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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, SDG BSI08

Marine Corps Ballistics Base Barstow
Barstow, California

November 2019

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DoD Type I Data Package

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

Project: Barstow Site Inspection
Potable Water and Soil Samples
Collected on 10/29/18

SDG# BSI08

GROUP	SAMPLE NUMBERS
2005361	9881938-9881942

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **11/27/2018**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Lyssa Longenecker at (717) 556-7321.

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Sample Reference List for SDG Number BSI08
with a Data Package Type of I-DOD

43806 - Gutierrez Canales Engineering

Project: Barstow Site Inspection

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9881938	OU1-GW-9-S-01-05	10/29/2018 11:55	11/02/2018 10:10
9881939	OU1-GW-9-S-01-10	10/29/2018 12:06	11/02/2018 10:10
9881940	OU1-GW-9-S-01-15	10/29/2018 12:10	11/02/2018 10:10
9881941	OU1-GW-9-S-01-20	10/29/2018 12:15	11/02/2018 10:10
9881942	OU1-GW-9-W-01	10/29/2018 11:50	11/02/2018 10:10

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14434 PFAS in Water by LC/MS/MS-DoD
14465 PFAS Water Prep - DoD

A 250 ml sample of water is extracted using a solid phase extraction (SPE) cartridge. The resulting extract is analyzed by LC/MS/MS in negative electrospray ionization (ESI) mode.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), EPA 537 Version 1.1, September 2009, Modified. Department of Defense Quality System Manual Version 5.1, Table B-15.

14478 PFAS in Soil by LC/MS/MS-DoD
14510 PFAS Solid Prep - DoD

A 5 gram sample of soil/sediment is sonicated with an acetonitrile/methanol solution followed by SPE extraction. The resultant extract is analyzed by LC/MS/MS in negative electrospray ionization (ESI) mode.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), EPA 537 Version 1.1, September 2009, Modified. Department of Defense Quality System Manual Version 5.1, Table B-15.

00111 Moisture

A well-mixed sample is heated by reflected infrared in an aluminum pan and dried to a constant weight. The decrease in weight in weight after drying is calculated as the moisture content.

Reference: SM 2540 G-1997 %Moisture Calculation for Dry Weight Determination

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

Report Date: November 19, 2018 08:45

Project: Barstow Site Inspection

Account #: 43806
Group Number: 2005361
SDG: BSI08
State of Sample Origin: CA

Electronic Copy To	Gutierrez Canales Engineering	Attn: Jesse MacNeill
Electronic Copy To	Gutierrez Canales Engineering	Attn: Eric Gardner

Respectfully Submitted,

Lyssa M. Longenecker
Specialist

(717) 556-7321

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
OU1-GW-9-S-01-05 Grab Soil	10/29/2018 11:55	9881938
OU1-GW-9-S-01-10 Grab Soil	10/29/2018 12:06	9881939
OU1-GW-9-S-01-15 Grab Soil	10/29/2018 12:10	9881940
OU1-GW-9-S-01-20 Grab Soil	10/29/2018 12:15	9881941
OU1-GW-9-W-01 Grab Potable Water	10/29/2018 11:50	9881942

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: Barstow Site Inspection
ELLE Group #: 2005361

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 9881942

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9881939

The following analytes were manually integrated due to incorrect integrations:
Perfluoro-octanesulfonate

Sample #s: 9881940

The recovery for labeled compound used as extraction standard d3-NMeFOSSA is outside of QC acceptance limits as noted on the QC Summary.The following corrective action was taken:
This sample was re-extracted within the method holding time and the recovery for labeled compound used as extraction standard d3-NMeFOSSA is again outside of QC acceptance limits. Both sets of data are included in the data package.

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9881938

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

The following analytes were manually integrated due to incorrect integrations:
Perfluoro-octanesulfonate

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Batch #: 18309005 (Sample number(s): 9881938-9881941 UNSPK: 9881938)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9881938, 9881940, MS

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Sample Description: **OU1-GW-9-S-01-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 11:55
SDG#: BSI08-01

Gutierrez Canales Engineering
ELLE Sample #: SW 9881938
ELLE Group #: 2005361
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.90	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
	The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.						
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.4	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 13:45	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Sample Description: **OU1-GW-9-S-01-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:06
SDG#: BSI08-02

Gutierrez Canales Engineering
ELLE Sample #: SW 9881939
ELLE Group #: 2005361
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.67 J	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 14:03	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Sample Description: **OU1-GW-9-S-01-15 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:10
SDG#: BSI08-03

Gutierrez Canales Engineering
ELLE Sample #: SW 9881940
ELLE Group #: 2005361
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.58	0.78	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.66	0.97	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.66	0.78	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.66	0.78	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.62	0.78	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.66	0.78	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.66	0.78	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.0	0.19	0.63	0.78	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.66	0.78	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.66	0.78	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.66	0.78	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.66	0.78	1
	The recovery for labeled compound used as extraction standard d3-NMeFOSSA is outside of QC acceptance limits as noted on the QC Summary.The following corrective action was taken: This sample was re-extracted within the method holding time and the recovery for labeled compound used as extraction standard d3-NMeFOSSA is again outside of QC acceptance limits. Both sets of data are included in the data package.						
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.8	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 14:12	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **OU1-GW-9-S-01-15 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:10
SDG#: BSI08-03

Gutierrez Canales Engineering
ELLE Sample #: SW 9881940
ELLE Group #: 2005361
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **OU1-GW-9-S-01-20 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:15
SDG#: BSI08-04

Gutierrez Canales Engineering
ELLE Sample #: SW 9881941
ELLE Group #: 2005361
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.58	0.78	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.66	0.97	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.66	0.78	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.66	0.78	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.62	0.78	1
14478	Perfluorohexanoic acid	307-24-4	0.25 J	0.19	0.66	0.78	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.66	0.78	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.63	0.78	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.66	0.78	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.66	0.78	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.66	0.78	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.66	0.78	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	0.84	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 14:21	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Sample Description: **OU1-GW-9-W-01 Grab Potable Water MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 11:50
SDG#: BSI08-05

Gutierrez Canales Engineering
ELLE Sample #: PW 9881942
ELLE Group #: 2005361
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	**ng/l**	
14434	NEtFOSAA	2991-50-6	N.D.	0.85	2.0	2.5	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14434	NMeFOSAA	2355-31-9	N.D.	0.85	2.0	2.5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14434	Perfluorobutanesulfonate	375-73-5	N.D.	0.25	0.93	1.7	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.42	1.0	1.7	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.42	1.0	1.7	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.34	1.0	1.7	1
14434	Perfluorohexanesulfonate	355-46-4	N.D.	0.34	0.93	1.7	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.42	1.0	1.7	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.34	1.0	1.7	1
14434	Perfluoro-octanesulfonate	1763-23-1	0.62 J	0.42	1.0	1.7	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.42	1.0	1.7	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.51	1.0	1.7	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.51	1.0	1.7	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.42	1.0	1.7	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18314006	11/12/2018 23:49	Marissa C Drexinger	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18314006	11/11/2018 16:10	Danielle D McCully	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 11/19/2018 08:45

Group Number: 2005361

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	DL**	LOD	LOQ
	ng/g	ng/g	ng/g	ng/g
Batch number: 18309005	Sample number(s): 9881938-9881941			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80
	ng/l	ng/l	ng/l	ng/l
Batch number: 18314006	Sample number(s): 9881942			
NEtFOSAA	N.D.	1.0	2.4	3.0
NMeFOSAA	N.D.	1.0	2.4	3.0
Perfluorobutanesulfonate	N.D.	0.30	1.1	2.0
Perfluorodecanoic acid	N.D.	0.50	1.2	2.0
Perfluorododecanoic acid	N.D.	0.50	1.2	2.0
Perfluoroheptanoic acid	N.D.	0.40	1.2	2.0
Perfluorohexanesulfonate	N.D.	0.40	1.1	2.0
Perfluorohexanoic acid	N.D.	0.50	1.2	2.0
Perfluorononanoic acid	N.D.	0.40	1.2	2.0
Perfluoro-octanesulfonate	N.D.	0.50	1.2	2.0
Perfluorooctanoic acid	N.D.	0.50	1.2	2.0
Perfluorotetradecanoic acid	N.D.	0.60	1.2	2.0
Perfluorotridecanoic acid	N.D.	0.60	1.2	2.0
Perfluoroundecanoic acid	N.D.	0.50	1.2	2.0

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

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Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 11/19/2018 08:45

Group Number: 2005361

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18309005	Sample number(s): 9881938-9881941								
NEtFOSAA	1.36	1.14	1.36	1.32	84	97	70-130	15	30
NMeFOSAA	1.36	1.39	1.36	1.29	102	95	70-130	7	30
Perfluorobutanesulfonate	1.20	1.30	1.20	1.33	108	111	70-130	3	30
Perfluorodecanoic acid	1.36	1.36	1.36	1.59	100	117	70-130	15	30
Perfluorododecanoic acid	1.36	1.34	1.36	1.47	98	108	70-130	10	30
Perfluoroheptanoic acid	1.36	1.54	1.36	1.64	113	121	70-130	6	30
Perfluorohexanesulfonate	1.29	1.39	1.29	1.45	108	113	70-130	4	30
Perfluorohexanoic acid	1.36	1.50	1.36	1.59	110	117	70-130	6	30
Perfluorononanoic acid	1.36	1.60	1.36	1.59	118	117	70-130	0	30
Perfluoro-octanesulfonate	1.30	1.40	1.30	1.50	108	116	70-130	7	30
Perfluorooctanoic acid	1.36	1.49	1.36	1.72	110	127	70-130	14	30
Perfluorotetradecanoic acid	1.36	1.40	1.36	1.51	103	111	70-130	8	30
Perfluorotridecanoic acid	1.36	1.42	1.36	1.50	104	110	70-130	6	30
Perfluoroundecanoic acid	1.36	1.35	1.36	1.69	100	124	70-130	22	30
	ng/l	ng/l	ng/l	ng/l					
Batch number: 18314006	Sample number(s): 9881942								
NEtFOSAA	5.44	5.06			93		60-131		
NMeFOSAA	5.44	4.75			87		67-124		
Perfluorobutanesulfonate	4.81	4.56			95		72-127		
Perfluorodecanoic acid	5.44	5.00			92		67-141		
Perfluorododecanoic acid	5.44	5.11			94		72-137		
Perfluoroheptanoic acid	5.44	5.69			105		75-139		
Perfluorohexanesulfonate	5.14	4.66			91		71-130		
Perfluorohexanoic acid	5.44	5.63			104		77-132		
Perfluorononanoic acid	5.44	5.30			97		73-144		
Perfluoro-octanesulfonate	5.20	4.63			89		67-134		
Perfluorooctanoic acid	5.44	5.49			101		76-136		
Perfluorotetradecanoic acid	5.44	5.19			95		70-142		
Perfluorotridecanoic acid	5.44	5.49			101		57-137		
Perfluoroundecanoic acid	5.44	5.38			99		83-132		
	%	%	%	%					
Batch number: 18312820004A	Sample number(s): 9881938-9881941								
Moisture	89.5	89.34			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

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Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 11/19/2018 08:45

Group Number: 2005361

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18309005	Sample number(s): 9881938-9881941 UNSPK: 9881938									
NEtFOSAA	N.D.	1.33	1.05			78		70-130		
NMeFOSAA	N.D.	1.33	1.37			102		70-130		
Perfluorobutanesulfonate	N.D.	1.18	1.27			108		70-130		
Perfluorodecanoic acid	N.D.	1.33	1.43			108		70-130		
Perfluorododecanoic acid	N.D.	1.33	1.35			101		70-130		
Perfluoroheptanoic acid	N.D.	1.33	1.63			122		70-130		
Perfluorohexanesulfonate	N.D.	1.26	1.33			105		70-130		
Perfluorohexanoic acid	N.D.	1.33	1.60			120		70-130		
Perfluorononanoic acid	N.D.	1.33	1.68			126		70-130		
Perfluoro-octanesulfonate	0.884	1.28	2.45			123		70-130		
Perfluorooctanoic acid	N.D.	1.33	1.61			121		70-130		
Perfluorotetradecanoic acid	N.D.	1.33	1.52			114		70-130		
Perfluorotridecanoic acid	N.D.	1.33	1.36			102		70-130		
Perfluoroundecanoic acid	N.D.	1.33	1.30			97		70-130		

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18309005

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881938	80	0.58	83	0.39	82	0.58	80	0.58	85	0.58	83	0.87
9881939	68	0.59	69	0.39	73	0.59	71	0.59	76	0.59	72	0.88
9881940	74	0.57	74	0.38	77	0.57	76	0.57	81	0.57	74	0.86
9881941	72	0.58	74	0.38	73	0.58	71	0.58	78	0.58	71	0.87
Blank	71	1.2	79	0.80	81	1.2	77	1.2	83	1.2	78	1.8
LCS	72	1.2	74	0.80	75	1.2	75	1.2	77	1.2	75	1.8
LCSD	69	1.2	71	0.80	69	1.2	67	1.2	75	1.2	73	1.8
MS	73	0.59	69	0.39	69	0.59	70	0.59	76	0.59	74	0.88
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

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Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 11/19/2018 08:45

Group Number: 2005361

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18309005

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881938	87	0.39	75	0.58	49*	0.87	77	0.58	53	0.87	78	0.58
9881939	76	0.39	72	0.59	51	0.88	75	0.59	52	0.88	70	0.59
9881940	77	0.38	77	0.57	47*	0.86	80	0.57	52	0.86	73	0.57
9881941	73	0.38	75	0.58	54	0.87	75	0.58	62	0.87	72	0.58
Blank	81	0.80	78	1.2	78	1.8	79	1.2	77	1.8	76	1.2
LCS	77	0.80	75	1.2	72	1.8	78	1.2	69	1.8	73	1.2
LCSD	76	0.80	63	1.2	62	1.8	63	1.2	62	1.8	65	1.2
MS	76	0.39	77	0.59	49*	0.88	79	0.59	53	0.88	76	0.59
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9881938	74	0.58
9881939	68	0.59
9881940	73	0.57
9881941	65	0.58
Blank	76	1.2
LCS	71	1.2
LCSD	59	1.2
MS	71	0.59
Limits:	50-150	

Analysis Name: PFAS in Water by LC/MS/MS-DoD
Batch number: 18314006

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)
9881942	74	8.5	85	1.7	77	8.5	83	1.7	80	1.7	82	8.5
Blank	82	10	90	2.0	81	10	90	2.0	90	2.0	84	10
LCS	89	10	93	2.0	91	10	91	2.0	93	2.0	88	10
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)
9881942	91	1.7	75	1.7	70	6.8	85	3.4	60	6.8	88	4.2

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

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Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 11/19/2018 08:45

Group Number: 2005361

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Water by LC/MS/MS-DoD
Batch number: 18314006

	13C9-PFNA %Rec	13C9-PFNA LOD (ng/l)	13C6-PFDA %Rec	13C6-PFDA LOD (ng/l)	d3-NMeFOSAA %Rec	d3-NMeFOSAA LOD (ng/l)	13C7-PFUnDA %Rec	13C7-PFUnDA LOD (ng/l)	d5-NEtFOSAA %Rec	d5-NEtFOSAA LOD (ng/l)	13C2-PFDoDA %Rec	13C2-PFDoDA LOD (ng/l)
Blank	89	2.0	87	2.0	85	8.0	88	4.0	75	8.0	74	5.0
LCS	97	2.0	89	2.0	86	8.0	86	4.0	80	8.0	81	5.0
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA %Rec	13C2-PFTeDA LOD (ng/l)
9881942	69	4.2
Blank	71	5.0
LCS	77	5.0
Limits:	50-150	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 43806 Group # 2w5361 Sample # 9881938-42

COC # 568801

Client Information

Client: GCE	Acct. #:
Project Name/#: 14G-C719-006 Barstow Site Inspection	PWSID #:
Project Manager: Eric Rider	P.O. #:
Sampler: Haydar Azzouz	Quote #:
State where samples were collected: CA	For Compliance: Yes ☐ No ☒

Matrix

Tissue ☐ | Ground ☐ | Surface ☐
Sediment ☐ | Potable ☒ | NPDES ☐
Soil ☒ | Water | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	EPA 537 Modified
OU1-GW-9-S-01-05	10/29/18	1155	X		X			2	X
OU1-GW-9-S-01-10		1206	X		X			2	X
OU1-GW-9-S-01-15		1210	X		X			2	X
OU1-GW-9-S-01-20		1215	X		X			2	X
OU1-GW-9-W-01		1150	X			X		2	X

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: jmacneille@neiaw.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jesse MacNeill	10/31/18	1300			
				11-1-18	1010

EDD Required? Yes No
If yes, format: NEDD, EDF

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.8-7.6°C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 231984

Group Number(s): 2405361

Client: GCE

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/02/2018 10:10
Number of Packages:	6	Number of Projects:	7
State/Province of Origin:	CA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 20:43 on 11/02/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	DT131	5.5	DT	Wet	Y	Bagged	N	N
2	DT131	0.5	DT	Wet	Y	Bagged	N	N
3	DT131	5.8	DT	Wet	Y	Bagged	N	N
4	DT131	7.6	DT	Wet	Y	Bagged	Y	N
5	DT131	1.5	DT	Wet	Y	Bagged	N	N
6	DT131	0.5	DT	Wet	Y	Bagged	N	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
4	32170023	10.2	8.2	9.4	11.0	8.3	Temp bottle wasn't touching ice bag.	

2425 New Holland Pike
Lancaster, PA 17601-5994
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Client: GCE

Samples In Elevated-Temperature Coolers

Cooler #	Sample ID
4	OU1-Bldg 371-S-03-10
4	OU1-Bldg 371-S-04-6
4	OU1-Bldg 371-S-04-03
4	OU1-Bldg 371-S-04-01
4	OU1-Bldg 371-S-03-03
4	OU1-Bldg 371-S-04-10
4	OU1-Bldg 371-S-03-08
4	OU1-Bldg 371-S-04-08
4	OU1-Bldg 371-S-04-12
4	OU1-Bldg 371-S-03-01
4	OU1-Bldg 371-S-03-05
4	OU1-Bldg 371-S-03-12

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
OU1-GW-9-S-01-10	OU1-GW-9-S-02-10	
OU1-GW-9-S-01-15	OU1-GW-9-S-02-15	
OU1-GW-9-S-01-20	OU1-GW-9-S-03-20	

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

PFAS by LC/MS/MS Data

Case Narrative/Conformance Summary

PFAS by LC/MS/MS

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI08

PFAS Group

Fraction: PFAS by LC/MS/MS

PFAS in Soil by LC/MS/MS-DoD

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9881938	OU1-GW-9-S-01-05		X	1	
9881939	OU1-GW-9-S-01-10		X	1	
9881940	OU1-GW-9-S-01-15		X	1	
9881941	OU1-GW-9-S-01-20		X	1	
9881942	OU1-GW-9-W-01	X		1	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 18309005 (Sample number(s): 9881938-9881941, UNSPK: 9881938)
The recovery(ies) for the following surrogate(s) were below the acceptance window: d3-NMeFOSAA (9881938 MS, 9881938 UNSPK, 9881940)

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI08

PFAS Group

Fraction: PFAS by LC/MS/MS

(Sample number(s): 9881938: Analysis: 14478)
The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

(Sample number(s): 9881940: Analysis: 14478)
The recovery for labeled compound used as extraction standard d3-NMeFOSSA is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken: This sample was re-extracted within the method holding time and the recovery for labeled compound used as extraction standard d3-NMeFOSSA is again outside of QC acceptance limits. Both sets of data are included in the data package.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

PFAS by LC/MS/MS

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Quality Control Reference List
PFAS Group

CLIENT: Gutierrez Canales Engineering
SDG: BSI08

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFAS in Soil by LC/MS/MS-DoD	18309005	BLK309005B	11/07/2018 13:17
		LCS309005Q	11/07/2018 13:26
		LCSDAY	11/07/2018 13:35
		9881938 UNSPK	11/07/2018 13:45
		9881938 MS	11/07/2018 13:54
		9881939	11/07/2018 14:03
		9881940	11/07/2018 14:12
		9881941	11/07/2018 14:21
PFAS in Soil by LC/MS/MS-DoD	18313005	BLK313005B	11/12/2018 19:00
		LCS313005Q	11/12/2018 19:09
		9881940	11/12/2018 19:45
PFAS in Water by LC/MS/MS-DoD	18314006	BLK314006B	11/12/2018 22:37
		LCS314006Q	11/12/2018 22:46
		9881942	11/12/2018 23:49

Quality Control Summary
Method Blank
PFAS Group
SDG: BSI08
Matrix: LIQUID

Fraction: PFAS by LC/MS/MS

18314006 / BLK314006B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/12/18	N.D.	ng/l	0.50	1.2	2.0
Perfluorononanoic acid	11/12/18	N.D.	ng/l	0.40	1.2	2.0
Perfluorodecanoic acid	11/12/18	N.D.	ng/l	0.50	1.2	2.0
Perfluoroundecanoic acid	11/12/18	N.D.	ng/l	0.50	1.2	2.0
Perfluorododecanoic acid	11/12/18	N.D.	ng/l	0.50	1.2	2.0
Perfluorotridecanoic acid	11/12/18	N.D.	ng/l	0.60	1.2	2.0
Perfluorotetradecanoic acid	11/12/18	N.D.	ng/l	0.60	1.2	2.0
Perfluorohexanoic acid	11/12/18	N.D.	ng/l	0.50	1.2	2.0
Perfluoroheptanoic acid	11/12/18	N.D.	ng/l	0.40	1.2	2.0
Perfluorobutanesulfonate	11/12/18	N.D.	ng/l	0.30	1.1	2.0
Perfluorohexanesulfonate	11/12/18	N.D.	ng/l	0.40	1.1	2.0
Perfluoro-octanesulfonate	11/12/18	N.D.	ng/l	0.50	1.2	2.0
NEtFOSAA	11/12/18	N.D.	ng/l	1.0	2.4	3.0
NMeFOSAA	11/12/18	N.D.	ng/l	1.0	2.4	3.0

Quality Control Summary
Method Blank
PFAS Group
SDG: BSI08
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18309005 / BLK309005B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/07/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/07/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/07/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/07/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/07/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/07/18	N.D.	ng/g	0.50	2.0	3.0

18313005 / BLK313005B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/12/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/12/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/12/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/12/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/12/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/12/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/12/18	N.D.	ng/g	0.50	2.0	3.0

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18309005		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK309005	11/07/18 13:17	76	76	71	81	77
LCS309005	11/07/18 13:26	73	71	72	75	75
LCSDA	11/07/18 13:35	65	59	69	69	67
9881938	11/07/18 13:45	78	74	80	82	80
9881938MS	11/07/18 13:54	76	71	73	69	70
9881939	11/07/18 14:03	70	68	68	73	71
9881940	11/07/18 14:12	73	73	74	77	76
9881941	11/07/18 14:21	72	65	72	73	71

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18309005		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK309005	11/07/18 13:17	79	78	79	83	78
LCS309005	11/07/18 13:26	74	75	78	77	75
LCSDA	11/07/18 13:35	71	63	63	75	73
9881938	11/07/18 13:45	83	75	77	85	83
9881938MS	11/07/18 13:54	69	77	79	76	74
9881939	11/07/18 14:03	69	72	75	76	72
9881940	11/07/18 14:12	74	77	80	81	74
9881941	11/07/18 14:21	74	75	75	78	71

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18309005		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK309005	11/07/18 13:17	81	78	77
LCS309005	11/07/18 13:26	77	72	69
LCSDA	11/07/18 13:35	76	62	62
9881938	11/07/18 13:45	87	49 *	53
9881938MS	11/07/18 13:54	76	49 *	53
9881939	11/07/18 14:03	76	51	52
9881940	11/07/18 14:12	77	47 *	52
9881941	11/07/18 14:21	73	54	62

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18313005		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK313005	11/12/18 19:00	69	65	70	73	73
LCS313005	11/12/18 19:09	55	52	59	60	57
9881940RE	11/12/18 19:45	71	72	76	75	77

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18314006		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK314006	11/12/18 22:37	74	71	82	81	90
LCS314006	11/12/18 22:46	81	77	89	91	91
9881942	11/12/18 23:49	88	69	74	77	83

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18313005		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK313005	11/12/18 19:00	76	73	73	78	70
LCS313005	11/12/18 19:09	61	56	62	64	62
9881940RE	11/12/18 19:45	71	75	78	72	84

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18314006		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK314006	11/12/18 22:37	90	87	88	90	84
LCS314006	11/12/18 22:46	93	89	86	93	88
9881942	11/12/18 23:49	85	75	85	80	82

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18313005		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK313005	11/12/18 19:00	73	68	63
LCS313005	11/12/18 19:09	68	61	55
9881940RE	11/12/18 19:45	85	40 *	40 *

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

18314006		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK314006	11/12/18 22:37	89	85	75
LCS314006	11/12/18 22:46	97	86	80
9881942	11/12/18 23:49	91	70	60

* Outside QC Limits

PFAS Group
Fraction: PFAS by LC/MS/MS

UNSPK: 9881938 MS: 9881938 **Analyte**	Batch: **18309005** (Sample number(s): 9881938-9881941) **Spike Added ng/g**	**Unspiked Conc ng/g**	**MS Conc ng/g**	**MSD Conc ng/g**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.33	N.D.	1.61	NA	121	NA	70-130	NA	NA
Perfluorononanoic acid	1.33	N.D.	1.68	NA	126	NA	70-130	NA	NA
Perfluorodecanoic acid	1.33	N.D.	1.43	NA	108	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.33	N.D.	1.30	NA	97	NA	70-130	NA	NA
Perfluorododecanoic acid	1.33	N.D.	1.35	NA	101	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.33	N.D.	1.36	NA	102	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.33	N.D.	1.52	NA	114	NA	70-130	NA	NA
Perfluorohexanoic acid	1.33	N.D.	1.60	NA	120	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.33	N.D.	1.63	NA	122	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.18	N.D.	1.27	NA	108	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.26	N.D.	1.33	NA	105	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.28	0.884	2.45	NA	123	NA	70-130	NA	NA
NEtFOSAA	1.33	N.D.	1.05 J	NA	78	NA	70-130	NA	NA
NMeFOSAA	1.33	N.D.	1.37 J	NA	102	NA	70-130	NA	NA

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: BSI08
Matrix: LIQUID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS314006Q	Batch: **18314006** (Sample number(s): 9881942)							
Analyte	**Spike Added ng/l**	**LCS Conc ng/l**	**LCSD Conc ng/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	5.44	5.49	NA	101	NA	76-136	NA	NA
Perfluorononanoic acid	5.44	5.30	NA	97	NA	73-144	NA	NA
Perfluorodecanoic acid	5.44	5.00	NA	92	NA	67-141	NA	NA
Perfluoroundecanoic acid	5.44	5.38	NA	99	NA	83-132	NA	NA
Perfluorododecanoic acid	5.44	5.11	NA	94	NA	72-137	NA	NA
Perfluorotridecanoic acid	5.44	5.49	NA	101	NA	57-137	NA	NA
Perfluorotetradecanoic acid	5.44	5.19	NA	95	NA	70-142	NA	NA
Perfluorohexanoic acid	5.44	5.63	NA	104	NA	77-132	NA	NA
Perfluoroheptanoic acid	5.44	5.69	NA	105	NA	75-139	NA	NA
Perfluorobutanesulfonate	4.81	4.56	NA	95	NA	72-127	NA	NA
Perfluorohexanesulfonate	5.14	4.66	NA	91	NA	71-130	NA	NA
Perfluoro-octanesulfonate	5.20	4.63	NA	89	NA	67-134	NA	NA
NEtFOSAA	5.44	5.06	NA	93	NA	60-131	NA	NA
NMeFOSAA	5.44	4.75	NA	87	NA	67-124	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: BSI08
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS309005Q LCSD: LCSDAY	Batch: **18309005** (Sample number(s): 9881938-9881941)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.49	1.72	110	127	70-130	14	30
Perfluorononanoic acid	1.36	1.60	1.59	118	117	70-130	0	30
Perfluorodecanoic acid	1.36	1.36	1.59	100	117	70-130	15	30
Perfluoroundecanoic acid	1.36	1.35	1.69	100	124	70-130	22	30
Perfluorododecanoic acid	1.36	1.34	1.47	98	108	70-130	10	30
Perfluorotridecanoic acid	1.36	1.42	1.50	104	110	70-130	6	30
Perfluorotetradecanoic acid	1.36	1.40	1.51	103	111	70-130	8	30
Perfluorohexanoic acid	1.36	1.50	1.59	110	117	70-130	6	30
Perfluoroheptanoic acid	1.36	1.54	1.64	113	121	70-130	6	30
Perfluorobutanesulfonate	1.20	1.30	1.33	108	111	70-130	3	30
Perfluorohexanesulfonate	1.29	1.39	1.45	108	113	70-130	4	30
Perfluoro-octanesulfonate	1.30	1.40	1.50	108	116	70-130	7	30
NEtFOSAA	1.36	1.14 J	1.32 J	84	97	70-130	15	30
NMeFOSAA	1.36	1.39 J	1.29 J	102	95	70-130	7	30

LCS: LCS313005Q	Batch: **18313005** (Sample number(s): 9881940)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.38	NA	102	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.32	NA	97	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.41	NA	104	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.31	NA	97	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.49	NA	109	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.35	NA	100	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.41	NA	104	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.36	NA	100	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.52	NA	112	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.32	NA	110	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.25	NA	97	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.21	NA	93	NA	70-130	NA	NA
NEtFOSAA	1.36	1.39 J	NA	103	NA	70-130	NA	NA
NMeFOSAA	1.36	1.38 J	NA	102	NA	70-130	NA	NA

Fraction: PFAS by LC/MS/MS

14478: PFAS in Soil by LC/MS/MS-DoD Analyte Name	Default DL	Default LOD	Default LOQ	Units
Perfluorooctanoic acid	.2	.68	0.80	ng/g
Perfluorononanoic acid	.2	.68	0.80	ng/g
Perfluorodecanoic acid	.3	.68	1.0	ng/g
Perfluoroundecanoic acid	.2	.68	0.80	ng/g
Perfluorododecanoic acid	.2	.68	0.80	ng/g
Perfluorotridecanoic acid	.2	.68	0.80	ng/g
Perfluorotetradecanoic acid	.2	.68	0.80	ng/g
Perfluorohexanoic acid	.2	.68	0.80	ng/g
Perfluoroheptanoic acid	.2	.68	0.80	ng/g
Perfluorobutanesulfonate	.2	.6	0.80	ng/g
Perfluorohexanesulfonate	.2	.64	0.80	ng/g
Perfluoro-octanesulfonate	.2	.65	0.80	ng/g
NEtFOSAA	.5	2	3.0	ng/g
NMeFOSAA	.5	2	3.0	ng/g

14434: PFAS in Water by LC/MS/MS-DoD Analyte Name	Default DL	Default LOD	Default LOQ	Units
Perfluorooctanoic acid	.5	1.2	2.0	ng/l
Perfluorononanoic acid	.4	1.2	2.0	ng/l
Perfluorodecanoic acid	.5	1.2	2.0	ng/l
Perfluoroundecanoic acid	.5	1.2	2.0	ng/l
Perfluorododecanoic acid	.5	1.2	2.0	ng/l
Perfluorotridecanoic acid	.6	1.2	2.0	ng/l
Perfluorotetradecanoic acid	.6	1.2	2.0	ng/l
Perfluorohexanoic acid	.5	1.2	2.0	ng/l
Perfluoroheptanoic acid	.4	1.2	2.0	ng/l
Perfluorobutanesulfonate	.3	1.1	2.0	ng/l
Perfluorohexanesulfonate	.4	1.1	2.0	ng/l
Perfluoro-octanesulfonate	.5	1.2	2.0	ng/l
NEtFOSAA	1	2.4	3.0	ng/l
NMeFOSAA	1	2.4	3.0	ng/l

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.238	19.1	±30
CAL2	0.093	0.50	0.545	9.0	±30
CAL3	0.362	2.00	2.120	6.0	±30
CAL4	1.495	8.00	8.747	9.3	±30
CAL5	3.745	20.00	21.919	9.6	±30
CAL6	8.813	50.00	51.576	3.2	±30
CAL7	16.327	100.00	95.554	-4.4	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.234	16.8	±30
CAL2	0.090	0.50	0.533	6.6	±30
CAL3	0.345	2.00	2.052	2.6	±30
CAL4	1.413	8.00	8.399	5.0	±30
CAL5	3.658	20.00	21.739	8.7	±30
CAL6	8.578	50.00	50.979	2.0	±30
CAL7	16.282	100.00	96.765	-3.2	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.17	0.213	25.6	±30
CAL2	0.093	0.44	0.470	6.7	±30
CAL3	0.345	1.77	1.740	-1.7	±30
CAL4	1.491	7.08	7.518	6.2	±30
CAL5	3.619	17.69	18.246	3.1	±30
CAL6	9.131	44.22	46.035	4.1	±30
CAL7	16.978	88.45	85.599	-3.2	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.191	2.3	±30
CAL2	0.183	0.47	0.492	5.3	±30
CAL3	0.731	1.87	1.964	5.2	±30
CAL4	2.975	7.47	7.999	7.1	±30
CAL5	7.477	18.68	20.102	7.6	±30
CAL6	17.311	46.70	46.538	-0.3	±30
CAL7	34.031	93.40	91.487	-2.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.055	0.20	0.235	17.4	±30
CAL2	0.123	0.50	0.529	5.8	±30
CAL3	0.498	2.00	2.137	6.9	±30
CAL4	2.041	8.00	8.751	9.4	±30
CAL5	5.013	20.00	21.499	7.5	±30
CAL6	11.088	50.00	47.549	-4.9	±30
CAL7	20.388	100.00	87.434	-12.6	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.19	0.183	-3.7	±30
CAL2	0.047	0.47	0.465	-0.9	±30
CAL3	0.180	1.88	1.772	-5.7	±30
CAL4	0.803	7.50	7.922	5.6	±30
CAL5	1.911	18.76	18.849	0.5	±30
CAL6	4.746	46.90	46.806	-0.2	±30
CAL7	9.480	93.80	93.501	-0.3	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.19	0.194	2.3	±30
CAL2	0.095	0.47	0.484	2.3	±30
CAL3	0.357	1.89	1.809	-4.3	±30
CAL4	1.514	7.56	7.676	1.5	±30
CAL5	3.791	18.91	19.215	1.6	±30
CAL6	9.344	47.28	47.360	0.2	±30
CAL7	18.567	94.55	94.113	-0.5	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.065	0.20	0.220	9.9	±30
CAL2	0.160	0.50	0.539	7.8	±30
CAL3	0.636	2.00	2.139	6.9	±30
CAL4	2.500	8.00	8.409	5.1	±30
CAL5	6.316	20.00	21.243	6.2	±30
CAL6	14.317	50.00	48.150	-3.7	±30
CAL7	25.595	100.00	86.081	-13.9	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
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Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.058	0.19	0.146	-23.1	±30
CAL2	0.229	0.47	0.570	20.3	±30
CAL3	0.830	1.90	2.071	9.3	±30
CAL4	3.200	7.58	7.982	5.2	±30
CAL5	8.507	18.96	21.223	11.9	±30
CAL6	18.600	47.40	46.401	-2.1	±30
CAL7	37.244	94.80	92.910	-2.0	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.207	8.9	±30
CAL2	0.091	0.48	0.476	0.0	±30
CAL3	0.359	1.90	1.877	-1.2	±30
CAL4	1.523	7.61	7.966	4.7	±30
CAL5	3.716	19.03	19.439	2.2	±30
CAL6	8.964	47.58	46.896	-1.4	±30
CAL7	18.173	95.15	95.074	-0.1	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.218	9.1	±30
CAL2	0.097	0.50	0.547	9.5	±30
CAL3	0.378	2.00	2.131	6.5	±30
CAL4	1.592	8.00	8.963	12.0	±30
CAL5	3.824	20.00	21.532	7.7	±30
CAL6	9.132	50.00	51.417	2.8	±30
CAL7	17.031	100.00	95.892	-4.1	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.206	8.2	±30
CAL2	0.100	0.48	0.517	8.1	±30
CAL3	0.375	1.91	1.943	1.7	±30
CAL4	1.534	7.65	7.953	4.0	±30
CAL5	3.719	19.12	19.287	0.9	±30
CAL6	9.270	47.80	48.067	0.6	±30
CAL7	18.277	95.60	94.776	-0.9	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
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Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.063	0.20	0.235	17.4	±30
CAL2	0.138	0.50	0.517	3.4	±30
CAL3	0.584	2.00	2.182	9.1	±30
CAL4	2.302	8.00	8.604	7.6	±30
CAL5	5.965	20.00	22.292	11.5	±30
CAL6	13.786	50.00	51.521	3.0	±30
CAL7	25.514	100.00	95.349	-4.7	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.174	-8.3	±30
CAL2	0.061	0.48	0.485	1.1	±30
CAL3	0.245	1.92	1.946	1.3	±30
CAL4	1.045	7.68	8.284	7.9	±30
CAL5	2.423	19.20	19.215	0.1	±30
CAL6	6.277	48.00	49.770	3.7	±30
CAL7	11.805	96.00	93.596	-2.5	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.216	7.8	±30
CAL2	0.095	0.50	0.520	4.0	±30
CAL3	0.383	2.00	2.107	5.3	±30
CAL4	1.568	8.00	8.626	7.8	±30
CAL5	4.015	20.00	22.091	10.5	±30
CAL6	9.247	50.00	50.875	1.7	±30
CAL7	17.498	100.00	96.265	-3.7	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.104	0.19	0.235	22.5	±30
CAL2	0.251	0.48	0.567	18.3	±30
CAL3	0.845	1.92	1.904	-0.6	±30
CAL4	3.495	7.66	7.877	2.8	±30
CAL5	8.887	19.16	20.031	4.5	±30
CAL6	20.717	47.90	46.697	-2.5	±30
CAL7	38.137	95.80	85.963	-10.3	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.194	-3.1	±30
CAL2	0.098	0.50	0.529	5.8	±30
CAL3	0.386	2.00	2.084	4.2	±30
CAL4	1.581	8.00	8.545	6.8	±30
CAL5	3.322	20.00	17.959	-10.2	±30
CAL6	9.665	50.00	52.247	4.5	±30
CAL7	18.341	100.00	99.141	-0.9	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.035	0.20	0.178	-10.8	±30
CAL2	0.118	0.50	0.607	21.4	±30
CAL3	0.396	2.00	2.039	2.0	±30
CAL4	1.685	8.00	8.670	8.4	±30
CAL5	4.175	20.00	21.482	7.4	±30
CAL6	9.476	50.00	48.760	-2.5	±30
CAL7	19.233	100.00	98.963	-1.0	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.021	0.19	0.201	5.6	±30
CAL2	0.055	0.48	0.525	8.9	±30
CAL3	0.199	1.93	1.898	-1.6	±30
CAL4	0.859	7.70	8.210	6.6	±30
CAL5	2.032	19.26	19.412	0.8	±30
CAL6	4.983	48.15	47.605	-1.1	±30
CAL7	10.066	96.30	96.161	-0.1	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.079	0.20	0.227	13.7	±30
CAL2	0.187	0.50	0.535	7.0	±30
CAL3	0.757	2.00	2.170	8.5	±30
CAL4	2.909	8.00	8.341	4.3	±30
CAL5	7.397	20.00	21.214	6.1	±30
CAL6	17.761	50.00	50.936	1.9	±30
CAL7	33.921	100.00	97.277	-2.7	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.183	-8.7	±30
CAL2	0.110	0.50	0.474	-5.3	±30
CAL3	0.441	2.00	1.896	-5.2	±30
CAL4	1.838	8.00	7.900	-1.3	±30
CAL5	5.175	20.00	22.240	11.2	±30
CAL6	11.319	50.00	48.645	-2.7	±30
CAL7	23.121	100.00	99.363	-0.6	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.224	11.9	±30
CAL2	0.101	0.50	0.545	9.0	±30
CAL3	0.377	2.00	2.046	2.3	±30
CAL4	1.466	8.00	7.946	-0.7	±30
CAL5	3.887	20.00	21.067	5.3	±30
CAL6	9.018	50.00	48.873	-2.3	±30
CAL7	15.613	100.00	84.613	-15.4	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.222	15.0	±30
CAL2	0.177	0.48	0.551	14.4	±30
CAL3	0.647	1.93	2.014	4.5	±30
CAL4	2.271	7.71	7.073	-8.3	±30
CAL5	6.446	19.28	20.071	4.1	±30
CAL6	15.876	48.20	49.437	2.6	±30
CAL7	30.453	96.40	94.827	-1.6	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.054	0.20	0.244	22.1	±30
CAL2	0.124	0.50	0.555	11.0	±30
CAL3	0.453	2.00	2.029	1.5	±30
CAL4	1.959	8.00	8.781	9.8	±30
CAL5	4.923	20.00	22.062	10.3	±30
CAL6	11.752	50.00	52.660	5.3	±30
CAL7	21.059	100.00	94.369	-5.6	±30

FORM 06
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Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.201	0.6	±30
CAL2	0.101	0.50	0.568	13.6	±30
CAL3	0.375	2.00	2.101	5.1	±30
CAL4	1.368	8.00	7.657	-4.3	±30
CAL5	3.939	20.00	22.050	10.2	±30
CAL6	9.140	50.00	51.162	2.3	±30
CAL7	17.323	100.00	96.961	-3.0	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.010	0.19	0.189	-0.3	±30
CAL2	0.025	0.48	0.487	0.7	±30
CAL3	0.108	1.94	2.084	7.4	±30
CAL4	0.416	7.74	8.039	3.9	±30
CAL5	0.991	19.36	19.132	-1.2	±30
CAL6	2.465	48.40	47.576	-1.7	±30
CAL7	5.047	96.80	97.407	0.6	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.074	0.20	0.237	18.5	±30
CAL2	0.181	0.50	0.579	15.9	±30
CAL3	0.650	2.00	2.083	4.2	±30
CAL4	2.703	8.00	8.666	8.3	±30
CAL5	6.965	20.00	22.328	11.6	±30
CAL6	16.033	50.00	51.396	2.8	±30
CAL7	29.763	100.00	95.411	-4.6	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.191	-4.7	±30
CAL2	0.096	0.50	0.424	-15.3	±30
CAL3	0.393	2.00	1.732	-13.4	±30
CAL4	1.711	8.00	7.534	-5.8	±30
CAL5	4.679	20.00	20.605	3.0	±30
CAL6	11.449	50.00	50.423	0.8	±30
CAL7	22.658	100.00	99.791	-0.2	±30

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FORM 06
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Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.250	25.1	±30
CAL2	0.082	0.50	0.519	3.9	±30
CAL3	0.337	2.00	2.128	6.4	±30
CAL4	1.306	8.00	8.235	2.9	±30
CAL5	3.375	20.00	21.280	6.4	±30
CAL6	7.657	50.00	48.287	-3.4	±30
CAL7	12.611	100.00	79.528	-20.5	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.232	16.2	±30
CAL2	0.082	0.50	0.482	-3.6	±30
CAL3	0.358	2.00	2.103	5.1	±30
CAL4	1.428	8.00	8.383	4.8	±30
CAL5	3.558	20.00	20.892	4.5	±30
CAL6	8.573	50.00	50.344	0.7	±30
CAL7	16.733	100.00	98.263	-1.7	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.20	0.236	17.9	±30
CAL2	0.042	0.50	0.524	4.8	±30
CAL3	0.167	2.00	2.078	3.9	±30
CAL4	0.673	8.00	8.351	4.4	±30
CAL5	1.699	20.00	21.085	5.4	±30
CAL6	3.954	50.00	49.083	-1.8	±30
CAL7	8.003	100.00	99.343	-0.7	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.015	0.20	0.220	10.2	±30
CAL2	0.036	0.50	0.511	2.2	±30
CAL3	0.142	2.00	2.041	2.0	±30
CAL4	0.570	8.00	8.162	2.0	±30
CAL5	1.481	20.00	21.218	6.1	±30
CAL6	3.399	50.00	48.698	-2.6	±30
CAL7	6.970	100.00	99.849	-0.2	±30

* Outside QC Limits

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.235	17.3	±30
CAL2	0.104	0.60	0.577	-3.8	±30
CAL3	0.413	2.00	2.291	14.5	±30
CAL4	1.471	8.00	8.148	1.9	±30
CAL5	3.863	20.00	21.403	7.0	±30
CAL6	9.099	50.00	50.404	0.8	±30
CAL7	17.644	100.00	97.743	-2.3	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.245	22.5	±30
CAL2	0.114	0.60	0.661	10.2	±30
CAL3	0.421	2.00	2.435	21.8	±30
CAL4	1.502	8.00	8.694	8.7	±30
CAL5	3.622	20.00	20.969	4.8	±30
CAL6	8.759	50.00	50.702	1.4	±30
CAL7	16.773	100.00	97.094	-2.9	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.18	0.192	8.5	±30
CAL2	0.107	0.53	0.510	-4.0	±30
CAL3	0.404	1.77	1.921	8.5	±30
CAL4	1.452	7.08	6.906	-2.5	±30
CAL5	3.809	17.70	18.121	2.4	±30
CAL6	9.475	44.20	45.072	2.0	±30
CAL7	18.318	88.40	87.136	-1.4	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.192	2.5	±30
CAL2	0.191	0.56	0.518	-7.5	±30
CAL3	0.720	1.87	1.954	4.5	±30
CAL4	2.675	7.47	7.263	-2.8	±30
CAL5	6.655	18.70	18.070	-3.4	±30
CAL6	17.824	46.70	48.392	3.6	±30
CAL7	34.069	93.40	92.499	-1.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.059	0.20	0.246	22.8	±30
CAL2	0.149	0.60	0.622	3.7	±30
CAL3	0.544	2.00	2.272	13.6	±30
CAL4	1.973	8.00	8.239	3.0	±30
CAL5	5.022	20.00	20.968	4.8	±30
CAL6	11.605	50.00	48.453	-3.1	±30
CAL7	21.693	100.00	90.577	-9.4	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.209	11.4	±30
CAL2	0.048	0.56	0.470	-16.4	±30
CAL3	0.202	1.88	1.960	4.3	±30
CAL4	0.773	7.50	7.508	0.1	±30
CAL5	1.906	18.80	18.506	-1.6	±30
CAL6	4.880	46.90	47.375	1.0	±30
CAL7	9.641	93.80	93.602	-0.2	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.20	0.235	17.7	±30
CAL2	0.178	0.60	0.591	-1.5	±30
CAL3	0.706	2.00	2.342	17.1	±30
CAL4	2.590	8.00	8.586	7.3	±30
CAL5	6.218	20.00	20.612	3.1	±30
CAL6	14.612	50.00	48.434	-3.1	±30
CAL7	27.372	100.00	90.732	-9.3	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.18	0.190	4.5	±30
CAL2	0.097	0.55	0.470	-14.1	±30
CAL3	0.396	1.82	1.920	5.5	±30
CAL4	1.518	7.30	7.361	0.8	±30
CAL5	3.681	18.20	17.849	-1.9	±30
CAL6	9.372	45.60	45.444	-0.3	±30
CAL7	18.895	91.20	91.615	0.5	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.076	0.19	0.183	-3.6	±30
CAL2	0.226	0.57	0.547	-3.8	±30
CAL3	0.886	1.90	2.143	12.8	±30
CAL4	3.371	7.58	8.157	7.6	±30
CAL5	8.392	19.00	20.308	6.9	±30
CAL6	18.720	47.40	45.301	-4.4	±30
CAL7	31.980	94.80	77.388	-18.4	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.213	12.0	±30
CAL2	0.093	0.57	0.491	-14.0	±30
CAL3	0.397	1.90	2.089	10.0	±30
CAL4	1.378	7.61	7.252	-4.7	±30
CAL5	3.704	19.00	19.496	2.6	±30
CAL6	9.168	47.60	48.262	1.4	±30
CAL7	17.908	95.20	94.267	-1.0	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.243	21.4	±30
CAL2	0.113	0.60	0.603	0.4	±30
CAL3	0.424	2.00	2.262	13.1	±30
CAL4	1.537	8.00	8.207	2.6	±30
CAL5	4.087	20.00	21.830	9.2	±30
CAL6	9.558	50.00	51.047	2.1	±30
CAL7	18.088	100.00	96.608	-3.4	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.19	0.202	9.3	±30
CAL2	0.119	0.56	0.520	-6.4	±30
CAL3	0.430	1.85	1.881	1.7	±30
CAL4	1.679	7.40	7.341	-0.8	±30
CAL5	4.296	18.50	18.789	1.6	±30
CAL6	10.528	46.30	46.040	-0.6	±30
CAL7	21.179	92.60	92.617	0.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.062	0.20	0.223	11.4	±30
CAL2	0.179	0.60	0.644	7.4	±30
CAL3	0.663	2.00	2.391	19.5	±30
CAL4	2.279	8.00	8.218	2.7	±30
CAL5	6.168	20.00	22.243	11.2	±30
CAL6	14.066	50.00	50.720	1.4	±30
CAL7	26.723	100.00	96.360	-3.6	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.024	0.19	0.169	-11.9	±30
CAL2	0.075	0.58	0.523	-9.2	±30
CAL3	0.271	1.92	1.893	-1.4	±30
CAL4	1.009	7.68	7.057	-8.1	±30
CAL5	2.715	19.20	18.997	-1.1	±30
CAL6	6.755	48.00	47.262	-1.5	±30
CAL7	13.960	96.00	97.666	1.7	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.238	18.9	±30
CAL2	0.106	0.60	0.562	-6.3	±30
CAL3	0.415	2.00	2.198	9.9	±30
CAL4	1.539	8.00	8.159	2.0	±30
CAL5	3.946	20.00	20.920	4.6	±30
CAL6	9.190	50.00	48.722	-2.6	±30
CAL7	16.908	100.00	89.640	-10.4	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.088	0.19	0.206	7.1	±30
CAL2	0.225	0.58	0.524	-8.8	±30
CAL3	0.899	1.92	2.096	9.2	±30
CAL4	2.969	7.66	6.923	-9.6	±30
CAL5	8.524	19.20	19.873	3.5	±30
CAL6	20.513	47.90	47.825	-0.2	±30
CAL7	35.402	95.80	82.540	-13.8	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.217	8.7	±30
CAL2	0.112	0.60	0.545	-9.1	±30
CAL3	0.429	2.00	2.098	4.9	±30
CAL4	1.526	8.00	7.455	-6.8	±30
CAL5	4.189	20.00	20.460	2.3	±30
CAL6	10.242	50.00	50.024	0.0	±30
CAL7	18.353	100.00	89.642	-10.4	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.027	0.20	0.150	-25.0	±30
CAL2	0.074	0.60	0.421	-29.9	±30
CAL3	0.351	2.00	1.983	-0.8	±30
CAL4	1.424	8.00	8.048	0.6	±30
CAL5	3.462	20.00	19.564	-2.2	±30
CAL6	8.928	50.00	50.461	0.9	±30
CAL7	17.725	100.00	100.173	0.2	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.021	0.19	0.190	-1.3	±30
CAL2	0.060	0.58	0.543	-6.0	±30
CAL3	0.206	1.93	1.869	-3.2	±30
CAL4	0.838	7.70	7.592	-1.4	±30
CAL5	2.167	19.30	19.633	1.7	±30
CAL6	5.189	48.20	47.020	-2.4	±30
CAL7	10.744	96.30	97.353	1.1	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.091	0.20	0.238	19.2	±30
CAL2	0.211	0.60	0.551	-8.1	±30
CAL3	0.810	2.00	2.119	5.9	±30
CAL4	3.310	8.00	8.654	8.2	±30
CAL5	7.672	20.00	20.055	0.3	±30
CAL6	18.813	50.00	49.183	-1.6	±30
CAL7	34.057	100.00	89.032	-11.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.028	0.20	0.149	-25.7	±30
CAL2	0.121	0.60	0.636	6.0	±30
CAL3	0.461	2.00	2.418	20.9	±30
CAL4	1.449	8.00	7.596	-5.1	±30
CAL5	3.724	20.00	19.520	-2.4	±30
CAL6	9.630	50.00	50.481	1.0	±30
CAL7	18.030	100.00	94.517	-5.5	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.207	3.4	±30
CAL2	0.112	0.60	0.571	-4.8	±30
CAL3	0.432	2.00	2.198	9.9	±30
CAL4	1.541	8.00	7.847	-1.9	±30
CAL5	4.136	20.00	21.062	5.3	±30
CAL6	9.606	50.00	48.914	-2.2	±30
CAL7	17.225	100.00	87.711	-12.3	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.069	0.19	0.229	18.4	±30
CAL2	0.188	0.58	0.627	8.6	±30
CAL3	0.634	1.93	2.111	9.4	±30
CAL4	2.056	7.71	6.849	-11.2	±30
CAL5	6.339	19.30	21.113	9.4	±30
CAL6	15.209	48.20	50.658	5.1	±30
CAL7	27.838	96.40	92.724	-3.8	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.051	0.20	0.214	7.1	±30
CAL2	0.133	0.60	0.554	-7.6	±30
CAL3	0.533	2.00	2.216	10.8	±30
CAL4	1.886	8.00	7.850	-1.9	±30
CAL5	5.021	20.00	20.896	4.5	±30
CAL6	12.781	50.00	53.193	6.4	±30
CAL7	23.037	100.00	95.876	-4.1	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.030	0.20	0.150	-25.2	±30
CAL2	0.114	0.60	0.562	-6.3	±30
CAL3	0.390	2.00	1.923	-3.8	±30
CAL4	1.632	8.00	8.049	0.6	±30
CAL5	4.385	20.00	21.631	8.2	±30
CAL6	9.828	50.00	48.485	-3.0	±30
CAL7	17.679	100.00	87.214	-12.8	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.012	0.19	0.218	12.3	±30
CAL2	0.033	0.58	0.580	-0.3	±30
CAL3	0.107	1.94	1.876	-3.3	±30
CAL4	0.440	7.74	7.707	-0.4	±30
CAL5	1.081	19.40	18.940	-2.4	±30
CAL6	2.811	48.40	49.234	1.7	±30
CAL7	5.510	96.80	96.500	-0.3	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.075	0.20	0.240	20.2	±30
CAL2	0.178	0.60	0.573	-4.6	±30
CAL3	0.687	2.00	2.204	10.2	±30
CAL4	2.595	8.00	8.324	4.0	±30
CAL5	6.492	20.00	20.830	4.1	±30
CAL6	15.157	50.00	48.629	-2.7	±30
CAL7	27.283	100.00	87.532	-12.5	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.207	3.7	±30
CAL2	0.139	0.60	0.637	6.1	±30
CAL3	0.463	2.00	2.124	6.2	±30
CAL4	1.801	8.00	8.269	3.4	±30
CAL5	4.664	20.00	21.421	7.1	±30
CAL6	10.701	50.00	49.142	-1.7	±30
CAL7	21.557	100.00	98.999	-1.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.037	0.20	0.234	16.8	±30
CAL2	0.090	0.60	0.569	-5.1	±30
CAL3	0.335	2.00	2.117	5.8	±30
CAL4	1.293	8.00	8.159	2.0	±30
CAL5	3.309	20.00	20.884	4.4	±30
CAL6	7.738	50.00	48.838	-2.3	±30
CAL7	13.241	100.00	83.569	-16.4	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.223	11.6	±30
CAL2	0.102	0.60	0.572	-4.6	±30
CAL3	0.398	2.00	2.228	11.4	±30
CAL4	1.458	8.00	8.171	2.1	±30
CAL5	3.737	20.00	20.945	4.7	±30
CAL6	8.923	50.00	50.021	0.0	±30
CAL7	17.596	100.00	98.638	-1.4	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.20	0.231	15.7	±30
CAL2	0.048	0.60	0.575	-4.2	±30
CAL3	0.177	2.00	2.109	5.4	±30
CAL4	0.654	8.00	7.793	-2.6	±30
CAL5	1.653	20.00	19.691	-1.5	±30
CAL6	4.347	50.00	51.786	3.6	±30
CAL7	8.277	100.00	98.615	-1.4	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.015	0.20	0.204	2.1	±30
CAL2	0.038	0.60	0.528	-11.9	±30
CAL3	0.147	2.00	2.045	2.3	±30
CAL4	0.559	8.00	7.786	-2.7	±30
CAL5	1.434	20.00	19.971	-0.1	±30
CAL6	3.601	50.00	50.157	0.3	±30
CAL7	7.188	100.00	100.107	0.1	±30

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Lab File Names: CAL1=18NOV07DCAL-10.WIFF; CAL2=18NOV07DCAL-11.WIFF; CAL3=18NOV07DCAL-12.WIFF;
CAL4=18NOV07DCAL-13.WIFF; CAL5=18NOV07DCAL-14.WIFF; CAL6=18NOV07DCAL-15.WIFF;
CAL7=18NOV07DCAL-16.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.018	0.931	0.905	0.934	0.936	0.881	0.816	6
Perfluoropentanoic acid	0.983	0.897	0.863	0.883	0.914	0.858	0.814	6
Perfluorobutanesulfonate	1.158	0.984	0.907	0.979	0.951	0.960	0.893	8
4:2 fluorotelomersulfonate	1.777	1.830	1.827	1.860	1.869	1.731	1.702	3
Perfluorohexanoic acid	1.369	1.233	1.246	1.275	1.253	1.109	---	6
Perfluoropentanesulfonate	0.454	0.467	0.444	0.498	0.474	0.471	0.470	3
Perfluorohexanesulfonate	0.955	0.955	0.893	0.948	0.948	0.935	0.929	2
Perfluoroheptanoic acid	1.634	1.603	1.590	1.563	1.579	1.432	---	4
6:2 fluorotelomersulfonate	1.464	2.292	2.080	2.004	2.131	1.864	1.866	13
Perfluoroheptanesulfonate	0.984	0.904	0.893	0.946	0.924	0.891	0.903	3
Perfluorooctanoic acid	0.969	0.972	0.946	0.995	0.956	0.913	0.852	5
Perfluoro-octanesulfonate	0.998	0.997	0.938	0.958	0.930	0.927	0.914	3
Perfluorononanoic acid	1.571	1.383	1.459	1.439	1.491	1.379	1.276	6
Perfluorononanesulfonate	0.553	0.609	0.611	0.650	0.603	0.625	0.588	5
Perfluorodecanoic acid	0.980	0.945	0.957	0.980	1.004	0.925	0.875	4
8:2 fluorotelomersulfonate	2.603	2.513	2.112	2.184	2.222	2.072	---	9
Perfluorooctanesulfonamide	0.896	0.979	0.964	0.988	0.831	0.967	0.917	6
NMeFOSAA	0.867	1.180	0.991	1.053	1.044	0.948	0.962	9
Perfluorodecanesulfonate	0.528	0.545	0.492	0.534	0.504	0.495	0.500	4
Perfluoroundecanoic acid	1.982	1.865	1.891	1.818	1.849	1.776	1.696	5
NEtFOSAA	1.063	1.102	1.103	1.149	1.294	1.132	1.156	6
Perfluorododecanoic acid	1.032	1.006	0.944	0.916	0.972	0.902	---	5
10:2-fluorotelomersulfonate	1.769	1.760	1.607	1.411	1.601	1.578	1.513	7
NMePFOSAE	1.362	1.238	1.132	1.225	1.231	1.175	1.053	7
NMePFOSA	0.899	1.015	0.938	0.855	0.985	0.914	0.866	6
Perfluorododecanesulfonate	0.247	0.249	0.266	0.257	0.245	0.243	0.249	3
NEtPFOSAE	1.848	1.807	1.624	1.689	1.741	1.603	1.488	7
NEtPFOSA	1.082	0.962	0.983	1.069	1.170	1.145	1.133	7
Perfluorotridecanoic acid	0.992	0.824	0.844	0.816	0.844	0.766	---	8
Perfluorotetradecanoic acid	0.989	0.821	0.895	0.892	0.889	0.857	0.837	6
Perfluorohexadecanoic acid	0.475	0.422	0.418	0.420	0.425	0.395	0.400	6
Perfluorooctadecanoic acid	0.385	0.357	0.356	0.356	0.370	0.340	0.348	4

--- Calibration point does not apply

* = % RSD > 20

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Lab File Names: CAL1=18NOV12DCAL-42.WIFF; CAL2=18NOV12DCAL-43.WIFF; CAL3=18NOV12DCAL-44.WIFF;
CAL4=18NOV12DCAL-45.WIFF; CAL5=18NOV12DCAL-46.WIFF; CAL6=18NOV12DCAL-47.WIFF;
CAL7=18NOV12DCAL-48.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7
Perfluoropentanoic acid	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8
Perfluorobutanesulfonate	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5
4:2 fluorotelomersulfonate	1.764	1.591	1.797	1.672	1.662	1.782	1.703	4
Perfluorohexanoic acid	1.470	1.241	1.361	1.233	1.255	1.160	---	8
Perfluoropentanesulfonate	0.534	0.400	0.499	0.479	0.471	0.484	0.478	8
Perfluoroheptanoic acid	1.776	1.486	1.766	1.619	1.555	1.461	---	8
Perfluorohexanesulfonate	1.019	0.838	1.029	0.984	0.957	0.972	0.980	6
6:2 fluorotelomersulfonate	1.892	1.888	2.214	2.112	2.098	1.876	---	7
Perfluoroheptanesulfonate	1.007	0.773	0.988	0.856	0.922	0.911	0.890	8
Perfluorooctanoic acid	1.136	0.940	1.059	0.960	1.022	0.956	0.904	7
Perfluoro-octanesulfonate	1.194	1.024	1.112	1.084	1.110	1.087	1.093	4
Perfluorononanoic acid	1.545	1.489	1.658	1.424	1.542	1.407	1.336	7
Perfluorononanesulfonate	0.602	0.621	0.674	0.628	0.676	0.673	0.695	5
Perfluorodecanoic acid	1.122	0.883	1.037	0.962	0.987	0.919	---	8
8:2 fluorotelomersulfonate	2.201	1.873	2.243	1.857	2.127	2.051	---	7
Perfluorooctanesulfonamide	1.113	0.931	1.074	0.954	1.047	1.024	---	6
NMeFOSAA	0.663	0.620	0.877	0.890	0.865	0.893	0.886	13
Perfluorodecanesulfonate	0.521	0.496	0.511	0.520	0.537	0.515	0.533	2
Perfluoroundecanoic acid	2.280	1.757	2.026	2.069	1.918	1.881	---	8
NEtFOSAA	0.709	1.011	1.153	0.906	0.931	0.963	---	14
Perfluorododecanoic acid	1.015	0.935	1.079	0.963	1.034	0.961	---	5
10:2-fluorotelomersulfonate	1.703	1.561	1.573	1.278	1.573	1.511	1.383	9
NMePFOSAE	1.287	1.110	1.331	1.179	1.255	1.278	1.152	6
NMePFOSA	0.758	0.950	0.975	1.020	1.096	0.983	---	11
Perfluorododecanesulfonate	0.306	0.272	0.264	0.272	0.266	0.278	0.272	5
NEtPFOSAE	1.873	1.487	1.717	1.622	1.623	1.516	---	8
NEtPFOSA	1.129	1.156	1.156	1.125	1.166	1.070	1.078	3
Perfluorotridecanoic acid	0.925	0.751	0.839	0.808	0.827	0.774	---	7
Perfluorotetradecanoic acid	0.996	0.851	0.994	0.911	0.934	0.892	0.880	6
Perfluorohexadecanoic acid	0.486	0.402	0.442	0.409	0.413	0.435	0.414	6
Perfluorooctadecanoic acid	0.367	0.316	0.367	0.349	0.358	0.360	0.359	5

--- Calibration point does not apply

* = % RSD > 20

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV07D-05.WIFF

Date/Time Analyzed: 11/07/2018 11:56 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.50	0.55	9.69	±30
Perfluoropentanoic acid	0.50	0.56	11.11	±30
Perfluorobutanesulfonate	0.44	0.47	5.80	±30
4:2 fluorotelomersulfonate	0.47	0.46	-1.91	±30
Perfluorohexanoic acid	0.50	0.54	8.14	±30
Perfluoropentanesulfonate	0.47	0.49	3.67	±30
Perfluorohexanesulfonate	0.47	0.44	-7.73	±30
Perfluoroheptanoic acid	0.50	0.54	8.60	±30
6:2 fluorotelomersulfonate	0.47	0.54	13.25	±30
Perfluoroheptanesulfonate	0.48	0.46	-3.48	±30
Perfluorooctanoic acid	0.50	0.57	13.63	±30
Perfluoro-octanesulfonate	0.48	0.51	7.58	±30
Perfluorononanoic acid	0.50	0.52	3.57	±30
Perfluorononanesulfonate	0.48	0.43	-10.53	±30
Perfluorodecanoic acid	0.50	0.48	-3.13	±30
8:2 fluorotelomersulfonate	0.48	0.46	-3.47	±30
Perfluorooctanesulfonamide	0.50	0.52	3.09	±30
NMeFOSAA	0.50	0.47	-6.74	±30
Perfluorodecanesulfonate	0.48	0.43	-11.12	±30
Perfluoroundecanoic acid	0.50	0.54	8.99	±30
NEtFOSAA	0.50	0.58	16.02	±30
Perfluorododecanoic acid	0.50	0.52	4.53	±30
10:2-fluorotelomersulfonate	0.48	0.41	-15.22	±30
NMePFOSAE	0.50	0.54	8.68	±30
NMePFOSA	0.50	0.57	13.40	±30
Perfluorododecanesulfonate	0.48	0.49	0.96	±30
NEtPFOSAE	0.50	0.58	15.93	±30
NEtPFOSA	0.50	0.50	0.04	±30
Perfluorotridecanoic acid	0.50	0.54	8.06	±30
Perfluorotetradecanoic acid	0.50	0.51	2.25	±30
Perfluorohexadecanoic acid	0.50	0.66	31.35 *	±30
Perfluorooctadecanoic acid	0.50	0.66	32.07 *	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV07D-12.WIFF

Date/Time Analyzed: 11/07/2018 12:59 Lab Sample ID: CCV2_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.16	8.12	±30
Perfluoropentanoic acid	2.00	2.08	4.06	±30
Perfluorobutanesulfonate	1.77	1.90	7.18	±30
4:2 fluorotelomersulfonate	1.87	1.76	-5.91	±30
Perfluorohexanoic acid	2.00	2.12	6.10	±30
Perfluoropentanesulfonate	1.88	1.82	-3.40	±30
Perfluorohexanesulfonate	1.89	1.90	0.35	±30
Perfluoroheptanoic acid	2.00	2.13	6.33	±30
6:2 fluorotelomersulfonate	1.90	2.29	20.97	±30
Perfluoroheptanesulfonate	1.90	1.88	-0.93	±30
Perfluorooctanoic acid	2.00	2.16	7.91	±30
Perfluoro-octanesulfonate	1.91	2.02	5.61	±30
Perfluorononanoic acid	2.00	2.18	9.14	±30
Perfluorononanesulfonate	1.92	2.04	6.23	±30
Perfluorodecanoic acid	2.00	1.92	-3.77	±30
8:2 fluorotelomersulfonate	1.92	2.10	9.48	±30
Perfluorooctanesulfonamide	2.00	2.28	13.76	±30
NMeFOSAA	2.00	2.01	0.54	±30
Perfluorodecanesulfonate	1.93	2.01	4.24	±30
Perfluoroundecanoic acid	2.00	2.25	12.32	±30
NEtFOSAA	2.00	1.70	-14.97	±30
Perfluorododecanoic acid	2.00	2.03	1.68	±30
10:2-fluorotelomersulfonate	1.93	1.96	1.64	±30
NMePFOSAE	2.00	2.17	8.68	±30
NMePFOSA	2.00	2.01	0.44	±30
Perfluorododecanesulfonate	1.94	1.91	-1.73	±30
NEtPFOSAE	2.00	2.14	6.82	±30
NEtPFOSA	2.00	2.00	-0.13	±30
Perfluorotridecanoic acid	2.00	1.97	-1.31	±30
Perfluorotetradecanoic acid	2.00	2.02	1.08	±30
Perfluorohexadecanoic acid	2.00	2.19	9.41	±30
Perfluorooctadecanoic acid	2.00	2.25	12.44	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV07D-24.WIFF

Date/Time Analyzed: 11/07/2018 14:48 Lab Sample ID: CCV3_CAL4

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.61	7.64	±30
Perfluoropentanoic acid	8.00	8.72	9.00	±30
Perfluorobutanesulfonate	7.08	7.43	5.00	±30
4:2 fluorotelomersulfonate	7.47	7.87	5.27	±30
Perfluorohexanoic acid	8.00	8.43	5.40	±30
Perfluoropentanesulfonate	7.50	7.89	5.22	±30
Perfluorohexanesulfonate	7.56	7.37	-2.46	±30
Perfluoroheptanoic acid	8.00	8.28	3.54	±30
6:2 fluorotelomersulfonate	7.58	8.45	11.42	±30
Perfluoroheptanesulfonate	7.61	7.66	0.62	±30
Perfluorooctanoic acid	8.00	8.52	6.47	±30
Perfluoro-octanesulfonate	7.65	7.76	1.49	±30
Perfluorononanoic acid	8.00	8.48	5.95	±30
Perfluorononanesulfonate	7.68	8.51	10.82	±30
Perfluorodecanoic acid	8.00	8.11	1.41	±30
8:2 fluorotelomersulfonate	7.66	8.41	9.72	±30
Perfluorooctanesulfonamide	8.00	8.80	9.99	±30
NMeFOSAA	8.00	8.85	10.57	±30
Perfluorodecanesulfonate	7.70	8.19	6.35	±30
Perfluoroundecanoic acid	8.00	9.00	12.46	±30
NEtFOSAA	8.00	7.47	-6.67	±30
Perfluorododecanoic acid	8.00	8.23	2.90	±30
10:2-fluorotelomersulfonate	7.71	8.00	3.77	±30
NMePFOSAE	8.00	8.97	12.06	±30
NMePFOSA	8.00	8.21	2.62	±30
Perfluorododecanesulfonate	7.74	7.76	0.27	±30
NEtPFOSAE	8.00	8.31	3.84	±30
NEtPFOSA	8.00	7.81	-2.43	±30
Perfluorotridecanoic acid	8.00	7.97	-0.43	±30
Perfluorotetradecanoic acid	8.00	8.83	10.34	±30
Perfluorohexadecanoic acid	8.00	7.96	-0.49	±30
Perfluorooctadecanoic acid	8.00	8.87	10.83	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV07DCAL-20.WIFF

Date/Time Analyzed: 11/07/2018 11:09 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.09	4.37	±30
Perfluoropentanoic acid	2.00	2.08	4.09	±30
Perfluorobutanesulfonate	1.77	1.83	3.13	±30
4:2 fluorotelomersulfonate	1.98	2.11	6.41	±30
Perfluorohexanoic acid	2.00	2.25	12.42	±30
Perfluoropentanesulfonate	1.88	1.94	3.35	±30
Perfluorohexanesulfonate	1.89	1.93	1.87	±30
Perfluoroheptanoic acid	2.00	2.19	9.28	±30
6:2 fluorotelomersulfonate	2.09	1.92	-8.35	±30
Perfluoroheptanesulfonate	1.90	1.87	-1.62	±30
Perfluorooctanoic acid	2.00	2.15	7.42	±30
Perfluoro-octanesulfonate	1.91	2.09	9.36	±30
Perfluorononanoic acid	2.00	2.06	3.07	±30
Perfluorononanesulfonate	1.92	1.98	2.88	±30
Perfluorodecanoic acid	2.00	2.08	3.96	±30
8:2 fluorotelomersulfonate	2.11	2.09	-0.82	±30
Perfluorooctanesulfonamide	2.00	2.07	3.64	±30
NMeFOSAA	2.00	1.63	-18.67	±30
Perfluorodecanesulfonate	1.93	1.96	1.77	±30
Perfluoroundecanoic acid	2.00	2.16	8.03	±30
NEtFOSAA	2.00	1.95	-2.25	±30
Perfluorododecanoic acid	2.00	2.04	1.95	±30
10:2-fluorotelomersulfonate	2.12	1.64	-22.85	±30
NMePFOSAE	2.00	2.16	7.79	±30
NMePFOSA	2.00	2.14	6.78	±30
Perfluorododecanesulfonate	1.94	2.09	7.77	±30
NEtPFOSAE	2.00	2.19	9.62	±30
NEtPFOSA	2.00	1.79	-10.51	±30
Perfluorotridecanoic acid	2.00	2.06	2.83	±30
Perfluorotetradecanoic acid	2.00	2.10	4.78	±30
Perfluorohexadecanoic acid	2.00	2.06	2.88	±30
Perfluorooctadecanoic acid	2.00	2.01	0.72	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV12D-05.WIFF

Date/Time Analyzed: 11/12/2018 17:21 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.57	-4.52	±30
Perfluoropentanoic acid	0.60	0.62	3.21	±30
Perfluorobutanesulfonate	0.53	0.45	-14.70	±30
4:2 fluorotelomersulfonate	0.56	0.63	12.84	±30
Perfluorohexanoic acid	0.60	0.59	-1.34	±30
Perfluoropentanesulfonate	0.56	0.51	-9.18	±30
Perfluoroheptanoic acid	0.60	0.61	1.56	±30
Perfluorohexanesulfonate	0.55	0.48	-11.70	±30
6:2 fluorotelomersulfonate	0.57	0.53	-6.29	±30
Perfluoroheptanesulfonate	0.57	0.57	-0.94	±30
Perfluorooctanoic acid	0.60	0.57	-4.44	±30
Perfluoro-octanesulfonate	0.56	0.47	-15.84	±30
Perfluorononanoic acid	0.60	0.57	-4.62	±30
Perfluorononanesulfonate	0.58	0.55	-5.13	±30
Perfluorodecanoic acid	0.60	0.53	-12.39	±30
8:2 fluorotelomersulfonate	0.58	0.55	-4.16	±30
Perfluorooctanesulfonamide	0.60	0.54	-9.38	±30
NMeFOSAA	0.60	0.58	-3.02	±30
Perfluorodecanesulfonate	0.58	0.56	-2.98	±30
Perfluoroundecanoic acid	0.60	0.52	-13.54	±30
NEtFOSAA	0.60	0.52	-12.53	±30
Perfluorododecanoic acid	0.60	0.53	-12.36	±30
10:2-fluorotelomersulfonate	0.58	0.50	-13.27	±30
NMePFOSAE	0.60	0.61	2.31	±30
NMePFOSA	0.60	0.48	-19.71	±30
Perfluorododecanesulfonate	0.58	0.51	-13.00	±30
NEtPFOSAE	0.60	0.57	-4.26	±30
NEtPFOSA	0.60	0.57	-4.87	±30
Perfluorotridecanoic acid	0.60	0.55	-8.33	±30
Perfluorotetradecanoic acid	0.60	0.55	-7.70	±30
Perfluorohexadecanoic acid	0.60	0.61	1.72	±30
Perfluorooctadecanoic acid	0.60	0.54	-9.17	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV12D-15.WIFF

Date/Time Analyzed: 11/12/2018 18:51 Lab Sample ID: CCV2_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.23	11.68	±30
Perfluoropentanoic acid	2.00	2.41	20.31	±30
Perfluorobutanesulfonate	1.77	1.95	10.43	±30
4:2 fluorotelomersulfonate	1.87	2.00	6.82	±30
Perfluorohexanoic acid	2.00	2.29	14.37	±30
Perfluoropentanesulfonate	1.88	1.94	3.31	±30
Perfluoroheptanoic acid	2.00	2.36	17.79	±30
Perfluorohexanesulfonate	1.82	1.93	5.90	±30
6:2 fluorotelomersulfonate	1.90	2.05	7.84	±30
Perfluoroheptanesulfonate	1.90	2.08	9.37	±30
Perfluorooctanoic acid	2.00	2.16	8.18	±30
Perfluoro-octanesulfonate	1.85	2.02	9.23	±30
Perfluorononanoic acid	2.00	2.32	16.13	±30
Perfluorononanesulfonate	1.92	1.94	0.78	±30
Perfluorodecanoic acid	2.00	2.24	12.15	±30
8:2 fluorotelomersulfonate	1.92	2.11	10.00	±30
Perfluorooctanesulfonamide	2.00	2.14	6.88	±30
NMeFOSAA	2.00	2.00	0.06	±30
Perfluorodecanesulfonate	1.93	2.24	16.30	±30
Perfluoroundecanoic acid	2.00	2.17	8.33	±30
NEtFOSAA	2.00	2.19	9.43	±30
Perfluorododecanoic acid	2.00	2.26	12.83	±30
10:2-fluorotelomersulfonate	1.93	2.34	21.35	±30
NMePFOSAE	2.00	2.36	18.01	±30
NMePFOSA	2.00	1.93	-3.71	±30
Perfluorododecanesulfonate	1.94	2.20	13.40	±30
NEtPFOSAE	2.00	2.09	4.64	±30
NEtPFOSA	2.00	2.05	2.42	±30
Perfluorotridecanoic acid	2.00	2.29	14.52	±30
Perfluorotetradecanoic acid	2.00	2.22	11.08	±30
Perfluorohexadecanoic acid	2.00	2.28	13.77	±30
Perfluorooctadecanoic acid	2.00	2.16	8.09	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV12D-24.WIFF

Date/Time Analyzed: 11/12/2018 20:13 Lab Sample ID: CCV3_CAL4

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.24	3.00	±30
Perfluoropentanoic acid	8.00	8.73	9.09	±30
Perfluorobutanesulfonate	7.08	6.88	-2.81	±30
4:2 fluorotelomersulfonate	7.47	8.54	14.27	±30
Perfluorohexanoic acid	8.00	8.59	7.34	±30
Perfluoropentanesulfonate	7.50	7.37	-1.69	±30
Perfluoroheptanoic acid	8.00	8.40	5.01	±30
Perfluorohexanesulfonate	7.30	7.44	1.96	±30
6:2 fluorotelomersulfonate	7.58	7.56	-0.28	±30
Perfluoroheptanesulfonate	7.61	7.77	2.11	±30
Perfluorooctanoic acid	8.00	8.19	2.34	±30
Perfluoro-octanesulfonate	7.40	7.17	-3.09	±30
Perfluorononanoic acid	8.00	8.87	10.84	±30
Perfluorononanesulfonate	7.68	7.57	-1.37	±30
Perfluorodecanoic acid	8.00	7.92	-0.97	±30
8:2 fluorotelomersulfonate	7.66	8.36	9.20	±30
Perfluorooctanesulfonamide	8.00	7.41	-7.42	±30
NMeFOSAA	8.00	9.13	14.18	±30
Perfluorodecanesulfonate	7.70	7.76	0.77	±30
Perfluoroundecanoic acid	8.00	8.22	2.76	±30
NEtFOSAA	8.00	7.26	-9.24	±30
Perfluorododecanoic acid	8.00	7.78	-2.69	±30
10:2-fluorotelomersulfonate	7.71	8.69	12.71	±30
NMePFOSAE	8.00	8.49	6.14	±30
NMePFOSA	8.00	8.24	2.99	±30
Perfluorododecanesulfonate	7.74	7.60	-1.83	±30
NEtPFOSAE	8.00	8.41	5.14	±30
NEtPFOSA	8.00	7.61	-4.84	±30
Perfluorotridecanoic acid	8.00	7.84	-1.99	±30
Perfluorotetradecanoic acid	8.00	8.18	2.23	±30
Perfluorohexadecanoic acid	8.00	8.03	0.34	±30
Perfluorooctadecanoic acid	8.00	8.44	5.52	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV12D-35.WIFF

Date/Time Analyzed: 11/12/2018 21:52 Lab Sample ID: CCV4_ISC_CAL2

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.59	-1.36	±30
Perfluoropentanoic acid	0.60	0.59	-1.39	±30
Perfluorobutanesulfonate	0.53	0.49	-7.40	±30
4:2 fluorotelomersulfonate	0.56	0.61	8.44	±30
Perfluorohexanoic acid	0.60	0.56	-6.71	±30
Perfluoropentanesulfonate	0.56	0.51	-9.20	±30
Perfluoroheptanoic acid	0.60	0.62	4.01	±30
Perfluorohexanesulfonate	0.55	0.48	-11.87	±30
6:2 fluorotelomersulfonate	0.57	0.53	-7.32	±30
Perfluoroheptanesulfonate	0.57	0.55	-3.47	±30
Perfluorooctanoic acid	0.60	0.55	-7.90	±30
Perfluoro-octanesulfonate	0.56	0.49	-11.16	±30
Perfluorononanoic acid	0.60	0.63	5.78	±30
Perfluorononanesulfonate	0.58	0.53	-8.67	±30
Perfluorodecanoic acid	0.60	0.57	-5.45	±30
8:2 fluorotelomersulfonate	0.58	0.51	-11.24	±30
Perfluorooctanesulfonamide	0.60	0.49	-18.07	±30
NMeFOSAA	0.60	0.57	-5.33	±30
Perfluorodecanesulfonate	0.58	0.48	-16.56	±30
Perfluoroundecanoic acid	0.60	0.57	-5.45	±30
NEtFOSAA	0.60	0.50	-15.84	±30
Perfluorododecanoic acid	0.60	0.53	-11.11	±30
10:2-fluorotelomersulfonate	0.58	0.62	7.76	±30
NMePFOSAE	0.60	0.59	-1.10	±30
NMePFOSA	0.60	0.54	-10.47	±30
Perfluorododecanesulfonate	0.58	0.44	-24.93	±30
NEtPFOSAE	0.60	0.53	-10.92	±30
NEtPFOSA	0.60	0.62	2.54	±30
Perfluorotridecanoic acid	0.60	0.57	-4.64	±30
Perfluorotetradecanoic acid	0.60	0.55	-7.53	±30
Perfluorohexadecanoic acid	0.60	0.58	-2.63	±30
Perfluorooctadecanoic acid	0.60	0.53	-11.67	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV12D-47.WIFF

Date/Time Analyzed: 11/12/2018 23:40 Lab Sample ID: CCV5_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.28	13.78	±30
Perfluoropentanoic acid	2.00	2.42	21.14	±30
Perfluorobutanesulfonate	1.77	1.85	4.63	±30
4:2 fluorotelomersulfonate	1.87	2.24	19.63	±30
Perfluorohexanoic acid	2.00	2.22	10.98	±30
Perfluoropentanesulfonate	1.88	2.01	6.68	±30
Perfluoroheptanoic acid	2.00	2.35	17.43	±30
Perfluorohexanesulfonate	1.82	2.00	9.95	±30
6:2 fluorotelomersulfonate	1.90	2.13	12.14	±30
Perfluoroheptanesulfonate	1.90	2.03	6.81	±30
Perfluorooctanoic acid	2.00	2.15	7.70	±30
Perfluoro-octanesulfonate	1.85	1.97	6.67	±30
Perfluorononanoic acid	2.00	2.42	21.18	±30
Perfluorononanesulfonate	1.92	1.97	2.75	±30
Perfluorodecanoic acid	2.00	2.25	12.71	±30
8:2 fluorotelomersulfonate	1.92	2.39	24.48	±30
Perfluorooctanesulfonamide	2.00	2.06	2.85	±30
NMeFOSAA	2.00	2.40	19.83	±30
Perfluorodecanesulfonate	1.93	1.95	1.27	±30
Perfluoroundecanoic acid	2.00	2.26	13.06	±30
NEtFOSAA	2.00	1.84	-7.96	±30
Perfluorododecanoic acid	2.00	2.09	4.61	±30
10:2-fluorotelomersulfonate	1.93	2.38	23.57	±30
NMePFOSAE	2.00	2.19	9.64	±30
NMePFOSA	2.00	1.72	-13.99	±30
Perfluorododecanesulfonate	1.94	1.97	1.77	±30
NEtPFOSAE	2.00	2.29	14.48	±30
NEtPFOSA	2.00	1.81	-9.44	±30
Perfluorotridecanoic acid	2.00	2.23	11.35	±30
Perfluorotetradecanoic acid	2.00	2.28	14.15	±30
Perfluorohexadecanoic acid	2.00	2.27	13.71	±30
Perfluorooctadecanoic acid	2.00	2.21	10.28	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV12D-58.WIFF

Date/Time Analyzed: 11/13/2018 01:20 Lab Sample ID: CCV6_CAL4

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.06	0.73	±30
Perfluoropentanoic acid	8.00	8.59	7.38	±30
Perfluorobutanesulfonate	7.08	6.93	-2.07	±30
4:2 fluorotelomersulfonate	7.47	7.43	-0.51	±30
Perfluorohexanoic acid	8.00	8.10	1.27	±30
Perfluoropentanesulfonate	7.50	6.94	-7.41	±30
Perfluoroheptanoic acid	8.00	8.47	5.91	±30
Perfluorohexanesulfonate	7.30	7.39	1.22	±30
6:2 fluorotelomersulfonate	7.58	8.17	7.83	±30
Perfluoroheptanesulfonate	7.61	7.25	-4.78	±30
Perfluorooctanoic acid	8.00	8.60	7.46	±30
Perfluoro-octanesulfonate	7.40	7.40	-0.06	±30
Perfluorononanoic acid	8.00	8.49	6.08	±30
Perfluorononanesulfonate	7.68	7.43	-3.28	±30
Perfluorodecanoic acid	8.00	7.87	-1.65	±30
8:2 fluorotelomersulfonate	7.66	8.83	15.34	±30
Perfluorooctanesulfonamide	8.00	7.68	-4.00	±30
NMeFOSAA	8.00	8.33	4.15	±30
Perfluorodecanesulfonate	7.70	7.34	-4.62	±30
Perfluoroundecanoic acid	8.00	7.88	-1.54	±30
NEtFOSAA	8.00	7.20	-9.95	±30
Perfluorododecanoic acid	8.00	8.15	1.93	±30
10:2-fluorotelomersulfonate	7.71	8.80	14.20	±30
NMePFOSAE	8.00	8.67	8.42	±30
NMePFOSA	8.00	7.71	-3.62	±30
Perfluorododecanesulfonate	7.74	7.31	-5.52	±30
NEtPFOSAE	8.00	7.80	-2.50	±30
NEtPFOSA	8.00	8.41	5.12	±30
Perfluorotridecanoic acid	8.00	8.67	8.37	±30
Perfluorotetradecanoic acid	8.00	8.25	3.18	±30
Perfluorohexadecanoic acid	8.00	8.58	7.25	±30
Perfluorooctadecanoic acid	8.00	8.57	7.11	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI08

Instrument ID: 27631 Lab File ID: 18NOV12DCAL-52.WIFF

Date/Time Analyzed: 11/12/2018 16:36 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.29	14.39	±30
Perfluoropentanoic acid	2.00	2.35	17.52	±30
Perfluorobutanesulfonate	1.77	1.85	4.70	±30
4:2 fluorotelomersulfonate	1.87	1.97	5.23	±30
Perfluorohexanoic acid	2.00	2.37	18.39	±30
Perfluoropentanesulfonate	1.88	1.99	5.89	±30
Perfluoroheptanoic acid	2.00	2.33	16.60	±30
Perfluorohexanesulfonate	1.82	1.97	8.45	±30
6:2 fluorotelomersulfonate	1.90	2.38	25.21	±30
Perfluoroheptanesulfonate	1.90	2.05	7.87	±30
Perfluorooctanoic acid	2.00	2.34	17.00	±30
Perfluoro-octanesulfonate	1.85	2.05	10.87	±30
Perfluorononanoic acid	2.00	2.25	12.52	±30
Perfluorononanesulfonate	1.92	2.04	6.21	±30
Perfluorodecanoic acid	2.00	2.21	10.29	±30
8:2 fluorotelomersulfonate	1.92	1.86	-3.14	±30
Perfluorooctanesulfonamide	2.00	1.66	-17.08	±30
NMeFOSAA	2.00	2.20	10.04	±30
Perfluorodecanesulfonate	1.93	2.17	12.52	±30
Perfluoroundecanoic acid	2.00	2.13	6.44	±30
NEtFOSAA	2.00	1.83	-8.35	±30
Perfluorododecanoic acid	2.00	2.34	17.18	±30
10:2-fluorotelomersulfonate	1.93	1.71	-11.18	±30
NMePFOSAE	2.00	2.39	19.28	±30
NMePFOSA	2.00	2.07	3.39	±30
Perfluorododecanesulfonate	1.94	2.27	16.87	±30
NEtPFOSAE	2.00	2.32	15.96	±30
NEtPFOSA	2.00	2.04	2.16	±30
Perfluorotridecanoic acid	2.00	2.35	17.54	±30
Perfluorotetradecanoic acid	2.00	2.36	18.05	±30
Perfluorohexadecanoic acid	2.00	2.15	7.32	±30
Perfluorooctadecanoic acid	2.00	2.13	6.56	±30

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

Batch: 18309005 File Name:18NOV07DCAL-12.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		311442	524424	730411	274062
LOWER LIMIT		155721	262212	365206	137031
UPPER LIMIT		467163	786636	1095617	411093
LAB SAMPLE ID	**DATE ANALYZED**				
BLK309005	11/07/18 13:17	353256	565630	813266	295029
LCS309005	11/07/18 13:26	354733	555052	775987	284083
LCSDA	11/07/18 13:35	382065	565668	766560	288519
9881938	11/07/18 13:45	378343	568200	782947	298333
9881938MS	11/07/18 13:54	352117	591520	759370	291401
9881939	11/07/18 14:03	353179	572828	790120	294806
9881940	11/07/18 14:12	350181	545509	765072	291072
9881941	11/07/18 14:21	356230	569005	802595	301402

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

Batch: 18313005 File Name:18NOV12DCAL-44.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		278744	450220	659926	249206
LOWER LIMIT		139372	225110	329963	124603
UPPER LIMIT		418116	675330	989889	373809
LAB SAMPLE ID	**DATE ANALYZED**				
BLK313005	11/12/18 19:00	307142	477712	704295	265256
LCS313005	11/12/18 19:09	312084	496519	681266	253719
9881940RE	11/12/18 19:45	325346	531234	698949	260298

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI08
Matrix: SOIL

Batch: 18314006 File Name:18NOV12DCAL-44.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		278744	450220	659926	249206
LOWER LIMIT		139372	225110	329963	124603
UPPER LIMIT		418116	675330	989889	373809
LAB SAMPLE ID	**DATE ANALYZED**				
BLK314006	11/12/18 22:37	301446	492840	698915	264794
LCS314006	11/12/18 22:46	298114	483546	706876	262275
9881942	11/12/18 23:49	338637	492233	718615	261590

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

Sample Data

PFAS by LC/MS/MS

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881938BKG			**Data File:**		18NOV07D-17.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-GW-9-S-01-05 Grab Soil			**Acquis Date:**		2018-11-07T13:45:00
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	16			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	782947.1	730410.6	7	50	
13C2-PFOA	5.0	568200.2	524423.6	8	50	
13C4-PFOS	4.8	298333.5	274061.7	9	50	
13C2-PFDA	5.0	378343.0	311442.1	21	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	395727.8	13C3-PFBA	782947.1	0.505	9.029	7.203	80	50-150	
E13C5-PFHxA	641767.3	13C2-PFOA	568200.2	1.129	9.709	8.067	83	50-150	
E13C3-PFHxS	305416.1	13C2-PFOA	568200.2	0.538	9.184	7.493	82	50-150	
E13C4-PFHpA	498426.2	13C2-PFOA	568200.2	0.877	9.709	7.749	80	50-150	
E13C8-PFOA	861746.6	13C2-PFOA	568200.2	1.517	9.709	8.212	85	50-150	
E13C8-PFOS	268622.1	13C4-PFOS	298333.5	0.900	9.282	7.731	83	50-150	
E13C9-PFNA	477584.4	13C4-PFOS	298333.5	1.601	9.709	8.491	87	50-150	
E13C6-PFDA	562972.6	13C2-PFDA	378343.0	1.488	9.709	7.266	75	50-150	
Ed3-NMeFOSAA	49512.8	13C2-PFDA	378343.0	0.131	9.709	4.725	49	50-150	OOS
E13C7-PFUnDA	251503.1	13C2-PFDA	378343.0	0.665	9.709	7.446	77	50-150	
Ed5-NEtFOSAA	43586.0	13C2-PFDA	378343.0	0.115	9.709	5.177	53	50-150	
E13C2-PFDoDA	548902.3	13C2-PFDA	378343.0	1.451	9.709	7.594	78	50-150	
E13C2-PFTeDA	386817.6	13C2-PFDA	378343.0	1.022	9.709	7.147	74	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

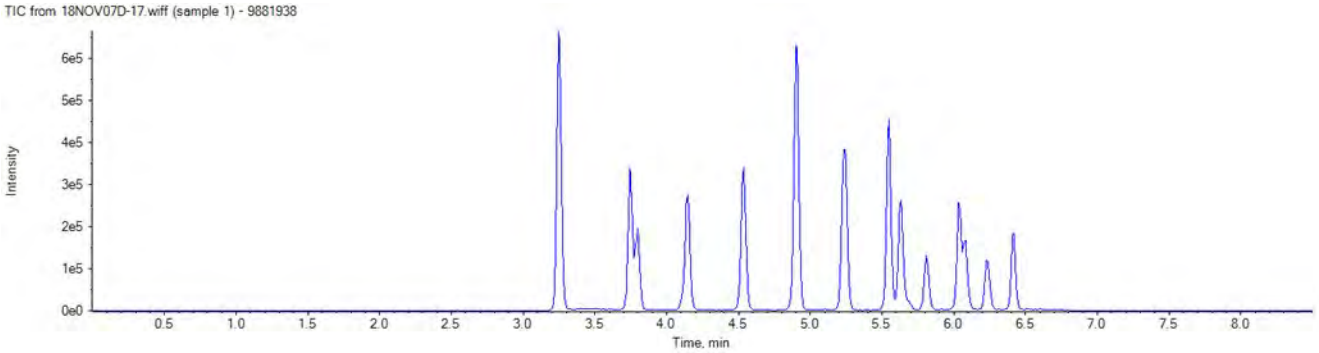
Analyte Quantitation Peak Table

Sample Name: 9881938BKG **Instrument Name:** LM27631 **File Name:** 18NOV07D-17.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	395727.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.14	641767.3	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	305416.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.53	498426.2	N/A	
PFOA	4.91	1.000	10753.1		A	13C8-PFOA	4.90	861746.6	0.012	0.136
PFOS	5.23	1.000	23574.2		M	13C8-PFOS	5.23	268622.1	0.088	0.884
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	477584.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	562972.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	49512.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	251503.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	43586.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	548902.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	548902.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	386817.6	N/A	

Total Ion Chromatogram

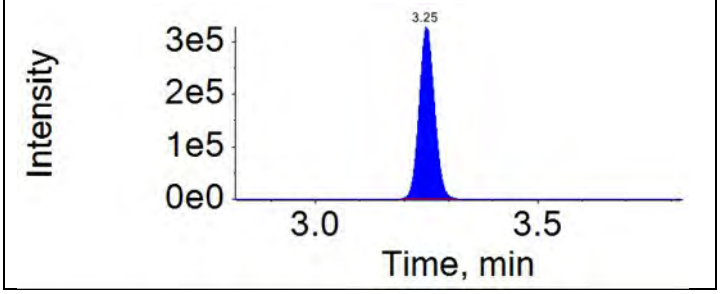


APPROVED
By MCD at 4:42 pm, 11/8/18

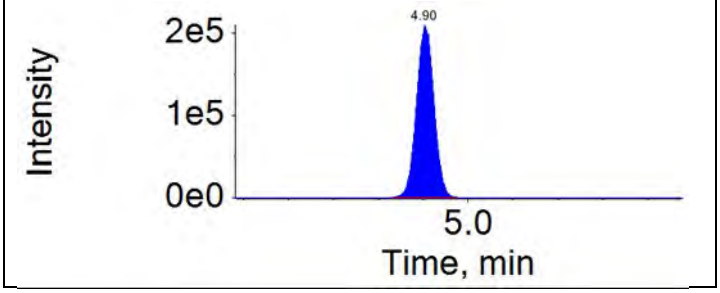
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

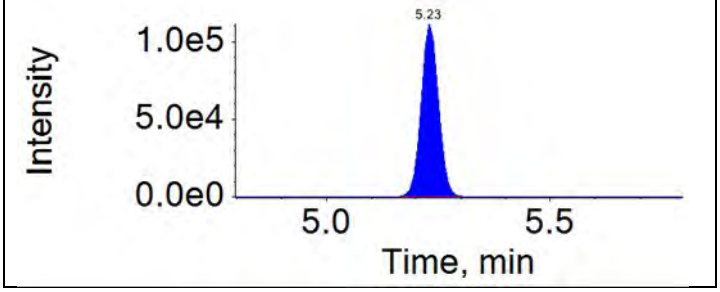
Injection Standard: 13C3-PFBA
216.0 / 172.0



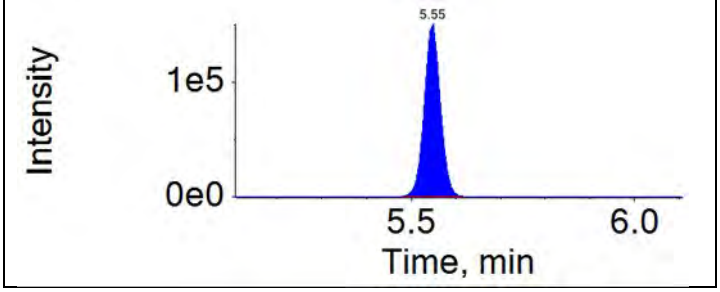
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



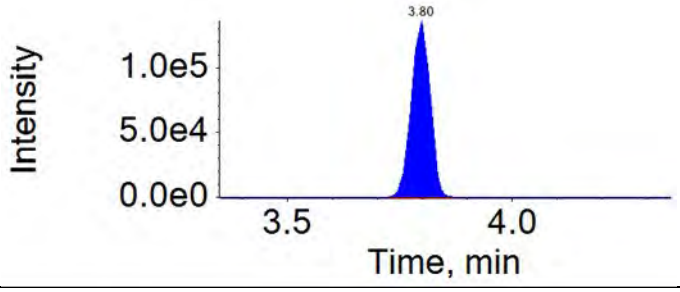
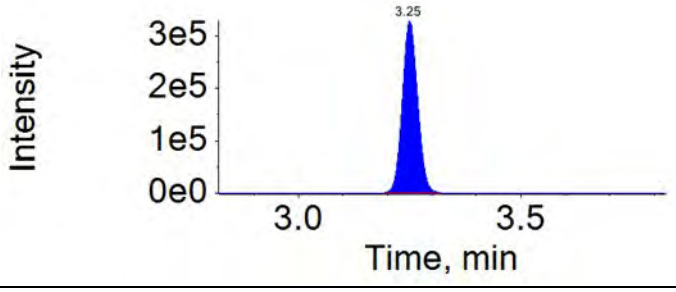
Injection Standard: 13C2-PFDA
515.0 / 470.0

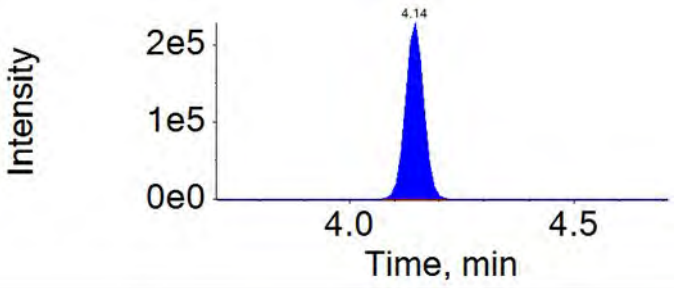
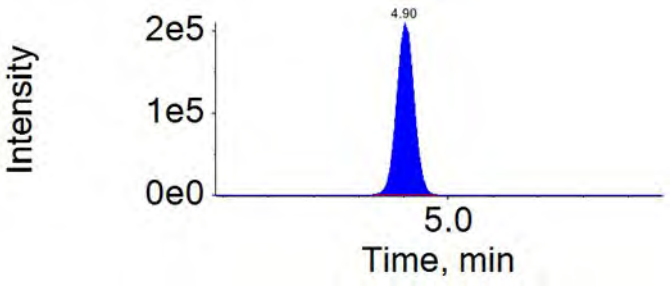


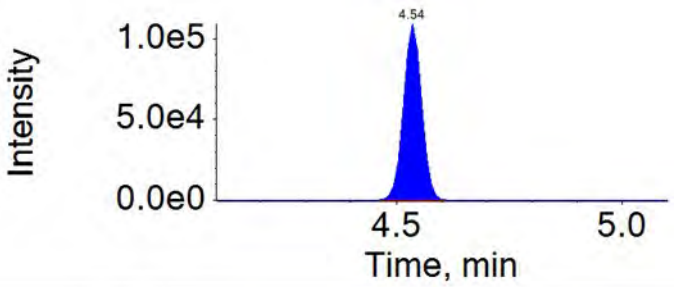
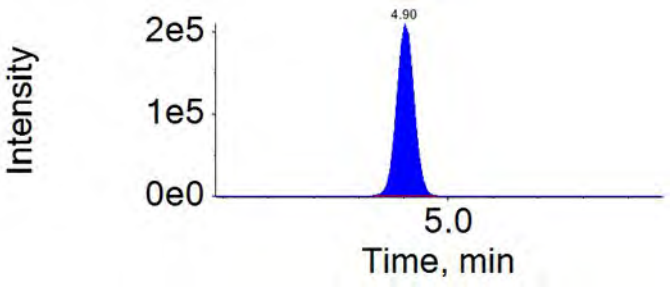
APPROVED
By MCD at 4:42 pm, 11/8/18

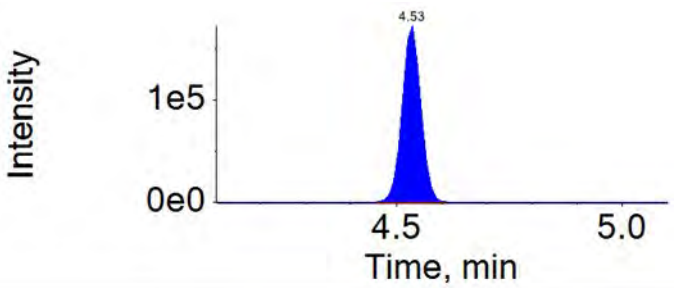
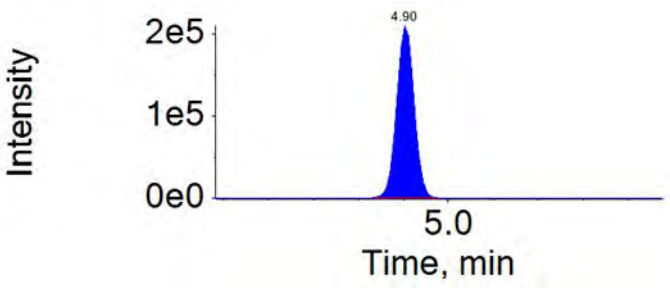
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

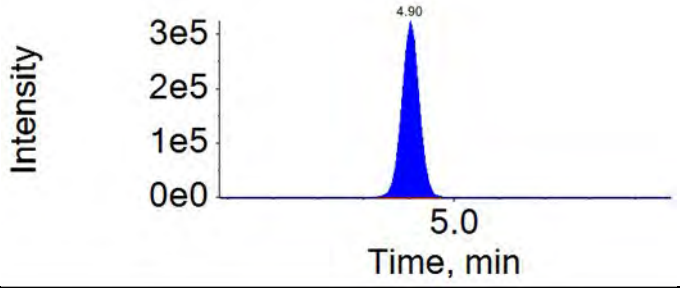
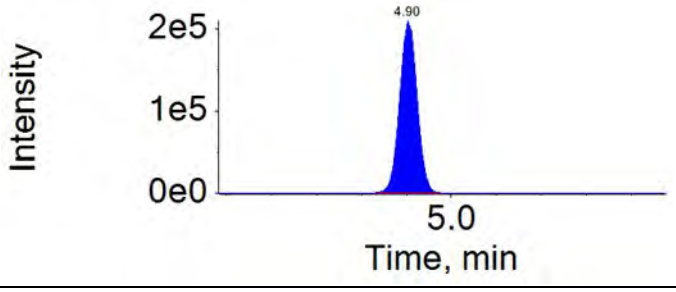
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

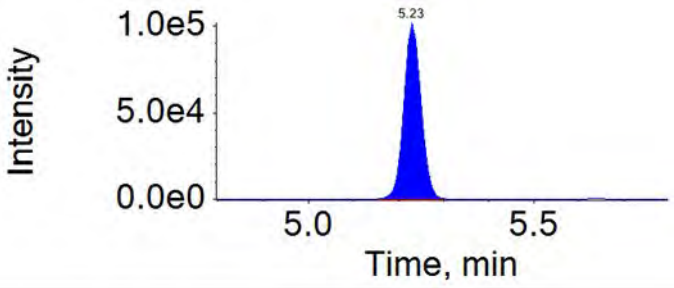
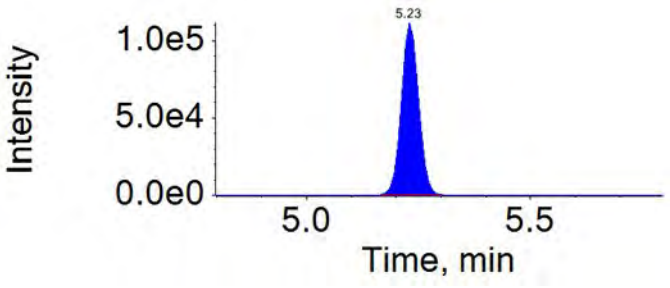
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

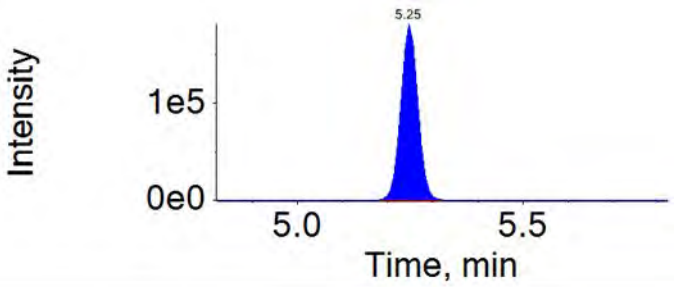
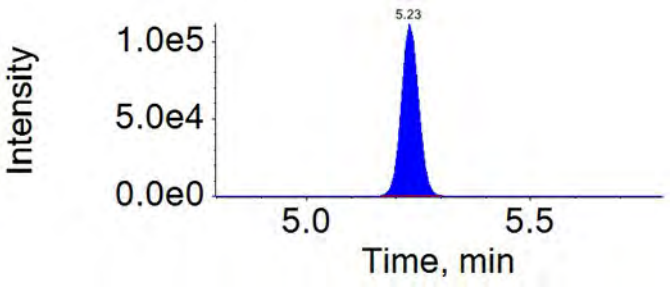
APPROVED
By MCD at 4:42 pm, 11/8/18

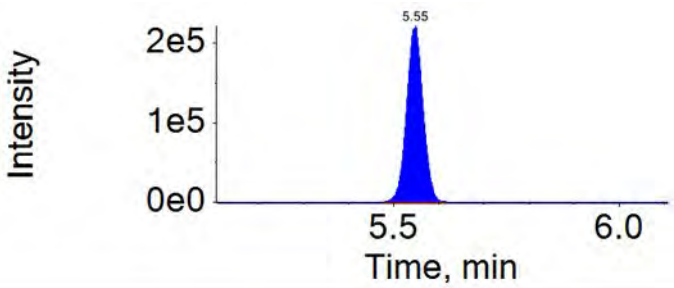
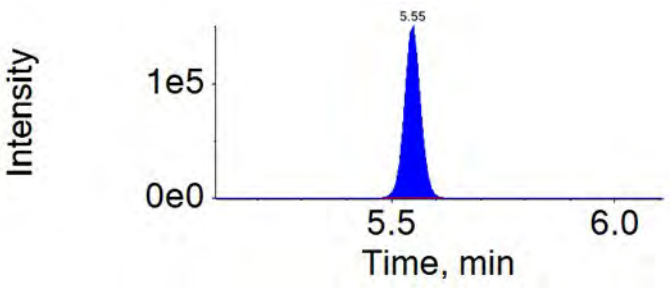
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

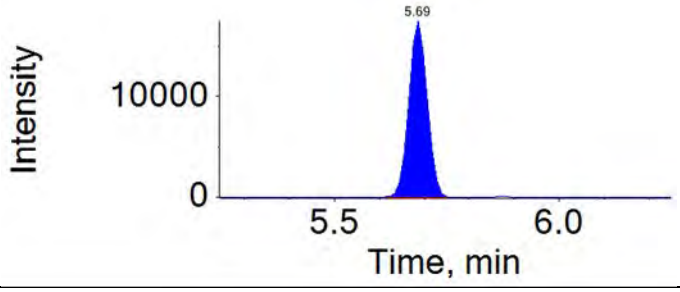
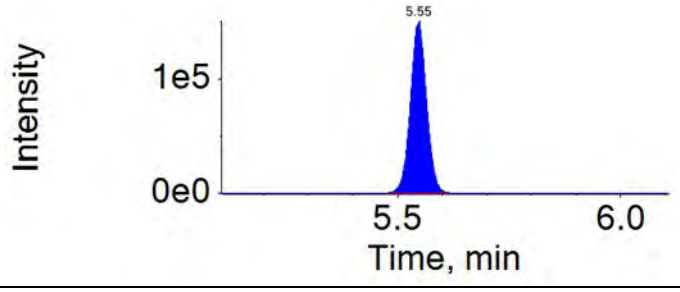
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

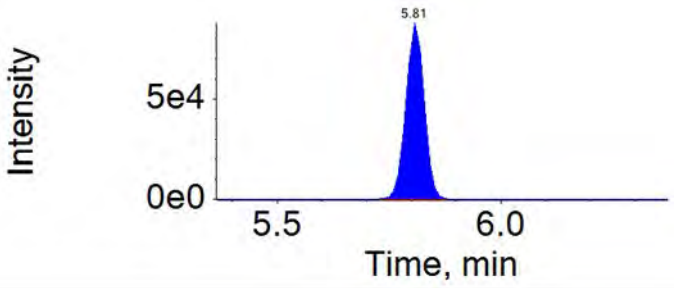
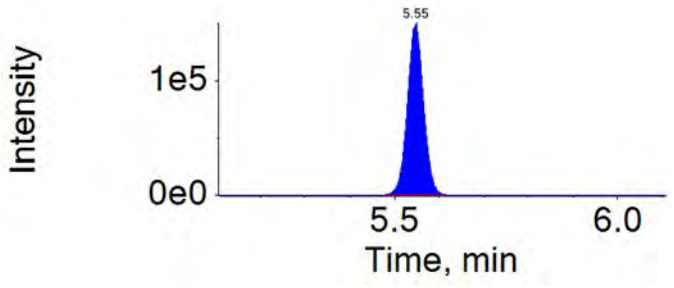
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

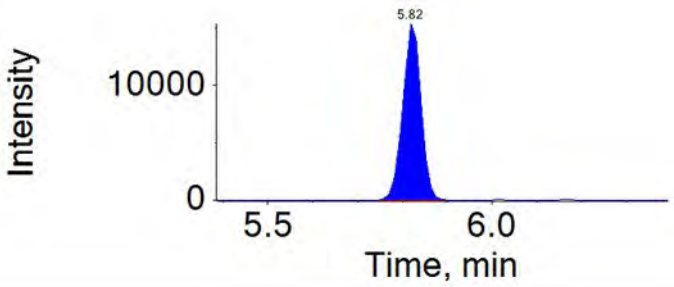
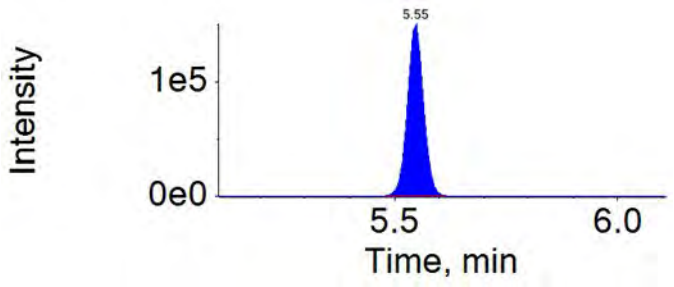
APPROVED
By MCD at 4:42 pm, 11/8/18

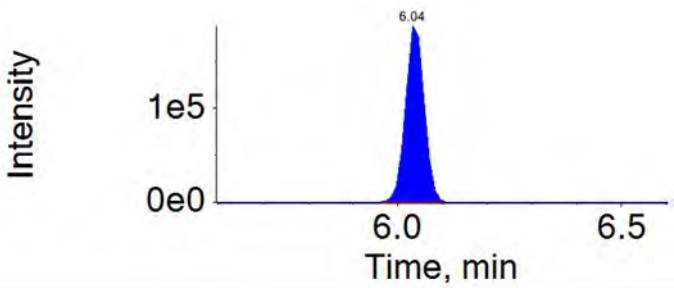
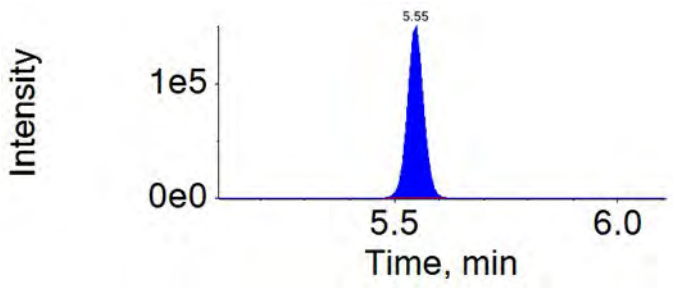
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

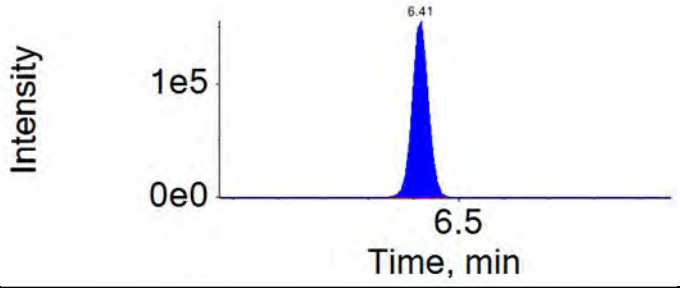
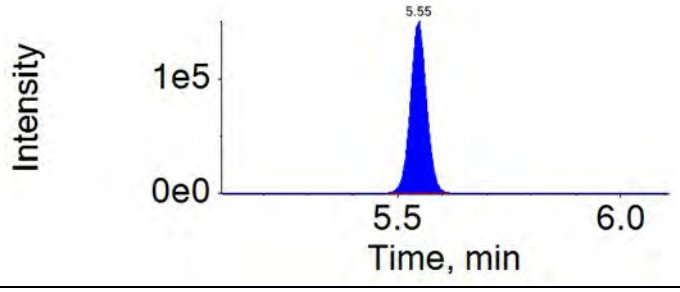
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

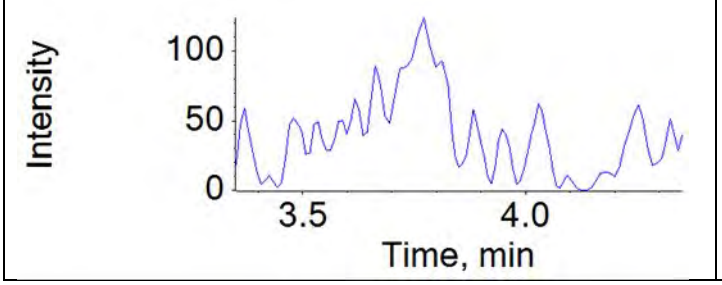
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

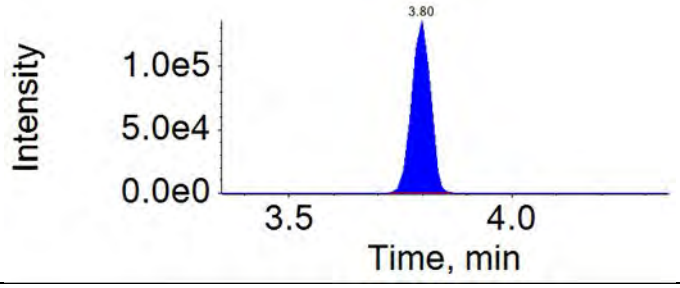
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

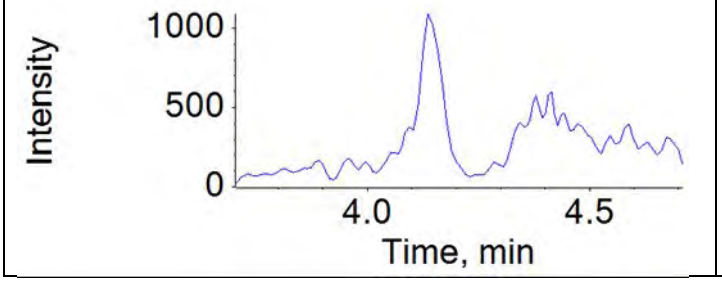
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

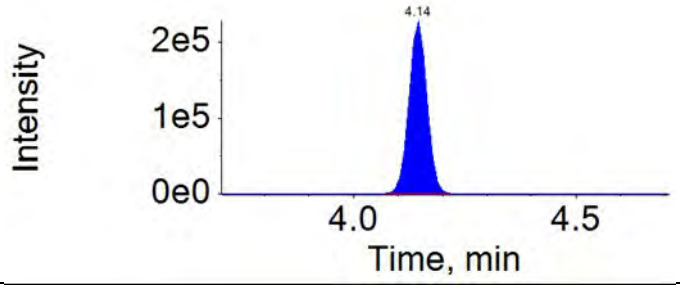
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



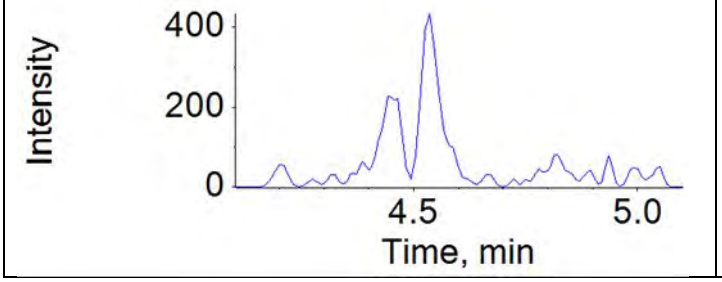


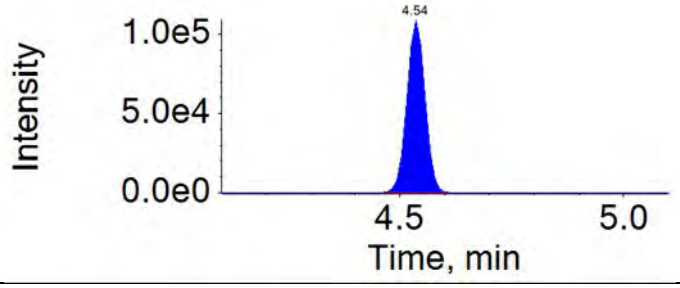
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



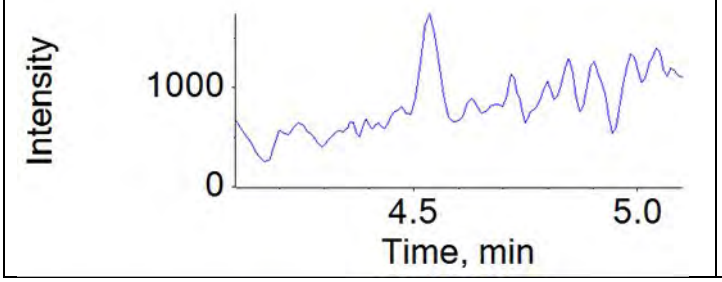


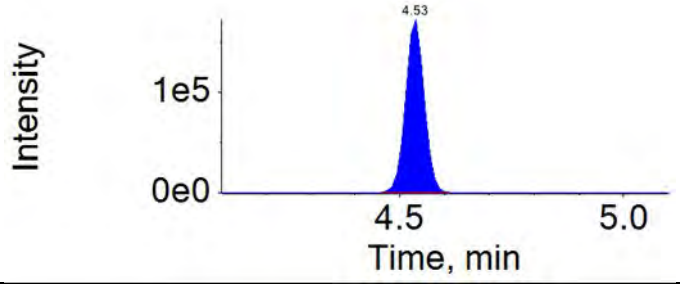
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

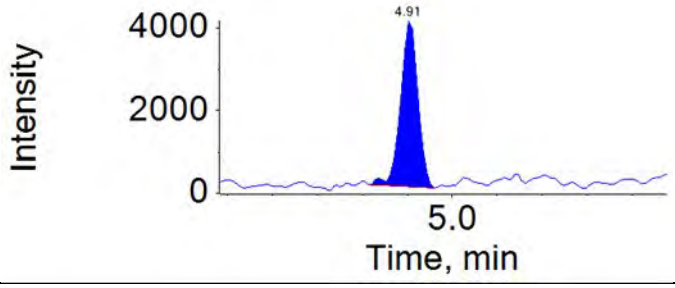
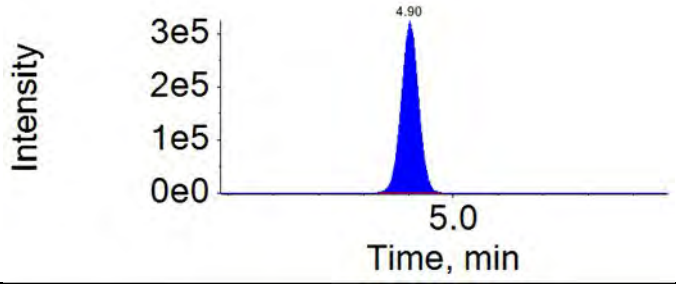


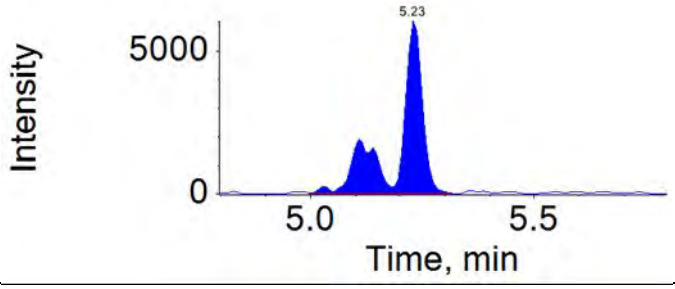
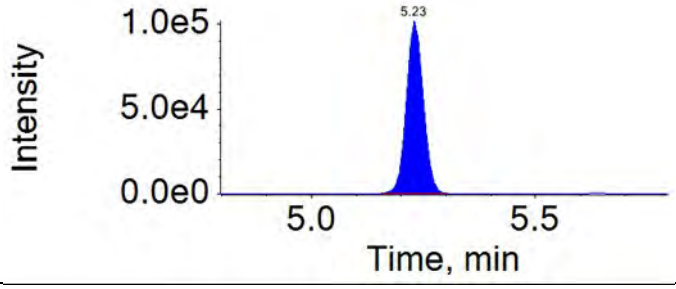


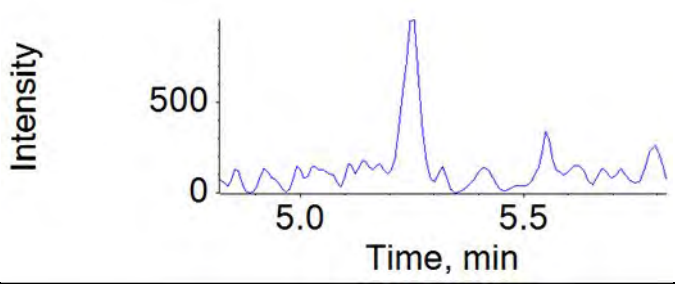
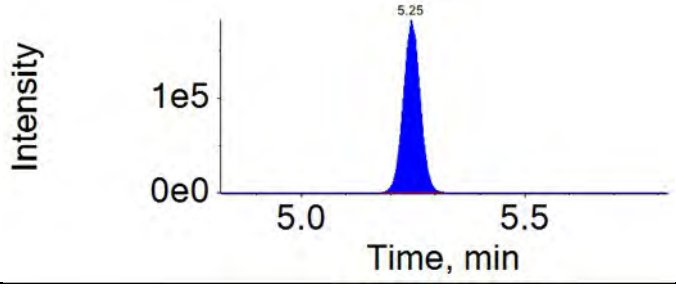
APPROVED
By MCD at 4:42 pm, 11/8/18

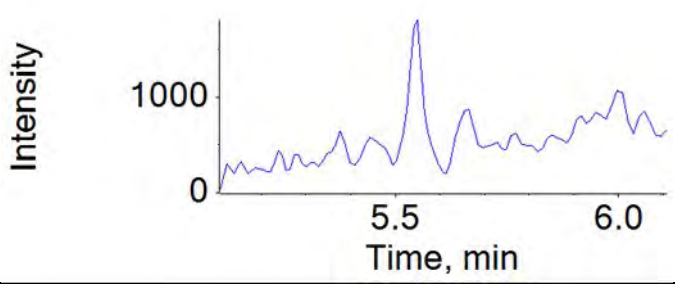
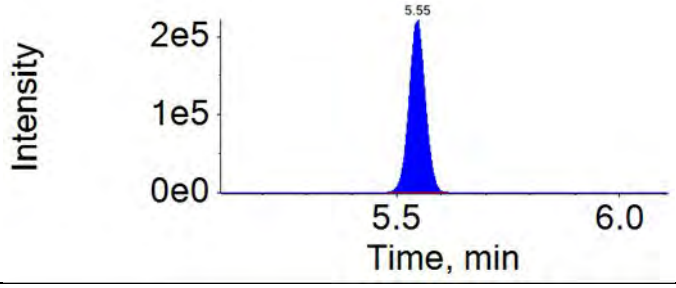
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

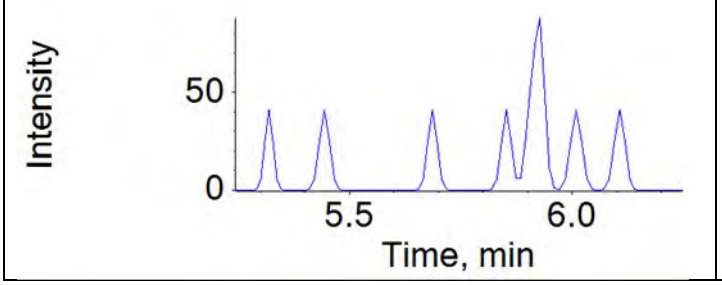
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

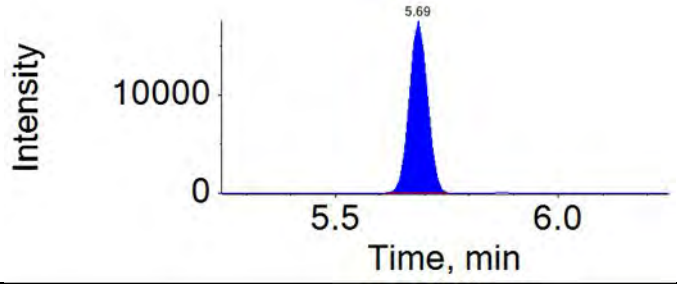
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

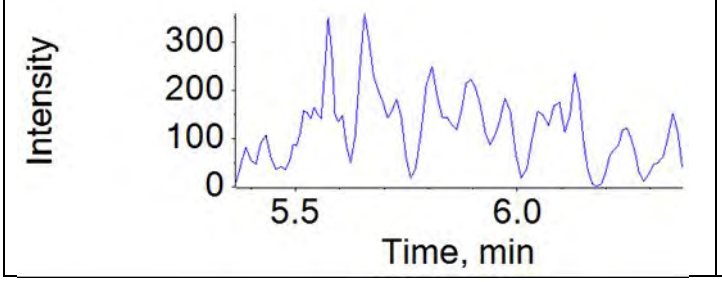
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

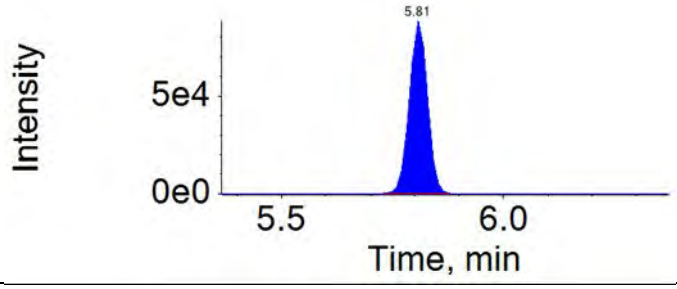
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



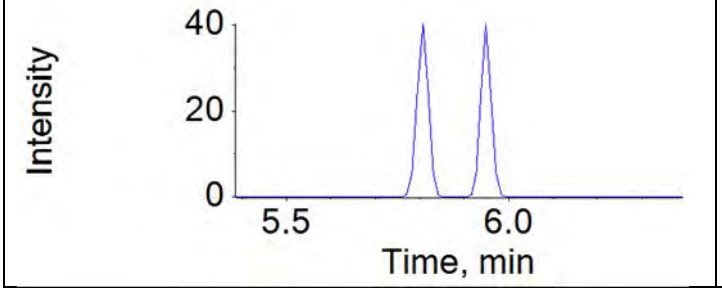


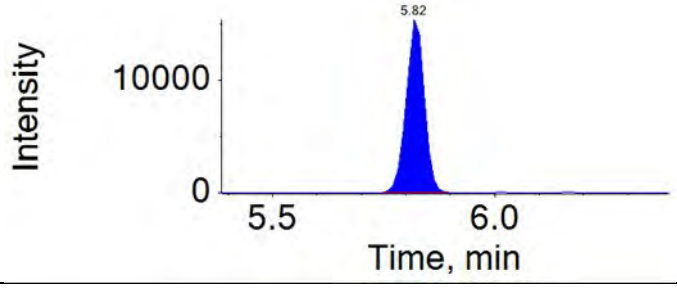
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



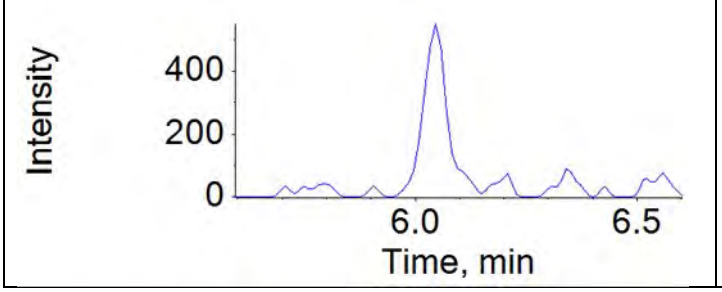


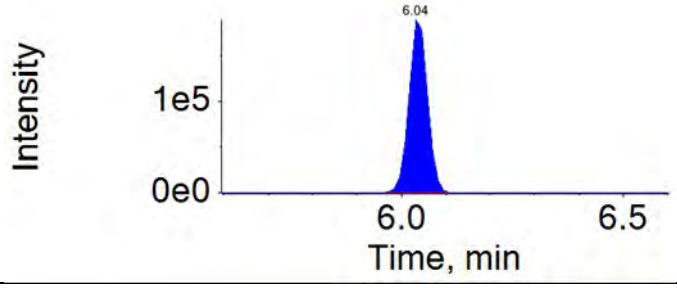
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



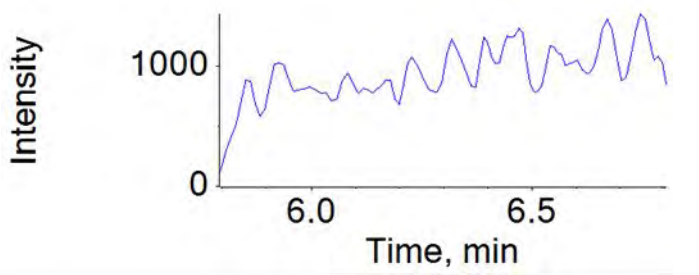


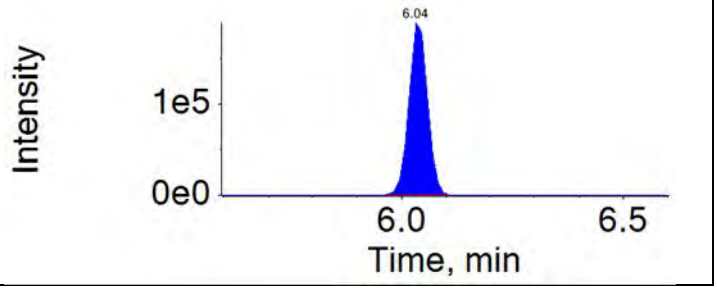
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

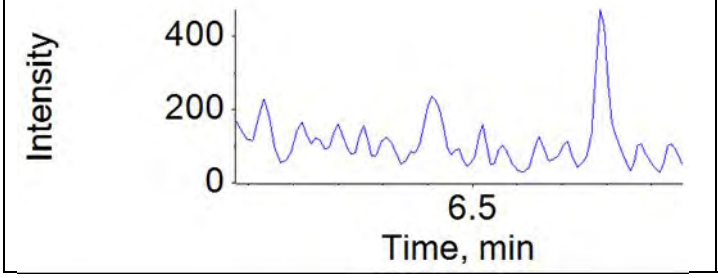
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

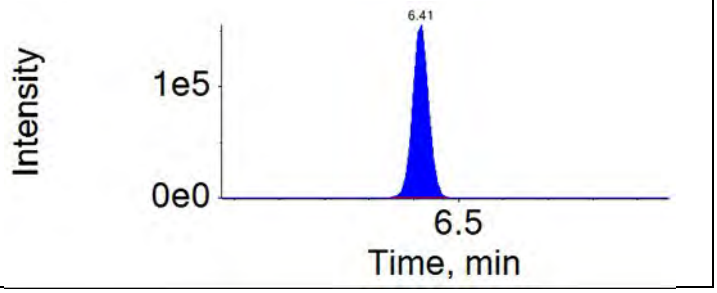
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



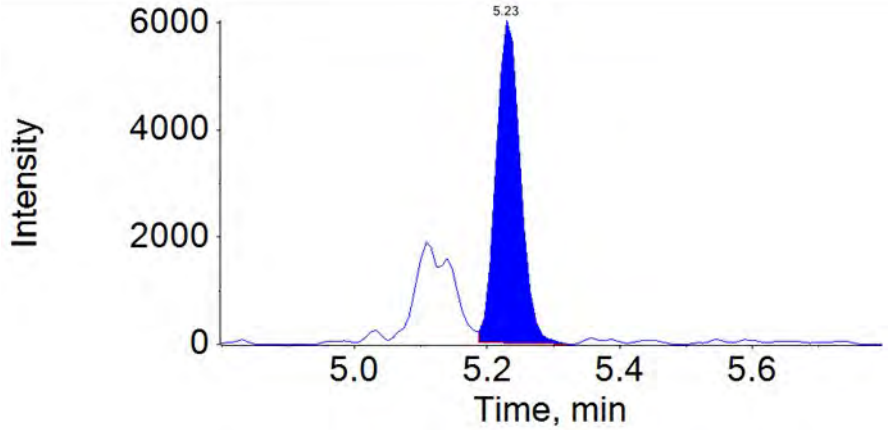


APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

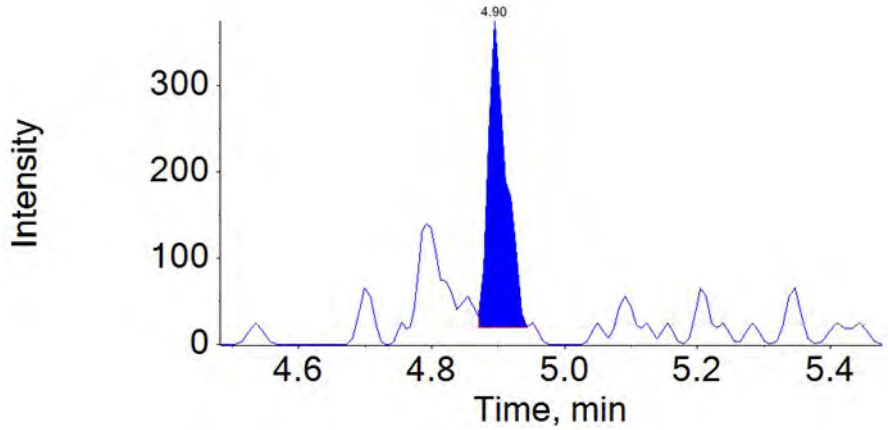
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
15312.2
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-17.wiff
Sample Name:
9881938BKG



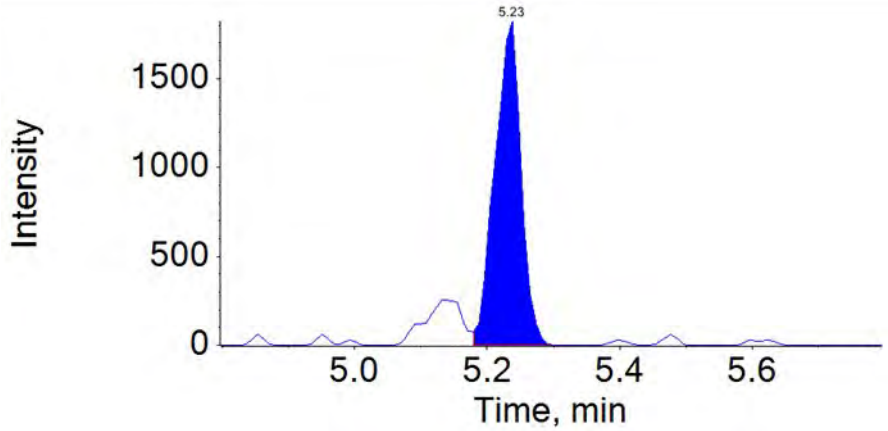
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.90
Peak Area:
662.3
Mass Range:
413.0 / 169.0
File Name:
18NOV07D-17.wiff
Sample Name:
9881938BKG



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
5006.6
Mass Range:
499.0 / 99.0
File Name:
18NOV07D-17.wiff
Sample Name:
9881938BKG



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

Ion Ratio Report

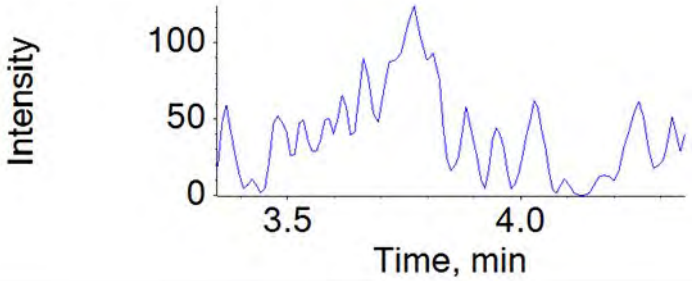
Sample Name: 9881938BKG **Instrument Name:** LM27631 **File Name:** 18NOV07D-17.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.91	1.00	10753.1	A	N/A	0.0933			
PFOA_2	4.90	1.00	1003.6	M	N/A	0.0933	46	50	
PFOS	5.23	1.00	23574.2	M	N/A	0.2554			
PFOS_2	5.23	1.00	6021.7	M	N/A	0.2554	-27	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

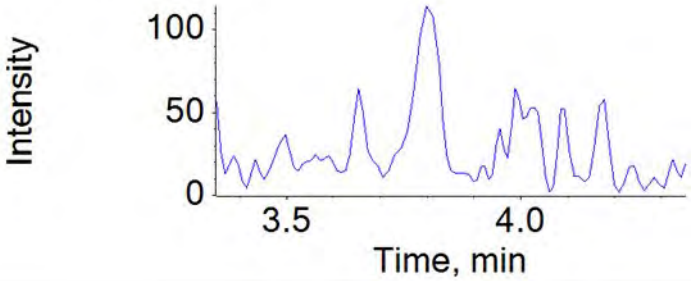
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

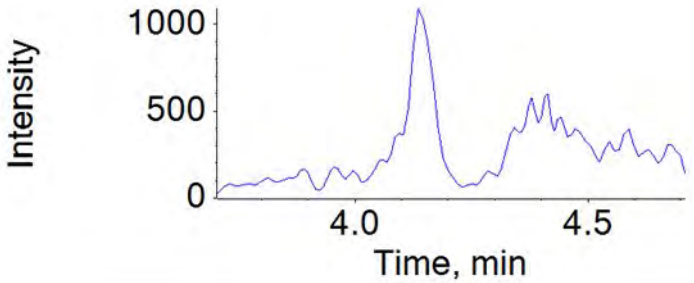
Component: PFBS
Primary Mass: 299.0 / 80.0



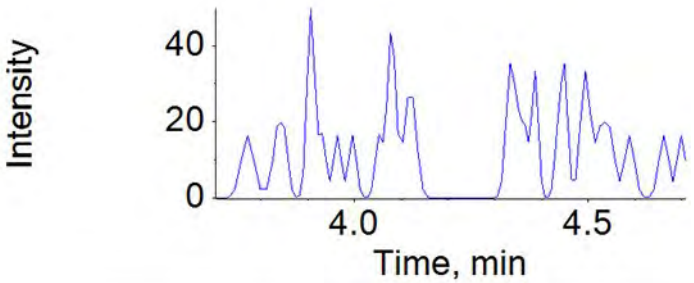
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



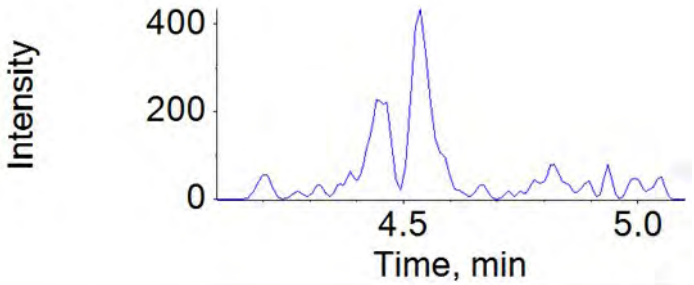
Component: PFHxA
Primary Mass: 313.0 / 269.0



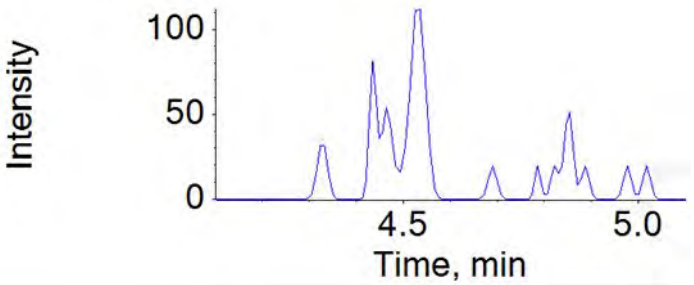
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



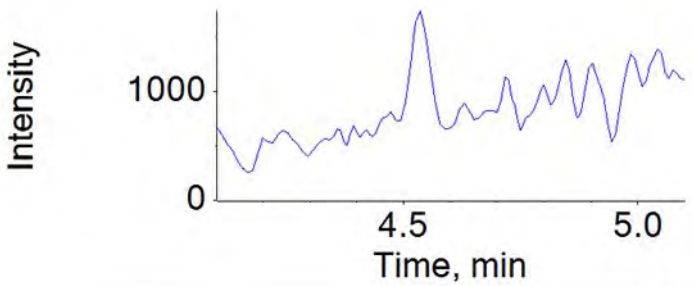
Component: PFHxS
Primary Mass: 399.0 / 80.0



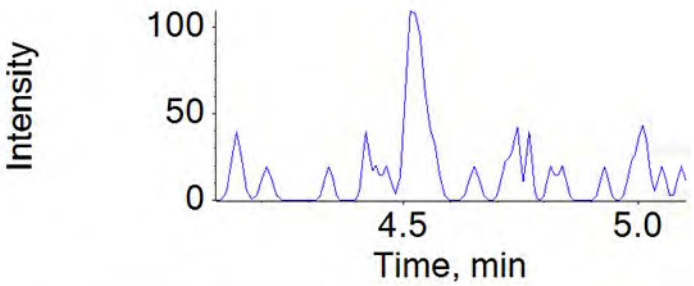
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



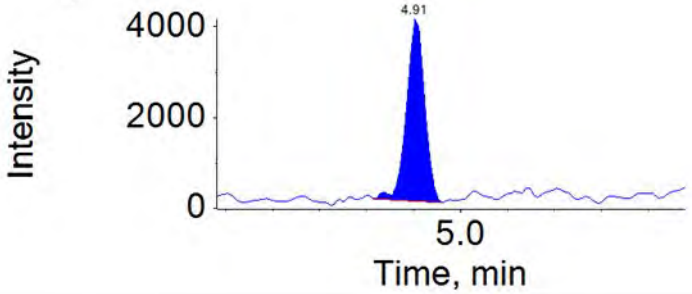
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



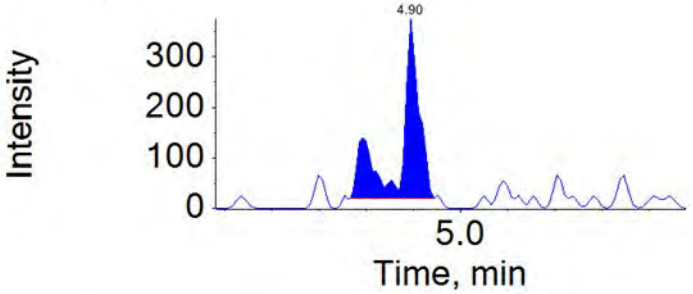
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

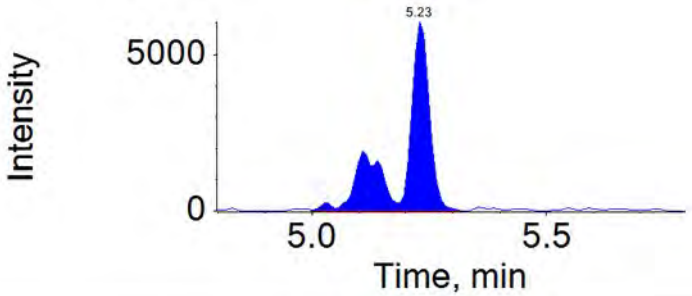
Component: PFOA
Primary Mass: 413.0 / 369.0



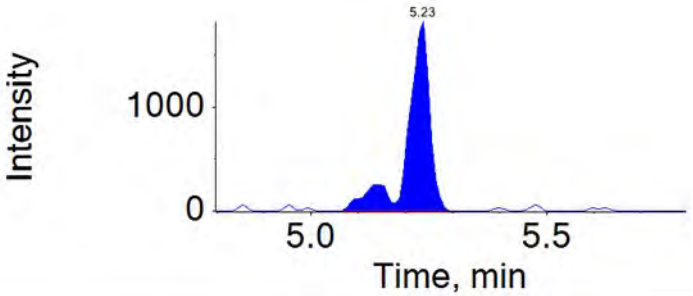
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



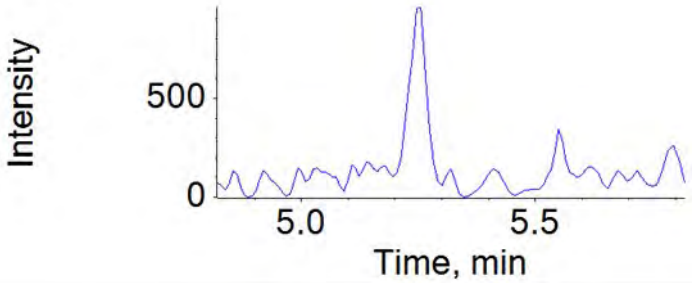
Component: PFOS
Primary Mass: 499.0 / 80.0



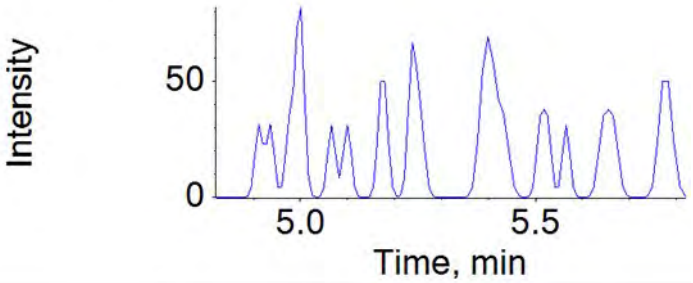
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



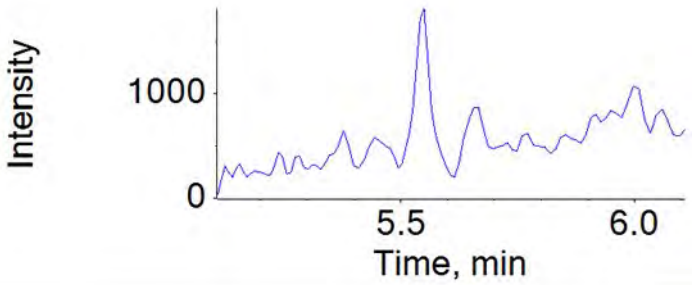
Component: PFNA
Primary Mass: 463.0 / 419.0



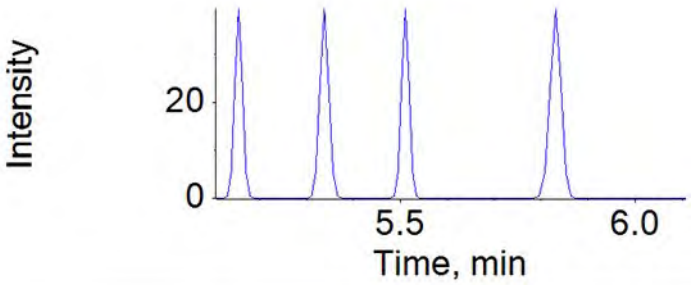
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



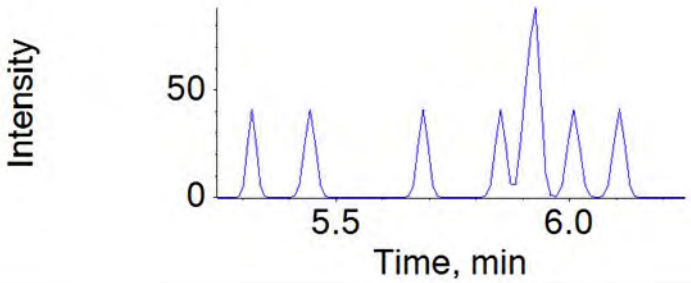
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



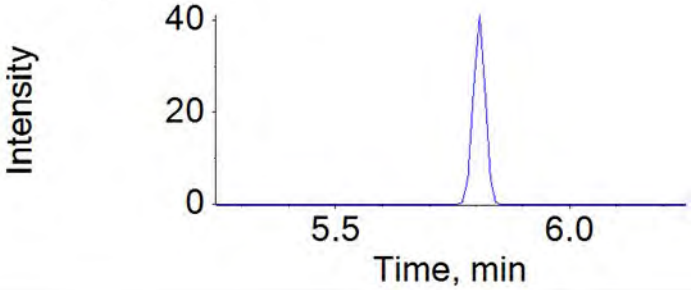
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

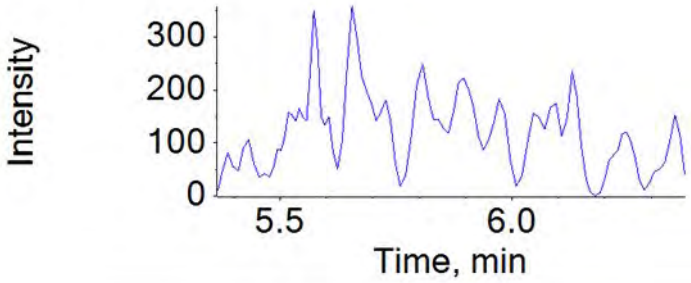
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



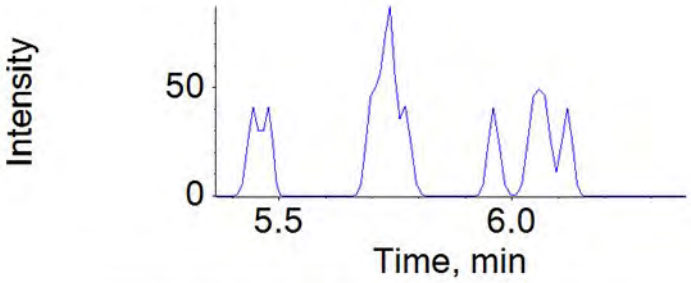
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



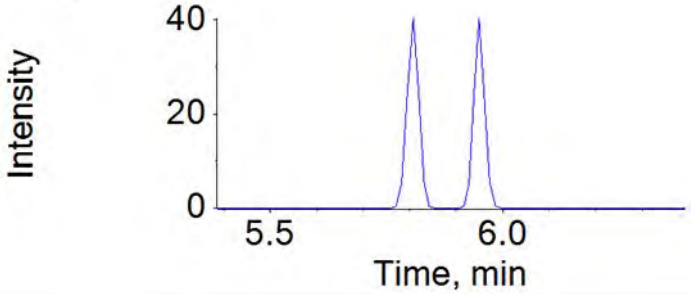
Component: PFUnDA
Primary Mass: 563.0 / 519.0



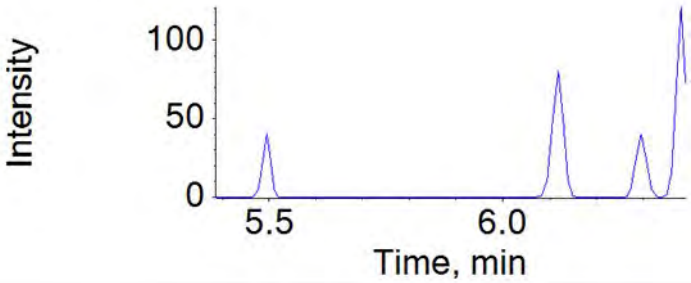
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



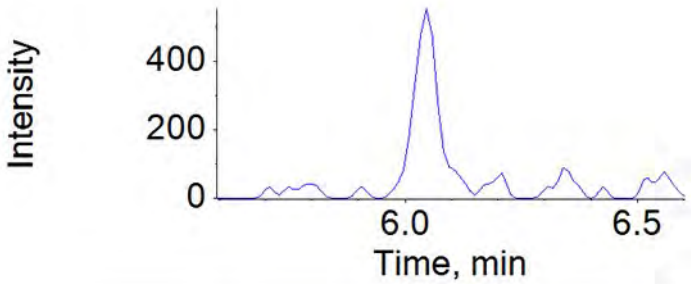
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



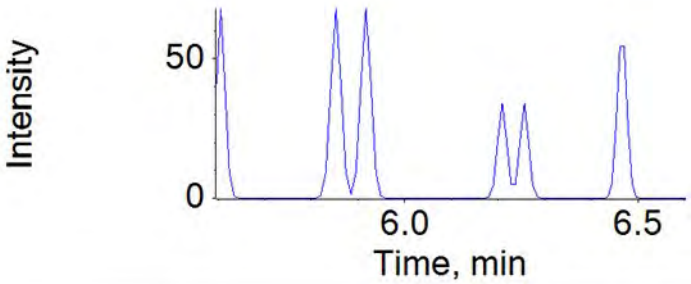
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



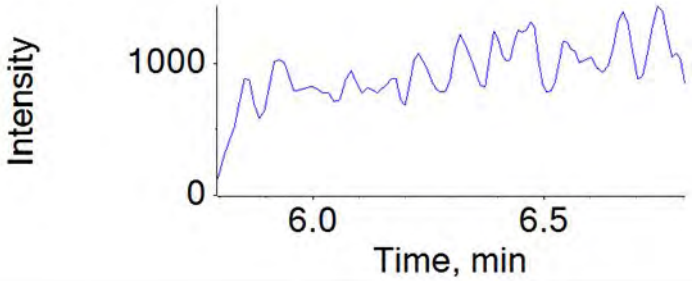
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



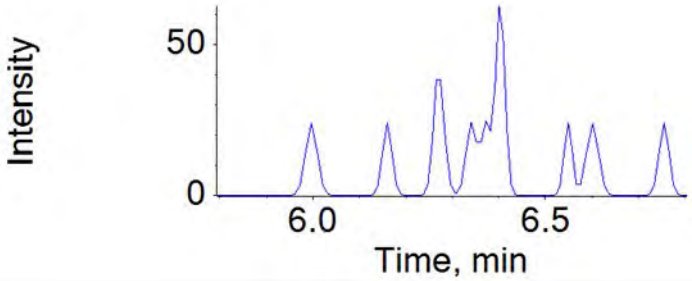
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

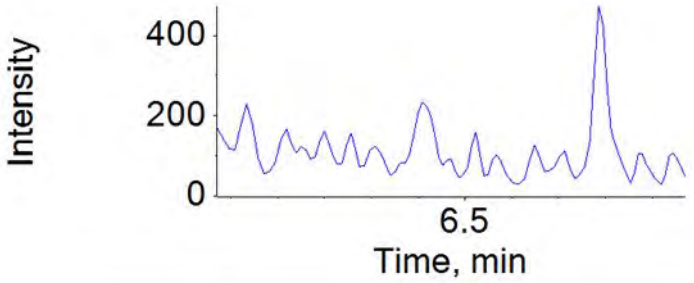
Component: PFTrDA
Primary Mass: 663.0 / 619.0



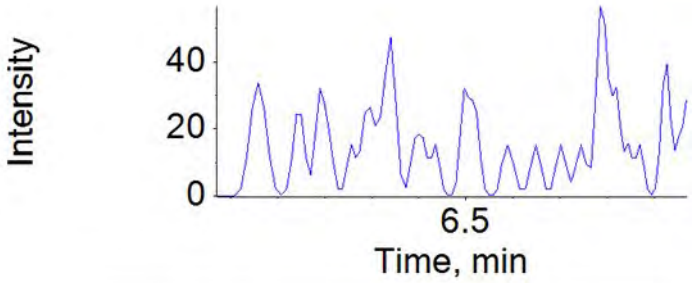
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881939			**Data File:**		18NOV07D-19.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-GW-9-S-01-10 Grab Soil			**Acquis Date:**		2018-11-07T14:03:00
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	18			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.02000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	790119.6	730410.6	8	50	
13C2-PFOA	5.0	572828.4	524423.6	9	50	
13C4-PFOS	4.8	294805.9	274061.7	8	50	
13C2-PFDA	5.0	353179.0	311442.1	13	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	342330.5	13C3-PFBA	790119.6	0.433	9.118	6.235	68	50-150	
E13C5-PFHxA	540539.4	13C2-PFOA	572828.4	0.944	9.804	6.806	69	50-150	
E13C3-PFHxS	276926.1	13C2-PFOA	572828.4	0.483	9.275	6.805	73	50-150	
E13C4-PFHpA	448055.2	13C2-PFOA	572828.4	0.782	9.804	6.977	71	50-150	
E13C8-PFOA	782294.7	13C2-PFOA	572828.4	1.366	9.804	7.467	76	50-150	
E13C8-PFOS	230871.4	13C4-PFOS	294805.9	0.783	9.373	6.790	72	50-150	
E13C9-PFNA	409637.5	13C4-PFOS	294805.9	1.390	9.804	7.442	76	50-150	
E13C6-PFDA	505465.6	13C2-PFDA	353179.0	1.431	9.804	7.057	72	50-150	
Ed3-NMeFOSAA	48545.4	13C2-PFDA	353179.0	0.137	9.804	5.012	51	50-150	
E13C7-PFUnDA	228401.4	13C2-PFDA	353179.0	0.647	9.804	7.315	75	50-150	
Ed5-NEtFOSAA	39999.6	13C2-PFDA	353179.0	0.113	9.804	5.139	52	50-150	
E13C2-PFDoDA	460031.1	13C2-PFDA	353179.0	1.303	9.804	6.885	70	50-150	
E13C2-PFTeDA	332818.2	13C2-PFDA	353179.0	0.942	9.804	6.652	68	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

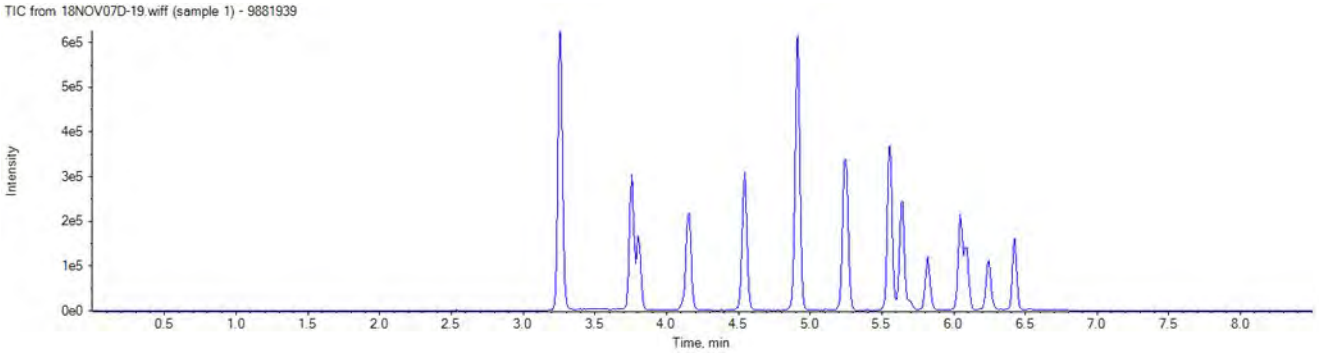
Analyte Quantitation Peak Table

Sample Name: 9881939 **Instrument Name:** LM27631 **File Name:** 18NOV07D-19.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.02000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	342330.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	540539.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	276926.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	448055.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	782294.7	N/A	
PFOS	5.24	1.000	14971.2		M	13C8-PFOS	5.24	230871.4	0.065	0.659
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	409637.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	505465.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	48545.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	228401.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	39999.6	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	460031.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	460031.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	332818.2	N/A	

Total Ion Chromatogram

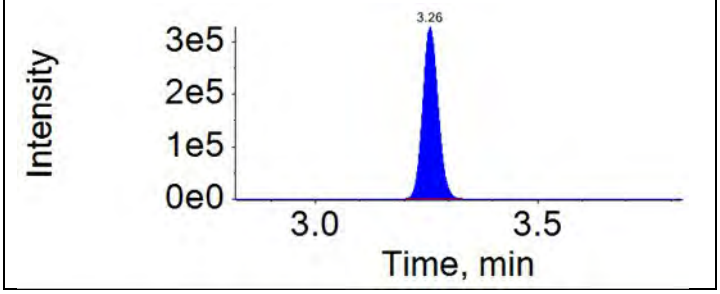


APPROVED
By MCD at 4:42 pm, 11/8/18

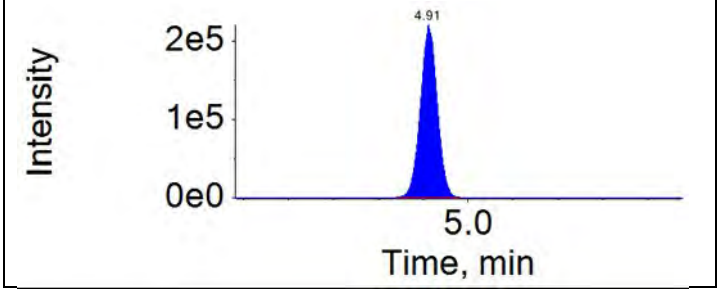
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

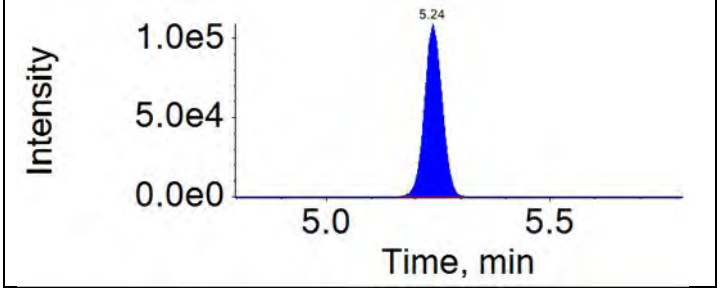
Injection Standard: 13C3-PFBA
216.0 / 172.0



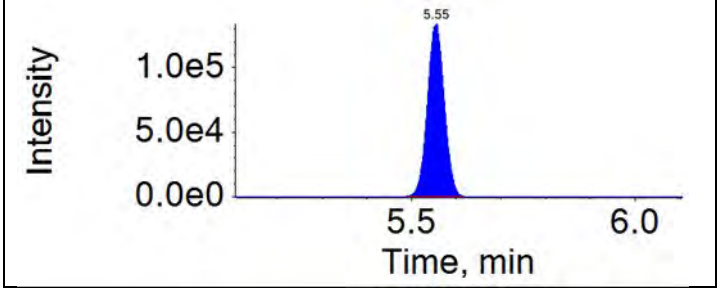
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



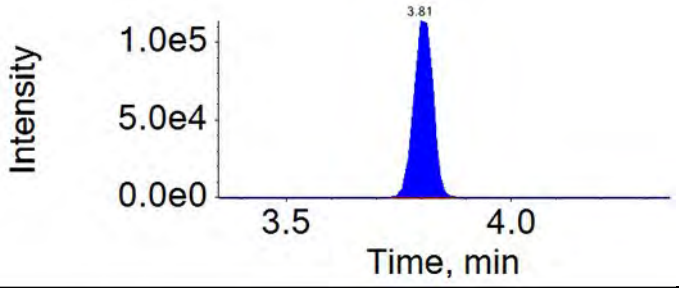
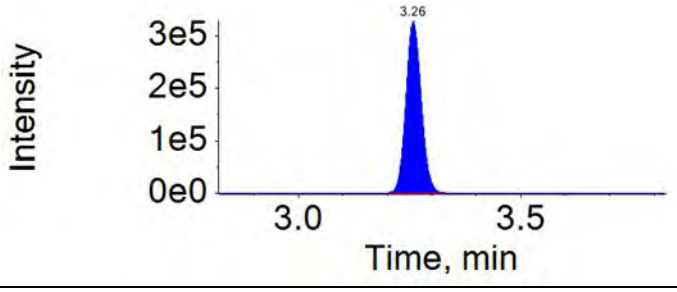
Injection Standard: 13C2-PFDA
515.0 / 470.0

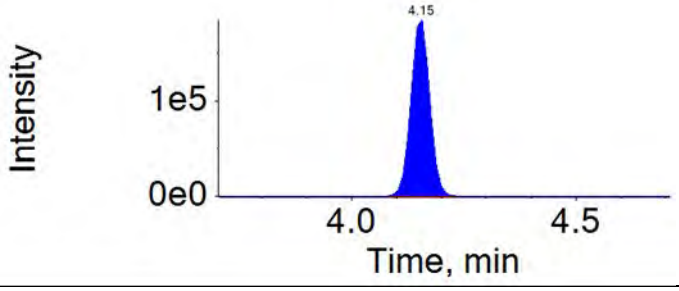
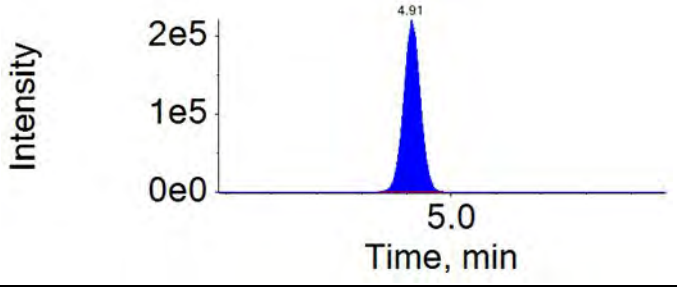


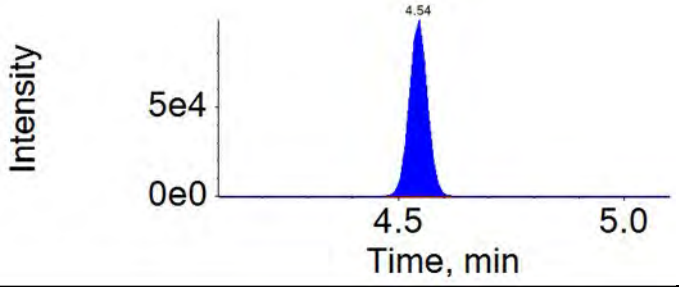
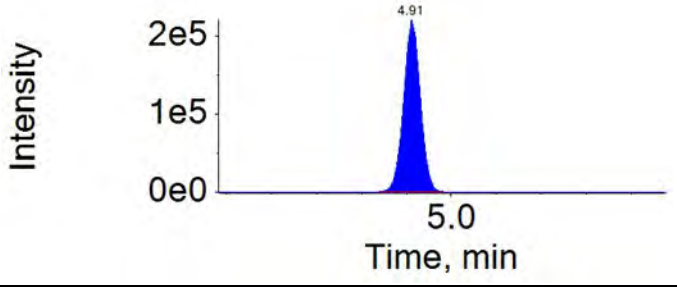
APPROVED
By MCD at 4:42 pm, 11/8/18

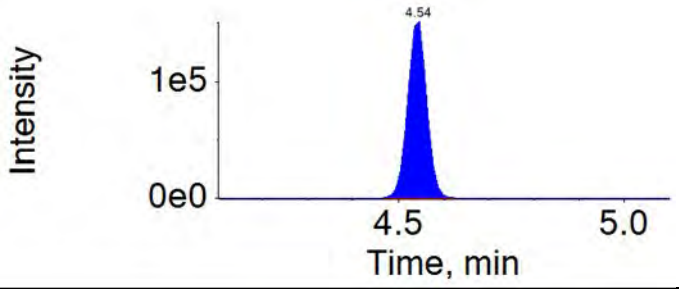
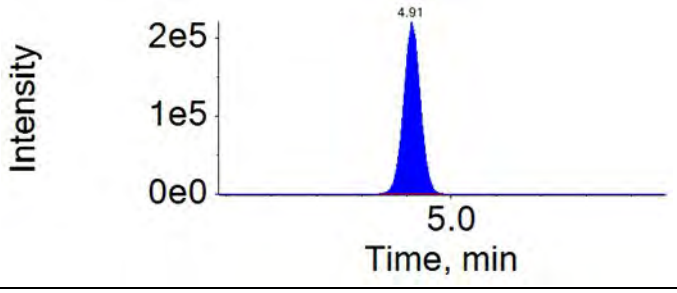
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

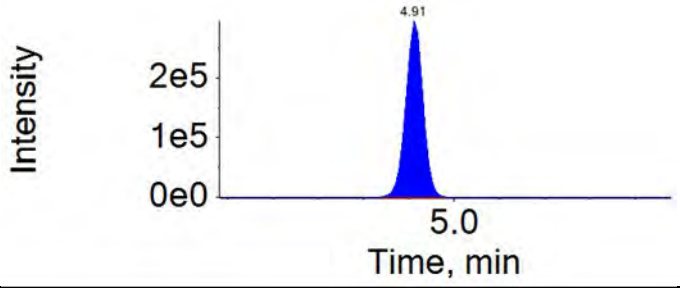
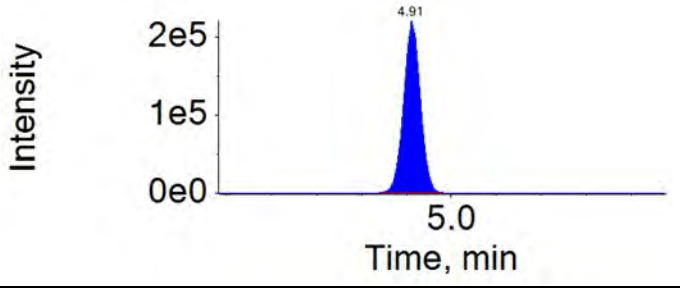
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

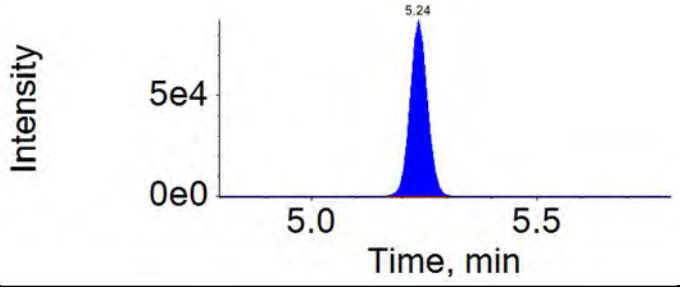
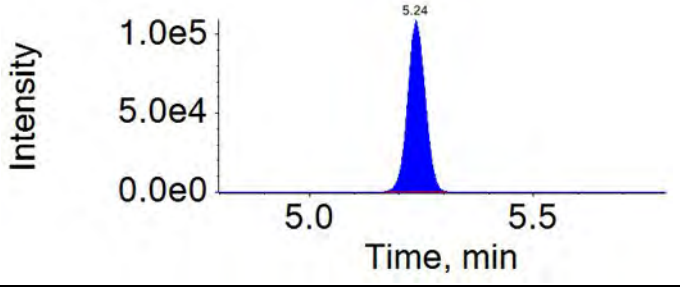
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

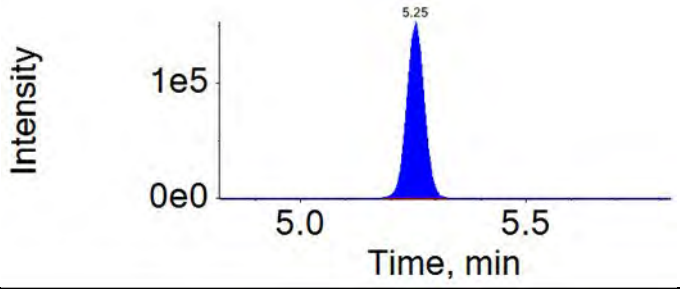
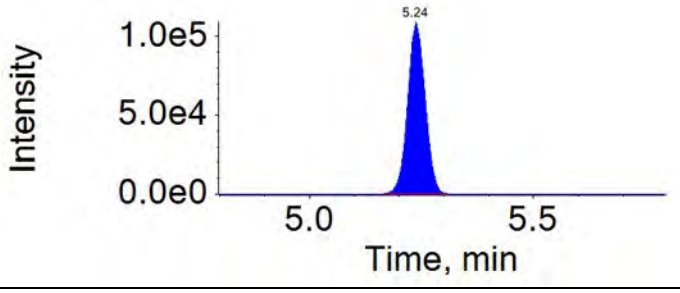
APPROVED
By MCD at 4:42 pm, 11/8/18

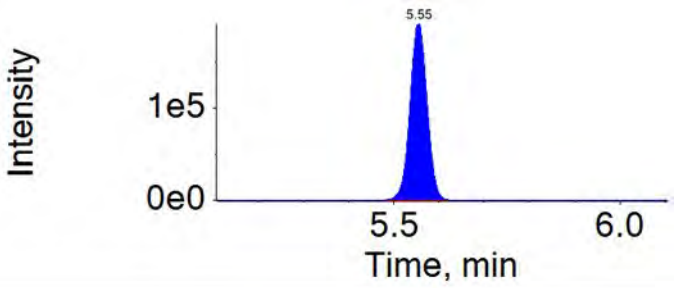
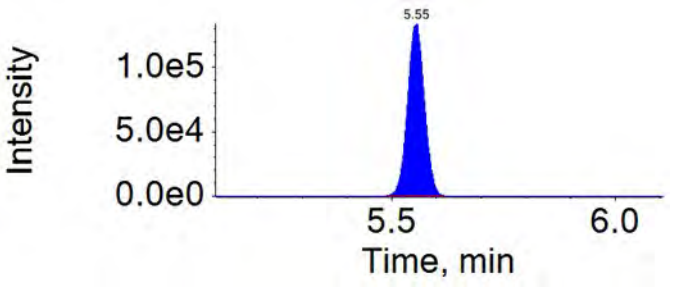
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

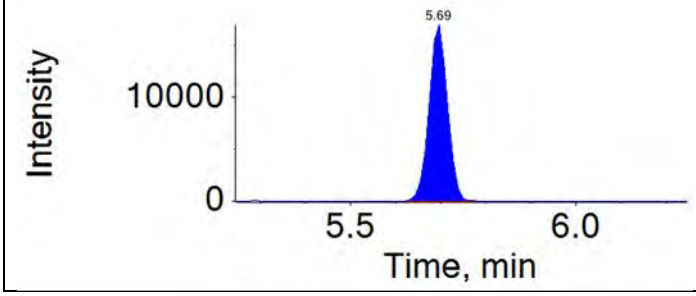
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

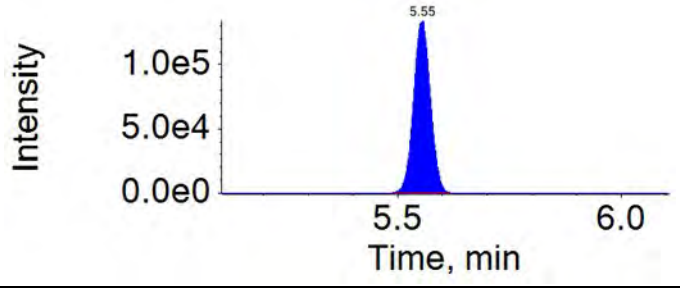
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

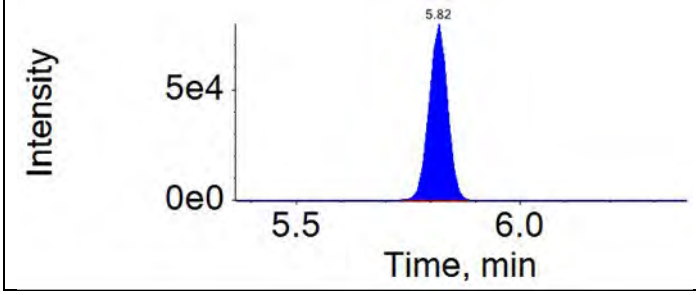
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

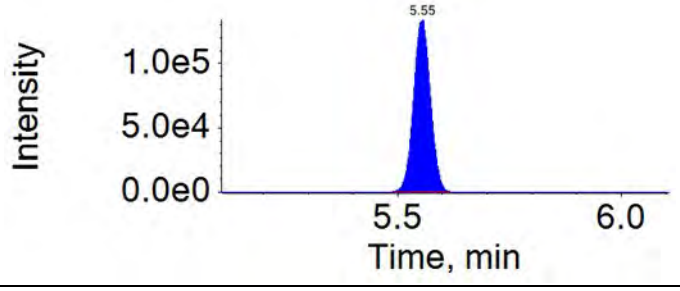
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



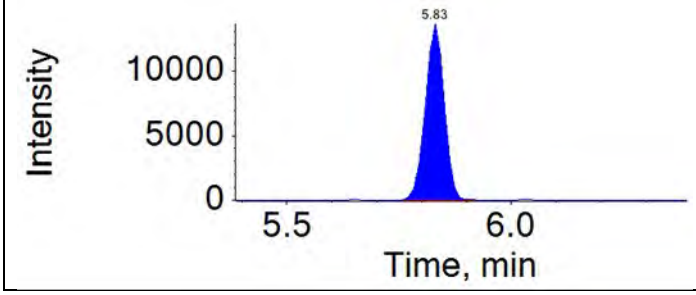


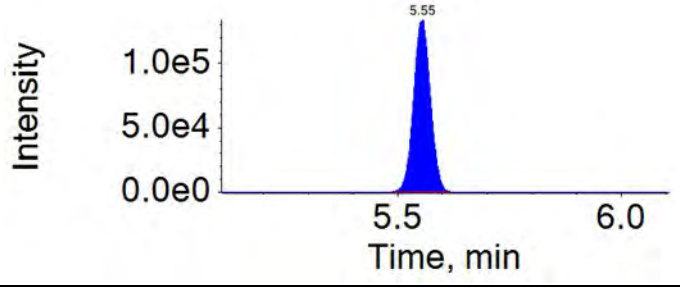
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



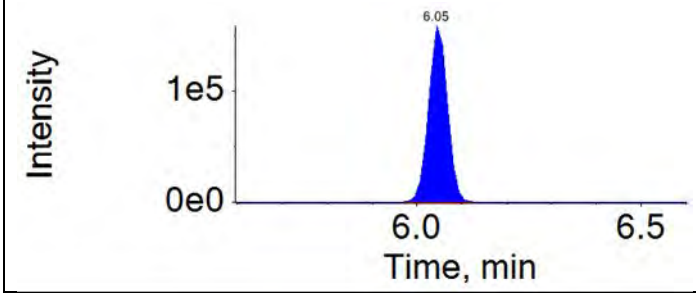


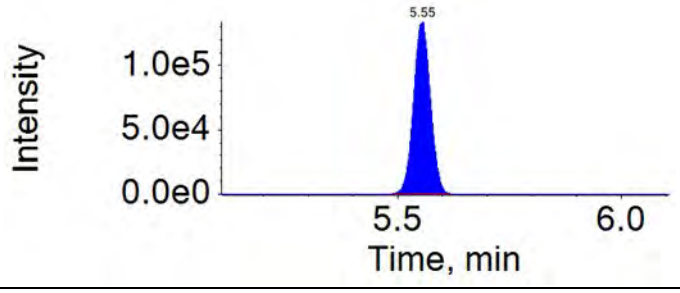
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



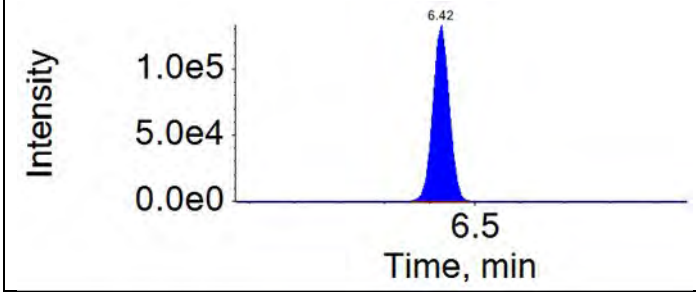


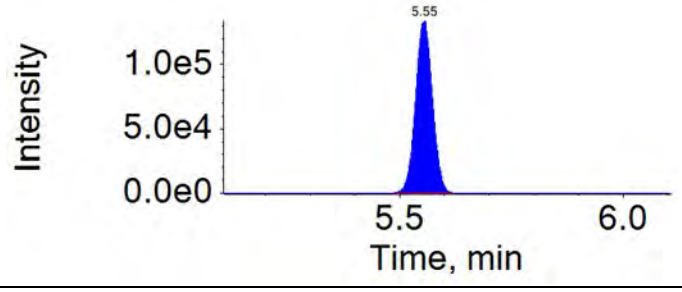
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



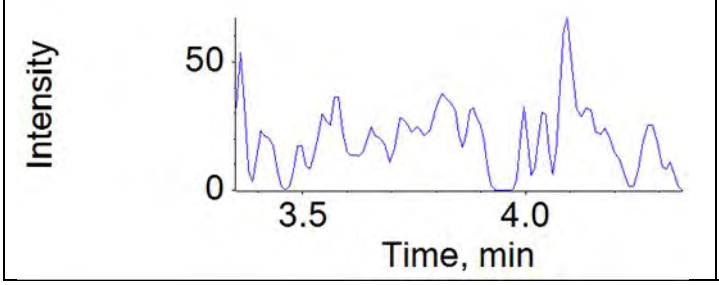


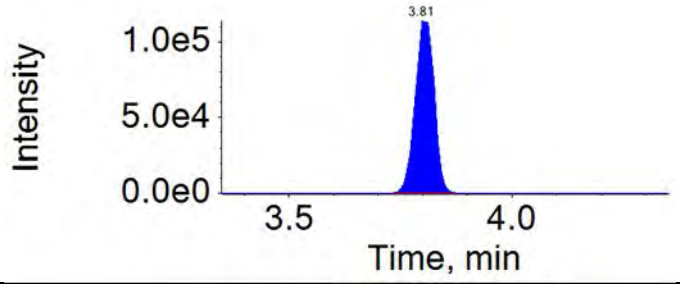
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

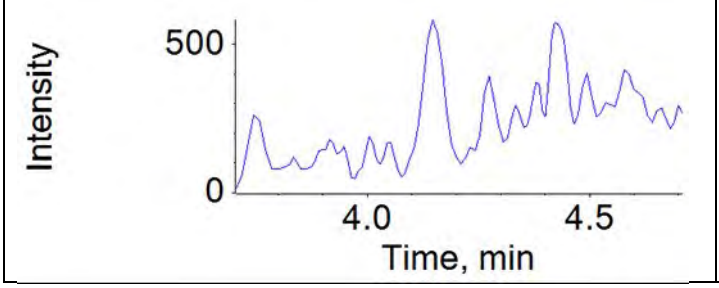
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

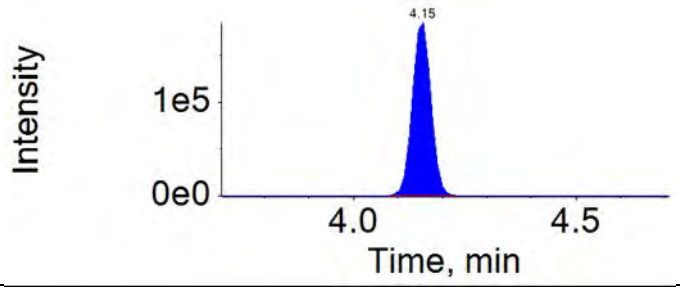
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



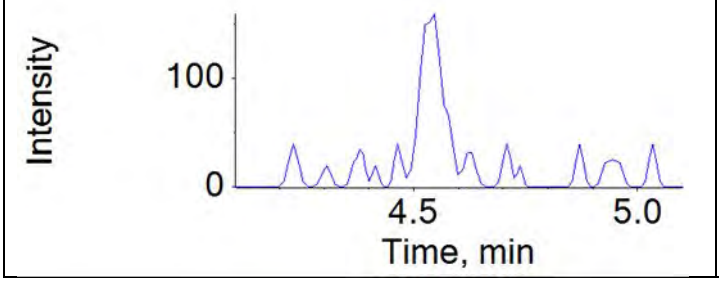


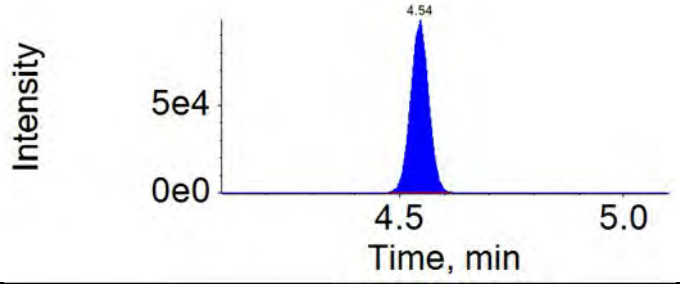
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



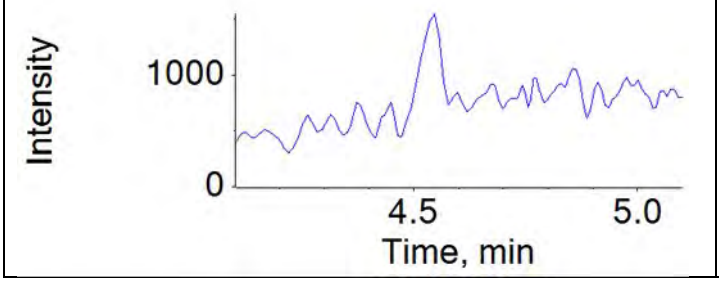


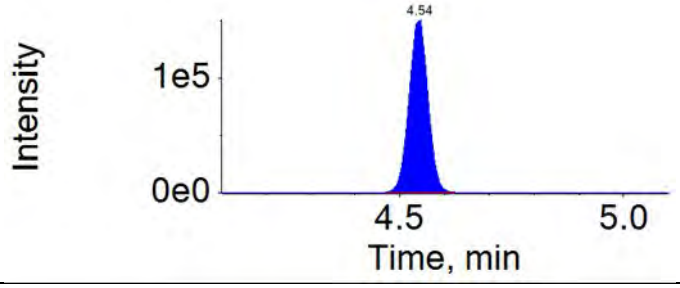
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



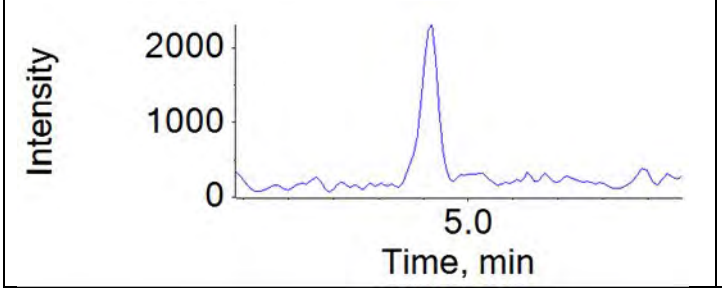


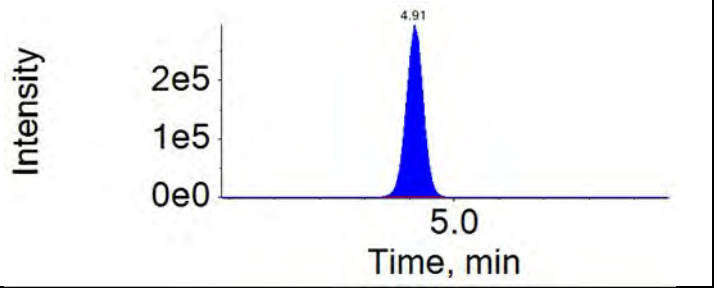
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

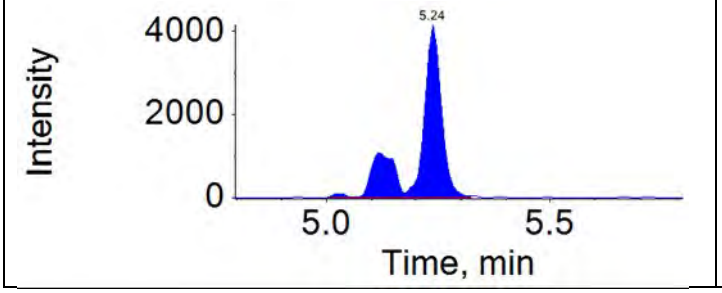
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

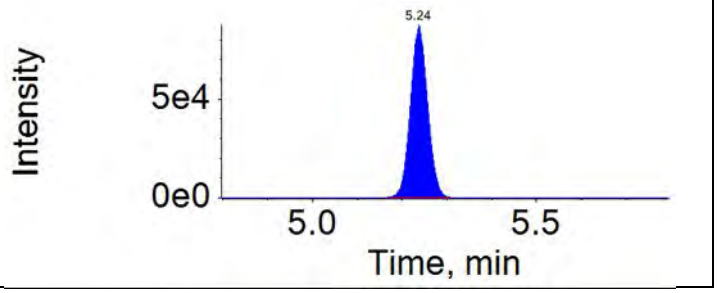
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



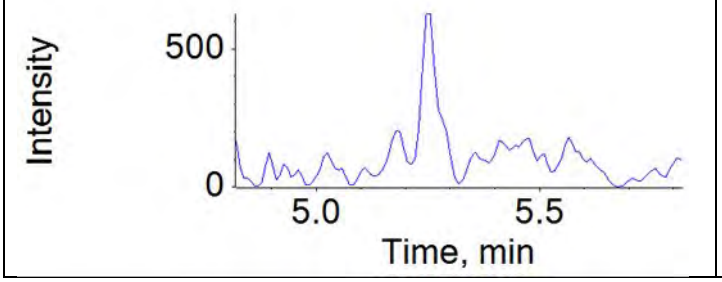


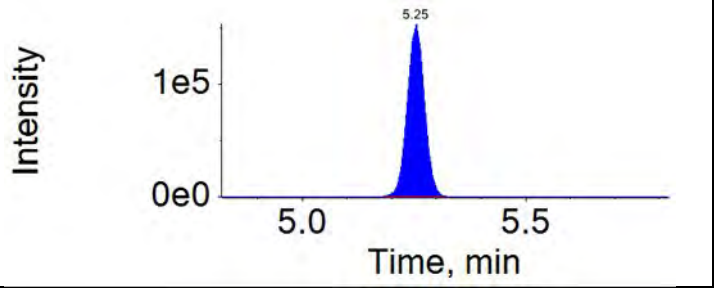
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



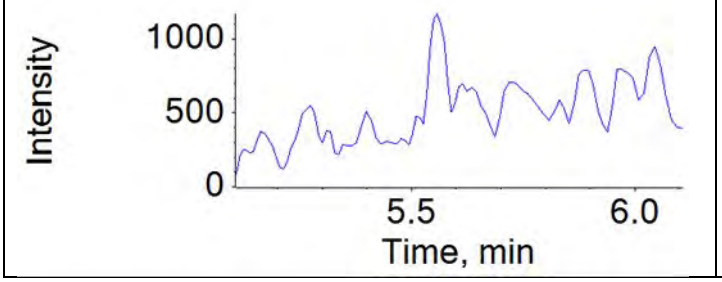


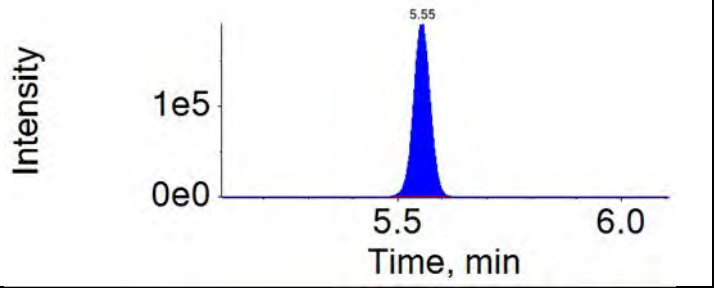
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



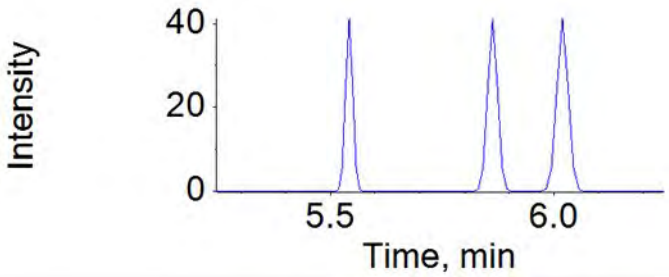


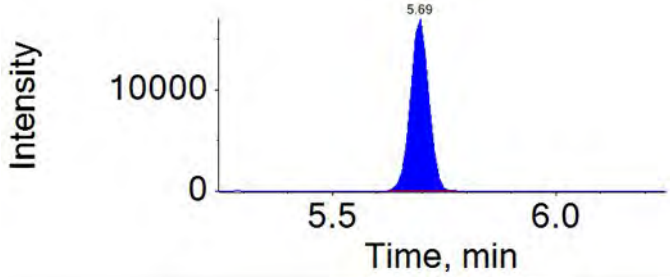
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

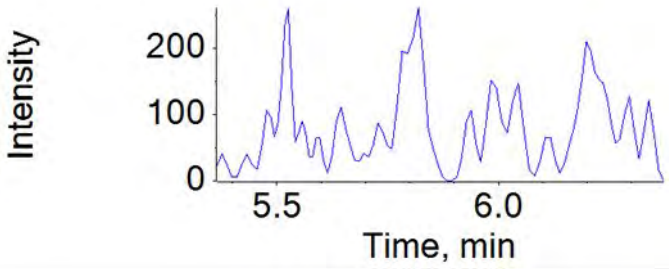
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

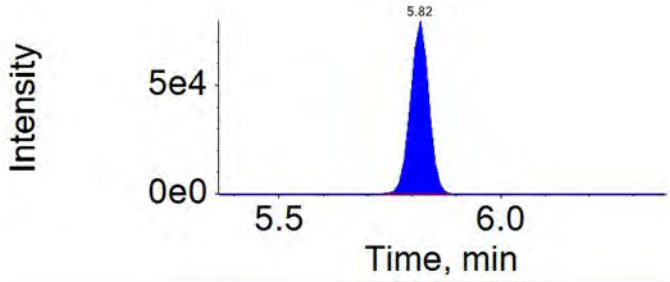
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



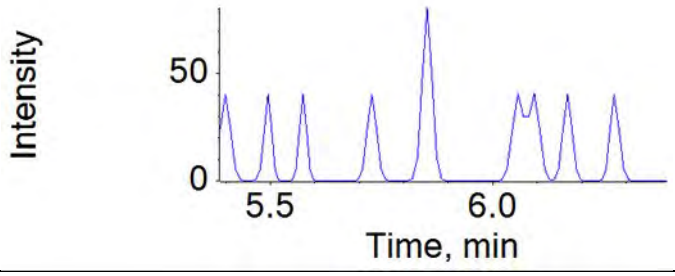


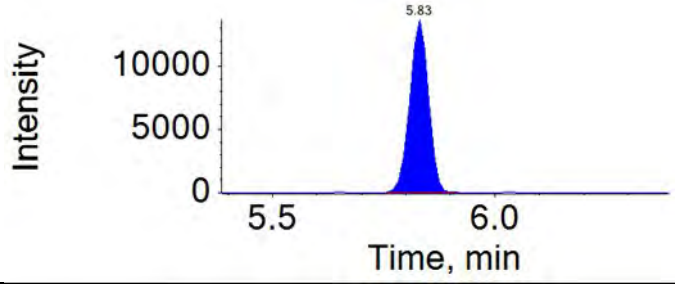
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



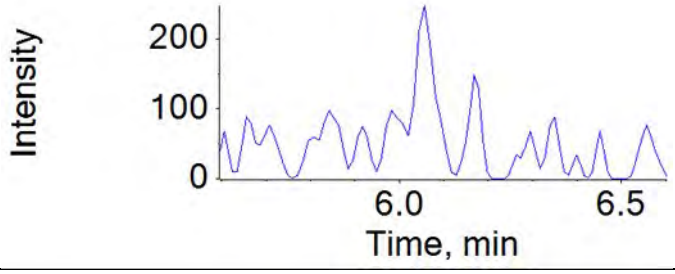


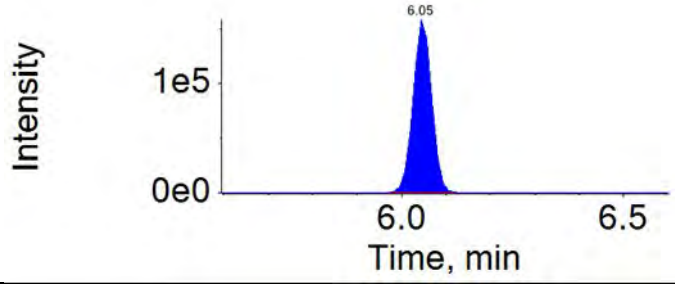
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0

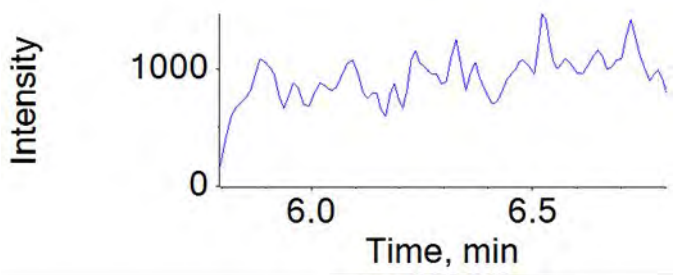
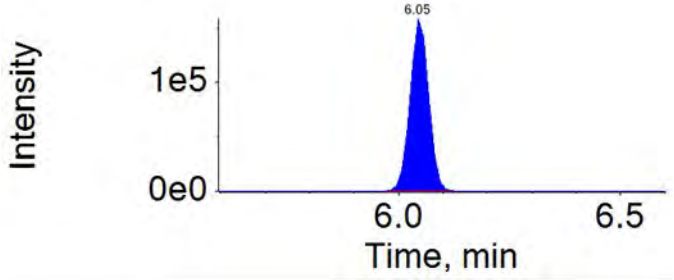


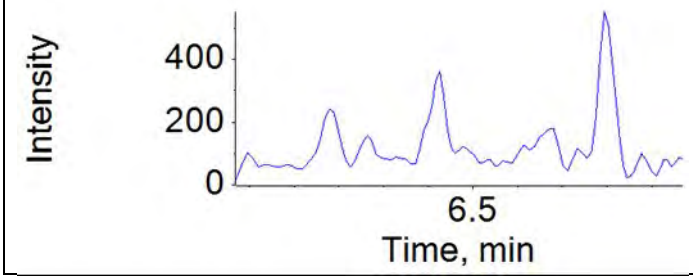
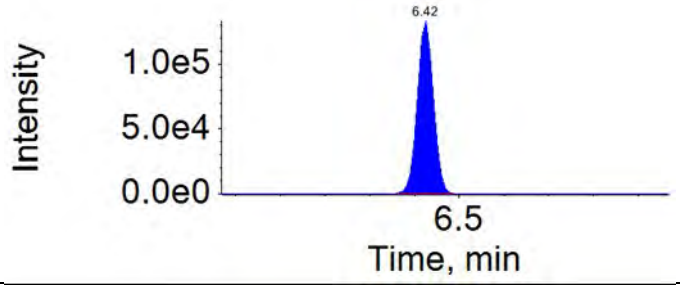


APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

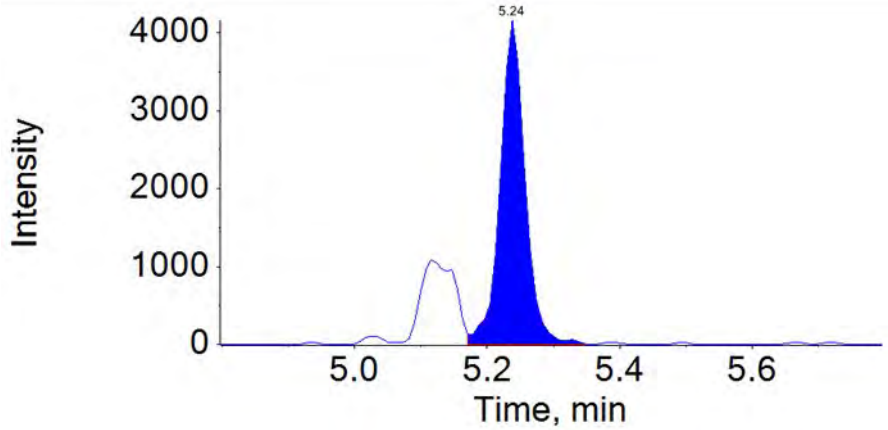
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

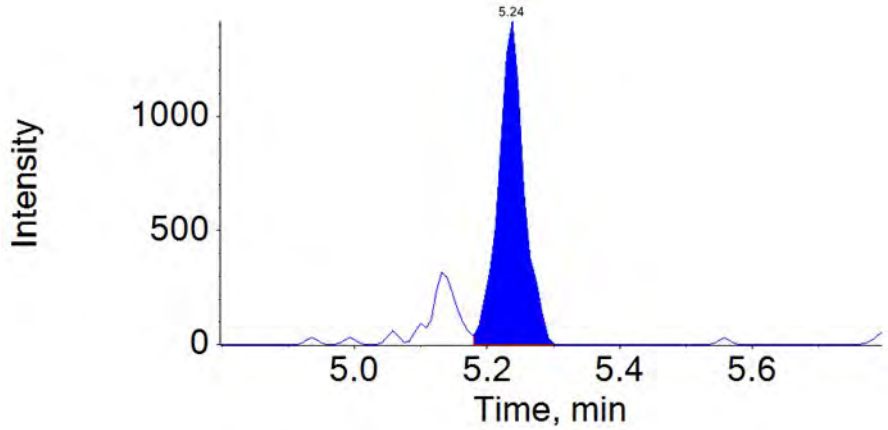
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
10873.7
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-19.wiff
Sample Name:
9881939



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
3805.9
Mass Range:
499.0 / 99.0
File Name:
18NOV07D-19.wiff
Sample Name:
9881939



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

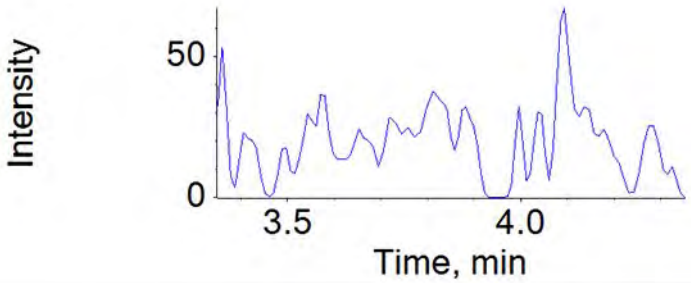
Sample Name: 9881939 **Instrument Name:** LM27631 **File Name:** 18NOV07D-19.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.24	1.00	14971.2	M	N/A	0.3153			
PFOS_2	5.24	1.00	4720.4	M	N/A	0.3153	-10	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

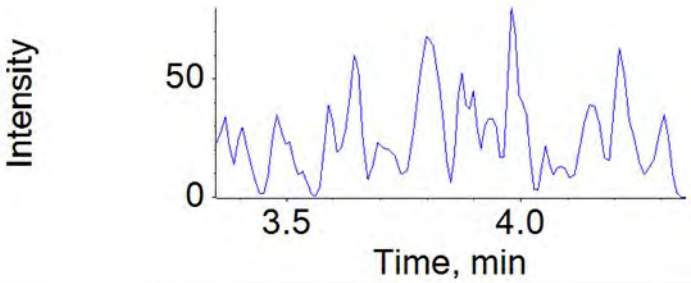
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

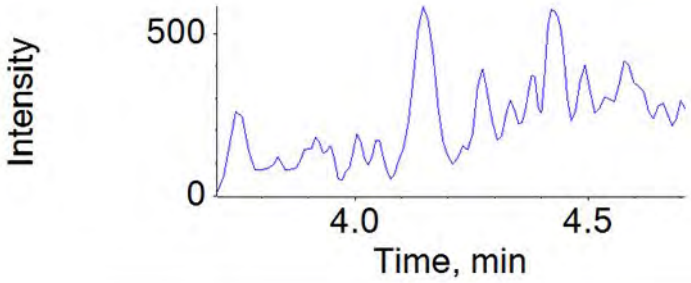
Component: PFBS
Primary Mass: 299.0 / 80.0



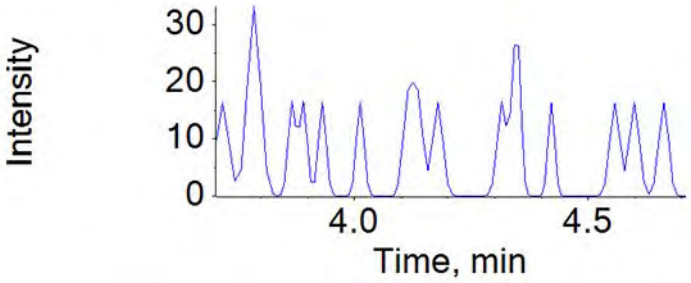
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



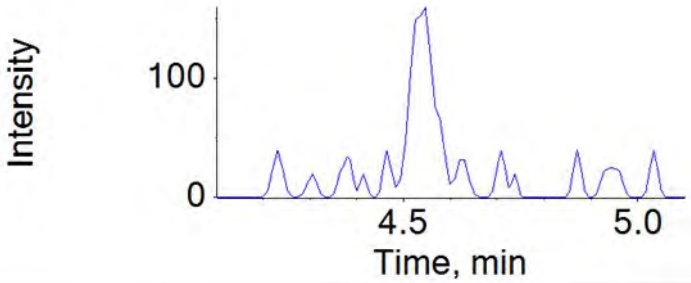
Component: PFHxA
Primary Mass: 313.0 / 269.0



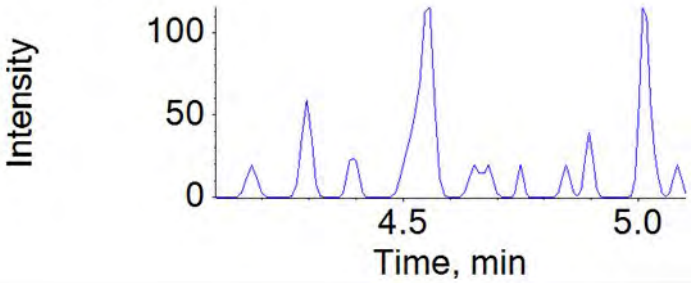
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



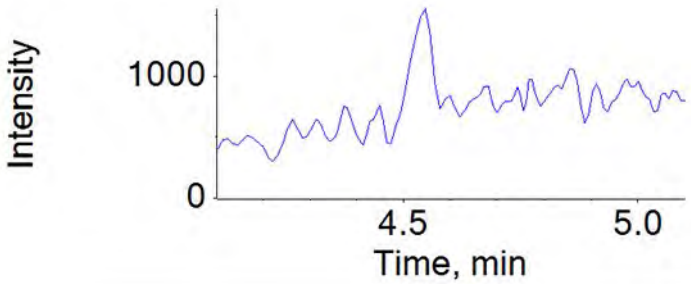
Component: PFHxS
Primary Mass: 399.0 / 80.0



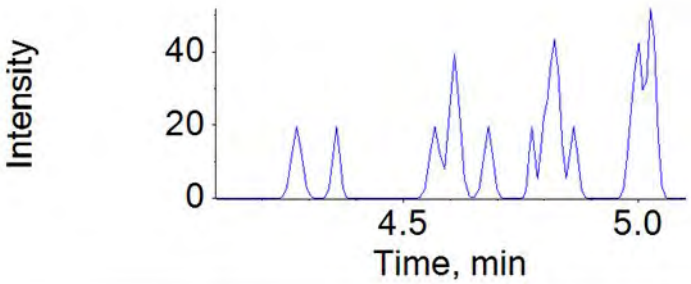
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



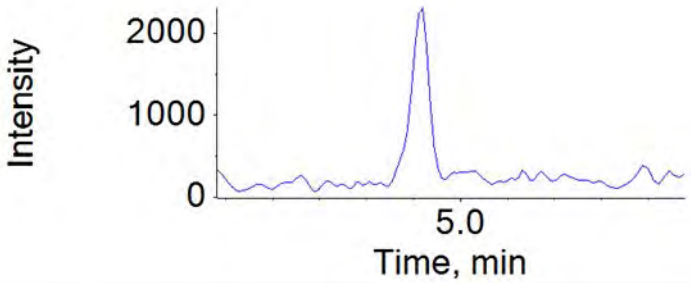
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



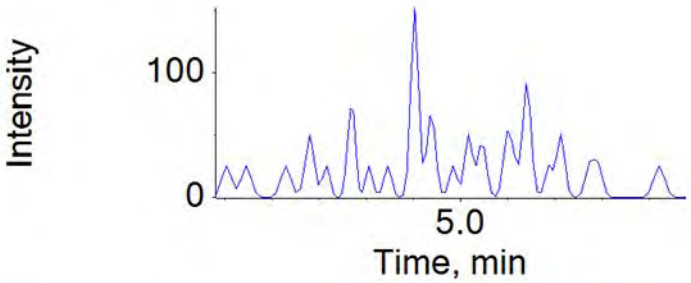
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

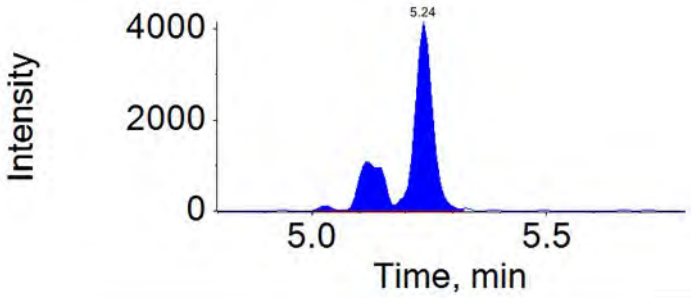
Component: PFOA
Primary Mass: 413.0 / 369.0



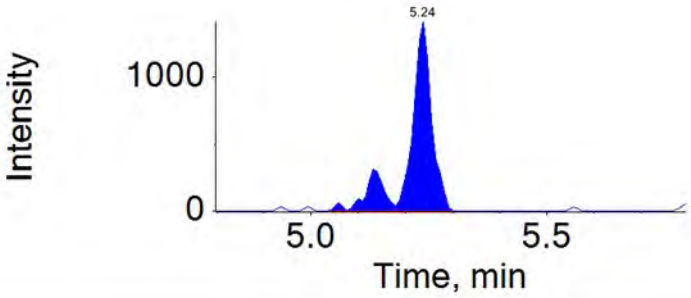
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



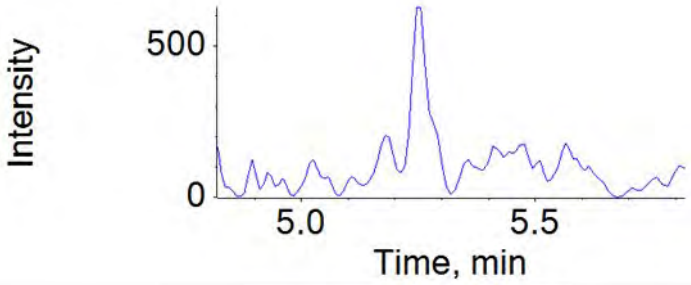
Component: PFOS
Primary Mass: 499.0 / 80.0



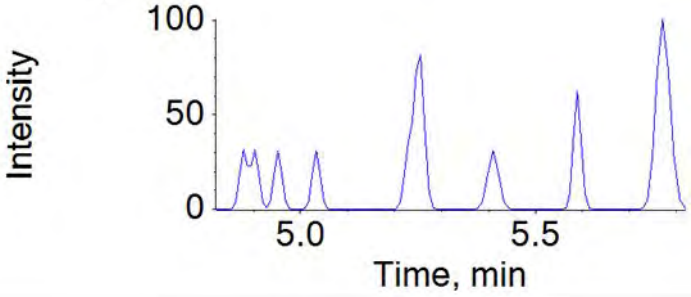
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



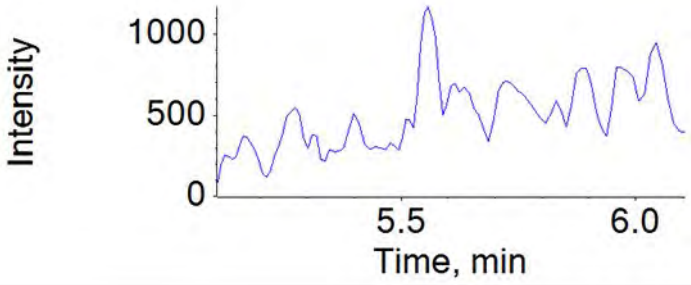
Component: PFNA
Primary Mass: 463.0 / 419.0



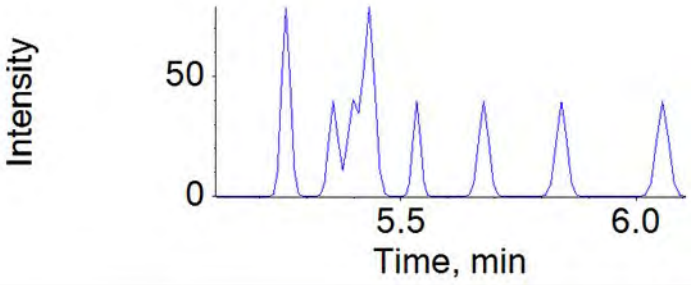
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



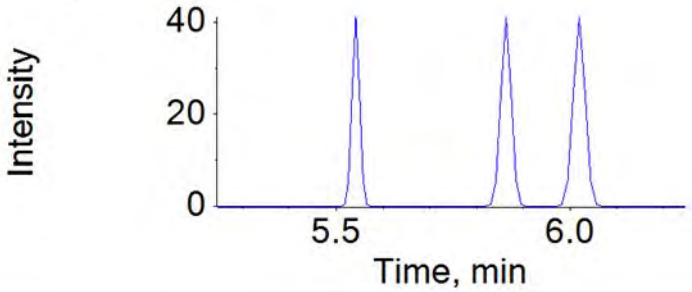
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



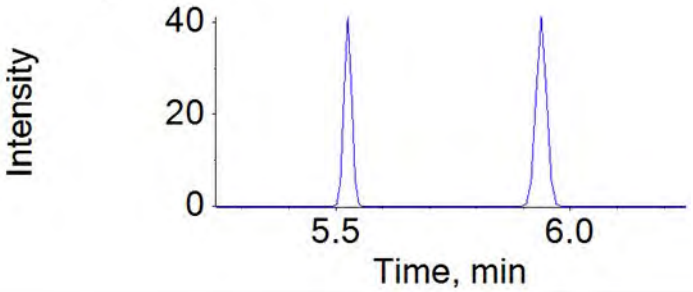
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

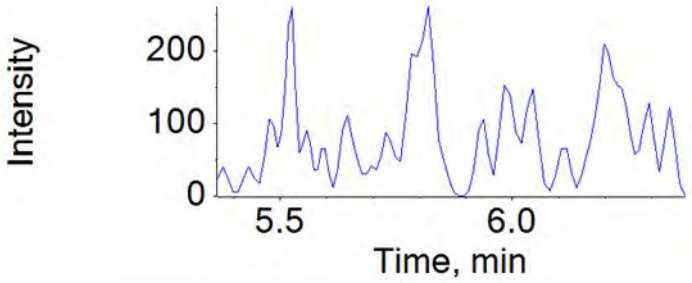
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



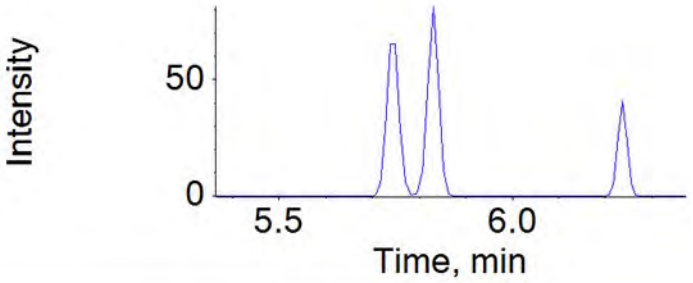
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



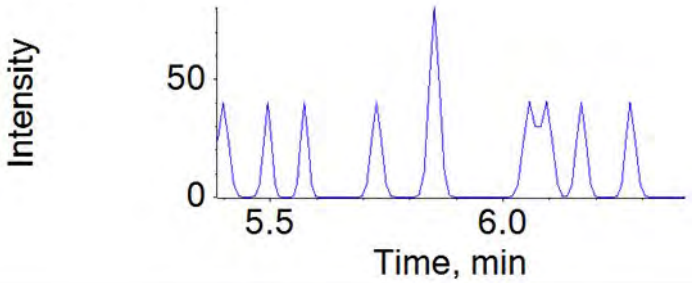
Component: PFUnDA
Primary Mass: 563.0 / 519.0



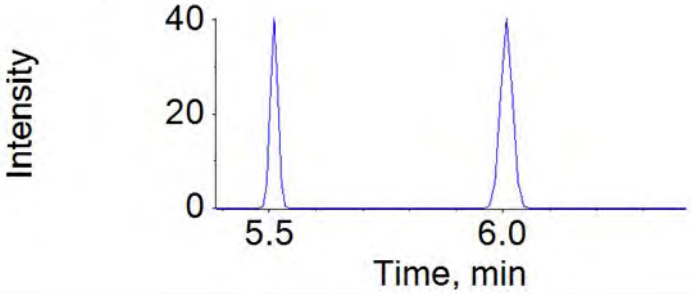
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



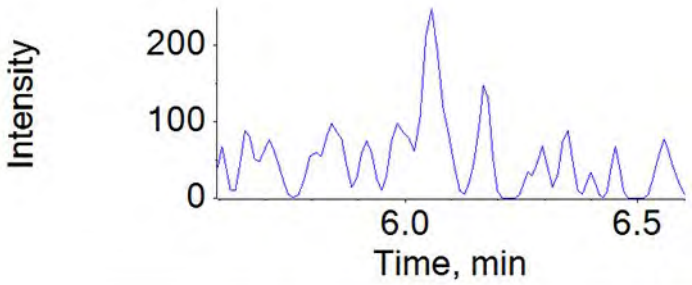
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



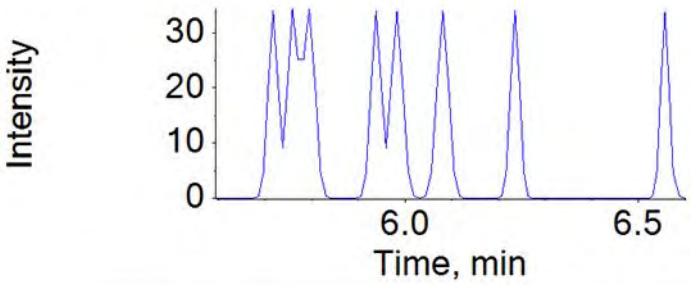
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



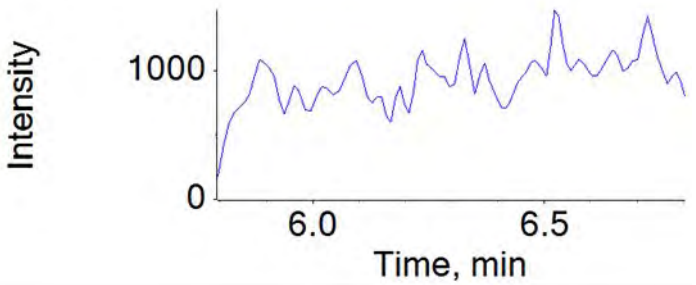
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



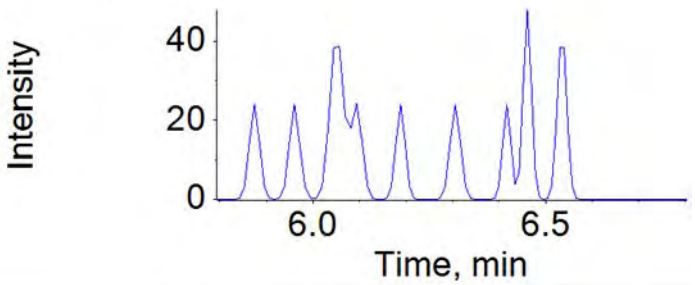
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

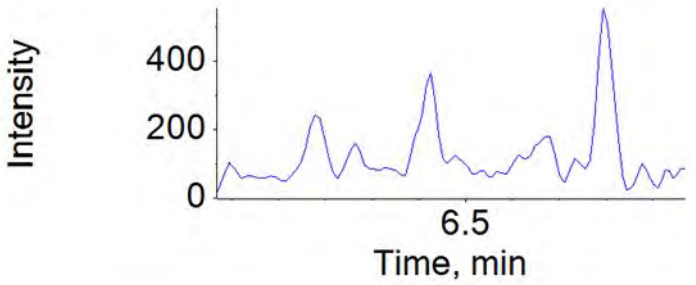
Component: PFTrDA
Primary Mass: 663.0 / 619.0



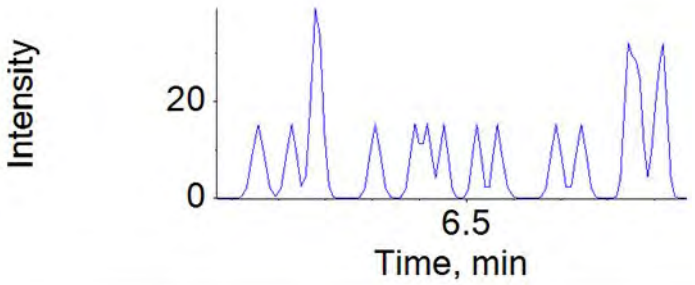
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881940			**Data File:**		18NOV07D-20.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-GW-9-S-01-15 Grab Soil			**Acquis Date:**		2018-11-07T14:12:00
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	19			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	765072.0	730410.6	5	50	
13C2-PFOA	5.0	545508.8	524423.6	4	50	
13C4-PFOS	4.8	291072.5	274061.7	6	50	
13C2-PFDA	5.0	350181.4	311442.1	12	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	356768.1	13C3-PFBA	765072.0	0.466	8.857	6.519	74	50-150	
E13C5-PFHxA	552007.6	13C2-PFOA	545508.8	1.012	9.524	7.090	74	50-150	
E13C3-PFHxS	276776.4	13C2-PFOA	545508.8	0.507	9.010	6.938	77	50-150	
E13C4-PFHpA	452866.6	13C2-PFOA	545508.8	0.830	9.524	7.193	76	50-150	
E13C8-PFOA	791934.5	13C2-PFOA	545508.8	1.452	9.524	7.711	81	50-150	
E13C8-PFOS	234193.9	13C4-PFOS	291072.5	0.805	9.105	6.777	74	50-150	
E13C9-PFNA	407900.0	13C4-PFOS	291072.5	1.401	9.524	7.291	77	50-150	
E13C6-PFDA	538566.3	13C2-PFDA	350181.4	1.538	9.524	7.367	77	50-150	
Ed3-NMeFOSAA	44292.8	13C2-PFDA	350181.4	0.126	9.524	4.480	47	50-150	OOS
E13C7-PFUnDA	242470.2	13C2-PFDA	350181.4	0.692	9.524	7.608	80	50-150	
Ed5-NEtFOSAA	39014.8	13C2-PFDA	350181.4	0.111	9.524	4.911	52	50-150	
E13C2-PFDoDA	474313.8	13C2-PFDA	350181.4	1.354	9.524	6.955	73	50-150	
E13C2-PFTeDA	355218.1	13C2-PFDA	350181.4	1.014	9.524	6.956	73	50-150	

APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

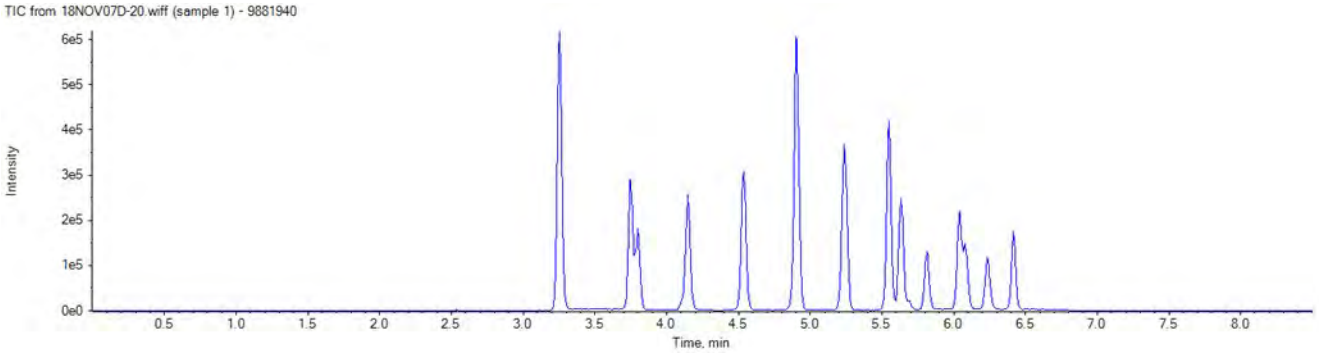
Analyte Quantitation Peak Table

Sample Name: 9881940 **Instrument Name:** LM27631 **File Name:** 18NOV07D-20.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	356768.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	552007.6	N/A	
PFHxS	4.54	1.000	5128.3		M	13C3-PFHxS	4.54	276776.4	0.019	0.179
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.53	452866.6	N/A	
PFOA	4.90	1.000	14000.6		A	13C8-PFOA	4.90	791934.5	0.018	0.190
PFOS	5.23	1.000	24395.8		M	13C8-PFOS	5.23	234193.9	0.104	1.029
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	407900.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	538566.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	44292.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	242470.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	39014.8	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	474313.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	474313.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	355218.1	N/A	

Total Ion Chromatogram

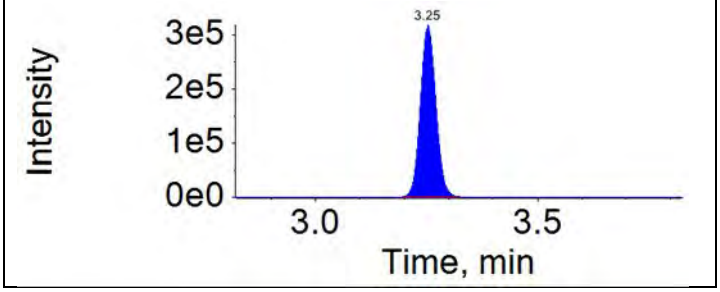


APPROVED
By JPT at 10:33 am, 11/13/18

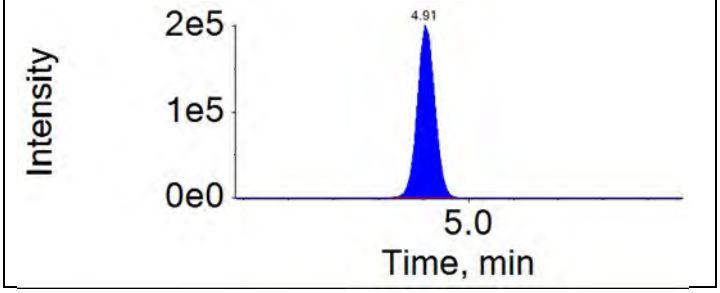
REVIEWED
By HMK at 2:14 pm, 11/13/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

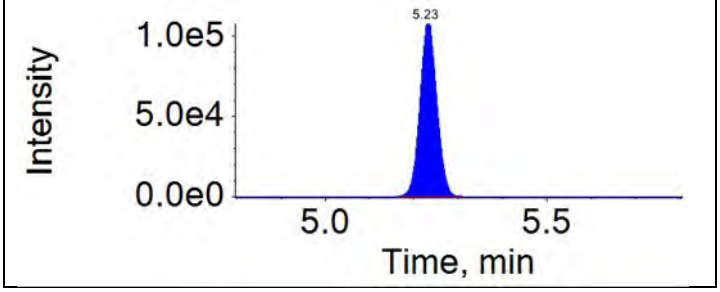
Injection Standard: 13C3-PFBA
216.0 / 172.0



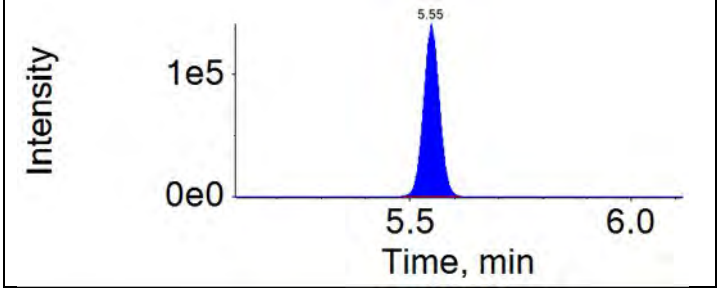
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



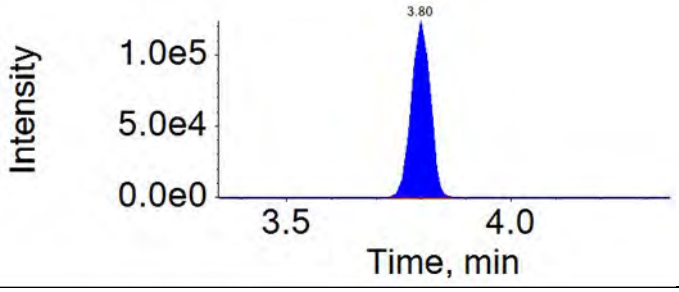
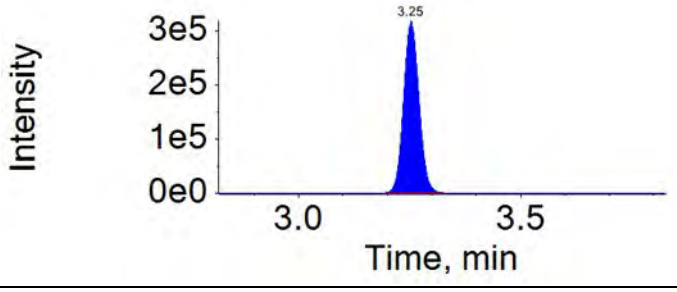
Injection Standard: 13C2-PFDA
515.0 / 470.0

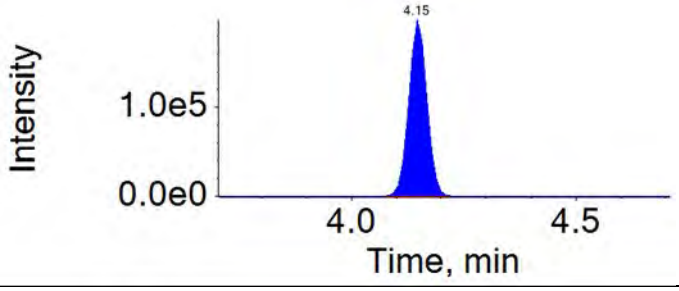
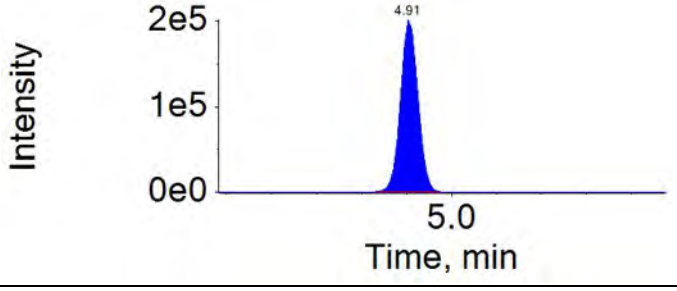


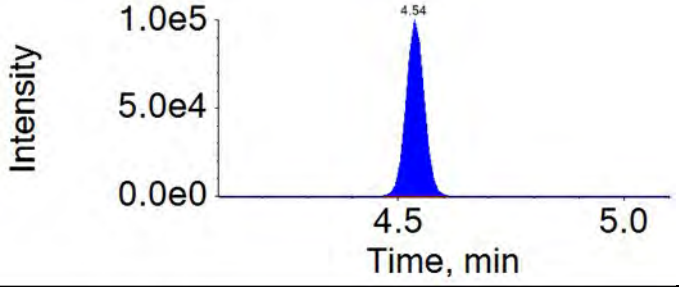
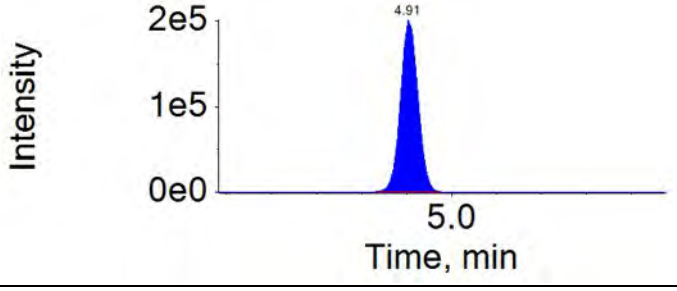
APPROVED
By JPT at 10:33 am, 11/13/18

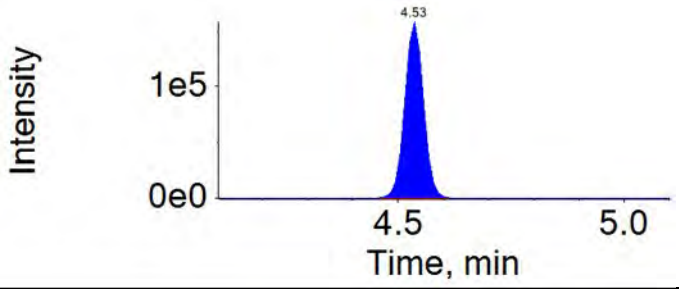
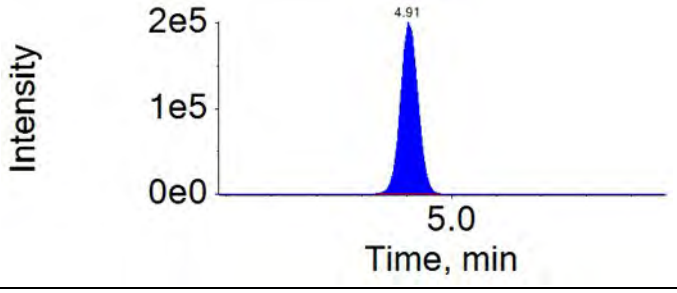
REVIEWED
By HMK at 2:14 pm, 11/13/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

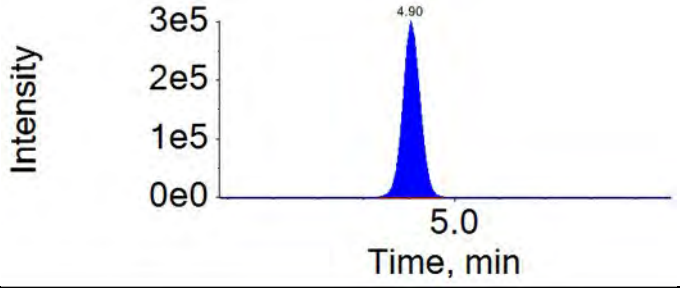
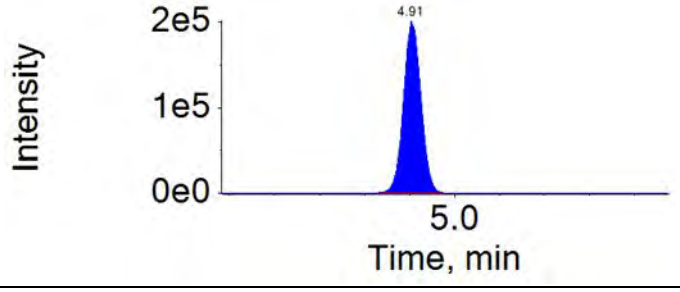
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

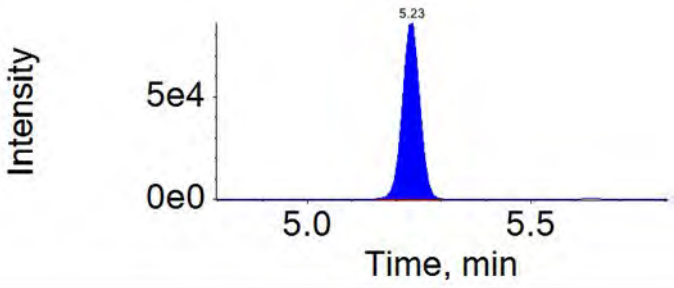
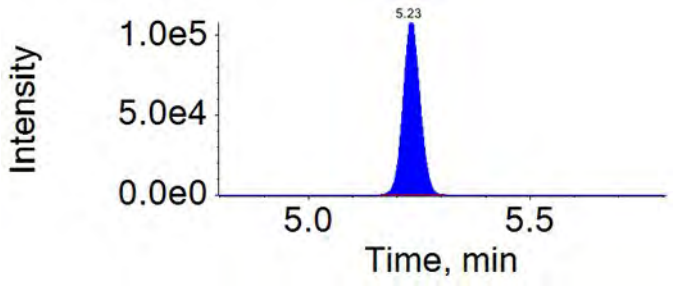
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

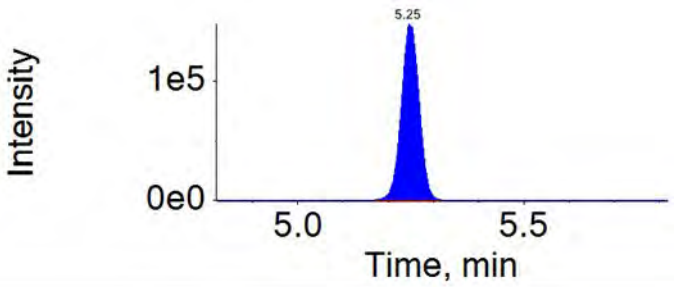
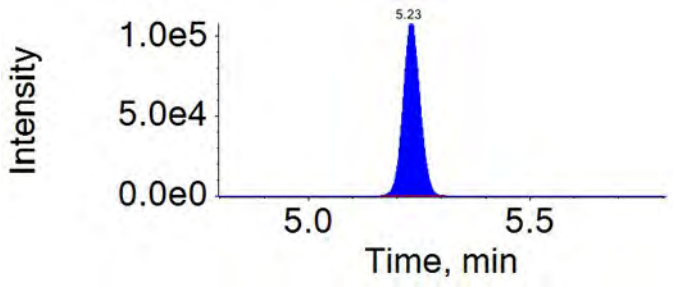
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

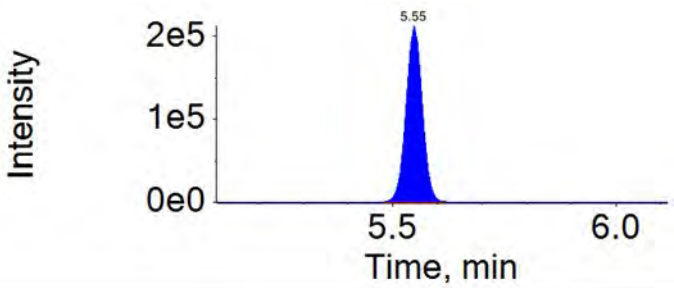
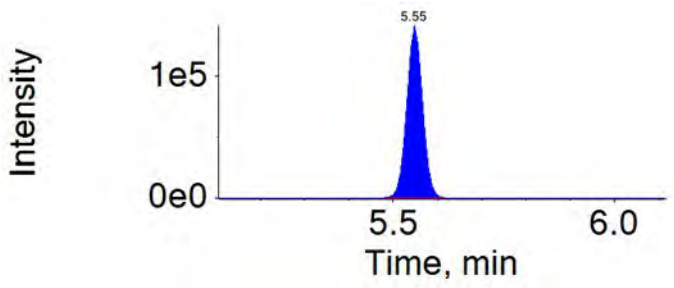
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

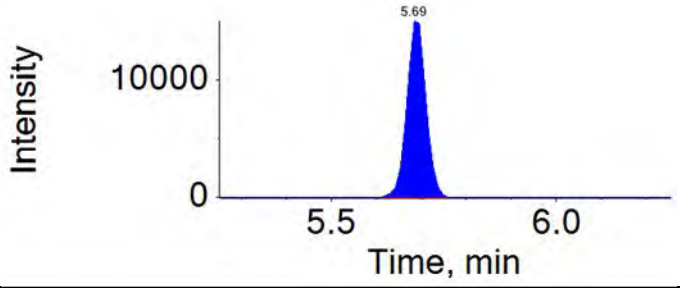
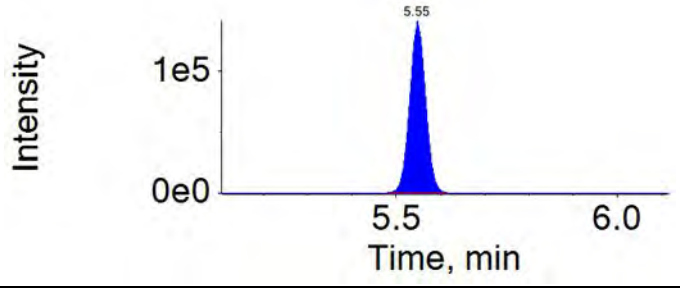
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

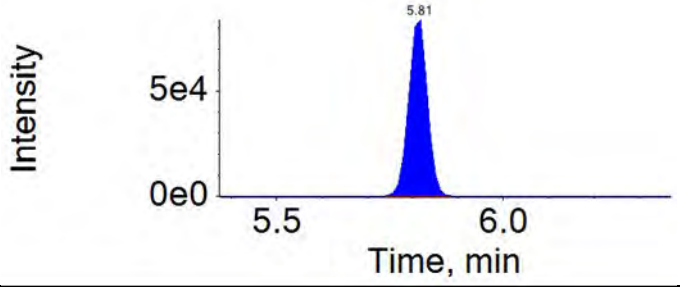
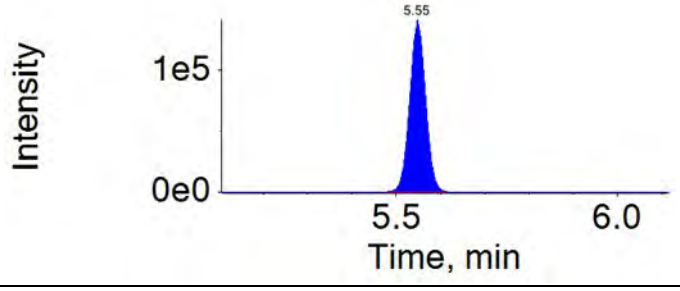
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

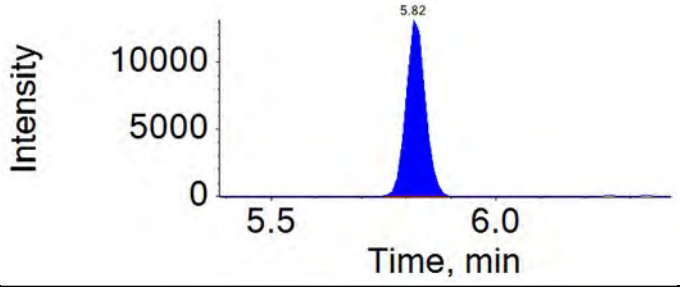
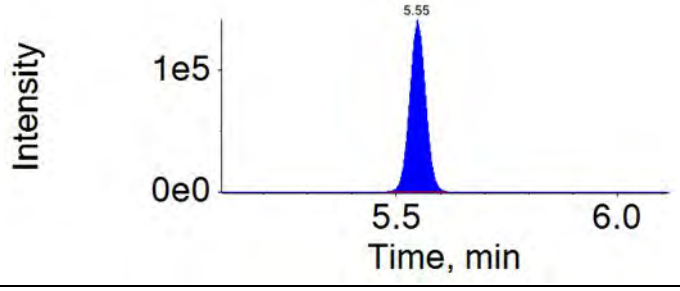
APPROVED
By JPT at 10:33 am, 11/13/18

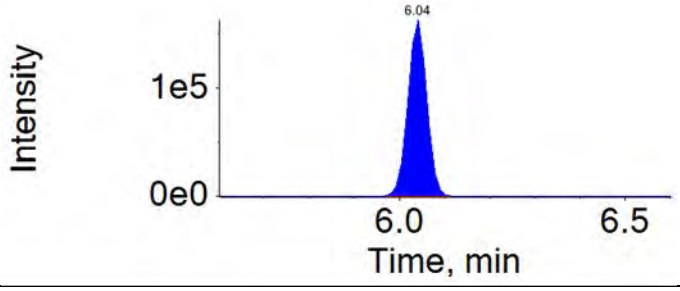
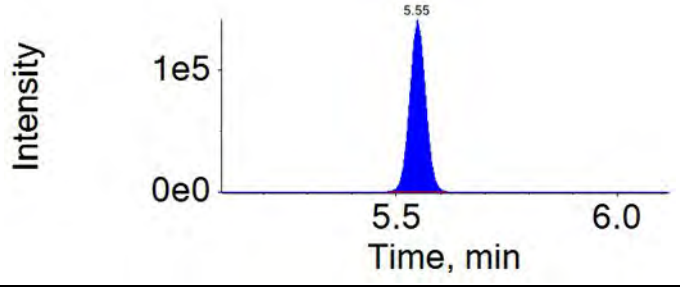
REVIEWED
By HMK at 2:14 pm, 11/13/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

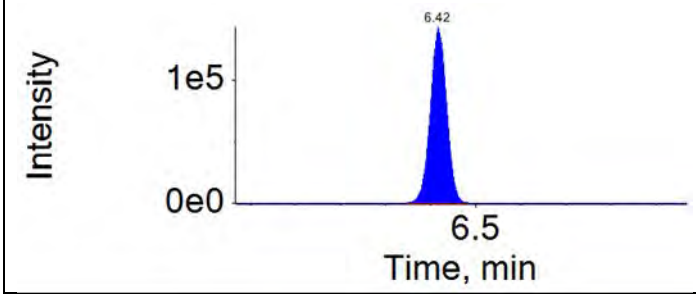
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

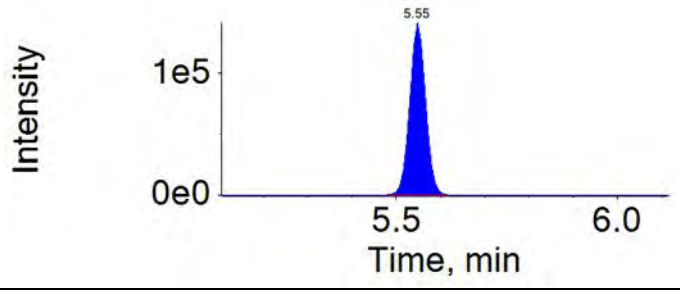
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



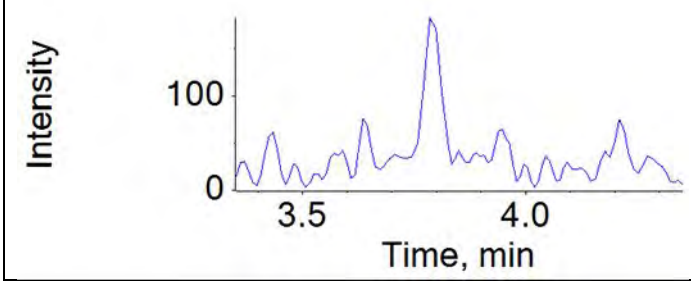


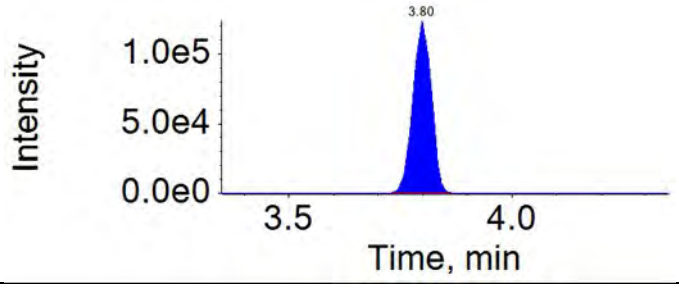
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

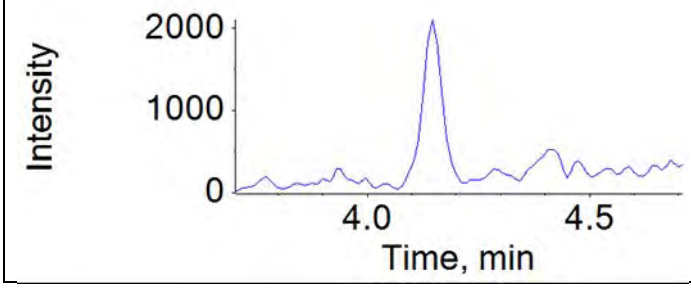
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

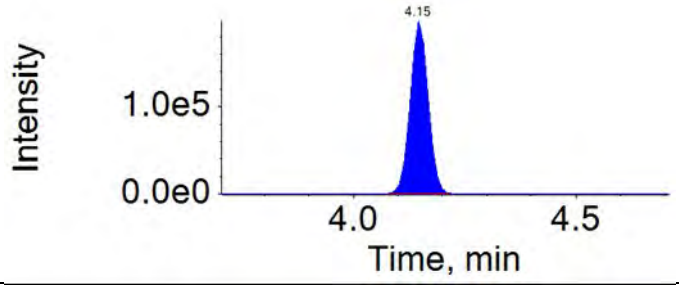
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



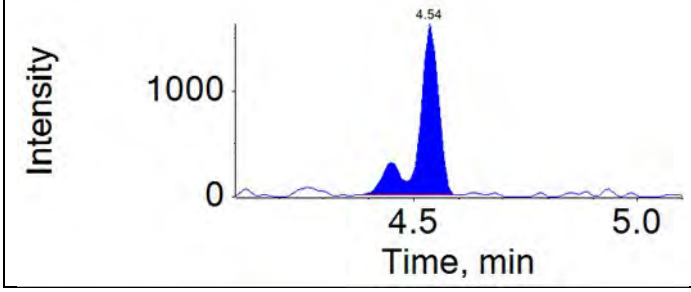


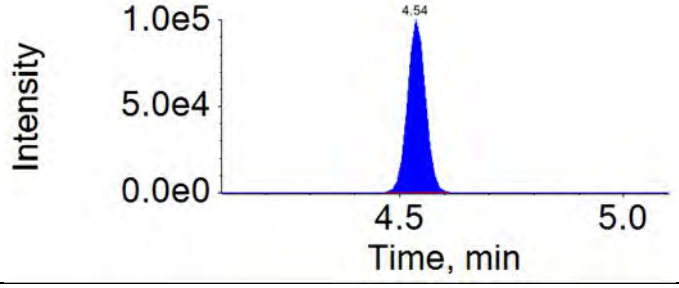
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



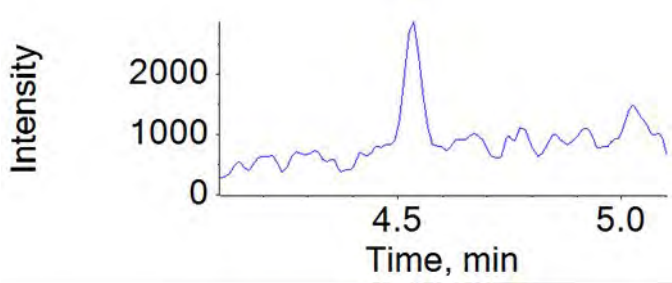


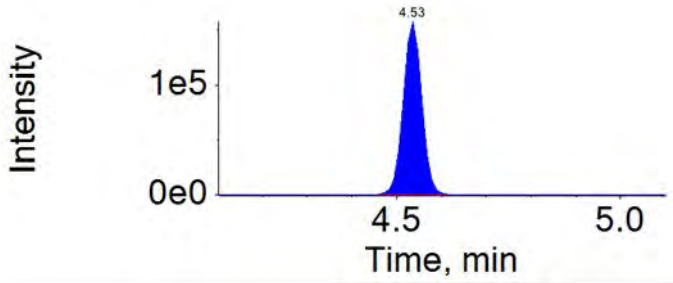
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



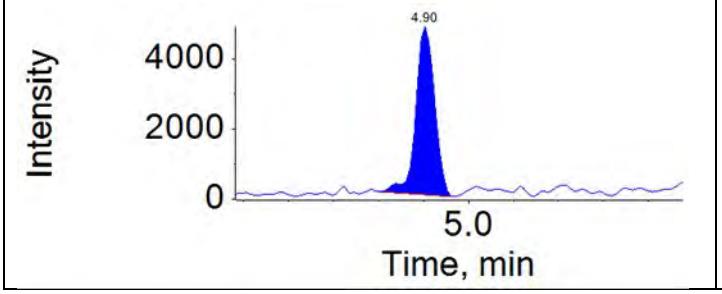


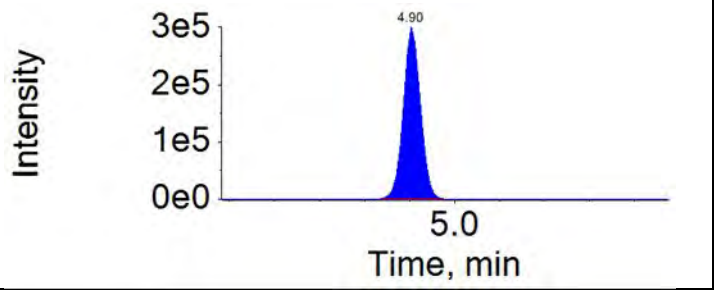
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

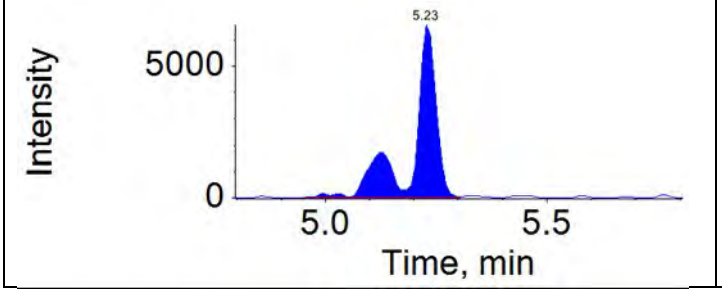
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

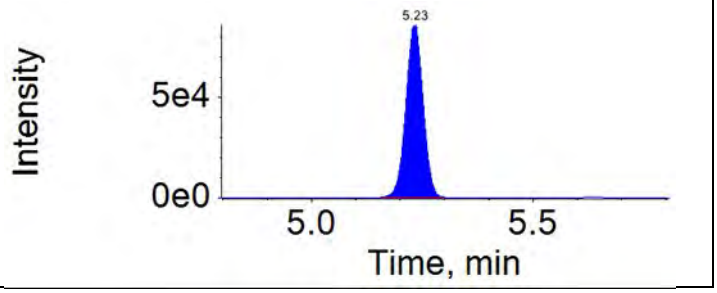
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



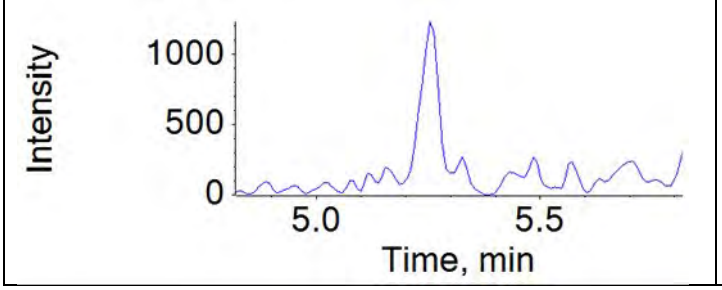


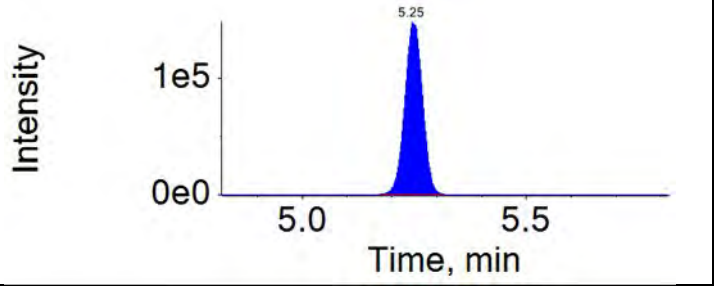
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



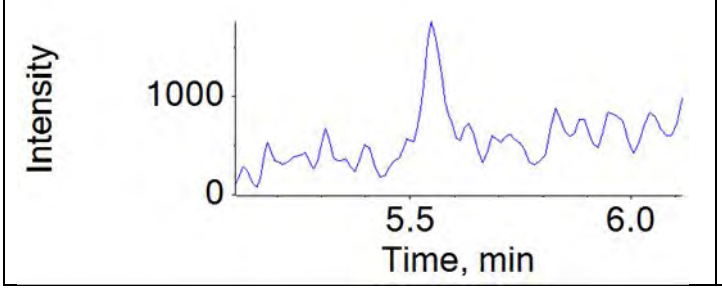


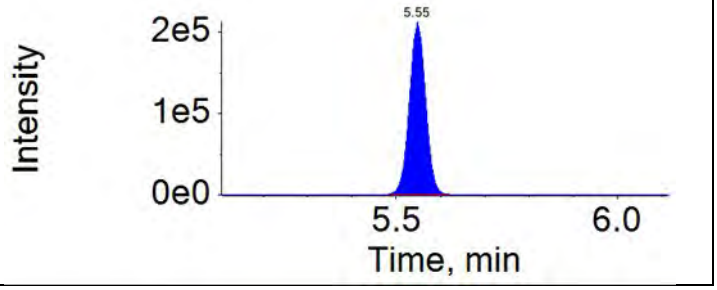
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0

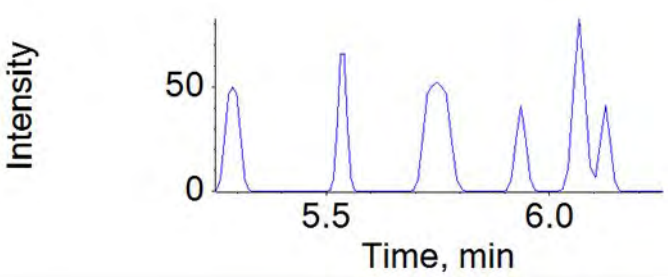
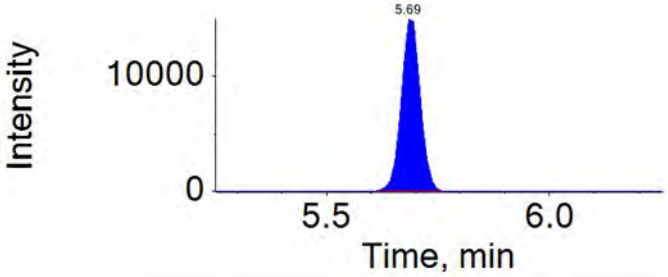


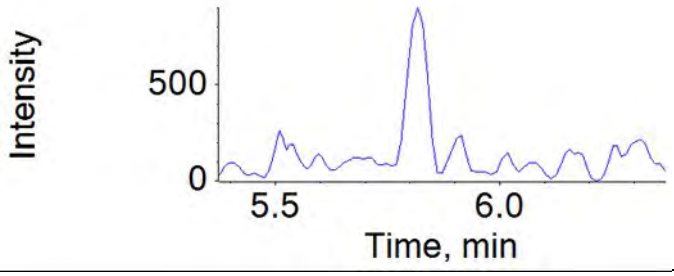
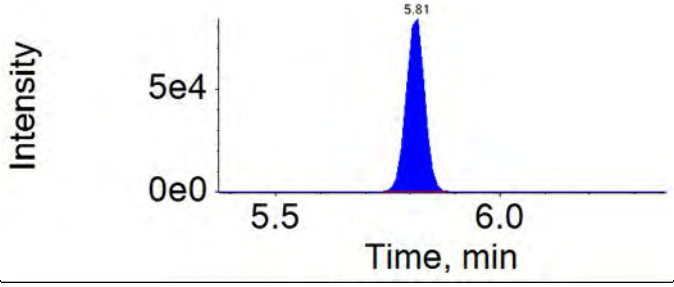


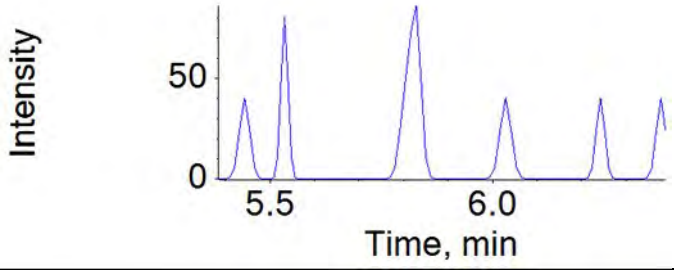
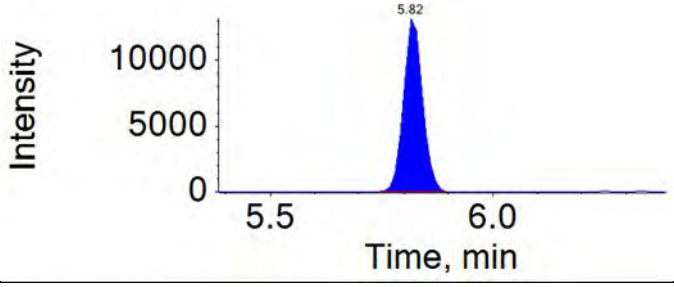
APPROVED
By JPT at 10:33 am, 11/13/18

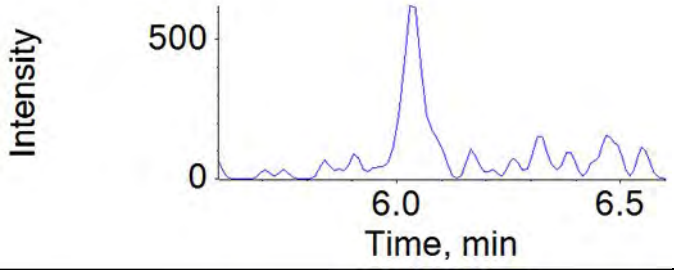
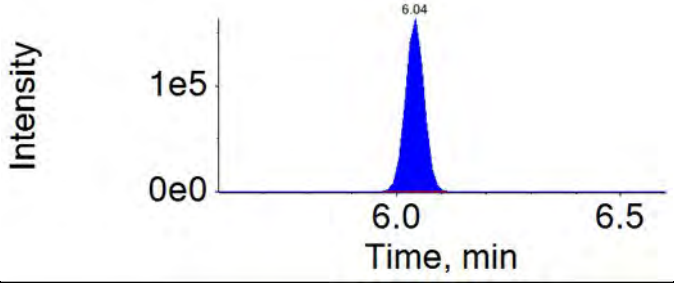
REVIEWED
By HMK at 2:14 pm, 11/13/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

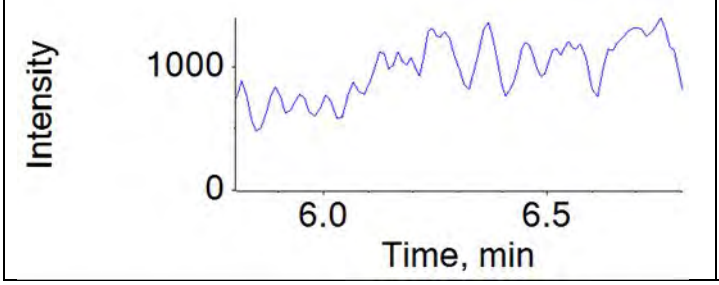
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

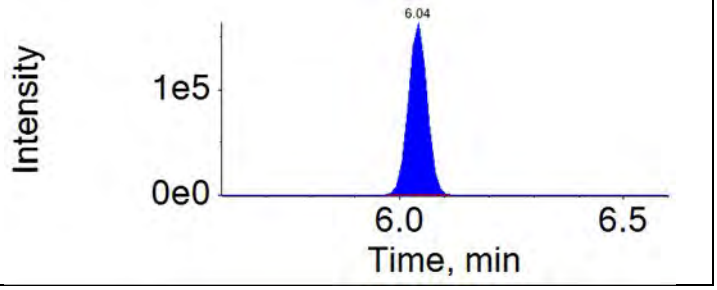
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

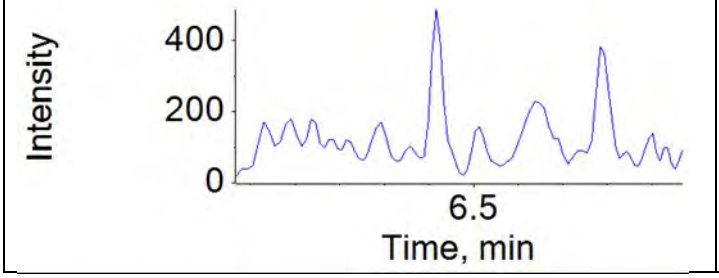
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

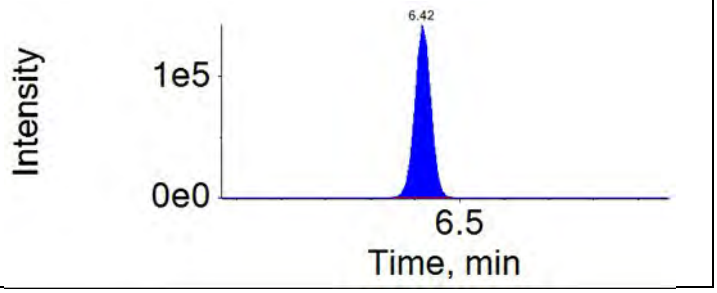
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



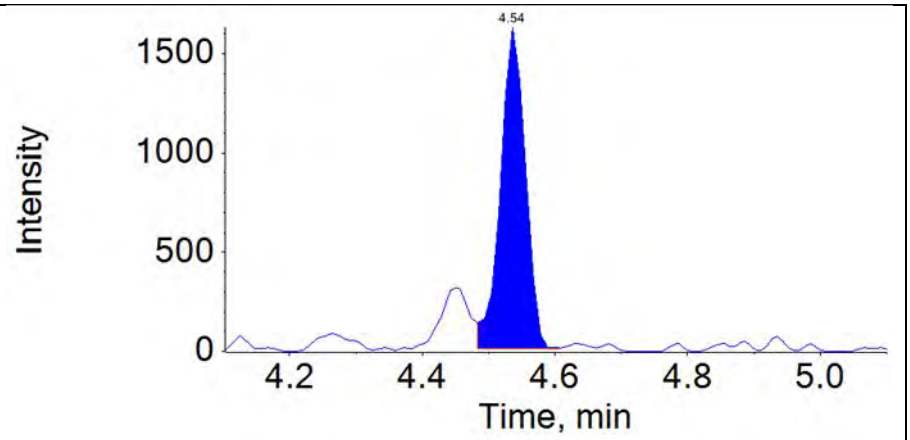


APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

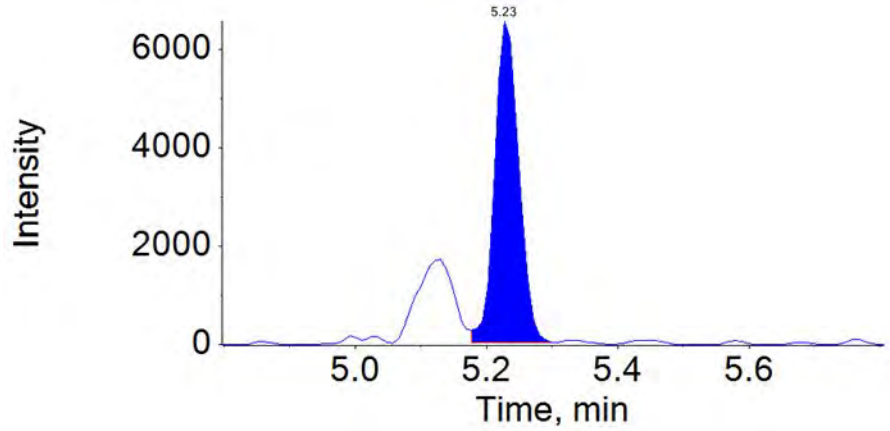
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
4204.1
Mass Range:
399.0 / 80.0
File Name:
18NOV07D-20.wiff
Sample Name:
9881940



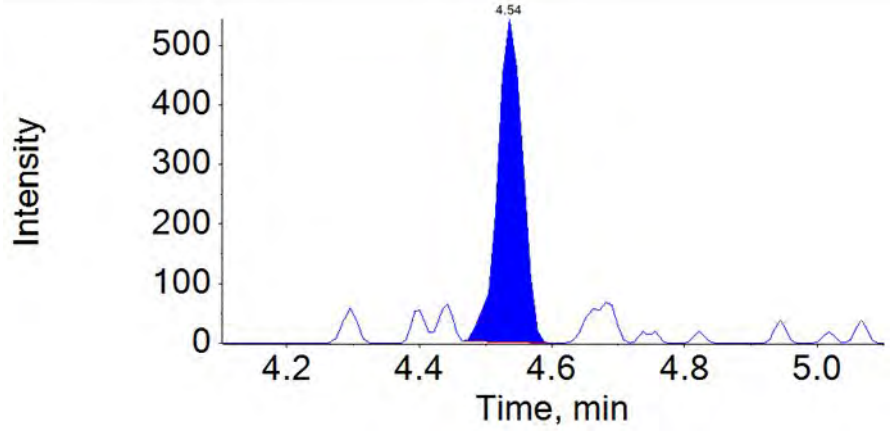
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
16689.7
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-20.wiff
Sample Name:
9881940



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
1416.5
Mass Range:
399.0 / 99.0
File Name:
18NOV07D-20.wiff
Sample Name:
9881940

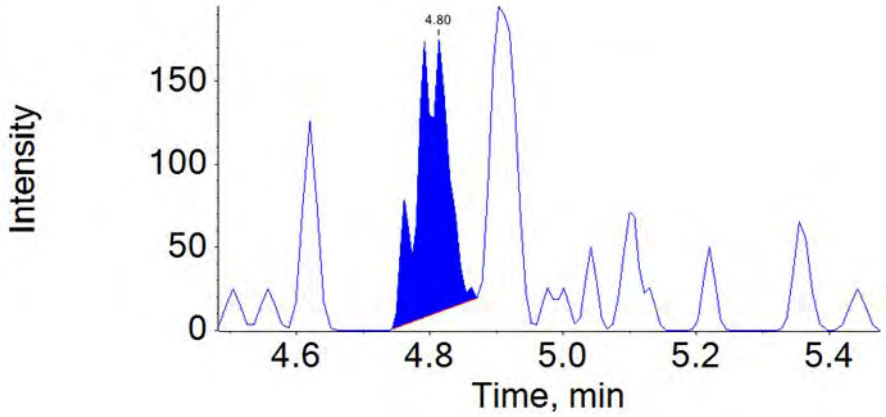


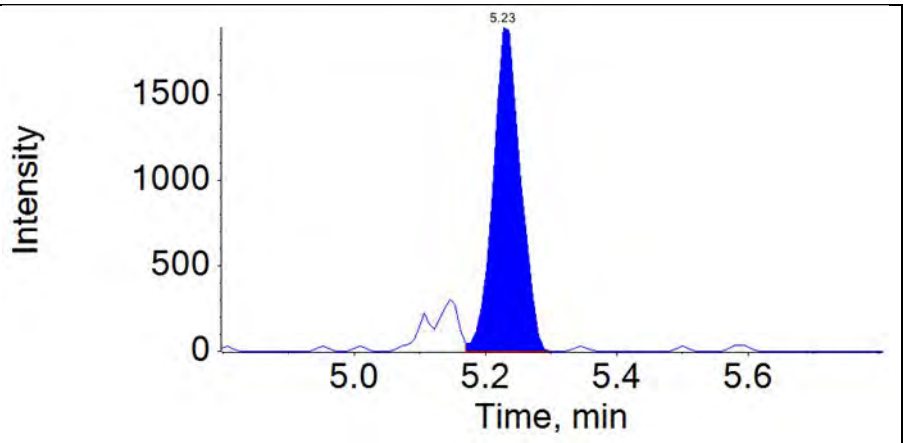
Integration Comment: incorrect integration

APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFOA_2 **RT (min.):** 4.80 **Peak Area:** 539.2 **Mass Range:** 413.0 / 169.0 **File Name:** 18NOV07D-20.wiff **Sample Name:** 9881940	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.23 **Peak Area:** 5495.6 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV07D-20.wiff **Sample Name:** 9881940	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

Ion Ratio Report

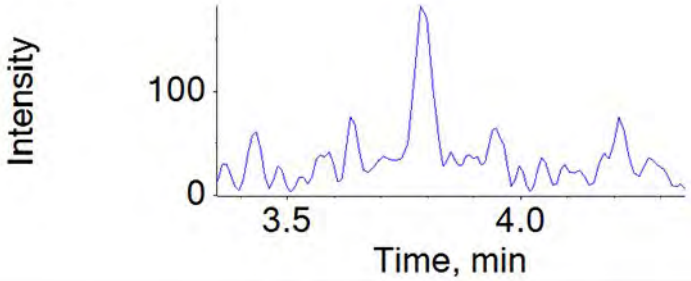
Sample Name: 9881940 **Instrument Name:** LM27631 **File Name:** 18NOV07D-20.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.54	1.00	5128.3	M	N/A	0.3153			
PFHxS_2	4.54	1.00	1616.8	M	N/A	0.3153	-12	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.90	1.00	14000.6	A	N/A	0.0820			
PFOA_2	4.86	0.99	1147.6	M	N/A	0.0820	28	50	
PFOS	5.23	1.00	24395.8	M	N/A	0.2637			
PFOS_2	5.23	1.00	6433.4	M	N/A	0.2637	-25	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

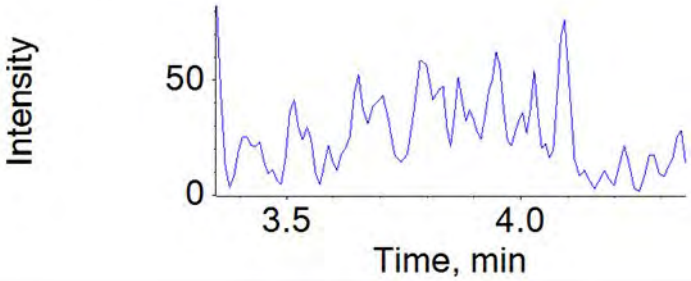
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

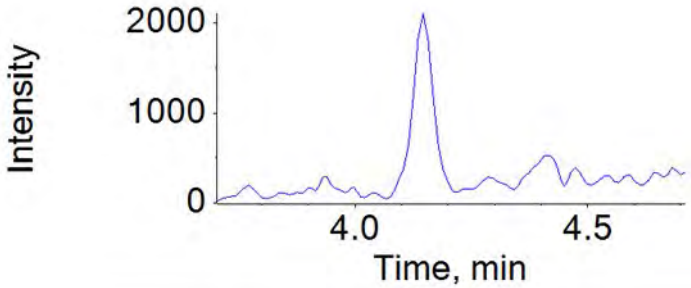
Component: PFBS
Primary Mass: 299.0 / 80.0



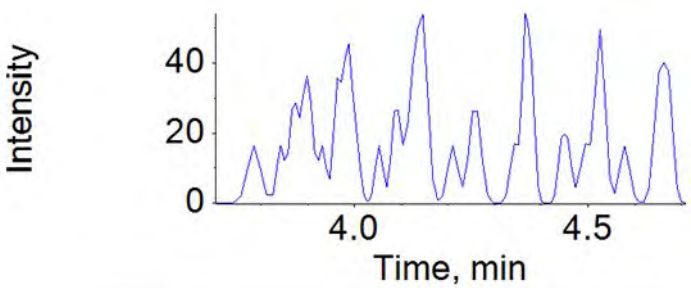
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



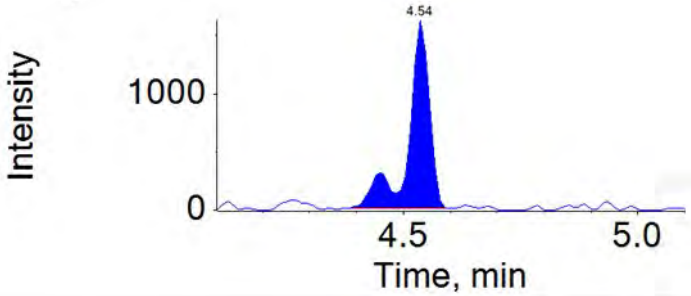
Component: PFHxA
Primary Mass: 313.0 / 269.0



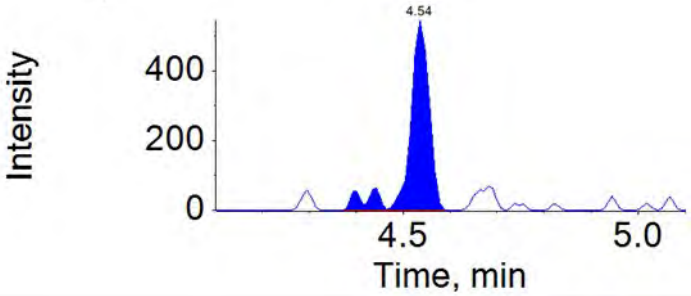
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



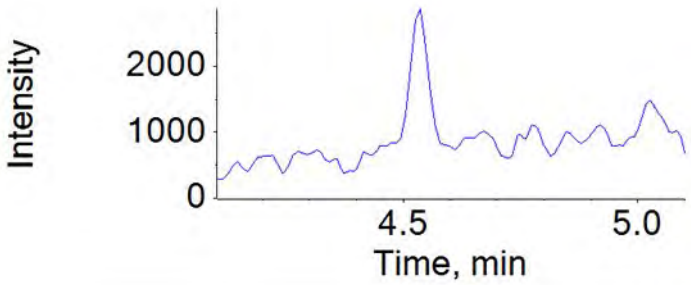
Component: PFHxS
Primary Mass: 399.0 / 80.0



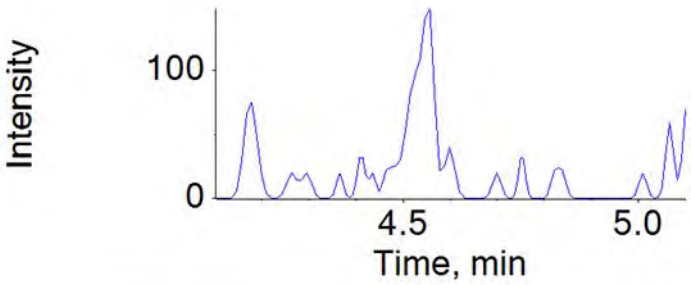
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



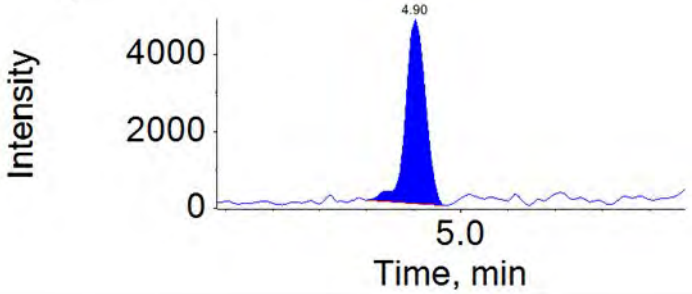
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



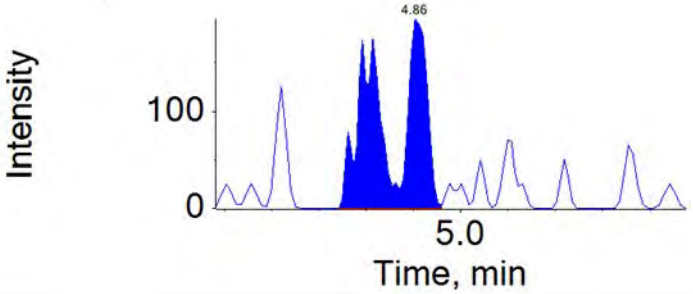
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

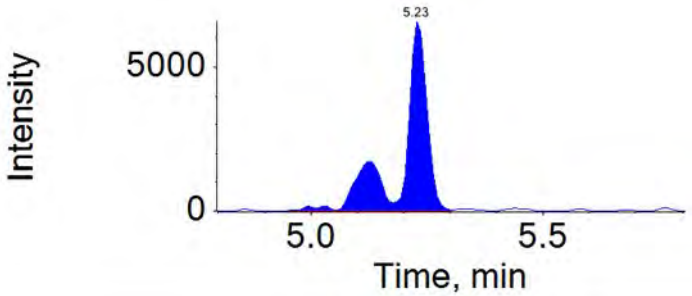
Component: PFOA
Primary Mass: 413.0 / 369.0



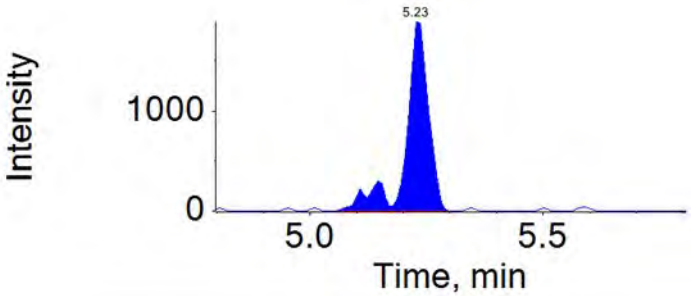
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



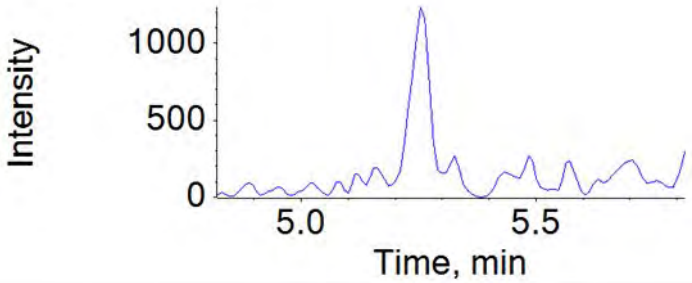
Component: PFOS
Primary Mass: 499.0 / 80.0



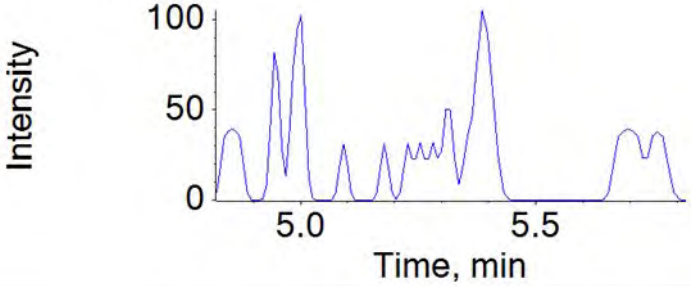
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



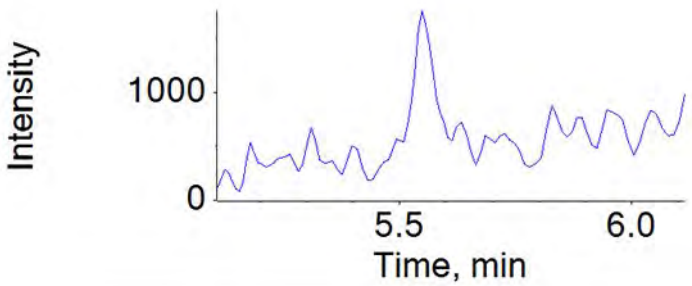
Component: PFNA
Primary Mass: 463.0 / 419.0



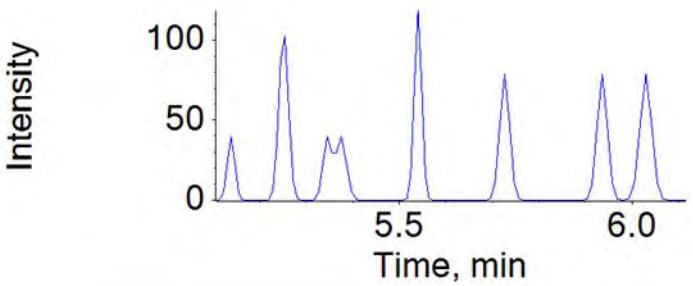
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



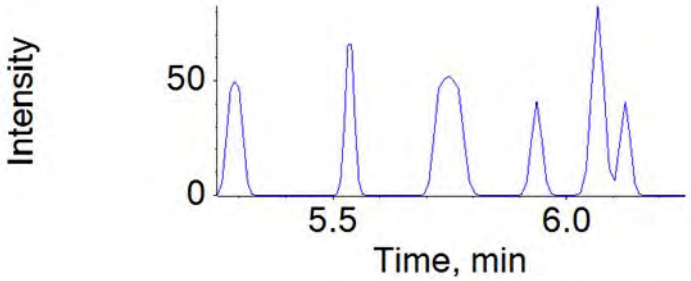
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



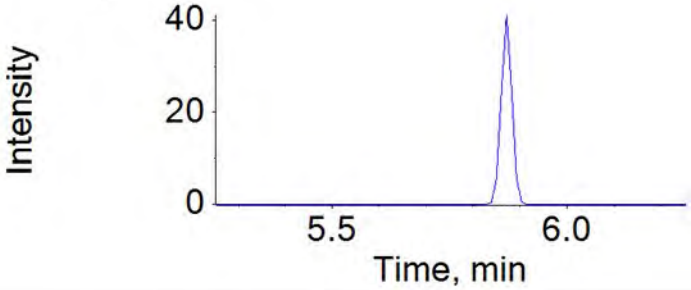
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

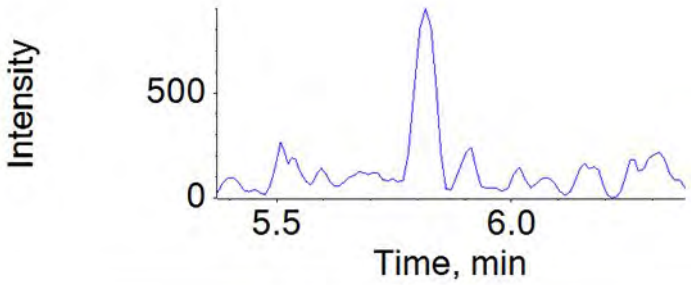
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



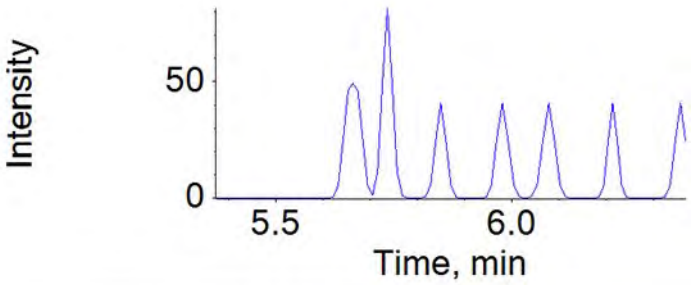
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



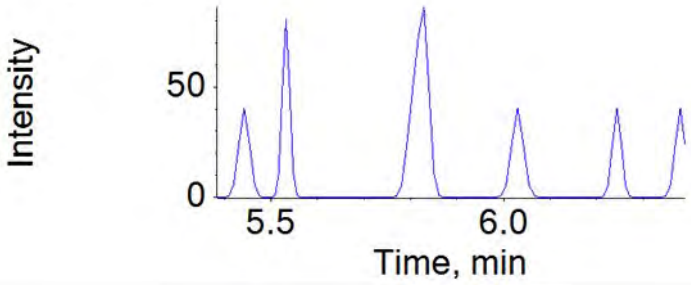
Component: PFUnDA
Primary Mass: 563.0 / 519.0



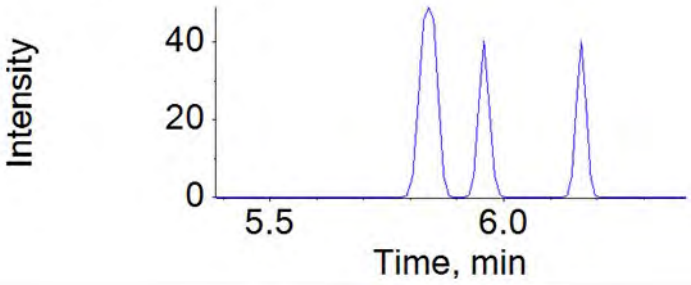
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



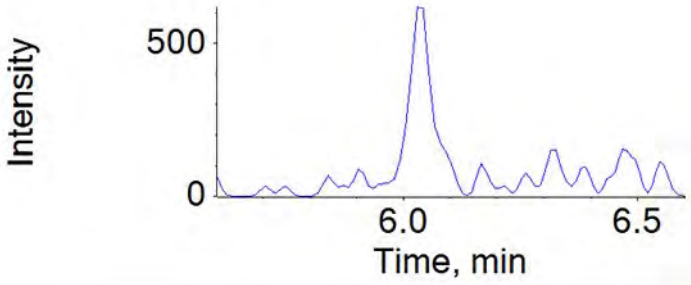
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



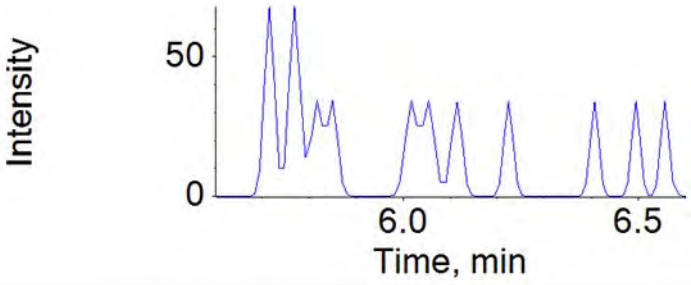
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



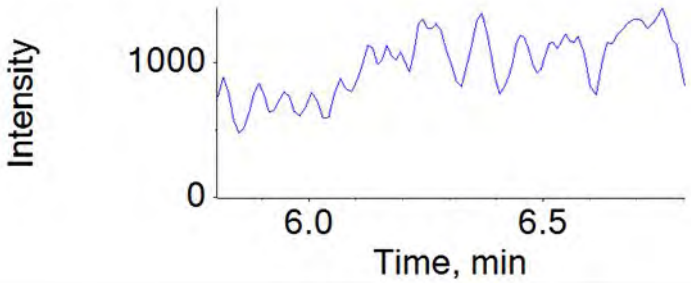
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



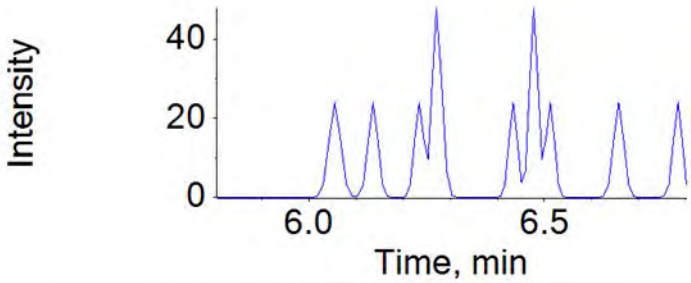
APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

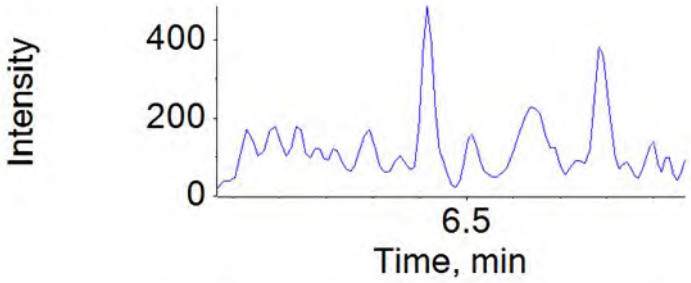
Component: PFTrDA
Primary Mass: 663.0 / 619.0



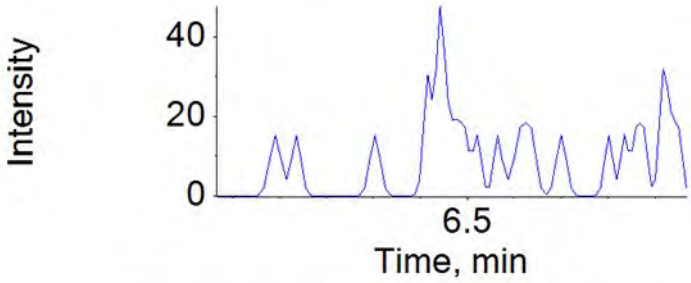
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 10:33 am, 11/13/18

REVIEWED
By HMK at 2:14 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881940RE			**Data File:**		18NOV12D-21.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18313005 OU1-GW-9-S-01-15 Grab Soil			**Acquis Date:**		2018-11-12T19:45:57
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	40			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18313005
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18313005			**Operator:**		JPT12262
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	698949.5	659926.2	6	50	
13C2-PFOA	5.0	531233.8	450219.7	18	50	
13C4-PFOS	4.8	260298.2	249205.8	4	50	
13C2-PFDA	5.0	325346.3	278743.9	17	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	348898.8	13C3-PFBA	698949.5	0.499	8.774	6.649	76	50-150	
E13C5-PFHxA	523231.7	13C2-PFOA	531233.8	0.985	9.434	6.713	71	50-150	
E13C3-PFHxS	274156.3	13C2-PFOA	531233.8	0.516	8.925	6.682	75	50-150	
E13C4-PFHpA	454343.5	13C2-PFOA	531233.8	0.855	9.434	7.270	77	50-150	
E13C8-PFOA	694515.5	13C2-PFOA	531233.8	1.307	9.434	6.796	72	50-150	
E13C8-PFOS	235073.5	13C4-PFOS	260298.2	0.903	9.019	7.550	84	50-150	
E13C9-PFNA	398185.7	13C4-PFOS	260298.2	1.530	9.434	8.047	85	50-150	
E13C6-PFDA	520647.9	13C2-PFDA	325346.3	1.600	9.434	7.046	75	50-150	
Ed3-NMeFOSAA	36171.4	13C2-PFDA	325346.3	0.111	9.434	3.786	40	50-150	OOS
E13C7-PFUnDA	218244.2	13C2-PFDA	325346.3	0.671	9.434	7.348	78	50-150	
Ed5-NEtFOSAA	30830.1	13C2-PFDA	325346.3	0.095	9.434	3.783	40	50-150	OOS
E13C2-PFDoDA	443595.9	13C2-PFDA	325346.3	1.363	9.434	6.679	71	50-150	
E13C2-PFTeDA	333523.0	13C2-PFDA	325346.3	1.025	9.434	6.790	72	50-150	

APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

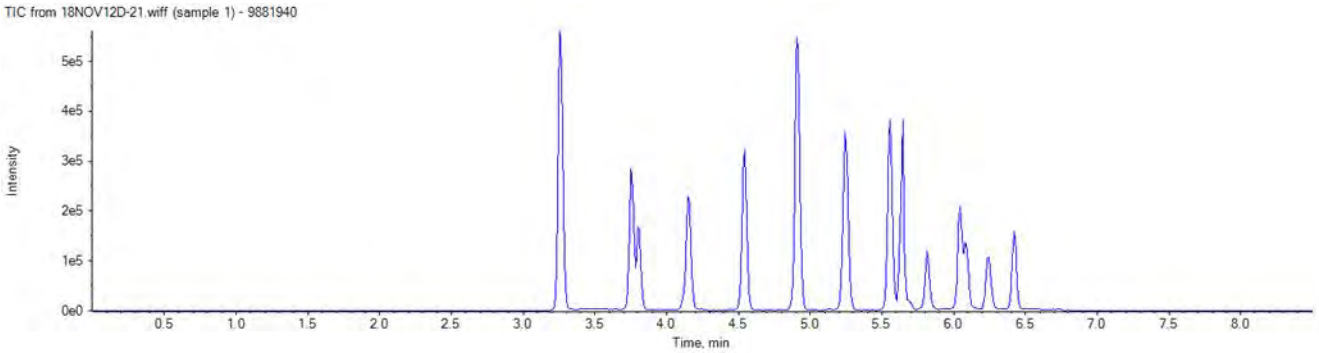
Analyte Quantitation Peak Table

Sample Name: 9881940RE **Instrument Name:** LM27631 **File Name:** 18NOV12D-21.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	348898.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	523231.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	454343.5	N/A	
PFHxS	4.54	1.000	5629.9		M	13C3-PFHxS	4.54	274156.3	0.021	0.188
PFOA	4.91	1.000	14264.1		M	13C8-PFOA	4.91	694515.5	0.021	0.207
PFOS	5.24	1.000	27979.6		M	13C8-PFOS	5.24	235073.5	0.119	0.982
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	398185.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	520647.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	36171.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	218244.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	30830.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	443595.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	443595.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	333523.0	N/A	

Total Ion Chromatogram

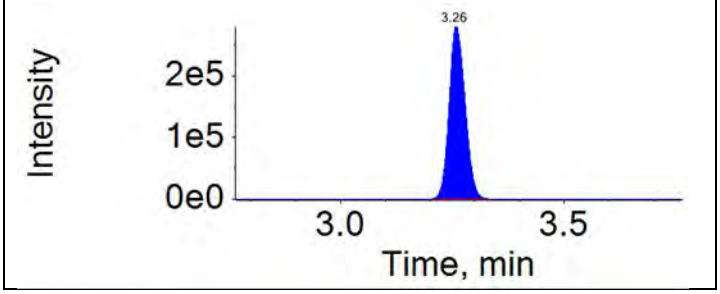


APPROVED
By JPT at 12:33 pm, 11/13/18

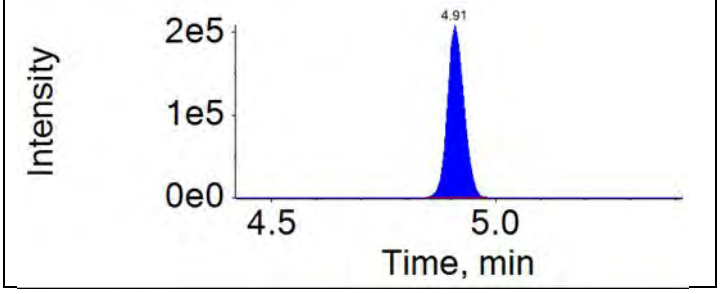
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

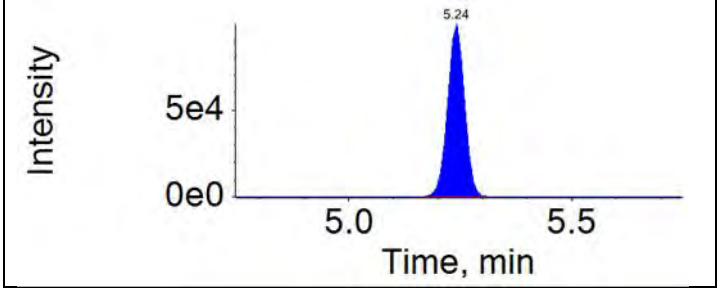
Injection Standard: 13C3-PFBA
216.0 / 172.0



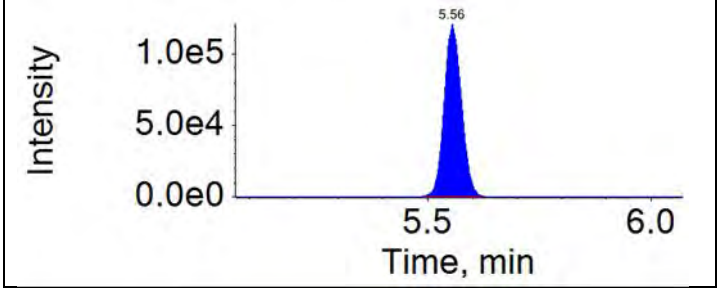
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



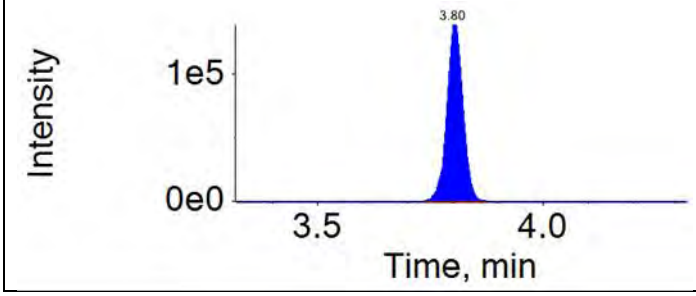
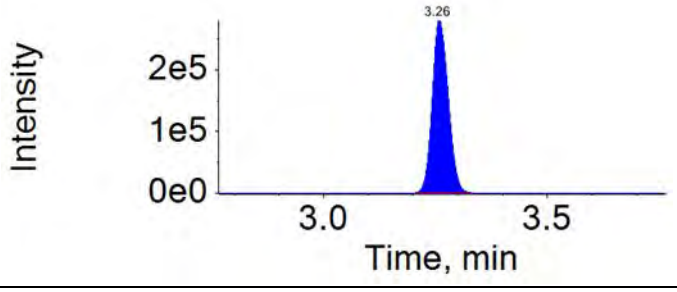
Injection Standard: 13C2-PFDA
515.0 / 470.0

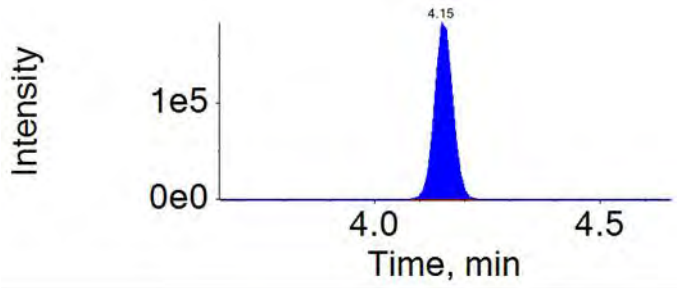
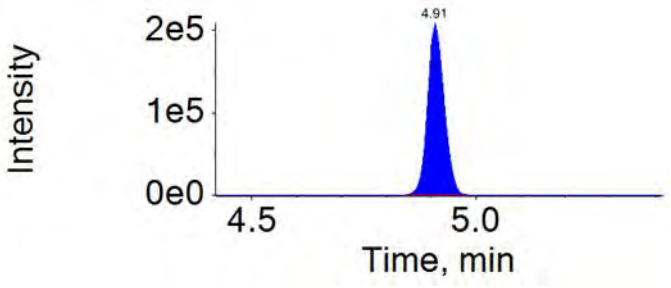


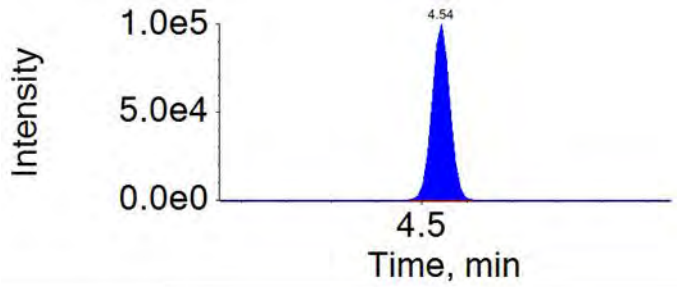
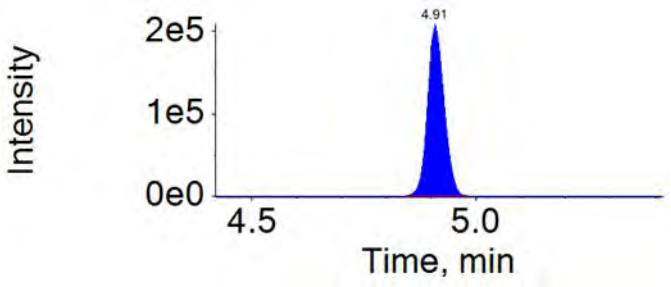
APPROVED
By JPT at 12:33 pm, 11/13/18

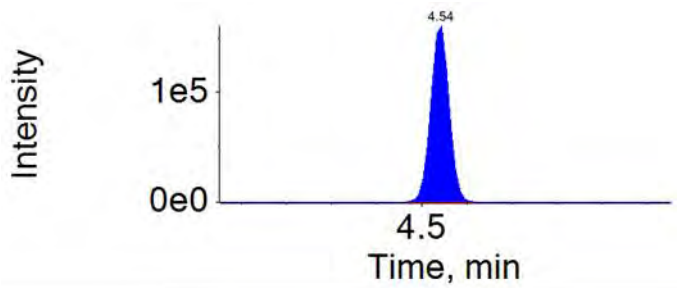
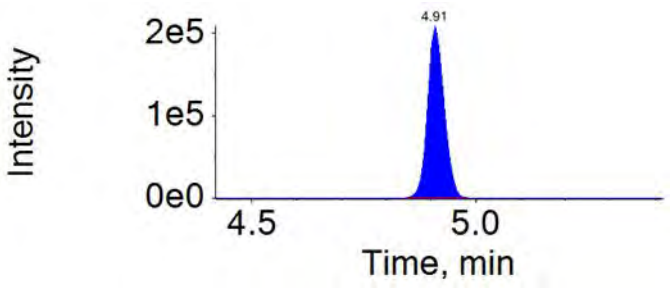
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

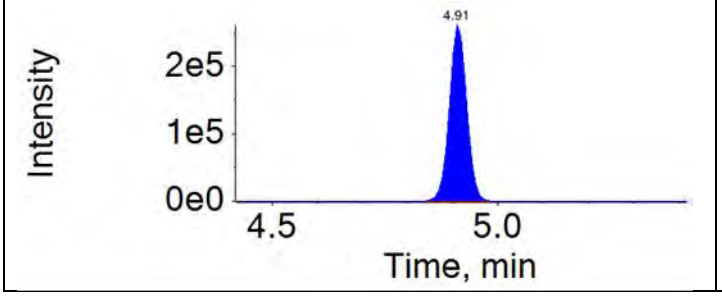
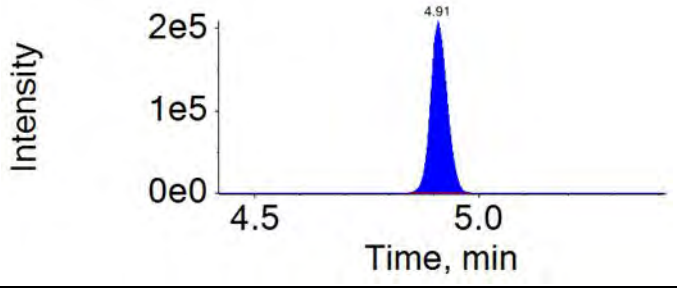
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

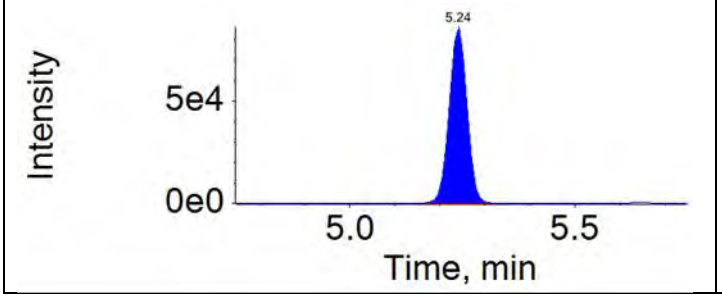
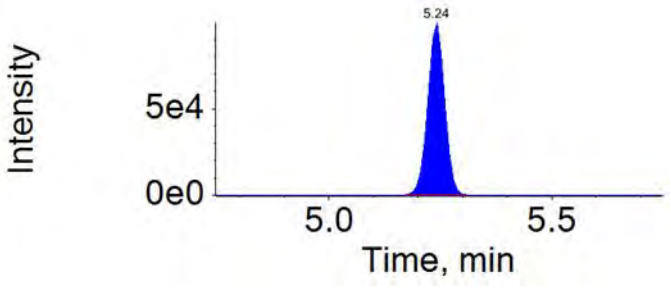
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

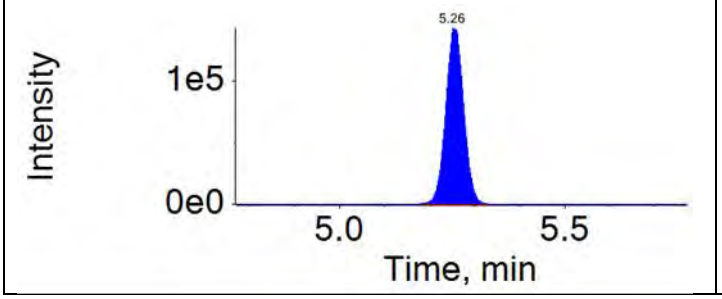
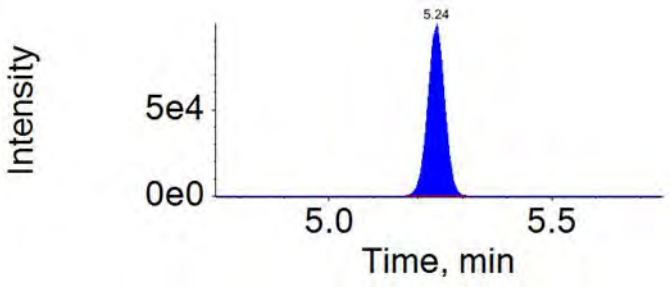
APPROVED
By JPT at 12:33 pm, 11/13/18

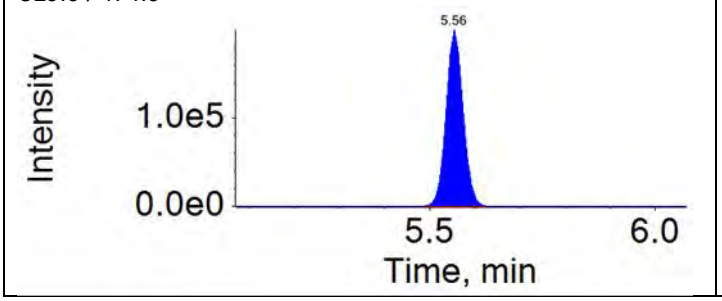
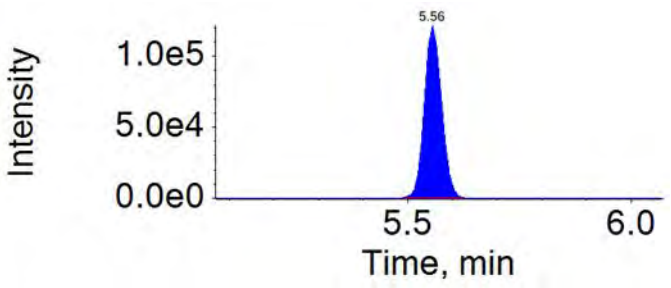
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

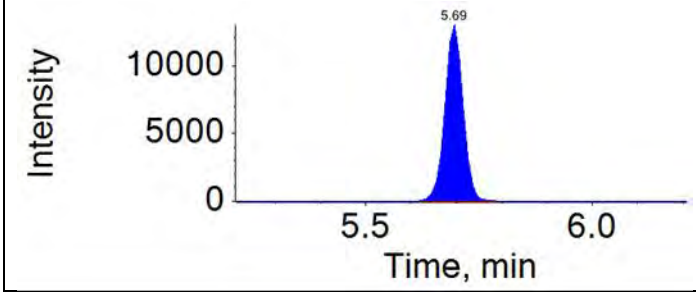
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

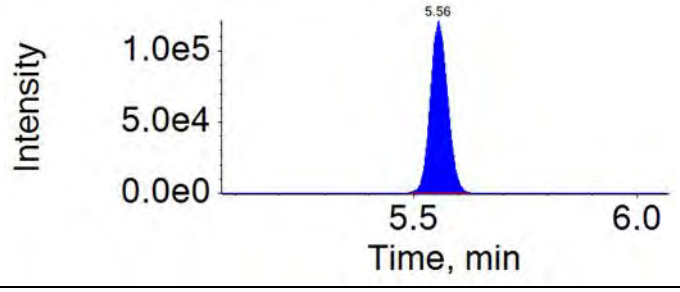
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

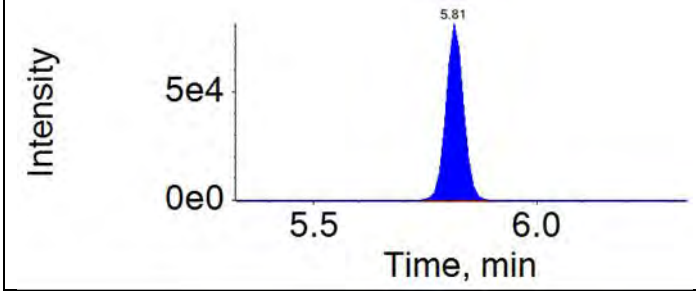
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

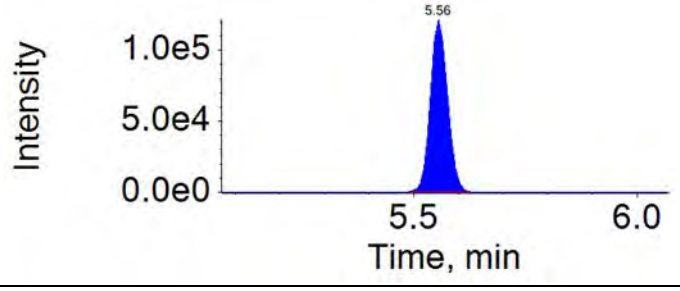
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



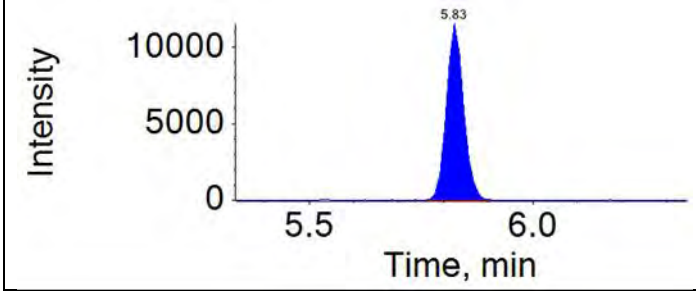


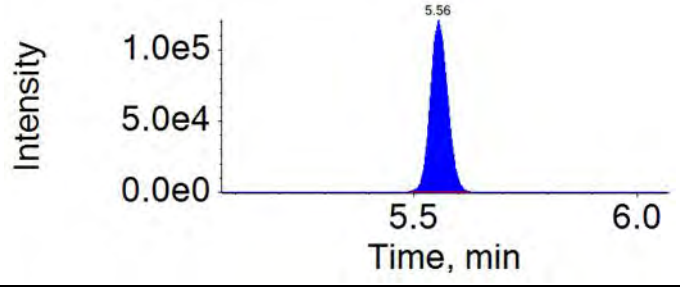
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



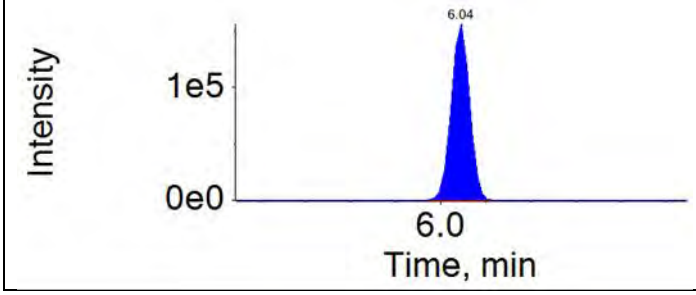


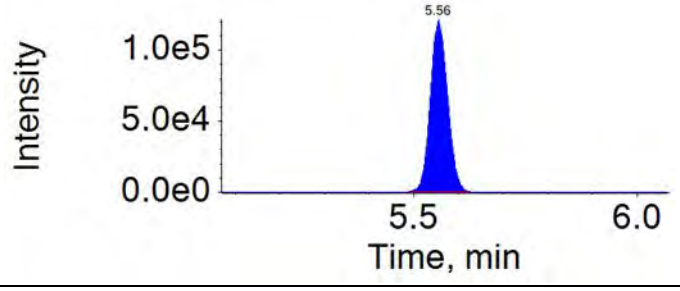
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



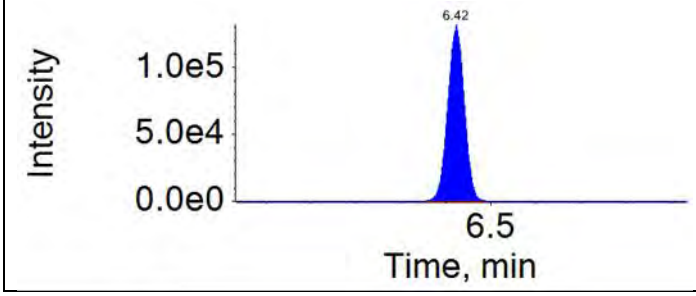


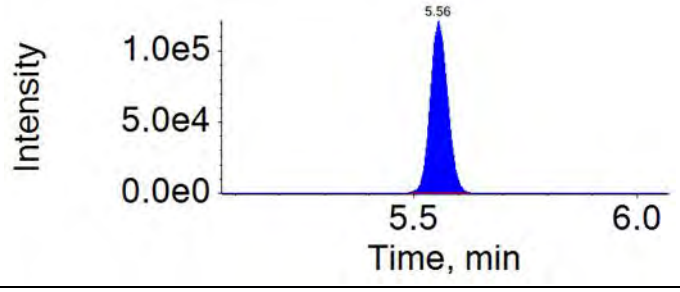
APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



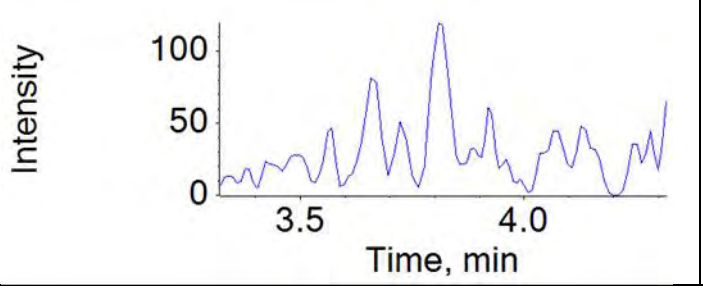


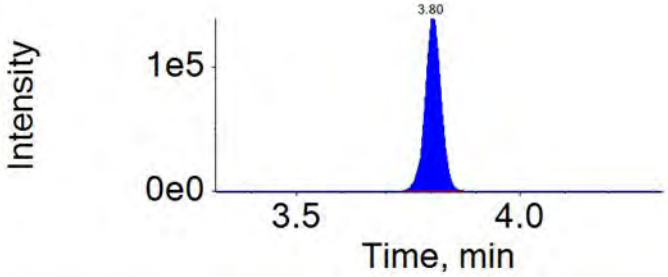
APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

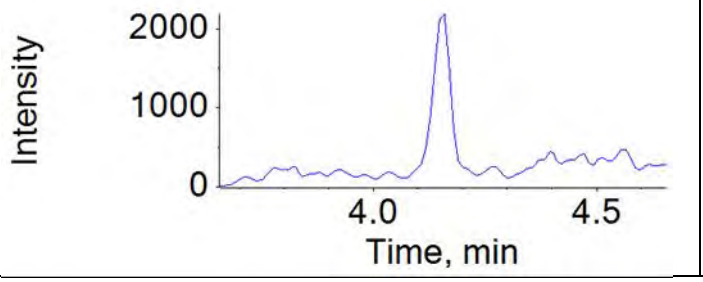
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

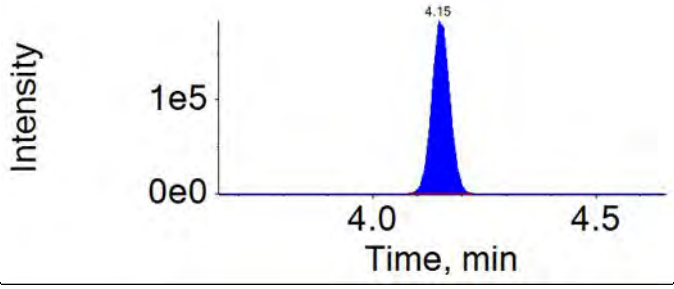
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



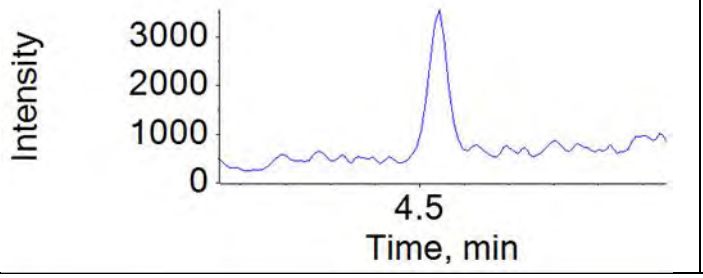


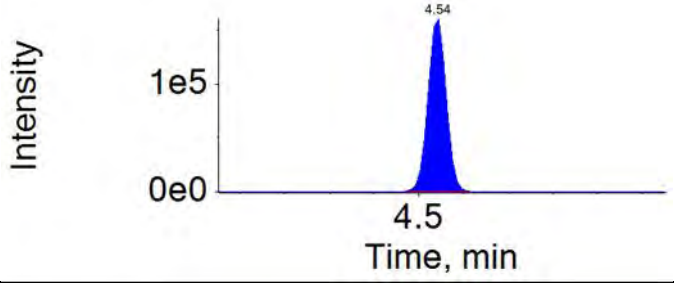
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



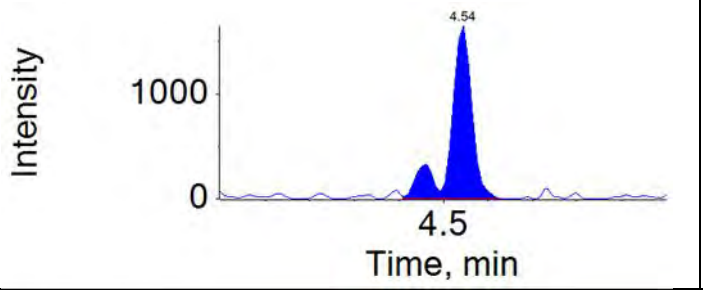


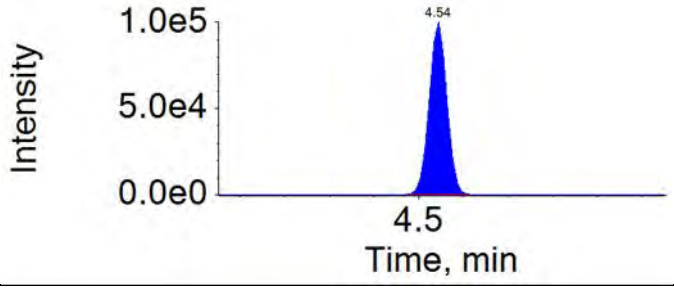
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

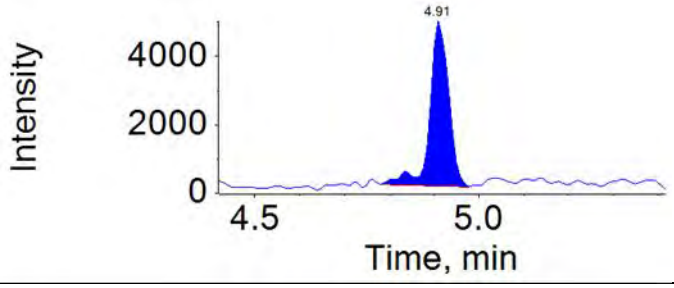
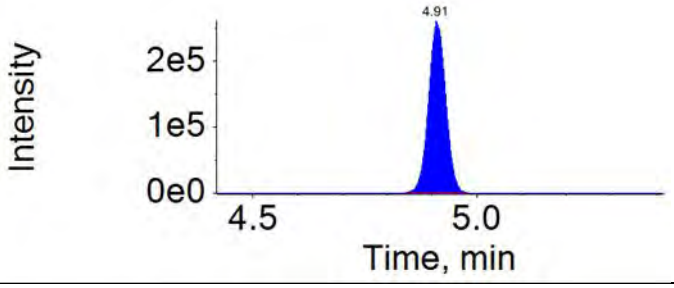


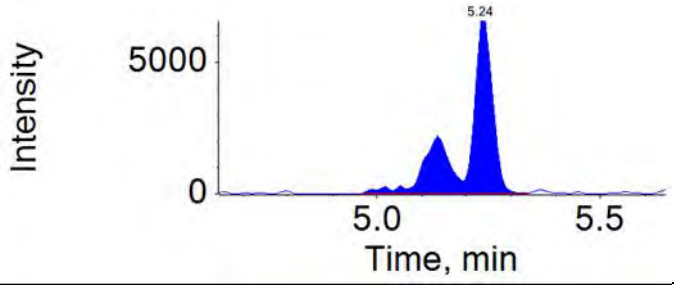
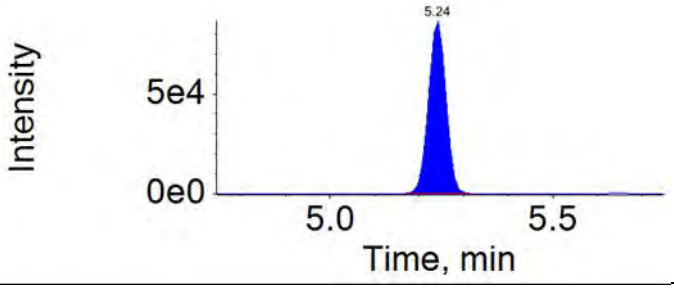


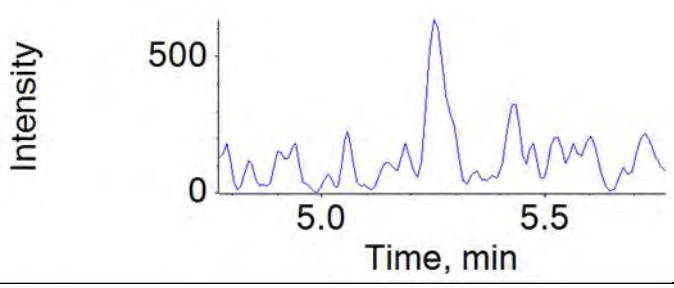
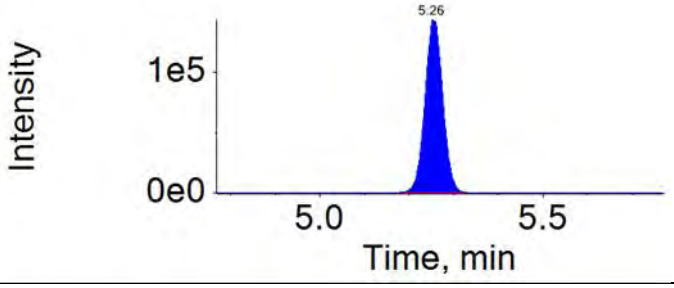
APPROVED
By JPT at 12:33 pm, 11/13/18

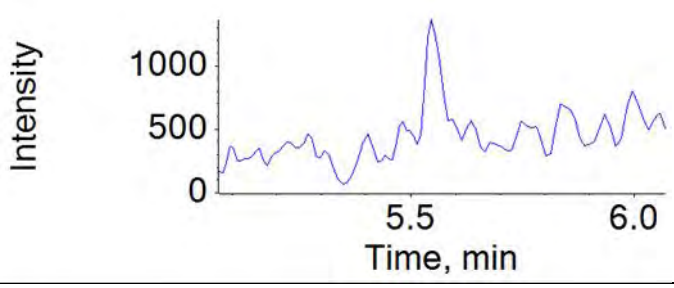
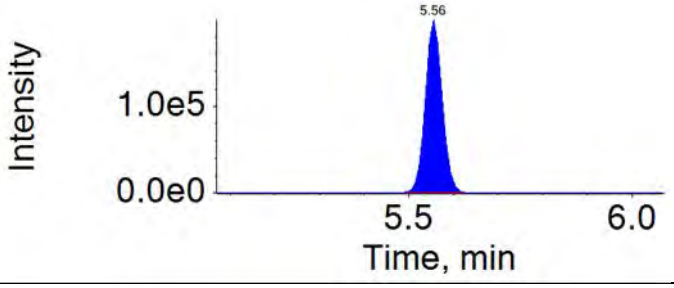
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

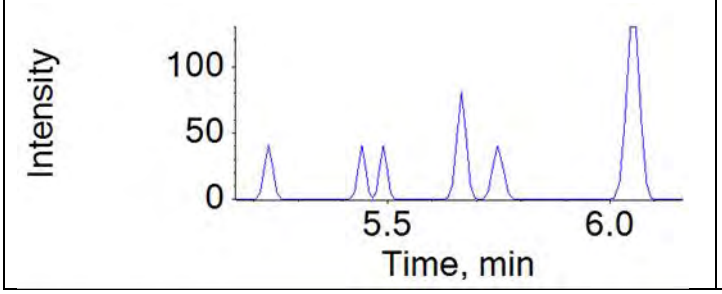
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

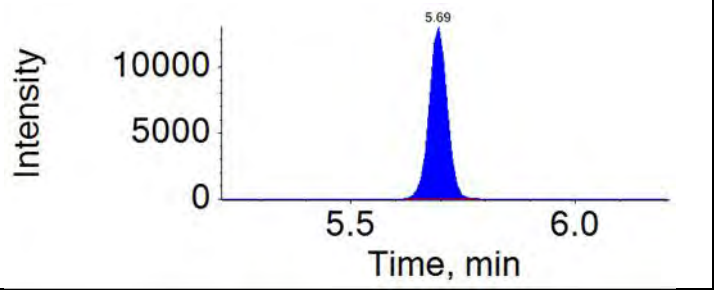
APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

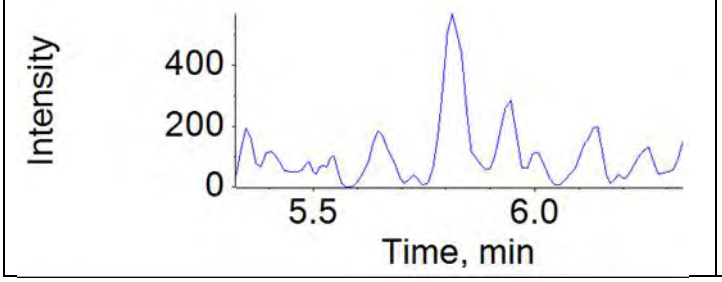
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

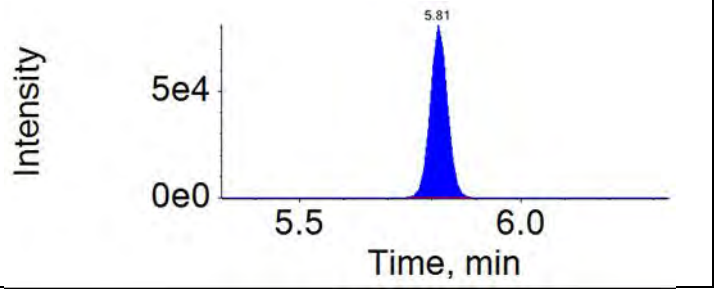
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



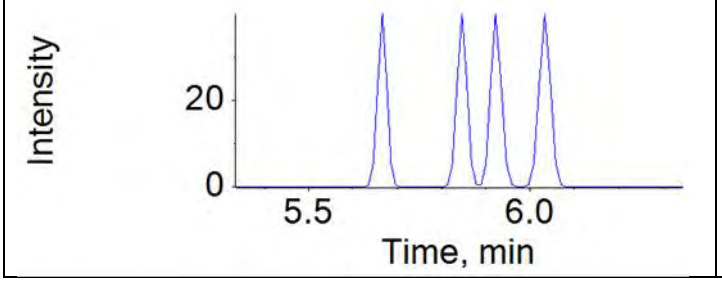


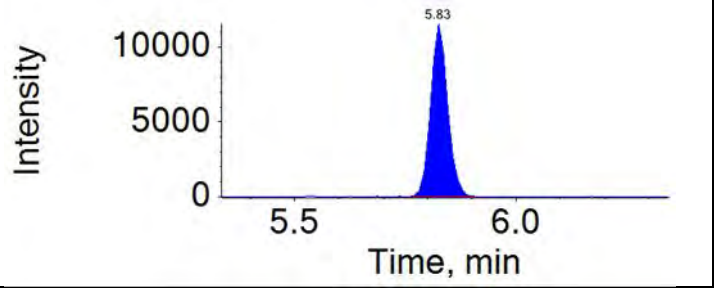
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



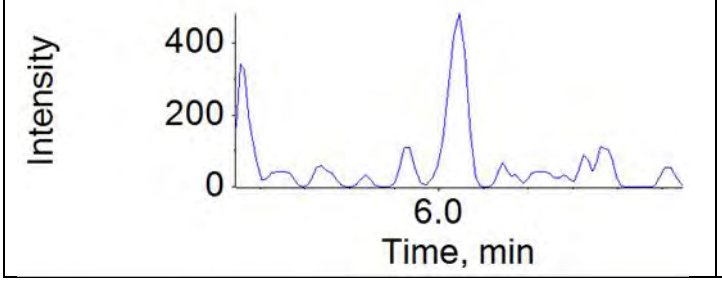


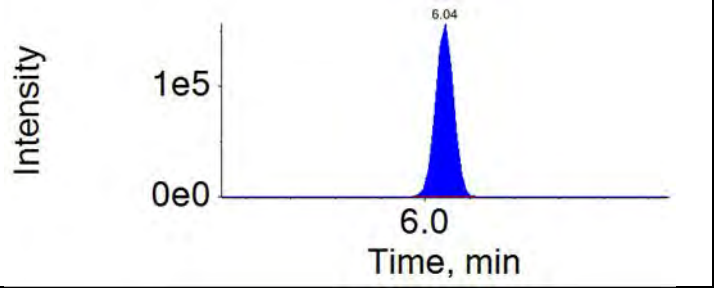
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0

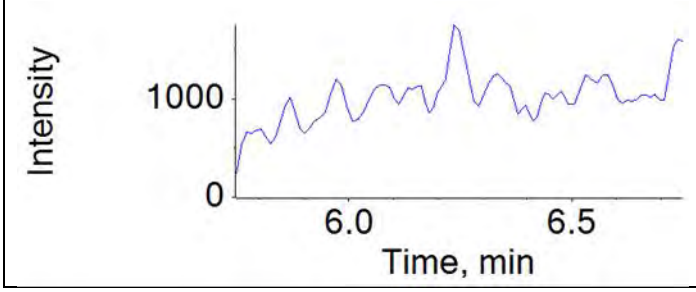
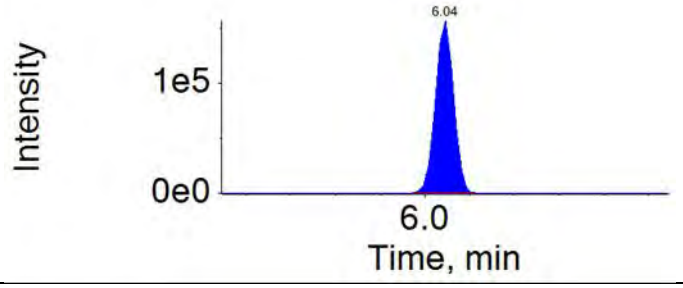


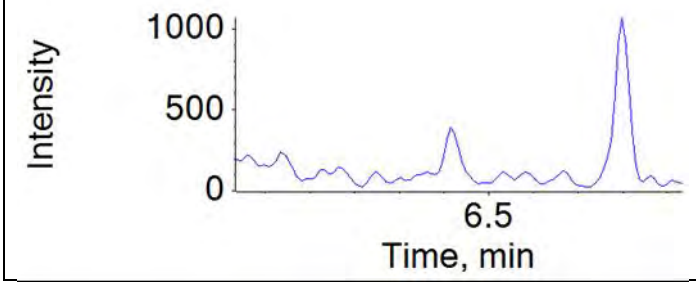
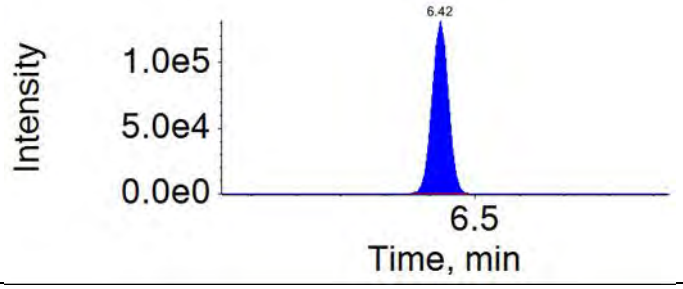


APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

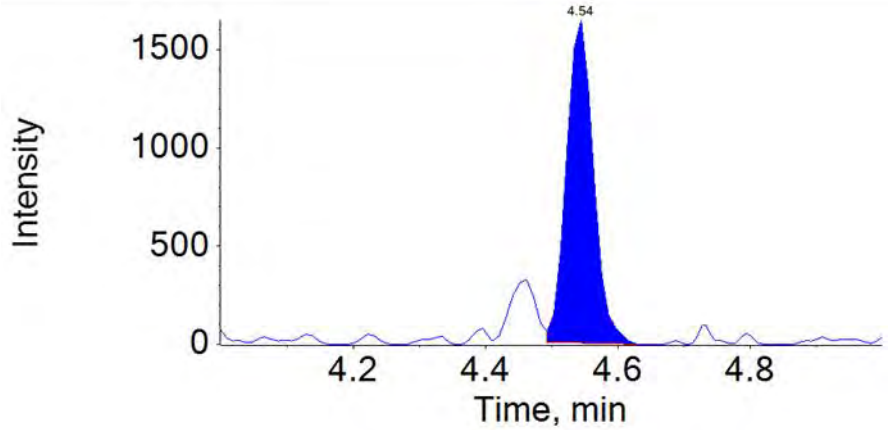
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

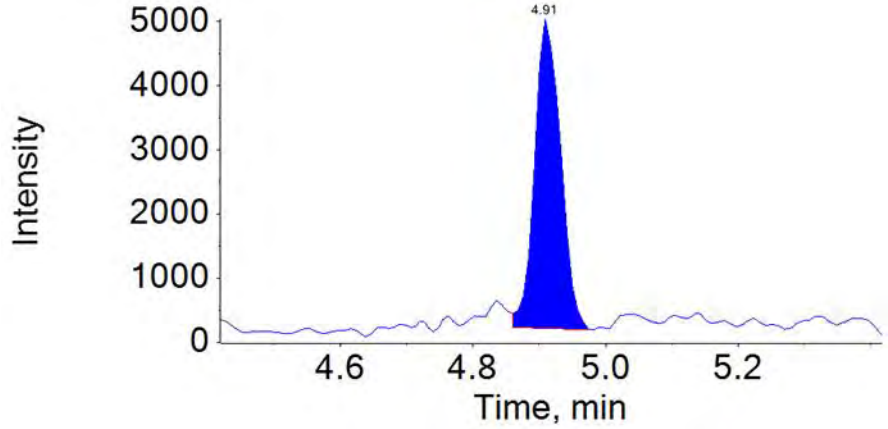
Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
4667.7
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-21.wiff
Sample Name:
9881940RE



Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
13160.9
Mass Range:
413.0 / 369.0
File Name:
18NOV12D-21.wiff
Sample Name:
9881940RE



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
17941.4
Mass Range:
499.0 / 80.0
File Name:
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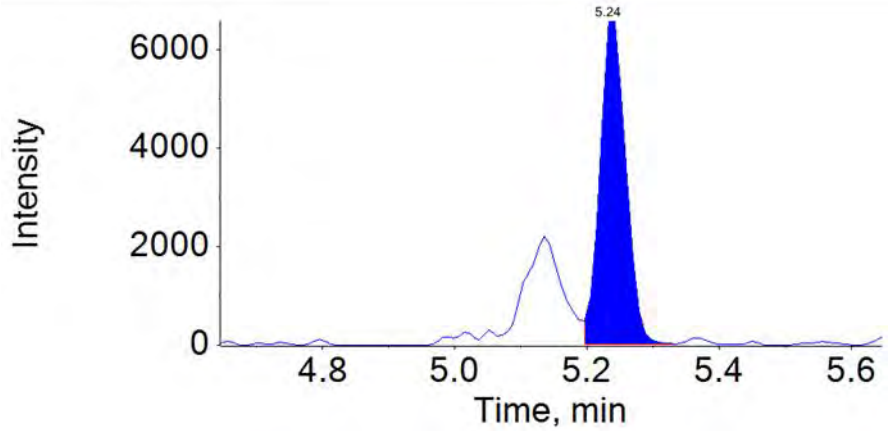
Sample Name:
9881940RE



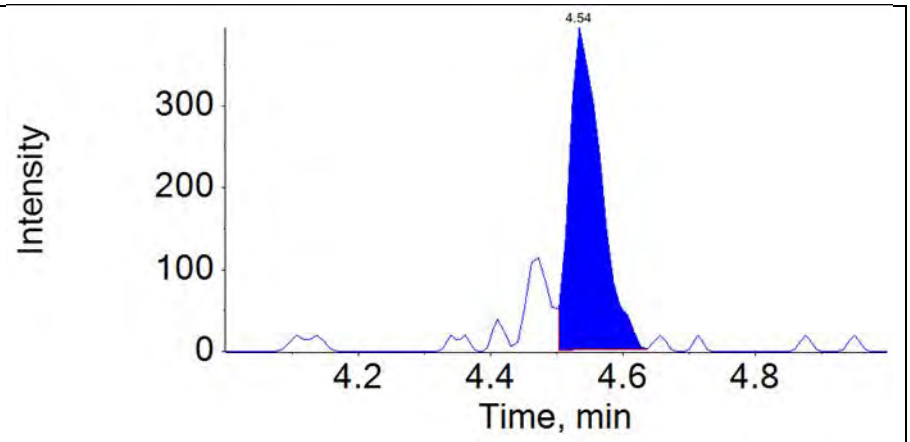
Integration Comment: incorrect integration

APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

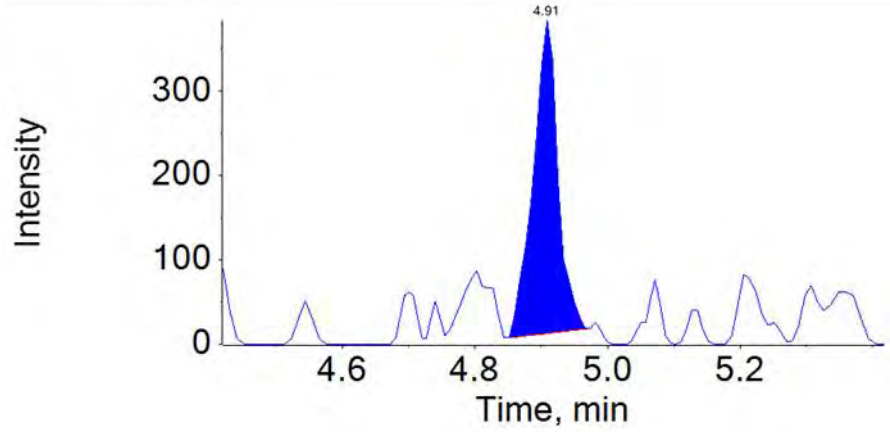
Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
1298.6
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-21.wiff
Sample Name:
9881940RE



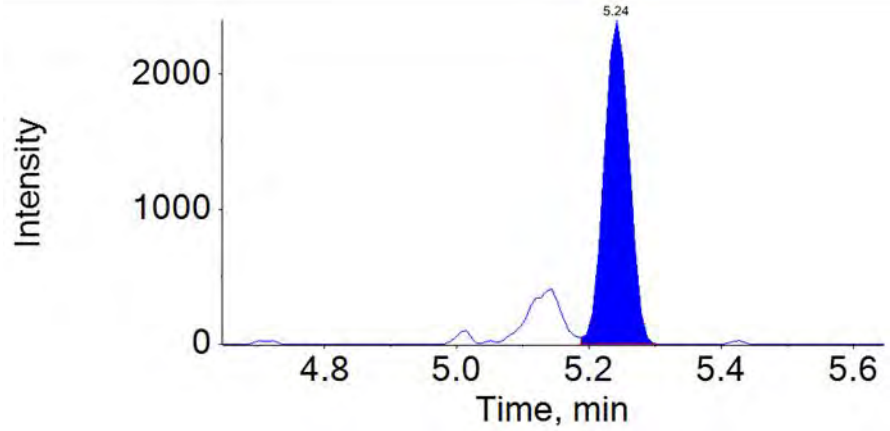
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
966.7
Mass Range:
413.0 / 169.0
File Name:
18NOV12D-21.wiff
Sample Name:
9881940RE



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
6354.4
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-21.wiff
Sample Name:
9881940RE



Integration Comment: incorrect integration

APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Ion Ratio Report

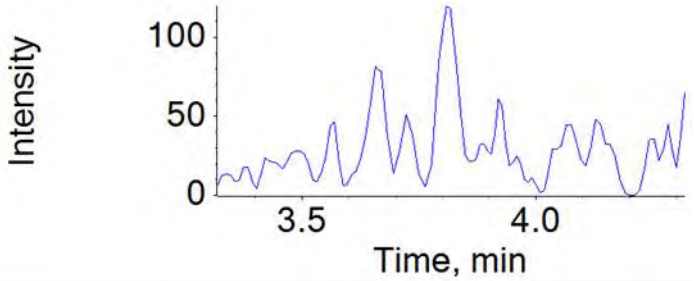
Sample Name: 9881940RE **Instrument Name:** LM27631 **File Name:** 18NOV12D-21.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.54	1.00	5629.9	M	N/A	1.0000			
PFHxS_2	4.54	1.00	1587.5	M	N/A	0.2820	-7	50	
PFOA	4.91	1.00	14264.1	M	N/A	1.0000			
PFOA_2	4.91	1.00	1335.4	M	N/A	0.0936	65	50	OOS
PFOS	5.24	1.00	27979.6	M	N/A	1.0000			
PFOS_2	5.24	1.00	8007.4	M	N/A	0.2862	11	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

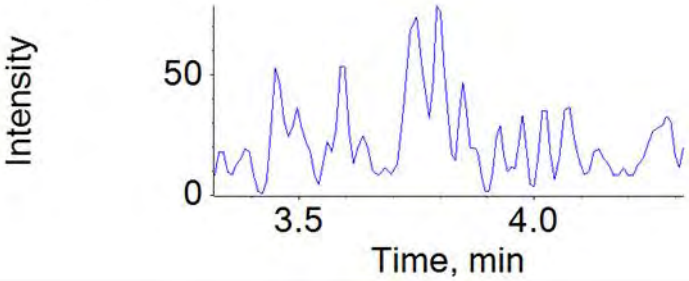
APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

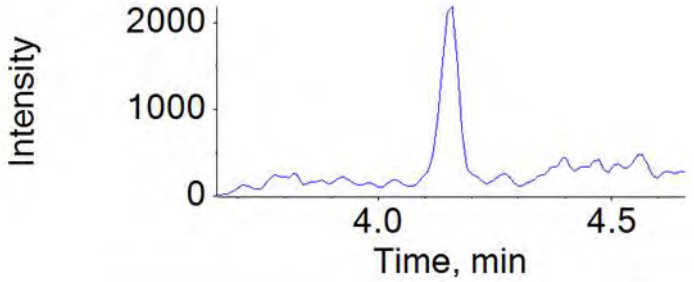
Component: PFBS
Primary Mass: 299.0 / 80.0



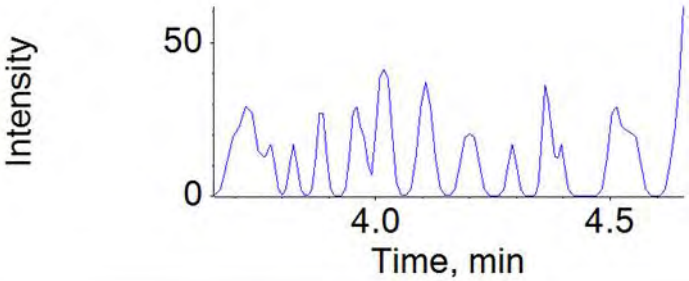
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



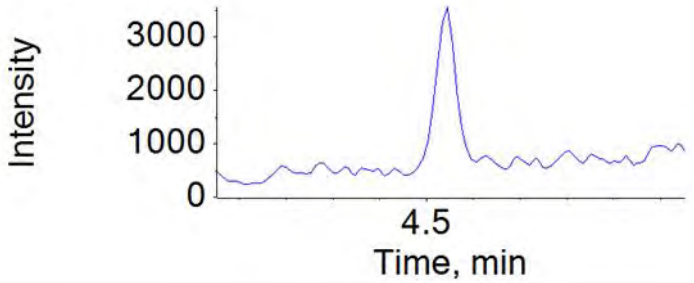
Component: PFHxA
Primary Mass: 313.0 / 269.0



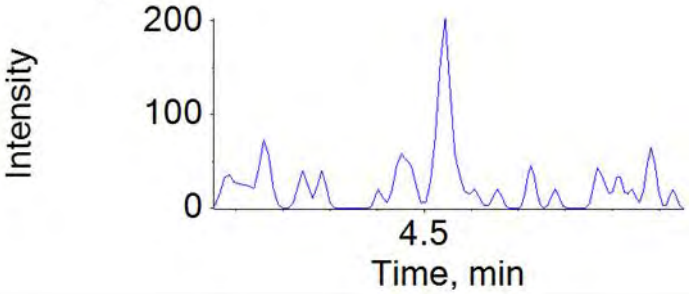
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



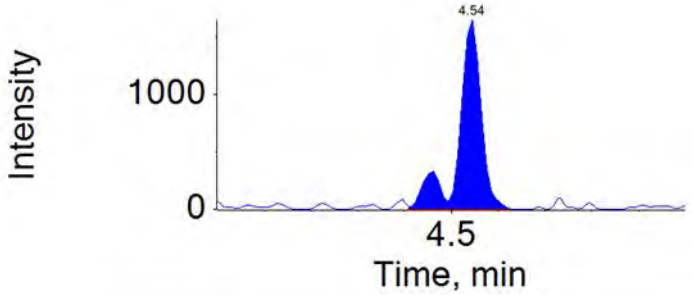
Component: PFHpA
Primary Mass: 363.0 / 319.0



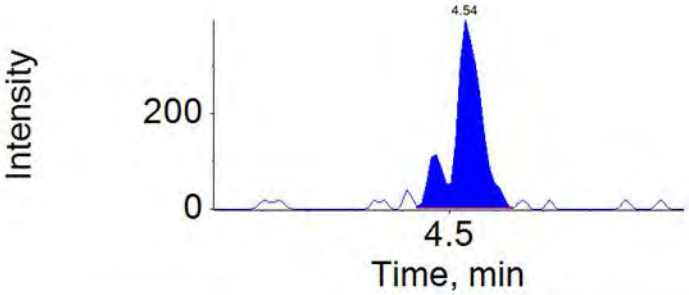
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



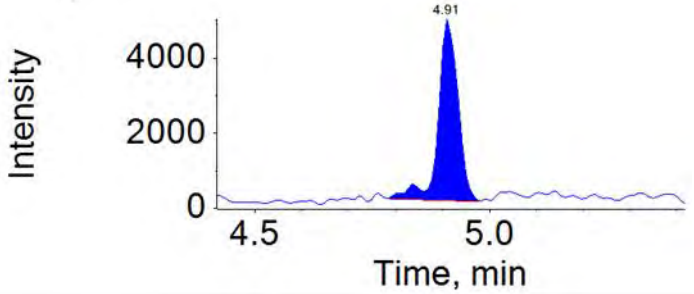
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



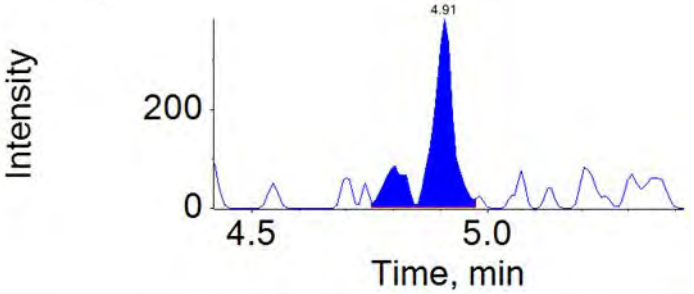
APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

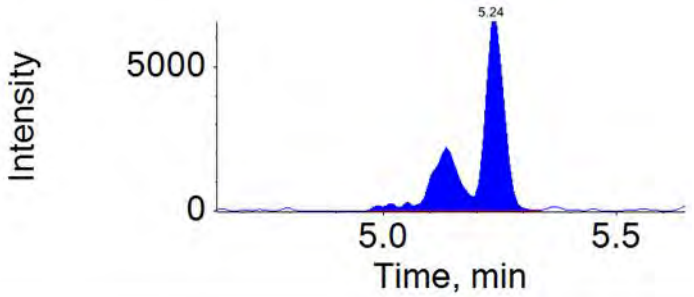
Component: PFOA
Primary Mass: 413.0 / 369.0



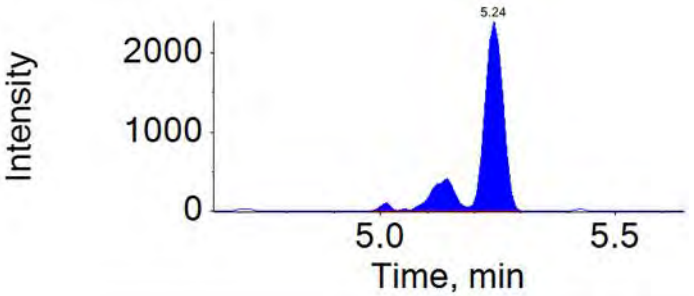
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



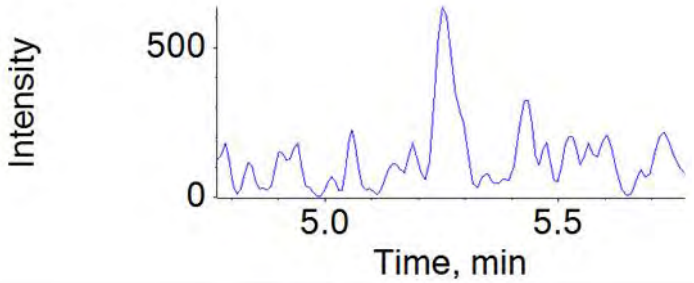
Component: PFOS
Primary Mass: 499.0 / 80.0



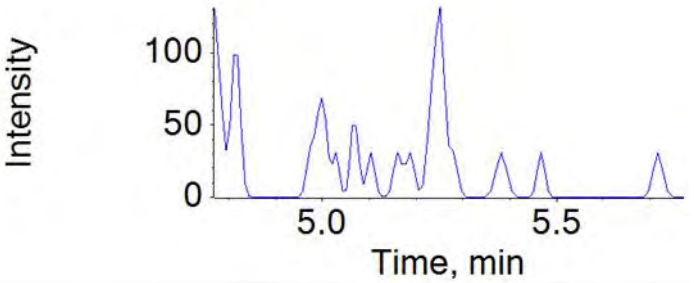
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



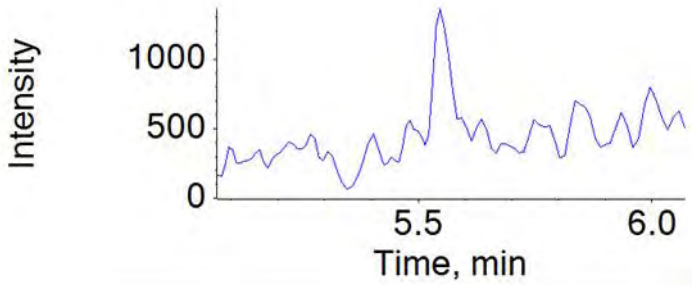
Component: PFNA
Primary Mass: 463.0 / 419.0



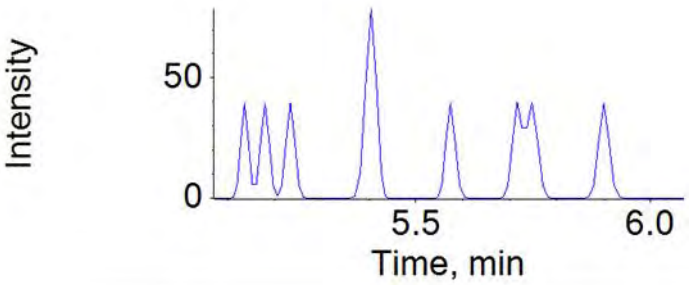
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



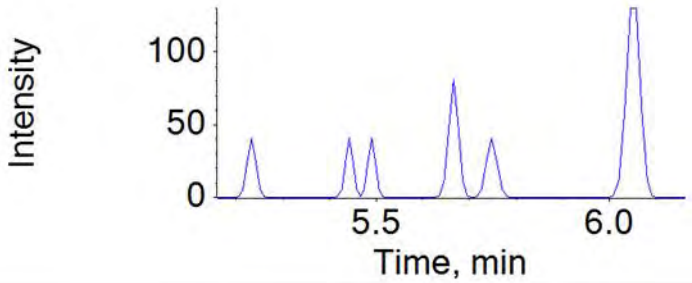
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



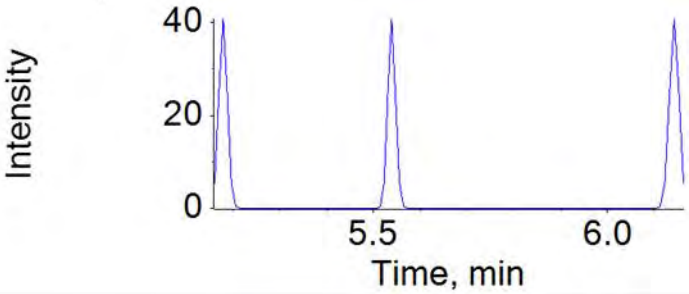
APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

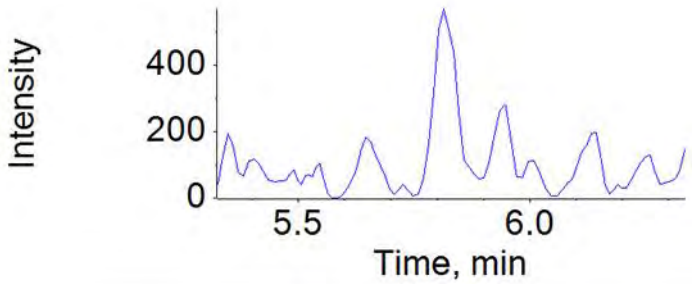
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



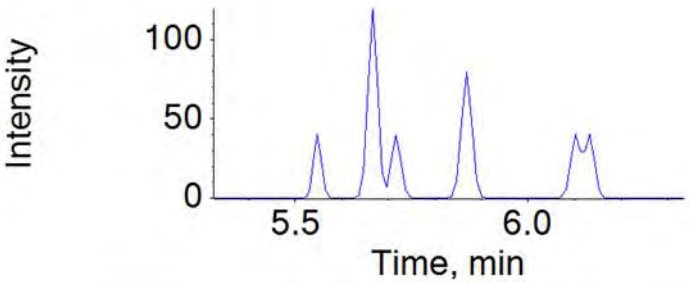
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



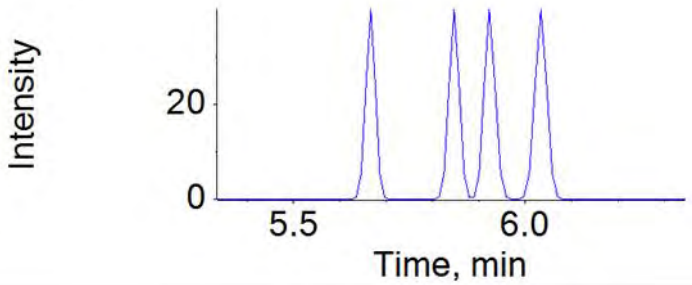
Component: PFUnDA
Primary Mass: 563.0 / 519.0



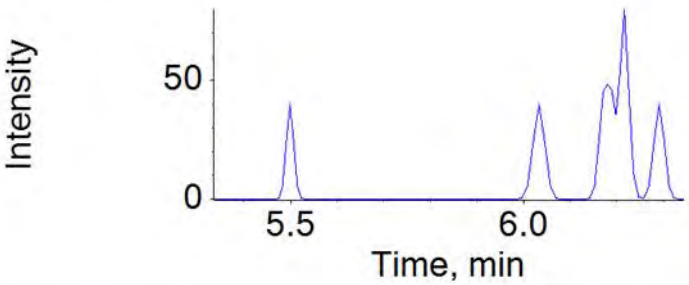
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



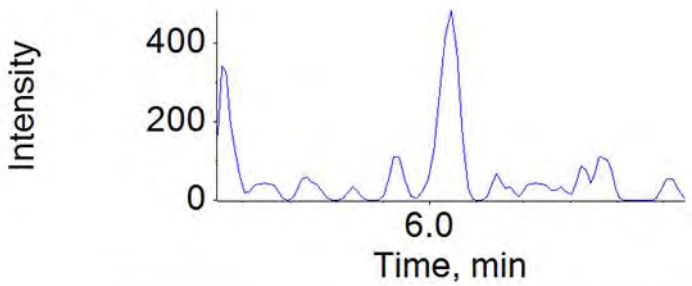
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



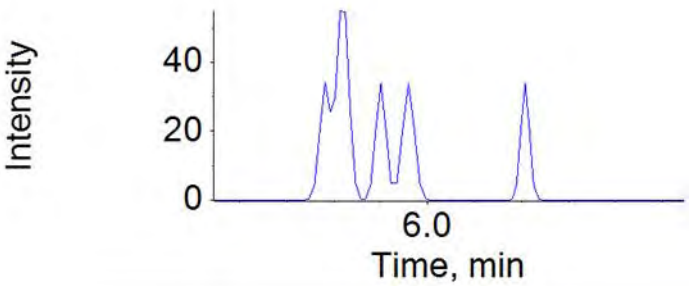
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



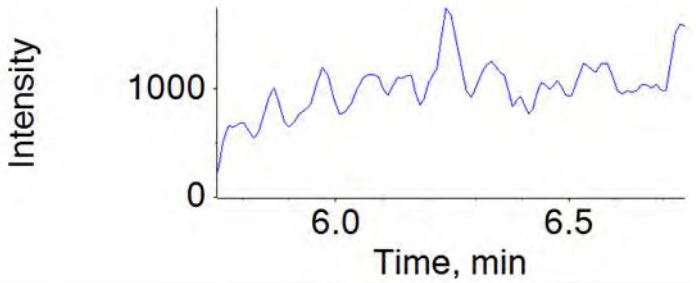
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



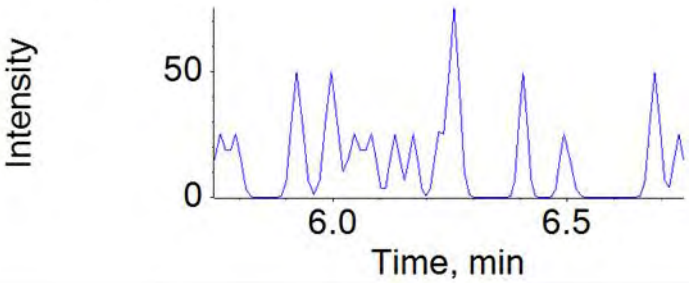
APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

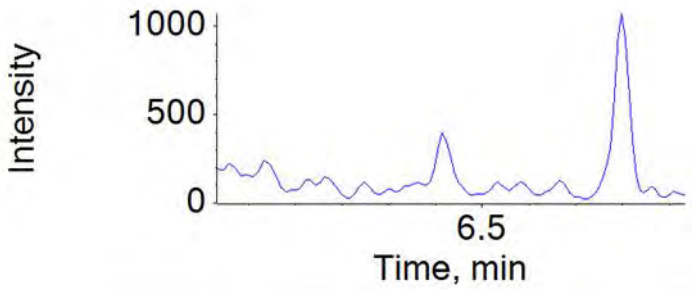
Component: PFTrDA
Primary Mass: 663.0 / 619.0



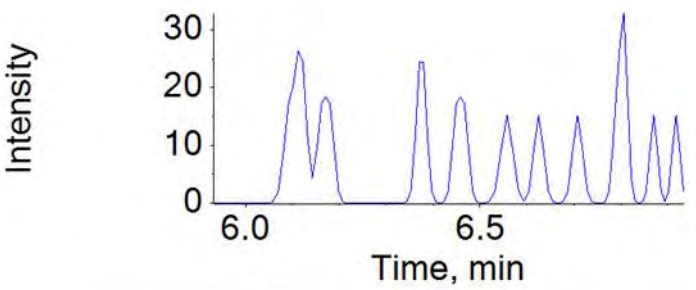
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 12:33 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881941			**Data File:**		18NOV07D-21.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-GW-9-S-01-20 Grab Soil			**Acquis Date:**		2018-11-07T14:21:00
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	20			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.04000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	802595.2	730410.6	10	50	
13C2-PFOA	5.0	569005.5	524423.6	9	50	
13C4-PFOS	4.8	301402.3	274061.7	10	50	
13C2-PFDA	5.0	356229.7	311442.1	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	367122.4	13C3-PFBA	802595.2	0.457	8.942	6.456	72	50-150	
E13C5-PFHxA	570919.6	13C2-PFOA	569005.5	1.003	9.615	7.098	74	50-150	
E13C3-PFHxS	272066.3	13C2-PFOA	569005.5	0.478	9.096	6.601	73	50-150	
E13C4-PFHpA	446612.1	13C2-PFOA	569005.5	0.785	9.615	6.867	71	50-150	
E13C8-PFOA	795969.6	13C2-PFOA	569005.5	1.399	9.615	7.502	78	50-150	
E13C8-PFOS	232622.7	13C4-PFOS	301402.3	0.772	9.192	6.563	71	50-150	
E13C9-PFNA	400037.0	13C4-PFOS	301402.3	1.327	9.615	6.972	73	50-150	
E13C6-PFDA	529019.2	13C2-PFDA	356229.7	1.485	9.615	7.182	75	50-150	
Ed3-NMeFOSAA	51631.3	13C2-PFDA	356229.7	0.145	9.615	5.183	54	50-150	
E13C7-PFUnDA	230273.3	13C2-PFDA	356229.7	0.646	9.615	7.171	75	50-150	
Ed5-NEtFOSAA	47567.6	13C2-PFDA	356229.7	0.134	9.615	5.943	62	50-150	
E13C2-PFDoDA	478109.2	13C2-PFDA	356229.7	1.342	9.615	6.958	72	50-150	
E13C2-PFTeDA	321891.8	13C2-PFDA	356229.7	0.904	9.615	6.256	65	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

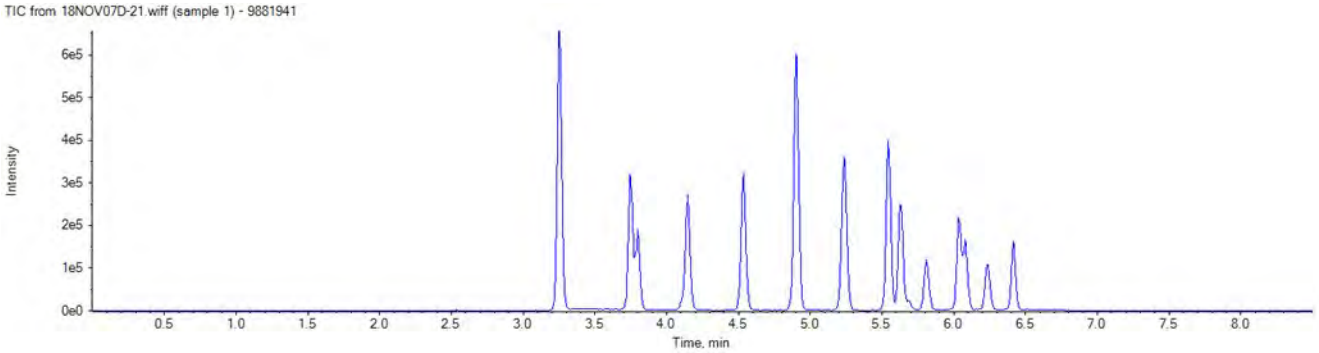
Analyte Quantitation Peak Table

Sample Name: 9881941 **Instrument Name:** LM27631 **File Name:** 18NOV07D-21.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.04000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	367122.4	N/A	
PFHxA	4.14	1.000	17363.2		A	13C5-PFHxA	4.15	570919.6	0.030	0.251
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	272066.3	N/A	
PFHpA	4.53	1.000	12198.9		A	13C4-PFHpA	4.53	446612.1	0.027	0.177
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.90	795969.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	232622.7	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.24	400037.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.54	529019.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	51631.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	230273.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	47567.6	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	478109.2	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	478109.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	321891.8	N/A	

Total Ion Chromatogram

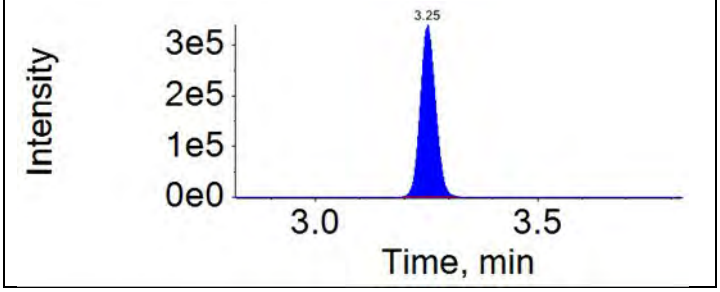


APPROVED
By MCD at 4:42 pm, 11/8/18

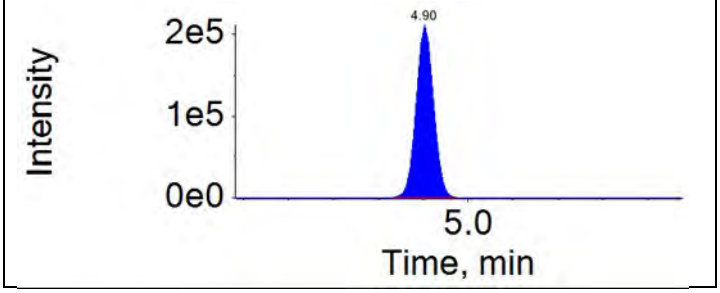
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

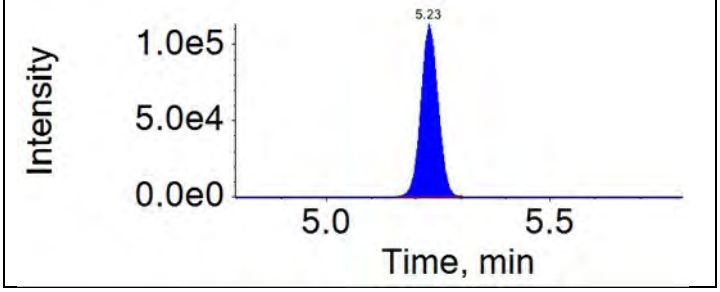
Injection Standard: 13C3-PFBA
216.0 / 172.0



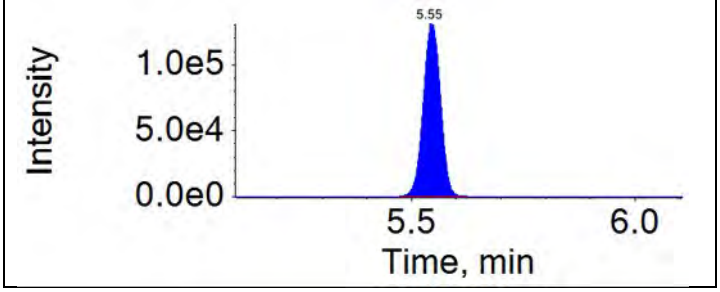
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

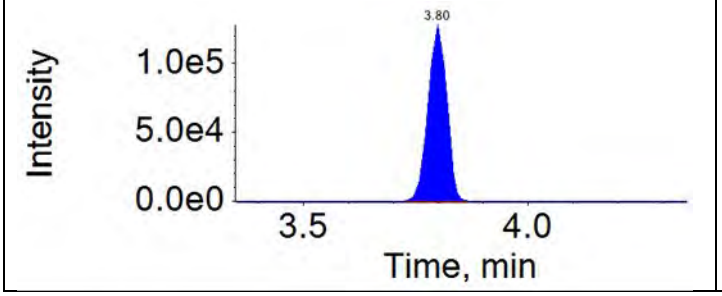


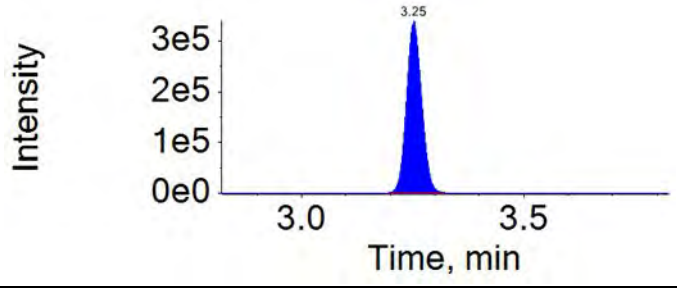
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

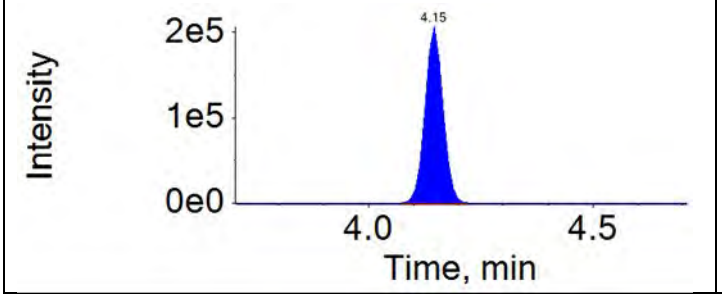
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

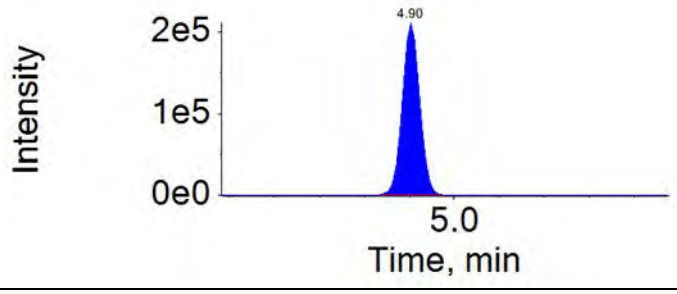
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



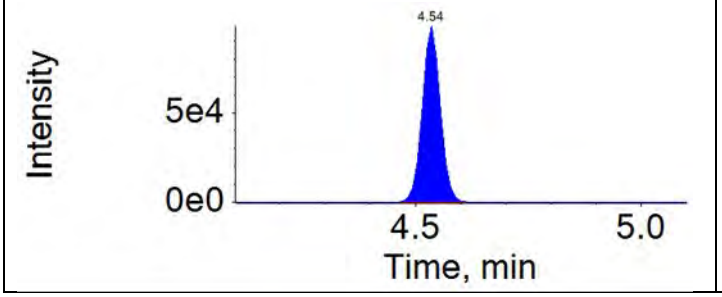


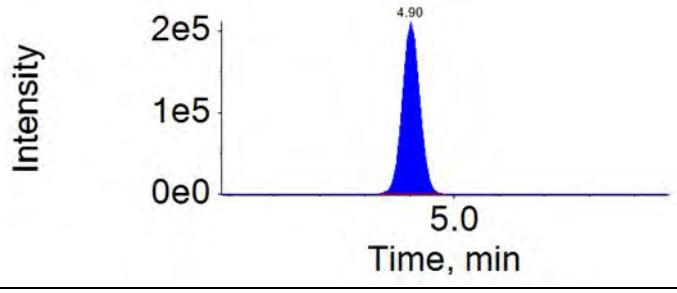
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



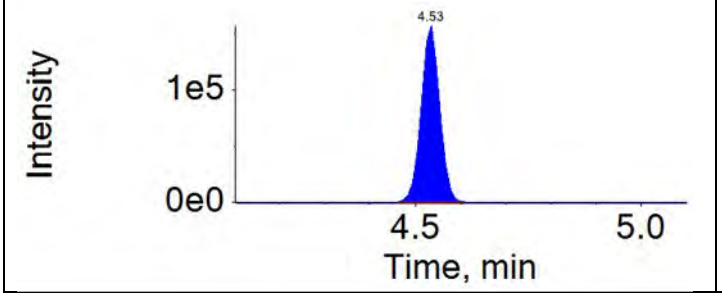


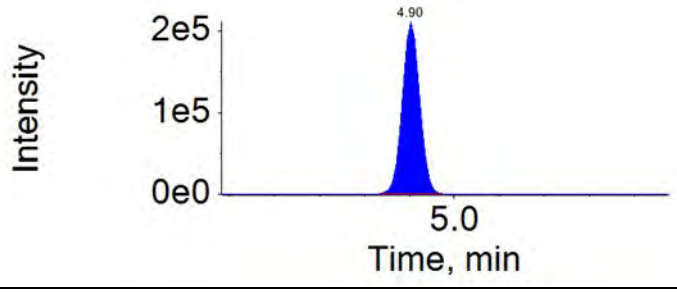
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



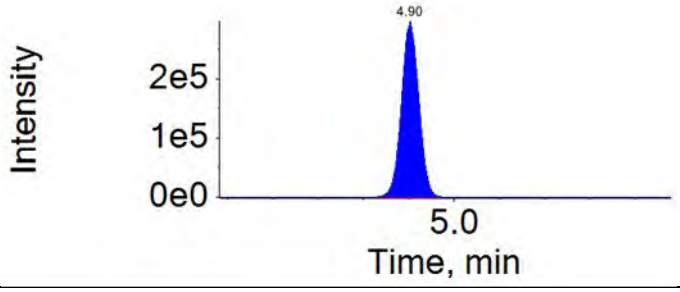
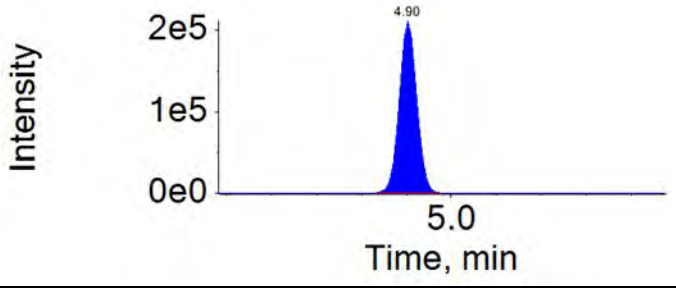


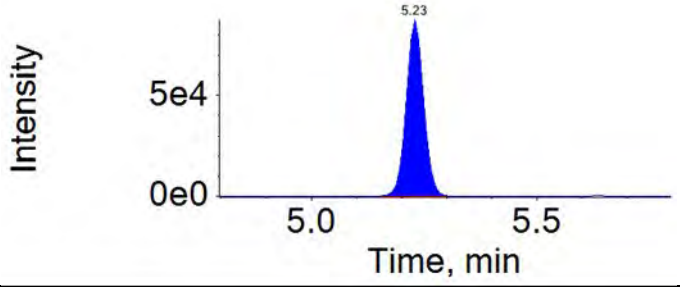
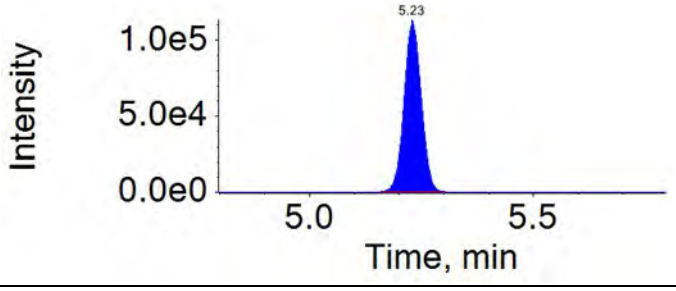
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

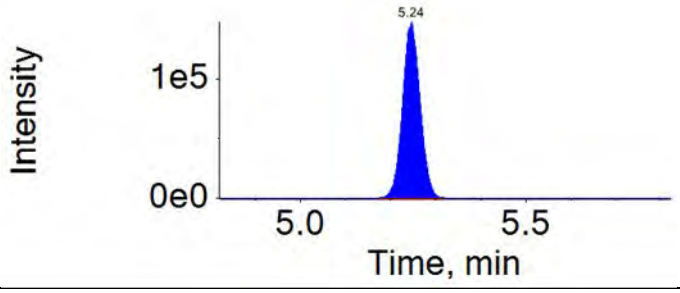
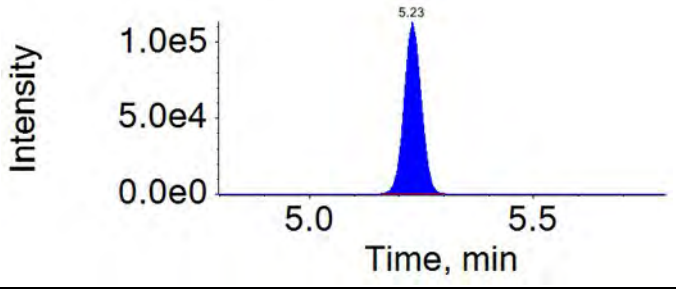


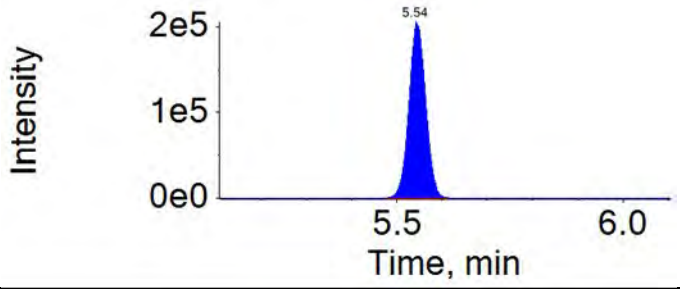
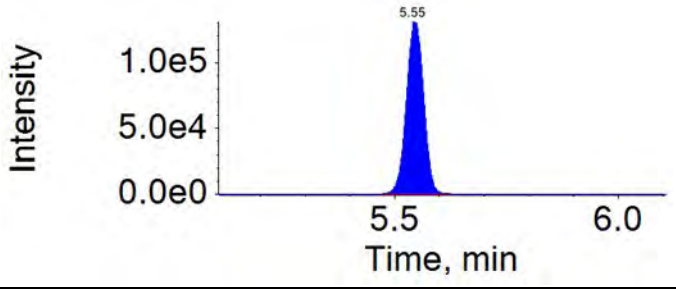


ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

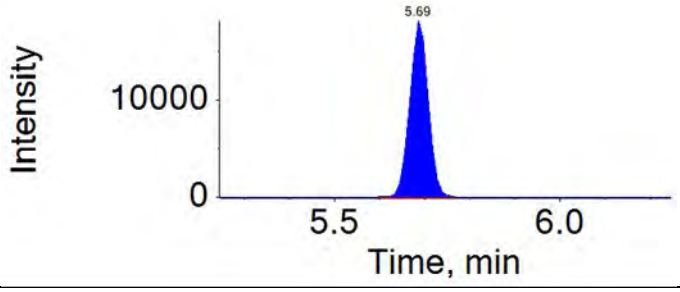
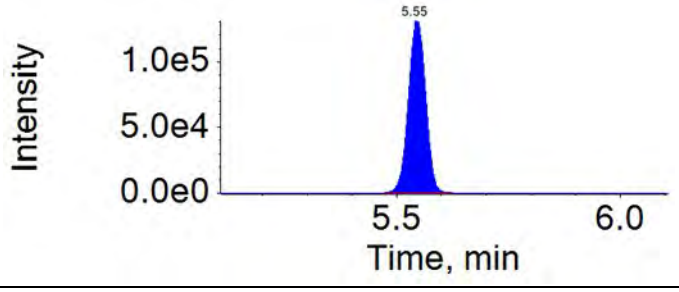
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

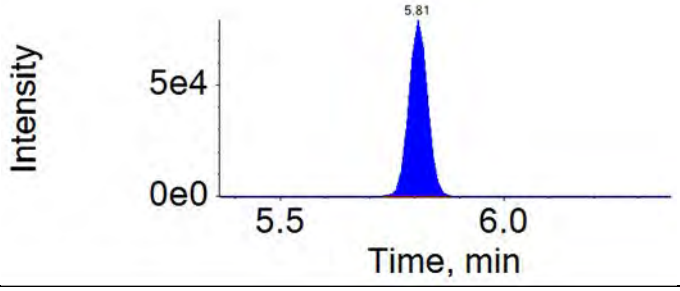
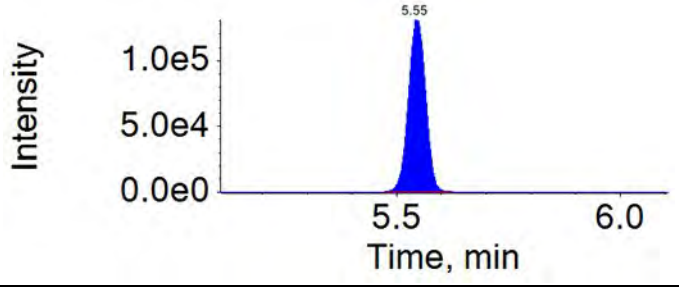
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

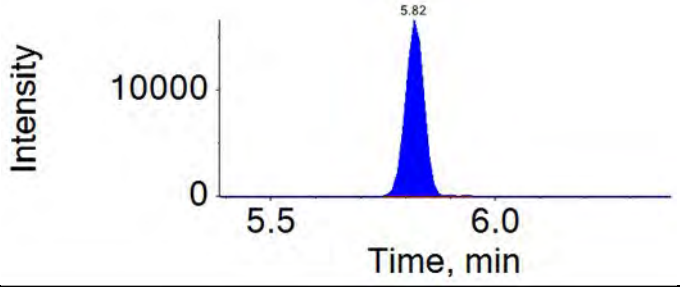
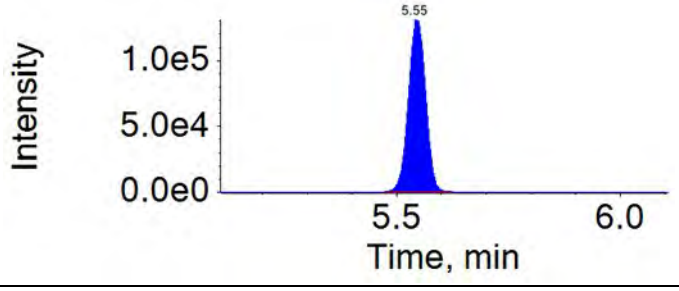
APPROVED
By MCD at 4:42 pm, 11/8/18

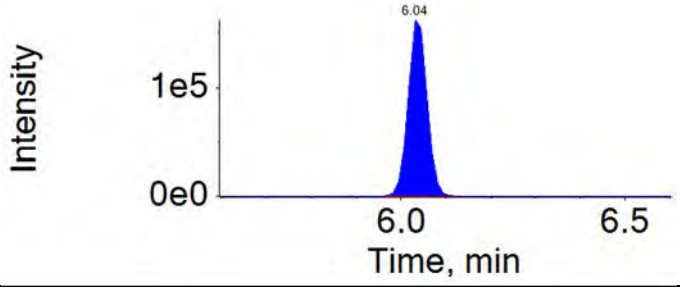
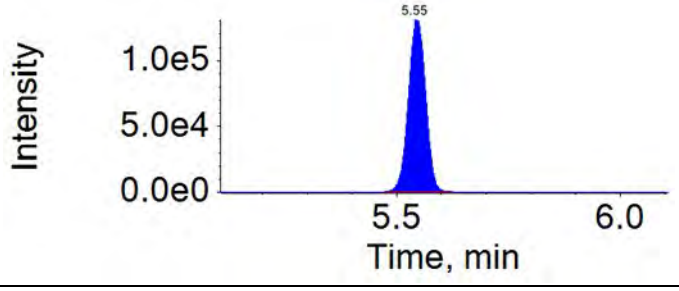
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

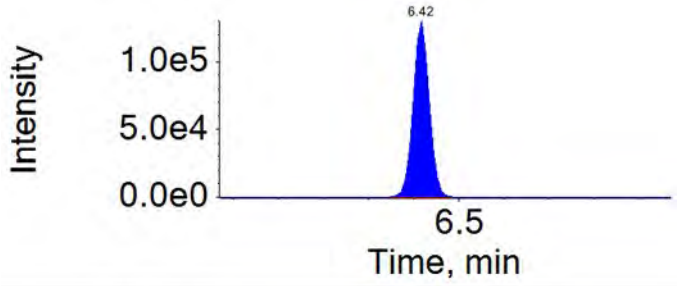
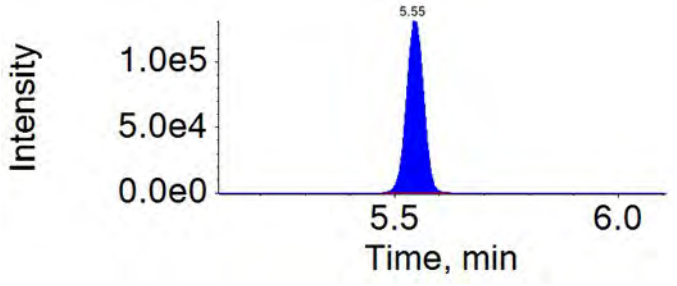
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

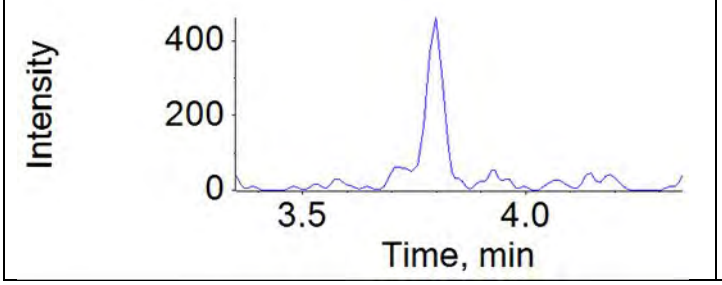
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

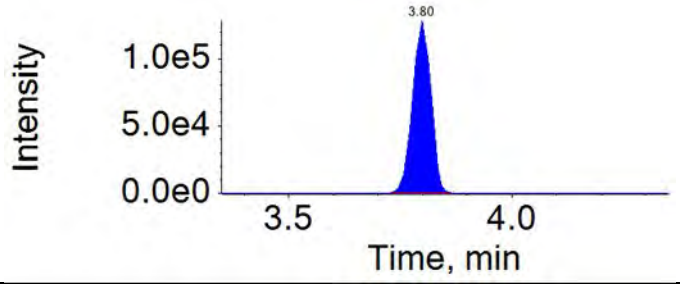
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

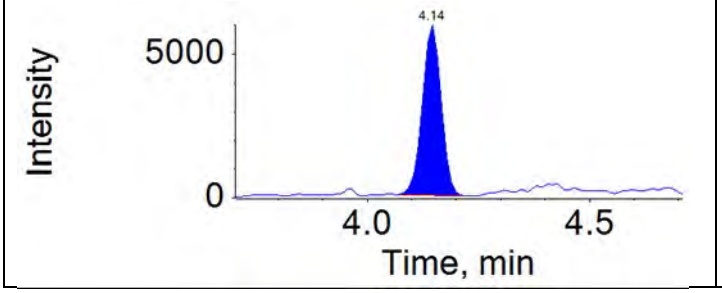
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

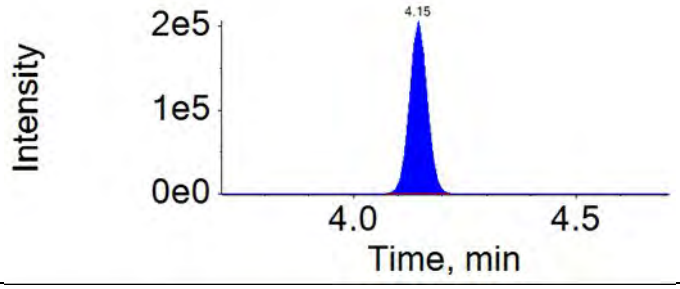
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



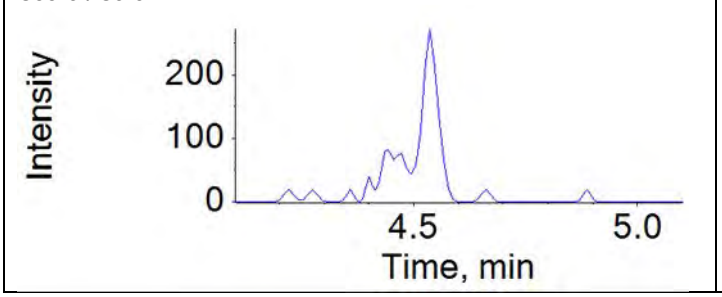


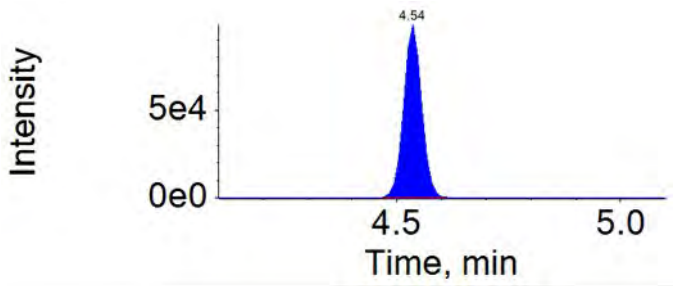
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



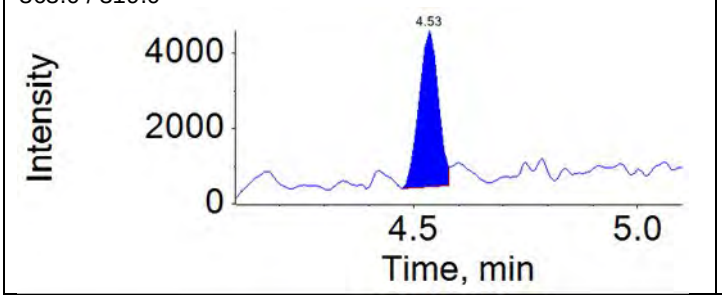


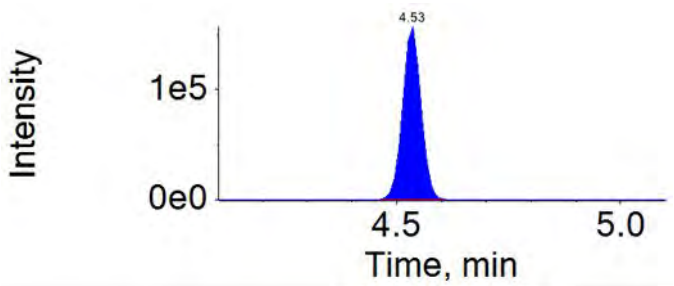
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



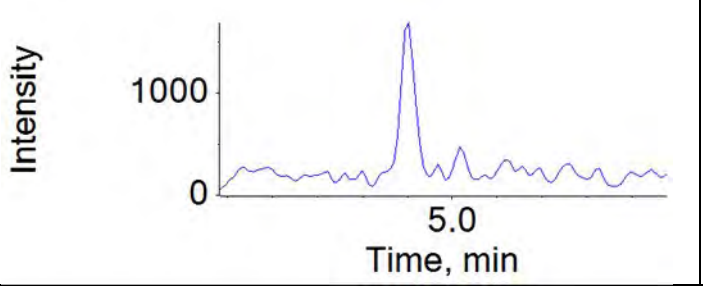


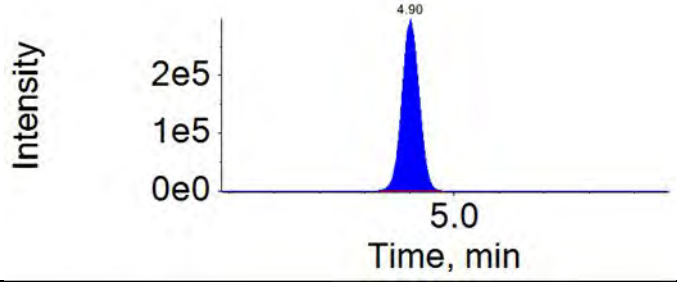
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

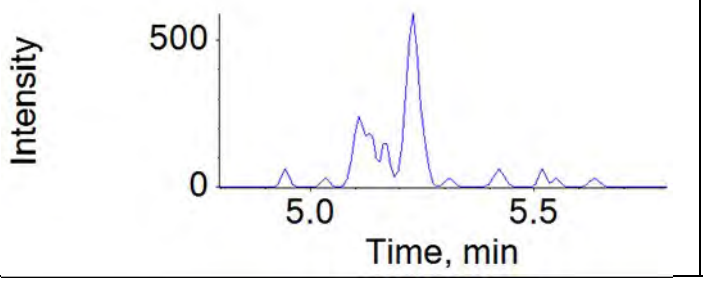
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

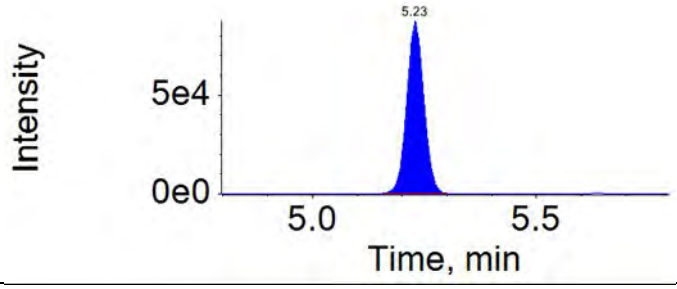
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



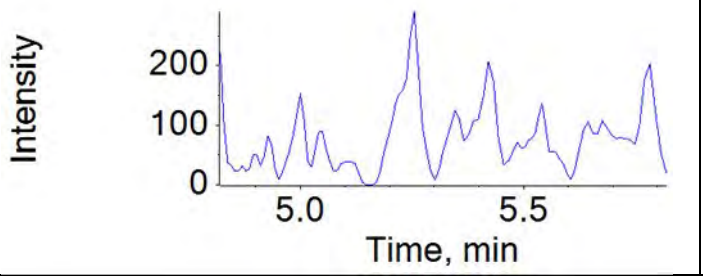


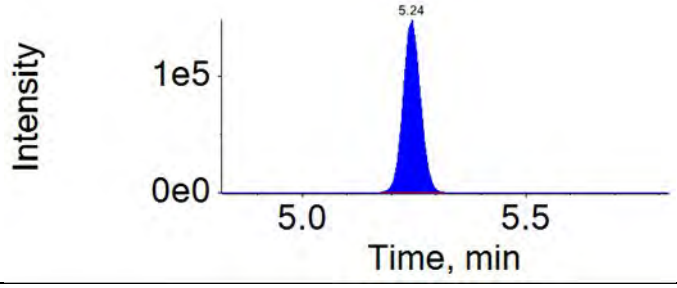
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



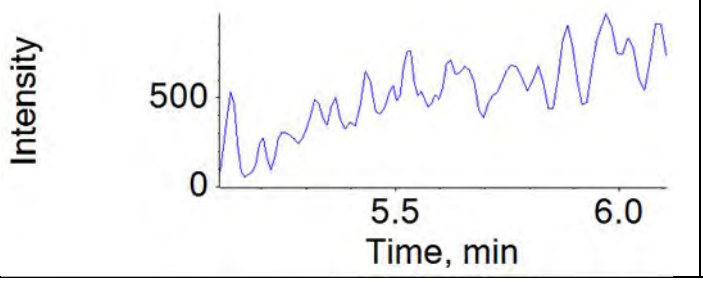


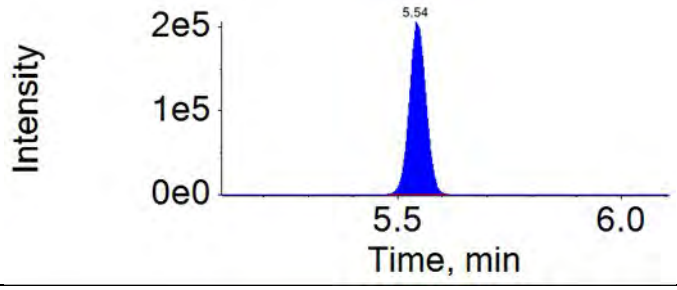
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



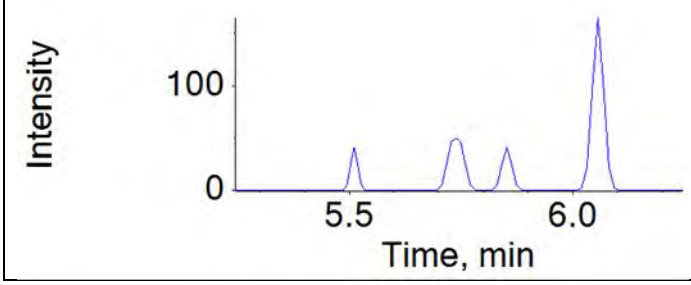


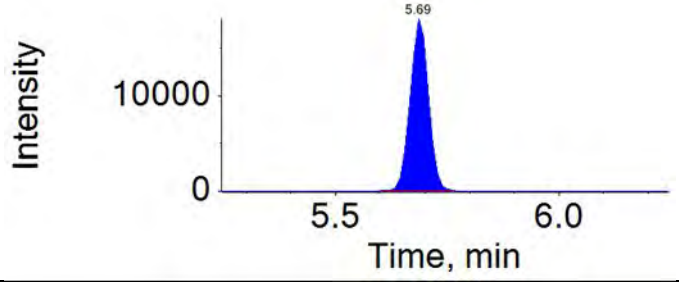
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

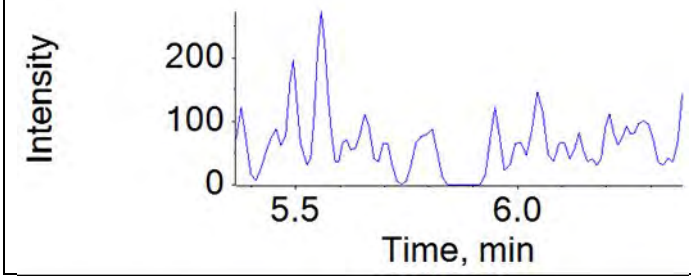
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

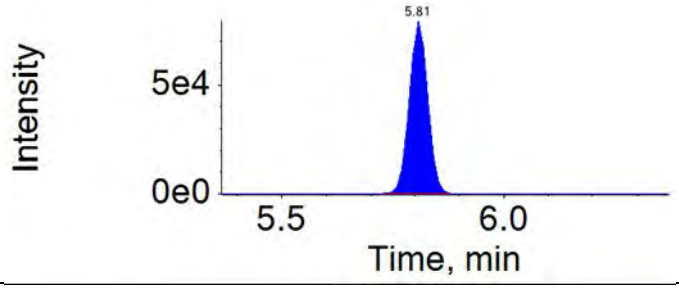
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



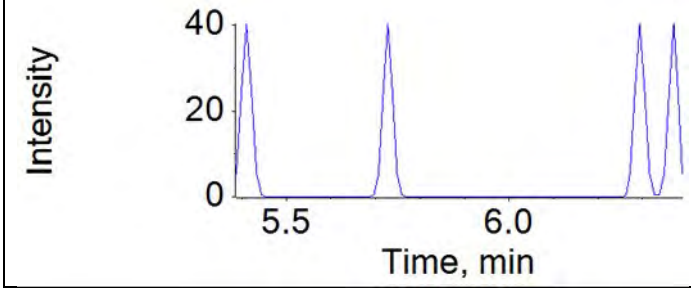


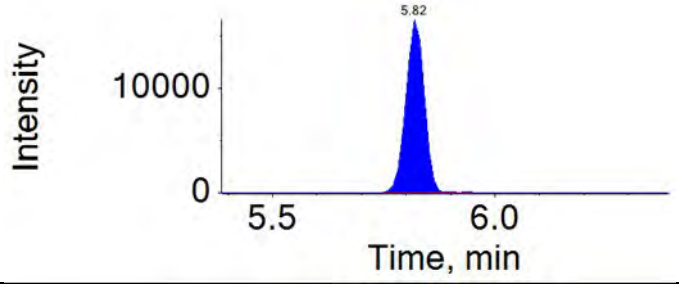
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



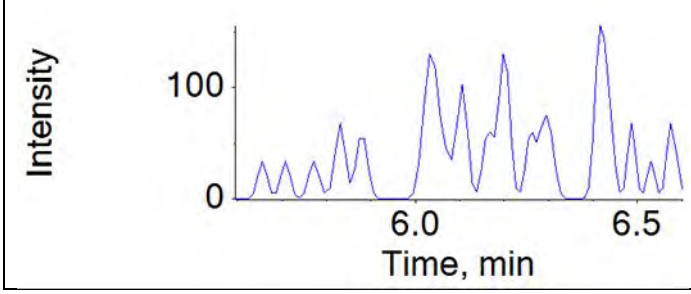


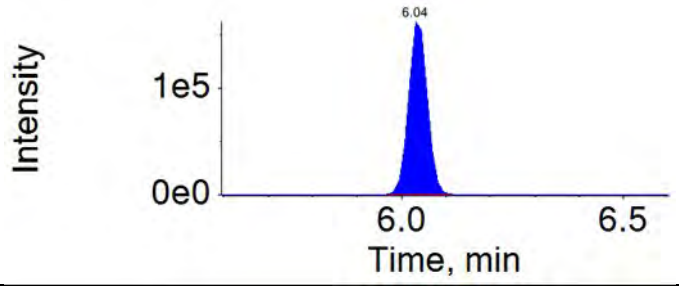
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



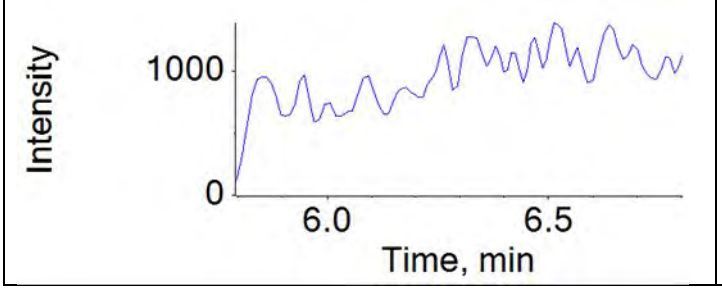


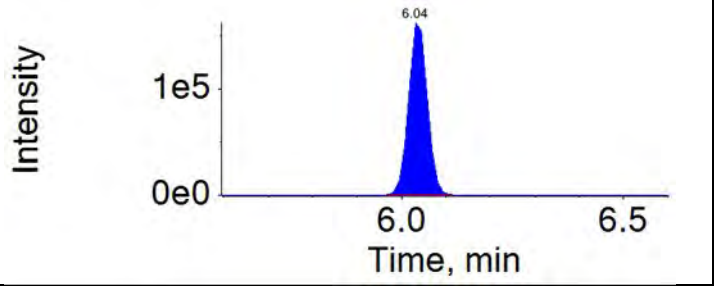
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

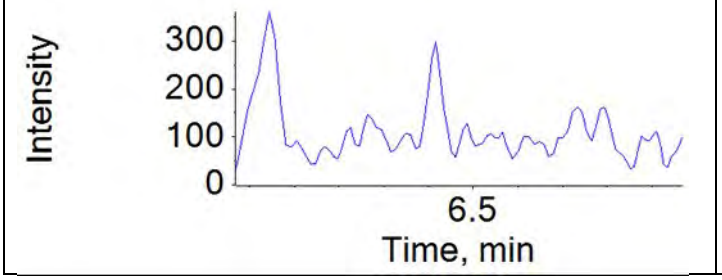
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

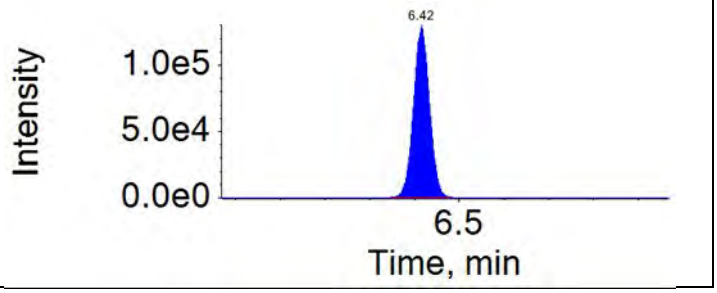
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

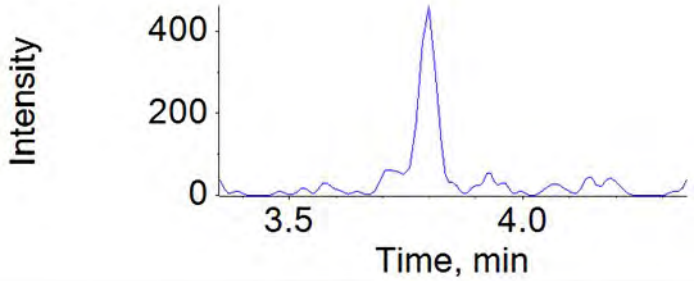
Sample Name: 9881941 **Instrument Name:** LM27631 **File Name:** 18NOV07D-21.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.14	1.00	17363.2	A	N/A	0.0045			
PFHxA_2	4.14	1.00	78.4	A	N/A	0.0045	-60	50	OOS
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	4.53	1.00	12198.9	A	N/A	0.0430			
PFHpA_2	4.52	1.00	524.4	A	N/A	0.0430	-25	50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

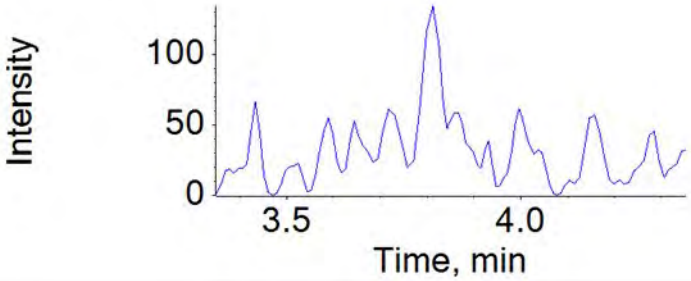
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

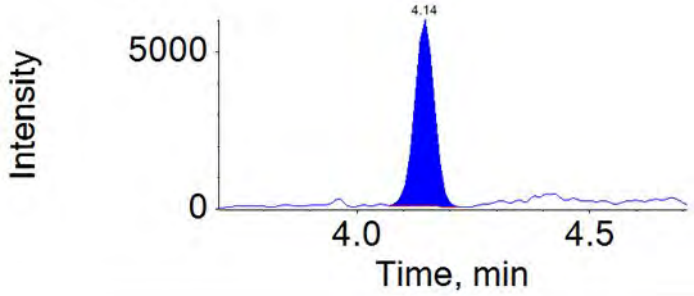
Component: PFBS
Primary Mass: 299.0 / 80.0



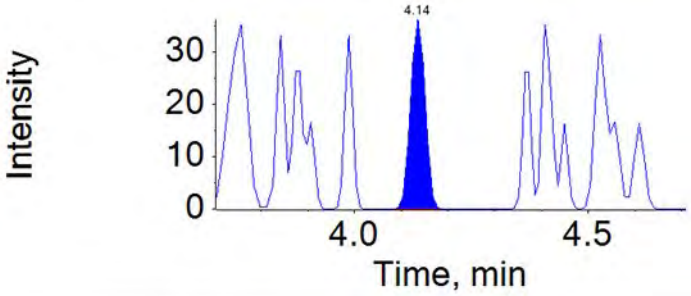
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



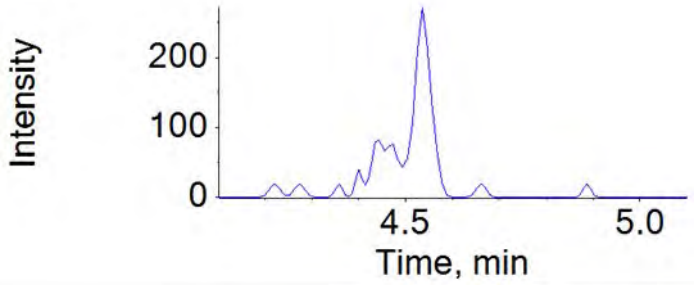
Component: PFHxA
Primary Mass: 313.0 / 269.0



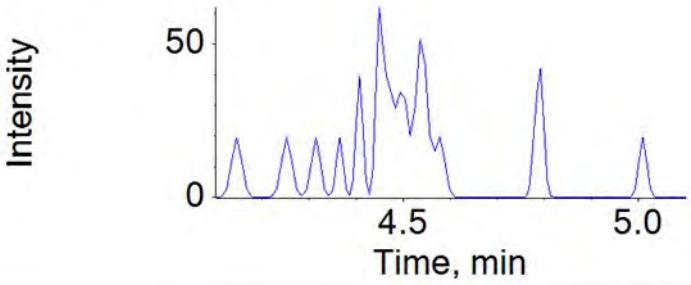
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



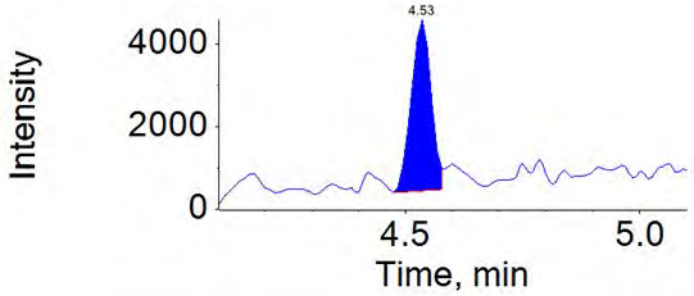
Component: PFHxS
Primary Mass: 399.0 / 80.0



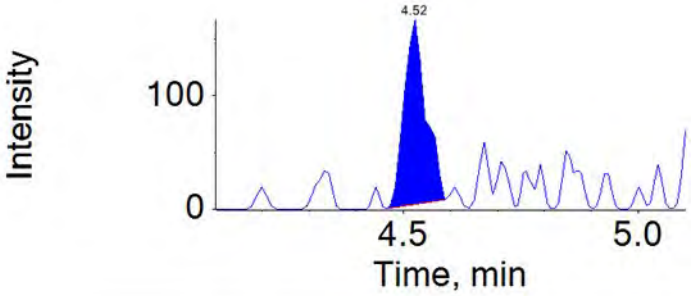
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



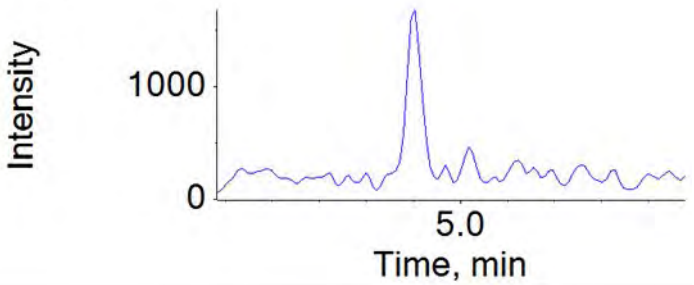
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



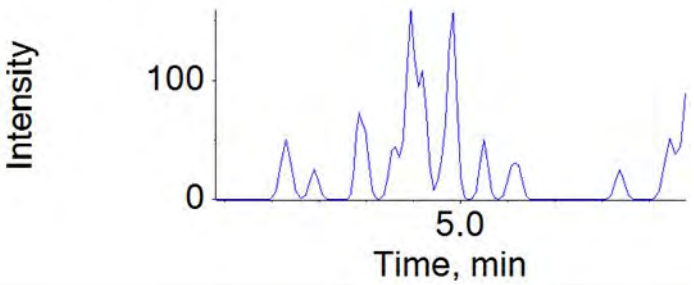
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

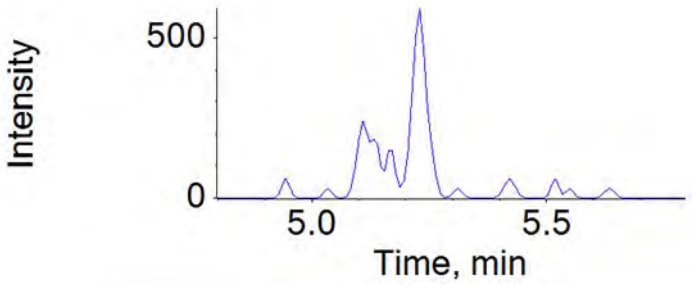
Component: PFOA
Primary Mass: 413.0 / 369.0



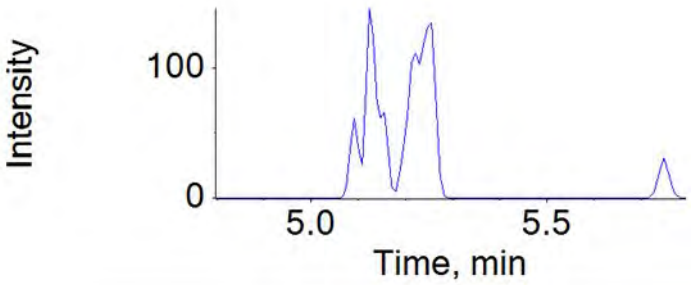
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



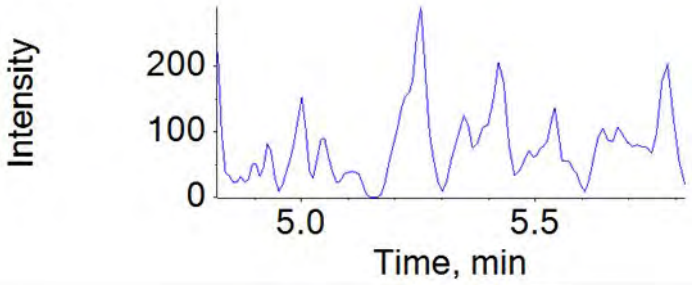
Component: PFOS
Primary Mass: 499.0 / 80.0



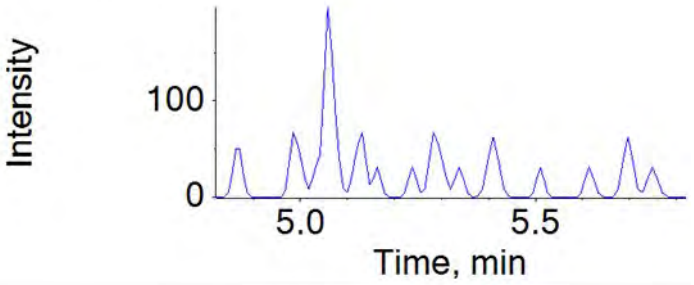
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



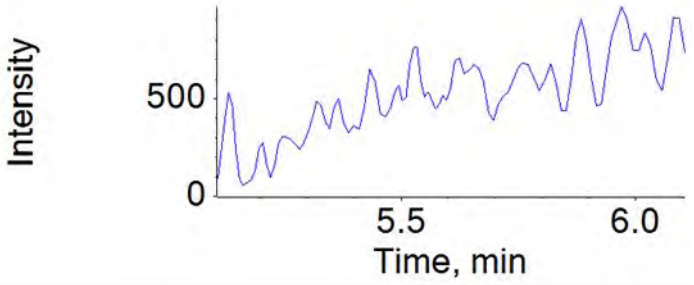
Component: PFNA
Primary Mass: 463.0 / 419.0



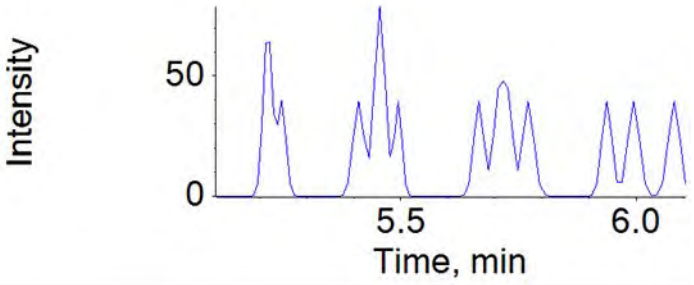
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



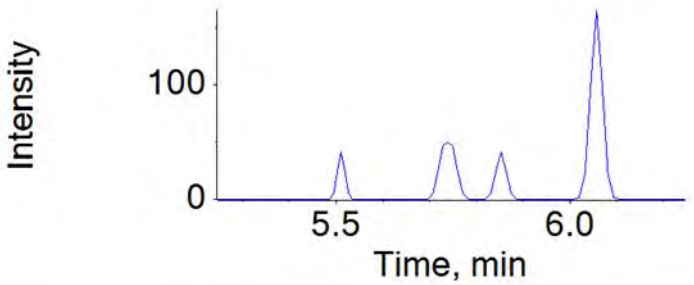
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



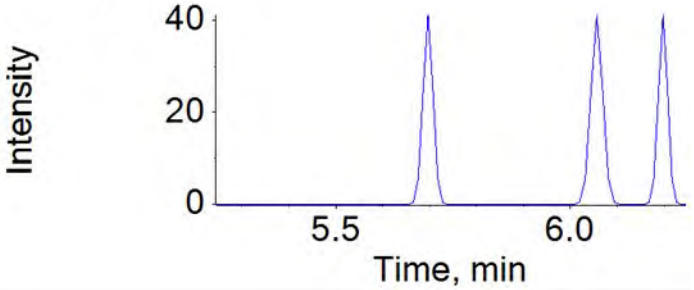
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

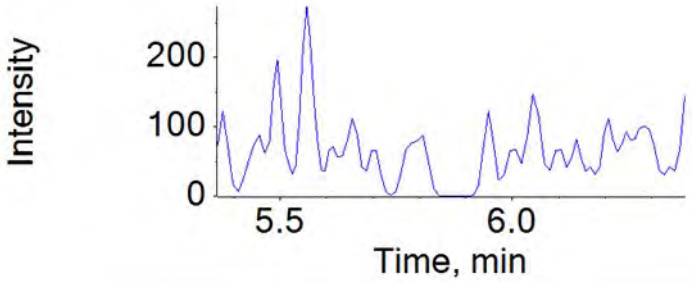
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



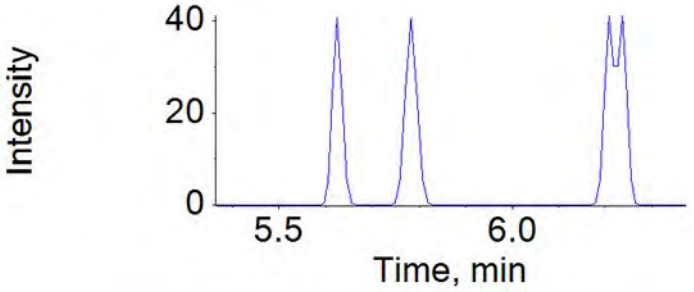
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



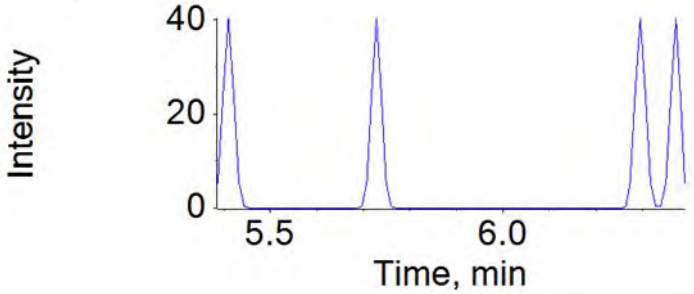
Component: PFUnDA
Primary Mass: 563.0 / 519.0



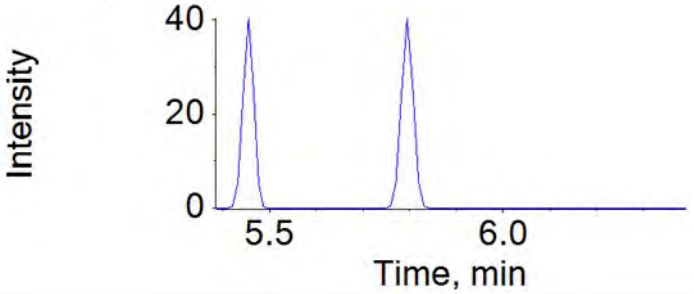
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



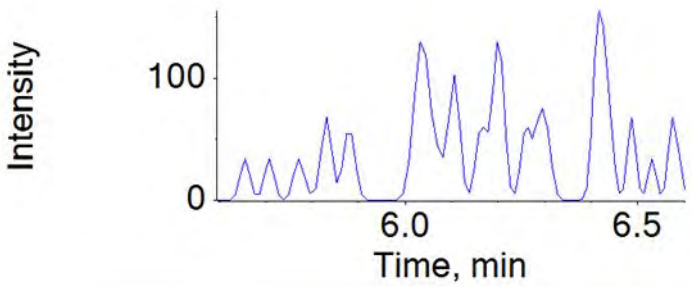
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



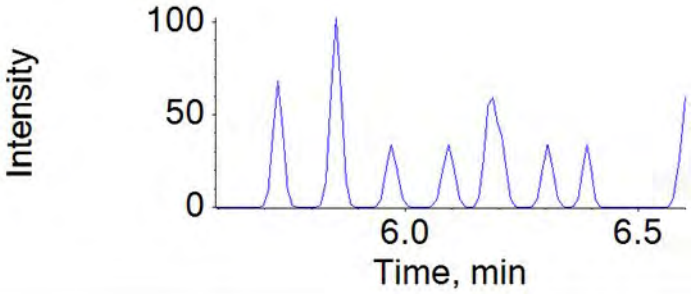
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



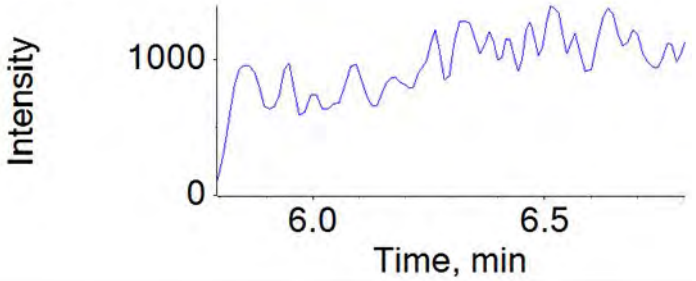
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



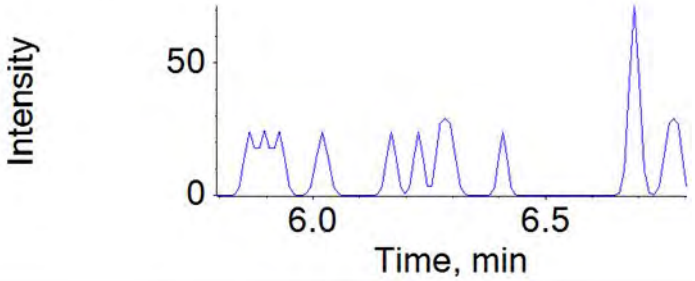
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

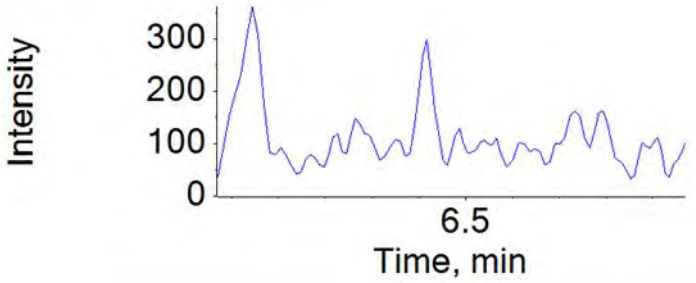
Component: PFTrDA
Primary Mass: 663.0 / 619.0



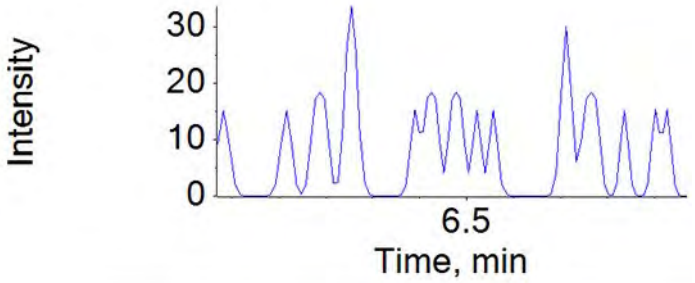
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881942			**Data File:**		18NOV12D-48.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314006 OU1-GW-9-W-01 Grab Potable Water			**Acquis Date:**		2018-11-12T23:49:51
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	76			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314006
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314006			**Operator:**		MCD7824
Sample Wt.:	0.29471			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	718615.2	659926.2	9	50	
13C2-PFOA	5.0	492232.8	450219.7	9	50	
13C4-PFOS	4.8	261590.5	249205.8	5	50	
13C2-PFDA	5.0	338636.6	278743.9	21	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	350660.5	13C3-PFBA	718615.2	0.488	15.778	11.688	74	50-150	
E13C5-PFHxA	580097.9	13C2-PFOA	492232.8	1.179	16.966	14.445	85	50-150	
E13C3-PFHxS	259828.2	13C2-PFOA	492232.8	0.528	16.050	12.290	77	50-150	
E13C4-PFHpA	452376.7	13C2-PFOA	492232.8	0.919	16.966	14.049	83	50-150	
E13C8-PFOA	713284.9	13C2-PFOA	492232.8	1.449	16.966	13.547	80	50-150	
E13C8-PFOS	231702.6	13C4-PFOS	261590.5	0.886	16.219	13.317	82	50-150	
E13C9-PFNA	424872.1	13C4-PFOS	261590.5	1.624	16.966	15.366	91	50-150	
E13C6-PFDA	545775.2	13C2-PFDA	338636.6	1.612	16.966	12.762	75	50-150	
Ed3-NMeFOSAA	66037.7	13C2-PFDA	338636.6	0.195	16.966	11.944	70	50-150	
E13C7-PFUnDA	247035.7	13C2-PFDA	338636.6	0.730	16.966	14.372	85	50-150	
Ed5-NEtFOSAA	47961.0	13C2-PFDA	338636.6	0.142	16.966	10.167	60	50-150	
E13C2-PFDoDA	576867.0	13C2-PFDA	338636.6	1.703	16.966	15.008	88	50-150	
E13C2-PFTeDA	330613.1	13C2-PFDA	338636.6	0.976	16.966	11.630	69	50-150	

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

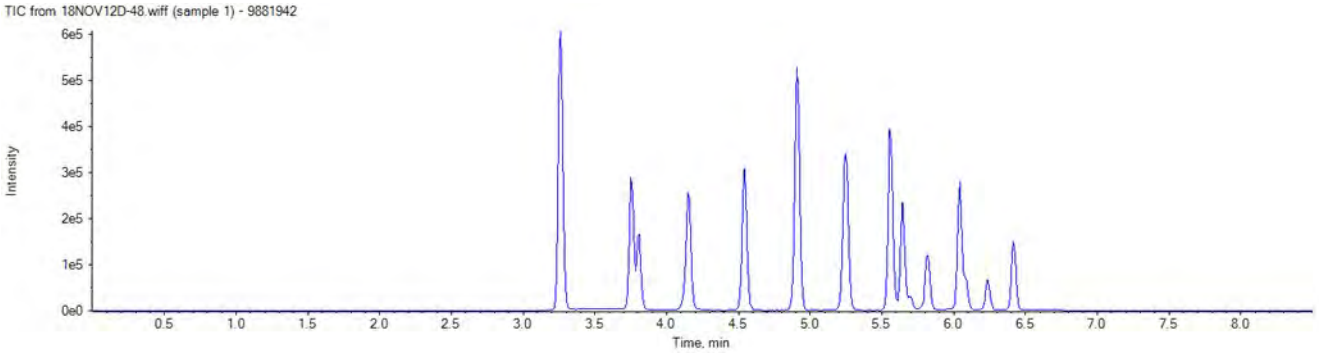
Analyte Quantitation Peak Table

Sample Name: 9881942 **Instrument Name:** LM27631 **File Name:** 18NOV12D-48.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.29471	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	350660.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	580097.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	452376.7	N/A	
PFHxS	4.54	1.000	3595.7		M	13C3-PFHxS	4.54	259828.2	0.014	0.228
PFOA	4.91	1.000	12279.9		A	13C8-PFOA	4.91	713284.9	0.017	0.312
PFOS	5.24	1.000	9608.3		M	13C8-PFOS	5.24	231702.6	0.041	0.615
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	424872.1	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	545775.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	66037.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	247035.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	47961.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	576867.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	576867.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	330613.1	N/A	

Total Ion Chromatogram

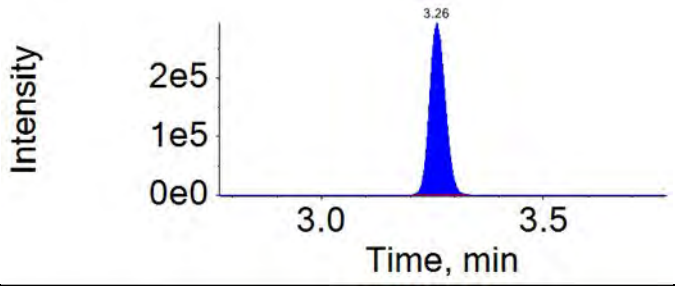


APPROVED
By MCD at 8:21 pm, 11/13/18

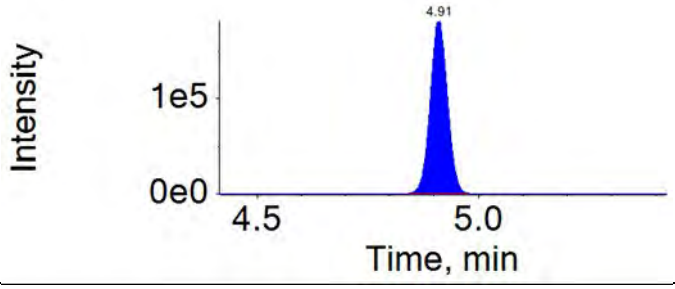
REVIEWED
By umar at 2:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

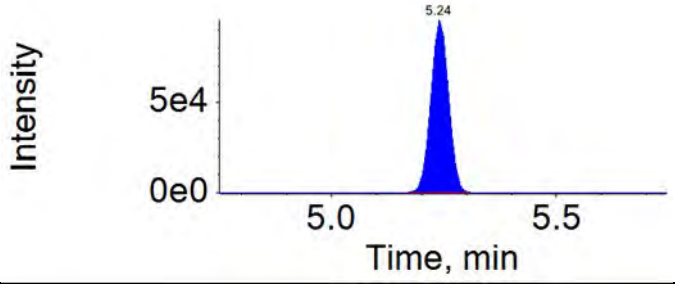
Injection Standard: 13C3-PFBA
216.0 / 172.0



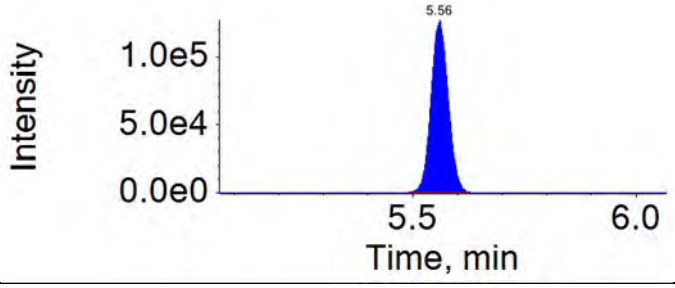
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



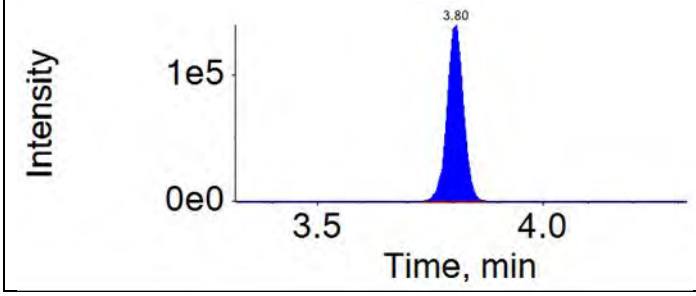
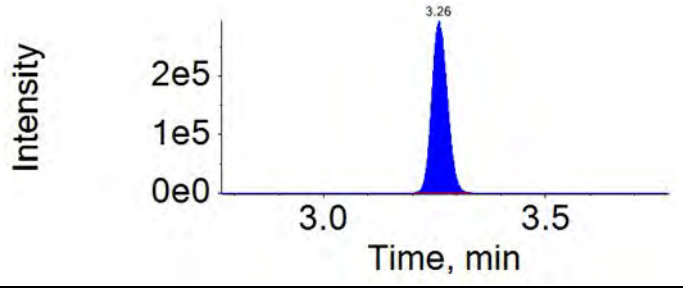
Injection Standard: 13C2-PFDA
515.0 / 470.0

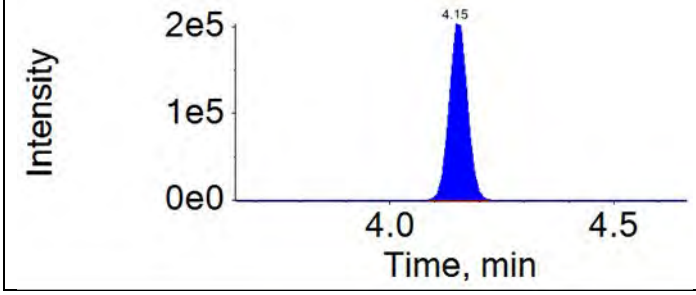
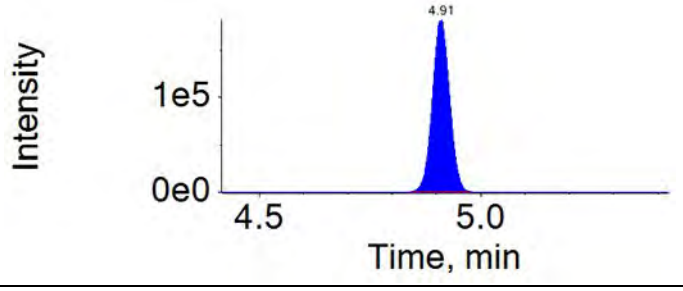


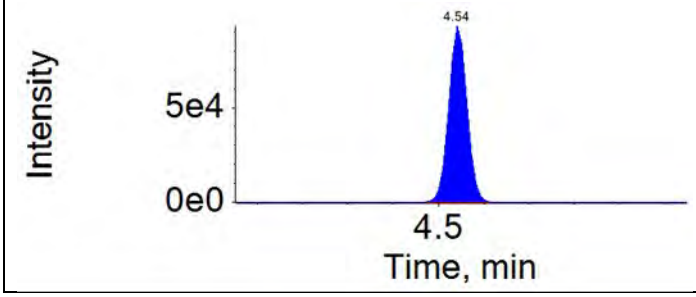
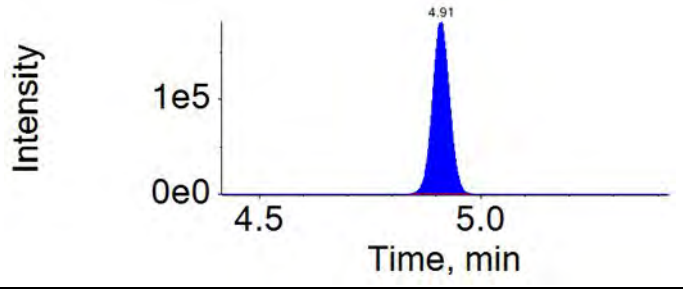
APPROVED
By MCD at 8:21 pm, 11/13/18

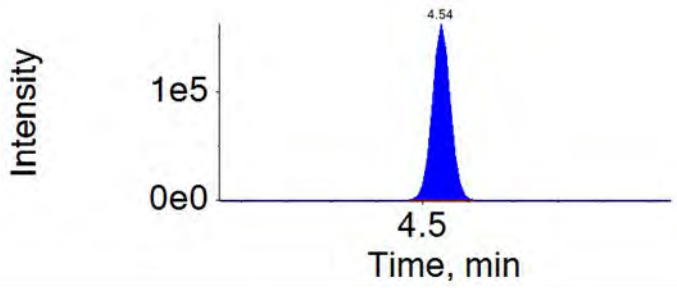
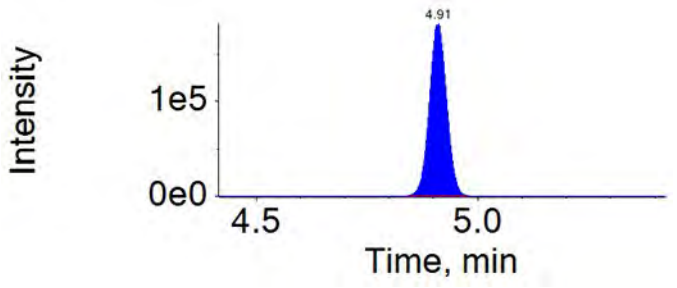
REVIEWED
By umar at 2:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

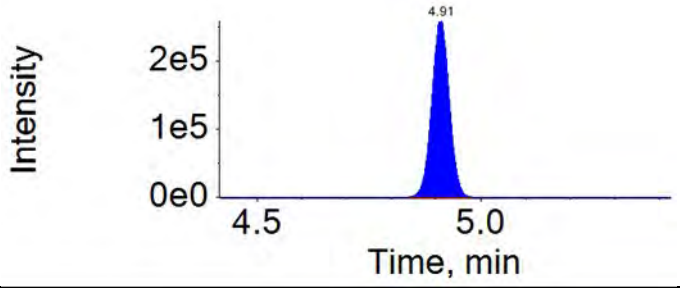
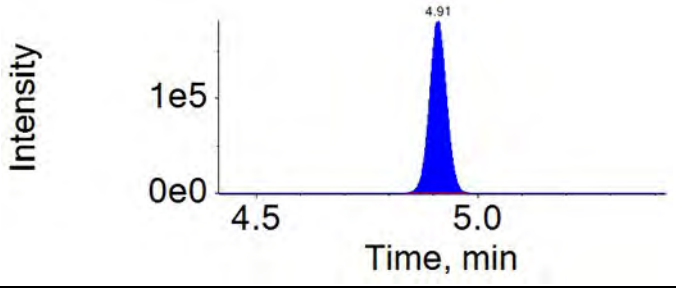
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

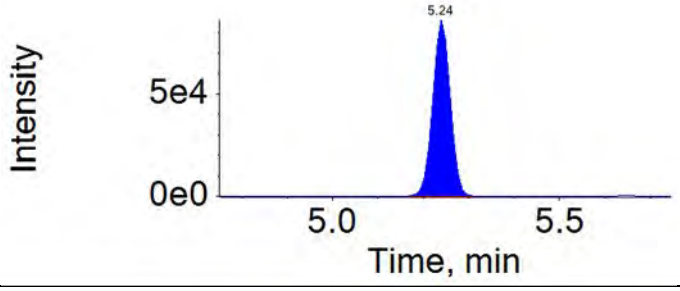
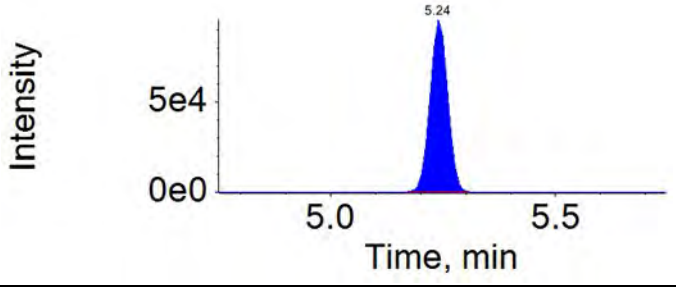
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

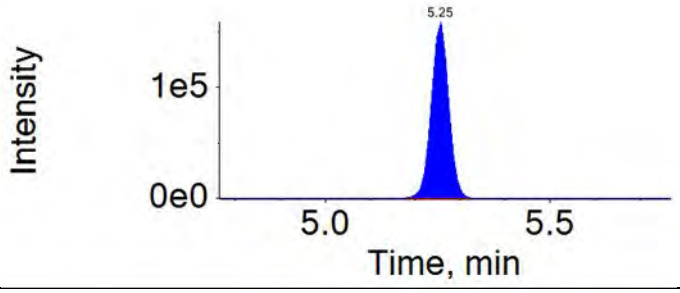
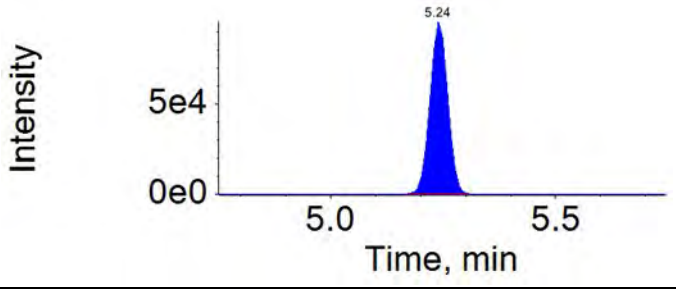
APPROVED
By MCD at 8:21 pm, 11/13/18

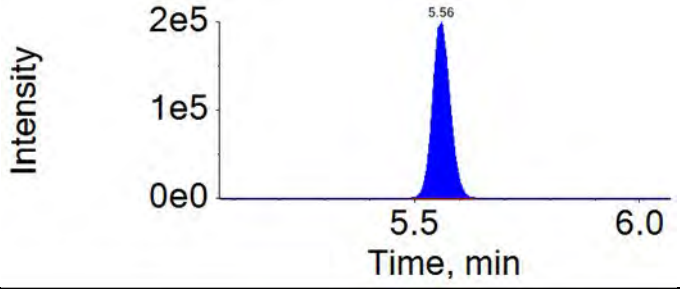
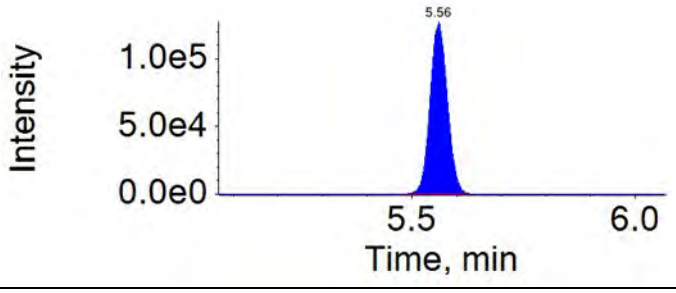
REVIEWED
By umar at 2:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

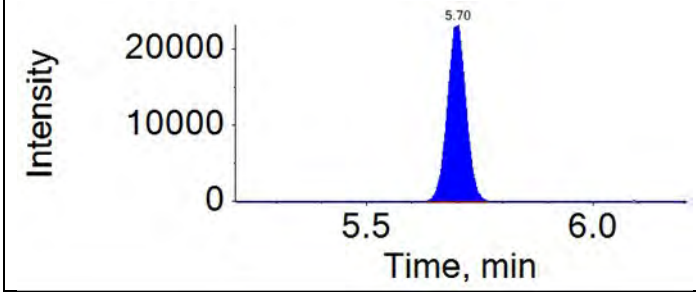
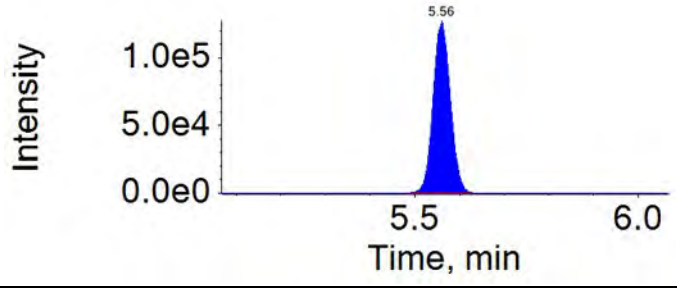
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

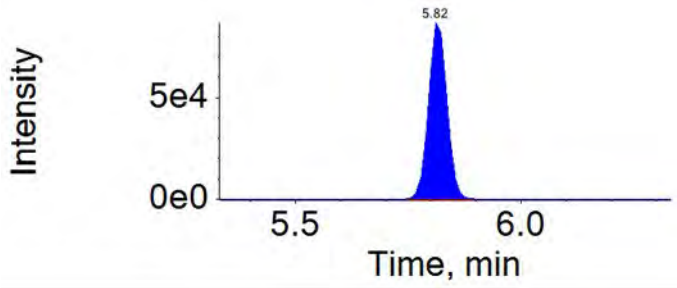
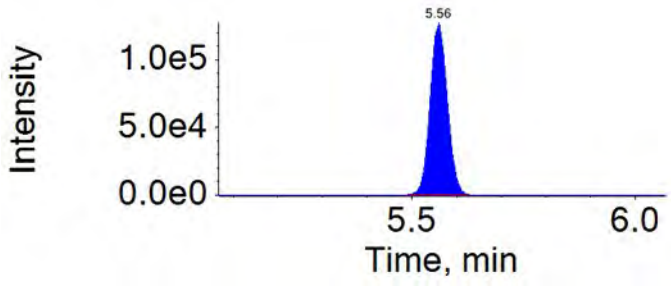
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

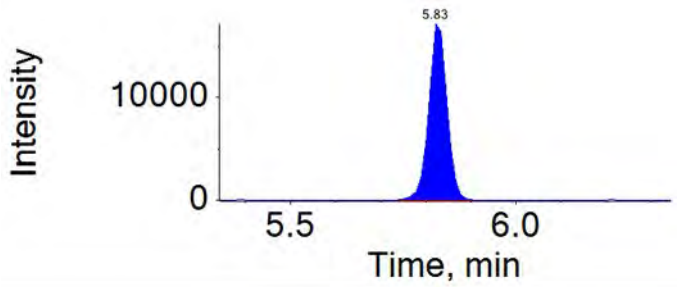
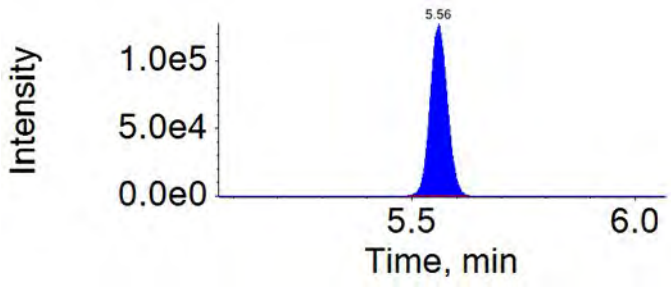
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

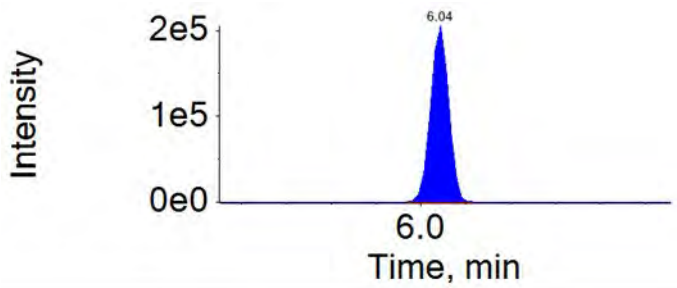
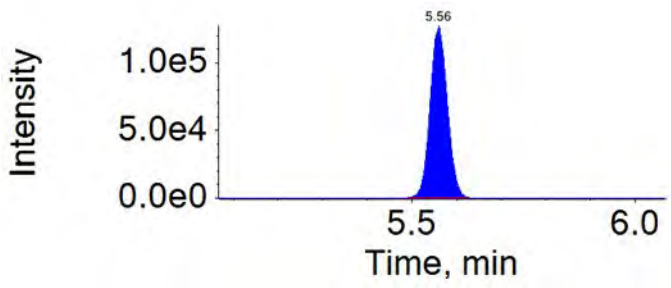
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

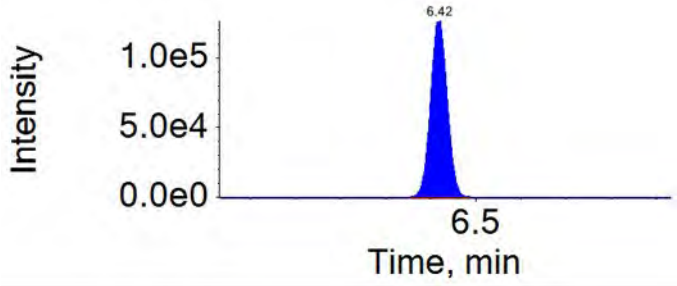
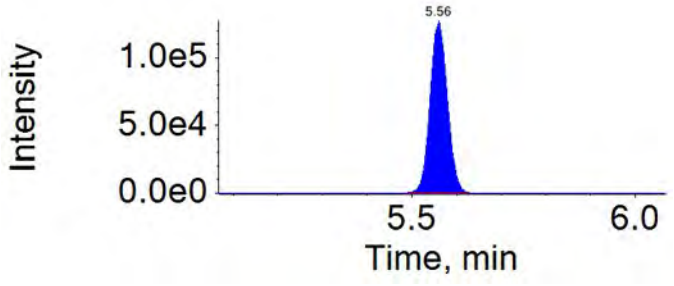
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

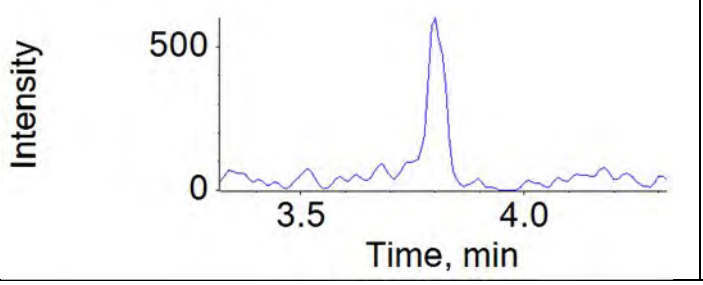
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

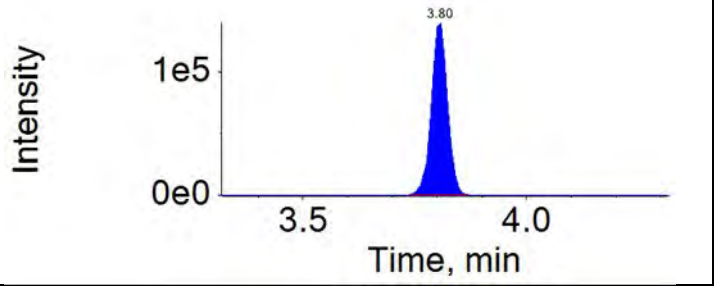
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

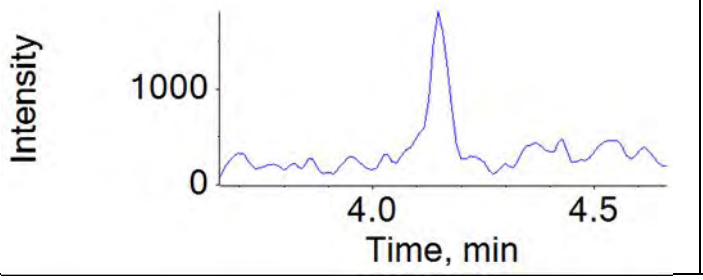
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

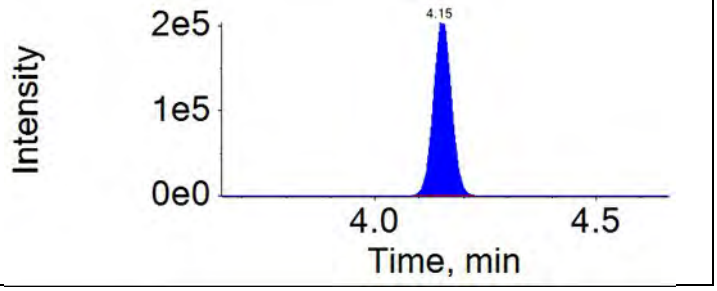
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



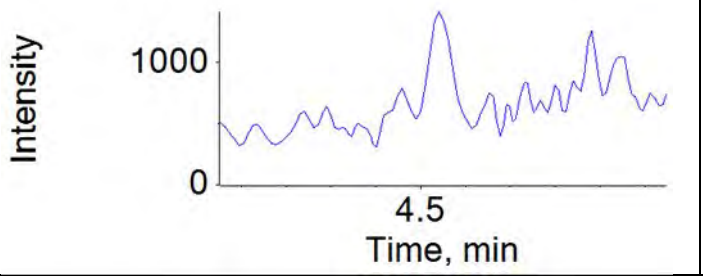


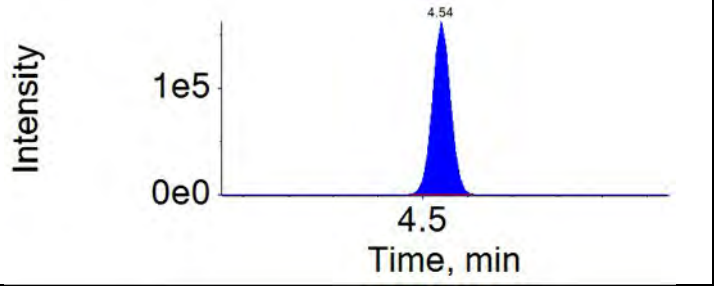
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



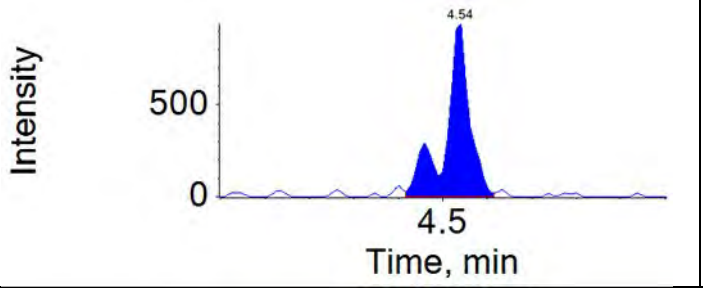


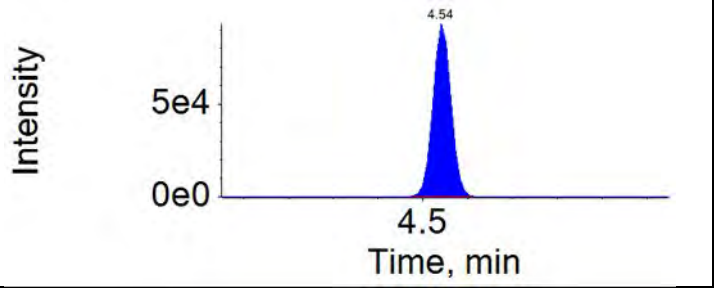
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



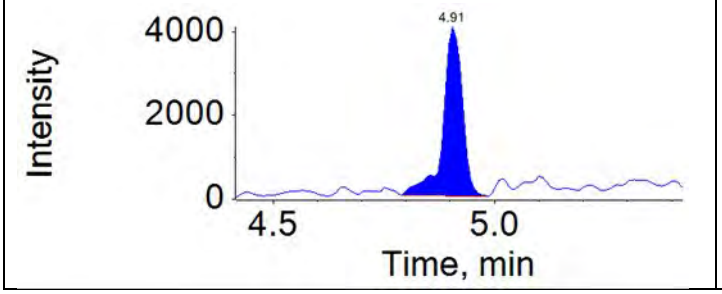


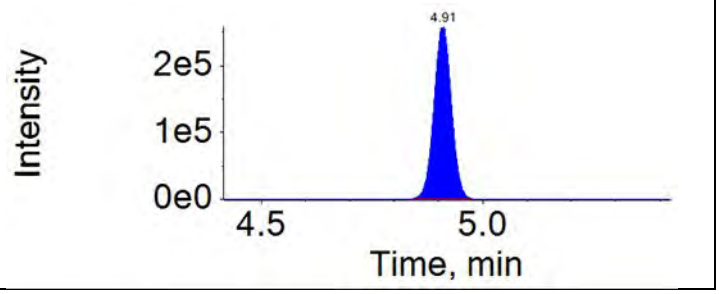
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

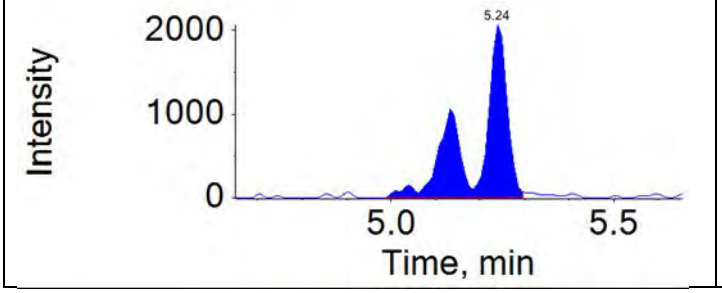
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

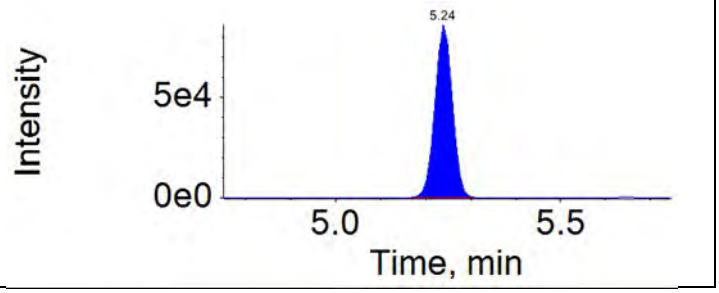
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



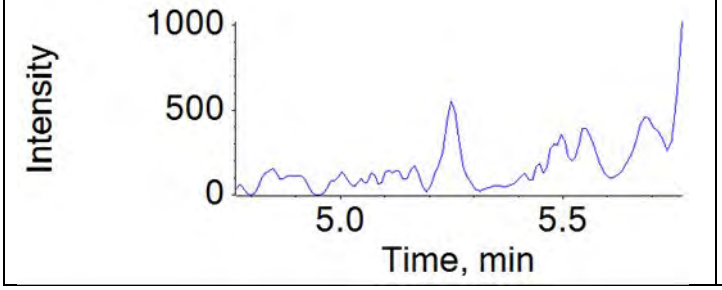


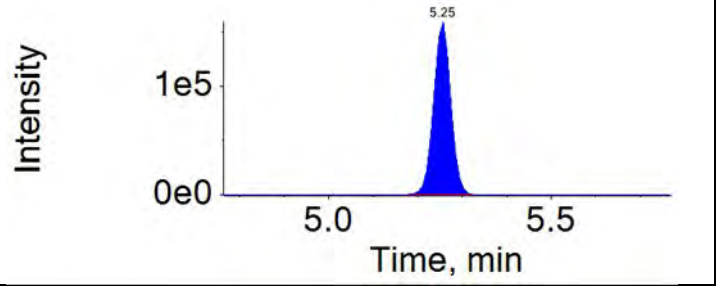
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



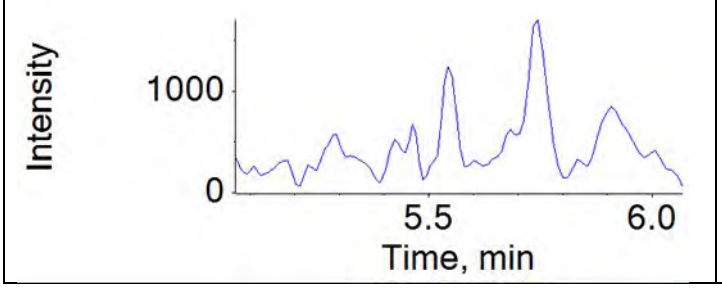


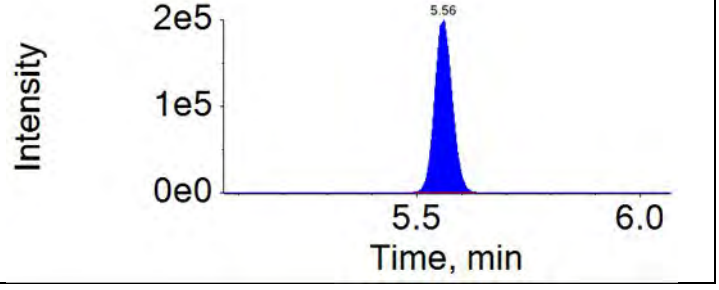
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



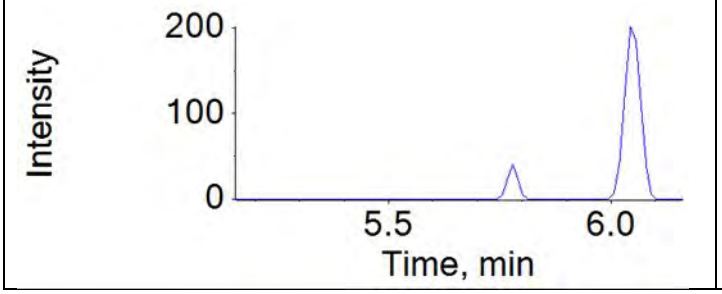


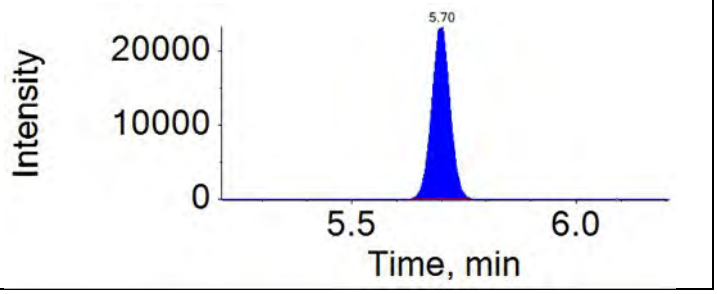
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

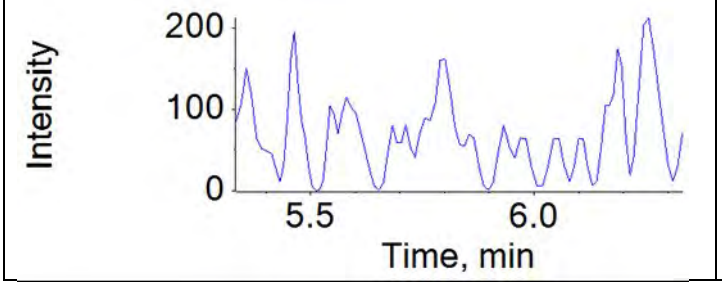
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

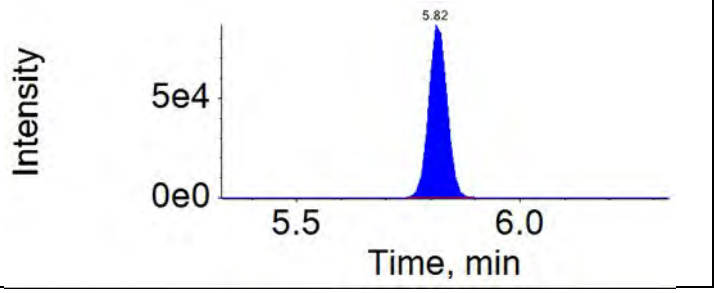
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



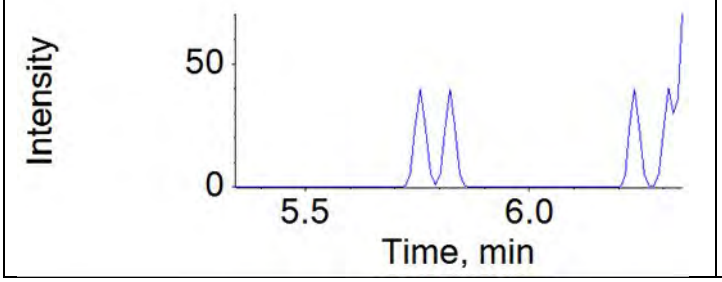


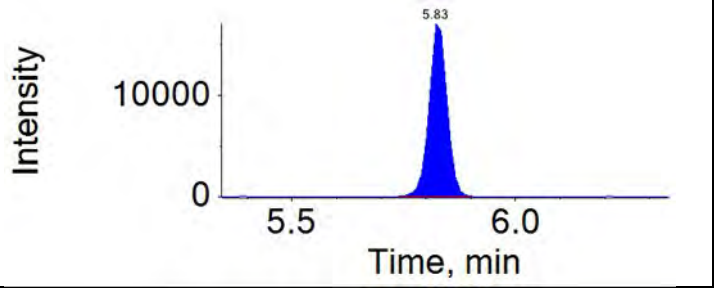
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



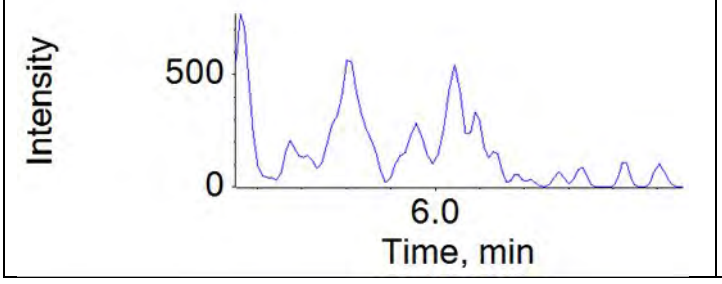


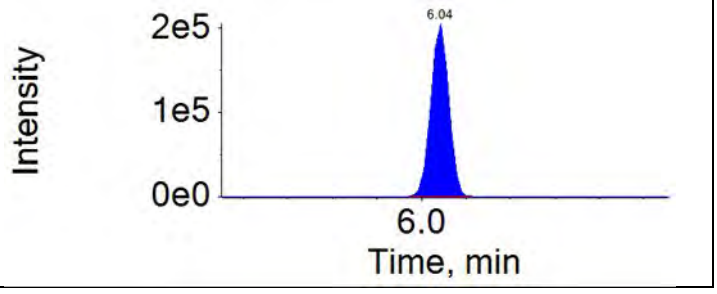
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



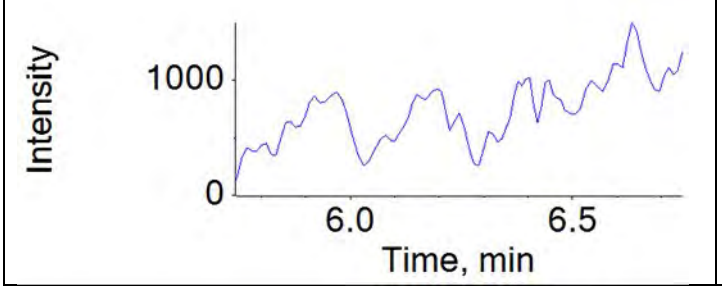


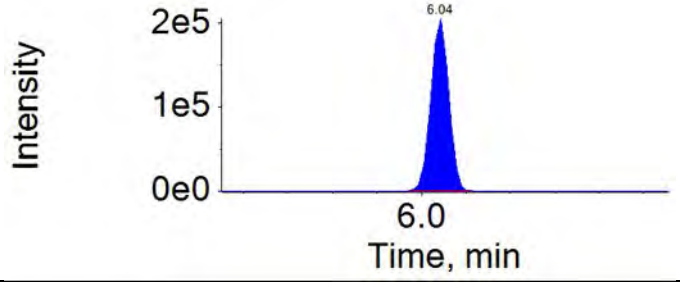
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

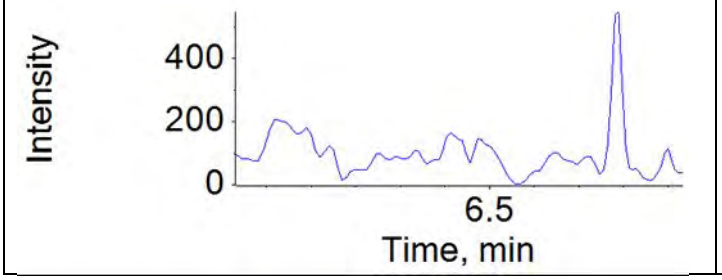
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

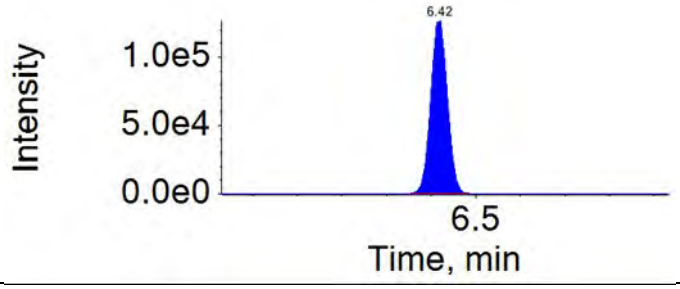
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



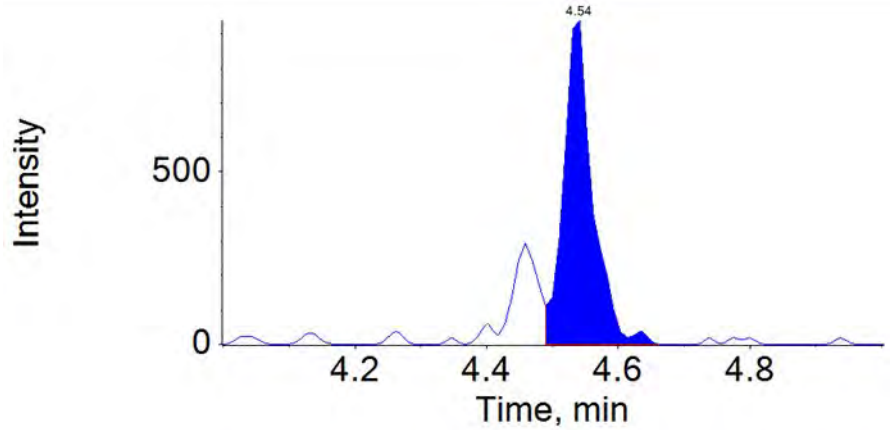


APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

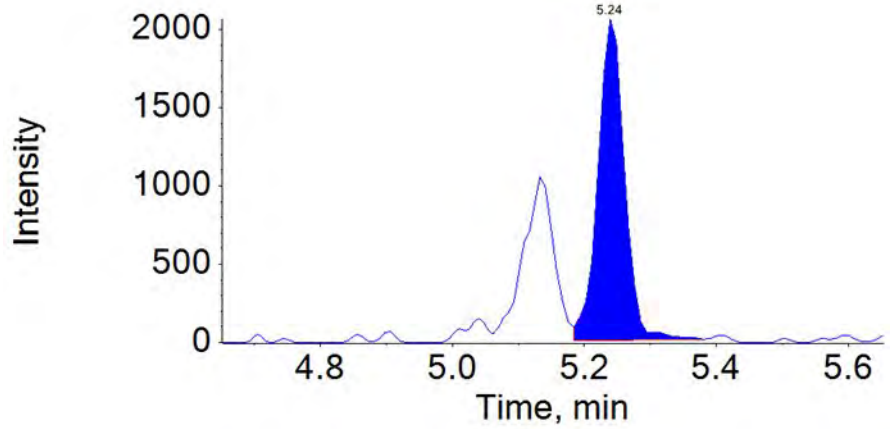
Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
2896.17
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-48.wiff
Sample Name:
9881942



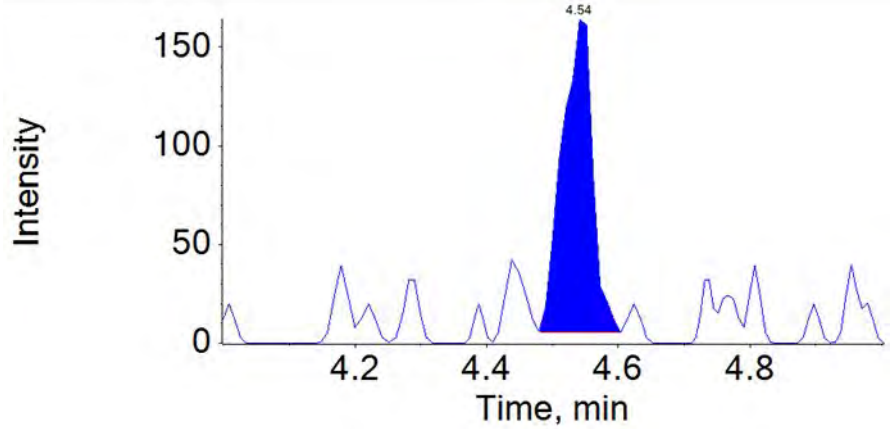
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
5766.03
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-48.wiff
Sample Name:
9881942



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
511.79
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-48.wiff
Sample Name:
9881942



Integration Comment: incorrect integration

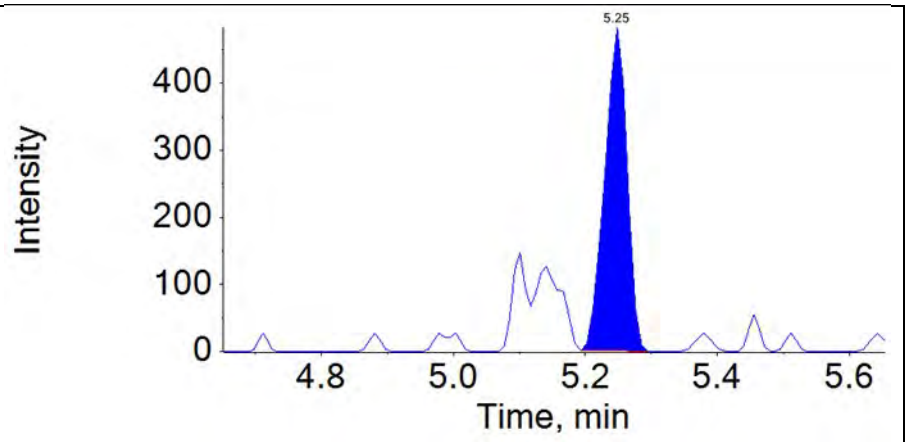
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
1131.35
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-48.wiff
Sample Name:
9881942



Integration Comment: incorrect integration

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

Ion Ratio Report

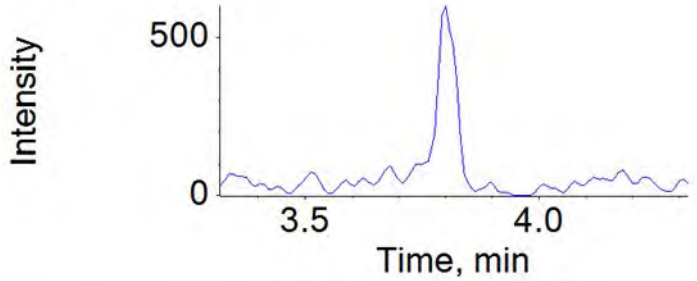
Sample Name: 9881942 **Instrument Name:** LM27631 **File Name:** 18NOV12D-48.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.54	1.00	3595.67	M	N/A	0.1798			
PFHxS_2	4.54	1.00	646.62	M	N/A	0.1798	-41	50	
PFOA	4.91	1.00	12279.89	A	N/A	0.0618			
PFOA_2	4.90	1.00	758.93	A	N/A	0.0618	10	50	
PFOS	5.24	1.00	9608.31	M	N/A	0.1785			
PFOS_2	5.25	1.00	1714.67	M	N/A	0.1785	-31	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

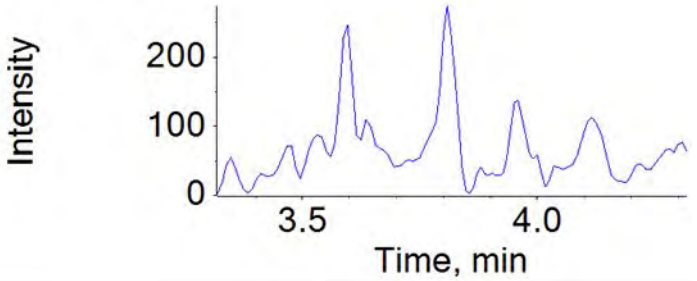
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

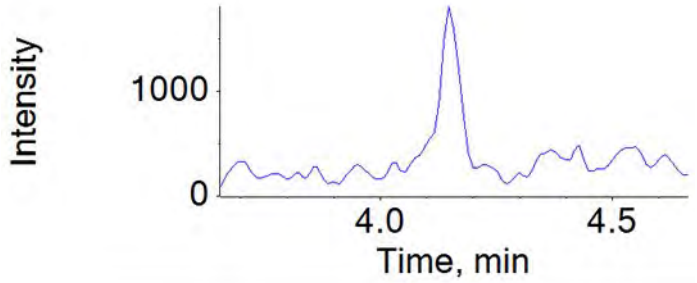
Component: PFBS
Primary Mass: 299.0 / 80.0



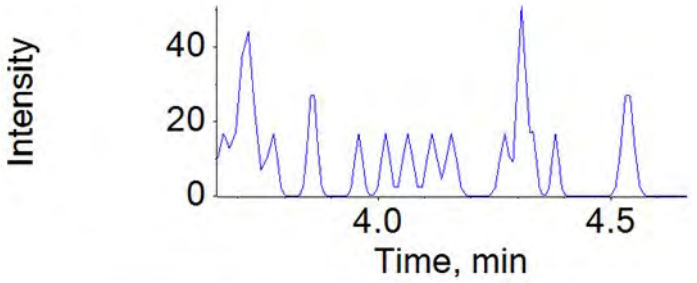
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



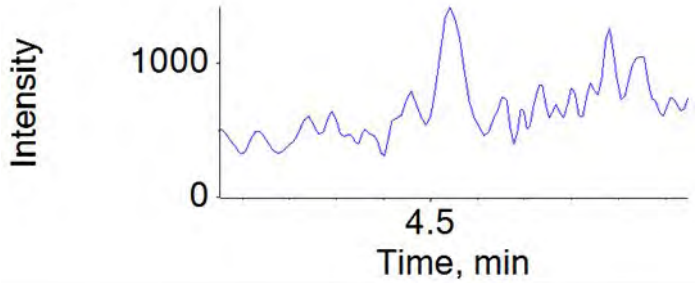
Component: PFHxA
Primary Mass: 313.0 / 269.0



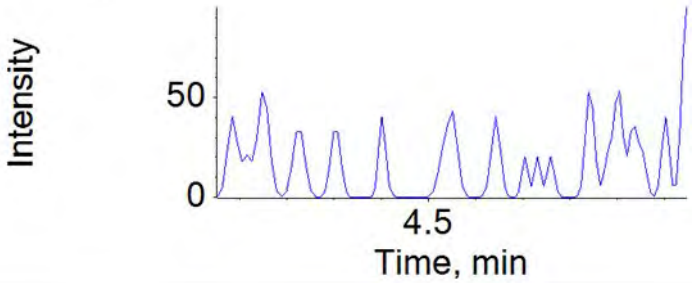
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



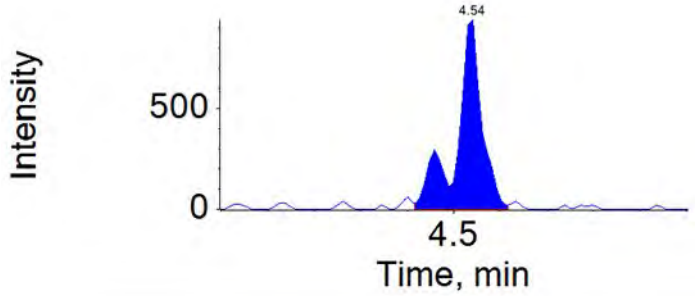
Component: PFHpA
Primary Mass: 363.0 / 319.0



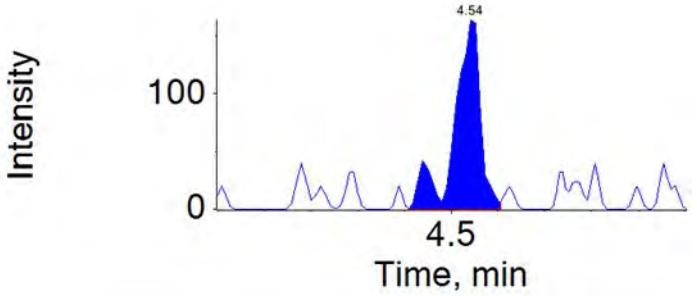
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



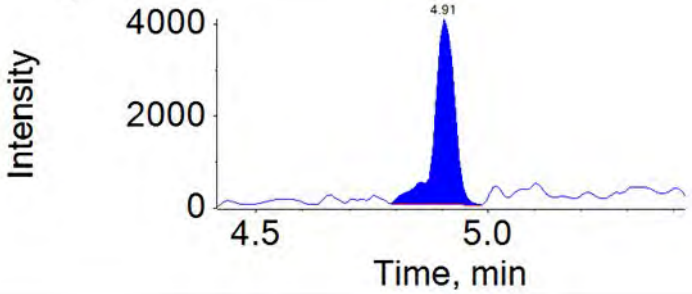
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



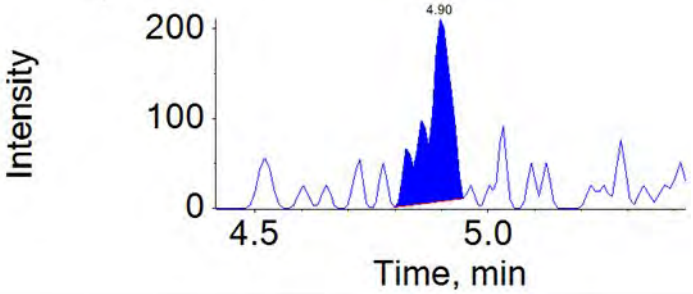
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

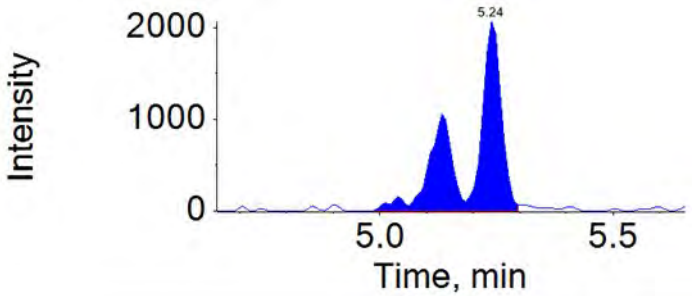
Component: PFOA
Primary Mass: 413.0 / 369.0



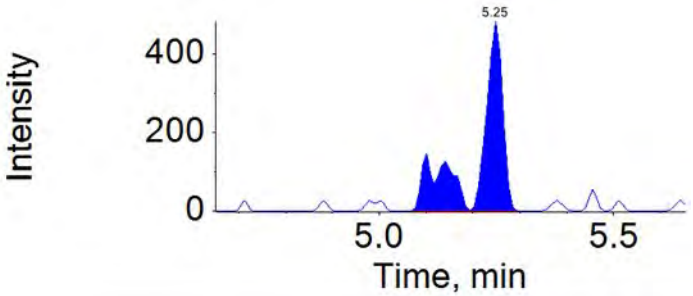
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



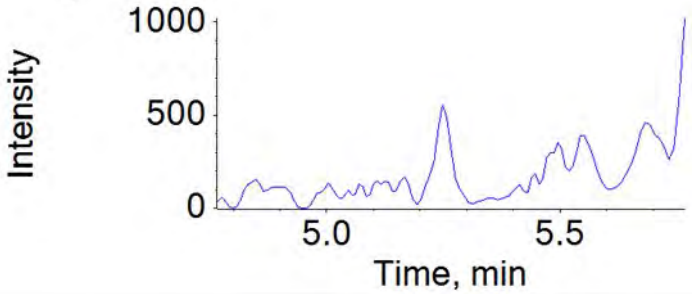
Component: PFOS
Primary Mass: 499.0 / 80.0



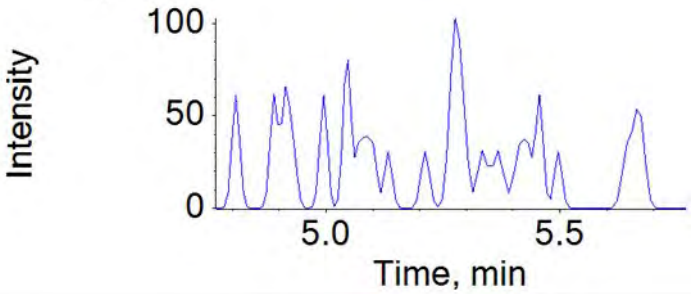
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



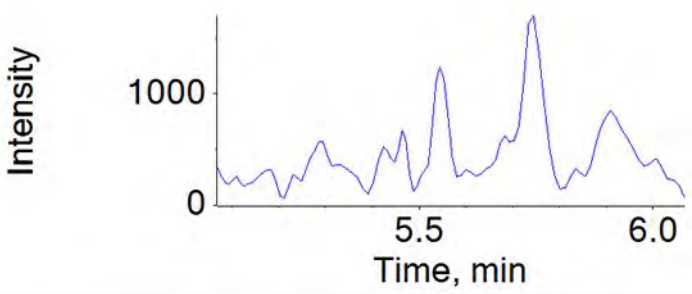
Component: PFNA
Primary Mass: 463.0 / 419.0



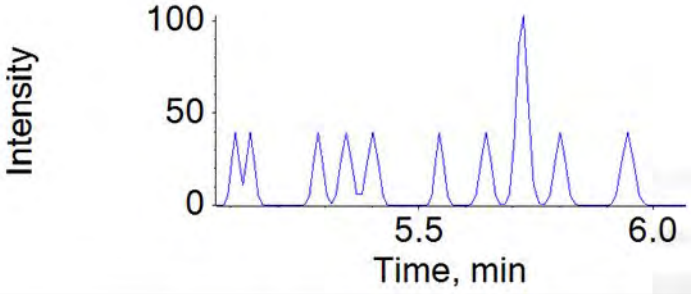
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



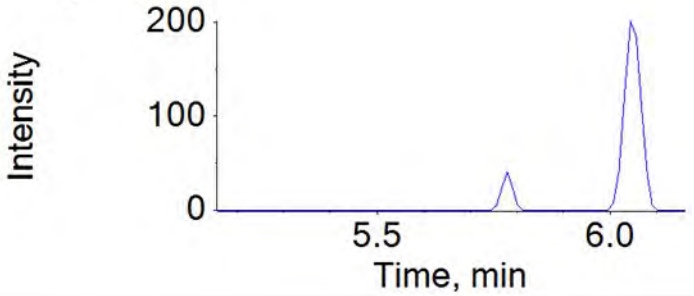
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



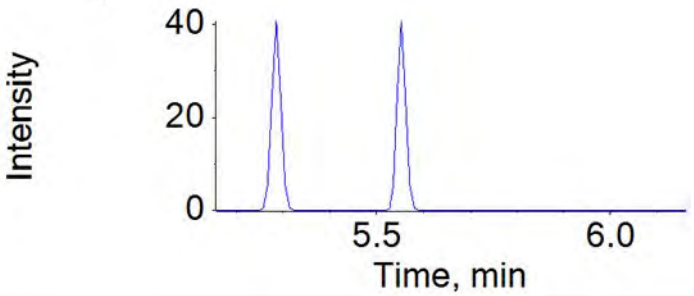
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

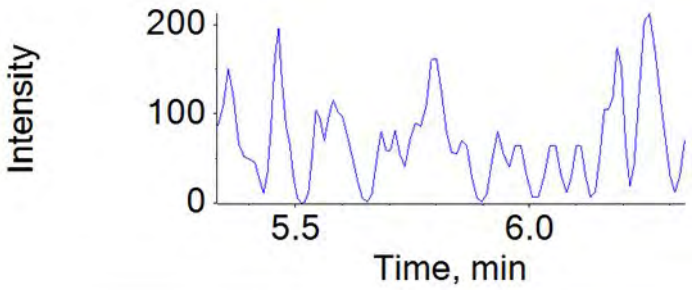
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



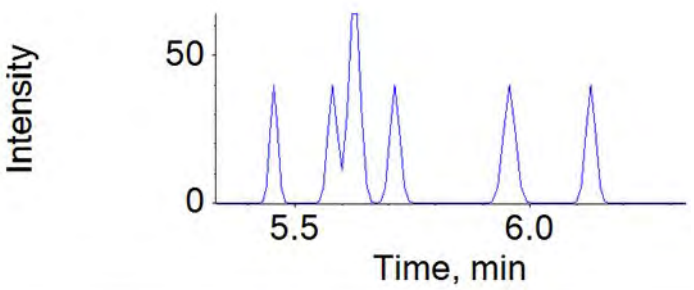
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



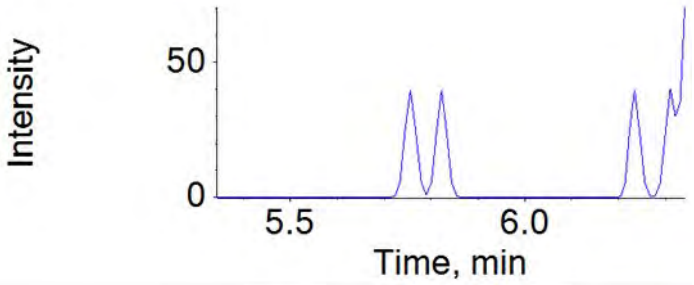
Component: PFUnDA
Primary Mass: 563.0 / 519.0



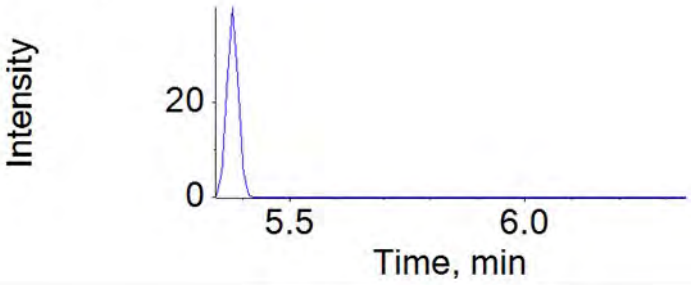
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



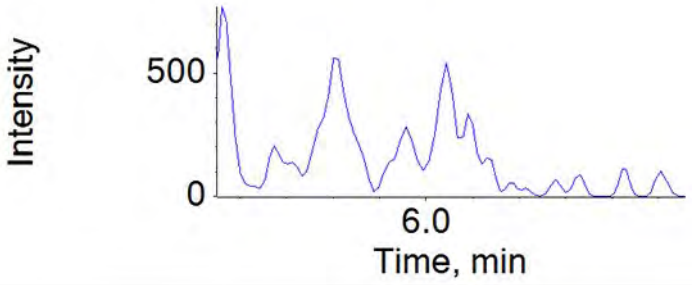
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



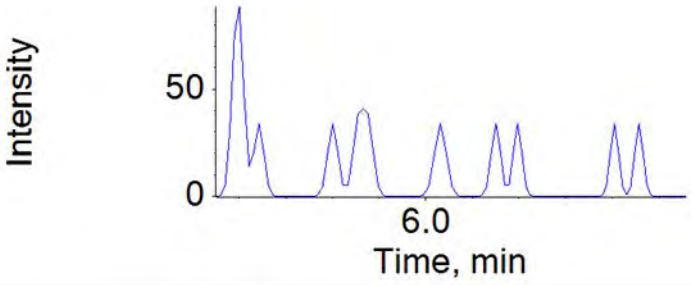
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



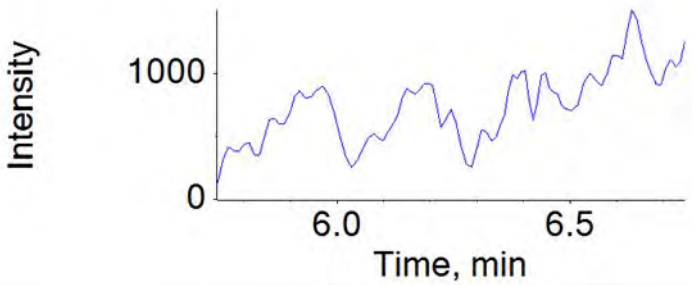
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



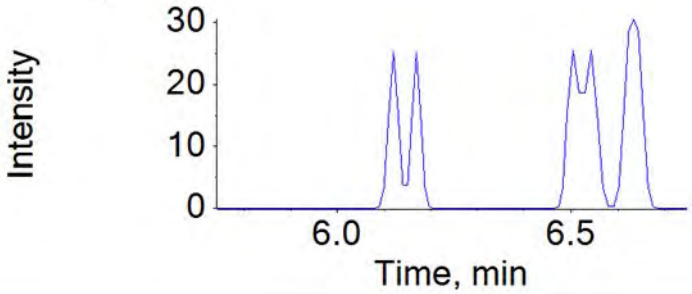
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

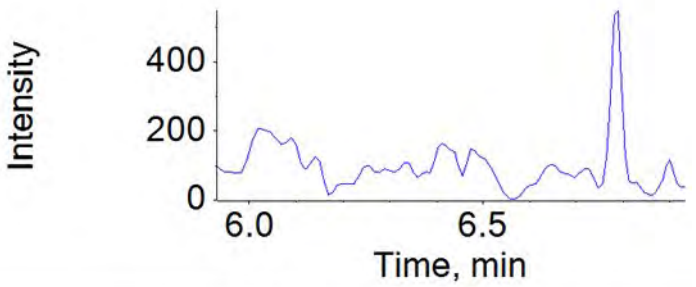
Component: PFTrDA
Primary Mass: 663.0 / 619.0



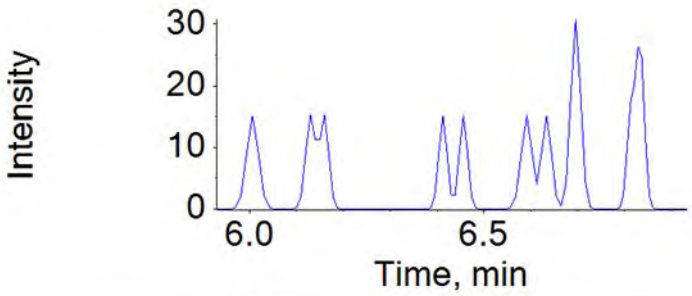
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:22 pm, 11/15/18

Standards Data

PFAS by LC/MS/MS

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV07DCAL-09.wiff	MDL	N/A	11/7/2018 9:30:56 AM
18NOV07DCAL-10.wiff	CAL1	N/A	11/7/2018 9:39:56 AM
18NOV07DCAL-11.wiff	CAL2	N/A	11/7/2018 9:48:56 AM
18NOV07DCAL-12.wiff	CAL3	N/A	11/7/2018 9:57:56 AM
18NOV07DCAL-13.wiff	CAL4	N/A	11/7/2018 10:06:59 AM
18NOV07DCAL-14.wiff	CAL5	N/A	11/7/2018 10:15:59 AM
18NOV07DCAL-15.wiff	CAL6	N/A	11/7/2018 10:24:59 AM
18NOV07DCAL-16.wiff	CAL7	N/A	11/7/2018 10:33:59 AM
18NOV07DCAL-17.wiff	Instrument Blank	N/A	11/7/2018 10:42:59 AM
18NOV07DCAL-18.wiff	ICV	N/A	11/7/2018 10:51:59 AM
18NOV07DCAL-19.wiff	L+B CAL3	N/A	11/7/2018 11:00:59 AM
18NOV07DCAL-20.wiff	CCV1_CAL3	N/A	11/7/2018 11:09:59 AM
18NOV07D-01.wiff	solvent	N/A	11/7/2018 11:20:42 AM
18NOV07D-02.wiff	Tape Test A	18310020	11/7/2018 11:29:44 AM
18NOV07D-03.wiff	Tape Test B	18310020	11/7/2018 11:38:44 AM
18NOV07D-04.wiff	solvent	N/A	11/7/2018 11:47:44 AM
18NOV07D-05.wiff	CCV1_ISC_CAL2	N/A	11/7/2018 11:56:44 AM
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18NOV07D-07.wiff	BLK308002	18308002	11/7/2018 12:14:47 PM
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18NOV07D-09.wiff	LCSDA	18308002	11/7/2018 12:32:47 PM
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18NOV07D-18.wiff	9881938MS	18309005	11/7/2018 1:54:00 PM
18NOV07D-19.wiff	9881939	18309005	11/7/2018 2:03:00 PM
18NOV07D-20.wiff	9881940	18309005	11/7/2018 2:12:00 PM
18NOV07D-21.wiff	9881941	18309005	11/7/2018 2:21:00 PM
18NOV07D-22.wiff	9881943	18309005	11/7/2018 2:30:00 PM
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18NOV07D-28.wiff	9881950	18309005	11/7/2018 3:24:03 PM
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18NOV07D-41.wiff	9881869	18309011	11/7/2018 5:21:21 PM
18NOV07D-42.wiff	9881870	18309011	11/7/2018 5:30:21 PM
18NOV07D-43.wiff	9881871BKG	18309011	11/7/2018 5:39:21 PM
18NOV07D-44.wiff	9881872MS	18309011	11/7/2018 5:48:24 PM
18NOV07D-45.wiff	9881873MSD	18309011	11/7/2018 5:57:24 PM

APPROVED
By MCD at 7:15 pm, 11/8/18

Instrument Name: LM27631

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18NOV07D-47.wiff	CCV5_CAL3	N/A	11/7/2018 6:15:30 PM
18NOV07D-48.wiff	9881931	18309011	11/7/2018 6:24:30 PM
18NOV07D-49.wiff	9881936	18309011	11/7/2018 6:33:33 PM
18NOV07D-50.wiff	9881937	18309011	11/7/2018 6:42:36 PM
18NOV07D-51.wiff	CCV6_CAL4	N/A	11/7/2018 6:51:39 PM
18NOV07D-52.wiff	9881945	18309005	11/7/2018 7:03:46 PM
18NOV07D-53.wiff	9881946	18309005	11/7/2018 7:12:48 PM
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18NOV07D-55.wiff	9881950	18309005	11/7/2018 7:30:51 PM
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18NOV07D-57.wiff	9881952	18309005	11/7/2018 7:48:54 PM
18NOV07D-58.wiff	9881955	18309005	11/7/2018 7:57:57 PM
18NOV07D-59.wiff	9881956	18309005	11/7/2018 8:07:00 PM
18NOV07D-60.wiff	9881957	18309005	11/7/2018 8:16:03 PM
18NOV07D-61.wiff	9881958	18309005	11/7/2018 8:25:06 PM
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18NOV07D-63.wiff	9881961	18309005	11/7/2018 8:43:09 PM
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18NOV07D-68.wiff	9881869	18309011	11/7/2018 9:28:12 PM
18NOV07D-69.wiff	9881870	18309011	11/7/2018 9:37:12 PM
18NOV07D-70.wiff	9881871BKG	18309011	11/7/2018 9:46:15 PM
18NOV07D-71.wiff	9881872MS	18309011	11/7/2018 9:55:15 PM
18NOV07D-72.wiff	9881873MSD	18309011	11/7/2018 10:04:15 PM
18NOV07D-73.wiff	9881874	18309011	11/7/2018 10:13:15 PM
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18NOV07D-79.wiff	9881892	18310004	11/7/2018 11:07:24 PM
18NOV07D-80.wiff	9881895	18310004	11/7/2018 11:16:24 PM
18NOV07D-81.wiff	9881896	18310004	11/7/2018 11:25:27 PM
18NOV07D-82.wiff	9881897	18310004	11/7/2018 11:34:27 PM
18NOV07D-83.wiff	9881898	18310004	11/7/2018 11:43:27 PM
18NOV07D-84.wiff	9881901	18310004	11/7/2018 11:52:27 PM
18NOV07D-85.wiff	CCV9_ISC_CAL2	N/A	11/8/2018 12:01:27 AM
18NOV07D-86.wiff	Instrument Blank	N/A	11/8/2018 12:10:27 AM
18NOV07D-87.wiff	9881889MS	18310004	11/8/2018 12:19:30 AM
18NOV07D-88.wiff	9881890MSD	18310004	11/8/2018 12:28:30 AM
18NOV07D-89.wiff	solvent	N/A	11/8/2018 12:37:30 AM
18NOV07D-90.wiff	BLK310002	18310002	11/8/2018 12:46:33 AM
18NOV07D-91.wiff	LCS310002	18310002	11/8/2018 12:55:33 AM
18NOV07D-92.wiff	LCSDA	18310002	11/8/2018 1:04:36 AM
18NOV07D-93.wiff	9881534	18310002	11/8/2018 1:13:36 AM
18NOV07D-94.wiff	9881535	18310002	11/8/2018 1:22:36 AM
18NOV07D-95.wiff	9881579	18310002	11/8/2018 1:31:36 AM
18NOV07D-96.wiff	9881580	18310002	11/8/2018 1:40:36 AM
18NOV07D-97.wiff	9881925	18310002	11/8/2018 1:49:36 AM
18NOV07D-98.wiff	CCV10_CAL3	N/A	11/8/2018 1:58:36 AM
18NOV07D-99.wiff	9881942	18310002	11/8/2018 2:07:36 AM
18NOV07D-100.wiff	9881979	18310002	11/8/2018 2:16:36 AM
18NOV07D-101.wiff	9881980	18310002	11/8/2018 2:25:36 AM
18NOV07D-102.wiff	CCV11_CAL4	N/A	11/8/2018 2:34:36 AM
18NOV07D-103.wiff	solvent	N/A	11/8/2018 10:32:10 AM

APPROVED
By MCD at 7:15 pm, 11/8/18

Instrument Name: LM27631

18NOV07D-104.wiff	solvent	N/A	11/8/2018 10:41:10 AM
18NOV07D-105.wiff	solvent	N/A	11/8/2018 10:50:13 AM

20 mM Ammonium Acetate in H2O: 782411021833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411021833B

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV12DCAL-41.wiff	MDL	N\A	11/12/2018 2:56:51 PM
18NOV12DCAL-42.wiff	CAL1	N\A	11/12/2018 3:05:54 PM
18NOV12DCAL-43.wiff	CAL2	N\A	11/12/2018 3:15:03 PM
18NOV12DCAL-44.wiff	CAL3	N\A	11/12/2018 3:24:03 PM
18NOV12DCAL-45.wiff	CAL4	N\A	11/12/2018 3:33:03 PM
18NOV12DCAL-46.wiff	CAL5	N\A	11/12/2018 3:42:06 PM
18NOV12DCAL-47.wiff	CAL6	N\A	11/12/2018 3:51:06 PM
18NOV12DCAL-48.wiff	CAL7	N\A	11/12/2018 4:00:06 PM
18NOV12DCAL-49.wiff	solvent	N\A	11/12/2018 4:09:09 PM
18NOV12DCAL-50.wiff	ICV	N\A	11/12/2018 4:18:11 PM
18NOV12DCAL-51.wiff	L+B CAL3	N\A	11/12/2018 4:27:15 PM
18NOV12DCAL-52.wiff	CCV1_CAL3	N\A	11/12/2018 4:36:17 PM
18NOV12D-01.wiff	solvent	N\A	11/12/2018 4:45:21 PM
18NOV12D-02.wiff	solvent	N\A	11/12/2018 4:54:24 PM
18NOV12D-03.wiff	solvent	N\A	11/12/2018 5:03:30 PM
18NOV12D-04.wiff	solvent	N\A	11/12/2018 5:12:33 PM
18NOV12D-05.wiff	CCV1_ISC_CAL2	N/A	11/12/2018 5:21:36 PM
18NOV12D-06.wiff	Instrument Blank	N/A	11/12/2018 5:30:36 PM
18NOV12D-07.wiff	BLK312009	18312009	11/12/2018 5:39:36 PM
18NOV12D-08.wiff	LCS312009	18312009	11/12/2018 5:48:39 PM
18NOV12D-09.wiff	9888754BKG	18312009	11/12/2018 5:57:42 PM
18NOV12D-10.wiff	9888799	18312009	11/12/2018 6:06:45 PM
18NOV12D-11.wiff	9888800	18312009	11/12/2018 6:15:48 PM
18NOV12D-12.wiff	9888801	18312009	11/12/2018 6:24:51 PM
18NOV12D-13.wiff	9888755MS	18312009	11/12/2018 6:33:51 PM
18NOV12D-14.wiff	9888756MSD	18312009	11/12/2018 6:42:51 PM
18NOV12D-15.wiff	CCV2_CAL3	N/A	11/12/2018 6:51:51 PM
18NOV12D-16.wiff	BLK313005	18313005	11/12/2018 7:00:51 PM
18NOV12D-17.wiff	LCS313005	18313005	11/12/2018 7:09:51 PM
18NOV12D-18.wiff	9881926	18313005	11/12/2018 7:18:51 PM
18NOV12D-19.wiff	9881927	18313005	11/12/2018 7:27:54 PM
18NOV12D-20.wiff	9881928BKG	18313005	11/12/2018 7:36:54 PM
18NOV12D-21.wiff	9881940	18313005	11/12/2018 7:45:57 PM
18NOV12D-22.wiff	9881963	18313005	11/12/2018 7:54:57 PM
18NOV12D-23.wiff	9881964	18313005	11/12/2018 8:04:00 PM
18NOV12D-24.wiff	CCV3_CAL4	N/A	11/12/2018 8:13:03 PM
18NOV12D-25.wiff	9881967	18313005	11/12/2018 8:22:06 PM
18NOV12D-26.wiff	9881968	18313005	11/12/2018 8:31:09 PM
18NOV12D-27.wiff	9881969	18313005	11/12/2018 8:40:12 PM
18NOV12D-28.wiff	9881970	18313005	11/12/2018 8:49:15 PM
18NOV12D-29.wiff	9881973	18313005	11/12/2018 8:58:18 PM
18NOV12D-30.wiff	9881974	18313005	11/12/2018 9:07:21 PM
18NOV12D-31.wiff	9881975	18313005	11/12/2018 9:16:24 PM
18NOV12D-32.wiff	9881976	18313005	11/12/2018 9:25:24 PM
18NOV12D-33.wiff	9881929MS	18313005	11/12/2018 9:34:27 PM
18NOV12D-34.wiff	9881930MSD	18313005	11/12/2018 9:43:27 PM
18NOV12D-35.wiff	CCV4_ISC_CAL2	N/A	11/12/2018 9:52:30 PM
18NOV12D-36.wiff	9881926DL	18313005	11/12/2018 10:01:33 PM
18NOV12D-37.wiff	9881927DL	18313005	11/12/2018 10:10:36 PM
18NOV12D-38.wiff	9881928BKGDL	18313005	11/12/2018 10:19:36 PM
18NOV12D-39.wiff	solvent	N/A	11/12/2018 10:28:39 PM
18NOV12D-40.wiff	BLK314006	18314006	11/12/2018 10:37:42 PM
18NOV12D-41.wiff	LCS314006	18314006	11/12/2018 10:46:42 PM
18NOV12D-42.wiff	9881534	18314006	11/12/2018 10:55:42 PM
18NOV12D-43.wiff	9881535	18314006	11/12/2018 11:04:42 PM
18NOV12D-44.wiff	9881579	18314006	11/12/2018 11:13:42 PM
18NOV12D-45.wiff	9881580	18314006	11/12/2018 11:22:45 PM

APPROVED
By MCD at 9:27 pm, 11/13/18

Instrument Name: LM27631

18NOV12D-46.wiff	9881925	18314006	11/12/2018 11:31:48 PM
18NOV12D-47.wiff	CCV5_CAL3	N/A	11/12/2018 11:40:51 PM
18NOV12D-48.wiff	9881942	18314006	11/12/2018 11:49:51 PM
18NOV12D-49.wiff	9881979	18314006	11/12/2018 11:58:54 PM
18NOV12D-50.wiff	9881980	18314006	11/13/2018 12:07:57 AM
18NOV12D-51.wiff	9893164	18314006	11/13/2018 12:16:57 AM
18NOV12D-52.wiff	9893165	18314006	11/13/2018 12:25:57 AM
18NOV12D-53.wiff	9893166	18314006	11/13/2018 12:35:00 AM
18NOV12D-54.wiff	9893167	18314006	11/13/2018 12:44:03 AM
18NOV12D-55.wiff	9893169BKG	18314006	11/13/2018 12:53:06 AM
18NOV12D-56.wiff	9893176	18314006	11/13/2018 1:02:06 AM
18NOV12D-57.wiff	9893170MS	18314006	11/13/2018 1:11:07 AM
18NOV12D-58.wiff	CCV6_CAL4	N/A	11/13/2018 1:20:06 AM
18NOV12D-59.wiff	9893171MSD	18314006	11/13/2018 1:29:06 AM
18NOV12D-60.wiff	solvent	N/A	11/13/2018 1:38:09 AM
18NOV12D-61.wiff	BLK314009	18314009	11/13/2018 1:47:15 AM
18NOV12D-62.wiff	LCS314009	18314009	11/13/2018 1:56:15 AM
18NOV12D-63.wiff	LCSDA	18314009	11/13/2018 2:05:18 AM
18NOV12D-64.wiff	9881540BKG	18314009	11/13/2018 2:14:21 AM
18NOV12D-65.wiff	9881573	18314009	11/13/2018 2:23:27 AM
18NOV12D-66.wiff	9881575	18314009	11/13/2018 2:32:27 AM
18NOV12D-67.wiff	9881576	18314009	11/13/2018 2:41:30 AM
18NOV12D-68.wiff	9881589	18314009	11/13/2018 2:50:33 AM
18NOV12D-69.wiff	9881595	18314009	11/13/2018 2:59:33 AM
18NOV12D-70.wiff	CCV7_ISC_CAL2	N/A	11/13/2018 3:08:33 AM
18NOV12D-71.wiff	Instrument Blank	N/A	11/13/2018 3:17:33 AM
18NOV12D-72.wiff	9883388	18314009	11/13/2018 3:26:33 AM
18NOV12D-73.wiff	9883389	18314009	11/13/2018 3:35:33 AM
18NOV12D-74.wiff	9883393	18314009	11/13/2018 3:44:36 AM
18NOV12D-75.wiff	9883394	18314009	11/13/2018 3:53:39 AM
18NOV12D-76.wiff	9885112	18314009	11/13/2018 4:02:39 AM
18NOV12D-77.wiff	9885113	18314009	11/13/2018 4:11:42 AM
18NOV12D-78.wiff	9885131	18314009	11/13/2018 4:20:42 AM
18NOV12D-79.wiff	9885137	18314009	11/13/2018 4:29:42 AM
18NOV12D-80.wiff	9885138	18314009	11/13/2018 4:38:45 AM
18NOV12D-81.wiff	9881540MS	18314009	11/13/2018 4:47:45 AM
18NOV12D-82.wiff	CCV8_CAL3	N/A	11/13/2018 4:56:45 AM
18NOV12D-83.wiff	BLK313002	18313002	11/13/2018 5:05:49 AM
18NOV12D-84.wiff	LCS313002	18313002	11/13/2018 5:14:51 AM
18NOV12D-85.wiff	9889418	18313002	11/13/2018 5:23:54 AM
18NOV12D-86.wiff	9889419	18313002	11/13/2018 5:32:56 AM
18NOV12D-87.wiff	9889420	18313002	11/13/2018 5:41:59 AM
18NOV12D-88.wiff	9889421	18313002	11/13/2018 5:51:02 AM
18NOV12D-89.wiff	9889422	18313002	11/13/2018 6:00:08 AM
18NOV12D-90.wiff	9889423BKG	18313002	11/13/2018 6:09:11 AM
18NOV12D-91.wiff	9889426	18313002	11/13/2018 6:18:14 AM
18NOV12D-92.wiff	9889427	18313002	11/13/2018 6:27:17 AM
18NOV12D-93.wiff	CCV9_CAL4	N/A	11/13/2018 6:36:17 AM
18NOV12D-94.wiff	9889424MS	18313002	11/13/2018 6:45:17 AM
18NOV12D-95.wiff	9889425MSD	18313002	11/13/2018 6:54:17 AM
18NOV12D-96.wiff	CCV10_ISC_CAL2	N/A	11/13/2018 7:03:17 AM
18NOV12D-97.wiff	BLK309009	18309009	11/13/2018 7:12:17 AM
18NOV12D-98.wiff	IDOC1	18309009	11/13/2018 7:21:20 AM
18NOV12D-99.wiff	IDOC2	18309009	11/13/2018 7:30:23 AM
18NOV12D-100.wiff	IDOC3	18309009	11/13/2018 7:39:23 AM
18NOV12D-101.wiff	IDOC4	18309009	11/13/2018 7:48:26 AM
18NOV12D-102.wiff	solvent	N/A	11/13/2018 7:57:26 AM
18NOV12D-103.wiff	BLK306011	18306011	11/13/2018 8:06:26 AM

APPROVED
By MCD at 9:27 pm, 11/13/18

Instrument Name: LM27631

18NOV12D-104.wiff	18306011 MDL2	18306011	11/13/2018 8:15:29 AM
18NOV12D-105.wiff	BLK306012	18306012	11/13/2018 8:24:32 AM
18NOV12D-106.wiff	18306012 MDL2	18306012	11/13/2018 8:33:35 AM
18NOV12D-107.wiff	CCV11_CAL3	N/A	11/13/2018 8:42:38 AM

20 mM Ammonium Acetate in H2O: 782411091833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411091833B

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV07DCAL-10.wiff	11/7/2018 9:39:56 AM	CALMOD11833G	CAL1
18NOV07DCAL-11.wiff	11/7/2018 9:48:56 AM	CALMOD21833F	CAL2
18NOV07DCAL-12.wiff	11/7/2018 9:57:56 AM	CALMOD31833F	CAL3
18NOV07DCAL-13.wiff	11/7/2018 10:06:59 AM	CALMOD41833F	CAL4
18NOV07DCAL-14.wiff	11/7/2018 10:15:59 AM	CALMOD51833F	CAL5
18NOV07DCAL-15.wiff	11/7/2018 10:24:59 AM	CALMOD61833E	CAL6
18NOV07DCAL-16.wiff	11/7/2018 10:33:59 AM	CALMOD71833E	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	730410.6
CAL3	13C2-PFOA	524423.6
CAL3	13C4-PFOS	274061.7
CAL3	13C2-PFDA	311442.1

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

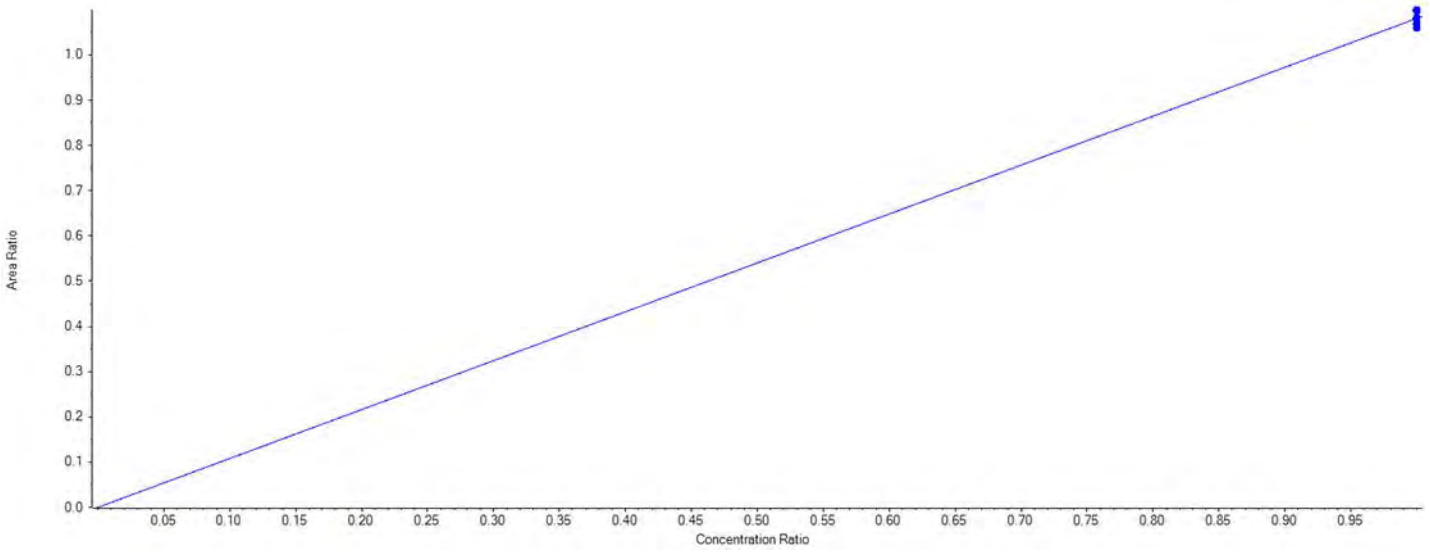
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.018	0.931	0.905	0.934	0.936	0.881	0.816	6	20		0.997	
PFPeA	0.983	0.897	0.863	0.883	0.914	0.858	0.814	6	20		0.998	
PFBS	1.158	0.984	0.907	0.979	0.951	0.960	0.893	8	20		0.999	
4:2-FTS	1.777	1.830	1.827	1.860	1.869	1.731	1.702	3	20		0.999	
PFHxA	1.369	1.233	1.246	1.275	1.253	1.109	N/A	6	20		0.996	
PFPeS	0.454	0.467	0.444	0.498	0.474	0.471	0.470	3	20		1.000	
PFHxS	0.955	0.955	0.893	0.948	0.948	0.935	0.929	2	20		1.000	
PFHpA	1.634	1.603	1.590	1.563	1.579	1.432	N/A	4	20		0.998	
6:2-FTS	1.464	2.292	2.080	2.004	2.131	1.864	1.866	13	20		0.998	
PFHpS	0.984	0.904	0.893	0.946	0.924	0.891	0.903	3	20		1.000	
PFOA	0.969	0.972	0.946	0.995	0.956	0.913	0.852	5	20		0.998	
PFOS	0.998	0.997	0.938	0.958	0.930	0.927	0.914	3	20		1.000	
PFNA	1.571	1.383	1.459	1.439	1.491	1.379	1.276	6	20		0.997	
PFNS	0.553	0.609	0.611	0.650	0.603	0.625	0.588	5	20		0.999	
PFDA	0.980	0.945	0.957	0.980	1.004	0.925	0.875	4	20		0.998	
8:2-FTS	2.603	2.513	2.112	2.184	2.222	2.072	N/A	9	20		0.999	
PFOSA	0.896	0.979	0.964	0.988	0.831	0.967	0.917	6	20		0.998	
NMeFOSAA	0.867	1.180	0.991	1.053	1.044	0.948	0.962	9	20		0.999	
PFDS	0.528	0.545	0.492	0.534	0.504	0.495	0.500	4	20		1.000	
PFUnDA	1.982	1.865	1.891	1.818	1.849	1.776	1.696	5	20		0.999	
NEtFOSAA	1.063	1.102	1.103	1.149	1.294	1.132	1.156	6	20		0.998	
PFDoDA	1.032	1.006	0.944	0.916	0.972	0.902	N/A	5	20		0.999	
10:2-FTS	1.769	1.760	1.607	1.411	1.601	1.578	1.513	7	20		0.999	
NMePFOSAE	1.362	1.238	1.132	1.225	1.231	1.175	1.053	7	20		0.996	
NMePFOSA	0.899	1.015	0.938	0.855	0.985	0.914	0.866	6	20		0.998	
PFDoS	0.247	0.249	0.266	0.257	0.245	0.243	0.249	3	20		1.000	
NEtPFOSAE	1.848	1.807	1.624	1.689	1.741	1.603	1.488	7	20		0.997	
NEtPFOSA	1.082	0.962	0.983	1.069	1.170	1.145	1.133	7	20		1.000	
PFTrDA	0.992	0.824	0.844	0.816	0.844	0.766	N/A	8	20		0.998	
PFTeDA	0.989	0.821	0.895	0.892	0.889	0.857	0.837	6	20		0.999	
PFHxDA	0.475	0.422	0.418	0.420	0.425	0.395	0.400	6	20		0.999	
PFODA	0.385	0.357	0.356	0.356	0.370	0.340	0.348	4	20		0.999	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.08045 x (std. dev. = 0.01457) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	794718.9	750779.984	True	5.00	1.059	3.27	1.000	5.000	4.899	-2	30	
CAL2	782732.8	723209.911	True	5.00	1.082	3.27	1.000	5.000	5.009	0	30	
CAL3	787180.2	730410.641	True	5.00	1.078	3.27	1.000	5.000	4.987	0	30	
CAL4	771359.1	721806.781	True	5.00	1.069	3.27	1.000	5.000	4.945	-1	30	
CAL5	728925.1	664213.611	True	5.00	1.097	3.27	1.000	5.000	5.079	2	30	
CAL6	647849.6	600246.701	True	5.00	1.079	3.26	1.000	5.000	4.995	0	30	
CAL7	609686.1	554647.432	True	5.00	1.099	3.26	1.000	5.000	5.087	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

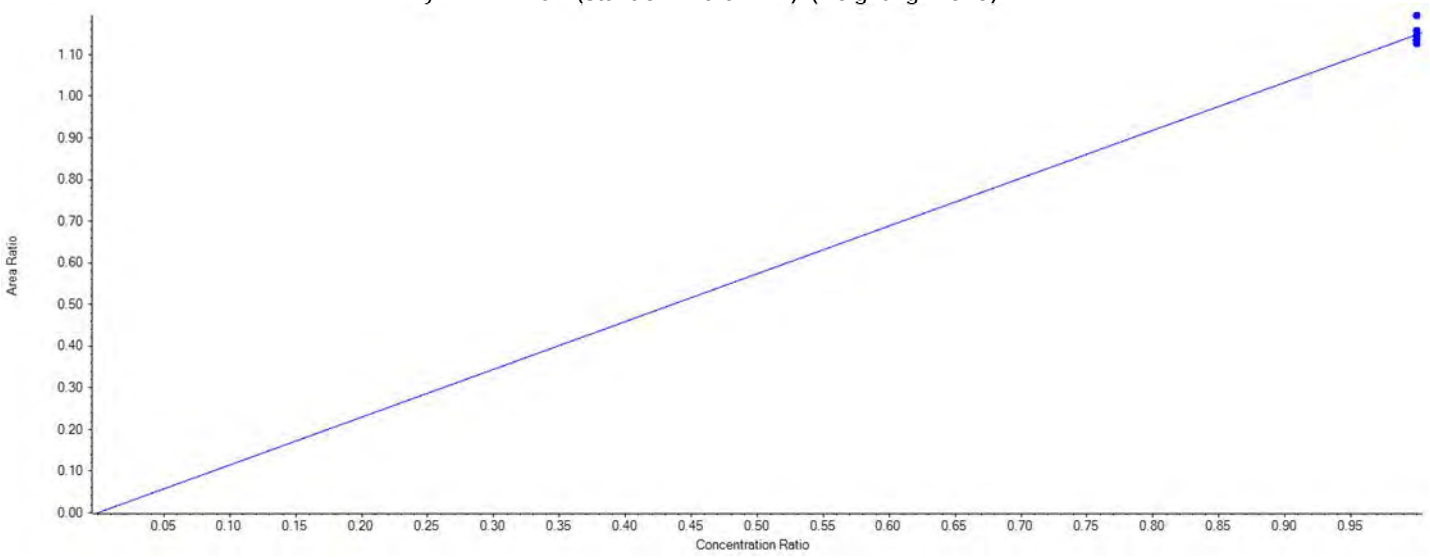
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.14776 x (std. dev. = 0.02271) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	844850.2	750779.984	True	5.00	1.125	3.77	1.150	5.000	4.902	-2	30	
CAL2	863262.8	723209.911	True	5.00	1.194	3.77	1.150	5.000	5.200	4	30	
CAL3	829978.5	730410.641	True	5.00	1.136	3.77	1.150	5.000	4.950	-1	30	
CAL4	824842.8	721806.781	True	5.00	1.143	3.77	1.150	5.000	4.978	0	30	
CAL5	768958.1	664213.611	True	5.00	1.158	3.77	1.150	5.000	5.043	1	30	
CAL6	687796.7	600246.701	True	5.00	1.146	3.76	1.150	5.000	4.992	0	30	
CAL7	628265.5	554647.432	True	5.00	1.133	3.76	1.150	5.000	4.935	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

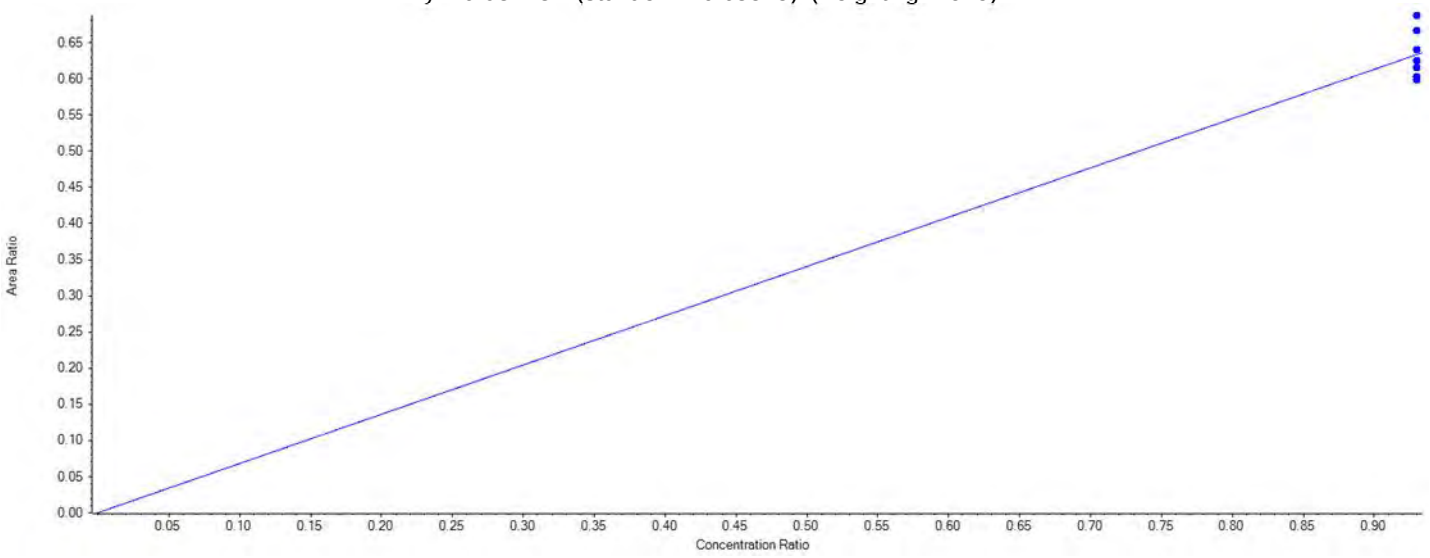
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.68128 x (std. dev. = 0.03575) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	449266.3	750779.984	True	5.00	0.598	3.82	1.170	4.650	4.392	-6	30	
CAL2	444721.3	723209.911	True	5.00	0.615	3.82	1.170	4.650	4.513	-3	30	
CAL3	456815.2	730410.641	True	5.00	0.625	3.82	1.170	4.650	4.590	-1	30	
CAL4	434938.9	721806.781	True	5.00	0.603	3.81	1.170	4.650	4.422	-5	30	
CAL5	442479.7	664213.611	True	5.00	0.666	3.82	1.170	4.650	4.889	5	30	
CAL6	384220.8	600246.701	True	5.00	0.640	3.81	1.170	4.650	4.698	1	30	
CAL7	381345.5	554647.432	True	5.00	0.688	3.81	1.170	4.650	5.046	9	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

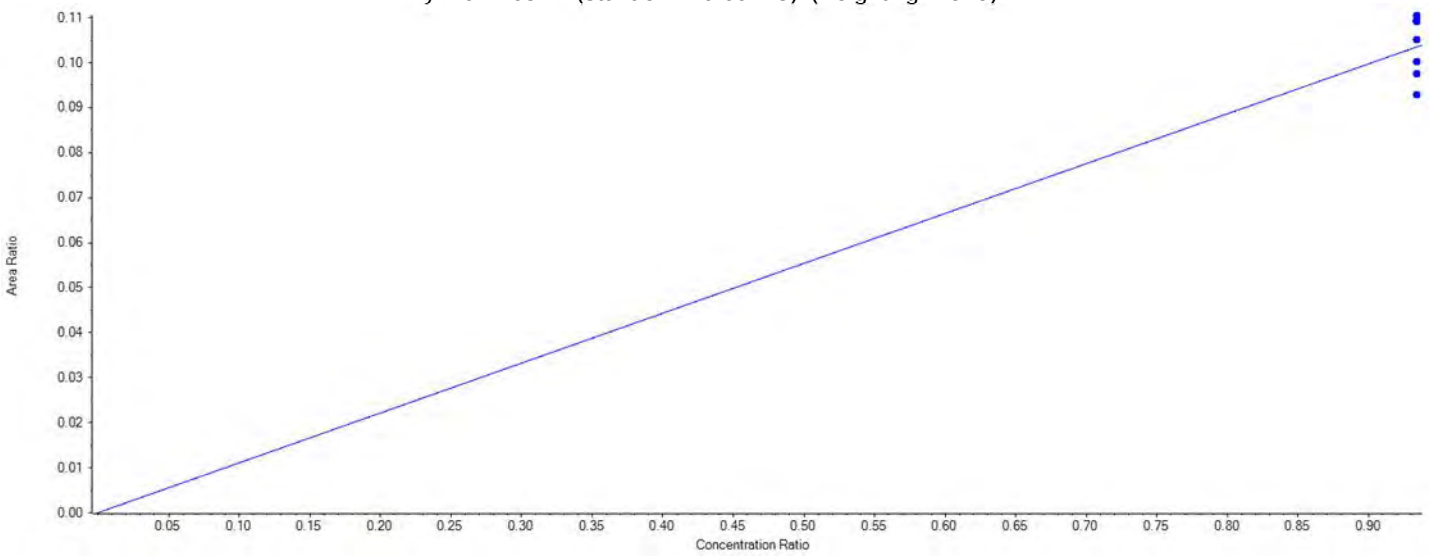
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.11081 x (std. dev. = 0.00728) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	58330.9	534171.859	True	5.00	0.109	4.13	0.840	4.670	4.927	6	30	
CAL2	54234.1	516360.932	True	5.00	0.105	4.13	0.840	4.670	4.739	1	30	
CAL3	48706.0	524423.602	True	5.00	0.093	4.13	0.840	4.670	4.191	-10	30	
CAL4	51520.6	528557.819	True	5.00	0.097	4.13	0.840	4.670	4.398	-6	30	
CAL5	48869.9	488019.600	True	5.00	0.100	4.13	0.840	4.670	4.519	-3	30	
CAL6	50041.3	457854.860	True	5.00	0.109	4.12	0.840	4.670	4.932	6	30	
CAL7	46334.2	419465.882	True	5.00	0.110	4.13	0.840	4.670	4.984	7	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

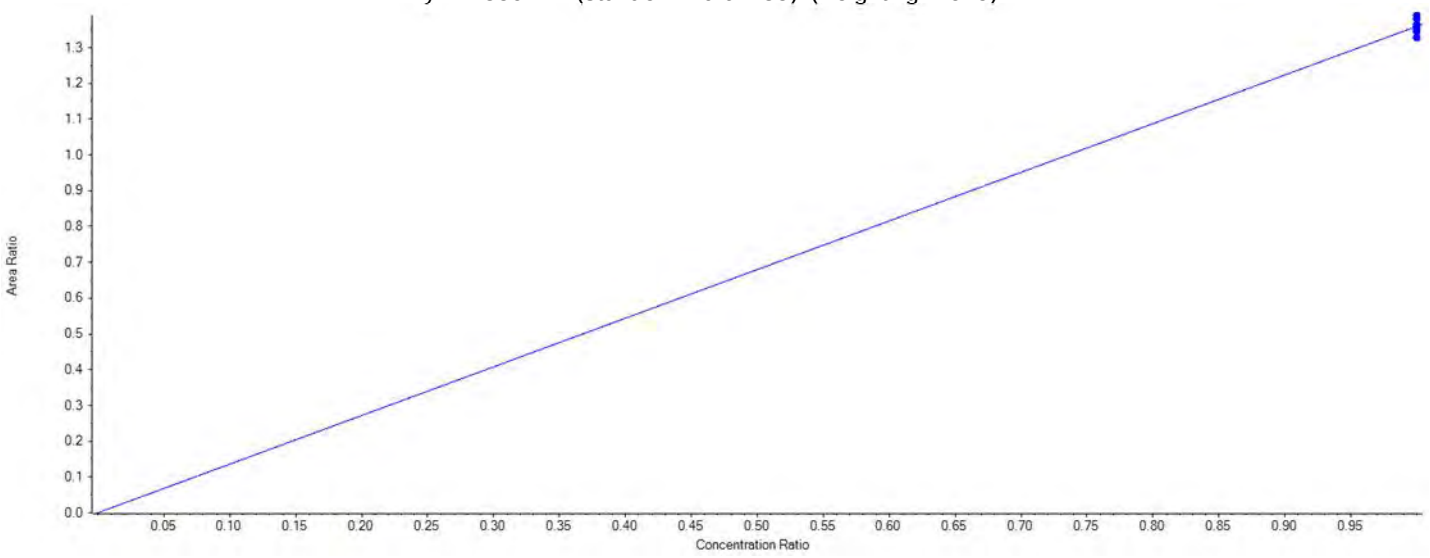
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.35927 x (std. dev. = 0.02135) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	725432.0	534171.859	True	5.00	1.358	4.17	0.850	5.000	4.996	0	30	
CAL2	717434.9	516360.932	True	5.00	1.389	4.17	0.850	5.000	5.111	2	30	
CAL3	705369.0	524423.602	True	5.00	1.345	4.17	0.850	5.000	4.948	-1	30	
CAL4	713446.3	528557.819	True	5.00	1.350	4.16	0.850	5.000	4.965	-1	30	
CAL5	674375.4	488019.600	True	5.00	1.382	4.17	0.850	5.000	5.083	2	30	
CAL6	607820.1	457854.860	True	5.00	1.328	4.16	0.850	5.000	4.883	-2	30	
CAL7	571807.5	419465.882	True	5.00	1.363	4.16	0.850	5.000	5.014	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

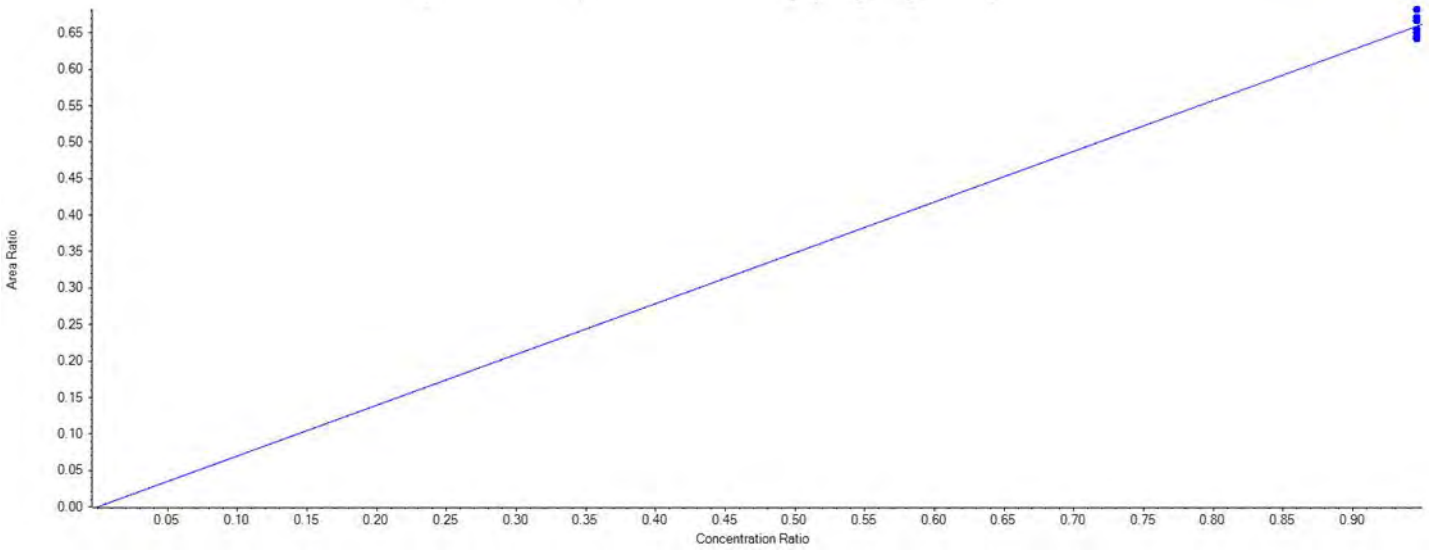
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.69649 x (std. dev. = 0.01583) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	358771.3	534171.859	True	5.00	0.672	4.56	0.930	4.730	4.822	2	30	
CAL2	335732.1	516360.932	True	5.00	0.650	4.56	0.920	4.730	4.668	-1	30	
CAL3	343139.5	524423.602	True	5.00	0.654	4.56	0.930	4.730	4.697	-1	30	
CAL4	339090.5	528557.819	True	5.00	0.642	4.55	0.930	4.730	4.606	-3	30	
CAL5	332808.5	488019.600	True	5.00	0.682	4.55	0.920	4.730	4.896	4	30	
CAL6	295466.2	457854.860	True	5.00	0.645	4.55	0.920	4.730	4.633	-2	30	
CAL7	279859.6	419465.882	True	5.00	0.667	4.55	0.930	4.730	4.790	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

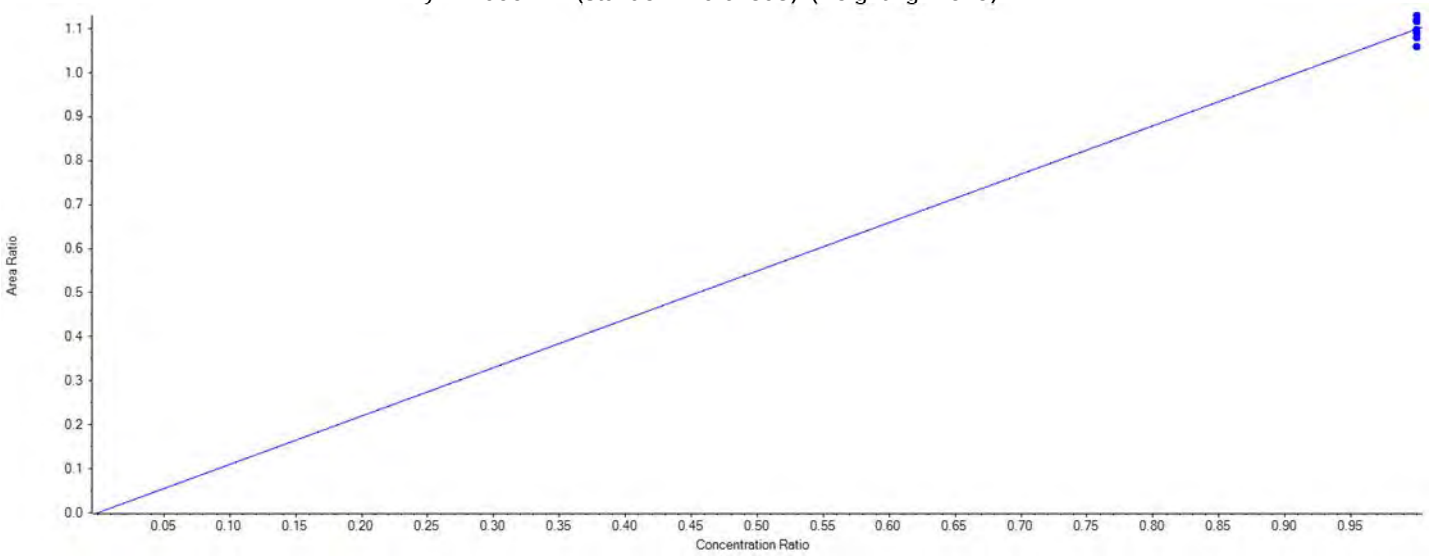
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.09911 x (std. dev. = 0.02508) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	586580.3	534171.859	True	5.00	1.098	4.56	0.930	5.000	4.995	0	30	
CAL2	583342.8	516360.932	True	5.00	1.130	4.55	0.920	5.000	5.139	3	30	
CAL3	566495.6	524423.602	True	5.00	1.080	4.56	0.930	5.000	4.914	-2	30	
CAL4	592497.9	528557.819	True	5.00	1.121	4.55	0.920	5.000	5.099	2	30	
CAL5	544681.1	488019.600	True	5.00	1.116	4.55	0.920	5.000	5.077	2	30	
CAL6	484763.2	457854.860	True	5.00	1.059	4.55	0.920	5.000	4.816	-4	30	
CAL7	457160.4	419465.882	True	5.00	1.090	4.55	0.920	5.000	4.958	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

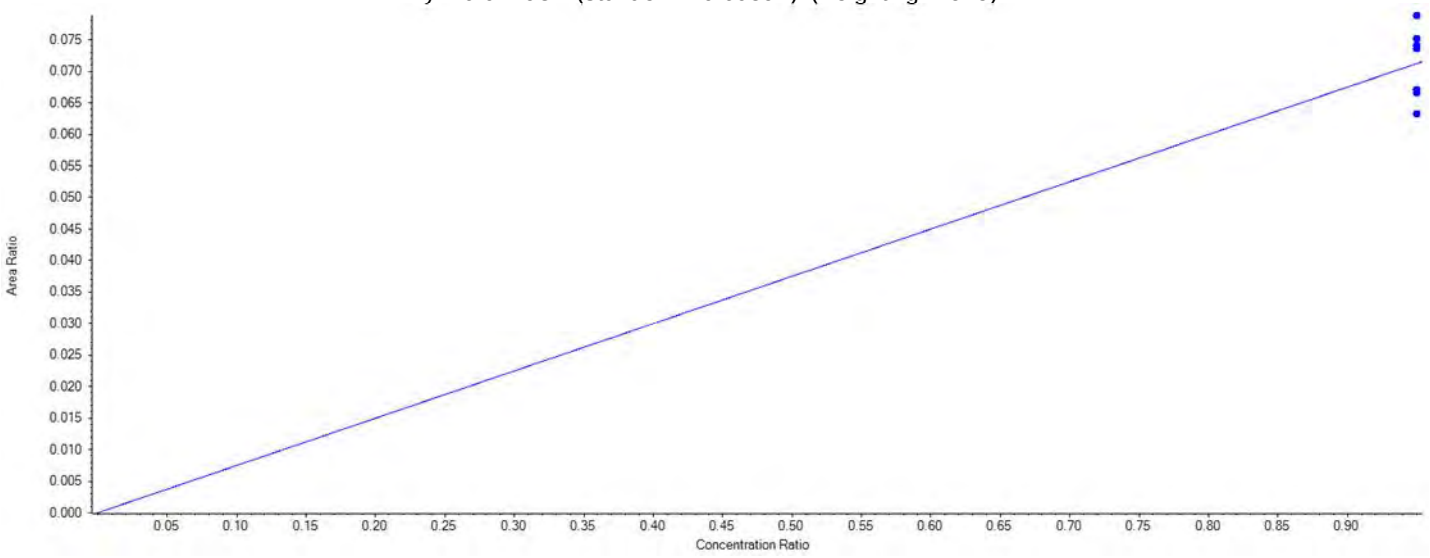
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.07498 x (std. dev. = 0.00592) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42112.8	534171.859	True	5.00	0.079	4.91	1.000	4.750	5.257	11	30	
CAL2	38849.6	516360.932	True	5.00	0.075	4.91	1.000	4.750	5.017	6	30	
CAL3	38605.5	524423.602	True	5.00	0.074	4.91	1.000	4.750	4.909	3	30	
CAL4	39121.7	528557.819	True	5.00	0.074	4.91	1.000	4.750	4.936	4	30	
CAL5	32735.6	488019.600	True	5.00	0.067	4.91	1.000	4.750	4.473	-6	30	
CAL6	30466.8	457854.860	True	5.00	0.067	4.90	1.000	4.750	4.437	-7	30	
CAL7	26549.1	419465.882	True	5.00	0.063	4.91	1.000	4.750	4.221	-11	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

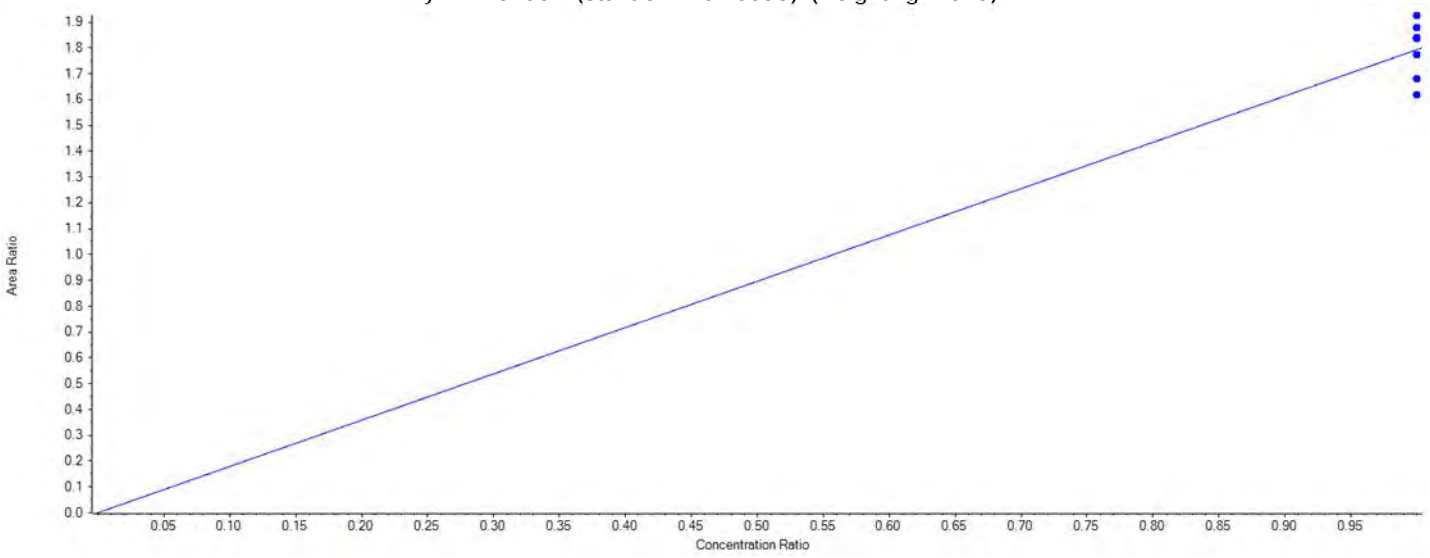
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.79299 x (std. dev. = 0.10993) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1028414.9	534171.859	True	5.00	1.925	4.93	1.000	5.000	5.369	7	30	
CAL2	970523.2	516360.932	True	5.00	1.880	4.92	1.000	5.000	5.241	5	30	
CAL3	964414.6	524423.602	True	5.00	1.839	4.93	1.000	5.000	5.128	3	30	
CAL4	937287.5	528557.819	True	5.00	1.773	4.92	1.000	5.000	4.945	-1	30	
CAL5	895692.2	488019.600	True	5.00	1.835	4.92	1.000	5.000	5.118	2	30	
CAL6	769164.4	457854.860	True	5.00	1.680	4.92	1.000	5.000	4.685	-6	30	
CAL7	678914.6	419465.882	True	5.00	1.619	4.92	1.000	5.000	4.513	-10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

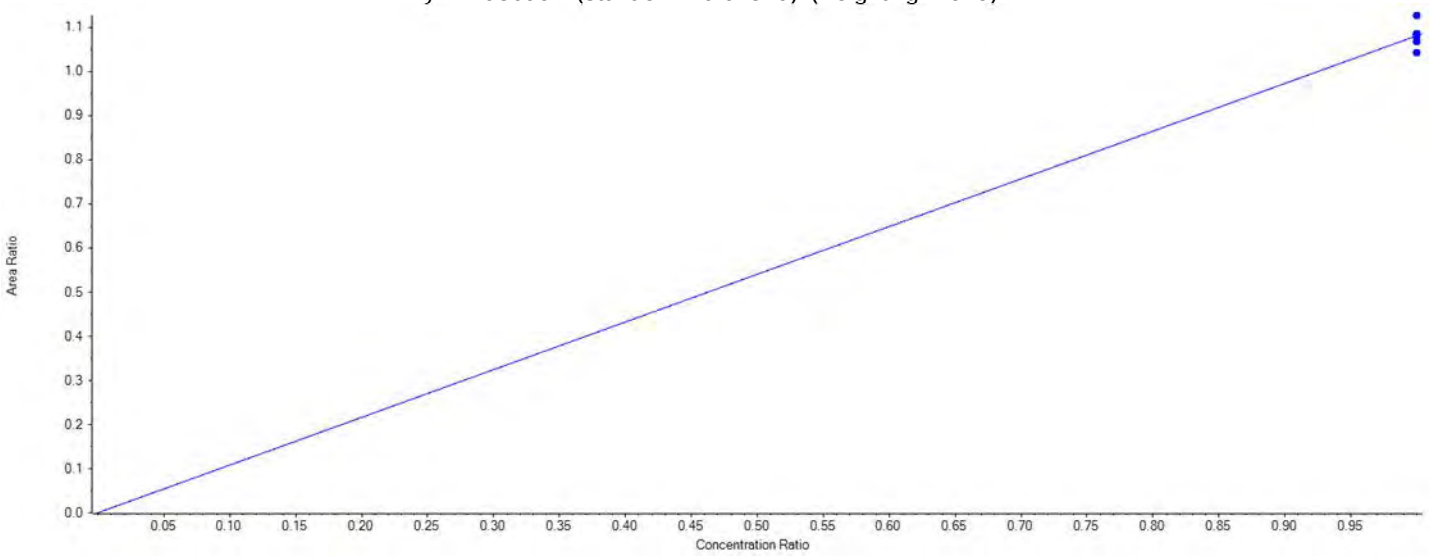
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.08099 x (std. dev. = 0.02540) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	307224.3	272674.740	True	4.78	1.127	5.25	1.000	4.780	4.982	4	30	
CAL2	286174.8	263756.990	True	4.78	1.085	5.25	1.000	4.780	4.798	0	30	
CAL3	297259.7	274061.672	True	4.78	1.085	5.25	1.000	4.780	4.796	0	30	
CAL4	291941.6	270733.913	True	4.78	1.078	5.25	1.000	4.780	4.768	0	30	
CAL5	297995.6	275029.173	True	4.78	1.084	5.25	1.000	4.780	4.791	0	30	
CAL6	268369.0	251499.907	True	4.78	1.067	5.24	1.000	4.780	4.718	-1	30	
CAL7	264295.9	253720.801	True	4.78	1.042	5.24	1.000	4.780	4.606	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

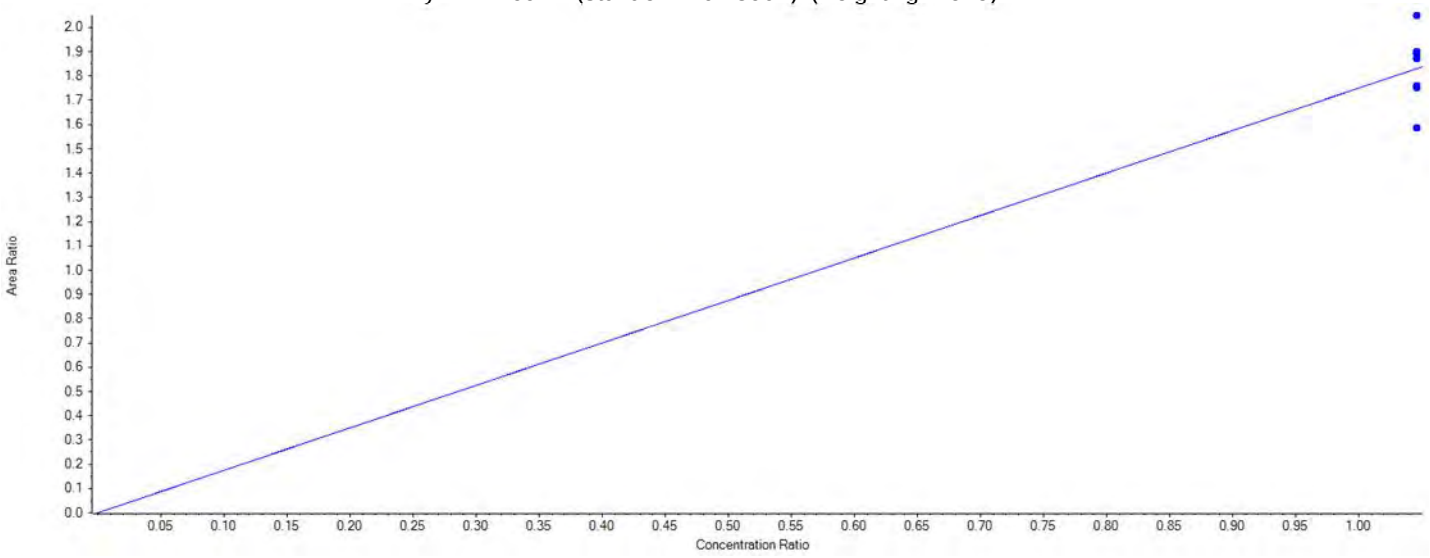
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 1.74992 x (std. dev. = 0.13964) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	518118.7	272674.740	True	4.78	1.900	5.27	1.000	5.000	5.190	4	30	
CAL2	540435.4	263756.990	True	4.78	2.049	5.27	1.000	5.000	5.597	12	30	
CAL3	513116.0	274061.672	True	4.78	1.872	5.27	1.000	5.000	5.114	2	30	
CAL4	512147.4	270733.913	True	4.78	1.892	5.26	1.000	5.000	5.167	3	30	
CAL5	484419.3	275029.173	True	4.78	1.761	5.27	1.000	5.000	4.811	-4	30	
CAL6	440319.0	251499.907	True	4.78	1.751	5.26	1.000	5.000	4.782	-4	30	
CAL7	402916.7	253720.801	True	4.78	1.588	5.26	1.000	5.000	4.338	-13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

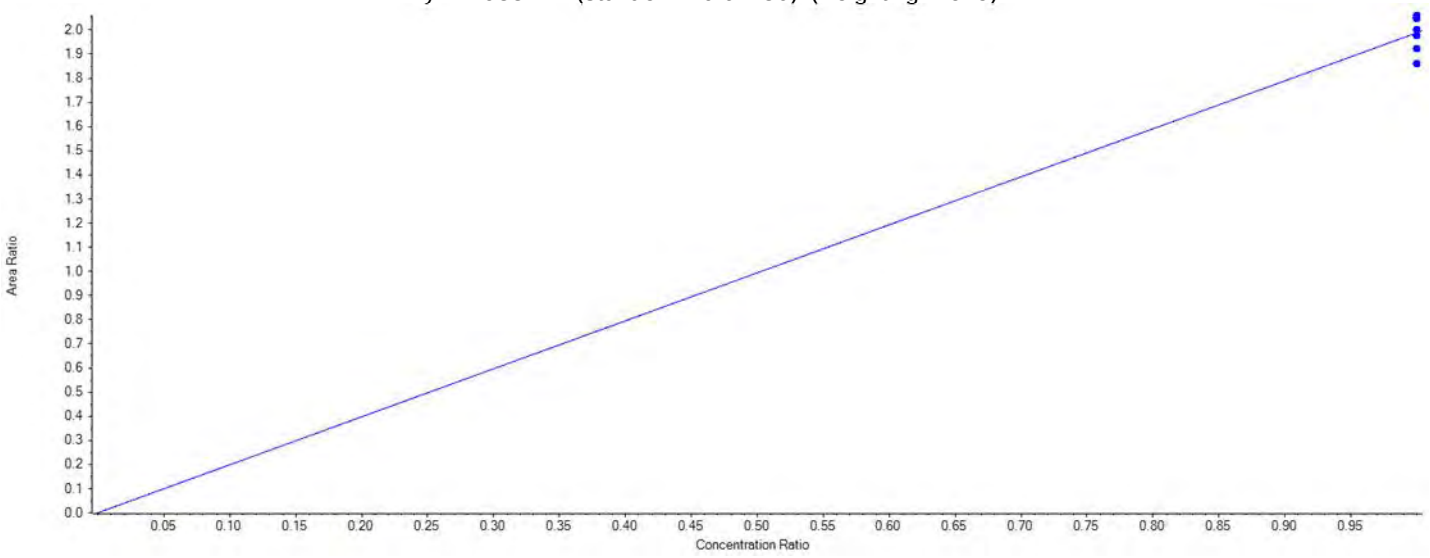
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 1.98822 x (std. dev. = 0.07436) (weighting: None)



Extraction Standard Calibration Verification

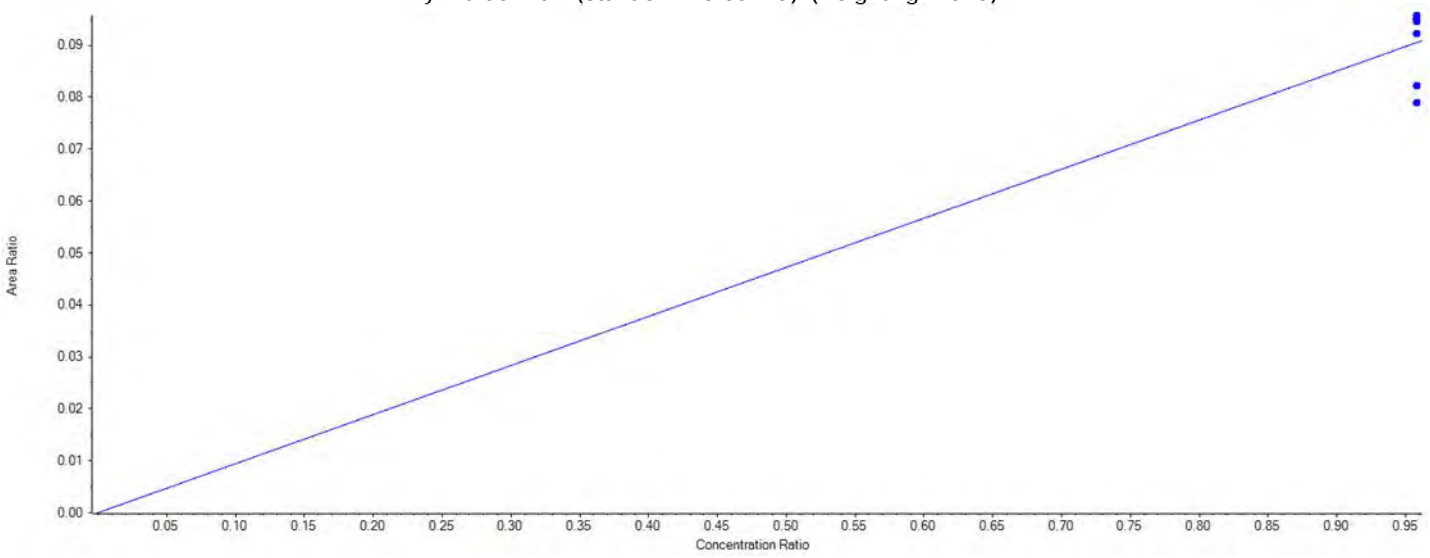
Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	651348.0	338833.714	True	5.00	1.922	5.57	1.000	5.000	4.834	-3	30	
CAL2	661423.8	334958.441	True	5.00	1.975	5.57	1.000	5.000	4.966	-1	30	
CAL3	639022.8	311442.089	True	5.00	2.052	5.57	1.000	5.000	5.160	3	30	
CAL4	656868.3	320985.487	True	5.00	2.046	5.56	1.000	5.000	5.146	3	30	
CAL5	598009.7	298912.145	True	5.00	2.001	5.57	1.000	5.000	5.031	1	30	
CAL6	536626.2	260528.967	True	5.00	2.060	5.56	1.000	5.000	5.180	4	30	
CAL7	480927.9	258292.235	True	5.00	1.862	5.56	1.000	5.000	4.682	-6	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.09449 x (std. dev. = 0.00729) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26730.2	338833.714	True	5.00	0.079	5.57	1.000	4.790	4.174	-13	30	
CAL2	27523.0	334958.441	True	5.00	0.082	5.57	1.000	4.790	4.348	-9	30	
CAL3	29468.3	311442.089	True	5.00	0.095	5.57	1.000	4.790	5.007	5	30	
CAL4	30500.3	320985.487	True	5.00	0.095	5.57	1.000	4.790	5.028	5	30	
CAL5	27554.0	298912.145	True	5.00	0.092	5.57	1.000	4.790	4.878	2	30	
CAL6	24938.2	260528.967	True	5.00	0.096	5.56	1.000	4.790	5.065	6	30	
CAL7	24555.7	258292.235	True	5.00	0.095	5.57	1.000	4.790	5.031	5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

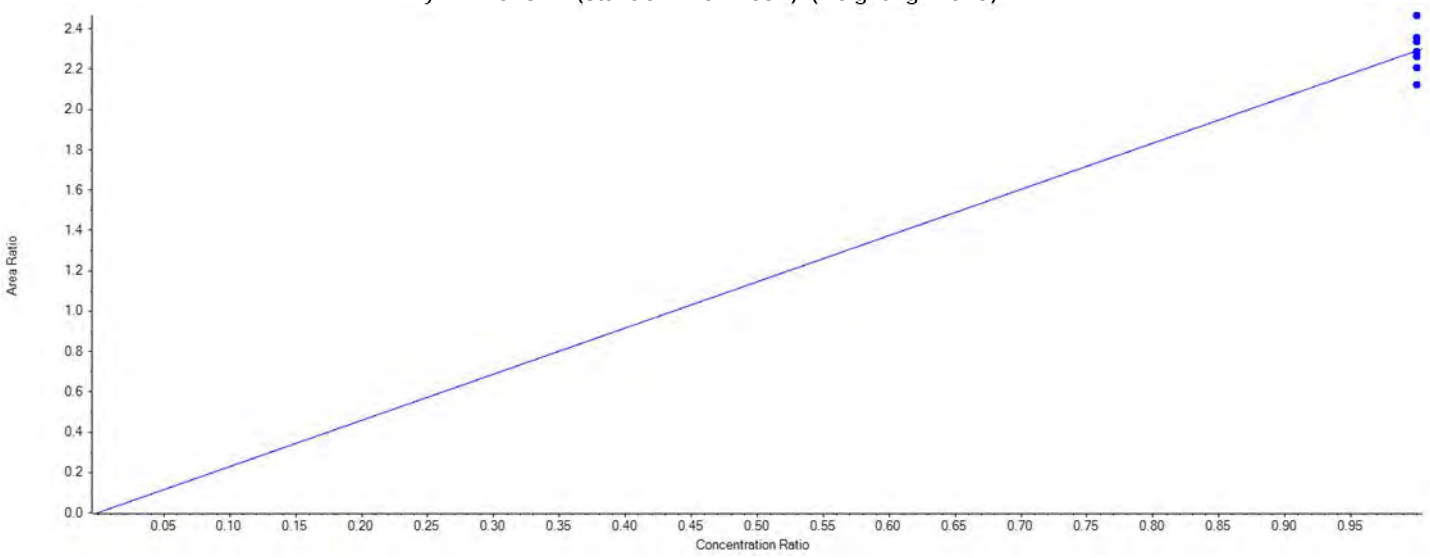
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 2.29132 x (std. dev. = 0.11051) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	774962.8	338833.714	True	5.00	2.287	5.64	1.010	5.000	4.991	0	30	
CAL2	711032.2	334958.441	True	5.00	2.123	5.64	1.010	5.000	4.632	-7	30	
CAL3	704745.5	311442.089	True	5.00	2.263	5.64	1.010	5.000	4.938	-1	30	
CAL4	708330.5	320985.487	True	5.00	2.207	5.64	1.010	5.000	4.815	-4	30	
CAL5	737038.5	298912.145	True	5.00	2.466	5.64	1.010	5.000	5.381	8	30	
CAL6	614406.4	260528.967	True	5.00	2.358	5.64	1.010	5.000	5.146	3	30	
CAL7	603296.1	258292.235	True	5.00	2.336	5.64	1.010	5.000	5.097	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

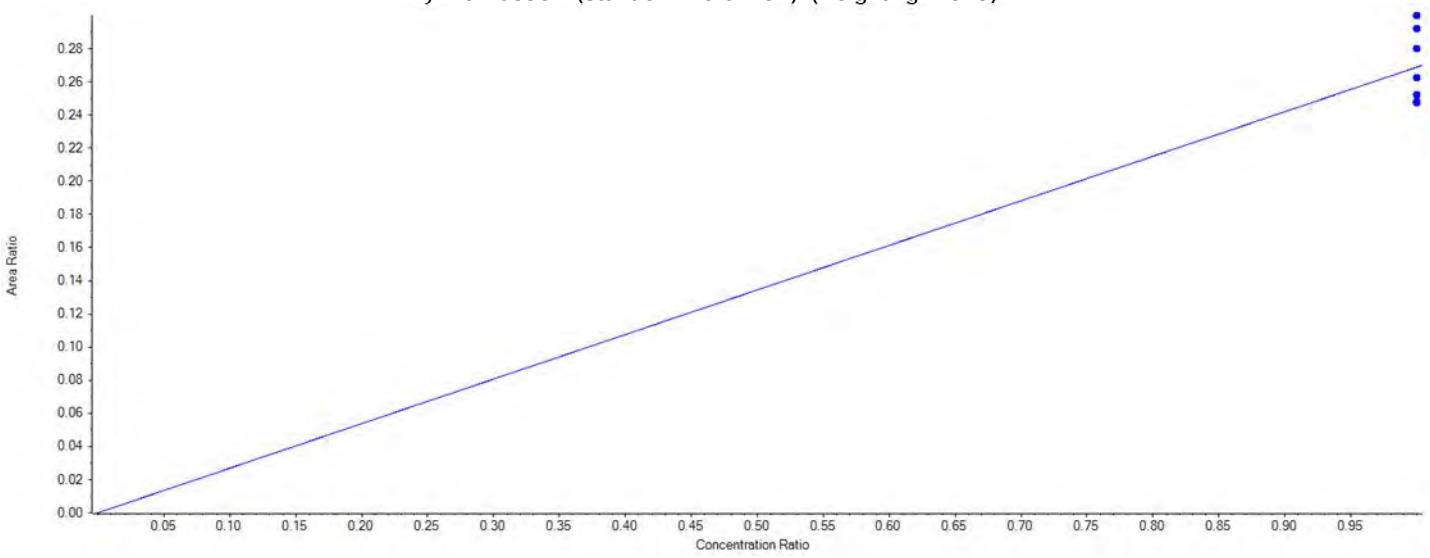
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.26888 x (std. dev. = 0.02181) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	94967.0	338833.714	True	5.00	0.280	5.71	1.030	5.000	5.212	4	30	
CAL2	83112.2	334958.441	True	5.00	0.248	5.71	1.020	5.000	4.614	-8	30	
CAL3	81763.3	311442.089	True	5.00	0.263	5.71	1.030	5.000	4.882	-2	30	
CAL4	80900.1	320985.487	True	5.00	0.252	5.70	1.030	5.000	4.687	-6	30	
CAL5	73896.1	298912.145	True	5.00	0.247	5.71	1.020	5.000	4.597	-8	30	
CAL6	78158.0	260528.967	True	5.00	0.300	5.70	1.020	5.000	5.579	12	30	
CAL7	75408.7	258292.235	True	5.00	0.292	5.70	1.020	5.000	5.429	9	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

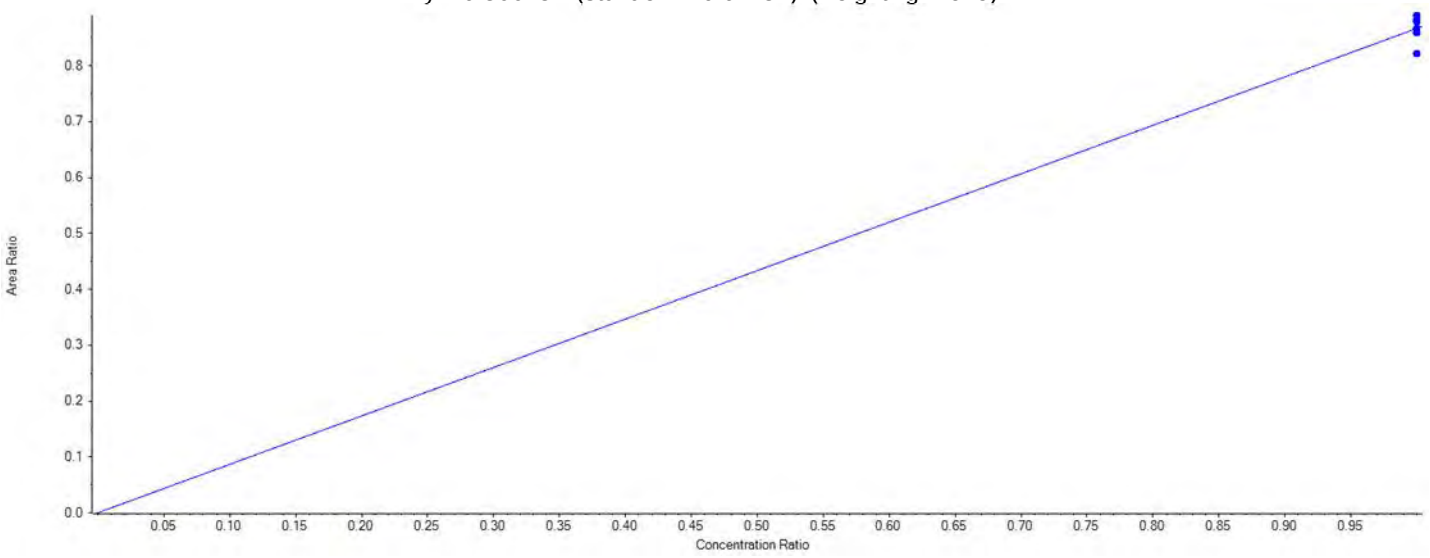
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 0.86673 x (std. dev. = 0.02232) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	293658.7	338833.714	True	5.00	0.867	5.83	1.050	5.000	5.000	0	30	
CAL2	289985.1	334958.441	True	5.00	0.866	5.83	1.050	5.000	4.994	0	30	
CAL3	277115.5	311442.089	True	5.00	0.890	5.83	1.050	5.000	5.133	3	30	
CAL4	275977.2	320985.487	True	5.00	0.860	5.83	1.050	5.000	4.960	-1	30	
CAL5	263924.7	298912.145	True	5.00	0.883	5.83	1.050	5.000	5.094	2	30	
CAL6	229237.1	260528.967	True	5.00	0.880	5.82	1.050	5.000	5.076	2	30	
CAL7	212399.8	258292.235	True	5.00	0.822	5.82	1.050	5.000	4.744	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

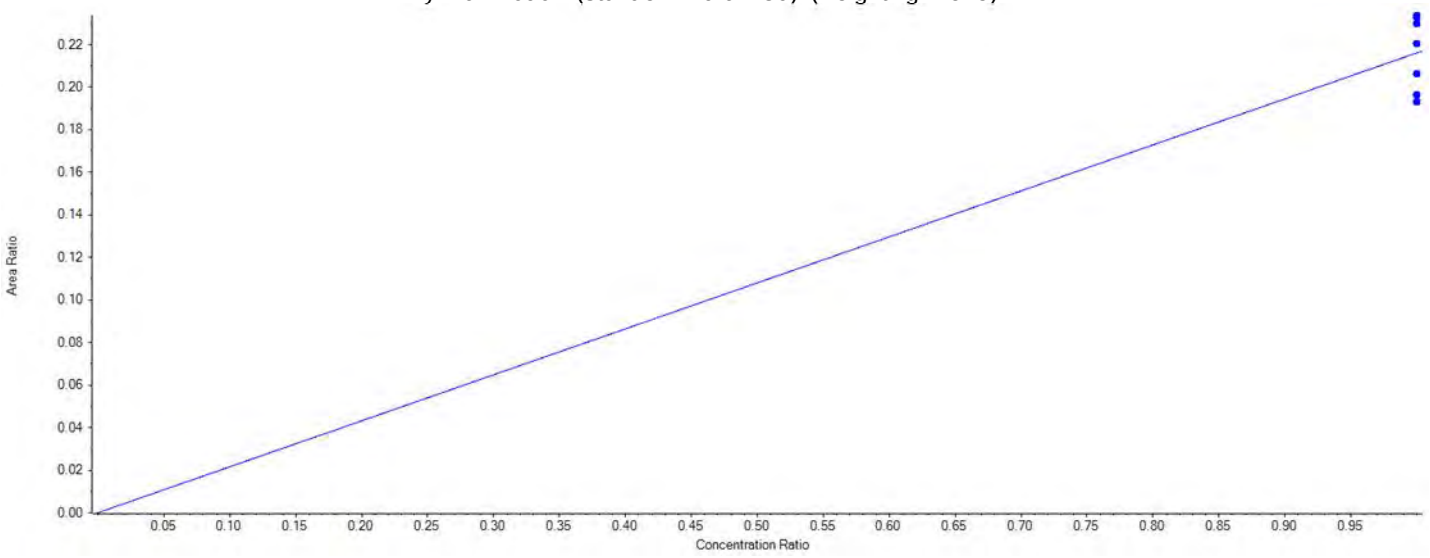
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.21606 x (std. dev. = 0.01730) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	77938.3	338833.714	True	5.00	0.230	5.84	1.050	5.000	5.323	6	30	
CAL2	65815.9	334958.441	True	5.00	0.196	5.84	1.050	5.000	4.547	-9	30	
CAL3	72755.7	311442.089	True	5.00	0.234	5.84	1.050	5.000	5.406	8	30	
CAL4	66162.4	320985.487	True	5.00	0.206	5.84	1.050	5.000	4.770	-5	30	
CAL5	57745.7	298912.145	True	5.00	0.193	5.84	1.050	5.000	4.471	-11	30	
CAL6	60556.6	260528.967	True	5.00	0.232	5.83	1.050	5.000	5.379	8	30	
CAL7	56963.1	258292.235	True	5.00	0.221	5.84	1.050	5.000	5.104	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

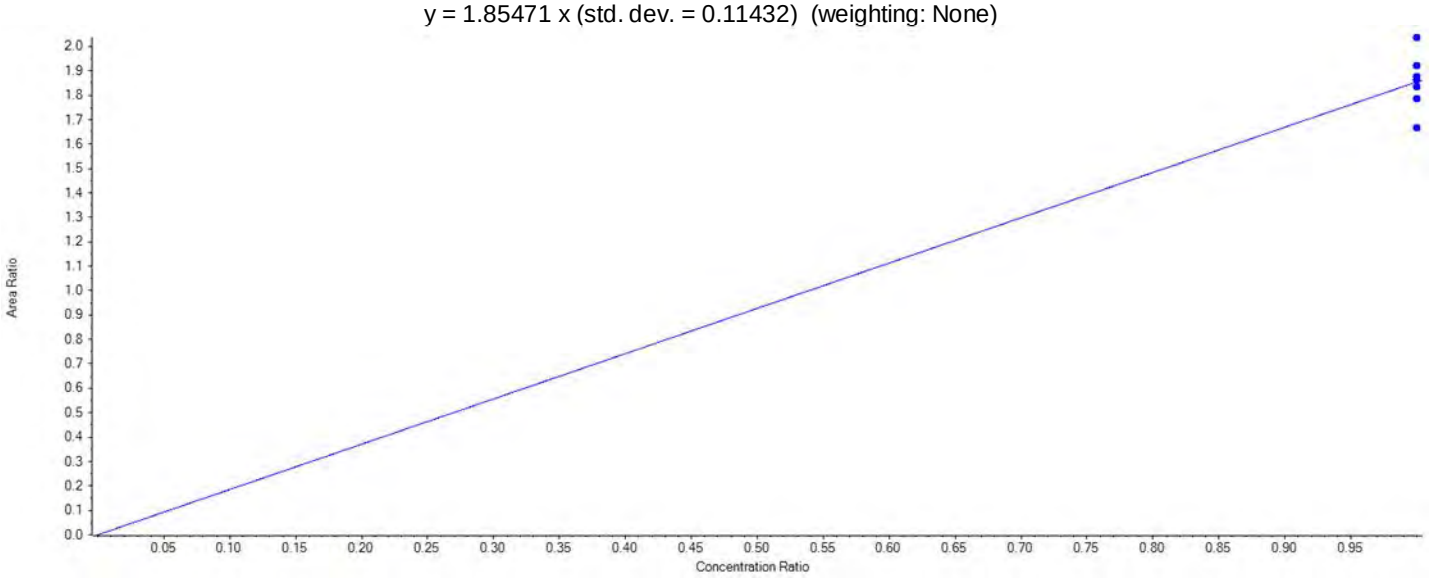
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 1.85471 x (std. dev. = 0.11432) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	564794.9	338833.714	True	5.00	1.667	6.06	1.090	5.000	4.494	-10	30	
CAL2	597616.3	334958.441	True	5.00	1.784	6.06	1.090	5.000	4.810	-4	30	
CAL3	584631.5	311442.089	True	5.00	1.877	6.06	1.090	5.000	5.061	1	30	
CAL4	598287.4	320985.487	True	5.00	1.864	6.05	1.090	5.000	5.025	0	30	
CAL5	548536.0	298912.145	True	5.00	1.835	6.06	1.090	5.000	4.947	-1	30	
CAL6	500065.3	260528.967	True	5.00	1.919	6.05	1.090	5.000	5.174	3	30	
CAL7	525971.8	258292.235	True	5.00	2.036	6.05	1.090	5.000	5.490	10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

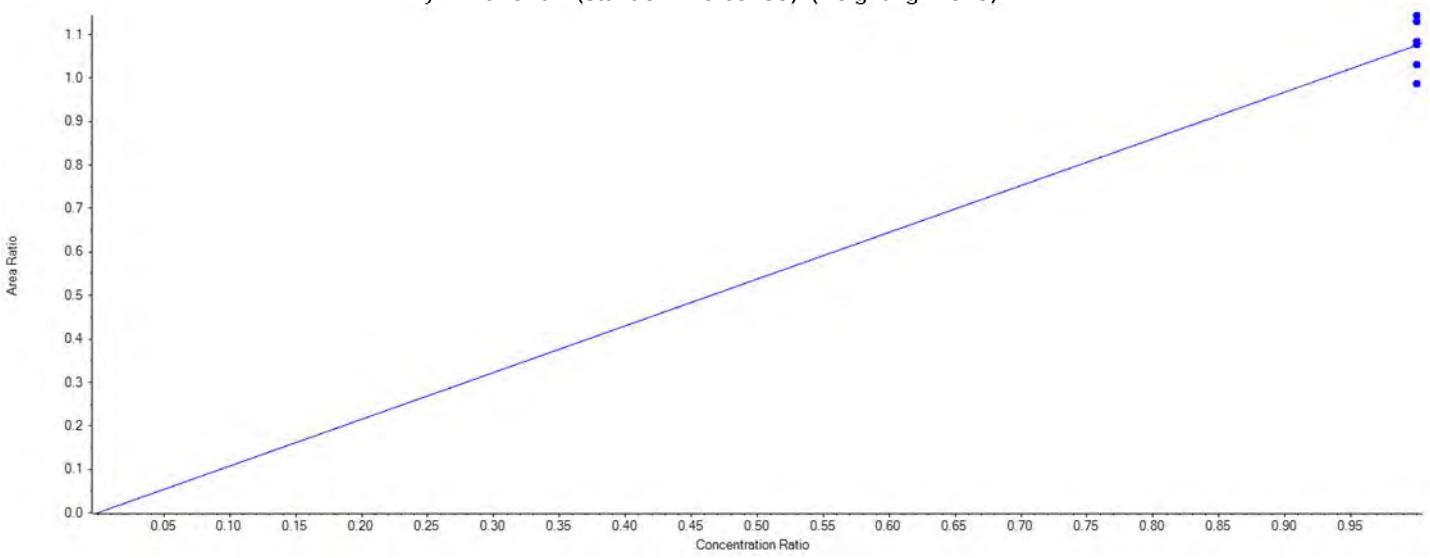
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 1.07520 x (std. dev. = 0.05435) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	366847.7	338833.714	True	5.00	1.083	6.09	1.090	5.000	5.035	1	30	
CAL2	330298.6	334958.441	True	5.00	0.986	6.09	1.090	5.000	4.586	-8	30	
CAL3	335206.8	311442.089	True	5.00	1.076	6.09	1.090	5.000	5.005	0	30	
CAL4	330968.7	320985.487	True	5.00	1.031	6.08	1.090	5.000	4.795	-4	30	
CAL5	321549.5	298912.145	True	5.00	1.076	6.09	1.090	5.000	5.002	0	30	
CAL6	294617.6	260528.967	True	5.00	1.131	6.08	1.090	5.000	5.259	5	30	
CAL7	295395.3	258292.235	True	5.00	1.144	6.08	1.090	5.000	5.318	6	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

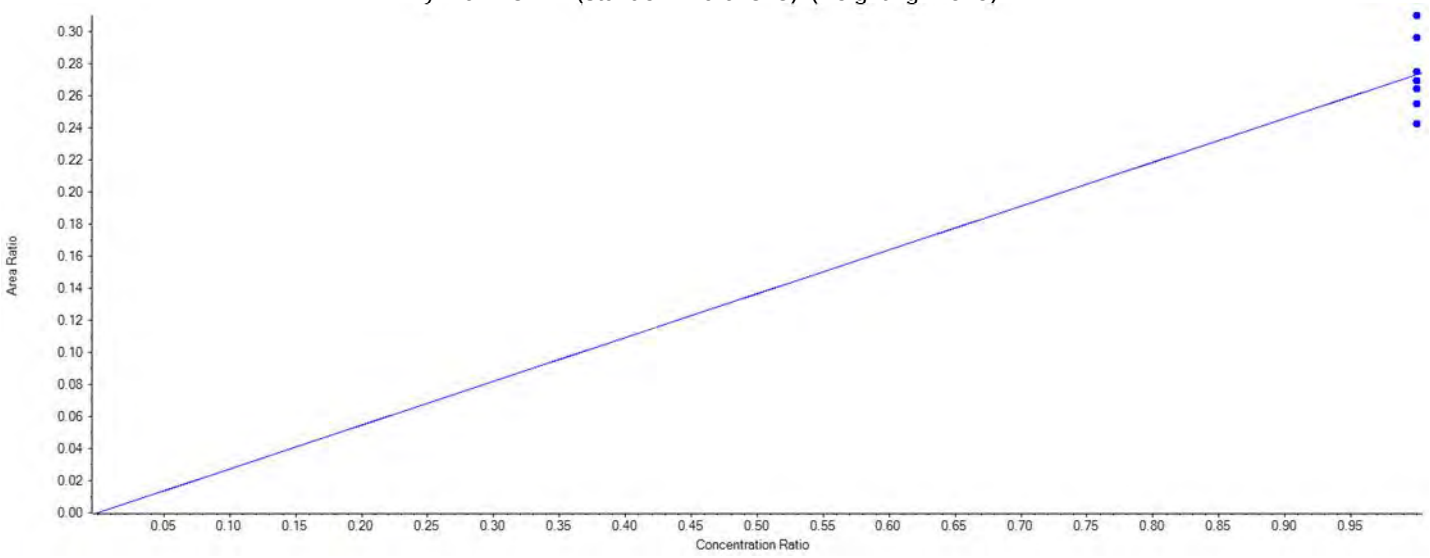
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.27311 x (std. dev. = 0.02323) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	89511.9	338833.714	True	5.00	0.264	6.10	1.100	5.000	4.836	-3	30	
CAL2	81301.2	334958.441	True	5.00	0.243	6.10	1.100	5.000	4.444	-11	30	
CAL3	79381.7	311442.089	True	5.00	0.255	6.10	1.100	5.000	4.666	-7	30	
CAL4	86399.4	320985.487	True	5.00	0.269	6.10	1.100	5.000	4.928	-1	30	
CAL5	82137.6	298912.145	True	5.00	0.275	6.10	1.100	5.000	5.031	1	30	
CAL6	77146.9	260528.967	True	5.00	0.296	6.09	1.100	5.000	5.421	8	30	
CAL7	80053.2	258292.235	True	5.00	0.310	6.10	1.100	5.000	5.674	13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

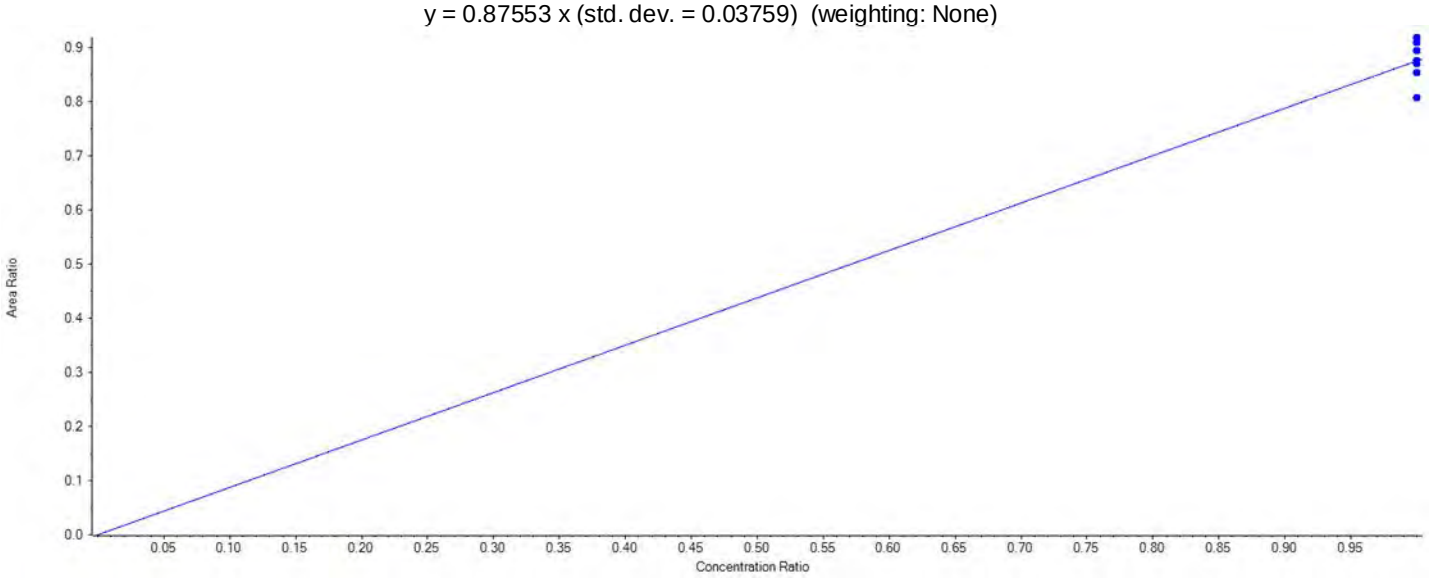
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.87553 x (std. dev. = 0.03759) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	296629.3	338833.714	True	5.00	0.875	6.24	1.120	5.000	5.000	0	30	
CAL2	270607.6	334958.441	True	5.00	0.808	6.24	1.120	5.000	4.614	-8	30	
CAL3	278375.1	311442.089	True	5.00	0.894	6.24	1.120	5.000	5.104	2	30	
CAL4	273909.1	320985.487	True	5.00	0.853	6.24	1.120	5.000	4.873	-3	30	
CAL5	259950.9	298912.145	True	5.00	0.870	6.24	1.120	5.000	4.966	-1	30	
CAL6	239317.0	260528.967	True	5.00	0.919	6.23	1.120	5.000	5.246	5	30	
CAL7	235038.0	258292.235	True	5.00	0.910	6.24	1.120	5.000	5.197	4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

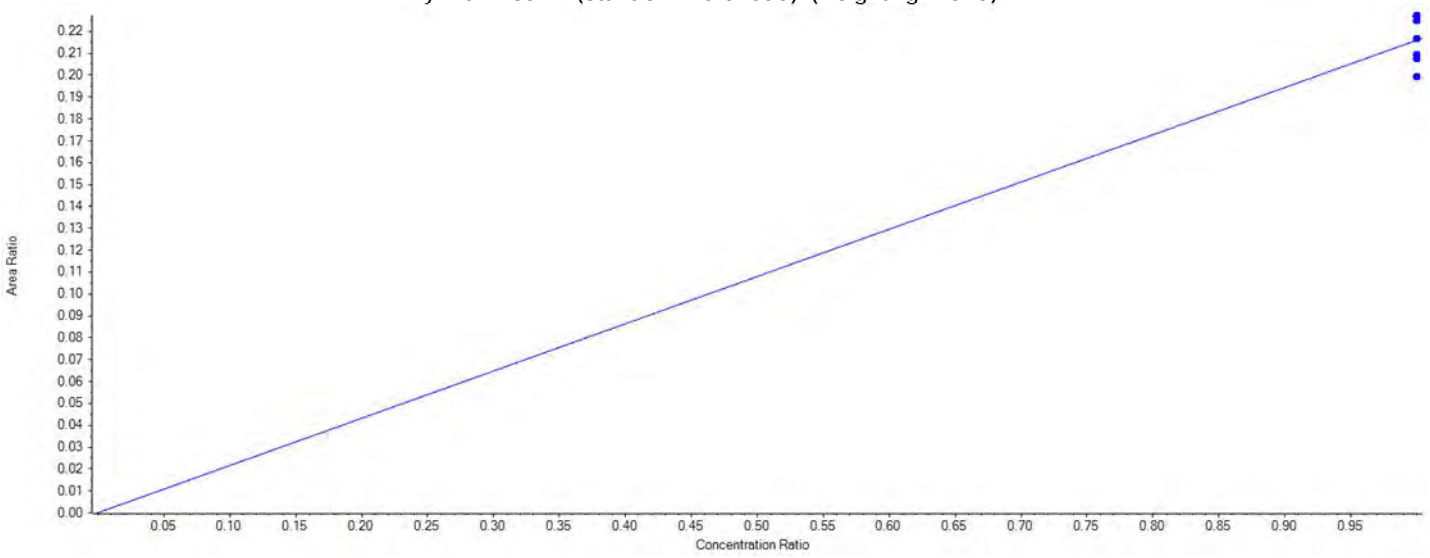
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.21594 x (std. dev. = 0.01096) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	70926.7	338833.714	True	5.00	0.209	6.26	1.120	5.000	4.847	-3	30	
CAL2	66745.4	334958.441	True	5.00	0.199	6.26	1.120	5.000	4.614	-8	30	
CAL3	67444.3	311442.089	True	5.00	0.217	6.26	1.120	5.000	5.014	0	30	
CAL4	72258.7	320985.487	True	5.00	0.225	6.26	1.120	5.000	5.212	4	30	
CAL5	62005.6	298912.145	True	5.00	0.207	6.26	1.120	5.000	4.803	-4	30	
CAL6	59054.4	260528.967	True	5.00	0.227	6.25	1.120	5.000	5.248	5	30	
CAL7	58686.1	258292.235	True	5.00	0.227	6.26	1.120	5.000	5.261	5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

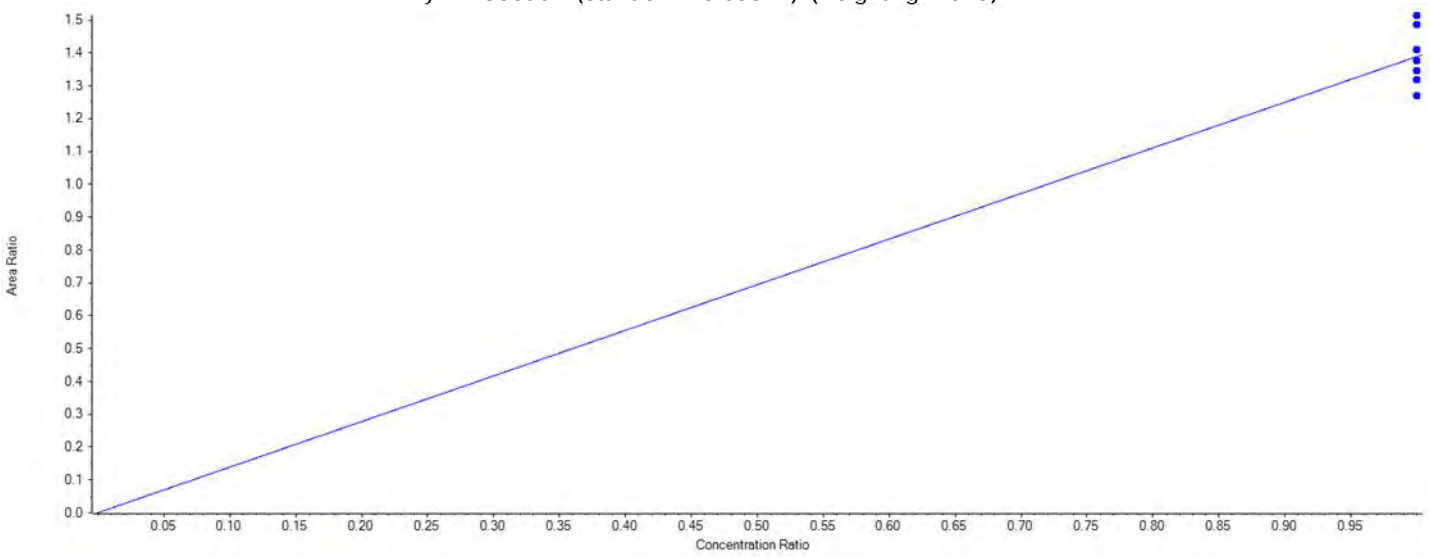
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.38890 x (std. dev. = 0.08847) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	430341.3	338833.714	True	5.00	1.270	6.43	1.160	5.000	4.572	-9	30	
CAL2	441206.9	334958.441	True	5.00	1.317	6.43	1.160	5.000	4.742	-5	30	
CAL3	419341.7	311442.089	True	5.00	1.346	6.43	1.160	5.000	4.847	-3	30	
CAL4	441858.1	320985.487	True	5.00	1.377	6.43	1.160	5.000	4.956	-1	30	
CAL5	421798.8	298912.145	True	5.00	1.411	6.43	1.160	5.000	5.080	2	30	
CAL6	394433.9	260528.967	True	5.00	1.514	6.43	1.160	5.000	5.450	9	30	
CAL7	384058.1	258292.235	True	5.00	1.487	6.43	1.160	5.000	5.353	7	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

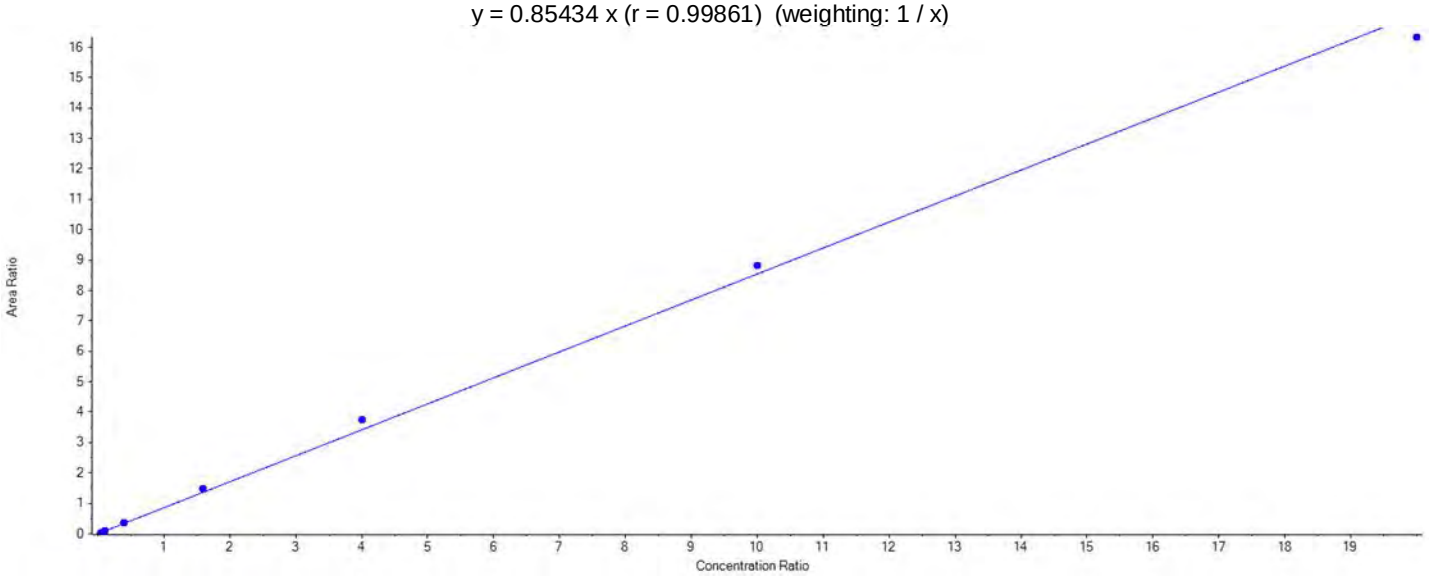
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.85434 x (r = 0.99861) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32354.4	146.4	794718.852	True	5.00	0.041	3.27	1.000	0.200	0.238	19	30	
CAL2	72868.6	212.8	782732.821	True	5.00	0.093	3.27	1.000	0.500	0.545	9	30	
CAL3	285113.3	434.5	787180.244	True	5.00	0.362	3.27	1.000	2.000	2.120	6	30	
CAL4	1152870.9	735.9	771359.129	True	5.00	1.495	3.27	1.000	8.000	8.747	9	30	
CAL5	2730076.0	1045.3	728925.112	True	5.00	3.745	3.27	1.000	20.000	21.919	10	30	
CAL6	5709364.6	1410.1	647849.559	True	5.00	8.813	3.26	1.000	50.000	51.576	3	30	
CAL7	9954520.3	1648.1	609686.139	True	5.00	16.327	3.26	1.000	100.000	95.554	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

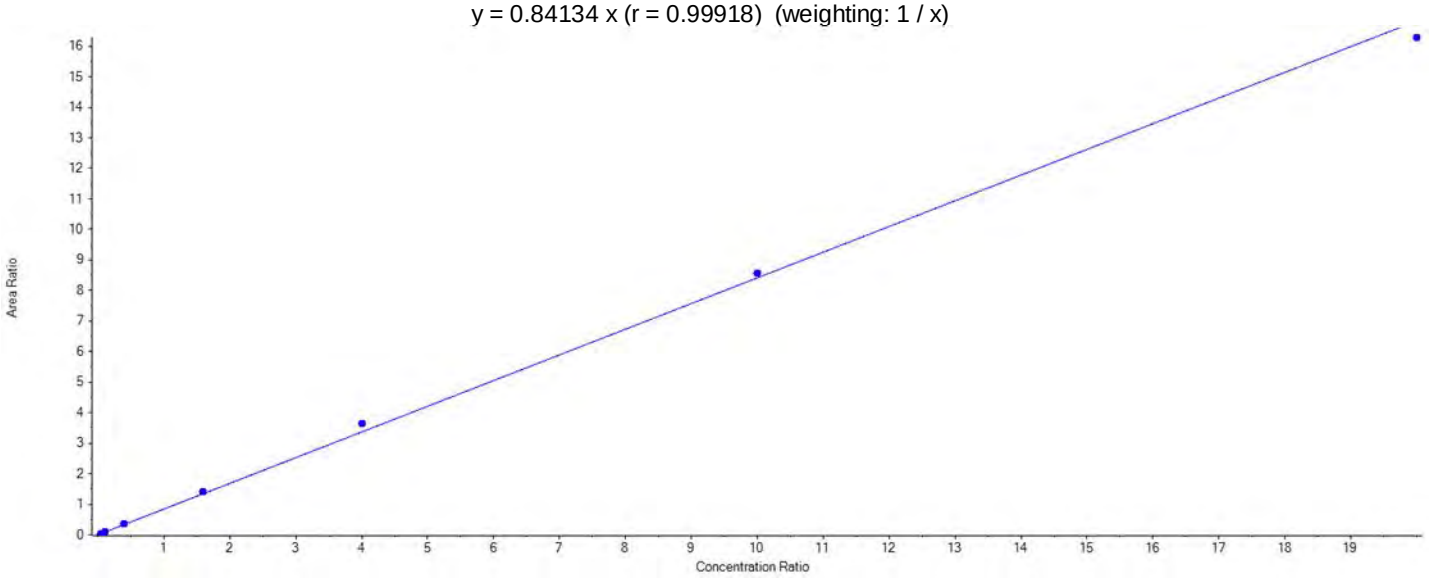
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 0.84134 x (r = 0.99918) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	33205.5	67.0	844850.159	True	5.00	0.039	3.77	1.000	0.200	0.234	17	30	
CAL2	77403.9	97.9	863262.811	True	5.00	0.090	3.77	1.000	0.500	0.533	7	30	
CAL3	286630.7	271.7	829978.484	True	5.00	0.345	3.77	1.000	2.000	2.052	3	30	
CAL4	1165758.7	263.0	824842.795	True	5.00	1.413	3.76	1.000	8.000	8.399	5	30	
CAL5	2812772.2	497.5	768958.133	True	5.00	3.658	3.77	1.000	20.000	21.739	9	30	
CAL6	5899932.2	954.6	687796.699	True	5.00	8.578	3.76	1.000	50.000	50.979	2	30	
CAL7	10229627.8	783.9	628265.483	True	5.00	16.282	3.76	1.000	100.000	96.765	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

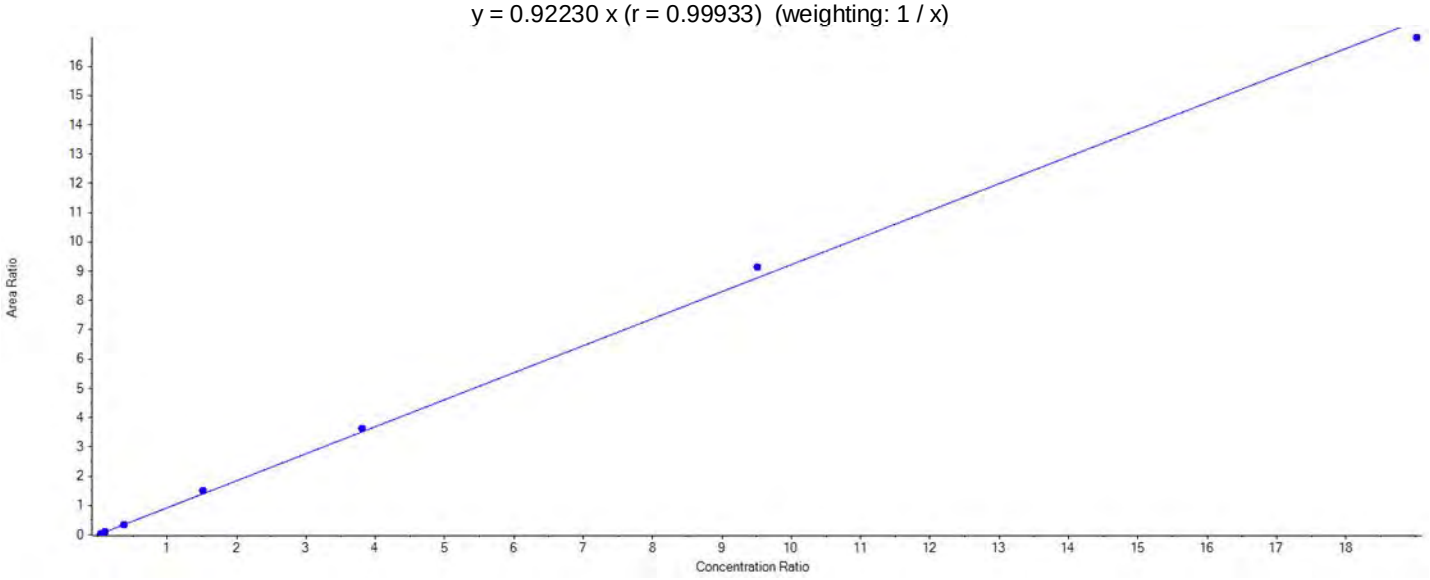
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.92230 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19024.1	393.3	449266.276	True	4.65	0.042	3.82	1.000	0.170	0.213	26	30	
CAL2	41415.1	562.8	444721.279	True	4.65	0.093	3.82	1.000	0.440	0.470	7	30	
CAL3	157656.3	933.8	456815.174	True	4.65	0.345	3.82	1.000	1.770	1.740	-2	30	
CAL4	648524.4	1539.0	434938.872	True	4.65	1.491	3.81	1.000	7.080	7.518	6	30	
CAL5	1601296.4	1306.5	442479.717	True	4.65	3.619	3.82	1.000	17.690	18.246	3	30	
CAL6	3508201.1	1595.6	384220.795	True	4.65	9.131	3.81	1.000	44.220	46.035	4	30	
CAL7	6474525.0	1528.4	381345.498	True	4.65	16.978	3.81	1.000	88.450	85.599	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

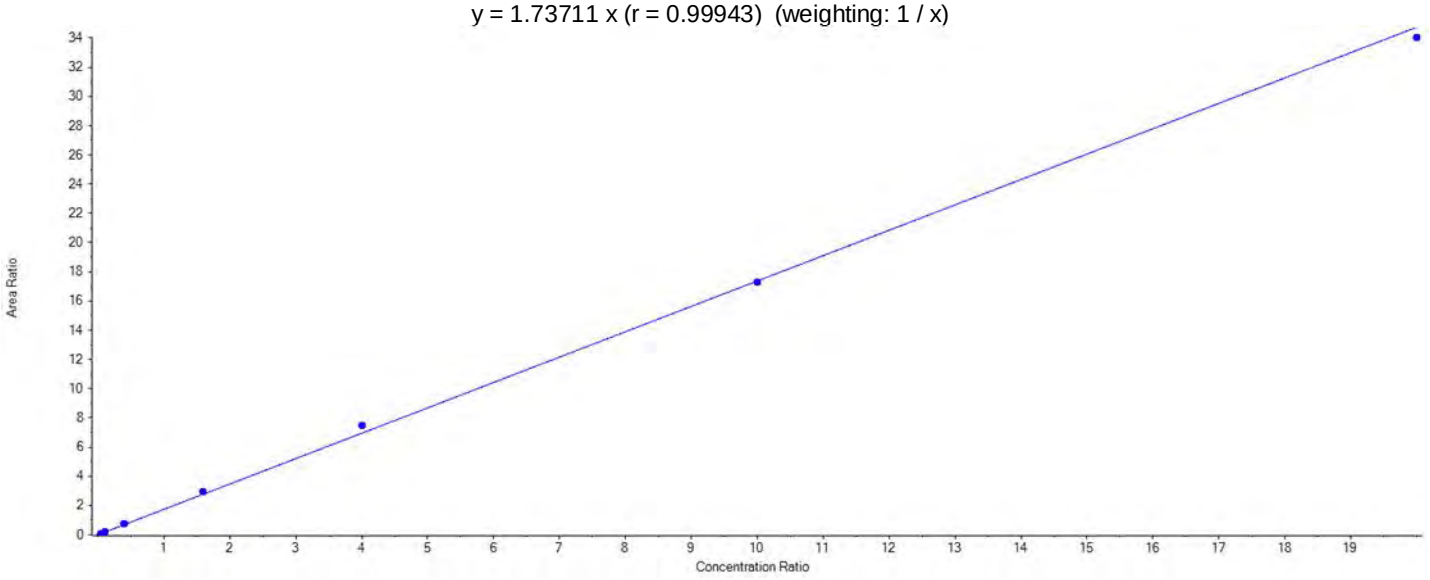
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.73711 x (r = 0.99943) (weighting: 1 / x)



Component Calibration Verification

Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	4145.4	132.5	58330.929	True	4.67	0.071	4.13	1.000	0.187	0.191	2	30	
CAL2	9924.9	268.5	54234.136	True	4.67	0.183	4.13	1.000	0.467	0.492	5	30	
CAL3	35586.2	540.9	48706.042	True	4.67	0.731	4.14	1.000	1.868	1.964	5	30	
CAL4	153295.4	973.4	51520.627	True	4.67	2.975	4.13	1.000	7.472	7.999	7	30	
CAL5	365423.8	1181.5	48869.851	True	4.67	7.477	4.13	1.000	18.680	20.102	8	30	
CAL6	866263.6	1274.7	50041.324	True	4.67	17.311	4.12	1.000	46.700	46.538	0	30	
CAL7	1576786.3	1225.2	46334.175	True	4.67	34.031	4.13	1.000	93.400	91.487	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

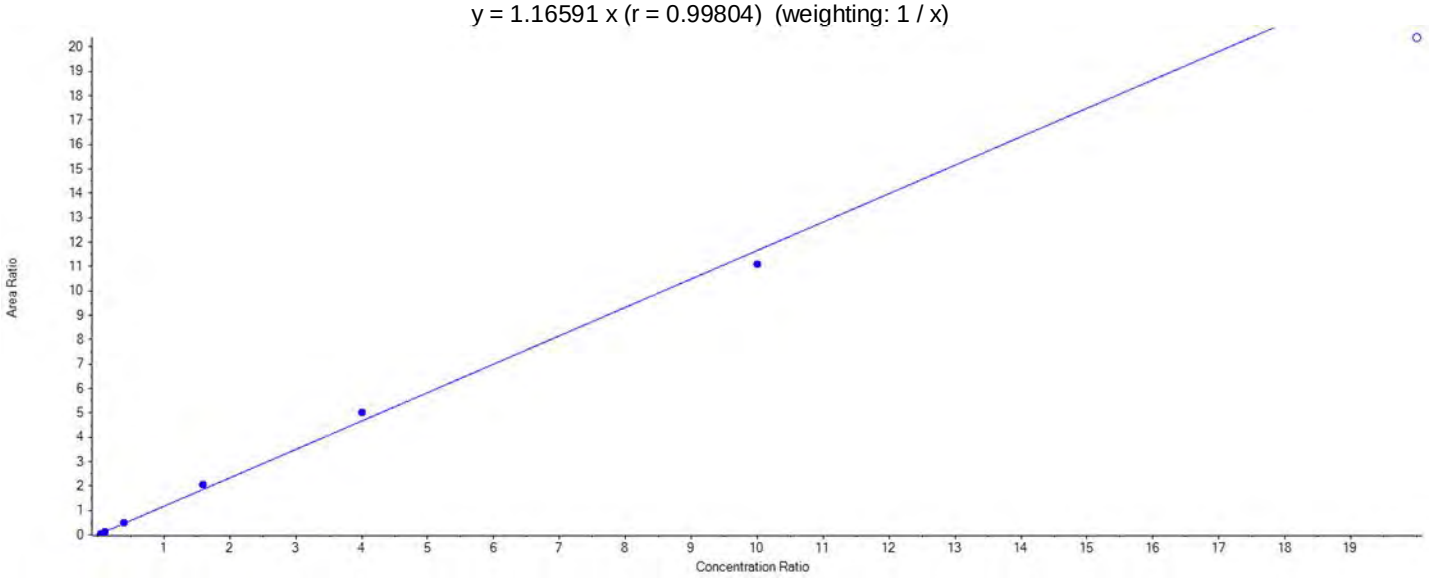
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.16591 x (r = 0.99804) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39732.2	173.4	725432.031	True	5.00	0.055	4.17	1.000	0.200	0.235	17	30	
CAL2	88469.9	273.6	717434.931	True	5.00	0.123	4.17	1.000	0.500	0.529	6	30	
CAL3	351503.9	491.3	705369.014	True	5.00	0.498	4.17	1.000	2.000	2.137	7	30	
CAL4	1455862.5	897.7	713446.262	True	5.00	2.041	4.16	1.000	8.000	8.751	9	30	
CAL5	3380716.3	1094.5	674375.429	True	5.00	5.013	4.16	1.000	20.000	21.499	7	30	
CAL6	6739327.9	1094.4	607820.088	True	5.00	11.088	4.16	1.000	50.000	47.549	-5	30	
CAL7	11658104.6	1005.0	571807.508	False	5.00	20.388	4.16	1.000	100.000	87.434	-13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

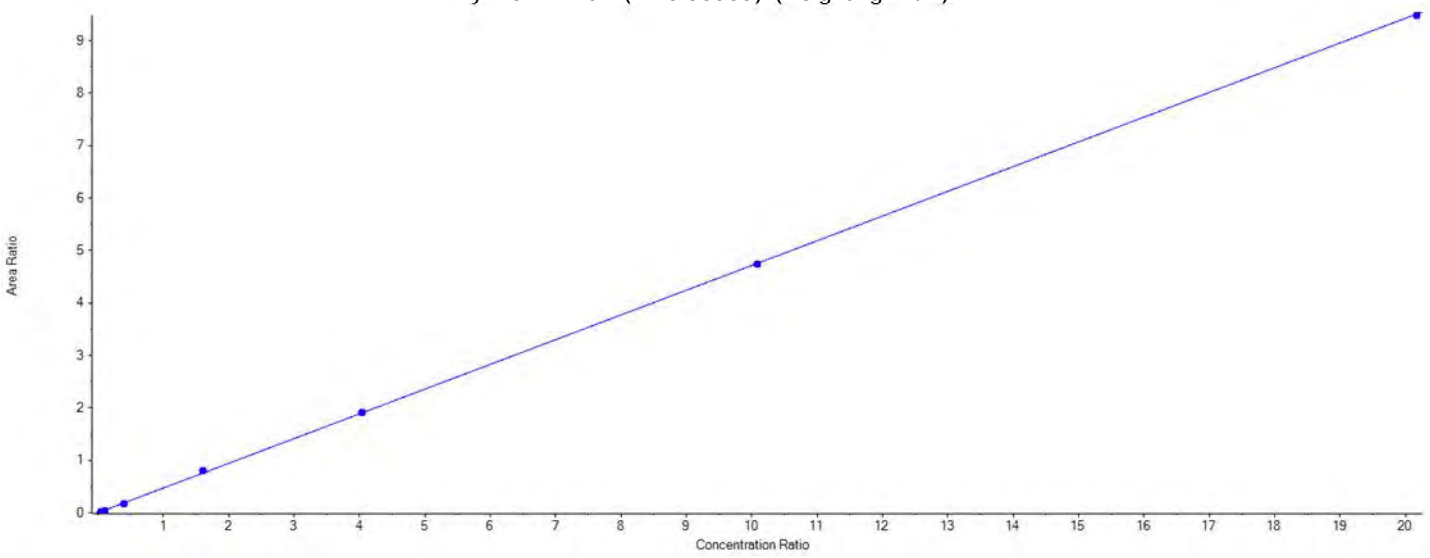
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.47146 x (r = 0.99990) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8335.4	274.6	449266.276	True	4.65	0.019	4.18	1.100	0.190	0.183	-4	30	
CAL2	20956.8	449.7	444721.279	True	4.65	0.047	4.19	1.100	0.469	0.465	-1	30	
CAL3	82090.1	729.5	456815.174	True	4.65	0.180	4.19	1.100	1.880	1.772	-6	30	
CAL4	349358.3	1303.9	434938.872	True	4.65	0.803	4.18	1.100	7.500	7.922	6	30	
CAL5	845636.3	1195.3	442479.717	True	4.65	1.911	4.18	1.100	18.760	18.849	0	30	
CAL6	1823355.9	1852.0	384220.795	True	4.65	4.746	4.18	1.100	46.900	46.806	0	30	
CAL7	3615170.2	1352.9	381345.498	True	4.65	9.480	4.18	1.100	93.800	93.501	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

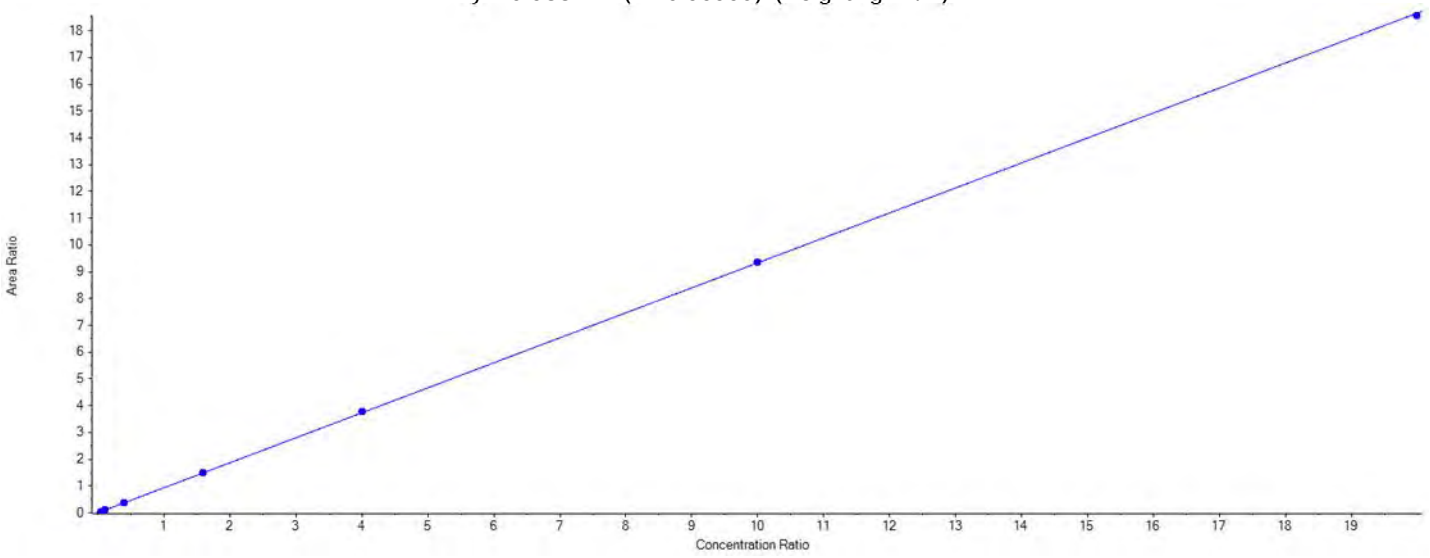
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 0.93317 x (r = 0.99996) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13762.6	1166.5	358771.251	True	4.73	0.038	4.56	1.000	0.190	0.194	2	30	
CAL2	32061.0	6549.5	335732.100	True	4.73	0.095	4.56	1.000	0.473	0.484	2	30	
CAL3	122477.7	1994.1	343139.549	True	4.73	0.357	4.56	1.000	1.890	1.809	-4	30	
CAL4	513536.6	3164.6	339090.468	True	4.73	1.514	4.55	1.000	7.560	7.676	2	30	
CAL5	1261633.0	4348.9	332808.457	True	4.73	3.791	4.55	1.000	18.910	19.215	2	30	
CAL6	2760712.8	3934.3	295466.243	True	4.73	9.344	4.55	1.000	47.280	47.360	0	30	
CAL7	5196245.3	3688.8	279859.575	True	4.73	18.567	4.55	1.000	94.550	94.113	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

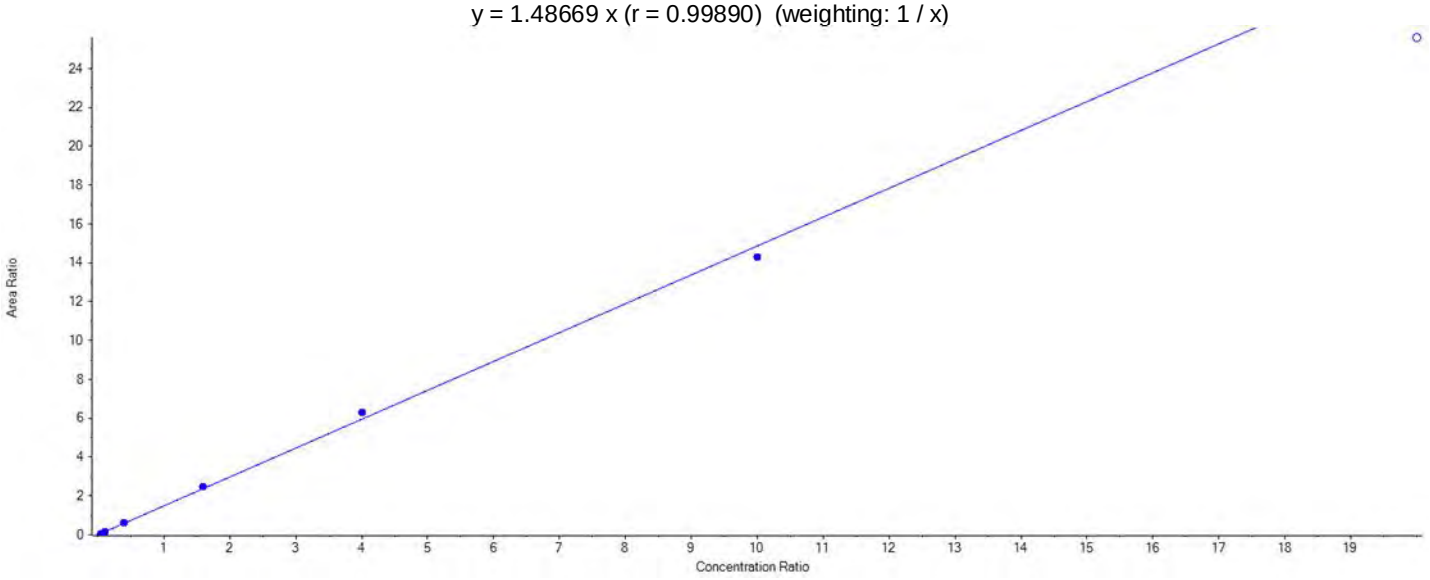
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.48669 x (r = 0.99890) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	38331.9	115.7	586580.259	True	5.00	0.065	4.55	1.000	0.200	0.220	10	30	
CAL2	93502.9	220.2	583342.783	True	5.00	0.160	4.56	1.000	0.500	0.539	8	30	
CAL3	360280.4	493.2	566495.562	True	5.00	0.636	4.56	1.000	2.000	2.139	7	30	
CAL4	1481489.5	591.4	592497.863	True	5.00	2.500	4.55	1.000	8.000	8.409	5	30	
CAL5	3440372.8	967.5	544681.071	True	5.00	6.316	4.55	1.000	20.000	21.243	6	30	
CAL6	6940304.7	1231.7	484763.199	True	5.00	14.317	4.55	1.000	50.000	48.150	-4	30	
CAL7	11701142.2	1512.0	457160.435	False	5.00	25.595	4.55	1.000	100.000	86.081	-14	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

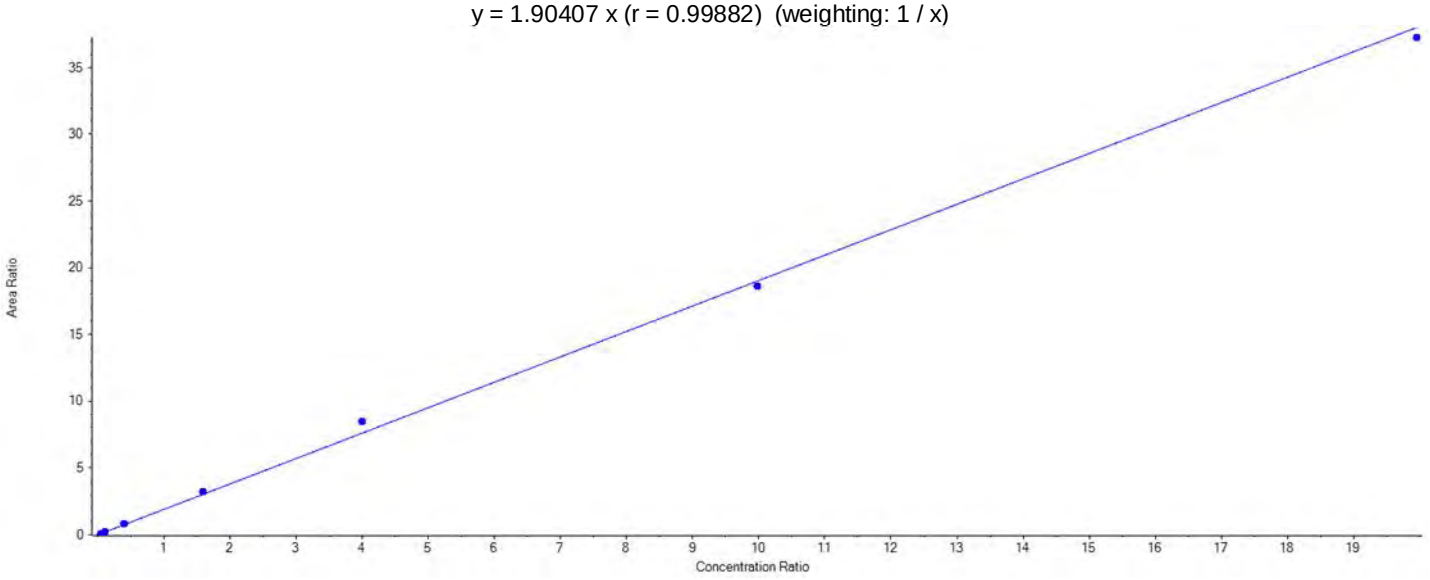
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.90407 x (r = 0.99882) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2460.6	100.5	42112.811	True	4.75	0.058	4.91	1.000	0.190	0.146	-23	30	
CAL2	8883.8	317.6	38849.605	True	4.75	0.229	4.91	1.000	0.474	0.570	20	30	
CAL3	32056.4	598.2	38605.475	True	4.75	0.830	4.92	1.000	1.896	2.071	9	30	
CAL4	125170.2	897.1	39121.731	True	4.75	3.200	4.91	1.000	7.584	7.982	5	30	
CAL5	278493.0	1000.7	32735.591	True	4.75	8.507	4.91	1.000	18.960	21.223	12	30	
CAL6	566692.8	797.2	30466.848	True	4.75	18.600	4.90	1.000	47.400	46.401	-2	30	
CAL7	988785.9	901.9	26549.079	True	4.75	37.244	4.90	1.000	94.800	92.910	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

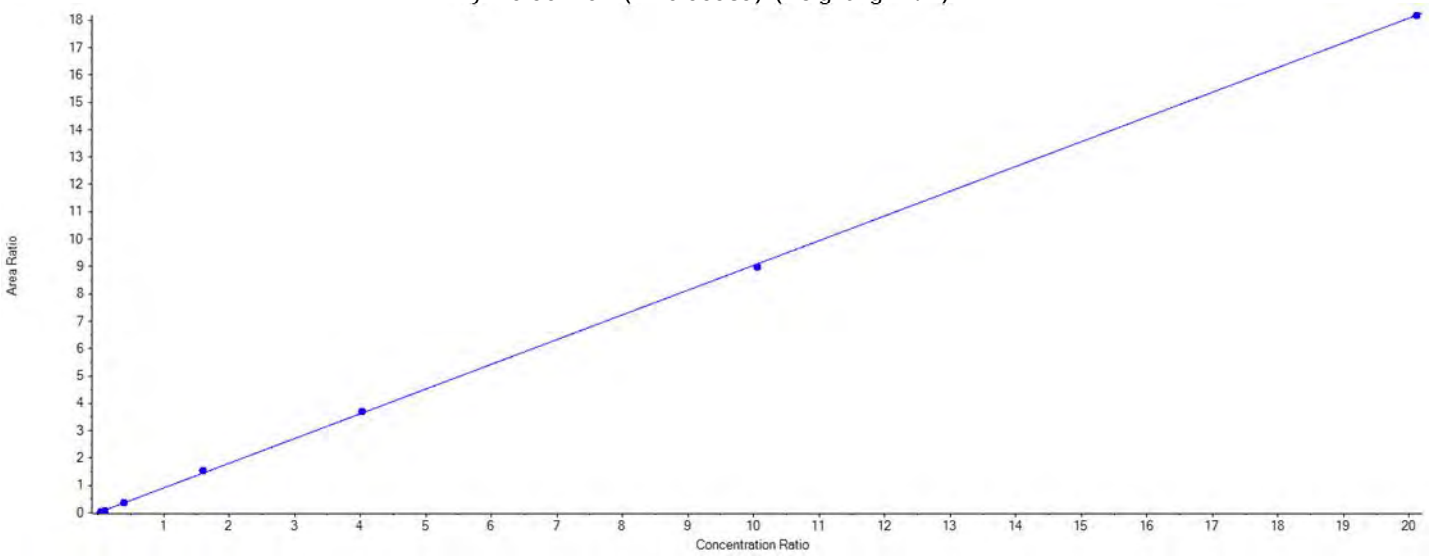
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.90410 x (r = 0.99989) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	14183.4	333.2	358771.251	True	4.73	0.040	4.91	1.080	0.190	0.207	9	30	
CAL2	30553.2	575.9	335732.100	True	4.73	0.091	4.92	1.080	0.476	0.476	0	30	
CAL3	123126.9	881.8	343139.549	True	4.73	0.359	4.92	1.080	1.900	1.877	-1	30	
CAL4	516333.1	1178.7	339090.468	True	4.73	1.523	4.91	1.080	7.610	7.966	5	30	
CAL5	1236603.7	1092.5	332808.457	True	4.73	3.716	4.92	1.080	19.030	19.439	2	30	
CAL6	2648512.9	1087.8	295466.243	True	4.73	8.964	4.91	1.080	47.580	46.896	-1	30	
CAL7	5085803.6	1089.6	279859.575	True	4.73	18.173	4.91	1.080	95.150	95.074	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

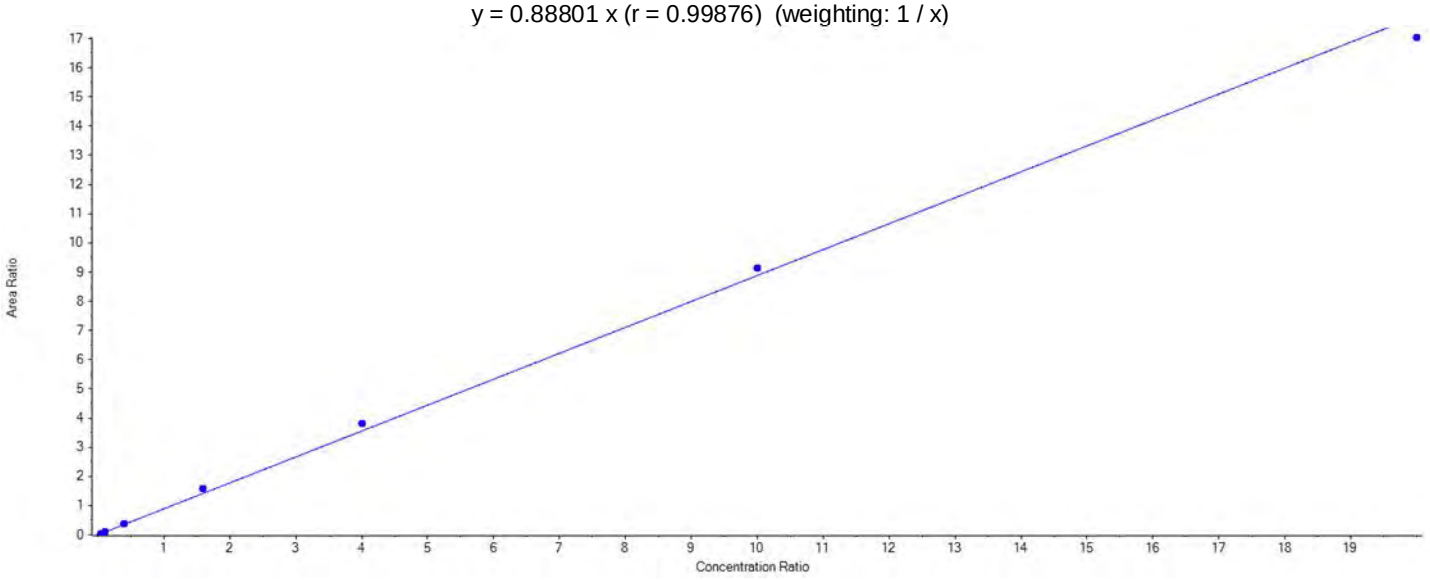
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.88801 x (r = 0.99876) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39843.5	233.7	1028414.921	True	5.00	0.039	4.93	1.000	0.200	0.218	9	30	
CAL2	94348.1	430.7	970523.191	True	5.00	0.097	4.93	1.000	0.500	0.547	9	30	
CAL3	364943.1	791.6	964414.633	True	5.00	0.378	4.93	1.000	2.000	2.131	7	30	
CAL4	1491946.3	1207.0	937287.469	True	5.00	1.592	4.92	1.000	8.000	8.963	12	30	
CAL5	3425279.8	1901.2	895692.173	True	5.00	3.824	4.92	1.000	20.000	21.532	8	30	
CAL6	7023921.1	2522.0	769164.416	True	5.00	9.132	4.92	1.000	50.000	51.417	3	30	
CAL7	11562348.7	2334.2	678914.551	True	5.00	17.031	4.92	1.000	100.000	95.892	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

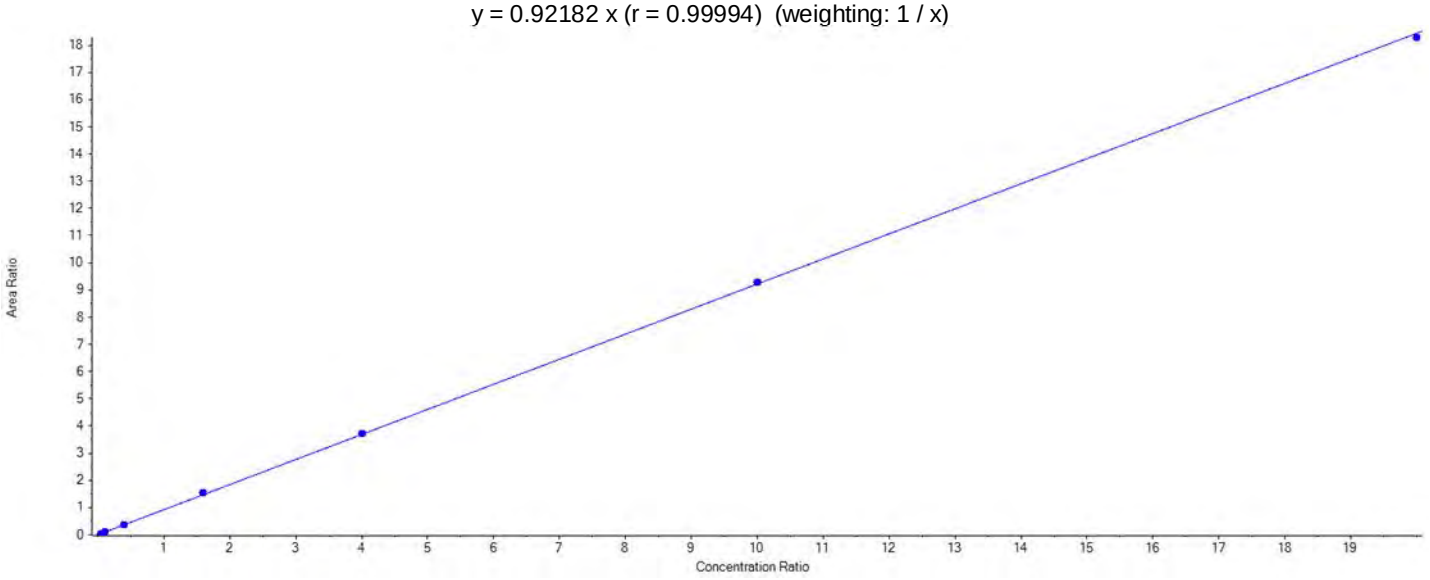
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 0.92182 x (r = 0.99994) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12181.7	1599.7	307224.329	True	4.78	0.040	5.25	1.000	0.190	0.206	8	30	
CAL2	28529.2	1301.4	286174.783	True	4.78	0.100	5.25	1.000	0.478	0.517	8	30	
CAL3	111397.7	2913.4	297259.750	True	4.78	0.375	5.25	1.000	1.910	1.943	2	30	
CAL4	447769.0	1957.6	291941.558	True	4.78	1.534	5.25	1.000	7.650	7.953	4	30	
CAL5	1108359.9	3249.6	297995.609	True	4.78	3.719	5.25	1.000	19.120	19.287	1	30	
CAL6	2487687.4	4656.8	268368.993	True	4.78	9.270	5.24	1.000	47.800	48.067	1	30	
CAL7	4830627.6	3150.6	264295.900	True	4.78	18.277	5.25	1.000	95.600	94.776	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

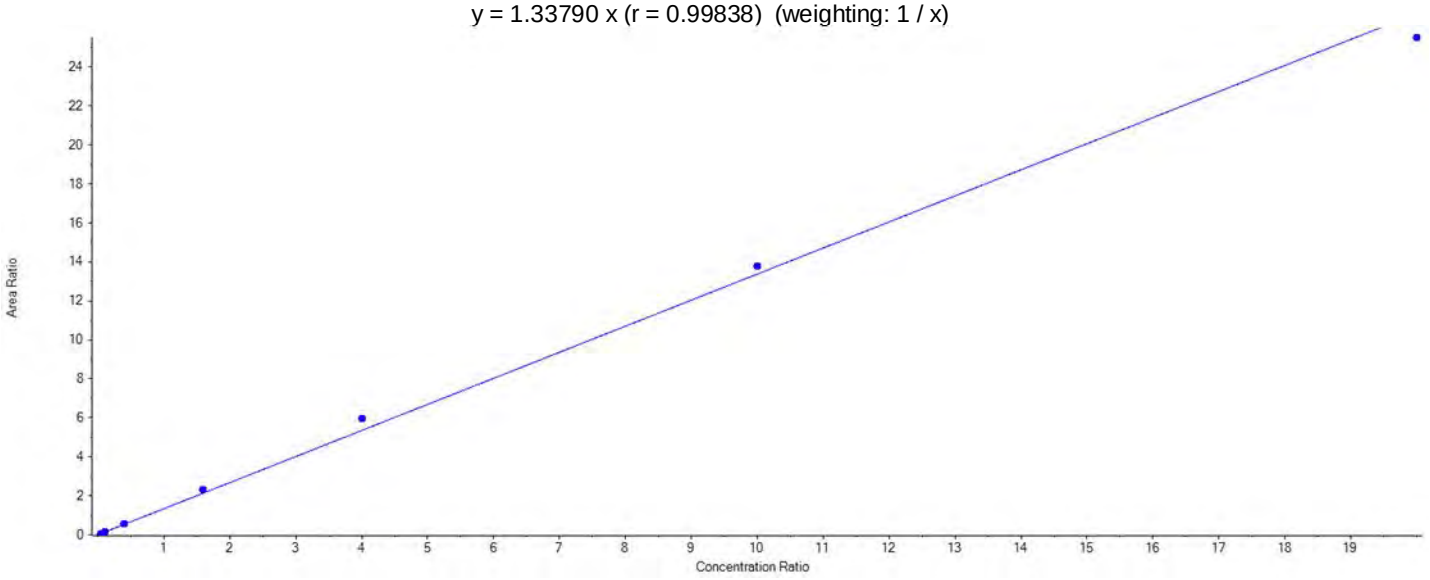
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.33790 x (r = 0.99838) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32563.3	212.6	518118.657	True	5.00	0.063	5.27	1.000	0.200	0.235	17	30	
CAL2	74743.9	385.8	540435.380	True	5.00	0.138	5.27	1.000	0.500	0.517	3	30	
CAL3	299530.4	891.6	513115.984	True	5.00	0.584	5.27	1.000	2.000	2.182	9	30	
CAL4	1179151.8	1096.7	512147.381	True	5.00	2.302	5.27	1.000	8.000	8.604	8	30	
CAL5	2889454.7	1462.7	484419.266	True	5.00	5.965	5.27	1.000	20.000	22.292	11	30	
CAL6	6070259.1	1061.5	440319.007	True	5.00	13.786	5.26	1.000	50.000	51.521	3	30	
CAL7	10279837.9	1111.6	402916.669	True	5.00	25.514	5.27	1.000	100.000	95.349	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

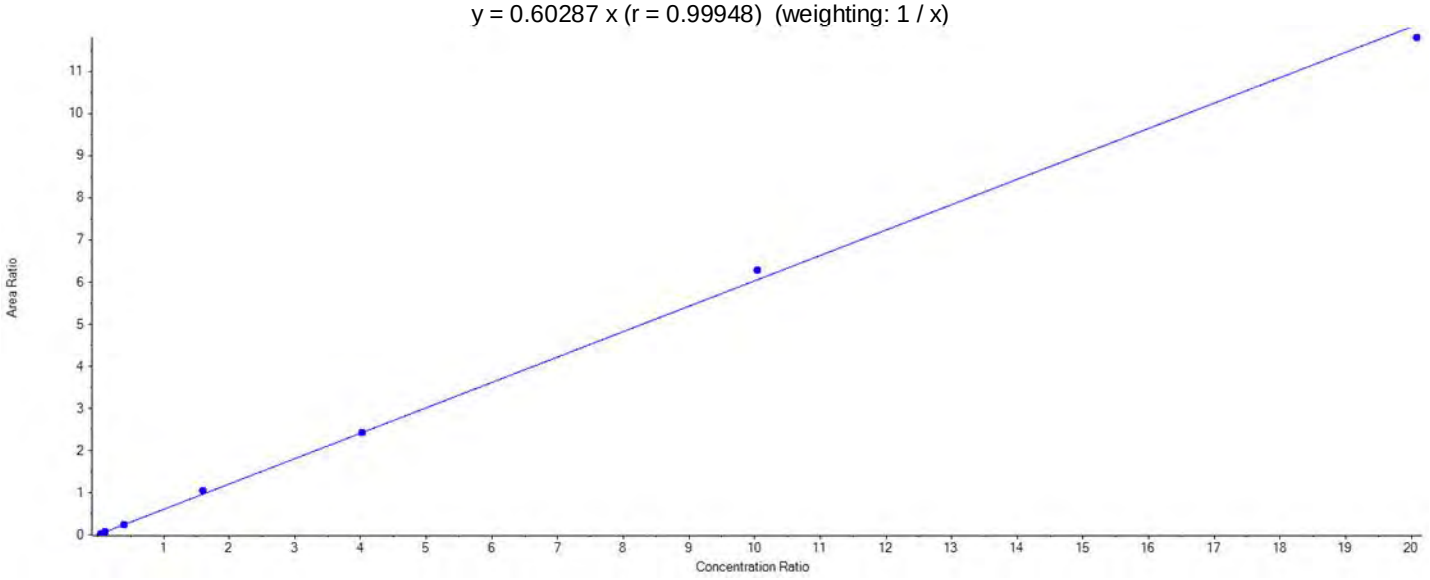
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.60287 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6748.5	139.2	307224.329	True	4.78	0.022	5.55	1.060	0.190	0.174	-8	30	
CAL2	17507.8	298.5	286174.783	True	4.78	0.061	5.55	1.060	0.480	0.485	1	30	
CAL3	72940.0	700.2	297259.750	True	4.78	0.245	5.55	1.060	1.920	1.946	1	30	
CAL4	305013.7	830.3	291941.558	True	4.78	1.045	5.54	1.060	7.680	8.284	8	30	
CAL5	722178.3	1119.3	297995.609	True	4.78	2.423	5.54	1.060	19.200	19.215	0	30	
CAL6	1684601.2	897.8	268368.993	True	4.78	6.277	5.54	1.060	48.000	49.770	4	30	
CAL7	3119908.2	856.2	264295.900	True	4.78	11.805	5.54	1.060	96.000	93.596	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

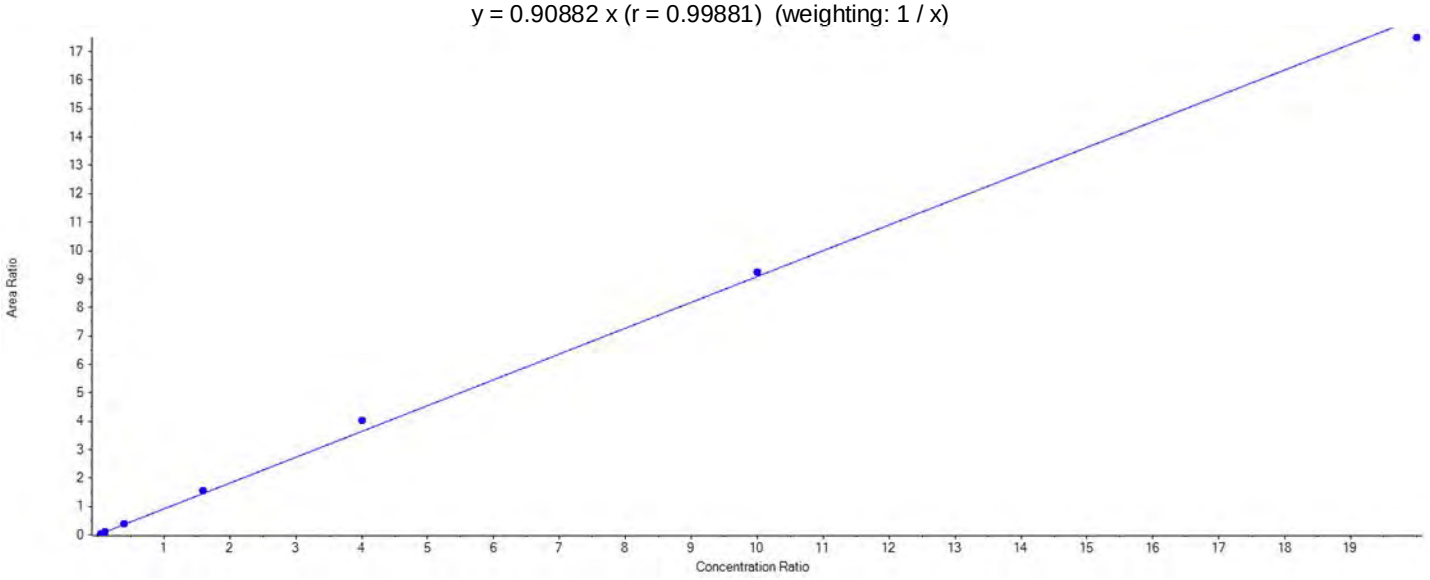
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.90882 x (r = 0.99881) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	25530.0	80.6	651347.959	True	5.00	0.039	5.57	1.000	0.200	0.216	8	30	
CAL2	62530.6	137.6	661423.810	True	5.00	0.095	5.57	1.000	0.500	0.520	4	30	
CAL3	244693.9	357.4	639022.779	True	5.00	0.383	5.57	1.000	2.000	2.107	5	30	
CAL4	1029893.8	556.8	656868.302	True	5.00	1.568	5.56	1.000	8.000	8.626	8	30	
CAL5	2401274.2	683.6	598009.725	True	5.00	4.015	5.57	1.000	20.000	22.091	10	30	
CAL6	4962332.7	791.5	536626.204	True	5.00	9.247	5.56	1.000	50.000	50.875	2	30	
CAL7	8415098.4	928.9	480927.883	True	5.00	17.498	5.56	1.000	100.000	96.265	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

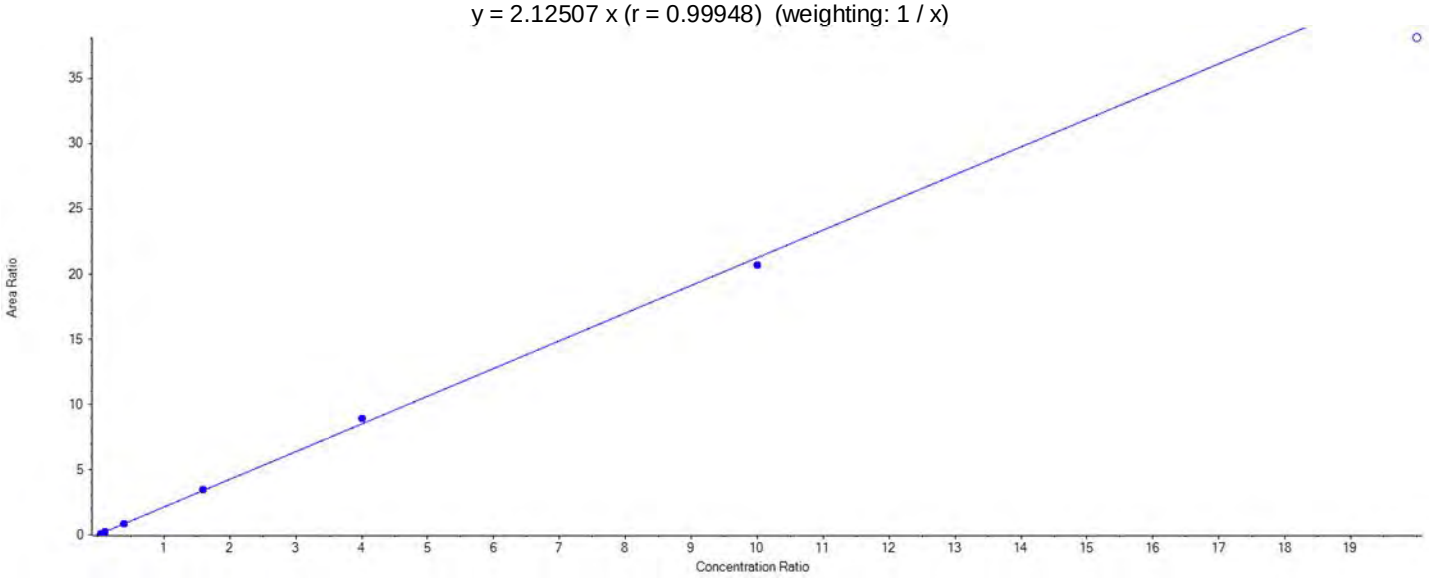
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.12507 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2783.3	121.0	26730.160	True	4.79	0.104	5.58	1.000	0.192	0.235	22	30	
CAL2	6917.6	207.6	27523.013	True	4.79	0.251	5.57	1.000	0.479	0.567	18	30	
CAL3	24892.6	1018.5	29468.270	True	4.79	0.845	5.57	1.000	1.916	1.904	-1	30	
CAL4	106591.3	873.6	30500.264	True	4.79	3.495	5.57	1.000	7.664	7.877	3	30	
CAL5	244867.6	996.2	27553.973	True	4.79	8.887	5.57	1.000	19.160	20.031	5	30	
CAL6	516640.5	1051.6	24938.159	True	4.79	20.717	5.56	1.000	47.900	46.697	-3	30	
CAL7	936483.2	582.0	24555.696	False	4.79	38.137	5.57	1.000	95.800	85.963	-10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

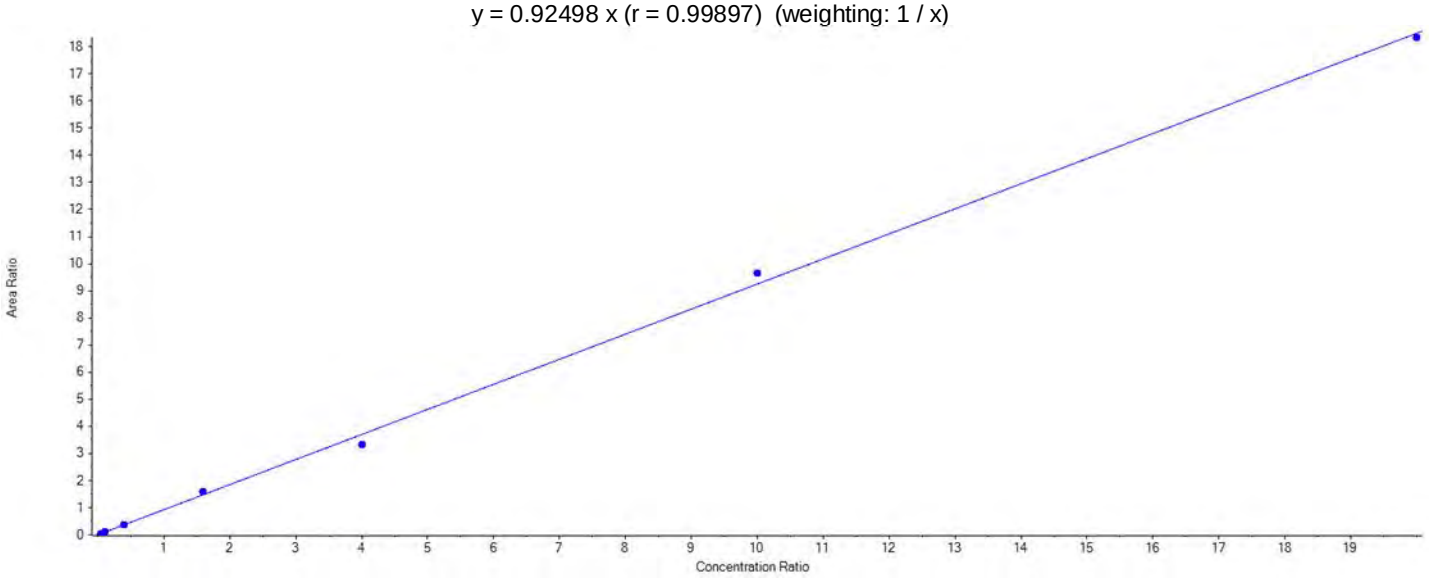
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 0.92498 x (r = 0.99897) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27779.6	365.6	774962.773	True	5.00	0.036	5.64	1.000	0.200	0.194	-3	30	
CAL2	69586.0	485.9	711032.158	True	5.00	0.098	5.64	1.000	0.500	0.529	6	30	
CAL3	271753.2	606.8	704745.507	True	5.00	0.386	5.64	1.000	2.000	2.084	4	30	
CAL4	1119770.1	706.4	708330.461	True	5.00	1.581	5.64	1.000	8.000	8.545	7	30	
CAL5	2448684.3	761.3	737038.484	True	5.00	3.322	5.64	1.000	20.000	17.959	-10	30	
CAL6	5938541.7	607.4	614406.373	True	5.00	9.665	5.64	1.000	50.000	52.247	4	30	
CAL7	11064835.5	659.2	603296.116	True	5.00	18.341	5.64	1.000	100.000	99.141	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

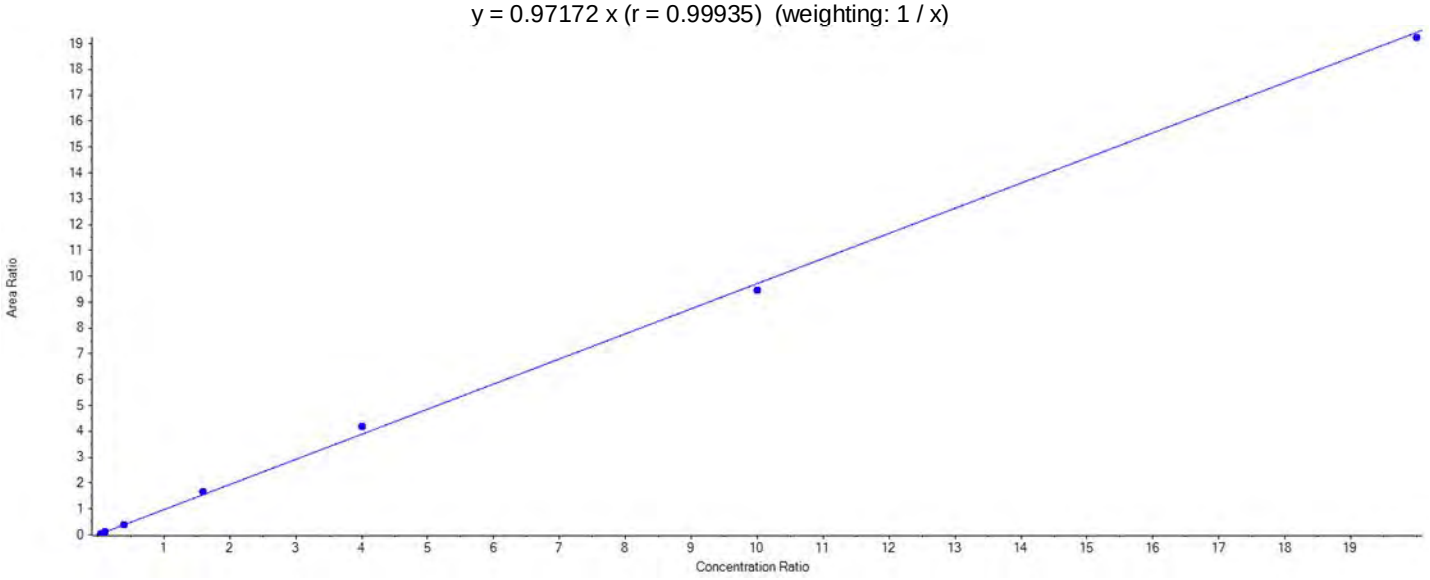
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.97172 x (r = 0.99935) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3293.8	523.5	94966.986	True	5.00	0.035	5.71	1.000	0.200	0.178	-11	30	
CAL2	9807.4	1757.7	83112.192	True	5.00	0.118	5.71	1.000	0.500	0.607	21	30	
CAL3	32400.4	714.3	81763.338	True	5.00	0.396	5.71	1.000	2.000	2.039	2	30	
CAL4	136316.9	1055.9	80900.105	True	5.00	1.685	5.71	1.000	8.000	8.670	8	30	
CAL5	308507.7	1864.0	73896.081	True	5.00	4.175	5.71	1.000	20.000	21.482	7	30	
CAL6	740651.6	2592.1	78157.968	True	5.00	9.476	5.70	1.000	50.000	48.760	-2	30	
CAL7	1450331.2	3029.7	75408.724	True	5.00	19.233	5.70	1.000	100.000	98.963	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

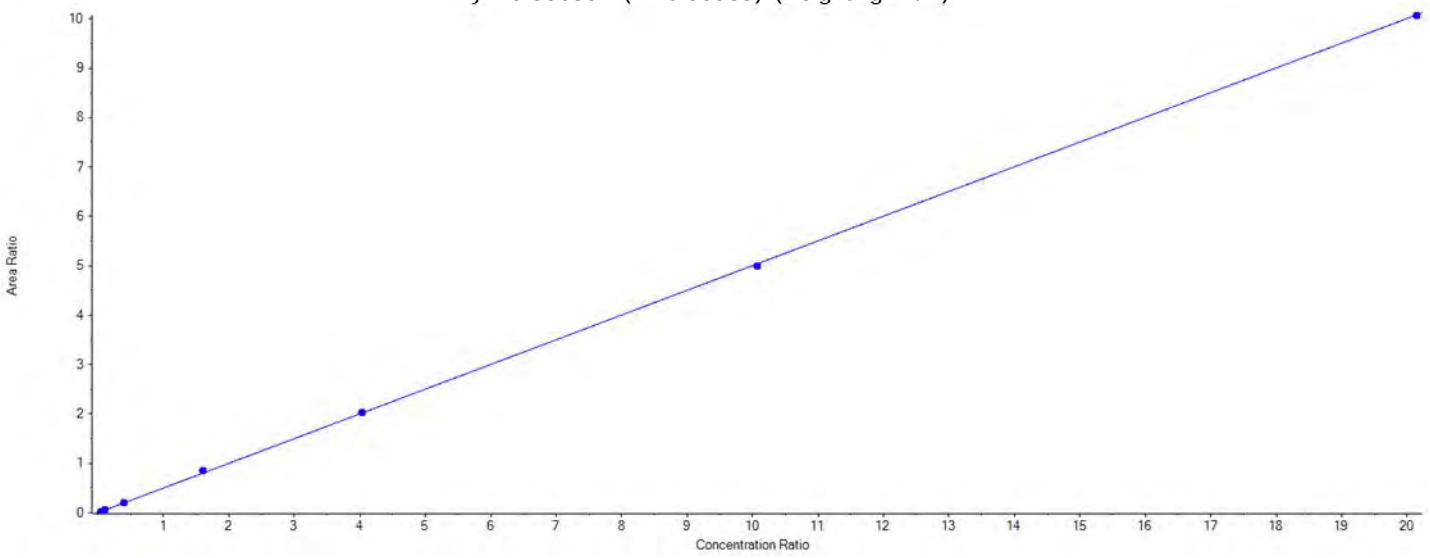
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.50039 x (r = 0.99988) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6453.6	144.3	307224.329	True	4.78	0.021	5.80	1.100	0.190	0.201	6	30	
CAL2	15726.3	346.3	286174.783	True	4.78	0.055	5.80	1.110	0.482	0.525	9	30	
CAL3	59073.9	499.2	297259.750	True	4.78	0.199	5.80	1.100	1.930	1.898	-2	30	
CAL4	250911.0	762.1	291941.558	True	4.78	0.859	5.80	1.110	7.700	8.210	7	30	
CAL5	605559.3	1144.8	297995.609	True	4.78	2.032	5.80	1.110	19.260	19.412	1	30	
CAL6	1337416.6	1228.3	268368.993	True	4.78	4.983	5.79	1.110	48.150	47.605	-1	30	
CAL7	2660525.2	1099.2	264295.900	True	4.78	10.066	5.80	1.110	96.300	96.161	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

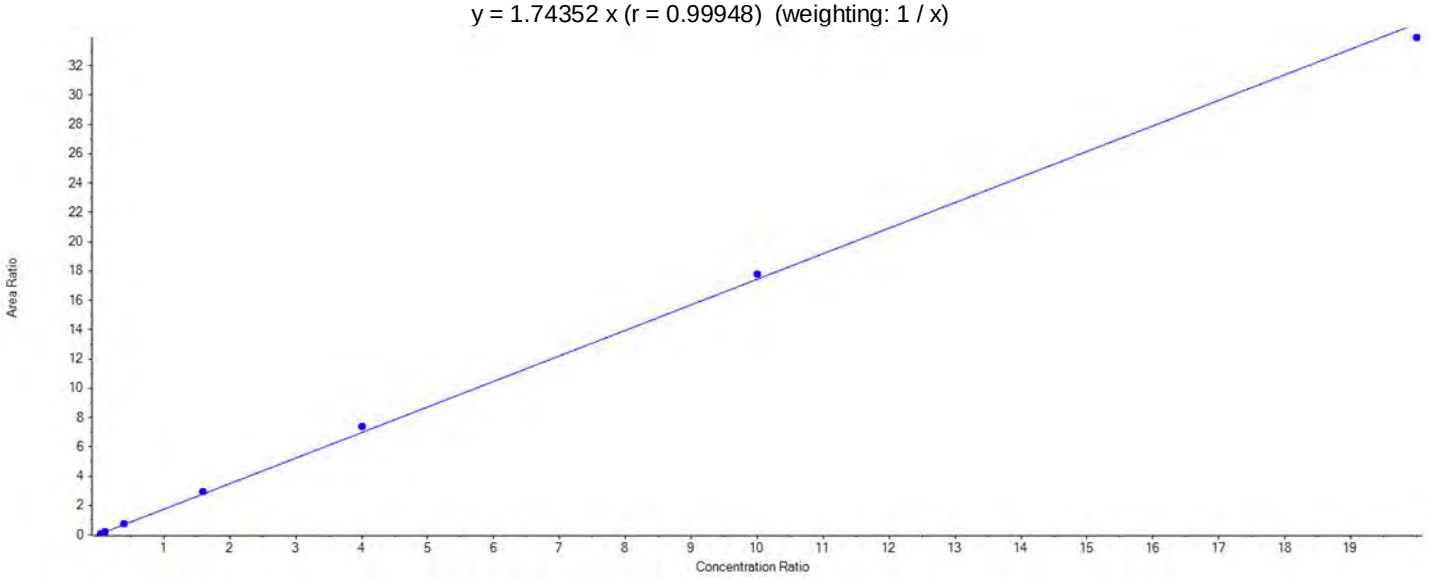
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.74352 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23275.5	123.3	293658.674	True	5.00	0.079	5.83	1.000	0.200	0.227	14	30	
CAL2	54085.5	306.2	289985.074	True	5.00	0.187	5.83	1.000	0.500	0.535	7	30	
CAL3	209644.8	492.6	277115.542	True	5.00	0.757	5.83	1.000	2.000	2.170	8	30	
CAL4	802732.3	974.7	275977.201	True	5.00	2.909	5.83	1.000	8.000	8.341	4	30	
CAL5	1952356.4	1160.8	263924.687	True	5.00	7.397	5.83	1.000	20.000	21.214	6	30	
CAL6	4071590.3	1109.0	229237.069	True	5.00	17.761	5.82	1.000	50.000	50.936	2	30	
CAL7	7204782.9	1154.1	212399.757	True	5.00	33.921	5.82	1.000	100.000	97.277	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

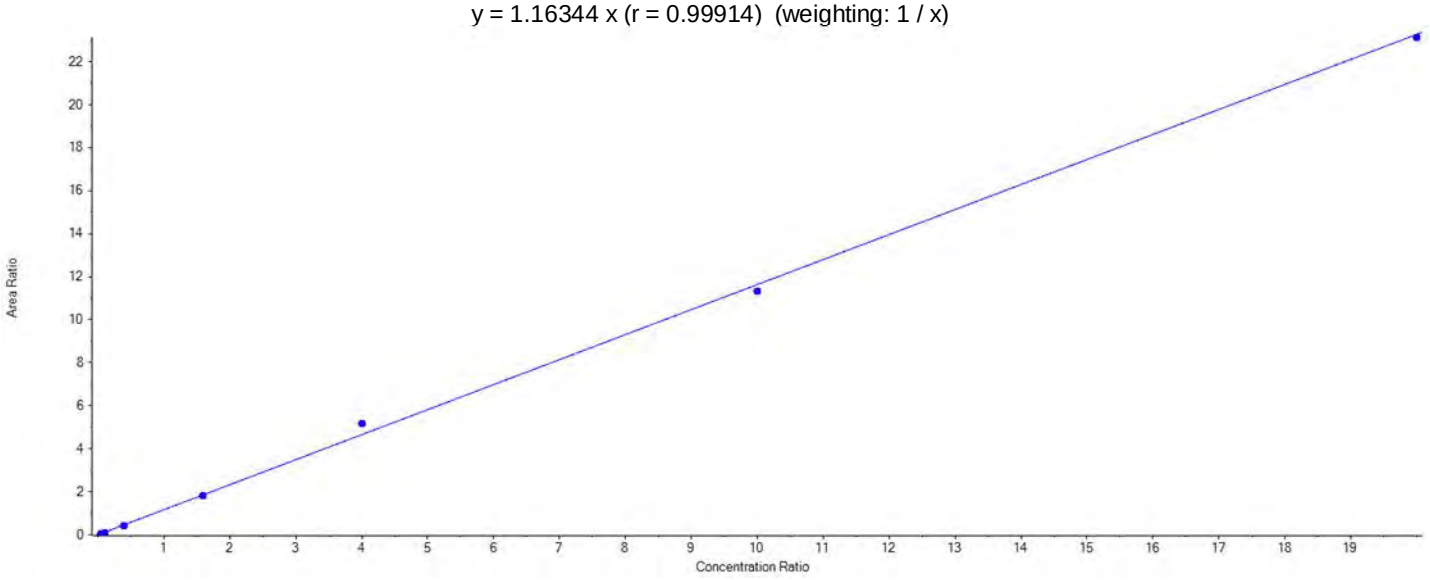
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 1.16344 x (r = 0.99914) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3313.0	102.1	77938.309	True	5.00	0.043	5.84	1.000	0.200	0.183	-9	30	
CAL2	7253.7	357.6	65815.920	True	5.00	0.110	5.84	1.000	0.500	0.474	-5	30	
CAL3	32100.8	3488.9	72755.747	True	5.00	0.441	5.85	1.000	2.000	1.896	-5	30	
CAL4	121615.1	1770.9	66162.445	True	5.00	1.838	5.84	1.000	8.000	7.900	-1	30	
CAL5	298834.2	3536.0	57745.714	True	5.00	5.175	5.85	1.000	20.000	22.240	11	30	
CAL6	685447.7	2450.9	60556.615	True	5.00	11.319	5.84	1.000	50.000	48.645	-3	30	
CAL7	1317020.6	2554.3	56963.053	True	5.00	23.121	5.84	1.000	100.000	99.363	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

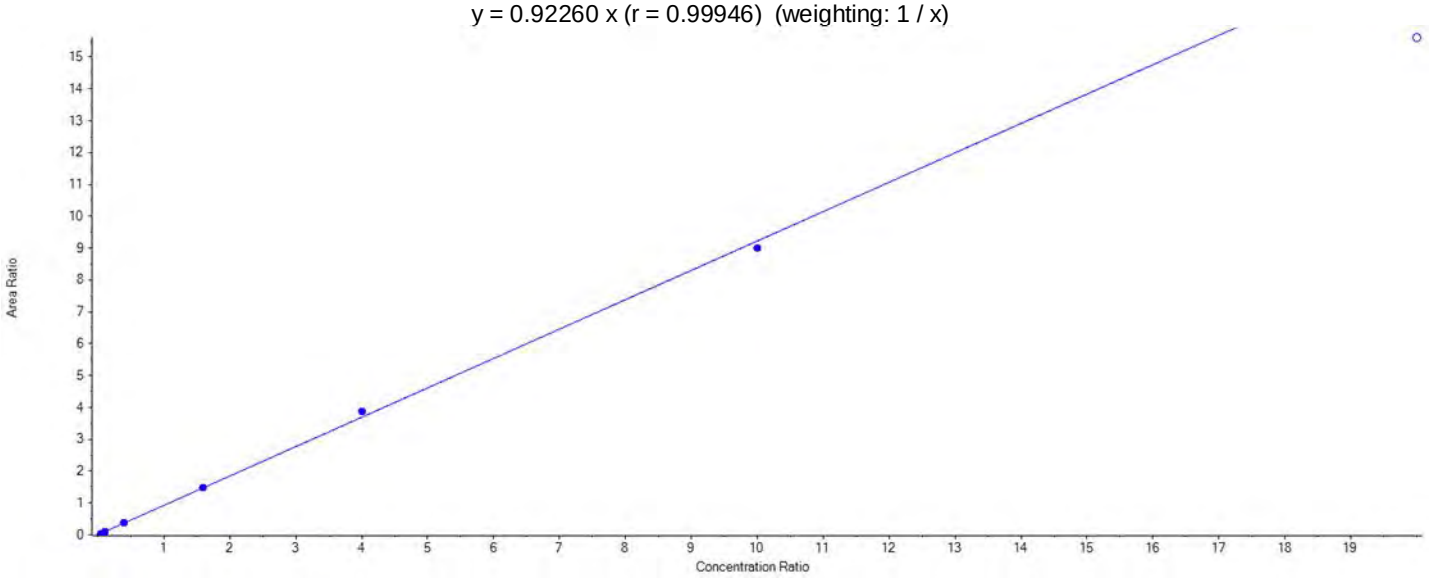
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.92260 x (r = 0.99946) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23314.2	211.1	564794.852	True	5.00	0.041	6.06	1.000	0.200	0.224	12	30	
CAL2	60098.0	579.3	597616.302	True	5.00	0.101	6.06	1.000	0.500	0.545	9	30	
CAL3	220663.6	750.3	584631.538	True	5.00	0.377	6.06	1.000	2.000	2.046	2	30	
CAL4	877242.2	1049.4	598287.433	True	5.00	1.466	6.05	1.000	8.000	7.946	-1	30	
CAL5	2132260.7	1239.0	548536.046	True	5.00	3.887	6.06	1.000	20.000	21.067	5	30	
CAL6	4509578.7	1127.0	500065.276	True	5.00	9.018	6.05	1.000	50.000	48.873	-2	30	
CAL7	8211828.8	1159.6	525971.755	False	5.00	15.613	6.05	1.000	100.000	84.613	-15	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

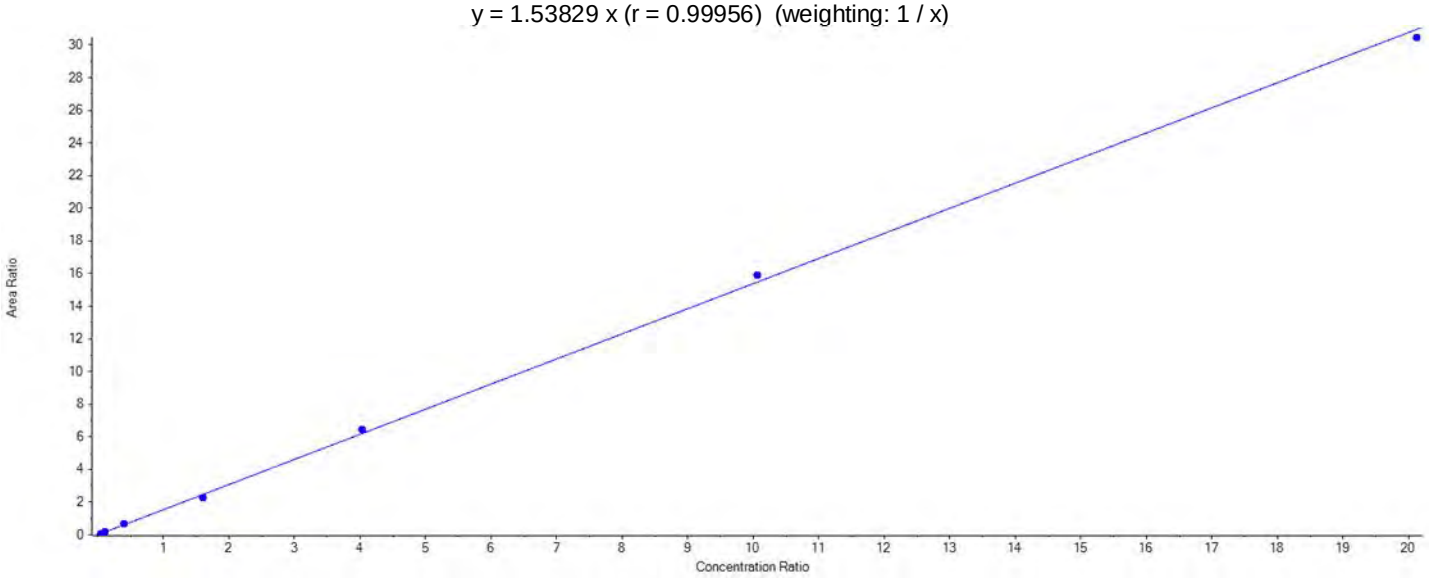
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 1.53829 x (r = 0.99956) (weighting: 1 / x)



Component Calibration Verification

Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1903.7	172.7	26730.160	True	4.79	0.071	6.07	1.090	0.193	0.222	15	30	
CAL2	4874.3	125.8	27523.013	True	4.79	0.177	6.07	1.090	0.482	0.551	14	30	
CAL3	19060.5	262.9	29468.270	True	4.79	0.647	6.07	1.090	1.928	2.014	4	30	
CAL4	69275.8	544.3	30500.264	True	4.79	2.271	6.07	1.090	7.712	7.073	-8	30	
CAL5	177607.5	693.3	27553.973	True	4.79	6.446	6.07	1.090	19.280	20.071	4	30	
CAL6	395929.8	1104.6	24938.159	True	4.79	15.876	6.07	1.090	48.200	49.437	3	30	
CAL7	747804.5	1151.9	24555.696	True	4.79	30.453	6.07	1.090	96.400	94.827	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

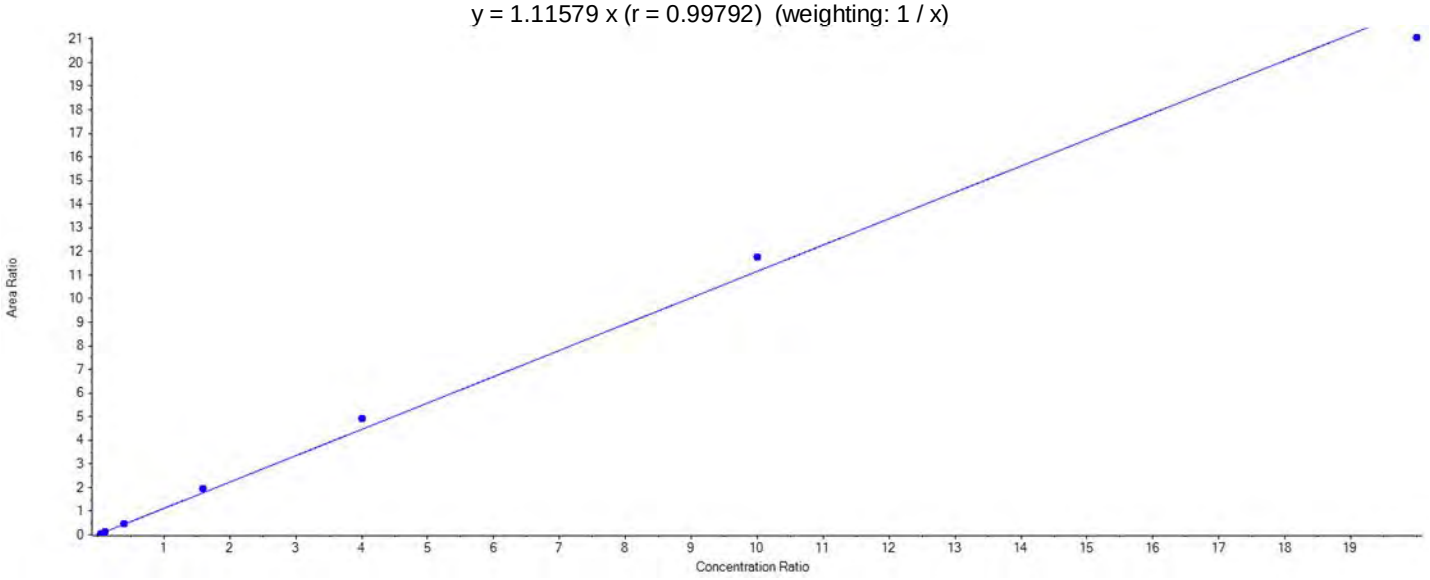
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.11579 x (r = 0.99792) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19989.4	87.7	366847.670	True	5.00	0.054	6.10	1.000	0.200	0.244	22	30	
CAL2	40902.1	140.8	330298.603	True	5.00	0.124	6.10	1.000	0.500	0.555	11	30	
CAL3	151795.0	297.4	335206.816	True	5.00	0.453	6.10	1.000	2.000	2.029	1	30	
CAL4	648523.4	496.3	330968.748	True	5.00	1.959	6.09	1.000	8.000	8.781	10	30	
CAL5	1583085.5	689.6	321549.477	True	5.00	4.923	6.10	1.000	20.000	22.062	10	30	
CAL6	3462215.2	801.3	294617.585	True	5.00	11.752	6.09	1.000	50.000	52.660	5	30	
CAL7	6220772.1	824.6	295395.339	True	5.00	21.059	6.09	1.000	100.000	94.369	-6	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

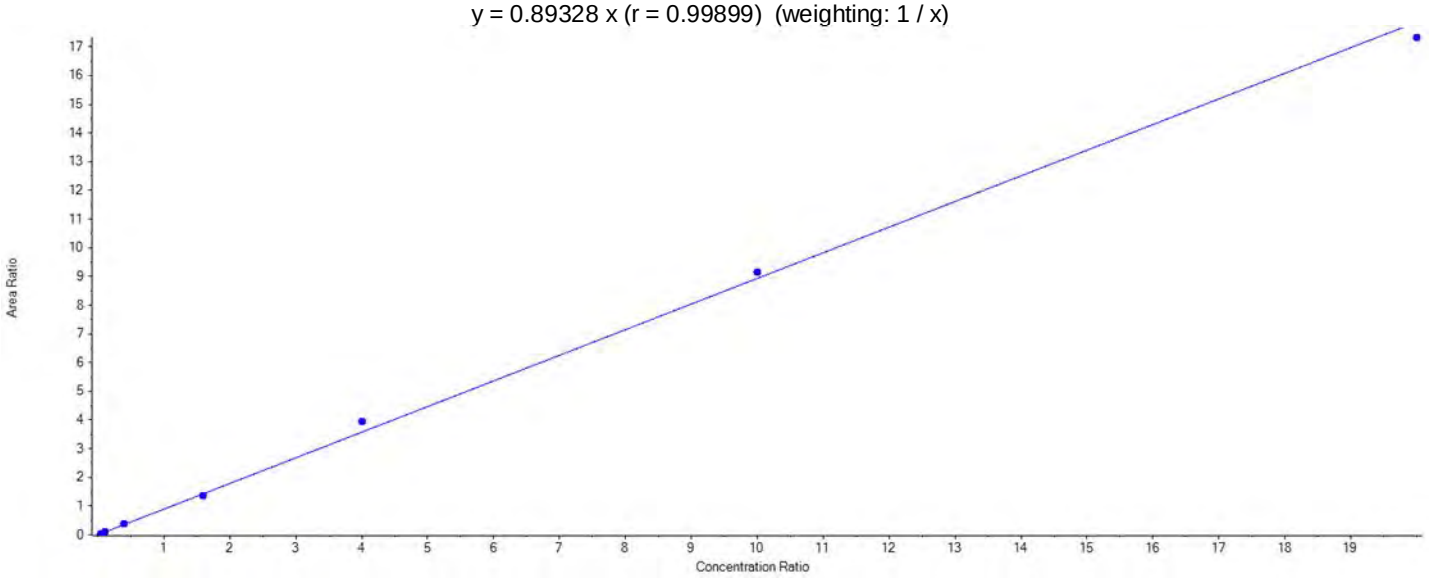
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 0.89328 x (r = 0.99899) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3218.9	123.4	89511.926	True	5.00	0.036	6.10	1.000	0.200	0.201	1	30	
CAL2	8251.9	123.5	81301.239	True	5.00	0.101	6.10	1.000	0.500	0.568	14	30	
CAL3	29797.4	354.6	79381.682	True	5.00	0.375	6.10	1.000	2.000	2.101	5	30	
CAL4	118194.2	528.2	86399.425	True	5.00	1.368	6.10	1.000	8.000	7.657	-4	30	
CAL5	323567.0	708.0	82137.635	True	5.00	3.939	6.10	1.000	20.000	22.050	10	30	
CAL6	705149.2	546.6	77146.949	True	5.00	9.140	6.10	1.000	50.000	51.162	2	30	
CAL7	1386738.5	563.9	80053.250	True	5.00	17.323	6.10	1.000	100.000	96.961	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

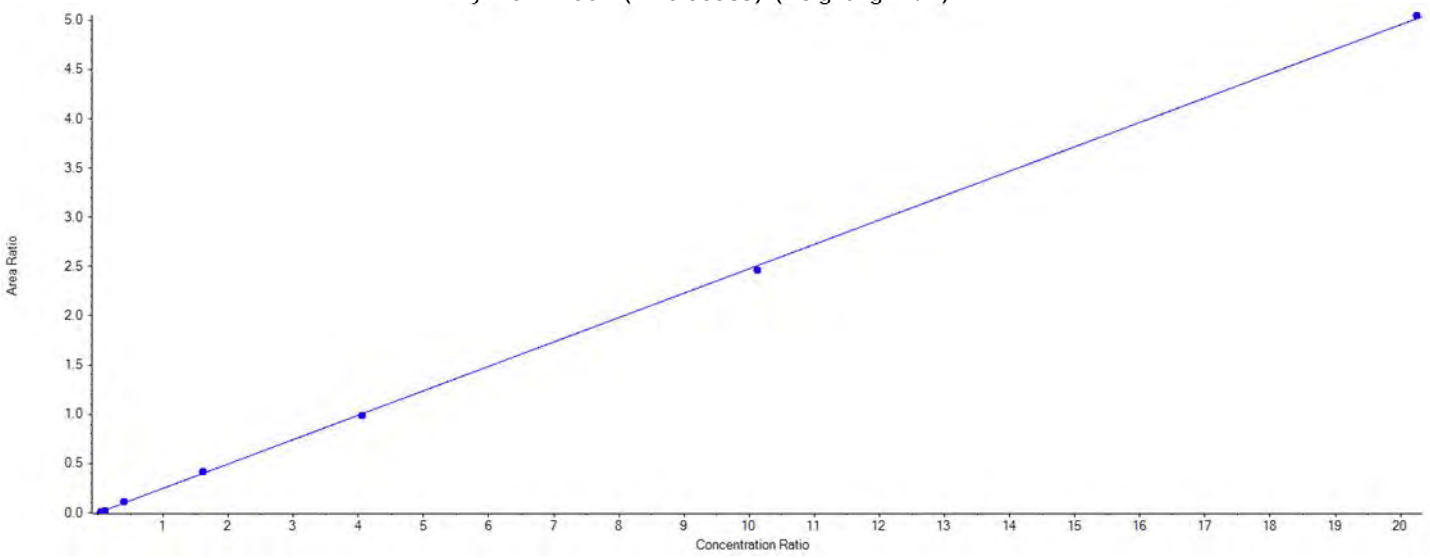
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.24766 x (r = 0.99988) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3016.1	142.5	307224.329	True	4.78	0.010	6.22	1.190	0.190	0.189	0	30	
CAL2	7227.2	251.5	286174.783	True	4.78	0.025	6.23	1.190	0.484	0.487	1	30	
CAL3	32096.3	376.5	297259.750	True	4.78	0.108	6.22	1.190	1.940	2.084	7	30	
CAL4	121590.1	703.3	291941.558	True	4.78	0.416	6.22	1.190	7.740	8.039	4	30	
CAL5	295383.8	738.2	297995.609	True	4.78	0.991	6.22	1.190	19.360	19.132	-1	30	
CAL6	661528.1	1015.3	268368.993	True	4.78	2.465	6.22	1.190	48.400	47.576	-2	30	
CAL7	1333847.1	1122.7	264295.900	True	4.78	5.047	6.22	1.190	96.800	97.407	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

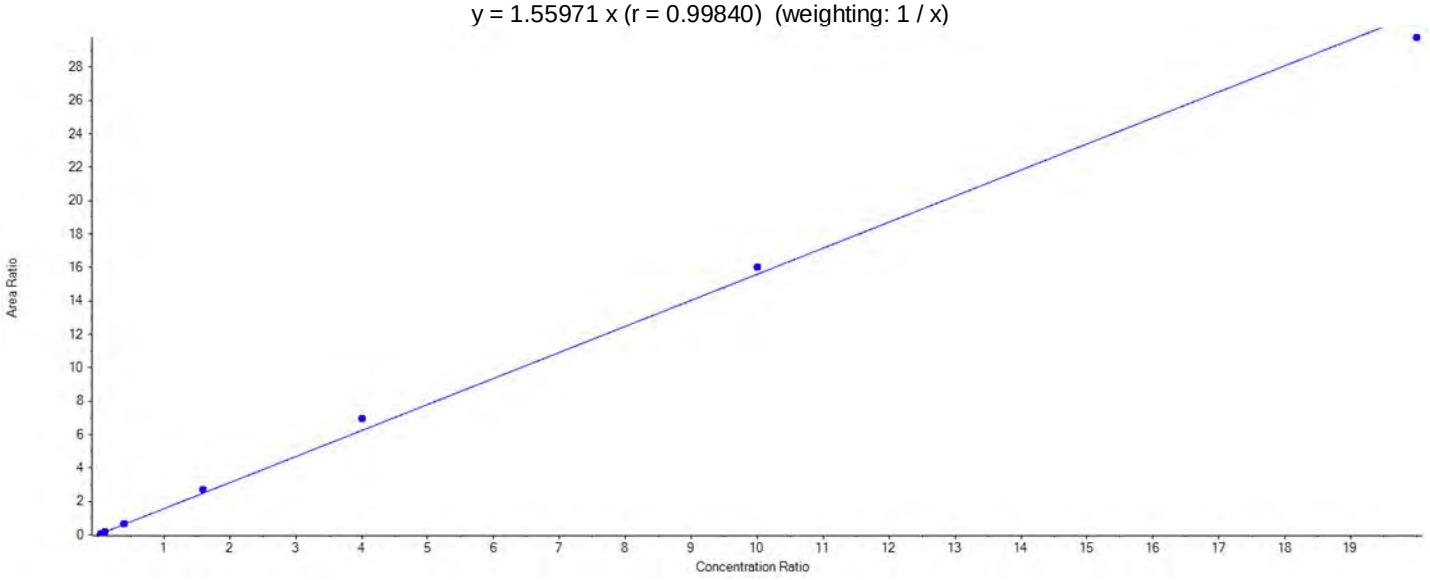
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.55971 x (r = 0.99840) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	21922.0	86.9	296629.265	True	5.00	0.074	6.25	1.000	0.200	0.237	18	30	
CAL2	48905.8	147.7	270607.582	True	5.00	0.181	6.25	1.000	0.500	0.579	16	30	
CAL3	180884.6	310.2	278375.126	True	5.00	0.650	6.25	1.000	2.000	2.083	4	30	
CAL4	740427.4	562.5	273909.084	True	5.00	2.703	6.25	1.000	8.000	8.666	8	30	
CAL5	1810587.6	560.5	259950.874	True	5.00	6.965	6.25	1.000	20.000	22.328	12	30	
CAL6	3836850.8	823.2	239316.963	True	5.00	16.033	6.25	1.000	50.000	51.396	3	30	
CAL7	6995371.5	738.3	235038.050	True	5.00	29.763	6.25	1.000	100.000	95.411	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

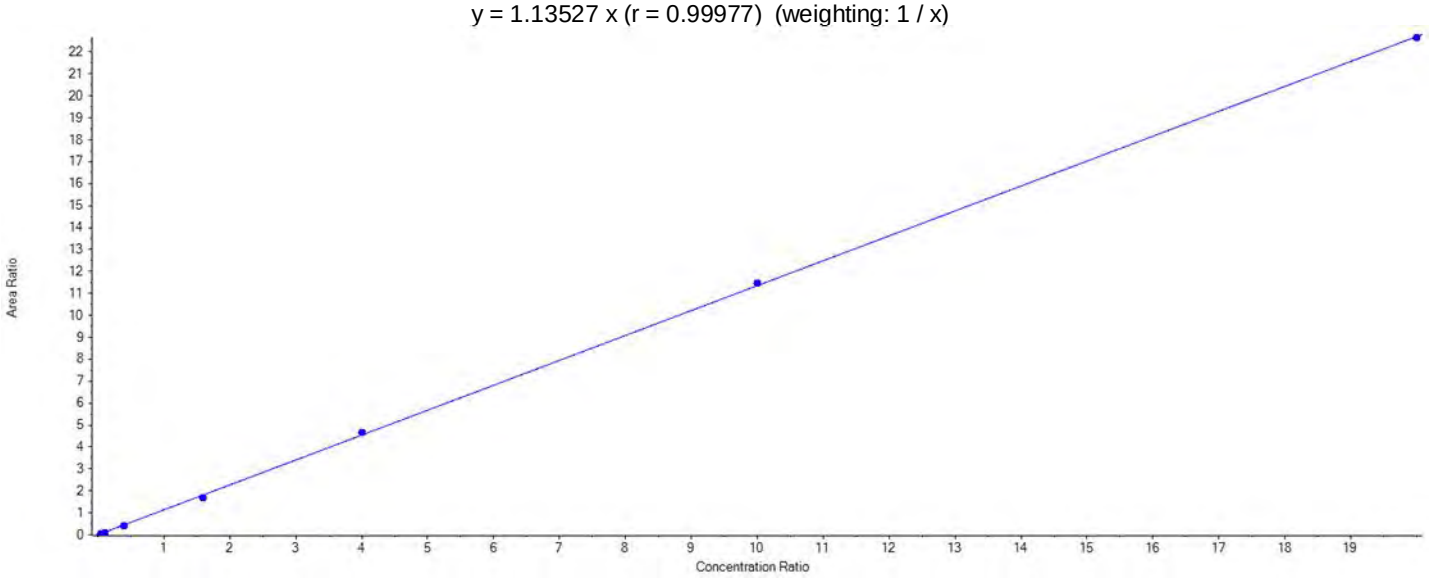
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.13527 x (r = 0.99977) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3068.5	69.6	70926.726	True	5.00	0.043	6.26	1.000	0.200	0.191	-5	30	
CAL2	6419.4	198.8	66745.434	True	5.00	0.096	6.26	1.000	0.500	0.424	-15	30	
CAL3	26524.6	267.9	67444.318	True	5.00	0.393	6.27	1.000	2.000	1.732	-13	30	
CAL4	123609.2	637.6	72258.683	True	5.00	1.711	6.26	1.000	8.000	7.534	-6	30	
CAL5	290096.1	630.6	62005.585	True	5.00	4.679	6.27	1.000	20.000	20.605	3	30	
CAL6	676107.2	667.5	59054.389	True	5.00	11.449	6.26	1.000	50.000	50.423	1	30	
CAL7	1329706.9	655.7	58686.052	True	5.00	22.658	6.26	1.000	100.000	99.791	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

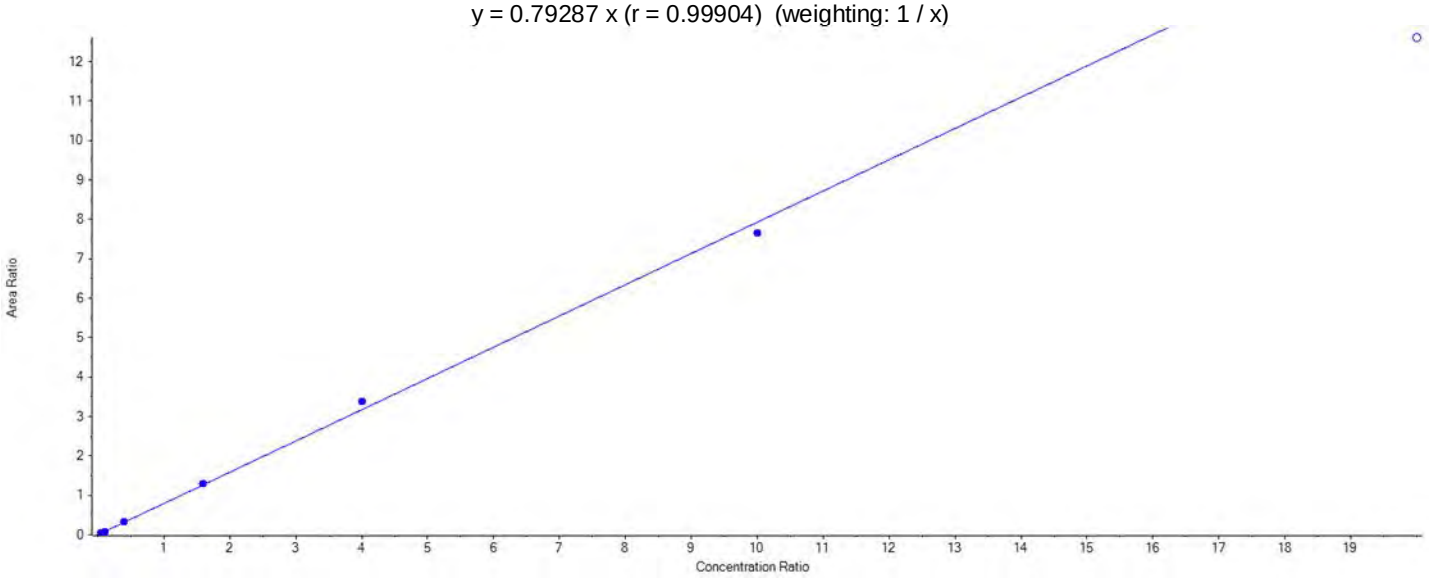
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.79287 x (r = 0.99904) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22403.2	67.6	564794.852	True	5.00	0.040	6.25	1.030	0.200	0.250	25	30	
CAL2	49218.5	108.1	597616.302	True	5.00	0.082	6.25	1.030	0.500	0.519	4	30	
CAL3	197290.7	195.6	584631.538	True	5.00	0.337	6.25	1.030	2.000	2.128	6	30	
CAL4	781283.7	366.6	598287.433	True	5.00	1.306	6.25	1.030	8.000	8.235	3	30	
CAL5	1851055.0	610.7	548536.046	True	5.00	3.375	6.25	1.030	20.000	21.280	6	30	
CAL6	3829048.4	757.6	500065.276	True	5.00	7.657	6.25	1.030	50.000	48.287	-3	30	
CAL7	6633128.3	811.0	525971.755	False	5.00	12.611	6.25	1.030	100.000	79.528	-20	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

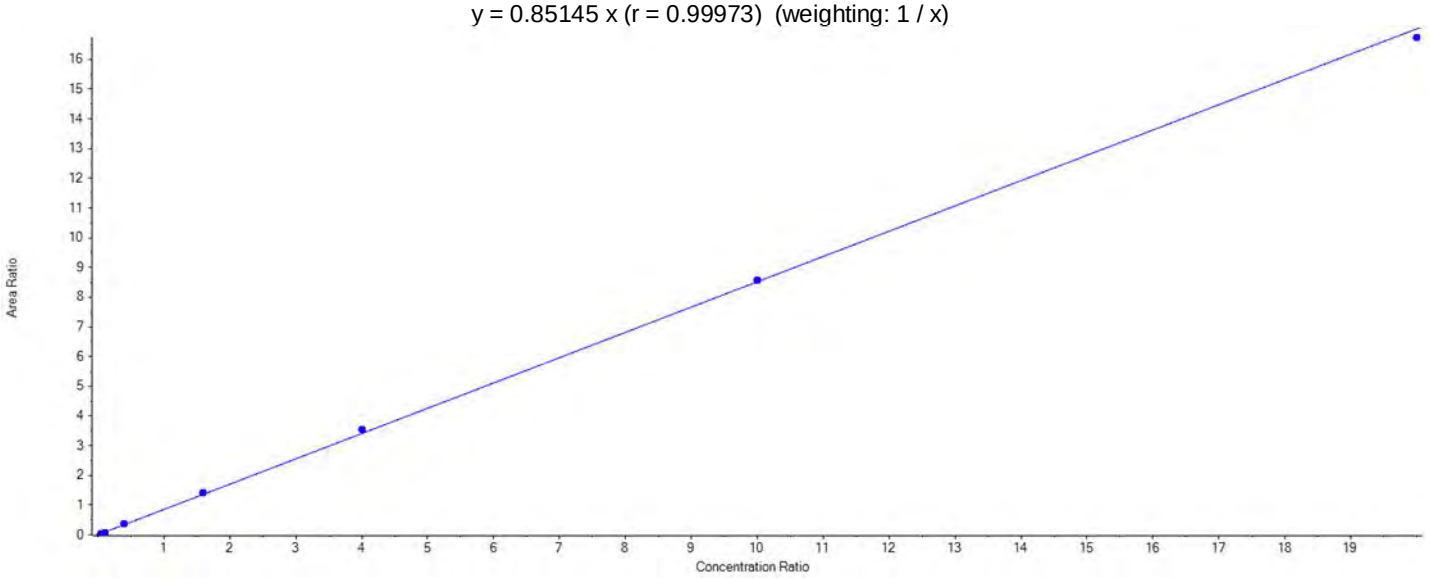
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.85145 x (r = 0.99973) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17031.0	49.1	430341.267	True	5.00	0.040	6.43	1.000	0.200	0.232	16	30	
CAL2	36223.2	102.6	441206.866	True	5.00	0.082	6.43	1.000	0.500	0.482	-4	30	
CAL3	150162.8	175.3	419341.711	True	5.00	0.358	6.43	1.000	2.000	2.103	5	30	
CAL4	630801.4	309.8	441858.057	True	5.00	1.428	6.43	1.000	8.000	8.383	5	30	
CAL5	1500655.1	416.1	421798.801	True	5.00	3.558	6.43	1.000	20.000	20.892	4	30	
CAL6	3381511.1	591.7	394433.888	True	5.00	8.573	6.42	1.000	50.000	50.344	1	30	
CAL7	6426587.4	783.6	384058.101	True	5.00	16.733	6.43	1.000	100.000	98.263	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

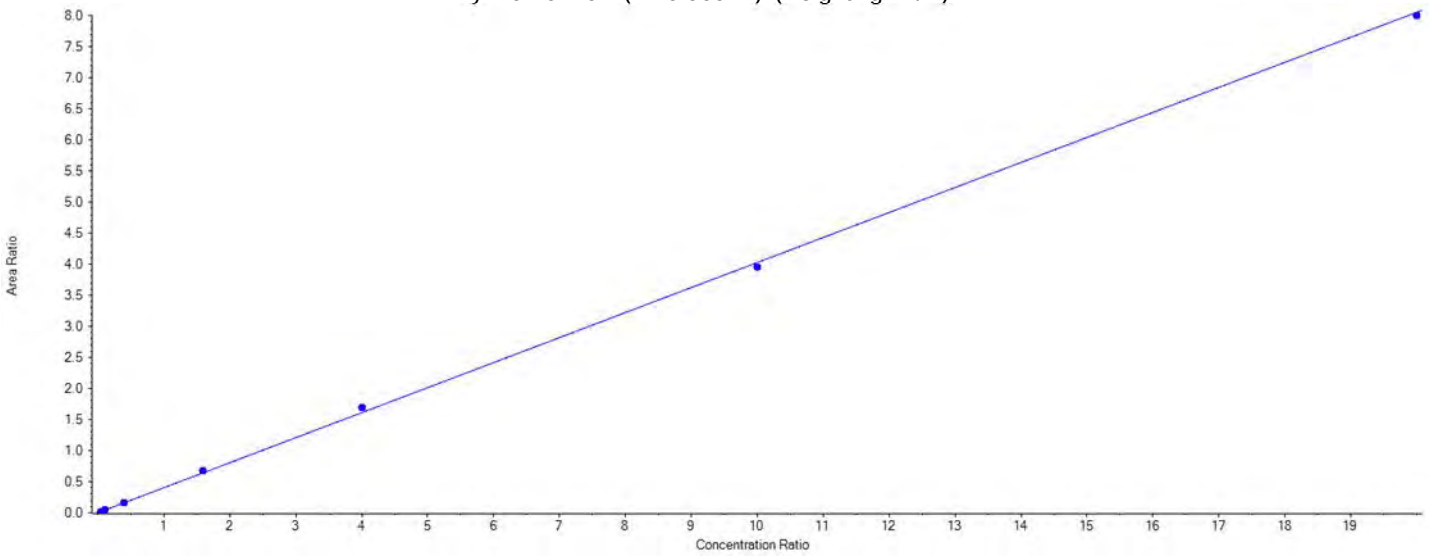
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.40279 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8175.1	231.4	430341.267	True	5.00	0.019	6.74	1.050	0.200	0.236	18	30	
CAL2	18619.3	372.3	441206.866	True	5.00	0.042	6.74	1.050	0.500	0.524	5	30	
CAL3	70193.5	676.5	419341.711	True	5.00	0.167	6.74	1.050	2.000	2.078	4	30	
CAL4	297242.6	1318.1	441858.057	True	5.00	0.673	6.73	1.050	8.000	8.351	4	30	
CAL5	716467.3	1493.6	421798.801	True	5.00	1.699	6.73	1.050	20.000	21.085	5	30	
CAL6	1559604.6	1330.2	394433.888	True	5.00	3.954	6.73	1.050	50.000	49.083	-2	30	
CAL7	3073572.7	1322.0	384058.101	True	5.00	8.003	6.73	1.050	100.000	99.343	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

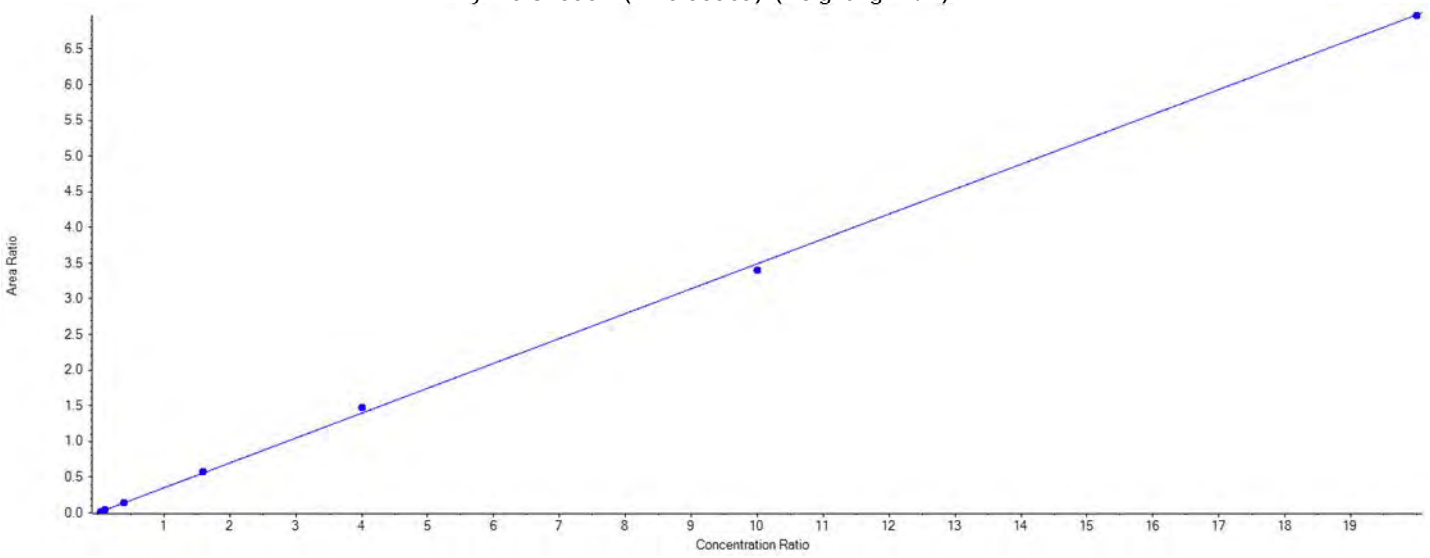
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.34900 x (r = 0.99969) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6622.6	295.7	430341.267	True	5.00	0.015	7.00	1.090	0.200	0.220	10	30	
CAL2	15742.1	618.0	441206.866	True	5.00	0.036	7.00	1.090	0.500	0.511	2	30	
CAL3	59736.9	980.9	419341.711	True	5.00	0.142	7.00	1.090	2.000	2.041	2	30	
CAL4	251726.5	1475.1	441858.057	True	5.00	0.570	7.00	1.090	8.000	8.162	2	30	
CAL5	624697.0	1672.6	421798.801	True	5.00	1.481	7.00	1.090	20.000	21.218	6	30	
CAL6	1340733.9	1995.4	394433.888	True	5.00	3.399	6.99	1.090	50.000	48.698	-3	30	
CAL7	2676698.5	2398.9	384058.101	True	5.00	6.970	6.99	1.090	100.000	99.849	0	30	

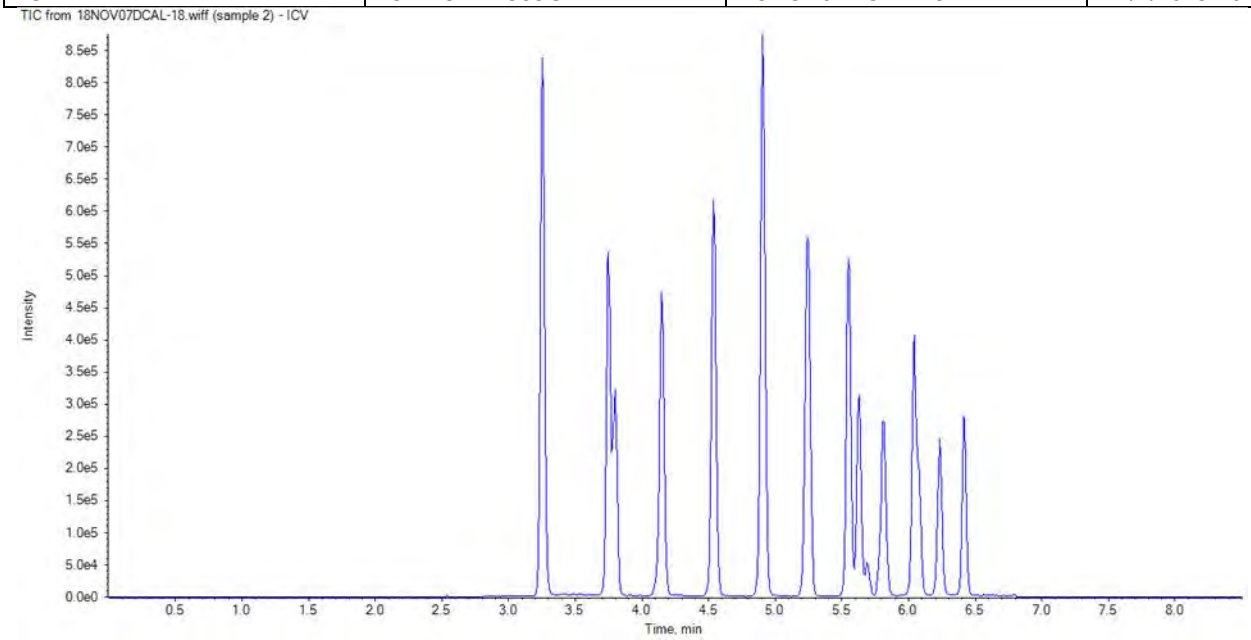
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV07DCAL-18.wiff	11/7/2018 10:51:59 AM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	748799.9	730410.6	2.5	50	
13C2-PFOA	5.000	501855.0	524423.6	-4.3	50	
13C4-PFOS	4.780	265586.7	274061.7	-3.1	50	
13C2-PFDA	5.000	309656.0	311442.1	-0.6	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV07DCAL-18.wiff	11/7/2018 10:51:59 AM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	307777.1	13C4-PFBA	809267.460	5.00	0.380	3.25	1.00	2.000	2.226	11	30	
PFPeA	325574.9	13C5-PFPeA	881218.236	5.00	0.369	3.75	1.00	2.000	2.196	10	30	
PFBS	159719.5	13C3-PFBS	459507.471	4.65	0.348	3.80	1.00	1.770	1.752	-1	30	
4:2-FTS	N/A	13C2-4:2-FTS	53451.954	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	397434.6	13C5-PFHxA	721013.613	5.00	0.551	4.15	1.00	2.000	2.364	18	30	
PFPeS	N/A	13C3-PFBS	459507.471	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHxS	126635.3	13C3-PFHxS	351165.975	4.73	0.361	4.54	1.00	1.890	1.828	-3	30	
PFHpA	390197.1	13C4-PFHpA	564695.352	5.00	0.691	4.54	1.00	2.000	2.324	16	30	
6:2-FTS	N/A	13C2-6:2-FTS	37550.072	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	126812.1	13C3-PFHxS	351165.975	4.73	0.361	4.90	1.08	1.900	1.889	-1	30	
PFOA	387215.1	13C8-PFOA	985027.092	5.00	0.393	4.91	1.00	2.000	2.213	11	30	
PFOS	114911.8	13C8-PFOS	289450.121	4.78	0.397	5.23	1.00	1.910	2.059	8	30	
PFNA	329644.4	13C9-PFNA	531663.026	5.00	0.620	5.25	1.00	2.000	2.317	16	30	
PFNS	N/A	13C8-PFOS	289450.121	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	262760.0	13C6-PFDA	669137.111	5.00	0.393	5.55	1.00	2.000	2.160	8	30	
8:2-FTS	N/A	13C2-8:2-FTS	27983.400	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	741232.186	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	33916.6	d3-NMeFOSAA	76665.384	5.00	0.442	5.69	1.00	2.000	2.276	14	30	
PFDS	65962.5	13C8-PFOS	289450.121	4.78	0.228	5.79	1.11	1.930	2.177	13	30	
PFUnDA	225137.5	13C7-PFUnDA	292761.511	5.00	0.769	5.81	1.00	2.000	2.205	10	30	
NEtFOSAA	29687.2	d5-NEtFOSAA	78938.706	5.00	0.376	5.83	1.00	2.000	1.616	-19	30	
PFDoDA	232949.2	13C2-PFDoDA	580675.056	5.00	0.401	6.04	1.00	2.000	2.174	9	30	
10:2-FTS	N/A	13C2-8:2-FTS	27983.400	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	334001.430	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	79719.053	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	289450.121	4.78	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	293829.693	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	65412.861	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFTrDA	206908.4	13C2-PFDoDA	580675.056	5.00	0.356	6.24	1.03	2.000	2.247	12	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA	157975.3	13C2-PFTeDA	427601.643	5.00	0.369	6.42	1.00	2.000	2.169	8	30	
PFHxDA	N/A	13C2-PFTeDA	427601.643	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	427601.643	5.00	N/A	N/A	N/A	0.000	N/A		30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV07DCAL-10.wiff
Sample ID:	CALMOD11833G			**Acquis Date:**		2018-11-07T09:39:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	750780.0	730410.6	3	50	
13C2-PFOA	5.0	534171.9	524423.6	2	50	
13C4-PFOS	4.8	272674.7	274061.7	-1	50	
13C2-PFDA	5.0	338833.7	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	794718.9	13C3-PFBA	750780.0	1.059	5.000	4.899	98	70-130	
E13C5-PFPeA	844850.2	13C3-PFBA	750780.0	1.125	5.000	4.902	98	70-130	
E13C3-PFBS	449266.3	13C3-PFBA	750780.0	0.598	4.650	4.392	94	70-130	
E13C2-4:2-FTS	58330.9	13C2-PFOA	534171.9	0.109	4.670	4.927	106	70-130	
E13C5-PFHxA	725432.0	13C2-PFOA	534171.9	1.358	5.000	4.996	100	70-130	
E13C3-PFHxS	358771.3	13C2-PFOA	534171.9	0.672	4.730	4.822	102	70-130	
E13C4-PFHpA	586580.3	13C2-PFOA	534171.9	1.098	5.000	4.995	100	70-130	
E13C2-6:2-FTS	42112.8	13C2-PFOA	534171.9	0.079	4.750	5.257	111	70-130	
E13C8-PFOA	1028414.9	13C2-PFOA	534171.9	1.925	5.000	5.369	107	70-130	
E13C8-PFOS	307224.3	13C4-PFOS	272674.7	1.127	4.780	4.982	104	70-130	
E13C9-PFNA	518118.7	13C4-PFOS	272674.7	1.900	5.000	5.190	104	70-130	
E13C6-PFDA	651348.0	13C2-PFDA	338833.7	1.922	5.000	4.834	97	70-130	
E13C2-8:2-FTS	26730.2	13C2-PFDA	338833.7	0.079	4.790	4.174	87	70-130	
E13C8-PFOSA	774962.8	13C2-PFDA	338833.7	2.287	5.000	4.991	100	70-130	
Ed3-NMeFOSAA	94967.0	13C2-PFDA	338833.7	0.280	5.000	5.212	104	70-130	
E13C7-PFUnDA	293658.7	13C2-PFDA	338833.7	0.867	5.000	5.000	100	70-130	
Ed5-NEtFOSAA	77938.3	13C2-PFDA	338833.7	0.230	5.000	5.323	106	70-130	
E13C2-PFDoDA	564794.9	13C2-PFDA	338833.7	1.667	5.000	4.494	90	70-130	
Ed7-NMePFOSAE	366847.7	13C2-PFDA	338833.7	1.083	5.000	5.035	101	70-130	
Ed3-NMePFOSA	89511.9	13C2-PFDA	338833.7	0.264	5.000	4.836	97	70-130	
Ed9-NEtPFOSAE	296629.3	13C2-PFDA	338833.7	0.875	5.000	5.000	100	70-130	
Ed5-NEtPFOSA	70926.7	13C2-PFDA	338833.7	0.209	5.000	4.847	97	70-130	
E13C2-PFTeDA	430341.3	13C2-PFDA	338833.7	1.270	5.000	4.572	91	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

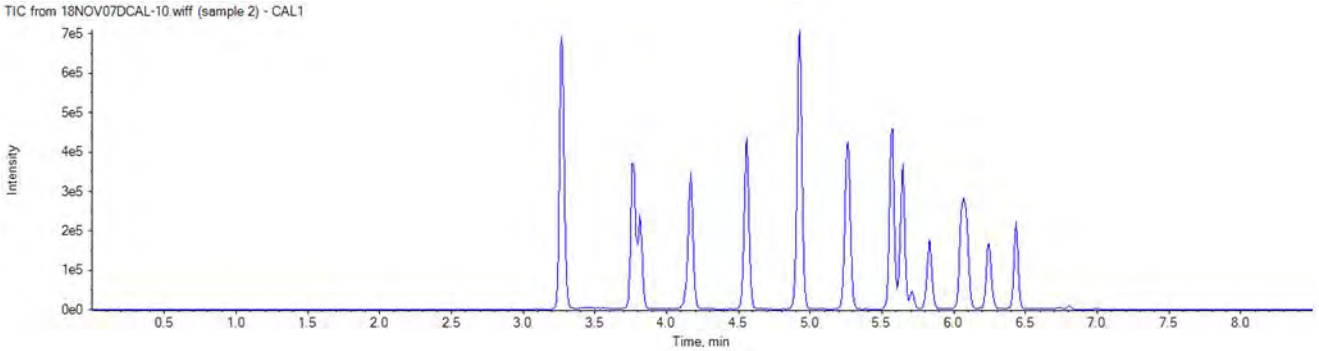
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-10.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	32354.4		A	13C4-PFBA	3.27	794718.9	0.041	0.238
PFPeA	3.77	1.000	33205.5		A	13C5-PFPeA	3.77	844850.2	0.039	0.234
PFBS	3.82	1.000	19024.1		A	13C3-PFBS	3.82	449266.3	0.042	0.213
4:2-FTS	4.13	1.000	4145.4		M	13C2-4:2-FTS	4.13	58330.9	0.071	0.191
PFHxA	4.17	1.000	39732.2		A	13C5-PFHxA	4.17	725432.0	0.055	0.235
PFPeS	4.18	1.100	8335.4		A	13C3-PFBS	3.82	449266.3	0.019	0.183
PFHxS	4.56	1.000	13762.6		M	13C3-PFHxS	4.56	358771.3	0.038	0.194
PFHpA	4.55	1.000	38331.9		M	13C4-PFHpA	4.56	586580.3	0.065	0.220
6:2-FTS	4.91	1.000	2460.6		A	13C2-6:2-FTS	4.91	42112.8	0.058	0.146
PFHpS	4.91	1.080	14183.4		M	13C3-PFHxS	4.56	358771.3	0.040	0.207
PFOA	4.93	1.000	39843.5		A	13C8-PFOA	4.93	1028414.9	0.039	0.218
PFOS	5.25	1.000	12181.7		A	13C8-PFOS	5.25	307224.3	0.040	0.206
PFNA	5.27	1.000	32563.3		M	13C9-PFNA	5.27	518118.7	0.063	0.235
PFNS	5.55	1.060	6748.5		A	13C8-PFOS	5.25	307224.3	0.022	0.174
PFDA	5.57	1.000	25530.0		A	13C6-PFDA	5.57	651348.0	0.039	0.216
8:2-FTS	5.58	1.000	2783.3		M	13C2-8:2-FTS	5.57	26730.2	0.104	0.235
PFOSA	5.64	1.000	27779.6		A	13C8-PFOSA	5.64	774962.8	0.036	0.194
NMeFOSAA	5.71	1.000	3293.8		M	d3-NMeFOSAA	5.71	94967.0	0.035	0.178
PFDS	5.80	1.100	6453.6		A	13C8-PFOS	5.25	307224.3	0.021	0.201
PFUnDA	5.83	1.000	23275.5		M	13C7-PFUnDA	5.83	293658.7	0.079	0.227
NEtFOSAA	5.84	1.000	3313.0		A	d5-NEtFOSAA	5.84	77938.3	0.043	0.183
PFDoDA	6.06	1.000	23314.2		M	13C2-PFDoDA	6.06	564794.9	0.041	0.224
10:2-FTS	6.07	1.090	1903.7		A	13C2-8:2-FTS	5.57	26730.2	0.071	0.222
NMePFOSAE	6.10	1.000	19989.4		A	d7-NMePFOSAE	6.09	366847.7	0.054	0.244
NMePFOSA	6.10	1.000	3218.9		M	d3-NMePFOSA	6.10	89511.9	0.036	0.201
PFDoS	6.22	1.190	3016.1		M	13C8-PFOS	5.25	307224.3	0.010	0.189
NEtPFOSAE	6.25	1.000	21922.0		A	d9-NEtPFOSAE	6.24	296629.3	0.074	0.237
NEtPFOSA	6.26	1.000	3068.5		M	d5-NEtPFOSA	6.26	70926.7	0.043	0.191
PFTrDA	6.25	1.030	22403.2		A	13C2-PFDoDA	6.06	564794.9	0.040	0.250
PFTeDA	6.43	1.000	17031.0		A	13C2-PFTeDA	6.43	430341.3	0.040	0.232
PFHxDA	6.74	1.050	8175.1		A	13C2-PFTeDA	6.43	430341.3	0.019	0.236
PFODA	7.00	1.090	6622.6		A	13C2-PFTeDA	6.43	430341.3	0.015	0.220

Total Ion Chromatogram

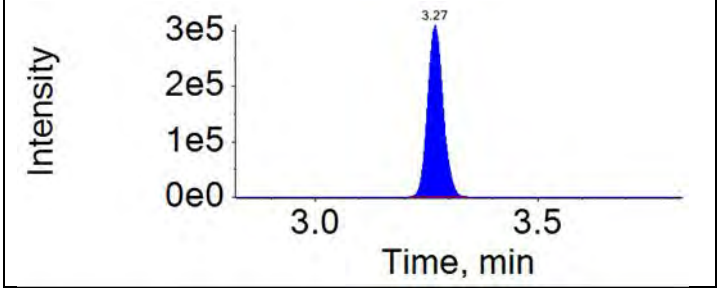


APPROVED
By JPT at 2:53 pm, 11/7/18

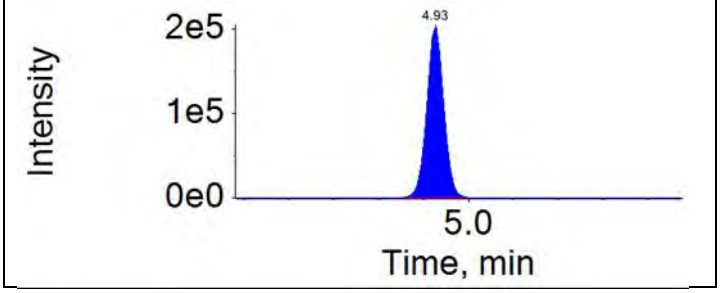
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

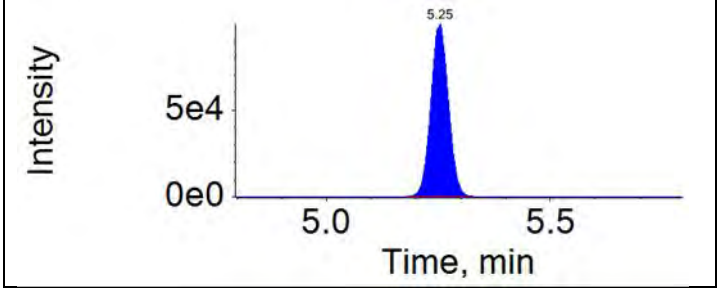
Injection Standard: 13C3-PFBA
216.0 / 172.0



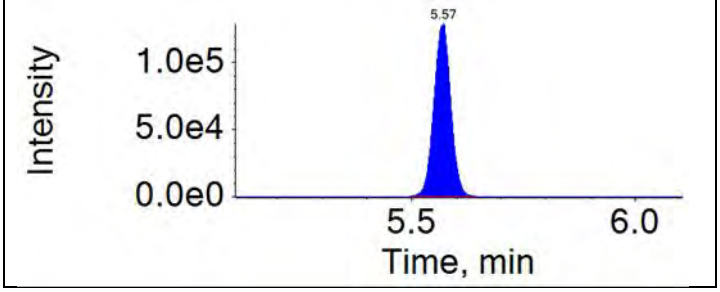
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



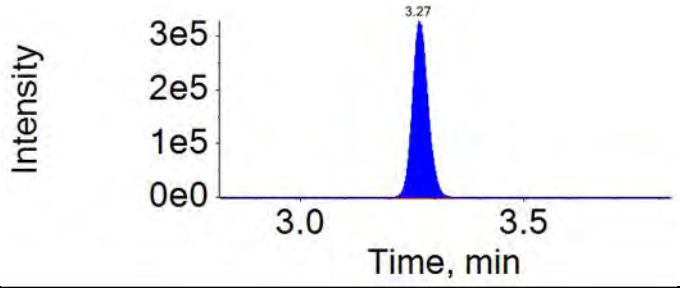
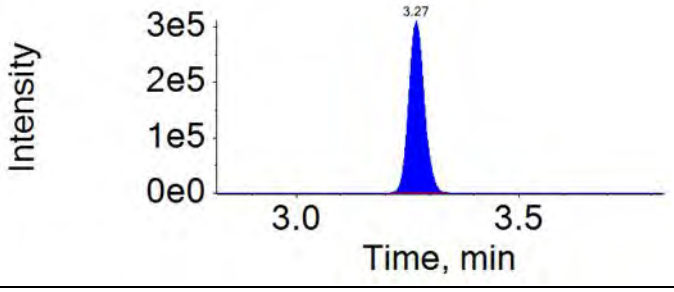
Injection Standard: 13C2-PFDA
515.0 / 470.0

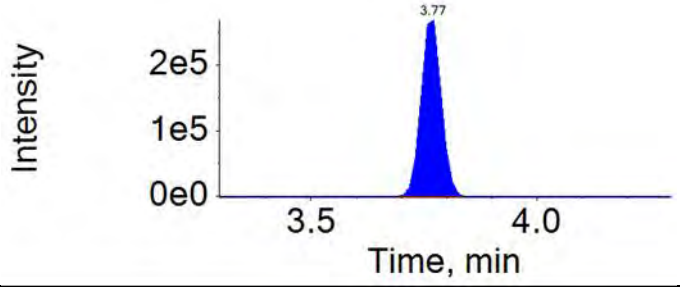
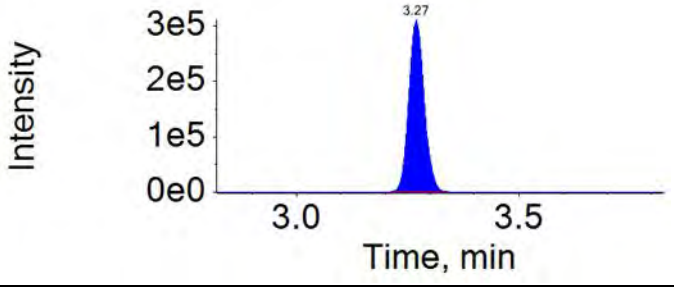


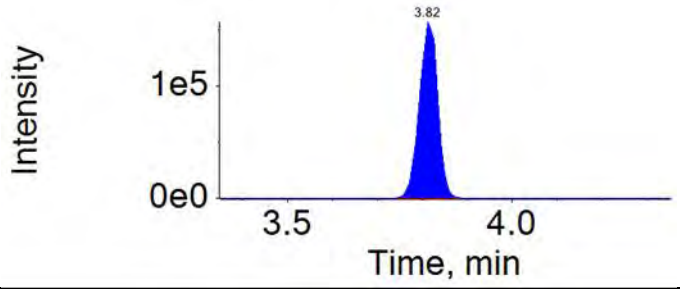
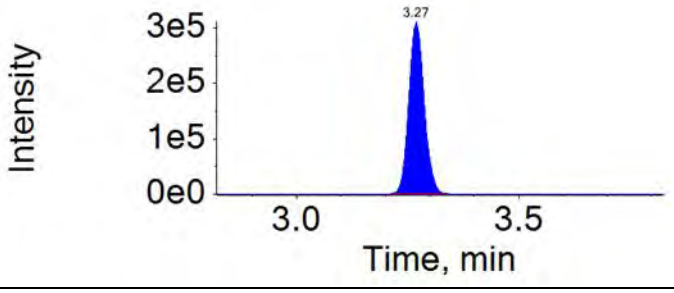
APPROVED
By JPT at 2:53 pm, 11/7/18

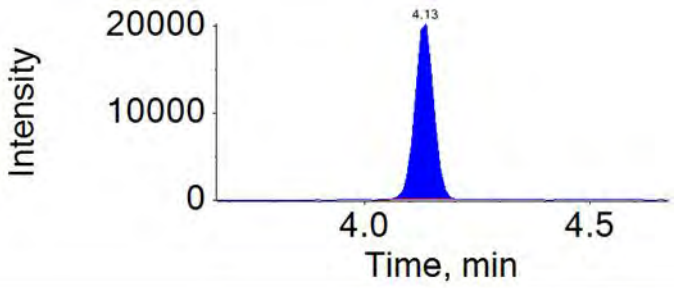
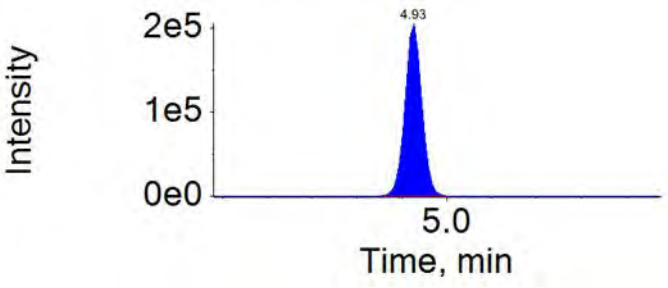
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

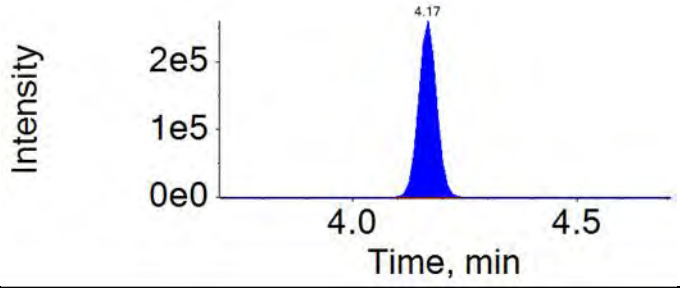
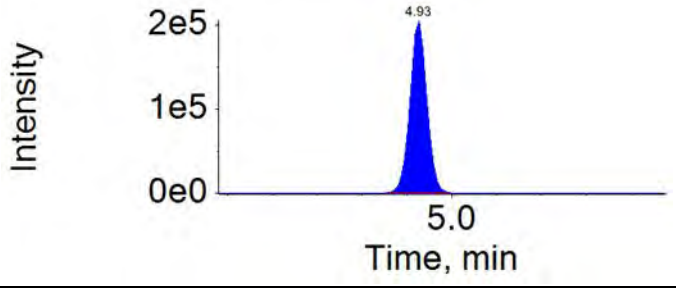
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

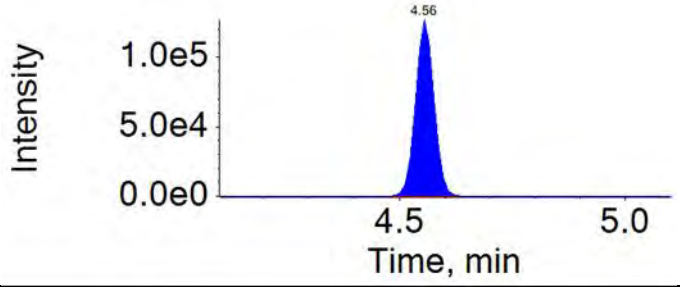
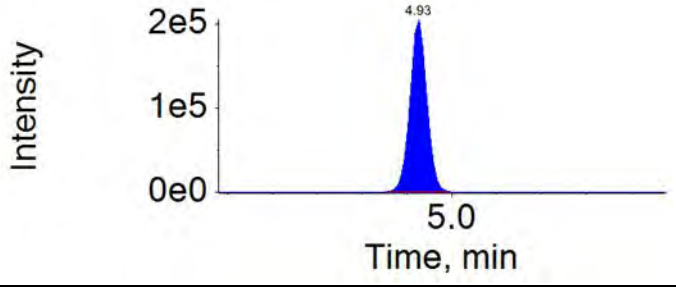
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

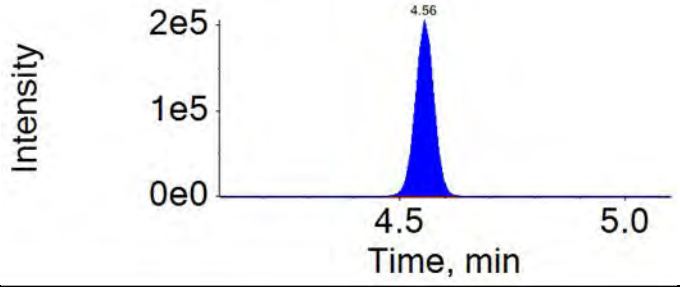
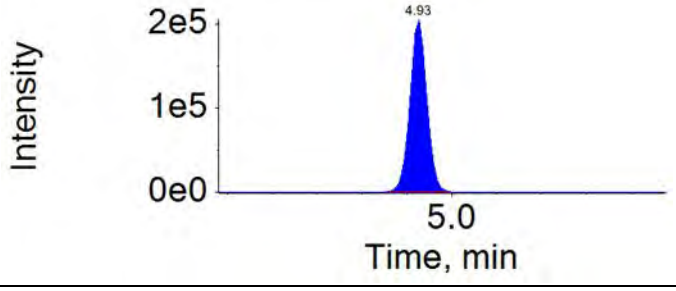
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

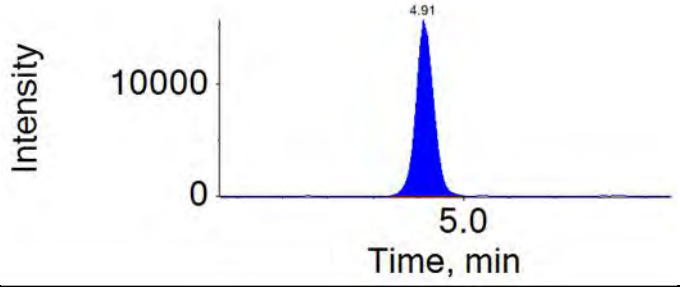
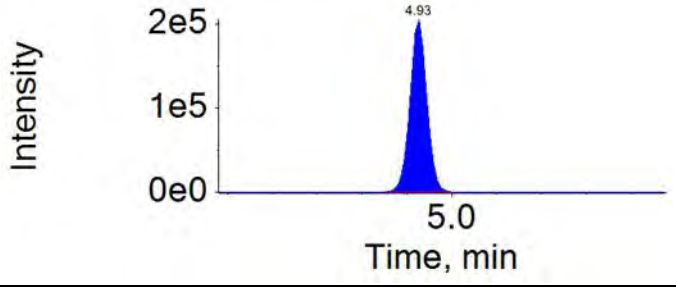
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

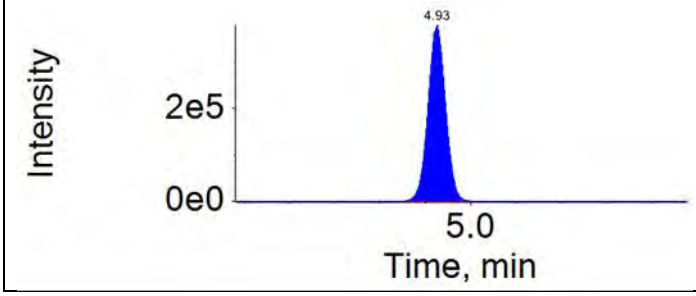
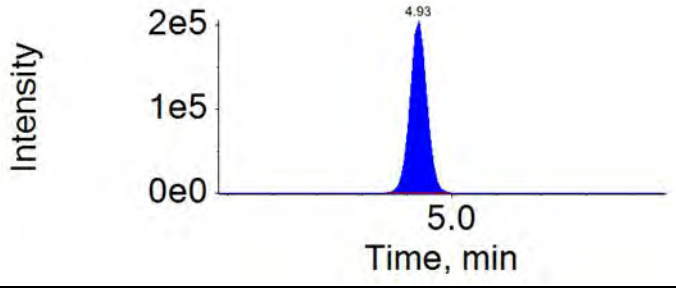
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

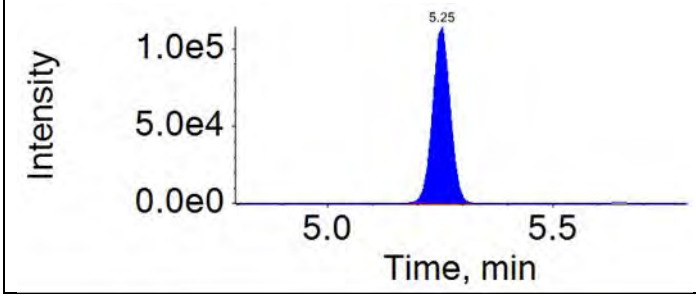
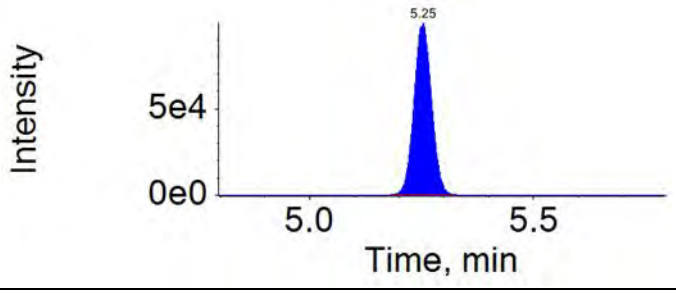
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

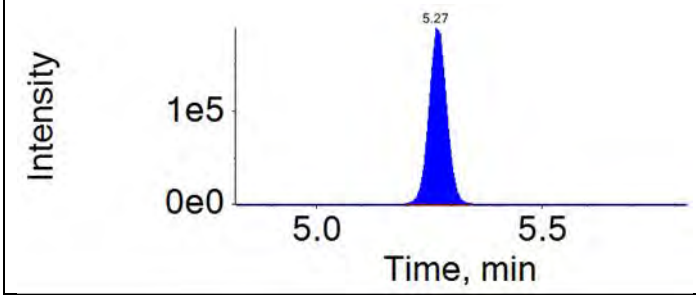
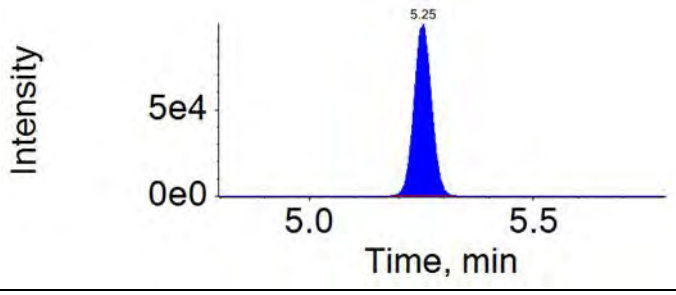
APPROVED
By JPT at 2:53 pm, 11/7/18

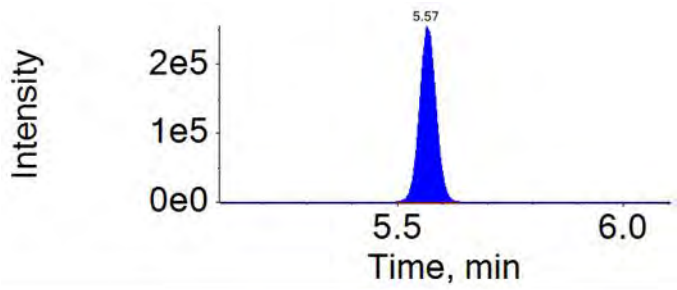
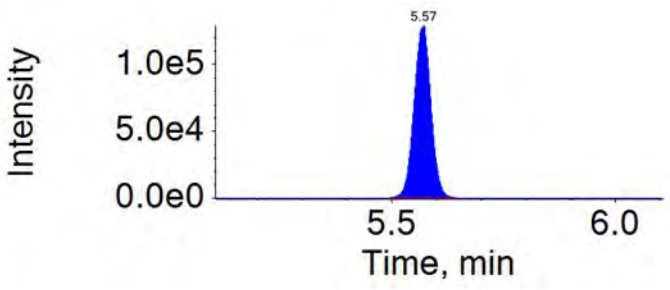
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

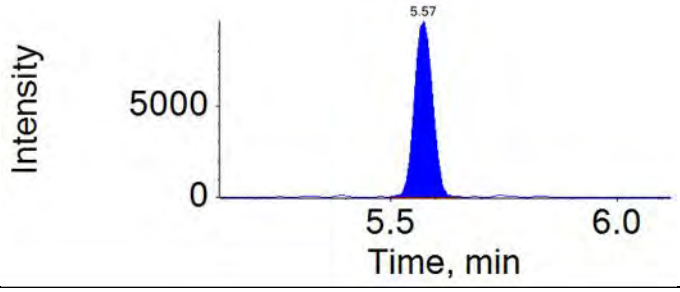
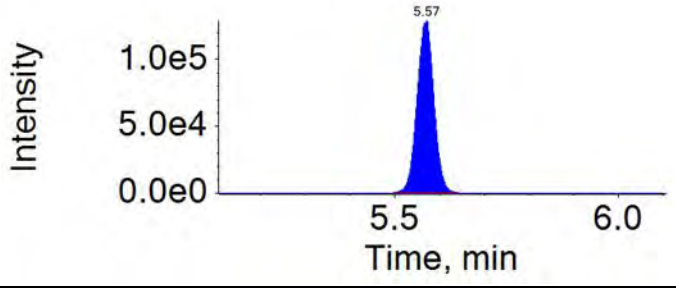
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

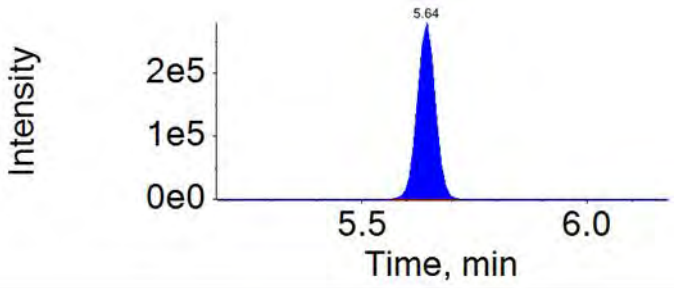
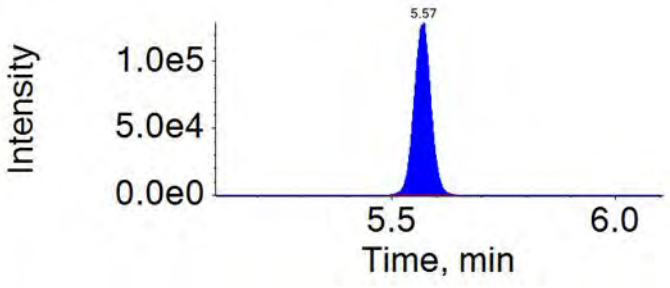
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

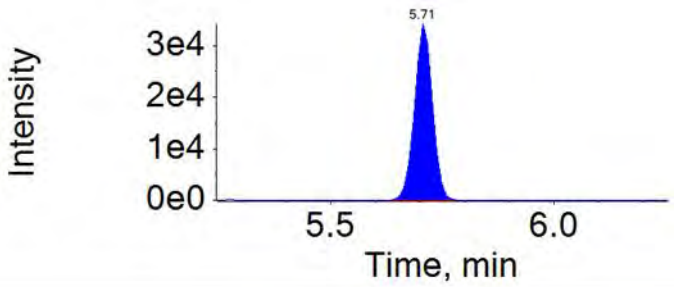
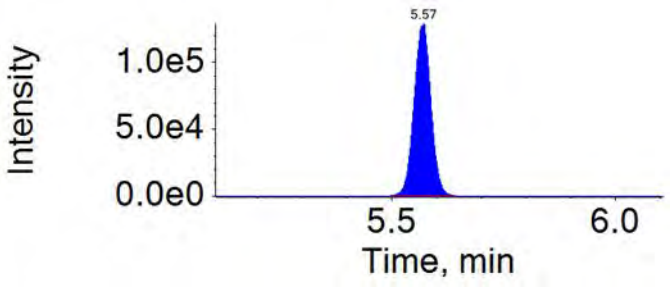
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

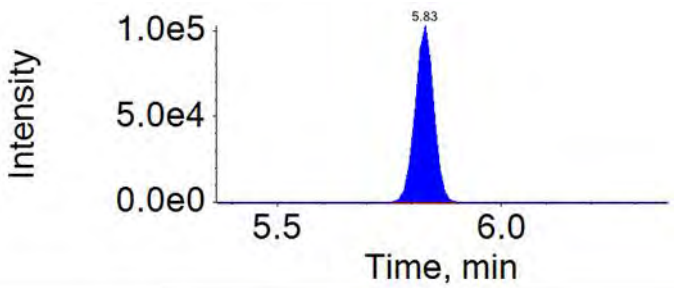
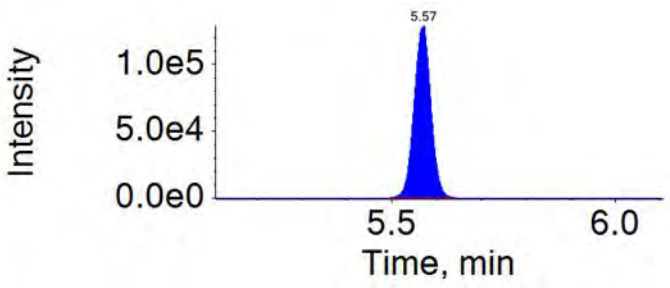
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

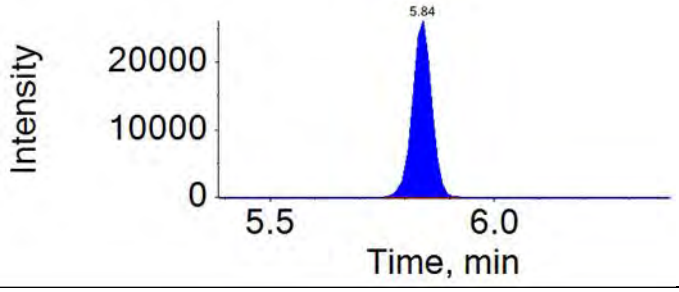
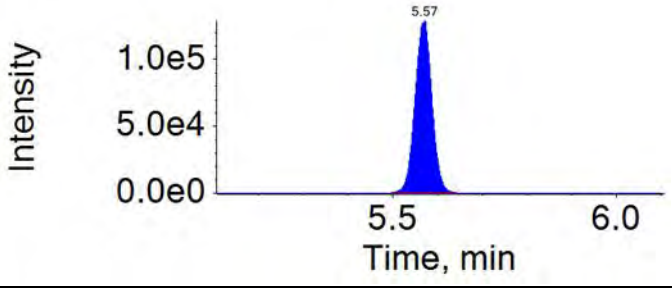
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

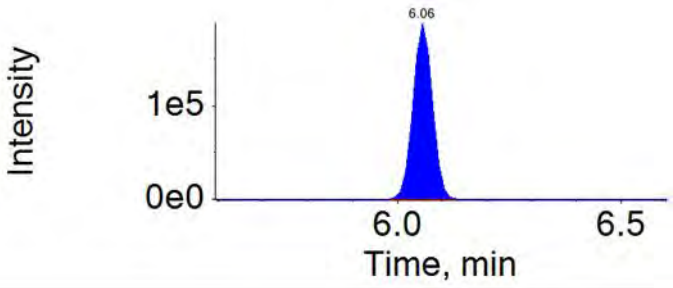
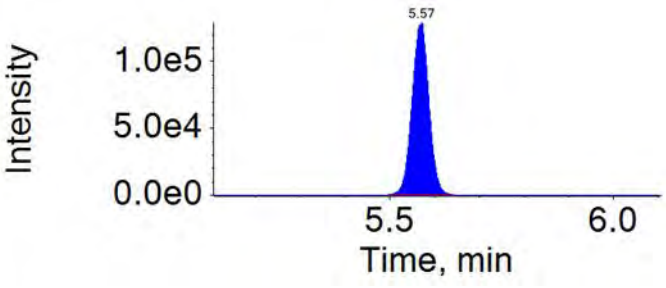
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

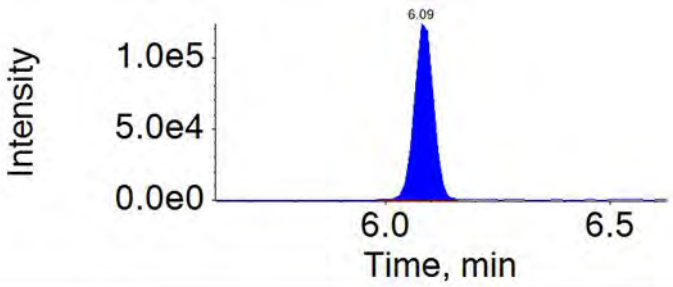
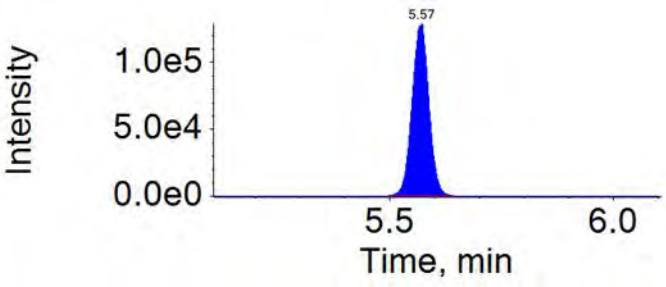
APPROVED
By JPT at 2:53 pm, 11/7/18

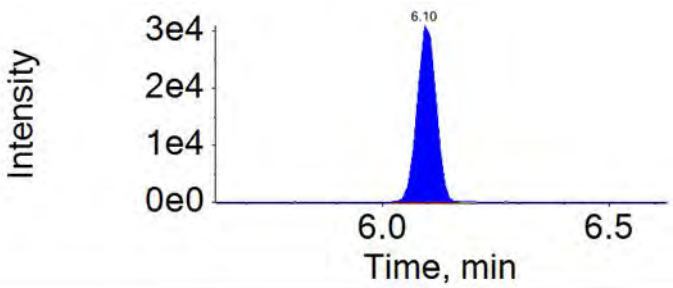
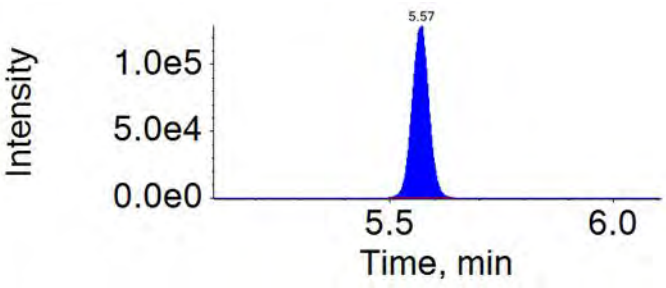
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

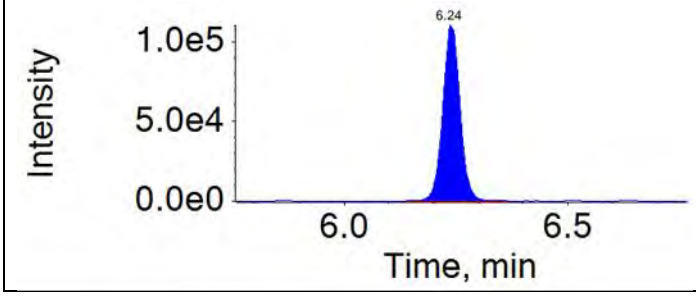
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

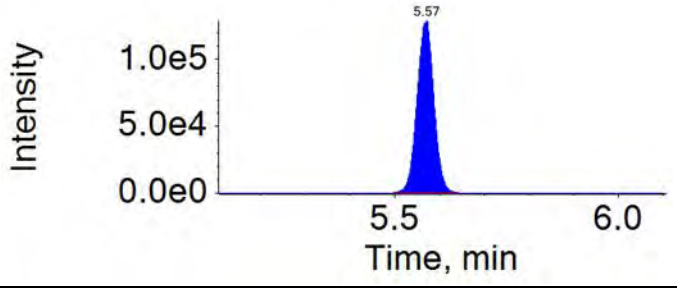
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

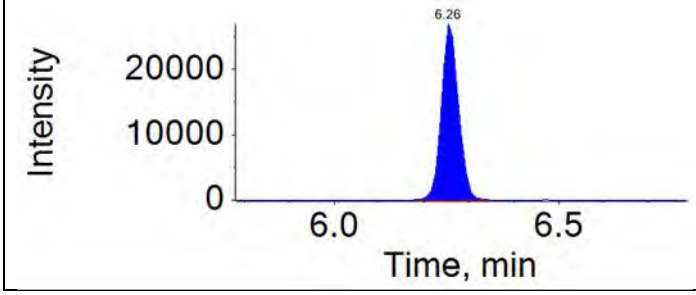
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

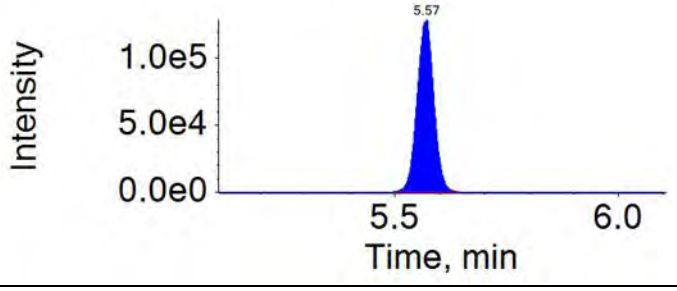
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



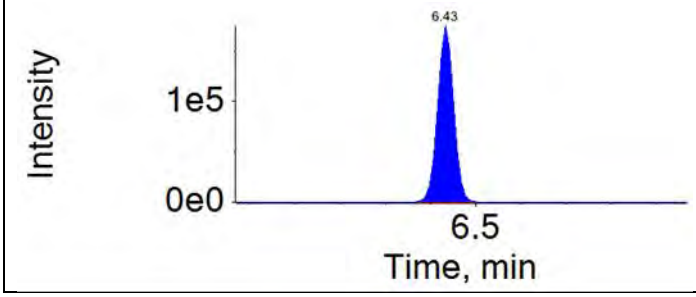


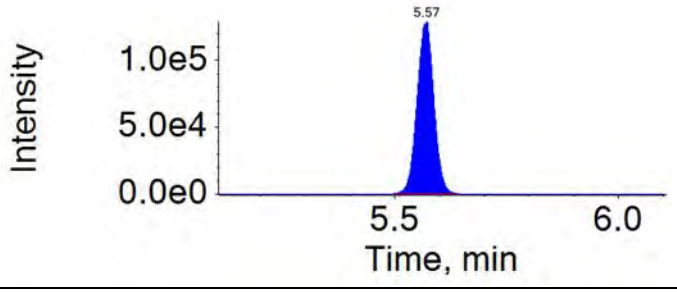
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



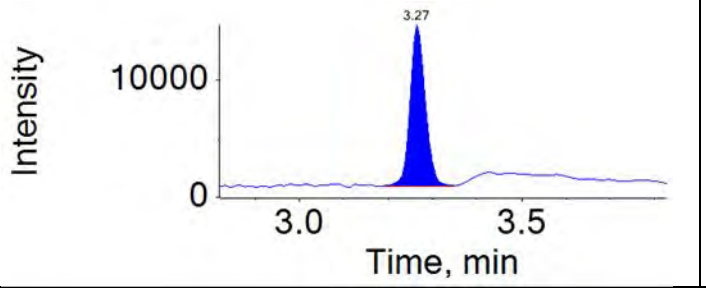


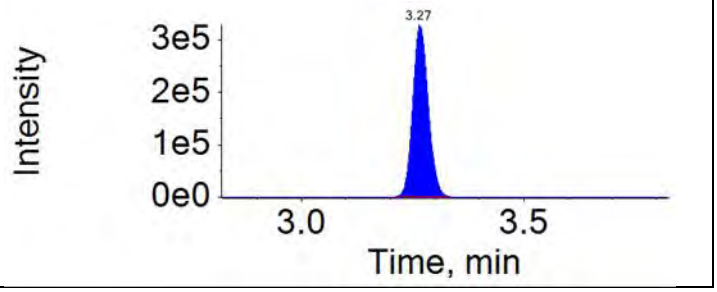
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

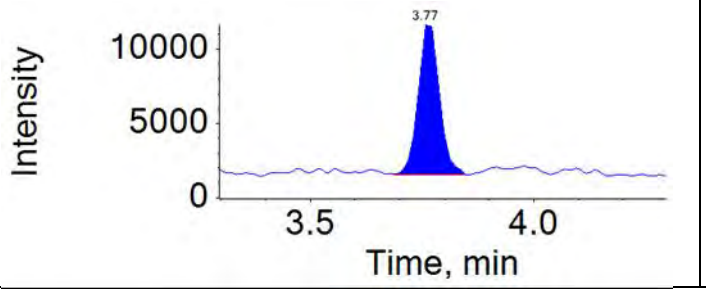
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

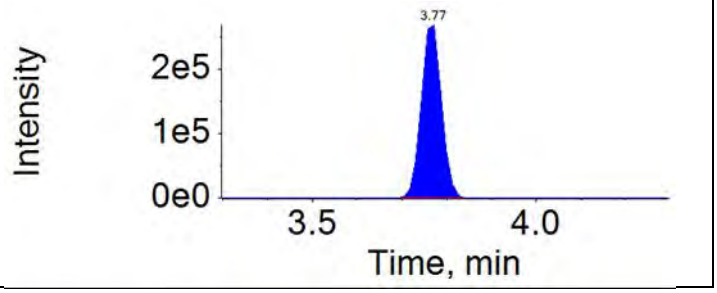
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



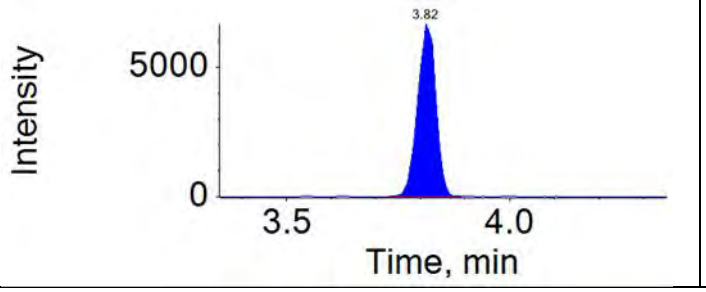


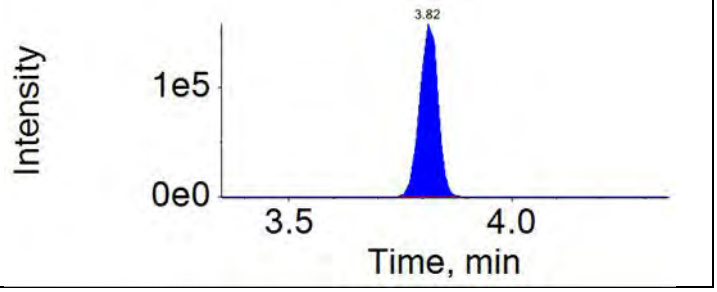
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



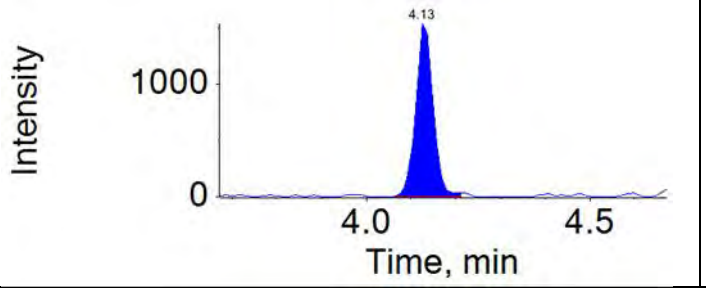


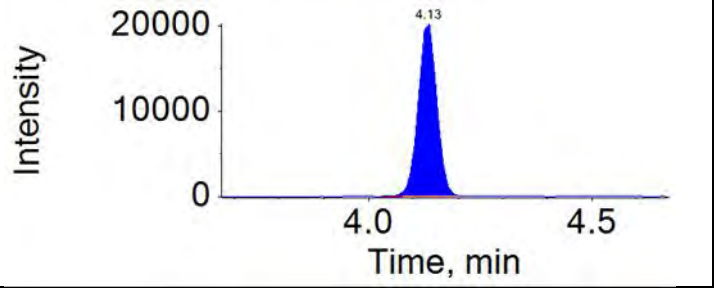
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

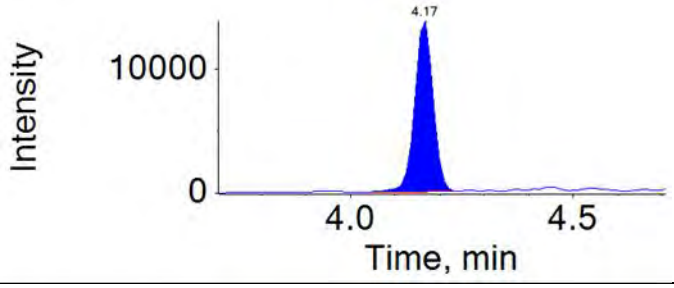
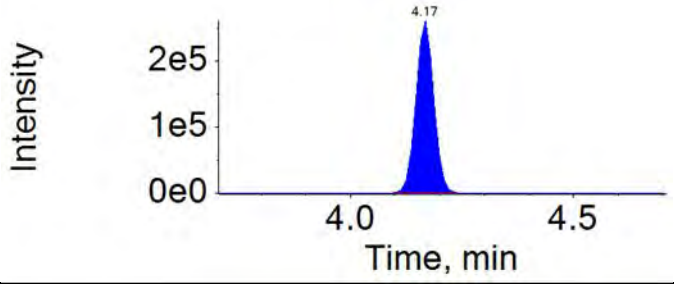


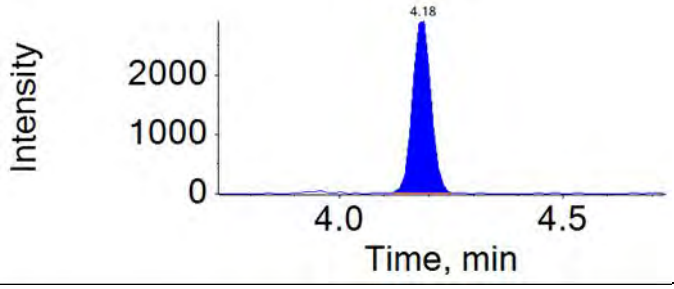
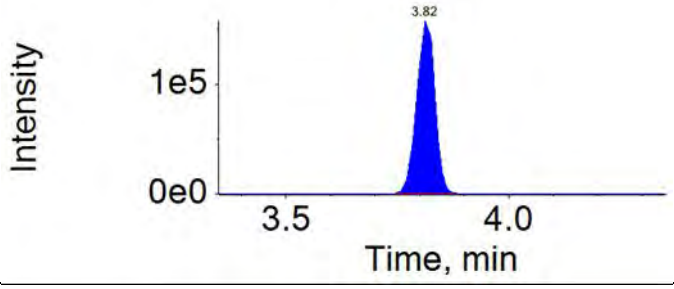


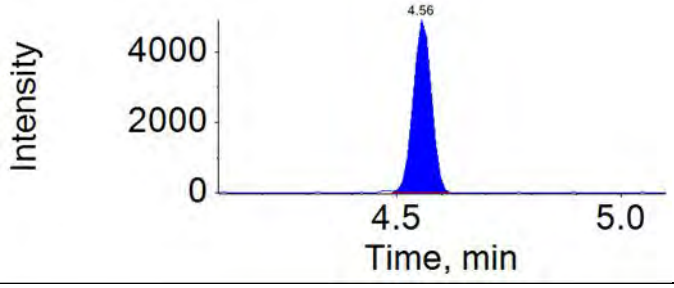
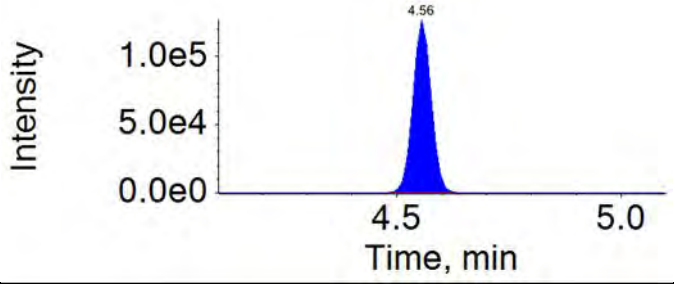
APPROVED
By JPT at 2:53 pm, 11/7/18

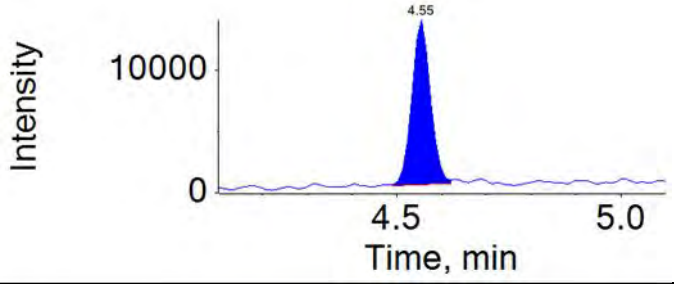
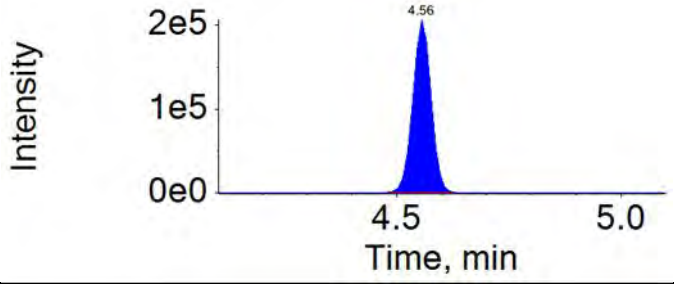
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

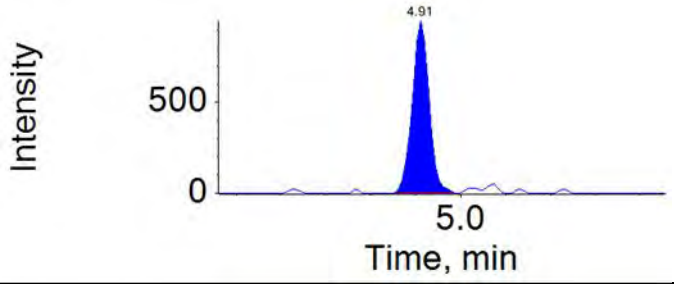
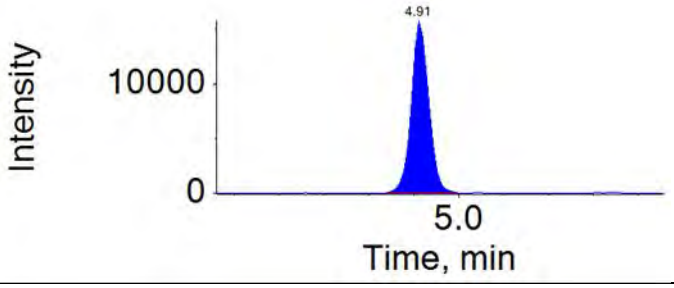
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

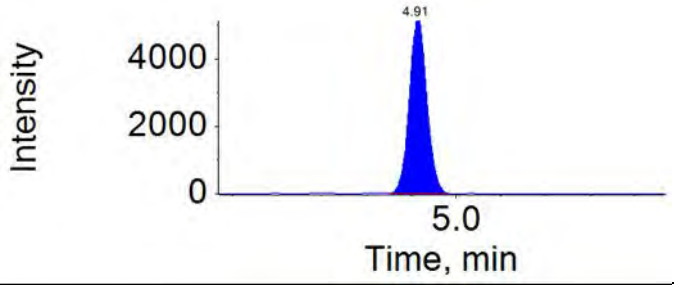
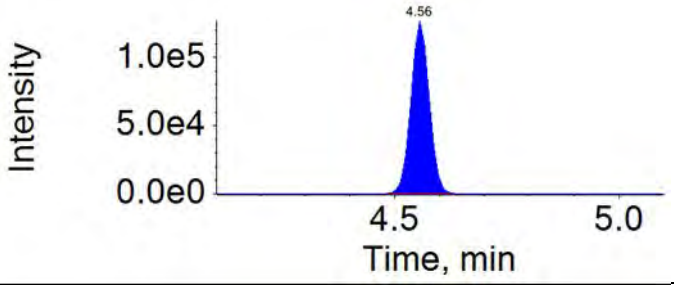
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

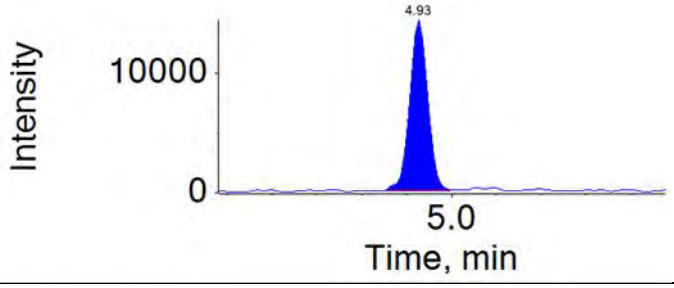
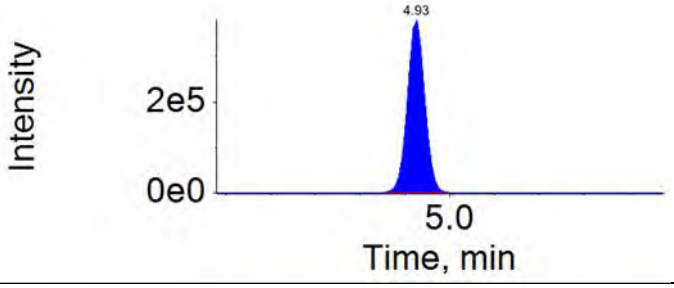
APPROVED
By JPT at 2:53 pm, 11/7/18

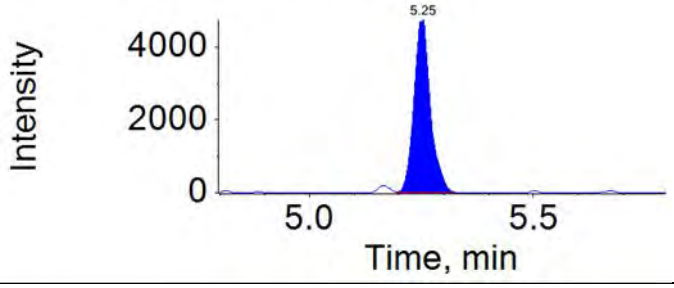
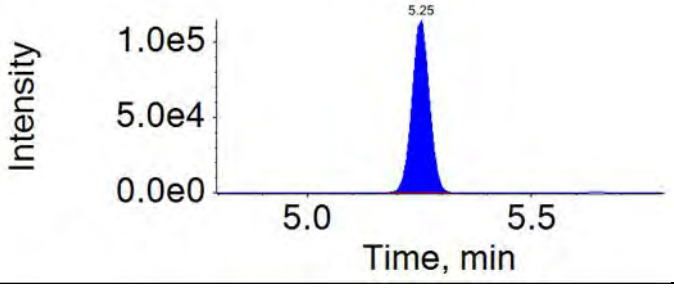
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

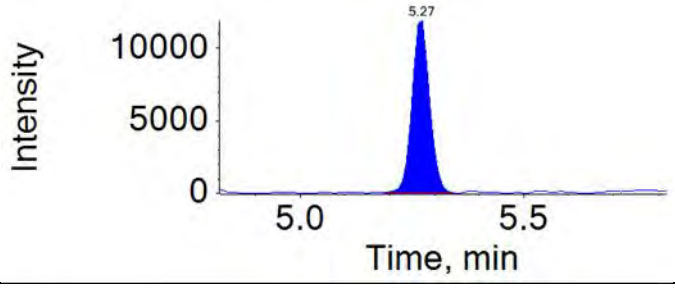
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

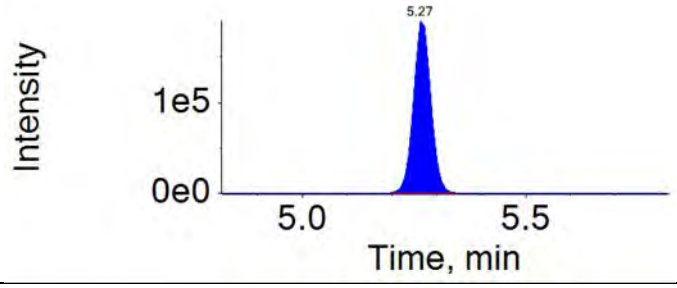
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

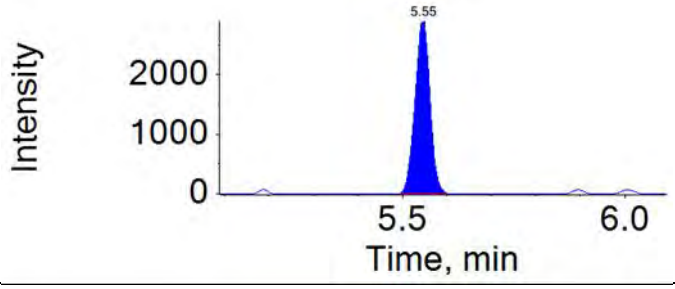
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

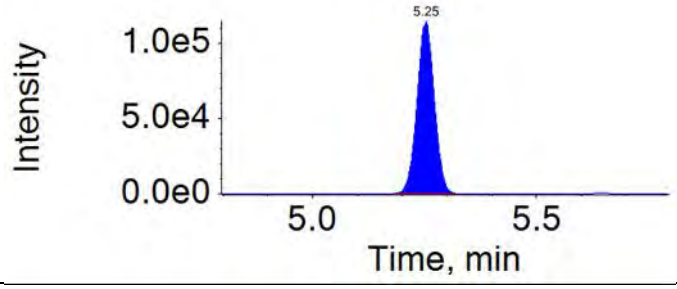
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



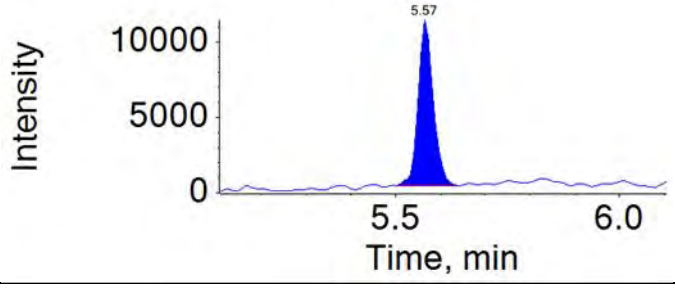


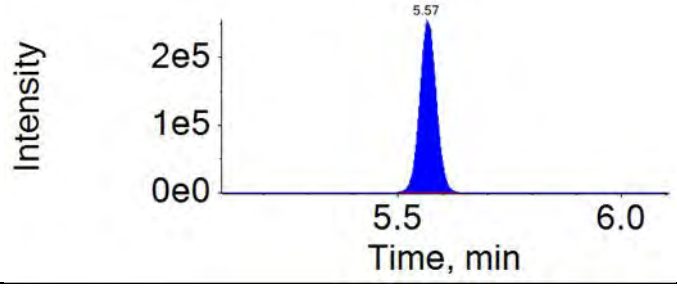
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



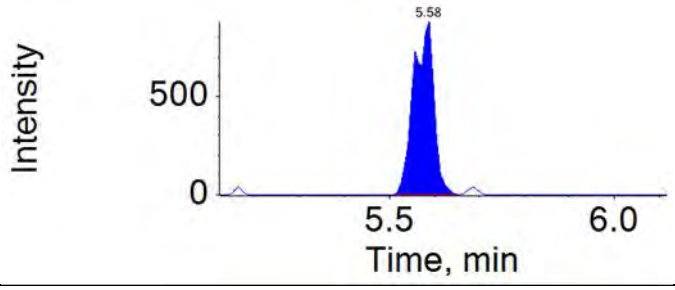


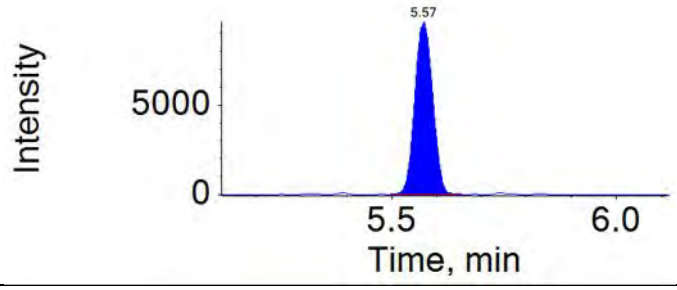
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

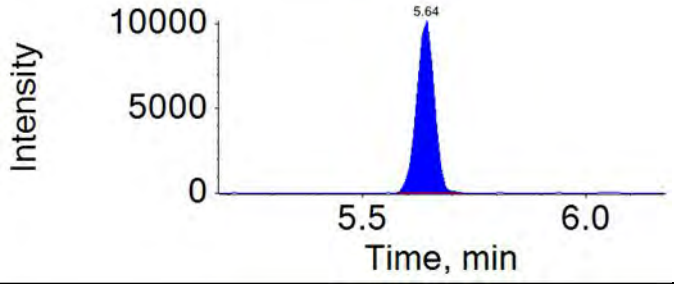
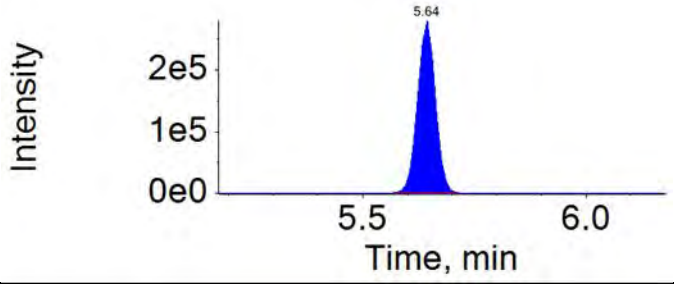


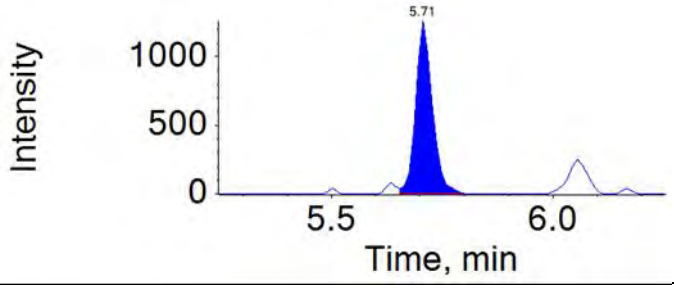
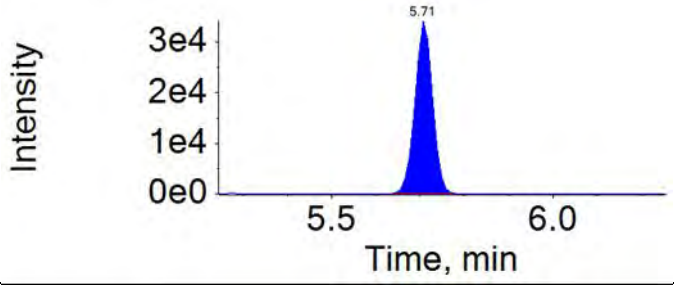


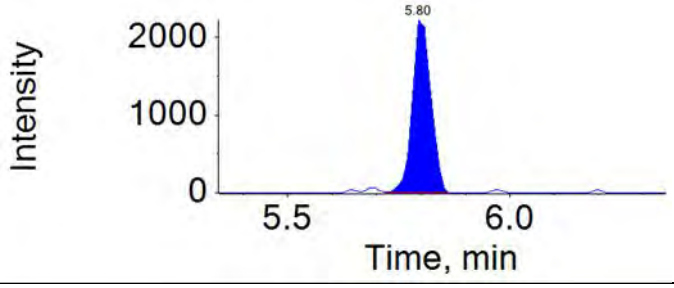
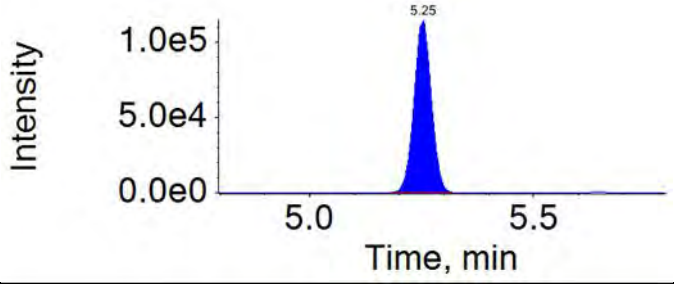
APPROVED
By JPT at 2:53 pm, 11/7/18

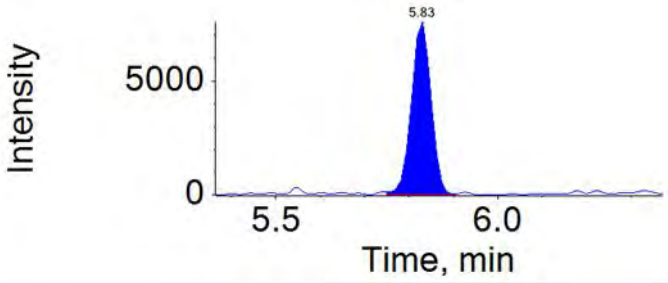
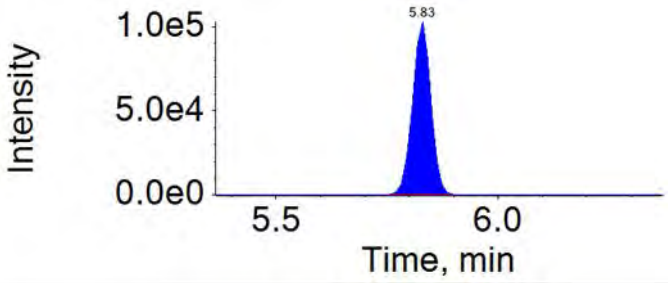
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

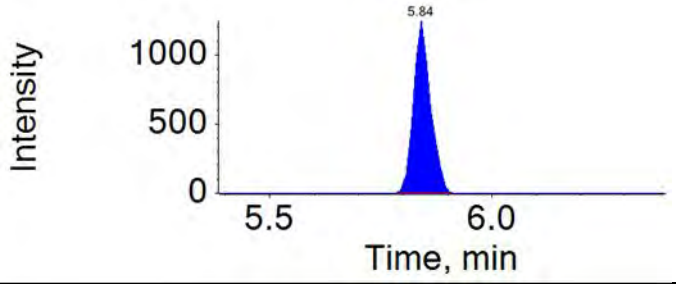
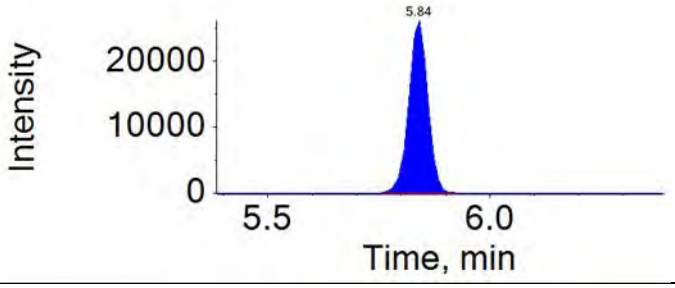
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

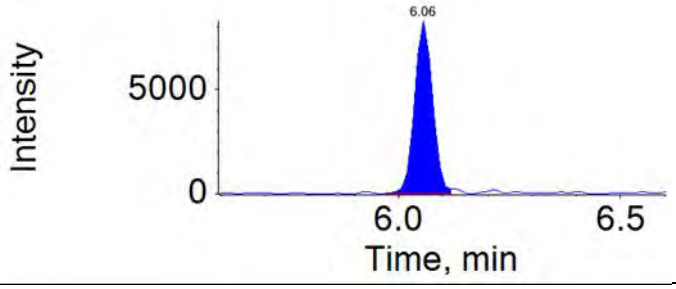
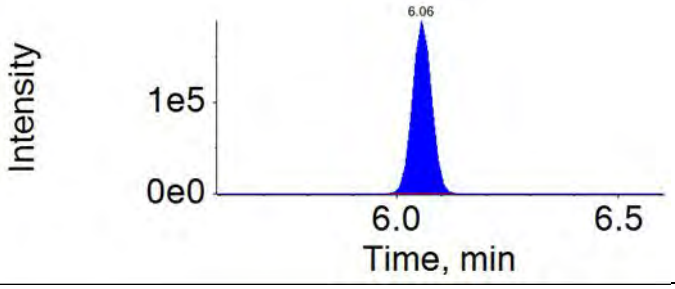
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

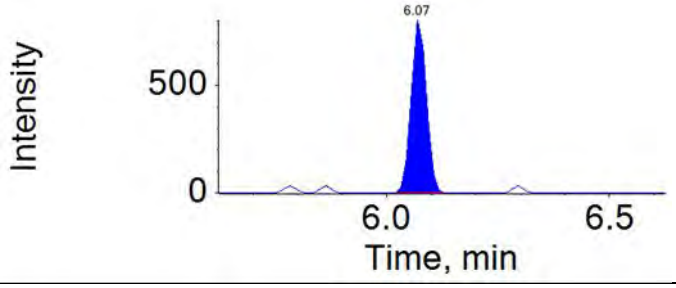
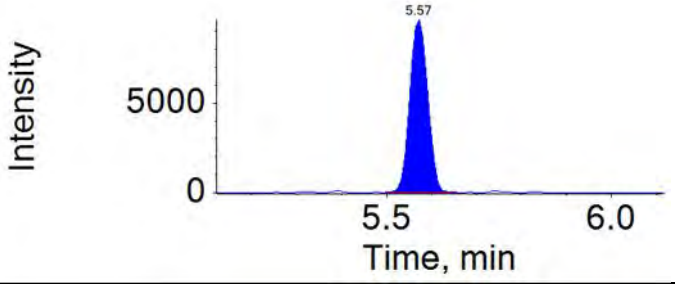
APPROVED
By JPT at 2:53 pm, 11/7/18

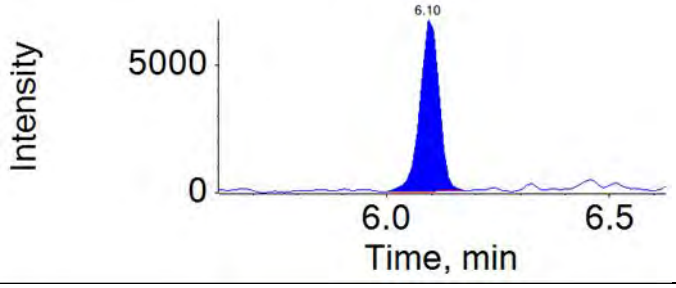
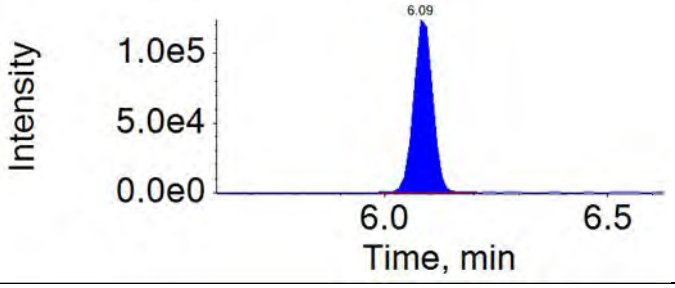
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

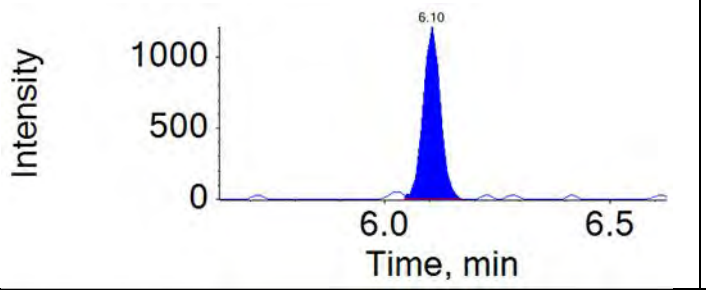
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

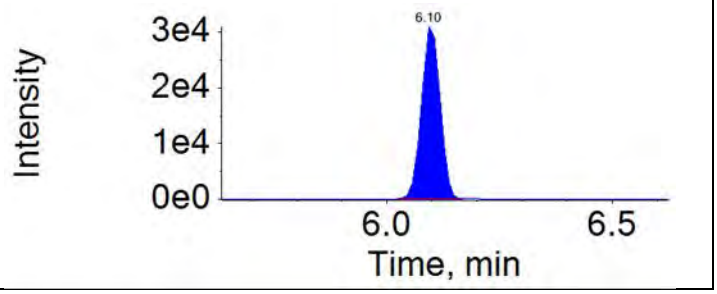
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

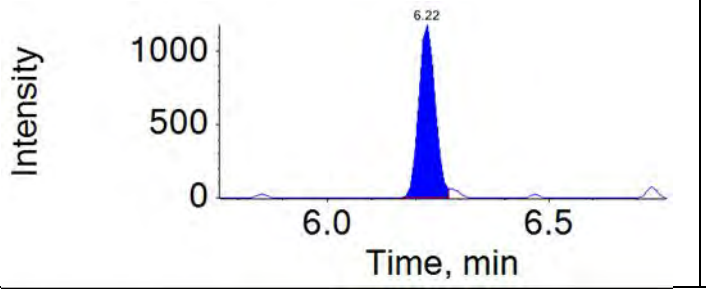
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

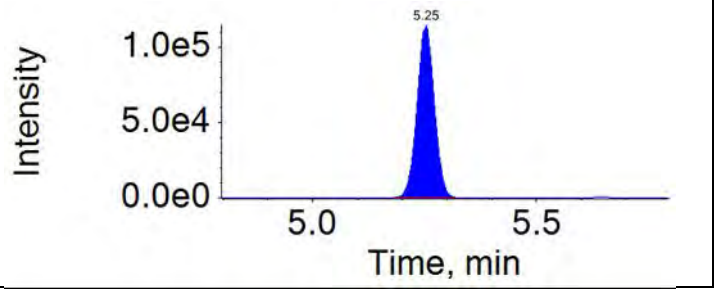
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



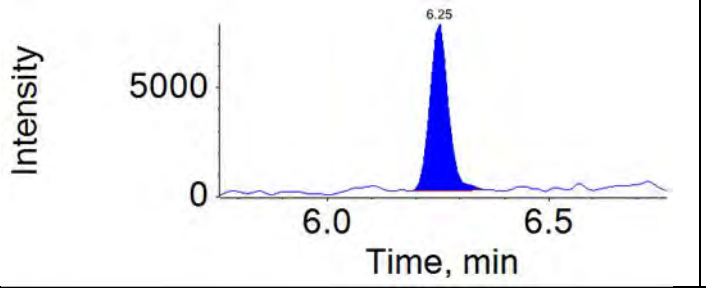


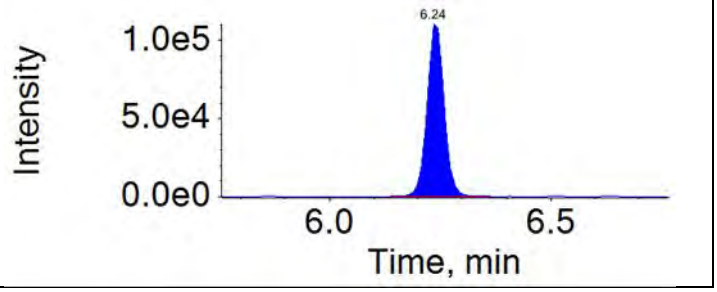
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



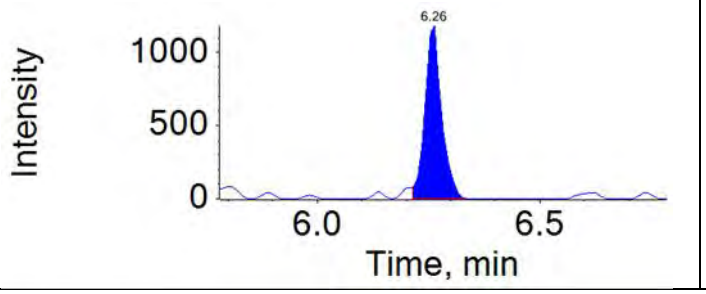


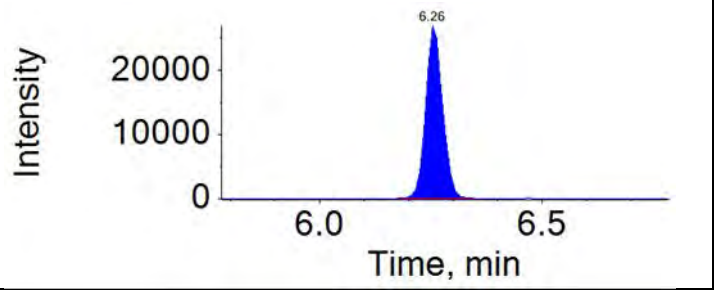
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



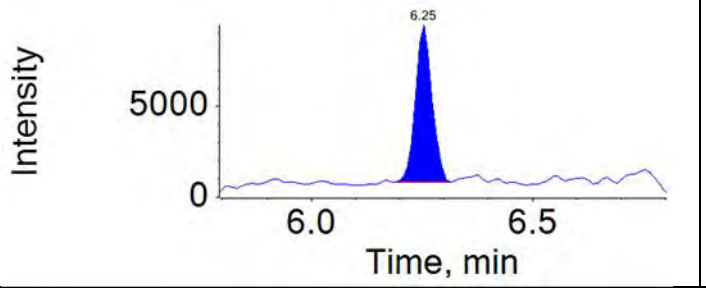


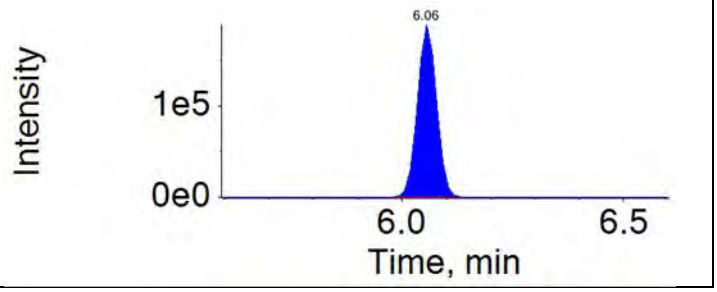
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

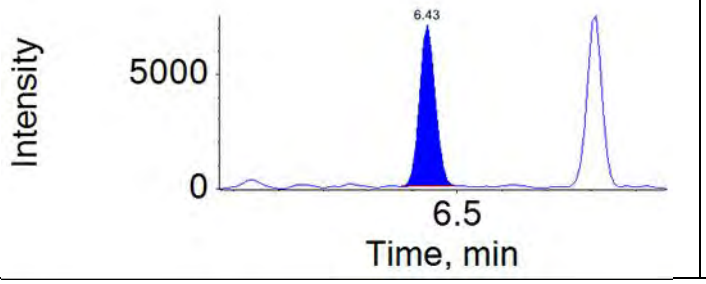
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

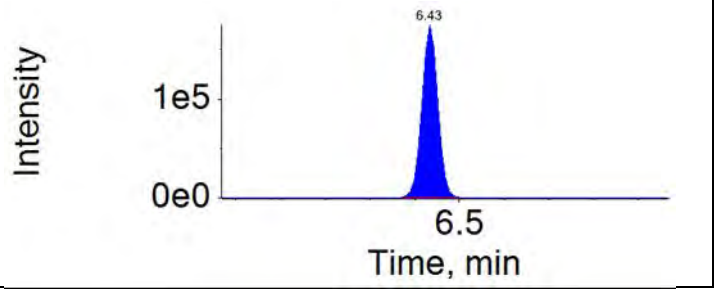
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



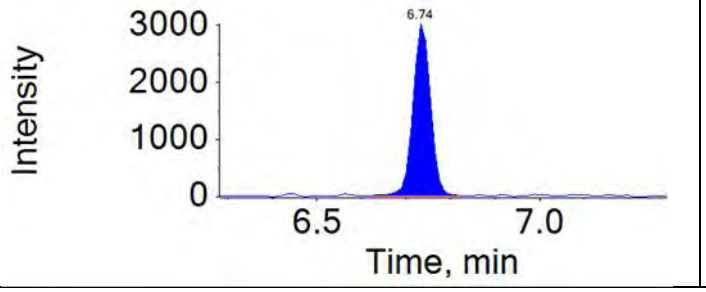


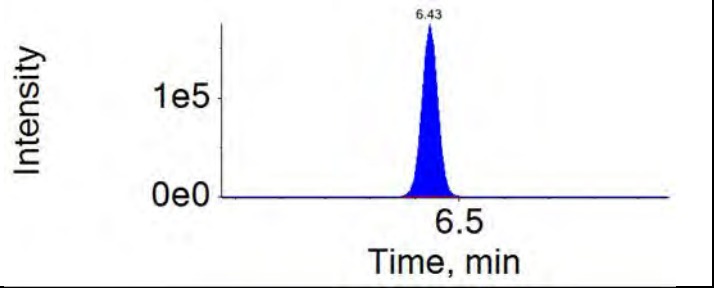
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



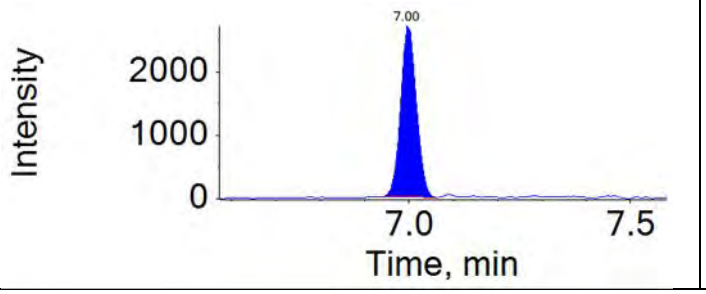


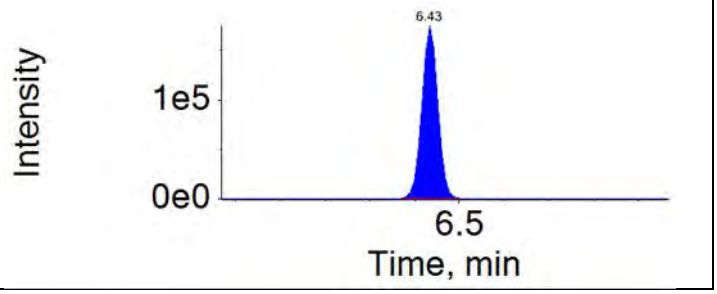
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

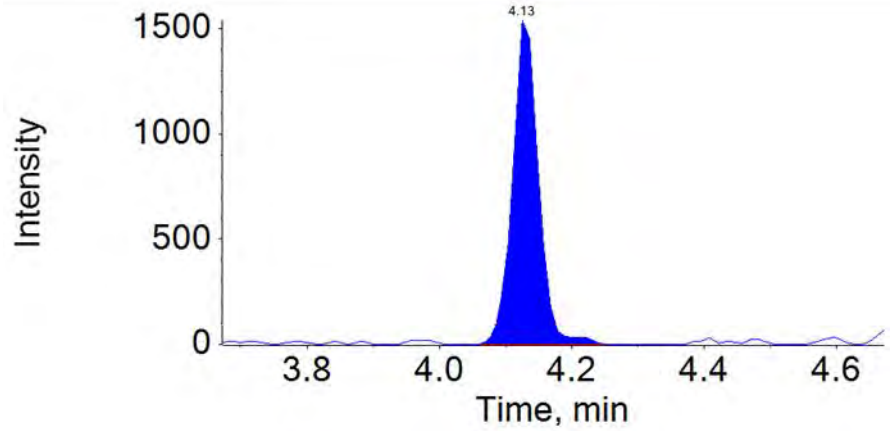
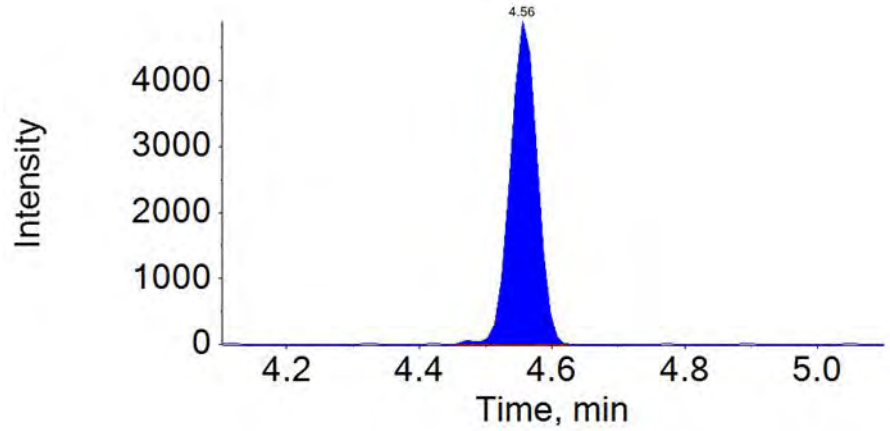
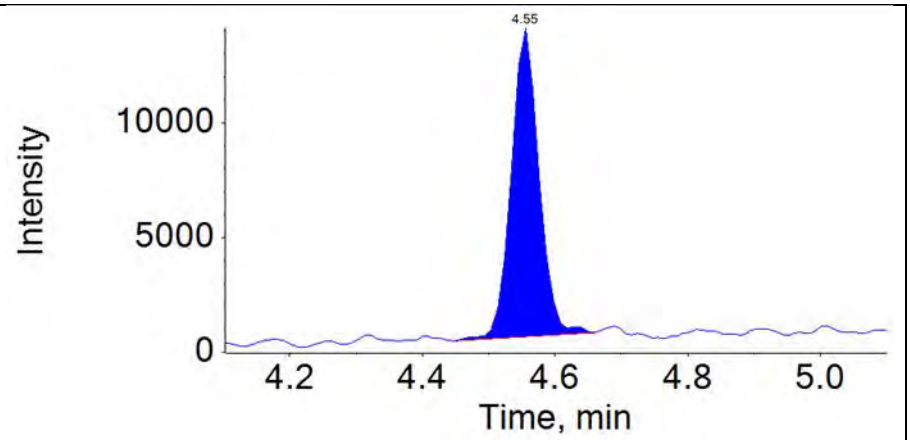




APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

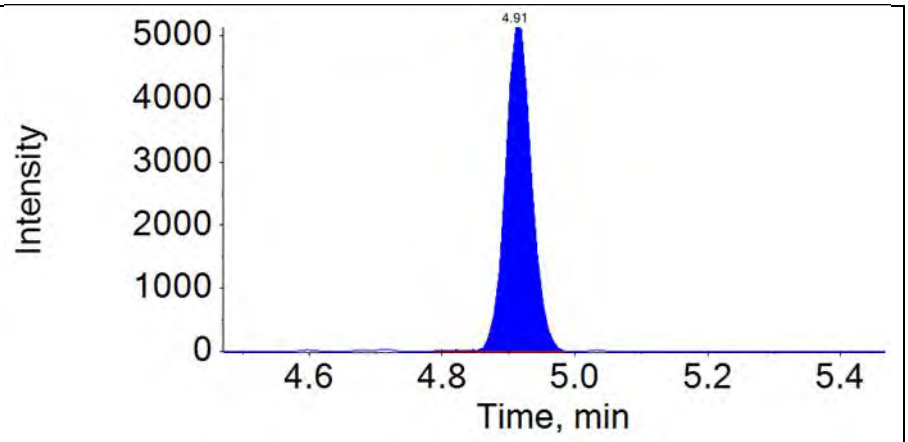
Component Name: 4:2-FTS **RT (min.):** 4.13 **Peak Area:** 4195.6 **Mass Range:** 327.0 / 307.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration
Component Name: PFHxS **RT (min.):** 4.56 **Peak Area:** 13860.4 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration
Component Name: PFHpA **RT (min.):** 4.55 **Peak Area:** 38996.9 **Mass Range:** 363.0 / 319.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

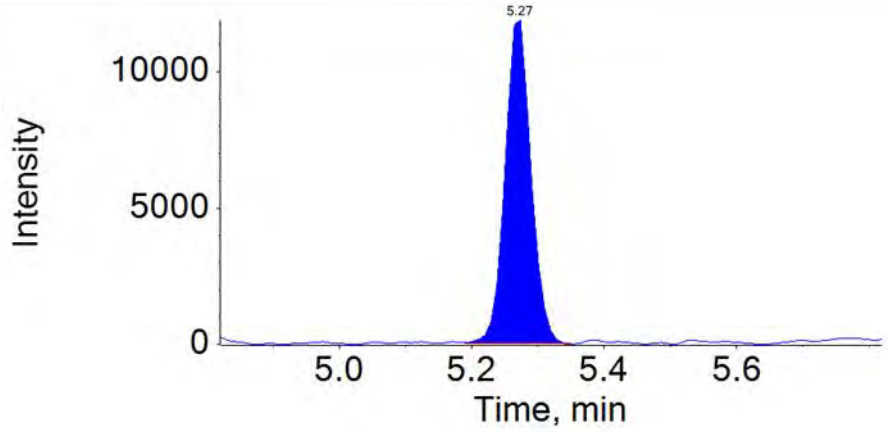
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHpS
RT (min.):
4.91
Peak Area:
14266.0
Mass Range:
449.0 / 80.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



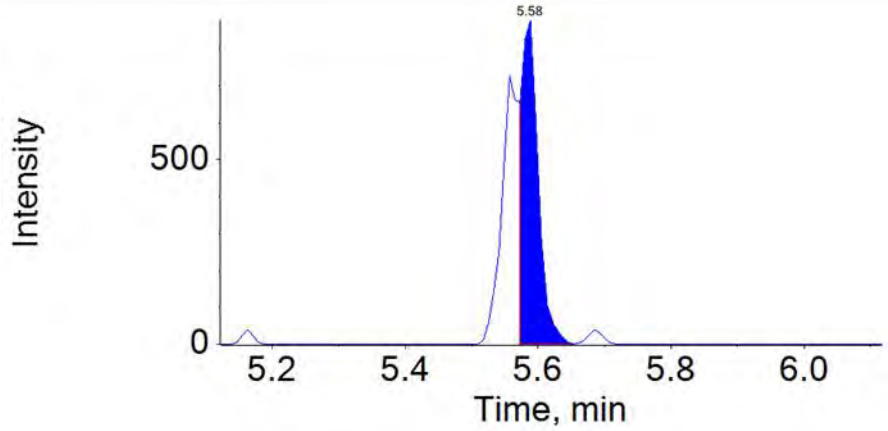
Integration Comment: incorrect integration

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
32355.6
Mass Range:
463.0 / 419.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
8:2-FTS
RT (min.):
5.58
Peak Area:
1513.1
Mass Range:
527.0 / 507.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1

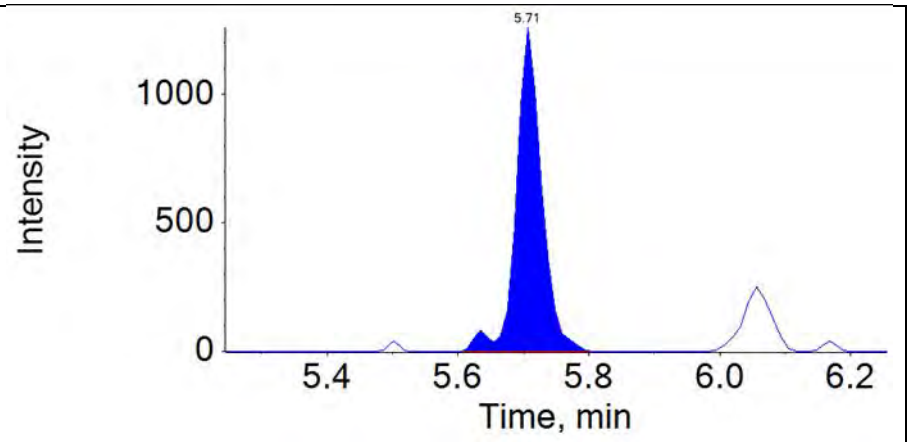


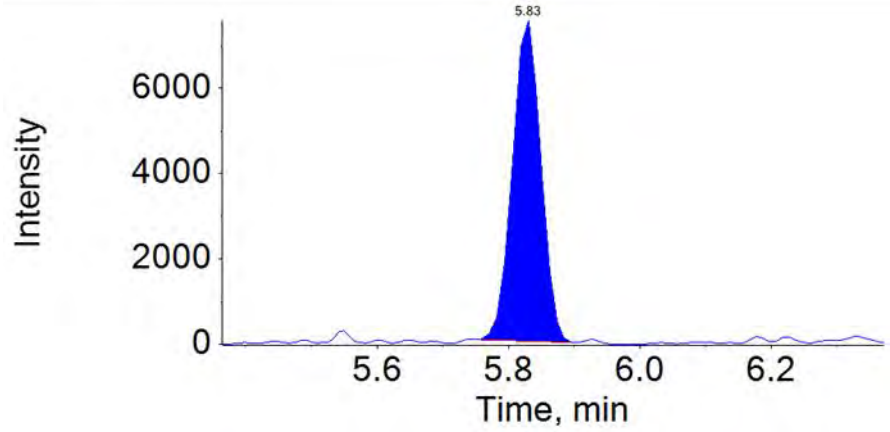
Integration Comment: incorrect integration

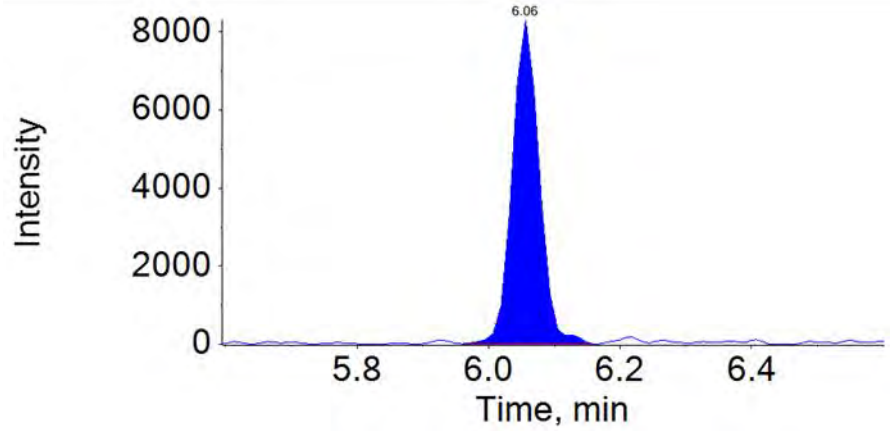
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: NMeFOSAA **RT (min.):** 5.71 **Peak Area:** 3425.3 **Mass Range:** 570.0 / 419.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

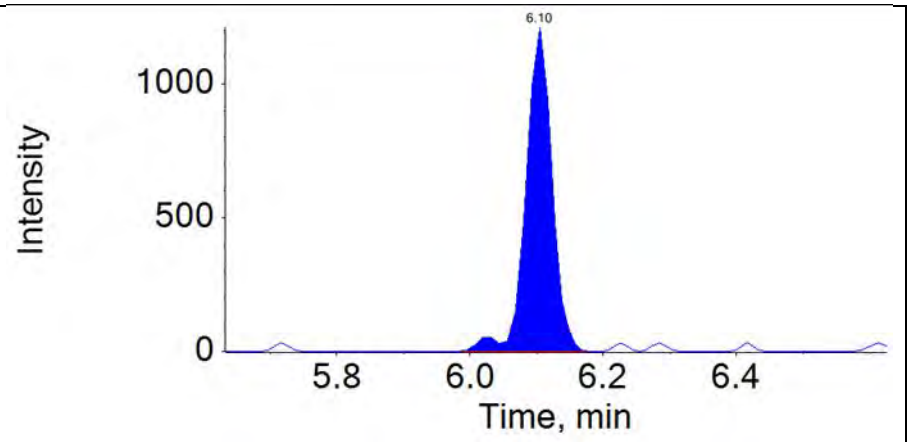
Component Name: PFUnDA **RT (min.):** 5.83 **Peak Area:** 22631.3 **Mass Range:** 563.0 / 519.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

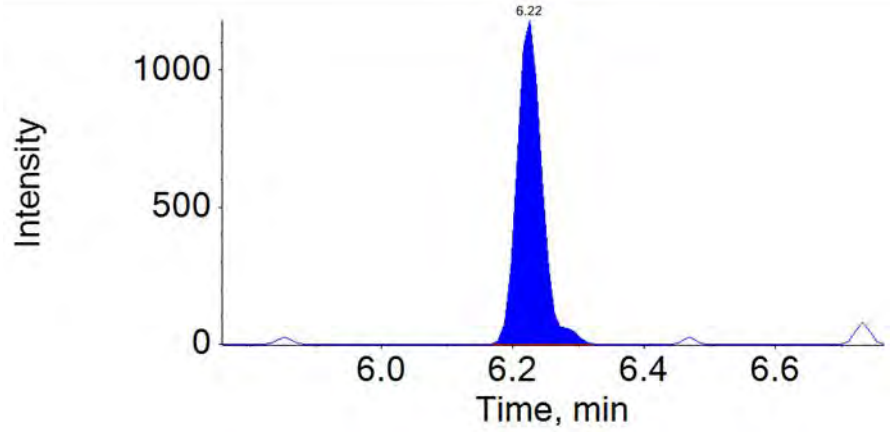
Component Name: PFDoDA **RT (min.):** 6.06 **Peak Area:** 23623.5 **Mass Range:** 613.0 / 569.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

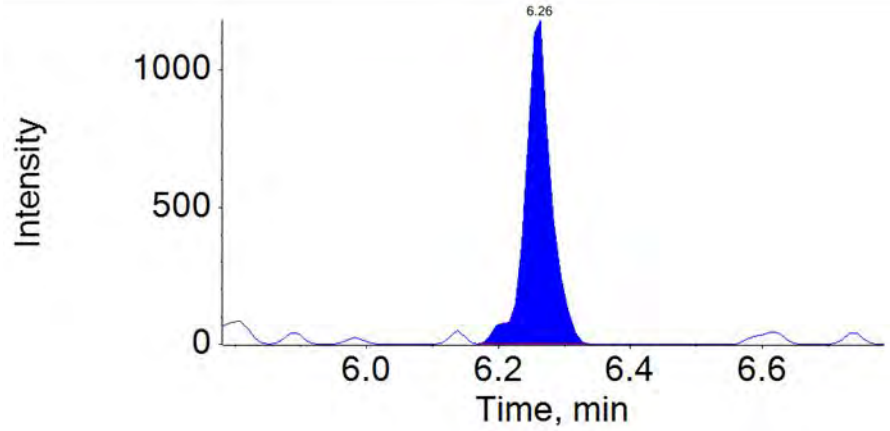
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: NMePFOSA **RT (min.):** 6.10 **Peak Area:** 3327.7 **Mass Range:** 512.0 / 169.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: PFDoS **RT (min.):** 6.22 **Peak Area:** 3114.4 **Mass Range:** 699.0 / 80.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: NEtPFOSA **RT (min.):** 6.26 **Peak Area:** 3185.1 **Mass Range:** 526.0 / 169.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

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By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	19024.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	5667.0	A	0.3576	0.2979	-17	50	
4:2-FTS	4.13	1.00	4145.4	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	3113.1	A	0.6359	0.7510	18	50	
PFHxA	4.17	1.00	39732.2	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	426.0	A	0.0115	0.0107	-7	50	
PFPeS	4.18	1.10	8335.4	A	1.0000	1.0000			
PFPeS_2	4.19	1.10	4437.8	A	0.5384	0.5324	-1	50	
PFHxS	4.56	1.00	13762.6	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	4694.9	A	0.3569	0.3411	-4	50	
PFHpA	4.55	1.00	38331.9	M	1.0000	1.0000			
PFHpA_2	4.56	1.00	2299.9	A	0.0577	0.0600	4	50	
6:2-FTS	4.91	1.00	2460.6	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	2419.1	A	0.6752	0.9832	46	50	
PFHpS	4.91	1.08	14183.4	M	1.0000	1.0000			
PFHpS_2	4.92	1.08	4803.7	A	0.3950	0.3387	-14	50	
PFOA	4.93	1.00	39843.5	A	1.0000	1.0000			
PFOA_2	4.92	1.00	2905.3	A	0.0635	0.0729	15	50	
PFOS	5.25	1.00	12181.7	A	1.0000	1.0000			
PFOS_2	5.25	1.00	4968.4	A	0.3494	0.4079	17	50	
PFNA	5.27	1.00	32563.3	M	1.0000	1.0000			
PFNA_2	5.29	1.00	475.0	A	0.0207	0.0146	-29	50	
PFNS	5.55	1.06	6748.5	A	1.0000	1.0000			
PFNS_2	5.55	1.06	3646.4	A	0.4890	0.5403	10	50	
PFDA	5.57	1.00	25530.0	A	1.0000	1.0000			
PFDA_2	5.55	1.00	33.4	A	0.0057	0.0013	-77	50	OOS
8:2-FTS	5.58	1.00	2783.3	M	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	2168.5	A	0.6169	0.7791	26	50	
NMeFOSAA	5.71	1.00	3293.8	M	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	644.8	A	0.2206	0.1958	-11	50	
PFDS	5.80	1.10	6453.6	A	1.0000	1.0000			
PFDS_2	5.82	1.11	1756.6	A	0.4648	0.2722	-41	50	
PFUnDA	5.83	1.00	23275.5	M	1.0000	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	5.84	1.00	3313.0	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	1807.4	A	0.6082	0.5455	-10	50	
PFDoDA	6.06	1.00	23314.2	M	1.0000	1.0000			
PFDoDA_2	6.06	1.00	62.7	A	0.0109	0.0027	-75	50	OOS
10:2-FTS	6.07	1.09	1903.7	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	1472.7	A	0.7082	0.7736	9	50	
PFTrDA	6.25	1.03	22403.2	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	178.7	A	0.0096	0.0080	-17	50	
PFTeDA	6.43	1.00	17031.0	A	1.0000	1.0000			
PFTeDA_2	6.48	1.01	40.0	A	0.0055	0.0023	-58	50	OOS
PFHxDA	6.74	1.05	8175.1	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	437.4	A	0.0596	0.0535	-10	50	
PFODA	7.00	1.09	6622.6	A	1.0000	1.0000			
PFODA_2	6.99	1.09	171.3	A	0.0257	0.0259	1	50	

APPROVED
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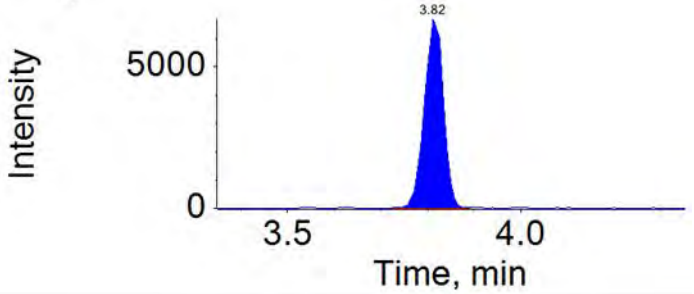
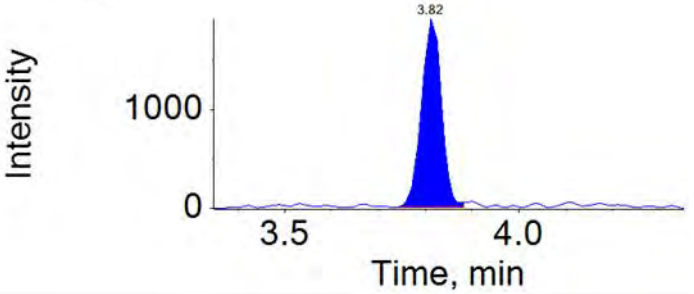
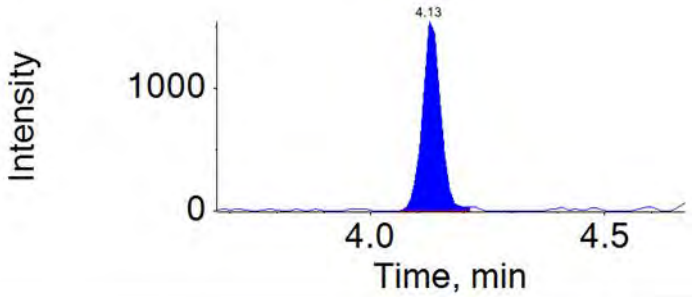
Component: PFBS
Primary Mass: 299.0 / 80.0



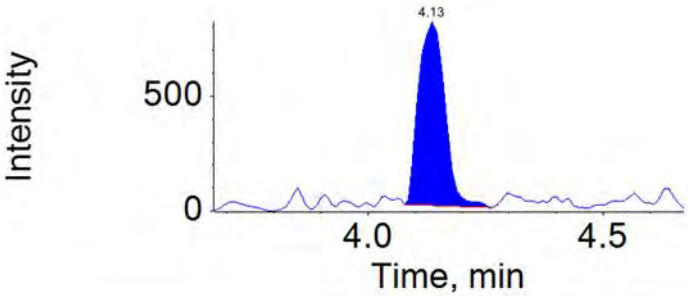
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



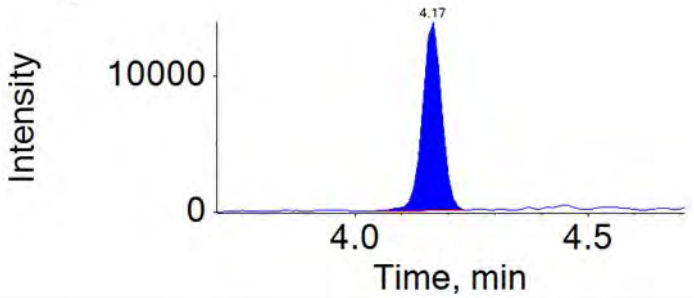
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



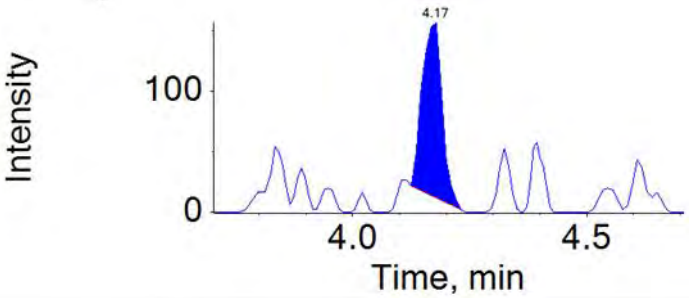
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



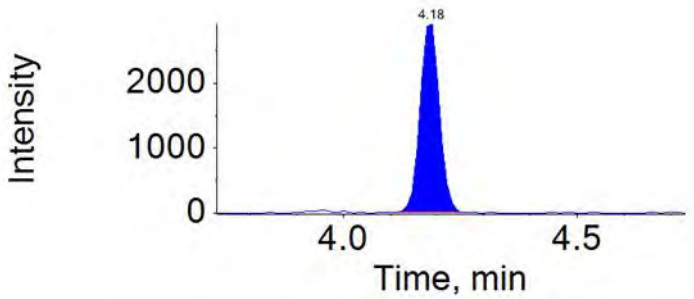
Component: PFHxA
Primary Mass: 313.0 / 269.0



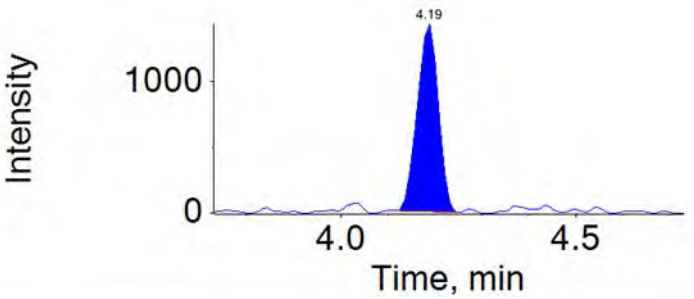
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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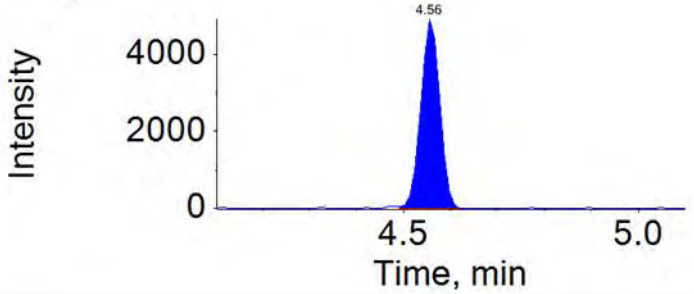
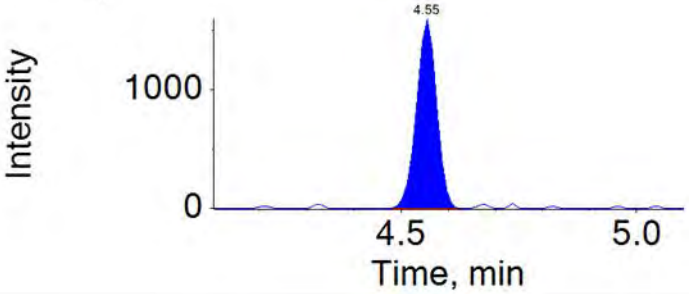
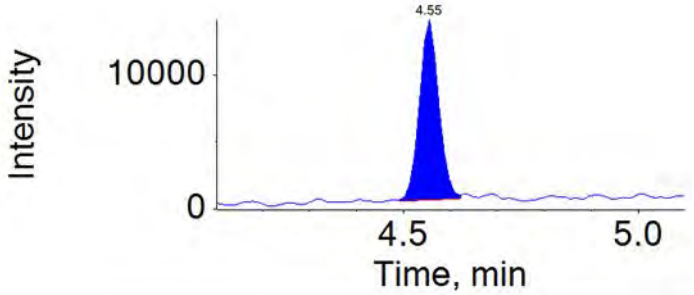
Component: PFHxS
Primary Mass: 399.0 / 80.0



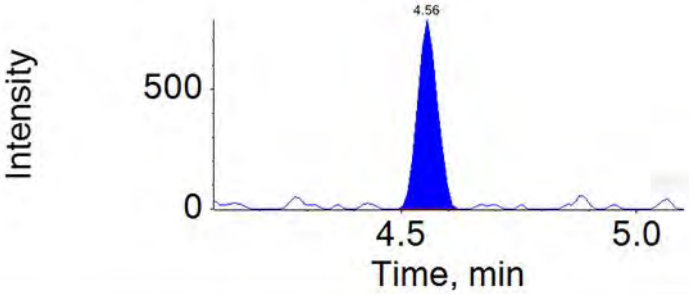
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



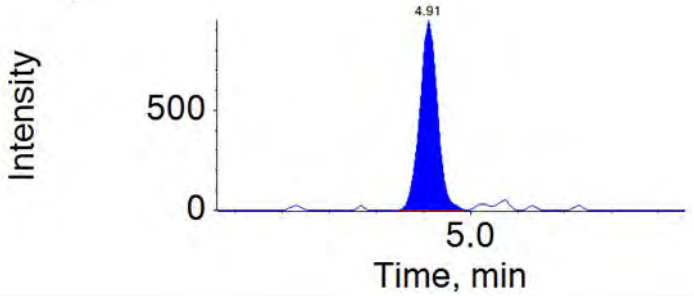
Component: PFHpA
Primary Mass: 363.0 / 319.0



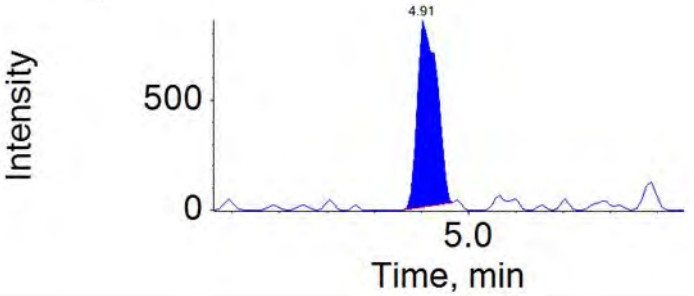
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



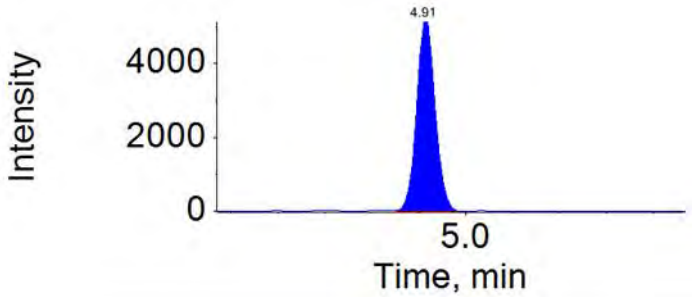
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



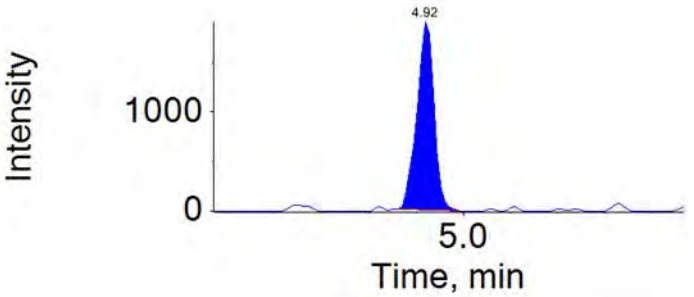
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
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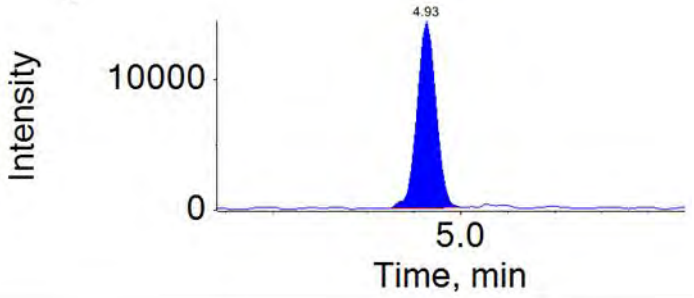
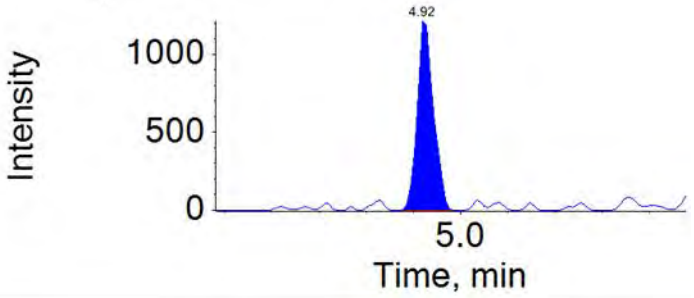
By umar at 5:23 pm, 11/9/18

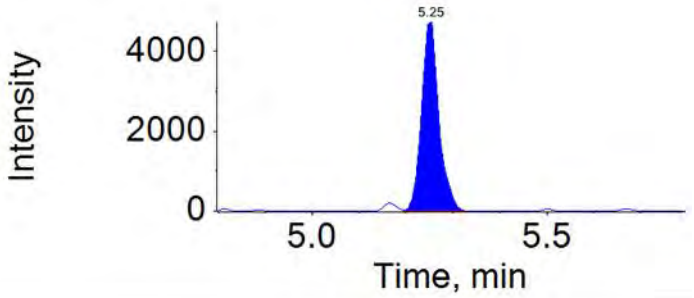
Component: PFOA
Primary Mass: 413.0 / 369.0



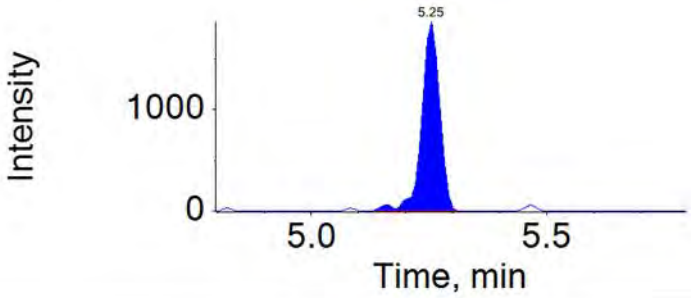
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



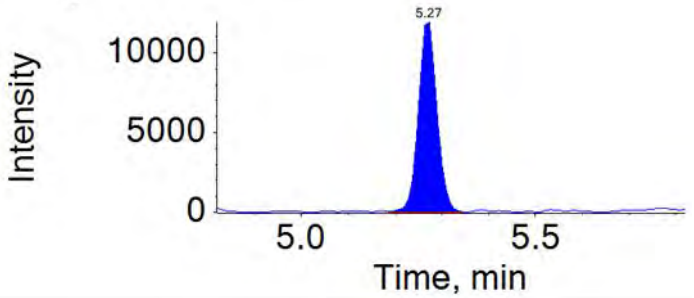
Component: PFOS
Primary Mass: 499.0 / 80.0



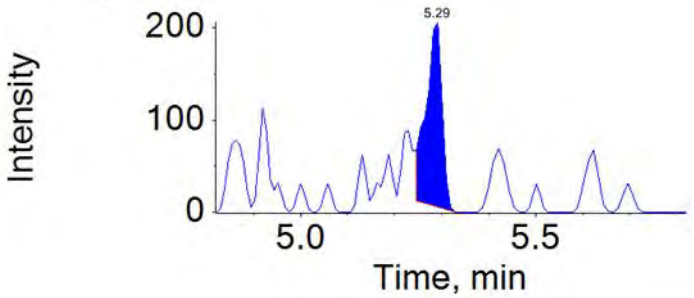
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



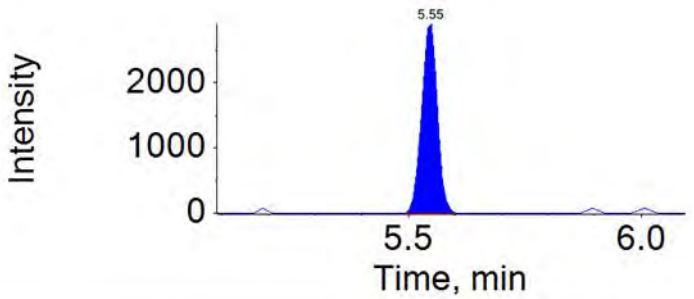
Component: PFNA
Primary Mass: 463.0 / 419.0



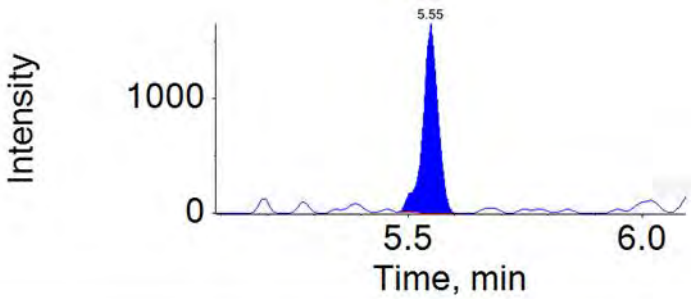
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



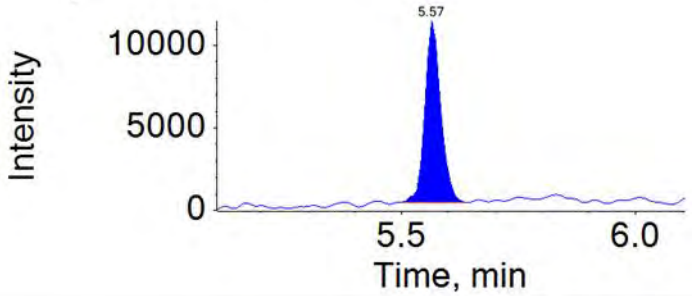
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



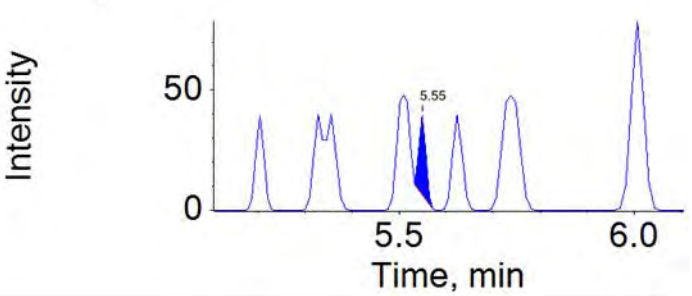
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

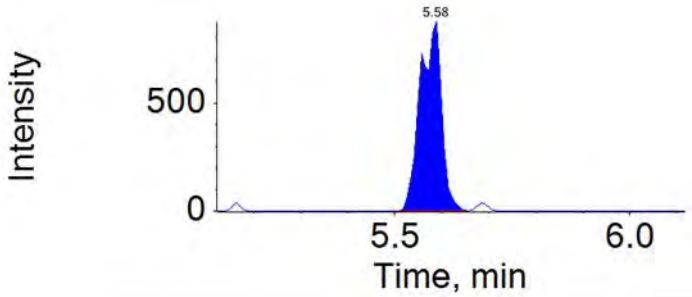
Component: PFDA
Primary Mass: 513.0 / 469.0



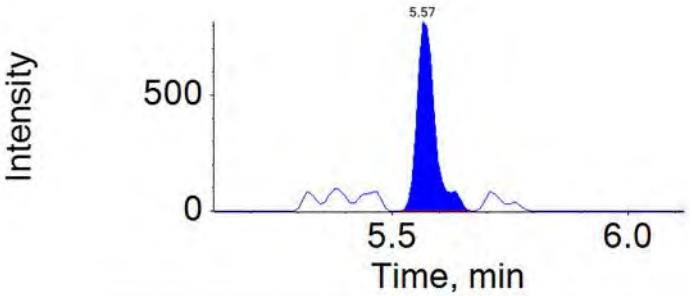
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



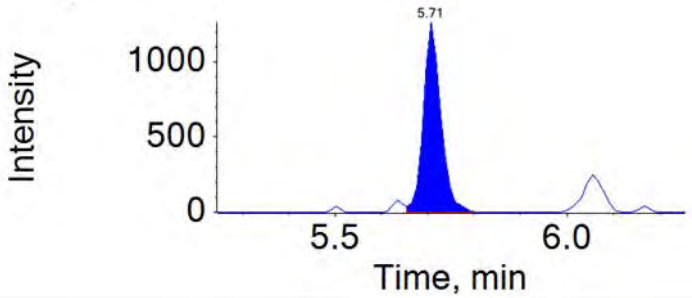
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



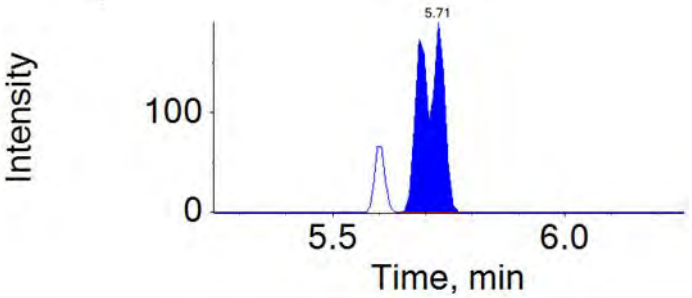
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



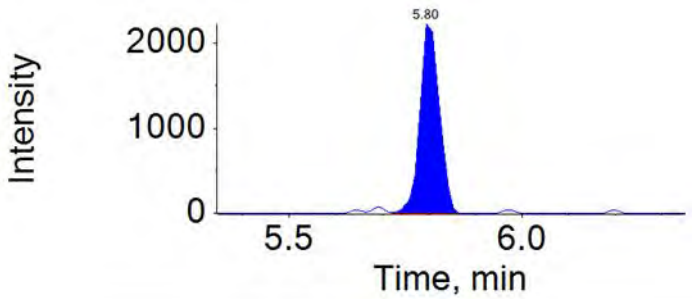
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



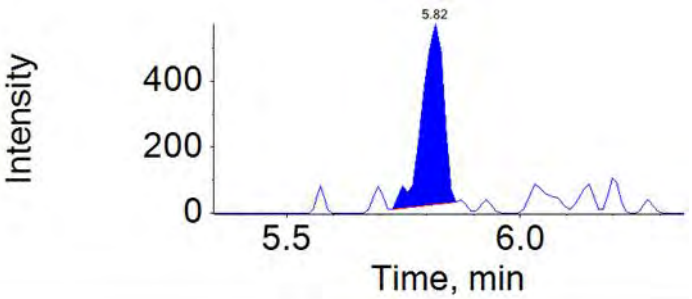
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



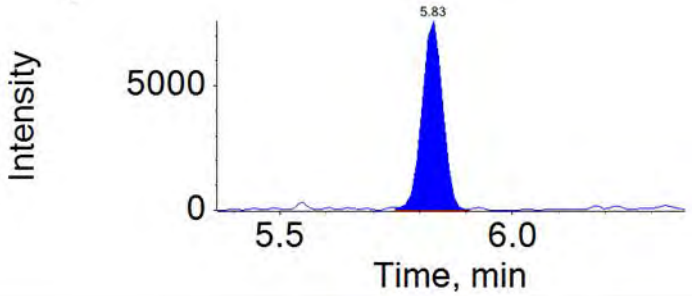
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



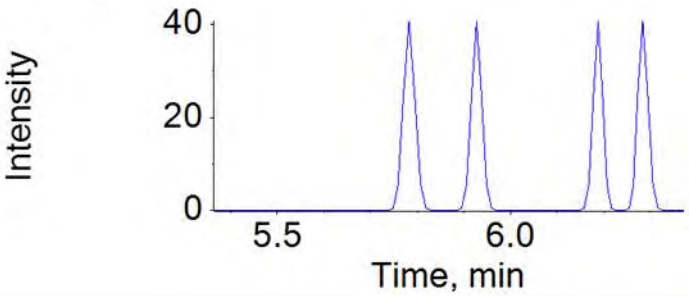
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

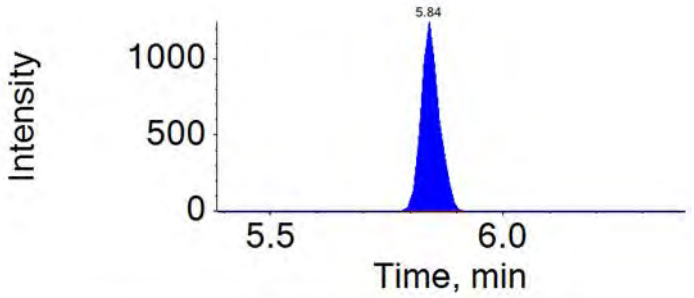
Component: PFUnDA
Primary Mass: 563.0 / 519.0



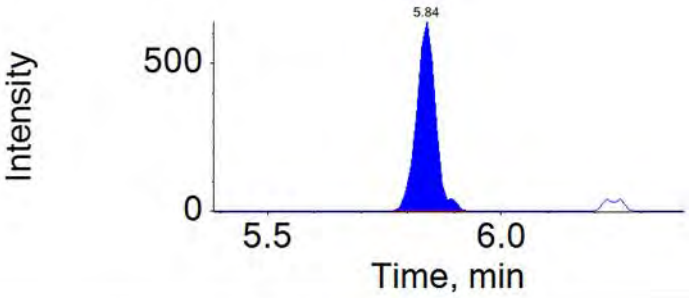
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



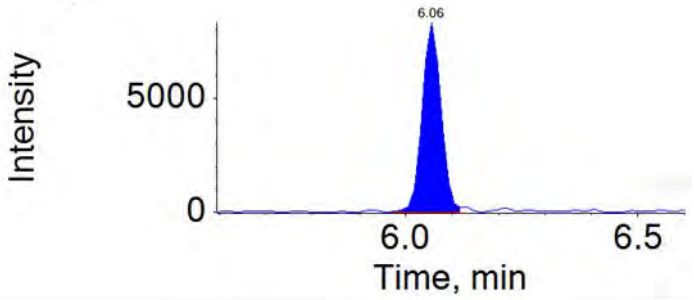
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



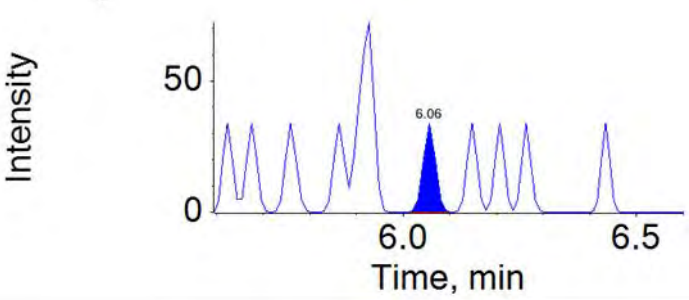
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



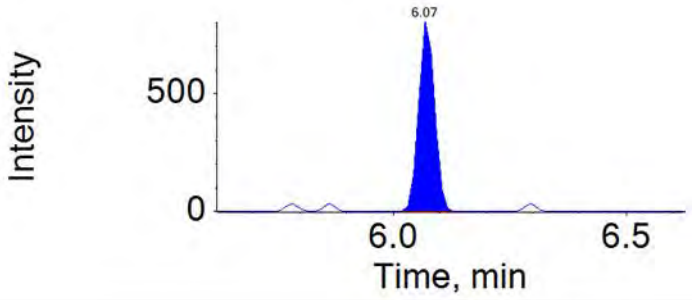
Component: PFDoDA
Primary Mass: 613.0 / 569.0



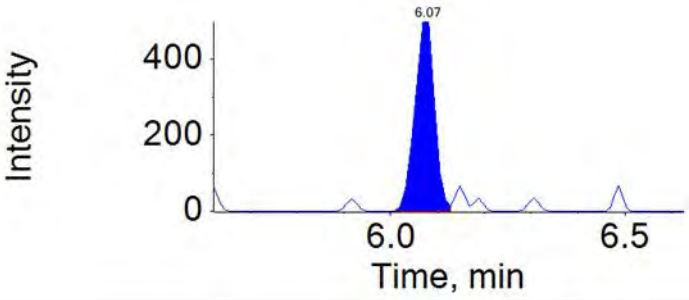
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



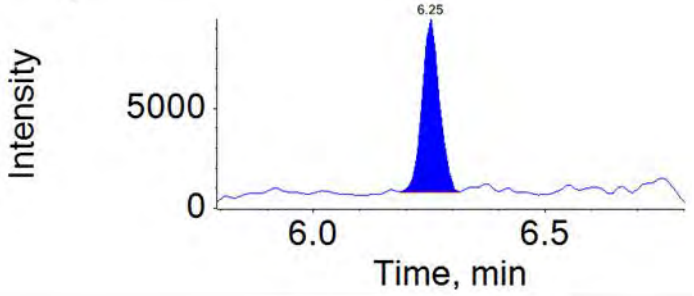
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



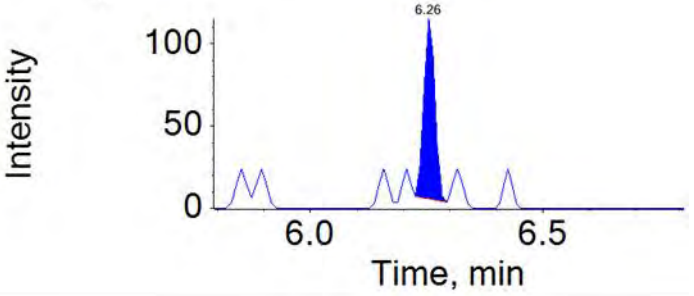
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



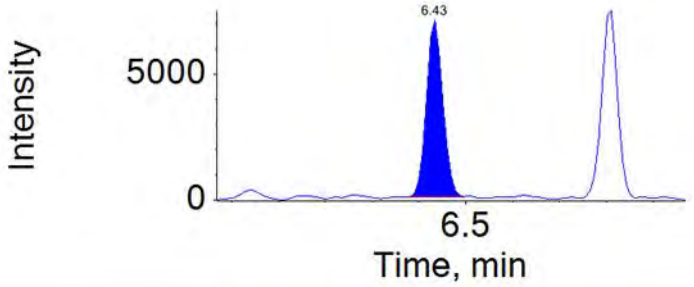
Component: PFTrDA
Primary Mass: 663.0 / 619.0



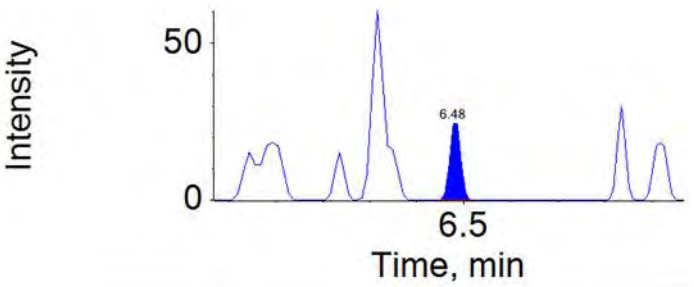
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



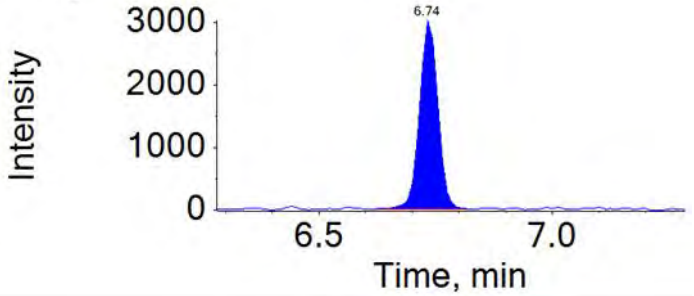
Component: PFTeDA
Primary Mass: 713.0 / 669.0



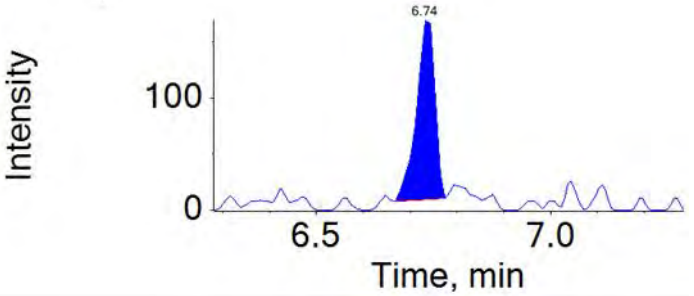
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



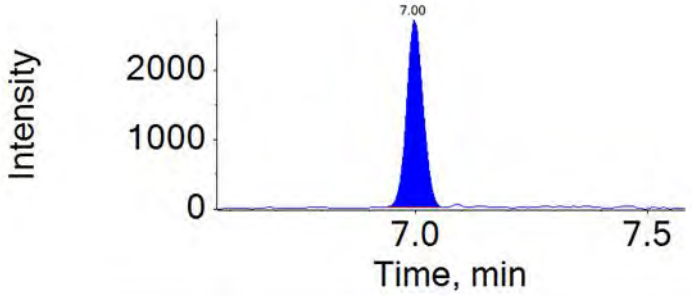
Component: PFHxDA
Primary Mass: 813.0 / 769.0



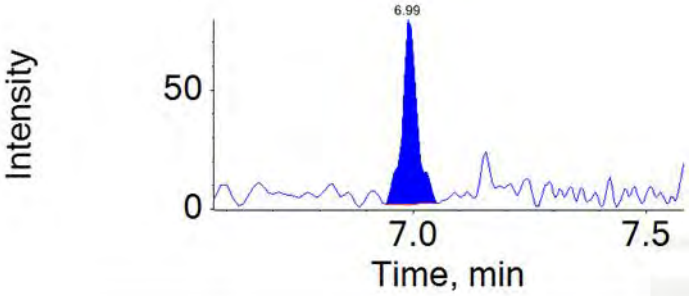
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV07DCAL-11.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-07T09:48:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723209.9	730410.6	-1	50	
13C2-PFOA	5.0	516360.9	524423.6	-2	50	
13C4-PFOS	4.8	263757.0	274061.7	-4	50	
13C2-PFDA	5.0	334958.4	311442.1	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	782732.8	13C3-PFBA	723209.9	1.082	5.000	5.009	100	70-130	
E13C5-PFPeA	863262.8	13C3-PFBA	723209.9	1.194	5.000	5.200	104	70-130	
E13C3-PFBS	444721.3	13C3-PFBA	723209.9	0.615	4.650	4.513	97	70-130	
E13C2-4:2-FTS	54234.1	13C2-PFOA	516360.9	0.105	4.670	4.739	101	70-130	
E13C5-PFHxA	717434.9	13C2-PFOA	516360.9	1.389	5.000	5.111	102	70-130	
E13C3-PFHxS	335732.1	13C2-PFOA	516360.9	0.650	4.730	4.668	99	70-130	
E13C4-PFHpA	583342.8	13C2-PFOA	516360.9	1.130	5.000	5.139	103	70-130	
E13C2-6:2-FTS	38849.6	13C2-PFOA	516360.9	0.075	4.750	5.017	106	70-130	
E13C8-PFOA	970523.2	13C2-PFOA	516360.9	1.880	5.000	5.241	105	70-130	
E13C8-PFOS	286174.8	13C4-PFOS	263757.0	1.085	4.780	4.798	100	70-130	
E13C9-PFNA	540435.4	13C4-PFOS	263757.0	2.049	5.000	5.597	112	70-130	
E13C6-PFDA	661423.8	13C2-PFDA	334958.4	1.975	5.000	4.966	99	70-130	
E13C2-8:2-FTS	27523.0	13C2-PFDA	334958.4	0.082	4.790	4.348	91	70-130	
E13C8-PFOSA	711032.2	13C2-PFDA	334958.4	2.123	5.000	4.632	93	70-130	
Ed3-NMeFOSAA	83112.2	13C2-PFDA	334958.4	0.248	5.000	4.614	92	70-130	
E13C7-PFUnDA	289985.1	13C2-PFDA	334958.4	0.866	5.000	4.994	100	70-130	
Ed5-NEtFOSAA	65815.9	13C2-PFDA	334958.4	0.196	5.000	4.547	91	70-130	
E13C2-PFDoDA	597616.3	13C2-PFDA	334958.4	1.784	5.000	4.810	96	70-130	
Ed7-NMePFOSAE	330298.6	13C2-PFDA	334958.4	0.986	5.000	4.586	92	70-130	
Ed3-NMePFOSA	81301.2	13C2-PFDA	334958.4	0.243	5.000	4.444	89	70-130	
Ed9-NEtPFOSAE	270607.6	13C2-PFDA	334958.4	0.808	5.000	4.614	92	70-130	
Ed5-NEtPFOSA	66745.4	13C2-PFDA	334958.4	0.199	5.000	4.614	92	70-130	
E13C2-PFTeDA	441206.9	13C2-PFDA	334958.4	1.317	5.000	4.742	95	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

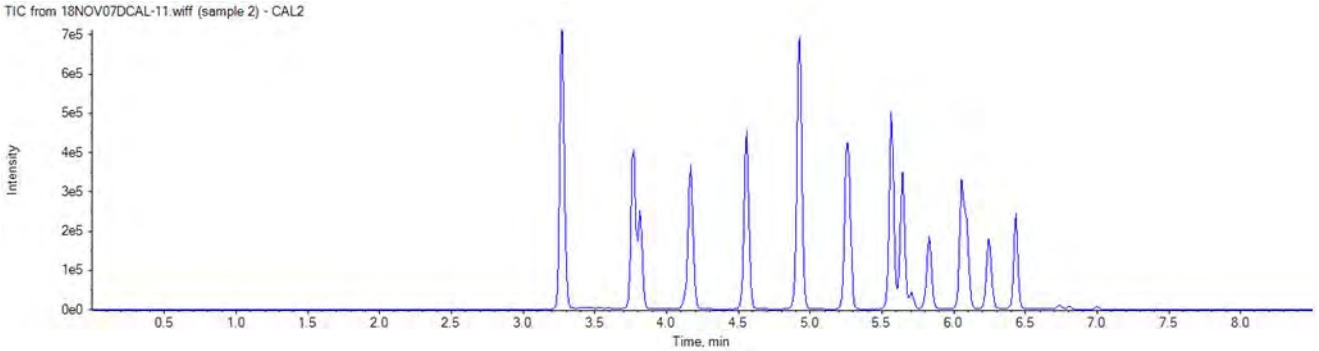
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-11.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	72868.6		A	13C4-PFBA	3.27	782732.8	0.093	0.545
PFPeA	3.77	1.000	77403.9		A	13C5-PFPeA	3.77	863262.8	0.090	0.533
PFBS	3.82	1.000	41415.1		A	13C3-PFBS	3.82	444721.3	0.093	0.470
4:2-FTS	4.13	1.000	9924.9		M	13C2-4:2-FTS	4.13	54234.1	0.183	0.492
PFHxA	4.17	1.000	88469.9		A	13C5-PFHxA	4.17	717434.9	0.123	0.529
PFPeS	4.19	1.100	20956.8		A	13C3-PFBS	3.82	444721.3	0.047	0.465
PFHxS	4.56	1.000	32061.0		M	13C3-PFHxS	4.56	335732.1	0.095	0.484
PFHpA	4.56	1.000	93502.9		A	13C4-PFHpA	4.55	583342.8	0.160	0.539
6:2-FTS	4.91	1.000	8883.8		A	13C2-6:2-FTS	4.91	38849.6	0.229	0.570
PFHpS	4.92	1.080	30553.2		A	13C3-PFHxS	4.56	335732.1	0.091	0.476
PFOA	4.93	1.000	94348.1		A	13C8-PFOA	4.92	970523.2	0.097	0.547
PFOS	5.25	1.000	28529.2		M	13C8-PFOS	5.25	286174.8	0.100	0.517
PFNA	5.27	1.000	74743.9		A	13C9-PFNA	5.27	540435.4	0.138	0.517
PFNS	5.55	1.060	17507.8		A	13C8-PFOS	5.25	286174.8	0.061	0.485
PFDA	5.57	1.000	62530.6		A	13C6-PFDA	5.57	661423.8	0.095	0.520
8:2-FTS	5.57	1.000	6917.6		A	13C2-8:2-FTS	5.57	27523.0	0.251	0.567
PFOSA	5.64	1.000	69586.0		A	13C8-PFOSA	5.64	711032.2	0.098	0.529
NMeFOSAA	5.71	1.000	9807.4		A	d3-NMeFOSAA	5.71	83112.2	0.118	0.607
PFDS	5.80	1.110	15726.3		A	13C8-PFOS	5.25	286174.8	0.055	0.525
PFUnDA	5.83	1.000	54085.5		A	13C7-PFUnDA	5.83	289985.1	0.187	0.535
NEtFOSAA	5.84	1.000	7253.7		A	d5-NEtFOSAA	5.84	65815.9	0.110	0.474
PFDoDA	6.06	1.000	60098.0		A	13C2-PFDoDA	6.06	597616.3	0.101	0.545
10:2-FTS	6.07	1.090	4874.3		A	13C2-8:2-FTS	5.57	27523.0	0.177	0.551
NMePFOSAE	6.10	1.000	40902.1		A	d7-NMePFOSAE	6.09	330298.6	0.124	0.555
NMePFOSA	6.10	1.000	8251.9		A	d3-NMePFOSA	6.10	81301.2	0.101	0.568
PFDoS	6.23	1.190	7227.2		A	13C8-PFOS	5.25	286174.8	0.025	0.487
NEtPFOSAE	6.25	1.000	48905.8		A	d9-NEtPFOSAE	6.24	270607.6	0.181	0.579
NEtPFOSA	6.26	1.000	6419.4		A	d5-NEtPFOSA	6.26	66745.4	0.096	0.424
PFTrDA	6.25	1.030	49218.5		A	13C2-PFDoDA	6.06	597616.3	0.082	0.519
PFTeDA	6.43	1.000	36223.2		A	13C2-PFTeDA	6.43	441206.9	0.082	0.482
PFHxDA	6.74	1.050	18619.3		A	13C2-PFTeDA	6.43	441206.9	0.042	0.524
PFODA	7.00	1.090	15742.1		A	13C2-PFTeDA	6.43	441206.9	0.036	0.511

Total Ion Chromatogram

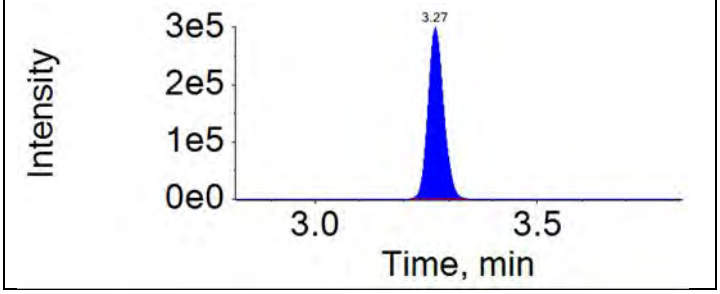


APPROVED
By JPT at 2:53 pm, 11/7/18

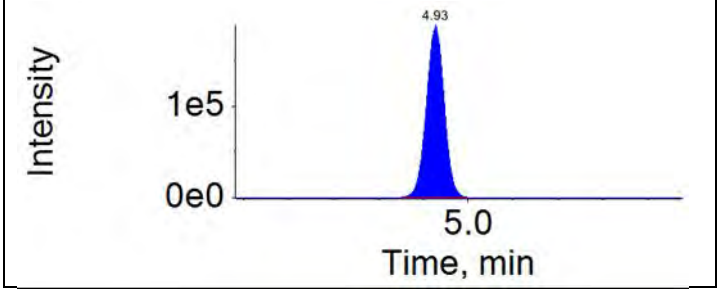
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

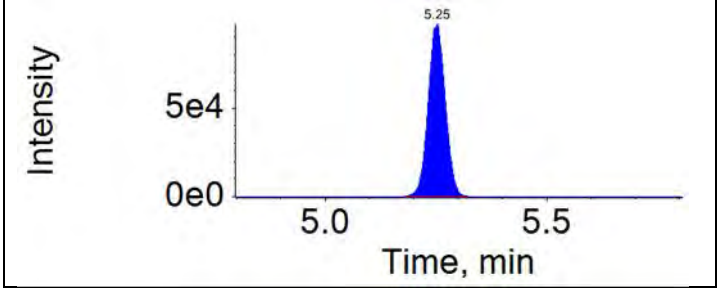
Injection Standard: 13C3-PFBA
216.0 / 172.0



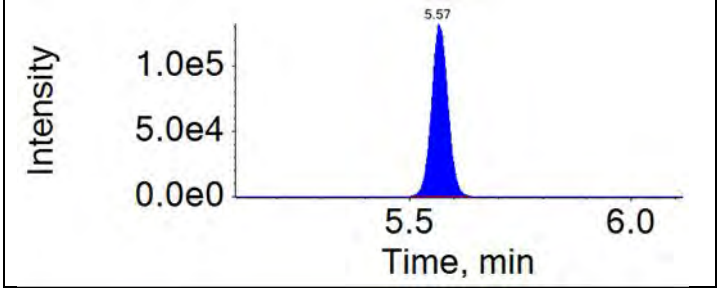
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

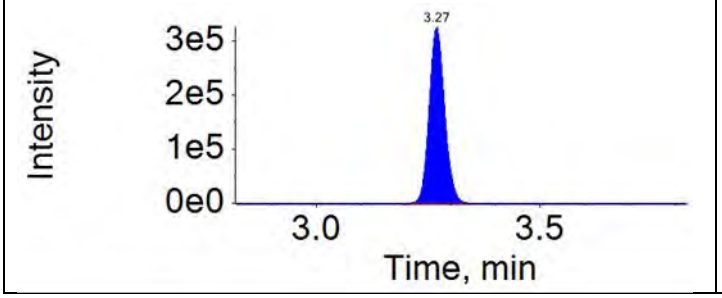


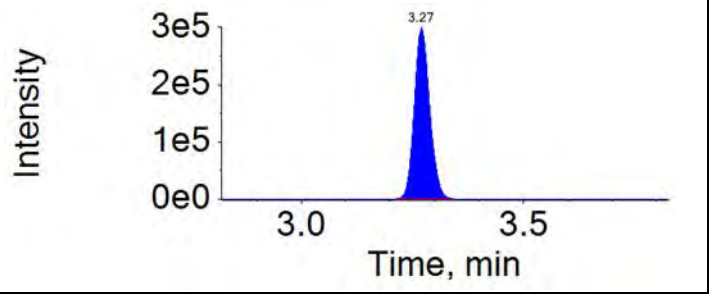
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

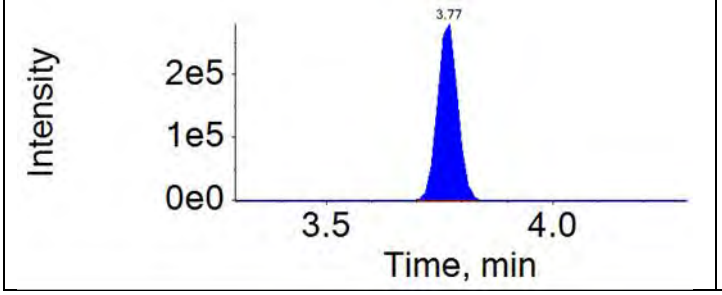
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

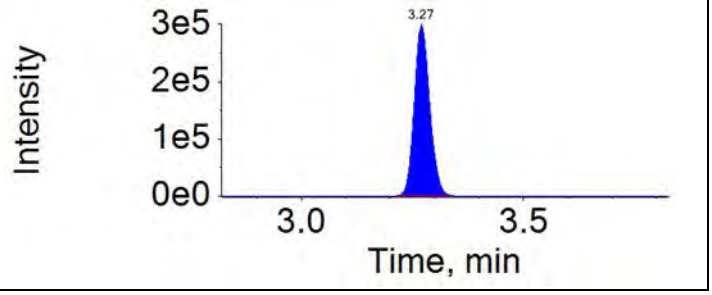
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



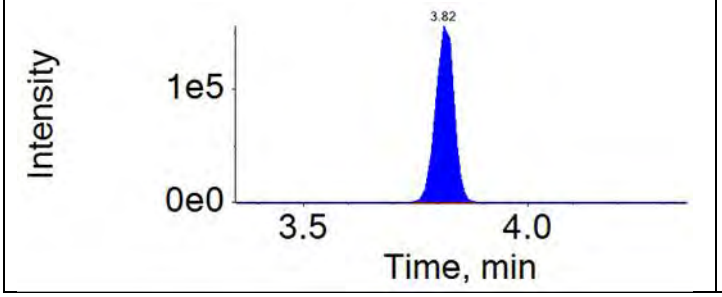


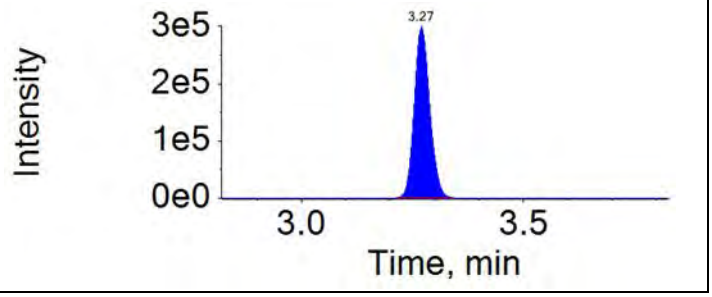
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



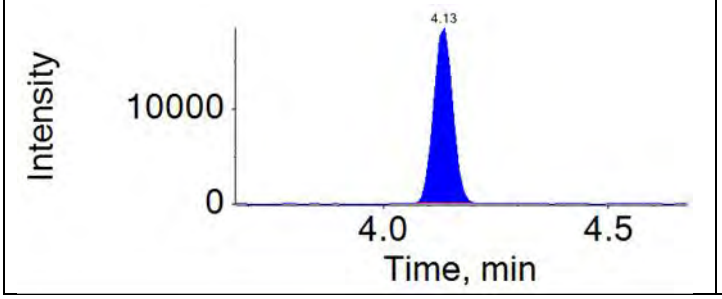


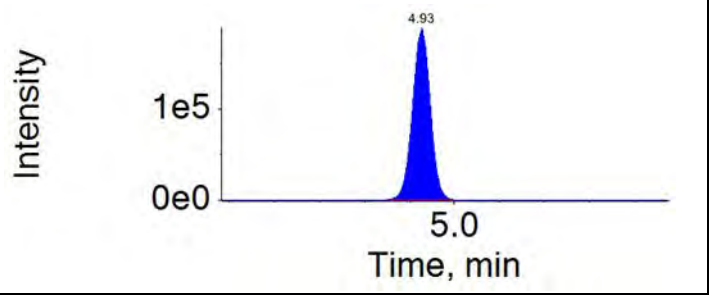
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



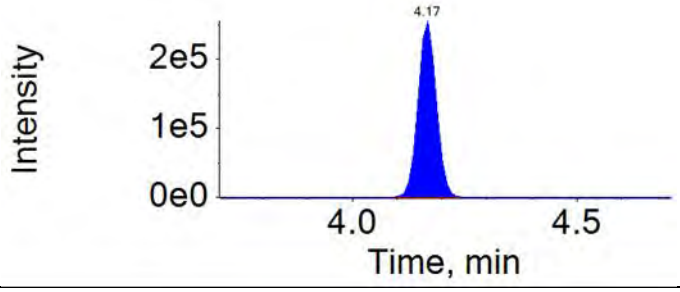
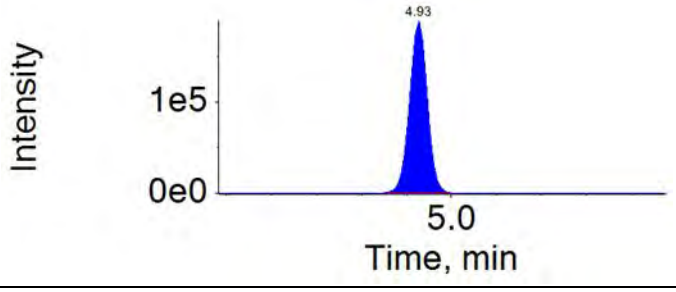


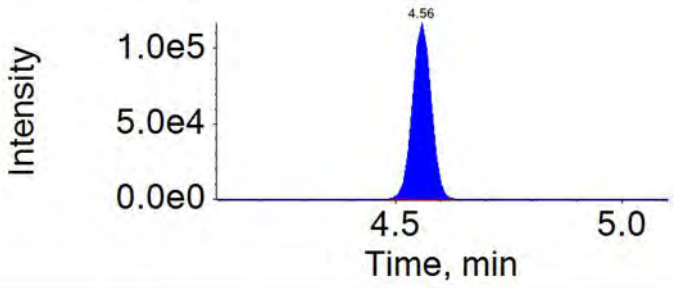
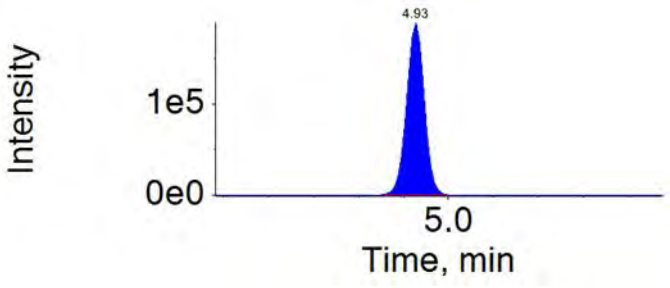
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

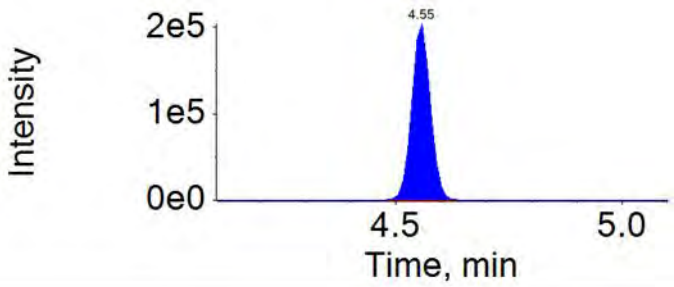
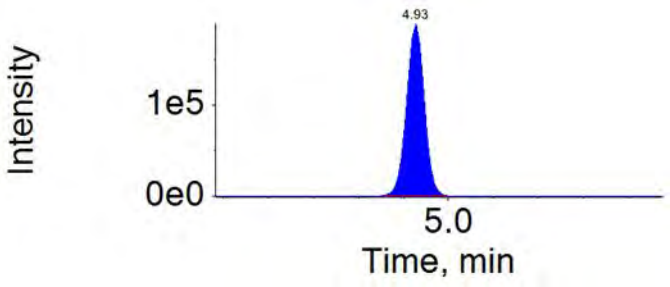


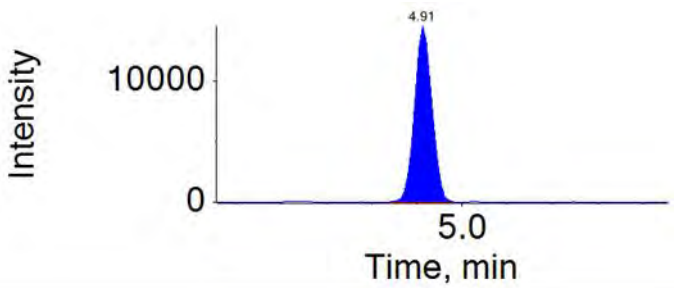
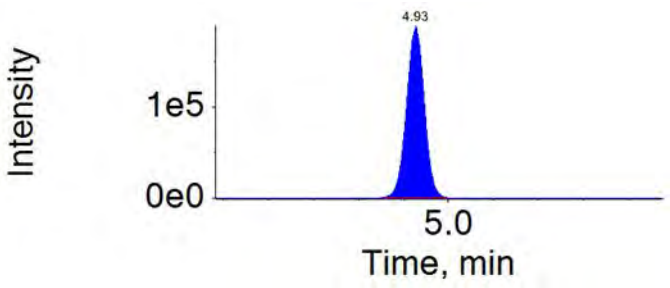


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

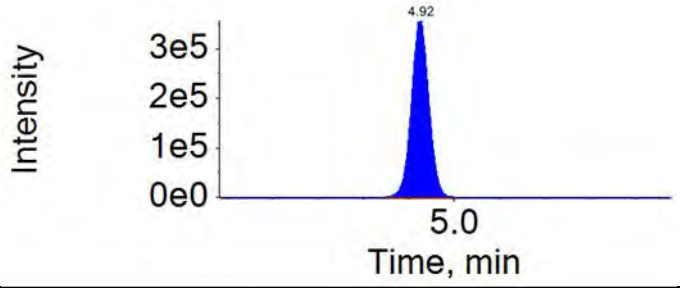
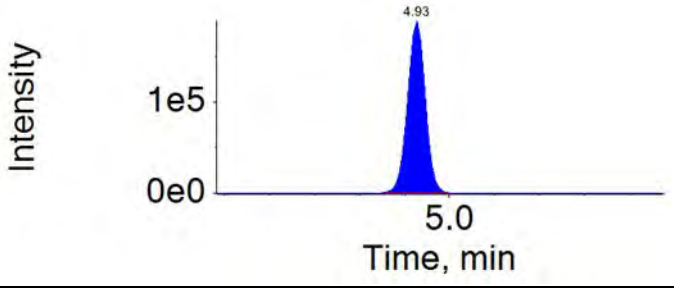
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

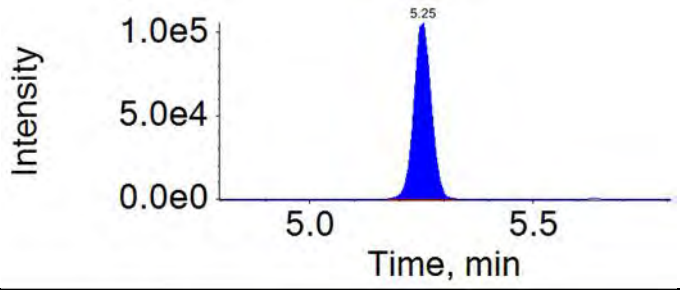
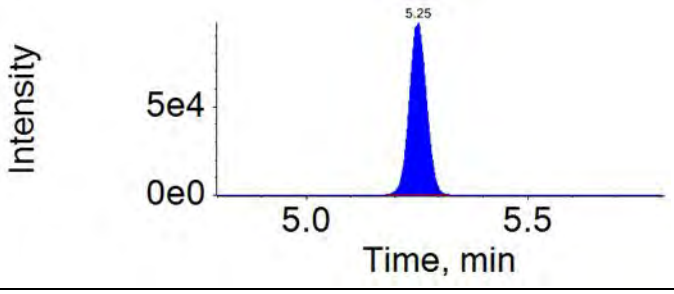
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

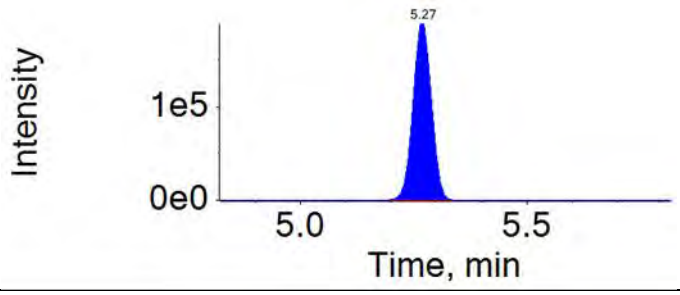
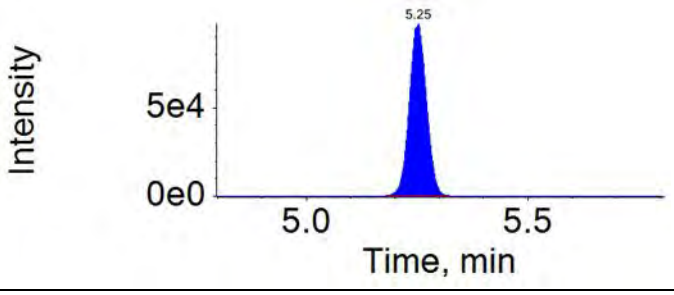
APPROVED
By JPT at 2:53 pm, 11/7/18

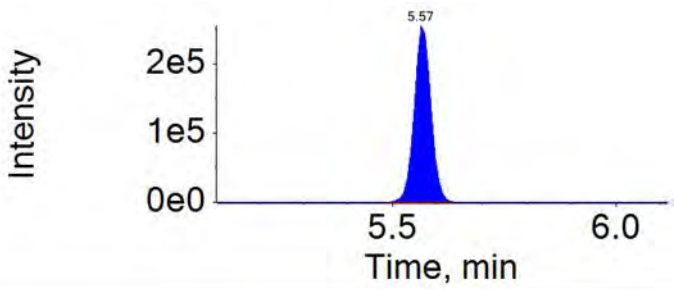
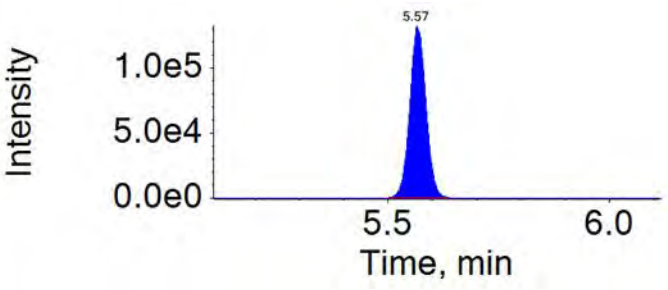
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

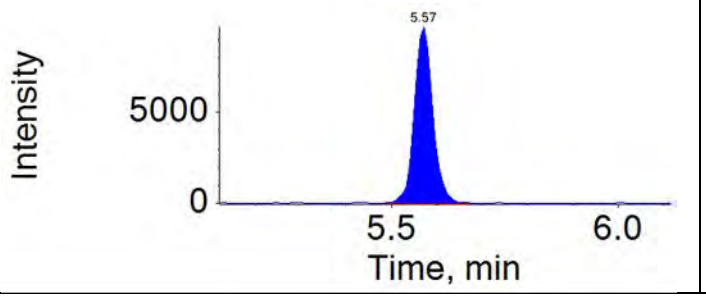
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

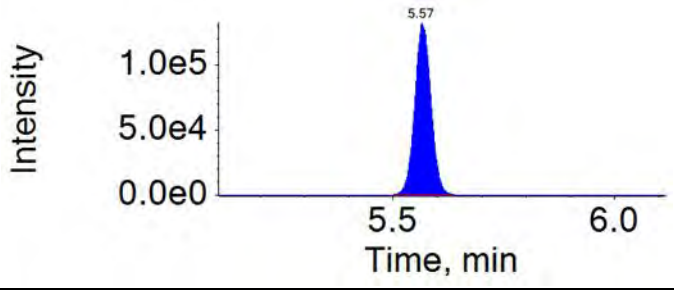
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

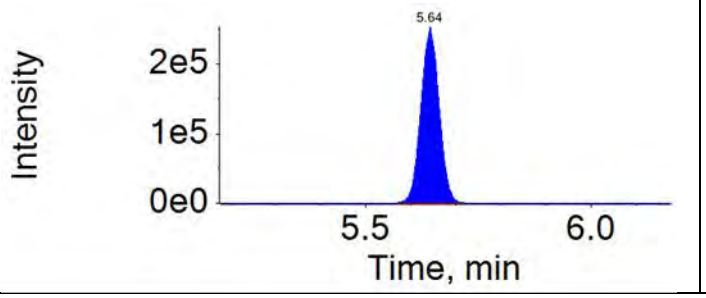
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

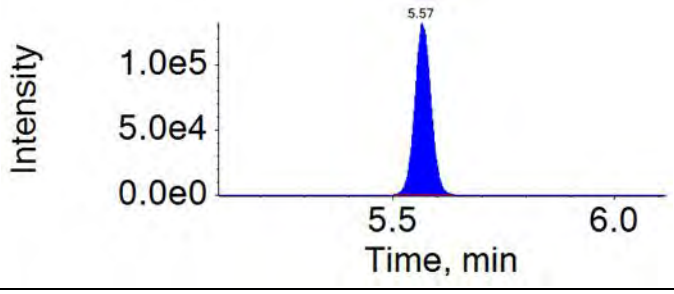
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



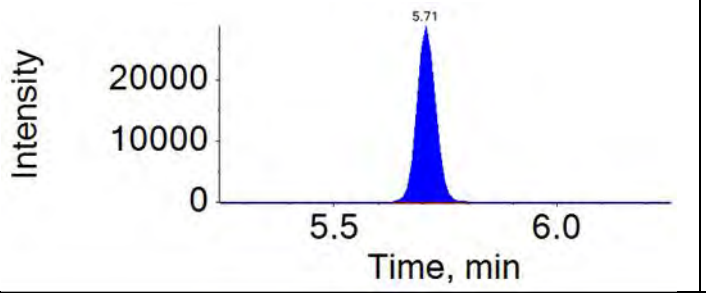


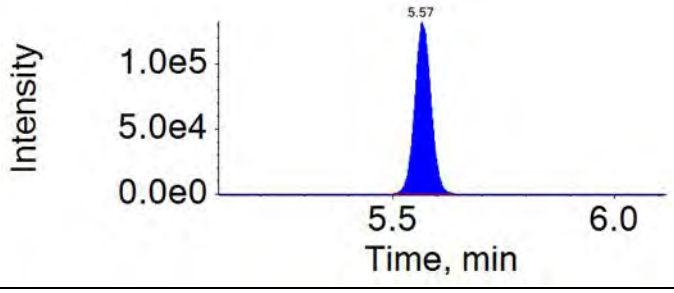
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



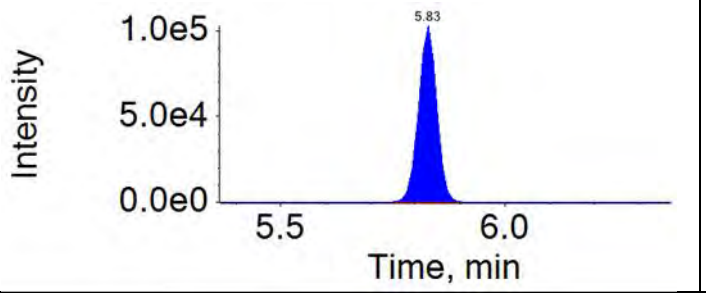


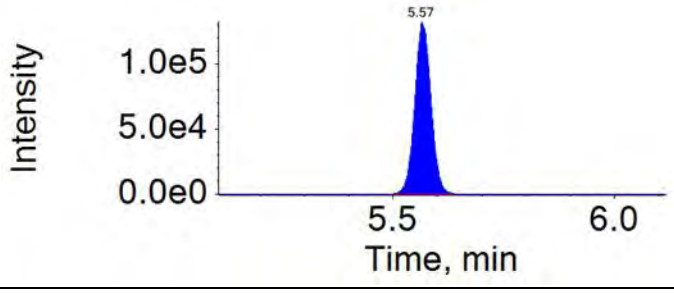
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

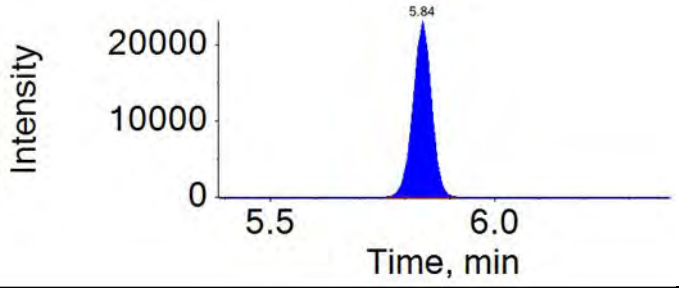
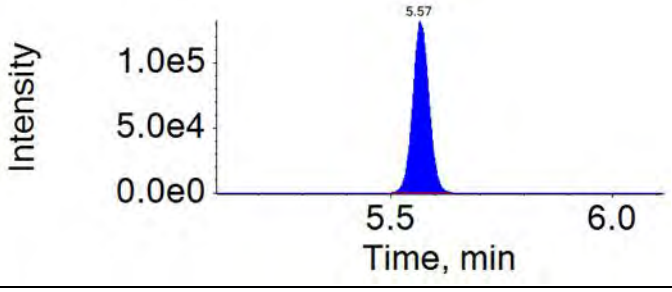


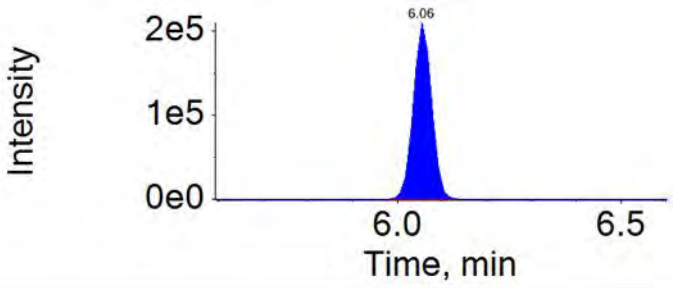
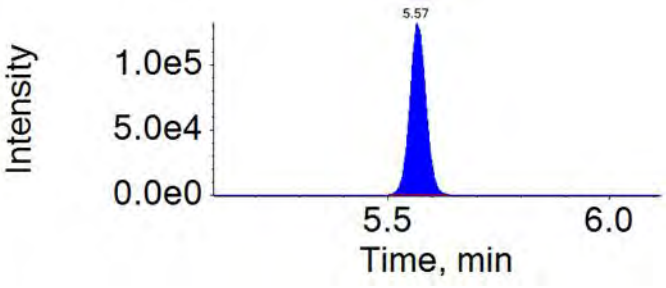


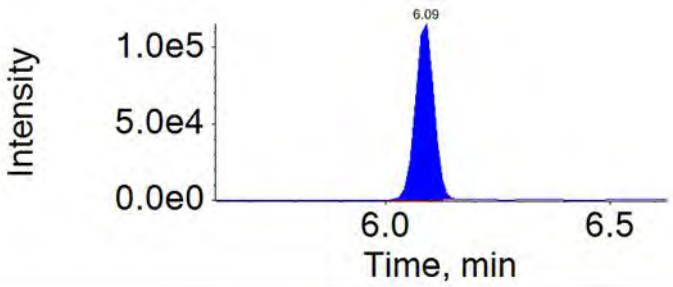
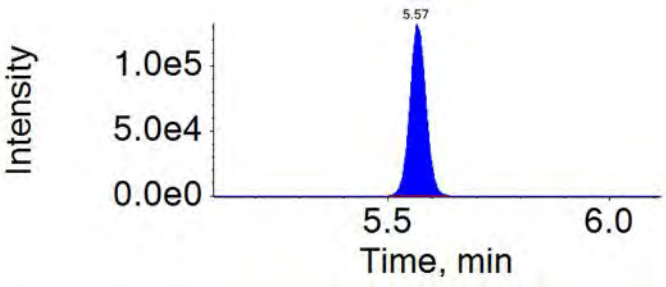
APPROVED
By JPT at 2:53 pm, 11/7/18

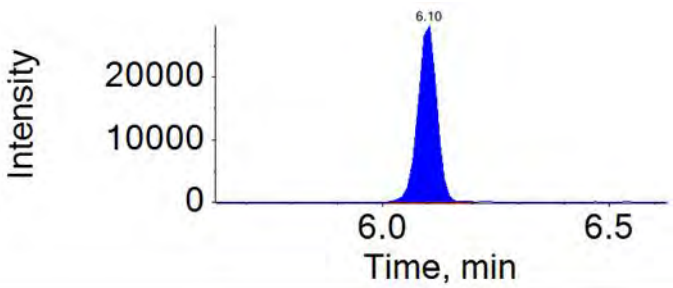
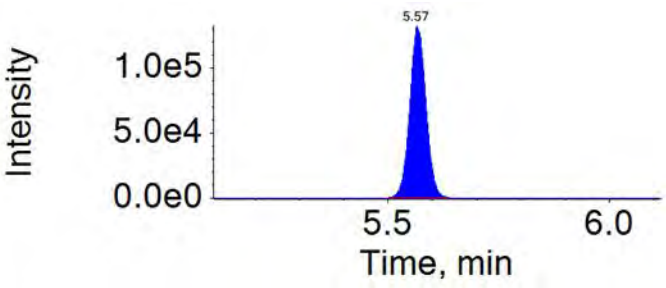
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

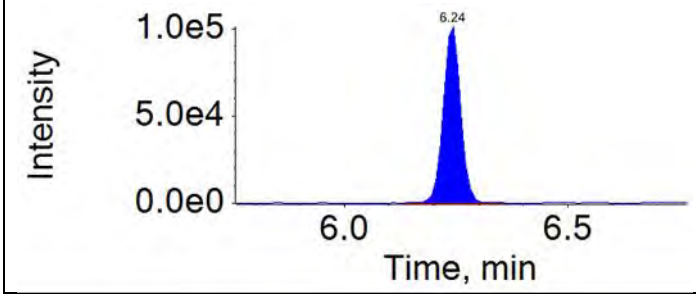
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

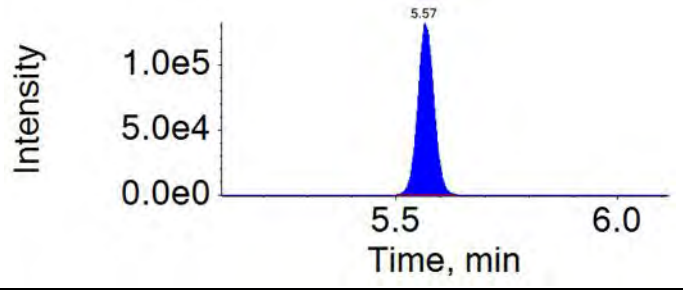
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

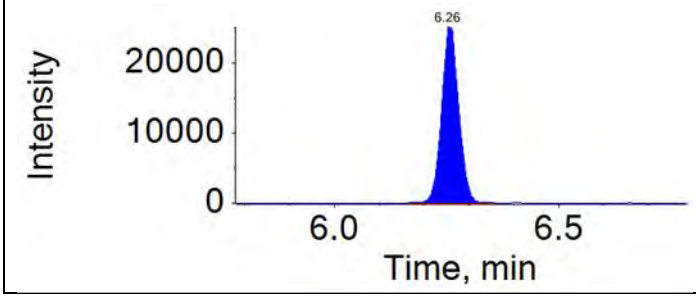
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

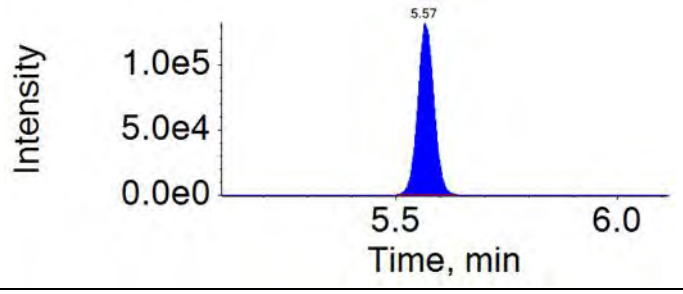
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



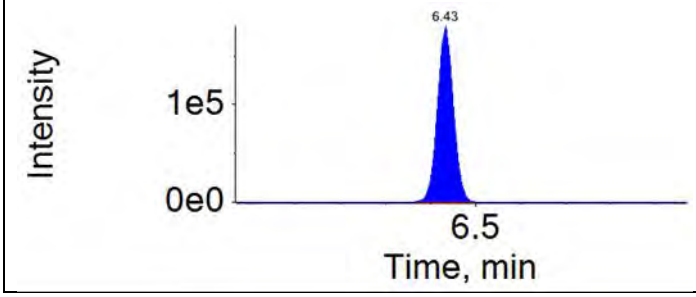


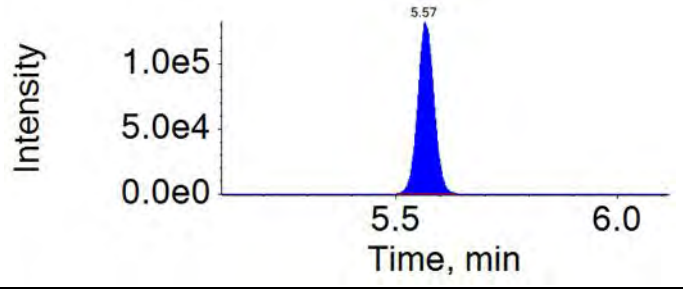
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

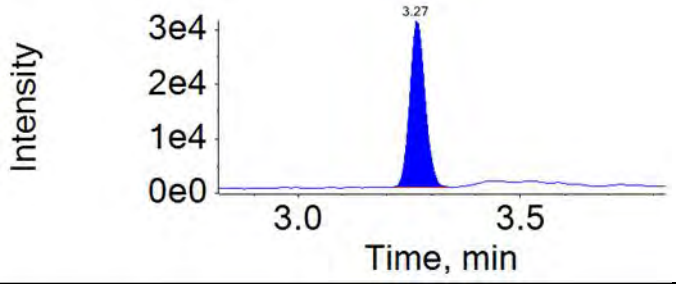
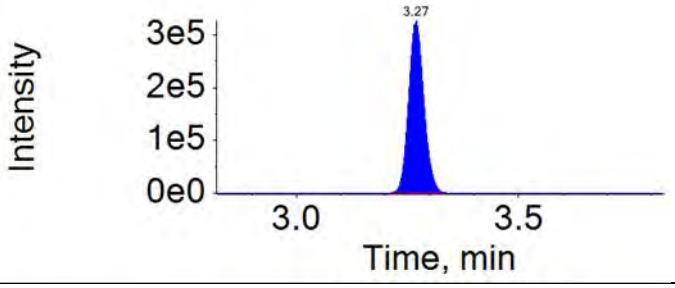


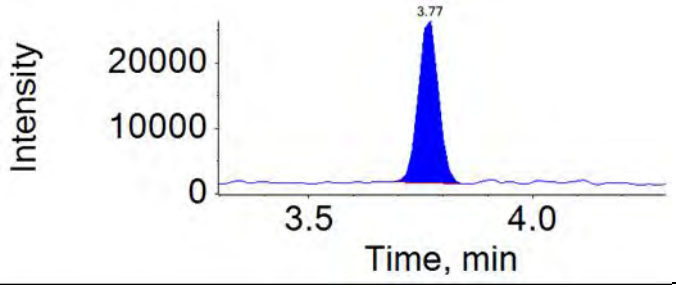
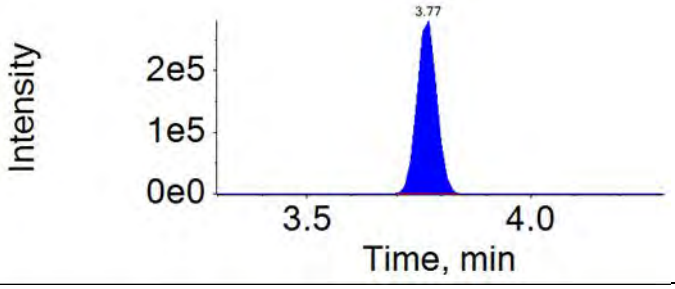


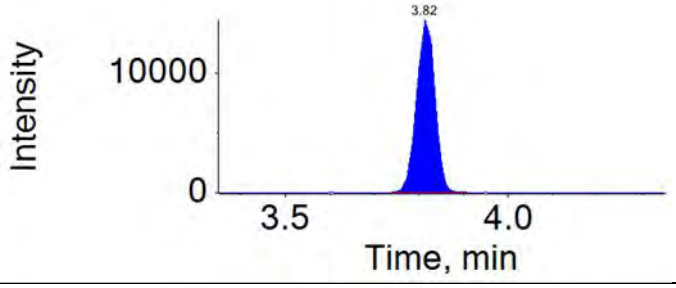
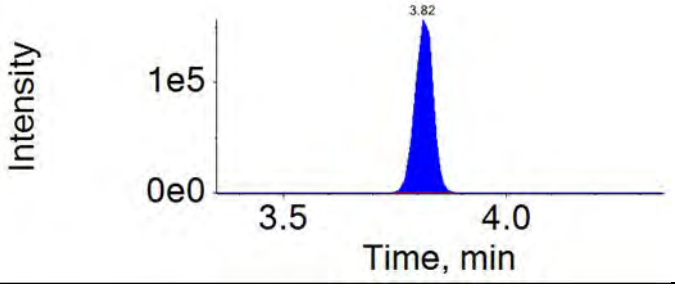
APPROVED
By JPT at 2:53 pm, 11/7/18

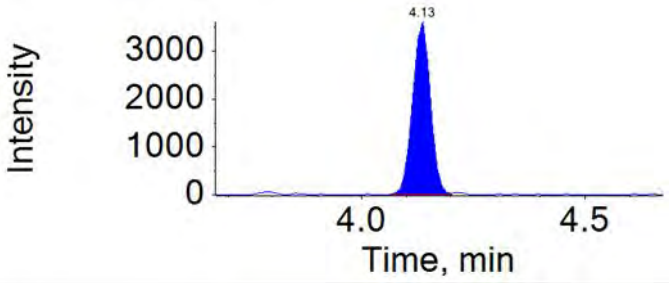
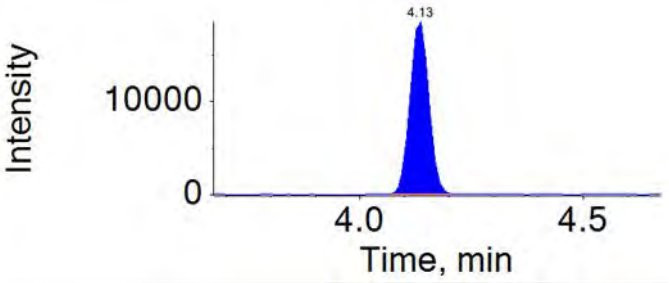
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

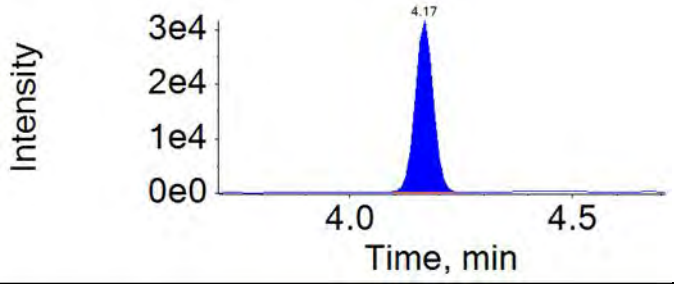
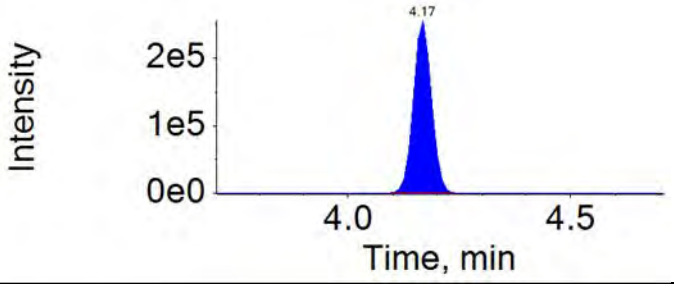
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

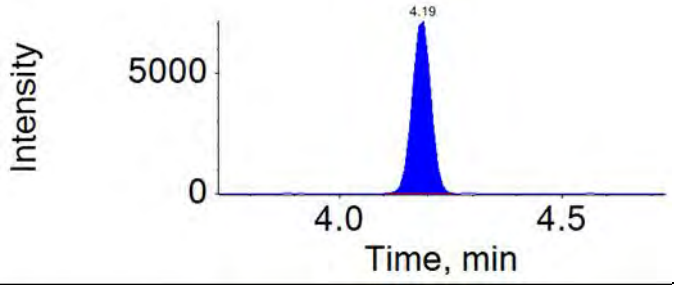
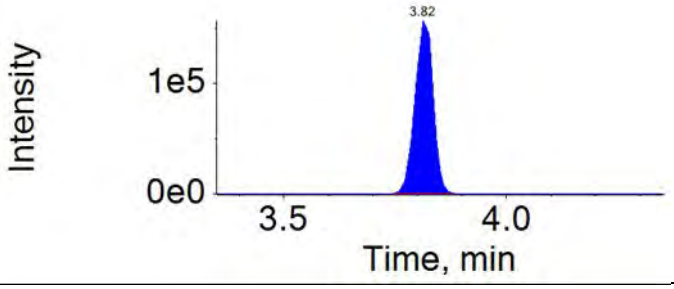
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

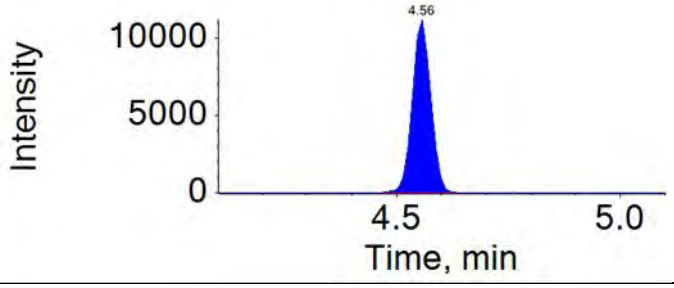
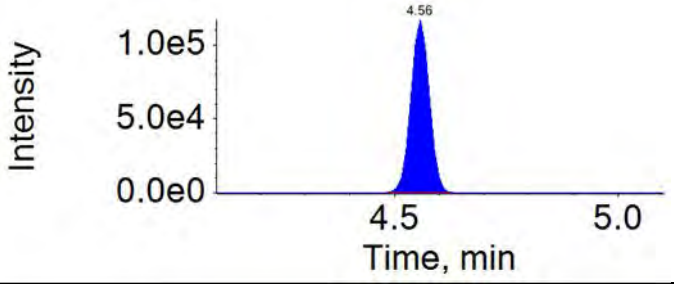
APPROVED
By JPT at 2:53 pm, 11/7/18

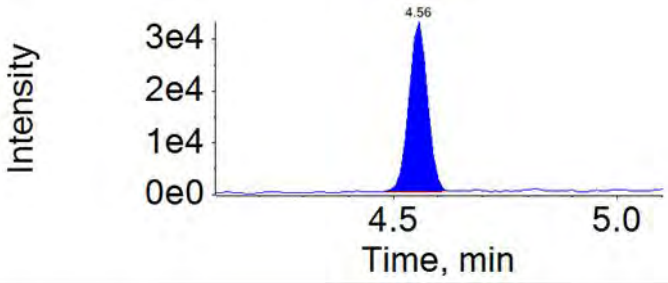
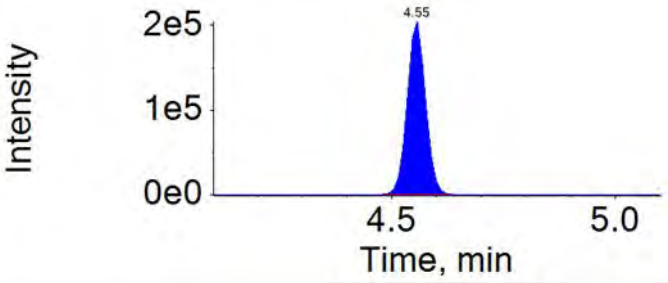
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

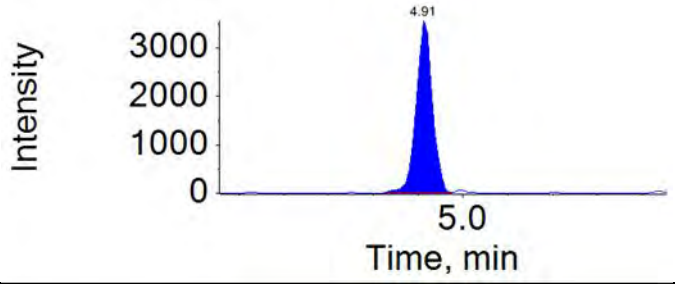
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

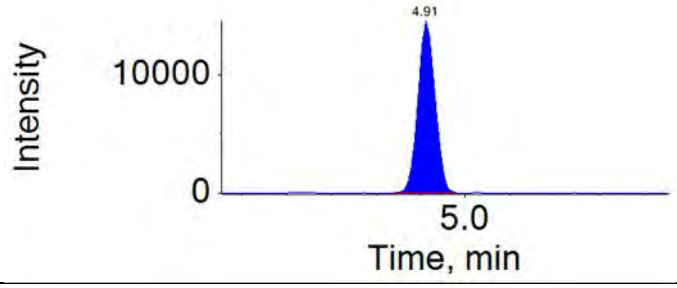
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

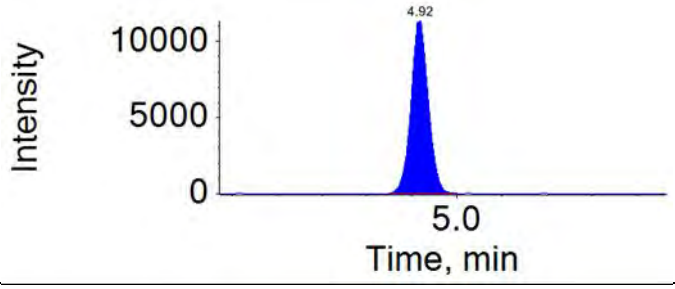
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

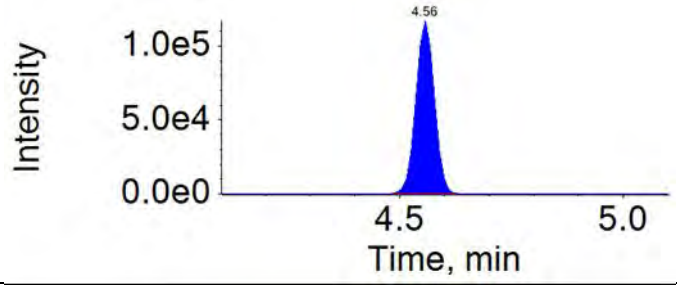
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



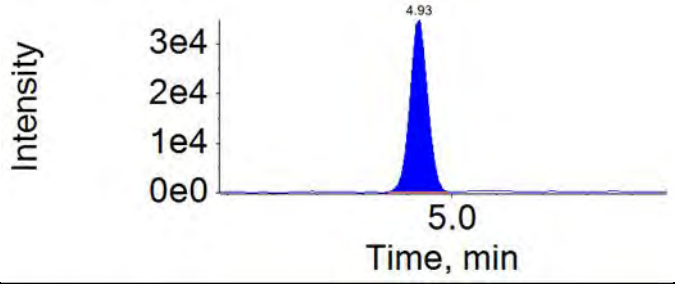


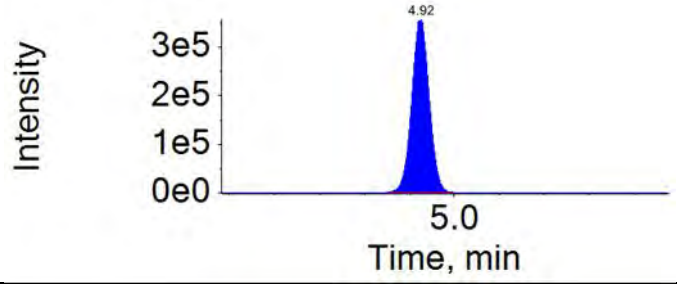
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



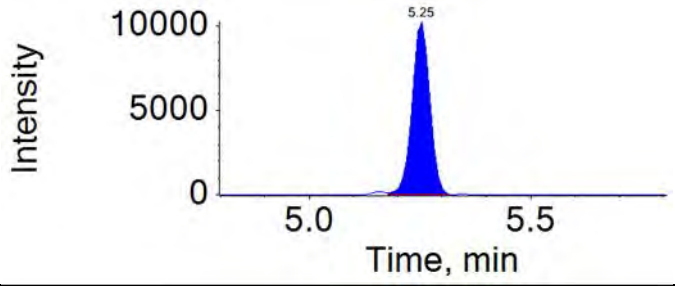


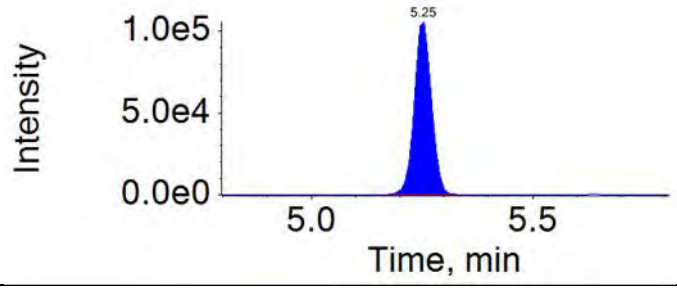
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



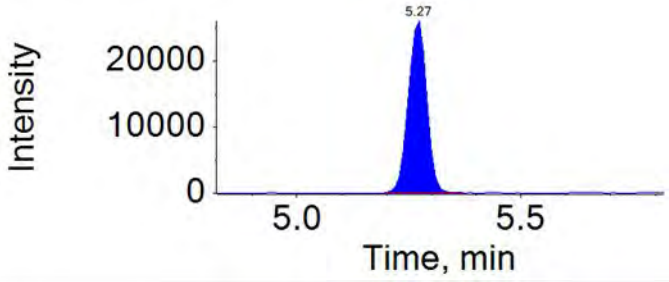


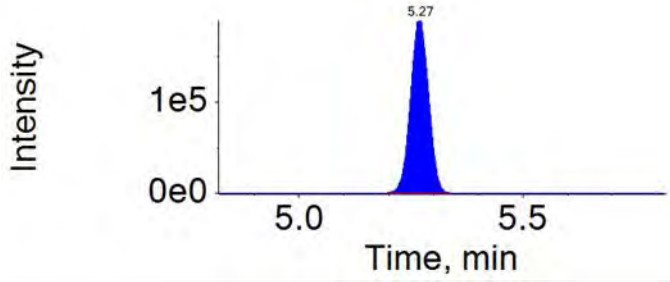
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

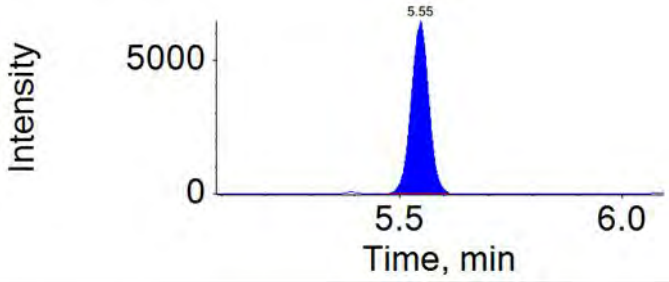
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

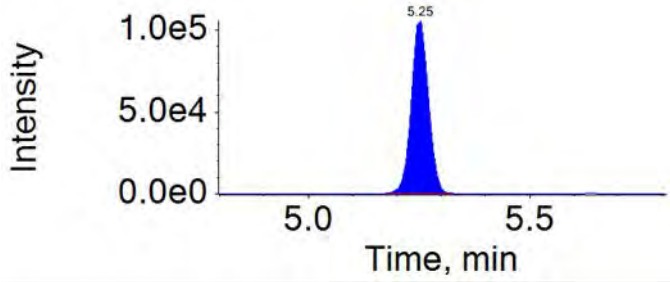
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



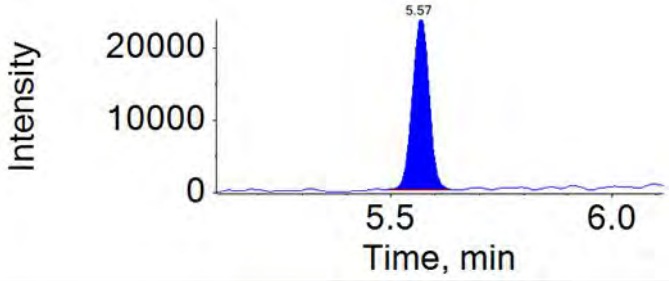


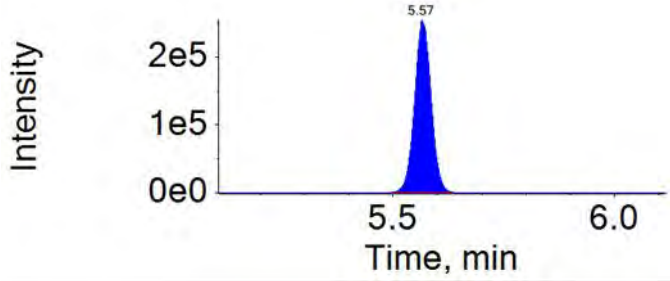
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



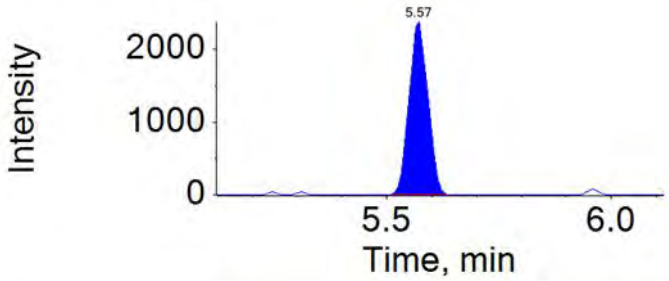


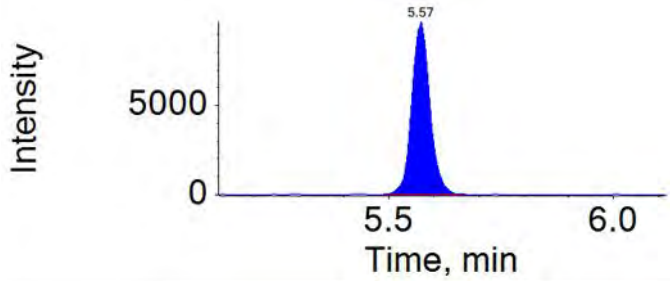
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

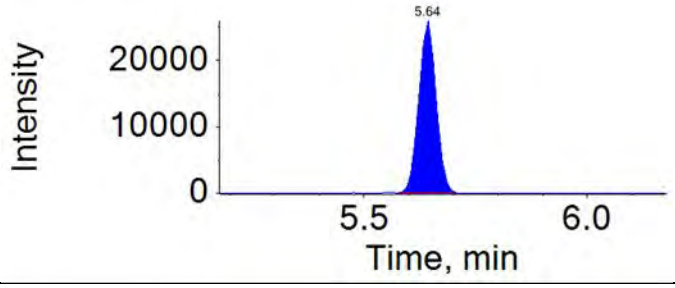
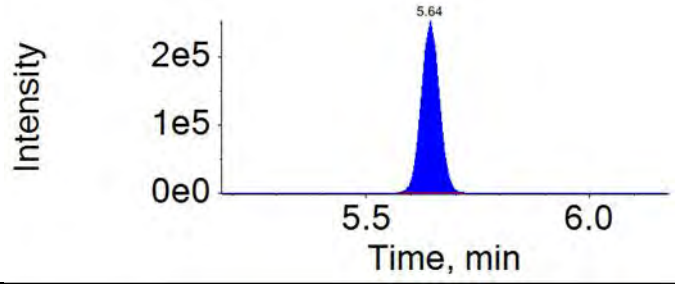


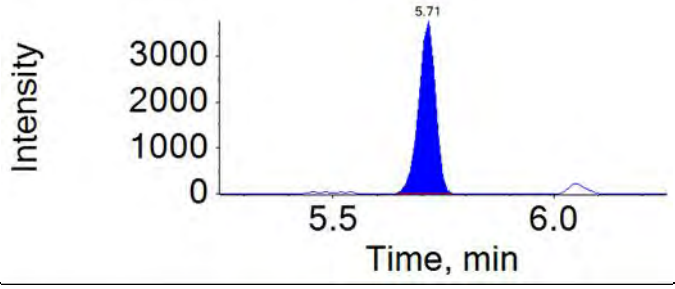
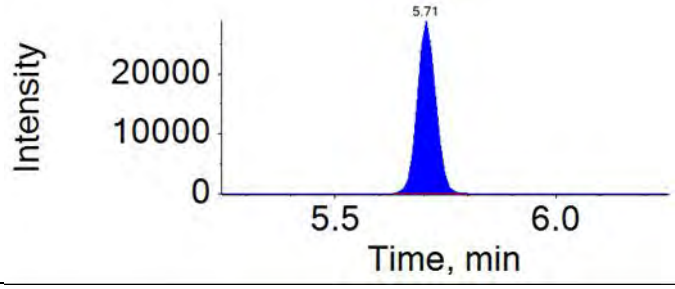


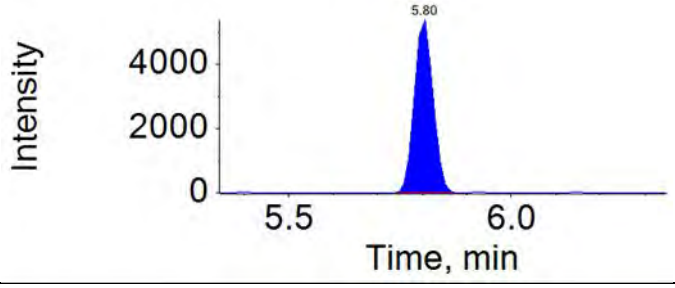
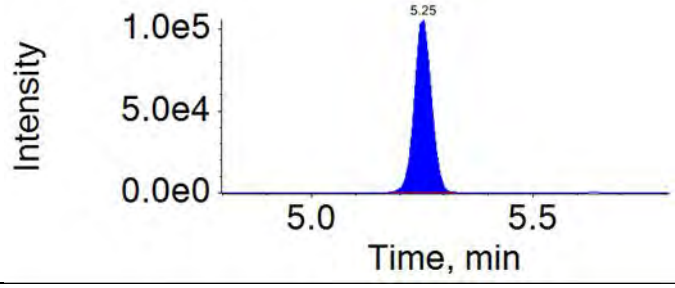
APPROVED
By JPT at 2:53 pm, 11/7/18

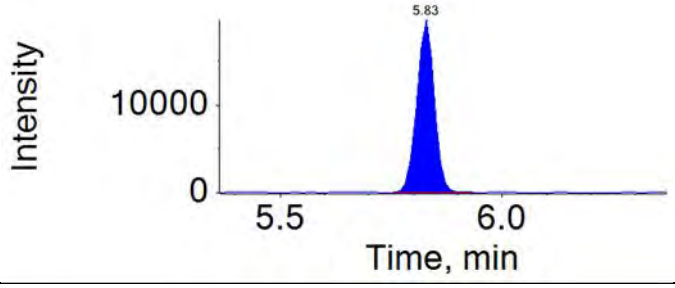
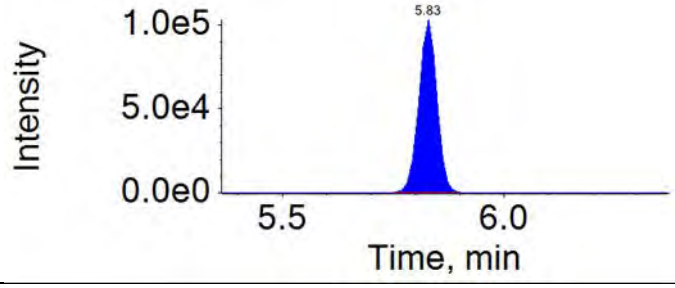
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

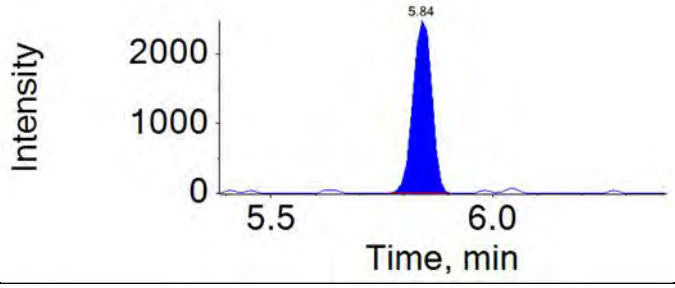
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

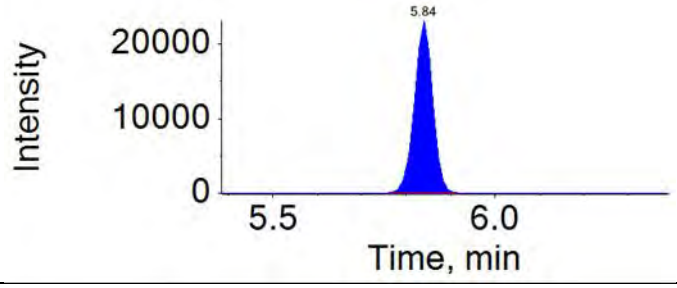
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

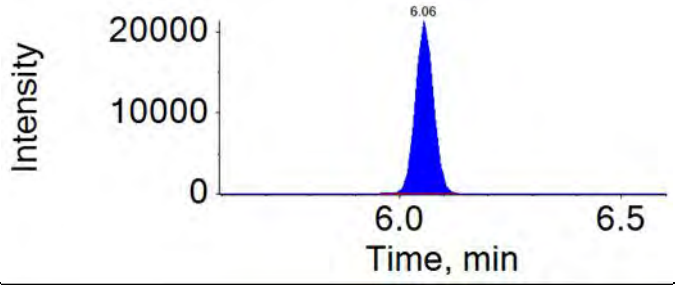
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

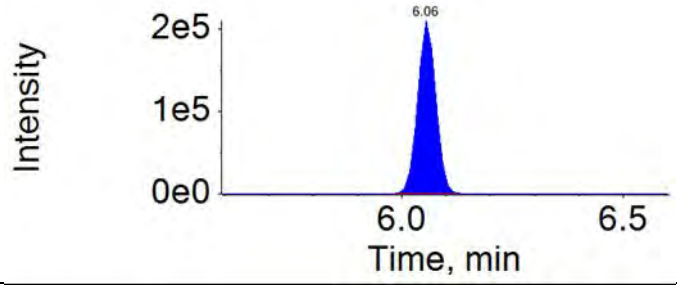
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



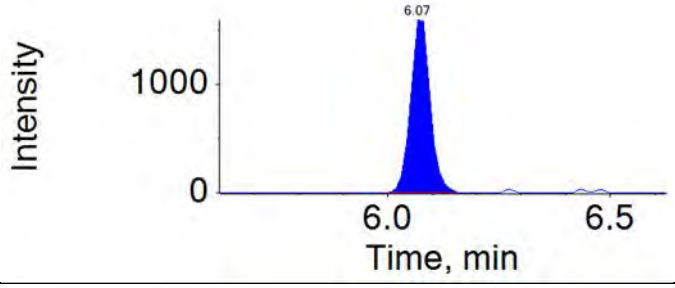


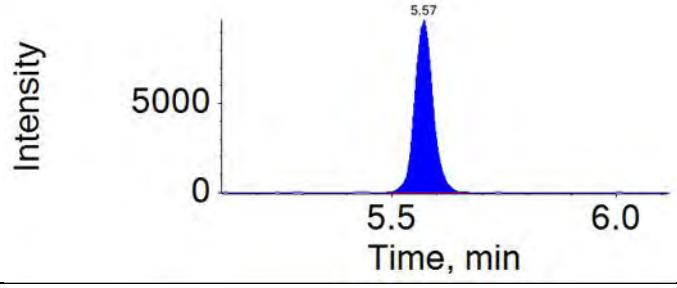
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



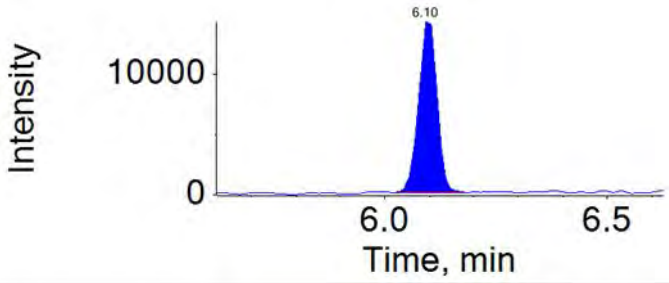


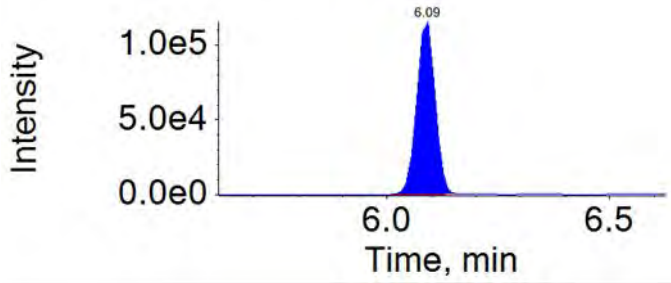
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



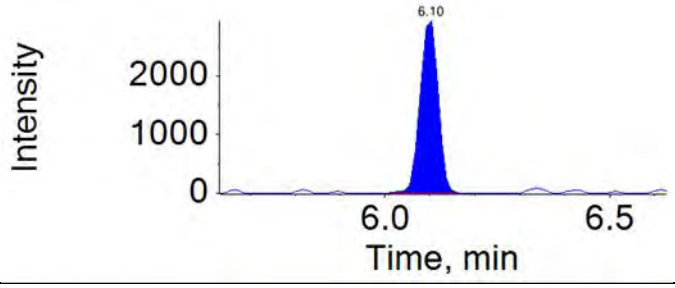


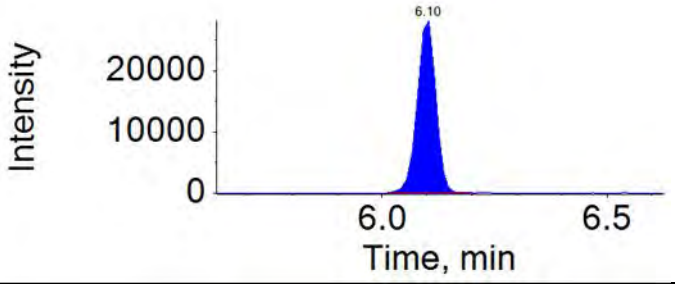
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

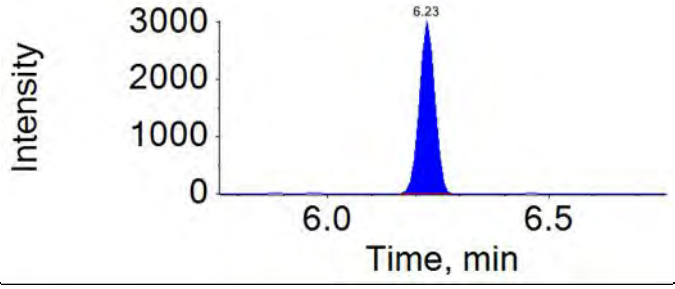
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

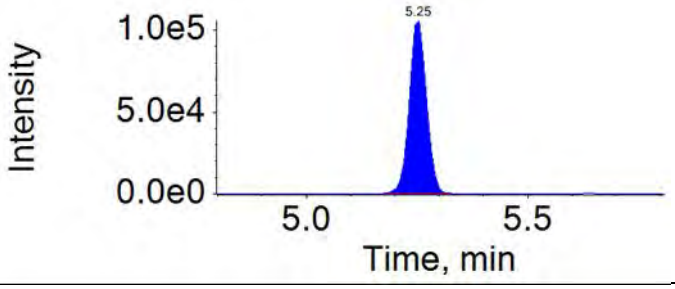
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



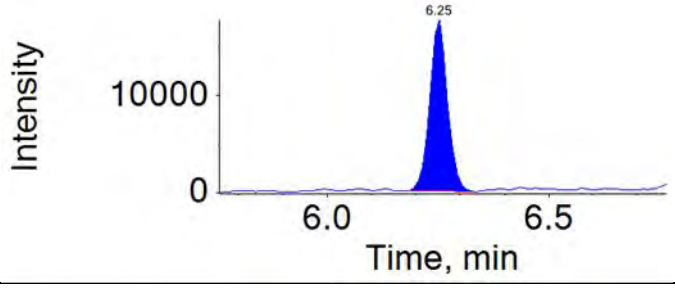


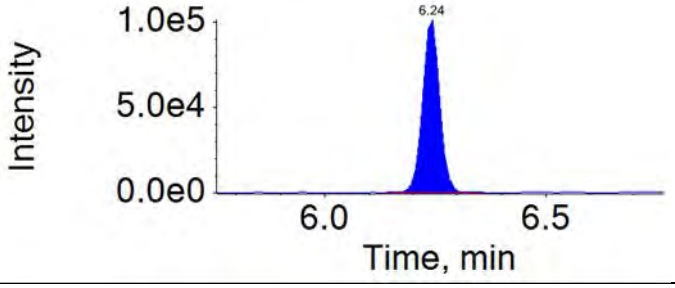
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



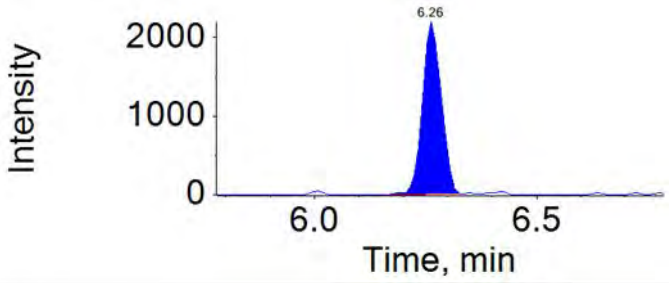


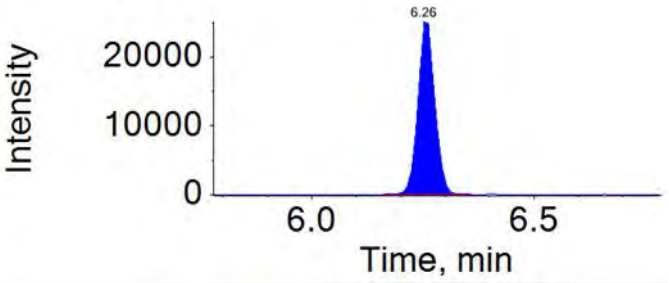
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



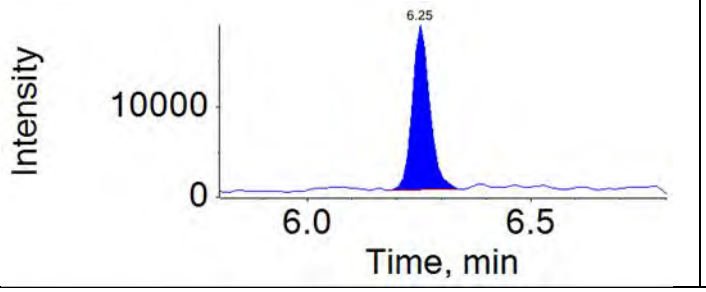


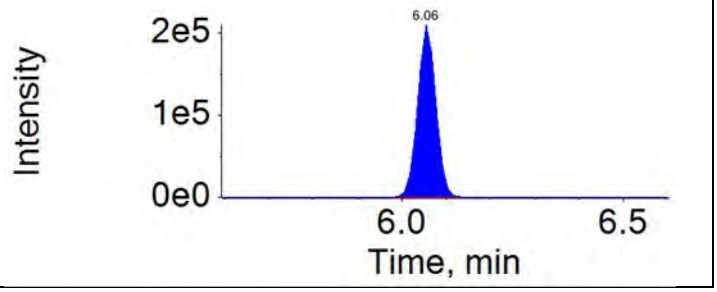
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

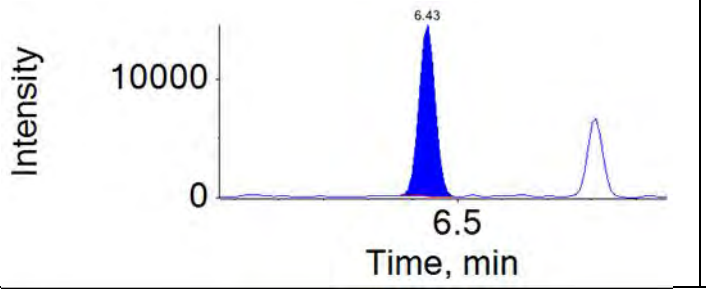
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

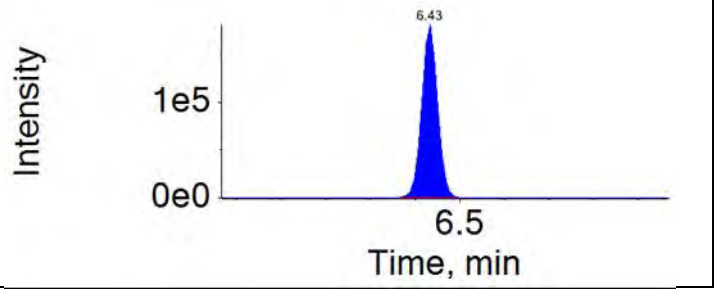
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



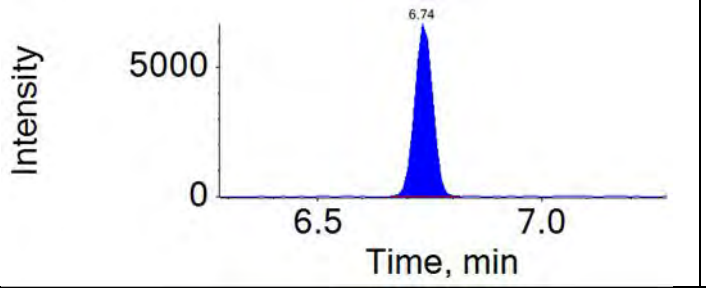


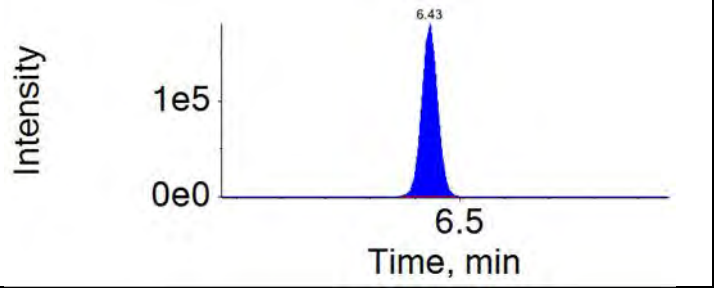
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



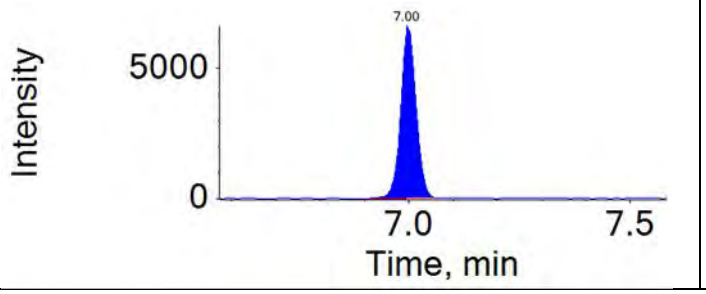


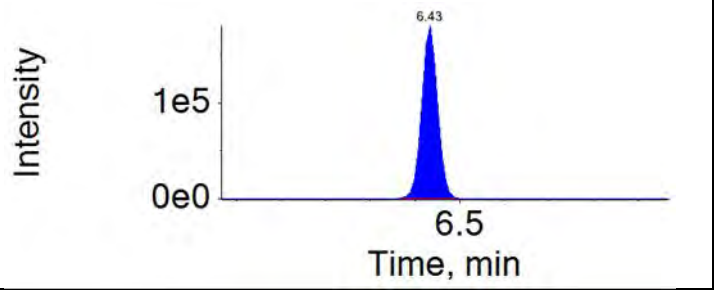
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



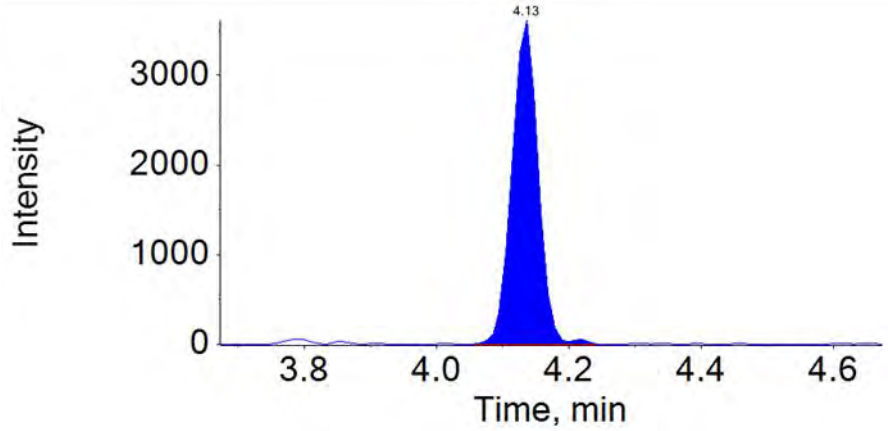


APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

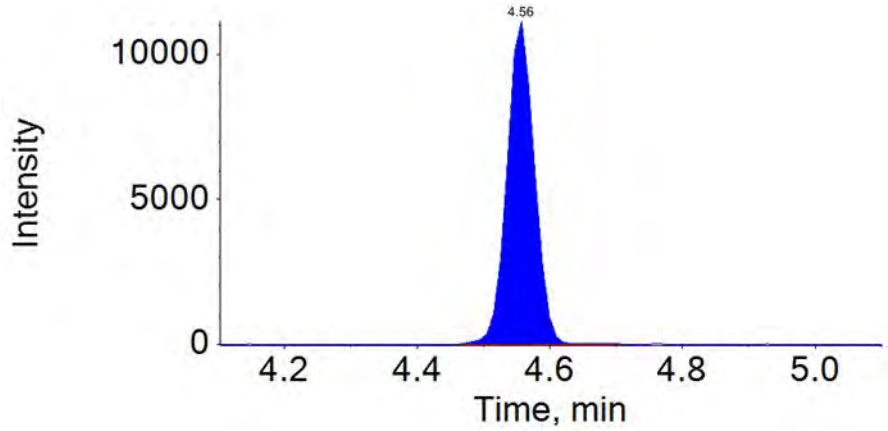
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
4:2-FTS
RT (min.):
4.13
Peak Area:
10015.5
Mass Range:
327.0 / 307.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



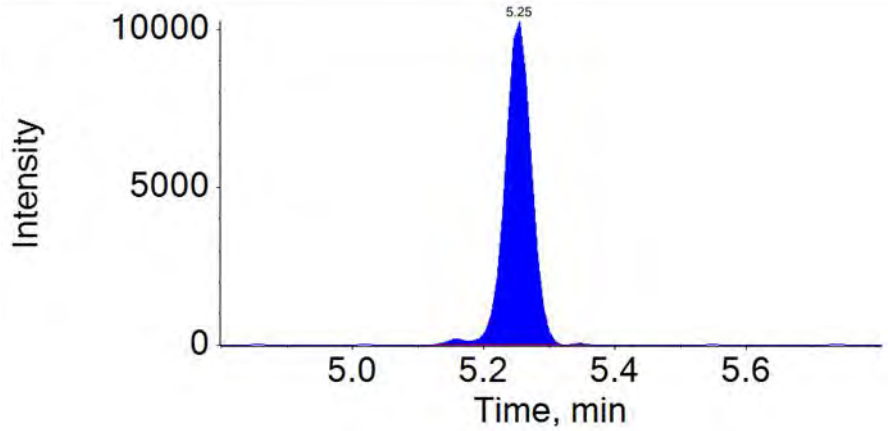
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
32165.6
Mass Range:
399.0 / 80.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
29015.4
Mass Range:
499.0 / 80.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

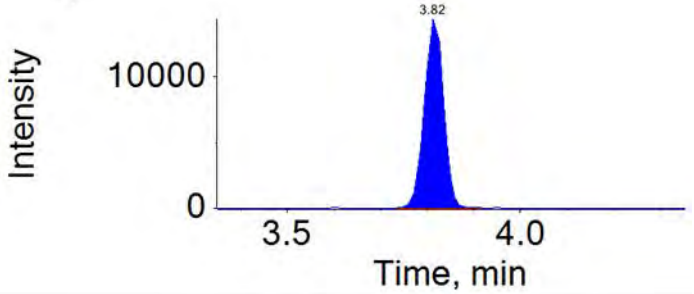
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	41415.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	14355.0	A	0.3576	0.3466	-3	50	
4:2-FTS	4.13	1.00	9924.9	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	6720.6	A	0.6359	0.6771	6	50	
PFHxA	4.17	1.00	88469.9	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	1053.3	A	0.0115	0.0119	4	50	
PFPeS	4.19	1.10	20956.8	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	12018.2	A	0.5384	0.5735	7	50	
PFHxS	4.56	1.00	32061.0	M	1.0000	1.0000			
PFHxS_2	4.56	1.00	11356.8	A	0.3569	0.3542	-1	50	
PFHpA	4.56	1.00	93502.9	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	5694.0	A	0.0577	0.0609	6	50	
6:2-FTS	4.91	1.00	8883.8	A	1.0000	1.0000			
6:2-FTS_2	4.92	1.00	4933.5	A	0.6752	0.5553	-18	50	
PFHpS	4.92	1.08	30553.2	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	12511.0	A	0.3950	0.4095	4	50	
PFOA	4.93	1.00	94348.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	6706.8	A	0.0635	0.0711	12	50	
PFOS	5.25	1.00	28529.2	M	1.0000	1.0000			
PFOS_2	5.25	1.00	9986.4	A	0.3494	0.3500	0	50	
PFNA	5.27	1.00	74743.9	A	1.0000	1.0000			
PFNA_2	5.27	1.00	2006.2	A	0.0207	0.0268	30	50	
PFNS	5.55	1.06	17507.8	A	1.0000	1.0000			
PFNS_2	5.54	1.06	9005.6	A	0.4890	0.5144	5	50	
PFDA	5.57	1.00	62530.6	A	1.0000	1.0000			
PFDA_2	5.57	1.00	229.8	A	0.0057	0.0037	-35	50	
8:2-FTS	5.57	1.00	6917.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	4092.7	A	0.6169	0.5916	-4	50	
NMeFOSAA	5.71	1.00	9807.4	A	1.0000	1.0000			
NMeFOSAA_2	5.72	1.00	1815.6	A	0.2206	0.1851	-16	50	
PFDS	5.80	1.11	15726.3	A	1.0000	1.0000			
PFDS_2	5.79	1.10	7422.2	A	0.4648	0.4720	2	50	
PFUnDA	5.83	1.00	54085.5	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	55.5	A	0.0031	0.0010	-67	50	OOS
NEtFOSAA	5.84	1.00	7253.7	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	4097.5	A	0.6082	0.5649	-7	50	
PFDoDA	6.06	1.00	60098.0	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	610.7	A	0.0109	0.0102	-7	50	
10:2-FTS	6.07	1.09	4874.3	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	3667.0	A	0.7082	0.7523	6	50	
PFTrDA	6.25	1.03	49218.5	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	479.8	A	0.0096	0.0097	1	50	
PFTeDA	6.43	1.00	36223.2	A	1.0000	1.0000			
PFTeDA_2	6.44	1.00	219.8	A	0.0055	0.0061	10	50	
PFHxDA	6.74	1.05	18619.3	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	1073.0	A	0.0596	0.0576	-3	50	
PFODA	7.00	1.09	15742.1	A	1.0000	1.0000			
PFODA_2	7.00	1.09	416.9	A	0.0257	0.0265	3	50	

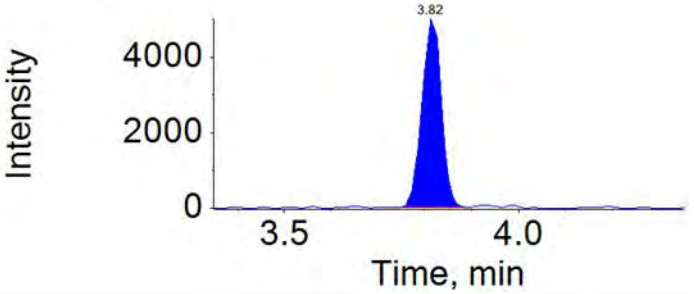
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

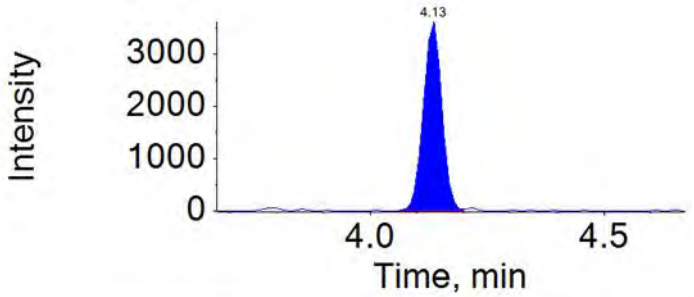
Component: PFBS
Primary Mass: 299.0 / 80.0



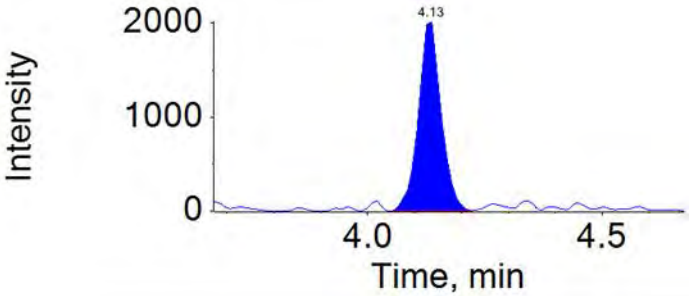
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



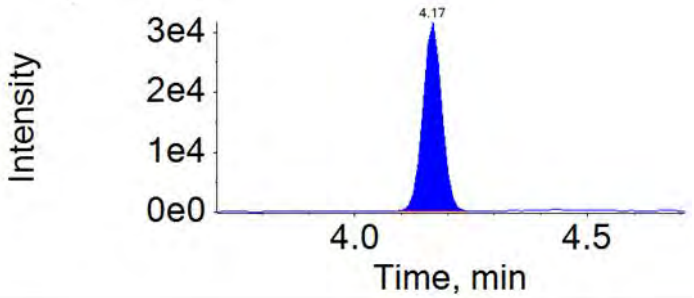
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



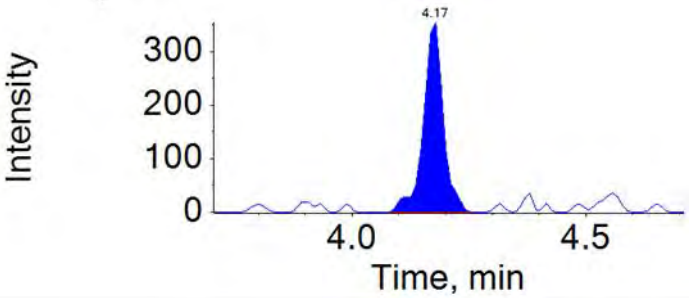
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



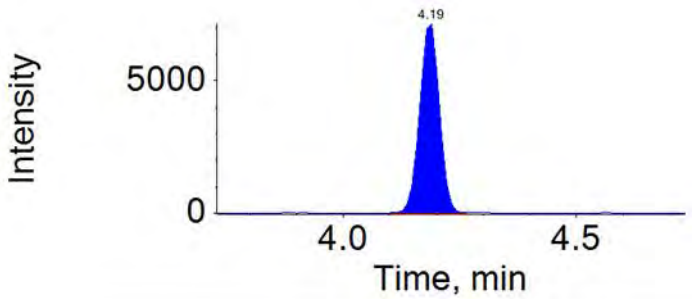
Component: PFHxA
Primary Mass: 313.0 / 269.0



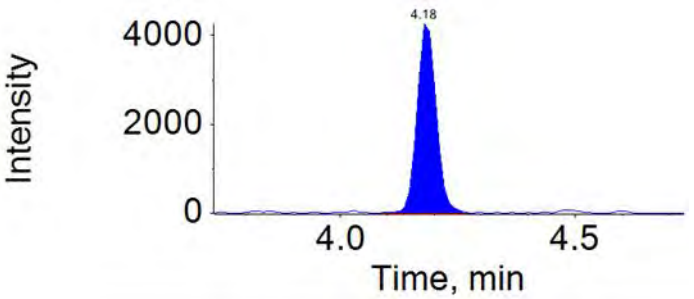
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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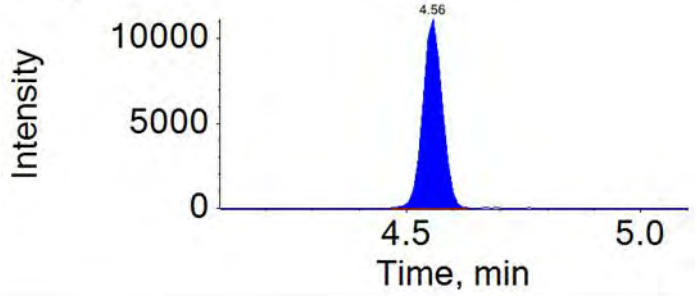
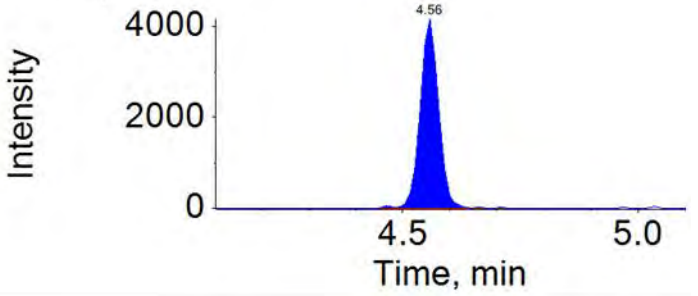
By umar at 5:23 pm, 11/9/18

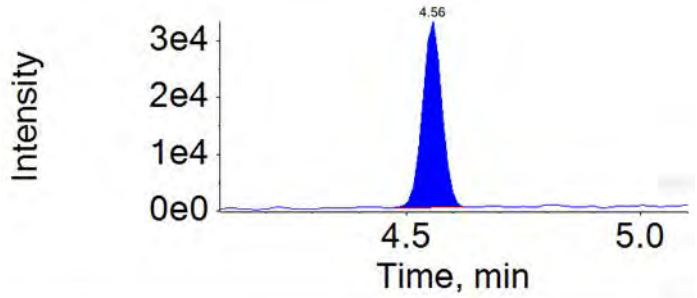
Component: PFHxS
Primary Mass: 399.0 / 80.0



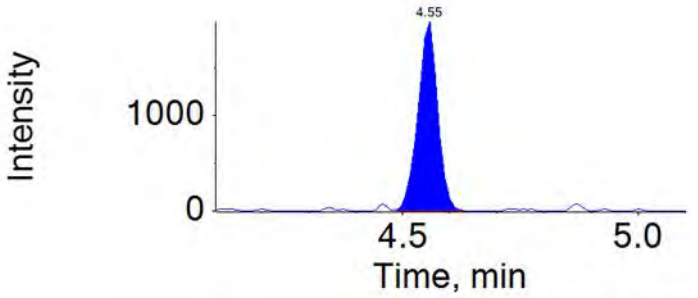
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



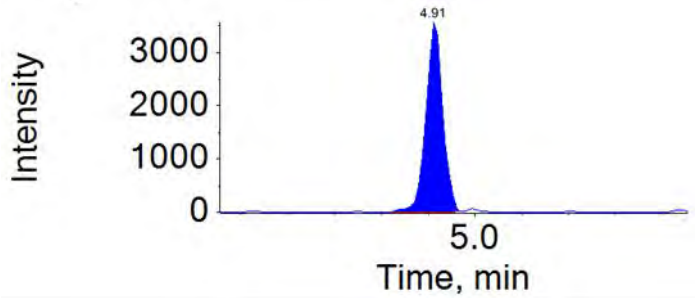
Component: PFHpA
Primary Mass: 363.0 / 319.0



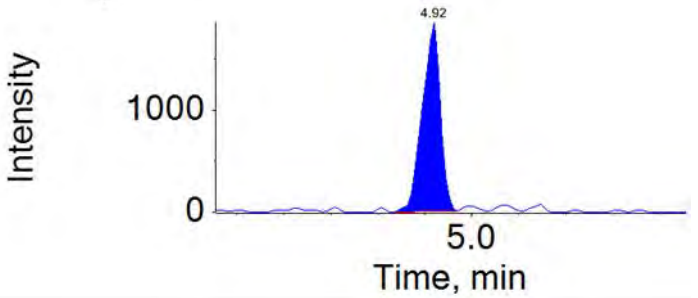
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



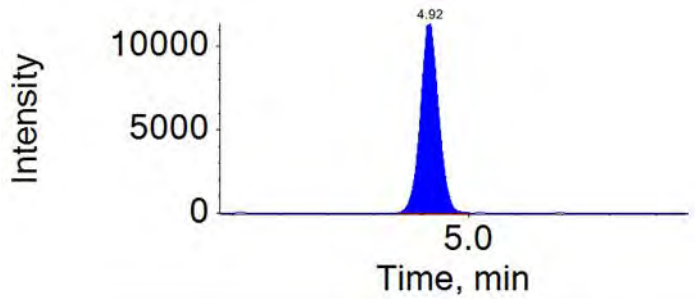
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



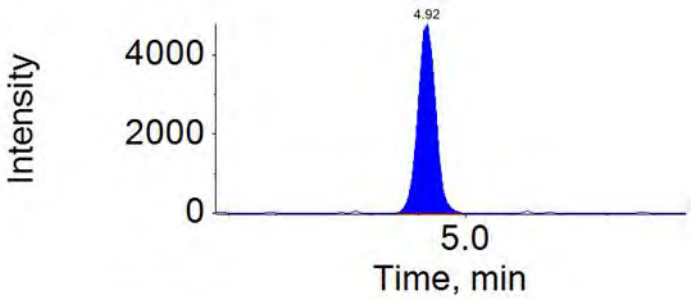
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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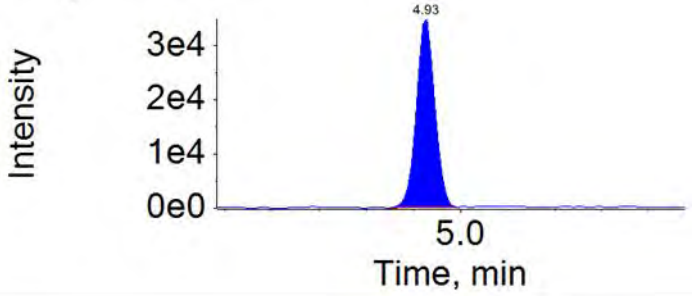
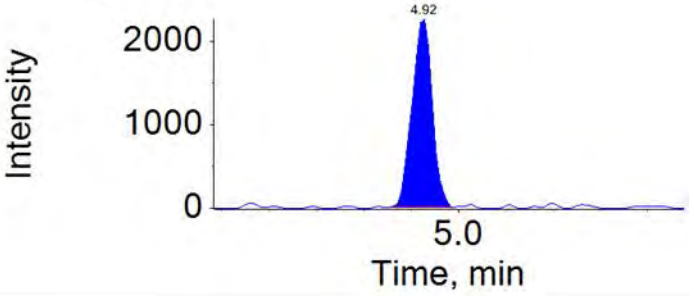
By umar at 5:23 pm, 11/9/18

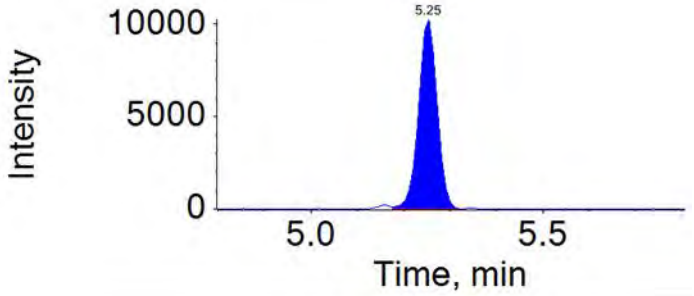
Component: PFOA
Primary Mass: 413.0 / 369.0



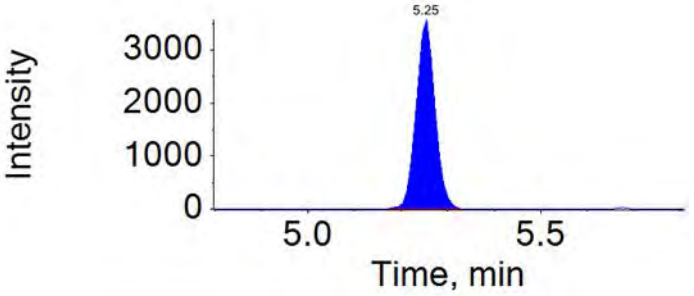
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



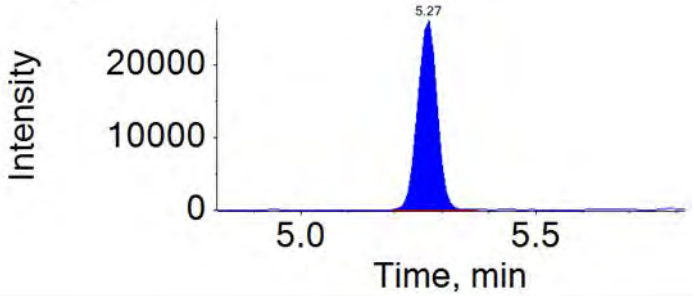
Component: PFOS
Primary Mass: 499.0 / 80.0



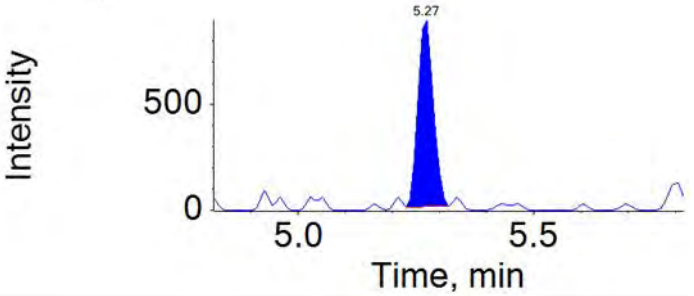
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



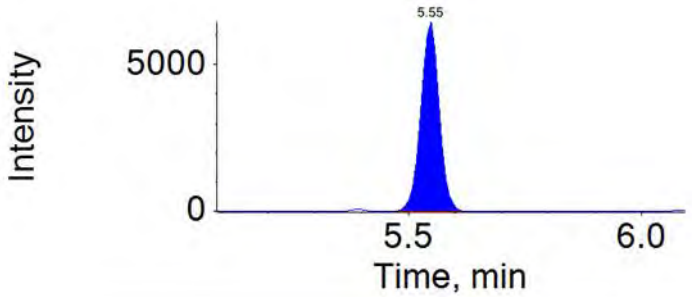
Component: PFNA
Primary Mass: 463.0 / 419.0



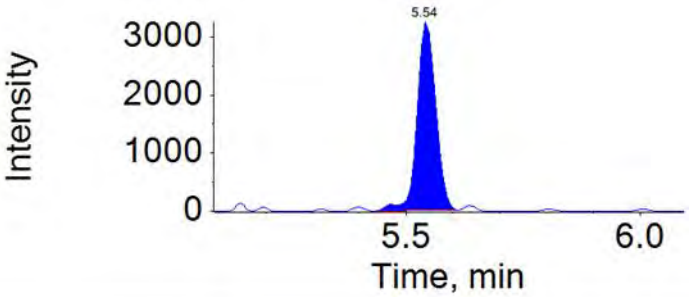
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



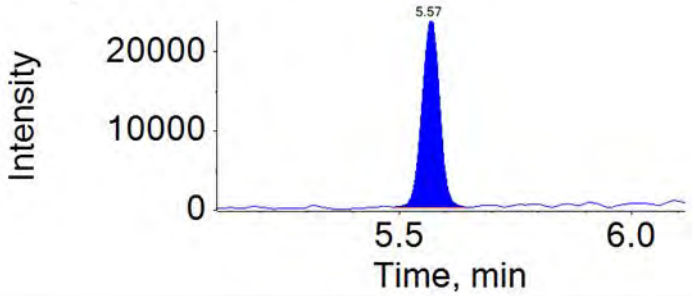
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



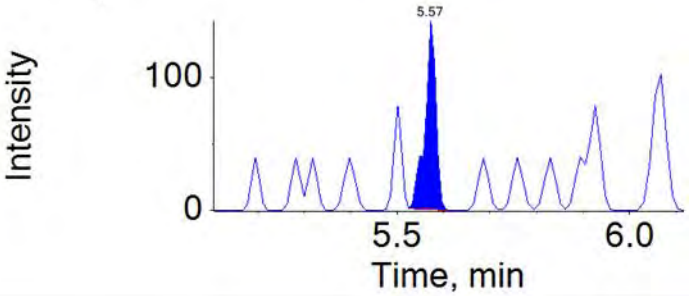
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

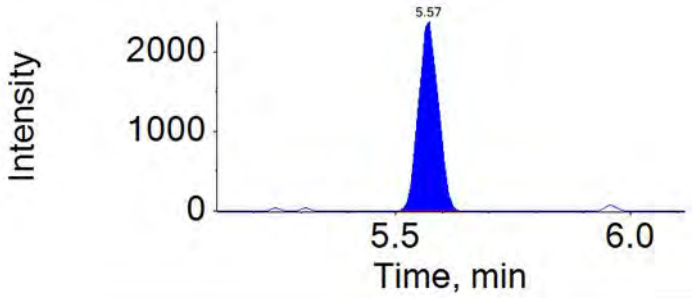
Component: PFDA
Primary Mass: 513.0 / 469.0



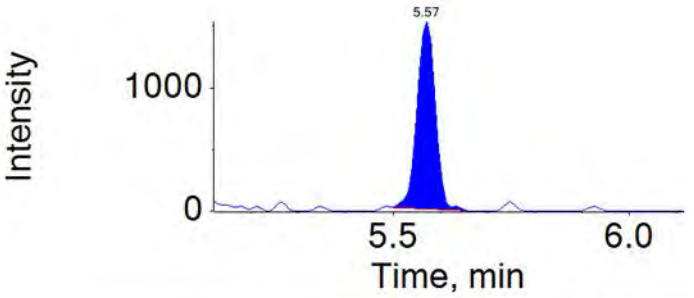
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



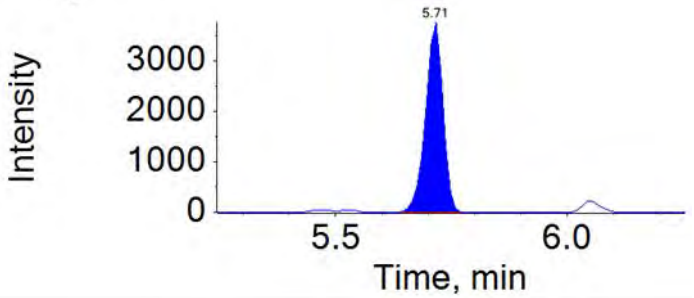
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



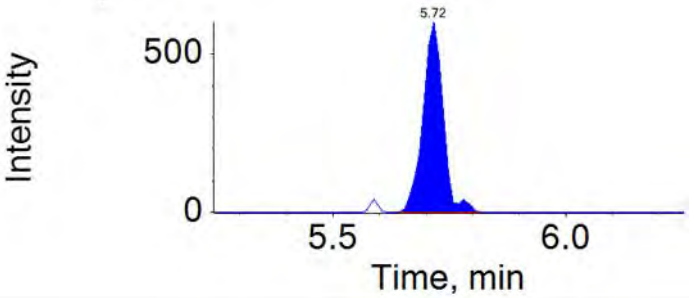
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



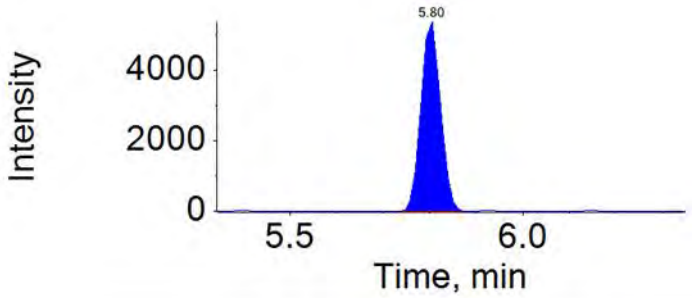
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



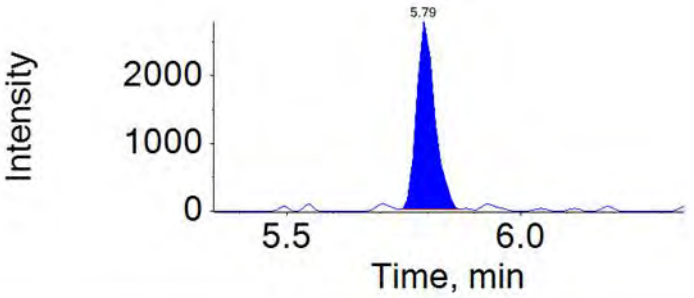
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



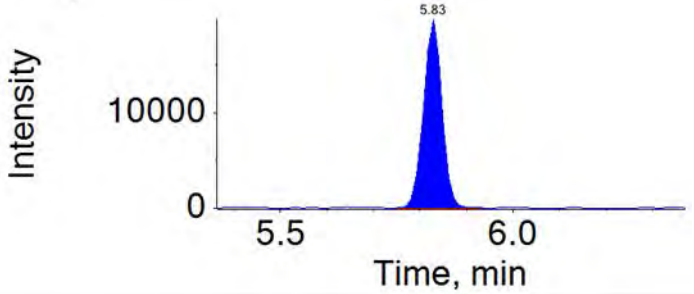
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



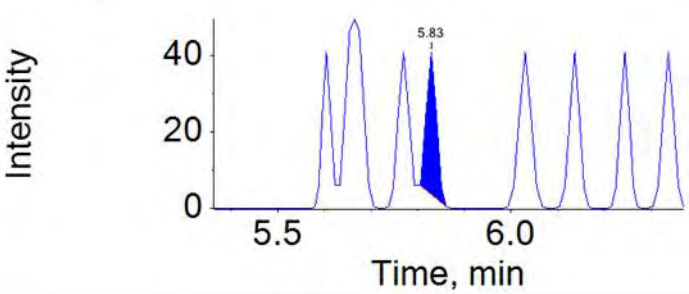
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

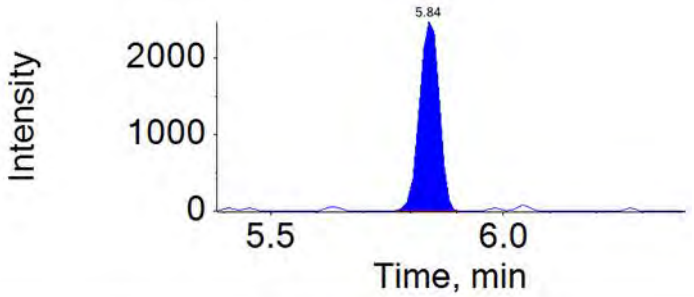
Component: PFUnDA
Primary Mass: 563.0 / 519.0



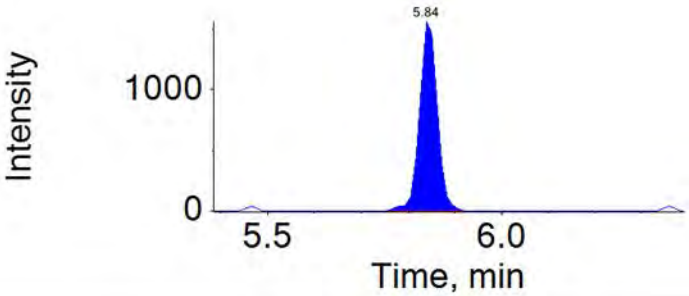
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



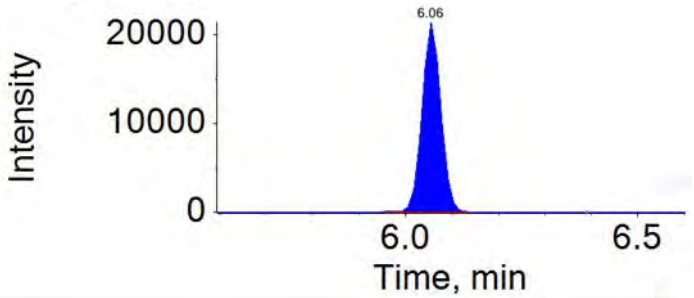
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



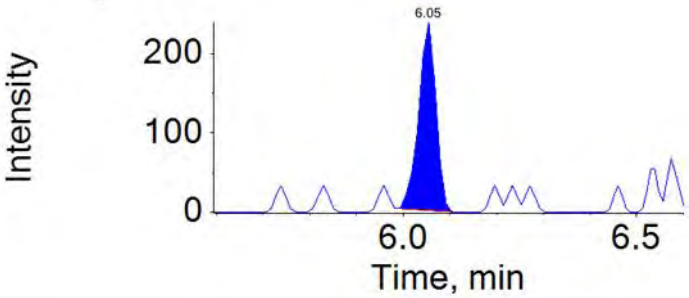
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



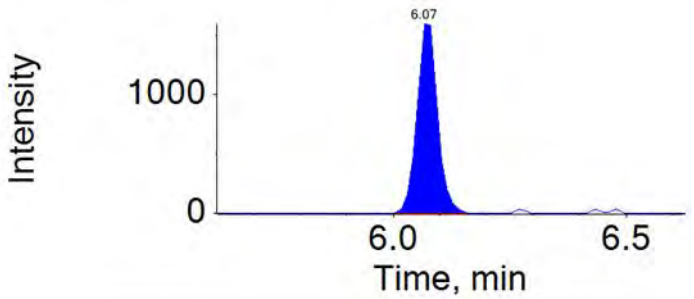
Component: PFDoDA
Primary Mass: 613.0 / 569.0



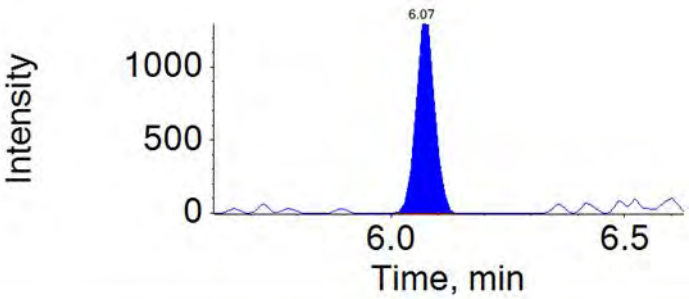
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



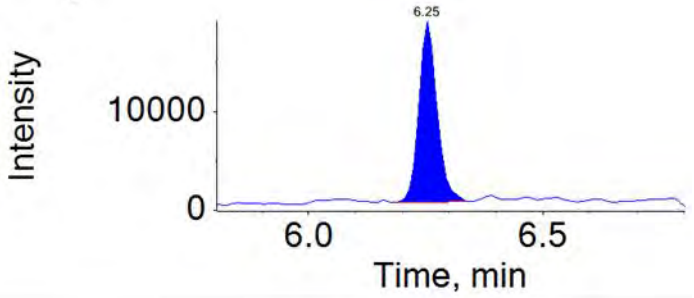
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



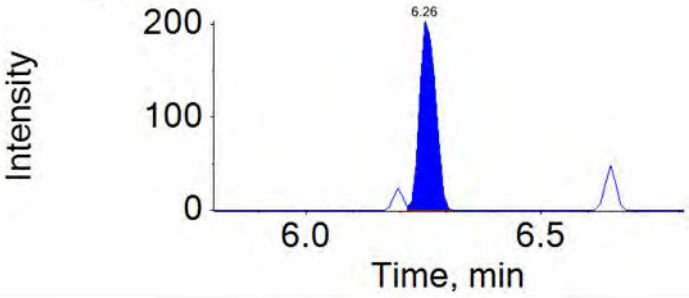
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

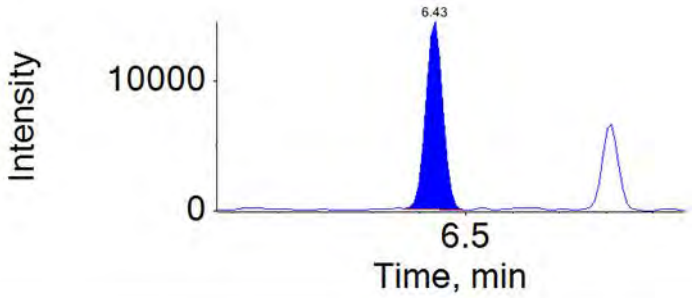
Component: PFTrDA
Primary Mass: 663.0 / 619.0



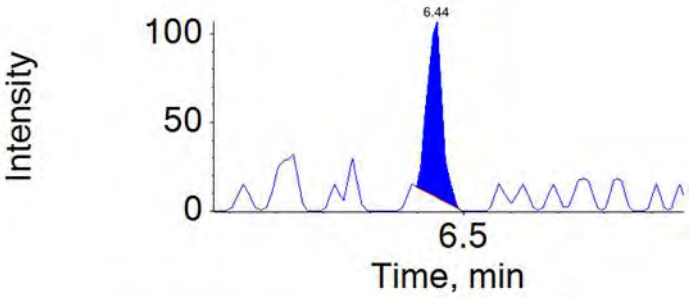
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



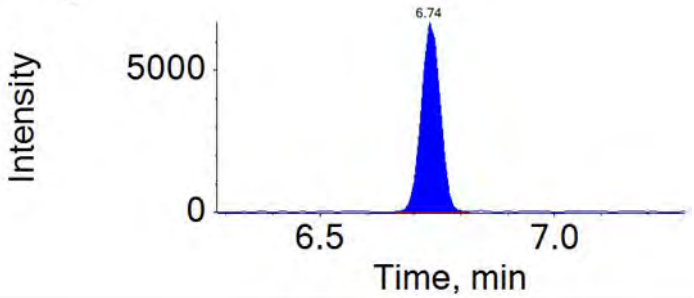
Component: PFTeDA
Primary Mass: 713.0 / 669.0



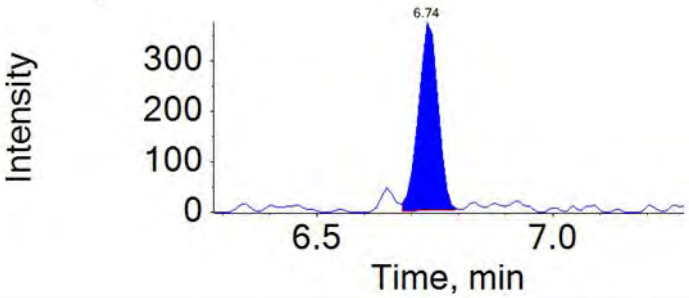
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



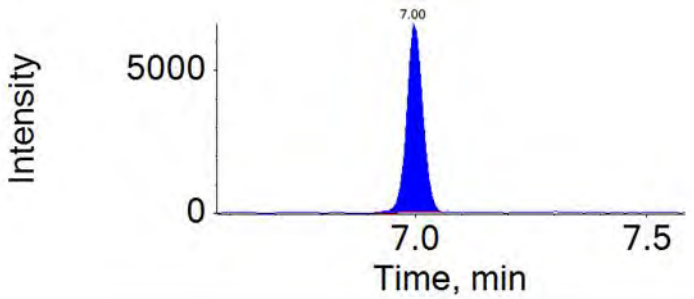
Component: PFHxDA
Primary Mass: 813.0 / 769.0



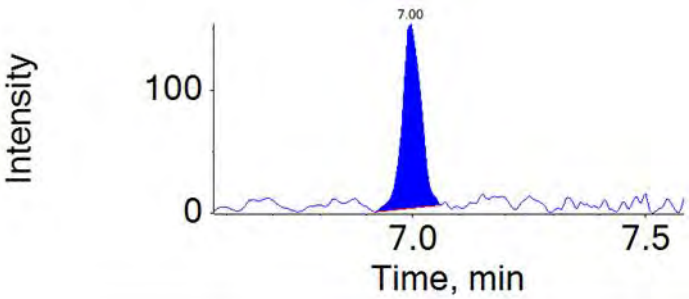
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV07DCAL-12.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T09:57:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	730410.6	730410.6	0	50	
13C2-PFOA	5.0	524423.6	524423.6	0	50	
13C4-PFOS	4.8	274061.7	274061.7	0	50	
13C2-PFDA	5.0	311442.1	311442.1	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	787180.2	13C3-PFBA	730410.6	1.078	5.000	4.987	100	70-130	
E13C5-PFPeA	829978.5	13C3-PFBA	730410.6	1.136	5.000	4.950	99	70-130	
E13C3-PFBS	456815.2	13C3-PFBA	730410.6	0.625	4.650	4.590	99	70-130	
E13C2-4:2-FTS	48706.0	13C2-PFOA	524423.6	0.093	4.670	4.191	90	70-130	
E13C5-PFHxA	705369.0	13C2-PFOA	524423.6	1.345	5.000	4.948	99	70-130	
E13C3-PFHxS	343139.5	13C2-PFOA	524423.6	0.654	4.730	4.697	99	70-130	
E13C4-PFHpA	566495.6	13C2-PFOA	524423.6	1.080	5.000	4.914	98	70-130	
E13C2-6:2-FTS	38605.5	13C2-PFOA	524423.6	0.074	4.750	4.909	103	70-130	
E13C8-PFOA	964414.6	13C2-PFOA	524423.6	1.839	5.000	5.128	103	70-130	
E13C8-PFOS	297259.7	13C4-PFOS	274061.7	1.085	4.780	4.796	100	70-130	
E13C9-PFNA	513116.0	13C4-PFOS	274061.7	1.872	5.000	5.114	102	70-130	
E13C6-PFDA	639022.8	13C2-PFDA	311442.1	2.052	5.000	5.160	103	70-130	
E13C2-8:2-FTS	29468.3	13C2-PFDA	311442.1	0.095	4.790	5.007	105	70-130	
E13C8-PFOSA	704745.5	13C2-PFDA	311442.1	2.263	5.000	4.938	99	70-130	
Ed3-NMeFOSAA	81763.3	13C2-PFDA	311442.1	0.263	5.000	4.882	98	70-130	
E13C7-PFUnDA	277115.5	13C2-PFDA	311442.1	0.890	5.000	5.133	103	70-130	
Ed5-NEtFOSAA	72755.7	13C2-PFDA	311442.1	0.234	5.000	5.406	108	70-130	
E13C2-PFDoDA	584631.5	13C2-PFDA	311442.1	1.877	5.000	5.061	101	70-130	
Ed7-NMePFOSAE	335206.8	13C2-PFDA	311442.1	1.076	5.000	5.005	100	70-130	
Ed3-NMePFOSA	79381.7	13C2-PFDA	311442.1	0.255	5.000	4.666	93	70-130	
Ed9-NEtPFOSAE	278375.1	13C2-PFDA	311442.1	0.894	5.000	5.104	102	70-130	
Ed5-NEtPFOSA	67444.3	13C2-PFDA	311442.1	0.217	5.000	5.014	100	70-130	
E13C2-PFTeDA	419341.7	13C2-PFDA	311442.1	1.346	5.000	4.847	97	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

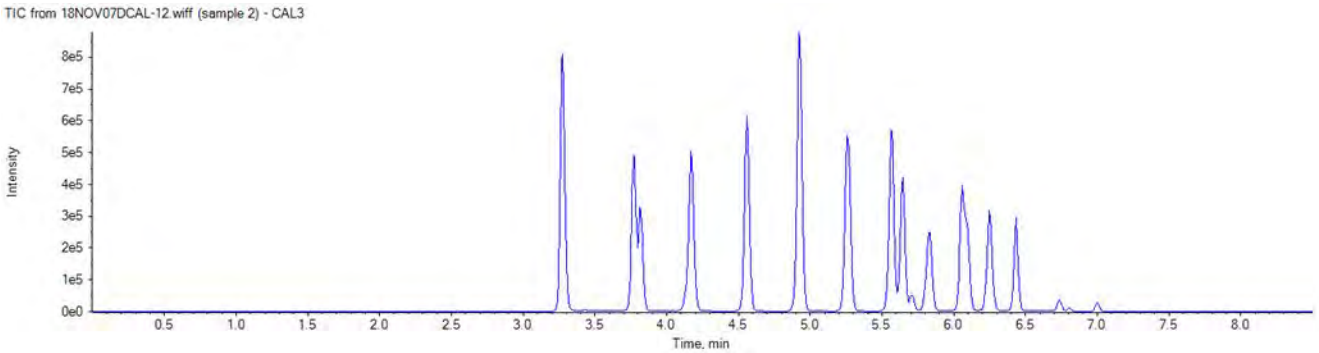
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	285113.3		A	13C4-PFBA	3.27	787180.2	0.362	2.120
PFPeA	3.77	1.000	286630.7		A	13C5-PFPeA	3.77	829978.5	0.345	2.052
PFBS	3.82	1.000	157656.3		A	13C3-PFBS	3.82	456815.2	0.345	1.740
4:2-FTS	4.14	1.000	35586.2		A	13C2-4:2-FTS	4.13	48706.0	0.731	1.964
PFHxA	4.17	1.000	351503.9		A	13C5-PFHxA	4.17	705369.0	0.498	2.137
PFPeS	4.19	1.100	82090.1		A	13C3-PFBS	3.82	456815.2	0.180	1.772
PFHxS	4.56	1.000	122477.7		A	13C3-PFHxS	4.56	343139.5	0.357	1.809
PFHpA	4.56	1.000	360280.4		A	13C4-PFHpA	4.56	566495.6	0.636	2.139
6:2-FTS	4.92	1.000	32056.4		A	13C2-6:2-FTS	4.91	38605.5	0.830	2.071
PFHpS	4.92	1.080	123126.9		A	13C3-PFHxS	4.56	343139.5	0.359	1.877
PFOA	4.93	1.000	364943.1		A	13C8-PFOA	4.93	964414.6	0.378	2.131
PFOS	5.25	1.000	111397.7		A	13C8-PFOS	5.25	297259.8	0.375	1.943
PFNA	5.27	1.000	299530.4		A	13C9-PFNA	5.27	513116.0	0.584	2.182
PFNS	5.55	1.060	72940.0		A	13C8-PFOS	5.25	297259.8	0.245	1.946
PFDA	5.57	1.000	244693.9		A	13C6-PFDA	5.57	639022.8	0.383	2.107
8:2-FTS	5.57	1.000	24892.6		A	13C2-8:2-FTS	5.57	29468.3	0.845	1.904
PFOSA	5.64	1.000	271753.2		A	13C8-PFOSA	5.64	704745.5	0.386	2.084
NMeFOSAA	5.71	1.000	32400.4		A	d3-NMeFOSAA	5.71	81763.3	0.396	2.039
PFDS	5.80	1.100	59073.9		A	13C8-PFOS	5.25	297259.8	0.199	1.898
PFUnDA	5.83	1.000	209644.8		A	13C7-PFUnDA	5.83	277115.5	0.757	2.170
NEtFOSAA	5.85	1.000	32100.8		A	d5-NEtFOSAA	5.84	72755.7	0.441	1.896
PFDoDA	6.06	1.000	220663.6		A	13C2-PFDoDA	6.06	584631.5	0.377	2.046
10:2-FTS	6.07	1.090	19060.5		A	13C2-8:2-FTS	5.57	29468.3	0.647	2.014
NMePFOSAE	6.10	1.000	151795.0		A	d7-NMePFOSAE	6.09	335206.8	0.453	2.029
NMePFOSA	6.10	1.000	29797.4		A	d3-NMePFOSA	6.10	79381.7	0.375	2.101
PFDoS	6.22	1.190	32096.3		A	13C8-PFOS	5.25	297259.8	0.108	2.084
NEtPFOSAE	6.25	1.000	180884.6		A	d9-NEtPFOSAE	6.24	278375.1	0.650	2.083
NEtPFOSA	6.27	1.000	26524.6		A	d5-NEtPFOSA	6.26	67444.3	0.393	1.732
PFTrDA	6.25	1.030	197290.7		A	13C2-PFDoDA	6.06	584631.5	0.337	2.128
PFTeDA	6.43	1.000	150162.8		A	13C2-PFTeDA	6.43	419341.7	0.358	2.103
PFHxDA	6.74	1.050	70193.5		A	13C2-PFTeDA	6.43	419341.7	0.167	2.078
PFODA	7.00	1.090	59736.9		A	13C2-PFTeDA	6.43	419341.7	0.142	2.041

Total Ion Chromatogram

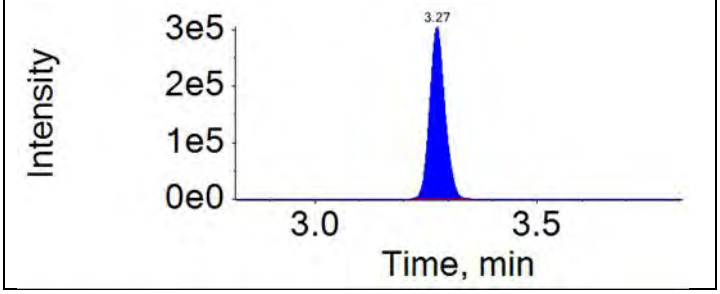


APPROVED
By JPT at 2:53 pm, 11/7/18

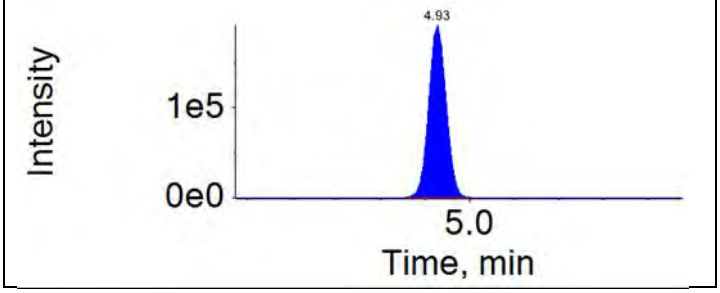
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

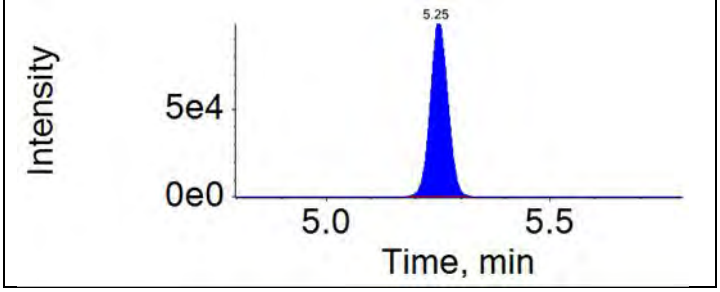
Injection Standard: 13C3-PFBA
216.0 / 172.0



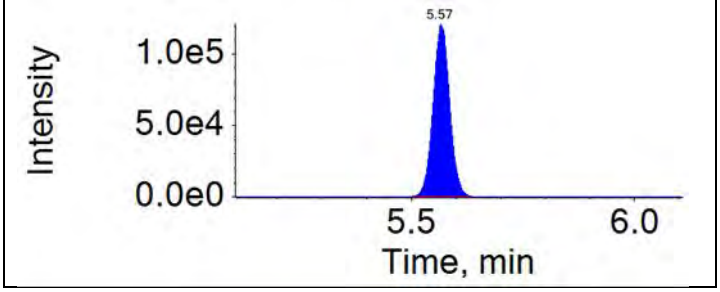
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



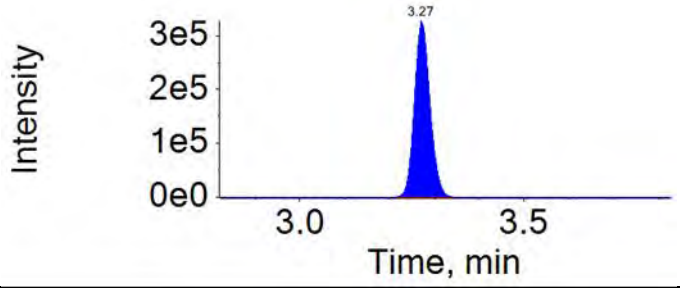
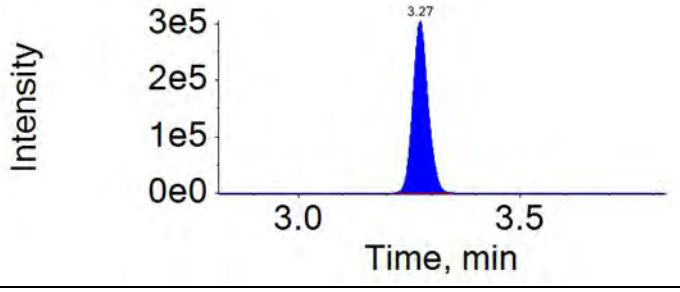
Injection Standard: 13C2-PFDA
515.0 / 470.0

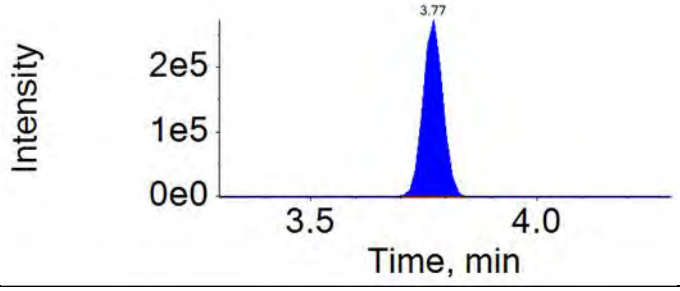
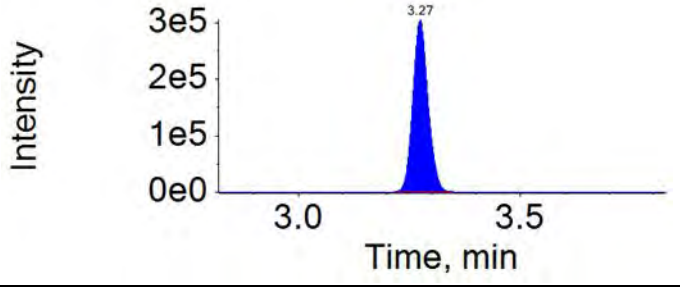


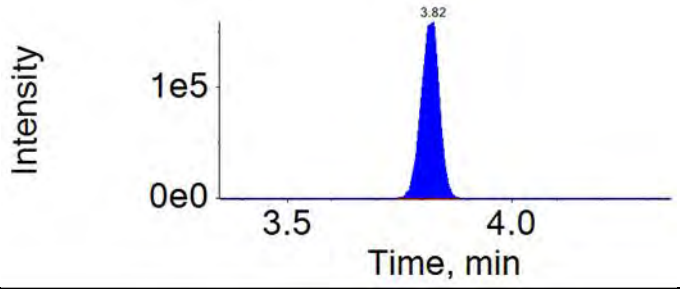
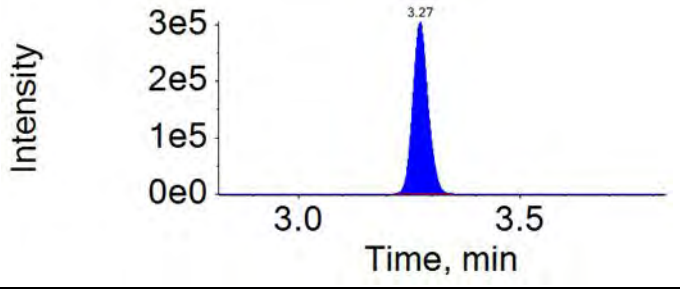
APPROVED
By JPT at 2:53 pm, 11/7/18

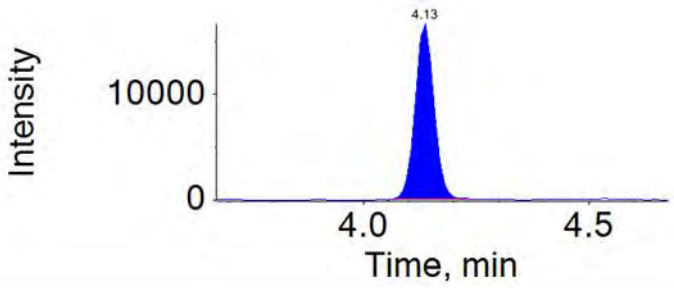
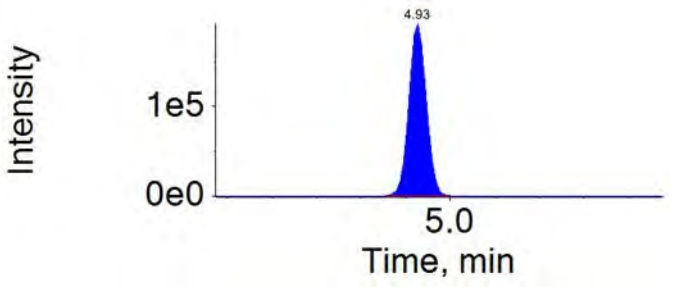
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

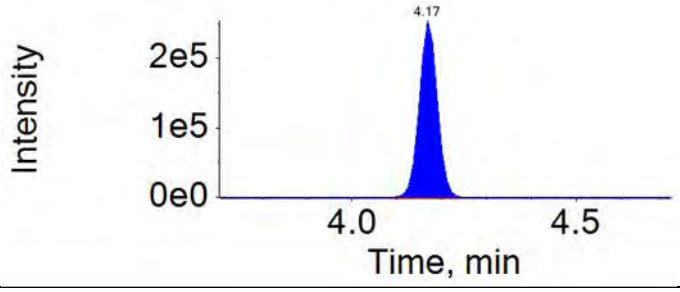
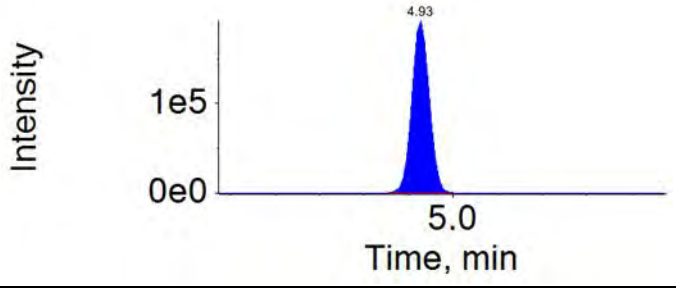
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

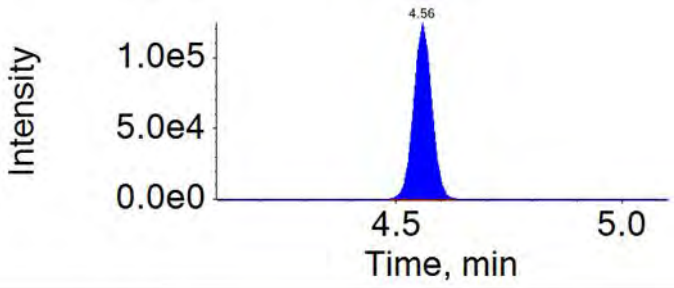
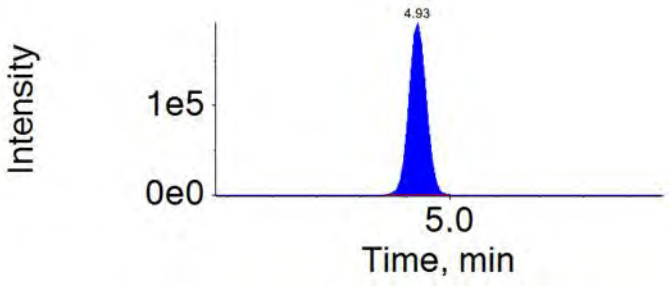
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

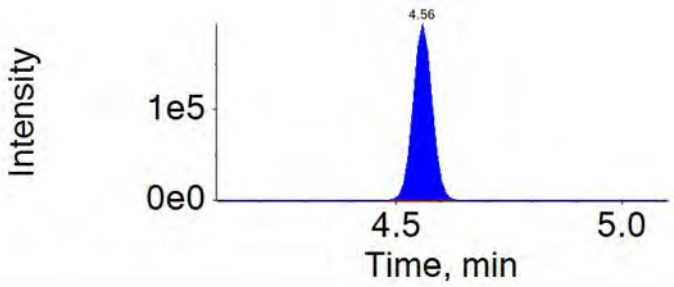
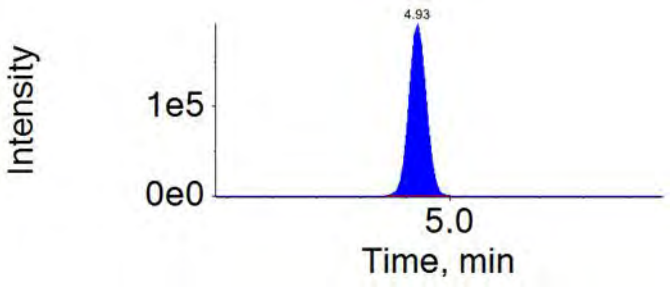
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

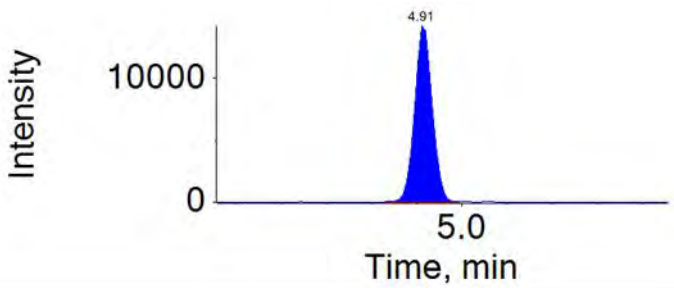
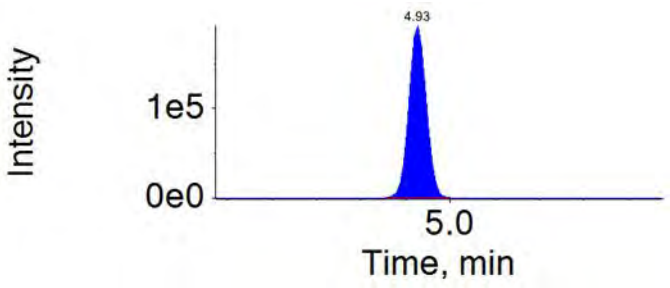
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

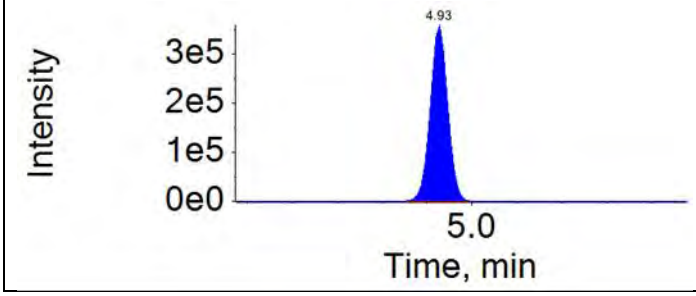
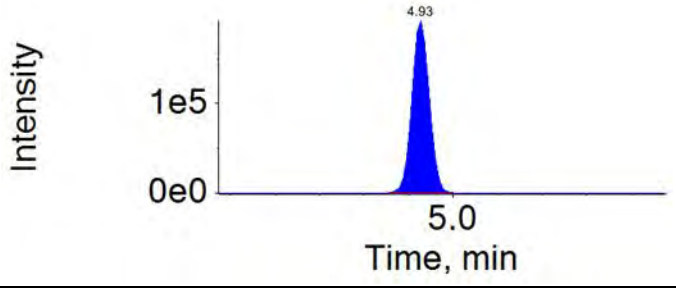
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

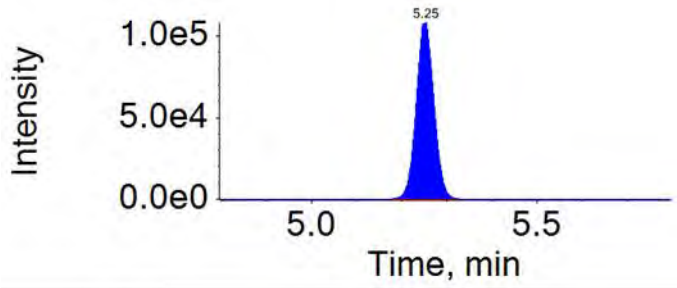
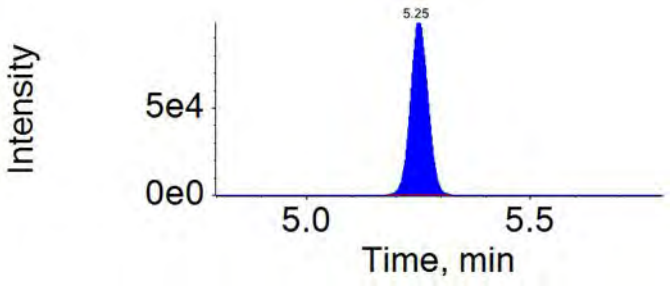
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

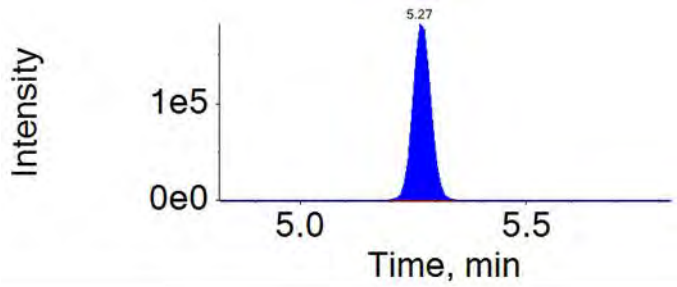
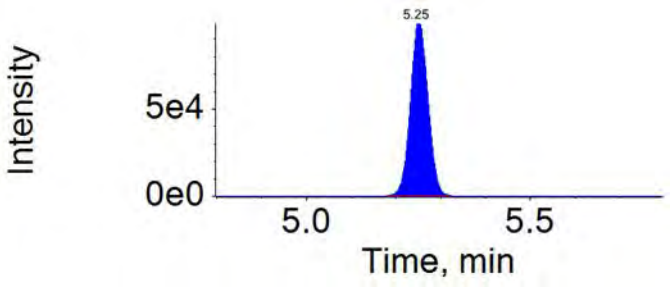
APPROVED
By JPT at 2:53 pm, 11/7/18

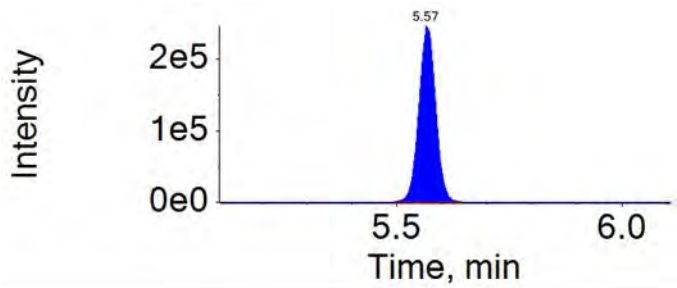
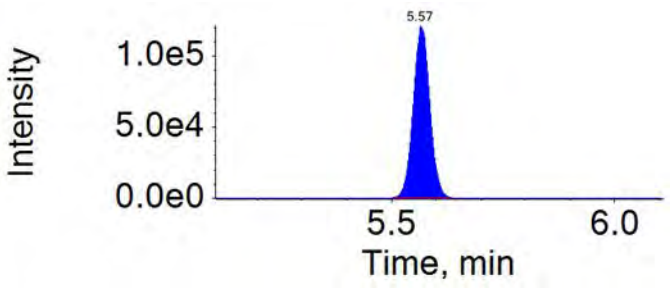
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

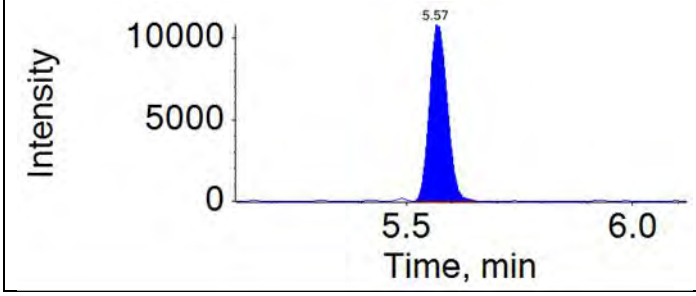
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

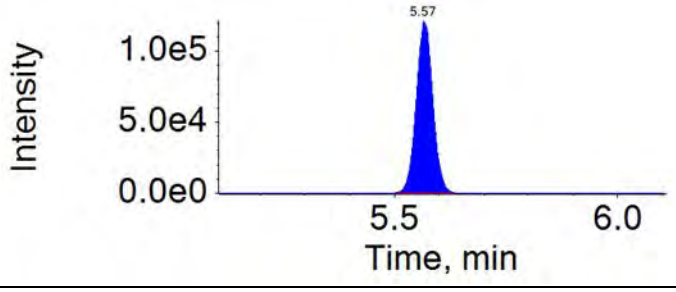
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

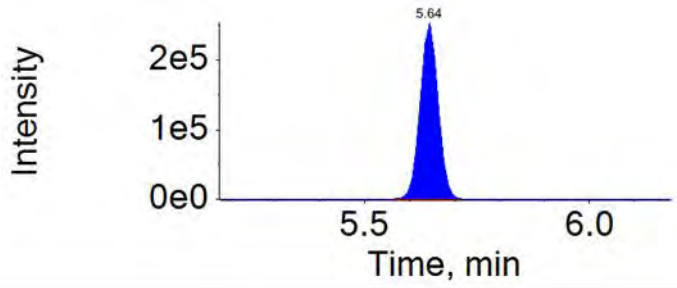
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

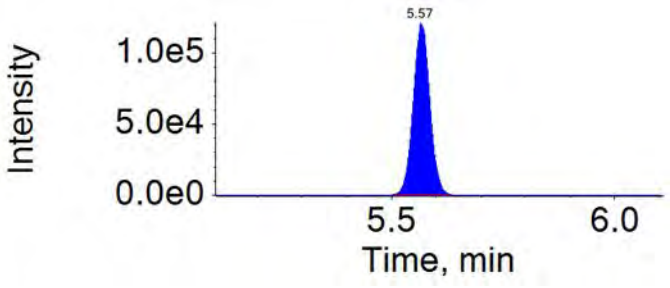
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



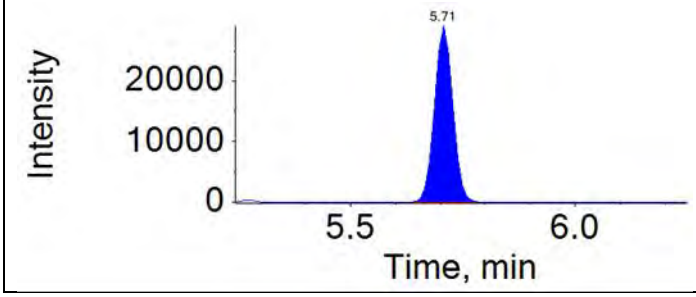


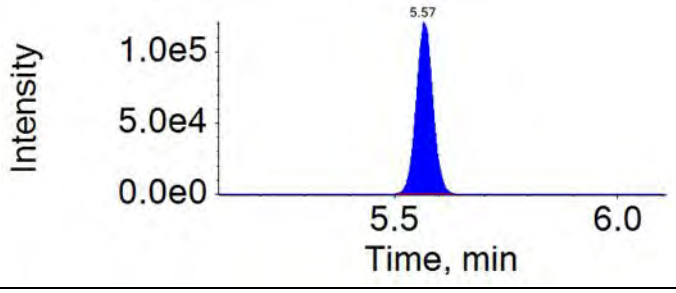
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



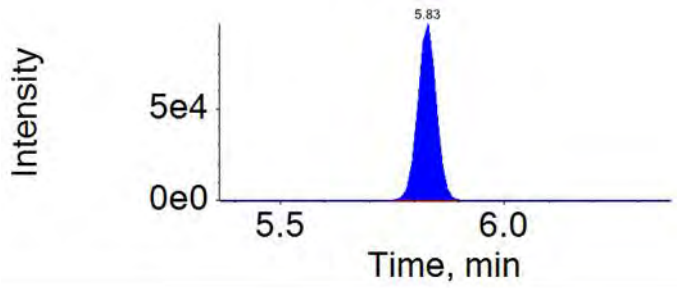


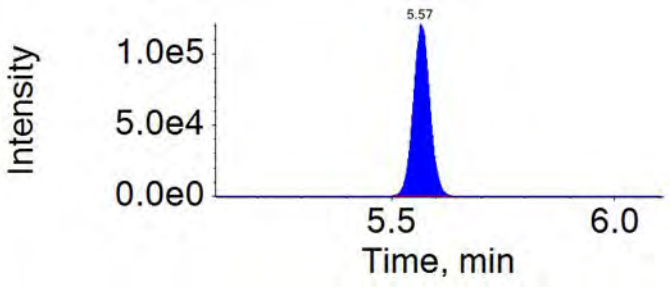
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

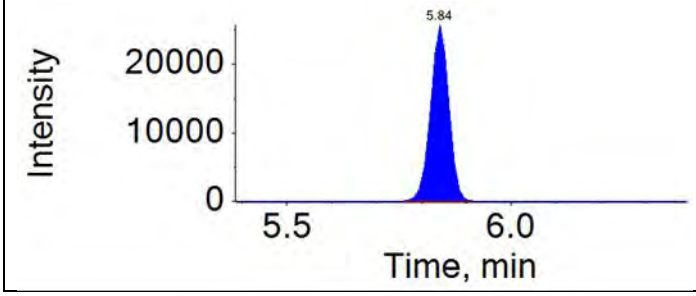
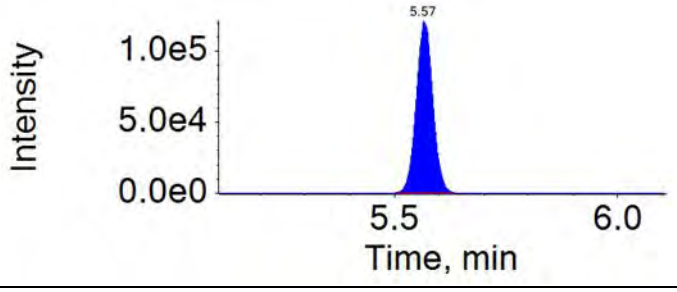


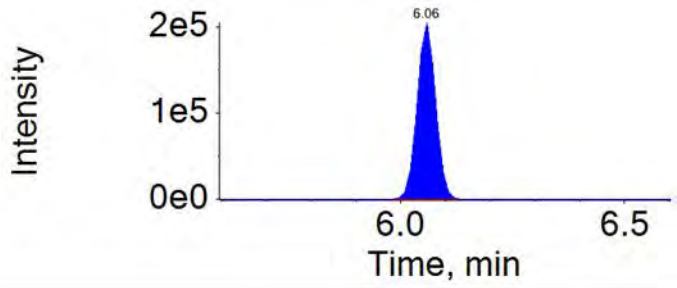
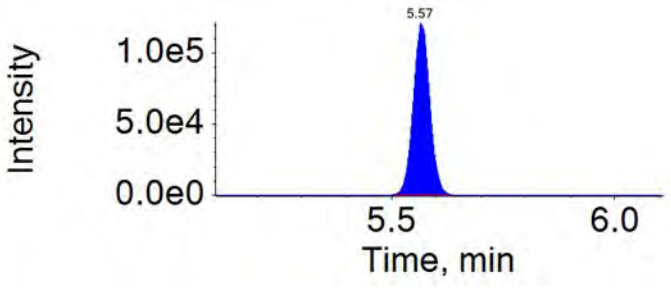


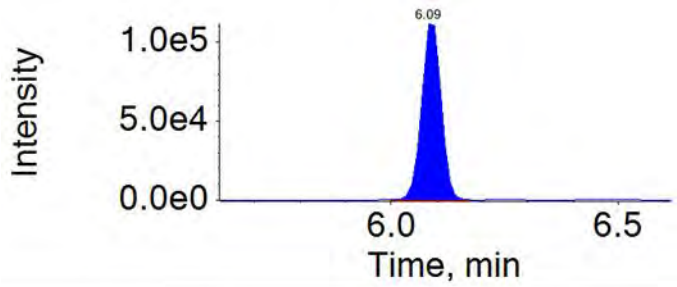
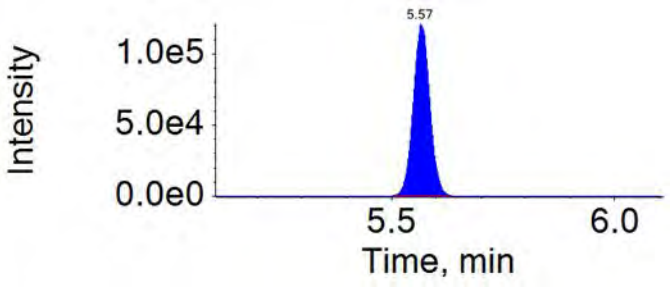
APPROVED
By JPT at 2:53 pm, 11/7/18

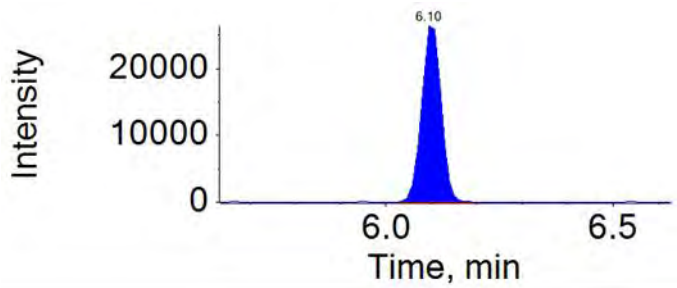
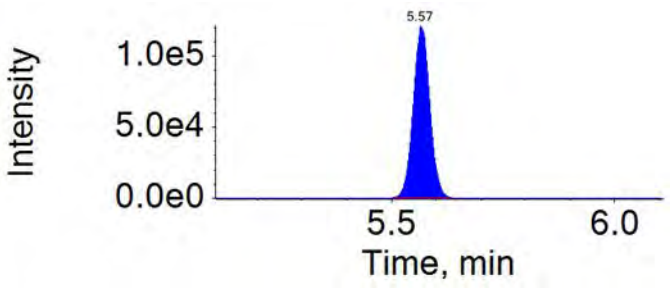
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

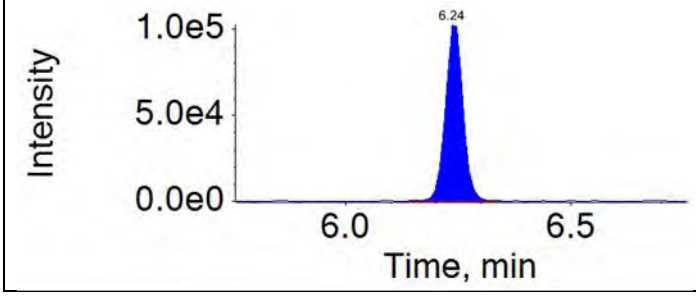
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

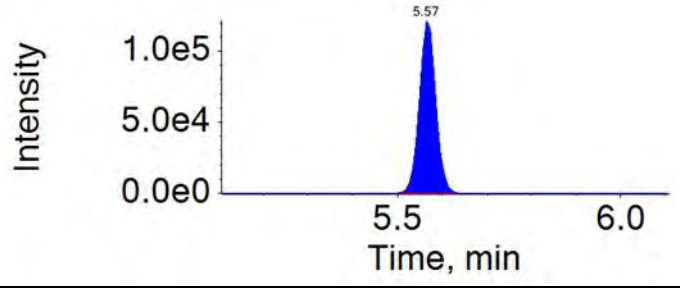
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

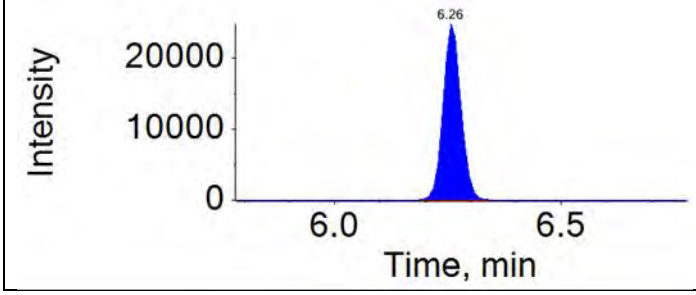
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

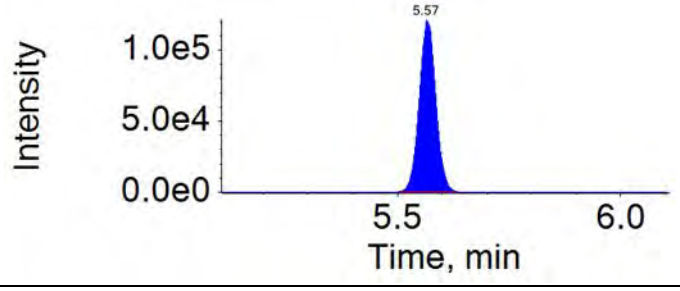
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



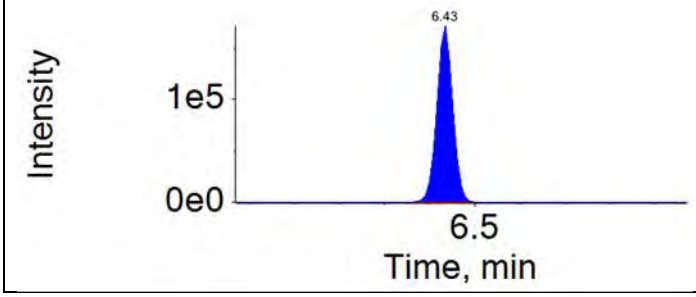


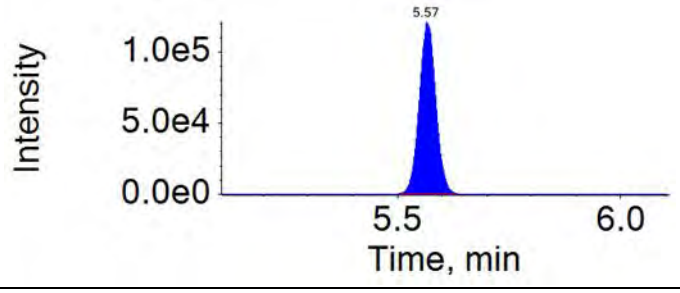
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



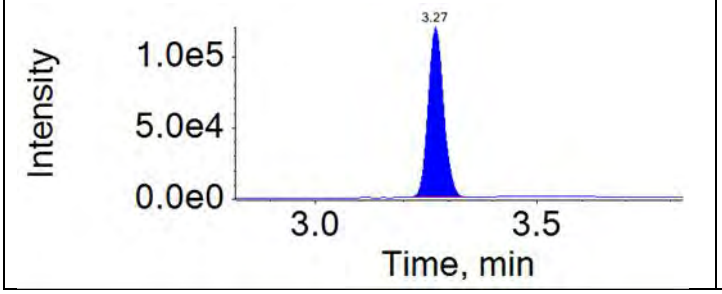


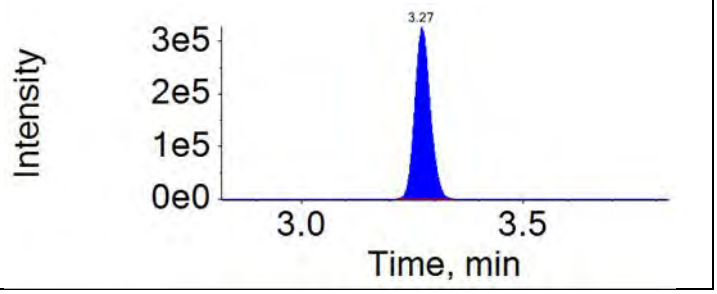
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

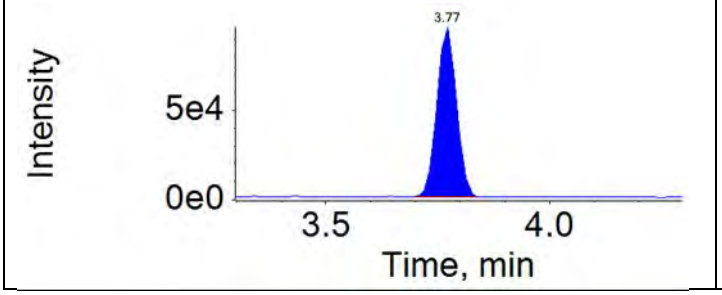
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

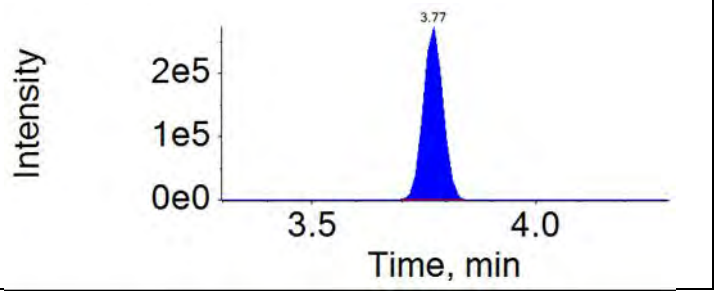
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



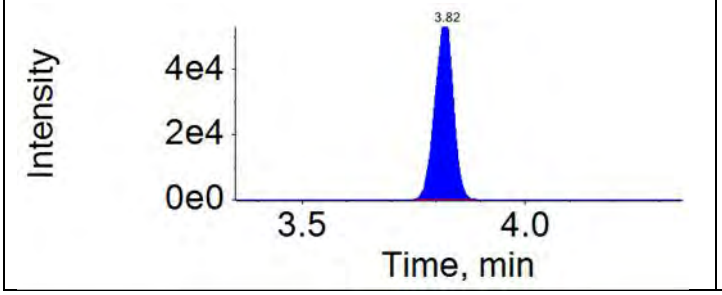


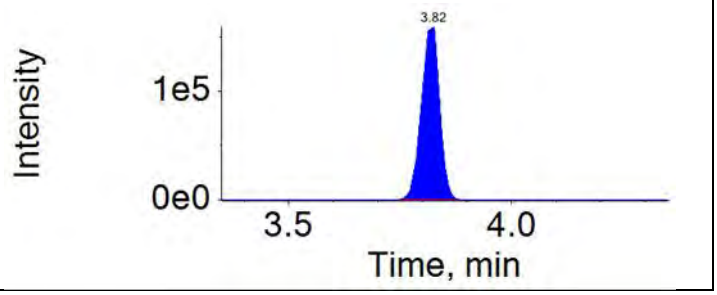
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



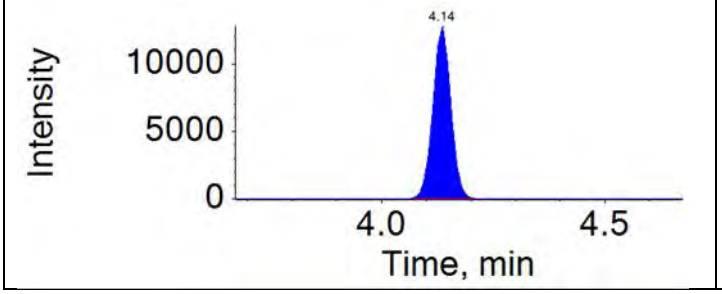


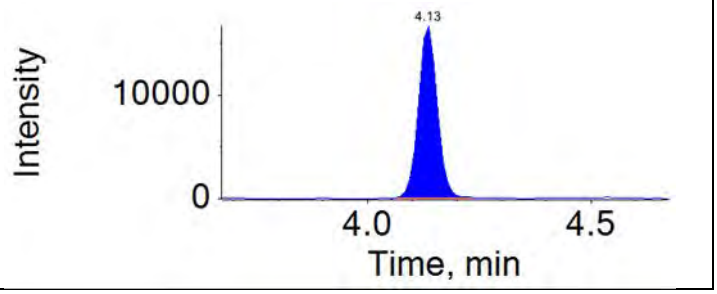
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

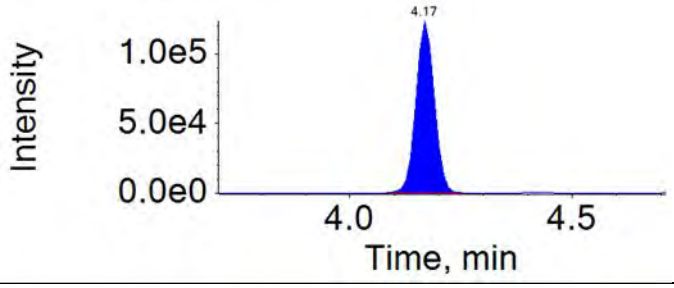
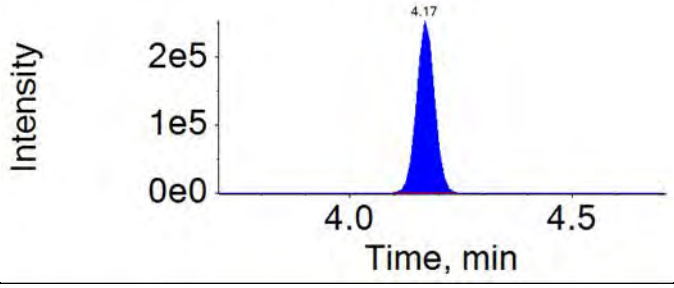


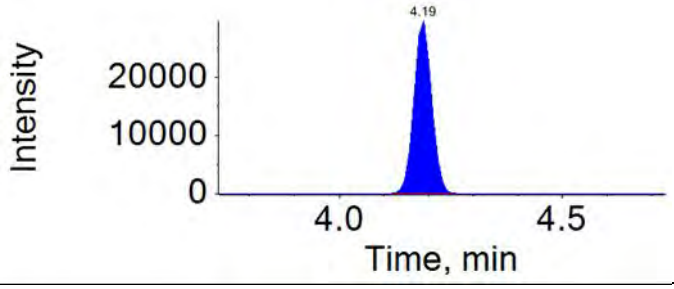
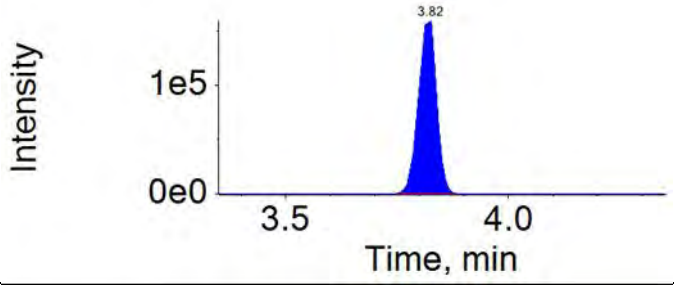


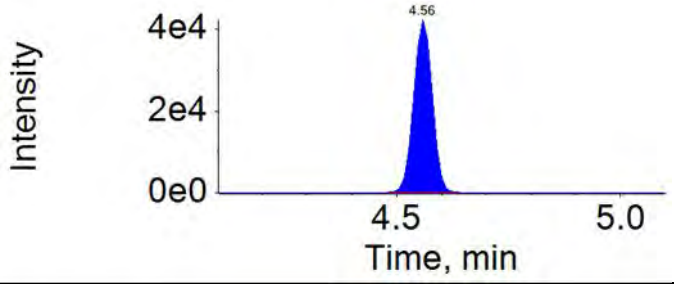
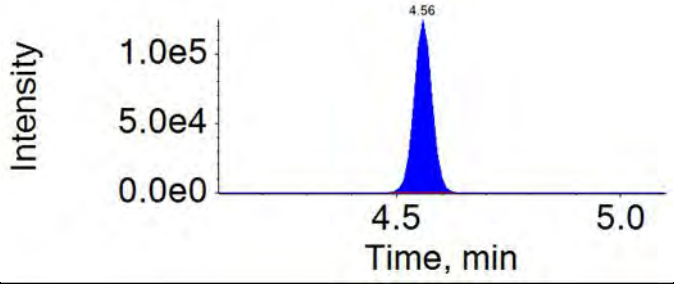
APPROVED
By JPT at 2:53 pm, 11/7/18

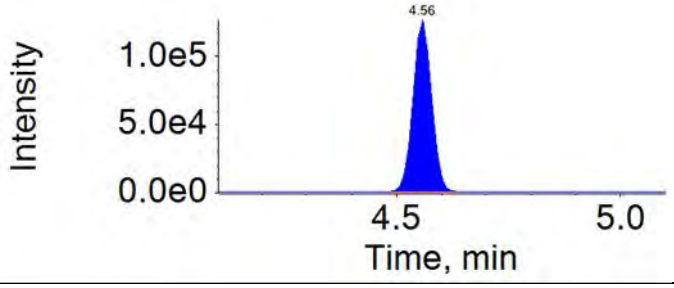
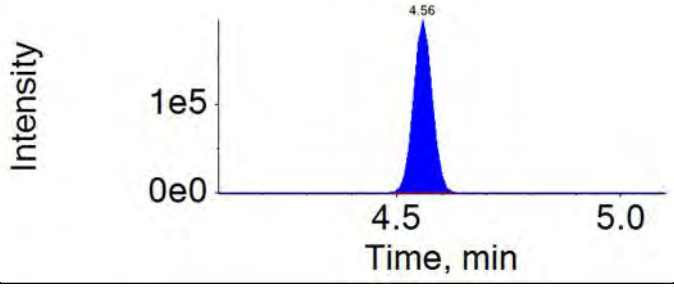
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

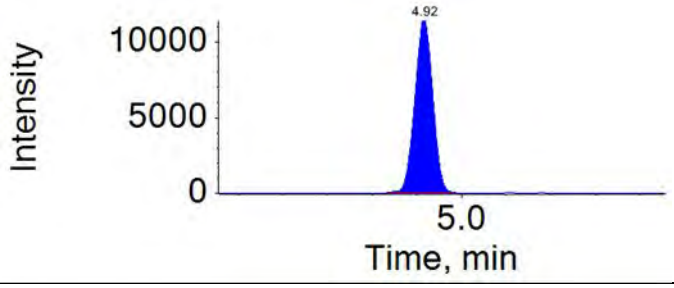
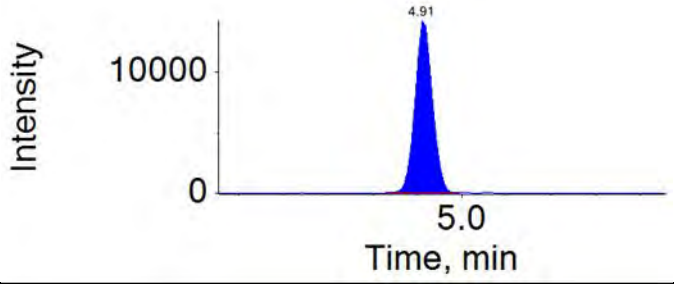
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

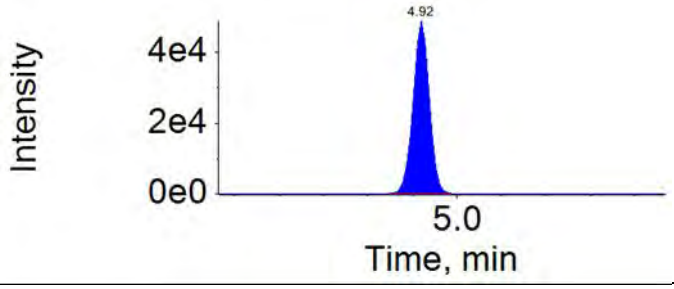
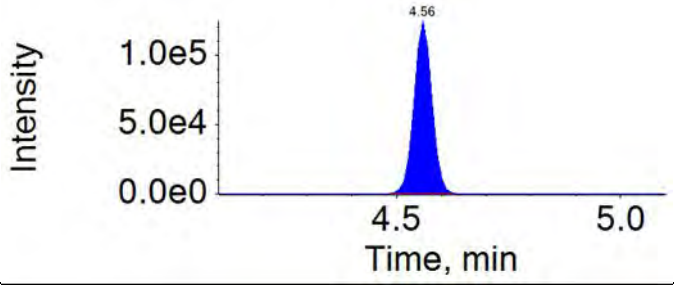
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

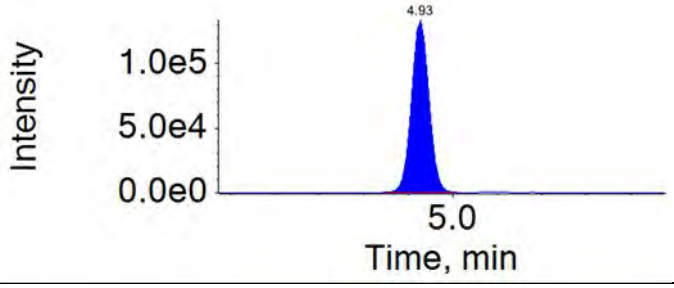
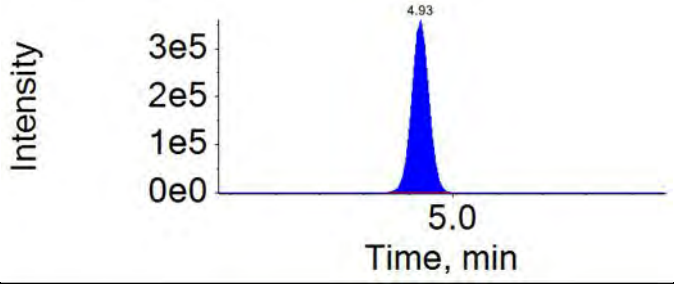
APPROVED
By JPT at 2:53 pm, 11/7/18

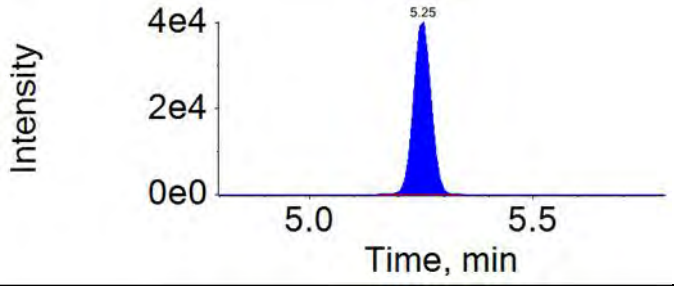
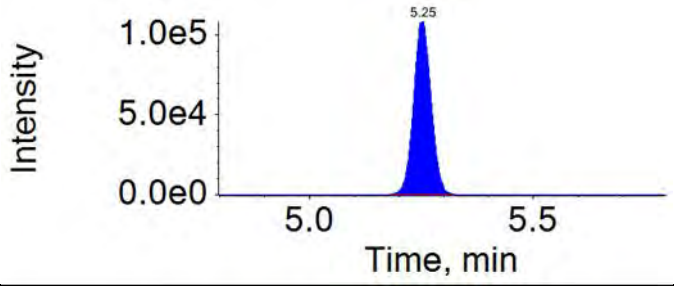
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

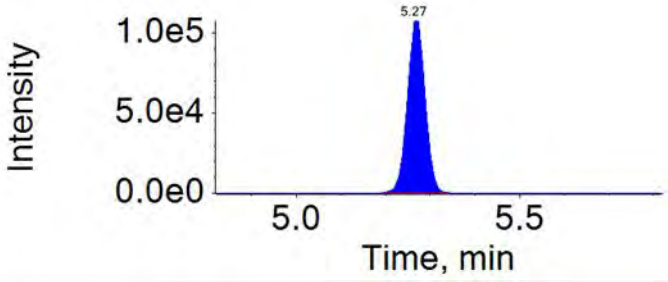
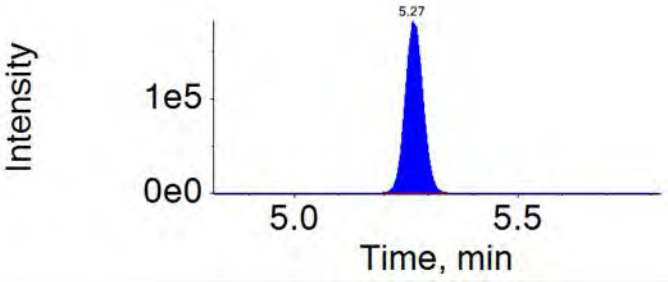
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

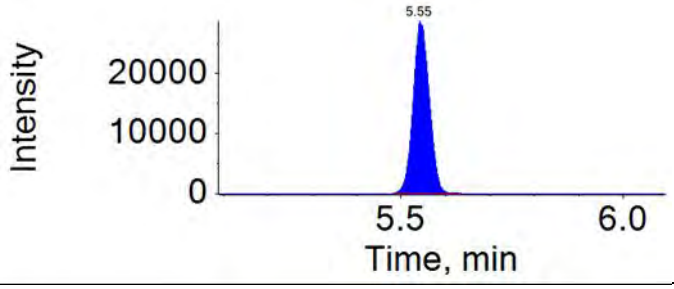
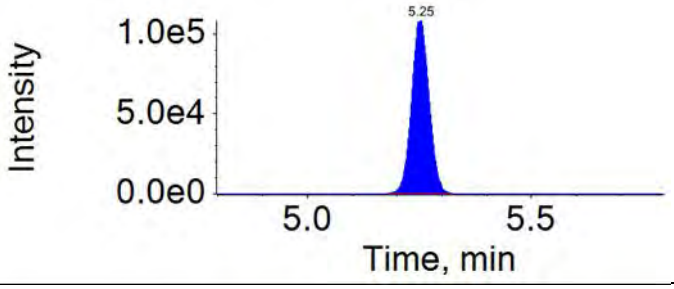
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

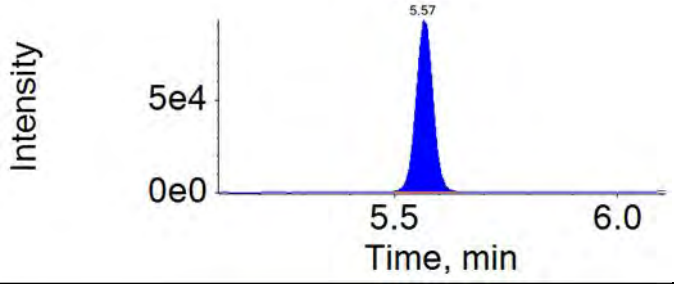
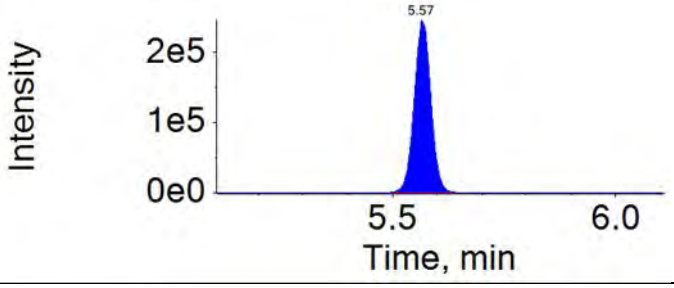
APPROVED
By JPT at 2:53 pm, 11/7/18

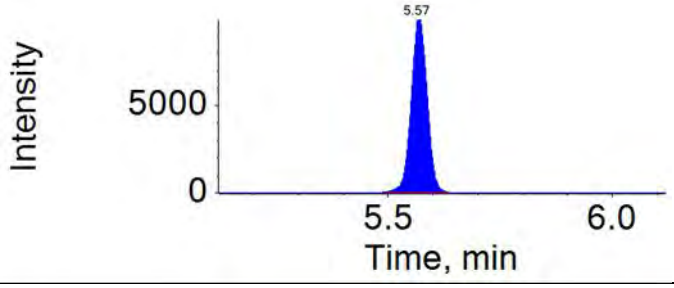
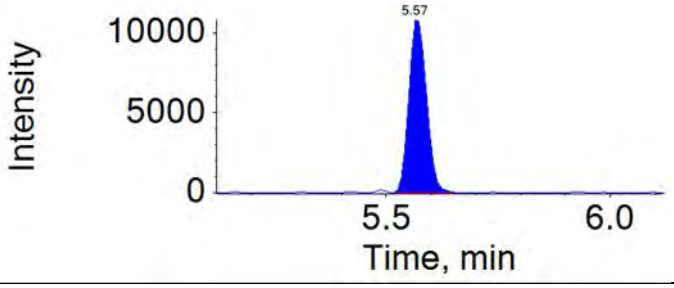
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

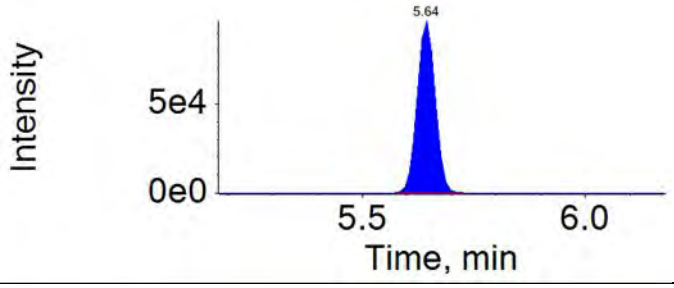
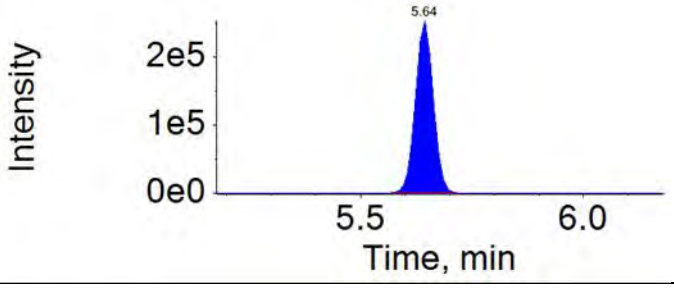
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

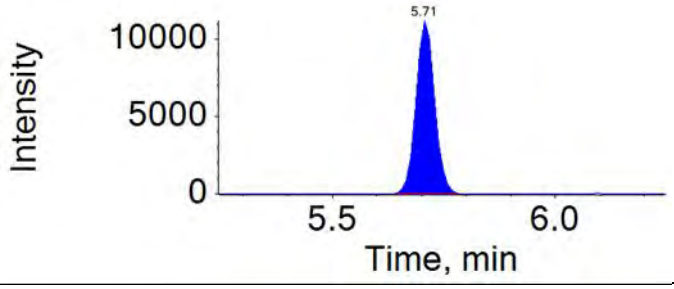
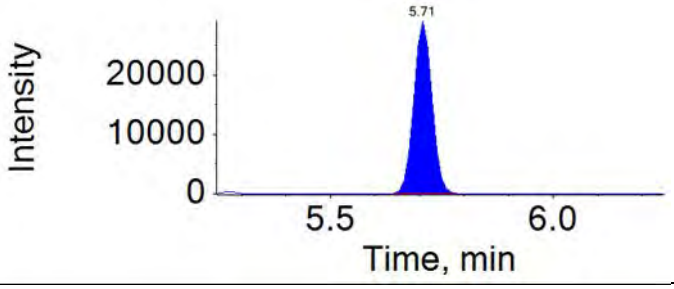
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

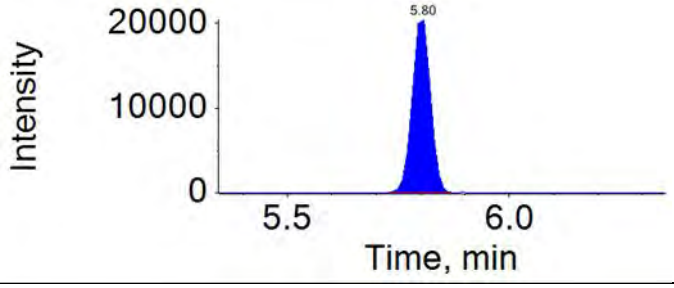
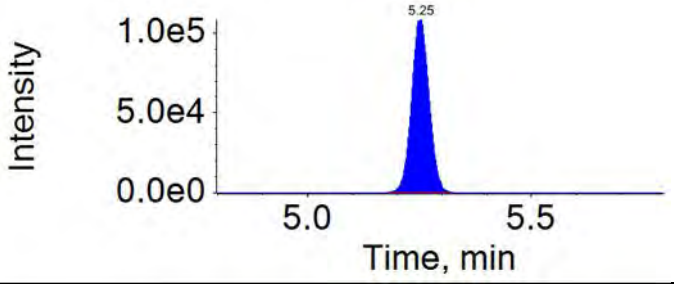
APPROVED
By JPT at 2:53 pm, 11/7/18

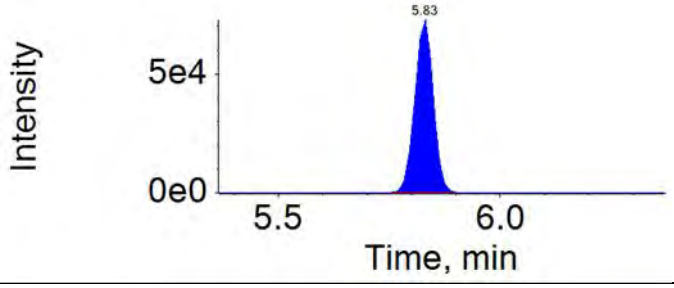
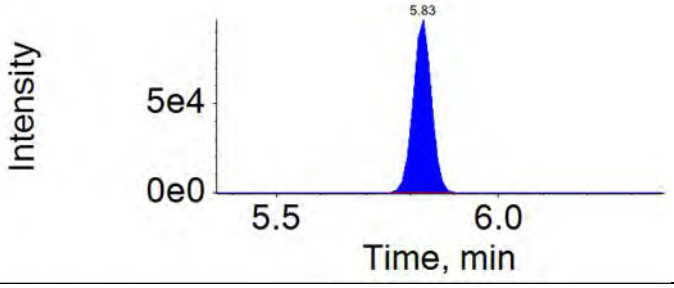
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

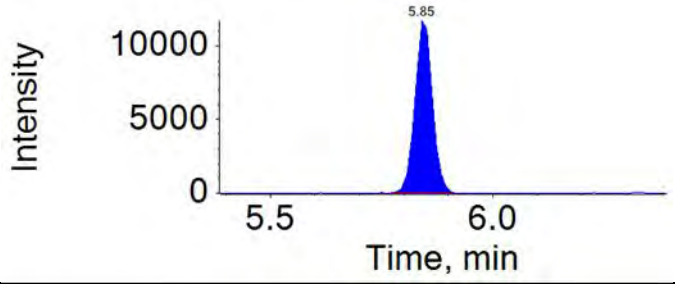
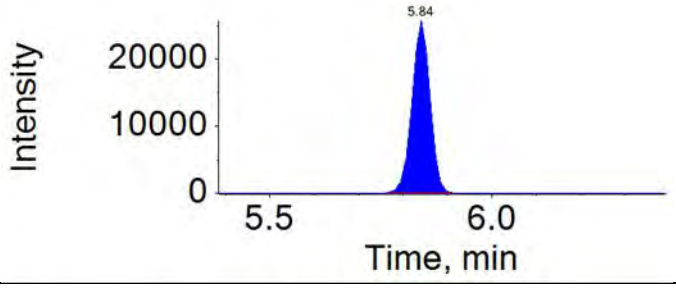
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

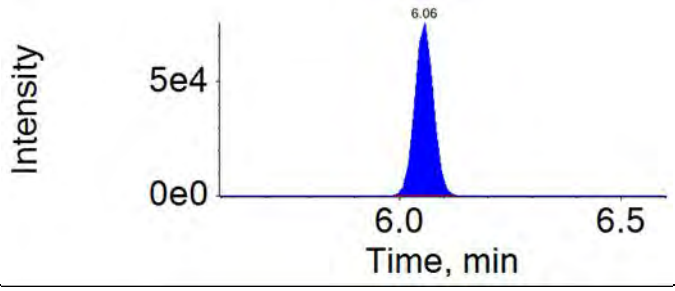
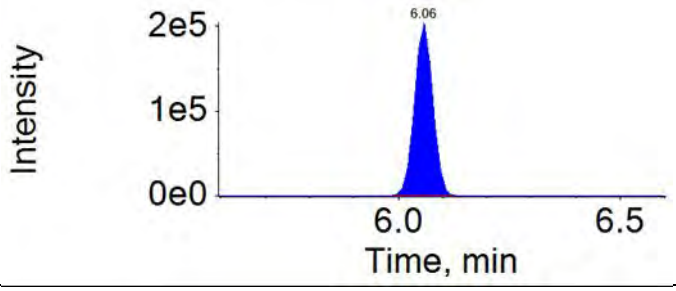
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

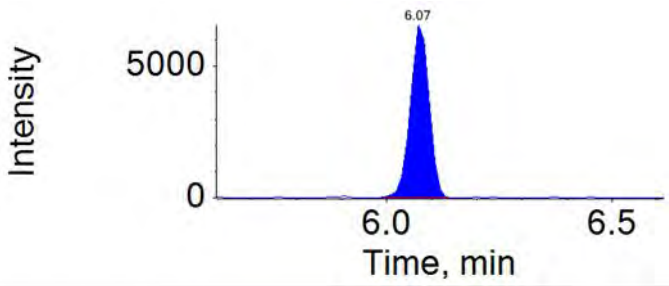
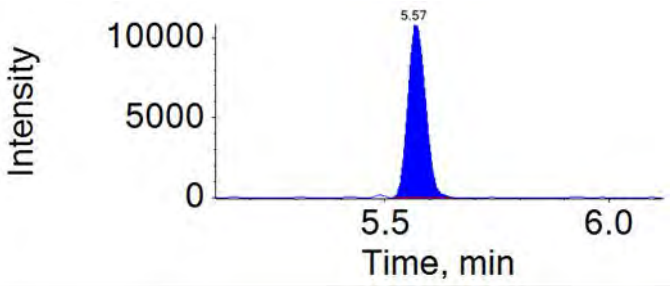
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

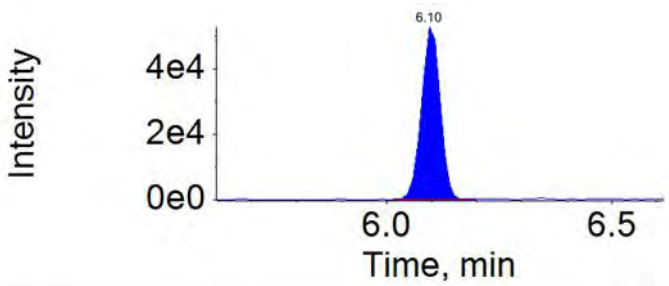
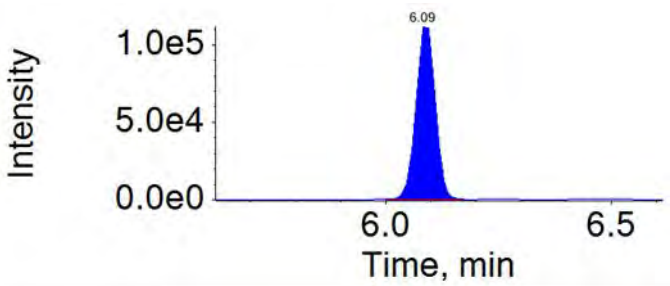
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

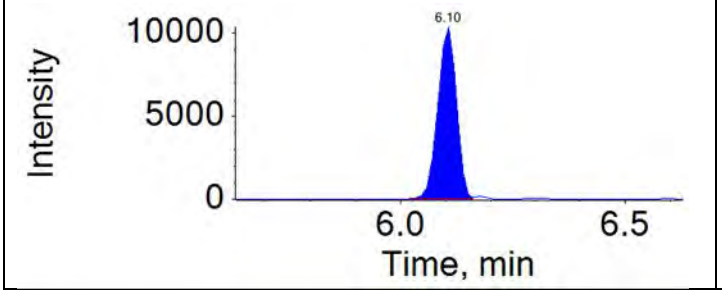
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

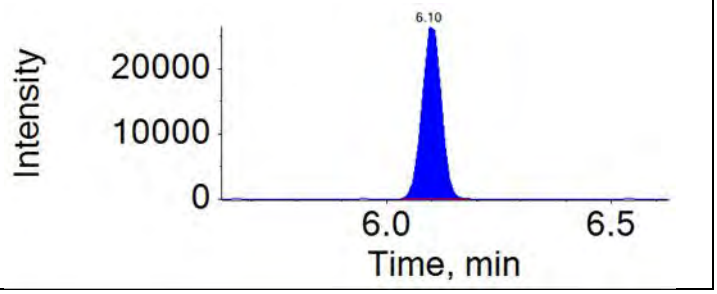
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

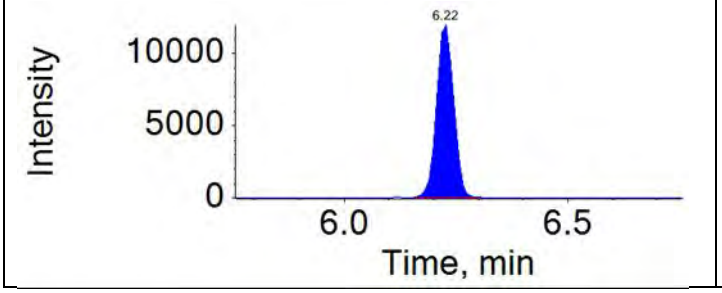
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

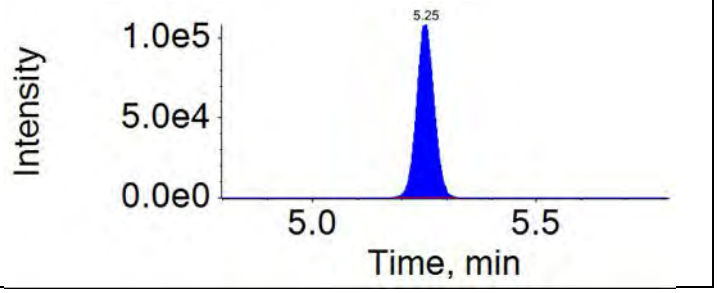
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



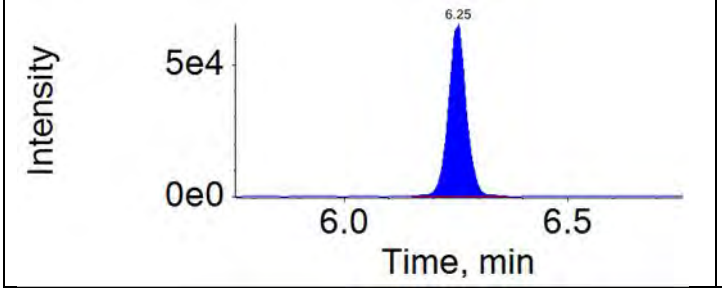


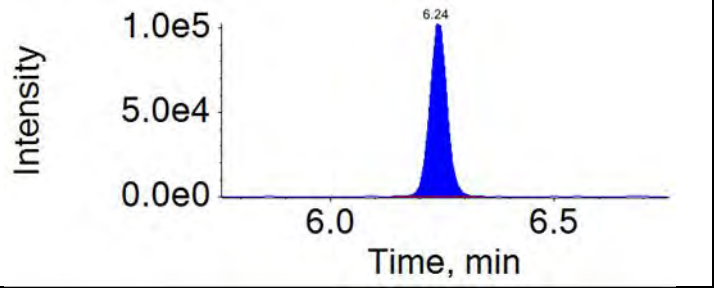
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



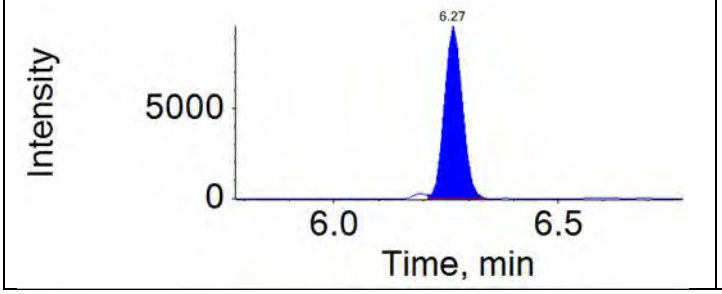


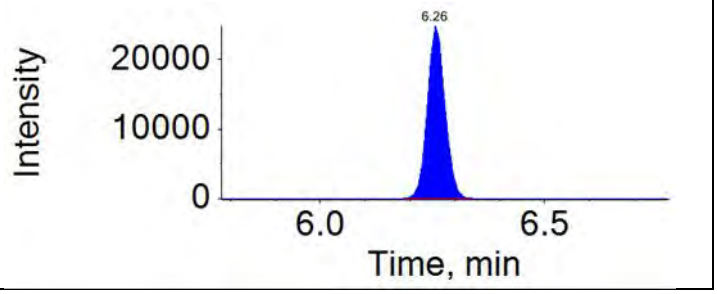
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



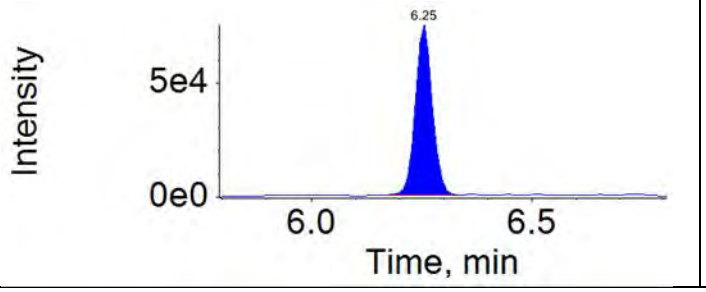


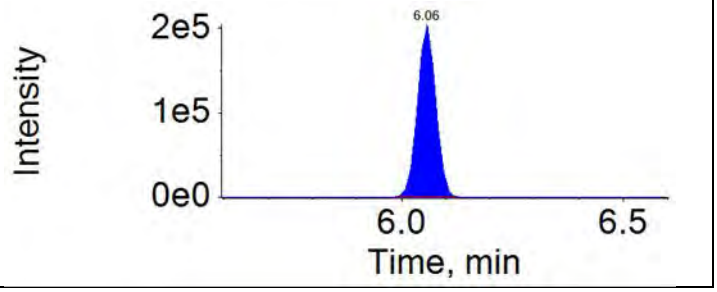
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

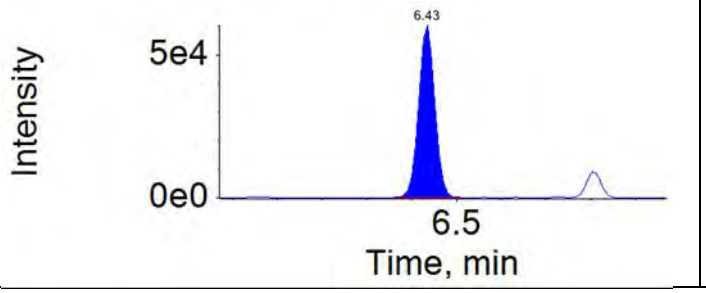
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

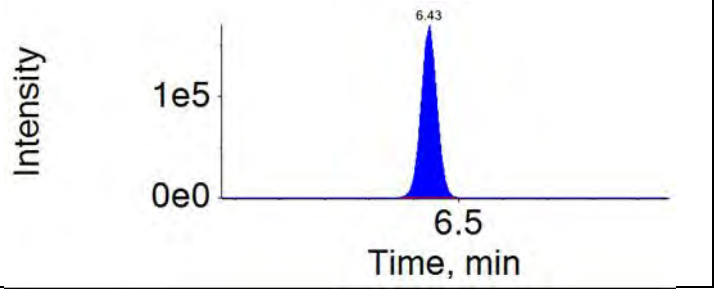
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



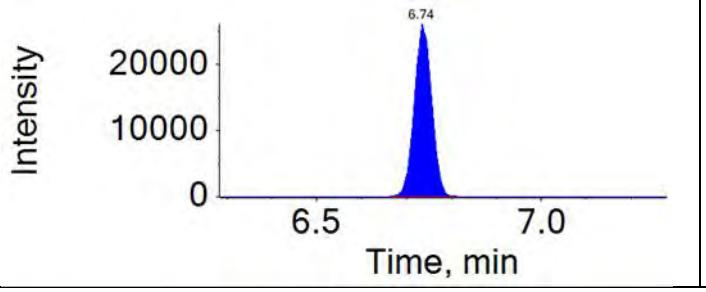


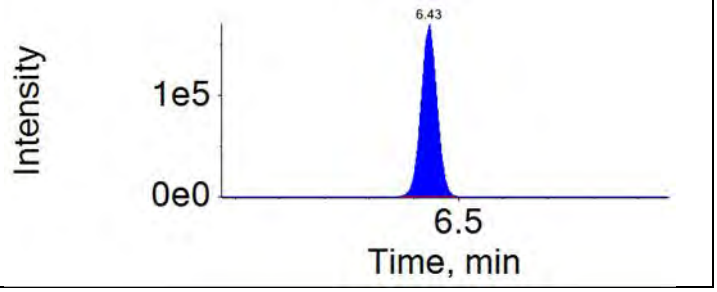
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



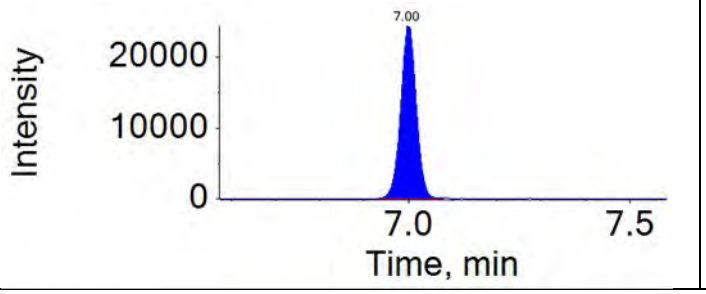


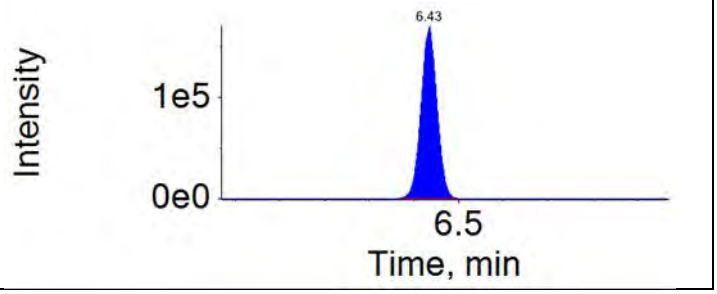
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	157656.3	A	1.0000	1.0000			
PFBS_2	3.82	1.00	57942.5	A	0.3576	0.3675	3	50	
4:2-FTS	4.14	1.00	35586.2	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	22248.8	A	0.6359	0.6252	-2	50	
PFHxA	4.17	1.00	351503.9	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	3580.7	A	0.0115	0.0102	-11	50	
PFPeS	4.19	1.10	82090.1	A	1.0000	1.0000			
PFPeS_2	4.19	1.10	44176.0	A	0.5384	0.5381	0	50	
PFHxS	4.56	1.00	122477.7	A	1.0000	1.0000			
PFHxS_2	4.56	1.00	45270.2	A	0.3569	0.3696	4	50	
PFHpA	4.56	1.00	360280.4	A	1.0000	1.0000			
PFHpA_2	4.56	1.00	20898.8	A	0.0577	0.0580	1	50	
6:2-FTS	4.92	1.00	32056.4	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	19790.8	A	0.6752	0.6174	-9	50	
PFHpS	4.92	1.08	123126.9	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	49357.0	A	0.3950	0.4009	1	50	
PFOA	4.93	1.00	364943.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	23223.3	A	0.0635	0.0636	0	50	
PFOS	5.25	1.00	111397.7	A	1.0000	1.0000			
PFOS_2	5.25	1.00	35008.5	A	0.3494	0.3143	-10	50	
PFNA	5.27	1.00	299530.4	A	1.0000	1.0000			
PFNA_2	5.27	1.00	6077.4	A	0.0207	0.0203	-2	50	
PFNS	5.55	1.06	72940.0	A	1.0000	1.0000			
PFNS_2	5.54	1.06	34560.8	A	0.4890	0.4738	-3	50	
PFDA	5.57	1.00	244693.9	A	1.0000	1.0000			
PFDA_2	5.57	1.00	1604.2	A	0.0057	0.0066	16	50	
8:2-FTS	5.57	1.00	24892.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	15231.3	A	0.6169	0.6119	-1	50	
NMeFOSAA	5.71	1.00	32400.4	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	7101.6	A	0.2206	0.2192	-1	50	
PFDS	5.80	1.10	59073.9	A	1.0000	1.0000			
PFDS_2	5.80	1.11	31660.9	A	0.4648	0.5360	15	50	
PFUnDA	5.83	1.00	209644.8	A	1.0000	1.0000			
PFUnDA_2	5.84	1.00	267.4	A	0.0031	0.0013	-59	50	OOS
NEtFOSAA	5.85	1.00	32100.8	A	1.0000	1.0000			
NEtFOSAA_2	5.85	1.00	21563.1	A	0.6082	0.6717	10	50	
PFDoDA	6.06	1.00	220663.6	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	2566.4	A	0.0109	0.0116	6	50	
10:2-FTS	6.07	1.09	19060.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	13428.2	A	0.7082	0.7045	-1	50	
PFTrDA	6.25	1.03	197290.7	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	2128.7	A	0.0096	0.0108	12	50	
PFTeDA	6.43	1.00	150162.8	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	849.9	A	0.0055	0.0057	2	50	
PFHxDA	6.74	1.05	70193.5	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	4327.4	A	0.0596	0.0616	3	50	
PFODA	7.00	1.09	59736.9	A	1.0000	1.0000			
PFODA_2	7.00	1.09	1504.6	A	0.0257	0.0252	-2	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

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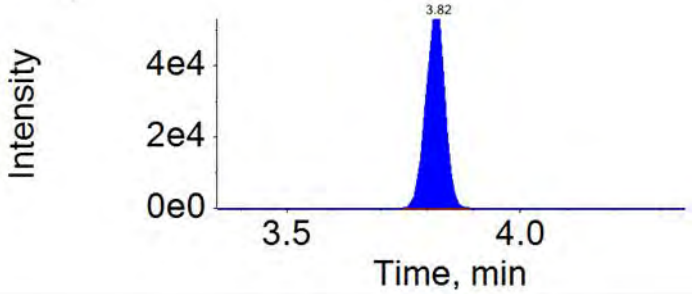
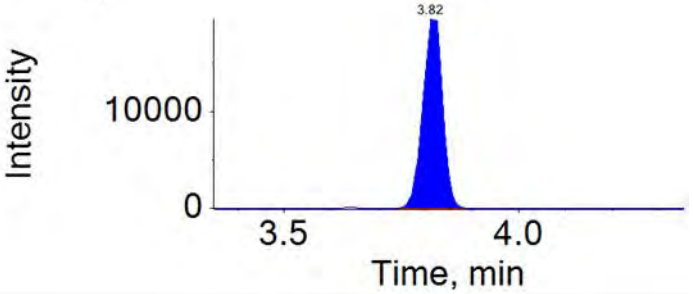
By umar at 5:23 pm, 11/9/18

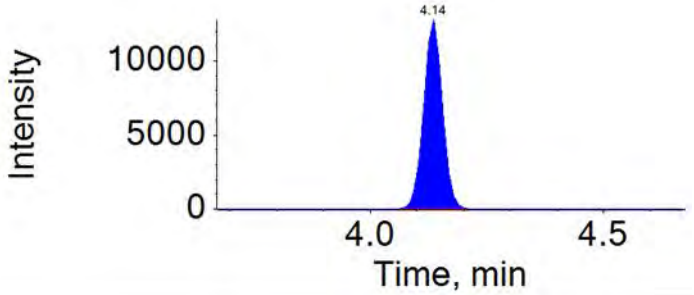
Component: PFBS
Primary Mass: 299.0 / 80.0



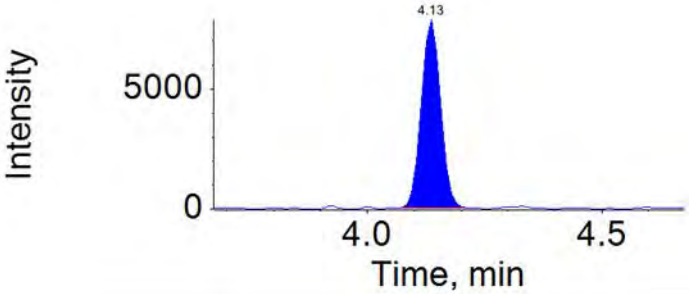
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



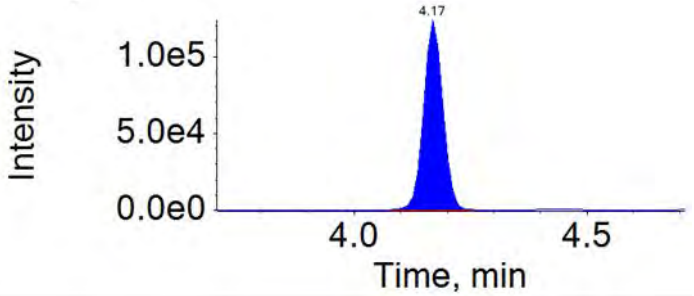
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



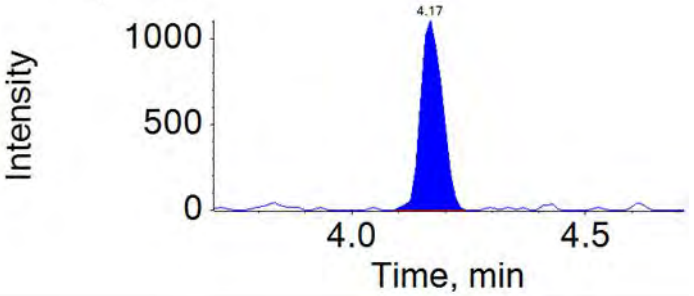
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



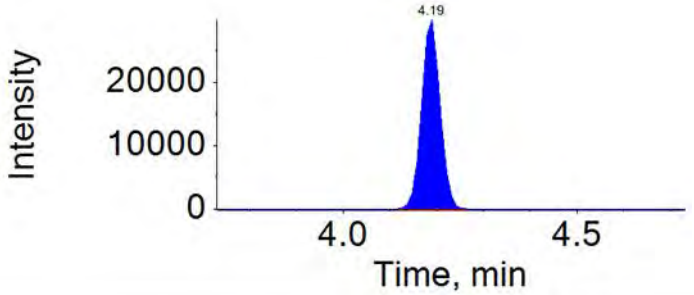
Component: PFHxA
Primary Mass: 313.0 / 269.0



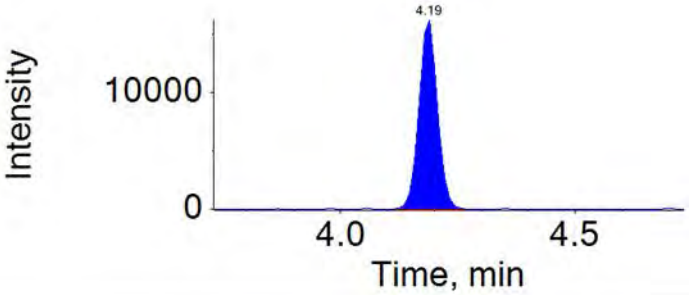
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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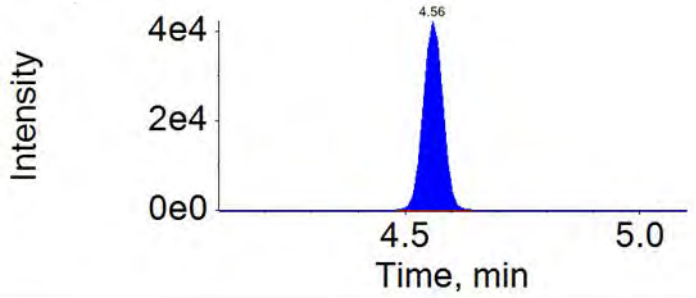
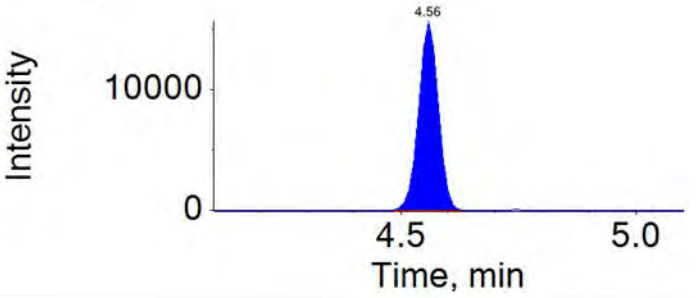
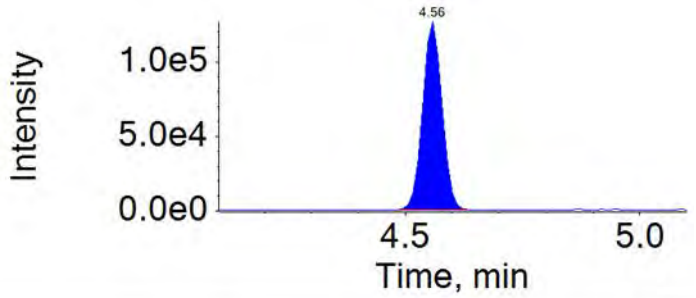
Component: PFHxS
Primary Mass: 399.0 / 80.0



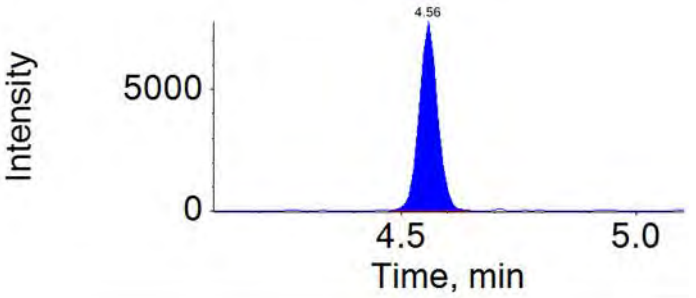
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



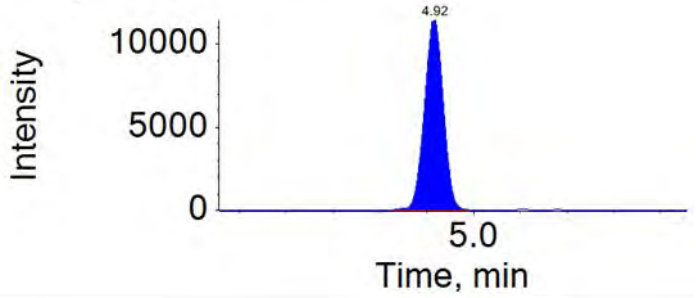
Component: PFHpA
Primary Mass: 363.0 / 319.0



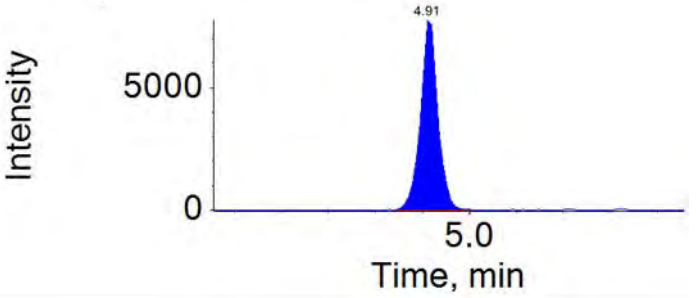
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



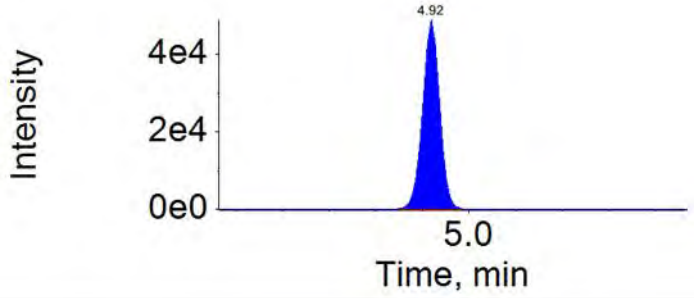
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



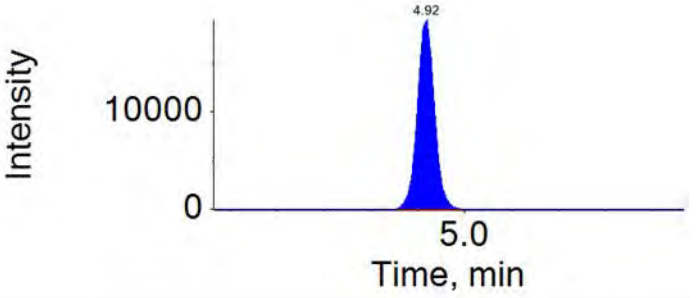
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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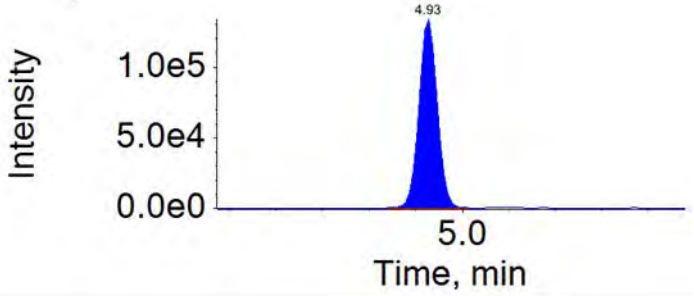
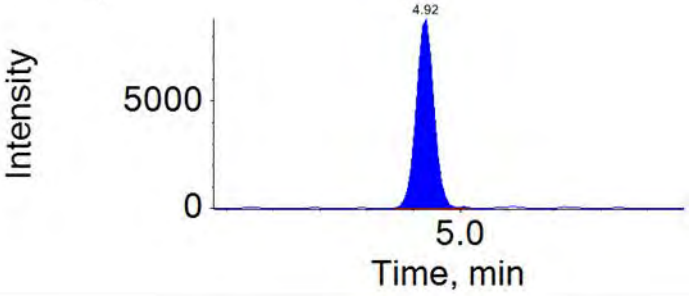
By umar at 5:23 pm, 11/9/18

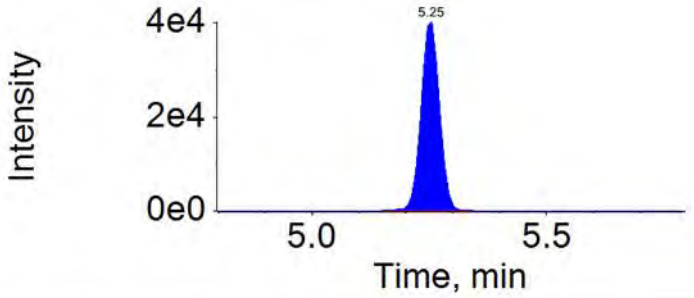
Component: PFOA
Primary Mass: 413.0 / 369.0



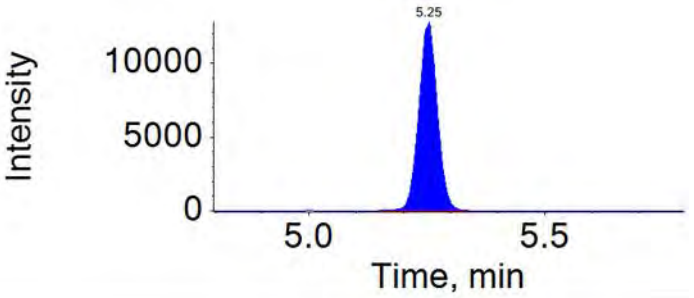
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



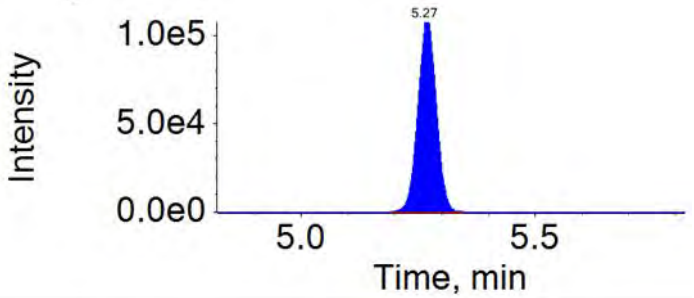
Component: PFOS
Primary Mass: 499.0 / 80.0



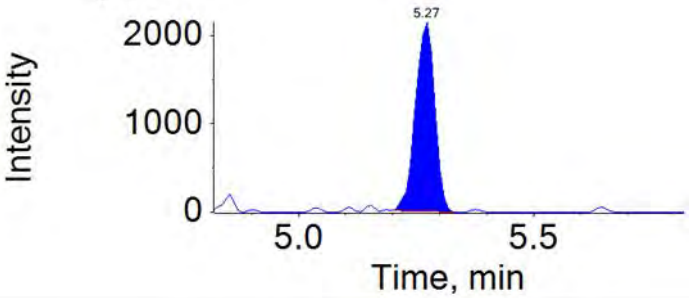
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



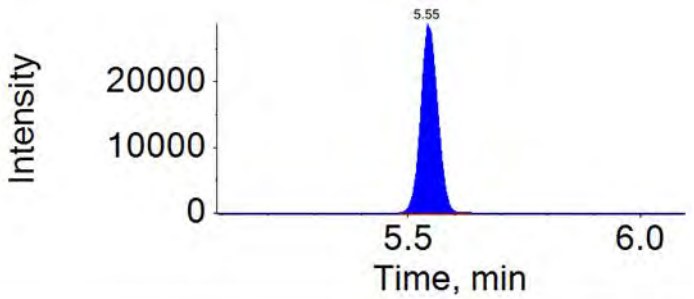
Component: PFNA
Primary Mass: 463.0 / 419.0



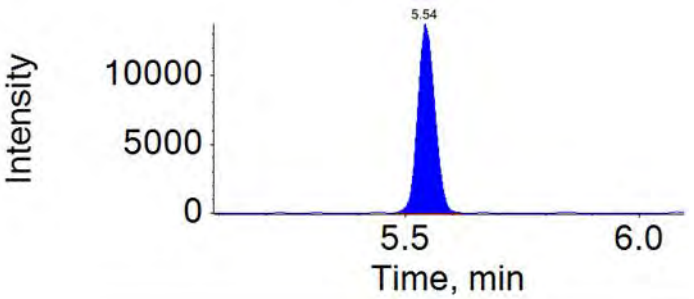
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



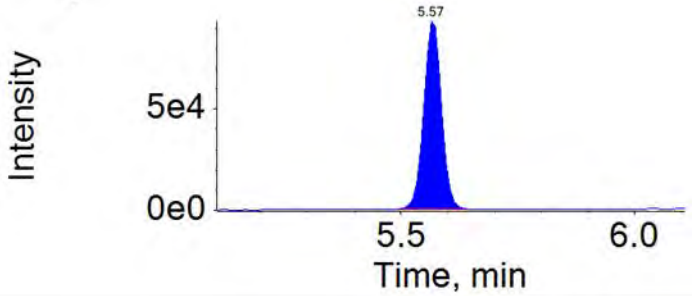
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



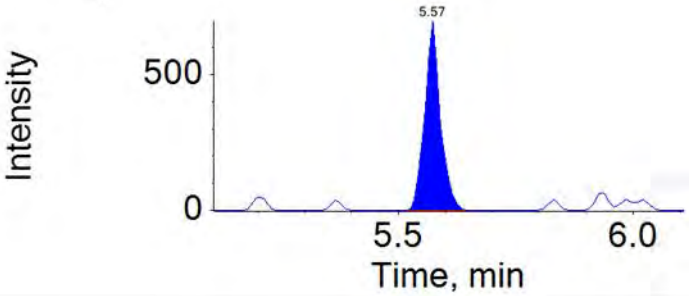
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

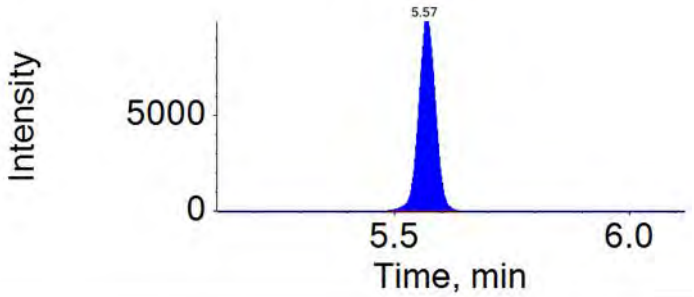
Component: PFDA
Primary Mass: 513.0 / 469.0



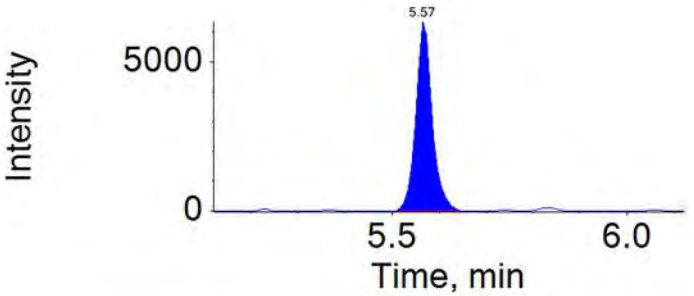
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



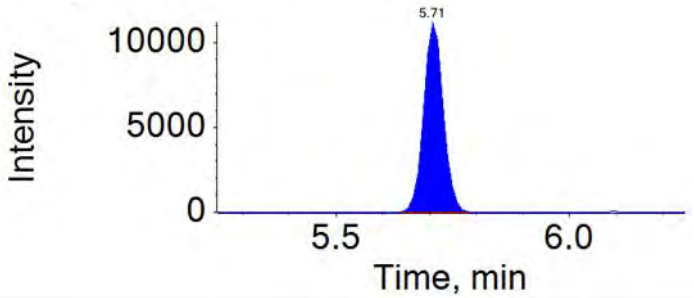
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



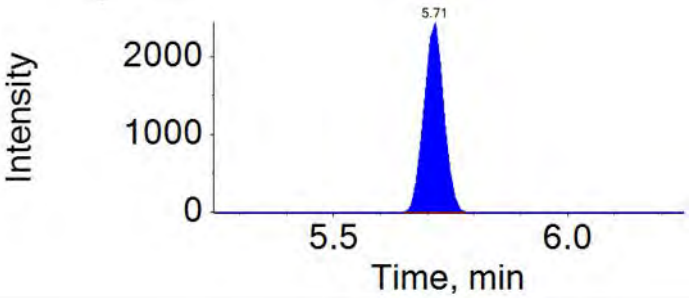
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



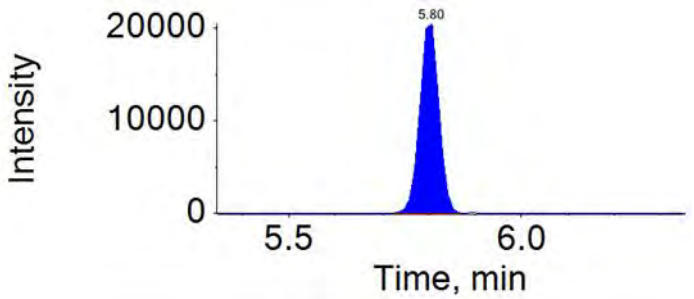
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



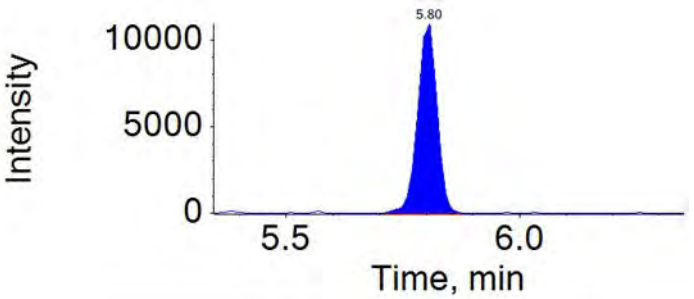
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



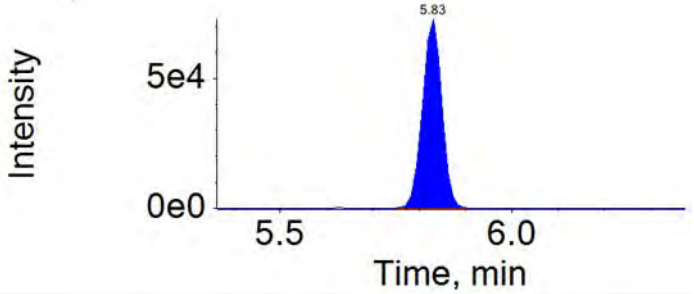
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



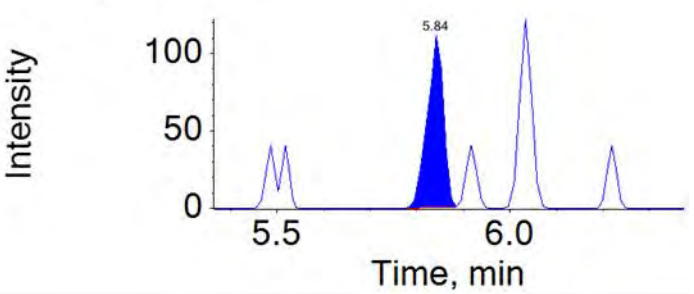
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

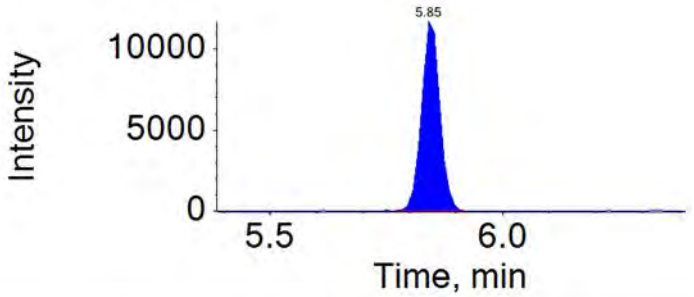
Component: PFUnDA
Primary Mass: 563.0 / 519.0



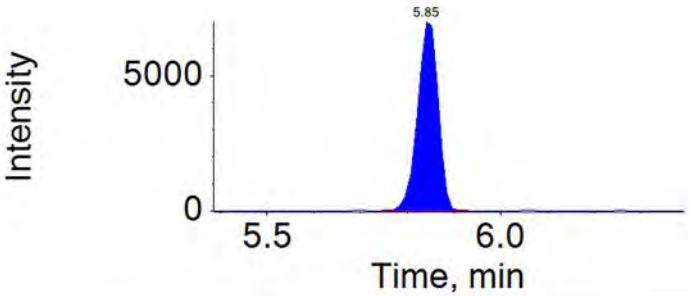
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



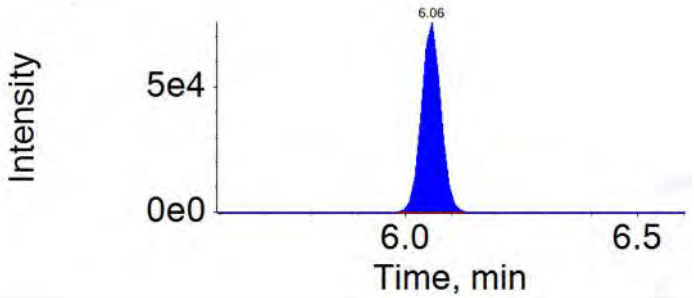
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



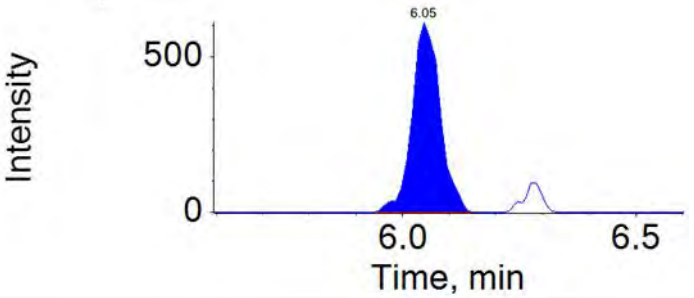
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



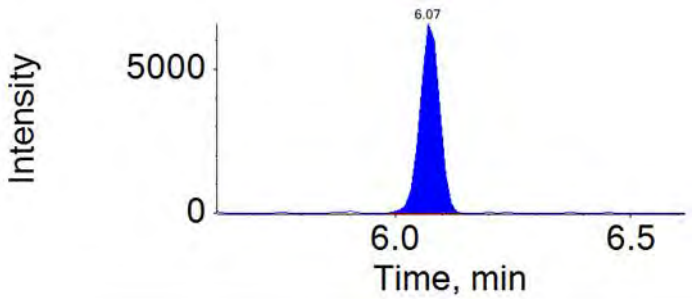
Component: PFDoDA
Primary Mass: 613.0 / 569.0



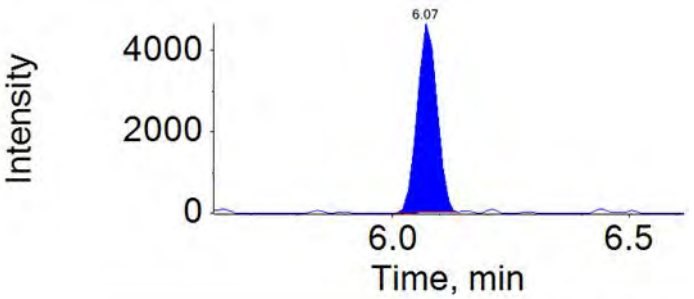
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



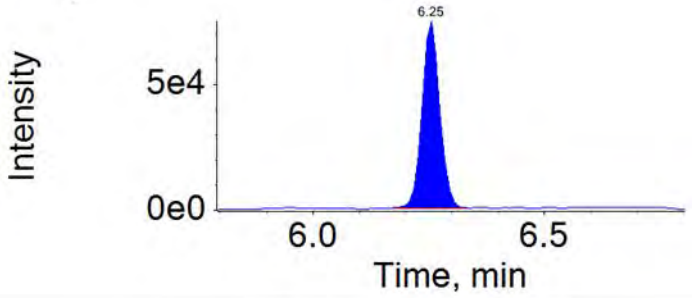
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



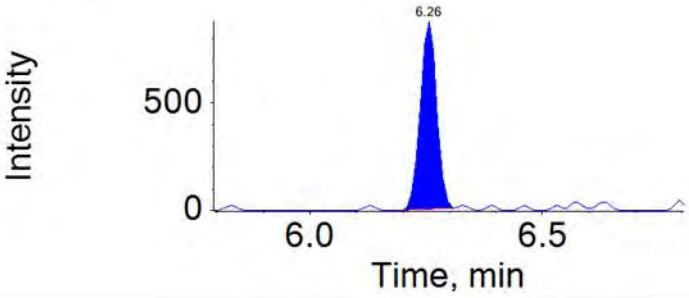
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



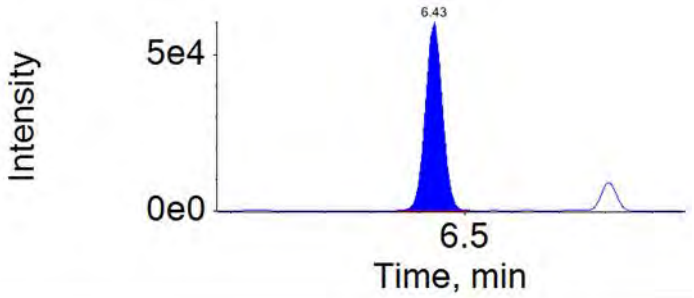
Component: PFTrDA
Primary Mass: 663.0 / 619.0



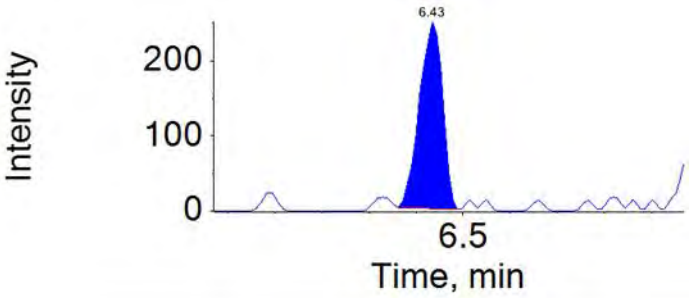
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



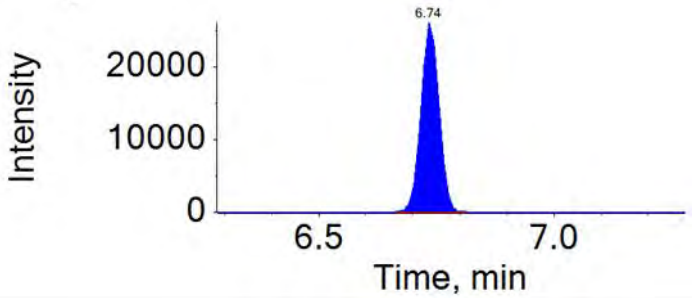
Component: PFTeDA
Primary Mass: 713.0 / 669.0



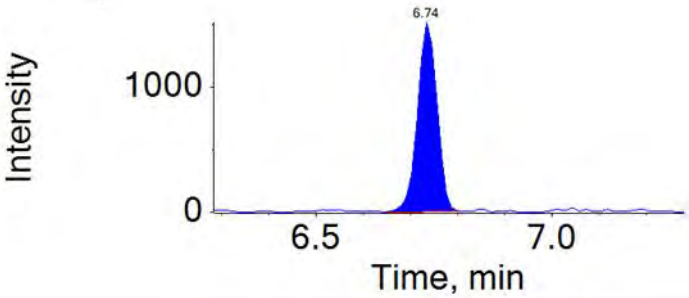
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



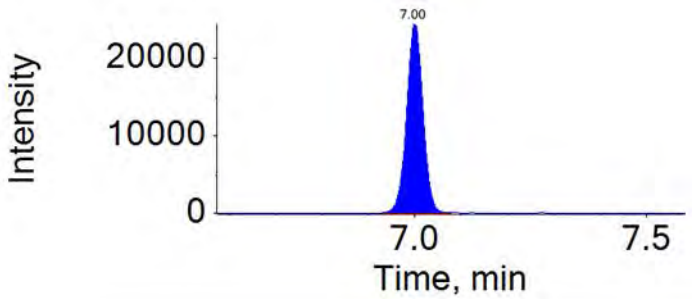
Component: PFHxDA
Primary Mass: 813.0 / 769.0



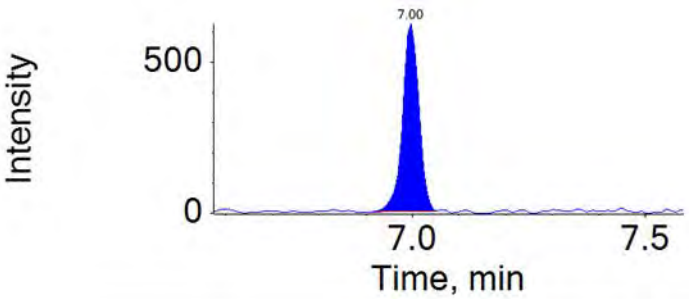
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV07DCAL-13.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-07T10:06:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721806.8	730410.6	-1	50	
13C2-PFOA	5.0	528557.8	524423.6	1	50	
13C4-PFOS	4.8	270733.9	274061.7	-1	50	
13C2-PFDA	5.0	320985.5	311442.1	3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771359.1	13C3-PFBA	721806.8	1.069	5.000	4.945	99	70-130	
E13C5-PFPeA	824842.8	13C3-PFBA	721806.8	1.143	5.000	4.978	100	70-130	
E13C3-PFBS	434938.9	13C3-PFBA	721806.8	0.603	4.650	4.422	95	70-130	
E13C2-4:2-FTS	51520.6	13C2-PFOA	528557.8	0.097	4.670	4.398	94	70-130	
E13C5-PFHxA	713446.3	13C2-PFOA	528557.8	1.350	5.000	4.965	99	70-130	
E13C3-PFHxS	339090.5	13C2-PFOA	528557.8	0.642	4.730	4.606	97	70-130	
E13C4-PFHpA	592497.9	13C2-PFOA	528557.8	1.121	5.000	5.099	102	70-130	
E13C2-6:2-FTS	39121.7	13C2-PFOA	528557.8	0.074	4.750	4.936	104	70-130	
E13C8-PFOA	937287.5	13C2-PFOA	528557.8	1.773	5.000	4.945	99	70-130	
E13C8-PFOS	291941.6	13C4-PFOS	270733.9	1.078	4.780	4.768	100	70-130	
E13C9-PFNA	512147.4	13C4-PFOS	270733.9	1.892	5.000	5.167	103	70-130	
E13C6-PFDA	656868.3	13C2-PFDA	320985.5	2.046	5.000	5.146	103	70-130	
E13C2-8:2-FTS	30500.3	13C2-PFDA	320985.5	0.095	4.790	5.028	105	70-130	
E13C8-PFOSA	708330.5	13C2-PFDA	320985.5	2.207	5.000	4.815	96	70-130	
Ed3-NMeFOSAA	80900.1	13C2-PFDA	320985.5	0.252	5.000	4.687	94	70-130	
E13C7-PFUnDA	275977.2	13C2-PFDA	320985.5	0.860	5.000	4.960	99	70-130	
Ed5-NEtFOSAA	66162.4	13C2-PFDA	320985.5	0.206	5.000	4.770	95	70-130	
E13C2-PFDoDA	598287.4	13C2-PFDA	320985.5	1.864	5.000	5.025	100	70-130	
Ed7-NMePFOSAE	330968.7	13C2-PFDA	320985.5	1.031	5.000	4.795	96	70-130	
Ed3-NMePFOSA	86399.4	13C2-PFDA	320985.5	0.269	5.000	4.928	99	70-130	
Ed9-NEtPFOSAE	273909.1	13C2-PFDA	320985.5	0.853	5.000	4.873	97	70-130	
Ed5-NEtPFOSA	72258.7	13C2-PFDA	320985.5	0.225	5.000	5.212	104	70-130	
E13C2-PFTeDA	441858.1	13C2-PFDA	320985.5	1.377	5.000	4.956	99	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

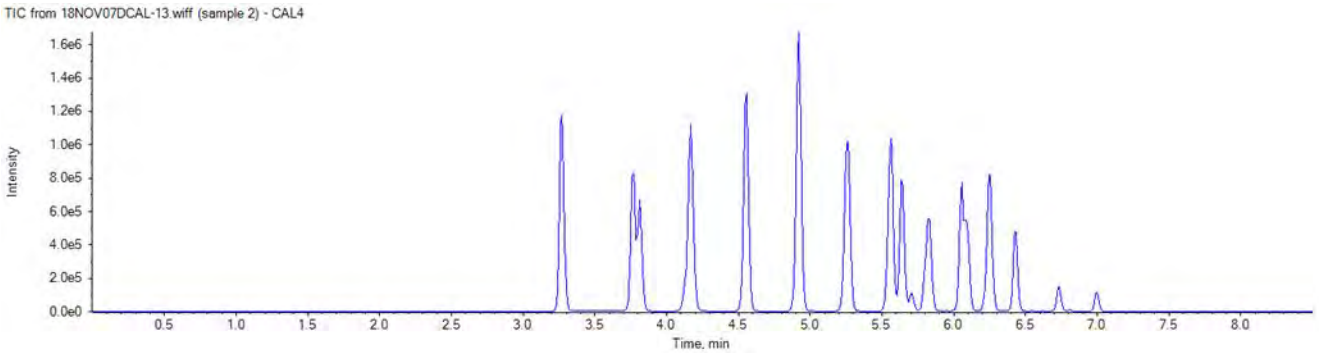
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-13.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	1152870.9		A	13C4-PFBA	3.27	771359.1	1.495	8.747
PFPeA	3.76	1.000	1165758.7		A	13C5-PFPeA	3.77	824842.8	1.413	8.399
PFBS	3.81	1.000	648524.4		A	13C3-PFBS	3.81	434938.9	1.491	7.518
4:2-FTS	4.13	1.000	153295.4		A	13C2-4:2-FTS	4.13	51520.6	2.975	7.999
PFHxA	4.16	1.000	1455862.5		A	13C5-PFHxA	4.16	713446.3	2.041	8.751
PFPeS	4.18	1.100	349358.3		A	13C3-PFBS	3.81	434938.9	0.803	7.922
PFHxS	4.55	1.000	513536.6		A	13C3-PFHxS	4.55	339090.5	1.514	7.676
PFHpA	4.55	1.000	1481489.5		A	13C4-PFHpA	4.55	592497.9	2.500	8.409
6:2-FTS	4.91	1.000	125170.2		A	13C2-6:2-FTS	4.91	39121.7	3.200	7.982
PFHpS	4.91	1.080	516333.1		A	13C3-PFHxS	4.55	339090.5	1.523	7.966
PFOA	4.92	1.000	1491946.3		A	13C8-PFOA	4.92	937287.5	1.592	8.963
PFOS	5.25	1.000	447769.0		A	13C8-PFOS	5.25	291941.6	1.534	7.953
PFNA	5.27	1.000	1179151.8		A	13C9-PFNA	5.26	512147.4	2.302	8.604
PFNS	5.54	1.060	305013.7		A	13C8-PFOS	5.25	291941.6	1.045	8.284
PFDA	5.56	1.000	1029893.8		A	13C6-PFDA	5.56	656868.3	1.568	8.626
8:2-FTS	5.57	1.000	106591.3		A	13C2-8:2-FTS	5.57	30500.3	3.495	7.877
PFOSA	5.64	1.000	1119770.1		A	13C8-PFOSA	5.64	708330.5	1.581	8.545
NMeFOSAA	5.71	1.000	136316.9		A	d3-NMeFOSAA	5.70	80900.1	1.685	8.670
PFDS	5.80	1.110	250911.0		A	13C8-PFOS	5.25	291941.6	0.859	8.210
PFUnDA	5.83	1.000	802732.3		A	13C7-PFUnDA	5.83	275977.2	2.909	8.341
NEtFOSAA	5.84	1.000	121615.1		A	d5-NEtFOSAA	5.84	66162.4	1.838	7.900
PFDoDA	6.05	1.000	877242.2		A	13C2-PFDoDA	6.05	598287.4	1.466	7.946
10:2-FTS	6.07	1.090	69275.8		A	13C2-8:2-FTS	5.57	30500.3	2.271	7.073
NMePFOSAE	6.09	1.000	648523.4		A	d7-NMePFOSAE	6.08	330968.7	1.959	8.781
NMePFOSA	6.10	1.000	118194.2		A	d3-NMePFOSA	6.10	86399.4	1.368	7.657
PFDoS	6.22	1.190	121590.1		A	13C8-PFOS	5.25	291941.6	0.416	8.039
NEtPFOSAE	6.25	1.000	740427.4		A	d9-NEtPFOSAE	6.24	273909.1	2.703	8.666
NEtPFOSA	6.26	1.000	123609.2		A	d5-NEtPFOSA	6.26	72258.7	1.711	7.534
PFTrDA	6.25	1.030	781283.7		A	13C2-PFDoDA	6.05	598287.4	1.306	8.235
PFTeDA	6.43	1.000	630801.4		A	13C2-PFTeDA	6.43	441858.1	1.428	8.383
PFHxDA	6.73	1.050	297242.6		A	13C2-PFTeDA	6.43	441858.1	0.673	8.351
PFODA	7.00	1.090	251726.5		A	13C2-PFTeDA	6.43	441858.1	0.570	8.162

Total Ion Chromatogram

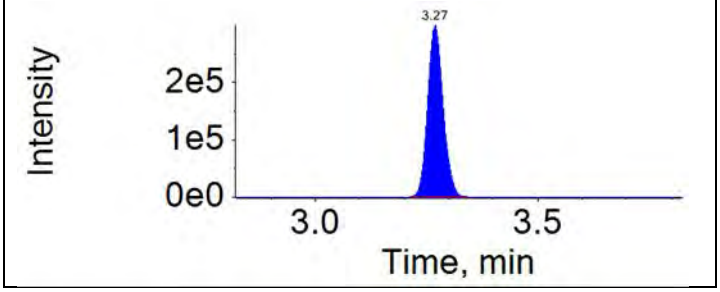


APPROVED
By JPT at 2:53 pm, 11/7/18

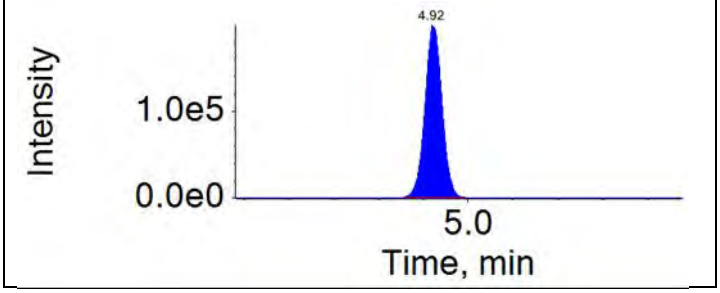
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

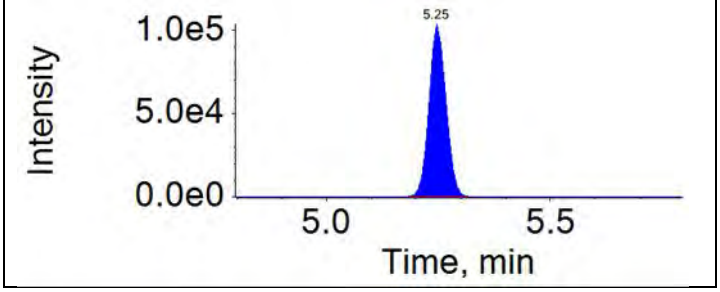
Injection Standard: 13C3-PFBA
216.0 / 172.0



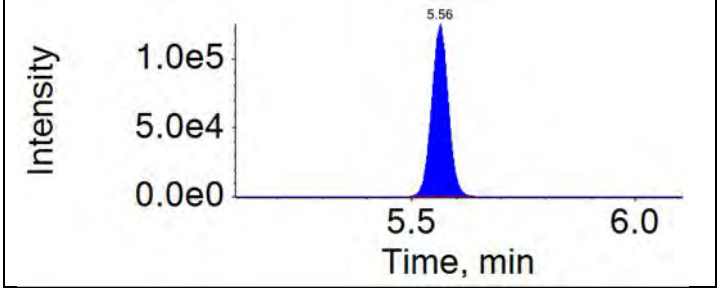
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



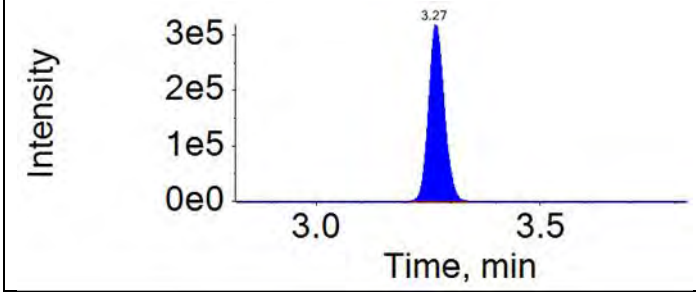
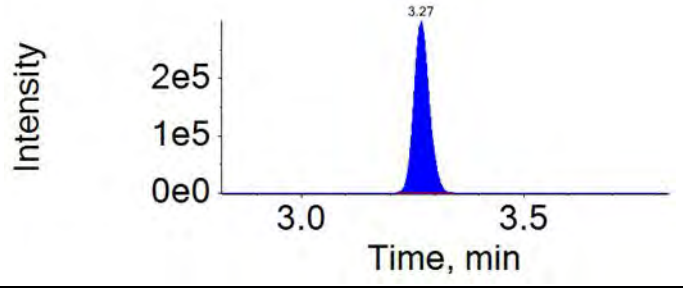
Injection Standard: 13C2-PFDA
515.0 / 470.0

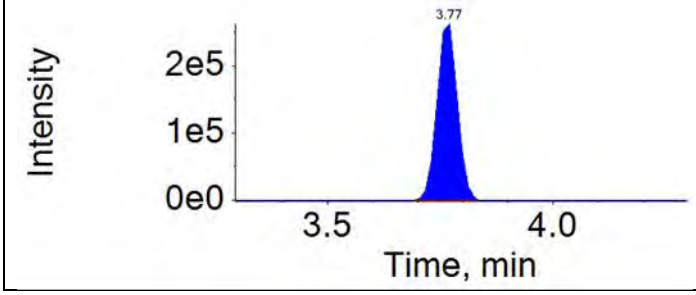
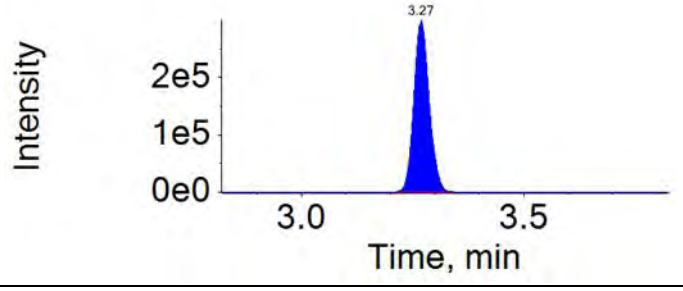


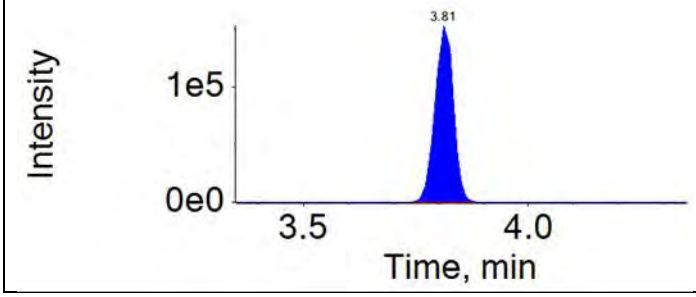
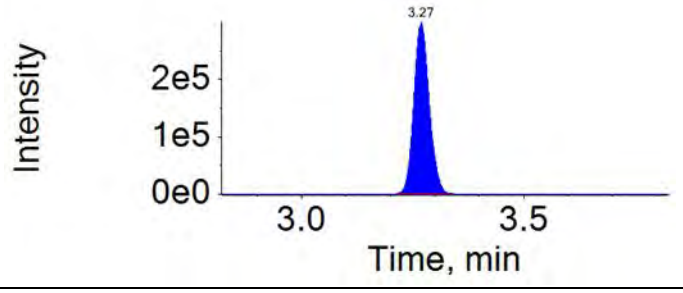
APPROVED
By JPT at 2:53 pm, 11/7/18

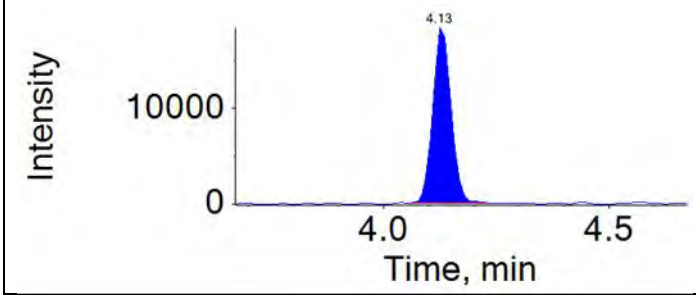
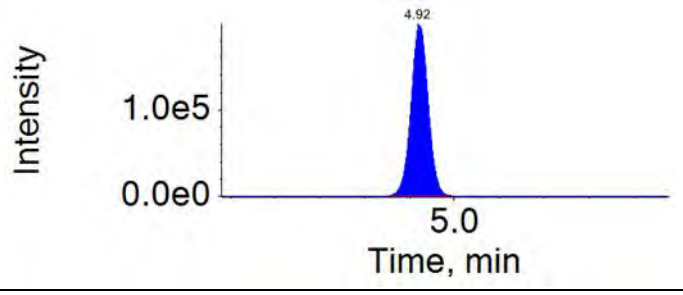
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

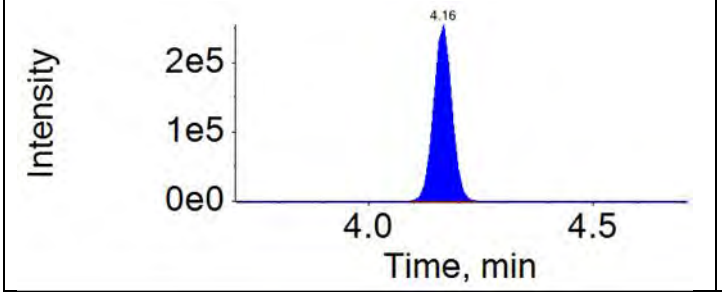
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

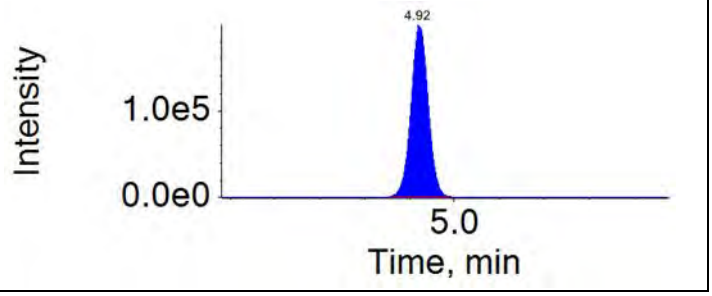
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

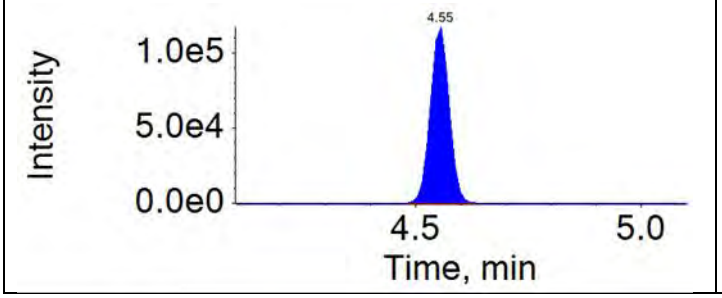
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

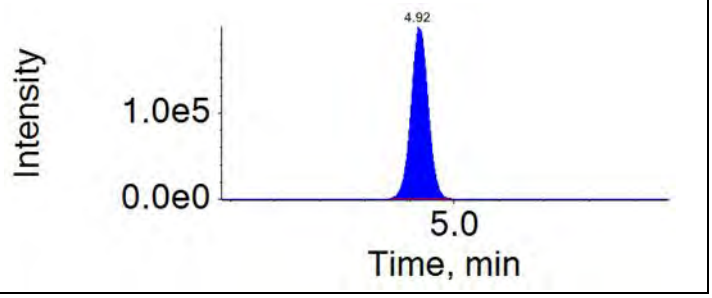
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



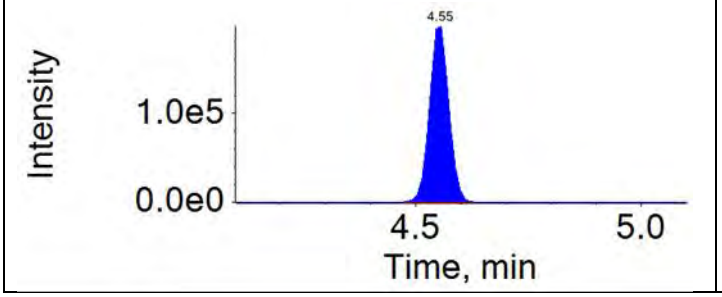


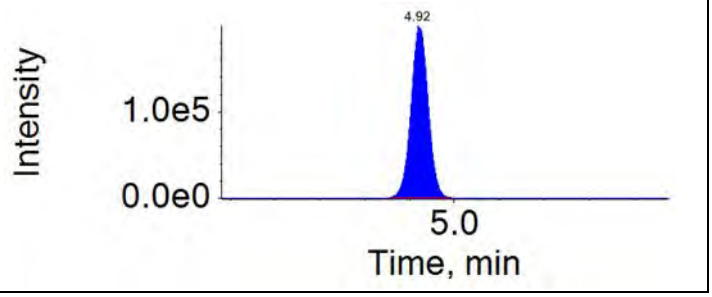
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



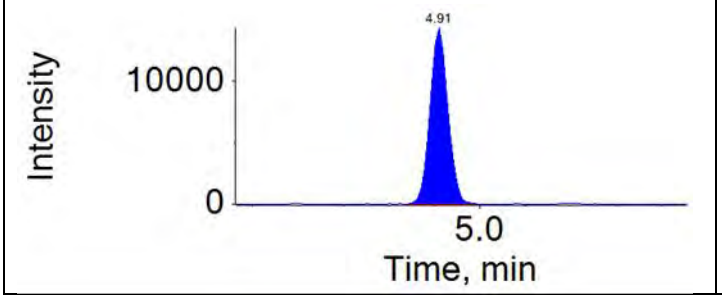


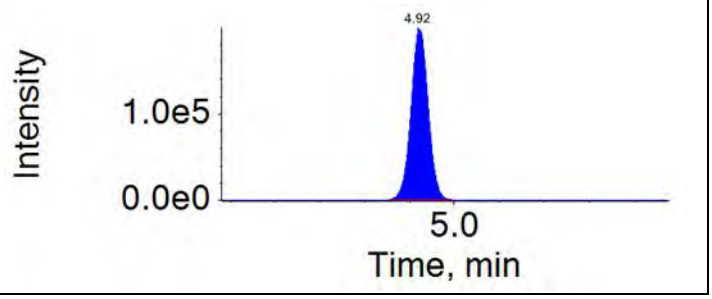
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



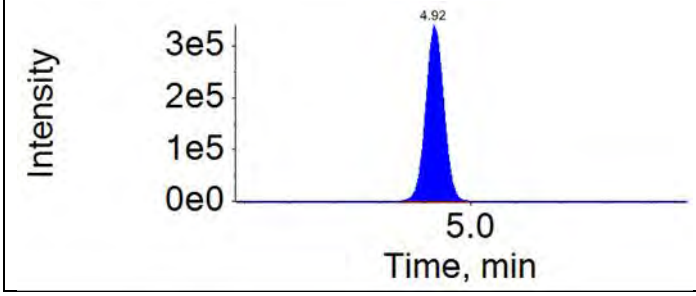
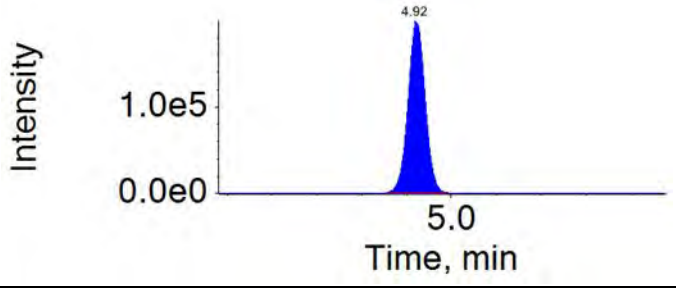


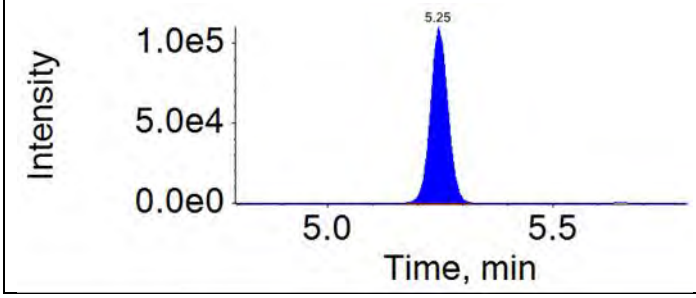
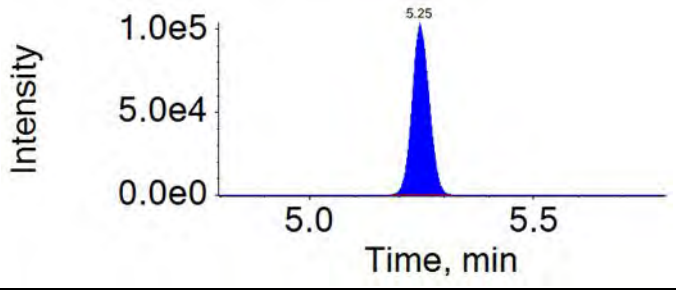
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

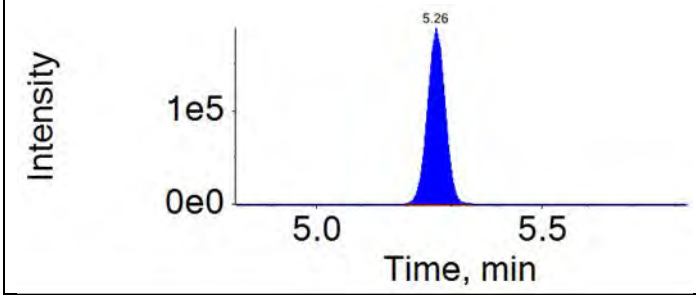
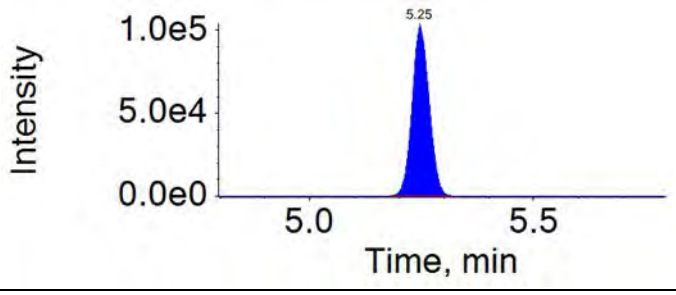


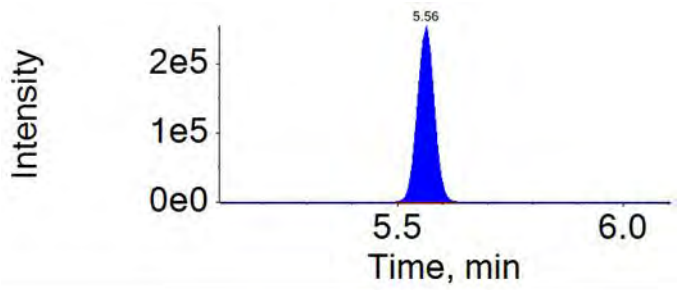
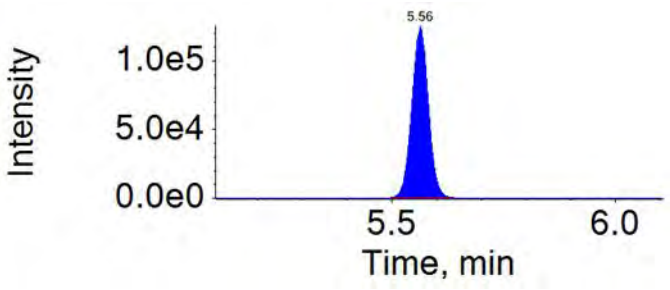


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

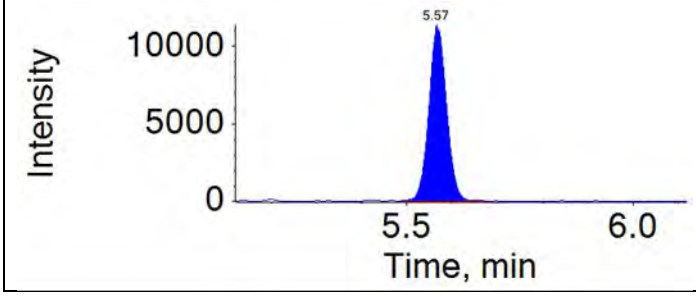
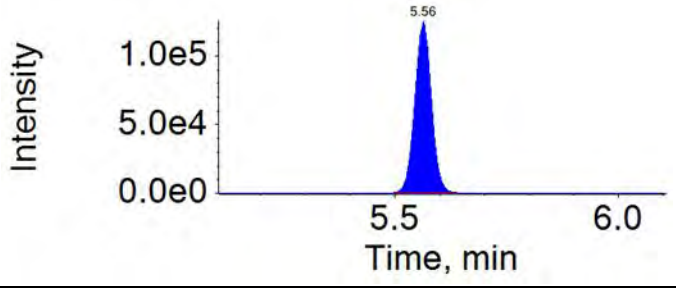
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

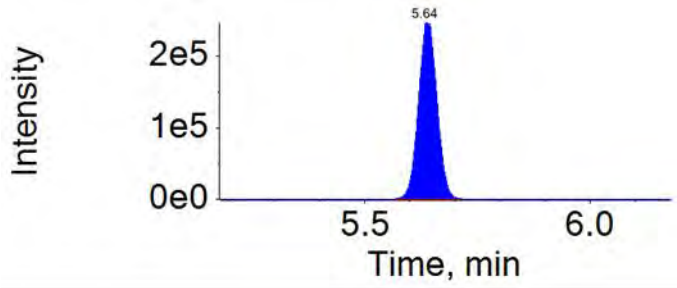
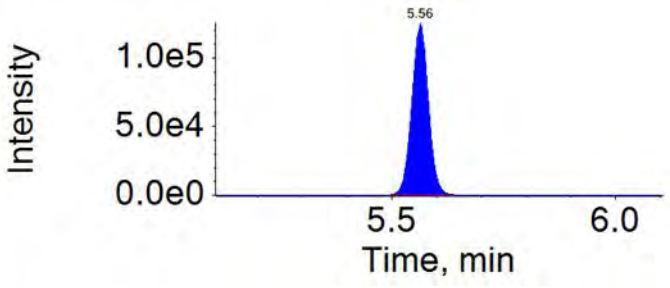
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

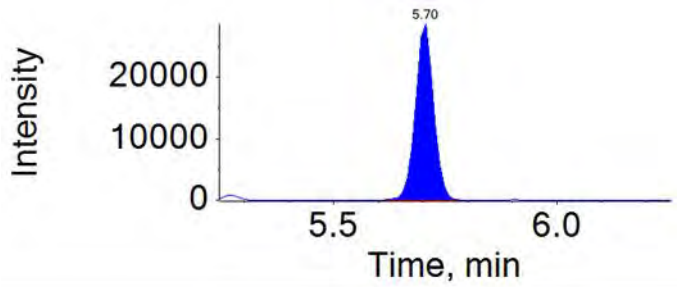
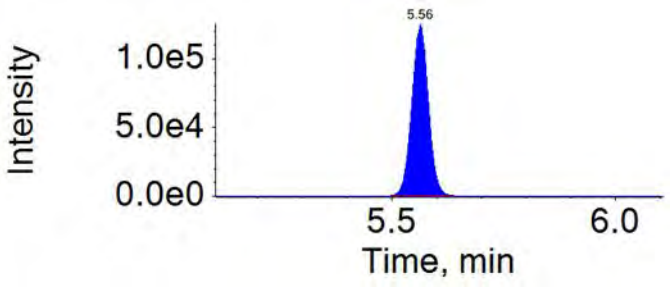
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

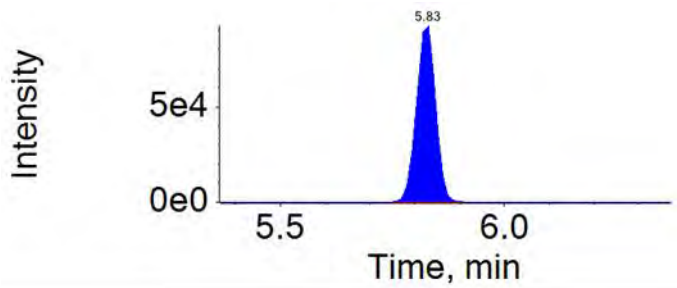
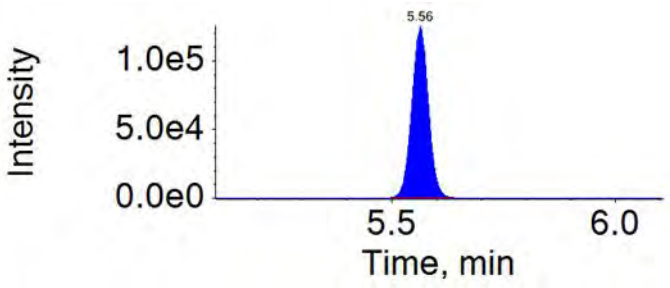
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

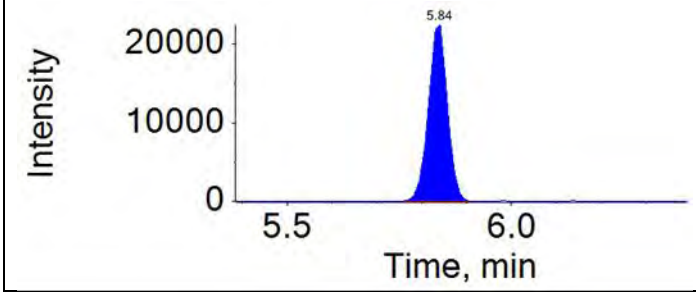
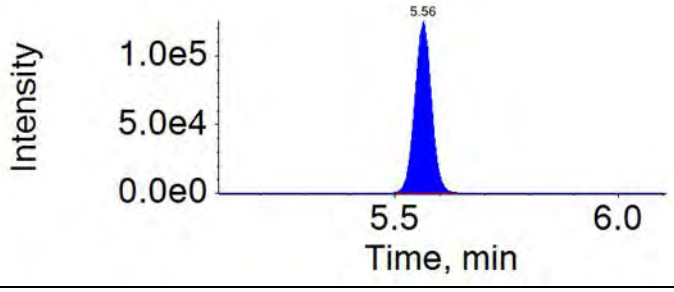
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

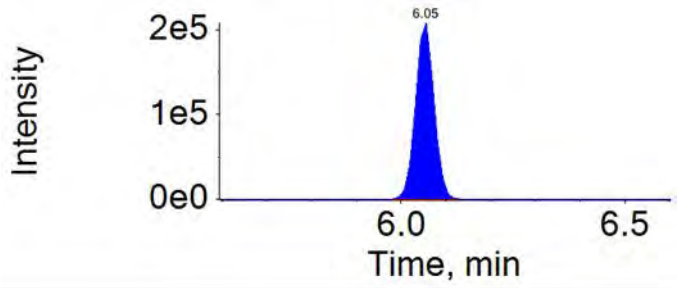
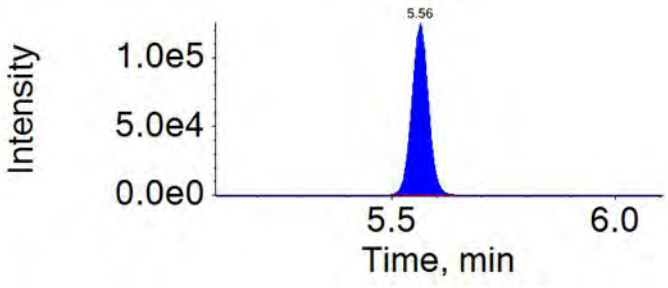
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

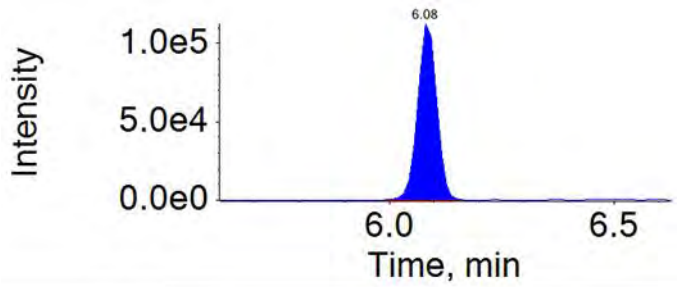
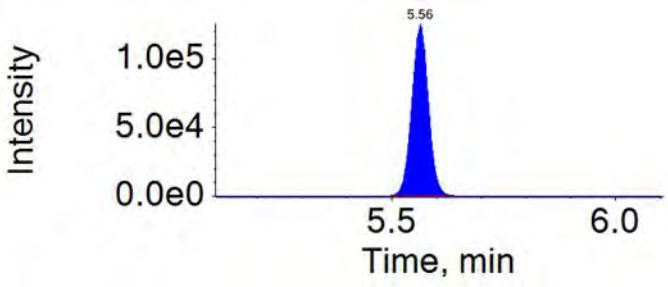
APPROVED
By JPT at 2:53 pm, 11/7/18

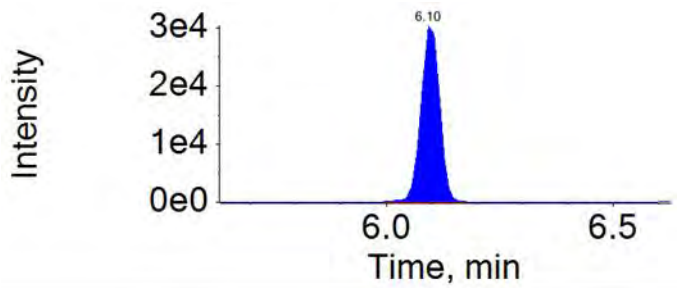
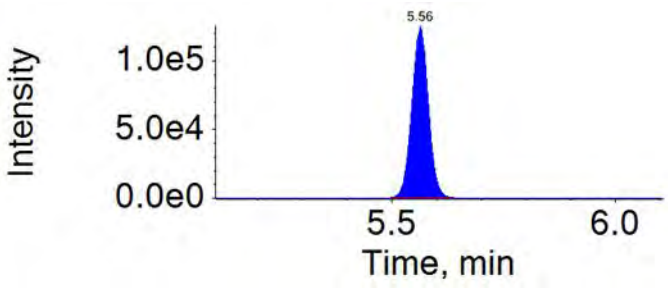
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

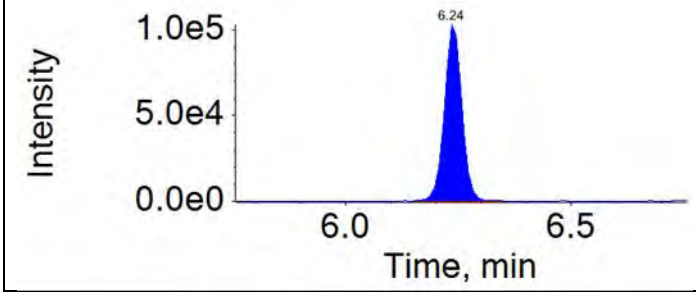
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

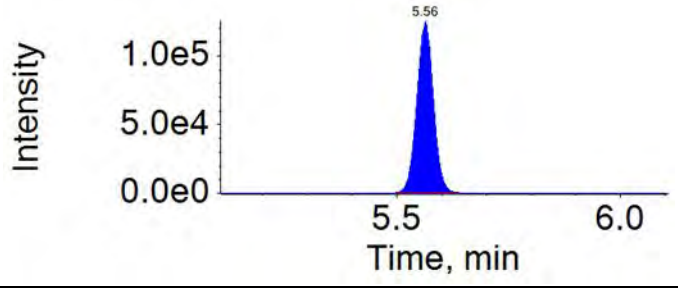
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

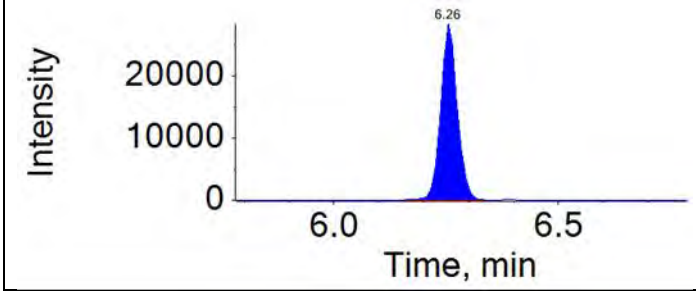
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

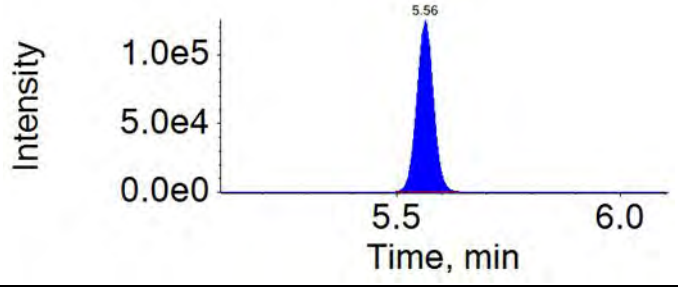
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



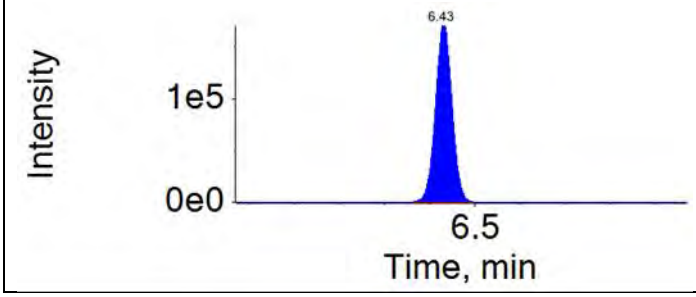


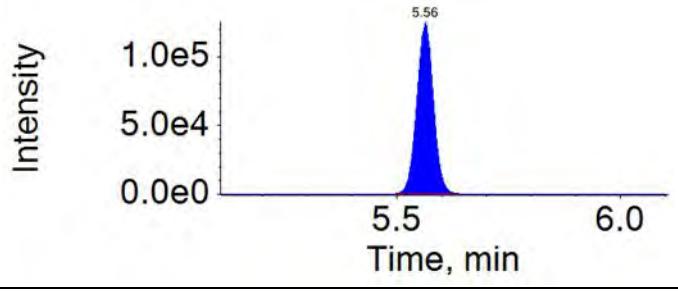
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

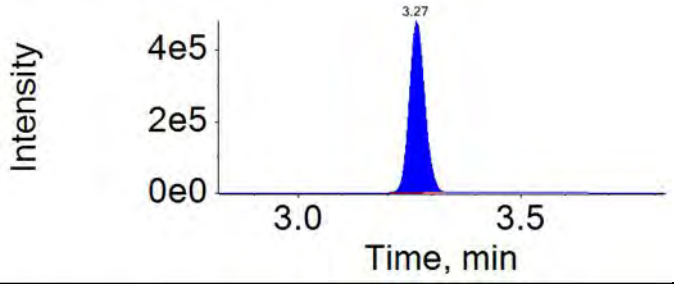
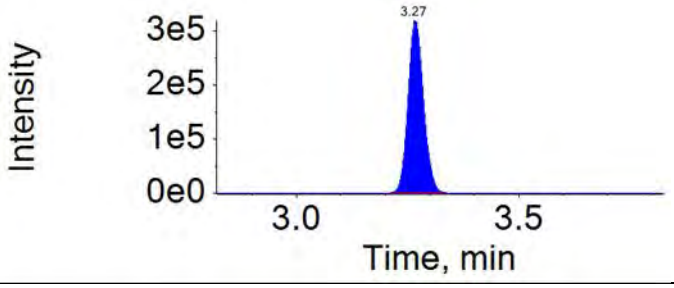


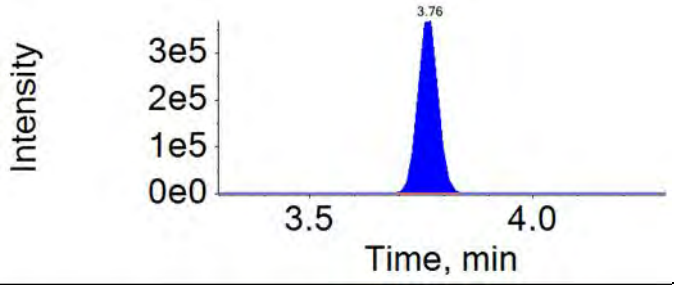
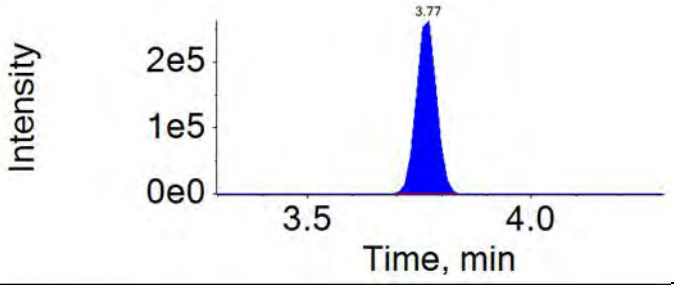


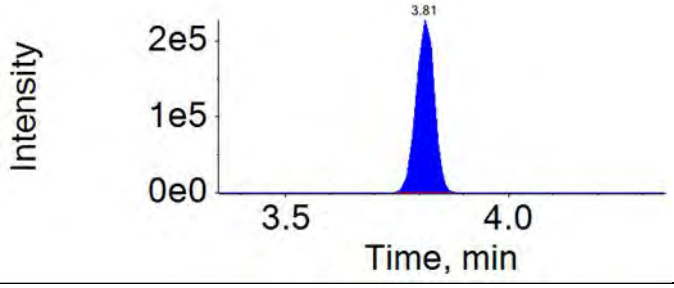
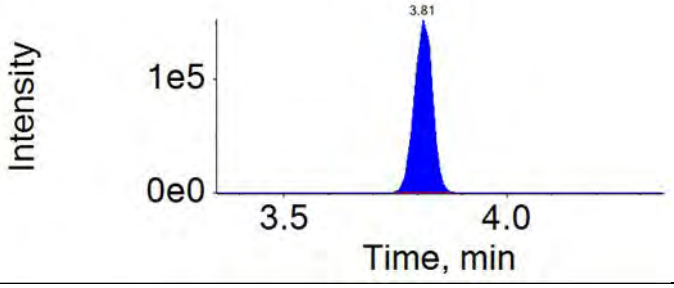
APPROVED
By JPT at 2:53 pm, 11/7/18

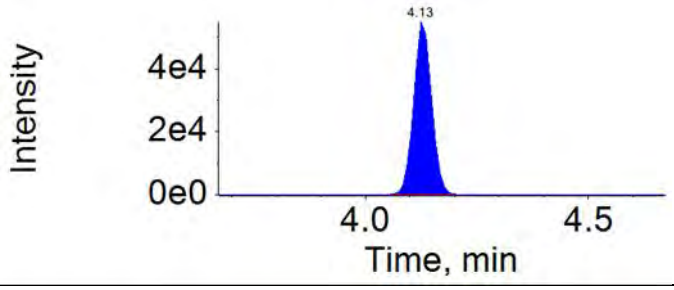
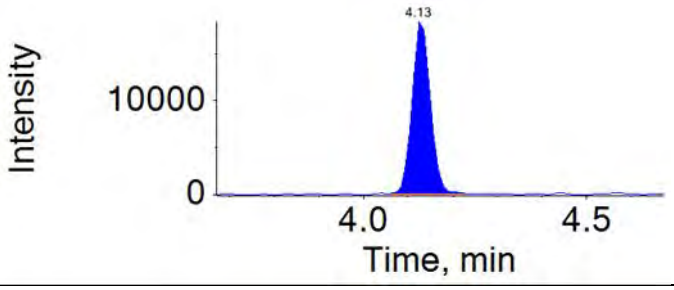
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

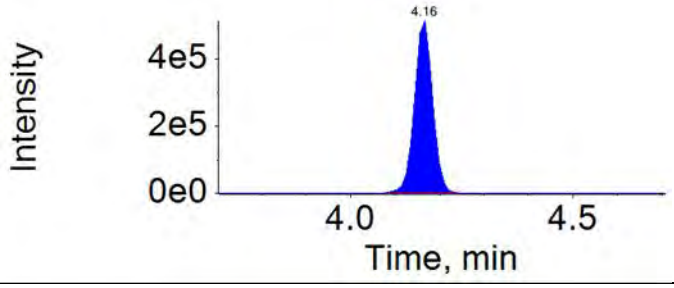
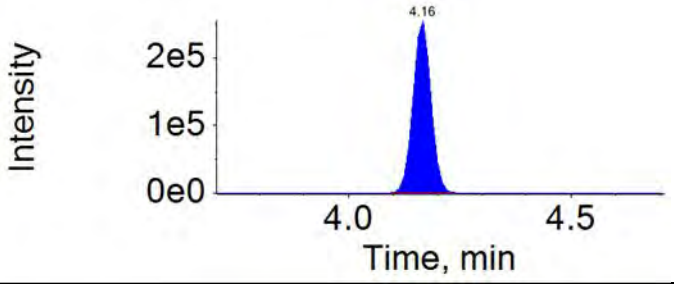
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

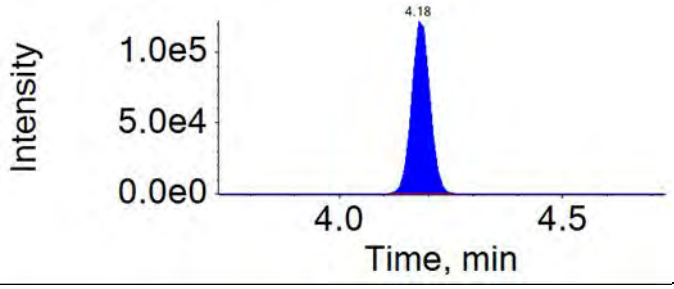
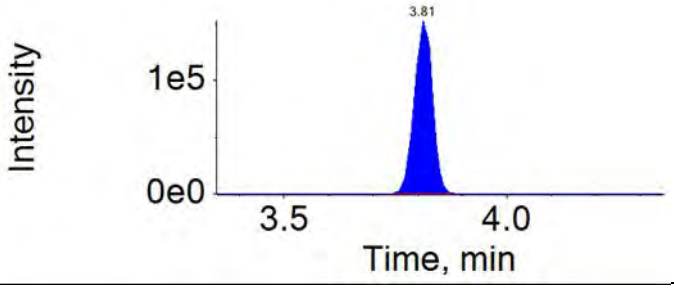
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

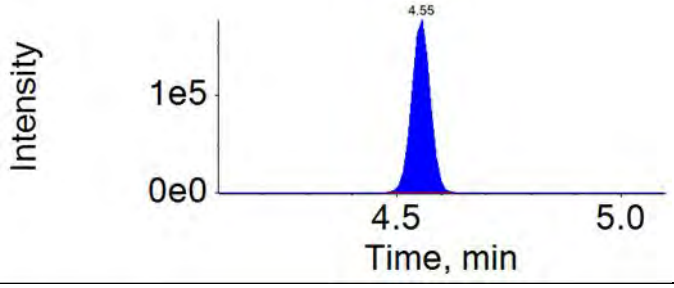
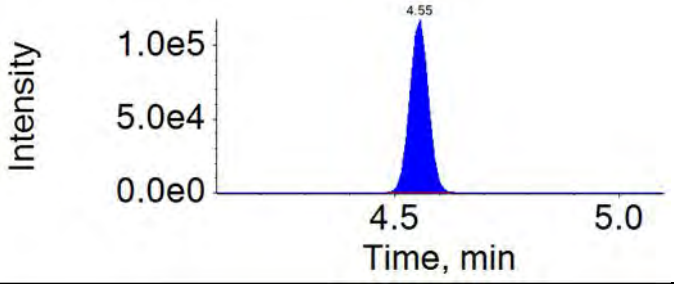
APPROVED
By JPT at 2:53 pm, 11/7/18

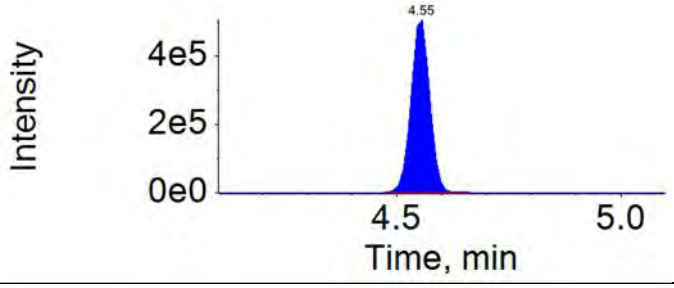
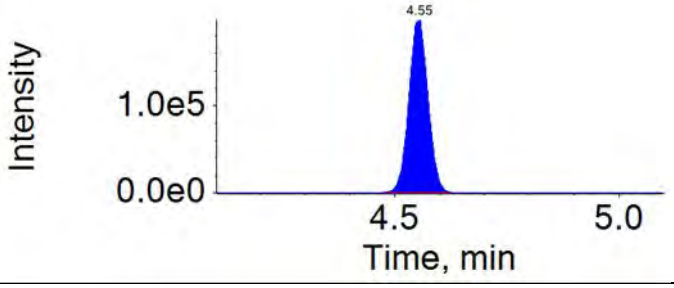
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

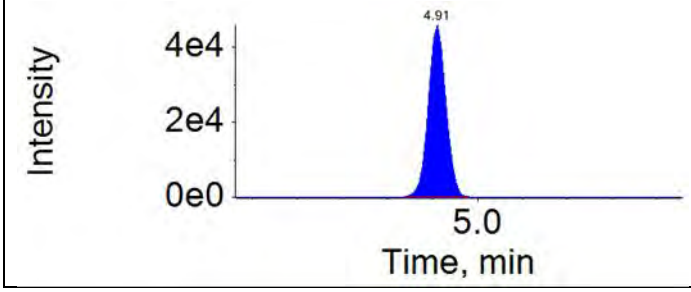
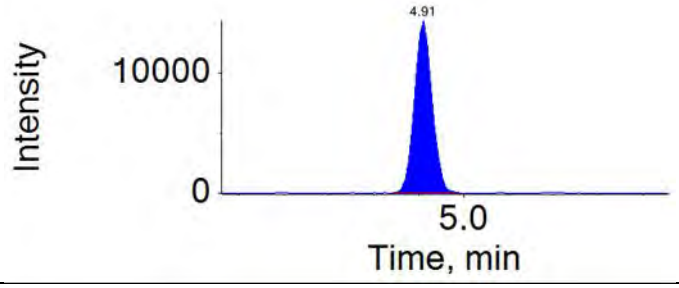
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

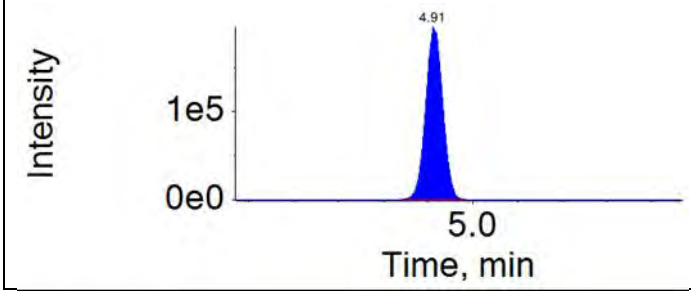
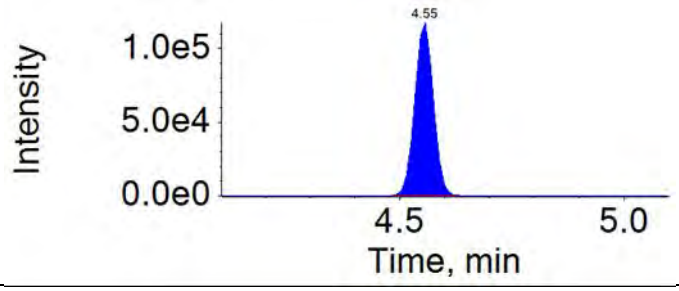
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

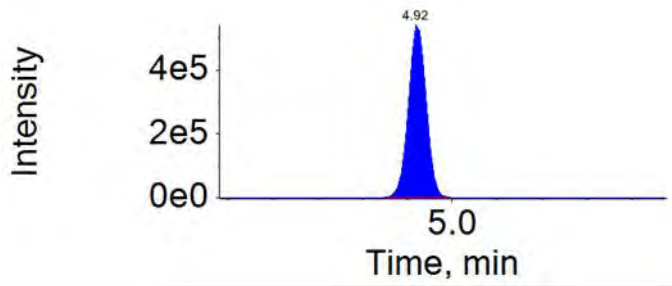
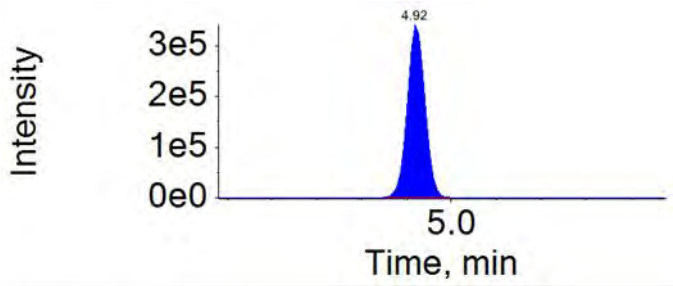
APPROVED
By JPT at 2:53 pm, 11/7/18

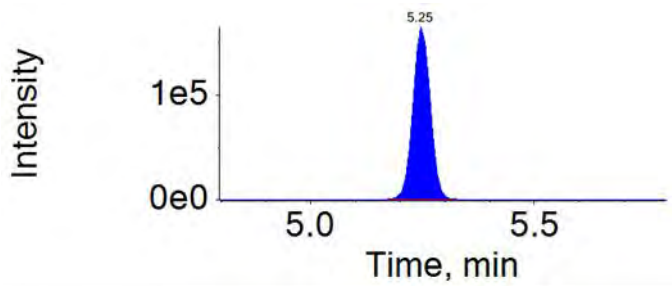
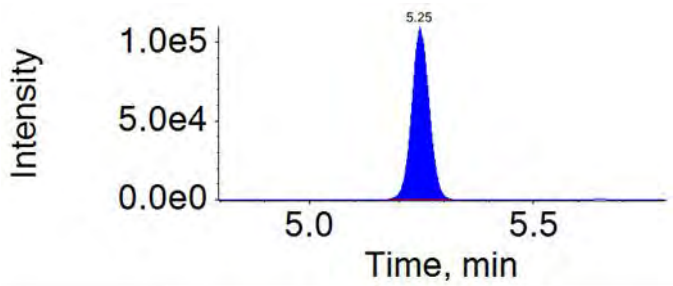
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

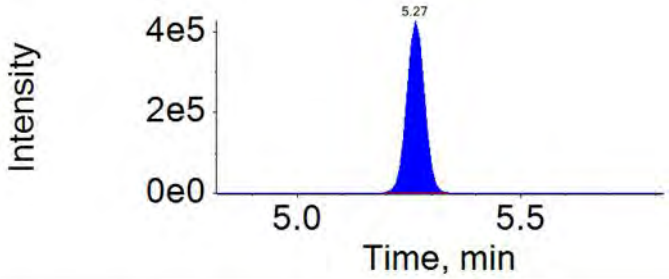
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

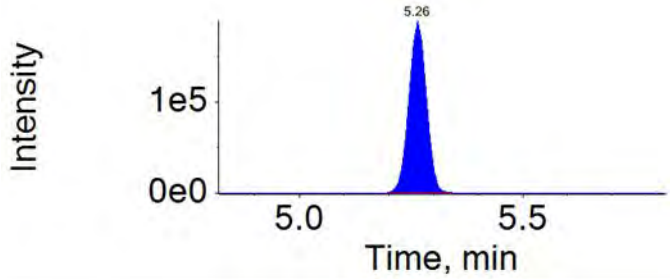
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

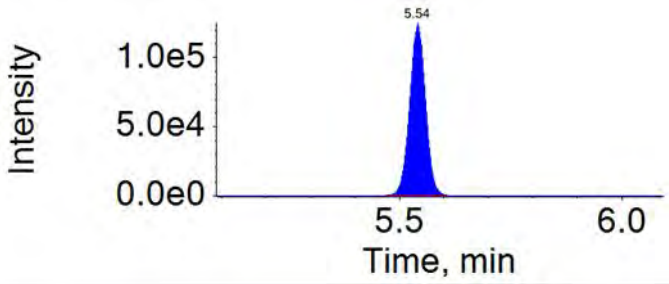
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

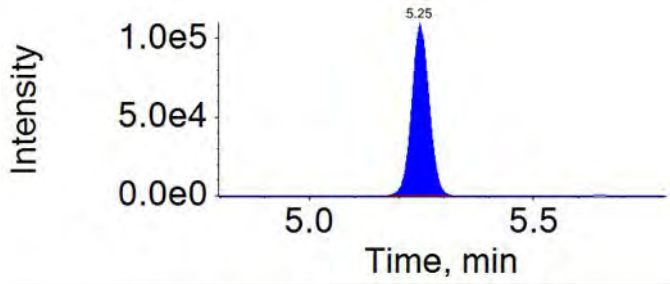
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



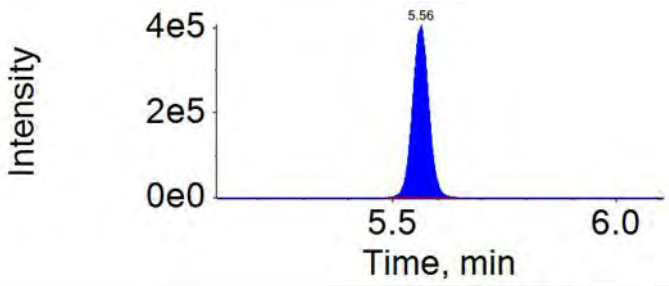


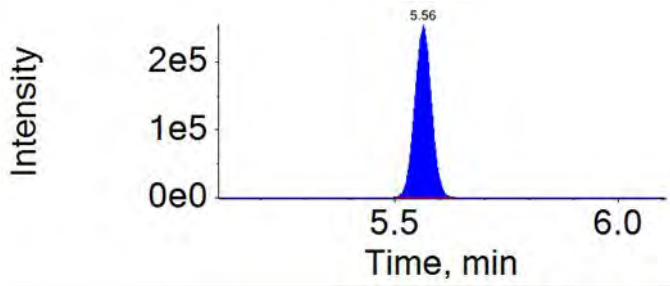
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



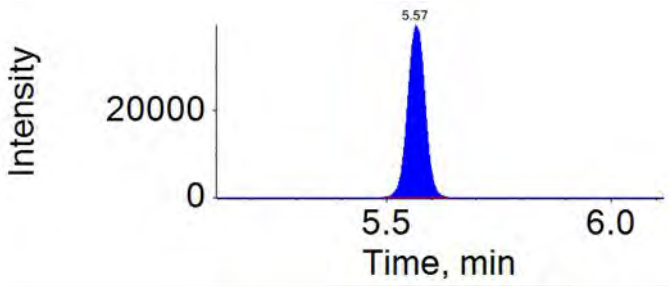


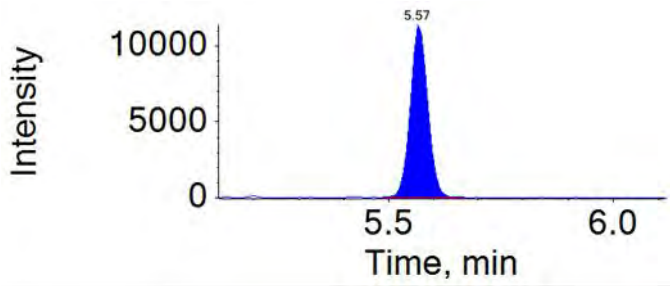
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

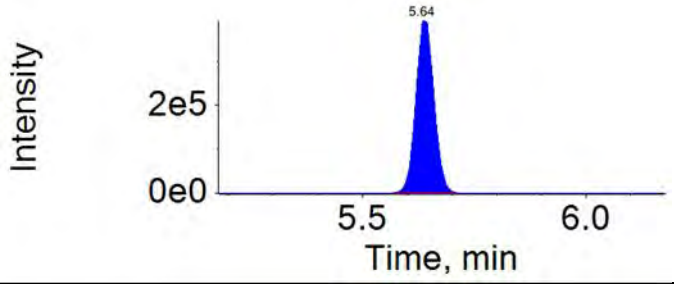
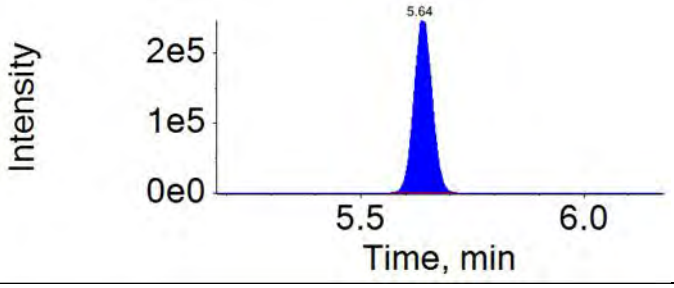


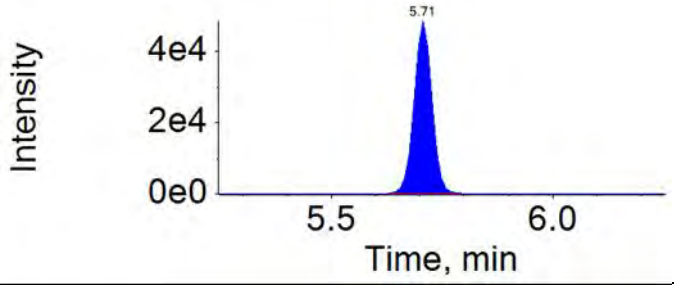
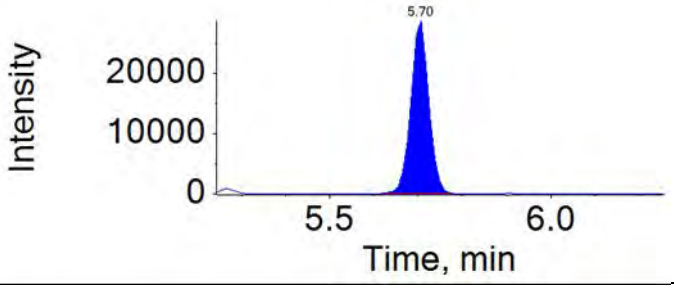


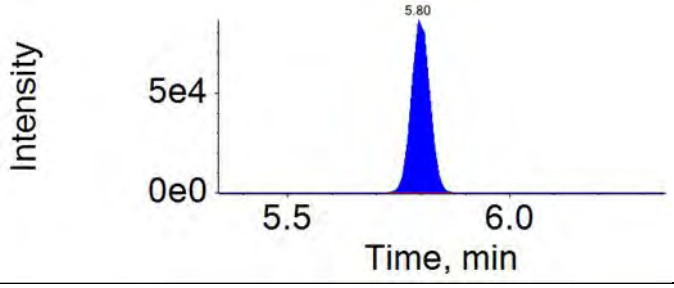
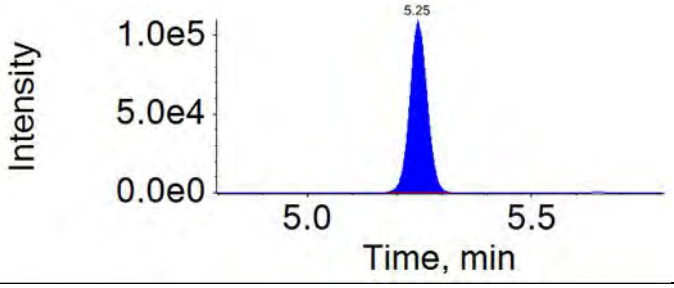
APPROVED
By JPT at 2:53 pm, 11/7/18

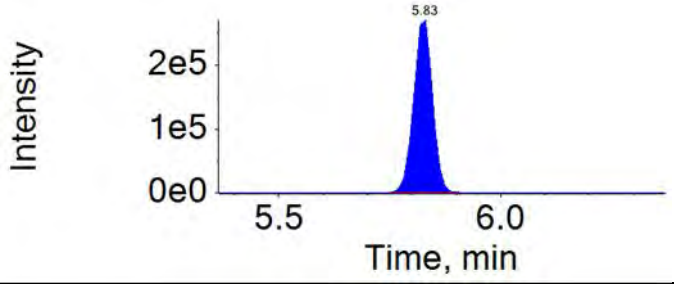
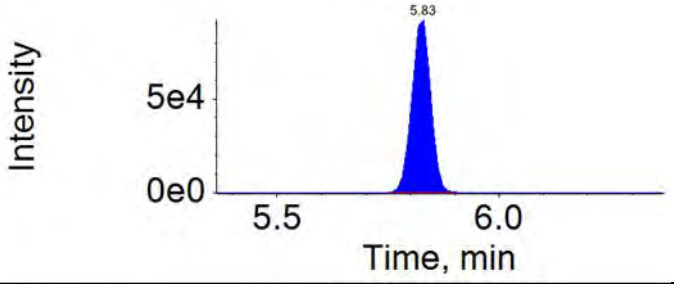
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

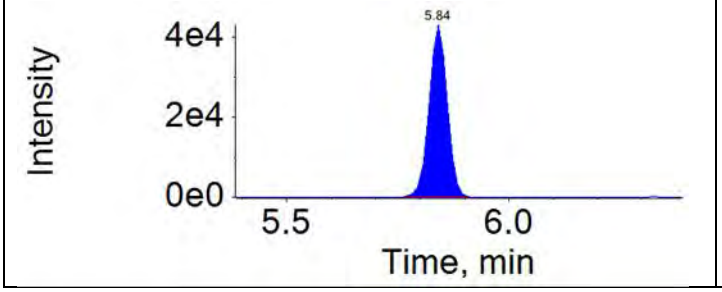
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

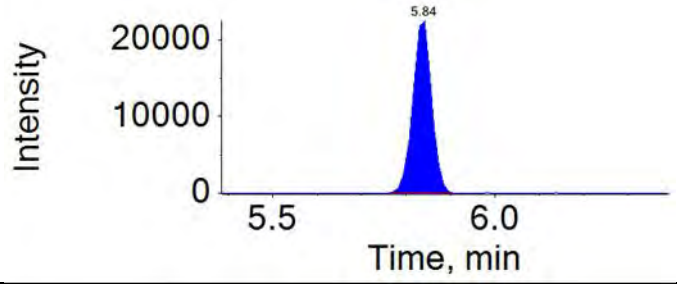
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

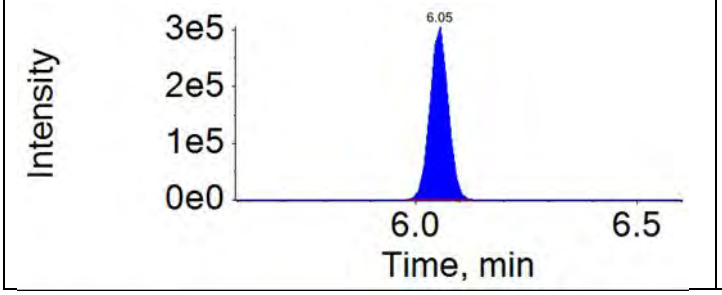
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

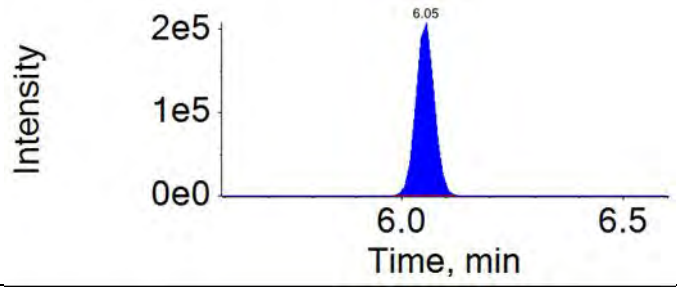
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



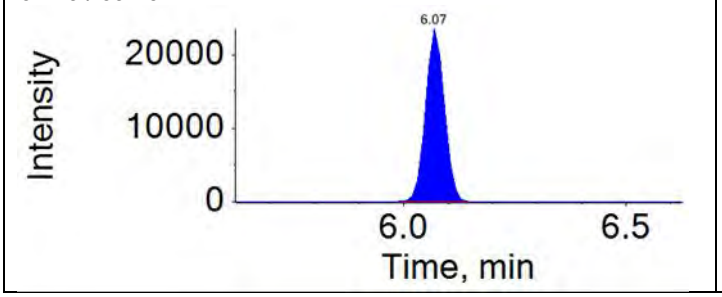


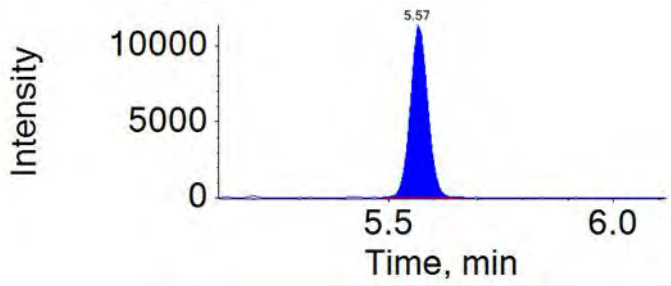
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



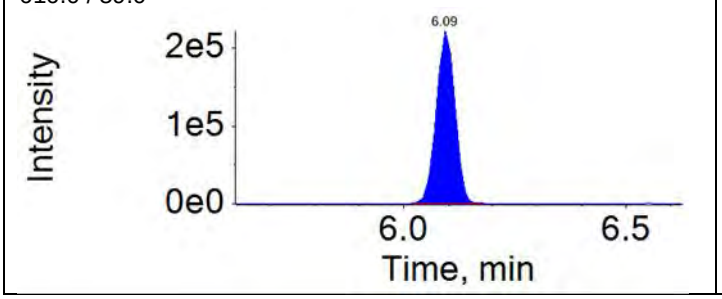


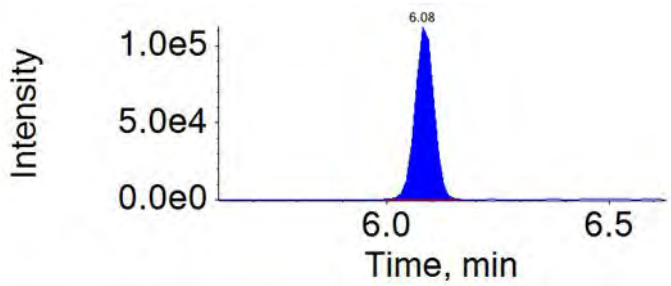
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



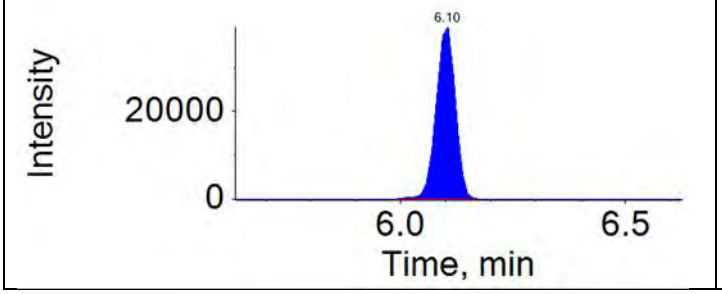


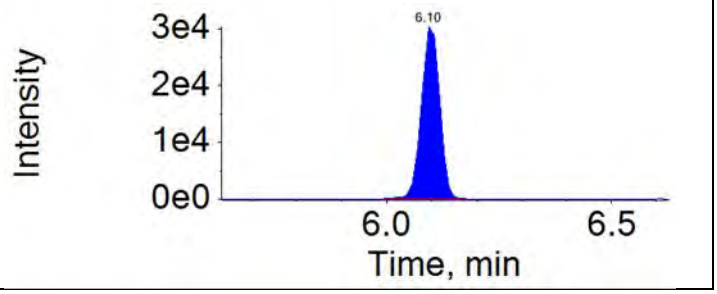
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

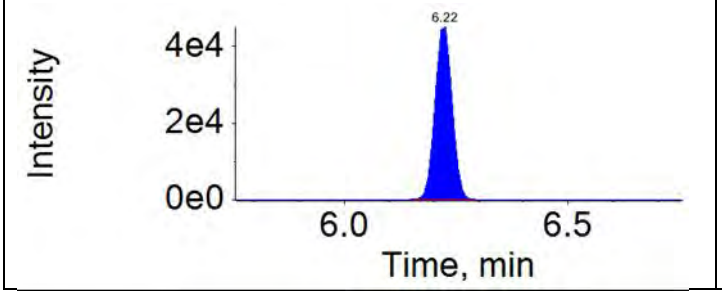
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

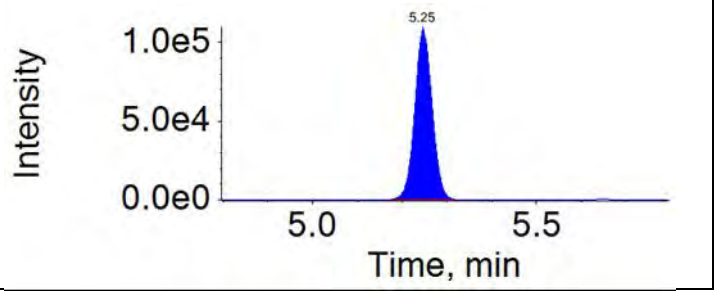
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



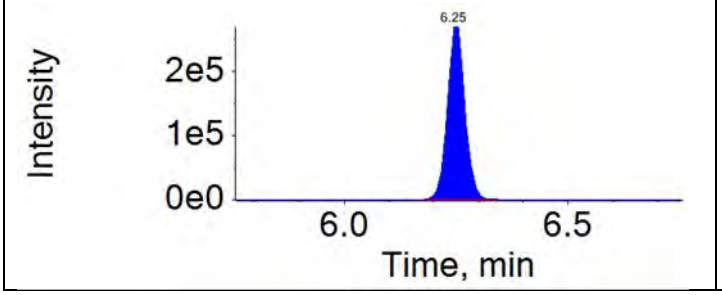


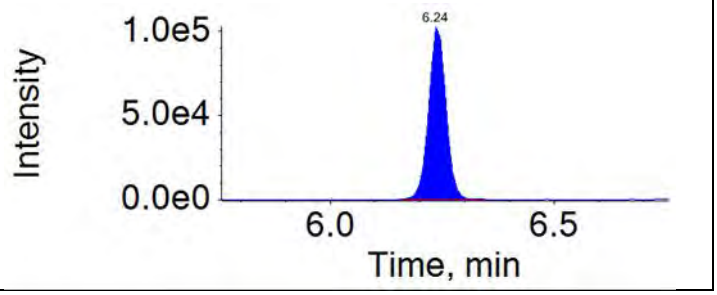
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



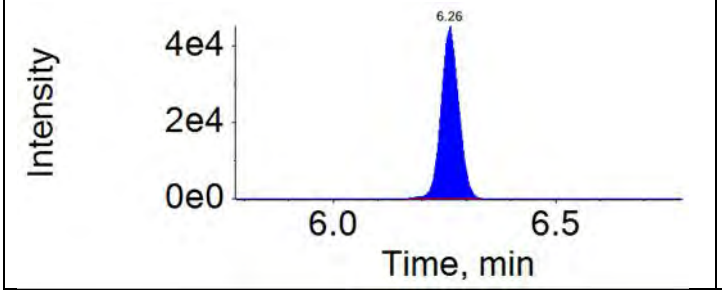


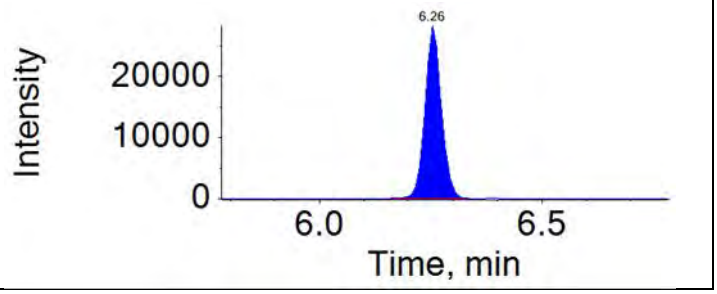
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

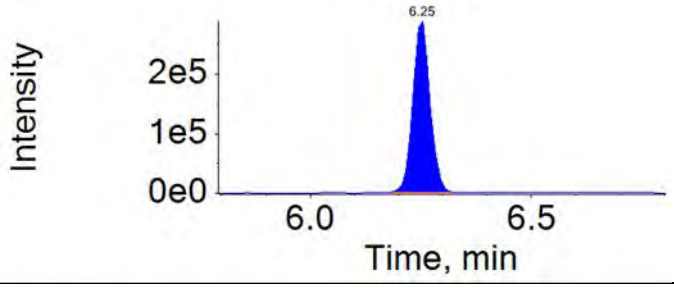
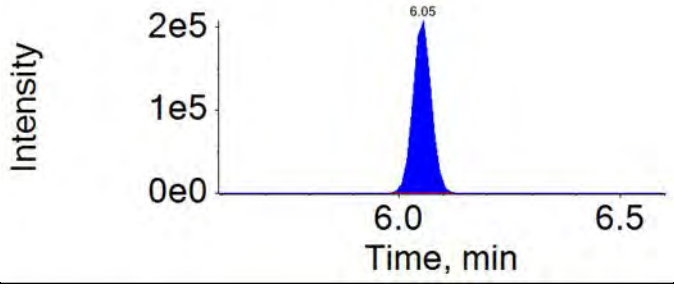


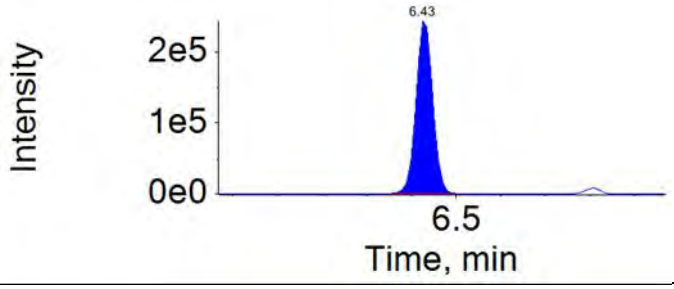
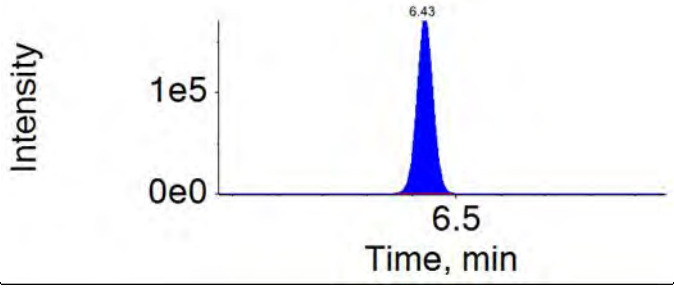


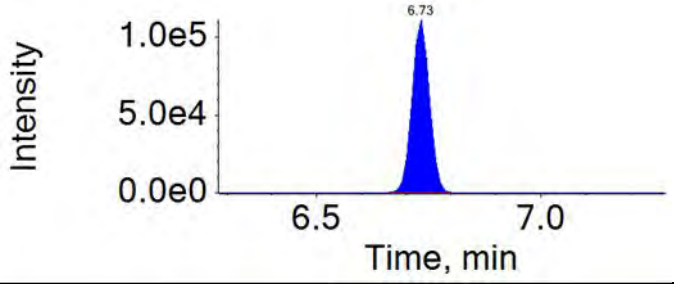
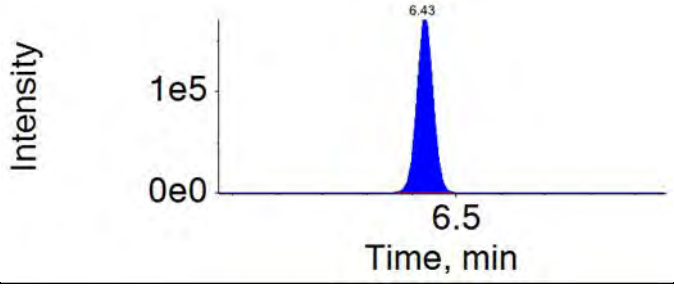
APPROVED
By JPT at 2:53 pm, 11/7/18

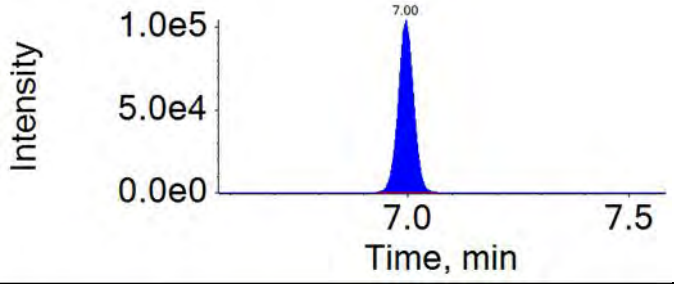
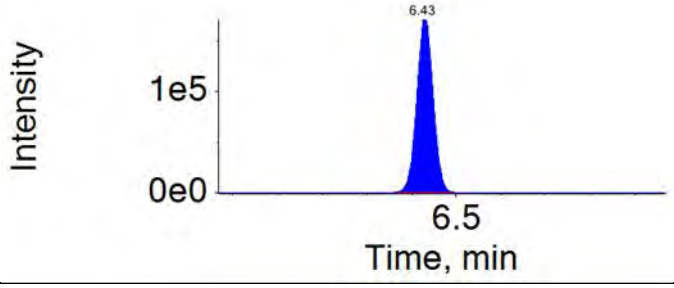
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

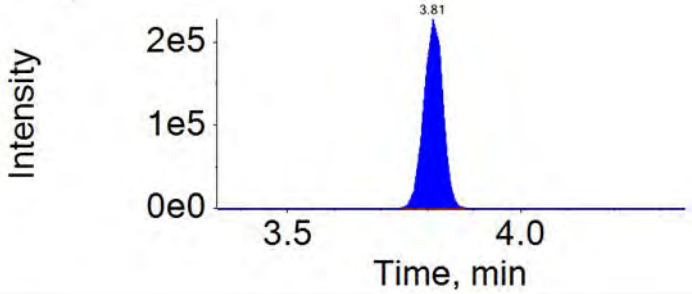
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-13.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	648524.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	251751.9	A	0.3576	0.3882	9	50	
4:2-FTS	4.13	1.00	153295.4	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	92676.3	A	0.6359	0.6046	-5	50	
PFHxA	4.16	1.00	1455862.5	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	17238.3	A	0.0115	0.0118	3	50	
PFPeS	4.18	1.10	349358.3	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	186638.0	A	0.5384	0.5342	-1	50	
PFHxS	4.55	1.00	513536.6	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	191630.2	A	0.3569	0.3732	5	50	
PFHpA	4.55	1.00	1481489.5	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	81361.9	A	0.0577	0.0549	-5	50	
6:2-FTS	4.91	1.00	125170.2	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	79402.5	A	0.6752	0.6344	-6	50	
PFHpS	4.91	1.08	516333.1	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	209566.6	A	0.3950	0.4059	3	50	
PFOA	4.92	1.00	1491946.3	A	1.0000	1.0000			
PFOA_2	4.92	1.00	87116.1	A	0.0635	0.0584	-8	50	
PFOS	5.25	1.00	447769.0	A	1.0000	1.0000			
PFOS_2	5.25	1.00	153925.0	A	0.3494	0.3438	-2	50	
PFNA	5.27	1.00	1179151.8	A	1.0000	1.0000			
PFNA_2	5.26	1.00	25252.4	A	0.0207	0.0214	4	50	
PFNS	5.54	1.06	305013.7	A	1.0000	1.0000			
PFNS_2	5.54	1.06	144136.3	A	0.4890	0.4726	-3	50	
PFDA	5.56	1.00	1029893.8	A	1.0000	1.0000			
PFDA_2	5.56	1.00	7604.6	A	0.0057	0.0074	31	50	
8:2-FTS	5.57	1.00	106591.3	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	64856.7	A	0.6169	0.6085	-1	50	
NMeFOSAA	5.71	1.00	136316.9	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	30839.5	A	0.2206	0.2262	3	50	
PFDS	5.80	1.11	250911.0	A	1.0000	1.0000			
PFDS_2	5.80	1.11	110579.9	A	0.4648	0.4407	-5	50	
PFUnDA	5.83	1.00	802732.3	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	3336.4	A	0.0031	0.0042	32	50	
NEtFOSAA	5.84	1.00	121615.1	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	75878.8	A	0.6082	0.6239	3	50	
PFDoDA	6.05	1.00	877242.2	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	11649.3	A	0.0109	0.0133	21	50	
10:2-FTS	6.07	1.09	69275.8	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	48328.6	A	0.7082	0.6976	-2	50	
PFTrDA	6.25	1.03	781283.7	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	8100.4	A	0.0096	0.0104	8	50	
PFTeDA	6.43	1.00	630801.4	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	3863.1	A	0.0055	0.0061	11	50	
PFHxDA	6.73	1.05	297242.6	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	17318.1	A	0.0596	0.0583	-2	50	
PFODA	7.00	1.09	251726.5	A	1.0000	1.0000			
PFODA_2	6.99	1.09	6453.4	A	0.0257	0.0256	0	50	

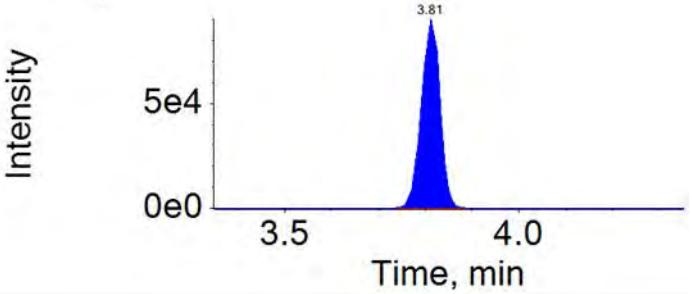
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

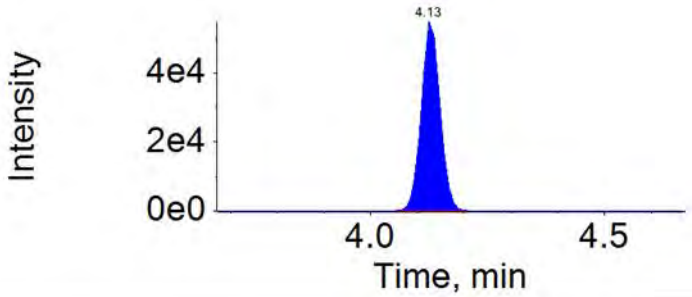
Component: PFBS
Primary Mass: 299.0 / 80.0



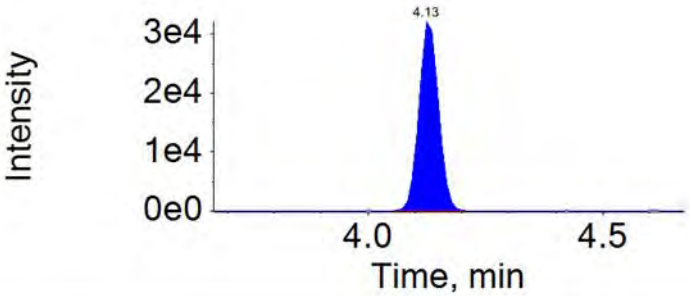
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



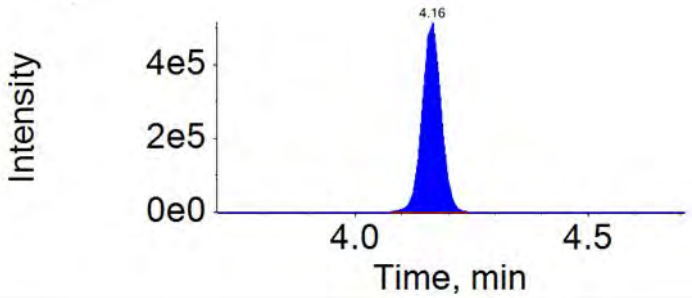
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



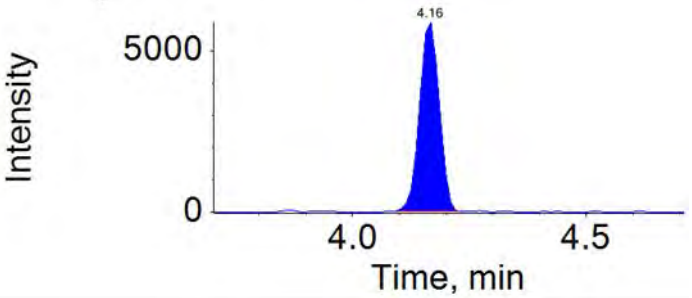
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



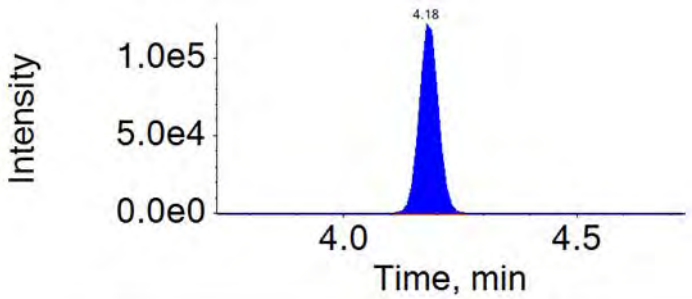
Component: PFHxA
Primary Mass: 313.0 / 269.0



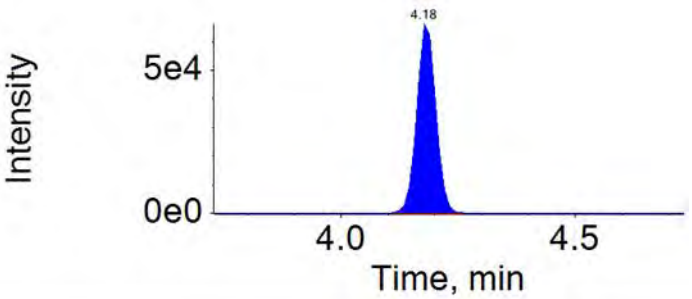
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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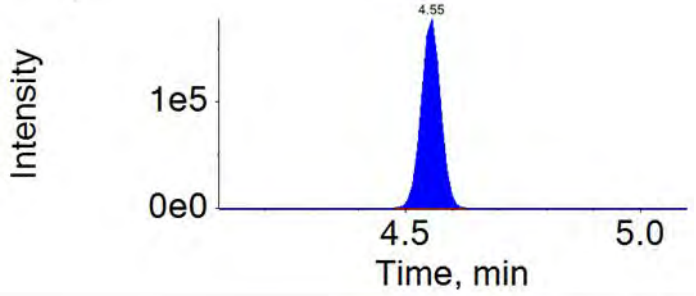
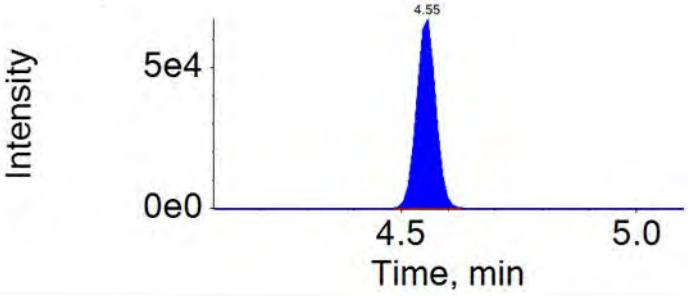
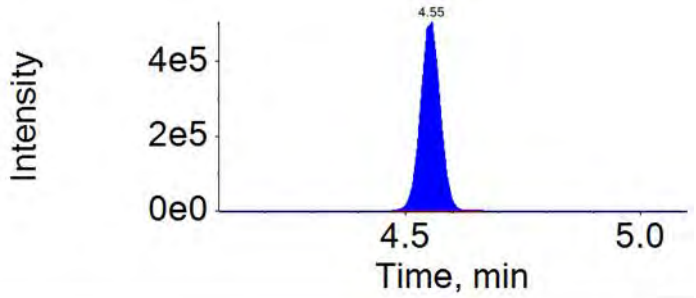
Component: PFHxS
Primary Mass: 399.0 / 80.0



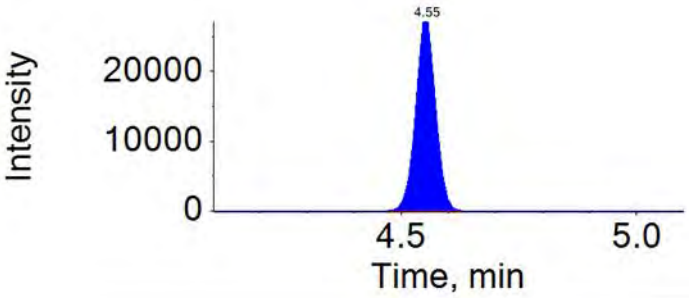
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



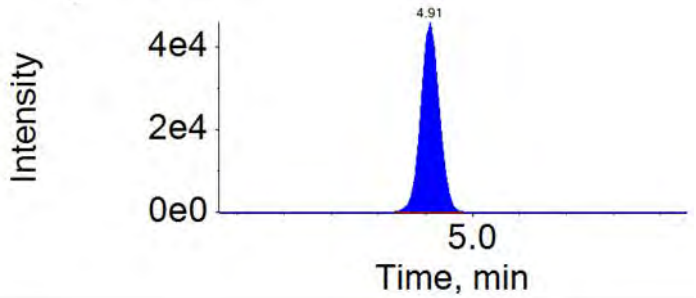
Component: PFHpA
Primary Mass: 363.0 / 319.0



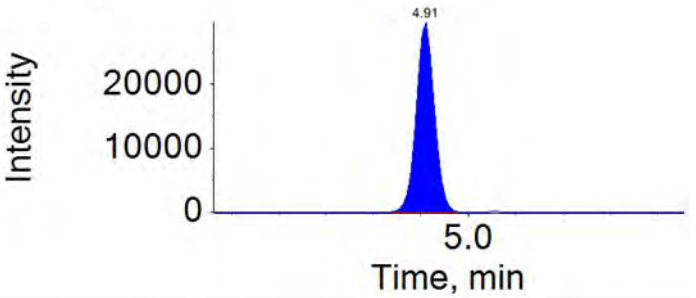
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



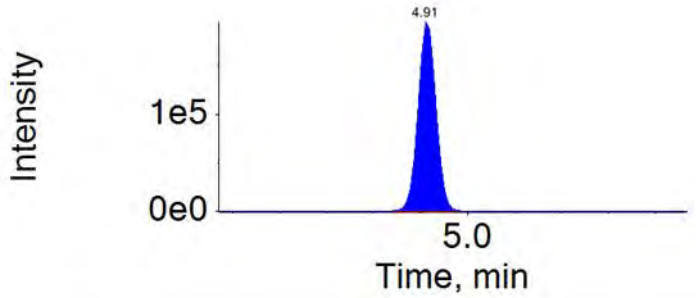
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



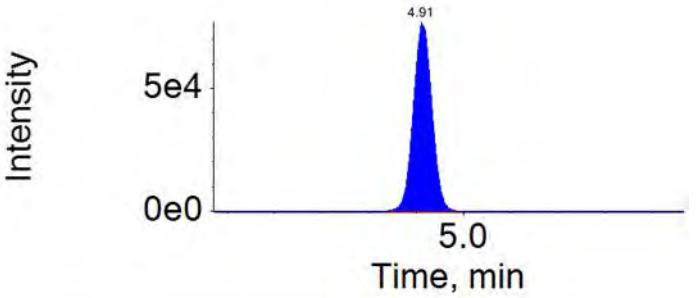
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



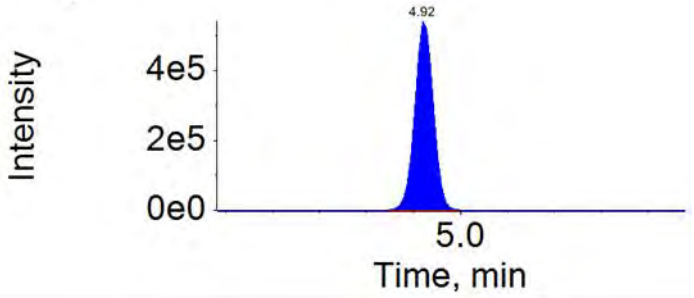
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



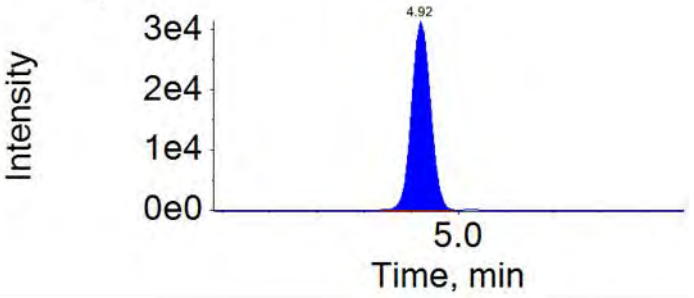
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

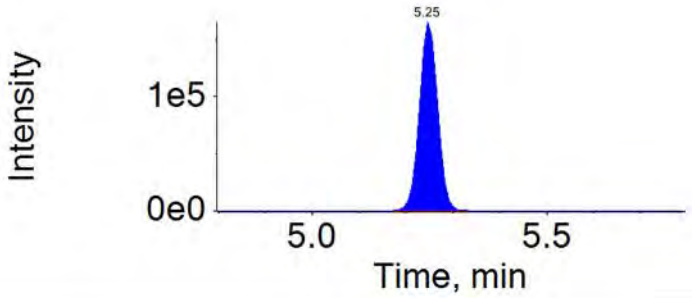
Component: PFOA
Primary Mass: 413.0 / 369.0



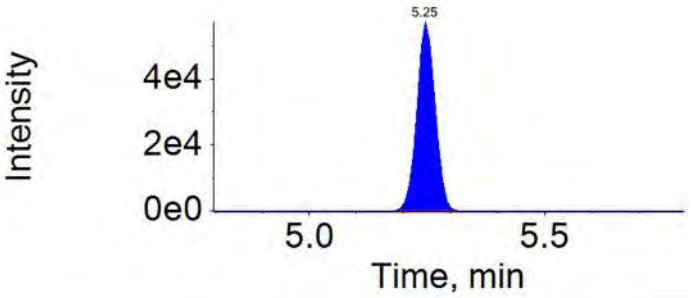
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



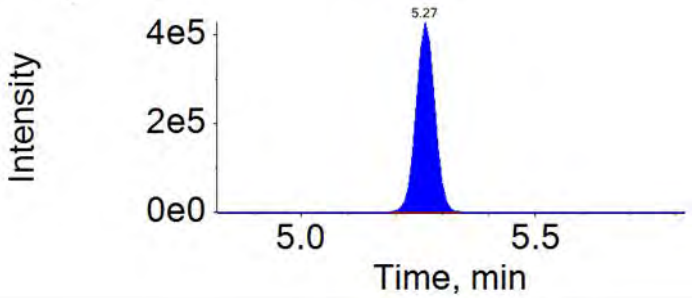
Component: PFOS
Primary Mass: 499.0 / 80.0



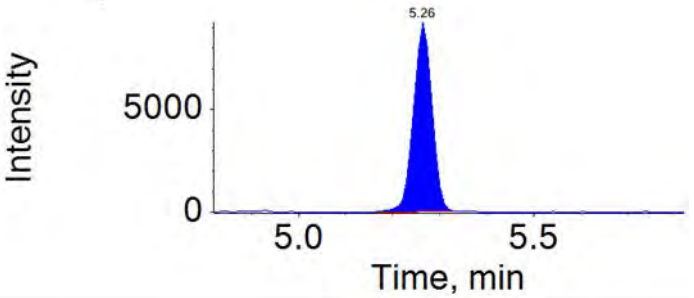
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



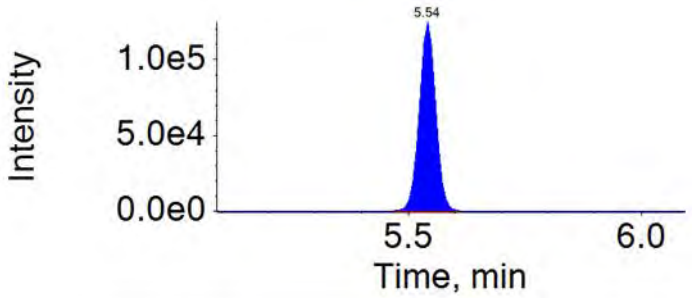
Component: PFNA
Primary Mass: 463.0 / 419.0



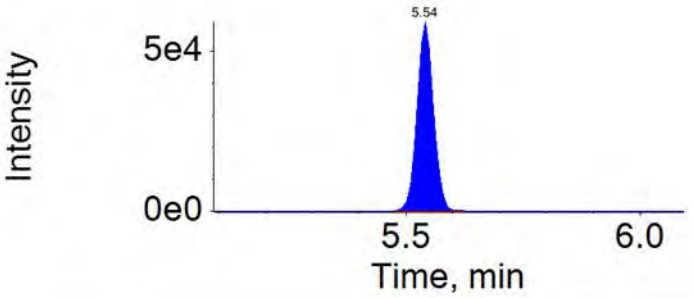
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



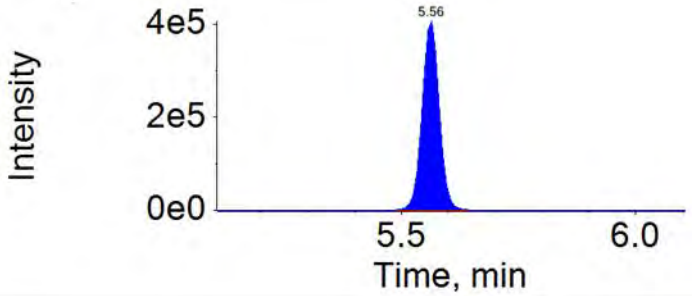
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



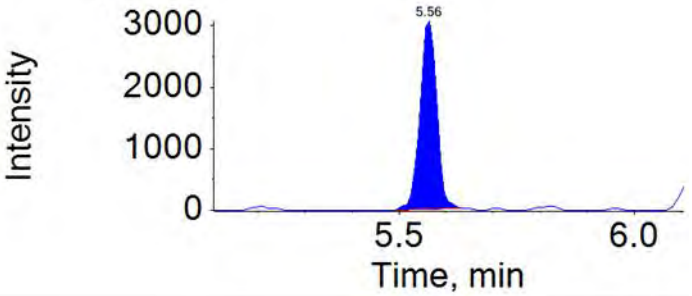
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

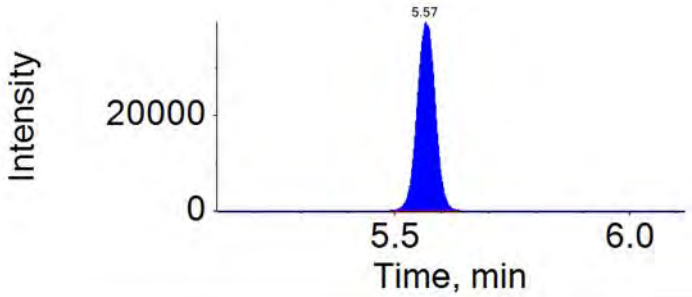
Component: PFDA
Primary Mass: 513.0 / 469.0



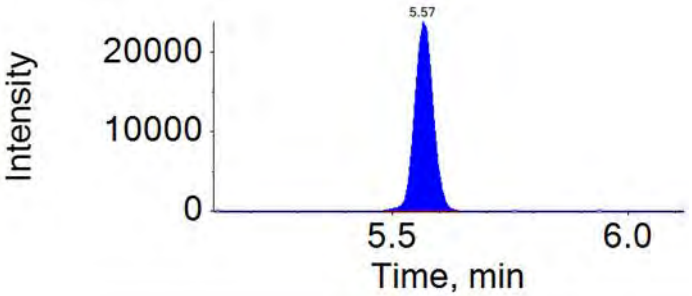
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



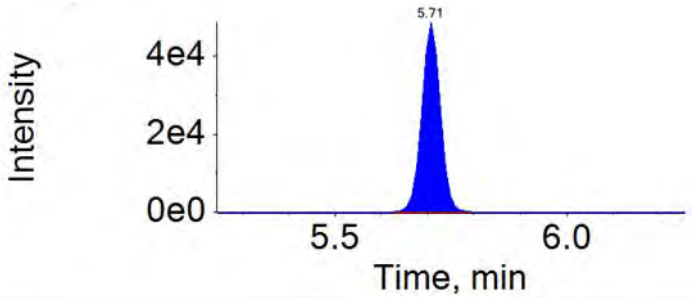
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



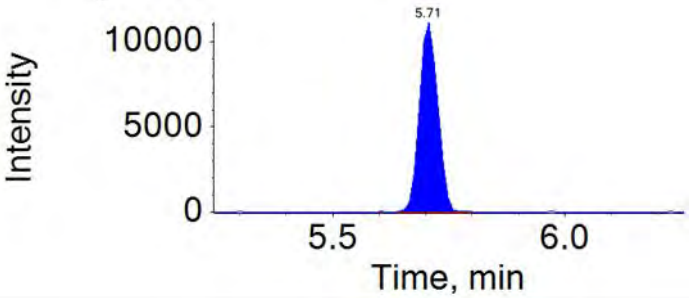
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



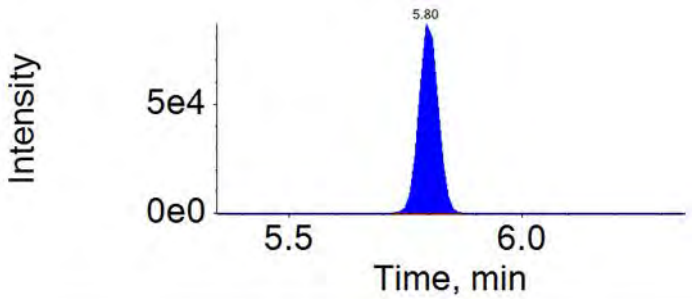
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



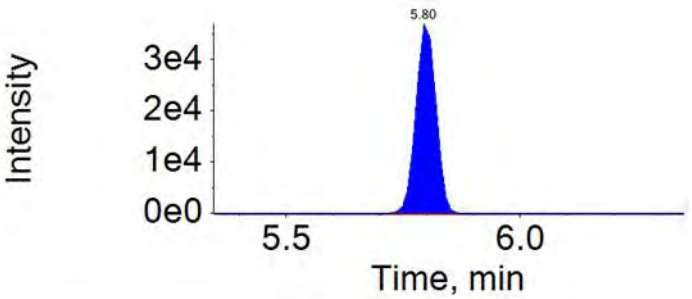
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



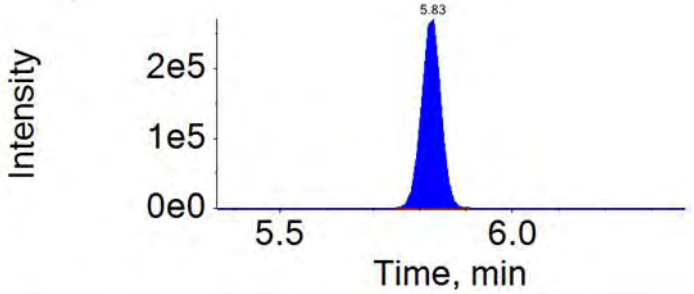
Component: PFDS
Primary Mass: 599.0 / 80.0



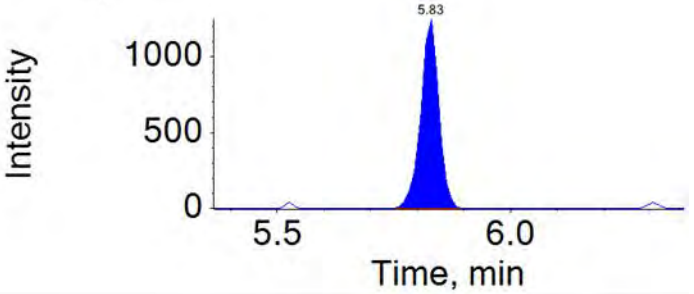
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



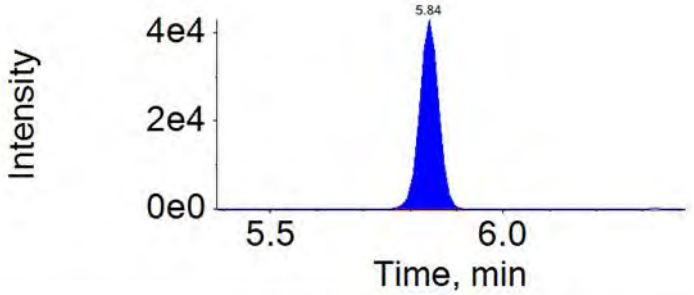
Component: PFUnDA
Primary Mass: 563.0 / 519.0



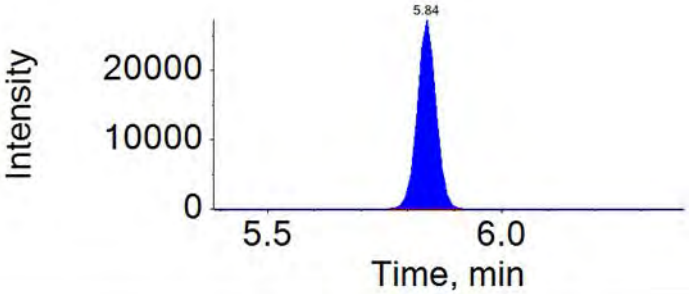
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



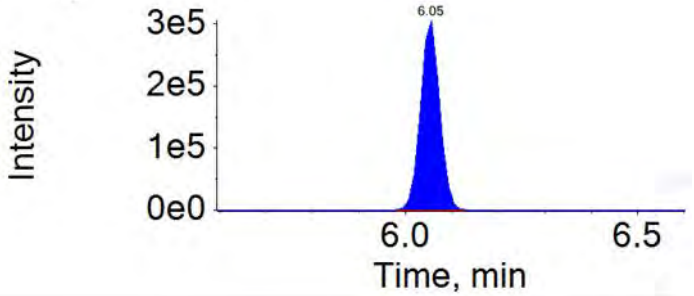
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



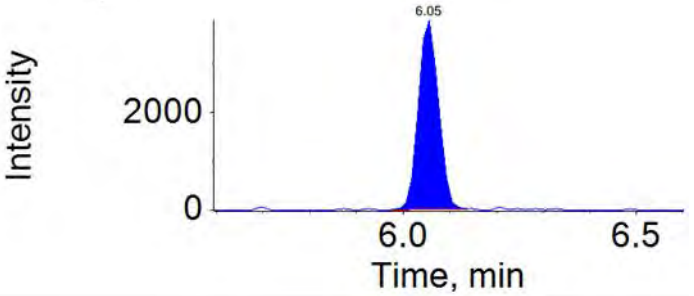
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



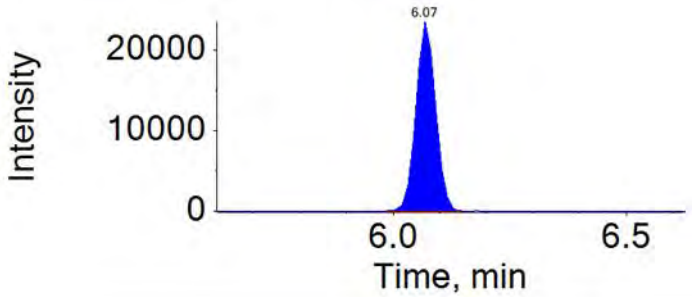
Component: PFDoDA
Primary Mass: 613.0 / 569.0



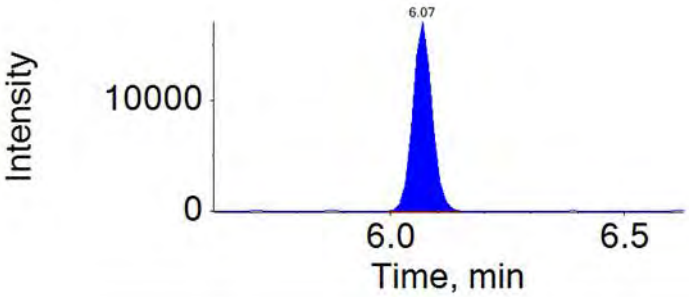
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



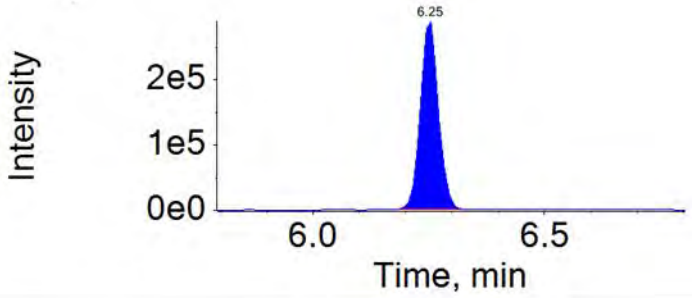
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



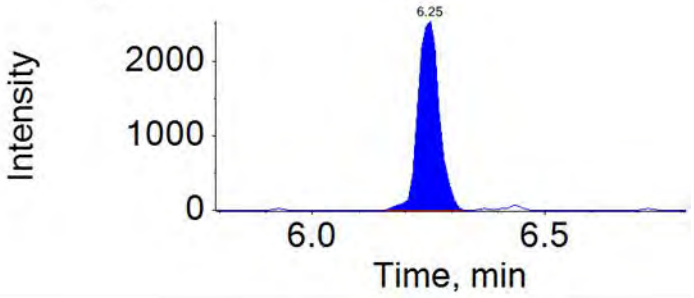
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

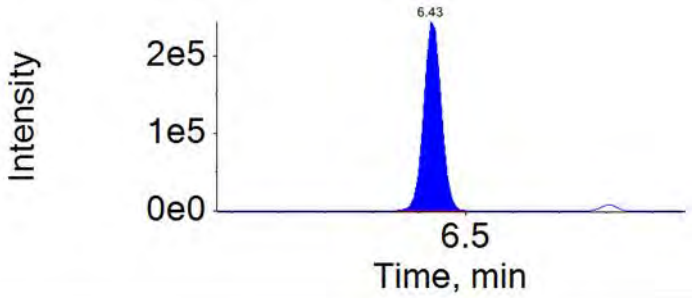
Component: PFTrDA
Primary Mass: 663.0 / 619.0



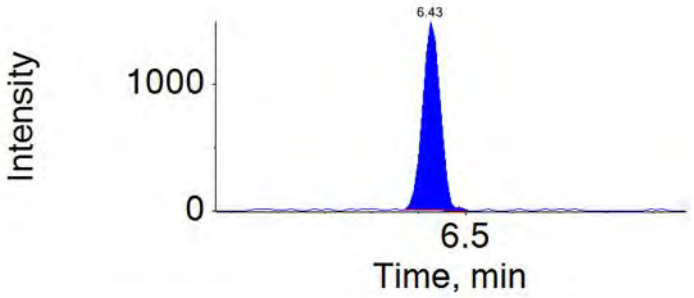
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



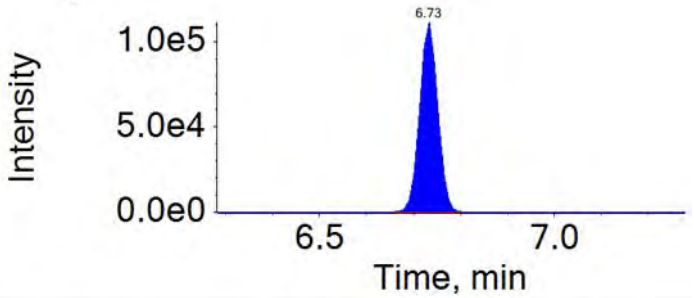
Component: PFTeDA
Primary Mass: 713.0 / 669.0



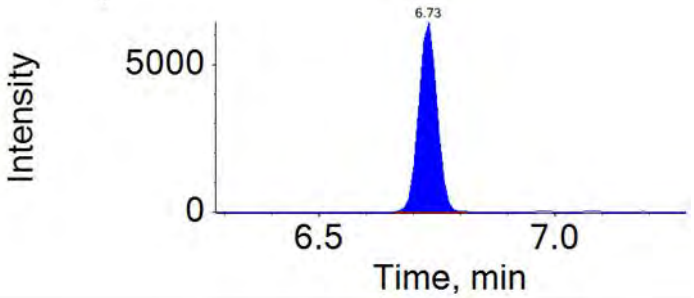
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



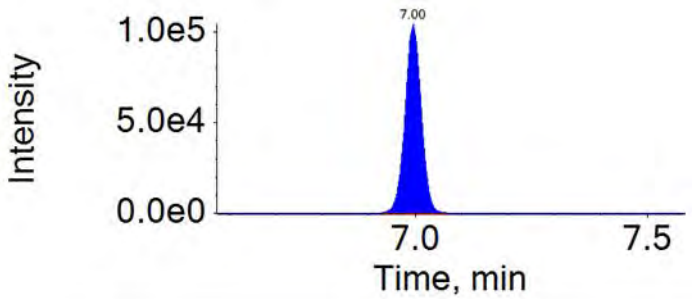
Component: PFHxDA
Primary Mass: 813.0 / 769.0



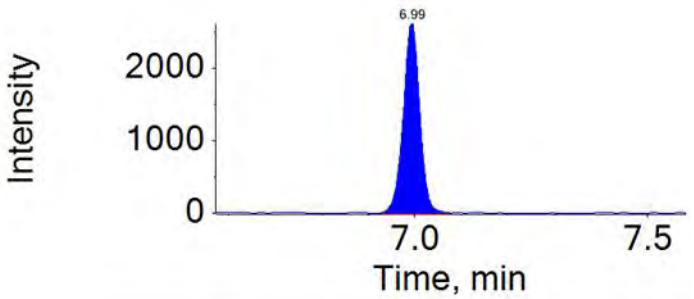
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV07DCAL-14.wiff
Sample ID:	CALMOD51833F			**Acquis Date:**		2018-11-07T10:15:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664213.6	730410.6	-9	50	
13C2-PFOA	5.0	488019.6	524423.6	-7	50	
13C4-PFOS	4.8	275029.2	274061.7	0	50	
13C2-PFDA	5.0	298912.1	311442.1	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	728925.1	13C3-PFBA	664213.6	1.097	5.000	5.079	102	70-130	
E13C5-PFPeA	768958.1	13C3-PFBA	664213.6	1.158	5.000	5.043	101	70-130	
E13C3-PFBS	442479.7	13C3-PFBA	664213.6	0.666	4.650	4.889	105	70-130	
E13C2-4:2-FTS	48869.9	13C2-PFOA	488019.6	0.100	4.670	4.519	97	70-130	
E13C5-PFHxA	674375.4	13C2-PFOA	488019.6	1.382	5.000	5.083	102	70-130	
E13C3-PFHxS	332808.5	13C2-PFOA	488019.6	0.682	4.730	4.896	104	70-130	
E13C4-PFHpA	544681.1	13C2-PFOA	488019.6	1.116	5.000	5.077	102	70-130	
E13C2-6:2-FTS	32735.6	13C2-PFOA	488019.6	0.067	4.750	4.473	94	70-130	
E13C8-PFOA	895692.2	13C2-PFOA	488019.6	1.835	5.000	5.118	102	70-130	
E13C8-PFOS	297995.6	13C4-PFOS	275029.2	1.084	4.780	4.791	100	70-130	
E13C9-PFNA	484419.3	13C4-PFOS	275029.2	1.761	5.000	4.811	96	70-130	
E13C6-PFDA	598009.7	13C2-PFDA	298912.1	2.001	5.000	5.031	101	70-130	
E13C2-8:2-FTS	27554.0	13C2-PFDA	298912.1	0.092	4.790	4.878	102	70-130	
E13C8-PFOSA	737038.5	13C2-PFDA	298912.1	2.466	5.000	5.381	108	70-130	
Ed3-NMeFOSAA	73896.1	13C2-PFDA	298912.1	0.247	5.000	4.597	92	70-130	
E13C7-PFUnDA	263924.7	13C2-PFDA	298912.1	0.883	5.000	5.094	102	70-130	
Ed5-NEtFOSAA	57745.7	13C2-PFDA	298912.1	0.193	5.000	4.471	89	70-130	
E13C2-PFDoDA	548536.0	13C2-PFDA	298912.1	1.835	5.000	4.947	99	70-130	
Ed7-NMePFOSAE	321549.5	13C2-PFDA	298912.1	1.076	5.000	5.002	100	70-130	
Ed3-NMePFOSA	82137.6	13C2-PFDA	298912.1	0.275	5.000	5.031	101	70-130	
Ed9-NEtPFOSAE	259950.9	13C2-PFDA	298912.1	0.870	5.000	4.966	99	70-130	
Ed5-NEtPFOSA	62005.6	13C2-PFDA	298912.1	0.207	5.000	4.803	96	70-130	
E13C2-PFTeDA	421798.8	13C2-PFDA	298912.1	1.411	5.000	5.080	102	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

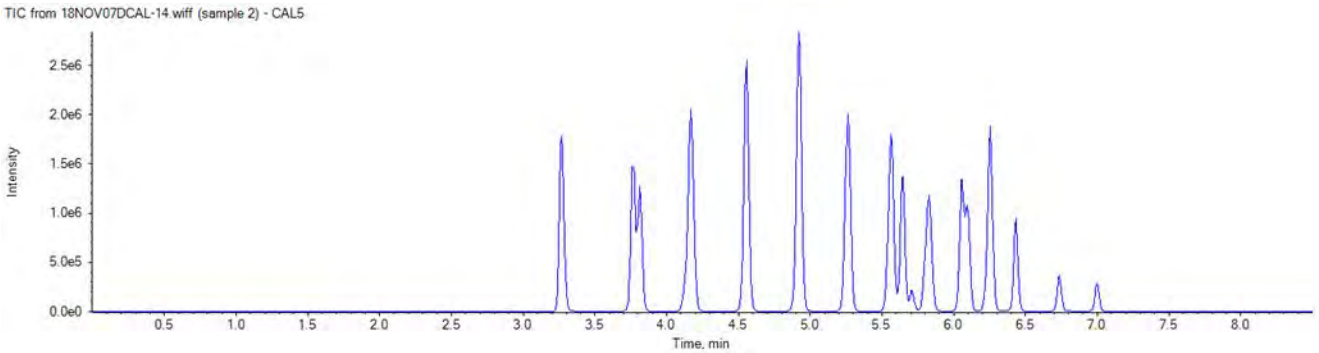
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	2730076.0		A	13C4-PFBA	3.27	728925.1	3.745	21.919
PFPeA	3.77	1.000	2812772.2		A	13C5-PFPeA	3.77	768958.1	3.658	21.739
PFBS	3.82	1.000	1601296.4		A	13C3-PFBS	3.82	442479.7	3.619	18.246
4:2-FTS	4.13	1.000	365423.8		A	13C2-4:2-FTS	4.13	48869.9	7.477	20.102
PFHxA	4.16	1.000	3380716.3		A	13C5-PFHxA	4.17	674375.4	5.013	21.499
PFPeS	4.18	1.100	845636.3		A	13C3-PFBS	3.82	442479.7	1.911	18.849
PFHxS	4.55	1.000	1261633.0		A	13C3-PFHxS	4.55	332808.5	3.791	19.215
PFHpA	4.55	1.000	3440372.8		A	13C4-PFHpA	4.55	544681.1	6.316	21.243
6:2-FTS	4.91	1.000	278493.0		A	13C2-6:2-FTS	4.91	32735.6	8.507	21.223
PFHpS	4.92	1.080	1236603.7		A	13C3-PFHxS	4.55	332808.5	3.716	19.439
PFOA	4.92	1.000	3425279.8		A	13C8-PFOA	4.92	895692.2	3.824	21.532
PFOS	5.25	1.000	1108359.9		A	13C8-PFOS	5.25	297995.6	3.719	19.287
PFNA	5.27	1.000	2889454.7		A	13C9-PFNA	5.27	484419.3	5.965	22.292
PFNS	5.54	1.060	722178.3		A	13C8-PFOS	5.25	297995.6	2.423	19.215
PFDA	5.57	1.000	2401274.2		A	13C6-PFDA	5.57	598009.7	4.015	22.091
8:2-FTS	5.57	1.000	244867.6		A	13C2-8:2-FTS	5.57	27554.0	8.887	20.031
PFOSA	5.64	1.000	2448684.3		A	13C8-PFOSA	5.64	737038.5	3.322	17.959
NMeFOSAA	5.71	1.000	308507.7		A	d3-NMeFOSAA	5.71	73896.1	4.175	21.482
PFDS	5.80	1.110	605559.3		A	13C8-PFOS	5.25	297995.6	2.032	19.412
PFUnDA	5.83	1.000	1952356.4		A	13C7-PFUnDA	5.83	263924.7	7.397	21.214
NEtFOSAA	5.85	1.000	298834.2		A	d5-NEtFOSAA	5.84	57745.7	5.175	22.240
PFDoDA	6.06	1.000	2132260.7		A	13C2-PFDoDA	6.06	548536.0	3.887	21.067
10:2-FTS	6.07	1.090	177607.5		A	13C2-8:2-FTS	5.57	27554.0	6.446	20.071
NMePFOSAE	6.10	1.000	1583085.5		A	d7-NMePFOSAE	6.09	321549.5	4.923	22.062
NMePFOSA	6.10	1.000	323567.0		A	d3-NMePFOSA	6.10	82137.6	3.939	22.050
PFDoS	6.22	1.190	295383.8		A	13C8-PFOS	5.25	297995.6	0.991	19.132
NEtPFOSAE	6.25	1.000	1810587.6		A	d9-NEtPFOSAE	6.24	259950.9	6.965	22.328
NEtPFOSA	6.27	1.000	290096.1		A	d5-NEtPFOSA	6.26	62005.6	4.679	20.605
PFTrDA	6.25	1.030	1851055.0		A	13C2-PFDoDA	6.06	548536.0	3.375	21.280
PFTeDA	6.43	1.000	1500655.1		A	13C2-PFTeDA	6.43	421798.8	3.558	20.892
PFHxDA	6.73	1.050	716467.3		A	13C2-PFTeDA	6.43	421798.8	1.699	21.085
PFODA	7.00	1.090	624697.0		A	13C2-PFTeDA	6.43	421798.8	1.481	21.218

Total Ion Chromatogram

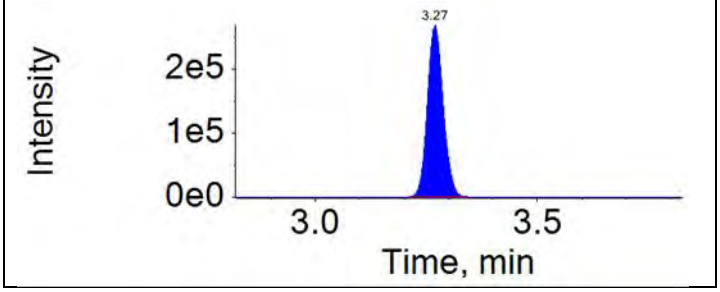


APPROVED
By JPT at 2:53 pm, 11/7/18

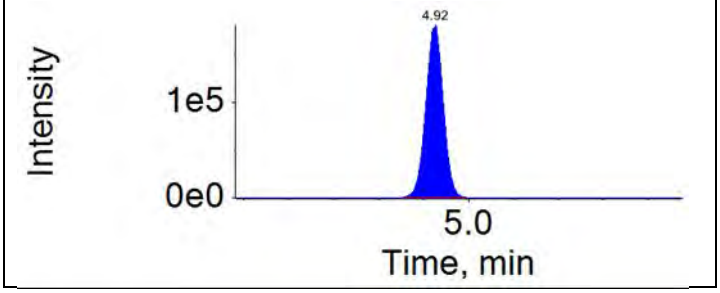
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

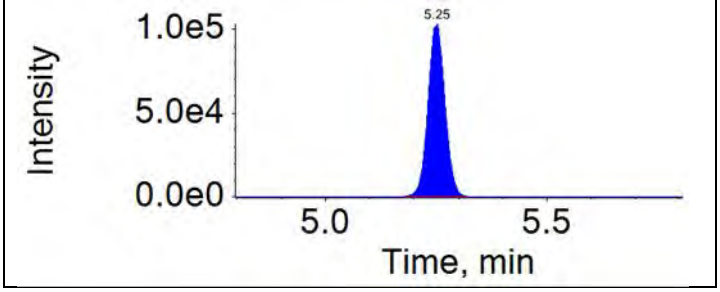
Injection Standard: 13C3-PFBA
216.0 / 172.0



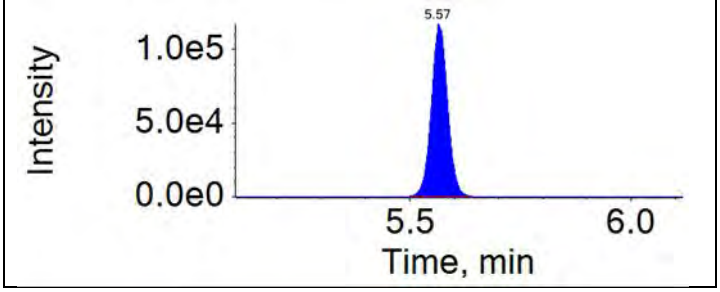
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



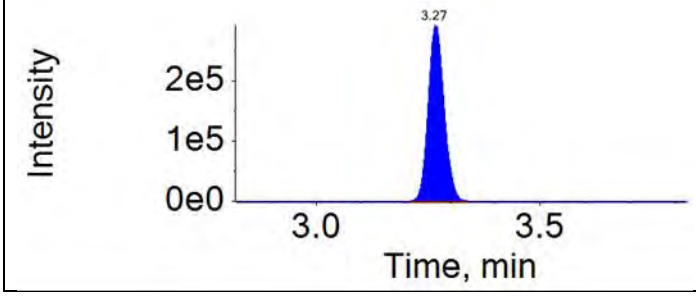
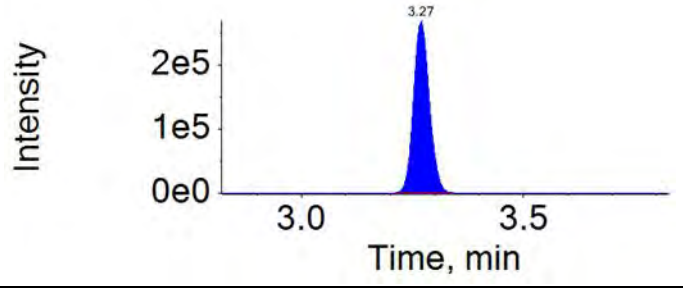
Injection Standard: 13C2-PFDA
515.0 / 470.0

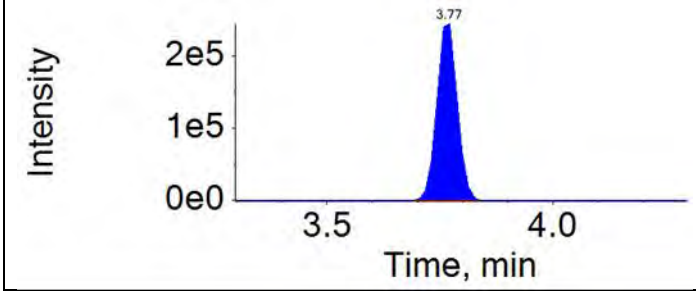
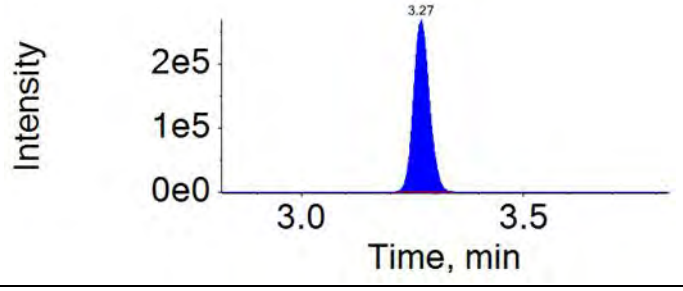


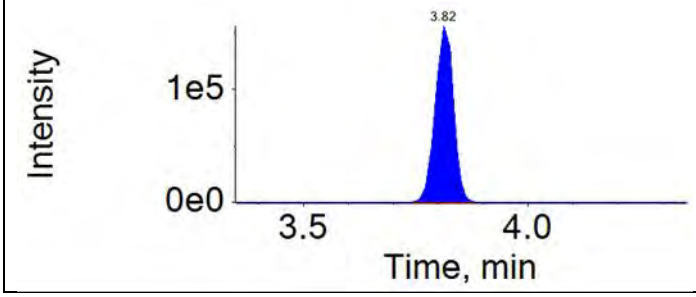
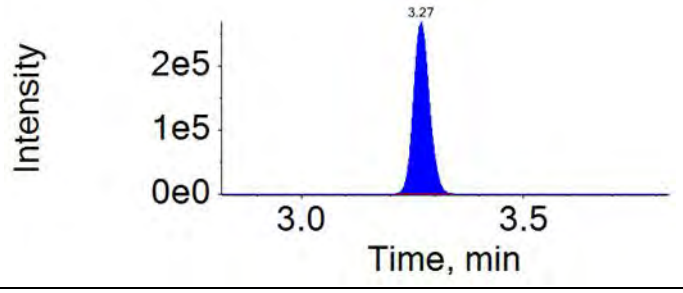
APPROVED
By JPT at 2:53 pm, 11/7/18

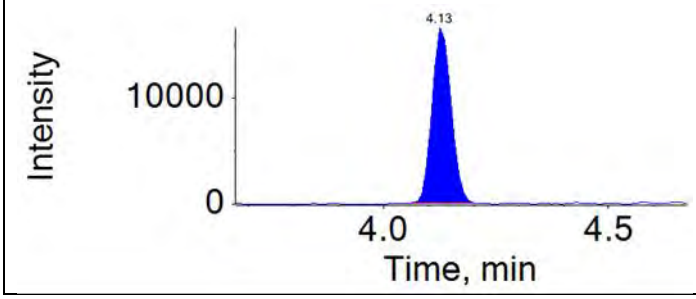
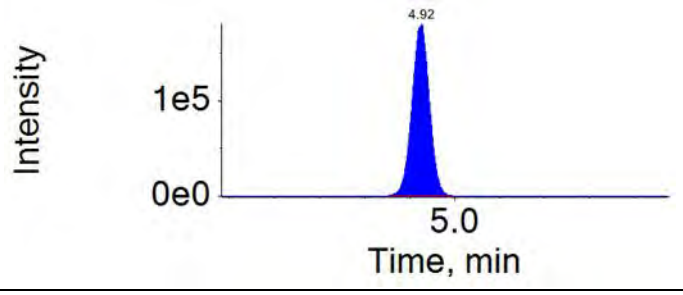
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

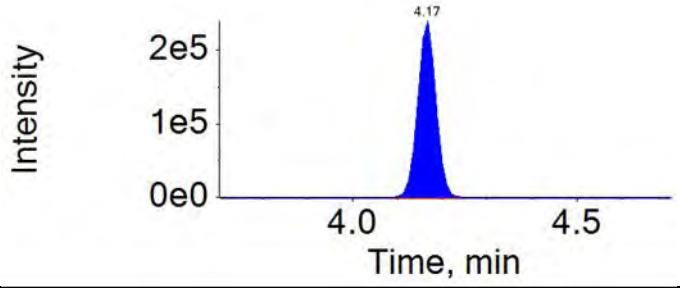
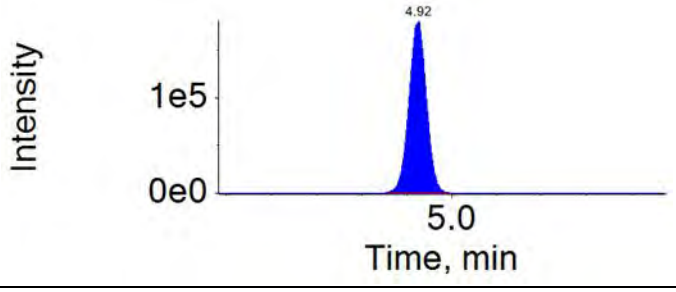
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

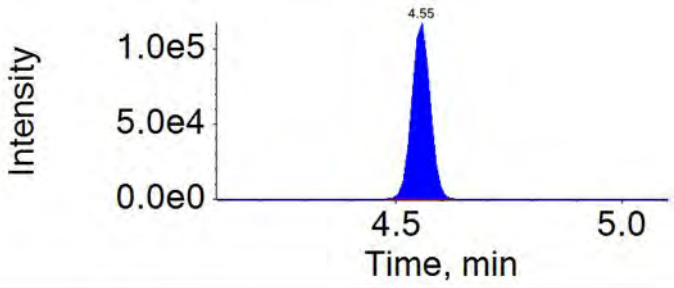
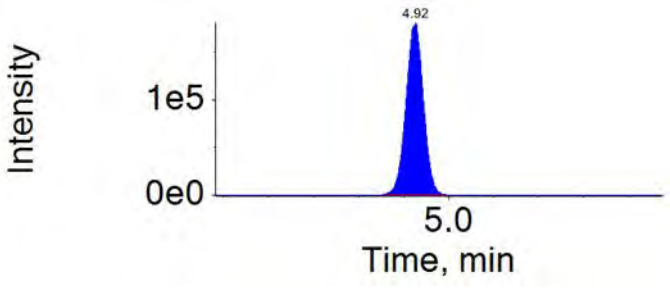
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

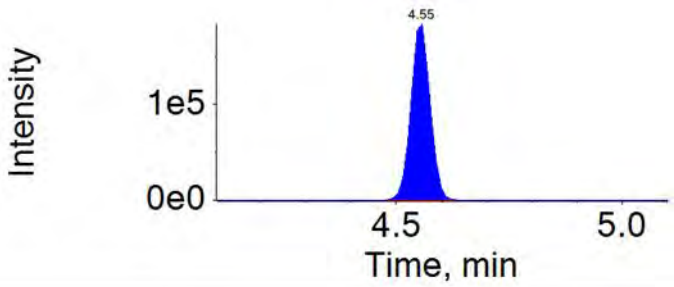
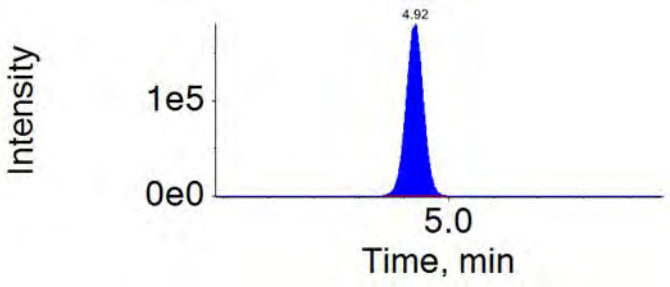
APPROVED
By JPT at 2:53 pm, 11/7/18

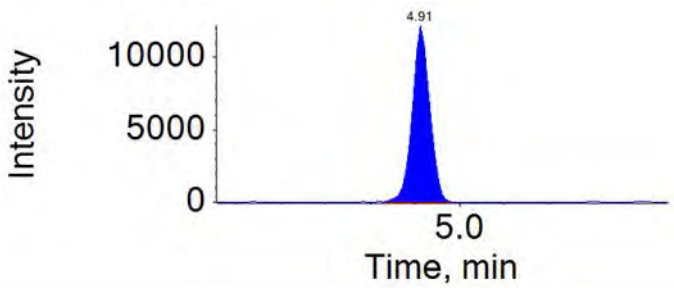
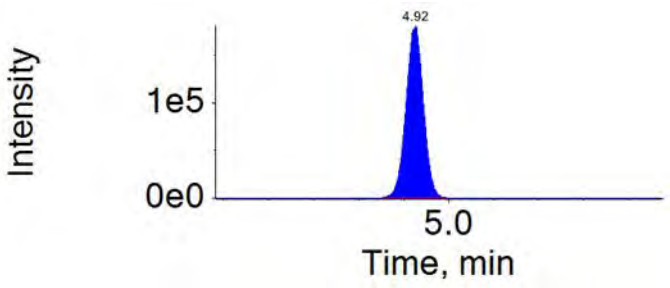
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

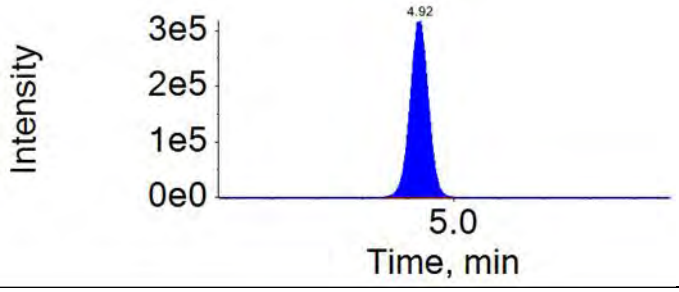
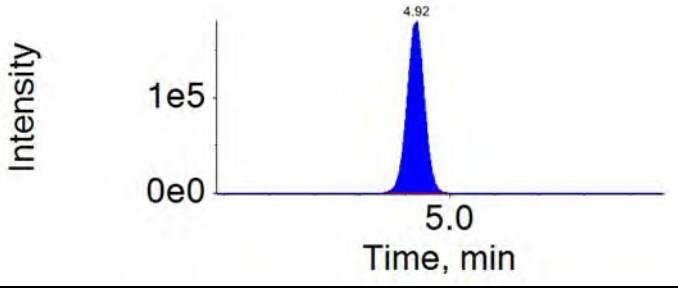
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

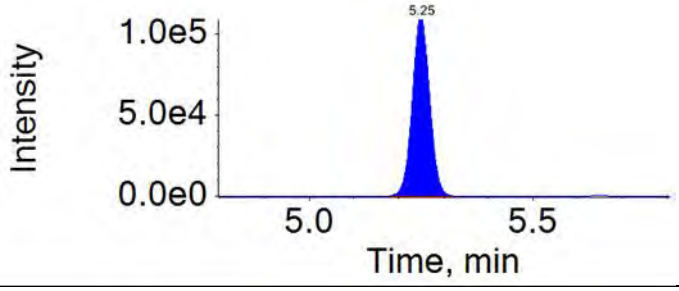
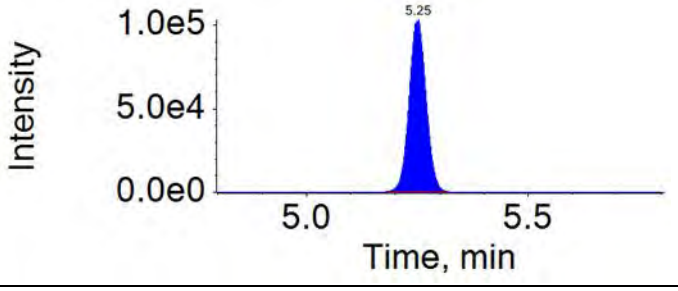
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

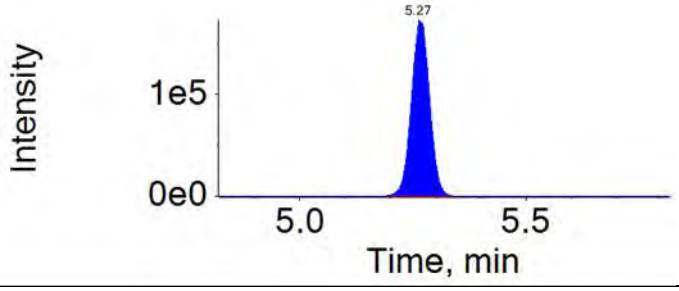
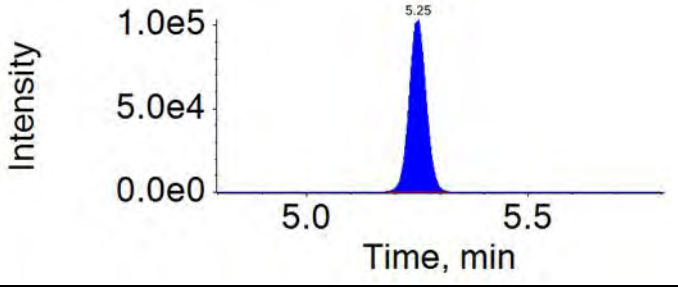
APPROVED
By JPT at 2:53 pm, 11/7/18

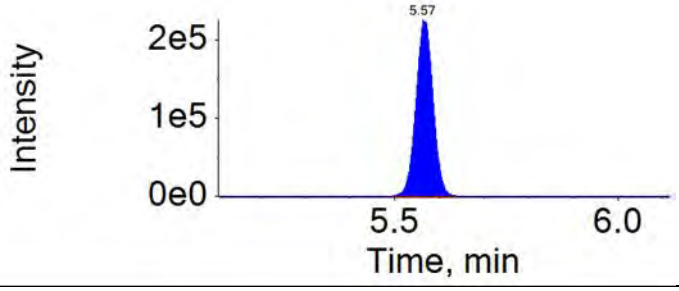
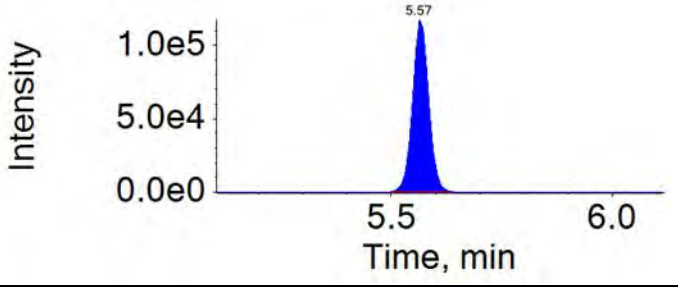
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

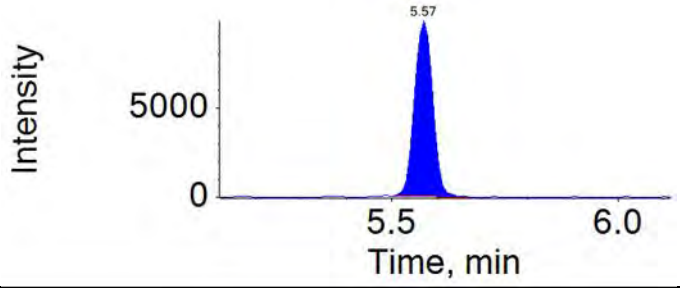
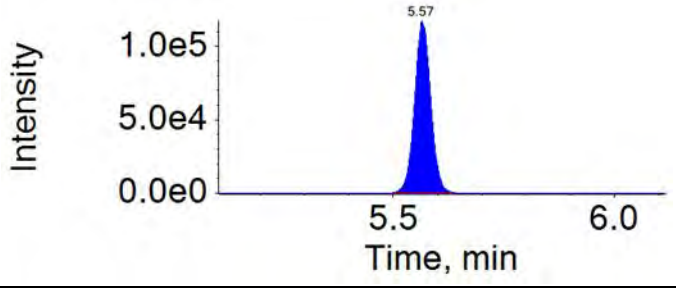
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

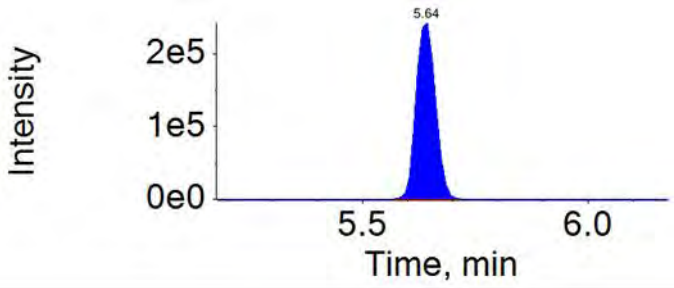
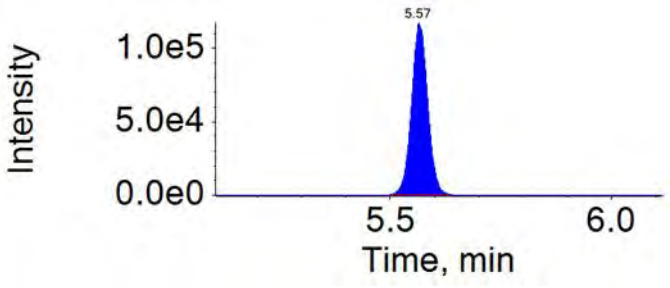
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

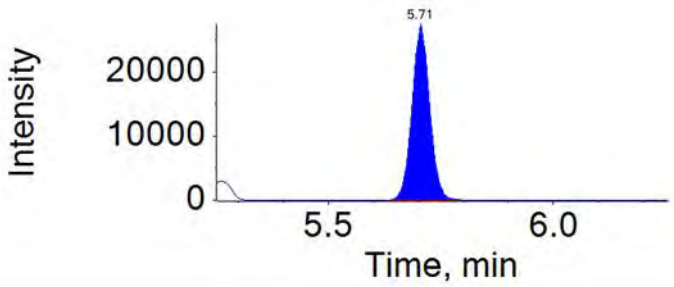
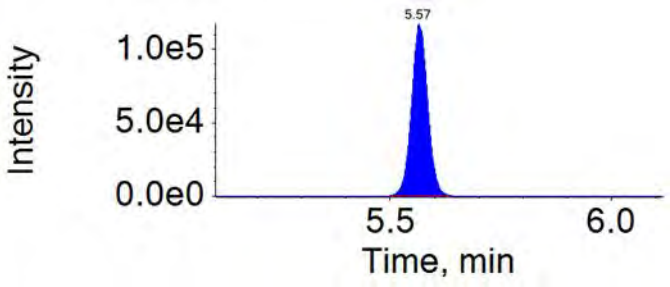
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

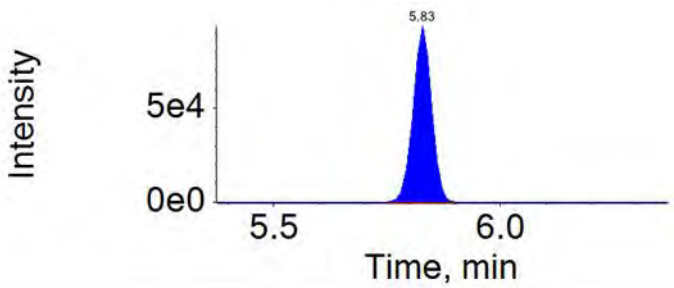
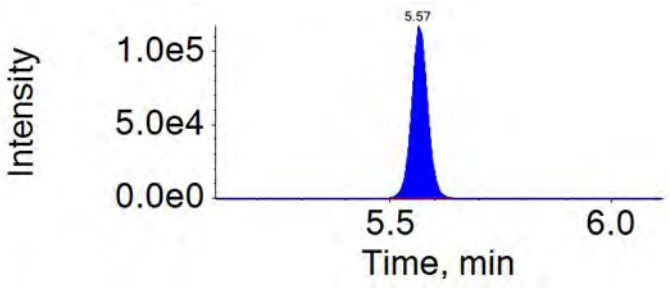
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

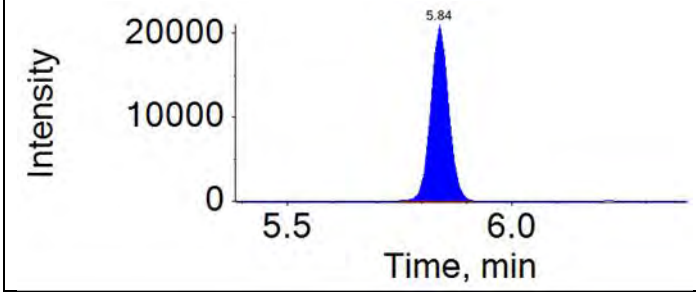
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

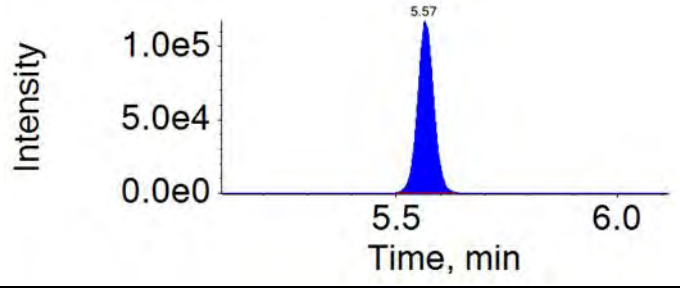
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

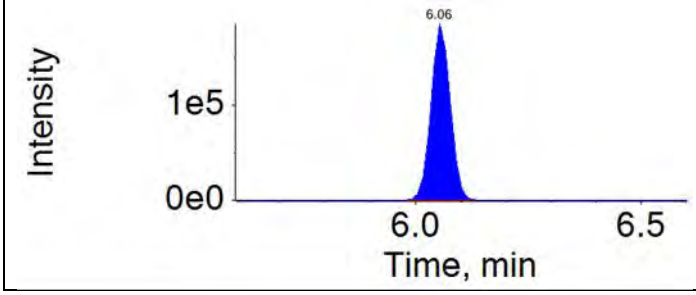
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

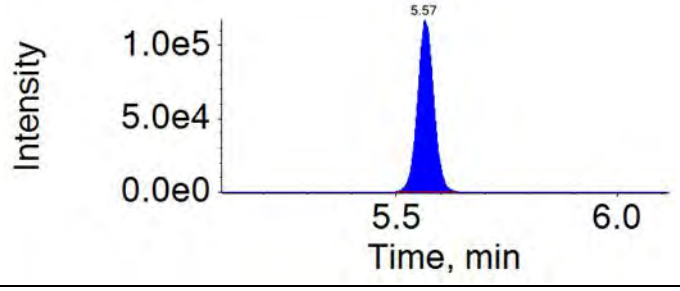
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



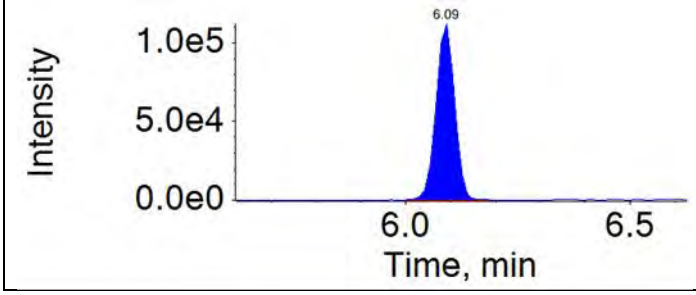


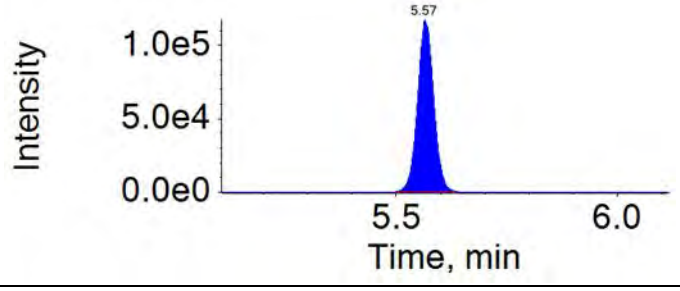
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



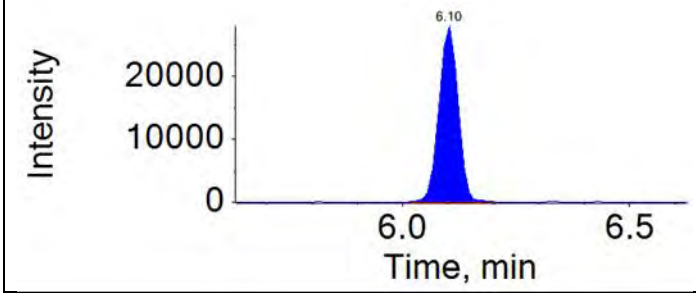


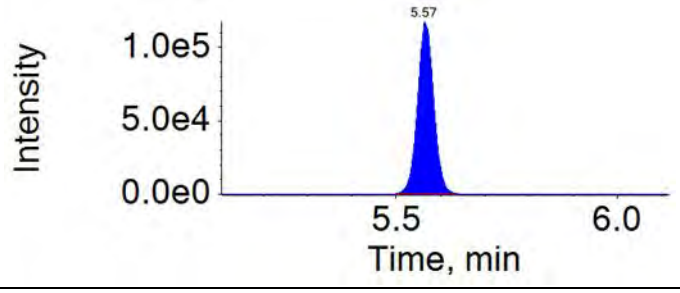
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



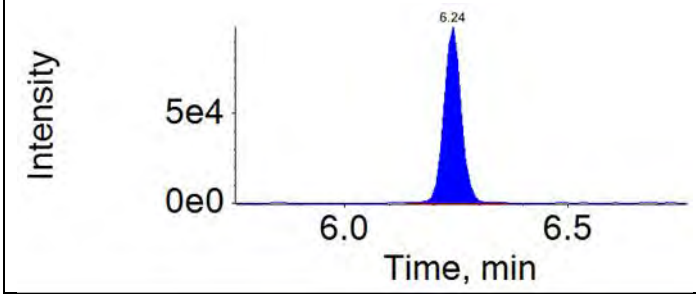


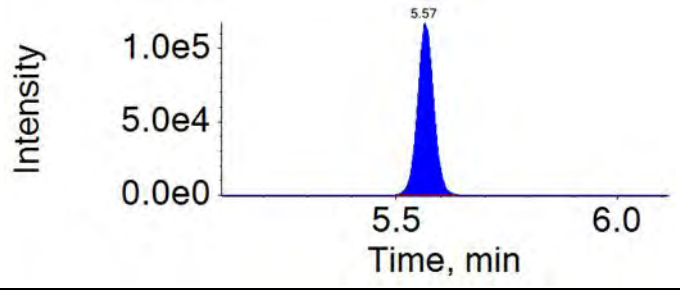
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

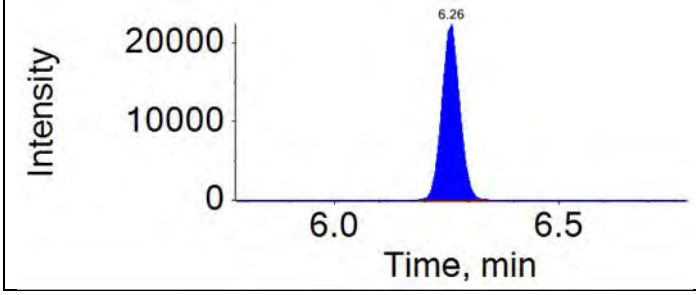
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

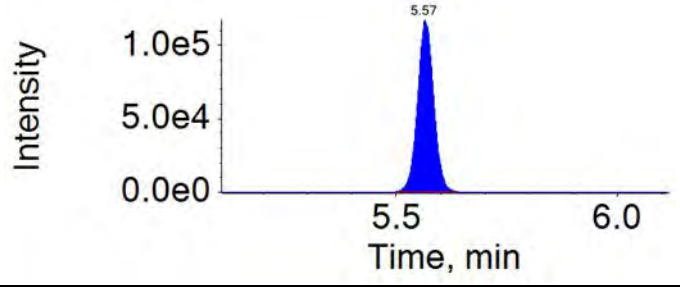
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



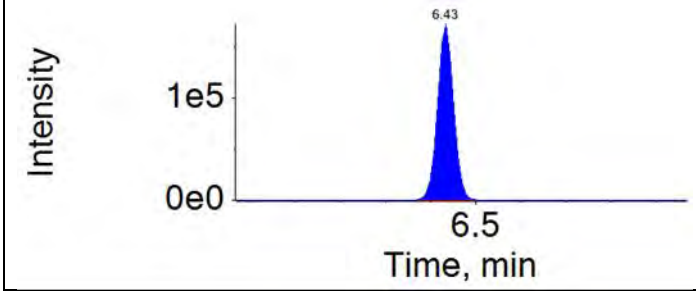


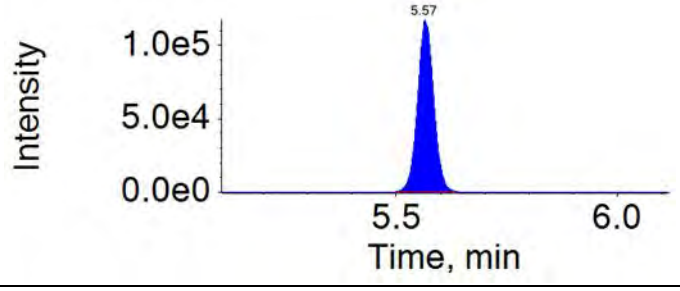
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



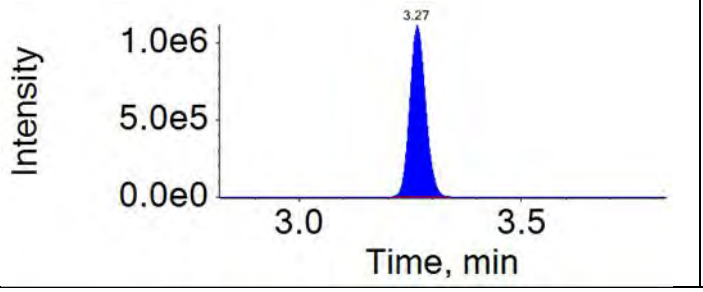


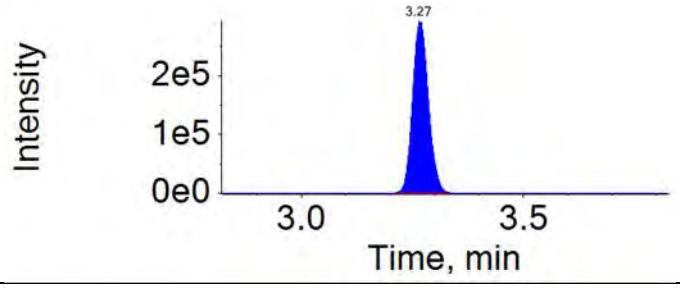
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

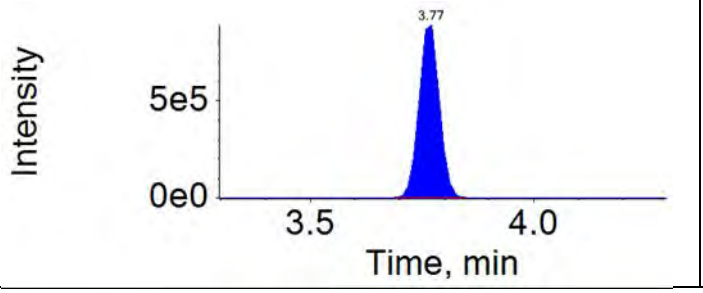
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

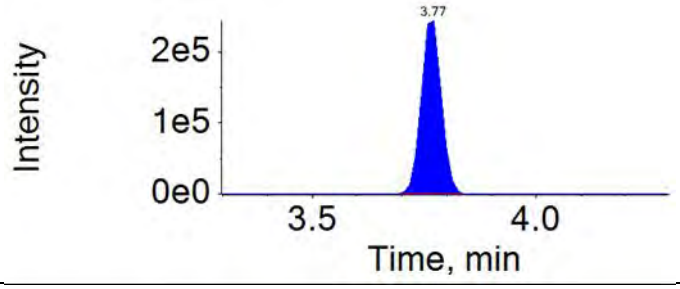
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



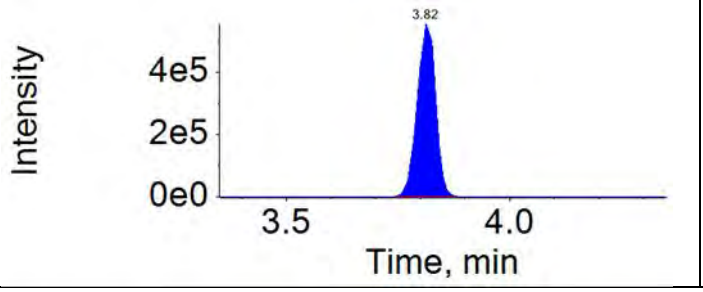


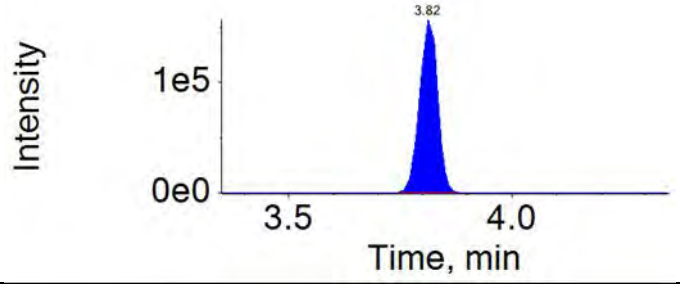
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



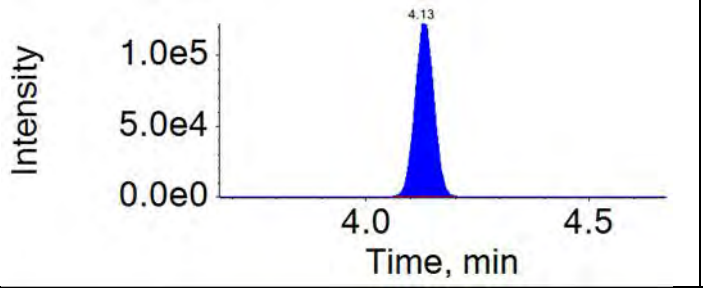


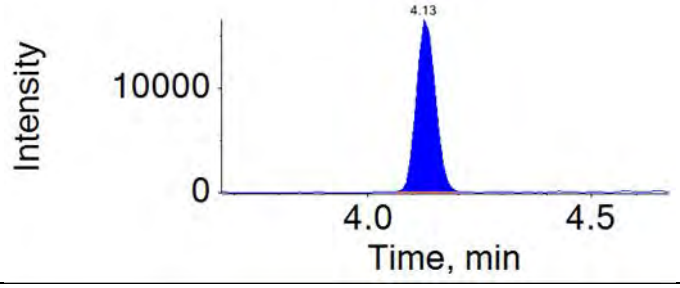
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

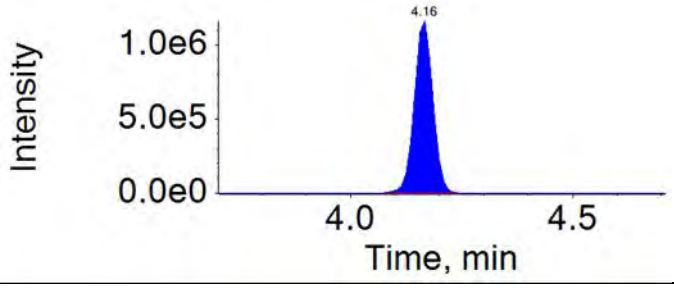
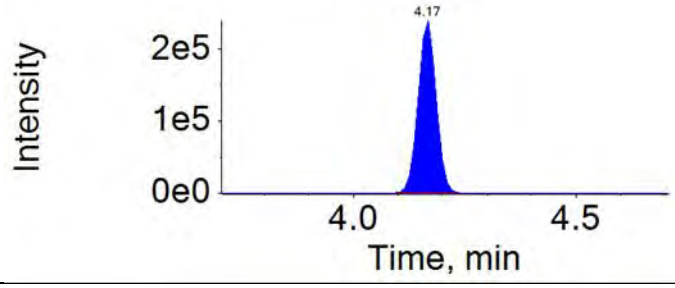


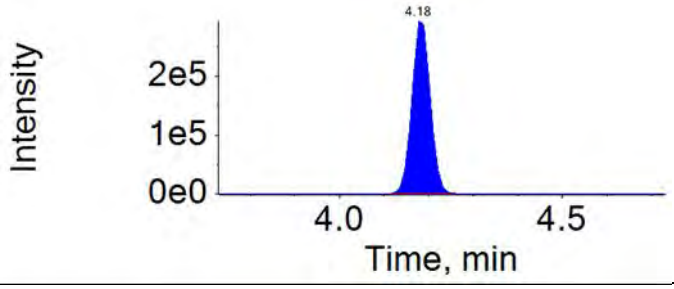
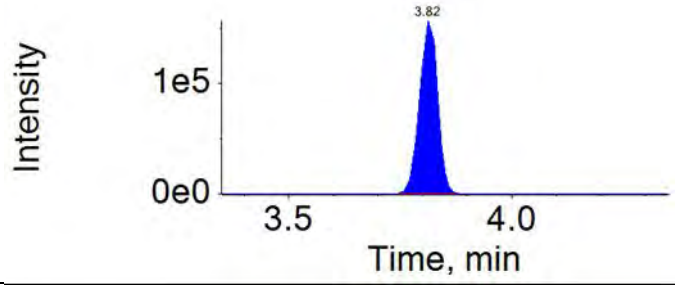


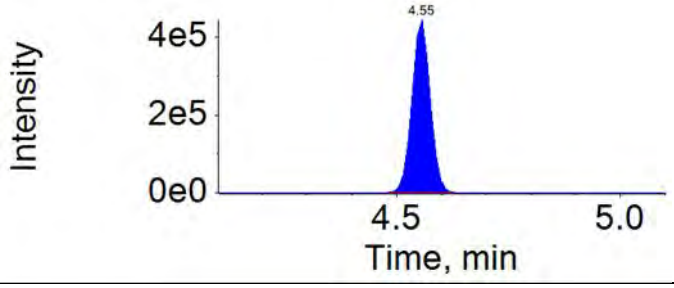
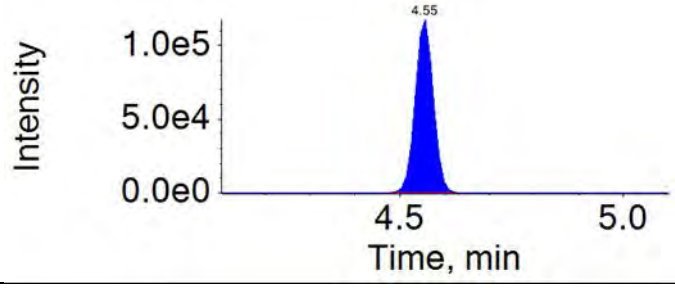
APPROVED
By JPT at 2:53 pm, 11/7/18

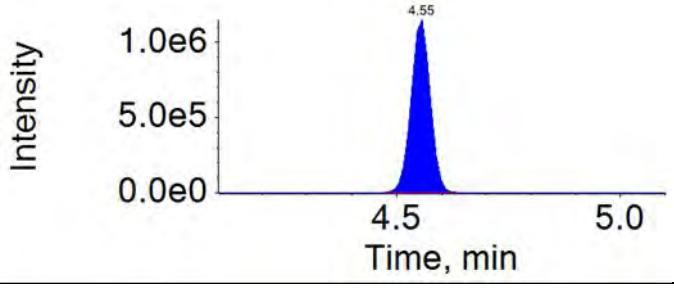
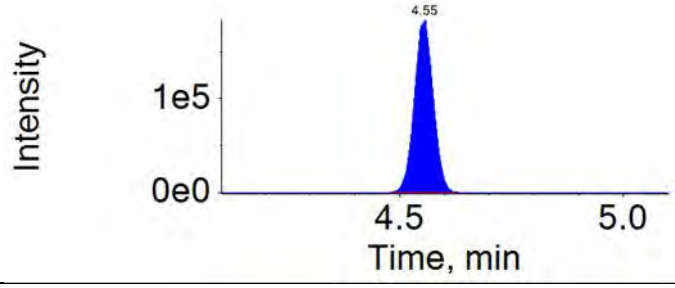
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

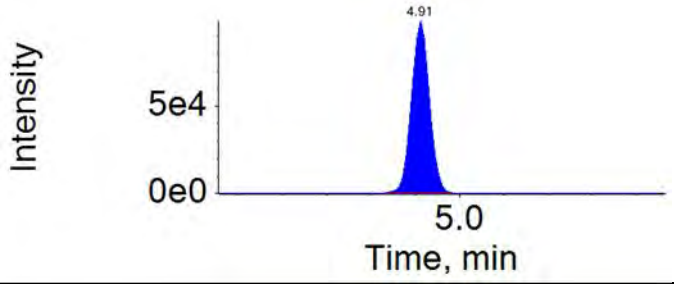
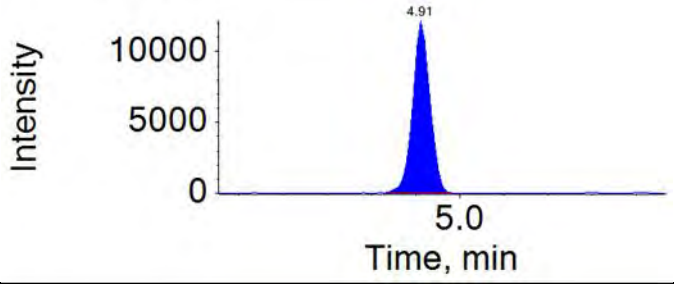
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

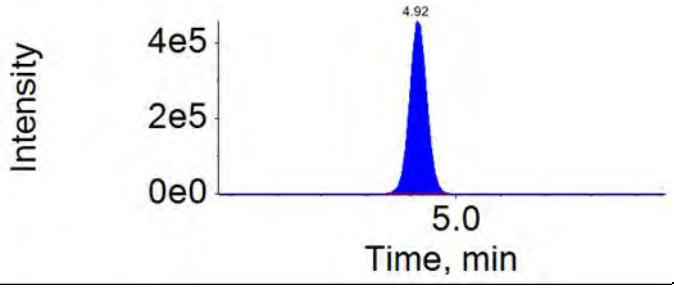
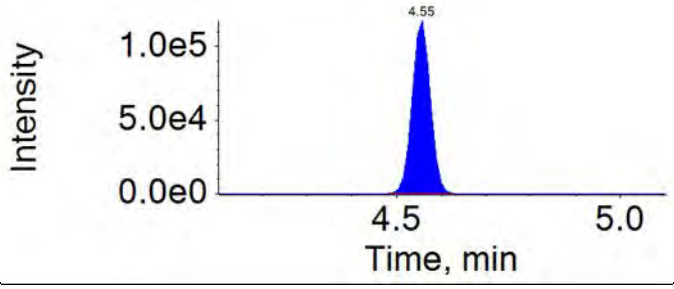
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

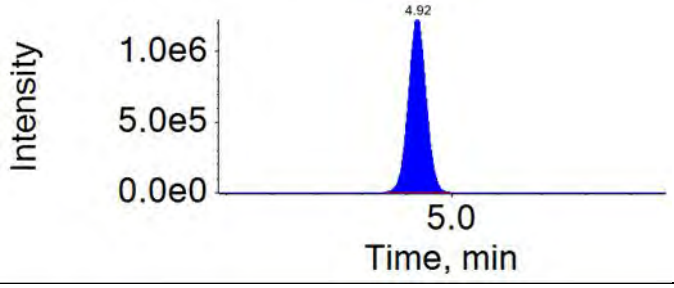
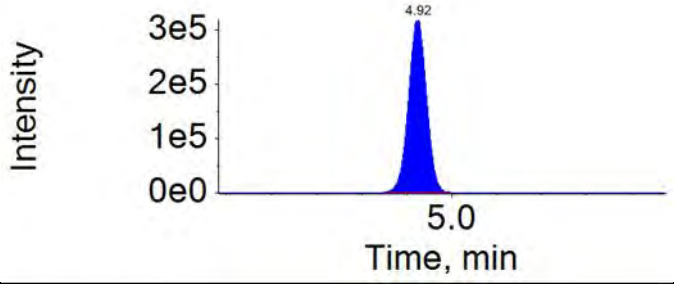
APPROVED
By JPT at 2:53 pm, 11/7/18

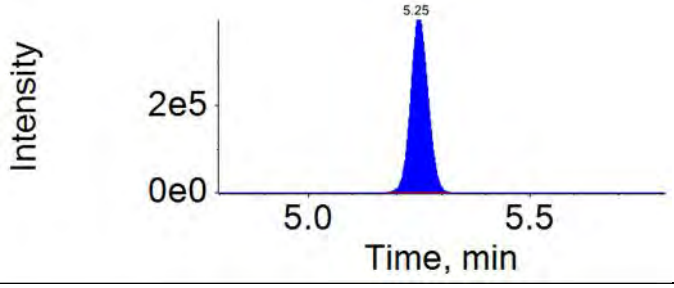
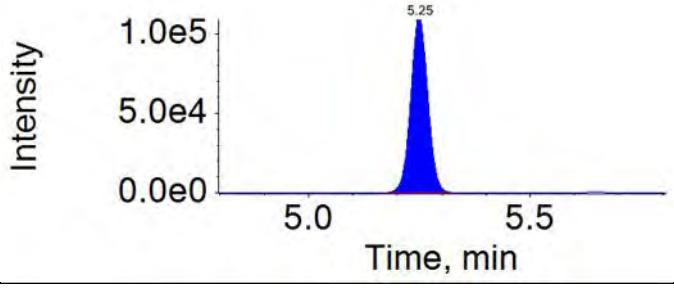
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

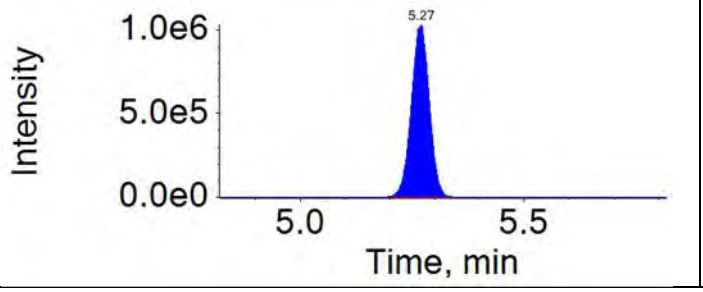
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

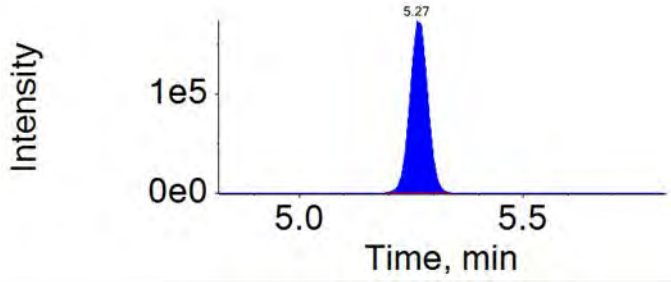
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

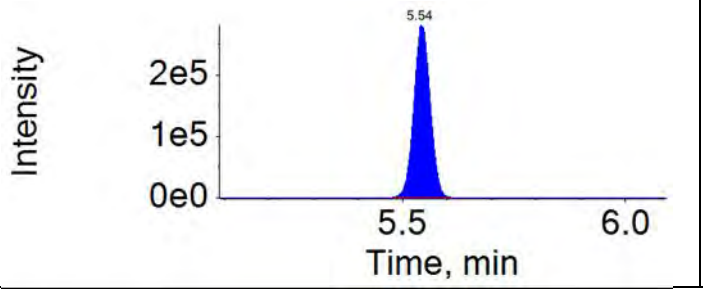
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

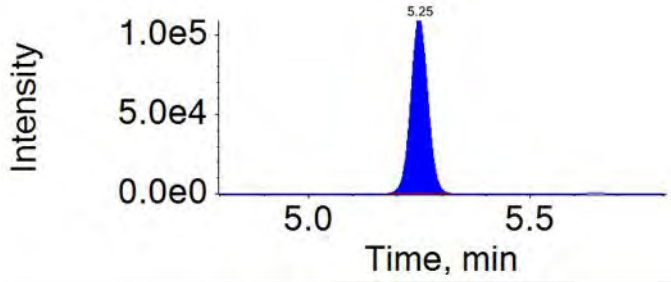
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



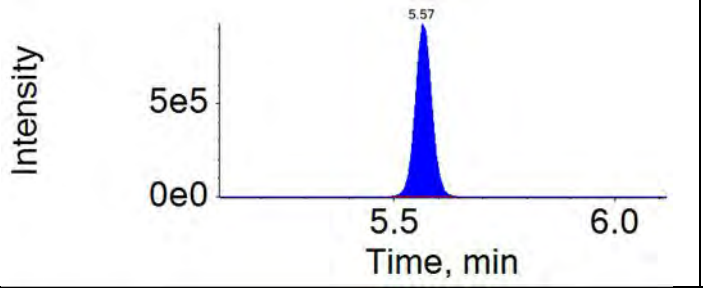


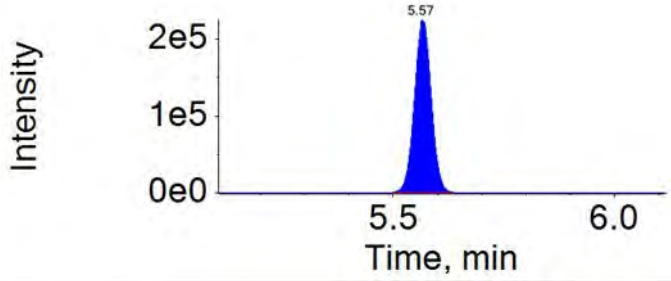
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



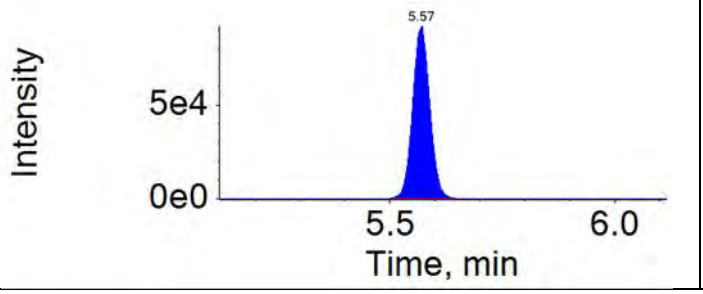


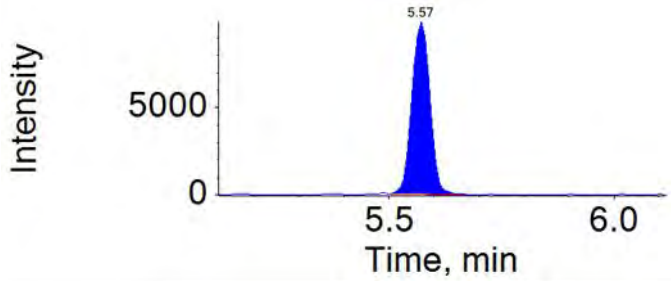
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

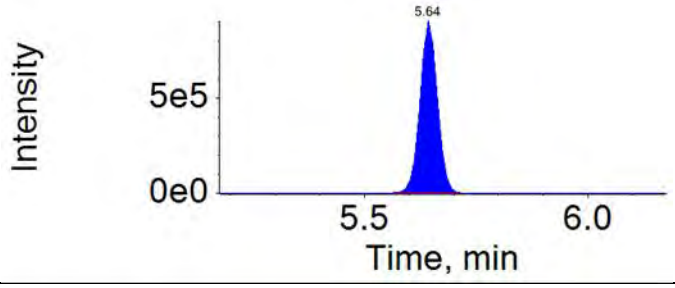
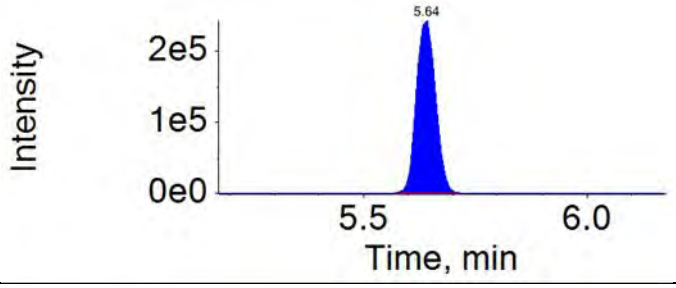


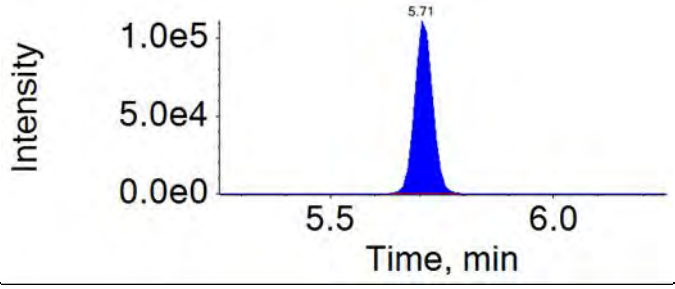
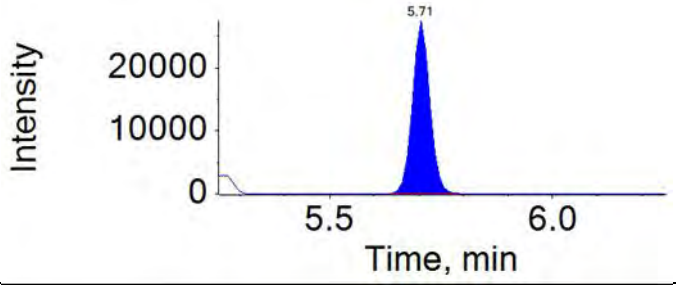


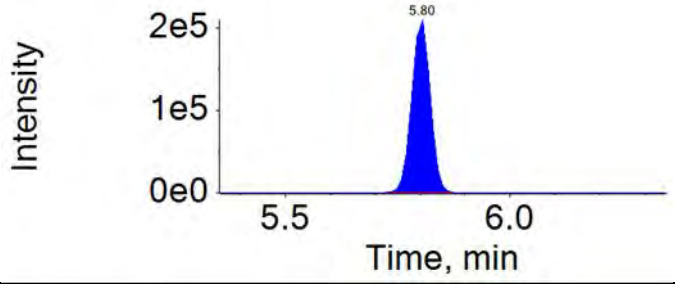
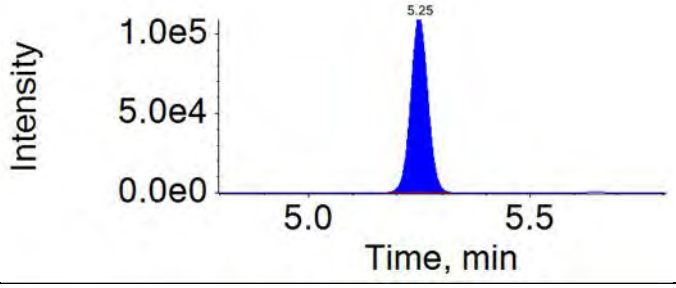
APPROVED
By JPT at 2:53 pm, 11/7/18

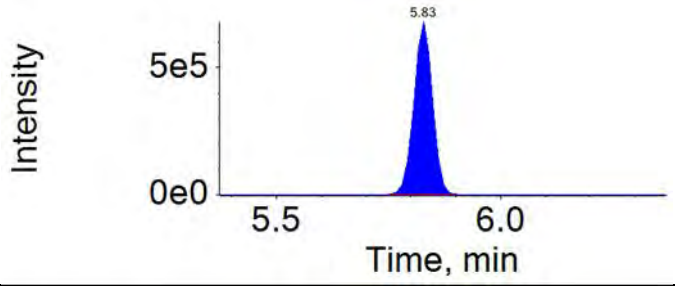
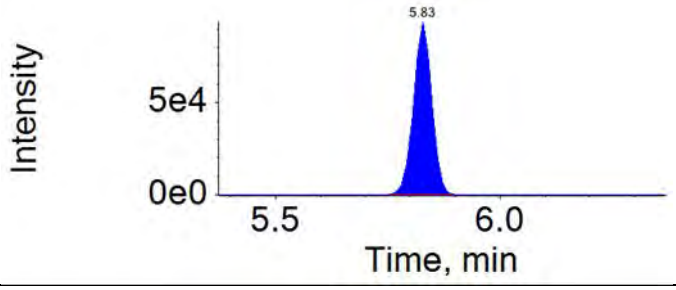
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

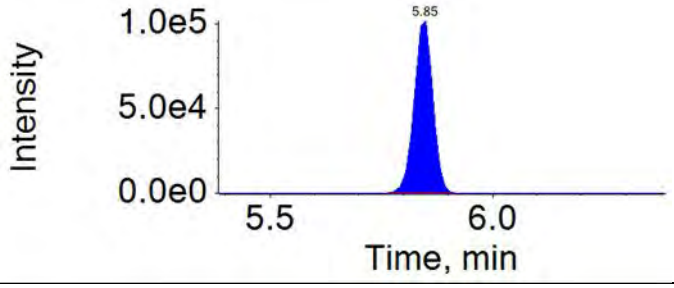
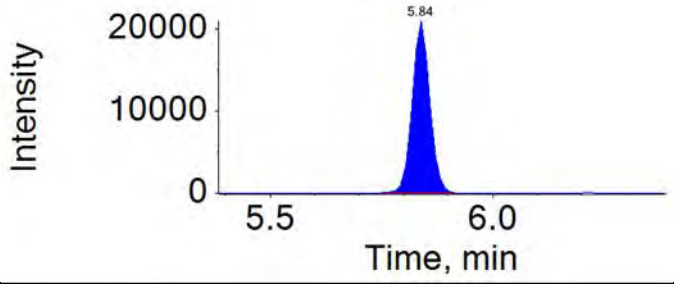
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

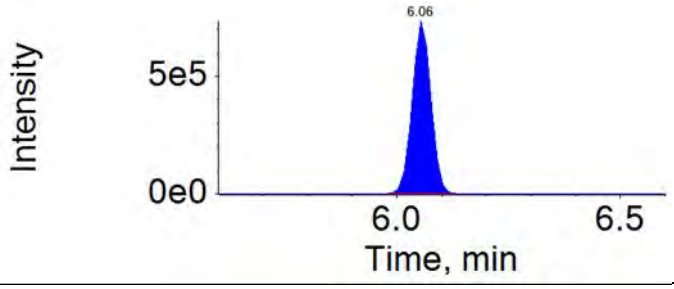
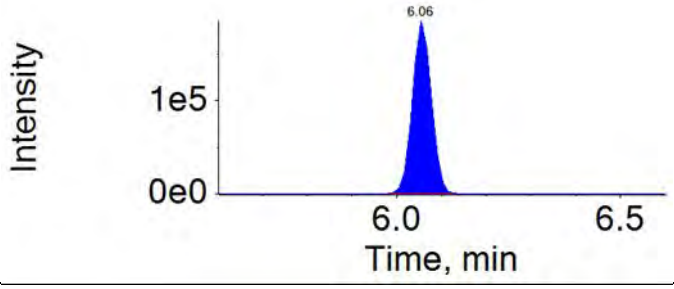
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

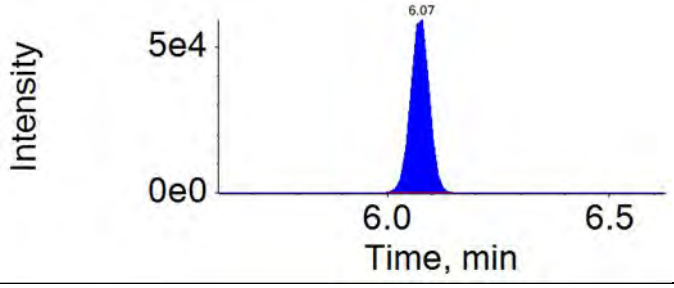
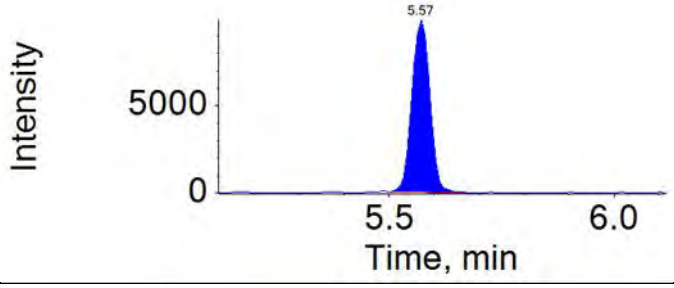
APPROVED
By JPT at 2:53 pm, 11/7/18

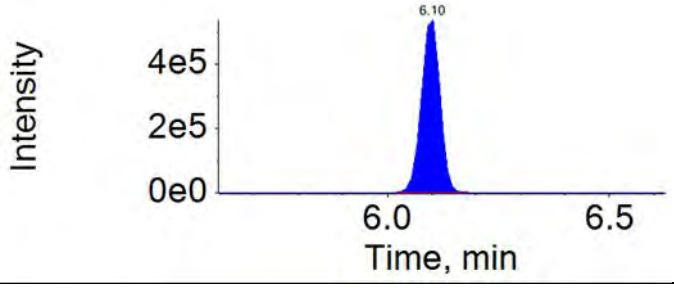
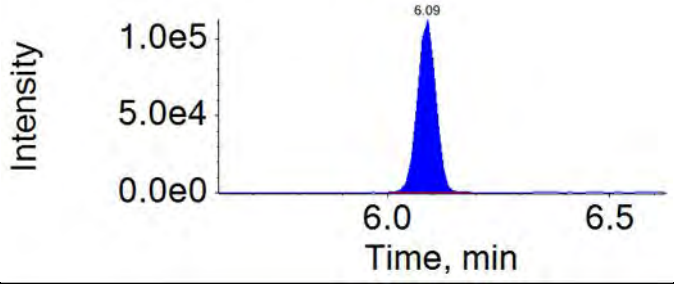
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

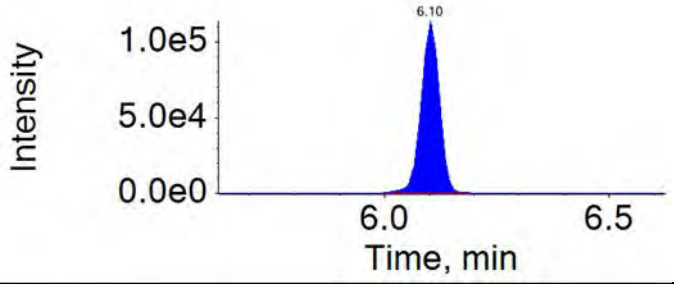
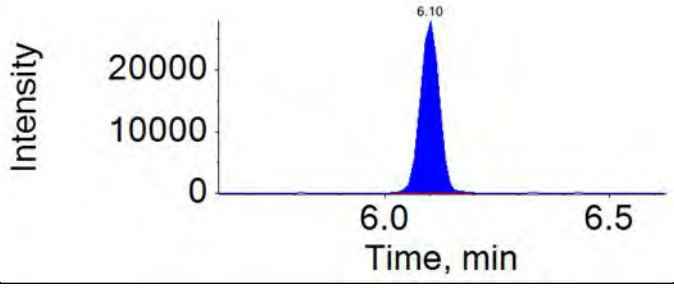
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

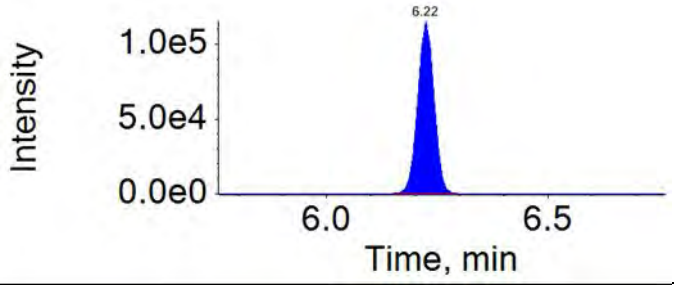
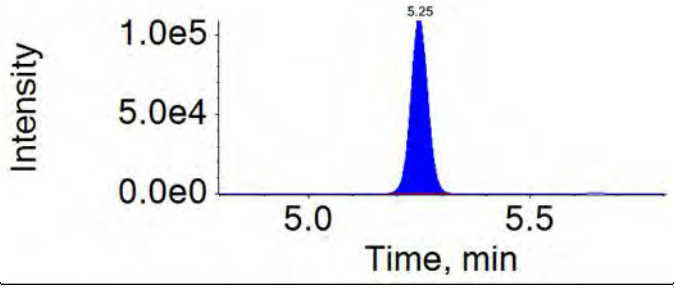
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

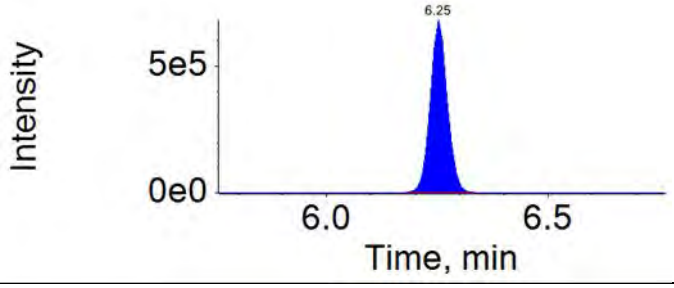
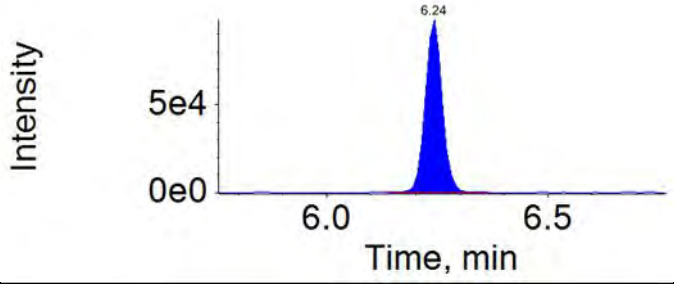
APPROVED
By JPT at 2:53 pm, 11/7/18

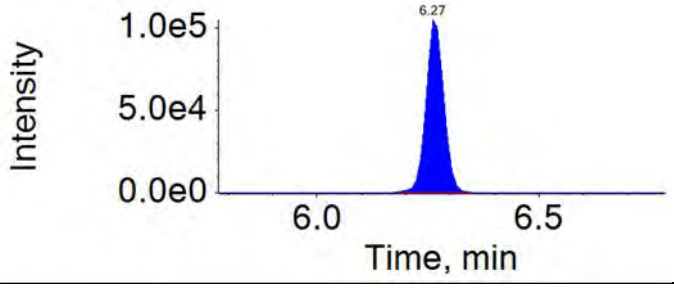
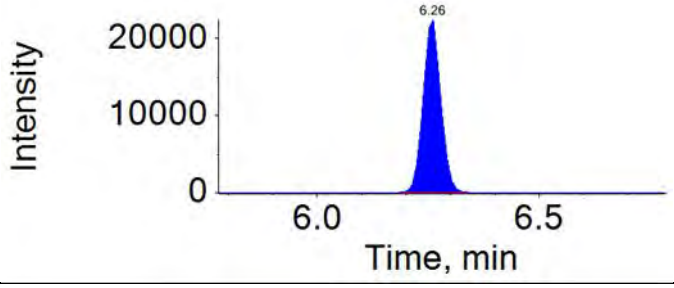
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0
	

Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0
	

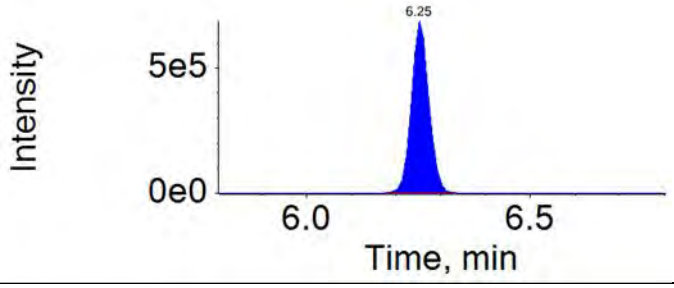
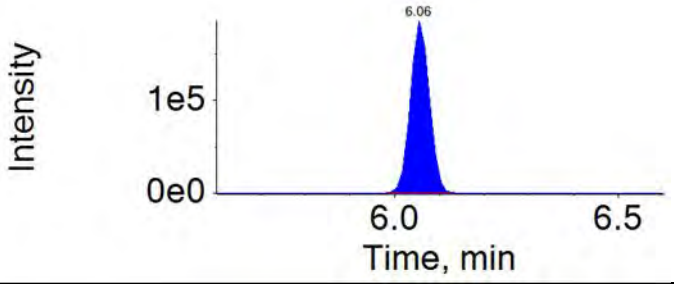
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0
	

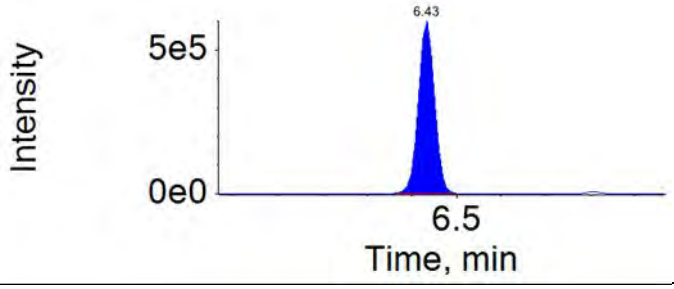
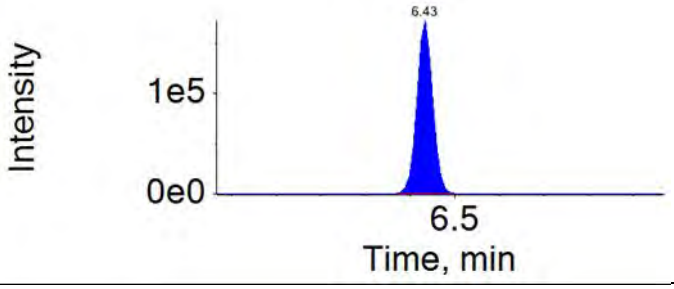
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0
	

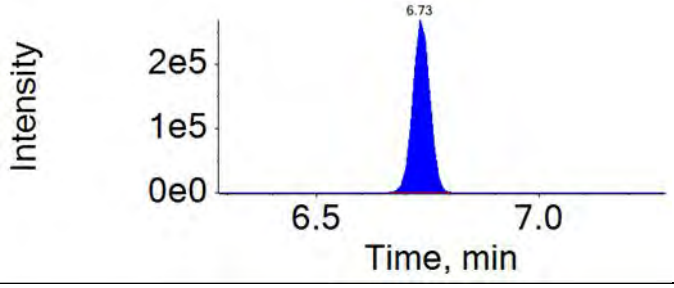
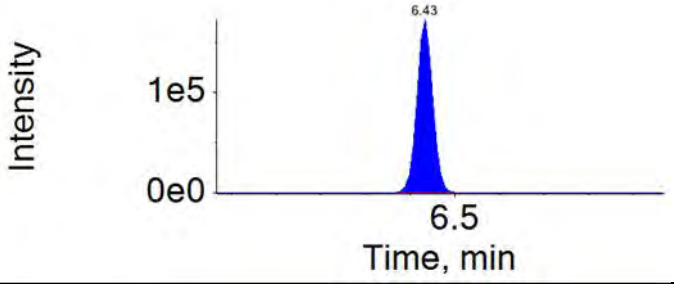
APPROVED
By JPT at 2:53 pm, 11/7/18

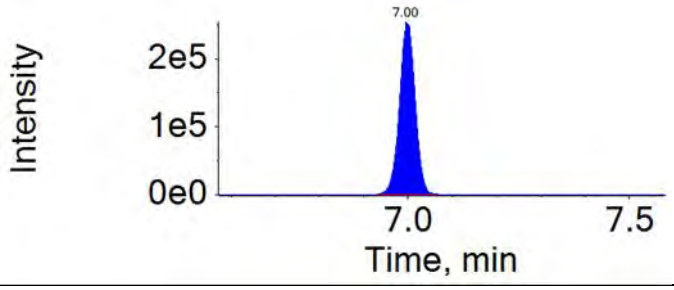
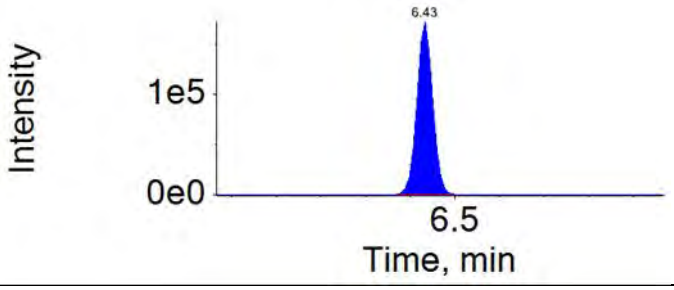
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

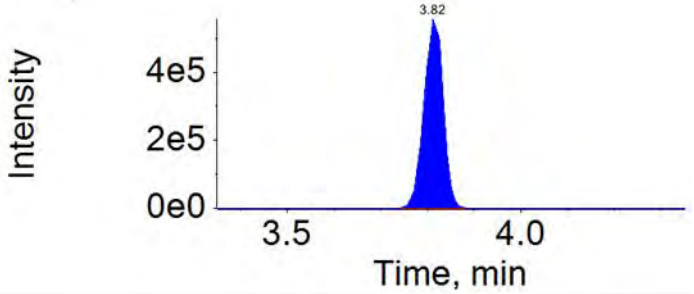
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	1601296.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	589199.3	A	0.3576	0.3680	3	50	
4:2-FTS	4.13	1.00	365423.8	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	215025.0	A	0.6359	0.5884	-7	50	
PFHxA	4.16	1.00	3380716.3	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	39429.8	A	0.0115	0.0117	2	50	
PFPeS	4.18	1.10	845636.3	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	449010.4	A	0.5384	0.5310	-1	50	
PFHxS	4.55	1.00	1261633.0	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	452452.3	A	0.3569	0.3586	0	50	
PFHpA	4.55	1.00	3440372.8	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	189560.1	A	0.0577	0.0551	-4	50	
6:2-FTS	4.91	1.00	278493.0	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	181363.3	A	0.6752	0.6512	-4	50	
PFHpS	4.92	1.08	1236603.7	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	499368.1	A	0.3950	0.4038	2	50	
PFOA	4.92	1.00	3425279.8	A	1.0000	1.0000			
PFOA_2	4.92	1.00	194621.3	A	0.0635	0.0568	-10	50	
PFOS	5.25	1.00	1108359.9	A	1.0000	1.0000			
PFOS_2	5.25	1.00	389460.8	A	0.3494	0.3514	1	50	
PFNA	5.27	1.00	2889454.7	A	1.0000	1.0000			
PFNA_2	5.27	1.00	55493.0	A	0.0207	0.0192	-7	50	
PFNS	5.54	1.06	722178.3	A	1.0000	1.0000			
PFNS_2	5.54	1.06	336998.4	A	0.4890	0.4666	-5	50	
PFDA	5.57	1.00	2401274.2	A	1.0000	1.0000			
PFDA_2	5.57	1.00	16983.6	A	0.0057	0.0071	25	50	
8:2-FTS	5.57	1.00	244867.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	133528.0	A	0.6169	0.5453	-12	50	
NMeFOSAA	5.71	1.00	308507.7	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	75576.5	A	0.2206	0.2450	11	50	
PFDS	5.80	1.11	605559.3	A	1.0000	1.0000			
PFDS_2	5.80	1.11	310462.1	A	0.4648	0.5127	10	50	
PFUnDA	5.83	1.00	1952356.4	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	9988.0	A	0.0031	0.0051	62	50	OOS
NEtFOSAA	5.85	1.00	298834.2	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	185748.9	A	0.6082	0.6216	2	50	
PFDoDA	6.06	1.00	2132260.7	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	26780.3	A	0.0109	0.0126	15	50	
10:2-FTS	6.07	1.09	177607.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	115093.0	A	0.7082	0.6480	-9	50	
PFTrDA	6.25	1.03	1851055.0	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	17056.8	A	0.0096	0.0092	-4	50	
PFTeDA	6.43	1.00	1500655.1	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	8887.6	A	0.0055	0.0059	7	50	
PFHxDA	6.73	1.05	716467.3	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	43825.8	A	0.0596	0.0612	3	50	
PFODA	7.00	1.09	624697.0	A	1.0000	1.0000			
PFODA_2	7.00	1.09	15544.4	A	0.0257	0.0249	-3	50	

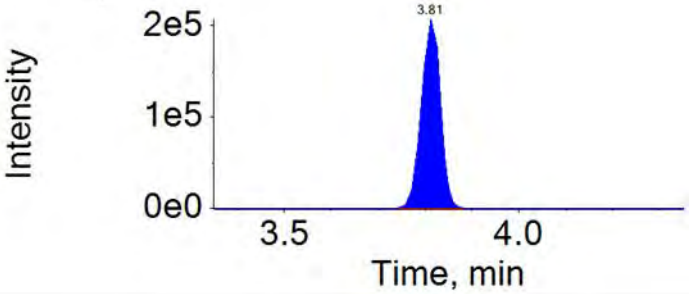
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

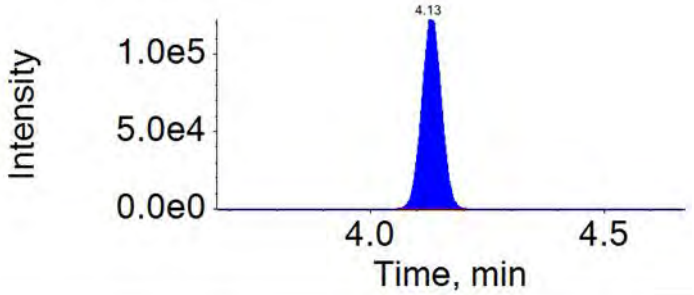
Component: PFBS
Primary Mass: 299.0 / 80.0



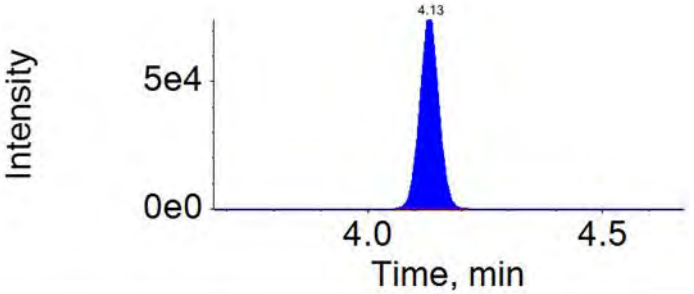
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



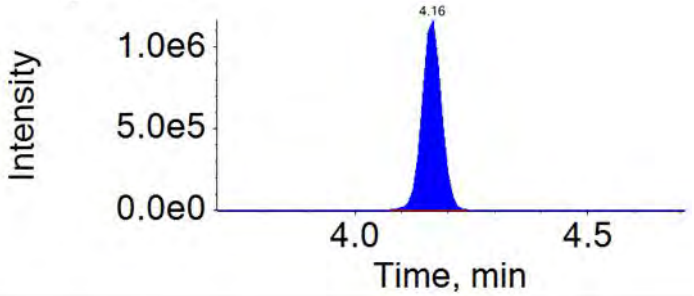
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



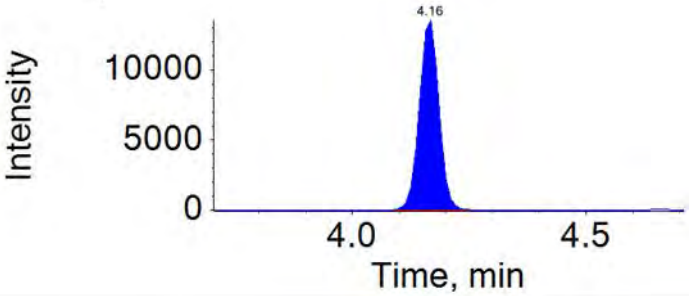
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



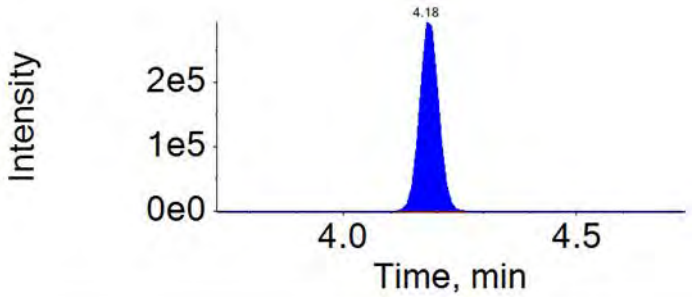
Component: PFHxA
Primary Mass: 313.0 / 269.0



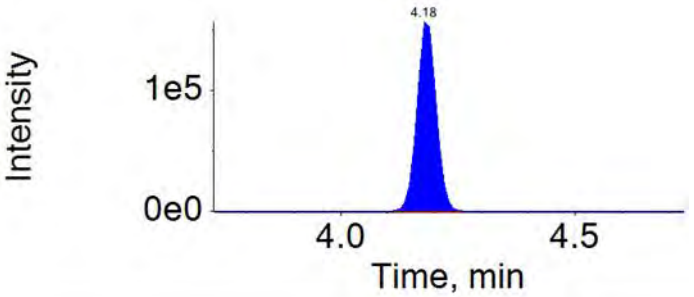
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



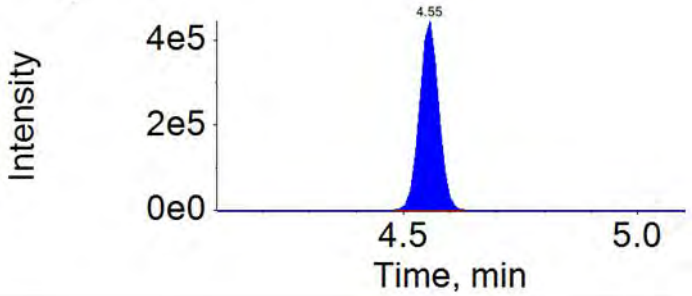
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



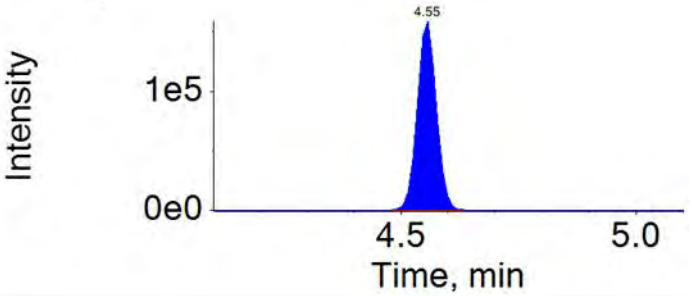
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

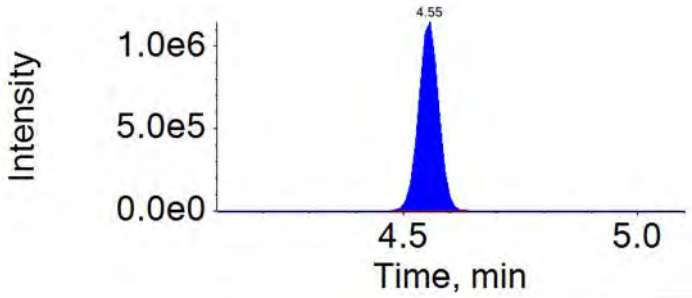
Component: PFHxS
Primary Mass: 399.0 / 80.0



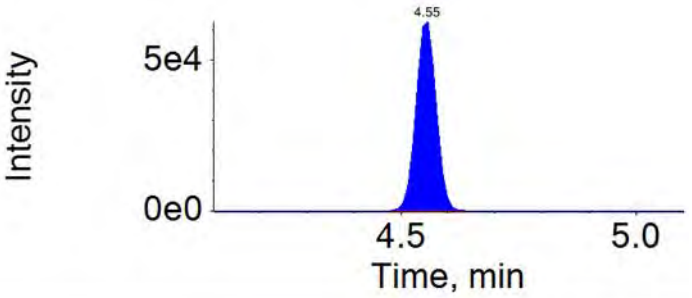
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



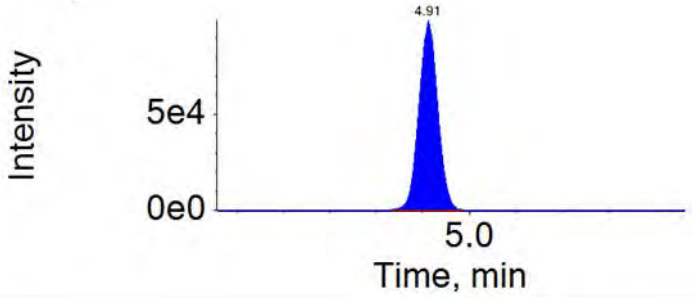
Component: PFHpA
Primary Mass: 363.0 / 319.0



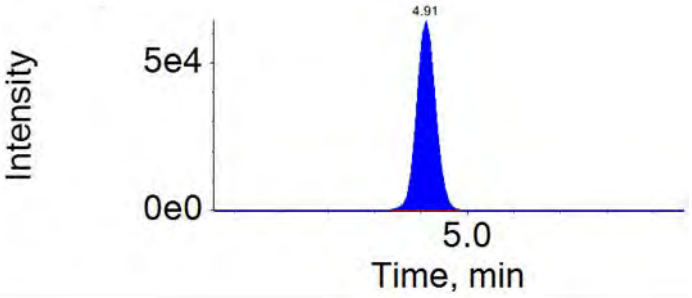
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



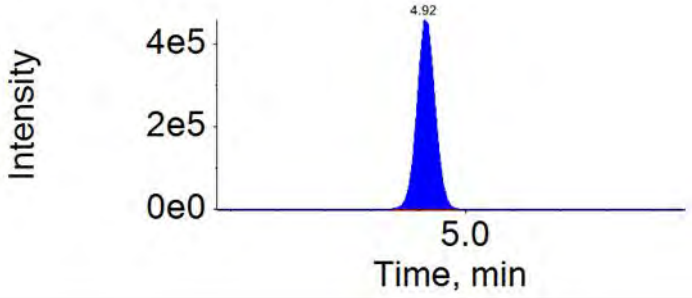
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



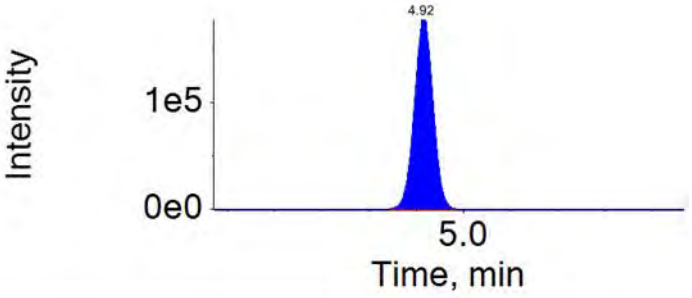
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



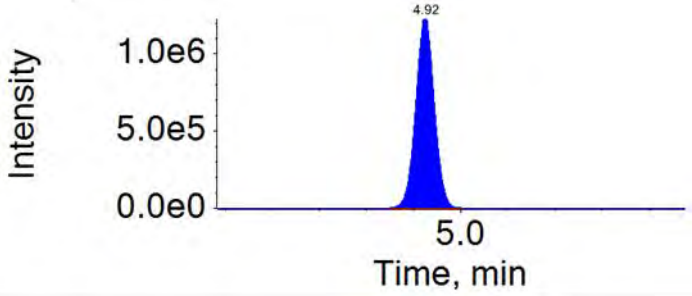
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



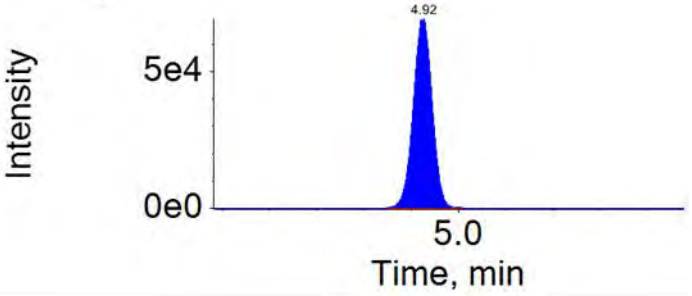
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

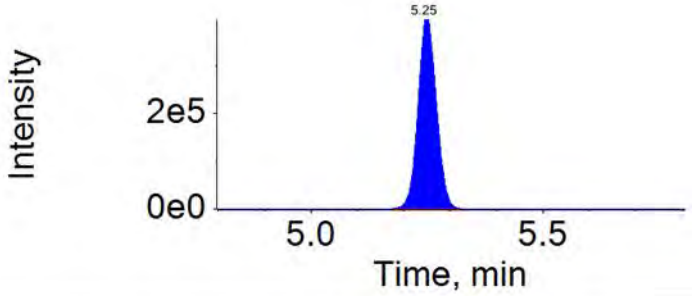
Component: PFOA
Primary Mass: 413.0 / 369.0



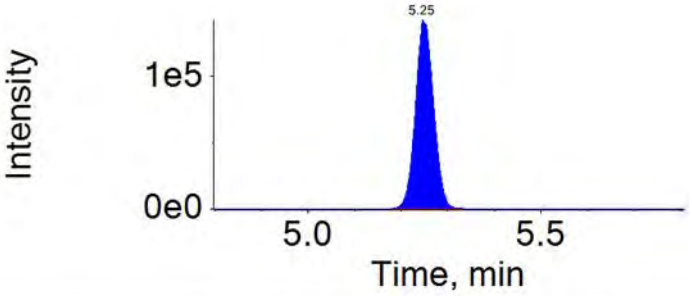
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



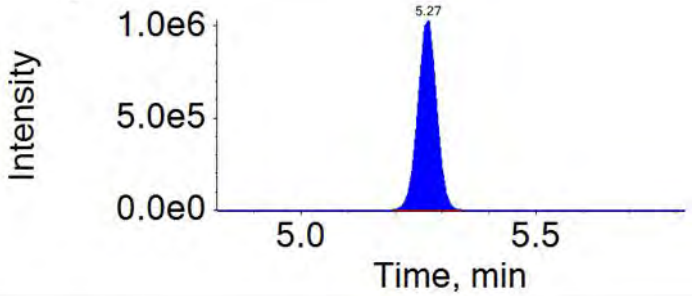
Component: PFOS
Primary Mass: 499.0 / 80.0



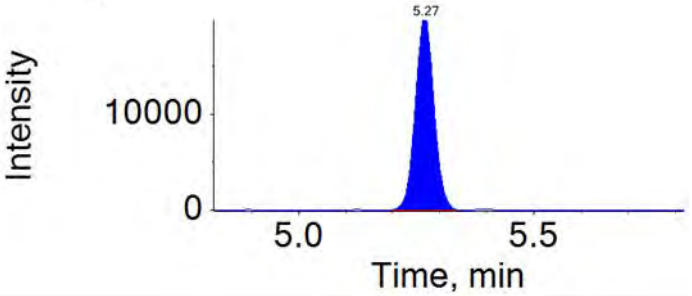
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



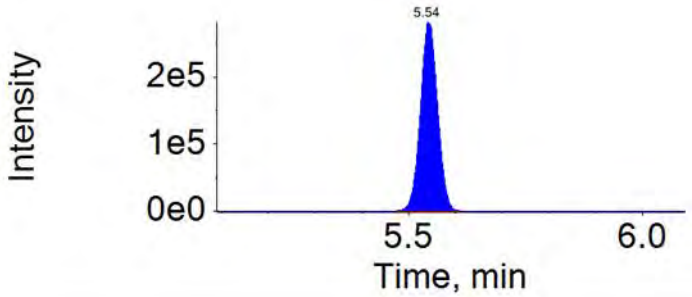
Component: PFNA
Primary Mass: 463.0 / 419.0



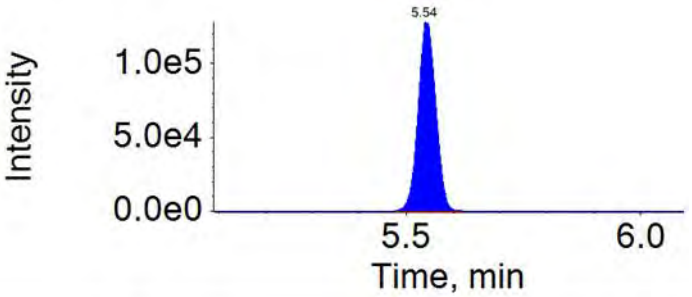
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



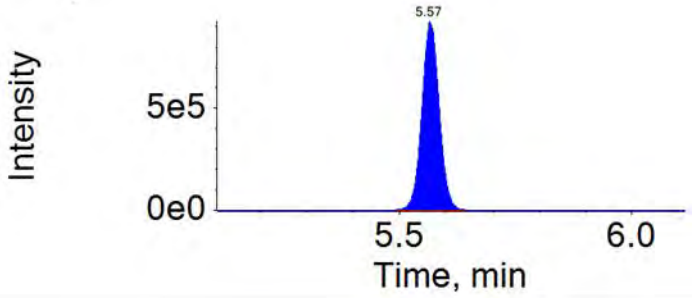
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



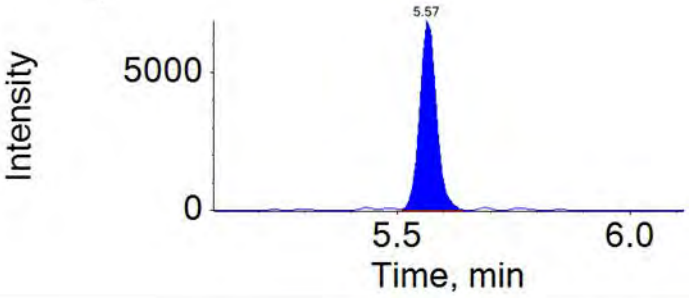
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

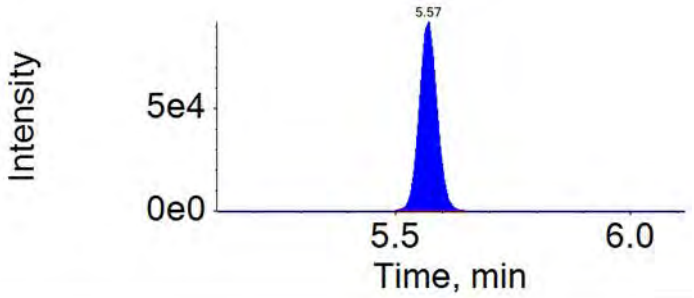
Component: PFDA
Primary Mass: 513.0 / 469.0



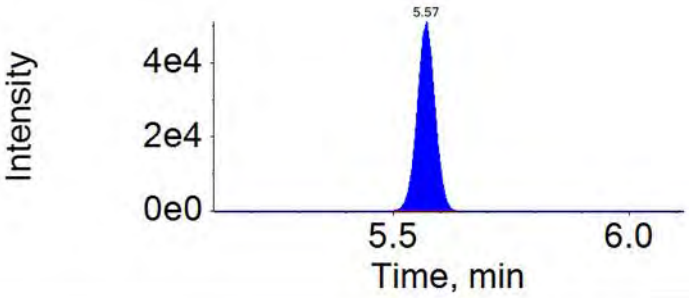
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



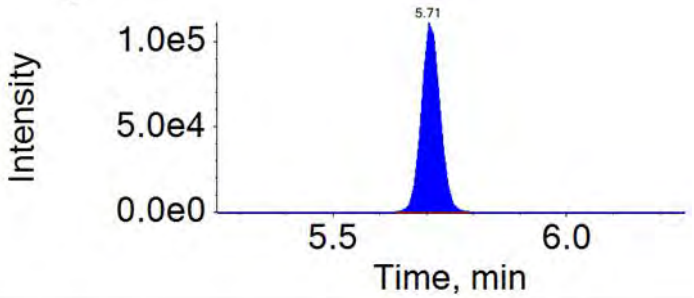
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



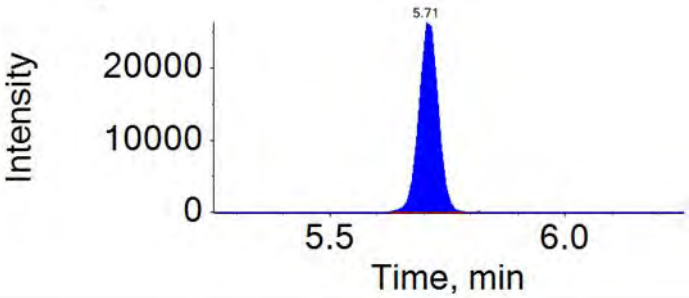
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



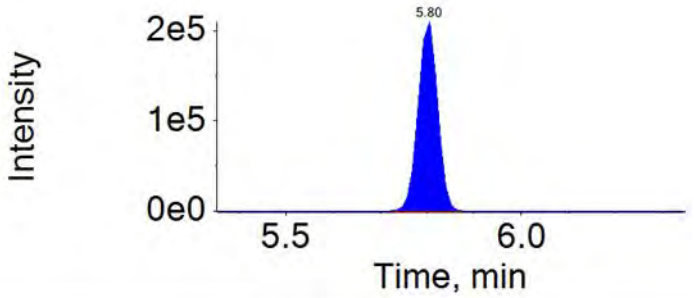
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



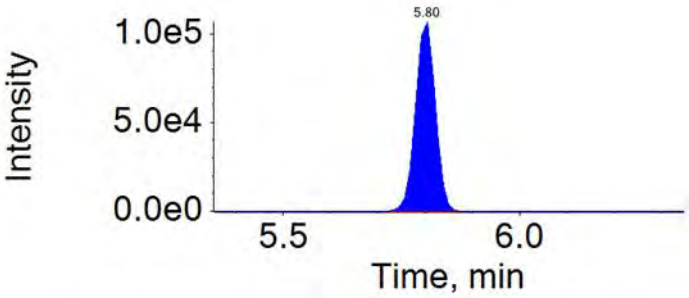
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



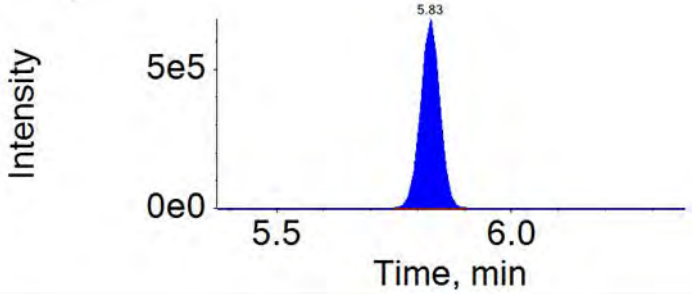
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



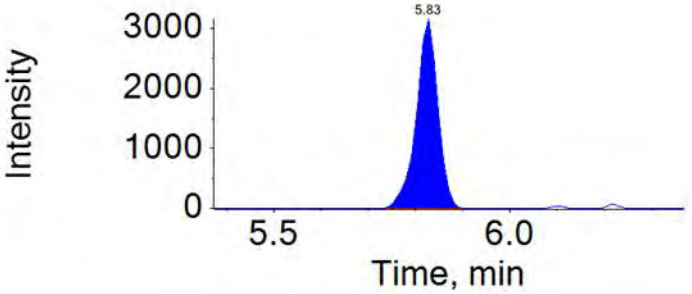
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

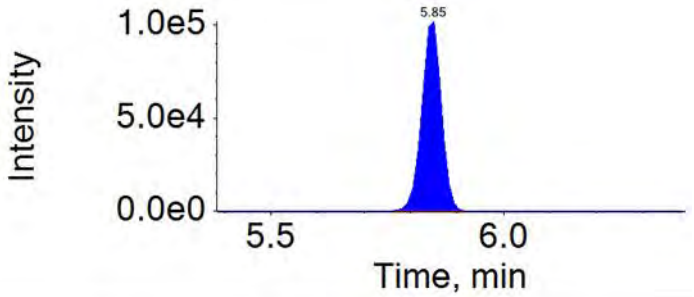
Component: PFUnDA
Primary Mass: 563.0 / 519.0



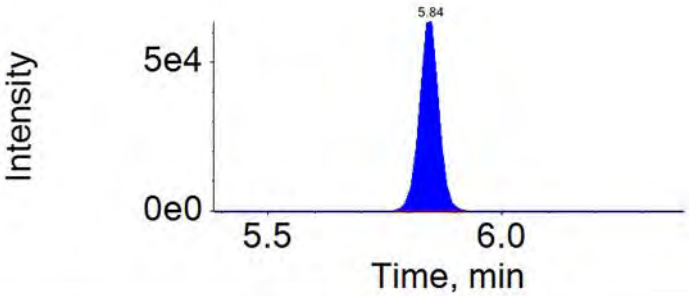
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



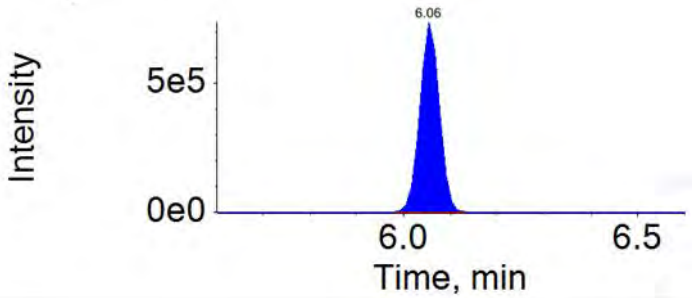
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



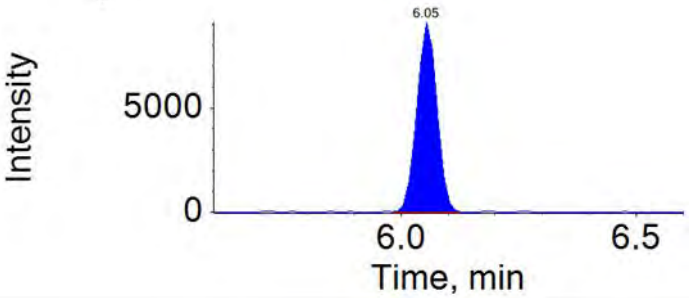
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



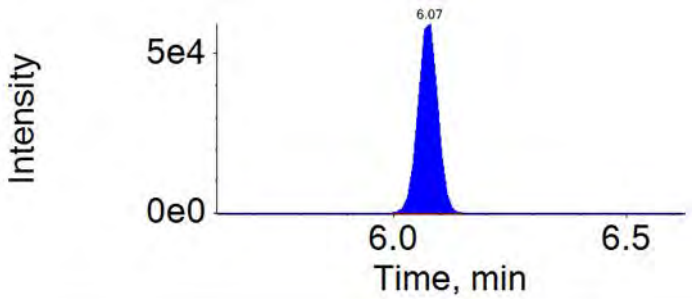
Component: PFDoDA
Primary Mass: 613.0 / 569.0



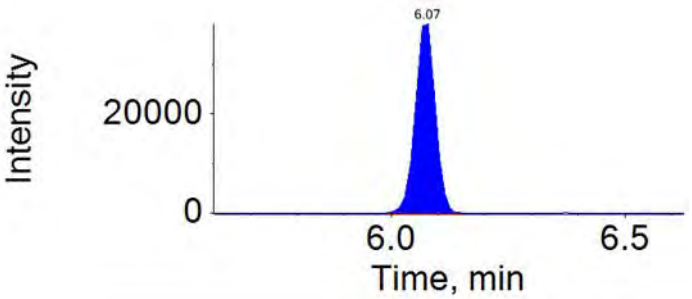
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



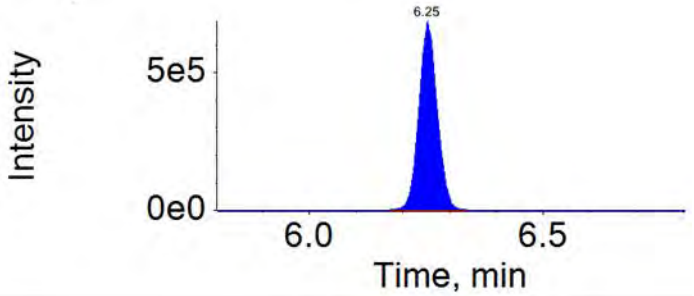
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



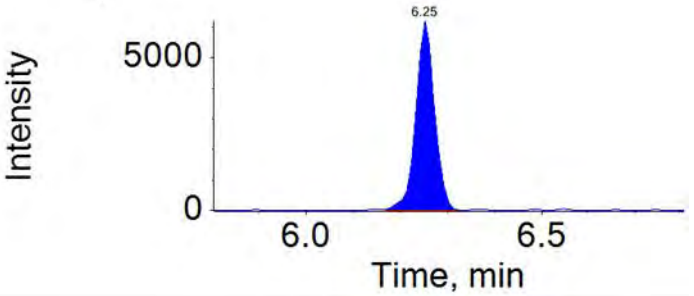
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

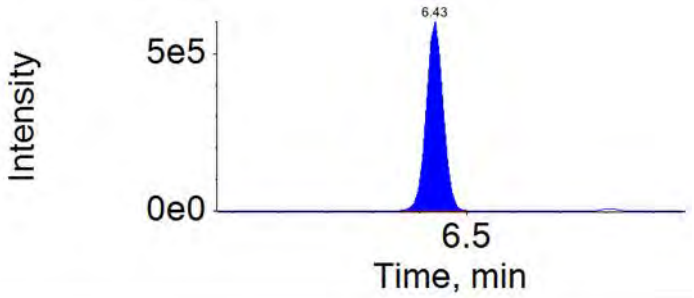
Component: PFTrDA
Primary Mass: 663.0 / 619.0



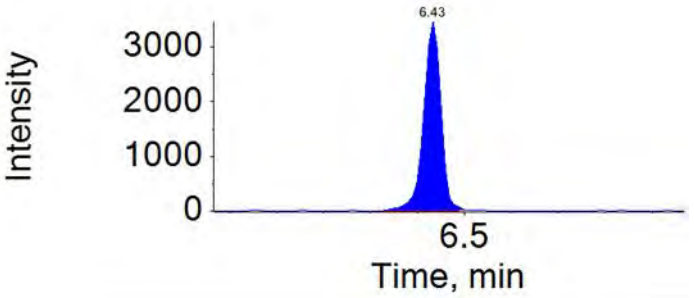
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



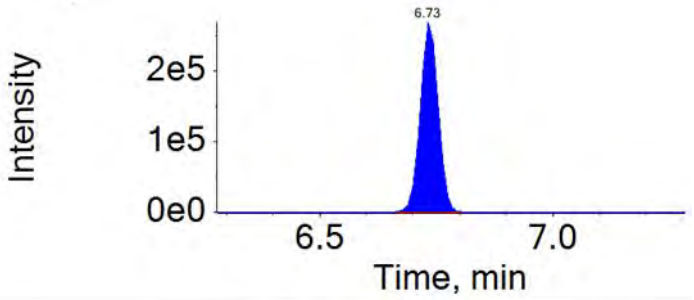
Component: PFTeDA
Primary Mass: 713.0 / 669.0



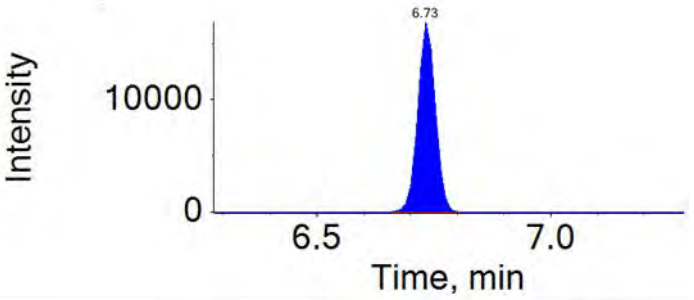
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



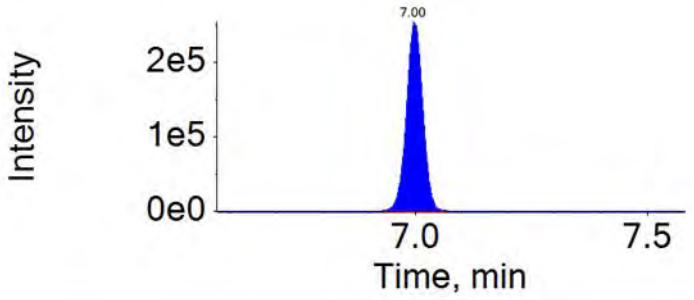
Component: PFHxDA
Primary Mass: 813.0 / 769.0



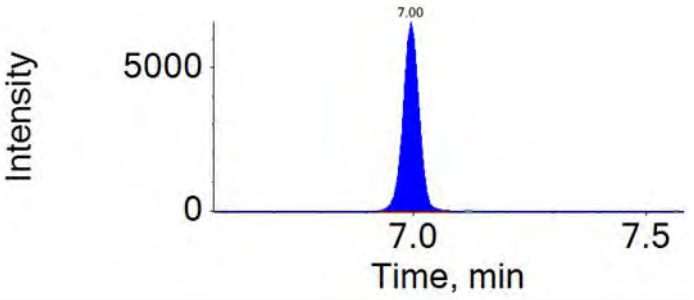
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV07DCAL-15.wiff
Sample ID:	CALMOD61833E			**Acquis Date:**		2018-11-07T10:24:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	600246.7	730410.6	-18	50	
13C2-PFOA	5.0	457854.9	524423.6	-13	50	
13C4-PFOS	4.8	251499.9	274061.7	-8	50	
13C2-PFDA	5.0	260529.0	311442.1	-16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	647849.6	13C3-PFBA	600246.7	1.079	5.000	4.995	100	70-130	
E13C5-PFPeA	687796.7	13C3-PFBA	600246.7	1.146	5.000	4.992	100	70-130	
E13C3-PFBS	384220.8	13C3-PFBA	600246.7	0.640	4.650	4.698	101	70-130	
E13C2-4:2-FTS	50041.3	13C2-PFOA	457854.9	0.109	4.670	4.932	106	70-130	
E13C5-PFHxA	607820.1	13C2-PFOA	457854.9	1.328	5.000	4.883	98	70-130	
E13C3-PFHxS	295466.2	13C2-PFOA	457854.9	0.645	4.730	4.633	98	70-130	
E13C4-PFHpA	484763.2	13C2-PFOA	457854.9	1.059	5.000	4.816	96	70-130	
E13C2-6:2-FTS	30466.8	13C2-PFOA	457854.9	0.067	4.750	4.437	93	70-130	
E13C8-PFOA	769164.4	13C2-PFOA	457854.9	1.680	5.000	4.685	94	70-130	
E13C8-PFOS	268369.0	13C4-PFOS	251499.9	1.067	4.780	4.718	99	70-130	
E13C9-PFNA	440319.0	13C4-PFOS	251499.9	1.751	5.000	4.782	96	70-130	
E13C6-PFDA	536626.2	13C2-PFDA	260529.0	2.060	5.000	5.180	104	70-130	
E13C2-8:2-FTS	24938.2	13C2-PFDA	260529.0	0.096	4.790	5.065	106	70-130	
E13C8-PFOSA	614406.4	13C2-PFDA	260529.0	2.358	5.000	5.146	103	70-130	
Ed3-NMeFOSAA	78158.0	13C2-PFDA	260529.0	0.300	5.000	5.579	112	70-130	
E13C7-PFUnDA	229237.1	13C2-PFDA	260529.0	0.880	5.000	5.076	102	70-130	
Ed5-NEtFOSAA	60556.6	13C2-PFDA	260529.0	0.232	5.000	5.379	108	70-130	
E13C2-PFDoDA	500065.3	13C2-PFDA	260529.0	1.919	5.000	5.174	103	70-130	
Ed7-NMePFOSAE	294617.6	13C2-PFDA	260529.0	1.131	5.000	5.259	105	70-130	
Ed3-NMePFOSA	77146.9	13C2-PFDA	260529.0	0.296	5.000	5.421	108	70-130	
Ed9-NEtPFOSAE	239317.0	13C2-PFDA	260529.0	0.919	5.000	5.246	105	70-130	
Ed5-NEtPFOSA	59054.4	13C2-PFDA	260529.0	0.227	5.000	5.248	105	70-130	
E13C2-PFTeDA	394433.9	13C2-PFDA	260529.0	1.514	5.000	5.450	109	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

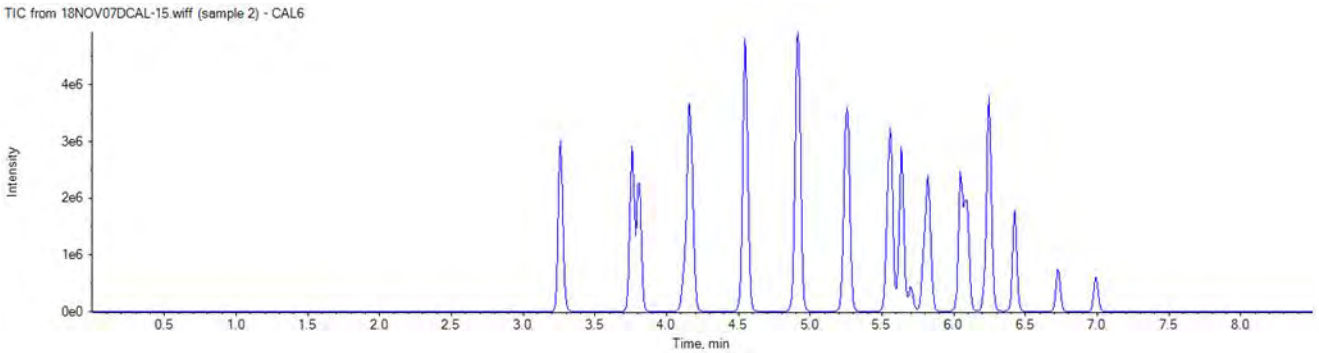
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	5709364.6		A	13C4-PFBA	3.26	647849.6	8.813	51.576
PFPeA	3.76	1.000	5899932.2		A	13C5-PFPeA	3.76	687796.7	8.578	50.979
PFBS	3.81	1.000	3508201.1		A	13C3-PFBS	3.81	384220.8	9.131	46.035
4:2-FTS	4.12	1.000	866263.6		A	13C2-4:2-FTS	4.12	50041.3	17.311	46.538
PFHxA	4.16	1.000	6739327.9		A	13C5-PFHxA	4.16	607820.1	11.088	47.549
PFPeS	4.18	1.100	1823355.9		A	13C3-PFBS	3.81	384220.8	4.746	46.806
PFHxS	4.55	1.000	2760712.8		A	13C3-PFHxS	4.55	295466.2	9.344	47.360
PFHpA	4.55	1.000	6940304.7		A	13C4-PFHpA	4.55	484763.2	14.317	48.150
6:2-FTS	4.90	1.000	566692.8		A	13C2-6:2-FTS	4.90	30466.8	18.600	46.401
PFHpS	4.91	1.080	2648512.9		A	13C3-PFHxS	4.55	295466.2	8.964	46.896
PFOA	4.92	1.000	7023921.1		A	13C8-PFOA	4.92	769164.4	9.132	51.417
PFOS	5.24	1.000	2487687.4		A	13C8-PFOS	5.24	268369.0	9.270	48.067
PFNA	5.26	1.000	6070259.1		A	13C9-PFNA	5.26	440319.0	13.786	51.521
PFNS	5.54	1.060	1684601.2		A	13C8-PFOS	5.24	268369.0	6.277	49.770
PFDA	5.56	1.000	4962332.7		A	13C6-PFDA	5.56	536626.2	9.247	50.875
8:2-FTS	5.56	1.000	516640.5		A	13C2-8:2-FTS	5.56	24938.2	20.717	46.697
PFOSA	5.64	1.000	5938541.7		A	13C8-PFOSA	5.64	614406.4	9.665	52.247
NMeFOSAA	5.70	1.000	740651.6		A	d3-NMeFOSAA	5.70	78158.0	9.476	48.760
PFDS	5.79	1.110	1337416.6		A	13C8-PFOS	5.24	268369.0	4.983	47.605
PFUnDA	5.82	1.000	4071590.3		A	13C7-PFUnDA	5.82	229237.1	17.761	50.936
NEtFOSAA	5.84	1.000	685447.7		A	d5-NEtFOSAA	5.83	60556.6	11.319	48.645
PFDoDA	6.05	1.000	4509578.7		A	13C2-PFDoDA	6.05	500065.3	9.018	48.873
10:2-FTS	6.07	1.090	395929.8		A	13C2-8:2-FTS	5.56	24938.2	15.876	49.437
NMePFOSAE	6.09	1.000	3462215.2		A	d7-NMePFOSAE	6.08	294617.6	11.752	52.660
NMePFOSA	6.10	1.000	705149.2		A	d3-NMePFOSA	6.09	77146.9	9.140	51.162
PFDoS	6.22	1.190	661528.1		A	13C8-PFOS	5.24	268369.0	2.465	47.576
NEtPFOSAE	6.25	1.000	3836850.8		A	d9-NEtPFOSAE	6.23	239317.0	16.033	51.396
NEtPFOSA	6.26	1.000	676107.2		A	d5-NEtPFOSA	6.25	59054.4	11.449	50.423
PFTrDA	6.25	1.030	3829048.4		A	13C2-PFDoDA	6.05	500065.3	7.657	48.287
PFTeDA	6.42	1.000	3381511.1		A	13C2-PFTeDA	6.43	394433.9	8.573	50.344
PFHxDA	6.73	1.050	1559604.6		A	13C2-PFTeDA	6.43	394433.9	3.954	49.083
PFODA	6.99	1.090	1340733.9		A	13C2-PFTeDA	6.43	394433.9	3.399	48.698

Total Ion Chromatogram

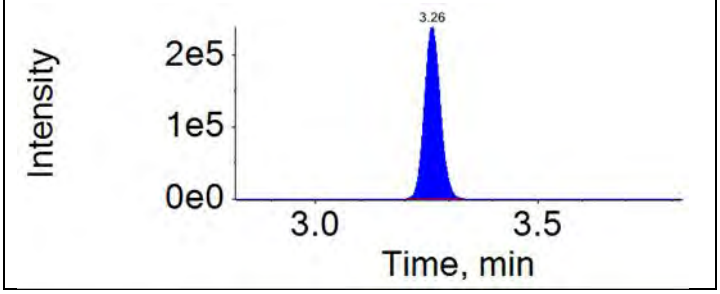


APPROVED
By JPT at 2:53 pm, 11/7/18

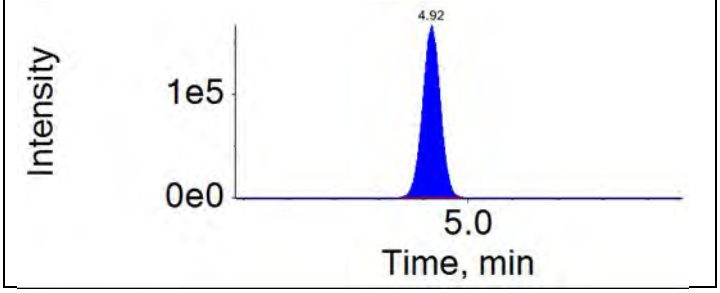
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

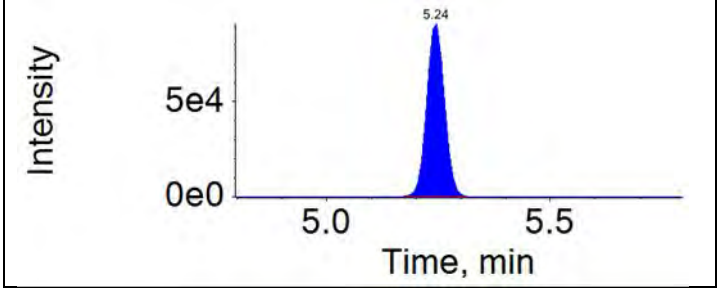
Injection Standard: 13C3-PFBA
216.0 / 172.0



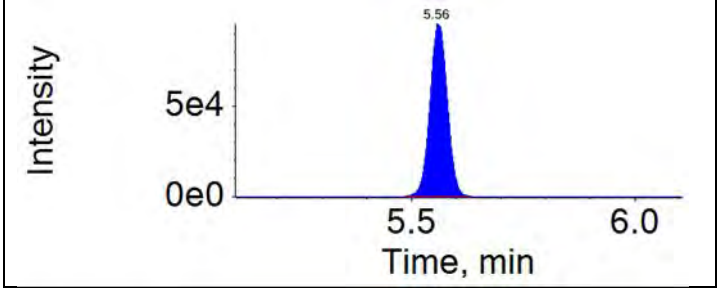
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



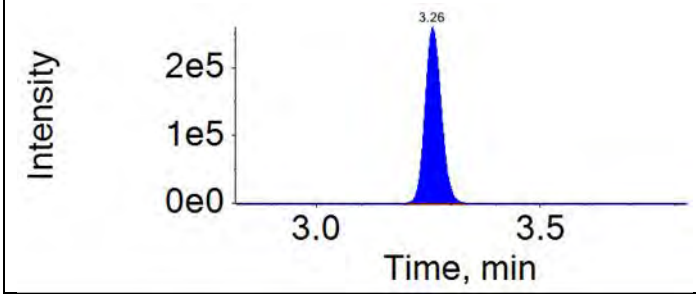
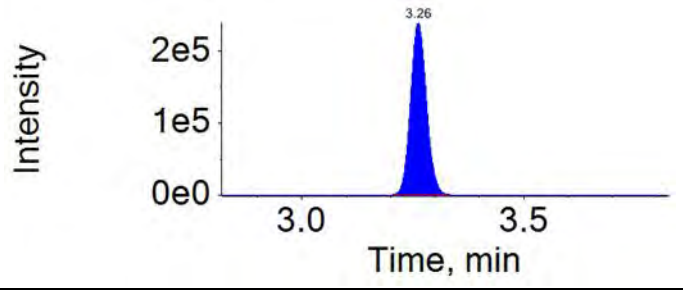
Injection Standard: 13C2-PFDA
515.0 / 470.0

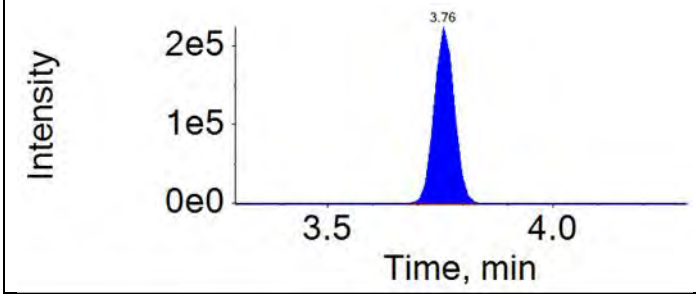
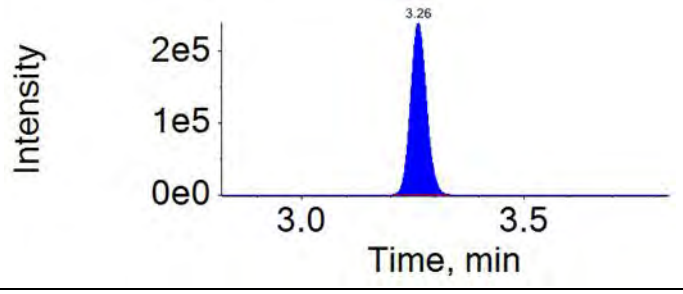


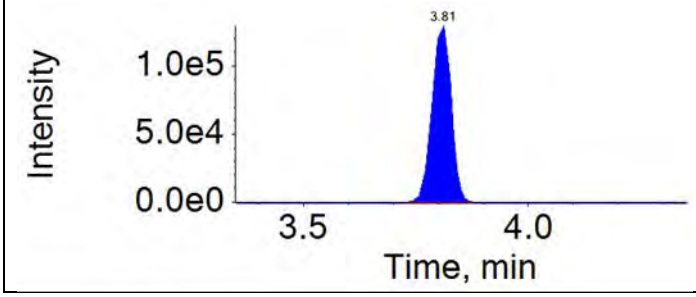
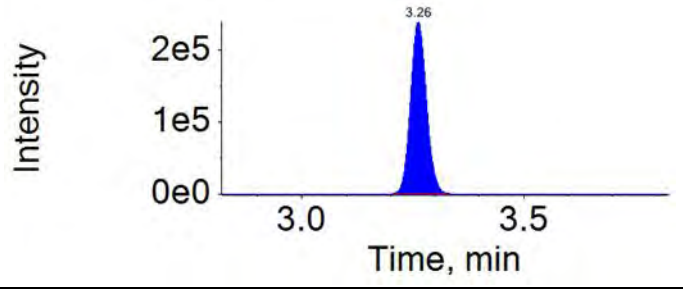
APPROVED
By JPT at 2:53 pm, 11/7/18

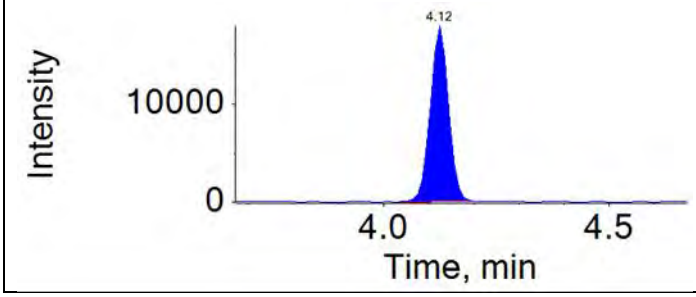
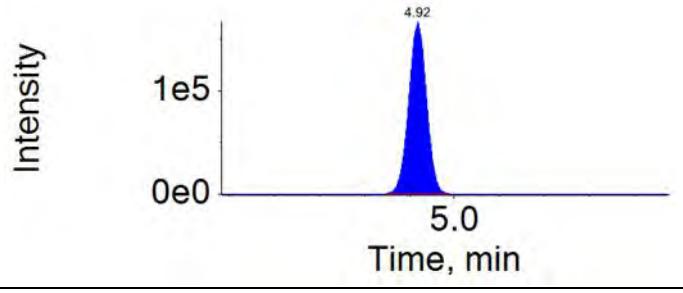
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

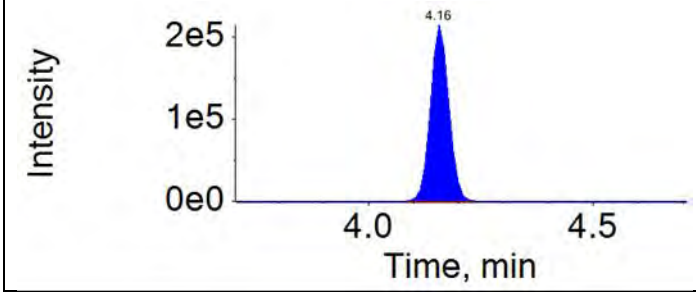
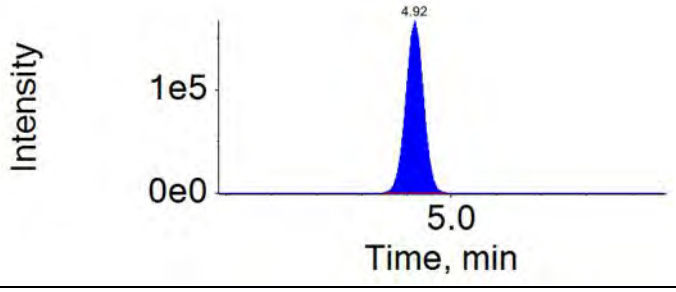
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

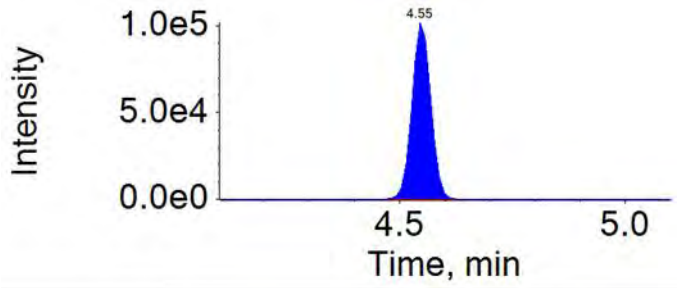
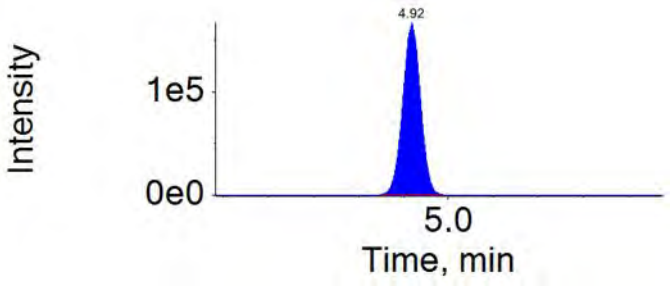
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

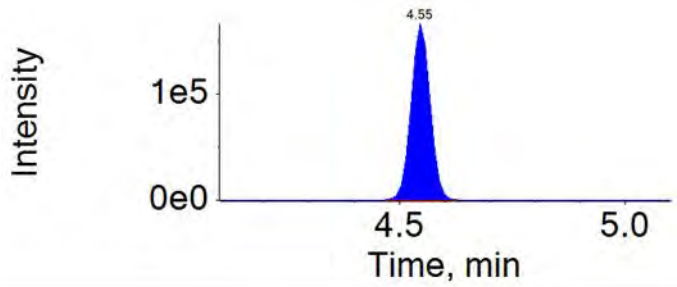
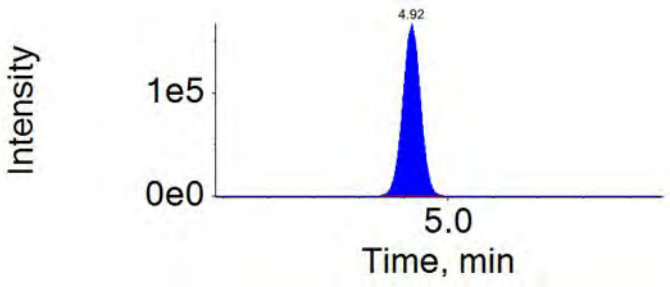
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

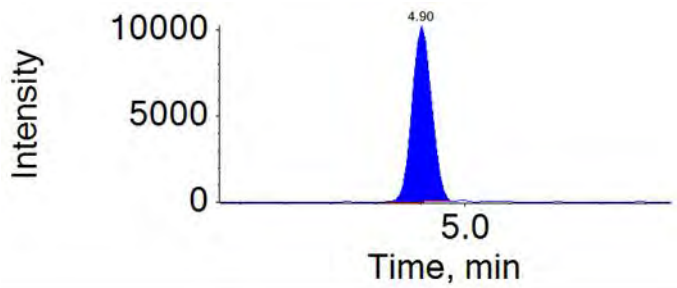
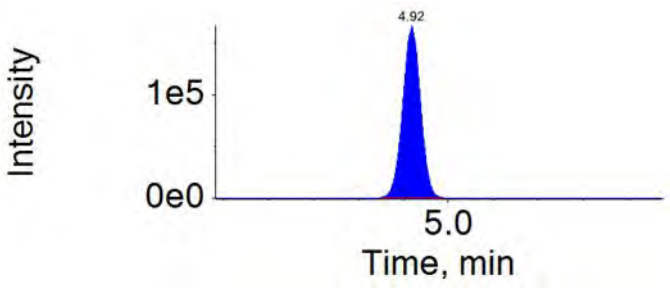
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

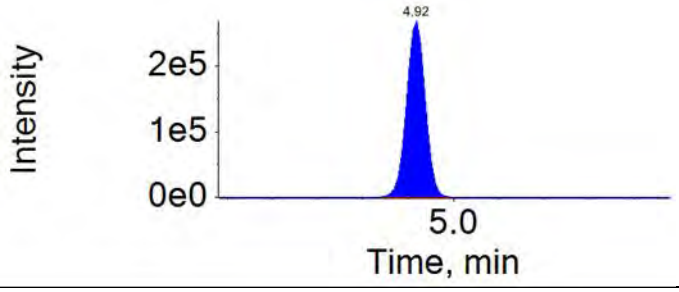
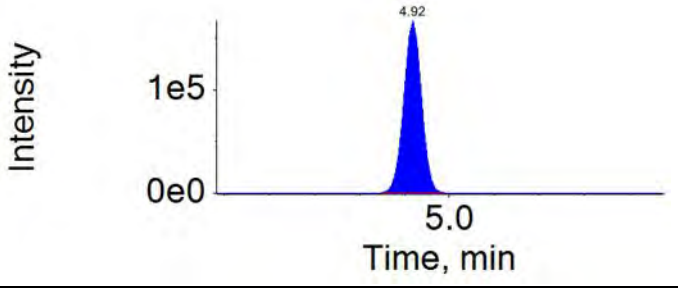
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

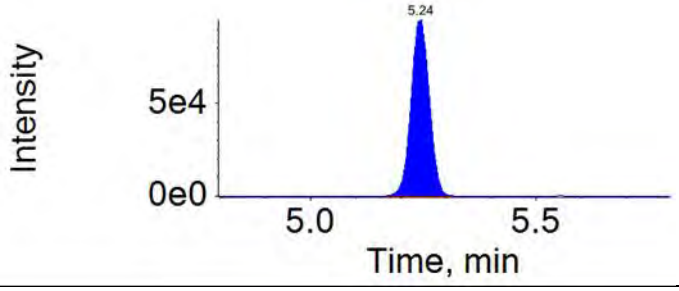
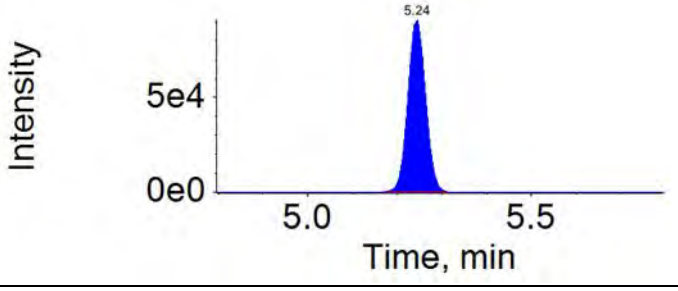
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

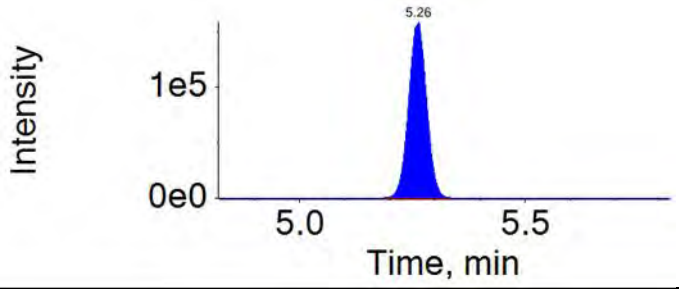
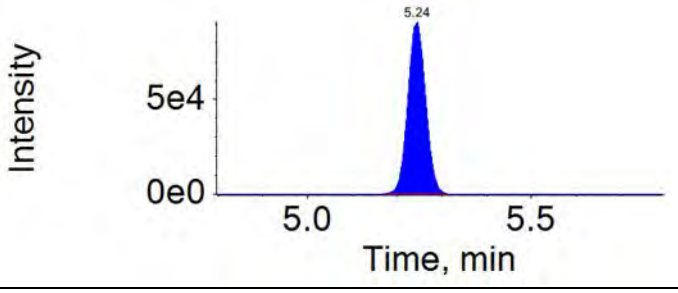
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

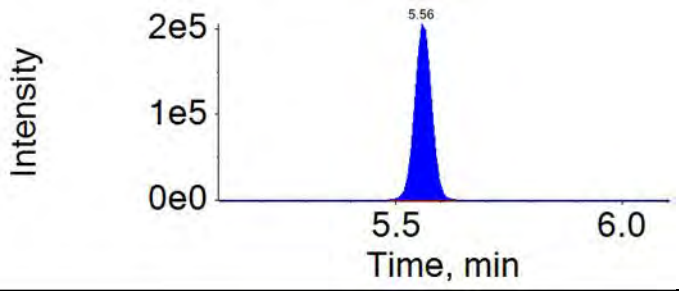
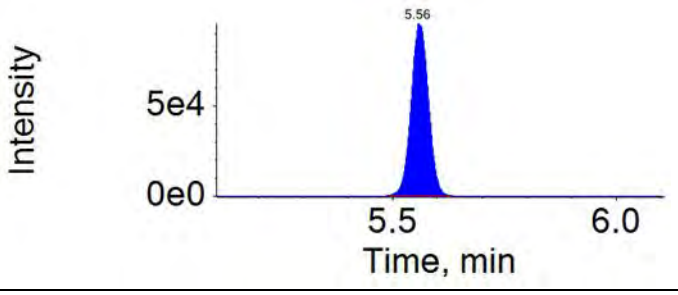
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

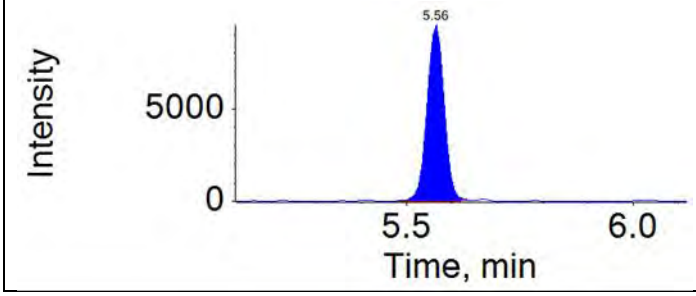
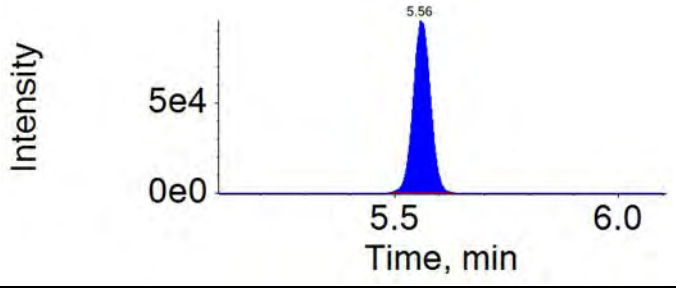
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

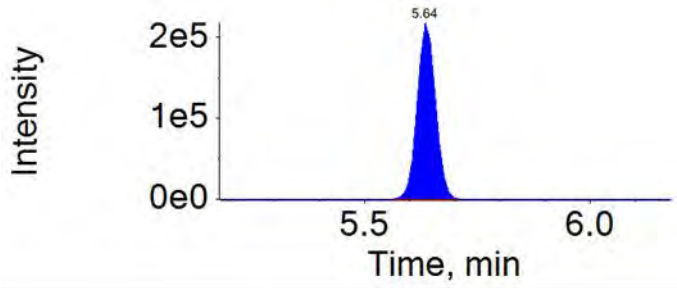
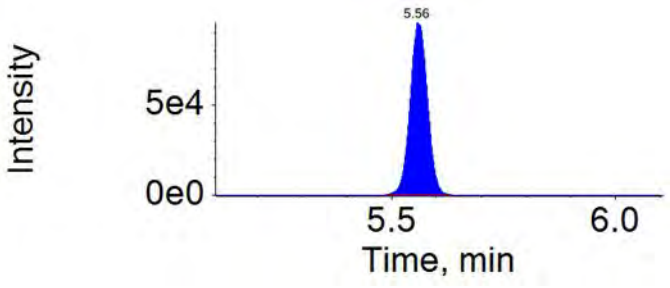
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

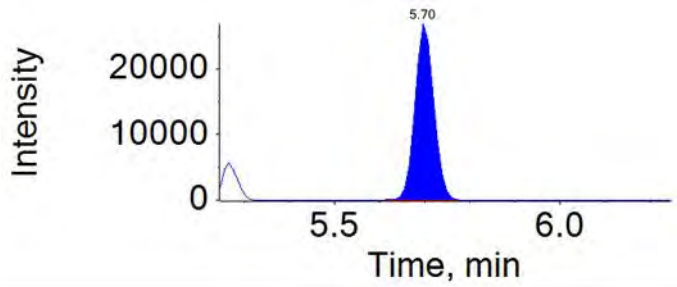
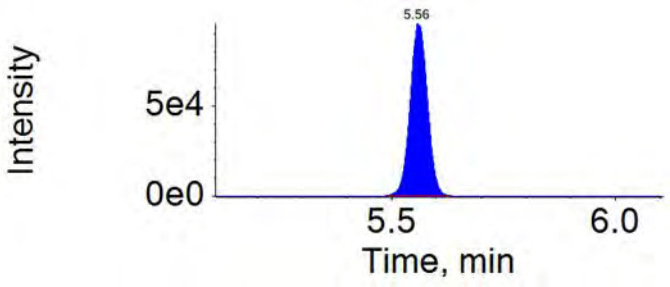
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

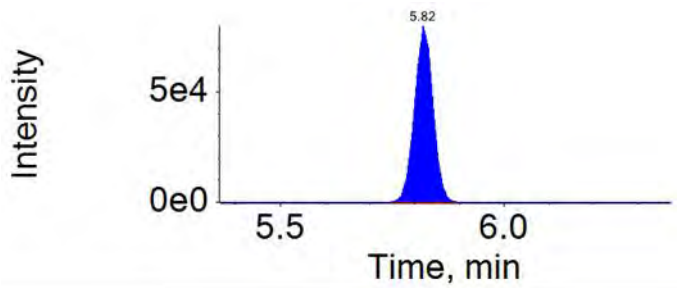
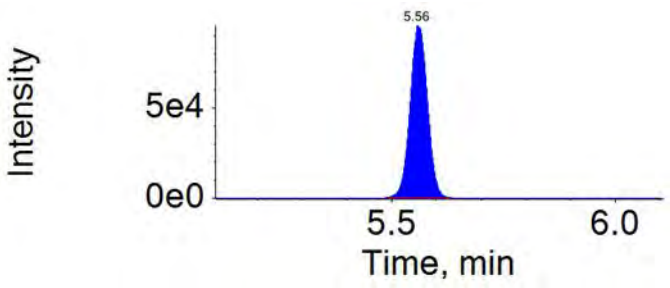
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

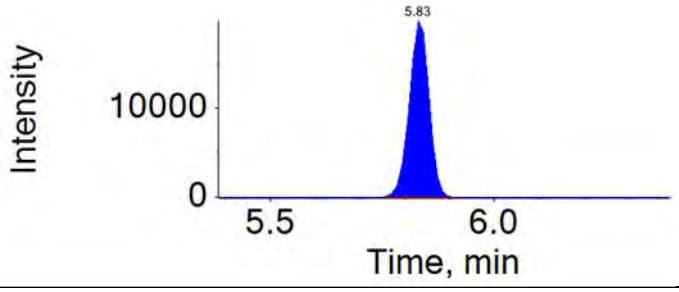
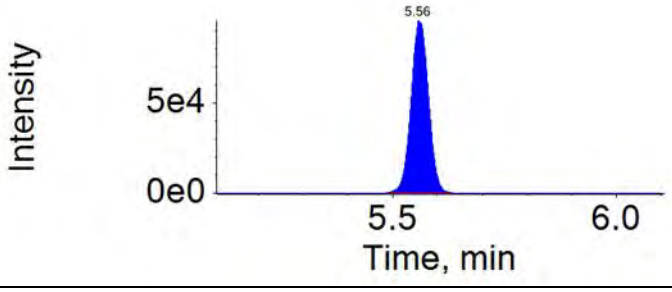
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

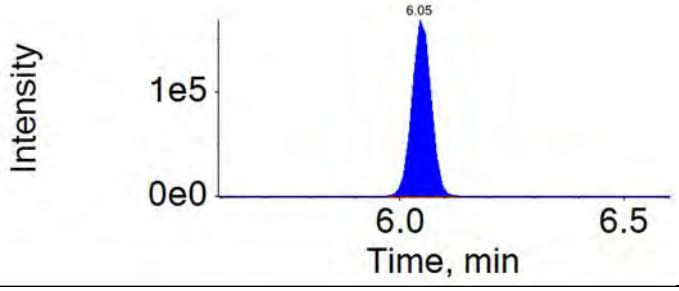
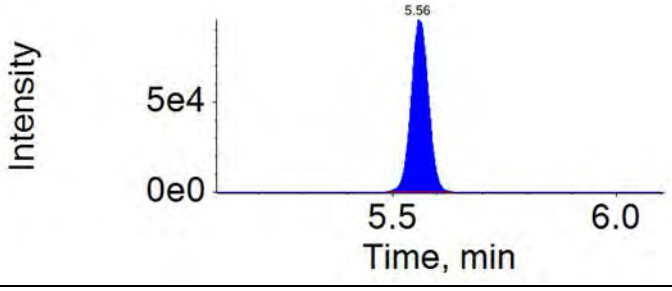
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

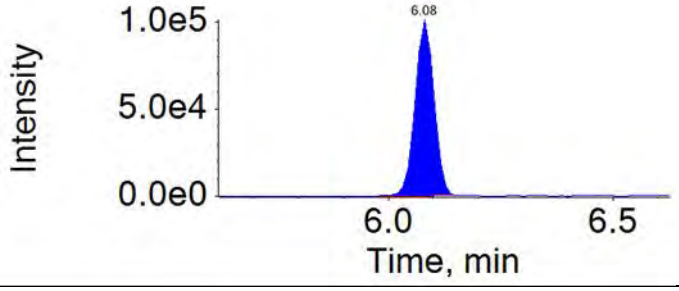
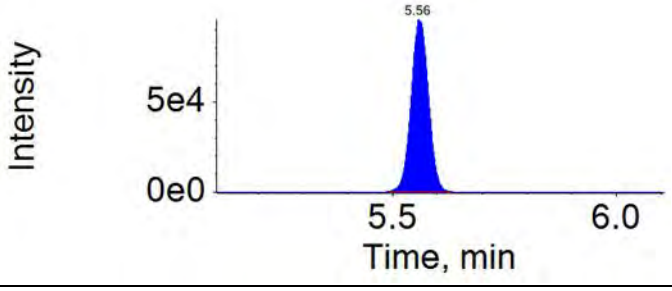
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

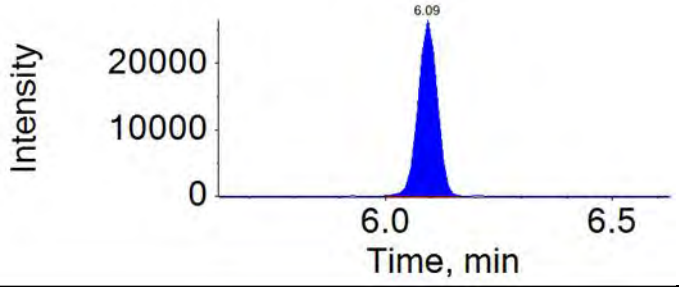
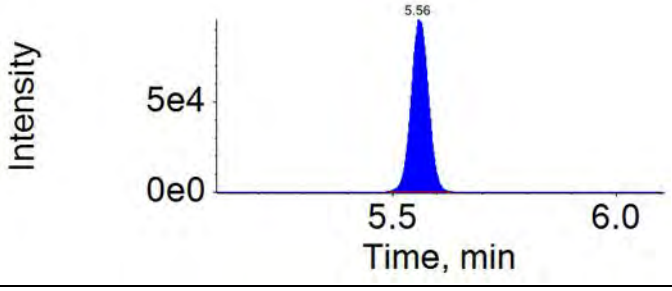
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

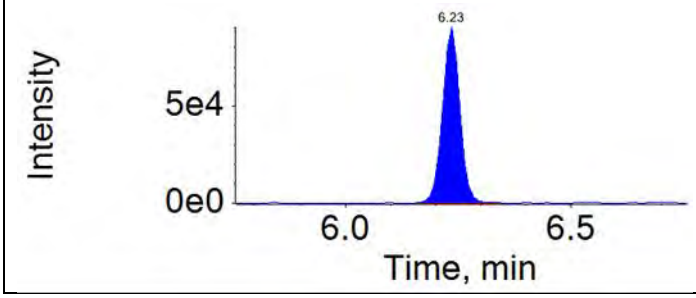
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

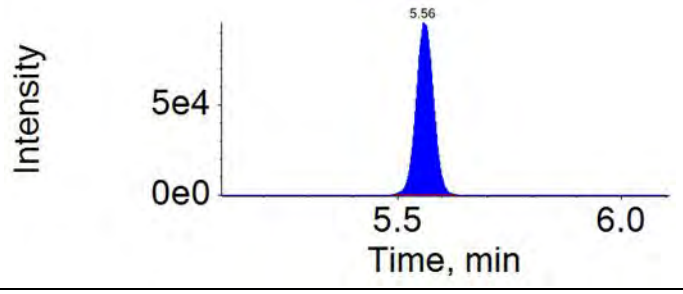
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

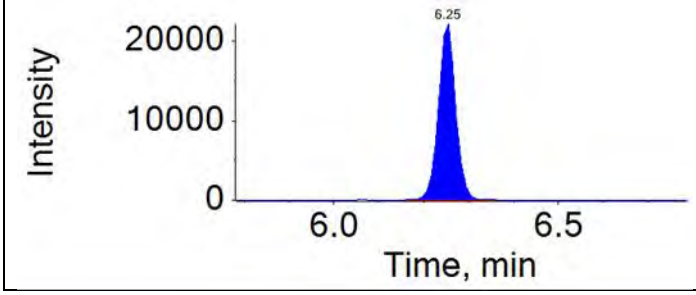
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

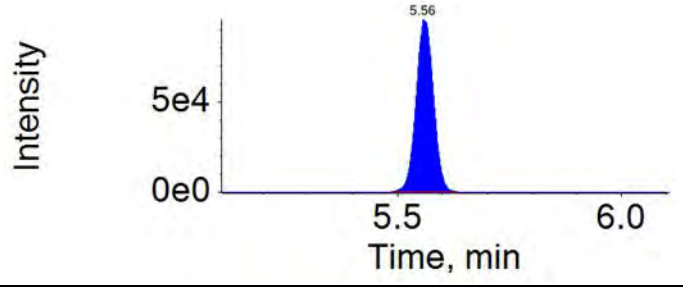
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



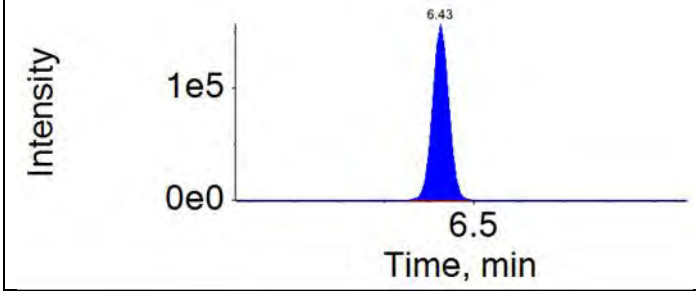


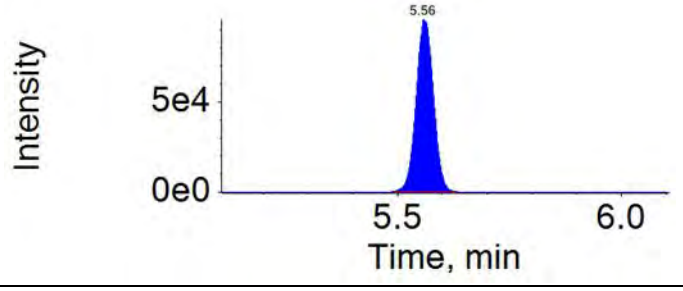
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



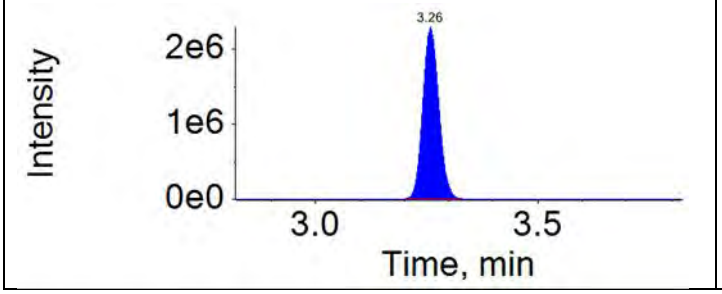


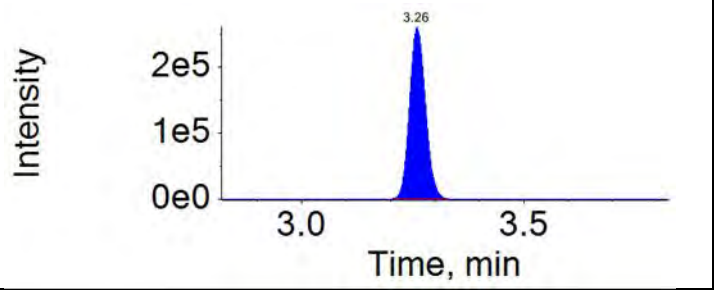
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

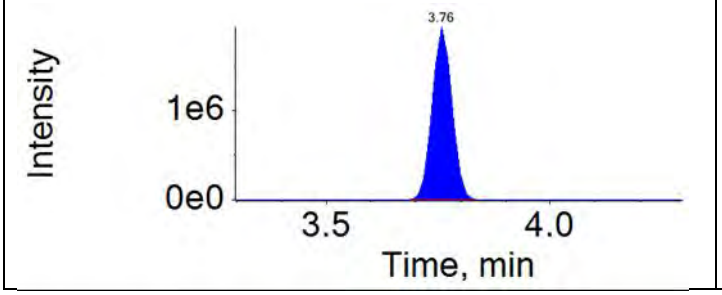
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

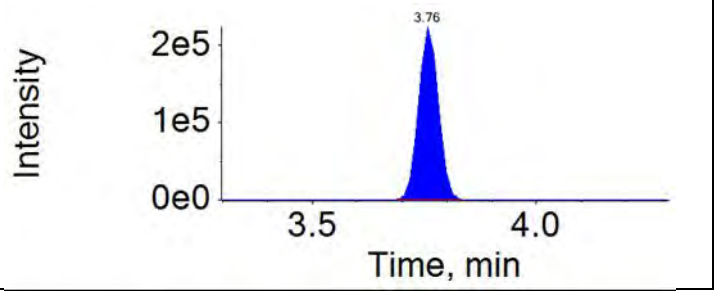
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



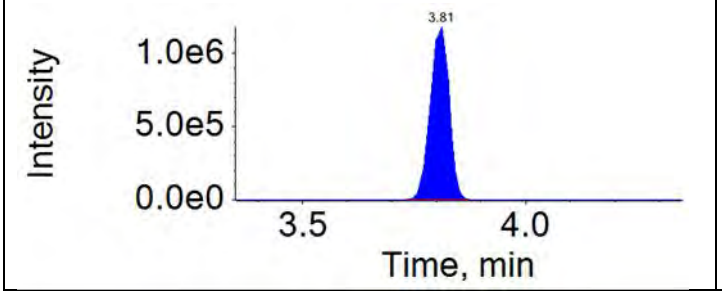


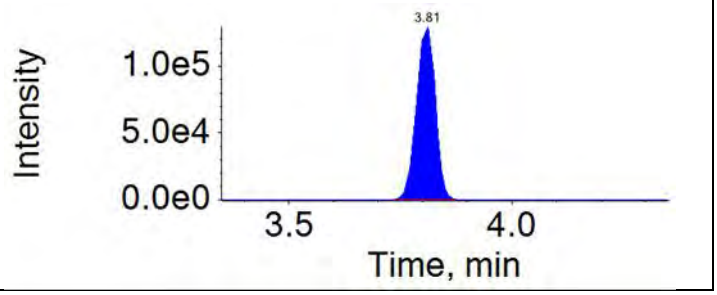
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



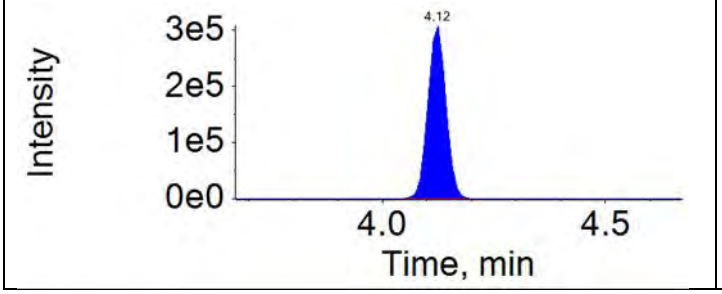


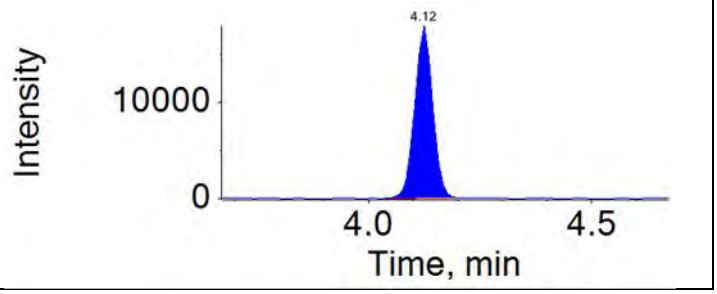
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

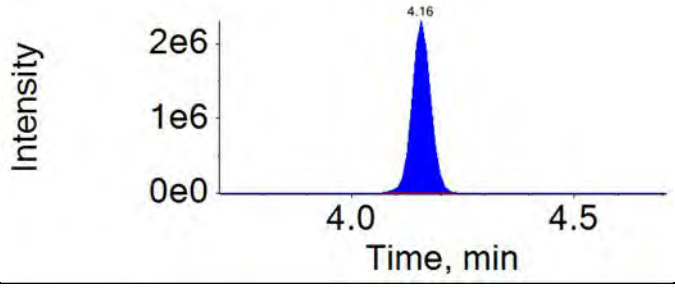
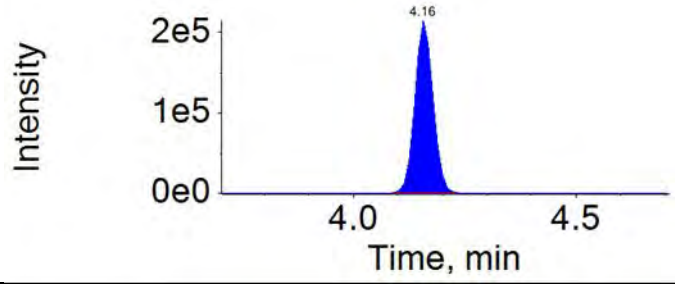


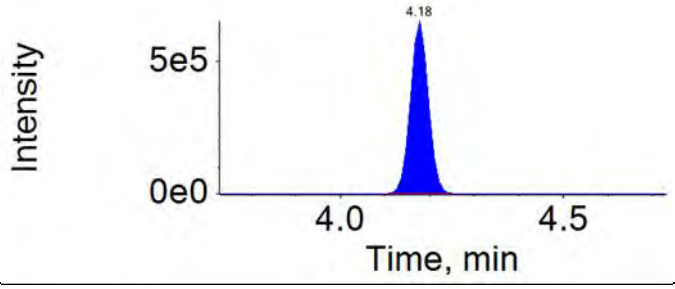
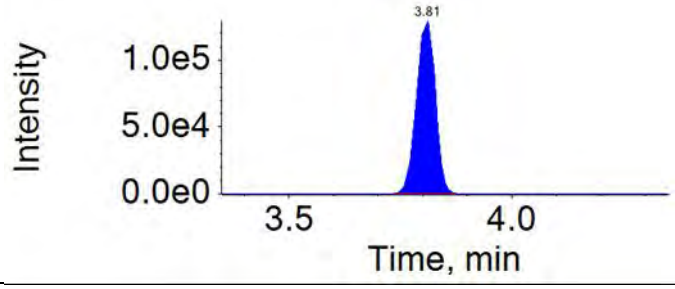


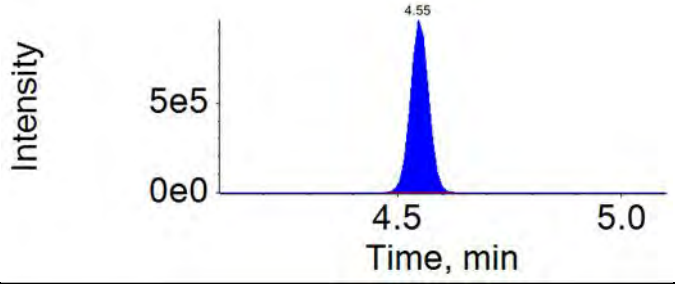
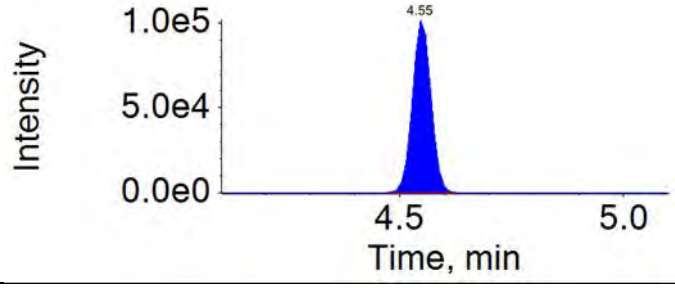
APPROVED
By JPT at 2:53 pm, 11/7/18

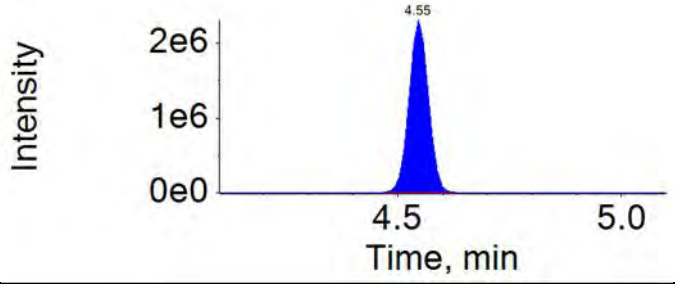
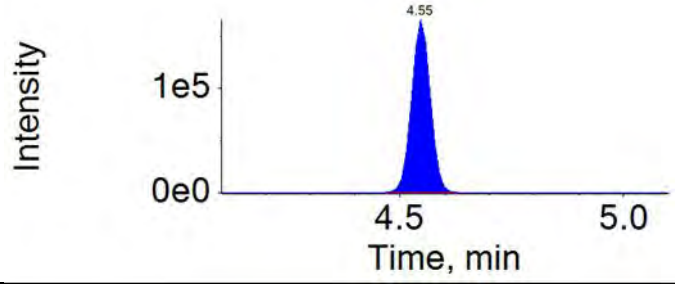
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

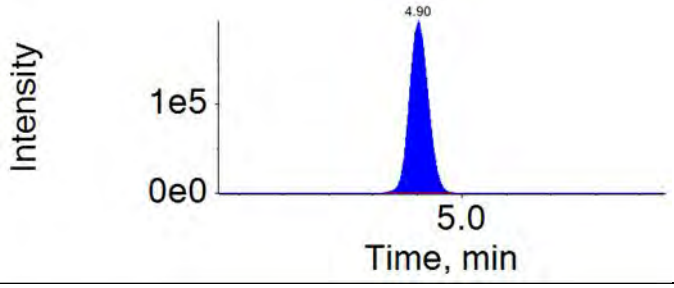
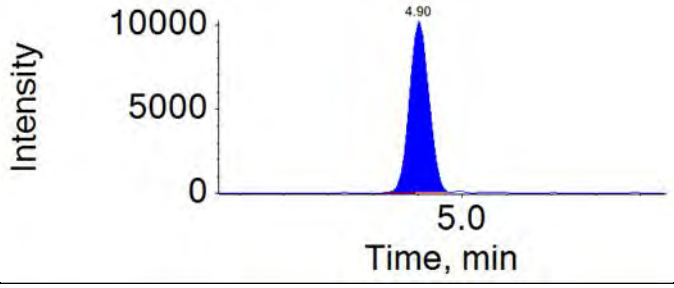
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

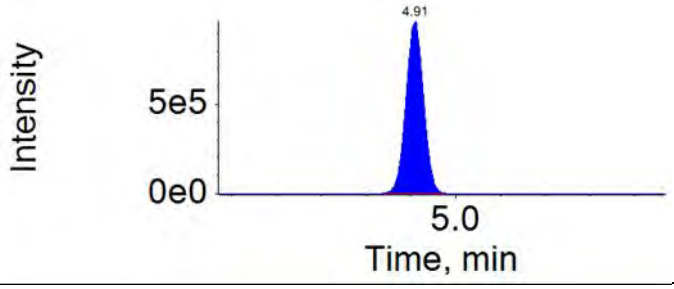
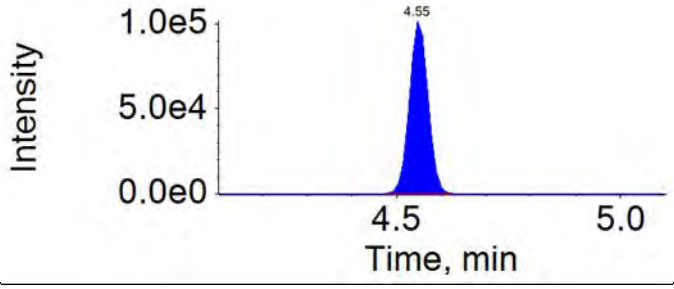
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

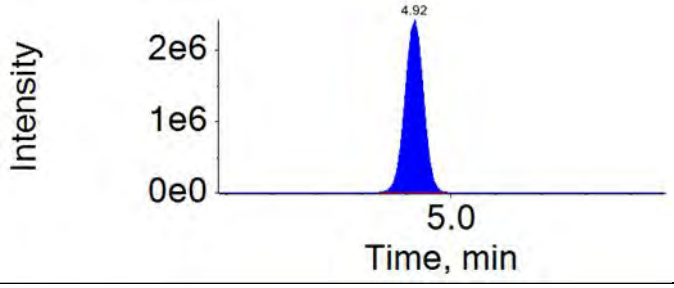
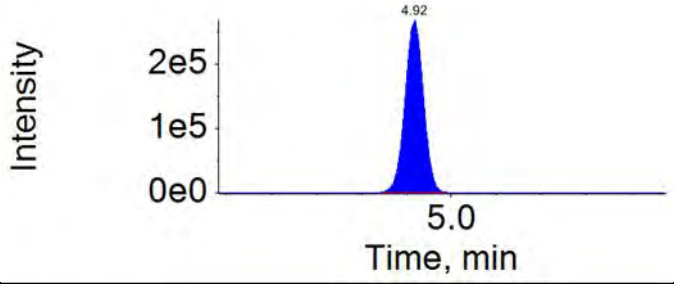
APPROVED
By JPT at 2:53 pm, 11/7/18

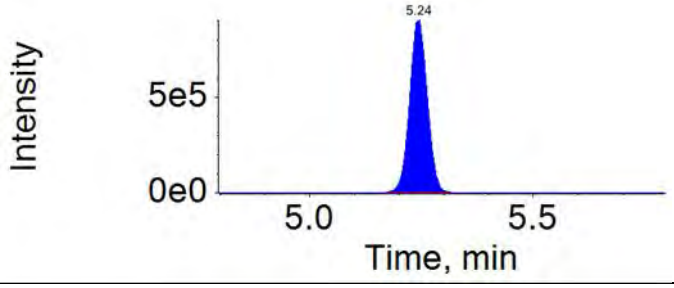
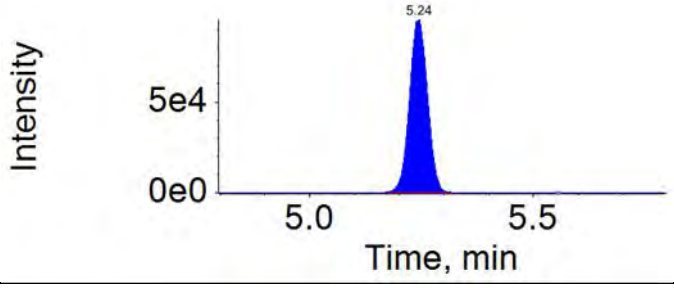
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

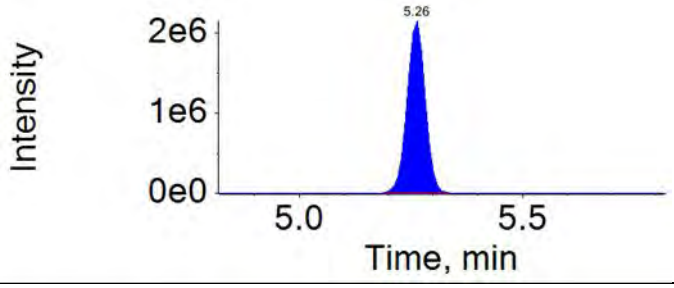
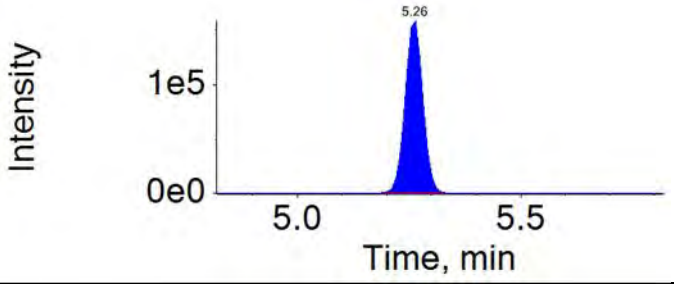
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

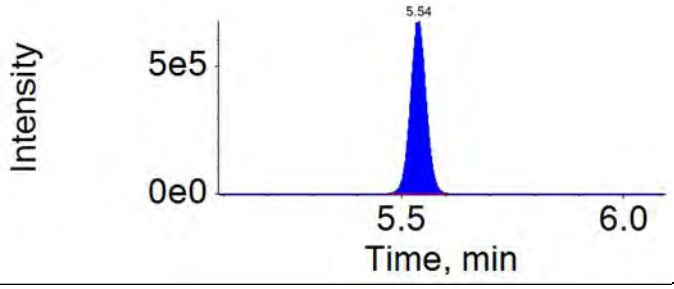
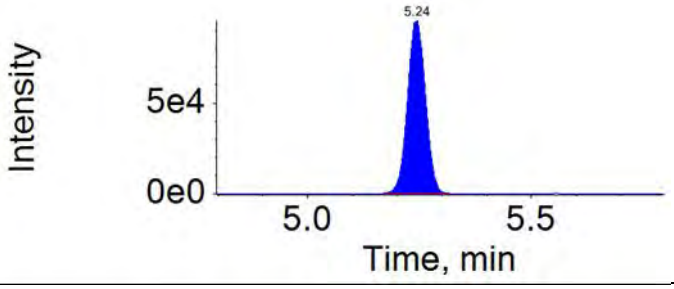
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

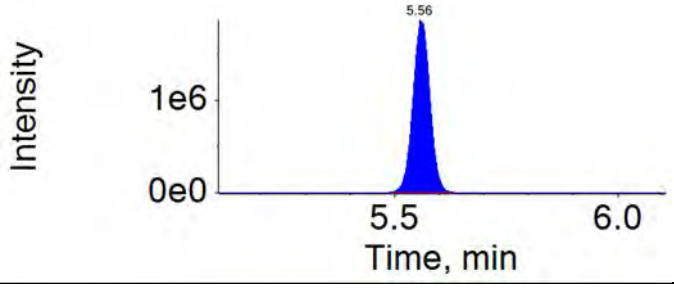
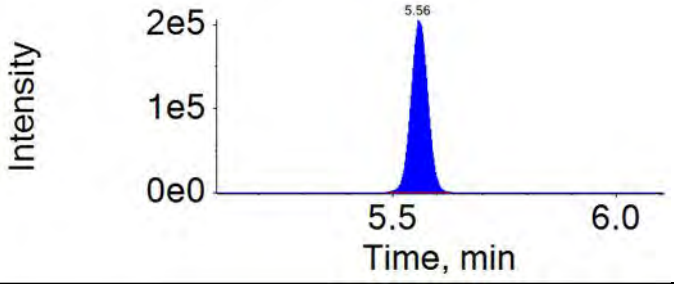
APPROVED
By JPT at 2:53 pm, 11/7/18

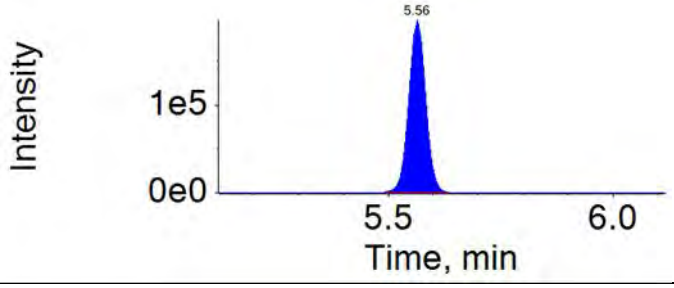
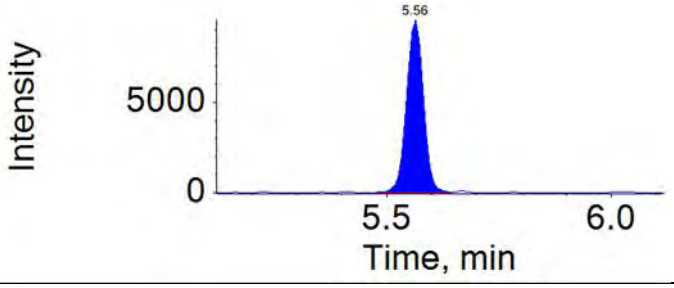
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

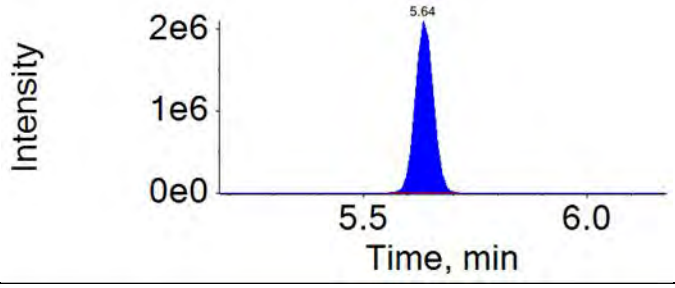
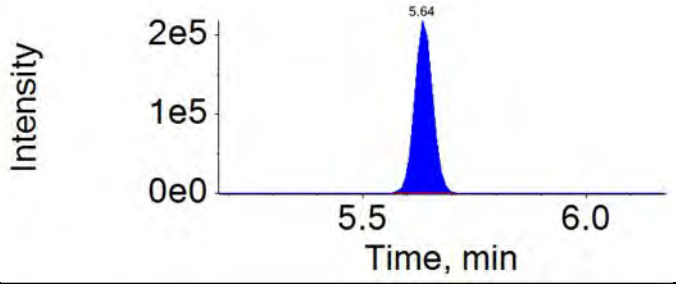
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

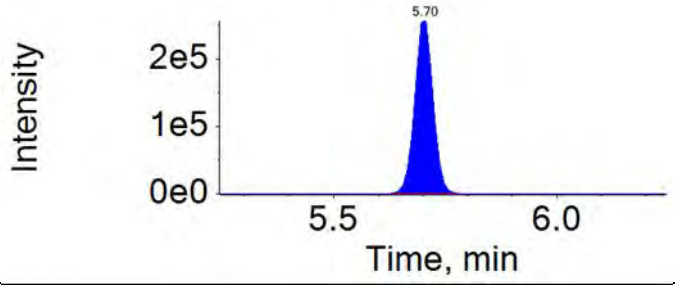
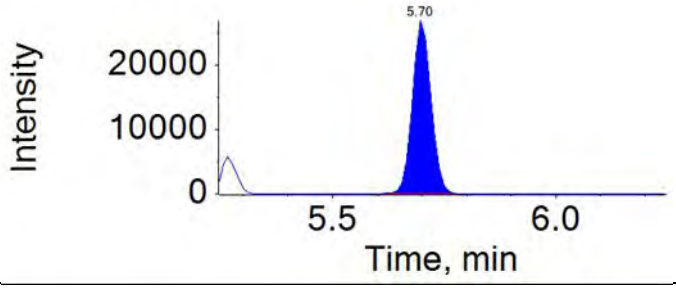
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

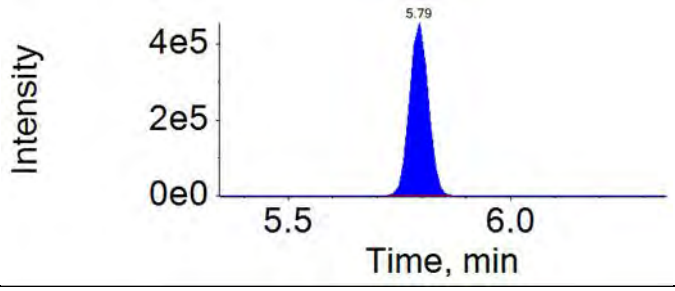
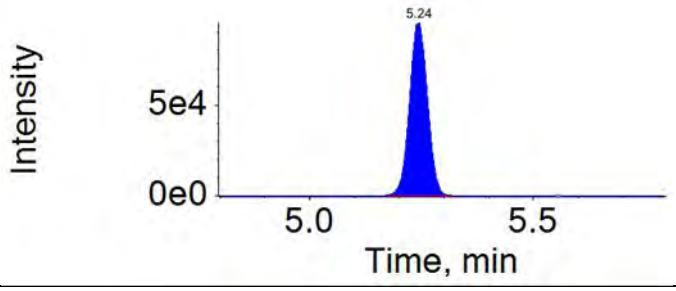
APPROVED
By JPT at 2:53 pm, 11/7/18

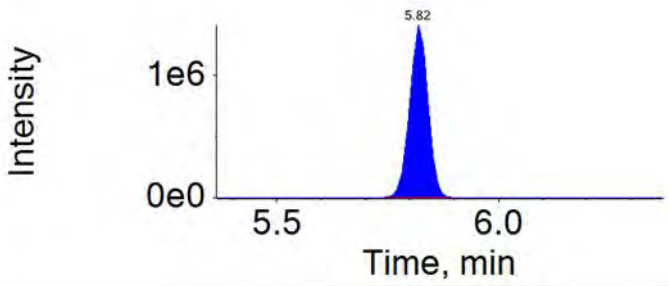
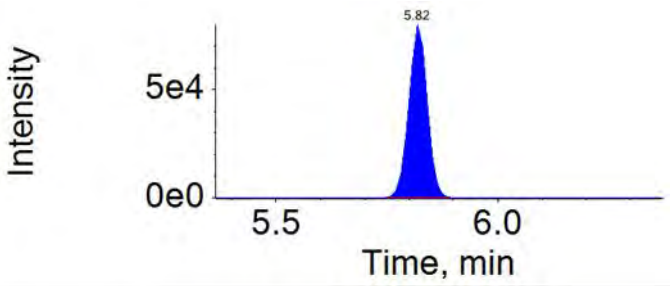
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

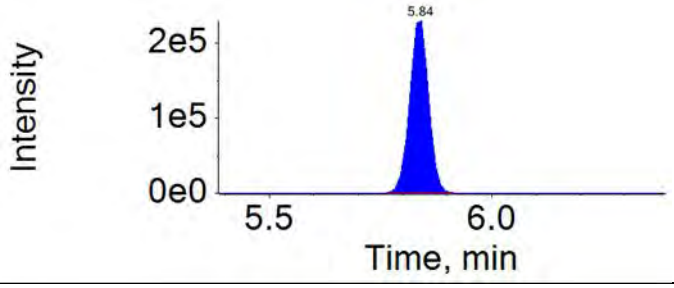
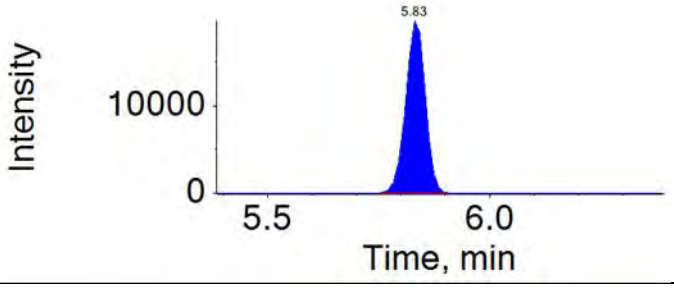
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

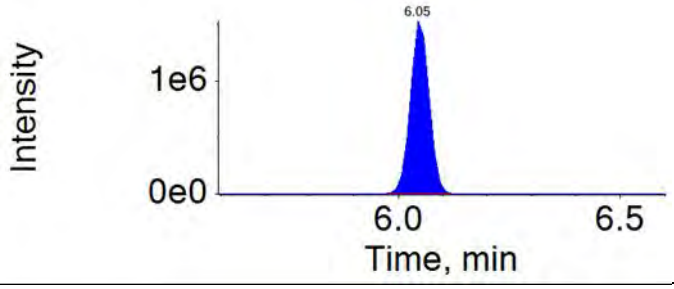
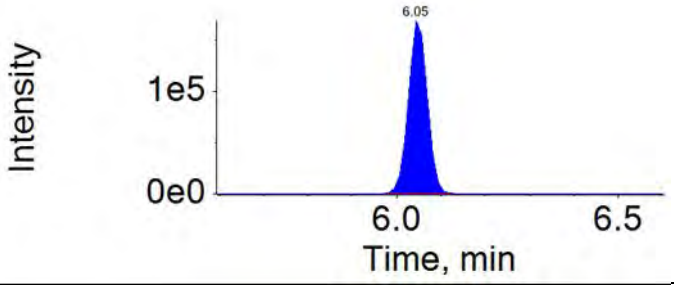
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

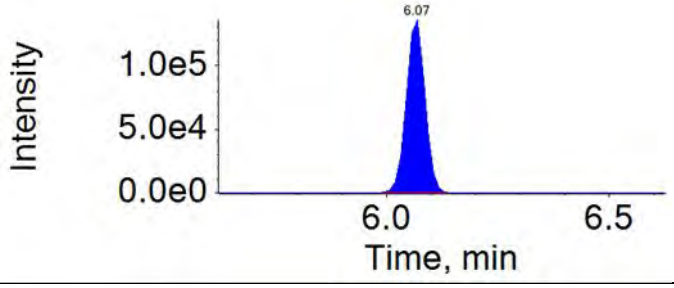
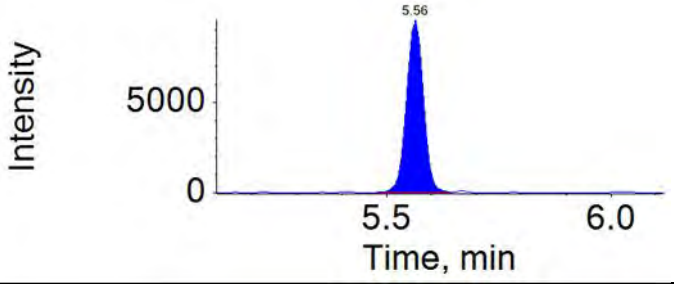
APPROVED
By JPT at 2:53 pm, 11/7/18

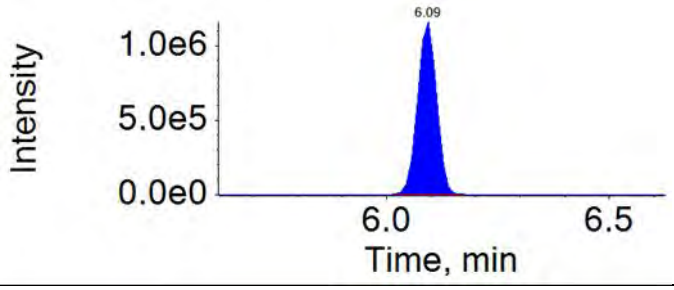
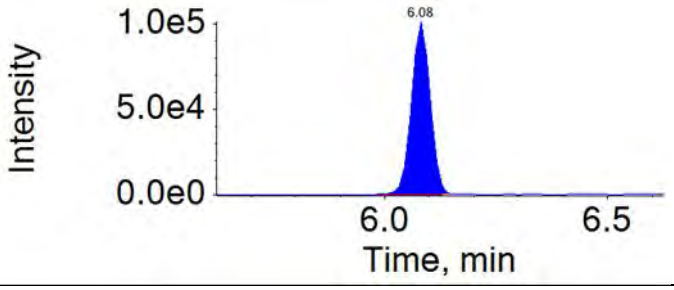
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

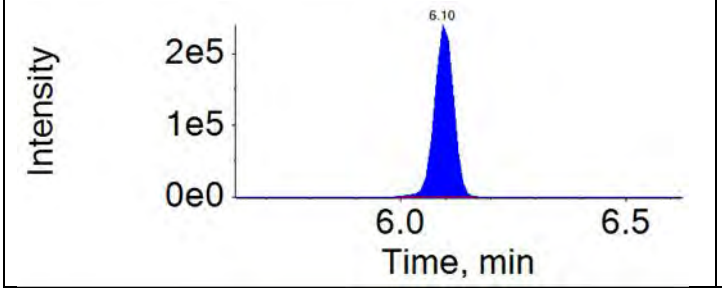
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

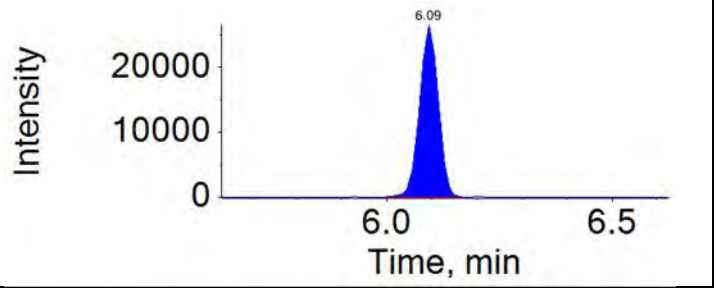
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

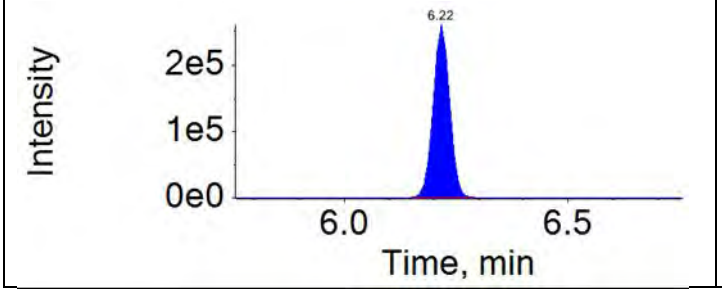
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

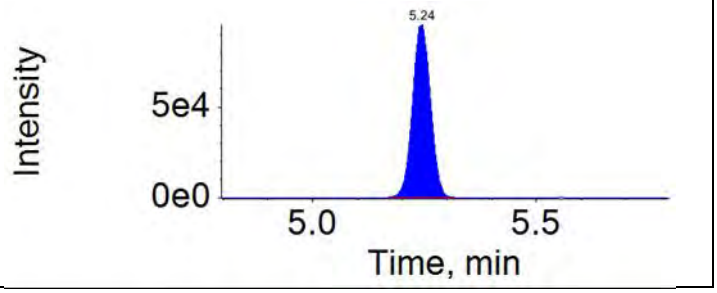
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



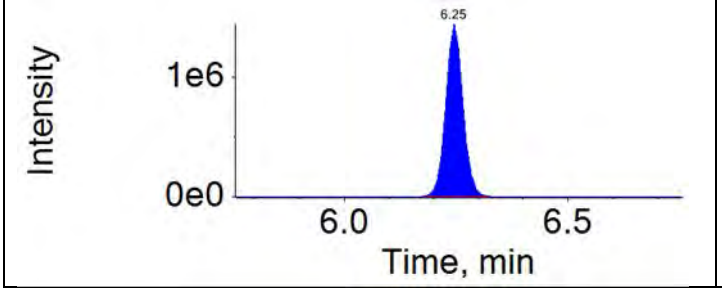


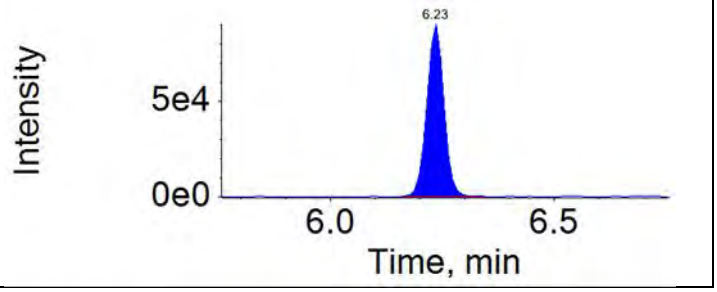
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



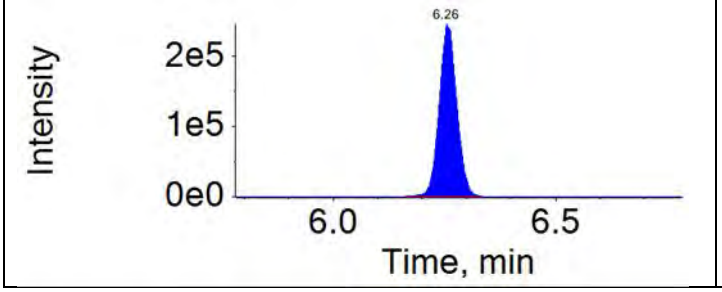


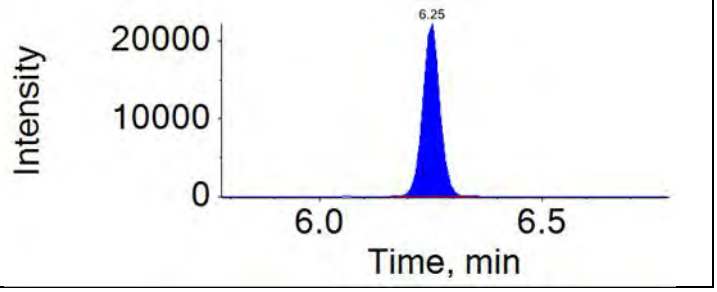
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

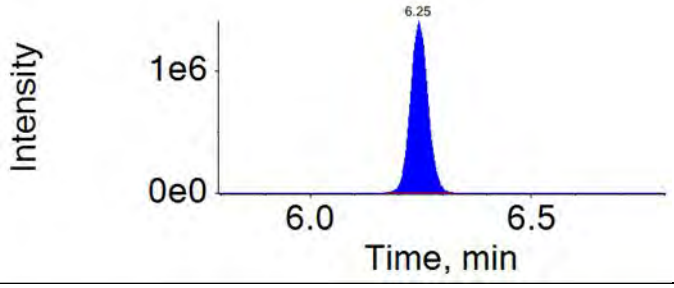
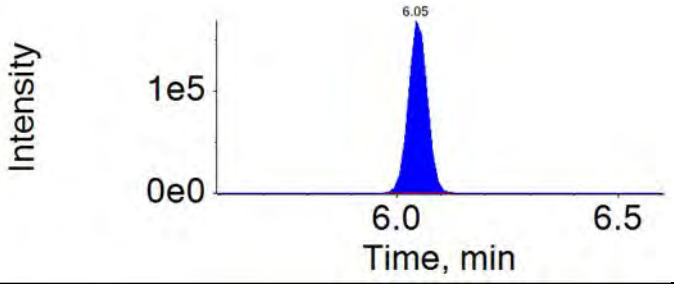


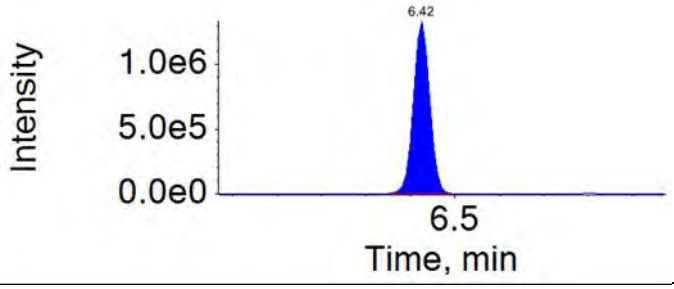
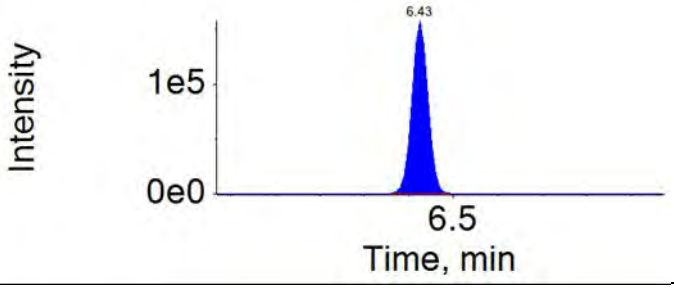


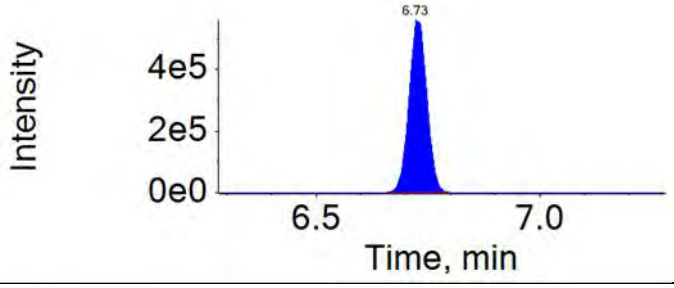
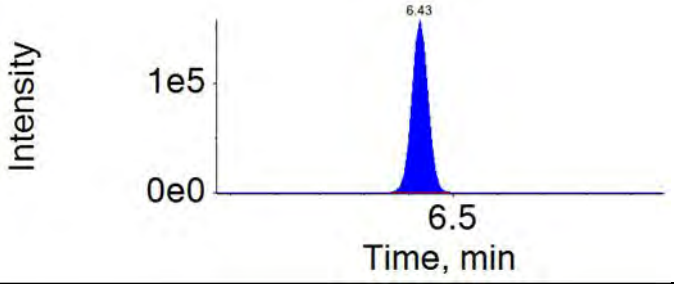
APPROVED
By JPT at 2:53 pm, 11/7/18

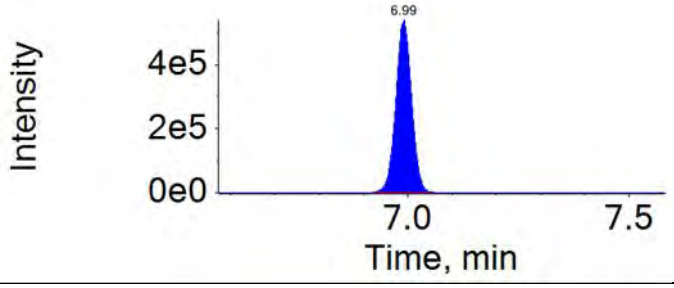
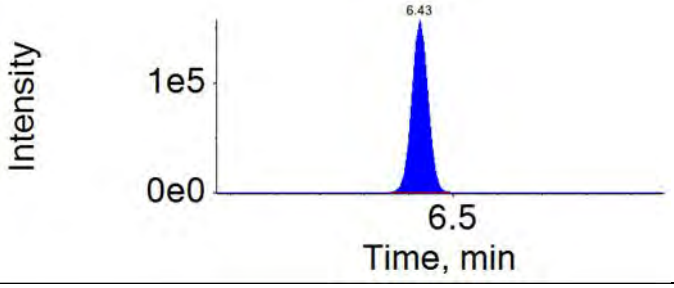
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

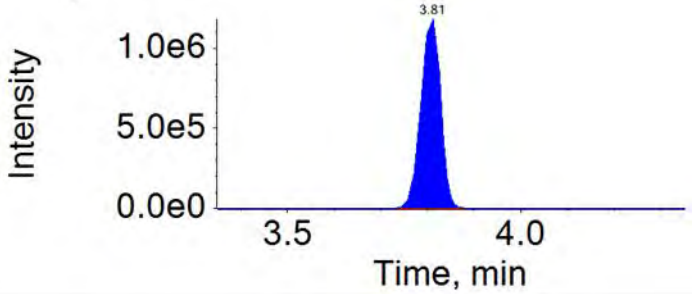
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3508201.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	1286846.1	A	0.3576	0.3668	3	50	
4:2-FTS	4.12	1.00	866263.6	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	524123.7	A	0.6359	0.6050	-5	50	
PFHxA	4.16	1.00	6739327.9	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	77061.9	A	0.0115	0.0114	0	50	
PFPeS	4.18	1.10	1823355.9	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	993764.2	A	0.5384	0.5450	1	50	
PFHxS	4.55	1.00	2760712.8	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	964116.9	A	0.3569	0.3492	-2	50	
PFHpA	4.55	1.00	6940304.7	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	395462.8	A	0.0577	0.0570	-1	50	
6:2-FTS	4.90	1.00	566692.8	A	1.0000	1.0000			
6:2-FTS_2	4.90	1.00	369783.6	A	0.6752	0.6525	-3	50	
PFHpS	4.91	1.08	2648512.9	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	1077513.1	A	0.3950	0.4068	3	50	
PFOA	4.92	1.00	7023921.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	420903.3	A	0.0635	0.0599	-6	50	
PFOS	5.24	1.00	2487687.4	A	1.0000	1.0000			
PFOS_2	5.24	1.00	854704.9	A	0.3494	0.3436	-2	50	
PFNA	5.26	1.00	6070259.1	A	1.0000	1.0000			
PFNA_2	5.26	1.00	127695.8	A	0.0207	0.0210	2	50	
PFNS	5.54	1.06	1684601.2	A	1.0000	1.0000			
PFNS_2	5.54	1.06	776478.1	A	0.4890	0.4609	-6	50	
PFDA	5.56	1.00	4962332.7	A	1.0000	1.0000			
PFDA_2	5.56	1.00	33135.1	A	0.0057	0.0067	18	50	
8:2-FTS	5.56	1.00	516640.5	A	1.0000	1.0000			
8:2-FTS_2	5.56	1.00	308500.7	A	0.6169	0.5971	-3	50	
NMeFOSAA	5.70	1.00	740651.6	A	1.0000	1.0000			
NMeFOSAA_2	5.70	1.00	170978.8	A	0.2206	0.2308	5	50	
PFDS	5.79	1.11	1337416.6	A	1.0000	1.0000			
PFDS_2	5.79	1.10	697007.4	A	0.4648	0.5212	12	50	
PFUnDA	5.82	1.00	4071590.3	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	14961.6	A	0.0031	0.0037	17	50	
NEtFOSAA	5.84	1.00	685447.7	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	416391.3	A	0.6082	0.6075	0	50	
PFDoDA	6.05	1.00	4509578.7	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	57065.9	A	0.0109	0.0127	16	50	
10:2-FTS	6.07	1.09	395929.8	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	276017.2	A	0.7082	0.6971	-2	50	
PFTrDA	6.25	1.03	3829048.4	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	35358.1	A	0.0096	0.0092	-4	50	
PFTeDA	6.42	1.00	3381511.1	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	21143.9	A	0.0055	0.0063	13	50	
PFHxDA	6.73	1.05	1559604.6	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	97226.7	A	0.0596	0.0623	5	50	
PFODA	6.99	1.09	1340733.9	A	1.0000	1.0000			
PFODA_2	6.99	1.09	34220.3	A	0.0257	0.0255	-1	50	

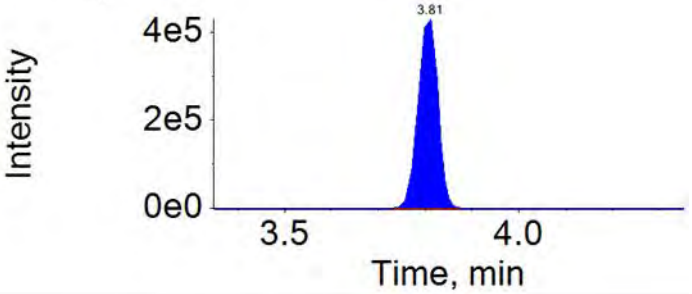
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

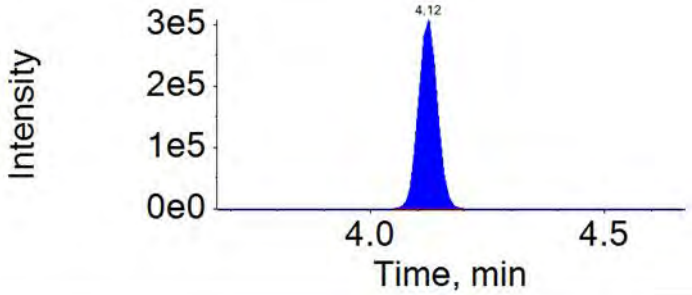
Component: PFBS
Primary Mass: 299.0 / 80.0



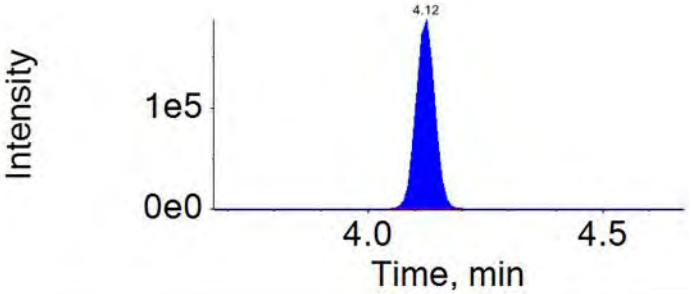
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



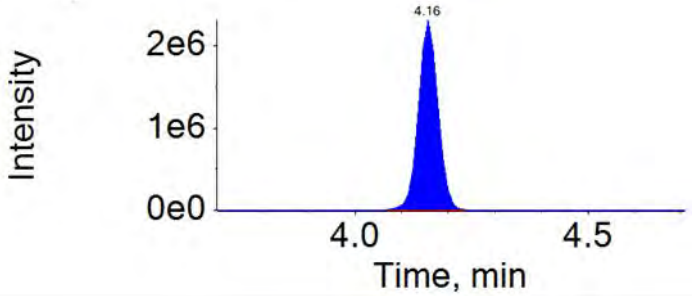
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



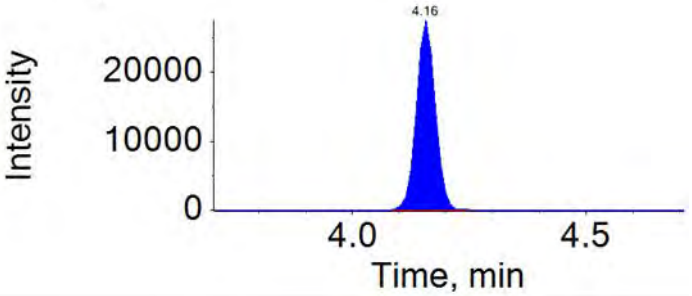
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



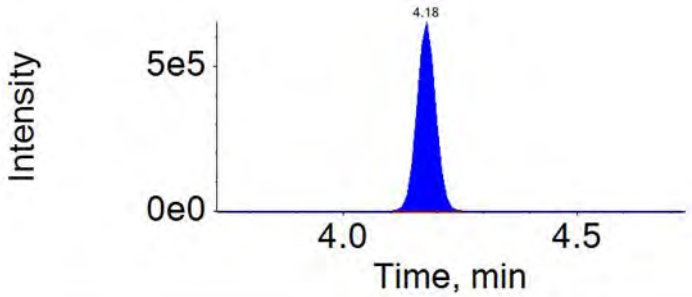
Component: PFHxA
Primary Mass: 313.0 / 269.0



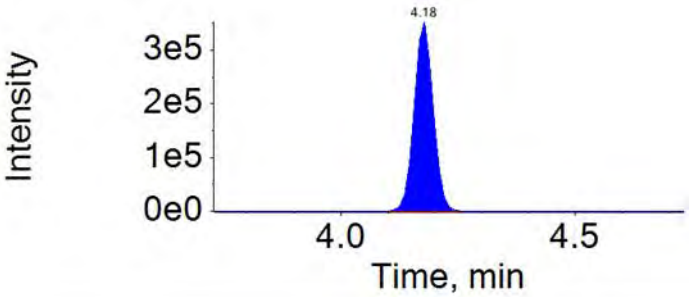
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



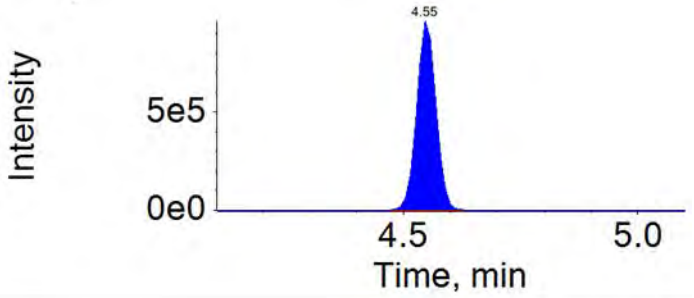
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



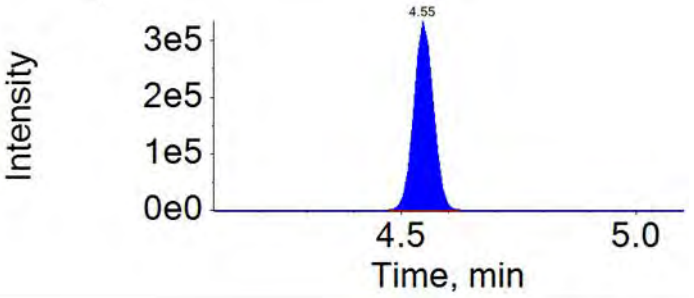
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

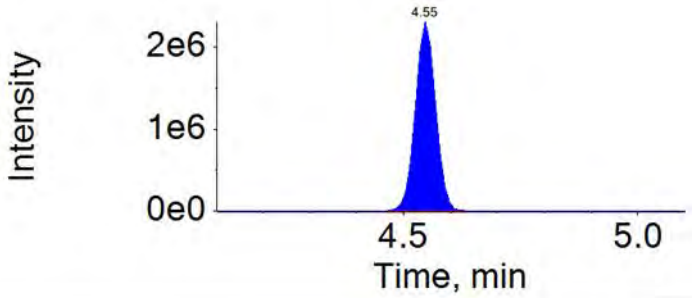
Component: PFHxS
Primary Mass: 399.0 / 80.0



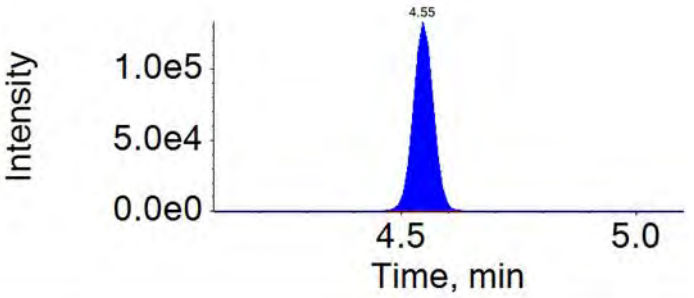
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



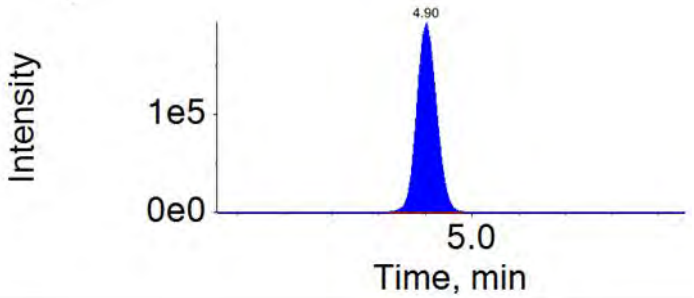
Component: PFHpA
Primary Mass: 363.0 / 319.0



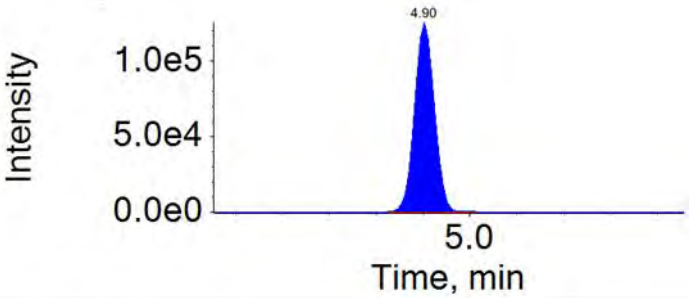
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



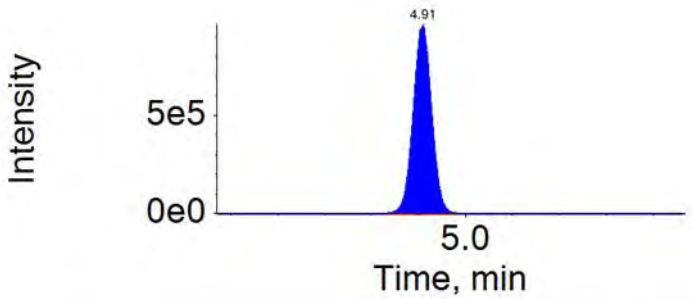
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



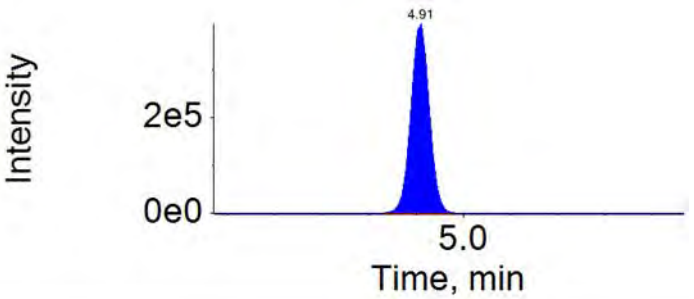
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



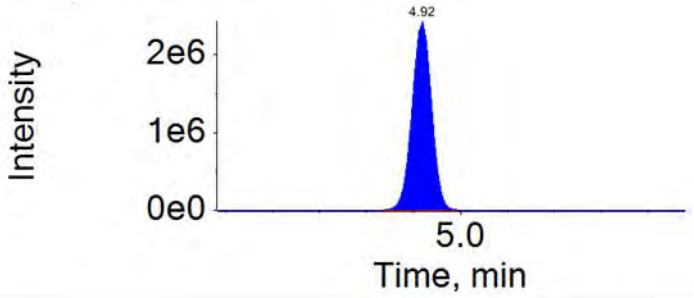
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



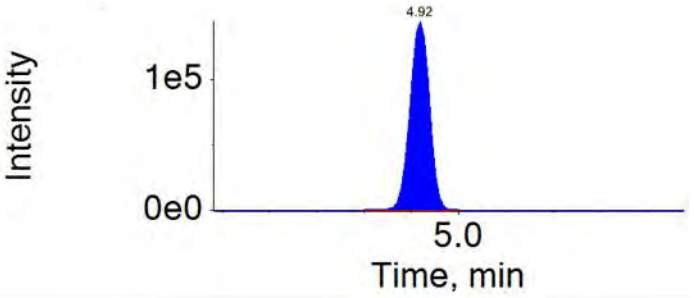
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

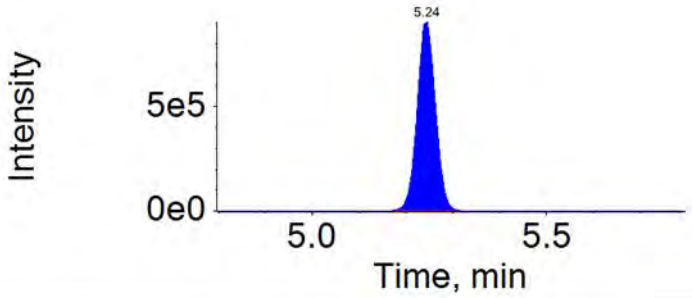
Component: PFOA
Primary Mass: 413.0 / 369.0



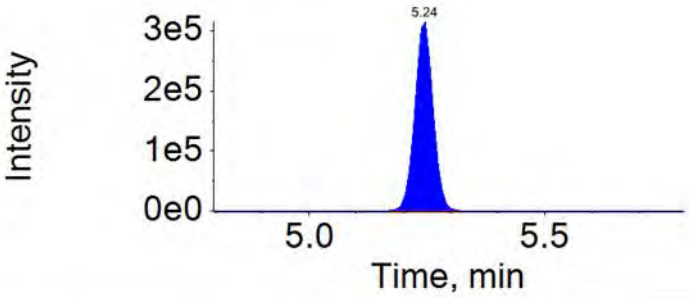
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



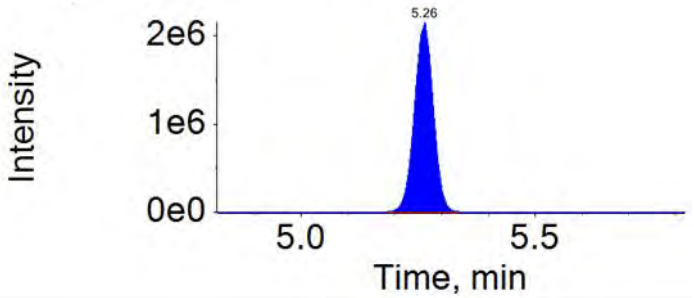
Component: PFOS
Primary Mass: 499.0 / 80.0



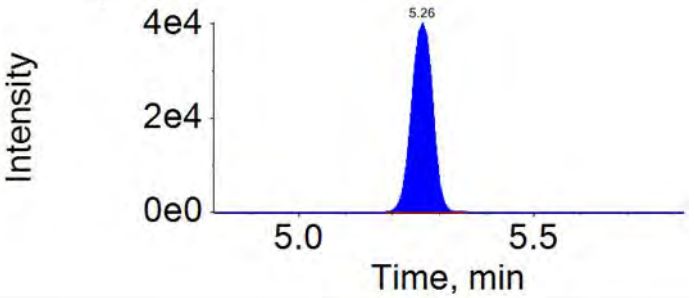
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



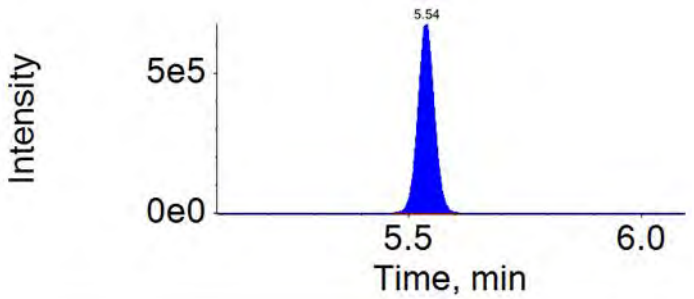
Component: PFNA
Primary Mass: 463.0 / 419.0



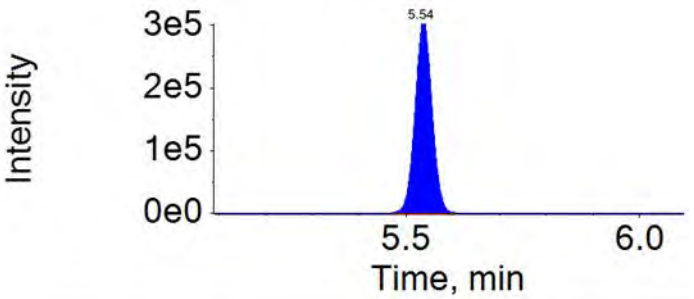
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



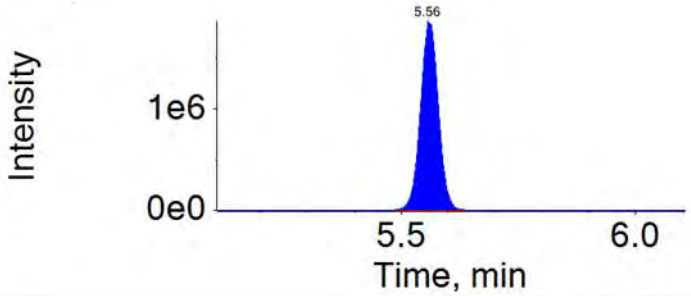
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



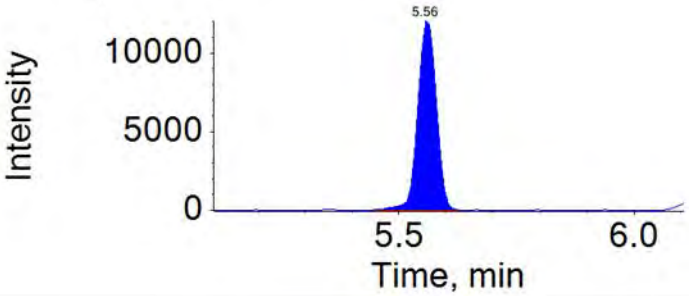
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

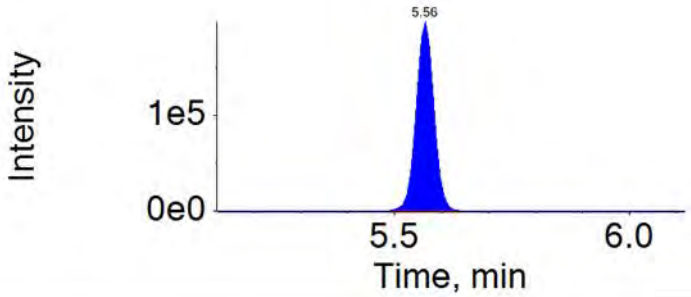
Component: PFDA
Primary Mass: 513.0 / 469.0



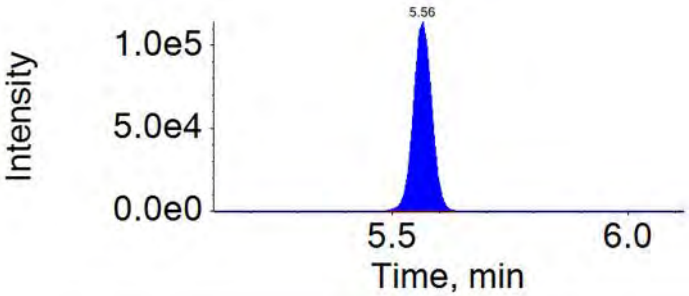
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



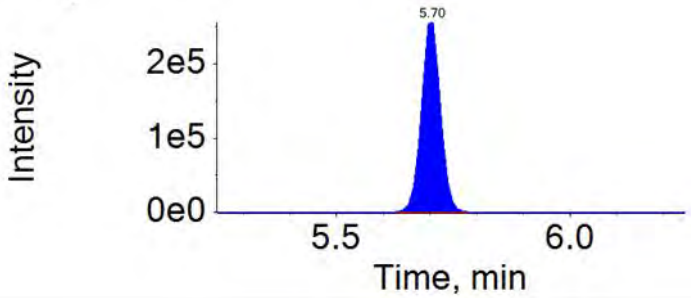
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



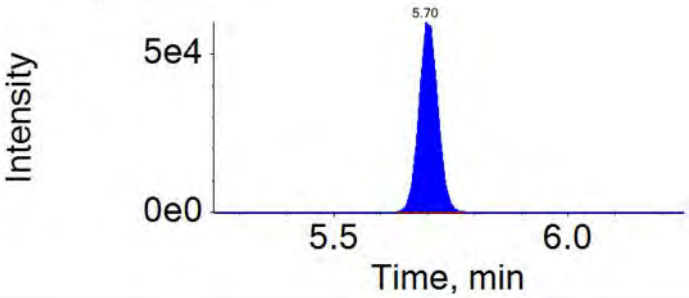
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



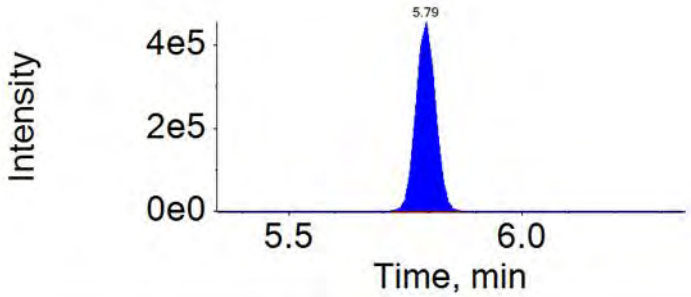
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



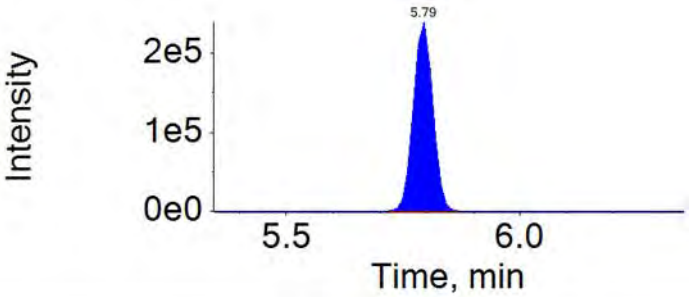
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



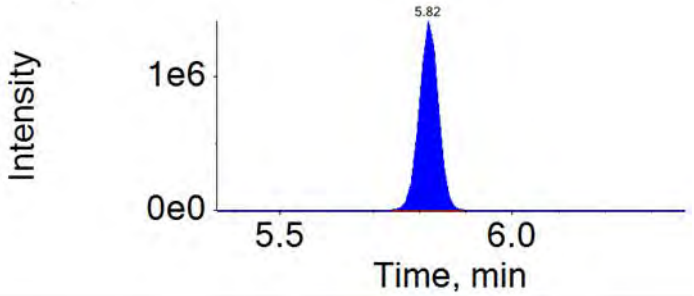
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



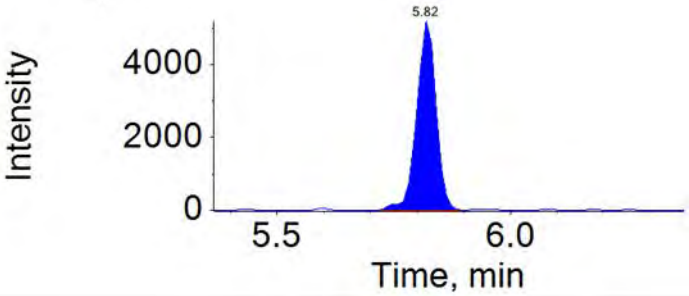
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

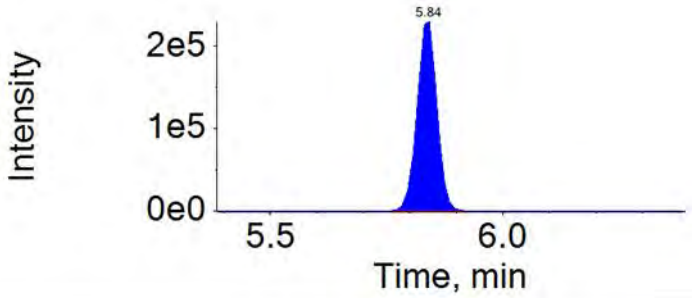
Component: PFUnDA
Primary Mass: 563.0 / 519.0



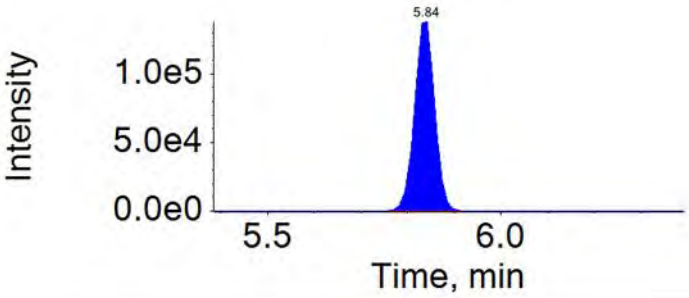
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



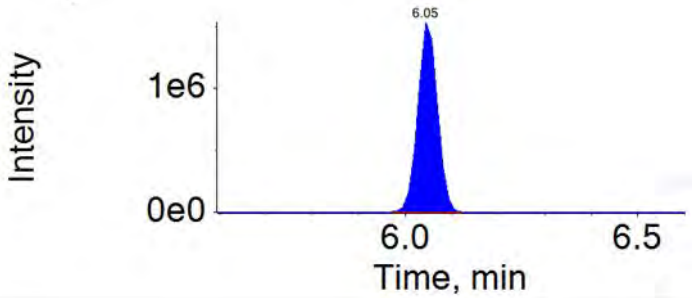
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



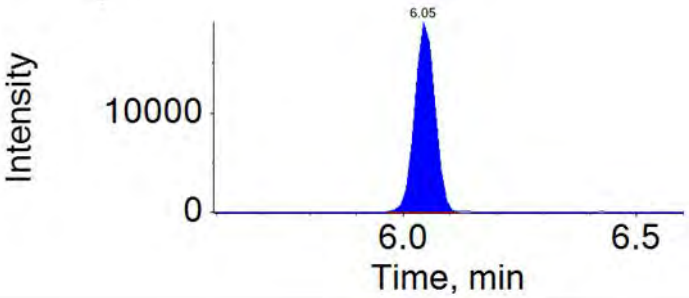
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



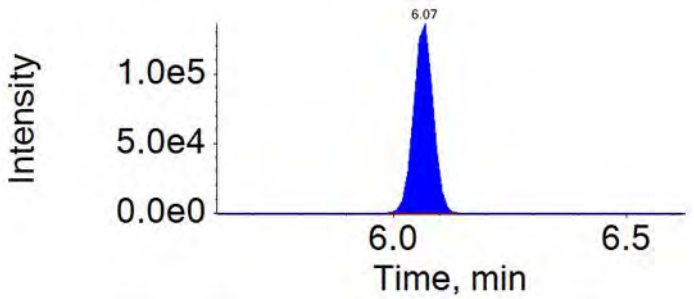
Component: PFDoDA
Primary Mass: 613.0 / 569.0



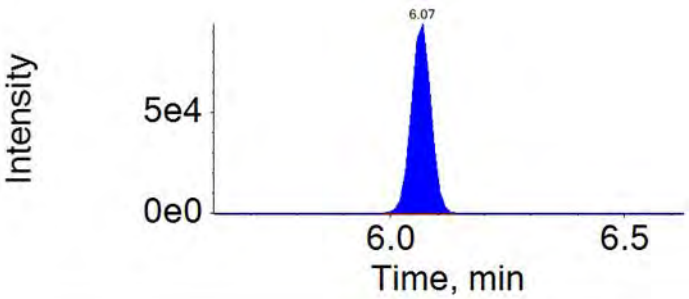
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



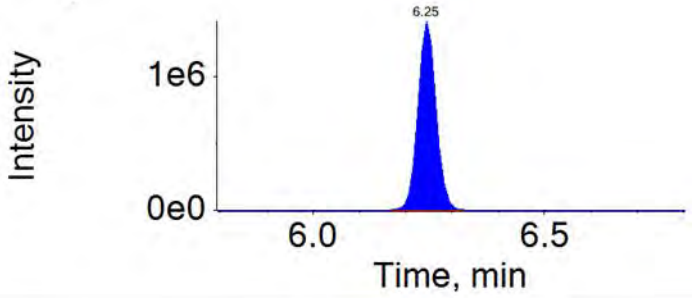
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



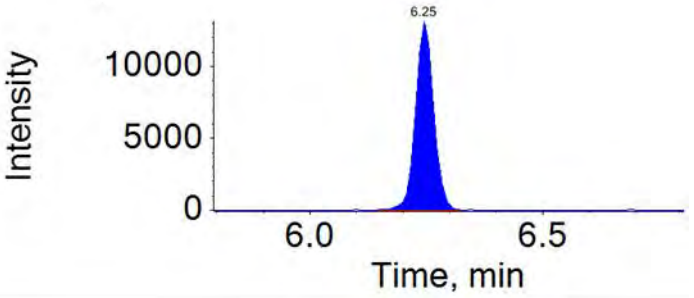
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

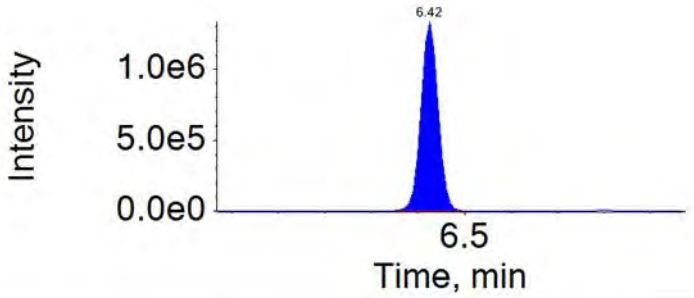
Component: PFTrDA
Primary Mass: 663.0 / 619.0



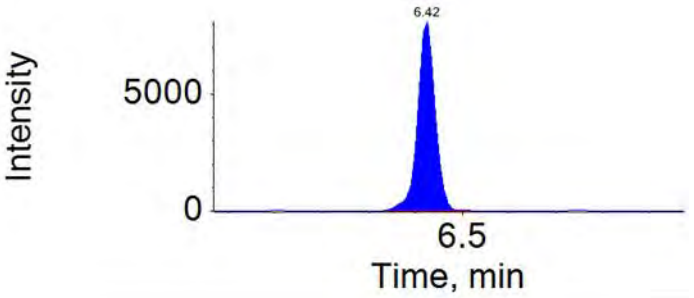
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



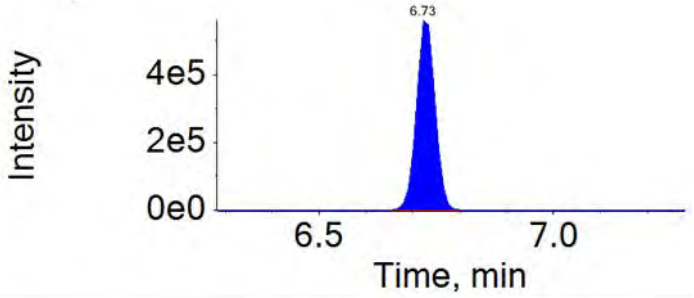
Component: PFTeDA
Primary Mass: 713.0 / 669.0



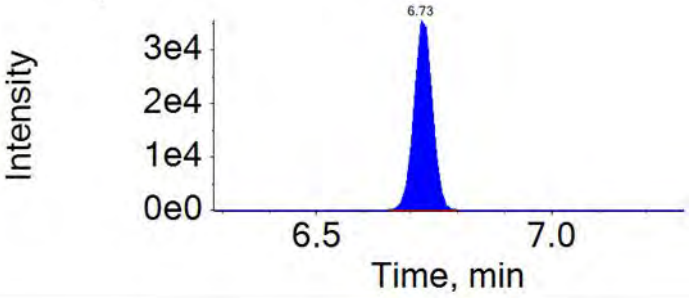
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



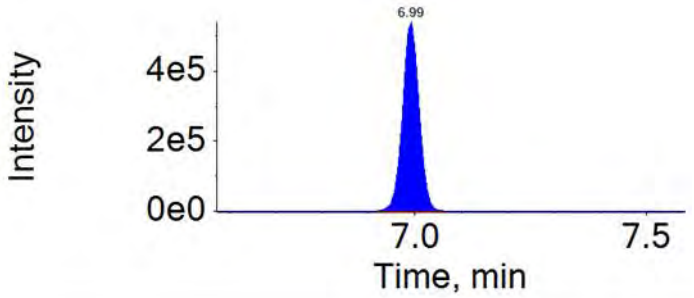
Component: PFHxDA
Primary Mass: 813.0 / 769.0



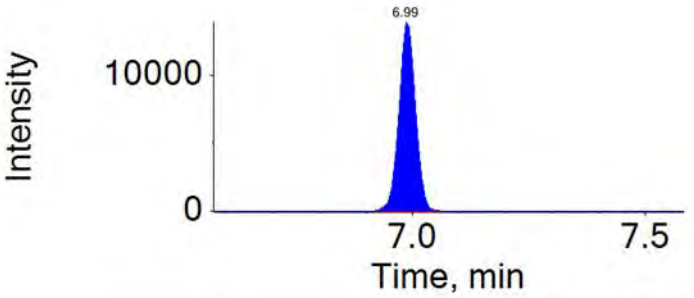
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV07DCAL-16.wiff
Sample ID:	CALMOD71833E			**Acquis Date:**		2018-11-07T10:33:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	554647.4	730410.6	-24	50	
13C2-PFOA	5.0	419465.9	524423.6	-20	50	
13C4-PFOS	4.8	253720.8	274061.7	-7	50	
13C2-PFDA	5.0	258292.2	311442.1	-17	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	609686.1	13C3-PFBA	554647.4	1.099	5.000	5.087	102	70-130	
E13C5-PFPeA	628265.5	13C3-PFBA	554647.4	1.133	5.000	4.935	99	70-130	
E13C3-PFBS	381345.5	13C3-PFBA	554647.4	0.688	4.650	5.046	109	70-130	
E13C2-4:2-FTS	46334.2	13C2-PFOA	419465.9	0.110	4.670	4.984	107	70-130	
E13C5-PFHxA	571807.5	13C2-PFOA	419465.9	1.363	5.000	5.014	100	70-130	
E13C3-PFHxS	279859.6	13C2-PFOA	419465.9	0.667	4.730	4.790	101	70-130	
E13C4-PFHpA	457160.4	13C2-PFOA	419465.9	1.090	5.000	4.958	99	70-130	
E13C2-6:2-FTS	26549.1	13C2-PFOA	419465.9	0.063	4.750	4.221	89	70-130	
E13C8-PFOA	678914.6	13C2-PFOA	419465.9	1.619	5.000	4.513	90	70-130	
E13C8-PFOS	264295.9	13C4-PFOS	253720.8	1.042	4.780	4.606	96	70-130	
E13C9-PFNA	402916.7	13C4-PFOS	253720.8	1.588	5.000	4.338	87	70-130	
E13C6-PFDA	480927.9	13C2-PFDA	258292.2	1.862	5.000	4.682	94	70-130	
E13C2-8:2-FTS	24555.7	13C2-PFDA	258292.2	0.095	4.790	5.031	105	70-130	
E13C8-PFOSA	603296.1	13C2-PFDA	258292.2	2.336	5.000	5.097	102	70-130	
Ed3-NMeFOSAA	75408.7	13C2-PFDA	258292.2	0.292	5.000	5.429	109	70-130	
E13C7-PFUnDA	212399.8	13C2-PFDA	258292.2	0.822	5.000	4.744	95	70-130	
Ed5-NEtFOSAA	56963.1	13C2-PFDA	258292.2	0.221	5.000	5.104	102	70-130	
E13C2-PFDoDA	525971.8	13C2-PFDA	258292.2	2.036	5.000	5.490	110	70-130	
Ed7-NMePFOSAE	295395.3	13C2-PFDA	258292.2	1.144	5.000	5.318	106	70-130	
Ed3-NMePFOSA	80053.2	13C2-PFDA	258292.2	0.310	5.000	5.674	113	70-130	
Ed9-NEtPFOSAE	235038.0	13C2-PFDA	258292.2	0.910	5.000	5.197	104	70-130	
Ed5-NEtPFOSA	58686.1	13C2-PFDA	258292.2	0.227	5.000	5.261	105	70-130	
E13C2-PFTeDA	384058.1	13C2-PFDA	258292.2	1.487	5.000	5.353	107	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

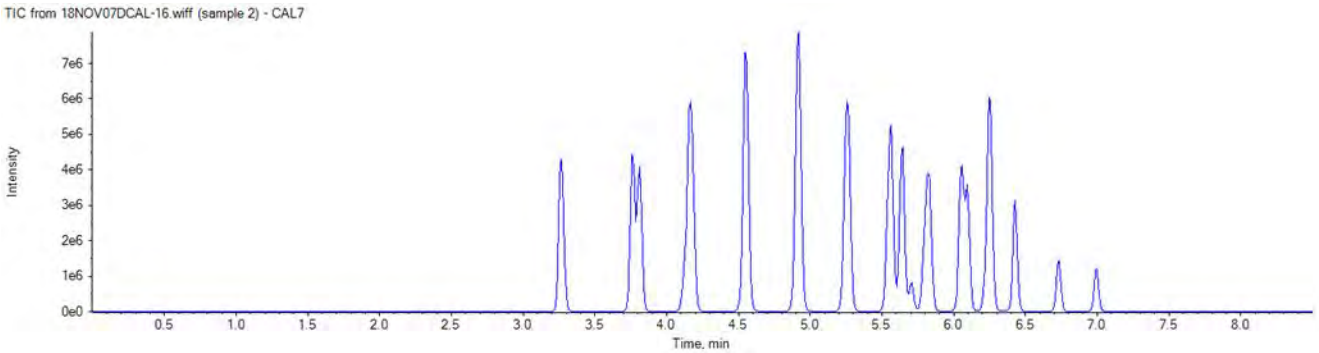
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	9954520.3		A	13C4-PFBA	3.26	609686.1	16.327	95.554
PFPeA	3.76	1.000	10229627.8		A	13C5-PFPeA	3.76	628265.5	16.282	96.765
PFBS	3.81	1.000	6474525.0		A	13C3-PFBS	3.81	381345.5	16.978	85.599
4:2-FTS	4.13	1.000	1576786.3		A	13C2-4:2-FTS	4.13	46334.2	34.031	91.487
PFHxA	4.16	1.000	11658104.6		A	13C5-PFHxA	4.16	571807.5	20.388	87.434
PFPeS	4.18	1.100	3615170.2		A	13C3-PFBS	3.81	381345.5	9.480	93.501
PFHxS	4.55	1.000	5196245.3		A	13C3-PFHxS	4.55	279859.6	18.567	94.113
PFHpA	4.55	1.000	11701142.2		A	13C4-PFHpA	4.55	457160.4	25.595	86.081
6:2-FTS	4.90	1.000	988785.9		A	13C2-6:2-FTS	4.91	26549.1	37.244	92.910
PFHpS	4.91	1.080	5085803.6		A	13C3-PFHxS	4.55	279859.6	18.173	95.074
PFOA	4.92	1.000	11562348.7		A	13C8-PFOA	4.92	678914.6	17.031	95.892
PFOS	5.25	1.000	4830627.6		A	13C8-PFOS	5.24	264295.9	18.277	94.776
PFNA	5.27	1.000	10279837.9		A	13C9-PFNA	5.26	402916.7	25.514	95.349
PFNS	5.54	1.060	3119908.2		A	13C8-PFOS	5.24	264295.9	11.805	93.596
PFDA	5.56	1.000	8415098.4		A	13C6-PFDA	5.56	480927.9	17.498	96.265
8:2-FTS	5.57	1.000	936483.2		A	13C2-8:2-FTS	5.57	24555.7	38.137	85.963
PFOSA	5.64	1.000	11064835.5		A	13C8-PFOSA	5.64	603296.1	18.341	99.141
NMeFOSAA	5.70	1.000	1450331.2		A	d3-NMeFOSAA	5.70	75408.7	19.233	98.963
PFDS	5.80	1.110	2660525.2		A	13C8-PFOS	5.24	264295.9	10.066	96.161
PFUnDA	5.82	1.000	7204782.9		A	13C7-PFUnDA	5.82	212399.8	33.921	97.277
NEtFOSAA	5.84	1.000	1317020.6		A	d5-NEtFOSAA	5.84	56963.1	23.121	99.363
PFDoDA	6.05	1.000	8211828.8		A	13C2-PFDoDA	6.05	525971.8	15.613	84.613
10:2-FTS	6.07	1.090	747804.5		A	13C2-8:2-FTS	5.57	24555.7	30.453	94.827
NMePFOSAE	6.09	1.000	6220772.1		A	d7-NMePFOSAE	6.08	295395.3	21.059	94.369
NMePFOSA	6.10	1.000	1386738.5		A	d3-NMePFOSA	6.10	80053.3	17.323	96.961
PFDoS	6.22	1.190	1333847.1		A	13C8-PFOS	5.24	264295.9	5.047	97.407
NEtPFOSAE	6.25	1.000	6995371.5		A	d9-NEtPFOSAE	6.24	235038.1	29.763	95.411
NEtPFOSA	6.26	1.000	1329706.9		A	d5-NEtPFOSA	6.26	58686.1	22.658	99.791
PFTrDA	6.25	1.030	6633128.3		A	13C2-PFDoDA	6.05	525971.8	12.611	79.528
PFTeDA	6.43	1.000	6426587.4		A	13C2-PFTeDA	6.43	384058.1	16.733	98.263
PFHxDA	6.73	1.050	3073572.7		A	13C2-PFTeDA	6.43	384058.1	8.003	99.343
PFODA	6.99	1.090	2676698.5		A	13C2-PFTeDA	6.43	384058.1	6.970	99.849

Total Ion Chromatogram

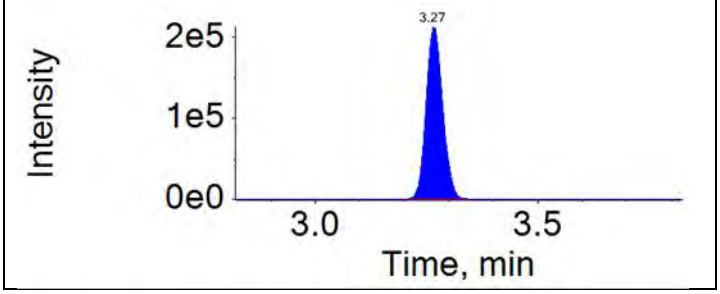


APPROVED
By JPT at 2:53 pm, 11/7/18

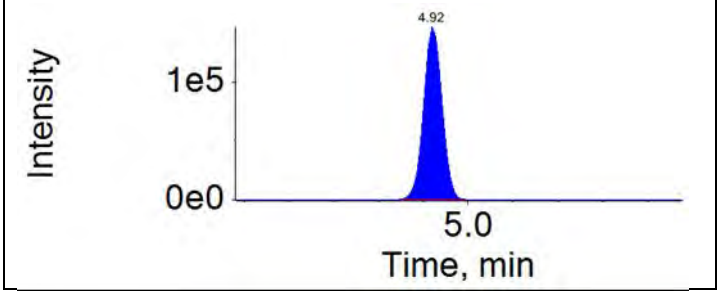
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

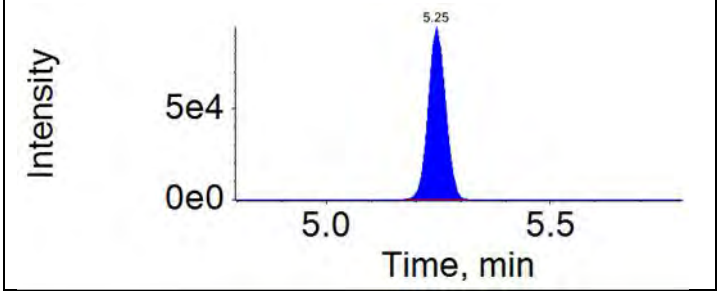
Injection Standard: 13C3-PFBA
216.0 / 172.0



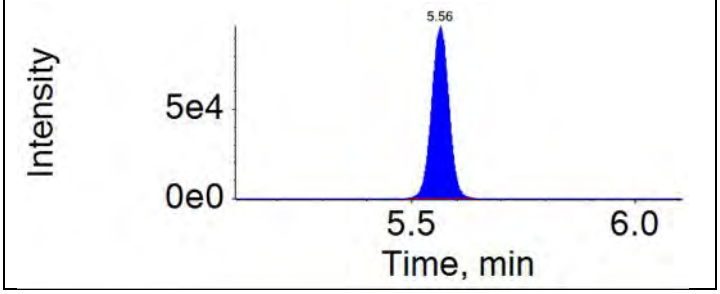
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



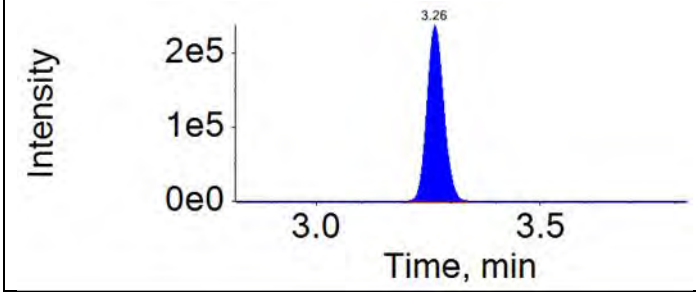
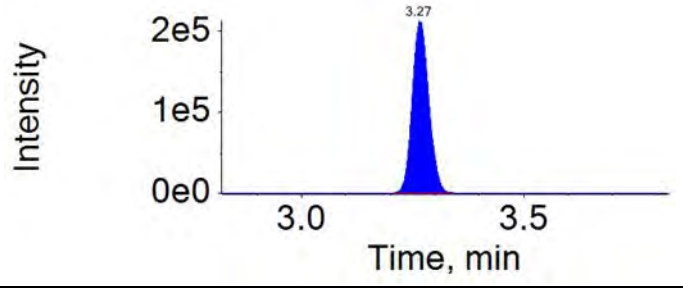
Injection Standard: 13C2-PFDA
515.0 / 470.0

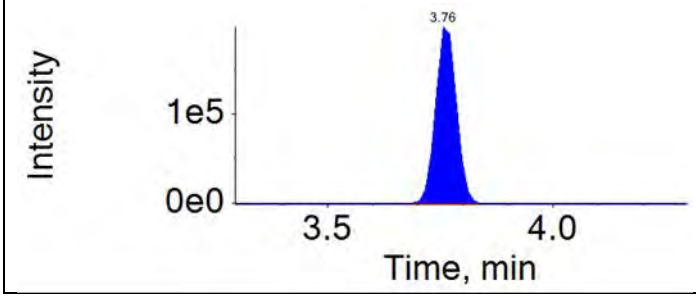
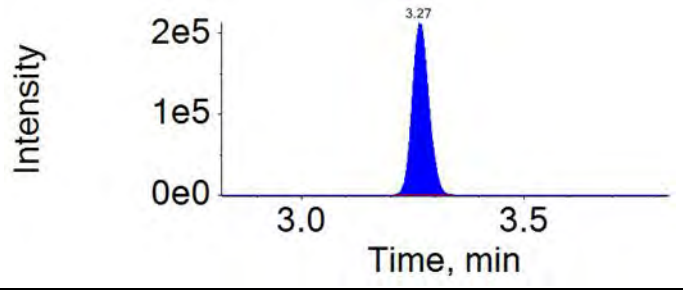


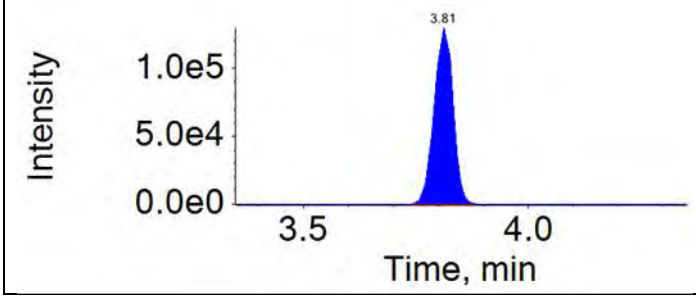
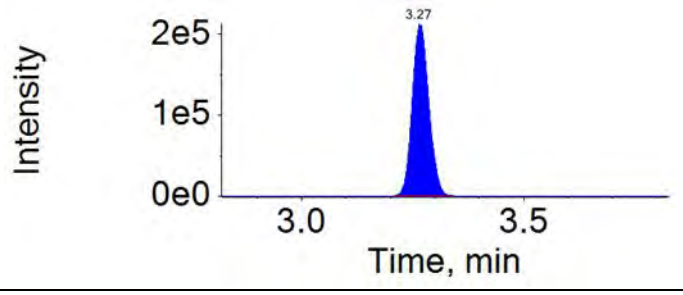
APPROVED
By JPT at 2:53 pm, 11/7/18

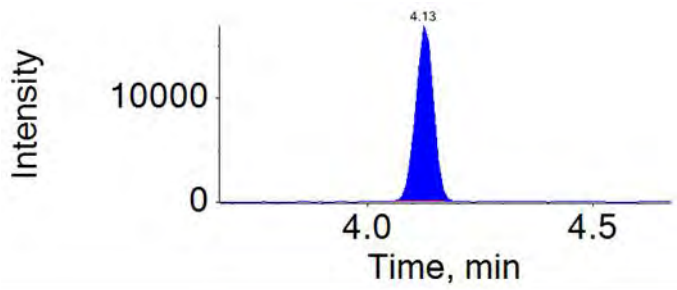
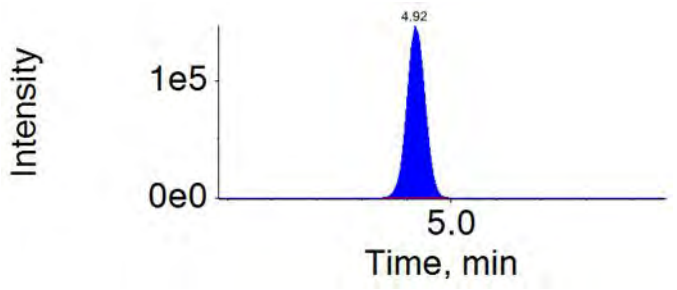
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

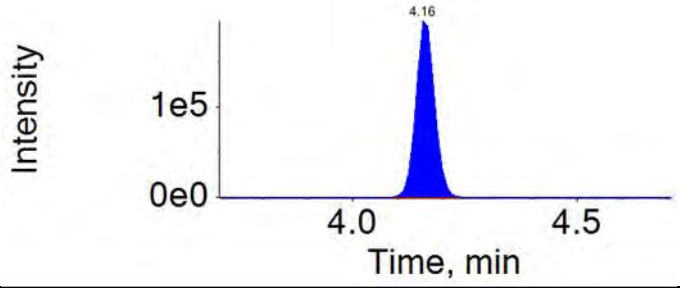
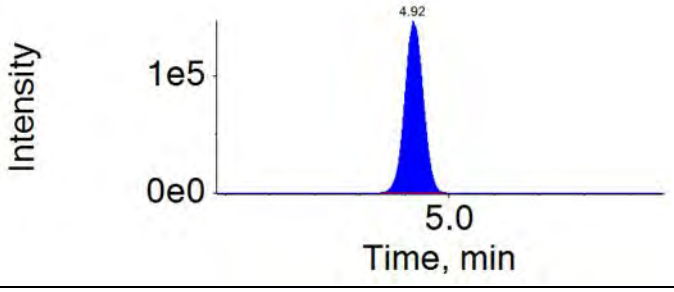
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

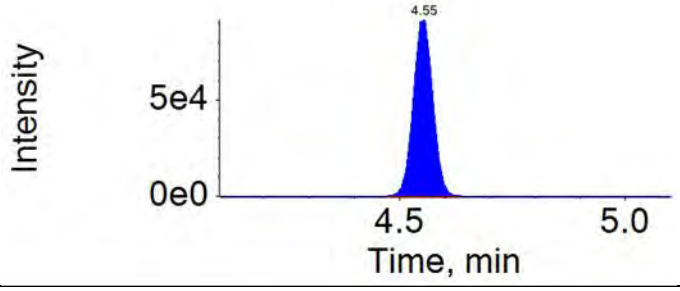
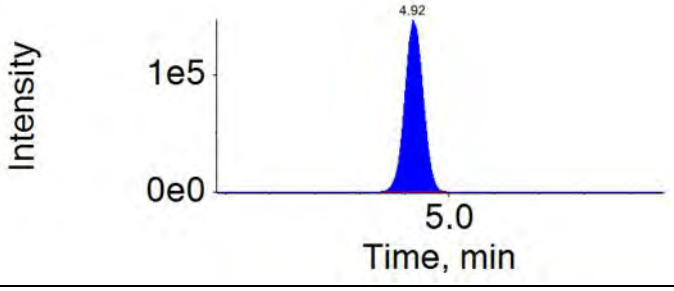
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

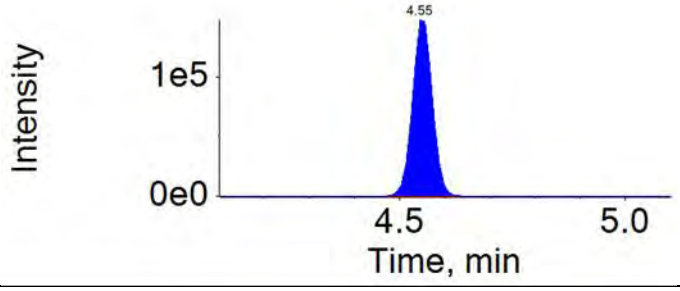
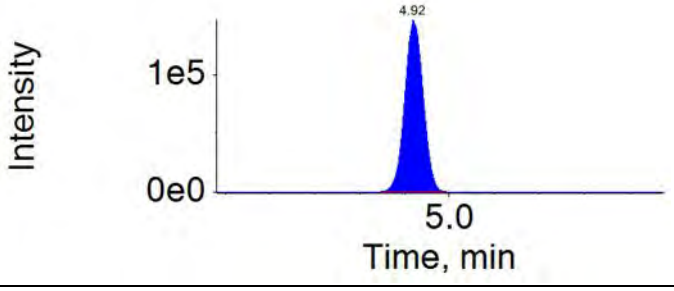
APPROVED
By JPT at 2:53 pm, 11/7/18

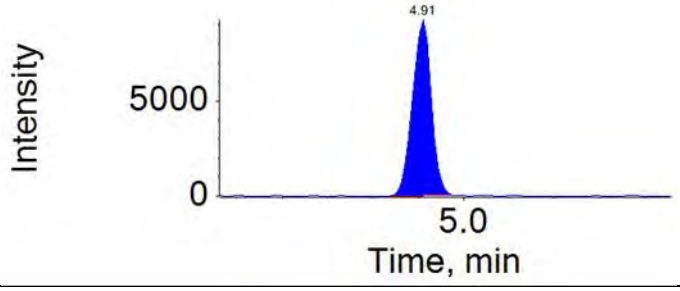
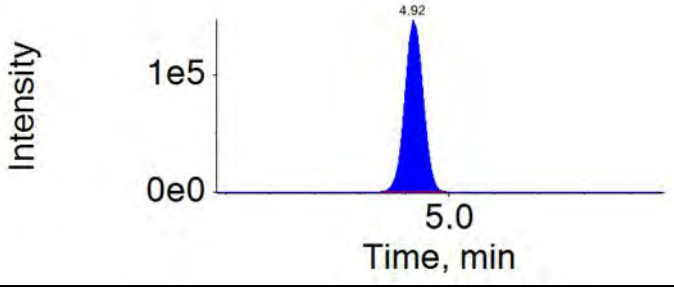
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

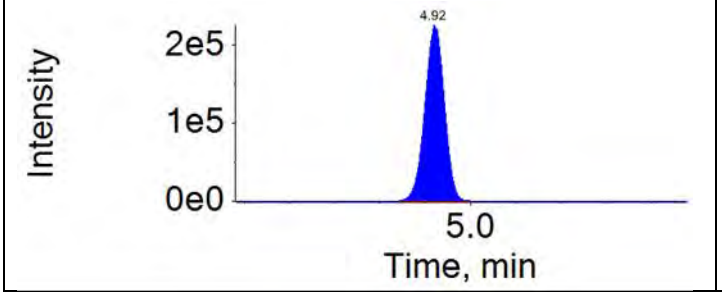
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

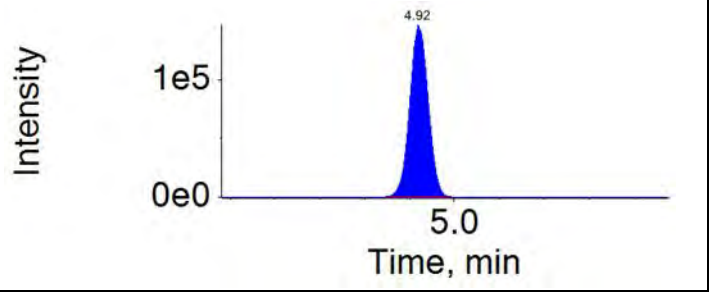
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

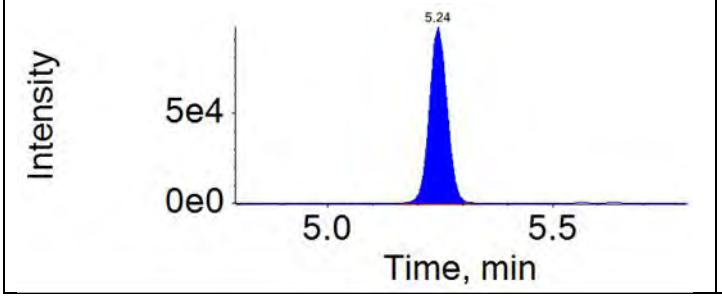
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

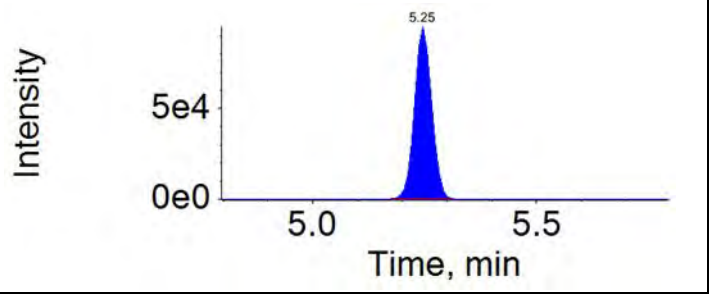
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



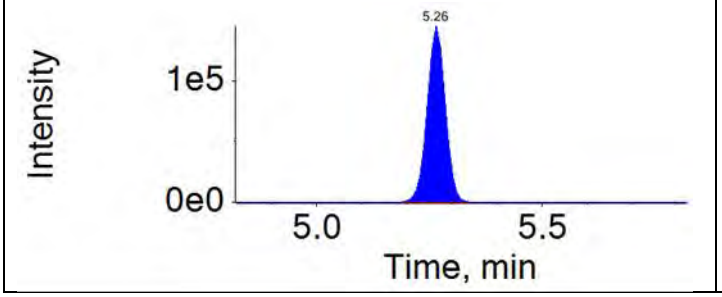


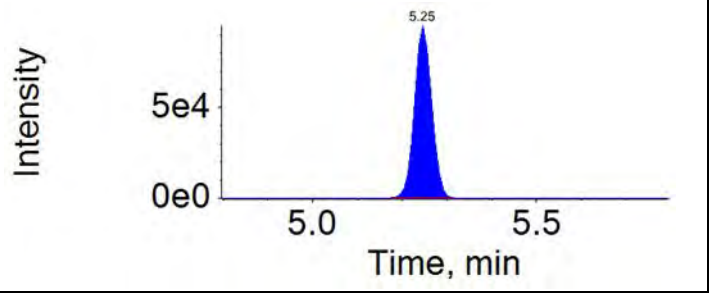
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



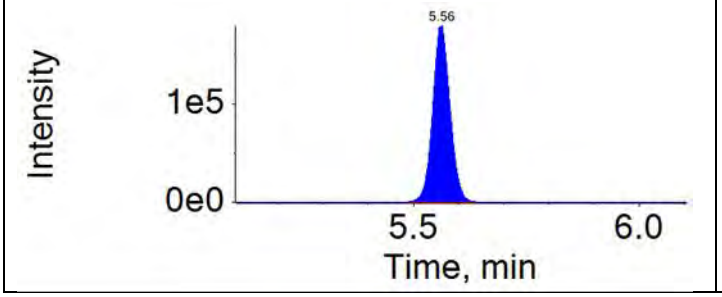


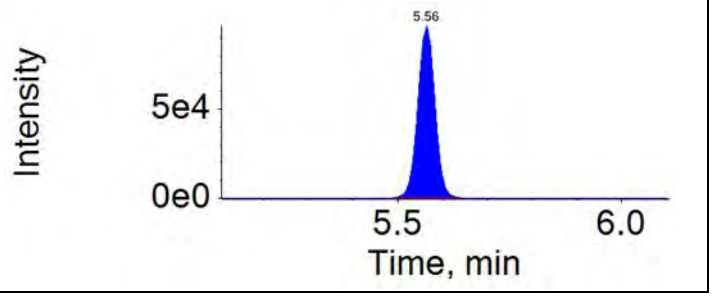
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

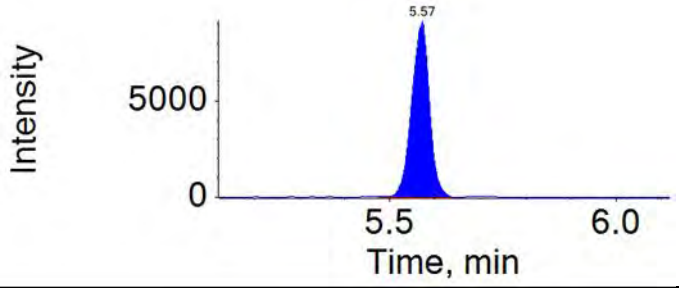
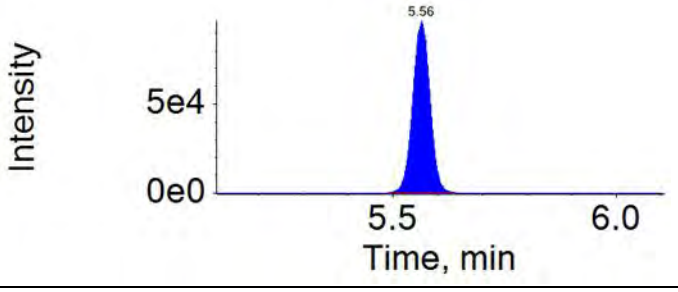


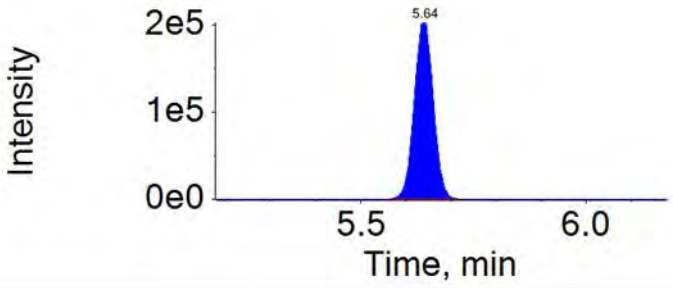
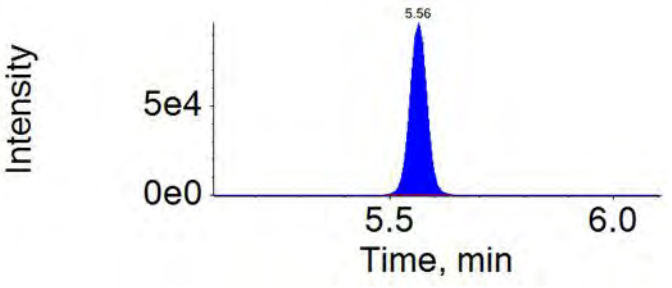


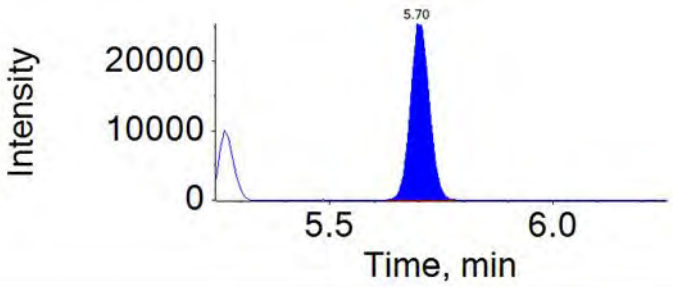
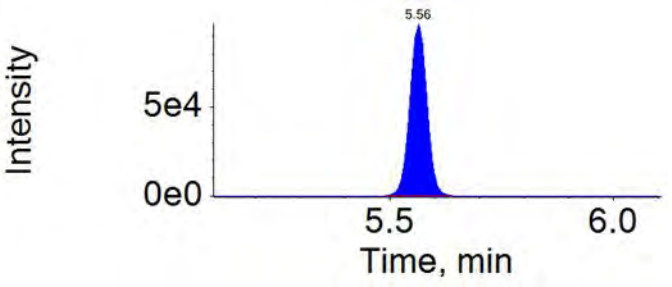
APPROVED
By JPT at 2:53 pm, 11/7/18

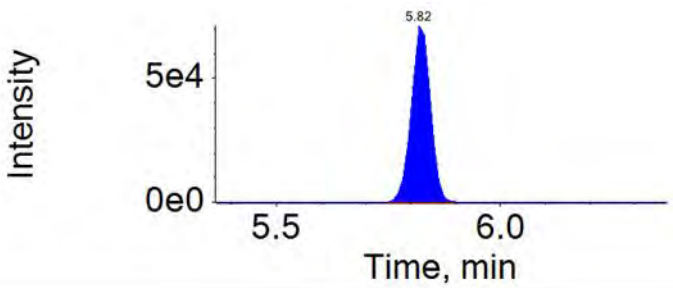
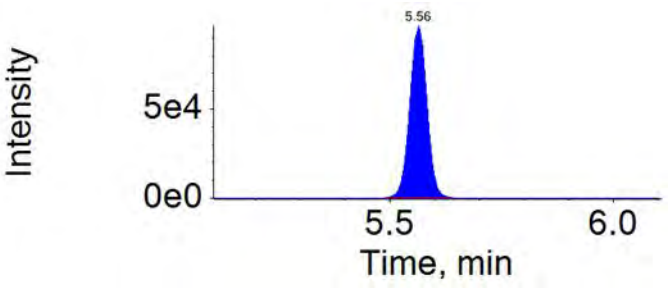
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

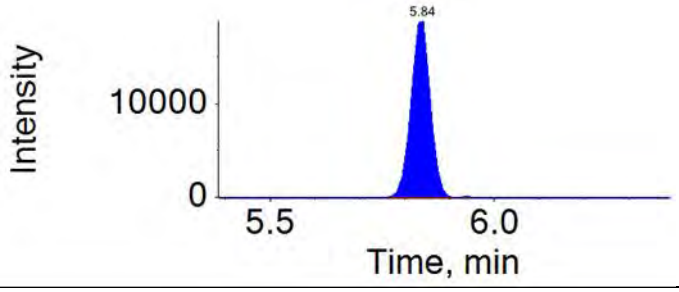
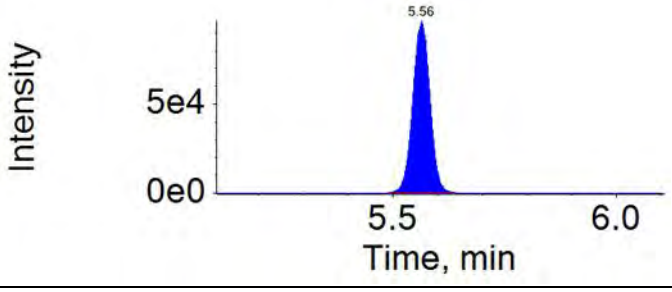
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

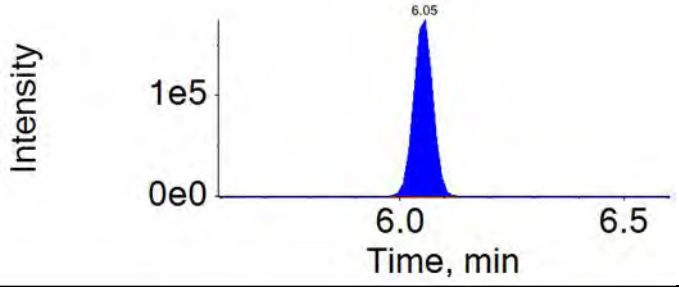
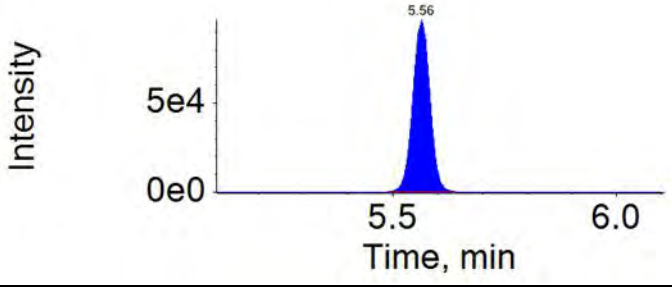
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

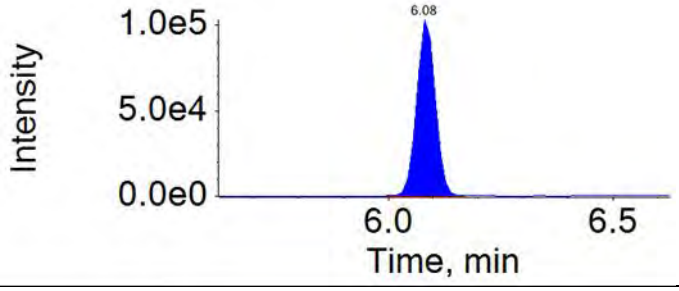
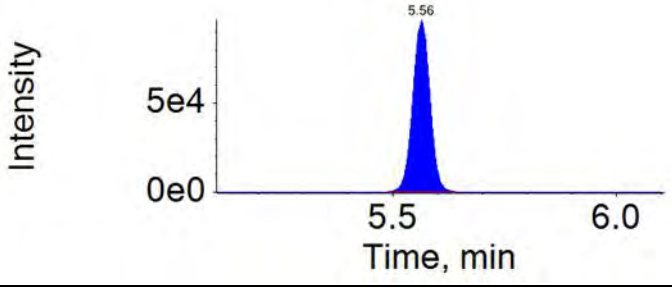
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

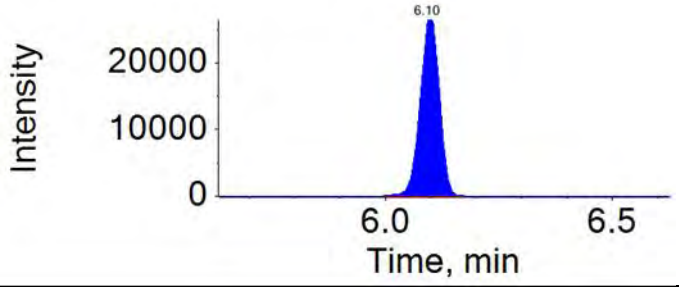
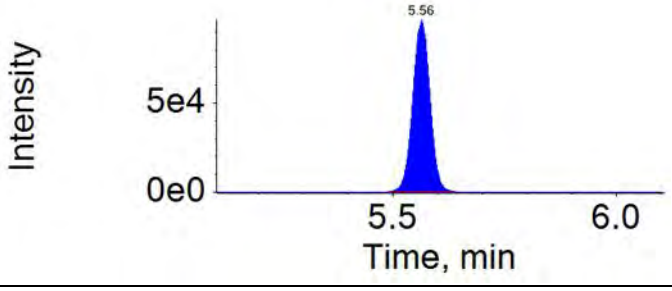
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

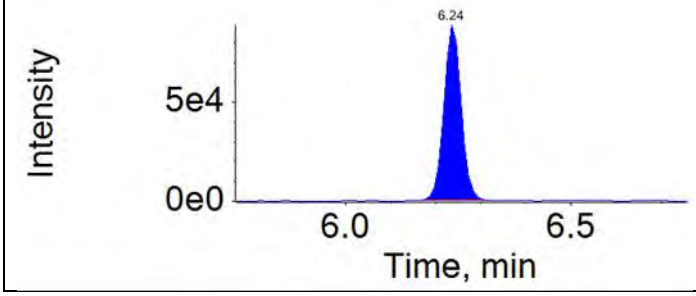
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

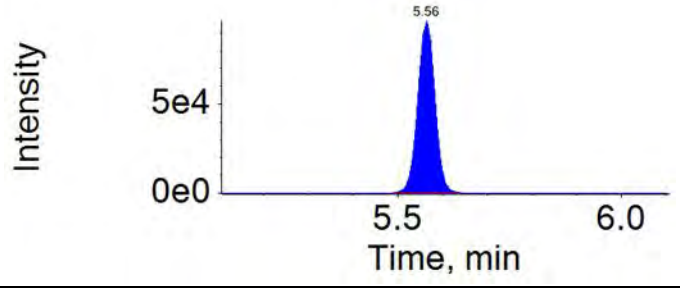
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

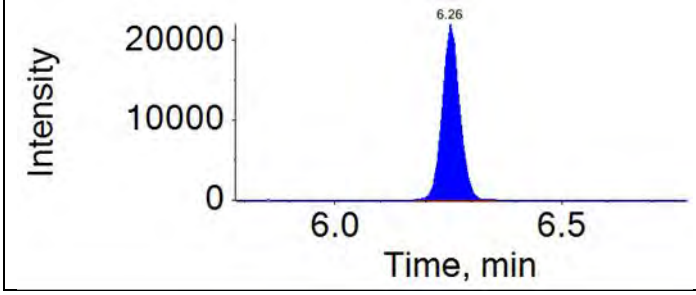
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

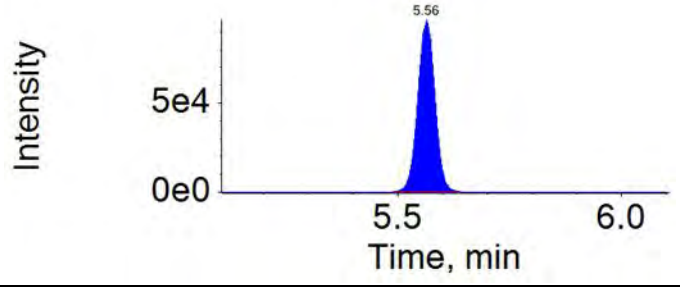
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



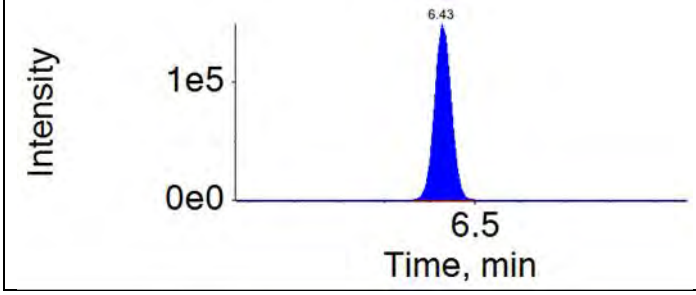


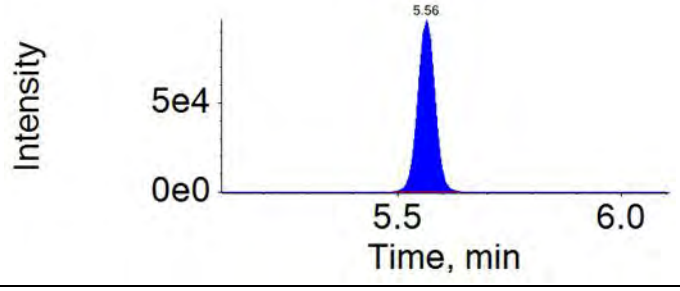
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



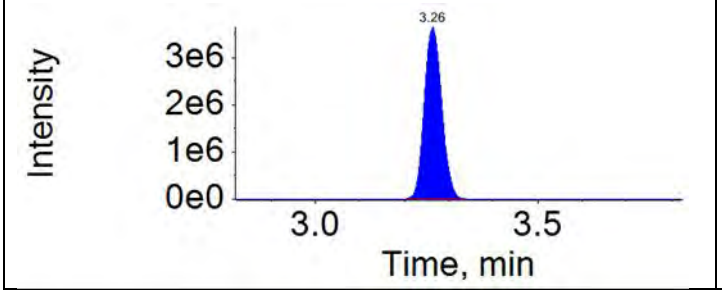


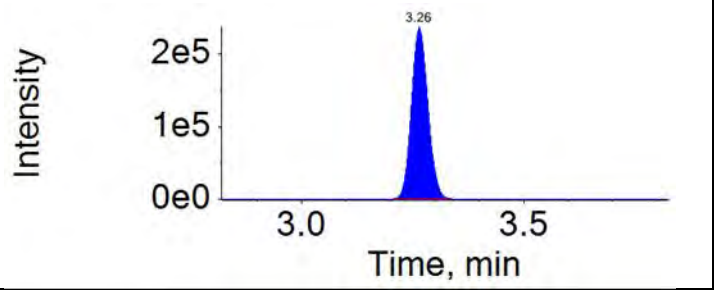
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

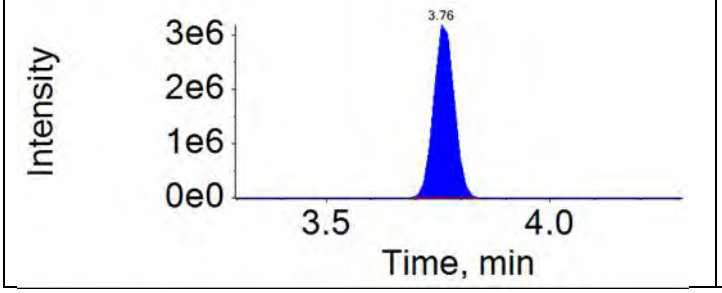
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

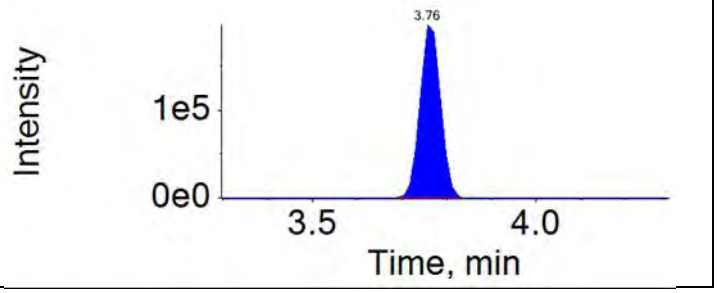
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



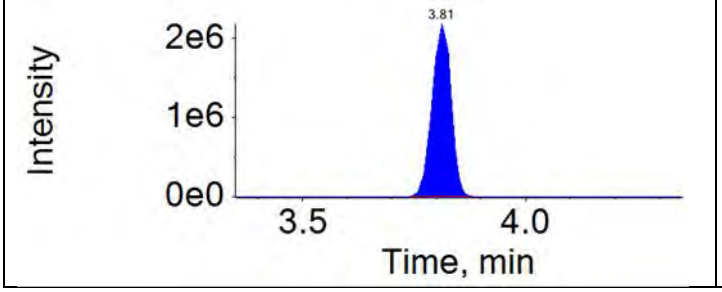


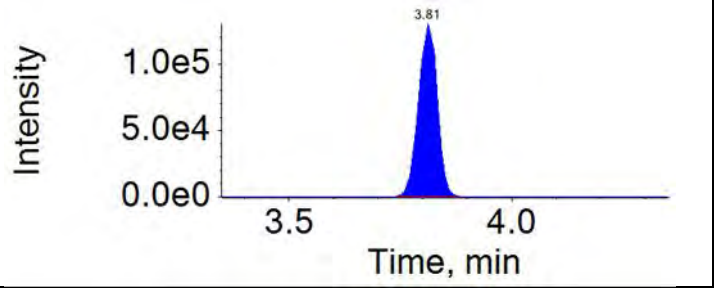
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



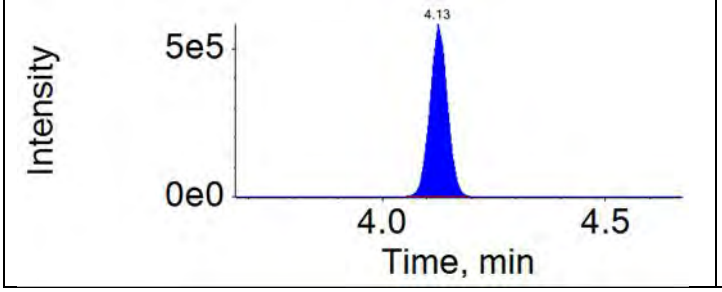


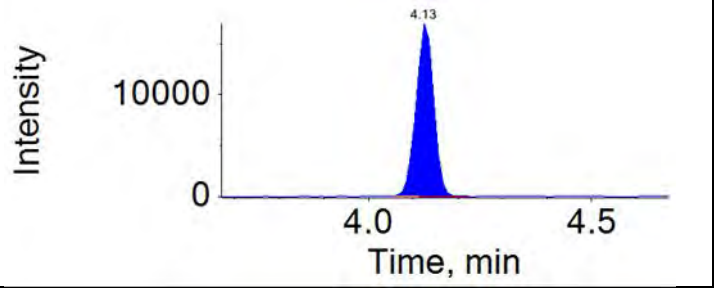
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

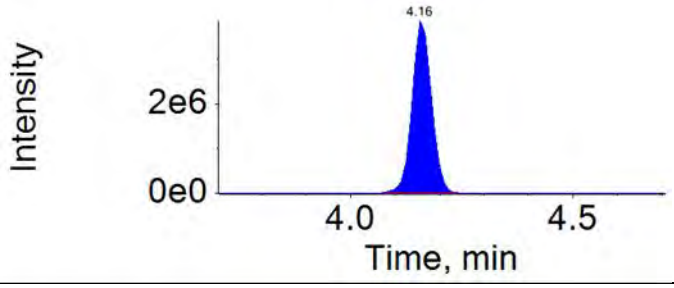
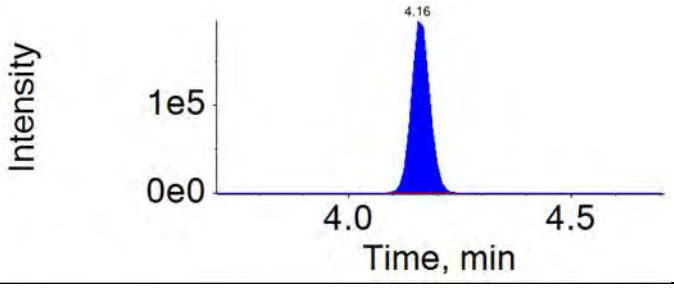


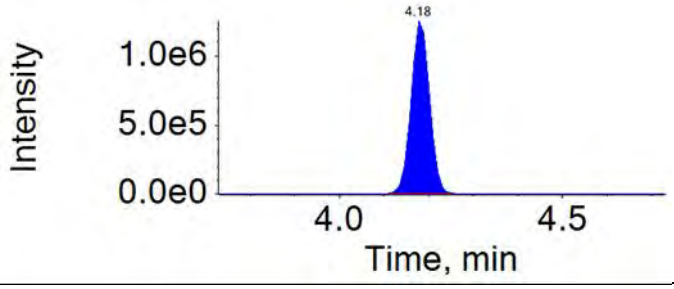
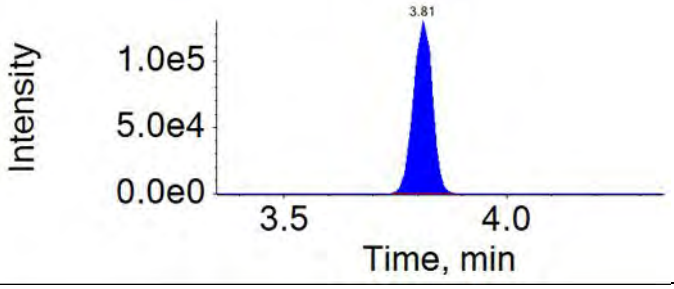


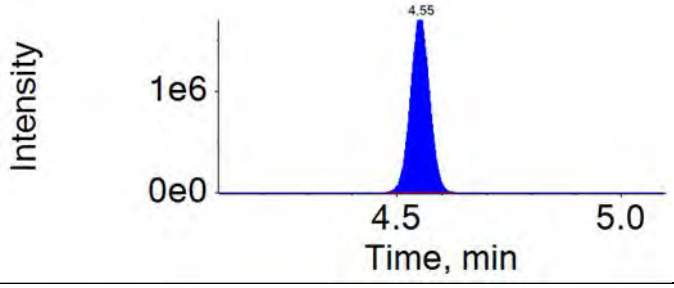
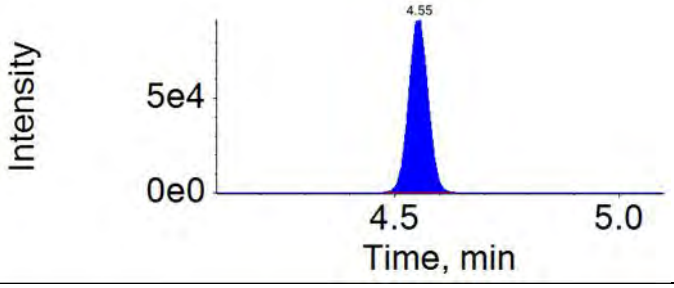
APPROVED
By JPT at 2:53 pm, 11/7/18

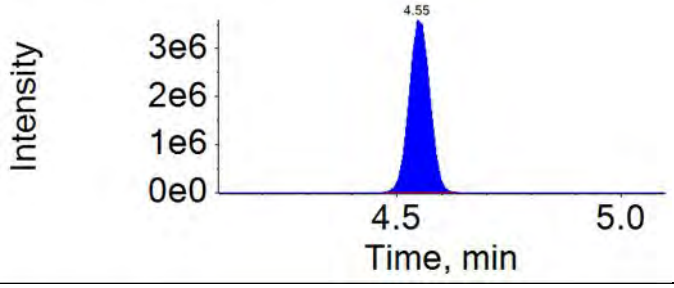
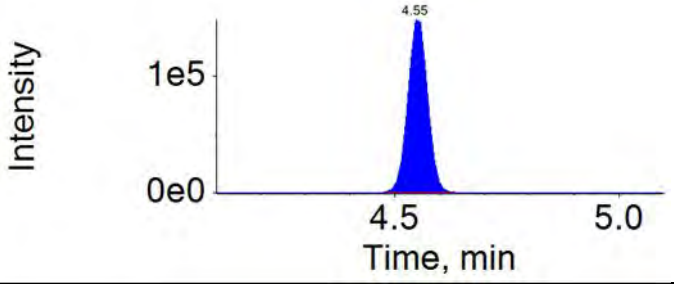
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

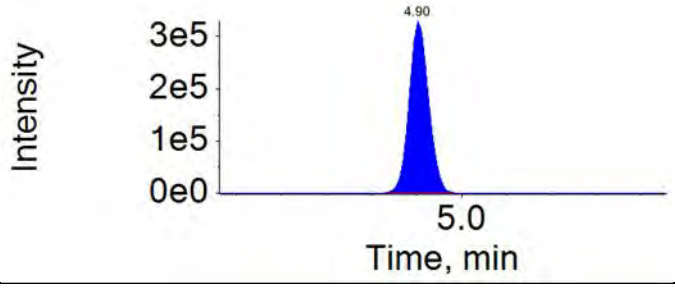
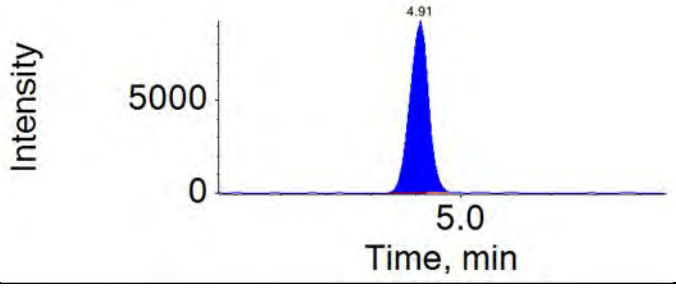
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

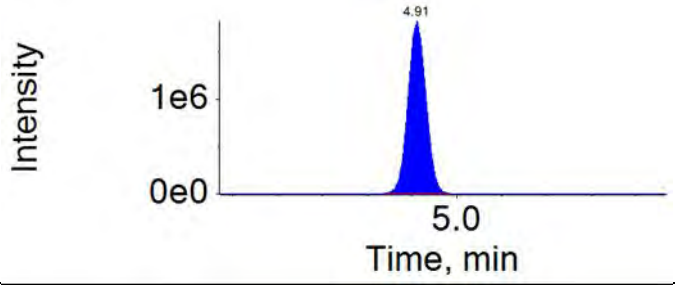
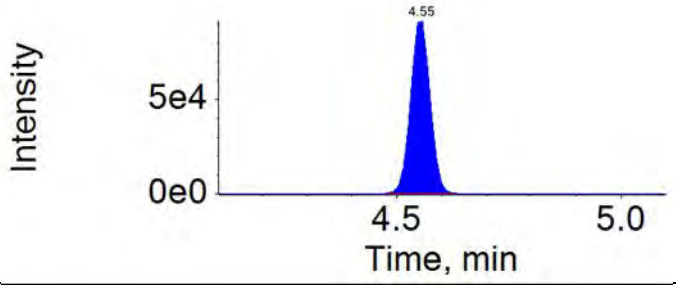
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

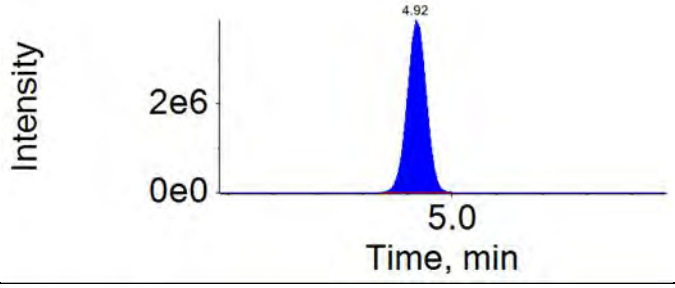
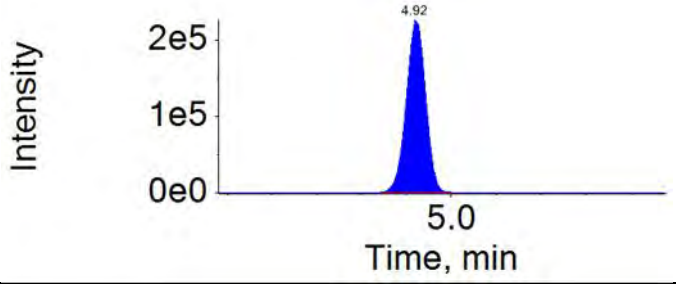
APPROVED
By JPT at 2:53 pm, 11/7/18

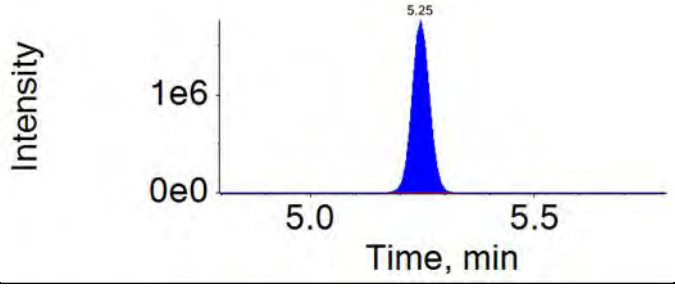
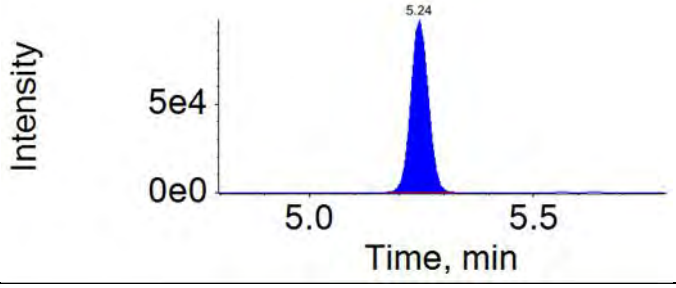
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

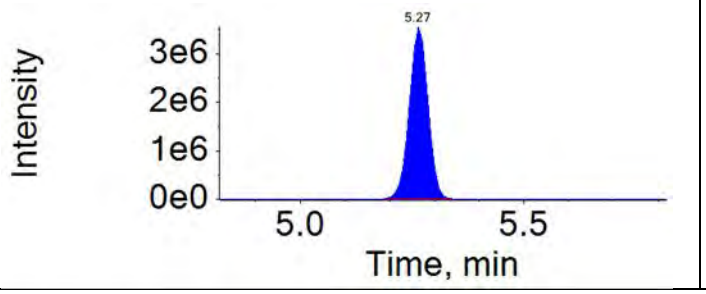
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

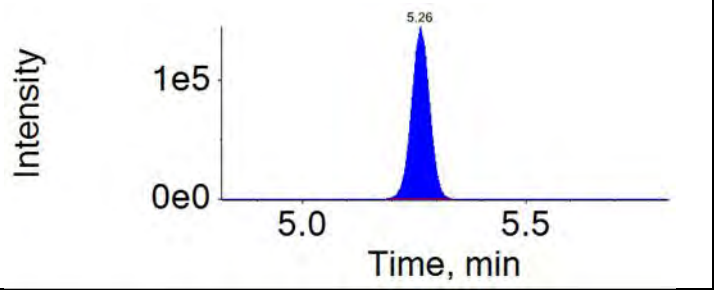
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

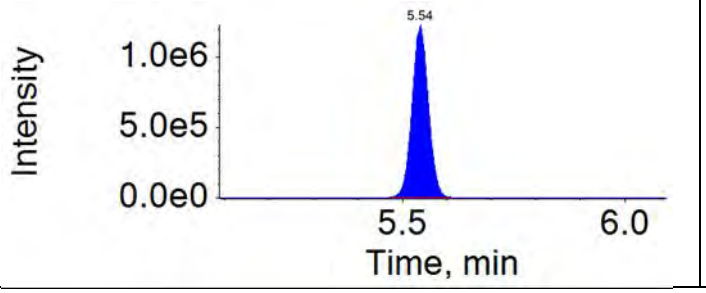
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

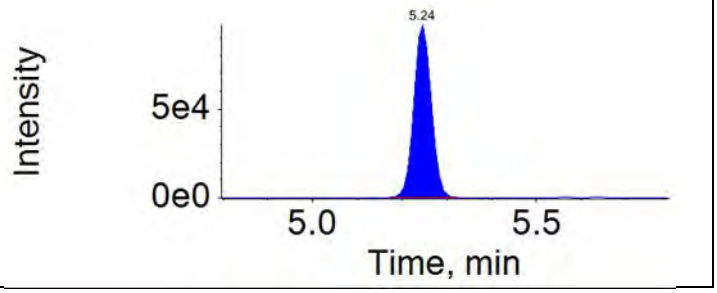
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



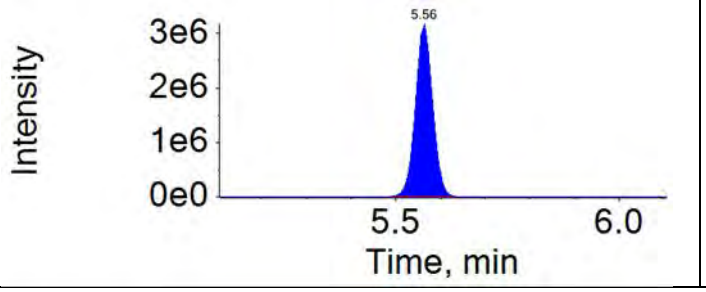


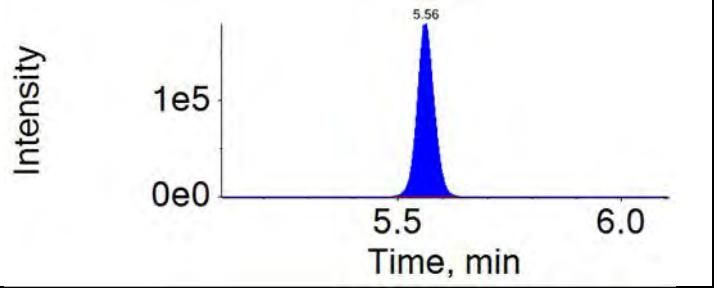
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



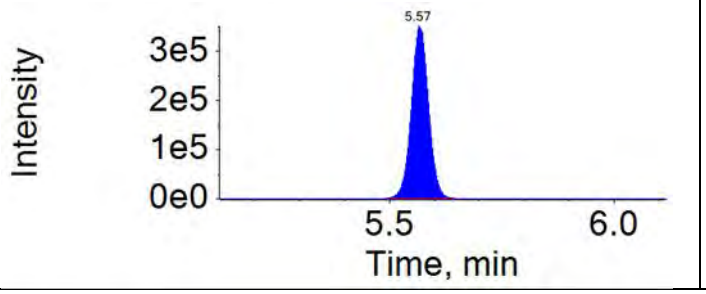


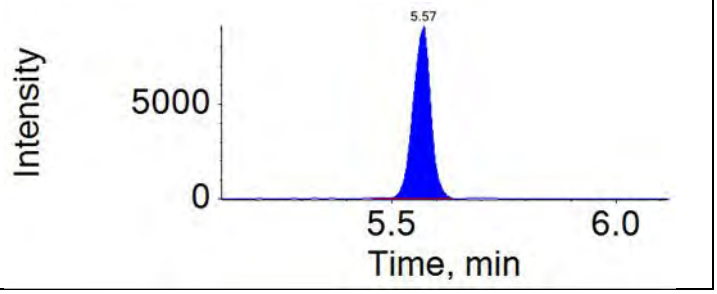
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

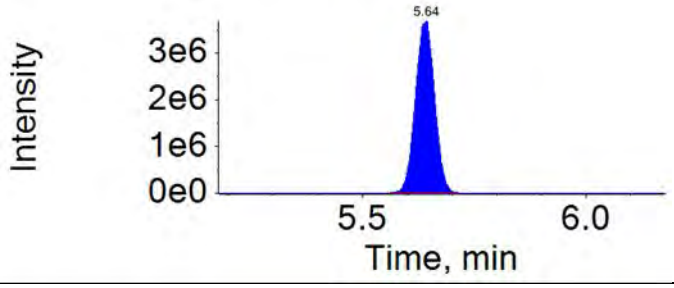
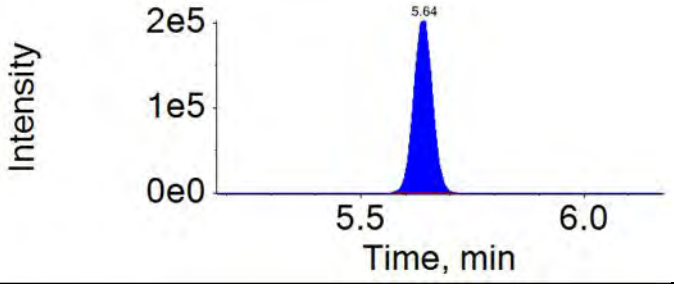


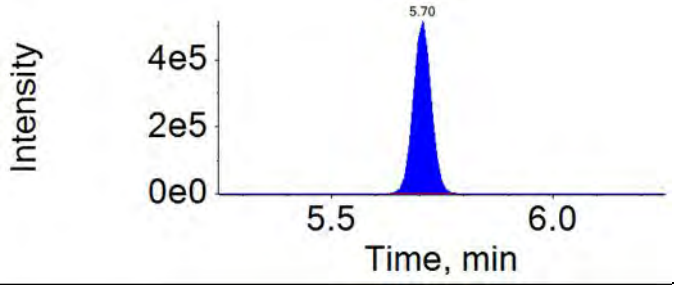
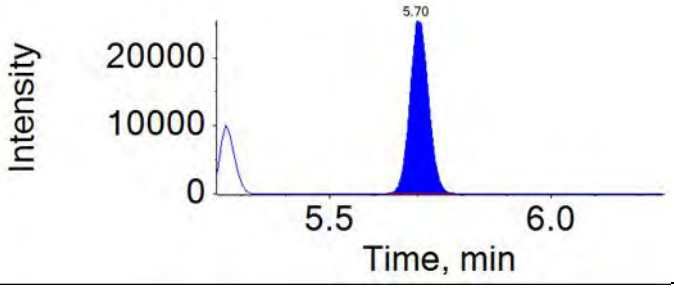


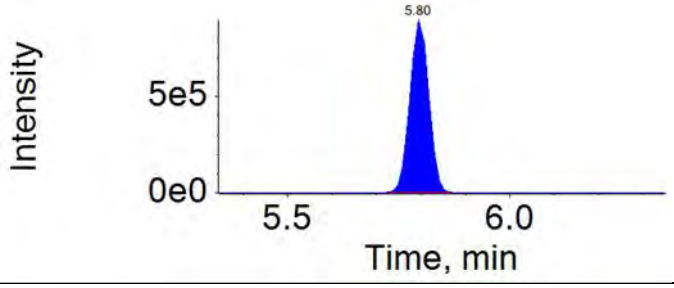
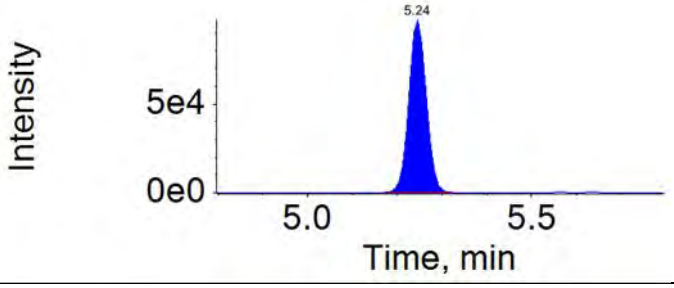
APPROVED
By JPT at 2:53 pm, 11/7/18

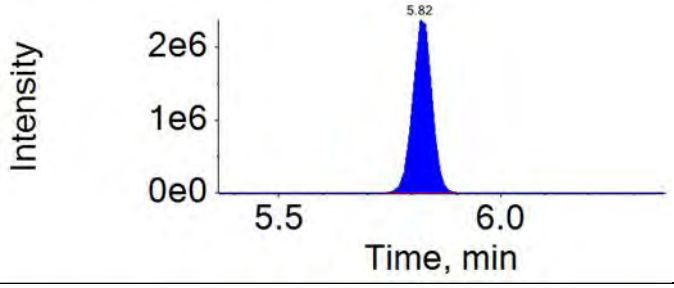
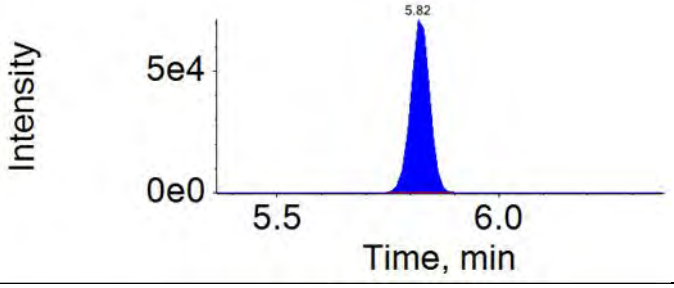
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

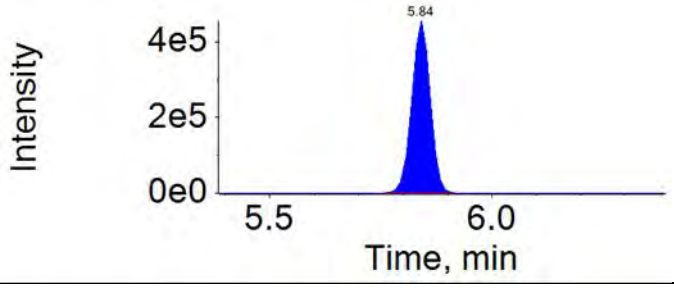
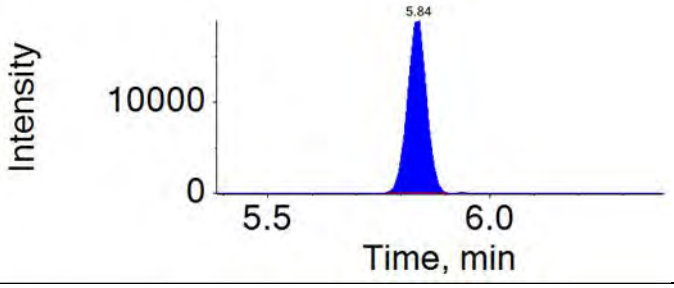
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

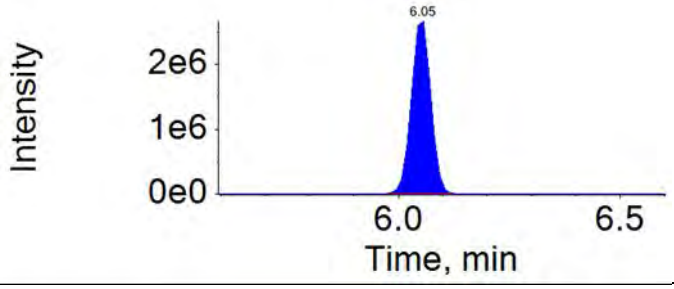
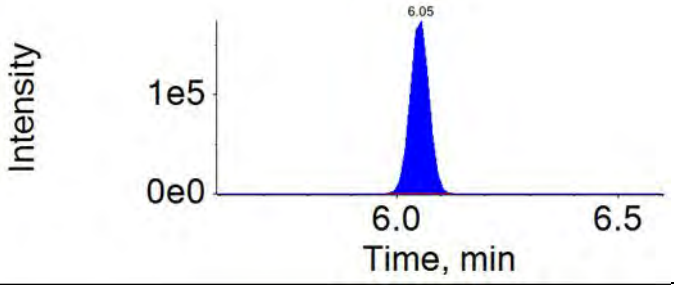
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

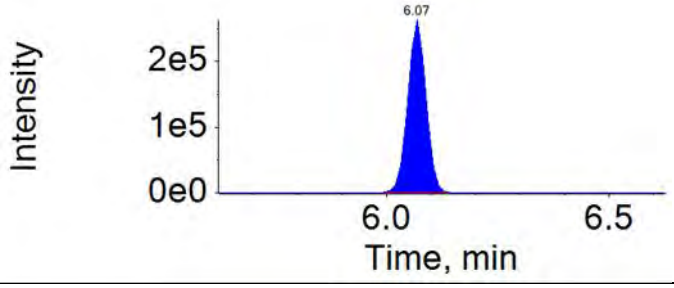
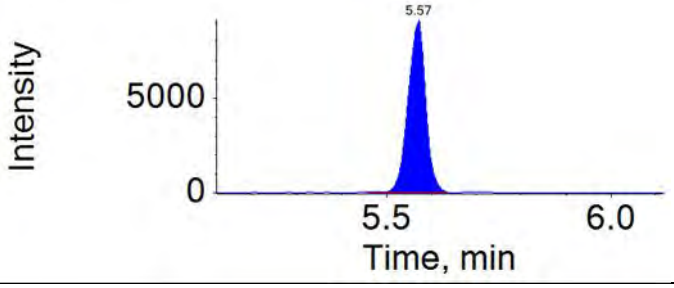
APPROVED
By JPT at 2:53 pm, 11/7/18

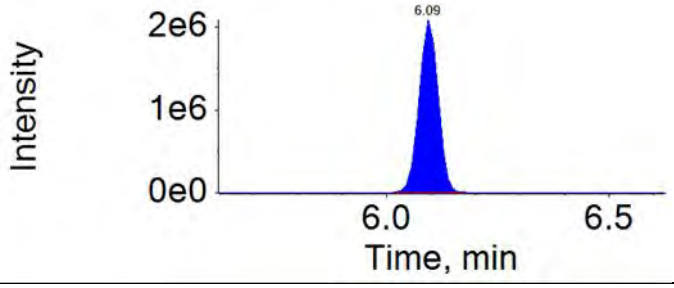
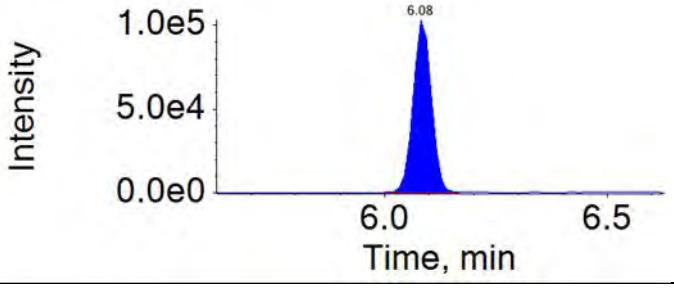
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

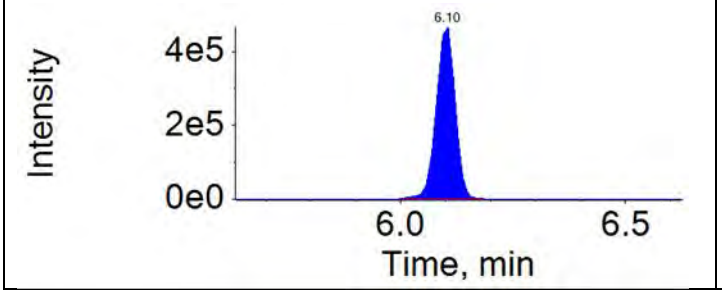
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

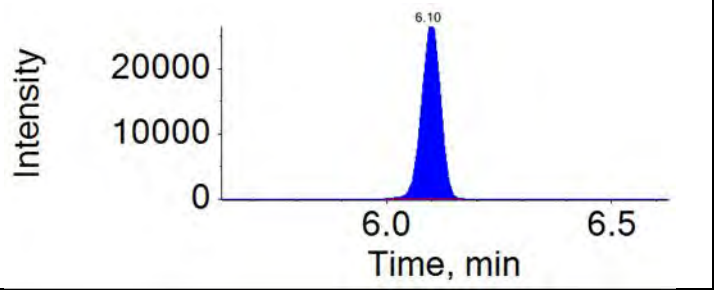
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

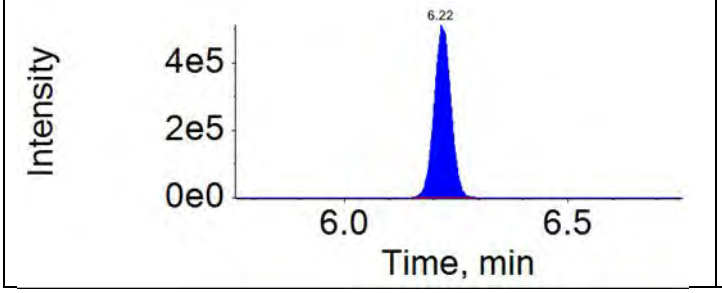
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

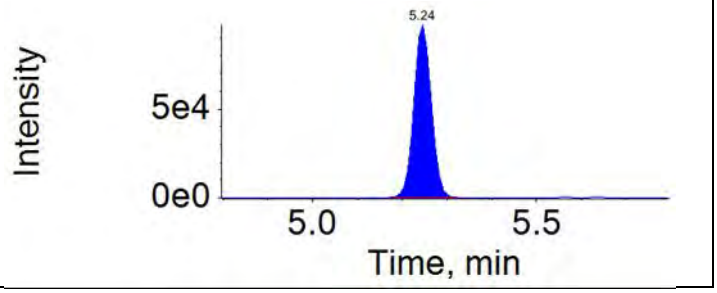
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



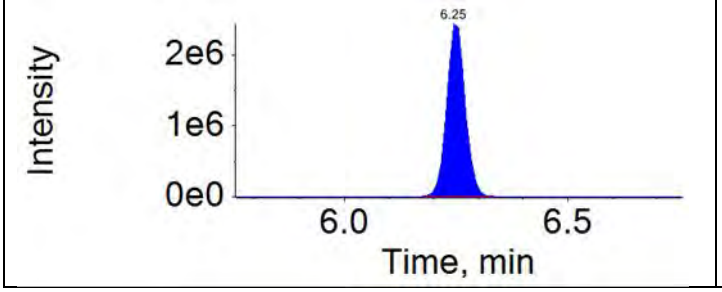


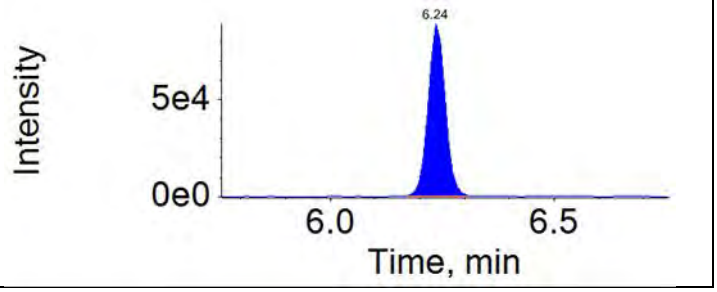
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



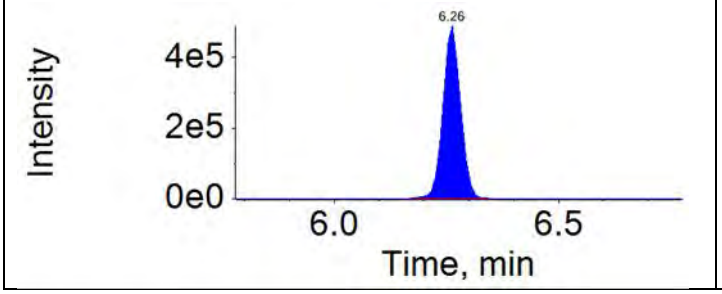


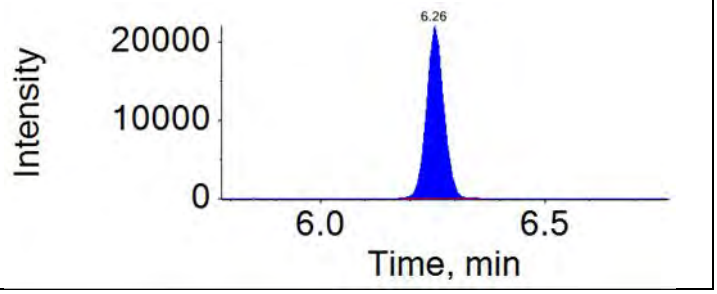
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

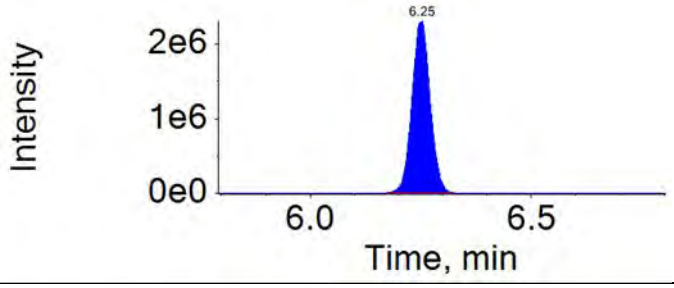
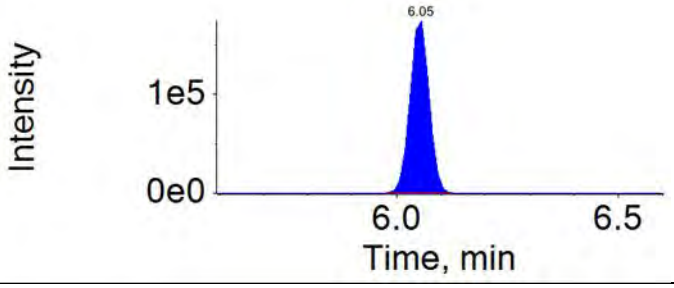


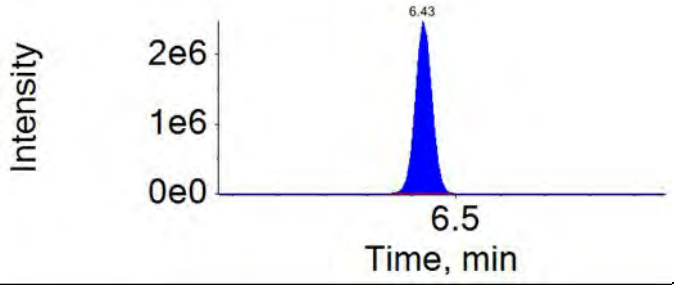
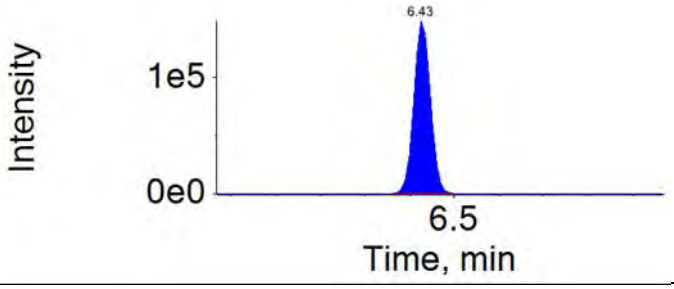


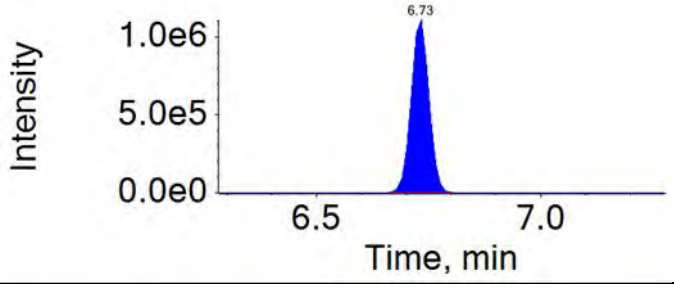
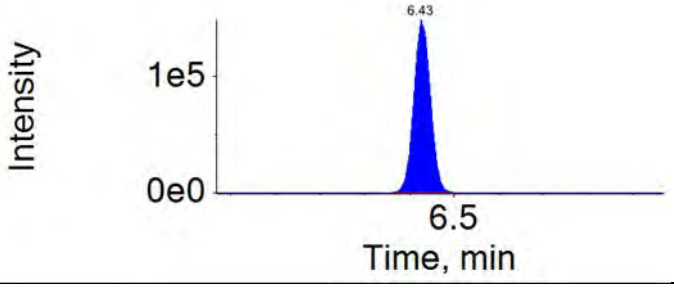
APPROVED
By JPT at 2:53 pm, 11/7/18

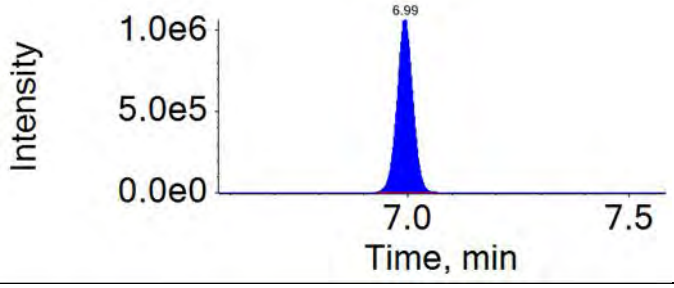
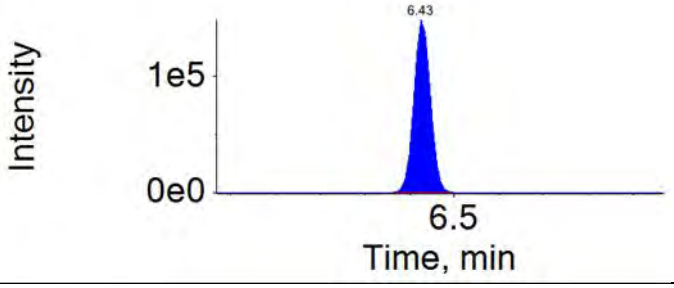
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

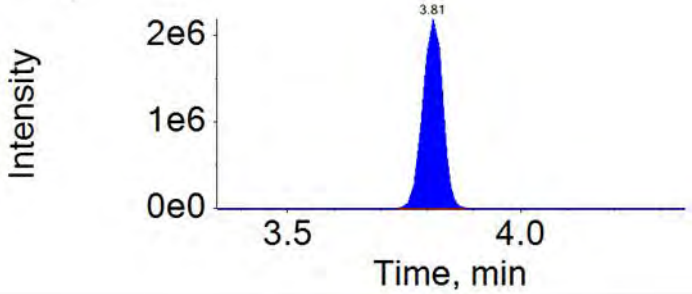
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	6474525.0	A	1.0000	1.0000			
PFBS_2	3.81	1.00	2381935.1	A	0.3576	0.3679	3	50	
4:2-FTS	4.13	1.00	1576786.3	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	946320.6	A	0.6359	0.6002	-6	50	
PFHxA	4.16	1.00	11658104.6	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	146733.2	A	0.0115	0.0126	10	50	
PFPeS	4.18	1.10	3615170.2	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	1859405.8	A	0.5384	0.5143	-4	50	
PFHxS	4.55	1.00	5196245.3	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	1830260.3	A	0.3569	0.3522	-1	50	
PFHpA	4.55	1.00	11701142.2	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	676550.1	A	0.0577	0.0578	0	50	
6:2-FTS	4.90	1.00	988785.9	A	1.0000	1.0000			
6:2-FTS_2	4.90	1.00	625214.8	A	0.6752	0.6323	-6	50	
PFHpS	4.91	1.08	5085803.6	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	2031737.5	A	0.3950	0.3995	1	50	
PFOA	4.92	1.00	11562348.7	A	1.0000	1.0000			
PFOA_2	4.92	1.00	711843.9	A	0.0635	0.0616	-3	50	
PFOS	5.25	1.00	4830627.6	A	1.0000	1.0000			
PFOS_2	5.24	1.00	1617879.0	A	0.3494	0.3349	-4	50	
PFNA	5.27	1.00	10279837.9	A	1.0000	1.0000			
PFNA_2	5.27	1.00	219746.5	A	0.0207	0.0214	3	50	
PFNS	5.54	1.06	3119908.2	A	1.0000	1.0000			
PFNS_2	5.54	1.06	1542771.9	A	0.4890	0.4945	1	50	
PFDA	5.56	1.00	8415098.4	A	1.0000	1.0000			
PFDA_2	5.56	1.00	58233.7	A	0.0057	0.0069	22	50	
8:2-FTS	5.57	1.00	936483.2	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	547919.5	A	0.6169	0.5851	-5	50	
NMeFOSAA	5.70	1.00	1450331.2	A	1.0000	1.0000			
NMeFOSAA_2	5.70	1.00	350791.8	A	0.2206	0.2419	10	50	
PFDS	5.80	1.11	2660525.2	A	1.0000	1.0000			
PFDS_2	5.80	1.11	1326713.6	A	0.4648	0.4987	7	50	
PFUnDA	5.82	1.00	7204782.9	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	26281.4	A	0.0031	0.0036	16	50	
NEtFOSAA	5.84	1.00	1317020.6	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	819492.6	A	0.6082	0.6222	2	50	
PFDoDA	6.05	1.00	8211828.8	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	111190.9	A	0.0109	0.0135	24	50	
10:2-FTS	6.07	1.09	747804.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	511885.1	A	0.7082	0.6845	-3	50	
PFTrDA	6.25	1.03	6633128.3	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	66200.2	A	0.0096	0.0100	4	50	
PFTeDA	6.43	1.00	6426587.4	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	41133.5	A	0.0055	0.0064	16	50	
PFHxDA	6.73	1.05	3073572.7	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	192350.4	A	0.0596	0.0626	5	50	
PFODA	6.99	1.09	2676698.5	A	1.0000	1.0000			
PFODA_2	6.99	1.09	70338.4	A	0.0257	0.0263	2	50	

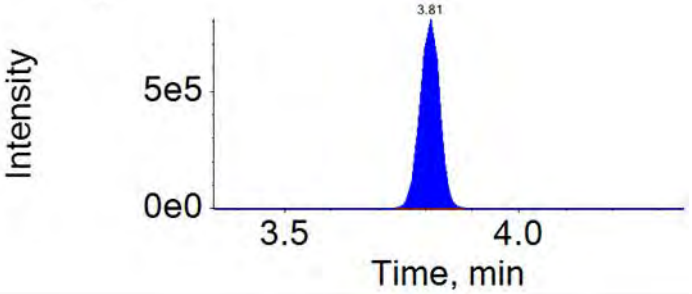
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

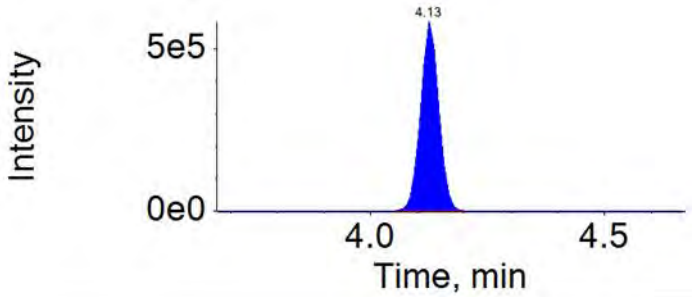
Component: PFBS
Primary Mass: 299.0 / 80.0



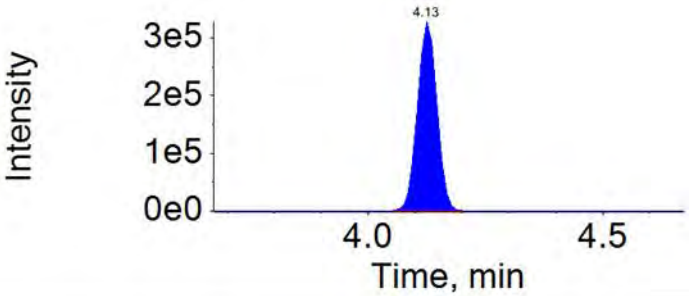
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



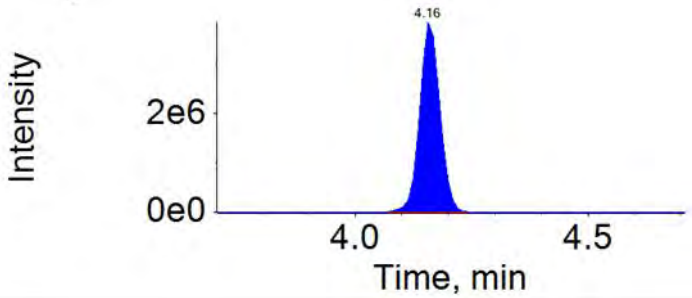
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



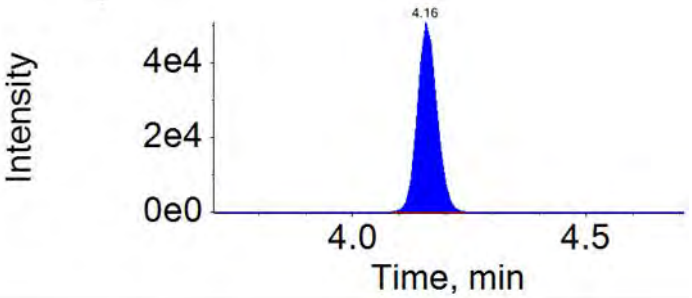
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



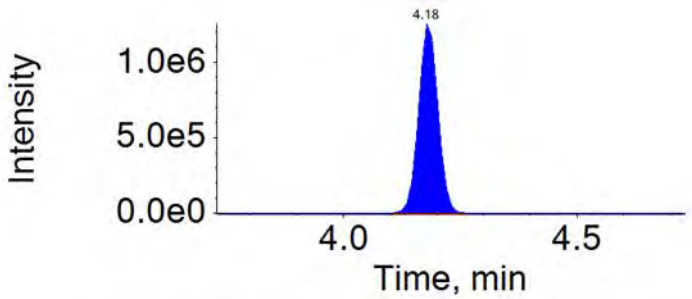
Component: PFHxA
Primary Mass: 313.0 / 269.0



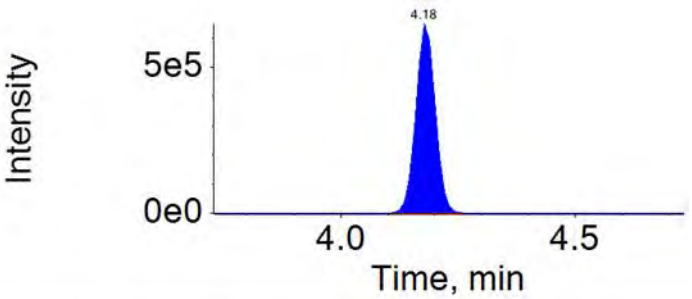
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



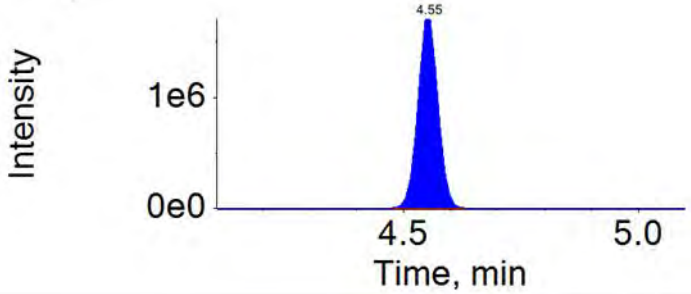
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



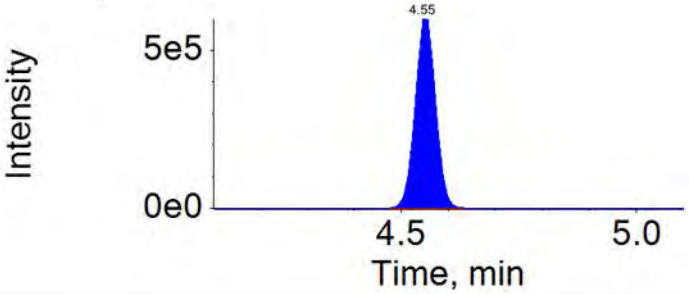
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

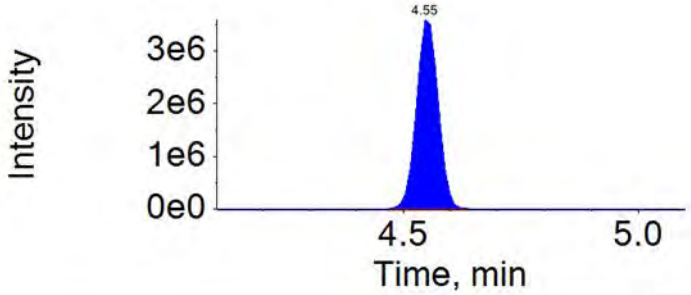
Component: PFHxS
Primary Mass: 399.0 / 80.0



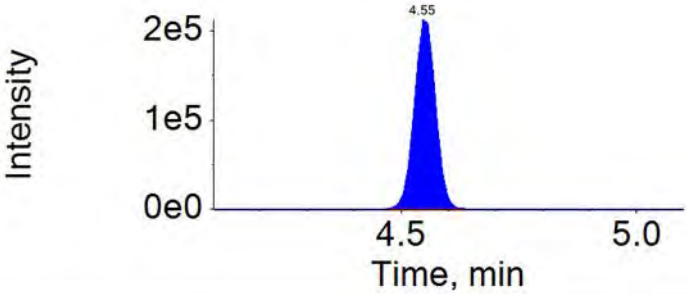
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



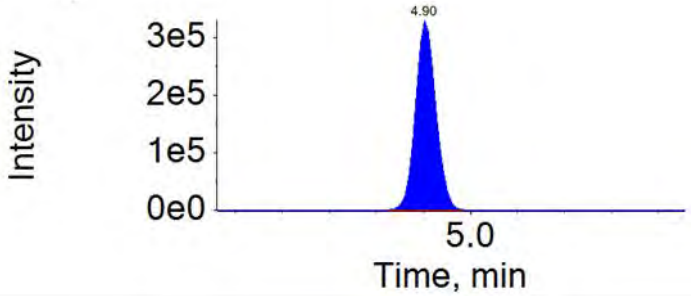
Component: PFHpA
Primary Mass: 363.0 / 319.0



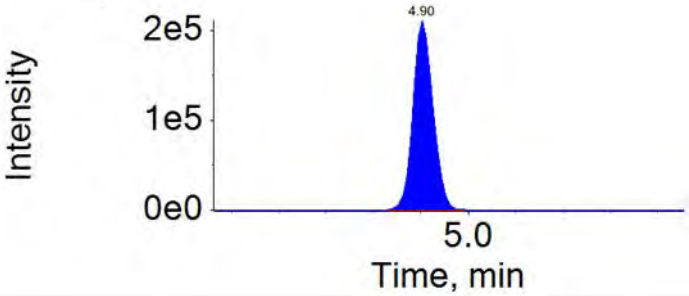
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



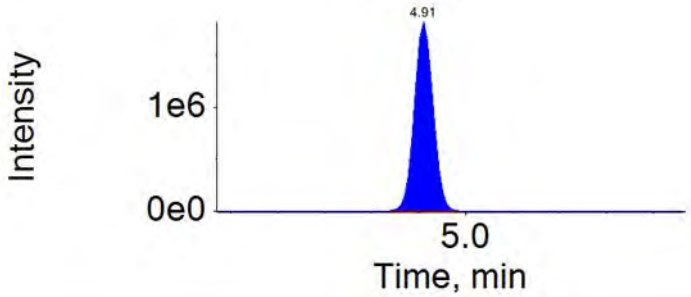
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



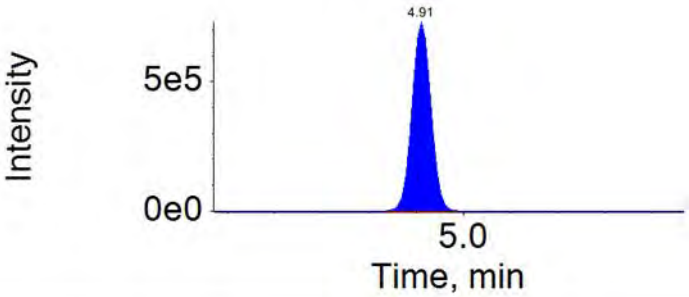
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



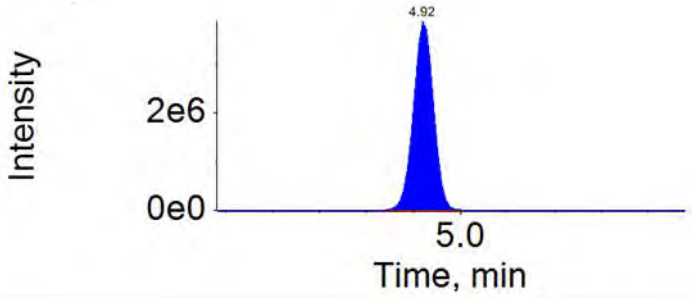
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



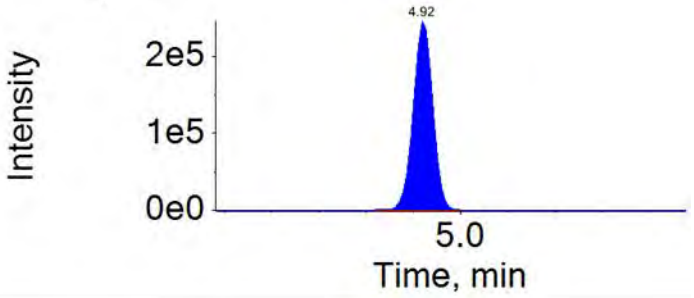
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

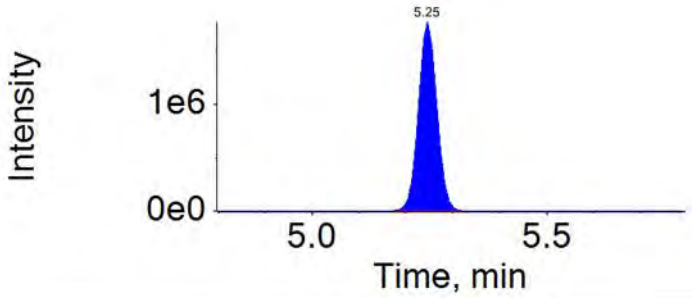
Component: PFOA
Primary Mass: 413.0 / 369.0



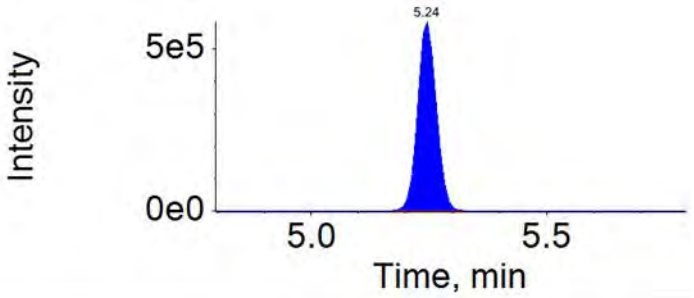
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



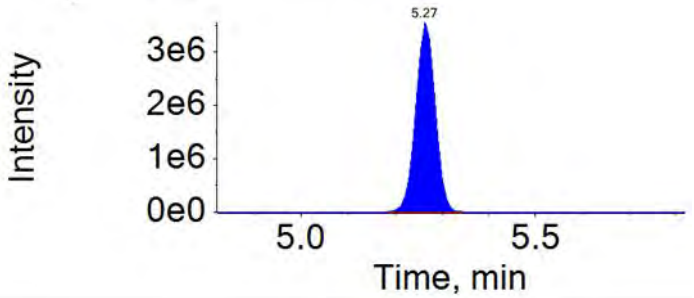
Component: PFOS
Primary Mass: 499.0 / 80.0



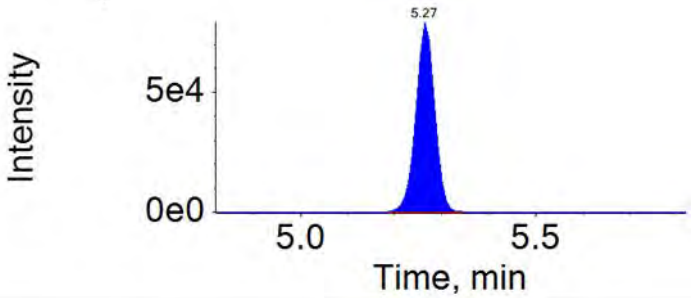
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



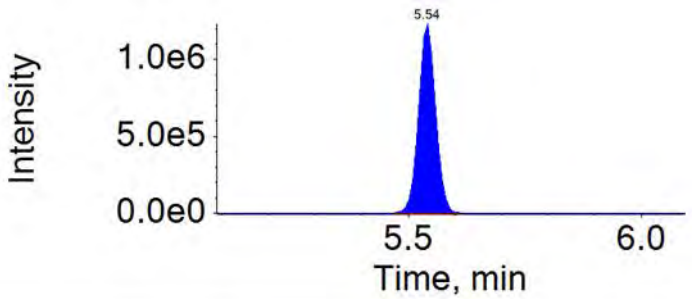
Component: PFNA
Primary Mass: 463.0 / 419.0



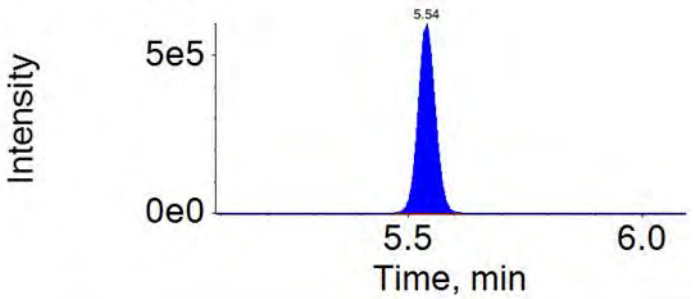
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



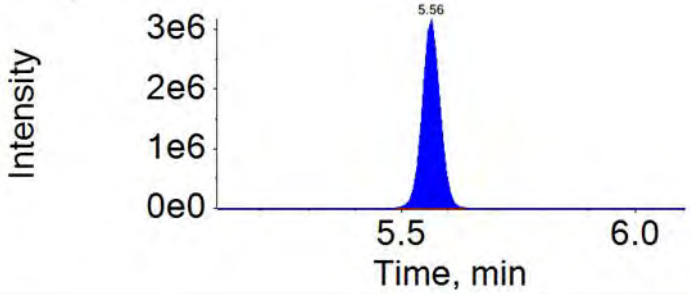
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



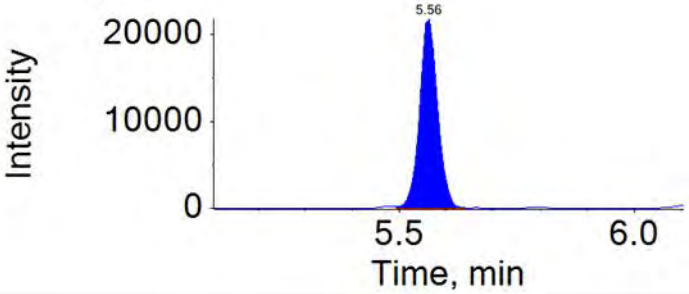
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

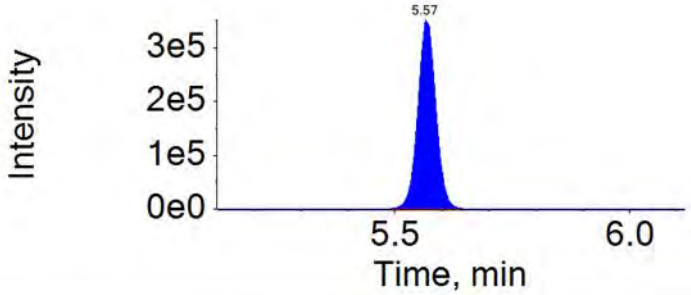
Component: PFDA
Primary Mass: 513.0 / 469.0



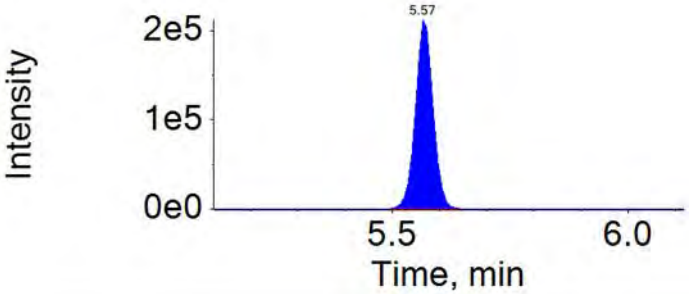
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



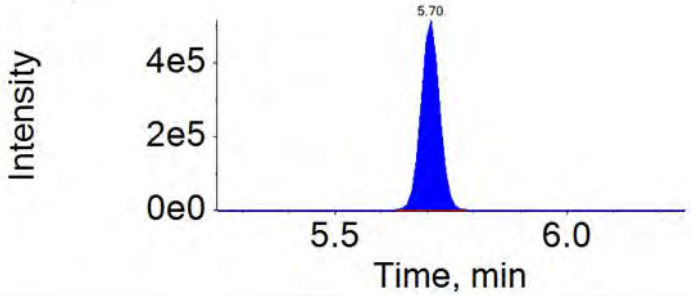
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



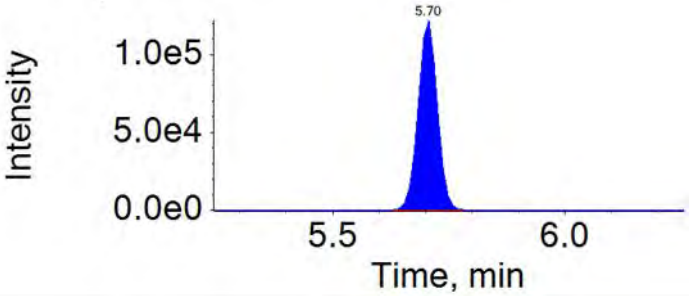
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



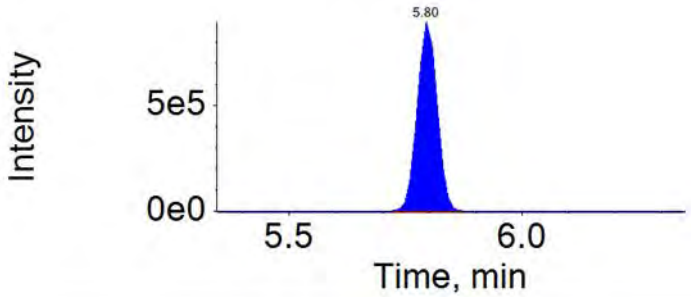
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



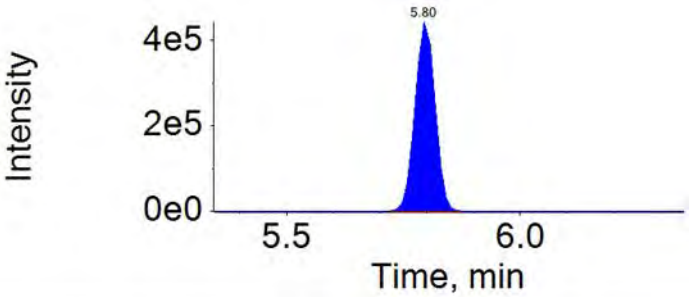
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



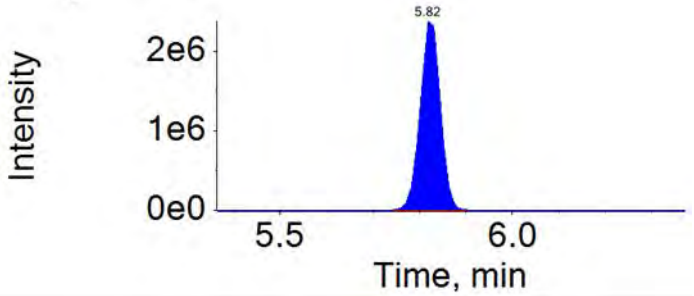
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



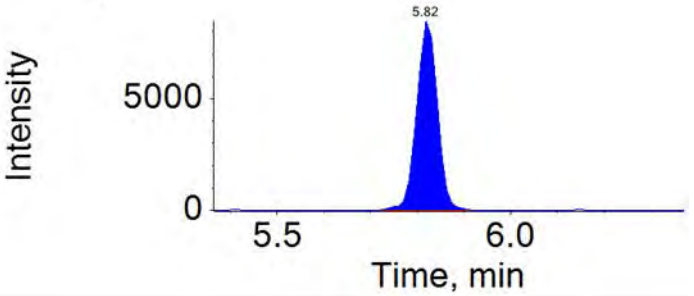
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

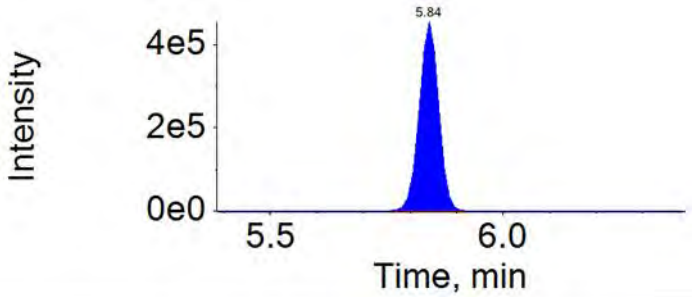
Component: PFUnDA
Primary Mass: 563.0 / 519.0



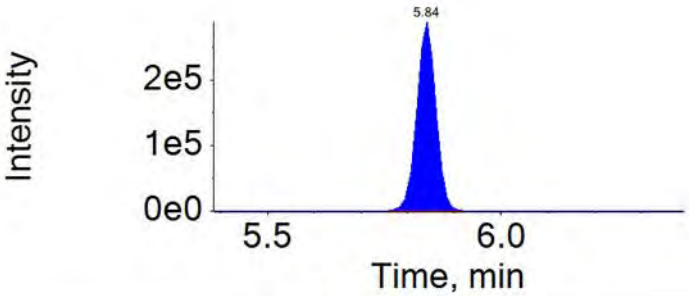
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



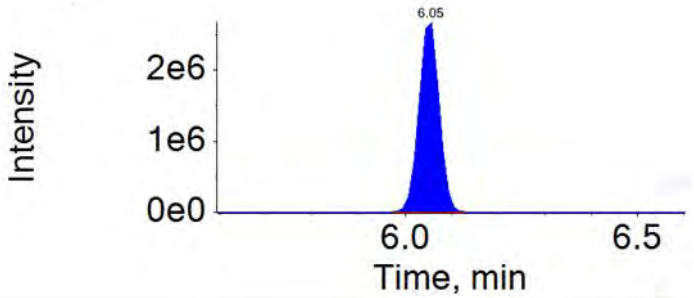
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



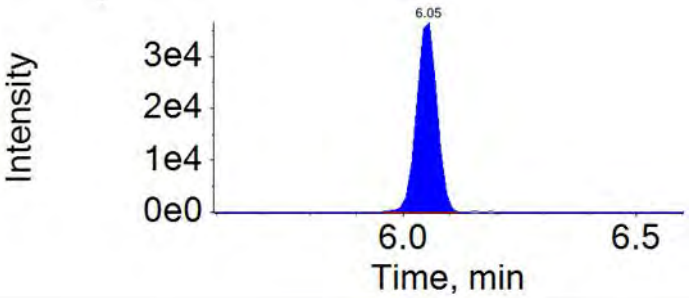
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



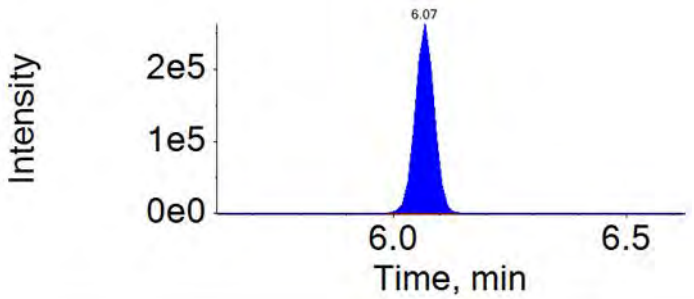
Component: PFDoDA
Primary Mass: 613.0 / 569.0



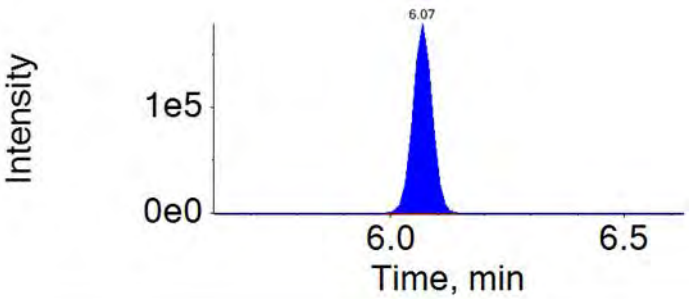
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



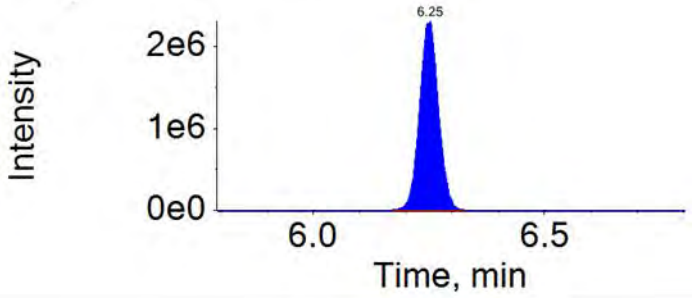
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



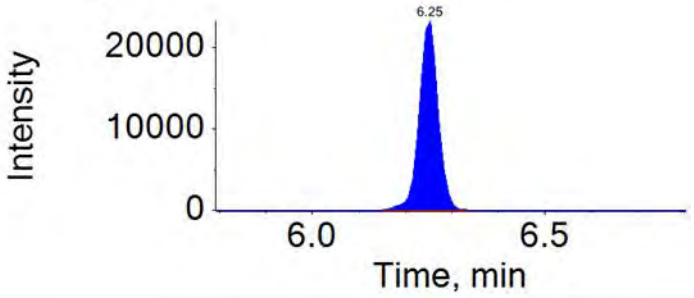
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

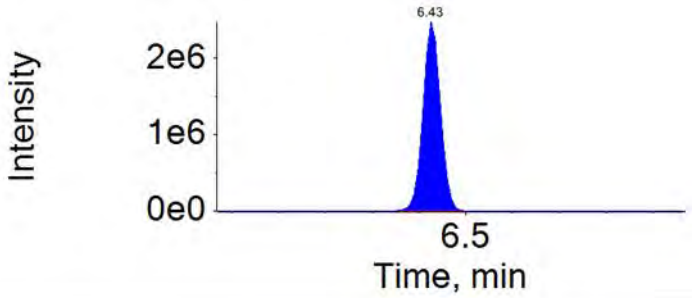
Component: PFTrDA
Primary Mass: 663.0 / 619.0



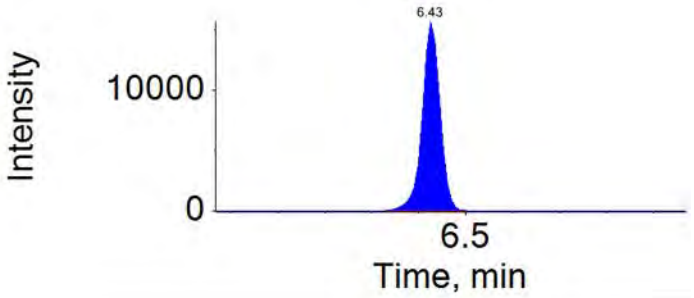
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



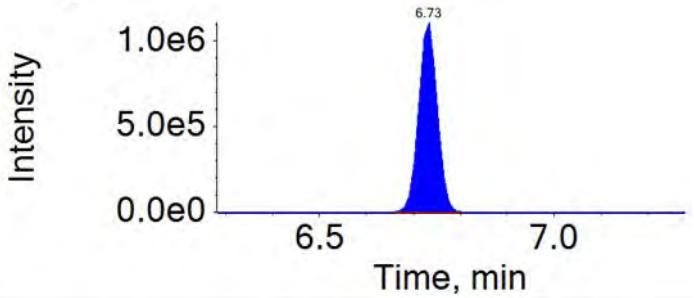
Component: PFTeDA
Primary Mass: 713.0 / 669.0



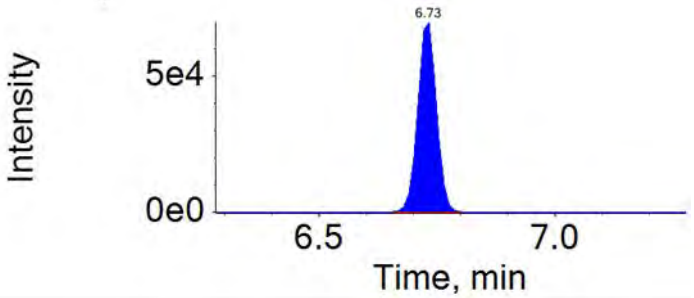
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



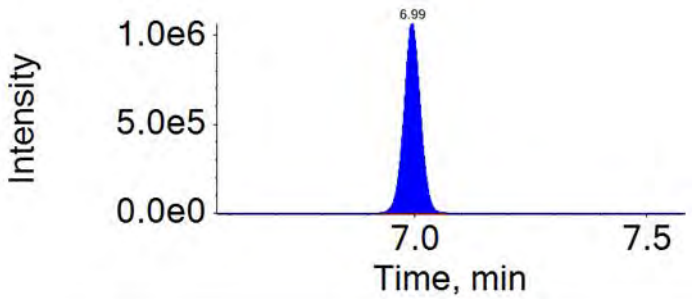
Component: PFHxDA
Primary Mass: 813.0 / 769.0



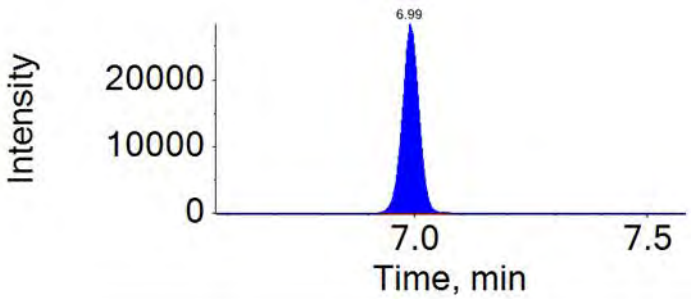
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV07DCAL-09.wiff
Sample ID:	MDLMODX1833E			**Acquis Date:**		2018-11-07T09:30:56
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	727406.8	730410.6	0	50	
13C2-PFOA	5.0	526479.1	524423.6	0	50	
13C4-PFOS	4.8	275181.3	274061.7	0	50	
13C2-PFDA	5.0	315732.1	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	807312.5	13C3-PFBA	727406.8	1.110	5.000	5.136	103	70-130	
E13C5-PFPeA	823702.7	13C3-PFBA	727406.8	1.132	5.000	4.933	99	70-130	
E13C3-PFBS	442660.1	13C3-PFBA	727406.8	0.609	4.650	4.466	96	70-130	
E13C2-4:2-FTS	52398.7	13C2-PFOA	526479.1	0.100	4.670	4.491	96	70-130	
E13C5-PFHxA	716268.2	13C2-PFOA	526479.1	1.360	5.000	5.004	100	70-130	
E13C3-PFHxS	335727.6	13C2-PFOA	526479.1	0.638	4.730	4.578	97	70-130	
E13C4-PFHpA	575860.3	13C2-PFOA	526479.1	1.094	5.000	4.976	100	70-130	
E13C2-6:2-FTS	41140.3	13C2-PFOA	526479.1	0.078	4.750	5.211	110	70-130	
E13C8-PFOA	972540.0	13C2-PFOA	526479.1	1.847	5.000	5.151	103	70-130	
E13C8-PFOS	290003.4	13C4-PFOS	275181.3	1.054	4.780	4.660	97	70-130	
E13C9-PFNA	494088.2	13C4-PFOS	275181.3	1.796	5.000	4.905	98	70-130	
E13C6-PFDA	660922.5	13C2-PFDA	315732.1	2.093	5.000	5.264	105	70-130	
E13C2-8:2-FTS	30155.0	13C2-PFDA	315732.1	0.096	4.790	5.054	106	70-130	
E13C8-PFOSA	682695.0	13C2-PFDA	315732.1	2.162	5.000	4.718	94	70-130	
Ed3-NMeFOSAA	79243.0	13C2-PFDA	315732.1	0.251	5.000	4.667	93	70-130	
E13C7-PFUnDA	280781.9	13C2-PFDA	315732.1	0.889	5.000	5.130	103	70-130	
Ed5-NEtFOSAA	64527.2	13C2-PFDA	315732.1	0.204	5.000	4.730	95	70-130	
E13C2-PFDoDA	600395.5	13C2-PFDA	315732.1	1.902	5.000	5.126	103	70-130	
Ed7-NMePFOSAE	326457.3	13C2-PFDA	315732.1	1.034	5.000	4.808	96	70-130	
Ed3-NMePFOSA	82534.2	13C2-PFDA	315732.1	0.261	5.000	4.786	96	70-130	
Ed9-NEtPFOSAE	271491.0	13C2-PFDA	315732.1	0.860	5.000	4.911	98	70-130	
Ed5-NEtPFOSA	69328.7	13C2-PFDA	315732.1	0.220	5.000	5.084	102	70-130	
E13C2-PFTeDA	418605.6	13C2-PFDA	315732.1	1.326	5.000	4.773	95	70-130	

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

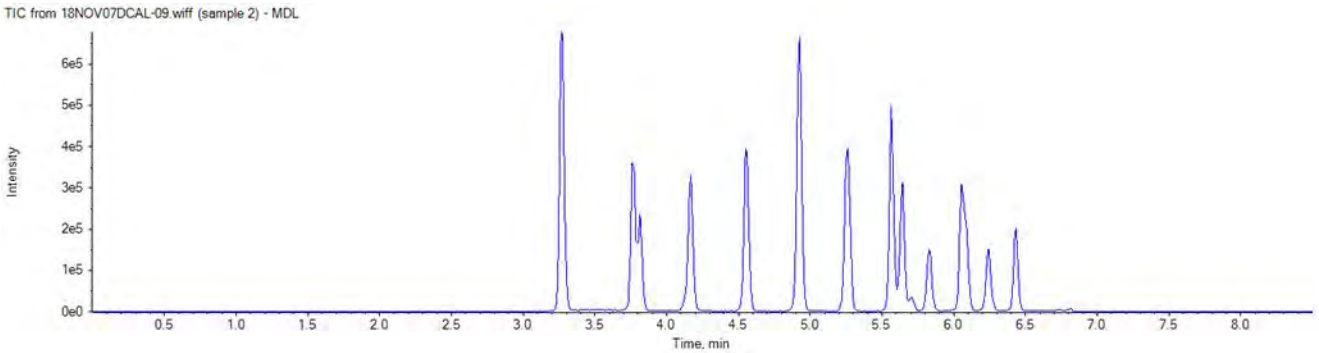
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-09.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	15305.2		A	13C4-PFBA	3.27	807312.5	0.019	0.111
PFPeA	3.76	1.000	17527.3		A	13C5-PFPeA	3.77	823702.7	0.021	0.126
PFBS	3.81	1.000	8179.1		A	13C3-PFBS	3.82	442660.1	0.018	0.093
4:2-FTS	4.14	1.000	2516.6		A	13C2-4:2-FTS	4.13	52398.7	0.048	0.129
PFHxA	4.16	1.000	19041.3		A	13C5-PFHxA	4.17	716268.2	0.027	0.114
PFPeS	4.18	1.100	4553.9		A	13C3-PFBS	3.82	442660.1	0.010	0.101
PFHxS	4.55	1.000	5720.4		A	13C3-PFHxS	4.55	335727.6	0.017	0.086
PFHpA	4.55	1.000	20611.7		A	13C4-PFHpA	4.55	575860.3	0.036	0.120
6:2-FTS	4.92	1.000	1337.7		A	13C2-6:2-FTS	4.91	41140.3	0.033	0.081
PFHpS	4.92	1.080	5811.8		A	13C3-PFHxS	4.55	335727.6	0.017	0.091
PFOA	4.92	1.000	21714.7		A	13C8-PFOA	4.92	972540.0	0.022	0.126
PFOS	5.25	1.000	7067.6		A	13C8-PFOS	5.25	290003.4	0.024	0.126
PFNA	5.27	1.000	14036.5		M	13C9-PFNA	5.27	494088.2	0.028	0.106
PFNS	5.54	1.060	4370.5		A	13C8-PFOS	5.25	290003.4	0.015	0.119
PFDA	5.57	1.000	13448.9		A	13C6-PFDA	5.57	660922.5	0.020	0.112
8:2-FTS	5.57	1.000	1277.3		A	13C2-8:2-FTS	5.57	30155.0	0.042	0.095
PFOSA	5.64	1.000	12732.2		A	13C8-PFOSA	5.64	682695.0	0.019	0.101
NMeFOSAA	5.71	1.000	1352.6		M	d3-NMeFOSAA	5.71	79243.0	0.017	0.088
PFDS	5.80	1.110	2949.3		A	13C8-PFOS	5.25	290003.4	0.010	0.097
PFUnDA	5.83	1.000	13003.8		A	13C7-PFUnDA	5.83	280781.9	0.046	0.133
NEtFOSAA	5.84	1.000	1823.4		A	d5-NEtFOSAA	5.84	64527.2	0.028	0.121
PFDoDA	6.05	1.000	12755.8		A	13C2-PFDoDA	6.05	600395.5	0.021	0.115
10:2-FTS	6.07	1.090	1033.2		A	13C2-8:2-FTS	5.57	30155.0	0.034	0.107
NMePFOSAE	6.10	1.000	8309.5		A	d7-NMePFOSAE	6.08	326457.3	0.025	0.114
NMePFOSA	6.10	1.000	1429.6		M	d3-NMePFOSA	6.10	82534.2	0.017	0.097
PFDoS	6.22	1.190	1360.5		A	13C8-PFOS	5.25	290003.4	0.005	0.091
NEtPFOSAE	6.25	1.000	9821.0		A	d9-NEtPFOSAE	6.24	271491.0	0.036	0.116
NEtPFOSA	6.26	1.000	1542.4		A	d5-NEtPFOSA	6.26	69328.7	0.022	0.098
PFTrDA	6.26	1.030	10576.8		M	13C2-PFDoDA	6.05	600395.5	0.018	0.111
PFTeDA	6.43	1.000	7741.6		A	13C2-PFTeDA	6.43	418605.6	0.018	0.109
PFHxDA	6.73	1.050	5030.0		A	13C2-PFTeDA	6.43	418605.6	0.012	0.149
PFODA	7.00	1.090	3044.8		A	13C2-PFTeDA	6.43	418605.6	0.007	0.104

Total Ion Chromatogram

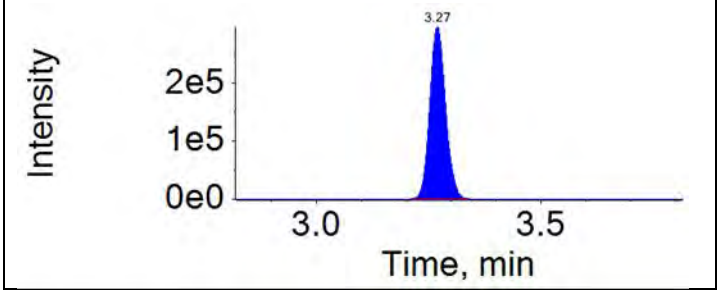


APPROVED
By JPT at 2:54 pm, 11/7/18

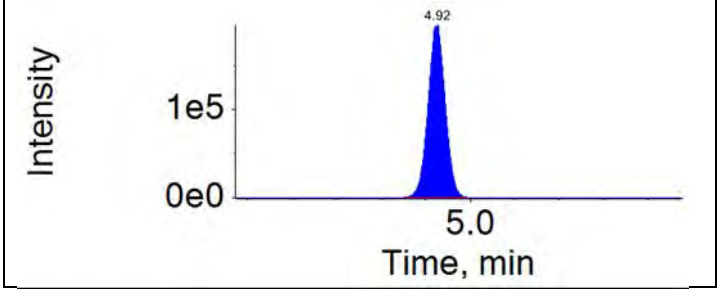
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

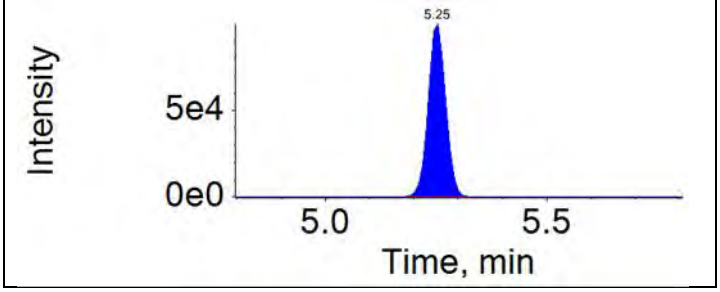
Injection Standard: 13C3-PFBA
216.0 / 172.0



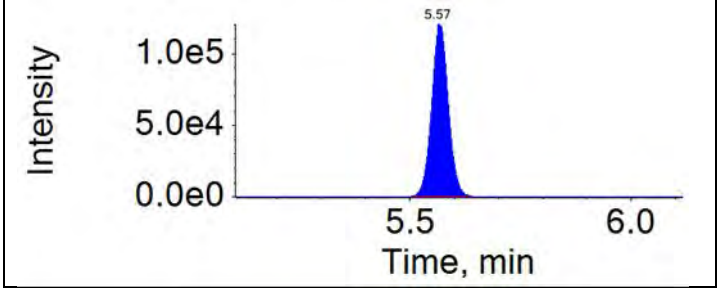
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



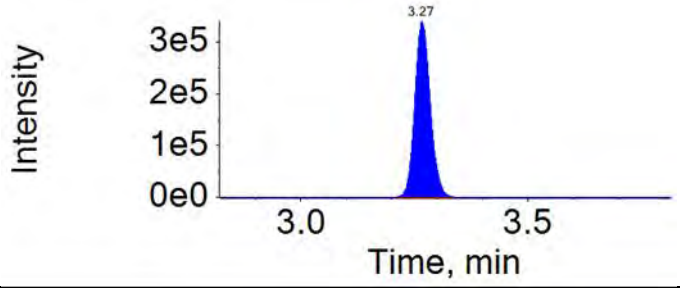
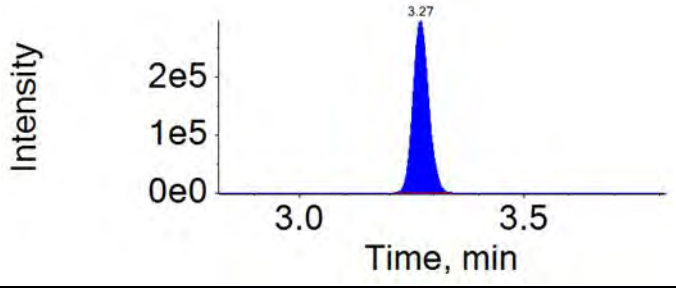
Injection Standard: 13C2-PFDA
515.0 / 470.0

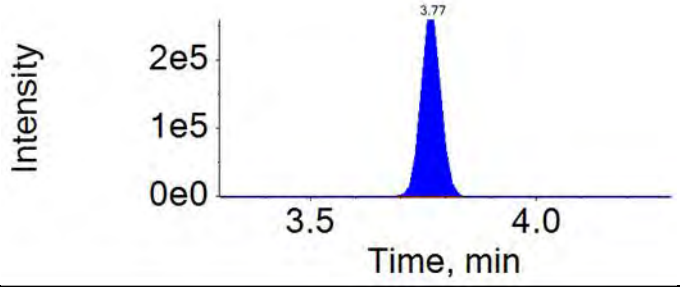
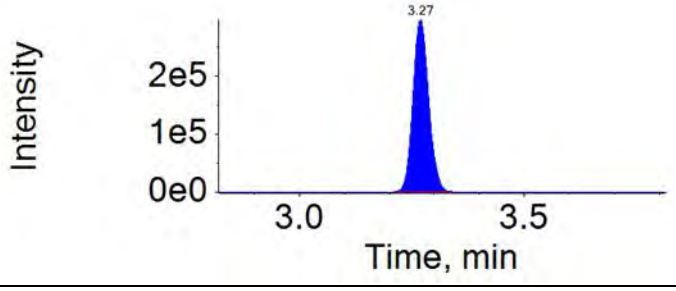


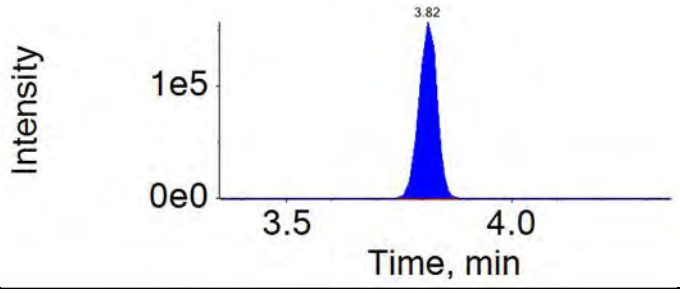
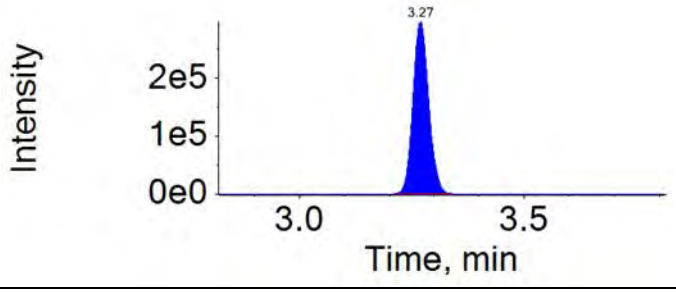
APPROVED
By JPT at 2:54 pm, 11/7/18

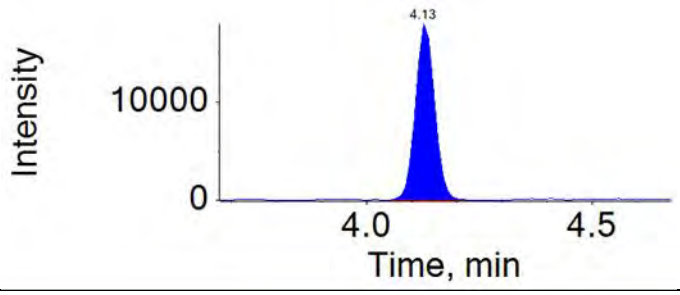
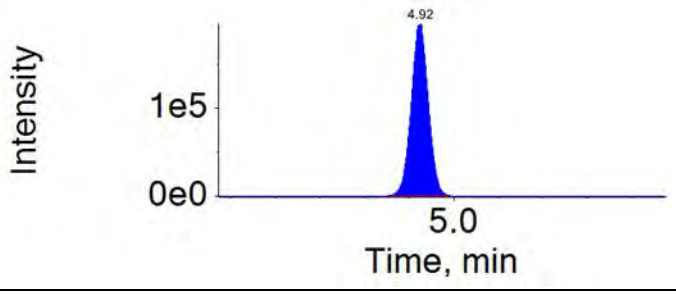
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

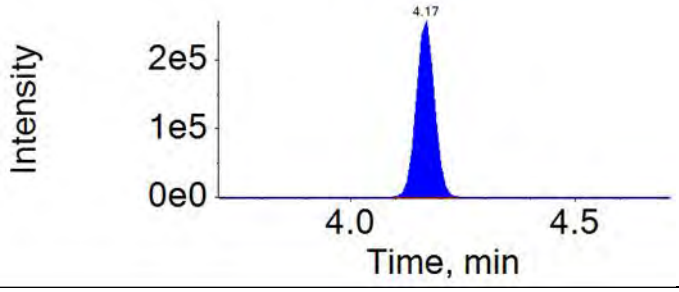
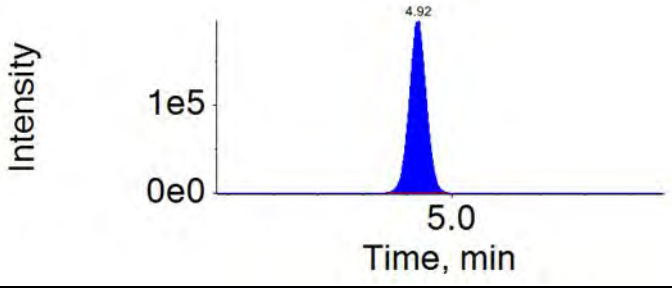
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

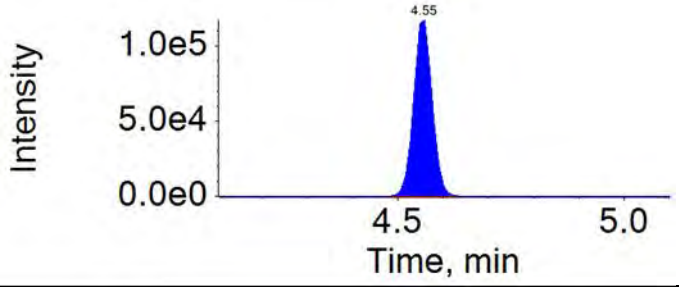
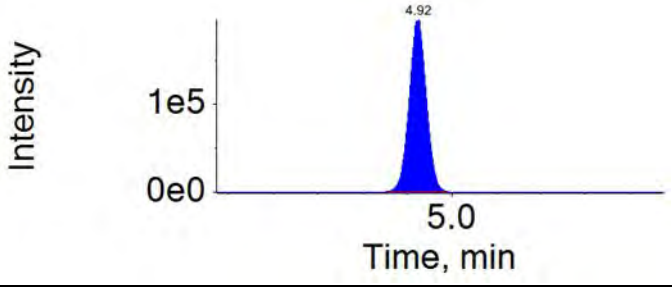
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

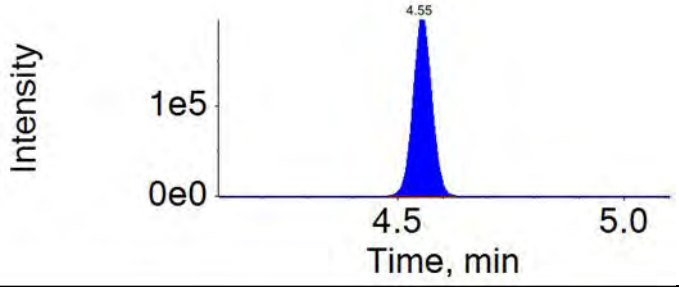
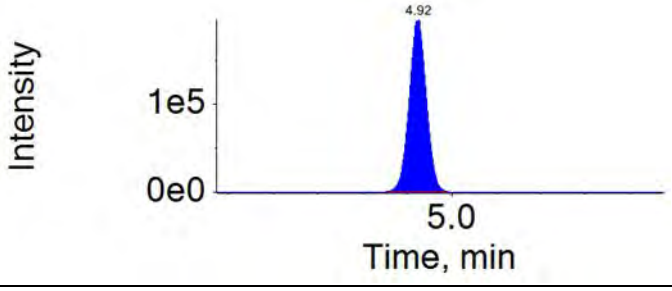
APPROVED
By JPT at 2:54 pm, 11/7/18

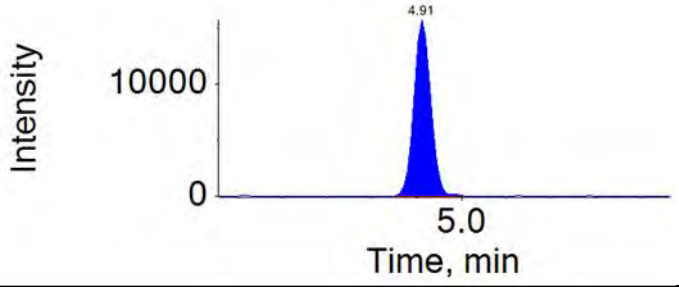
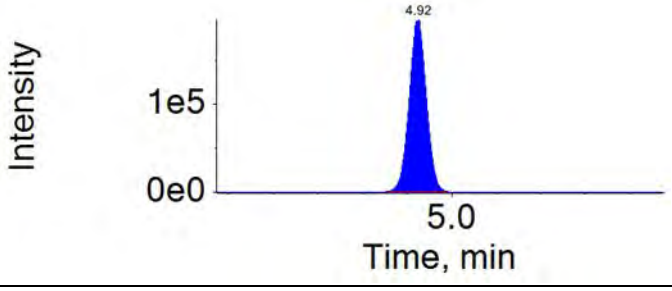
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

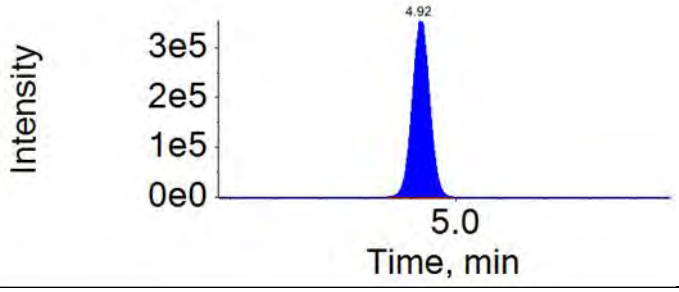
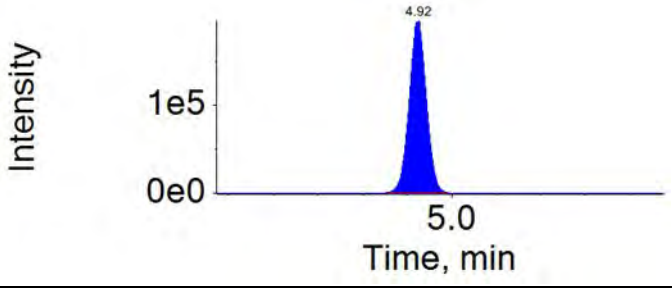
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

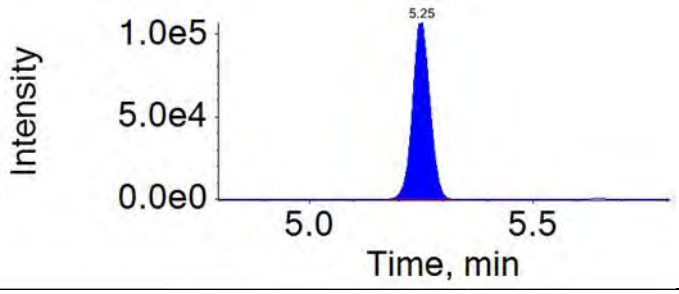
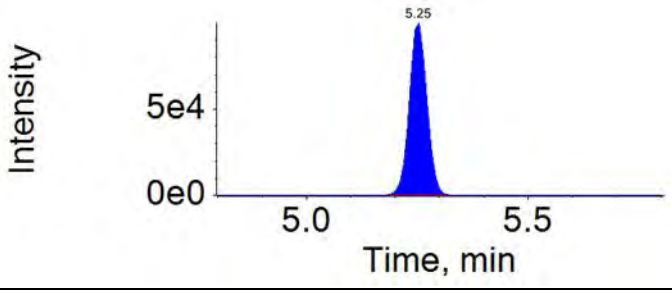
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

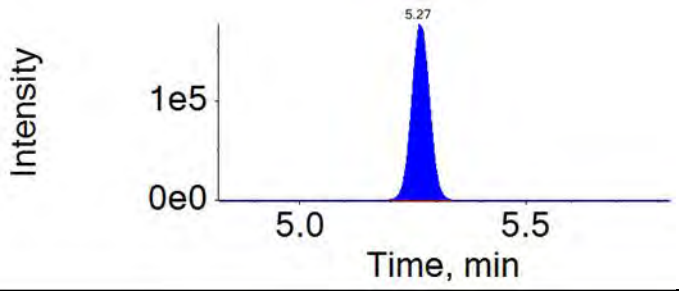
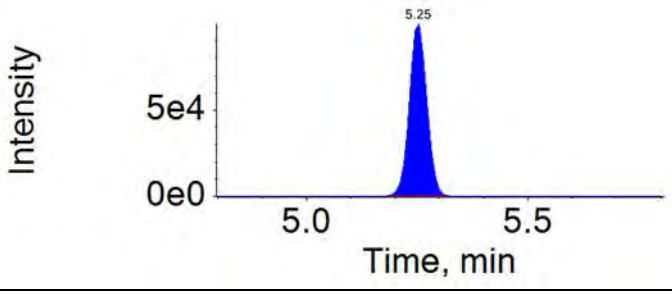
APPROVED
By JPT at 2:54 pm, 11/7/18

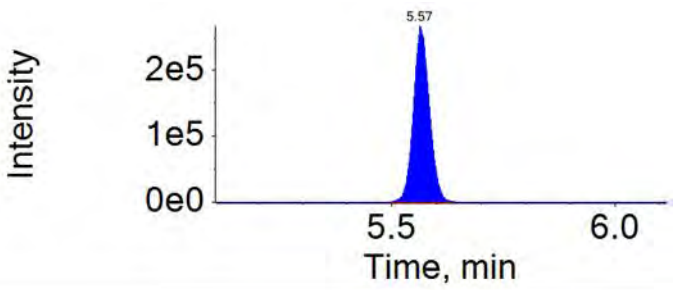
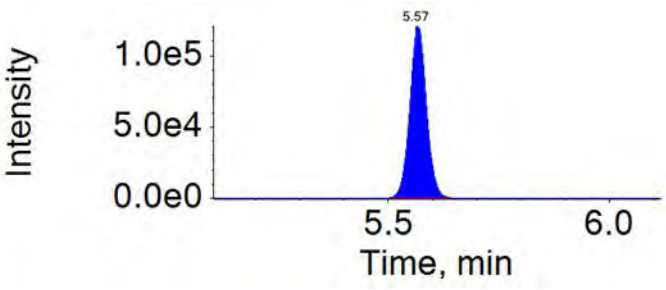
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

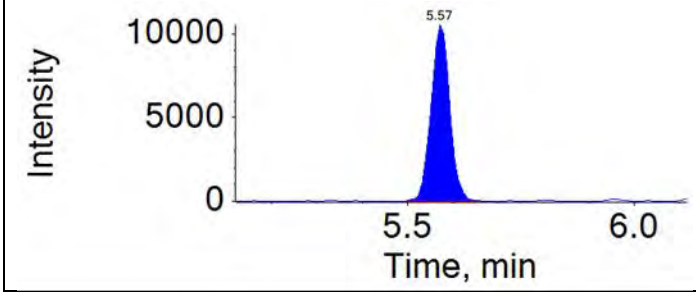
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

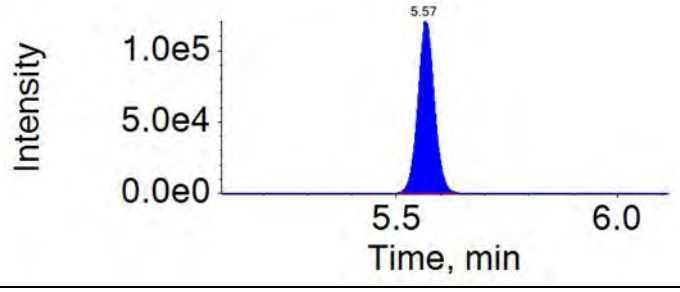
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

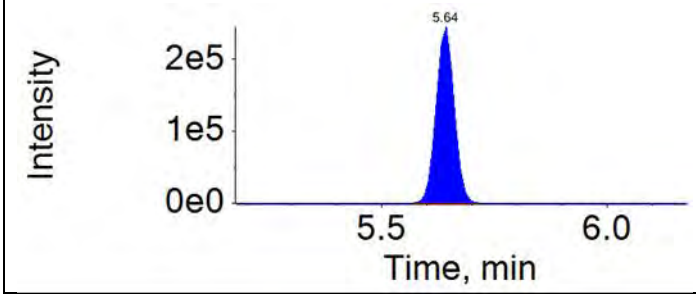
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

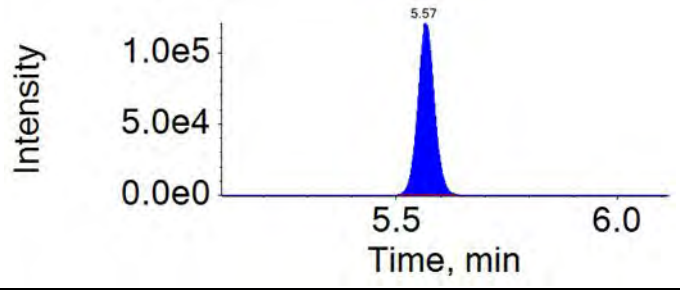
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



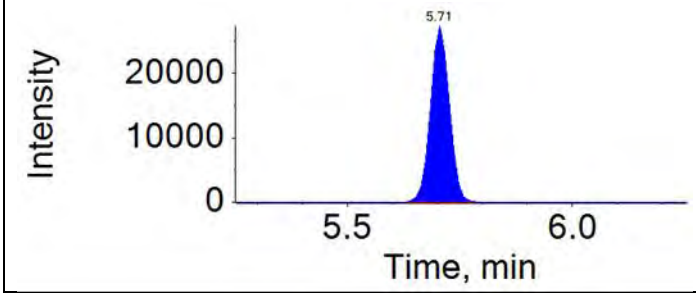


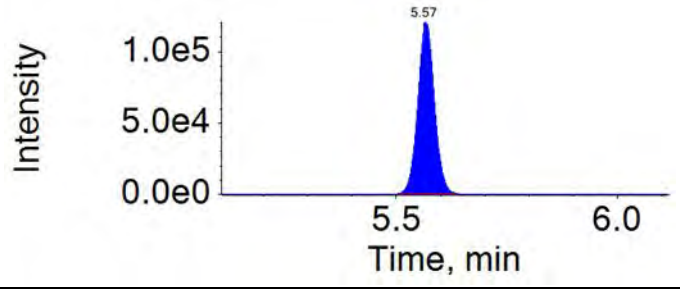
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



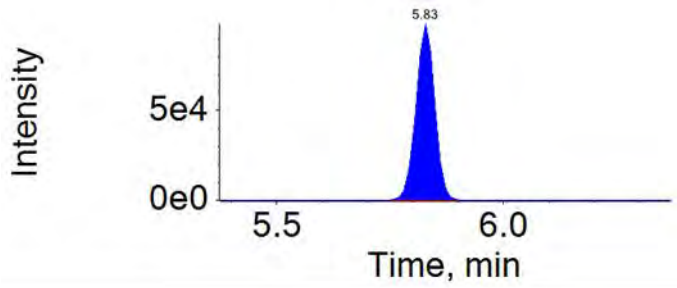


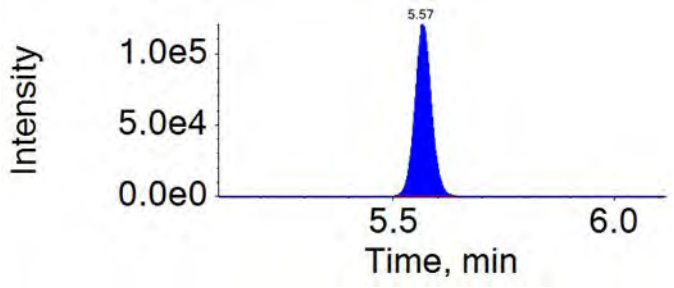
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



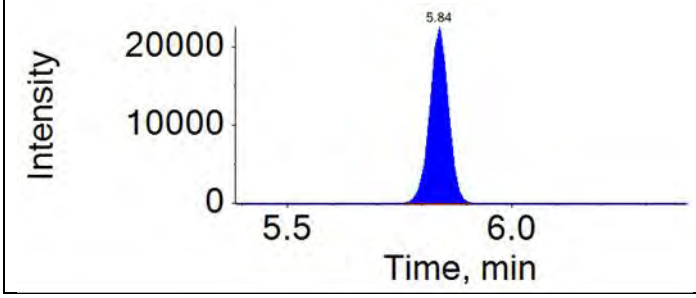


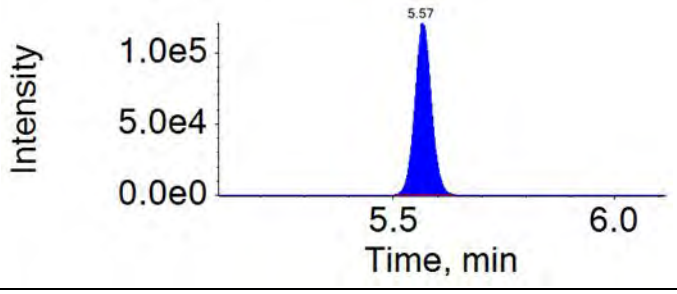
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

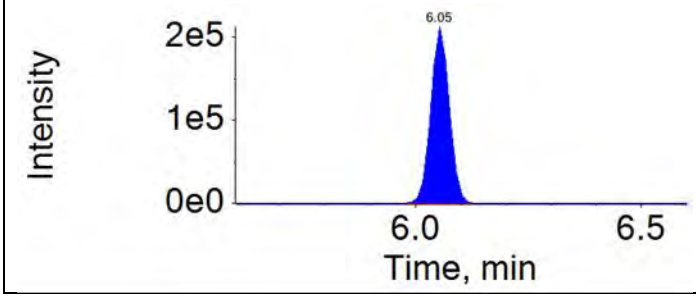
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

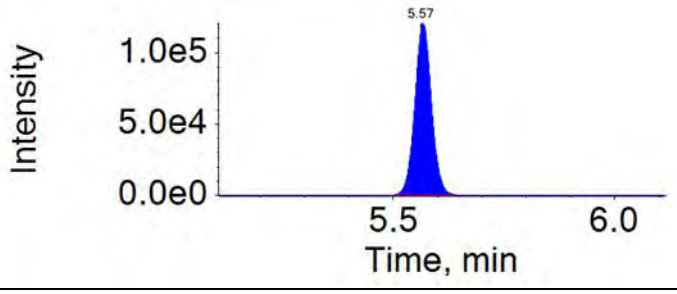
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



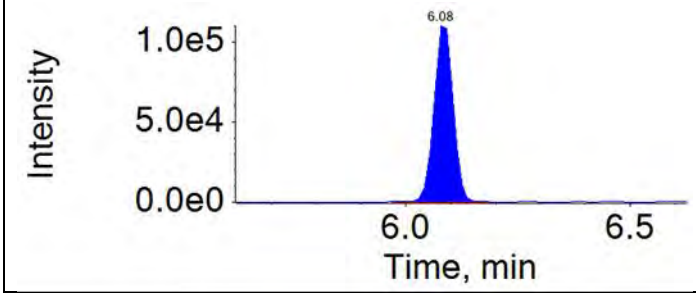


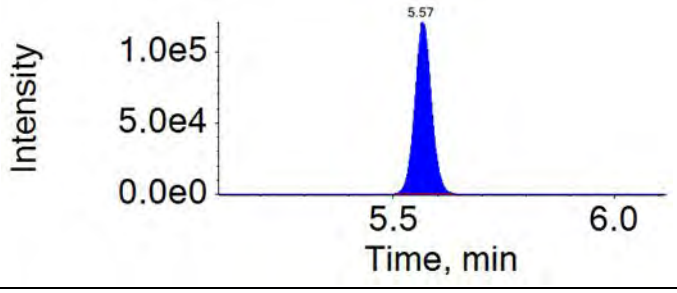
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



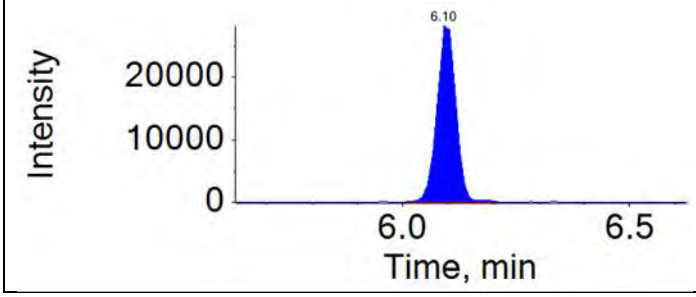


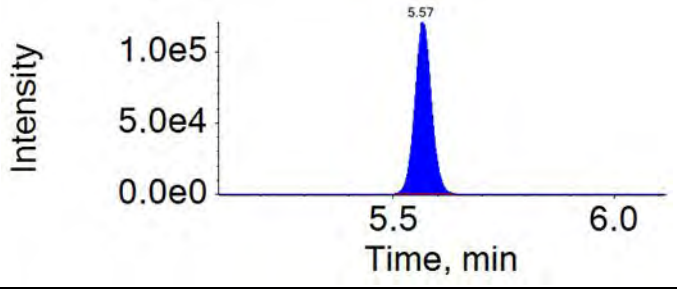
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



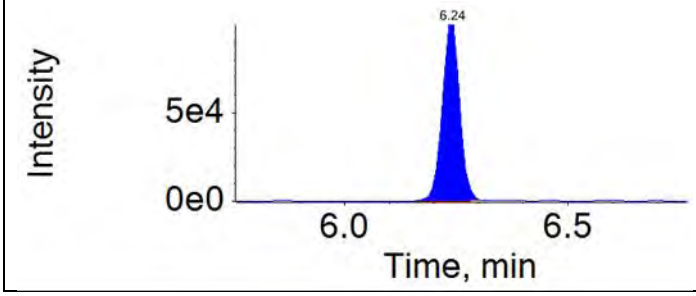


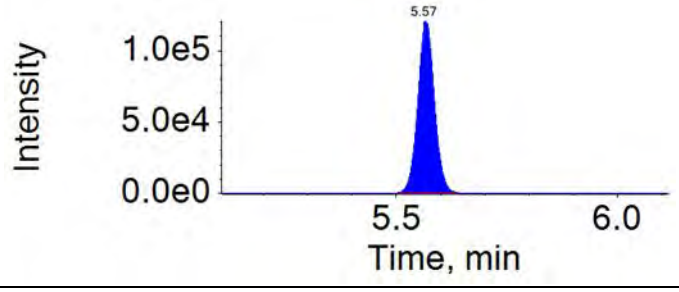
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

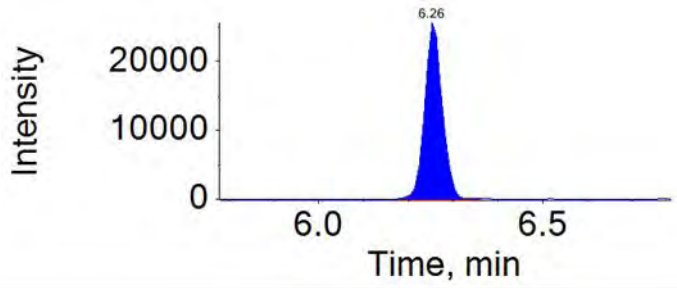
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

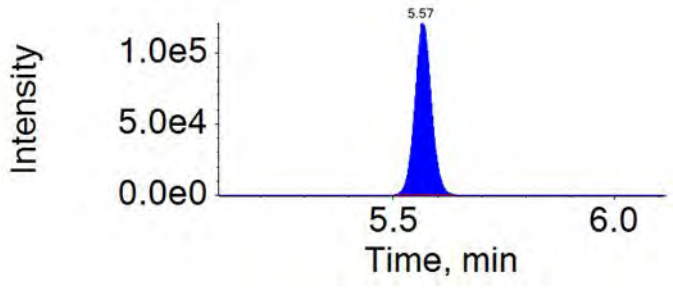
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



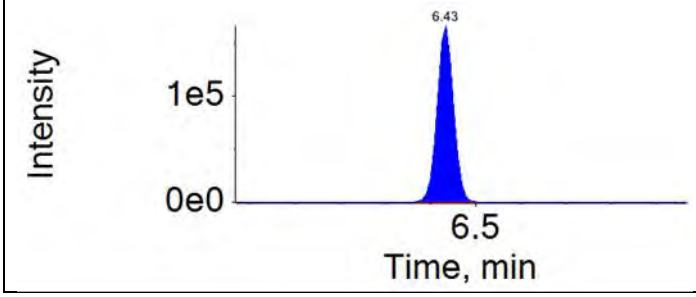


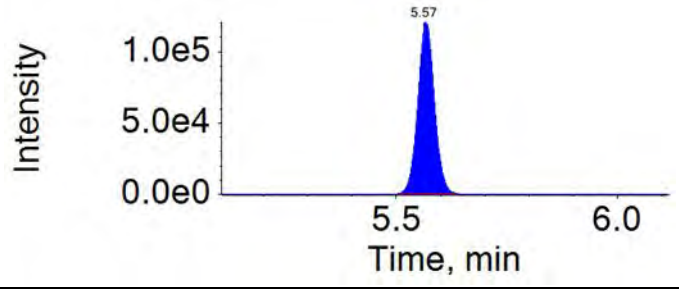
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



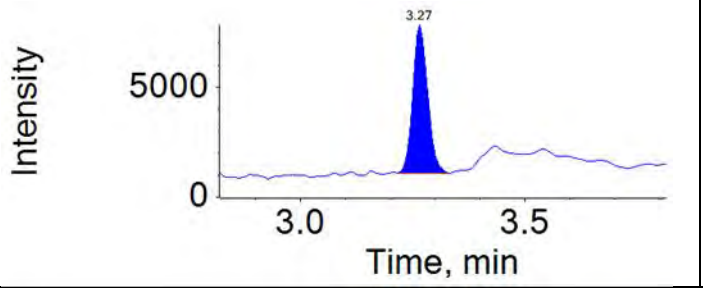


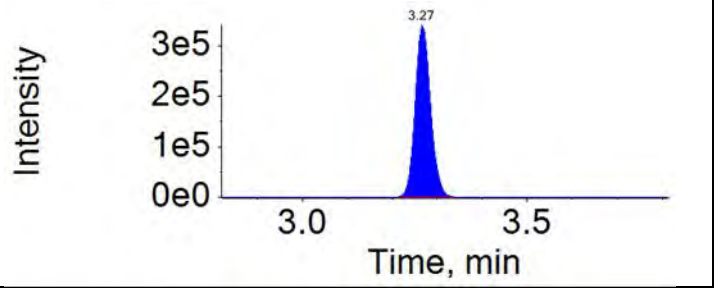
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

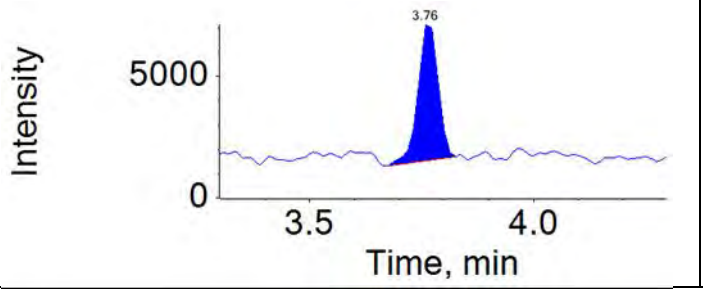
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

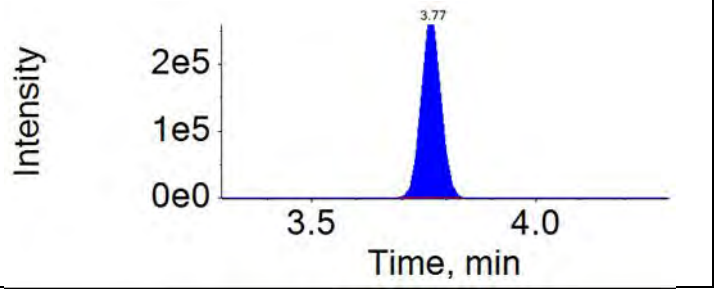
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



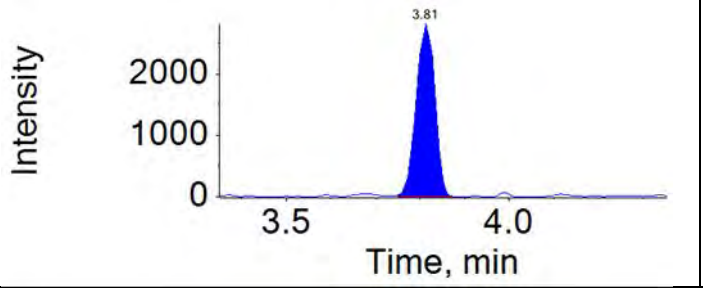


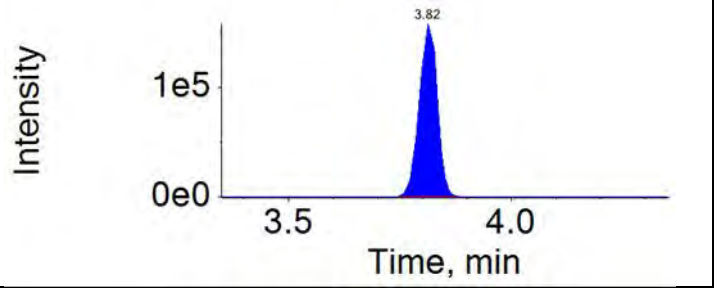
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



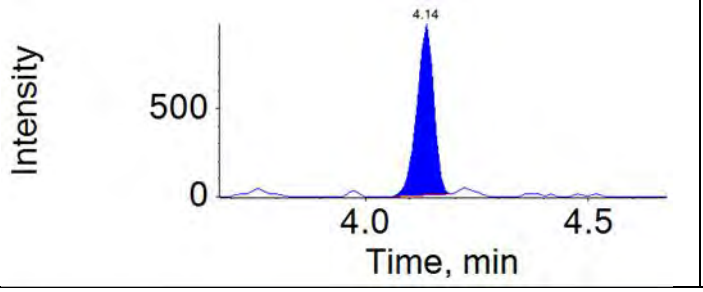


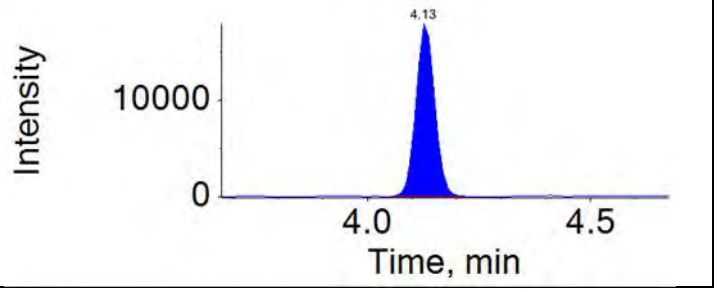
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

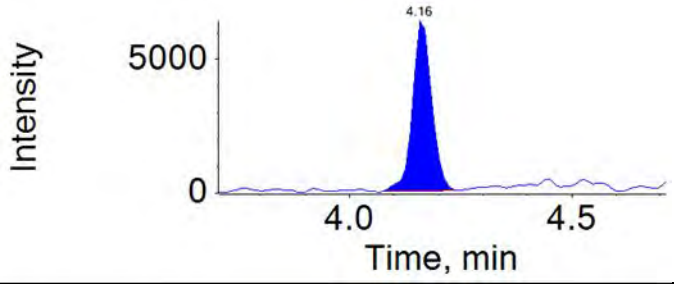
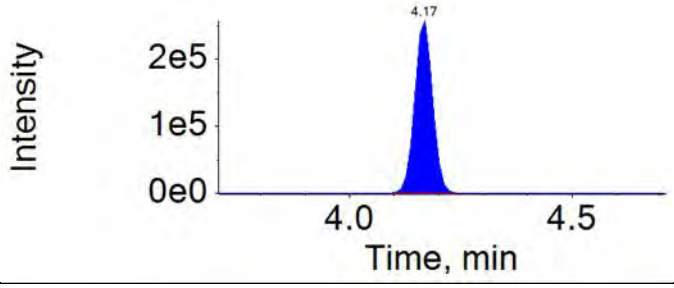


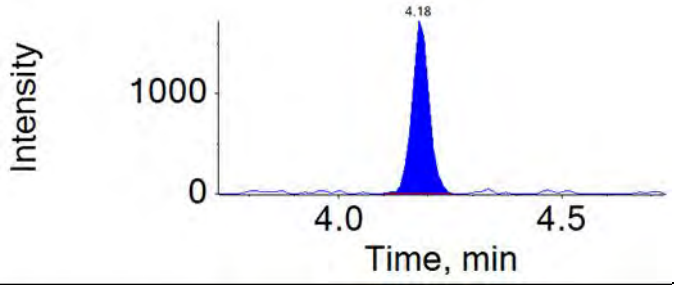
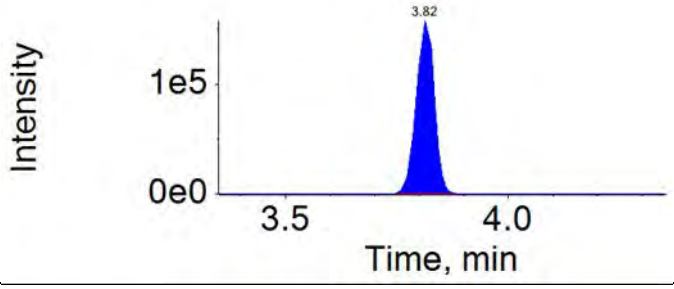


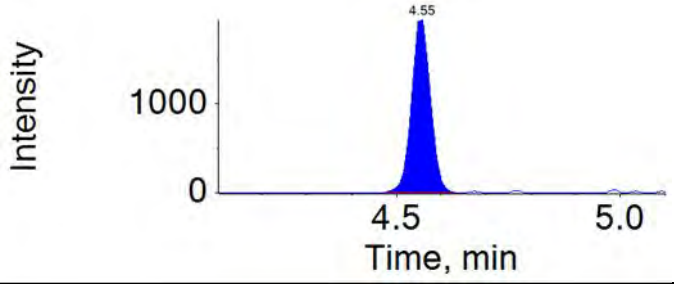
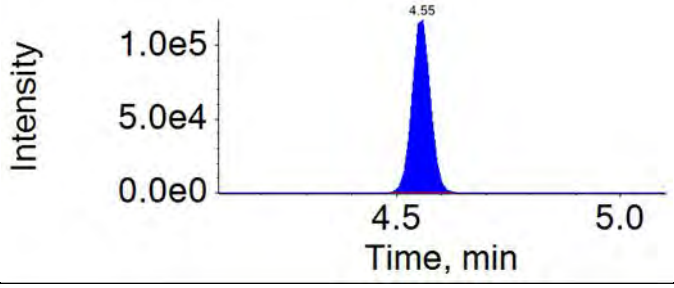
APPROVED
By JPT at 2:54 pm, 11/7/18

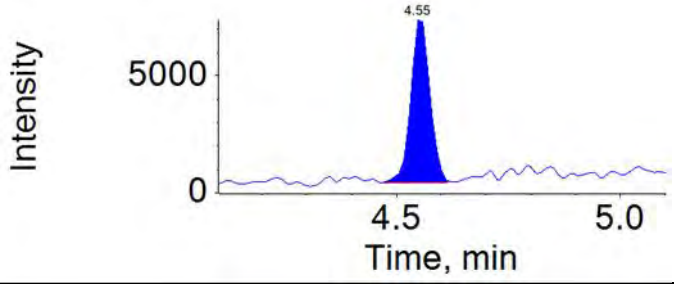
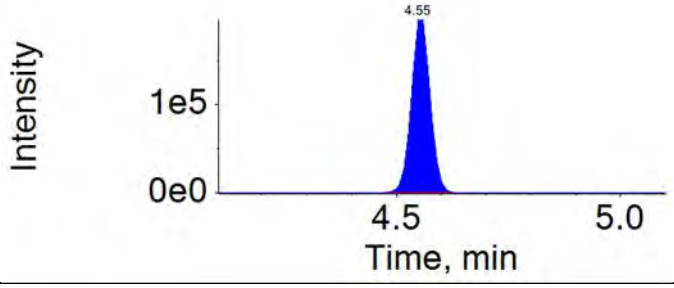
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

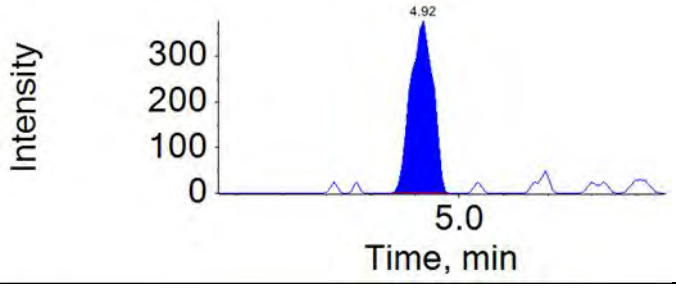
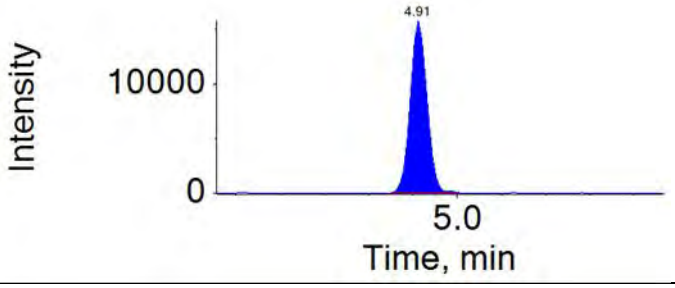
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

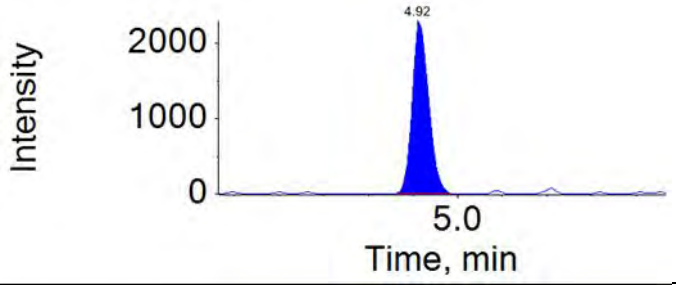
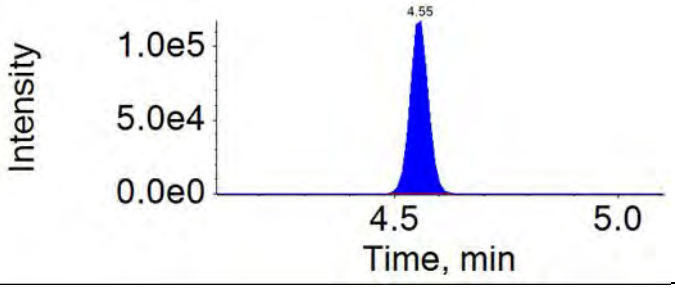
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

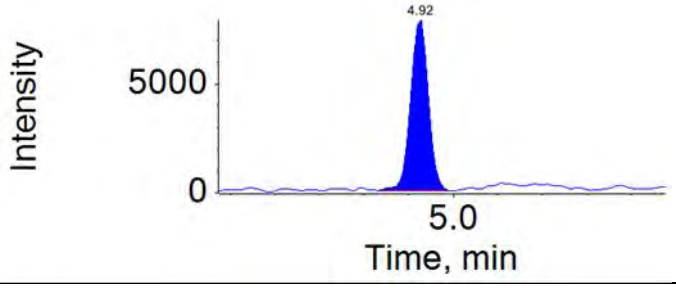
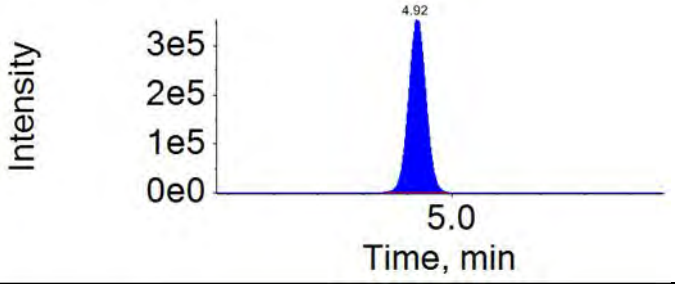
APPROVED
By JPT at 2:54 pm, 11/7/18

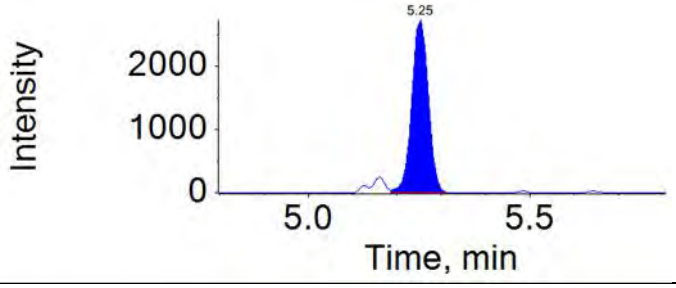
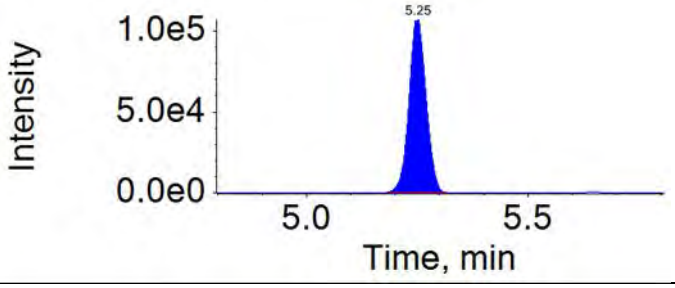
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

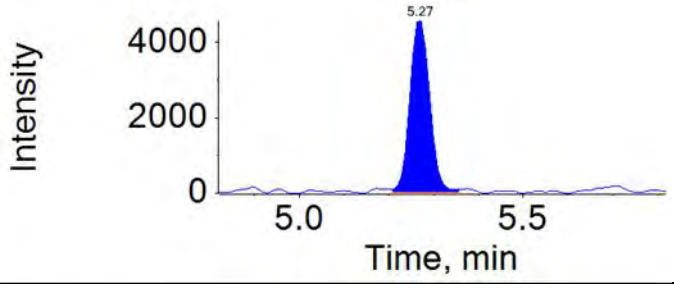
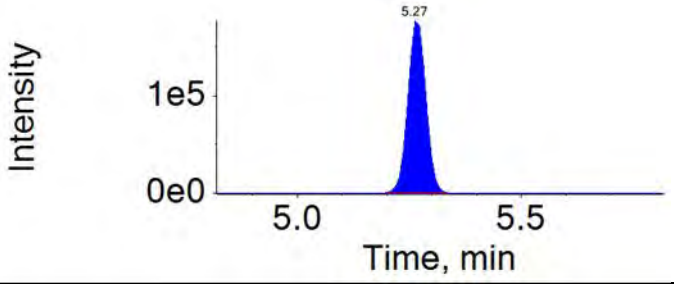
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

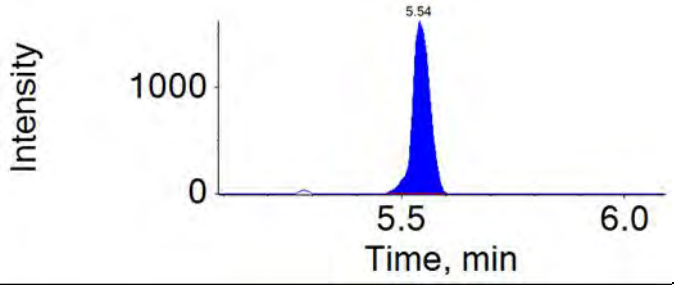
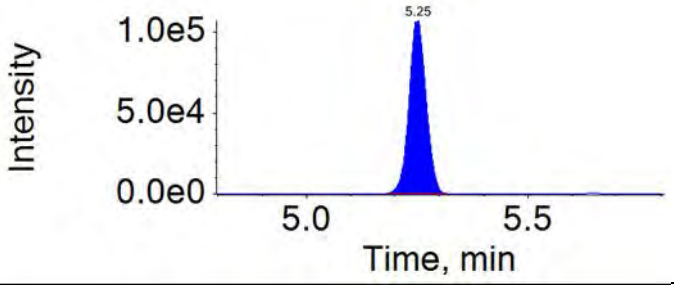
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

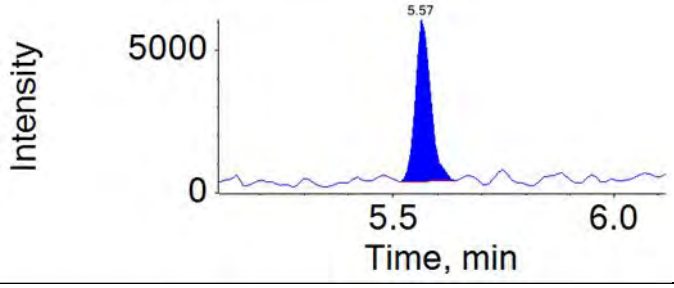
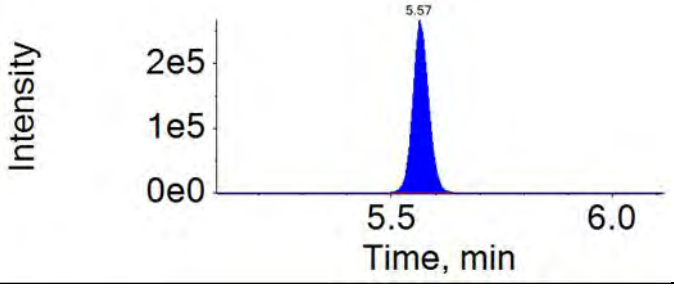
APPROVED
By JPT at 2:54 pm, 11/7/18

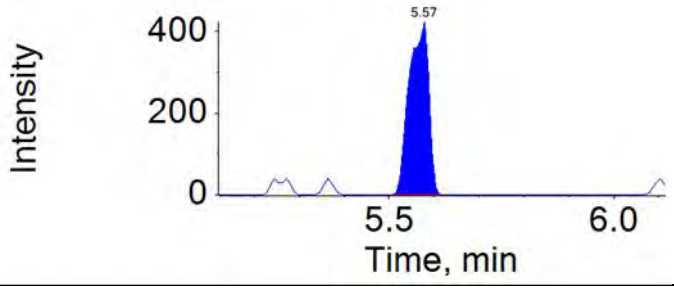
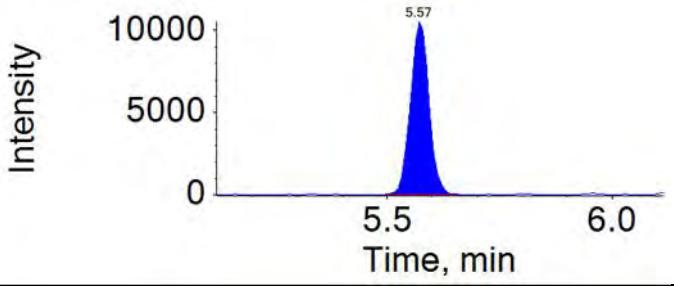
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

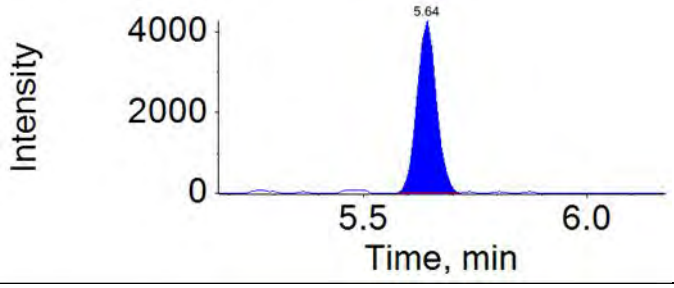
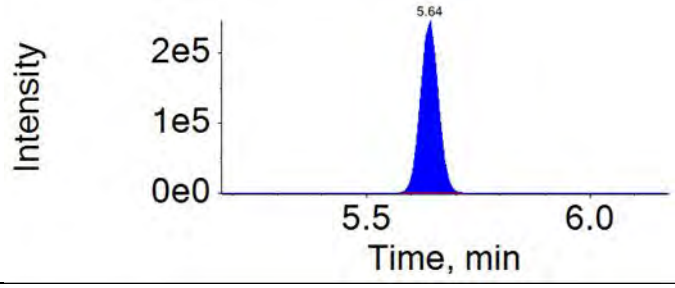
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

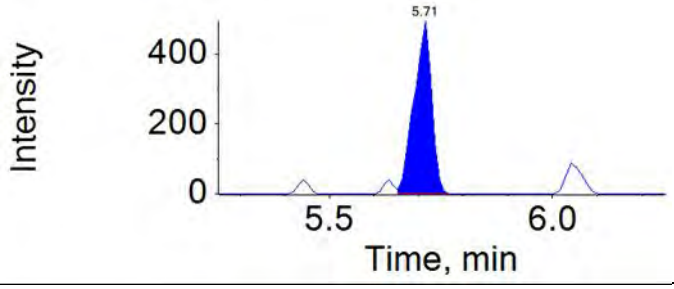
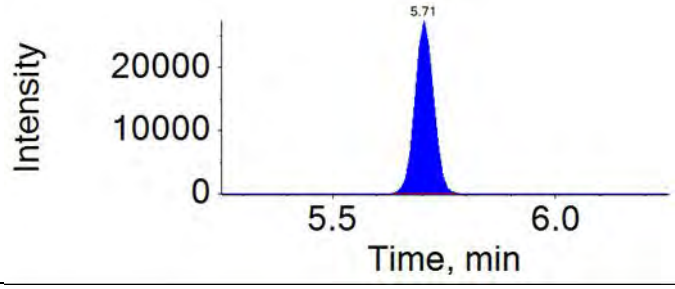
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

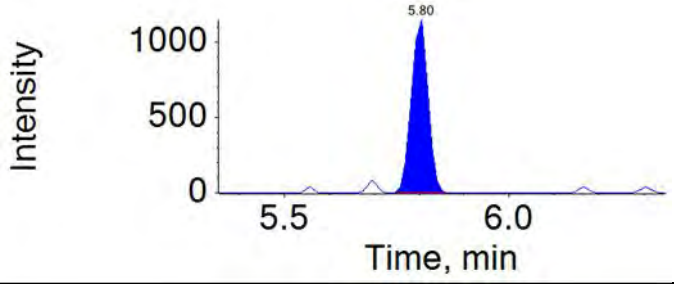
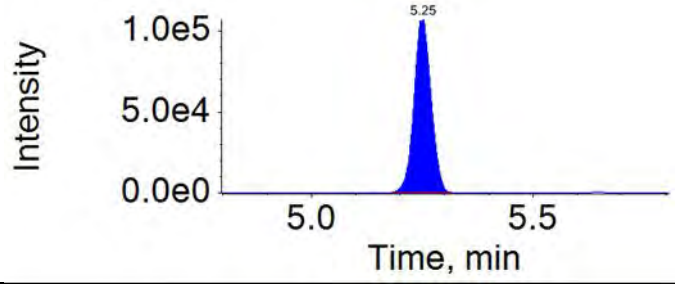
APPROVED
By JPT at 2:54 pm, 11/7/18

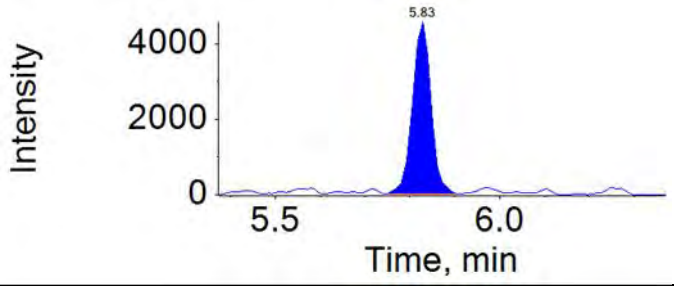
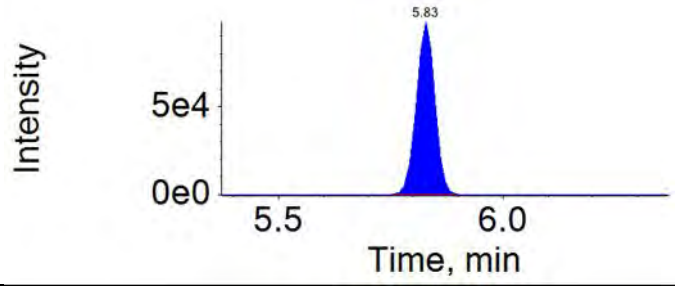
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

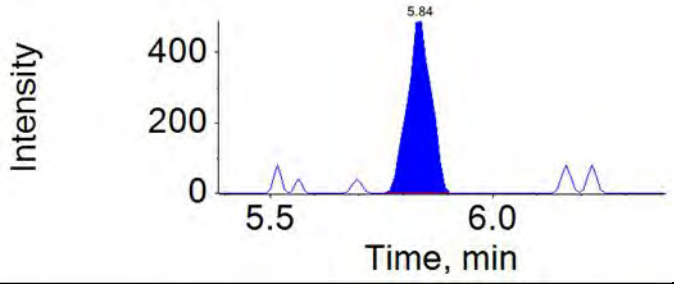
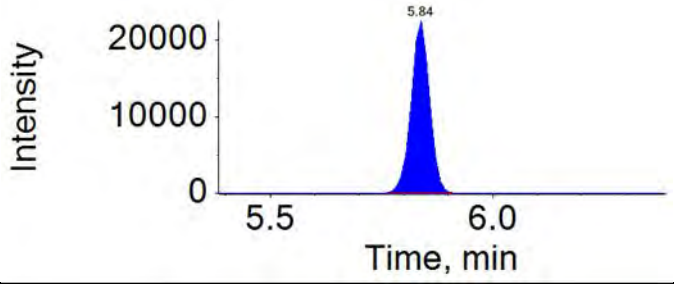
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

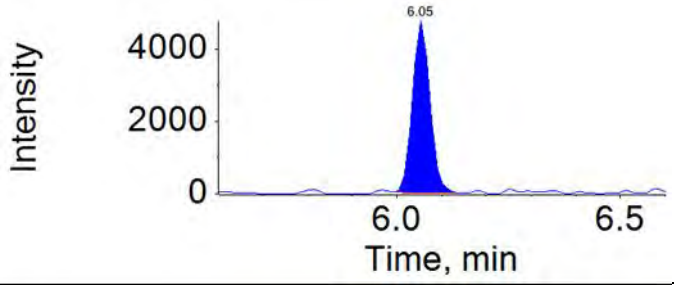
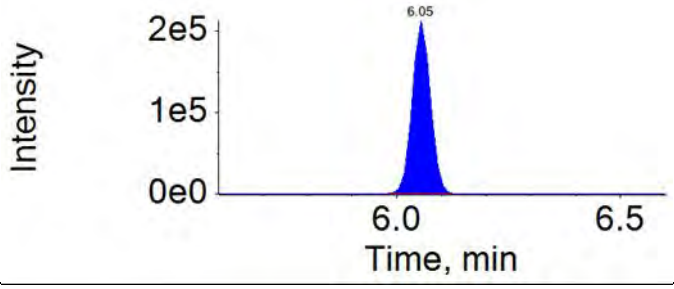
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

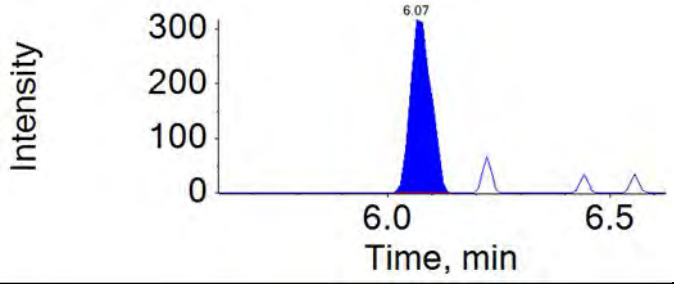
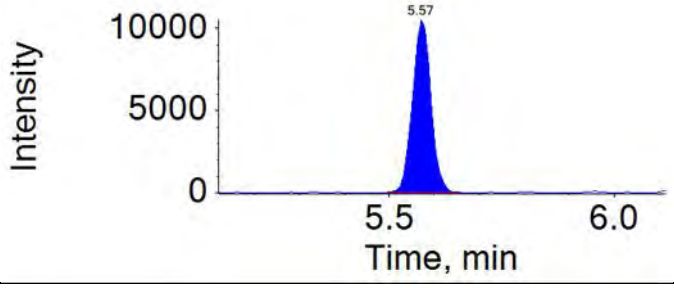
APPROVED
By JPT at 2:54 pm, 11/7/18

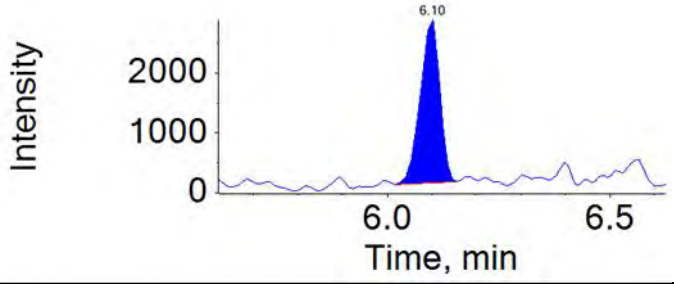
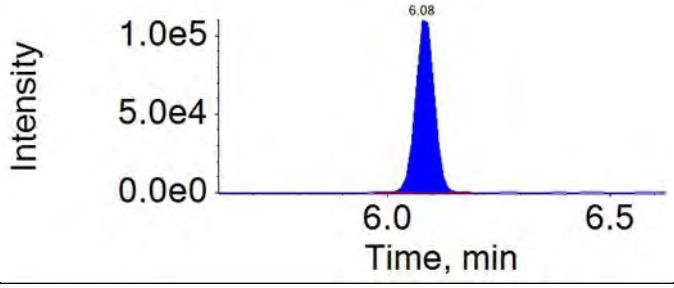
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

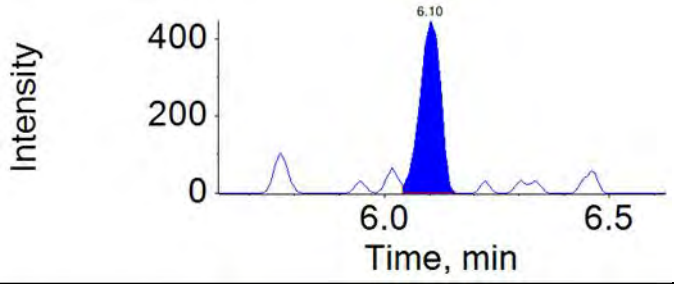
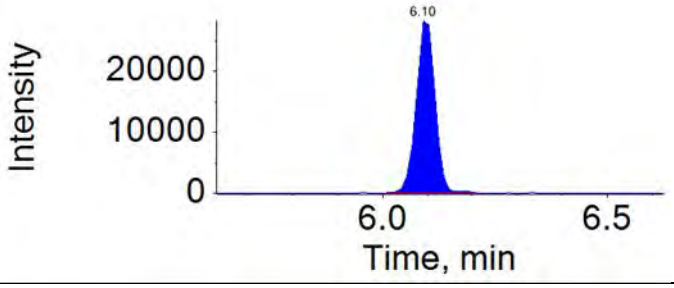
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

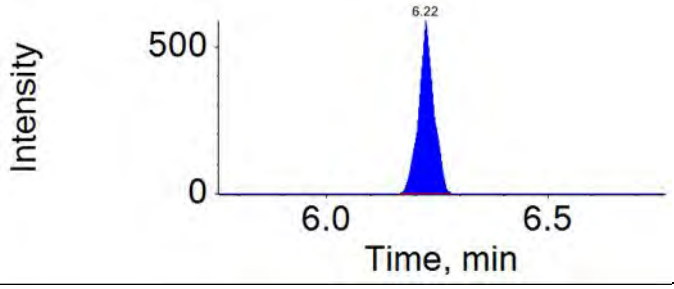
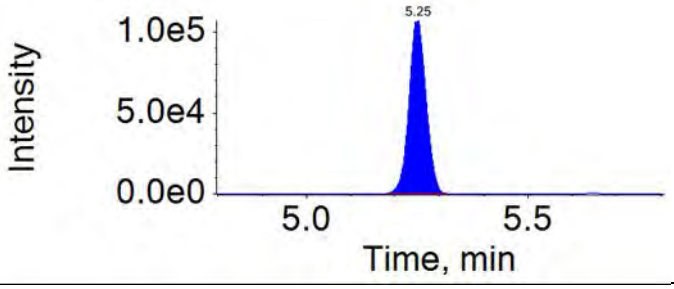
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

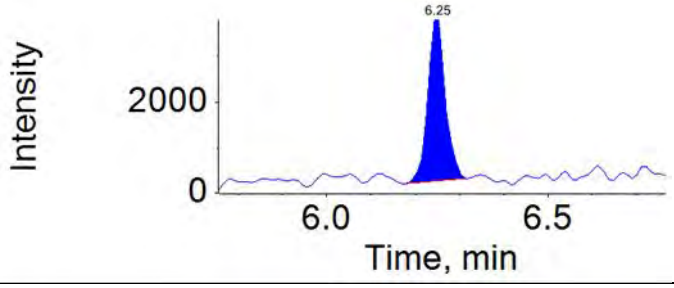
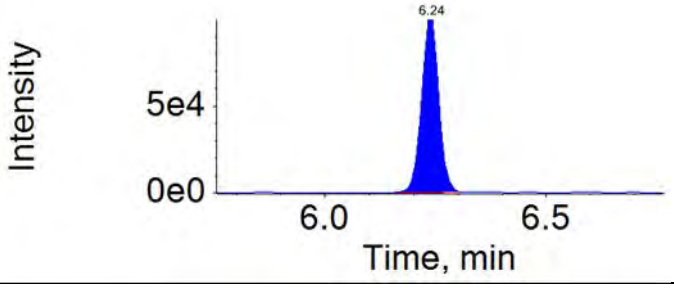
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

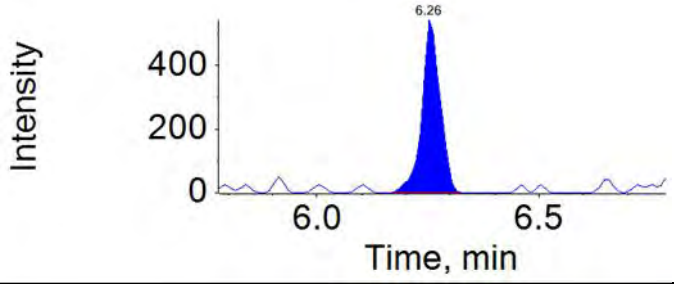
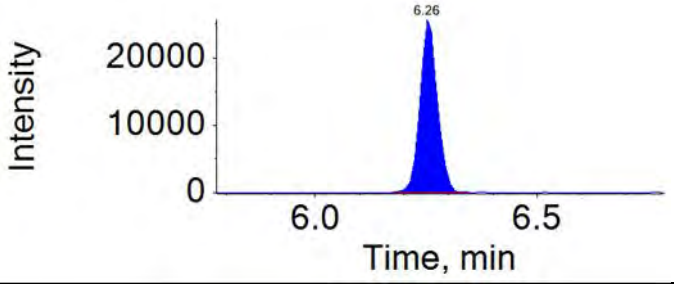
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0
	

Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0
	

Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0
	

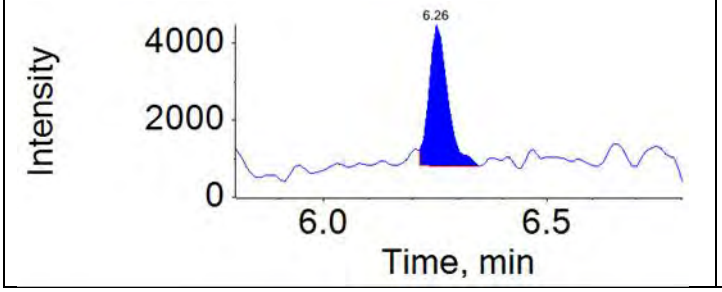
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0
	

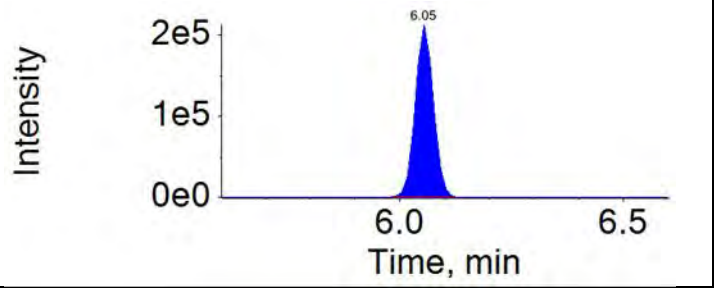
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

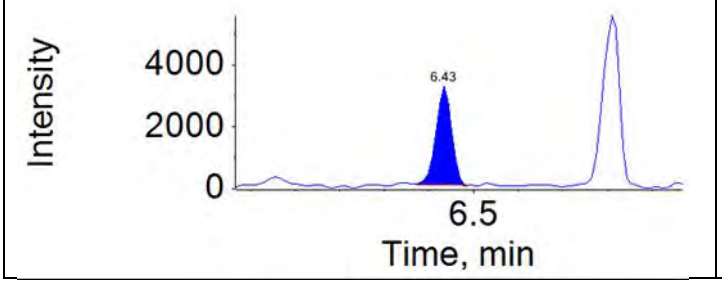
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

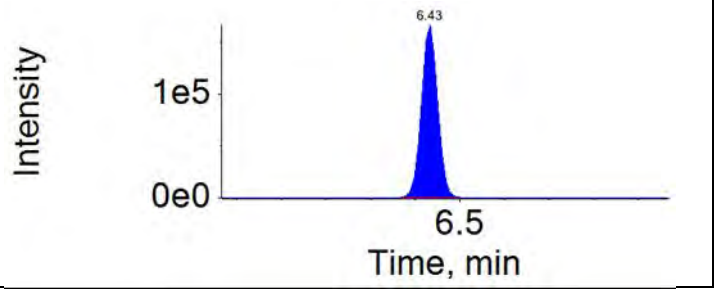
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



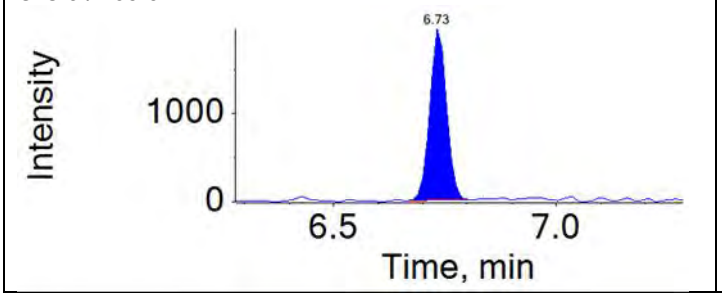


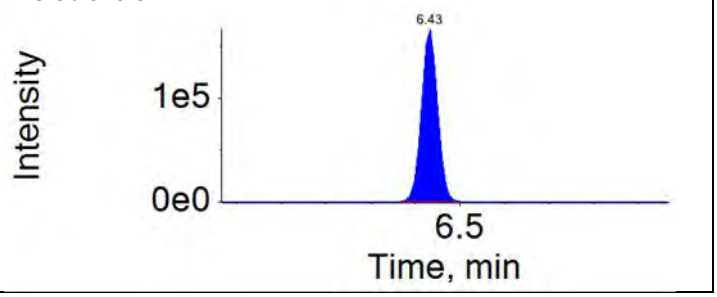
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



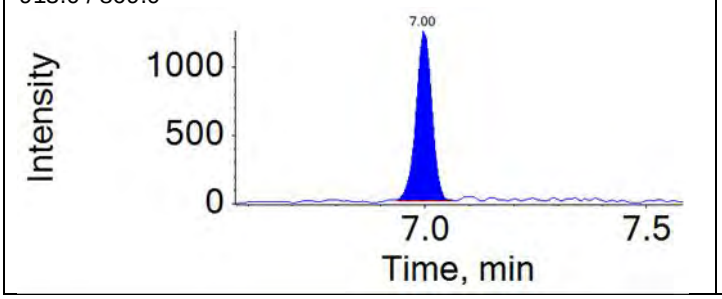


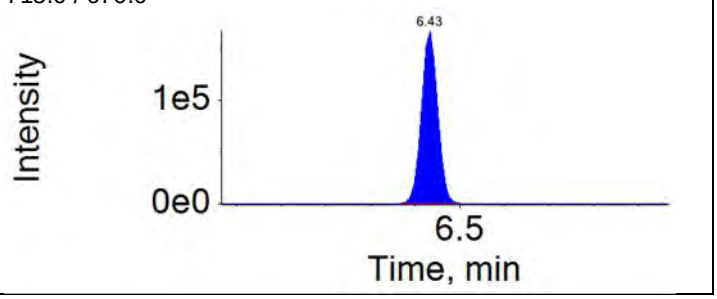
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



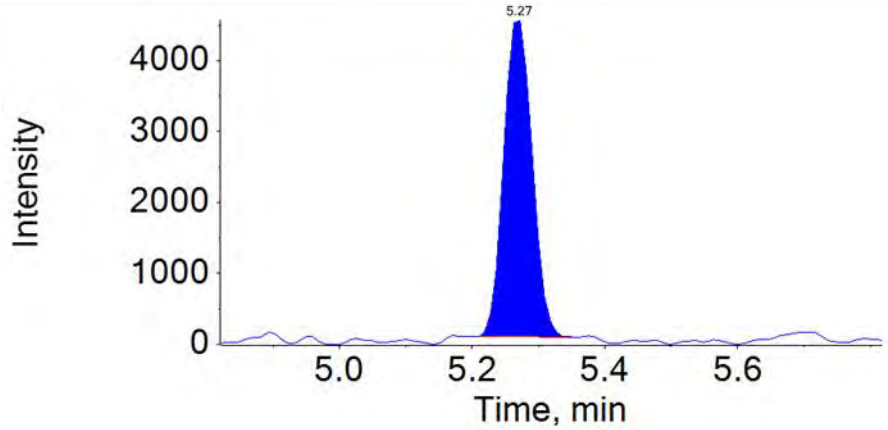


APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

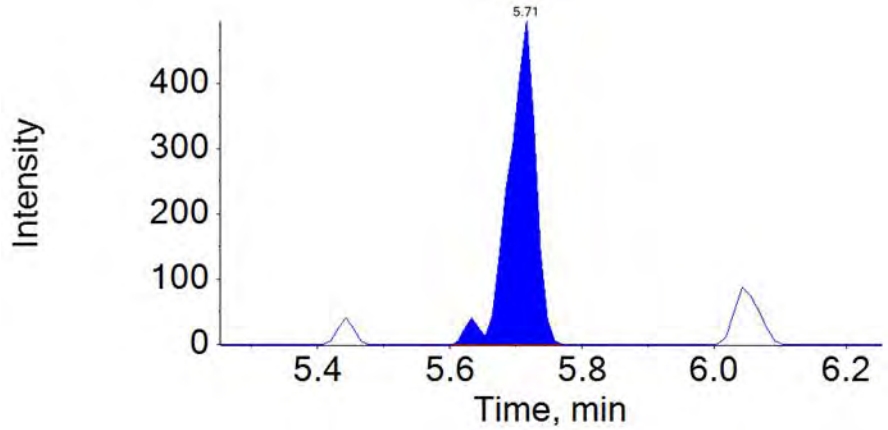
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
13308.8
Mass Range:
463.0 / 419.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



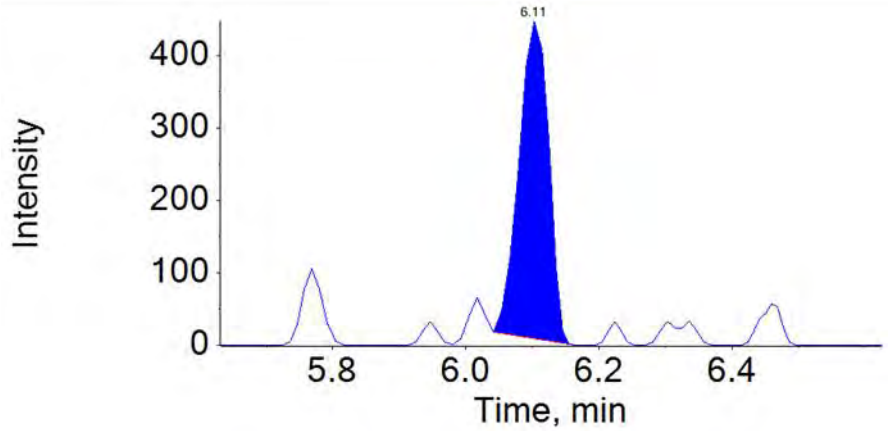
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
1418.1
Mass Range:
570.0 / 419.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.11
Peak Area:
1361.1
Mass Range:
512.0 / 169.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

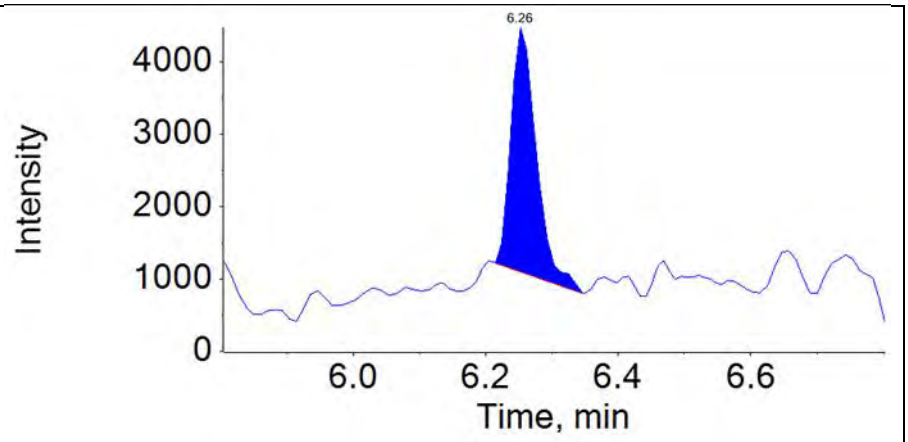
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFTrDA
RT (min.):
6.26
Peak Area:
8999.3
Mass Range:
663.0 / 619.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Ion Ratio Report

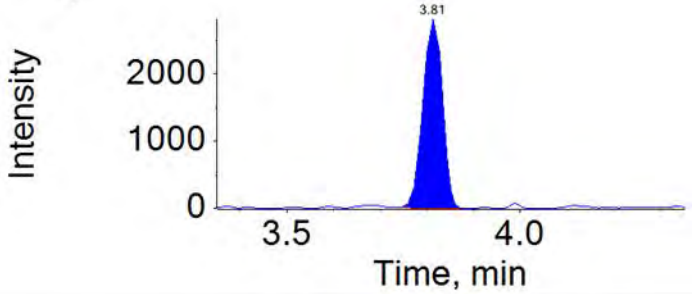
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	8179.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	3067.3	A	0.3576	0.3750	5	50	
4:2-FTS	4.14	1.00	2516.6	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	1184.6	A	0.6359	0.4707	-26	50	
PFHxA	4.16	1.00	19041.3	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	272.1	A	0.0115	0.0143	25	50	
PFPeS	4.18	1.10	4553.9	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	2517.9	A	0.5384	0.5529	3	50	
PFHxS	4.55	1.00	5720.4	A	1.0000	1.0000			
PFHxS_2	4.56	1.00	2255.5	A	0.3569	0.3943	10	50	
PFHpA	4.55	1.00	20611.7	A	1.0000	1.0000			
PFHpA_2	4.56	1.00	1062.3	A	0.0577	0.0515	-11	50	
6:2-FTS	4.92	1.00	1337.7	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	1232.9	A	0.6752	0.9217	37	50	
PFHpS	4.92	1.08	5811.8	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	2272.0	A	0.3950	0.3909	-1	50	
PFOA	4.92	1.00	21714.7	A	1.0000	1.0000			
PFOA_2	4.92	1.00	1080.5	A	0.0635	0.0498	-22	50	
PFOS	5.25	1.00	7067.6	A	1.0000	1.0000			
PFOS_2	5.26	1.00	1948.3	A	0.3494	0.2757	-21	50	
PFNA	5.27	1.00	14036.5	M	1.0000	1.0000			
PFNA_2	5.25	1.00	631.4	A	0.0207	0.0450	118	50	OOS
PFNS	5.54	1.06	4370.5	A	1.0000	1.0000			
PFNS_2	5.54	1.06	1979.5	A	0.4890	0.4529	-7	50	
PFDA	5.57	1.00	13448.9	A	1.0000	1.0000			
PFDA_2	5.56	1.00	136.4	A	0.0057	0.0101	79	50	OOS
8:2-FTS	5.57	1.00	1277.3	A	1.0000	1.0000			
8:2-FTS_2	5.58	1.00	851.4	A	0.6169	0.6666	8	50	
NMeFOSAA	5.71	1.00	1352.6	M	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	451.3	A	0.2206	0.3336	51	50	OOS
PFDS	5.80	1.11	2949.3	A	1.0000	1.0000			
PFDS_2	5.80	1.11	1315.3	A	0.4648	0.4460	-4	50	
PFUnDA	5.83	1.00	13003.8	A	1.0000	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	5.84	1.00	1823.4	A	1.0000	1.0000			
NEtFOSAA_2	5.83	1.00	670.0	A	0.6082	0.3675	-40	50	
PFDoDA	6.05	1.00	12755.8	A	1.0000	1.0000			
PFDoDA_2	6.07	1.00	250.5	A	0.0109	0.0196	80	50	OOS
10:2-FTS	6.07	1.09	1033.2	A	1.0000	1.0000			
10:2-FTS_2	6.08	1.09	898.7	A	0.7082	0.8698	23	50	
PFTrDA	6.26	1.03	10576.8	M	1.0000	1.0000			
PFTrDA_2	6.24	1.03	127.3	A	0.0096	0.0120	25	50	
PFTeDA	6.43	1.00	7741.6	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	40.1	A	0.0055	0.0052	-7	50	
PFHxDA	6.73	1.05	5030.0	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	165.8	A	0.0596	0.0330	-45	50	
PFODA	7.00	1.09	3044.8	A	1.0000	1.0000			
PFODA_2	7.00	1.09	76.0	A	0.0257	0.0250	-3	50	

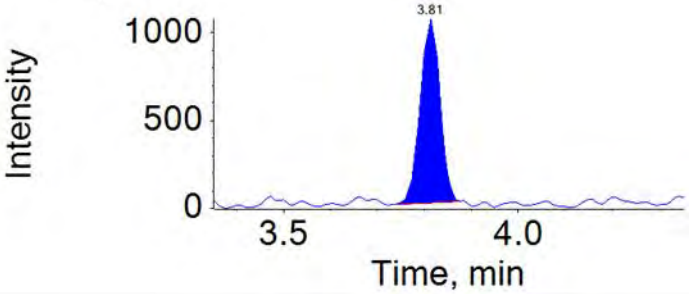
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

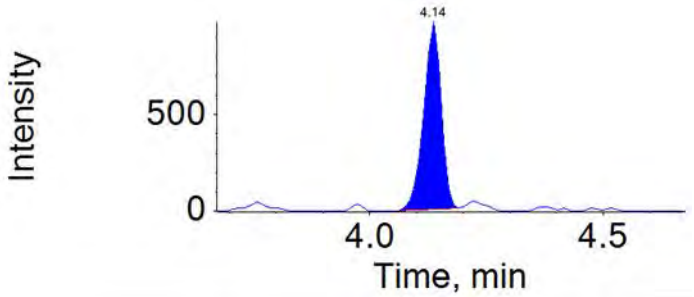
Component: PFBS
Primary Mass: 299.0 / 80.0



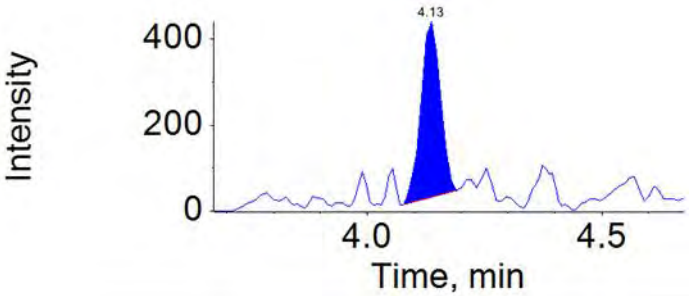
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



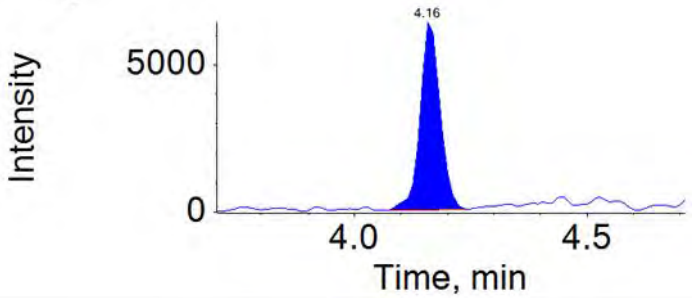
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



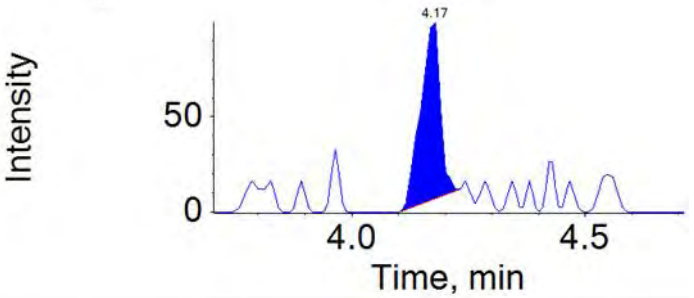
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



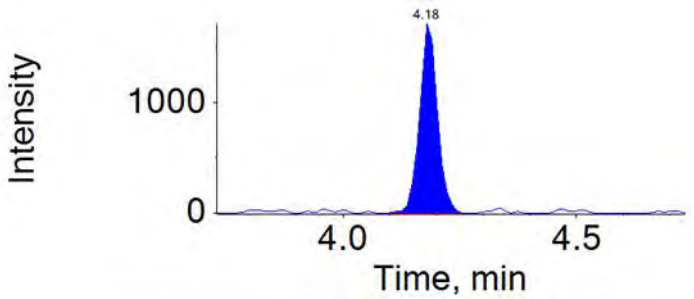
Component: PFHxA
Primary Mass: 313.0 / 269.0



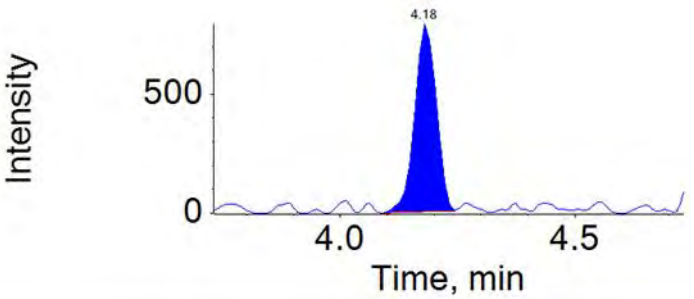
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



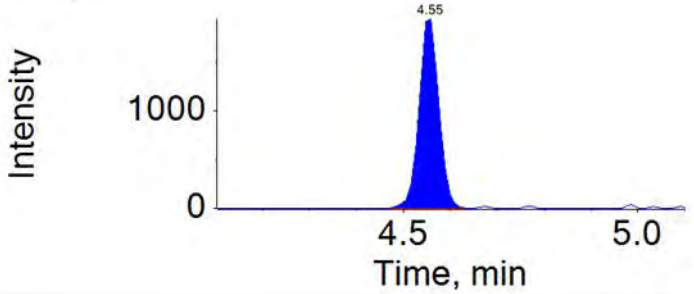
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



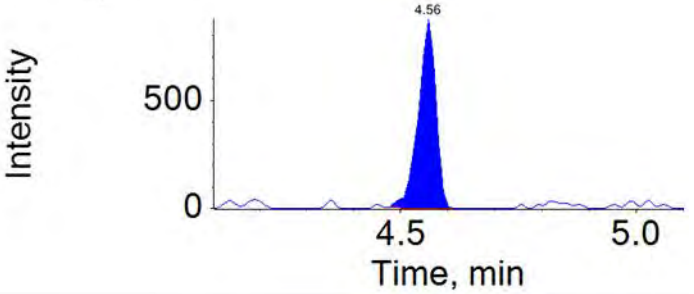
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

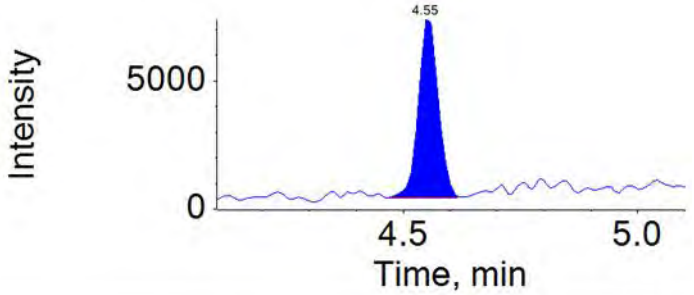
Component: PFHxS
Primary Mass: 399.0 / 80.0



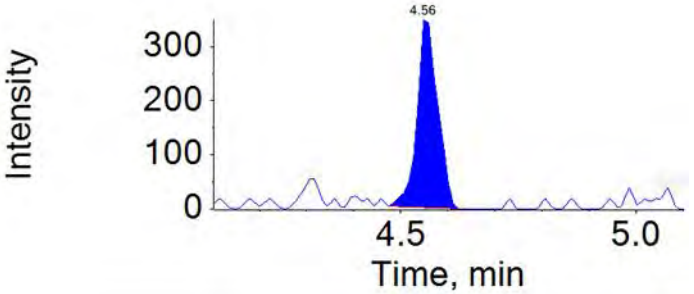
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



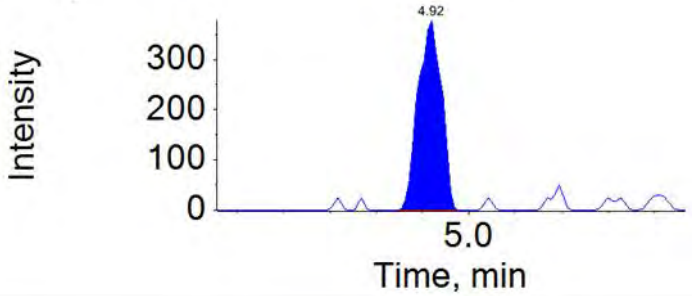
Component: PFHpA
Primary Mass: 363.0 / 319.0



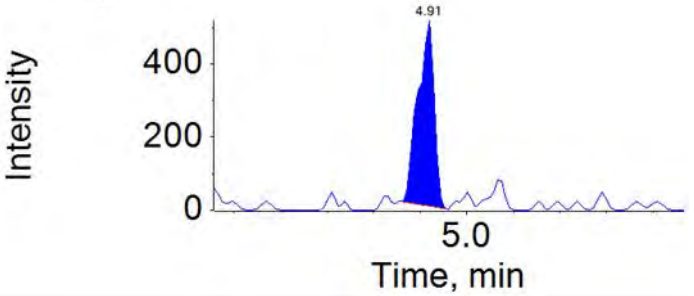
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



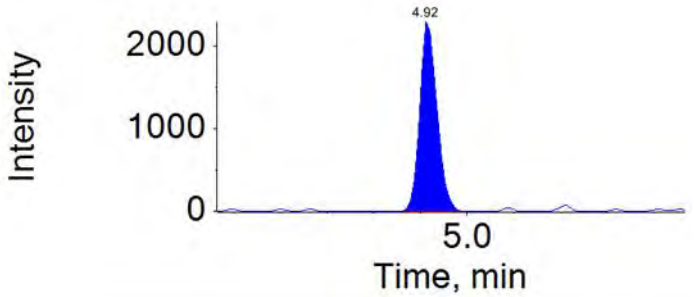
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



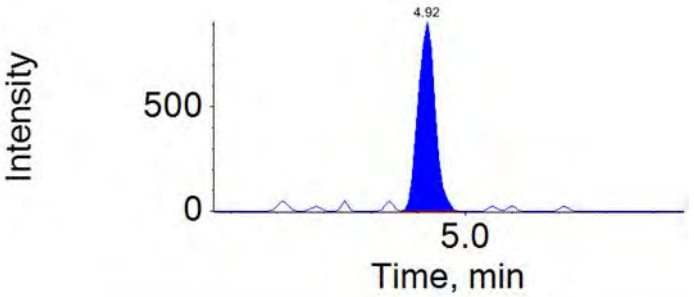
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



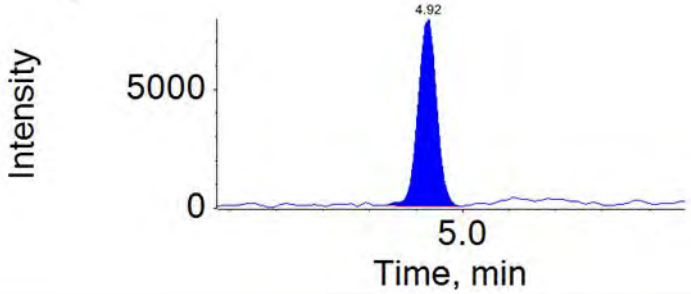
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



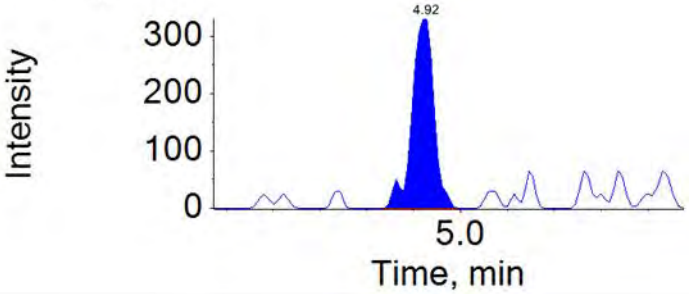
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

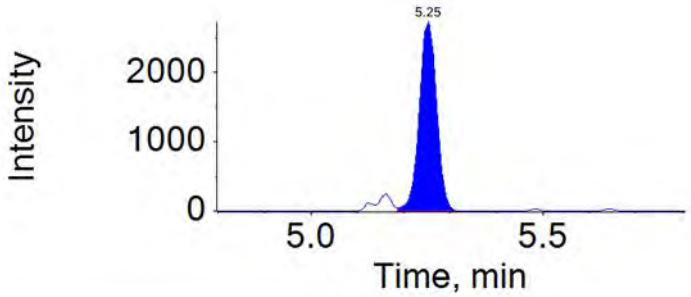
Component: PFOA
Primary Mass: 413.0 / 369.0



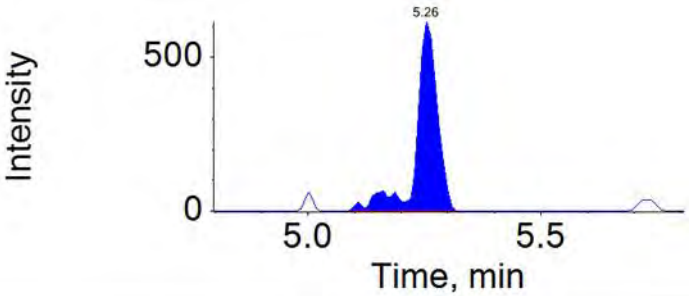
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



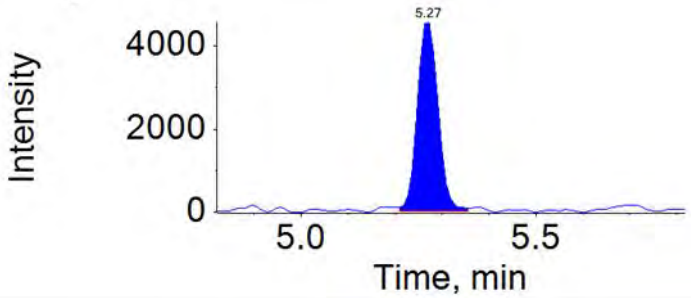
Component: PFOS
Primary Mass: 499.0 / 80.0



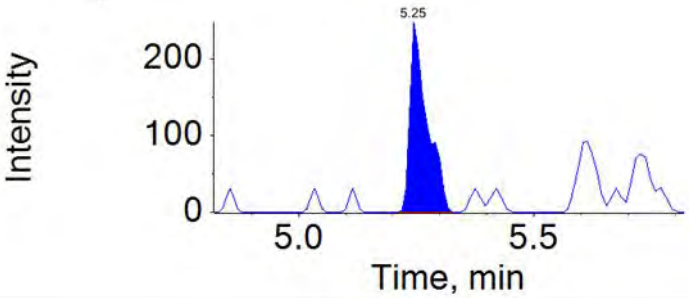
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



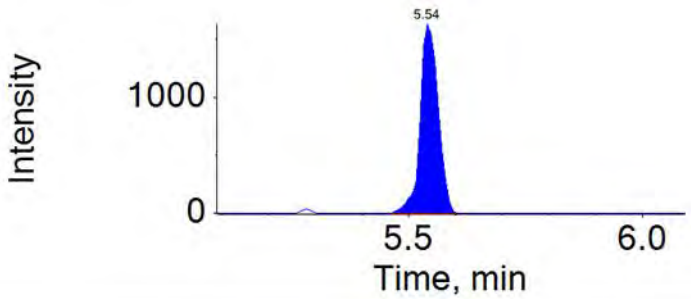
Component: PFNA
Primary Mass: 463.0 / 419.0



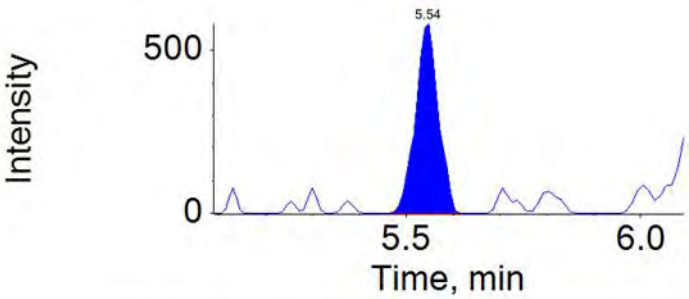
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



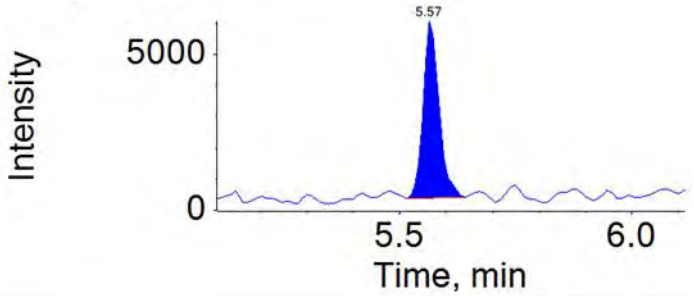
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



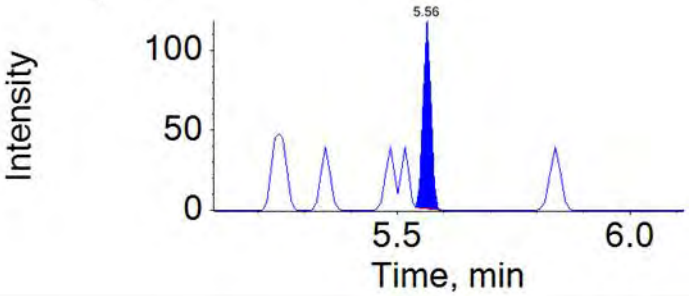
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

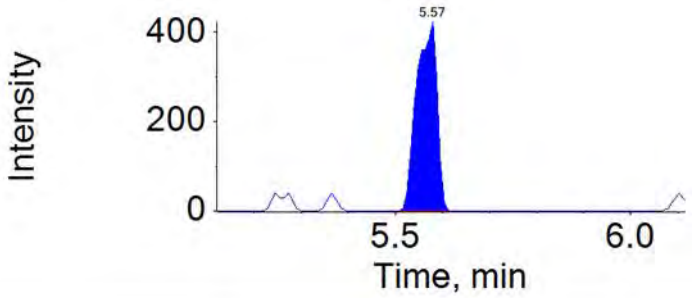
Component: PFDA
Primary Mass: 513.0 / 469.0



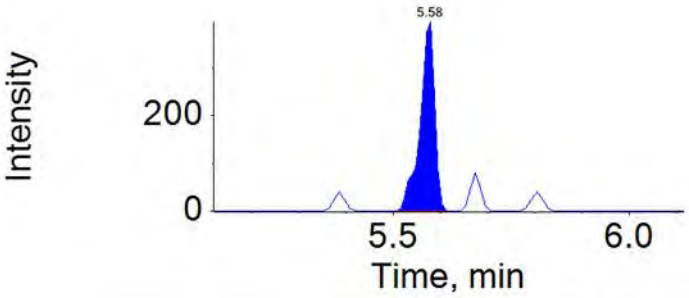
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



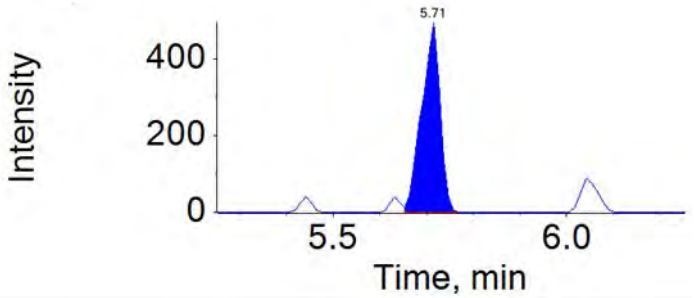
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



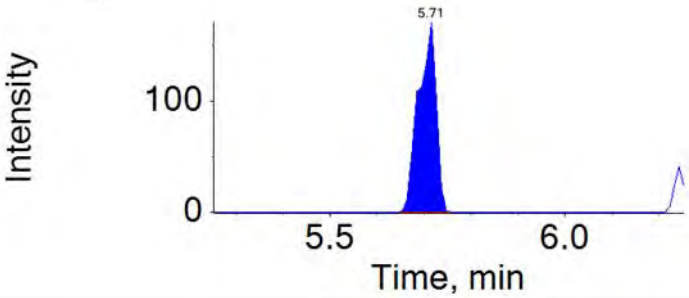
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



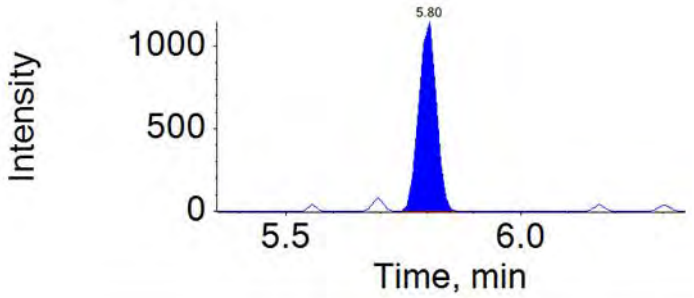
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



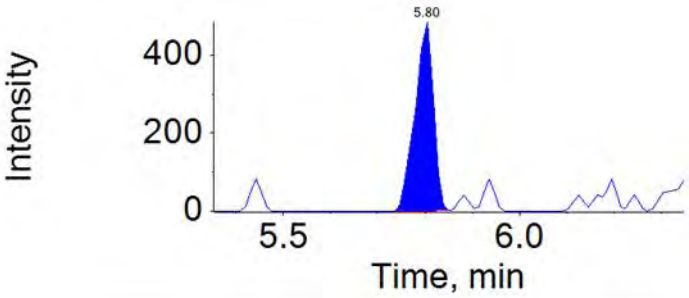
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



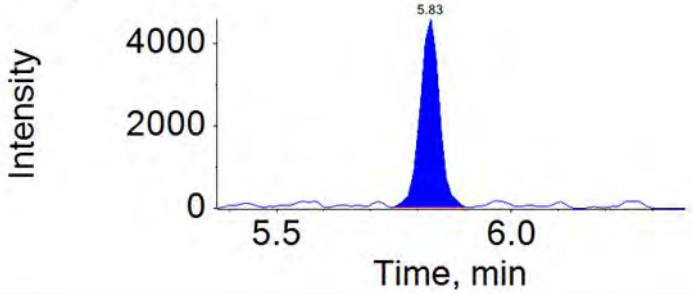
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



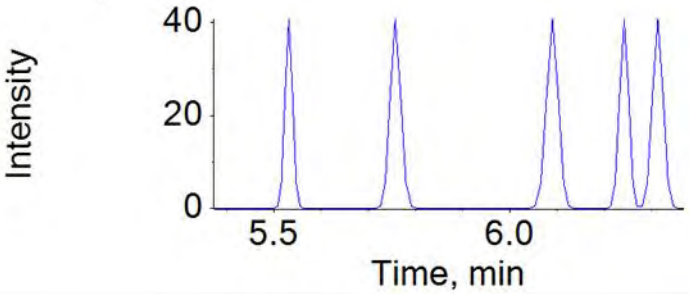
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

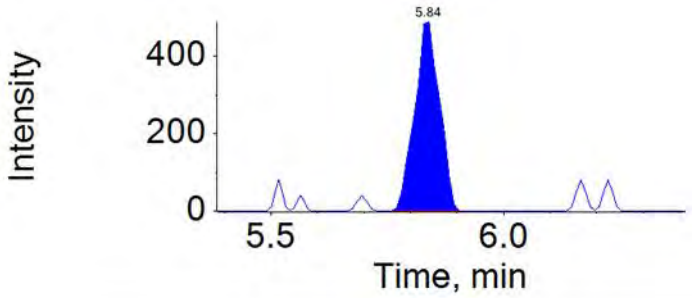
Component: PFUnDA
Primary Mass: 563.0 / 519.0



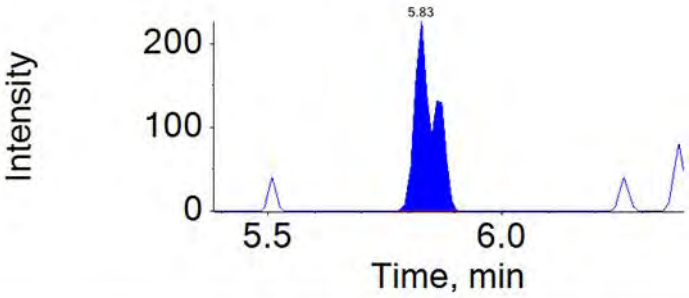
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



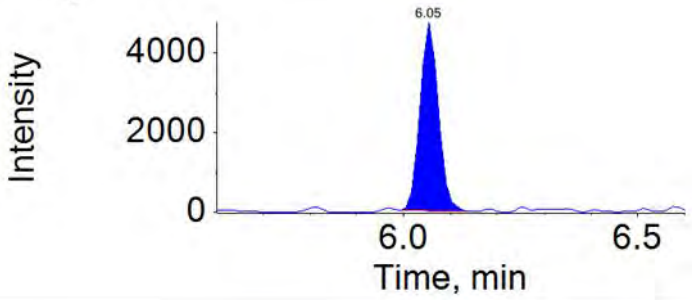
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



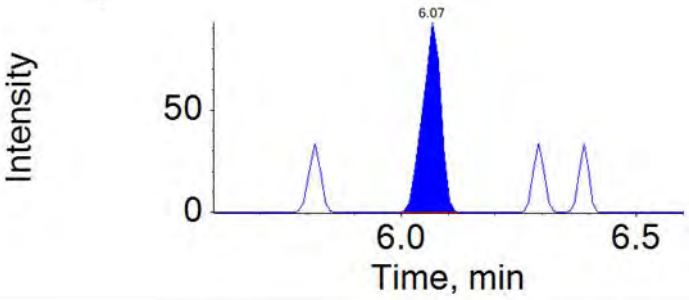
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



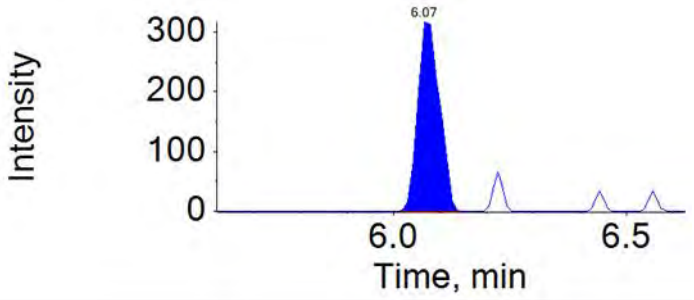
Component: PFDoDA
Primary Mass: 613.0 / 569.0



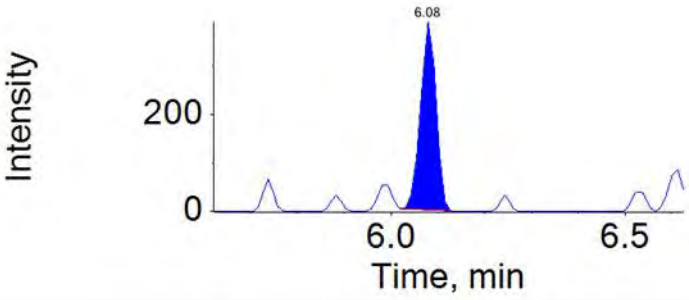
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



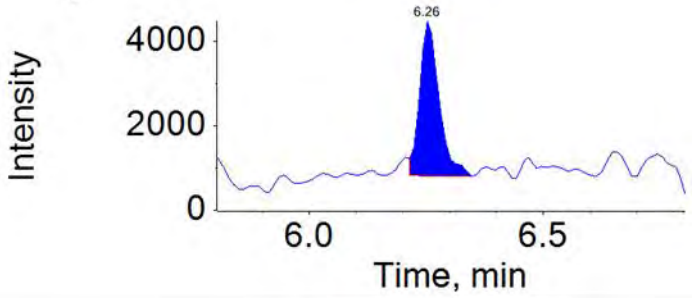
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



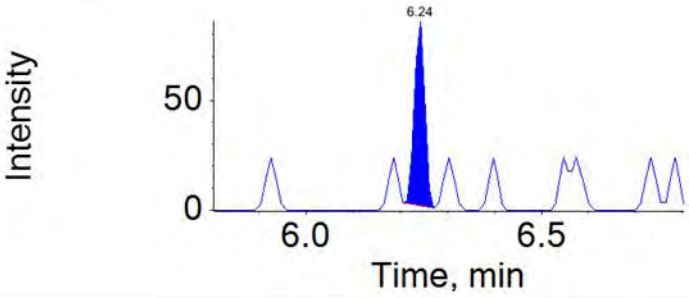
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

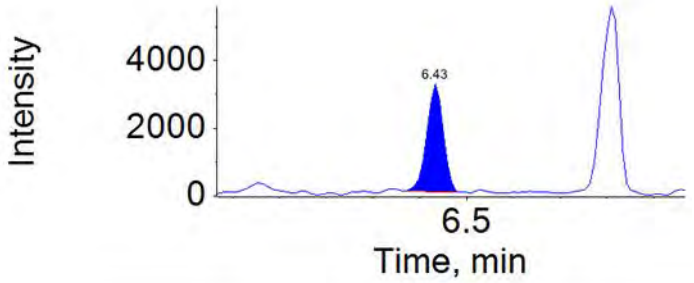
Component: PFTrDA
Primary Mass: 663.0 / 619.0



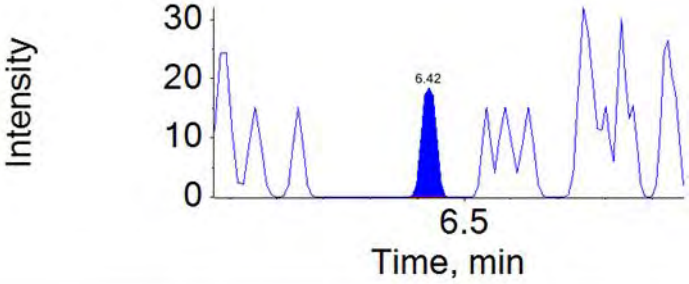
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



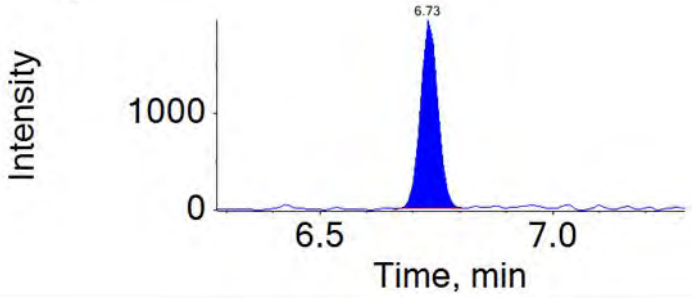
Component: PFTeDA
Primary Mass: 713.0 / 669.0



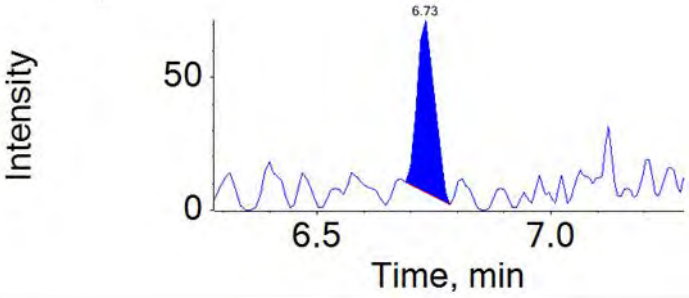
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



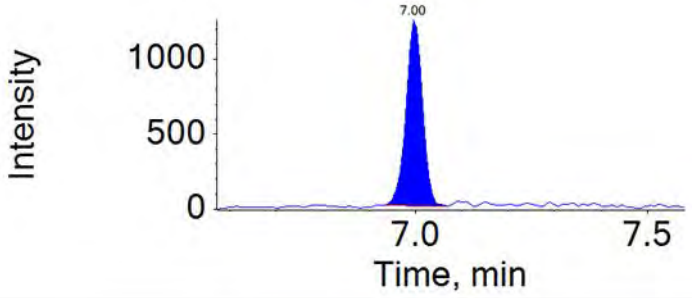
Component: PFHxDA
Primary Mass: 813.0 / 769.0



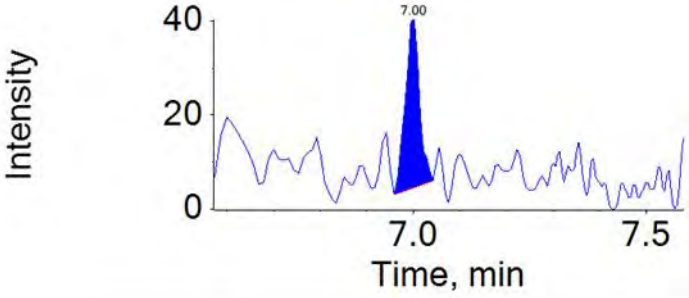
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV07DCAL-17.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-07T10:42:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	735610.3	730410.6	1	50	
13C2-PFOA	5.0	545052.0	524423.6	4	50	
13C4-PFOS	4.8	294815.1	274061.7	8	50	
13C2-PFDA	5.0	340045.1	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	825928.3	13C3-PFBA	735610.3	1.123	5.000	5.196	104	70-130	
E13C5-PFPeA	881634.8	13C3-PFBA	735610.3	1.199	5.000	5.221	104	70-130	
E13C3-PFBS	456572.3	13C3-PFBA	735610.3	0.621	4.650	4.555	98	70-130	
E13C2-4:2-FTS	56024.0	13C2-PFOA	545052.0	0.103	4.670	4.638	99	70-130	
E13C5-PFHxA	745299.1	13C2-PFOA	545052.0	1.367	5.000	5.030	101	70-130	
E13C3-PFHxS	363559.9	13C2-PFOA	545052.0	0.667	4.730	4.788	101	70-130	
E13C4-PFHpA	680947.9	13C2-PFOA	545052.0	1.249	5.000	5.683	114	70-130	
E13C2-6:2-FTS	40789.9	13C2-PFOA	545052.0	0.075	4.750	4.990	105	70-130	
E13C8-PFOA	1030720.3	13C2-PFOA	545052.0	1.891	5.000	5.273	105	70-130	
E13C8-PFOS	325503.0	13C4-PFOS	294815.1	1.104	4.780	4.882	102	70-130	
E13C9-PFNA	562782.6	13C4-PFOS	294815.1	1.909	5.000	5.214	104	70-130	
E13C6-PFDA	680228.7	13C2-PFDA	340045.1	2.000	5.000	5.031	101	70-130	
E13C2-8:2-FTS	29365.3	13C2-PFDA	340045.1	0.086	4.790	4.570	95	70-130	
E13C8-PFOSA	750773.0	13C2-PFDA	340045.1	2.208	5.000	4.818	96	70-130	
Ed3-NMeFOSAA	84635.6	13C2-PFDA	340045.1	0.249	5.000	4.628	93	70-130	
E13C7-PFUnDA	301084.0	13C2-PFDA	340045.1	0.885	5.000	5.108	102	70-130	
Ed5-NEtFOSAA	71817.7	13C2-PFDA	340045.1	0.211	5.000	4.888	98	70-130	
E13C2-PFDoDA	636951.8	13C2-PFDA	340045.1	1.873	5.000	5.050	101	70-130	
Ed7-NMePFOSAE	359644.6	13C2-PFDA	340045.1	1.058	5.000	4.918	98	70-130	
Ed3-NMePFOSA	81798.8	13C2-PFDA	340045.1	0.241	5.000	4.404	88	70-130	
Ed9-NEtPFOSAE	287361.1	13C2-PFDA	340045.1	0.845	5.000	4.826	97	70-130	
Ed5-NEtPFOSA	66311.5	13C2-PFDA	340045.1	0.195	5.000	4.515	90	70-130	
E13C2-PFTeDA	458986.1	13C2-PFDA	340045.1	1.350	5.000	4.859	97	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

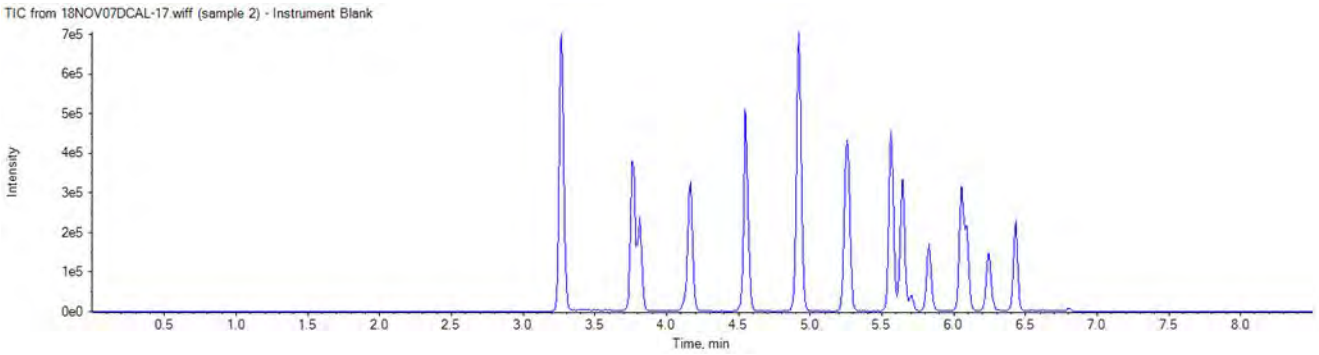
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-17.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	825928.3	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	881634.8	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456572.3	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	56024.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	745299.1	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456572.3	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363559.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	680947.9	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	40789.9	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363559.9	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1030720.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	562782.6	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	680228.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29365.3	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	750773.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	84635.6	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	301084.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	71817.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	636951.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29365.3	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	359644.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81798.8	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	287361.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	66311.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	636951.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	

Total Ion Chromatogram

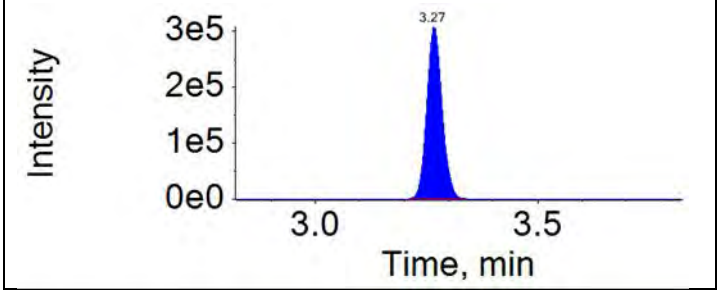


APPROVED
By JPT at 2:53 pm, 11/7/18

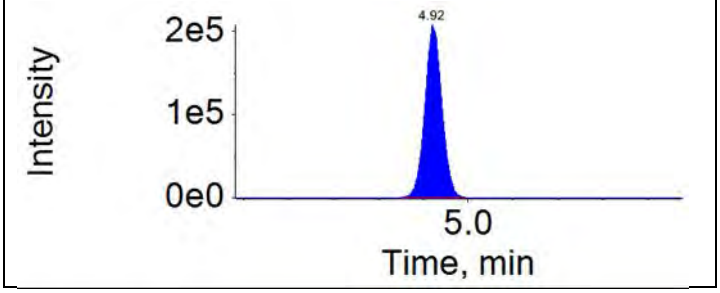
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

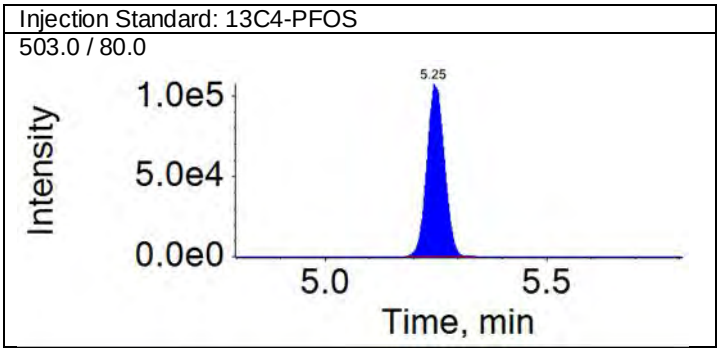
Injection Standard: 13C3-PFBA
216.0 / 172.0



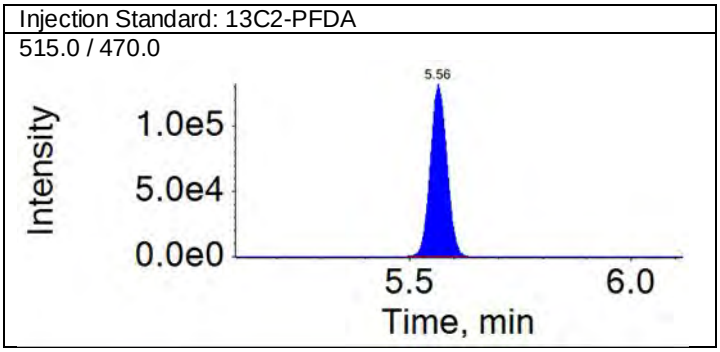
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



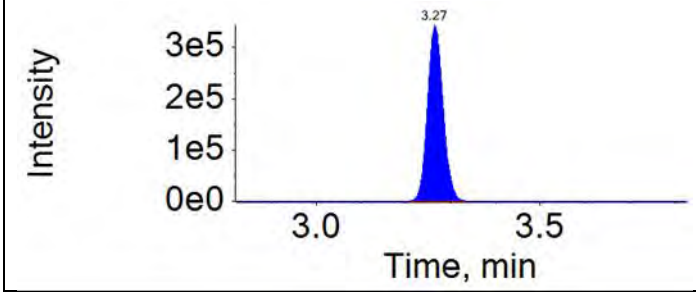
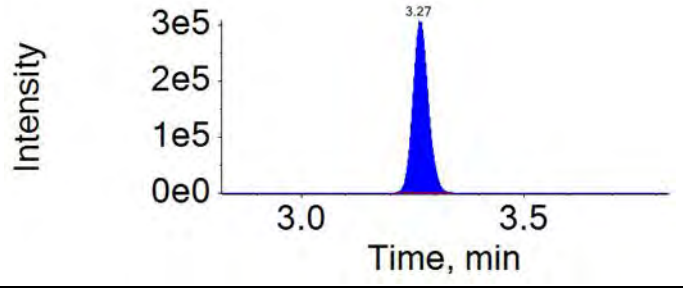
Injection Standard: 13C2-PFDA
515.0 / 470.0

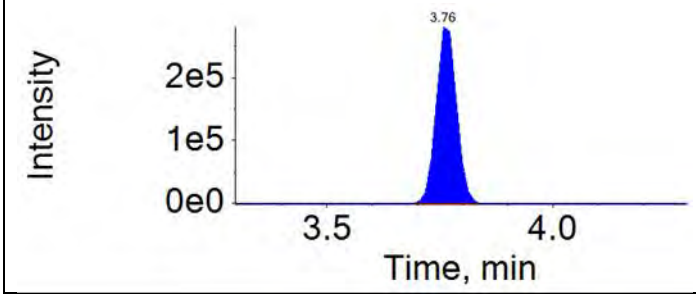
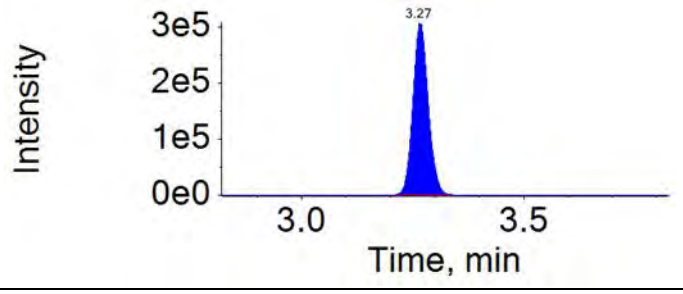


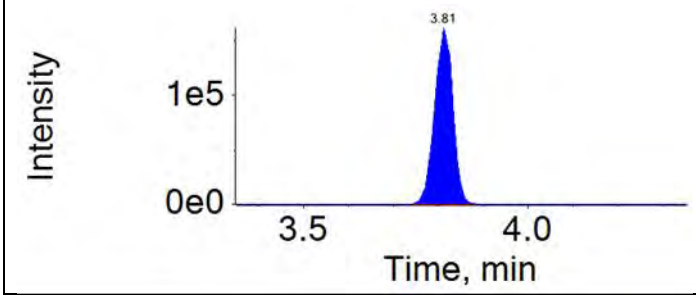
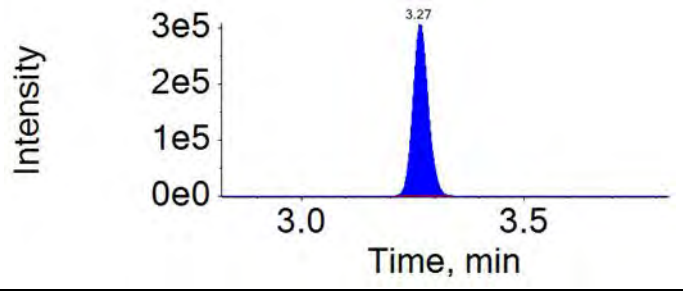
APPROVED
By JPT at 2:53 pm, 11/7/18

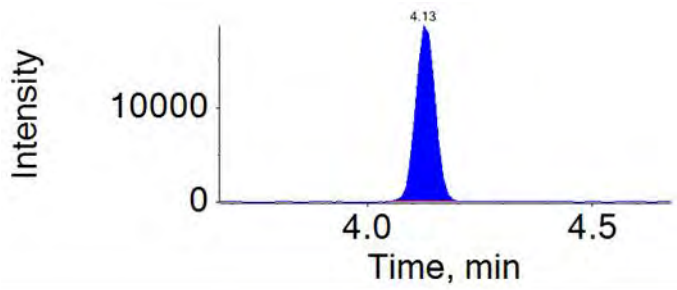
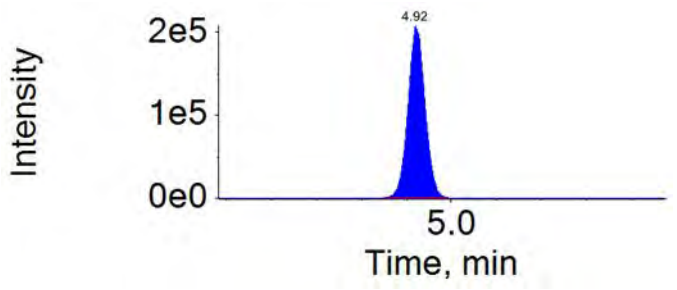
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

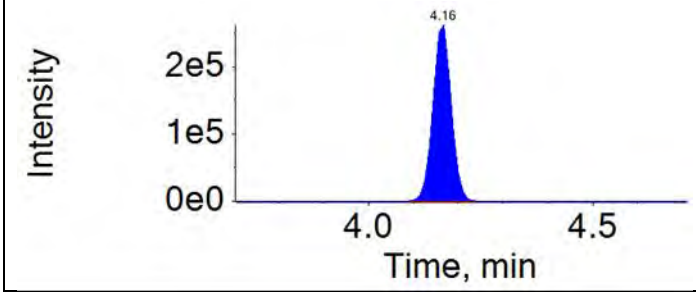
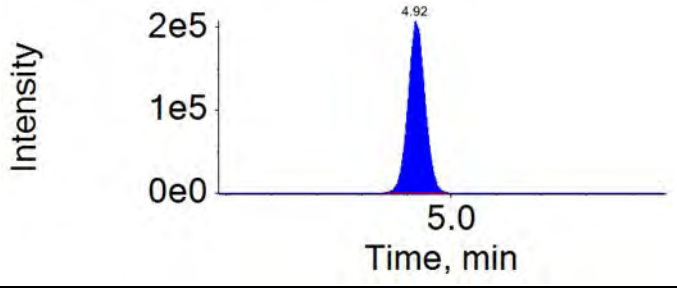
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

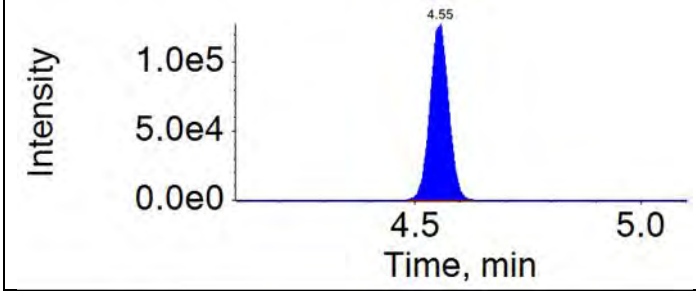
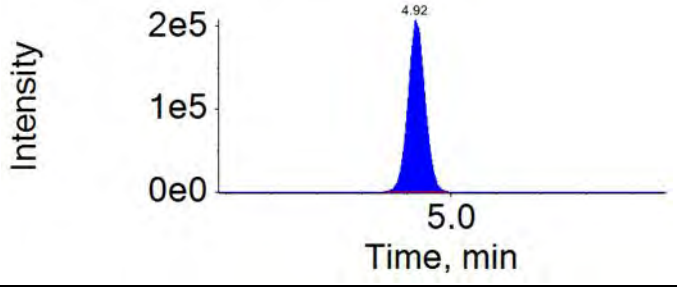
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

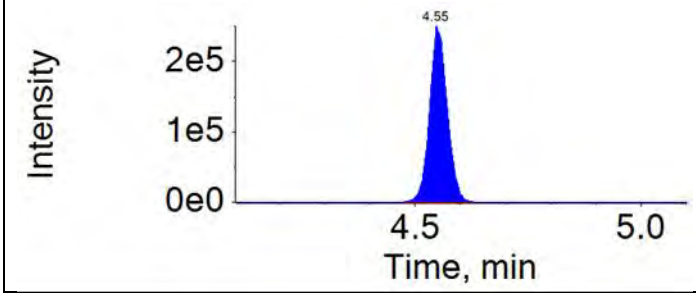
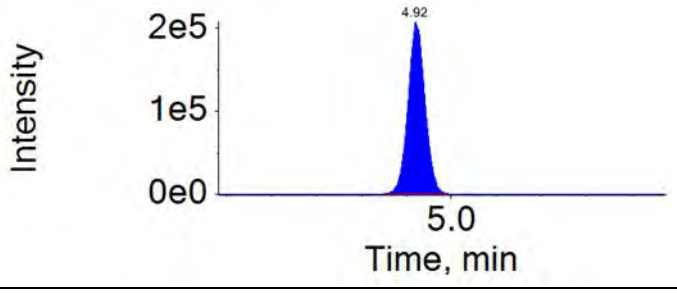
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

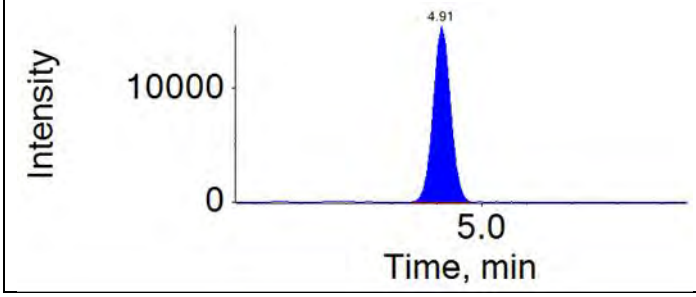
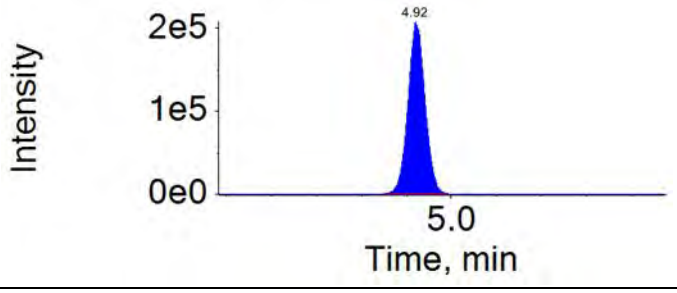
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

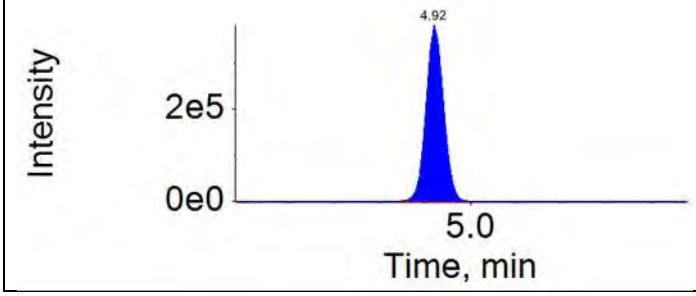
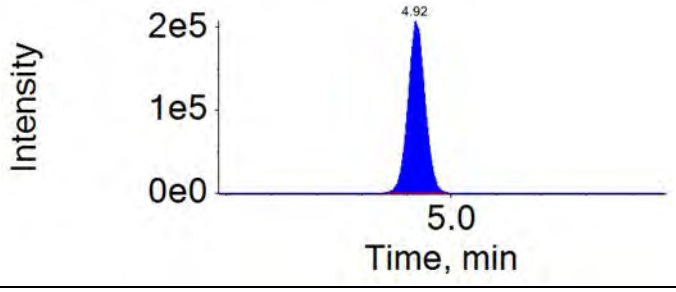
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

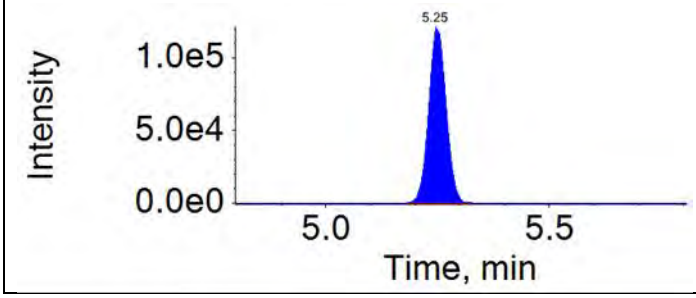
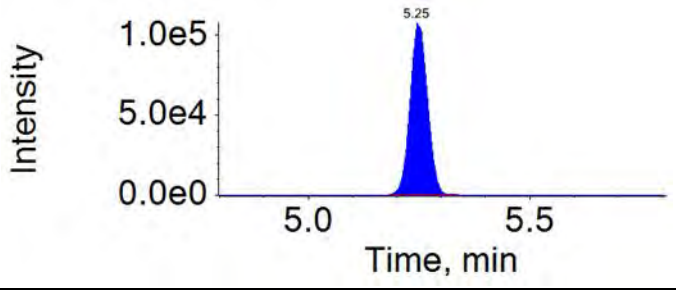
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

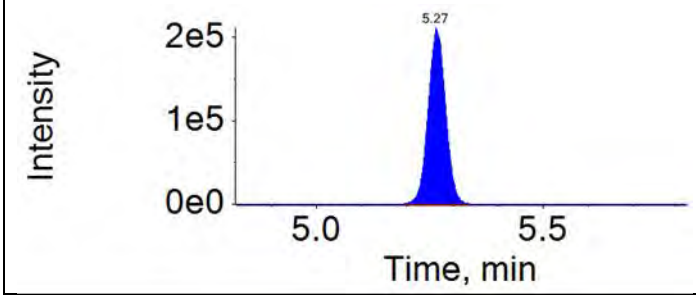
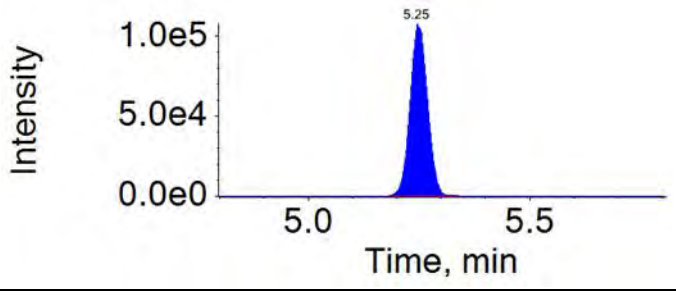
APPROVED
By JPT at 2:53 pm, 11/7/18

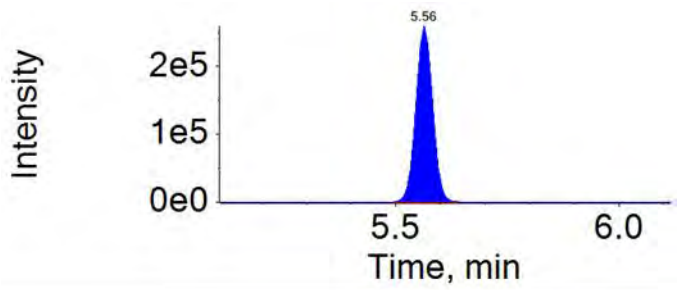
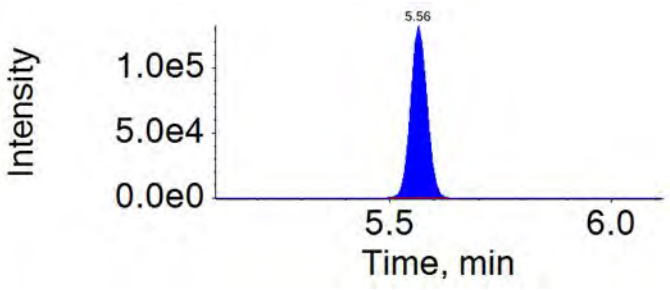
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

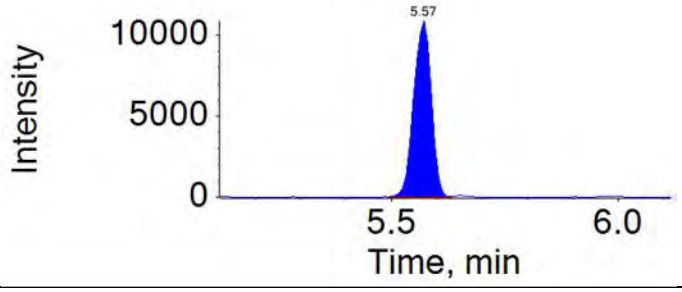
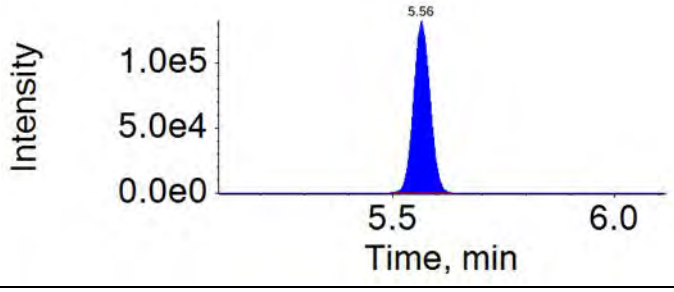
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

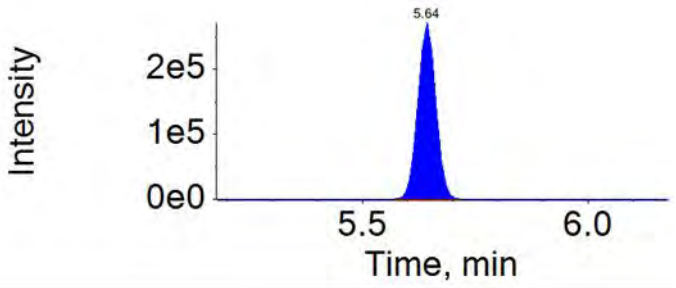
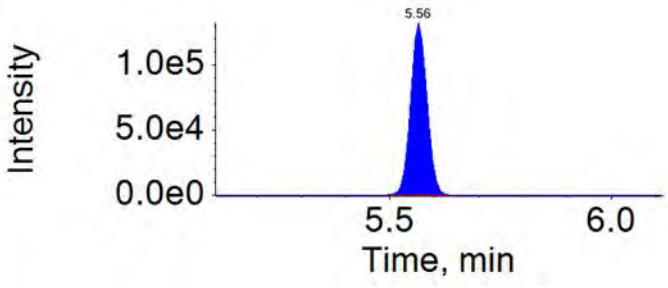
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

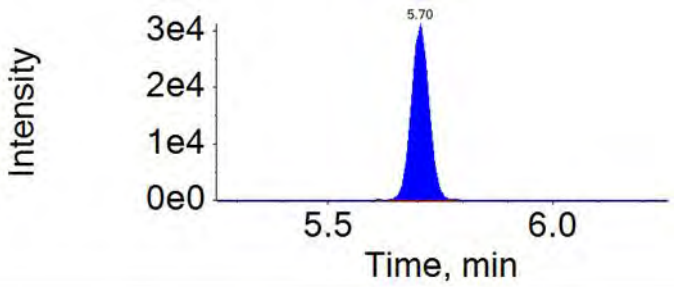
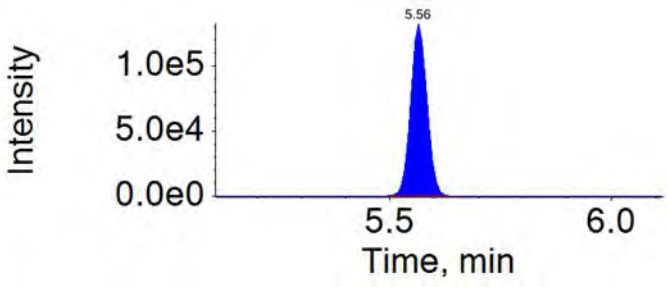
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

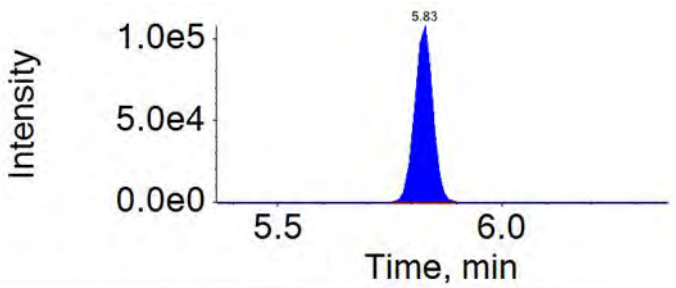
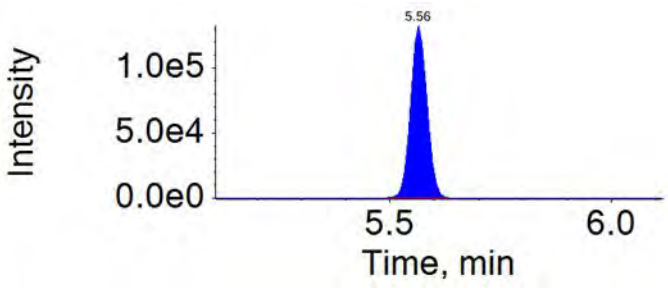
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

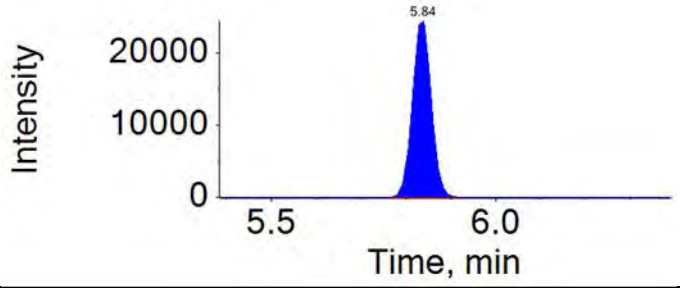
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

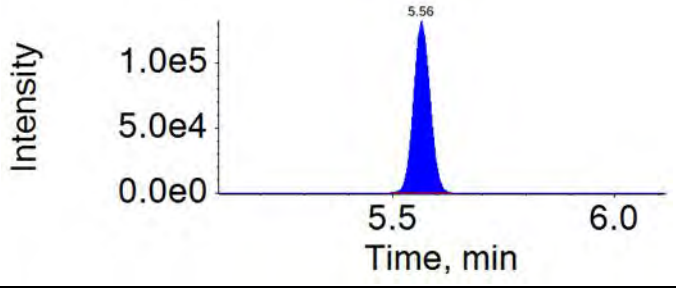
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

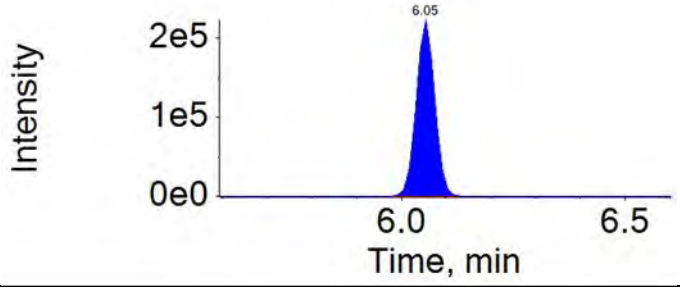
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

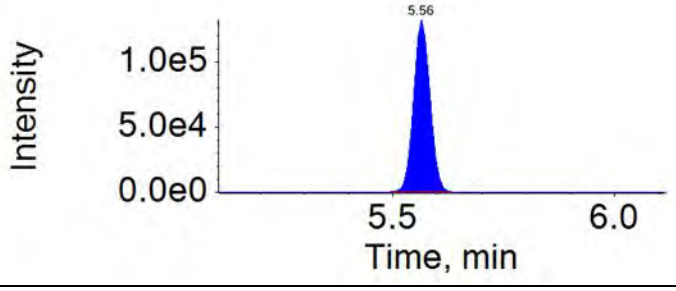
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



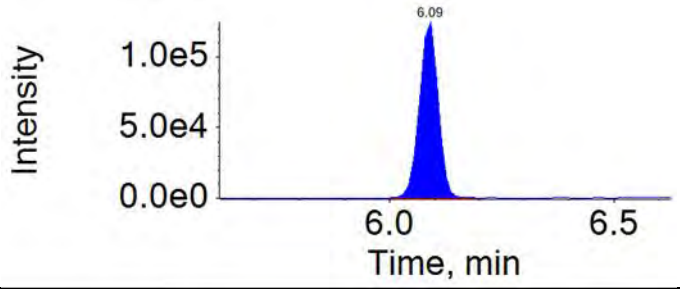


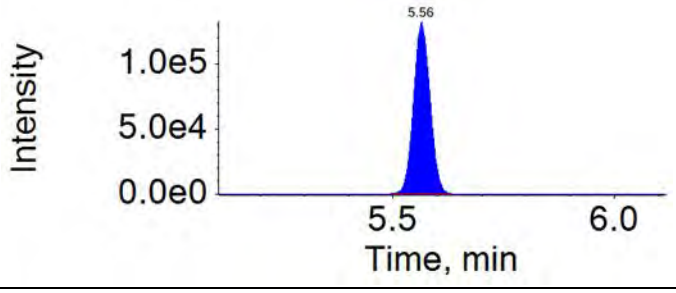
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



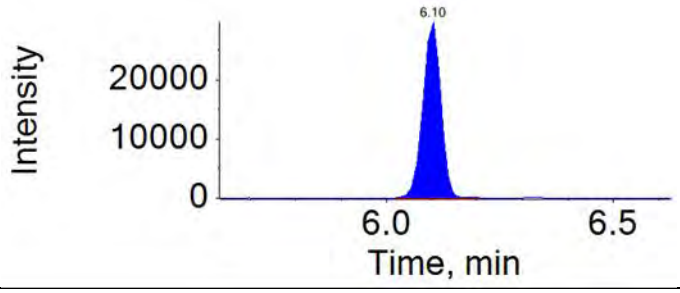


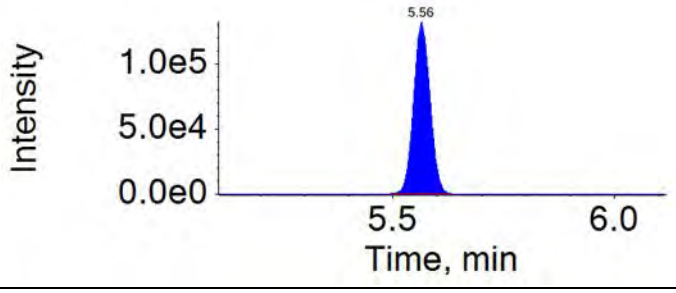
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



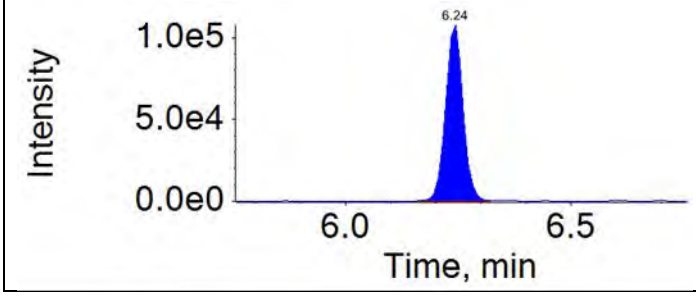


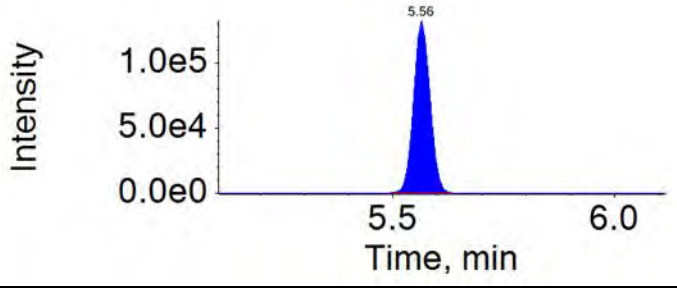
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

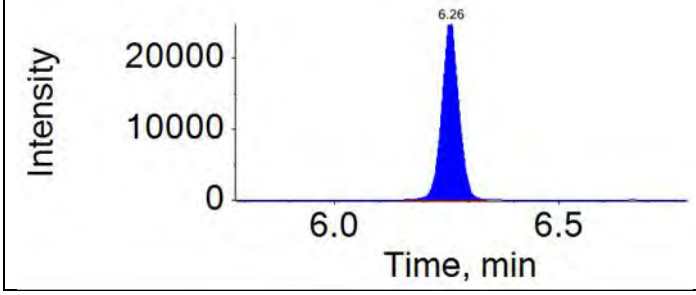
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

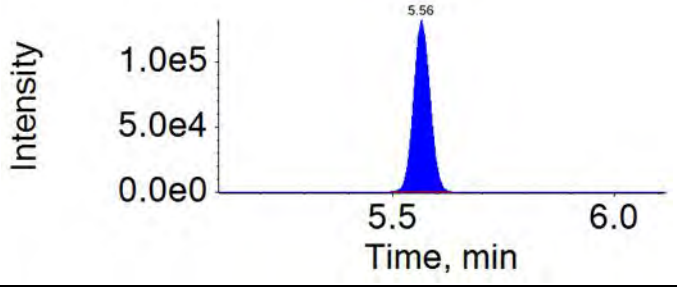
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



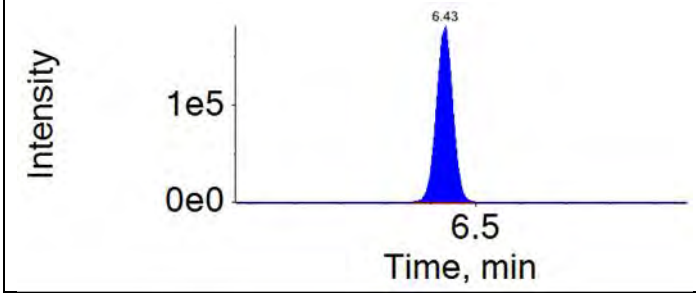


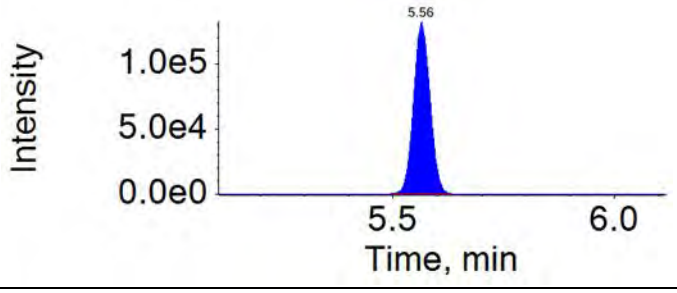
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



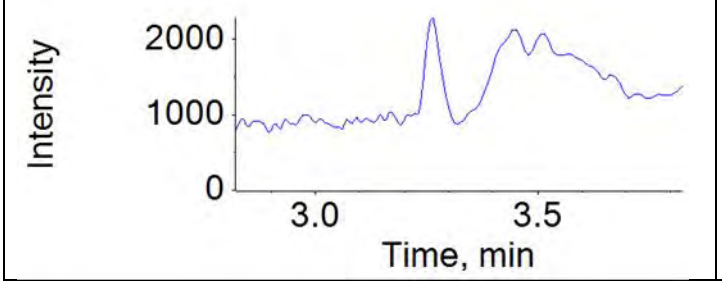


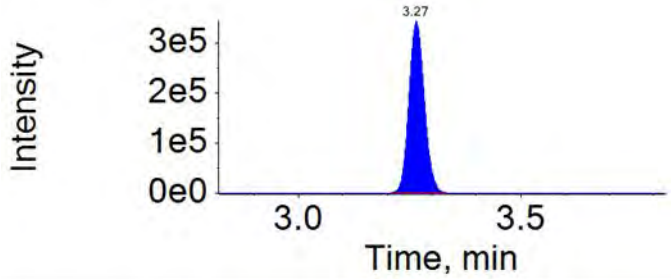
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

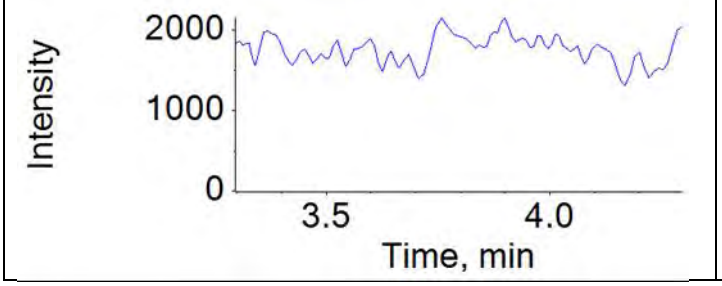
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

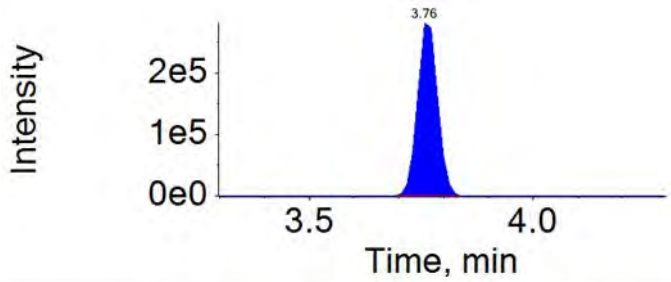
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



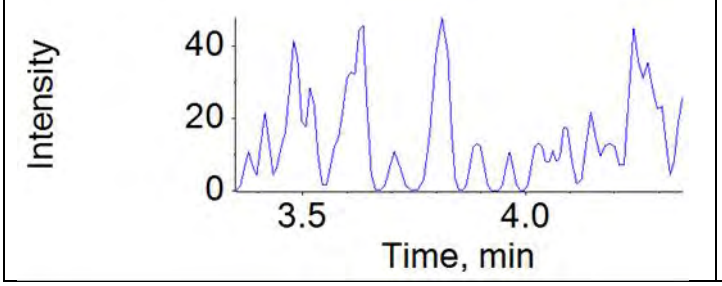


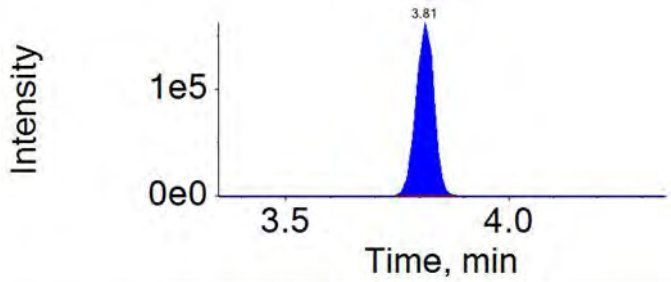
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



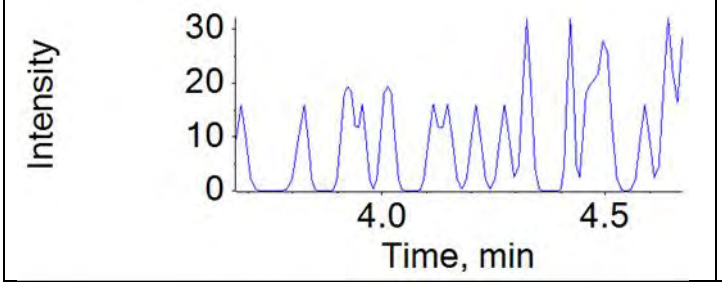


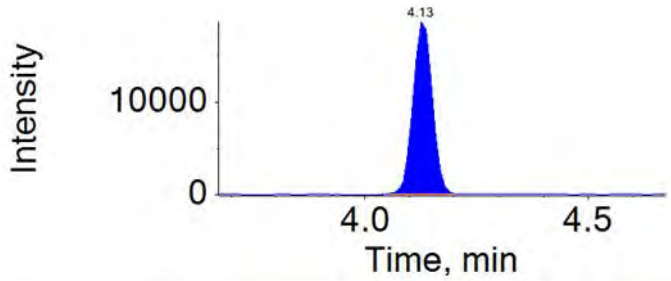
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



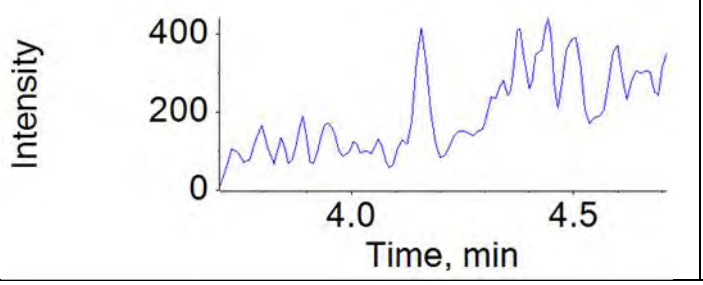


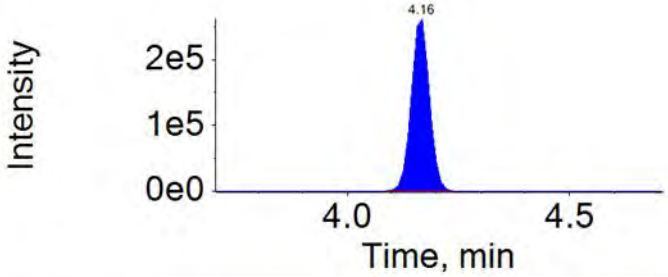
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

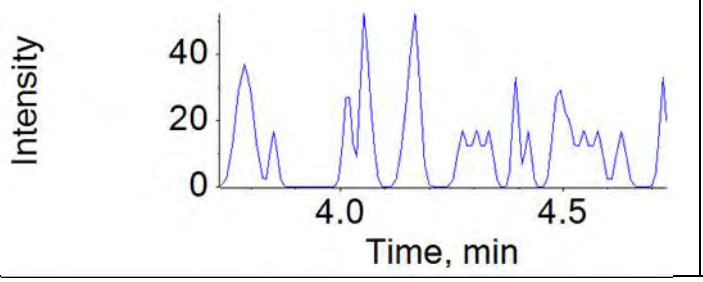
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

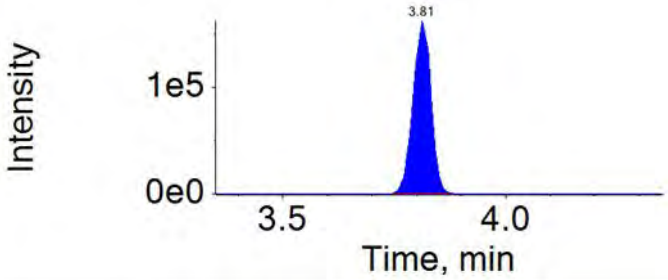
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



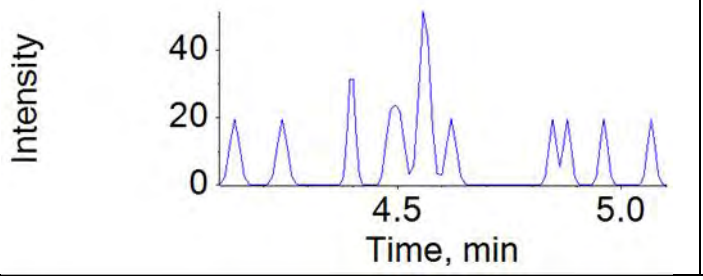


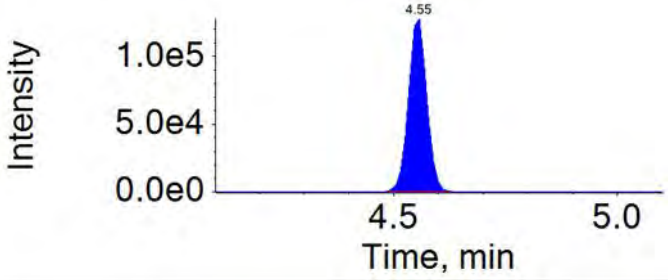
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



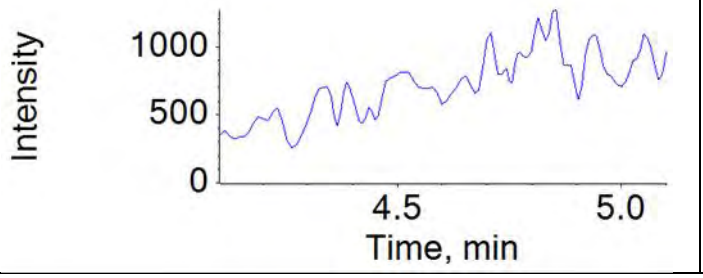


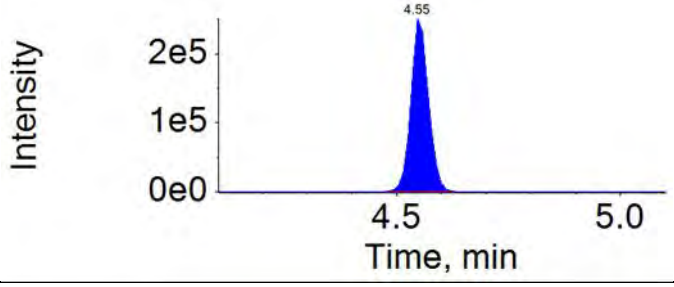
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

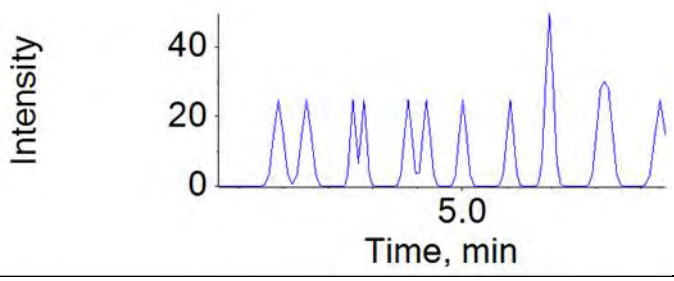
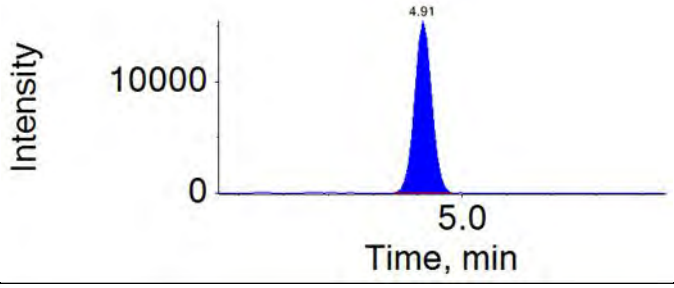


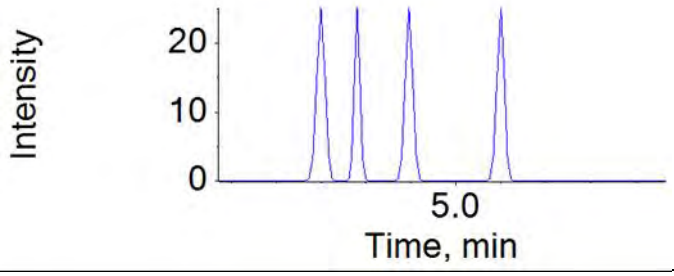
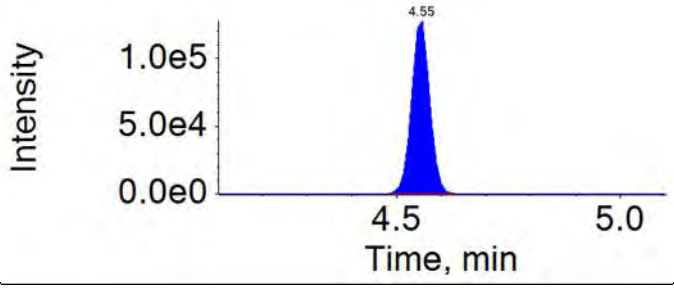


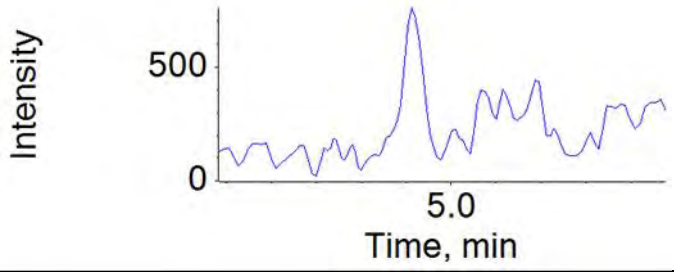
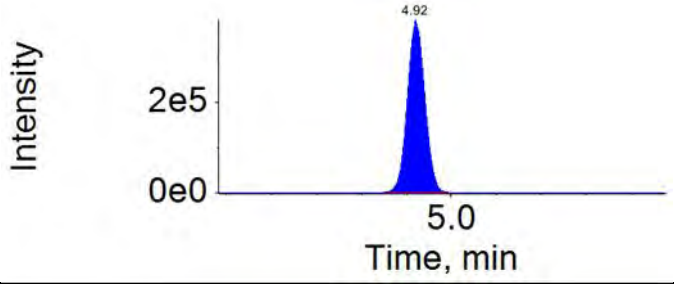
APPROVED
By JPT at 2:53 pm, 11/7/18

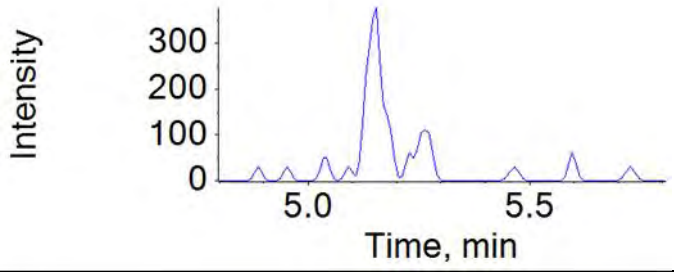
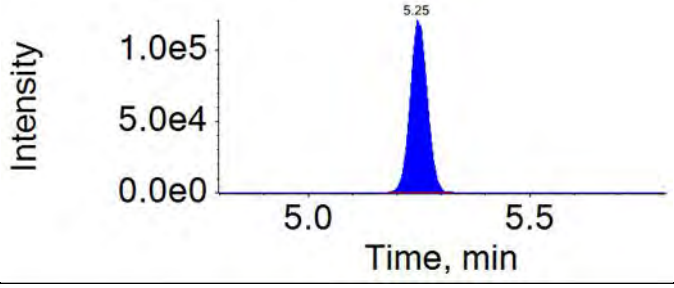
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

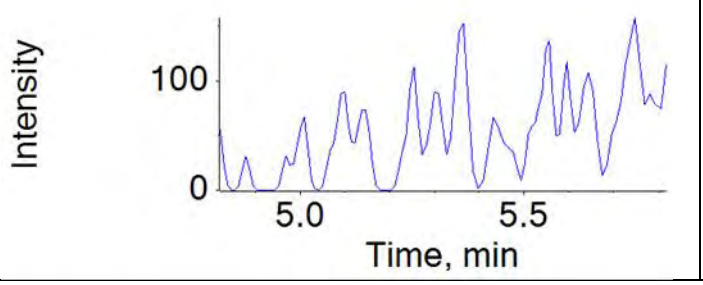
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

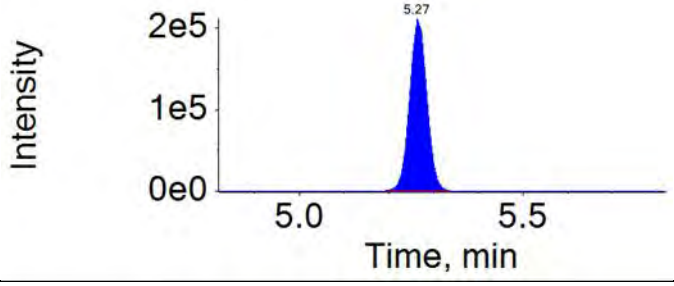
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

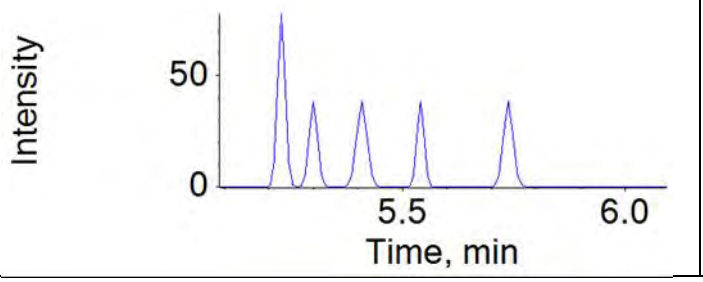
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

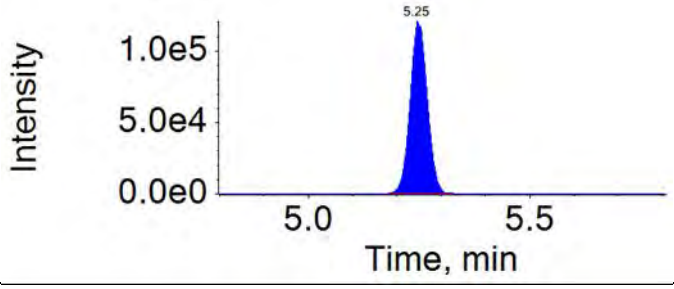
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



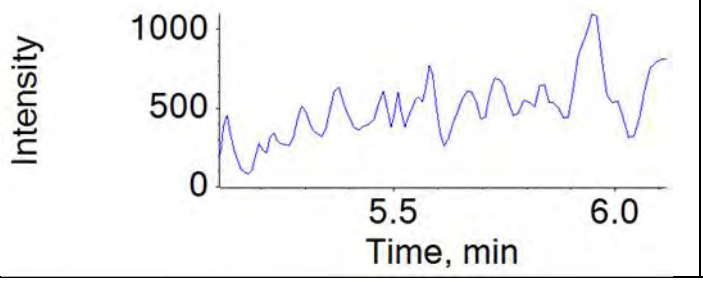


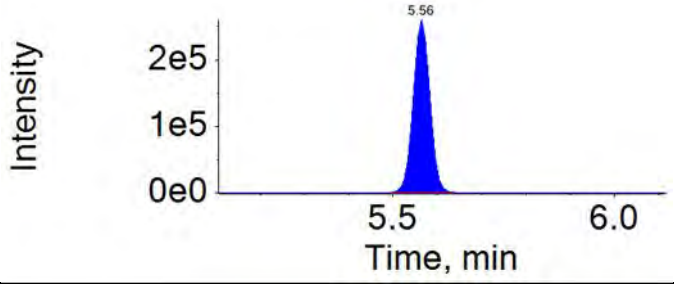
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



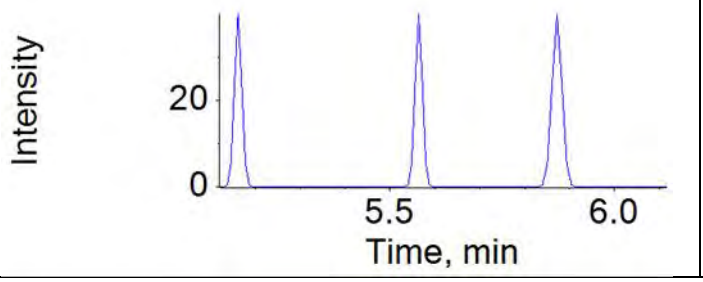


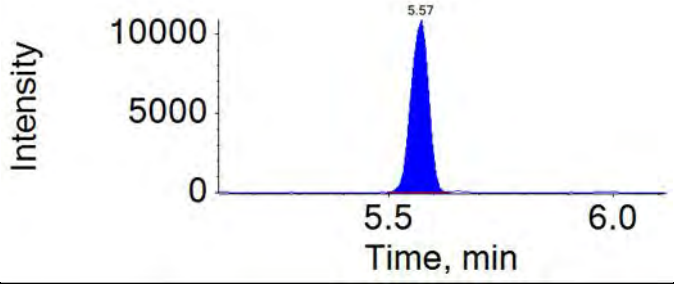
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



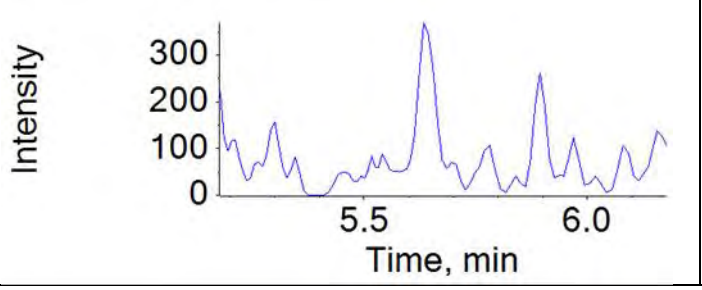


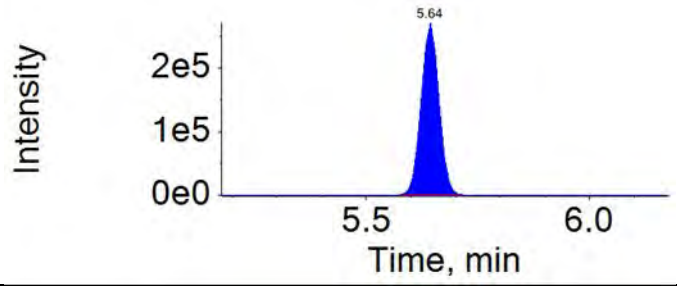
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

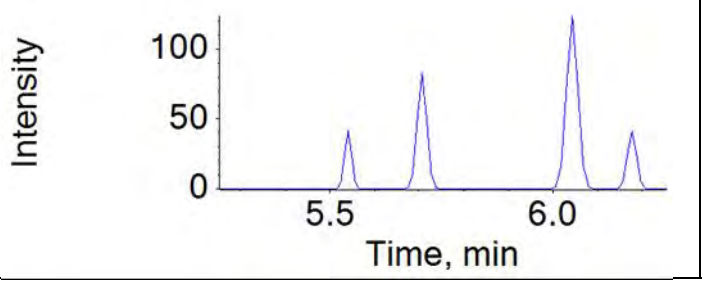
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

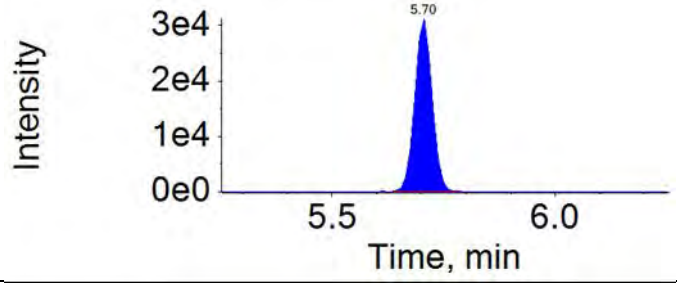
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



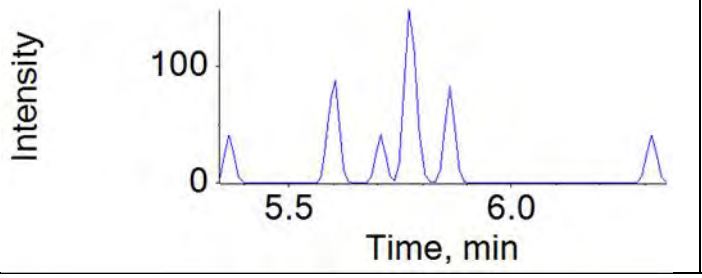


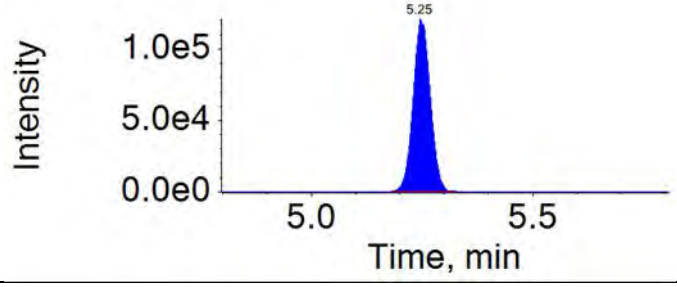
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



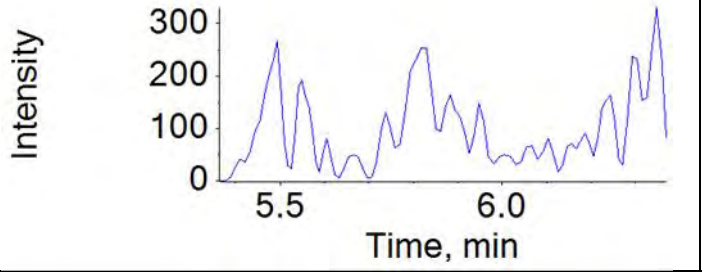


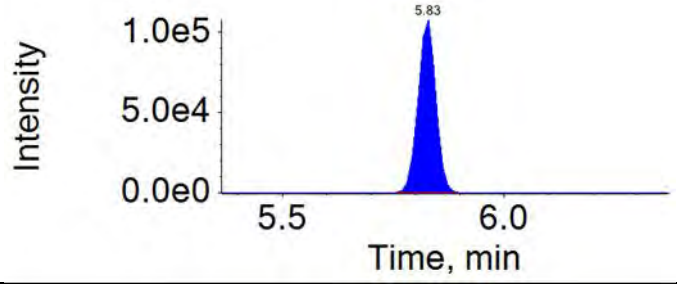
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



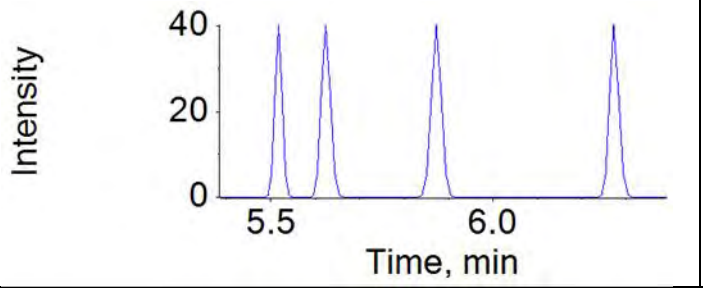


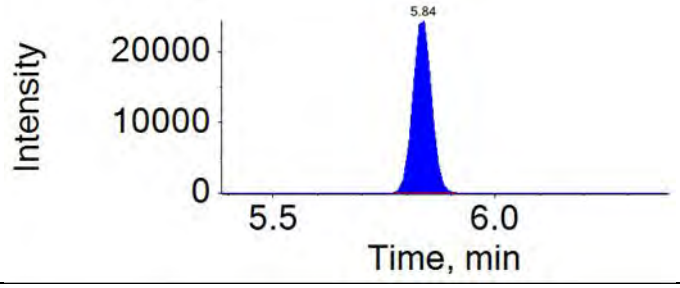
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

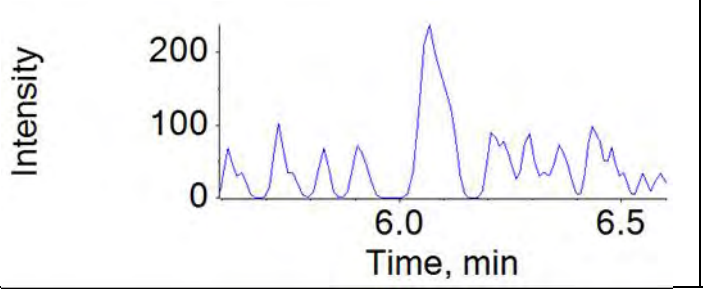
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

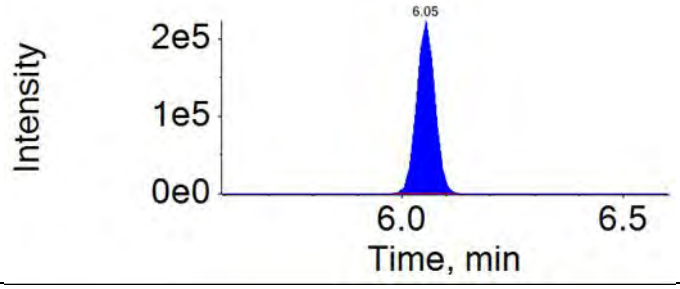
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



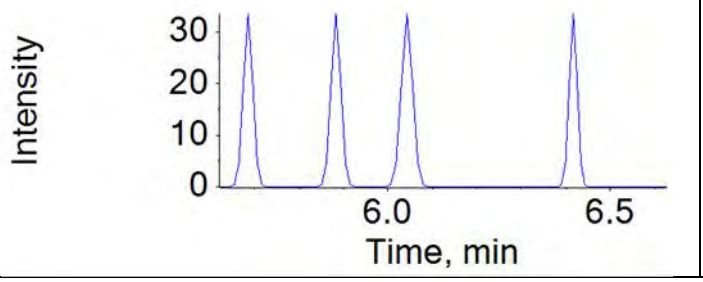


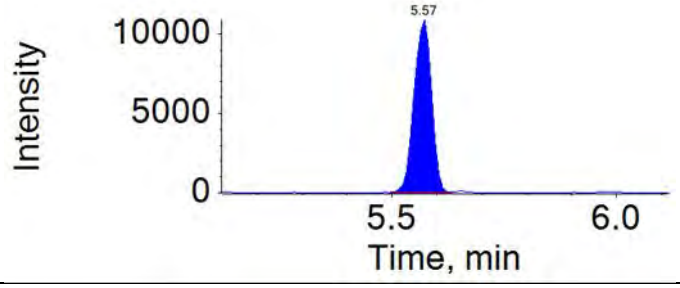
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



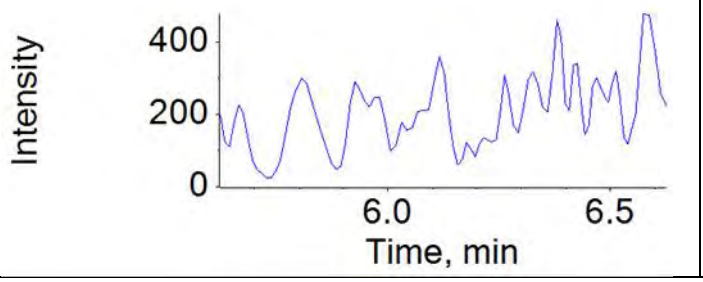


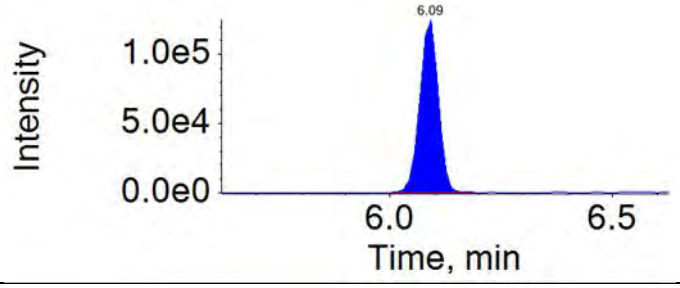
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



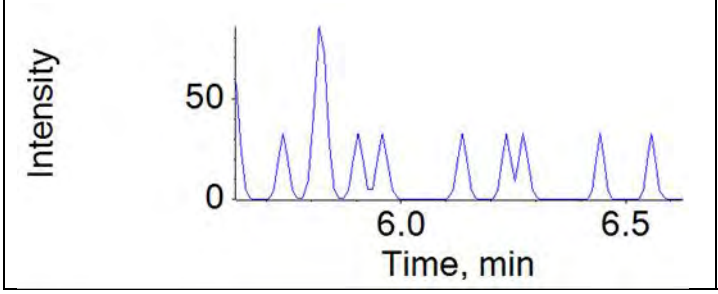


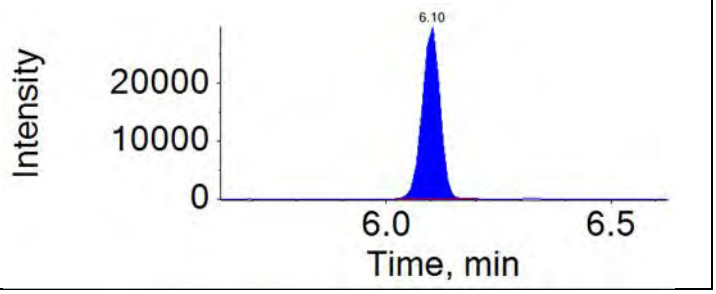
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

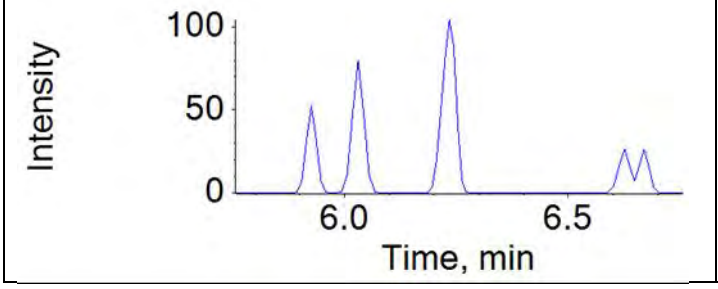
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

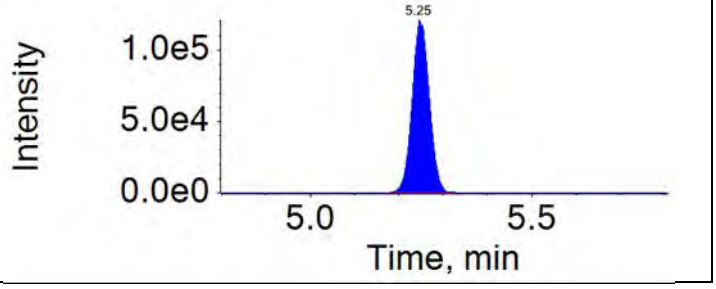
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



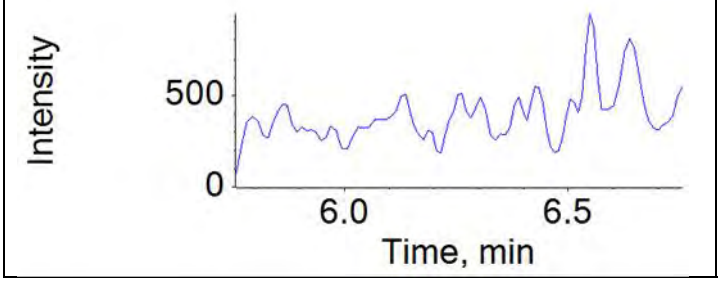


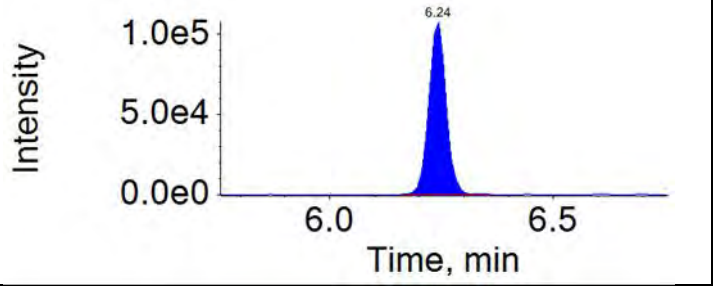
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



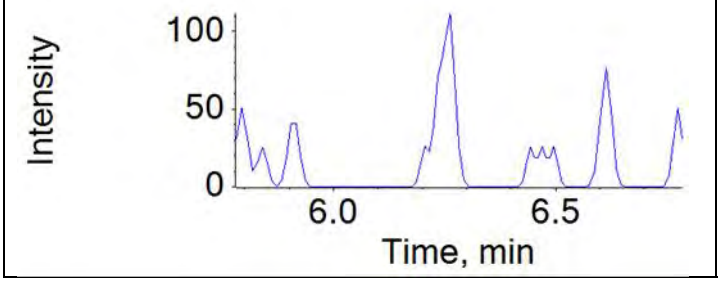


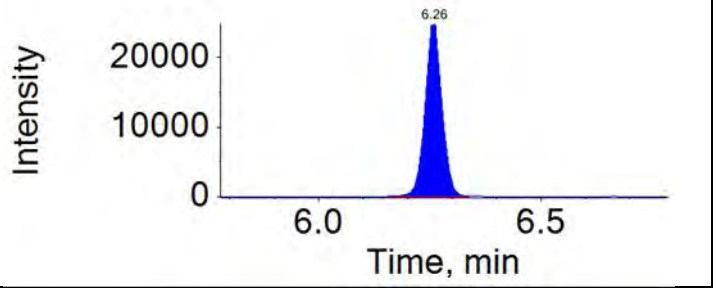
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





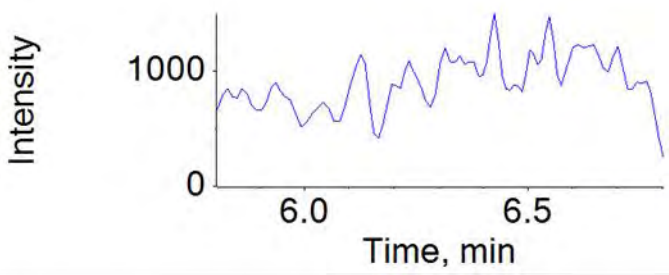
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

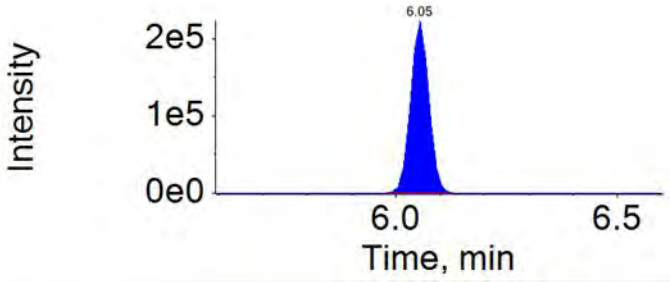




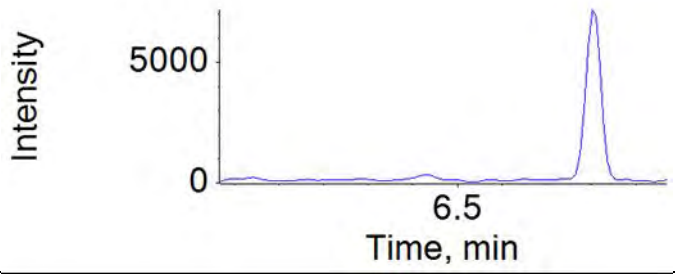
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

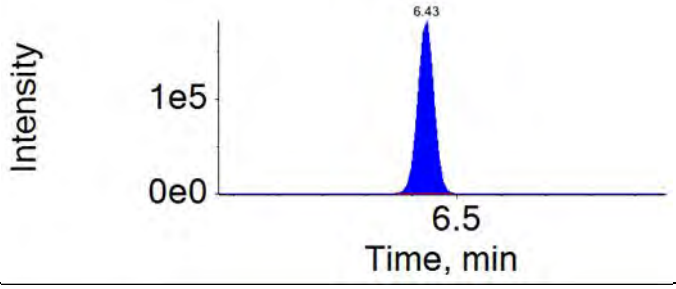
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



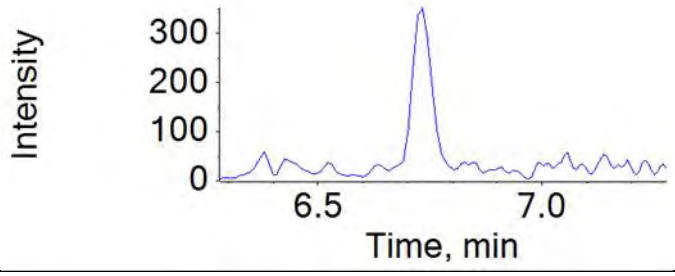


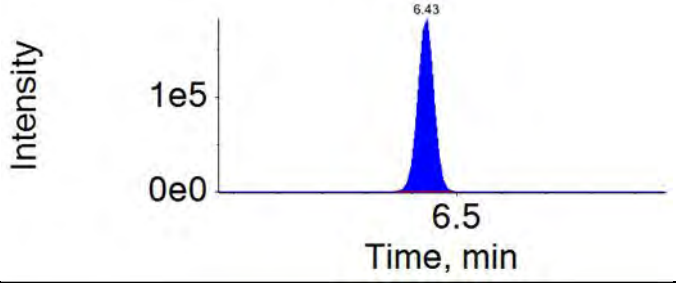
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



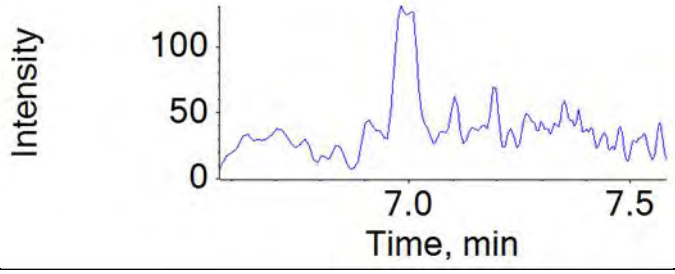


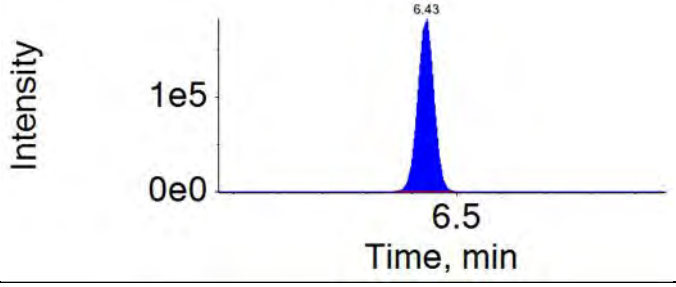
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

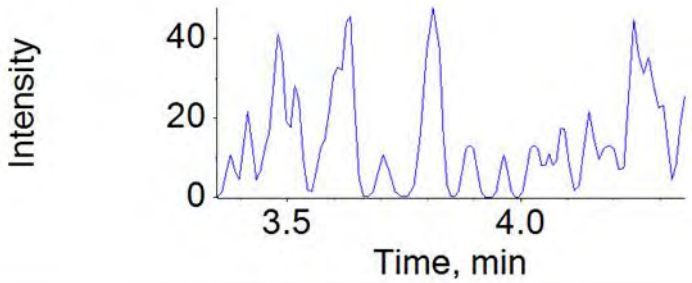
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-17.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	1.0000	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3576	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0115	N/A		50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	N/A	N/A	N/A	A	1.0000	N/A			
PFHxS_2	N/A	N/A	N/A	A	0.3569	N/A		50	
PFHpA	N/A	N/A	N/A	A	1.0000	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0577	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	N/A	N/A	N/A	A	1.0000	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3950	N/A		50	
PFOA	N/A	N/A	N/A	A	1.0000	N/A			
PFOA_2	N/A	N/A	N/A	A	0.0635	N/A		50	
PFOS	N/A	N/A	N/A	A	1.0000	N/A			
PFOS_2	N/A	N/A	N/A	A	0.3494	N/A		50	
PFNA	N/A	N/A	N/A	A	1.0000	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0207	N/A		50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0057	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	N/A	N/A	N/A	A	1.0000	N/A			
PFDS_2	N/A	N/A	N/A	A	0.4648	N/A		50	
PFUnDA	N/A	N/A	N/A	A	1.0000	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.6082	N/A		50	
PFDoDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0109	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0096	N/A		50	
PFTeDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0055	N/A		50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

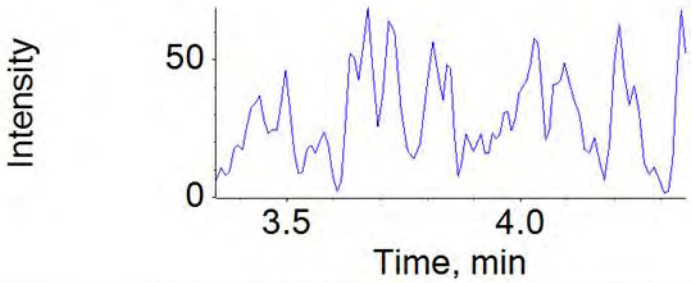
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

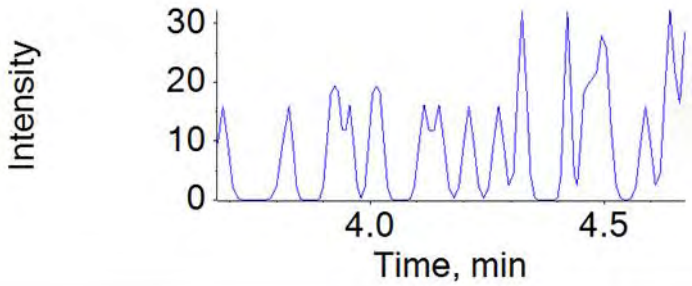
Component: PFBS
Primary Mass: 299.0 / 80.0



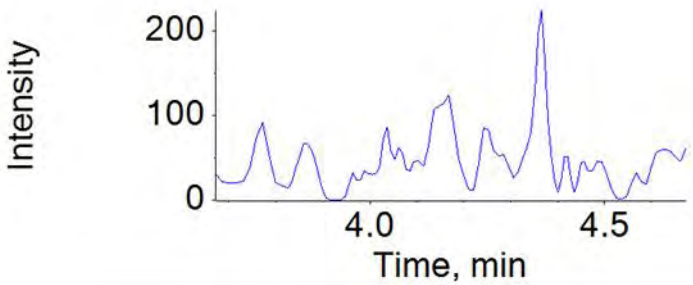
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



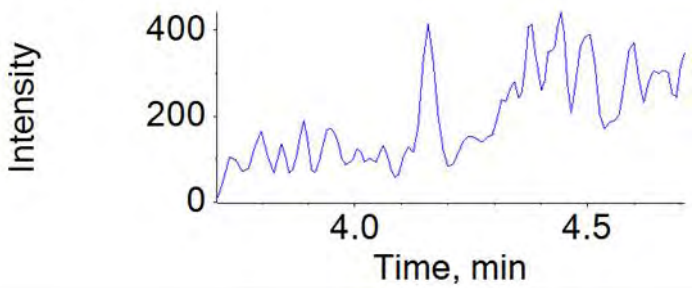
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



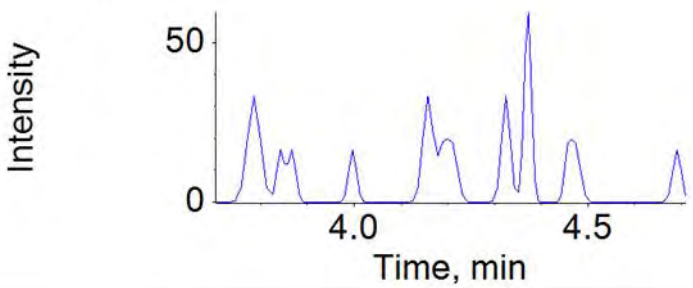
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



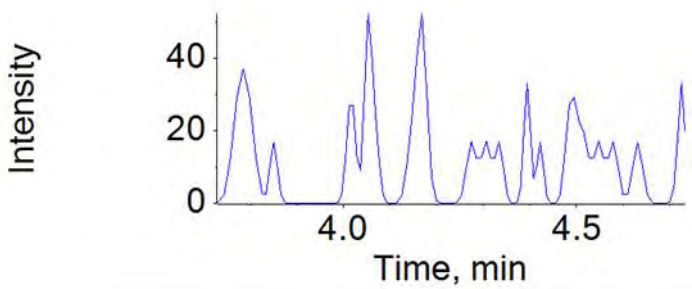
Component: PFHxA
Primary Mass: 313.0 / 269.0



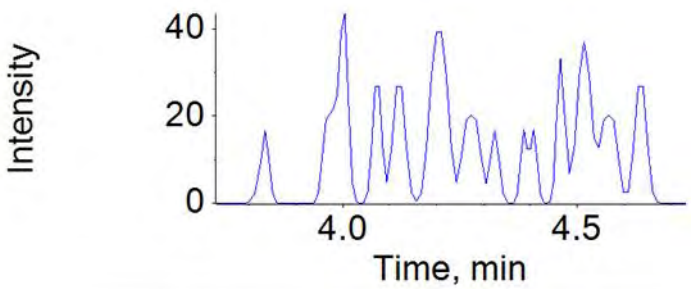
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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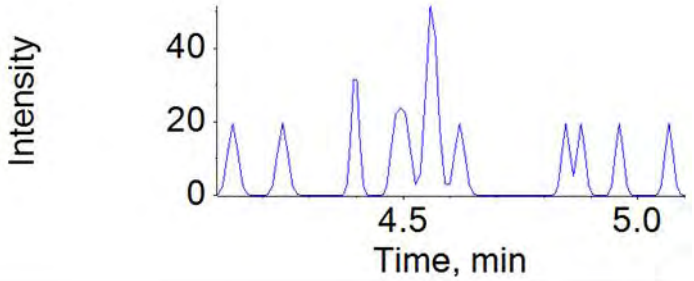
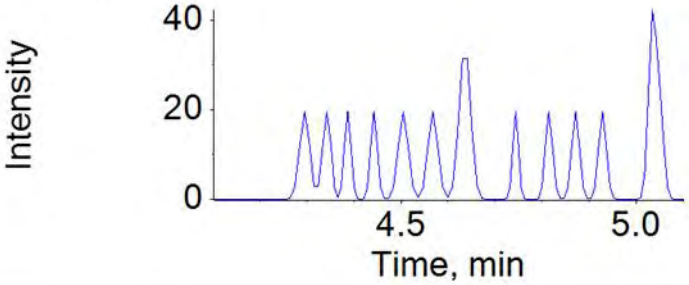
By umar at 5:23 pm, 11/9/18

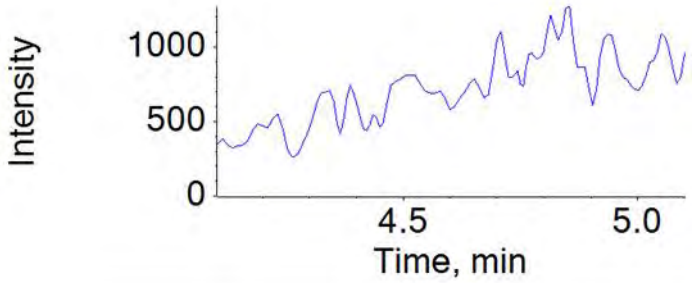
Component: PFHxS
Primary Mass: 399.0 / 80.0



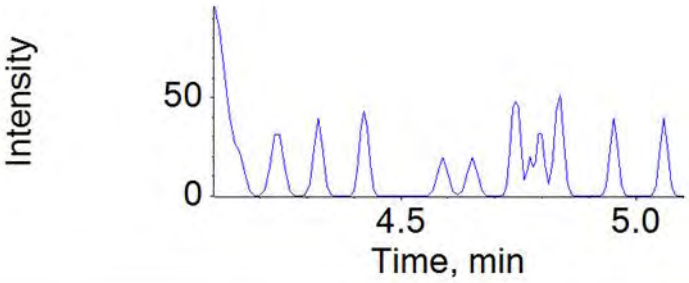
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



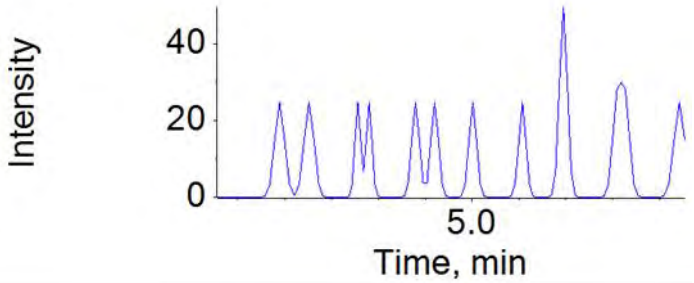
Component: PFHpA
Primary Mass: 363.0 / 319.0



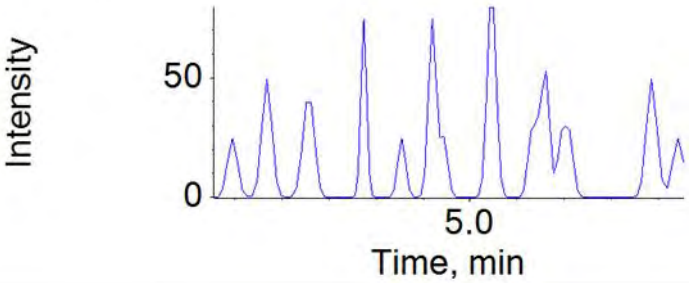
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



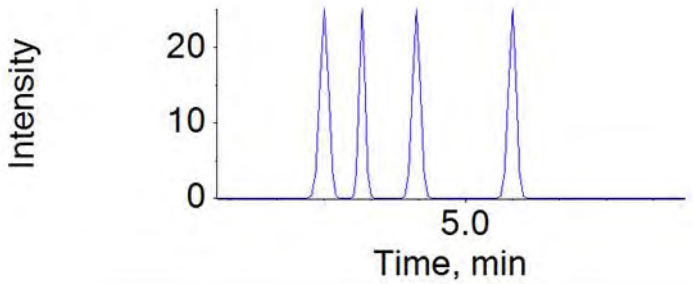
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



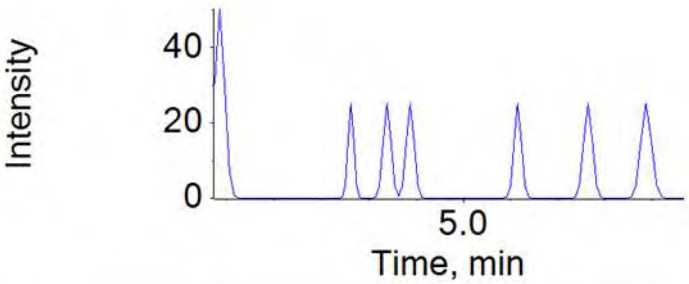
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



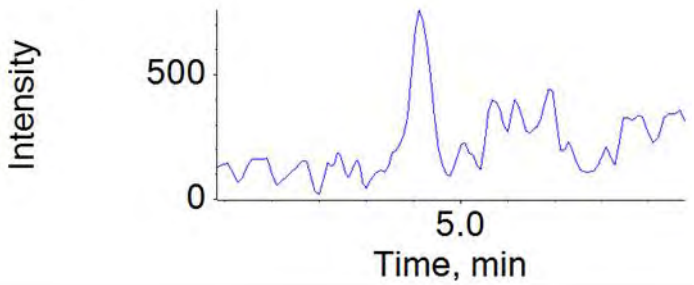
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



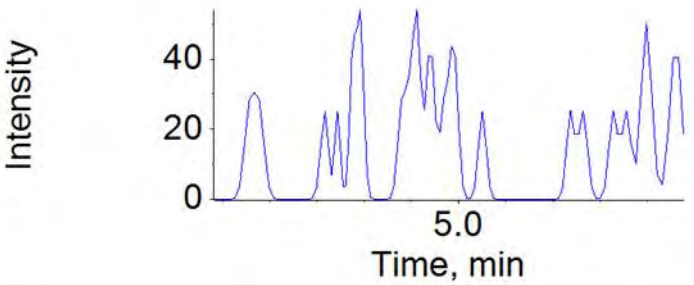
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

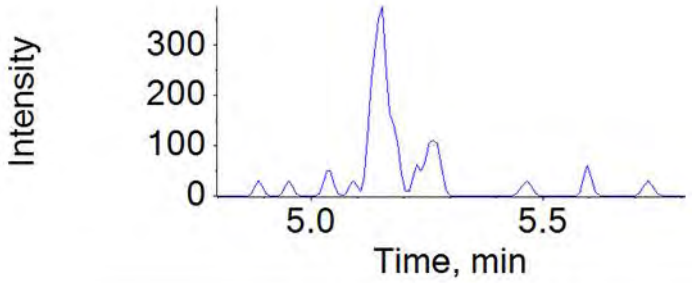
Component: PFOA
Primary Mass: 413.0 / 369.0



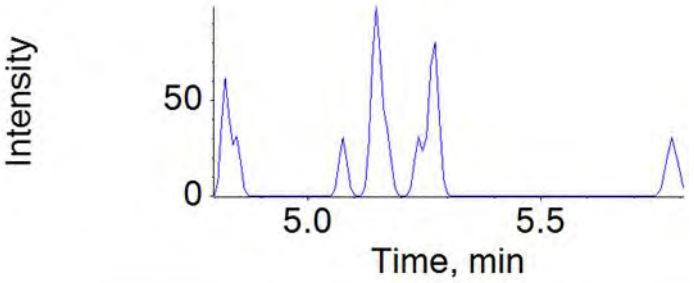
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



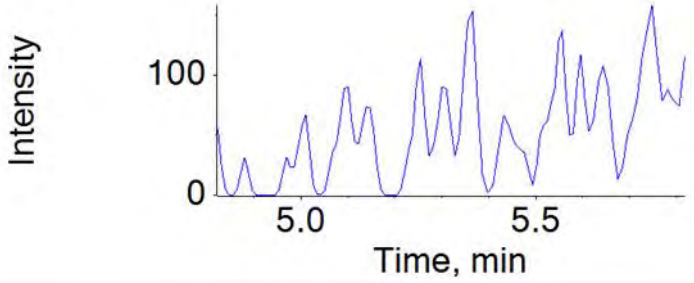
Component: PFOS
Primary Mass: 499.0 / 80.0



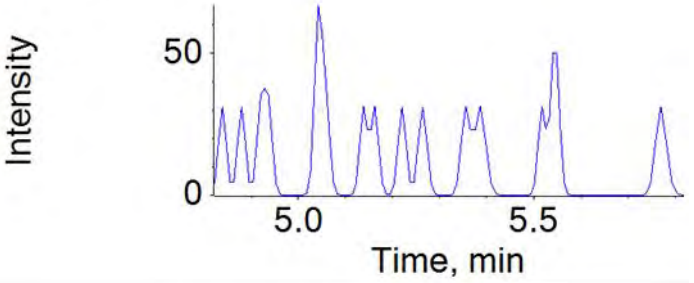
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



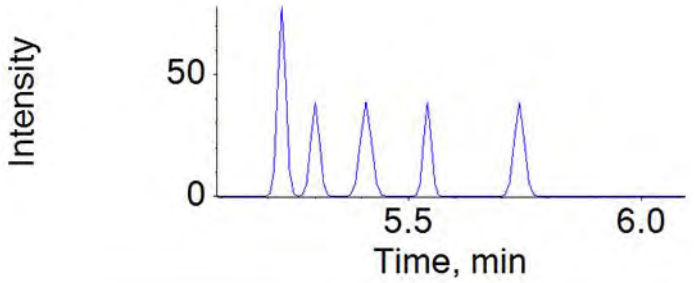
Component: PFNA
Primary Mass: 463.0 / 419.0



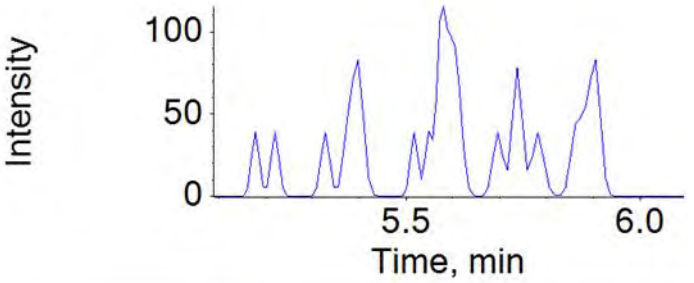
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



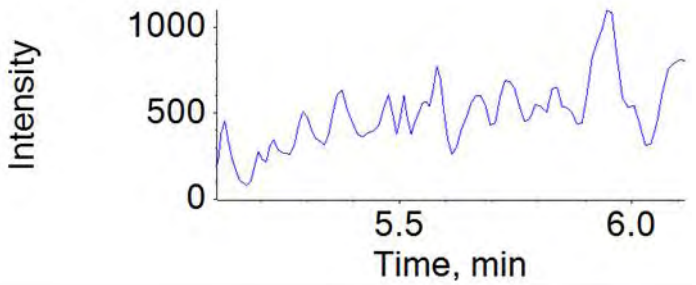
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



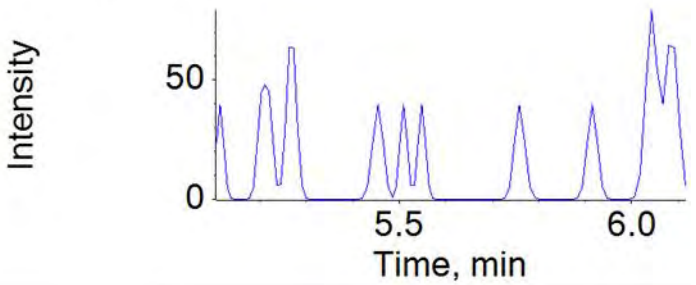
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

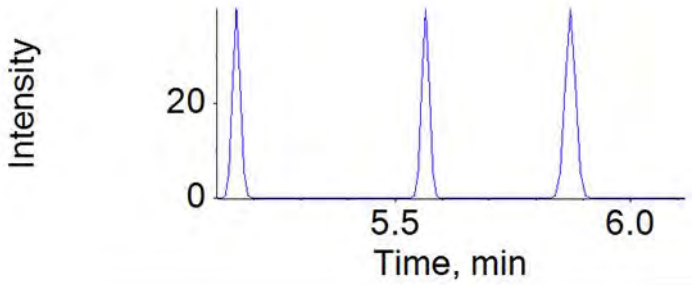
Component: PFDA
Primary Mass: 513.0 / 469.0



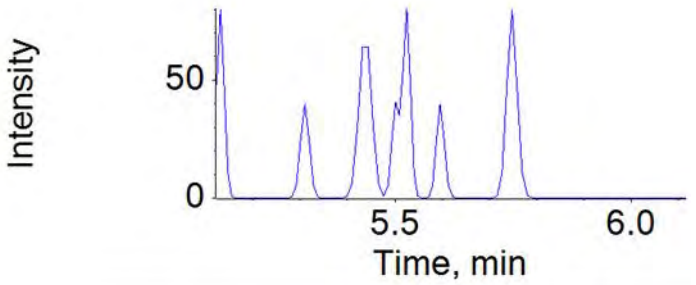
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



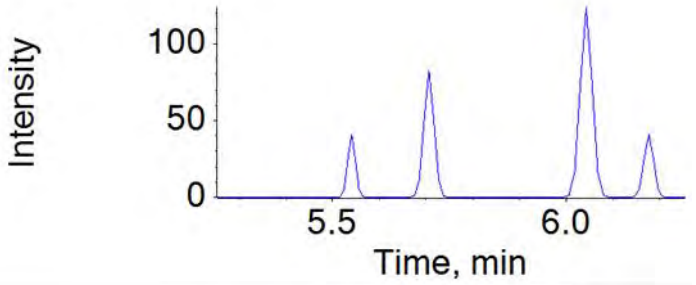
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



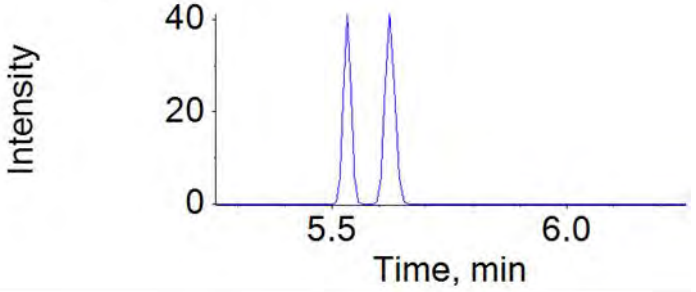
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



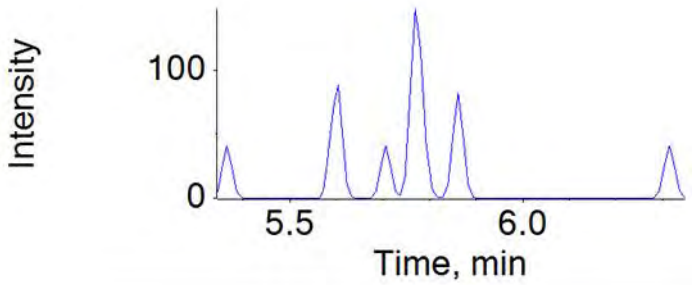
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



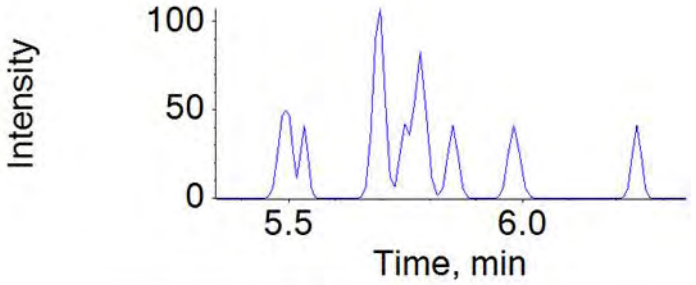
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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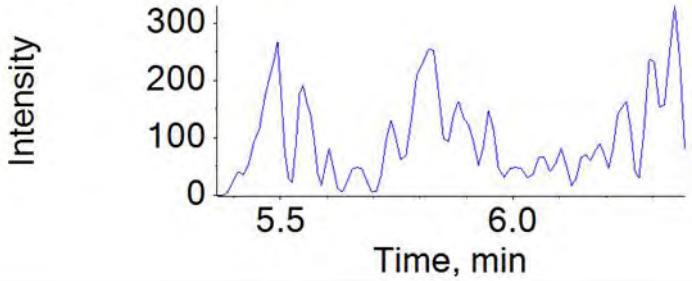
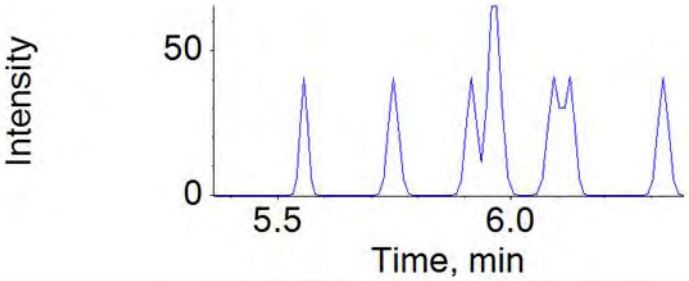
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

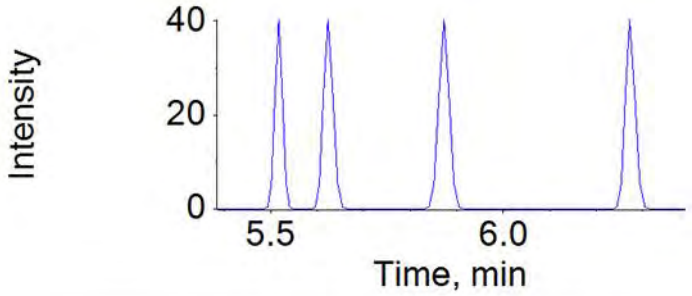
Component: PFUnDA
Primary Mass: 563.0 / 519.0



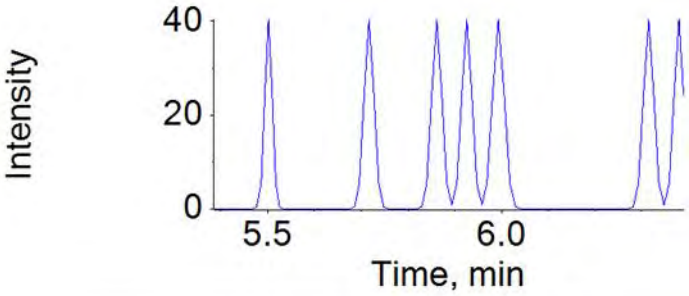
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



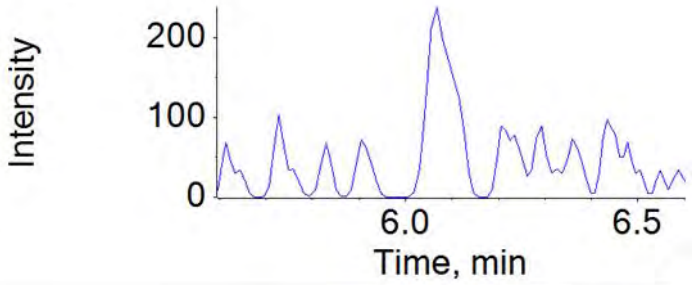
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



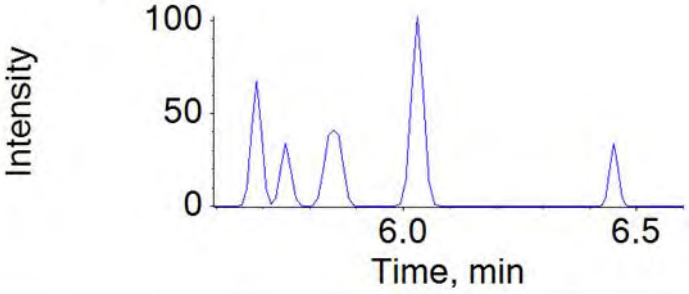
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



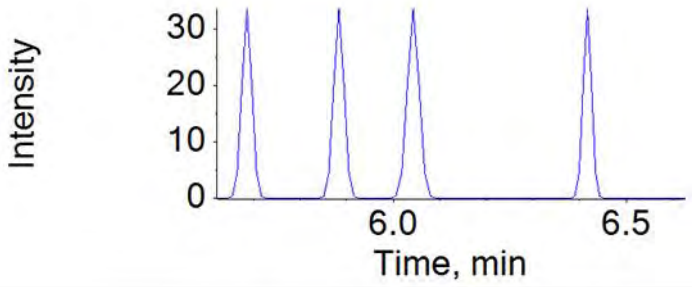
Component: PFDoDA
Primary Mass: 613.0 / 569.0



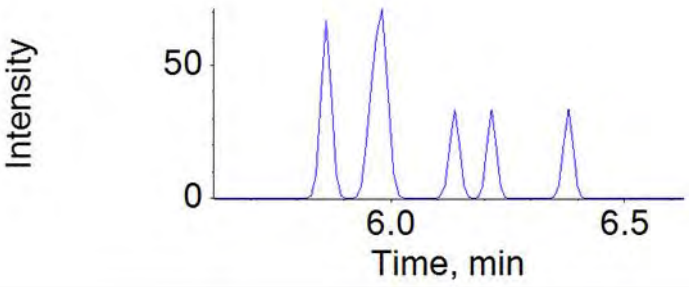
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



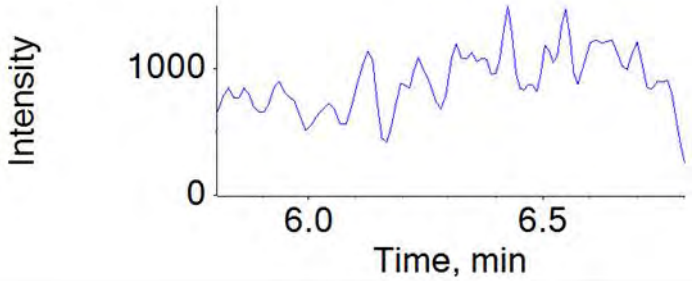
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



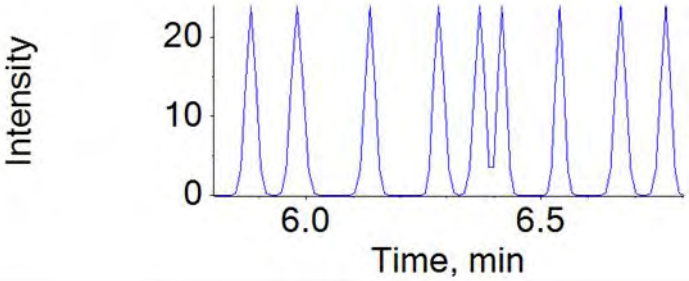
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

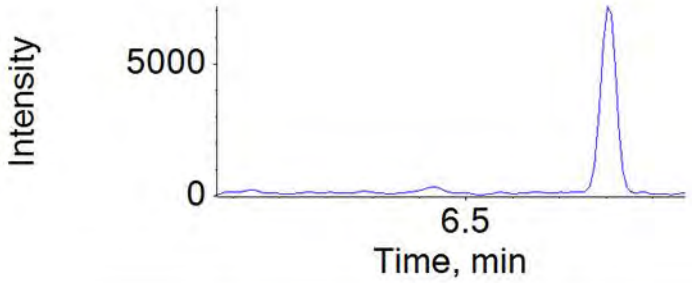
Component: PFTrDA
Primary Mass: 663.0 / 619.0



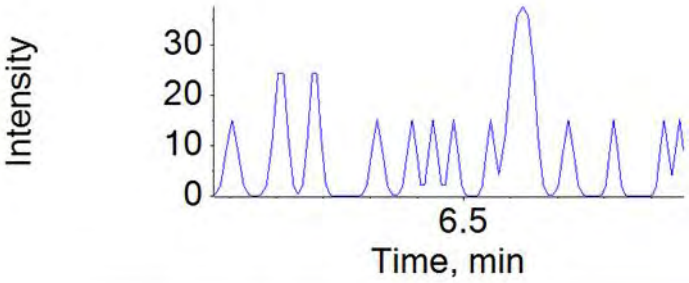
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



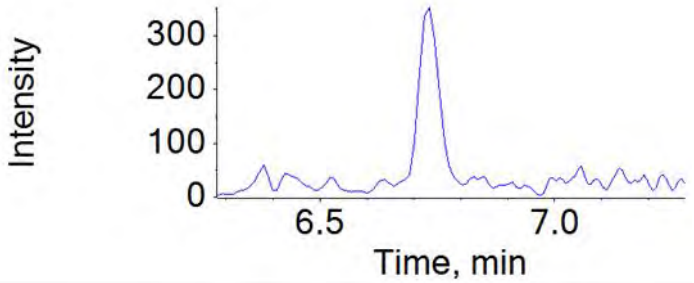
Component: PFTeDA
Primary Mass: 713.0 / 669.0



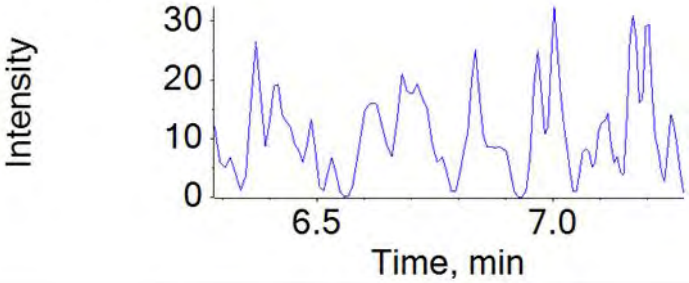
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



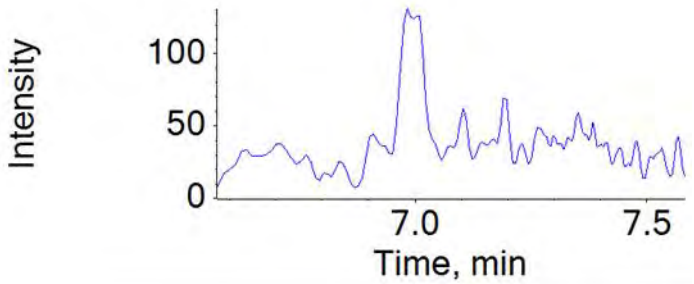
Component: PFHxDA
Primary Mass: 813.0 / 769.0



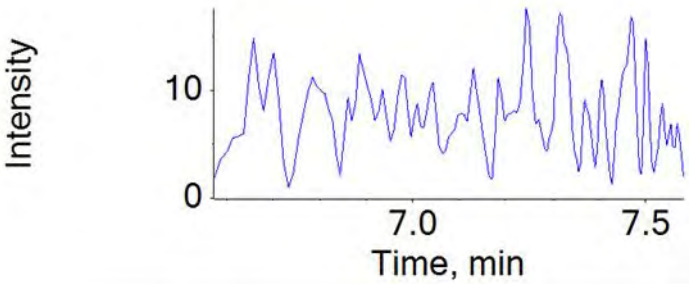
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV07DCAL-18.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-07T10:51:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	748799.9	730410.6	3	50	
13C2-PFOA	5.0	501855.0	524423.6	-4	50	
13C4-PFOS	4.8	265586.7	274061.7	-3	50	
13C2-PFDA	5.0	309656.0	311442.1	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	809267.5	13C3-PFBA	748799.9	1.081	5.000	5.001	100	70-130	
E13C5-PFPeA	881218.2	13C3-PFBA	748799.9	1.177	5.000	5.127	103	70-130	
E13C3-PFBS	459507.5	13C3-PFBA	748799.9	0.614	4.650	4.504	97	70-130	
E13C2-4:2-FTS	53452.0	13C2-PFOA	501855.0	0.107	4.670	4.806	103	70-130	
E13C5-PFHxA	721013.6	13C2-PFOA	501855.0	1.437	5.000	5.285	106	70-130	
E13C3-PFHxS	351166.0	13C2-PFOA	501855.0	0.700	4.730	5.023	106	70-130	
E13C4-PFHpA	564695.4	13C2-PFOA	501855.0	1.125	5.000	5.119	102	70-130	
E13C2-6:2-FTS	37550.1	13C2-PFOA	501855.0	0.075	4.750	4.989	105	70-130	
E13C8-PFOA	985027.1	13C2-PFOA	501855.0	1.963	5.000	5.473	109	70-130	
E13C8-PFOS	289450.1	13C4-PFOS	265586.7	1.090	4.780	4.819	101	70-130	
E13C9-PFNA	531663.0	13C4-PFOS	265586.7	2.002	5.000	5.468	109	70-130	
E13C6-PFDA	669137.1	13C2-PFDA	309656.0	2.161	5.000	5.434	109	70-130	
E13C2-8:2-FTS	27983.4	13C2-PFDA	309656.0	0.090	4.790	4.782	100	70-130	
E13C8-PFOSA	741232.2	13C2-PFDA	309656.0	2.394	5.000	5.223	104	70-130	
Ed3-NMeFOSAA	76665.4	13C2-PFDA	309656.0	0.248	5.000	4.604	92	70-130	
E13C7-PFUnDA	292761.5	13C2-PFDA	309656.0	0.945	5.000	5.454	109	70-130	
Ed5-NEtFOSAA	78938.7	13C2-PFDA	309656.0	0.255	5.000	5.899	118	70-130	
E13C2-PFDoDA	580675.1	13C2-PFDA	309656.0	1.875	5.000	5.055	101	70-130	
Ed7-NMePFOSAE	334001.4	13C2-PFDA	309656.0	1.079	5.000	5.016	100	70-130	
Ed3-NMePFOSA	79719.1	13C2-PFDA	309656.0	0.257	5.000	4.713	94	70-130	
Ed9-NEtPFOSAE	293829.7	13C2-PFDA	309656.0	0.949	5.000	5.419	108	70-130	
Ed5-NEtPFOSA	65412.9	13C2-PFDA	309656.0	0.211	5.000	4.891	98	70-130	
E13C2-PFTeDA	427601.6	13C2-PFDA	309656.0	1.381	5.000	4.971	99	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

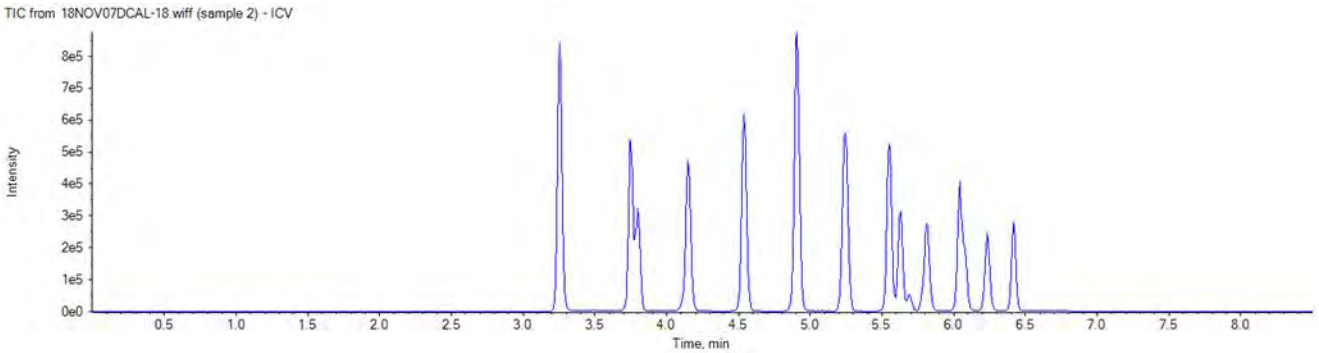
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-18.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	307777.1		A	13C4-PFBA	3.25	809267.5	0.380	2.226
PFPeA	3.75	1.000	325574.9		A	13C5-PFPeA	3.75	881218.2	0.369	2.196
PFBS	3.80	1.000	159719.5		A	13C3-PFBS	3.80	459507.5	0.348	1.752
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	53452.0	N/A	
PFHxA	4.15	1.000	397434.6		A	13C5-PFHxA	4.15	721013.6	0.551	2.364
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	459507.5	N/A	
PFHxS	4.54	1.000	126635.3		A	13C3-PFHxS	4.54	351166.0	0.361	1.828
PFHpA	4.54	1.000	390197.1		A	13C4-PFHpA	4.54	564695.4	0.691	2.324
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	37550.1	N/A	
PFHpS	4.90	1.080	126812.1		A	13C3-PFHxS	4.54	351166.0	0.361	1.889
PFOA	4.91	1.000	387215.1		M	13C8-PFOA	4.91	985027.1	0.393	2.213
PFOS	5.23	1.000	114911.8		M	13C8-PFOS	5.23	289450.1	0.397	2.059
PFNA	5.25	1.000	329644.4		A	13C9-PFNA	5.25	531663.0	0.620	2.317
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	289450.1	N/A	
PFDA	5.55	1.000	262760.0		A	13C6-PFDA	5.55	669137.1	0.393	2.160
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	27983.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.63	741232.2	N/A	
NMeFOSAA	5.69	1.000	33916.6		A	d3-NMeFOSAA	5.69	76665.4	0.442	2.276
PFDS	5.79	1.110	65962.5		A	13C8-PFOS	5.23	289450.1	0.228	2.177
PFUnDA	5.81	1.000	225137.5		A	13C7-PFUnDA	5.81	292761.5	0.769	2.205
NEtFOSAA	5.83	1.000	29687.2		A	d5-NEtFOSAA	5.82	78938.7	0.376	1.616
PFDoDA	6.04	1.000	232949.2		A	13C2-PFDoDA	6.04	580675.1	0.401	2.174
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	27983.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	334001.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	79719.1	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	289450.1	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.23	293829.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	65412.9	N/A	
PFTrDA	6.24	1.030	206908.4		A	13C2-PFDoDA	6.04	580675.1	0.356	2.247
PFTeDA	6.42	1.000	157975.3		A	13C2-PFTeDA	6.42	427601.6	0.369	2.169
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	427601.6	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	427601.6	N/A	

Total Ion Chromatogram

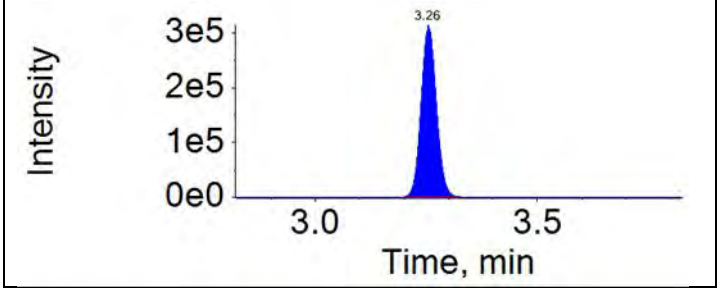


APPROVED
By JPT at 2:53 pm, 11/7/18

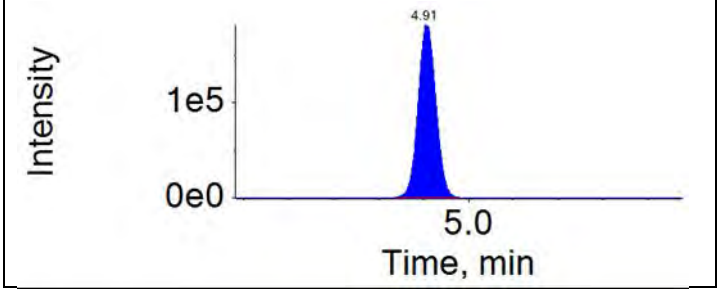
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

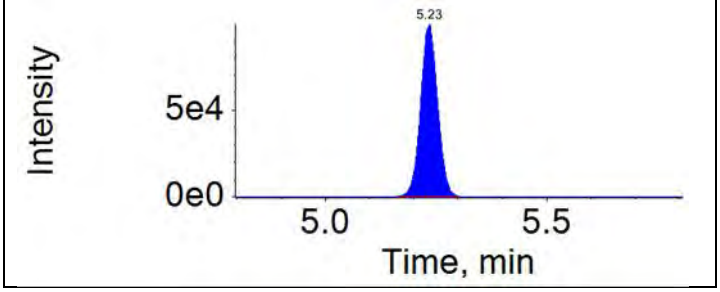
Injection Standard: 13C3-PFBA
216.0 / 172.0



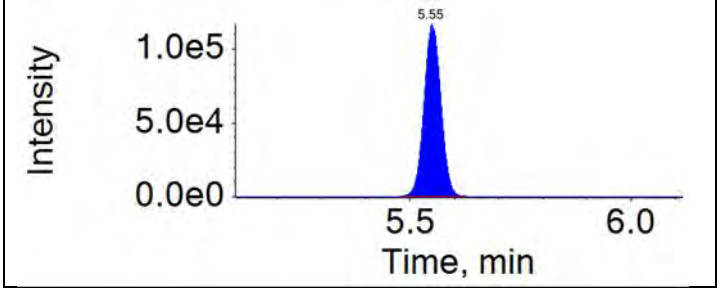
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



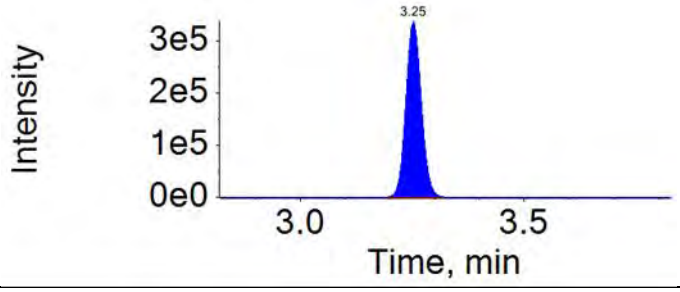
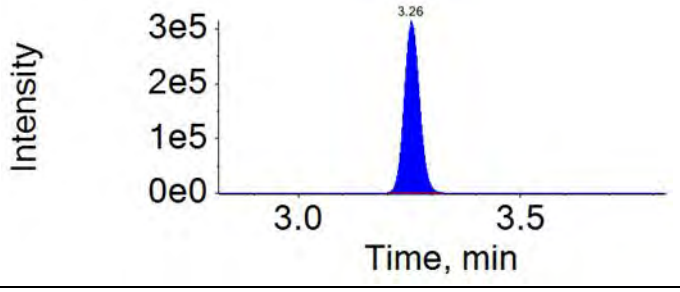
Injection Standard: 13C2-PFDA
515.0 / 470.0

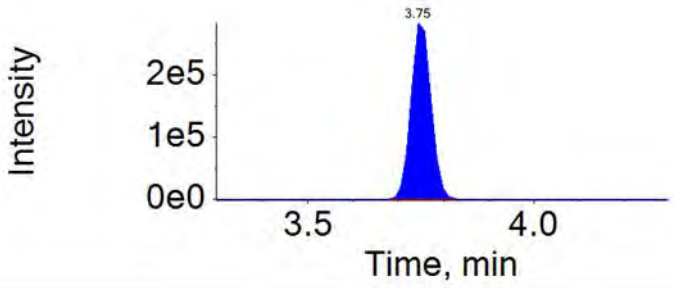
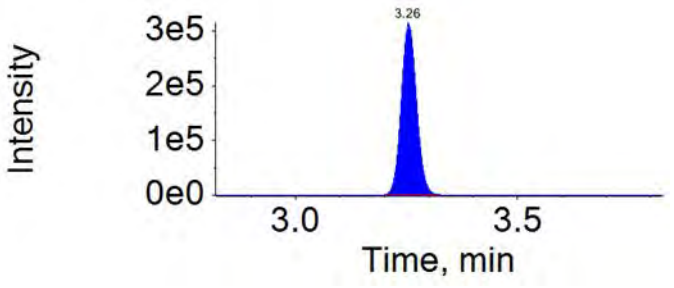


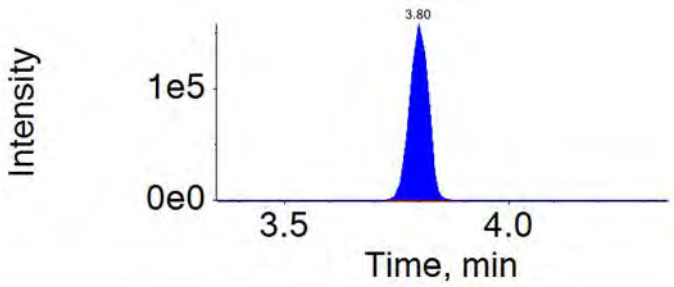
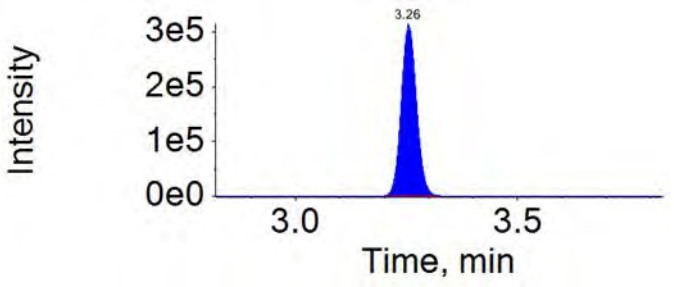
APPROVED
By JPT at 2:53 pm, 11/7/18

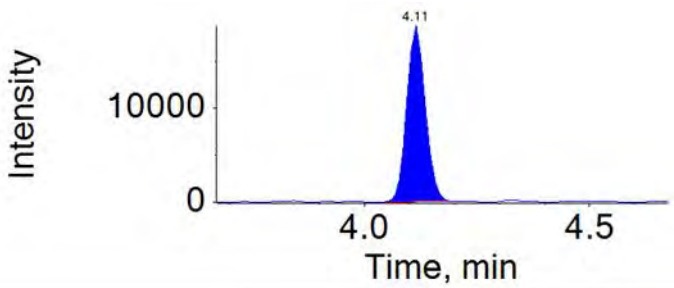
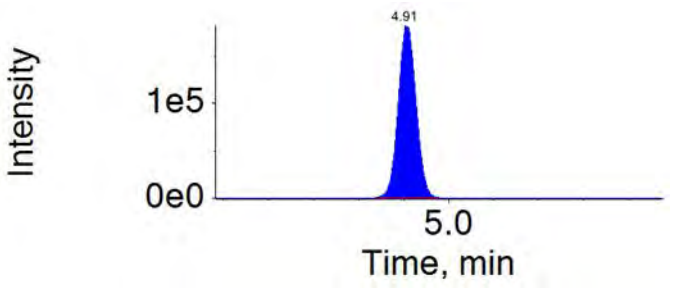
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

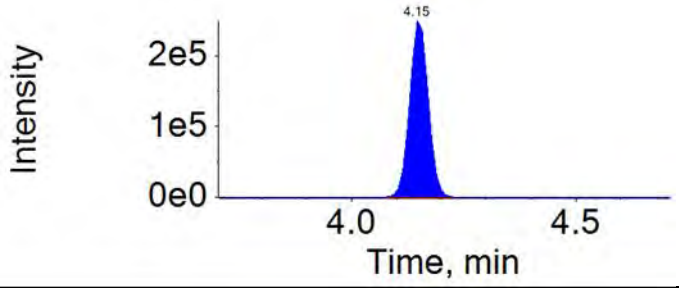
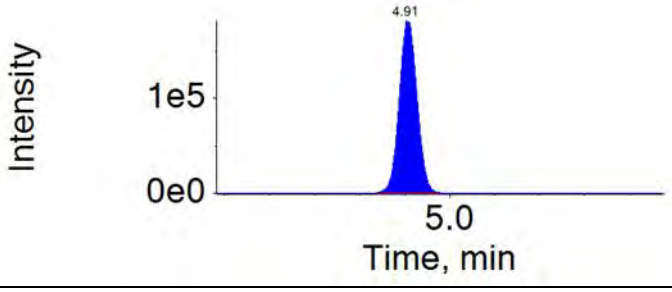
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

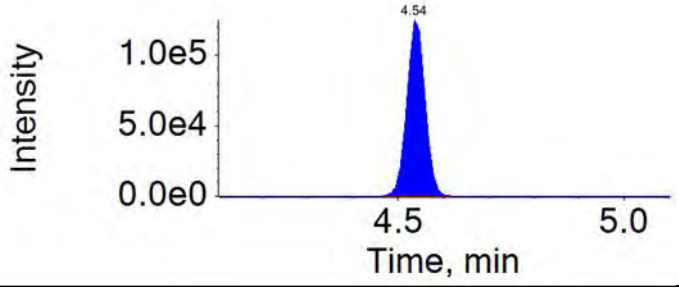
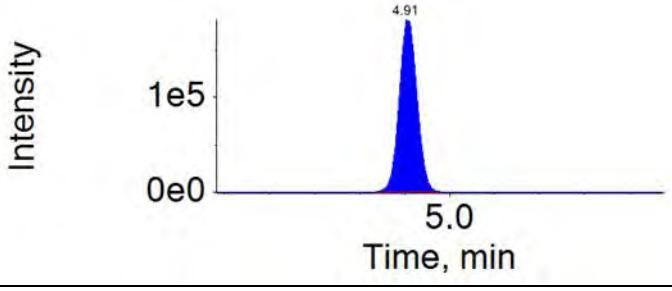
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

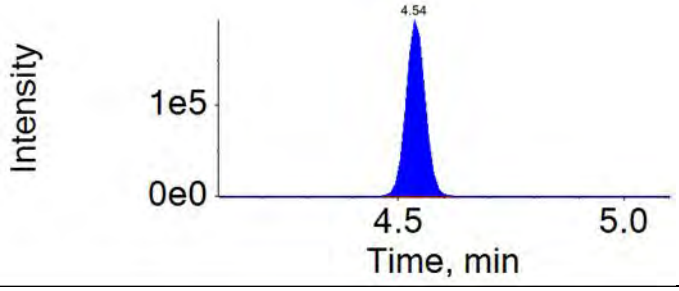
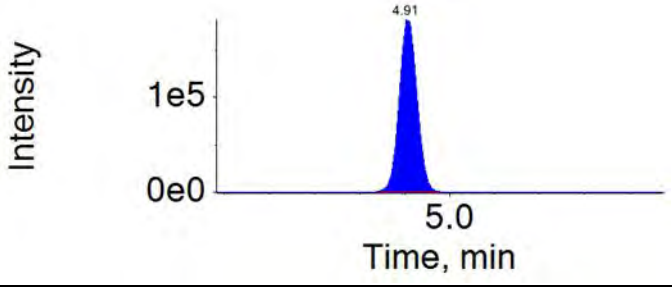
APPROVED
By JPT at 2:53 pm, 11/7/18

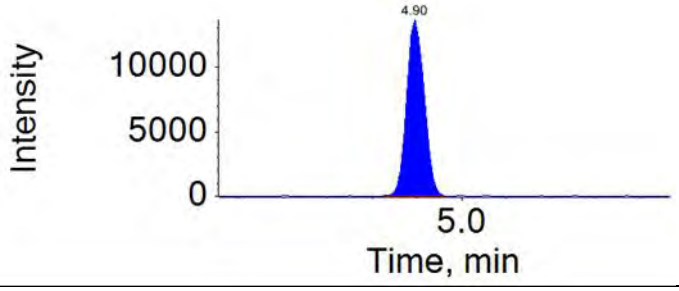
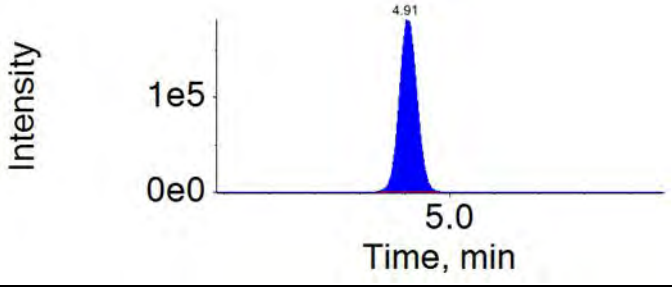
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

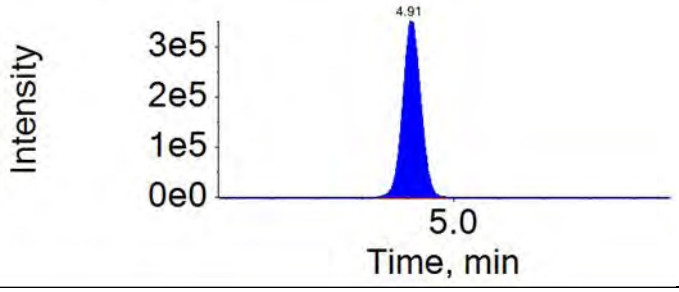
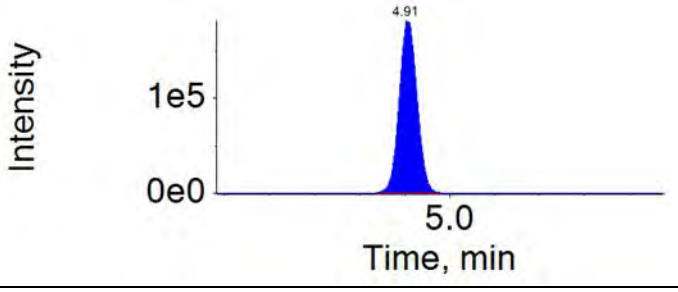
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

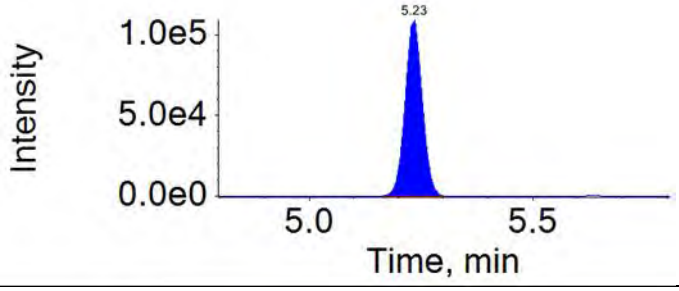
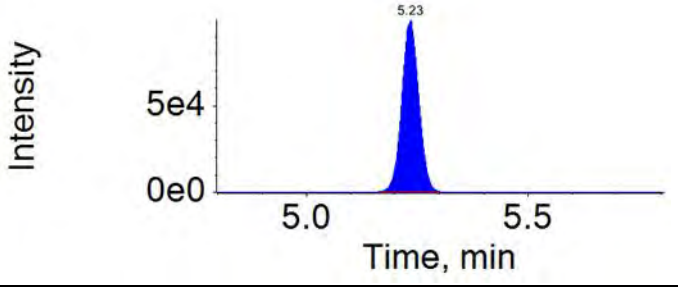
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

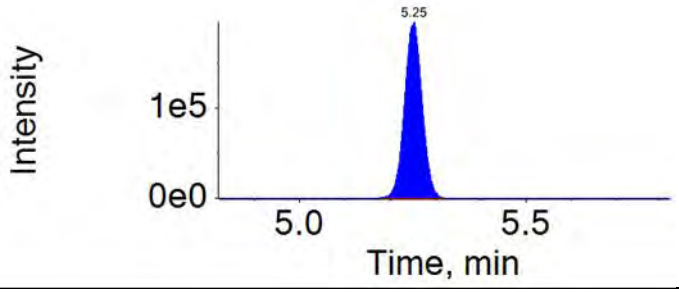
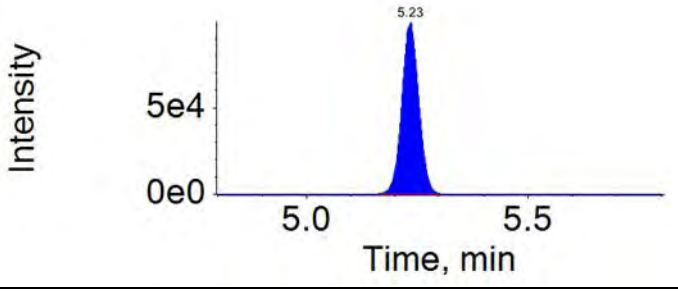
APPROVED
By JPT at 2:53 pm, 11/7/18

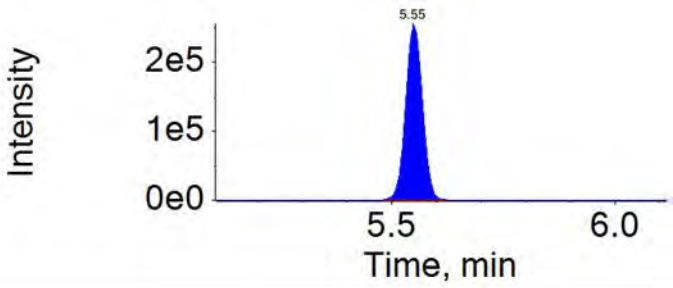
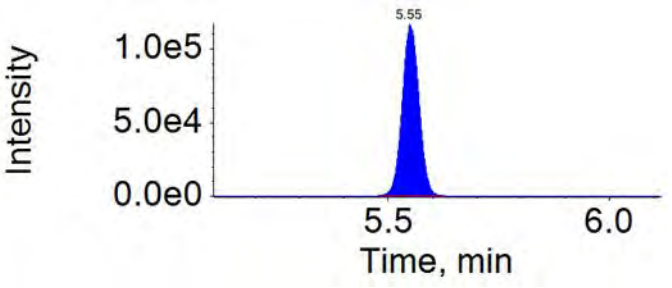
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

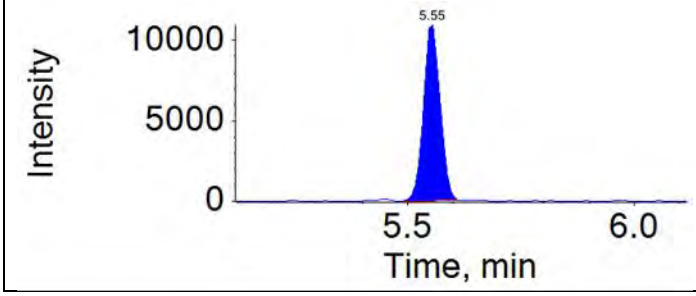
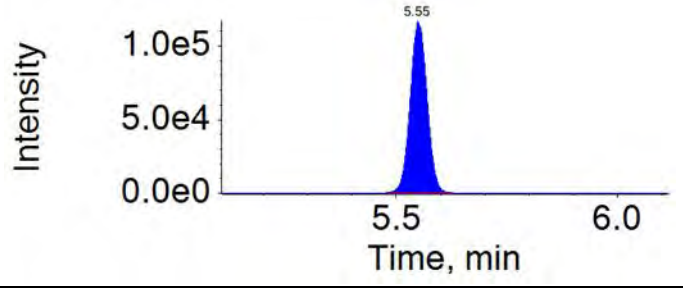
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

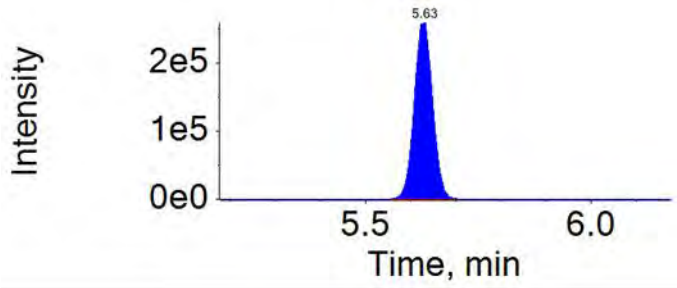
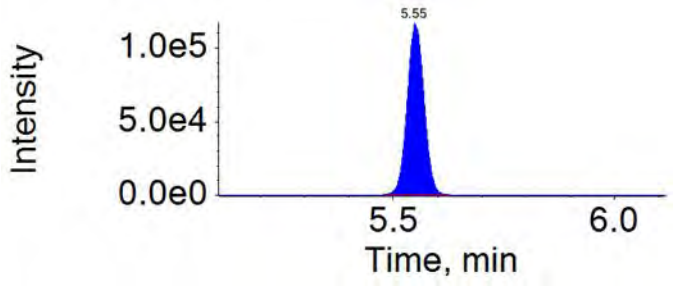
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

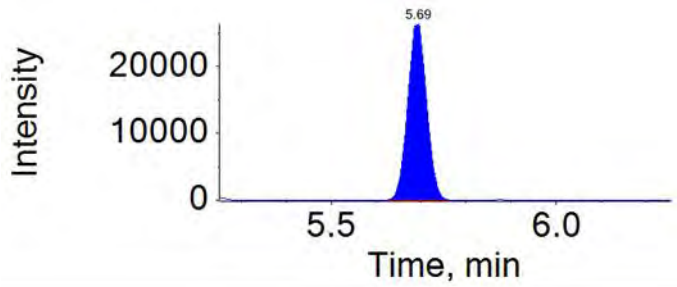
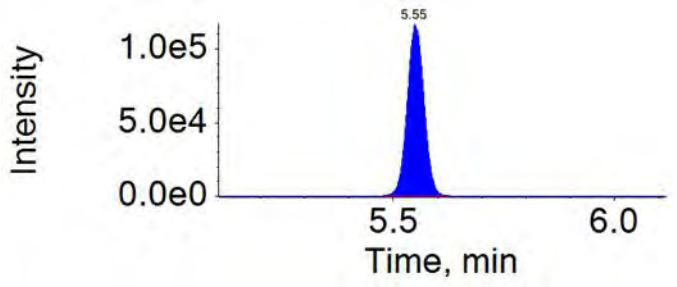
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

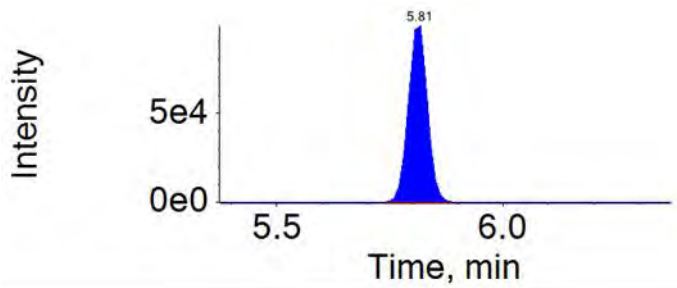
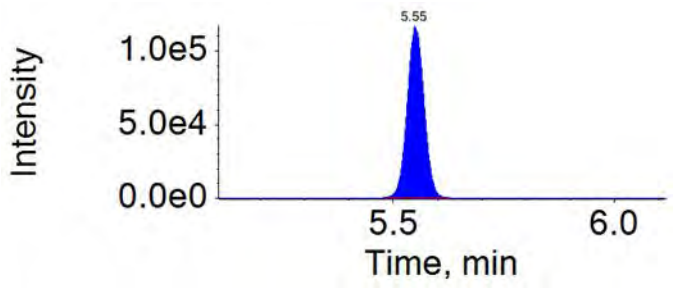
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

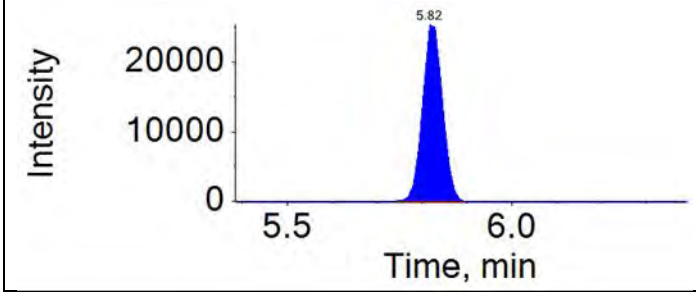
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

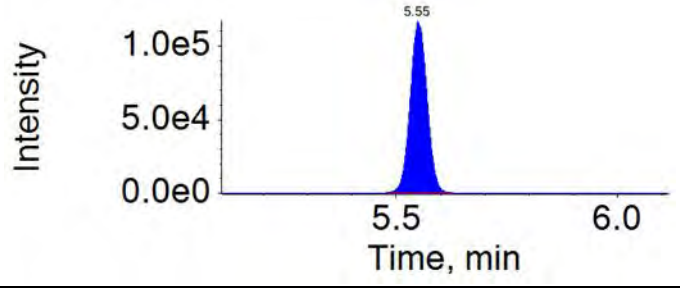
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

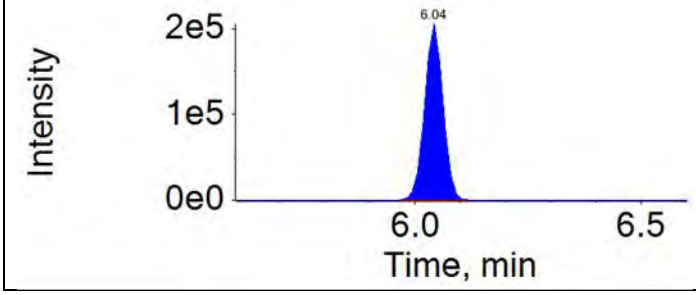
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

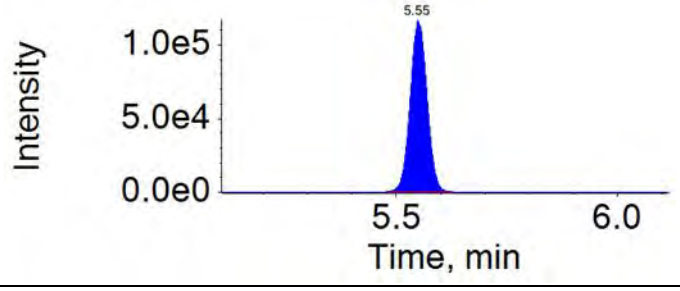
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



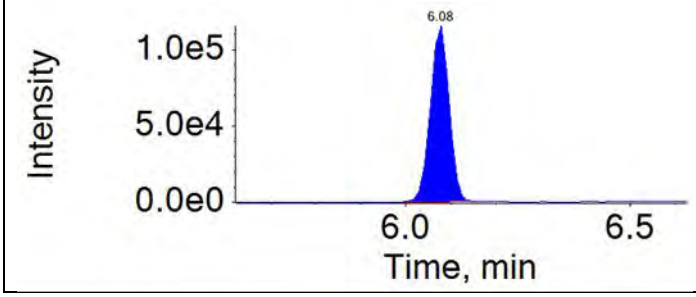


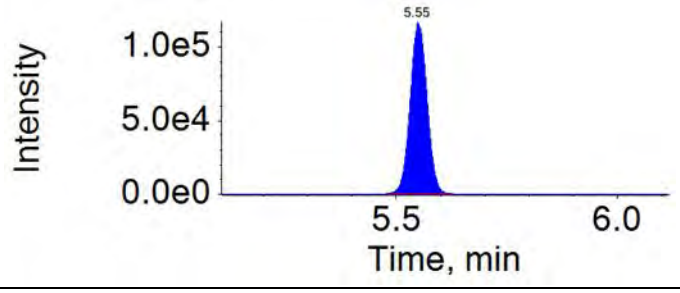
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



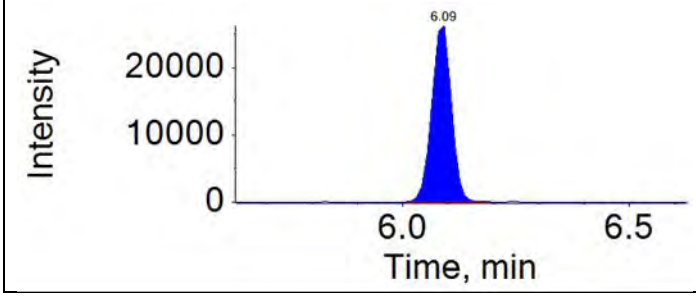


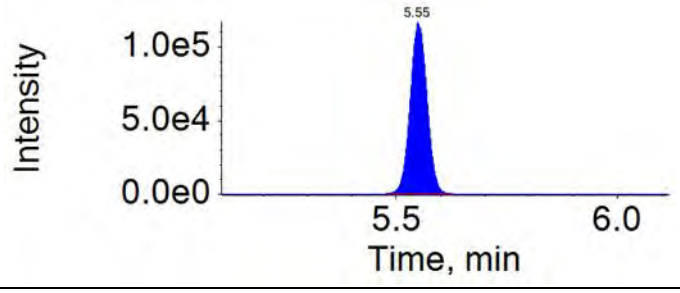
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



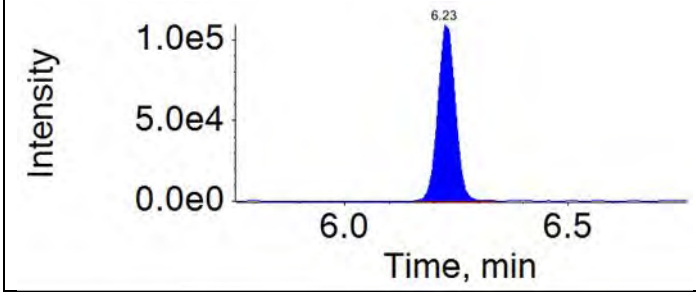


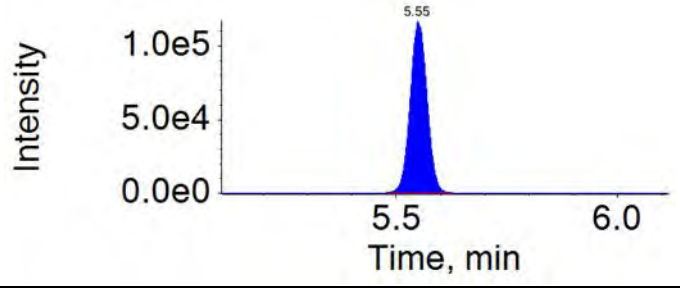
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

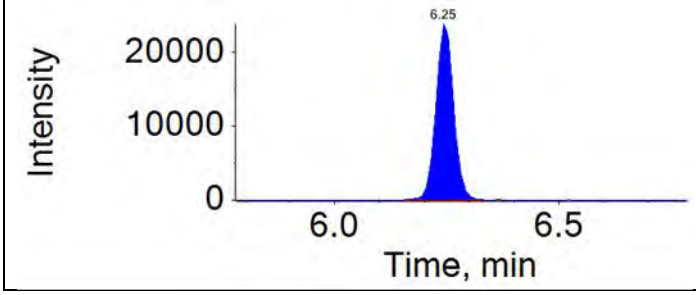
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

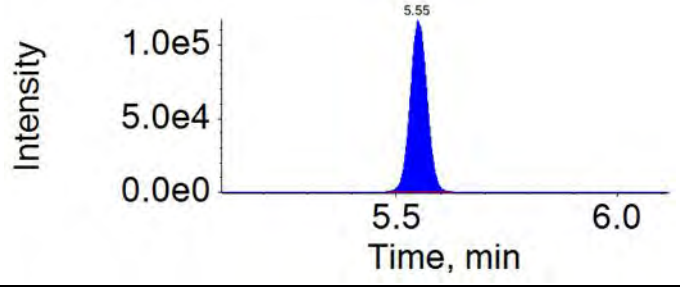
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



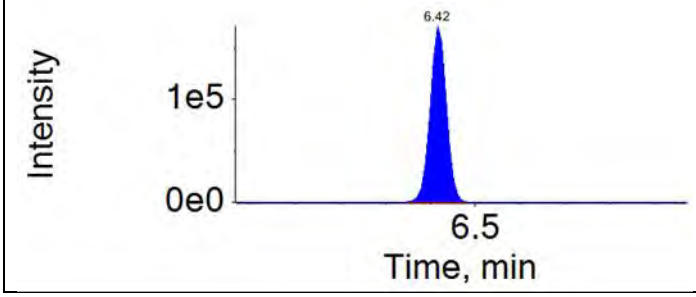


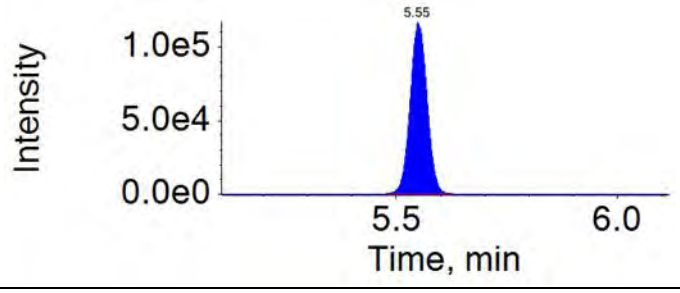
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

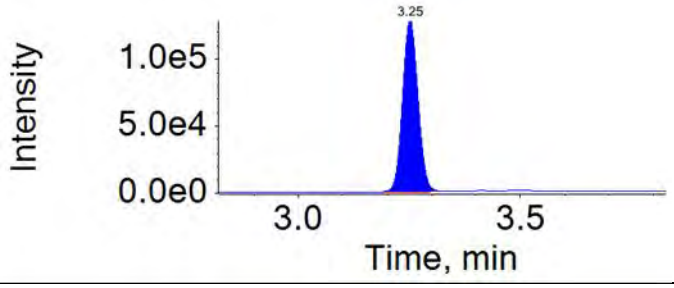
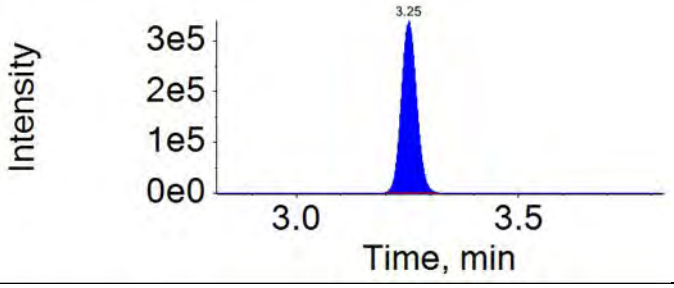


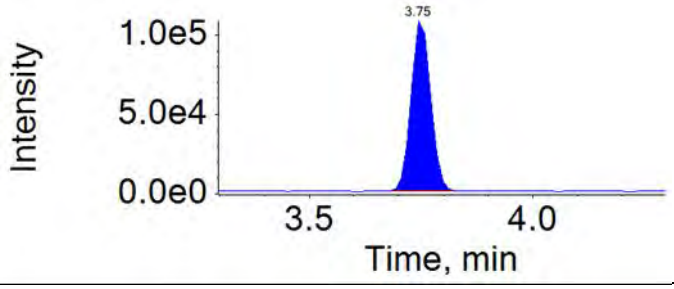
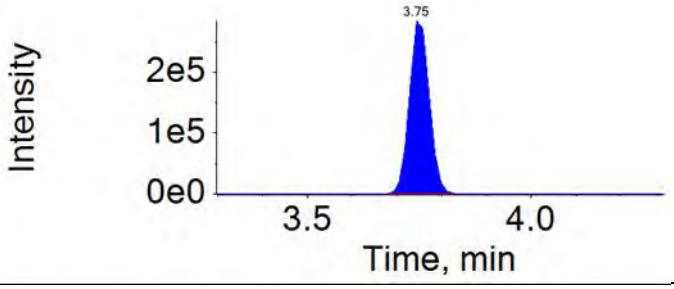


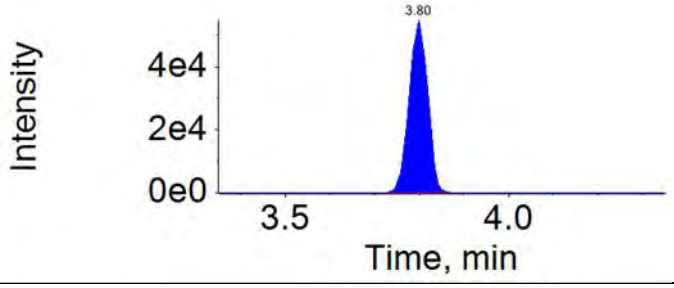
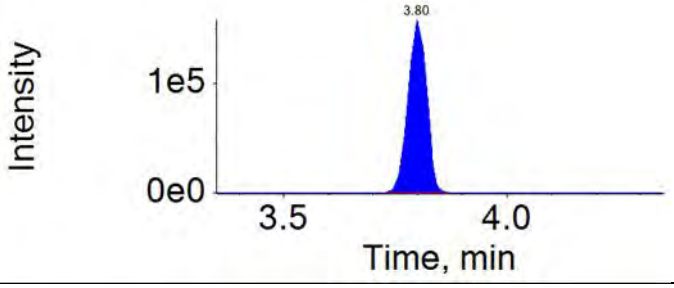
APPROVED
By JPT at 2:53 pm, 11/7/18

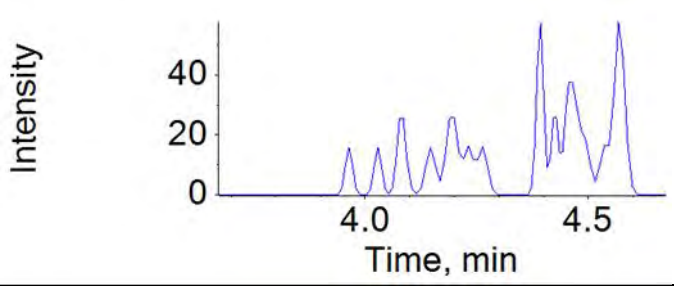
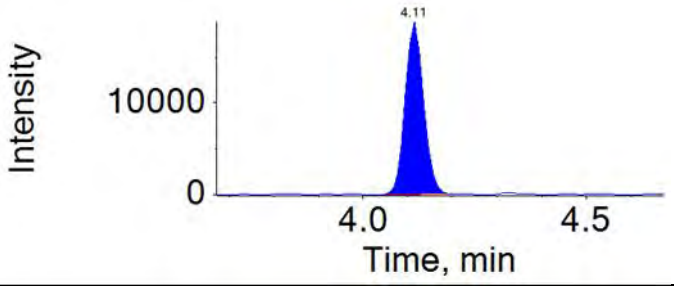
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

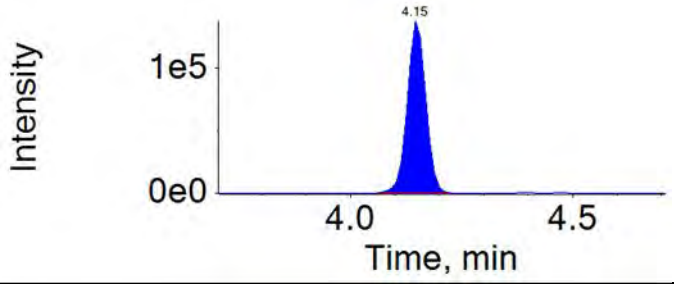
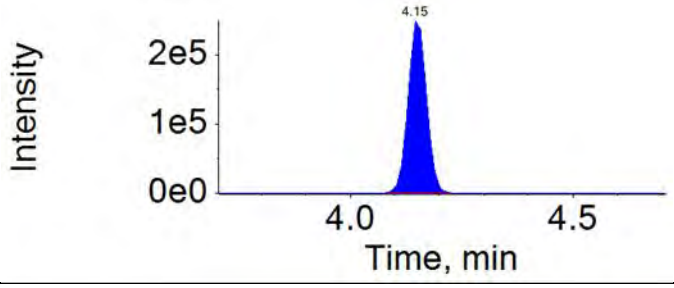
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

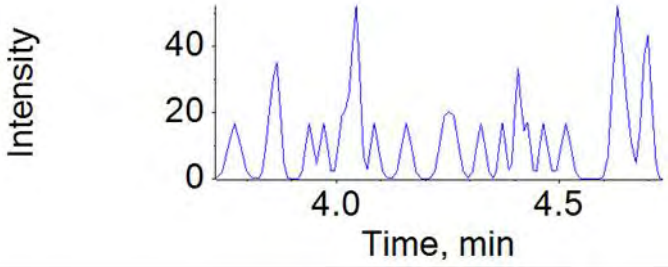
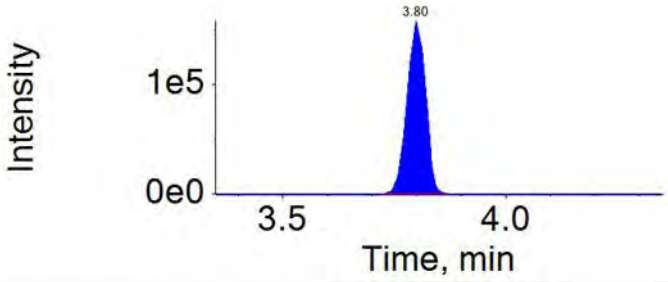
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

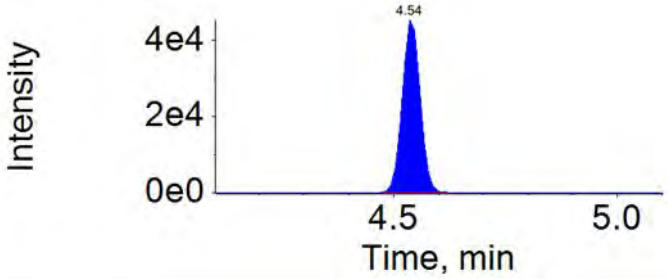
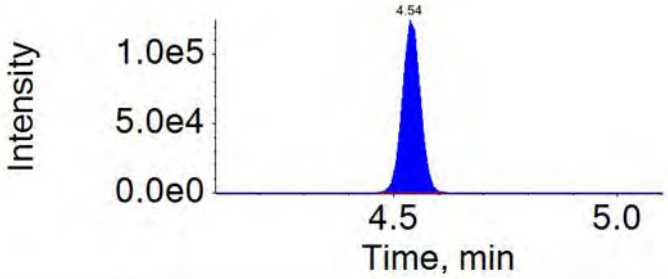
APPROVED
By JPT at 2:53 pm, 11/7/18

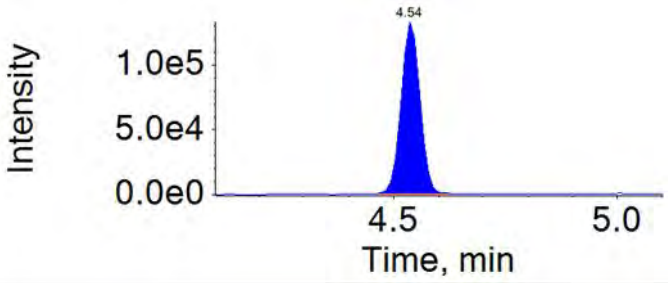
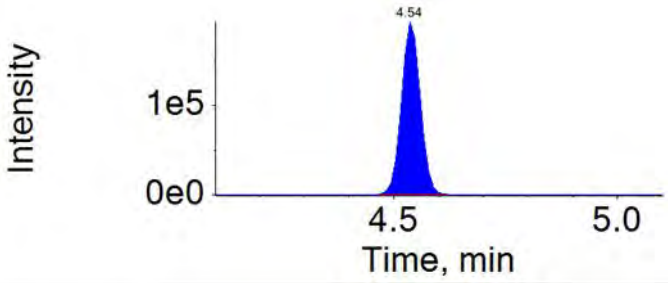
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

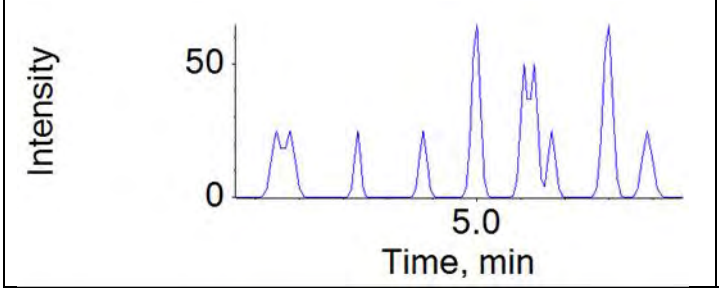
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

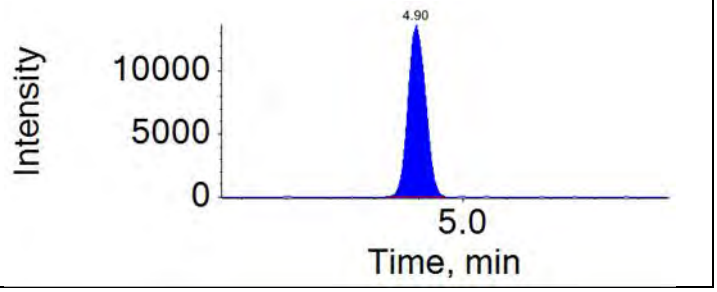
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

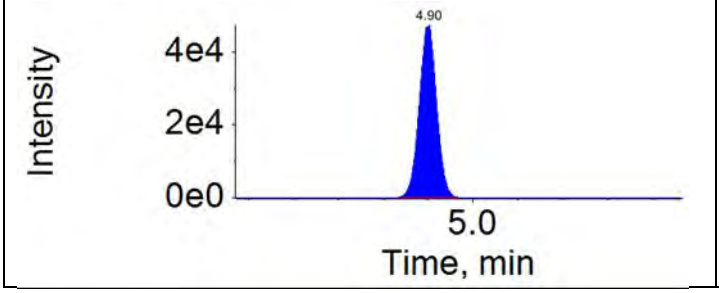
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

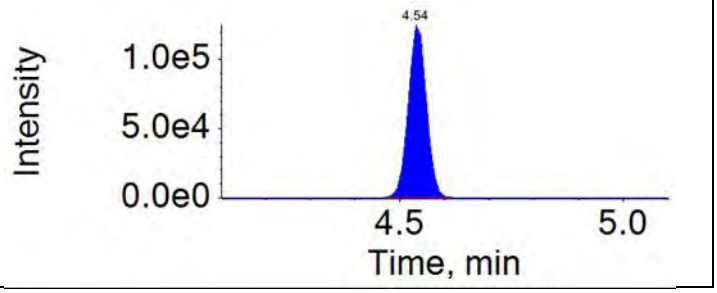
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



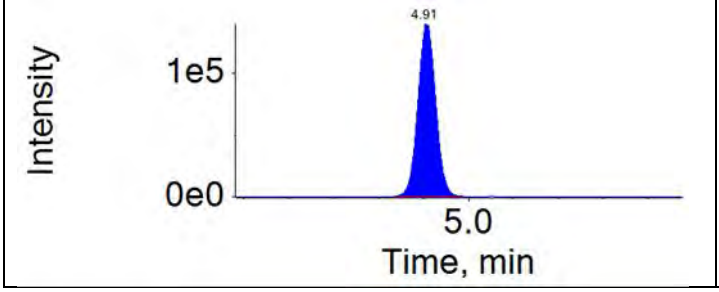


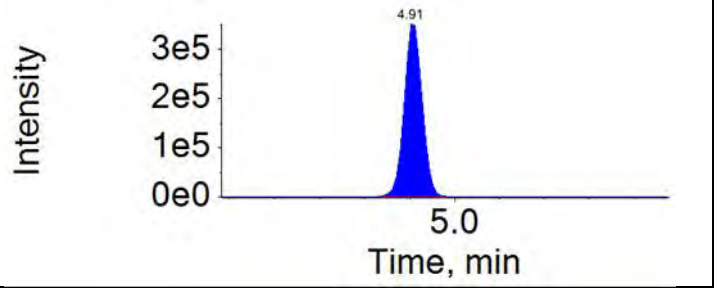
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



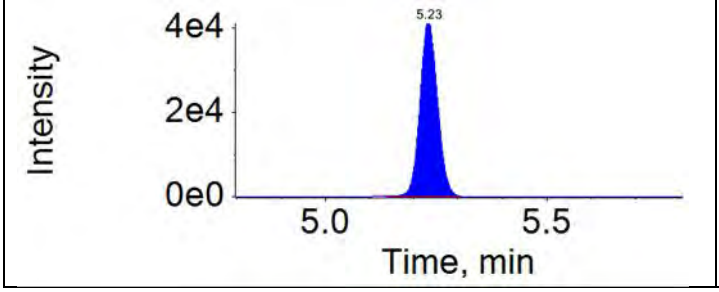


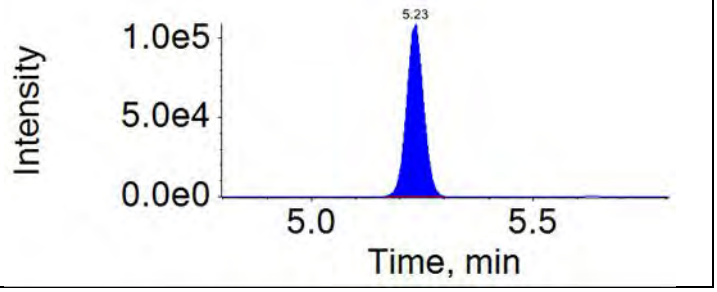
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



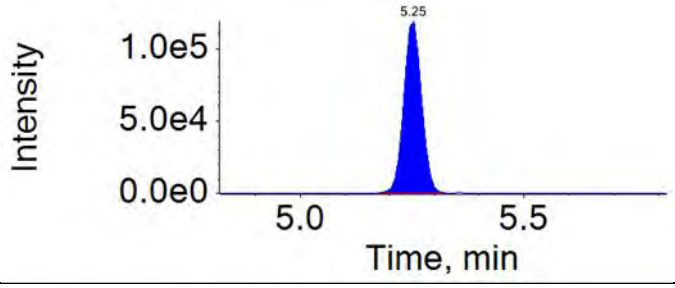


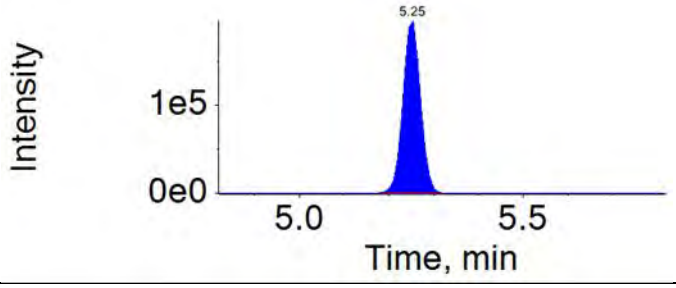
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

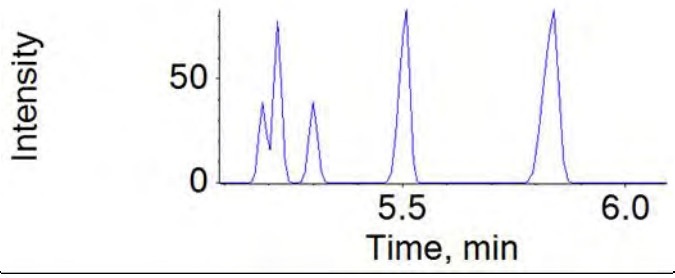
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

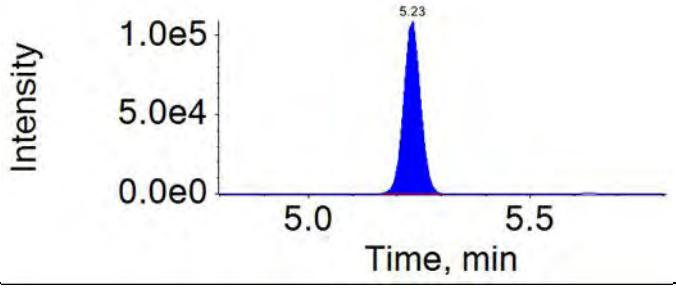
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



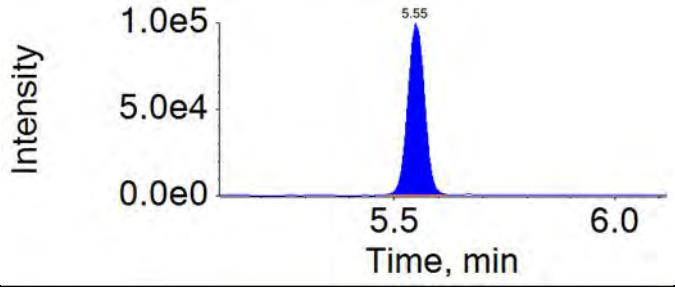


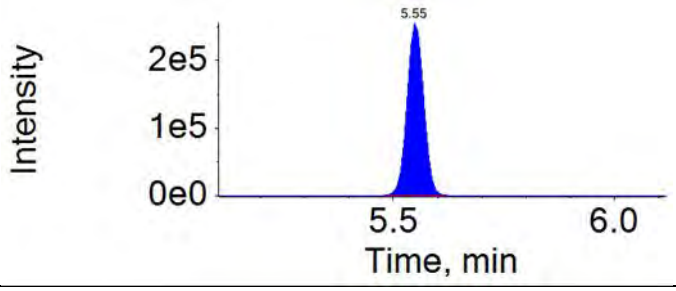
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



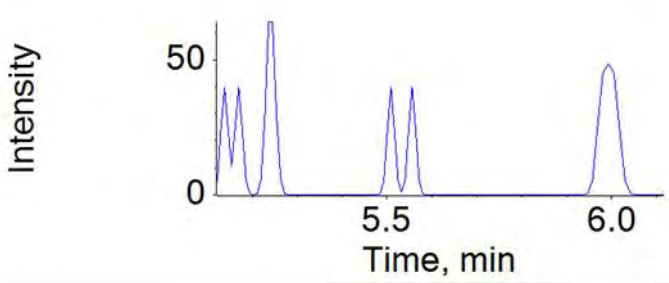


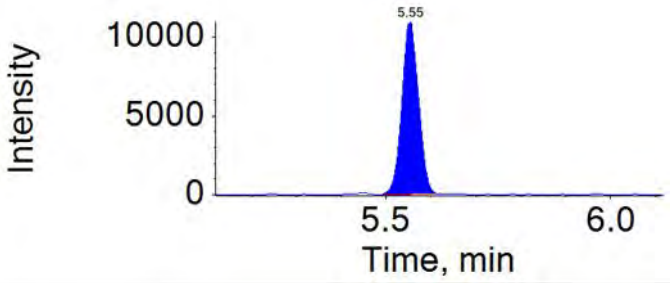
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

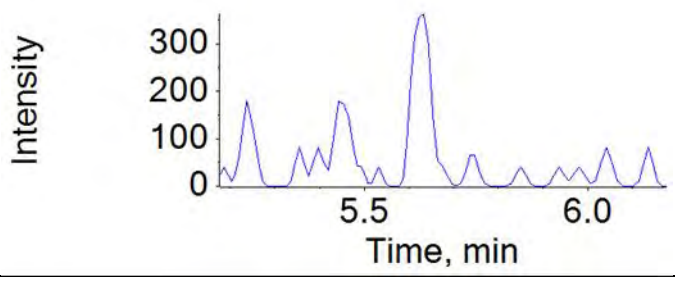
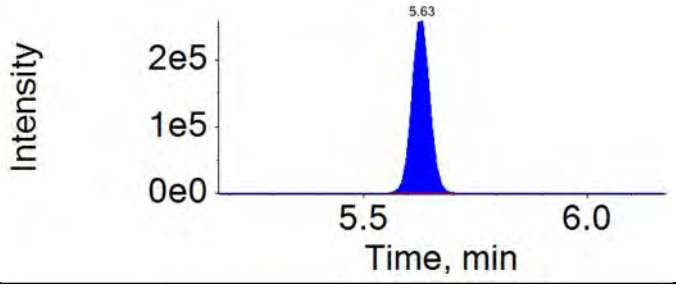


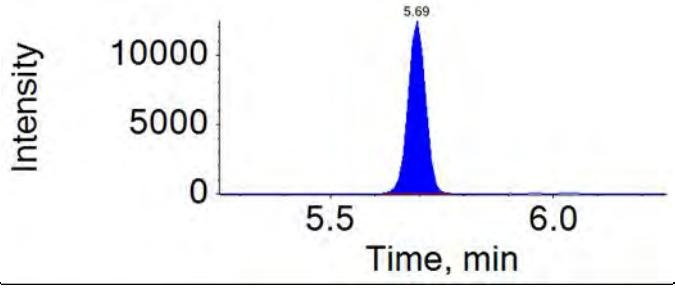
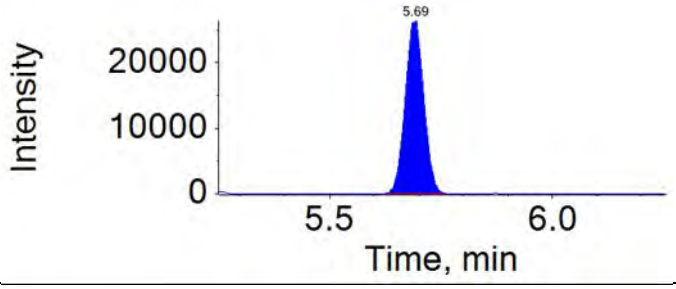


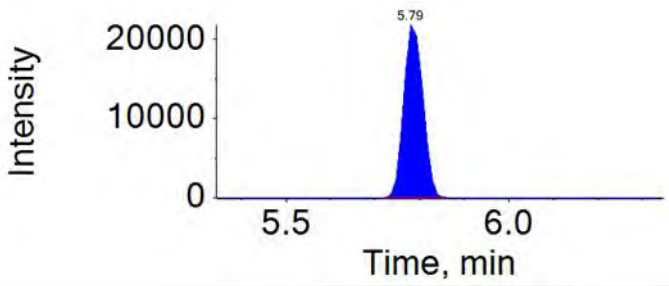
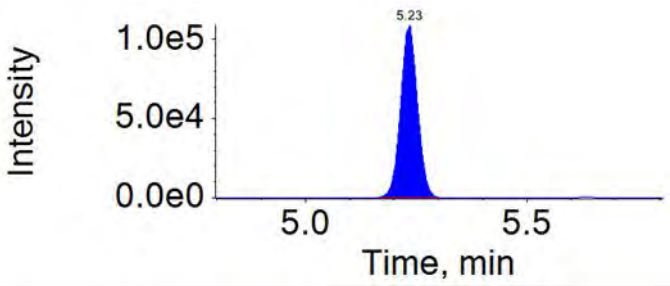
APPROVED
By JPT at 2:53 pm, 11/7/18

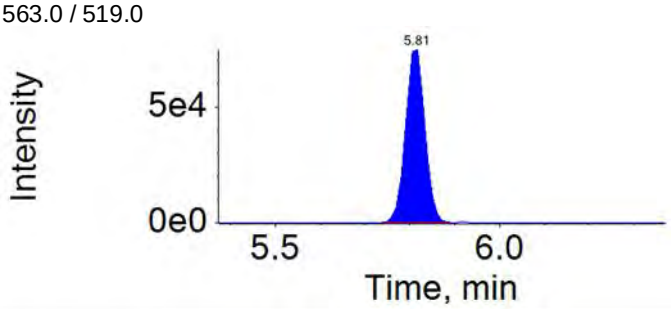
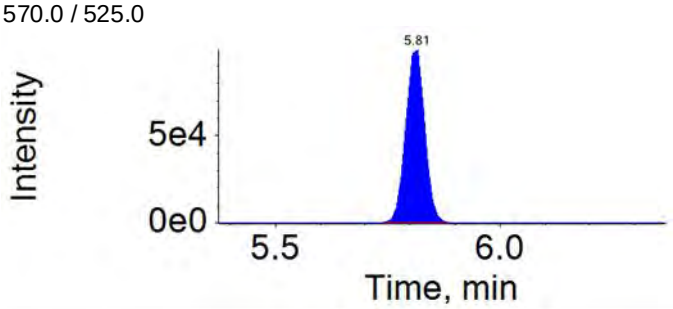
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

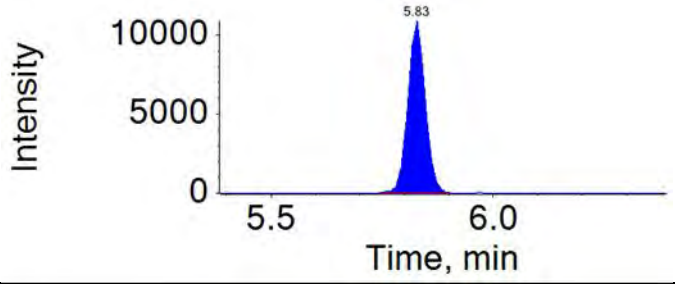
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

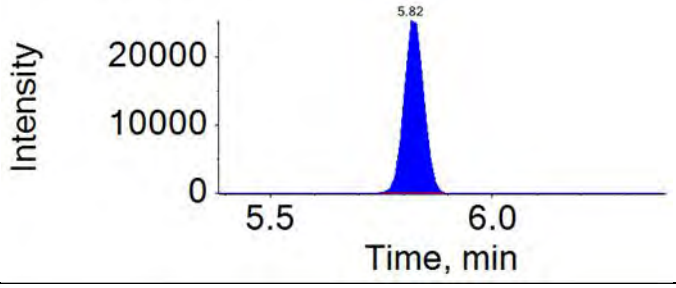
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

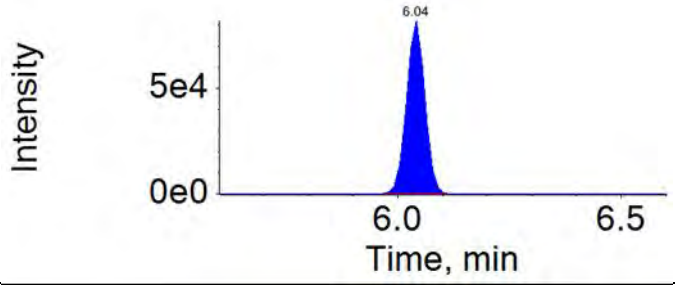
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

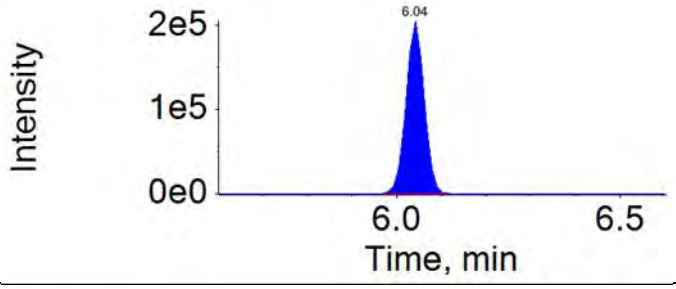
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



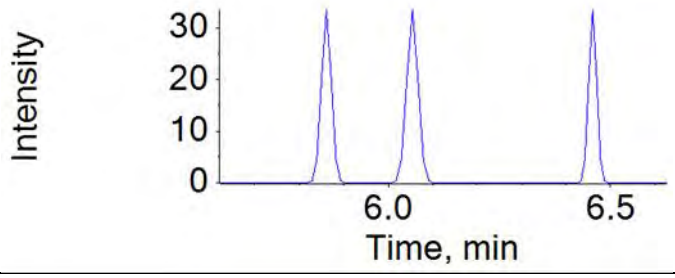


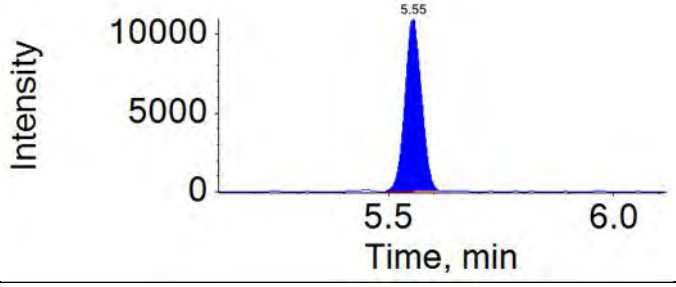
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



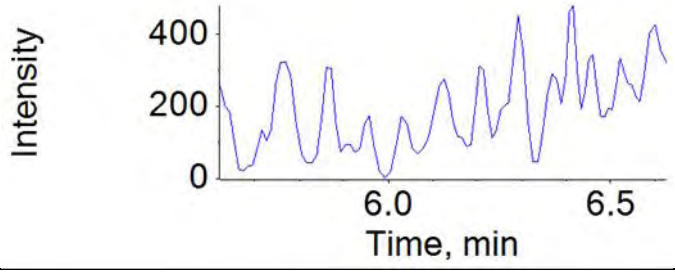


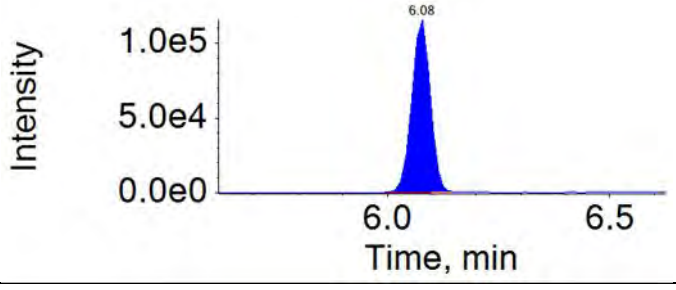
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



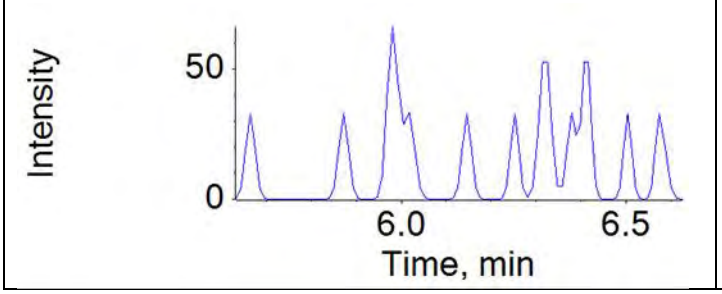


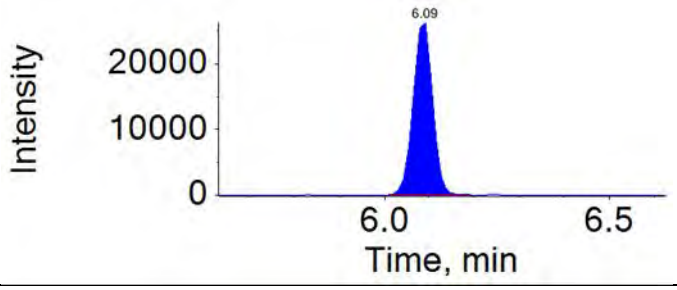
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

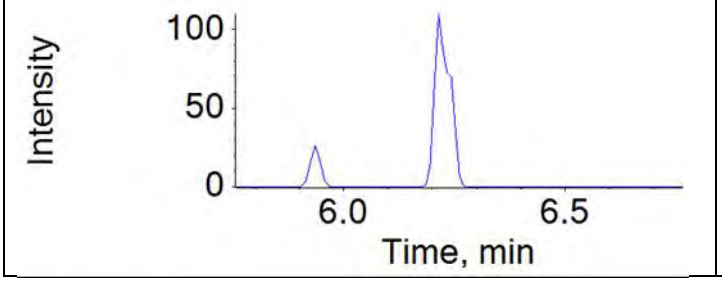
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

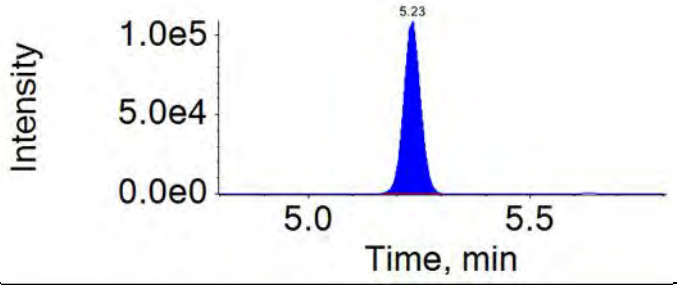
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



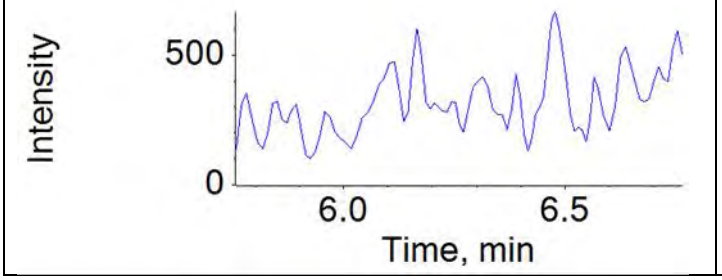


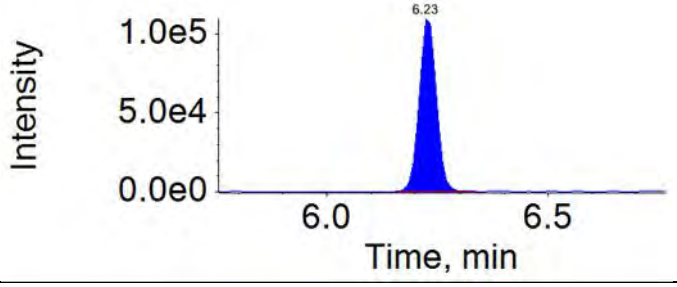
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



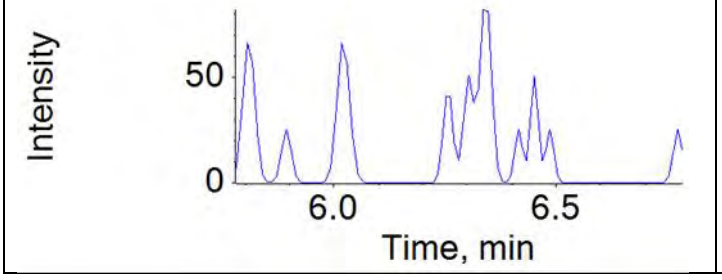


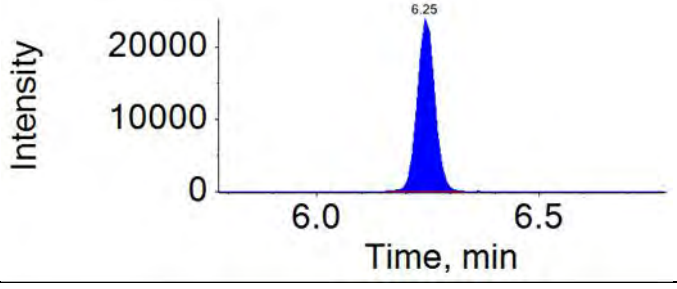
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

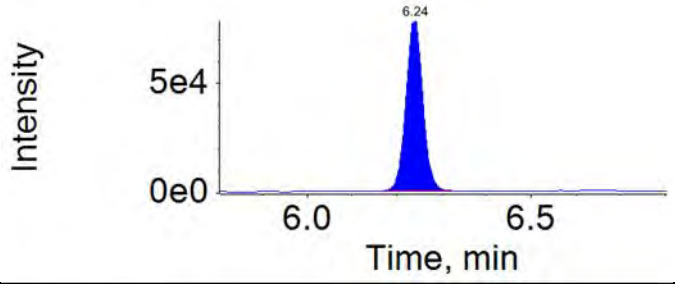
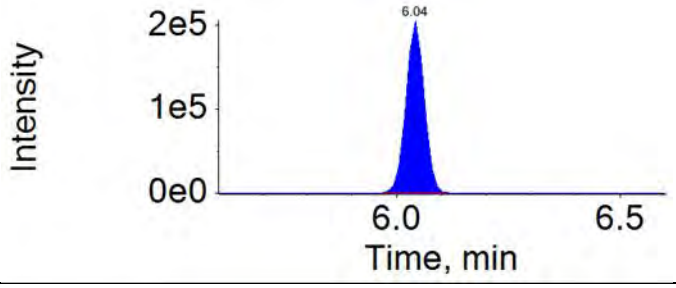


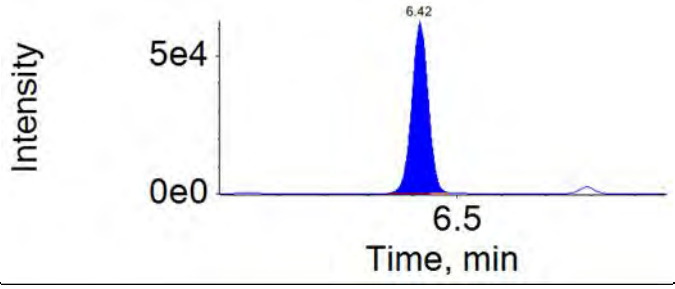
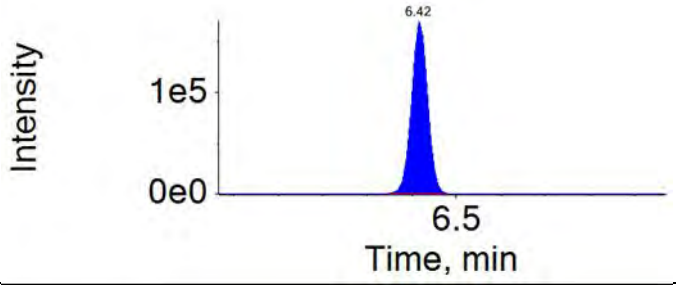


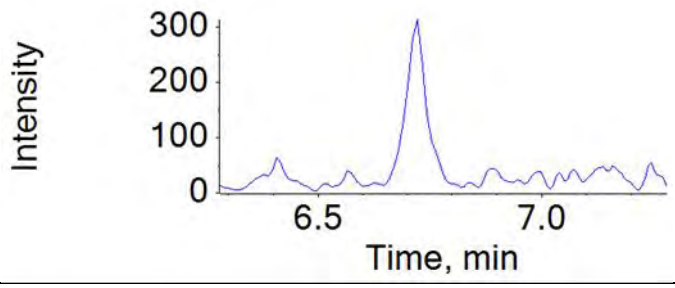
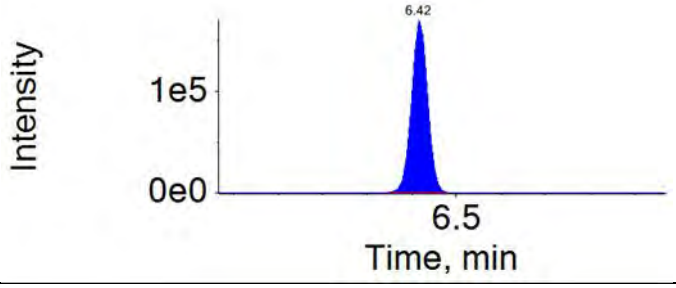
APPROVED
By JPT at 2:53 pm, 11/7/18

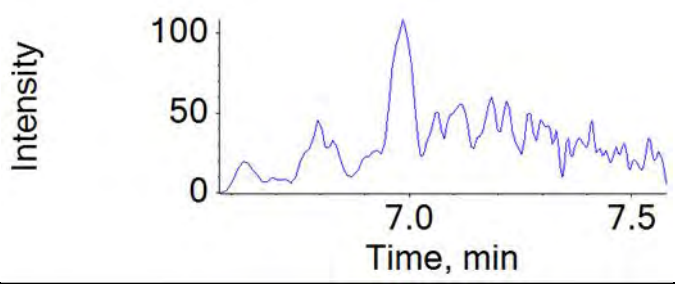
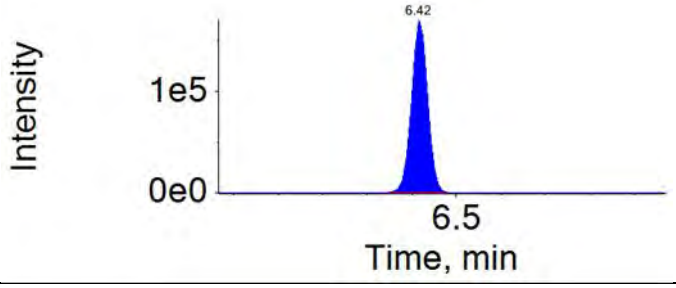
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

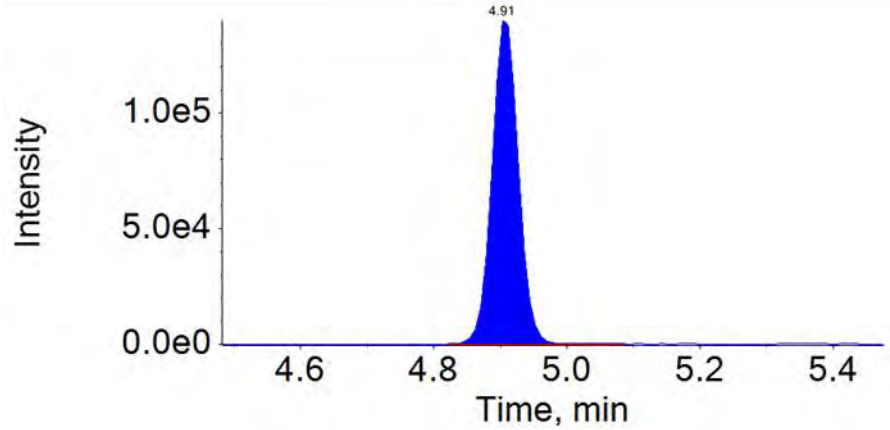
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

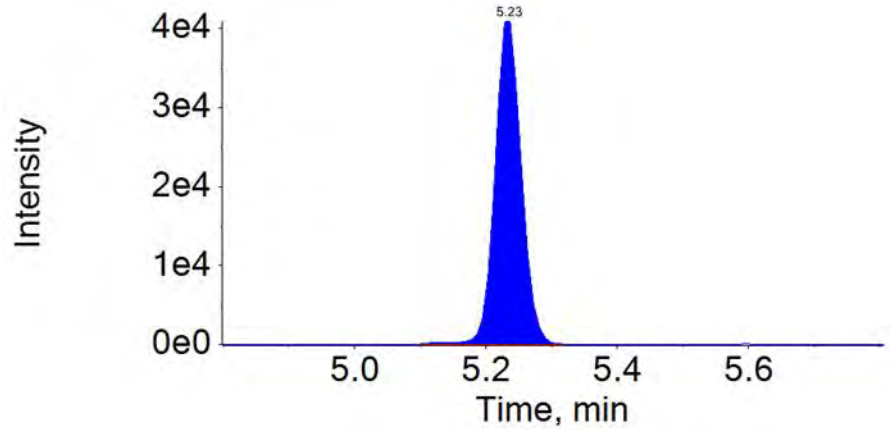
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFOA **RT (min.):** 4.91 **Peak Area:** 388249.1 **Mass Range:** 413.0 / 369.0 **File Name:** 18NOV07DCAL-18.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.23 **Peak Area:** 115469.0 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV07DCAL-18.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-18.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	159719.5	A	1.0000	1.0000			
PFBS_2	3.80	1.00	61541.1	A	0.3576	0.3853	8	50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	4.15	1.00	397434.6	A	1.0000	1.0000			
PFHxA_2	4.15	1.00	3792.4	A	0.0115	0.0095	-17	50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	4.54	1.00	126635.3	A	1.0000	1.0000			
PFHxS_2	4.54	1.00	48242.3	A	0.3569	0.3810	7	50	
PFHpA	4.54	1.00	390197.1	A	1.0000	1.0000			
PFHpA_2	4.54	1.00	18822.2	A	0.0577	0.0482	-16	50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	4.90	1.08	126812.1	A	1.0000	1.0000			
PFHpS_2	4.90	1.08	51068.7	A	0.3950	0.4027	2	50	
PFOA	4.91	1.00	387215.1	M	1.0000	1.0000			
PFOA_2	4.91	1.00	20820.8	A	0.0635	0.0538	-15	50	
PFOS	5.23	1.00	114911.8	M	1.0000	1.0000			
PFOS_2	5.23	1.00	40072.6	A	0.3494	0.3487	0	50	
PFNA	5.25	1.00	329644.4	A	1.0000	1.0000			
PFNA_2	5.25	1.00	6625.6	A	0.0207	0.0201	-3	50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	5.55	1.00	262760.0	A	1.0000	1.0000			
PFDA_2	5.55	1.00	2122.6	A	0.0057	0.0081	43	50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	5.69	1.00	33916.6	A	1.0000	1.0000			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	5.79	1.11	65962.5	A	1.0000	1.0000			
PFDS_2	5.78	1.11	33540.9	A	0.4648	0.5085	9	50	
PFUnDA	5.81	1.00	225137.5	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	557.6	A	0.0031	0.0025	-21	50	
NEtFOSAA	5.83	1.00	29687.2	A	1.0000	1.0000			
NEtFOSAA_2	5.83	1.00	17691.0	A	0.6082	0.5959	-2	50	
PFDoDA	6.04	1.00	232949.2	A	1.0000	1.0000			
PFDoDA_2	6.04	1.00	3431.7	A	0.0109	0.0147	35	50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	6.24	1.03	206908.4	A	1.0000	1.0000			
PFTrDA_2	6.24	1.03	2086.3	A	0.0096	0.0101	5	50	
PFTeDA	6.42	1.00	157975.3	A	1.0000	1.0000			
PFTeDA_2	6.41	1.00	879.0	A	0.0055	0.0056	0	50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

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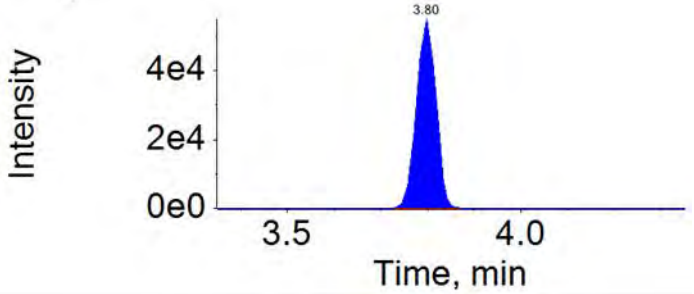
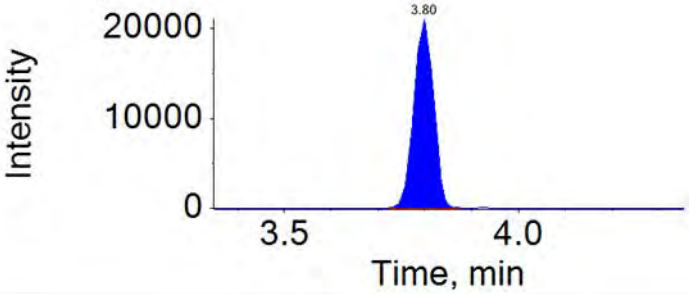
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

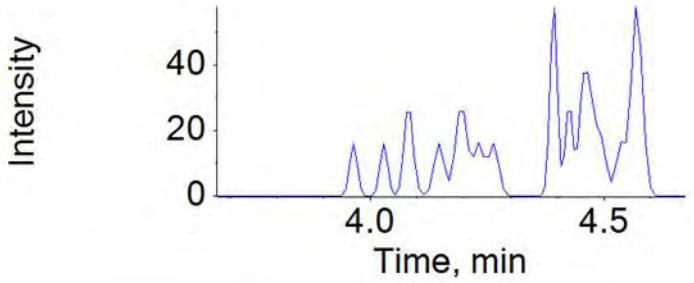
Component: PFBS
Primary Mass: 299.0 / 80.0



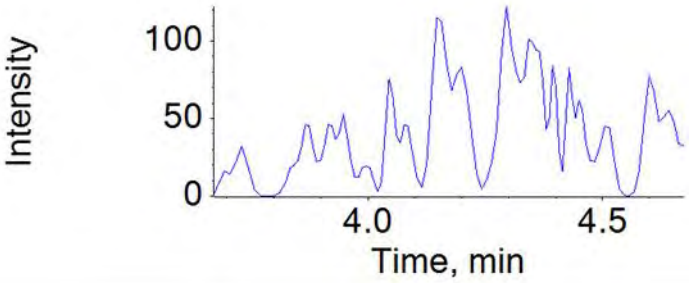
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



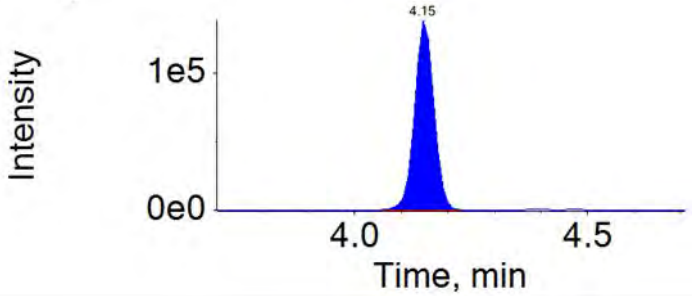
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



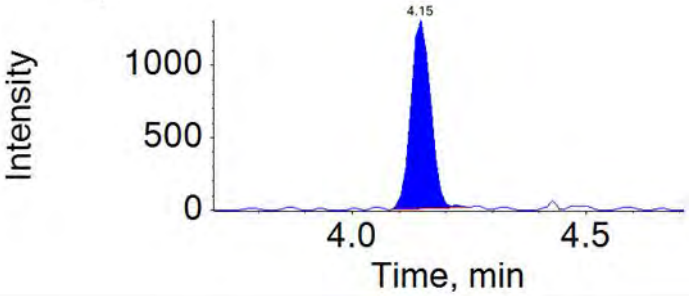
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



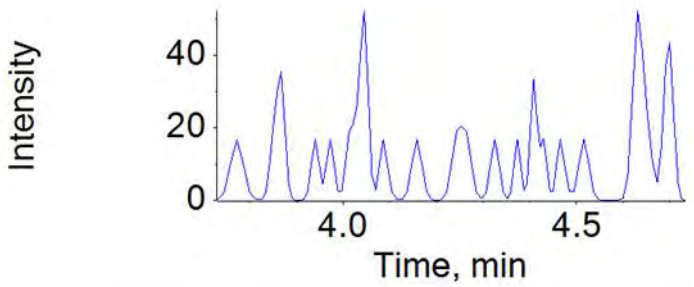
Component: PFHxA
Primary Mass: 313.0 / 269.0



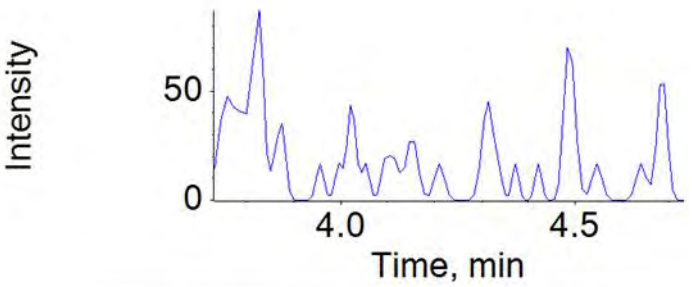
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



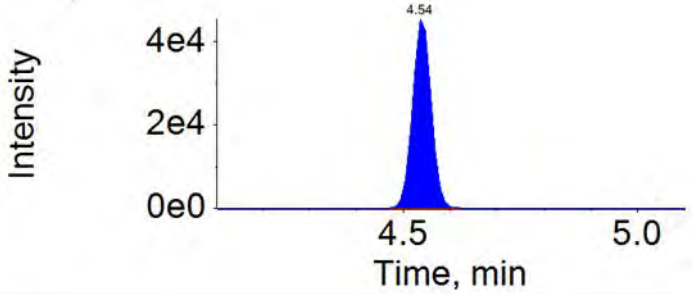
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



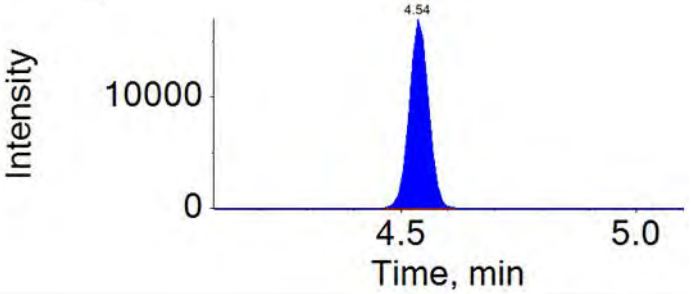
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

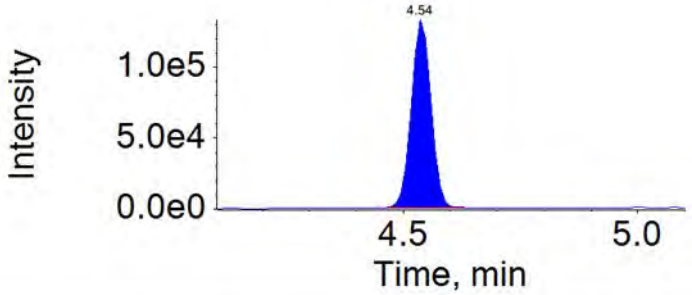
Component: PFHxS
Primary Mass: 399.0 / 80.0



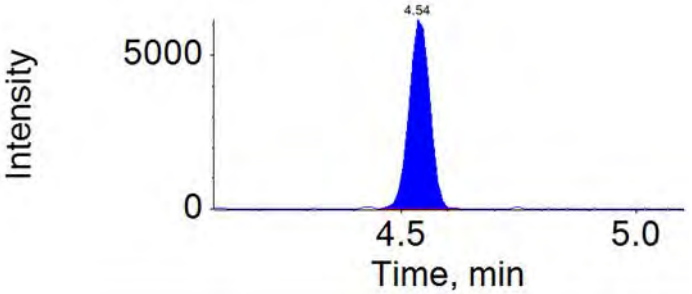
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



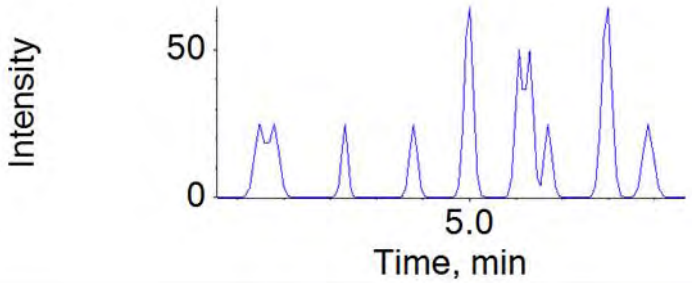
Component: PFHpA
Primary Mass: 363.0 / 319.0



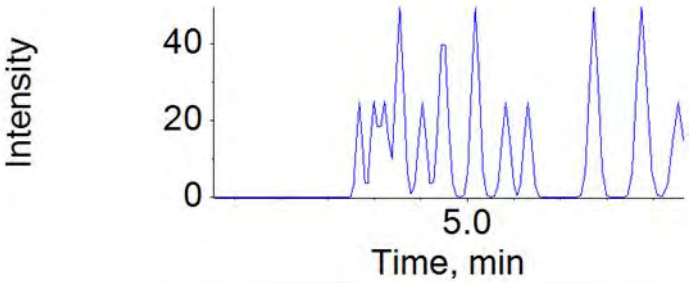
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



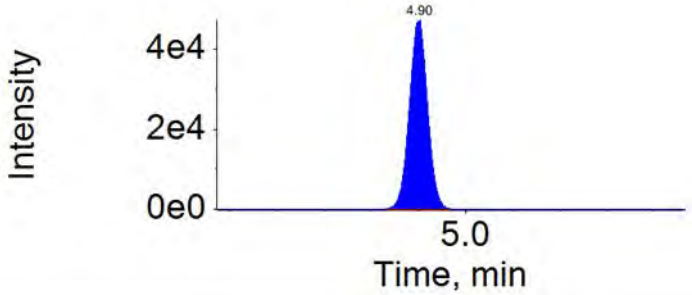
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



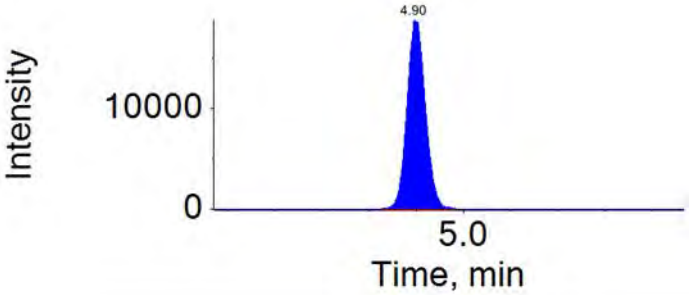
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

REVIEWED
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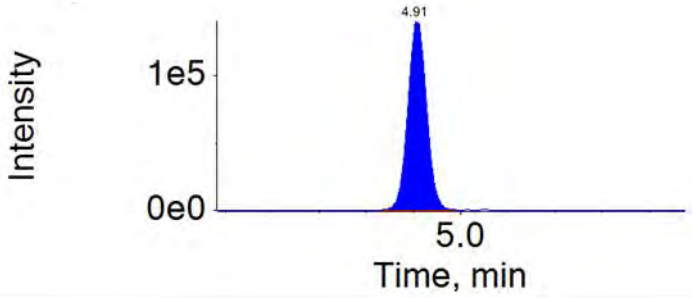
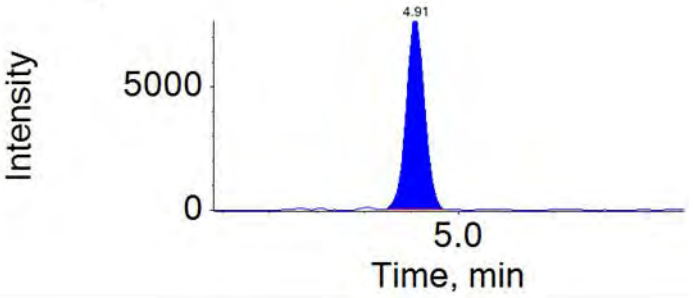
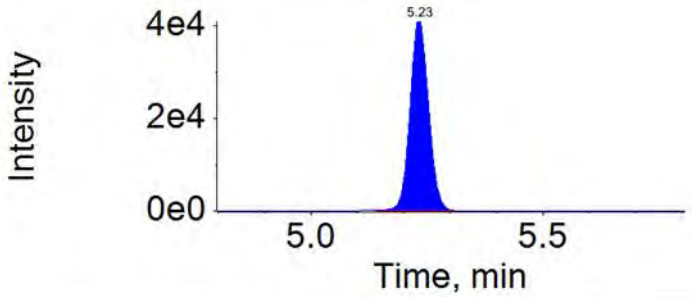
Component: PFOA
Primary Mass: 413.0 / 369.0



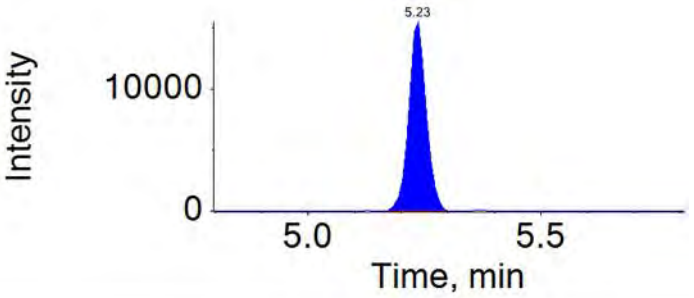
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



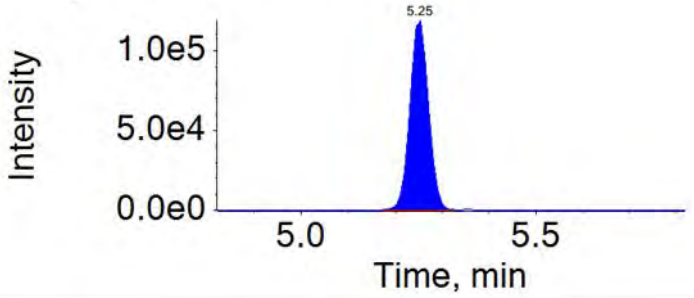
Component: PFOS
Primary Mass: 499.0 / 80.0



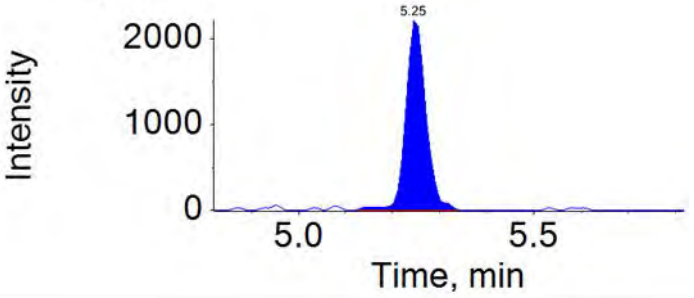
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



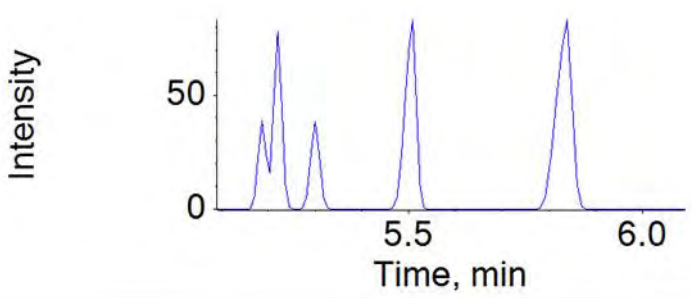
Component: PFNA
Primary Mass: 463.0 / 419.0



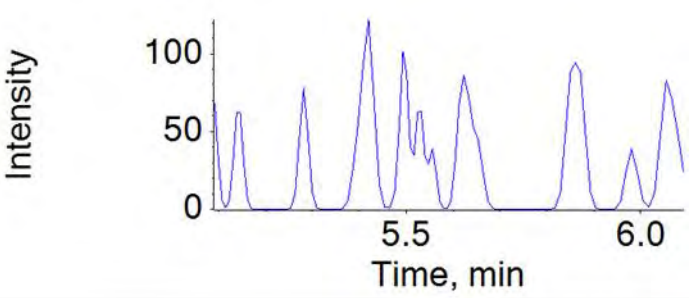
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



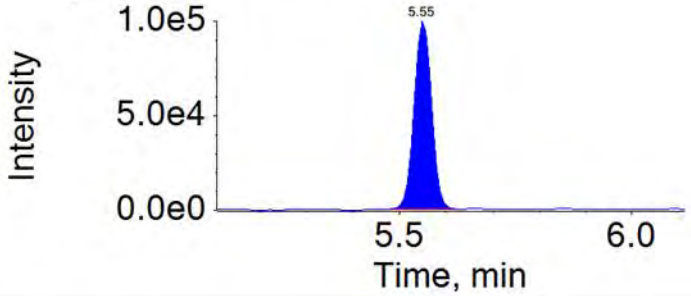
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



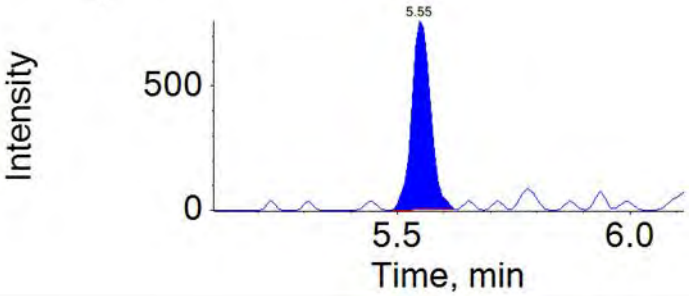
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

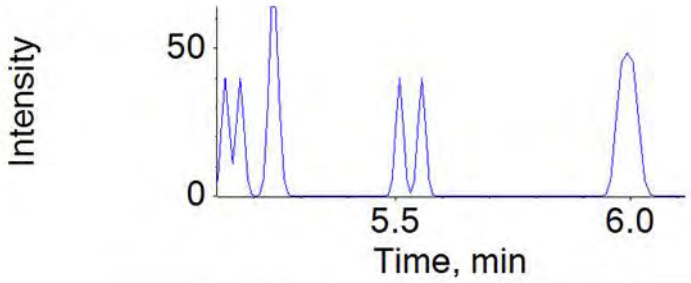
Component: PFDA
Primary Mass: 513.0 / 469.0



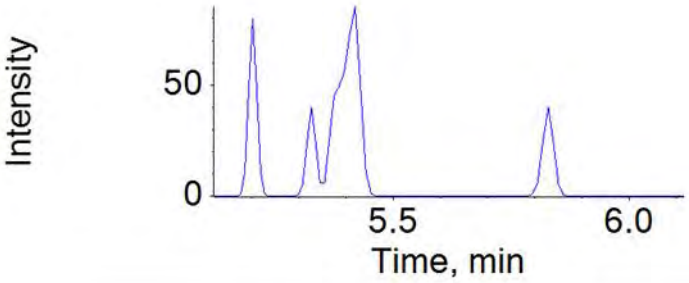
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



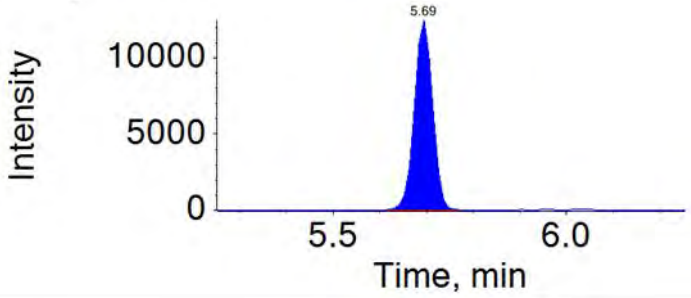
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



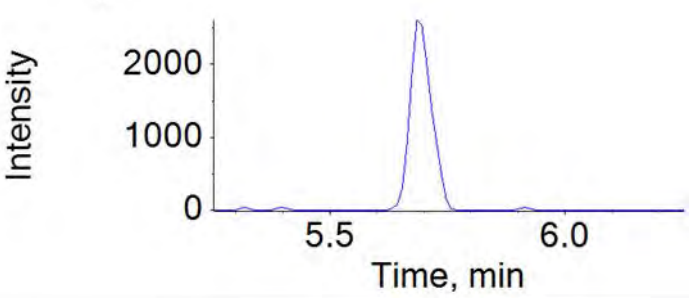
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



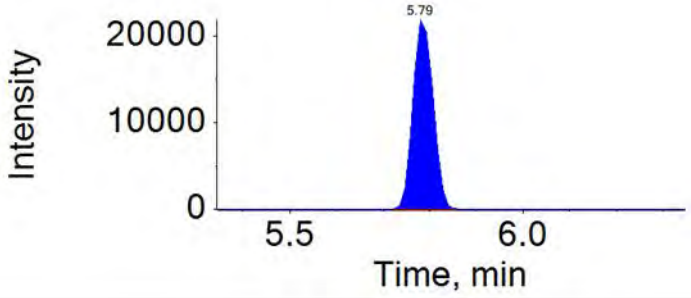
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



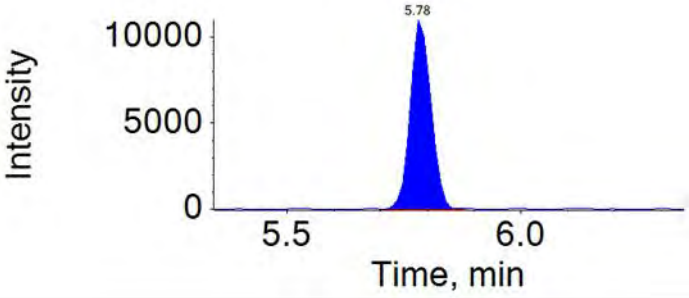
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



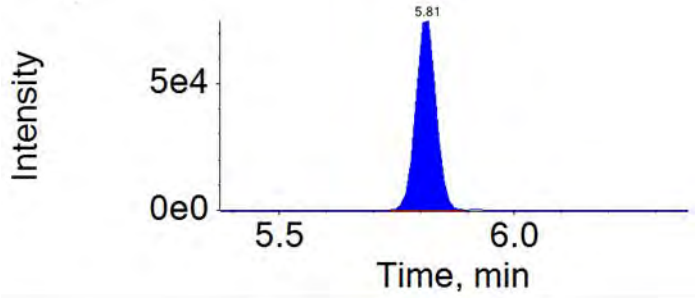
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



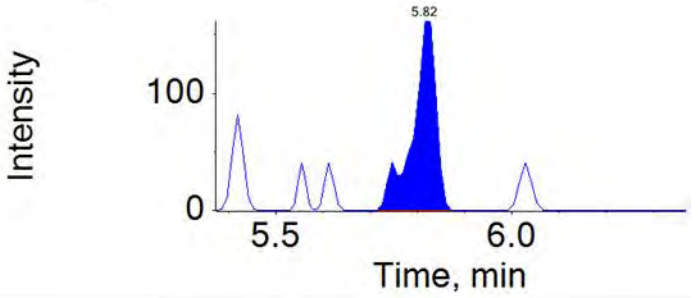
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

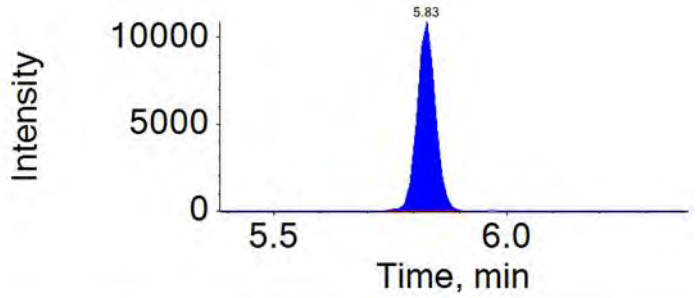
Component: PFUnDA
Primary Mass: 563.0 / 519.0



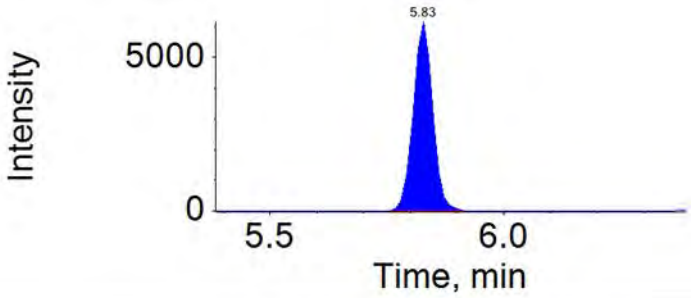
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



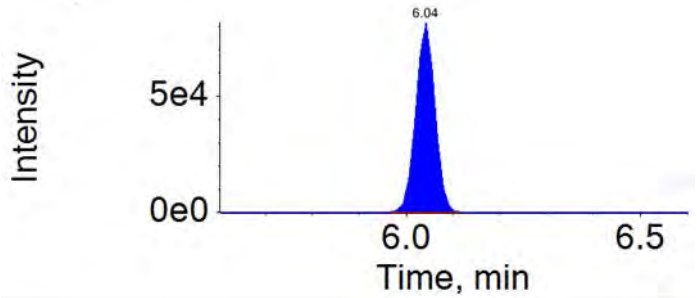
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



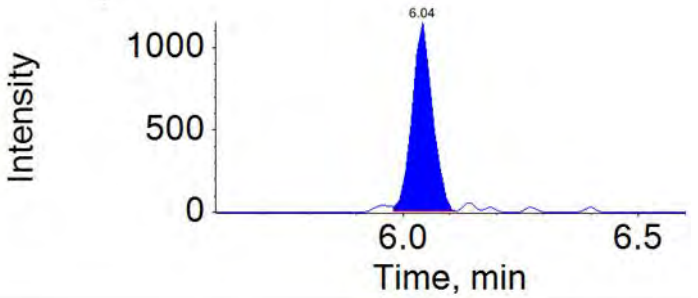
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



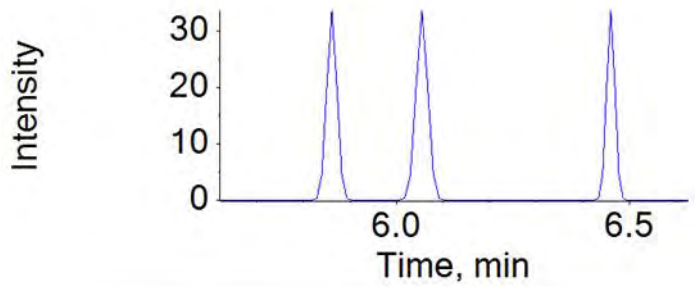
Component: PFDoDA
Primary Mass: 613.0 / 569.0



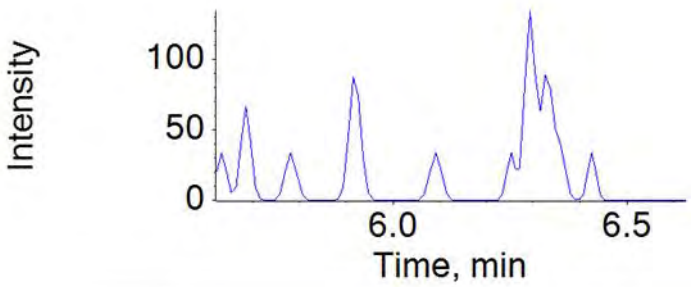
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



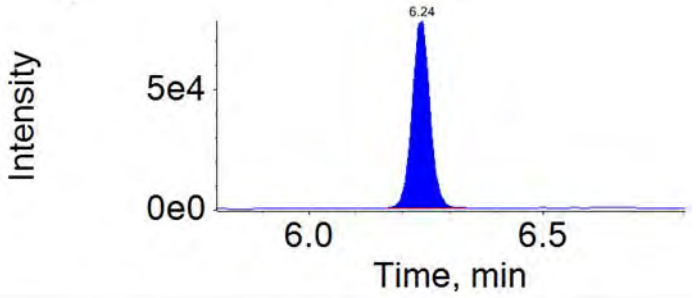
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



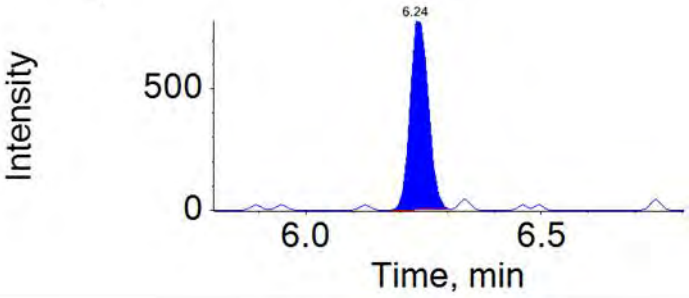
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

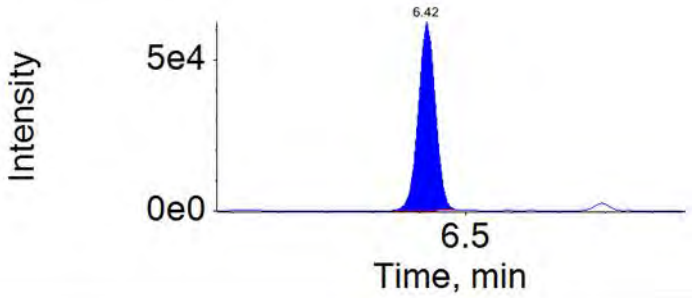
Component: PFTrDA
Primary Mass: 663.0 / 619.0



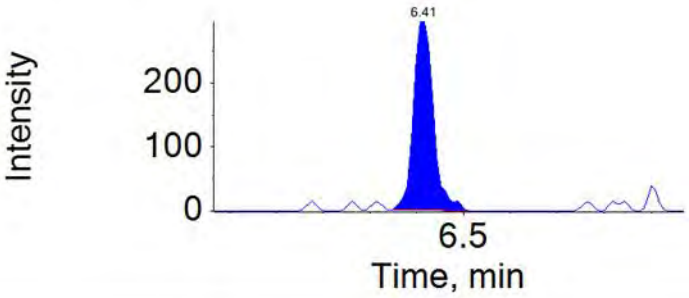
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



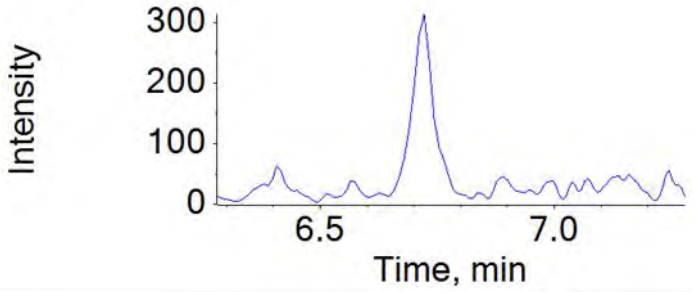
Component: PFTeDA
Primary Mass: 713.0 / 669.0



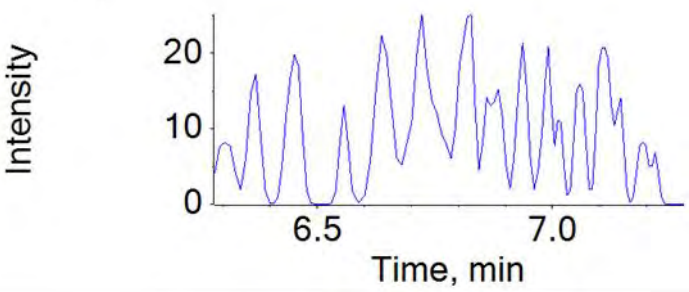
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



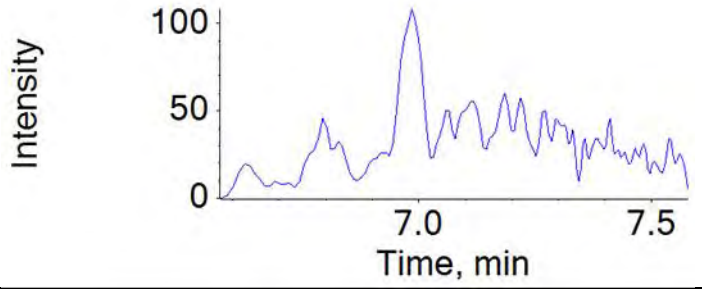
Component: PFHxDA
Primary Mass: 813.0 / 769.0



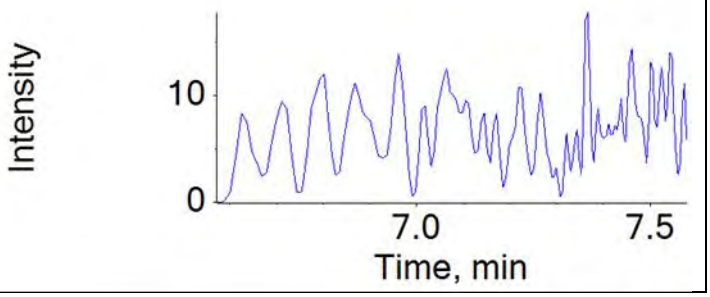
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV07DCAL-19.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-07T11:00:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	736211.8	730410.6	1	50	
13C2-PFOA	5.0	529333.9	524423.6	1	50	
13C4-PFOS	4.8	269502.4	274061.7	-2	50	
13C2-PFDA	5.0	314695.8	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	798089.2	13C3-PFBA	736211.8	1.084	5.000	5.017	100	70-130	
E13C5-PFPeA	837606.5	13C3-PFBA	736211.8	1.138	5.000	4.956	99	70-130	
E13C3-PFBS	434778.6	13C3-PFBA	736211.8	0.591	4.650	4.334	93	70-130	
E13C2-4:2-FTS	52170.5	13C2-PFOA	529333.9	0.099	4.670	4.447	95	70-130	
E13C5-PFHxA	698718.6	13C2-PFOA	529333.9	1.320	5.000	4.856	97	70-130	
E13C3-PFHxS	338752.7	13C2-PFOA	529333.9	0.640	4.730	4.594	97	70-130	
E13C4-PFHpA	566540.4	13C2-PFOA	529333.9	1.070	5.000	4.869	97	70-130	
E13C2-6:2-FTS	34551.5	13C2-PFOA	529333.9	0.065	4.750	4.353	92	70-130	
E13C8-PFOA	967968.8	13C2-PFOA	529333.9	1.829	5.000	5.099	102	70-130	
E13C8-PFOS	276433.8	13C4-PFOS	269502.4	1.026	4.780	4.536	95	70-130	
E13C9-PFNA	490916.1	13C4-PFOS	269502.4	1.822	5.000	4.976	100	70-130	
E13C6-PFDA	634835.7	13C2-PFDA	314695.8	2.017	5.000	5.073	101	70-130	
E13C2-8:2-FTS	29224.4	13C2-PFDA	314695.8	0.093	4.790	4.914	103	70-130	
E13C8-PFOSA	714716.6	13C2-PFDA	314695.8	2.271	5.000	4.956	99	70-130	
Ed3-NMeFOSAA	78018.5	13C2-PFDA	314695.8	0.248	5.000	4.610	92	70-130	
E13C7-PFUnDA	277737.7	13C2-PFDA	314695.8	0.883	5.000	5.091	102	70-130	
Ed5-NEtFOSAA	76987.7	13C2-PFDA	314695.8	0.245	5.000	5.661	113	70-130	
E13C2-PFDoDA	545941.2	13C2-PFDA	314695.8	1.735	5.000	4.677	94	70-130	
Ed7-NMePFOSAE	329839.8	13C2-PFDA	314695.8	1.048	5.000	4.874	97	70-130	
Ed3-NMePFOSA	79724.2	13C2-PFDA	314695.8	0.253	5.000	4.638	93	70-130	
Ed9-NEtPFOSAE	275393.6	13C2-PFDA	314695.8	0.875	5.000	4.998	100	70-130	
Ed5-NEtPFOSA	64841.7	13C2-PFDA	314695.8	0.206	5.000	4.771	95	70-130	
E13C2-PFTeDA	416258.4	13C2-PFDA	314695.8	1.323	5.000	4.762	95	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

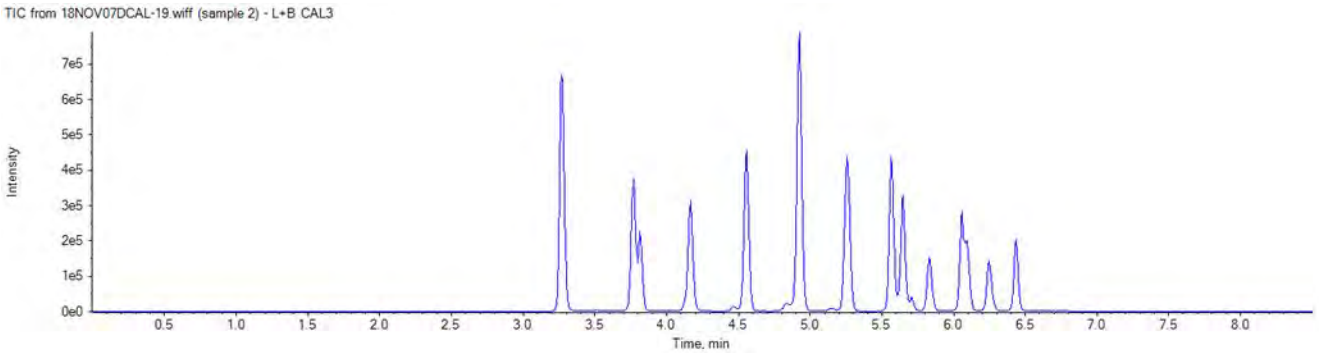
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-19.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	798089.2	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.77	837606.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.82	434778.6	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	52170.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.17	698718.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.82	434778.6	N/A	
PFHxS	4.56	1.000	140012.1		M	13C3-PFHxS	4.56	338752.7	0.413	2.095
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	566540.4	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	34551.5	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.56	338752.7	N/A	
PFOA	4.92	1.000	347563.0		M	13C8-PFOA	4.92	967968.8	0.359	2.022
PFOS	5.25	1.000	117649.0		M	13C8-PFOS	5.25	276433.8	0.426	2.207
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	490916.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	634835.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29224.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	714716.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	78018.5	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	277737.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	76987.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	545941.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29224.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	329839.8	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	79724.2	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	275393.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	64841.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	545941.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	

Total Ion Chromatogram

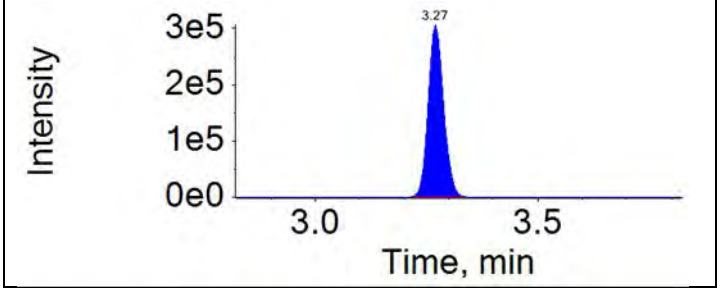


APPROVED
By JPT at 2:53 pm, 11/7/18

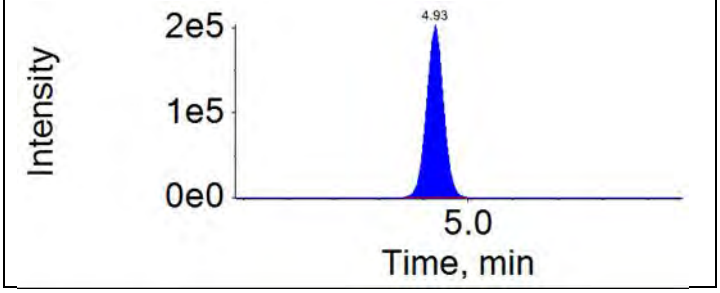
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

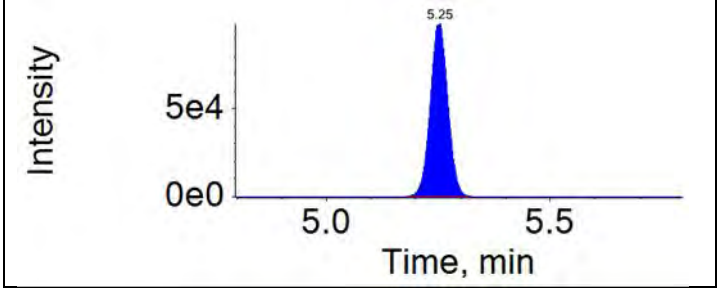
Injection Standard: 13C3-PFBA
216.0 / 172.0



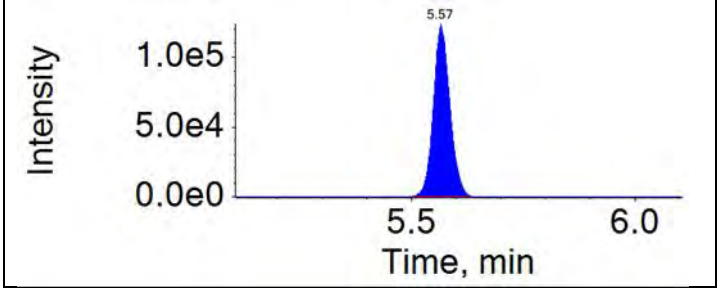
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



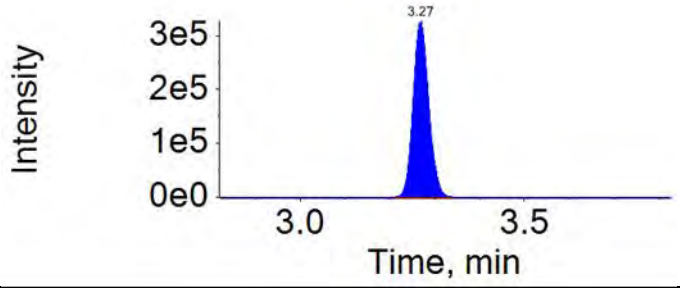
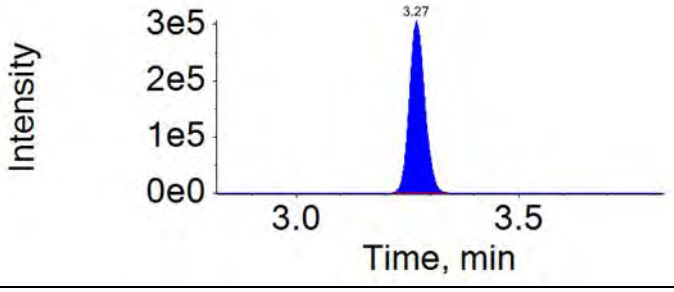
Injection Standard: 13C2-PFDA
515.0 / 470.0

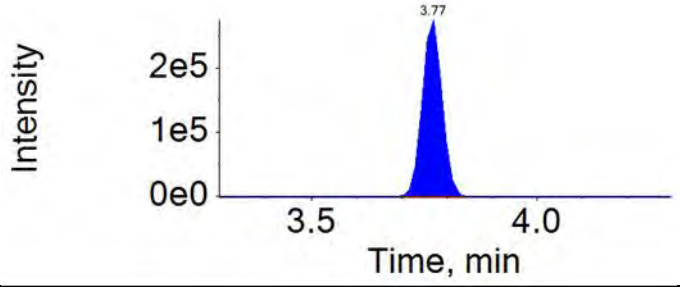
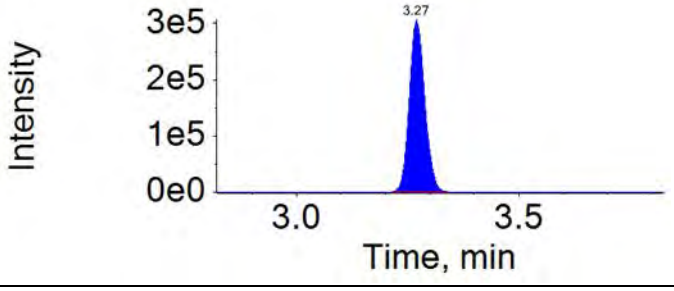


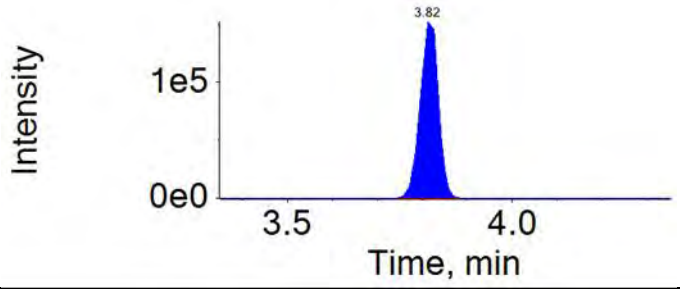
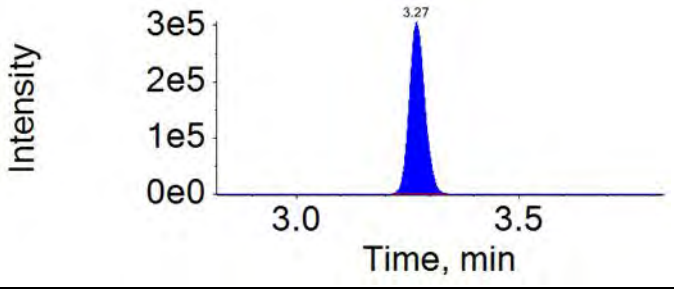
APPROVED
By JPT at 2:53 pm, 11/7/18

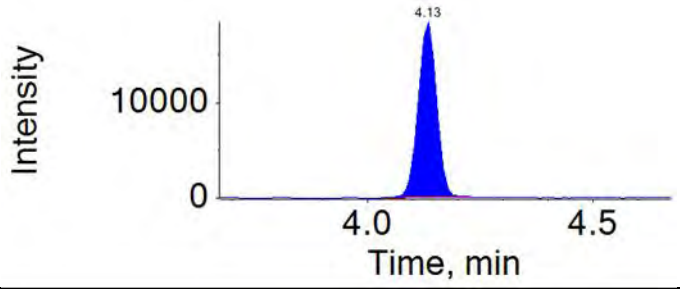
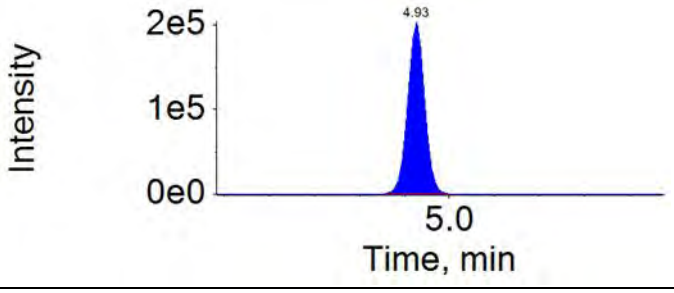
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

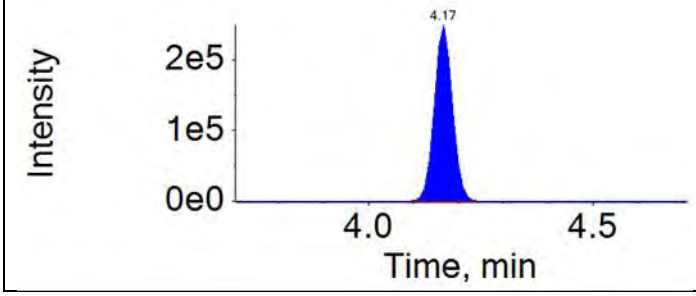
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

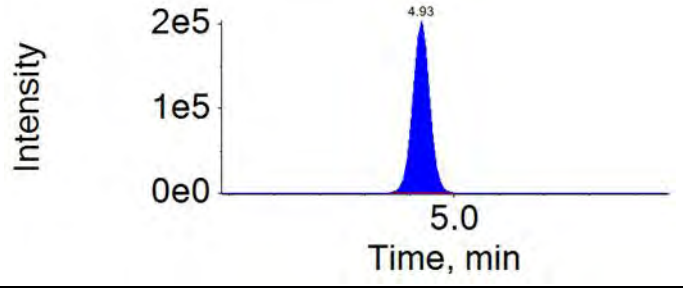
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

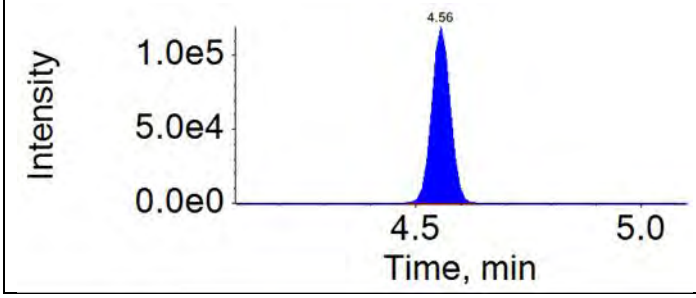
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

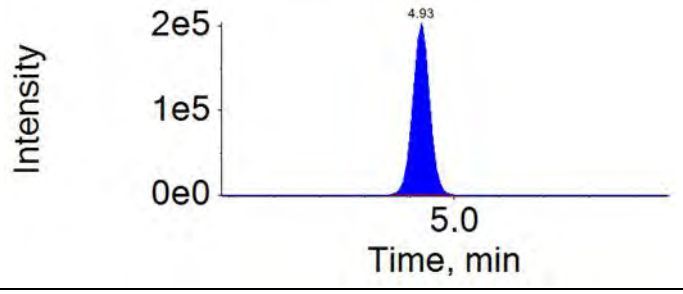
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



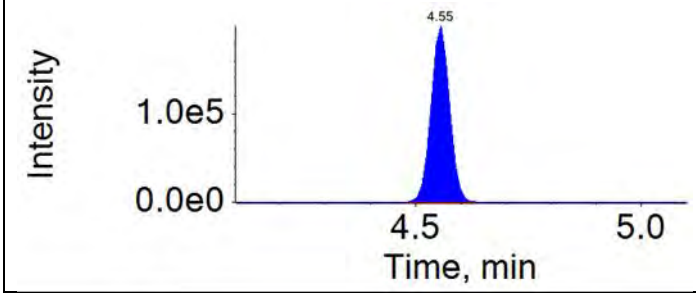


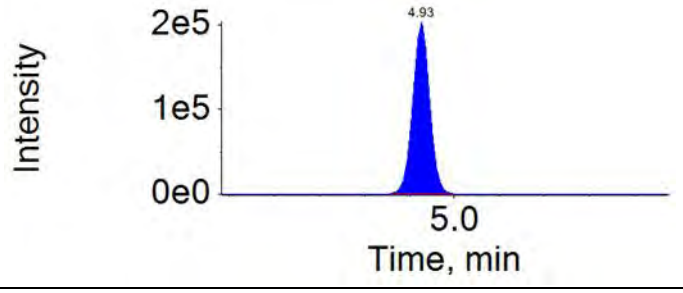
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



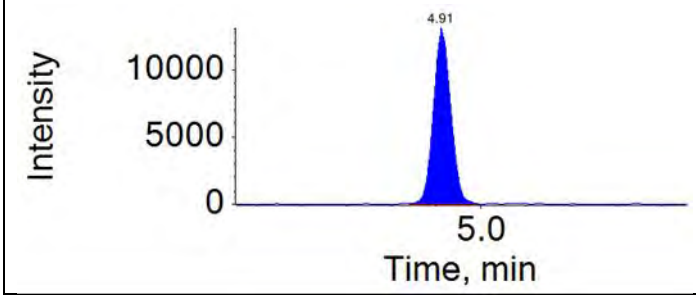


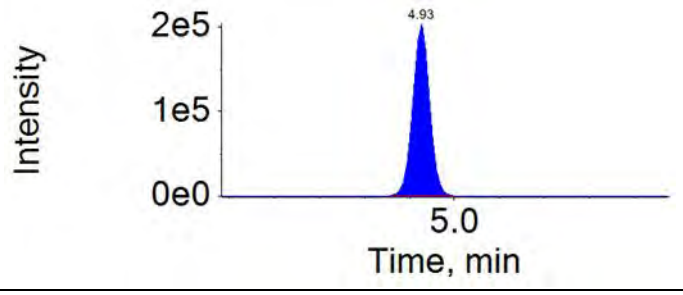
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

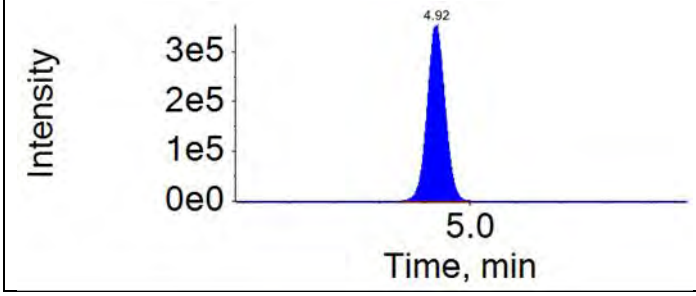
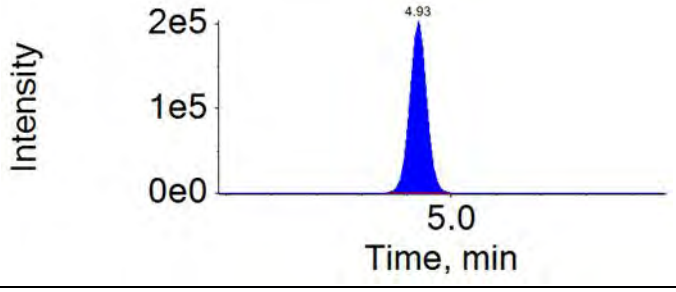


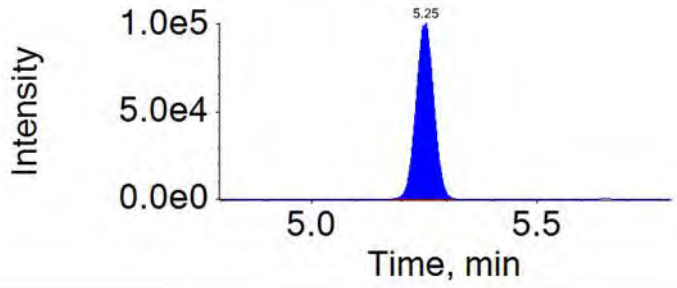
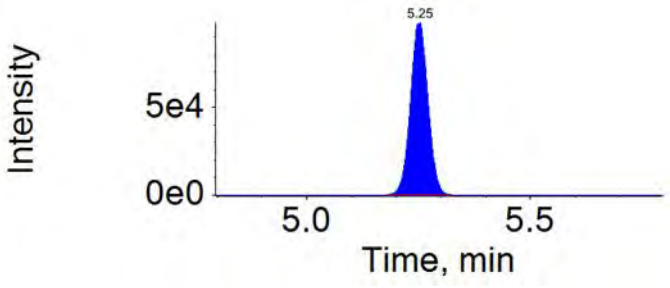


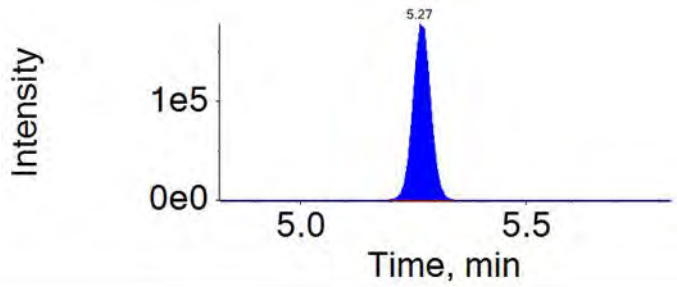
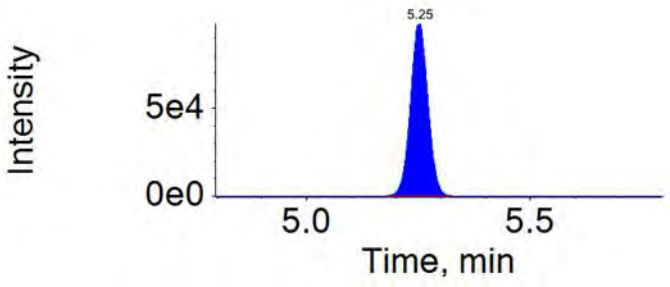
APPROVED
By JPT at 2:53 pm, 11/7/18

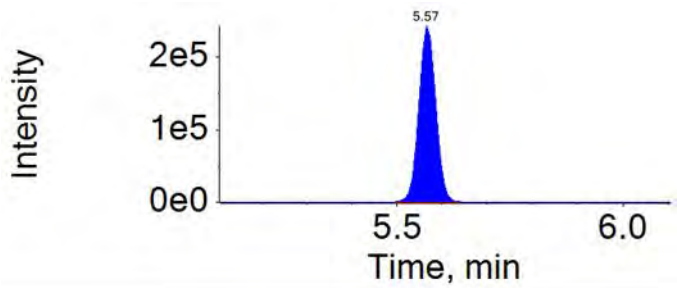
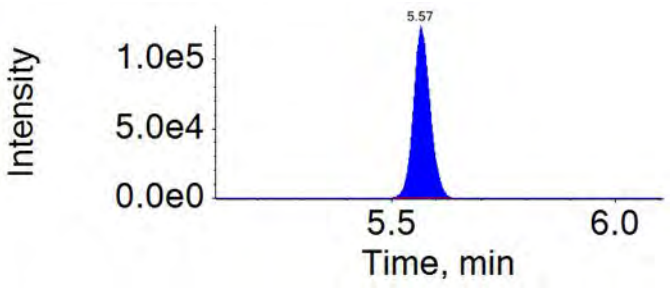
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

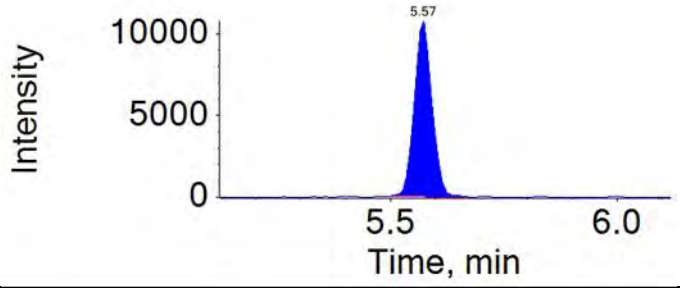
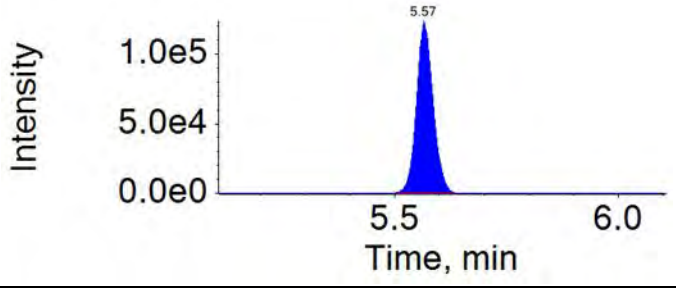
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

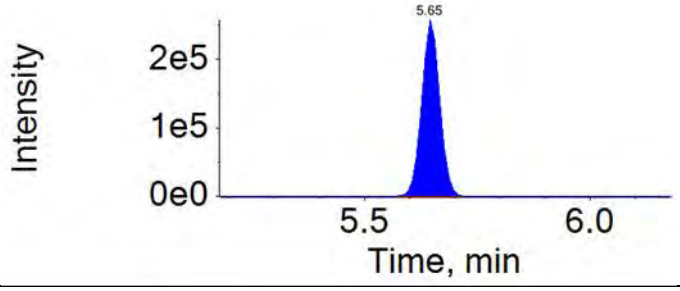
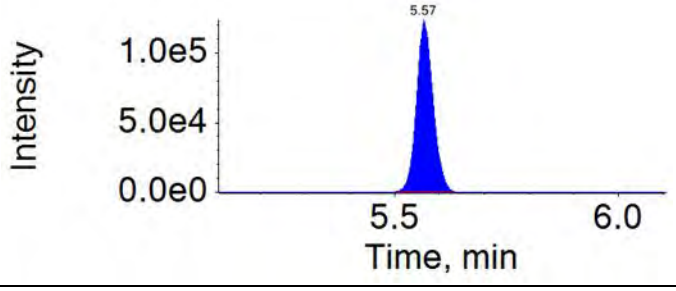
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

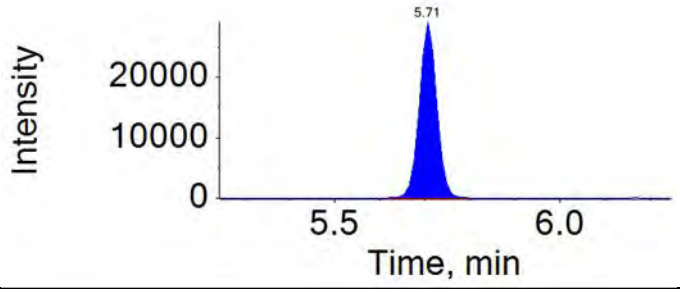
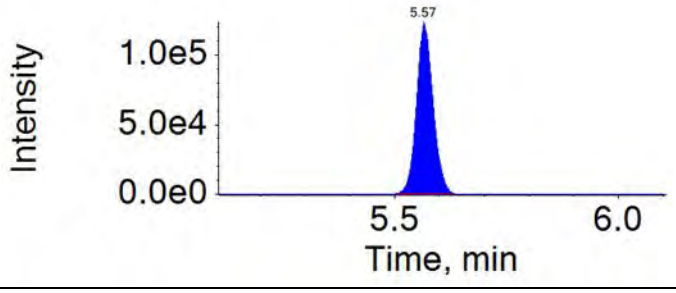
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

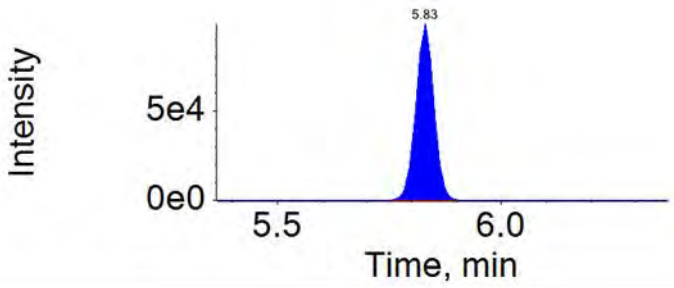
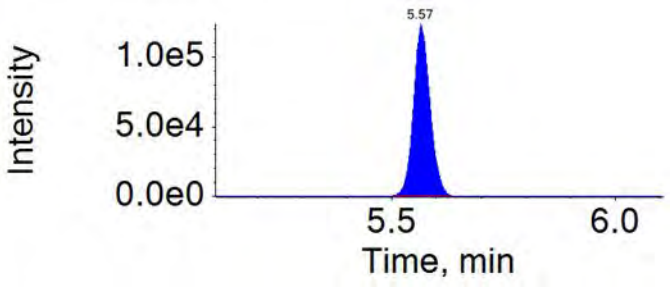
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

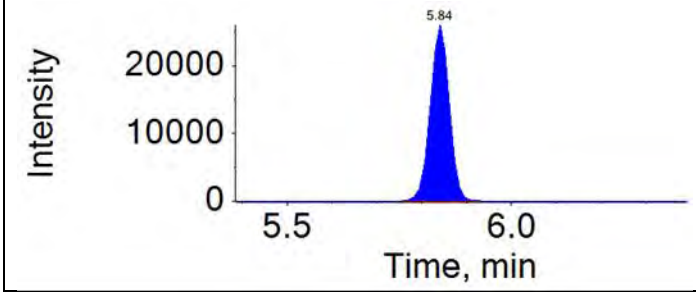
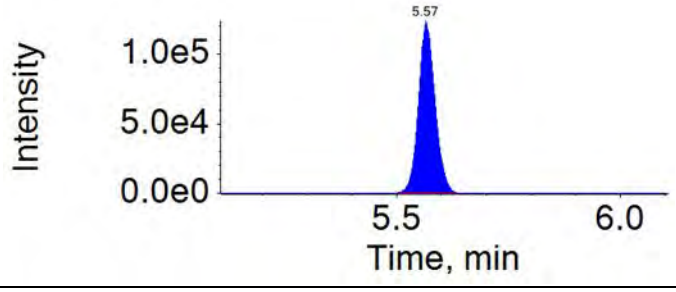
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

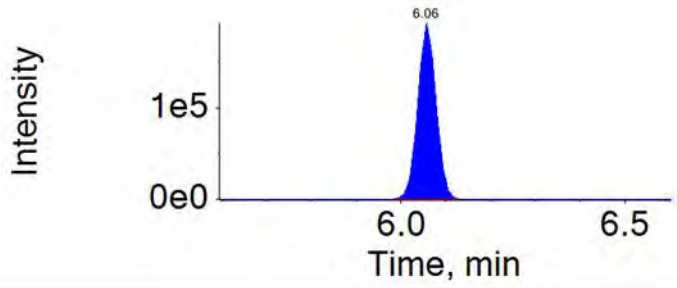
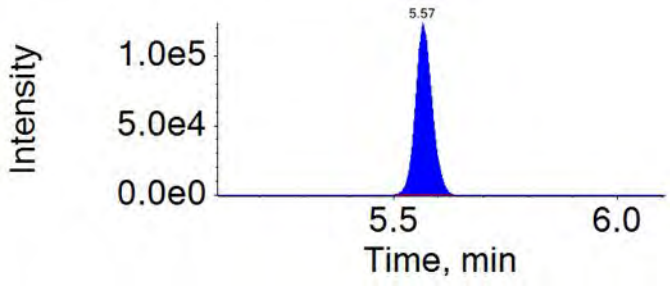
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

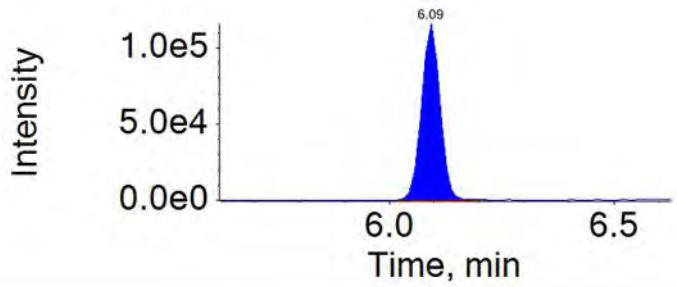
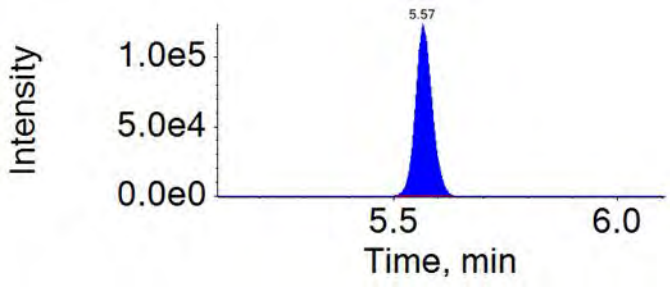
APPROVED
By JPT at 2:53 pm, 11/7/18

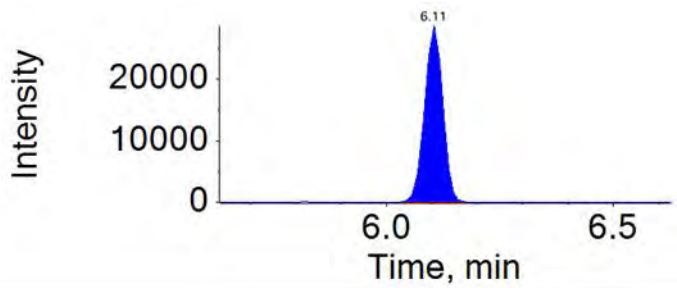
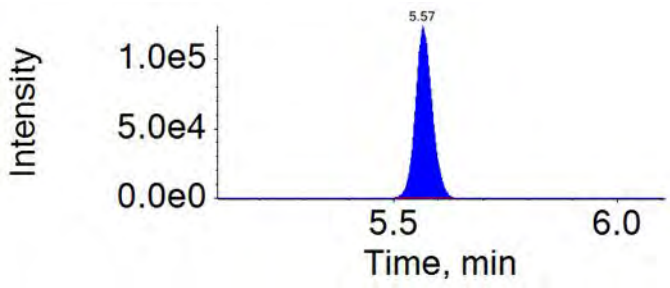
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

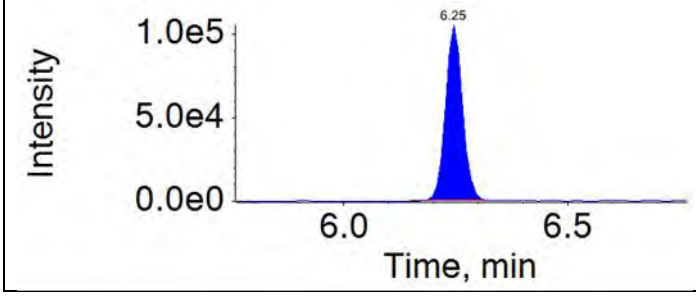
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

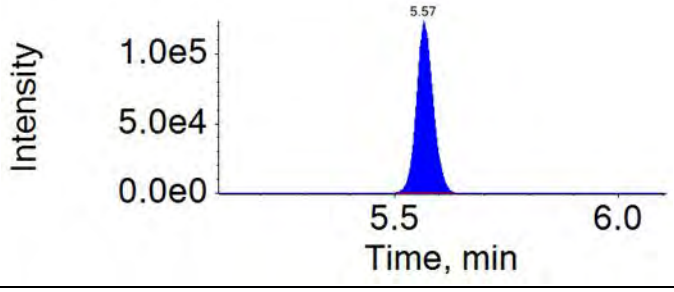
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

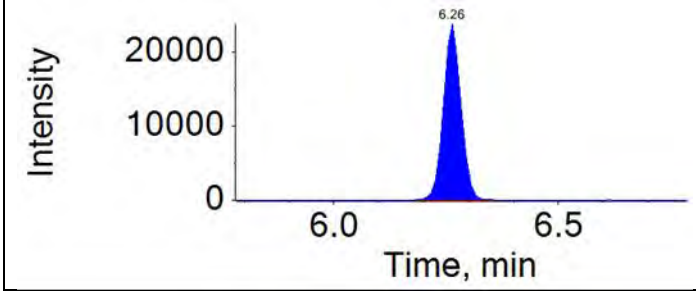
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

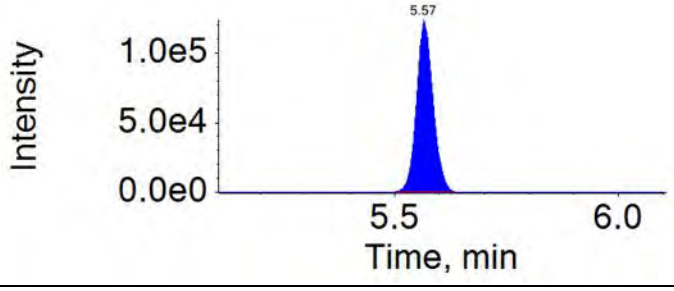
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



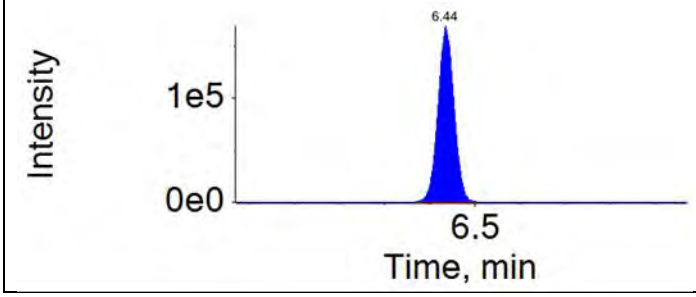


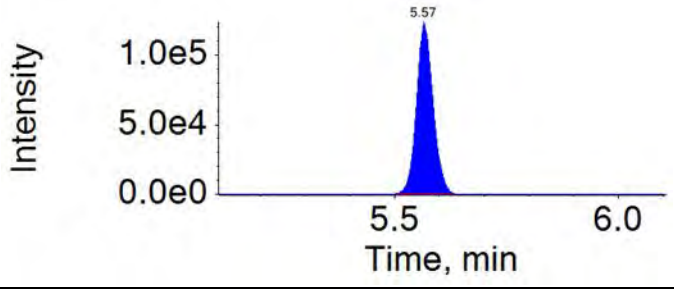
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



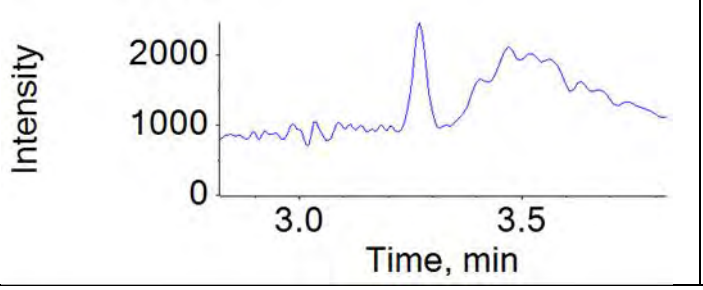


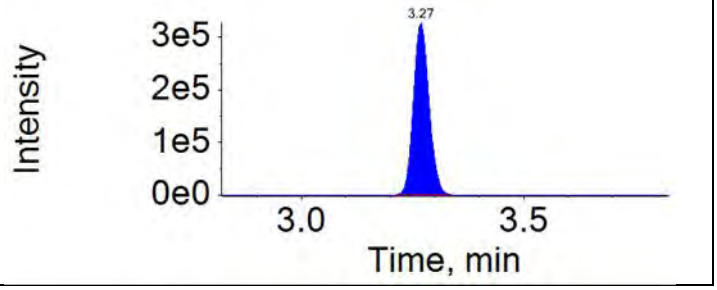
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

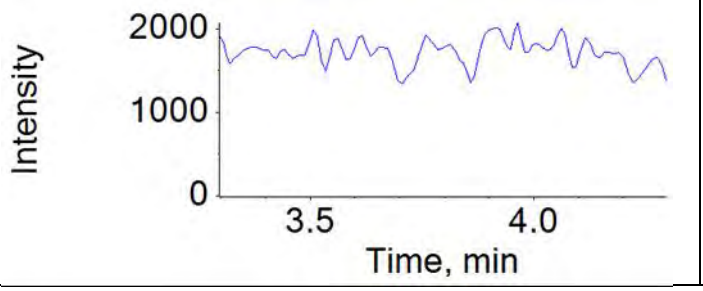
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

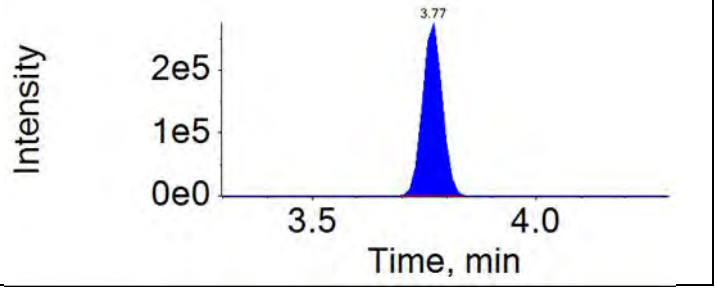
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



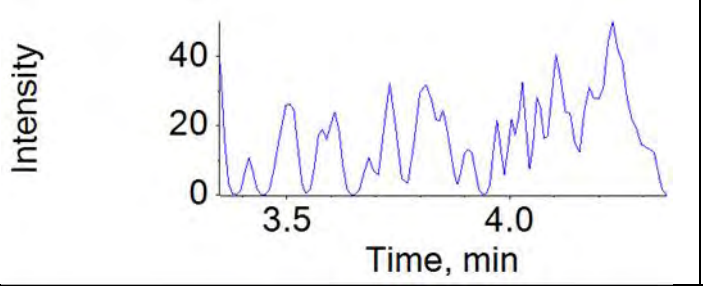


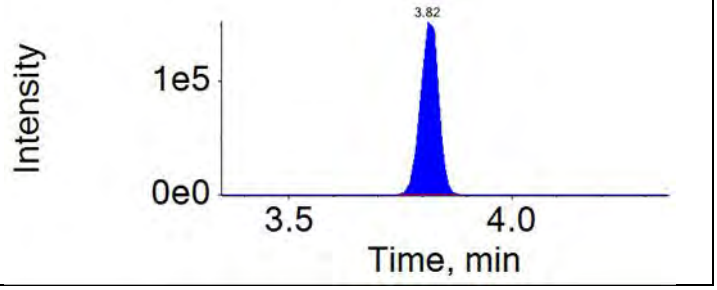
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



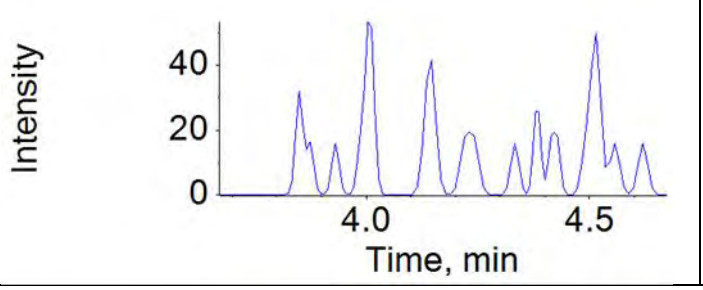


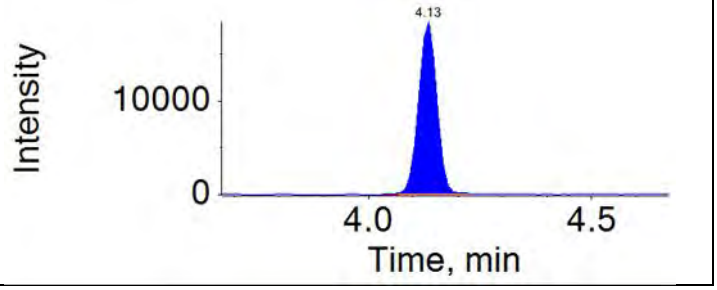
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



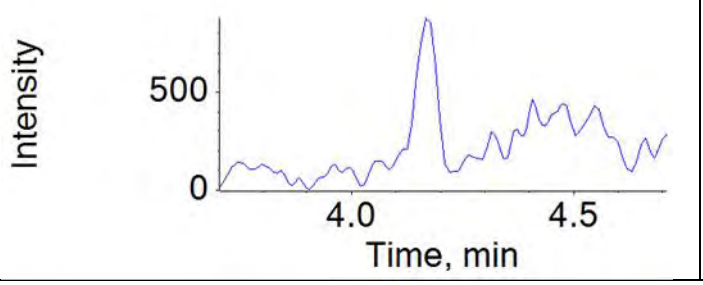


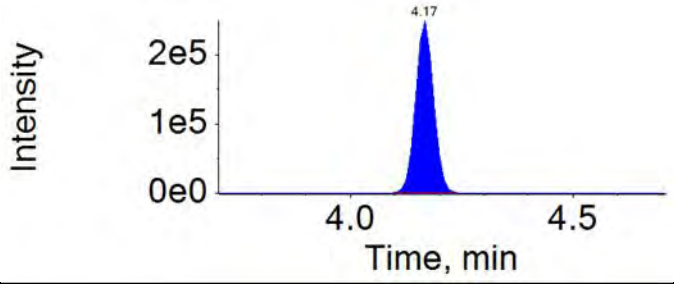
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

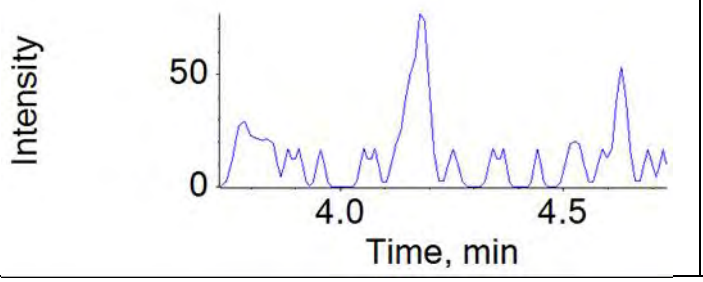
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

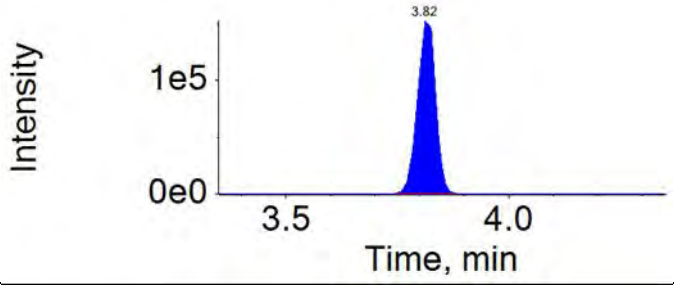
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



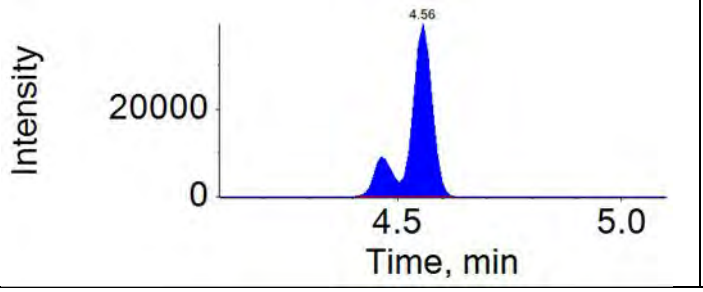


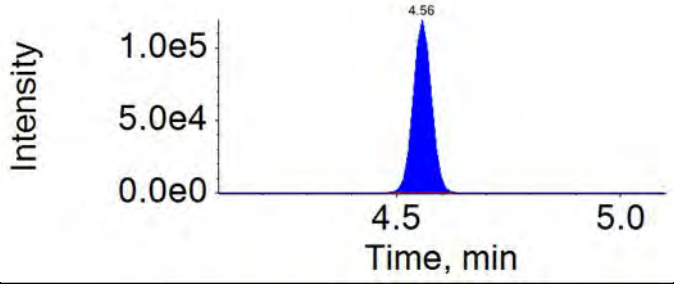
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



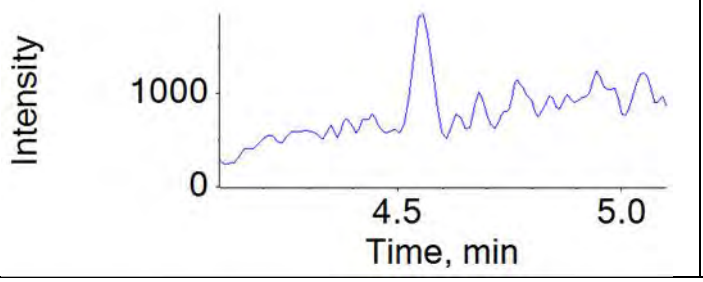


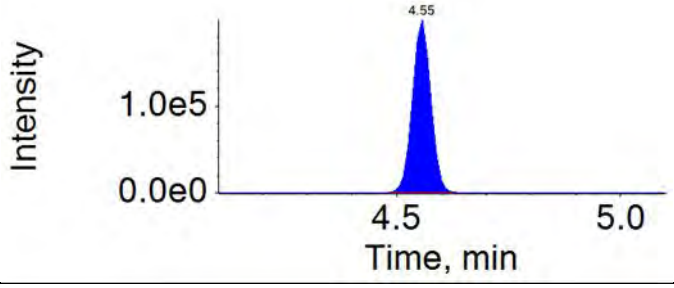
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



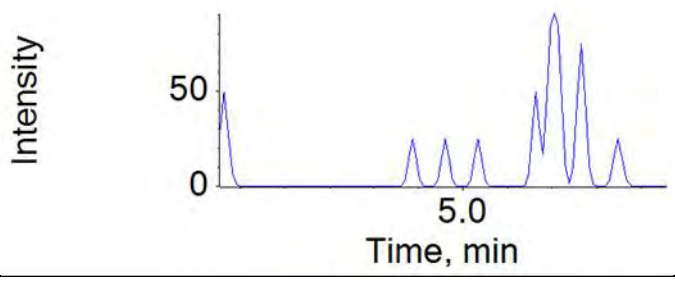


APPROVED
By JPT at 2:53 pm, 11/7/18

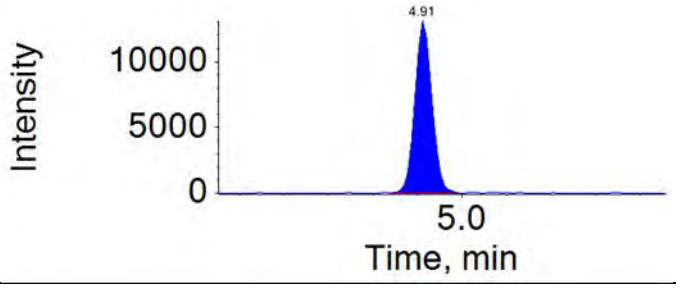
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

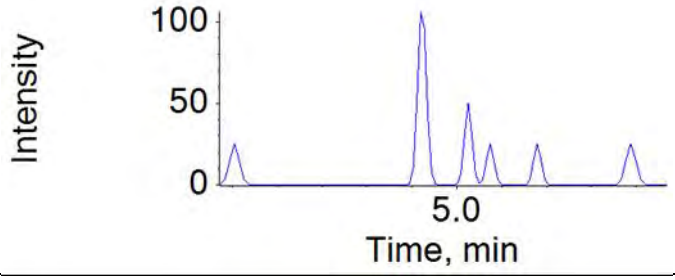
Analyte: 6:2-FTS
427.0 / 407.0



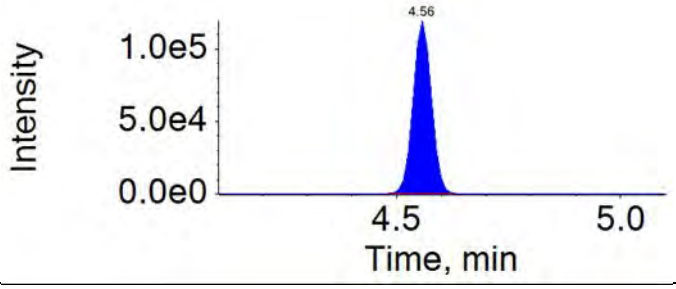
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



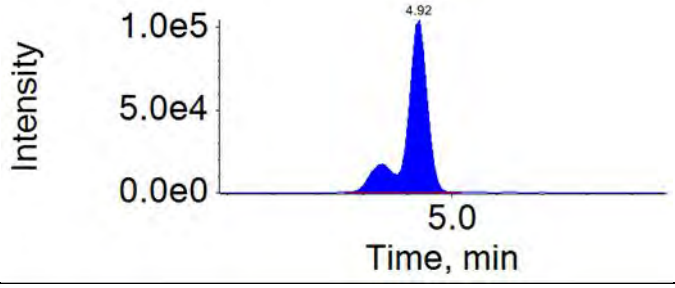
Analyte: PFHpS
449.0 / 80.0



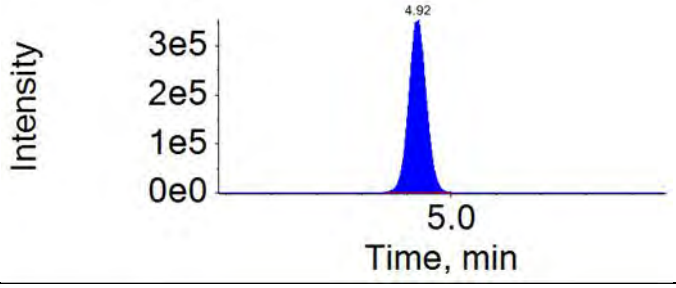
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



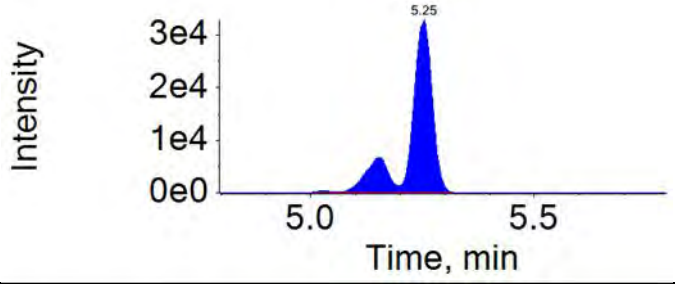
Analyte: PFOA
413.0 / 369.0



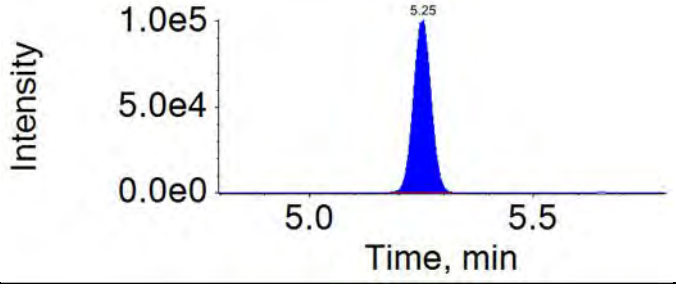
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

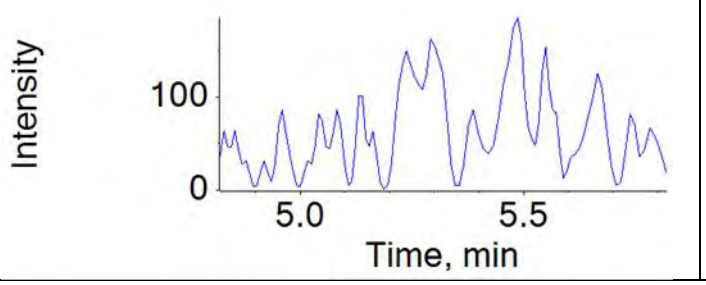


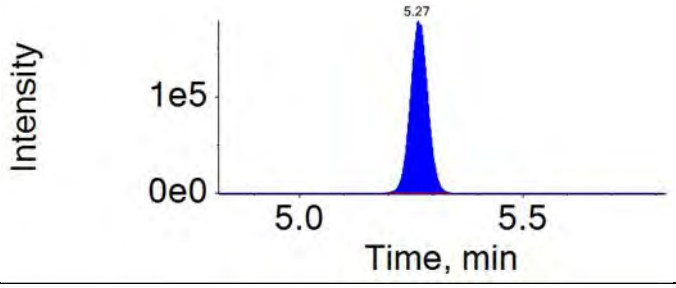
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

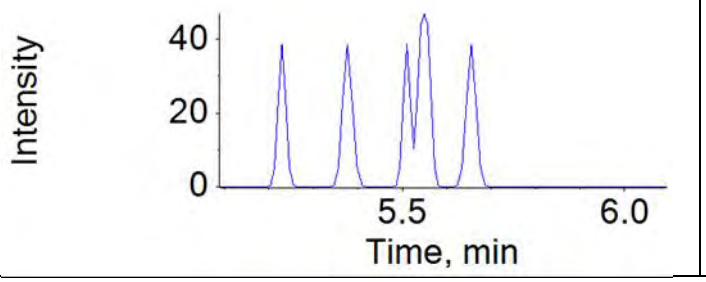
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

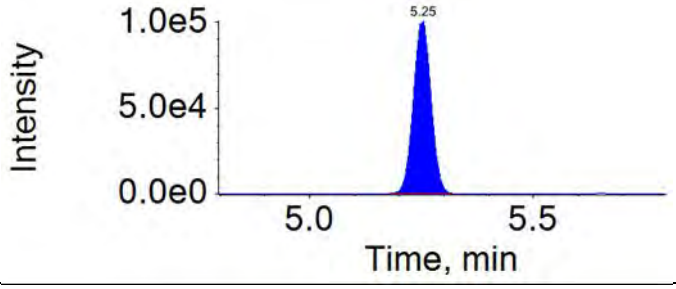
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



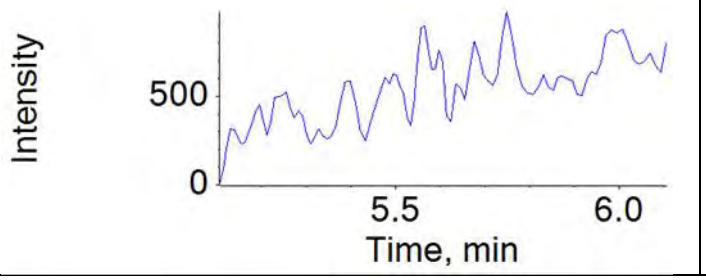


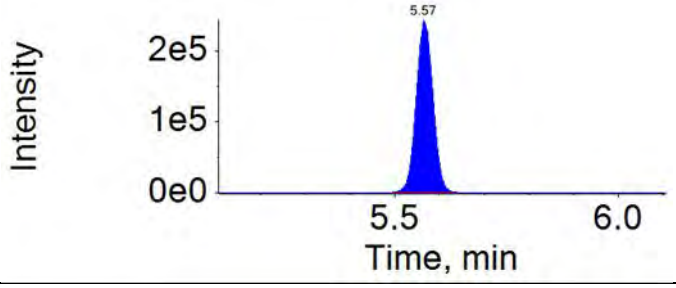
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



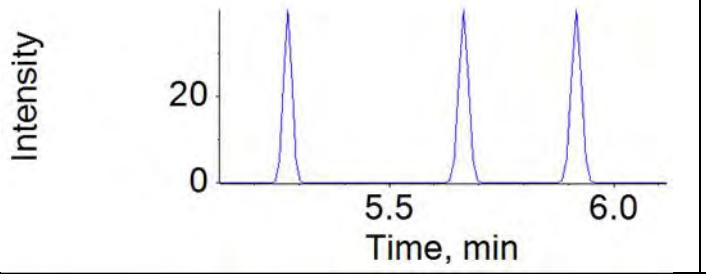


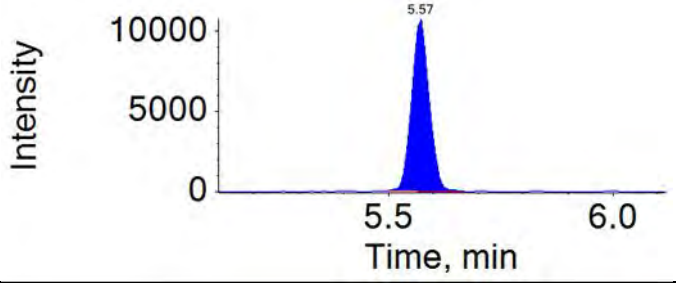
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





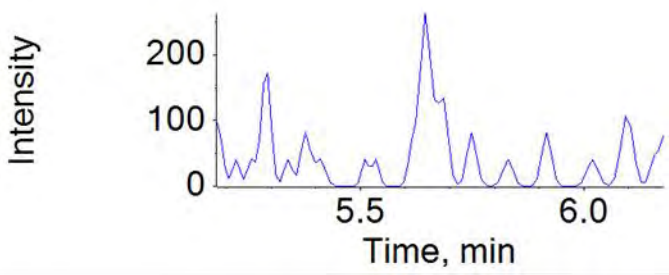
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



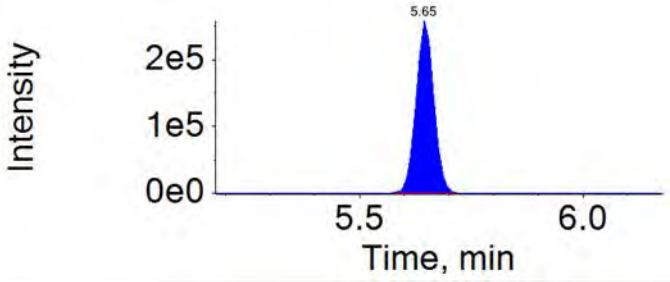


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

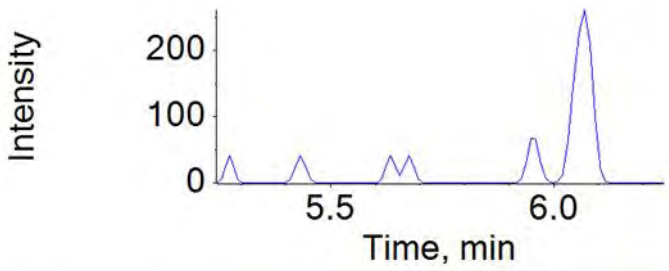
Analyte: PFOSA
498.0 / 78.0



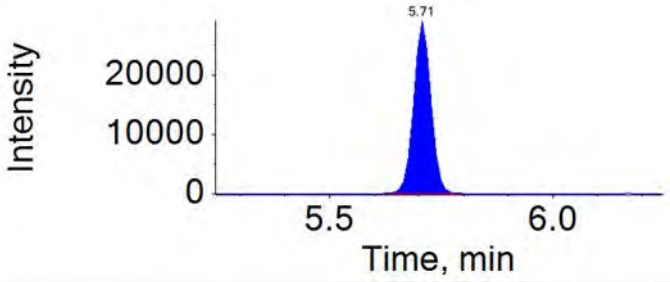
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



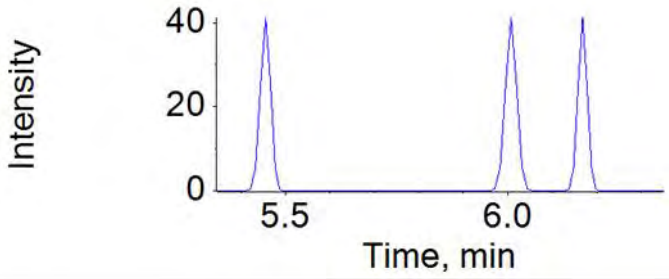
Analyte: NMeFOSAA
570.0 / 419.0



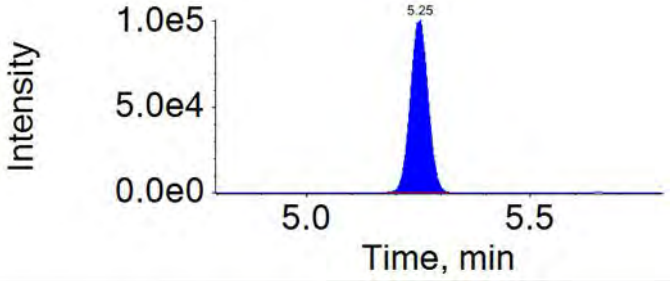
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



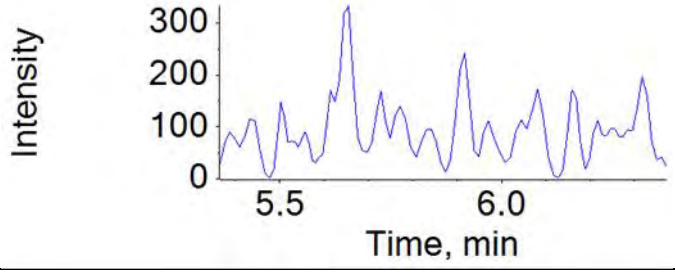
Analyte: PFDS
599.0 / 80.0



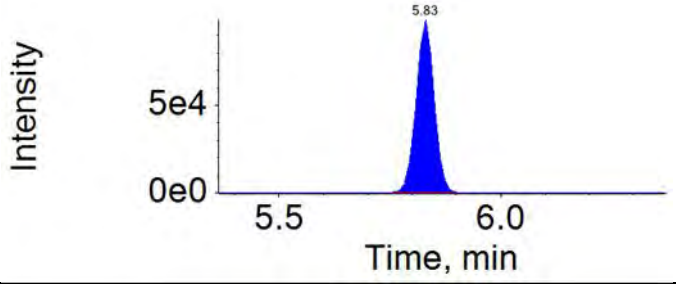
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

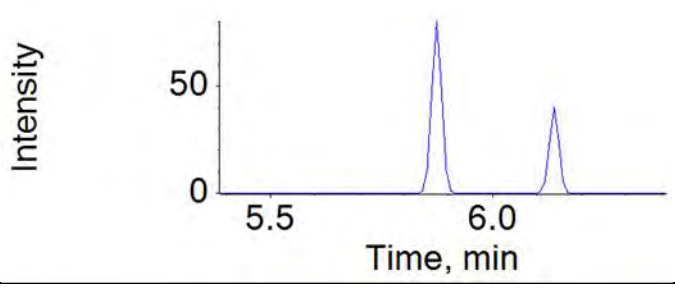


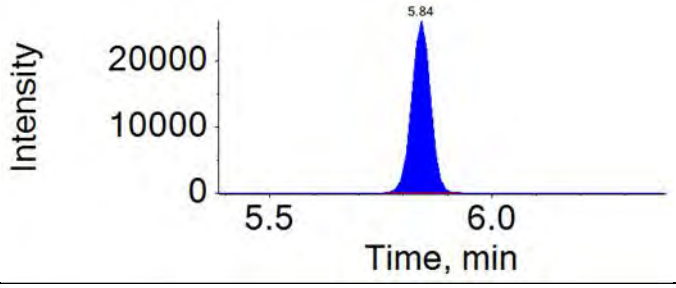
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

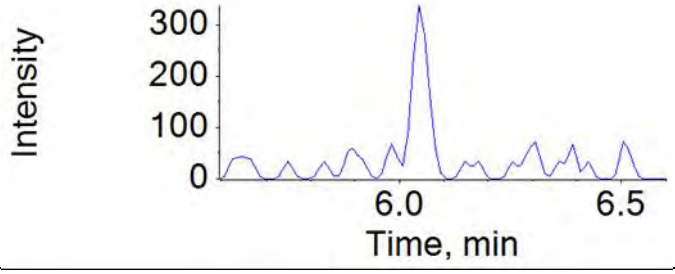
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

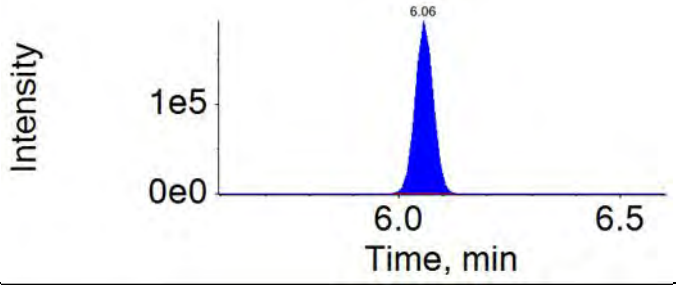
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



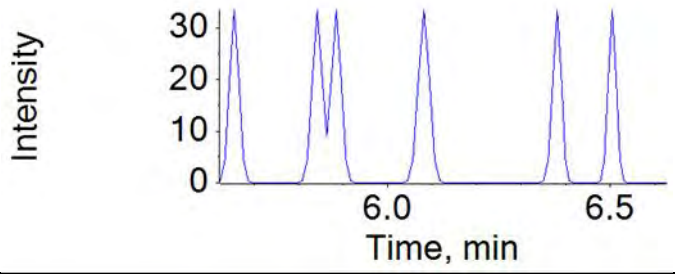


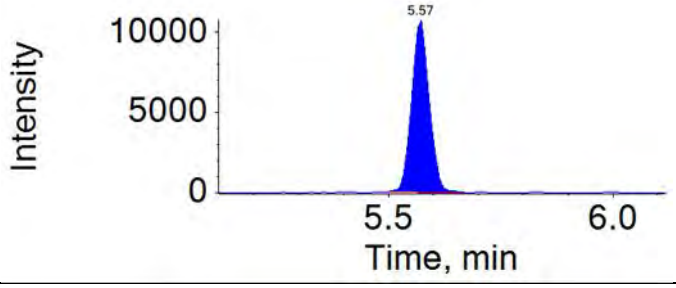
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



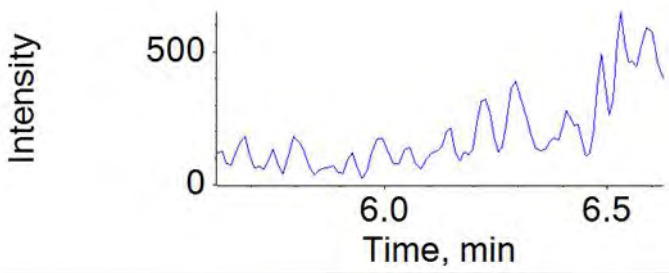


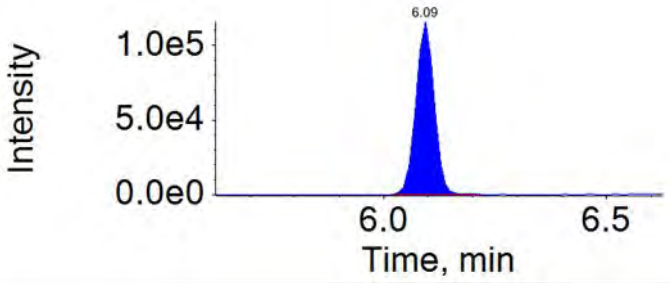
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



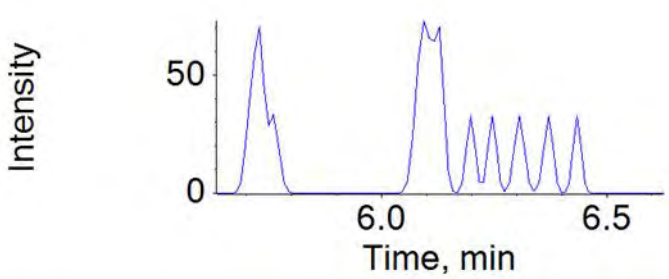


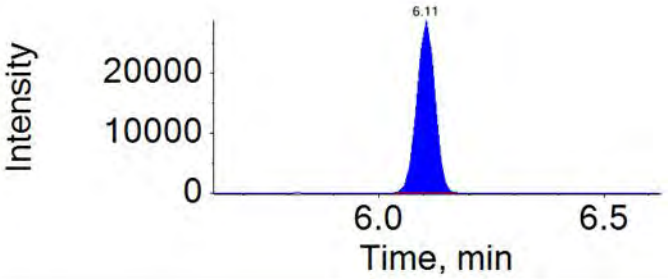
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

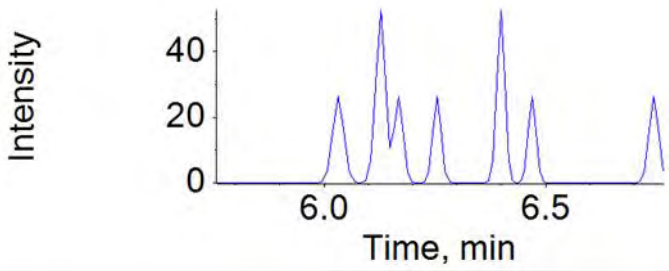
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

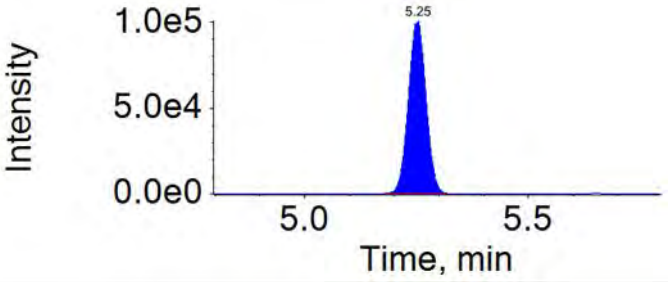
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



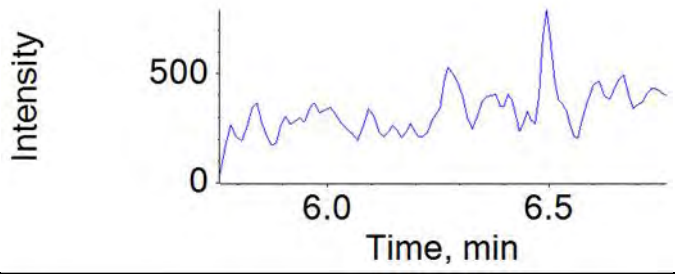


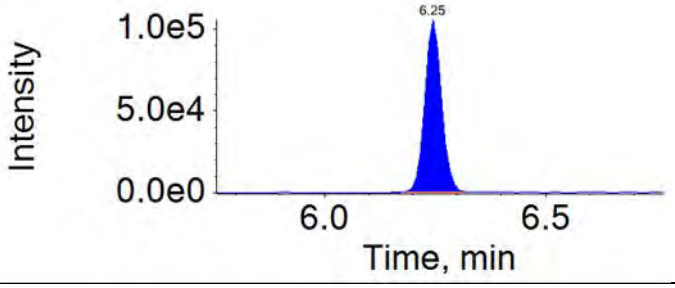
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



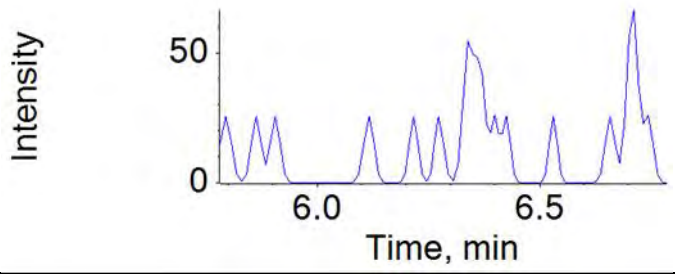


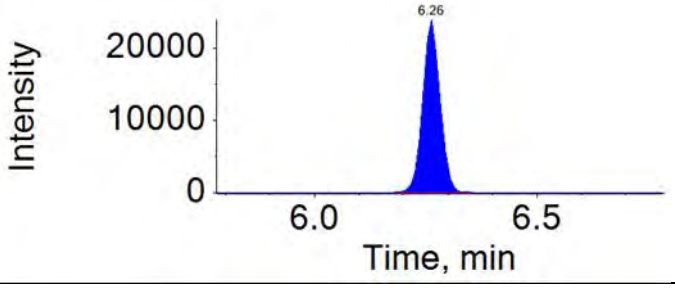
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



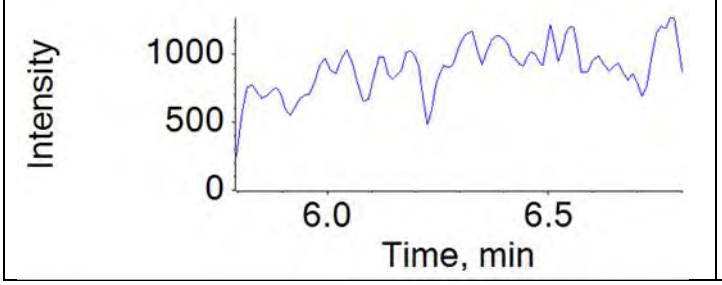


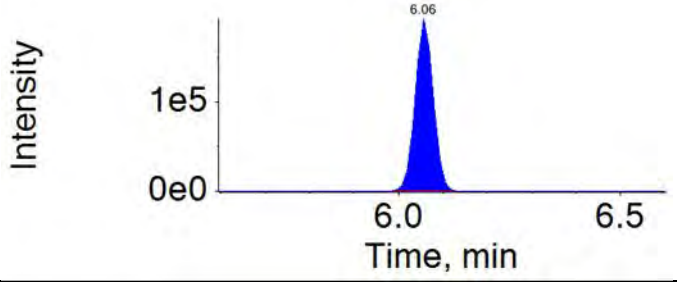
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

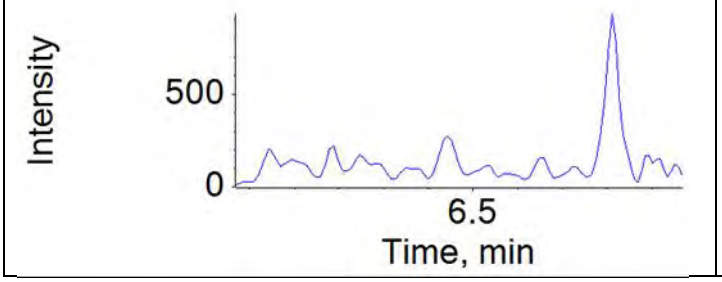
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

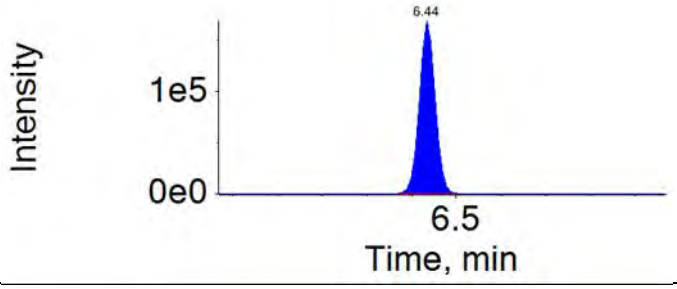
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



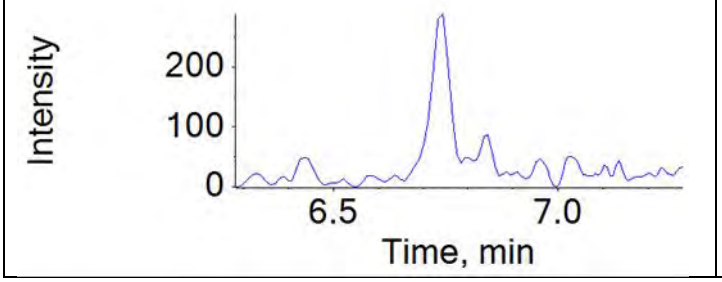


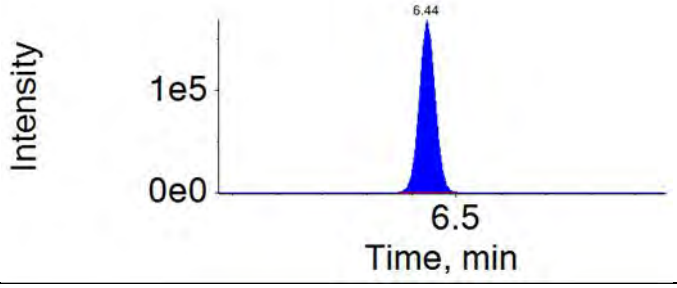
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



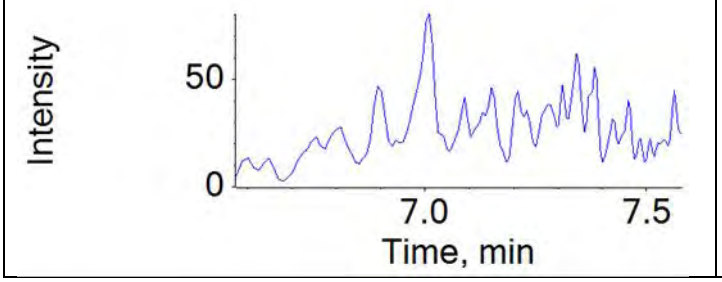


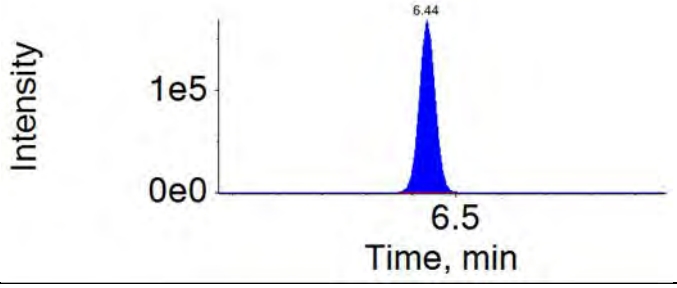
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



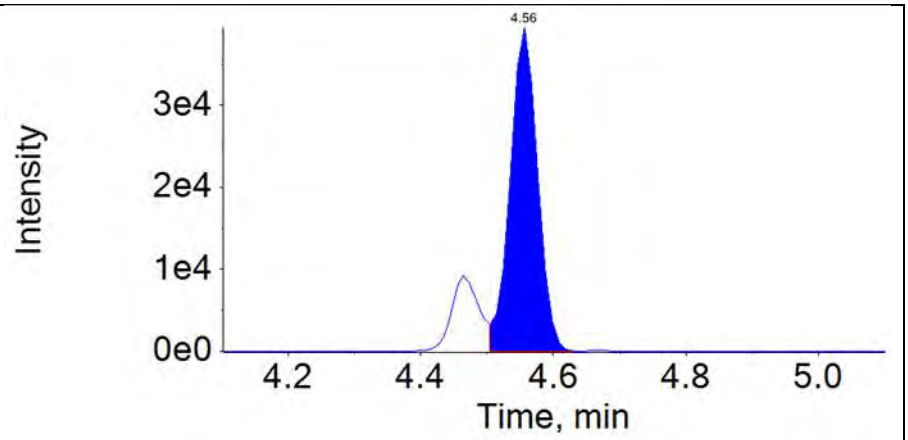


APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

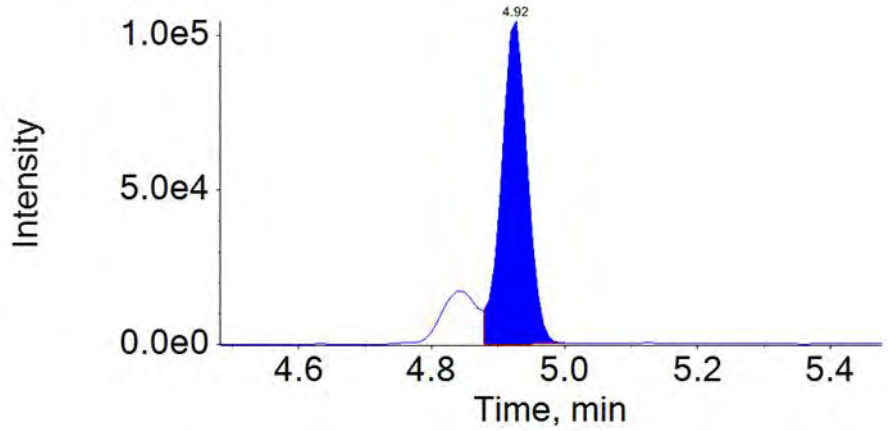
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
113540.6
Mass Range:
399.0 / 80.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



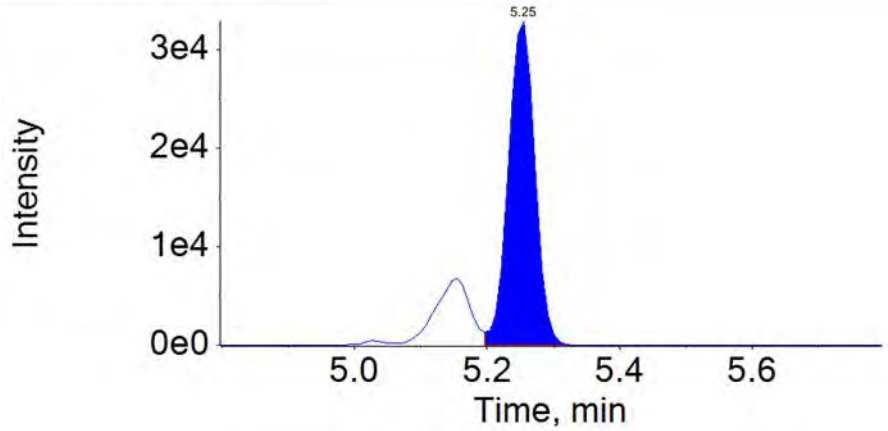
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
284491.6
Mass Range:
413.0 / 369.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
91841.8
Mass Range:
499.0 / 80.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



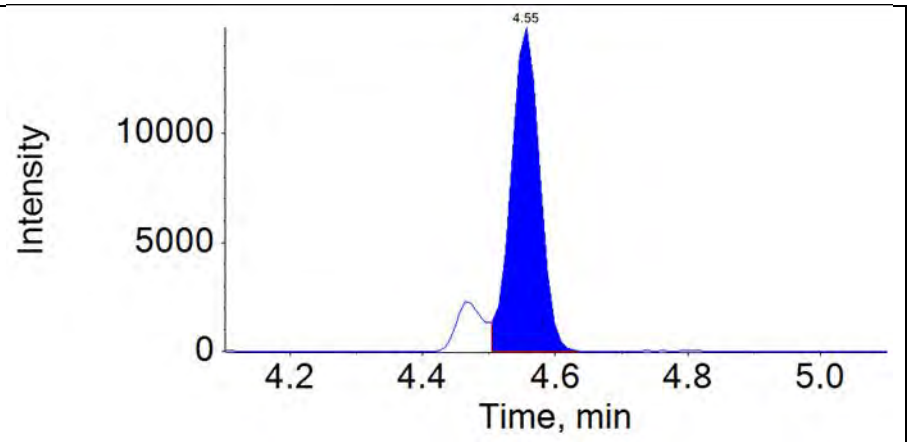
Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

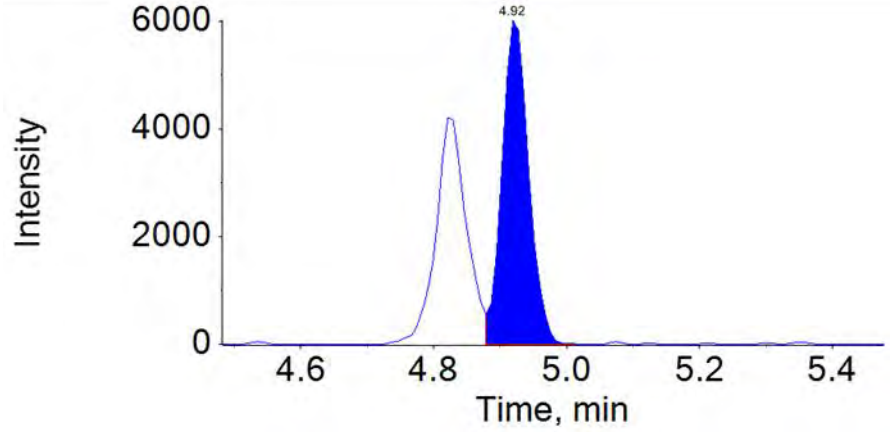
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
44357.1
Mass Range:
399.0 / 99.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



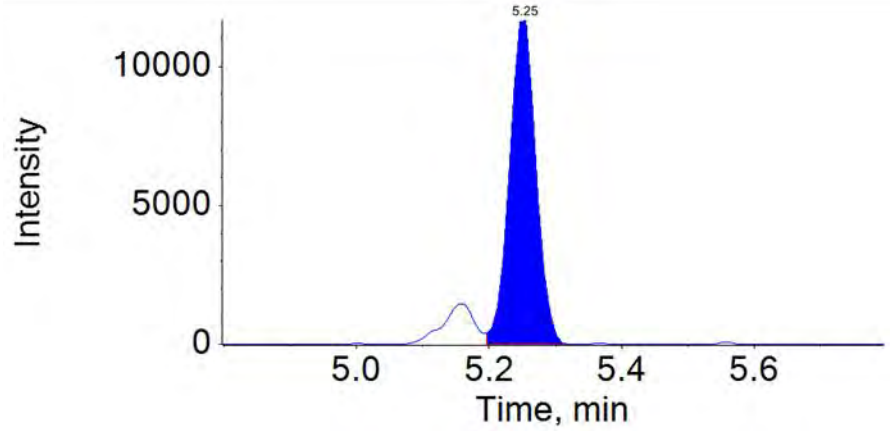
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
16848.6
Mass Range:
413.0 / 169.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
32705.6
Mass Range:
499.0 / 99.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Ion Ratio Report

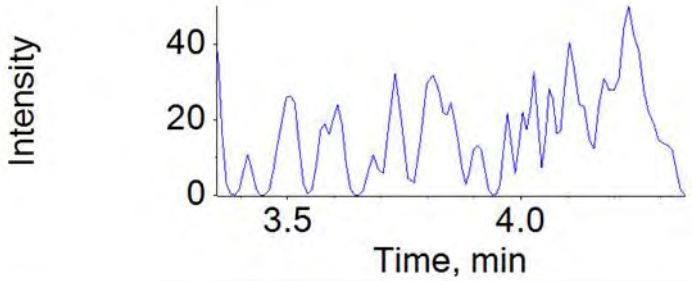
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-19.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	1.0000	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3576	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0115	N/A		50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	4.56	1.00	140012.1	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	50830.8	M	0.3569	0.3630	2	50	
PFHpA	N/A	N/A	N/A	A	1.0000	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0577	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	N/A	N/A	N/A	A	1.0000	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3950	N/A		50	
PFOA	4.92	1.00	347563.0	M	1.0000	1.0000			
PFOA_2	4.90	0.99	30355.3	M	0.0635	0.0873	38	50	
PFOS	5.25	1.00	117649.0	M	1.0000	1.0000			
PFOS_2	5.25	1.00	37584.5	M	0.3494	0.3195	-9	50	
PFNA	N/A	N/A	N/A	A	1.0000	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0207	N/A		50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0057	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	N/A	N/A	N/A	A	1.0000	N/A			
PFDS_2	N/A	N/A	N/A	A	0.4648	N/A		50	
PFUnDA	N/A	N/A	N/A	A	1.0000	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.6082	N/A		50	
PFDoDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0109	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0096	N/A		50	
PFTeDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0055	N/A		50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

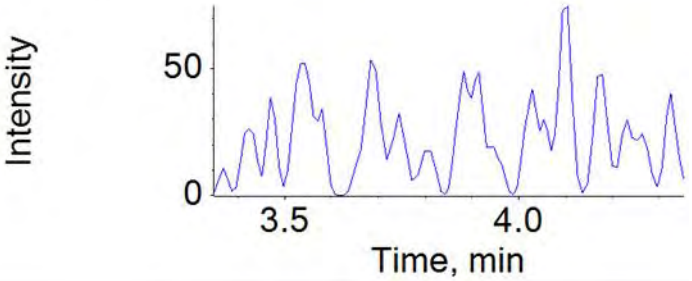
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

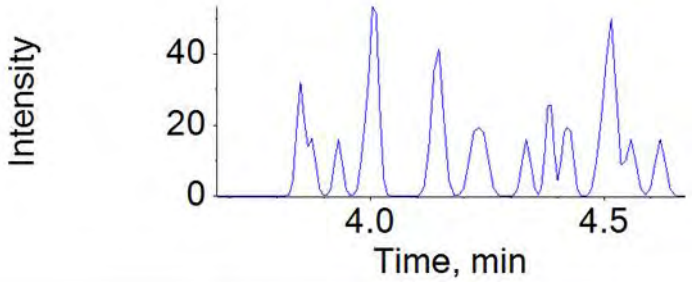
Component: PFBS
Primary Mass: 299.0 / 80.0



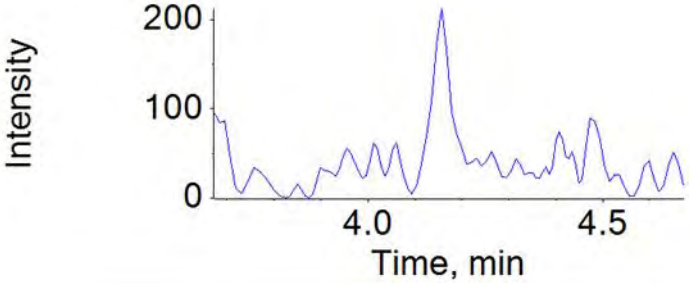
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



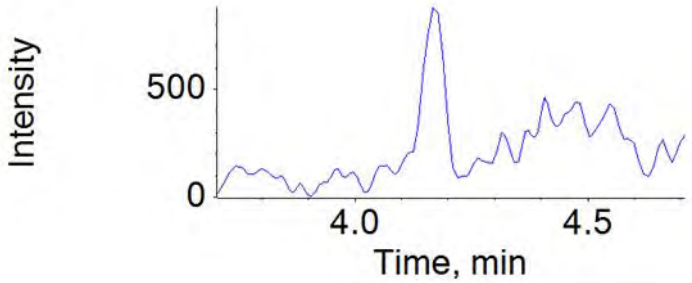
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



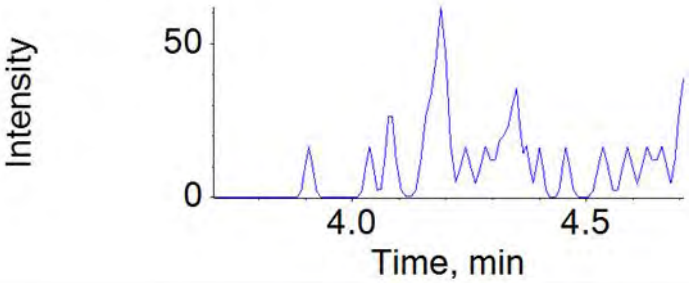
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



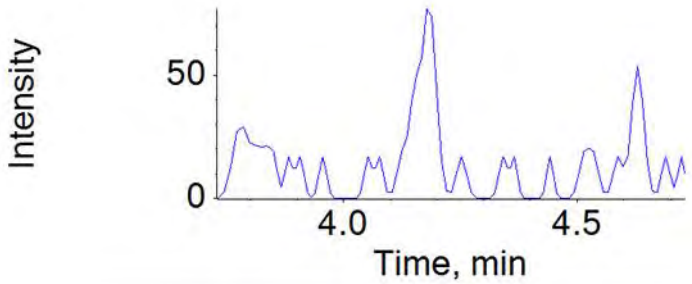
Component: PFHxA
Primary Mass: 313.0 / 269.0



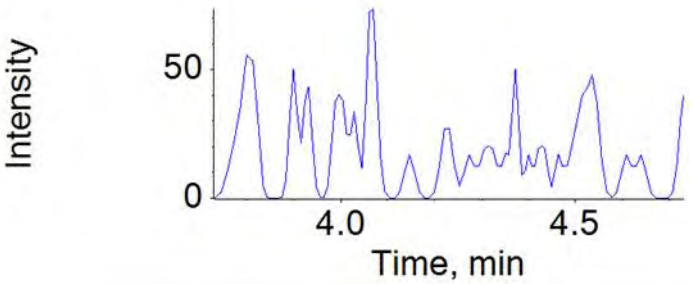
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



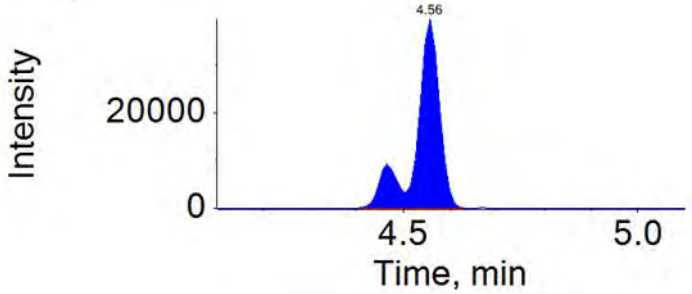
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



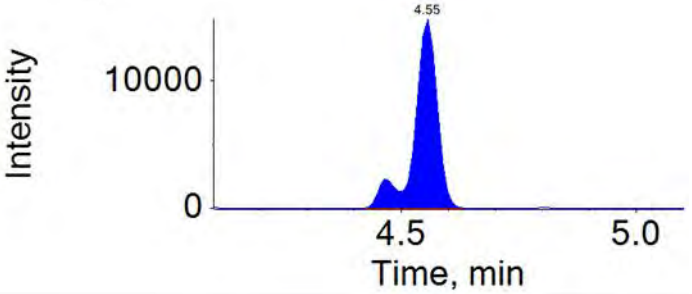
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

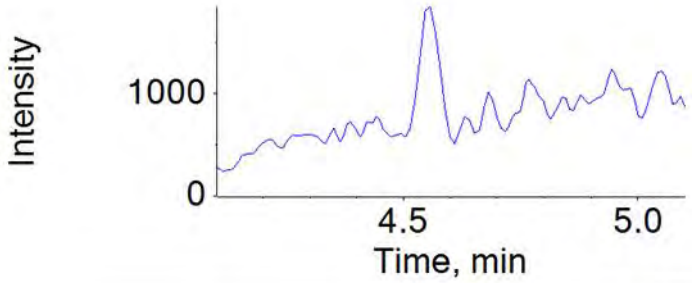
Component: PFHxS
Primary Mass: 399.0 / 80.0



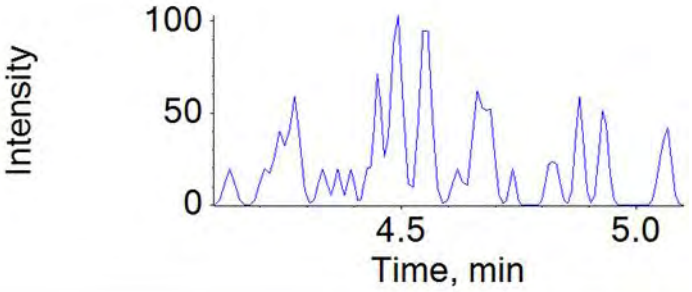
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



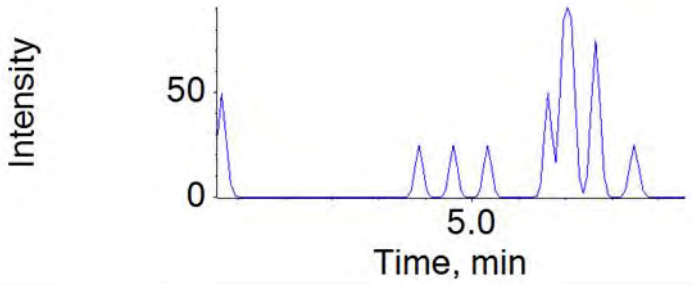
Component: PFHpA
Primary Mass: 363.0 / 319.0



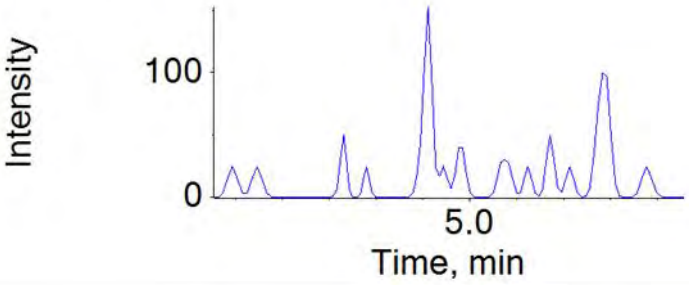
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



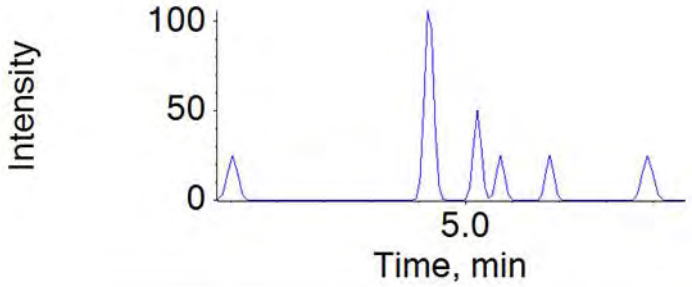
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



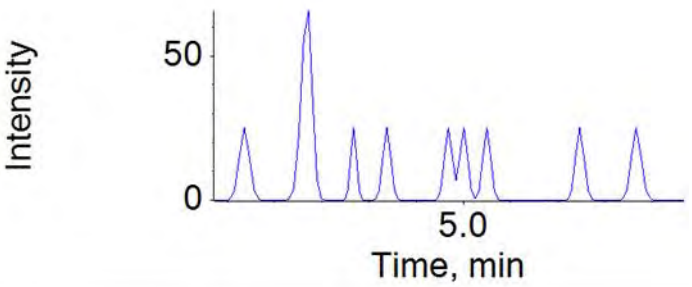
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



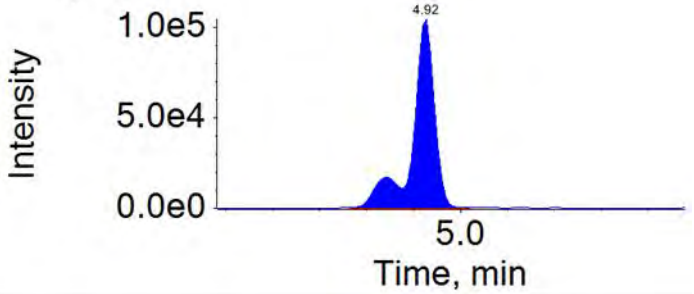
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



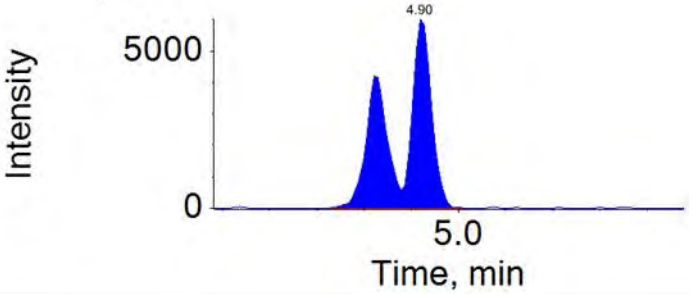
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

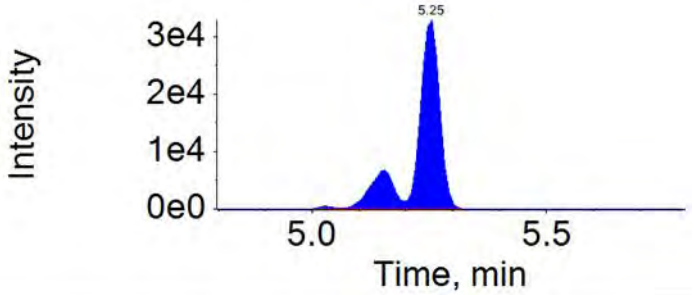
Component: PFOA
Primary Mass: 413.0 / 369.0



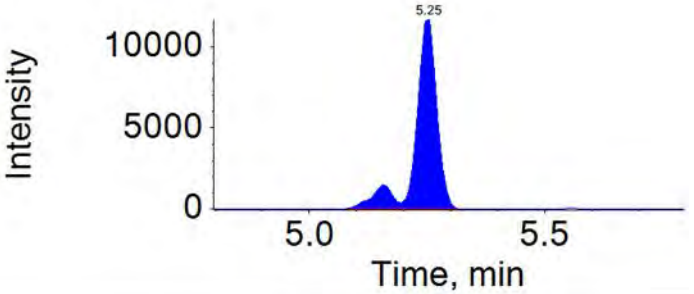
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



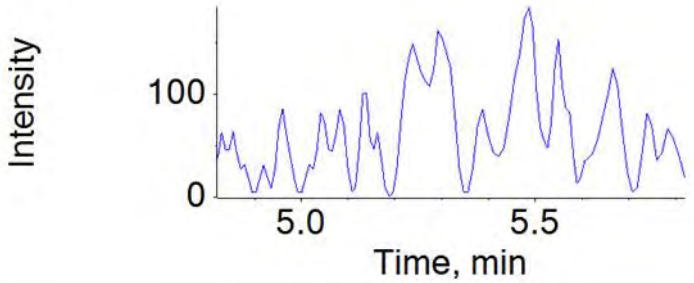
Component: PFOS
Primary Mass: 499.0 / 80.0



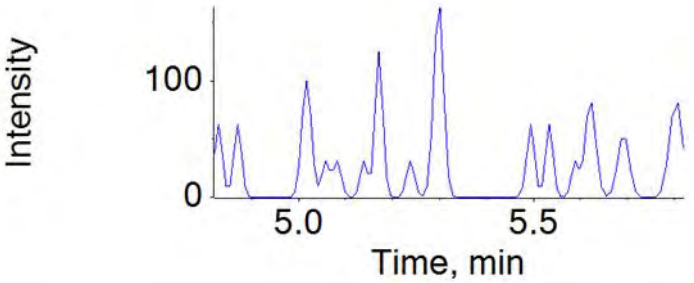
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



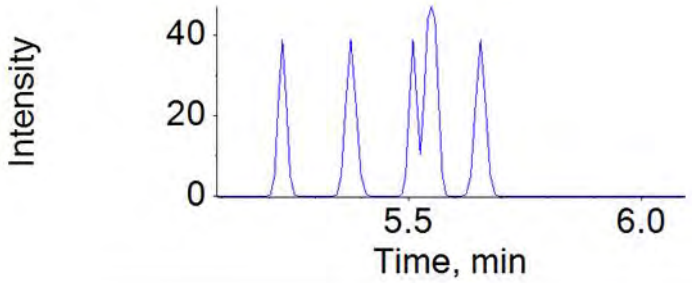
Component: PFNA
Primary Mass: 463.0 / 419.0



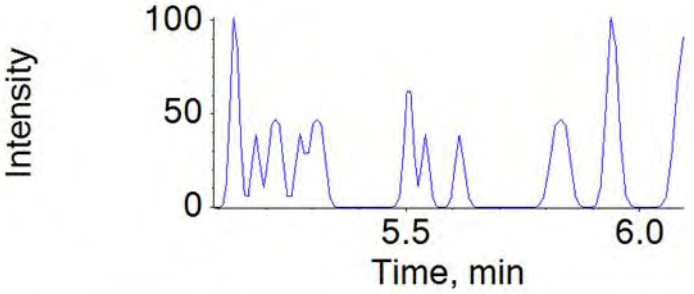
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



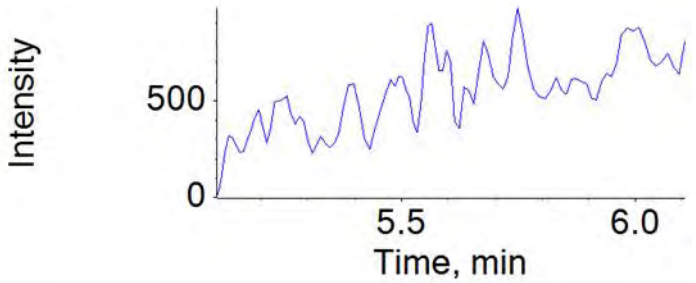
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



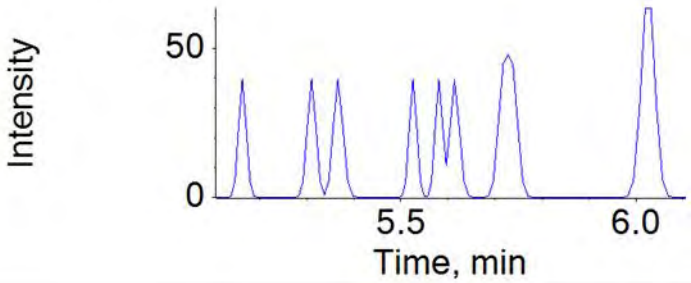
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

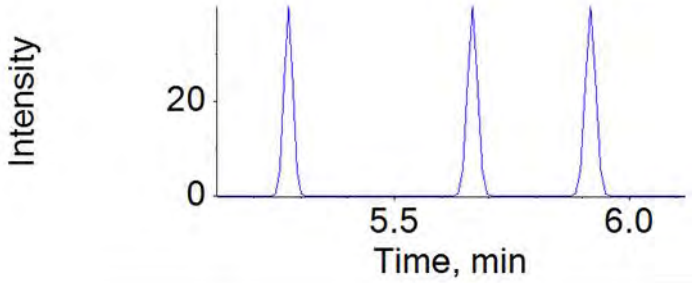
Component: PFDA
Primary Mass: 513.0 / 469.0



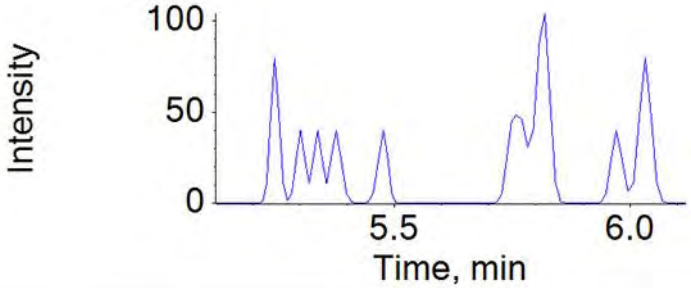
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



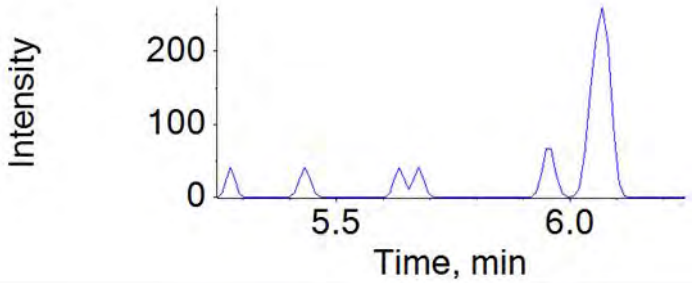
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



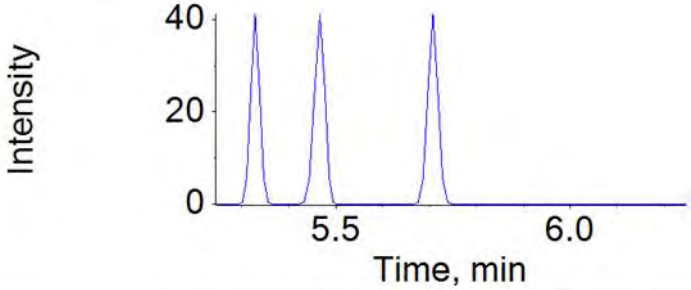
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



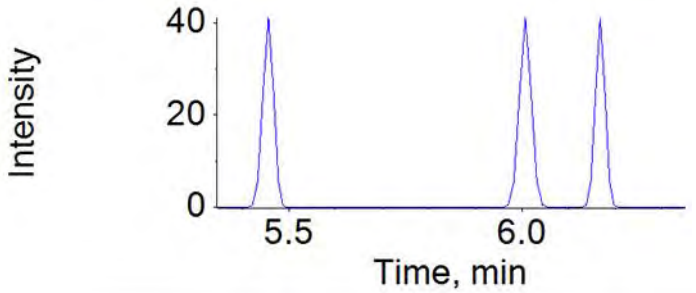
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



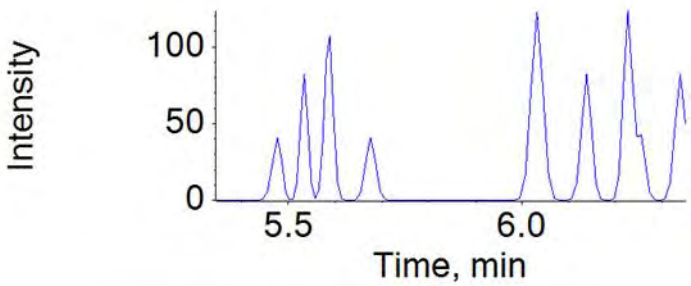
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



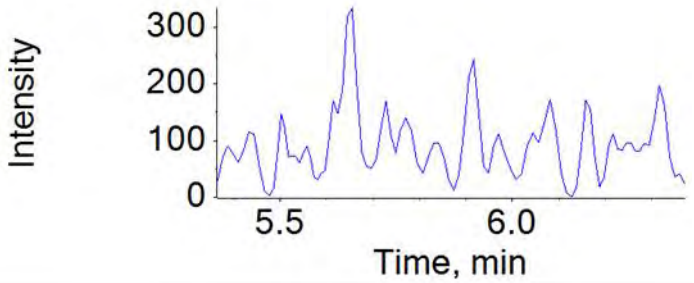
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



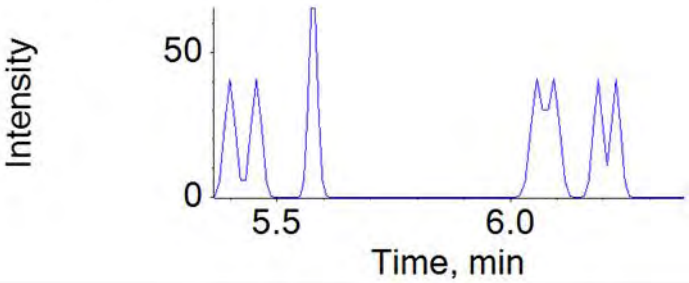
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

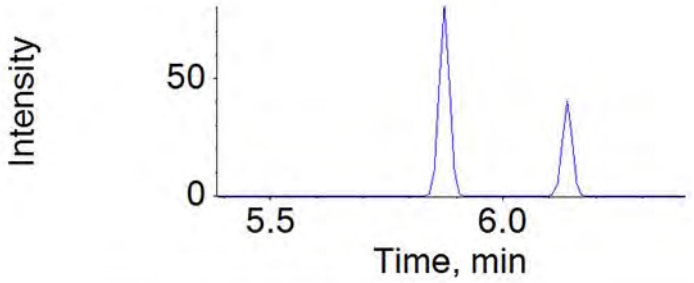
Component: PFUnDA
Primary Mass: 563.0 / 519.0



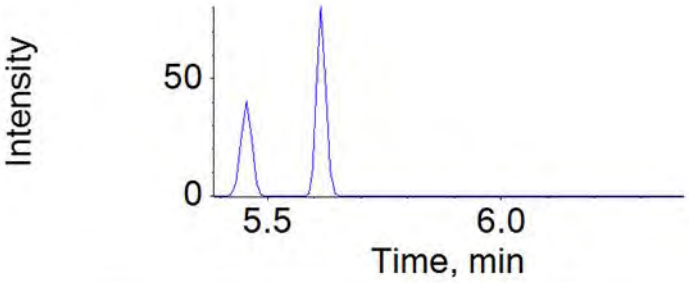
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



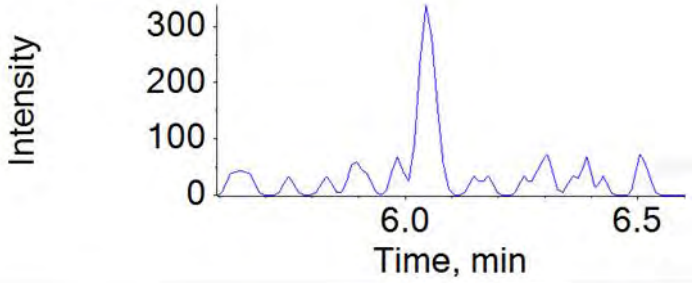
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



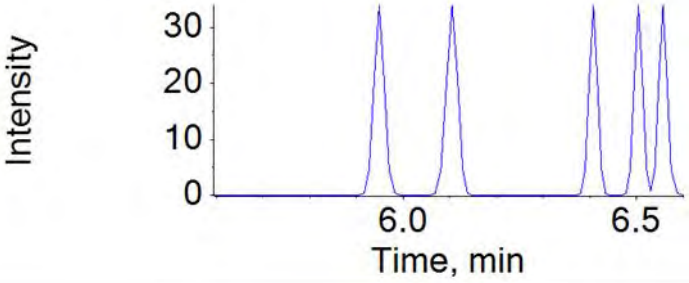
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



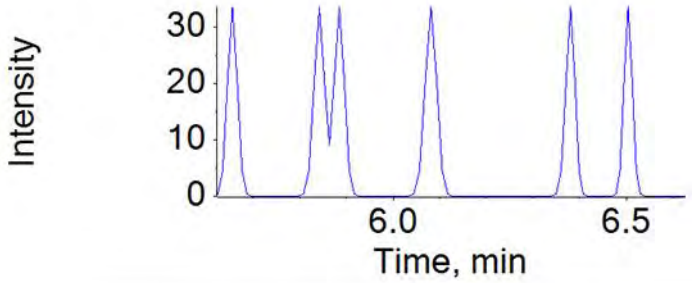
Component: PFDoDA
Primary Mass: 613.0 / 569.0



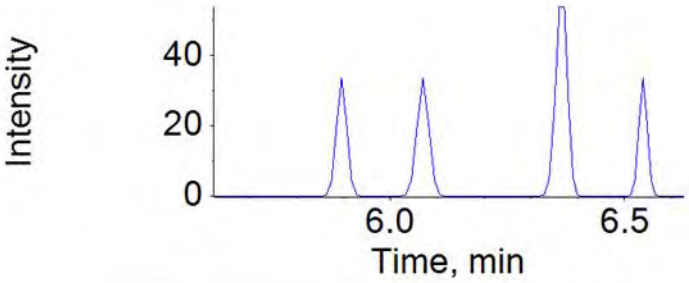
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



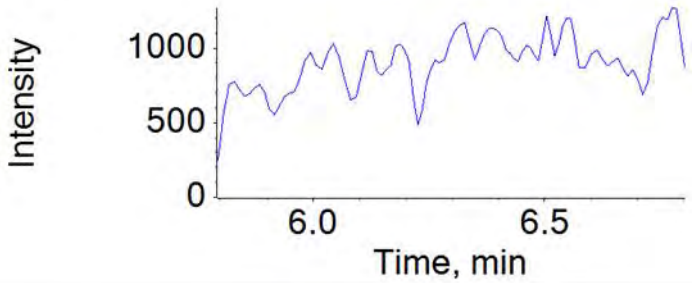
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



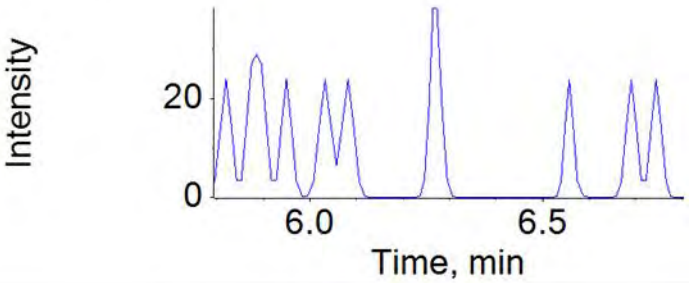
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

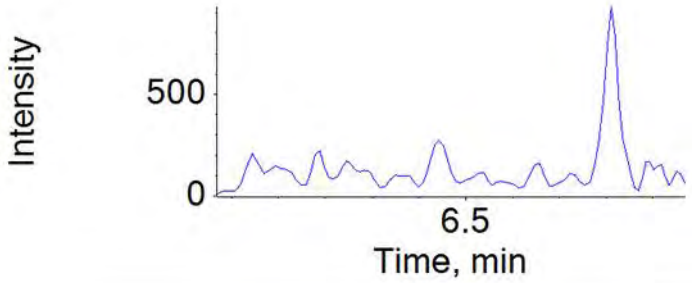
Component: PFTrDA
Primary Mass: 663.0 / 619.0



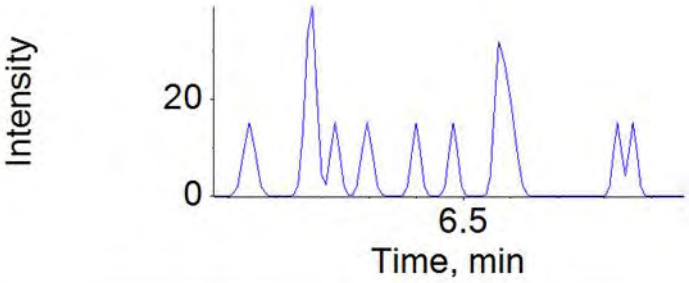
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



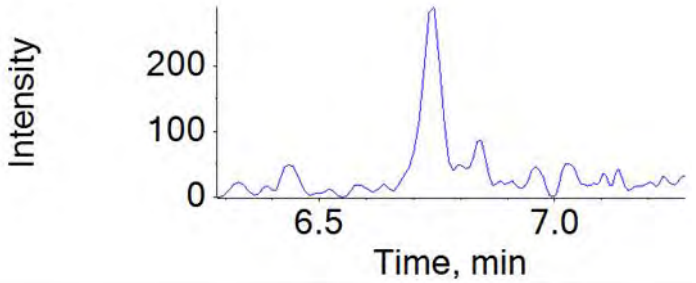
Component: PFTeDA
Primary Mass: 713.0 / 669.0



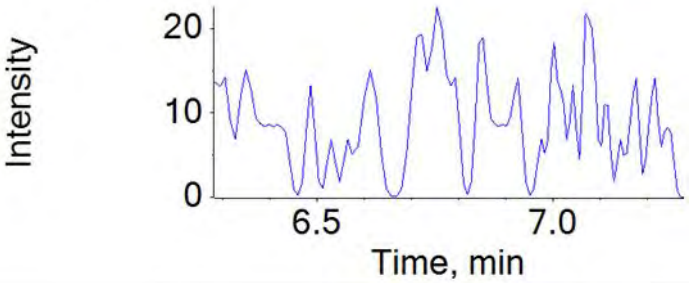
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



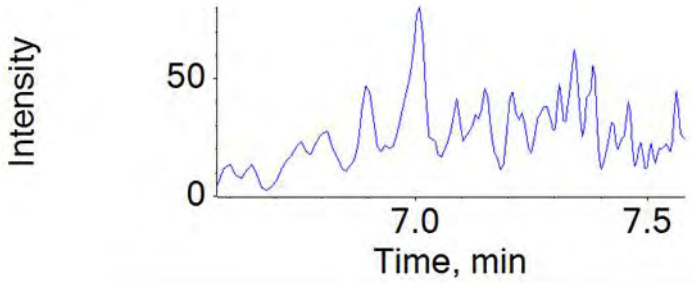
Component: PFHxDA
Primary Mass: 813.0 / 769.0



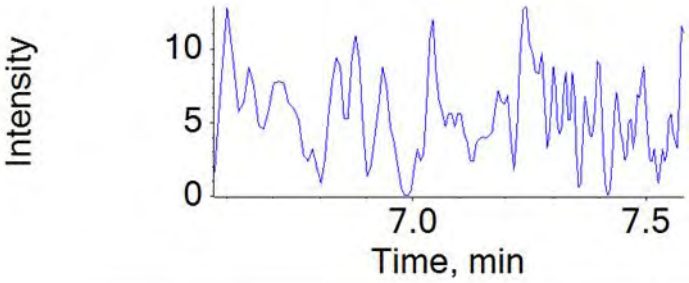
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



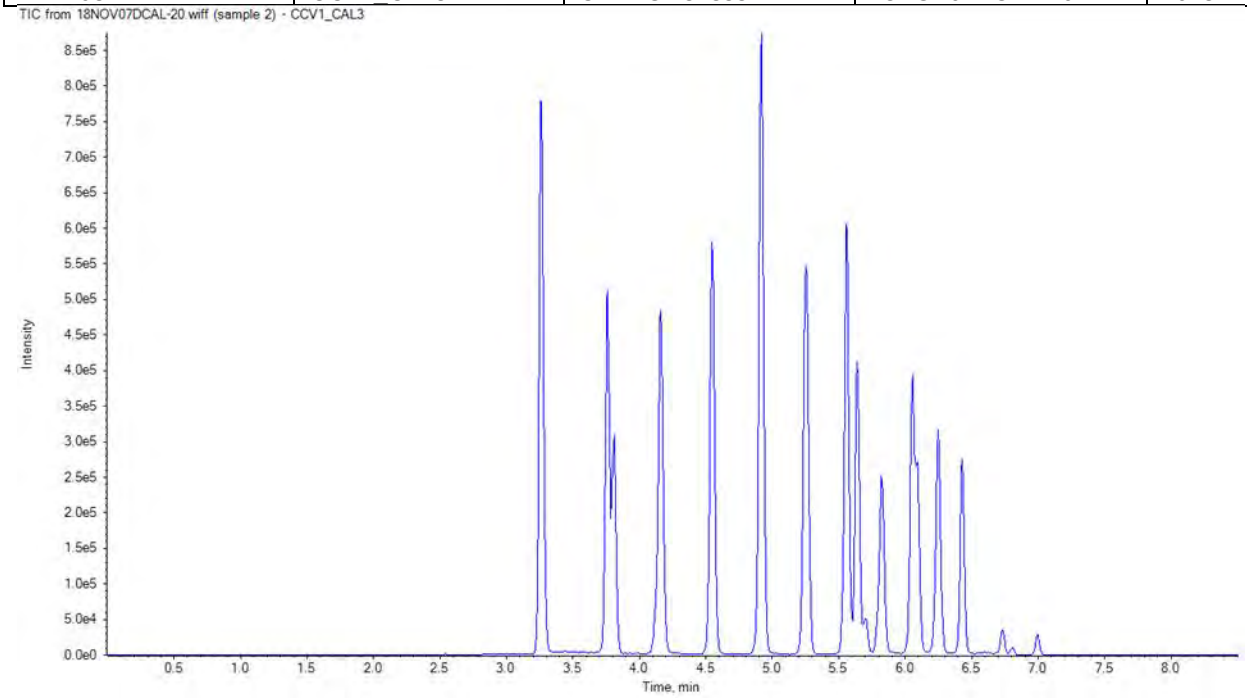
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALMOD31833F	18NOV07DCAL-20.wiff	2018-11-07T11:09:59



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721701.6	730410.6	-1	50	
13C2-PFOA	5.0	512566.9	524423.6	-2	50	
13C4-PFOS	4.8	267946.3	274061.7	-2	50	
13C2-PFDA	5.0	316670.3	311442.1	2	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALMOD31833F	18NOV07DCAL-20.wiff	2018-11-07T11:09:59

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	278381.8	10	13C4-PFBA	780482.5	5.0	0.357	3.26	1.000	2.000	2.087	4	30	
PFPeA	286996.9	12	13C5-PFPeA	819317.3	5.0	0.350	3.76	1.000	2.000	2.082	4	30	
PFBS	155917.1	11	13C3-PFBS	430650.1	4.7	0.362	3.81	1.000	1.770	1.825	3	30	
4:2-FTS	41869.1	11	13C2-4:2-FTS	53424.6	4.7	0.784	4.13	1.000	1.980	2.107	6	30	
PFHxA	355844.6	12	13C5-PFHxA	678729.1	5.0	0.524	4.16	1.000	2.000	2.248	12	30	
PFPeS	84840.7	11	13C3-PFBS	430650.1	4.7	0.197	4.18	1.100	1.880	1.943	3	30	
PFHxS	126167.9	12	13C3-PFHxS	332171.0	4.7	0.380	4.55	1.000	1.890	1.925	2	30	
PFHpA	359438.8	12	13C4-PFHpA	553115.2	5.0	0.650	4.55	1.000	2.000	2.186	9	30	
6:2-FTS	30418.5	11	13C2-6:2-FTS	39617.7	4.8	0.768	4.91	1.000	2.090	1.915	-8	30	
PFHpS	118682.9	11	13C3-PFHxS	332171.0	4.7	0.357	4.91	1.080	1.900	1.869	-2	30	
PFOA	363186.2	11	13C8-PFOA	951797.5	5.0	0.382	4.92	1.000	2.000	2.148	7	30	
PFOS	113455.6	11	13C8-PFOS	281657.2	4.8	0.403	5.24	1.000	1.910	2.089	9	30	
PFNA	284061.5	11	13C9-PFNA	514994.9	5.0	0.552	5.26	1.000	2.000	2.061	3	30	
PFNS	70168.8	10	13C8-PFOS	281657.2	4.8	0.249	5.54	1.060	1.920	1.975	3	30	
PFDA	243089.4	11	13C6-PFDA	643202.5	5.0	0.378	5.56	1.000	2.000	2.079	4	30	
8:2-FTS	25674.2	11	13C2-8:2-FTS	27654.3	4.8	0.928	5.56	1.000	2.110	2.093	-1	30	
PFOSA	272309.7	12	13C8-PFOSA	710116.3	5.0	0.383	5.64	1.000	2.000	2.073	4	30	
NMeFOSAA	27107.5	12	d3-NMeFOSAA	85750.0	5.0	0.316	5.71	1.000	2.000	1.627	-19	30	
PFDS	57911.4	12	13C8-PFOS	281657.2	4.8	0.206	5.80	1.110	1.930	1.964	2	30	
PFUnDA	206684.1	12	13C7-PFUnDA	274326.2	5.0	0.753	5.82	1.000	2.000	2.161	8	30	
NEtFOSAA	29353.4	12	d5-NEtFOSAA	64529.1	5.0	0.455	5.84	1.000	2.000	1.955	-2	30	
PFDoDA	220745.0	12	13C2-PFDoDA	586710.7	5.0	0.376	6.05	1.000	2.000	2.039	2	30	
10:2-FTS	14526.2	12	13C2-8:2-FTS	27654.3	4.8	0.525	6.07	1.090	2.120	1.636	-23	30	
NMePFOSAE	157888.7	12	d7-NMePFOSAE	328201.0	5.0	0.481	6.10	1.000	2.000	2.156	8	30	
NMePFOSA	30788.7	12	d3-NMePFOSA	80699.5	5.0	0.382	6.10	1.000	2.000	2.136	7	30	
PFDoS	30510.8	11	13C8-PFOS	281657.2	4.8	0.108	6.22	1.190	1.940	2.091	8	30	
NEtPFOSAE	187574.4	11	d9-NEtPFOSAE	274277.4	5.0	0.684	6.25	1.000	2.000	2.192	10	30	
NEtPFOSA	29547.8	12	d5-NEtPFOSA	72708.8	5.0	0.406	6.26	1.000	2.000	1.790	-11	30	
PFTrDA	191338.9	11	13C2-PFDoDA	586710.7	5.0	0.326	6.25	1.030	2.000	2.057	3	30	
PFTeDA	153182.8	11	13C2-PFTeDA	429266.0	5.0	0.357	6.43	1.000	2.000	2.096	5	30	
PFHxDA	71156.3	11	13C2-PFTeDA	429266.0	5.0	0.166	6.73	1.050	2.000	2.058	3	30	
PFODA	60356.7	10	13C2-PFTeDA	429266.0	5.0	0.141	6.99	1.090	2.000	2.014	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV07DCAL-20.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T11:09:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721701.6	730410.6	-1	50	
13C2-PFOA	5.0	512566.9	524423.6	-2	50	
13C4-PFOS	4.8	267946.3	274061.7	-2	50	
13C2-PFDA	5.0	316670.3	311442.1	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	780482.5	13C3-PFBA	721701.6	1.081	5.000	5.005	100	70-130	
E13C5-PFPeA	819317.3	13C3-PFBA	721701.6	1.135	5.000	4.946	99	70-130	
E13C3-PFBS	430650.1	13C3-PFBA	721701.6	0.597	4.650	4.379	94	70-130	
E13C2-4:2-FTS	53424.6	13C2-PFOA	512566.9	0.104	4.670	4.703	101	70-130	
E13C5-PFHxA	678729.1	13C2-PFOA	512566.9	1.324	5.000	4.871	97	70-130	
E13C3-PFHxS	332171.0	13C2-PFOA	512566.9	0.648	4.730	4.652	98	70-130	
E13C4-PFHpA	553115.2	13C2-PFOA	512566.9	1.079	5.000	4.909	98	70-130	
E13C2-6:2-FTS	39617.7	13C2-PFOA	512566.9	0.077	4.750	5.154	109	70-130	
E13C8-PFOA	951797.5	13C2-PFOA	512566.9	1.857	5.000	5.178	104	70-130	
E13C8-PFOS	281657.2	13C4-PFOS	267946.3	1.051	4.780	4.648	97	70-130	
E13C9-PFNA	514994.9	13C4-PFOS	267946.3	1.922	5.000	5.250	105	70-130	
E13C6-PFDA	643202.5	13C2-PFDA	316670.3	2.031	5.000	5.108	102	70-130	
E13C2-8:2-FTS	27654.3	13C2-PFDA	316670.3	0.087	4.790	4.621	96	70-130	
E13C8-PFOSA	710116.3	13C2-PFDA	316670.3	2.242	5.000	4.893	98	70-130	
Ed3-NMeFOSAA	85750.0	13C2-PFDA	316670.3	0.271	5.000	5.036	101	70-130	
E13C7-PFUnDA	274326.2	13C2-PFDA	316670.3	0.866	5.000	4.997	100	70-130	
Ed5-NEtFOSAA	64529.1	13C2-PFDA	316670.3	0.204	5.000	4.716	94	70-130	
E13C2-PFDoDA	586710.7	13C2-PFDA	316670.3	1.853	5.000	4.995	100	70-130	
Ed7-NMePFOSAE	328201.0	13C2-PFDA	316670.3	1.036	5.000	4.820	96	70-130	
Ed3-NMePFOSA	80699.5	13C2-PFDA	316670.3	0.255	5.000	4.665	93	70-130	
Ed9-NEtPFOSAE	274277.4	13C2-PFDA	316670.3	0.866	5.000	4.946	99	70-130	
Ed5-NEtPFOSA	72708.8	13C2-PFDA	316670.3	0.230	5.000	5.316	106	70-130	
E13C2-PFTeDA	429266.0	13C2-PFDA	316670.3	1.356	5.000	4.880	98	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

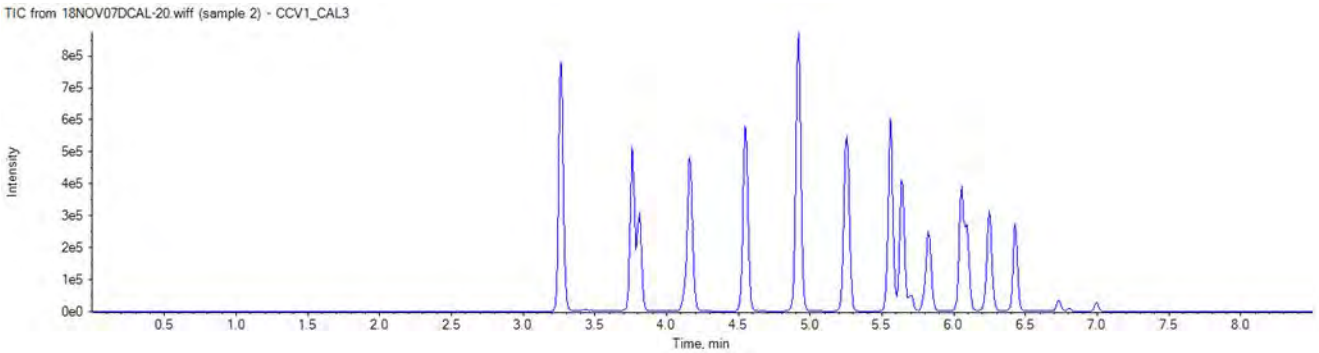
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-20.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	278381.8		A	13C4-PFBA	3.26	780482.5	0.357	2.087
PFPeA	3.76	1.000	286996.9		A	13C5-PFPeA	3.76	819317.3	0.350	2.082
PFBS	3.81	1.000	155917.1		A	13C3-PFBS	3.81	430650.1	0.362	1.825
4:2-FTS	4.13	1.000	41869.1		A	13C2-4:2-FTS	4.13	53424.6	0.784	2.107
PFHxA	4.16	1.000	355844.6		A	13C5-PFHxA	4.16	678729.1	0.524	2.248
PFPeS	4.18	1.100	84840.7		A	13C3-PFBS	3.81	430650.1	0.197	1.943
PFHxS	4.55	1.000	126167.9		A	13C3-PFHxS	4.55	332171.0	0.380	1.925
PFHpA	4.55	1.000	359438.8		A	13C4-PFHpA	4.55	553115.2	0.650	2.186
6:2-FTS	4.91	1.000	30418.5		A	13C2-6:2-FTS	4.91	39617.7	0.768	1.915
PFHpS	4.91	1.080	118682.9		A	13C3-PFHxS	4.55	332171.0	0.357	1.869
PFOA	4.92	1.000	363186.2		A	13C8-PFOA	4.92	951797.5	0.382	2.148
PFOS	5.24	1.000	113455.6		M	13C8-PFOS	5.24	281657.2	0.403	2.089
PFNA	5.26	1.000	284061.5		A	13C9-PFNA	5.26	514994.9	0.552	2.061
PFNS	5.54	1.060	70168.8		A	13C8-PFOS	5.24	281657.2	0.249	1.975
PFDA	5.56	1.000	243089.4		A	13C6-PFDA	5.56	643202.5	0.378	2.079
8:2-FTS	5.56	1.000	25674.2		A	13C2-8:2-FTS	5.56	27654.3	0.928	2.093
PFOSA	5.64	1.000	272309.7		A	13C8-PFOSA	5.64	710116.3	0.383	2.073
NMeFOSAA	5.71	1.000	27107.5		A	d3-NMeFOSAA	5.70	85750.0	0.316	1.627
PFDS	5.80	1.110	57911.4		A	13C8-PFOS	5.24	281657.2	0.206	1.964
PFUnDA	5.82	1.000	206684.1		A	13C7-PFUnDA	5.82	274326.2	0.753	2.161
NEtFOSAA	5.84	1.000	29353.4		A	d5-NEtFOSAA	5.84	64529.1	0.455	1.955
PFDoDA	6.05	1.000	220745.0		A	13C2-PFDoDA	6.05	586710.7	0.376	2.039
10:2-FTS	6.07	1.090	14526.2		A	13C2-8:2-FTS	5.56	27654.3	0.525	1.636
NMePFOSAE	6.10	1.000	157888.7		A	d7-NMePFOSAE	6.09	328201.0	0.481	2.156
NMePFOSA	6.10	1.000	30788.7		A	d3-NMePFOSA	6.10	80699.5	0.382	2.136
PFDoS	6.22	1.190	30510.8		A	13C8-PFOS	5.24	281657.2	0.108	2.091
NEtPFOSAE	6.25	1.000	187574.4		A	d9-NEtPFOSAE	6.24	274277.4	0.684	2.192
NEtPFOSA	6.26	1.000	29547.8		A	d5-NEtPFOSA	6.26	72708.8	0.406	1.790
PFTrDA	6.25	1.030	191338.9		A	13C2-PFDoDA	6.05	586710.7	0.326	2.057
PFTeDA	6.43	1.000	153182.8		A	13C2-PFTeDA	6.43	429266.0	0.357	2.096
PFHxDA	6.73	1.050	71156.3		A	13C2-PFTeDA	6.43	429266.0	0.166	2.058
PFODA	6.99	1.090	60356.7		A	13C2-PFTeDA	6.43	429266.0	0.141	2.014

Total Ion Chromatogram

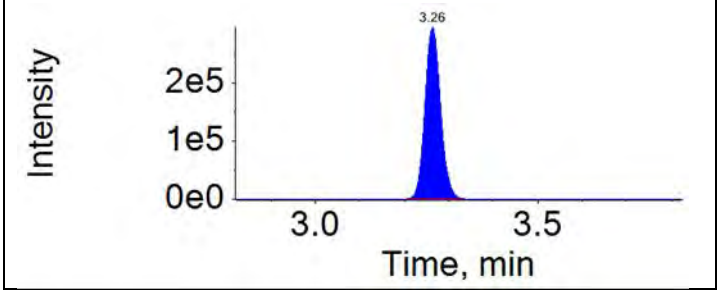


APPROVED
By JPT at 2:53 pm, 11/7/18

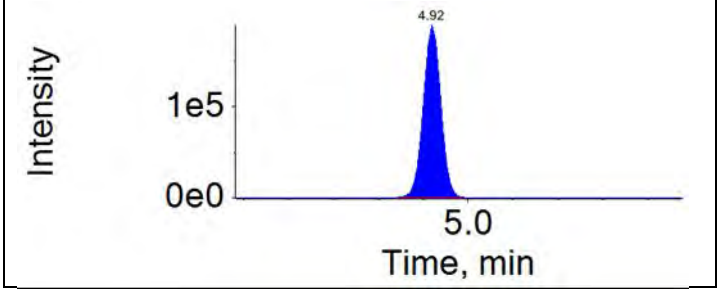
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

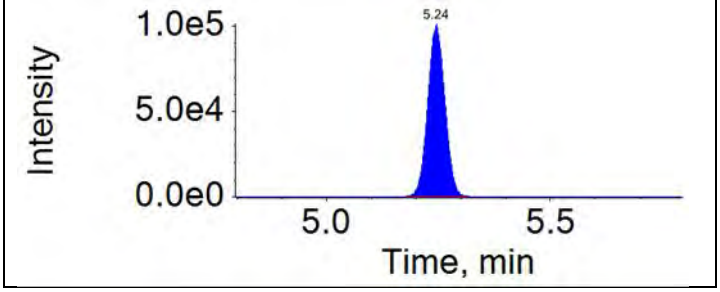
Injection Standard: 13C3-PFBA
216.0 / 172.0



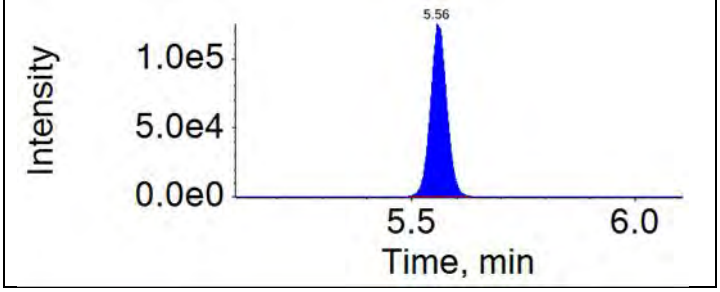
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

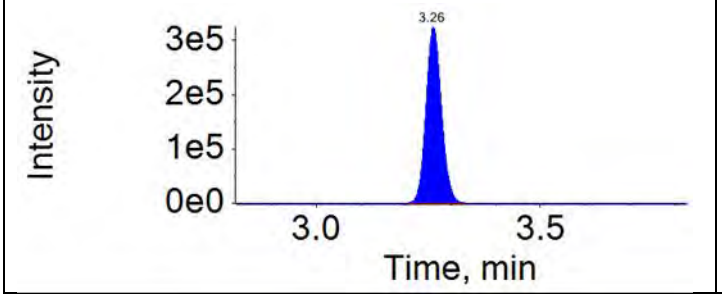


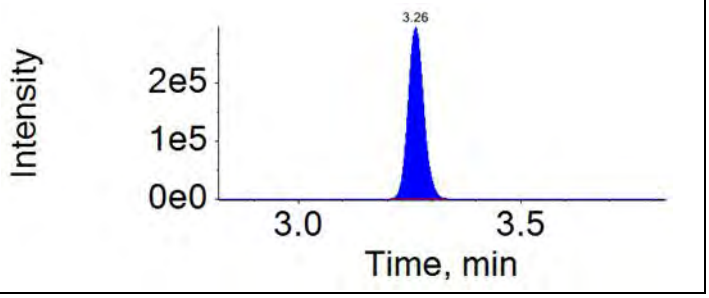
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

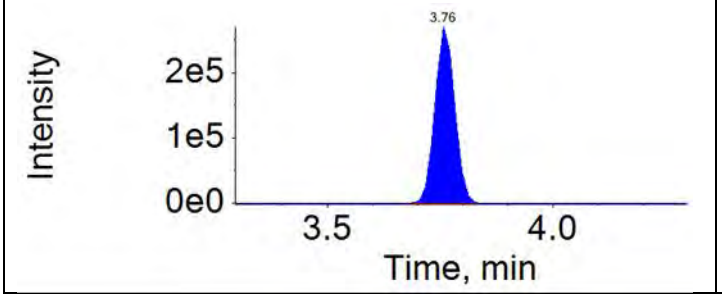
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

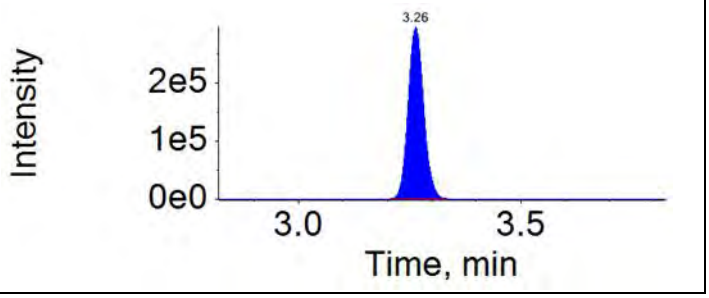
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



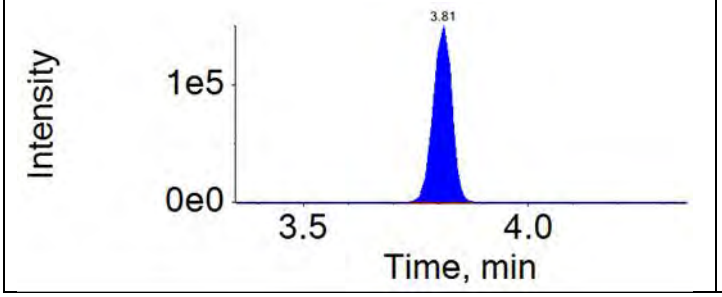


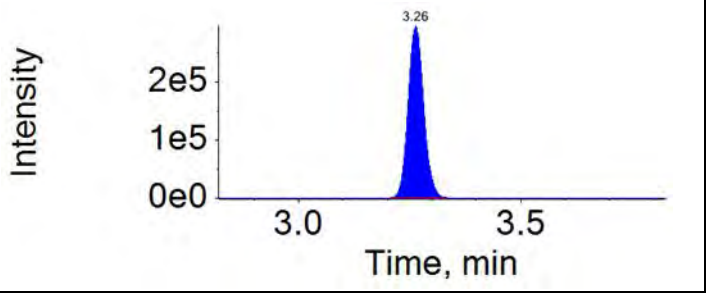
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



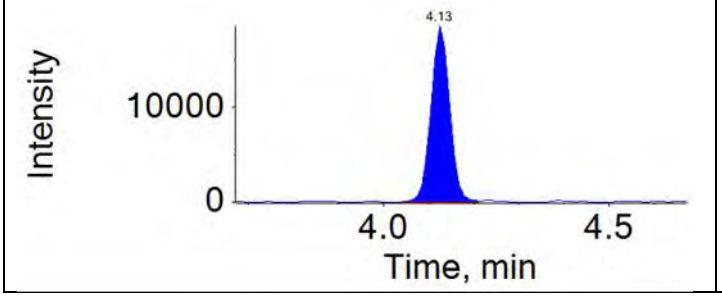


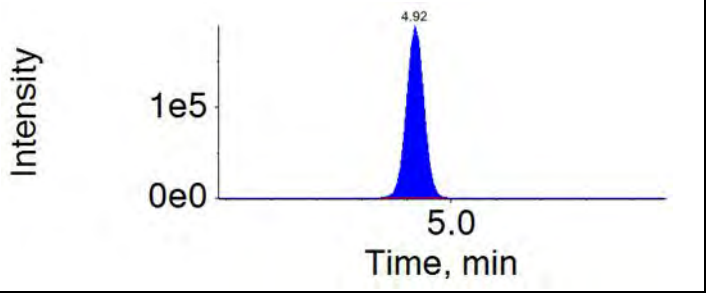
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

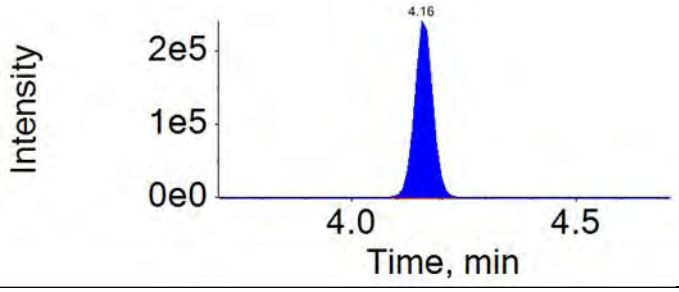
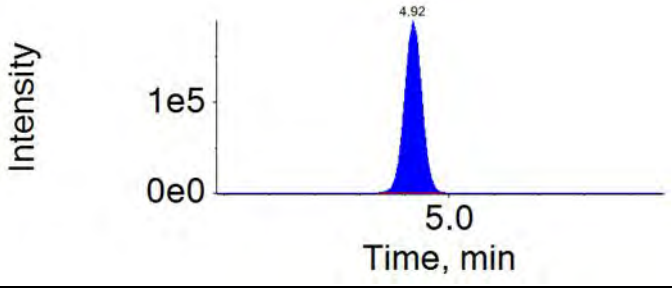


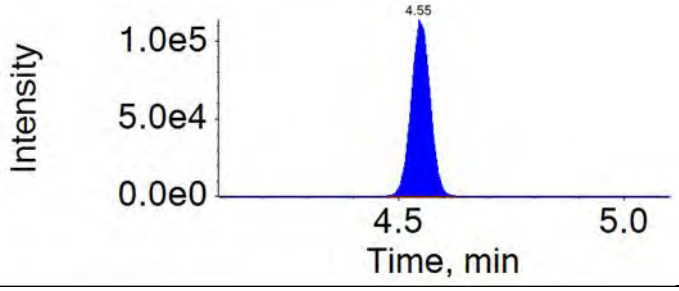
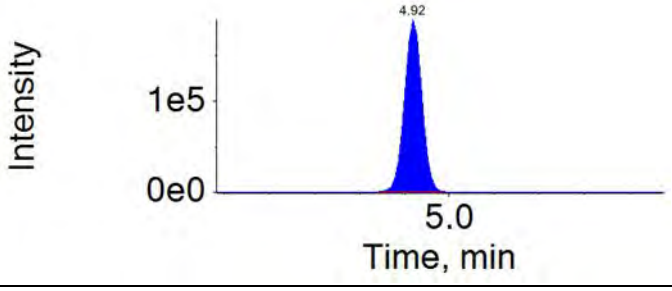


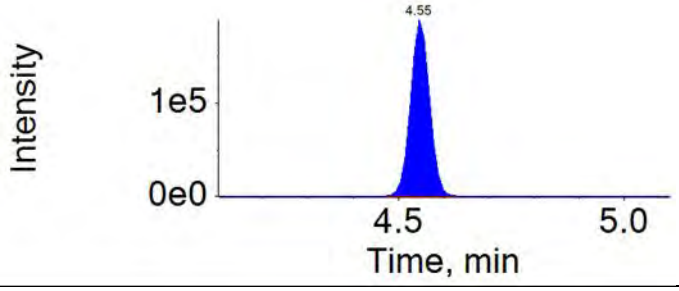
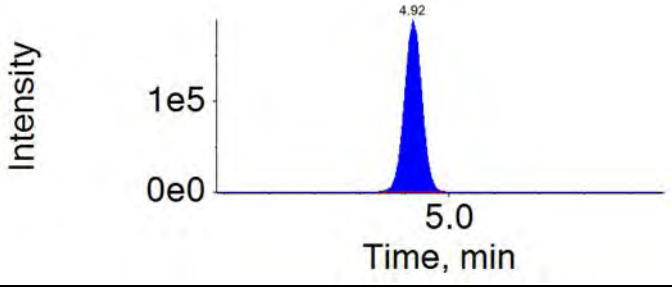
APPROVED
By JPT at 2:53 pm, 11/7/18

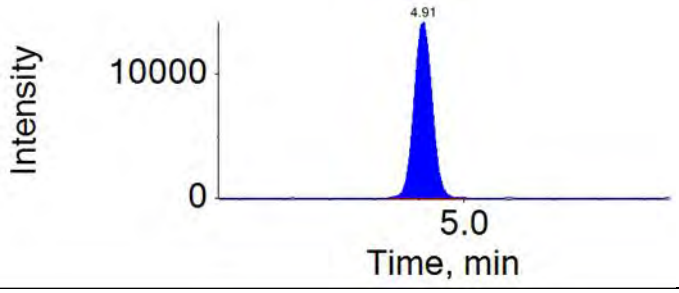
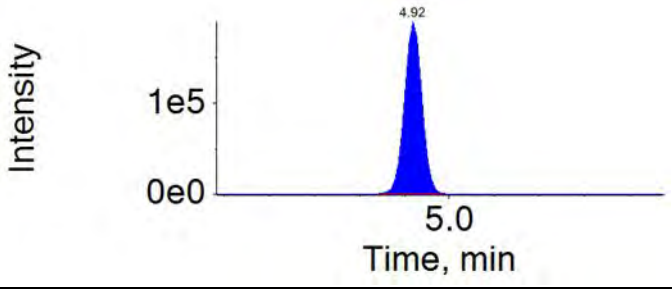
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

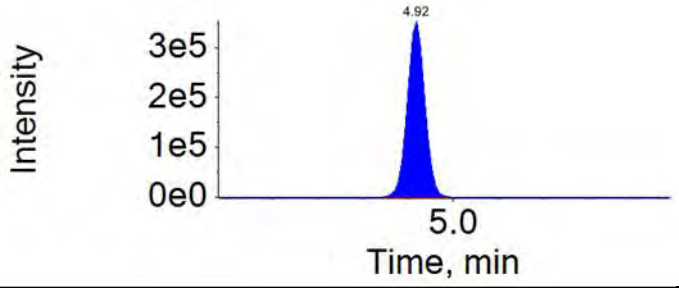
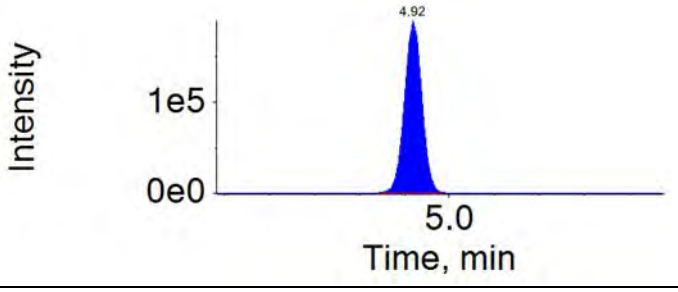
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

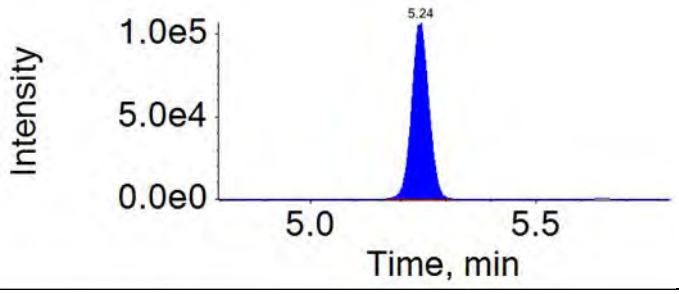
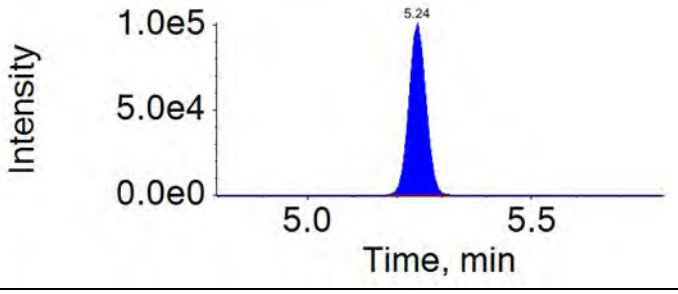
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

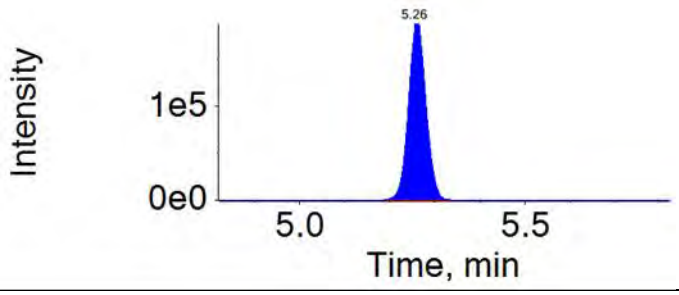
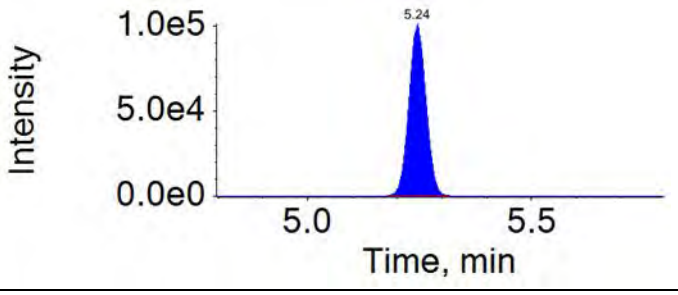
APPROVED
By JPT at 2:53 pm, 11/7/18

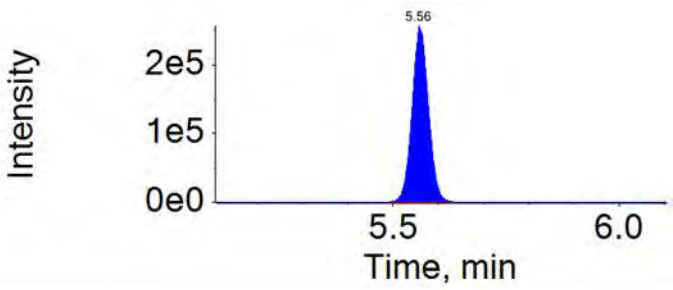
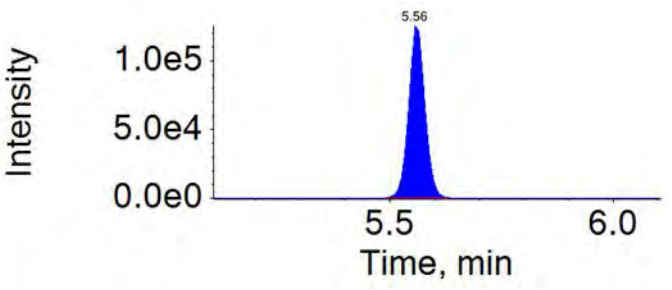
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

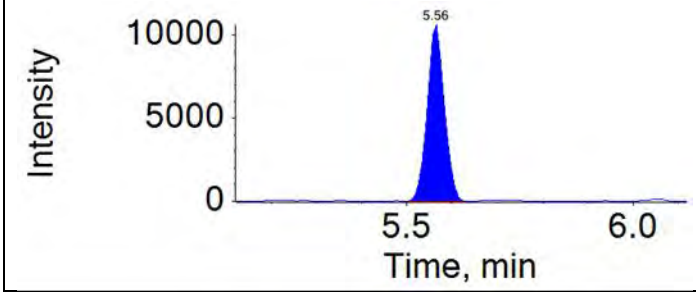
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

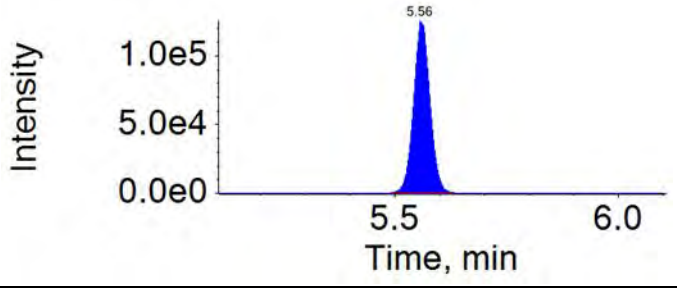
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

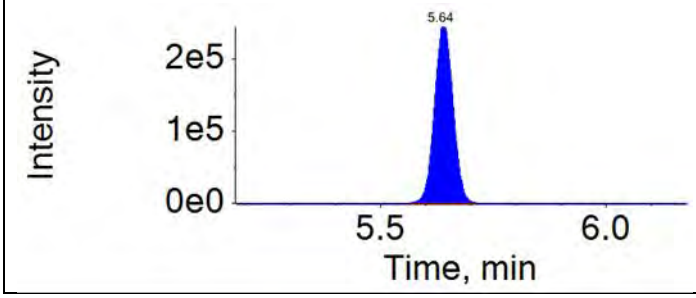
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

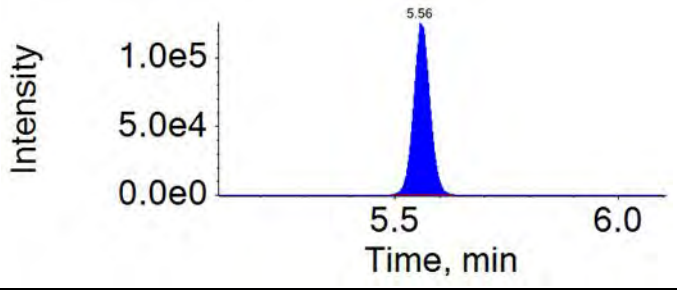
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



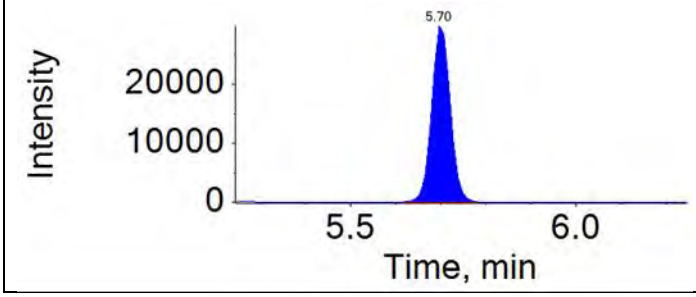


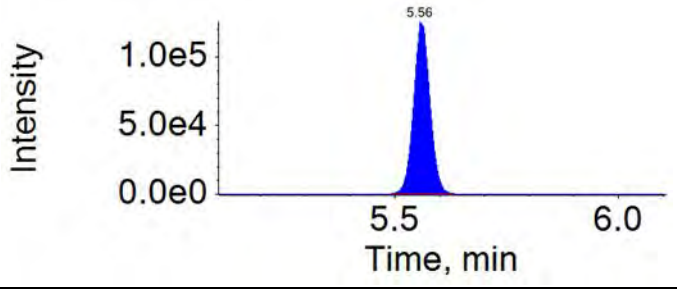
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



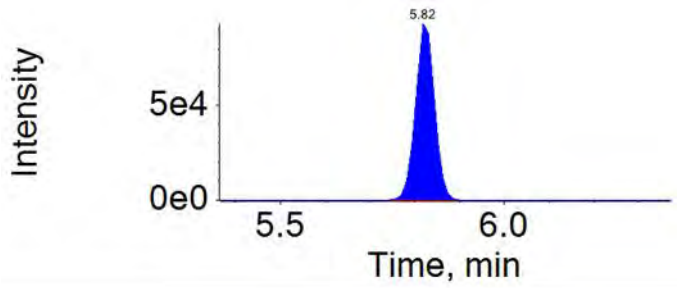


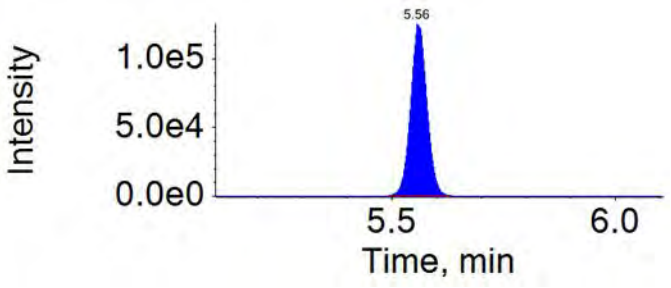
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

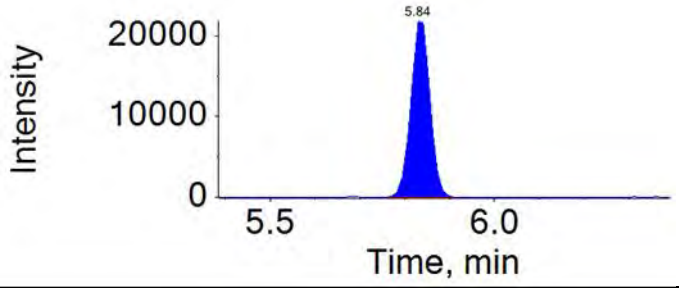
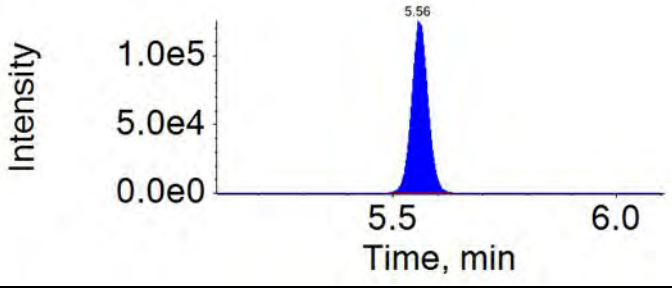


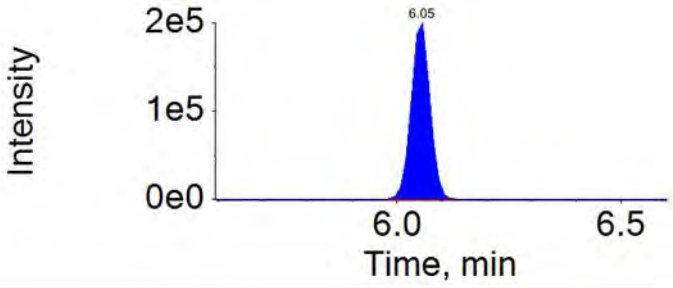
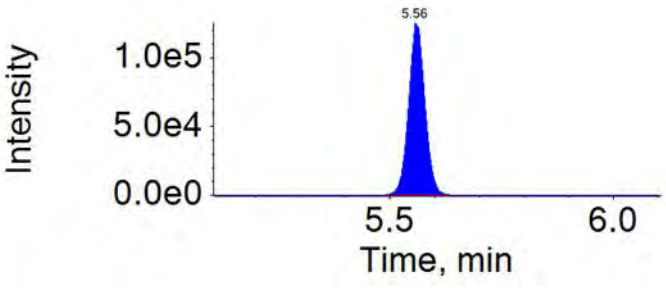


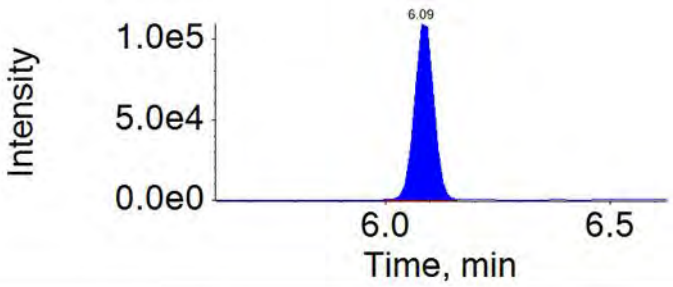
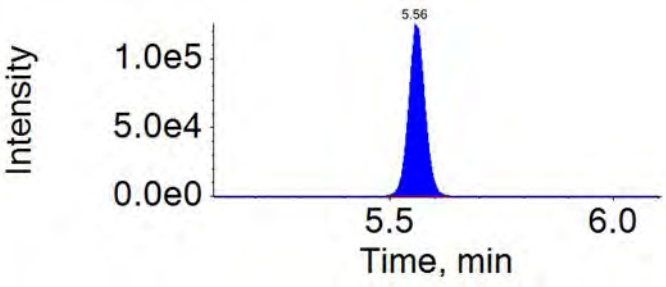
APPROVED
By JPT at 2:53 pm, 11/7/18

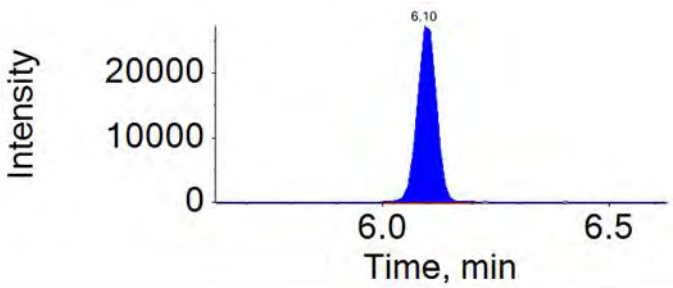
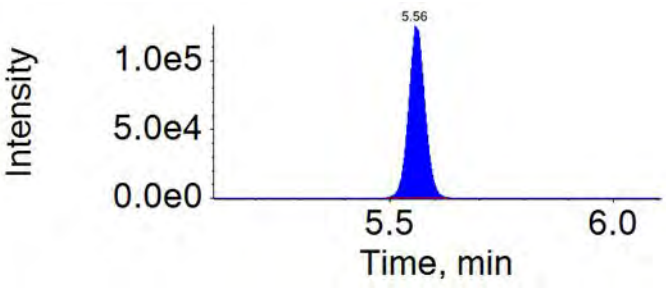
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

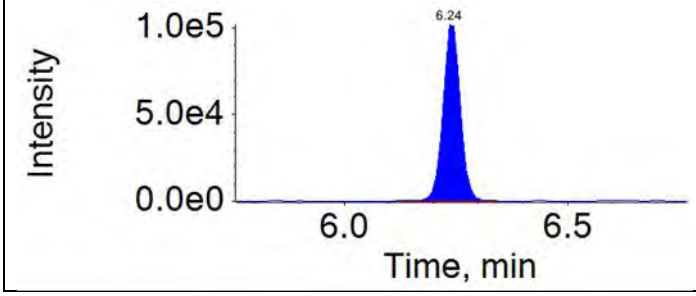
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

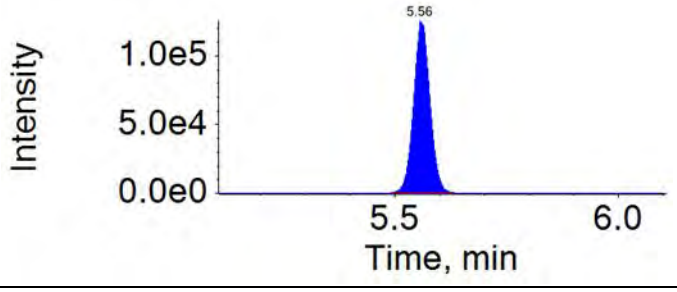
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

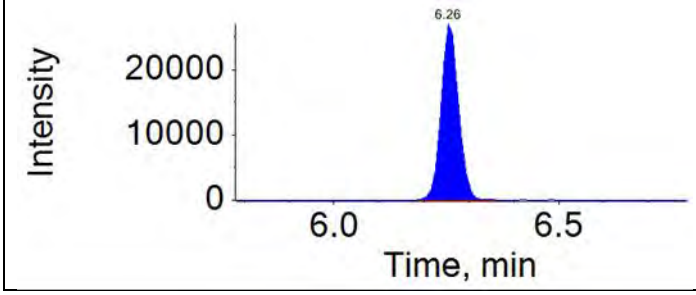
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

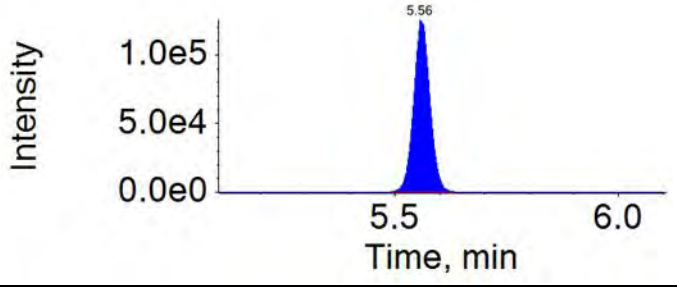
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



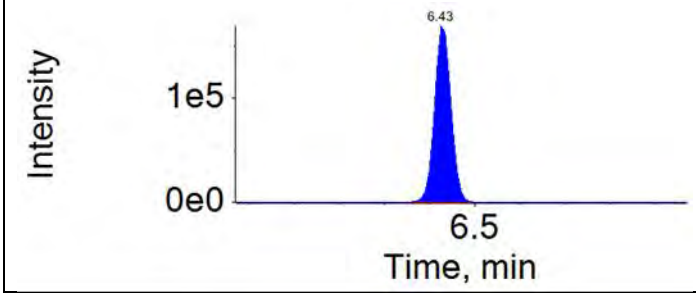


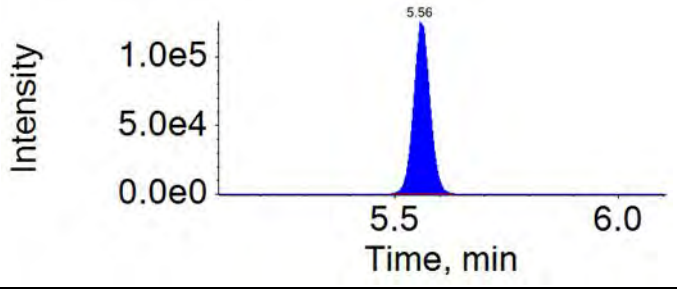
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

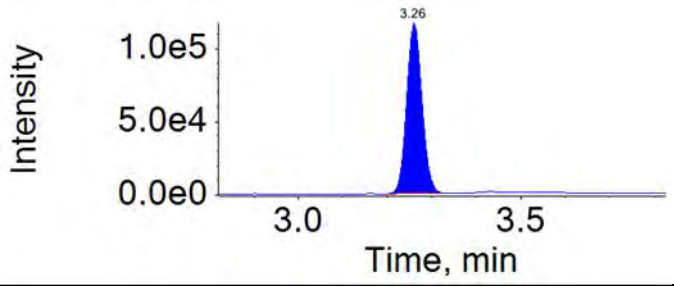
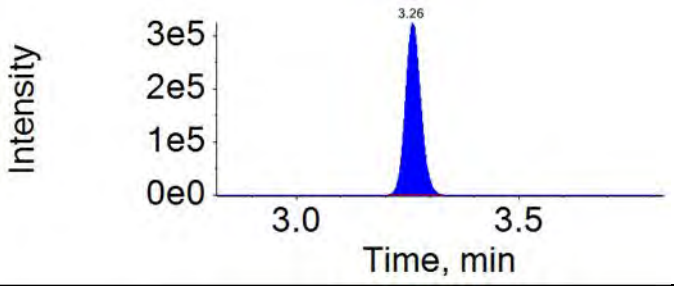


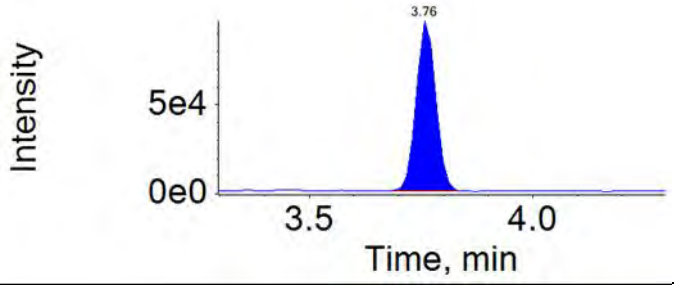
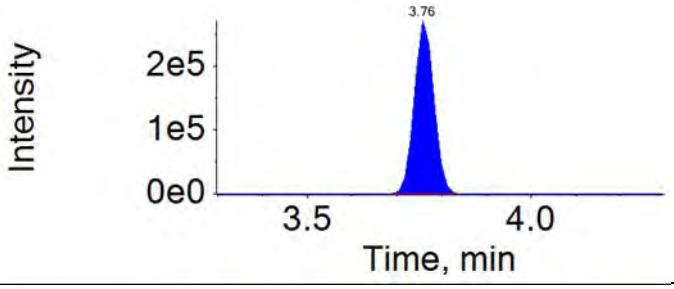


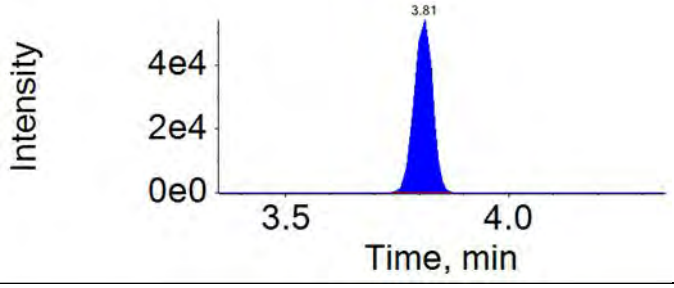
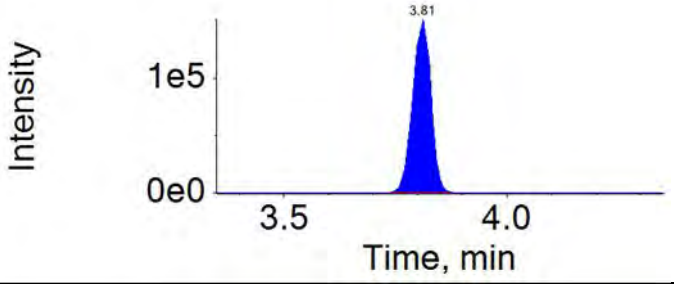
APPROVED
By JPT at 2:53 pm, 11/7/18

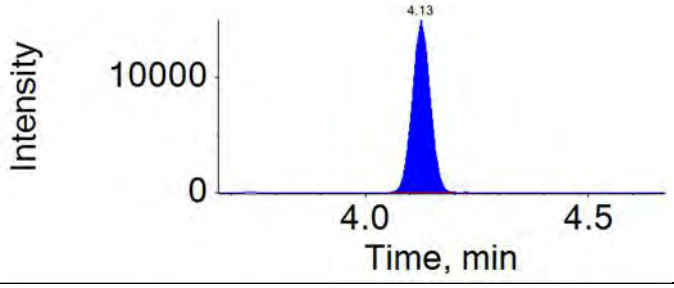
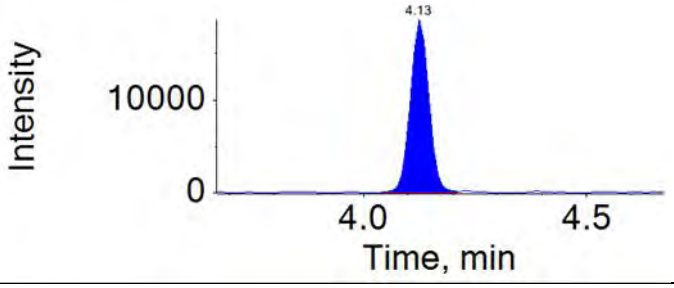
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

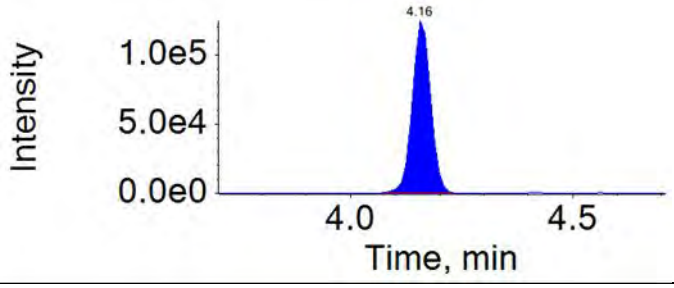
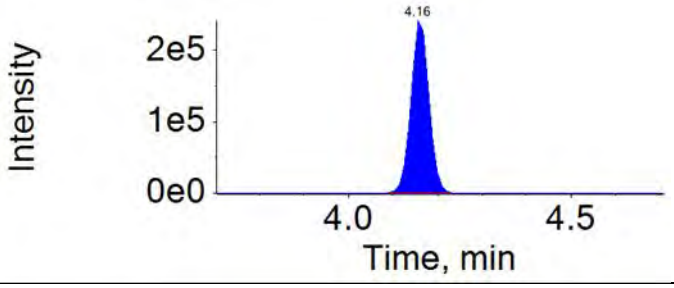
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

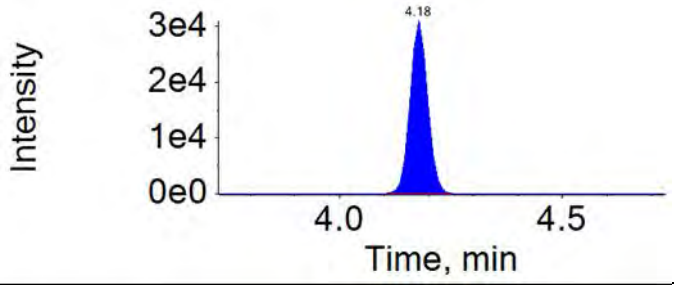
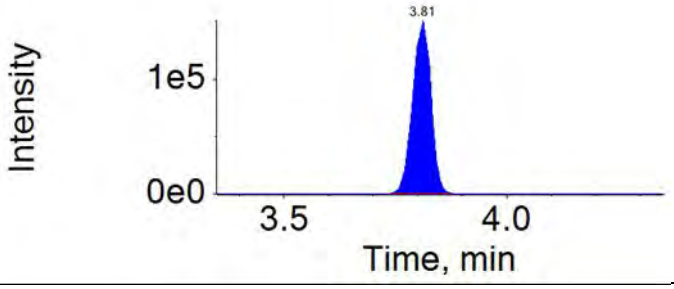
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

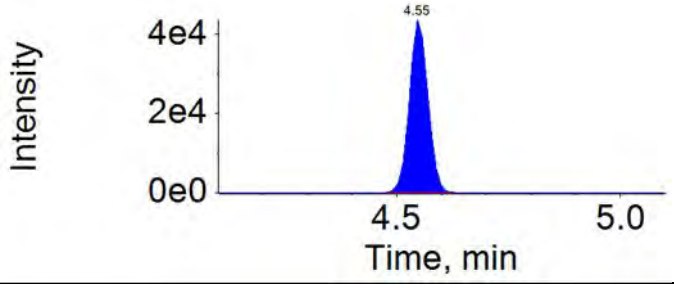
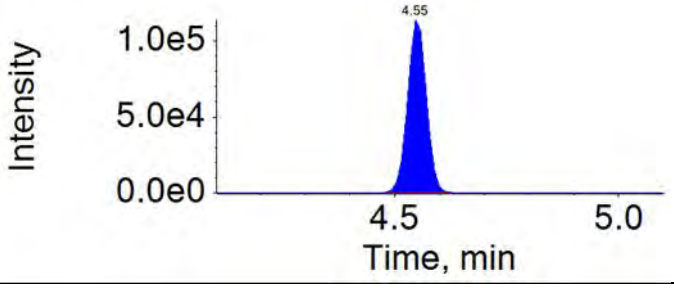
APPROVED
By JPT at 2:53 pm, 11/7/18

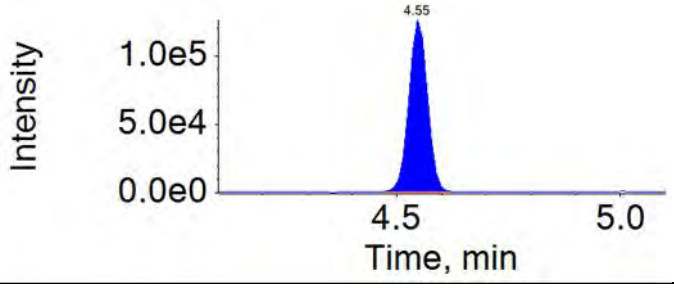
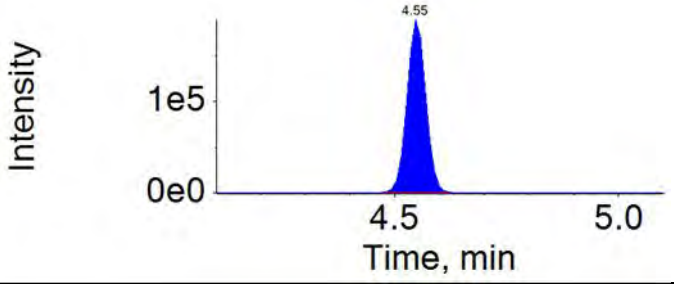
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

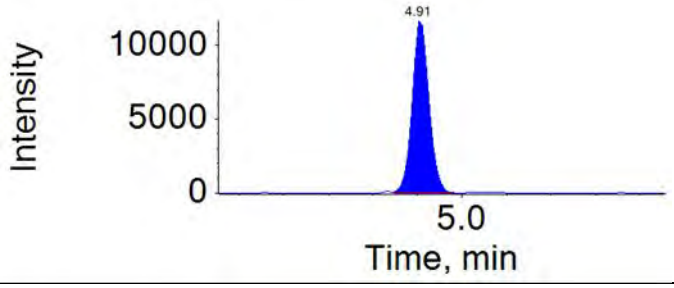
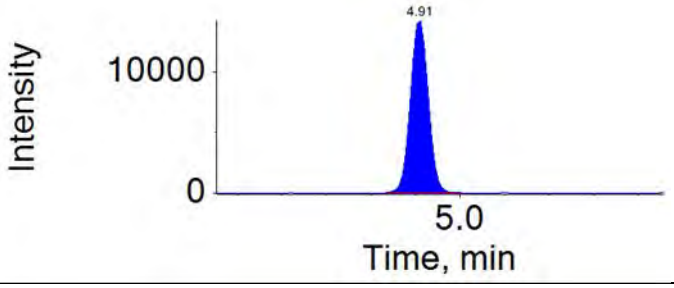
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

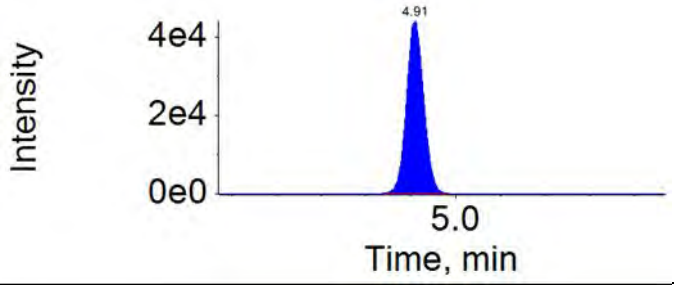
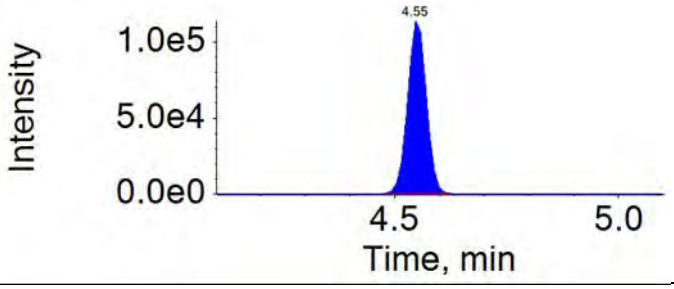
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

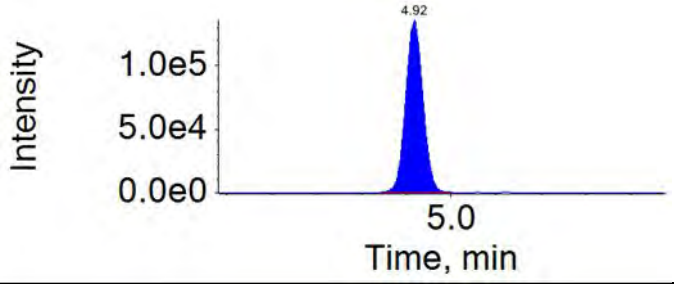
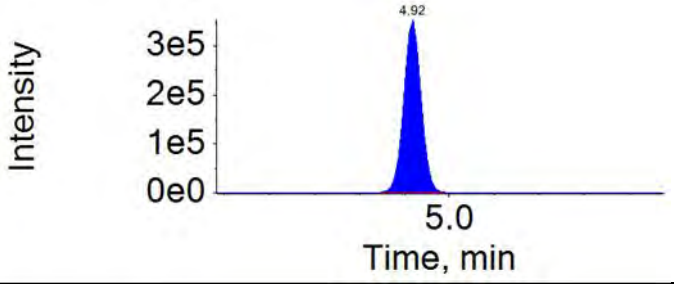
APPROVED
By JPT at 2:53 pm, 11/7/18

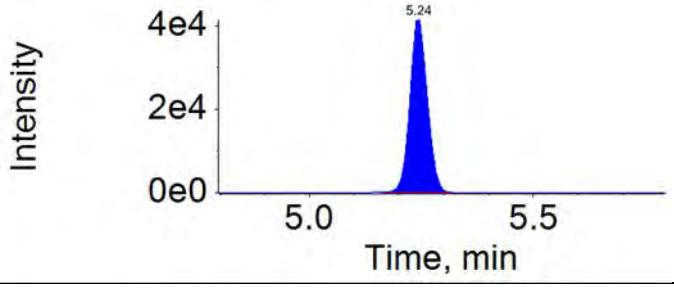
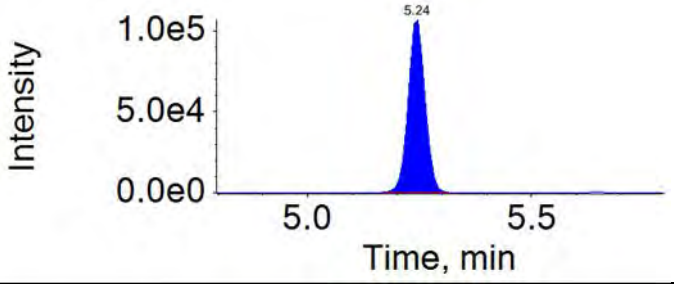
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

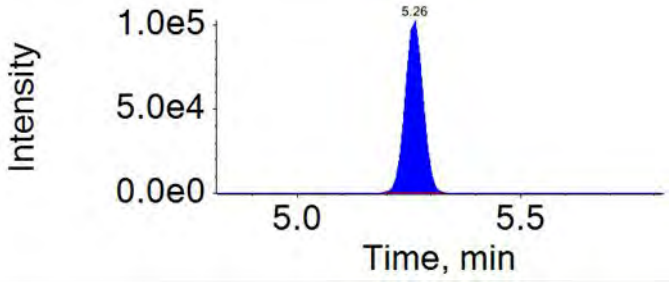
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

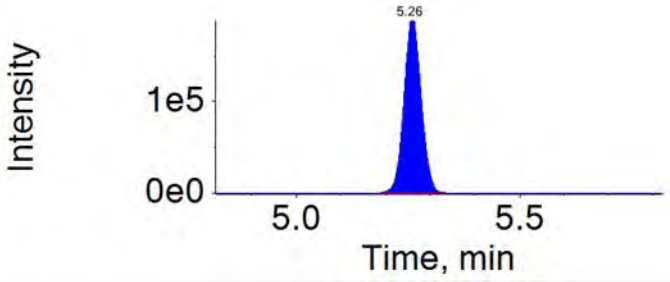
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

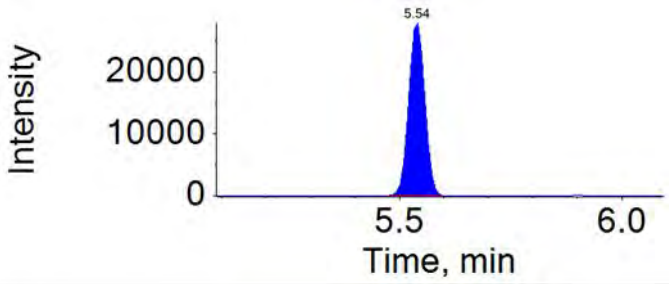
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

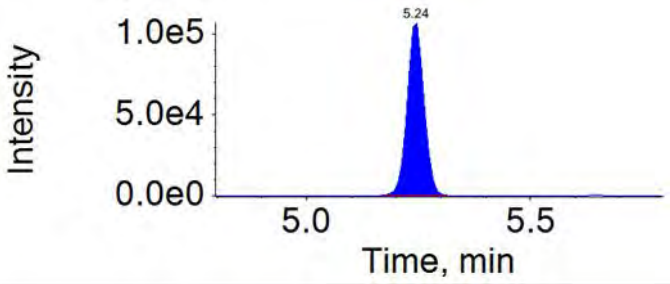
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



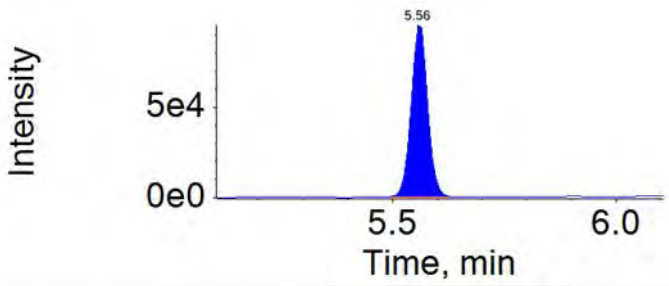


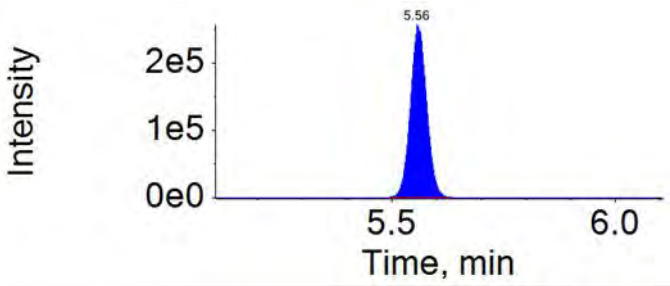
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



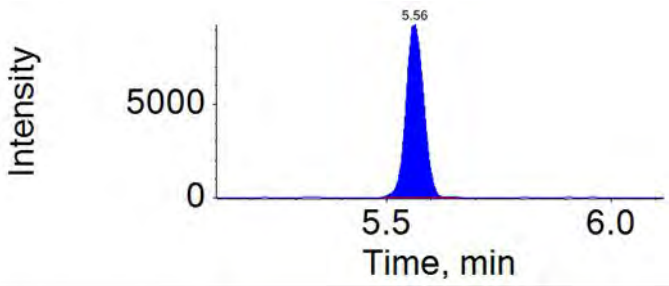


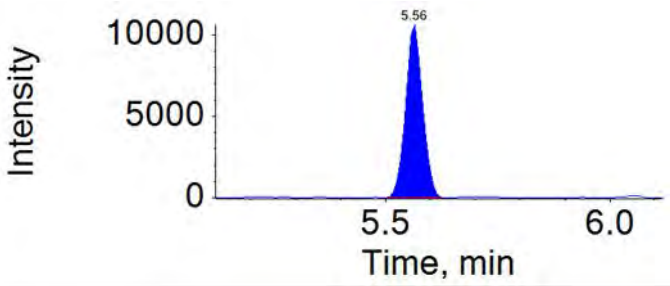
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

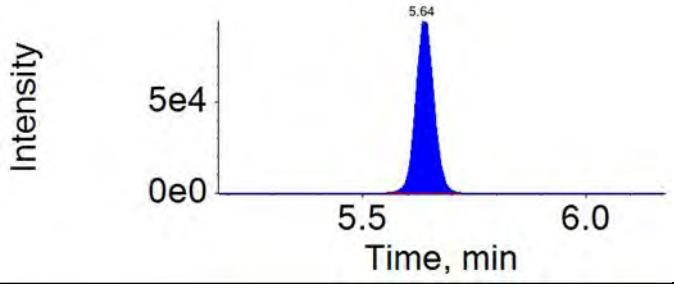
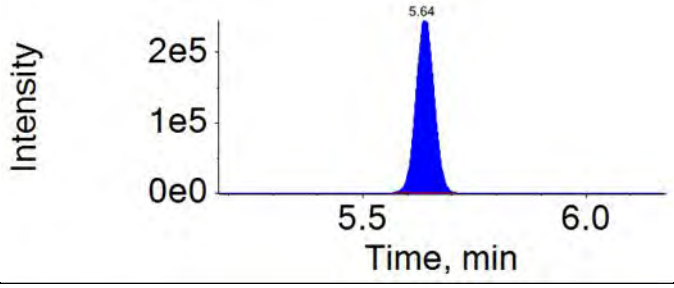


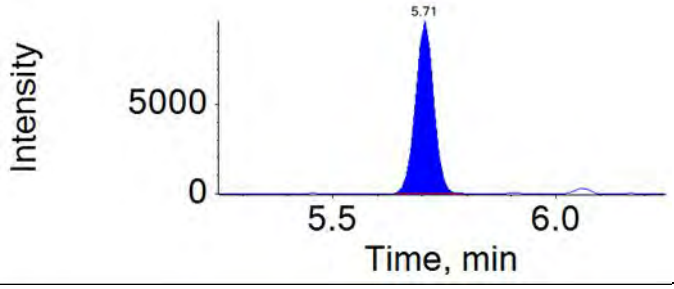
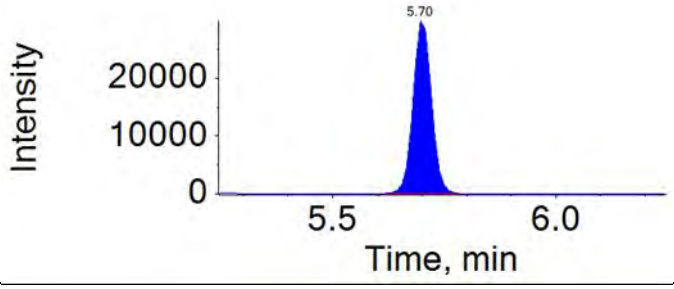


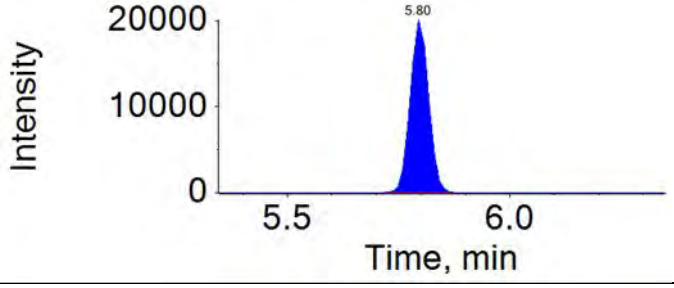
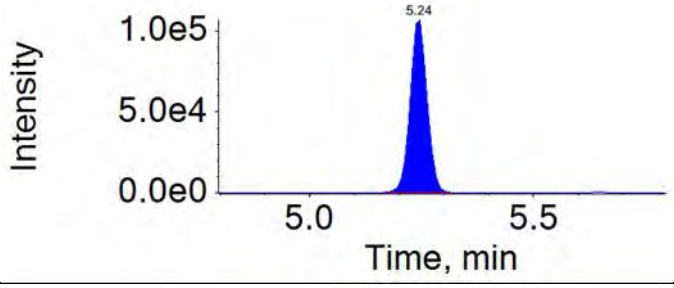
APPROVED
By JPT at 2:53 pm, 11/7/18

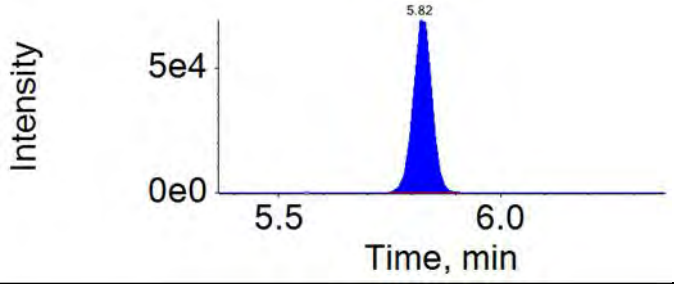
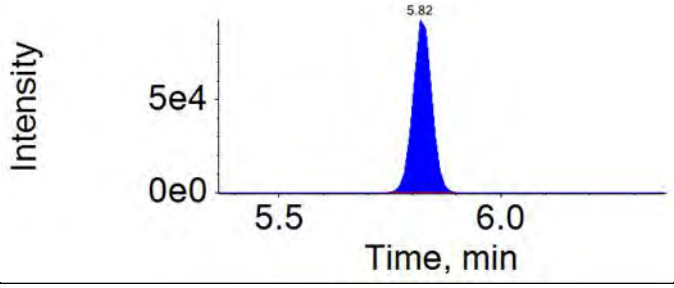
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

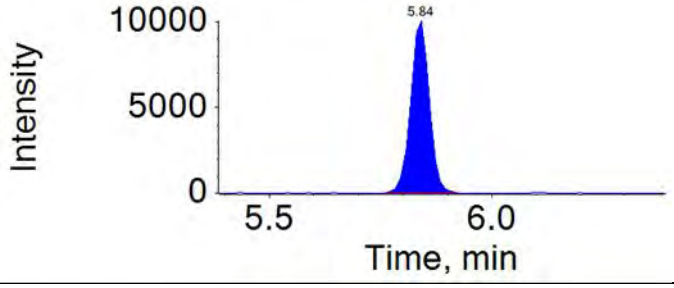
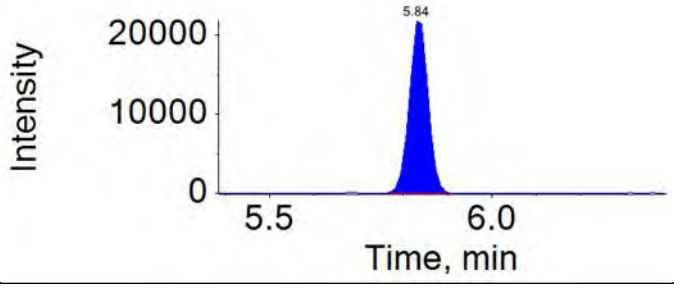
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

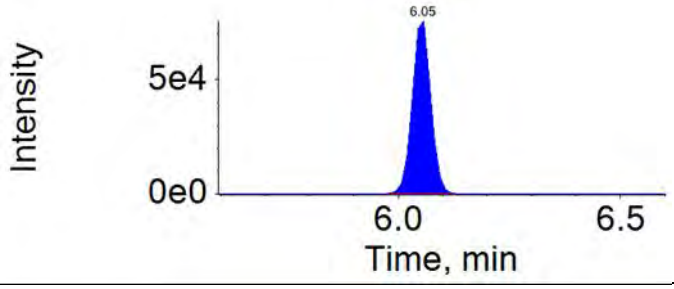
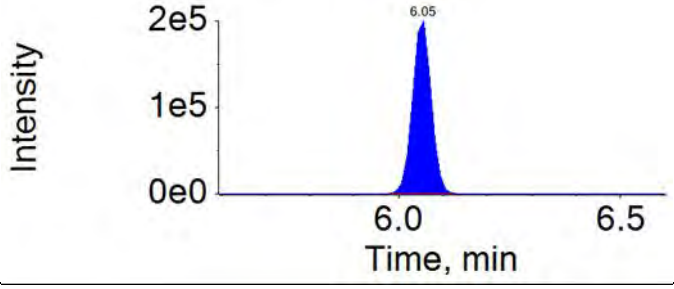
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

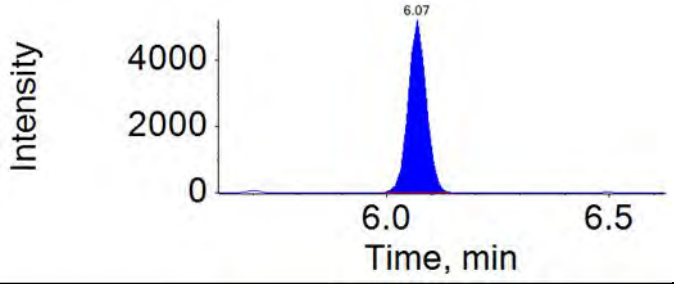
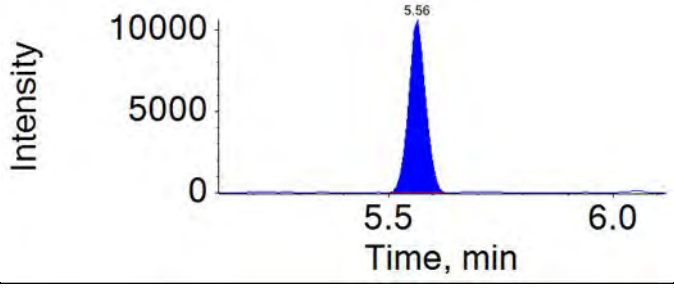
APPROVED
By JPT at 2:53 pm, 11/7/18

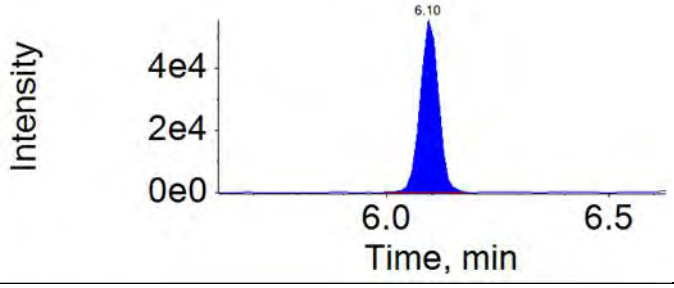
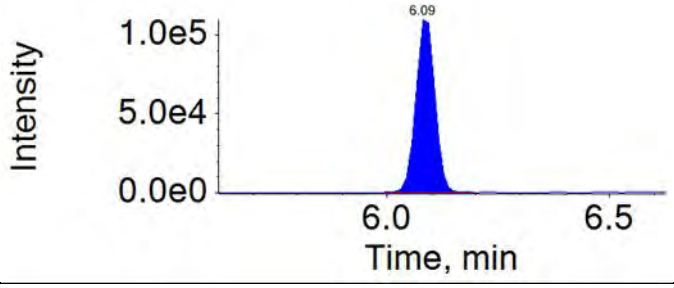
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

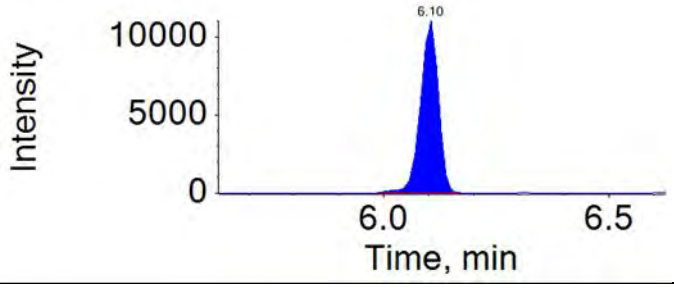
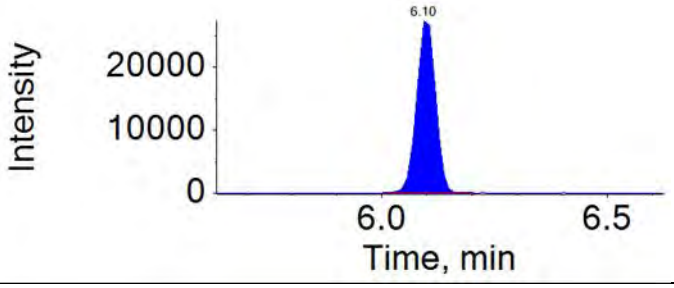
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

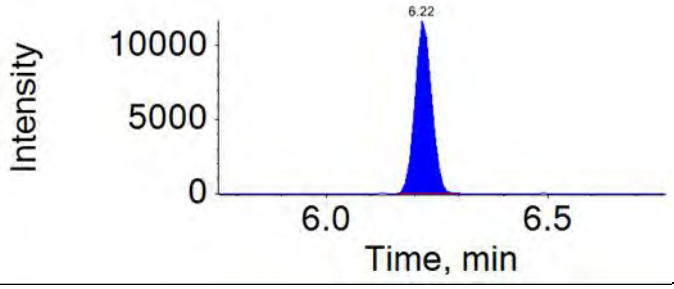
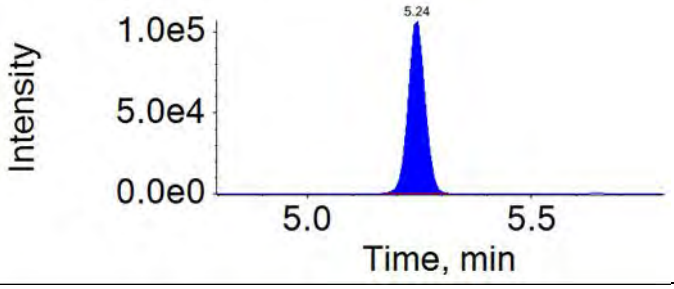
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

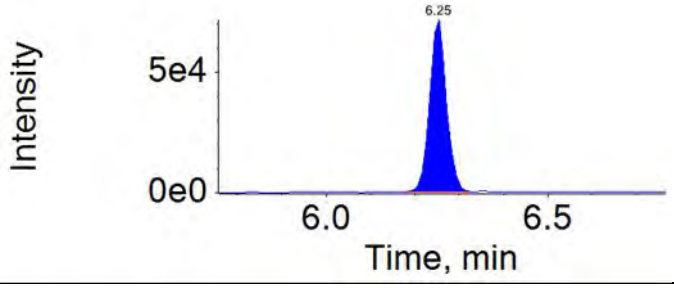
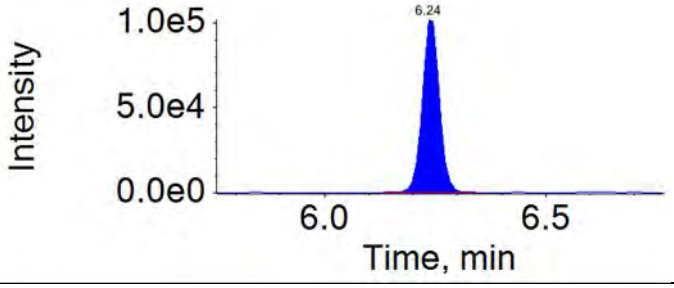
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

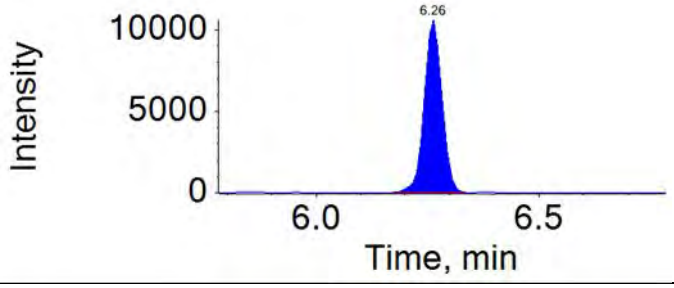
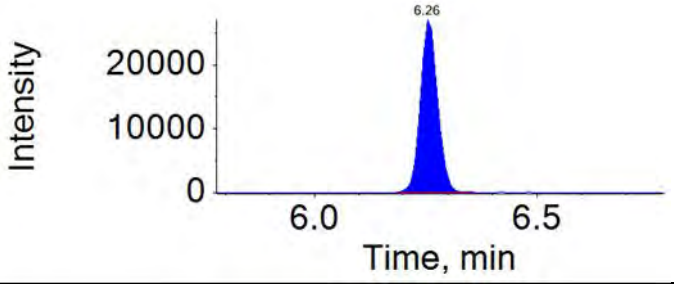
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0
	

Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0
	

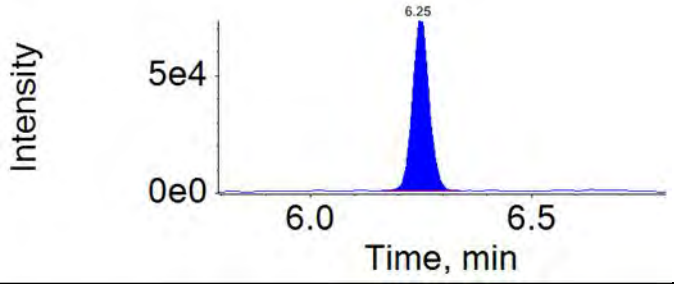
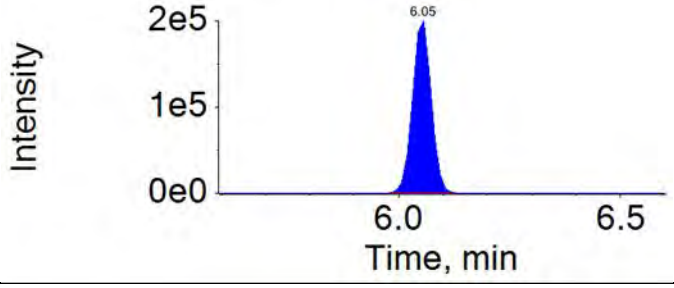
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0
	

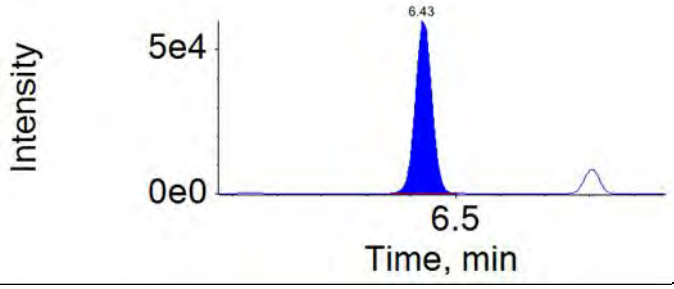
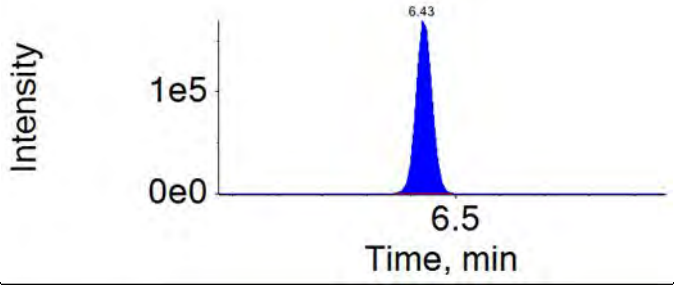
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0
	

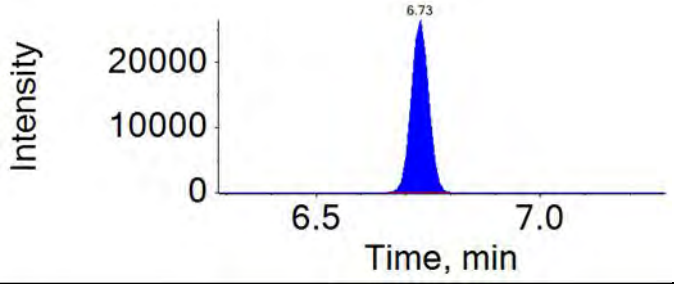
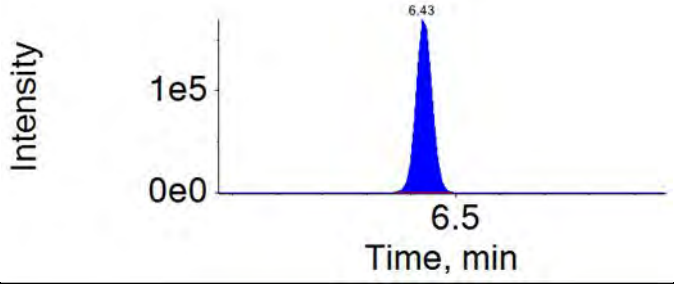
APPROVED
By JPT at 2:53 pm, 11/7/18

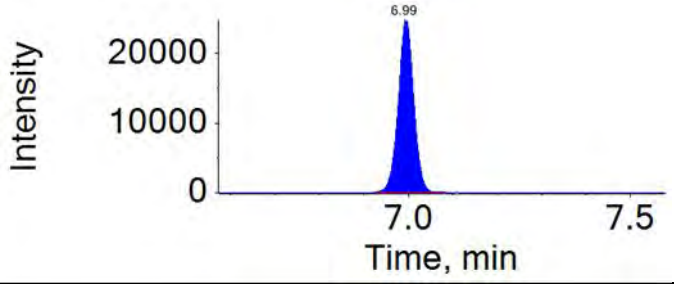
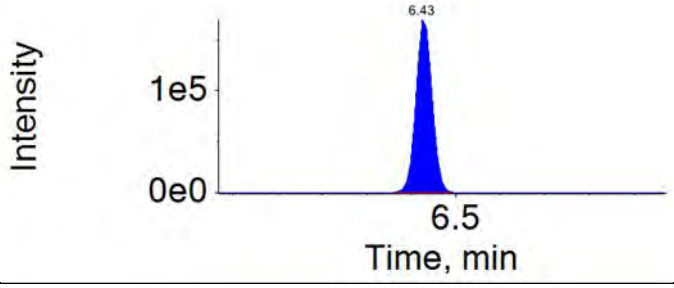
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

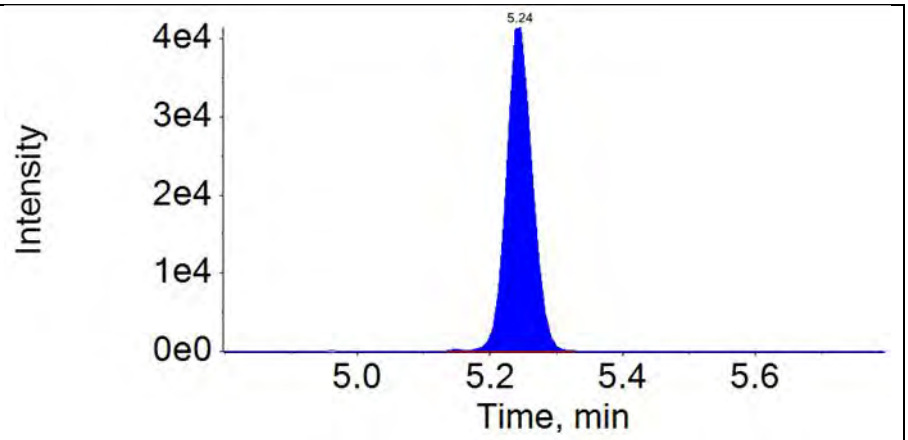
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
113697.4
Mass Range:
499.0 / 80.0
File Name:
18NOV07DCAL-20.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

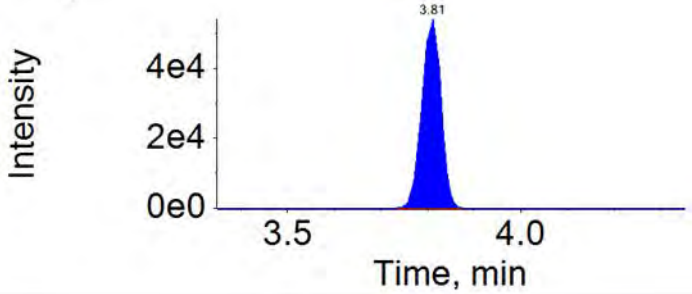
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-20.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	155917.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	59330.4	A	0.3576	0.3805	6	50	
4:2-FTS	4.13	1.00	41869.1	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	22969.1	A	0.6359	0.5486	-14	50	
PFHxA	4.16	1.00	355844.6	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	4420.8	A	0.0115	0.0124	8	50	
PFPeS	4.18	1.10	84840.7	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	44612.7	A	0.5384	0.5258	-2	50	
PFHxS	4.55	1.00	126167.9	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	44496.5	A	0.3569	0.3527	-1	50	
PFHpA	4.55	1.00	359438.8	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	17557.5	A	0.0577	0.0488	-15	50	
6:2-FTS	4.91	1.00	30418.5	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	19338.5	A	0.6752	0.6357	-6	50	
PFHpS	4.91	1.08	118682.9	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	47884.4	A	0.3950	0.4035	2	50	
PFOA	4.92	1.00	363186.2	A	1.0000	1.0000			
PFOA_2	4.92	1.00	21404.0	A	0.0635	0.0589	-7	50	
PFOS	5.24	1.00	113455.6	M	1.0000	1.0000			
PFOS_2	5.25	1.00	38360.0	A	0.3494	0.3381	-3	50	
PFNA	5.26	1.00	284061.5	A	1.0000	1.0000			
PFNA_2	5.26	1.00	5433.5	A	0.0207	0.0191	-8	50	
PFNS	5.54	1.06	70168.8	A	1.0000	1.0000			
PFNS_2	5.54	1.06	34369.0	A	0.4890	0.4898	0	50	
PFDA	5.56	1.00	243089.4	A	1.0000	1.0000			
PFDA_2	5.56	1.00	1775.1	A	0.0057	0.0073	29	50	
8:2-FTS	5.56	1.00	25674.2	A	1.0000	1.0000			
8:2-FTS_2	5.56	1.00	17540.1	A	0.6169	0.6832	11	50	
NMeFOSAA	5.71	1.00	27107.5	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	6964.7	A	0.2206	0.2569	16	50	
PFDS	5.80	1.11	57911.4	A	1.0000	1.0000			
PFDS_2	5.80	1.11	30519.9	A	0.4648	0.5270	13	50	
PFUnDA	5.82	1.00	206684.1	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	912.7	A	0.0031	0.0044	40	50	
NEtFOSAA	5.84	1.00	29353.4	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	17948.8	A	0.6082	0.6115	1	50	
PFDoDA	6.05	1.00	220745.0	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	3019.9	A	0.0109	0.0137	25	50	
10:2-FTS	6.07	1.09	14526.2	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	13571.8	A	0.7082	0.9343	32	50	
PFTrDA	6.25	1.03	191338.9	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	1915.2	A	0.0096	0.0100	4	50	
PFTeDA	6.43	1.00	153182.8	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	1214.6	A	0.0055	0.0079	43	50	
PFHxDA	6.73	1.05	71156.3	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	4385.3	A	0.0596	0.0616	3	50	
PFODA	6.99	1.09	60356.7	A	1.0000	1.0000			
PFODA_2	6.99	1.09	1801.4	A	0.0257	0.0298	16	50	

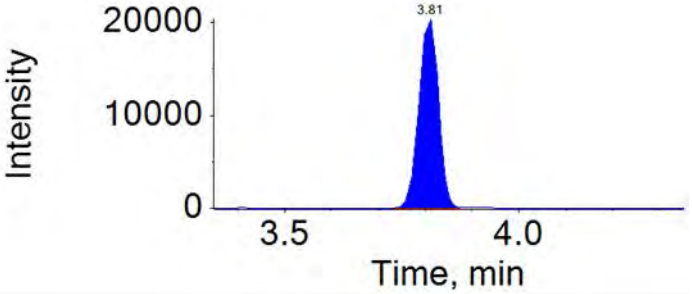
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

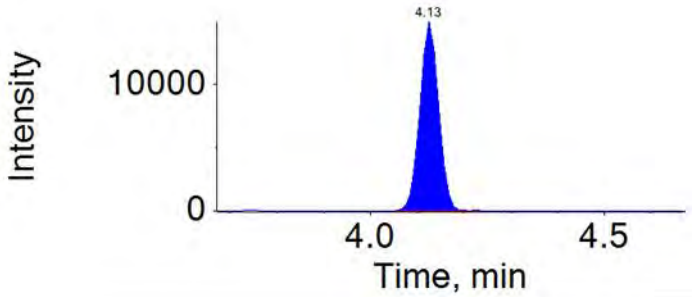
Component: PFBS
Primary Mass: 299.0 / 80.0



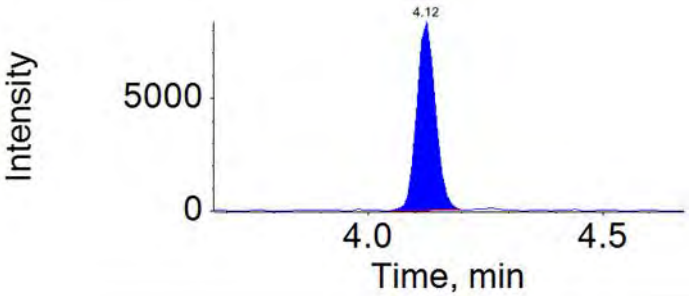
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



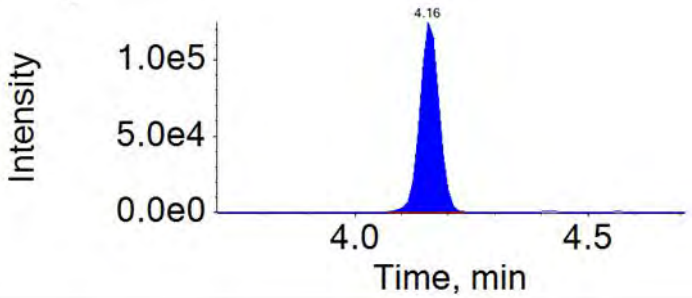
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



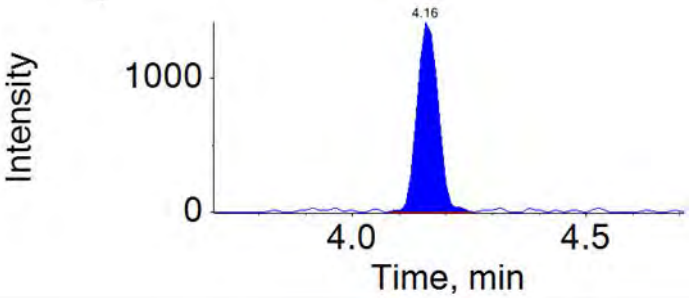
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



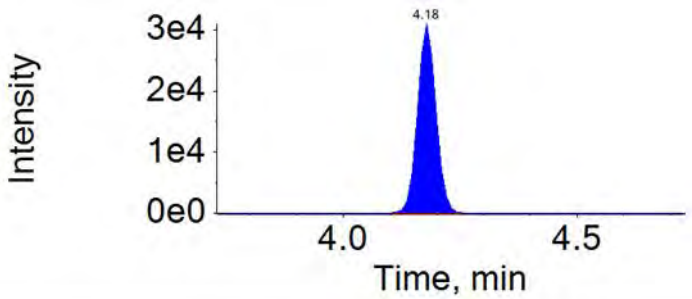
Component: PFHxA
Primary Mass: 313.0 / 269.0



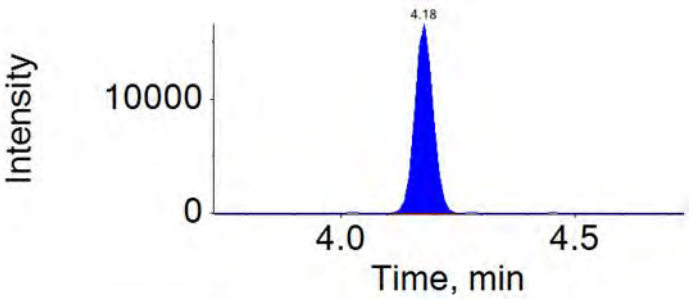
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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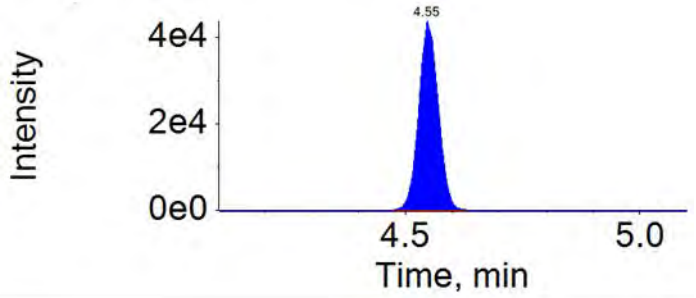
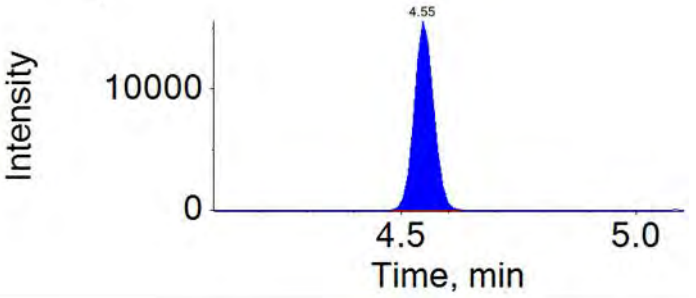
By umar at 5:23 pm, 11/9/18

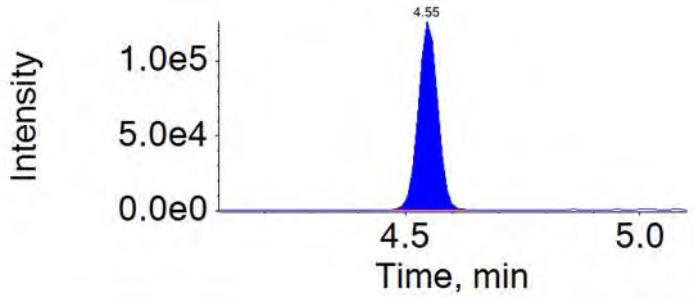
Component: PFHxS
Primary Mass: 399.0 / 80.0



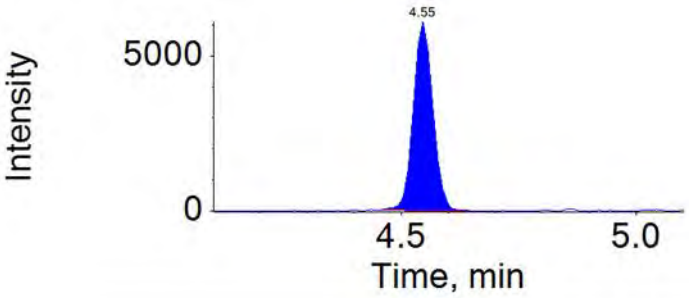
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



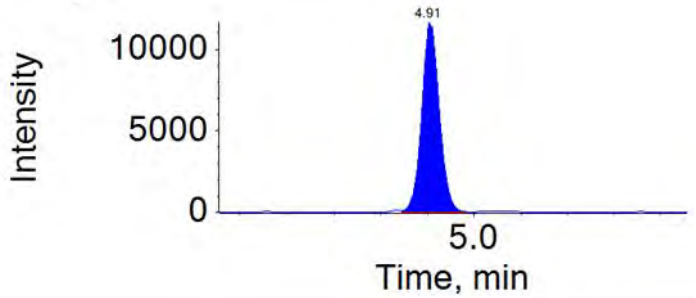
Component: PFHpA
Primary Mass: 363.0 / 319.0



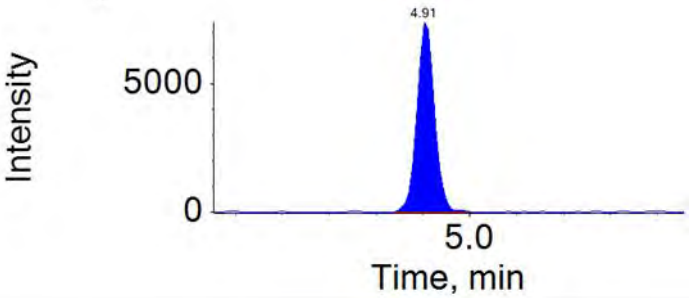
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



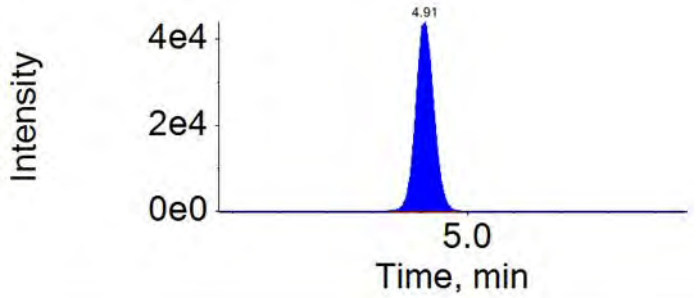
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



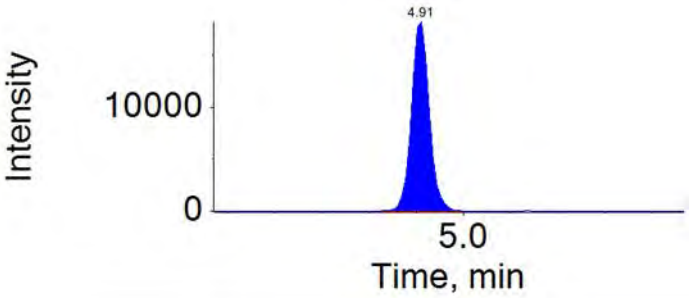
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



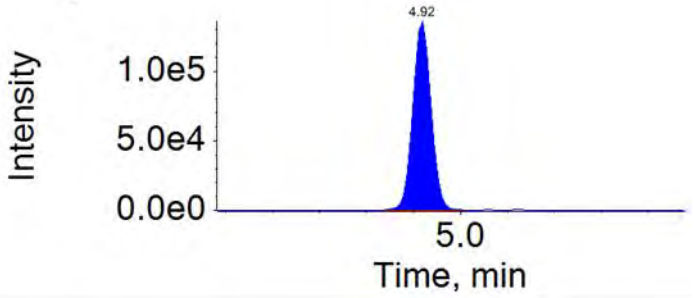
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



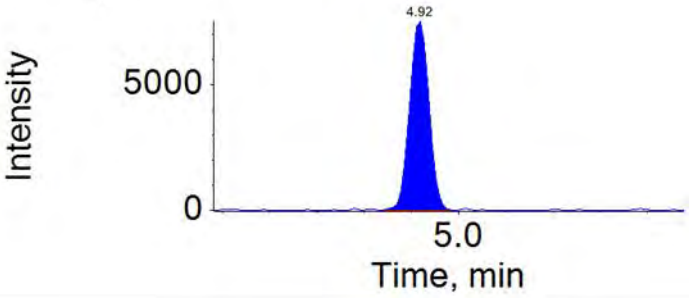
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

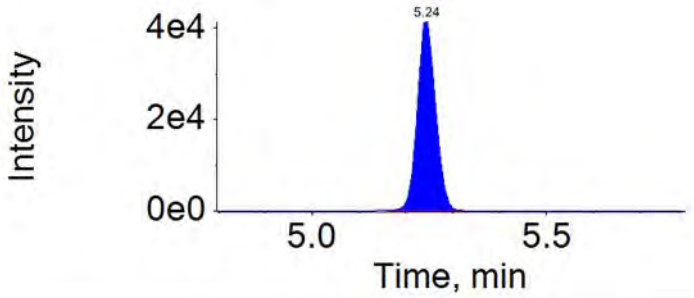
Component: PFOA
Primary Mass: 413.0 / 369.0



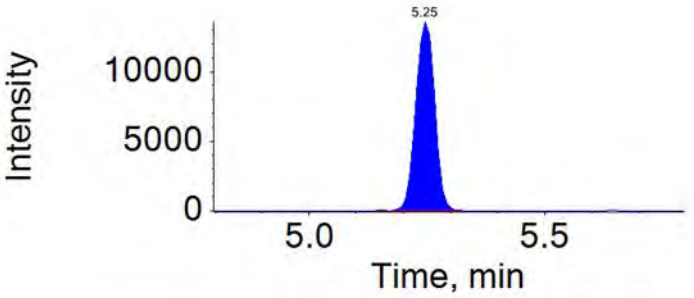
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



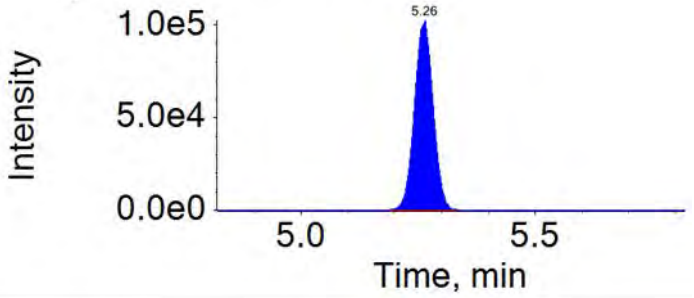
Component: PFOS
Primary Mass: 499.0 / 80.0



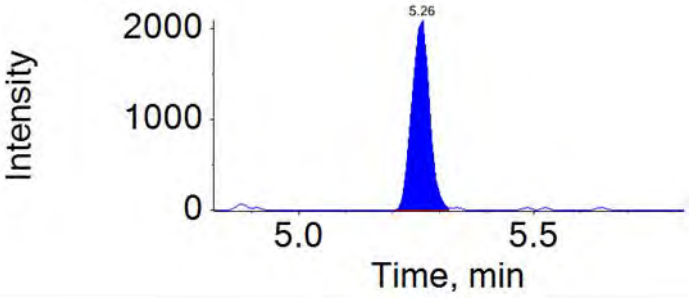
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



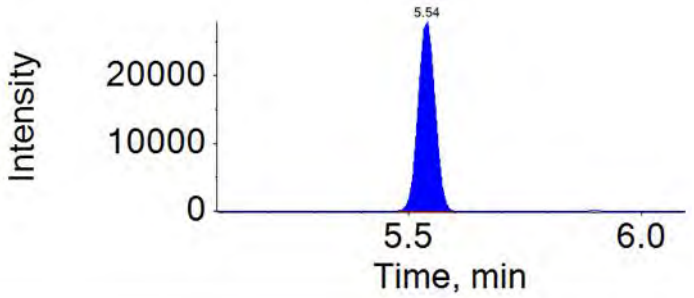
Component: PFNA
Primary Mass: 463.0 / 419.0



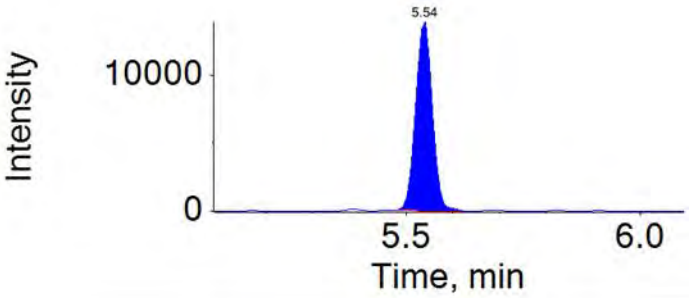
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



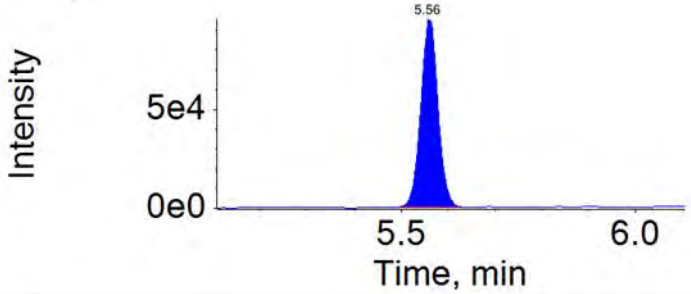
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



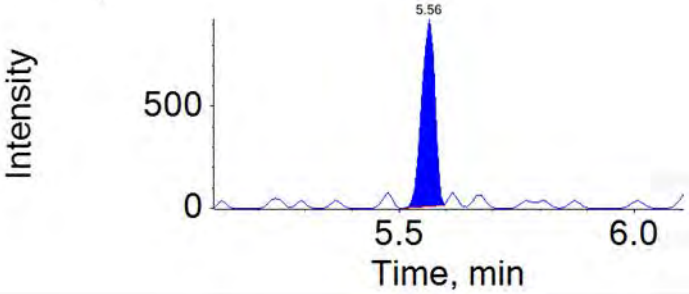
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

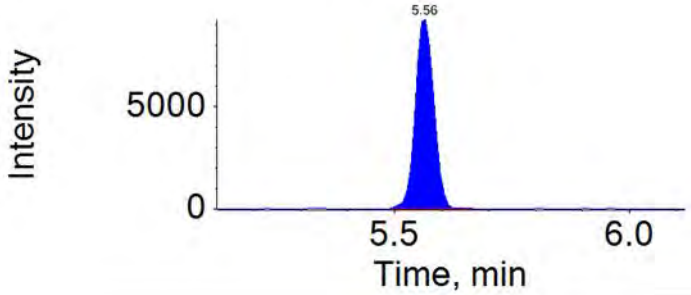
Component: PFDA
Primary Mass: 513.0 / 469.0



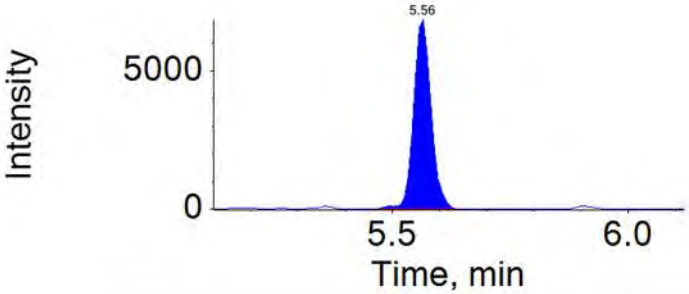
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



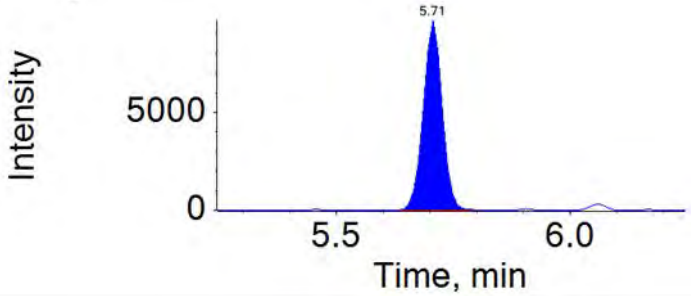
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



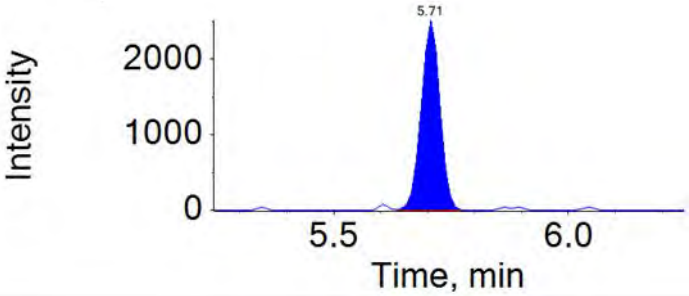
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



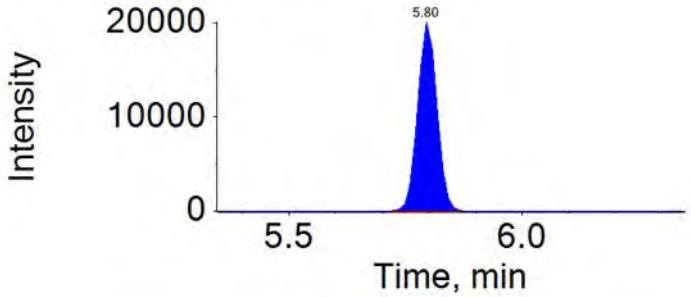
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



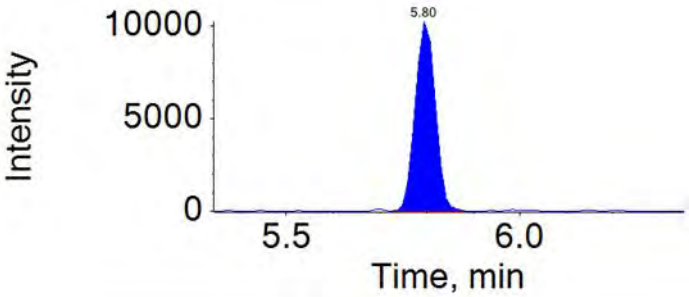
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



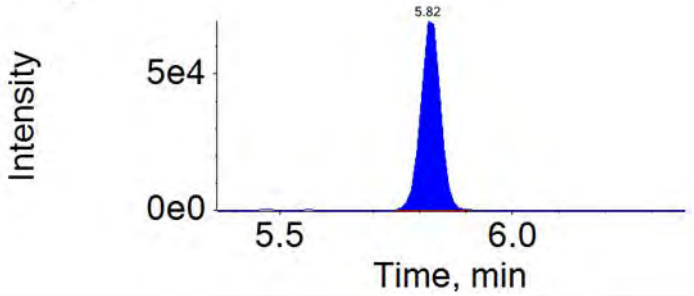
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



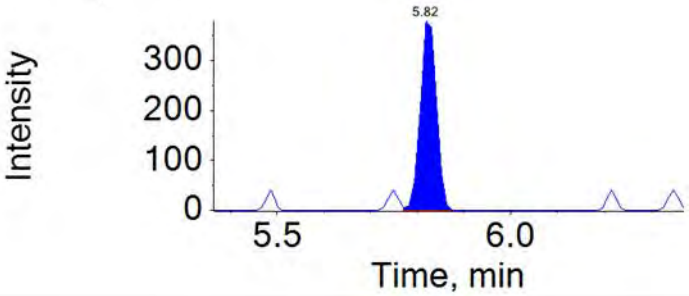
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

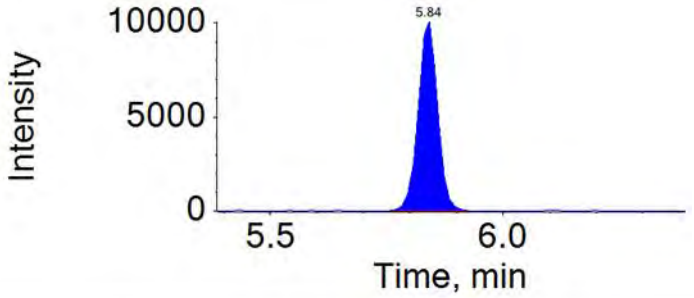
Component: PFUnDA
Primary Mass: 563.0 / 519.0



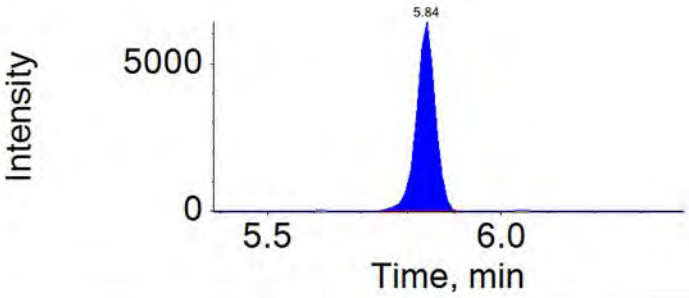
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



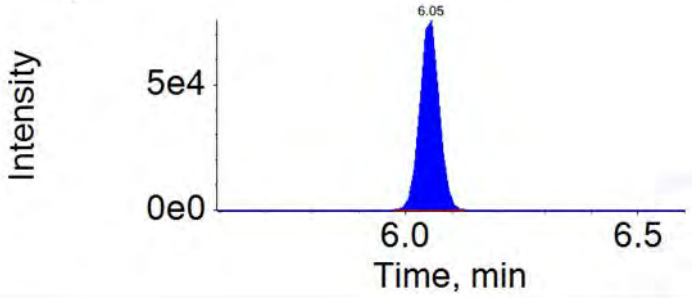
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



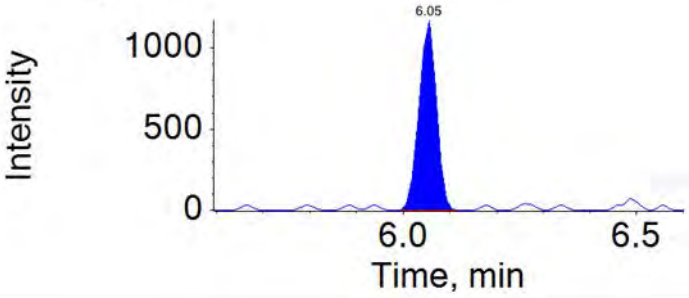
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



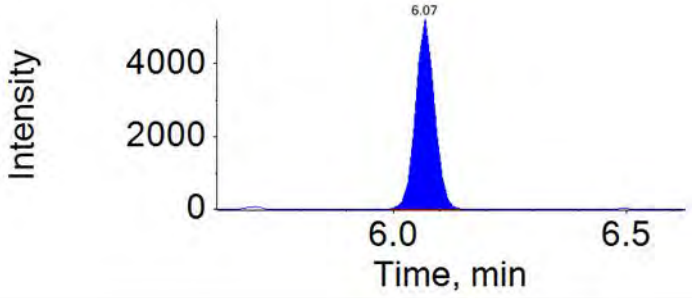
Component: PFDoDA
Primary Mass: 613.0 / 569.0



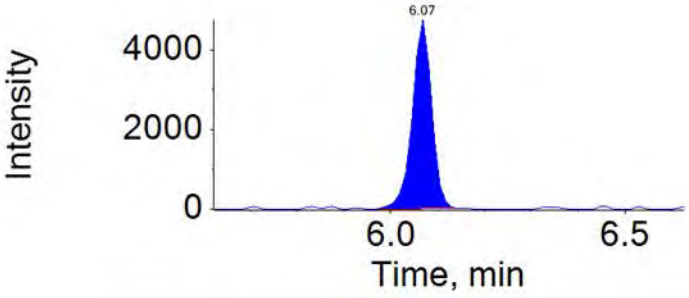
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



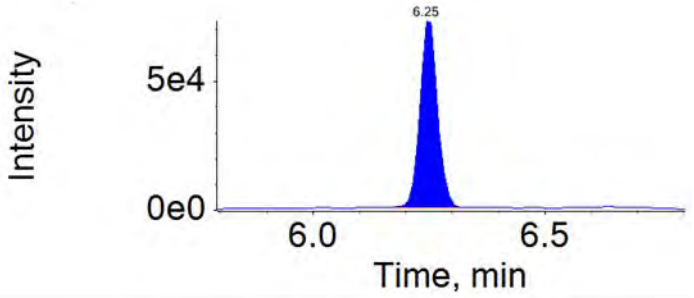
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



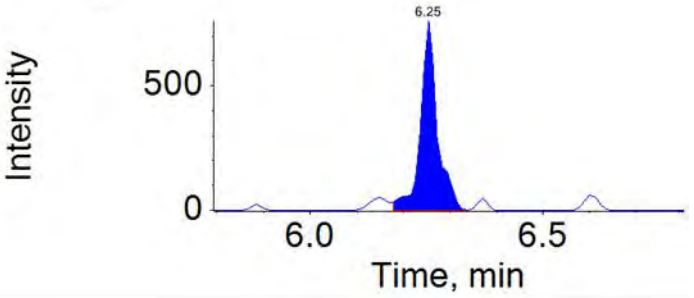
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

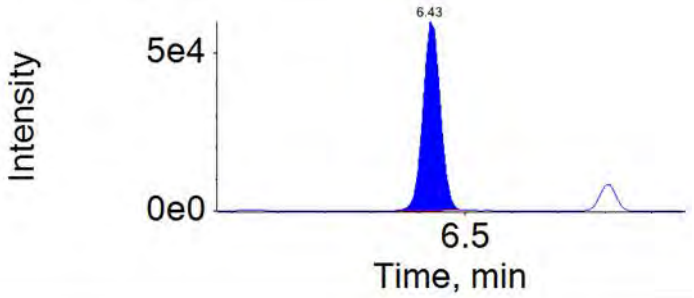
Component: PFTrDA
Primary Mass: 663.0 / 619.0



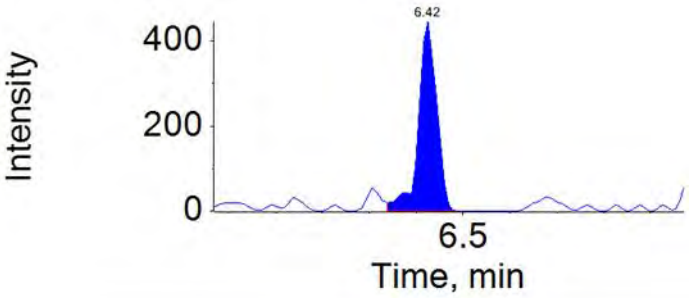
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



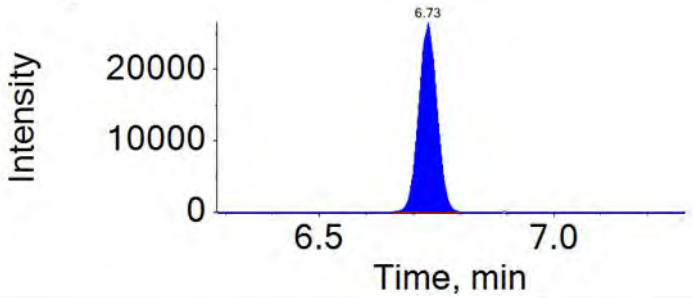
Component: PFTeDA
Primary Mass: 713.0 / 669.0



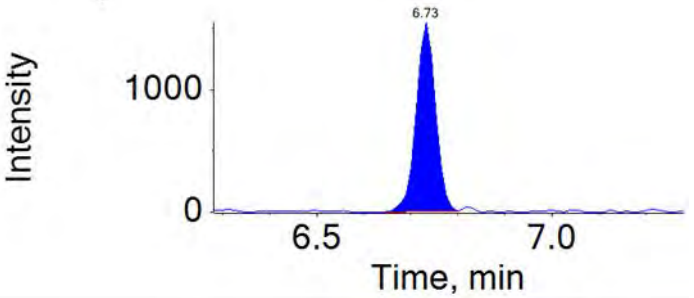
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



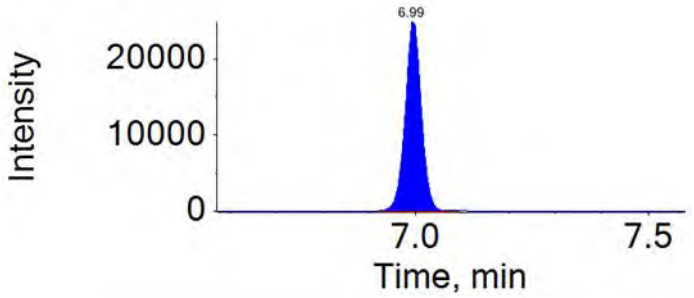
Component: PFHxDA
Primary Mass: 813.0 / 769.0



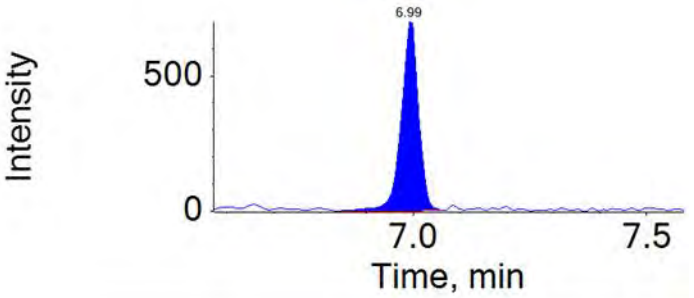
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



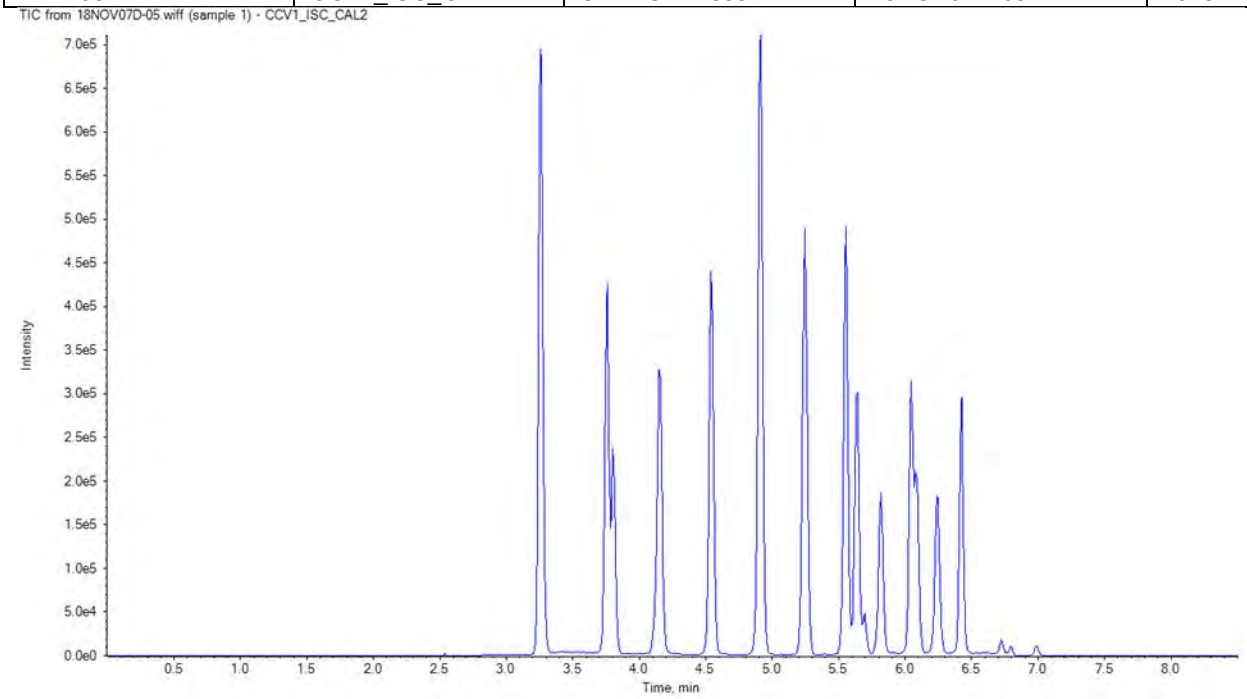
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV07D-05.wiff	2018-11-07T11:56:44



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723636.3	730410.6	-1	50	
13C2-PFOA	5.0	521176.2	524423.6	-1	50	
13C4-PFOS	4.8	281409.0	274061.7	3	50	
13C2-PFDA	5.0	314201.1	311442.1	1	50	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV07D-05.wiff	2018-11-07T11:56:44

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	72943.4	10	13C4-PFBA	778381.3	5.0	0.094	3.26	1.000	0.500	0.548	10	30	
PFPeA	77938.7	12	13C5-PFPeA	833775.0	5.0	0.093	3.76	1.000	0.500	0.556	11	30	
PFBS	39168.4	12	13C3-PFBS	424213.4	4.7	0.092	3.81	1.000	0.440	0.466	6	30	
4:2-FTS	9925.9	11	13C2-4:2-FTS	58255.4	4.7	0.170	4.12	1.000	0.467	0.458	-2	30	
PFHxA	88074.7	12	13C5-PFHxA	698561.1	5.0	0.126	4.15	1.000	0.500	0.541	8	30	
PFPeS	20913.0	12	13C3-PFBS	424213.4	4.7	0.049	4.17	1.100	0.469	0.486	4	30	
PFHxS	30387.3	12	13C3-PFHxS	352931.4	4.7	0.086	4.54	1.000	0.473	0.436	-8	30	
PFHpA	90462.4	12	13C4-PFHpA	560291.0	5.0	0.161	4.54	1.000	0.500	0.543	9	30	
6:2-FTS	8938.2	11	13C2-6:2-FTS	41536.9	4.8	0.215	4.90	1.000	0.474	0.537	13	30	
PFHpS	30992.6	11	13C3-PFHxS	352931.4	4.7	0.088	4.90	1.080	0.476	0.459	-3	30	
PFOA	99629.5	11	13C8-PFOA	987341.0	5.0	0.101	4.91	1.000	0.500	0.568	14	30	
PFOS	30525.5	11	13C8-PFOS	307801.9	4.8	0.099	5.24	1.000	0.478	0.514	8	30	
PFNA	74628.2	11	13C9-PFNA	538549.9	5.0	0.139	5.25	1.000	0.500	0.518	4	30	
PFNS	16672.5	11	13C8-PFOS	307801.9	4.8	0.054	5.53	1.060	0.480	0.429	-11	30	
PFDA	58204.1	11	13C6-PFDA	661143.8	5.0	0.088	5.55	1.000	0.500	0.484	-3	30	
8:2-FTS	6912.4	11	13C2-8:2-FTS	33696.5	4.8	0.205	5.56	1.000	0.479	0.462	-3	30	
PFOSA	64296.7	12	13C8-PFOSA	674275.2	5.0	0.095	5.64	1.000	0.500	0.515	3	30	
NMeFOSAA	7609.0	12	d3-NMeFOSAA	83963.9	5.0	0.091	5.69	1.000	0.500	0.466	-7	30	
PFDS	13804.1	11	13C8-PFOS	307801.9	4.8	0.045	5.79	1.110	0.482	0.428	-11	30	
PFUnDA	55119.4	11	13C7-PFUnDA	290057.1	5.0	0.190	5.82	1.000	0.500	0.545	9	30	
NEtFOSAA	9115.6	11	d5-NEtFOSAA	67534.8	5.0	0.135	5.83	1.000	0.500	0.580	16	30	
PFDoDA	59030.8	12	13C2-PFDoDA	612086.9	5.0	0.096	6.04	1.000	0.500	0.523	5	30	
10:2-FTS	4422.0	12	13C2-8:2-FTS	33696.5	4.8	0.131	6.06	1.090	0.482	0.409	-15	30	
NMePFOSAE	40895.8	12	d7-NMePFOSAE	337249.9	5.0	0.121	6.09	1.000	0.500	0.543	9	30	
NMePFOSA	8204.0	11	d3-NMePFOSA	80989.7	5.0	0.101	6.10	1.000	0.500	0.567	13	30	
PFDoS	7792.8	11	13C8-PFOS	307801.9	4.8	0.025	6.21	1.190	0.484	0.489	1	30	
NEtPFOSAE	49160.3	11	d9-NEtPFOSAE	271867.0	5.0	0.181	6.25	1.000	0.500	0.580	16	30	
NEtPFOSA	7779.2	11	d5-NEtPFOSA	68493.6	5.0	0.114	6.26	1.000	0.500	0.500	0	30	
PFTrDA	52443.4	11	13C2-PFDoDA	612086.9	5.0	0.086	6.24	1.030	0.500	0.540	8	30	
PFTeDA	46434.9	11	13C2-PFTeDA	533368.0	5.0	0.087	6.42	1.000	0.500	0.511	2	30	
PFHxDA	28219.3	11	13C2-PFTeDA	533368.0	5.0	0.053	6.72	1.050	0.500	0.657	31	30	OOS
PFODA	24584.2	10	13C2-PFTeDA	533368.0	5.0	0.046	6.99	1.090	0.500	0.660	32	30	OOS

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV07D-05.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-07T11:56:44
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723636.3	730410.6	-1	50	
13C2-PFOA	5.0	521176.2	524423.6	-1	50	
13C4-PFOS	4.8	281409.0	274061.7	3	50	
13C2-PFDA	5.0	314201.1	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778381.3	13C3-PFBA	723636.3	1.076	5.000	4.978	100	70-130	
E13C5-PFPeA	833775.0	13C3-PFBA	723636.3	1.152	5.000	5.019	100	70-130	
E13C3-PFBS	424213.4	13C3-PFBA	723636.3	0.586	4.650	4.302	93	70-130	
E13C2-4:2-FTS	58255.4	13C2-PFOA	521176.2	0.112	4.670	5.044	108	70-130	
E13C5-PFHxA	698561.1	13C2-PFOA	521176.2	1.340	5.000	4.930	99	70-130	
E13C3-PFHxS	352931.4	13C2-PFOA	521176.2	0.677	4.730	4.861	103	70-130	
E13C4-PFHpA	560291.0	13C2-PFOA	521176.2	1.075	5.000	4.891	98	70-130	
E13C2-6:2-FTS	41536.9	13C2-PFOA	521176.2	0.080	4.750	5.315	112	70-130	
E13C8-PFOA	987341.0	13C2-PFOA	521176.2	1.894	5.000	5.283	106	70-130	
E13C8-PFOS	307801.9	13C4-PFOS	281409.0	1.094	4.780	4.837	101	70-130	
E13C9-PFNA	538549.9	13C4-PFOS	281409.0	1.914	5.000	5.228	105	70-130	
E13C6-PFDA	661143.8	13C2-PFDA	314201.1	2.104	5.000	5.292	106	70-130	
E13C2-8:2-FTS	33696.5	13C2-PFDA	314201.1	0.107	4.790	5.675	118	70-130	
E13C8-PFOSA	674275.2	13C2-PFDA	314201.1	2.146	5.000	4.683	94	70-130	
Ed3-NMeFOSAA	83963.9	13C2-PFDA	314201.1	0.267	5.000	4.969	99	70-130	
E13C7-PFUnDA	290057.1	13C2-PFDA	314201.1	0.923	5.000	5.325	107	70-130	
Ed5-NEtFOSAA	67534.7	13C2-PFDA	314201.1	0.215	5.000	4.974	99	70-130	
E13C2-PFDoDA	612086.9	13C2-PFDA	314201.1	1.948	5.000	5.252	105	70-130	
Ed7-NMePFOSAE	337249.9	13C2-PFDA	314201.1	1.073	5.000	4.991	100	70-130	
Ed3-NMePFOSA	80989.7	13C2-PFDA	314201.1	0.258	5.000	4.719	94	70-130	
Ed9-NEtPFOSAE	271867.0	13C2-PFDA	314201.1	0.865	5.000	4.941	99	70-130	
Ed5-NEtPFOSA	68493.6	13C2-PFDA	314201.1	0.218	5.000	5.048	101	70-130	
E13C2-PFTeDA	533368.0	13C2-PFDA	314201.1	1.698	5.000	6.111	122	70-130	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

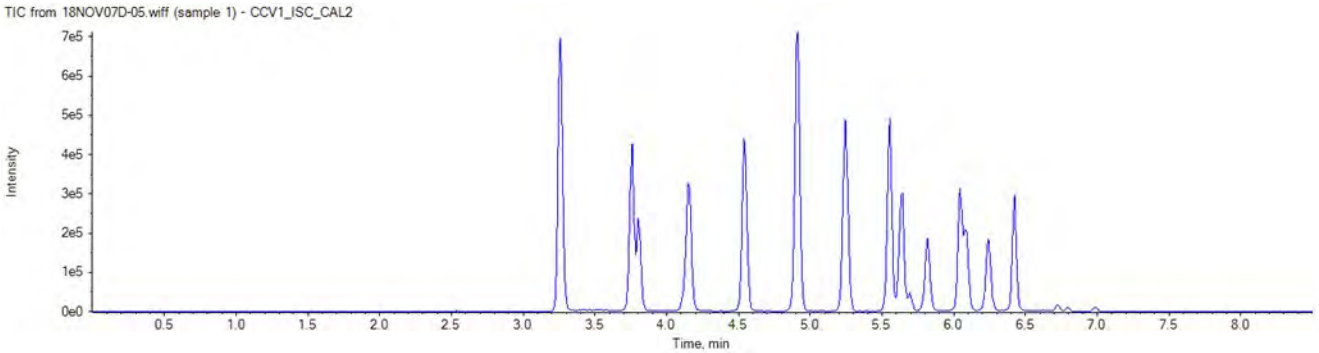
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	72943.4		A	13C4-PFBA	3.26	778381.3	0.094	0.548
PFPeA	3.76	1.000	77938.7		A	13C5-PFPeA	3.76	833775.0	0.093	0.556
PFBS	3.81	1.000	39168.4		A	13C3-PFBS	3.81	424213.4	0.092	0.466
4:2-FTS	4.12	1.000	9925.9		A	13C2-4:2-FTS	4.12	58255.4	0.170	0.458
PFHxA	4.15	1.000	88074.7		A	13C5-PFHxA	4.15	698561.1	0.126	0.541
PFPeS	4.17	1.100	20913.0		A	13C3-PFBS	3.81	424213.4	0.049	0.486
PFHxS	4.54	1.000	30387.3		A	13C3-PFHxS	4.54	352931.4	0.086	0.436
PFHpA	4.54	1.000	90462.4		A	13C4-PFHpA	4.54	560291.0	0.161	0.543
6:2-FTS	4.90	1.000	8938.2		A	13C2-6:2-FTS	4.90	41536.9	0.215	0.537
PFHpS	4.90	1.080	30992.6		A	13C3-PFHxS	4.54	352931.4	0.088	0.459
PFOA	4.91	1.000	99629.5		A	13C8-PFOA	4.91	987341.0	0.101	0.568
PFOS	5.24	1.000	30525.5		M	13C8-PFOS	5.24	307801.9	0.099	0.514
PFNA	5.25	1.000	74628.2		A	13C9-PFNA	5.25	538549.9	0.139	0.518
PFNS	5.53	1.060	16672.5		A	13C8-PFOS	5.24	307801.9	0.054	0.429
PFDA	5.55	1.000	58204.1		A	13C6-PFDA	5.55	661143.8	0.088	0.484
8:2-FTS	5.56	1.000	6912.4		A	13C2-8:2-FTS	5.56	33696.5	0.205	0.462
PFOSA	5.64	1.000	64296.7		A	13C8-PFOSA	5.64	674275.2	0.095	0.515
NMeFOSAA	5.69	1.000	7609.0		A	d3-NMeFOSAA	5.69	83963.9	0.091	0.466
PFDS	5.79	1.110	13804.1		A	13C8-PFOS	5.24	307801.9	0.045	0.428
PFUnDA	5.82	1.000	55119.4		M	13C7-PFUnDA	5.82	290057.1	0.190	0.545
NEtFOSAA	5.83	1.000	9115.6		M	d5-NEtFOSAA	5.83	67534.8	0.135	0.580
PFDoDA	6.04	1.000	59030.8		A	13C2-PFDoDA	6.04	612086.9	0.096	0.523
10:2-FTS	6.06	1.090	4422.0		A	13C2-8:2-FTS	5.56	33696.5	0.131	0.409
NMePFOSAE	6.09	1.000	40895.8		A	d7-NMePFOSAE	6.08	337249.9	0.121	0.543
NMePFOSA	6.10	1.000	8204.0		A	d3-NMePFOSA	6.10	80989.7	0.101	0.567
PFDoS	6.21	1.190	7792.8		A	13C8-PFOS	5.24	307801.9	0.025	0.489
NEtPFOSAE	6.25	1.000	49160.3		A	d9-NEtPFOSAE	6.24	271867.0	0.181	0.580
NEtPFOSA	6.26	1.000	7779.2		A	d5-NEtPFOSA	6.26	68493.6	0.114	0.500
PFTrDA	6.24	1.030	52443.4		A	13C2-PFDoDA	6.04	612086.9	0.086	0.540
PFTeDA	6.42	1.000	46434.9		A	13C2-PFTeDA	6.42	533368.0	0.087	0.511
PFHxDA	6.72	1.050	28219.3		A	13C2-PFTeDA	6.42	533368.0	0.053	0.657
PFODA	6.99	1.090	24584.2		A	13C2-PFTeDA	6.42	533368.0	0.046	0.660

Total Ion Chromatogram

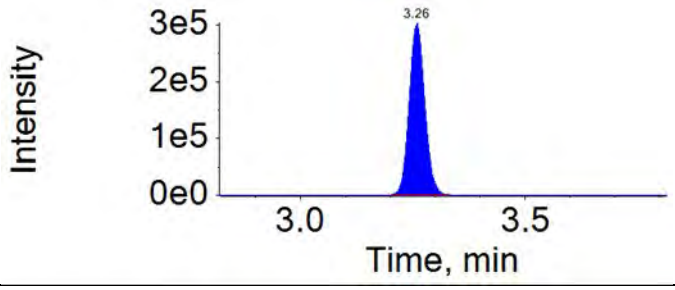


APPROVED
By MCD at 6:31 pm, 11/7/18

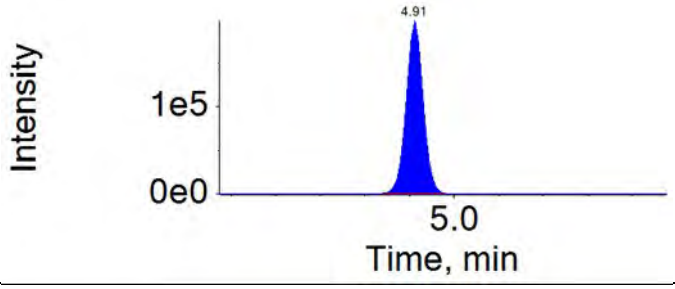
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

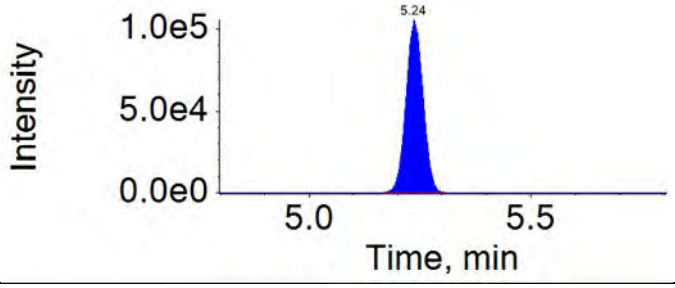
Injection Standard: 13C3-PFBA
216.0 / 172.0



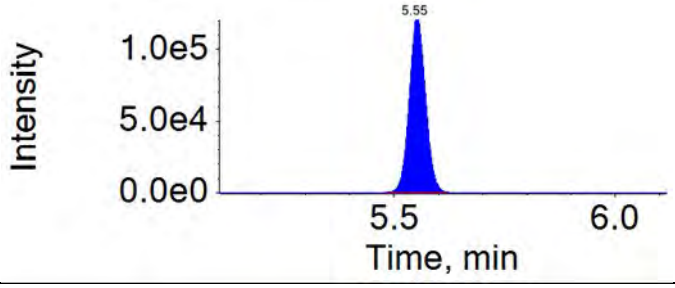
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

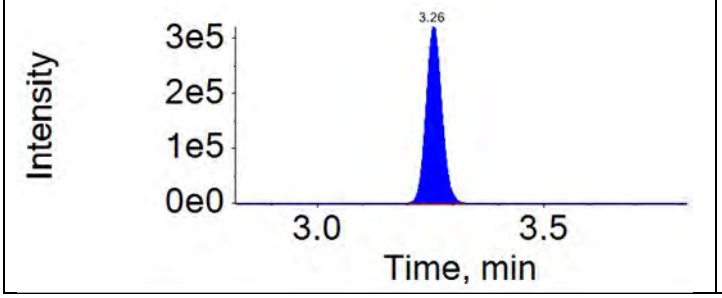


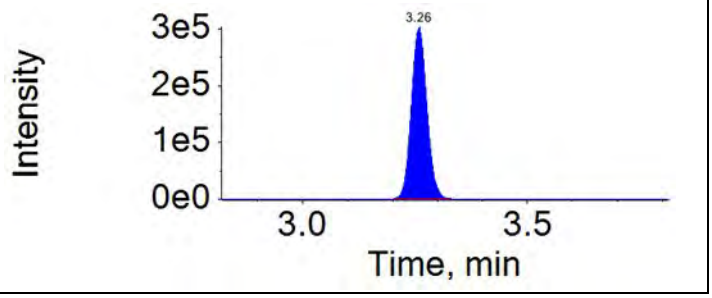
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

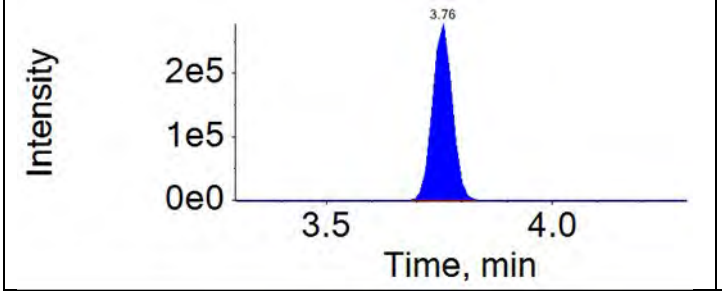
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

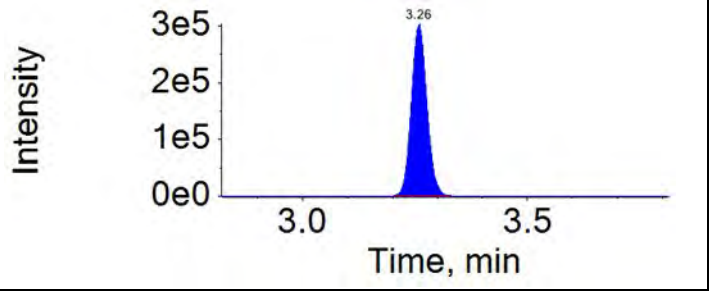
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



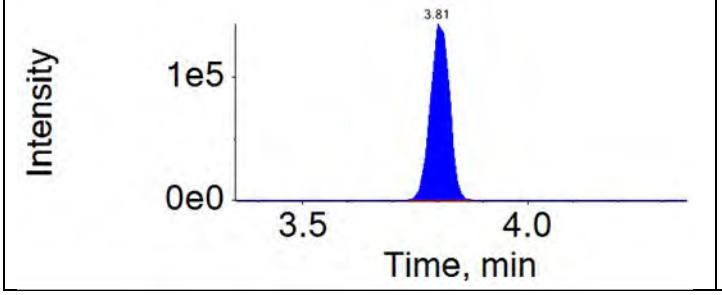


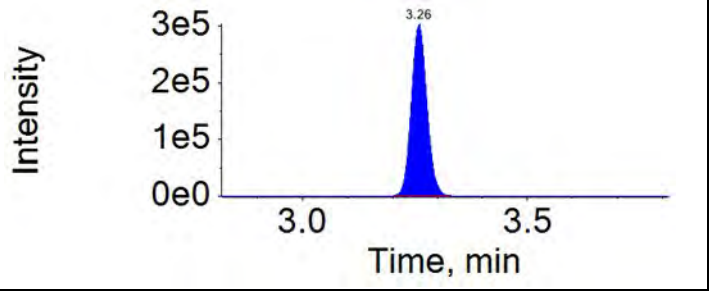
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



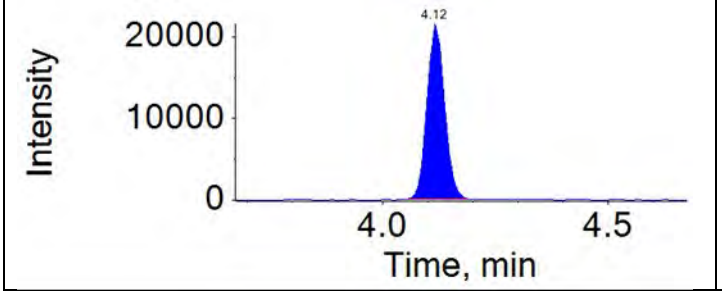


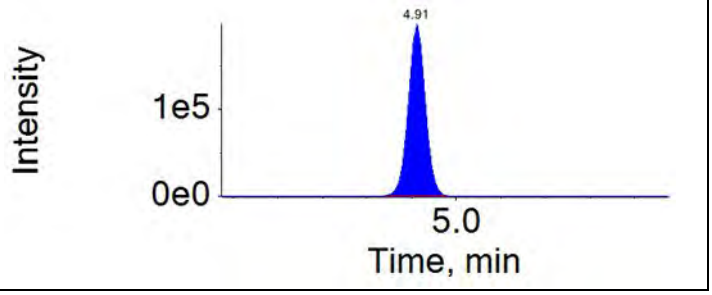
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





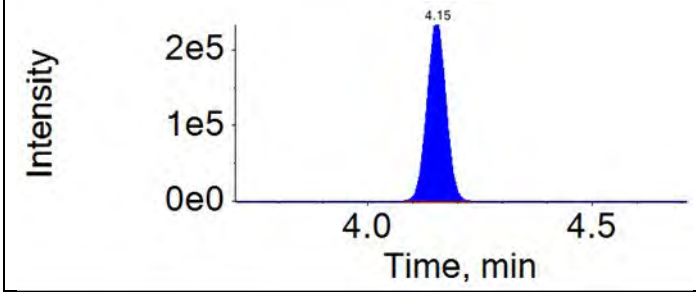
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

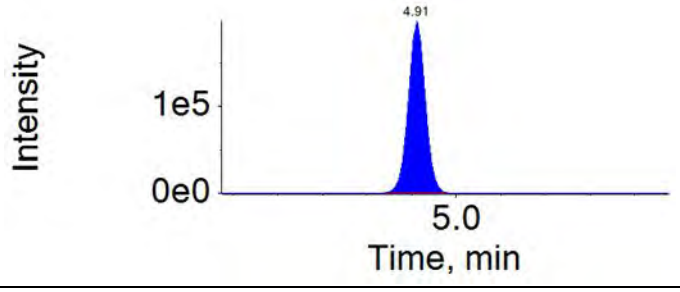




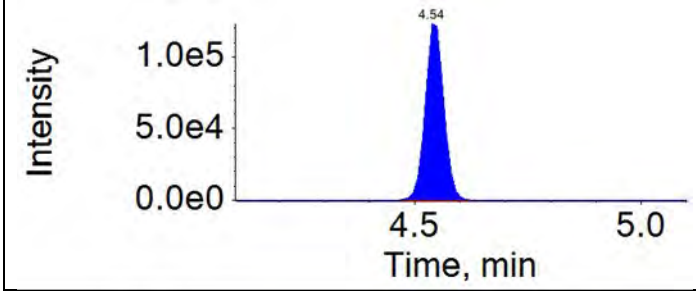
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

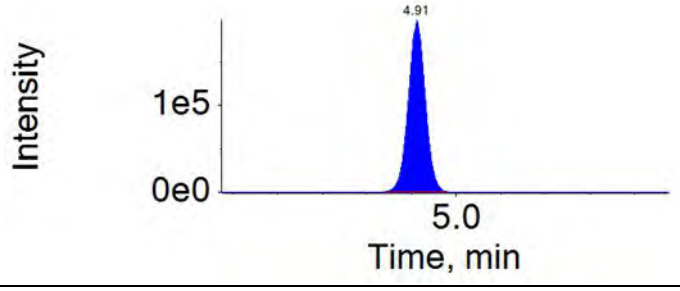
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



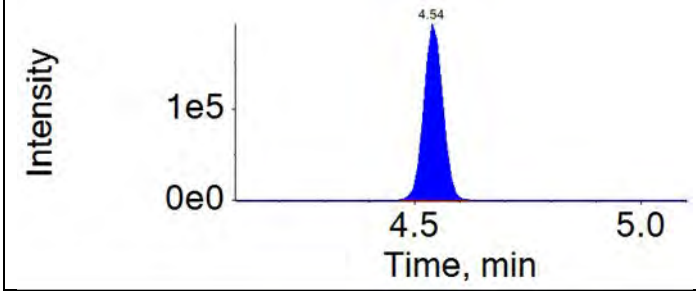


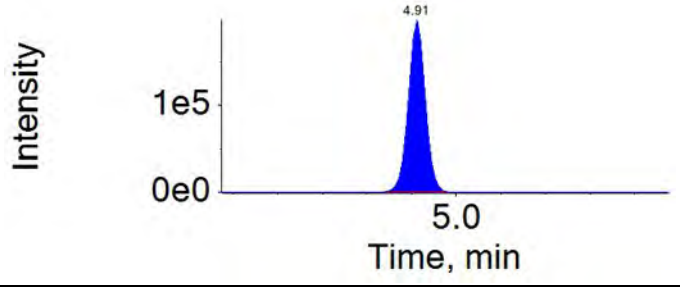
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



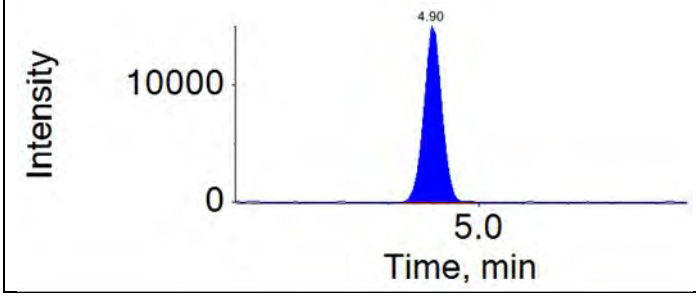


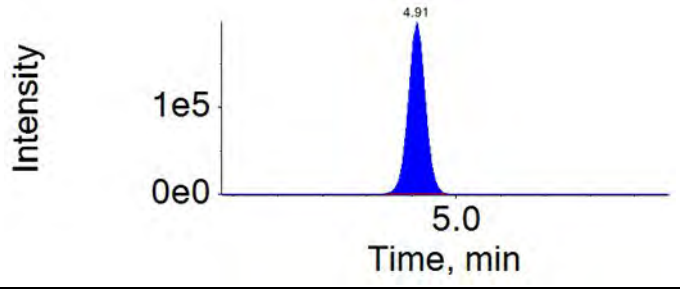
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



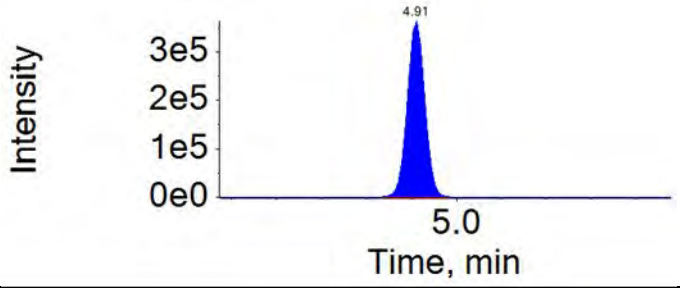


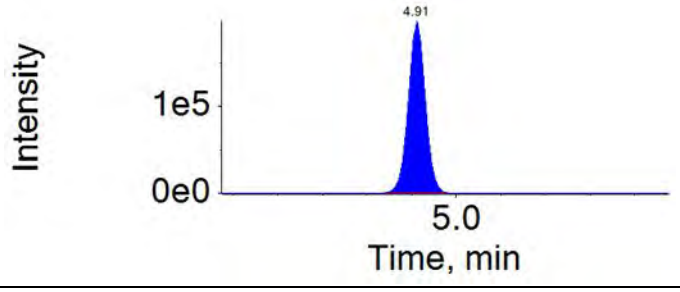
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

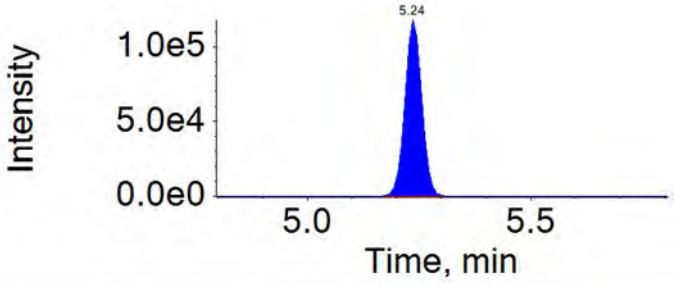
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

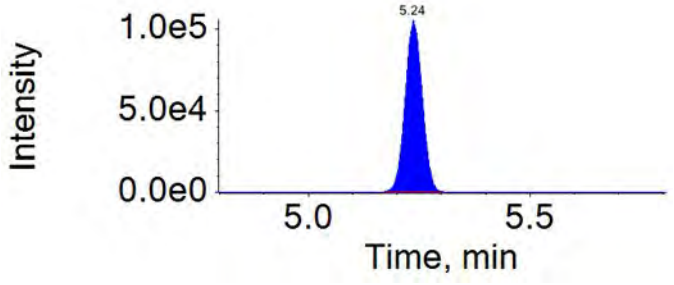
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



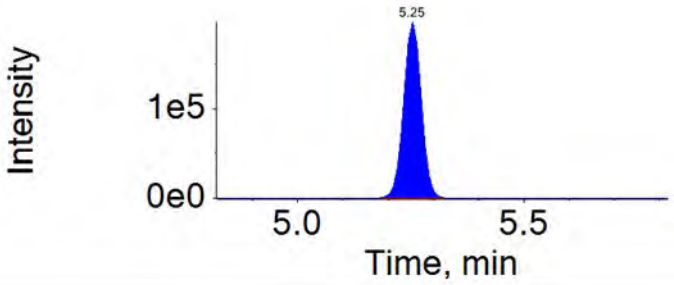


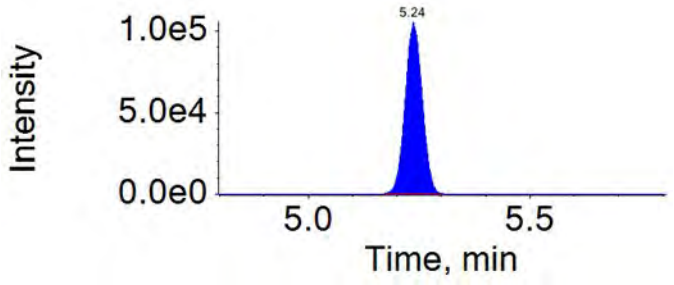
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



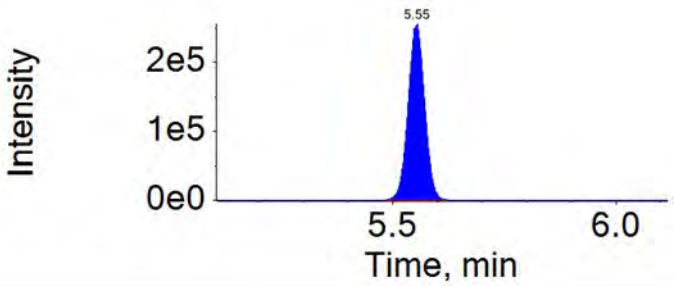


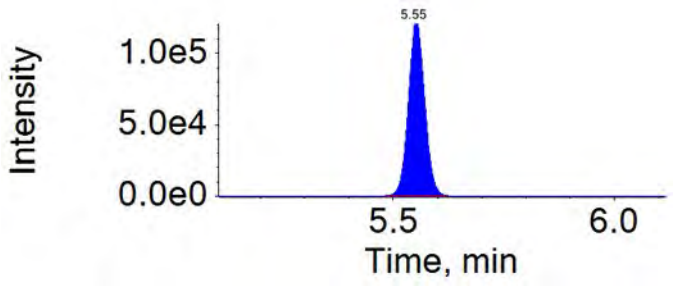
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



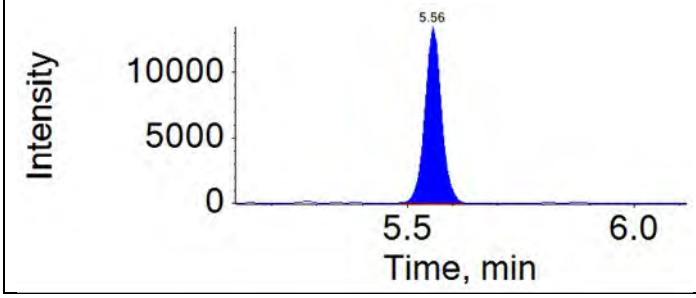


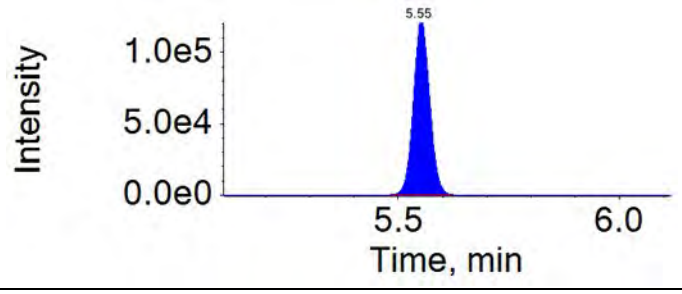
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

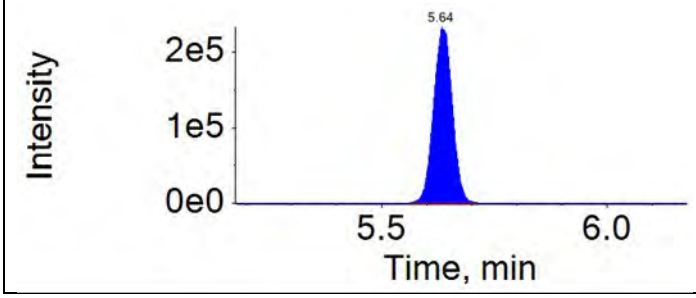
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

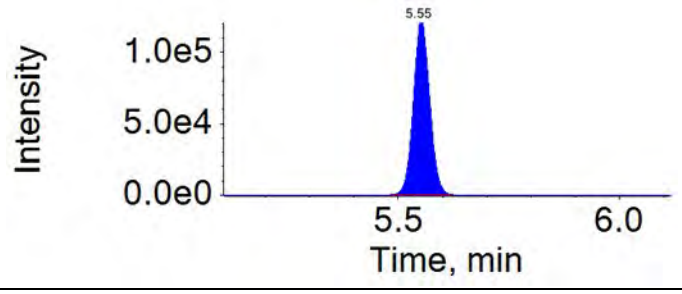
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



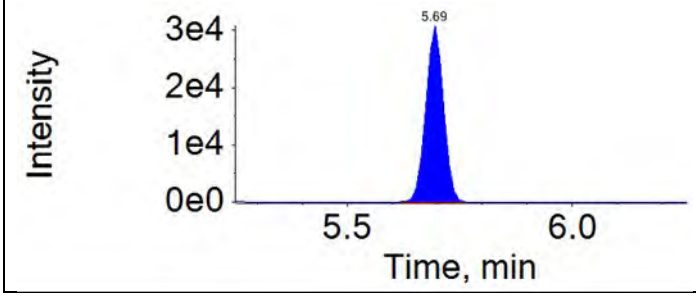


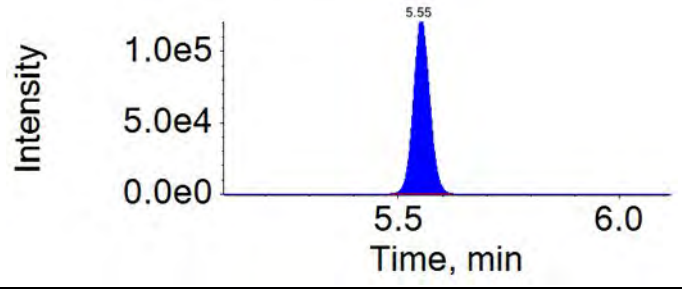
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



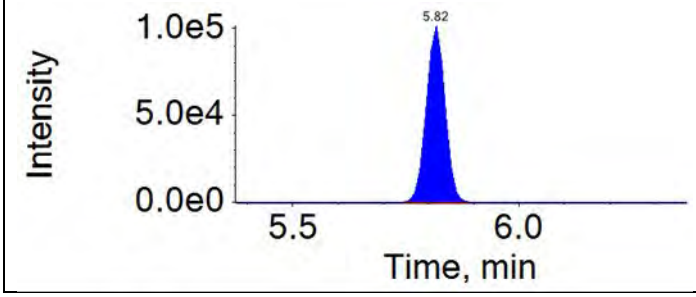


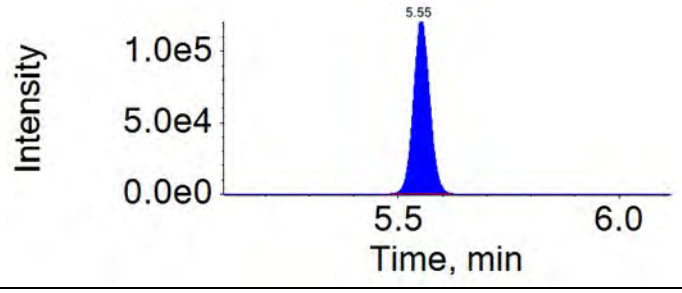
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





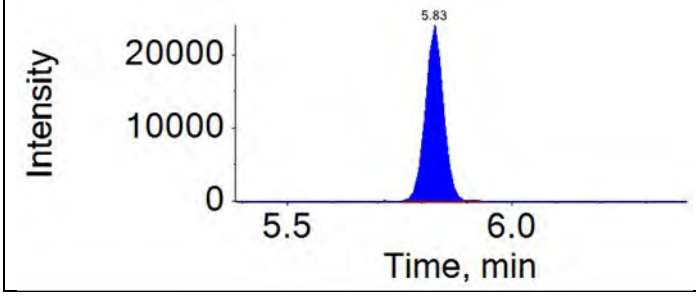
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

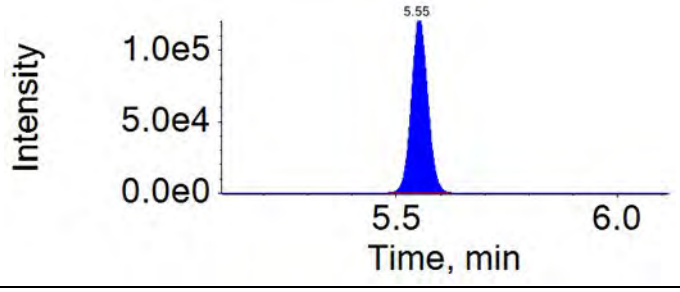




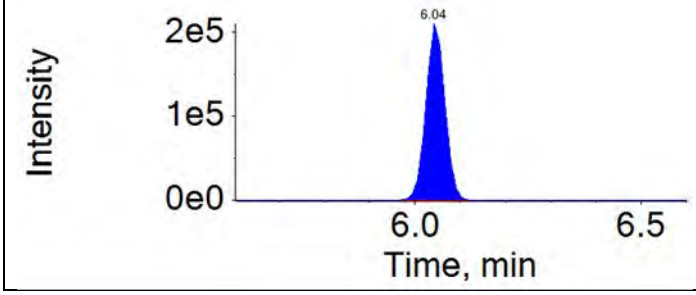
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

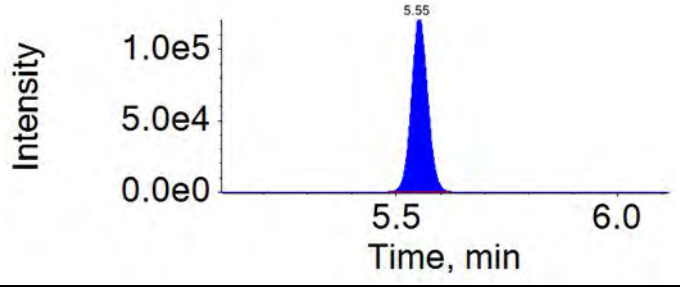
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



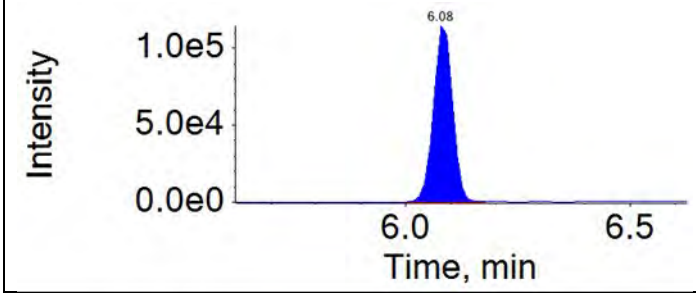


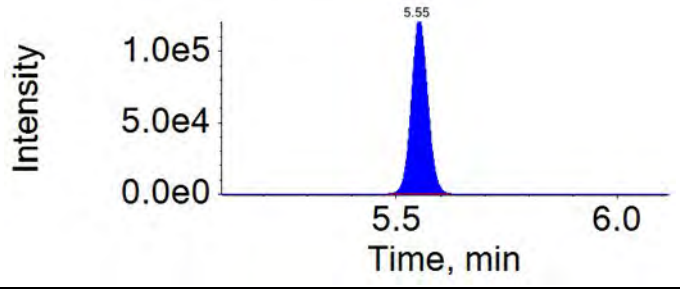
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



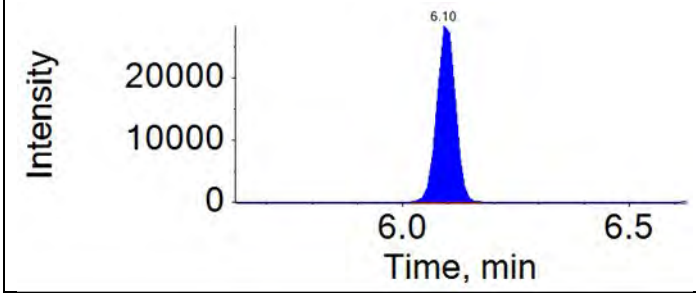


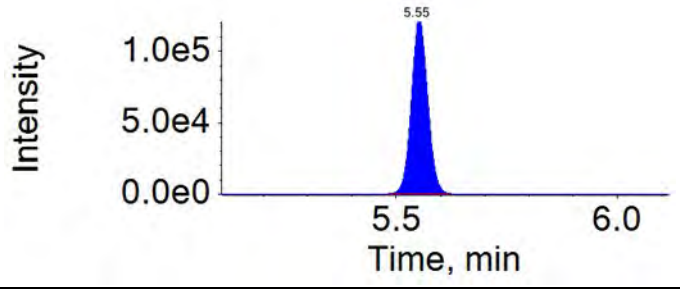
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



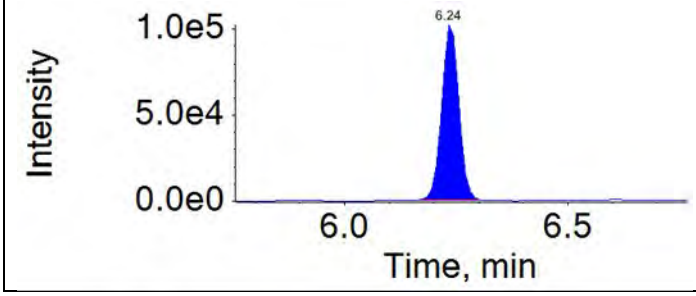


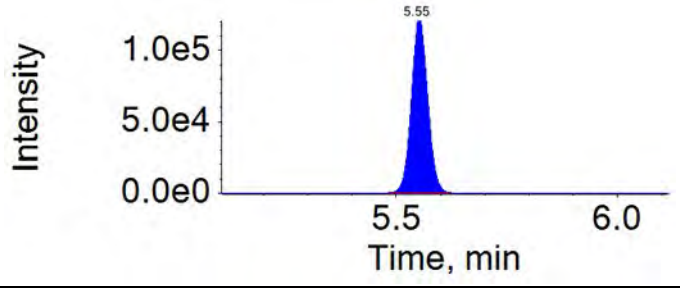
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

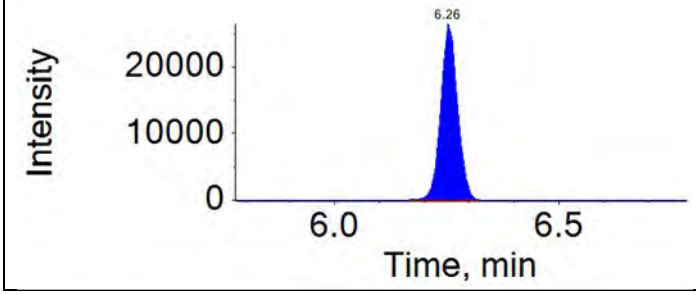
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

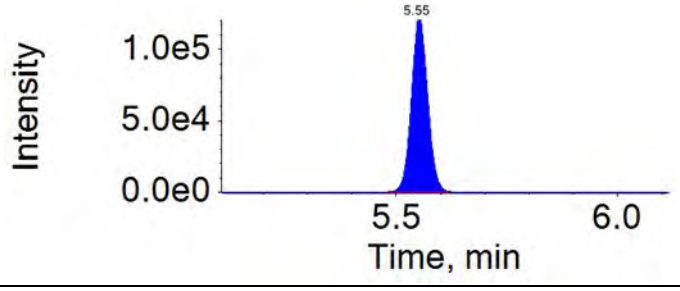
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



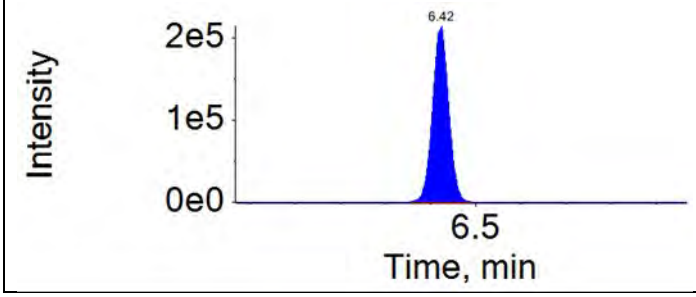


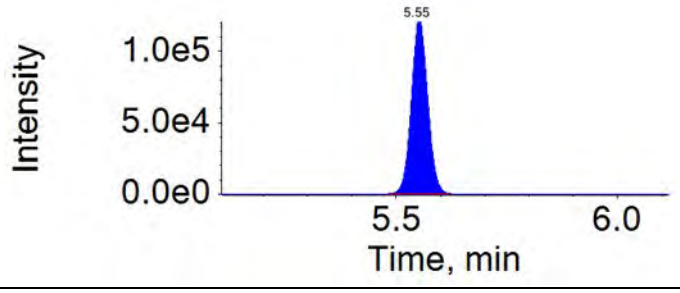
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



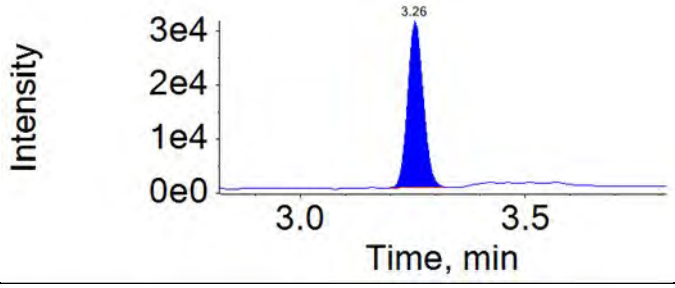


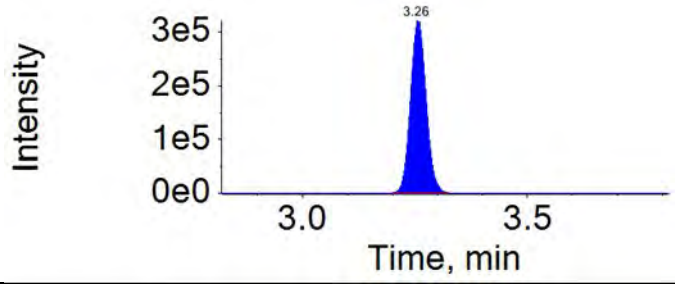
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

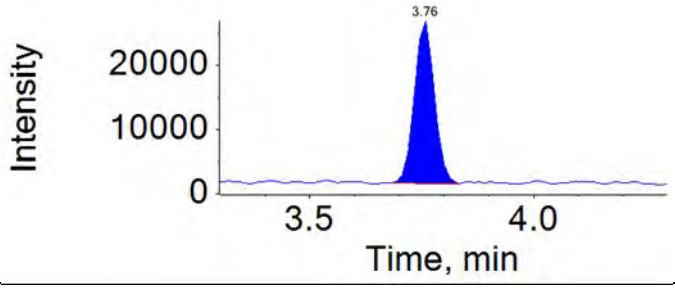
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

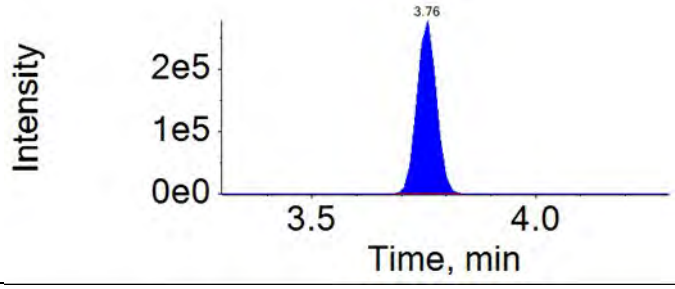
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



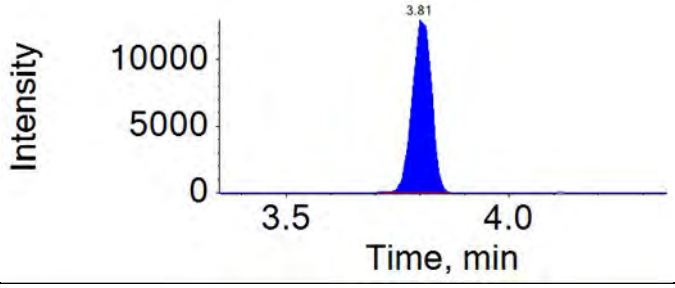


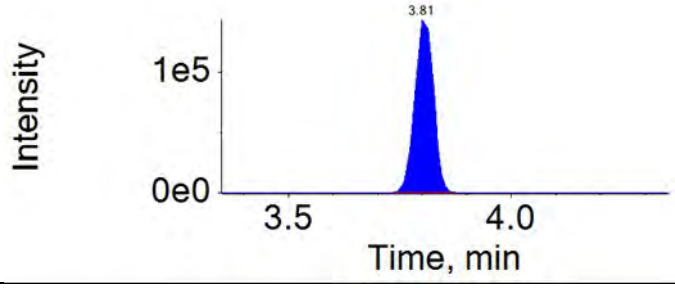
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



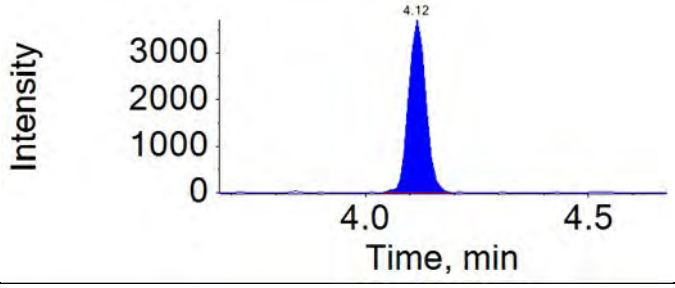


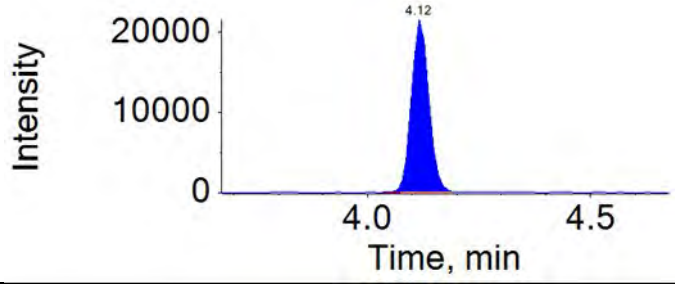
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



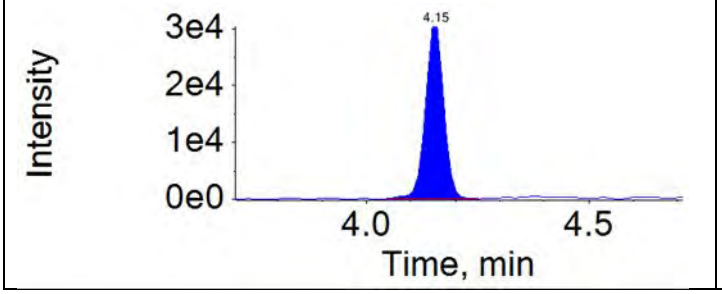


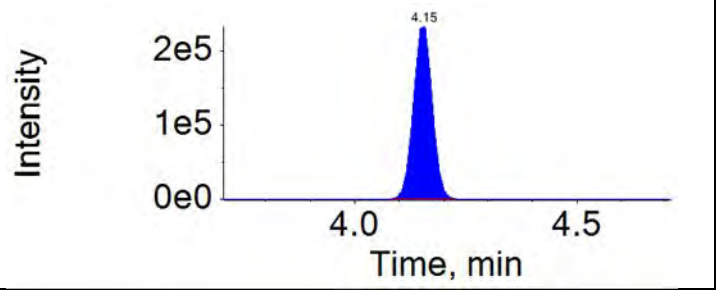
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

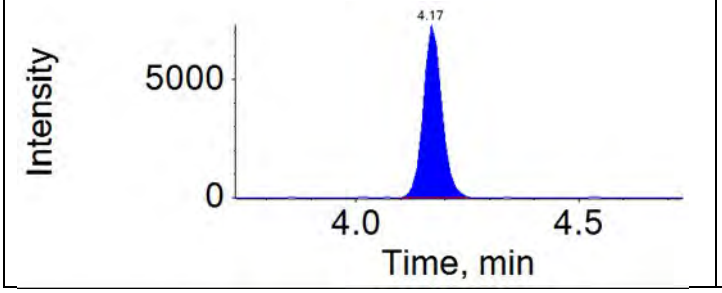
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

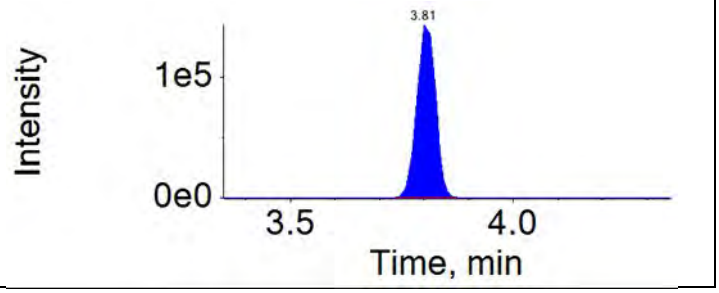
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



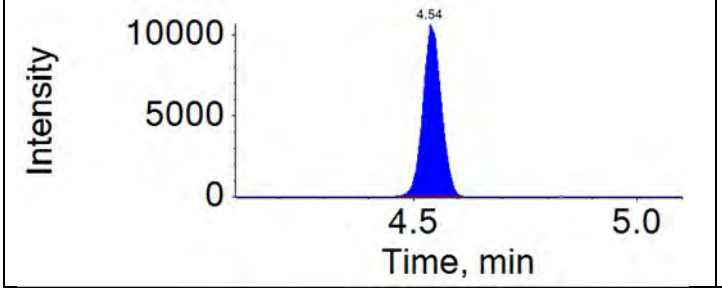


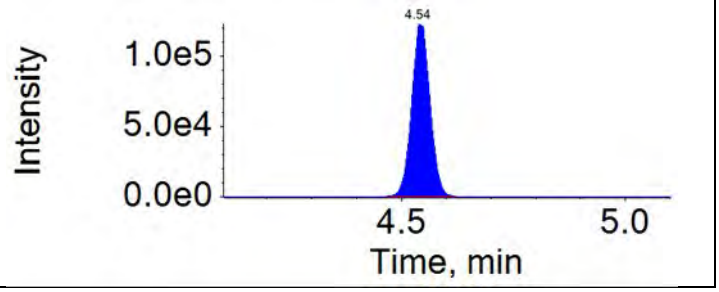
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



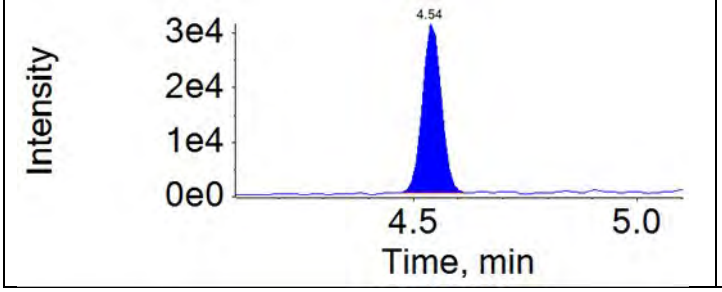


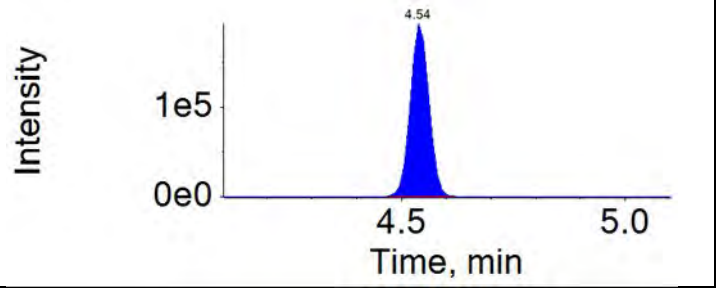
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



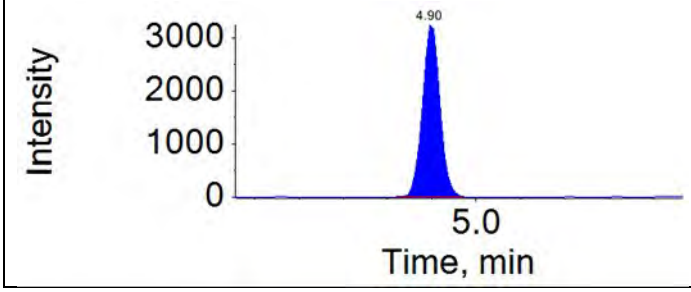


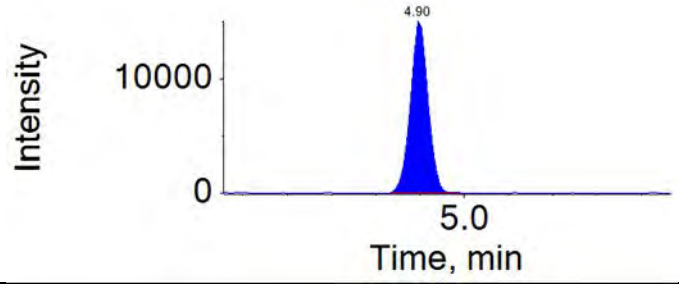
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

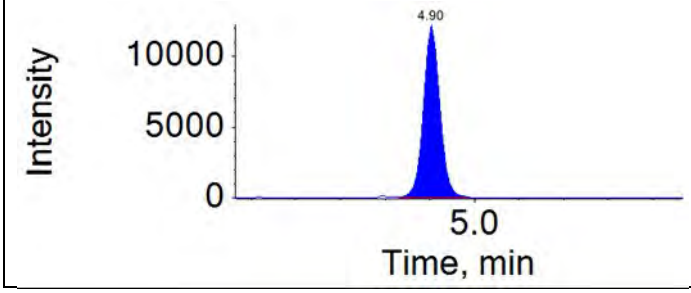
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

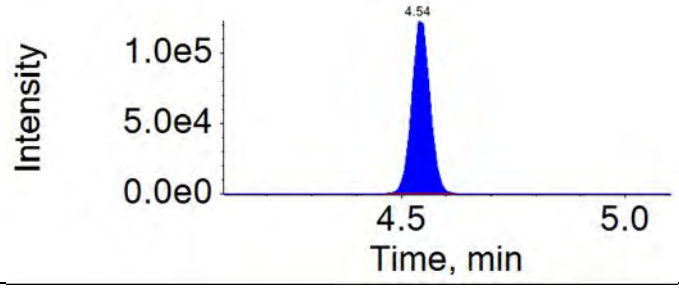
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



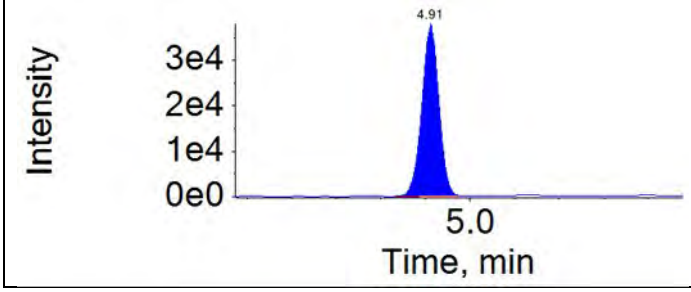


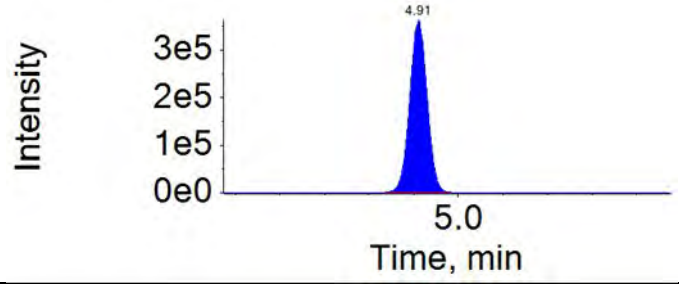
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



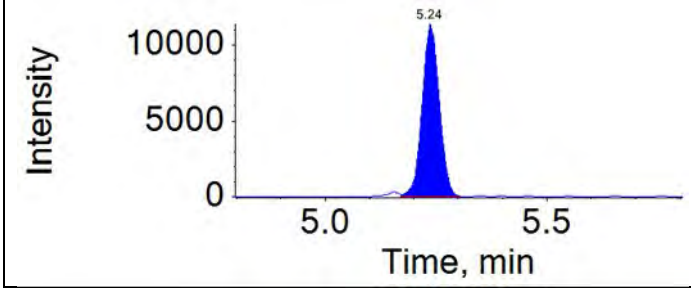


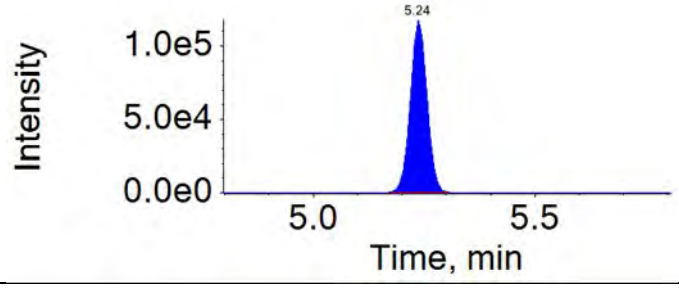
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



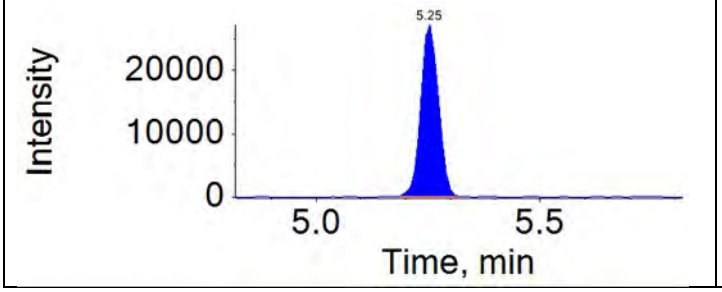


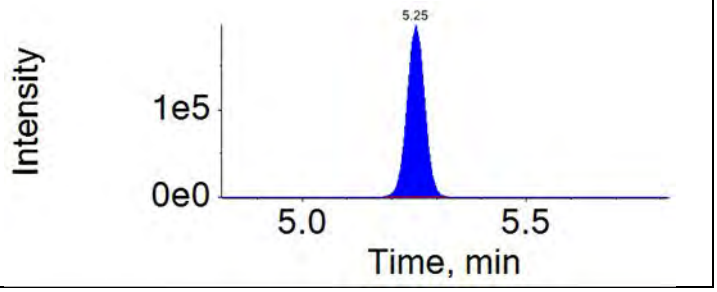
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

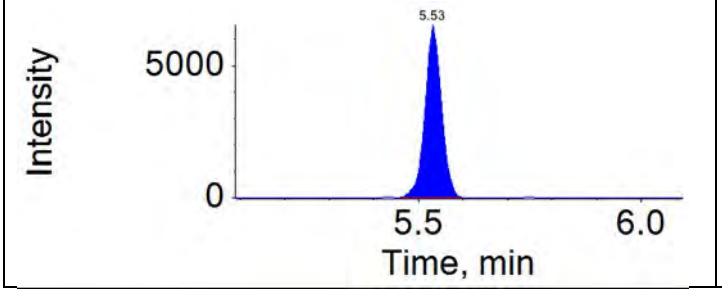
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

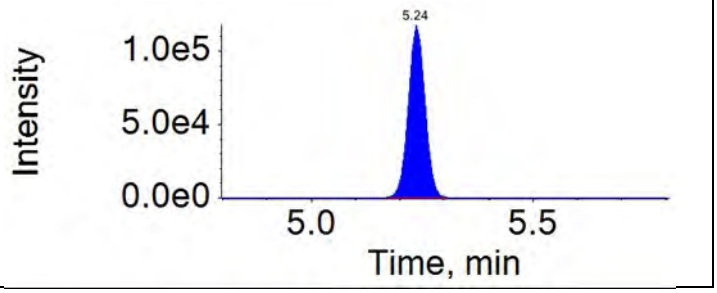
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



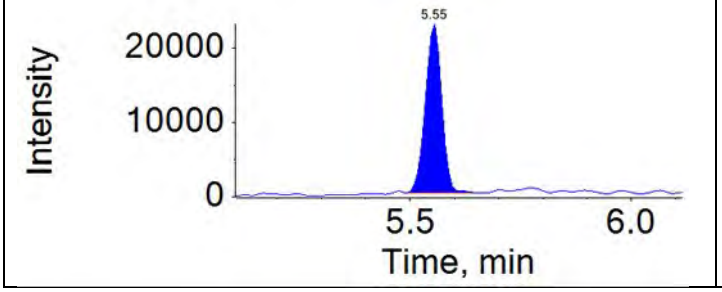


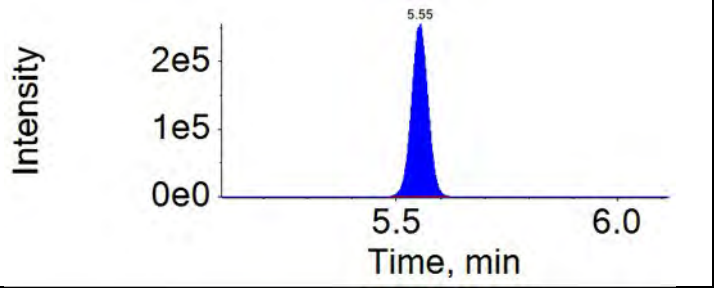
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



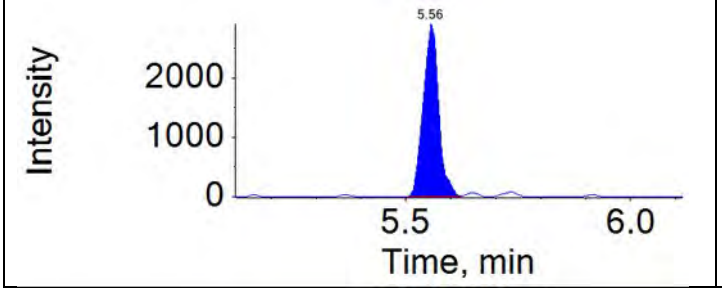


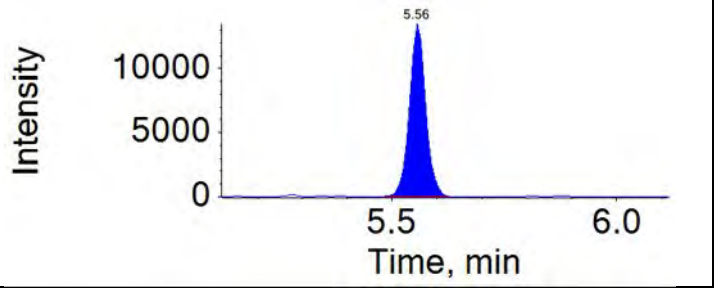
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



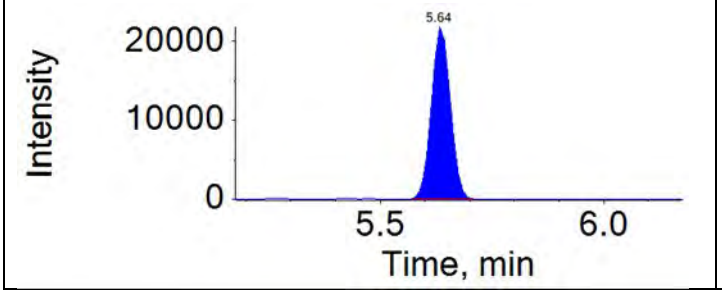


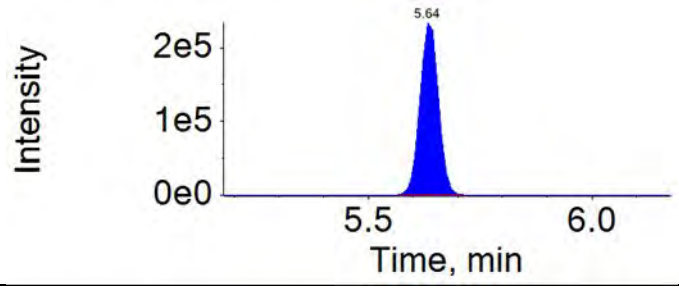
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

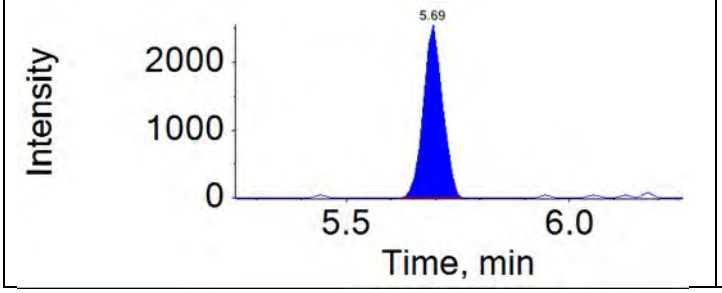
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

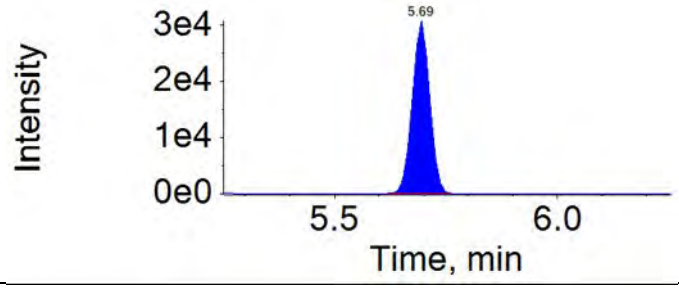
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



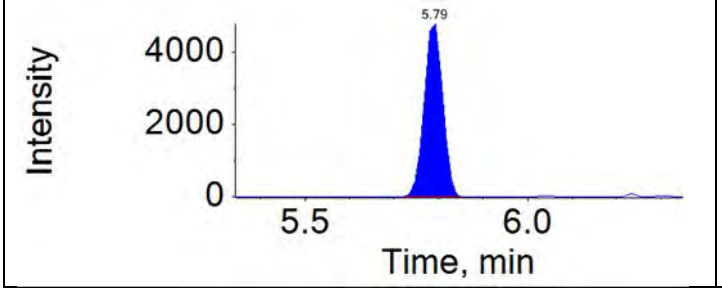


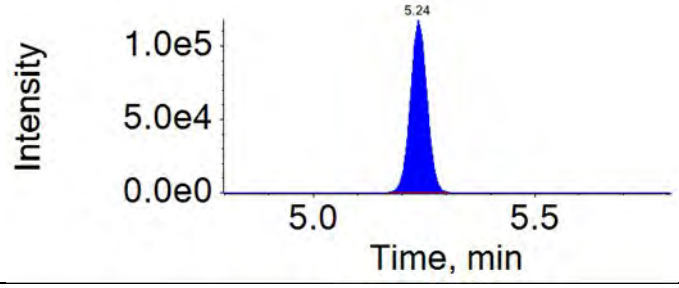
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



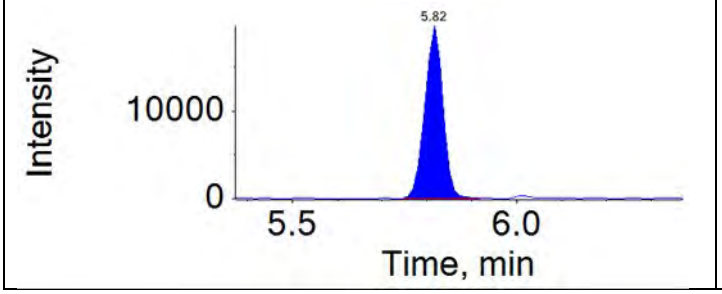


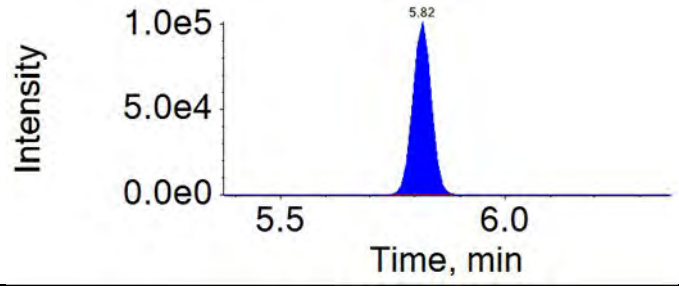
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



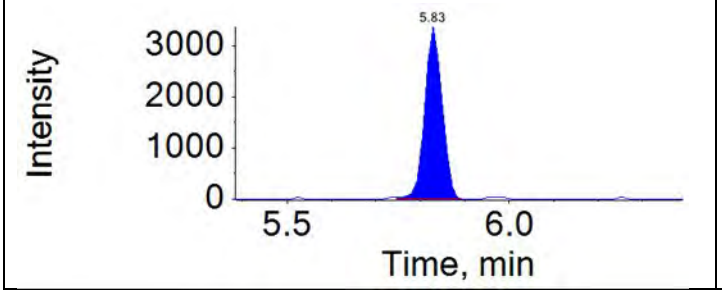


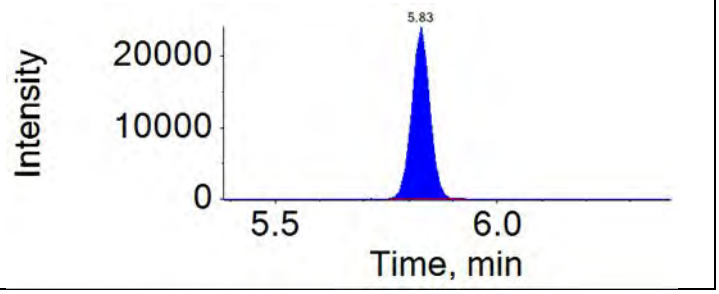
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

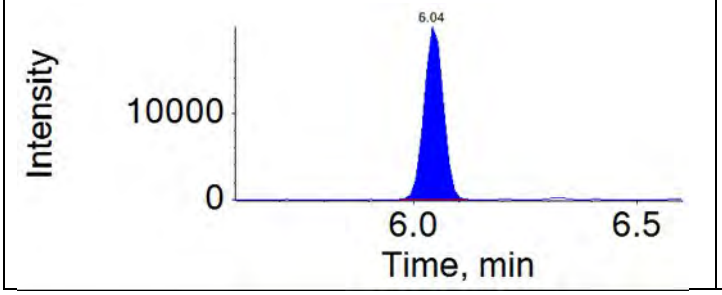
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

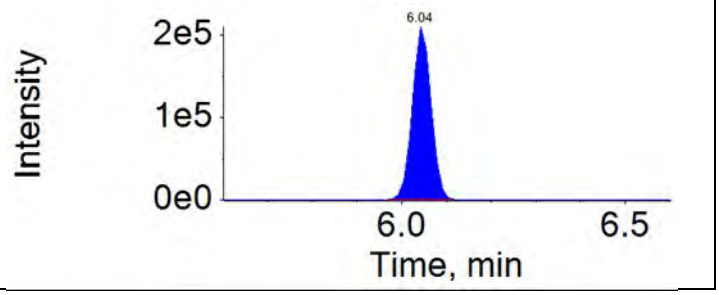
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



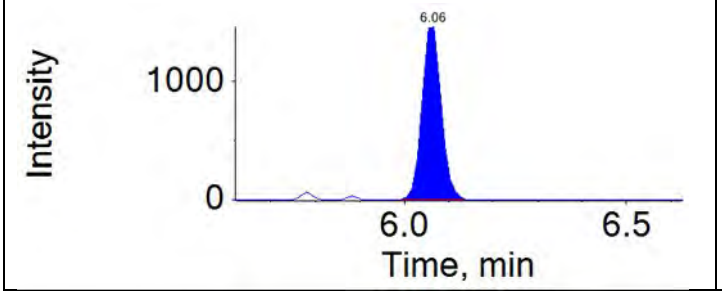


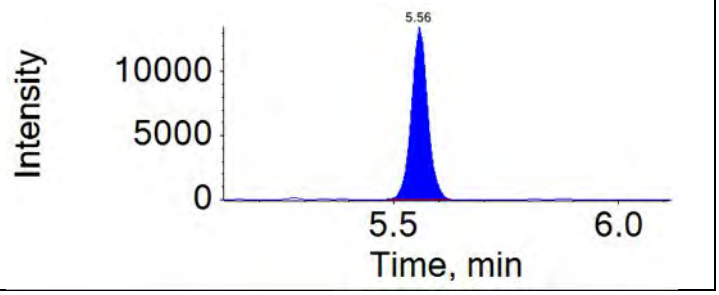
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



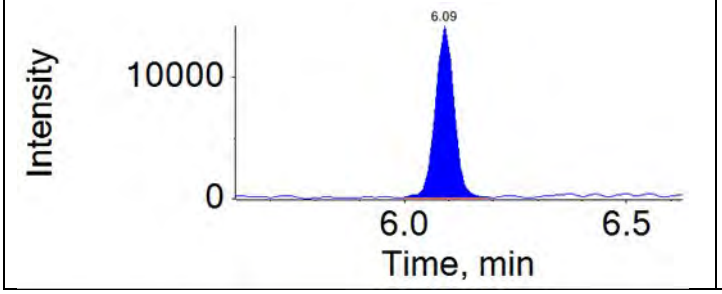


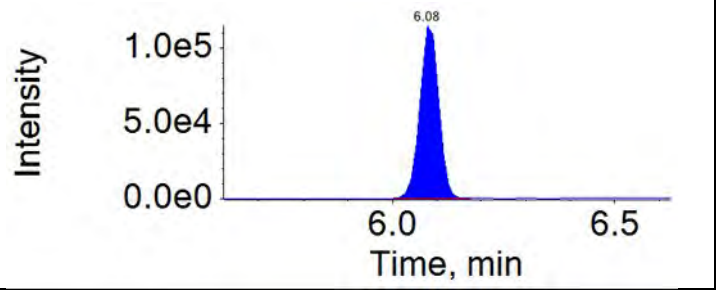
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



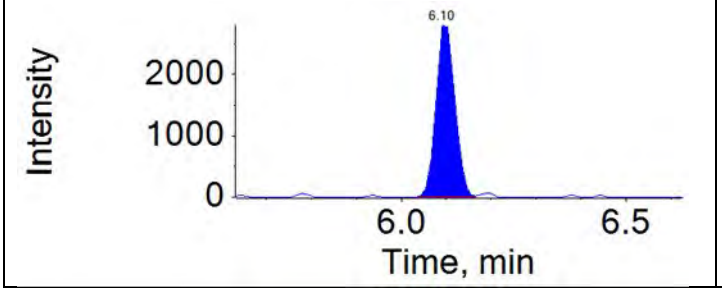


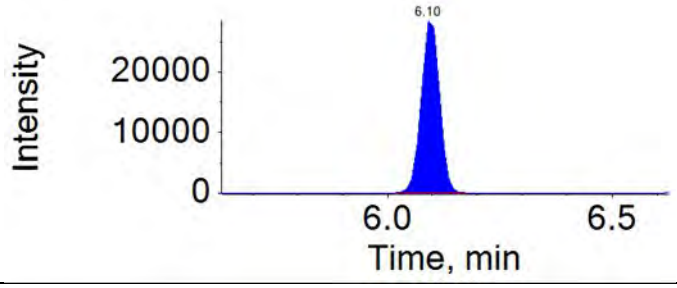
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

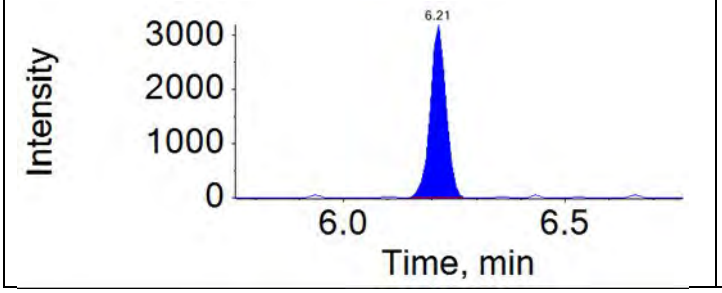
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

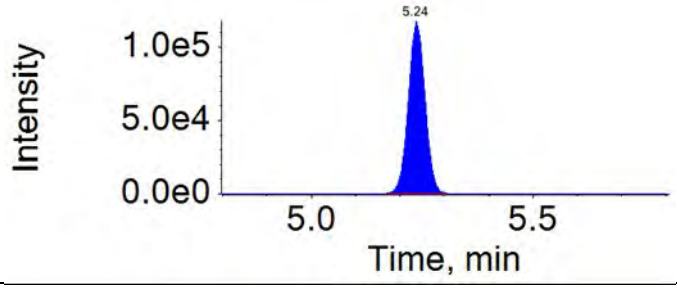
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



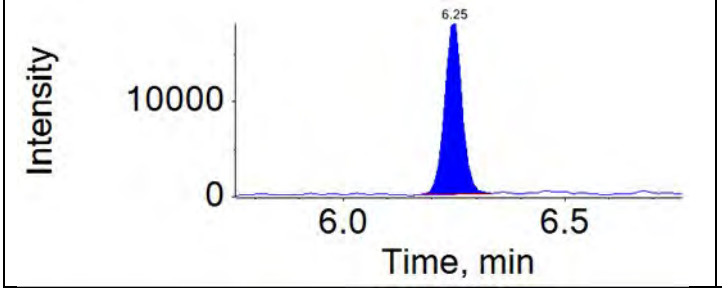


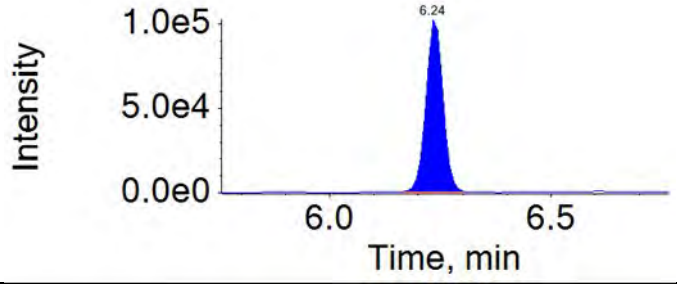
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



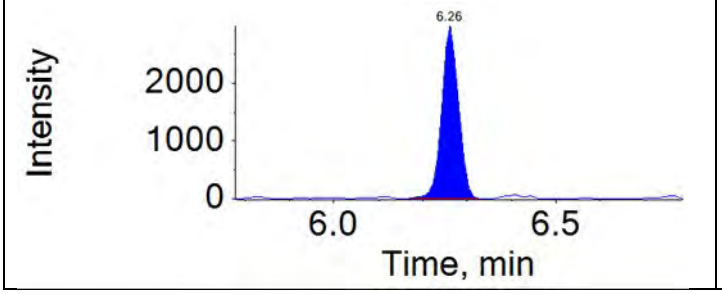


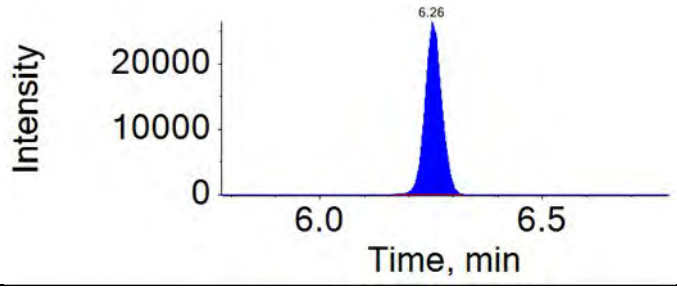
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

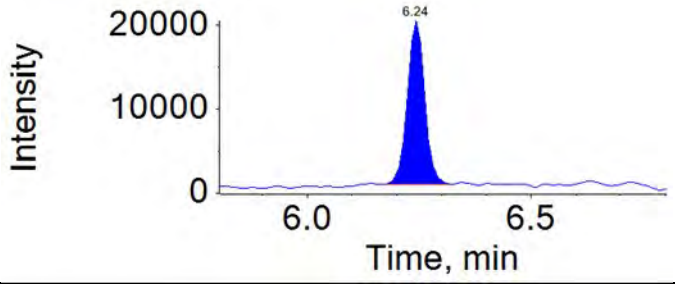
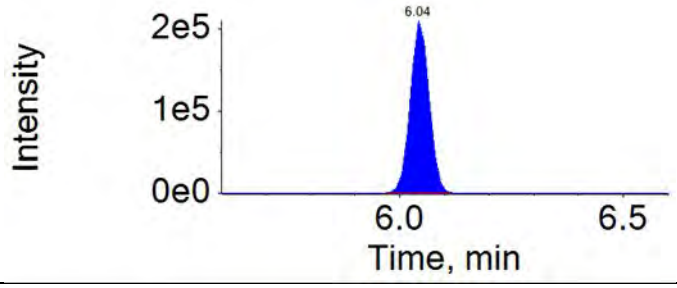


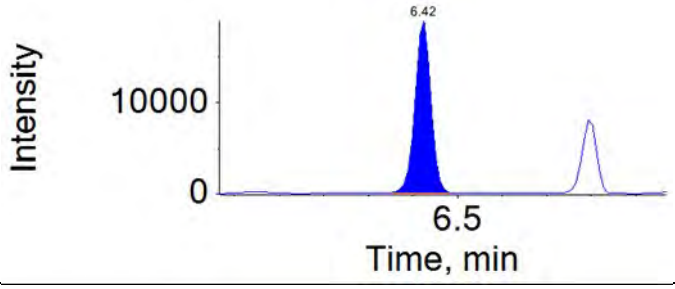
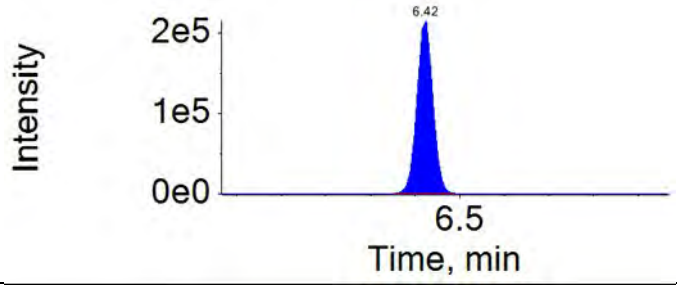


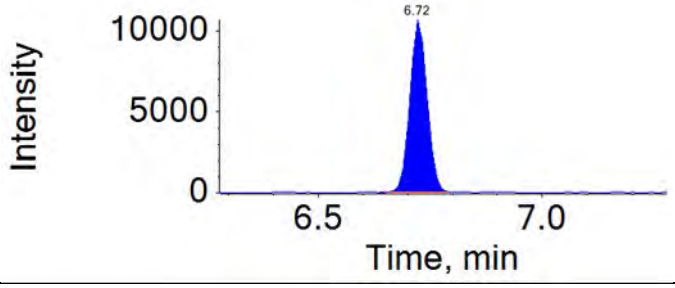
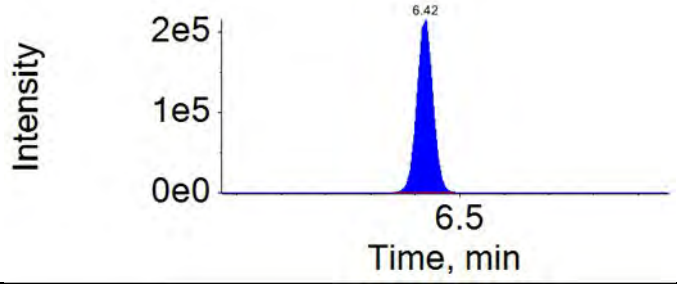
APPROVED
By MCD at 6:31 pm, 11/7/18

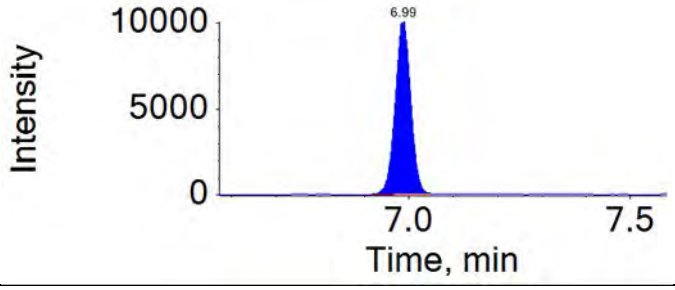
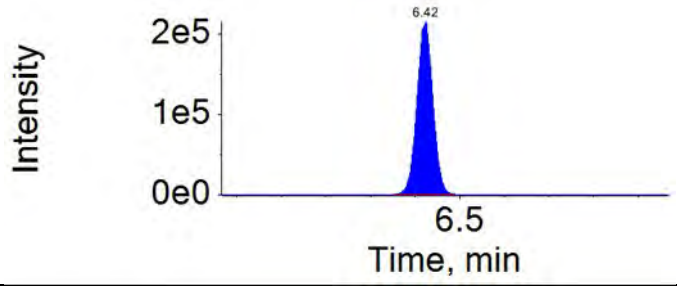
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

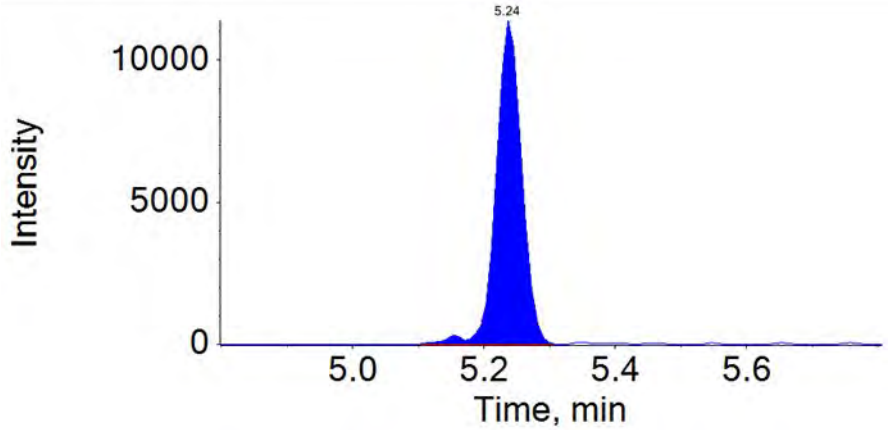
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

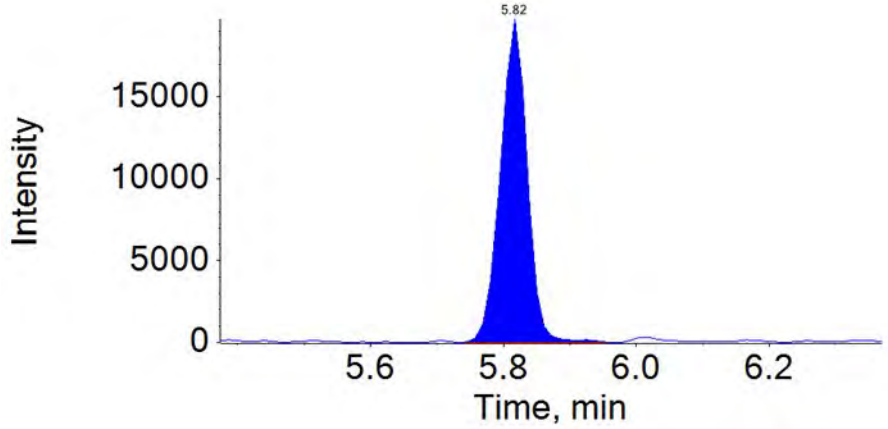
Results Table Name: 18NOV07DCCV1-4_DOD
Results Table Date: 11/7/2018 6:26:02 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
31140.2
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-05.wiff
Sample Name:
CCV1_ISC_CAL2



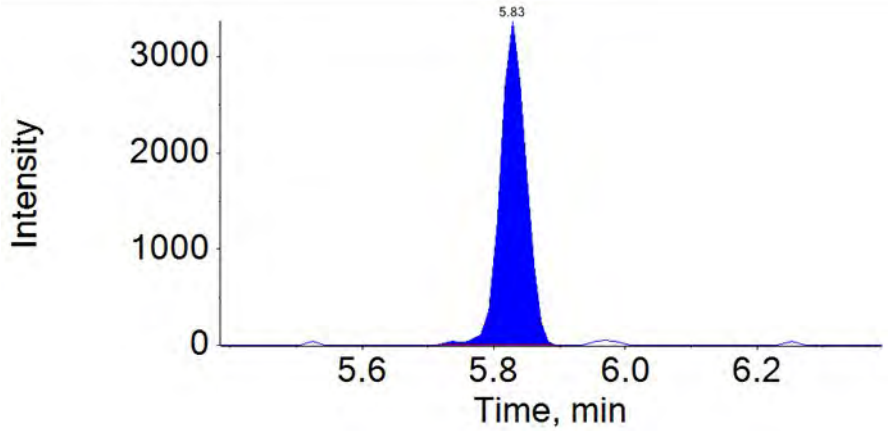
Integration Comment: incorrect integration

Component Name:
PFUnDA
RT (min.):
5.82
Peak Area:
55378.6
Mass Range:
563.0 / 519.0
File Name:
18NOV07D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
9166.7
Mass Range:
584.0 / 419.0
File Name:
18NOV07D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Results Table Name: 18NOV07DCCV1-4_DOD
Results Table Date: 11/7/2018 6:26:02 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Ion Ratio Report

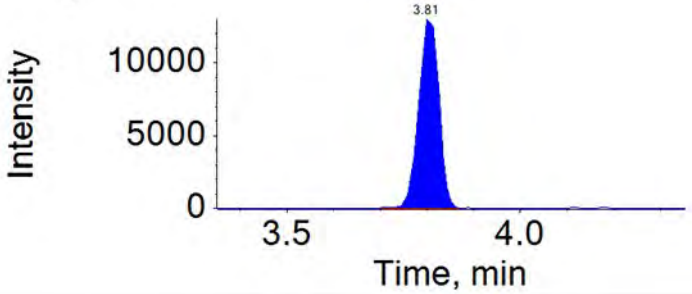
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	39168.4	A	N/A	0.3818			
PFBS_2	3.80	1.00	14954.7	A	N/A	0.3818	7	50	
4:2-FTS	4.12	1.00	9925.9	A	N/A	0.7140			
4:2-FTS_2	4.12	1.00	7086.7	A	N/A	0.7140	11	50	
PFHxA	4.15	1.00	88074.7	A	N/A	0.0131			
PFHxA_2	4.15	1.00	1154.7	A	N/A	0.0131	16	50	
PFPeS	4.17	1.10	20913.0	A	N/A	0.5407			
PFPeS_2	4.17	1.10	11308.3	A	N/A	0.5407	0	50	
PFHxS	4.54	1.00	30387.3	A	N/A	0.3536			
PFHxS_2	4.54	1.00	10746.4	A	N/A	0.3536	-1	50	
PFHpA	4.54	1.00	90462.4	A	N/A	0.0662			
PFHpA_2	4.54	1.00	5987.6	A	N/A	0.0662	15	50	
6:2-FTS	4.90	1.00	8938.2	A	N/A	0.6565			
6:2-FTS_2	4.90	1.00	5867.6	A	N/A	0.6565	-4	50	
PFHpS	4.90	1.08	30992.6	A	N/A	0.3879			
PFHpS_2	4.91	1.08	12021.9	A	N/A	0.3879	-2	50	
PFOA	4.91	1.00	99629.5	A	N/A	0.0517			
PFOA_2	4.91	1.00	5145.9	A	N/A	0.0517	-19	50	
PFOS	5.24	1.00	30525.5	M	N/A	0.3260			
PFOS_2	5.24	1.00	9952.4	A	N/A	0.3260	-7	50	
PFNA	5.25	1.00	74628.2	A	N/A	0.0235			
PFNA_2	5.25	1.00	1751.5	A	N/A	0.0235	14	50	
PFNS	5.53	1.06	16672.5	A	N/A	0.4591			
PFNS_2	5.53	1.06	7655.1	A	N/A	0.4591	-6	50	
PFDA	5.55	1.00	58204.1	A	N/A	0.0020			
PFDA_2	5.36	0.97	118.0	A	N/A	0.0020	-63	50	OOS
8:2-FTS	5.56	1.00	6912.4	A	N/A	0.6715			
8:2-FTS_2	5.56	1.00	4641.6	A	N/A	0.6715	8	50	
NMeFOSAA	5.69	1.00	7609.0	A	N/A	0.2968			
NMeFOSAA_2	5.70	1.00	2258.1	A	N/A	0.2968	37	50	
PFDS	5.79	1.11	13804.1	A	N/A	0.5109			
PFDS_2	5.80	1.11	7052.9	A	N/A	0.5109	11	50	
PFUnDA	5.82	1.00	55119.4	M	N/A	0.0076			
PFUnDA_2	5.82	1.00	417.9	A	N/A	0.0076	149	50	OOS
NEtFOSAA	5.83	1.00	9115.6	M	N/A	0.3688			
NEtFOSAA_2	5.84	1.00	3362.1	A	N/A	0.3688	-39	50	
PFDoDA	6.04	1.00	59030.8	A	N/A	0.0085			
PFDoDA_2	6.05	1.00	502.7	A	N/A	0.0085	-19	50	
10:2-FTS	6.06	1.09	4422.0	A	N/A	1.0135			
10:2-FTS_2	6.07	1.09	4481.6	A	N/A	1.0135	42	50	
PFTrDA	6.24	1.03	52443.4	A	N/A	0.0130			
PFTrDA_2	6.26	1.03	681.3	A	N/A	0.0130	36	50	
PFTeDA	6.42	1.00	46434.9	A	N/A	0.0073			
PFTeDA_2	6.42	1.00	340.9	A	N/A	0.0073	36	50	
PFHxDA	6.72	1.05	28219.3	A	N/A	0.0551			
PFHxDA_2	6.72	1.05	1554.7	A	N/A	0.0551	-7	50	
PFODA	6.99	1.09	24584.2	A	N/A	0.0228			
PFODA_2	6.98	1.09	560.9	A	N/A	0.0228	-11	50	

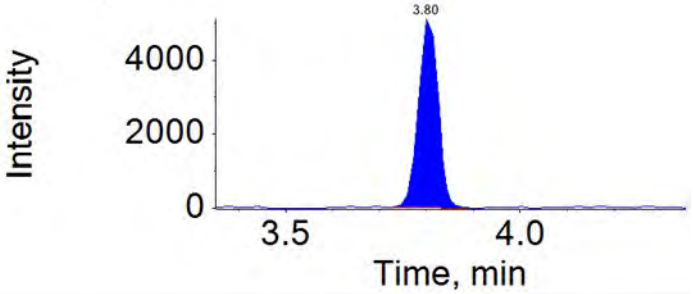
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

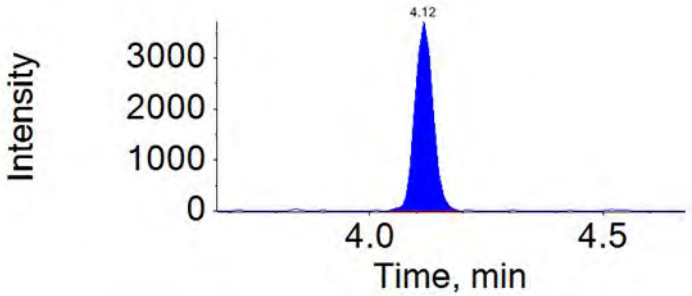
Component: PFBS
Primary Mass: 299.0 / 80.0



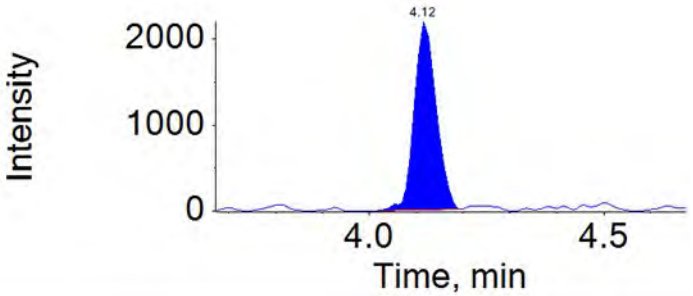
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



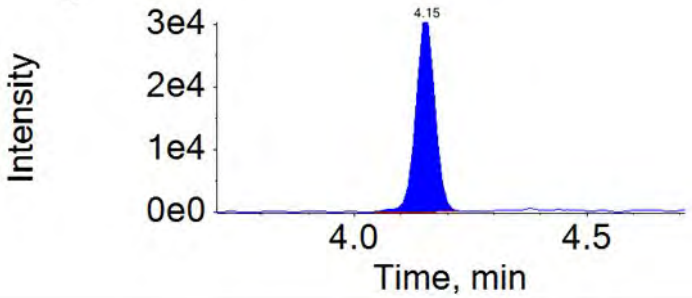
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



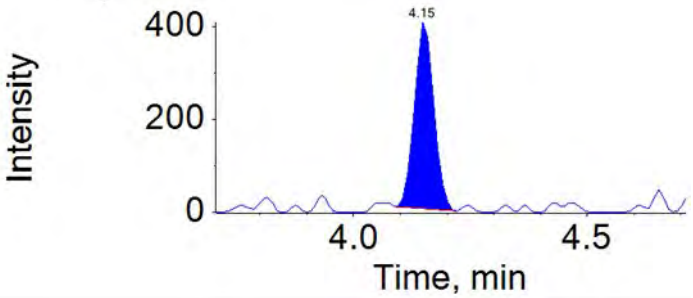
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



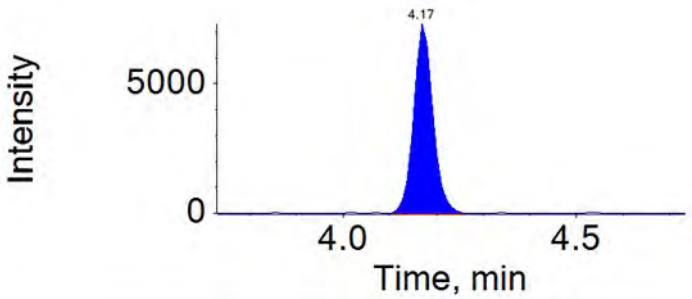
Component: PFHxA
Primary Mass: 313.0 / 269.0



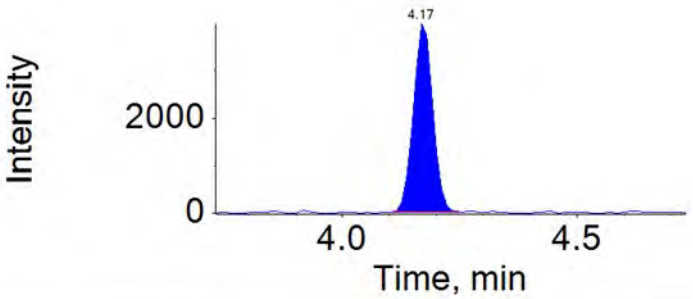
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



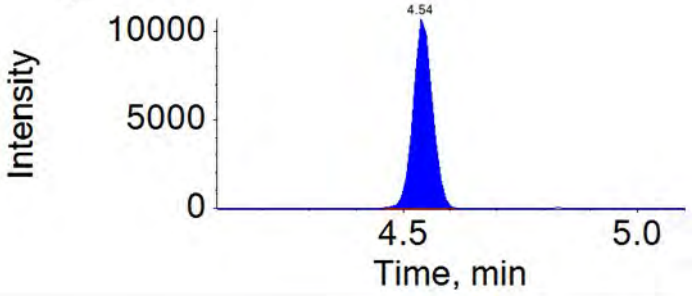
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



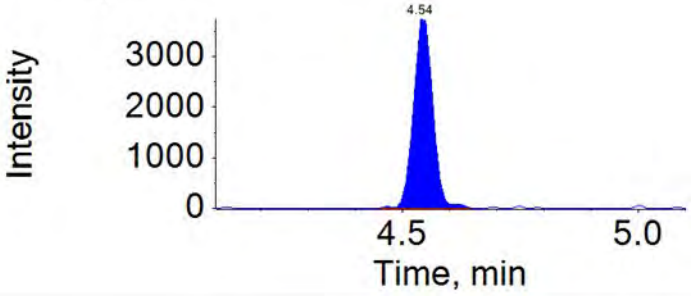
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

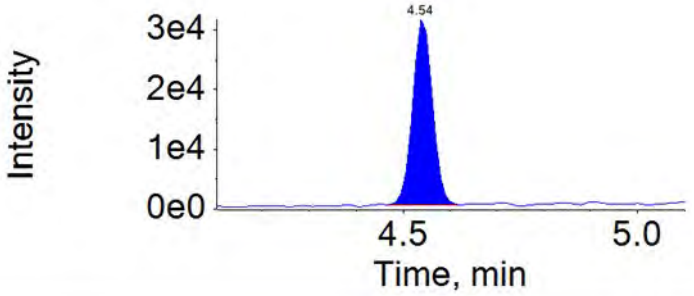
Component: PFHxS
Primary Mass: 399.0 / 80.0



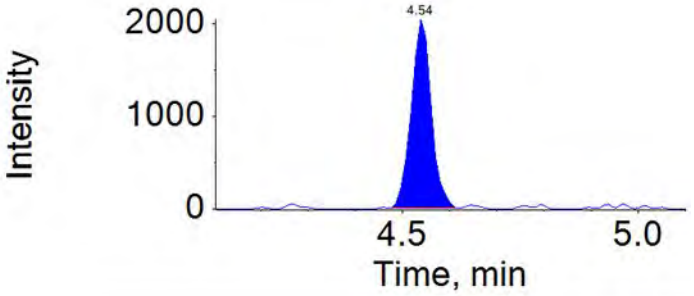
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



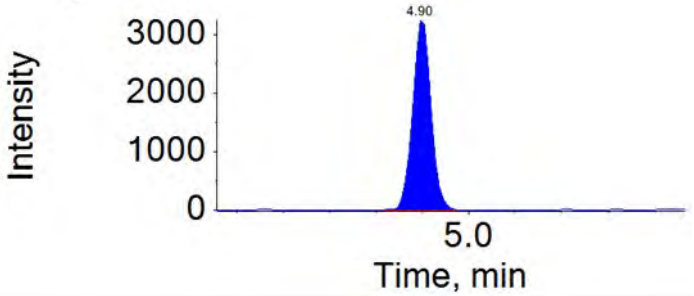
Component: PFHpA
Primary Mass: 363.0 / 319.0



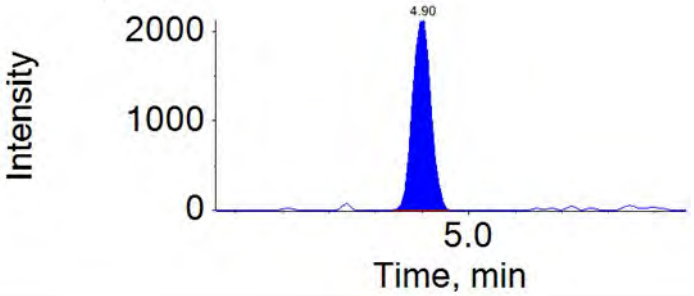
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



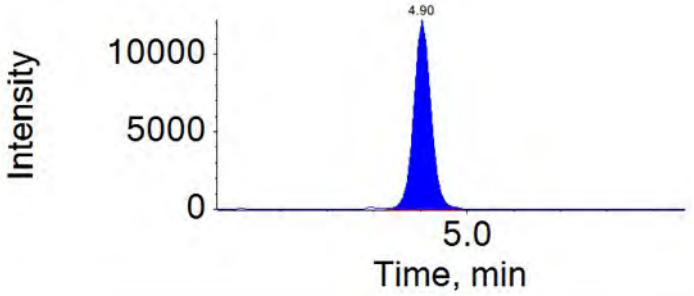
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



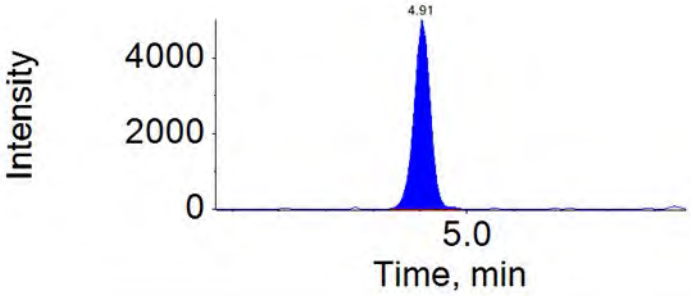
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



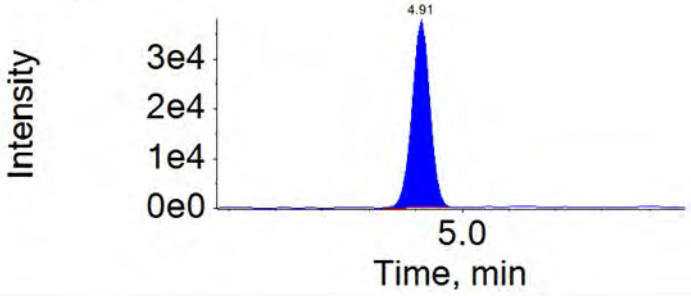
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



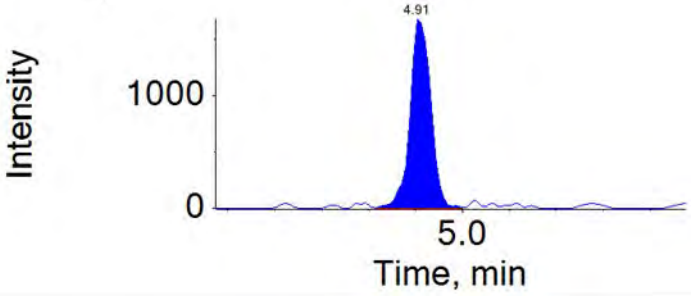
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

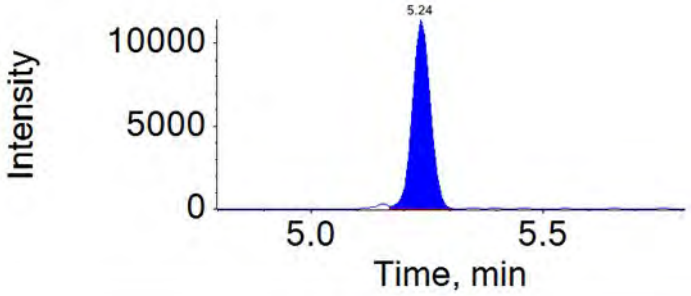
Component: PFOA
Primary Mass: 413.0 / 369.0



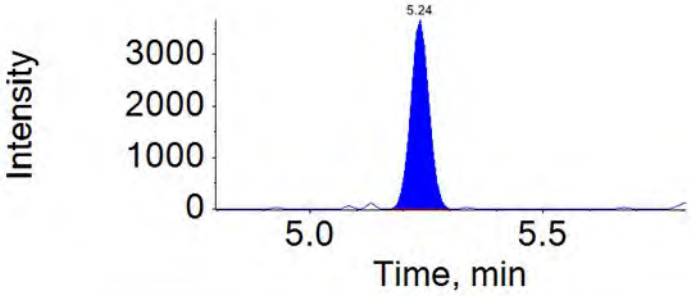
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



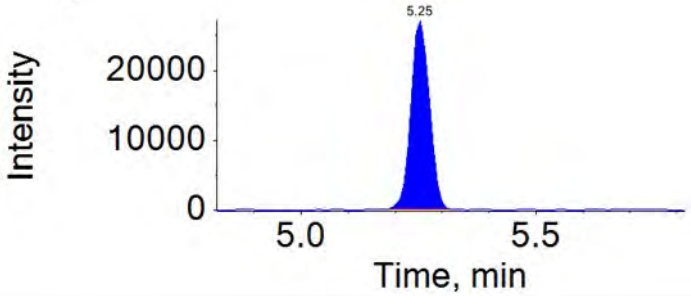
Component: PFOS
Primary Mass: 499.0 / 80.0



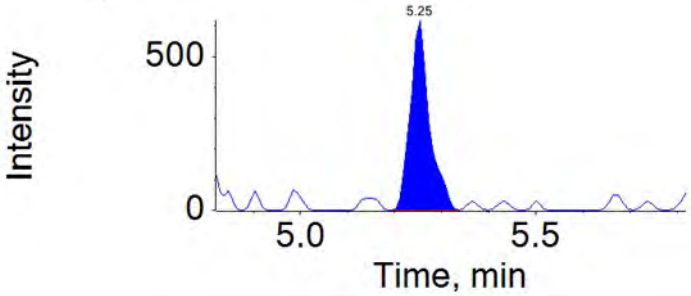
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



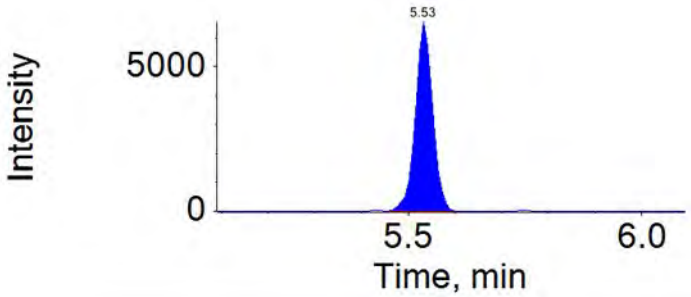
Component: PFNA
Primary Mass: 463.0 / 419.0



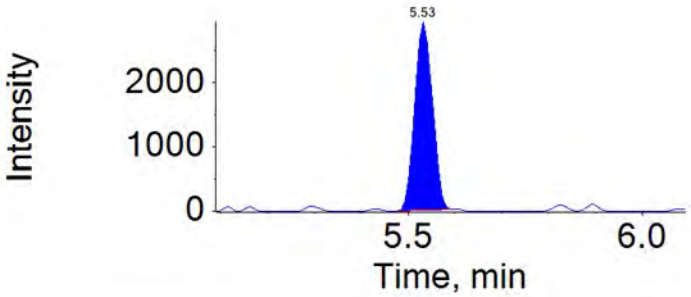
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



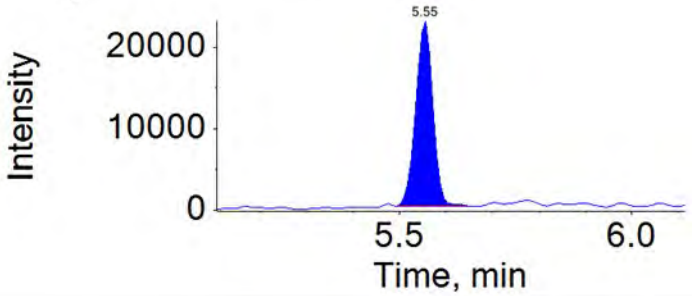
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



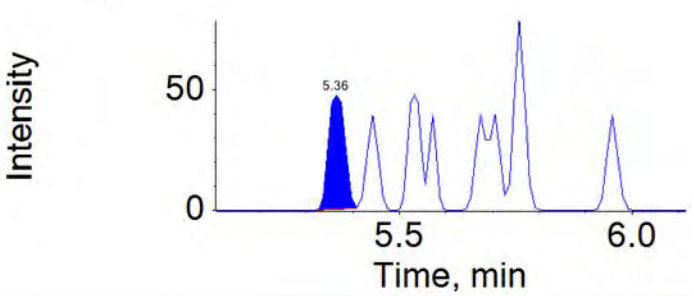
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

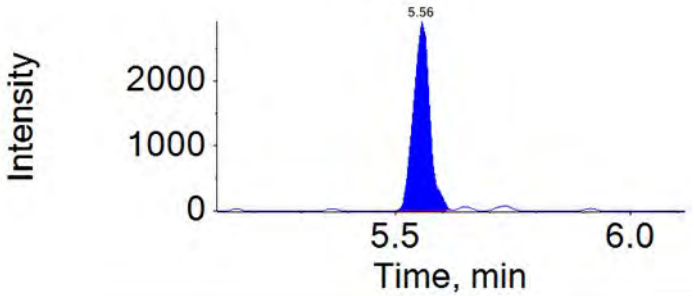
Component: PFDA
Primary Mass: 513.0 / 469.0



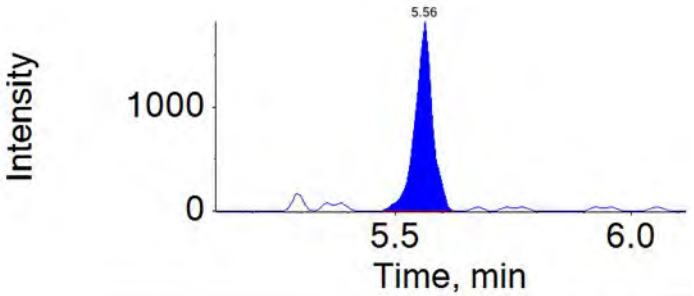
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



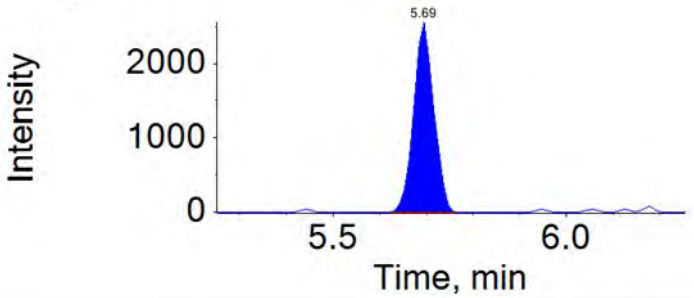
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



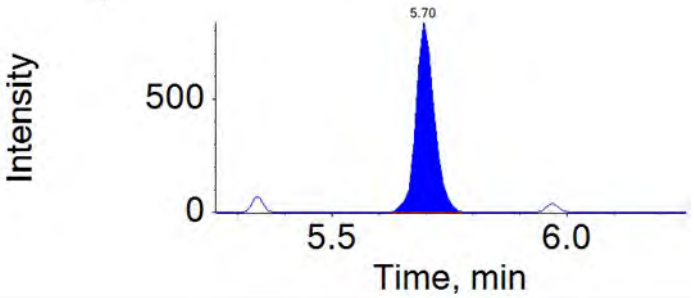
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



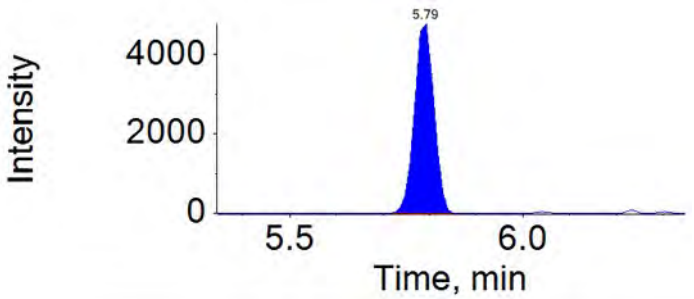
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



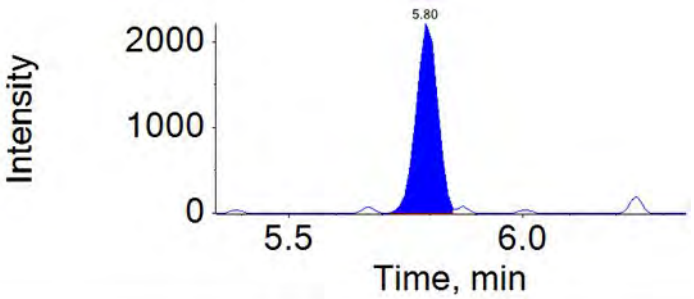
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



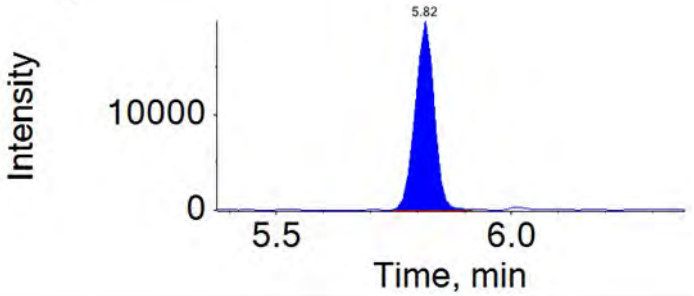
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



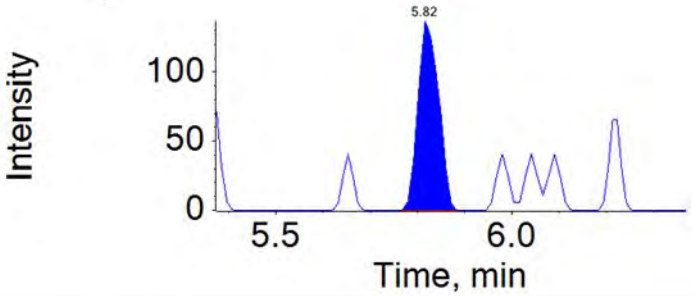
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

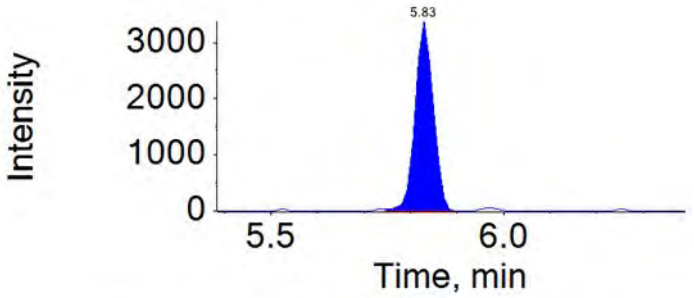
Component: PFUnDA
Primary Mass: 563.0 / 519.0



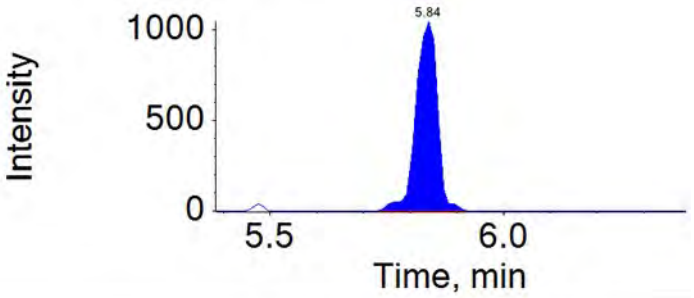
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



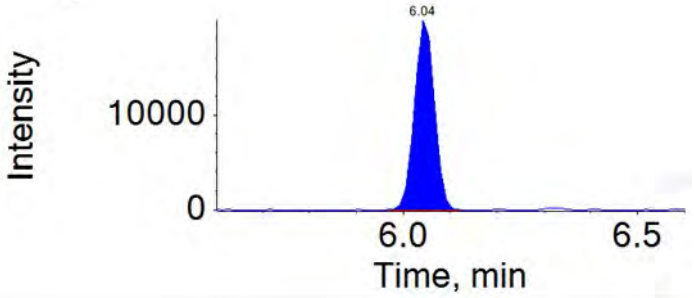
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



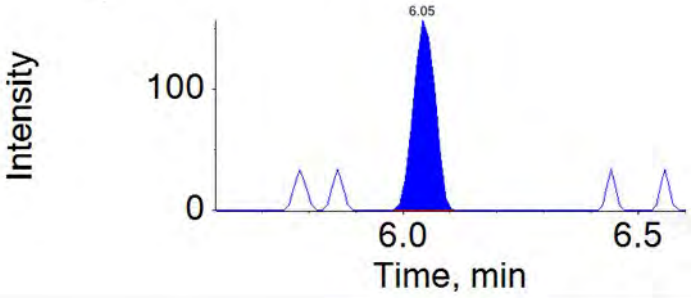
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



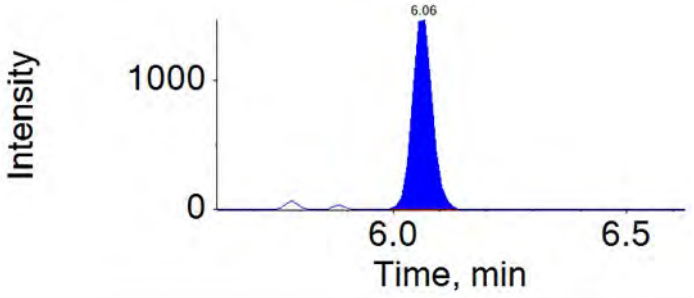
Component: PFDoDA
Primary Mass: 613.0 / 569.0



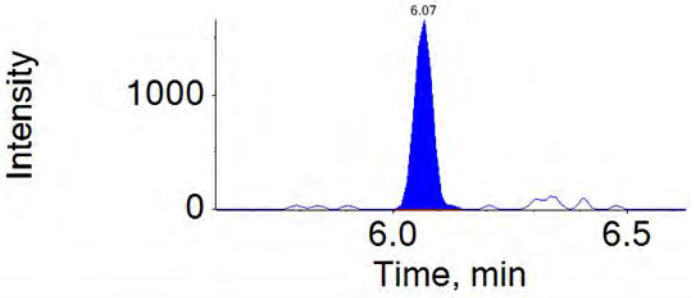
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



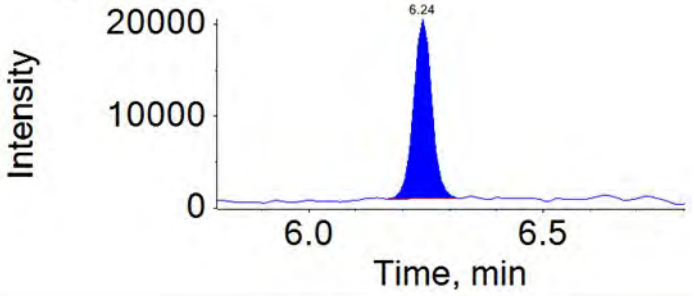
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



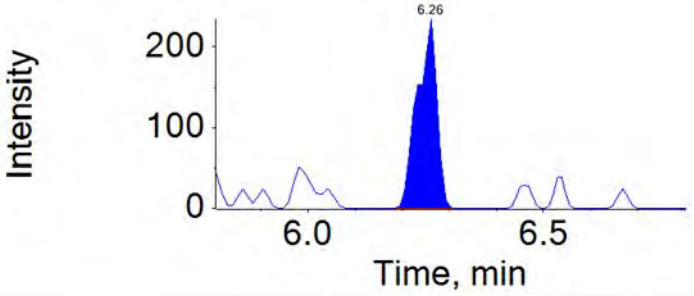
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

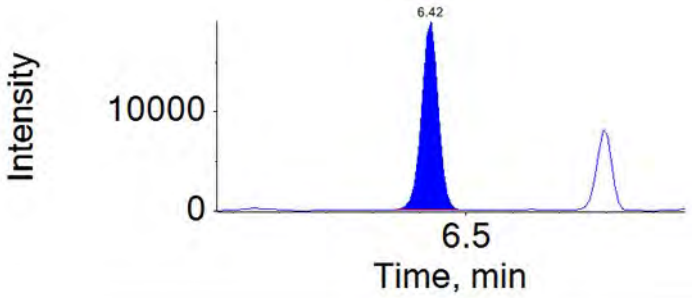
Component: PFTrDA
Primary Mass: 663.0 / 619.0



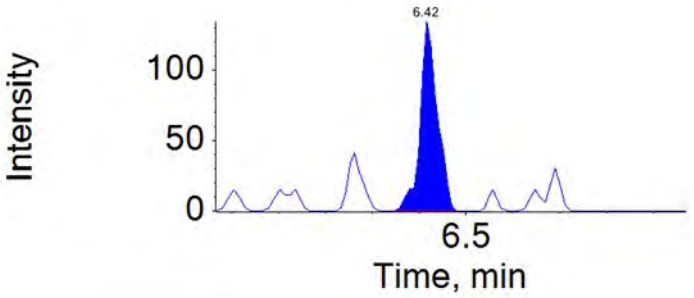
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



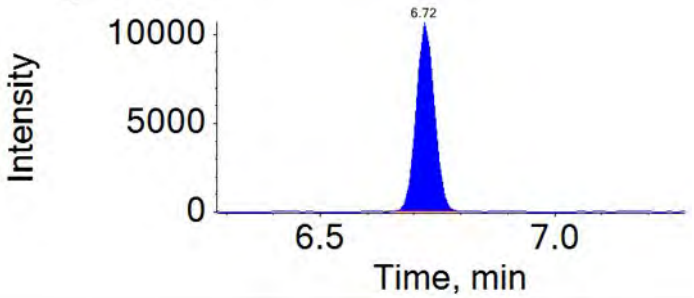
Component: PFTeDA
Primary Mass: 713.0 / 669.0



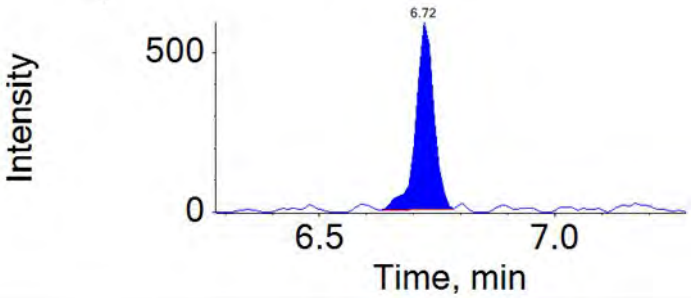
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



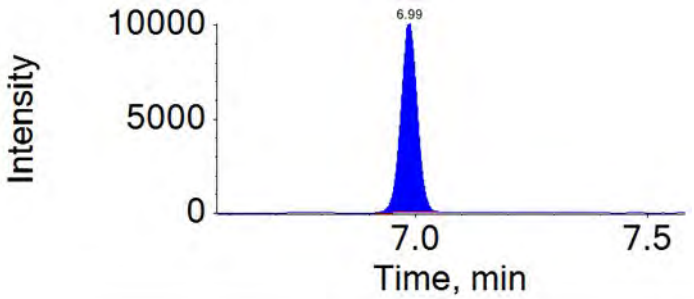
Component: PFHxDA
Primary Mass: 813.0 / 769.0



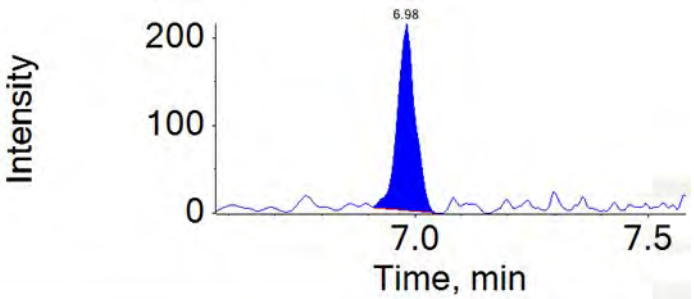
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



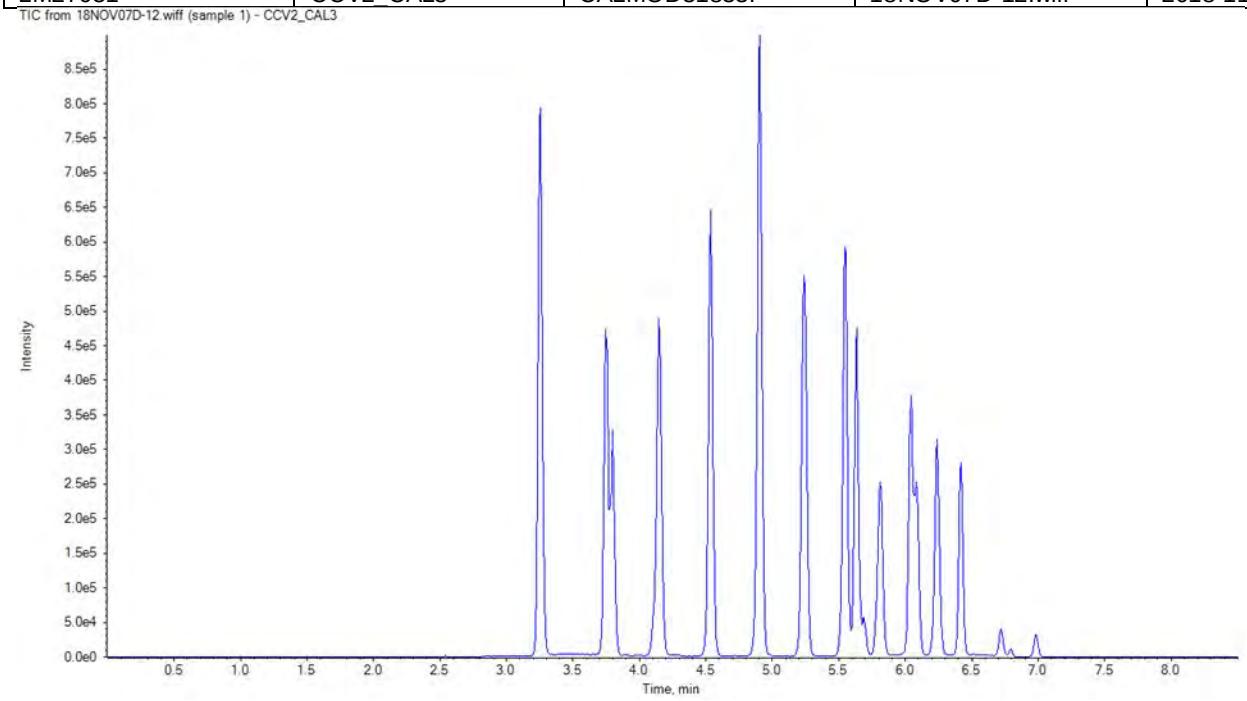
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALMOD31833F	18NOV07D-12.wiff	2018-11-07T12:59:48



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	716017.0	730410.6	-2	50	
13C2-PFOA	5.0	521855.6	524423.6	0	50	
13C4-PFOS	4.8	262694.1	274061.7	-4	50	
13C2-PFDA	5.0	322370.2	311442.1	4	50	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALMOD31833F	18NOV07D-12.wiff	2018-11-07T12:59:48

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	279577.2	10	13C4-PFBA	756673.6	5.0	0.369	3.25	1.000	2.000	2.162	8	30	
PFPeA	286456.5	12	13C5-PFPeA	817999.9	5.0	0.350	3.75	1.000	2.000	2.081	4	30	
PFBS	157076.1	11	13C3-PFBS	417453.4	4.7	0.376	3.80	1.000	1.770	1.897	7	30	
4:2-FTS	38952.4	12	13C2-4:2-FTS	59581.2	4.7	0.654	4.11	1.000	1.868	1.758	-6	30	
PFHxA	353783.1	12	13C5-PFHxA	714984.5	5.0	0.495	4.15	1.000	2.000	2.122	6	30	
PFPeS	76864.2	11	13C3-PFBS	417453.4	4.7	0.184	4.17	1.100	1.880	1.816	-3	30	
PFHxS	126814.6	12	13C3-PFHxS	338908.4	4.7	0.374	4.54	1.000	1.890	1.897	0	30	
PFHpA	368935.3	12	13C4-PFHpA	583445.6	5.0	0.632	4.54	1.000	2.000	2.127	6	30	
6:2-FTS	34898.0	11	13C2-6:2-FTS	37958.0	4.8	0.919	4.89	1.000	1.896	2.294	21	30	
PFHpS	121935.5	11	13C3-PFHxS	338908.4	4.7	0.360	4.90	1.080	1.900	1.882	-1	30	
PFOA	361377.7	11	13C8-PFOA	942807.5	5.0	0.383	4.90	1.000	2.000	2.158	8	30	
PFOS	112316.2	11	13C8-PFOS	288739.2	4.8	0.389	5.23	1.000	1.910	2.017	6	30	
PFNA	304718.7	11	13C9-PFNA	521726.8	5.0	0.584	5.25	1.000	2.000	2.183	9	30	
PFNS	74275.5	11	13C8-PFOS	288739.2	4.8	0.257	5.53	1.060	1.920	2.040	6	30	
PFDA	235396.8	11	13C6-PFDA	672916.4	5.0	0.350	5.55	1.000	2.000	1.925	-4	30	
8:2-FTS	27244.6	10	13C2-8:2-FTS	29277.2	4.8	0.931	5.55	1.000	1.916	2.098	9	30	
PFOSA	300183.3	11	13C8-PFOSA	713215.9	5.0	0.421	5.63	1.000	2.000	2.275	14	30	
NMeFOSAA	32038.6	11	d3-NMeFOSAA	81985.4	5.0	0.391	5.69	1.000	2.000	2.011	1	30	
PFDS	60808.7	12	13C8-PFOS	288739.2	4.8	0.211	5.78	1.110	1.930	2.012	4	30	
PFUnDA	209375.3	12	13C7-PFUnDA	267281.1	5.0	0.783	5.81	1.000	2.000	2.246	12	30	
NEtFOSAA	30206.4	12	d5-NEtFOSAA	76338.5	5.0	0.396	5.83	1.000	2.000	1.701	-15	30	
PFDoDA	219293.5	12	13C2-PFDoDA	584415.7	5.0	0.375	6.04	1.000	2.000	2.034	2	30	
10:2-FTS	18424.6	12	13C2-8:2-FTS	29277.2	4.8	0.629	6.05	1.090	1.928	1.960	2	30	
NMePFOSAE	158918.4	12	d7-NMePFOSAE	327621.4	5.0	0.485	6.09	1.000	2.000	2.174	9	30	
NMePFOSA	29509.2	12	d3-NMePFOSA	82225.3	5.0	0.359	6.10	1.000	2.000	2.009	0	30	
PFDoS	28520.3	10	13C8-PFOS	288739.2	4.8	0.099	6.21	1.190	1.940	1.906	-2	30	
NEtPFOSAE	184317.4	11	d9-NEtPFOSAE	276569.0	5.0	0.666	6.25	1.000	2.000	2.136	7	30	
NEtPFOSA	28612.8	11	d5-NEtPFOSA	63089.6	5.0	0.454	6.26	1.000	2.000	1.997	0	30	
PFTrDA	182926.3	11	13C2-PFDoDA	584415.7	5.0	0.313	6.24	1.030	2.000	1.974	-1	30	
PFTeDA	153584.9	11	13C2-PFTeDA	446124.2	5.0	0.344	6.42	1.000	2.000	2.022	1	30	
PFHxDA	78639.3	11	13C2-PFTeDA	446124.2	5.0	0.176	6.72	1.050	2.000	2.188	9	30	
PFODA	70028.7	10	13C2-PFTeDA	446124.2	5.0	0.157	6.98	1.090	2.000	2.249	12	30	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV2_CAL3			**Data File:**		18NOV07D-12.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T12:59:48
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	716017.0	730410.6	-2	50	
13C2-PFOA	5.0	521855.6	524423.6	0	50	
13C4-PFOS	4.8	262694.1	274061.7	-4	50	
13C2-PFDA	5.0	322370.2	311442.1	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	756673.6	13C3-PFBA	716017.0	1.057	5.000	4.890	98	70-130	
E13C5-PFPeA	817999.9	13C3-PFBA	716017.0	1.142	5.000	4.977	100	70-130	
E13C3-PFBS	417453.4	13C3-PFBA	716017.0	0.583	4.650	4.279	92	70-130	
E13C2-4:2-FTS	59581.2	13C2-PFOA	521855.6	0.114	4.670	5.152	110	70-130	
E13C5-PFHxA	714984.5	13C2-PFOA	521855.6	1.370	5.000	5.040	101	70-130	
E13C3-PFHxS	338908.4	13C2-PFOA	521855.6	0.649	4.730	4.662	99	70-130	
E13C4-PFHpA	583445.6	13C2-PFOA	521855.6	1.118	5.000	5.086	102	70-130	
E13C2-6:2-FTS	37958.0	13C2-PFOA	521855.6	0.073	4.750	4.850	102	70-130	
E13C8-PFOA	942807.5	13C2-PFOA	521855.6	1.807	5.000	5.038	101	70-130	
E13C8-PFOS	288739.2	13C4-PFOS	262694.1	1.099	4.780	4.860	102	70-130	
E13C9-PFNA	521726.8	13C4-PFOS	262694.1	1.986	5.000	5.425	109	70-130	
E13C6-PFDA	672916.4	13C2-PFDA	322370.2	2.087	5.000	5.249	105	70-130	
E13C2-8:2-FTS	29277.2	13C2-PFDA	322370.2	0.091	4.790	4.806	100	70-130	
E13C8-PFOSA	713215.9	13C2-PFDA	322370.2	2.212	5.000	4.828	97	70-130	
Ed3-NMeFOSAA	81985.4	13C2-PFDA	322370.2	0.254	5.000	4.729	95	70-130	
E13C7-PFUnDA	267281.1	13C2-PFDA	322370.2	0.829	5.000	4.783	96	70-130	
Ed5-NEtFOSAA	76338.5	13C2-PFDA	322370.2	0.237	5.000	5.480	110	70-130	
E13C2-PFDoDA	584415.7	13C2-PFDA	322370.2	1.813	5.000	4.887	98	70-130	
Ed7-NMePFOSAE	327621.4	13C2-PFDA	322370.2	1.016	5.000	4.726	95	70-130	
Ed3-NMePFOSA	82225.3	13C2-PFDA	322370.2	0.255	5.000	4.670	93	70-130	
Ed9-NEtPFOSAE	276569.0	13C2-PFDA	322370.2	0.858	5.000	4.899	98	70-130	
Ed5-NEtPFOSA	63089.6	13C2-PFDA	322370.2	0.196	5.000	4.531	91	70-130	
E13C2-PFTeDA	446124.2	13C2-PFDA	322370.2	1.384	5.000	4.982	100	70-130	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

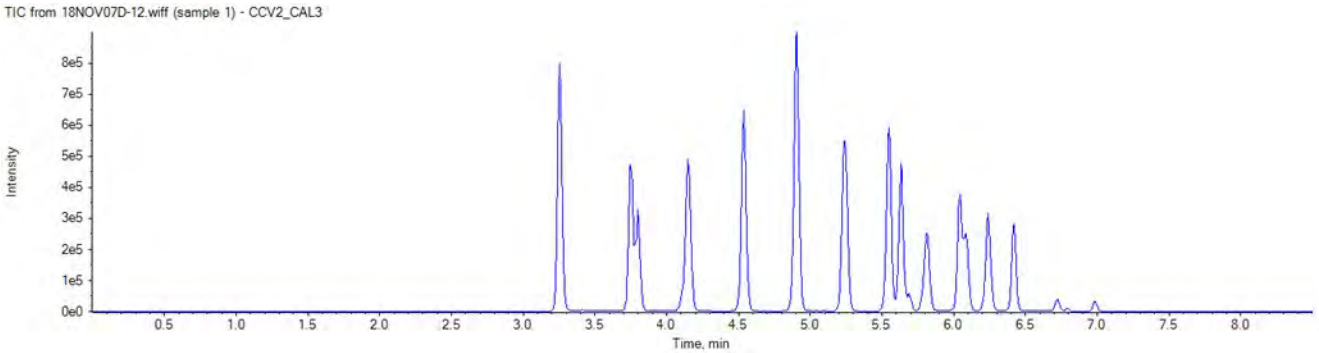
Analyte Quantitation Peak Table

Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07D-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	279577.2		A	13C4-PFBA	3.25	756673.6	0.369	2.162
PFPeA	3.75	1.000	286456.5		A	13C5-PFPeA	3.75	817999.9	0.350	2.081
PFBS	3.80	1.000	157076.1		A	13C3-PFBS	3.80	417453.4	0.376	1.897
4:2-FTS	4.11	1.000	38952.4		A	13C2-4:2-FTS	4.11	59581.2	0.654	1.758
PFHxA	4.15	1.000	353783.1		A	13C5-PFHxA	4.15	714984.5	0.495	2.122
PFPeS	4.17	1.100	76864.2		A	13C3-PFBS	3.80	417453.4	0.184	1.816
PFHxS	4.54	1.000	126814.6		A	13C3-PFHxS	4.54	338908.4	0.374	1.897
PFHpA	4.54	1.000	368935.3		A	13C4-PFHpA	4.54	583445.6	0.632	2.127
6:2-FTS	4.89	1.000	34898.0		A	13C2-6:2-FTS	4.89	37958.0	0.919	2.294
PFHpS	4.90	1.080	121935.5		A	13C3-PFHxS	4.54	338908.4	0.360	1.882
PFOA	4.90	1.000	361377.7		A	13C8-PFOA	4.91	942807.5	0.383	2.158
PFOS	5.23	1.000	112316.2		M	13C8-PFOS	5.23	288739.2	0.389	2.017
PFNA	5.25	1.000	304718.7		A	13C9-PFNA	5.25	521726.8	0.584	2.183
PFNS	5.53	1.060	74275.5		A	13C8-PFOS	5.23	288739.2	0.257	2.040
PFDA	5.55	1.000	235396.8		A	13C6-PFDA	5.55	672916.4	0.350	1.925
8:2-FTS	5.55	1.000	27244.6		A	13C2-8:2-FTS	5.55	29277.2	0.931	2.098
PFOSA	5.63	1.000	300183.3		A	13C8-PFOSA	5.63	713215.9	0.421	2.275
NMeFOSAA	5.69	1.000	32038.6		A	d3-NMeFOSAA	5.69	81985.4	0.391	2.011
PFDS	5.78	1.110	60808.7		A	13C8-PFOS	5.23	288739.2	0.211	2.012
PFUnDA	5.81	1.000	209375.3		A	13C7-PFUnDA	5.81	267281.1	0.783	2.246
NEtFOSAA	5.83	1.000	30206.4		A	d5-NEtFOSAA	5.82	76338.5	0.396	1.701
PFDoDA	6.04	1.000	219293.5		A	13C2-PFDoDA	6.04	584415.7	0.375	2.034
10:2-FTS	6.05	1.090	18424.6		A	13C2-8:2-FTS	5.55	29277.2	0.629	1.960
NMePFOSAE	6.09	1.000	158918.4		A	d7-NMePFOSAE	6.08	327621.4	0.485	2.174
NMePFOSA	6.10	1.000	29509.2		A	d3-NMePFOSA	6.09	82225.3	0.359	2.009
PFDoS	6.21	1.190	28520.3		A	13C8-PFOS	5.23	288739.2	0.099	1.906
NEtPFOSAE	6.25	1.000	184317.4		A	d9-NEtPFOSAE	6.23	276569.0	0.666	2.136
NEtPFOSA	6.26	1.000	28612.8		A	d5-NEtPFOSA	6.25	63089.6	0.454	1.997
PFTrDA	6.24	1.030	182926.3		A	13C2-PFDoDA	6.04	584415.7	0.313	1.974
PFTeDA	6.42	1.000	153584.9		A	13C2-PFTeDA	6.42	446124.2	0.344	2.022
PFHxDA	6.72	1.050	78639.3		A	13C2-PFTeDA	6.42	446124.2	0.176	2.188
PFODA	6.98	1.090	70028.7		A	13C2-PFTeDA	6.42	446124.2	0.157	2.249

Total Ion Chromatogram

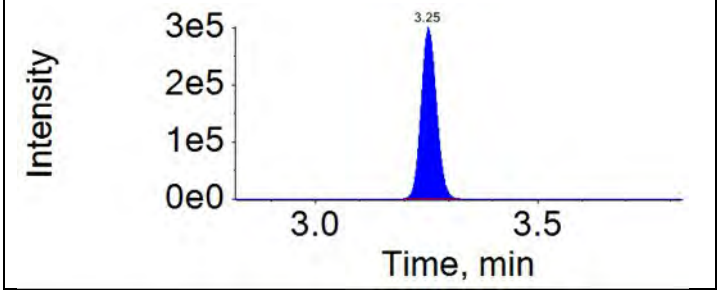


APPROVED
By MCD at 6:31 pm, 11/7/18

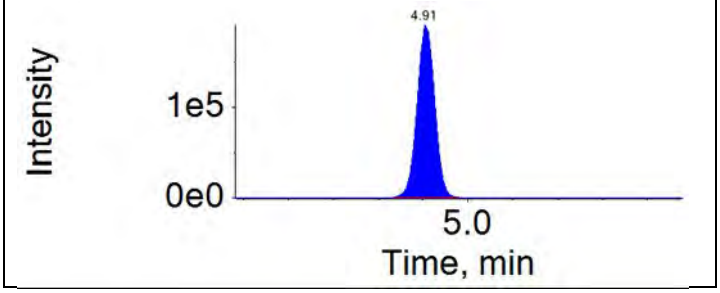
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

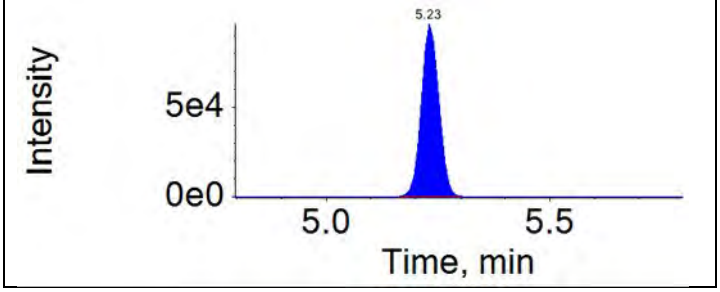
Injection Standard: 13C3-PFBA
216.0 / 172.0



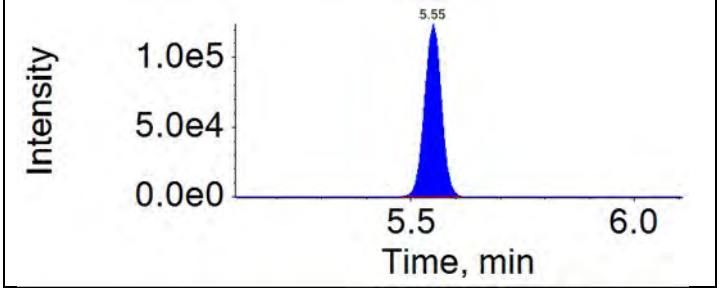
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

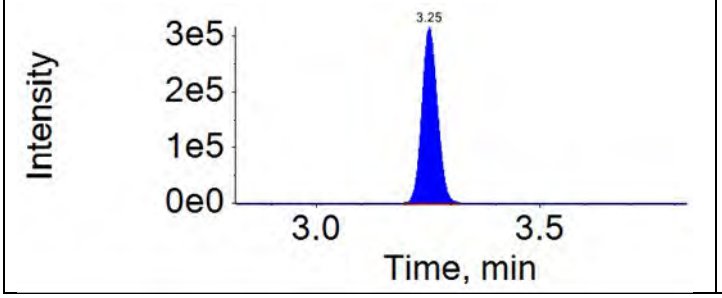


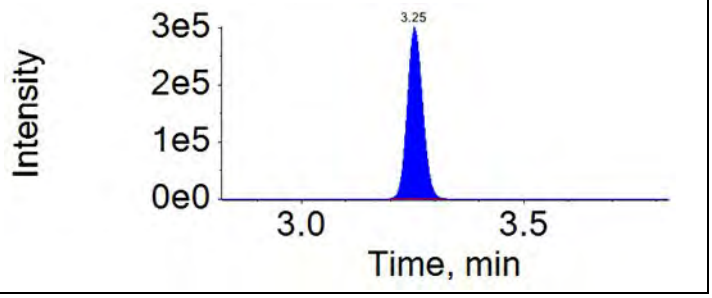
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

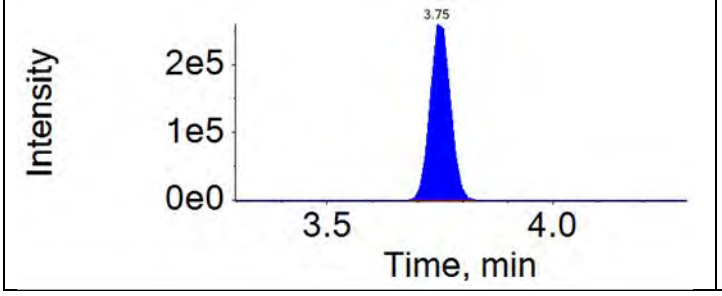
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

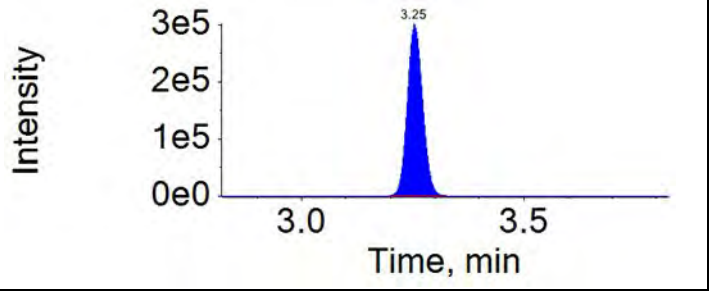
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



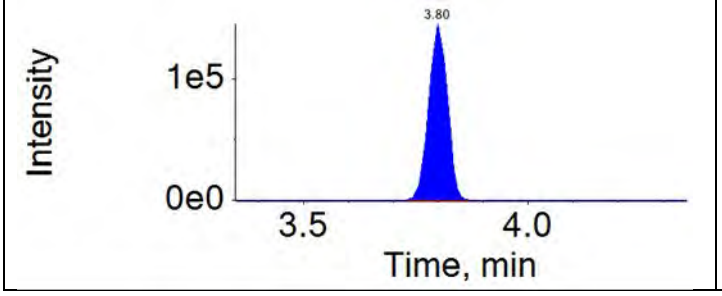


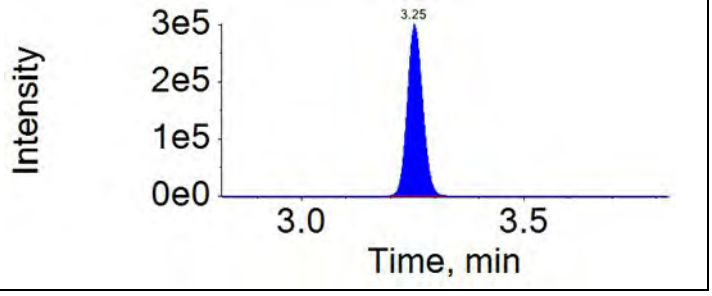
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



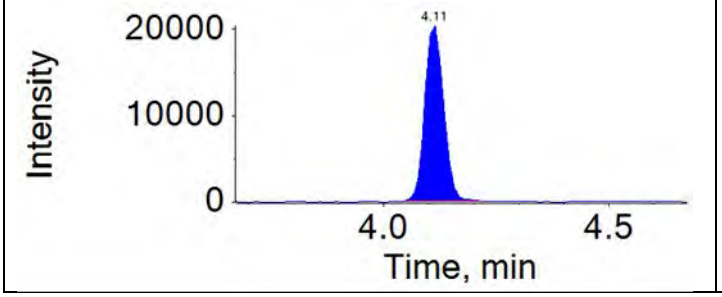


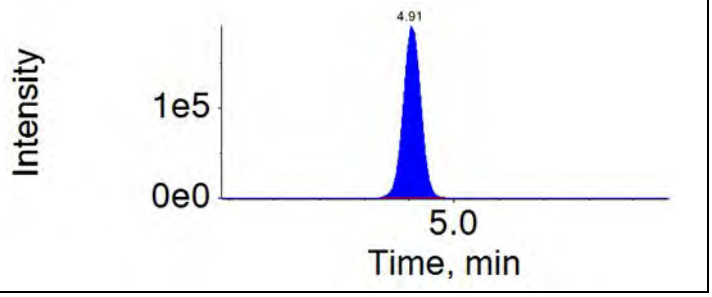
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



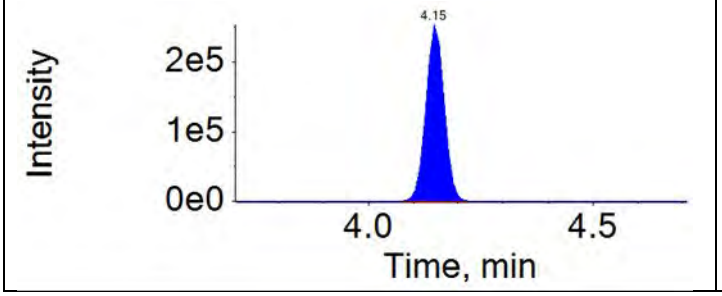


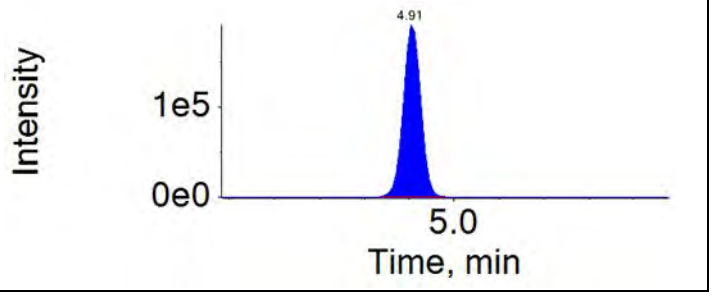
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

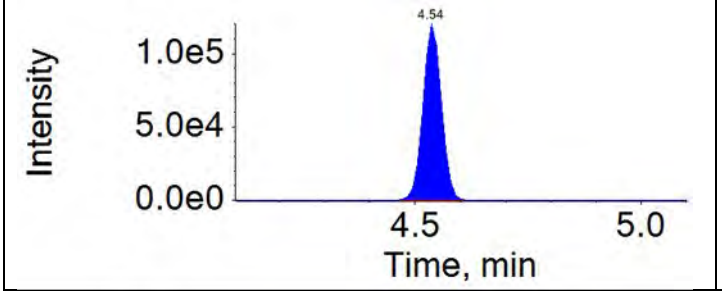
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

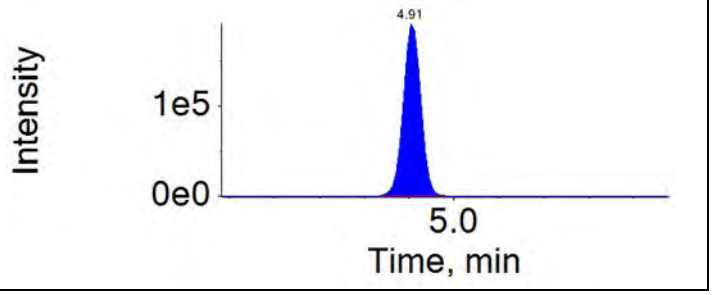
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



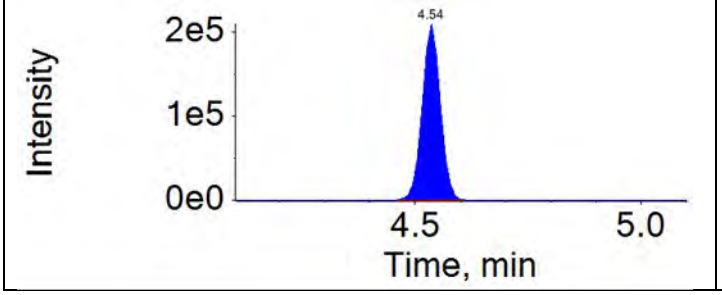


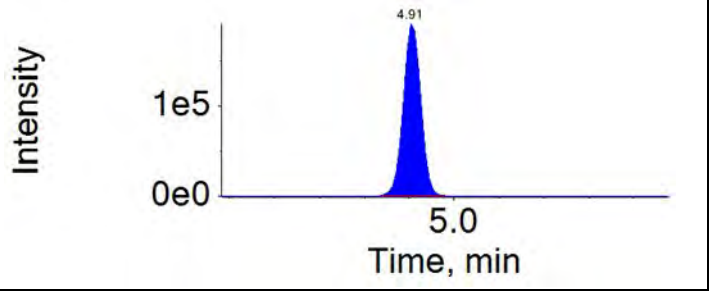
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



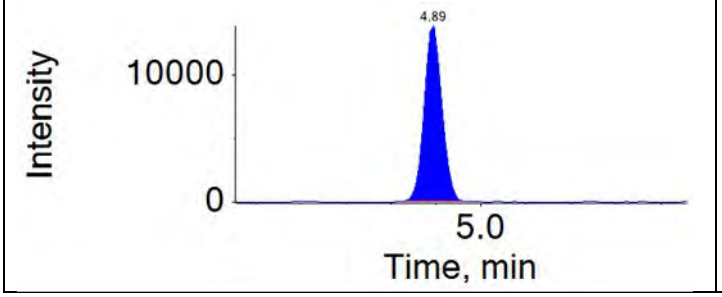


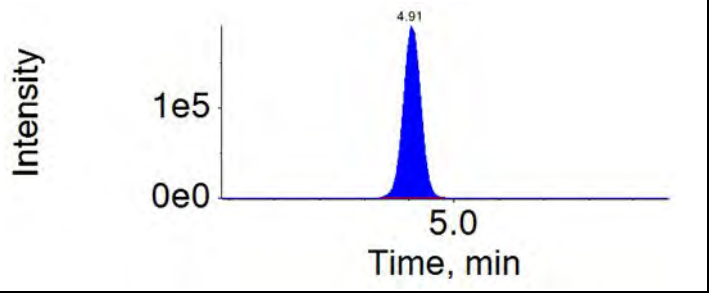
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



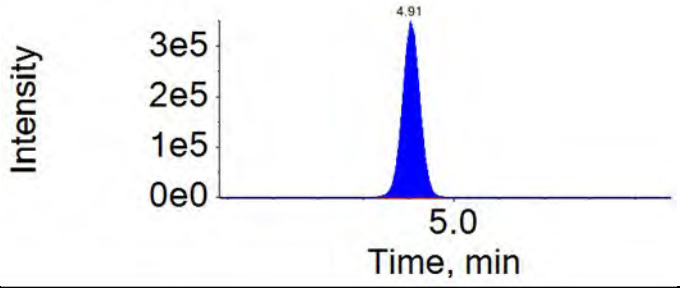
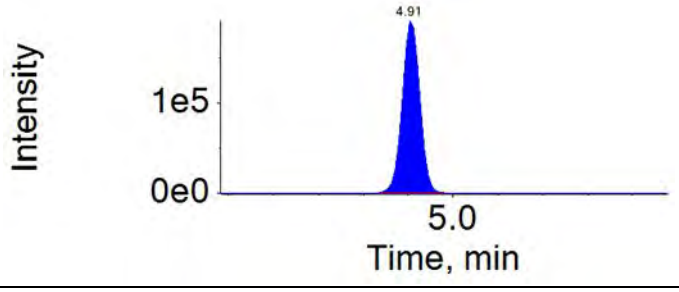


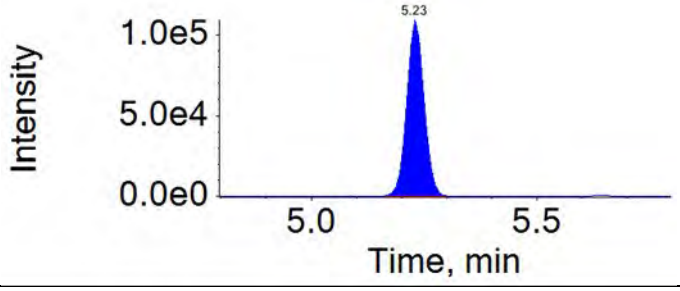
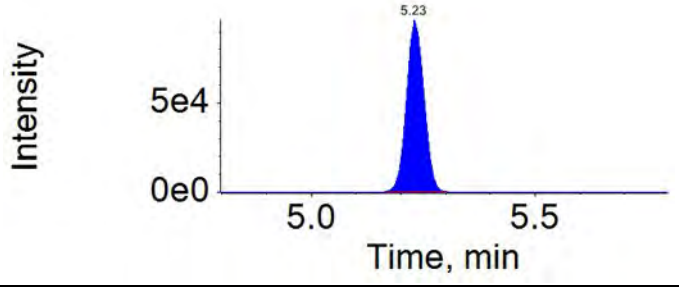
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

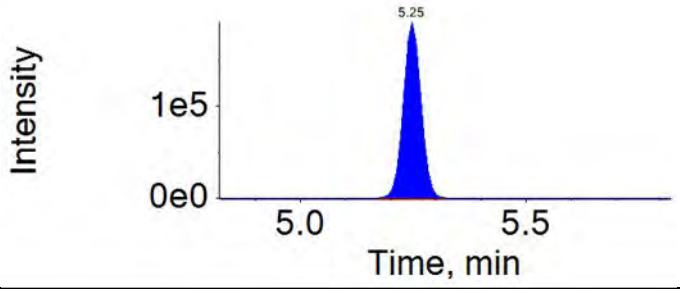
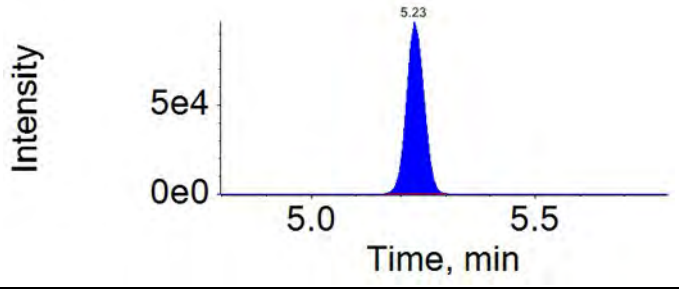


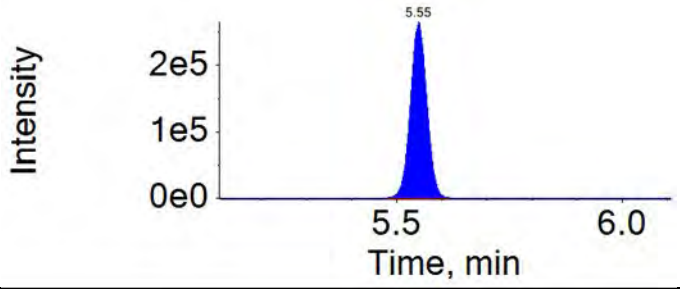
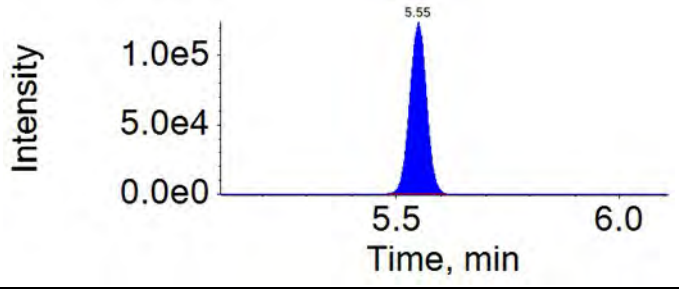


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

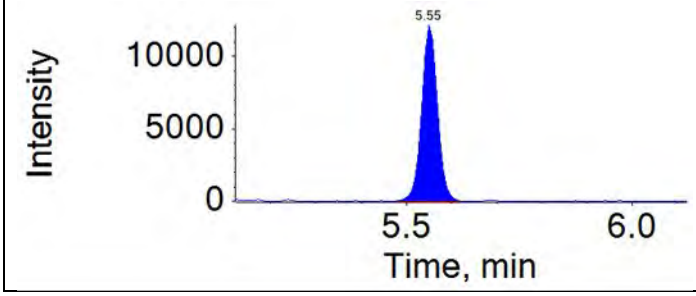
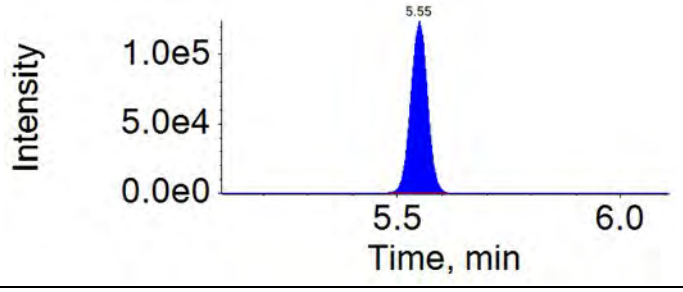
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

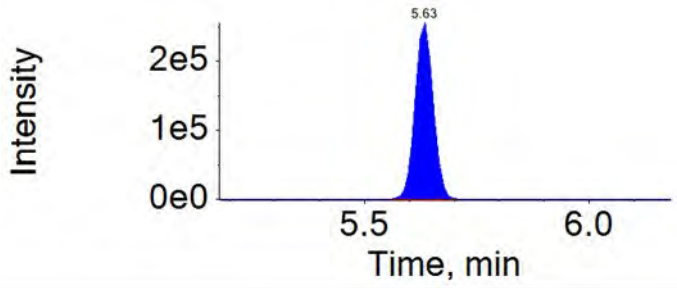
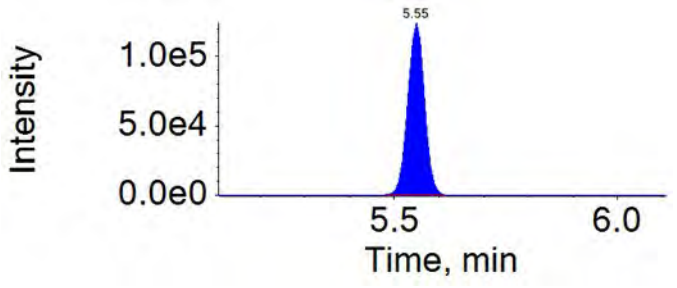
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

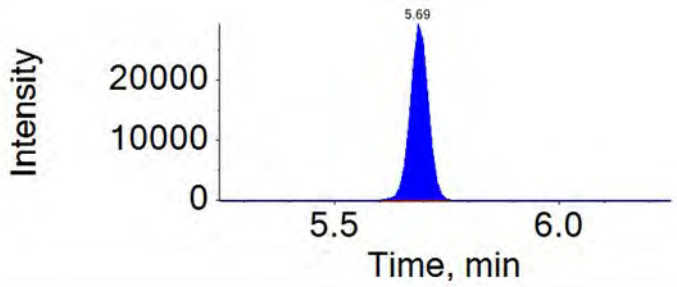
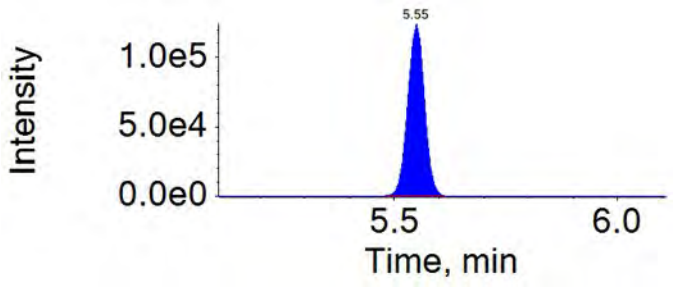
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

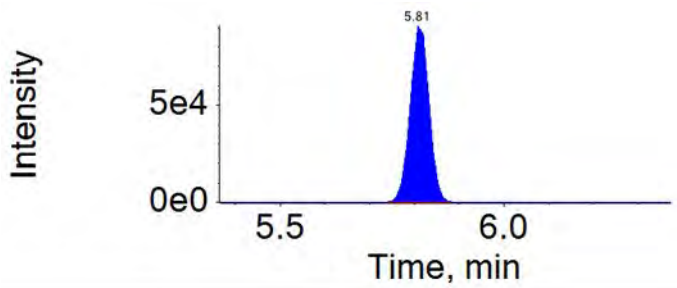
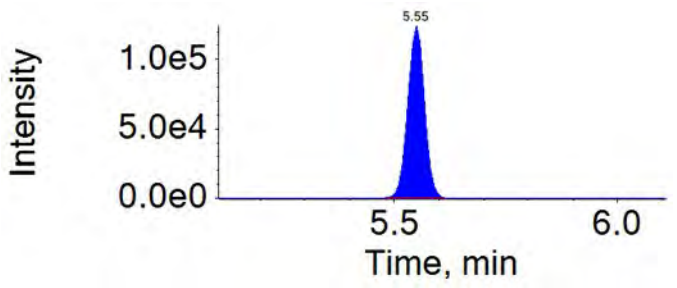
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

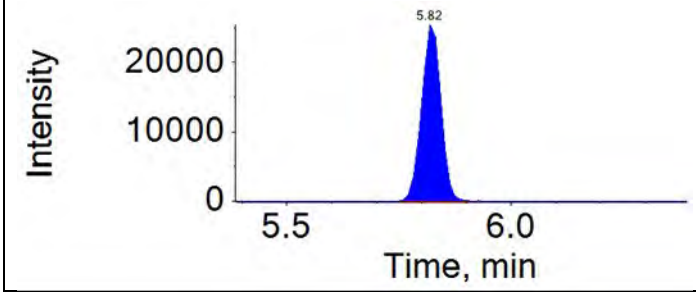
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

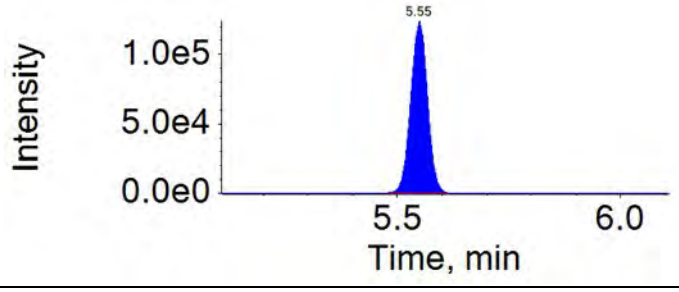
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

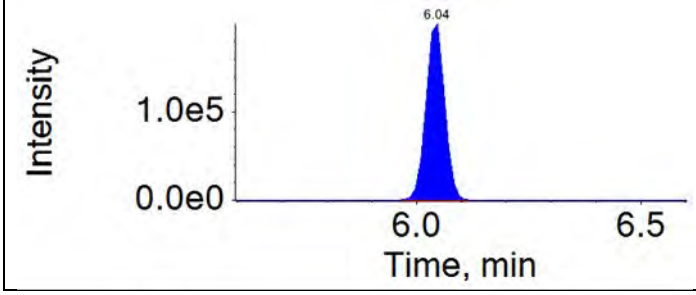
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

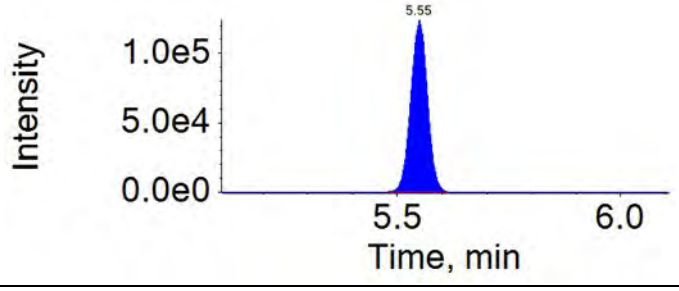
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



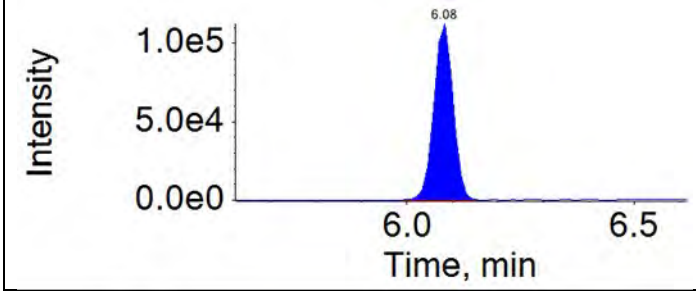


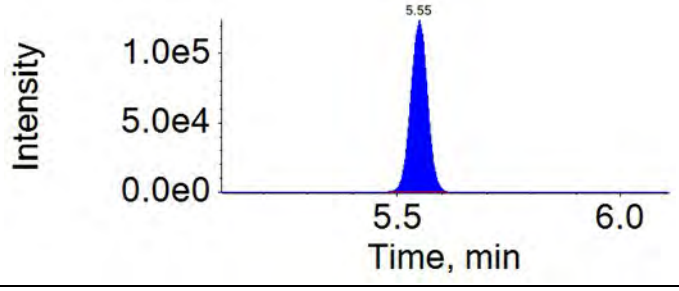
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



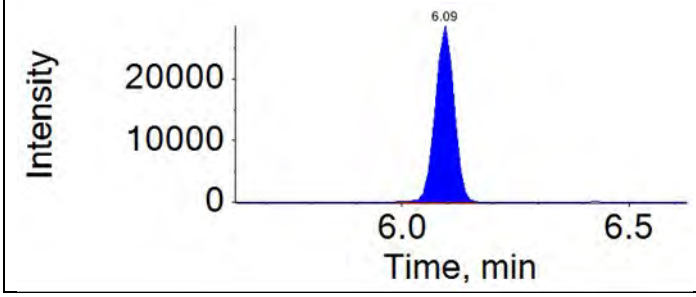


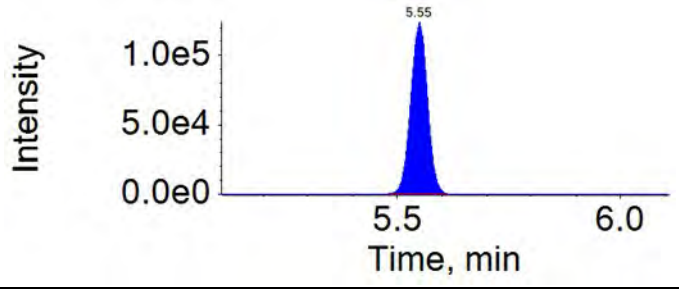
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





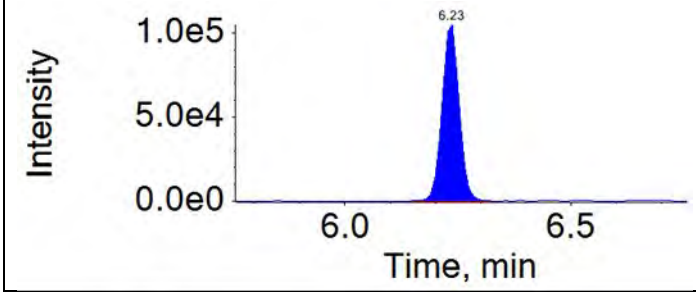
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

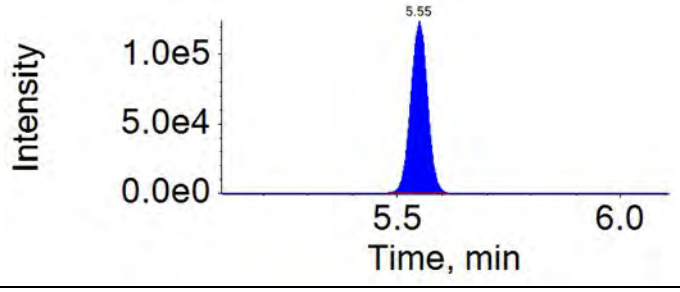




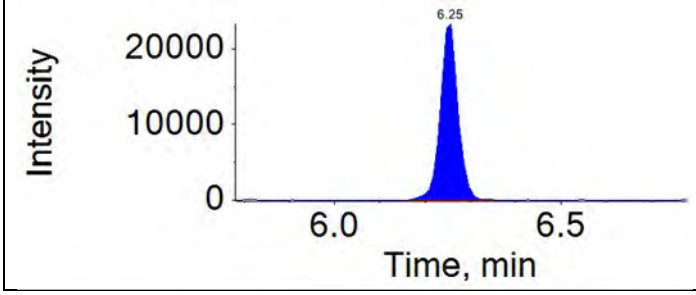
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

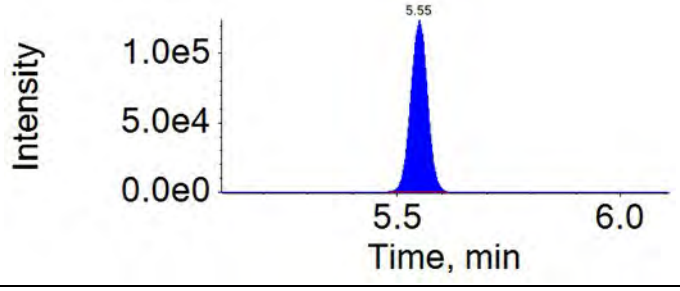
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



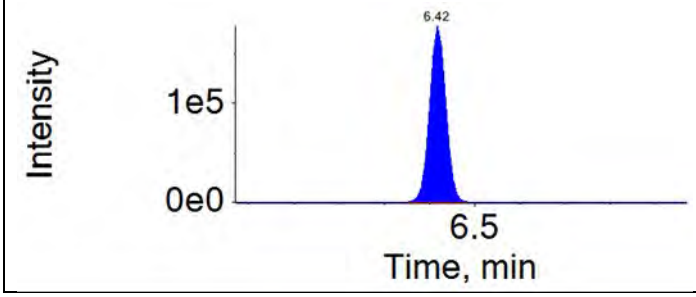


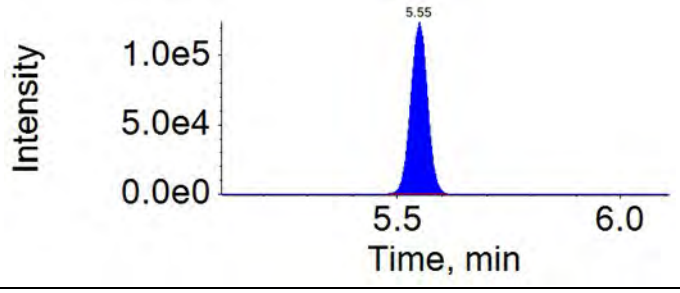
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



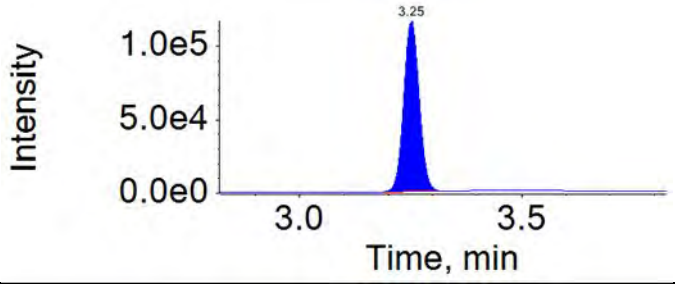


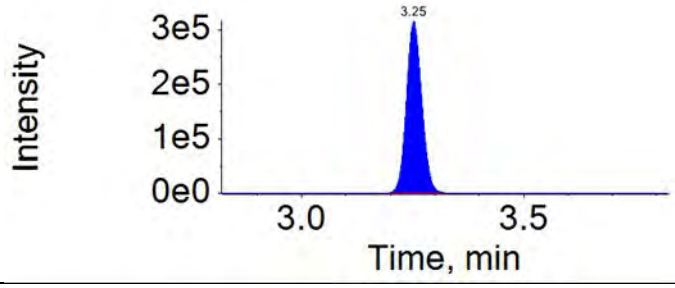
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

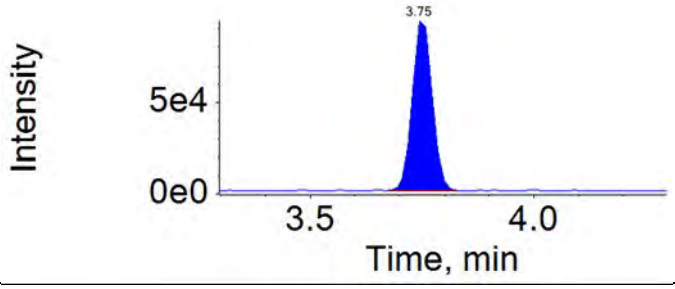
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

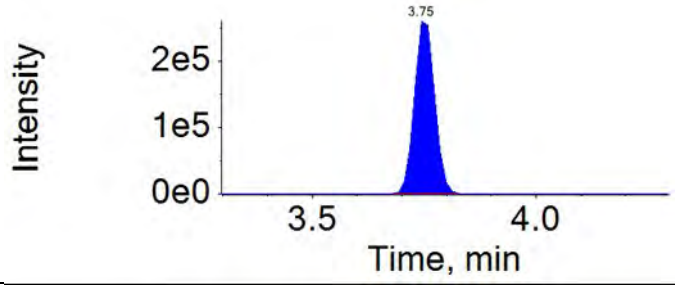
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



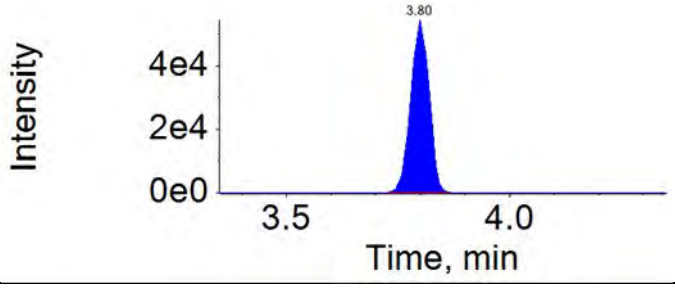


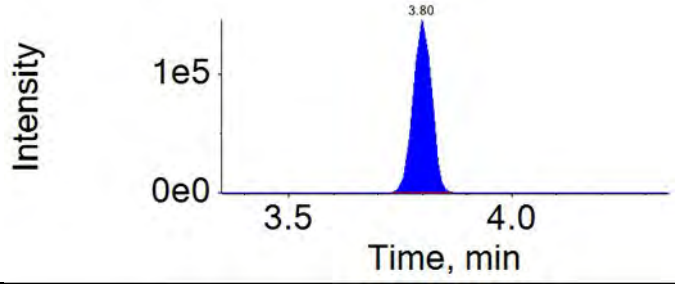
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



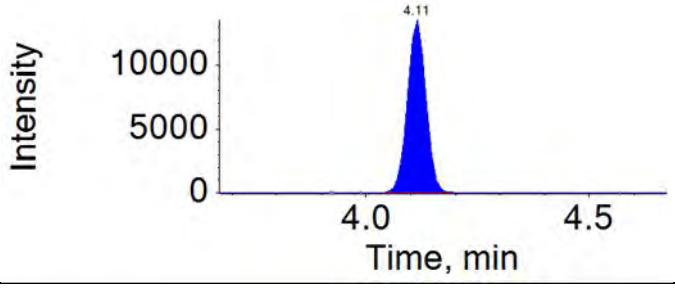


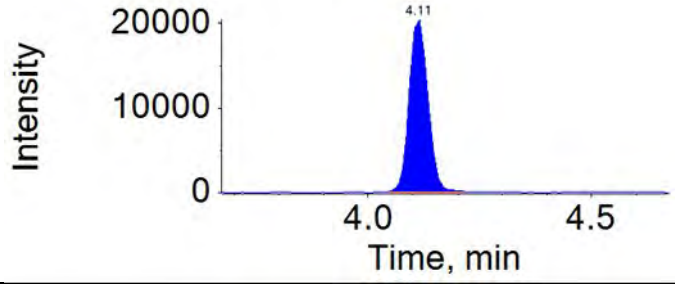
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



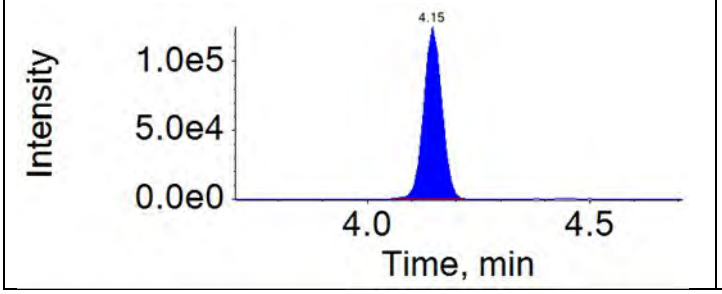


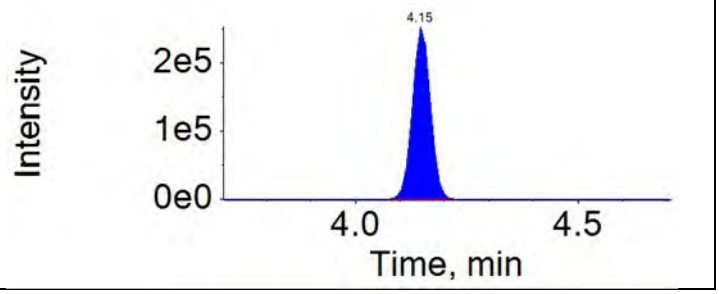
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

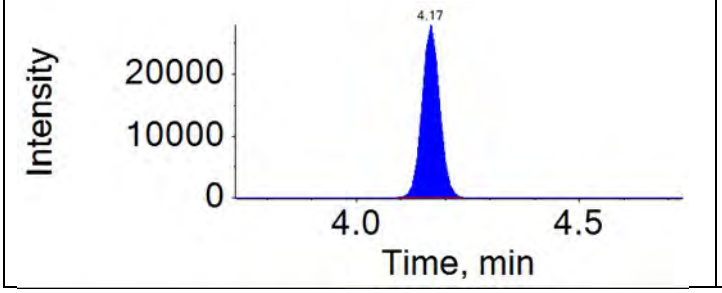
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

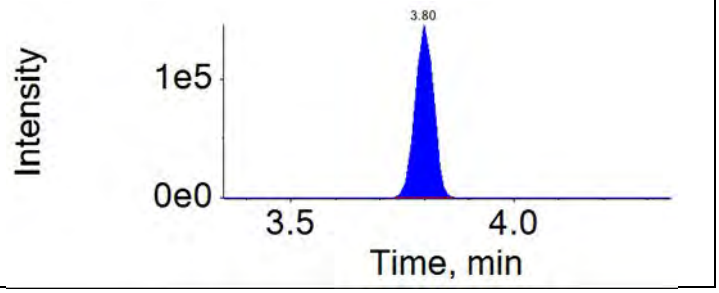
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



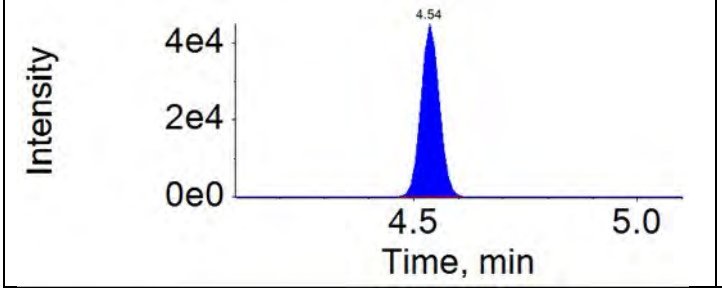


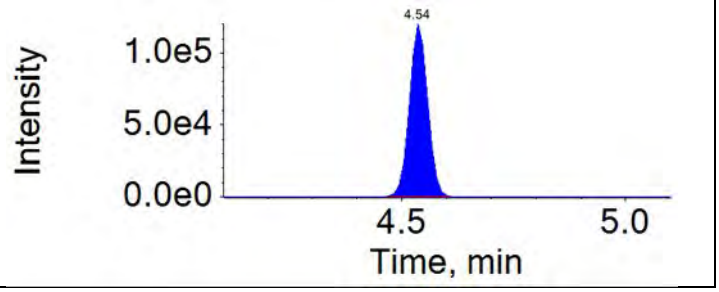
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



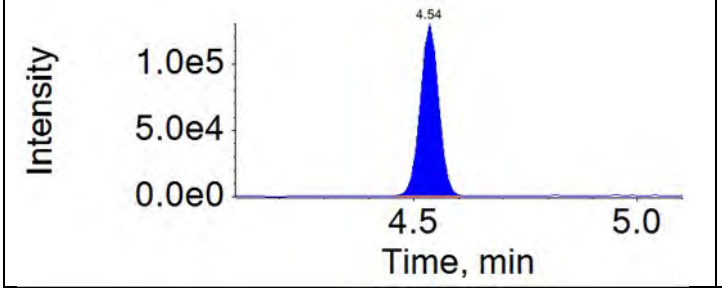


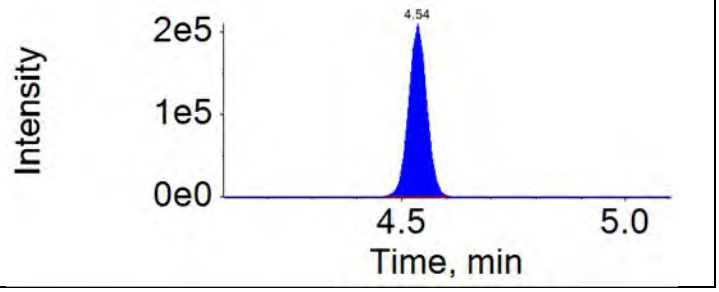
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





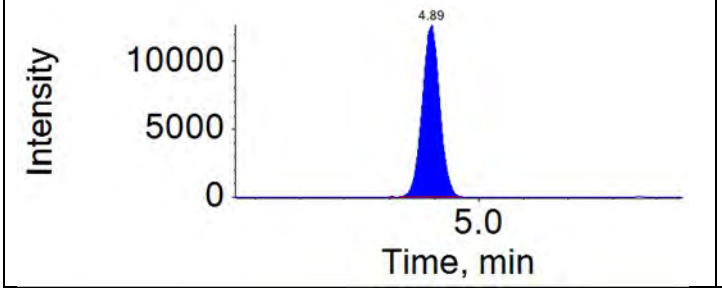
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

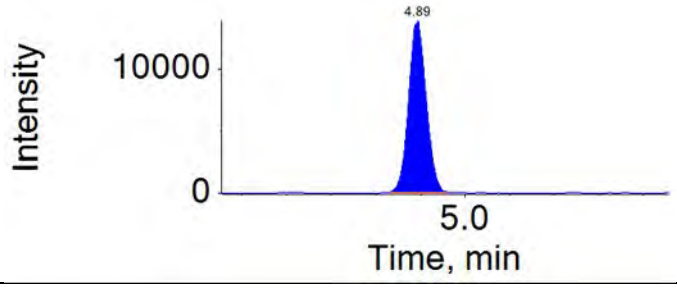




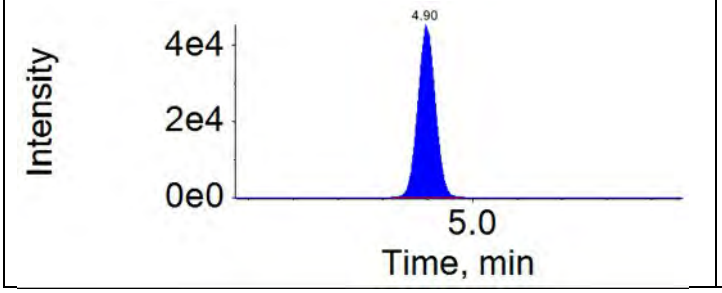
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

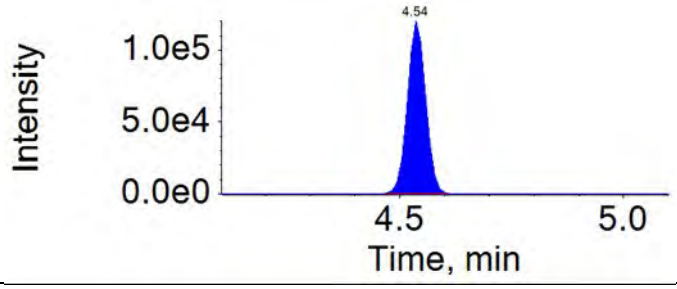
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



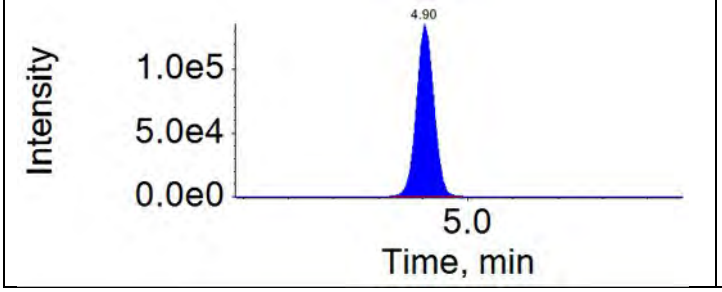


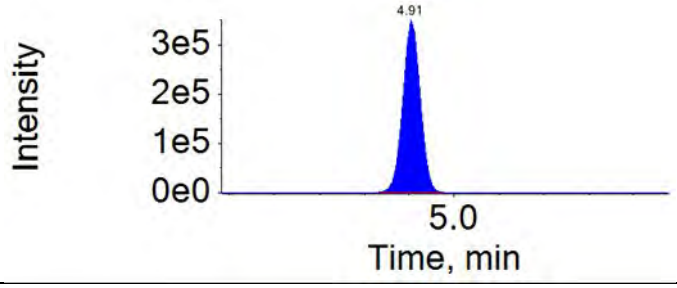
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



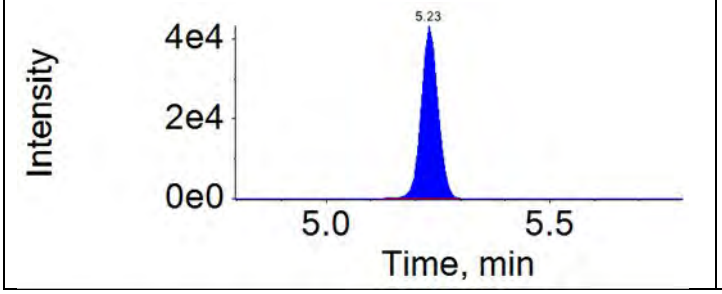


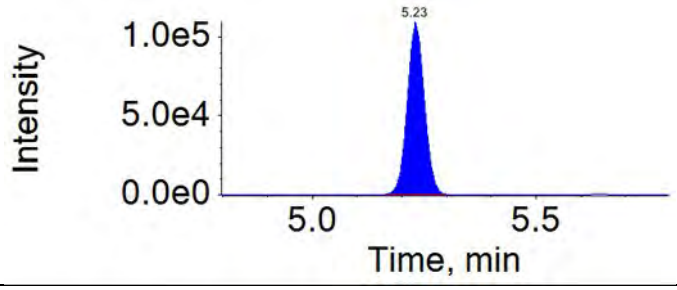
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



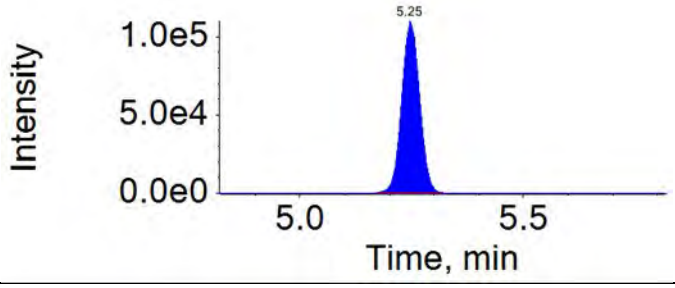


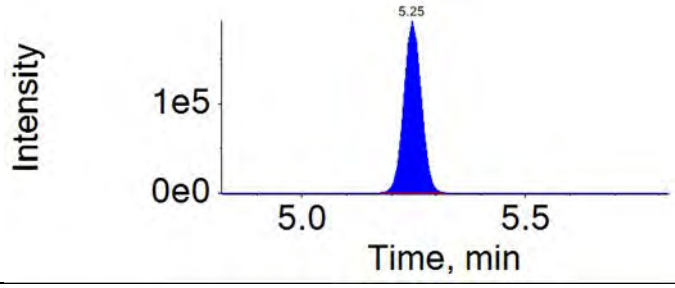
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

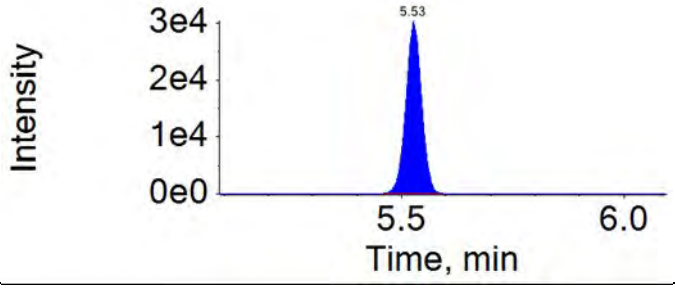
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

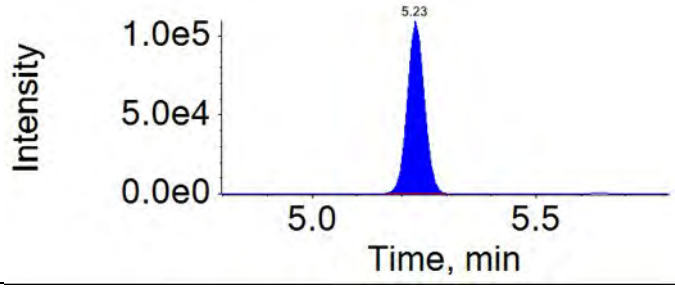
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



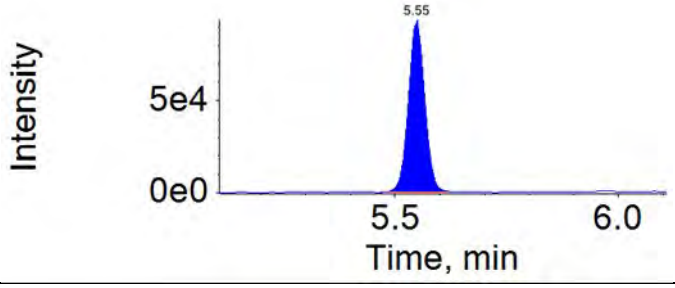


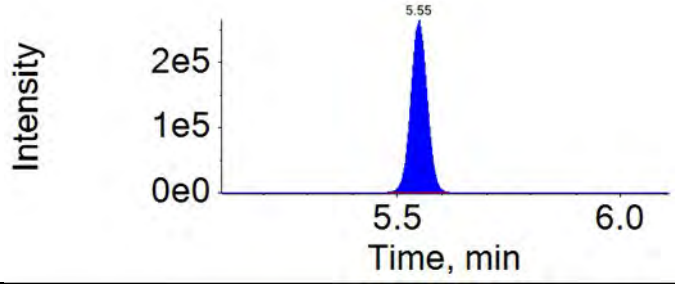
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



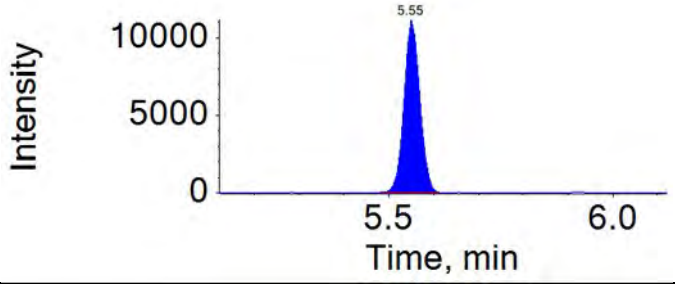


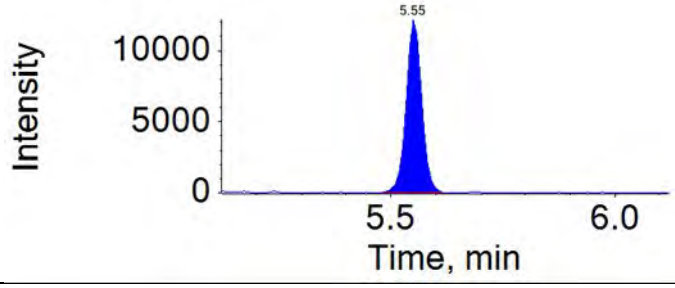
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



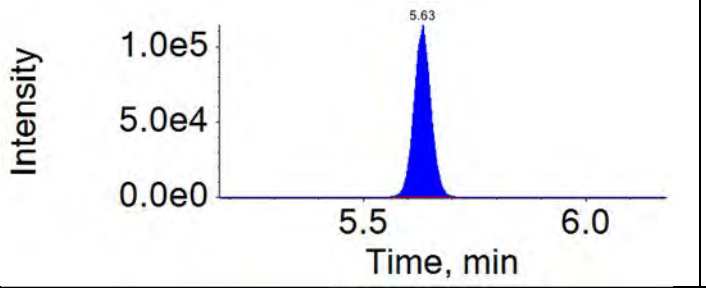


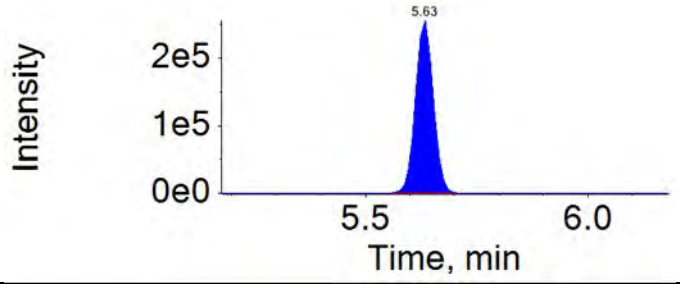
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

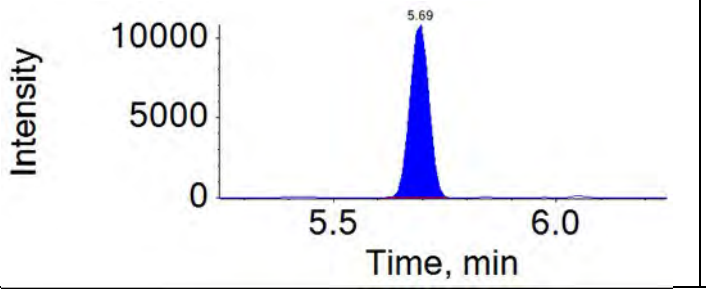
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

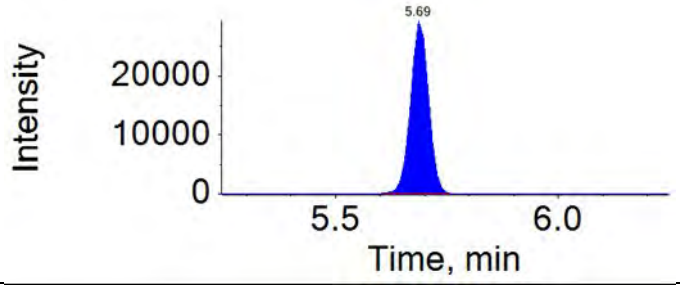
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



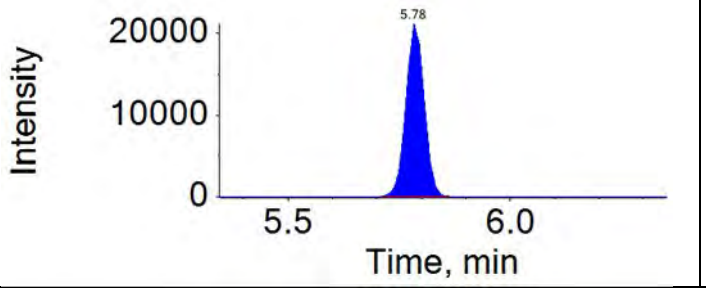


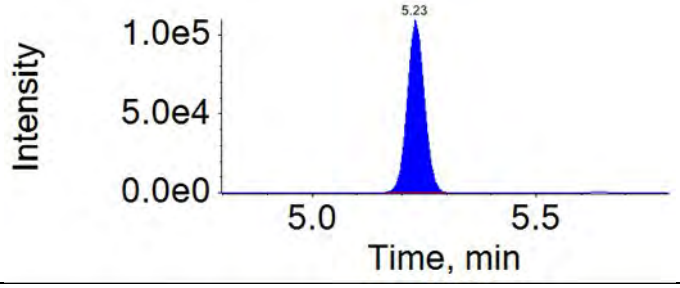
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



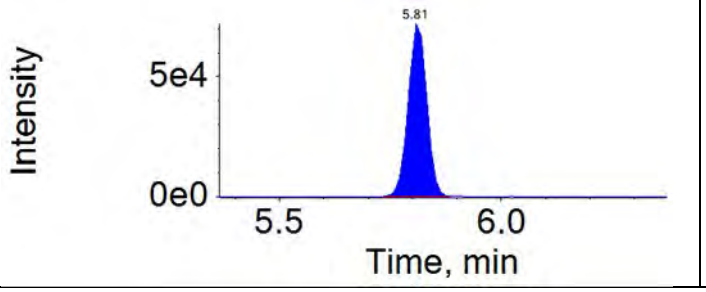


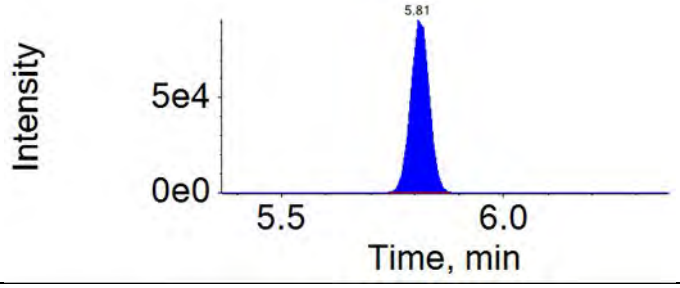
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



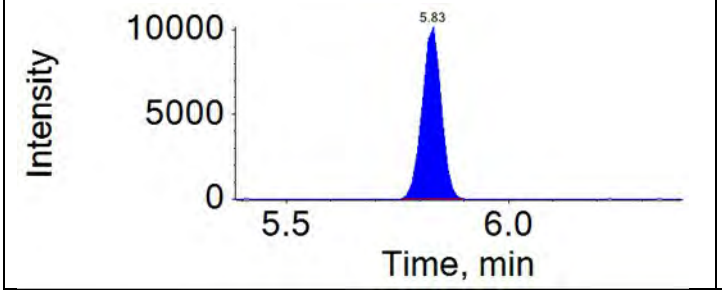


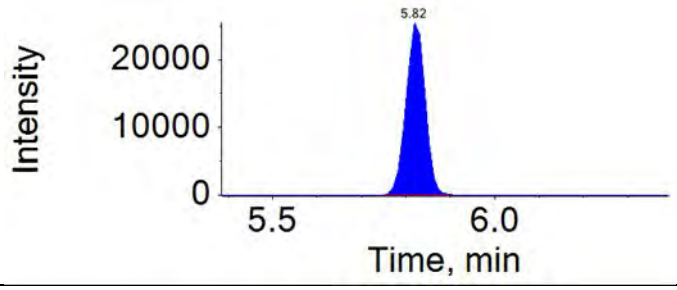
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

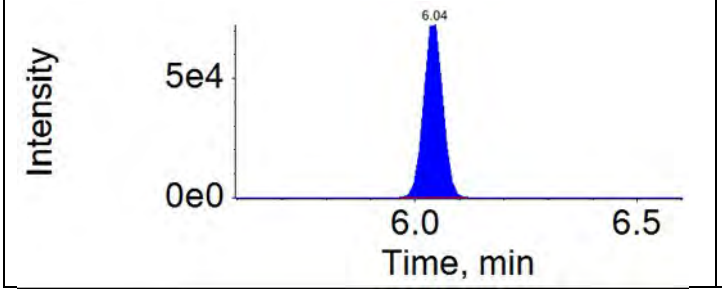
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

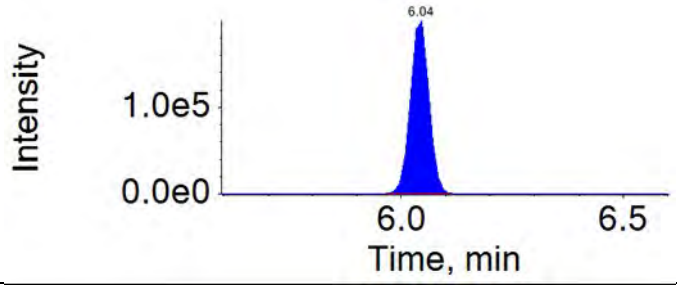
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



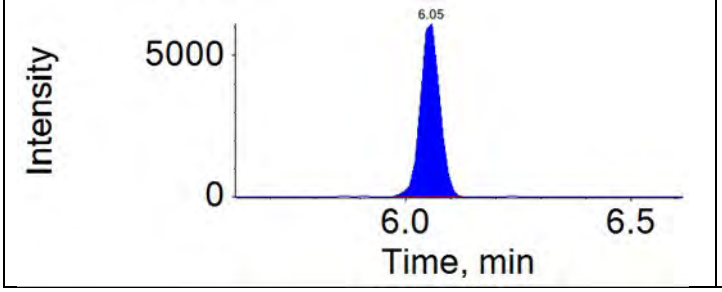


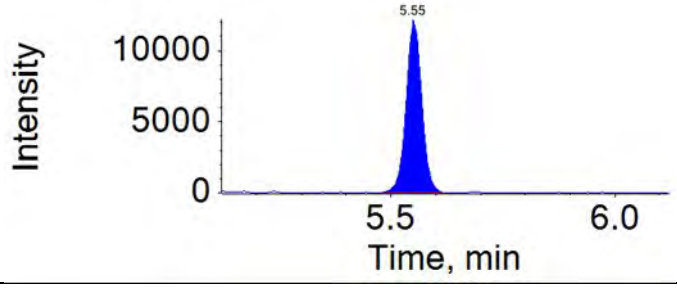
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



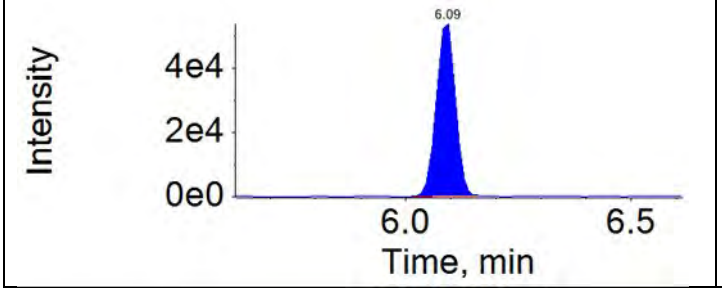


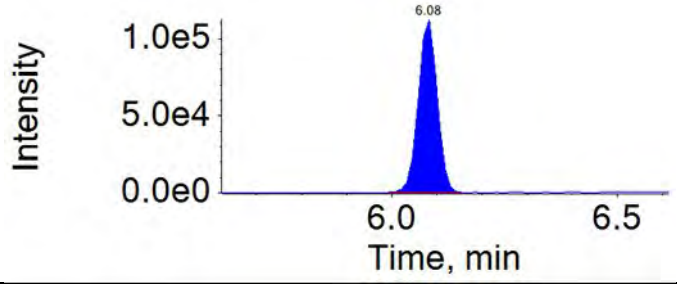
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



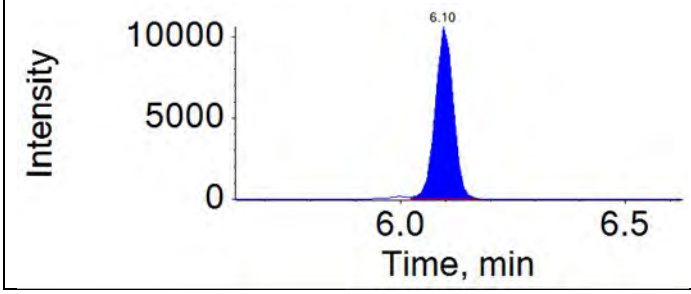


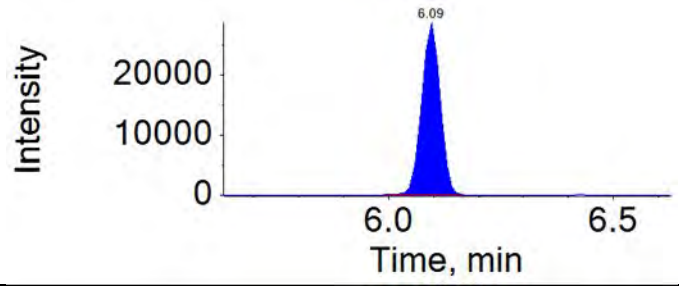
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

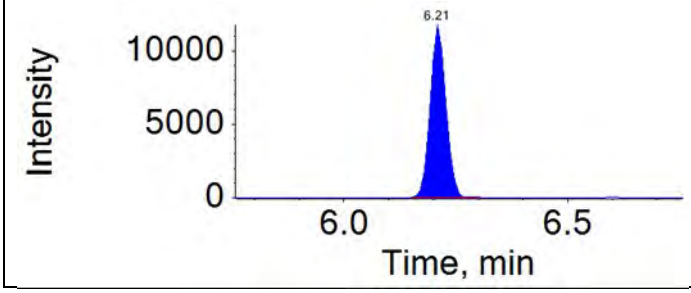
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

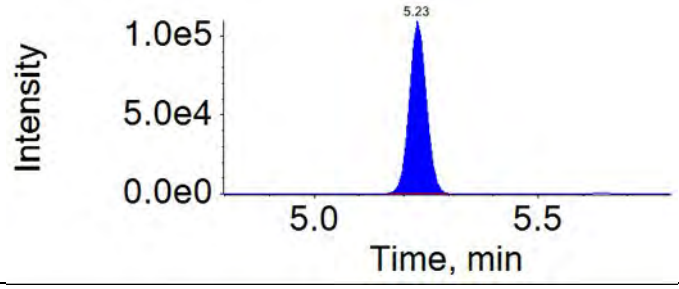
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



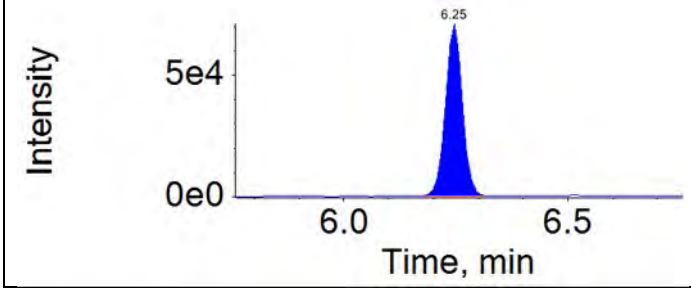


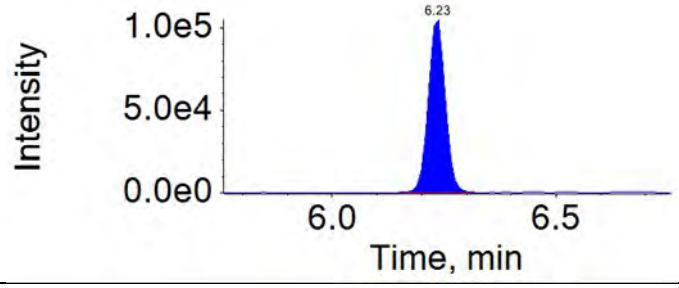
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



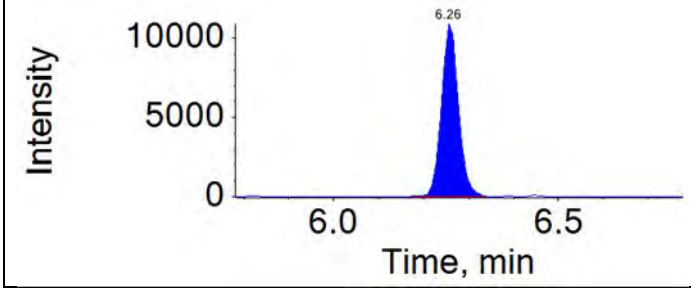


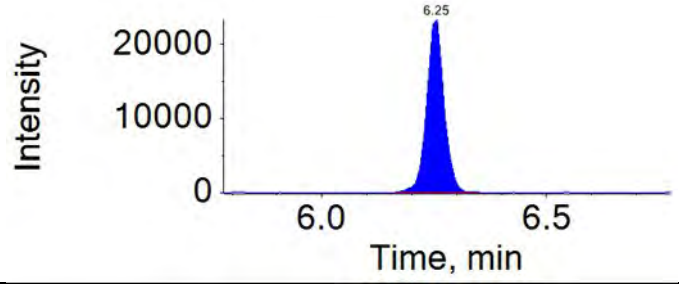
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



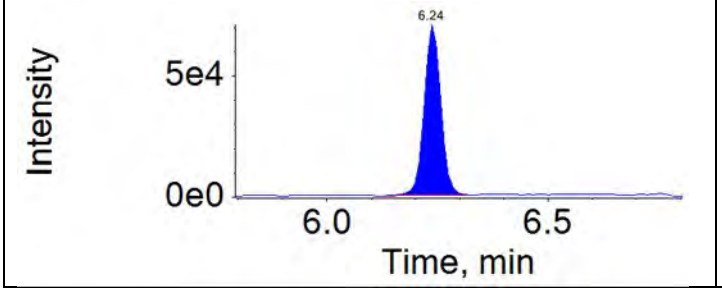


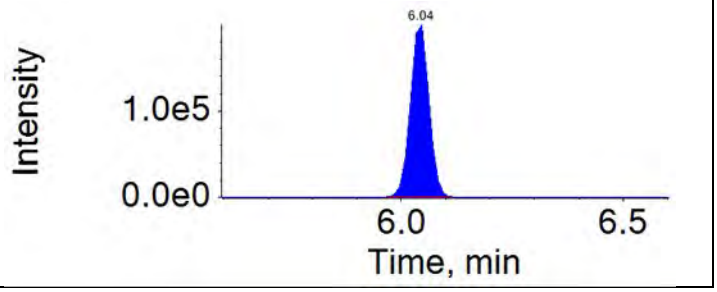
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

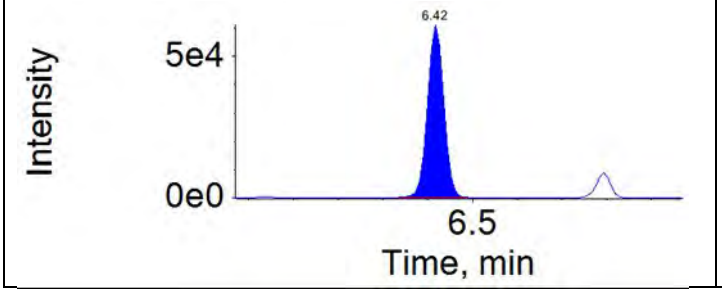
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

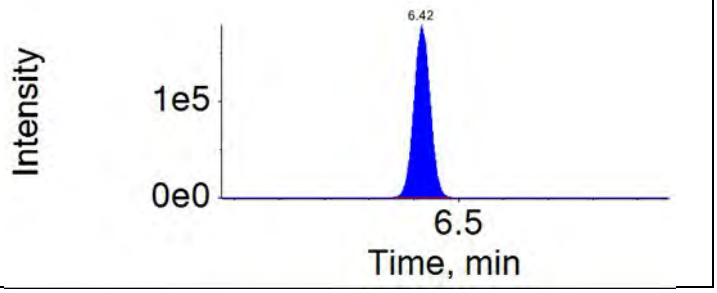
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



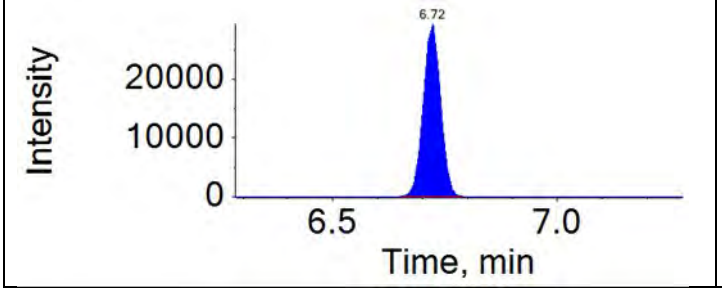


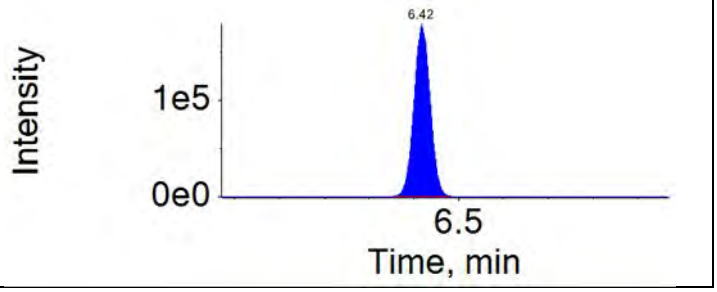
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



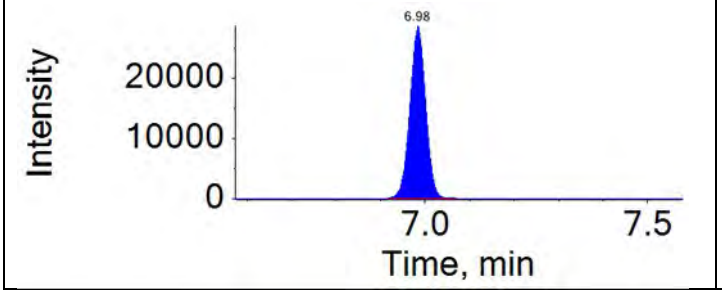


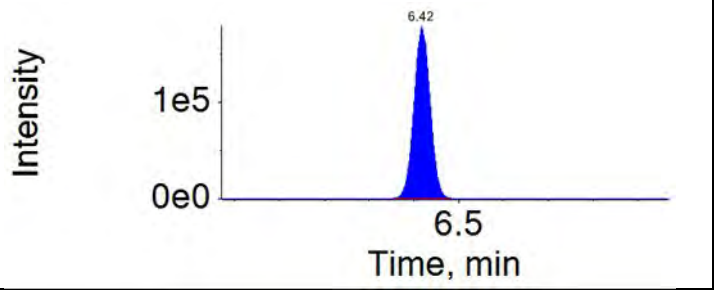
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



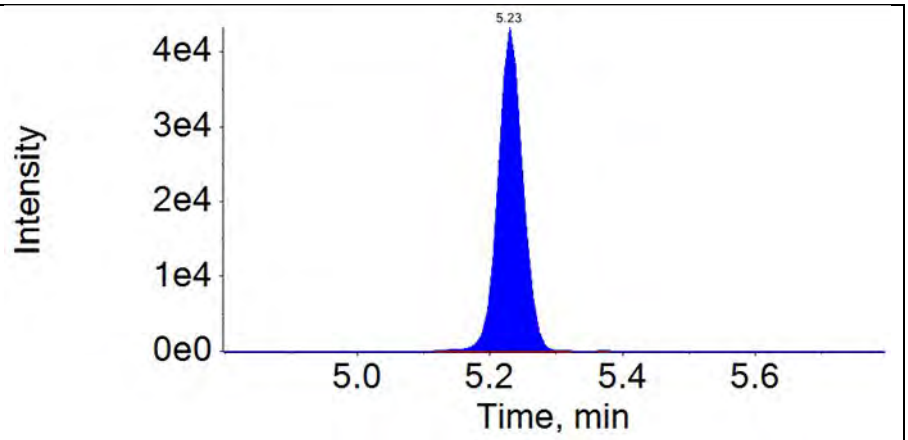


APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Results Table Name: 18NOV07DCCV1-4_DOD
Results Table Date: 11/7/2018 6:26:02 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
112549.2
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-12.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Results Table Name: 18NOV07DCCV1-4_DOD
Results Table Date: 11/7/2018 6:26:02 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Ion Ratio Report

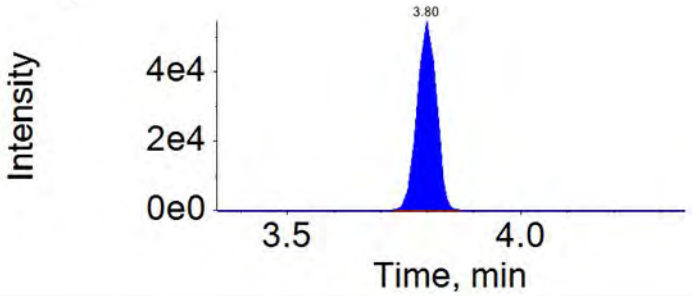
Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07D-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	157076.1	A	N/A	0.3651			
PFBS_2	3.80	1.00	57345.8	A	N/A	0.3651	3	50	
4:2-FTS	4.11	1.00	38952.4	A	N/A	0.6438			
4:2-FTS_2	4.11	1.00	25076.4	A	N/A	0.6438	0	50	
PFHxA	4.15	1.00	353783.1	A	N/A	0.0111			
PFHxA_2	4.15	1.00	3936.2	A	N/A	0.0111	-1	50	
PFPeS	4.17	1.10	76864.2	A	N/A	0.5681			
PFPeS_2	4.17	1.10	43668.5	A	N/A	0.5681	5	50	
PFHxS	4.54	1.00	126814.6	A	N/A	0.3365			
PFHxS_2	4.54	1.00	42676.0	A	N/A	0.3365	-6	50	
PFHpA	4.54	1.00	368935.3	A	N/A	0.0560			
PFHpA_2	4.53	1.00	20648.3	A	N/A	0.0560	-3	50	
6:2-FTS	4.89	1.00	34898.0	A	N/A	0.5524			
6:2-FTS_2	4.89	1.00	19279.4	A	N/A	0.5524	-19	50	
PFHpS	4.90	1.08	121935.5	A	N/A	0.4252			
PFHpS_2	4.90	1.08	51846.1	A	N/A	0.4252	8	50	
PFOA	4.90	1.00	361377.7	A	N/A	0.0514			
PFOA_2	4.90	1.00	18574.4	A	N/A	0.0514	-19	50	
PFOS	5.23	1.00	112316.2	M	N/A	0.3233			
PFOS_2	5.23	1.00	36314.7	A	N/A	0.3233	-8	50	
PFNA	5.25	1.00	304718.7	A	N/A	0.0148			
PFNA_2	5.25	1.00	4523.0	A	N/A	0.0148	-28	50	
PFNS	5.53	1.06	74275.5	A	N/A	0.4666			
PFNS_2	5.53	1.06	34659.2	A	N/A	0.4666	-4	50	
PFDA	5.55	1.00	235396.8	A	N/A	0.0068			
PFDA_2	5.55	1.00	1597.6	A	N/A	0.0068	25	50	
8:2-FTS	5.55	1.00	27244.6	A	N/A	0.5918			
8:2-FTS_2	5.55	1.00	16124.4	A	N/A	0.5918	-5	50	
NMeFOSAA	5.69	1.00	32038.6	A	N/A	0.2254			
NMeFOSAA_2	5.69	1.00	7221.6	A	N/A	0.2254	4	50	
PFDS	5.78	1.11	60808.7	A	N/A	0.5077			
PFDS_2	5.79	1.11	30871.3	A	N/A	0.5077	11	50	
PFUnDA	5.81	1.00	209375.3	A	N/A	0.0033			
PFUnDA_2	5.81	1.00	700.9	A	N/A	0.0033	10	50	
NEtFOSAA	5.83	1.00	30206.4	A	N/A	0.5806			
NEtFOSAA_2	5.83	1.00	17537.1	A	N/A	0.5806	-4	50	
PFDoDA	6.04	1.00	219293.5	A	N/A	0.0118			
PFDoDA_2	6.04	1.00	2580.7	A	N/A	0.0118	12	50	
10:2-FTS	6.05	1.09	18424.6	A	N/A	0.6509			
10:2-FTS_2	6.06	1.09	11992.6	A	N/A	0.6509	-9	50	
PFTrDA	6.24	1.03	182926.3	A	N/A	0.0087			
PFTrDA_2	6.25	1.03	1585.6	A	N/A	0.0087	-9	50	
PFTeDA	6.42	1.00	153584.9	A	N/A	0.0057			
PFTeDA_2	6.42	1.00	880.8	A	N/A	0.0057	6	50	
PFHxDA	6.72	1.05	78639.3	A	N/A	0.0577			
PFHxDA_2	6.72	1.05	4537.1	A	N/A	0.0577	-2	50	
PFODA	6.98	1.09	70028.7	A	N/A	0.0257			
PFODA_2	6.98	1.09	1800.5	A	N/A	0.0257	0	50	

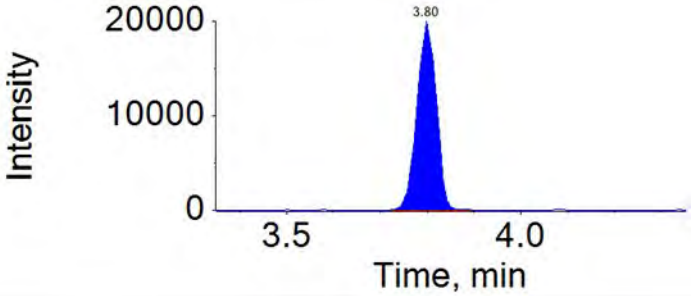
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

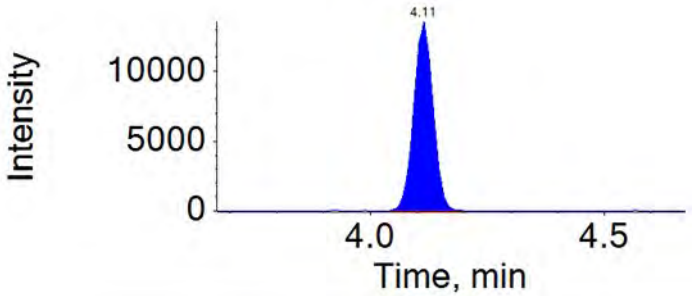
Component: PFBS
Primary Mass: 299.0 / 80.0



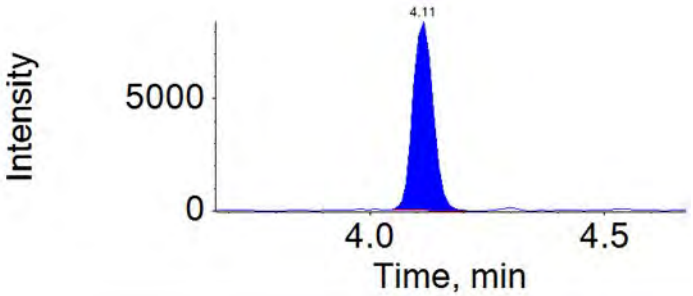
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



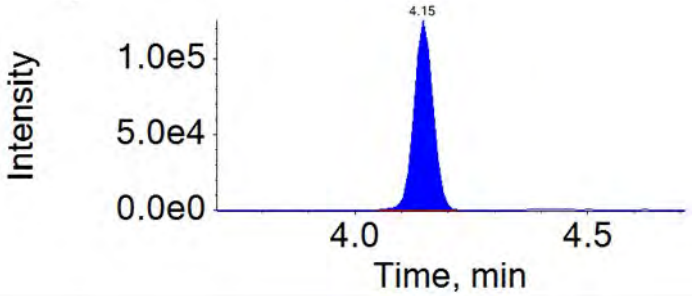
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



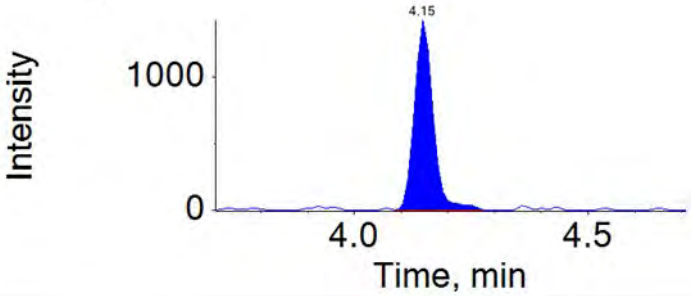
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



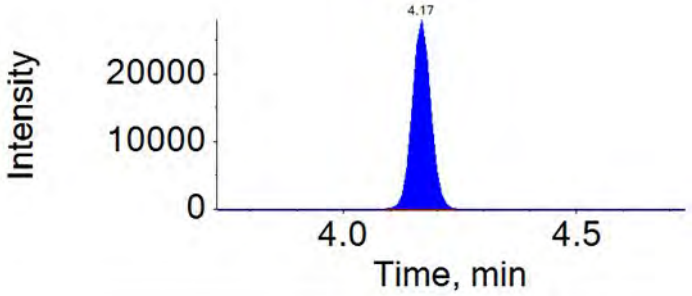
Component: PFHxA
Primary Mass: 313.0 / 269.0



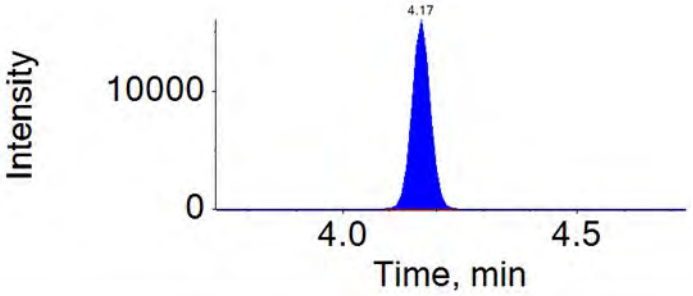
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



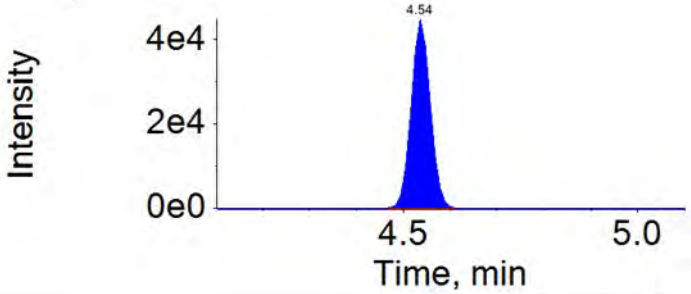
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



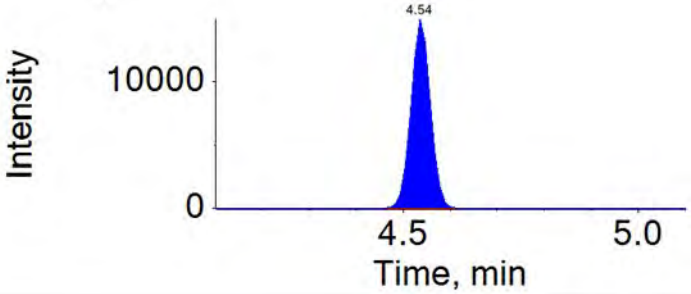
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

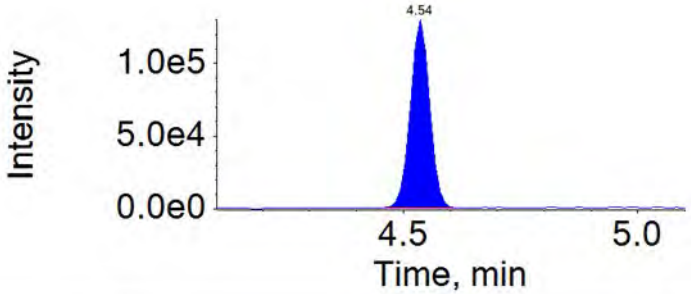
Component: PFHxS
Primary Mass: 399.0 / 80.0



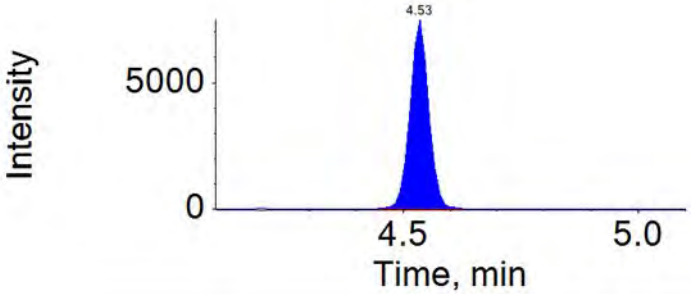
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



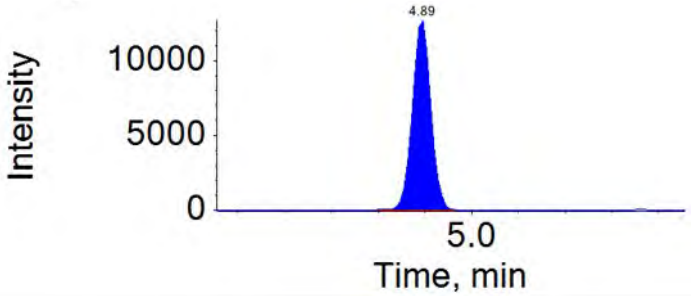
Component: PFHpA
Primary Mass: 363.0 / 319.0



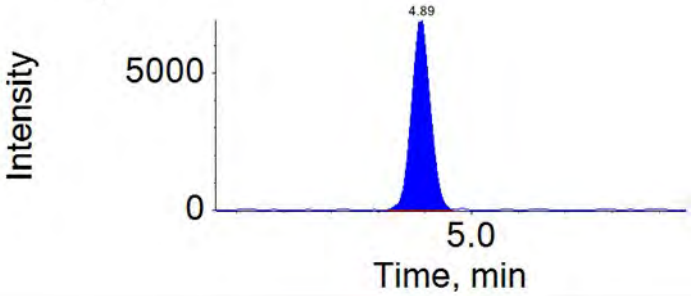
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



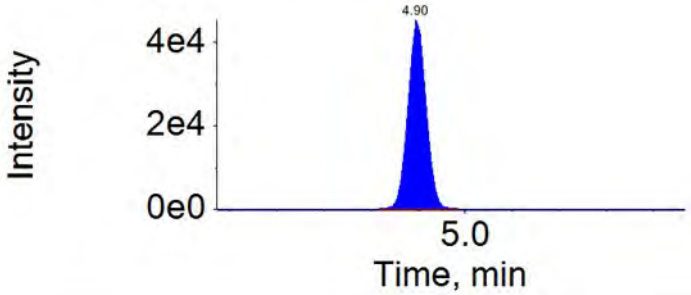
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



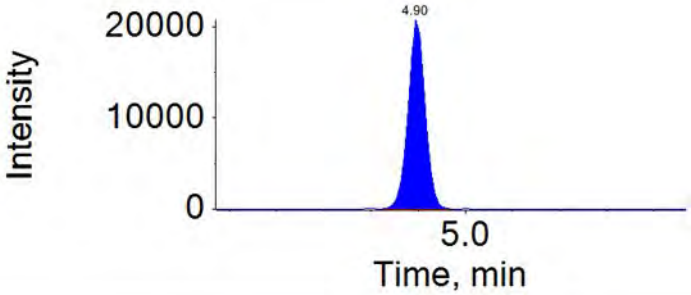
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



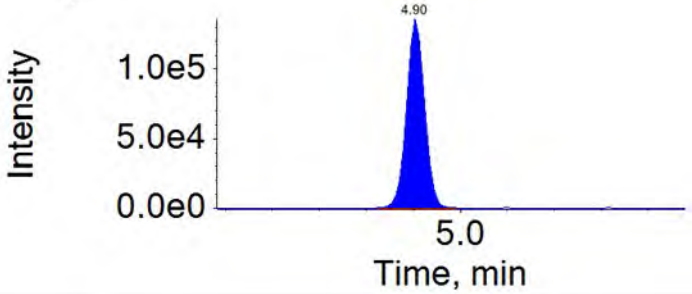
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



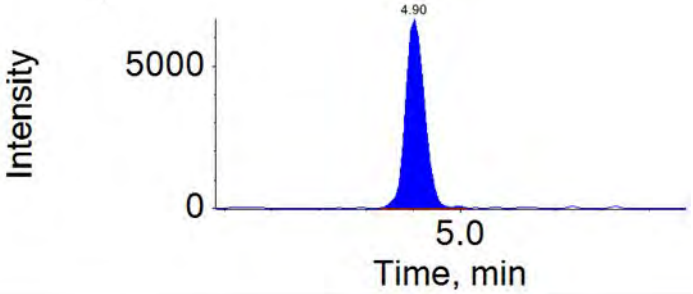
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

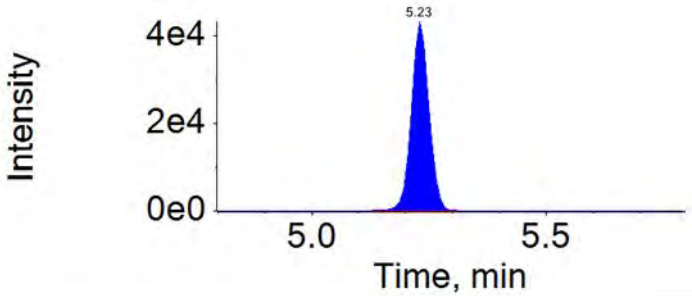
Component: PFOA
Primary Mass: 413.0 / 369.0



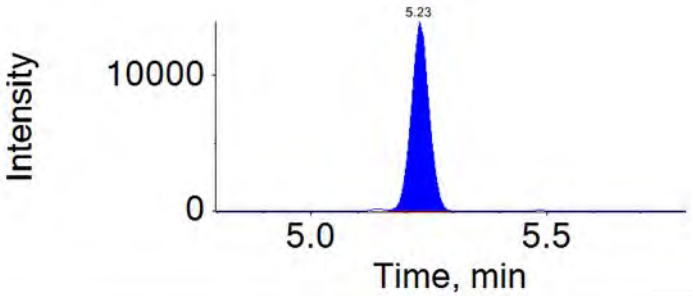
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



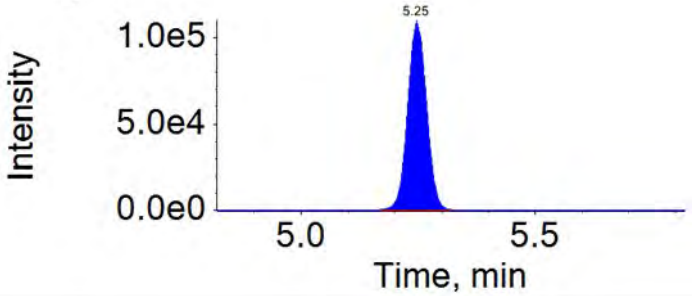
Component: PFOS
Primary Mass: 499.0 / 80.0



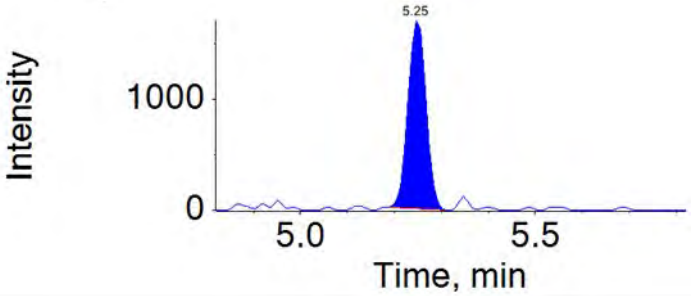
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



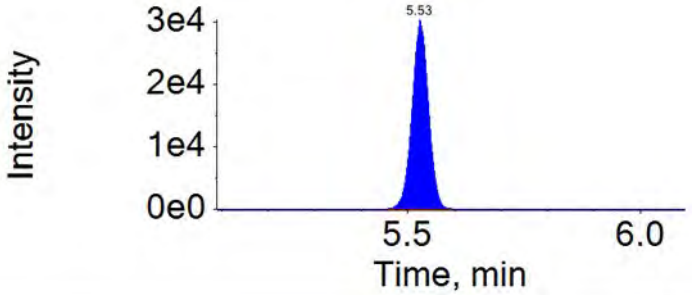
Component: PFNA
Primary Mass: 463.0 / 419.0



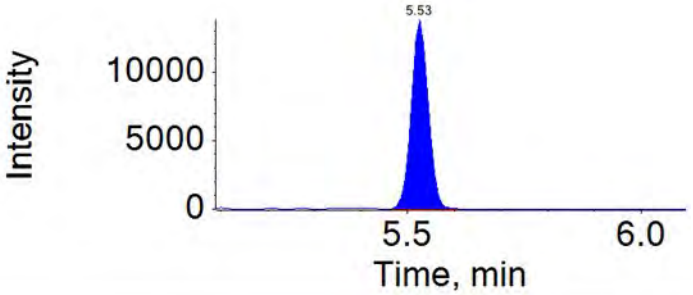
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



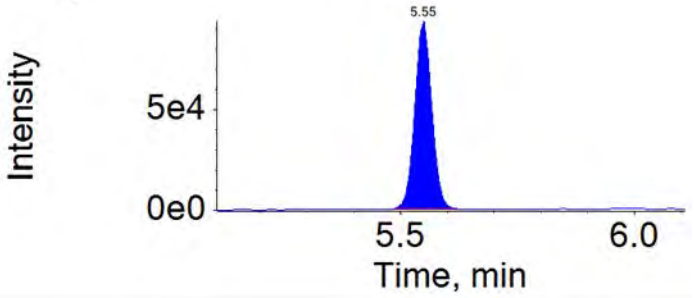
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



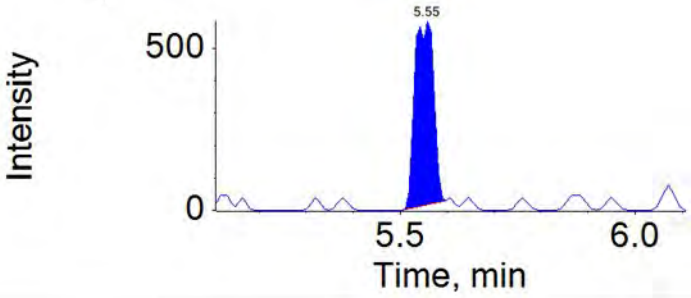
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

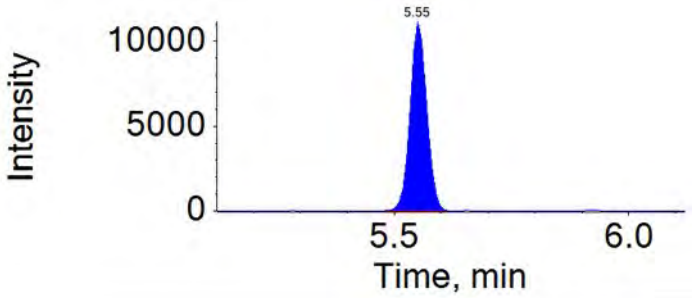
Component: PFDA
Primary Mass: 513.0 / 469.0



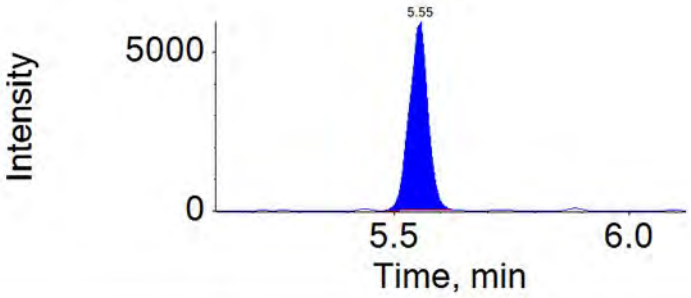
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



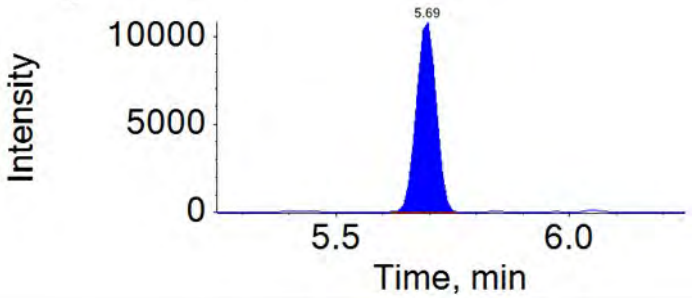
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



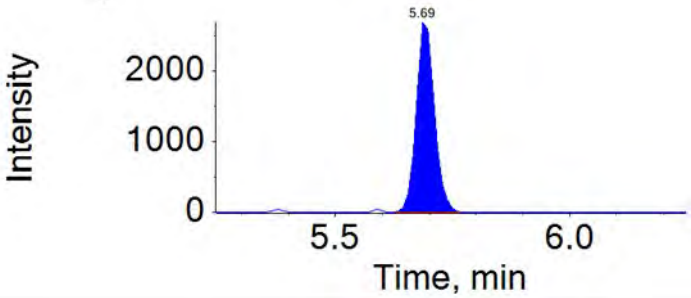
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



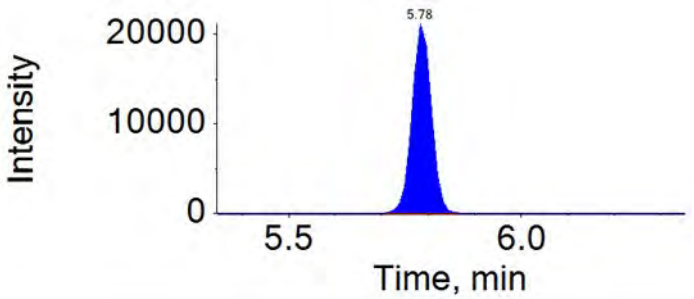
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



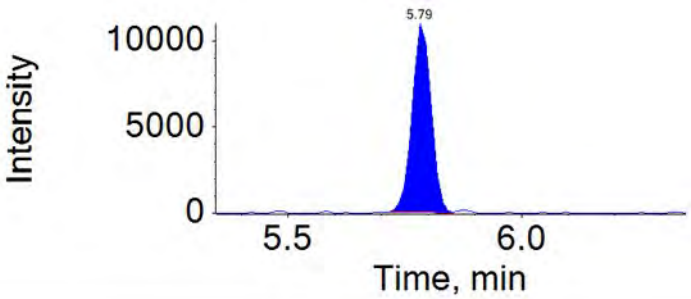
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



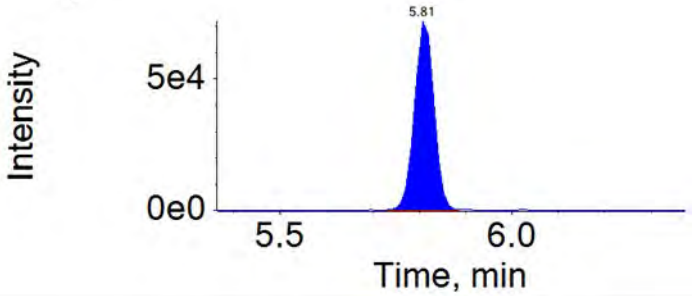
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



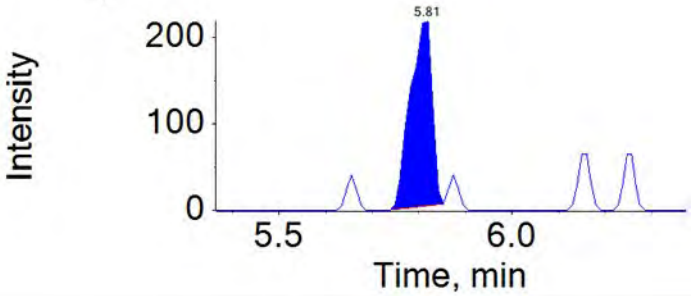
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

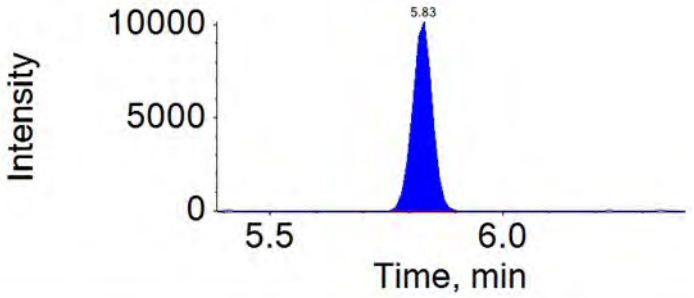
Component: PFUnDA
Primary Mass: 563.0 / 519.0



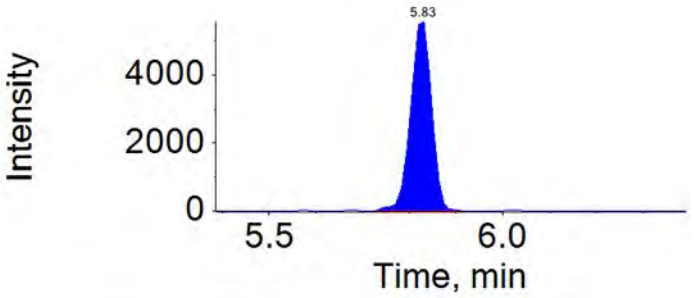
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



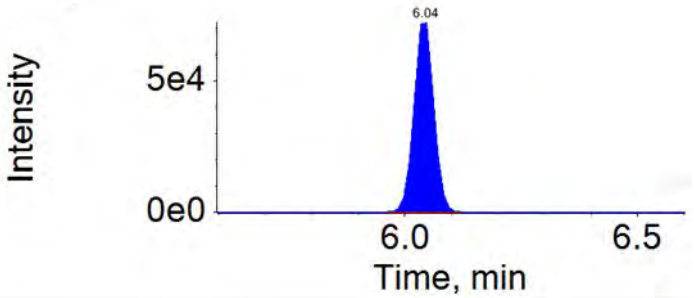
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



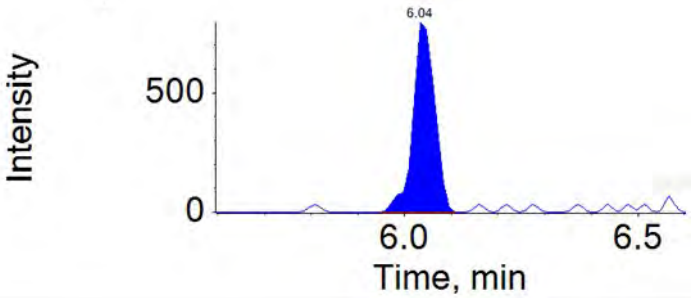
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



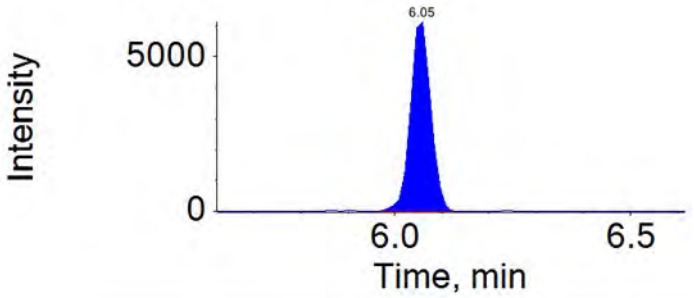
Component: PFDoDA
Primary Mass: 613.0 / 569.0



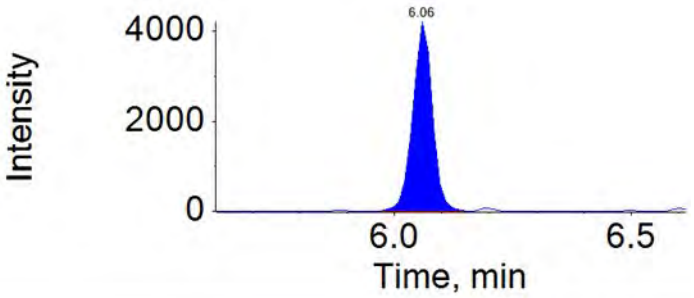
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



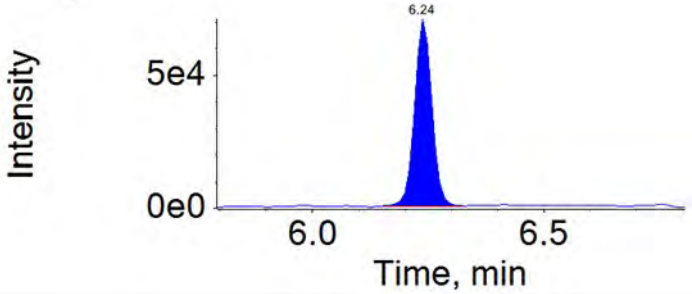
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



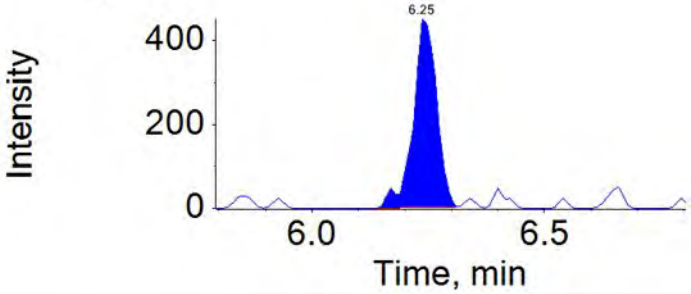
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



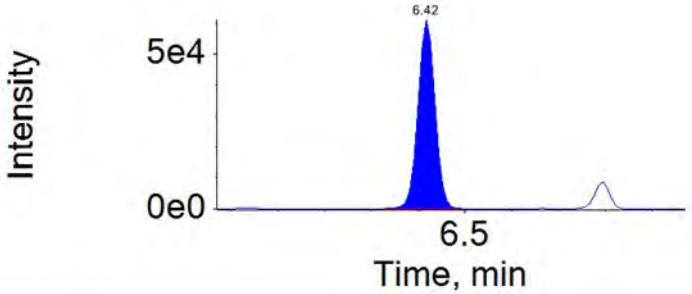
Component: PFTrDA
Primary Mass: 663.0 / 619.0



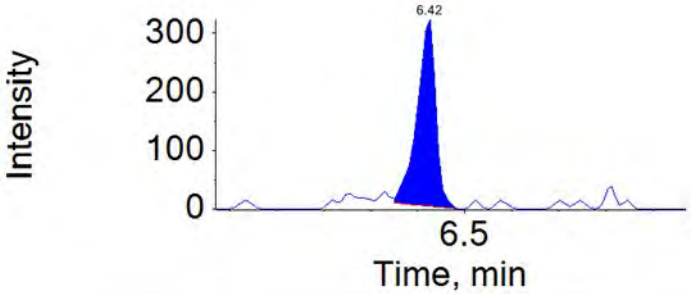
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



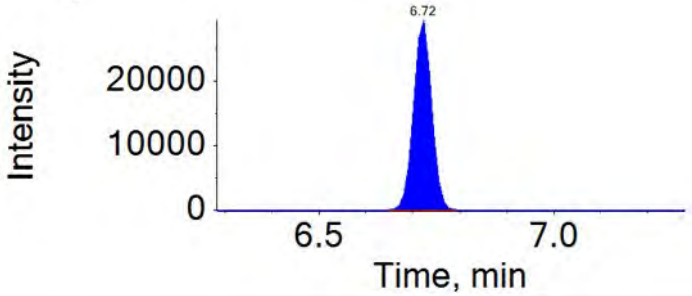
Component: PFTeDA
Primary Mass: 713.0 / 669.0



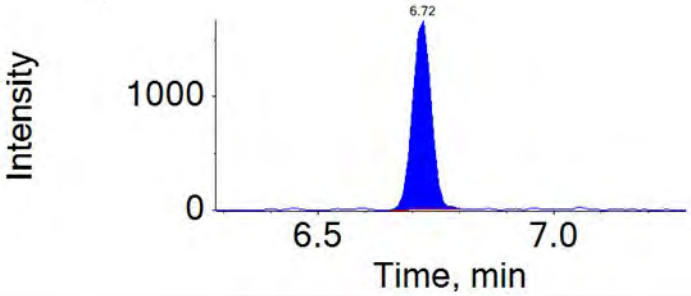
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



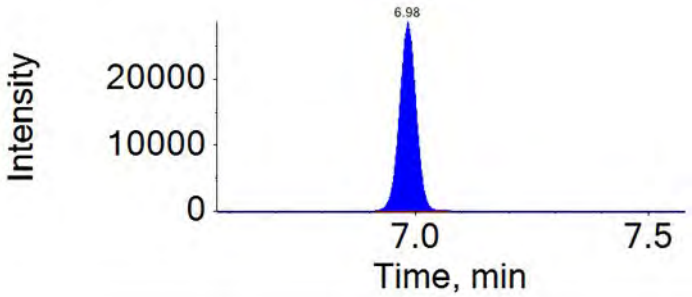
Component: PFHxDA
Primary Mass: 813.0 / 769.0



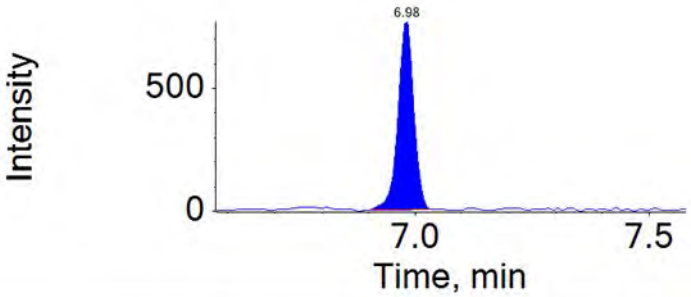
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



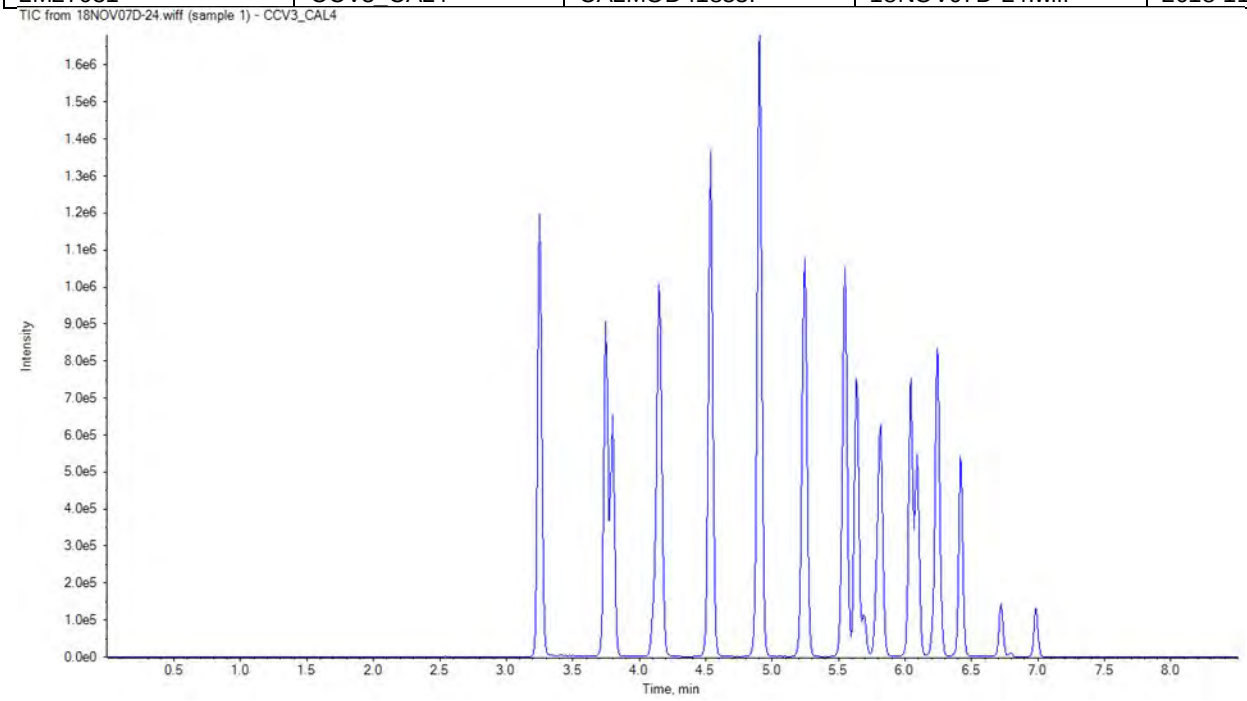
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3_CAL4	CALMOD41833F	18NOV07D-24.wiff	2018-11-07T14:48:00



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	718340.8	730410.6	-2	50	
13C2-PFOA	5.0	525023.1	524423.6	0	50	
13C4-PFOS	4.8	271544.5	274061.7	-1	50	
13C2-PFDA	5.0	317516.2	311442.1	2	50	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3_CAL4	CALMOD41833F	18NOV07D-24.wiff	2018-11-07T14:48:00

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1151890.3	10	13C4-PFBA	782874.6	5.0	1.471	3.25	1.000	8.000	8.611	8	30	
PFPeA	1202909.2	12	13C5-PFPeA	819794.7	5.0	1.467	3.75	1.000	8.000	8.720	9	30	
PFBS	653387.1	11	13C3-PFBS	443113.3	4.7	1.475	3.80	1.000	7.080	7.434	5	30	
4:2-FTS	161644.7	11	13C2-4:2-FTS	55248.6	4.7	2.926	4.11	1.000	7.472	7.866	5	30	
PFHxA	1392034.5	12	13C5-PFHxA	708016.1	5.0	1.966	4.15	1.000	8.000	8.432	5	30	
PFPeS	354542.6	11	13C3-PFBS	443113.3	4.7	0.800	4.17	1.100	7.500	7.892	5	30	
PFHxS	502548.7	12	13C3-PFHxS	345453.3	4.7	1.455	4.54	1.000	7.560	7.374	-2	30	
PFHpA	1450230.1	12	13C4-PFHpA	588837.4	5.0	2.463	4.54	1.000	8.000	8.283	4	30	
6:2-FTS	130208.9	11	13C2-6:2-FTS	38439.7	4.8	3.387	4.89	1.000	7.584	8.450	11	30	
PFHpS	505602.4	11	13C3-PFHxS	345453.3	4.7	1.464	4.90	1.080	7.610	7.657	1	30	
PFOA	1477626.7	11	13C8-PFOA	976782.8	5.0	1.513	4.91	1.000	8.000	8.518	6	30	
PFOS	442468.7	11	13C8-PFOS	295520.4	4.8	1.497	5.23	1.000	7.650	7.764	1	30	
PFNA	1184653.0	11	13C9-PFNA	522333.6	5.0	2.268	5.25	1.000	8.000	8.476	6	30	
PFNS	317230.6	10	13C8-PFOS	295520.4	4.8	1.073	5.53	1.060	7.680	8.511	11	30	
PFDA	998430.4	11	13C6-PFDA	677064.5	5.0	1.475	5.55	1.000	8.000	8.113	1	30	
8:2-FTS	108765.3	11	13C2-8:2-FTS	29154.7	4.8	3.731	5.55	1.000	7.664	8.409	10	30	
PFOSA	1133583.1	11	13C8-PFOSA	696392.5	5.0	1.628	5.63	1.000	8.000	8.799	10	30	
NMeFOSAA	140151.7	12	d3-NMeFOSAA	81528.0	5.0	1.719	5.69	1.000	8.000	8.845	11	30	
PFDS	253333.6	12	13C8-PFOS	295520.4	4.8	0.857	5.79	1.110	7.700	8.189	6	30	
PFUnDA	888633.9	12	13C7-PFUnDA	283267.0	5.0	3.137	5.81	1.000	8.000	8.996	12	30	
NEtFOSAA	122902.1	12	d5-NEtFOSAA	70744.9	5.0	1.737	5.83	1.000	8.000	7.466	-7	30	
PFDoDA	897491.0	12	13C2-PFDoDA	590879.3	5.0	1.519	6.04	1.000	8.000	8.232	3	30	
10:2-FTS	74932.7	12	13C2-8:2-FTS	29154.7	4.8	2.570	6.06	1.090	7.712	8.003	4	30	
NMePFOSAE	674097.6	12	d7-NMePFOSAE	336944.7	5.0	2.001	6.09	1.000	8.000	8.965	12	30	
NMePFOSA	130349.1	12	d3-NMePFOSA	88868.5	5.0	1.467	6.10	1.000	8.000	8.210	3	30	
PFDoS	118826.7	11	13C8-PFOS	295520.4	4.8	0.402	6.21	1.190	7.740	7.761	0	30	
NEtPFOSAE	736880.1	11	d9-NEtPFOSAE	284367.9	5.0	2.591	6.25	1.000	8.000	8.307	4	30	
NEtPFOSA	127621.9	11	d5-NEtPFOSA	72006.3	5.0	1.772	6.26	1.000	8.000	7.806	-2	30	
PFTrDA	746362.9	11	13C2-PFDoDA	590879.3	5.0	1.263	6.24	1.030	8.000	7.966	0	30	
PFTeDA	675574.7	11	13C2-PFTeDA	449441.0	5.0	1.503	6.42	1.000	8.000	8.827	10	30	
PFHxDA	288222.5	11	13C2-PFTeDA	449441.0	5.0	0.641	6.72	1.050	8.000	7.961	0	30	
PFODA	278149.1	10	13C2-PFTeDA	449441.0	5.0	0.619	6.98	1.090	8.000	8.866	11	30	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV3_CAL4			**Data File:**		18NOV07D-24.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-07T14:48:00
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	718340.8	730410.6	-2	50	
13C2-PFOA	5.0	525023.1	524423.6	0	50	
13C4-PFOS	4.8	271544.5	274061.7	-1	50	
13C2-PFDA	5.0	317516.2	311442.1	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	782874.6	13C3-PFBA	718340.8	1.090	5.000	5.043	101	70-130	
E13C5-PFPeA	819794.7	13C3-PFBA	718340.8	1.141	5.000	4.972	99	70-130	
E13C3-PFBS	443113.3	13C3-PFBA	718340.8	0.617	4.650	4.527	97	70-130	
E13C2-4:2-FTS	55248.6	13C2-PFOA	525023.1	0.105	4.670	4.748	102	70-130	
E13C5-PFHxA	708016.1	13C2-PFOA	525023.1	1.349	5.000	4.961	99	70-130	
E13C3-PFHxS	345453.3	13C2-PFOA	525023.1	0.658	4.730	4.724	100	70-130	
E13C4-PFHpA	588837.4	13C2-PFOA	525023.1	1.122	5.000	5.102	102	70-130	
E13C2-6:2-FTS	38439.7	13C2-PFOA	525023.1	0.073	4.750	4.882	103	70-130	
E13C8-PFOA	976782.8	13C2-PFOA	525023.1	1.860	5.000	5.188	104	70-130	
E13C8-PFOS	295520.4	13C4-PFOS	271544.5	1.088	4.780	4.812	101	70-130	
E13C9-PFNA	522333.6	13C4-PFOS	271544.5	1.924	5.000	5.254	105	70-130	
E13C6-PFDA	677064.5	13C2-PFDA	317516.2	2.132	5.000	5.363	107	70-130	
E13C2-8:2-FTS	29154.7	13C2-PFDA	317516.2	0.092	4.790	4.859	101	70-130	
E13C8-PFOSA	696392.5	13C2-PFDA	317516.2	2.193	5.000	4.786	96	70-130	
Ed3-NMeFOSAA	81528.0	13C2-PFDA	317516.2	0.257	5.000	4.775	95	70-130	
E13C7-PFUnDA	283267.0	13C2-PFDA	317516.2	0.892	5.000	5.147	103	70-130	
Ed5-NEtFOSAA	70744.9	13C2-PFDA	317516.2	0.223	5.000	5.156	103	70-130	
E13C2-PFDoDA	590879.3	13C2-PFDA	317516.2	1.861	5.000	5.017	100	70-130	
Ed7-NMePFOSAE	336944.7	13C2-PFDA	317516.2	1.061	5.000	4.935	99	70-130	
Ed3-NMePFOSA	88868.5	13C2-PFDA	317516.2	0.280	5.000	5.124	102	70-130	
Ed9-NEtPFOSAE	284367.9	13C2-PFDA	317516.2	0.896	5.000	5.115	102	70-130	
Ed5-NEtPFOSA	72006.3	13C2-PFDA	317516.2	0.227	5.000	5.251	105	70-130	
E13C2-PFTeDA	449441.0	13C2-PFDA	317516.2	1.415	5.000	5.096	102	70-130	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

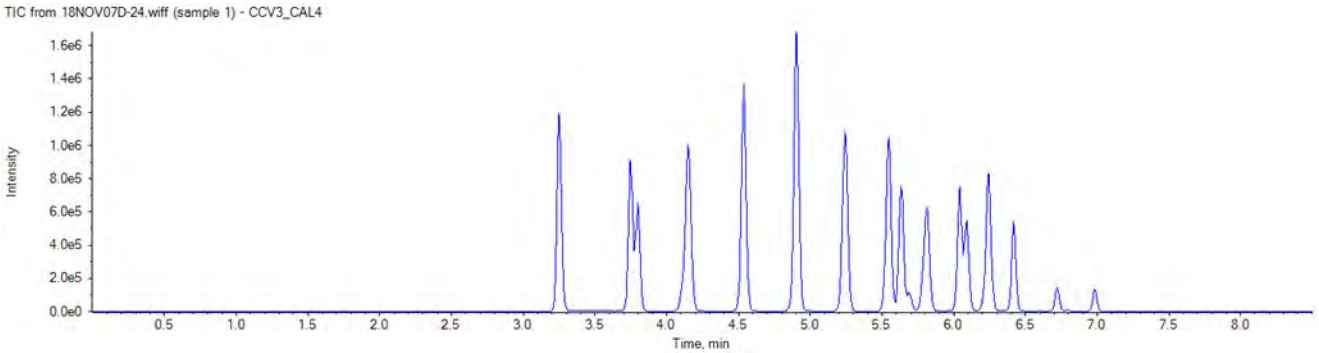
Analyte Quantitation Peak Table

Sample Name: CCV3_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07D-24.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	1151890.3		A	13C4-PFBA	3.25	782874.6	1.471	8.611
PFPeA	3.75	1.000	1202909.2		A	13C5-PFPeA	3.75	819794.7	1.467	8.720
PFBS	3.80	1.000	653387.1		A	13C3-PFBS	3.80	443113.3	1.475	7.434
4:2-FTS	4.11	1.000	161644.7		A	13C2-4:2-FTS	4.11	55248.6	2.926	7.866
PFHxA	4.15	1.000	1392034.5		A	13C5-PFHxA	4.15	708016.1	1.966	8.432
PFPeS	4.17	1.100	354542.6		A	13C3-PFBS	3.80	443113.3	0.800	7.892
PFHxS	4.54	1.000	502548.7		A	13C3-PFHxS	4.54	345453.3	1.455	7.374
PFHpA	4.54	1.000	1450230.1		A	13C4-PFHpA	4.54	588837.4	2.463	8.283
6:2-FTS	4.89	1.000	130208.9		A	13C2-6:2-FTS	4.89	38439.7	3.387	8.450
PFHpS	4.90	1.080	505602.4		A	13C3-PFHxS	4.54	345453.3	1.464	7.657
PFOA	4.91	1.000	1477626.7		A	13C8-PFOA	4.91	976782.8	1.513	8.518
PFOS	5.23	1.000	442468.7		A	13C8-PFOS	5.23	295520.4	1.497	7.764
PFNA	5.25	1.000	1184653.0		A	13C9-PFNA	5.25	522333.6	2.268	8.476
PFNS	5.53	1.060	317230.6		A	13C8-PFOS	5.23	295520.4	1.073	8.511
PFDA	5.55	1.000	998430.4		A	13C6-PFDA	5.55	677064.5	1.475	8.113
8:2-FTS	5.55	1.000	108765.3		A	13C2-8:2-FTS	5.55	29154.7	3.731	8.409
PFOSA	5.63	1.000	1133583.1		A	13C8-PFOSA	5.64	696392.5	1.628	8.799
NMeFOSAA	5.69	1.000	140151.7		A	d3-NMeFOSAA	5.69	81528.0	1.719	8.845
PFDS	5.79	1.110	253333.6		A	13C8-PFOS	5.23	295520.4	0.857	8.189
PFUnDA	5.81	1.000	888633.9		A	13C7-PFUnDA	5.81	283267.0	3.137	8.996
NEtFOSAA	5.83	1.000	122902.1		A	d5-NEtFOSAA	5.82	70744.9	1.737	7.466
PFDoDA	6.04	1.000	897491.0		A	13C2-PFDoDA	6.04	590879.3	1.519	8.232
10:2-FTS	6.06	1.090	74932.7		A	13C2-8:2-FTS	5.55	29154.7	2.570	8.003
NMePFOSAE	6.09	1.000	674097.6		A	d7-NMePFOSAE	6.08	336944.7	2.001	8.965
NMePFOSA	6.10	1.000	130349.1		A	d3-NMePFOSA	6.10	88868.5	1.467	8.210
PFDoS	6.21	1.190	118826.7		A	13C8-PFOS	5.23	295520.4	0.402	7.761
NEtPFOSAE	6.25	1.000	736880.1		A	d9-NEtPFOSAE	6.24	284367.9	2.591	8.307
NEtPFOSA	6.26	1.000	127621.9		A	d5-NEtPFOSA	6.25	72006.3	1.772	7.806
PFTrDA	6.24	1.030	746362.9		A	13C2-PFDoDA	6.04	590879.3	1.263	7.966
PFTeDA	6.42	1.000	675574.7		A	13C2-PFTeDA	6.42	449441.0	1.503	8.827
PFHxDA	6.72	1.050	288222.5		A	13C2-PFTeDA	6.42	449441.0	0.641	7.961
PFODA	6.98	1.090	278149.1		A	13C2-PFTeDA	6.42	449441.0	0.619	8.866

Total Ion Chromatogram

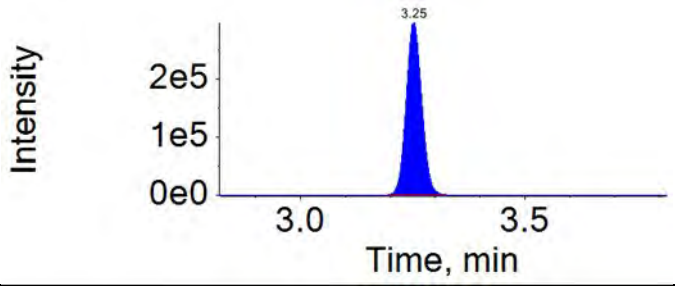


APPROVED
By MCD at 6:32 pm, 11/7/18

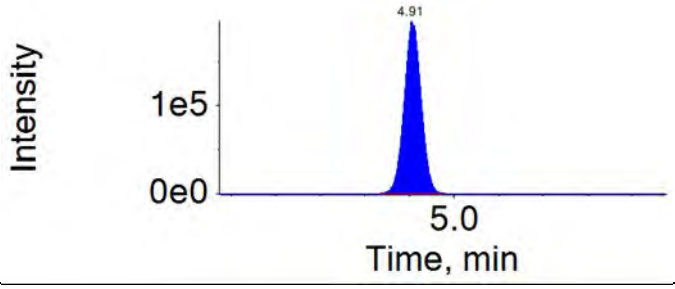
REVIEWED
By umar at 2:05 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

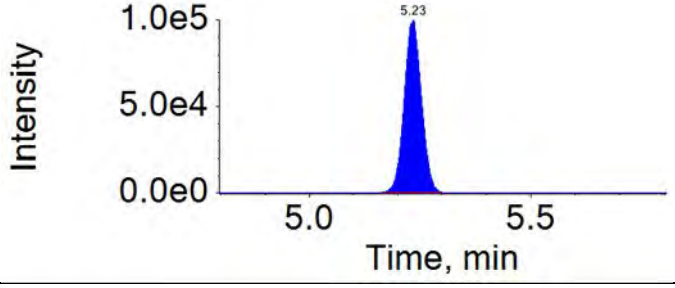
Injection Standard: 13C3-PFBA
216.0 / 172.0



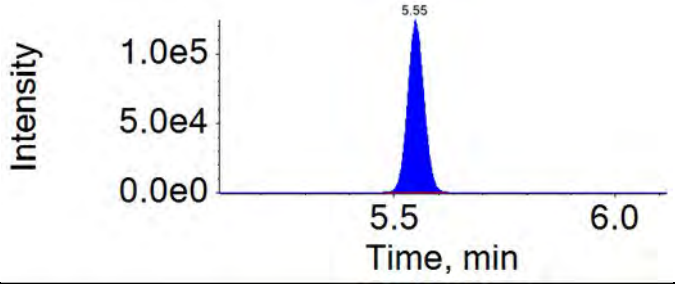
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

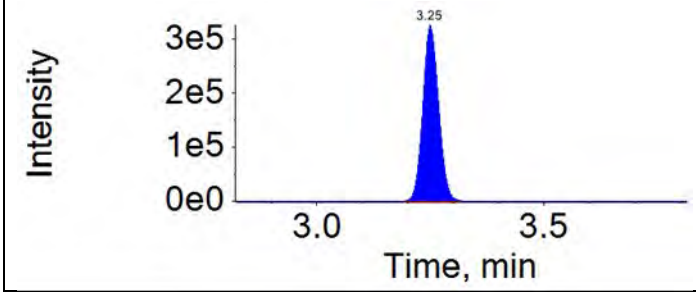


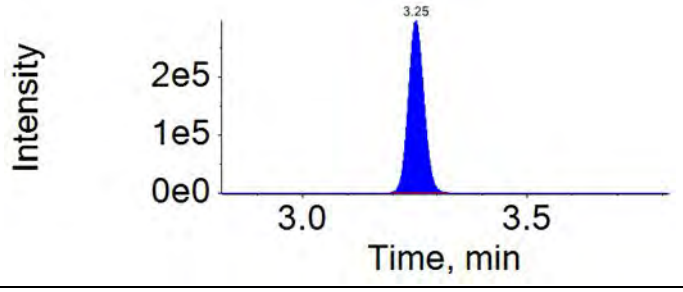
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

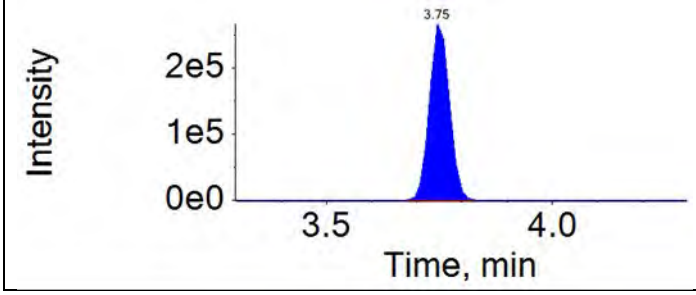
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

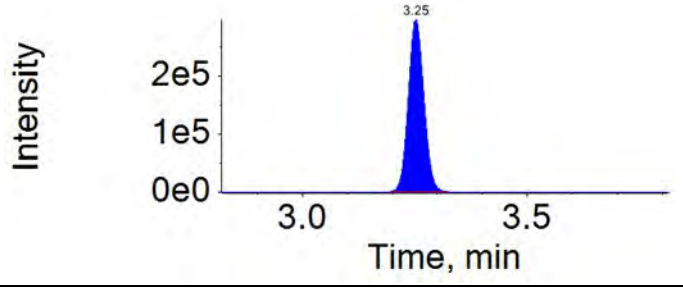
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



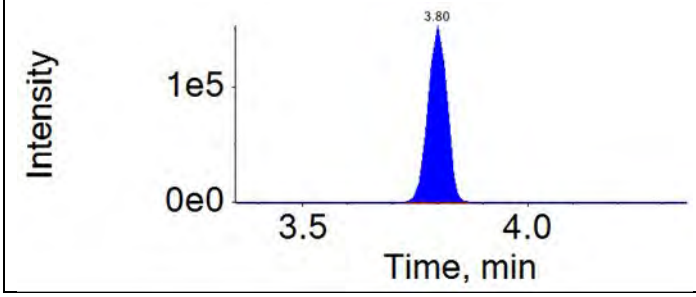


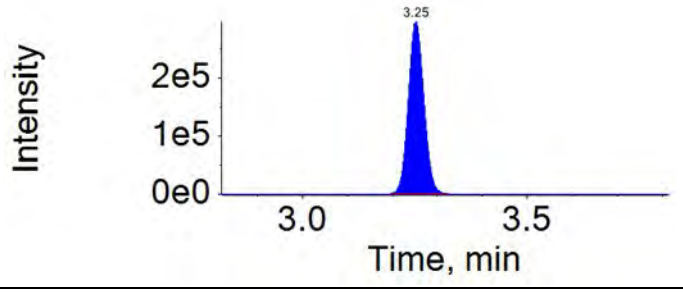
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



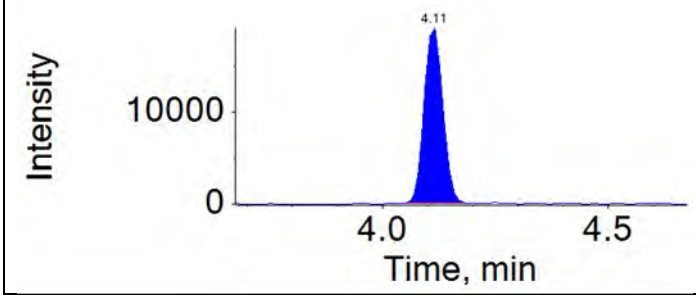


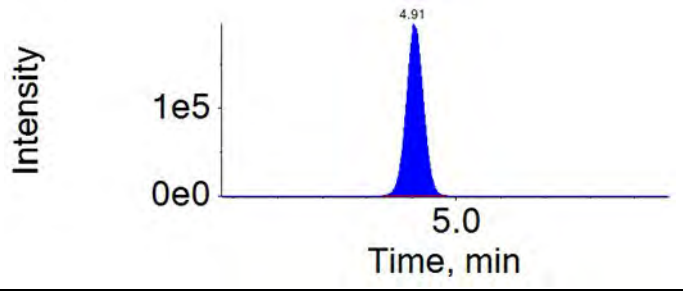
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



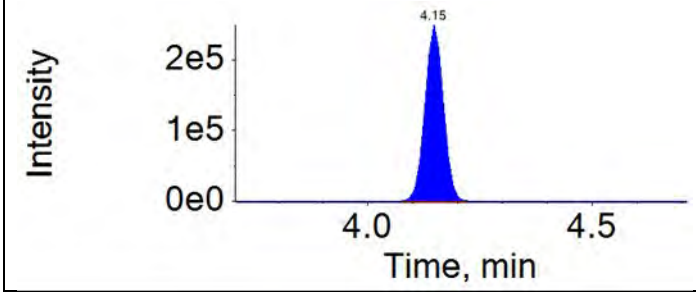


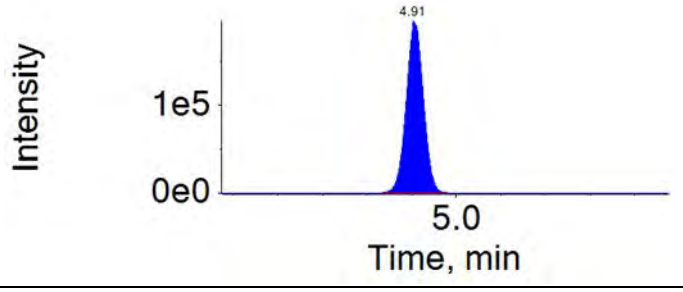
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

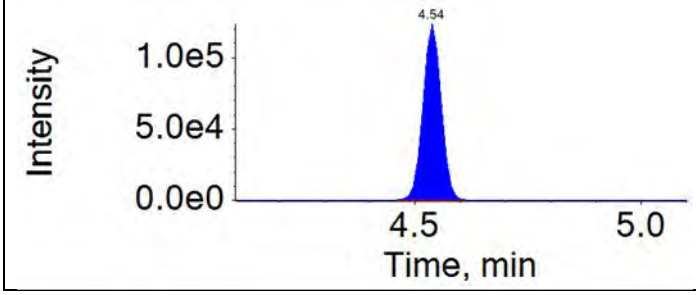
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

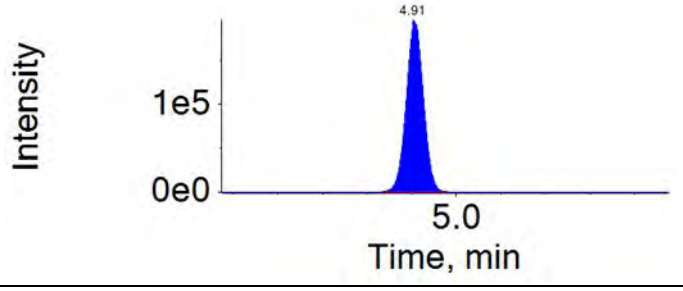
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



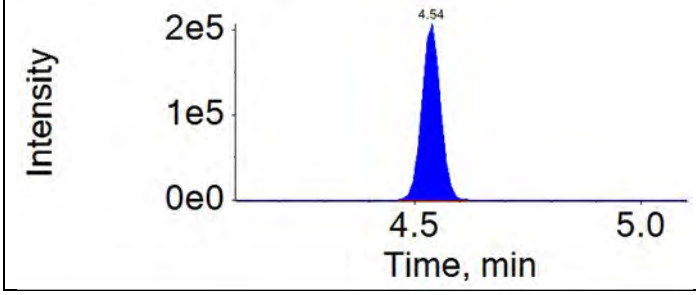


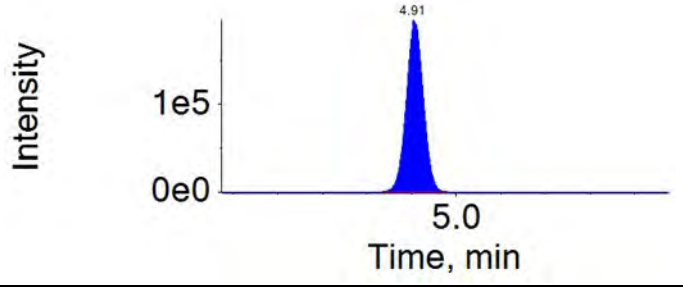
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



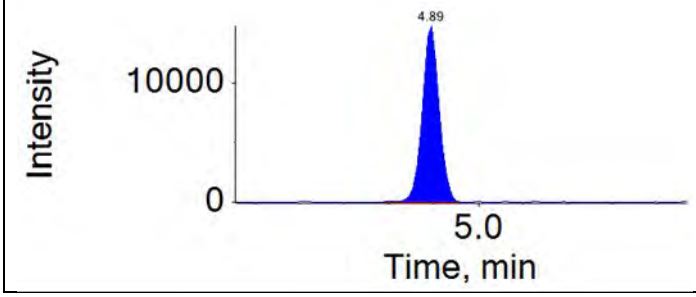


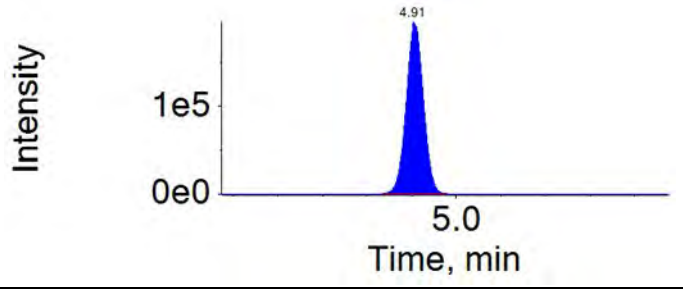
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



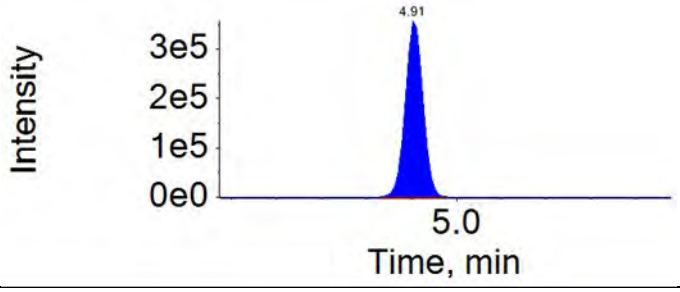


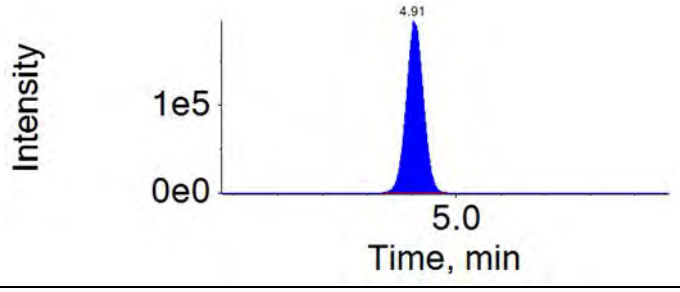
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

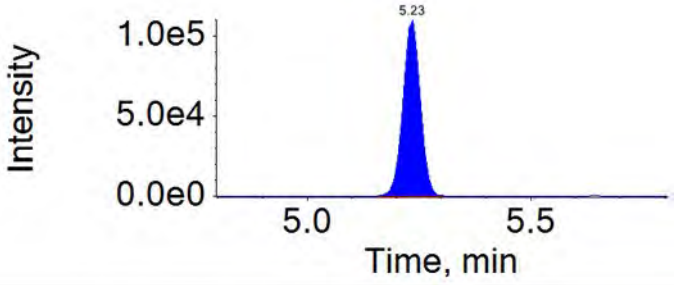
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

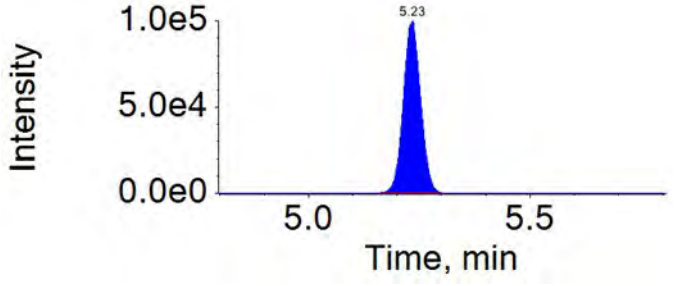
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



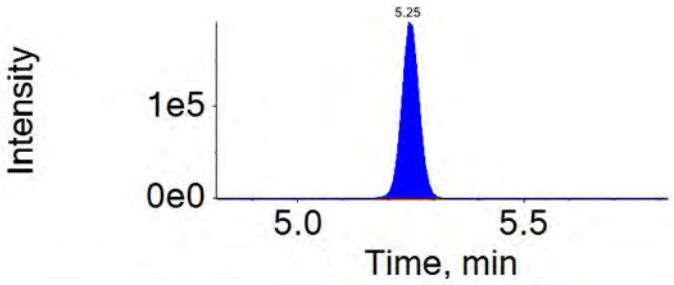


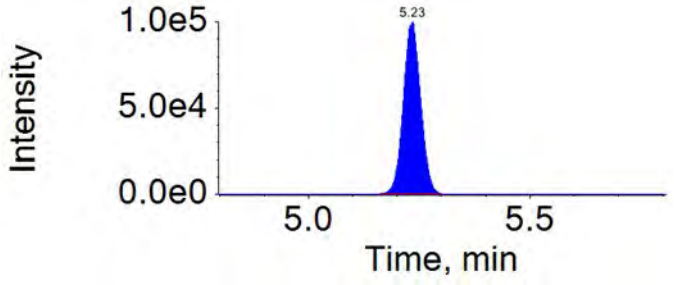
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



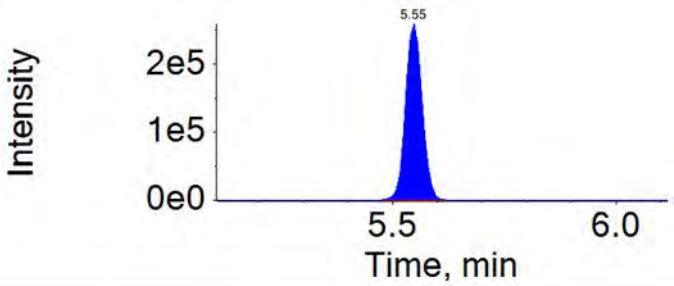


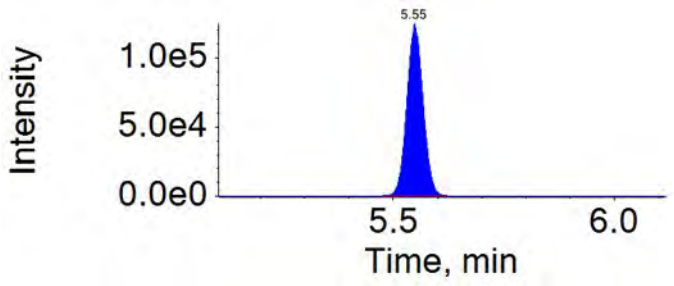
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



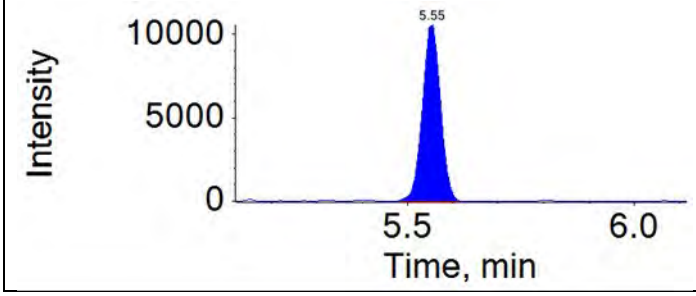


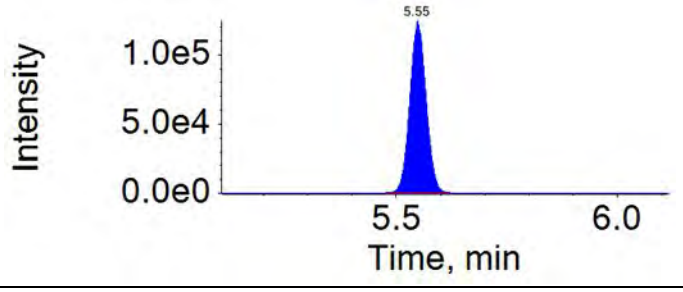
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

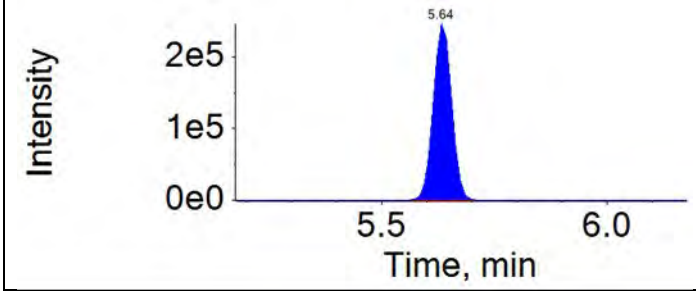
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

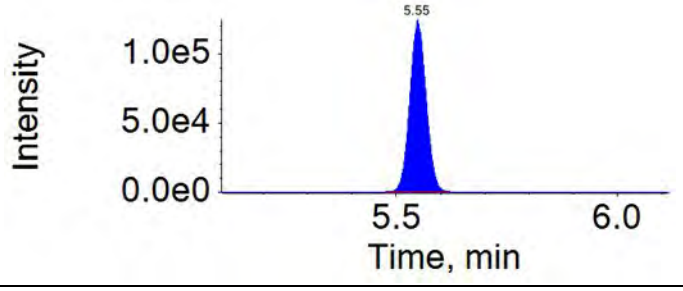
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



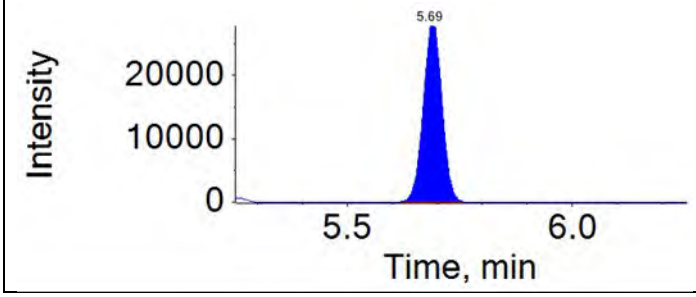


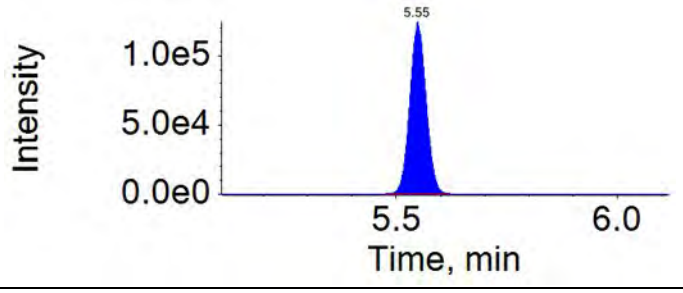
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



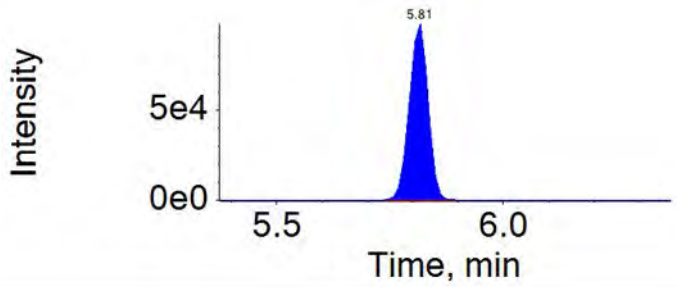


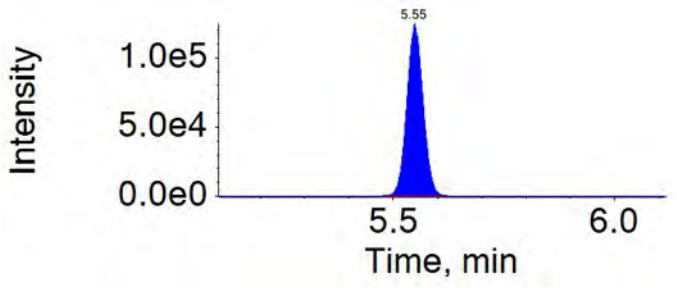
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



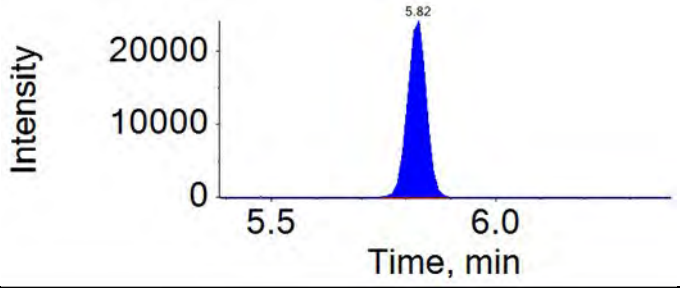
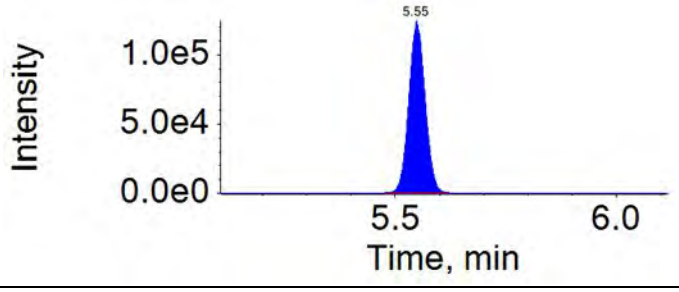


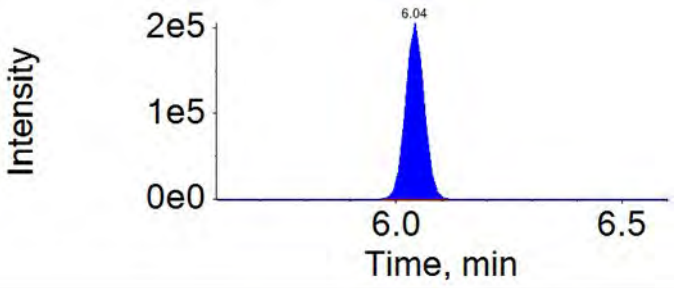
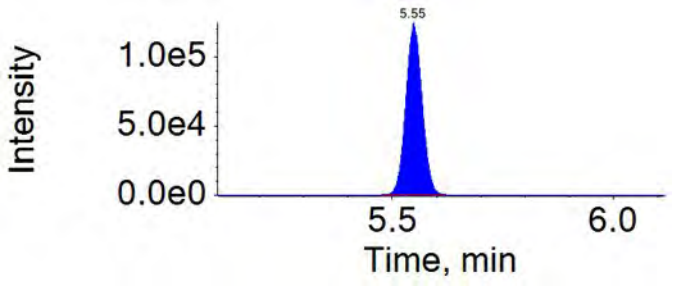
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

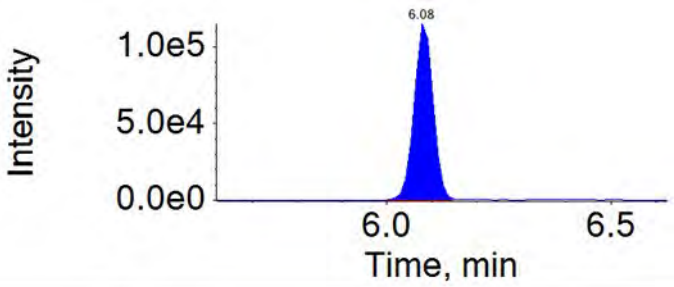
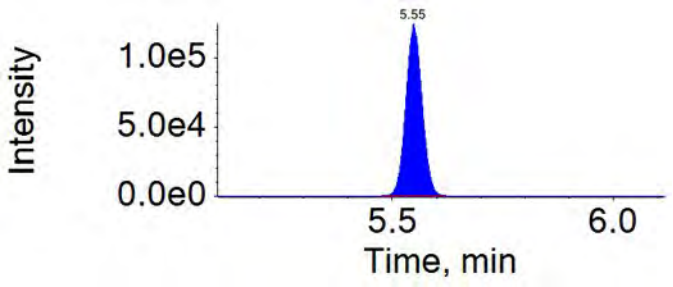


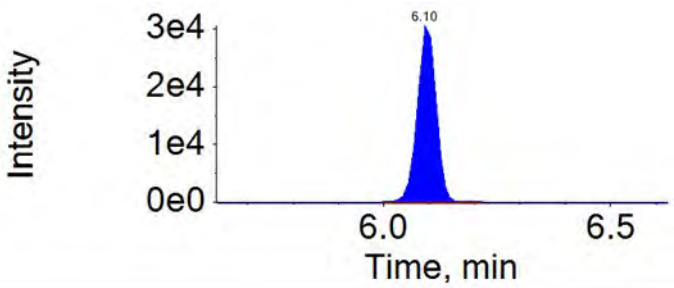
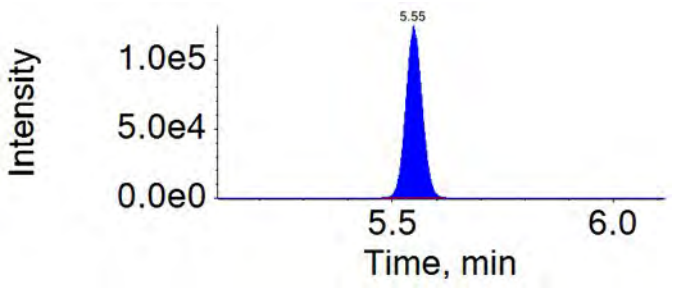


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

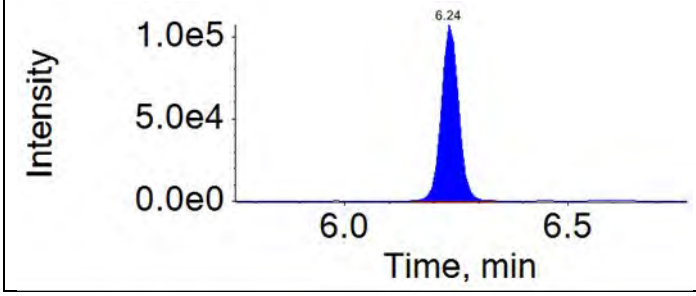
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

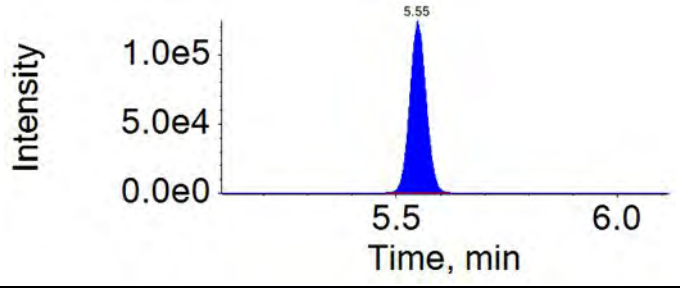
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

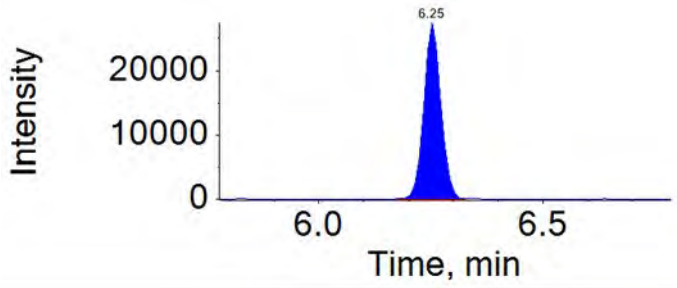
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

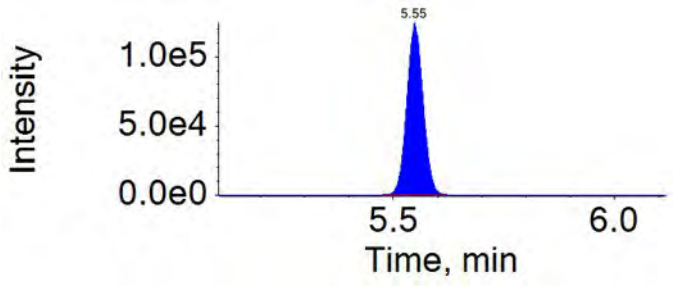
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



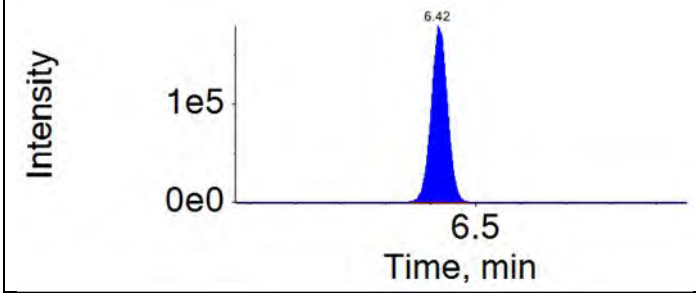


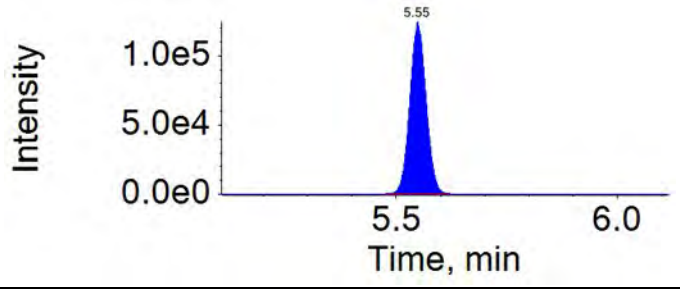
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



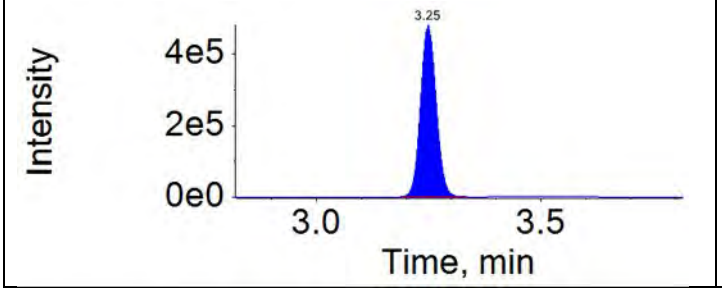


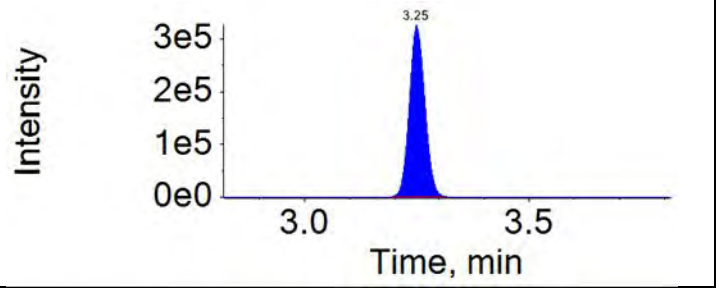
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

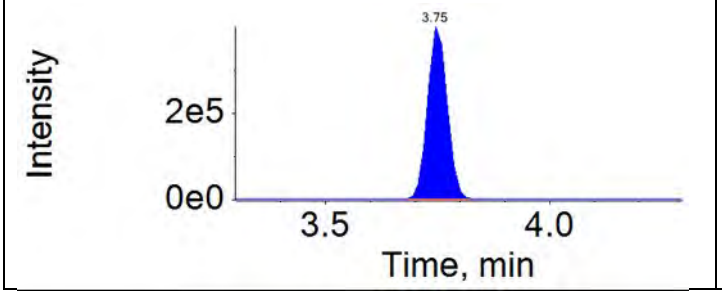
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

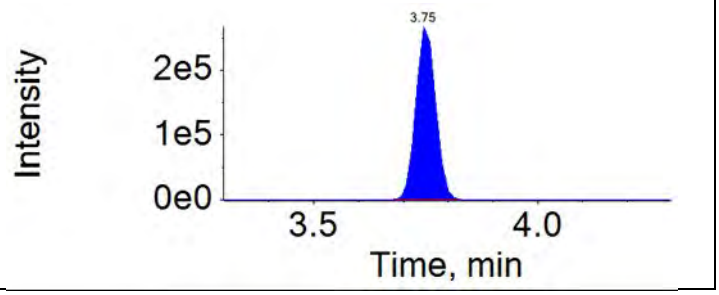
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



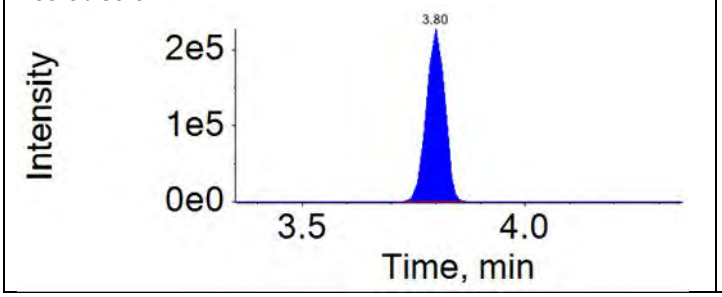


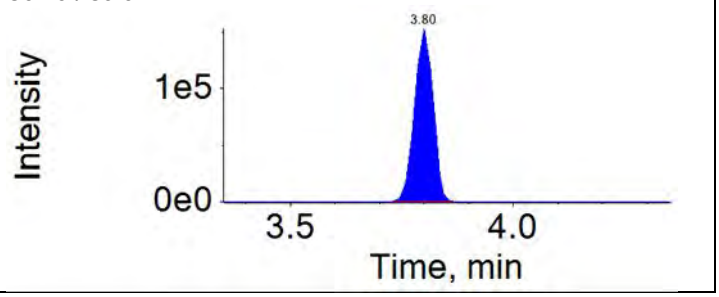
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



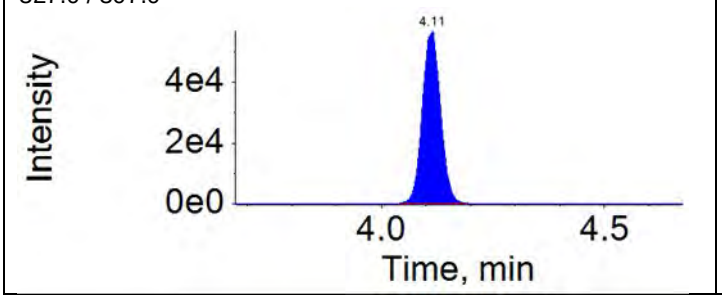


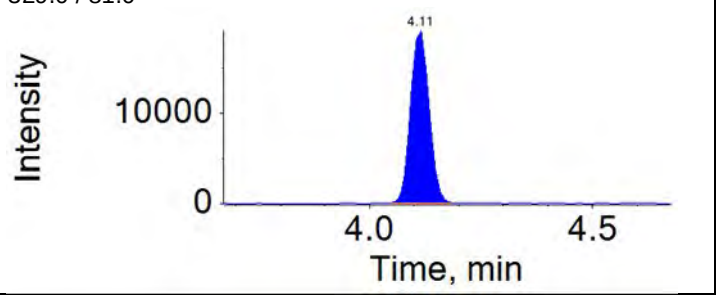
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



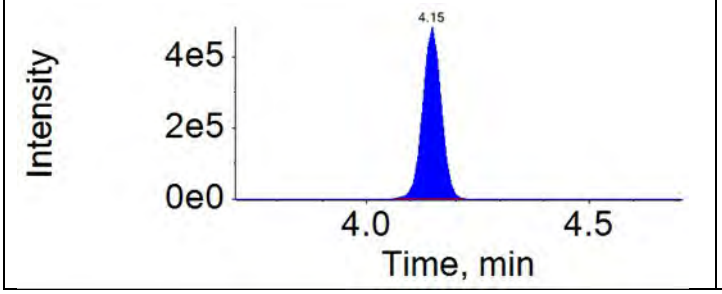


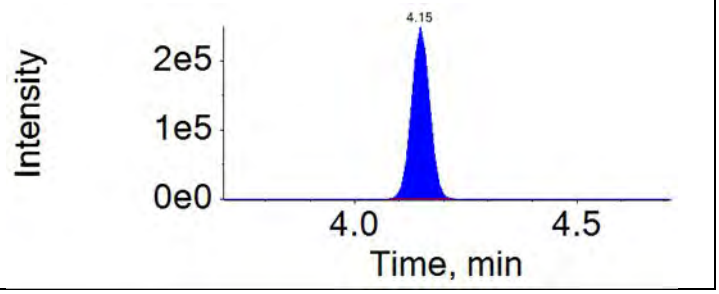
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

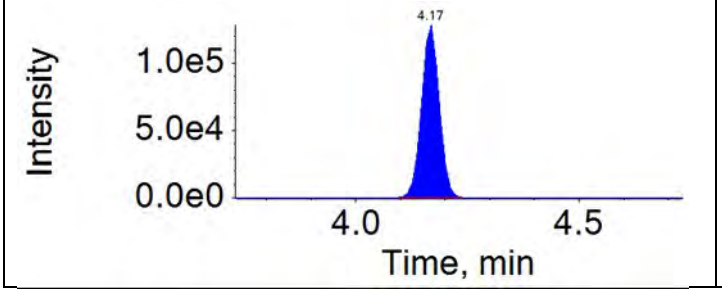
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

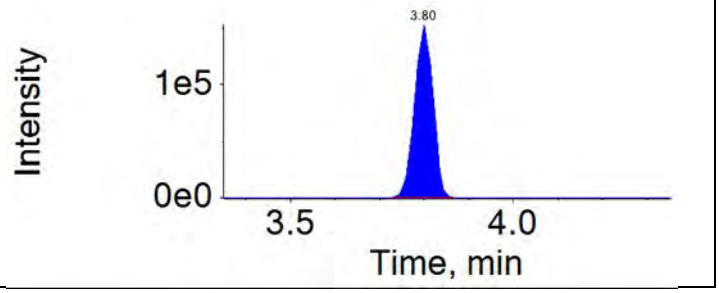
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



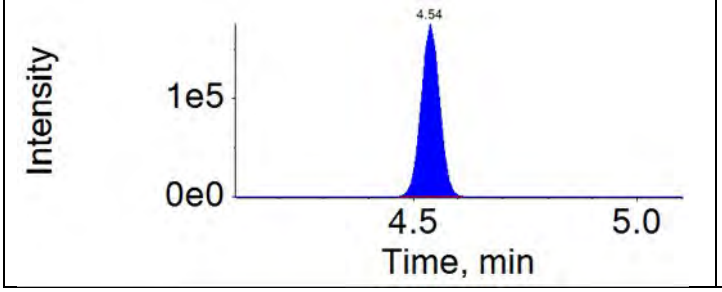


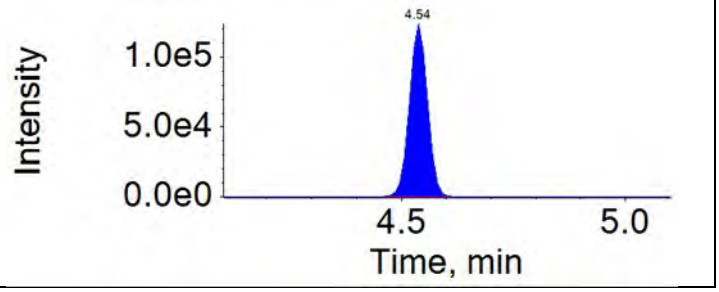
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



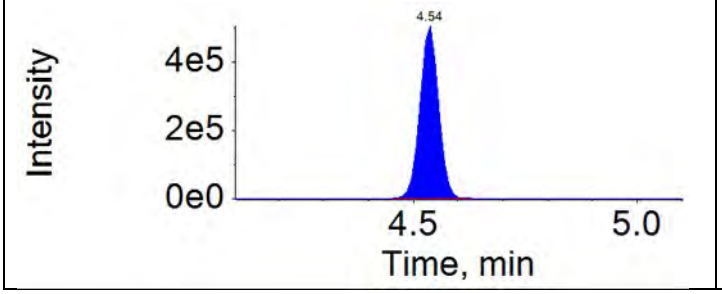


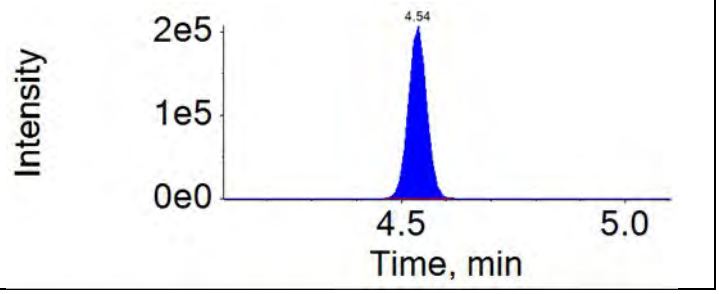
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



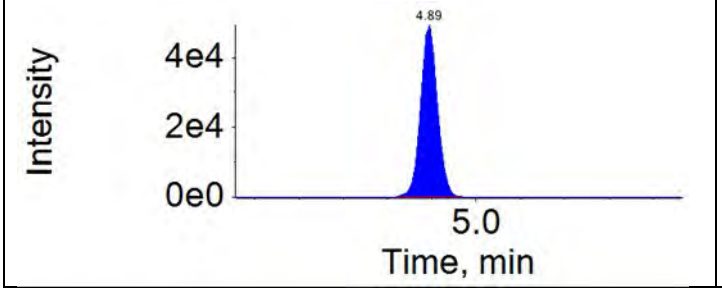


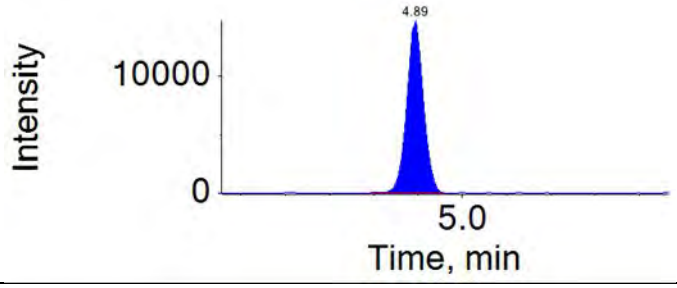
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

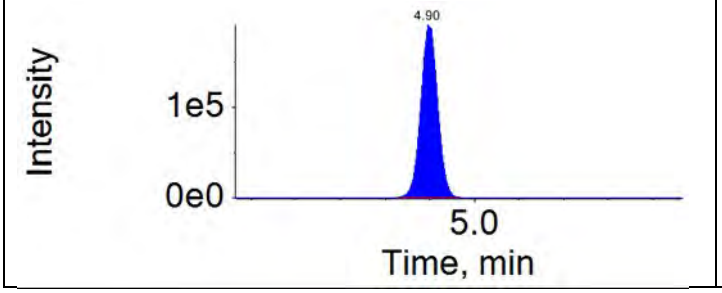
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

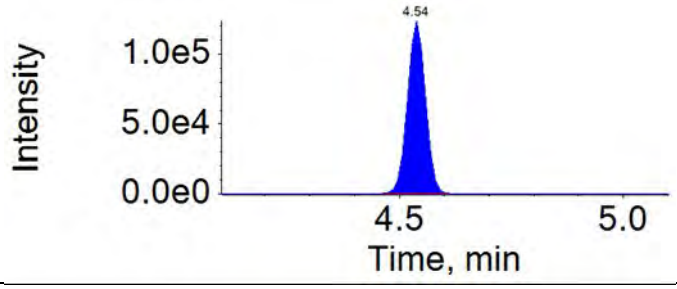
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



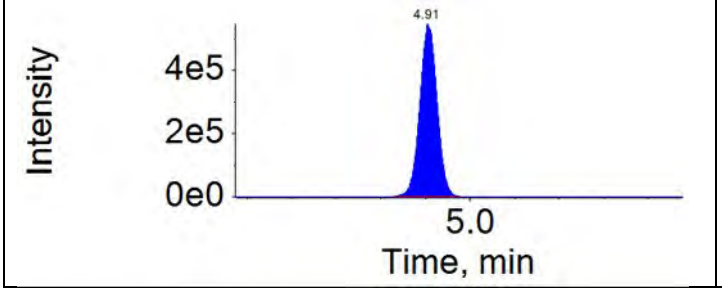


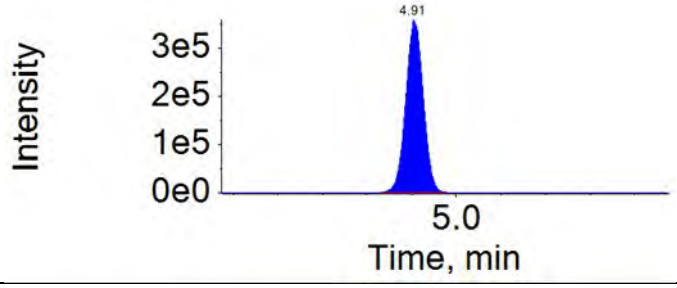
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



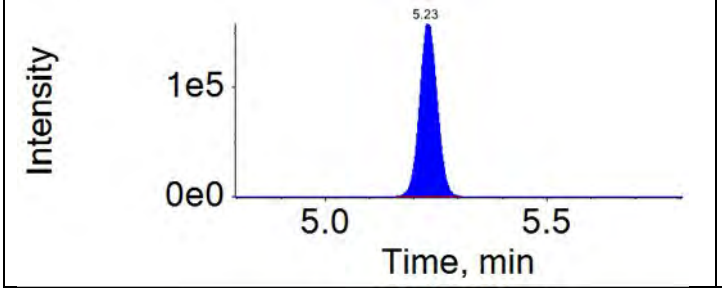


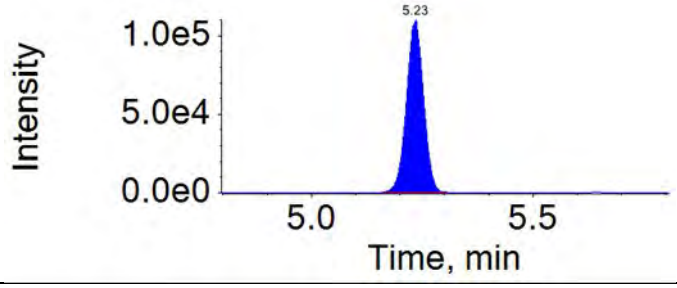
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



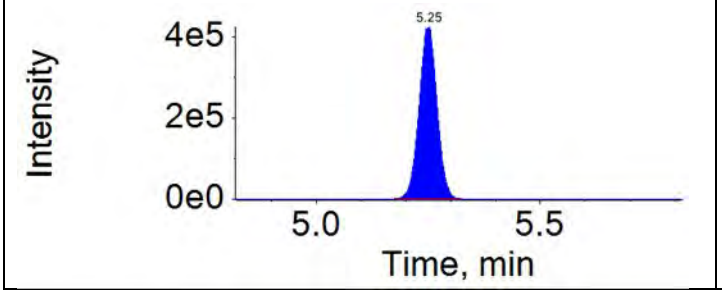


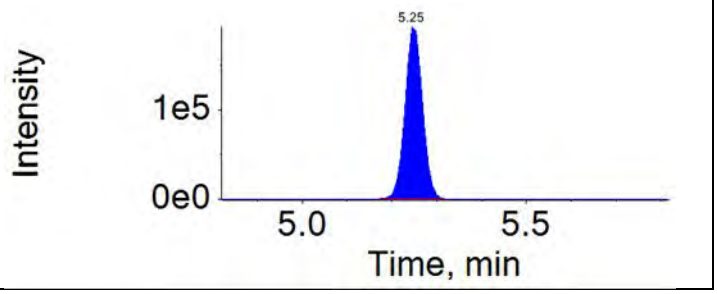
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

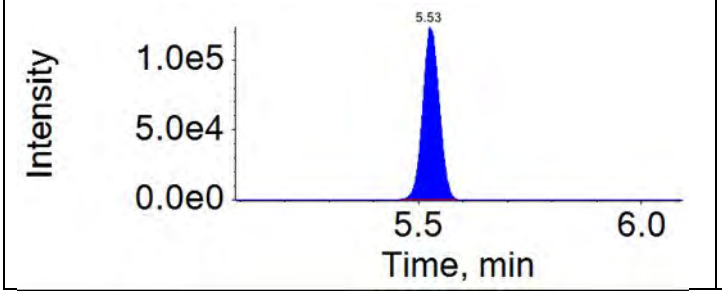
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

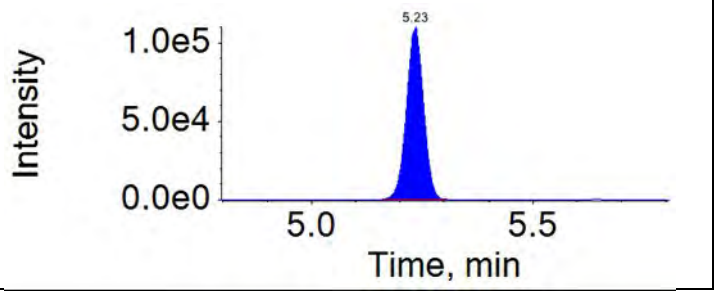
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



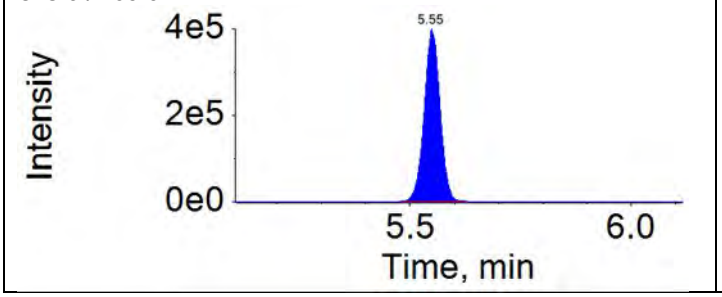


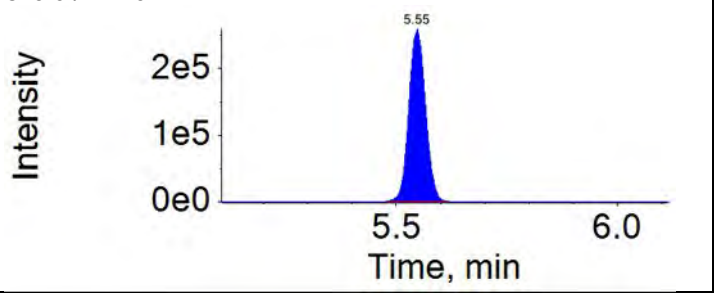
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



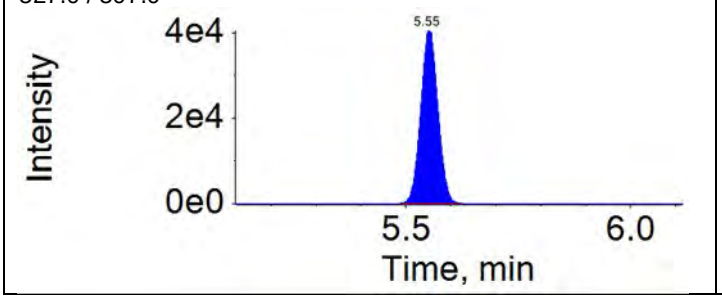


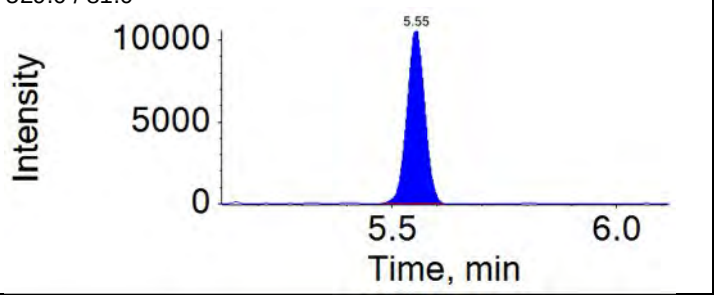
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



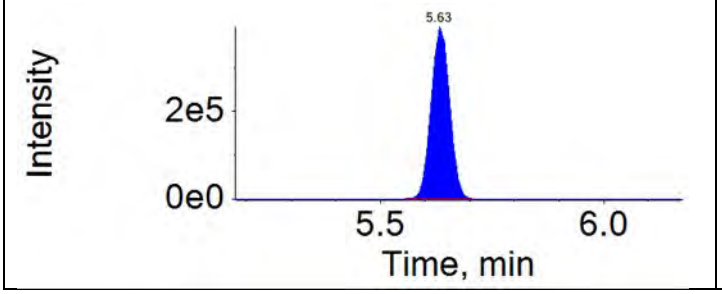


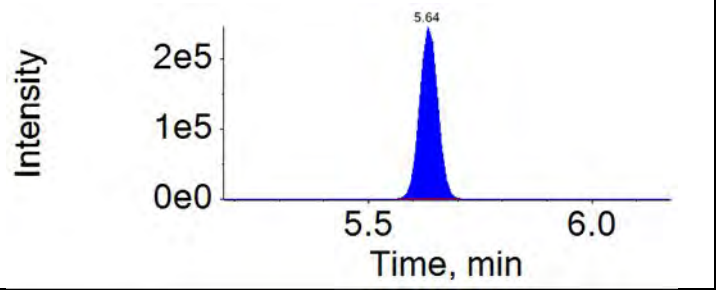
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

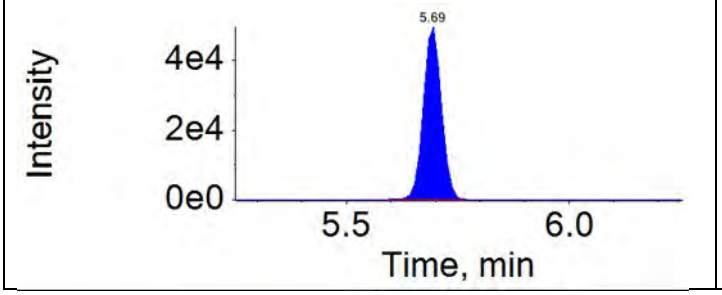
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

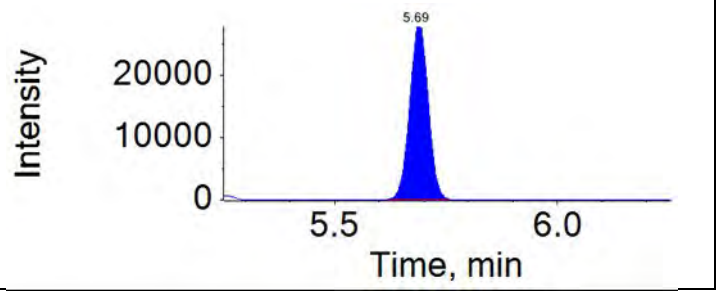
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



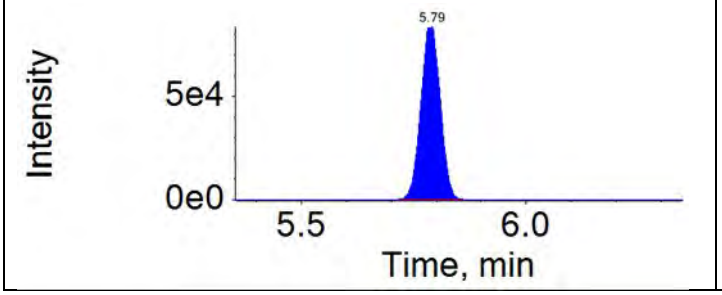


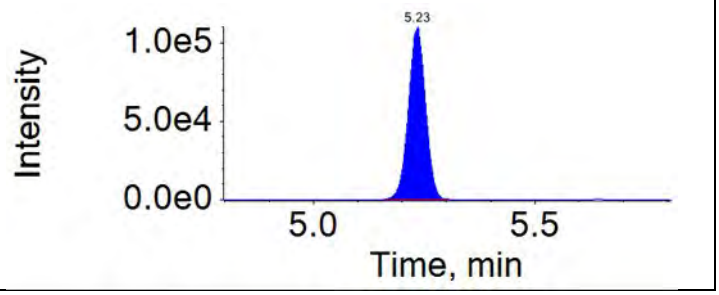
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



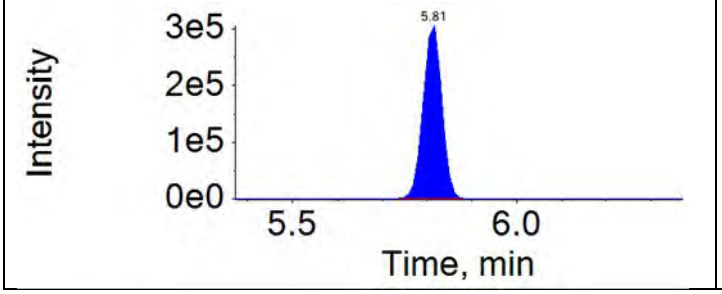


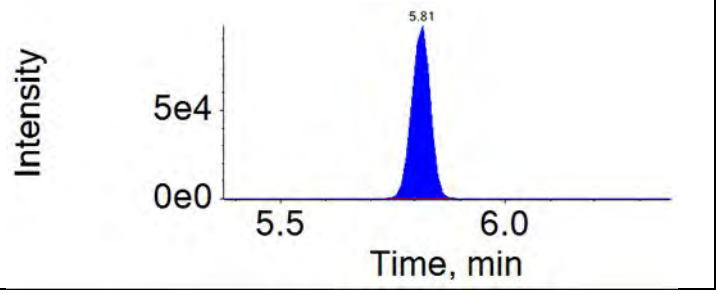
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



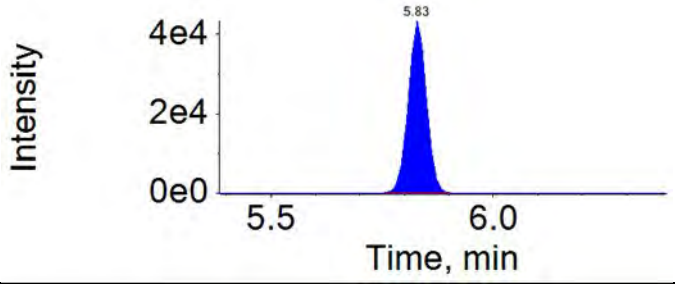


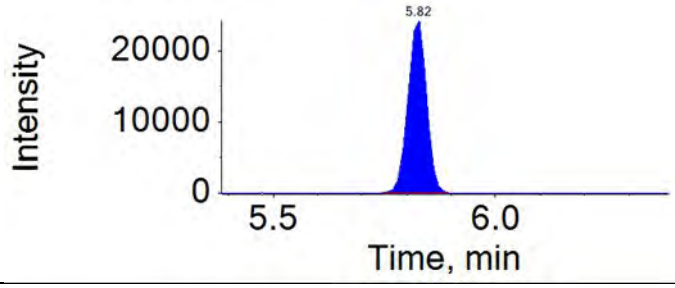
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

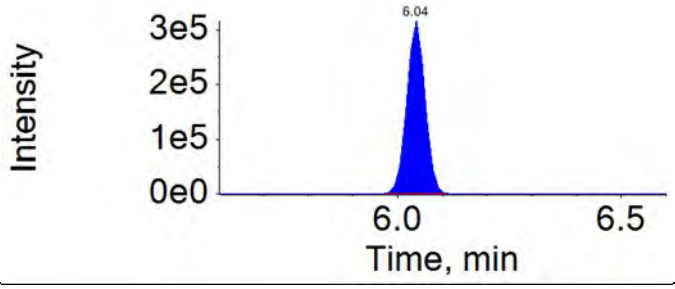
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

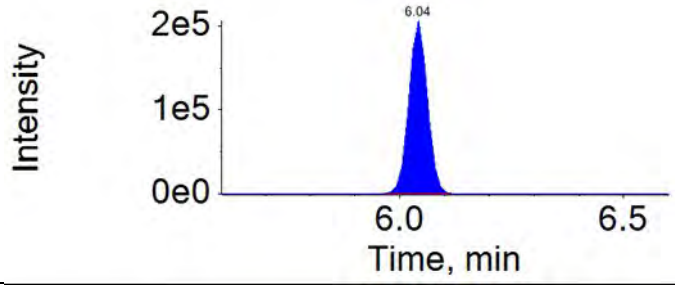
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



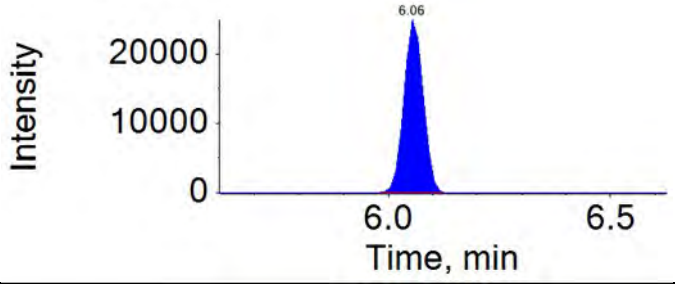


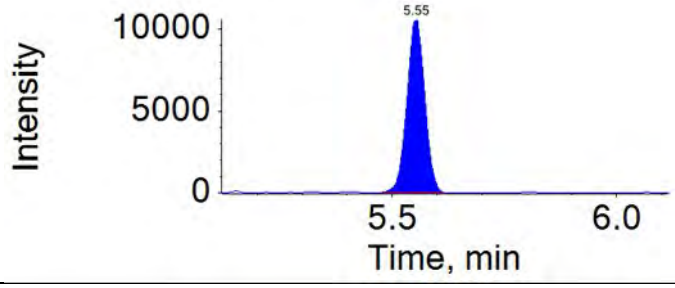
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



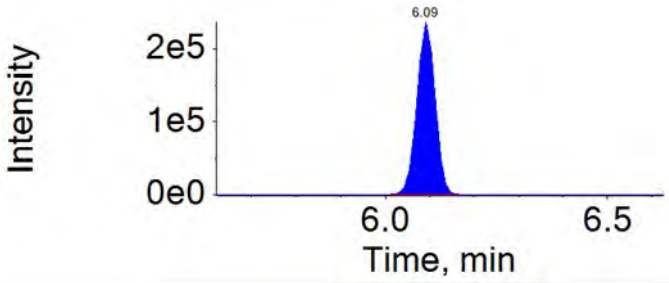


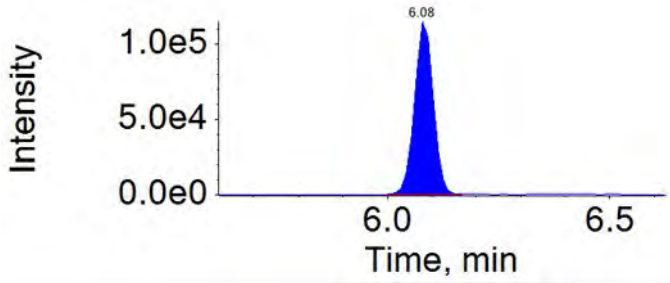
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



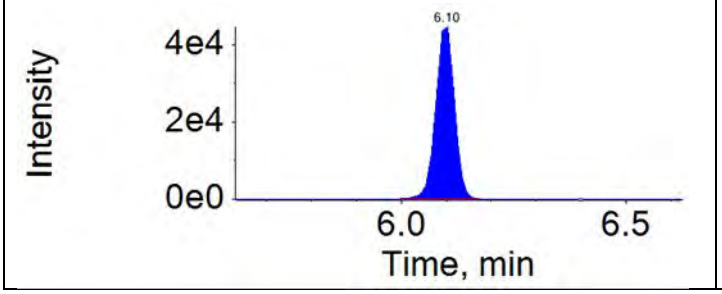


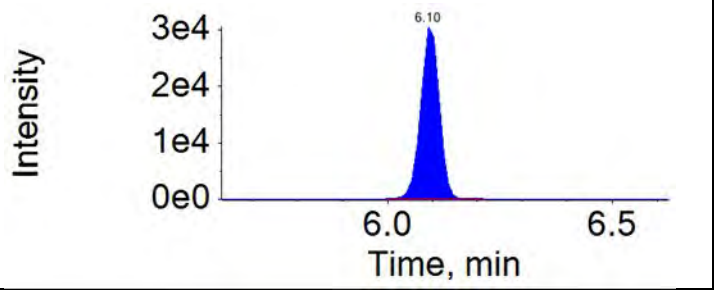
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

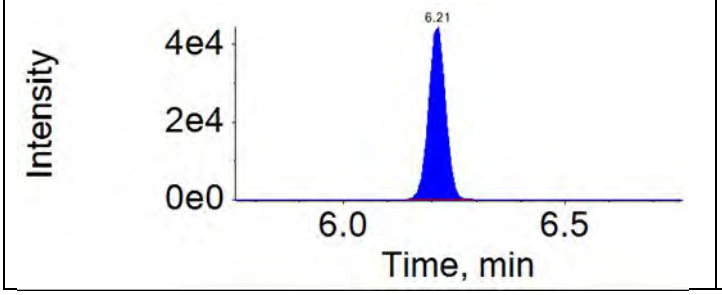
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

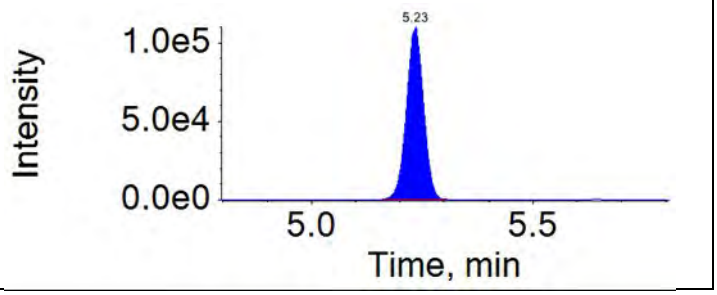
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



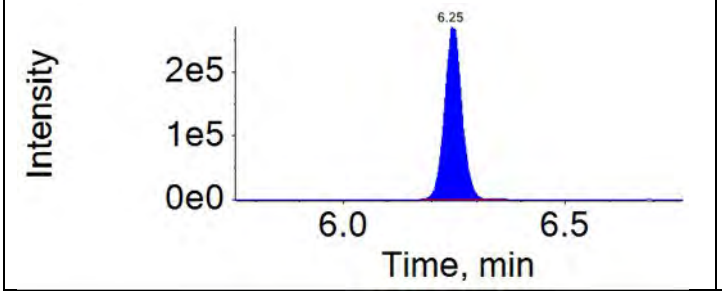


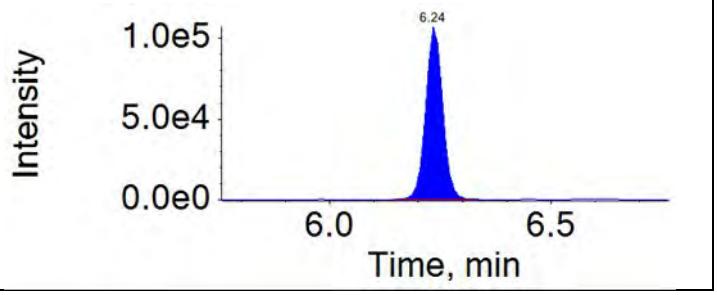
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



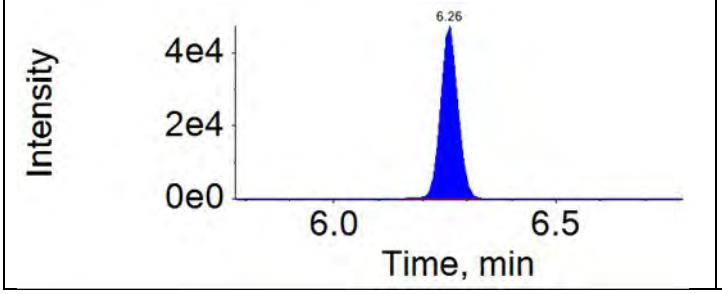


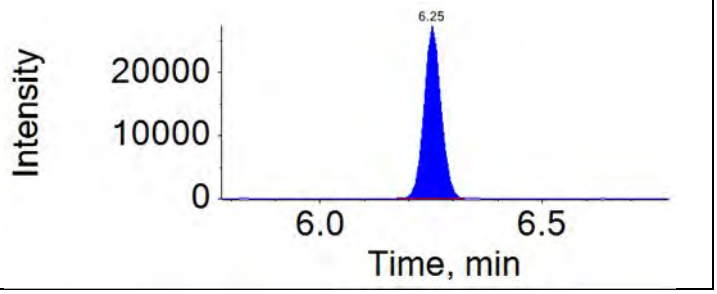
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



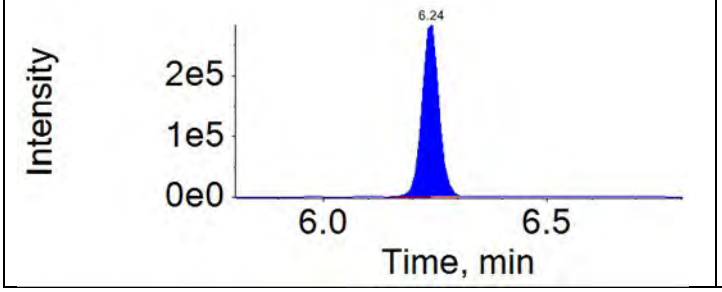


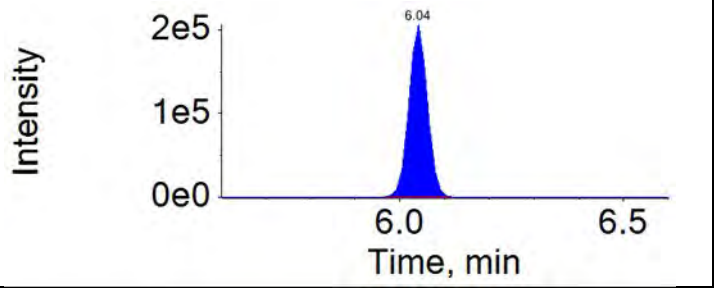
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

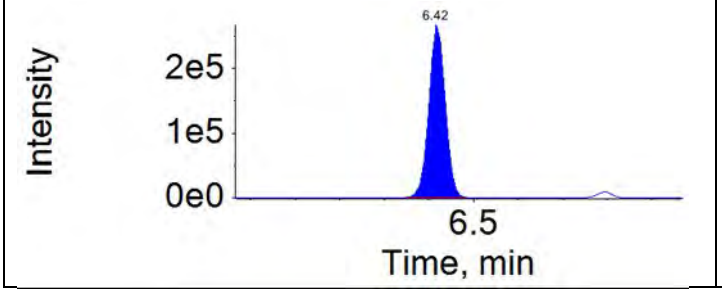
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

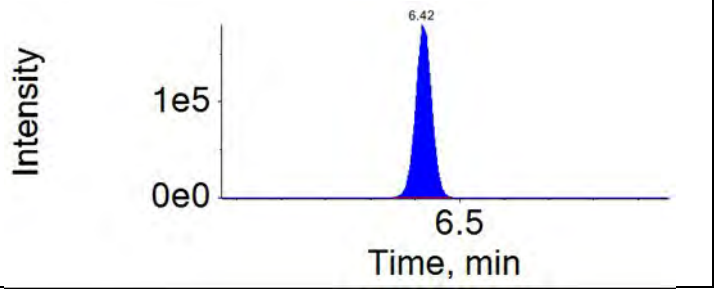
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



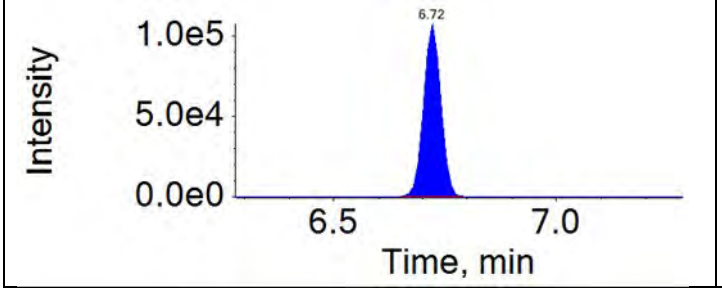


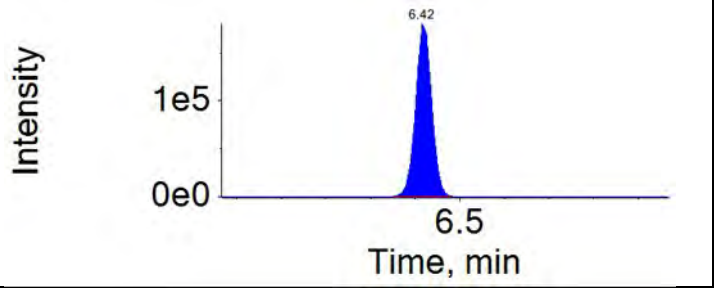
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



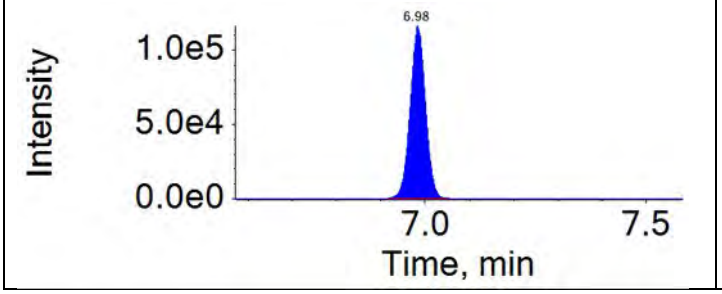


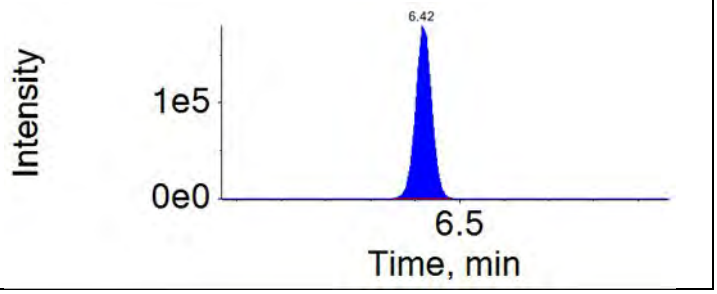
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

Ion Ratio Report

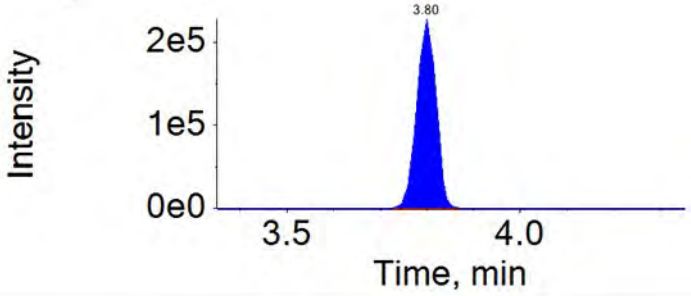
Sample Name: CCV3_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07D-24.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	653387.1	A	N/A	0.3650			
PFBS_2	3.80	1.00	238461.3	A	N/A	0.3650	3	50	
4:2-FTS	4.11	1.00	161644.7	A	N/A	0.5861			
4:2-FTS_2	4.11	1.00	94747.9	A	N/A	0.5861	-9	50	
PFHxA	4.15	1.00	1392034.5	A	N/A	0.0114			
PFHxA_2	4.15	1.00	15887.7	A	N/A	0.0114	1	50	
PFPeS	4.17	1.10	354542.6	A	N/A	0.5206			
PFPeS_2	4.17	1.10	184575.1	A	N/A	0.5206	-4	50	
PFHxS	4.54	1.00	502548.7	A	N/A	0.3753			
PFHxS_2	4.54	1.00	188622.2	A	N/A	0.3753	5	50	
PFHpA	4.54	1.00	1450230.1	A	N/A	0.0553			
PFHpA_2	4.53	1.00	80223.6	A	N/A	0.0553	-4	50	
6:2-FTS	4.89	1.00	130208.9	A	N/A	0.6366			
6:2-FTS_2	4.89	1.00	82891.1	A	N/A	0.6366	-7	50	
PFHpS	4.90	1.08	505602.4	A	N/A	0.4067			
PFHpS_2	4.90	1.08	205620.6	A	N/A	0.4067	3	50	
PFOA	4.91	1.00	1477626.7	A	N/A	0.0579			
PFOA_2	4.91	1.00	85623.9	A	N/A	0.0579	-9	50	
PFOS	5.23	1.00	442468.7	A	N/A	0.3479			
PFOS_2	5.23	1.00	153945.2	A	N/A	0.3479	-1	50	
PFNA	5.25	1.00	1184653.0	A	N/A	0.0205			
PFNA_2	5.25	1.00	24325.7	A	N/A	0.0205	0	50	
PFNS	5.53	1.06	317230.6	A	N/A	0.4521			
PFNS_2	5.53	1.06	143423.0	A	N/A	0.4521	-7	50	
PFDA	5.55	1.00	998430.4	A	N/A	0.0065			
PFDA_2	5.55	1.00	6472.3	A	N/A	0.0065	19	50	
8:2-FTS	5.55	1.00	108765.3	A	N/A	0.5977			
8:2-FTS_2	5.55	1.00	65003.9	A	N/A	0.5977	-4	50	
NMeFOSAA	5.69	1.00	140151.7	A	N/A	0.2306			
NMeFOSAA_2	5.69	1.00	32313.9	A	N/A	0.2306	6	50	
PFDS	5.79	1.11	253333.6	A	N/A	0.5184			
PFDS_2	5.79	1.11	131323.6	A	N/A	0.5184	13	50	
PFUnDA	5.81	1.00	888633.9	A	N/A	0.0031			
PFUnDA_2	5.81	1.00	2723.2	A	N/A	0.0031	0	50	
NEtFOSAA	5.83	1.00	122902.1	A	N/A	0.6647			
NEtFOSAA_2	5.83	1.00	81696.4	A	N/A	0.6647	10	50	
PFDoDA	6.04	1.00	897491.0	A	N/A	0.0136			
PFDoDA_2	6.04	1.00	12195.2	A	N/A	0.0136	29	50	
10:2-FTS	6.06	1.09	74932.7	A	N/A	0.7308			
10:2-FTS_2	6.06	1.09	54761.2	A	N/A	0.7308	3	50	
PFTrDA	6.24	1.03	746362.9	A	N/A	0.0104			
PFTrDA_2	6.24	1.03	7756.6	A	N/A	0.0104	9	50	
PFTeDA	6.42	1.00	675574.7	A	N/A	0.0057			
PFTeDA_2	6.42	1.00	3869.2	A	N/A	0.0057	6	50	
PFHxDA	6.72	1.05	288222.5	A	N/A	0.0655			
PFHxDA_2	6.72	1.05	18873.5	A	N/A	0.0655	11	50	
PFODA	6.98	1.09	278149.1	A	N/A	0.0245			
PFODA_2	6.98	1.09	6810.6	A	N/A	0.0245	-4	50	

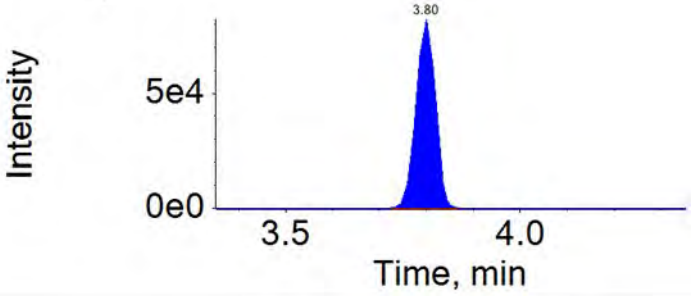
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

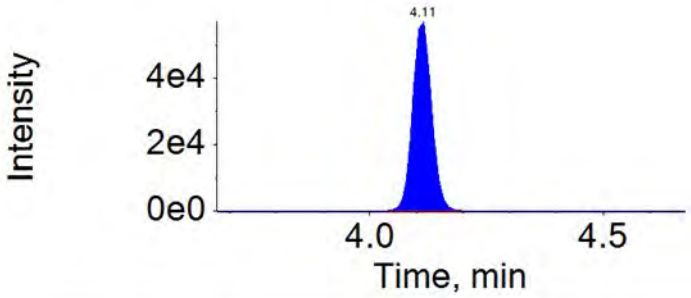
Component: PFBS
Primary Mass: 299.0 / 80.0



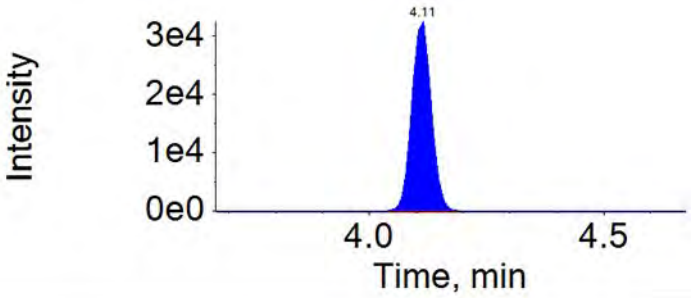
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



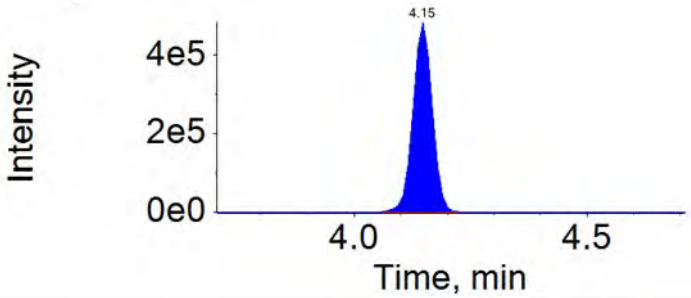
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



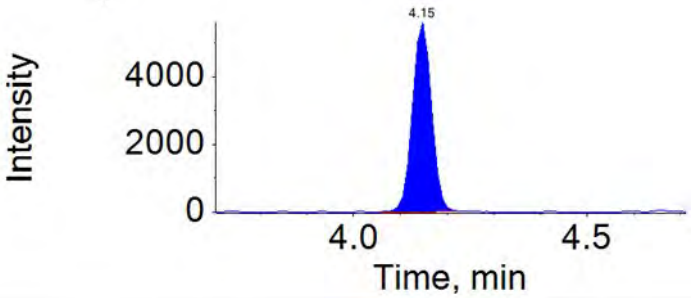
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



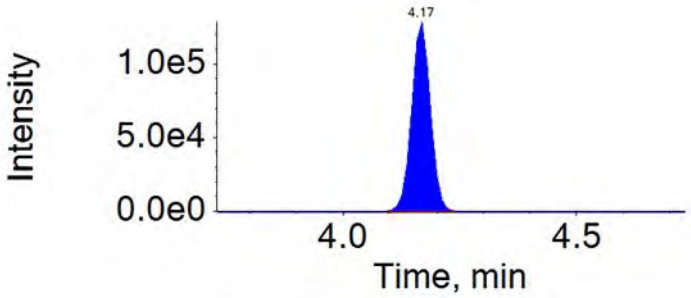
Component: PFHxA
Primary Mass: 313.0 / 269.0



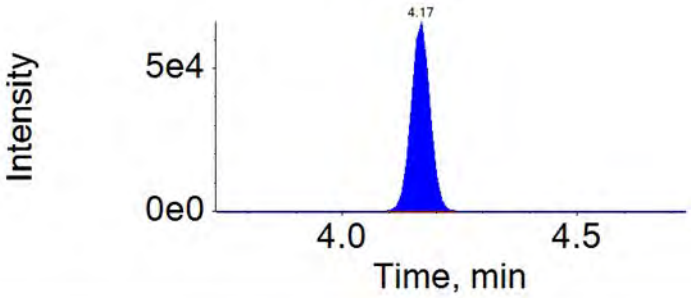
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



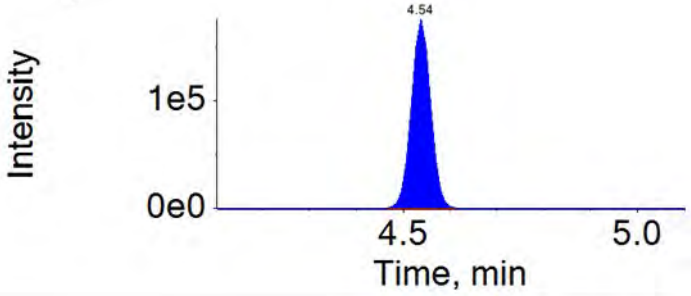
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



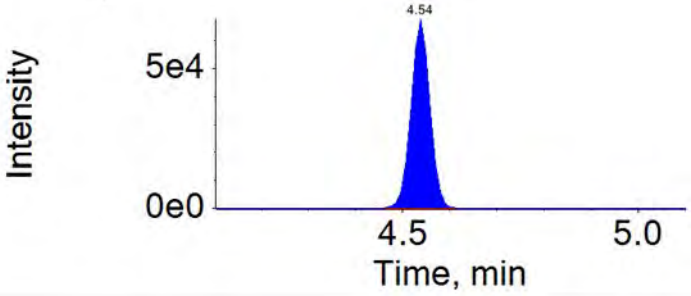
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

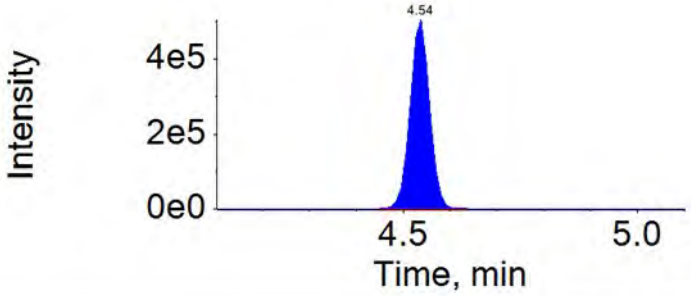
Component: PFHxS
Primary Mass: 399.0 / 80.0



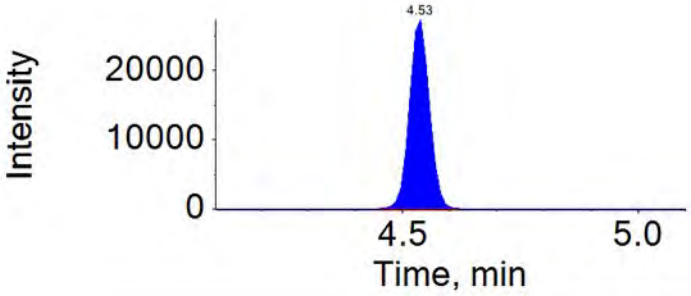
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



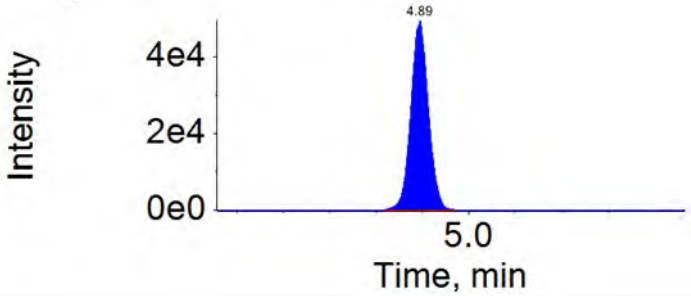
Component: PFHpA
Primary Mass: 363.0 / 319.0



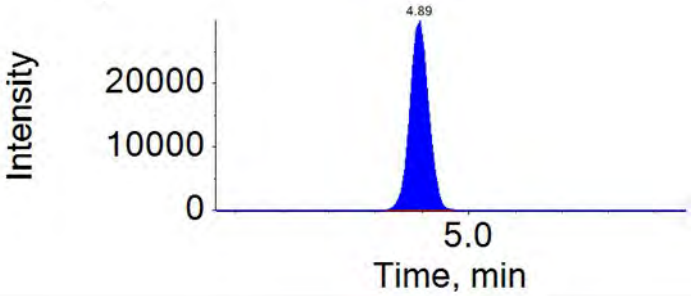
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



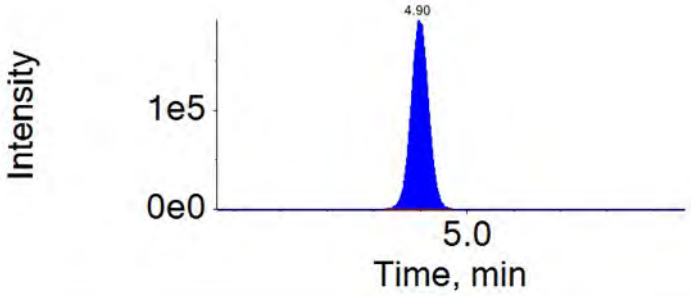
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



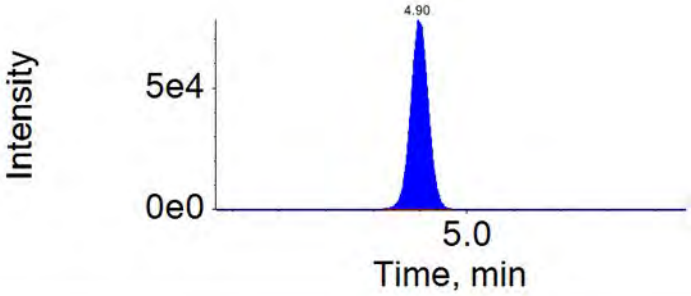
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



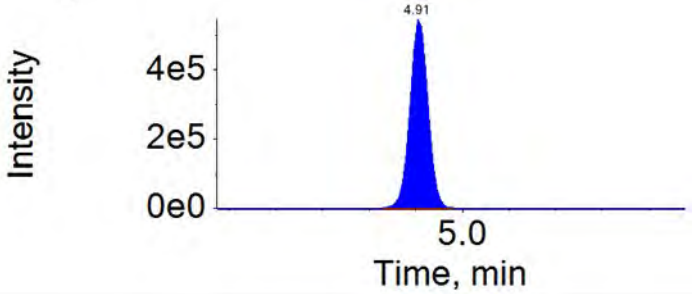
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



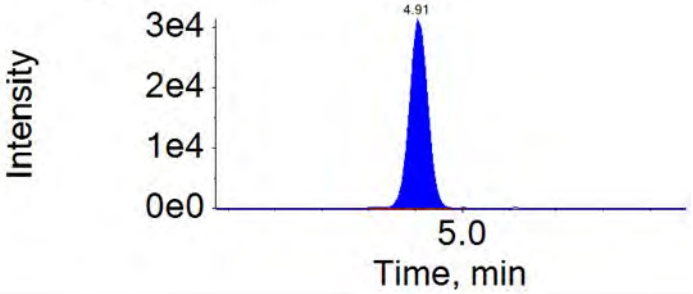
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

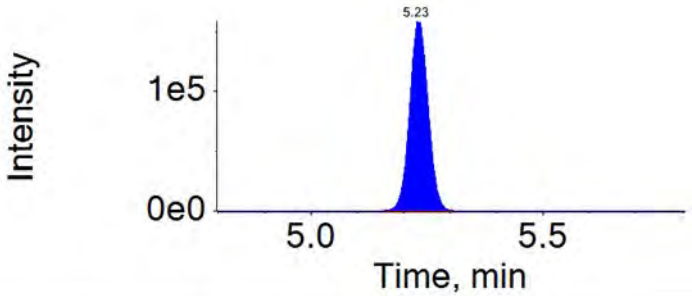
Component: PFOA
Primary Mass: 413.0 / 369.0



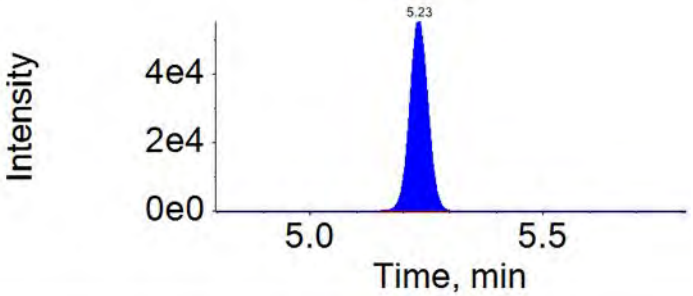
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



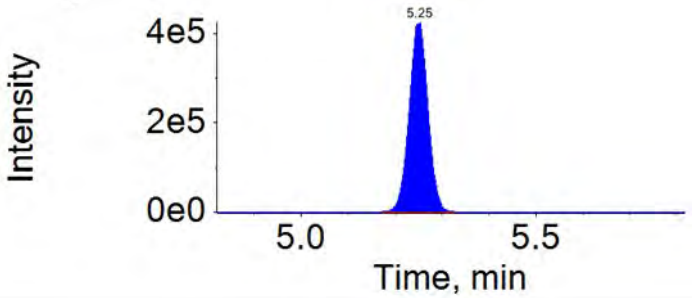
Component: PFOS
Primary Mass: 499.0 / 80.0



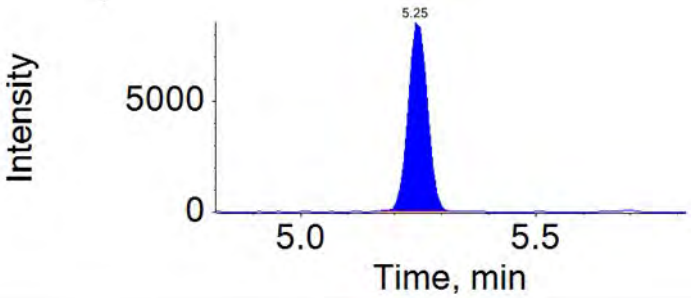
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



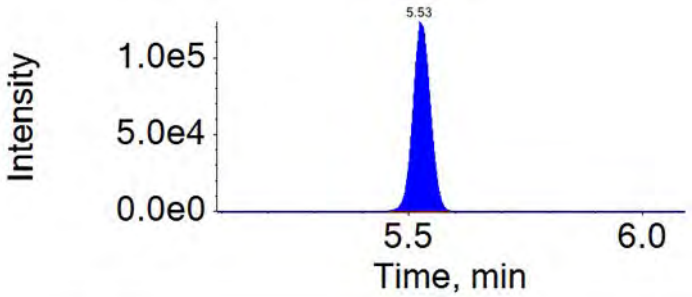
Component: PFNA
Primary Mass: 463.0 / 419.0



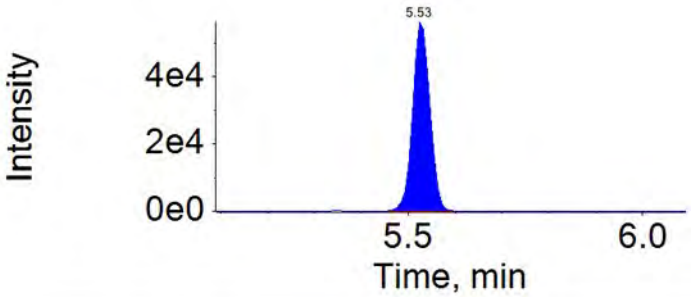
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



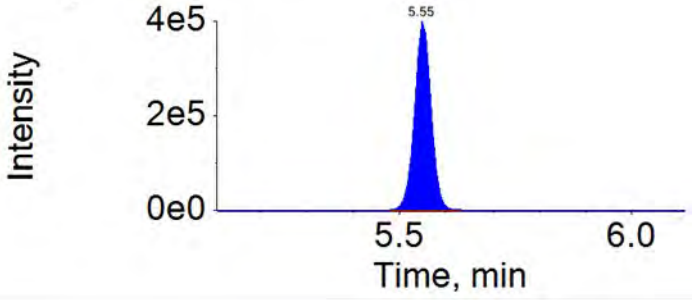
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



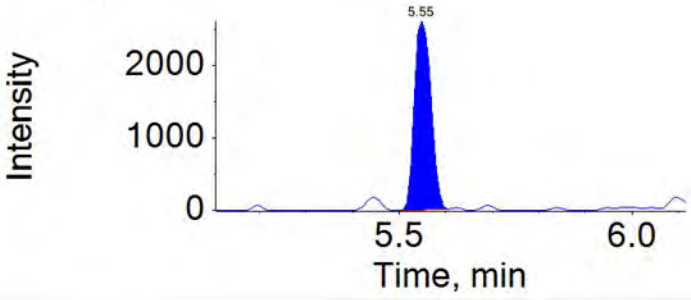
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

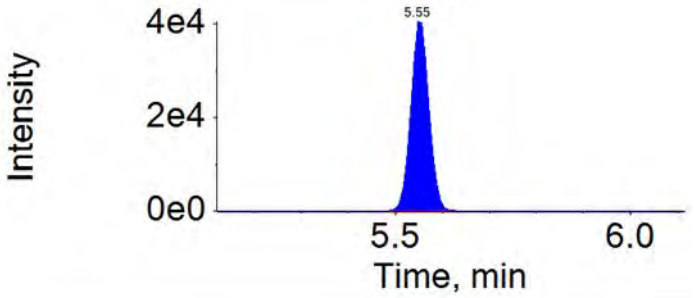
Component: PFDA
Primary Mass: 513.0 / 469.0



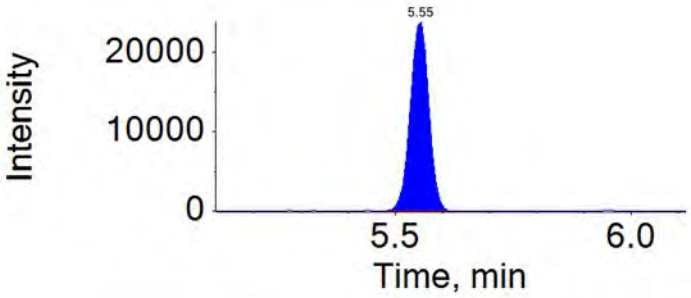
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



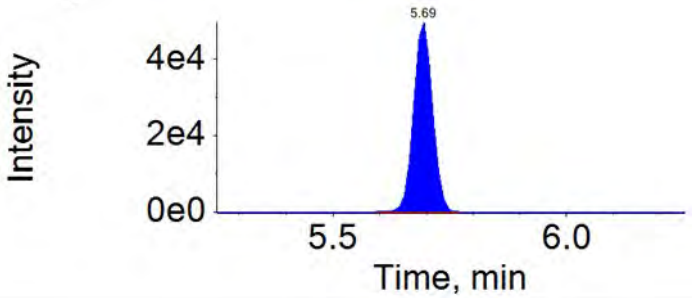
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



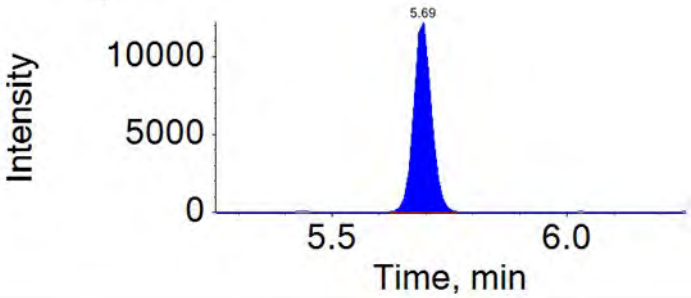
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



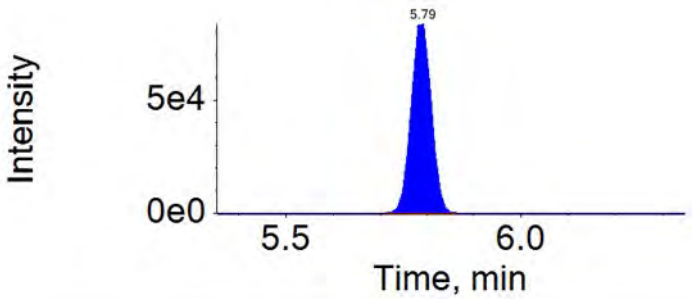
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



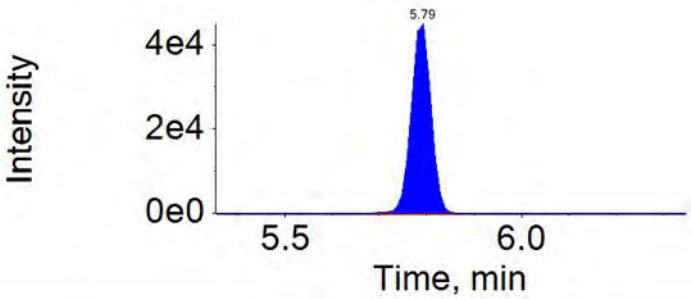
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



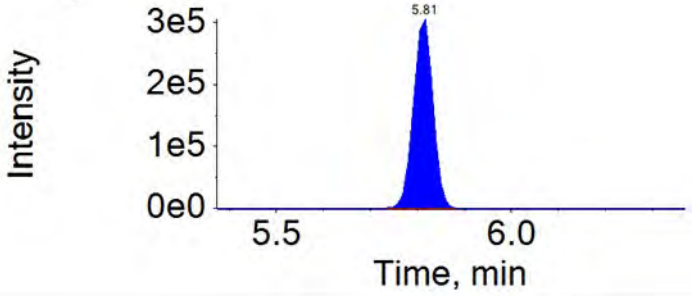
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



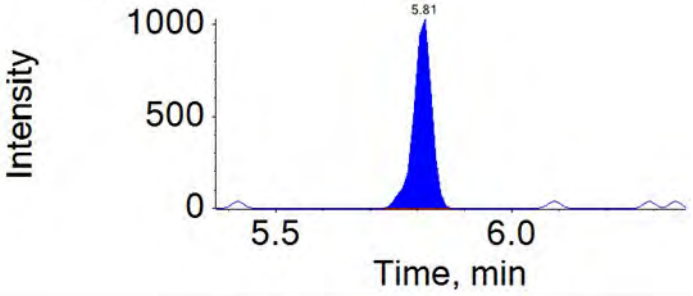
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

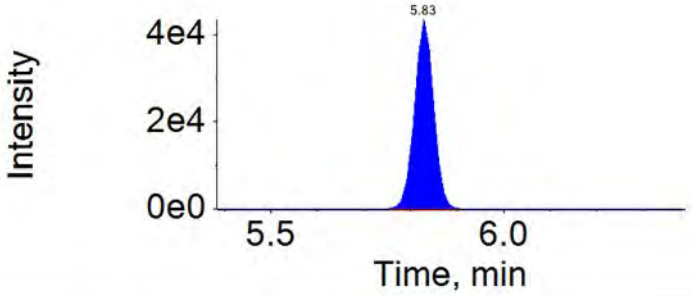
Component: PFUnDA
Primary Mass: 563.0 / 519.0



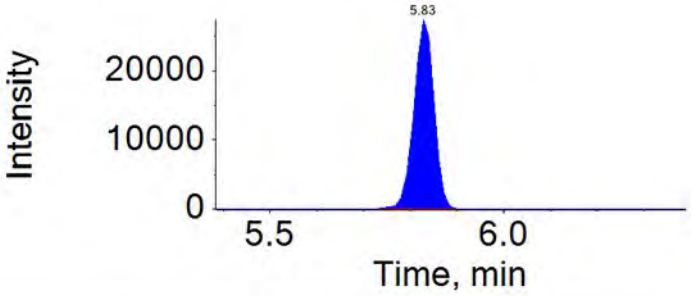
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



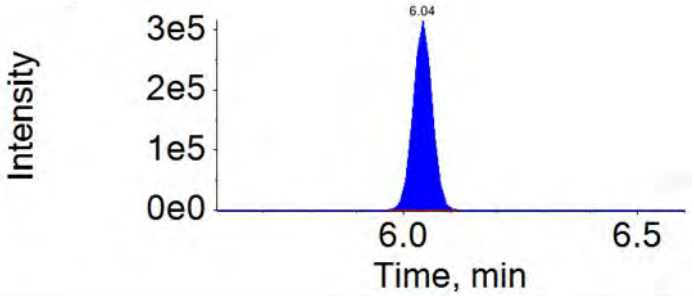
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



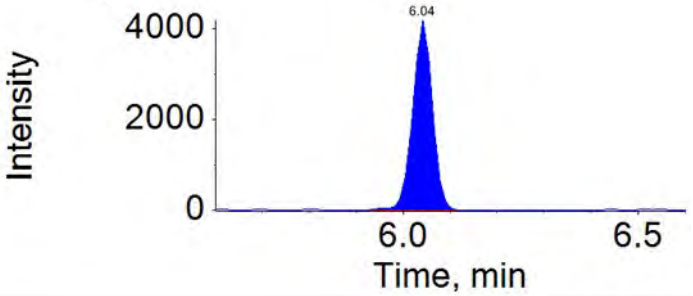
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



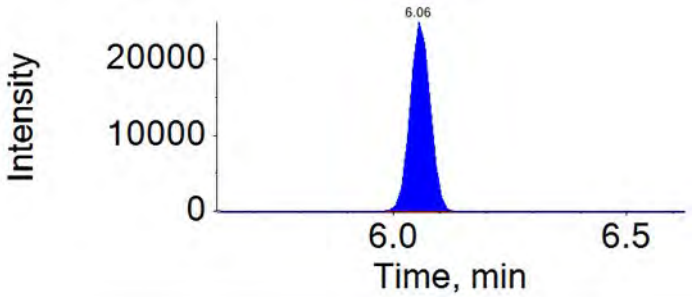
Component: PFDoDA
Primary Mass: 613.0 / 569.0



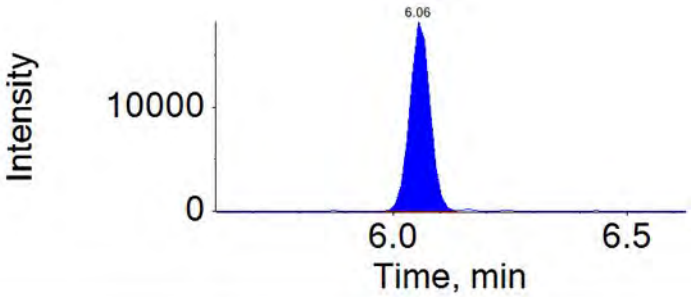
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



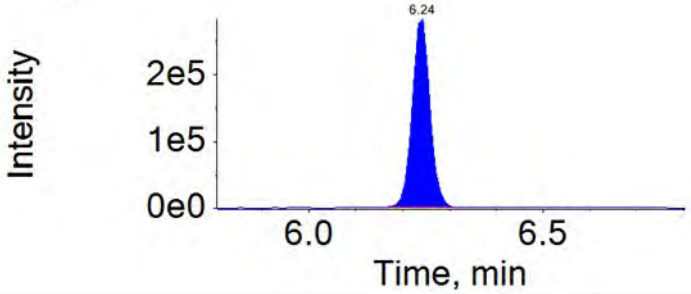
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



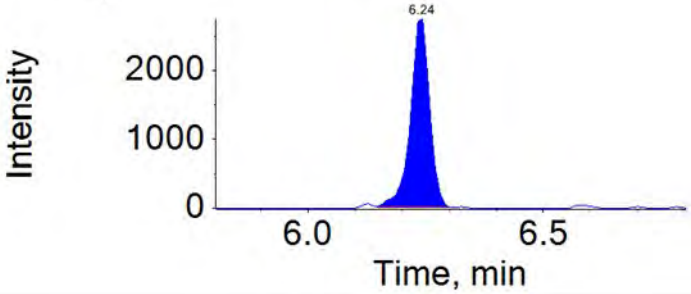
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

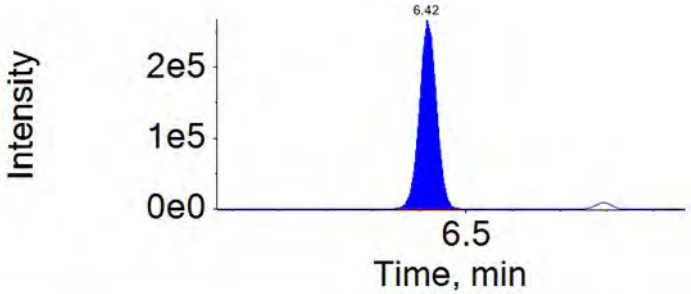
Component: PFTrDA
Primary Mass: 663.0 / 619.0



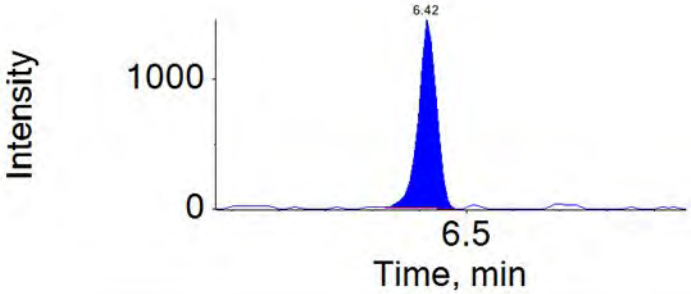
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



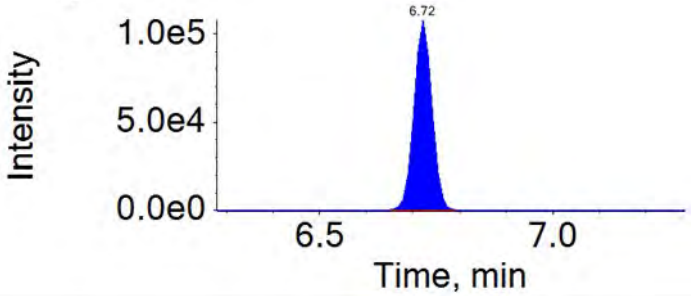
Component: PFTeDA
Primary Mass: 713.0 / 669.0



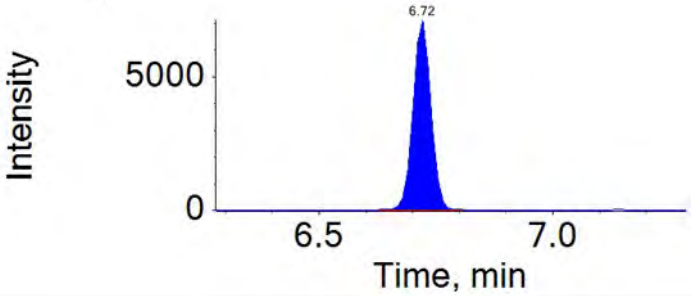
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



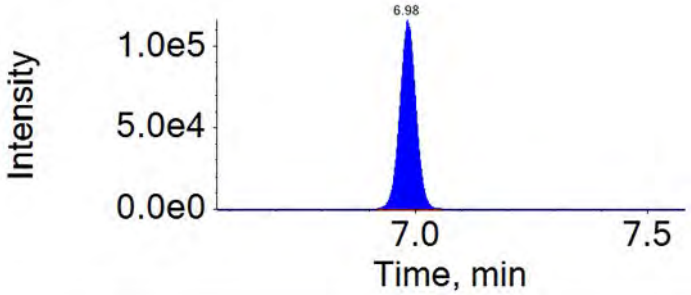
Component: PFHxDA
Primary Mass: 813.0 / 769.0



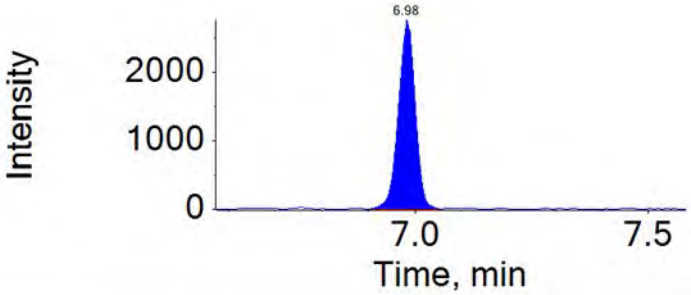
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV07D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-07T12:05:44
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	746238.1	730410.6	2	50	
13C2-PFOA	5.0	543666.1	524423.6	4	50	
13C4-PFOS	4.8	282394.6	274061.7	3	50	
13C2-PFDA	5.0	338571.3	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	824364.1	13C3-PFBA	746238.1	1.105	5.000	5.112	102	70-130	
E13C5-PFPeA	839122.9	13C3-PFBA	746238.1	1.124	5.000	4.899	98	70-130	
E13C3-PFBS	464310.5	13C3-PFBA	746238.1	0.622	4.650	4.566	98	70-130	
E13C2-4:2-FTS	63811.1	13C2-PFOA	543666.1	0.117	4.670	5.296	113	70-130	
E13C5-PFHxA	730598.3	13C2-PFOA	543666.1	1.344	5.000	4.943	99	70-130	
E13C3-PFHxS	366105.3	13C2-PFOA	543666.1	0.673	4.730	4.834	102	70-130	
E13C4-PFHpA	597749.6	13C2-PFOA	543666.1	1.099	5.000	5.002	100	70-130	
E13C2-6:2-FTS	48976.3	13C2-PFOA	543666.1	0.090	4.750	6.007	126	70-130	
E13C8-PFOA	1026003.0	13C2-PFOA	543666.1	1.887	5.000	5.263	105	70-130	
E13C8-PFOS	306326.4	13C4-PFOS	282394.6	1.085	4.780	4.797	100	70-130	
E13C9-PFNA	571605.8	13C4-PFOS	282394.6	2.024	5.000	5.529	111	70-130	
E13C6-PFDA	698490.6	13C2-PFDA	338571.3	2.063	5.000	5.188	104	70-130	
E13C2-8:2-FTS	33421.3	13C2-PFDA	338571.3	0.099	4.790	5.223	109	70-130	
E13C8-PFOSA	735116.3	13C2-PFDA	338571.3	2.171	5.000	4.738	95	70-130	
Ed3-NMeFOSAA	88965.9	13C2-PFDA	338571.3	0.263	5.000	4.886	98	70-130	
E13C7-PFUnDA	283954.2	13C2-PFDA	338571.3	0.839	5.000	4.838	97	70-130	
Ed5-NEtFOSAA	75152.6	13C2-PFDA	338571.3	0.222	5.000	5.137	103	70-130	
E13C2-PFDoDA	650229.2	13C2-PFDA	338571.3	1.921	5.000	5.177	104	70-130	
Ed7-NMePFOSAE	365056.2	13C2-PFDA	338571.3	1.078	5.000	5.014	100	70-130	
Ed3-NMePFOSA	86049.6	13C2-PFDA	338571.3	0.254	5.000	4.653	93	70-130	
Ed9-NEtPFOSAE	297852.1	13C2-PFDA	338571.3	0.880	5.000	5.024	100	70-130	
Ed5-NEtPFOSA	65421.9	13C2-PFDA	338571.3	0.193	5.000	4.474	89	70-130	
E13C2-PFTeDA	504217.0	13C2-PFDA	338571.3	1.489	5.000	5.361	107	70-130	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

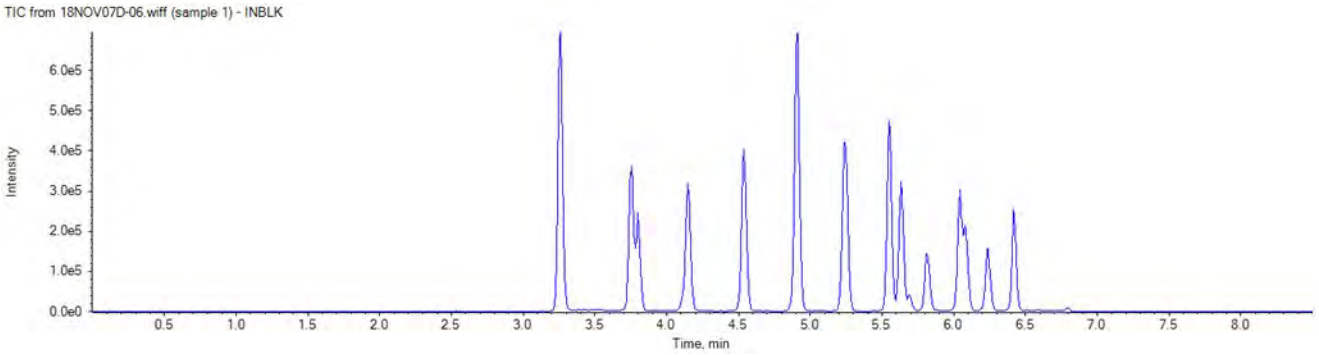
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV07D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	824364.1	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.75	839122.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	464310.5	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	63811.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	730598.3	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	464310.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	366105.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	597749.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	48976.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	366105.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	1026003.0	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	571605.8	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	698490.6	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	33421.3	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.63	735116.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	88965.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	283954.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	75152.6	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	650229.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	33421.3	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	365056.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	86049.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	297852.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	65421.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	650229.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	504217.0	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	504217.0	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	504217.0	N/A	

Total Ion Chromatogram

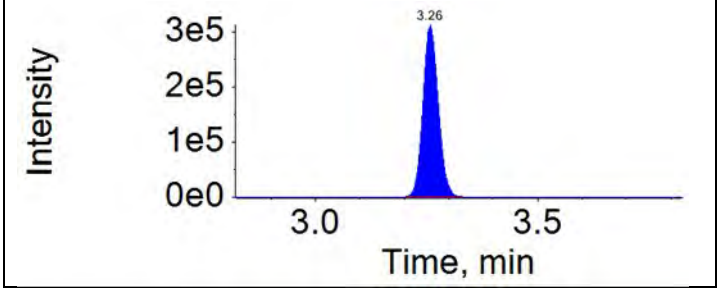


APPROVED
By MCD at 6:32 pm, 11/7/18

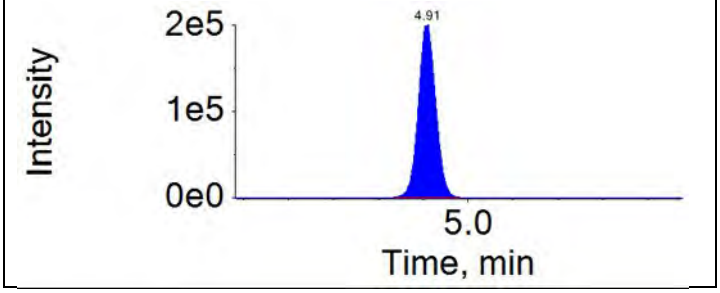
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

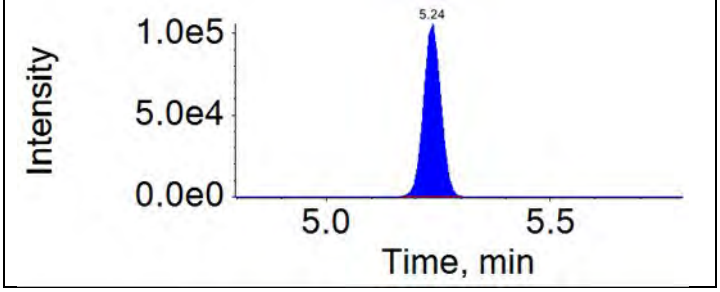
Injection Standard: 13C3-PFBA
216.0 / 172.0



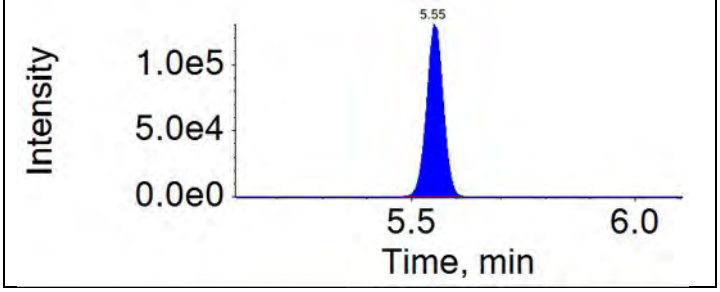
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

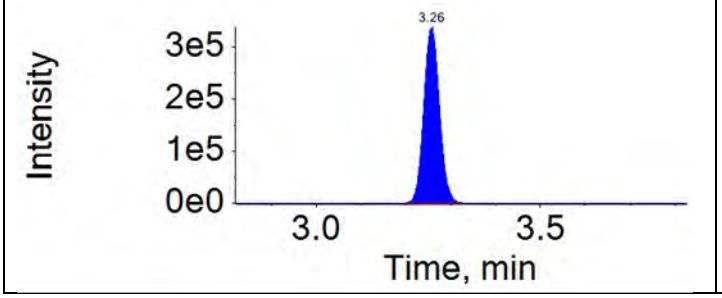


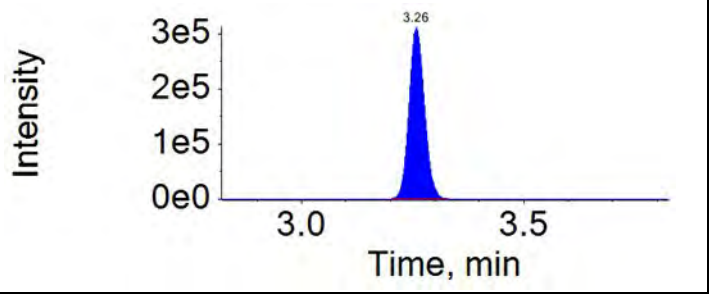
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

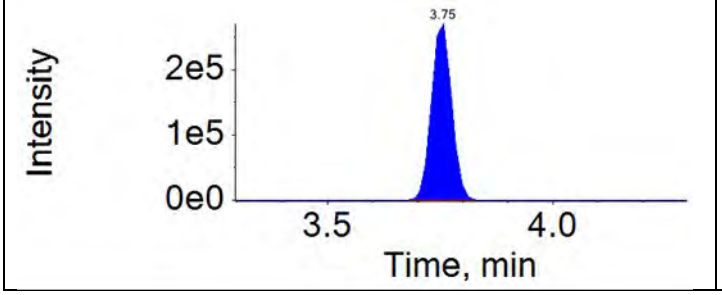
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

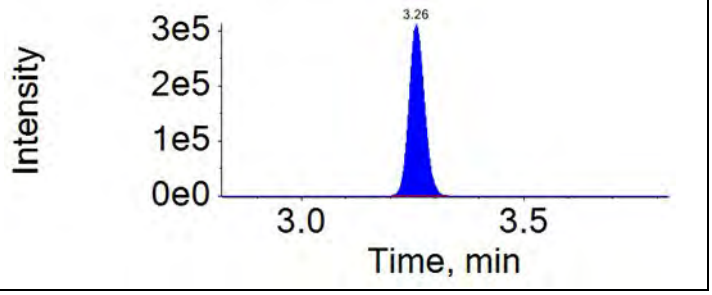
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



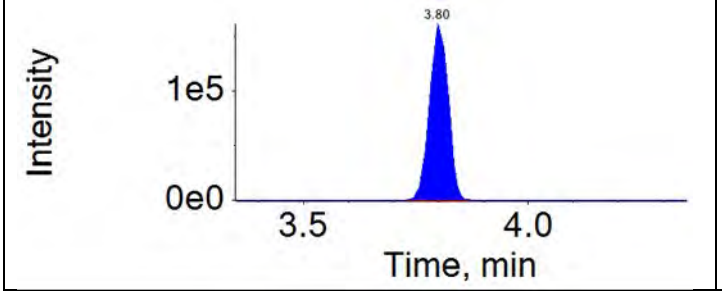


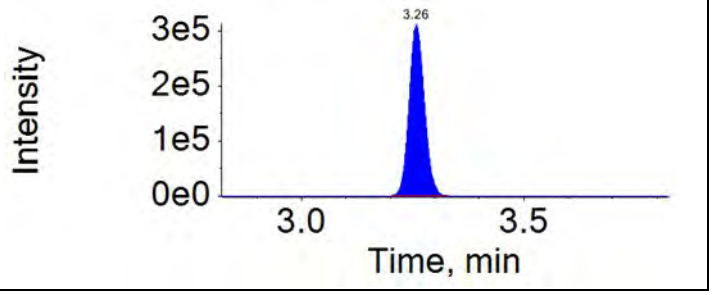
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



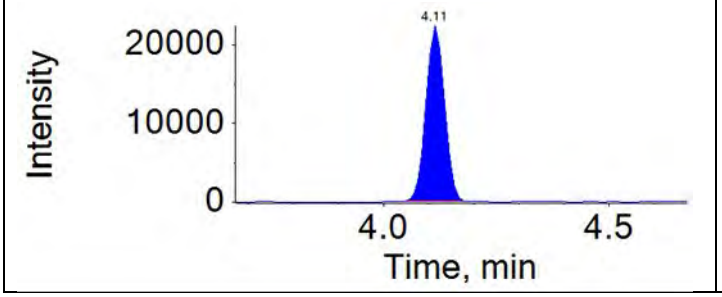


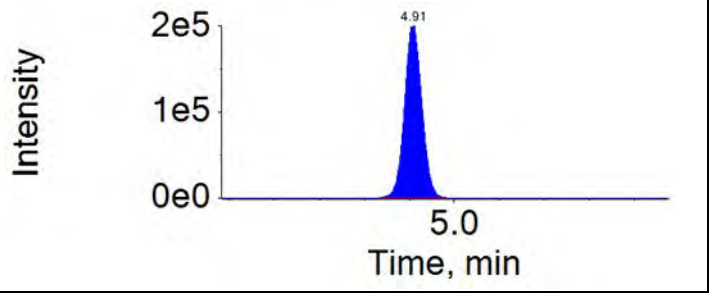
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





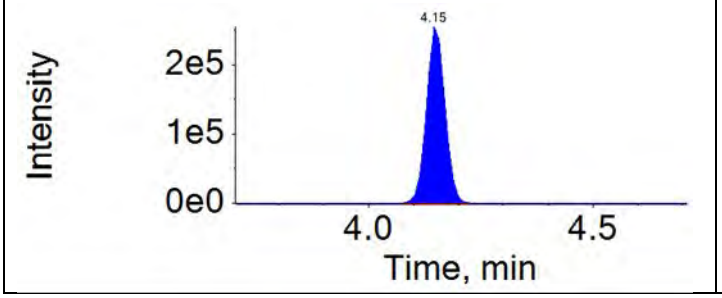
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

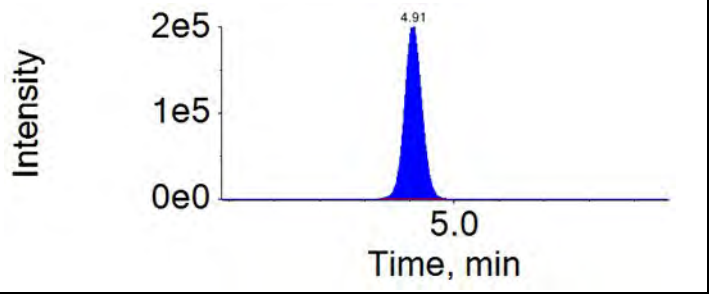




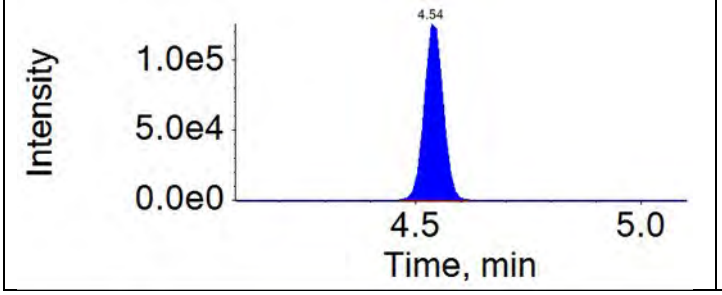
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

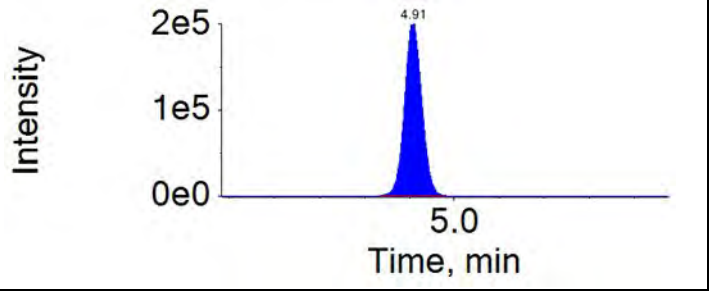
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



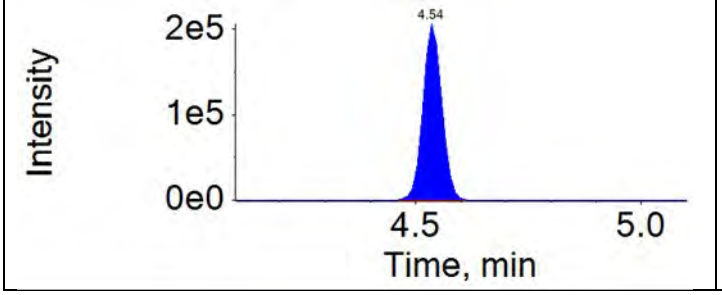


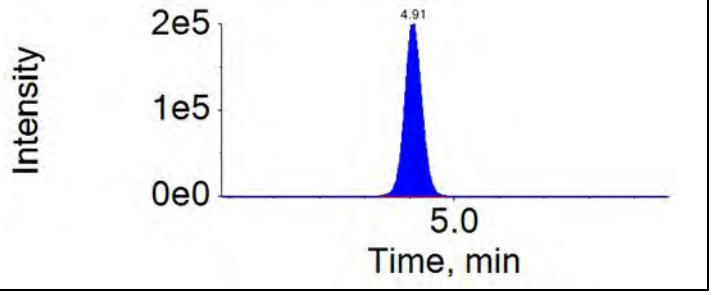
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



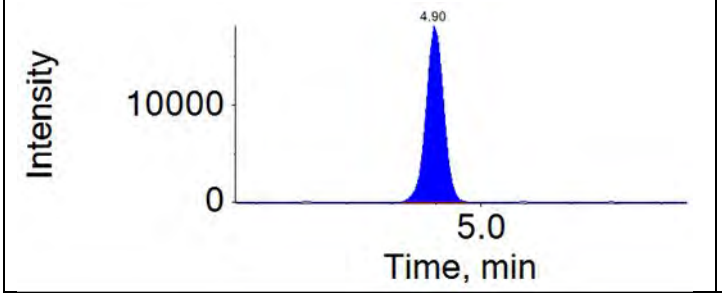


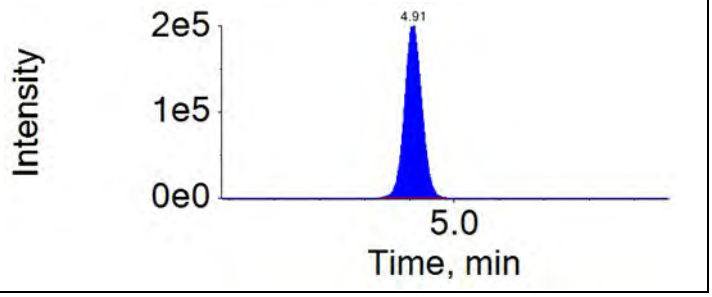
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



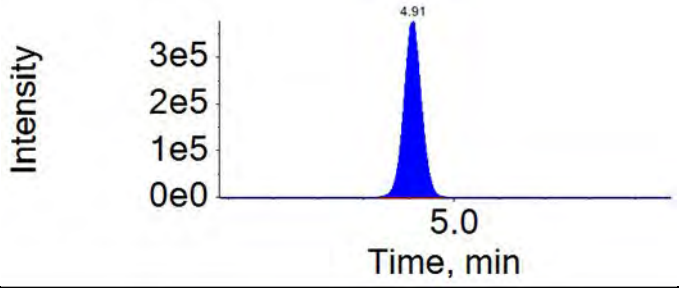


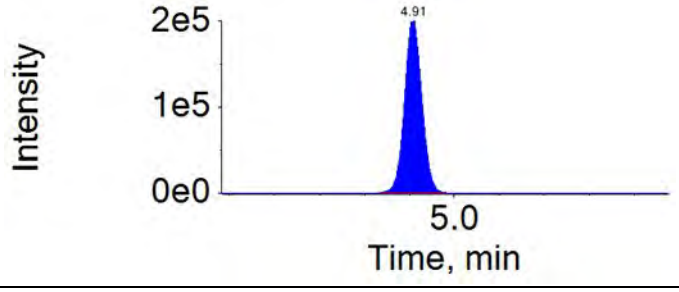
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

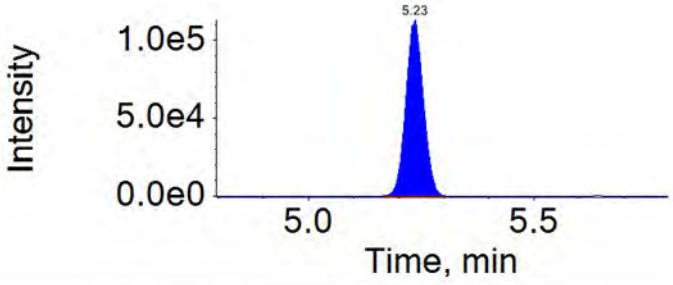
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

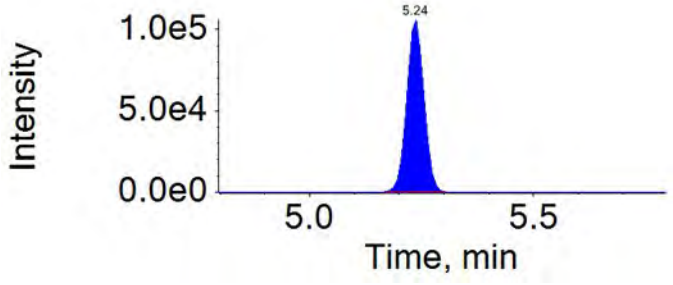
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



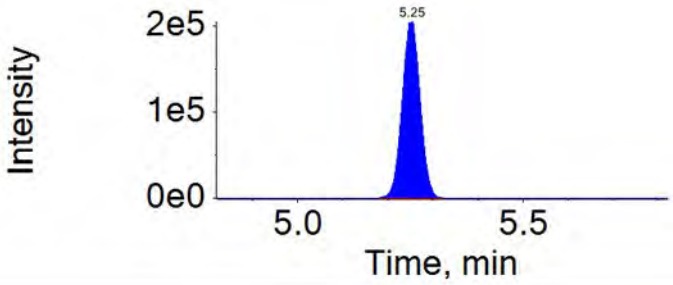


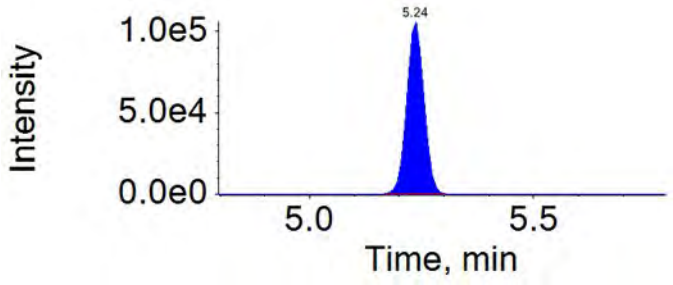
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



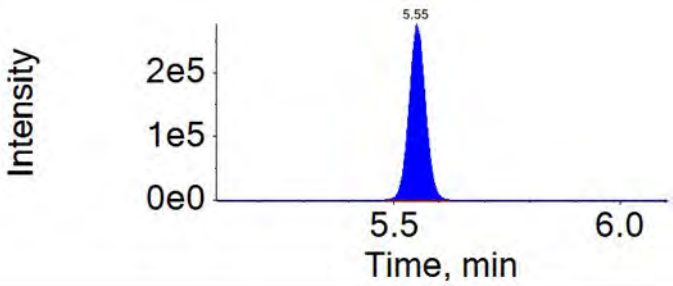


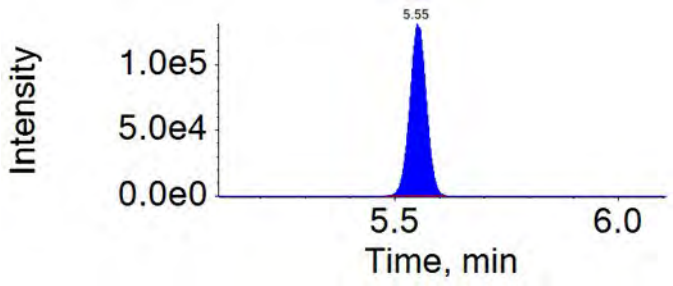
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





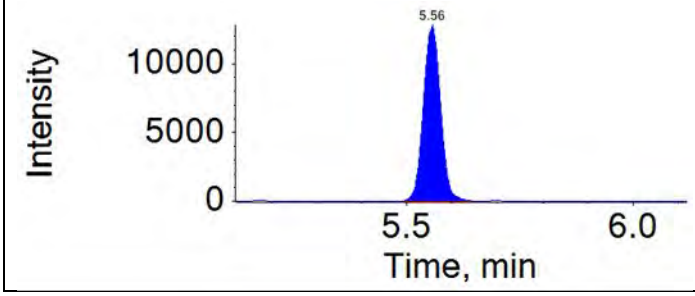
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

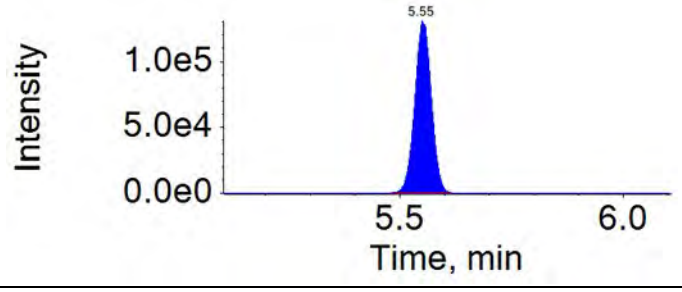




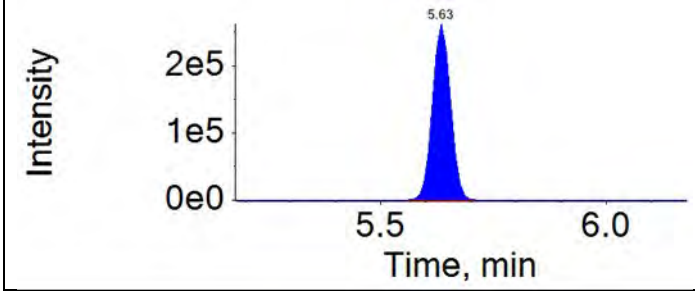
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

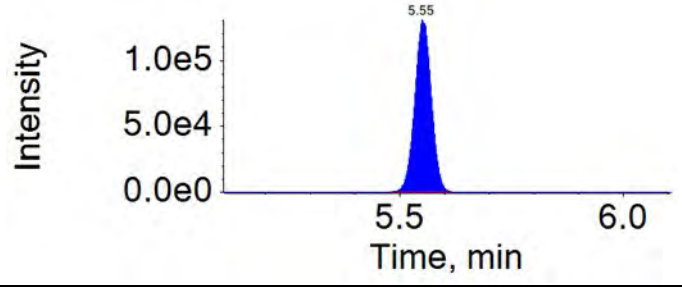
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



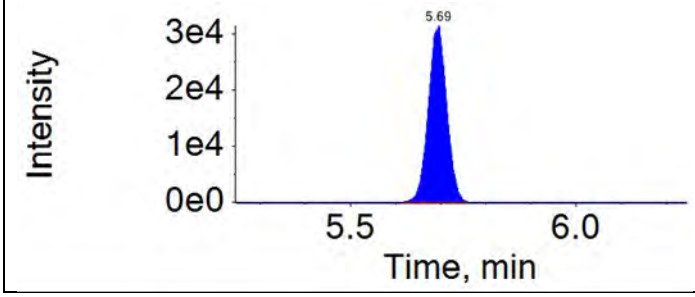


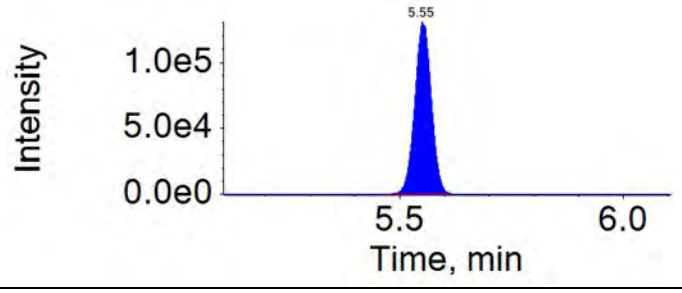
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



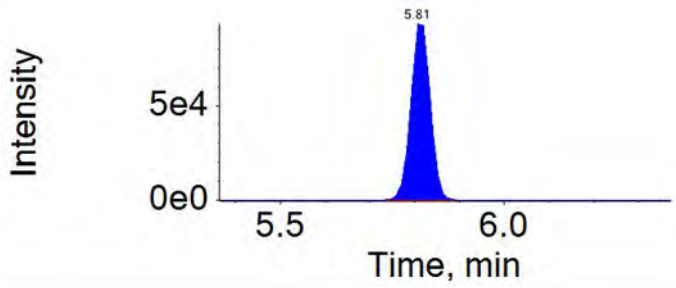


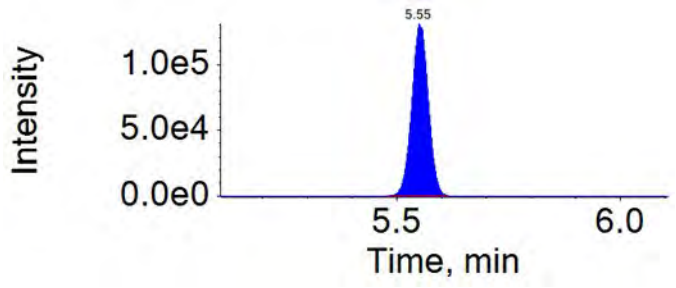
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





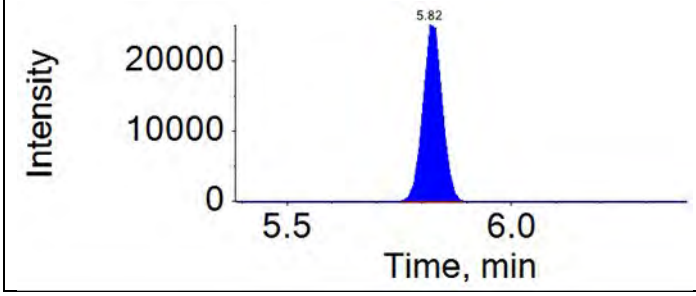
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

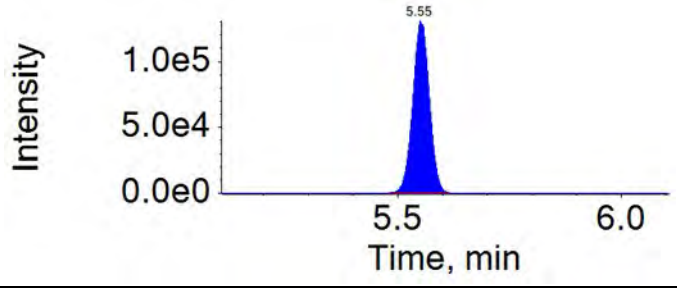




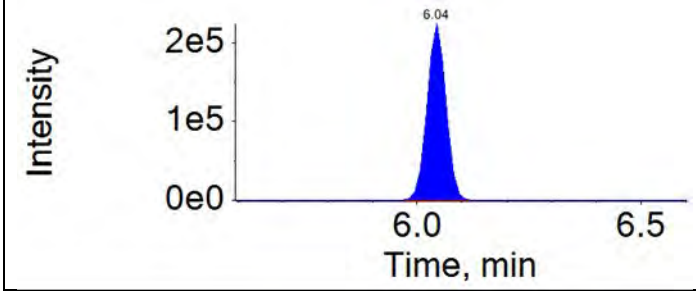
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

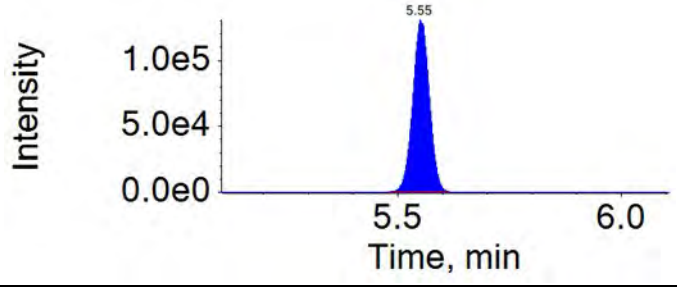
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



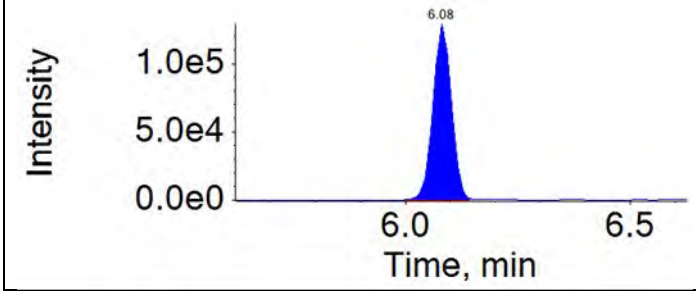


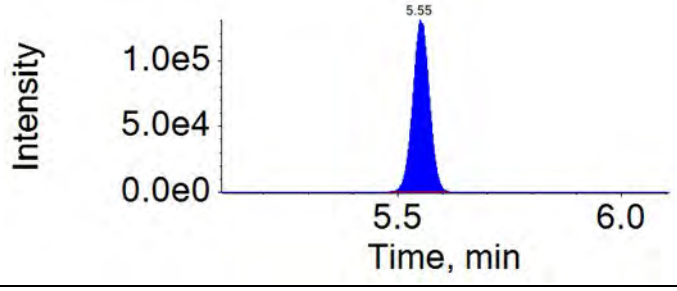
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



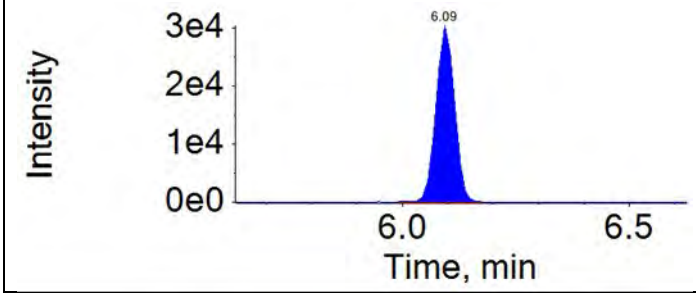


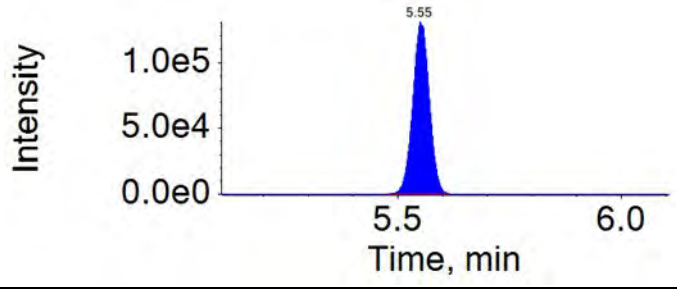
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



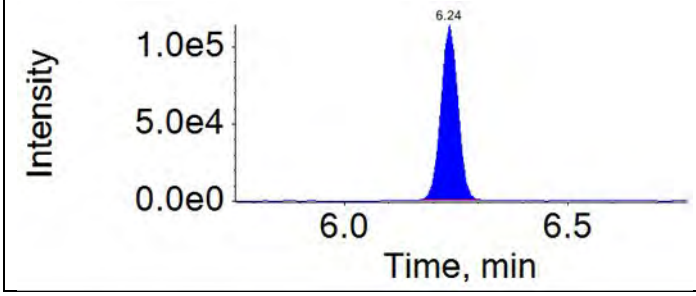


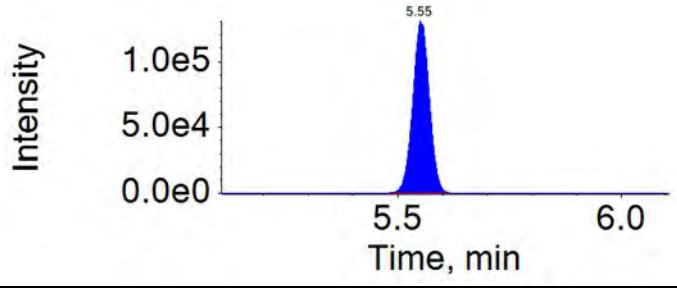
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

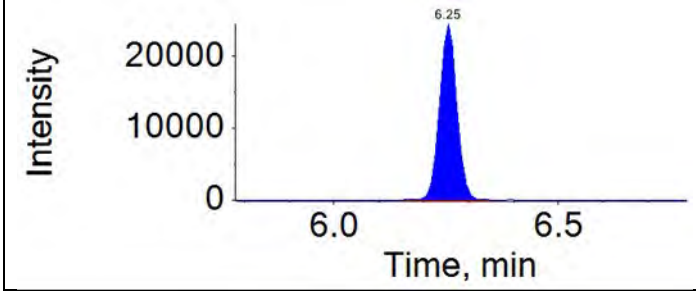
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

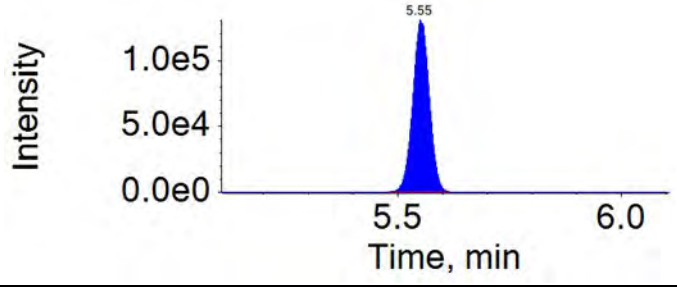
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



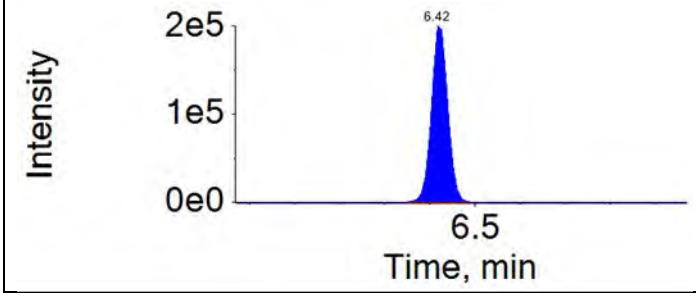


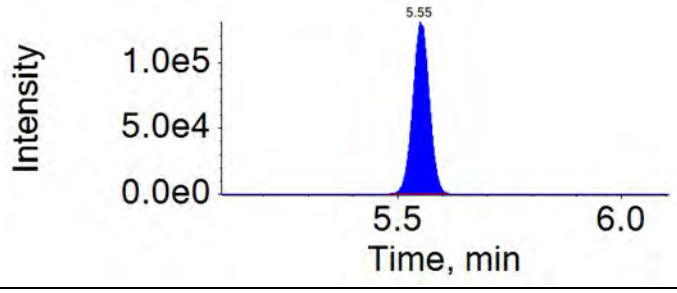
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



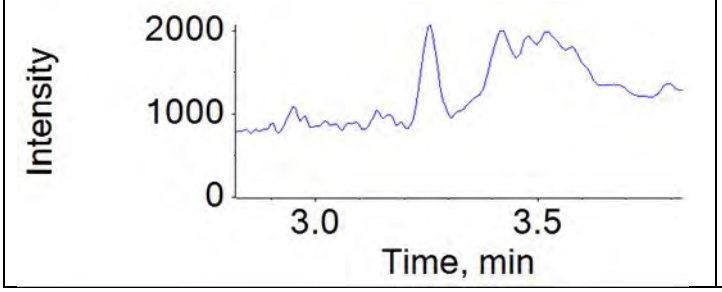


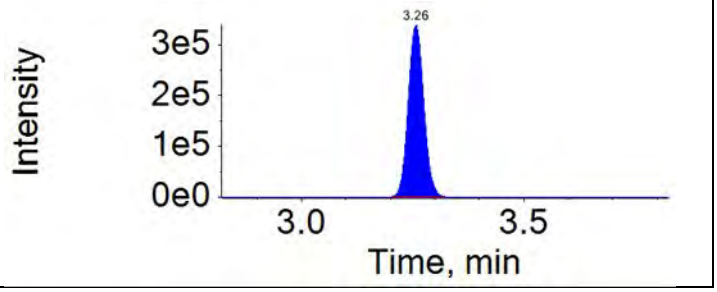
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

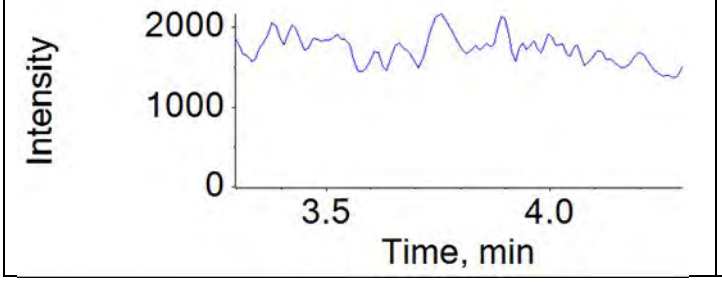
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

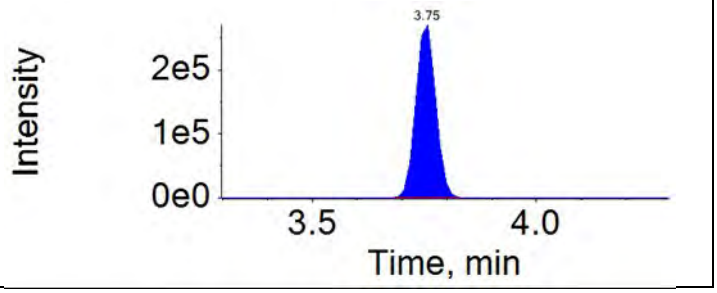
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



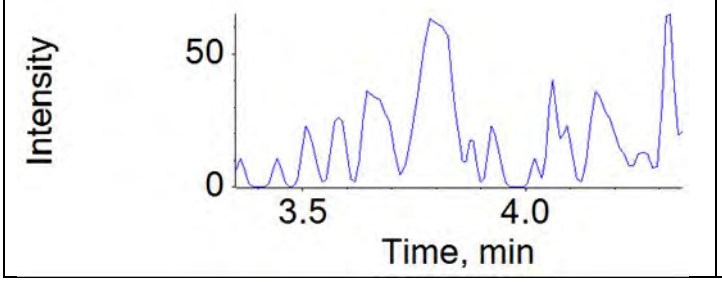


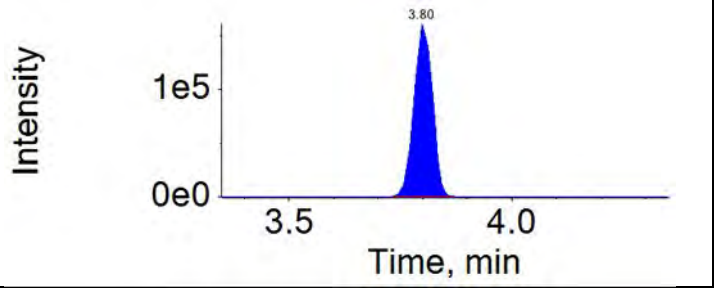
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



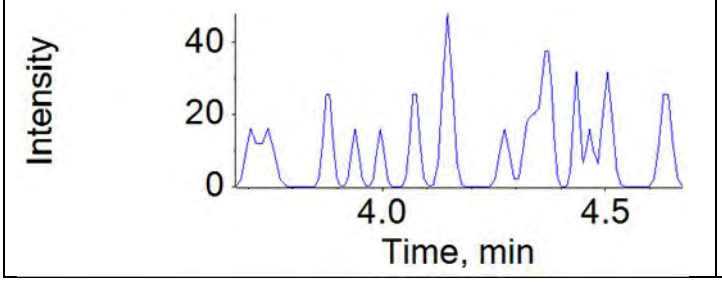


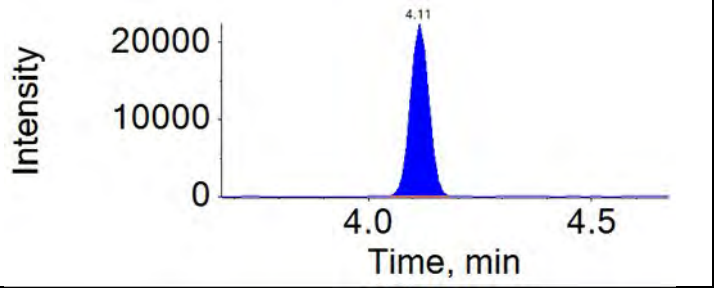
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



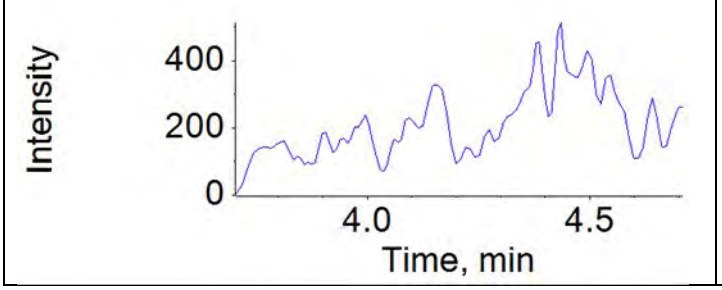


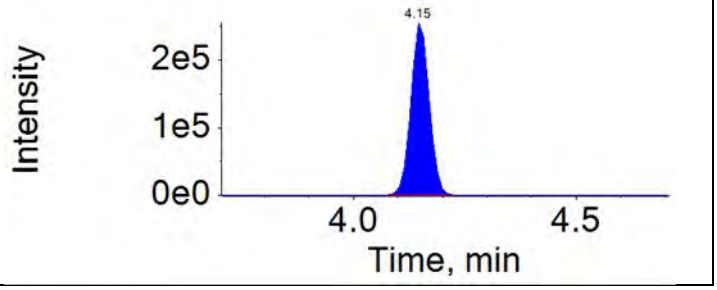
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

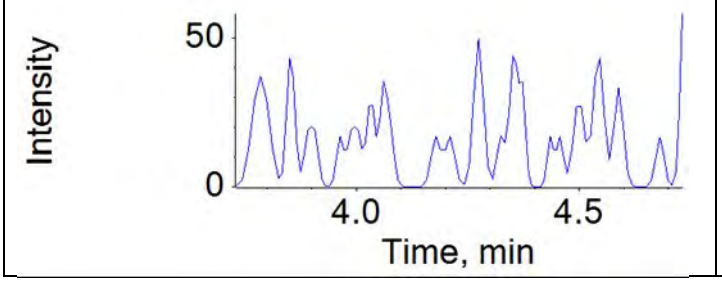
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

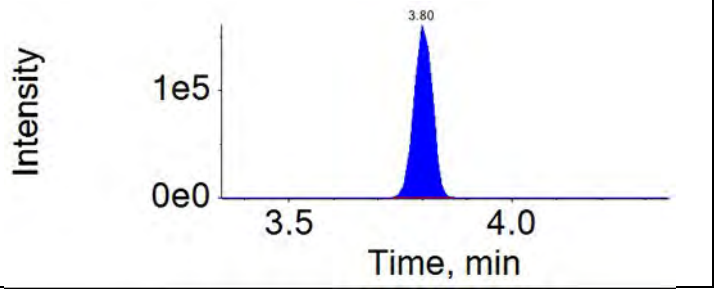
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



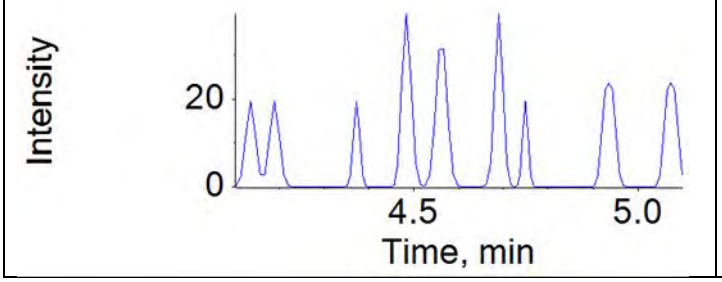


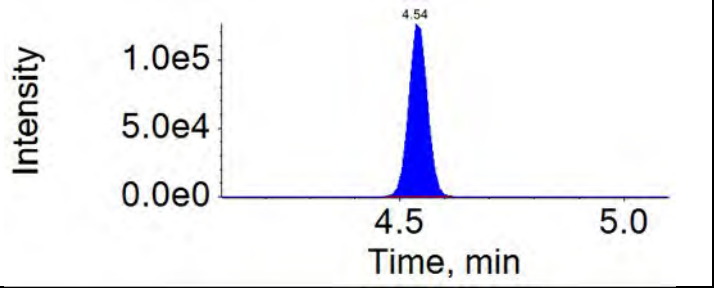
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



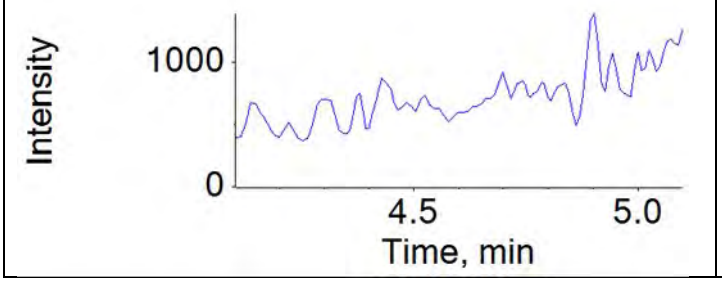


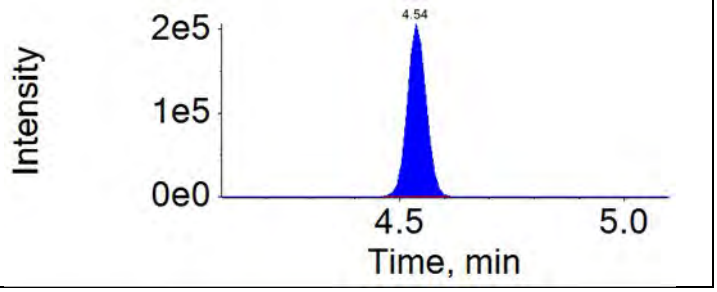
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



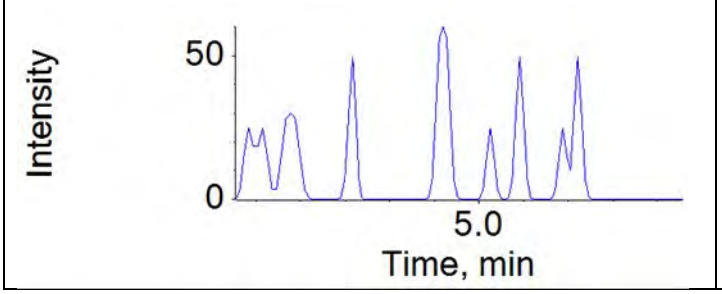


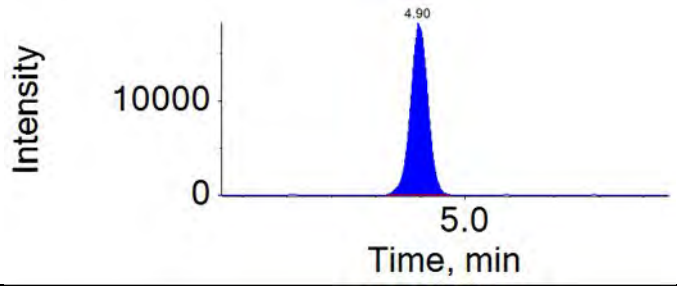
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

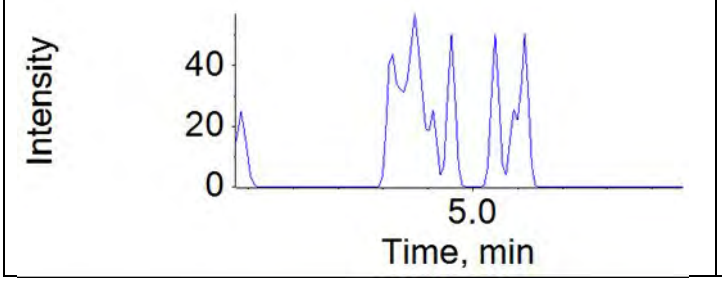
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

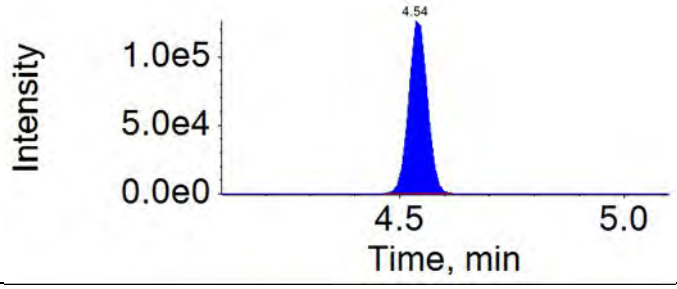
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



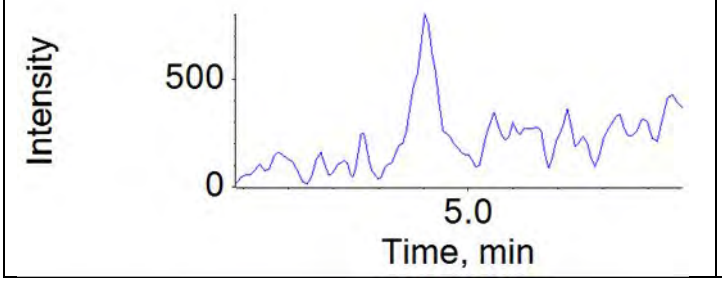


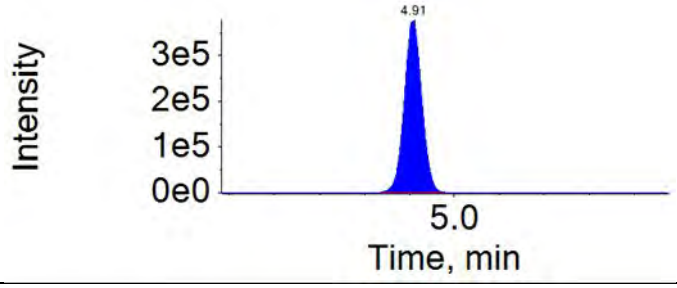
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



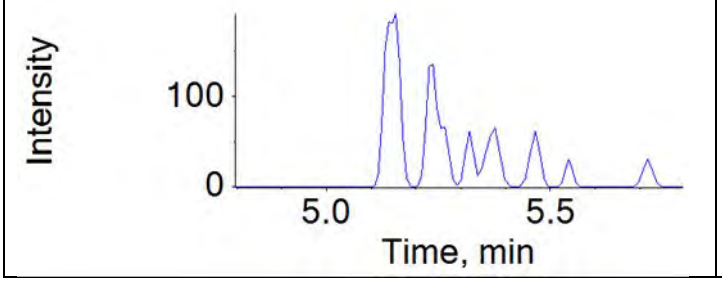


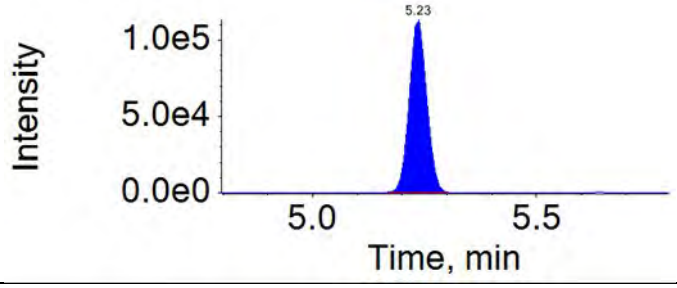
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



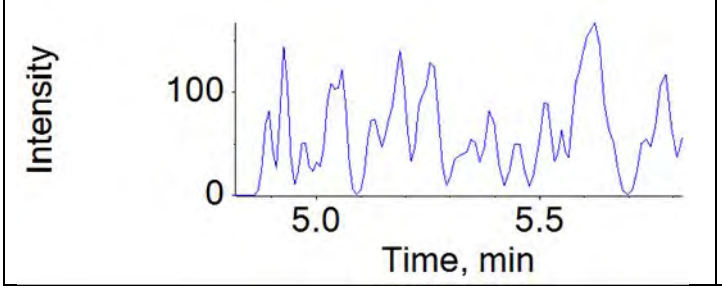


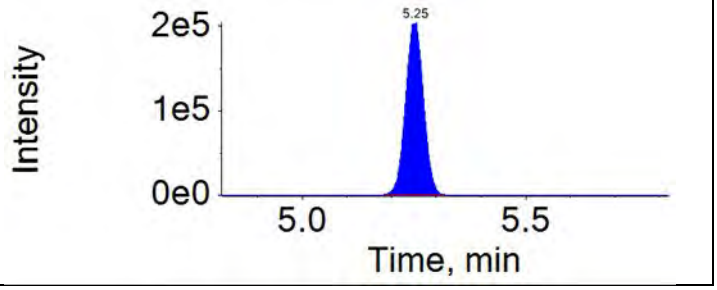
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

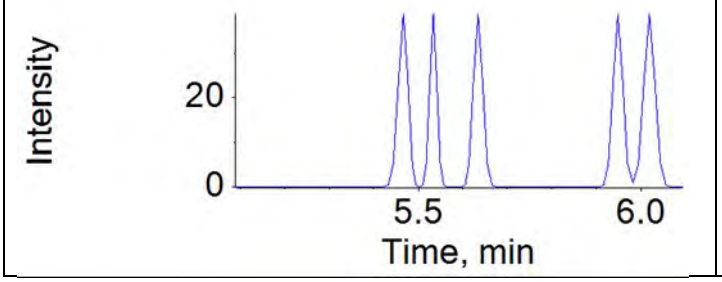
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

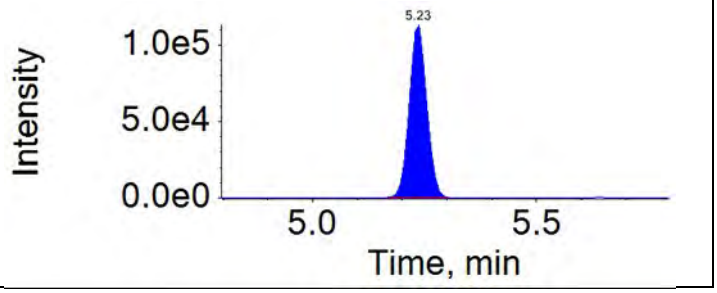
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



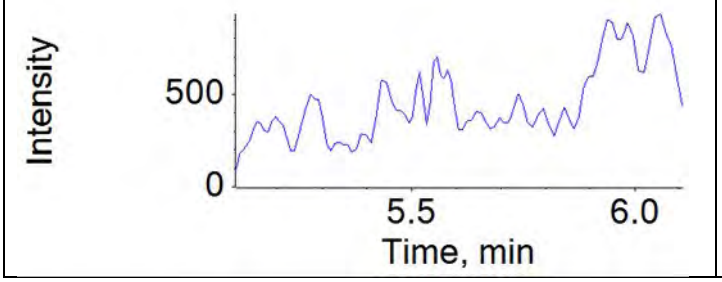


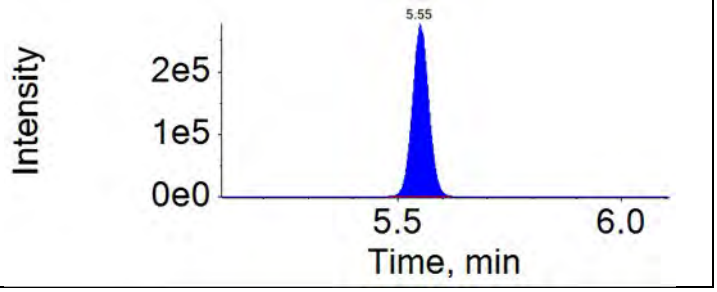
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



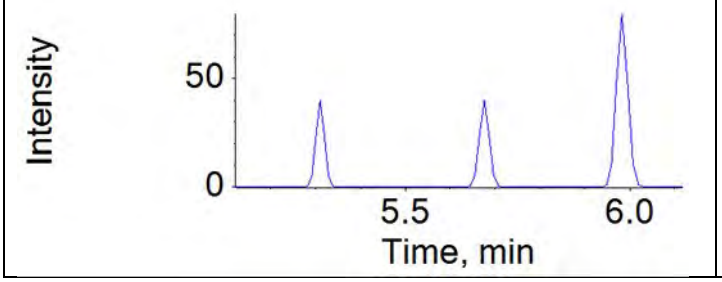


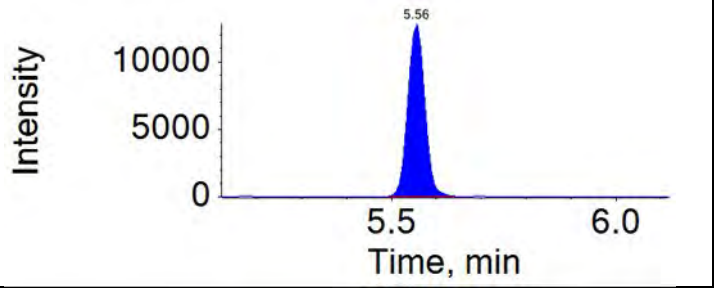
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



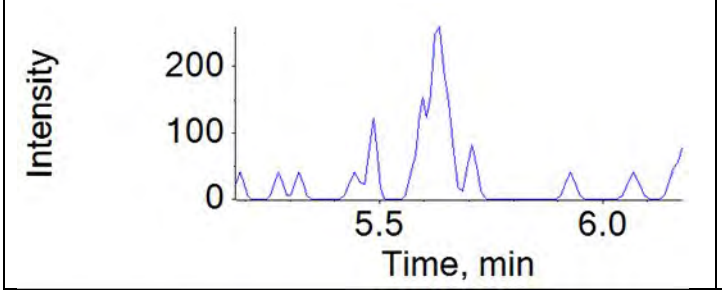


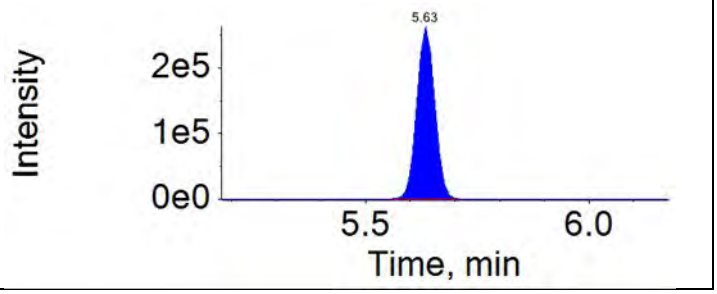
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

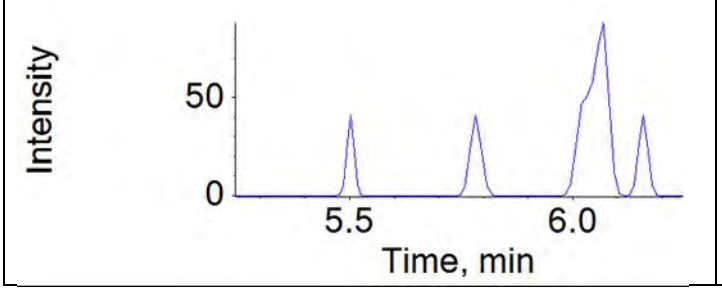
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

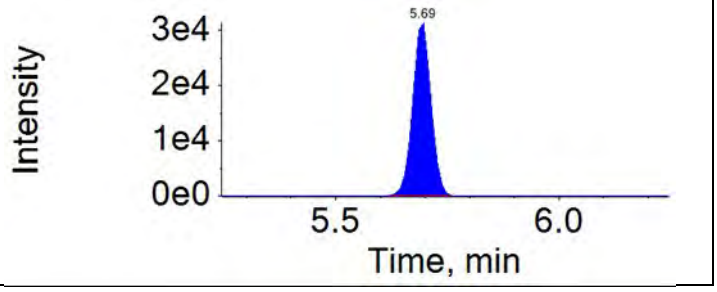
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



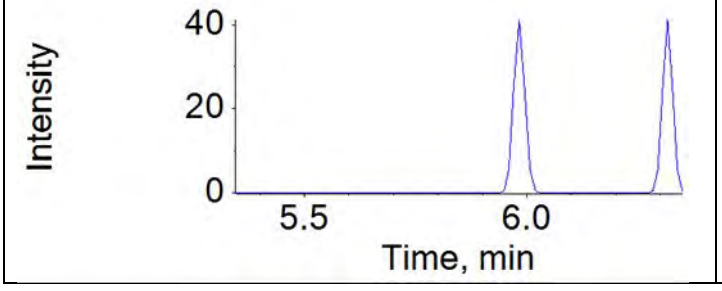


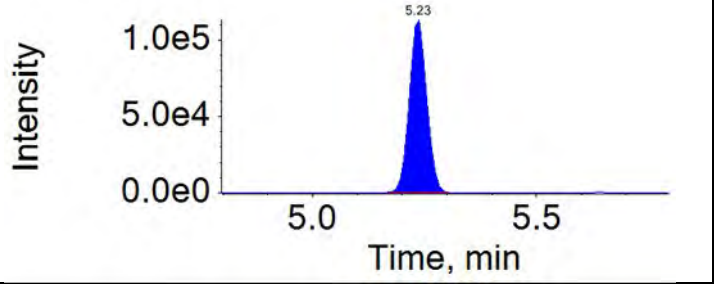
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



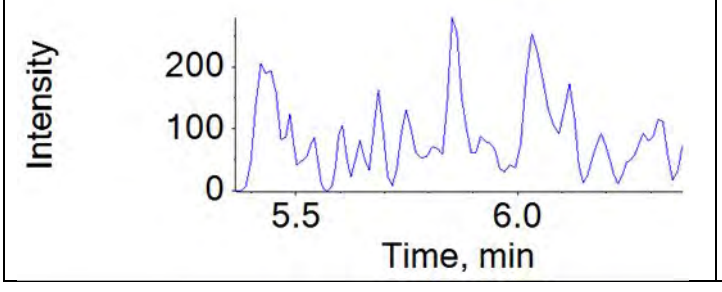


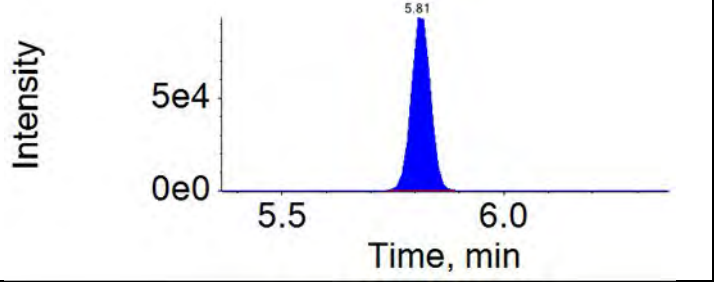
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



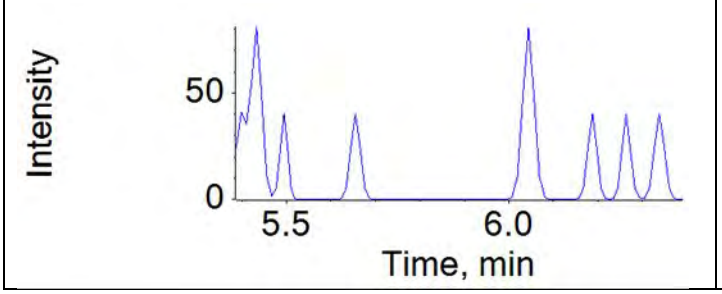


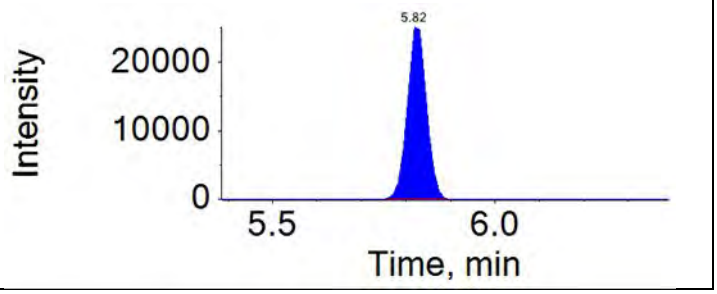
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

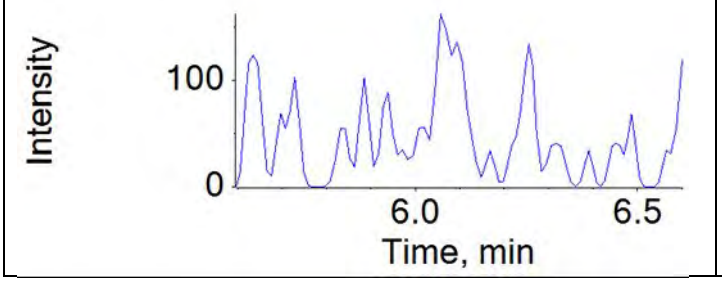
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

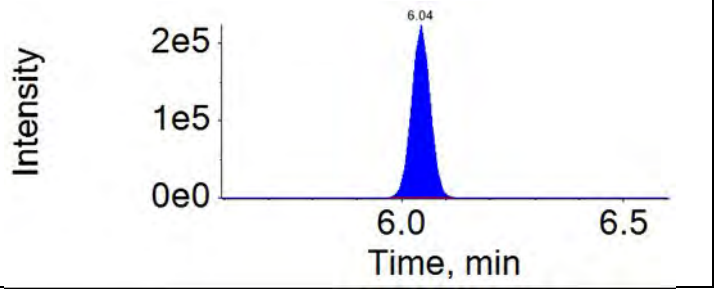
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



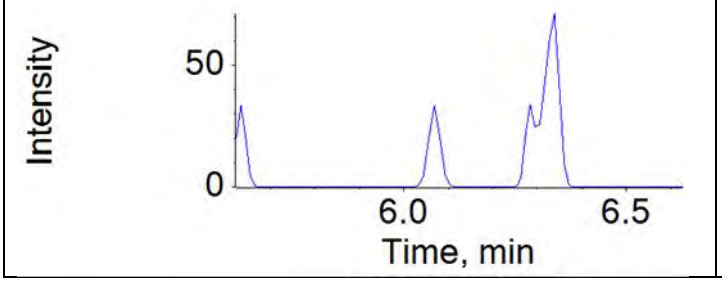


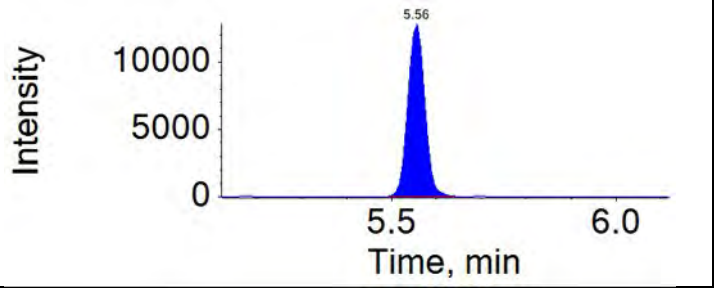
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



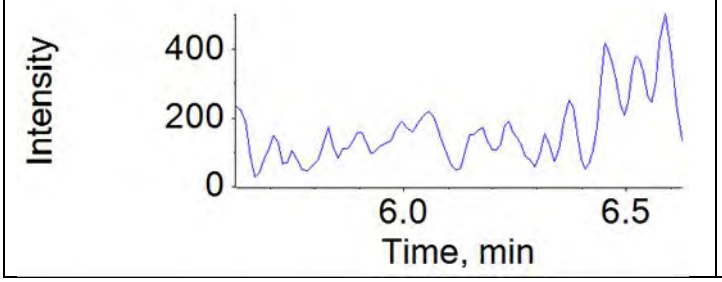


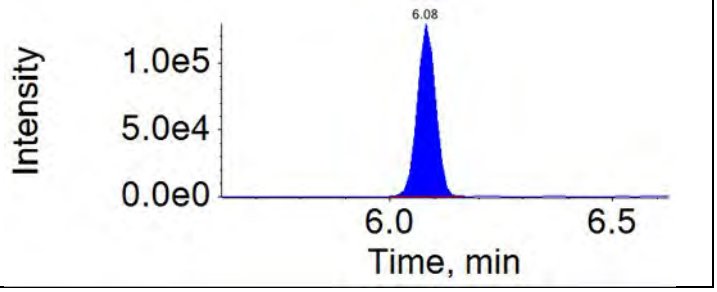
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



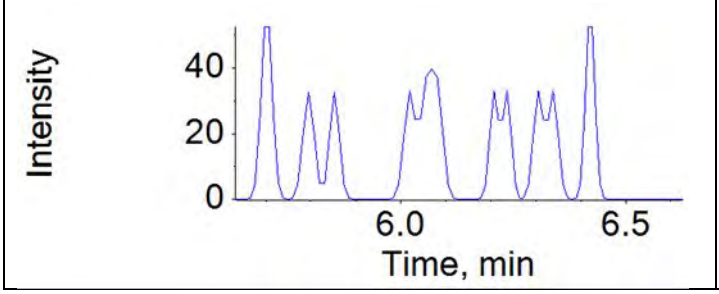


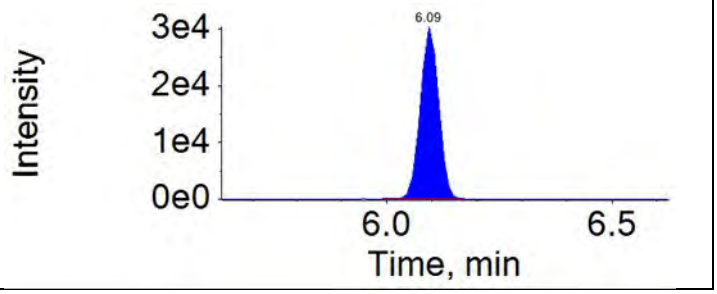
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

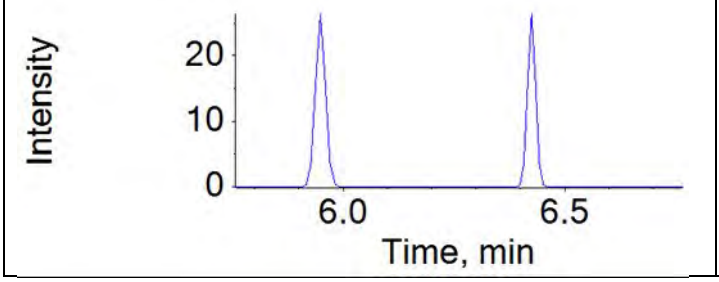
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

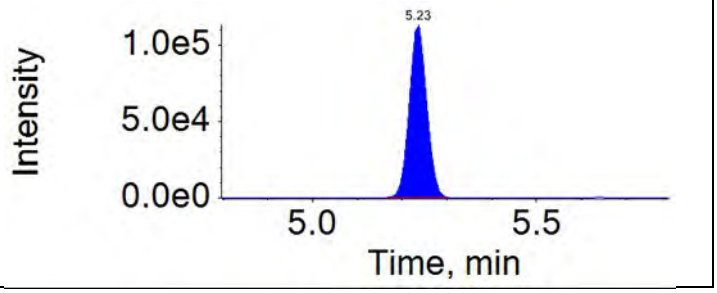
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



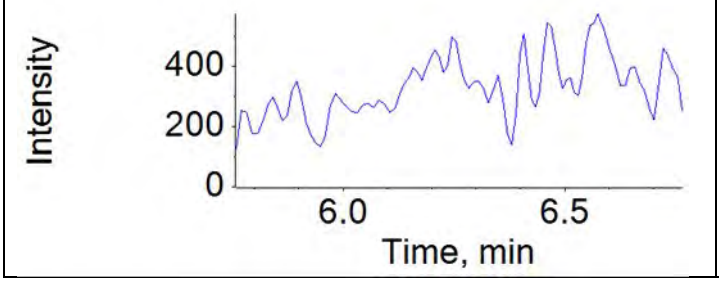


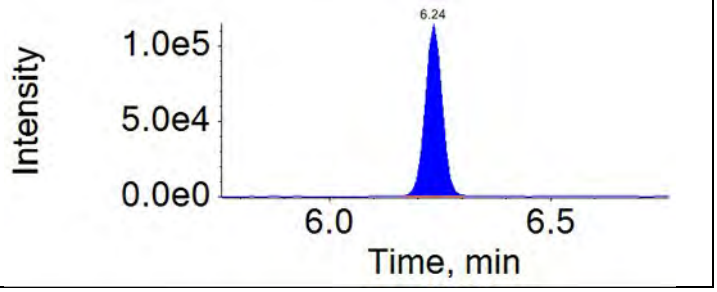
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



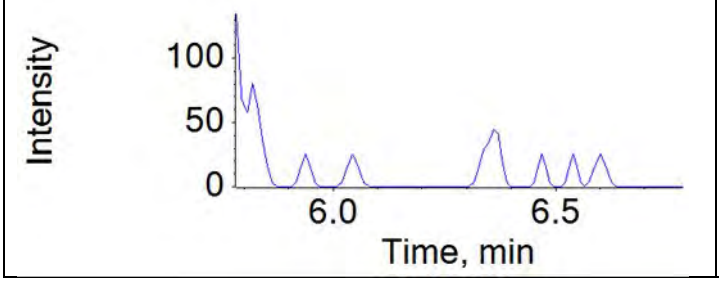


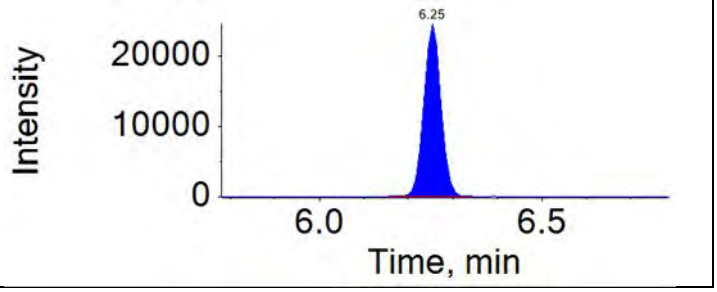
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



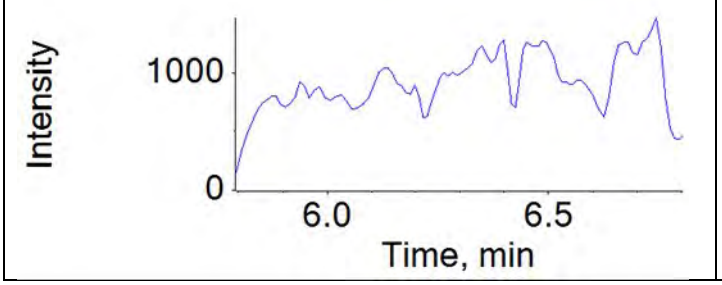


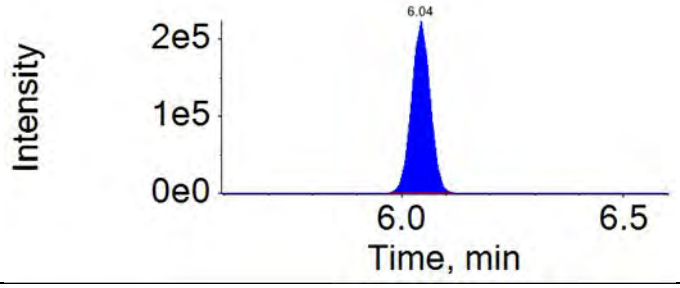
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

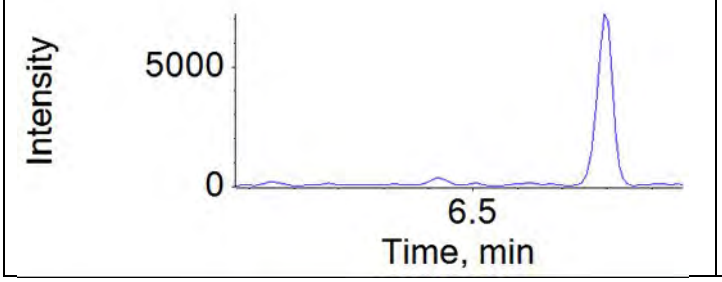
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

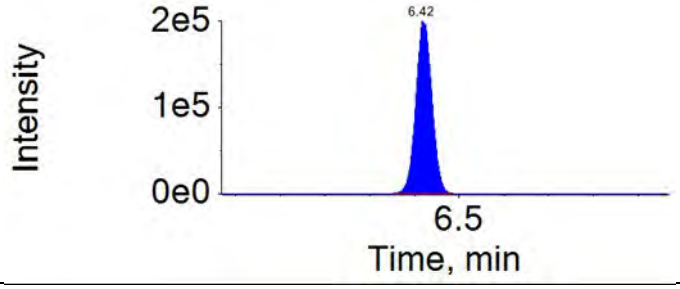
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



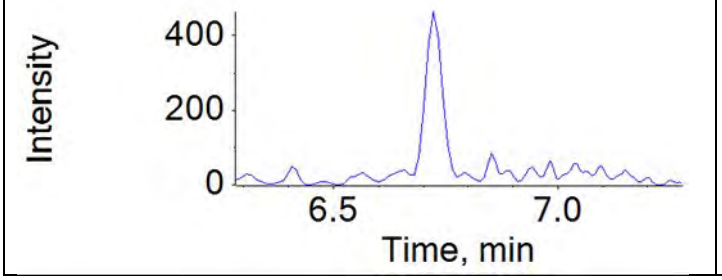


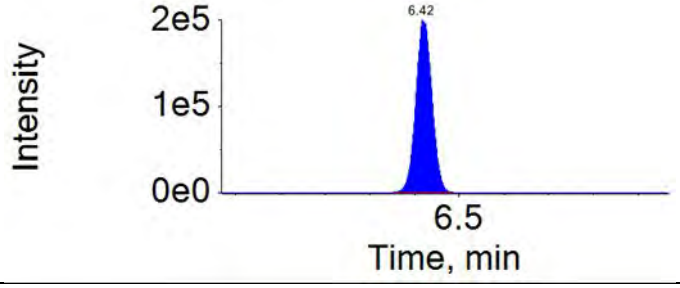
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



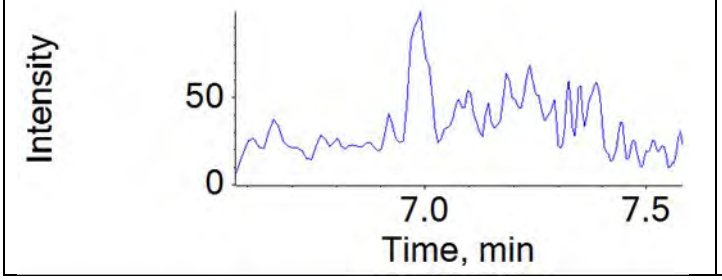


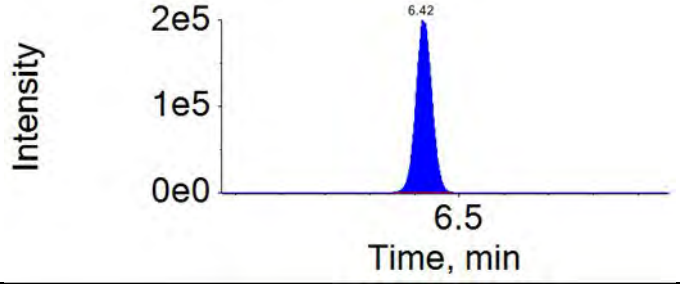
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Ion Ratio Report

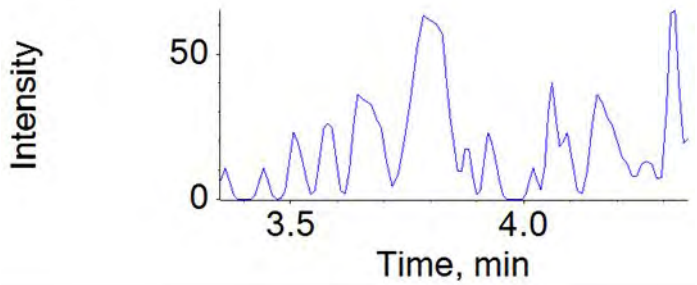
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV07D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

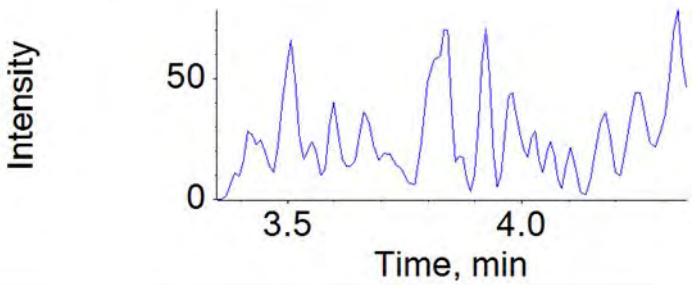
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

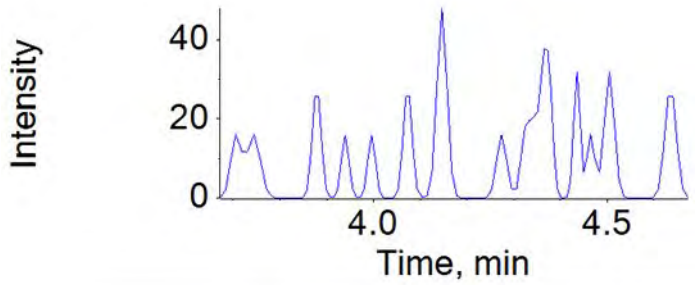
Component: PFBS
Primary Mass: 299.0 / 80.0



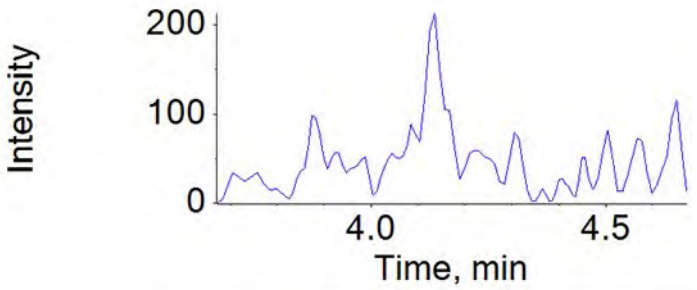
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



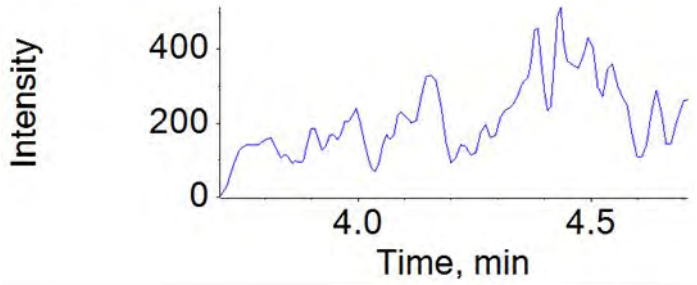
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



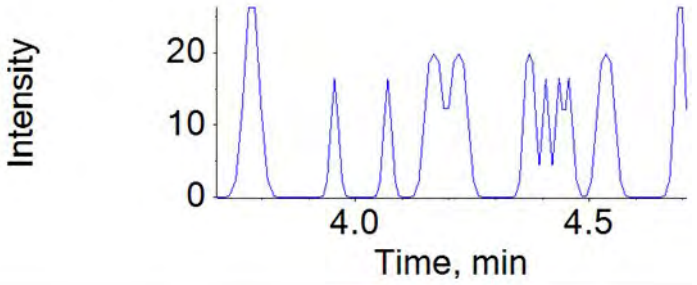
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



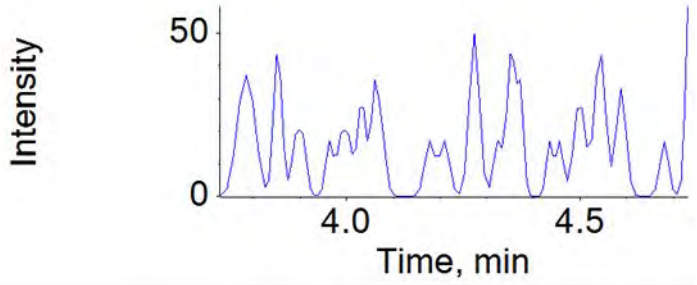
Component: PFHxA
Primary Mass: 313.0 / 269.0



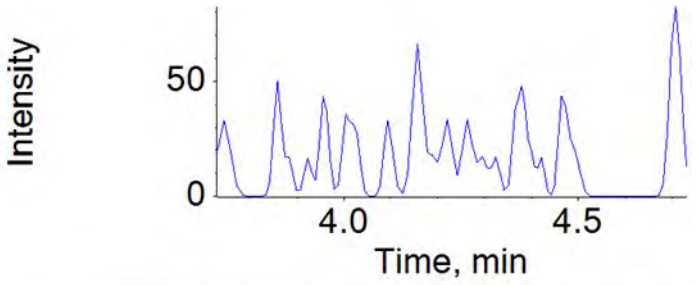
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



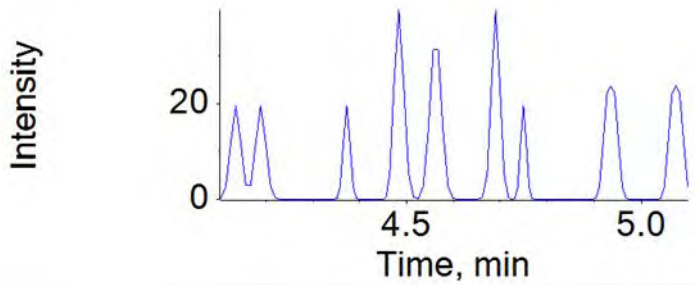
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



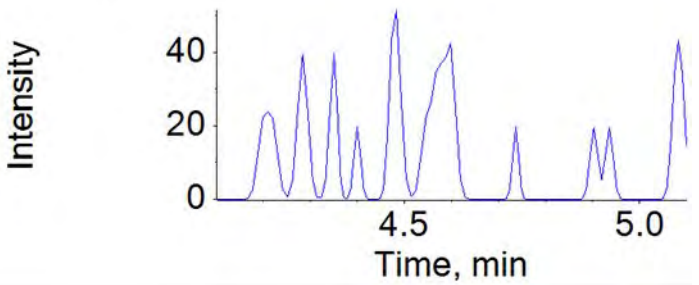
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

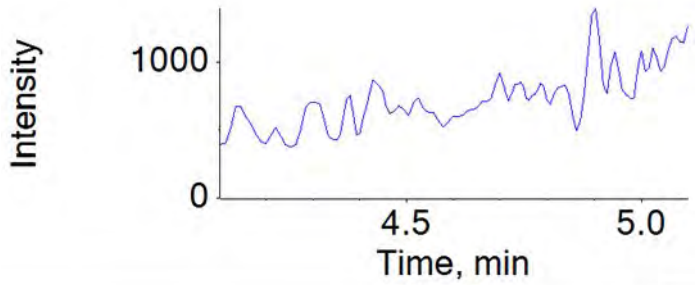
Component: PFHxS
Primary Mass: 399.0 / 80.0



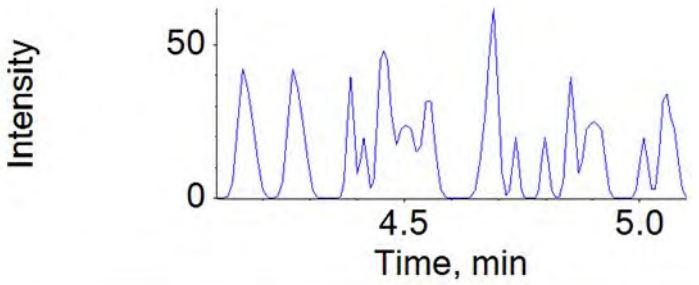
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



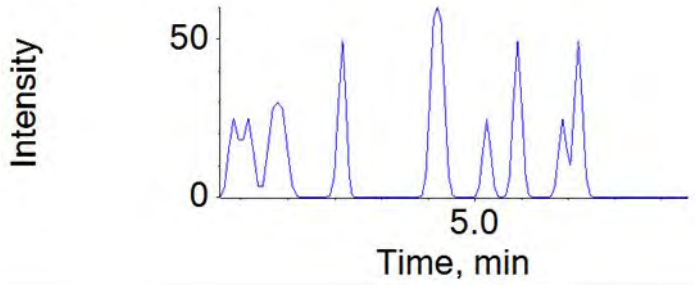
Component: PFHpA
Primary Mass: 363.0 / 319.0



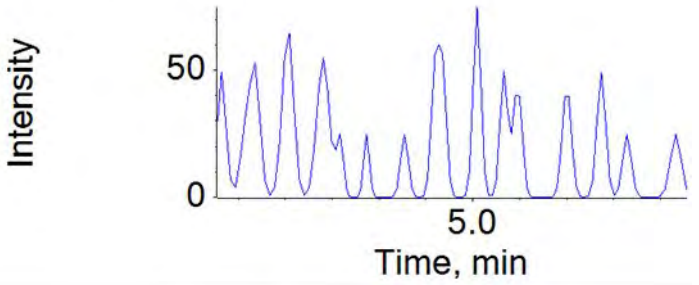
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



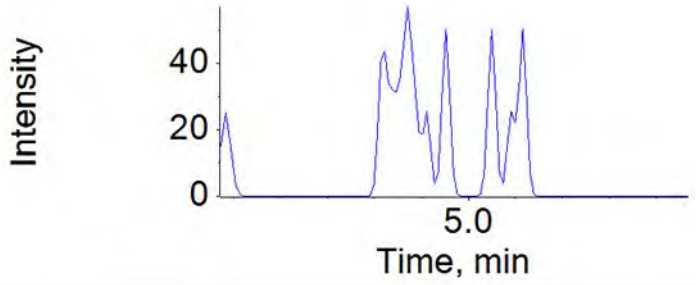
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



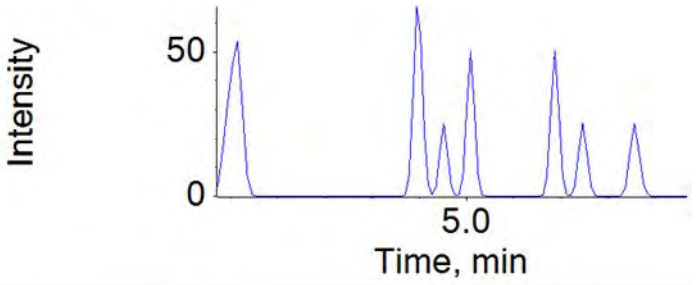
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



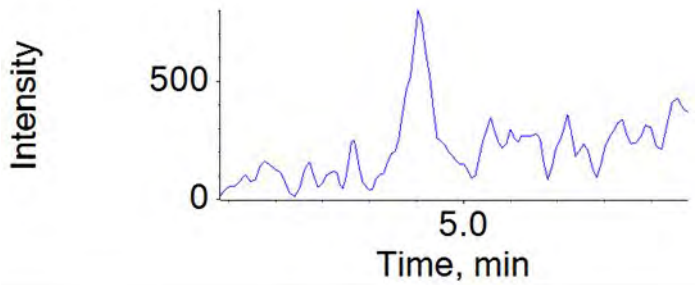
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



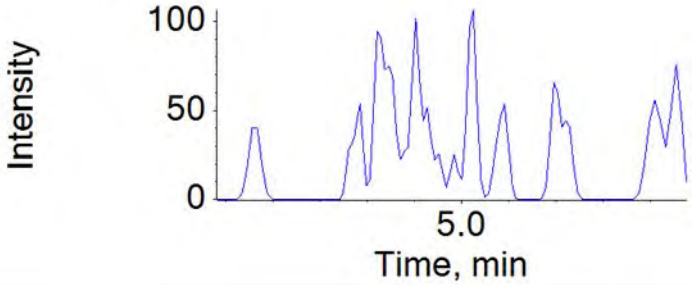
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

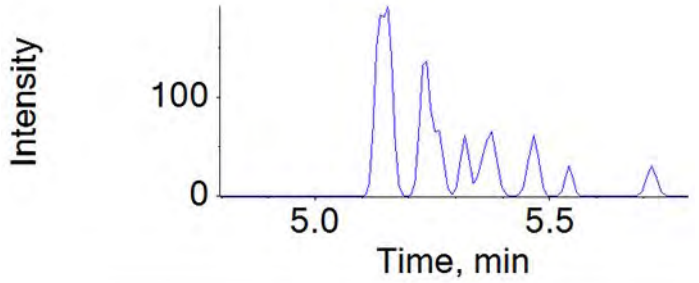
Component: PFOA
Primary Mass: 413.0 / 369.0



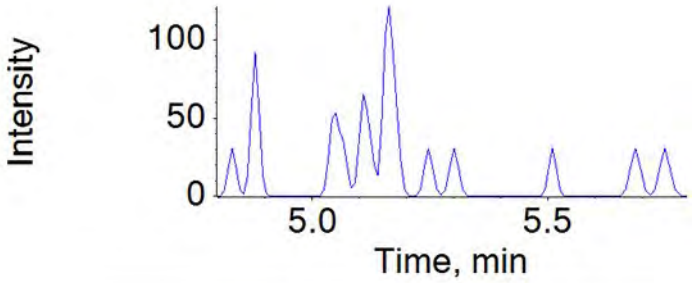
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



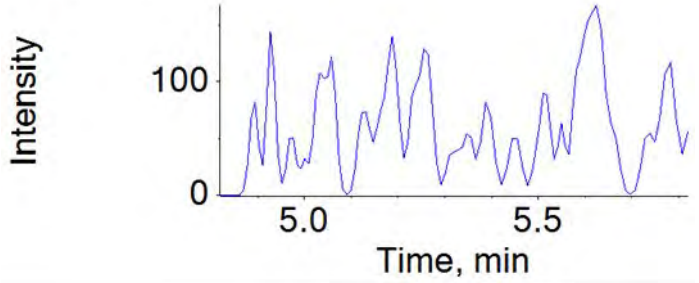
Component: PFOS
Primary Mass: 499.0 / 80.0



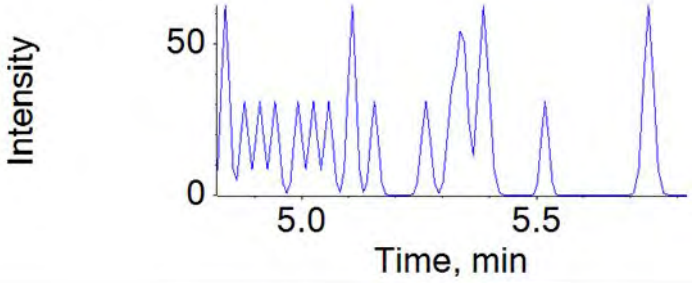
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



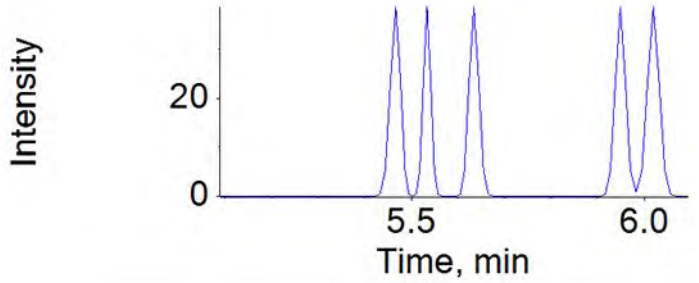
Component: PFNA
Primary Mass: 463.0 / 419.0



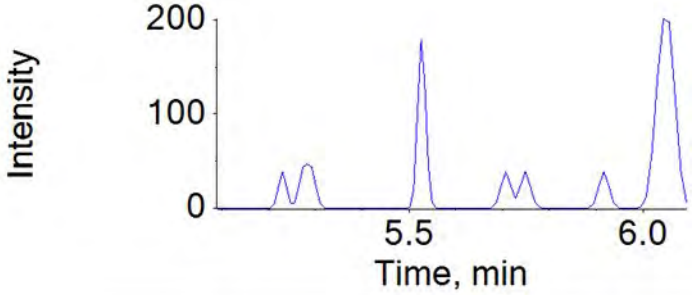
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



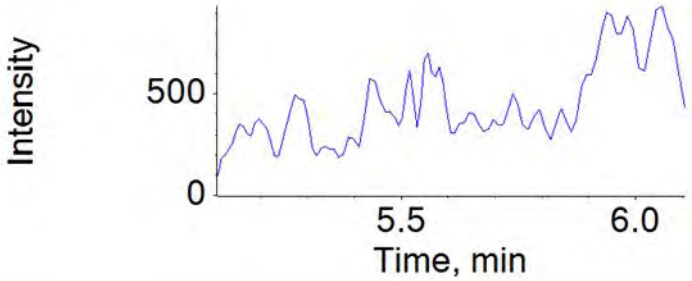
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



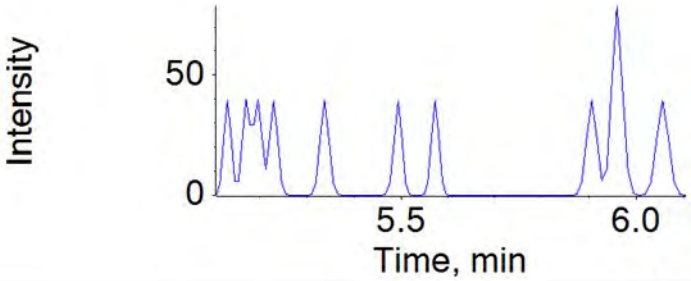
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

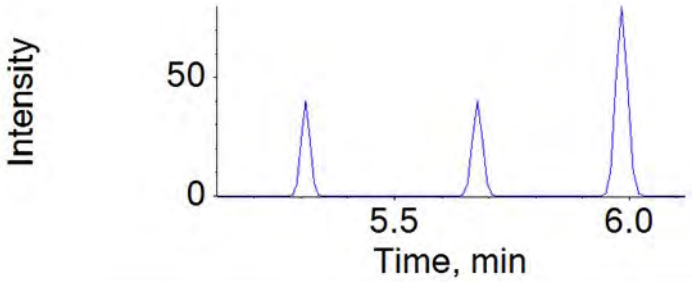
Component: PFDA
Primary Mass: 513.0 / 469.0



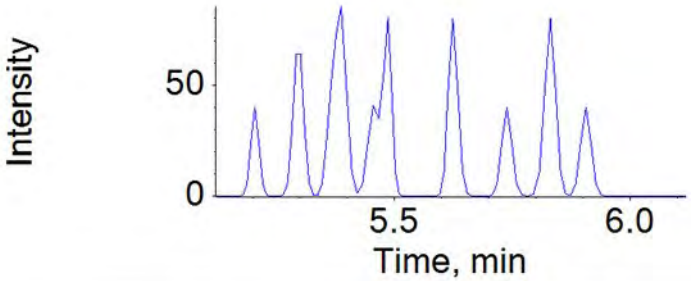
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



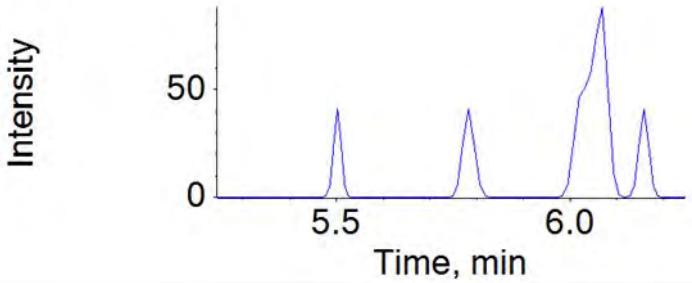
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



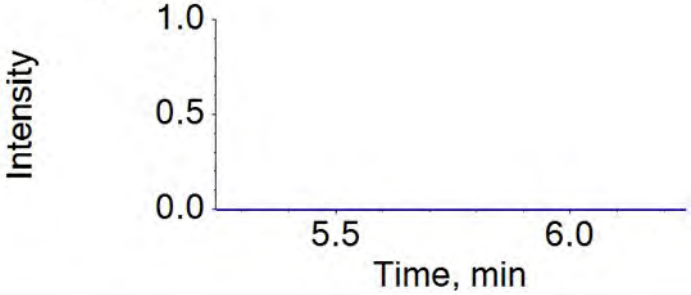
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



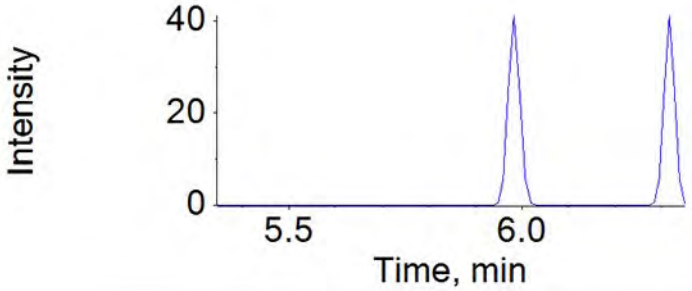
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



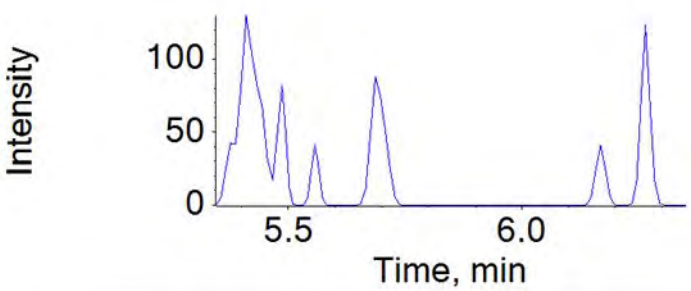
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



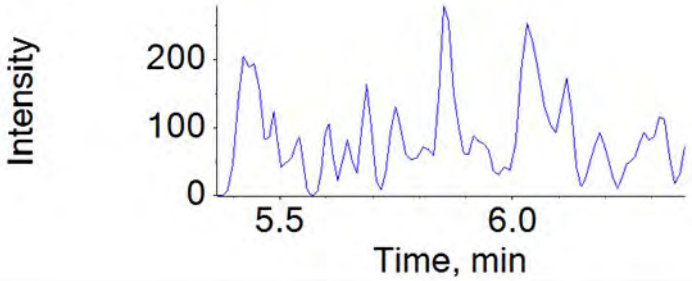
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



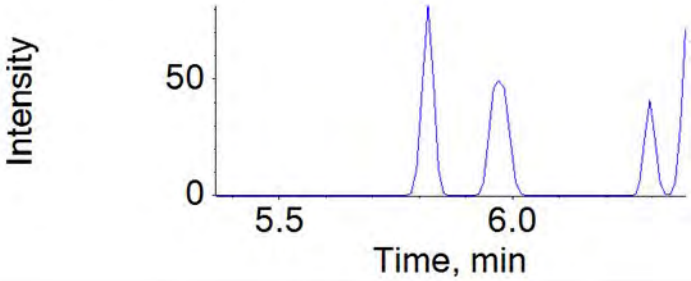
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

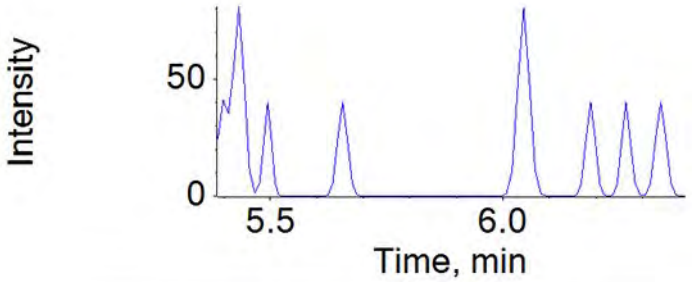
Component: PFUnDA
Primary Mass: 563.0 / 519.0



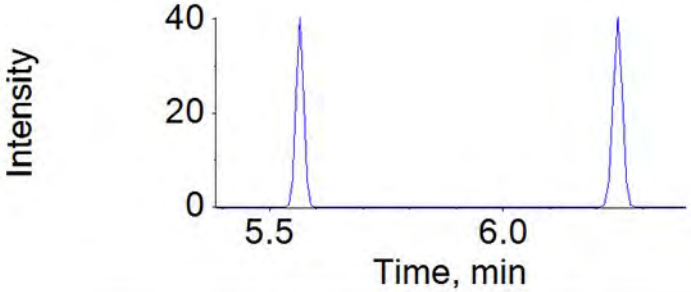
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



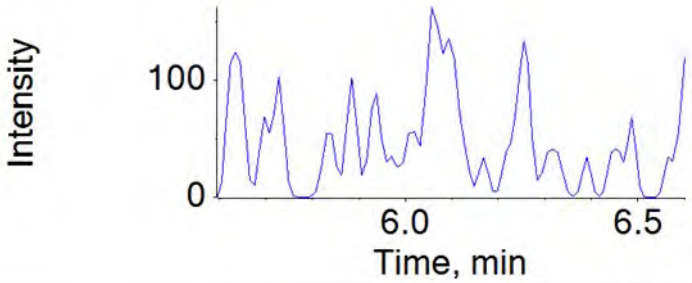
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



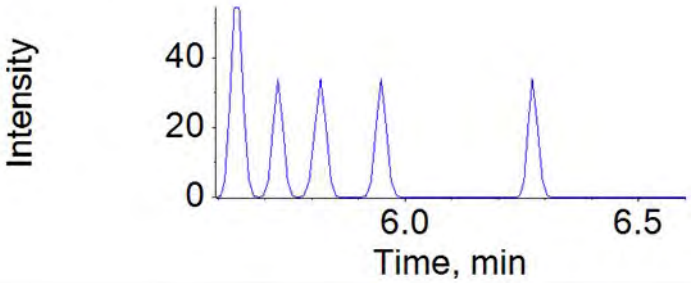
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



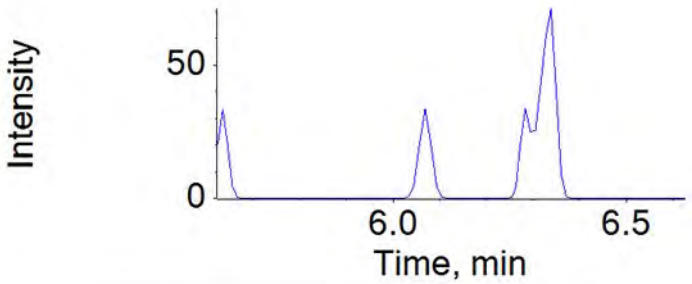
Component: PFDoDA
Primary Mass: 613.0 / 569.0



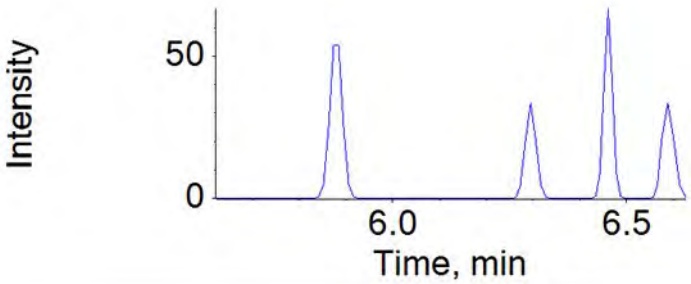
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



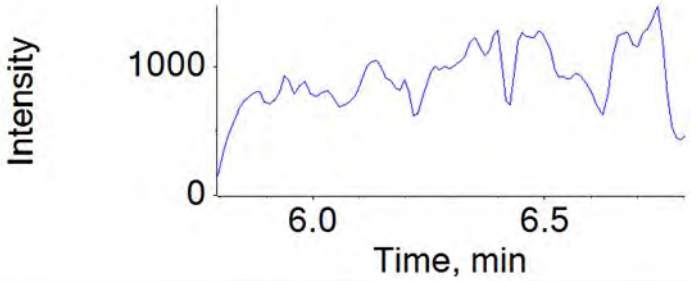
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



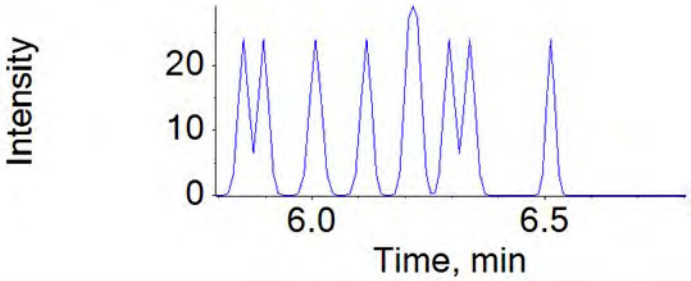
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

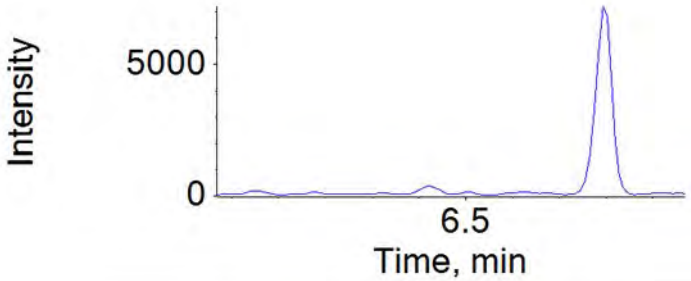
Component: PFTrDA
Primary Mass: 663.0 / 619.0



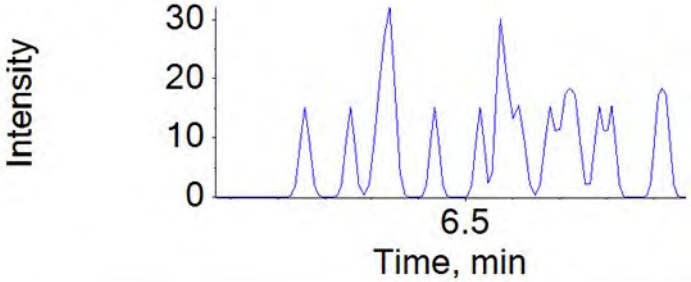
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



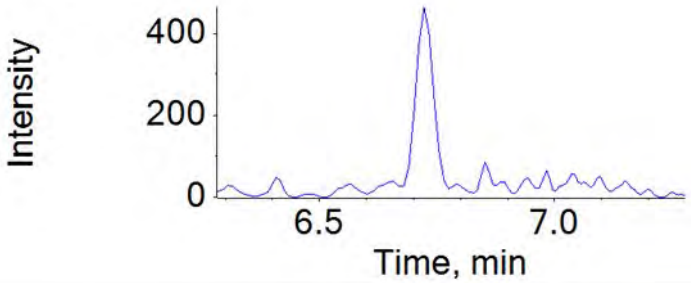
Component: PFTeDA
Primary Mass: 713.0 / 669.0



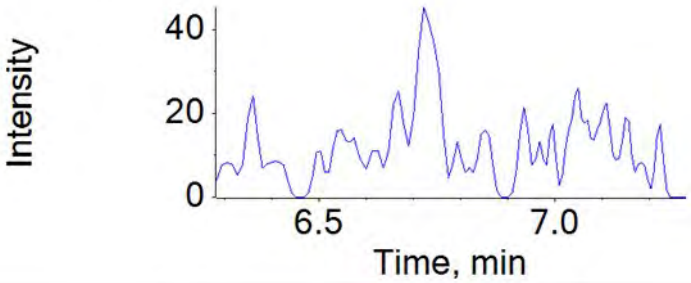
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



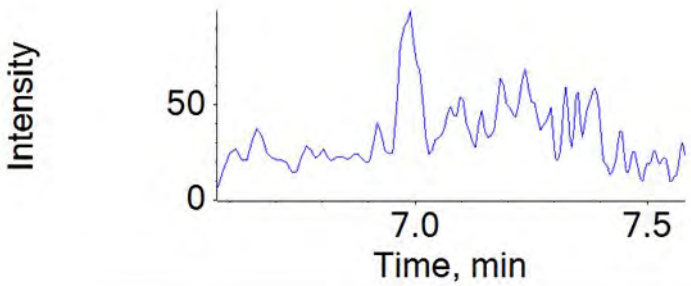
Component: PFHxDA
Primary Mass: 813.0 / 769.0



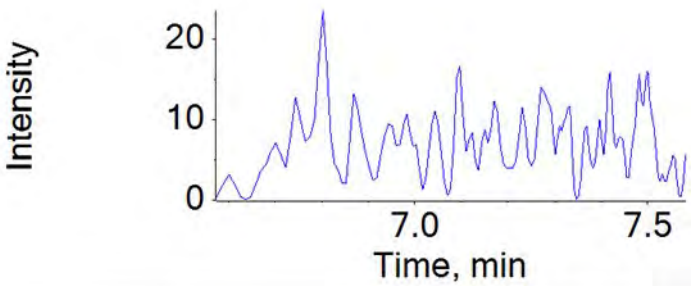
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV12DCAL-42.wiff	11/12/2018 3:05:54 PM	CALBRN11833C	CAL1
18NOV12DCAL-43.wiff	11/12/2018 3:15:03 PM	CALBRN21833C	CAL2
18NOV12DCAL-44.wiff	11/12/2018 3:24:03 PM	CALBRN31833B	CAL3
18NOV12DCAL-45.wiff	11/12/2018 3:33:03 PM	CALBRN41833B	CAL4
18NOV12DCAL-46.wiff	11/12/2018 3:42:06 PM	CALBRN51833B	CAL5
18NOV12DCAL-47.wiff	11/12/2018 3:51:06 PM	CALBRN61833B	CAL6
18NOV12DCAL-48.wiff	11/12/2018 4:00:06 PM	CALBRN71833B	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	659926.2
CAL3	13C2-PFOA	450219.7
CAL3	13C4-PFOS	249205.8
CAL3	13C2-PFDA	278743.9

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7	20		0.999	
PFPeA	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8	20		0.999	
PFBS	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5	20		1.000	
4:2-FTS	1.764	1.591	1.797	1.672	1.662	1.782	1.703	4	20		0.999	
PFHxA	1.470	1.241	1.361	1.233	1.255	1.160	N/A	8	20		0.998	
PFPeS	0.534	0.400	0.499	0.479	0.471	0.484	0.478	8	20		1.000	
PFHpA	1.776	1.486	1.766	1.619	1.555	1.461	N/A	8	20		0.998	
PFHxS	1.019	0.838	1.029	0.984	0.957	0.972	0.980	6	20		1.000	
6:2-FTS	1.892	1.888	2.214	2.112	2.098	1.876	N/A	7	20		0.996	
PFHpS	1.007	0.773	0.988	0.856	0.922	0.911	0.890	8	20		1.000	
PFOA	1.136	0.940	1.059	0.960	1.022	0.956	0.904	7	20		0.998	
PFOS	1.194	1.024	1.112	1.084	1.110	1.087	1.093	4	20		1.000	
PFNA	1.545	1.489	1.658	1.424	1.542	1.407	1.336	7	20		0.997	
PFNS	0.602	0.621	0.674	0.628	0.676	0.673	0.695	5	20		0.999	
PFDA	1.122	0.883	1.037	0.962	0.987	0.919	N/A	8	20		0.999	
8:2-FTS	2.201	1.873	2.243	1.857	2.127	2.051	N/A	7	20		0.998	
PFOSA	1.113	0.931	1.074	0.954	1.047	1.024	N/A	6	20		0.999	
NMeFOSAA	0.663	0.620	0.877	0.890	0.865	0.893	0.886	13	20		1.000	
PFDS	0.521	0.496	0.511	0.520	0.537	0.515	0.533	2	20		1.000	
PFUnDA	2.280	1.757	2.026	2.069	1.918	1.881	N/A	8	20		0.999	
NEtFOSAA	0.709	1.011	1.153	0.906	0.931	0.963	N/A	14	20		0.998	
PFDoDA	1.015	0.935	1.079	0.963	1.034	0.961	N/A	5	20		0.999	
10:2-FTS	1.703	1.561	1.573	1.278	1.573	1.511	1.383	9	20		0.997	
NMePFOSAE	1.287	1.110	1.331	1.179	1.255	1.278	1.152	6	20		0.997	
NMePFOSA	0.758	0.950	0.975	1.020	1.096	0.983	N/A	11	20		0.998	
PFDoS	0.306	0.272	0.264	0.272	0.266	0.278	0.272	5	20		1.000	
NEtPFOSAE	1.873	1.487	1.717	1.622	1.623	1.516	N/A	8	20		0.999	
NEtPFOSA	1.129	1.156	1.156	1.125	1.166	1.070	1.078	3	20		0.999	
PFTrDA	0.925	0.751	0.839	0.808	0.827	0.774	N/A	7	20		0.999	
PFTeDA	0.996	0.851	0.994	0.911	0.934	0.892	0.880	6	20		0.999	
PFHxDA	0.486	0.402	0.442	0.409	0.413	0.435	0.414	6	20		0.999	
PFODA	0.367	0.316	0.367	0.349	0.358	0.360	0.359	5	20		1.000	

APPROVED
By MCD at 6:33 pm, 11/12/18

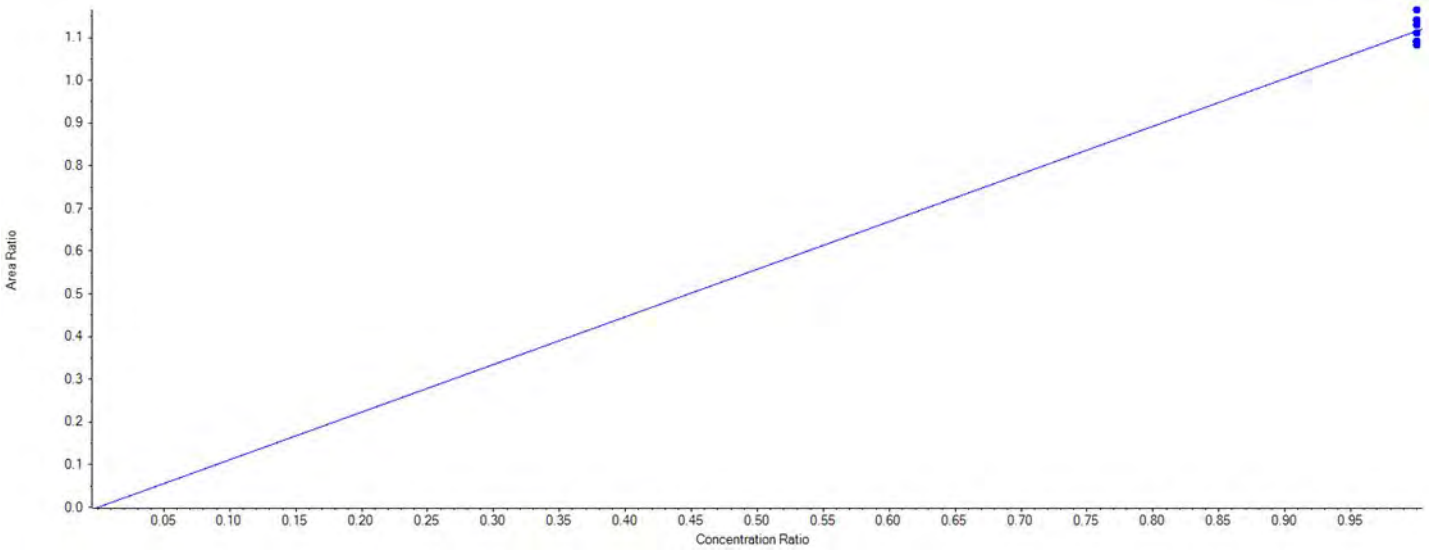
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.11523 x (std. dev. = 0.03058) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	763334.27	676527.50	True	5.00	1.128	3.27	1.000	5.000	5.059	1	30	
CAL2	771445.80	662396.70	True	5.00	1.165	3.27	1.000	5.000	5.221	4	30	
CAL3	733360.15	659926.18	True	5.00	1.111	3.27	1.000	5.000	4.982	0	30	
CAL4	726395.96	671568.05	True	5.00	1.082	3.26	1.000	5.000	4.849	-3	30	
CAL5	698871.91	641789.51	True	5.00	1.089	3.26	1.000	5.000	4.882	-2	30	
CAL6	633648.38	555817.86	True	5.00	1.140	3.27	1.000	5.000	5.111	2	30	
CAL7	557392.78	510525.81	True	5.00	1.092	3.25	1.000	5.000	4.895	-2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

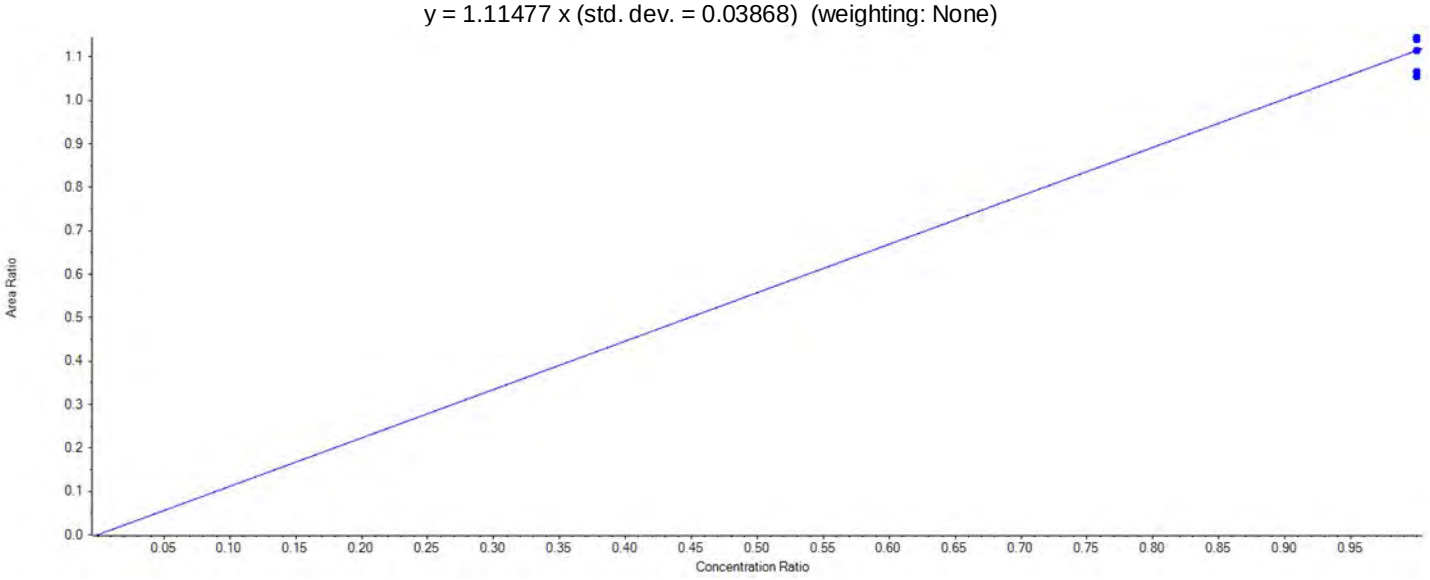
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.11477 x (std. dev. = 0.03868) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	771179.39	676527.50	True	5.00	1.140	3.76	1.150	5.000	5.113	2	30	
CAL2	738194.74	662396.70	True	5.00	1.114	3.77	1.150	5.000	4.998	0	30	
CAL3	695805.67	659926.18	True	5.00	1.054	3.77	1.150	5.000	4.729	-5	30	
CAL4	716206.93	671568.05	True	5.00	1.066	3.76	1.150	5.000	4.783	-4	30	
CAL5	734598.25	641789.51	True	5.00	1.145	3.76	1.150	5.000	5.134	3	30	
CAL6	635977.79	555817.86	True	5.00	1.144	3.76	1.150	5.000	5.132	3	30	
CAL7	581688.66	510525.81	True	5.00	1.139	3.75	1.150	5.000	5.110	2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

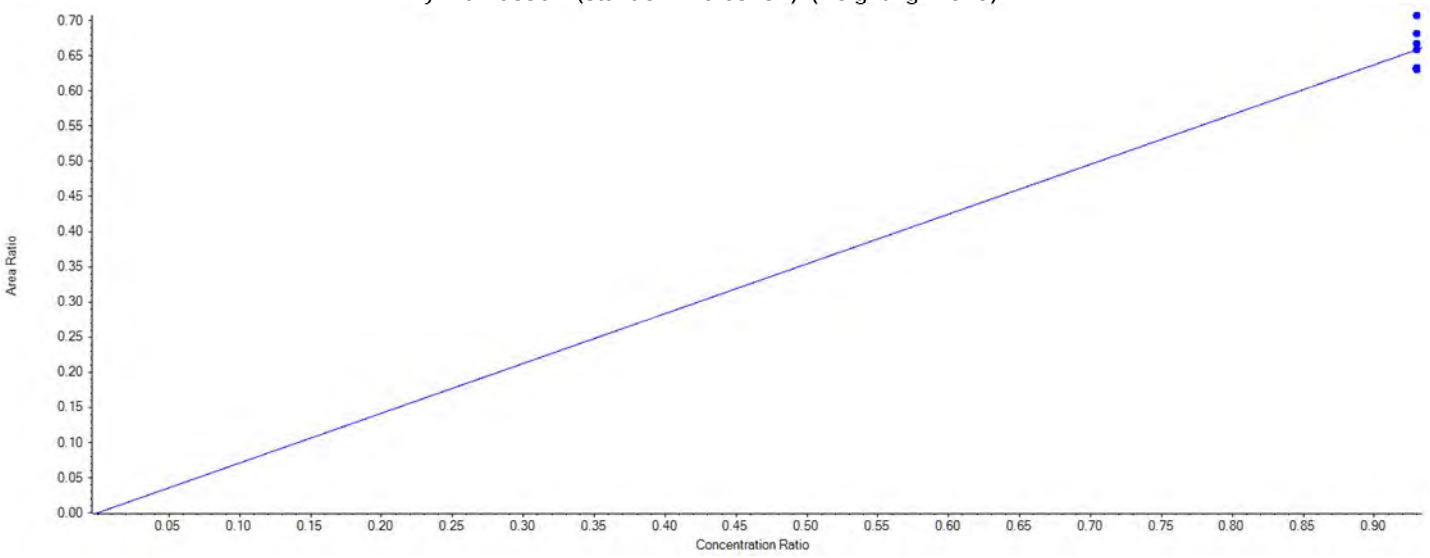
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.70830 x (std. dev. = 0.03132) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	445963.43	676527.50	True	5.00	0.659	3.81	1.170	4.650	4.653	0	30	
CAL2	418860.68	662396.70	True	5.00	0.632	3.82	1.170	4.650	4.464	-4	30	
CAL3	416352.75	659926.18	True	5.00	0.631	3.82	1.170	4.650	4.454	-4	30	
CAL4	425015.72	671568.05	True	5.00	0.633	3.81	1.170	4.650	4.468	-4	30	
CAL5	428050.64	641789.51	True	5.00	0.667	3.81	1.170	4.650	4.708	1	30	
CAL6	378676.81	555817.86	True	5.00	0.681	3.81	1.170	4.650	4.809	3	30	
CAL7	361166.00	510525.81	True	5.00	0.707	3.80	1.170	4.650	4.994	7	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

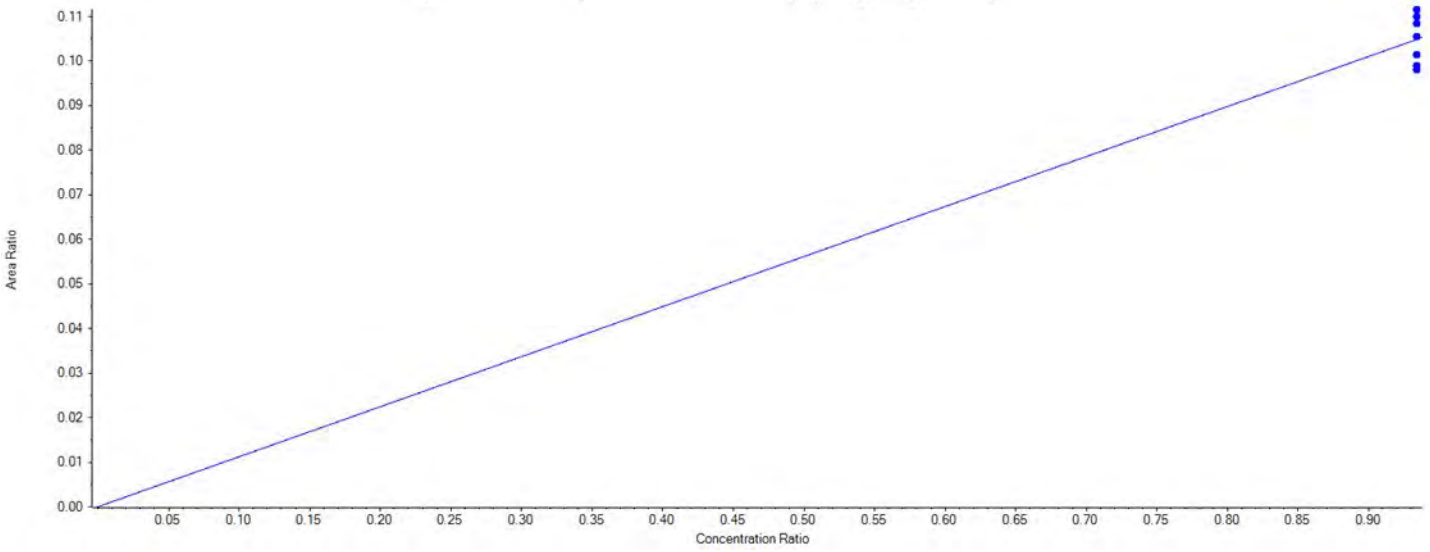
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.11226 x (std. dev. = 0.00584) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	51494.57	474834.93	True	5.00	0.108	4.13	0.840	4.670	4.830	3	30	
CAL2	46141.76	454466.72	True	5.00	0.102	4.13	0.840	4.670	4.522	-3	30	
CAL3	47514.79	450219.68	True	5.00	0.106	4.13	0.840	4.670	4.700	1	30	
CAL4	47246.37	477519.68	True	5.00	0.099	4.13	0.840	4.670	4.407	-6	30	
CAL5	51791.87	464284.62	True	5.00	0.112	4.12	0.840	4.670	4.968	6	30	
CAL6	41422.17	422900.47	True	5.00	0.098	4.13	0.840	4.670	4.362	-7	30	
CAL7	40505.09	368158.25	True	5.00	0.110	4.11	0.840	4.670	4.900	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

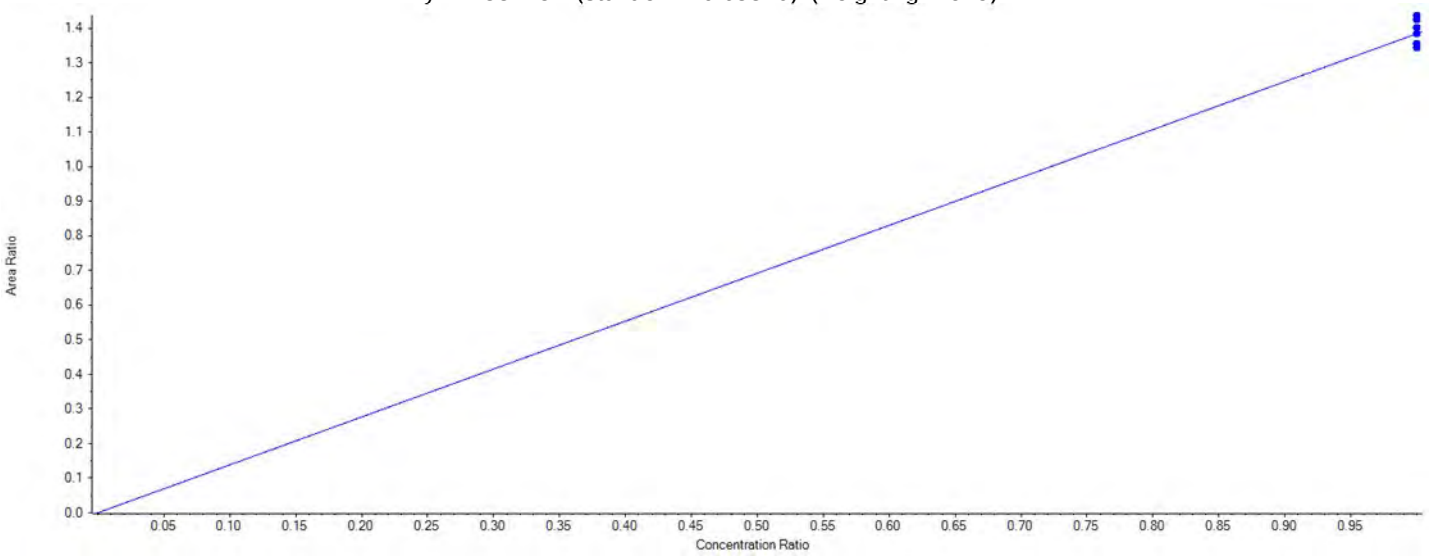
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.38415 x (std. dev. = 0.03876) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664975.88	474834.93	True	5.00	1.400	4.16	0.850	5.000	5.059	1	30	
CAL2	648170.06	454466.72	True	5.00	1.426	4.17	0.850	5.000	5.152	3	30	
CAL3	646783.50	450219.68	True	5.00	1.437	4.17	0.850	5.000	5.189	4	30	
CAL4	641195.85	477519.68	True	5.00	1.343	4.16	0.850	5.000	4.851	-3	30	
CAL5	628952.79	464284.62	True	5.00	1.355	4.15	0.850	5.000	4.894	-2	30	
CAL6	568205.82	422900.47	True	5.00	1.344	4.16	0.850	5.000	4.854	-3	30	
CAL7	509807.95	368158.25	True	5.00	1.385	4.15	0.840	5.000	5.002	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

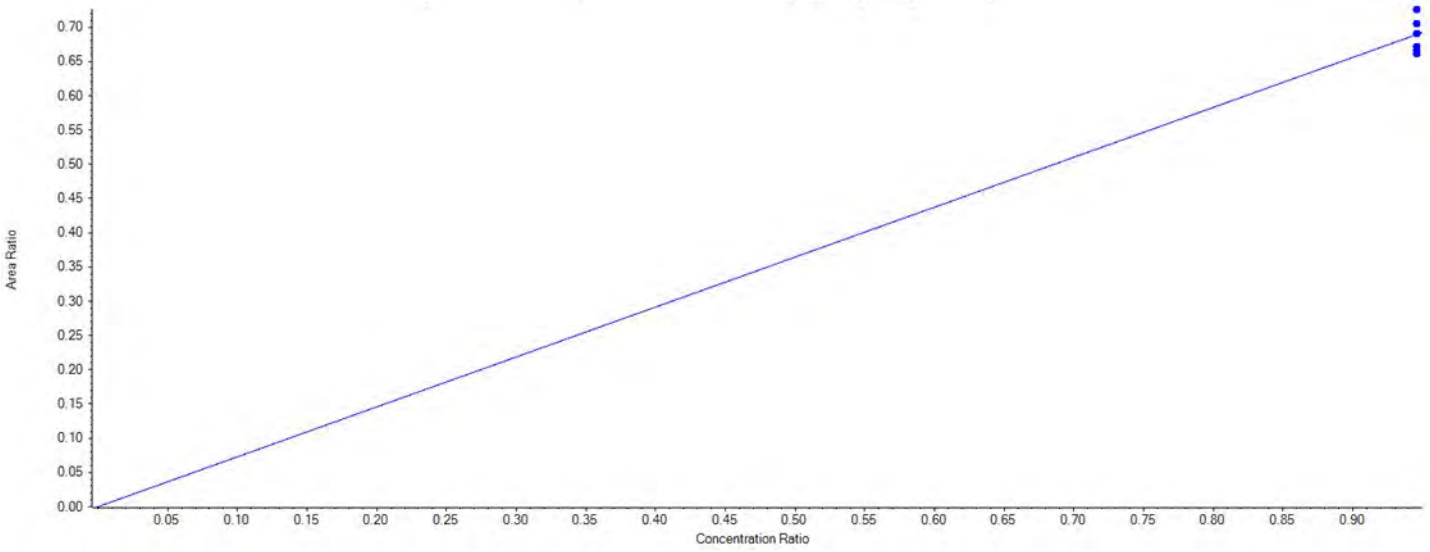
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.72866 x (std. dev. = 0.02531) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	327944.53	474834.93	True	5.00	0.691	4.55	0.930	4.730	4.739	0	30	
CAL2	320400.37	454466.72	True	5.00	0.705	4.56	0.930	4.730	4.838	2	30	
CAL3	317243.20	450219.68	True	5.00	0.705	4.56	0.930	4.730	4.835	2	30	
CAL4	315722.63	477519.68	True	5.00	0.661	4.55	0.930	4.730	4.537	-4	30	
CAL5	309304.49	464284.62	True	5.00	0.666	4.54	0.920	4.730	4.571	-3	30	
CAL6	284116.51	422900.47	True	5.00	0.672	4.55	0.920	4.730	4.610	-3	30	
CAL7	267182.79	368158.25	True	5.00	0.726	4.54	0.920	4.730	4.980	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

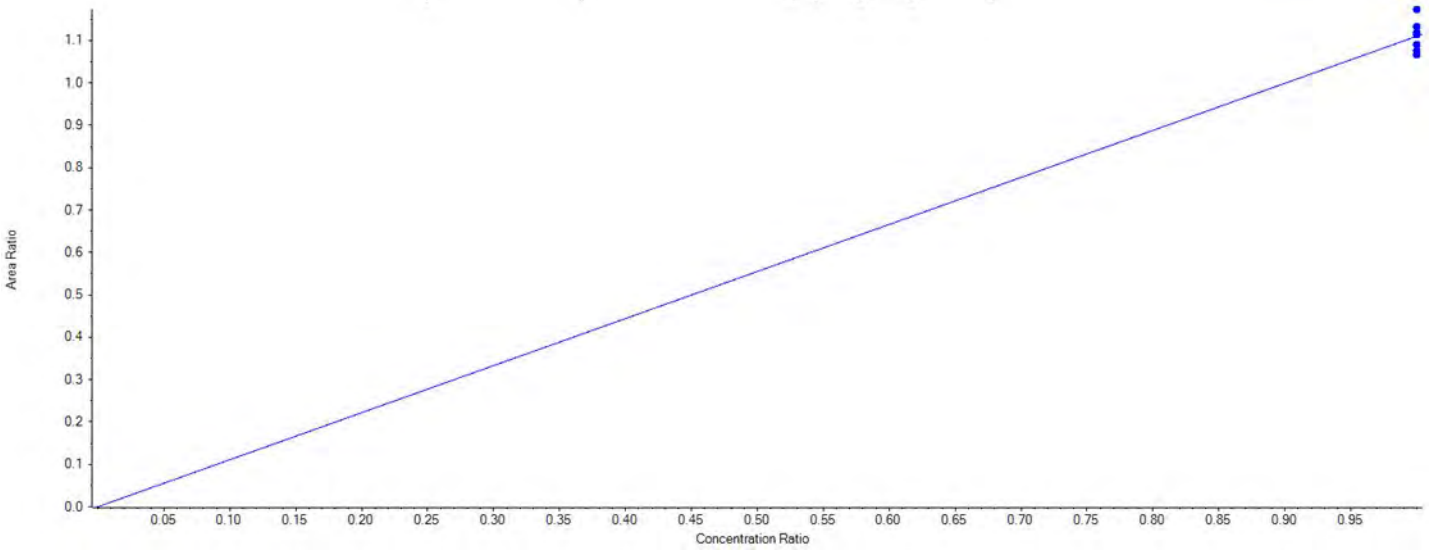
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.10984 x (std. dev. = 0.03656) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	528473.49	474834.93	True	5.00	1.113	4.55	0.920	5.000	5.014	0	30	
CAL2	532987.49	454466.72	True	5.00	1.173	4.55	0.920	5.000	5.284	6	30	
CAL3	503681.03	450219.68	True	5.00	1.119	4.55	0.920	5.000	5.040	1	30	
CAL4	509151.78	477519.68	True	5.00	1.066	4.55	0.920	5.000	4.804	-4	30	
CAL5	525802.05	464284.62	True	5.00	1.132	4.54	0.920	5.000	5.102	2	30	
CAL6	455005.81	422900.47	True	5.00	1.076	4.55	0.920	5.000	4.847	-3	30	
CAL7	401203.88	368158.25	True	5.00	1.090	4.54	0.920	5.000	4.910	-2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

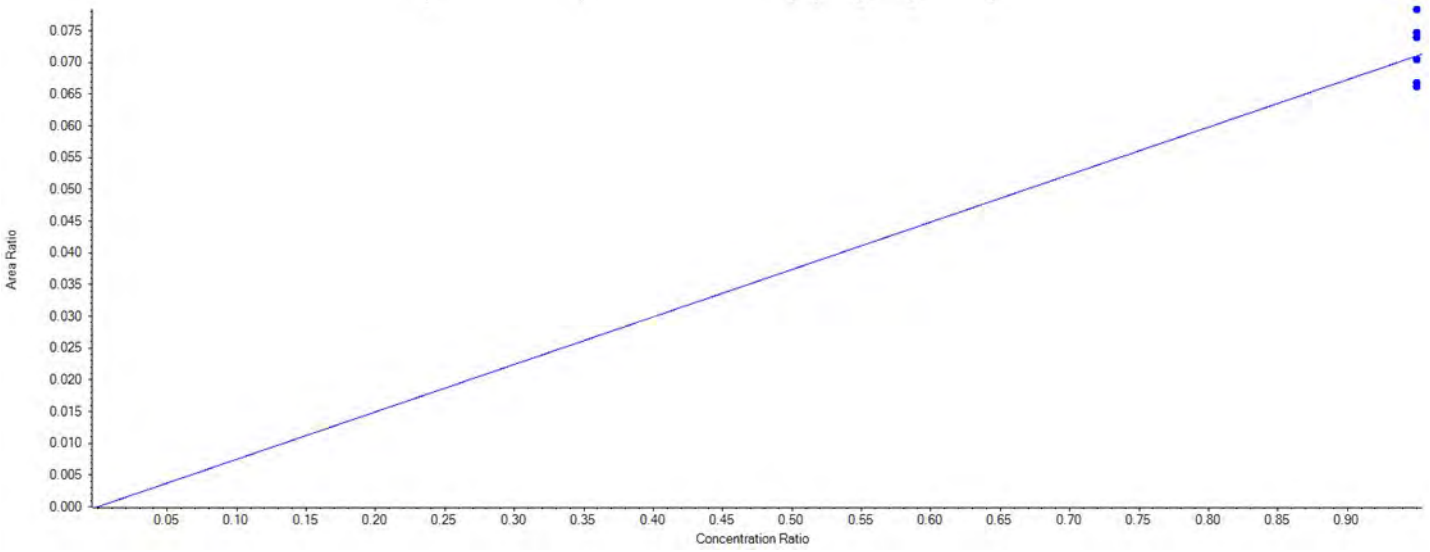
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.07473 x (std. dev. = 0.00497) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	35455.22	474834.93	True	5.00	0.075	4.91	1.000	4.750	4.996	5	30	
CAL2	35585.69	454466.72	True	5.00	0.078	4.91	1.000	4.750	5.239	10	30	
CAL3	31706.42	450219.68	True	5.00	0.070	4.91	1.000	4.750	4.712	-1	30	
CAL4	31883.28	477519.68	True	5.00	0.067	4.91	1.000	4.750	4.467	-6	30	
CAL5	31012.00	464284.62	True	5.00	0.067	4.90	1.000	4.750	4.469	-6	30	
CAL6	27988.49	422900.47	True	5.00	0.066	4.91	1.000	4.750	4.428	-7	30	
CAL7	27180.24	368158.25	True	5.00	0.074	4.89	1.000	4.750	4.939	4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

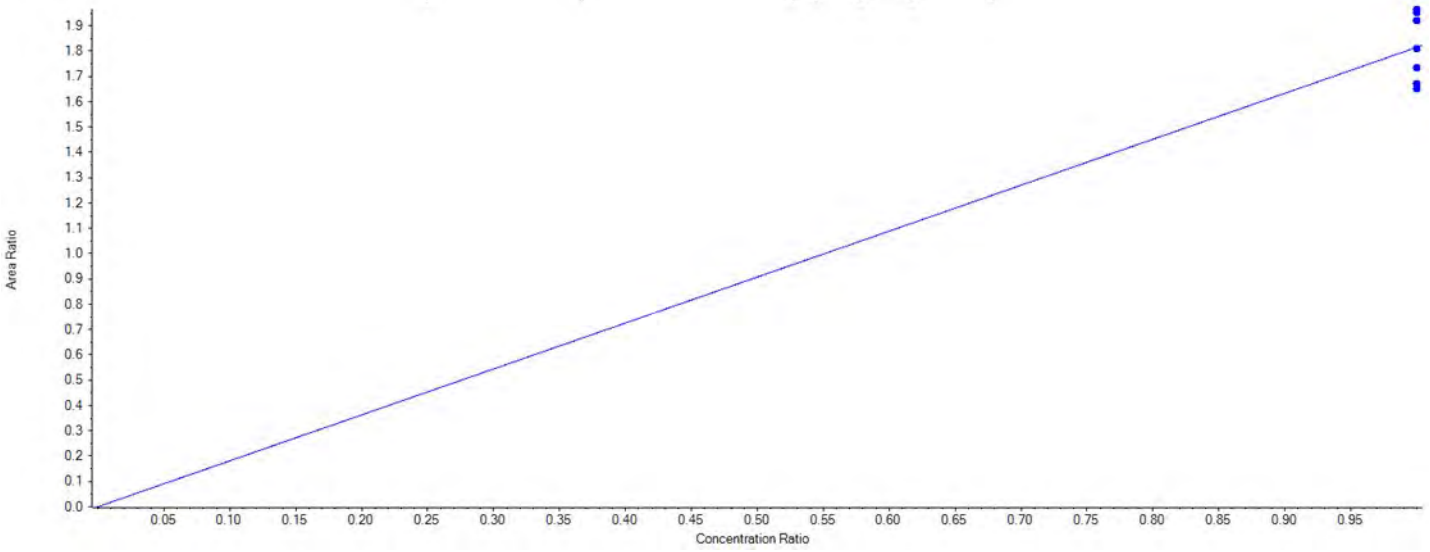
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.81479 x (std. dev. = 0.13316) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	912537.72	474834.93	True	5.00	1.922	4.92	1.000	5.000	5.295	6	30	
CAL2	892584.21	454466.72	True	5.00	1.964	4.92	1.000	5.000	5.411	8	30	
CAL3	878868.48	450219.68	True	5.00	1.952	4.93	1.000	5.000	5.378	8	30	
CAL4	863597.26	477519.68	True	5.00	1.809	4.92	1.000	5.000	4.983	0	30	
CAL5	805288.72	464284.62	True	5.00	1.734	4.91	1.000	5.000	4.779	-4	30	
CAL6	707130.31	422900.47	True	5.00	1.672	4.92	1.000	5.000	4.607	-8	30	
CAL7	607669.53	368158.25	True	5.00	1.651	4.91	1.000	5.000	4.548	-9	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

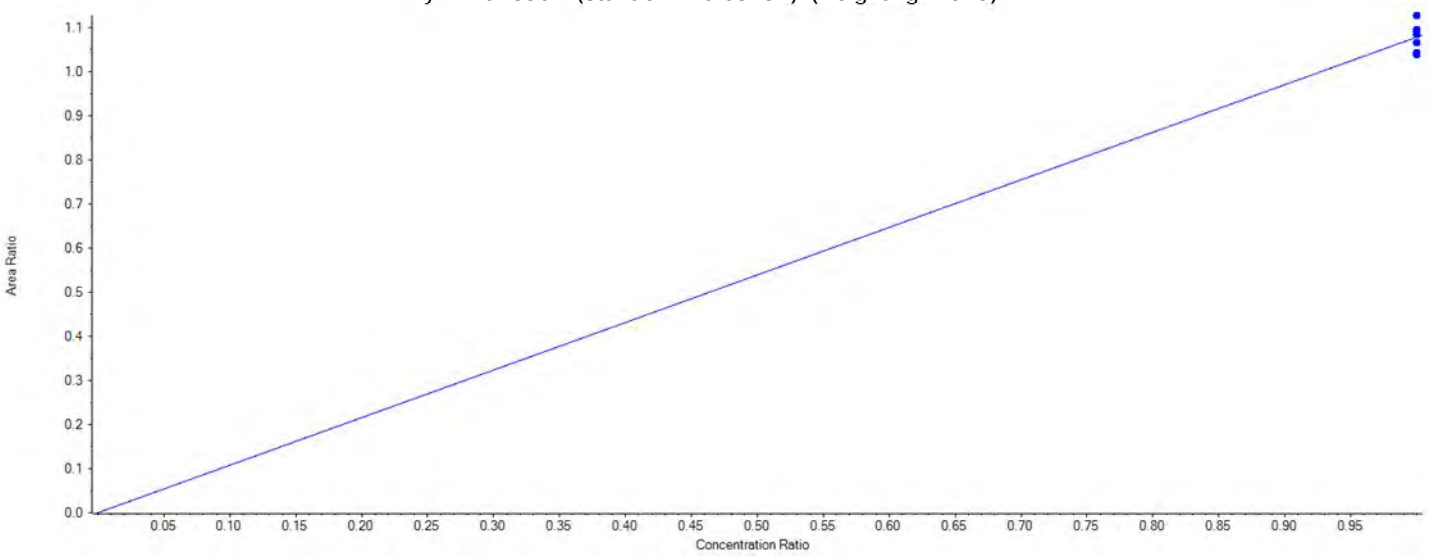
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.07880 x (std. dev. = 0.03134) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	283127.43	265368.99	True	4.78	1.067	5.25	1.000	4.780	4.727	-1	30	
CAL2	271778.84	250483.82	True	4.78	1.085	5.25	1.000	4.780	4.808	1	30	
CAL3	281035.50	249205.78	True	4.78	1.128	5.25	1.000	4.780	4.997	5	30	
CAL4	267380.81	256143.29	True	4.78	1.044	5.25	1.000	4.780	4.625	-3	30	
CAL5	267157.61	243589.87	True	4.78	1.097	5.24	1.000	4.780	4.860	2	30	
CAL6	253129.16	231712.12	True	4.78	1.092	5.25	1.000	4.780	4.840	1	30	
CAL7	242617.53	233532.69	True	4.78	1.039	5.24	1.000	4.780	4.603	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

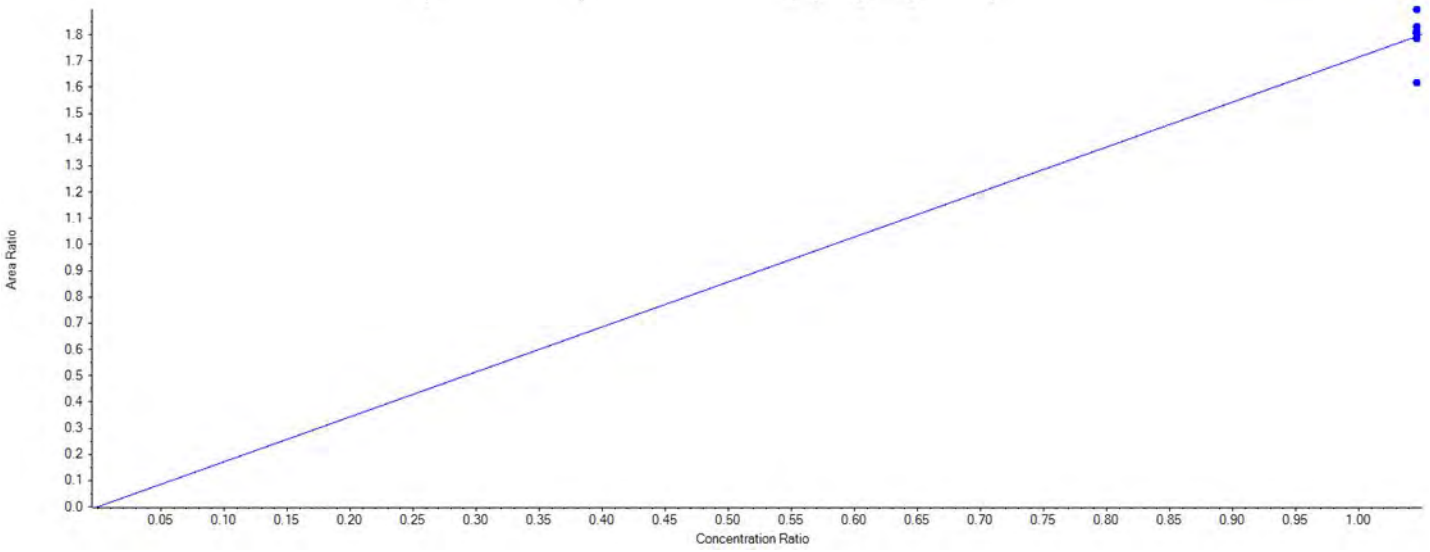
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 1.71440 x (std. dev. = 0.08194) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	479931.43	265368.99	True	4.78	1.809	5.26	1.000	5.000	5.042	1	30	
CAL2	451850.14	250483.82	True	4.78	1.804	5.27	1.000	5.000	5.030	1	30	
CAL3	455948.85	249205.78	True	4.78	1.830	5.27	1.000	5.000	5.101	2	30	
CAL4	485570.41	256143.29	True	4.78	1.896	5.26	1.000	5.000	5.285	6	30	
CAL5	441776.75	243589.87	True	4.78	1.814	5.26	1.000	5.000	5.057	1	30	
CAL6	413811.35	231712.12	True	4.78	1.786	5.27	1.000	5.000	4.979	0	30	
CAL7	377369.76	233532.69	True	4.78	1.616	5.25	1.000	5.000	4.505	-10	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

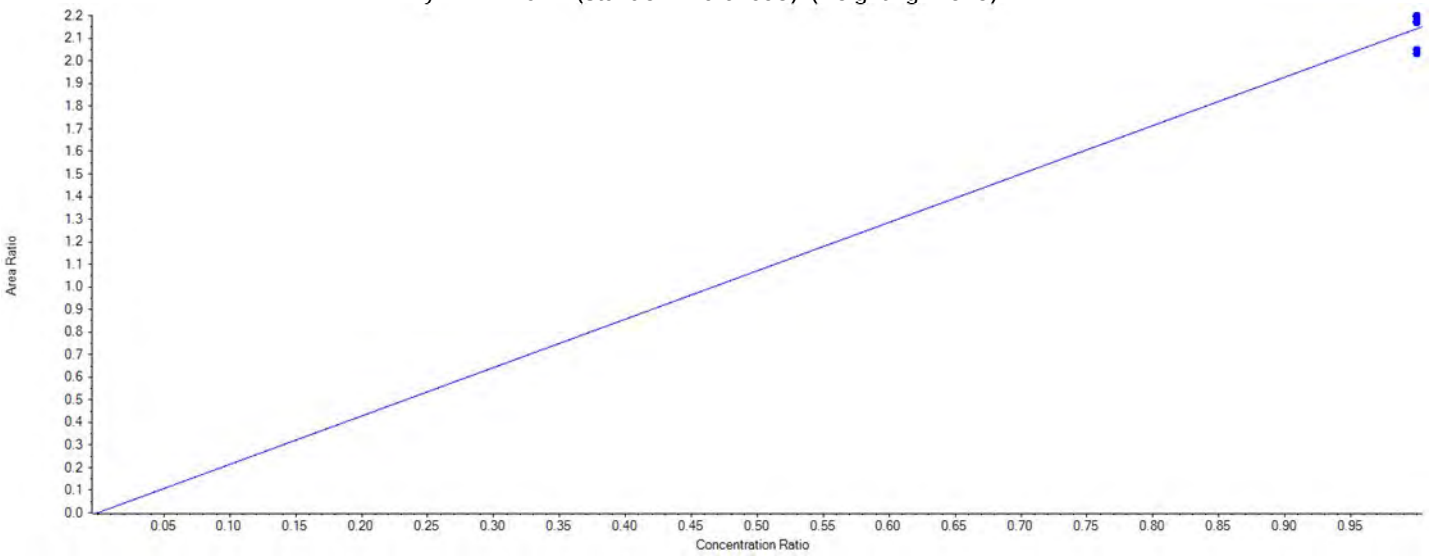
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 2.14262 x (std. dev. = 0.07095) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	612577.43	281654.75	True	5.00	2.175	5.57	1.000	5.000	5.075	2	30	
CAL2	601859.80	277324.19	True	5.00	2.170	5.57	1.000	5.000	5.064	1	30	
CAL3	612680.79	278743.89	True	5.00	2.198	5.57	1.000	5.000	5.129	3	30	
CAL4	612056.47	301327.18	True	5.00	2.031	5.56	1.000	5.000	4.740	-5	30	
CAL5	585231.23	269315.72	True	5.00	2.173	5.56	1.000	5.000	5.071	1	30	
CAL6	522613.81	237446.93	True	5.00	2.201	5.57	1.000	5.000	5.136	3	30	
CAL7	479333.06	233825.07	True	5.00	2.050	5.55	1.000	5.000	4.784	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

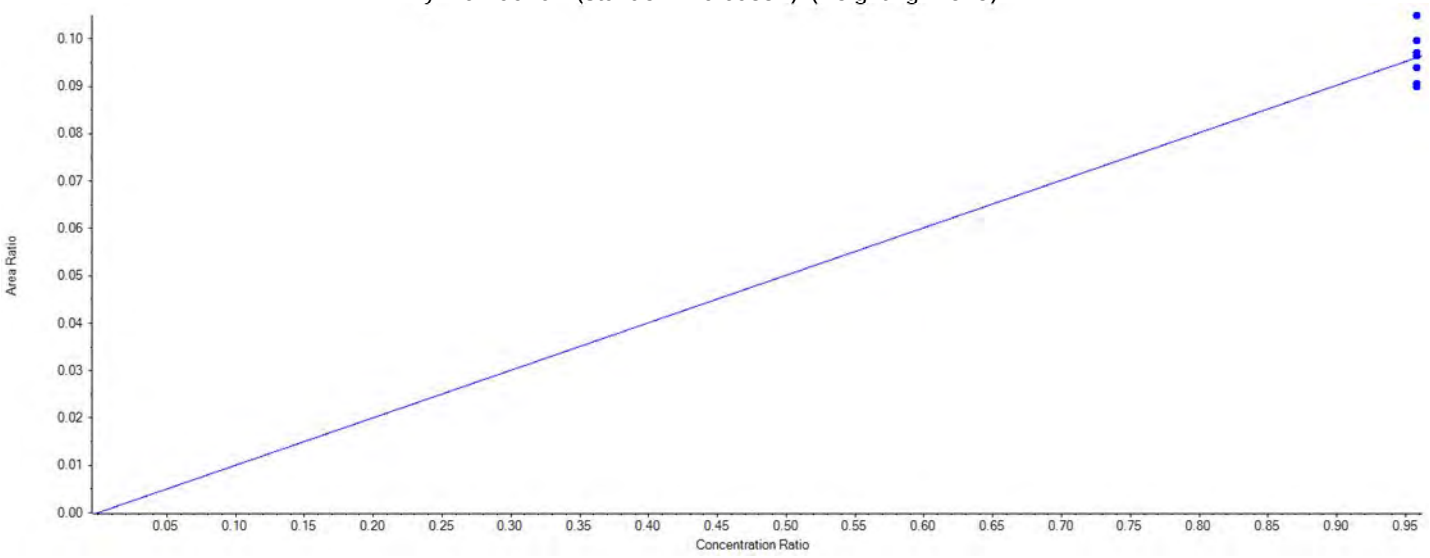
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.10026 x (std. dev. = 0.00552) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26445.48	281654.75	True	5.00	0.094	5.57	1.000	4.790	4.683	-2	30	
CAL2	27639.19	277324.19	True	5.00	0.100	5.57	1.000	4.790	4.970	4	30	
CAL3	29249.84	278743.89	True	5.00	0.105	5.57	1.000	4.790	5.233	9	30	
CAL4	27253.46	301327.18	True	5.00	0.090	5.57	1.000	4.790	4.511	-6	30	
CAL5	24192.14	269315.72	True	5.00	0.090	5.56	1.000	4.790	4.480	-6	30	
CAL6	22899.00	237446.93	True	5.00	0.096	5.57	1.000	4.790	4.810	0	30	
CAL7	22710.95	233825.07	True	5.00	0.097	5.56	1.000	4.790	4.844	1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

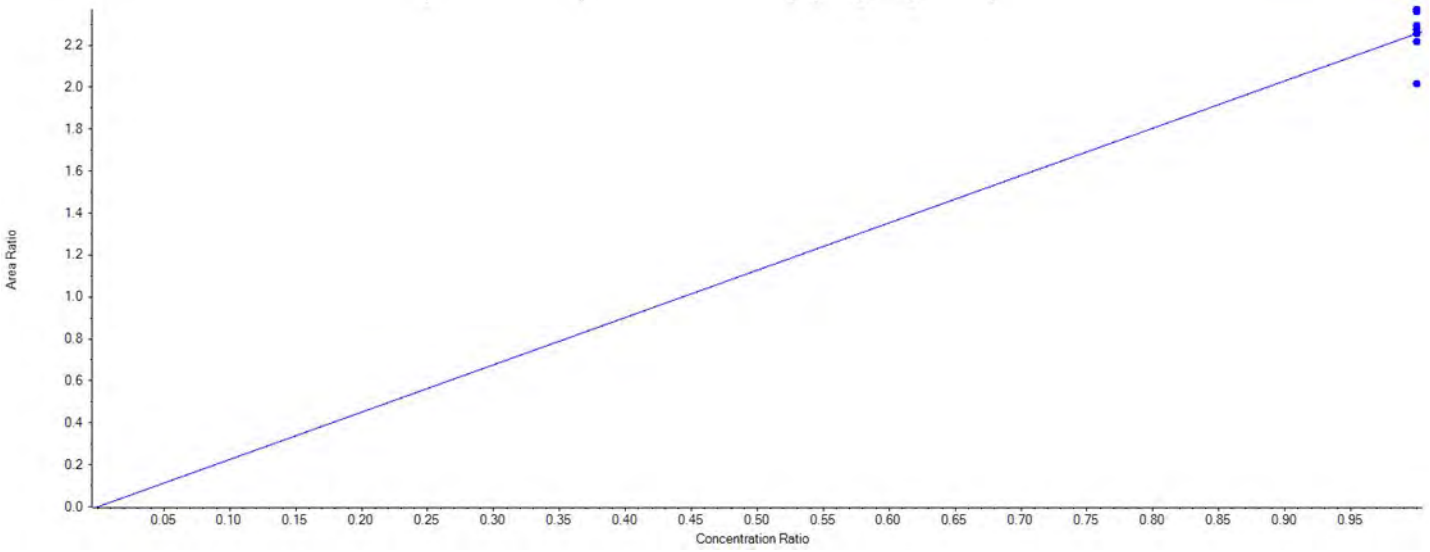
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 2.25533 x (std. dev. = 0.11852) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664489.93	281654.75	True	5.00	2.359	5.65	1.010	5.000	5.230	5	30	
CAL2	636543.15	277324.19	True	5.00	2.295	5.65	1.010	5.000	5.089	2	30	
CAL3	629109.87	278743.89	True	5.00	2.257	5.65	1.010	5.000	5.004	0	30	
CAL4	607762.03	301327.18	True	5.00	2.017	5.64	1.010	5.000	4.472	-11	30	
CAL5	596544.13	269315.72	True	5.00	2.215	5.64	1.010	5.000	4.911	-2	30	
CAL6	539992.50	237446.93	True	5.00	2.274	5.65	1.010	5.000	5.042	1	30	
CAL7	554092.64	233825.07	True	5.00	2.370	5.63	1.010	5.000	5.254	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

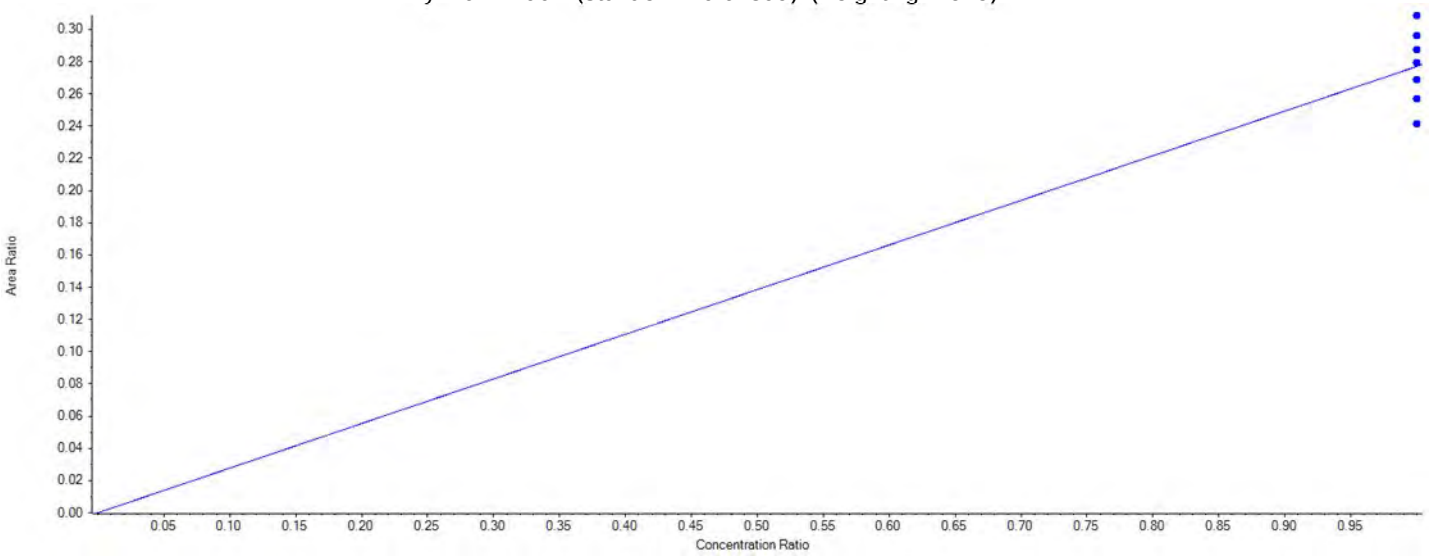
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.27700 x (std. dev. = 0.02309) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	86914.51	281654.75	True	5.00	0.309	5.70	1.020	5.000	5.570	11	30	
CAL2	77388.61	277324.19	True	5.00	0.279	5.71	1.020	5.000	5.037	1	30	
CAL3	71670.26	278743.89	True	5.00	0.257	5.71	1.030	5.000	4.641	-7	30	
CAL4	72788.02	301327.18	True	5.00	0.242	5.70	1.020	5.000	4.360	-13	30	
CAL5	72424.49	269315.72	True	5.00	0.269	5.70	1.020	5.000	4.854	-3	30	
CAL6	70320.26	237446.93	True	5.00	0.296	5.71	1.020	5.000	5.346	7	30	
CAL7	67250.45	233825.07	True	5.00	0.288	5.69	1.020	5.000	5.192	4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

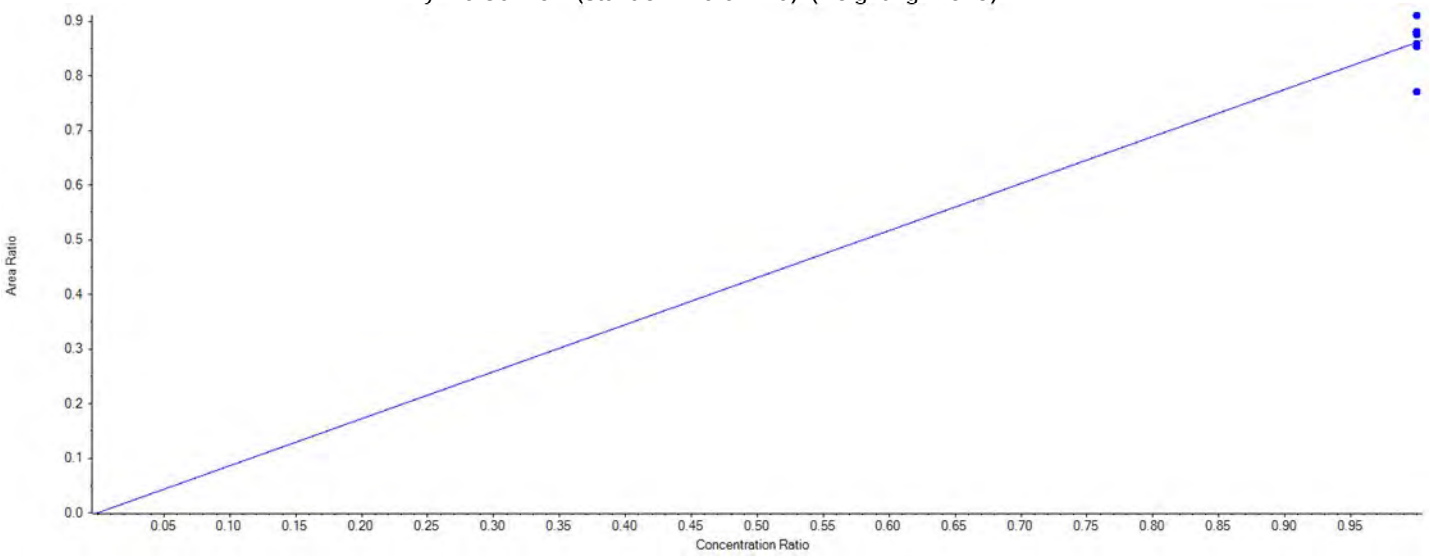
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 0.86119 x (std. dev. = 0.04416) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	256401.96	281654.75	True	5.00	0.910	5.83	1.050	5.000	5.285	6	30	
CAL2	242881.75	277324.19	True	5.00	0.876	5.83	1.050	5.000	5.085	2	30	
CAL3	245605.30	278743.89	True	5.00	0.881	5.83	1.050	5.000	5.116	2	30	
CAL4	232014.10	301327.18	True	5.00	0.770	5.82	1.050	5.000	4.470	-11	30	
CAL5	231187.89	269315.72	True	5.00	0.858	5.82	1.050	5.000	4.984	0	30	
CAL6	208574.11	237446.93	True	5.00	0.878	5.83	1.050	5.000	5.100	2	30	
CAL7	199746.83	233825.07	True	5.00	0.854	5.81	1.050	5.000	4.960	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

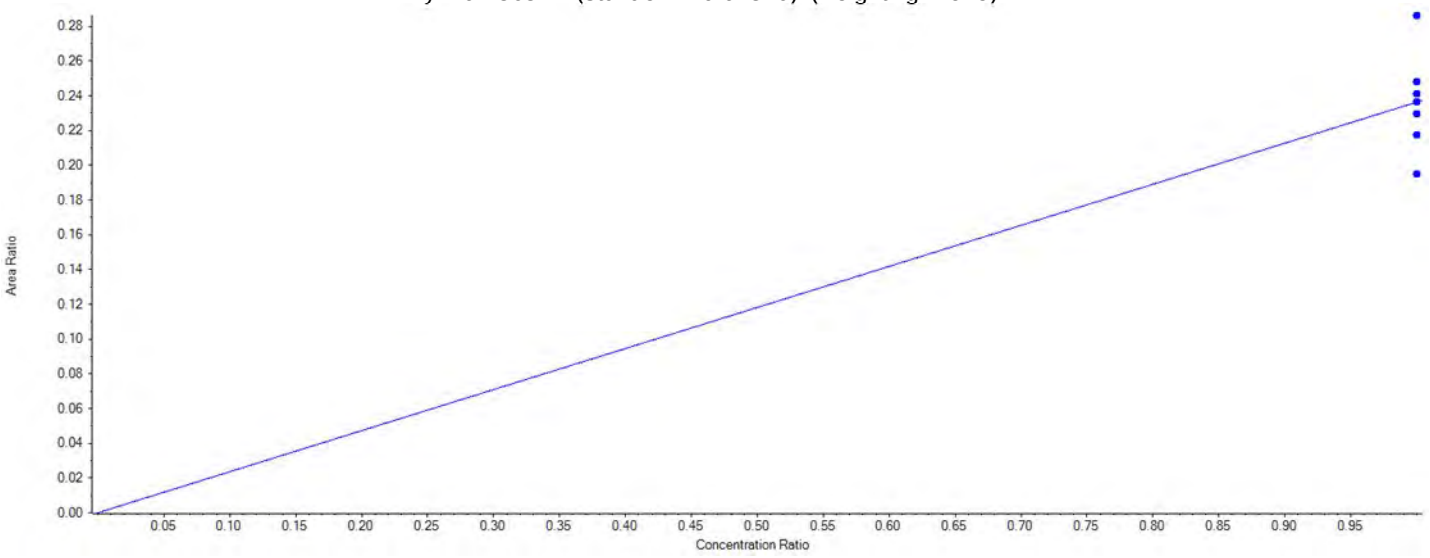
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.23634 x (std. dev. = 0.02816) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	80597.24	281654.75	True	5.00	0.286	5.84	1.050	5.000	6.054	21	30	
CAL2	63686.93	277324.19	True	5.00	0.230	5.84	1.050	5.000	4.859	-3	30	
CAL3	54383.91	278743.89	True	5.00	0.195	5.84	1.050	5.000	4.128	-17	30	
CAL4	65477.96	301327.18	True	5.00	0.217	5.83	1.050	5.000	4.597	-8	30	
CAL5	63701.69	269315.72	True	5.00	0.237	5.83	1.050	5.000	5.004	0	30	
CAL6	57308.08	237446.93	True	5.00	0.241	5.84	1.050	5.000	5.106	2	30	
CAL7	58049.49	233825.07	True	5.00	0.248	5.82	1.050	5.000	5.252	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

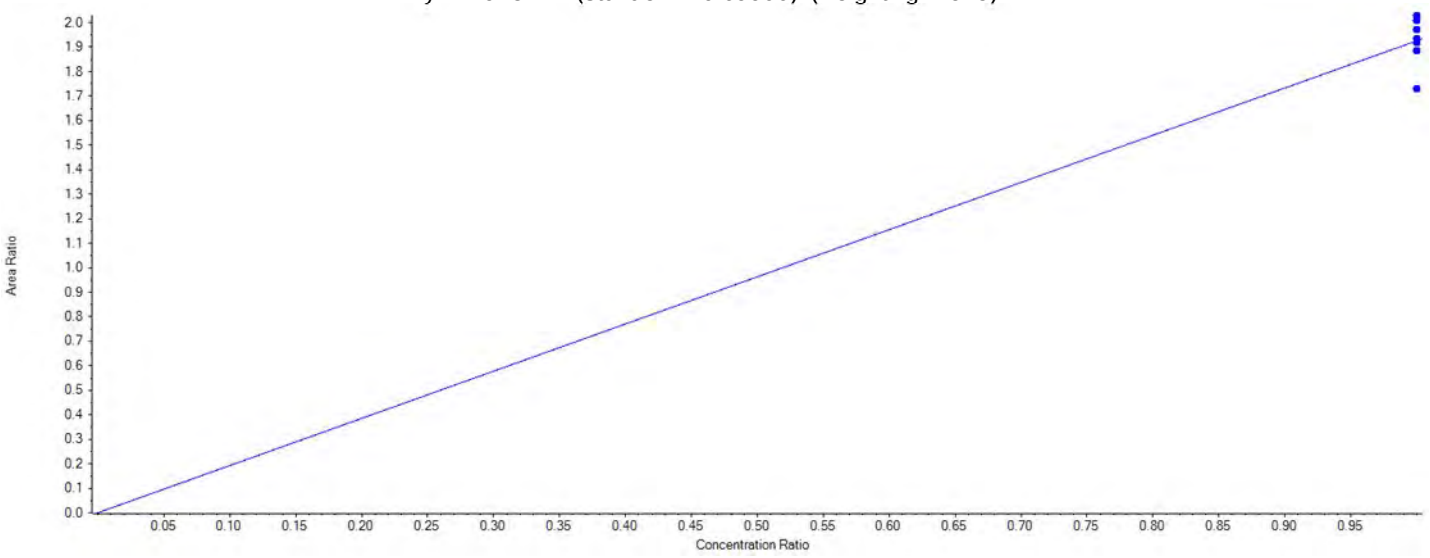
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 1.92577 x (std. dev. = 0.09966) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	545413.19	281654.75	True	5.00	1.936	6.05	1.090	5.000	5.028	1	30	
CAL2	532175.35	277324.19	True	5.00	1.919	6.06	1.090	5.000	4.982	0	30	
CAL3	549542.28	278743.89	True	5.00	1.971	6.06	1.090	5.000	5.119	2	30	
CAL4	521514.09	301327.18	True	5.00	1.731	6.05	1.090	5.000	4.494	-10	30	
CAL5	507556.82	269315.72	True	5.00	1.885	6.04	1.090	5.000	4.893	-2	30	
CAL6	477105.49	237446.93	True	5.00	2.009	6.06	1.090	5.000	5.217	4	30	
CAL7	474393.79	233825.07	True	5.00	2.029	6.04	1.090	5.000	5.268	5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

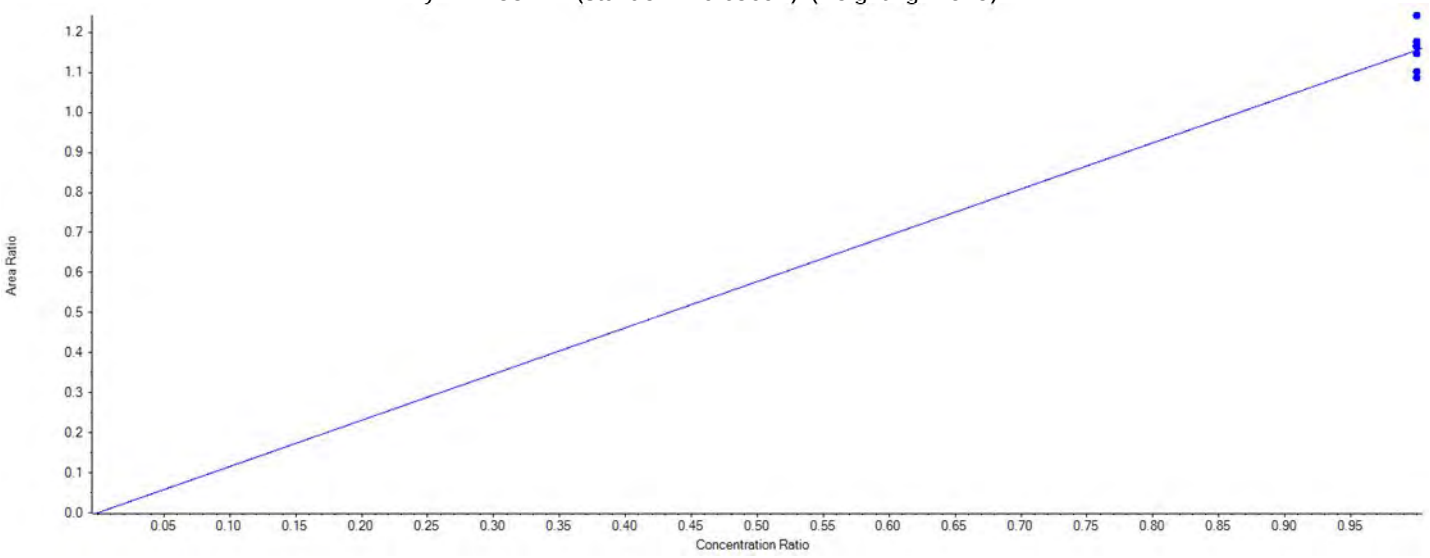
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 1.15541 x (std. dev. = 0.05092) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	349854.47	281654.75	True	5.00	1.242	6.09	1.090	5.000	5.375	8	30	
CAL2	323456.51	277324.19	True	5.00	1.166	6.09	1.090	5.000	5.047	1	30	
CAL3	307355.43	278743.89	True	5.00	1.103	6.09	1.090	5.000	4.772	-5	30	
CAL4	327796.39	301327.18	True	5.00	1.088	6.09	1.090	5.000	4.708	-6	30	
CAL5	316777.82	269315.72	True	5.00	1.176	6.08	1.090	5.000	5.090	2	30	
CAL6	272638.97	237446.93	True	5.00	1.148	6.09	1.090	5.000	4.969	-1	30	
CAL7	272283.14	233825.07	True	5.00	1.164	6.08	1.090	5.000	5.039	1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

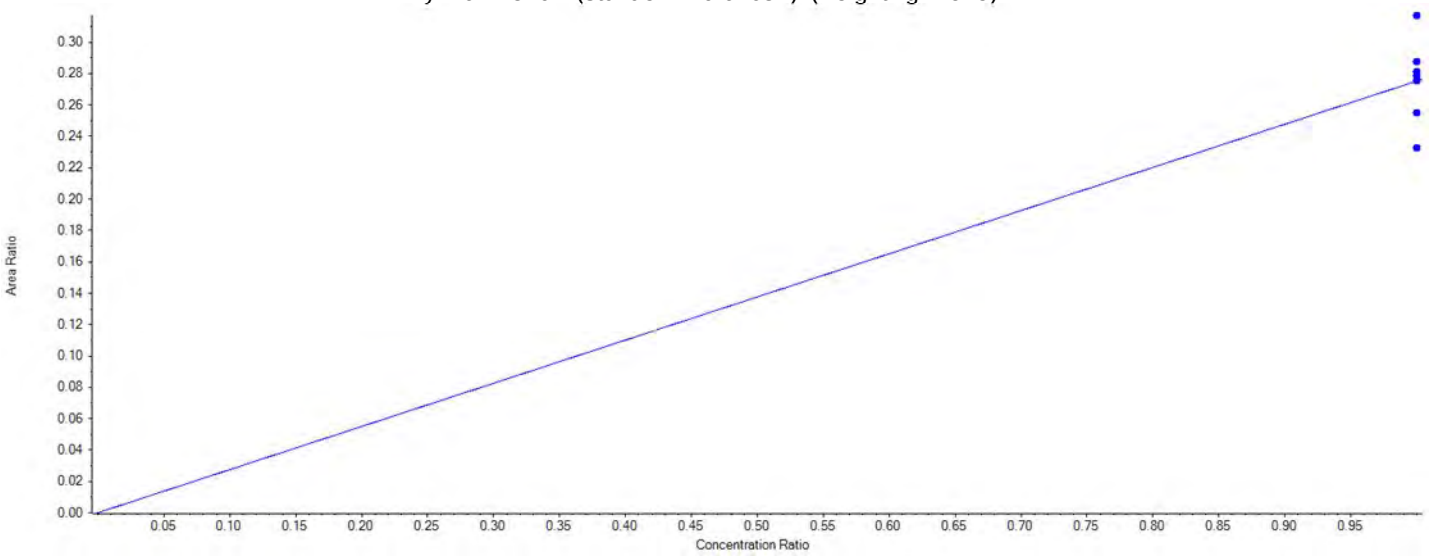
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.27520 x (std. dev. = 0.02631) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	78396.49	281654.75	True	5.00	0.278	6.10	1.100	5.000	5.057	1	30	
CAL2	77893.24	277324.19	True	5.00	0.281	6.11	1.100	5.000	5.103	2	30	
CAL3	76782.89	278743.89	True	5.00	0.275	6.11	1.100	5.000	5.005	0	30	
CAL4	70122.47	301327.18	True	5.00	0.233	6.10	1.100	5.000	4.228	-15	30	
CAL5	68615.66	269315.72	True	5.00	0.255	6.09	1.100	5.000	4.629	-7	30	
CAL6	68215.94	237446.93	True	5.00	0.287	6.11	1.100	5.000	5.220	4	30	
CAL7	74110.30	233825.07	True	5.00	0.317	6.09	1.100	5.000	5.758	15	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

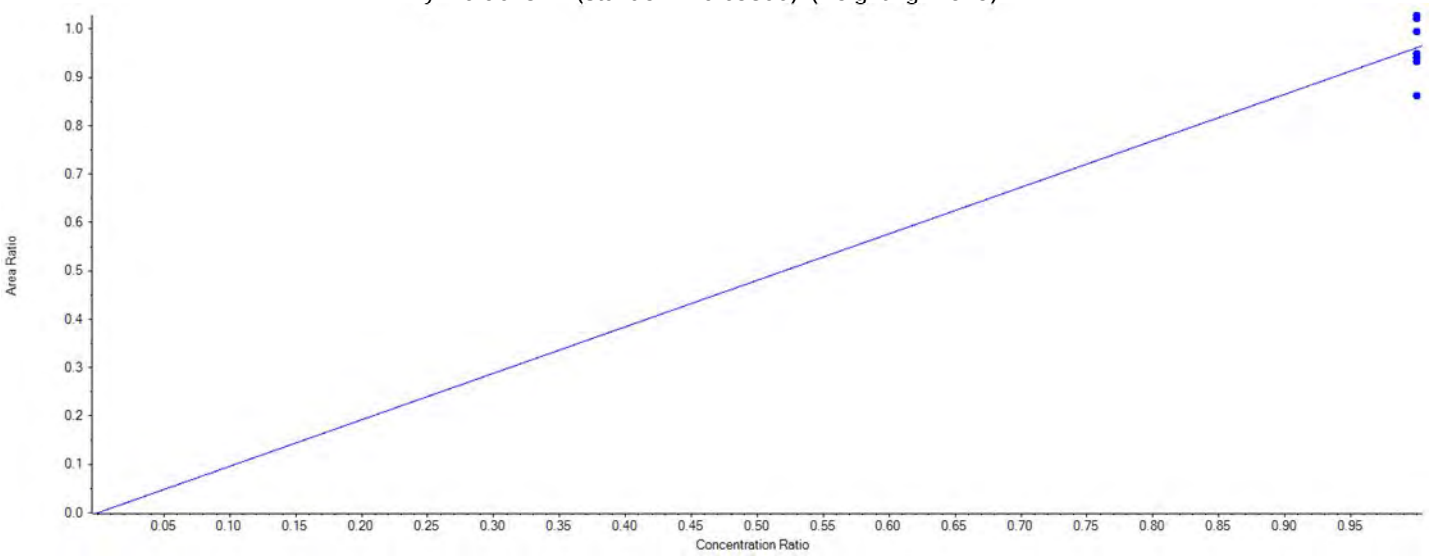
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.96134 x (std. dev. = 0.05866) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	280311.62	281654.75	True	5.00	0.995	6.24	1.120	5.000	5.176	4	30	
CAL2	261195.61	277324.19	True	5.00	0.942	6.25	1.120	5.000	4.899	-2	30	
CAL3	259792.28	278743.89	True	5.00	0.932	6.25	1.120	5.000	4.847	-3	30	
CAL4	259467.37	301327.18	True	5.00	0.861	6.24	1.120	5.000	4.479	-10	30	
CAL5	255767.75	269315.72	True	5.00	0.950	6.23	1.120	5.000	4.939	-1	30	
CAL6	242587.53	237446.93	True	5.00	1.022	6.25	1.120	5.000	5.314	6	30	
CAL7	240346.47	233825.07	True	5.00	1.028	6.23	1.120	5.000	5.346	7	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

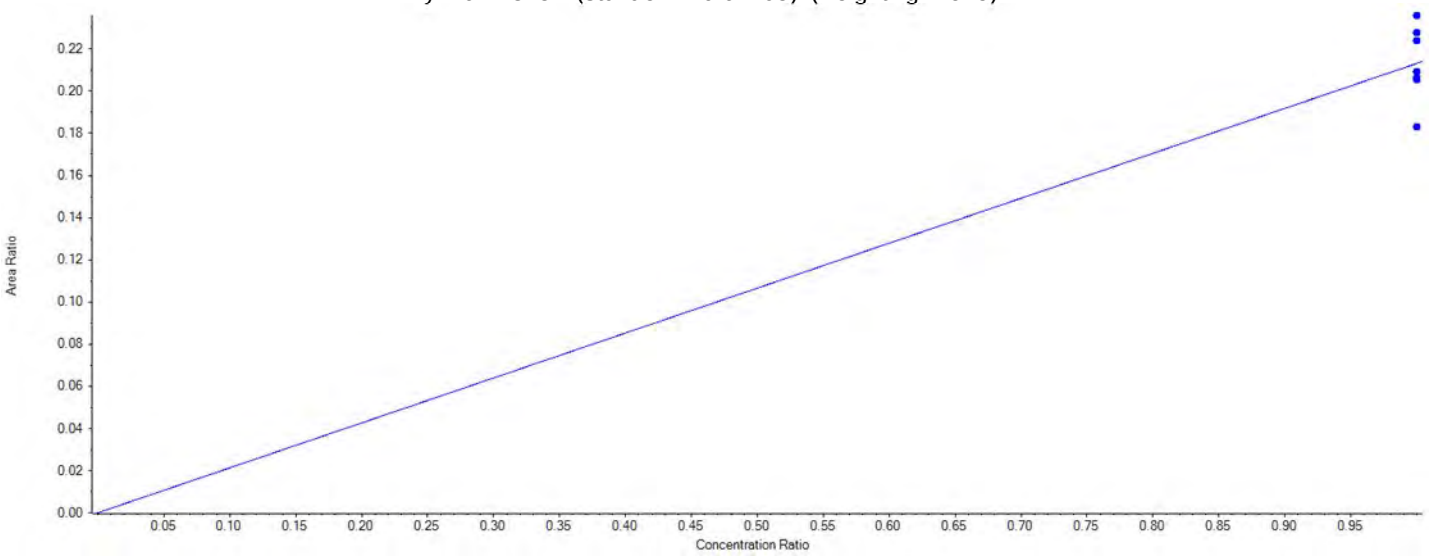
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.21315 x (std. dev. = 0.01765) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	63047.06	281654.75	True	5.00	0.224	6.26	1.130	5.000	5.251	5	30	
CAL2	58073.45	277324.19	True	5.00	0.209	6.27	1.130	5.000	4.912	-2	30	
CAL3	57485.89	278743.89	True	5.00	0.206	6.27	1.130	5.000	4.838	-3	30	
CAL4	55177.27	301327.18	True	5.00	0.183	6.26	1.130	5.000	4.296	-14	30	
CAL5	55378.45	269315.72	True	5.00	0.206	6.25	1.130	5.000	4.824	-4	30	
CAL6	56004.04	237446.93	True	5.00	0.236	6.27	1.130	5.000	5.533	11	30	
CAL7	53297.85	233825.07	True	5.00	0.228	6.25	1.130	5.000	5.347	7	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

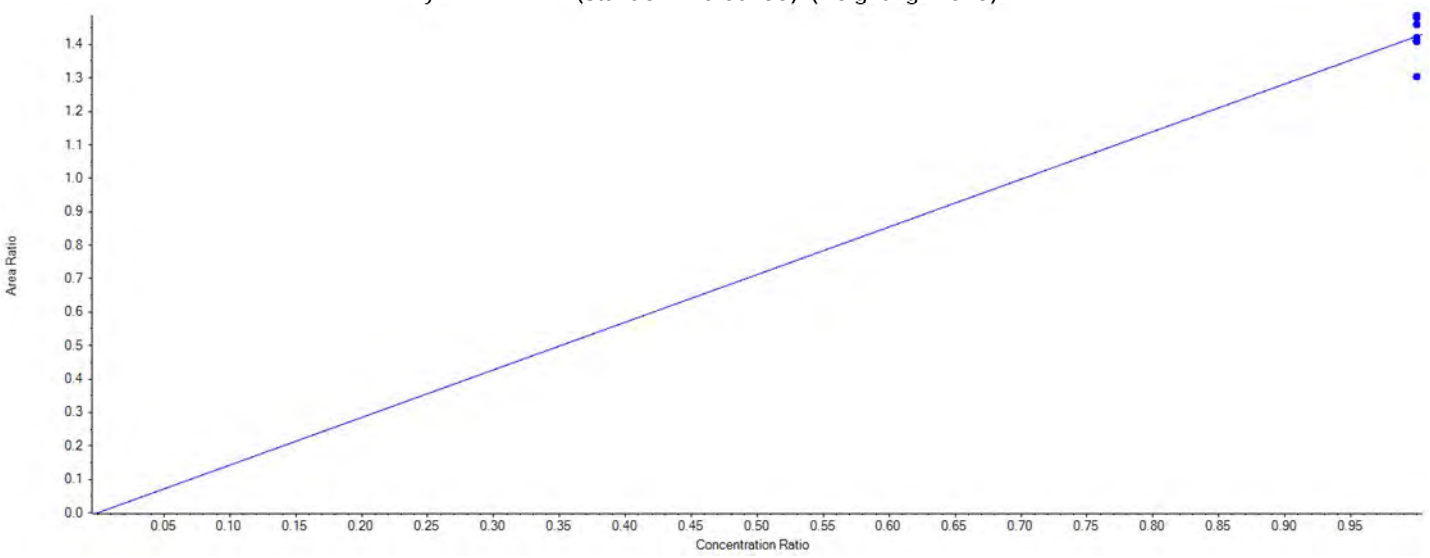
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.42422 x (std. dev. = 0.06255) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	410633.04	281654.75	True	5.00	1.458	6.43	1.160	5.000	5.118	2	30	
CAL2	394146.24	277324.19	True	5.00	1.421	6.43	1.160	5.000	4.990	0	30	
CAL3	393544.94	278743.89	True	5.00	1.412	6.43	1.160	5.000	4.957	-1	30	
CAL4	392356.63	301327.18	True	5.00	1.302	6.43	1.160	5.000	4.571	-9	30	
CAL5	379571.56	269315.72	True	5.00	1.409	6.42	1.160	5.000	4.948	-1	30	
CAL6	352892.21	237446.93	True	5.00	1.486	6.43	1.160	5.000	5.218	4	30	
CAL7	346256.59	233825.07	True	5.00	1.481	6.42	1.160	5.000	5.199	4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

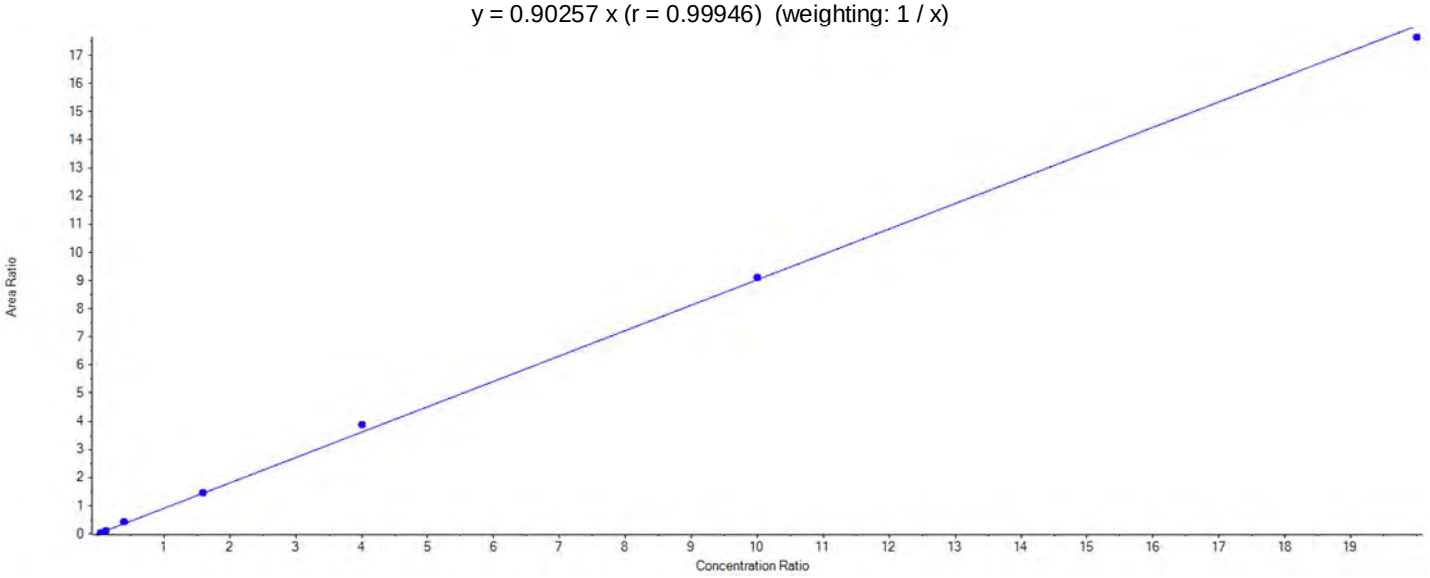
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.90257 x (r = 0.99946) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32322.94	189.9	763334.27	True	5.00	0.042	3.27	1.000	0.200	0.235	17	30	
CAL2	80396.23	328.7	771445.80	True	5.00	0.104	3.27	1.000	0.600	0.577	-4	30	
CAL3	303228.65	603.0	733360.15	True	5.00	0.413	3.27	1.000	2.000	2.291	15	30	
CAL4	1068414.88	996.7	726395.96	True	5.00	1.471	3.26	1.000	8.000	8.148	2	30	
CAL5	2700090.79	1579.9	698871.91	True	5.00	3.863	3.26	1.000	20.000	21.403	7	30	
CAL6	5765353.41	2132.7	633648.38	True	5.00	9.099	3.26	1.000	50.000	50.404	1	30	
CAL7	9834601.68	2326.7	557392.78	True	5.00	17.644	3.25	1.000	100.000	97.743	-2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

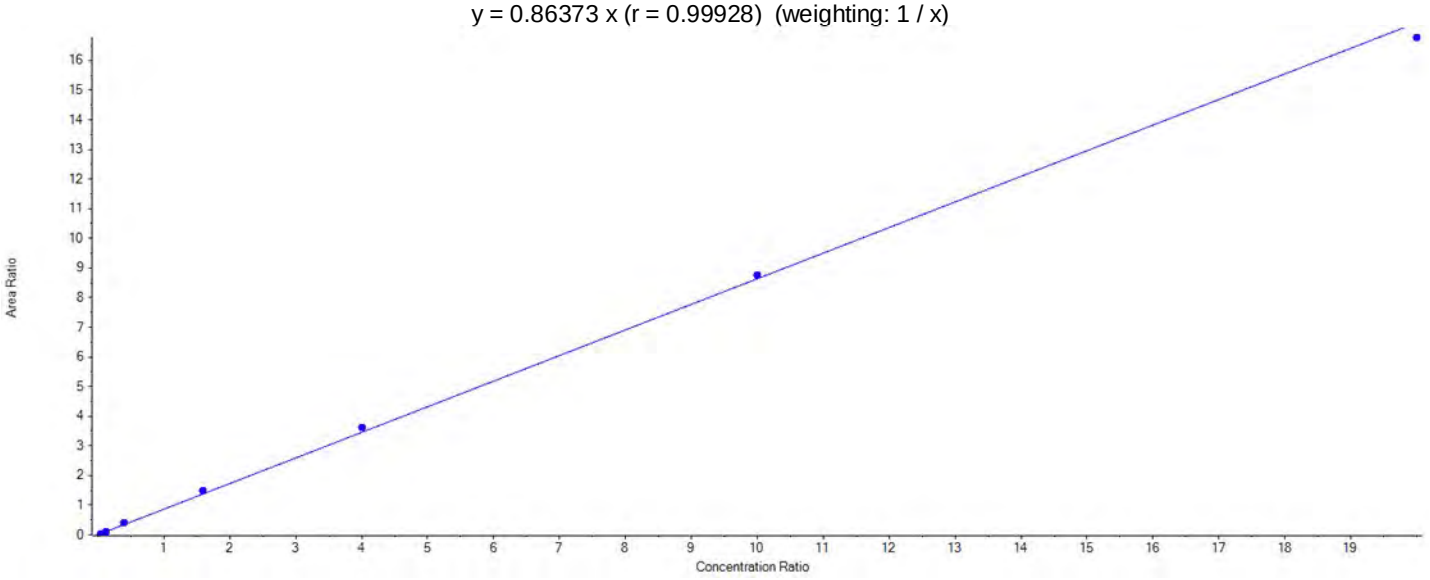
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 0.86373 x (r = 0.99928) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32633.13	78.7	771179.39	True	5.00	0.042	3.77	1.000	0.200	0.245	22	30	
CAL2	84319.38	153.0	738194.74	True	5.00	0.114	3.77	1.000	0.600	0.661	10	30	
CAL3	292715.83	240.6	695805.67	True	5.00	0.421	3.77	1.000	2.000	2.435	22	30	
CAL4	1075643.54	403.4	716206.93	True	5.00	1.502	3.76	1.000	8.000	8.694	9	30	
CAL5	2660895.37	642.6	734598.25	True	5.00	3.622	3.76	1.000	20.000	20.969	5	30	
CAL6	5570221.70	1016.0	635977.79	True	5.00	8.759	3.77	1.000	50.000	50.702	1	30	
CAL7	9756431.51	1095.7	581688.66	True	5.00	16.773	3.75	1.000	100.000	97.094	-3	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

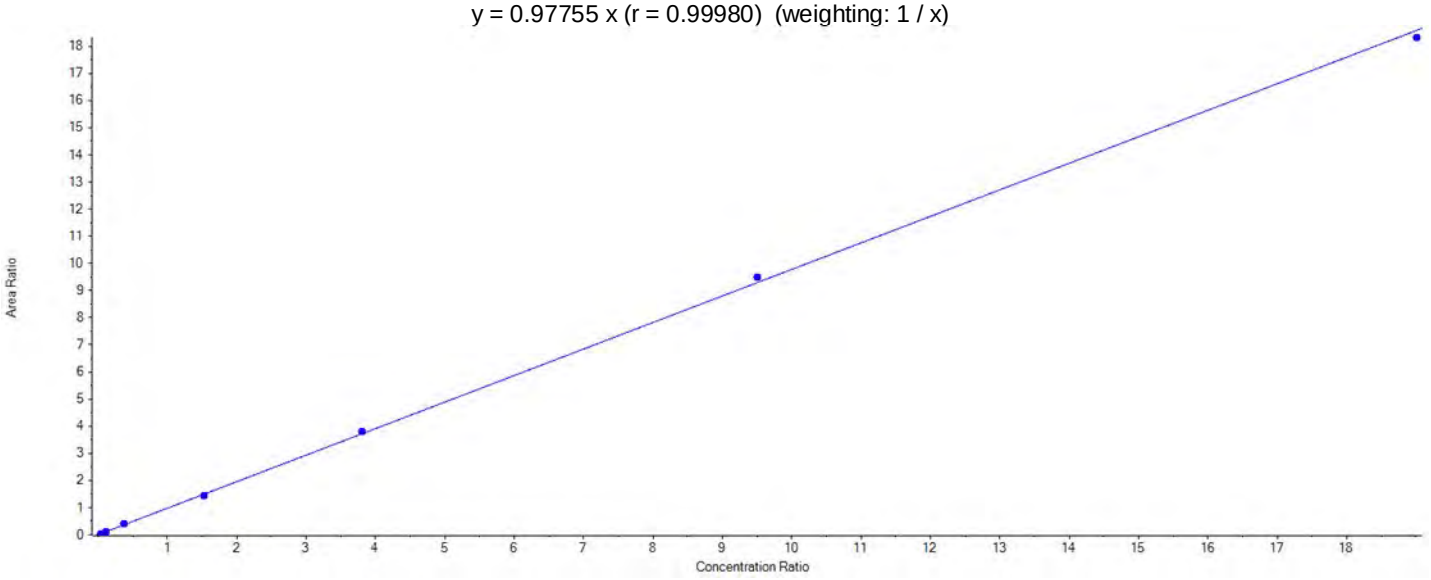
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.97755 x (r = 0.99980) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18010.03	456.9	445963.43	True	4.65	0.040	3.81	1.000	0.177	0.192	9	30	
CAL2	44885.16	959.4	418860.68	True	4.65	0.107	3.82	1.000	0.531	0.510	-4	30	
CAL3	168144.64	1287.7	416352.75	True	4.65	0.404	3.82	1.000	1.770	1.921	9	30	
CAL4	617045.58	2604.2	425015.72	True	4.65	1.452	3.81	1.000	7.080	6.906	-2	30	
CAL5	1630613.49	4013.6	428050.64	True	4.65	3.809	3.80	1.000	17.700	18.121	2	30	
CAL6	3588084.15	4714.2	378676.81	True	4.65	9.475	3.81	1.000	44.200	45.072	2	30	
CAL7	6615935.34	4086.7	361166.00	True	4.65	18.318	3.80	1.000	88.400	87.136	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

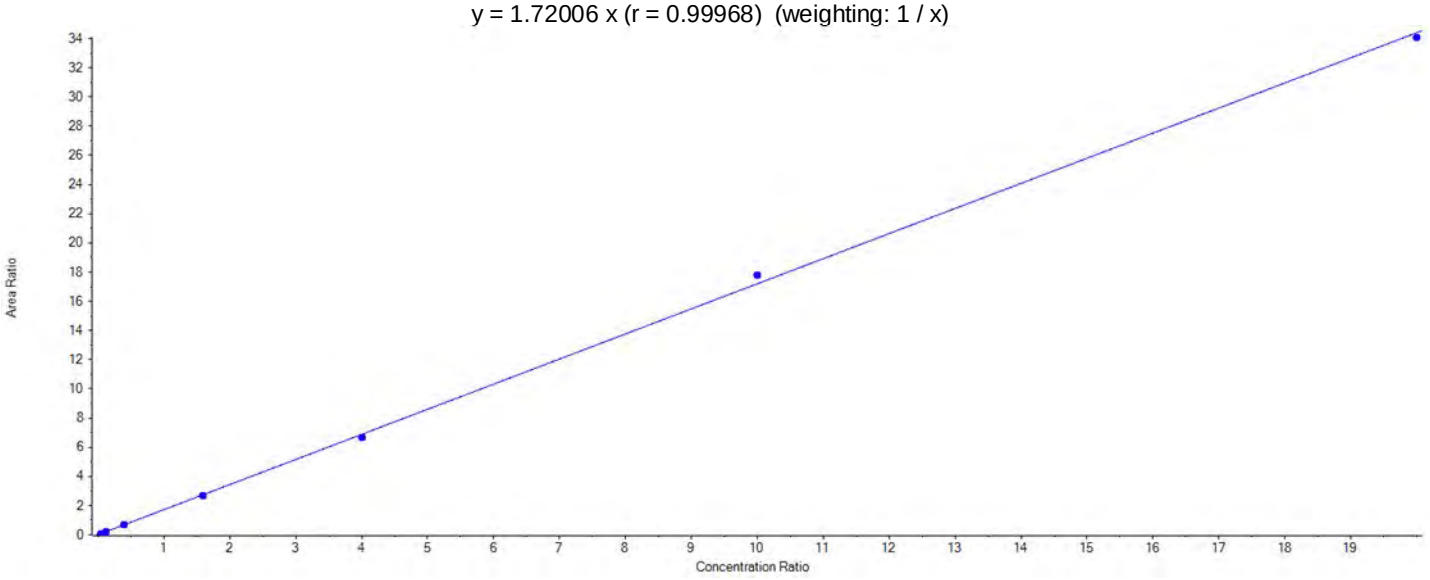
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.72006 x (r = 0.99968) (weighting: 1 / x)



Component Calibration Verification

Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3636.36	188.8	51494.57	True	4.67	0.071	4.13	1.000	0.187	0.192	3	30	
CAL2	8803.96	391.1	46141.76	True	4.67	0.191	4.13	1.000	0.560	0.518	-7	30	
CAL3	34188.48	932.2	47514.79	True	4.67	0.720	4.13	1.000	1.870	1.954	4	30	
CAL4	126396.51	2063.7	47246.37	True	4.67	2.675	4.13	1.000	7.470	7.263	-3	30	
CAL5	344695.89	2546.9	51791.87	True	4.67	6.655	4.12	1.000	18.700	18.070	-3	30	
CAL6	738293.95	3115.2	41422.17	True	4.67	17.824	4.13	1.000	46.700	48.392	4	30	
CAL7	1379983.90	3342.5	40505.09	True	4.67	34.069	4.11	1.000	93.400	92.499	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

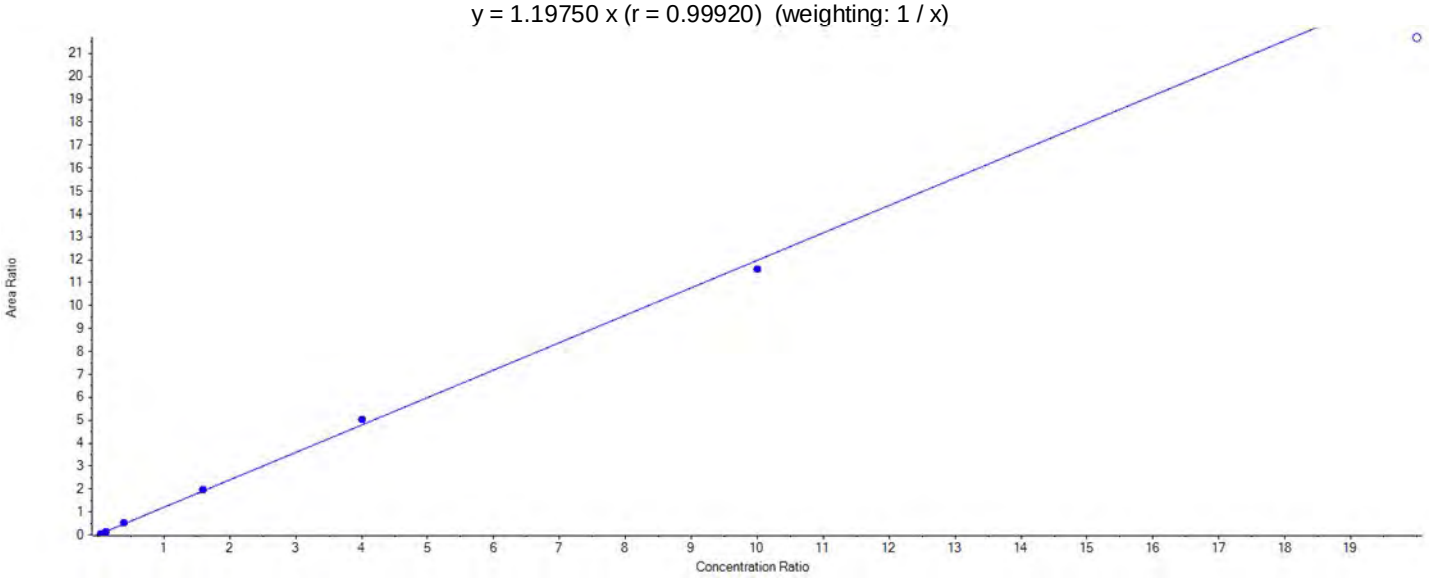
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.19750 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39108.19	254.9	664975.88	True	5.00	0.059	4.16	1.000	0.200	0.246	23	30	
CAL2	96559.34	367.8	648170.06	True	5.00	0.149	4.16	1.000	0.600	0.622	4	30	
CAL3	352013.45	713.4	646783.50	True	5.00	0.544	4.17	1.000	2.000	2.272	14	30	
CAL4	1265231.12	1181.4	641195.85	True	5.00	1.973	4.16	1.000	8.000	8.239	3	30	
CAL5	3158486.41	1640.8	628952.79	True	5.00	5.022	4.15	1.000	20.000	20.968	5	30	
CAL6	6593778.96	2095.1	568205.82	True	5.00	11.605	4.16	1.000	50.000	48.453	-3	30	
CAL7	11059420.28	2611.8	509807.95	False	5.00	21.693	4.15	1.000	100.000	90.577	-9	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

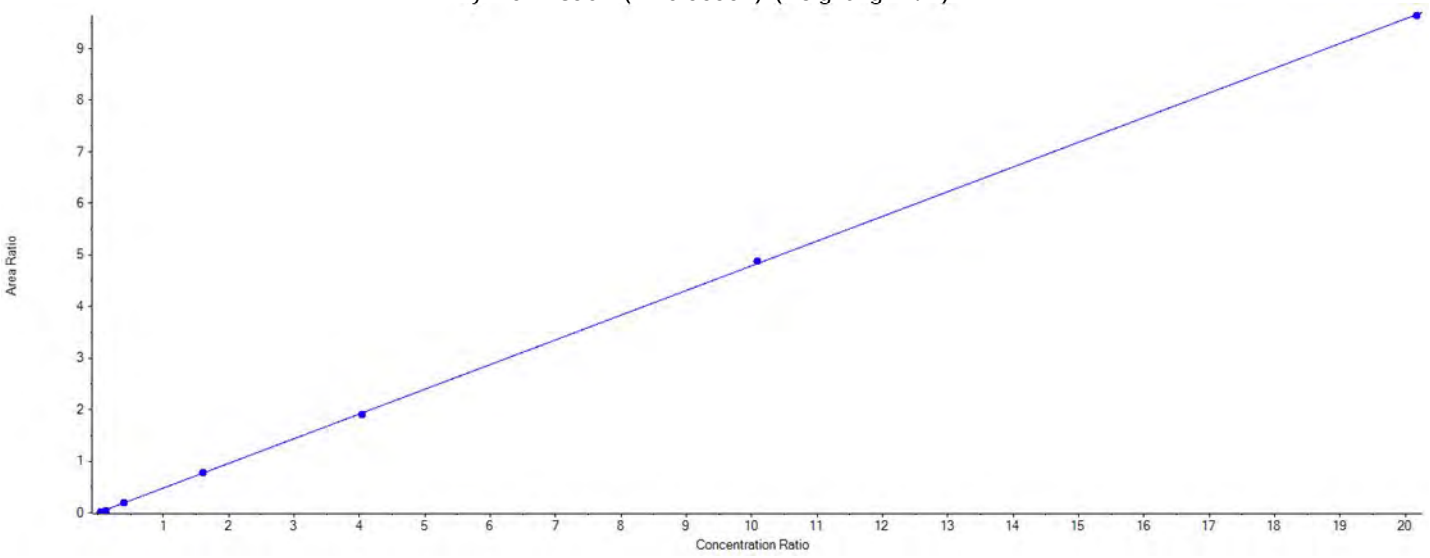
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.47896 x (r = 0.99991) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	9620.09	321.5	445963.43	True	4.65	0.022	4.18	1.100	0.188	0.209	11	30	
CAL2	20295.04	611.8	418860.68	True	4.65	0.048	4.19	1.100	0.563	0.470	-16	30	
CAL3	84071.24	1175.2	416352.75	True	4.65	0.202	4.19	1.100	1.880	1.960	4	30	
CAL4	328681.66	3455.2	425015.72	True	4.65	0.773	4.18	1.100	7.500	7.508	0	30	
CAL5	815928.18	2443.7	428050.64	True	4.65	1.906	4.17	1.100	18.800	18.506	-2	30	
CAL6	1847826.78	3263.9	378676.81	True	4.65	4.880	4.18	1.100	46.900	47.375	1	30	
CAL7	3482095.87	4201.9	361166.00	True	4.65	9.641	4.17	1.100	93.800	93.602	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

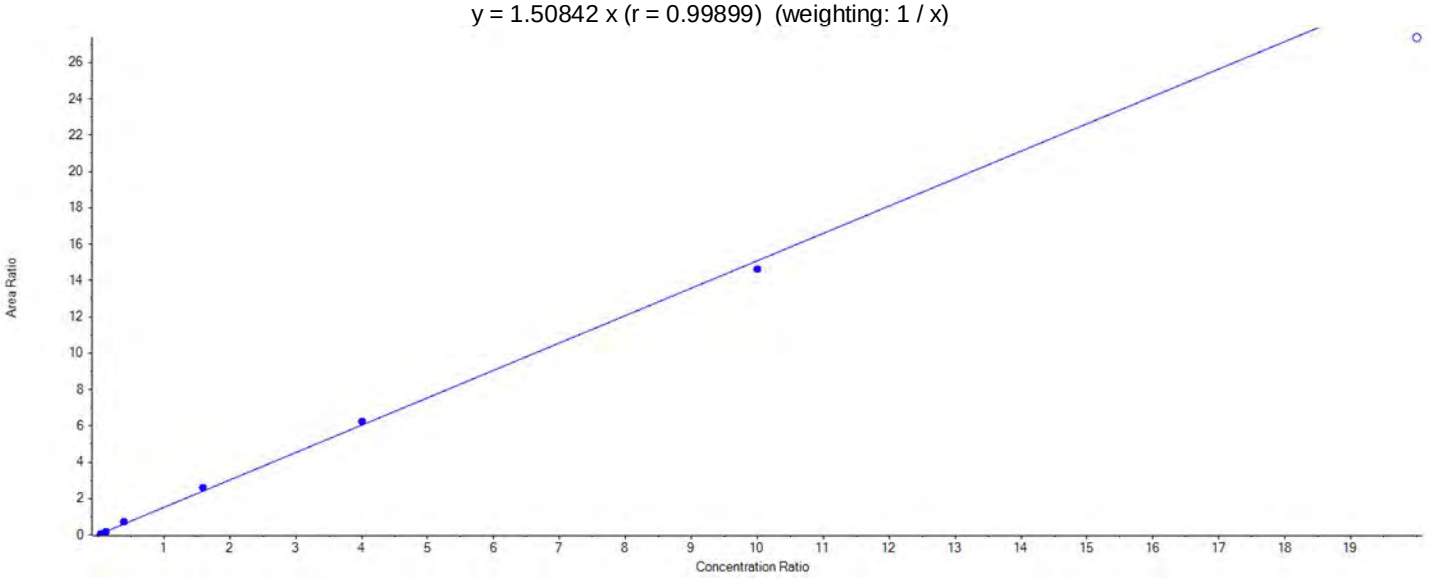
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.50842 x (r = 0.99899) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	37545.37	111.6	528473.49	True	5.00	0.071	4.55	1.000	0.200	0.235	18	30	
CAL2	95048.34	255.2	532987.49	True	5.00	0.178	4.55	1.000	0.600	0.591	-1	30	
CAL3	355834.18	621.3	503681.03	True	5.00	0.706	4.56	1.000	2.000	2.342	17	30	
CAL4	1318774.50	846.6	509151.78	True	5.00	2.590	4.55	1.000	8.000	8.586	7	30	
CAL5	3269561.01	1266.8	525802.05	True	5.00	6.218	4.54	1.000	20.000	20.612	3	30	
CAL6	6648455.32	1607.4	455005.81	True	5.00	14.612	4.55	1.000	50.000	48.434	-3	30	
CAL7	10981922.82	1824.2	401203.88	False	5.00	27.372	4.54	1.000	100.000	90.732	-9	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

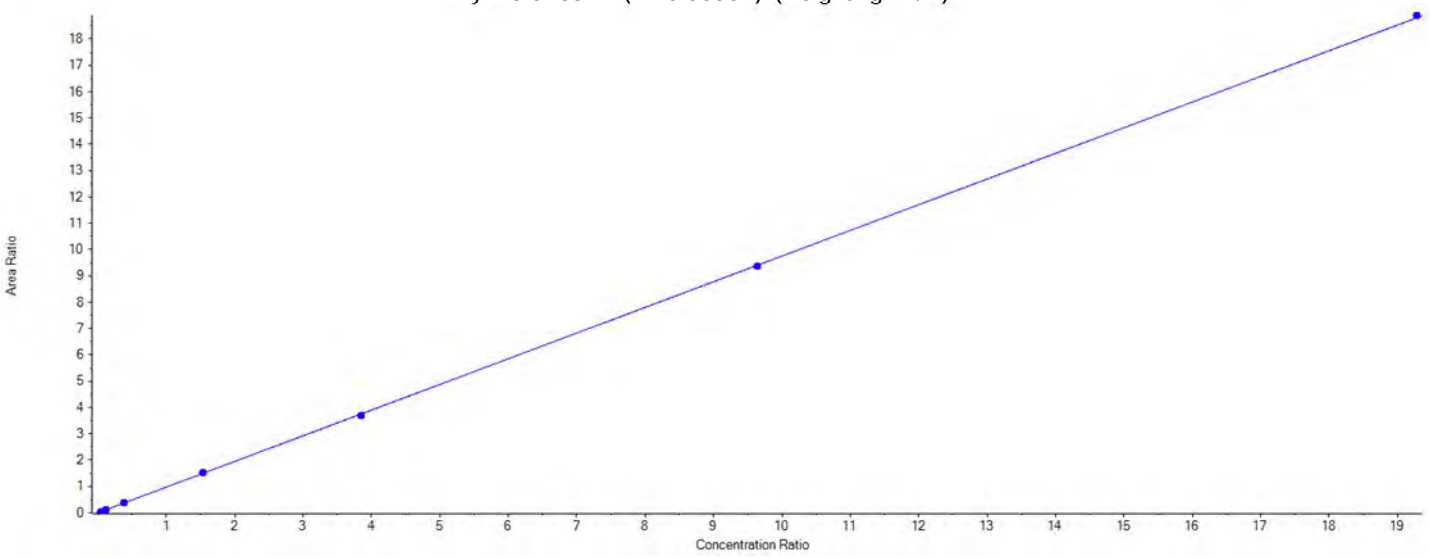
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 0.97552 x (r = 0.99992) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12858.11	420.7	327944.53	True	4.73	0.039	4.55	1.000	0.182	0.190	4	30	
CAL2	31064.73	21916.1	320400.37	True	4.73	0.097	4.56	1.000	0.547	0.470	-14	30	
CAL3	125622.02	1397.4	317243.20	True	4.73	0.396	4.56	1.000	1.820	1.920	5	30	
CAL4	479290.97	1690.0	315722.63	True	4.73	1.518	4.55	1.000	7.300	7.361	1	30	
CAL5	1138604.25	1511.8	309304.49	True	4.73	3.681	4.54	1.000	18.200	17.849	-2	30	
CAL6	2662852.00	1747.2	284116.51	True	4.73	9.372	4.55	1.000	45.600	45.444	0	30	
CAL7	5048349.82	1449.1	267182.79	True	4.73	18.895	4.54	1.000	91.200	91.615	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

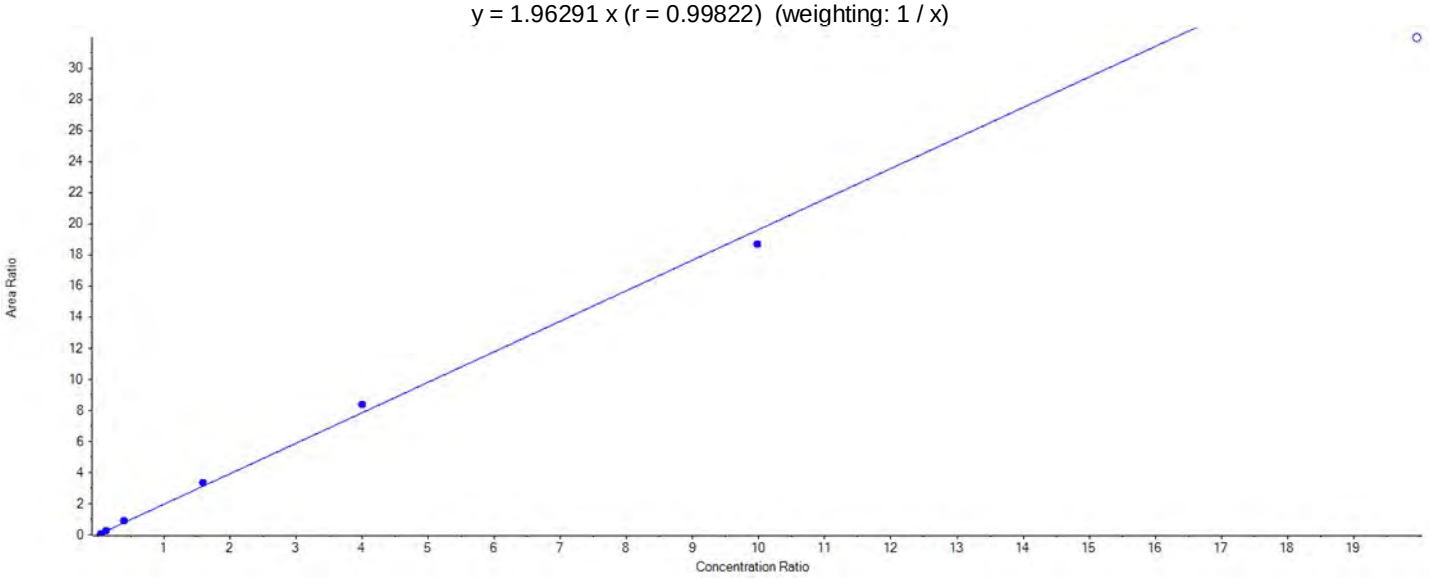
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.96291 x (r = 0.99822) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2683.12	289.4	35455.22	True	4.75	0.076	4.90	1.000	0.190	0.183	-4	30	
CAL2	8048.37	680.8	35585.69	True	4.75	0.226	4.91	1.000	0.569	0.547	-4	30	
CAL3	28084.91	4492.0	31706.42	True	4.75	0.886	4.91	1.000	1.900	2.143	13	30	
CAL4	107470.62	1876.3	31883.28	True	4.75	3.371	4.91	1.000	7.580	8.157	8	30	
CAL5	260254.34	2335.4	31012.00	True	4.75	8.392	4.90	1.000	19.000	20.308	7	30	
CAL6	523949.46	2243.2	27988.49	True	4.75	18.720	4.91	1.000	47.400	45.301	-4	30	
CAL7	869227.19	3021.8	27180.24	False	4.75	31.980	4.89	1.000	94.800	77.388	-18	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

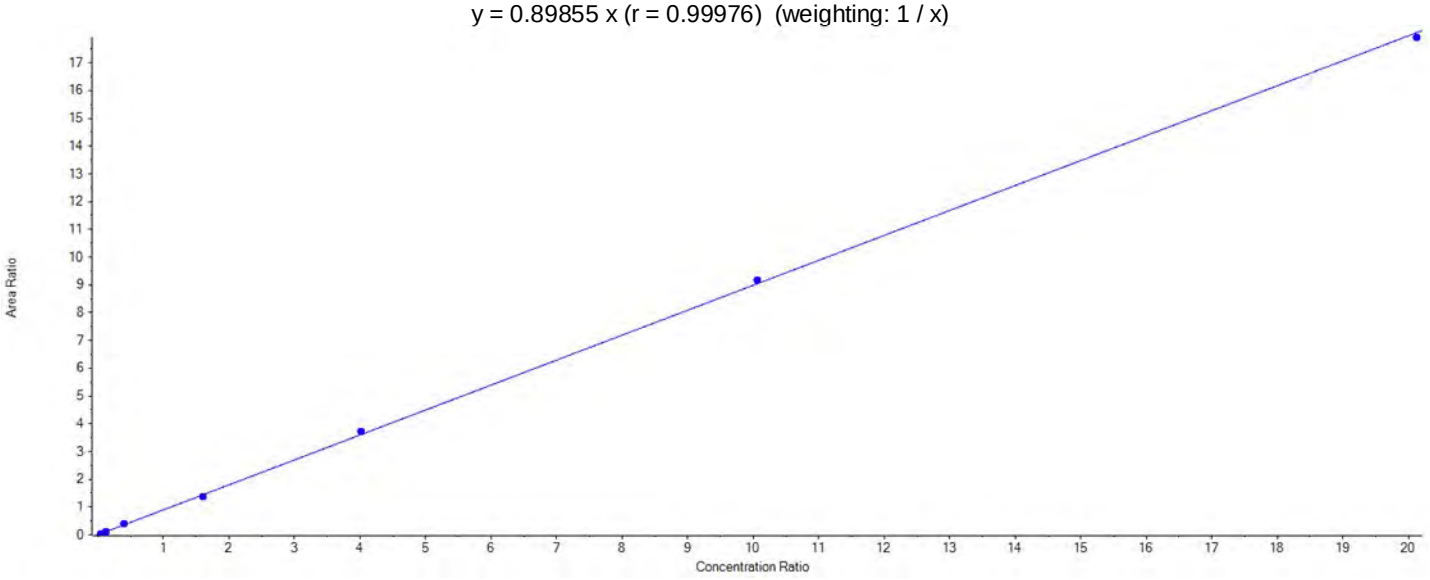
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.89855 x (r = 0.99976) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13262.78	924.7	327944.53	True	4.73	0.040	4.91	1.080	0.190	0.213	12	30	
CAL2	29902.32	1651.5	320400.37	True	4.73	0.093	4.92	1.080	0.571	0.491	-14	30	
CAL3	125907.86	2910.0	317243.20	True	4.73	0.397	4.92	1.080	1.900	2.089	10	30	
CAL4	434949.18	2606.3	315722.63	True	4.73	1.378	4.91	1.080	7.610	7.252	-5	30	
CAL5	1145559.80	3668.3	309304.49	True	4.73	3.704	4.90	1.080	19.000	19.496	3	30	
CAL6	2604868.63	3378.5	284116.51	True	4.73	9.168	4.91	1.080	47.600	48.262	1	30	
CAL7	4784682.82	2777.4	267182.79	True	4.73	17.908	4.90	1.080	95.200	94.267	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

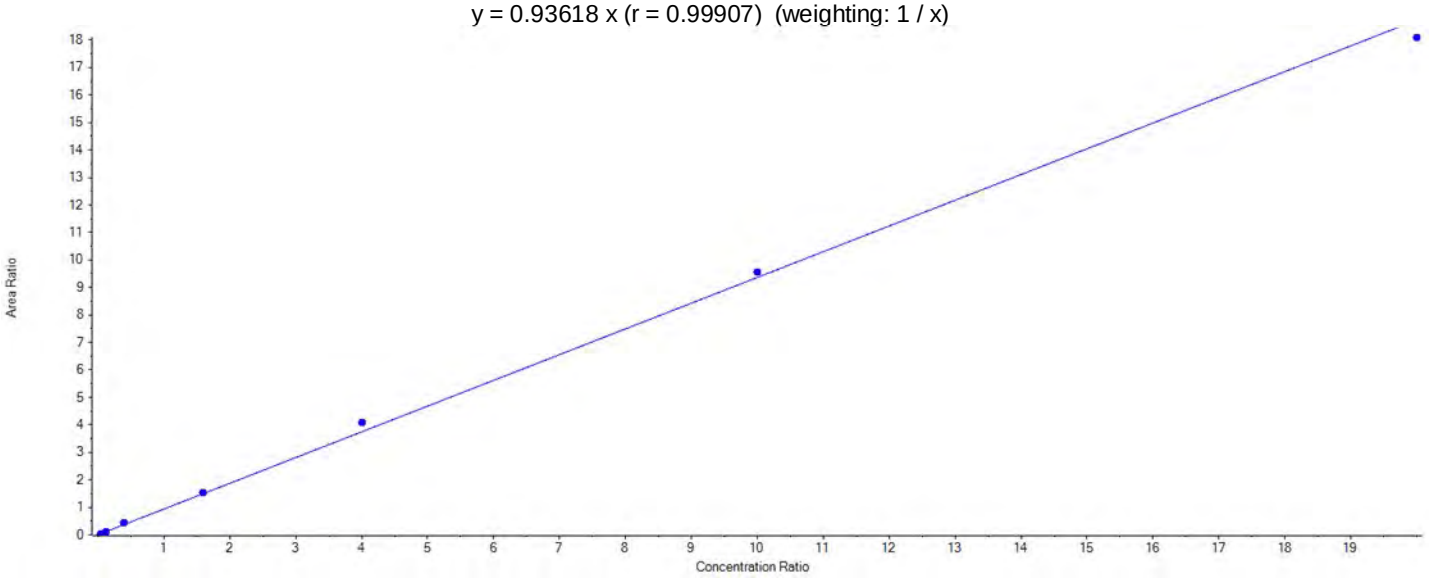
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.93618 x (r = 0.99907) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	41467.99	187.1	912537.72	True	5.00	0.045	4.92	1.000	0.200	0.243	21	30	
CAL2	100710.53	331.7	892584.21	True	5.00	0.113	4.93	1.000	0.600	0.603	0	30	
CAL3	372258.90	744.4	878868.48	True	5.00	0.424	4.93	1.000	2.000	2.262	13	30	
CAL4	1327086.09	1187.5	863597.26	True	5.00	1.537	4.92	1.000	8.000	8.207	3	30	
CAL5	3291549.40	1816.2	805288.72	True	5.00	4.087	4.91	1.000	20.000	21.830	9	30	
CAL6	6758642.79	2708.4	707130.31	True	5.00	9.558	4.92	1.000	50.000	51.047	2	30	
CAL7	10991740.12	2902.7	607669.53	True	5.00	18.088	4.91	1.000	100.000	96.608	-3	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

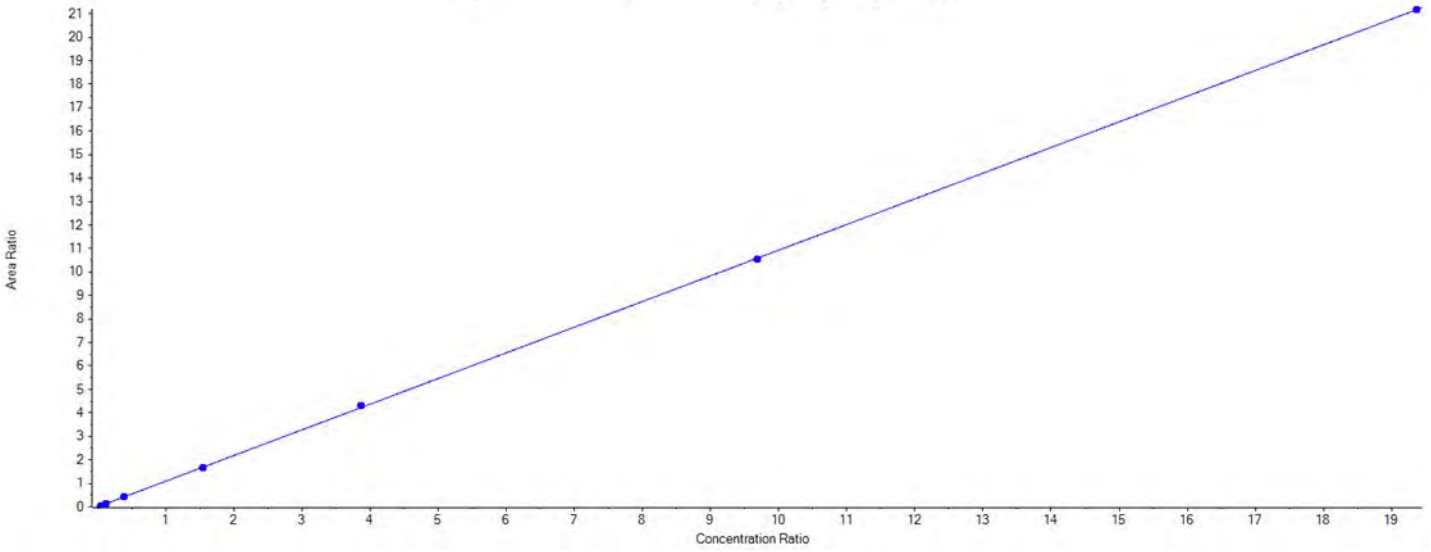
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 1.09305 x (r = 0.99997) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13088.49	581.9	283127.43	True	4.78	0.046	5.25	1.000	0.185	0.202	9	30	
CAL2	32300.98	342.7	271778.84	True	4.78	0.119	5.25	1.000	0.555	0.520	-6	30	
CAL3	120897.45	739.8	281035.50	True	4.78	0.430	5.25	1.000	1.850	1.881	2	30	
CAL4	448833.83	1353.6	267380.81	True	4.78	1.679	5.25	1.000	7.400	7.341	-1	30	
CAL5	1147826.77	1190.7	267157.61	True	4.78	4.296	5.24	1.000	18.500	18.789	2	30	
CAL6	2664957.22	1191.1	253129.16	True	4.78	10.528	5.25	1.000	46.300	46.040	-1	30	
CAL7	5138366.95	1123.0	242617.53	True	4.78	21.179	5.24	1.000	92.600	92.617	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

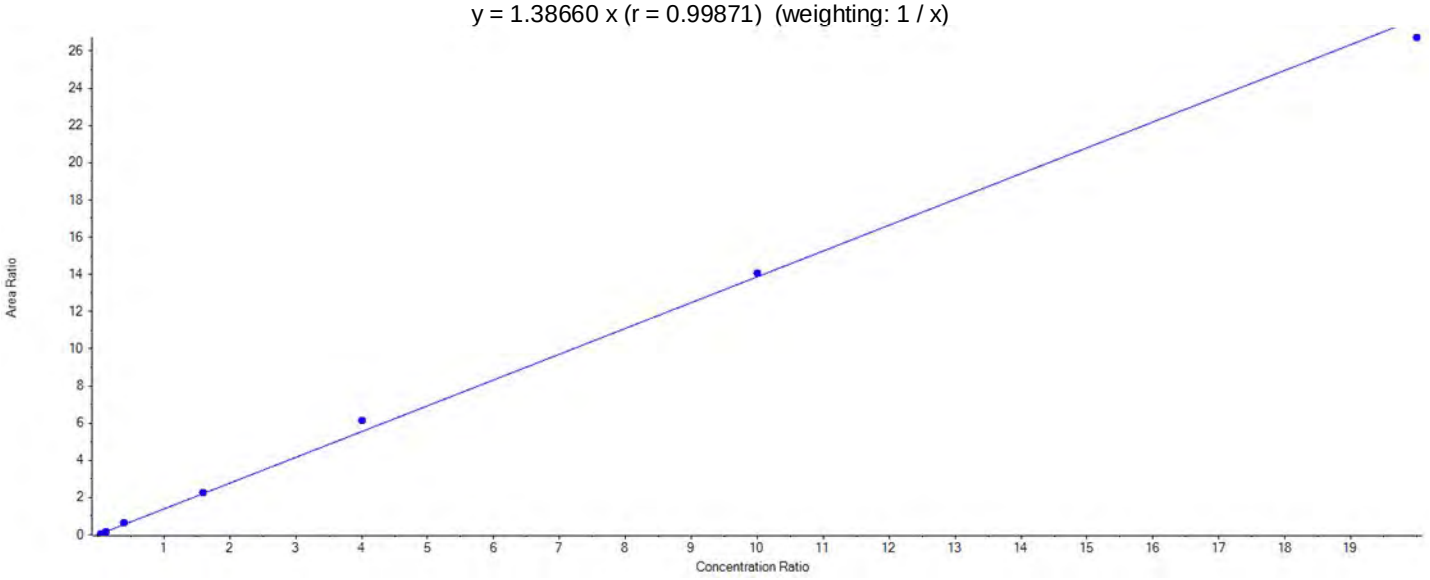
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.38660 x (r = 0.99871) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29660.05	270.7	479931.43	True	5.00	0.062	5.26	1.000	0.200	0.223	11	30	
CAL2	80724.19	537.0	451850.14	True	5.00	0.179	5.27	1.000	0.600	0.644	7	30	
CAL3	302323.82	1252.4	455948.85	True	5.00	0.663	5.27	1.000	2.000	2.391	20	30	
CAL4	1106664.23	1697.5	485570.41	True	5.00	2.279	5.26	1.000	8.000	8.218	3	30	
CAL5	2725089.71	2530.1	441776.75	True	5.00	6.168	5.26	1.000	20.000	22.243	11	30	
CAL6	5820576.59	3024.4	413811.35	True	5.00	14.066	5.27	1.000	50.000	50.720	1	30	
CAL7	10084288.28	3917.9	377369.76	True	5.00	26.723	5.25	1.000	100.000	96.360	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

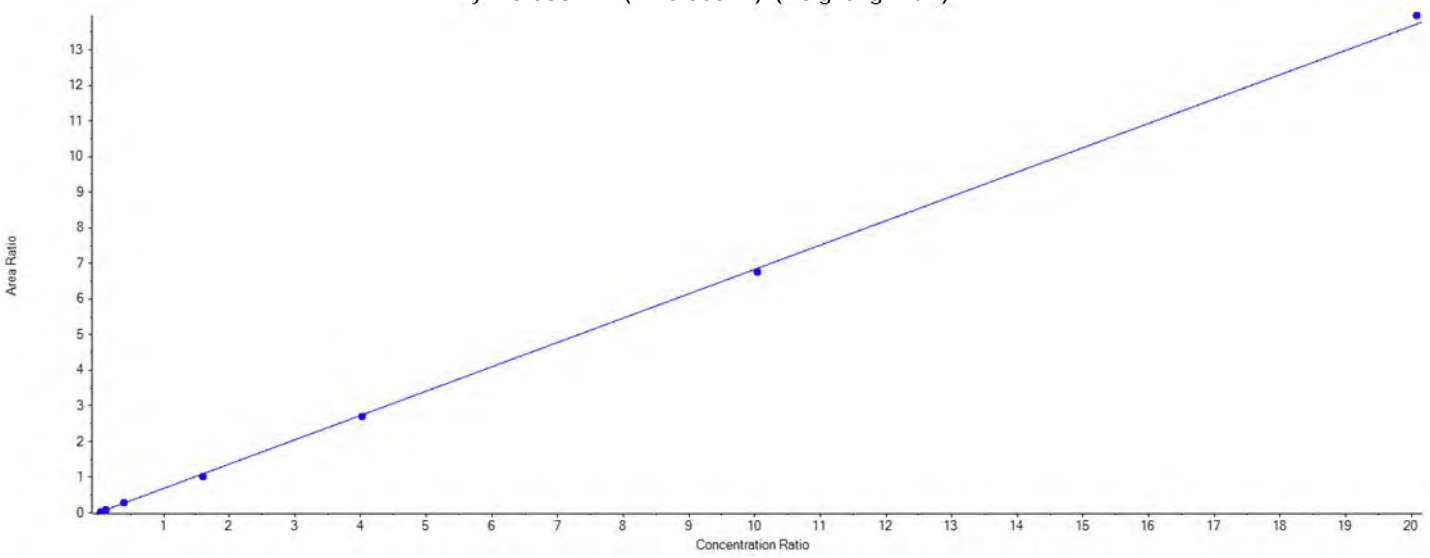
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.68322 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6846.55	64175.9	283127.43	True	4.78	0.024	5.54	1.060	0.192	0.169	-12	30	
CAL2	20326.14	1643.1	271778.84	True	4.78	0.075	5.55	1.060	0.576	0.523	-9	30	
CAL3	76049.00	306613.9	281035.50	True	4.78	0.271	5.55	1.060	1.920	1.893	-1	30	
CAL4	269712.27	3708.3	267380.81	True	4.78	1.009	5.54	1.060	7.680	7.057	-8	30	
CAL5	725402.00	3853.5	267157.61	True	4.78	2.715	5.53	1.060	19.200	18.997	-1	30	
CAL6	1709959.45	3115.5	253129.16	True	4.78	6.755	5.55	1.060	48.000	47.262	-2	30	
CAL7	3386860.46	3789.1	242617.53	True	4.78	13.960	5.53	1.060	96.000	97.666	2	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

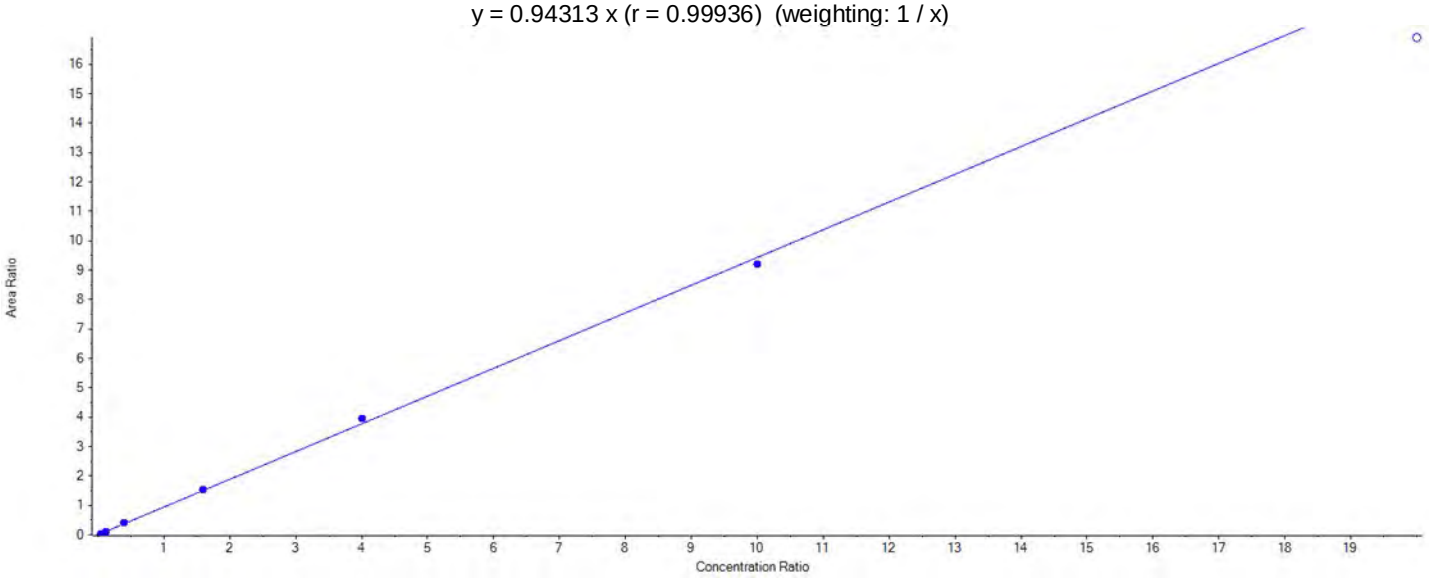
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.94313 x (r = 0.99936) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27488.55	91.3	612577.43	True	5.00	0.045	5.56	1.000	0.200	0.238	19	30	
CAL2	63802.06	156.0	601859.80	True	5.00	0.106	5.57	1.000	0.600	0.562	-6	30	
CAL3	254047.79	380.5	612680.79	True	5.00	0.415	5.57	1.000	2.000	2.198	10	30	
CAL4	941985.31	720.2	612056.47	True	5.00	1.539	5.56	1.000	8.000	8.159	2	30	
CAL5	2309359.54	1113.9	585231.23	True	5.00	3.946	5.56	1.000	20.000	20.920	5	30	
CAL6	4802967.81	1415.3	522613.81	True	5.00	9.190	5.57	1.000	50.000	48.722	-3	30	
CAL7	8104726.61	2024.7	479333.06	False	5.00	16.908	5.55	1.000	100.000	89.640	-10	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

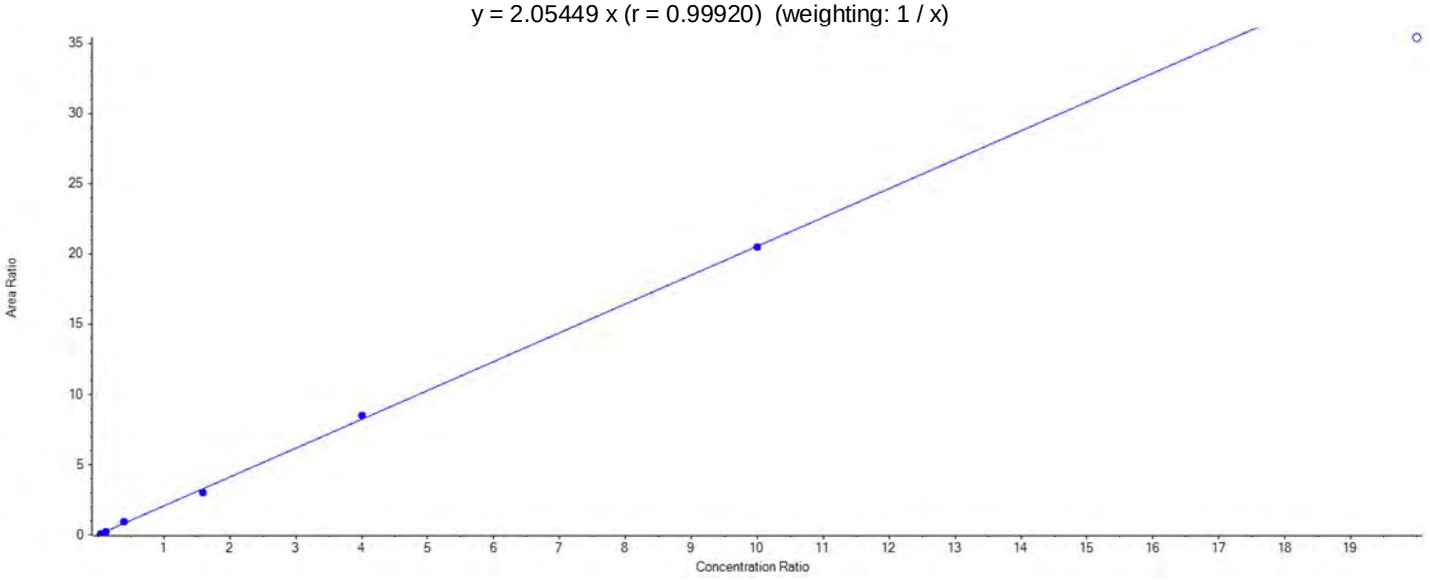
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.05449 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2333.06	294799.1	26445.48	True	4.79	0.088	5.57	1.000	0.192	0.206	7	30	
CAL2	6214.24	6270.0	27639.19	True	4.79	0.225	5.57	1.000	0.575	0.524	-9	30	
CAL3	26295.08	17693.1	29249.84	True	4.79	0.899	5.57	1.000	1.920	2.096	9	30	
CAL4	80922.57	6228.9	27253.46	True	4.79	2.969	5.57	1.000	7.660	6.923	-10	30	
CAL5	206213.12	2630.2	24192.14	True	4.79	8.524	5.56	1.000	19.200	19.873	4	30	
CAL6	469719.63	3836.0	22899.00	True	4.79	20.513	5.57	1.000	47.900	47.825	0	30	
CAL7	804019.53	2307.7	22710.95	False	4.79	35.402	5.56	1.000	95.800	82.540	-14	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

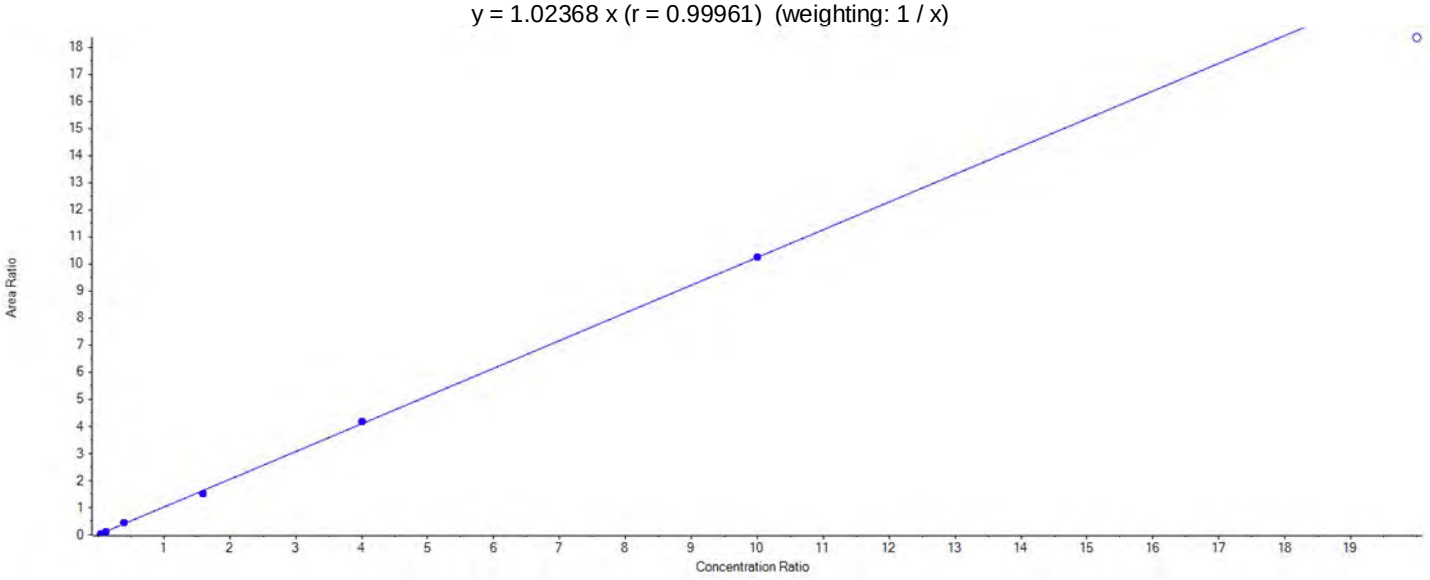
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 1.02368 x (r = 0.99961) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29582.80	441.0	664489.93	True	5.00	0.045	5.64	1.000	0.200	0.217	9	30	
CAL2	71087.03	726.6	636543.15	True	5.00	0.112	5.65	1.000	0.600	0.545	-9	30	
CAL3	270175.45	1379.9	629109.87	True	5.00	0.429	5.65	1.000	2.000	2.098	5	30	
CAL4	927660.45	2034.5	607762.03	True	5.00	1.526	5.64	1.000	8.000	7.455	-7	30	
CAL5	2498877.87	2082.0	596544.13	True	5.00	4.189	5.64	1.000	20.000	20.460	2	30	
CAL6	5530440.62	2331.7	539992.50	True	5.00	10.242	5.65	1.000	50.000	50.024	0	30	
CAL7	10169176.93	2455.7	554092.64	False	5.00	18.353	5.63	1.000	100.000	89.642	-10	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

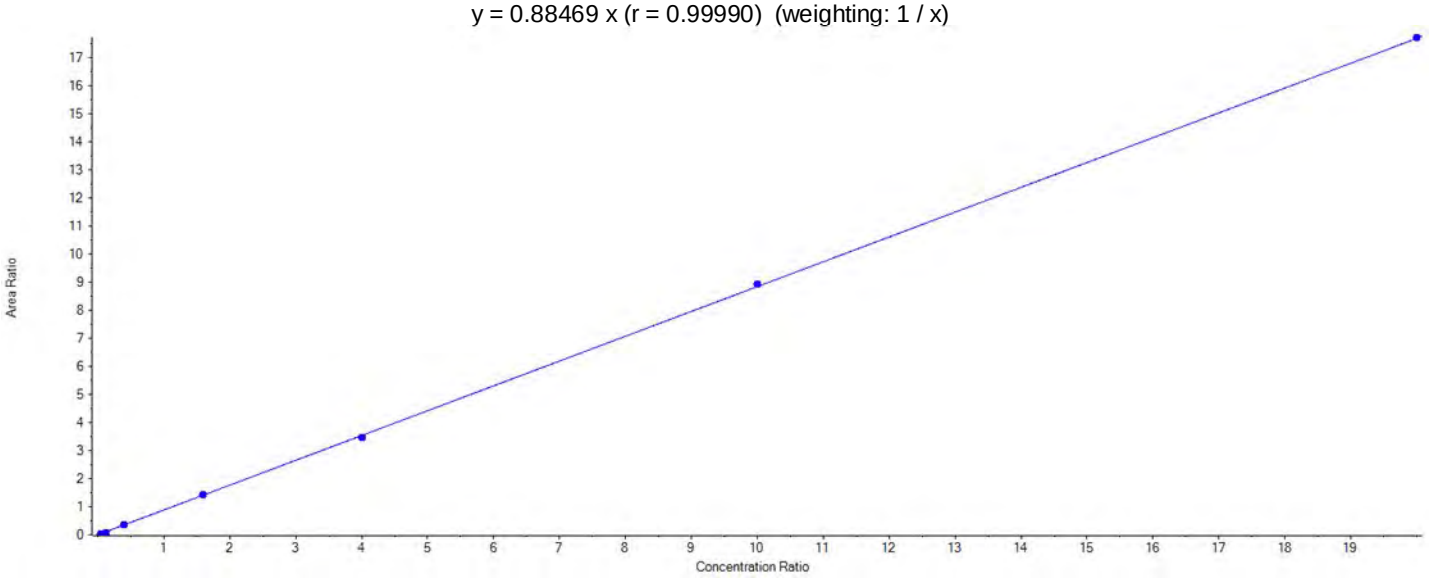
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.88469 x (r = 0.99990) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2306.38	597.4	86914.51	True	5.00	0.027	5.71	1.000	0.200	0.150	-25	30	
CAL2	5759.59	226.1	77388.61	True	5.00	0.074	5.71	1.000	0.600	0.421	-30	30	
CAL3	25147.65	632.7	71670.26	True	5.00	0.351	5.71	1.000	2.000	1.983	-1	30	
CAL4	103649.07	37382.5	72788.02	True	5.00	1.424	5.70	1.000	8.000	8.048	1	30	
CAL5	250711.49	2299.0	72424.49	True	5.00	3.462	5.70	1.000	20.000	19.564	-2	30	
CAL6	627854.43	1632.7	70320.26	True	5.00	8.928	5.71	1.000	50.000	50.461	1	30	
CAL7	1191981.70	2314.0	67250.45	True	5.00	17.725	5.69	1.000	100.000	100.173	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

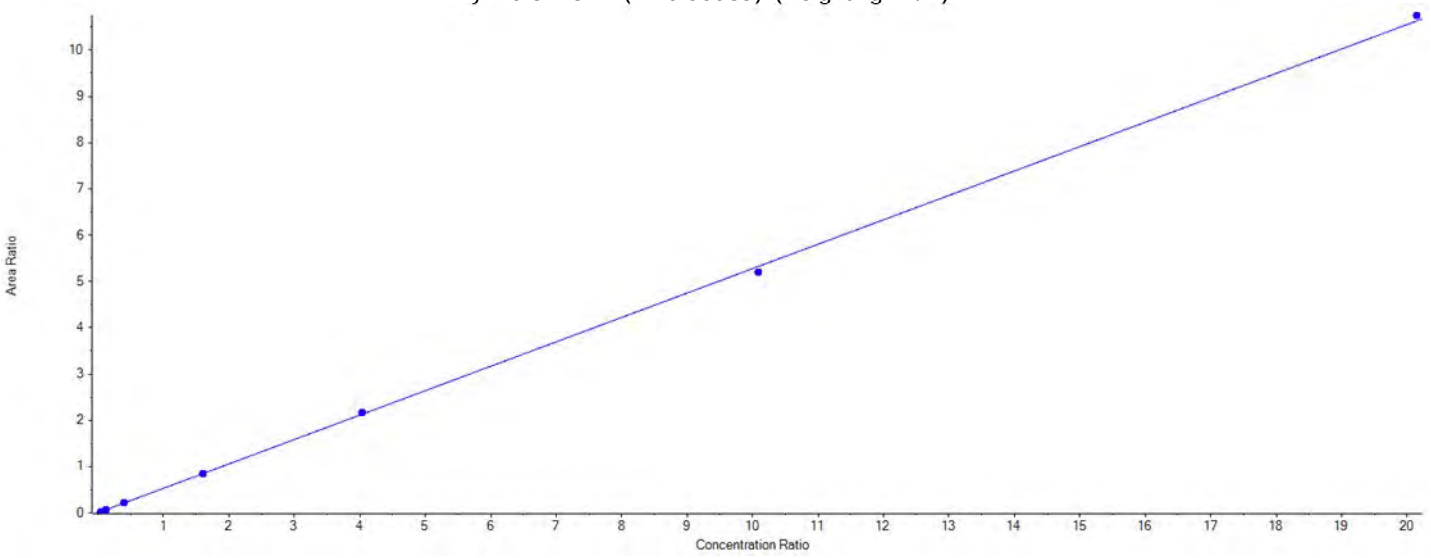
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.52754 x (r = 0.99985) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5952.23	1142.3	283127.43	True	4.78	0.021	5.80	1.100	0.193	0.190	-1	30	
CAL2	16291.91	12424.6	271778.84	True	4.78	0.060	5.80	1.100	0.578	0.543	-6	30	
CAL3	57966.88	3930335.8	281035.50	True	4.78	0.206	5.80	1.110	1.930	1.869	-3	30	
CAL4	224031.22	2859776.1	267380.81	True	4.78	0.838	5.80	1.110	7.700	7.592	-1	30	
CAL5	578877.50	2392.5	267157.61	True	4.78	2.167	5.79	1.100	19.300	19.633	2	30	
CAL6	1313570.32	3303.1	253129.16	True	4.78	5.189	5.80	1.100	48.200	47.020	-2	30	
CAL7	2606720.69	3557.3	242617.53	True	4.78	10.744	5.79	1.110	96.300	97.353	1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

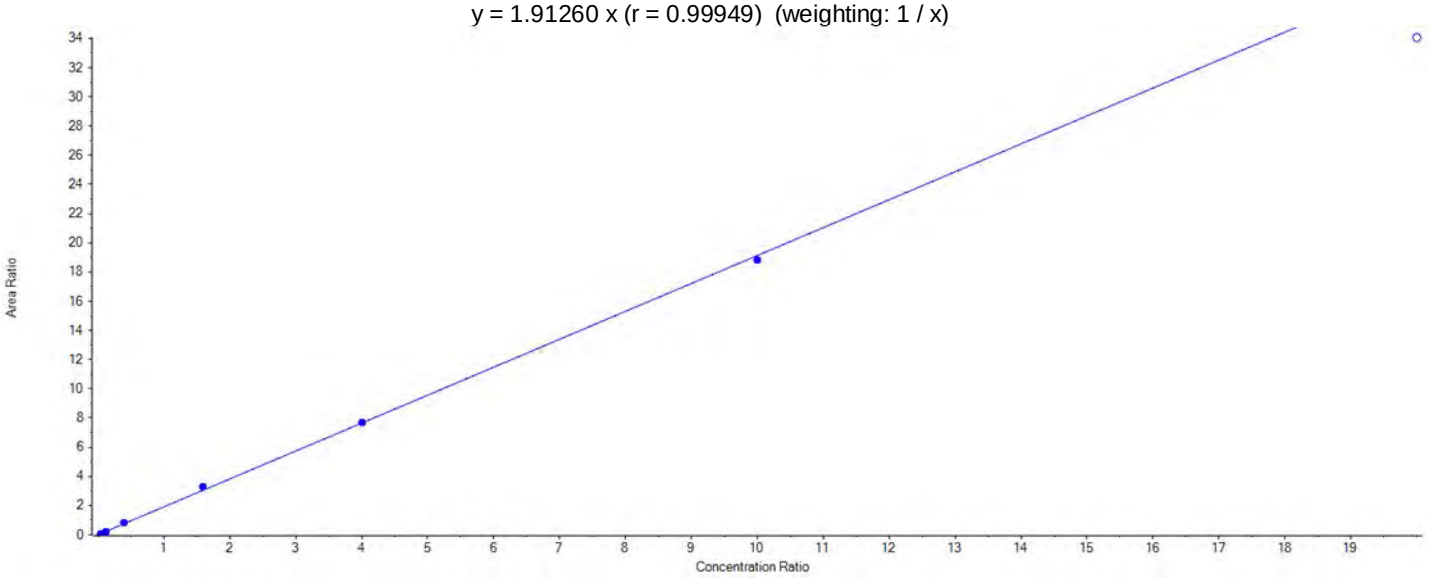
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.91260 x (r = 0.99949) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23379.53	206.2	256401.96	True	5.00	0.091	5.82	1.000	0.200	0.238	19	30	
CAL2	51206.76	285.0	242881.75	True	5.00	0.211	5.83	1.000	0.600	0.551	-8	30	
CAL3	199061.83	846.0	245605.30	True	5.00	0.810	5.83	1.000	2.000	2.119	6	30	
CAL4	768010.80	1510.9	232014.10	True	5.00	3.310	5.82	1.000	8.000	8.654	8	30	
CAL5	1773582.60	2061.6	231187.89	True	5.00	7.672	5.82	1.000	20.000	20.055	0	30	
CAL6	3923979.21	2695.3	208574.11	True	5.00	18.813	5.83	1.000	50.000	49.183	-2	30	
CAL7	6802701.21	3209.1	199746.83	False	5.00	34.057	5.81	1.000	100.000	89.032	-11	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

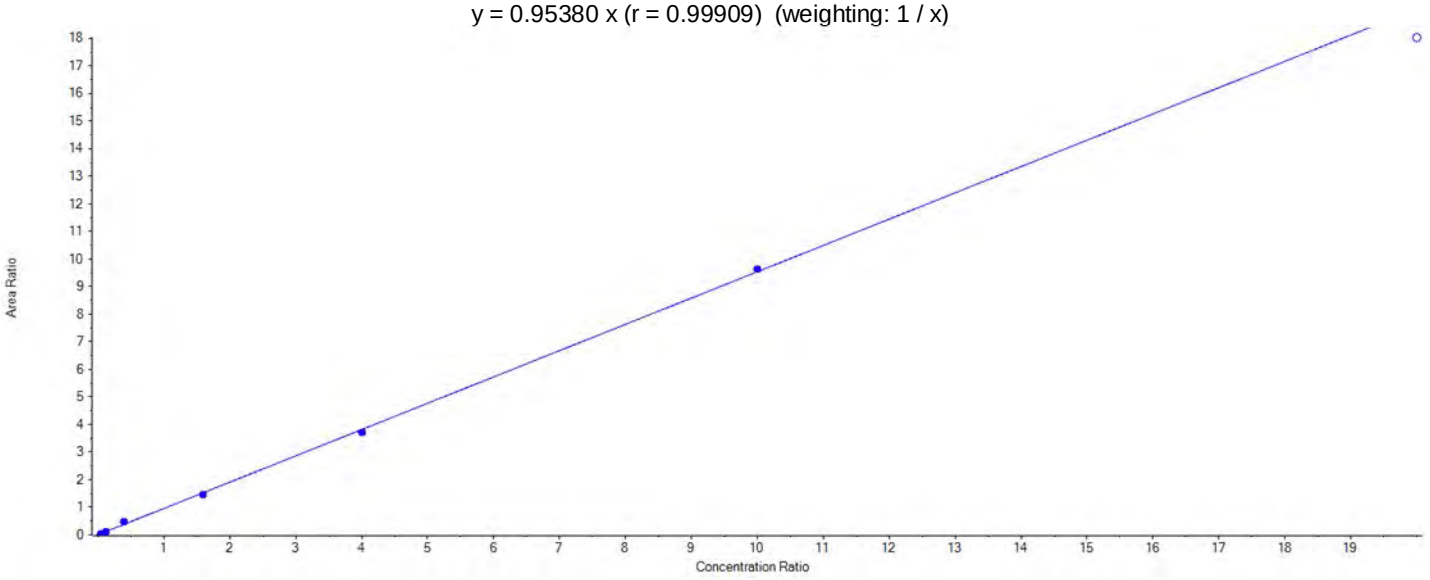
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 0.95380 x (r = 0.99909) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2284.89	20256.7	80597.24	True	5.00	0.028	5.85	1.000	0.200	0.149	-26	30	
CAL2	7727.12	209.6	63686.93	True	5.00	0.121	5.85	1.000	0.600	0.636	6	30	
CAL3	25089.02	97.0	54383.91	True	5.00	0.461	5.84	1.000	2.000	2.418	21	30	
CAL4	94877.84	20462.7	65477.96	True	5.00	1.449	5.84	1.000	8.000	7.596	-5	30	
CAL5	237197.18	1311.0	63701.69	True	5.00	3.724	5.83	1.000	20.000	19.520	-2	30	
CAL6	551865.73	1762.3	57308.08	True	5.00	9.630	5.84	1.000	50.000	50.481	1	30	
CAL7	1046636.11	1311.5	58049.49	False	5.00	18.030	5.83	1.000	100.000	94.517	-5	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

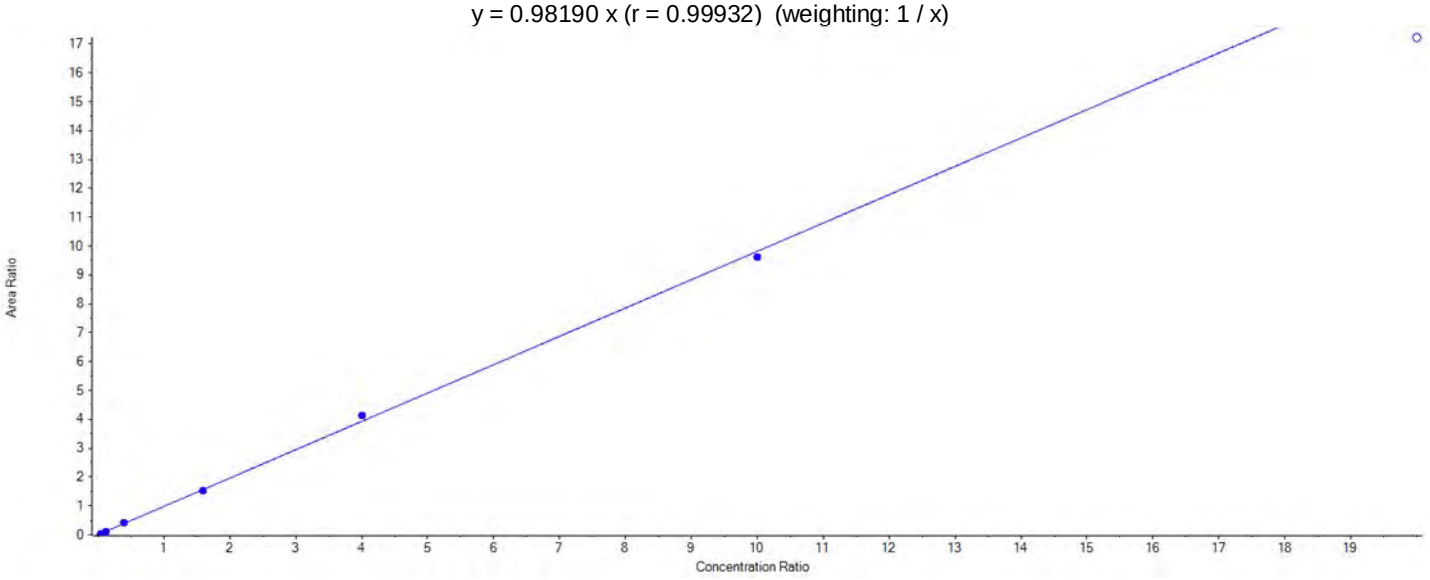
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.98190 x (r = 0.99932) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22143.56	430.3	545413.19	True	5.00	0.041	6.05	1.000	0.200	0.207	3	30	
CAL2	59695.25	467.4	532175.35	True	5.00	0.112	6.06	1.000	0.600	0.571	-5	30	
CAL3	237252.63	1192.0	549542.28	True	5.00	0.432	6.06	1.000	2.000	2.198	10	30	
CAL4	803646.84	1372.0	521514.09	True	5.00	1.541	6.05	1.000	8.000	7.847	-2	30	
CAL5	2099385.04	2645.1	507556.82	True	5.00	4.136	6.04	1.000	20.000	21.062	5	30	
CAL6	4582985.49	2623.0	477105.49	True	5.00	9.606	6.06	1.000	50.000	48.914	-2	30	
CAL7	8171355.35	3494.7	474393.79	False	5.00	17.225	6.04	1.000	100.000	87.711	-12	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

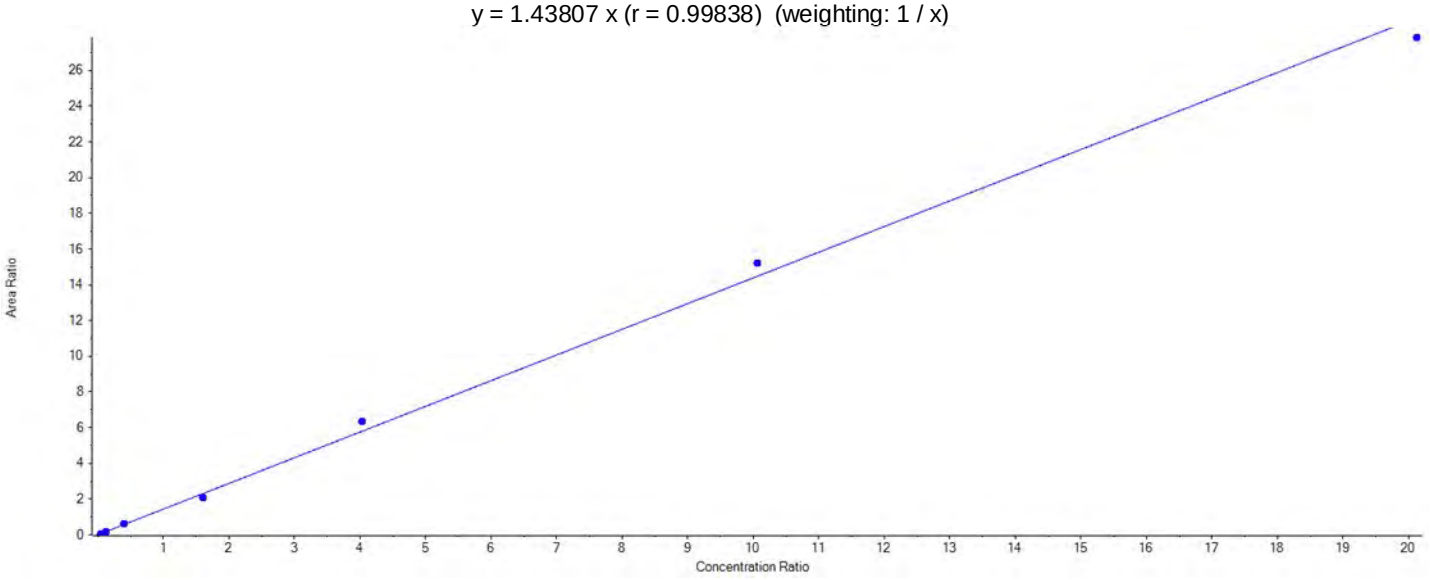
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 1.43807 x (r = 0.99838) (weighting: 1 / x)



Component Calibration Verification

Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1814.19	3265.8	26445.48	True	4.79	0.069	6.07	1.090	0.193	0.229	18	30	
CAL2	5206.47	6837.3	27639.19	True	4.79	0.188	6.08	1.090	0.578	0.627	9	30	
CAL3	18541.69	12580.7	29249.84	True	4.79	0.634	6.07	1.090	1.930	2.111	9	30	
CAL4	56040.80	5520.1	27253.46	True	4.79	2.056	6.07	1.090	7.710	6.849	-11	30	
CAL5	153343.55	2460.5	24192.14	True	4.79	6.339	6.06	1.090	19.300	21.113	9	30	
CAL6	348263.21	3159.4	22899.00	True	4.79	15.209	6.07	1.090	48.200	50.658	5	30	
CAL7	632223.71	3215.8	22710.95	True	4.79	27.838	6.06	1.090	96.400	92.724	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

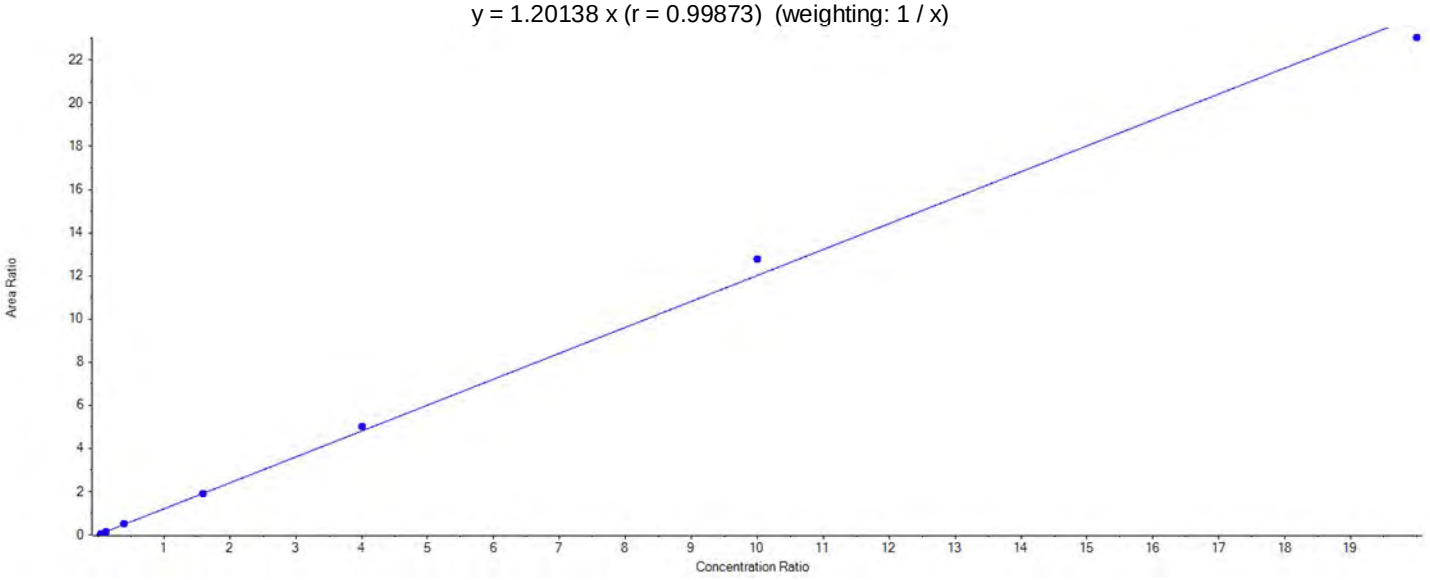
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.20138 x (r = 0.99873) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18013.88	109.4	349854.47	True	5.00	0.051	6.10	1.000	0.200	0.214	7	30	
CAL2	43085.10	193.1	323456.51	True	5.00	0.133	6.10	1.000	0.600	0.554	-8	30	
CAL3	163668.66	409.2	307355.43	True	5.00	0.533	6.10	1.000	2.000	2.216	11	30	
CAL4	618314.36	740.2	327796.39	True	5.00	1.886	6.10	1.000	8.000	7.850	-2	30	
CAL5	1590507.13	975.1	316777.82	True	5.00	5.021	6.09	1.000	20.000	20.896	4	30	
CAL6	3484588.79	1388.9	272638.97	True	5.00	12.781	6.10	1.000	50.000	53.193	6	30	
CAL7	6272486.25	1388.0	272283.14	True	5.00	23.037	6.09	1.000	100.000	95.876	-4	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

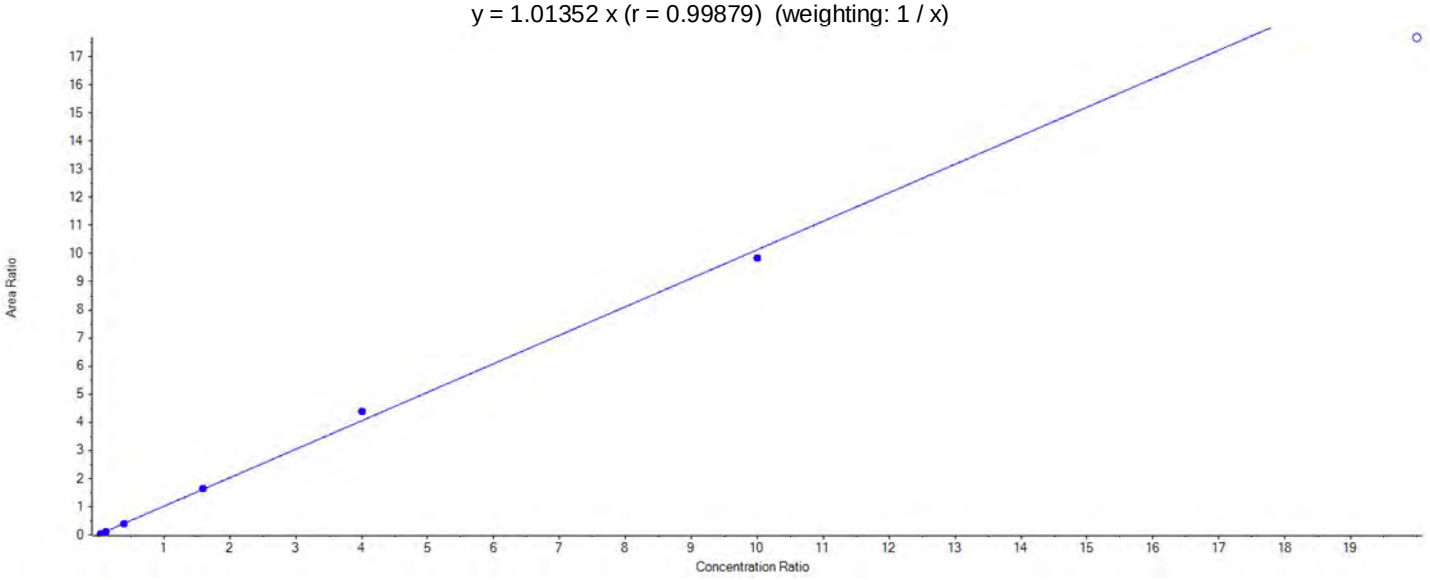
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 1.01352 x (r = 0.99879) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2376.29	153.9	78396.49	True	5.00	0.030	6.11	1.000	0.200	0.150	-25	30	
CAL2	8877.69	472.1	77893.24	True	5.00	0.114	6.11	1.000	0.600	0.562	-6	30	
CAL3	29934.31	447.4	76782.89	True	5.00	0.390	6.11	1.000	2.000	1.923	-4	30	
CAL4	114415.89	890.1	70122.47	True	5.00	1.632	6.10	1.000	8.000	8.049	1	30	
CAL5	300855.72	937.9	68615.66	True	5.00	4.385	6.10	1.000	20.000	21.631	8	30	
CAL6	670429.56	1054.0	68215.94	True	5.00	9.828	6.11	1.000	50.000	48.485	-3	30	
CAL7	1310162.93	1043.5	74110.30	False	5.00	17.679	6.09	1.000	100.000	87.214	-13	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

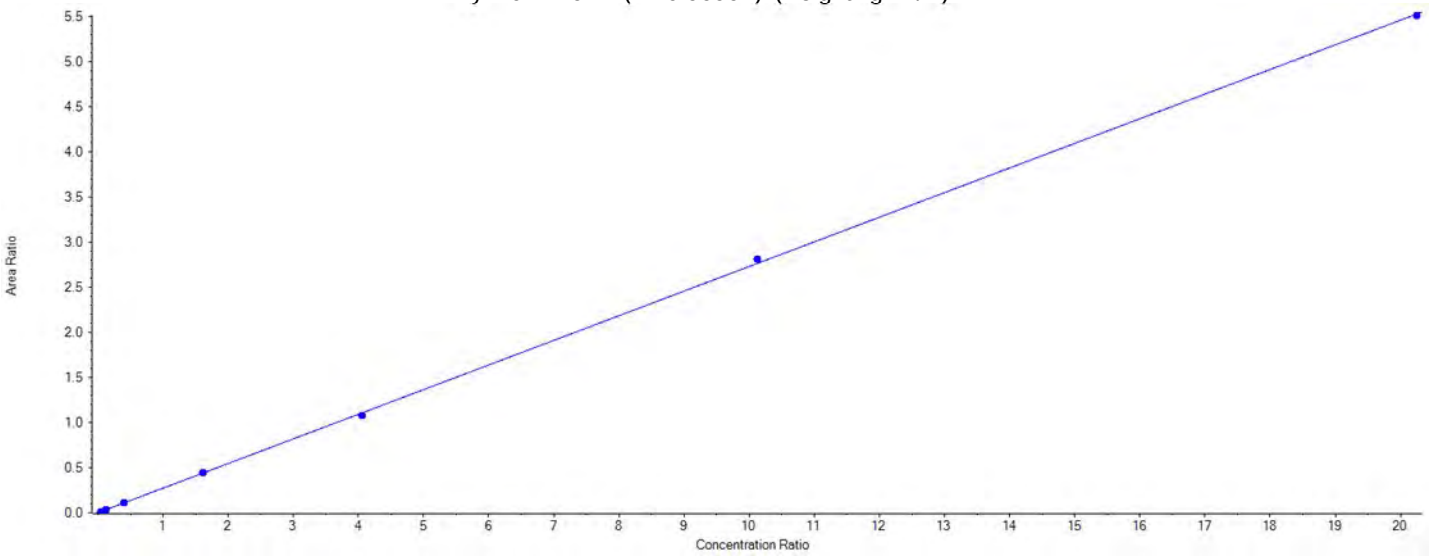
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.27292 x (r = 0.99991) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3520.93	58335.2	283127.43	True	4.78	0.012	6.22	1.190	0.194	0.218	12	30	
CAL2	8992.48	12149.3	271778.84	True	4.78	0.033	6.22	1.190	0.581	0.580	0	30	
CAL3	30098.33	137145.7	281035.50	True	4.78	0.107	6.23	1.190	1.940	1.876	-3	30	
CAL4	117663.31	1376.2	267380.81	True	4.78	0.440	6.22	1.190	7.740	7.707	0	30	
CAL5	288905.05	1660.8	267157.61	True	4.78	1.081	6.21	1.190	19.400	18.940	-2	30	
CAL6	711567.54	2275.7	253129.16	True	4.78	2.811	6.23	1.190	48.400	49.234	2	30	
CAL7	1336765.26	3028.7	242617.53	True	4.78	5.510	6.21	1.190	96.800	96.500	0	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

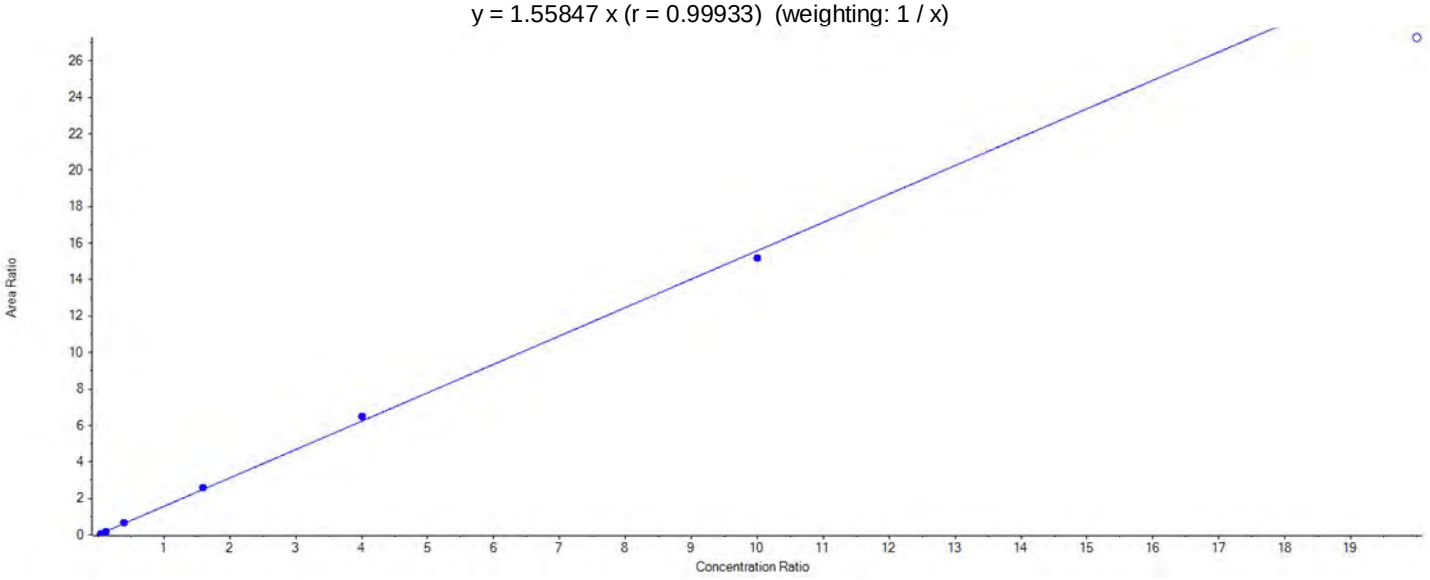
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.55847 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	21005.85	119.5	280311.62	True	5.00	0.075	6.26	1.000	0.200	0.240	20	30	
CAL2	46623.33	205.6	261195.61	True	5.00	0.178	6.26	1.000	0.600	0.573	-5	30	
CAL3	178457.85	320.7	259792.28	True	5.00	0.687	6.26	1.000	2.000	2.204	10	30	
CAL4	673196.14	592.1	259467.37	True	5.00	2.595	6.25	1.000	8.000	8.324	4	30	
CAL5	1660562.59	810.5	255767.75	True	5.00	6.492	6.25	1.000	20.000	20.830	4	30	
CAL6	3677006.58	1204.8	242587.53	True	5.00	15.157	6.26	1.000	50.000	48.629	-3	30	
CAL7	6557402.46	1093.9	240346.47	False	5.00	27.283	6.25	1.000	100.000	87.532	-12	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

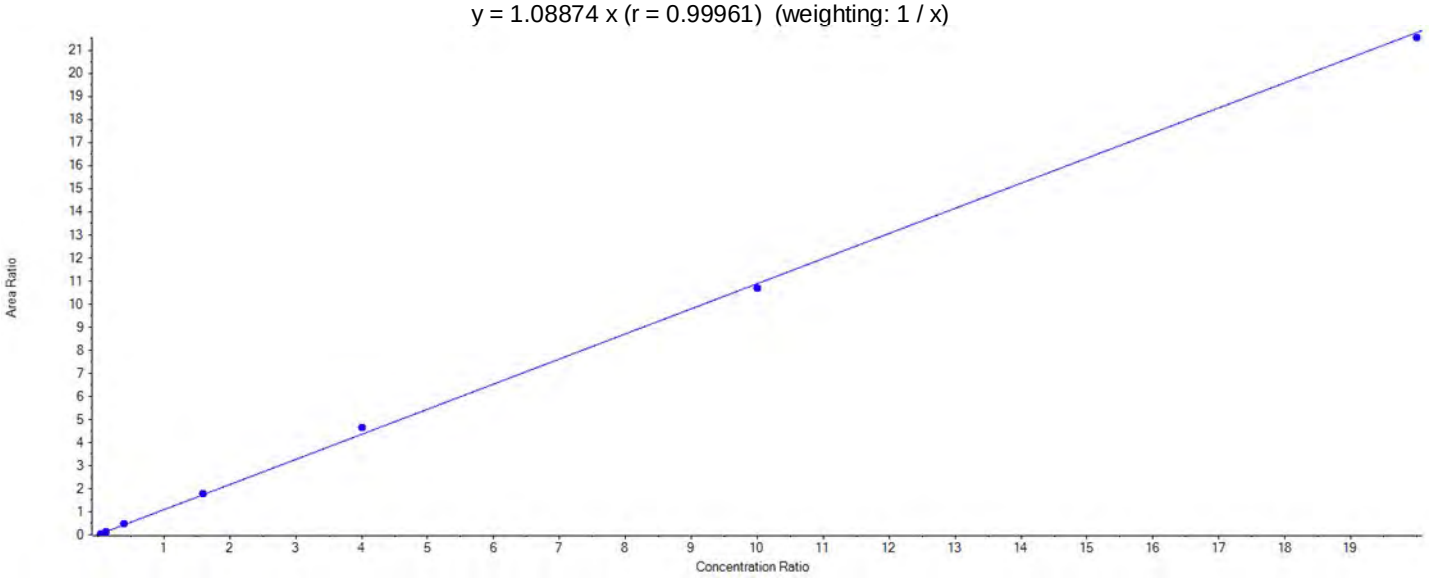
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.08874 x (r = 0.99961) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2846.21	154.5	63047.06	True	5.00	0.045	6.27	1.000	0.200	0.207	4	30	
CAL2	8053.68	439.3	58073.45	True	5.00	0.139	6.27	1.000	0.600	0.637	6	30	
CAL3	26590.22	407.4	57485.89	True	5.00	0.463	6.27	1.000	2.000	2.124	6	30	
CAL4	99354.14	862.8	55177.27	True	5.00	1.801	6.27	1.000	8.000	8.269	3	30	
CAL5	258300.34	1044.0	55378.45	True	5.00	4.664	6.26	1.000	20.000	21.421	7	30	
CAL6	599280.41	865.2	56004.04	True	5.00	10.701	6.27	1.000	50.000	49.142	-2	30	
CAL7	1148933.01	1266.7	53297.85	True	5.00	21.557	6.26	1.000	100.000	98.999	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

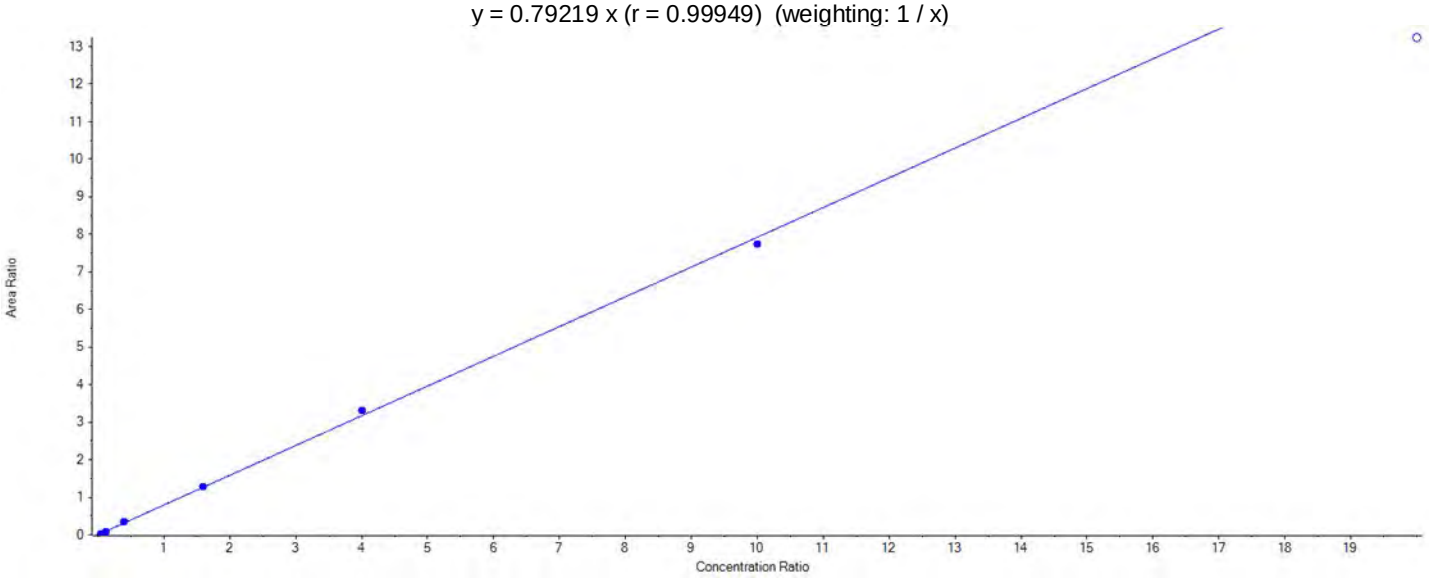
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.79219 x (r = 0.99949) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	20185.08	68.6	545413.19	True	5.00	0.037	6.25	1.030	0.200	0.234	17	30	
CAL2	47991.31	109.2	532175.35	True	5.00	0.090	6.26	1.030	0.600	0.569	-5	30	
CAL3	184322.87	257.3	549542.28	True	5.00	0.335	6.26	1.030	2.000	2.117	6	30	
CAL4	674140.32	350.0	521514.09	True	5.00	1.293	6.25	1.030	8.000	8.159	2	30	
CAL5	1679407.24	589.3	507556.82	True	5.00	3.309	6.24	1.030	20.000	20.884	4	30	
CAL6	3691733.76	935.9	477105.49	True	5.00	7.738	6.26	1.030	50.000	48.838	-2	30	
CAL7	6281239.03	1061.9	474393.79	False	5.00	13.241	6.24	1.030	100.000	83.569	-16	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

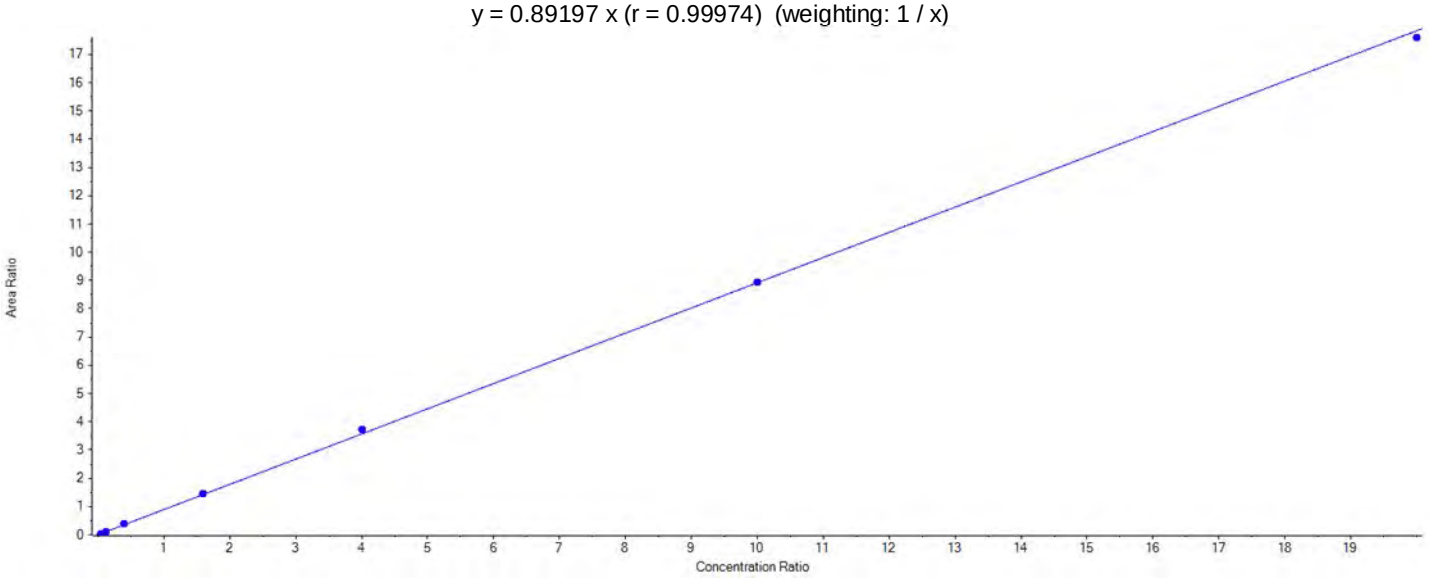
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.89197 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	16357.53	210.0	410633.04	True	5.00	0.040	6.43	1.000	0.200	0.223	12	30	
CAL2	40236.53	281.3	394146.24	True	5.00	0.102	6.43	1.000	0.600	0.572	-5	30	
CAL3	156439.94	700.6	393544.94	True	5.00	0.398	6.43	1.000	2.000	2.228	11	30	
CAL4	571926.74	1105.3	392356.63	True	5.00	1.458	6.43	1.000	8.000	8.171	2	30	
CAL5	1418276.72	1705.5	379571.56	True	5.00	3.737	6.42	1.000	20.000	20.945	5	30	
CAL6	3149020.22	2109.2	352892.21	True	5.00	8.923	6.43	1.000	50.000	50.021	0	30	
CAL7	6092875.66	2023.1	346256.59	True	5.00	17.596	6.42	1.000	100.000	98.638	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

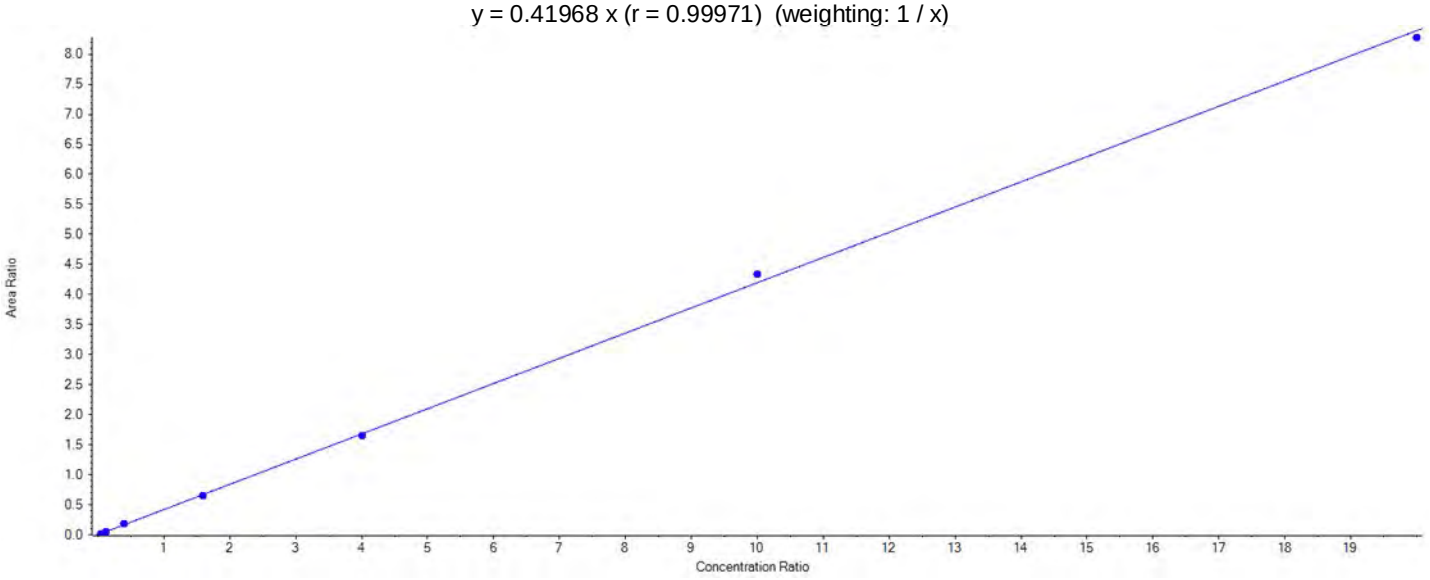
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.41968 x (r = 0.99971) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	7976.02	221.5	410633.04	True	5.00	0.019	6.73	1.050	0.200	0.231	16	30	
CAL2	19006.44	621.9	394146.24	True	5.00	0.048	6.74	1.050	0.600	0.575	-4	30	
CAL3	69655.07	986.8	393544.94	True	5.00	0.177	6.74	1.050	2.000	2.109	5	30	
CAL4	256654.28	1362.8	392356.63	True	5.00	0.654	6.73	1.050	8.000	7.793	-3	30	
CAL5	627350.68	1919.3	379571.56	True	5.00	1.653	6.72	1.050	20.000	19.691	-2	30	
CAL6	1533920.21	4020.8	352892.21	True	5.00	4.347	6.74	1.050	50.000	51.786	4	30	
CAL7	2866097.32	3342.9	346256.59	True	5.00	8.277	6.72	1.050	100.000	98.615	-1	30	

APPROVED
By MCD at 6:33 pm, 11/12/18

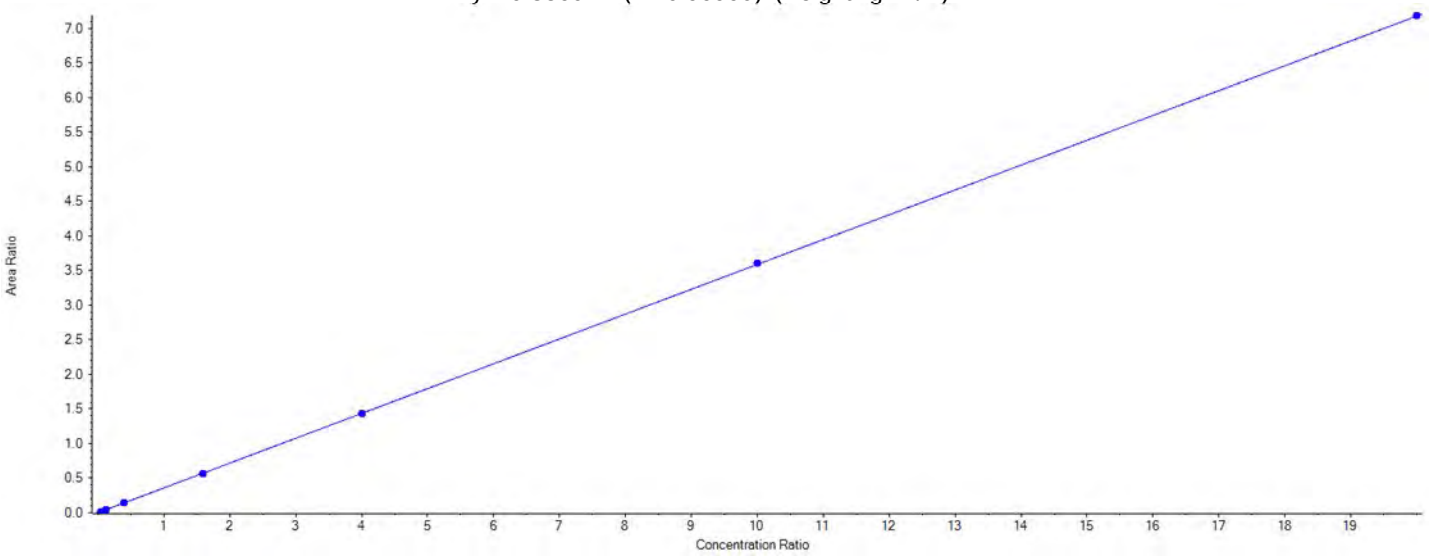
REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.35901 x (r = 0.99996) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6020.31	470.6	410633.04	True	5.00	0.015	7.00	1.090	0.200	0.204	2	30	
CAL2	14955.56	635.0	394146.24	True	5.00	0.038	7.00	1.090	0.600	0.528	-12	30	
CAL3	57795.96	1304.8	393544.94	True	5.00	0.147	7.00	1.090	2.000	2.045	2	30	
CAL4	219359.64	2291.9	392356.63	True	5.00	0.559	6.99	1.090	8.000	7.786	-3	30	
CAL5	544296.46	2946.8	379571.56	True	5.00	1.434	6.98	1.090	20.000	19.971	0	30	
CAL6	1270897.62	3196.4	352892.21	True	5.00	3.601	7.00	1.090	50.000	50.157	0	30	
CAL7	2488863.64	3668.3	346256.59	True	5.00	7.188	6.98	1.090	100.000	100.107	0	30	

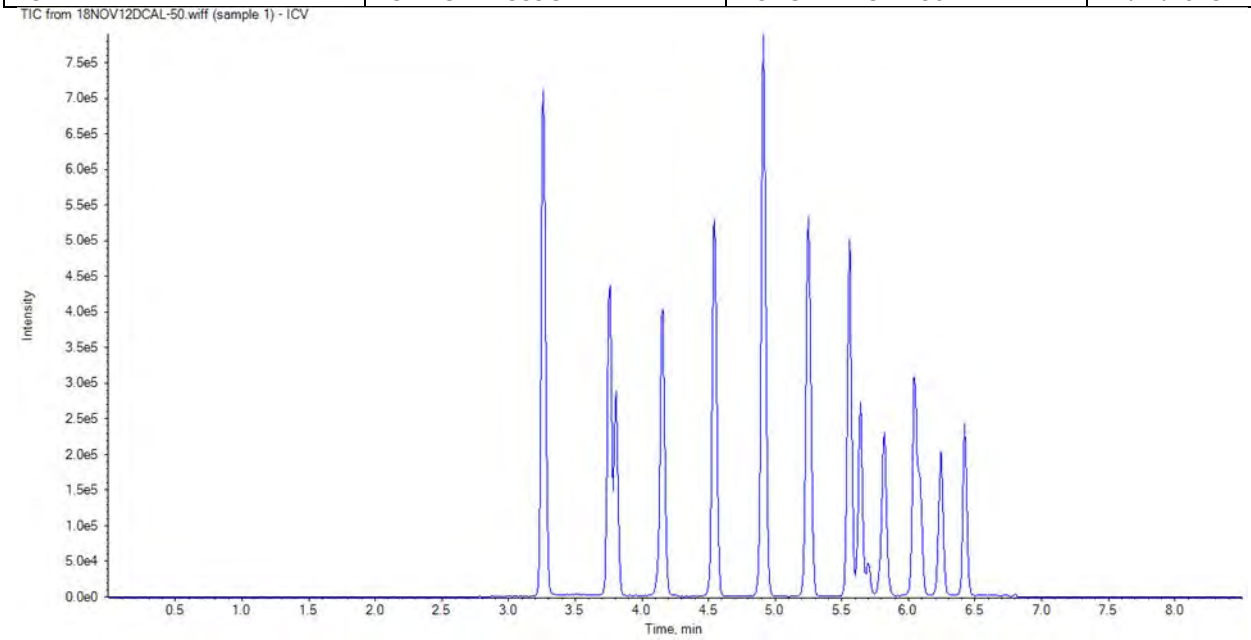
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	655209.26	659926.2	-0.7	50	
13C2-PFOA	5.000	452726.16	450219.7	0.6	50	
13C4-PFOS	4.780	253010.34	249205.8	1.5	50	
13C2-PFDA	5.000	277002.66	278743.9	-0.6	50	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	270820.62	13C4-PFBA	715834.41	5.00	0.378	3.26	1.00	2.000	2.096	5	30	
PFPeA	265646.79	13C5-PFPeA	699482.19	5.00	0.380	3.76	1.00	2.000	2.198	10	30	
PFBS	150059.59	13C3-PFBS	394903.38	4.65	0.380	3.80	1.00	1.769	1.808	2	30	
4:2-FTS	N/A	13C2-4:2-FTS	47297.29	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	328694.28	13C5-PFHxA	613579.43	5.00	0.536	4.15	1.00	2.000	2.237	12	30	
PFPeS	N/A	13C3-PFBS	394903.38	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHpA	316975.28	13C4-PFHpA	485394.91	5.00	0.653	4.54	1.00	2.000	2.165	8	30	
PFHxS	115564.23	13C3-PFHxS	304897.78	4.73	0.379	4.55	1.00	1.890	1.838	-3	30	
6:2-FTS	N/A	13C2-6:2-FTS	31532.78	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	118318.71	13C3-PFHxS	304897.78	4.73	0.388	4.91	1.08	1.900	2.043	8	30	
PFOA	332094.35	13C8-PFOA	843573.28	5.00	0.394	4.91	1.00	2.000	2.103	5	30	
PFOS	100952.54	13C8-PFOS	266211.35	4.78	0.379	5.24	1.00	1.910	1.658	-13	30	
PFNA	271240.37	13C9-PFNA	458821.54	5.00	0.591	5.26	1.00	2.000	2.132	7	30	
PFNS	N/A	13C8-PFOS	266211.35	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	224279.75	13C6-PFDA	590290.29	5.00	0.380	5.56	1.00	0.000	2.014		30	
8:2-FTS	N/A	13C2-8:2-FTS	22188.87	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	587080.14	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	30591.86	d3-NMeFOSAA	70133.21	5.00	0.436	5.70	1.00	2.000	2.465	23	30	
PFDS	52860.94	13C8-PFOS	266211.35	4.78	0.199	5.79	1.11	0.000	1.799		30	
PFUnDA	183511.26	13C7-PFUnDA	228363.91	5.00	0.804	5.82	1.00	2.000	2.101	5	30	
NEtFOSAA	26149.34	d5-NEtFOSAA	59551.26	5.00	0.439	5.83	1.00	2.000	2.302	15	30	
PFDoDA	185295.04	13C2-PFDoDA	495858.06	5.00	0.374	6.05	1.00	2.000	1.903	-5	30	
10:2-FTS	N/A	13C2-8:2-FTS	22188.87	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	299185.38	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	75186.89	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	266211.35	4.78	N/A	N/A	N/A	1.930	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	255149.77	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	53596.17	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFTrDA	165153.11	13C2-PFDoDA	495858.06	5.00	0.333	6.25	1.03	2.000	2.102	5	30	
PFTeDA	135650.98	13C2-PFTeDA	365300.22	5.00	0.371	6.42	1.00	2.000	2.082	4	30	
PFHxDA	N/A	13C2-PFTeDA	365300.22	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	365300.22	5.00	N/A	N/A	N/A	0.000	N/A		30	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV12DCAL-42.wiff
Sample ID:	CALBRN11833C			**Acquis Date:**		2018-11-12T15:05:54
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	676527.5	659926.2	3	50	
13C2-PFOA	5.0	474834.9	450219.7	5	50	
13C4-PFOS	4.8	265369.0	249205.8	6	50	
13C2-PFDA	5.0	281654.8	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	763334.3	13C3-PFBA	676527.5	1.128	5.000	5.059	101	70-130	
E13C5-PFPeA	771179.4	13C3-PFBA	676527.5	1.140	5.000	5.113	102	70-130	
E13C3-PFBS	445963.4	13C3-PFBA	676527.5	0.659	4.650	4.653	100	70-130	
E13C2-4:2-FTS	51494.6	13C2-PFOA	474834.9	0.108	4.670	4.830	103	70-130	
E13C5-PFHxA	664975.9	13C2-PFOA	474834.9	1.400	5.000	5.059	101	70-130	
E13C3-PFHxS	327944.5	13C2-PFOA	474834.9	0.691	4.730	4.739	100	70-130	
E13C4-PFHpA	528473.5	13C2-PFOA	474834.9	1.113	5.000	5.014	100	70-130	
E13C2-6:2-FTS	35455.2	13C2-PFOA	474834.9	0.075	4.750	4.996	105	70-130	
E13C8-PFOA	912537.7	13C2-PFOA	474834.9	1.922	5.000	5.295	106	70-130	
E13C8-PFOS	283127.4	13C4-PFOS	265369.0	1.067	4.780	4.727	99	70-130	
E13C9-PFNA	479931.4	13C4-PFOS	265369.0	1.809	5.000	5.042	101	70-130	
E13C6-PFDA	612577.4	13C2-PFDA	281654.8	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	26445.5	13C2-PFDA	281654.8	0.094	4.790	4.683	98	70-130	
E13C8-PFOSA	664489.9	13C2-PFDA	281654.8	2.359	5.000	5.230	105	70-130	
Ed3-NMeFOSAA	86914.5	13C2-PFDA	281654.8	0.309	5.000	5.570	111	70-130	
E13C7-PFUnDA	256402.0	13C2-PFDA	281654.8	0.910	5.000	5.285	106	70-130	
Ed5-NEtFOSAA	80597.2	13C2-PFDA	281654.8	0.286	5.000	6.054	121	70-130	
E13C2-PFDoDA	545413.2	13C2-PFDA	281654.8	1.936	5.000	5.028	101	70-130	
Ed7-NMePFOSAE	349854.5	13C2-PFDA	281654.8	1.242	5.000	5.375	108	70-130	
Ed3-NMePFOSA	78396.5	13C2-PFDA	281654.8	0.278	5.000	5.057	101	70-130	
Ed9-NEtPFOSAE	280311.6	13C2-PFDA	281654.8	0.995	5.000	5.176	104	70-130	
Ed5-NEtPFOSA	63047.1	13C2-PFDA	281654.8	0.224	5.000	5.251	105	70-130	
E13C2-PFTeDA	410633.0	13C2-PFDA	281654.8	1.458	5.000	5.118	102	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

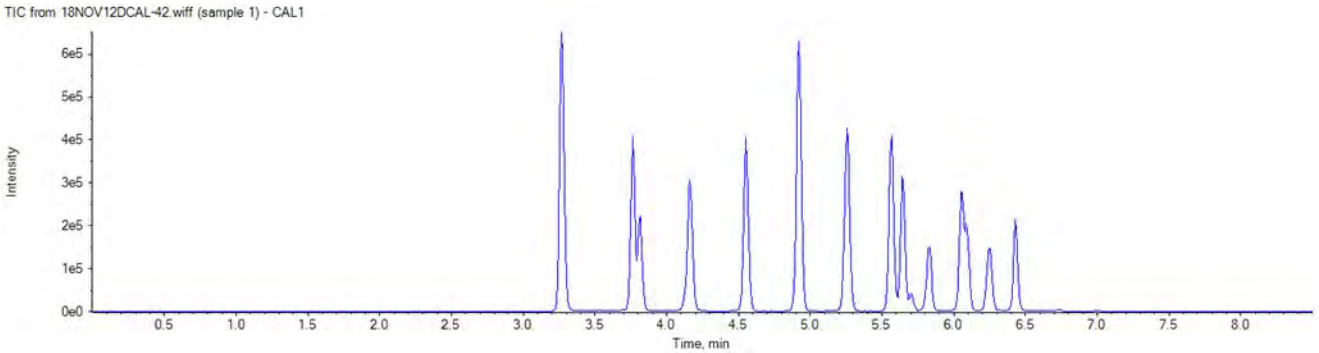
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-42.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	32322.9		A	13C4-PFBA	3.27	763334.3	0.042	0.235
PFPeA	3.77	1.000	32633.1		M	13C5-PFPeA	3.76	771179.4	0.042	0.245
PFBS	3.81	1.000	18010.0		A	13C3-PFBS	3.81	445963.4	0.040	0.192
4:2-FTS	4.13	1.000	3636.4		A	13C2-4:2-FTS	4.13	51494.6	0.071	0.192
PFHxA	4.16	1.000	39108.2		A	13C5-PFHxA	4.16	664975.9	0.059	0.246
PFPeS	4.18	1.100	9620.1		A	13C3-PFBS	3.81	445963.4	0.022	0.209
PFHpA	4.55	1.000	37545.4		A	13C4-PFHpA	4.55	528473.5	0.071	0.235
PFHxS	4.55	1.000	12858.1		M	13C3-PFHxS	4.55	327944.5	0.039	0.190
6:2-FTS	4.90	1.000	2683.1		M	13C2-6:2-FTS	4.91	35455.2	0.076	0.183
PFHpS	4.91	1.080	13262.8		A	13C3-PFHxS	4.55	327944.5	0.040	0.213
PFOA	4.92	1.000	41468.0		A	13C8-PFOA	4.92	912537.7	0.045	0.243
PFOS	5.25	1.000	13088.5		M	13C8-PFOS	5.25	283127.4	0.046	0.202
PFNA	5.26	1.000	29660.1		A	13C9-PFNA	5.26	479931.4	0.062	0.223
PFNS	5.54	1.060	6846.6		A	13C8-PFOS	5.25	283127.4	0.024	0.169
PFDA	5.56	1.000	27488.6		A	13C6-PFDA	5.57	612577.4	0.045	0.238
8:2-FTS	5.57	1.000	2333.1		A	13C2-8:2-FTS	5.57	26445.5	0.088	0.206
PFOSA	5.64	1.000	29582.8		A	13C8-PFOSA	5.65	664489.9	0.045	0.217
NMeFOSAA	5.71	1.000	2306.4		A	d3-NMeFOSAA	5.70	86914.5	0.027	0.150
PFDS	5.80	1.100	5952.2		A	13C8-PFOS	5.25	283127.4	0.021	0.190
PFUnDA	5.82	1.000	23379.5		A	13C7-PFUnDA	5.83	256402.0	0.091	0.238
NEtFOSAA	5.85	1.000	2284.9		A	d5-NEtFOSAA	5.84	80597.2	0.028	0.149
PFDoDA	6.05	1.000	22143.6		A	13C2-PFDoDA	6.05	545413.2	0.041	0.207
10:2-FTS	6.07	1.090	1814.2		A	13C2-8:2-FTS	5.57	26445.5	0.069	0.229
NMePFOSAE	6.10	1.000	18013.9		A	d7-NMePFOSAE	6.09	349854.5	0.051	0.214
NMePFOSA	6.11	1.000	2376.3		A	d3-NMePFOSA	6.10	78396.5	0.030	0.150
PFDoS	6.22	1.190	3520.9		A	13C8-PFOS	5.25	283127.4	0.012	0.218
NEtPFOSAE	6.26	1.000	21005.9		A	d9-NEtPFOSAE	6.24	280311.6	0.075	0.240
NEtPFOSA	6.27	1.000	2846.2		M	d5-NEtPFOSA	6.26	63047.1	0.045	0.207
PFTrDA	6.25	1.030	20185.1		M	13C2-PFDoDA	6.05	545413.2	0.037	0.234
PFTeDA	6.43	1.000	16357.5		A	13C2-PFTeDA	6.43	410633.0	0.040	0.223
PFHxDA	6.73	1.050	7976.0		M	13C2-PFTeDA	6.43	410633.0	0.019	0.231
PFODA	7.00	1.090	6020.3		A	13C2-PFTeDA	6.43	410633.0	0.015	0.204

Total Ion Chromatogram

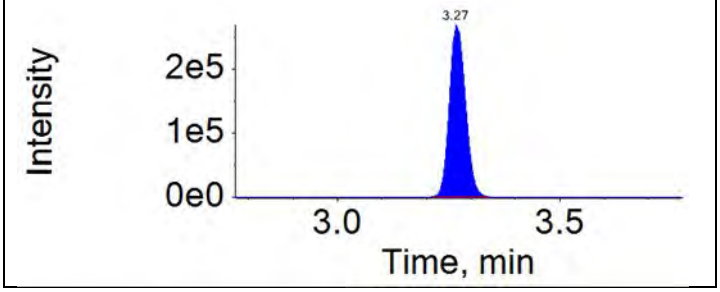


APPROVED
By MCD at 6:33 pm, 11/12/18

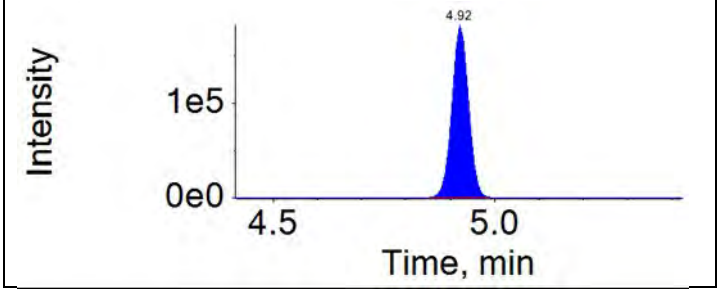
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

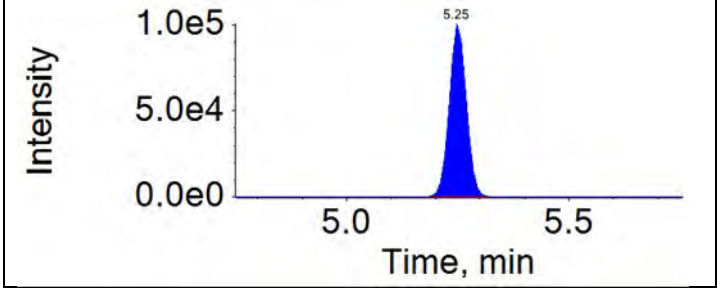
Injection Standard: 13C3-PFBA
216.0 / 172.0



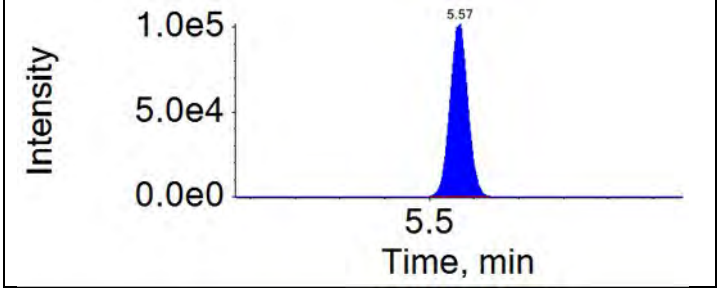
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

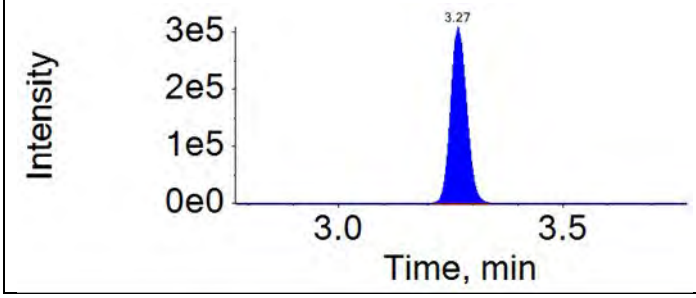


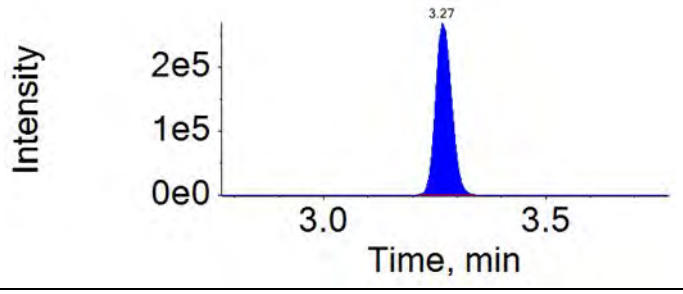
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

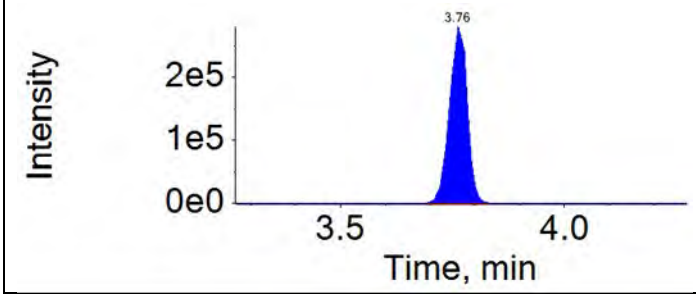
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

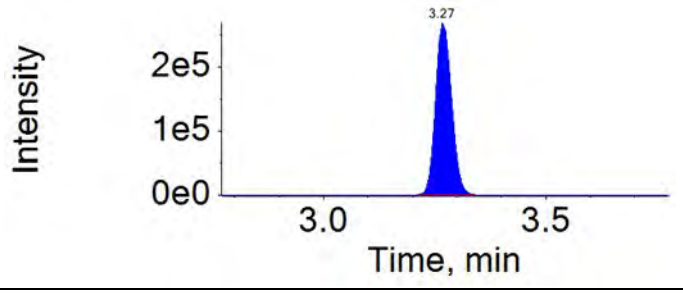
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



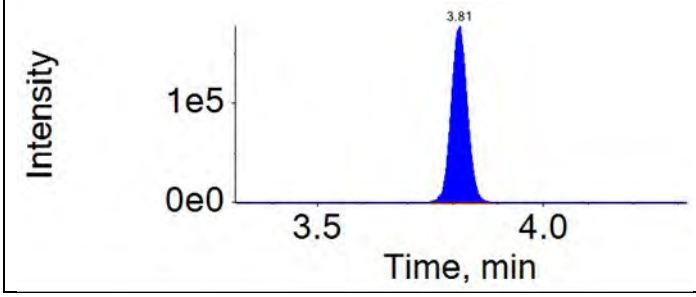


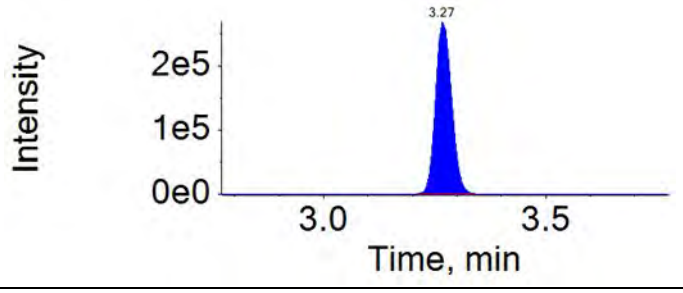
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



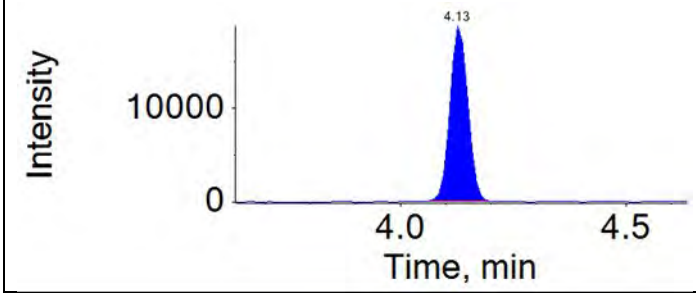


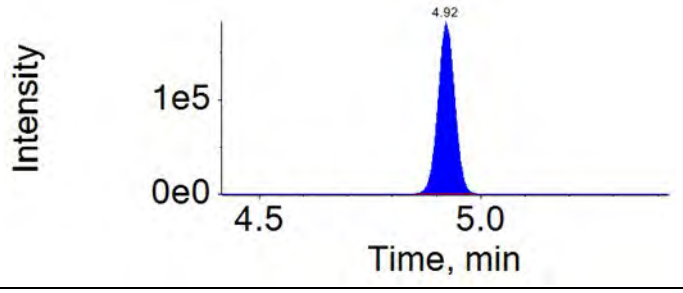
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





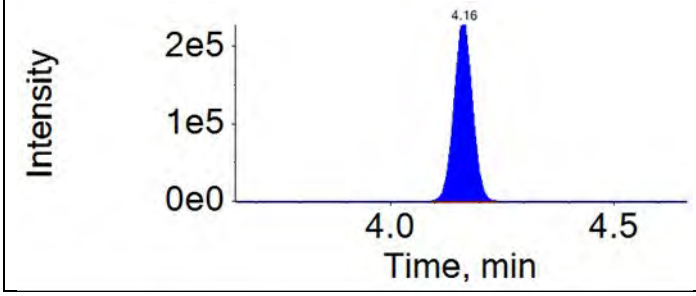
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

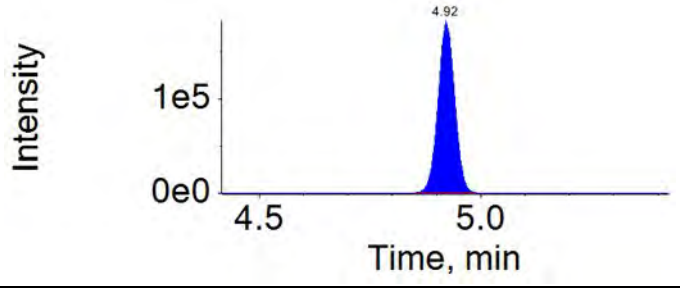




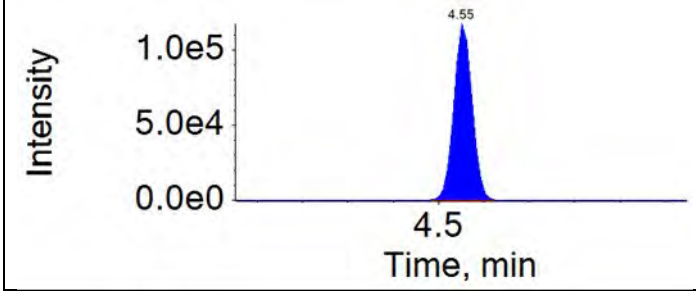
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

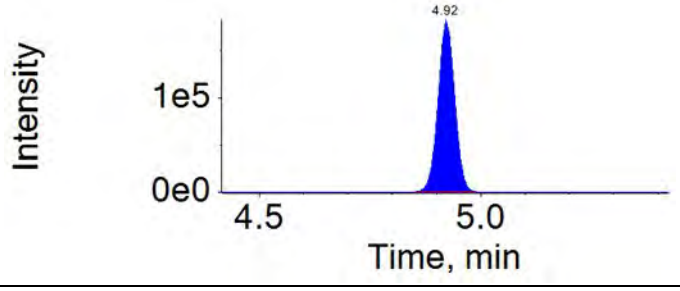
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



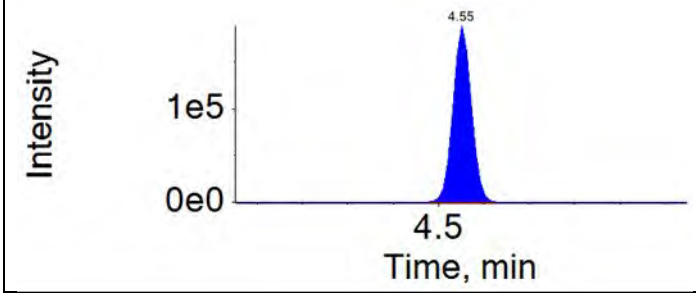


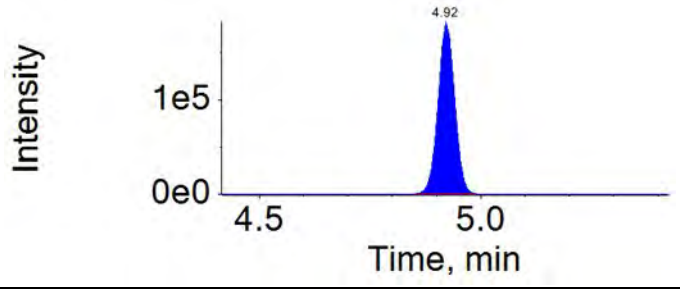
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



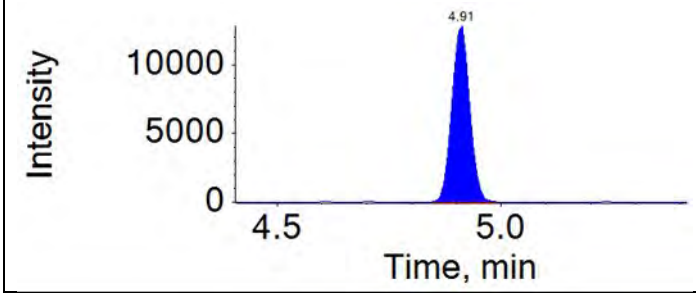


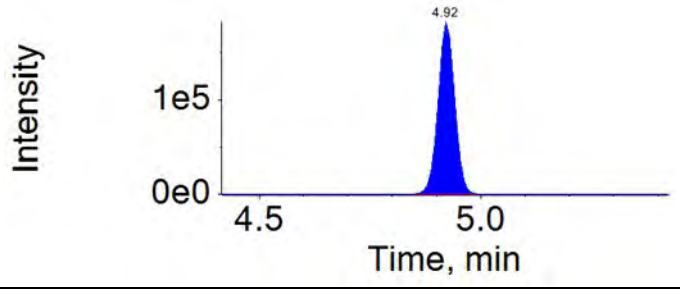
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

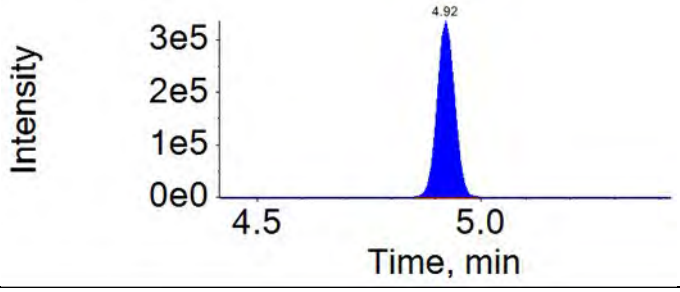
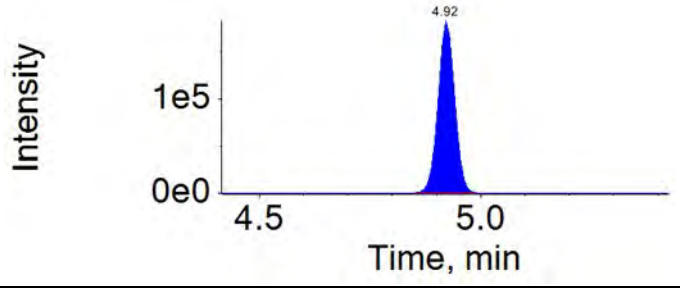


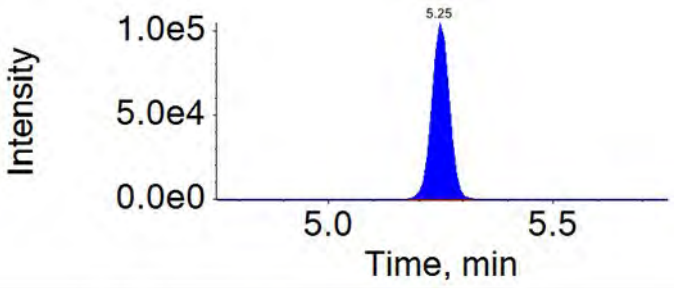
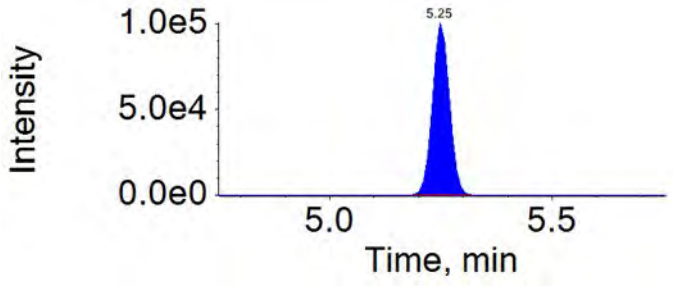


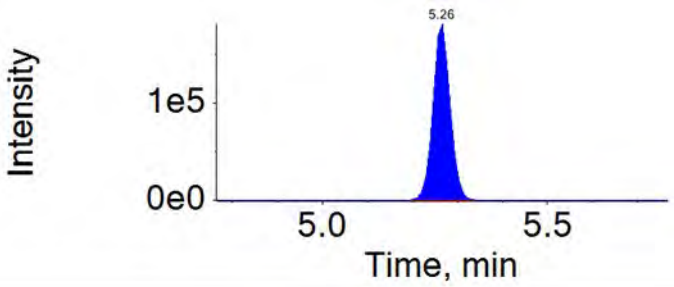
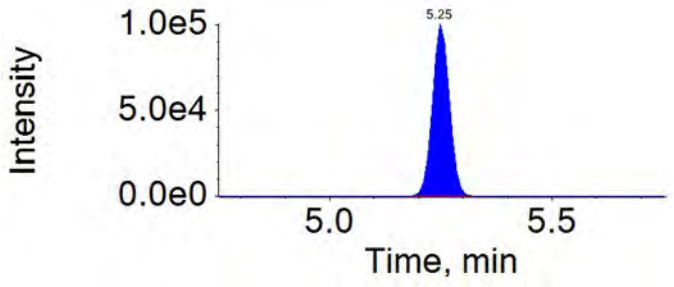
APPROVED
By MCD at 6:33 pm, 11/12/18

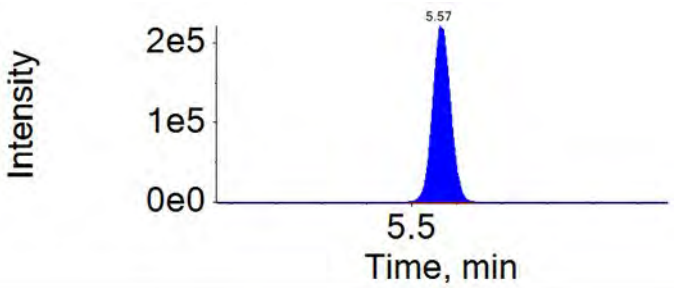
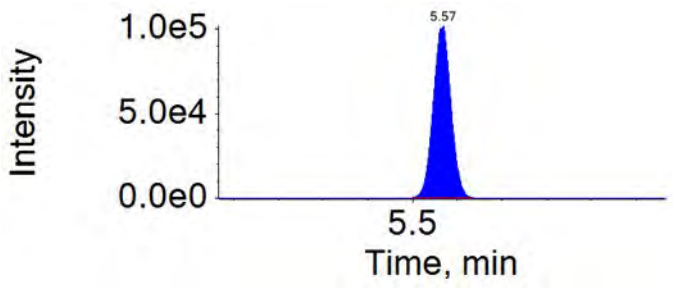
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

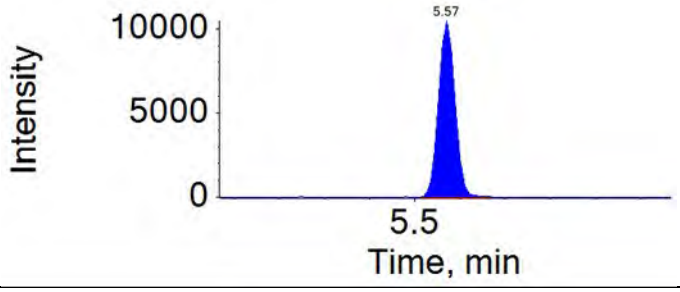
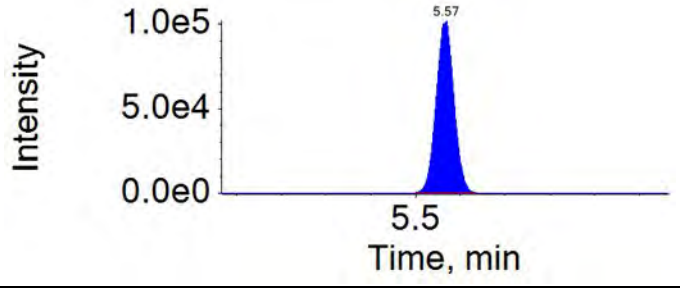
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

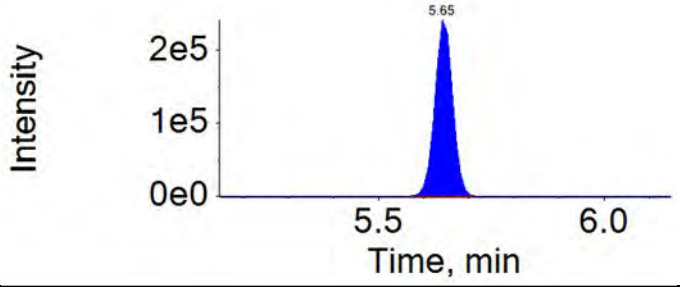
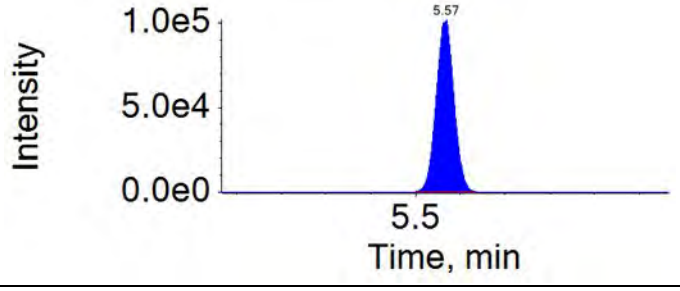
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

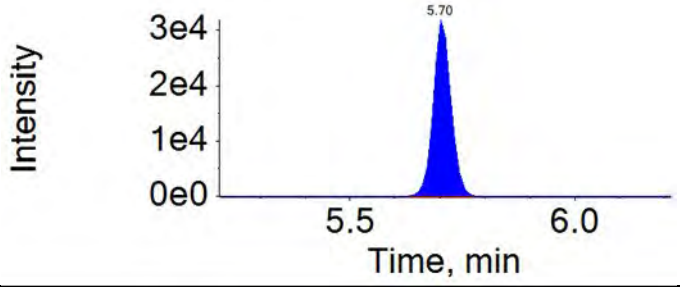
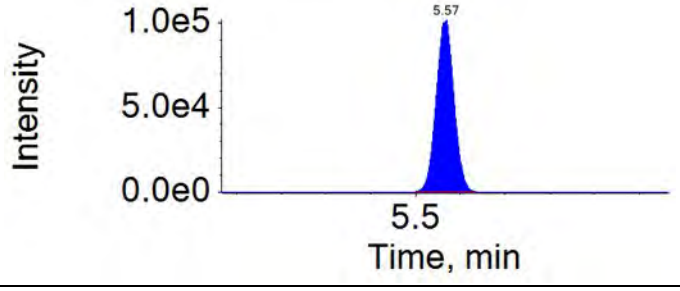
APPROVED
By MCD at 6:33 pm, 11/12/18

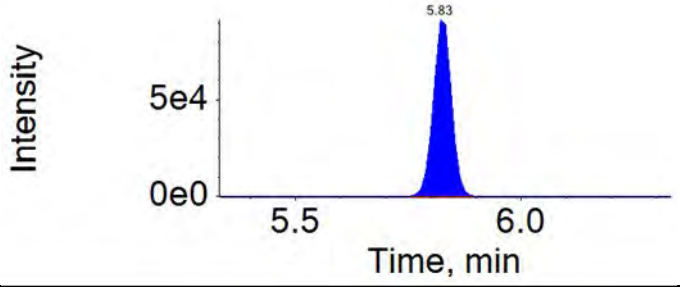
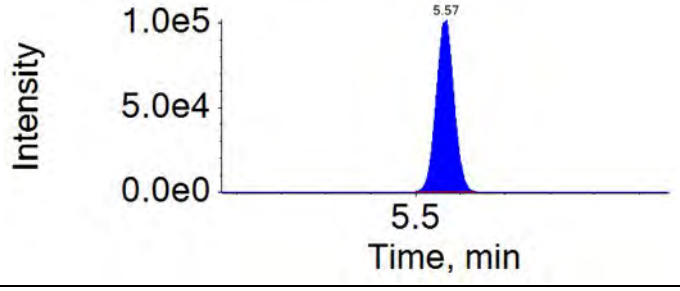
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

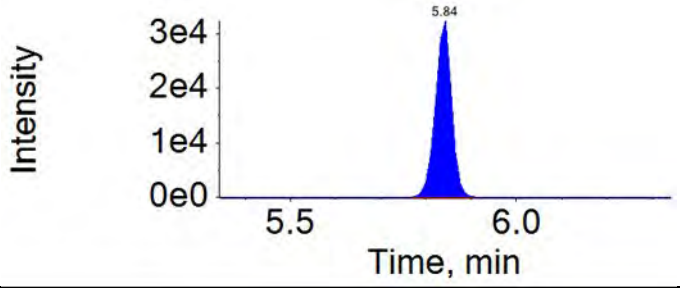
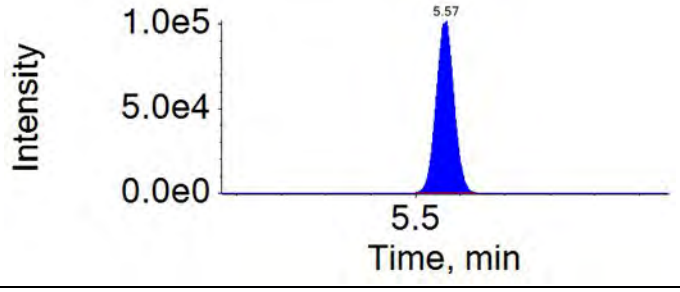
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

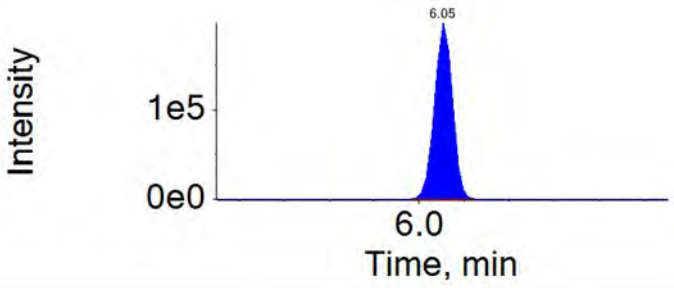
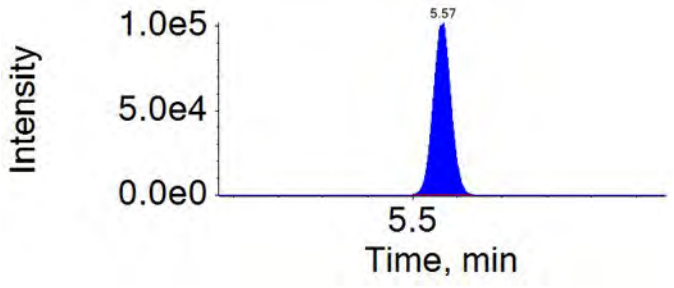
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

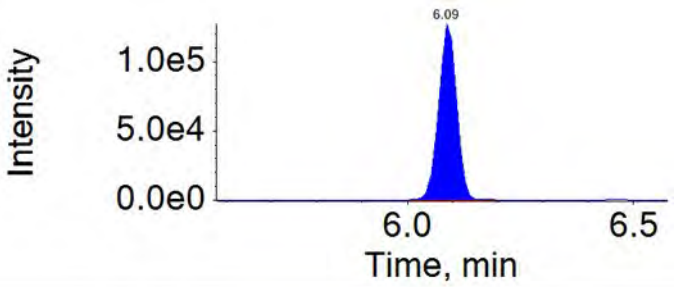
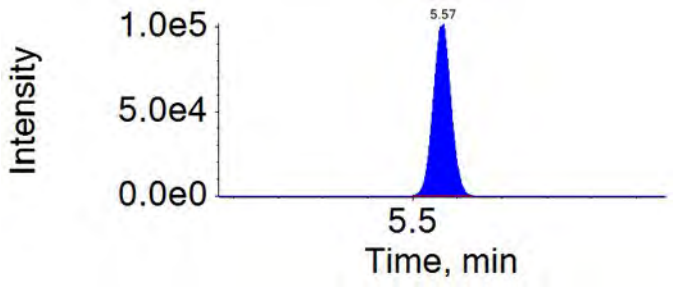
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

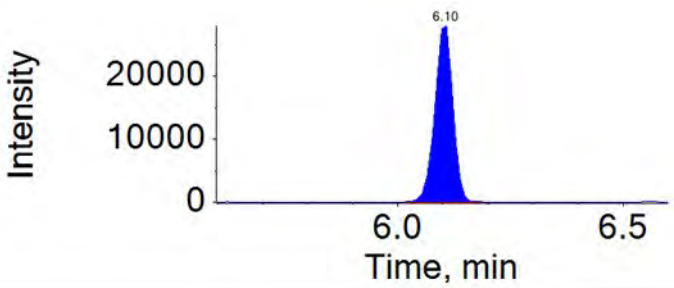
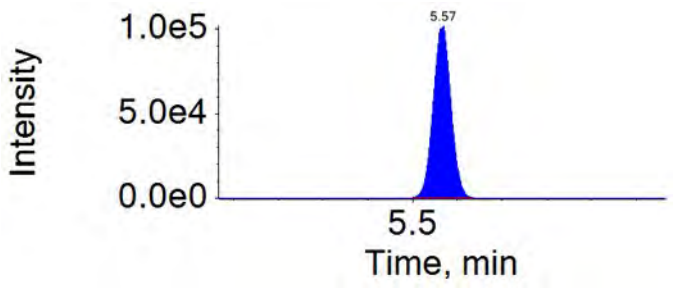
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

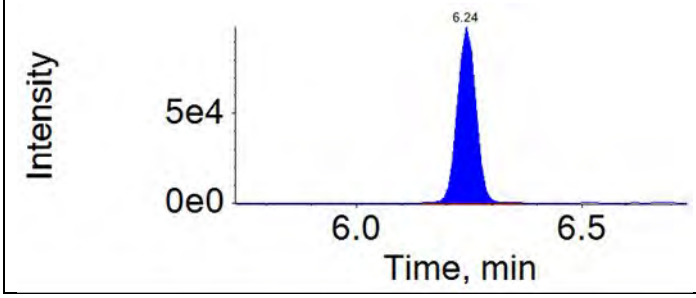
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

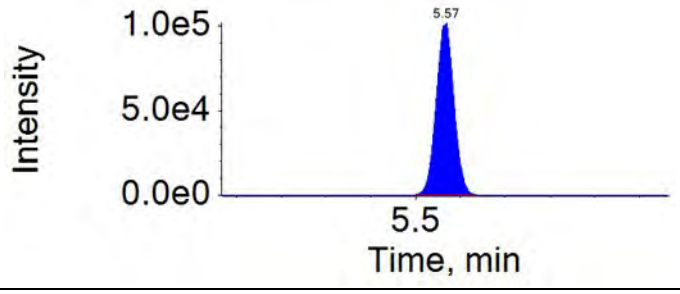
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

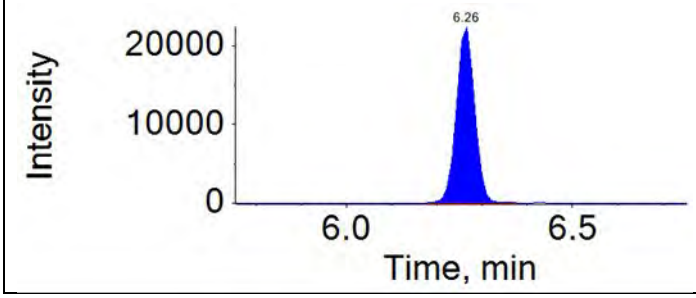
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

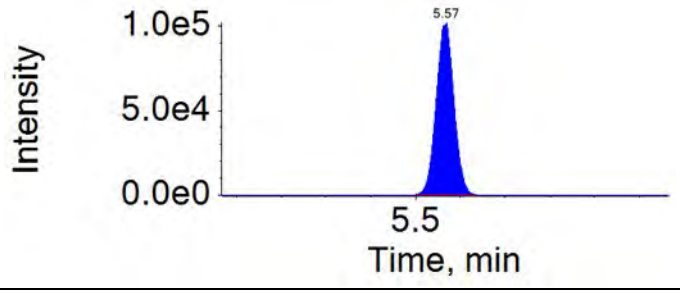
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



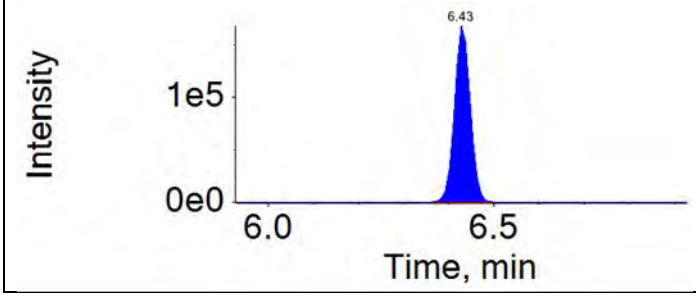


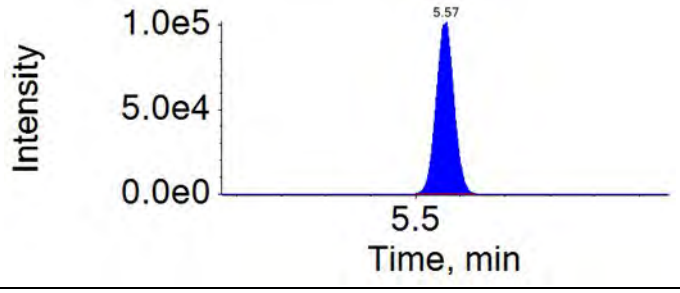
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



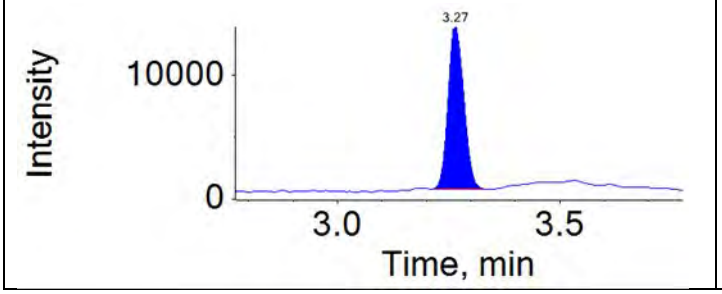


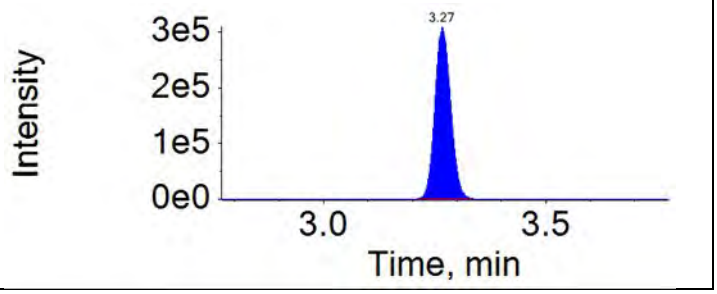
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

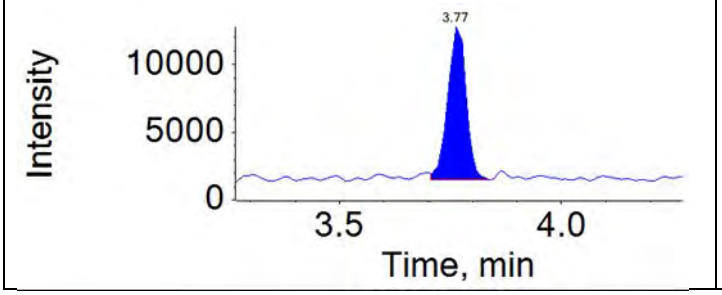
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

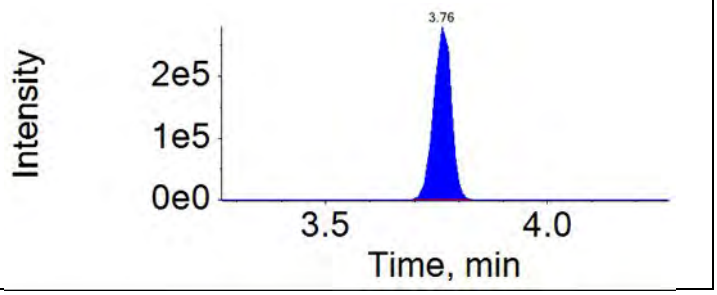
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



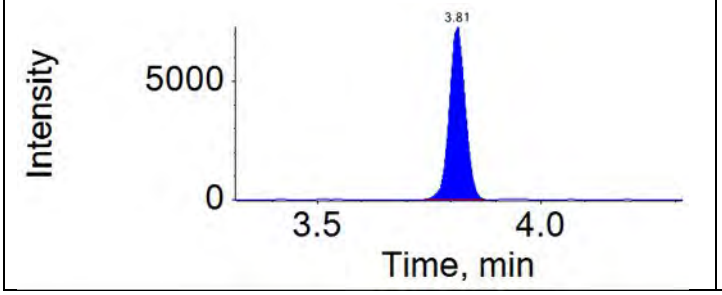


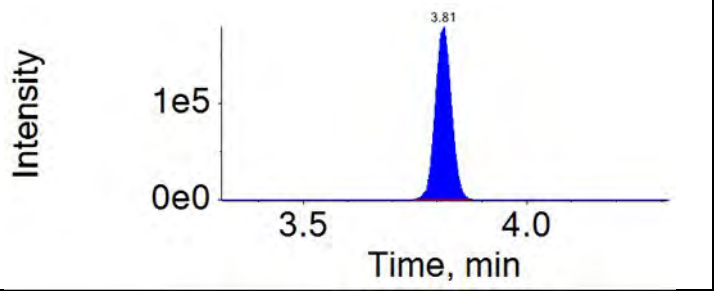
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



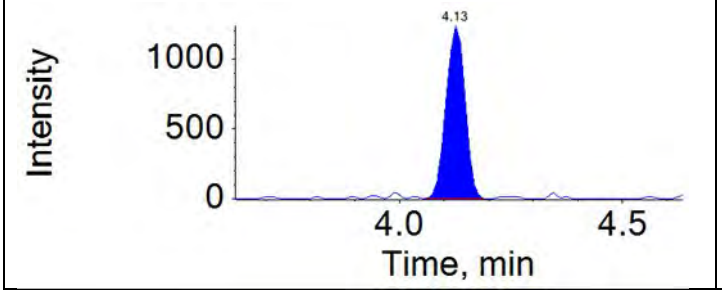


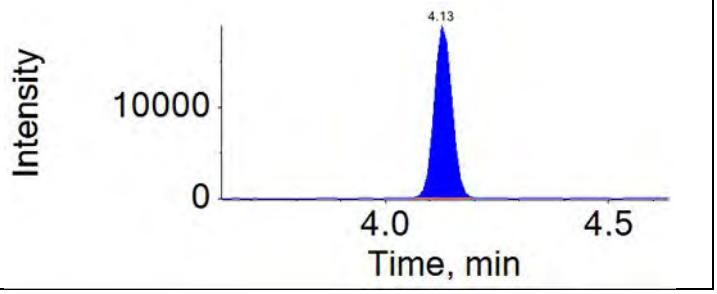
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



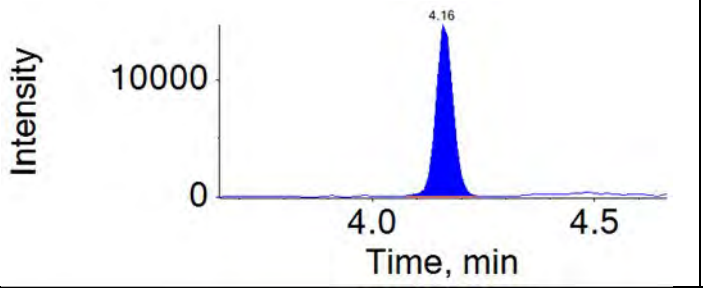


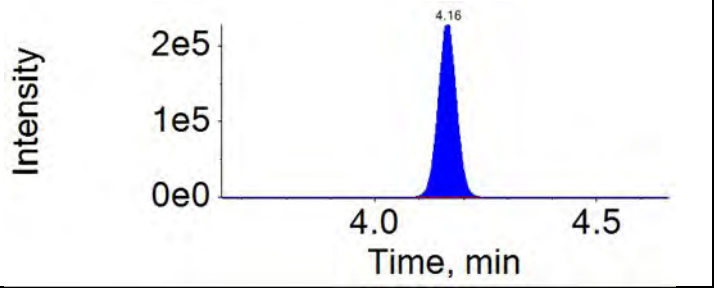
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

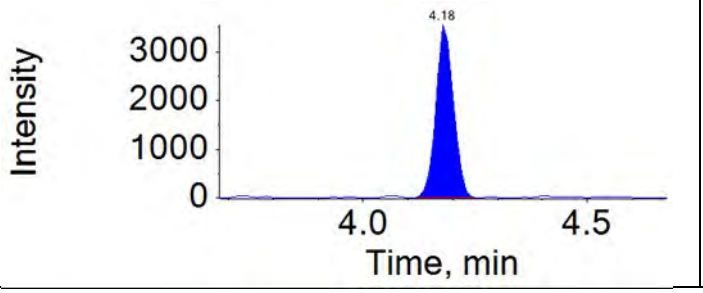
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

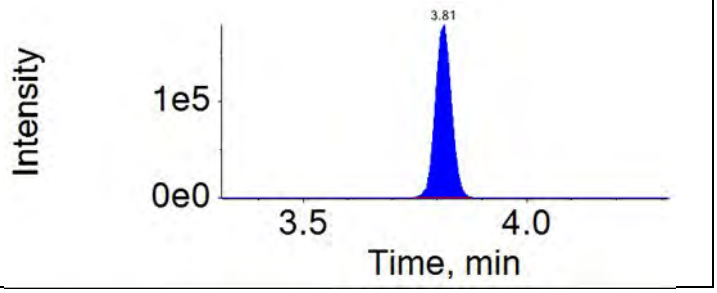
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



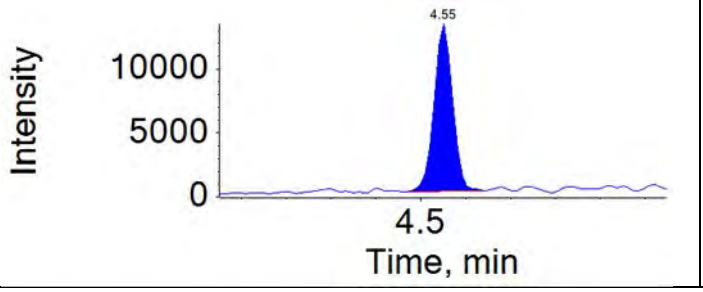


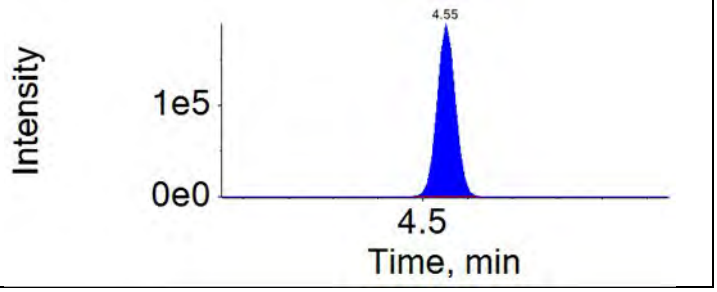
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



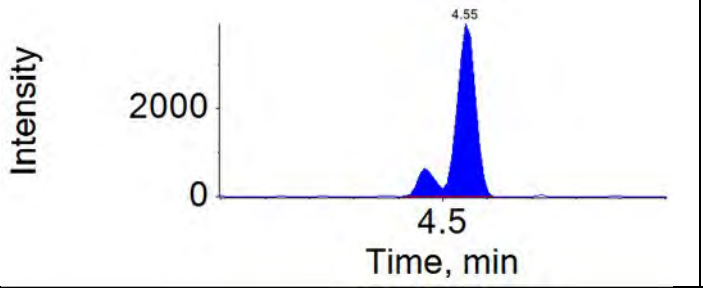


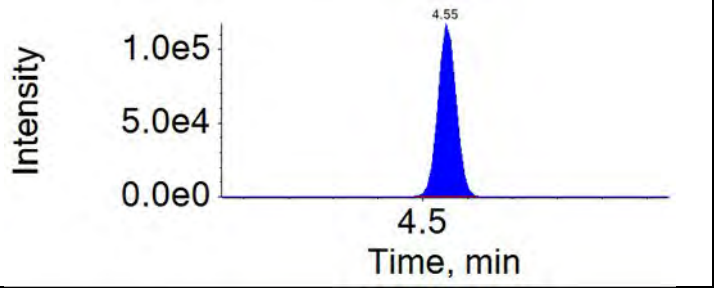
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



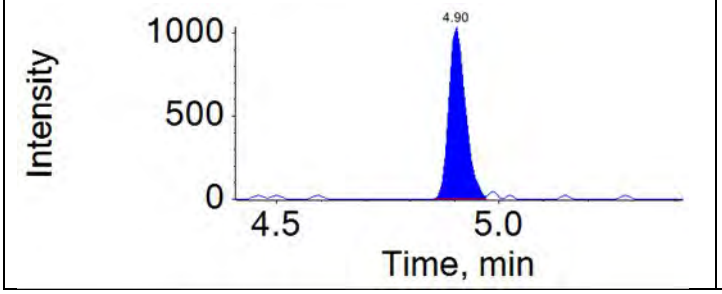


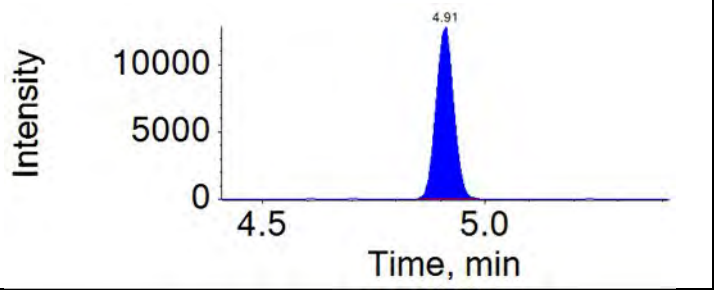
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

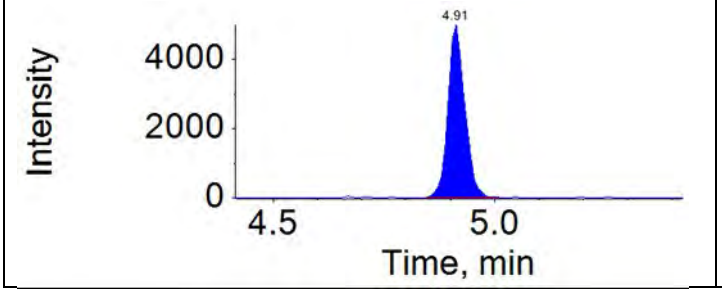
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

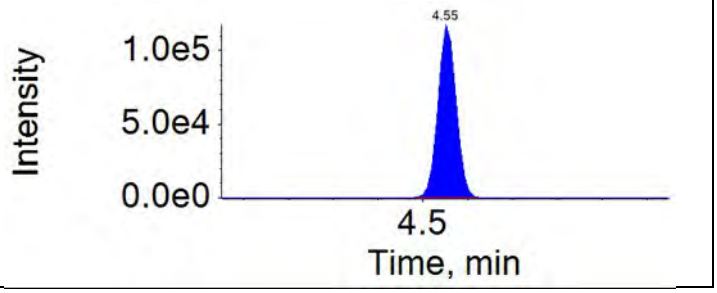
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



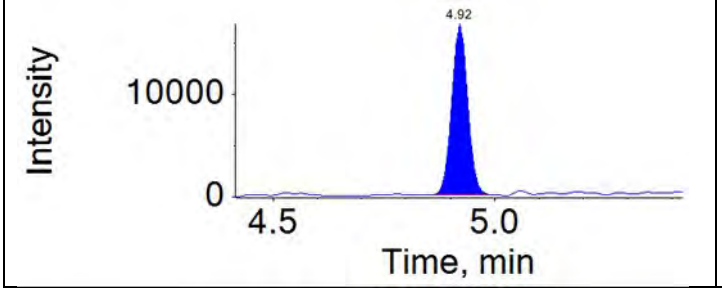


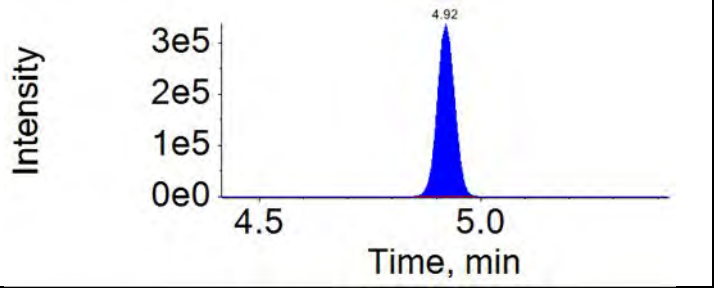
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



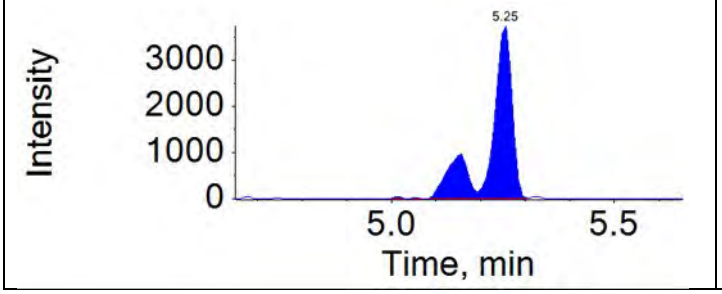


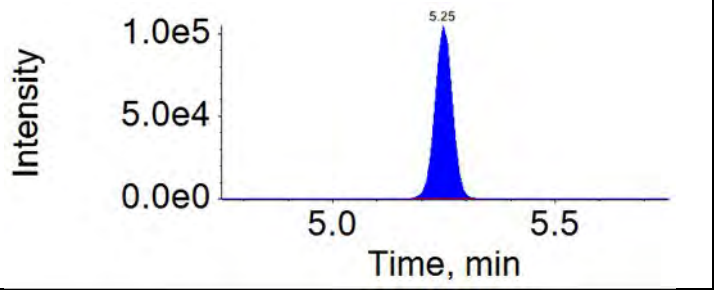
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



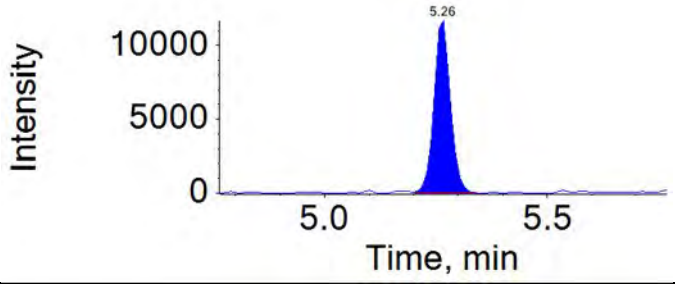


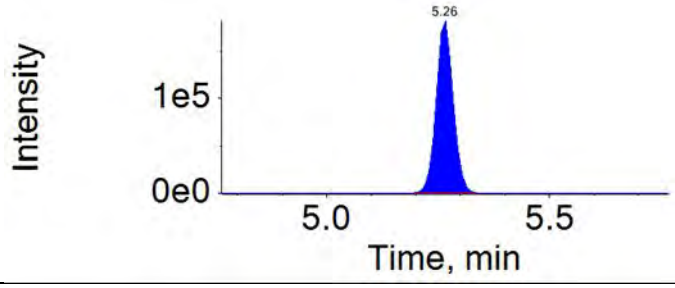
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

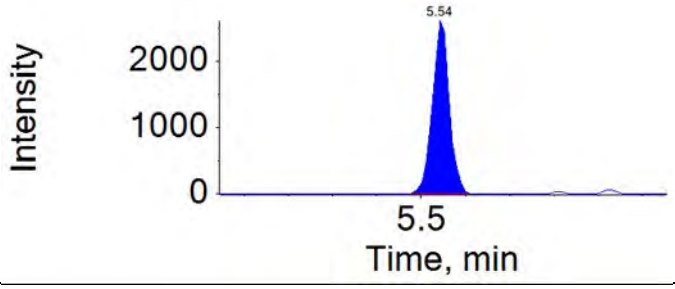
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

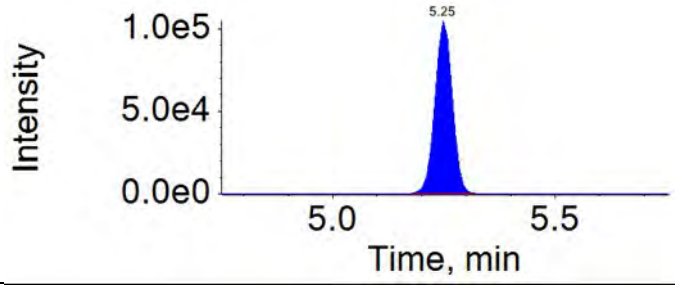
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



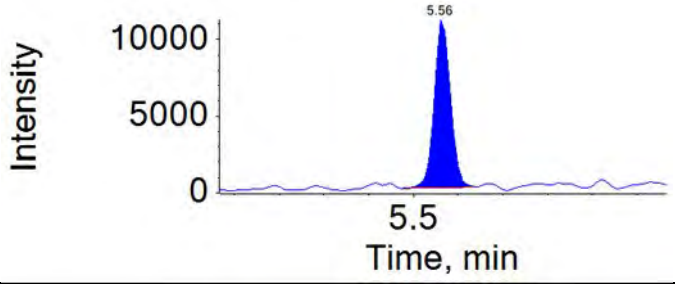


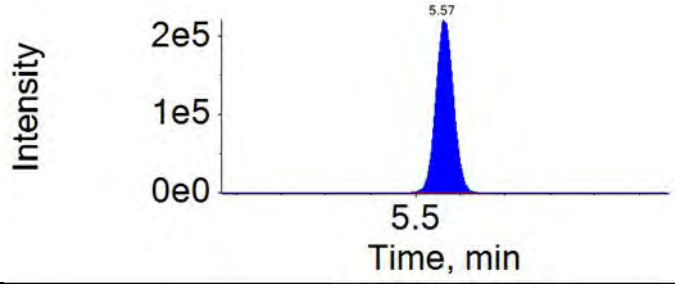
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



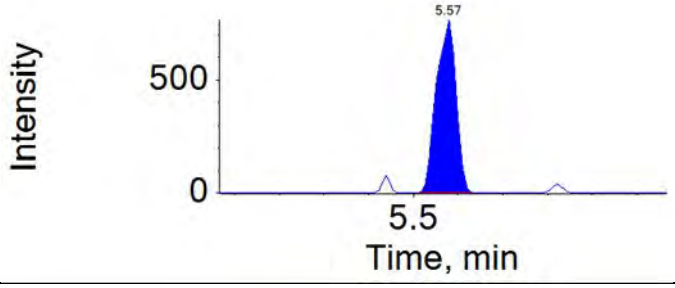


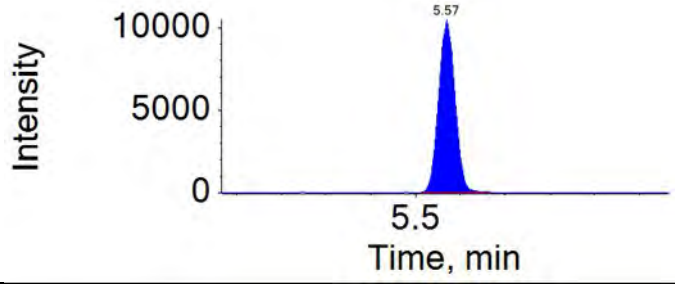
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



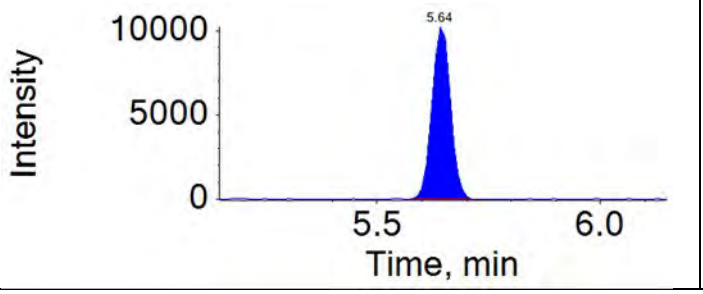


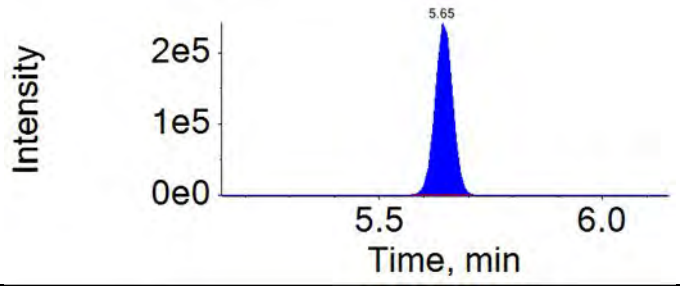
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

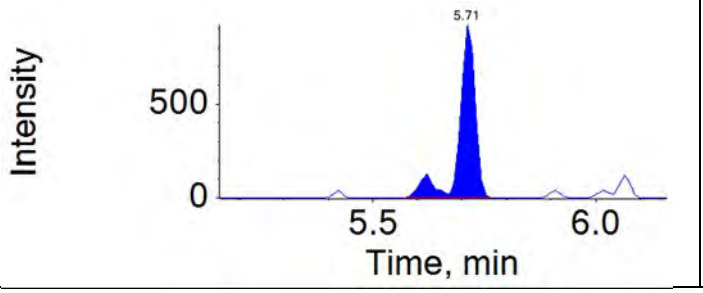
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

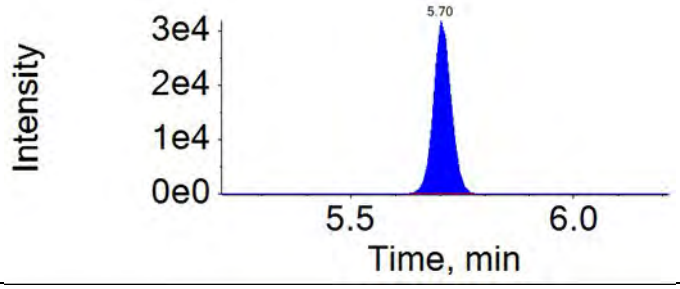
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



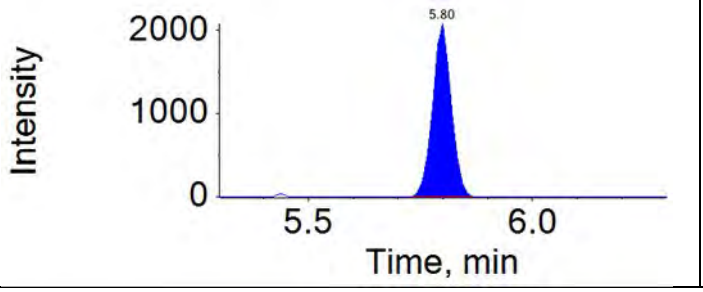


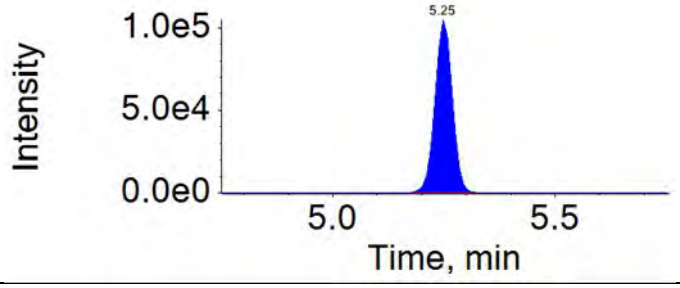
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



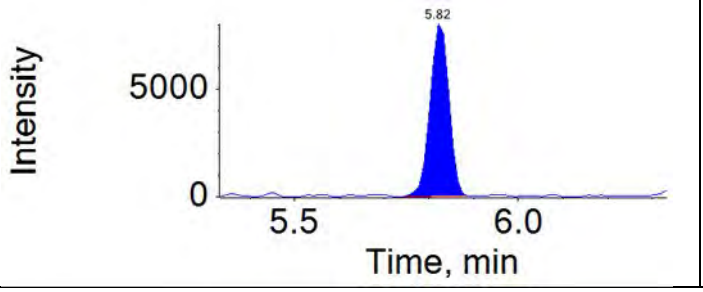


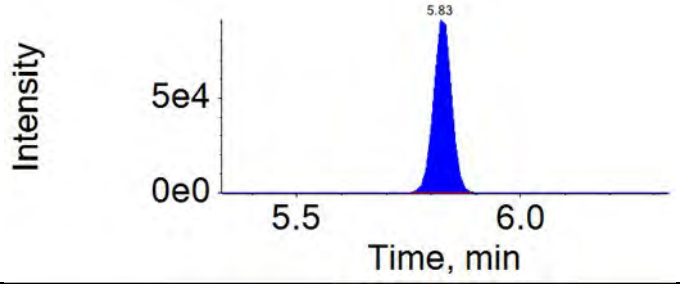
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

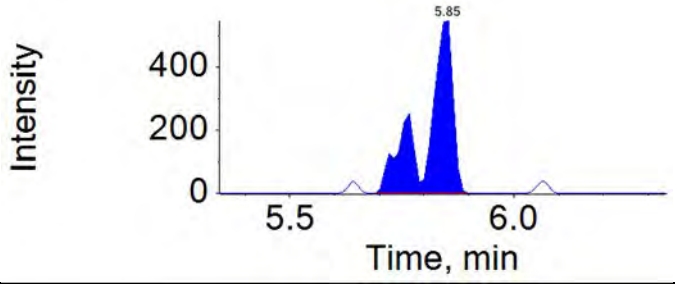
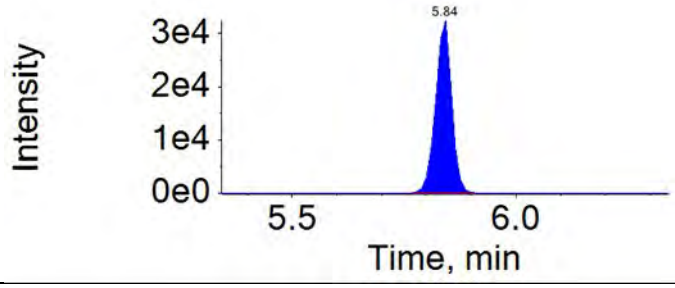


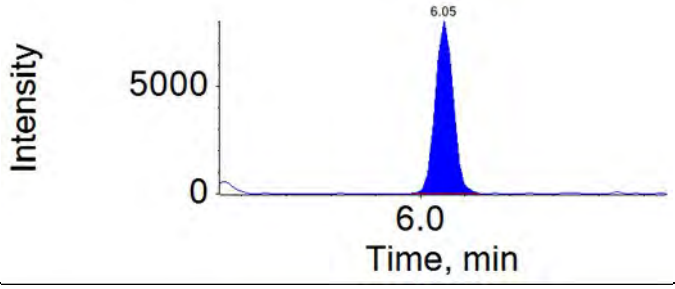
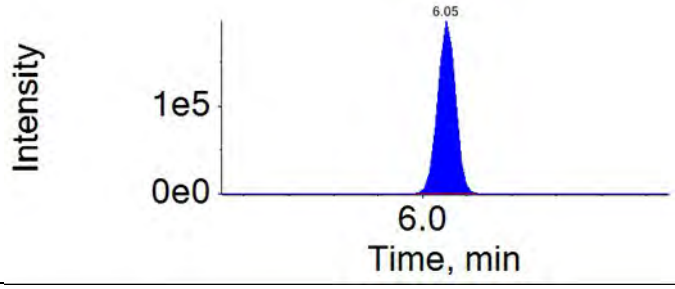


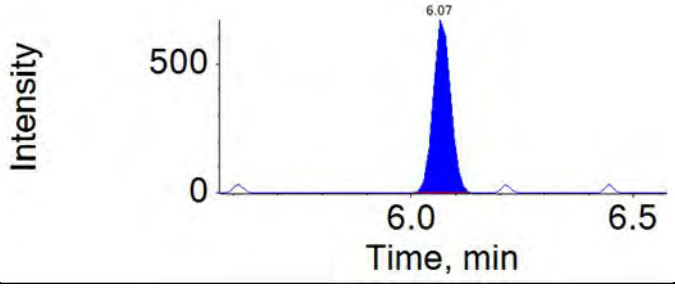
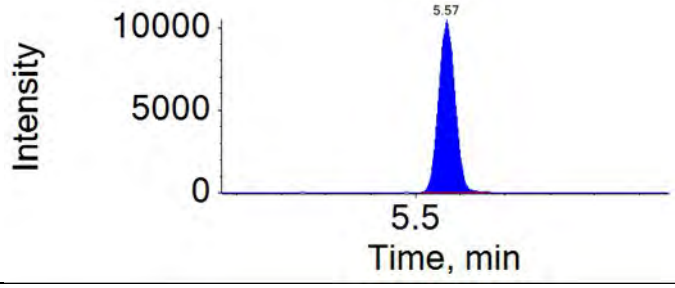
APPROVED
By MCD at 6:33 pm, 11/12/18

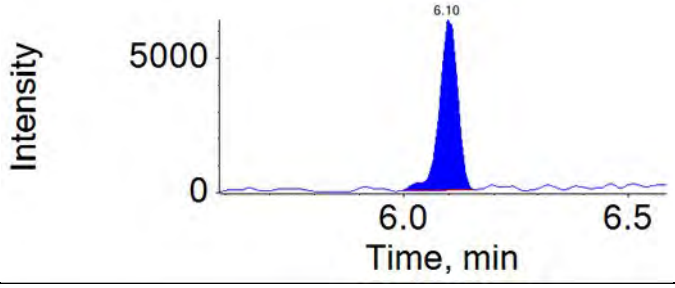
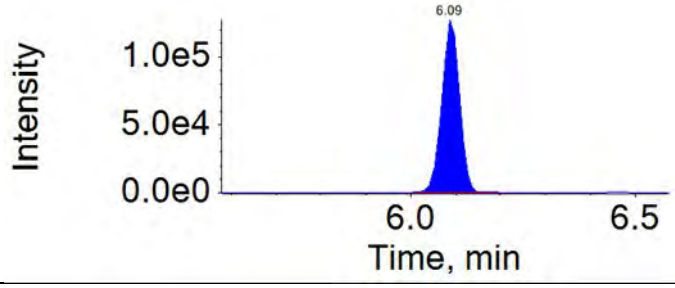
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

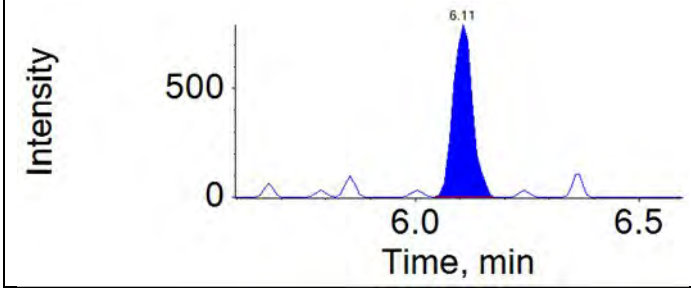
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

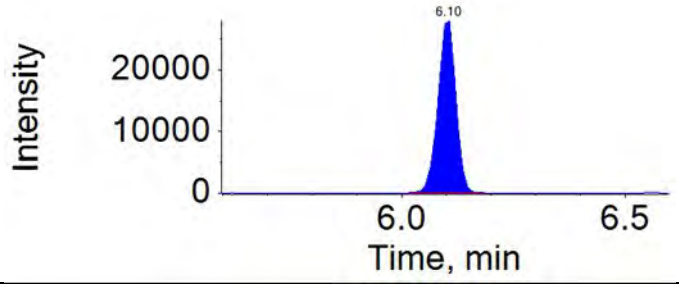
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

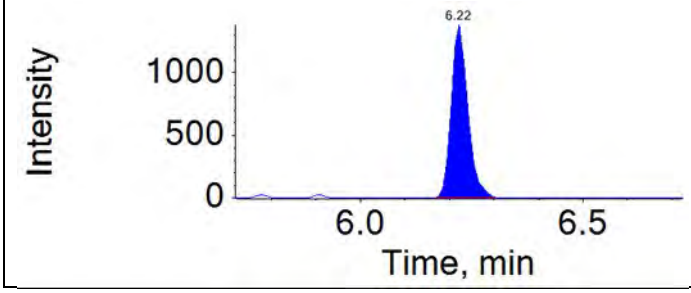
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

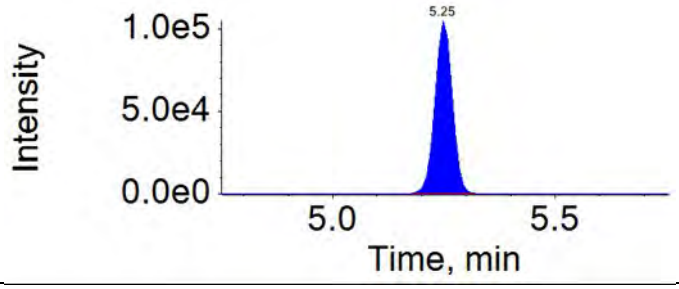
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



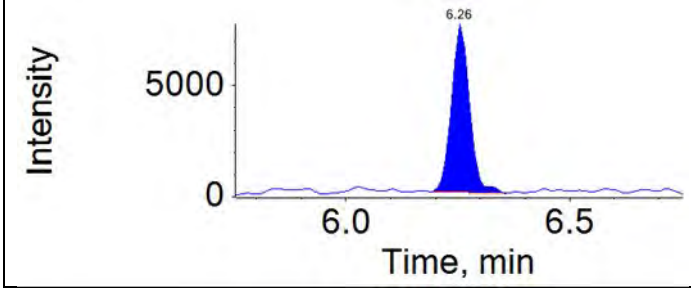


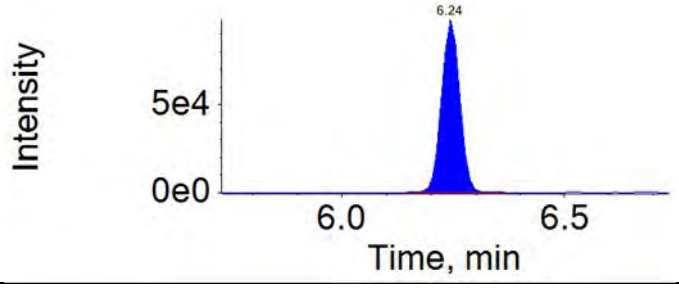
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



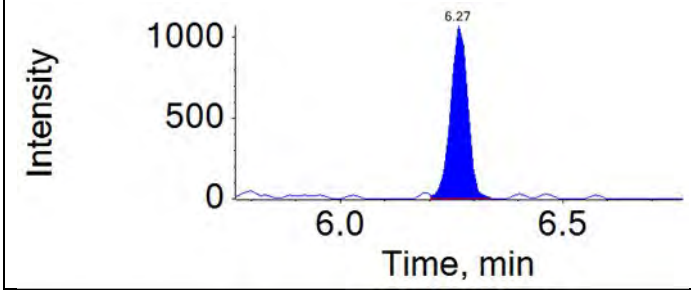


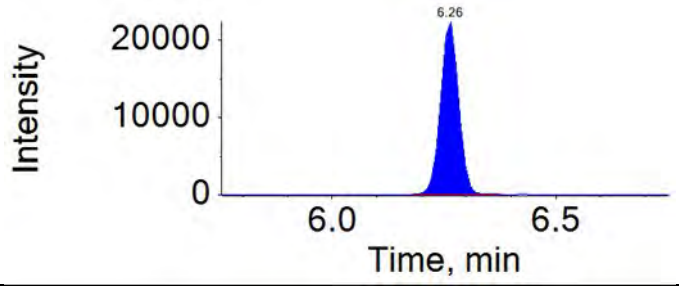
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



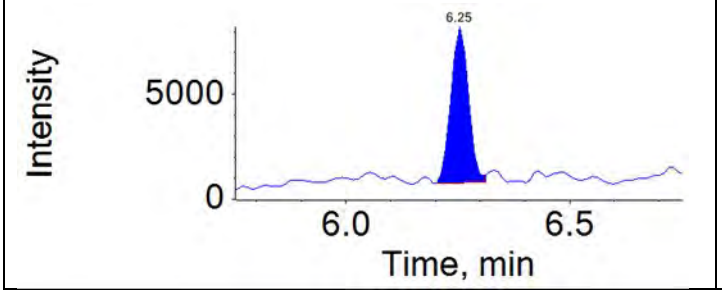


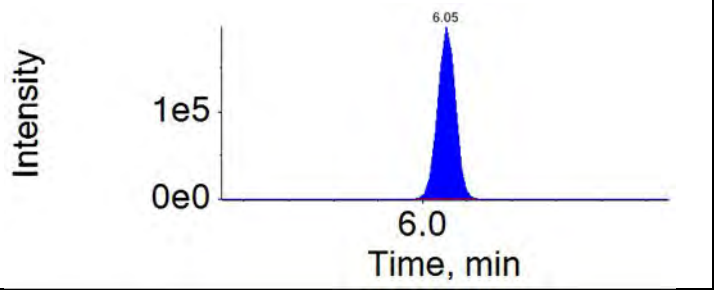
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

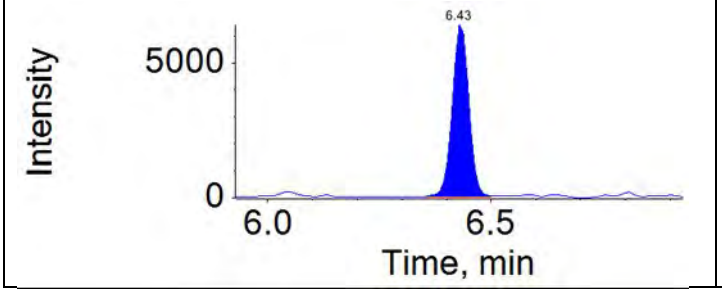
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

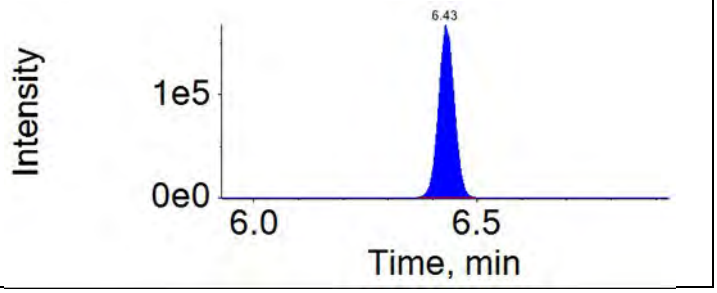
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



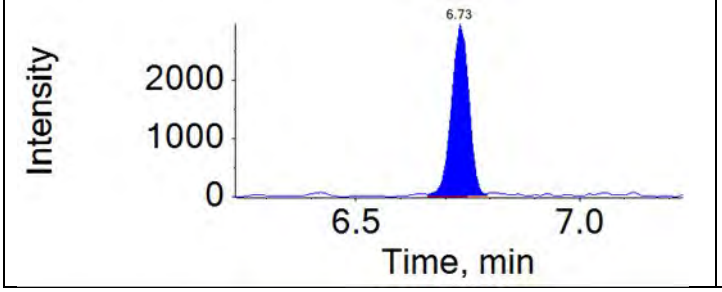


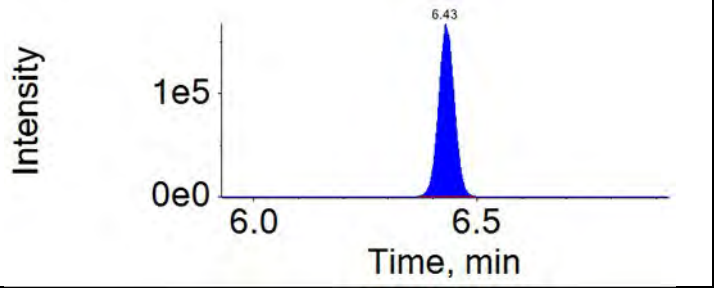
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



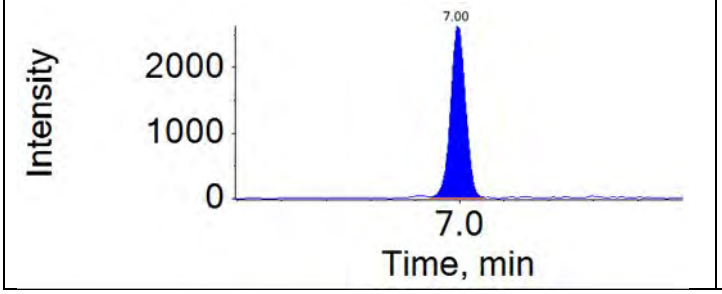


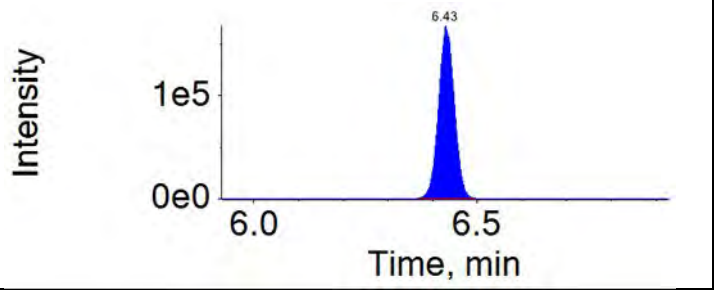
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

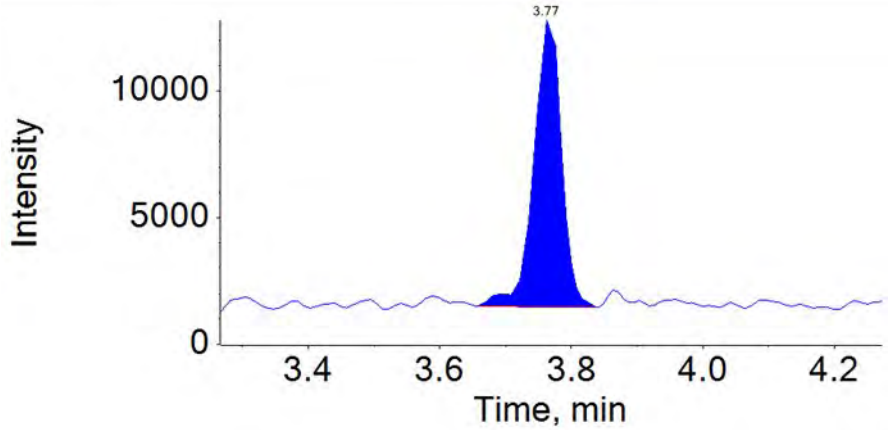


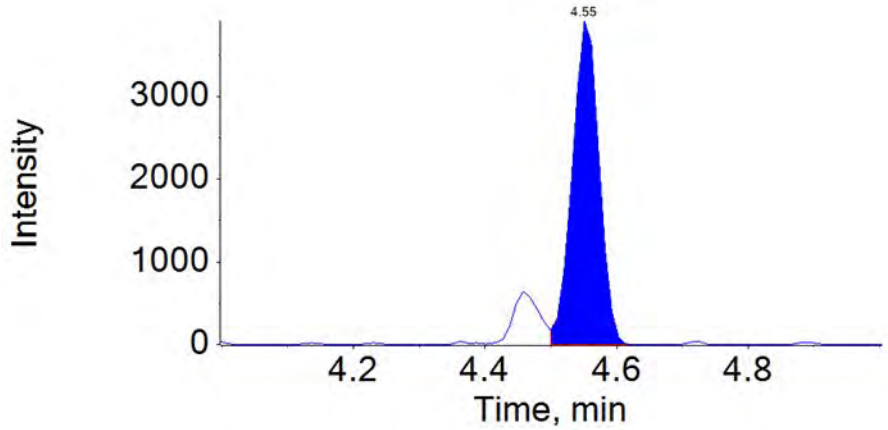


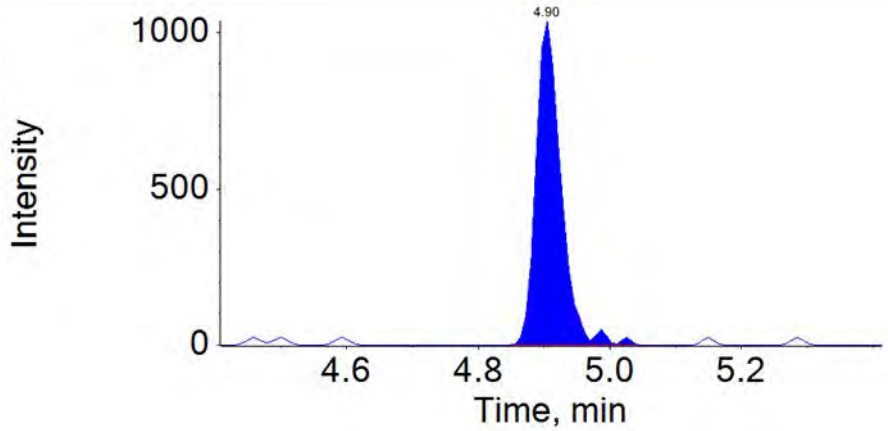
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFPeA **RT (min.):** 3.77 **Peak Area:** 33474.86 **Mass Range:** 263.0 / 219.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 11101.81 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

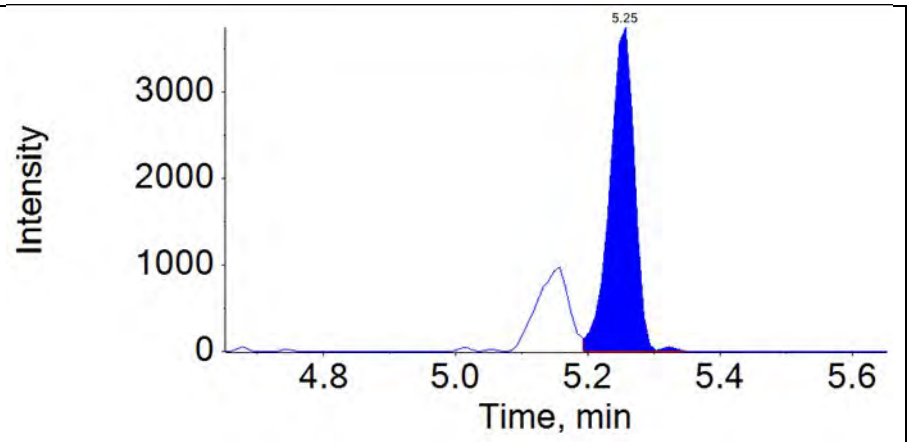
Component Name: 6:2-FTS **RT (min.):** 4.90 **Peak Area:** 2772.78 **Mass Range:** 427.0 / 407.0 **File Name:** 18NOV12DCAL-42.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

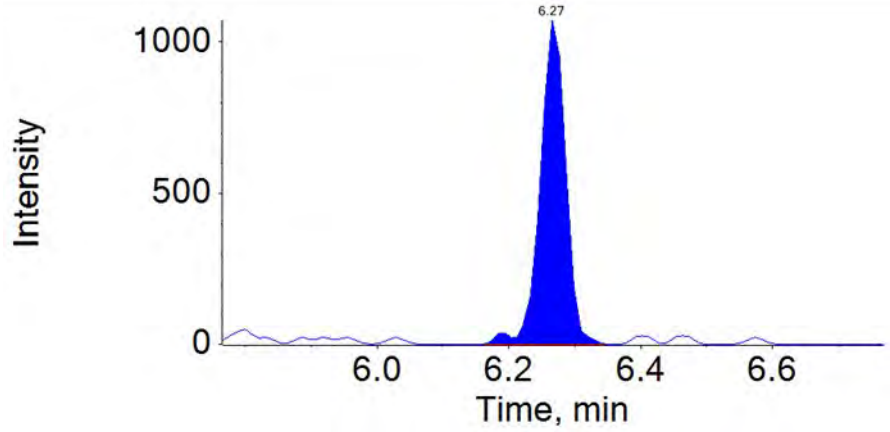
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
9779.70
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



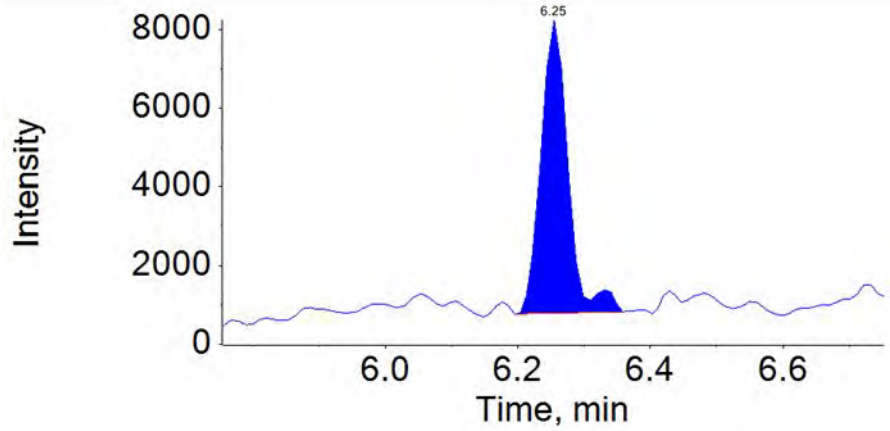
Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
2904.33
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.25
Peak Area:
21221.75
Mass Range:
663.0 / 619.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



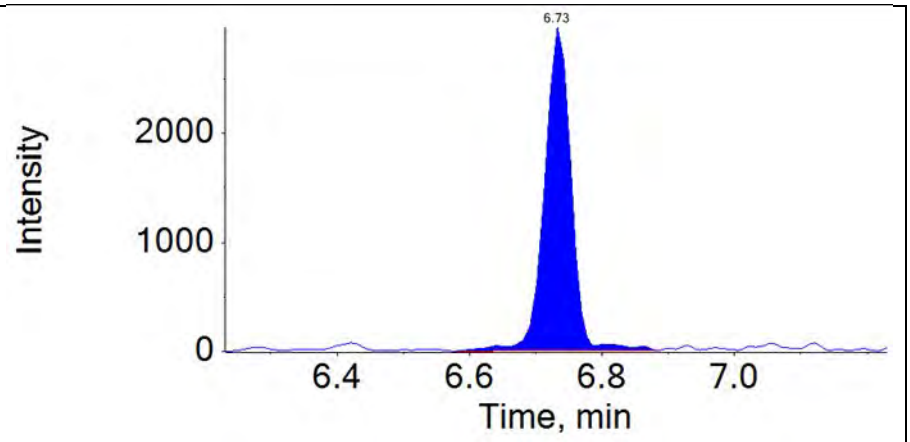
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

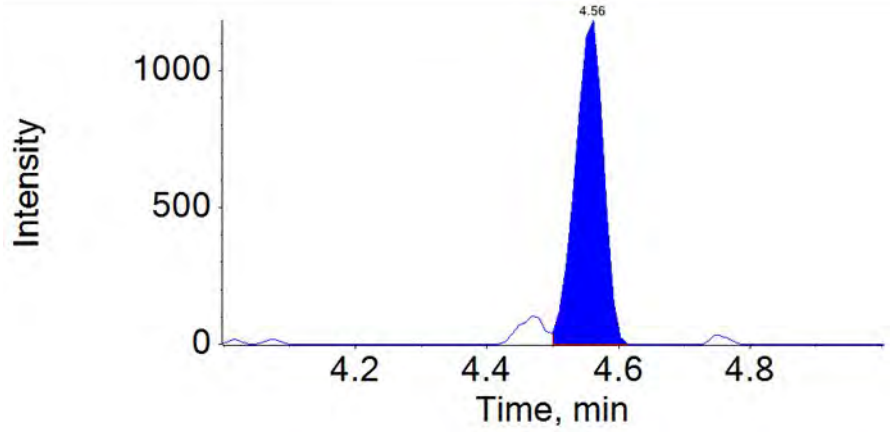
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA
RT (min.):
6.73
Peak Area:
8304.86
Mass Range:
813.0 / 769.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



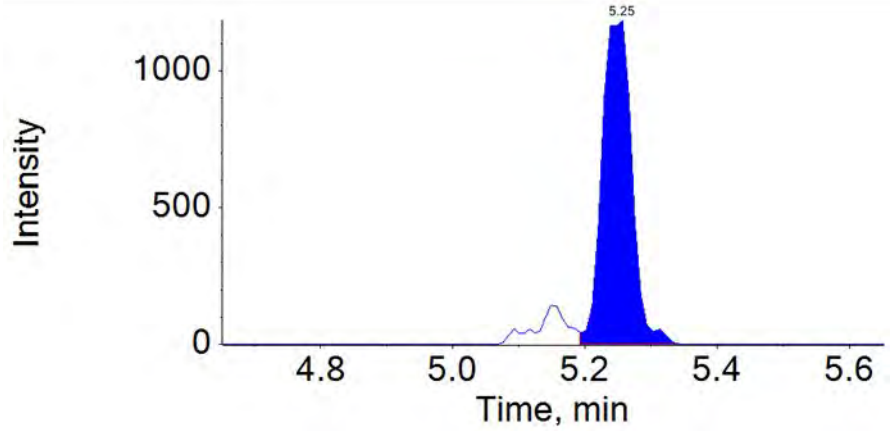
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3529.38
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
3773.94
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



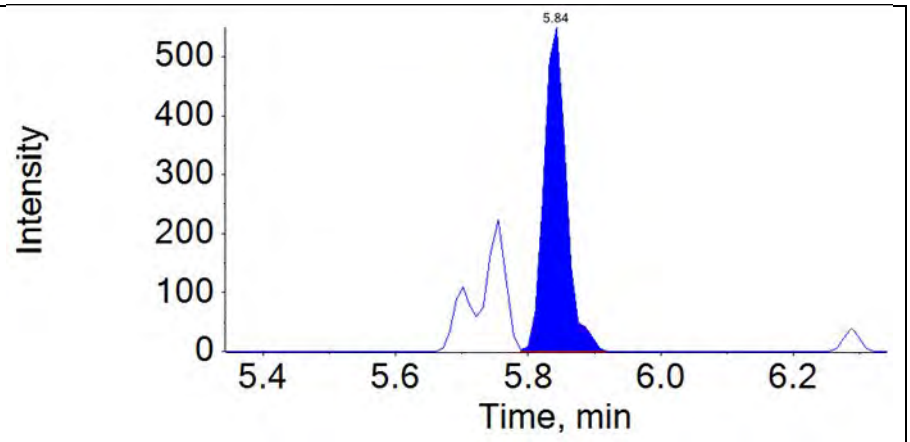
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

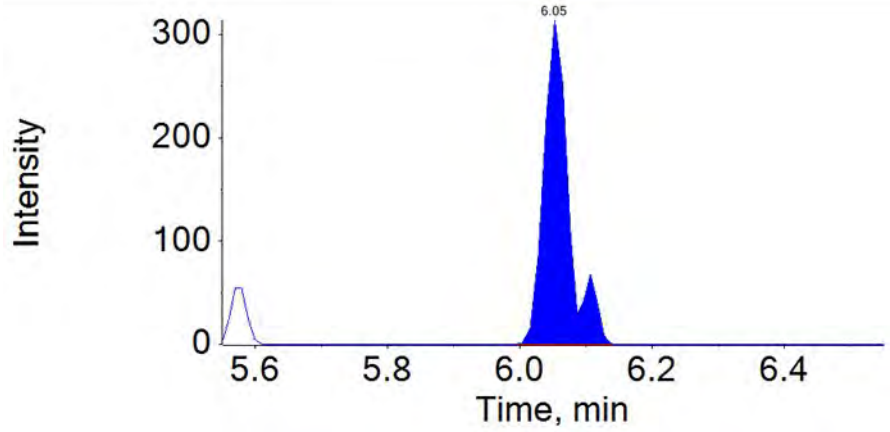
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
1295.22
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



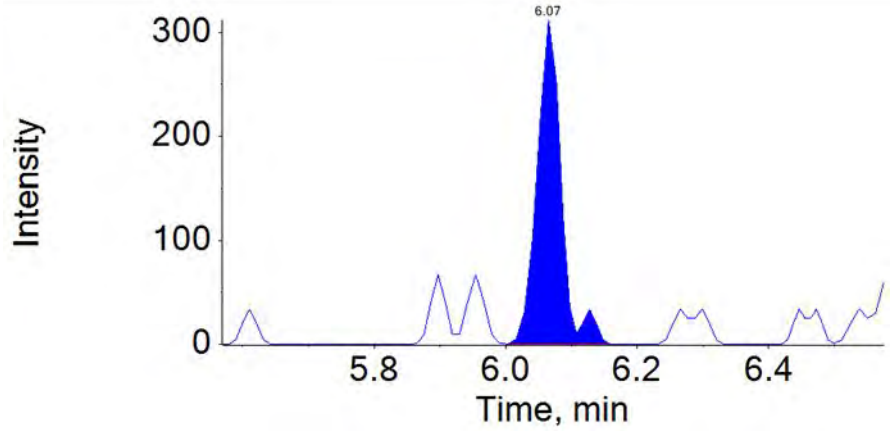
Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
835.89
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
10:2 FTS_2
RT (min.):
6.07
Peak Area:
801.59
Mass Range:
627.0 / 81.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

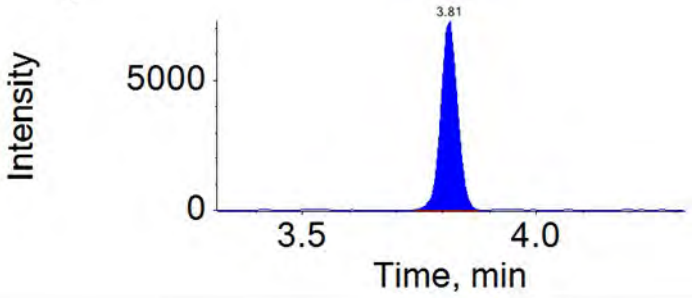
Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-42.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	18010.03	A	0.3619	0.3587			
PFBS_2	3.81	1.00	6459.67	A	0.3619	0.3587	-1	50	
4:2-FTS	4.13	1.00	3636.36	A	0.6730	0.7769			
4:2 FTS_2	4.13	1.00	2825.20	A	0.6730	0.7769		#NA!	
PFHxA	4.16	1.00	39108.19	A	0.0117	0.0110			
PFHxA_2	4.16	1.00	431.19	A	0.0117	0.0110	-5	50	
PFPeS	4.18	1.10	9620.09	A	0.5191	0.4377			
PFPeS_2	4.18	1.10	4210.95	A	0.5191	0.4377	-16	50	
PFHpA	4.55	1.00	37545.37	A	0.0563	0.0594			
PFHpA_2	4.55	1.00	2229.00	A	0.0563	0.0594	5	50	
PFHxS	4.55	1.00	12858.11	M	0.3428	0.2967			
PFHxS_2	4.56	1.00	3815.05	M	0.3428	0.2967	-13	50	
6:2-FTS	4.90	1.00	2683.12	M	0.6604	0.6208			
6:2 FTS_2	4.91	1.00	1665.70	A	0.6604	0.6208		#NA!	
PFHpS	4.91	1.08	13262.78	A	0.4066	0.3857			
PFHpS_2	4.91	1.08	5115.91	A	0.4066	0.3857	-5	50	
PFOA	4.92	1.00	41467.99	A	0.0562	0.0587			
PFOA_2	4.92	1.00	2433.19	A	0.0562	0.0587	4	50	
PFOS	5.25	1.00	13088.49	M	0.2968	0.3248			
PFOS_2	5.25	1.00	4250.80	M	0.2968	0.3248	9	50	
PFNA	5.26	1.00	29660.05	A	0.0229	0.0300			
PFNA_2	5.26	1.00	890.58	A	0.0229	0.0300	31	50	
PFNS	5.54	1.06	6846.55	A	0.4828	0.5747			
PFNS_2	5.55	1.06	3934.96	A	0.4828	0.5747	19	50	
PFDA	5.56	1.00	27488.55	A	0.0081	0.0185			
PFDA_2	5.57	1.00	509.91	A	0.0081	0.0185	130	50	OOS
8:2-FTS	5.57	1.00	2333.06	A	0.6814	0.8052			
8:2 FTS_2	5.57	1.00	1878.62	A	0.6814	0.8052		#NA!	
NMeFOSAA	5.71	1.00	2306.38	A	0.2569	0.2416			
NMeFOSAA_2	5.69	1.00	557.21	A	0.2569	0.2416	-6	50	
PFDS	5.80	1.10	5952.23	A	0.5144	0.5857			
PFDS_2	5.80	1.11	3486.36	A	0.5144	0.5857	14	50	
PFUnDA	5.82	1.00	23379.53	A	0.0058	0.0168			
PFUnDA_2	5.83	1.00	393.36	A	0.0058	0.0168	189	50	OOS
NEtFOSAA	5.85	1.00	2284.89	A	0.7253	0.8510			
NEtFOSAA_2	5.84	1.00	1944.53	M	0.7253	0.8510	17	50	
PFDoDA	6.05	1.00	22143.56	A	0.0157	0.0329			
PFDoDA_2	6.05	1.00	728.93	M	0.0157	0.0329	110	50	OOS
10:2-FTS	6.07	1.09	1814.19	A	0.6356	0.4140			
10:2 FTS_2	6.07	1.09	751.03	M	0.6356	0.4140		#NA!	
PFTrDA	6.25	1.03	20185.08	M	0.0086	0.0098			
PFTrDA_2	6.24	1.03	198.77	A	0.0086	0.0098	15	50	
PFTeDA	6.43	1.00	16357.53	A	0.0062	0.0036			
PFTeDA_2	6.46	1.01	58.89	A	0.0062	0.0036	-42	50	
PFHxDA	6.73	1.05	7976.02	M	0.0683	0.0708			
PFHxDA_2	6.73	1.05	564.53	A	0.0683	0.0708	4	50	
PFODA	7.00	1.09	6020.31	A	0.0277	0.0307			
PFODA_2	6.99	1.09	185.07	A	0.0277	0.0307	11	50	

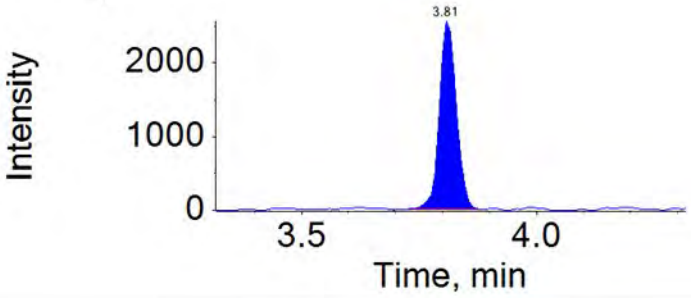
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

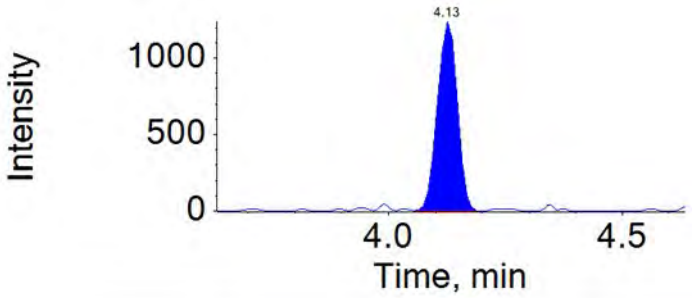
Component: PFBS
Primary Mass: 299.0 / 80.0



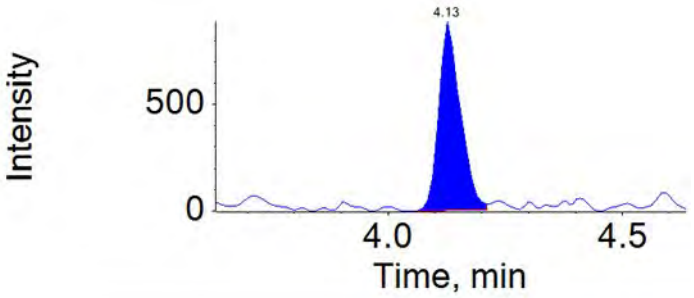
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



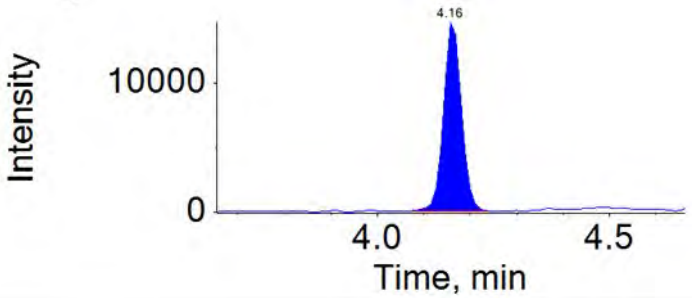
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



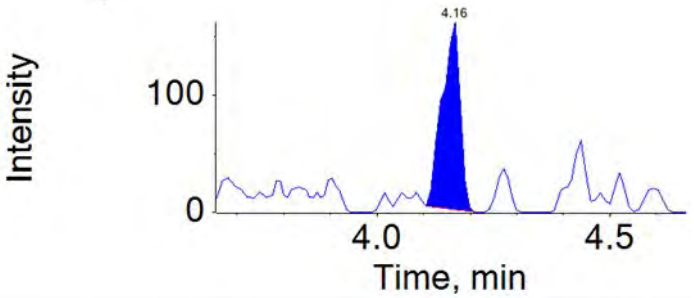
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



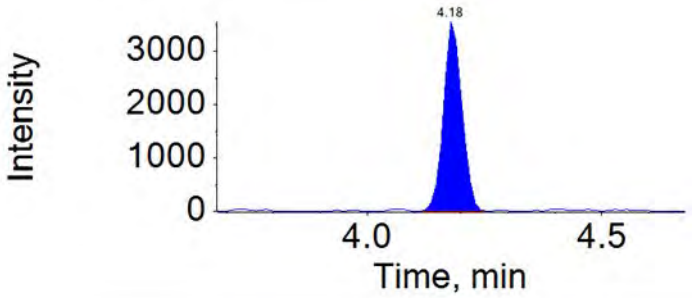
Component: PFHxA
Primary Mass: 313.0 / 269.0



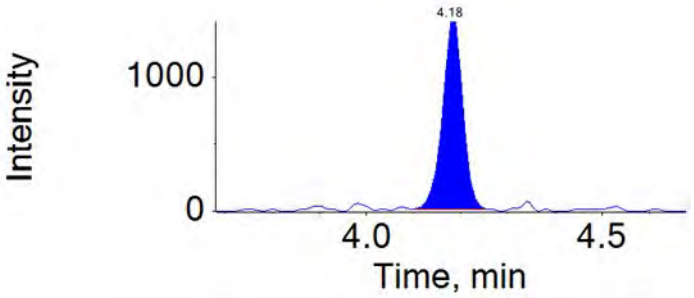
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



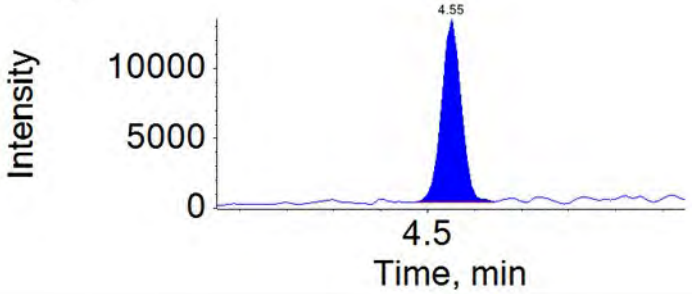
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



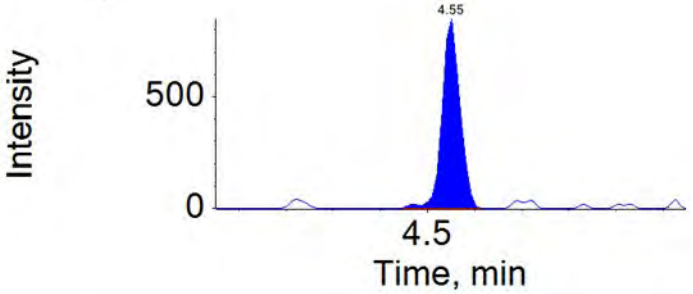
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

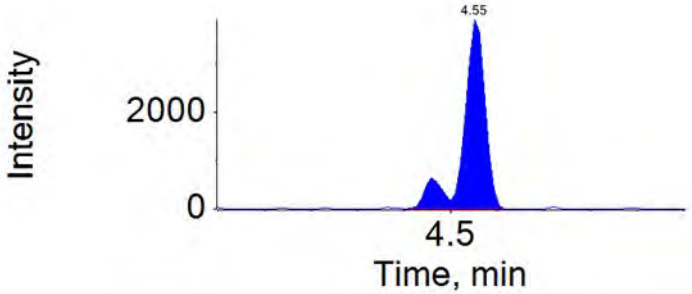
Component: PFHpA
Primary Mass: 363.0 / 319.0



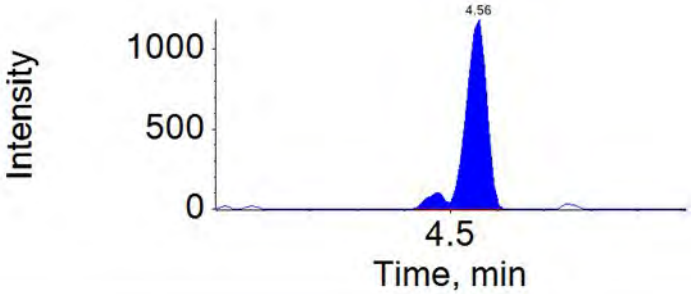
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



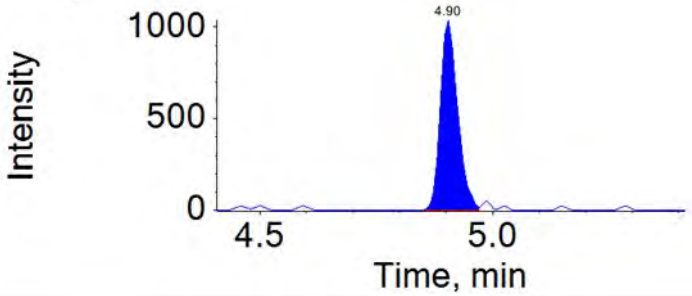
Component: PFHxS
Primary Mass: 399.0 / 80.0



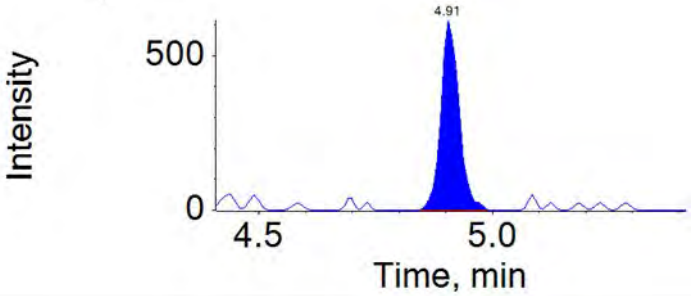
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



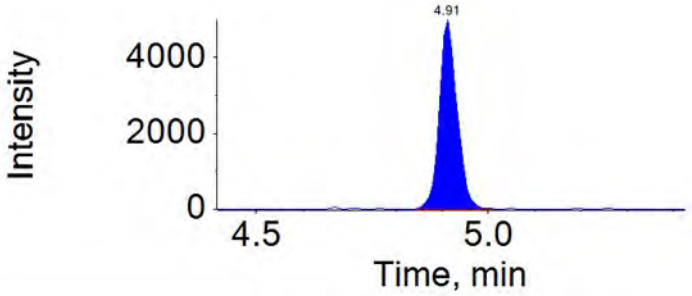
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



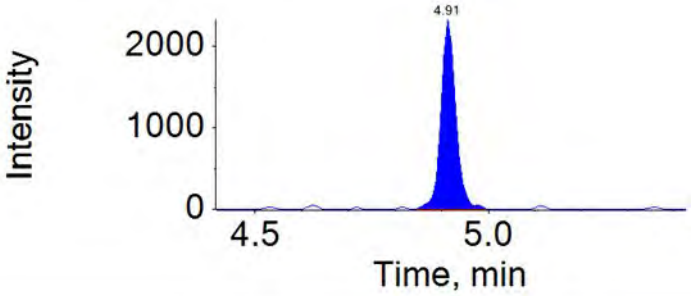
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



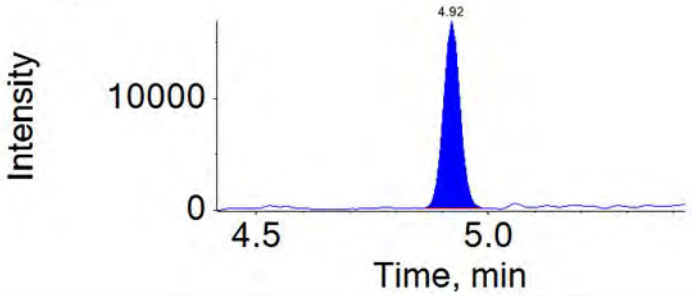
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



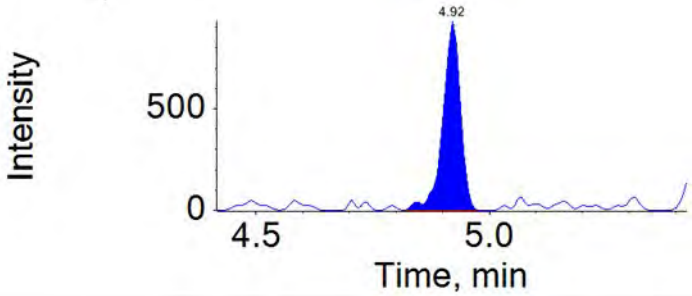
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

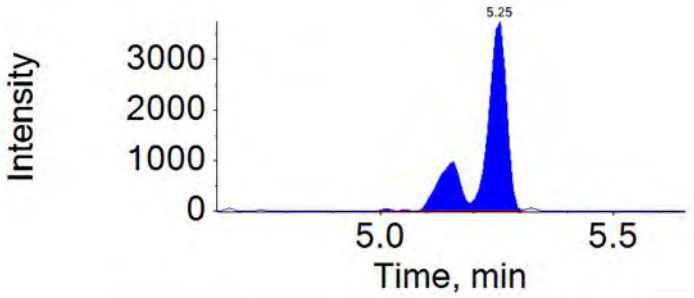
Component: PFOA
Primary Mass: 413.0 / 369.0



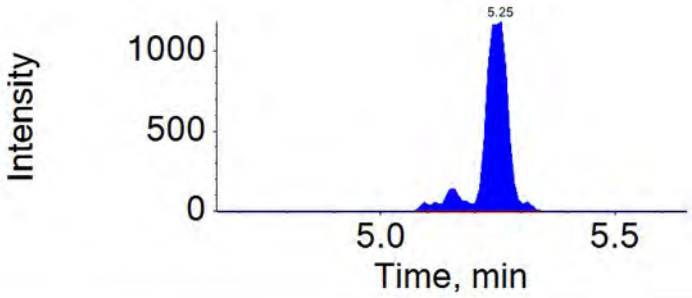
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



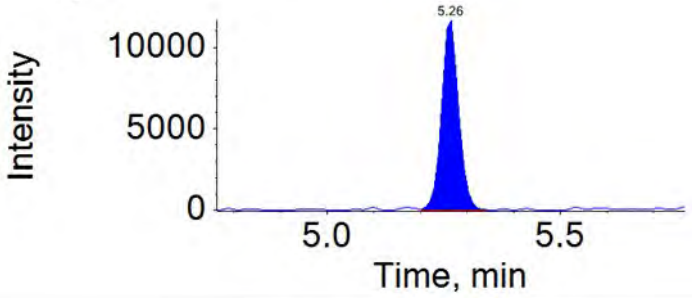
Component: PFOS
Primary Mass: 499.0 / 80.0



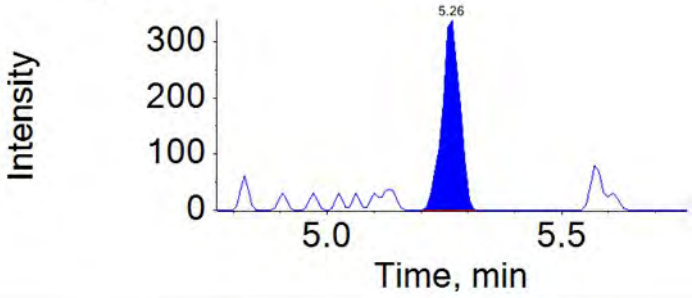
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



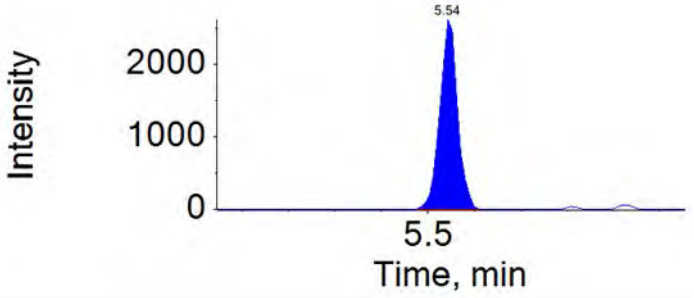
Component: PFNA
Primary Mass: 463.0 / 419.0



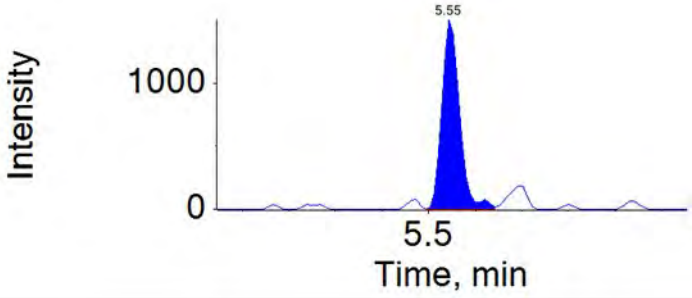
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



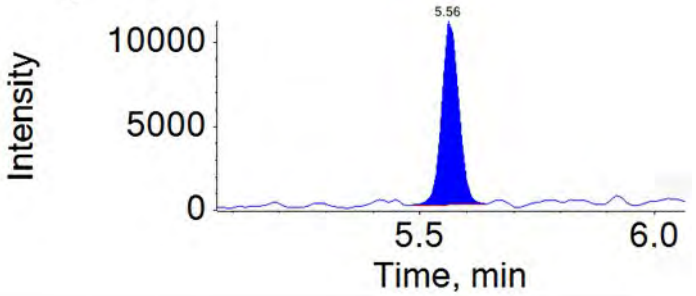
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



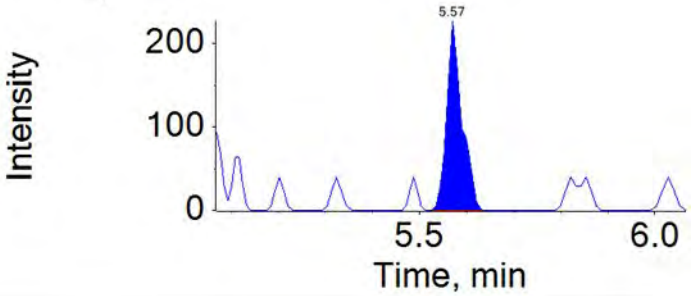
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

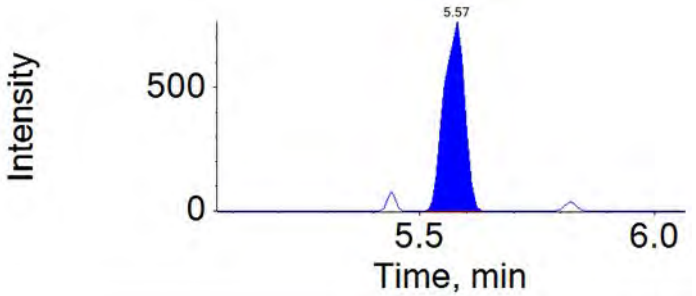
Component: PFDA
Primary Mass: 513.0 / 469.0



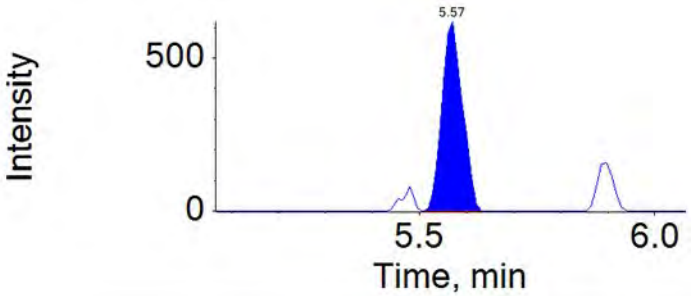
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



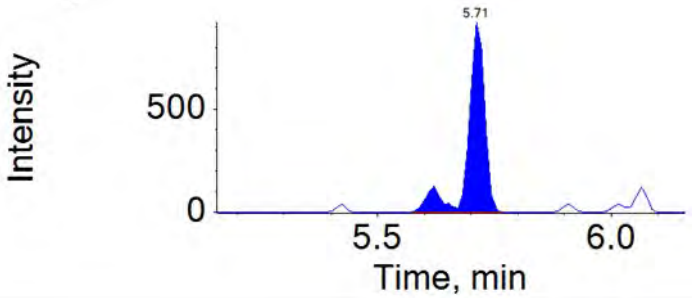
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



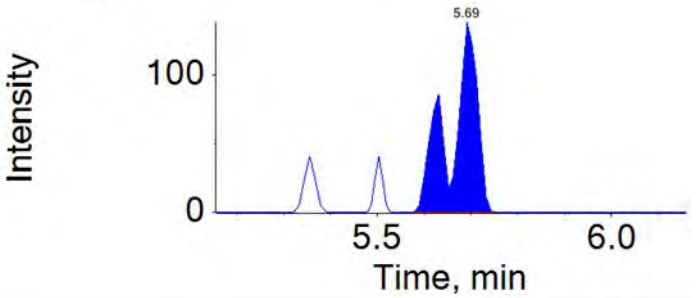
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



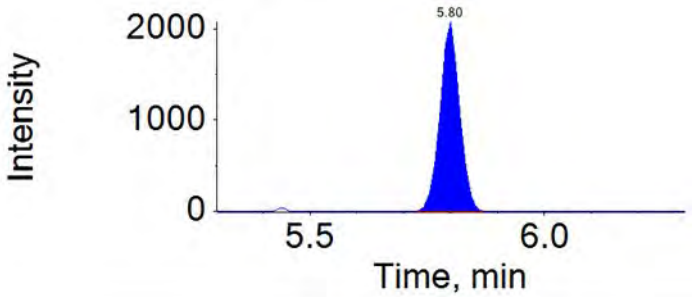
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



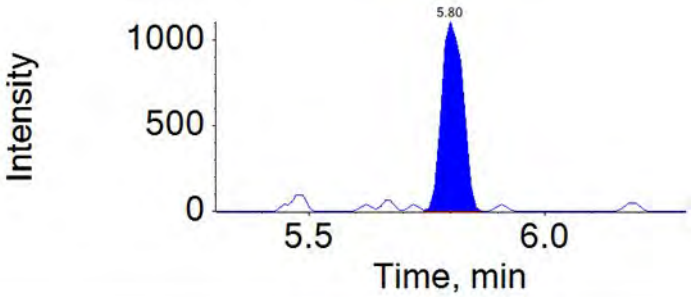
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



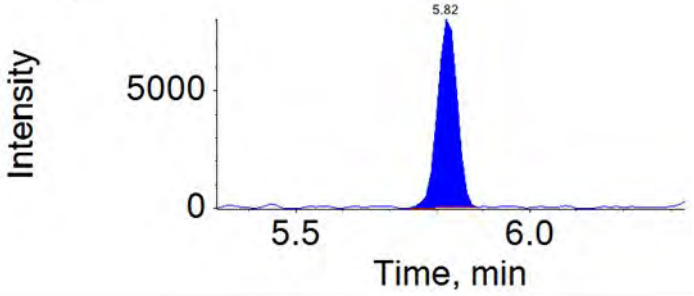
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



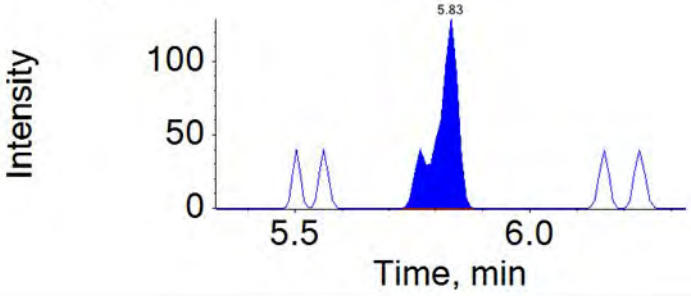
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

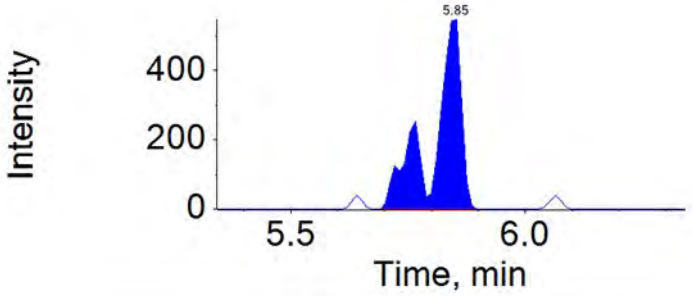
Component: PFUnDA
Primary Mass: 563.0 / 519.0



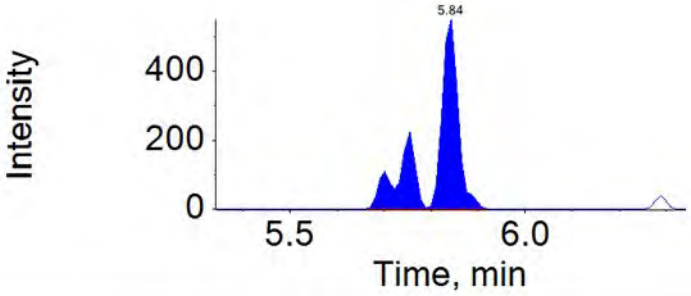
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



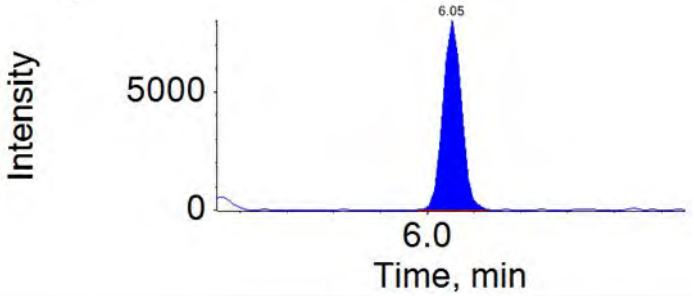
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



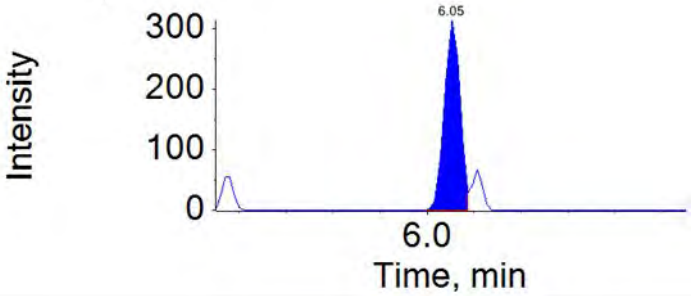
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



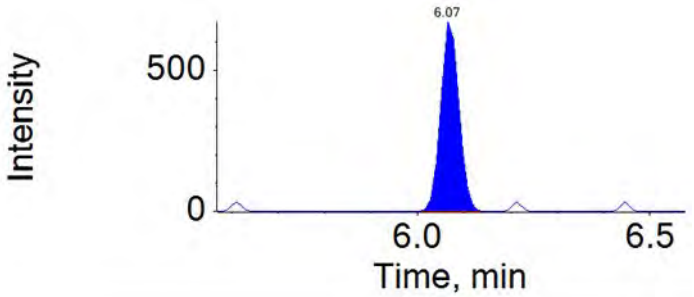
Component: PFDoDA
Primary Mass: 613.0 / 569.0



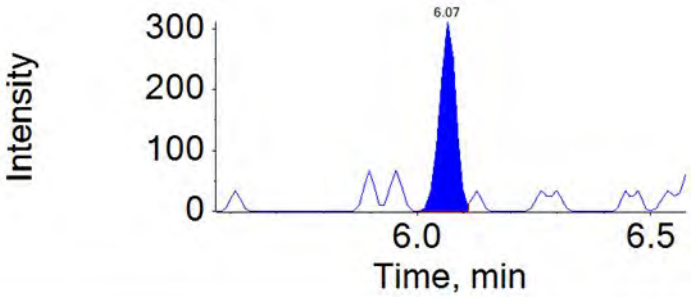
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



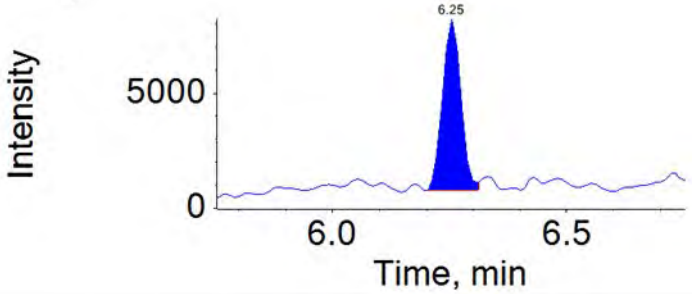
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



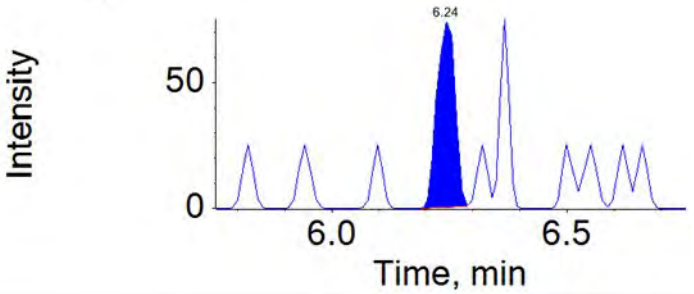
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

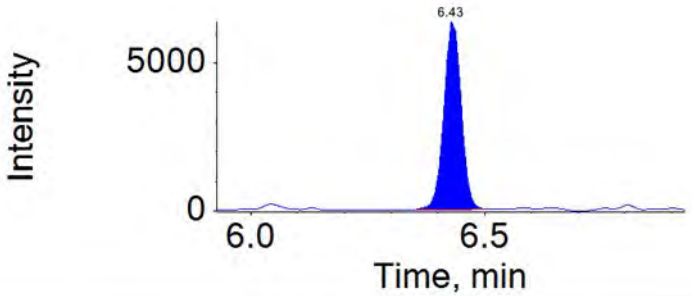
Component: PFTrDA
Primary Mass: 663.0 / 619.0



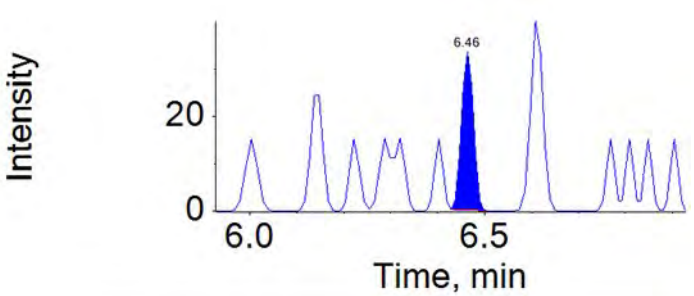
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



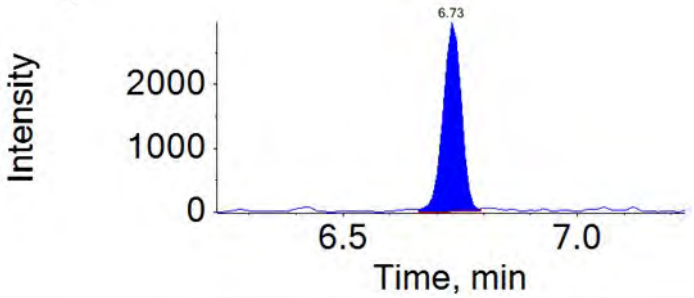
Component: PFTeDA
Primary Mass: 713.0 / 669.0



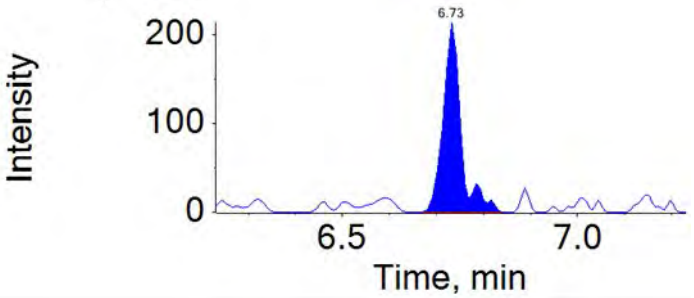
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



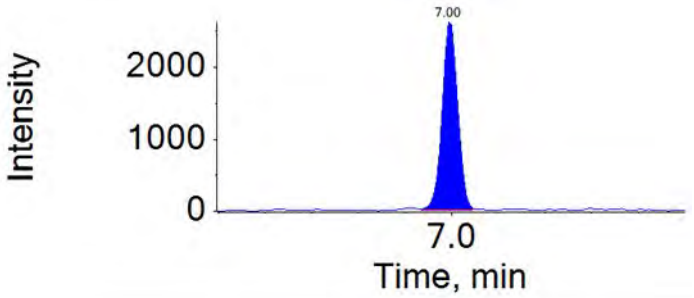
Component: PFHxDA
Primary Mass: 813.0 / 769.0



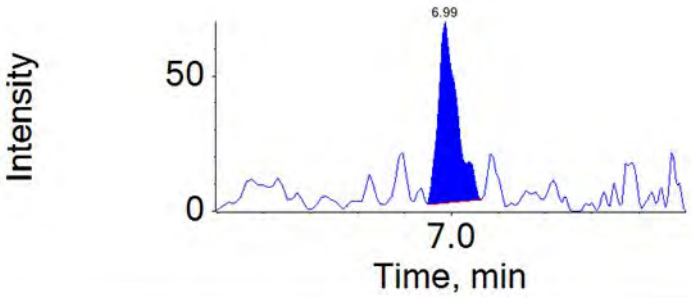
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV12DCAL-43.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-12T15:15:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	662396.7	659926.2	0	50	
13C2-PFOA	5.0	454466.7	450219.7	1	50	
13C4-PFOS	4.8	250483.8	249205.8	1	50	
13C2-PFDA	5.0	277324.2	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771445.8	13C3-PFBA	662396.7	1.165	5.000	5.221	104	70-130	
E13C5-PFPeA	738194.7	13C3-PFBA	662396.7	1.114	5.000	4.998	100	70-130	
E13C3-PFBS	418860.7	13C3-PFBA	662396.7	0.632	4.650	4.464	96	70-130	
E13C2-4:2-FTS	46141.8	13C2-PFOA	454466.7	0.102	4.670	4.522	97	70-130	
E13C5-PFHxA	648170.1	13C2-PFOA	454466.7	1.426	5.000	5.152	103	70-130	
E13C3-PFHxS	320400.4	13C2-PFOA	454466.7	0.705	4.730	4.838	102	70-130	
E13C4-PFHpA	532987.5	13C2-PFOA	454466.7	1.173	5.000	5.284	106	70-130	
E13C2-6:2-FTS	35585.7	13C2-PFOA	454466.7	0.078	4.750	5.239	110	70-130	
E13C8-PFOA	892584.2	13C2-PFOA	454466.7	1.964	5.000	5.411	108	70-130	
E13C8-PFOS	271778.8	13C4-PFOS	250483.8	1.085	4.780	4.808	101	70-130	
E13C9-PFNA	451850.1	13C4-PFOS	250483.8	1.804	5.000	5.030	101	70-130	
E13C6-PFDA	601859.8	13C2-PFDA	277324.2	2.170	5.000	5.064	101	70-130	
E13C2-8:2-FTS	27639.2	13C2-PFDA	277324.2	0.100	4.790	4.970	104	70-130	
E13C8-PFOSA	636543.2	13C2-PFDA	277324.2	2.295	5.000	5.089	102	70-130	
Ed3-NMeFOSAA	77388.6	13C2-PFDA	277324.2	0.279	5.000	5.037	101	70-130	
E13C7-PFUnDA	242881.8	13C2-PFDA	277324.2	0.876	5.000	5.085	102	70-130	
Ed5-NEtFOSAA	63686.9	13C2-PFDA	277324.2	0.230	5.000	4.859	97	70-130	
E13C2-PFDoDA	532175.4	13C2-PFDA	277324.2	1.919	5.000	4.982	100	70-130	
Ed7-NMePFOSAE	323456.5	13C2-PFDA	277324.2	1.166	5.000	5.047	101	70-130	
Ed3-NMePFOSA	77893.2	13C2-PFDA	277324.2	0.281	5.000	5.103	102	70-130	
Ed9-NEtPFOSAE	261195.6	13C2-PFDA	277324.2	0.942	5.000	4.899	98	70-130	
Ed5-NEtPFOSA	58073.5	13C2-PFDA	277324.2	0.209	5.000	4.912	98	70-130	
E13C2-PFTeDA	394146.2	13C2-PFDA	277324.2	1.421	5.000	4.990	100	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

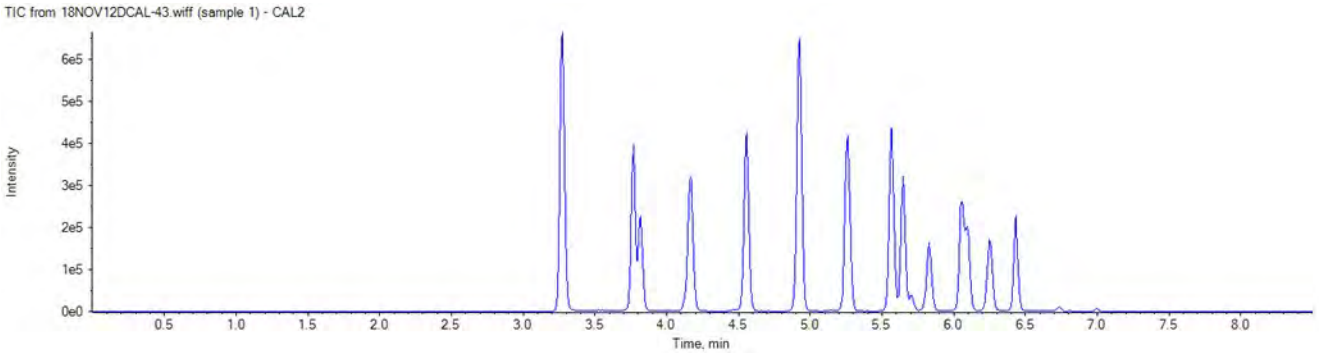
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-43.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	80396.2		A	13C4-PFBA	3.27	771445.8	0.104	0.577
PFPeA	3.77	1.000	84319.4		A	13C5-PFPeA	3.77	738194.7	0.114	0.661
PFBS	3.82	1.000	44885.2		A	13C3-PFBS	3.82	418860.7	0.107	0.510
4:2-FTS	4.13	1.000	8804.0		A	13C2-4:2-FTS	4.13	46141.8	0.191	0.518
PFHxA	4.16	1.000	96559.3		A	13C5-PFHxA	4.17	648170.1	0.149	0.622
PFPeS	4.19	1.100	20295.0		A	13C3-PFBS	3.82	418860.7	0.048	0.470
PFHpA	4.55	1.000	95048.3		M	13C4-PFHpA	4.55	532987.5	0.178	0.591
PFHxS	4.56	1.000	31064.7		M	13C3-PFHxS	4.56	320400.4	0.097	0.470
6:2-FTS	4.91	1.000	8048.4		A	13C2-6:2-FTS	4.91	35585.7	0.226	0.547
PFHpS	4.92	1.080	29902.3		A	13C3-PFHxS	4.56	320400.4	0.093	0.491
PFOA	4.93	1.000	100710.5		A	13C8-PFOA	4.92	892584.2	0.113	0.603
PFOS	5.25	1.000	32301.0		M	13C8-PFOS	5.25	271778.8	0.119	0.520
PFNA	5.27	1.000	80724.2		A	13C9-PFNA	5.27	451850.1	0.179	0.644
PFNS	5.55	1.060	20326.1		A	13C8-PFOS	5.25	271778.8	0.075	0.523
PFDA	5.57	1.000	63802.1		M	13C6-PFDA	5.57	601859.8	0.106	0.562
8:2-FTS	5.57	1.000	6214.2		A	13C2-8:2-FTS	5.57	27639.2	0.225	0.524
PFOSA	5.65	1.000	71087.0		A	13C8-PFOSA	5.65	636543.2	0.112	0.545
NMeFOSAA	5.71	1.000	5759.6		A	d3-NMeFOSAA	5.71	77388.6	0.074	0.421
PFDS	5.80	1.100	16291.9		A	13C8-PFOS	5.25	271778.8	0.060	0.543
PFUnDA	5.83	1.000	51206.8		A	13C7-PFUnDA	5.83	242881.8	0.211	0.551
NEtFOSAA	5.85	1.000	7727.1		M	d5-NEtFOSAA	5.84	63686.9	0.121	0.636
PFDoDA	6.06	1.000	59695.3		A	13C2-PFDoDA	6.06	532175.4	0.112	0.571
10:2-FTS	6.08	1.090	5206.5		A	13C2-8:2-FTS	5.57	27639.2	0.188	0.627
NMePFOSAE	6.10	1.000	43085.1		A	d7-NMePFOSAE	6.09	323456.5	0.133	0.554
NMePFOSA	6.11	1.000	8877.7		A	d3-NMePFOSA	6.11	77893.2	0.114	0.562
PFDoS	6.22	1.190	8992.5		M	13C8-PFOS	5.25	271778.8	0.033	0.580
NEtPFOSAE	6.26	1.000	46623.3		M	d9-NEtPFOSAE	6.25	261195.6	0.178	0.573
NEtPFOSA	6.27	1.000	8053.7		M	d5-NEtPFOSA	6.27	58073.5	0.139	0.637
PFTrDA	6.26	1.030	47991.3		A	13C2-PFDoDA	6.06	532175.4	0.090	0.569
PFTeDA	6.43	1.000	40236.5		A	13C2-PFTeDA	6.43	394146.2	0.102	0.572
PFHxDA	6.74	1.050	19006.4		A	13C2-PFTeDA	6.43	394146.2	0.048	0.575
PFODA	7.00	1.090	14955.6		A	13C2-PFTeDA	6.43	394146.2	0.038	0.528

Total Ion Chromatogram

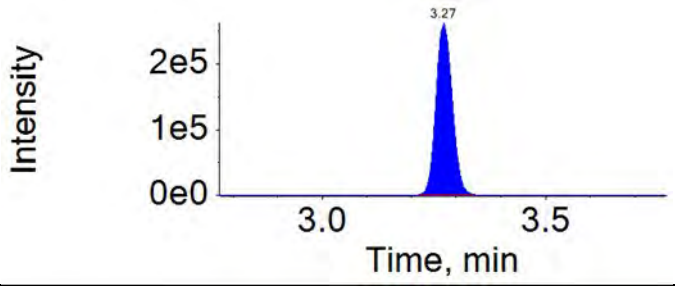


APPROVED
By MCD at 6:33 pm, 11/12/18

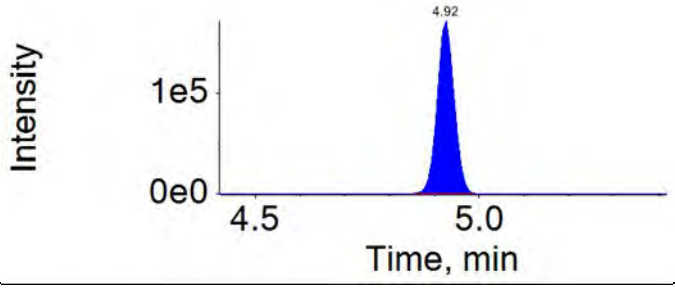
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

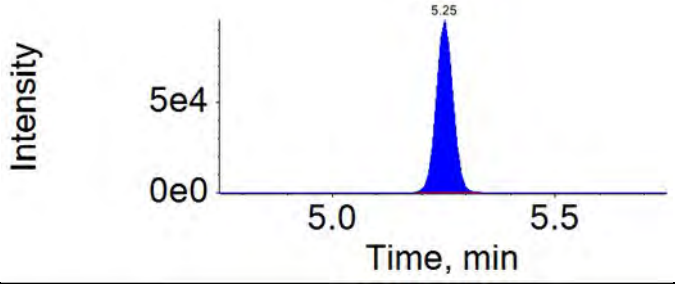
Injection Standard: 13C3-PFBA
216.0 / 172.0



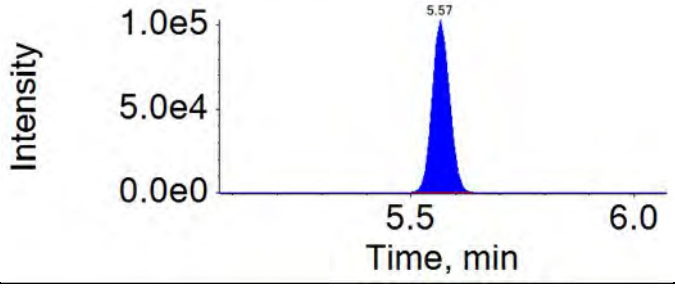
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

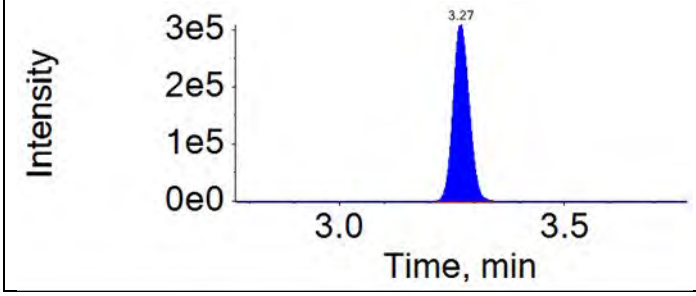


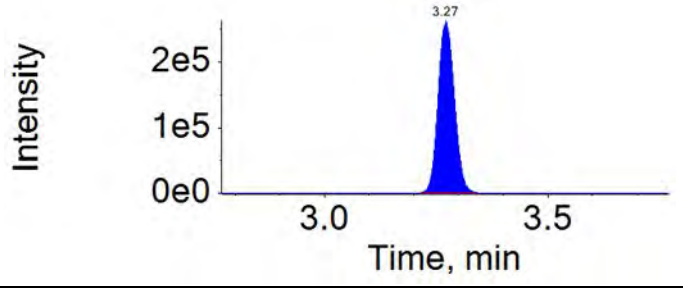
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

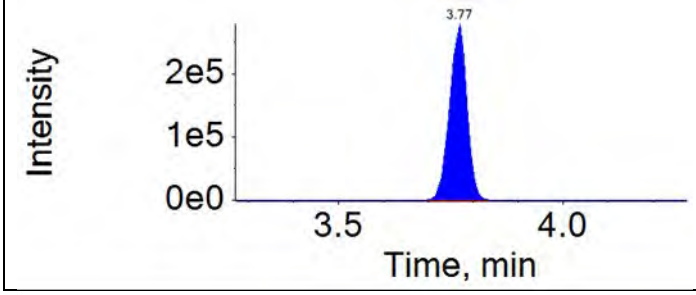
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

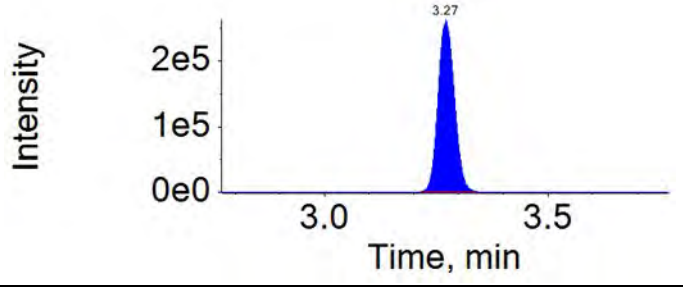
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



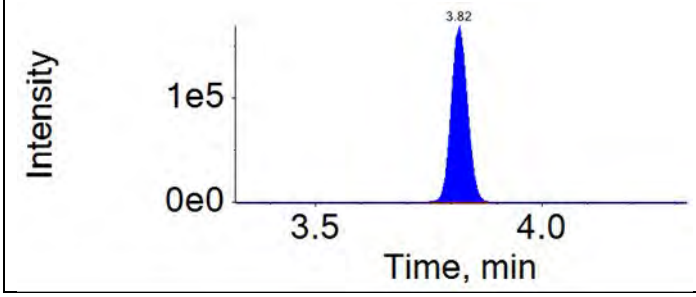


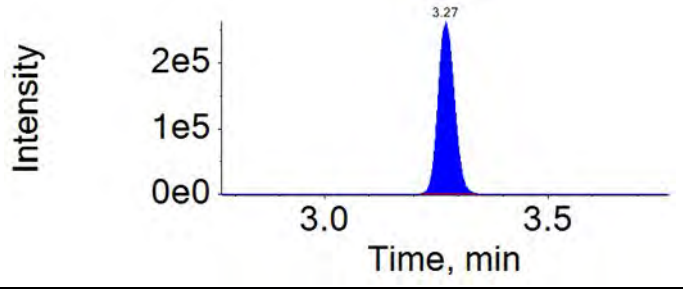
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



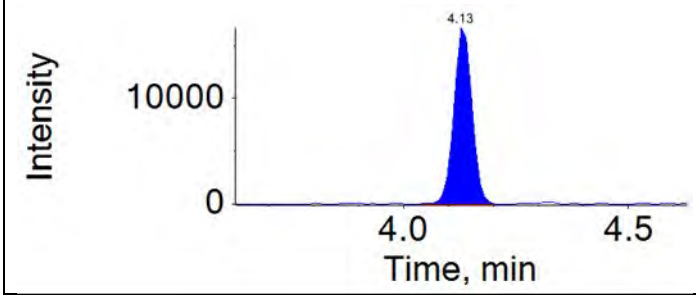


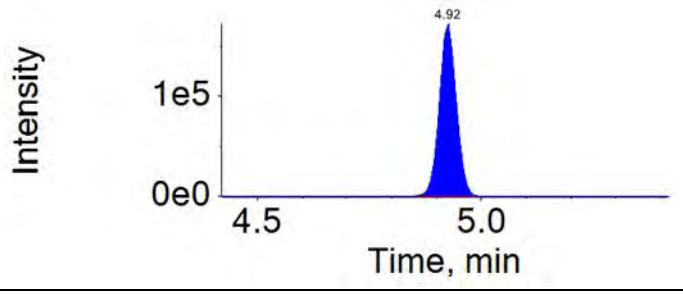
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





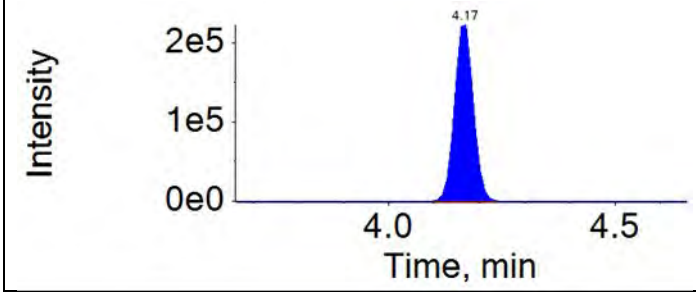
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

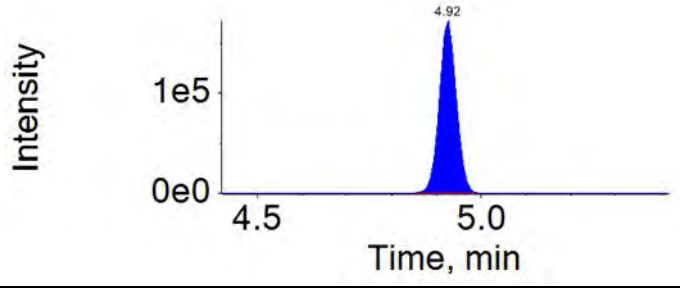




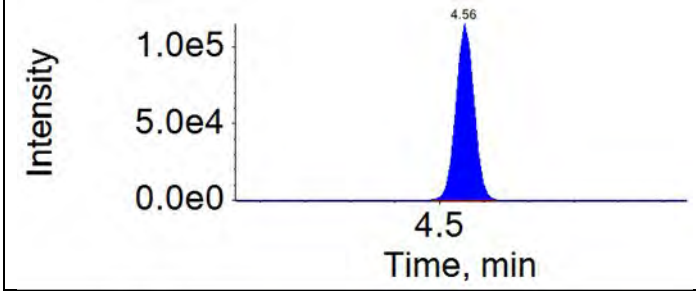
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

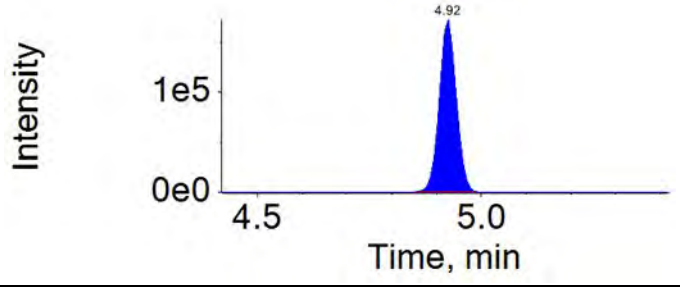
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



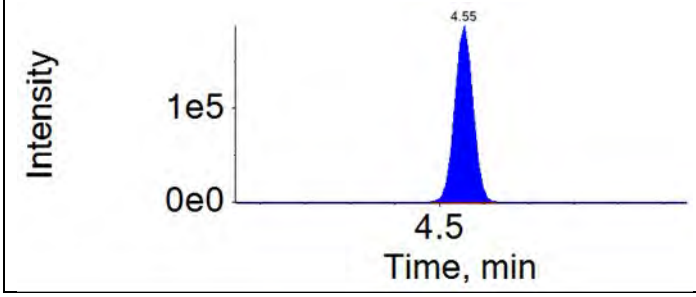


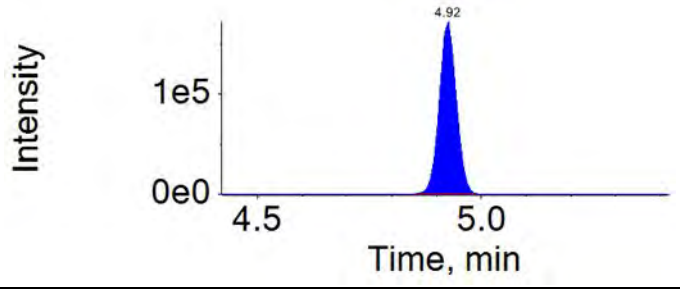
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



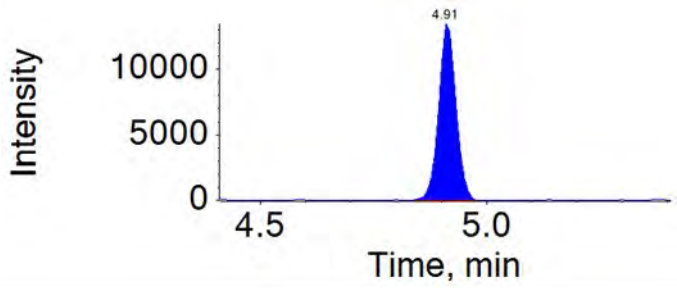


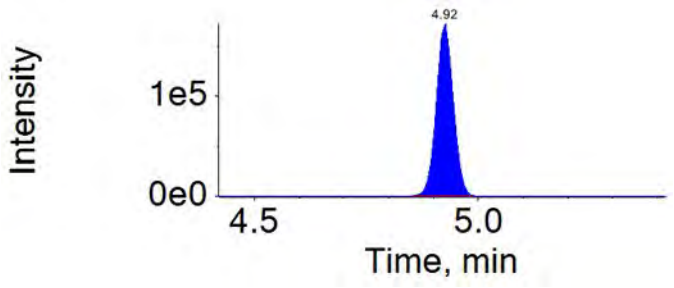
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

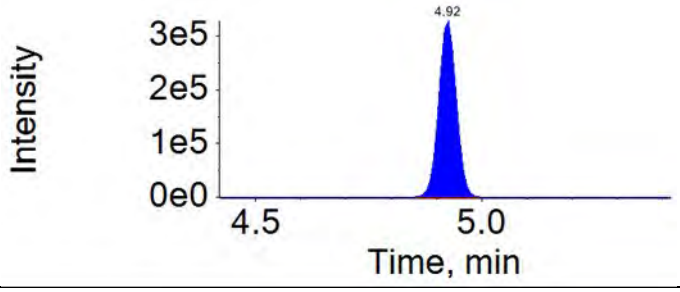
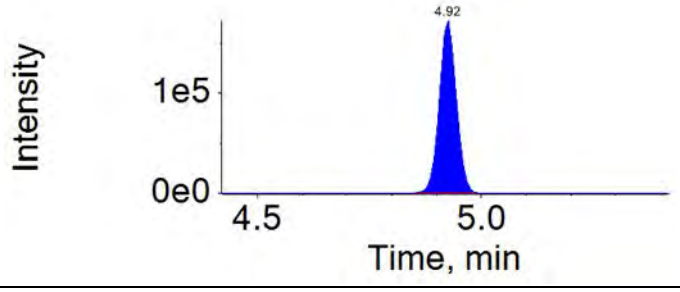


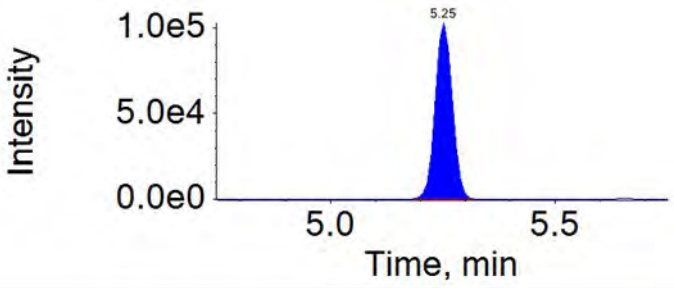
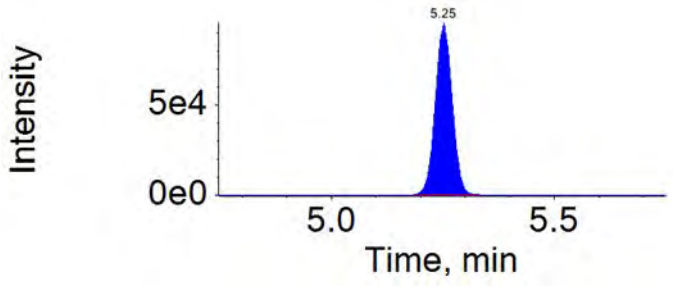


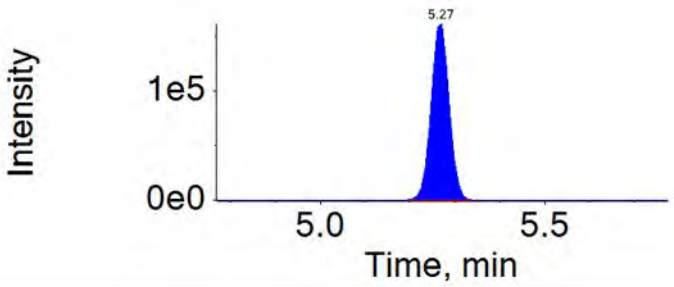
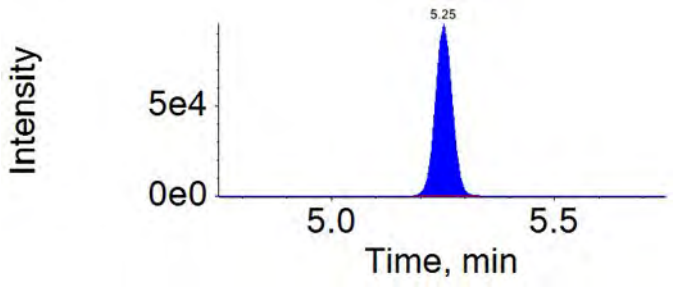
APPROVED
By MCD at 6:33 pm, 11/12/18

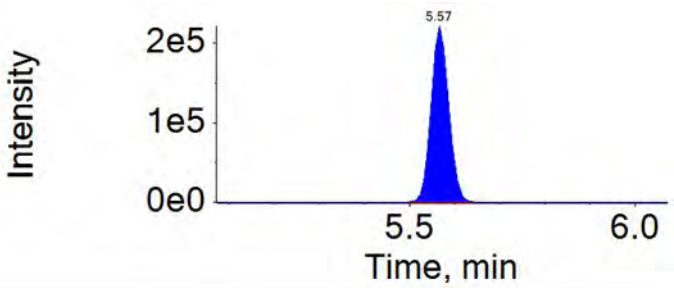
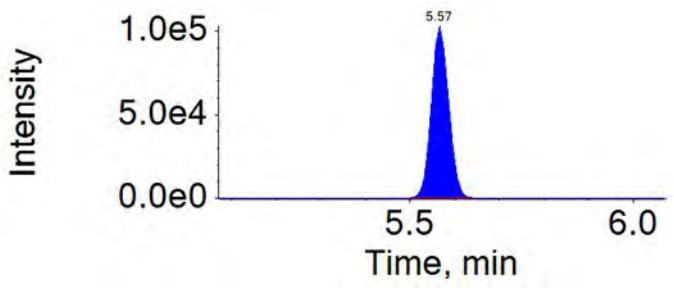
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

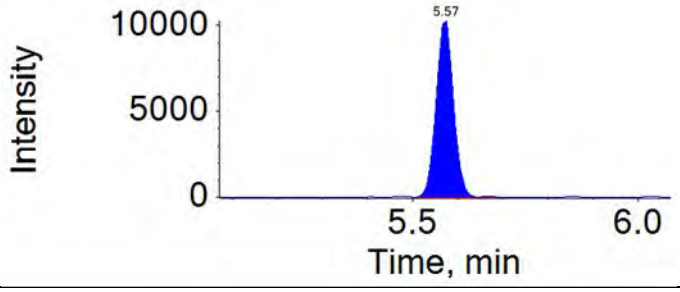
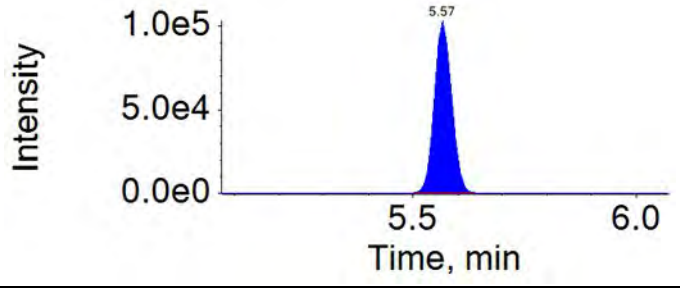
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

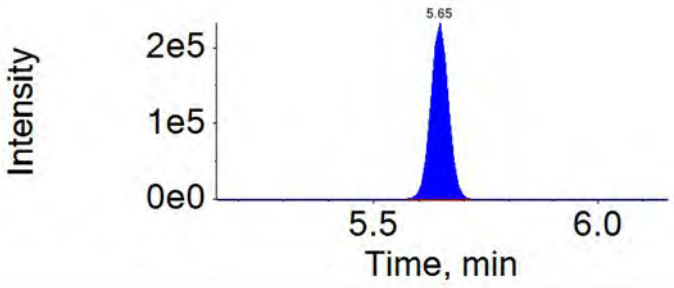
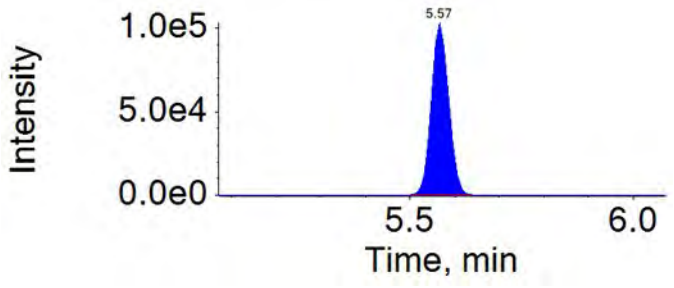
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

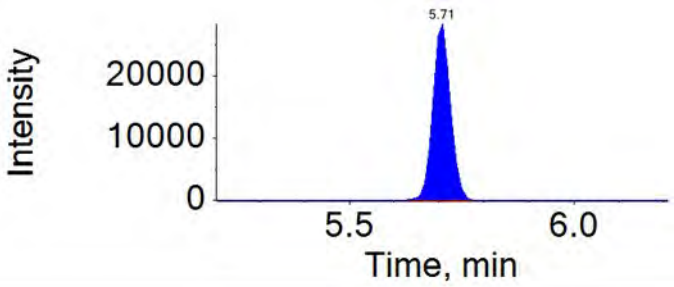
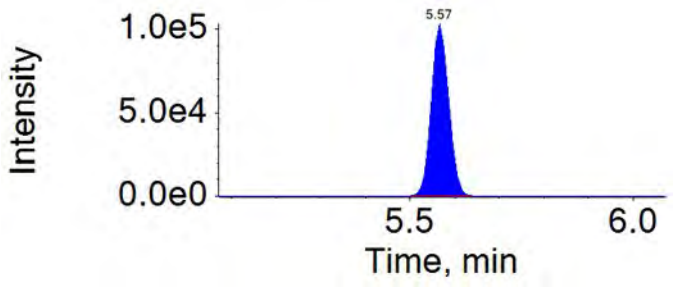
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

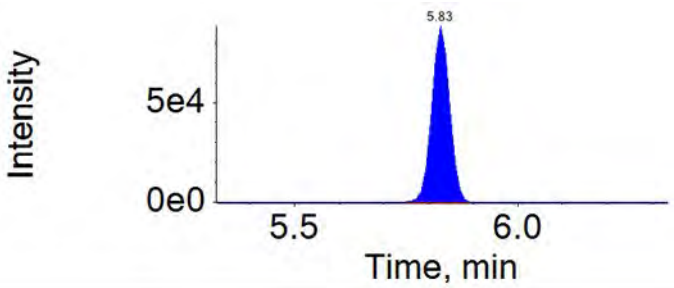
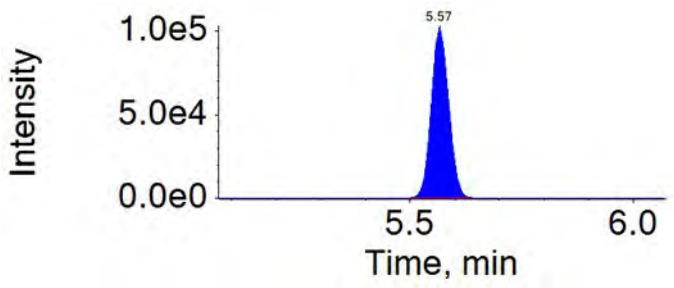
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

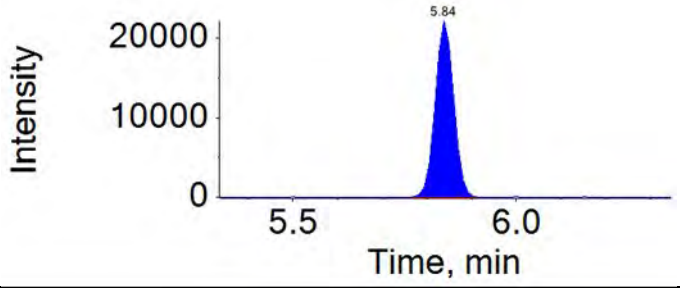
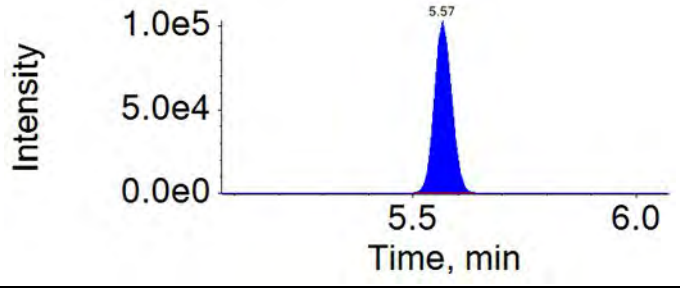
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

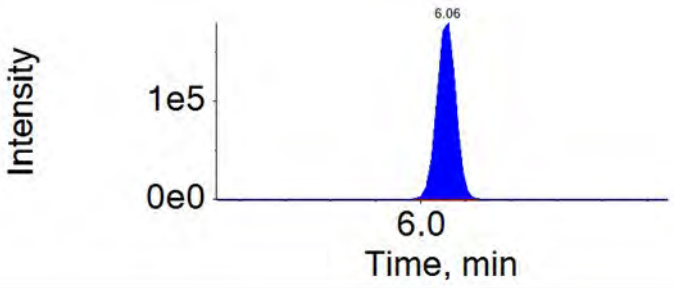
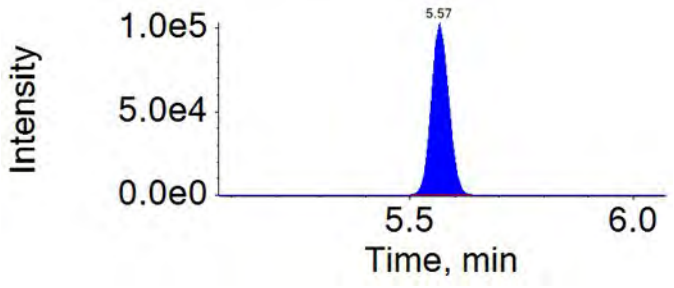
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

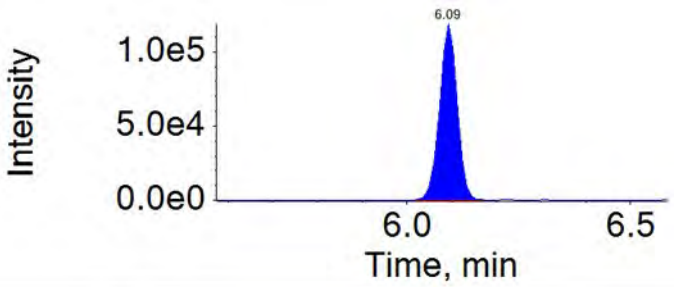
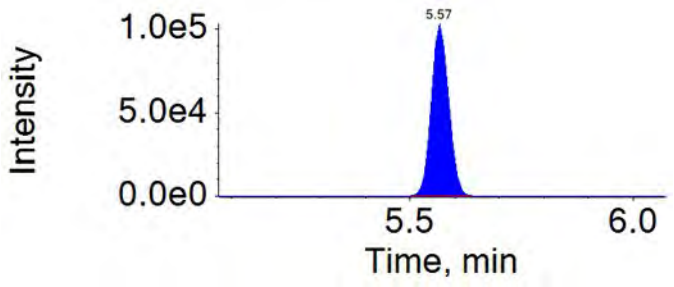
APPROVED
By MCD at 6:33 pm, 11/12/18

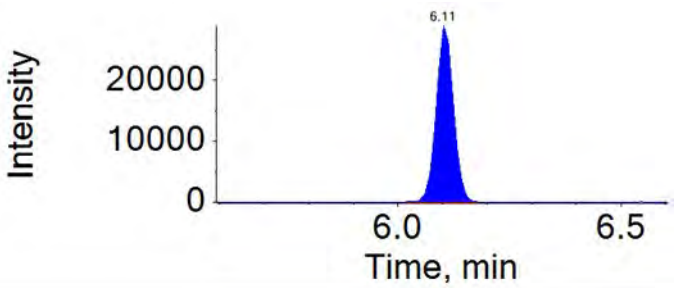
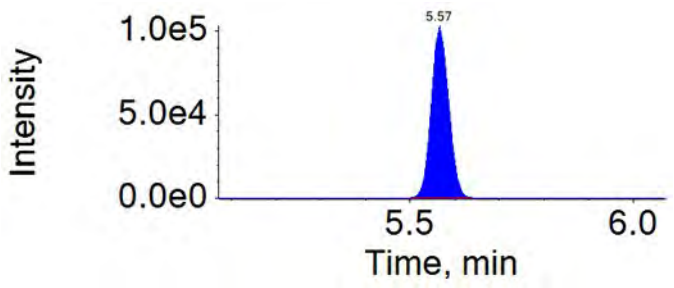
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

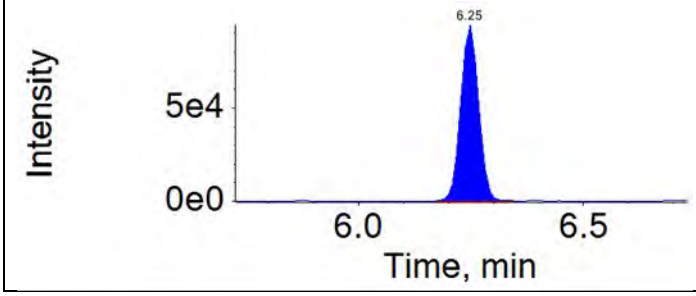
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

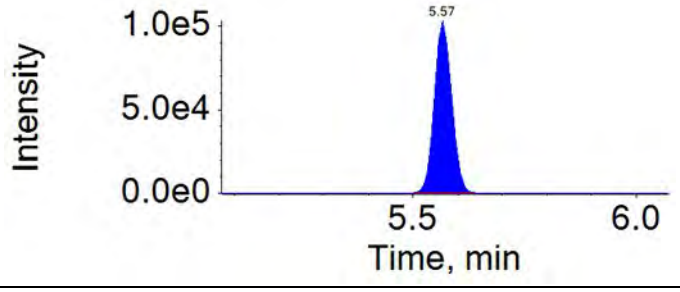
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

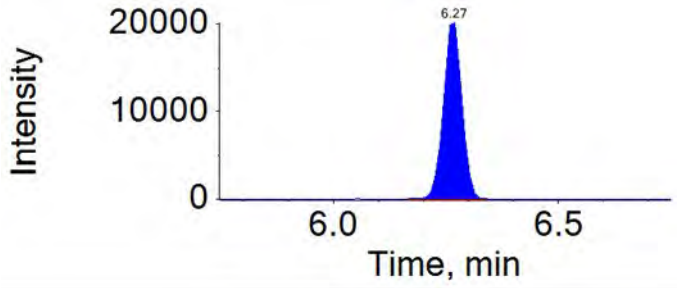
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

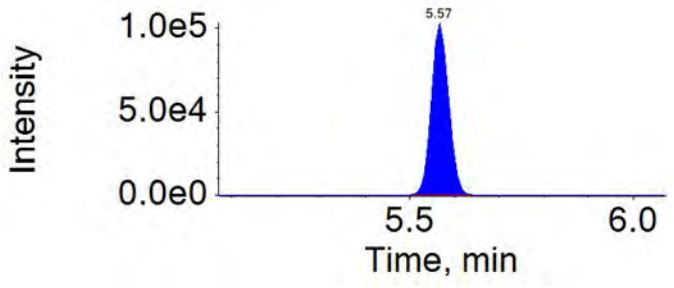
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



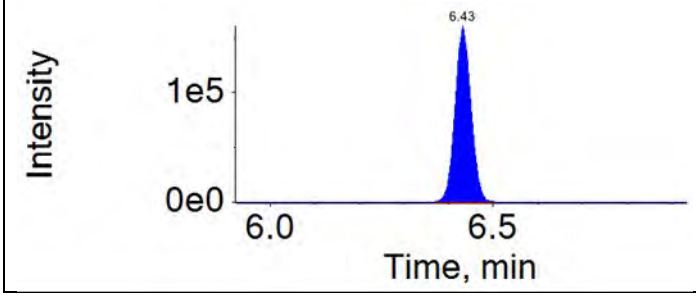


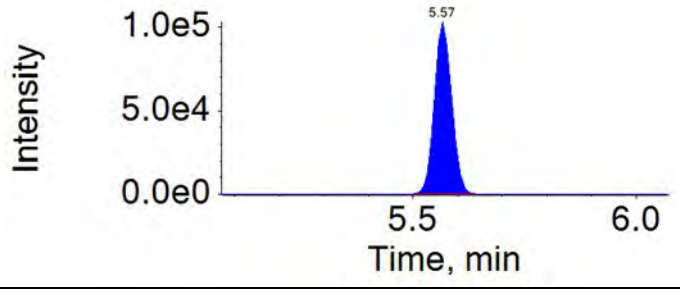
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



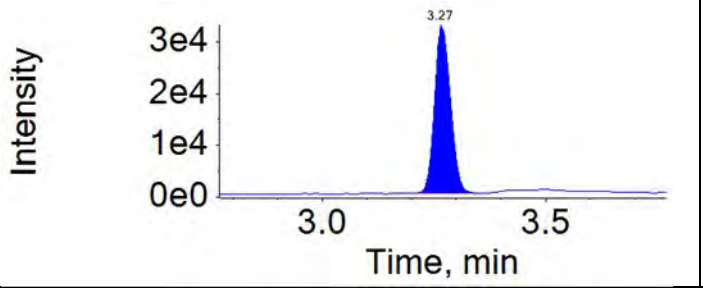


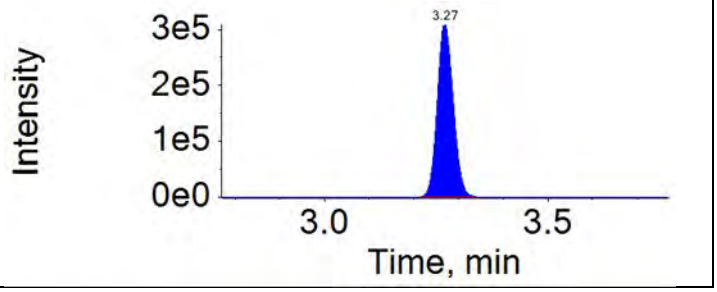
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

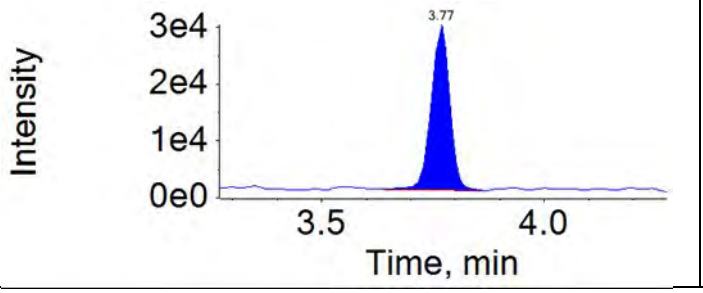
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

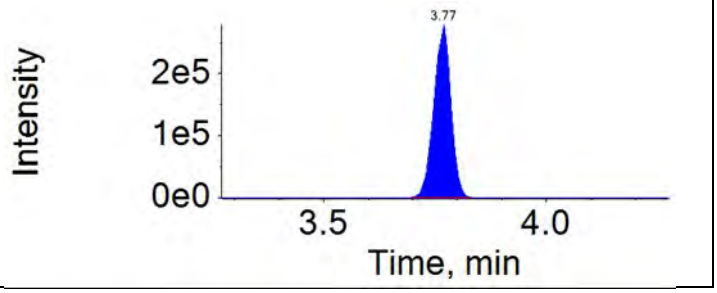
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



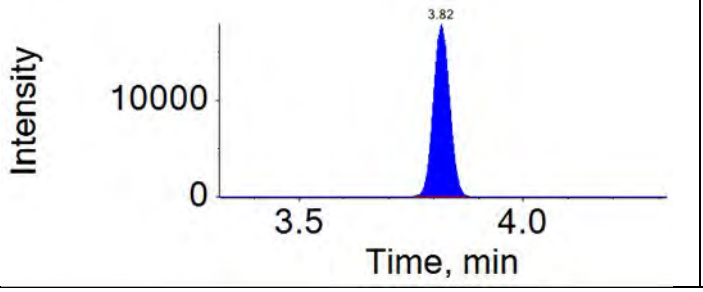


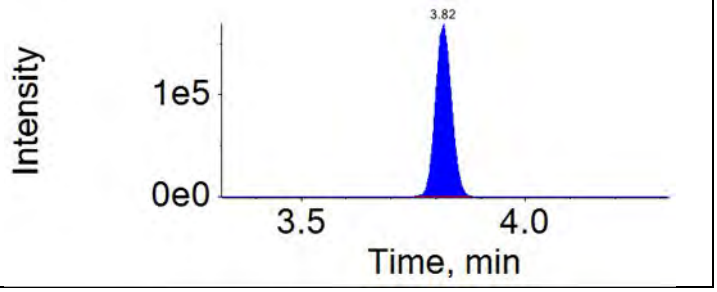
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



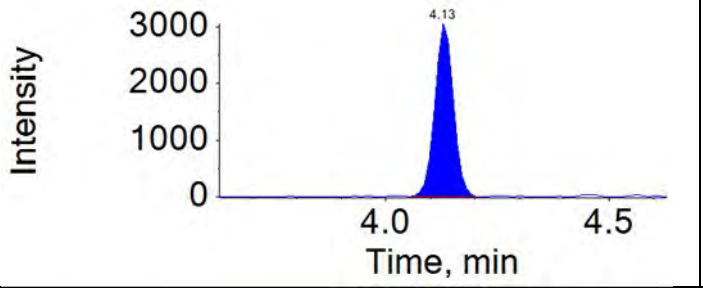


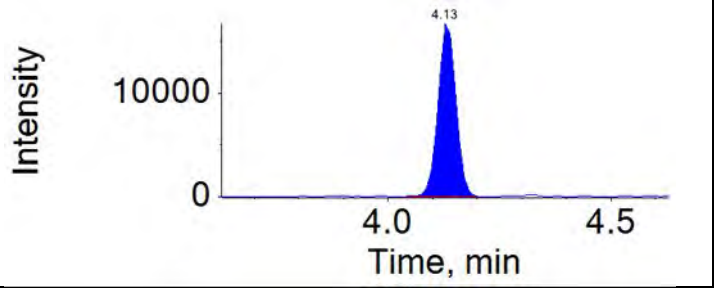
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





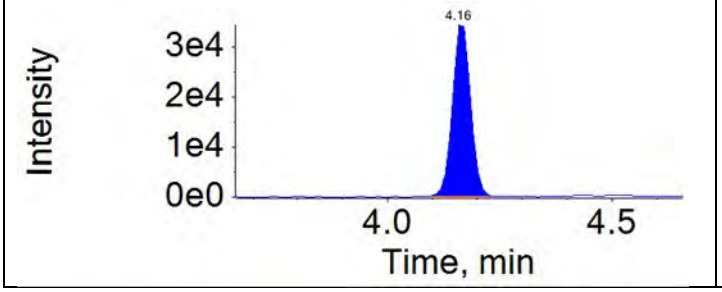
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

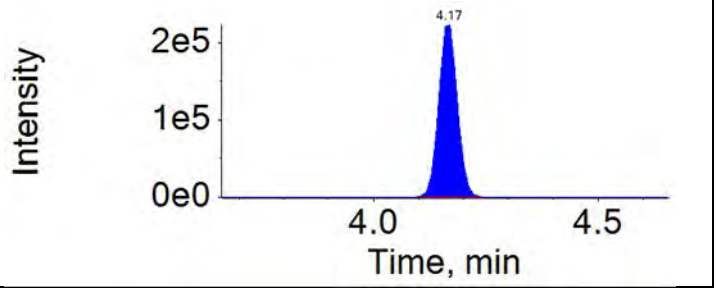




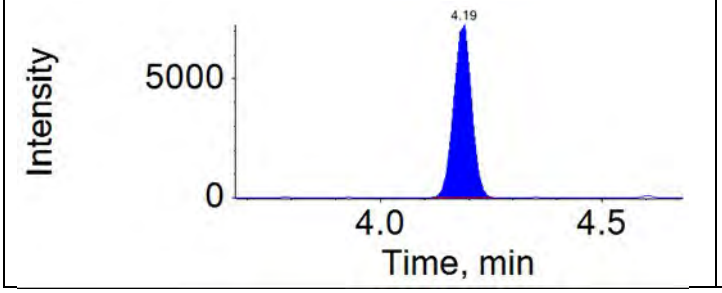
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

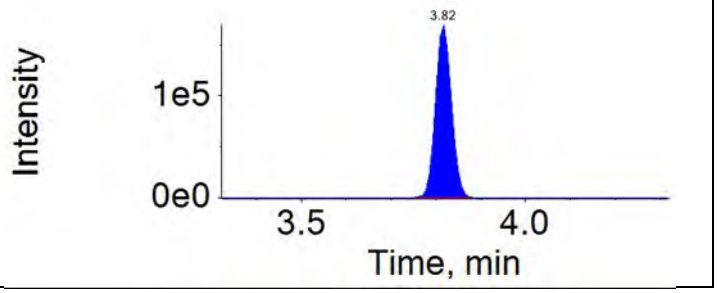
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



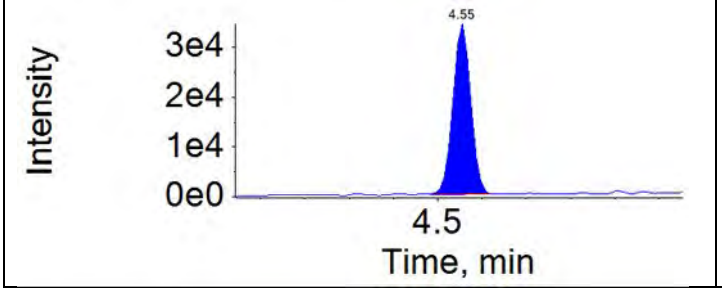


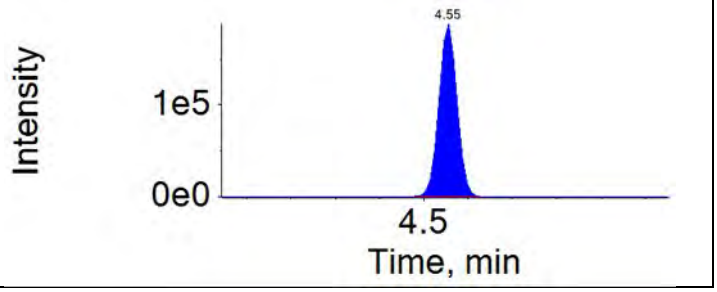
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



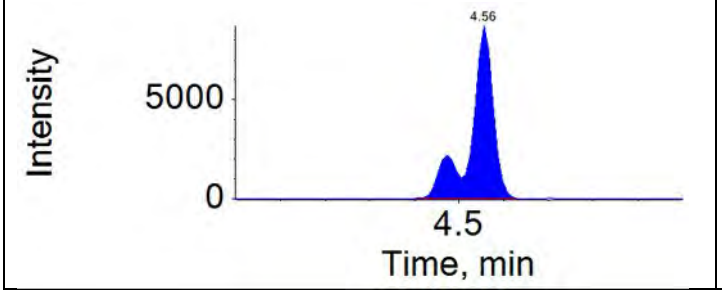


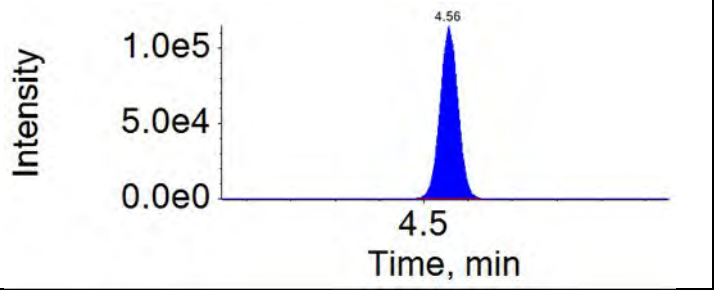
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



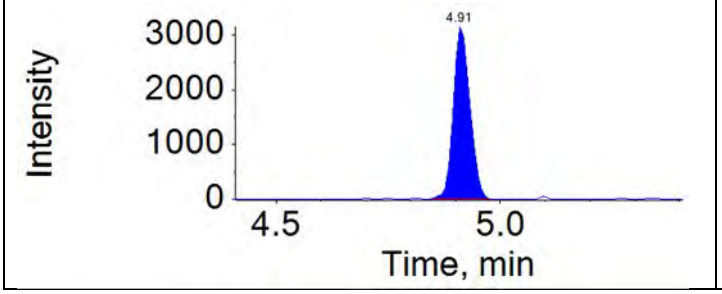


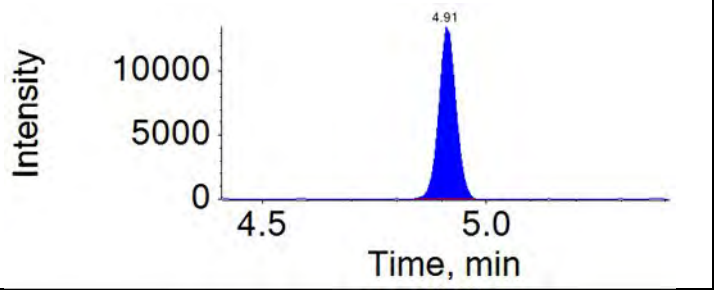
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

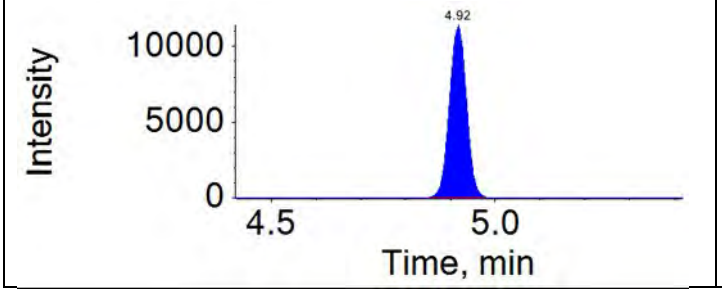
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

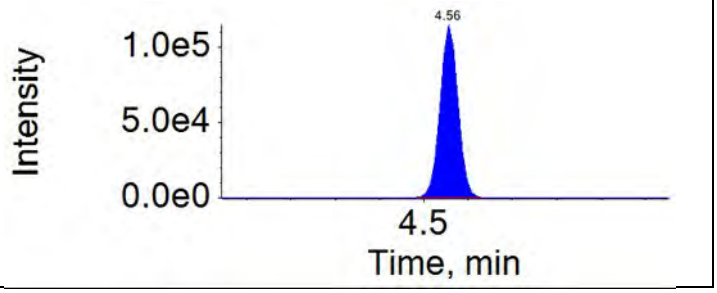
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



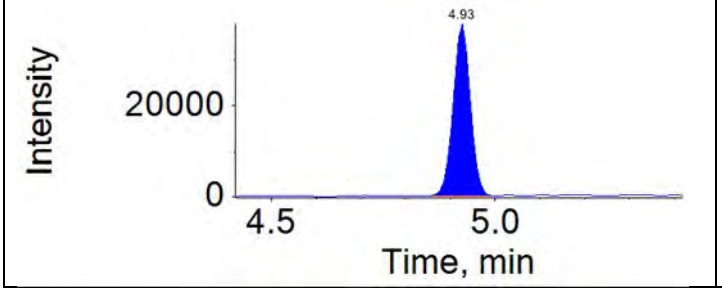


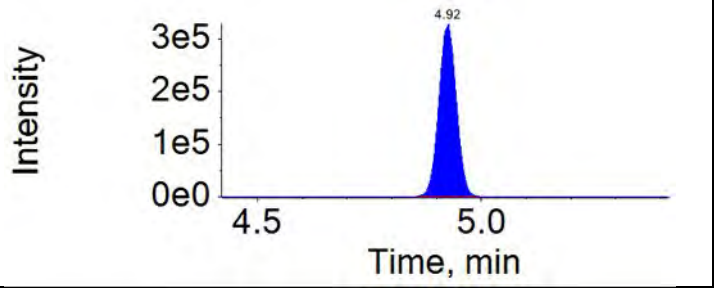
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



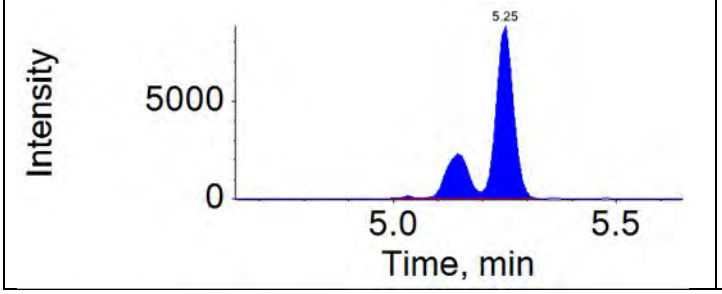


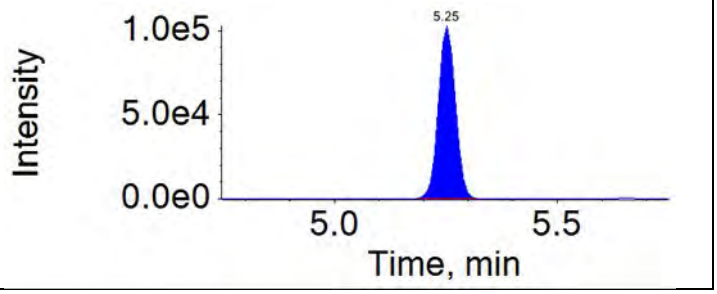
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





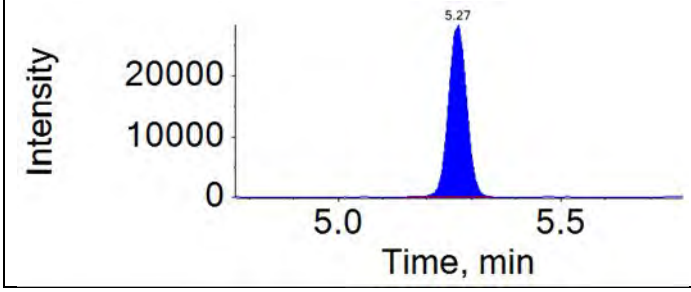
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

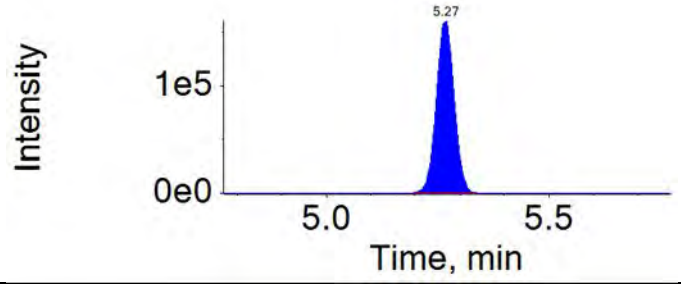




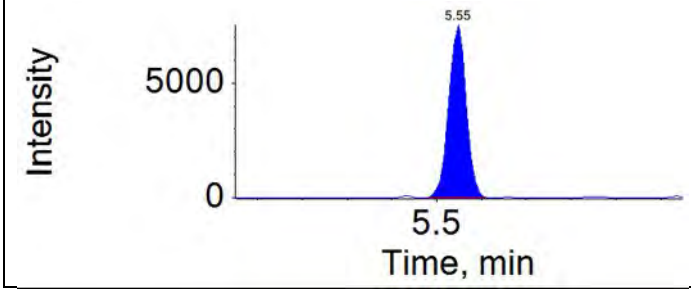
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

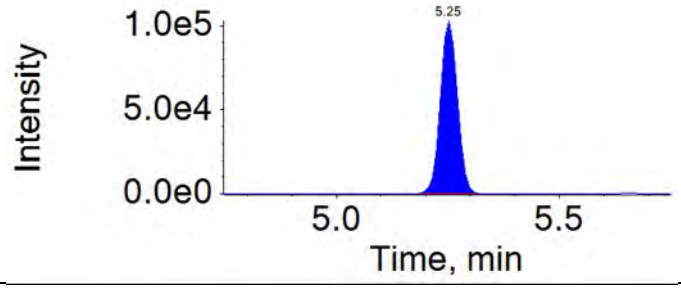
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



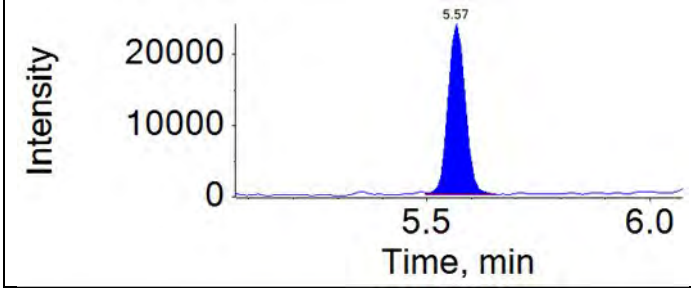


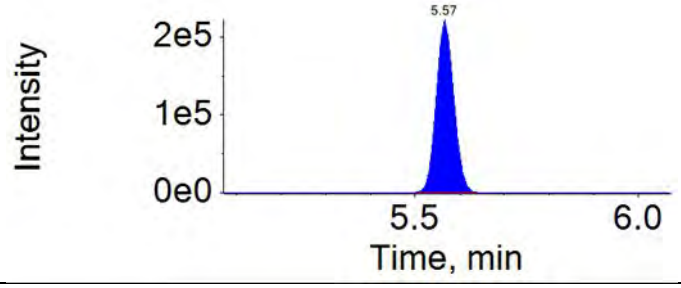
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



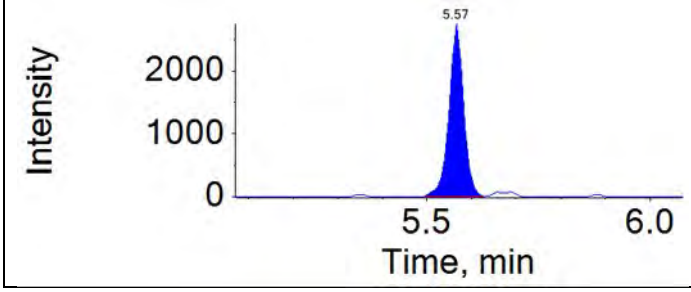


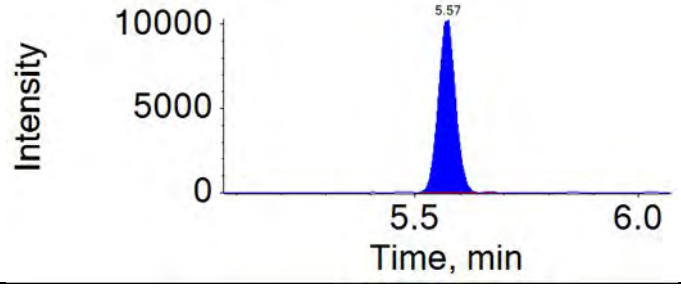
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



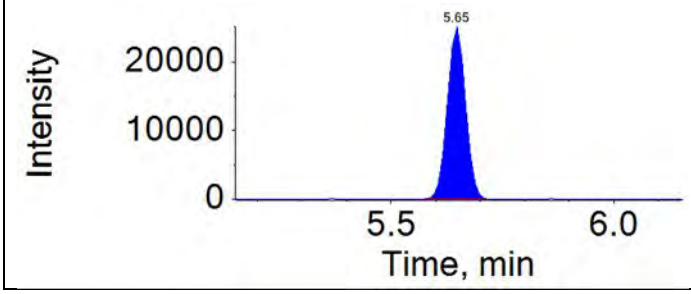


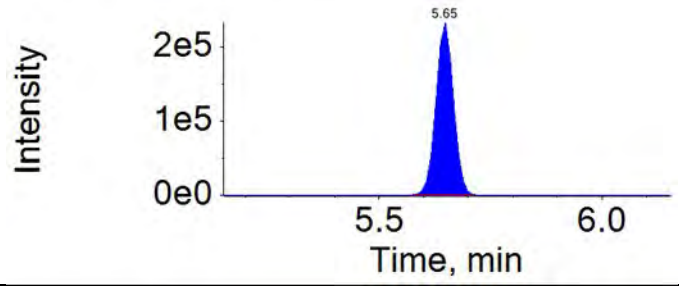
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

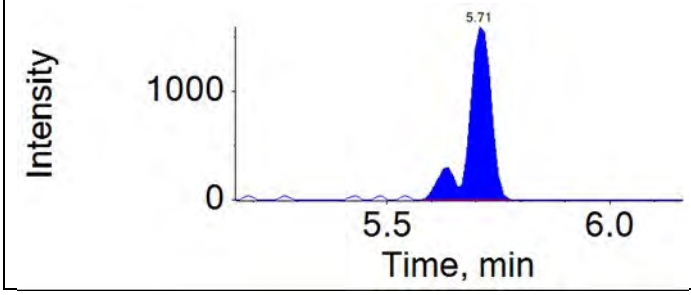
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

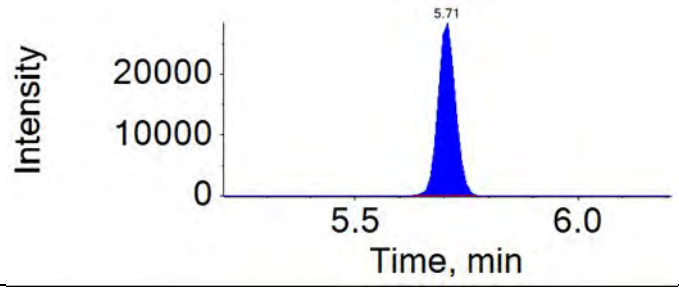
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



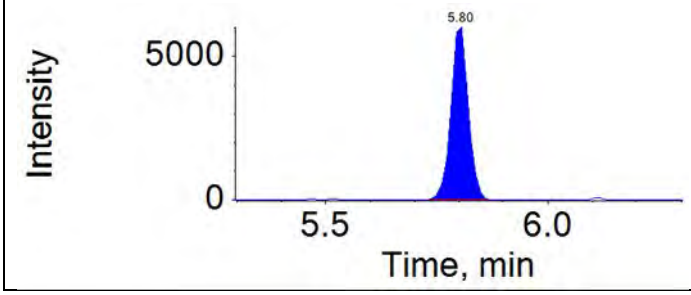


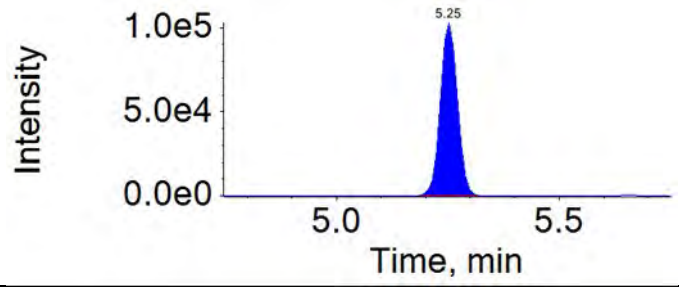
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



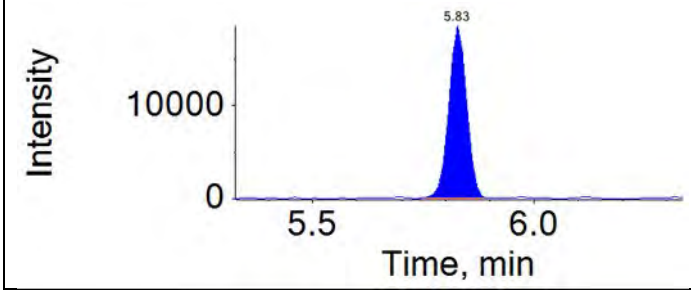


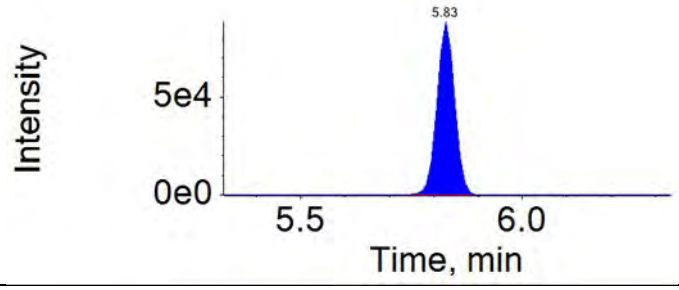
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

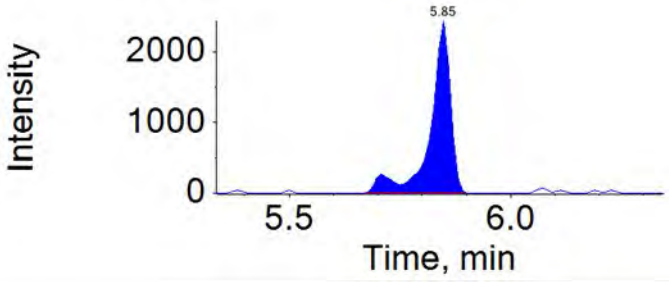
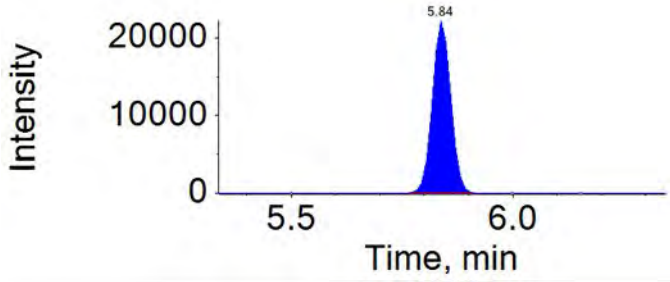


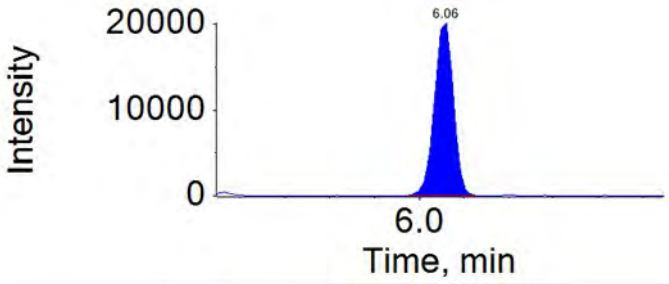
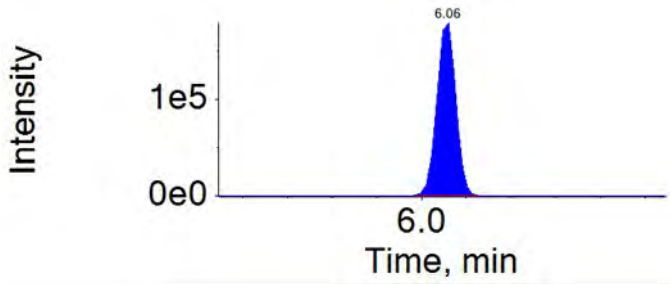


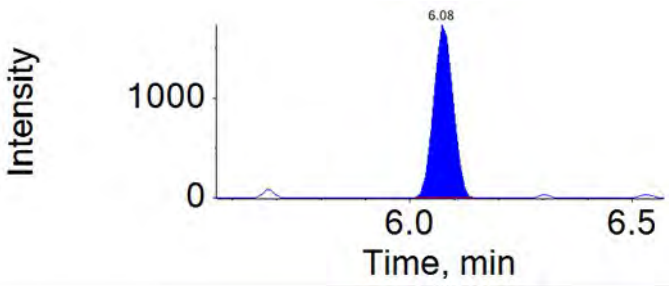
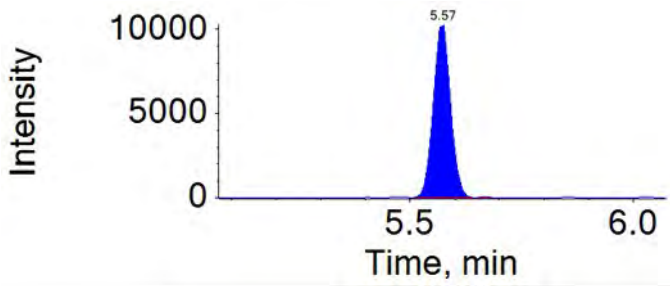
APPROVED
By MCD at 6:33 pm, 11/12/18

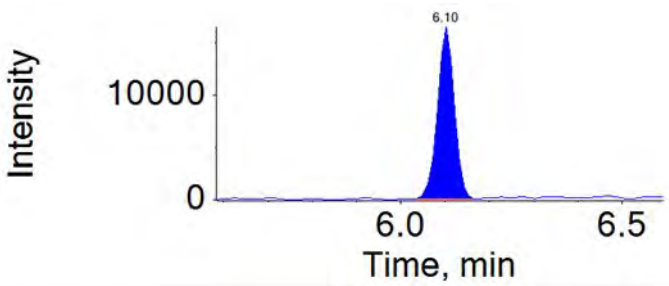
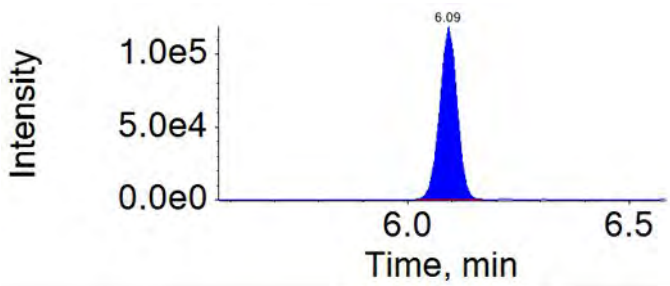
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

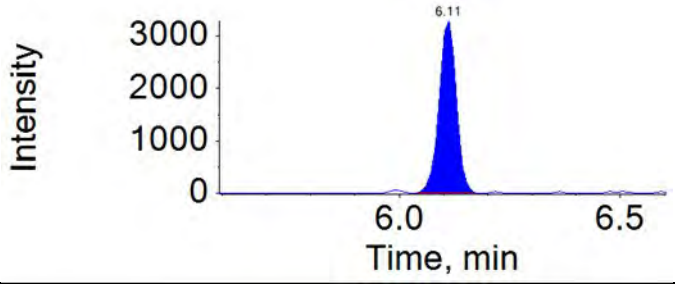
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

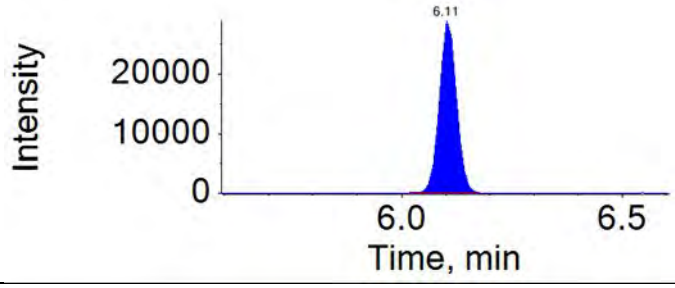
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

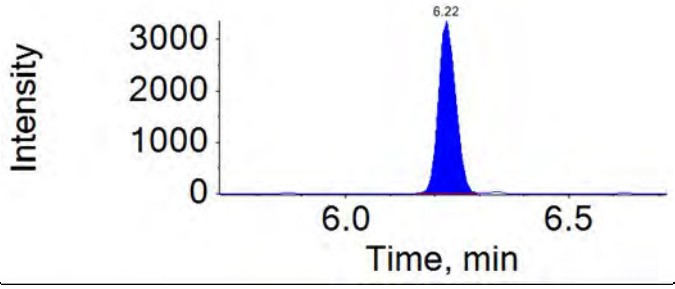
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

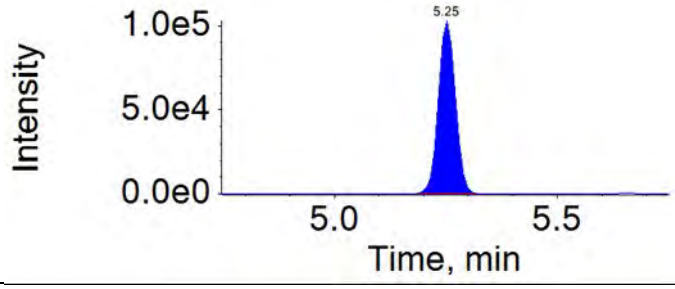
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



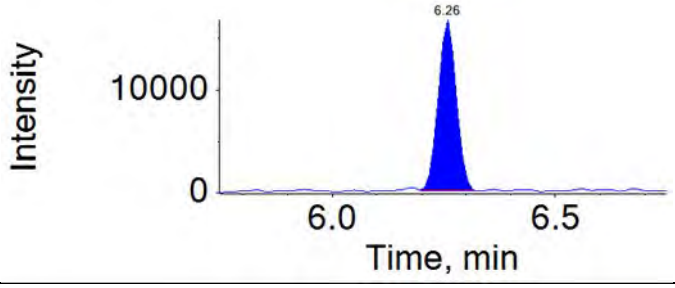


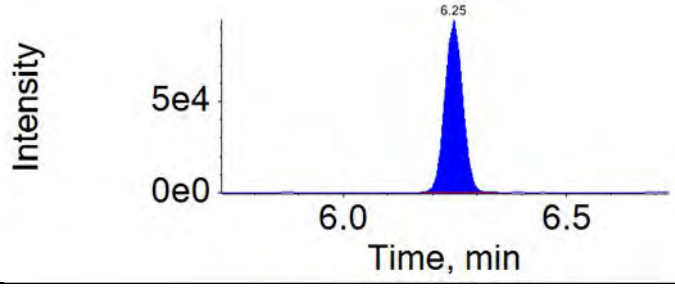
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



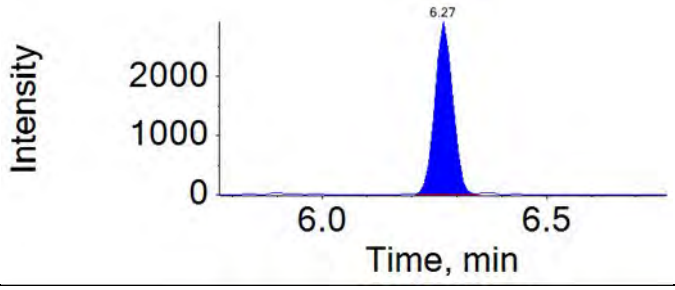


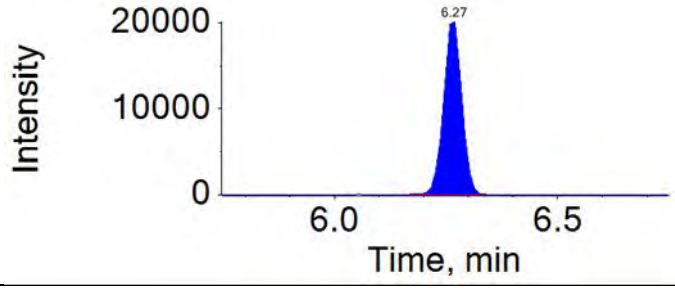
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

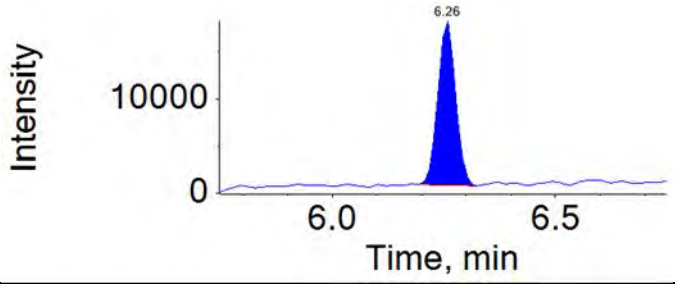
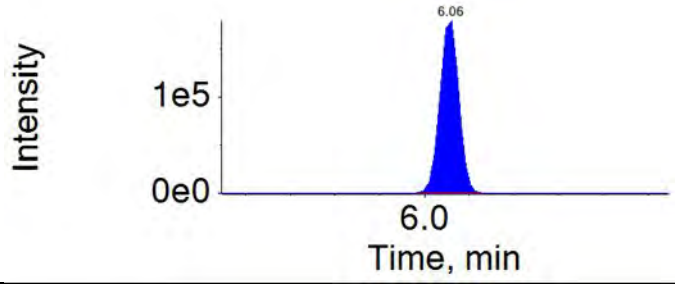


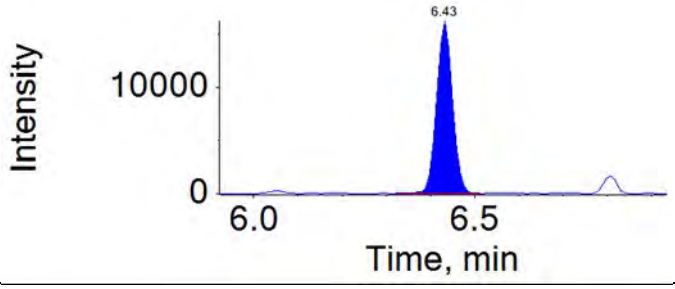
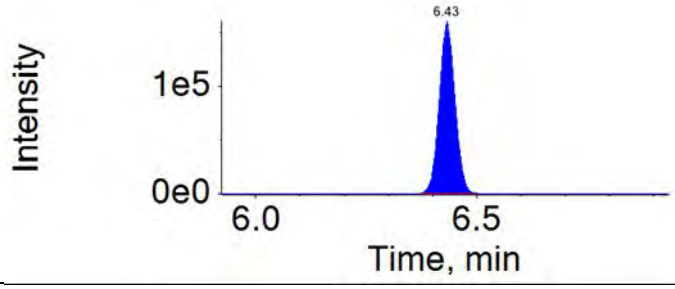


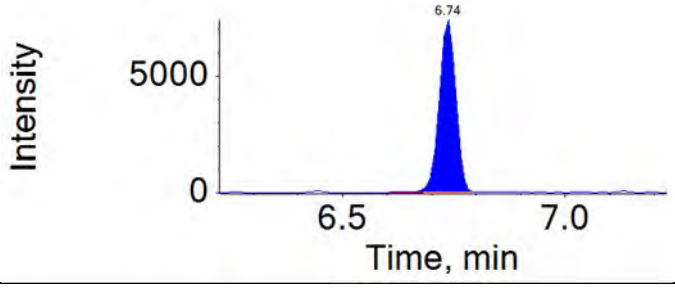
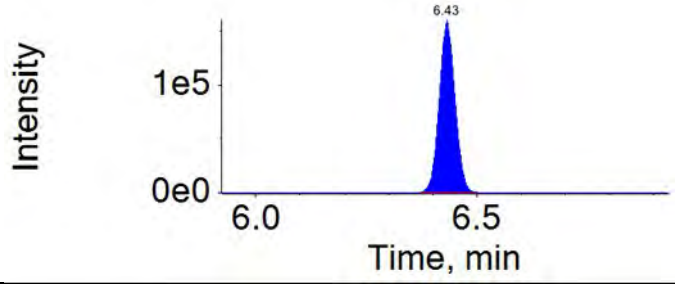
APPROVED
By MCD at 6:33 pm, 11/12/18

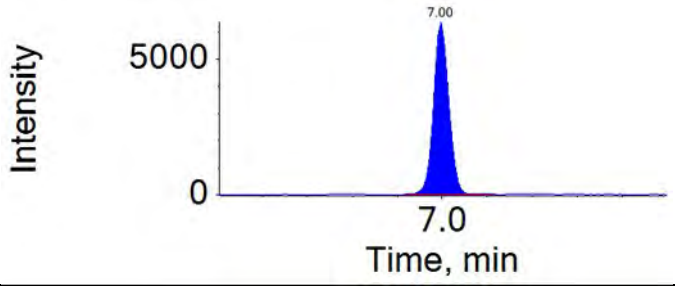
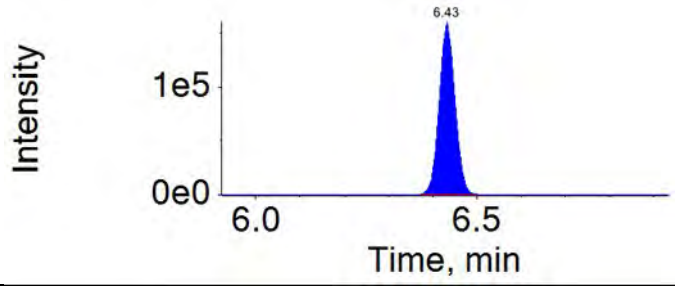
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

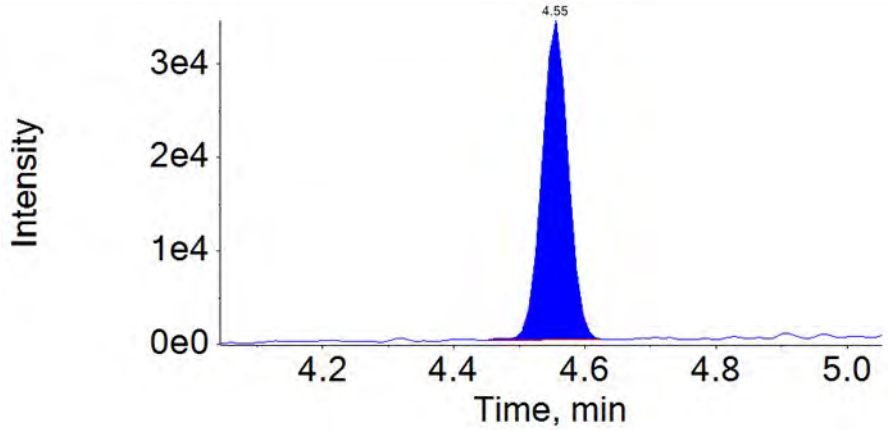
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

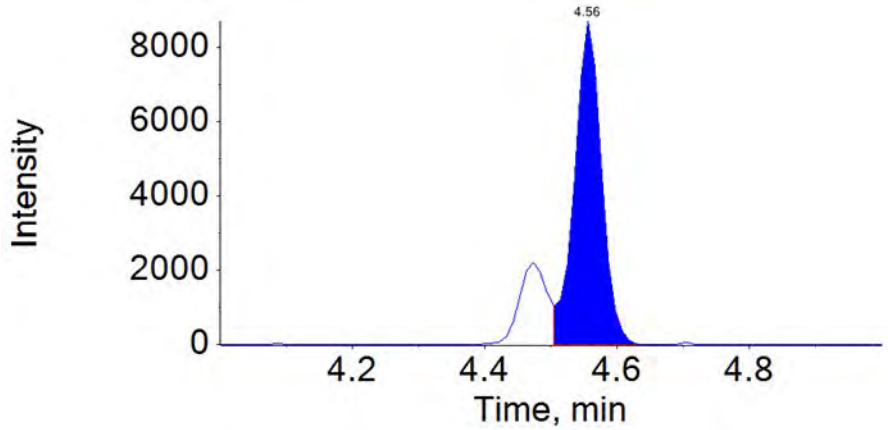
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
95434.80
Mass Range:
363.0 / 319.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



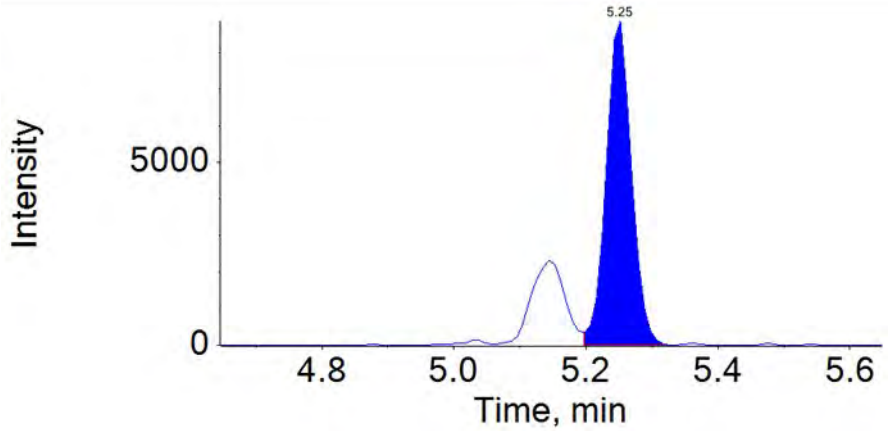
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
24710.47
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
23625.90
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2

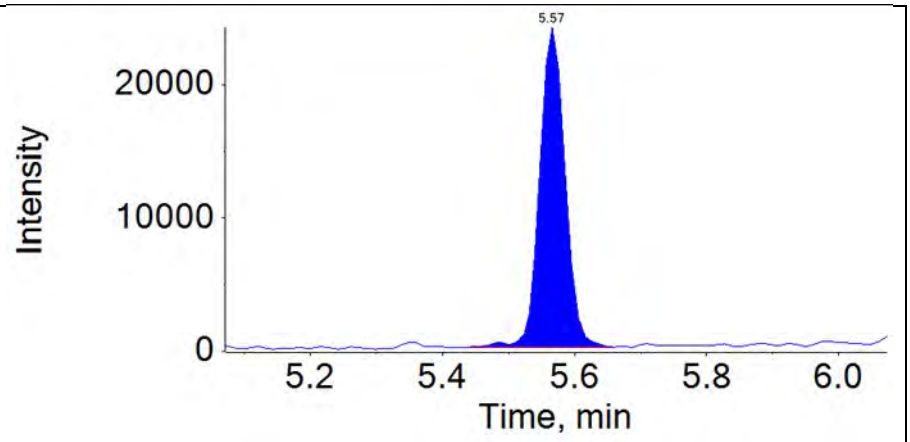


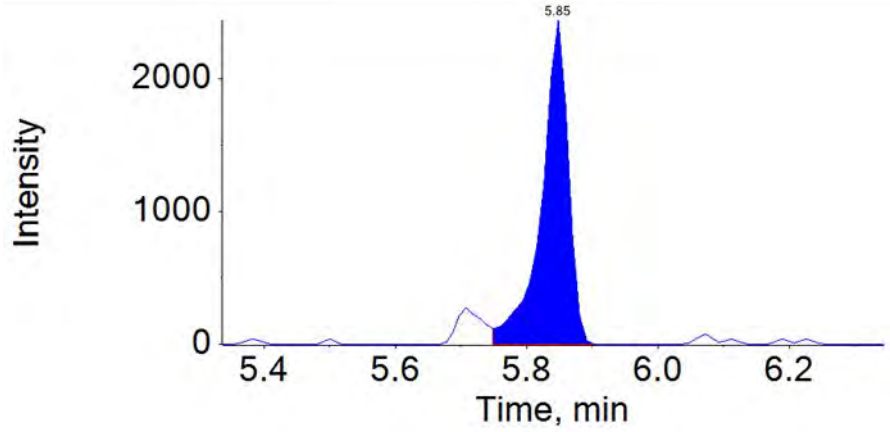
Integration Comment: incorrect integration

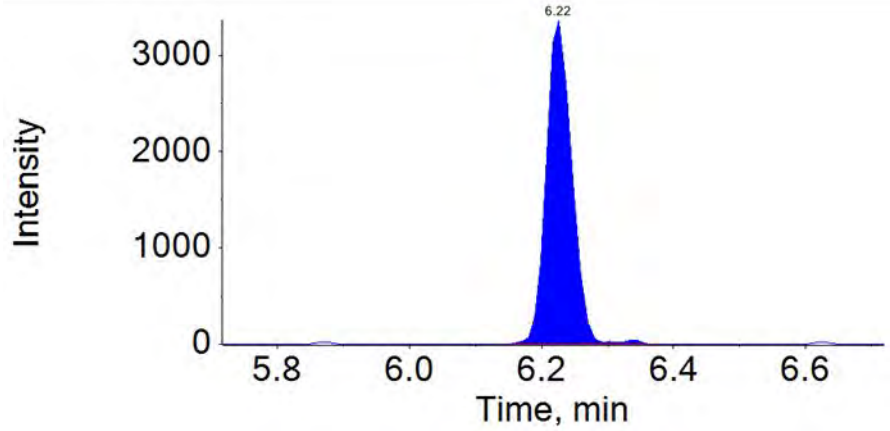
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFDA **RT (min.):** 5.57 **Peak Area:** 64555.75 **Mass Range:** 513.0 / 469.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

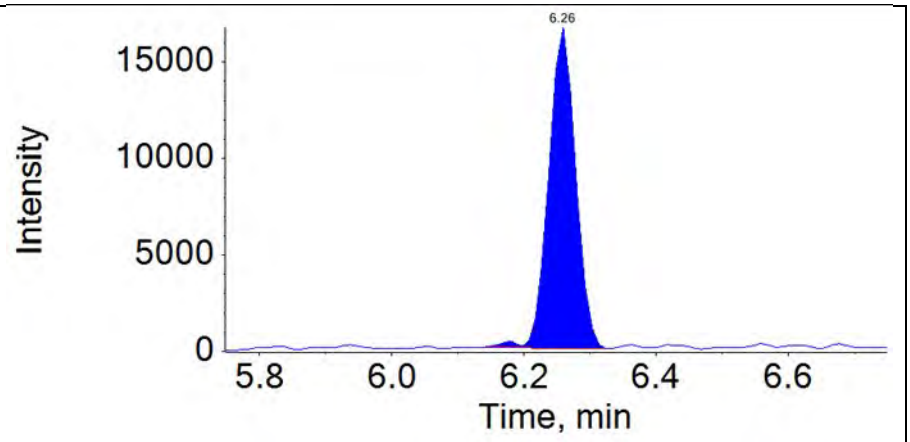
Component Name: NEtFOSAA **RT (min.):** 5.85 **Peak Area:** 6972.11 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

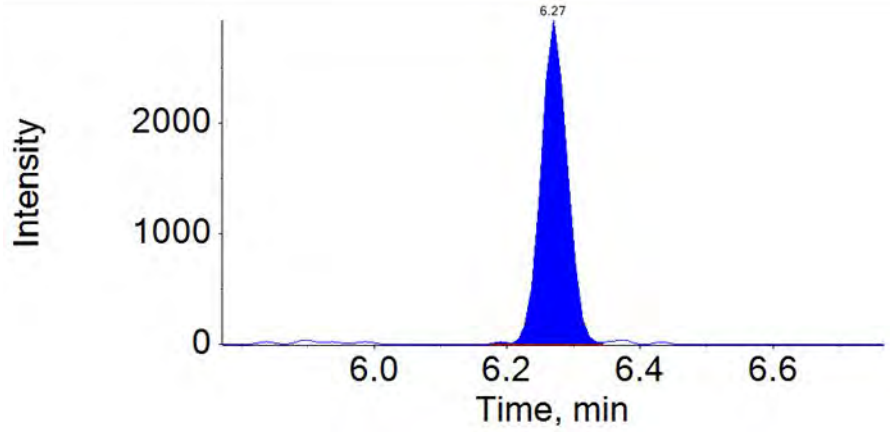
Component Name: PFDoS **RT (min.):** 6.22 **Peak Area:** 9104.97 **Mass Range:** 699.0 / 80.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

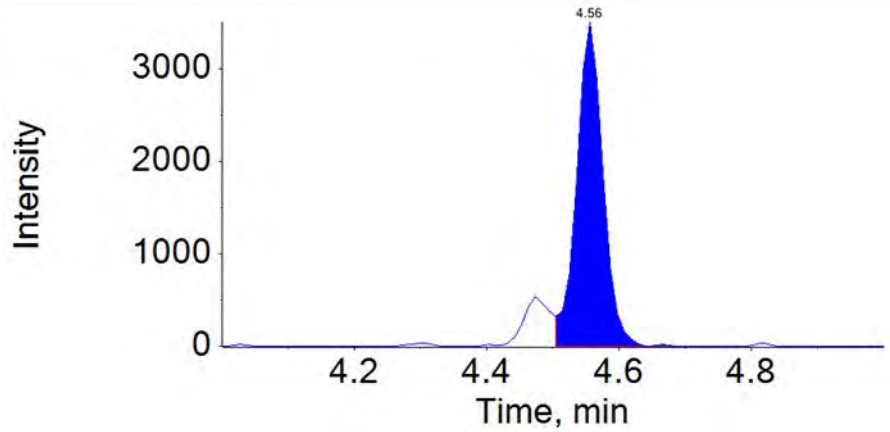
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtPFOSAE **RT (min.):** 6.26 **Peak Area:** 47267.14 **Mass Range:** 630.0 / 59.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

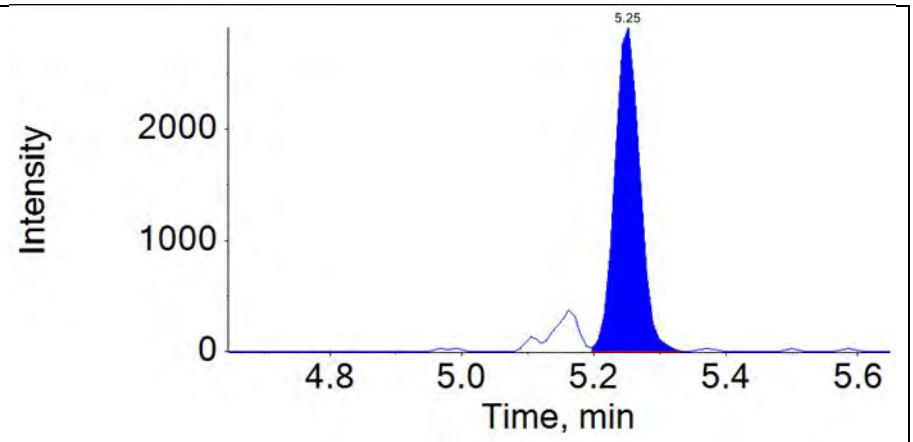
Component Name: NEtPFOSA **RT (min.):** 6.27 **Peak Area:** 8081.41 **Mass Range:** 526.0 / 169.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

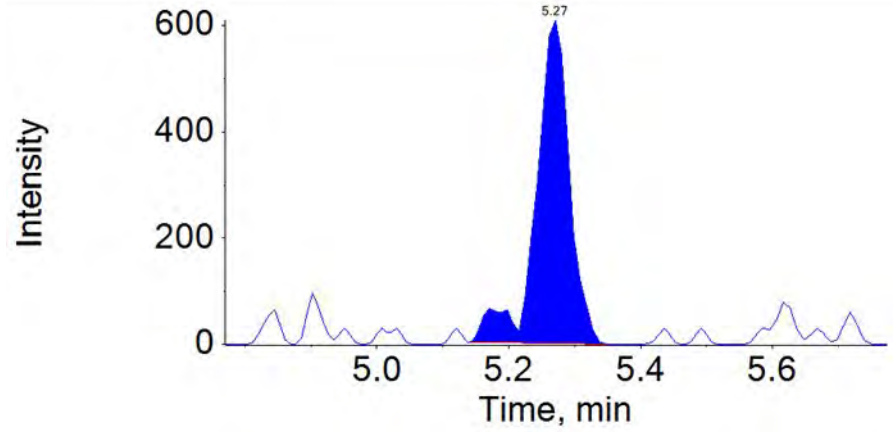
Component Name: PFHxS_2 **RT (min.):** 4.56 **Peak Area:** 9734.65 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

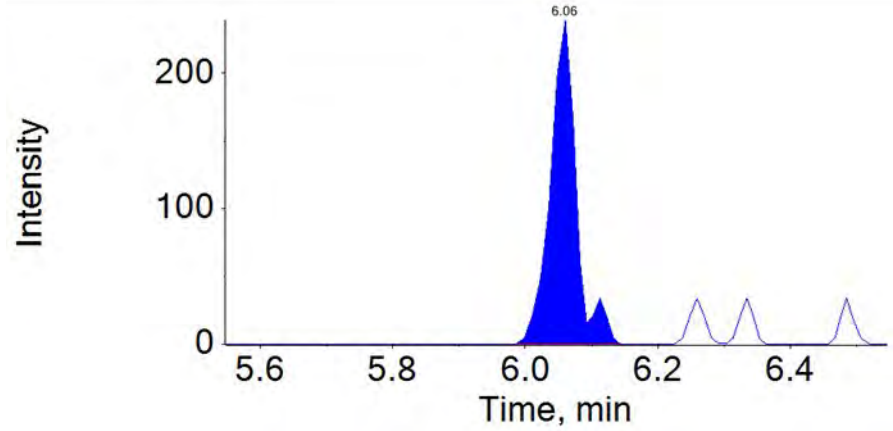
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 7692.11 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

Component Name: PFNA_2 **RT (min.):** 5.27 **Peak Area:** 2176.77 **Mass Range:** 463.0 / 169.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

Component Name: PFDoDA_2 **RT (min.):** 6.06 **Peak Area:** 655.49 **Mass Range:** 613.0 / 169.0 **File Name:** 18NOV12DCAL-43.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-43.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	44885.16	A	0.3619	0.3622			
PFBS_2	3.82	1.00	16259.22	A	0.3619	0.3622	0	50	
4:2-FTS	4.13	1.00	8803.96	A	0.6730	0.7006			
4:2 FTS_2	4.13	1.00	6168.18	A	0.6730	0.7006		#NA!	
PFHxA	4.16	1.00	96559.34	A	0.0117	0.0147			
PFHxA_2	4.16	1.00	1416.25	A	0.0117	0.0147	26	50	
PFPeS	4.19	1.10	20295.04	A	0.5191	0.5794			
PFPeS_2	4.18	1.10	11758.90	A	0.5191	0.5794	12	50	
PFHpA	4.55	1.00	95048.34	M	0.0563	0.0529			
PFHpA_2	4.55	1.00	5032.31	A	0.0563	0.0529	-6	50	
PFHxS	4.56	1.00	31064.73	M	0.3428	0.3595			
PFHxS_2	4.56	1.00	11169.02	M	0.3428	0.3595	5	50	
6:2-FTS	4.91	1.00	8048.37	A	0.6604	0.6742			
6:2 FTS_2	4.91	1.00	5425.84	A	0.6604	0.6742		#NA!	
PFHpS	4.92	1.08	29902.32	A	0.4066	0.4437			
PFHpS_2	4.92	1.08	13266.19	A	0.4066	0.4437	9	50	
PFOA	4.93	1.00	100710.53	A	0.0562	0.0523			
PFOA_2	4.92	1.00	5264.55	A	0.0562	0.0523	-7	50	
PFOS	5.25	1.00	32300.98	M	0.2968	0.2722			
PFOS_2	5.25	1.00	8793.88	M	0.2968	0.2722	-8	50	
PFNA	5.27	1.00	80724.19	A	0.0229	0.0248			
PFNA_2	5.27	1.00	1999.67	M	0.0229	0.0248	8	50	
PFNS	5.55	1.06	20326.14	A	0.4828	0.4548			
PFNS_2	5.54	1.06	9243.39	A	0.4828	0.4548	-6	50	
PFDA	5.57	1.00	63802.06	M	0.0081	0.0067			
PFDA_2	5.56	1.00	427.00	A	0.0081	0.0067	-17	50	
8:2-FTS	5.57	1.00	6214.24	A	0.6814	0.7964			
8:2 FTS_2	5.57	1.00	4949.26	A	0.6814	0.7964		#NA!	
NMeFOSAA	5.71	1.00	5759.59	A	0.2569	0.2344			
NMeFOSAA_2	5.70	1.00	1350.22	A	0.2569	0.2344	-9	50	
PFDS	5.80	1.10	16291.91	A	0.5144	0.5360			
PFDS_2	5.80	1.11	8732.52	A	0.5144	0.5360	4	50	
PFUnDA	5.83	1.00	51206.76	A	0.0058	0.0013			
PFUnDA_2	5.87	1.01	64.88	A	0.0058	0.0013	-78	50	OOS
NEtFOSAA	5.85	1.00	7727.12	M	0.7253	0.7329			
NEtFOSAA_2	5.84	1.00	5663.34	A	0.7253	0.7329	1	50	
PFDoDA	6.06	1.00	59695.25	A	0.0157	0.0101			
PFDoDA_2	6.06	1.00	604.13	M	0.0157	0.0101	-35	50	
10:2-FTS	6.08	1.09	5206.47	A	0.6356	0.6377			
10:2 FTS_2	6.07	1.09	3320.12	A	0.6356	0.6377		#NA!	
PFTrDA	6.26	1.03	47991.31	A	0.0086	0.0047			
PFTrDA_2	6.26	1.03	226.86	A	0.0086	0.0047	-45	50	
PFTeDA	6.43	1.00	40236.53	A	0.0062	0.0078			
PFTeDA_2	6.43	1.00	314.50	A	0.0062	0.0078	25	50	
PFHxDA	6.74	1.05	19006.44	A	0.0683	0.0747			
PFHxDA_2	6.73	1.05	1419.64	A	0.0683	0.0747	9	50	
PFODA	7.00	1.09	14955.56	A	0.0277	0.0314			
PFODA_2	7.00	1.09	469.81	A	0.0277	0.0314	13	50	

APPROVED
By MCD at 6:33 pm, 11/12/18

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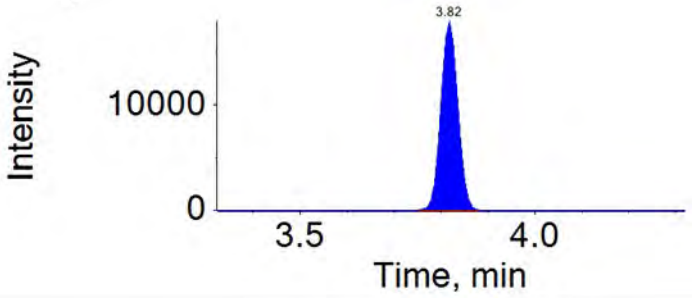
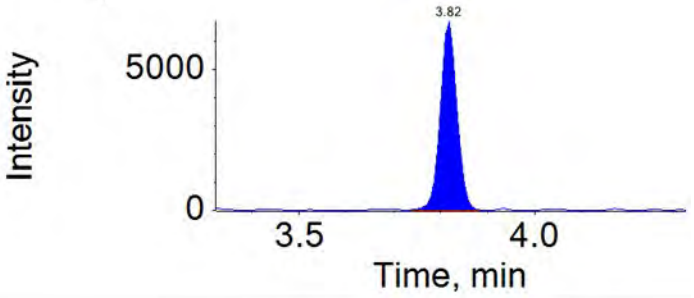
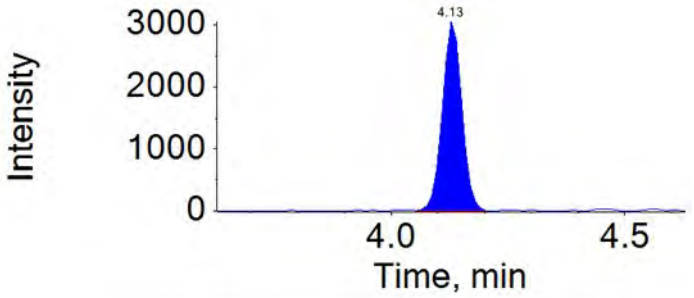
Component: PFBS
Primary Mass: 299.0 / 80.0



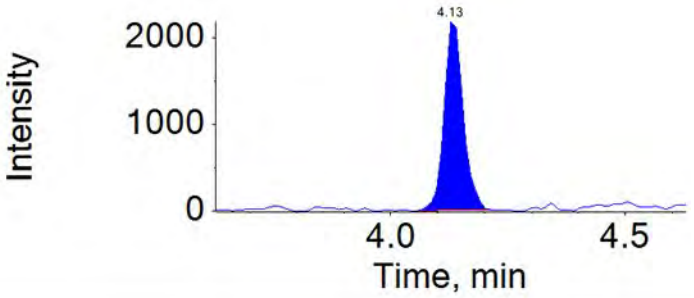
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



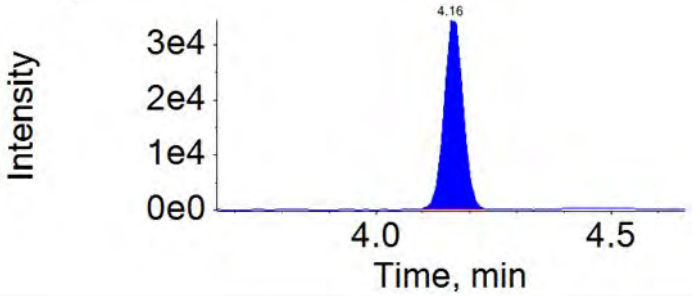
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



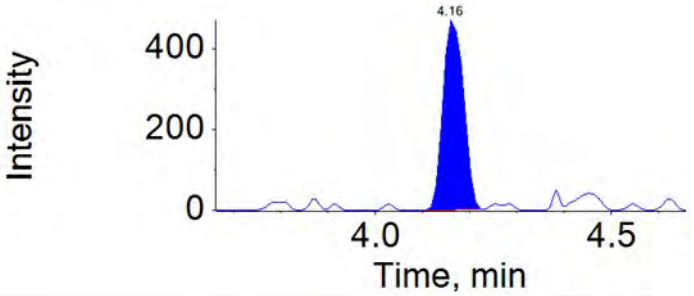
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



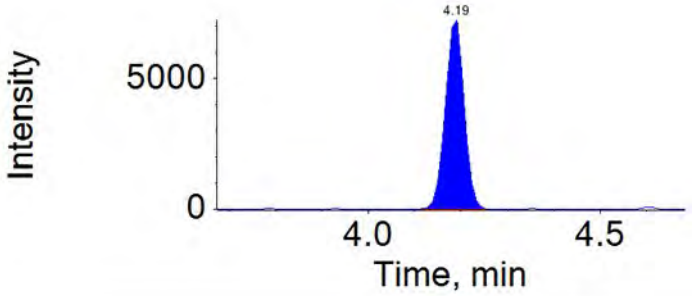
Component: PFHxA
Primary Mass: 313.0 / 269.0



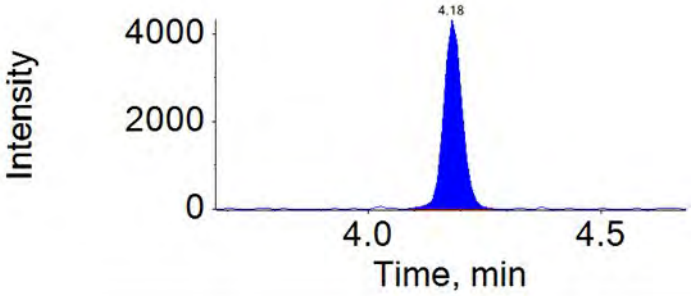
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By MCD at 6:33 pm, 11/12/18

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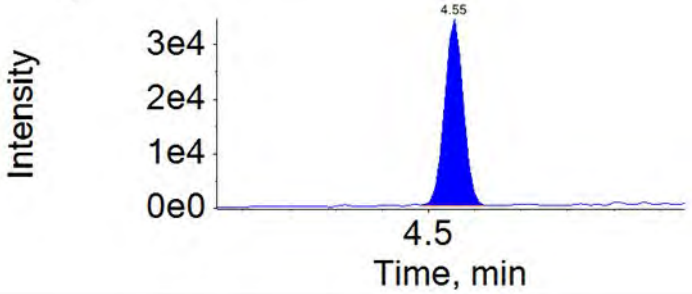
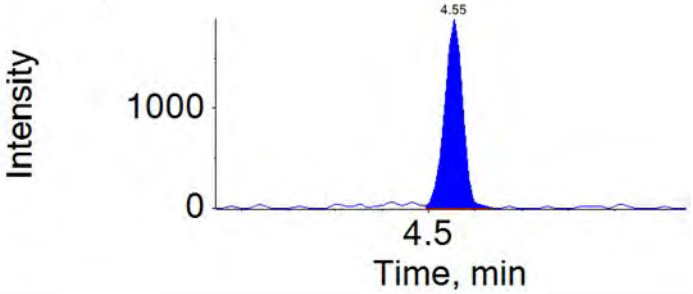
By HMK at 10:53 am, 11/13/18

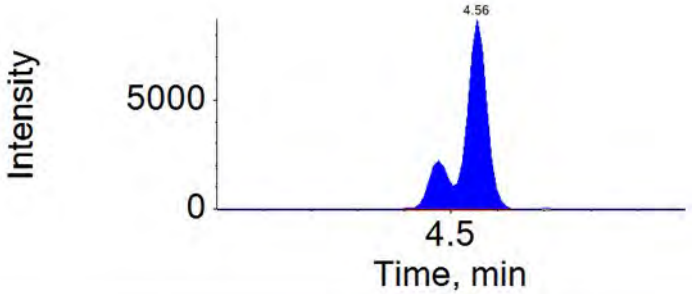
Component: PFHpA
Primary Mass: 363.0 / 319.0



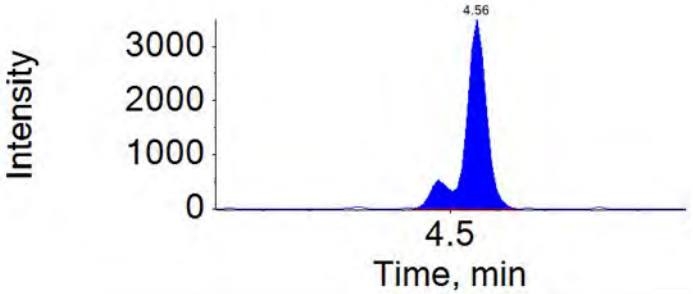
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



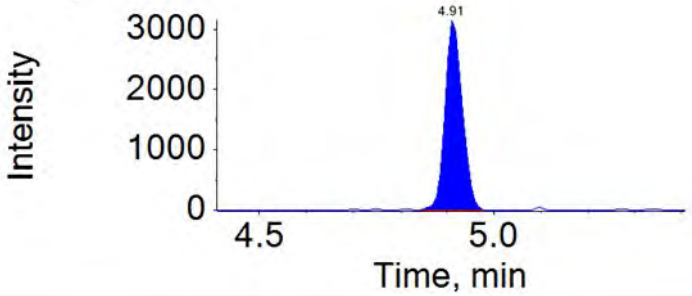
Component: PFHxS
Primary Mass: 399.0 / 80.0



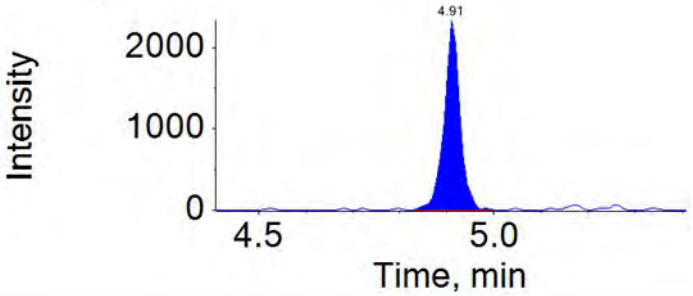
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



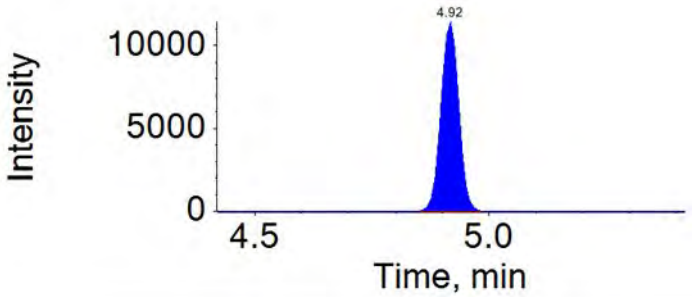
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



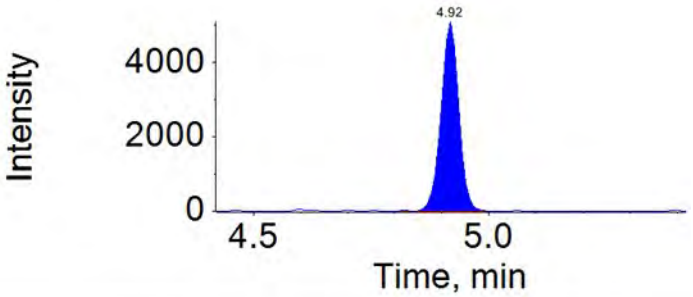
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By MCD at 6:33 pm, 11/12/18

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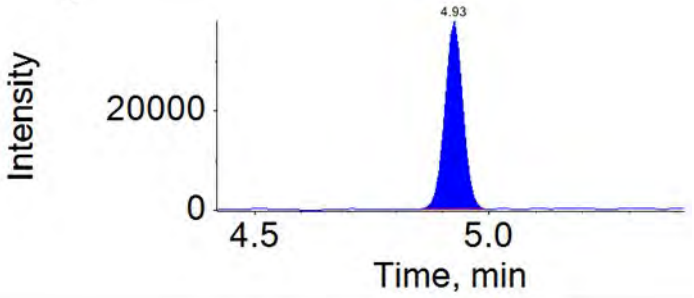
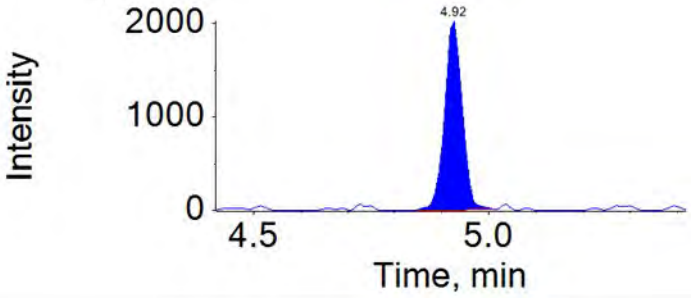
By HMK at 10:53 am, 11/13/18

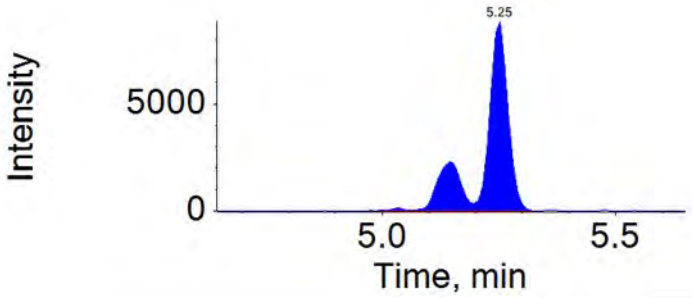
Component: PFOA
Primary Mass: 413.0 / 369.0



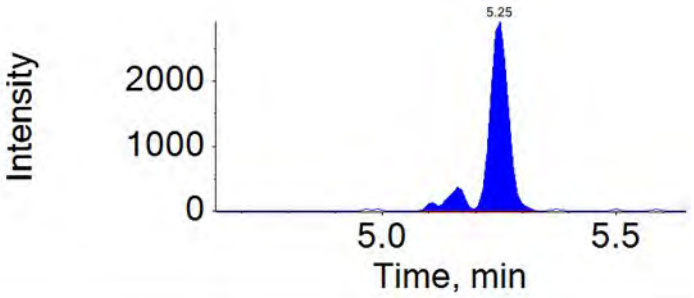
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



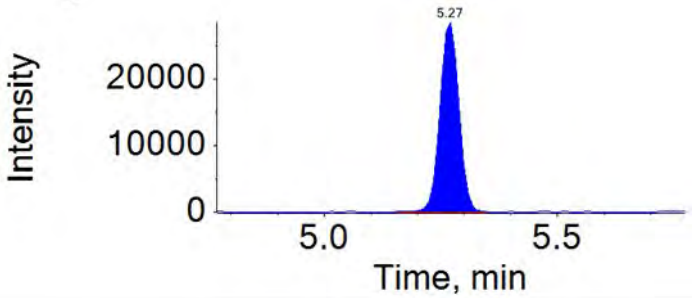
Component: PFOS
Primary Mass: 499.0 / 80.0



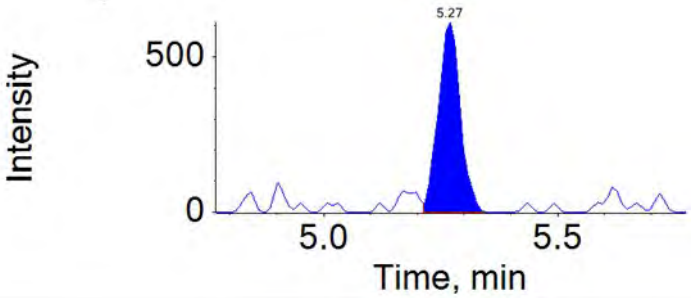
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



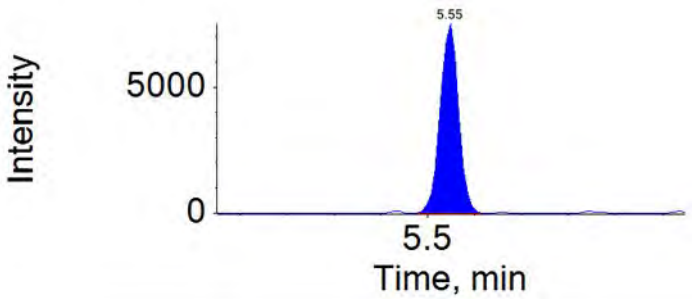
Component: PFNA
Primary Mass: 463.0 / 419.0



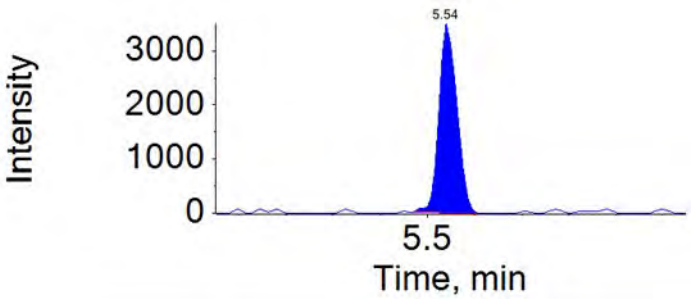
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



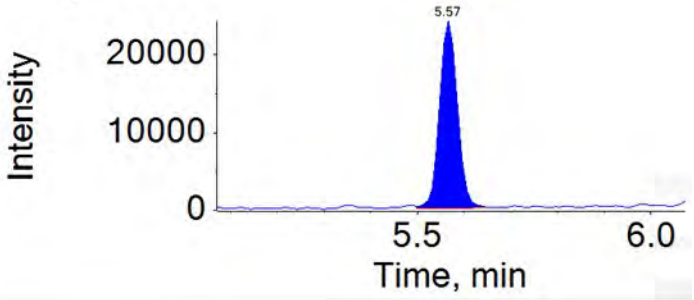
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



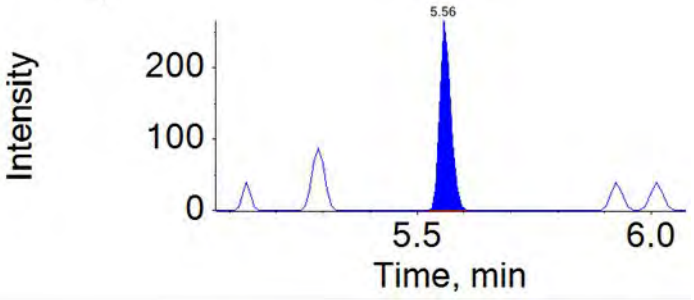
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

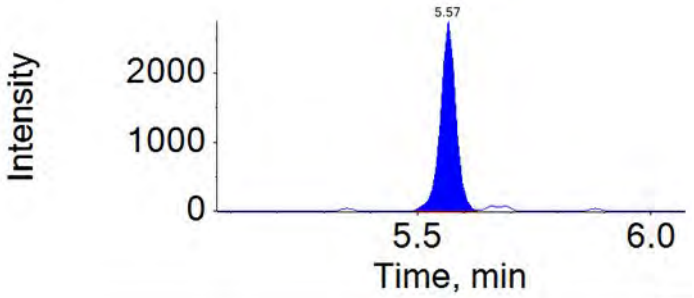
Component: PFDA
Primary Mass: 513.0 / 469.0



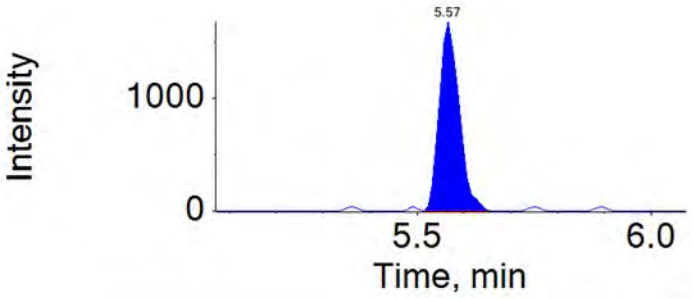
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



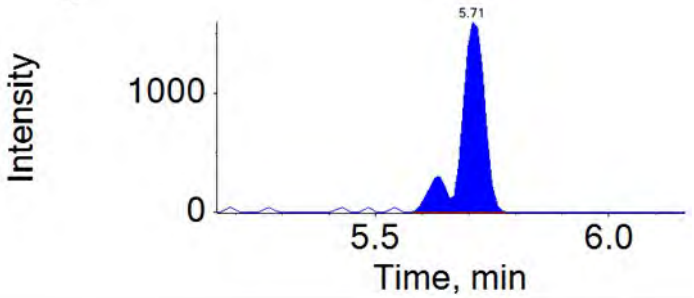
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



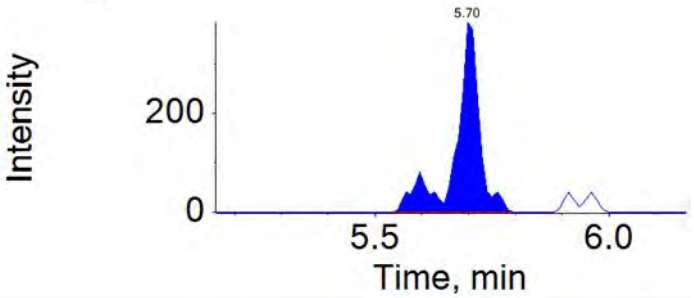
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



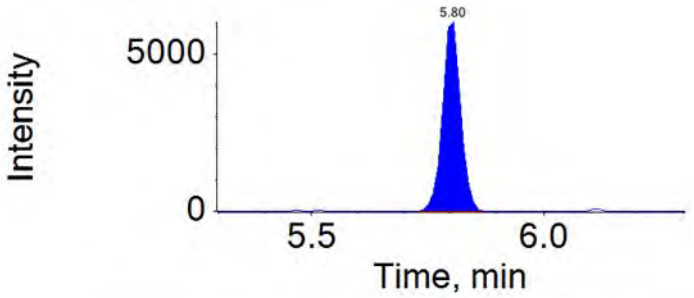
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



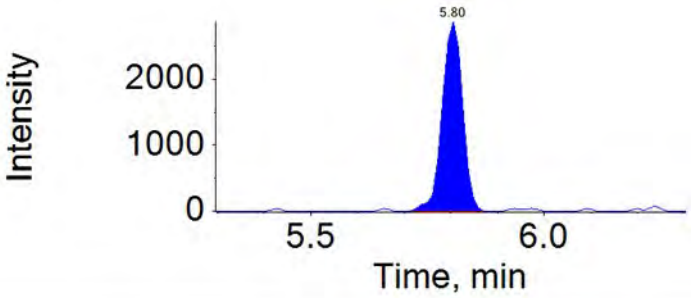
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



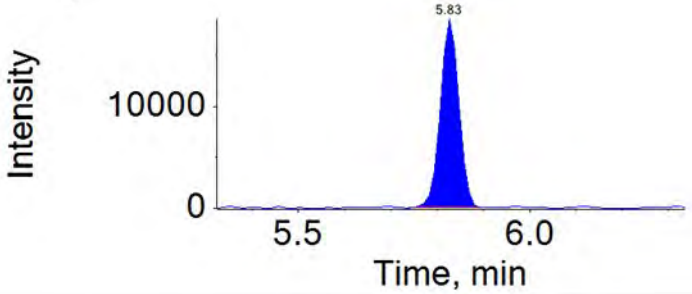
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



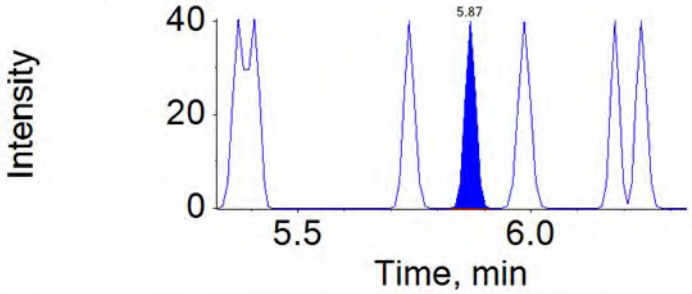
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

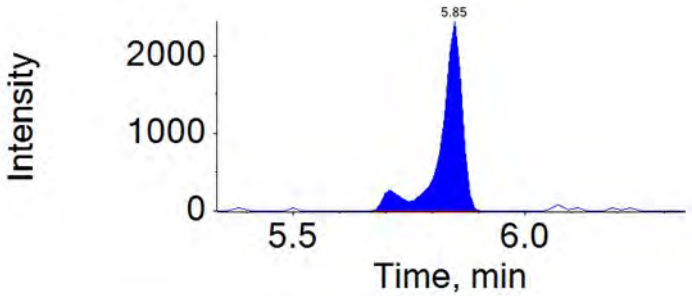
Component: PFUnDA
Primary Mass: 563.0 / 519.0



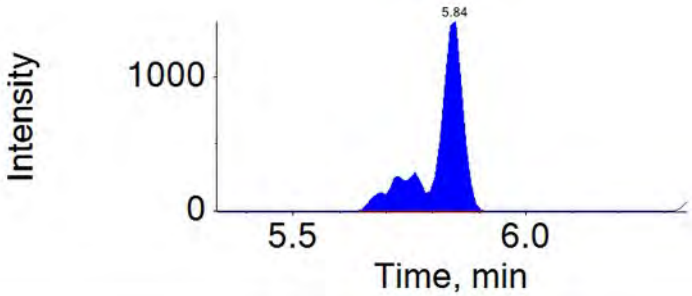
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



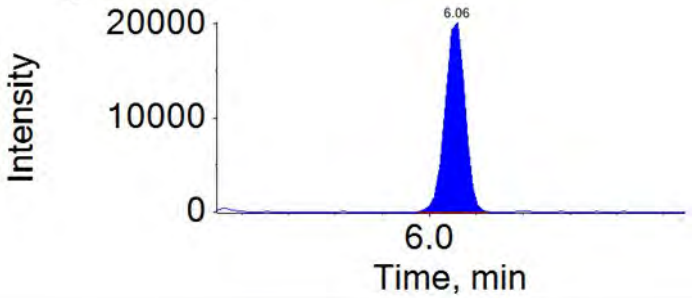
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



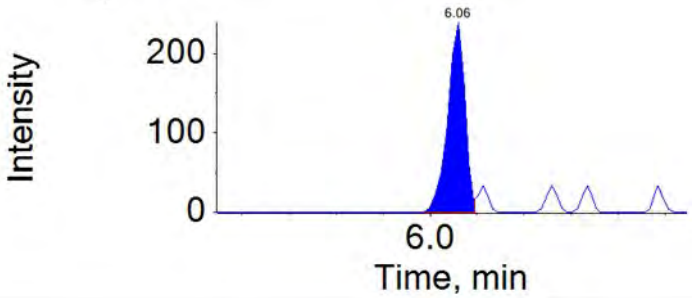
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



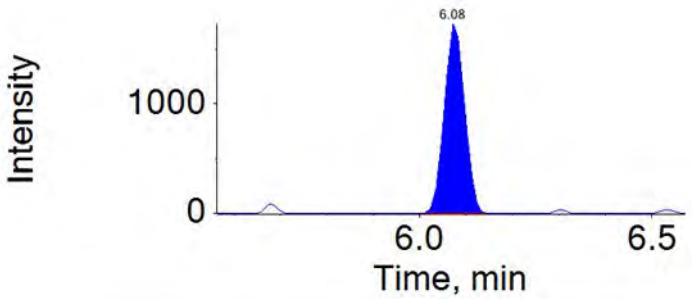
Component: PFDoDA
Primary Mass: 613.0 / 569.0



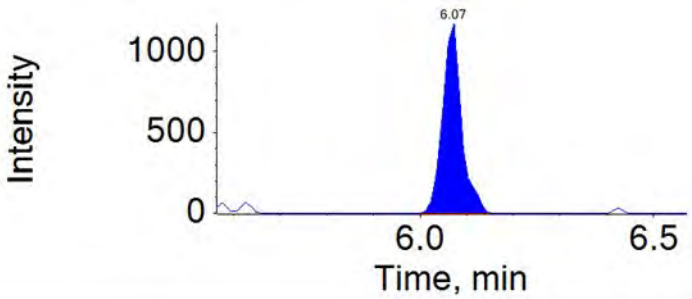
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



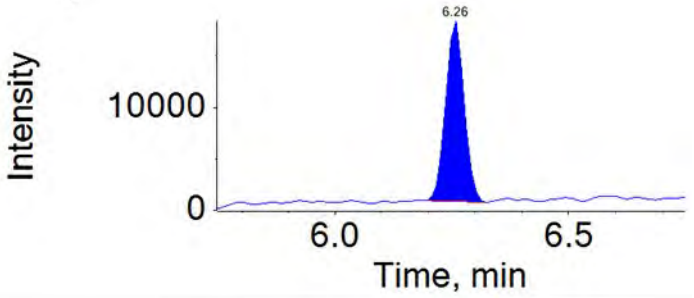
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



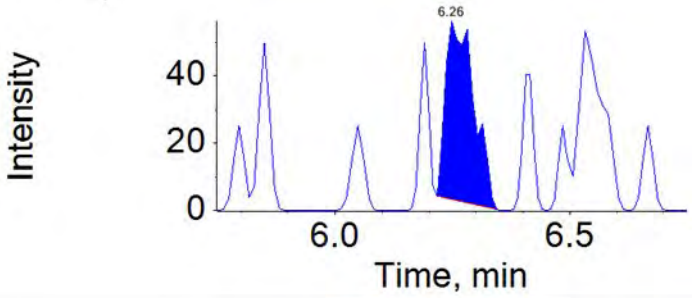
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

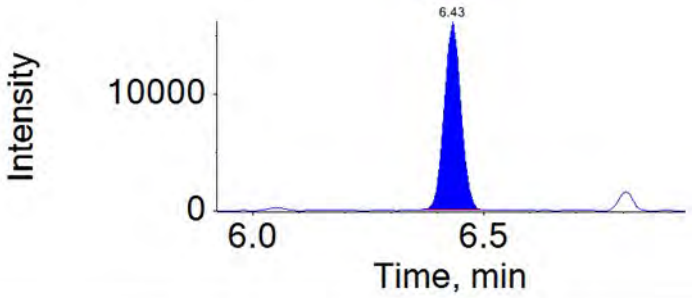
Component: PFTrDA
Primary Mass: 663.0 / 619.0



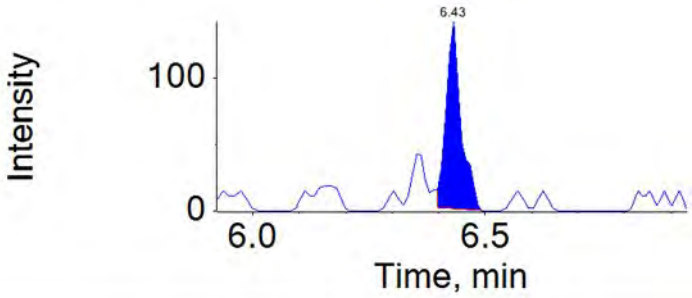
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



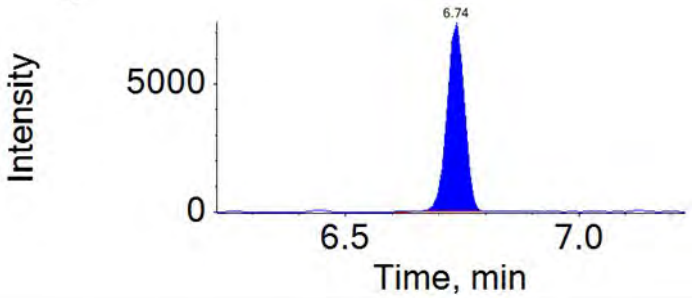
Component: PFTeDA
Primary Mass: 713.0 / 669.0



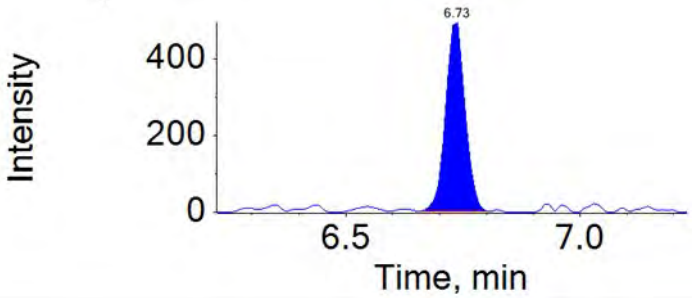
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



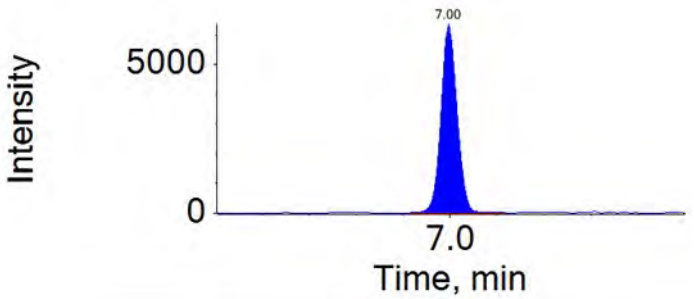
Component: PFHxDA
Primary Mass: 813.0 / 769.0



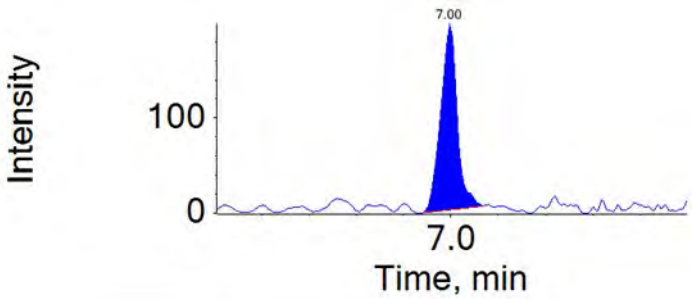
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV12DCAL-44.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T15:24:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	659926.2	659926.2	0	50	
13C2-PFOA	5.0	450219.7	450219.7	0	50	
13C4-PFOS	4.8	249205.8	249205.8	0	50	
13C2-PFDA	5.0	278743.9	278743.9	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	733360.2	13C3-PFBA	659926.2	1.111	5.000	4.982	100	70-130	
E13C5-PFPeA	695805.7	13C3-PFBA	659926.2	1.054	5.000	4.729	95	70-130	
E13C3-PFBS	416352.8	13C3-PFBA	659926.2	0.631	4.650	4.454	96	70-130	
E13C2-4:2-FTS	47514.8	13C2-PFOA	450219.7	0.106	4.670	4.700	101	70-130	
E13C5-PFHxA	646783.5	13C2-PFOA	450219.7	1.437	5.000	5.189	104	70-130	
E13C3-PFHxS	317243.2	13C2-PFOA	450219.7	0.705	4.730	4.835	102	70-130	
E13C4-PFHpA	503681.0	13C2-PFOA	450219.7	1.119	5.000	5.040	101	70-130	
E13C2-6:2-FTS	31706.4	13C2-PFOA	450219.7	0.070	4.750	4.712	99	70-130	
E13C8-PFOA	878868.5	13C2-PFOA	450219.7	1.952	5.000	5.378	108	70-130	
E13C8-PFOS	281035.5	13C4-PFOS	249205.8	1.128	4.780	4.997	105	70-130	
E13C9-PFNA	455948.9	13C4-PFOS	249205.8	1.830	5.000	5.101	102	70-130	
E13C6-PFDA	612680.8	13C2-PFDA	278743.9	2.198	5.000	5.129	103	70-130	
E13C2-8:2-FTS	29249.8	13C2-PFDA	278743.9	0.105	4.790	5.233	109	70-130	
E13C8-PFOSA	629109.9	13C2-PFDA	278743.9	2.257	5.000	5.004	100	70-130	
Ed3-NMeFOSAA	71670.3	13C2-PFDA	278743.9	0.257	5.000	4.641	93	70-130	
E13C7-PFUnDA	245605.3	13C2-PFDA	278743.9	0.881	5.000	5.116	102	70-130	
Ed5-NEtFOSAA	54383.9	13C2-PFDA	278743.9	0.195	5.000	4.128	83	70-130	
E13C2-PFDoDA	549542.3	13C2-PFDA	278743.9	1.971	5.000	5.119	102	70-130	
Ed7-NMePFOSAE	307355.4	13C2-PFDA	278743.9	1.103	5.000	4.772	95	70-130	
Ed3-NMePFOSA	76782.9	13C2-PFDA	278743.9	0.275	5.000	5.005	100	70-130	
Ed9-NEtPFOSAE	259792.3	13C2-PFDA	278743.9	0.932	5.000	4.847	97	70-130	
Ed5-NEtPFOSA	57485.9	13C2-PFDA	278743.9	0.206	5.000	4.838	97	70-130	
E13C2-PFTeDA	393544.9	13C2-PFDA	278743.9	1.412	5.000	4.957	99	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

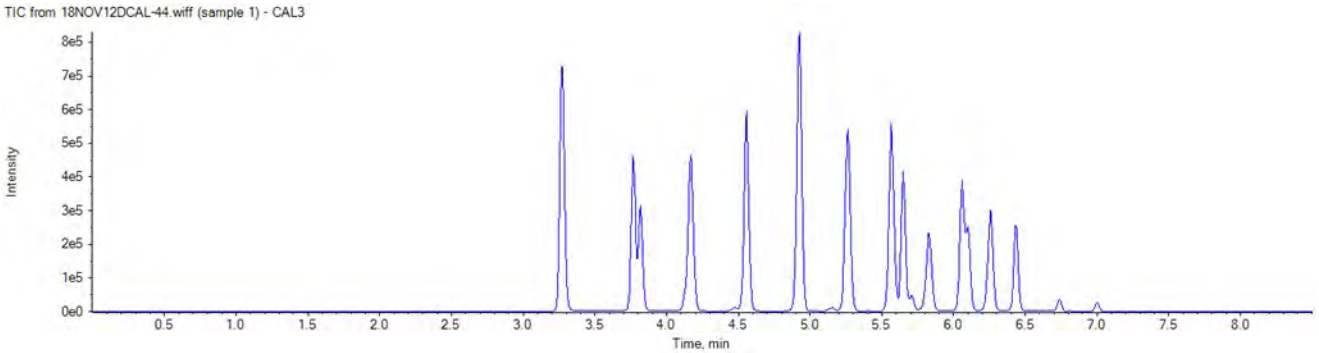
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-44.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	303228.7		A	13C4-PFBA	3.27	733360.2	0.413	2.291
PFPeA	3.77	1.000	292715.8		A	13C5-PFPeA	3.77	695805.7	0.421	2.435
PFBS	3.82	1.000	168144.6		A	13C3-PFBS	3.82	416352.8	0.404	1.921
4:2-FTS	4.13	1.000	34188.5		A	13C2-4:2-FTS	4.13	47514.8	0.720	1.954
PFHxA	4.17	1.000	352013.5		A	13C5-PFHxA	4.17	646783.5	0.544	2.272
PFPeS	4.19	1.100	84071.2		A	13C3-PFBS	3.82	416352.8	0.202	1.960
PFHpA	4.56	1.000	355834.2		A	13C4-PFHpA	4.55	503681.0	0.706	2.342
PFHxS	4.56	1.000	125622.0		M	13C3-PFHxS	4.56	317243.2	0.396	1.920
6:2-FTS	4.91	1.000	28084.9		A	13C2-6:2-FTS	4.91	31706.4	0.886	2.143
PFHpS	4.92	1.080	125907.9		A	13C3-PFHxS	4.56	317243.2	0.397	2.089
PFOA	4.93	1.000	372258.9		A	13C8-PFOA	4.93	878868.5	0.424	2.262
PFOS	5.25	1.000	120897.5		M	13C8-PFOS	5.25	281035.5	0.430	1.881
PFNA	5.27	1.000	302323.8		A	13C9-PFNA	5.27	455948.9	0.663	2.391
PFNS	5.55	1.060	76049.0		A	13C8-PFOS	5.25	281035.5	0.271	1.893
PFDA	5.57	1.000	254047.8		M	13C6-PFDA	5.57	612680.8	0.415	2.198
8:2-FTS	5.57	1.000	26295.1		A	13C2-8:2-FTS	5.57	29249.8	0.899	2.096
PFOSA	5.65	1.000	270175.5		A	13C8-PFOSA	5.65	629109.9	0.429	2.098
NMeFOSAA	5.71	1.000	25147.7		A	d3-NMeFOSAA	5.71	71670.3	0.351	1.983
PFDS	5.80	1.110	57966.9		A	13C8-PFOS	5.25	281035.5	0.206	1.869
PFUnDA	5.83	1.000	199061.8		A	13C7-PFUnDA	5.83	245605.3	0.810	2.119
NEtFOSAA	5.84	1.000	25089.0		A	d5-NEtFOSAA	5.84	54383.9	0.461	2.418
PFDoDA	6.06	1.000	237252.6		A	13C2-PFDoDA	6.06	549542.3	0.432	2.198
10:2-FTS	6.07	1.090	18541.7		A	13C2-8:2-FTS	5.57	29249.8	0.634	2.111
NMePFOSAE	6.10	1.000	163668.7		A	d7-NMePFOSAE	6.09	307355.4	0.533	2.216
NMePFOSA	6.11	1.000	29934.3		A	d3-NMePFOSA	6.11	76782.9	0.390	1.923
PFDoS	6.23	1.190	30098.3		A	13C8-PFOS	5.25	281035.5	0.107	1.876
NEtPFOSAE	6.26	1.000	178457.9		A	d9-NEtPFOSAE	6.25	259792.3	0.687	2.204
NEtPFOSA	6.27	1.000	26590.2		M	d5-NEtPFOSA	6.27	57485.9	0.463	2.124
PFTrDA	6.26	1.030	184322.9		A	13C2-PFDoDA	6.06	549542.3	0.335	2.117
PFTeDA	6.43	1.000	156439.9		A	13C2-PFTeDA	6.43	393544.9	0.398	2.228
PFHxDA	6.74	1.050	69655.1		A	13C2-PFTeDA	6.43	393544.9	0.177	2.109
PFODA	7.00	1.090	57796.0		A	13C2-PFTeDA	6.43	393544.9	0.147	2.045

Total Ion Chromatogram

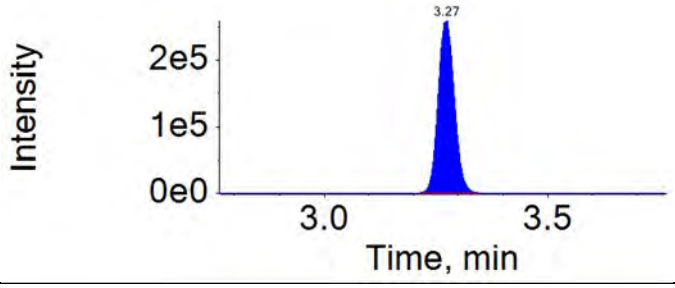


APPROVED
By MCD at 6:33 pm, 11/12/18

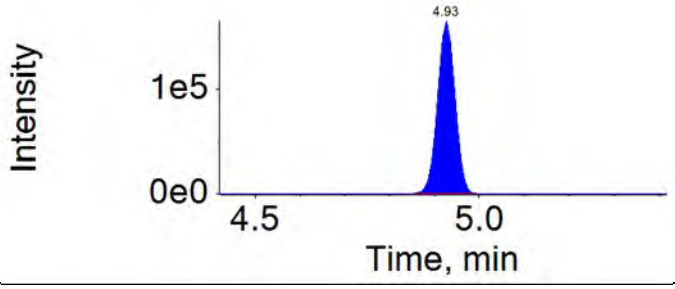
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

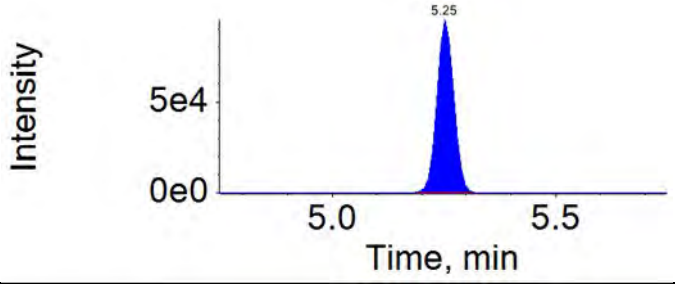
Injection Standard: 13C3-PFBA
216.0 / 172.0



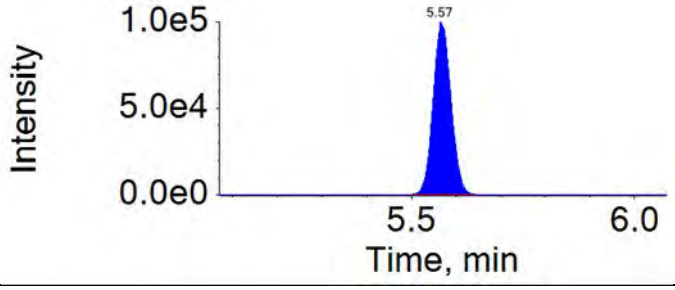
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

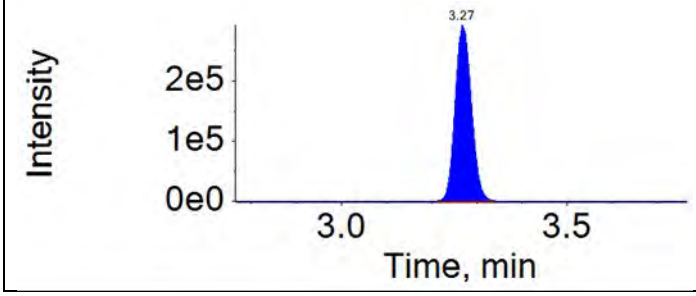


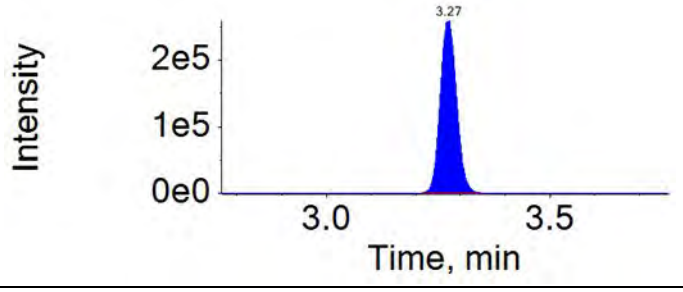
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

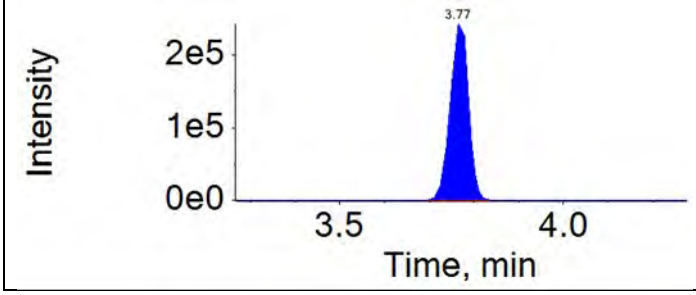
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

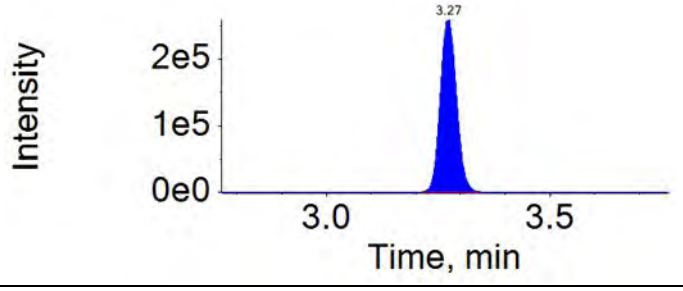
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



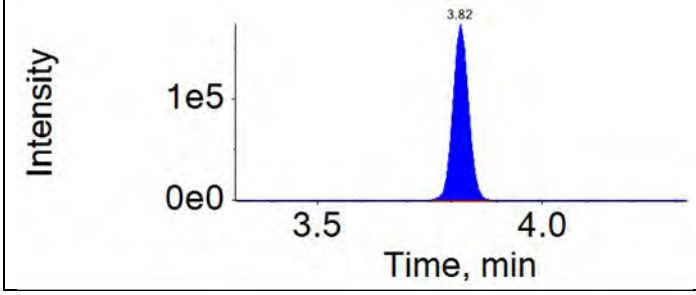


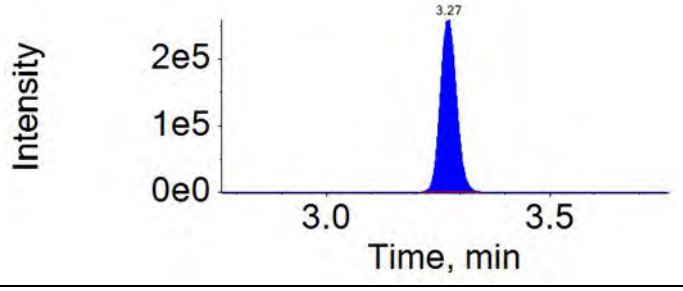
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



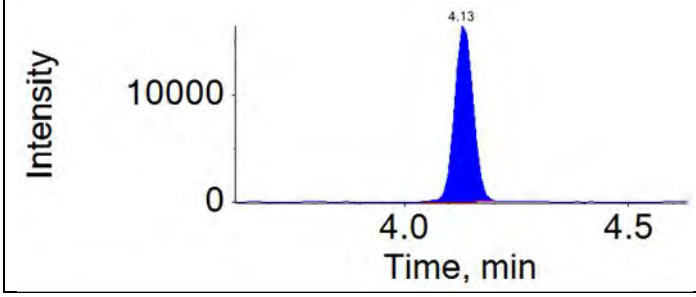


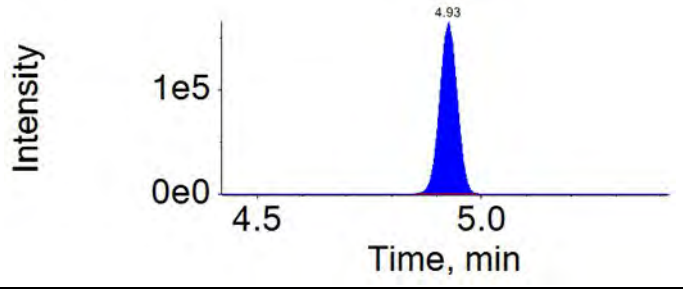
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



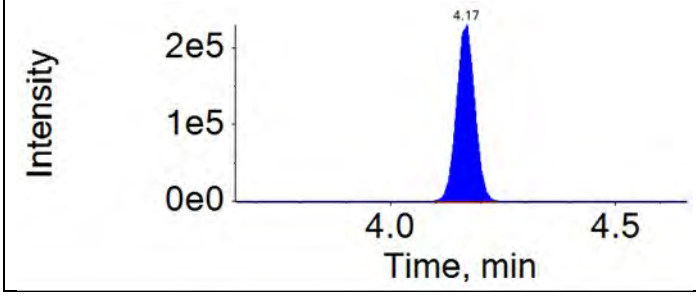


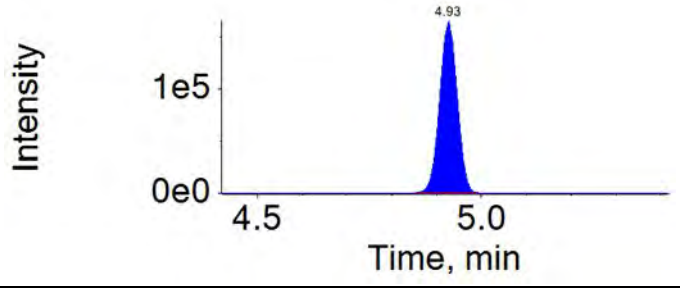
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

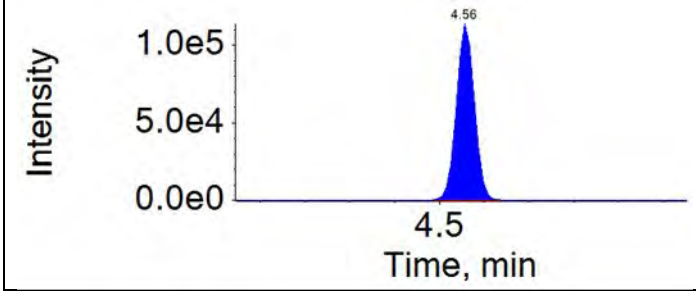
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

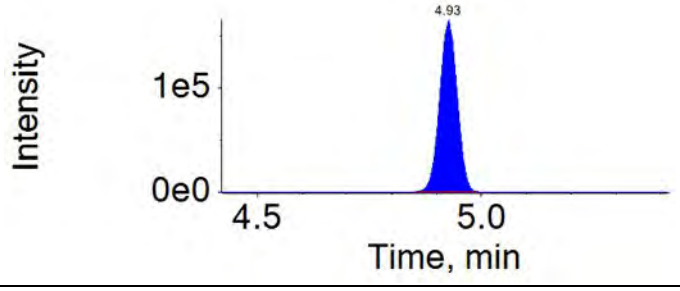
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



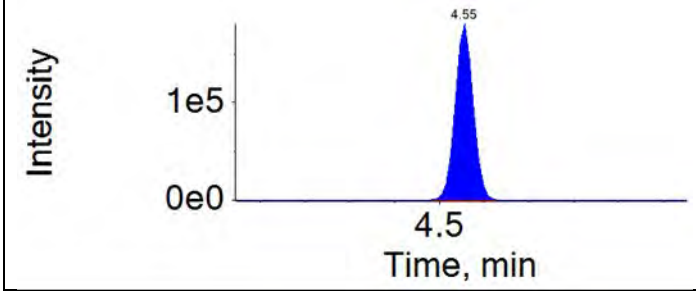


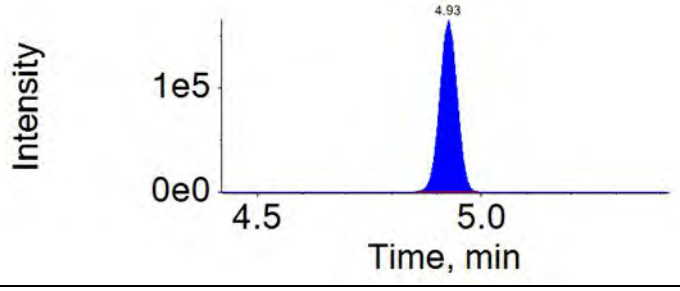
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



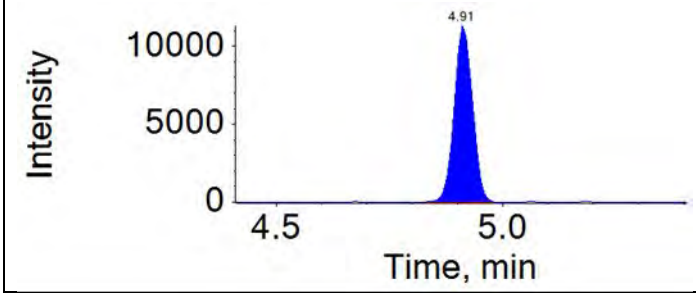


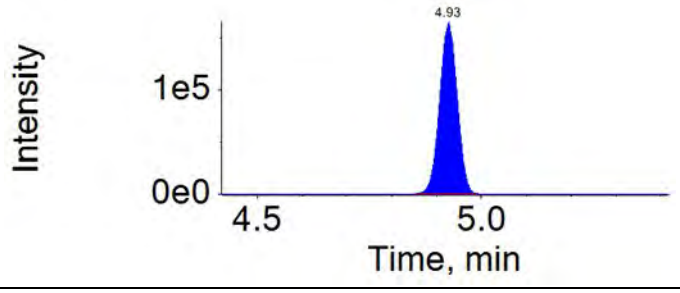
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

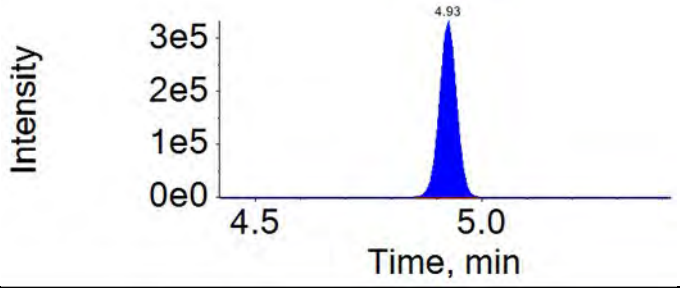
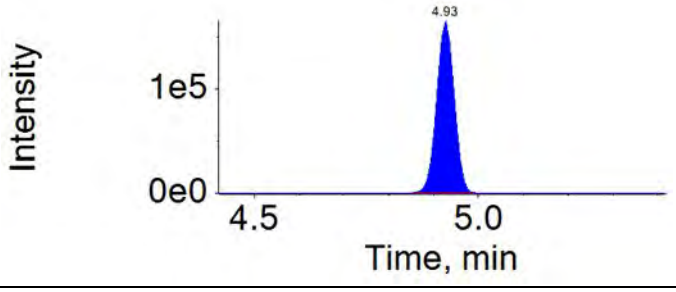


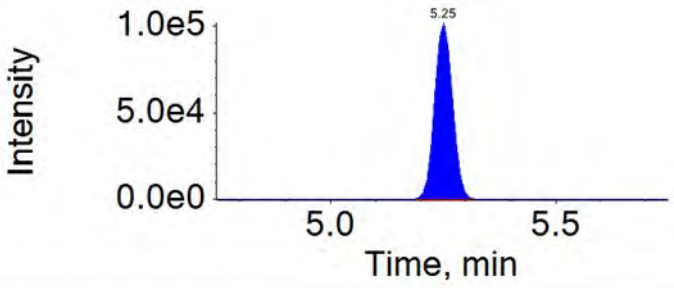
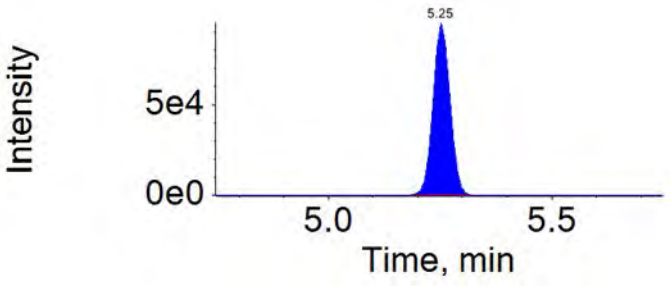


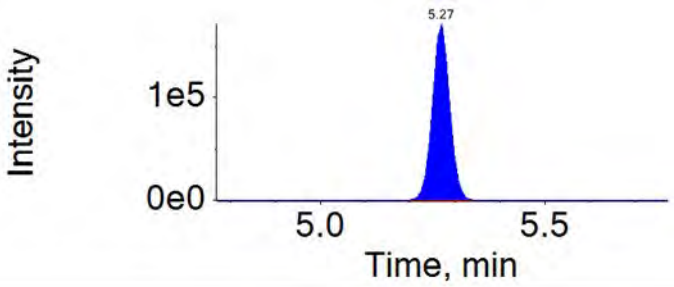
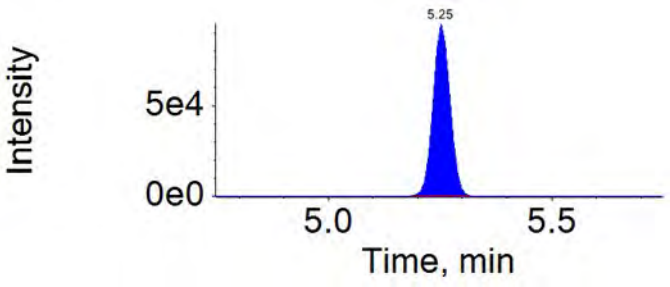
APPROVED
By MCD at 6:33 pm, 11/12/18

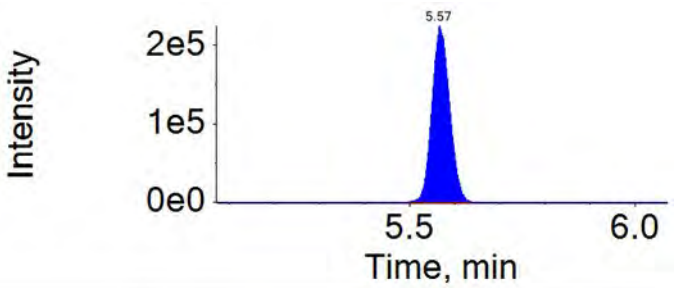
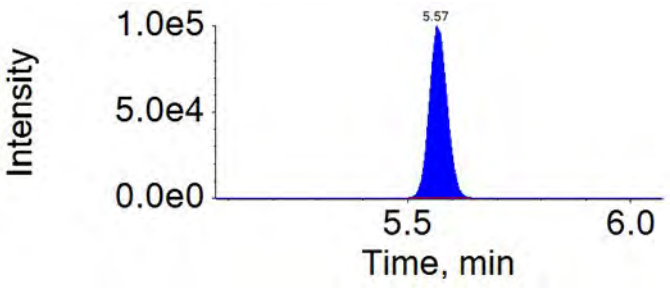
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

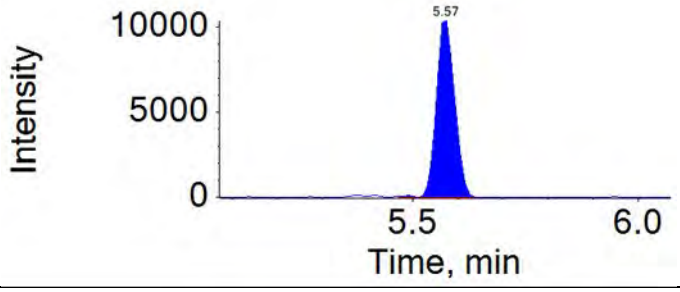
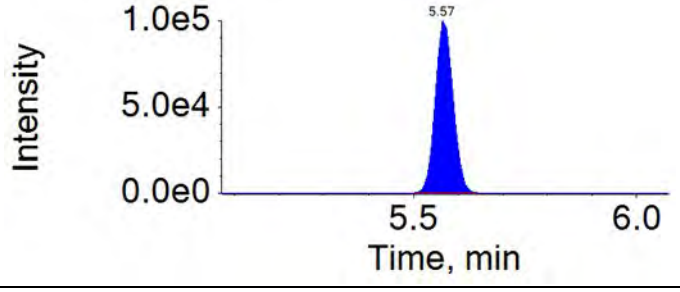
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

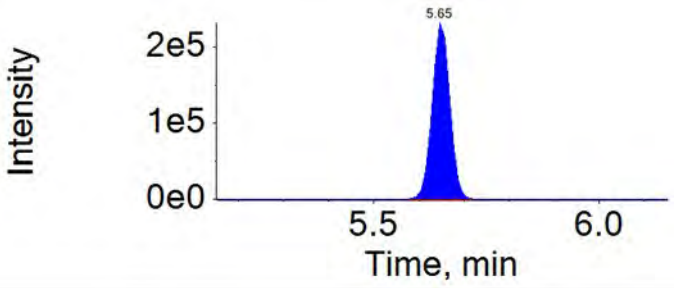
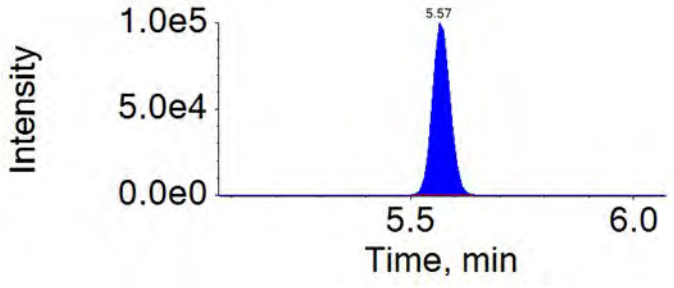
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

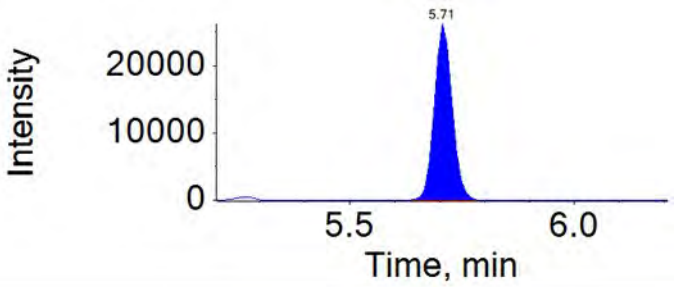
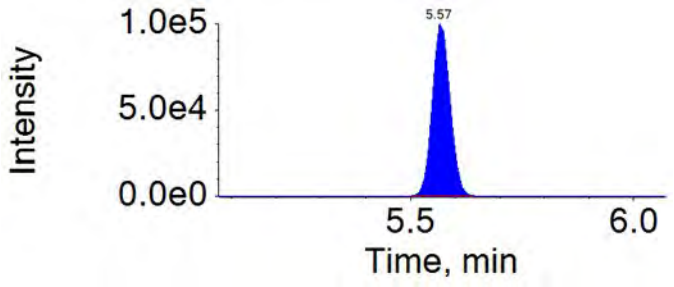
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

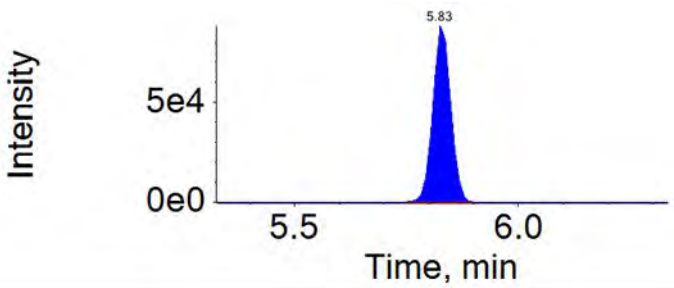
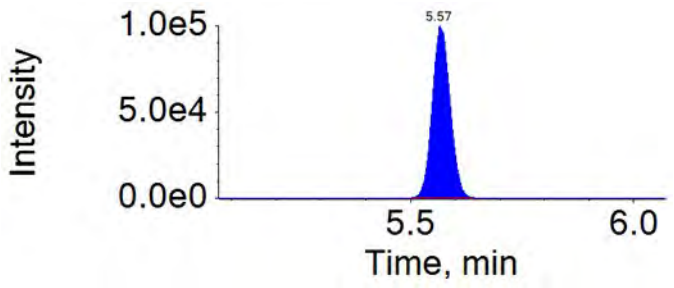
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

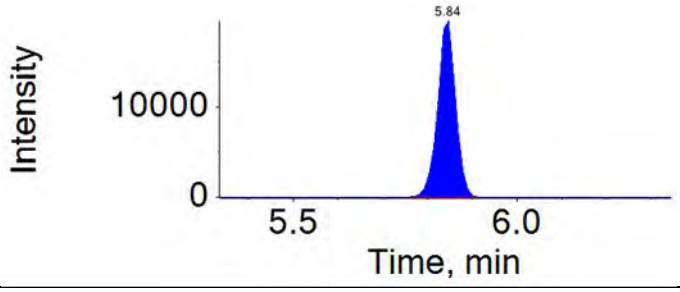
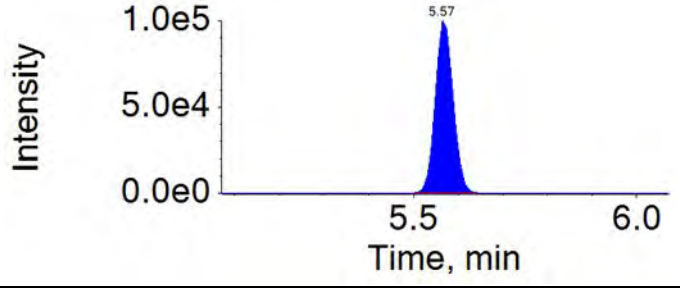
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

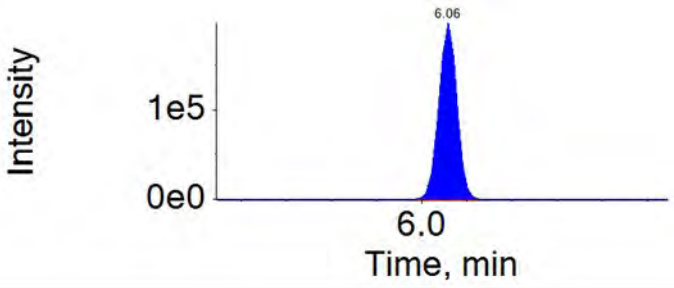
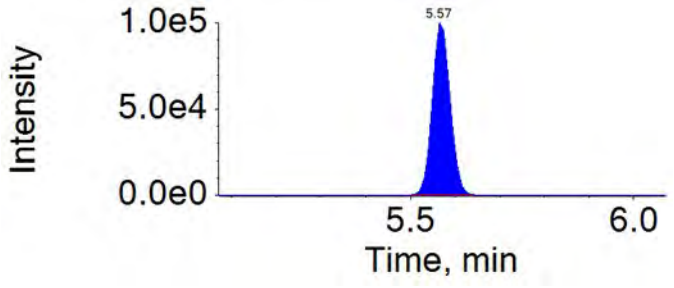
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

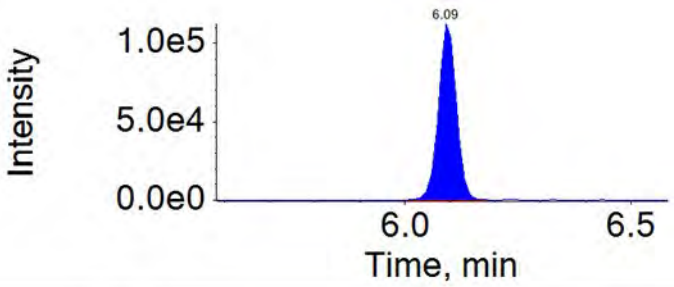
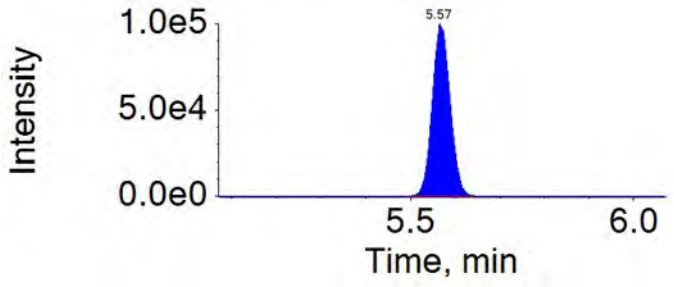
APPROVED
By MCD at 6:33 pm, 11/12/18

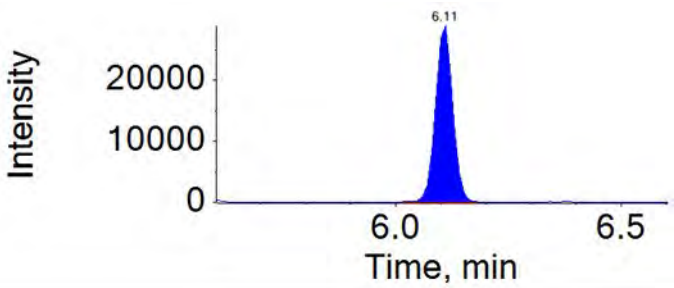
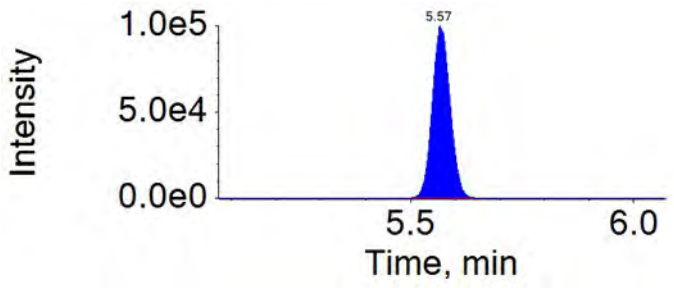
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

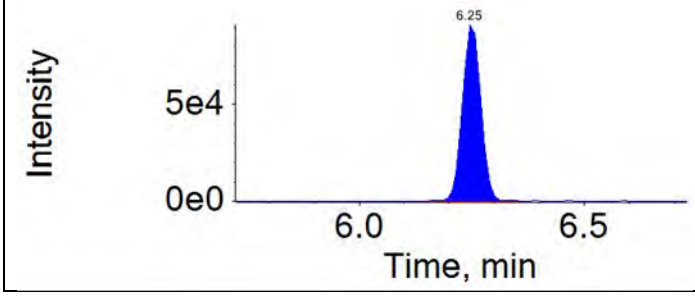
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

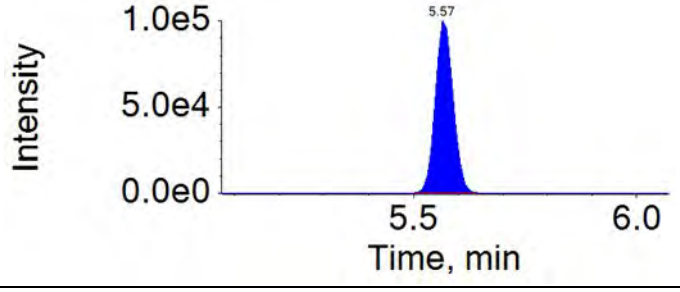
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

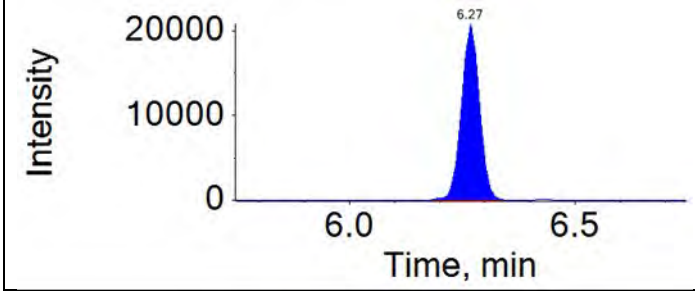
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

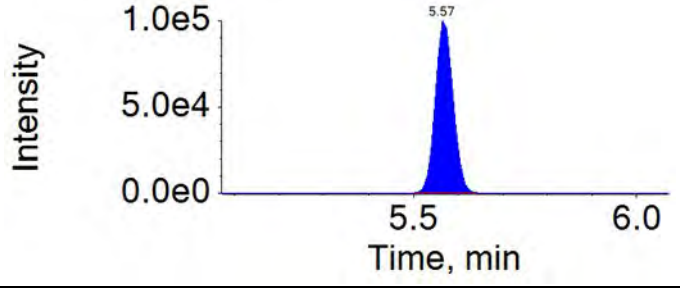
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



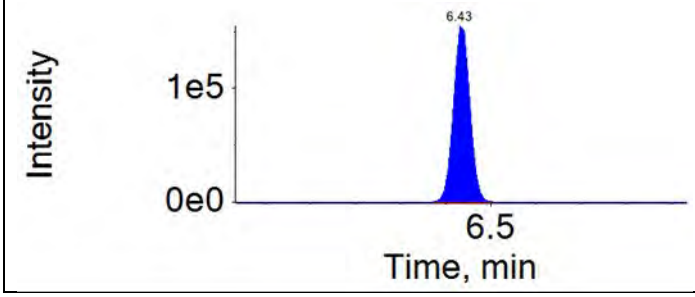


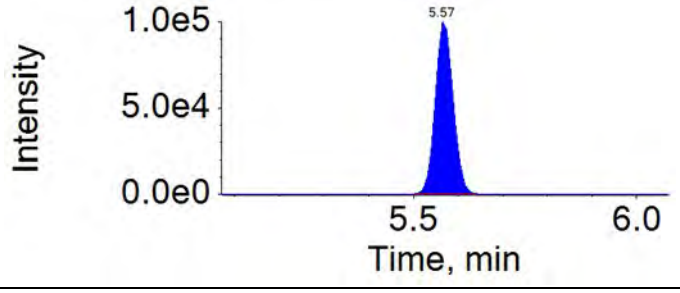
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



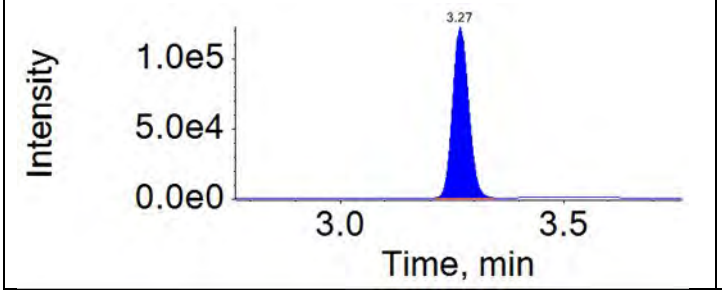


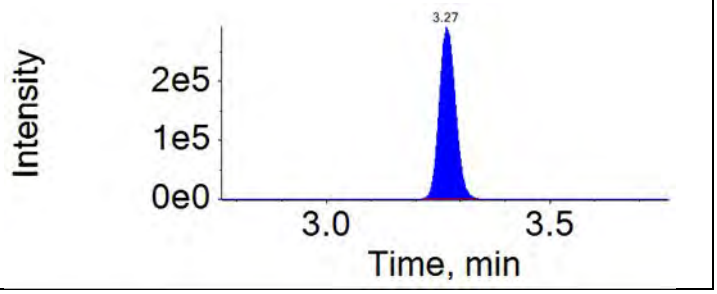
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

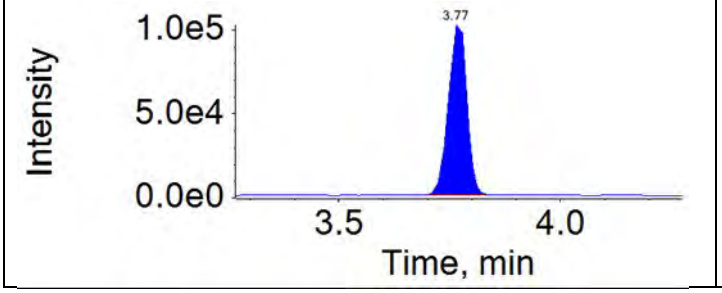
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

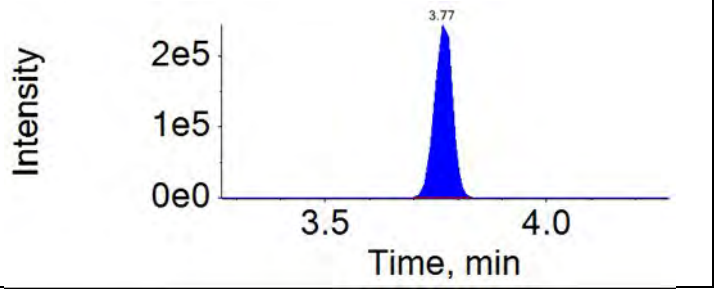
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



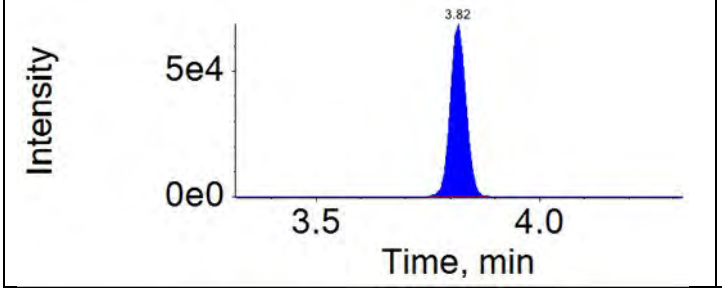


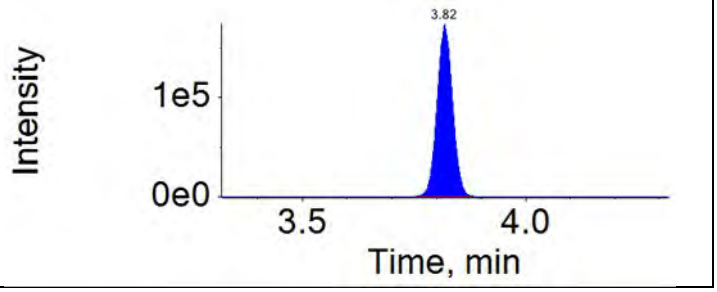
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



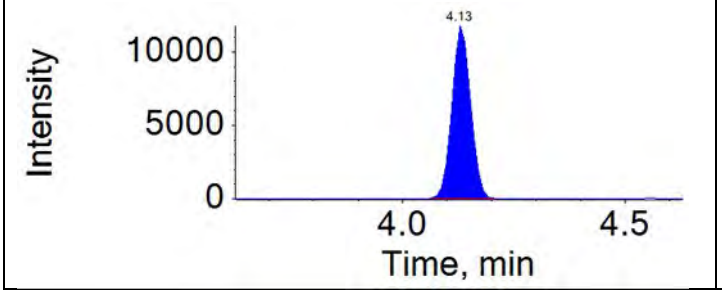


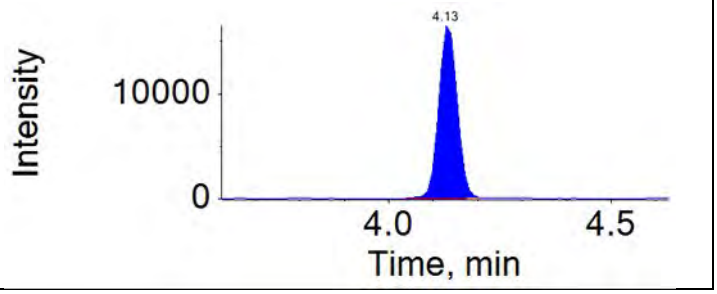
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

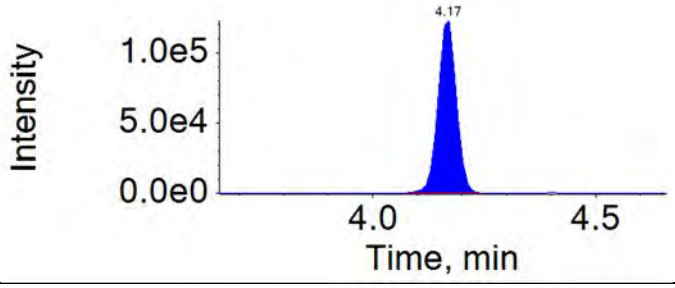
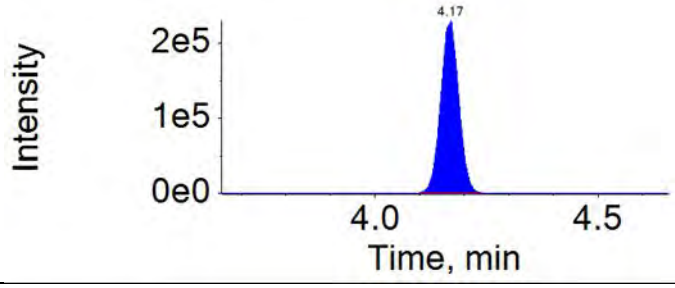


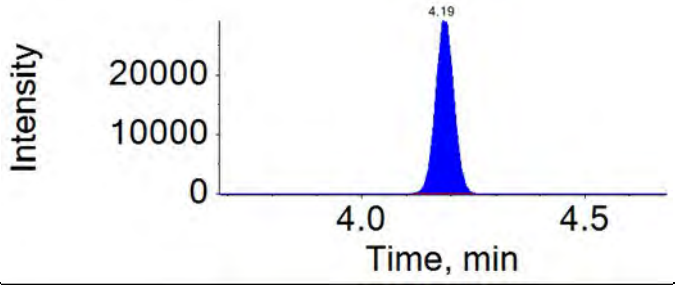
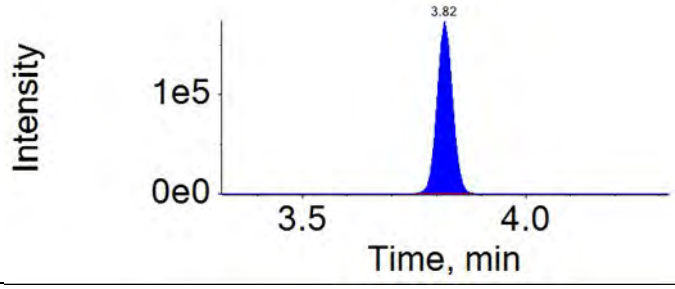


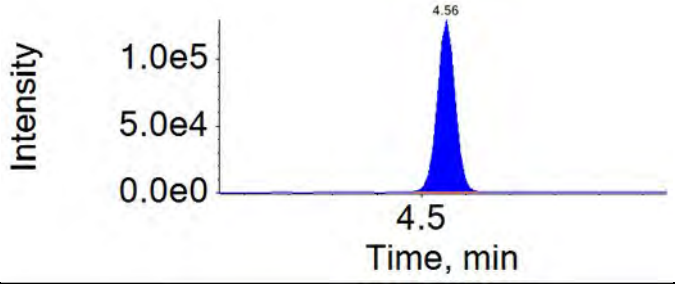
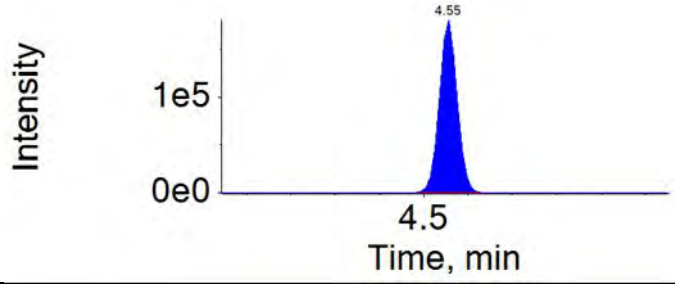
APPROVED
By MCD at 6:33 pm, 11/12/18

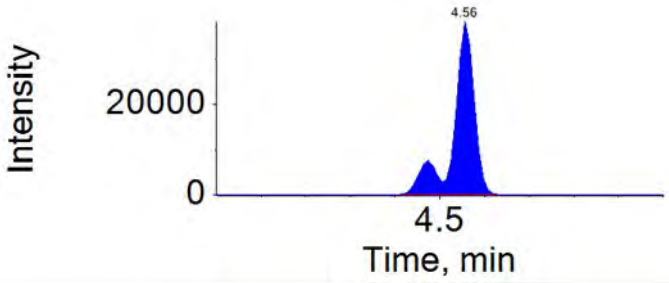
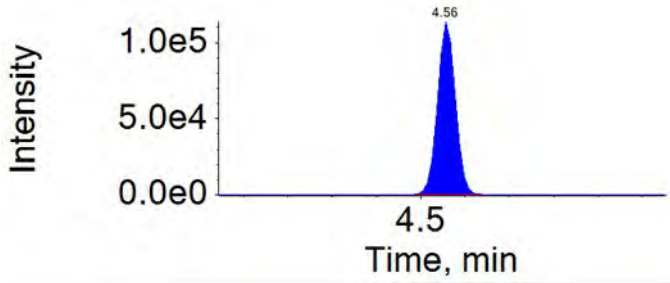
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

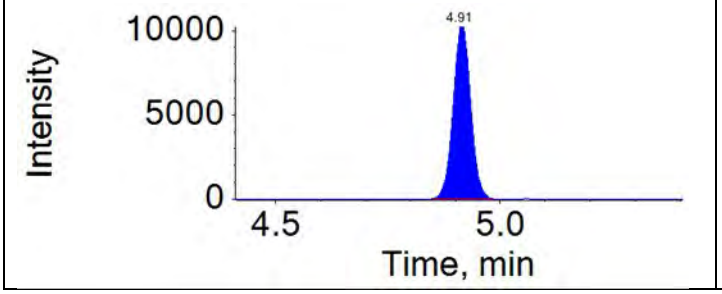
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

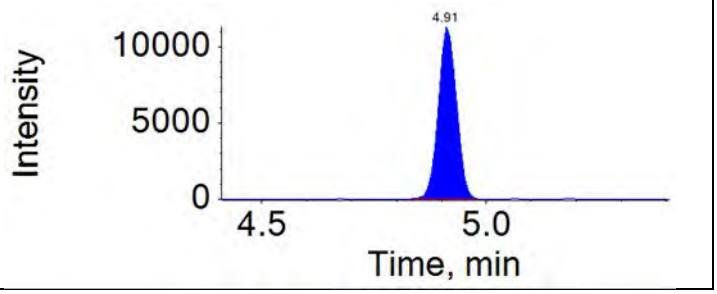
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

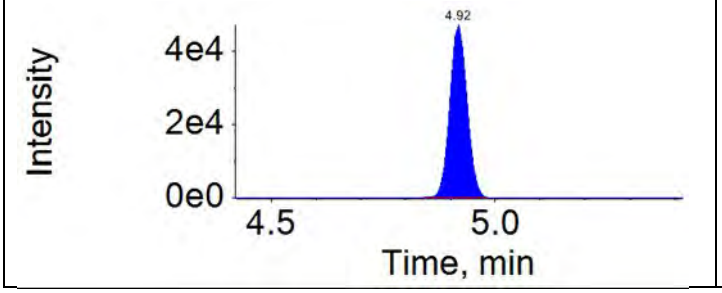
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

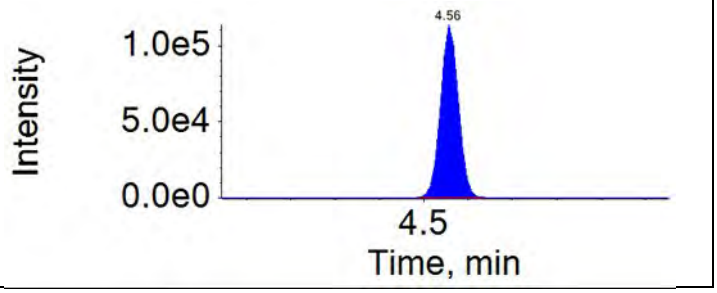
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



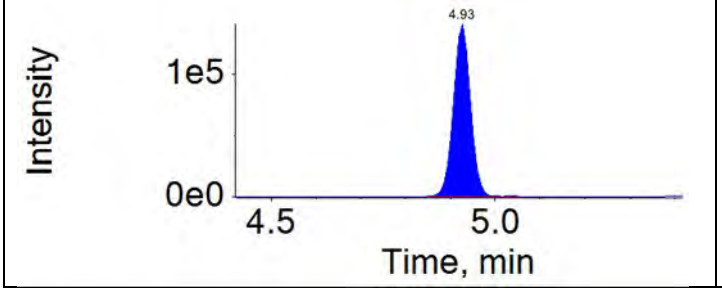


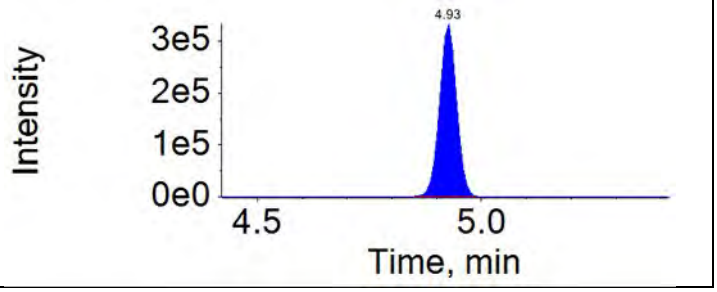
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



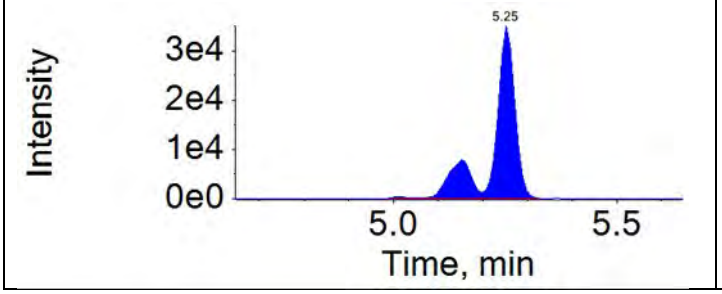


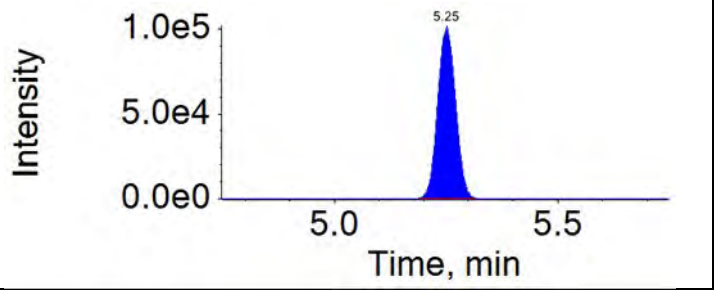
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



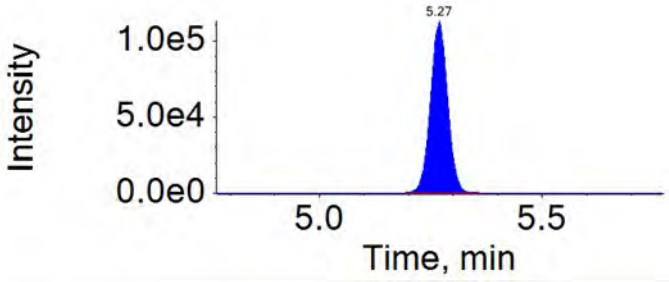


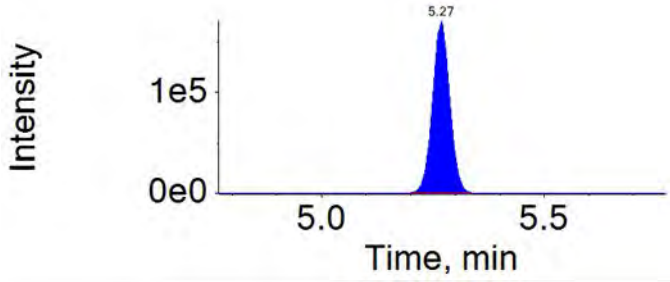
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

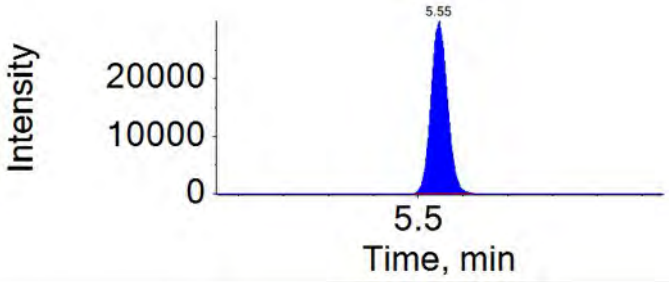
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

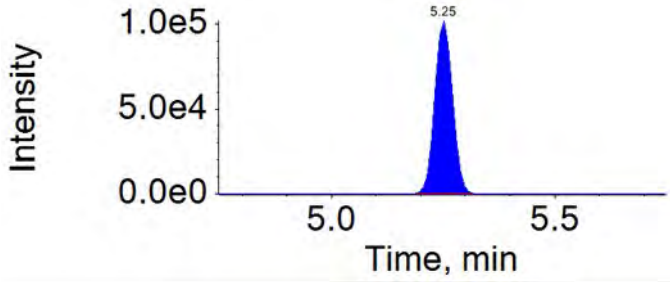
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



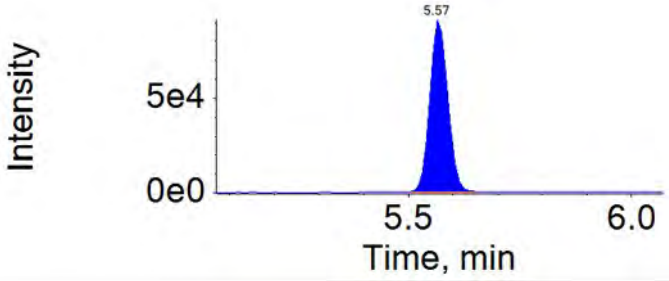


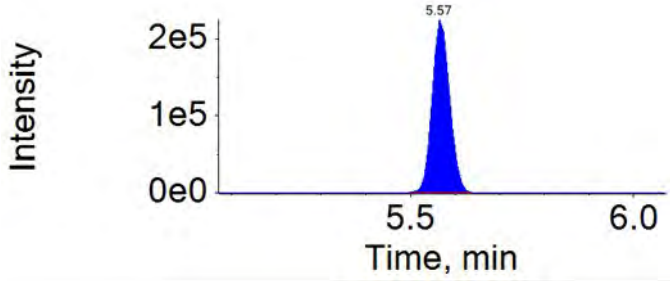
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



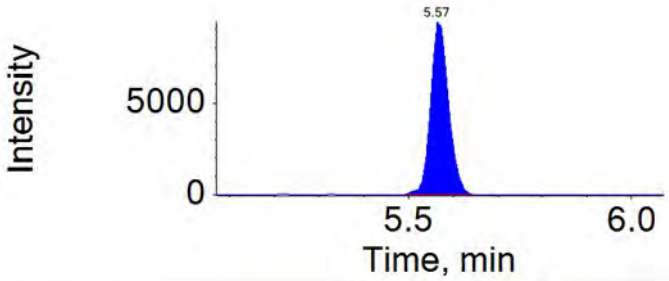


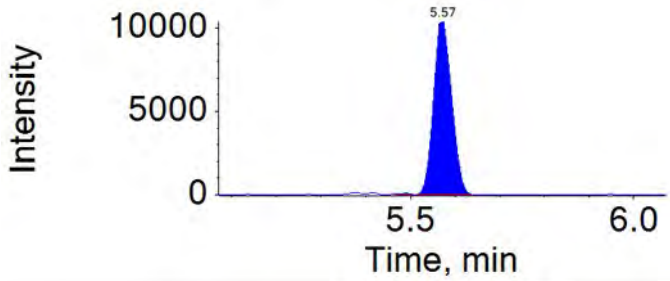
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



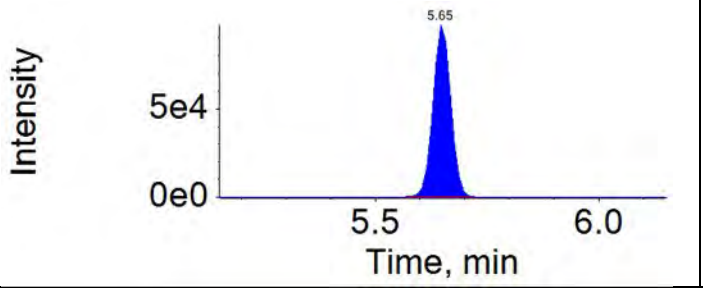


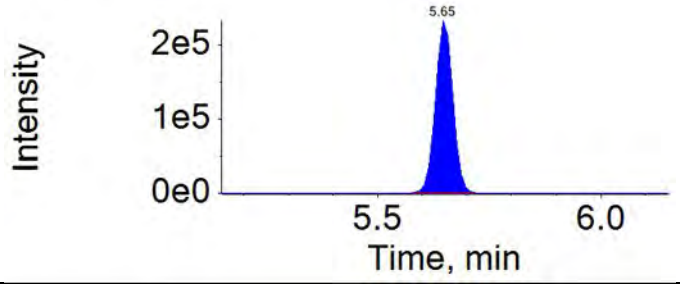
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

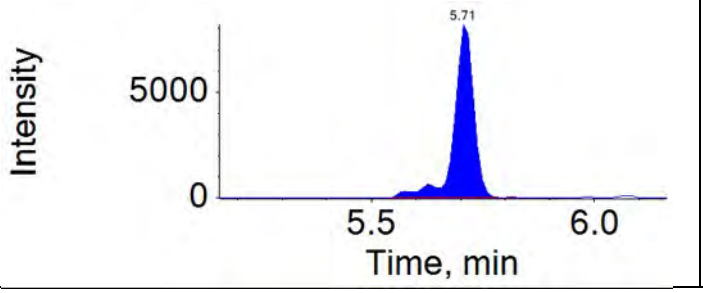
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

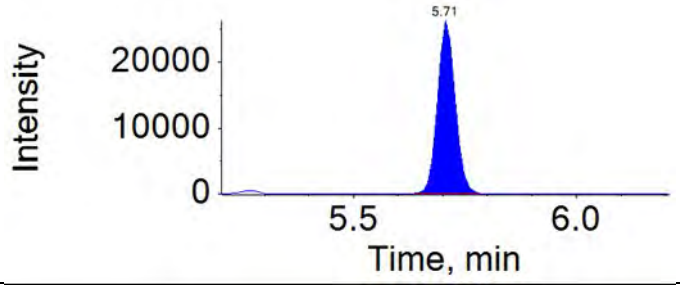
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



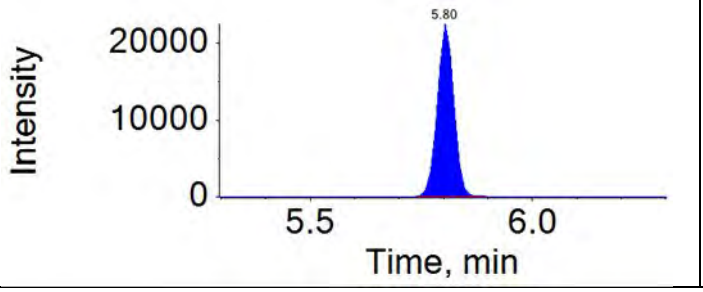


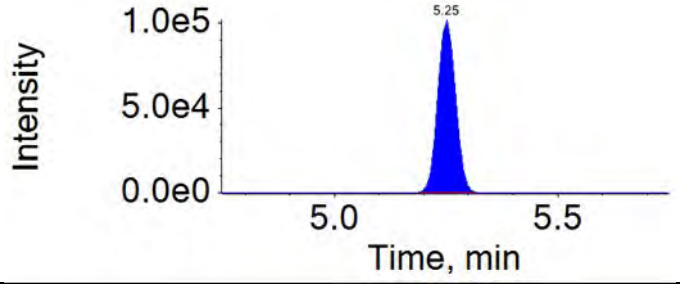
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



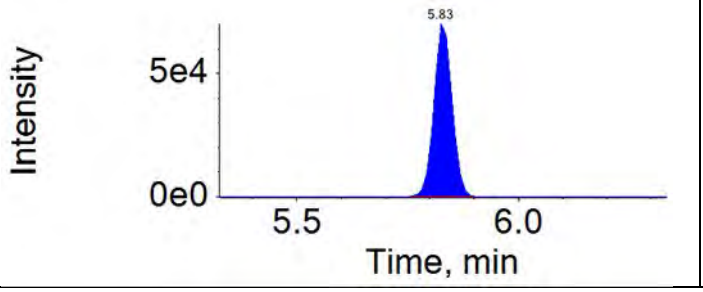


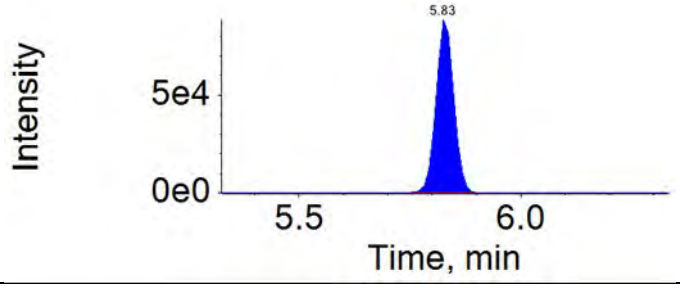
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

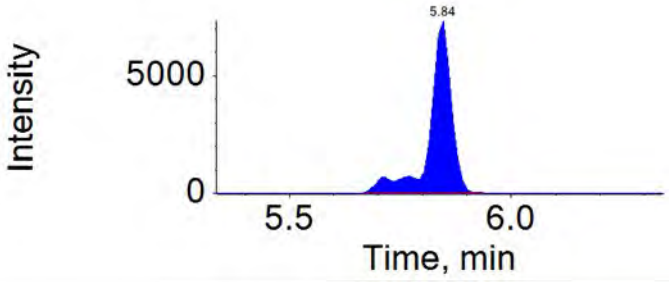
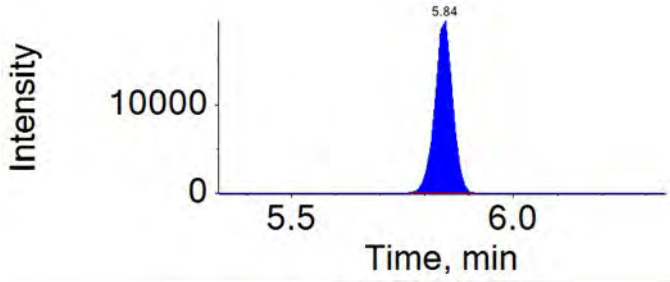


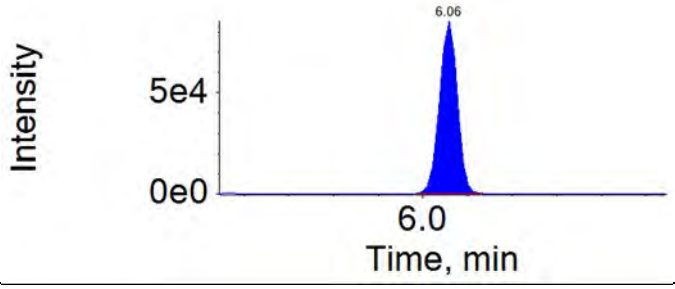
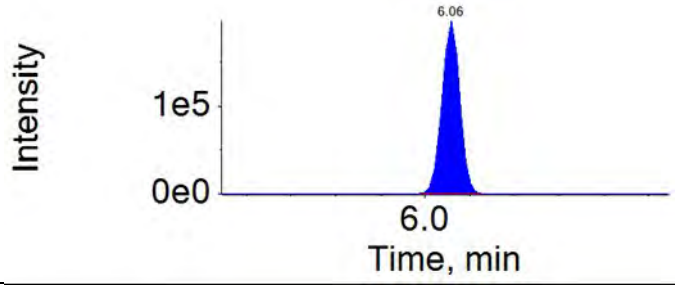


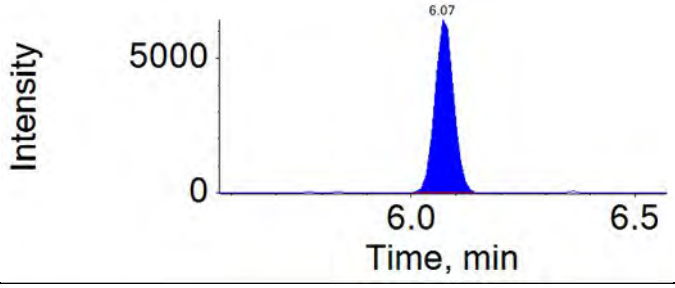
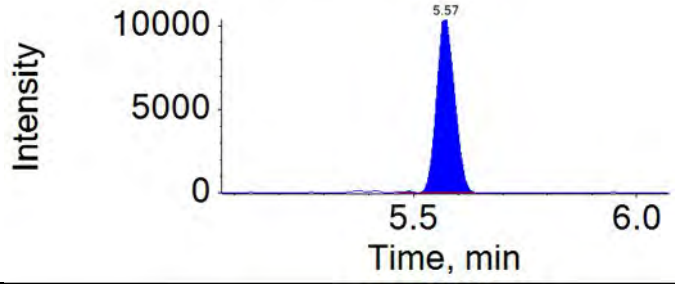
APPROVED
By MCD at 6:33 pm, 11/12/18

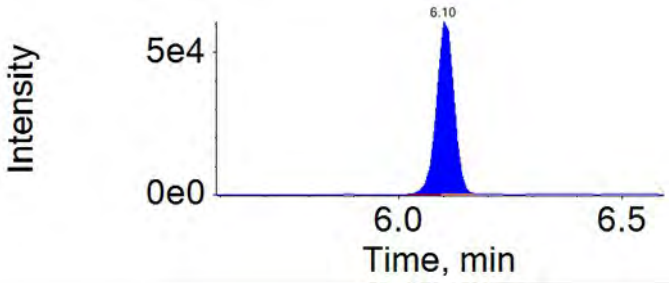
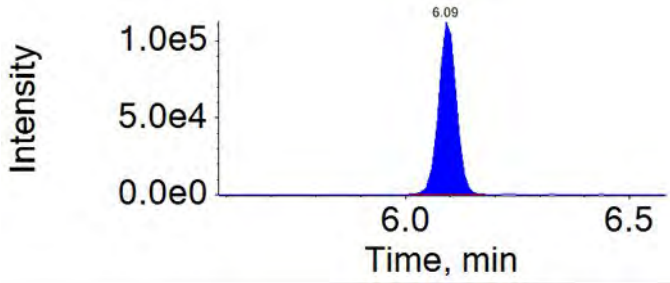
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

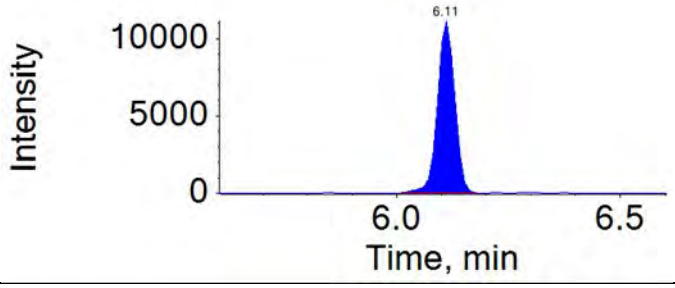
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

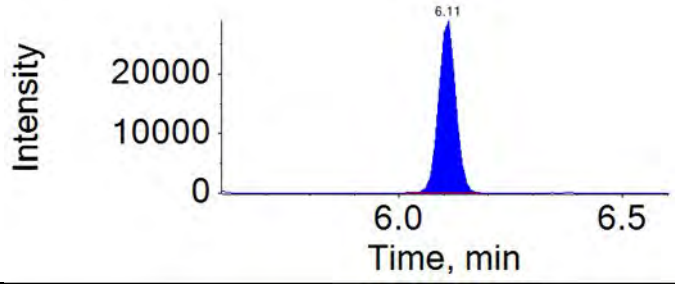
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

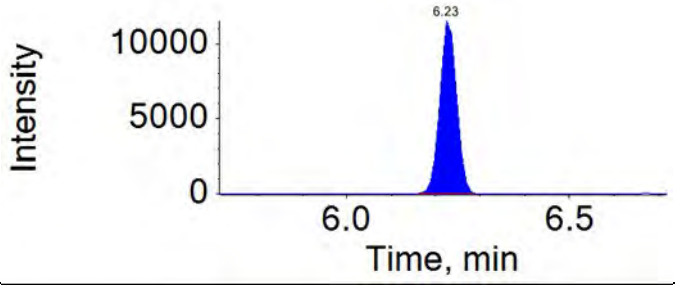
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

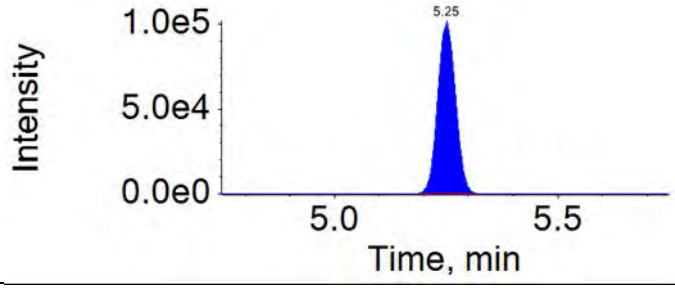
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



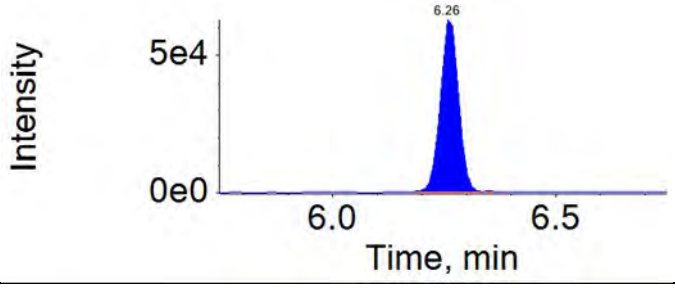


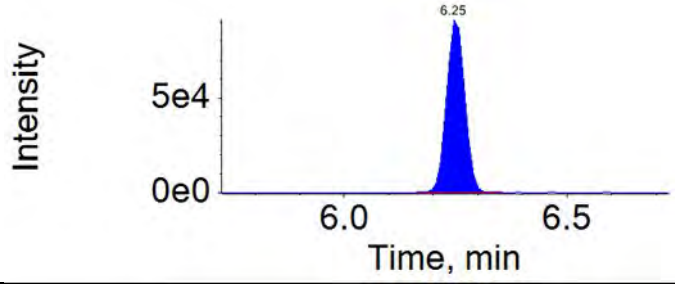
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



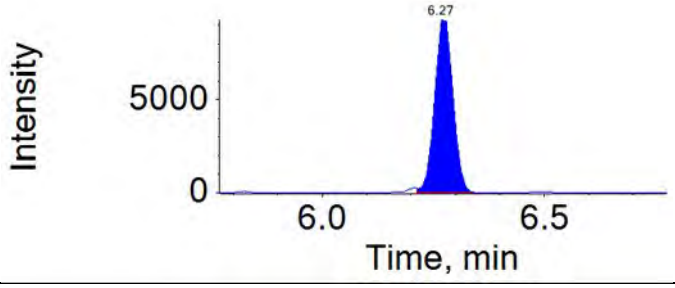


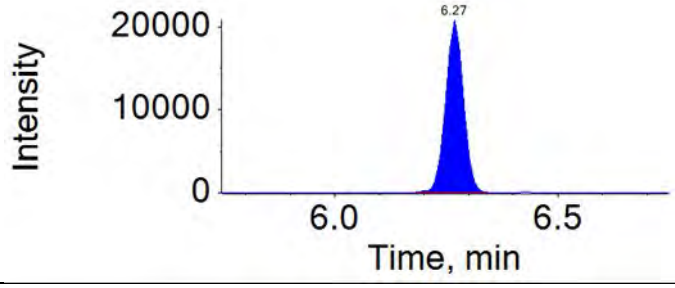
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



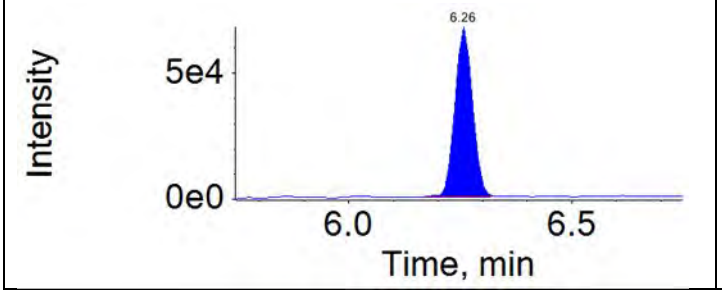


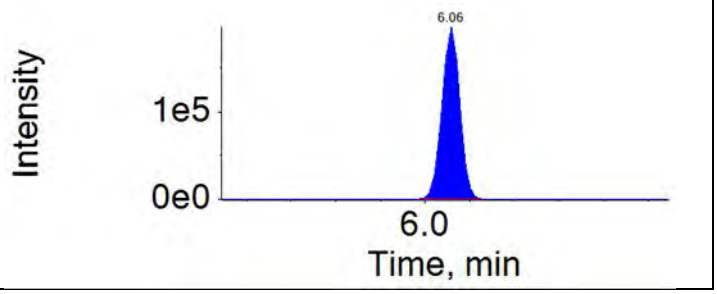
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

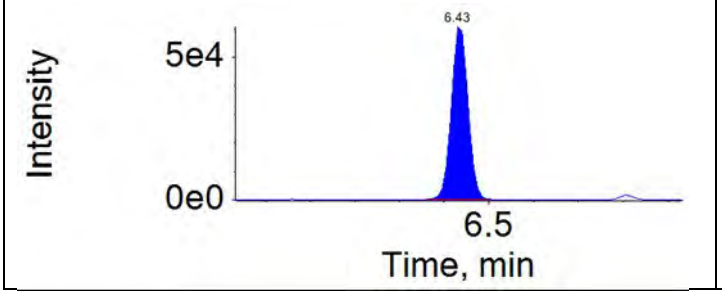
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

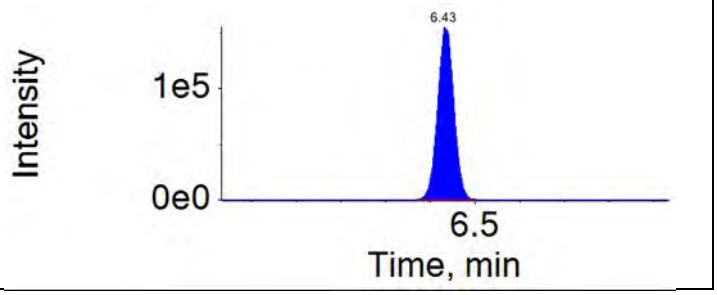
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



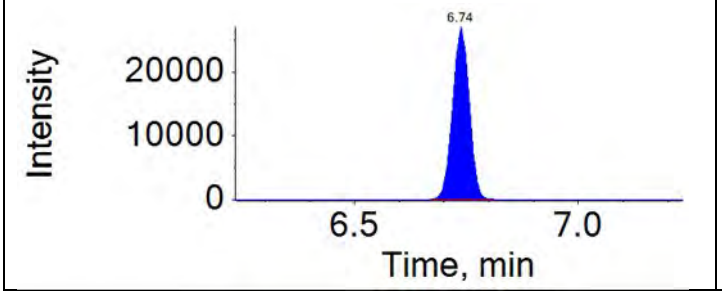


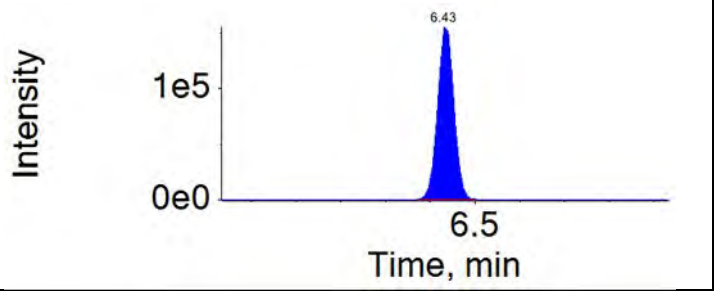
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



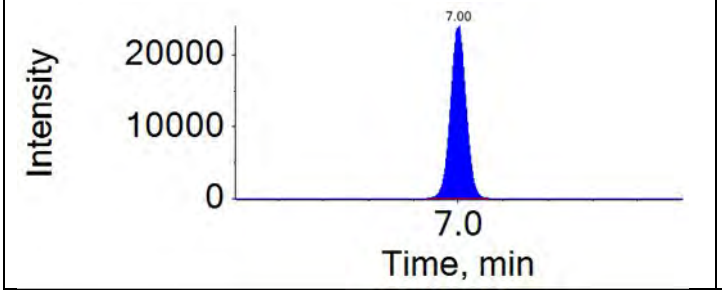


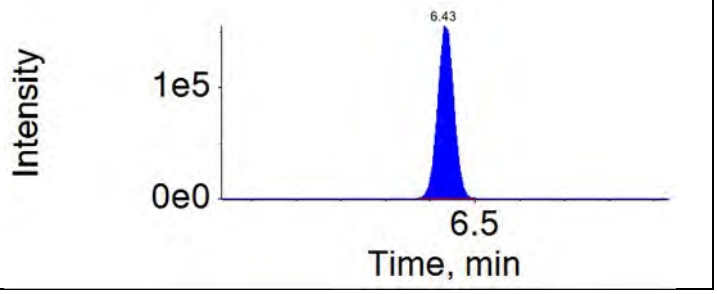
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



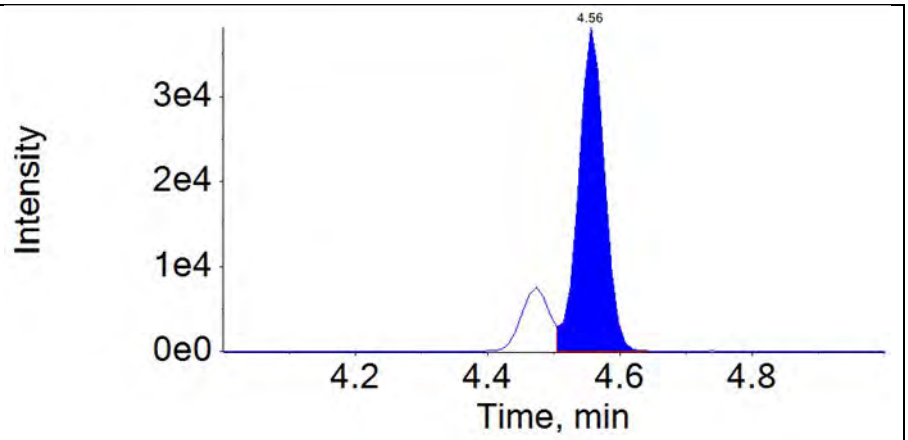


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

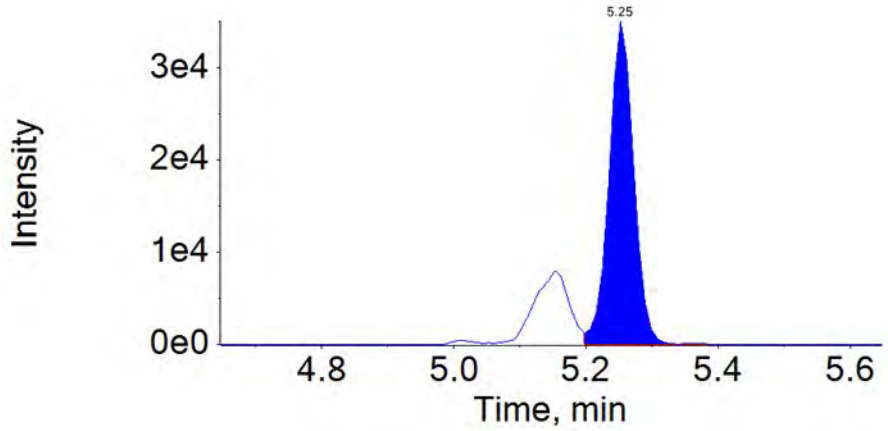
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
103825.76
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



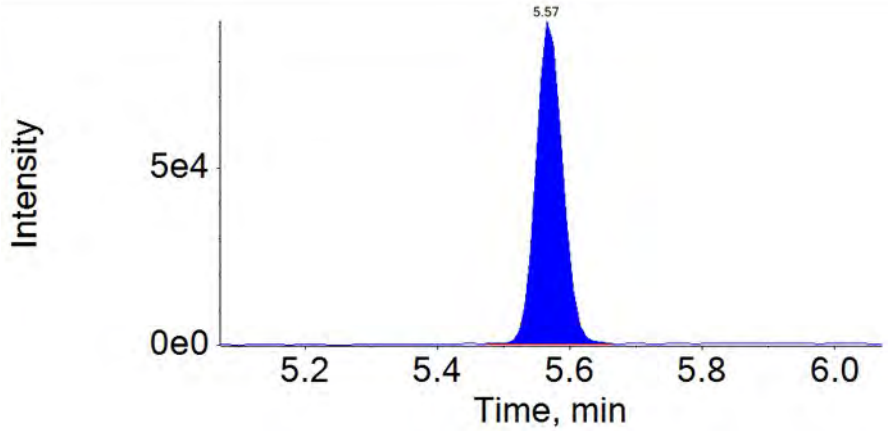
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
90727.07
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.57
Peak Area:
254529.84
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



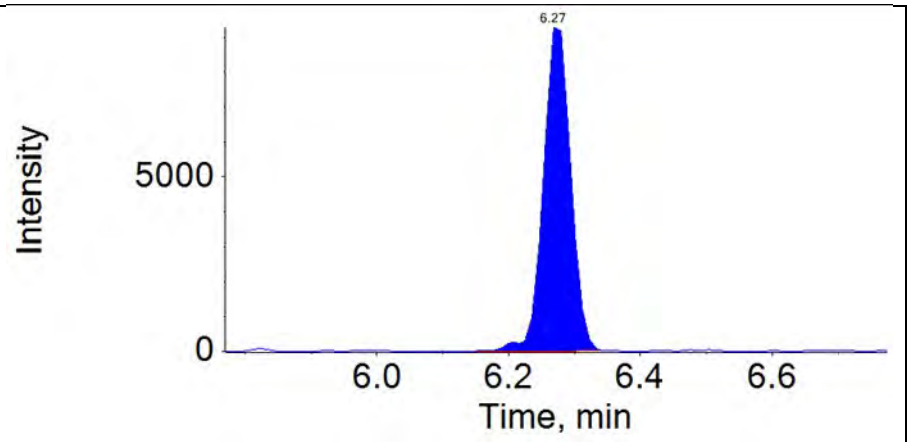
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

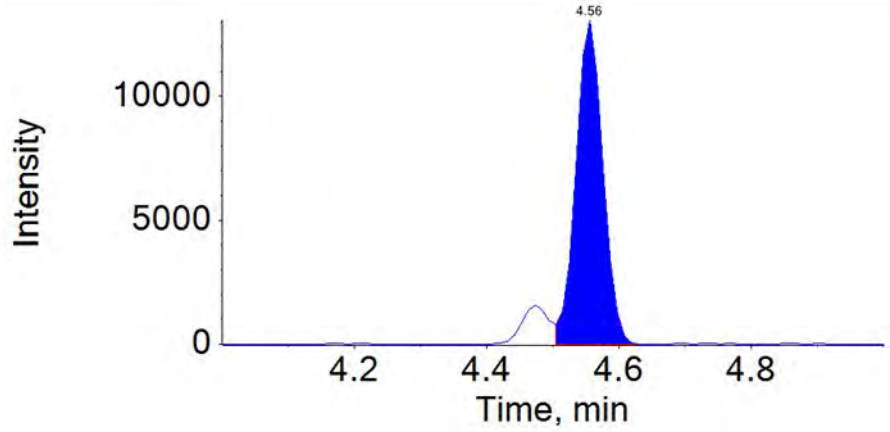
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
26985.34
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



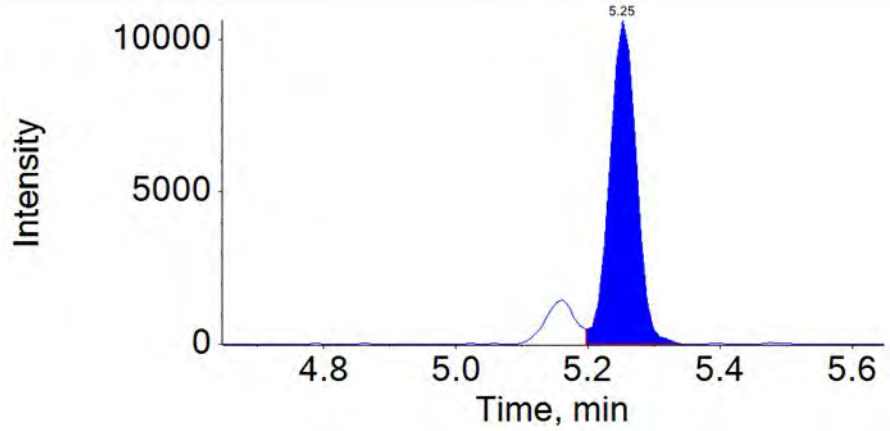
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
37027.02
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
29768.90
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



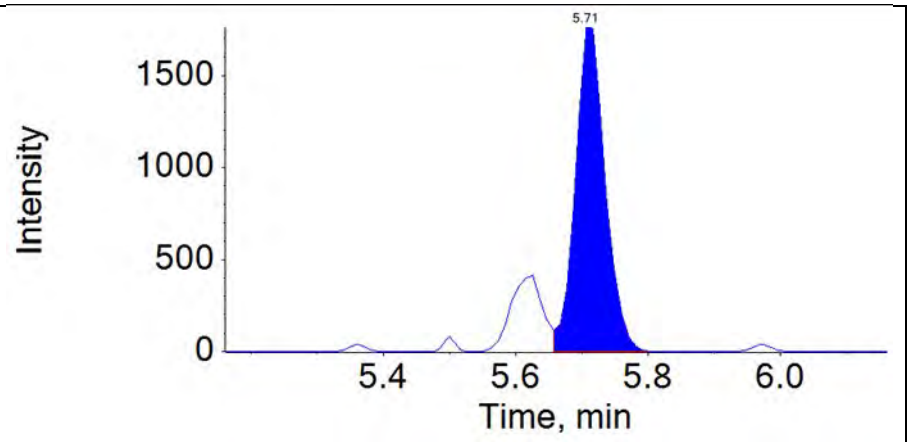
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

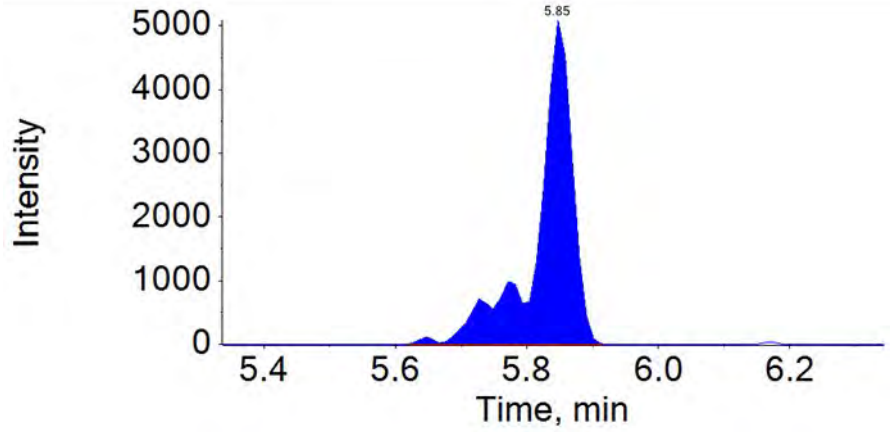
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
5548.71
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



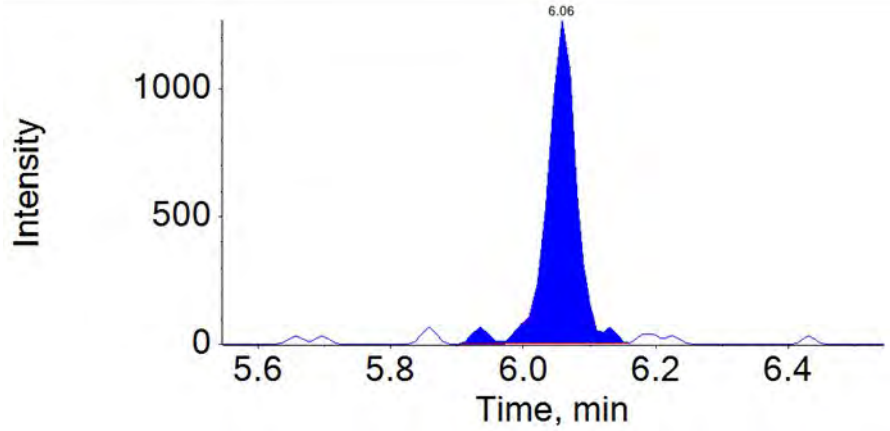
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
19243.29
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
3956.45
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

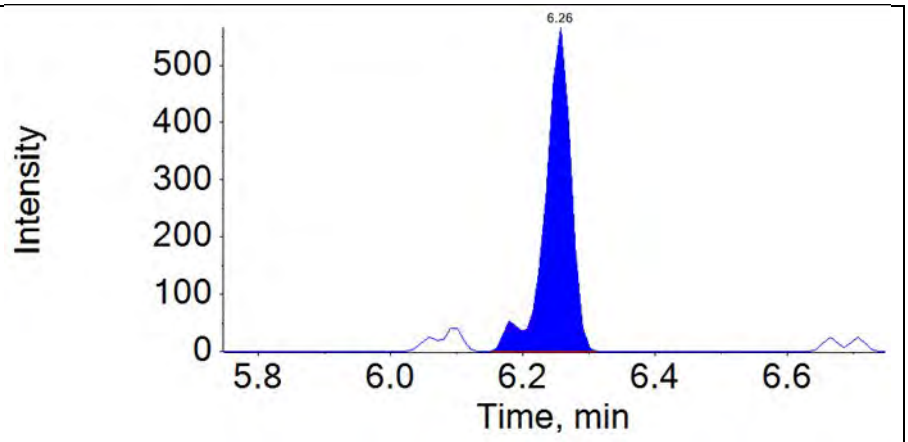
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.26
Peak Area:
1527.41
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

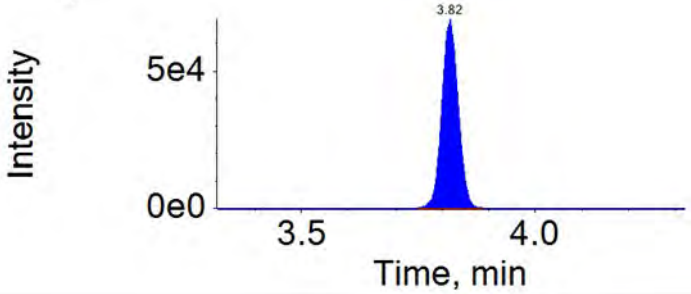
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-44.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	168144.64	A	0.3619	0.3569			
PFBS_2	3.82	1.00	60008.36	A	0.3619	0.3569	-1	50	
4:2-FTS	4.13	1.00	34188.48	A	0.6730	0.6730			
4:2 FTS_2	4.13	1.00	23007.23	A	0.6730	0.6730		#NA!	
PFHxA	4.17	1.00	352013.45	A	0.0117	0.0120			
PFHxA_2	4.17	1.00	4207.12	A	0.0117	0.0120	3	50	
PFPeS	4.19	1.10	84071.24	A	0.5191	0.5304			
PFPeS_2	4.19	1.10	44592.70	A	0.5191	0.5304	2	50	
PFHpA	4.56	1.00	355834.18	A	0.0563	0.0619			
PFHpA_2	4.55	1.00	22030.36	A	0.0563	0.0619	10	50	
PFHxS	4.56	1.00	125622.02	M	0.3428	0.3304			
PFHxS_2	4.56	1.00	41506.57	M	0.3428	0.3304	-4	50	
6:2-FTS	4.91	1.00	28084.91	A	0.6604	0.7337			
6:2 FTS_2	4.91	1.00	20606.67	A	0.6604	0.7337		#NA!	
PFHpS	4.92	1.08	125907.86	A	0.4066	0.3838			
PFHpS_2	4.92	1.08	48327.03	A	0.4066	0.3838	-6	50	
PFOA	4.93	1.00	372258.90	A	0.0562	0.0567			
PFOA_2	4.92	1.00	21118.14	A	0.0562	0.0567	1	50	
PFOS	5.25	1.00	120897.45	M	0.2968	0.2842			
PFOS_2	5.25	1.00	34361.90	M	0.2968	0.2842	-4	50	
PFNA	5.27	1.00	302323.82	A	0.0229	0.0192			
PFNA_2	5.28	1.00	5790.58	A	0.0229	0.0192	-16	50	
PFNS	5.55	1.06	76049.00	A	0.4828	0.4502			
PFNS_2	5.54	1.06	34233.54	A	0.4828	0.4502	-7	50	
PFDA	5.57	1.00	254047.79	M	0.0081	0.0044			
PFDA_2	5.56	1.00	1125.96	A	0.0081	0.0044	-45	50	
8:2-FTS	5.57	1.00	26295.08	A	0.6814	0.5850			
8:2 FTS_2	5.57	1.00	15383.41	A	0.6814	0.5850		#NA!	
NMeFOSAA	5.71	1.00	25147.65	A	0.2569	0.2754			
NMeFOSAA_2	5.71	1.00	6926.51	M	0.2569	0.2754	7	50	
PFDS	5.80	1.11	57966.88	A	0.5144	0.5358			
PFDS_2	5.80	1.11	31061.10	A	0.5144	0.5358	4	50	
PFUnDA	5.83	1.00	199061.83	A	0.0058	0.0049			
PFUnDA_2	5.83	1.00	975.19	A	0.0058	0.0049	-16	50	
NEtFOSAA	5.84	1.00	25089.02	A	0.7253	0.7602			
NEtFOSAA_2	5.85	1.00	19071.96	M	0.7253	0.7602	5	50	
PFDoDA	6.06	1.00	237252.63	A	0.0157	0.0159			
PFDoDA_2	6.06	1.00	3761.16	M	0.0157	0.0159	1	50	
10:2-FTS	6.07	1.09	18541.69	A	0.6356	0.6613			
10:2 FTS_2	6.08	1.09	12260.75	A	0.6356	0.6613		#NA!	
PFTrDA	6.26	1.03	184322.87	A	0.0086	0.0079			
PFTrDA_2	6.26	1.03	1447.70	M	0.0086	0.0079	-8	50	
PFTeDA	6.43	1.00	156439.94	A	0.0062	0.0065			
PFTeDA_2	6.44	1.00	1023.07	A	0.0062	0.0065	5	50	
PFHxDA	6.74	1.05	69655.07	A	0.0683	0.0690			
PFHxDA_2	6.74	1.05	4808.92	A	0.0683	0.0690	1	50	
PFODA	7.00	1.09	57795.96	A	0.0277	0.0253			
PFODA_2	7.00	1.09	1464.82	A	0.0277	0.0253	-9	50	

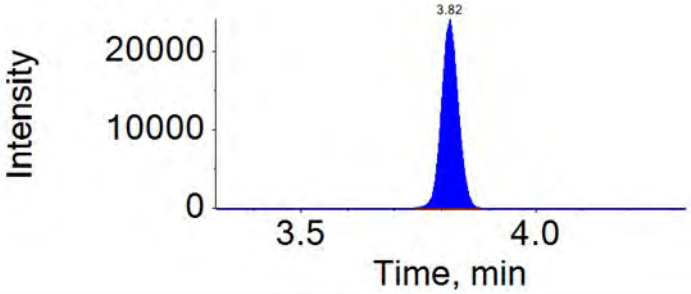
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

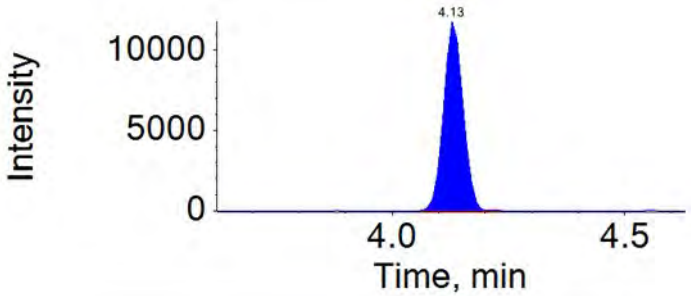
Component: PFBS
Primary Mass: 299.0 / 80.0



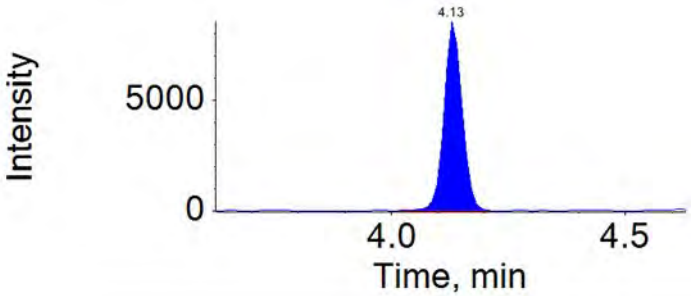
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



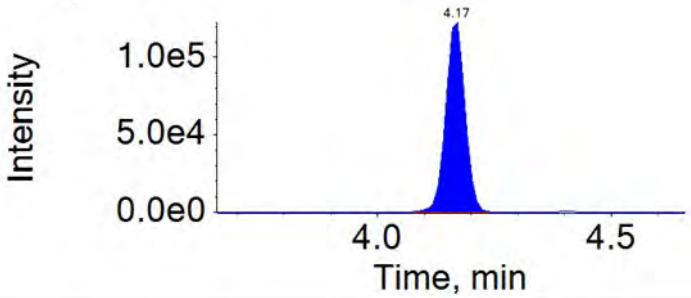
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



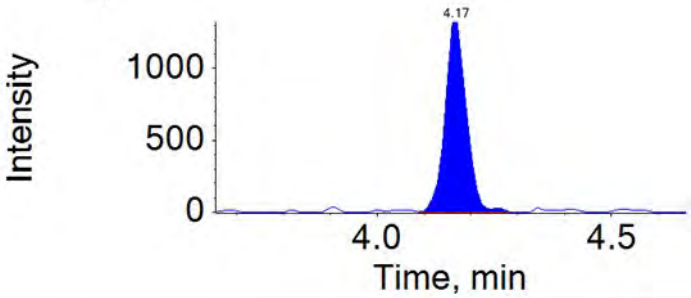
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



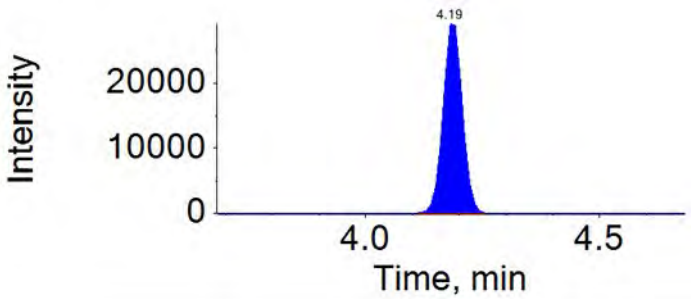
Component: PFHxA
Primary Mass: 313.0 / 269.0



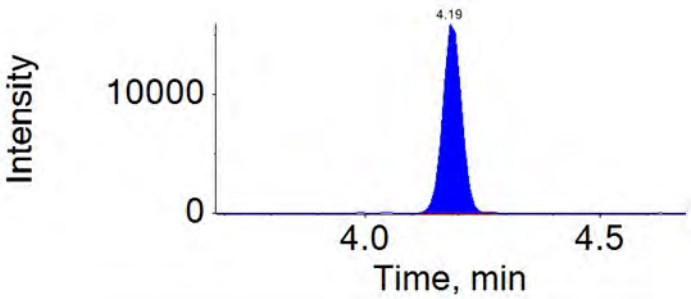
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



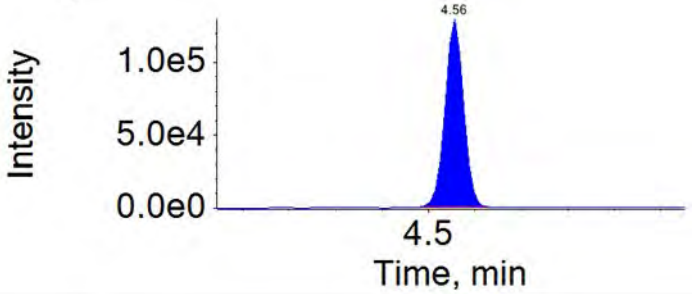
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



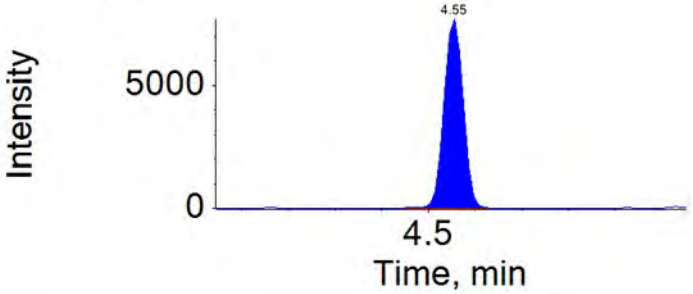
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

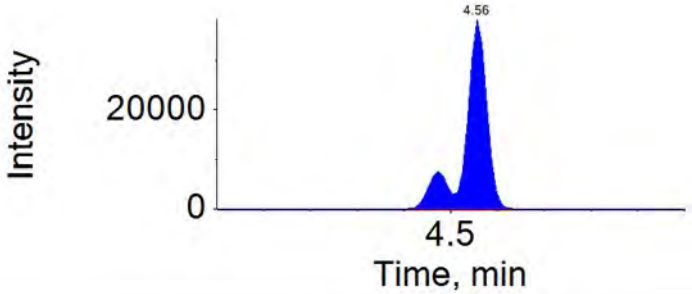
Component: PFHpA
Primary Mass: 363.0 / 319.0



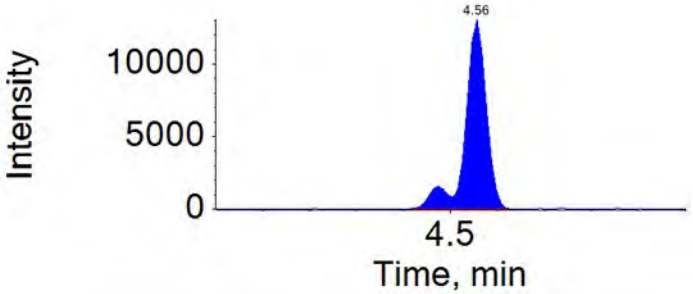
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



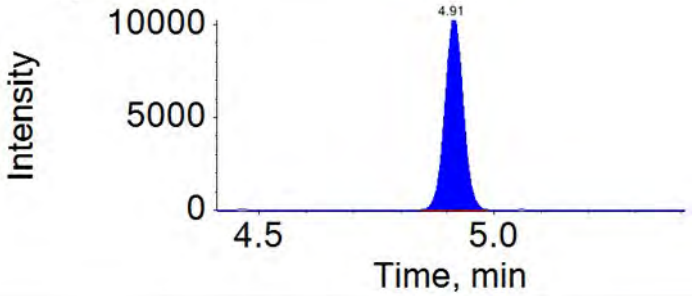
Component: PFHxS
Primary Mass: 399.0 / 80.0



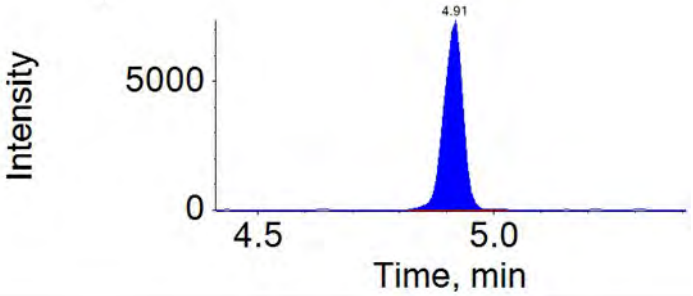
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



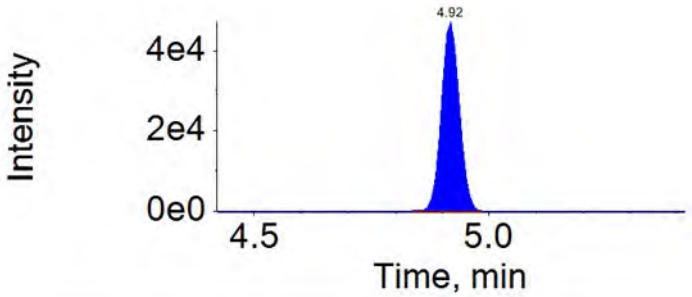
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



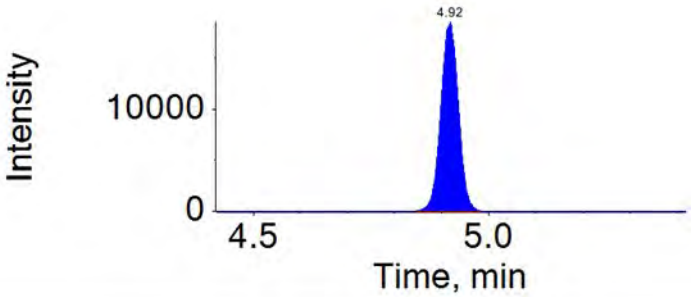
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



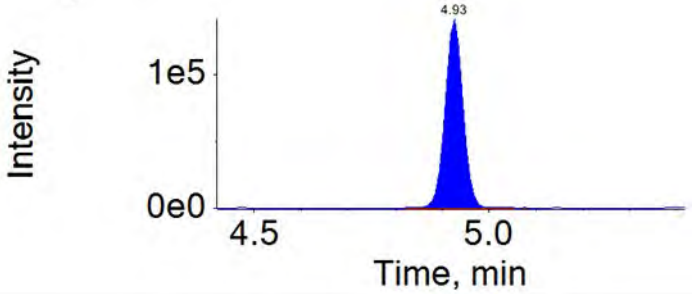
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



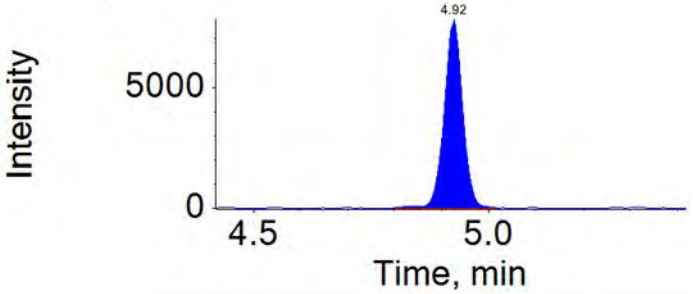
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

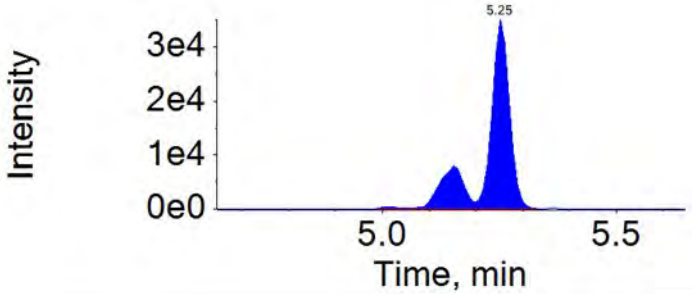
Component: PFOA
Primary Mass: 413.0 / 369.0



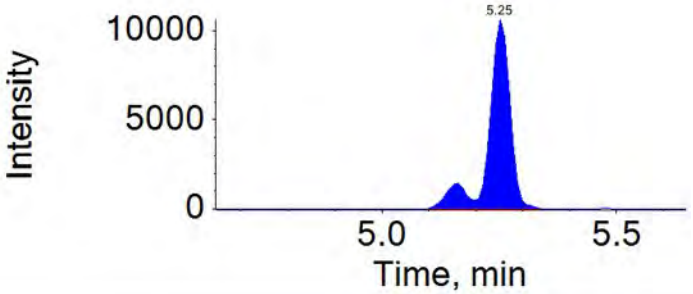
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



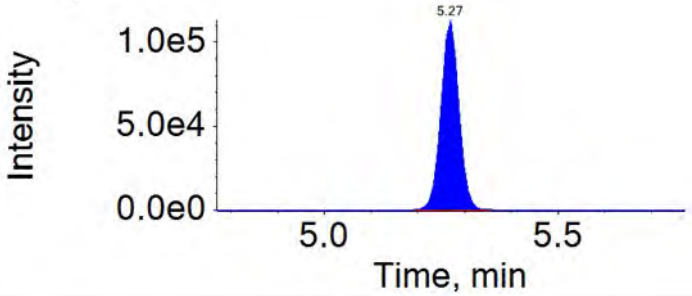
Component: PFOS
Primary Mass: 499.0 / 80.0



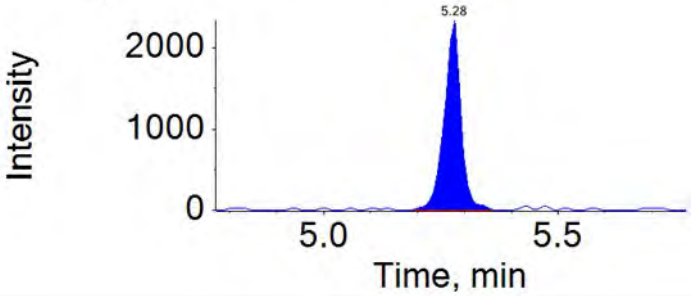
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



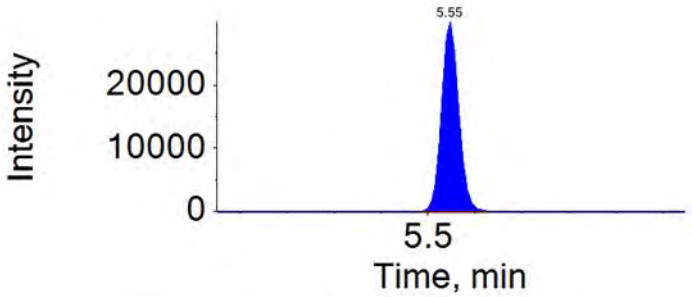
Component: PFNA
Primary Mass: 463.0 / 419.0



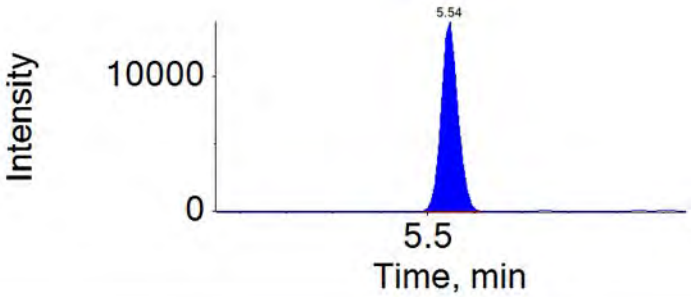
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



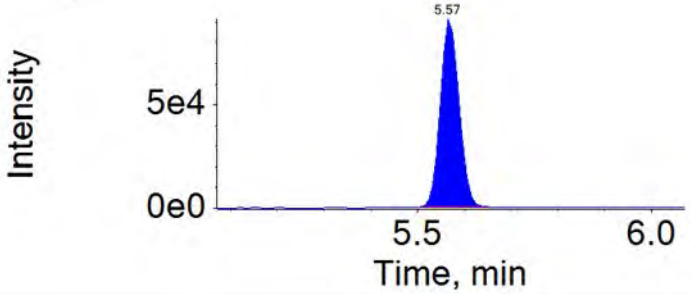
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



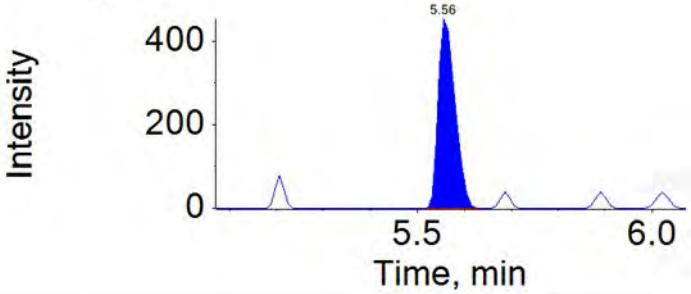
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

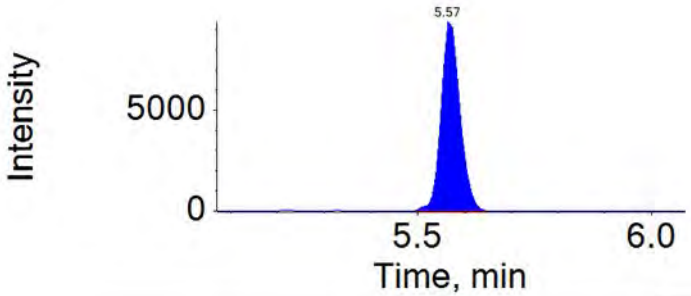
Component: PFDA
Primary Mass: 513.0 / 469.0



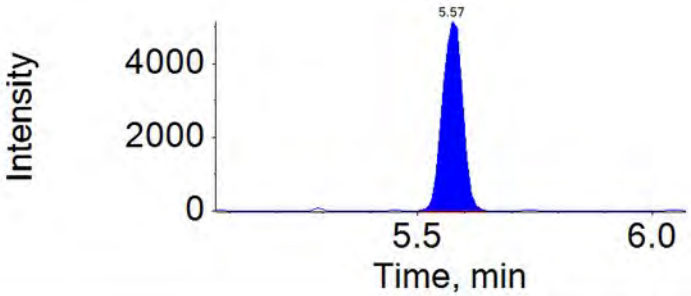
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



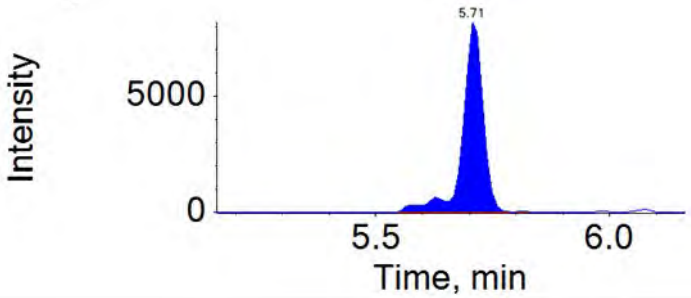
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



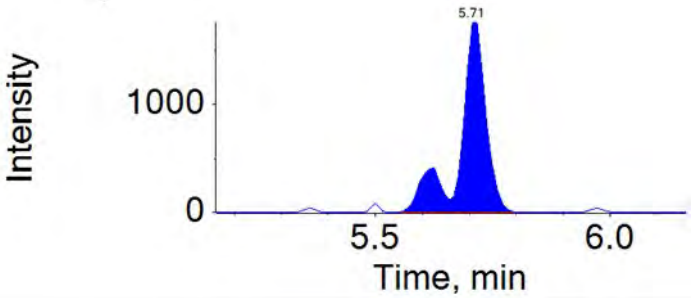
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



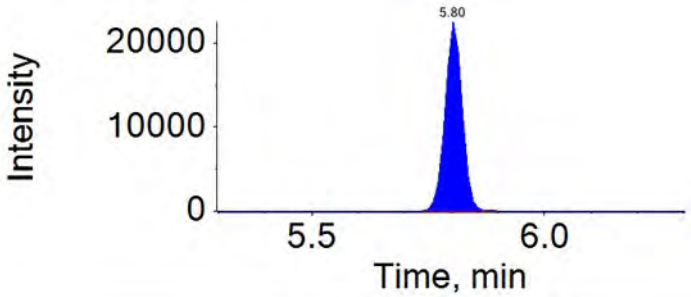
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



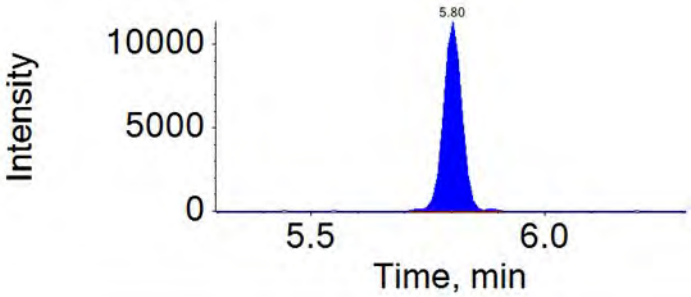
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



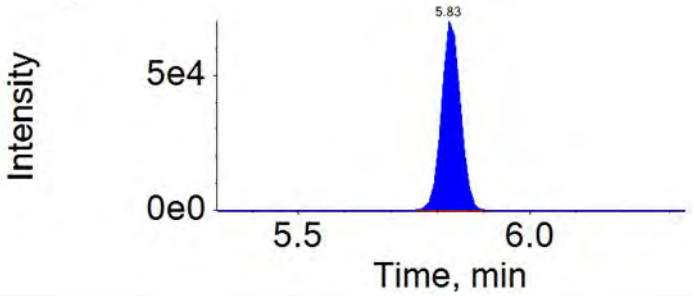
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



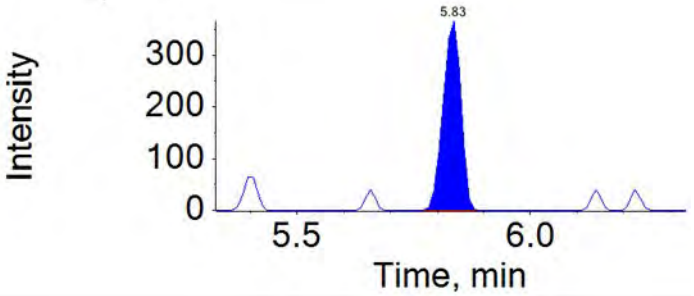
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

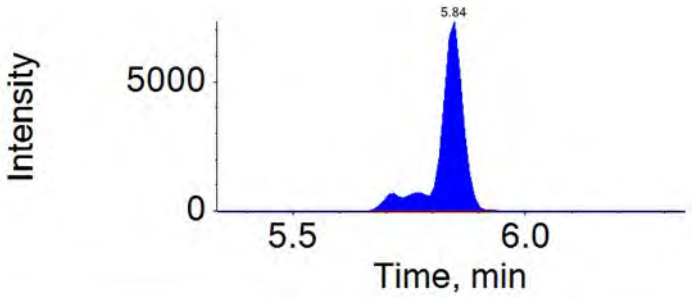
Component: PFUnDA
Primary Mass: 563.0 / 519.0



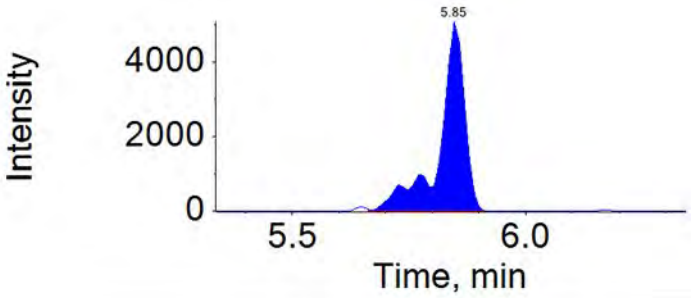
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



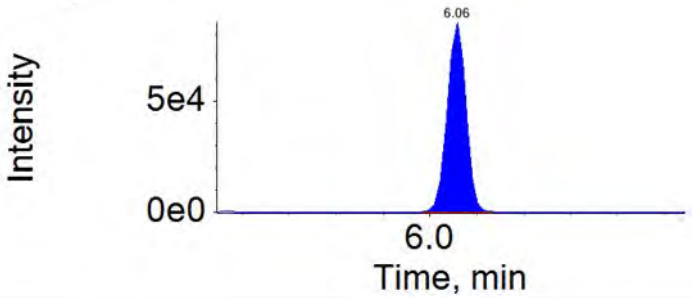
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



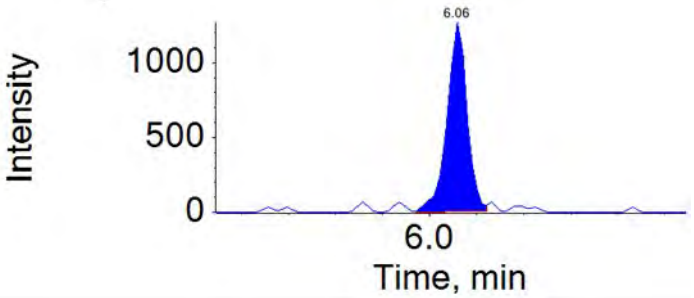
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



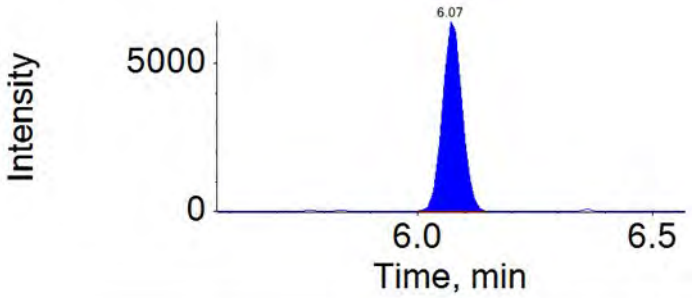
Component: PFDoDA
Primary Mass: 613.0 / 569.0



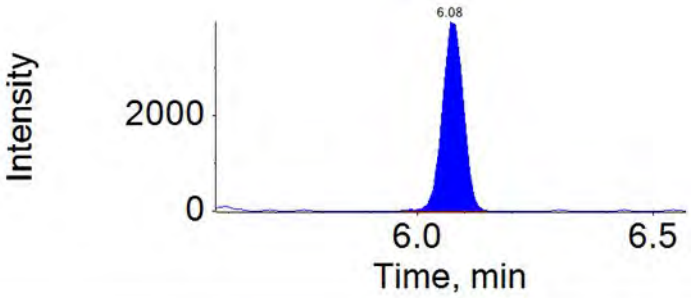
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



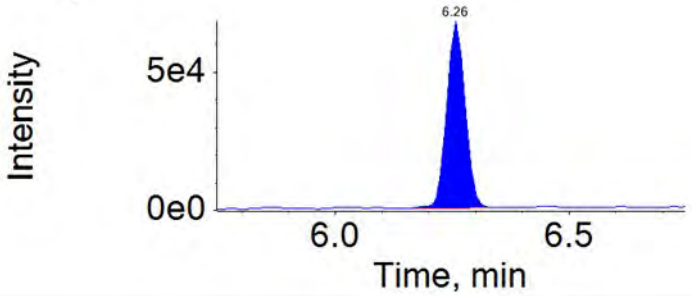
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



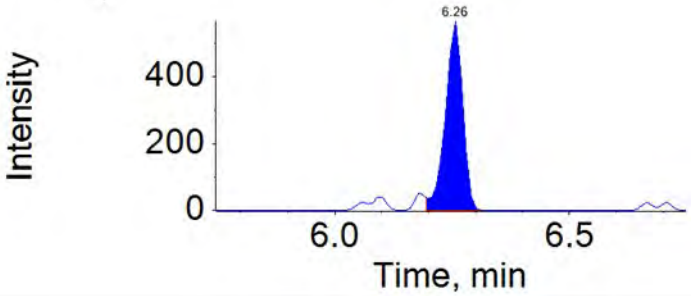
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

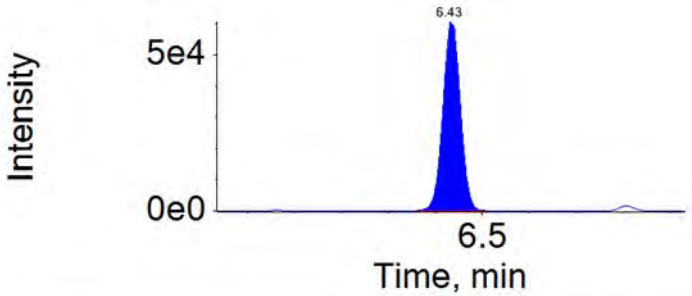
Component: PFTrDA
Primary Mass: 663.0 / 619.0



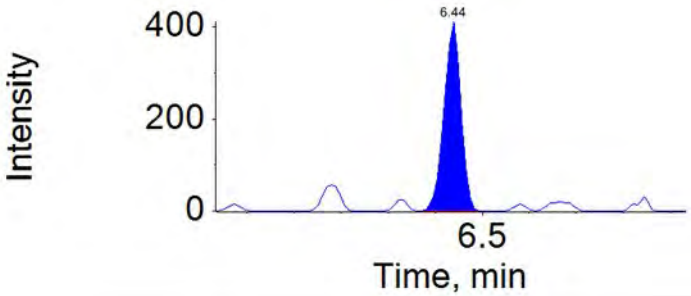
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



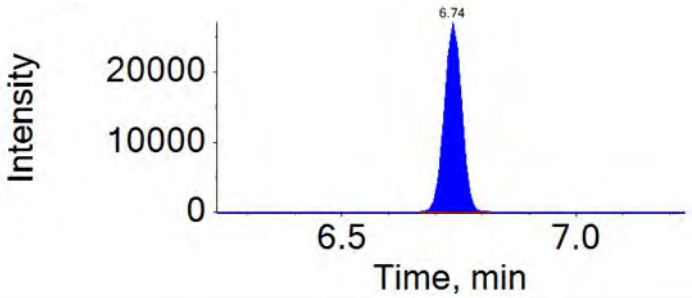
Component: PFTeDA
Primary Mass: 713.0 / 669.0



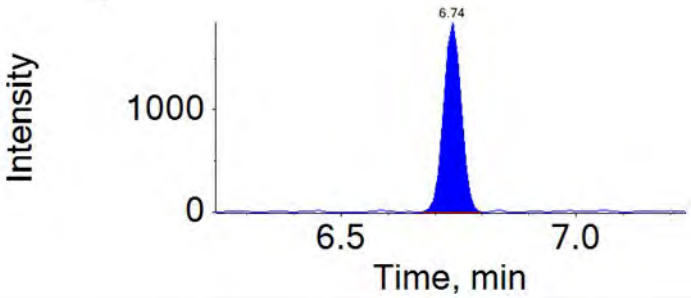
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



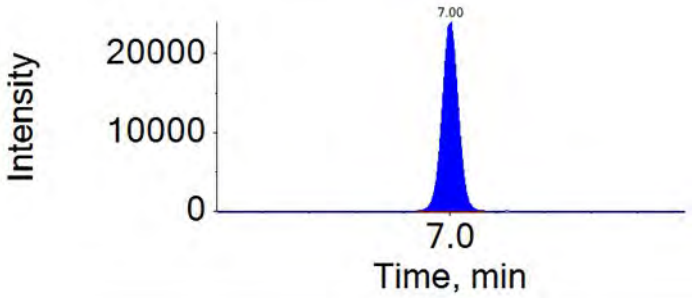
Component: PFHxDA
Primary Mass: 813.0 / 769.0



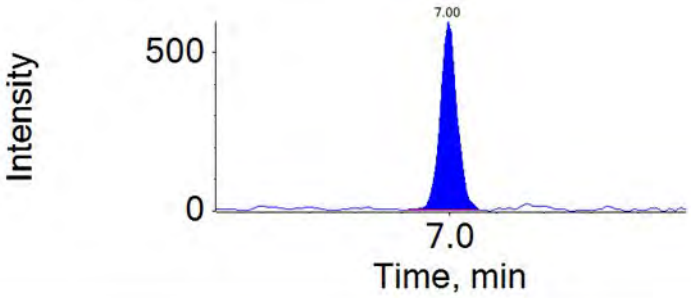
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV12DCAL-45.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-12T15:33:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	671568.1	659926.2	2	50	
13C2-PFOA	5.0	477519.7	450219.7	6	50	
13C4-PFOS	4.8	256143.3	249205.8	3	50	
13C2-PFDA	5.0	301327.2	278743.9	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	726396.0	13C3-PFBA	671568.1	1.082	5.000	4.849	97	70-130	
E13C5-PFPeA	716206.9	13C3-PFBA	671568.1	1.066	5.000	4.783	96	70-130	
E13C3-PFBS	425015.7	13C3-PFBA	671568.1	0.633	4.650	4.468	96	70-130	
E13C2-4:2-FTS	47246.4	13C2-PFOA	477519.7	0.099	4.670	4.407	94	70-130	
E13C5-PFHxA	641195.9	13C2-PFOA	477519.7	1.343	5.000	4.851	97	70-130	
E13C3-PFHxS	315722.6	13C2-PFOA	477519.7	0.661	4.730	4.537	96	70-130	
E13C4-PFHpA	509151.8	13C2-PFOA	477519.7	1.066	5.000	4.804	96	70-130	
E13C2-6:2-FTS	31883.3	13C2-PFOA	477519.7	0.067	4.750	4.467	94	70-130	
E13C8-PFOA	863597.3	13C2-PFOA	477519.7	1.809	5.000	4.983	100	70-130	
E13C8-PFOS	267380.8	13C4-PFOS	256143.3	1.044	4.780	4.625	97	70-130	
E13C9-PFNA	485570.4	13C4-PFOS	256143.3	1.896	5.000	5.285	106	70-130	
E13C6-PFDA	612056.5	13C2-PFDA	301327.2	2.031	5.000	4.740	95	70-130	
E13C2-8:2-FTS	27253.5	13C2-PFDA	301327.2	0.090	4.790	4.511	94	70-130	
E13C8-PFOSA	607762.0	13C2-PFDA	301327.2	2.017	5.000	4.472	89	70-130	
Ed3-NMeFOSAA	72788.0	13C2-PFDA	301327.2	0.242	5.000	4.360	87	70-130	
E13C7-PFUnDA	232014.1	13C2-PFDA	301327.2	0.770	5.000	4.470	89	70-130	
Ed5-NEtFOSAA	65478.0	13C2-PFDA	301327.2	0.217	5.000	4.597	92	70-130	
E13C2-PFDoDA	521514.1	13C2-PFDA	301327.2	1.731	5.000	4.494	90	70-130	
Ed7-NMePFOSAE	327796.4	13C2-PFDA	301327.2	1.088	5.000	4.708	94	70-130	
Ed3-NMePFOSA	70122.5	13C2-PFDA	301327.2	0.233	5.000	4.228	85	70-130	
Ed9-NEtPFOSAE	259467.4	13C2-PFDA	301327.2	0.861	5.000	4.479	90	70-130	
Ed5-NEtPFOSA	55177.3	13C2-PFDA	301327.2	0.183	5.000	4.296	86	70-130	
E13C2-PFTeDA	392356.6	13C2-PFDA	301327.2	1.302	5.000	4.571	91	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

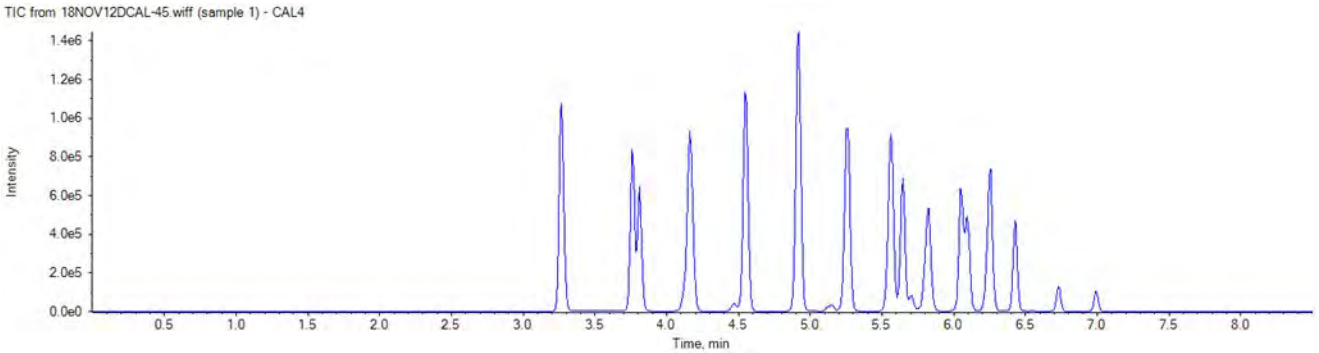
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-45.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1068414.9		A	13C4-PFBA	3.26	726396.0	1.471	8.148
PFPeA	3.76	1.000	1075643.5		A	13C5-PFPeA	3.76	716206.9	1.502	8.694
PFBS	3.81	1.000	617045.6		A	13C3-PFBS	3.81	425015.7	1.452	6.906
4:2-FTS	4.13	1.000	126396.5		A	13C2-4:2-FTS	4.13	47246.4	2.675	7.263
PFHxA	4.16	1.000	1265231.1		A	13C5-PFHxA	4.16	641195.9	1.973	8.239
PFPeS	4.18	1.100	328681.7		A	13C3-PFBS	3.81	425015.7	0.773	7.508
PFHpA	4.55	1.000	1318774.5		A	13C4-PFHpA	4.55	509151.8	2.590	8.586
PFHxS	4.55	1.000	479291.0		M	13C3-PFHxS	4.55	315722.6	1.518	7.361
6:2-FTS	4.91	1.000	107470.6		A	13C2-6:2-FTS	4.91	31883.3	3.371	8.157
PFHpS	4.91	1.080	434949.2		A	13C3-PFHxS	4.55	315722.6	1.378	7.252
PFOA	4.92	1.000	1327086.1		A	13C8-PFOA	4.92	863597.3	1.537	8.207
PFOS	5.25	1.000	448833.8		M	13C8-PFOS	5.25	267380.8	1.679	7.341
PFNA	5.26	1.000	1106664.2		A	13C9-PFNA	5.26	485570.4	2.279	8.218
PFNS	5.54	1.060	269712.3		A	13C8-PFOS	5.25	267380.8	1.009	7.057
PFDA	5.56	1.000	941985.3		M	13C6-PFDA	5.56	612056.5	1.539	8.159
8:2-FTS	5.57	1.000	80922.6		A	13C2-8:2-FTS	5.57	27253.5	2.969	6.923
PFOSA	5.64	1.000	927660.5		A	13C8-PFOSA	5.64	607762.0	1.526	7.455
NMeFOSAA	5.70	1.000	103649.1		A	d3-NMeFOSAA	5.70	72788.0	1.424	8.048
PFDS	5.80	1.110	224031.2		A	13C8-PFOS	5.25	267380.8	0.838	7.592
PFUnDA	5.82	1.000	768010.8		A	13C7-PFUnDA	5.82	232014.1	3.310	8.654
NEtFOSAA	5.84	1.000	94877.8		A	d5-NEtFOSAA	5.83	65478.0	1.449	7.596
PFDoDA	6.05	1.000	803646.8		A	13C2-PFDoDA	6.05	521514.1	1.541	7.847
10:2-FTS	6.07	1.090	56040.8		A	13C2-8:2-FTS	5.57	27253.5	2.056	6.849
NMePFOSAE	6.10	1.000	618314.4		M	d7-NMePFOSAE	6.09	327796.4	1.886	7.850
NMePFOSA	6.10	1.000	114415.9		M	d3-NMePFOSA	6.10	70122.5	1.632	8.049
PFDoS	6.22	1.190	117663.3		A	13C8-PFOS	5.25	267380.8	0.440	7.707
NEtPFOSAE	6.25	1.000	673196.1		A	d9-NEtPFOSAE	6.24	259467.4	2.595	8.324
NEtPFOSA	6.27	1.000	99354.1		M	d5-NEtPFOSA	6.26	55177.3	1.801	8.269
PFTrDA	6.25	1.030	674140.3		A	13C2-PFDoDA	6.05	521514.1	1.293	8.159
PFTeDA	6.43	1.000	571926.7		A	13C2-PFTeDA	6.43	392356.6	1.458	8.171
PFHxDA	6.73	1.050	256654.3		A	13C2-PFTeDA	6.43	392356.6	0.654	7.793
PFODA	6.99	1.090	219359.6		A	13C2-PFTeDA	6.43	392356.6	0.559	7.786

Total Ion Chromatogram

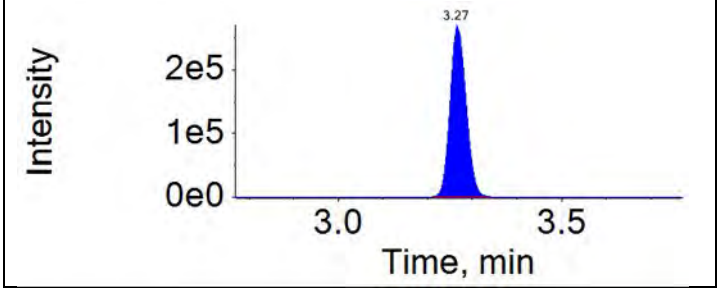


APPROVED
By MCD at 6:33 pm, 11/12/18

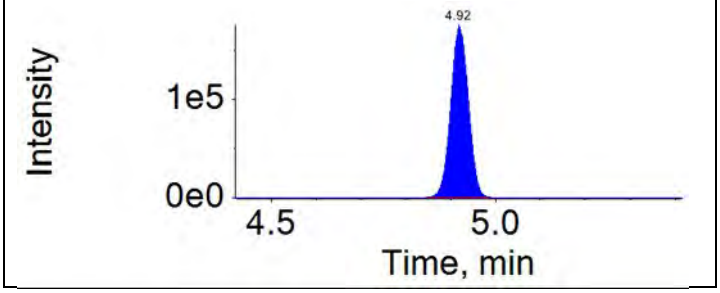
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

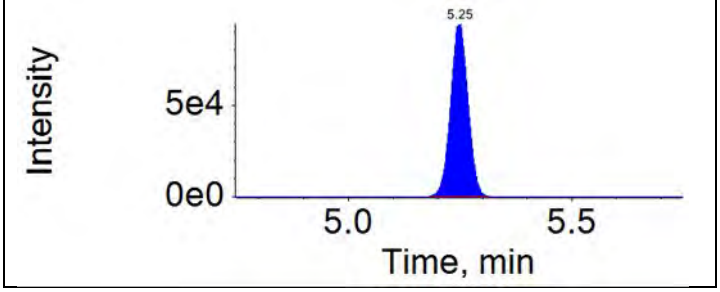
Injection Standard: 13C3-PFBA
216.0 / 172.0



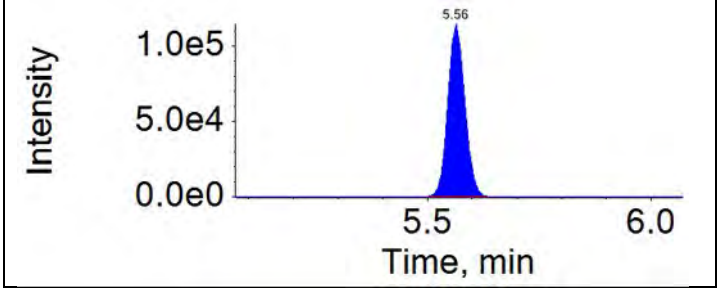
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

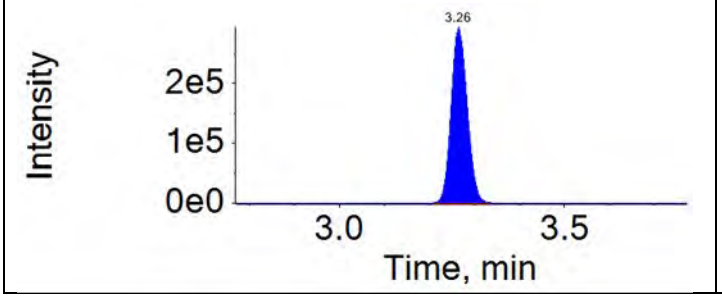


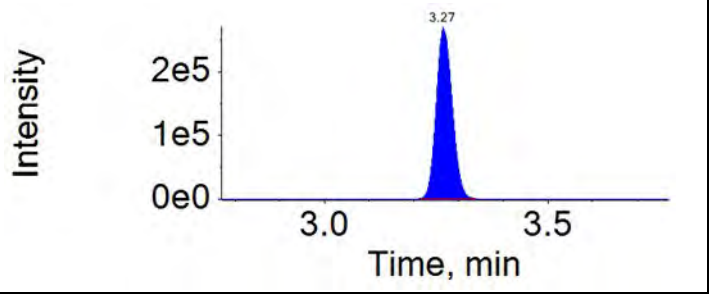
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

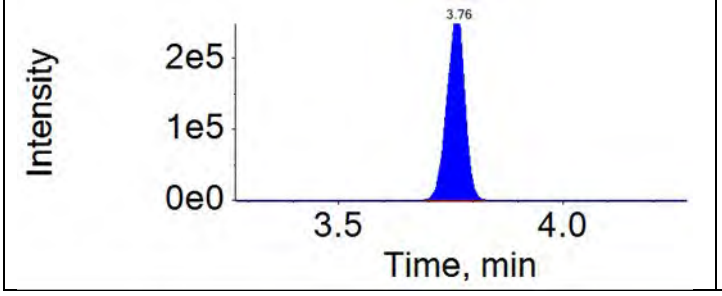
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

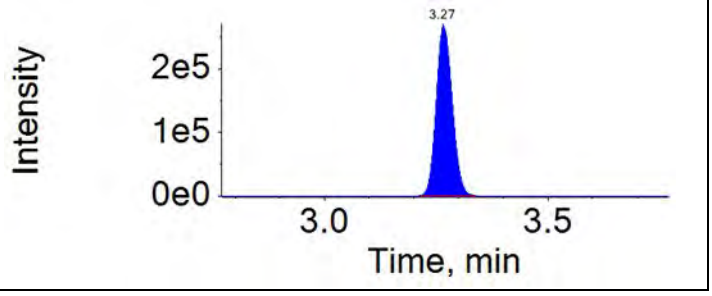
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



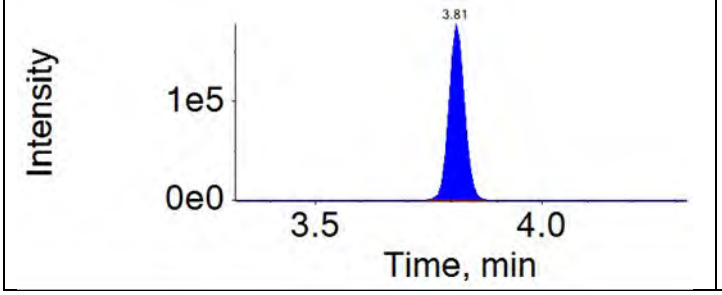


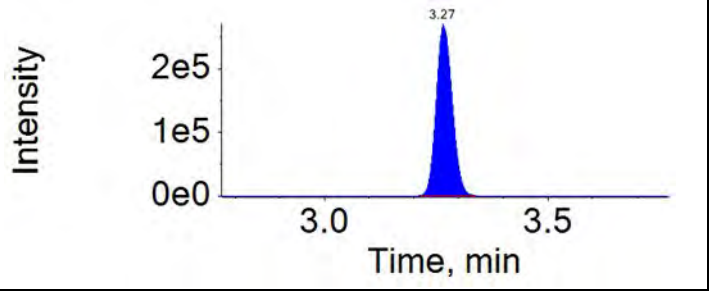
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



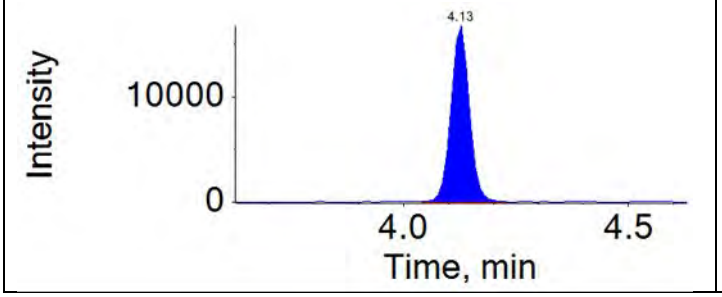


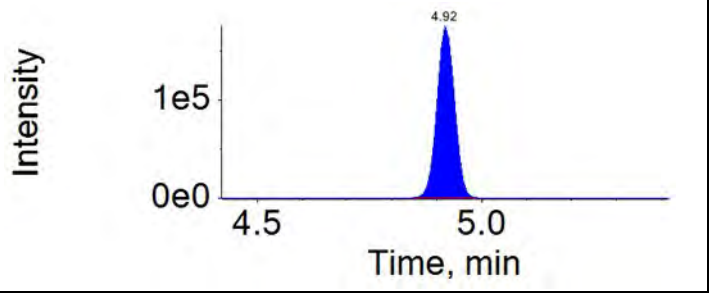
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





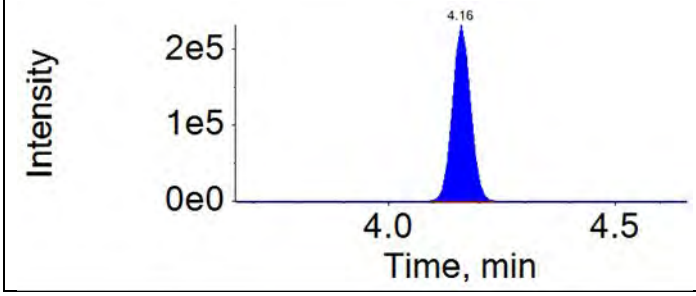
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

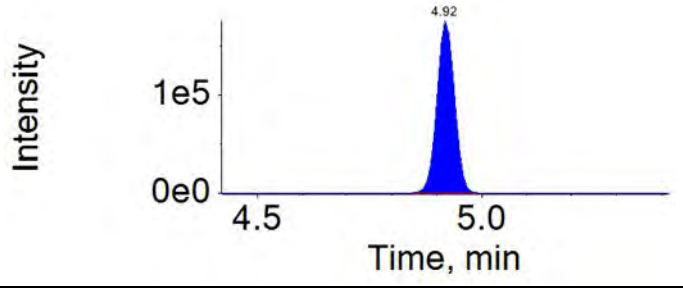




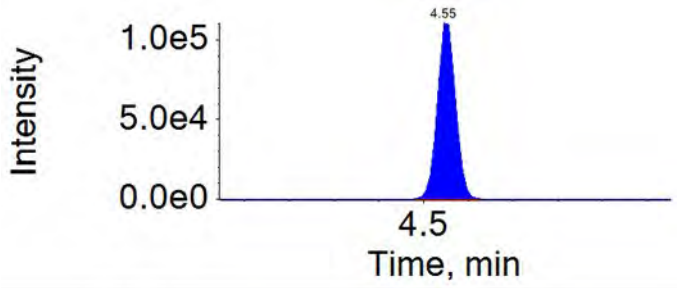
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

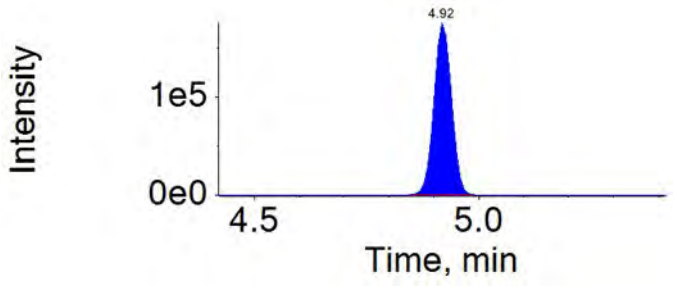
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



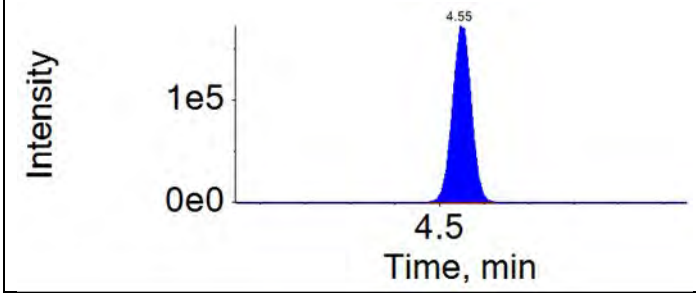


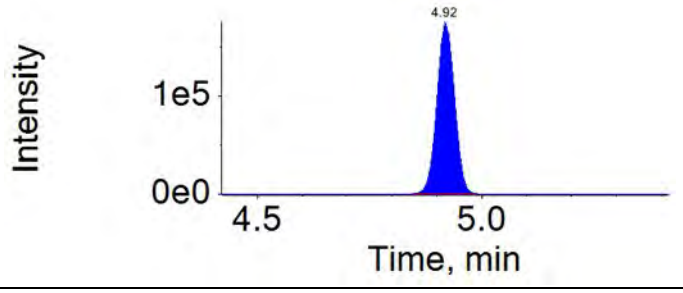
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



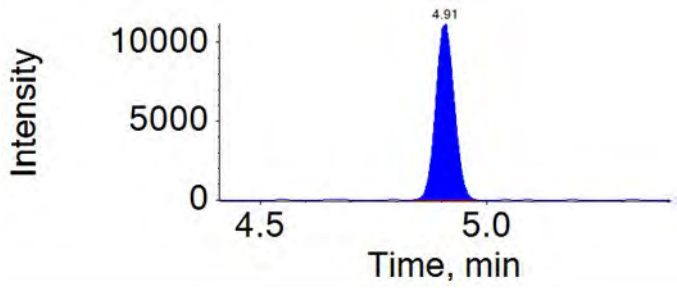


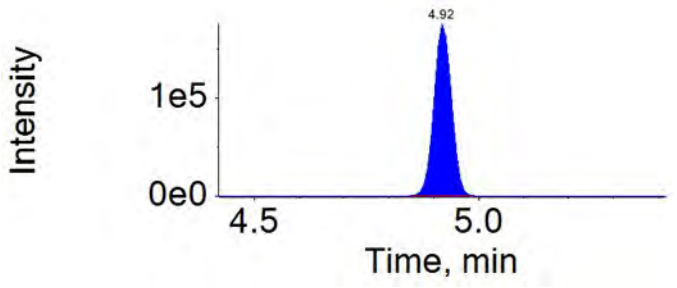
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

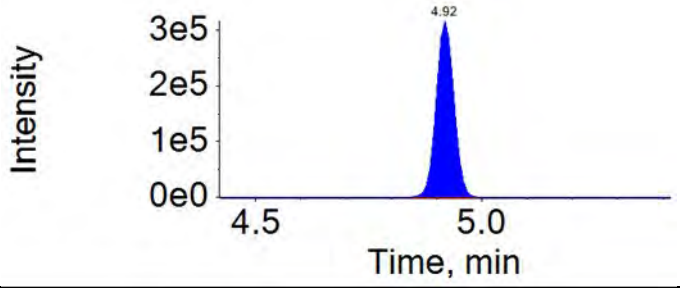
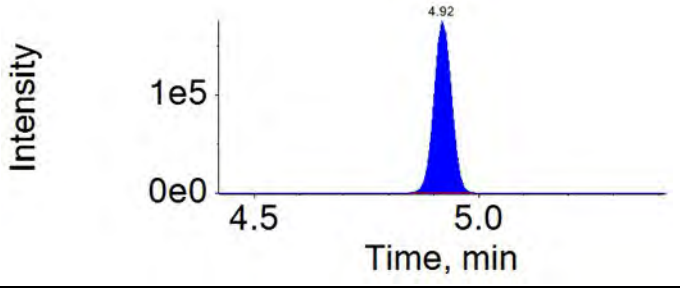


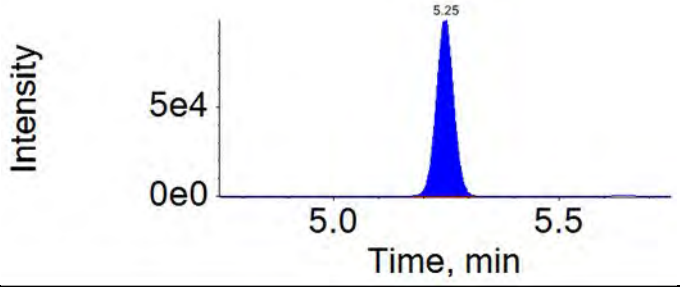
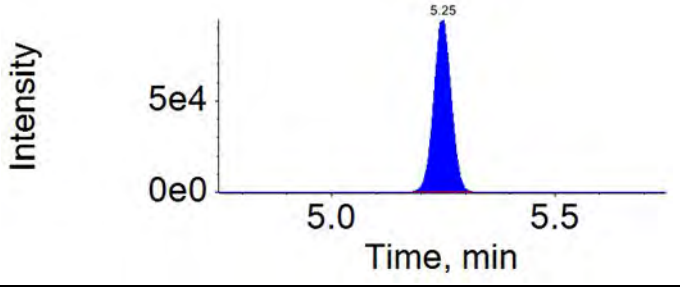


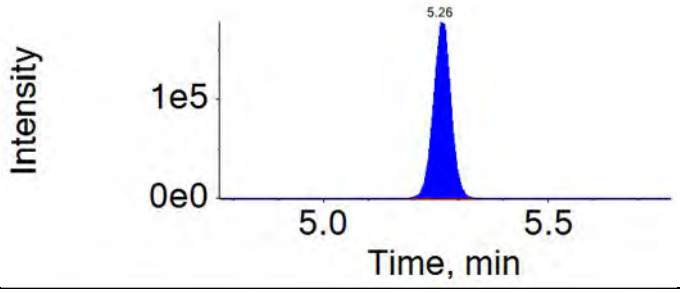
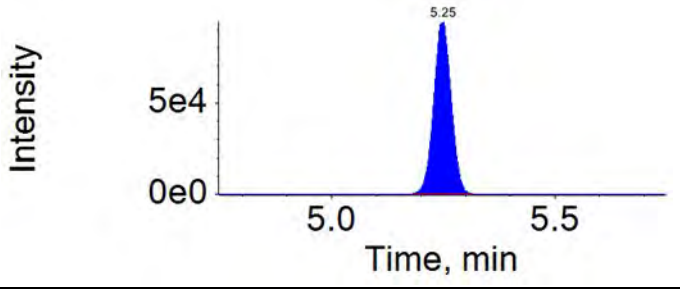
APPROVED
By MCD at 6:33 pm, 11/12/18

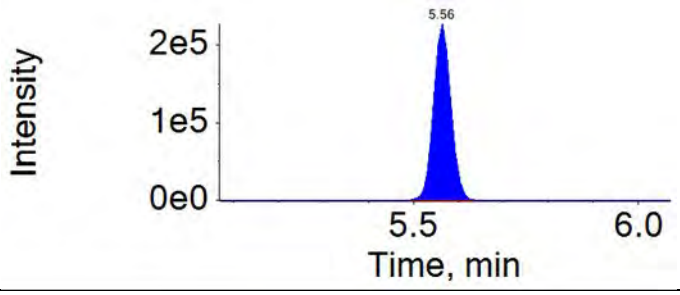
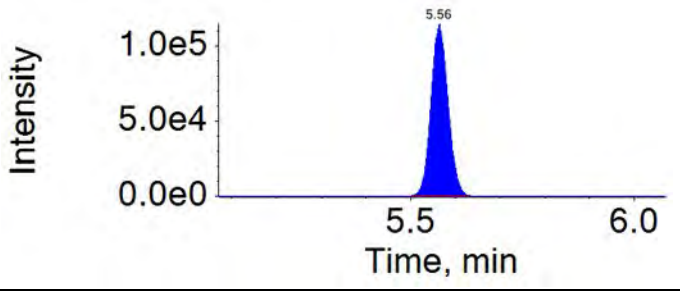
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

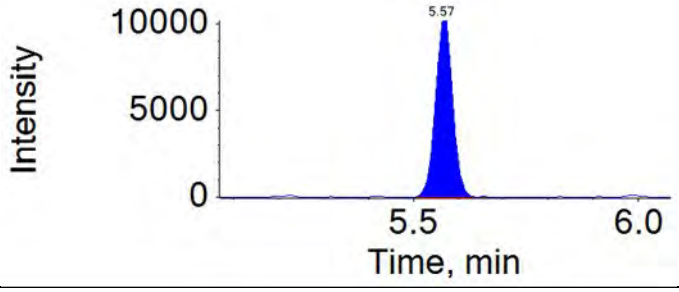
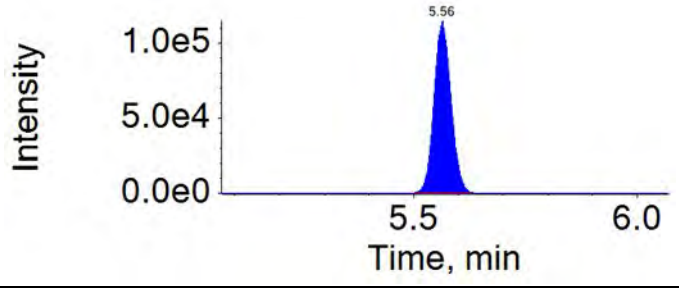
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

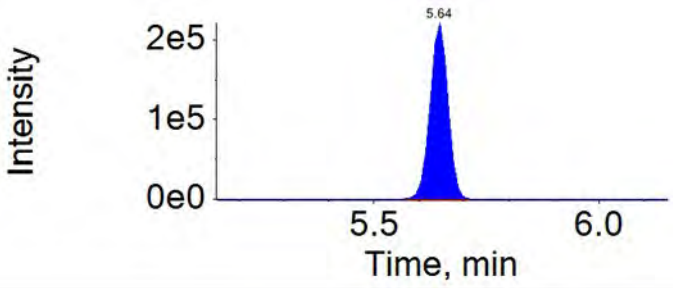
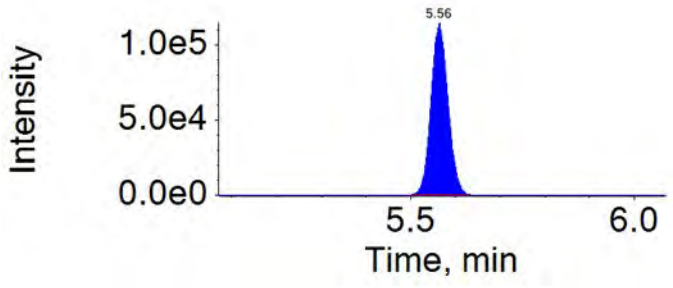
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

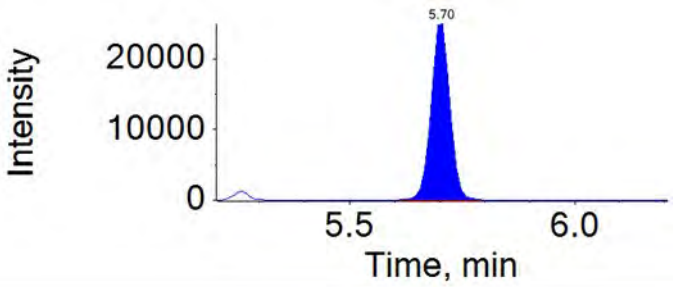
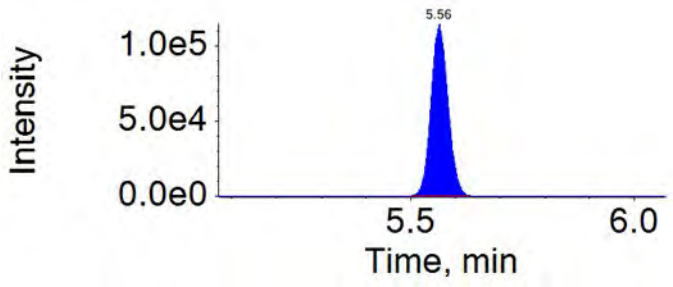
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

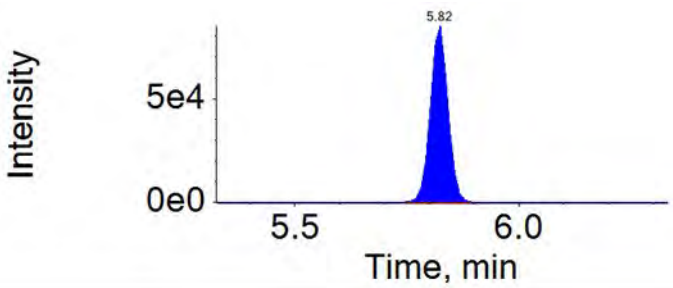
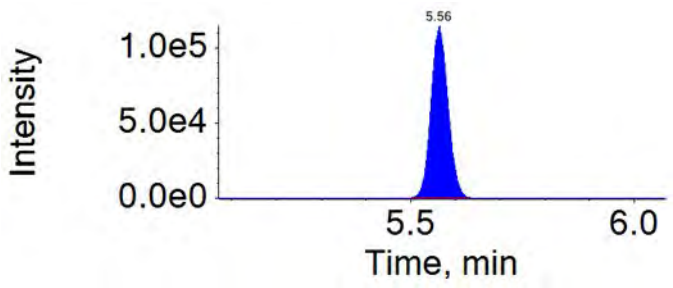
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

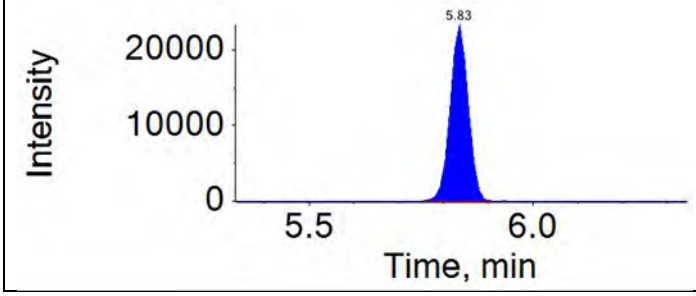
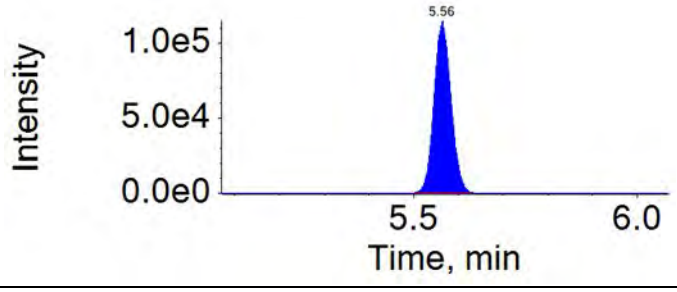
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

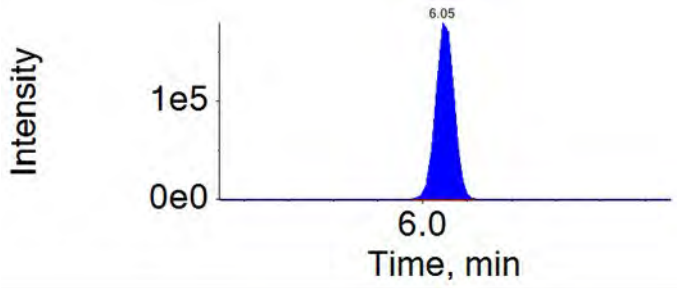
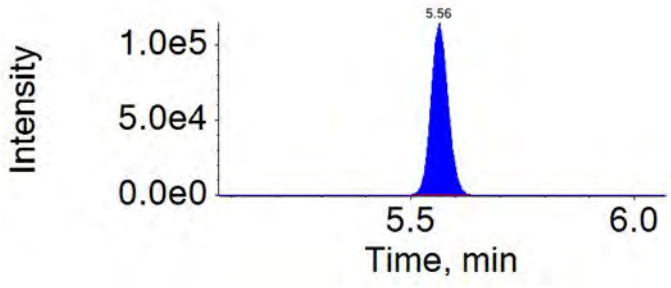
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

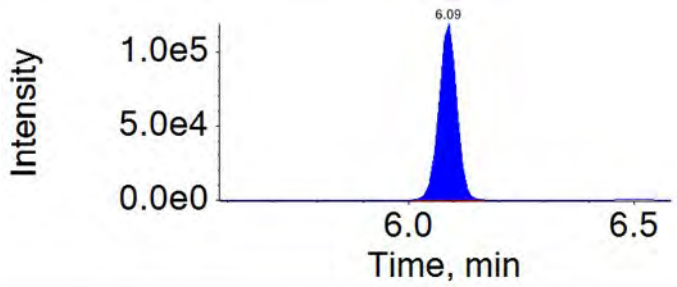
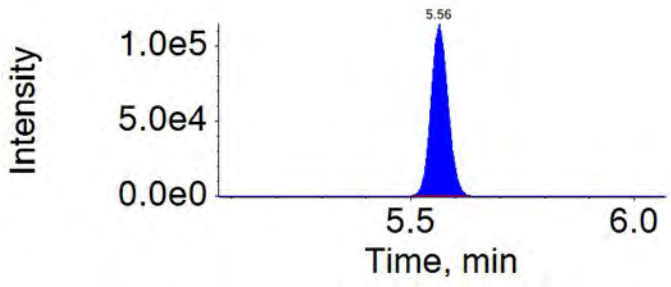
APPROVED
By MCD at 6:33 pm, 11/12/18

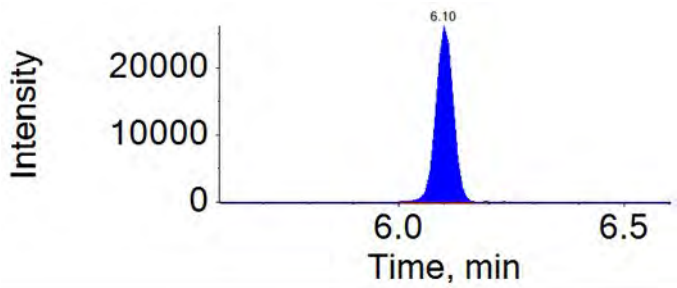
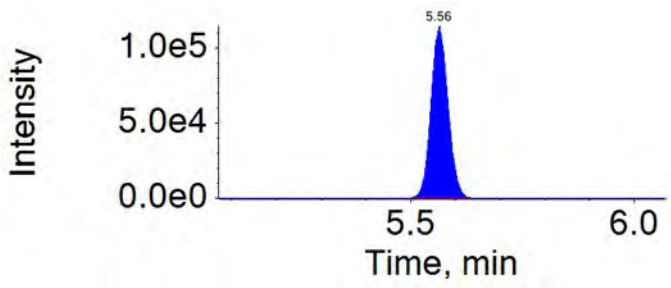
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

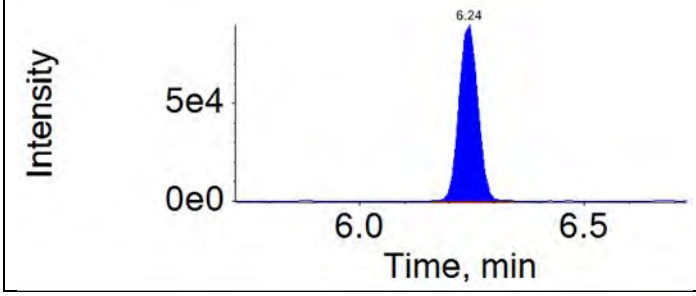
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

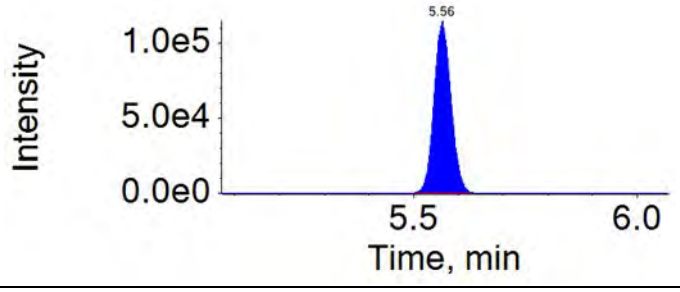
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

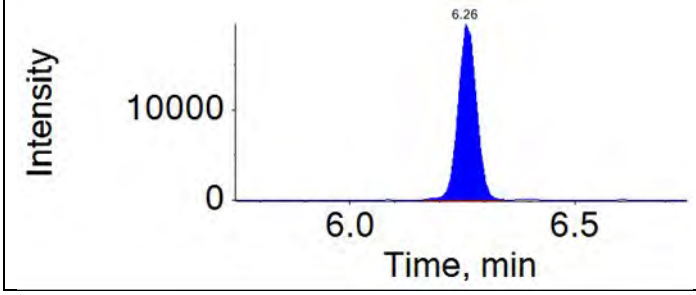
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

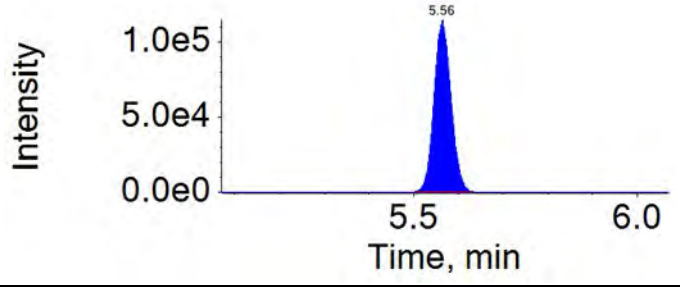
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



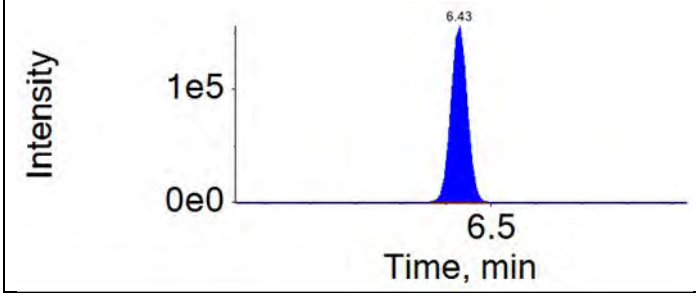


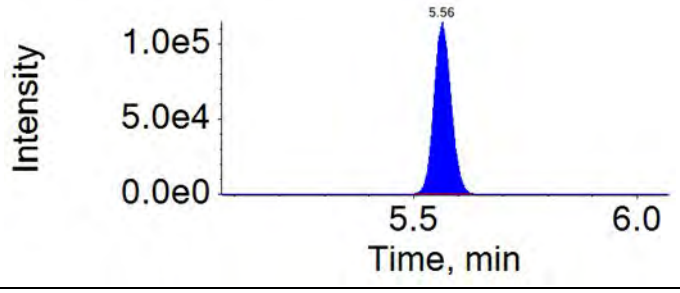
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



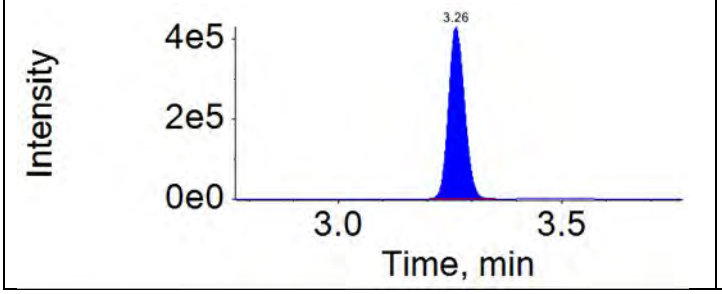


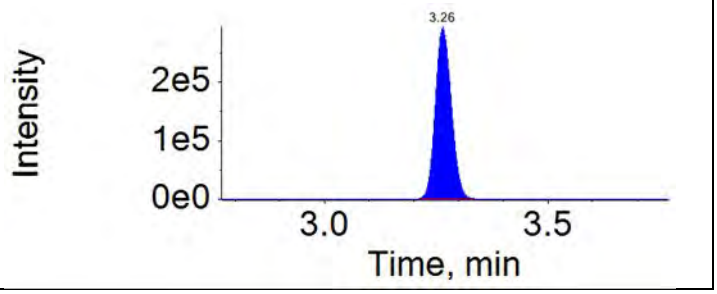
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

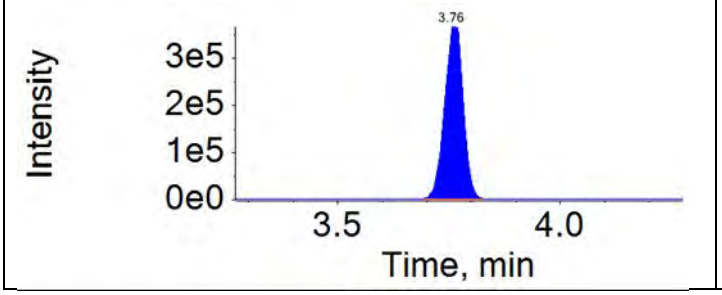
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

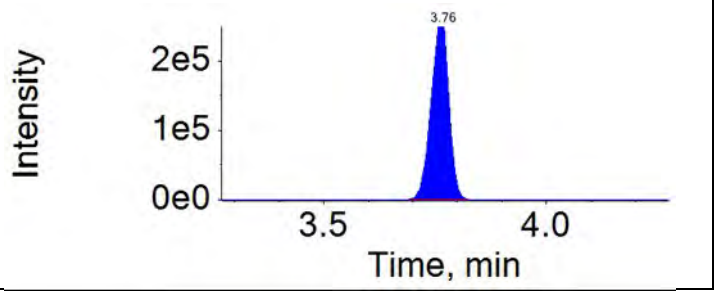
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



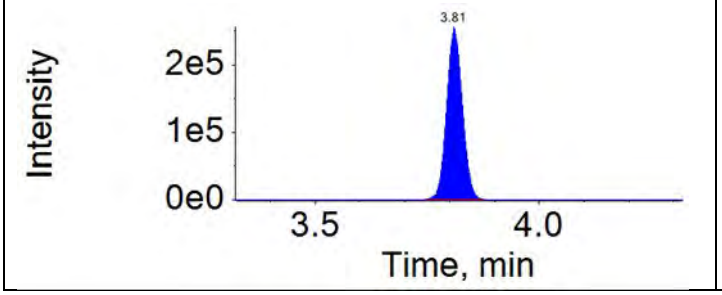


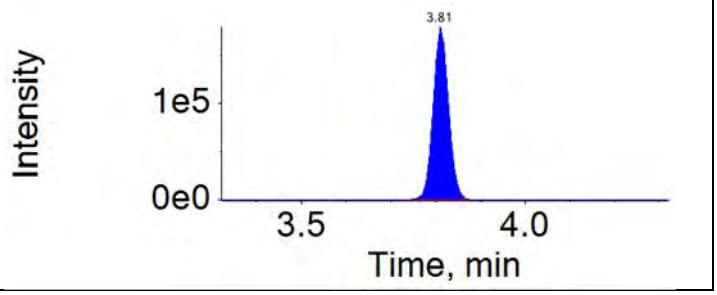
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



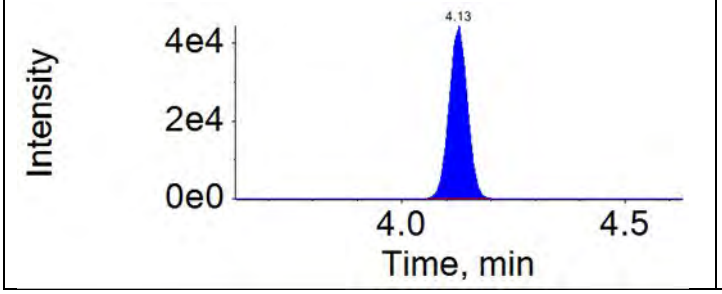


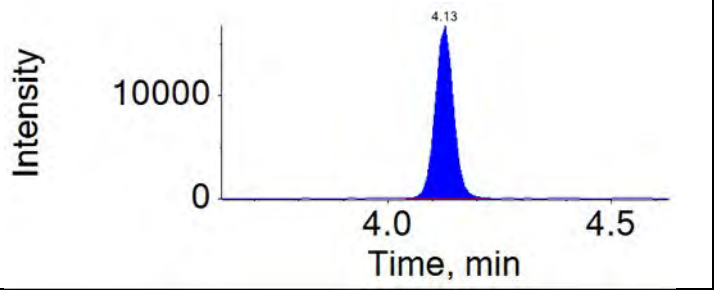
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





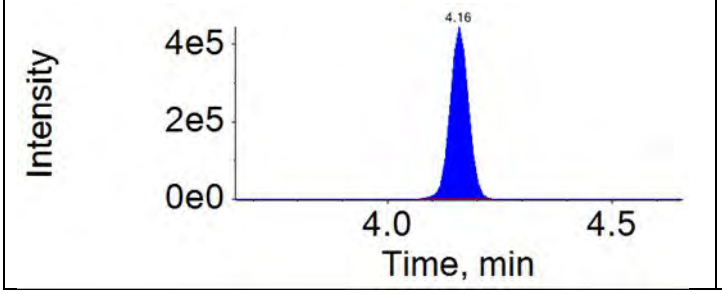
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

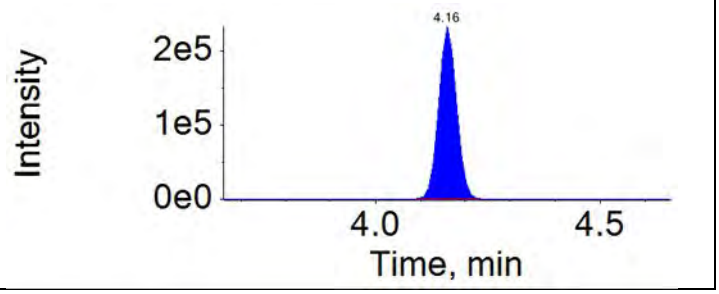




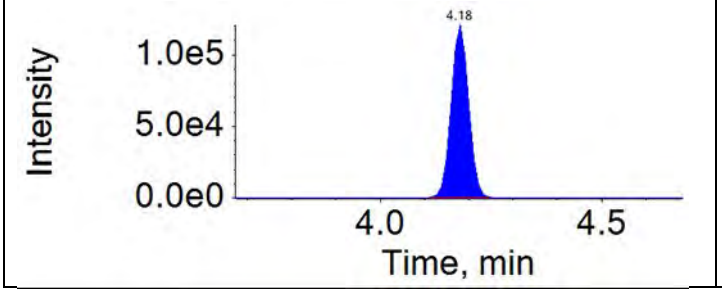
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

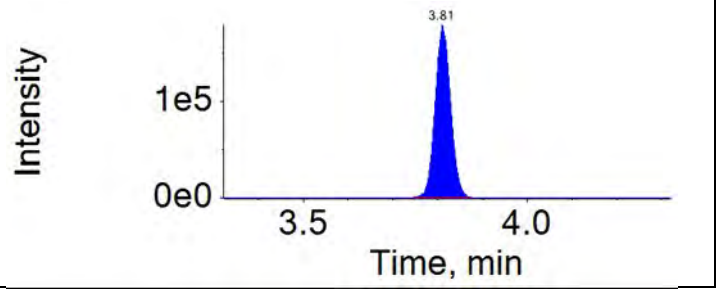
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



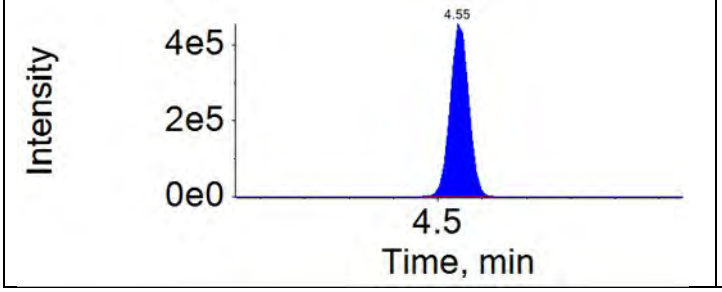


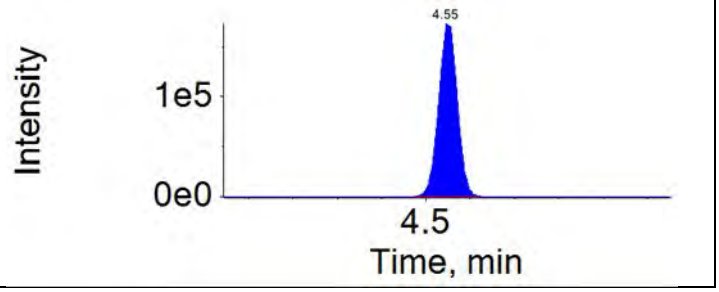
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



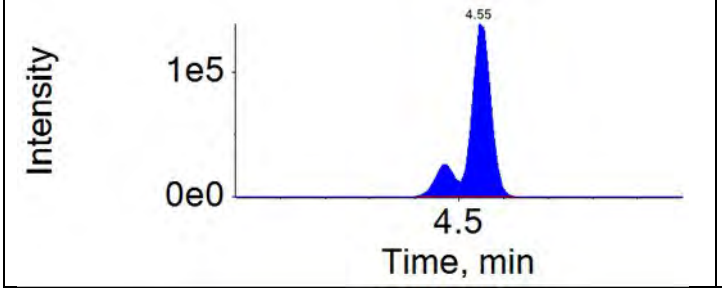


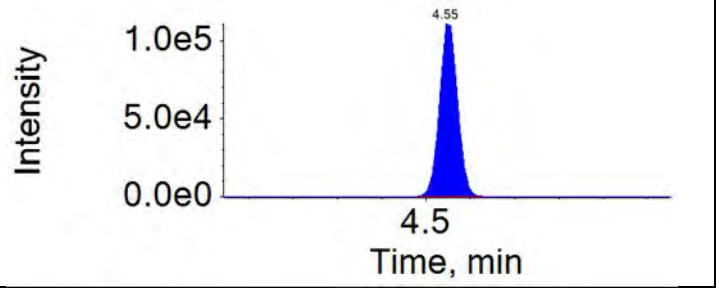
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



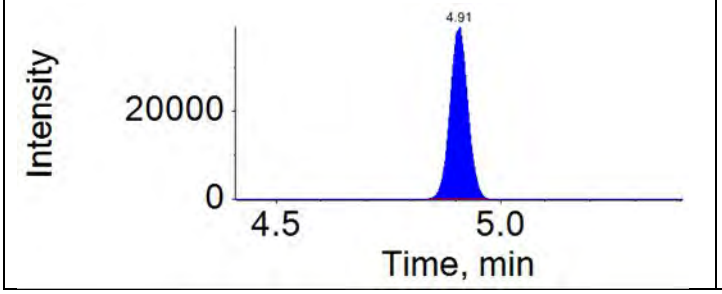


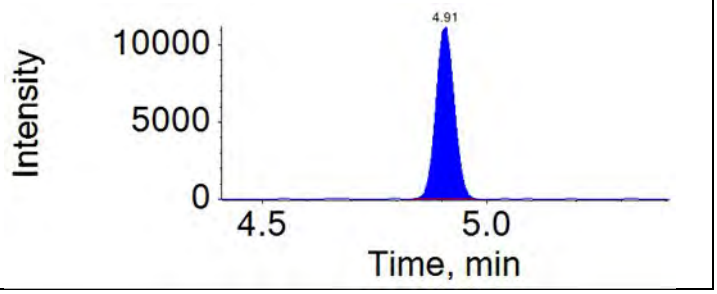
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

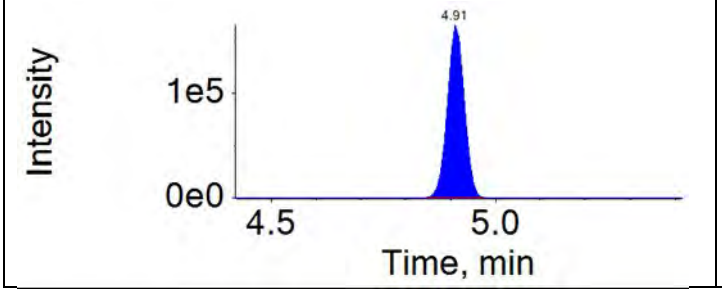
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

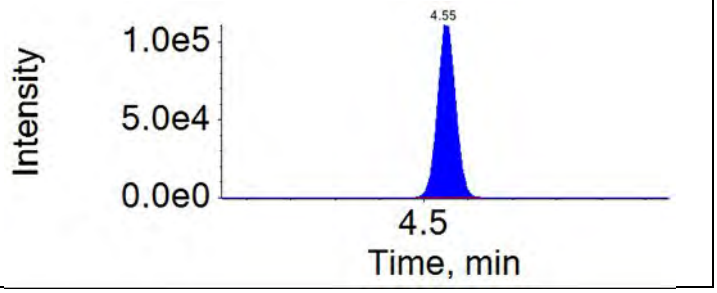
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



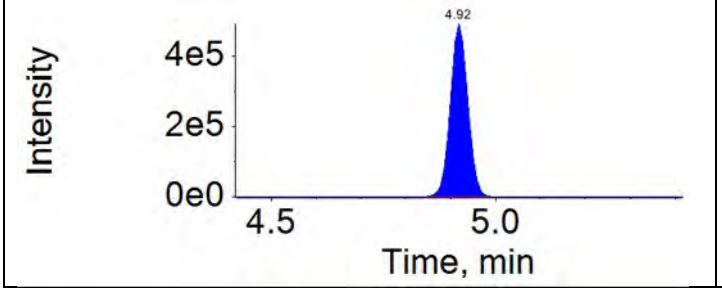


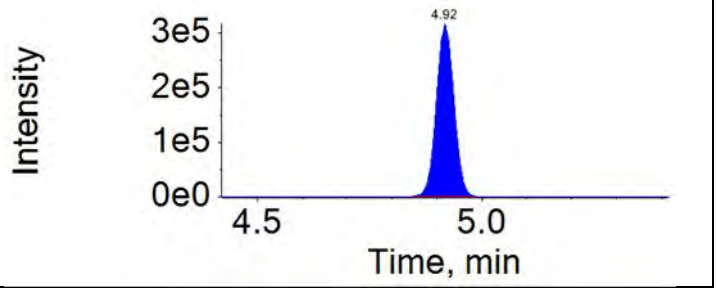
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



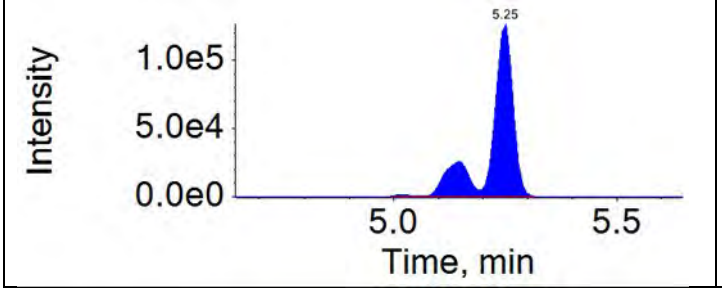


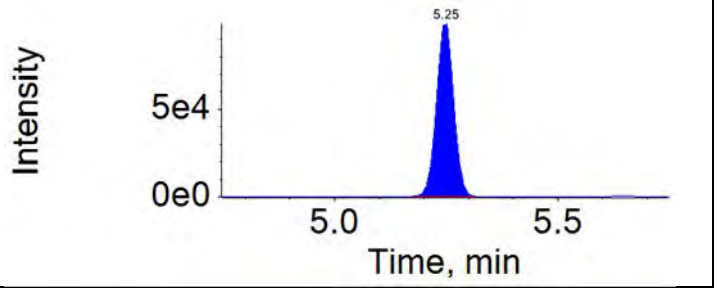
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



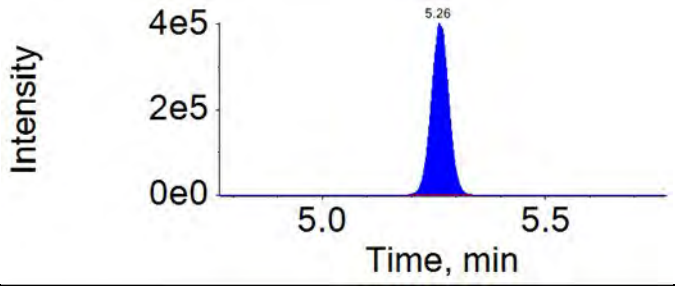


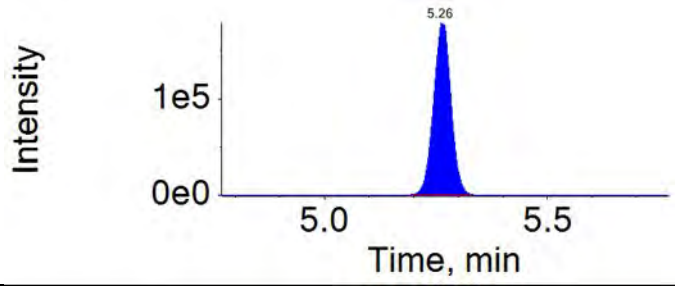
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

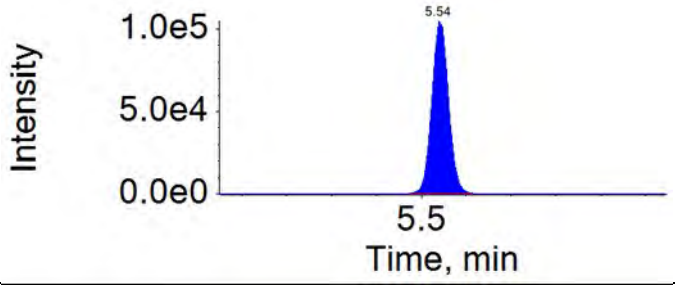
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

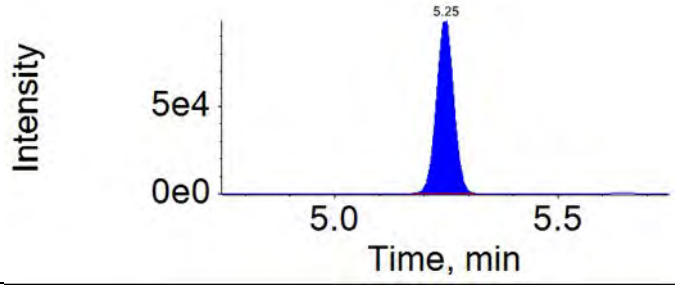
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



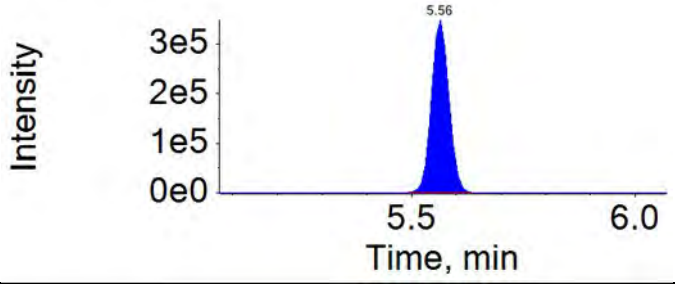


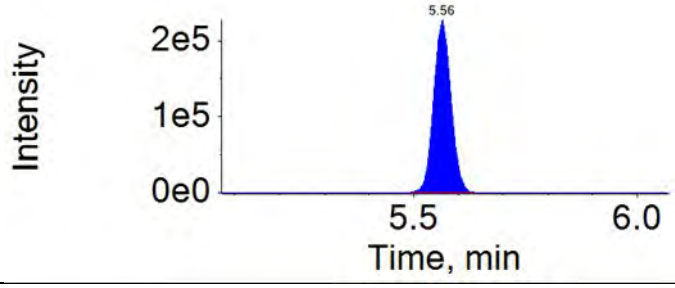
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



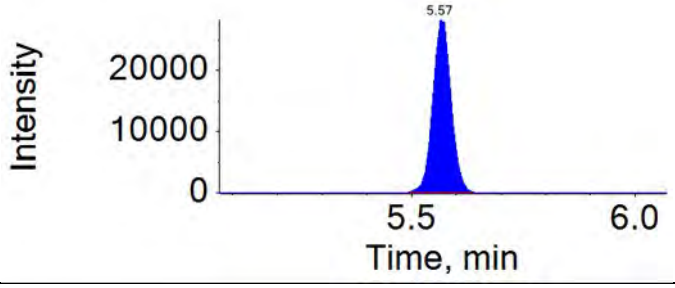


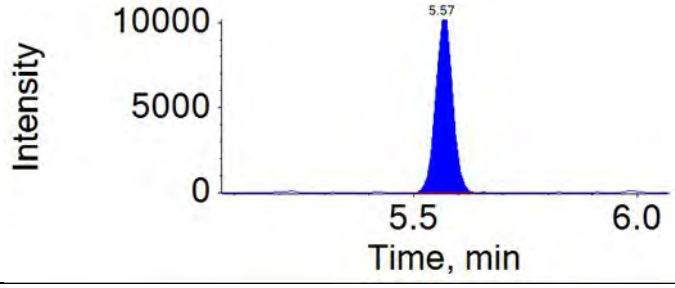
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



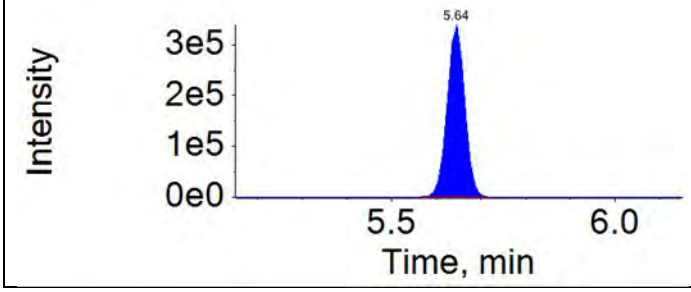


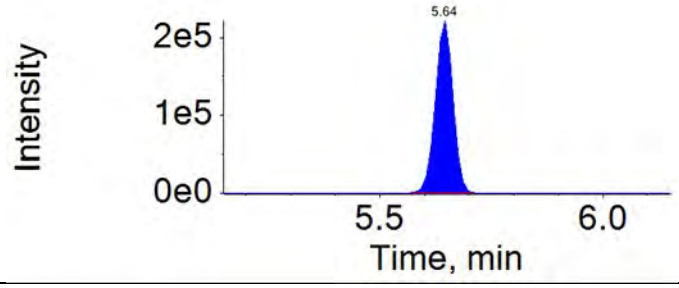
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

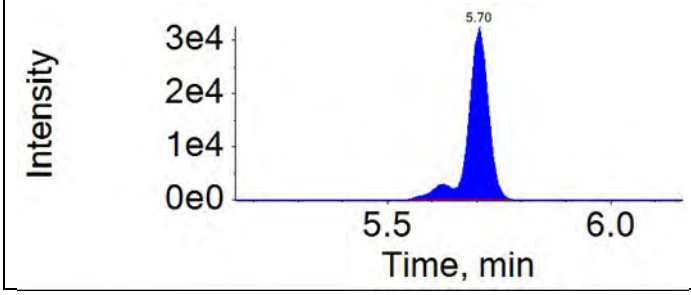
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

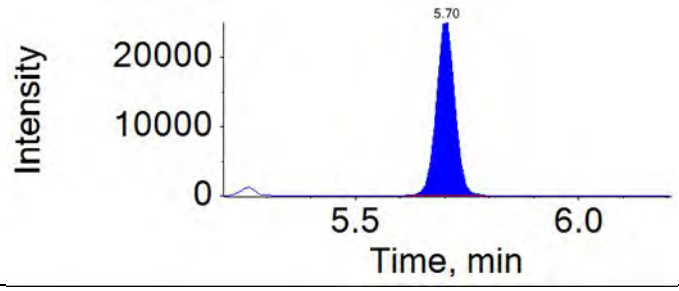
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



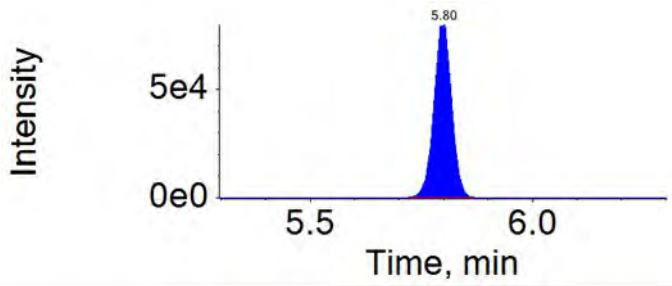


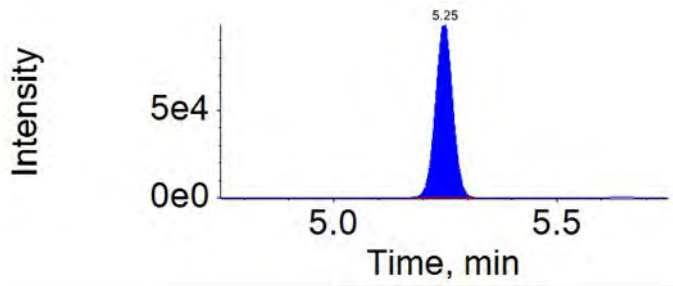
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



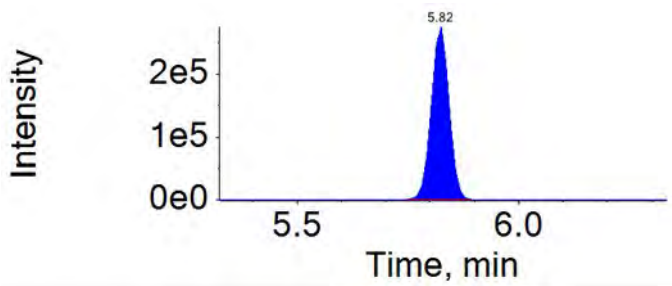


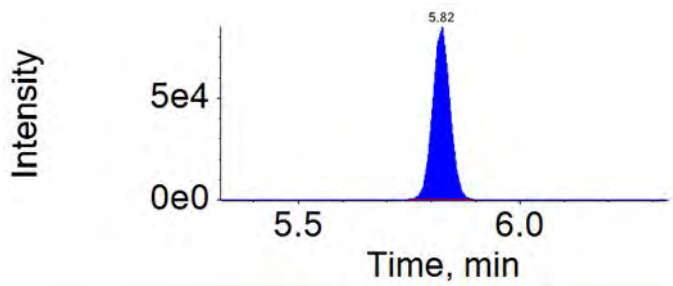
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



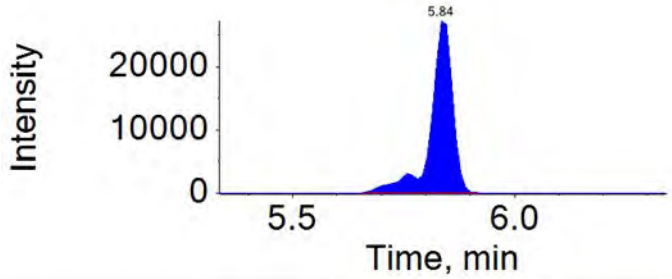


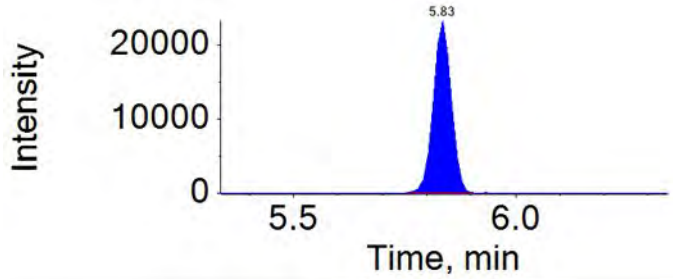
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

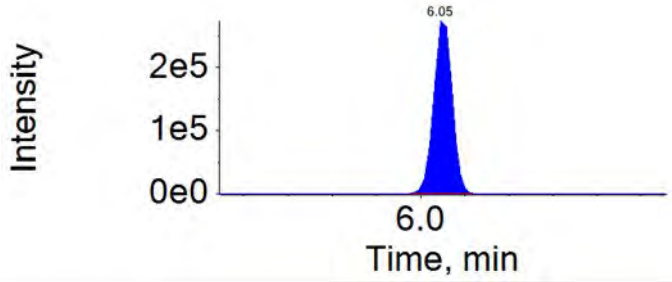
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

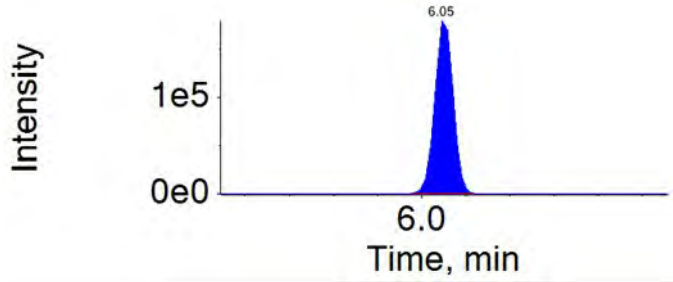
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



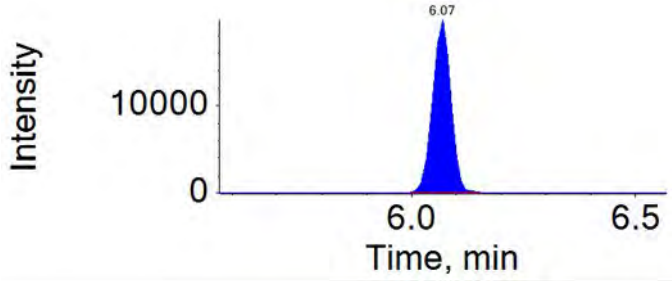


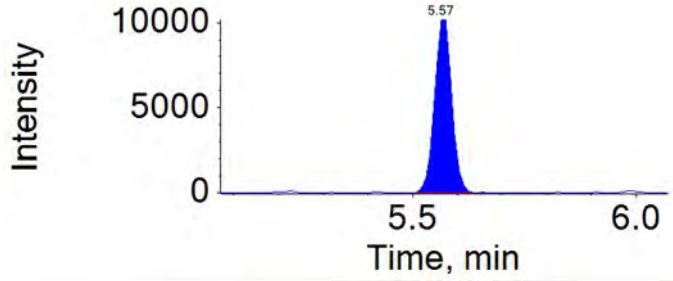
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



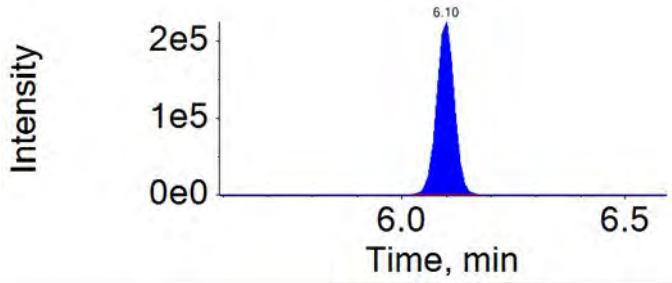


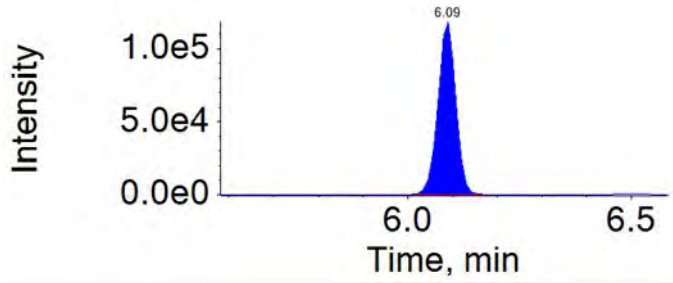
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



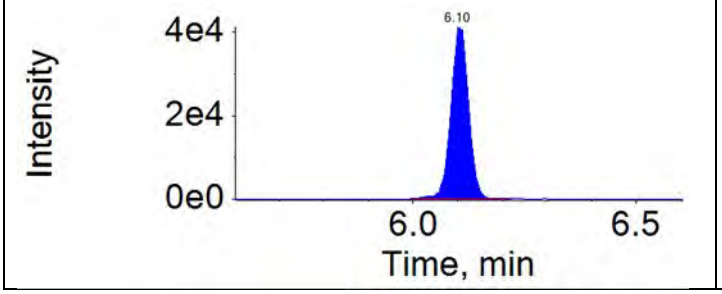


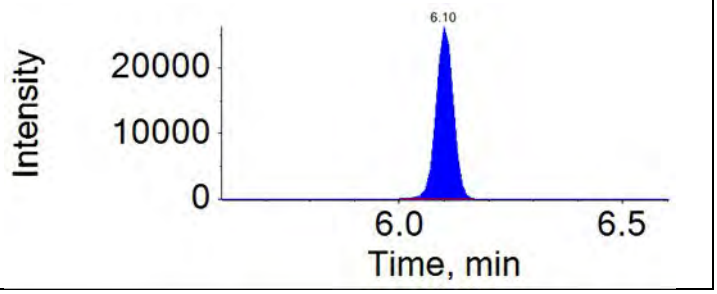
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

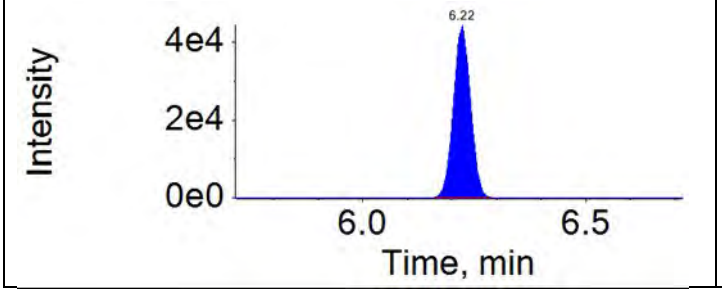
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

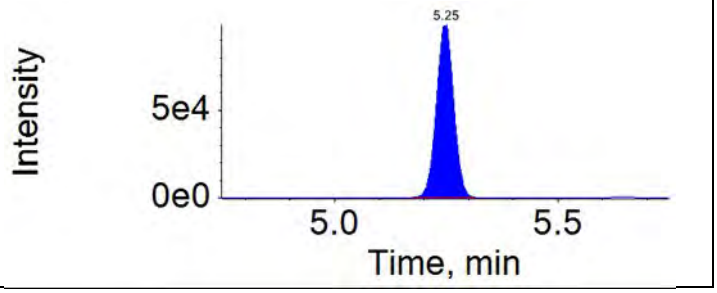
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



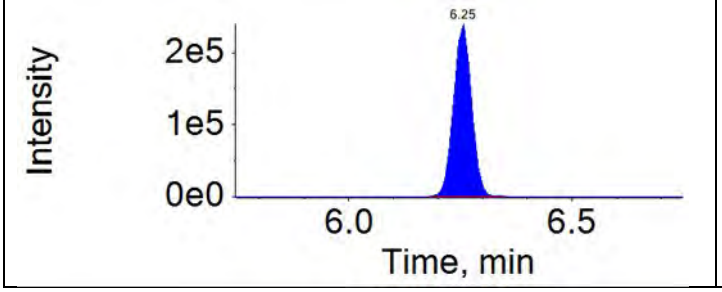


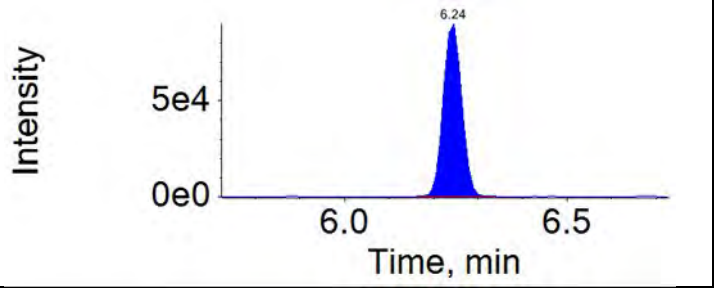
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



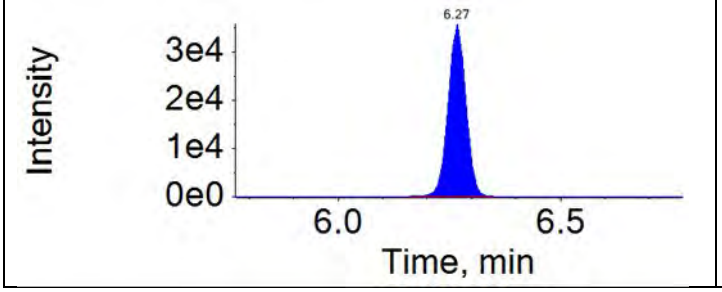


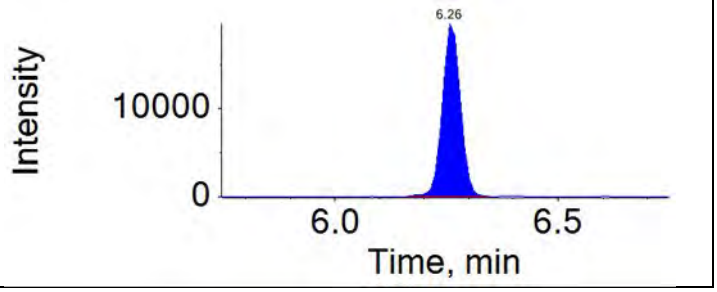
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

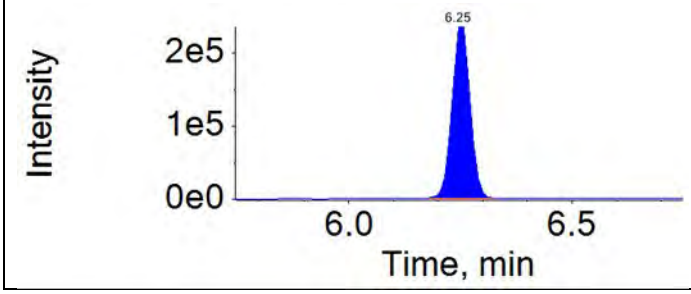
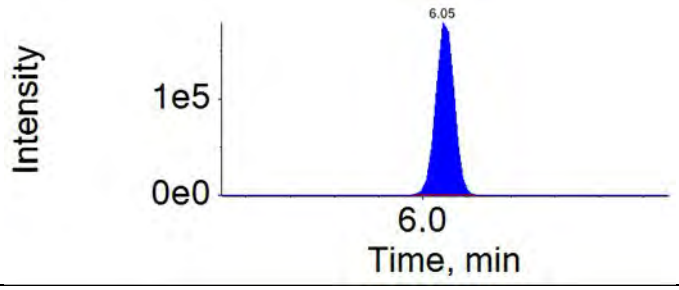


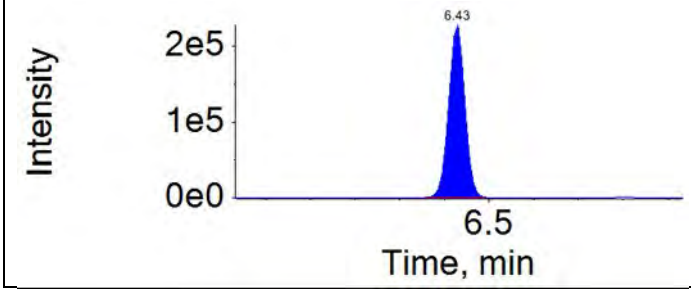
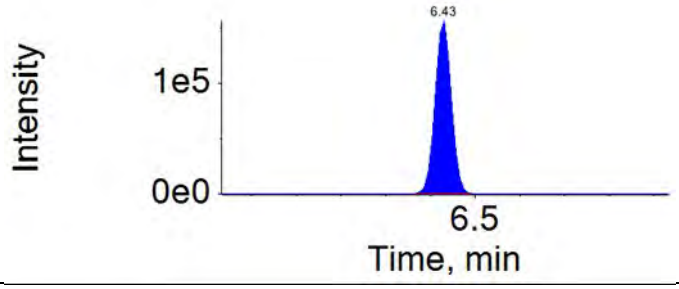


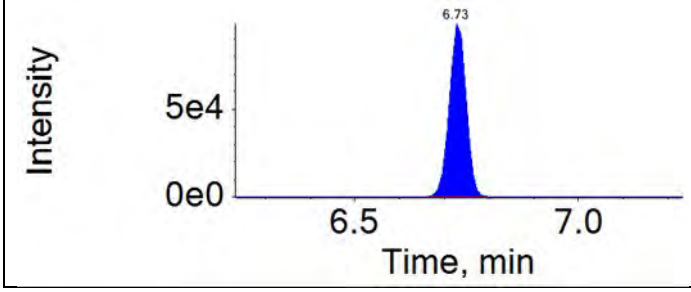
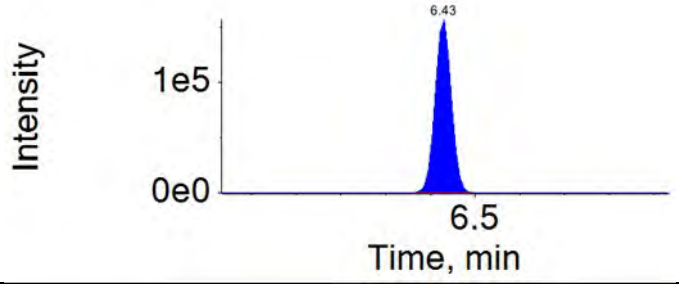
APPROVED
By MCD at 6:33 pm, 11/12/18

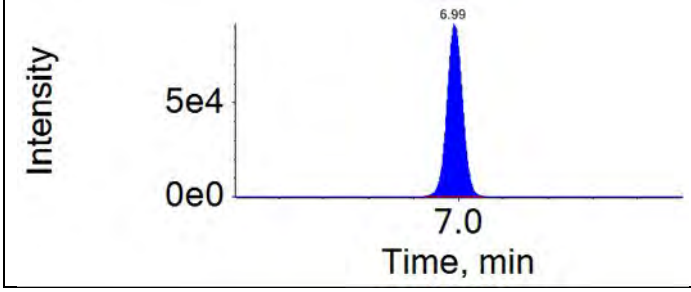
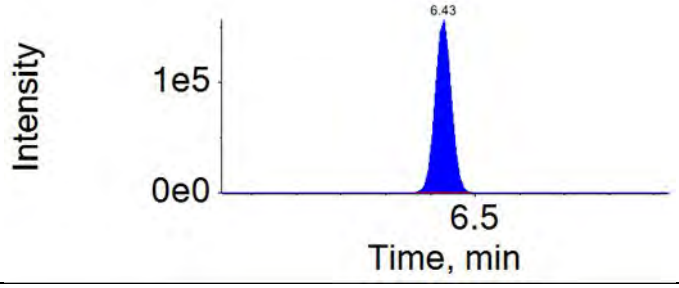
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

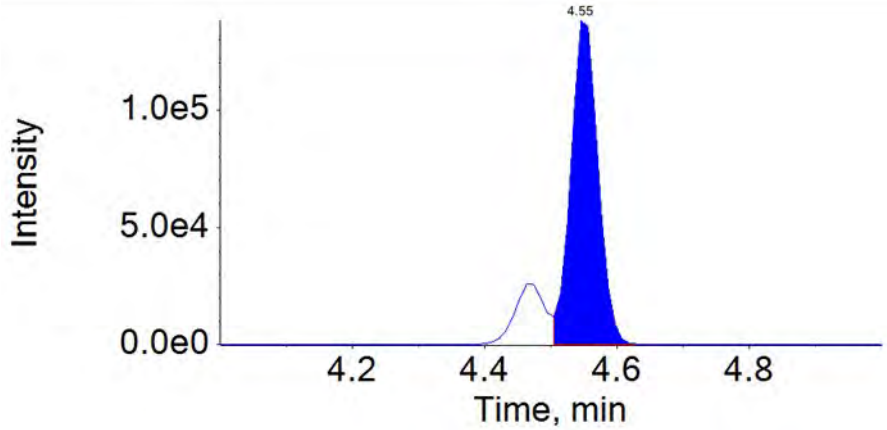
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

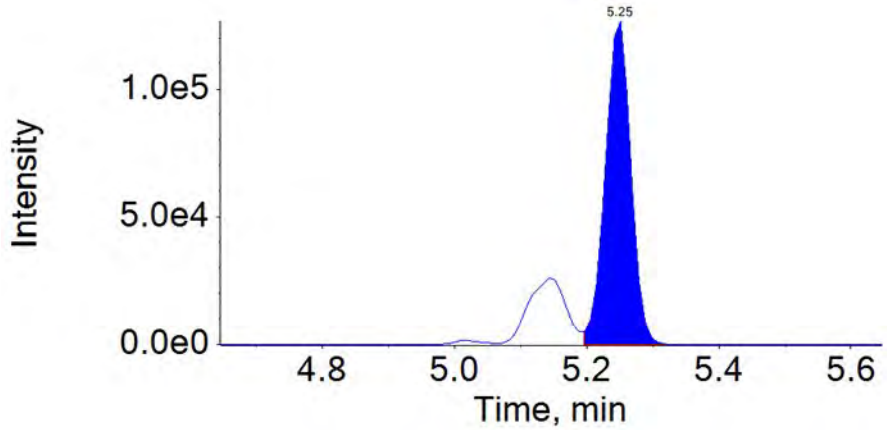
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
397028.39
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



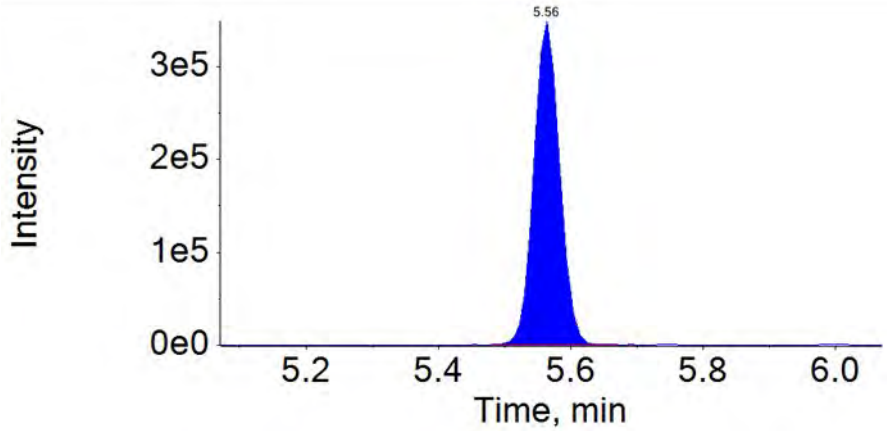
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
340529.09
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.56
Peak Area:
942897.11
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



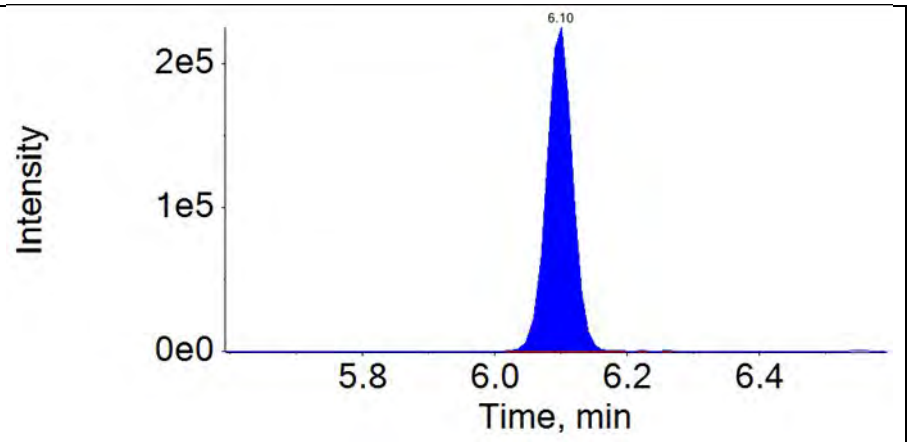
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

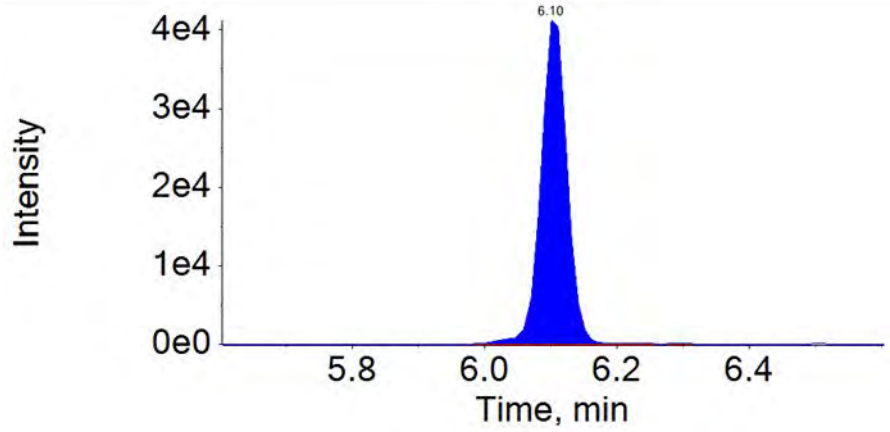
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMePFOSAE
RT (min.):
6.10
Peak Area:
620009.05
Mass Range:
616.0 / 59.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



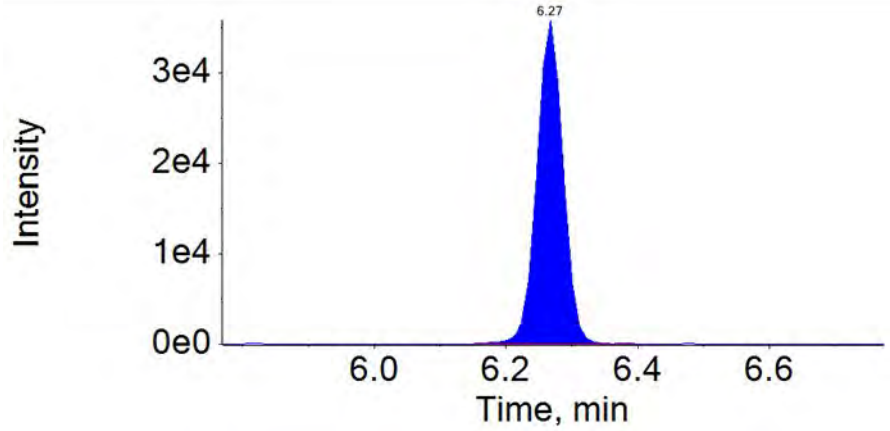
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
115018.95
Mass Range:
512.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
99550.21
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



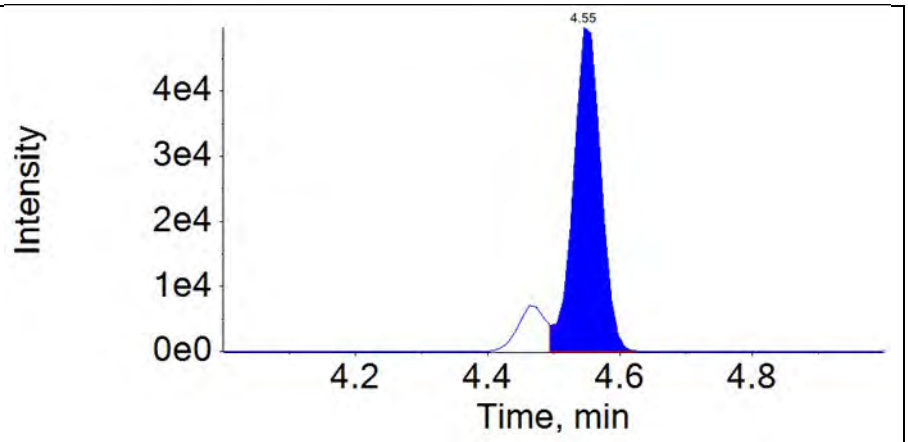
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

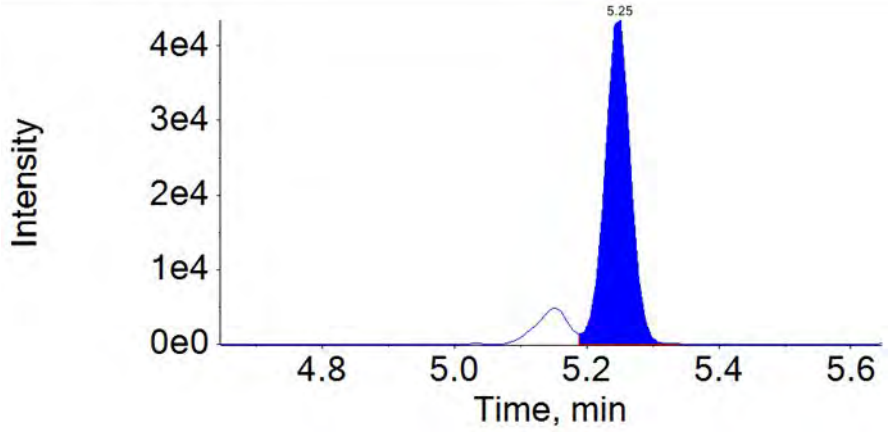
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS_2
RT (min.): 4.55
Peak Area: 144906.99
Mass Range: 399.0 / 99.0
File Name: 18NOV12DCAL-45.wiff
Sample Name: CAL4



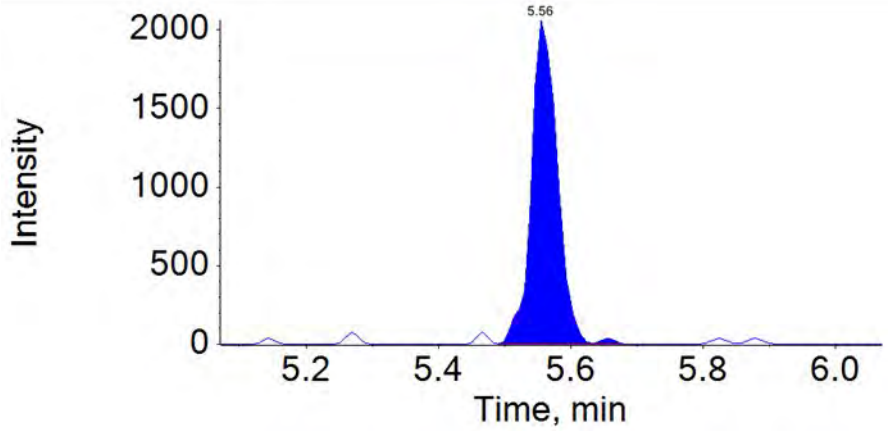
Integration Comment: incorrect integration

Component Name: PFOS_2
RT (min.): 5.25
Peak Area: 119086.74
Mass Range: 499.0 / 99.0
File Name: 18NOV12DCAL-45.wiff
Sample Name: CAL4



Integration Comment: incorrect integration

Component Name: PFDA_2
RT (min.): 5.56
Peak Area: 5673.40
Mass Range: 513.0 / 169.0
File Name: 18NOV12DCAL-45.wiff
Sample Name: CAL4



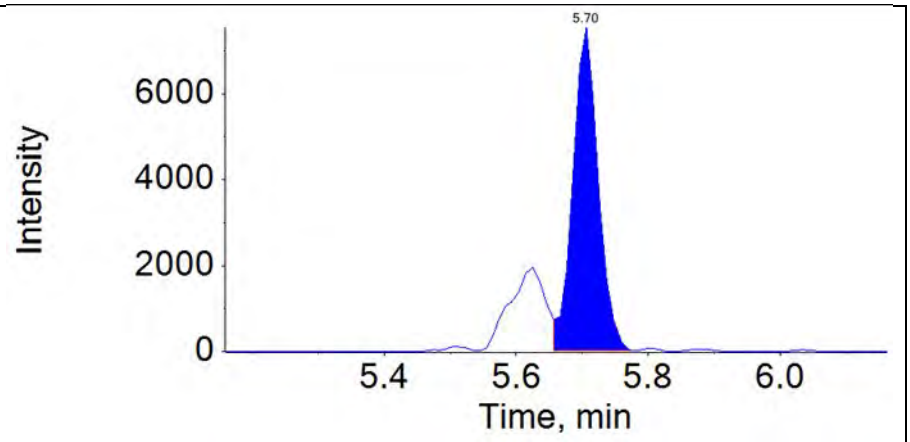
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

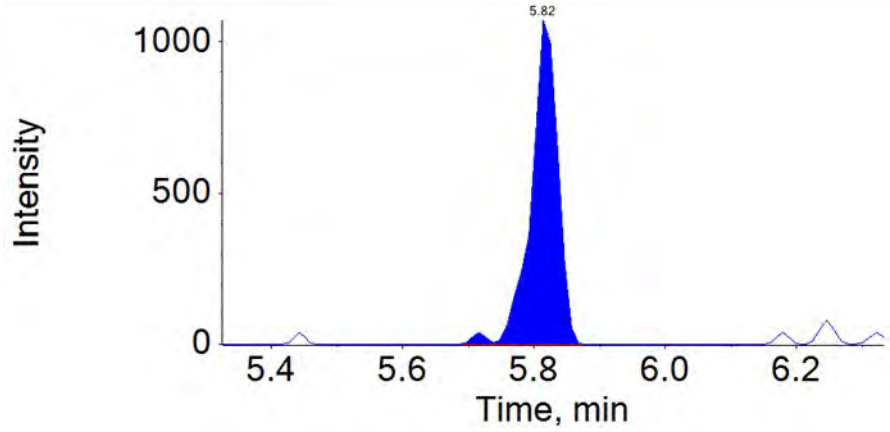
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
20115.54
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



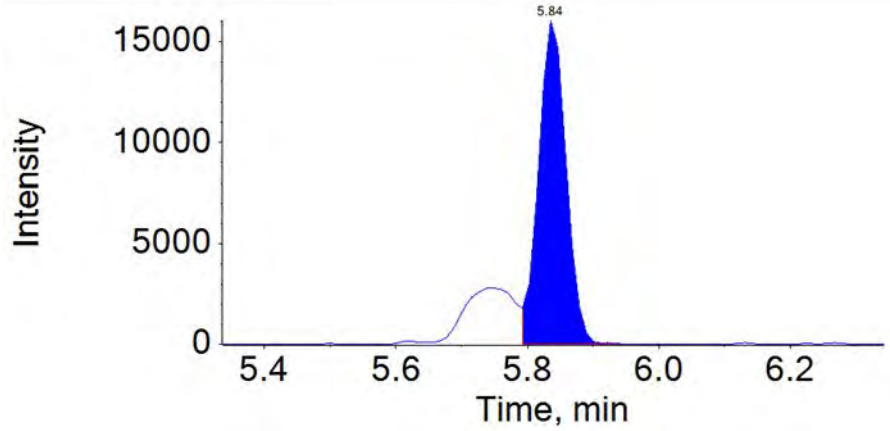
Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.82
Peak Area:
3055.95
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
46742.13
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

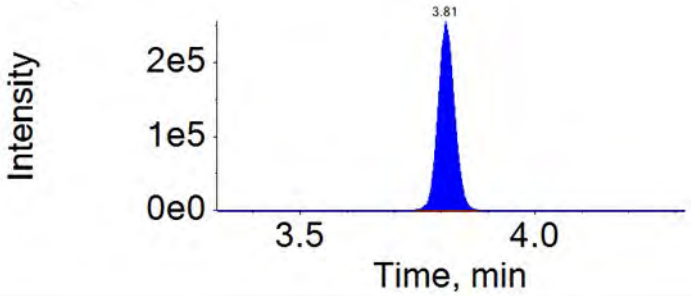
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-45.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	617045.58	A	0.3619	0.3710			
PFBS_2	3.81	1.00	228894.51	A	0.3619	0.3710	3	50	
4:2-FTS	4.13	1.00	126396.51	A	0.6730	0.6813			
4:2 FTS_2	4.12	1.00	86110.06	A	0.6730	0.6813		#NA!	
PFHxA	4.16	1.00	1265231.12	A	0.0117	0.0101			
PFHxA_2	4.16	1.00	12793.78	A	0.0117	0.0101	-13	50	
PFPeS	4.18	1.10	328681.66	A	0.5191	0.5078			
PFPeS_2	4.18	1.10	166890.99	A	0.5191	0.5078	-2	50	
PFHpA	4.55	1.00	1318774.50	A	0.0563	0.0555			
PFHpA_2	4.55	1.00	73135.24	A	0.0563	0.0555	-2	50	
PFHxS	4.55	1.00	479290.97	M	0.3428	0.3441			
PFHxS_2	4.55	1.00	164902.13	M	0.3428	0.3441	0	50	
6:2-FTS	4.91	1.00	107470.62	A	0.6604	0.6264			
6:2 FTS_2	4.91	1.00	67319.96	A	0.6604	0.6264		#NA!	
PFHpS	4.91	1.08	434949.18	A	0.4066	0.4089			
PFHpS_2	4.91	1.08	177851.23	A	0.4066	0.4089	1	50	
PFOA	4.92	1.00	1327086.09	A	0.0562	0.0557			
PFOA_2	4.92	1.00	73867.47	A	0.0562	0.0557	-1	50	
PFOS	5.25	1.00	448833.83	M	0.2968	0.3022			
PFOS_2	5.25	1.00	135652.81	M	0.2968	0.3022	2	50	
PFNA	5.26	1.00	1106664.23	A	0.0229	0.0210			
PFNA_2	5.26	1.00	23205.90	A	0.0229	0.0210	-8	50	
PFNS	5.54	1.06	269712.27	A	0.4828	0.4818			
PFNS_2	5.54	1.06	129941.05	A	0.4828	0.4818	0	50	
PFDA	5.56	1.00	941985.31	M	0.0081	0.0060			
PFDA_2	5.56	1.00	5626.45	M	0.0081	0.0060	-26	50	
8:2-FTS	5.57	1.00	80922.57	A	0.6814	0.6947			
8:2 FTS_2	5.57	1.00	56219.65	A	0.6814	0.6947		#NA!	
NMeFOSAA	5.70	1.00	103649.07	A	0.2569	0.2651			
NMeFOSAA_2	5.70	1.00	27472.86	M	0.2569	0.2651	3	50	
PFDS	5.80	1.11	224031.22	A	0.5144	0.4482			
PFDS_2	5.80	1.10	100404.30	A	0.5144	0.4482	-13	50	
PFUnDA	5.82	1.00	768010.80	A	0.0058	0.0039			
PFUnDA_2	5.82	1.00	2997.45	M	0.0058	0.0039	-33	50	
NEtFOSAA	5.84	1.00	94877.84	A	0.7253	0.6488			
NEtFOSAA_2	5.84	1.00	61554.78	M	0.7253	0.6488	-11	50	
PFDoDA	6.05	1.00	803646.84	A	0.0157	0.0099			
PFDoDA_2	6.05	1.00	7981.38	A	0.0157	0.0099	-37	50	
10:2-FTS	6.07	1.09	56040.80	A	0.6356	0.7371			
10:2 FTS_2	6.07	1.09	41308.18	A	0.6356	0.7371		#NA!	
PFTrDA	6.25	1.03	674140.32	A	0.0086	0.0101			
PFTrDA_2	6.25	1.03	6830.51	A	0.0086	0.0101	18	50	
PFTeDA	6.43	1.00	571926.74	A	0.0062	0.0068			
PFTeDA_2	6.43	1.00	3881.08	A	0.0062	0.0068	9	50	
PFHxDA	6.73	1.05	256654.28	A	0.0683	0.0616			
PFHxDA_2	6.73	1.05	15804.20	A	0.0683	0.0616	-10	50	
PFODA	6.99	1.09	219359.64	A	0.0277	0.0258			
PFODA_2	6.99	1.09	5669.48	A	0.0277	0.0258	-7	50	

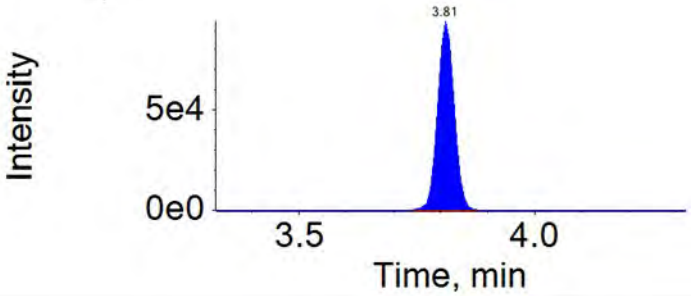
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

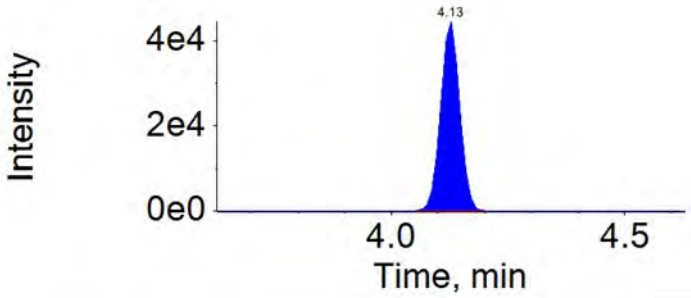
Component: PFBS
Primary Mass: 299.0 / 80.0



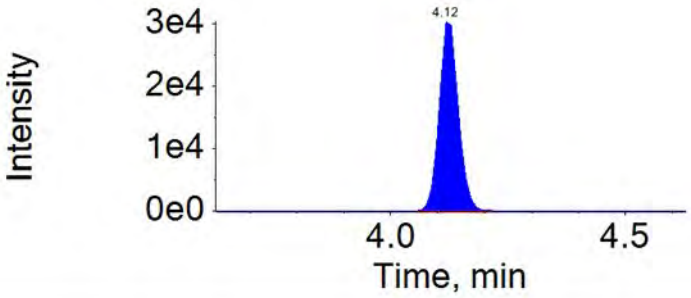
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



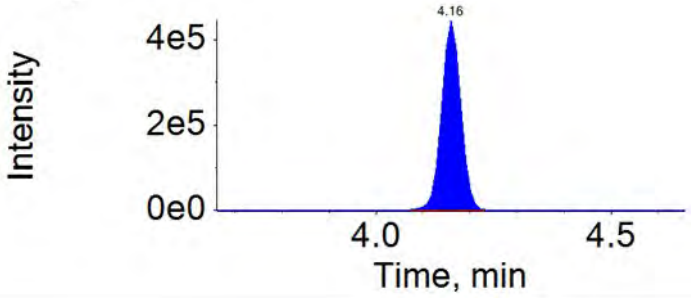
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



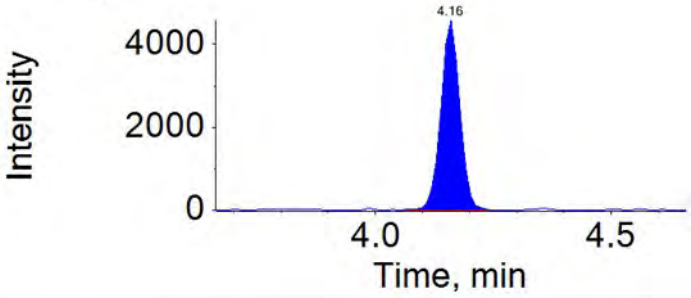
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



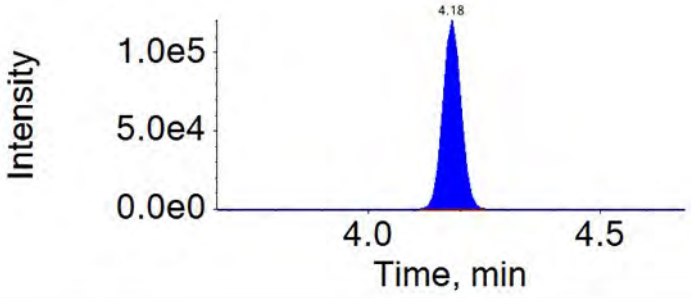
Component: PFHxA
Primary Mass: 313.0 / 269.0



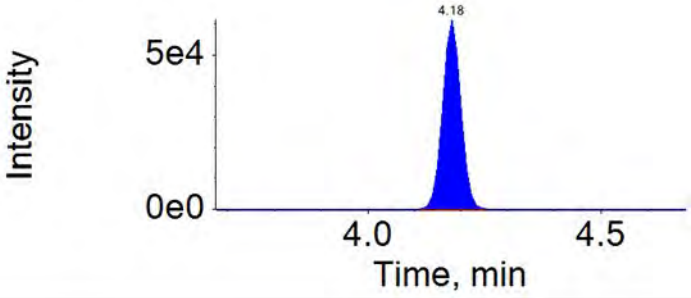
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



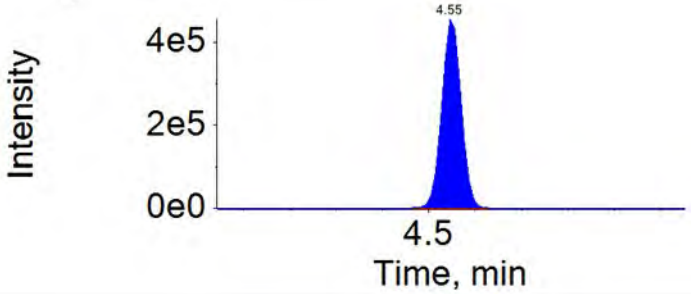
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



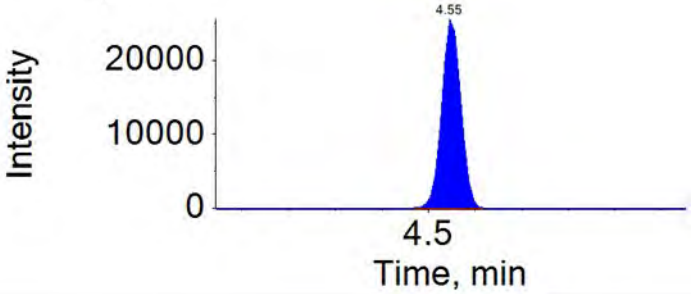
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

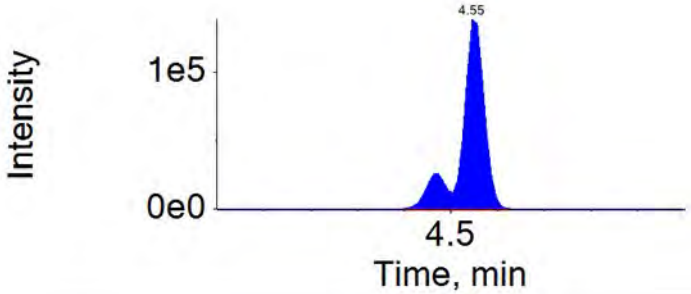
Component: PFHpA
Primary Mass: 363.0 / 319.0



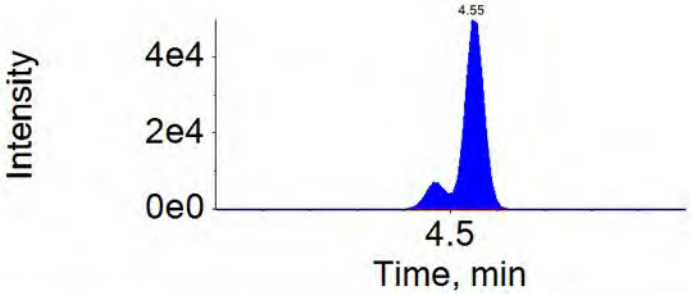
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



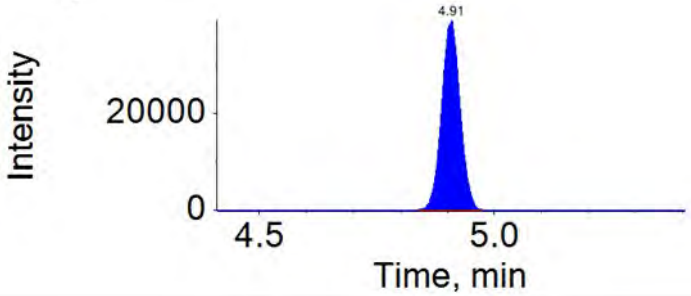
Component: PFHxS
Primary Mass: 399.0 / 80.0



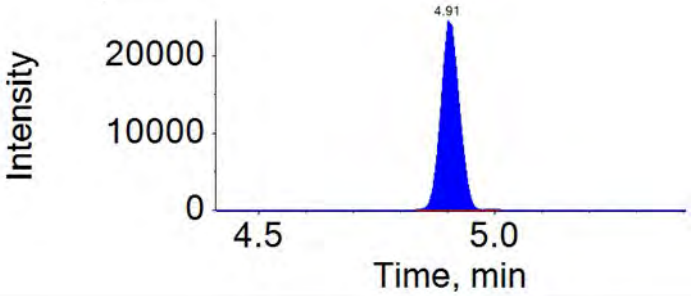
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



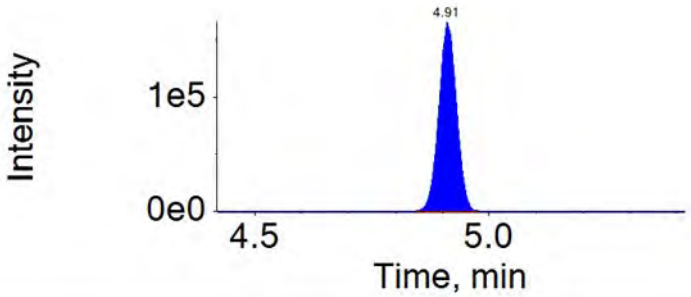
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



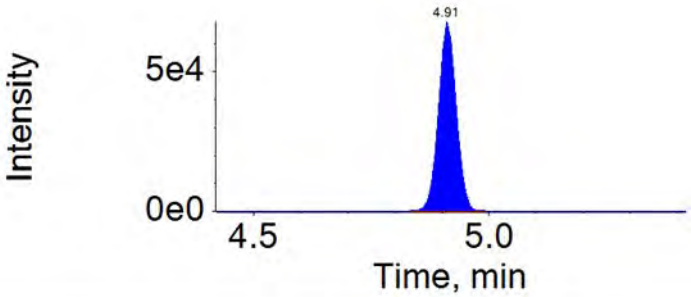
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



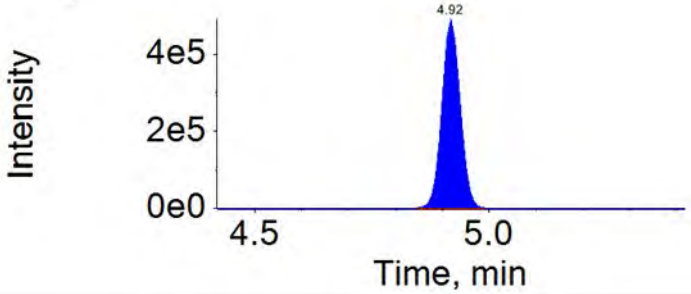
Component: PFHpS
Primary Mass: 449.0 / 80.0



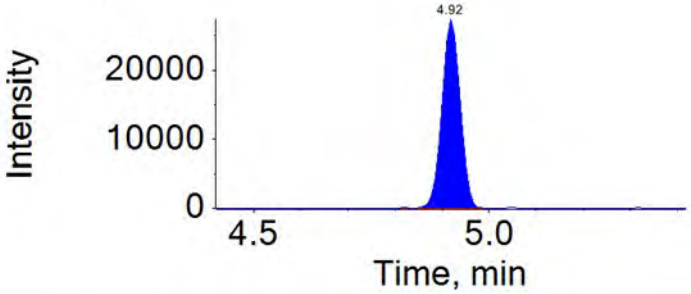
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



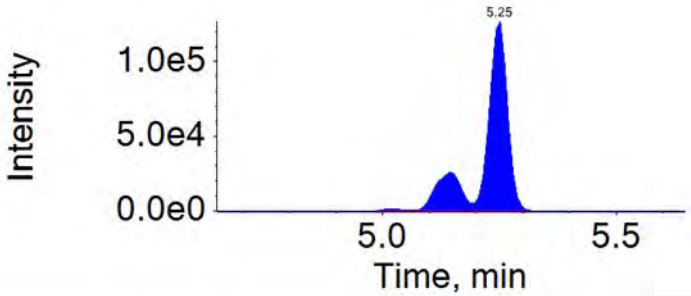
Component: PFOA
Primary Mass: 413.0 / 369.0



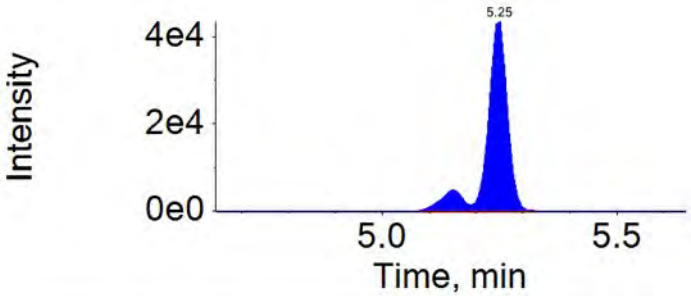
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



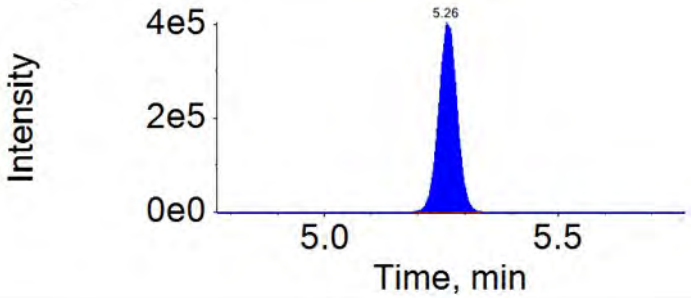
Component: PFOS
Primary Mass: 499.0 / 80.0



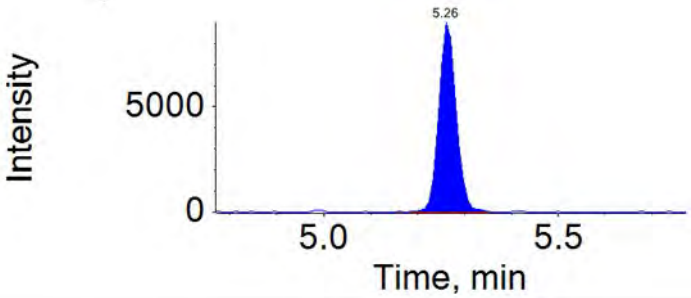
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



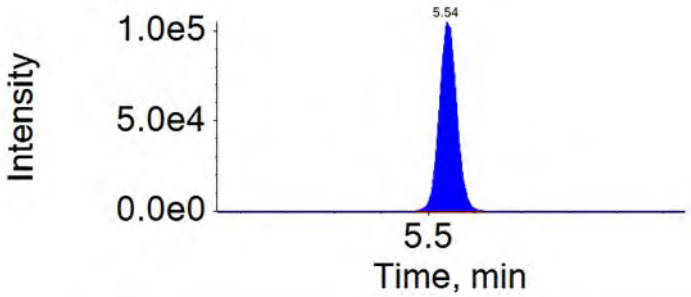
Component: PFNA
Primary Mass: 463.0 / 419.0



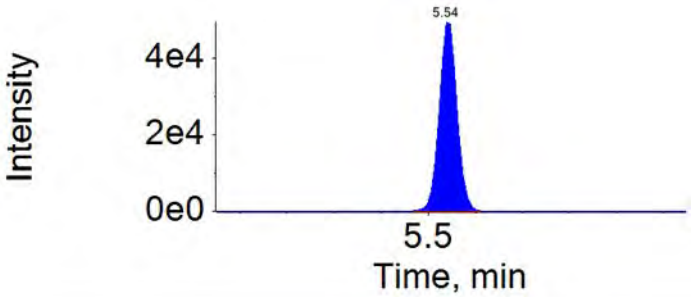
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



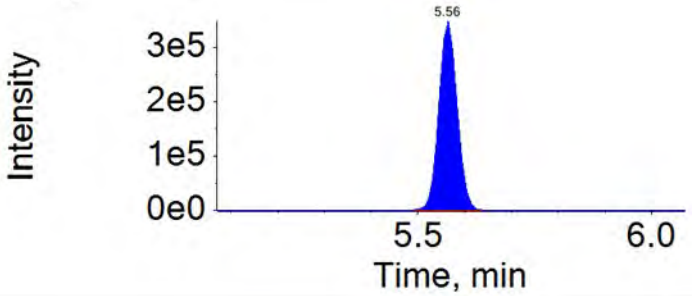
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



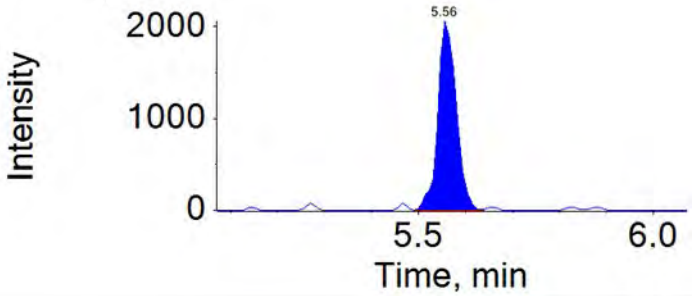
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

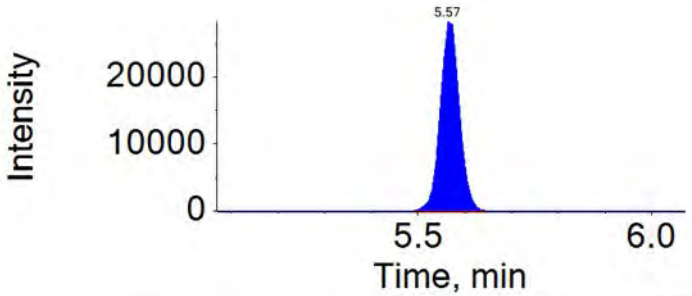
Component: PFDA
Primary Mass: 513.0 / 469.0



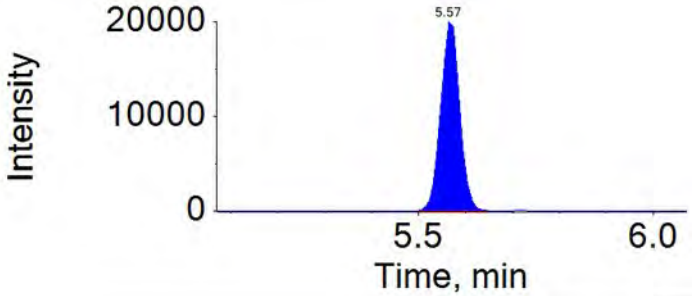
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



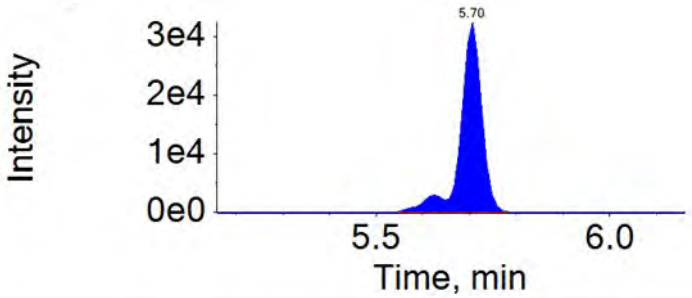
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



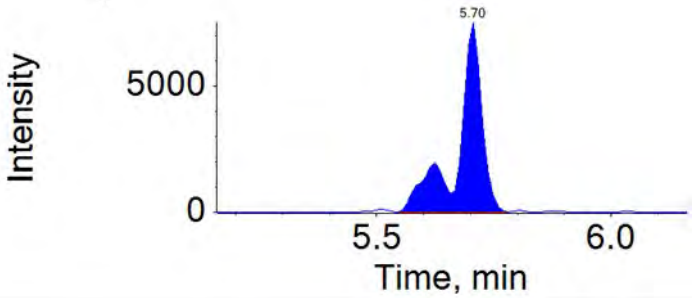
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



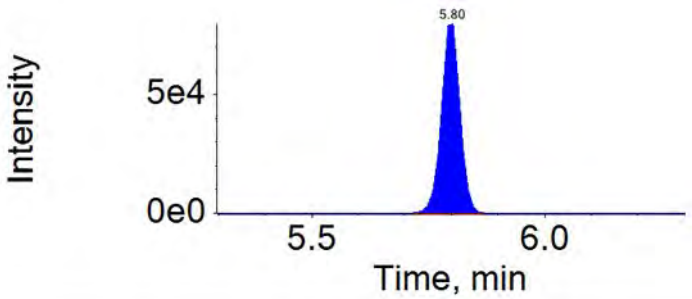
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



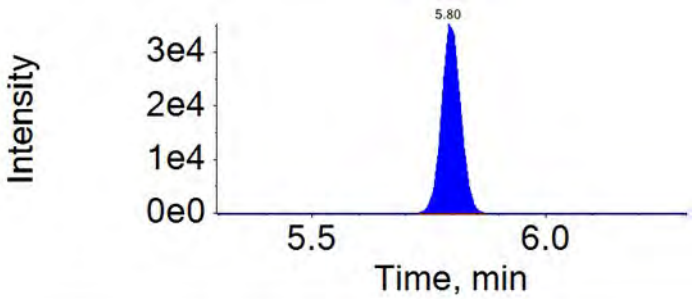
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



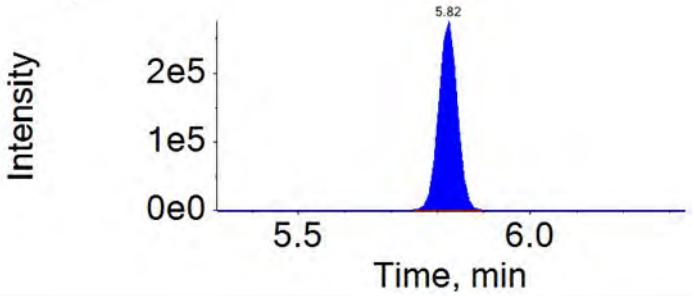
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



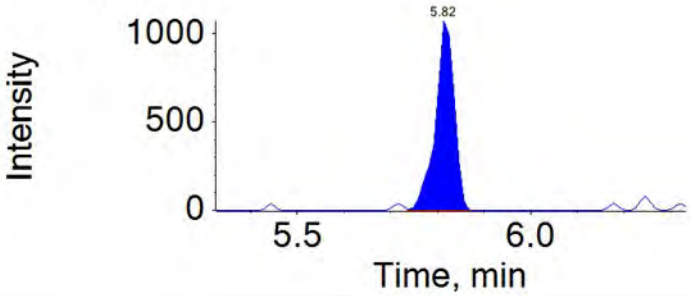
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

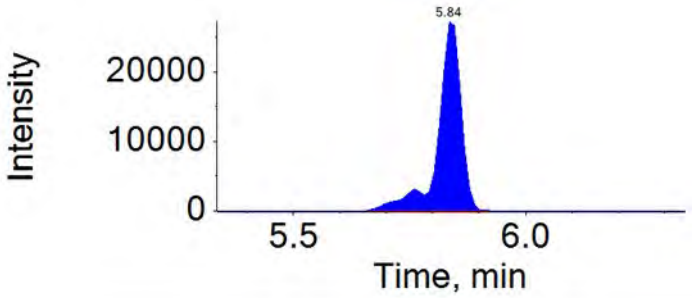
Component: PFUnDA
Primary Mass: 563.0 / 519.0



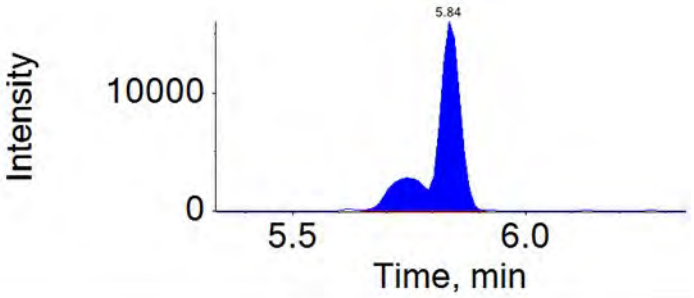
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



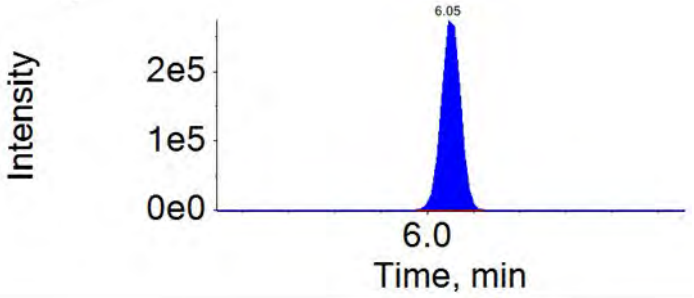
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



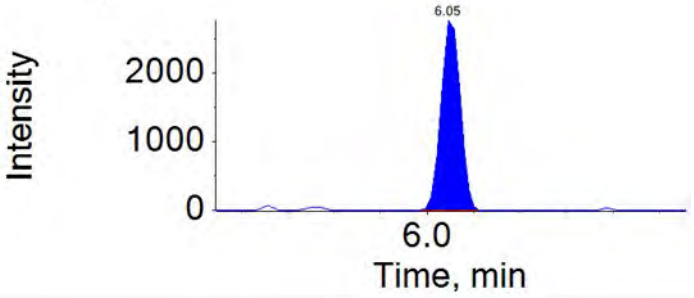
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



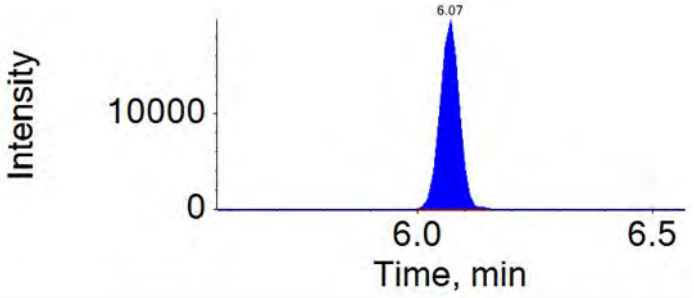
Component: PFDoDA
Primary Mass: 613.0 / 569.0



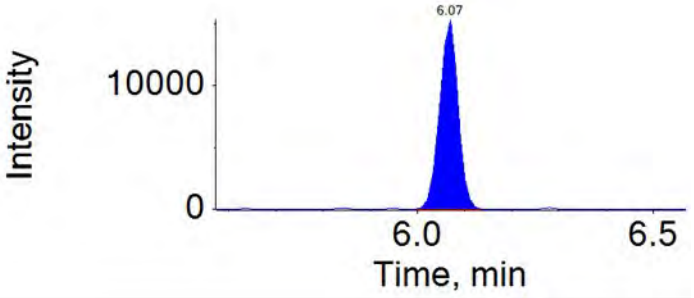
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



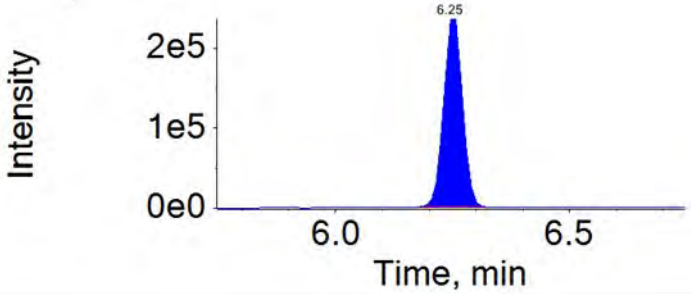
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



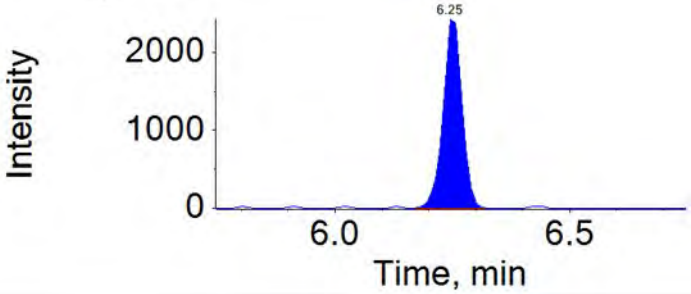
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

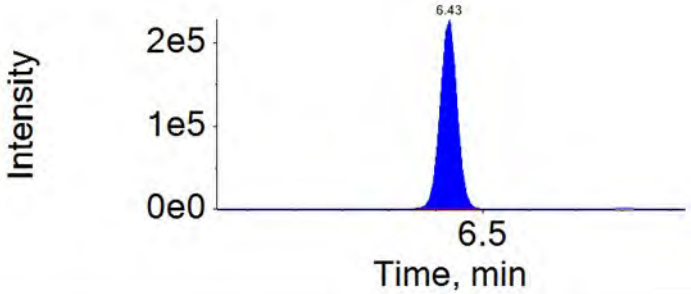
Component: PFTrDA
Primary Mass: 663.0 / 619.0



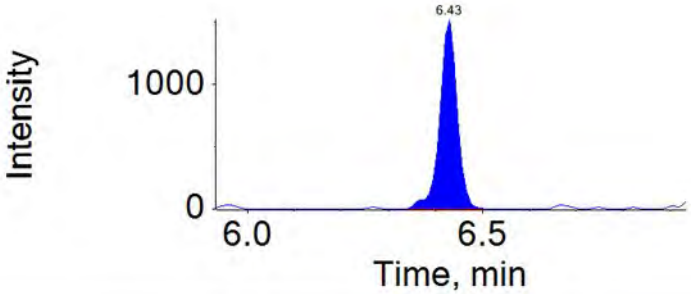
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



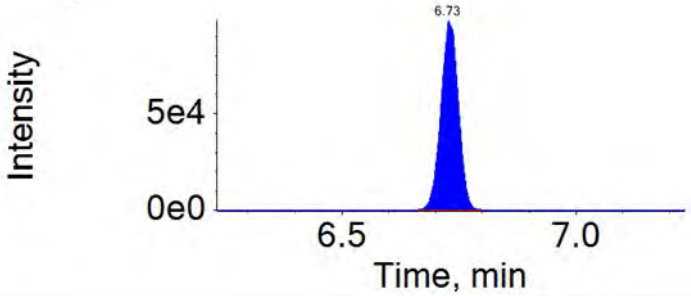
Component: PFTeDA
Primary Mass: 713.0 / 669.0



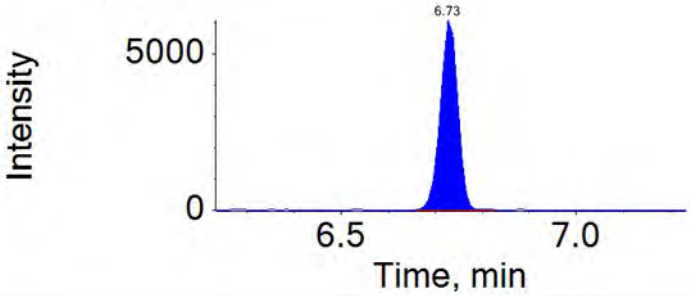
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



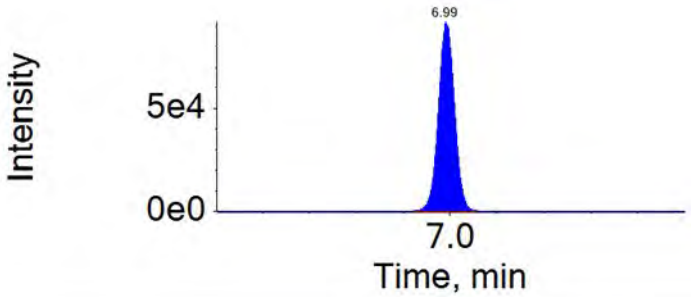
Component: PFHxDA
Primary Mass: 813.0 / 769.0



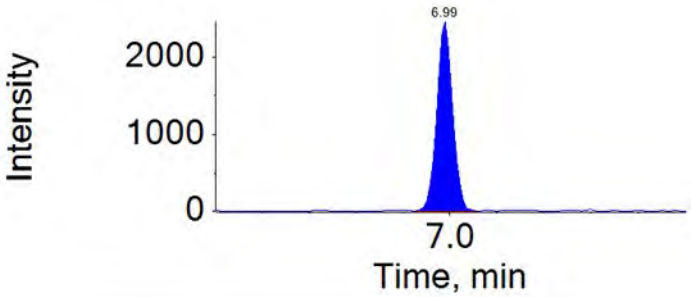
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV12DCAL-46.wiff
Sample ID:	CALBRN51833B			**Acquis Date:**		2018-11-12T15:42:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	641789.5	659926.2	-3	50	
13C2-PFOA	5.0	464284.6	450219.7	3	50	
13C4-PFOS	4.8	243589.9	249205.8	-2	50	
13C2-PFDA	5.0	269315.7	278743.9	-3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	698871.9	13C3-PFBA	641789.5	1.089	5.000	4.882	98	70-130	
E13C5-PFPeA	734598.3	13C3-PFBA	641789.5	1.145	5.000	5.134	103	70-130	
E13C3-PFBS	428050.6	13C3-PFBA	641789.5	0.667	4.650	4.708	101	70-130	
E13C2-4:2-FTS	51791.9	13C2-PFOA	464284.6	0.112	4.670	4.968	106	70-130	
E13C5-PFHxA	628952.8	13C2-PFOA	464284.6	1.355	5.000	4.894	98	70-130	
E13C3-PFHxS	309304.5	13C2-PFOA	464284.6	0.666	4.730	4.571	97	70-130	
E13C4-PFHpA	525802.1	13C2-PFOA	464284.6	1.132	5.000	5.102	102	70-130	
E13C2-6:2-FTS	31012.0	13C2-PFOA	464284.6	0.067	4.750	4.469	94	70-130	
E13C8-PFOA	805288.7	13C2-PFOA	464284.6	1.734	5.000	4.779	96	70-130	
E13C8-PFOS	267157.6	13C4-PFOS	243589.9	1.097	4.780	4.860	102	70-130	
E13C9-PFNA	441776.8	13C4-PFOS	243589.9	1.814	5.000	5.057	101	70-130	
E13C6-PFDA	585231.2	13C2-PFDA	269315.7	2.173	5.000	5.071	101	70-130	
E13C2-8:2-FTS	24192.1	13C2-PFDA	269315.7	0.090	4.790	4.480	94	70-130	
E13C8-PFOSA	596544.1	13C2-PFDA	269315.7	2.215	5.000	4.911	98	70-130	
Ed3-NMeFOSAA	72424.5	13C2-PFDA	269315.7	0.269	5.000	4.854	97	70-130	
E13C7-PFUnDA	231187.9	13C2-PFDA	269315.7	0.858	5.000	4.984	100	70-130	
Ed5-NEtFOSAA	63701.7	13C2-PFDA	269315.7	0.237	5.000	5.004	100	70-130	
E13C2-PFDoDA	507556.8	13C2-PFDA	269315.7	1.885	5.000	4.893	98	70-130	
Ed7-NMePFOSAE	316777.8	13C2-PFDA	269315.7	1.176	5.000	5.090	102	70-130	
Ed3-NMePFOSA	68615.7	13C2-PFDA	269315.7	0.255	5.000	4.629	93	70-130	
Ed9-NEtPFOSAE	255767.8	13C2-PFDA	269315.7	0.950	5.000	4.939	99	70-130	
Ed5-NEtPFOSA	55378.5	13C2-PFDA	269315.7	0.206	5.000	4.824	96	70-130	
E13C2-PFTeDA	379571.6	13C2-PFDA	269315.7	1.409	5.000	4.948	99	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

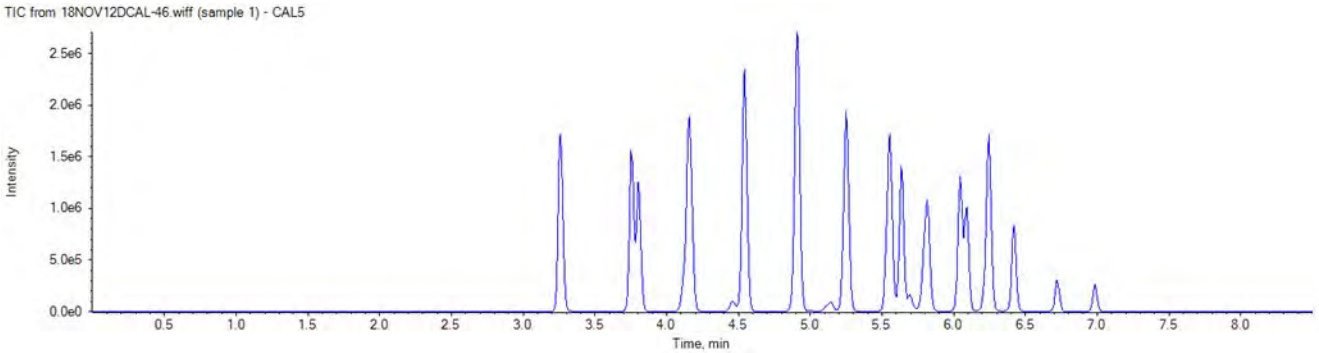
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-46.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	2700090.8		A	13C4-PFBA	3.26	698871.9	3.863	21.403
PFPeA	3.76	1.000	2660895.4		A	13C5-PFPeA	3.76	734598.3	3.622	20.969
PFBS	3.80	1.000	1630613.5		A	13C3-PFBS	3.81	428050.6	3.809	18.121
4:2-FTS	4.12	1.000	344695.9		A	13C2-4:2-FTS	4.12	51791.9	6.655	18.070
PFHxA	4.15	1.000	3158486.4		A	13C5-PFHxA	4.15	628952.8	5.022	20.968
PFPeS	4.17	1.100	815928.2		A	13C3-PFBS	3.81	428050.6	1.906	18.506
PFHpA	4.54	1.000	3269561.0		A	13C4-PFHpA	4.54	525802.1	6.218	20.612
PFHxS	4.54	1.000	1138604.3		M	13C3-PFHxS	4.54	309304.5	3.681	17.849
6:2-FTS	4.90	1.000	260254.3		A	13C2-6:2-FTS	4.90	31012.0	8.392	20.308
PFHpS	4.90	1.080	1145559.8		A	13C3-PFHxS	4.54	309304.5	3.704	19.496
PFOA	4.91	1.000	3291549.4		A	13C8-PFOA	4.91	805288.7	4.087	21.830
PFOS	5.24	1.000	1147826.8		M	13C8-PFOS	5.24	267157.6	4.296	18.789
PFNA	5.26	1.000	2725089.7		A	13C9-PFNA	5.26	441776.8	6.168	22.243
PFNS	5.53	1.060	725402.0		A	13C8-PFOS	5.24	267157.6	2.715	18.997
PFDA	5.56	1.000	2309359.5		A	13C6-PFDA	5.56	585231.2	3.946	20.920
8:2-FTS	5.56	1.000	206213.1		A	13C2-8:2-FTS	5.56	24192.1	8.524	19.873
PFOSA	5.64	1.000	2498877.9		A	13C8-PFOSA	5.64	596544.1	4.189	20.460
NMeFOSAA	5.70	1.000	250711.5		A	d3-NMeFOSAA	5.70	72424.5	3.462	19.564
PFDS	5.79	1.100	578877.5		A	13C8-PFOS	5.24	267157.6	2.167	19.633
PFUnDA	5.82	1.000	1773582.6		A	13C7-PFUnDA	5.82	231187.9	7.672	20.055
NEtFOSAA	5.83	1.000	237197.2		A	d5-NEtFOSAA	5.83	63701.7	3.724	19.520
PFDoDA	6.04	1.000	2099385.0		A	13C2-PFDoDA	6.04	507556.8	4.136	21.062
10:2-FTS	6.06	1.090	153343.6		A	13C2-8:2-FTS	5.56	24192.1	6.339	21.113
NMePFOSAE	6.09	1.000	1590507.1		M	d7-NMePFOSAE	6.08	316777.8	5.021	20.896
NMePFOSA	6.10	1.000	300855.7		A	d3-NMePFOSA	6.09	68615.7	4.385	21.631
PFDoS	6.21	1.190	288905.1		A	13C8-PFOS	5.24	267157.6	1.081	18.940
NEtPFOSAE	6.25	1.000	1660562.6		M	d9-NEtPFOSAE	6.23	255767.8	6.492	20.830
NEtPFOSA	6.26	1.000	258300.3		A	d5-NEtPFOSA	6.25	55378.5	4.664	21.421
PFTrDA	6.24	1.030	1679407.2		A	13C2-PFDoDA	6.04	507556.8	3.309	20.884
PFTeDA	6.42	1.000	1418276.7		A	13C2-PFTeDA	6.42	379571.6	3.737	20.945
PFHxDA	6.72	1.050	627350.7		A	13C2-PFTeDA	6.42	379571.6	1.653	19.691
PFODA	6.98	1.090	544296.5		A	13C2-PFTeDA	6.42	379571.6	1.434	19.971

Total Ion Chromatogram

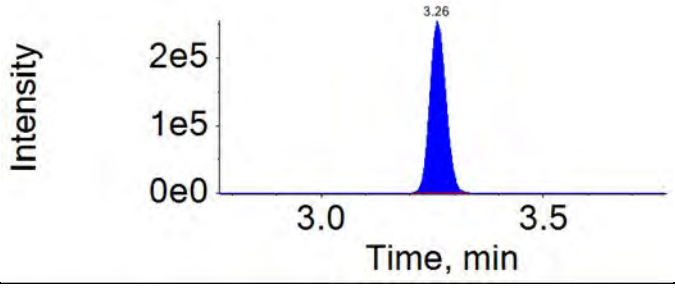


APPROVED
By MCD at 6:33 pm, 11/12/18

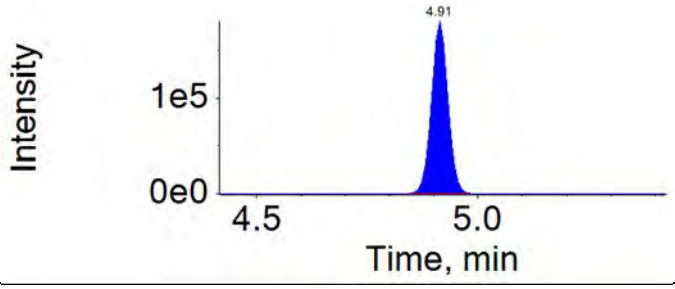
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

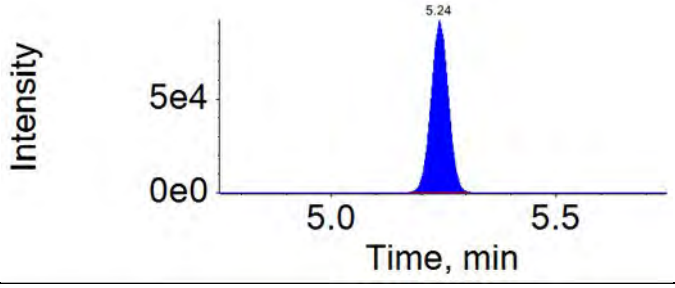
Injection Standard: 13C3-PFBA
216.0 / 172.0



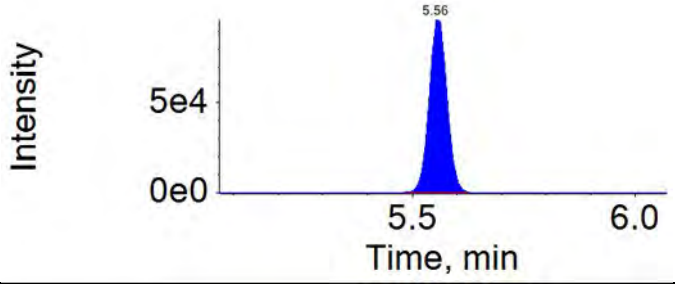
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

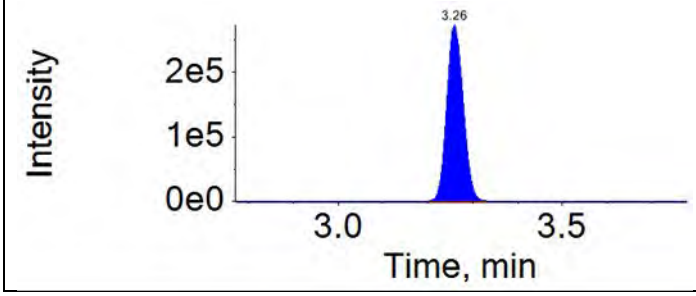


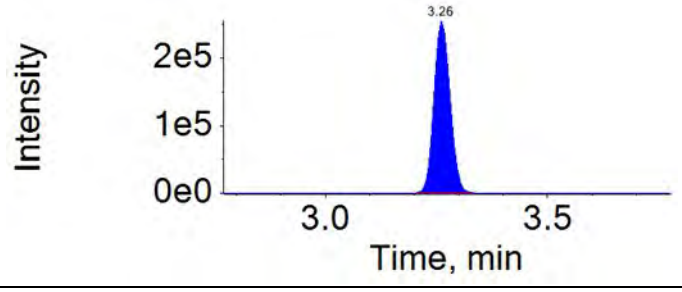
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

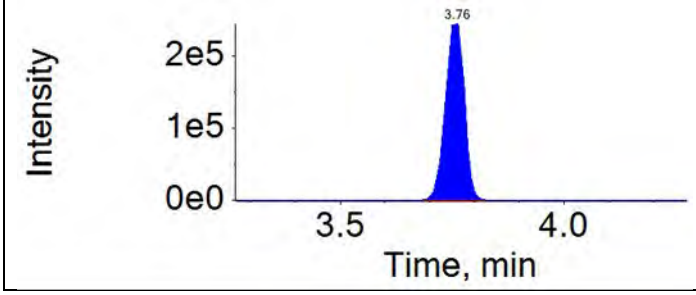
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

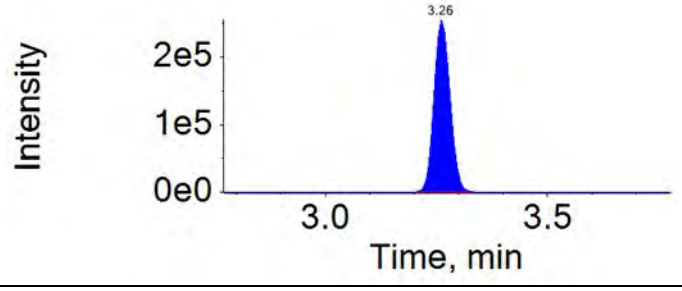
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



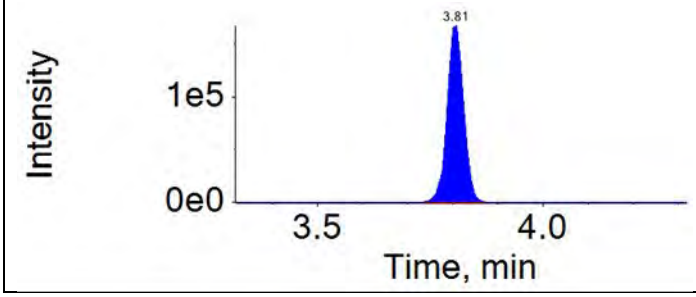


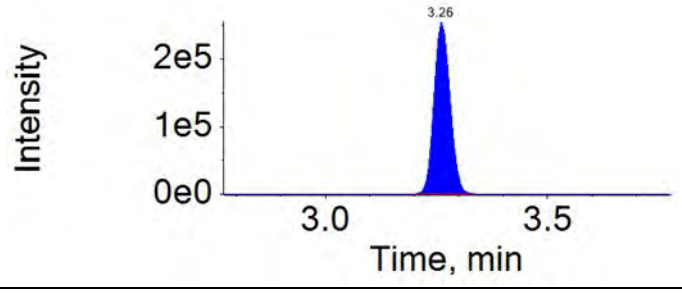
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



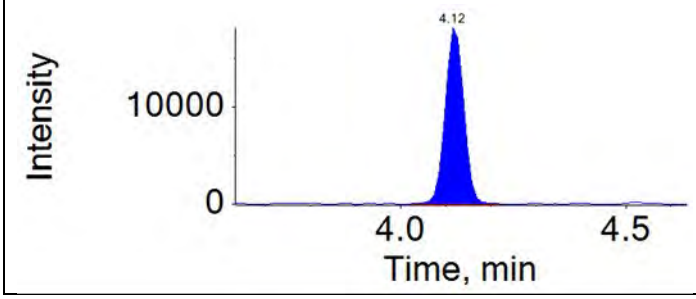


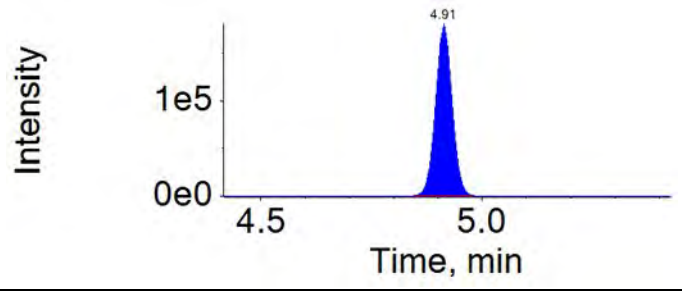
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



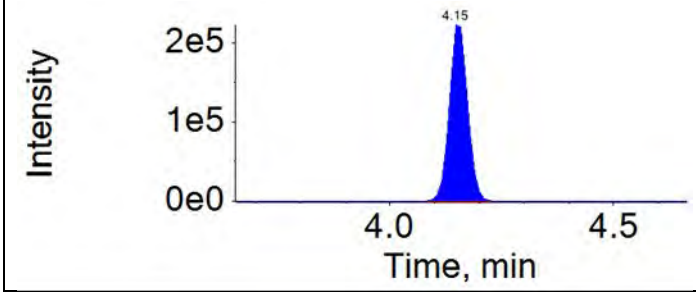


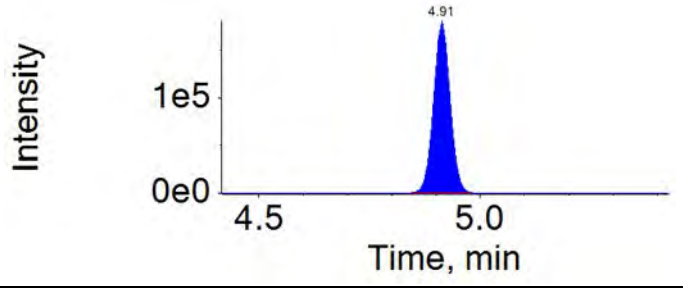
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

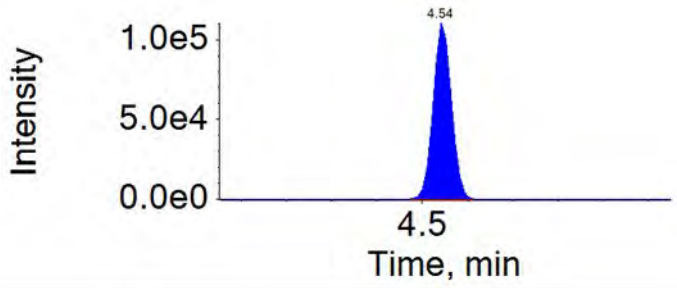
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

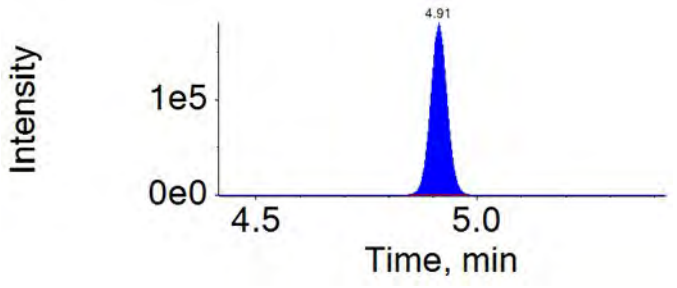
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



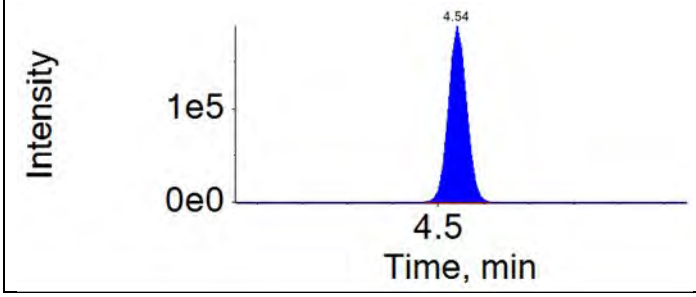


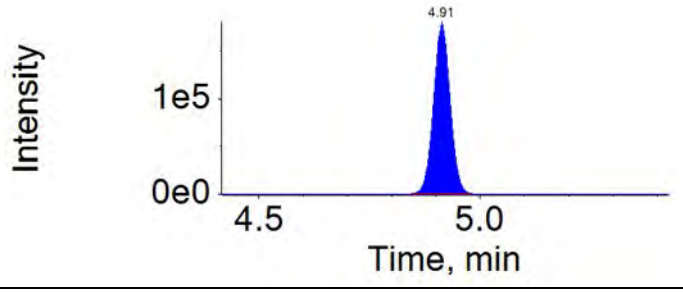
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



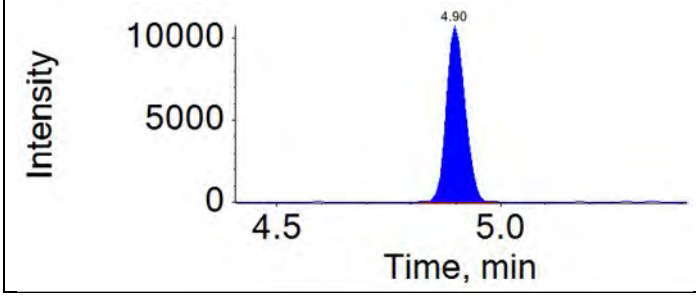


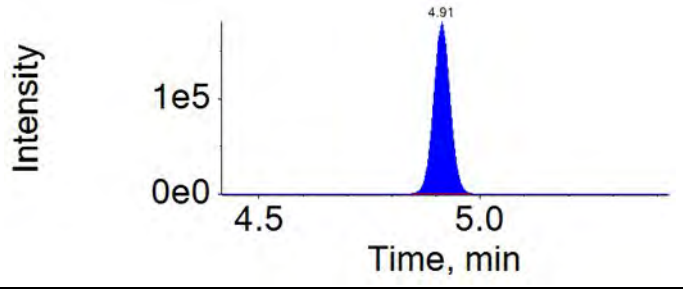
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

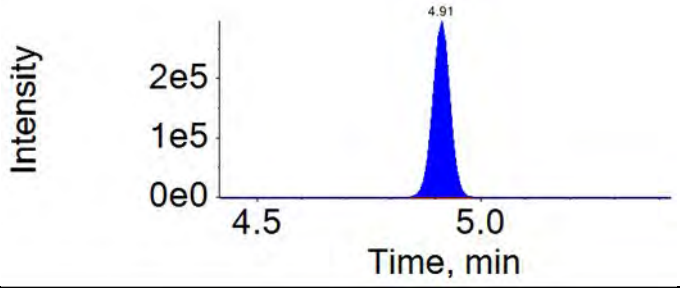
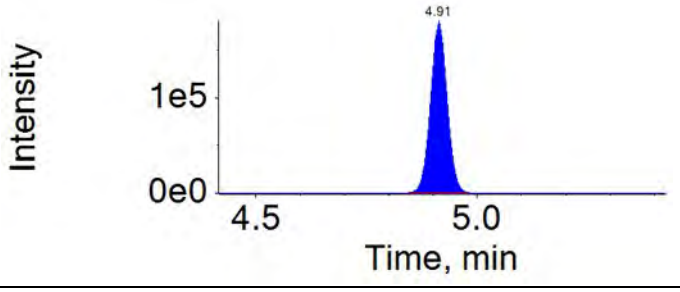


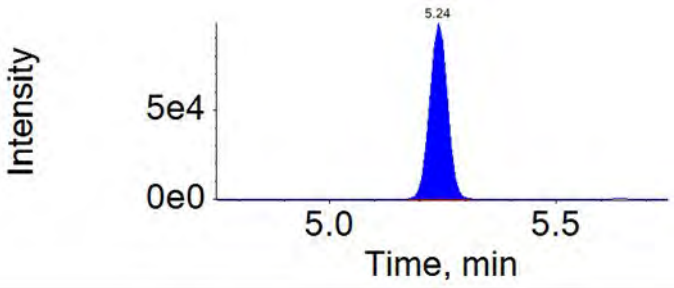
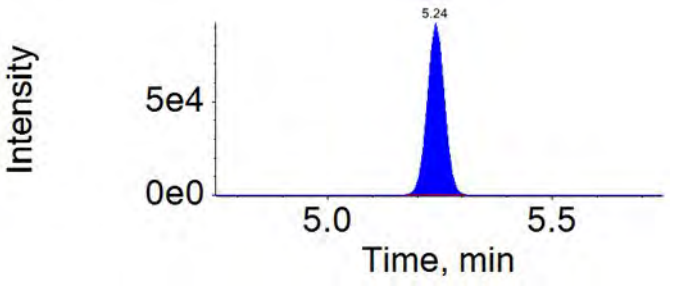


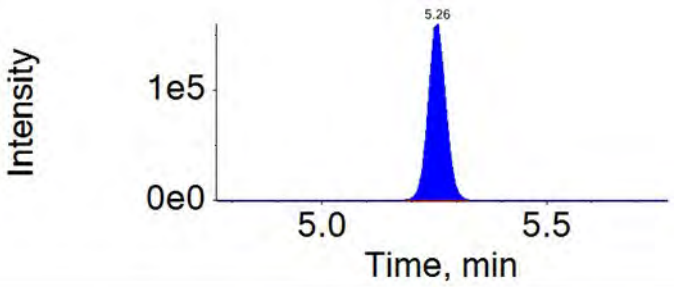
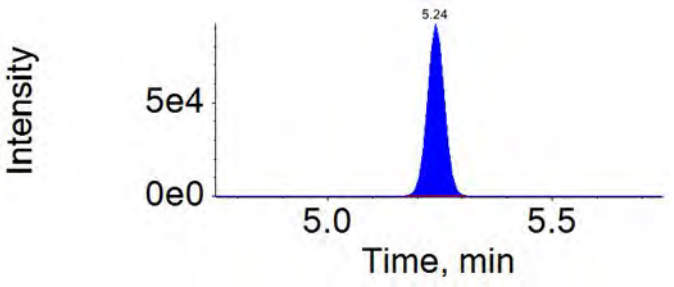
APPROVED
By MCD at 6:33 pm, 11/12/18

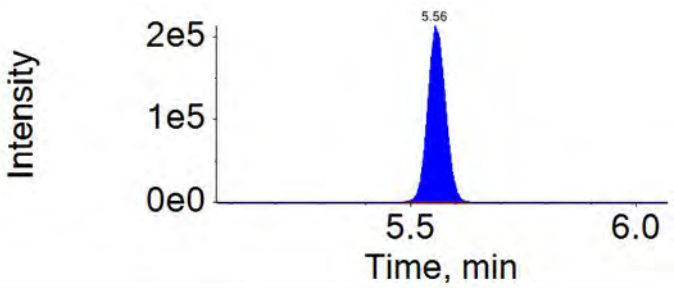
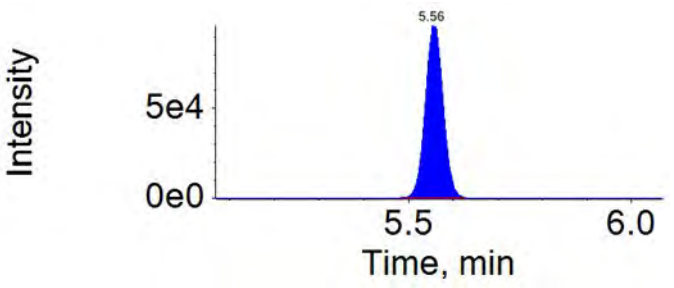
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

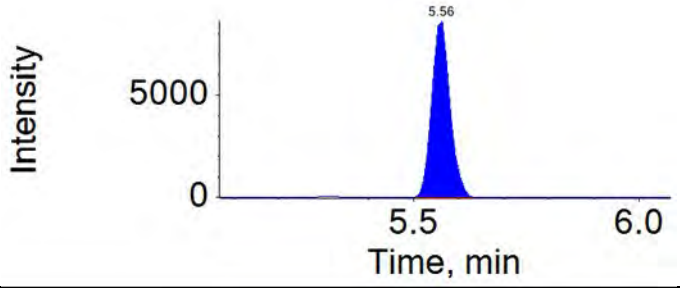
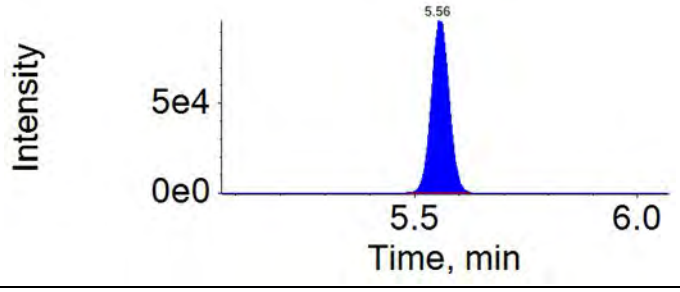
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

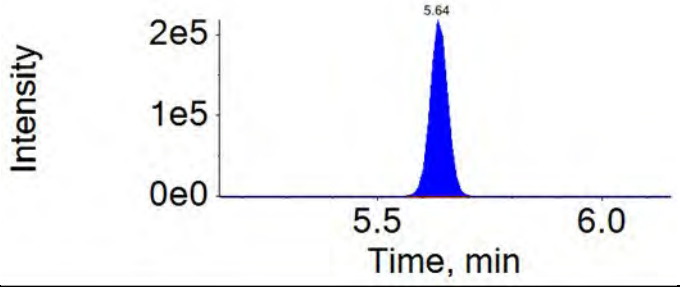
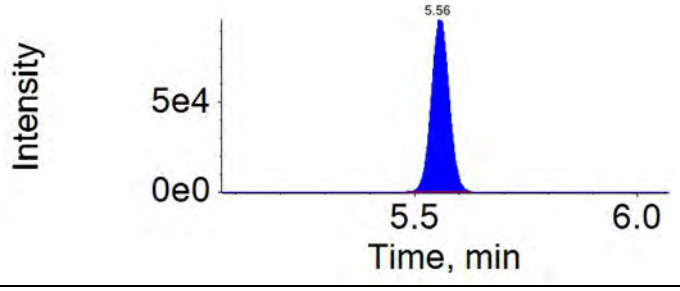
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

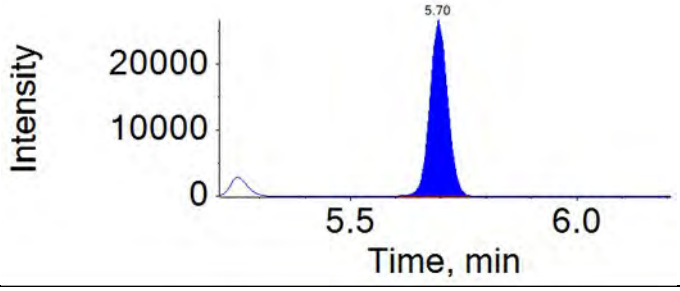
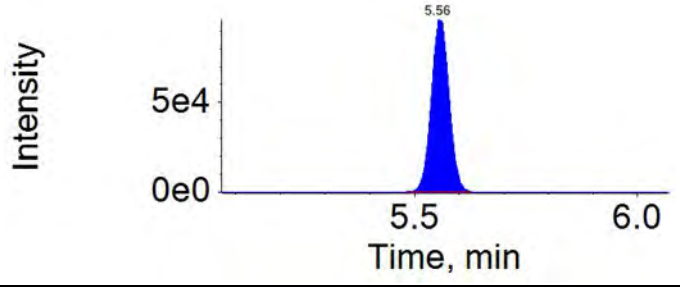
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

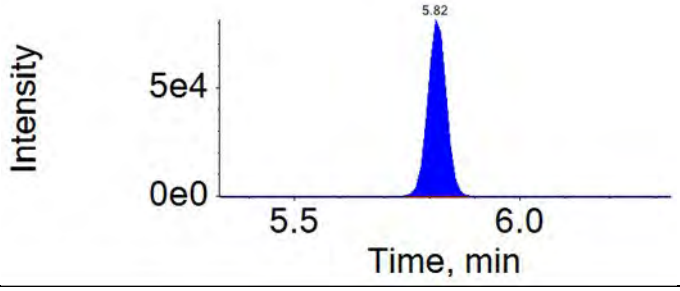
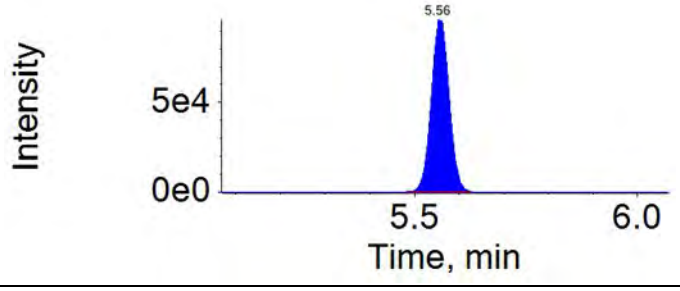
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

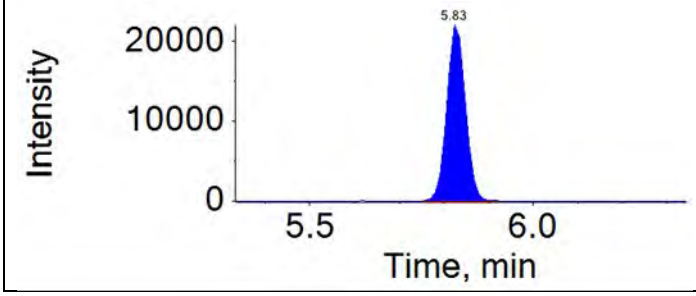
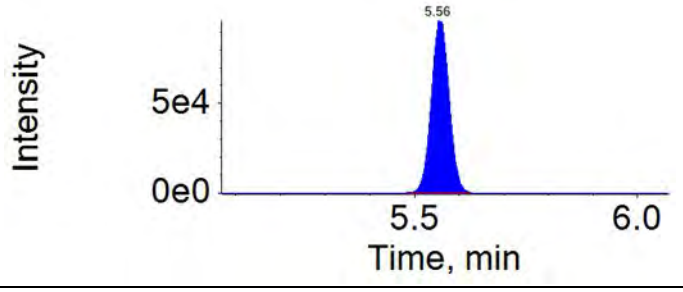
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

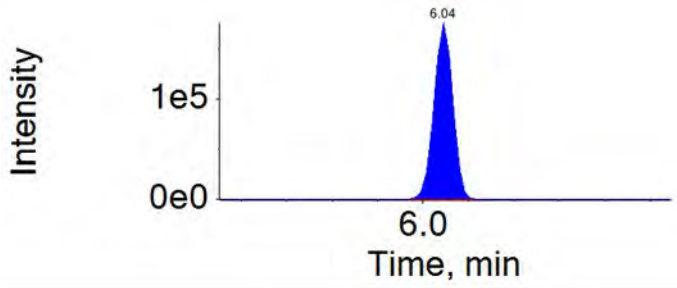
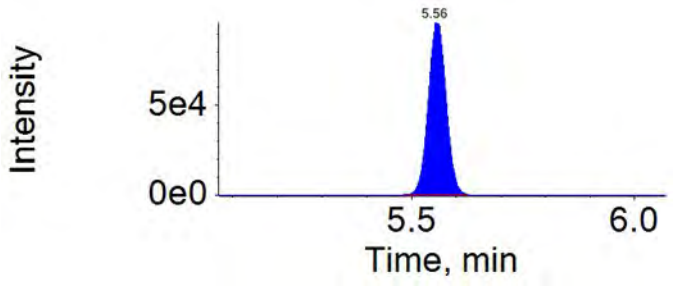
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

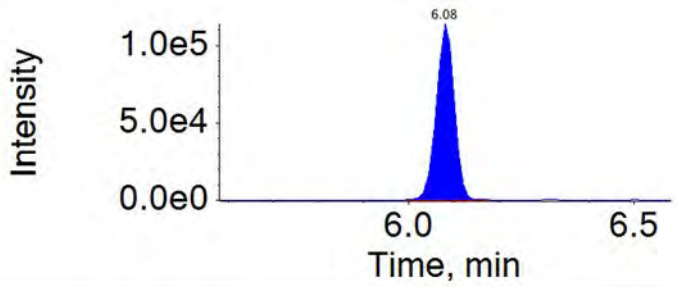
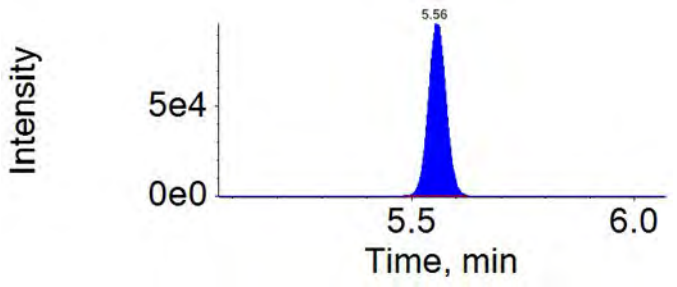
APPROVED
By MCD at 6:33 pm, 11/12/18

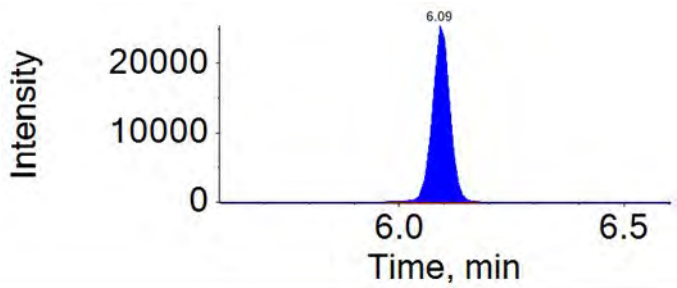
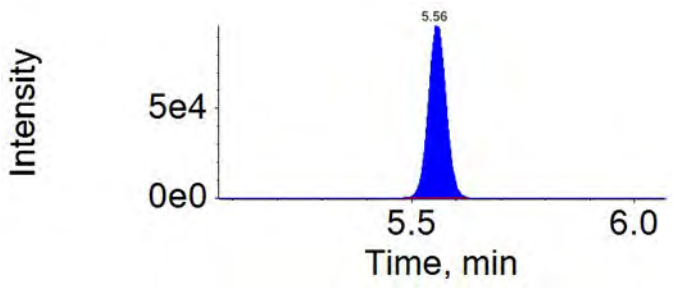
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

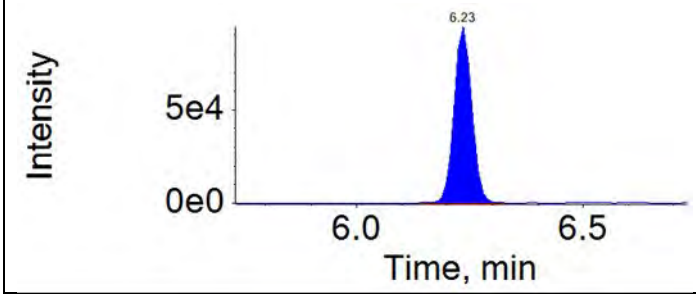
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

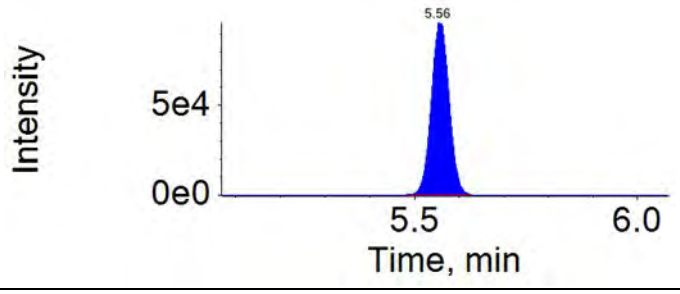
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

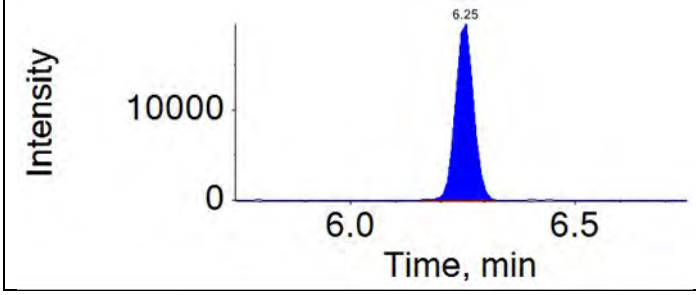
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

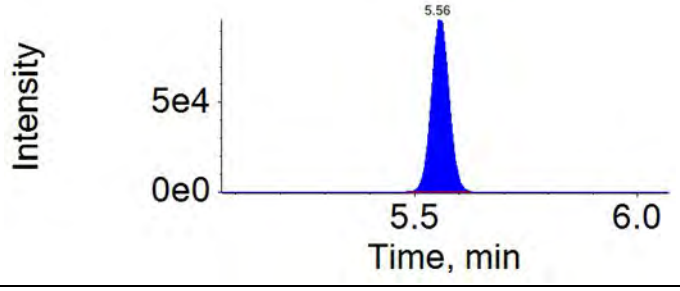
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



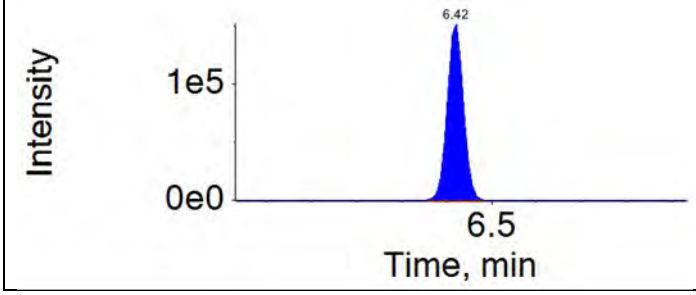


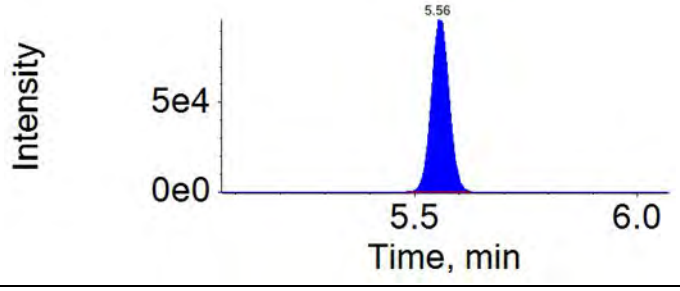
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



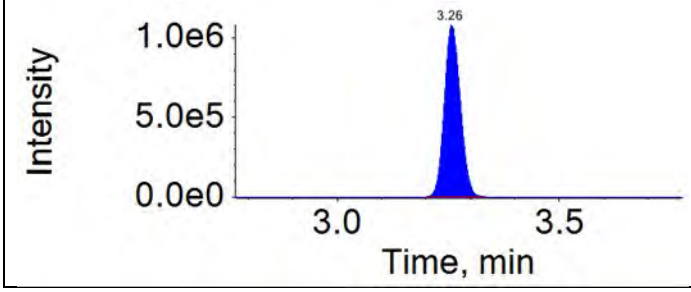


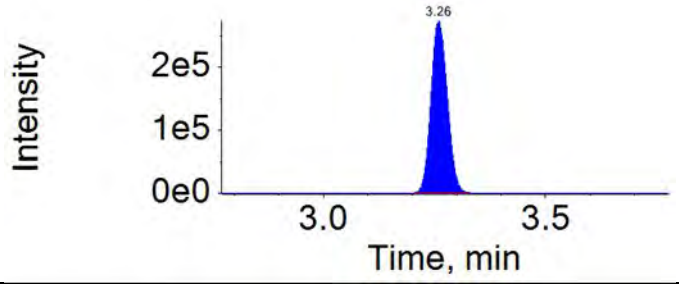
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

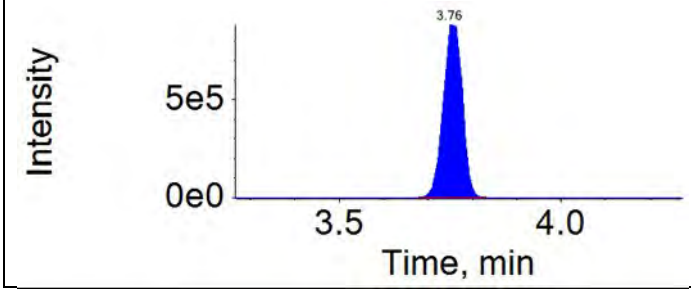
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

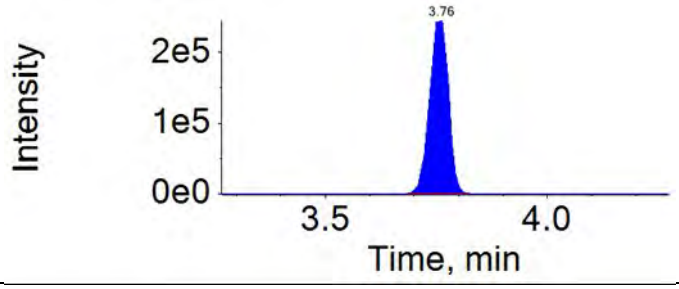
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



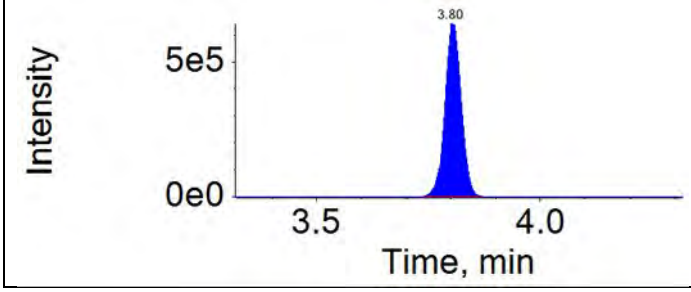


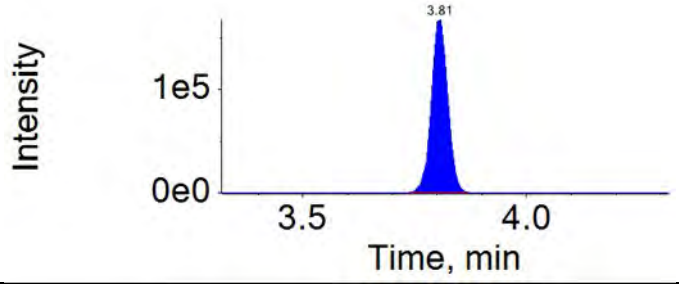
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



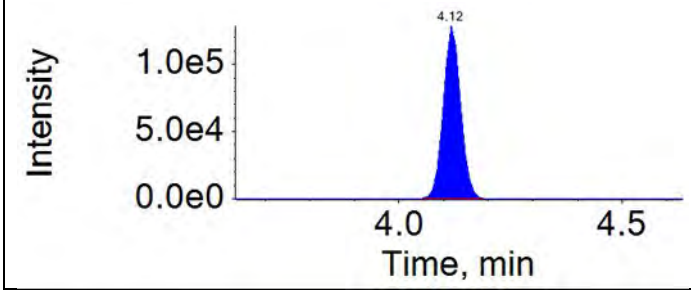


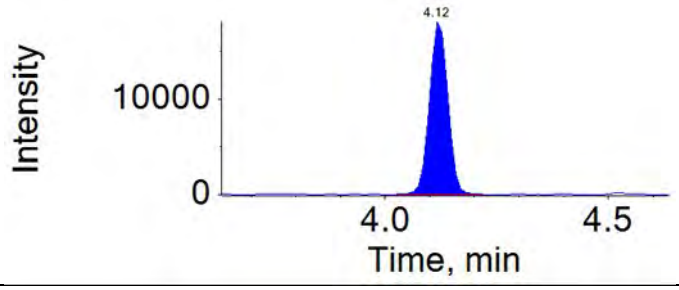
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



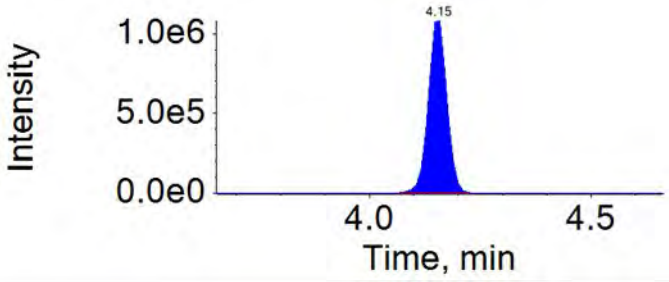


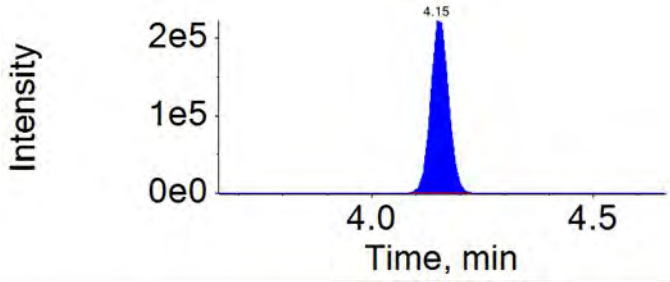
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

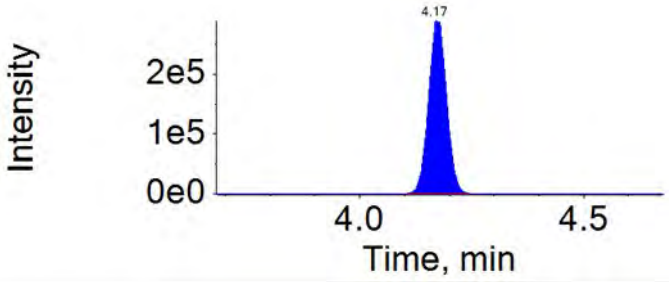
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

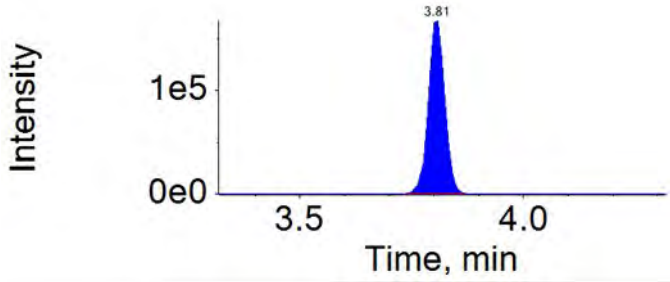
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



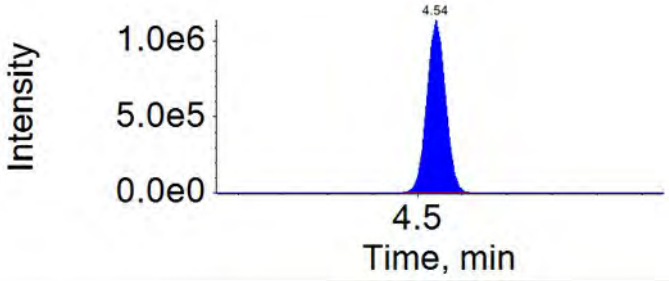


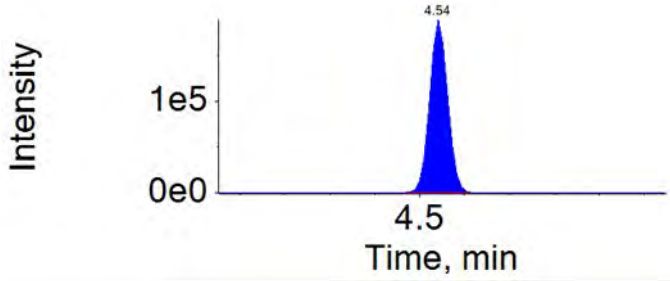
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



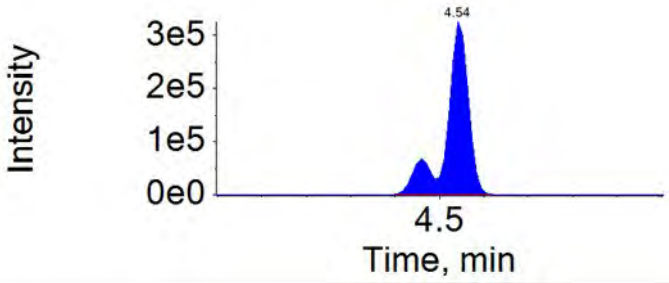


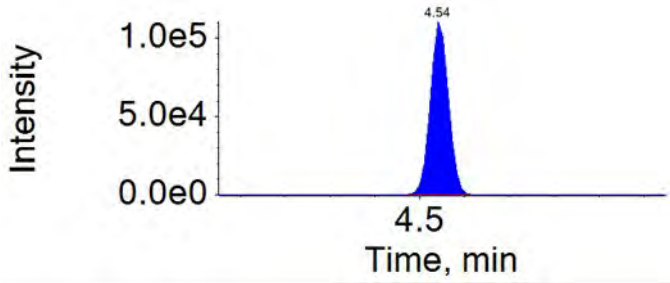
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



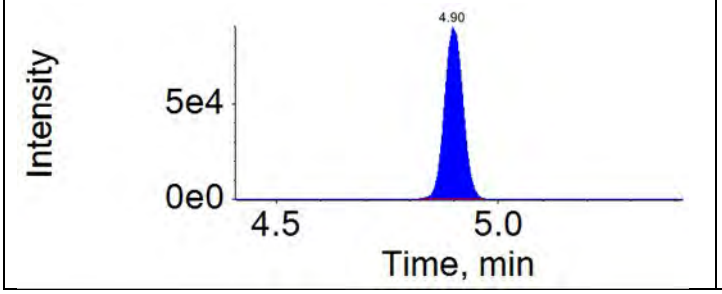


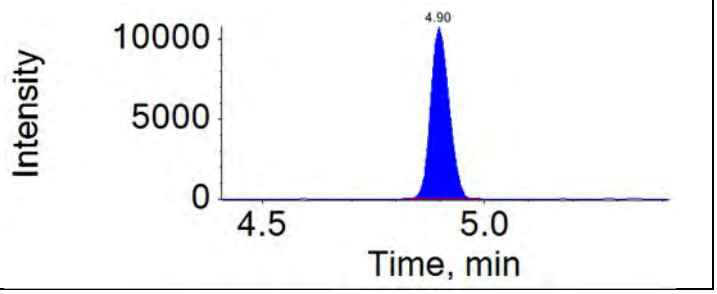
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

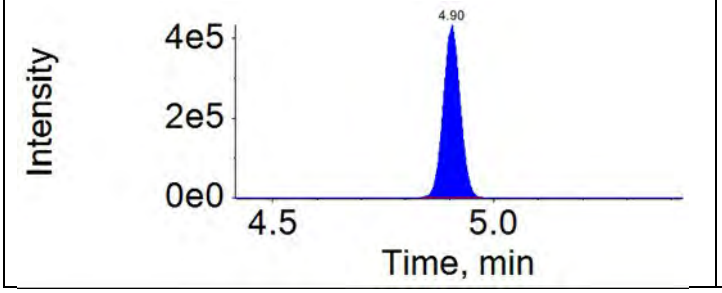
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

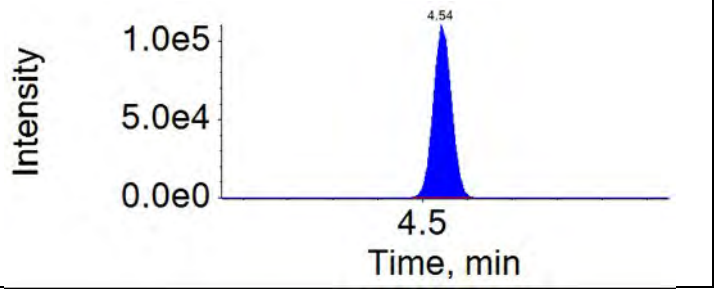
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



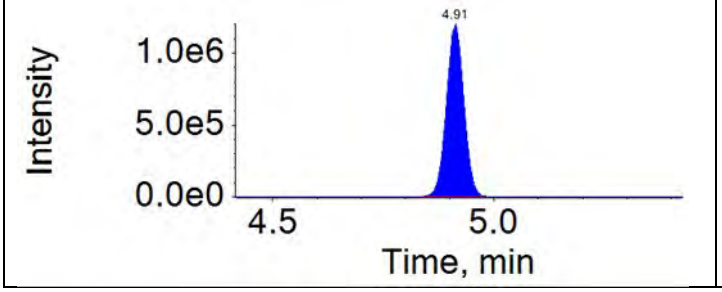


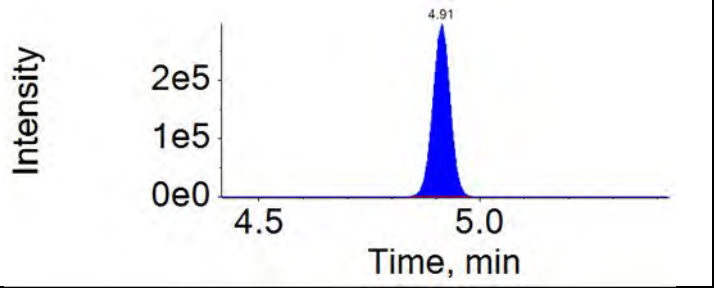
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



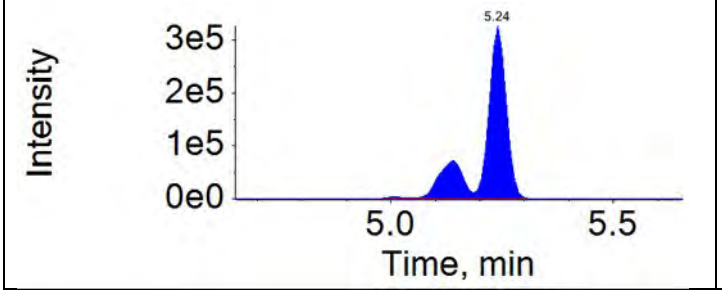


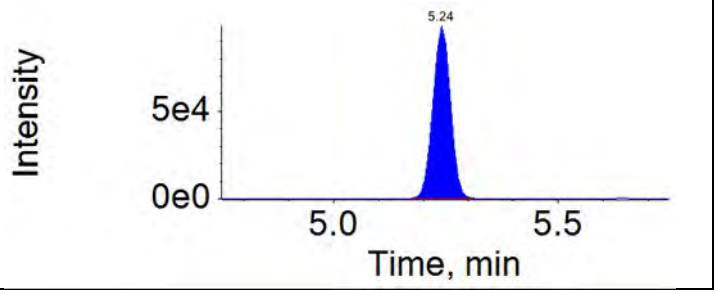
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



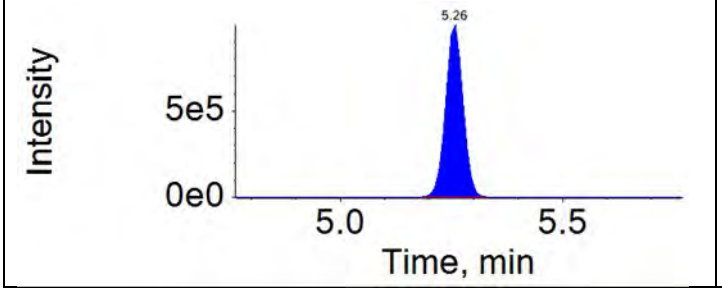


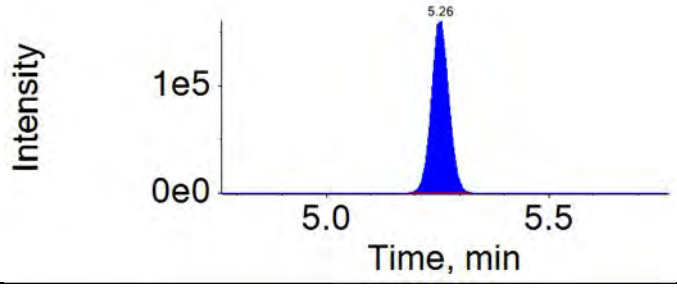
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

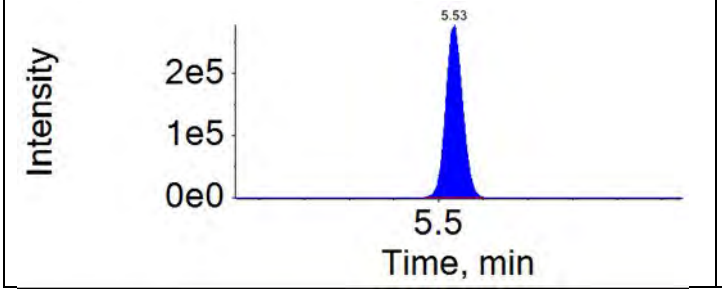
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

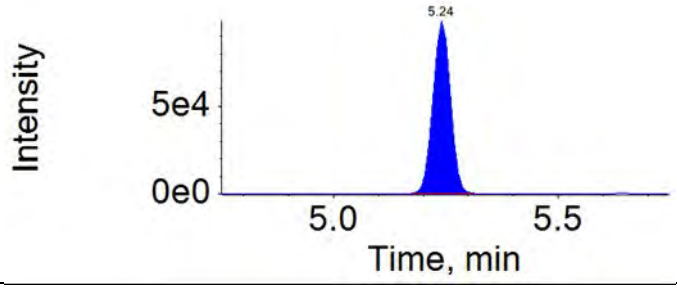
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



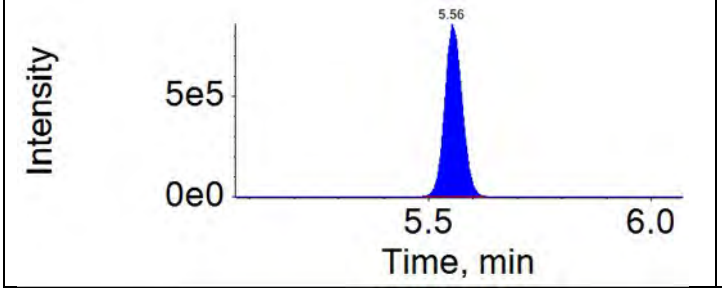


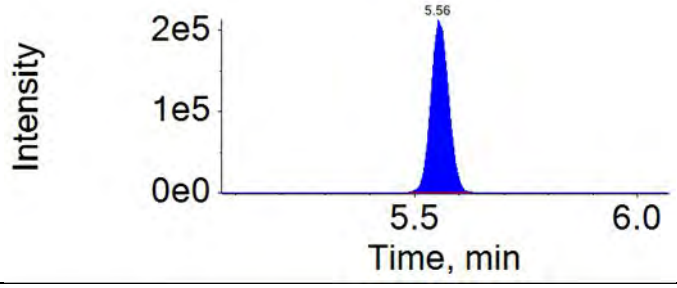
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



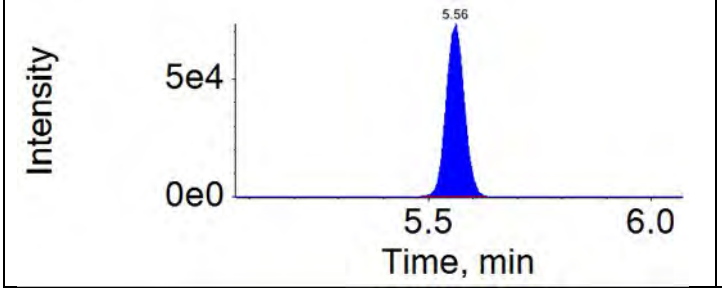


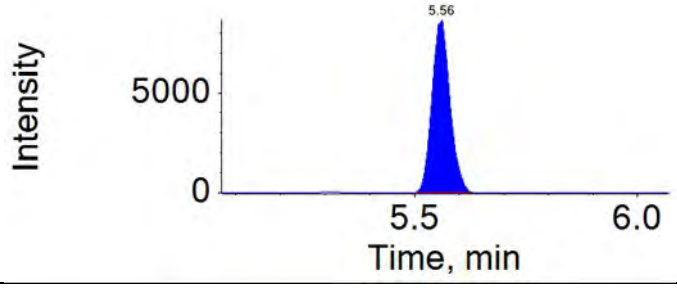
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



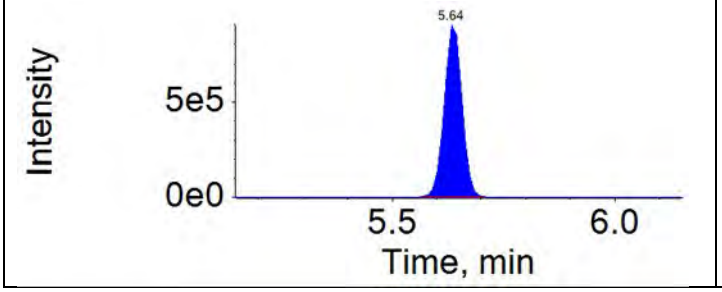


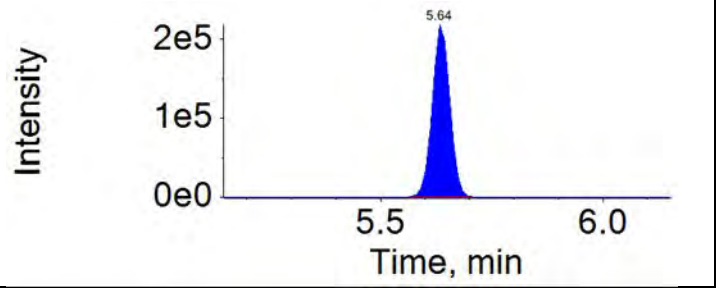
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

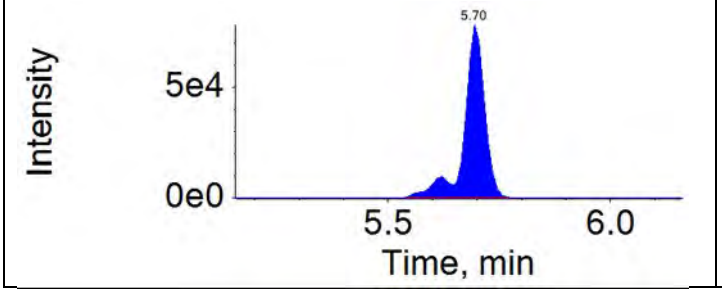
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

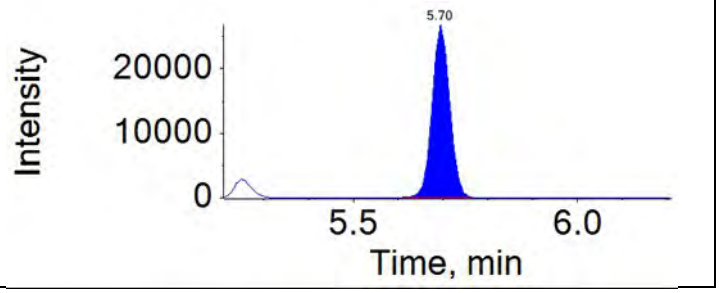
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



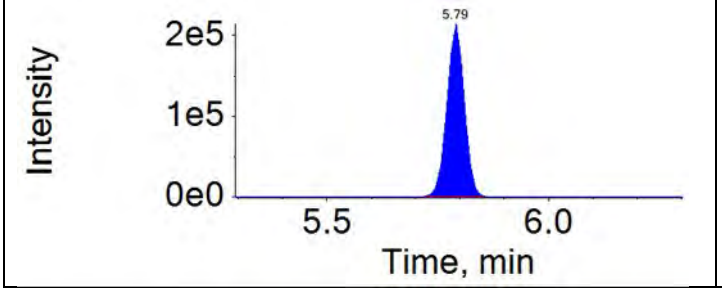


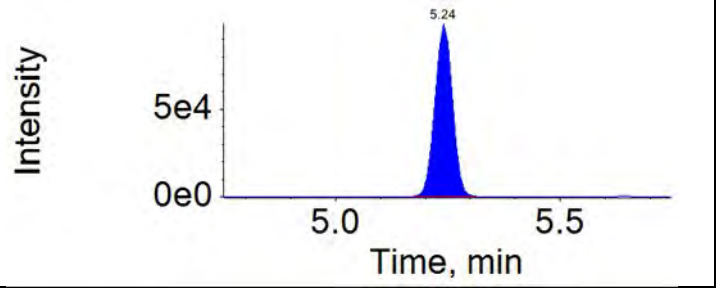
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



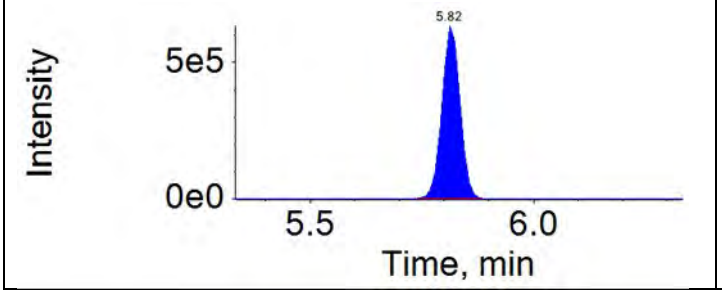


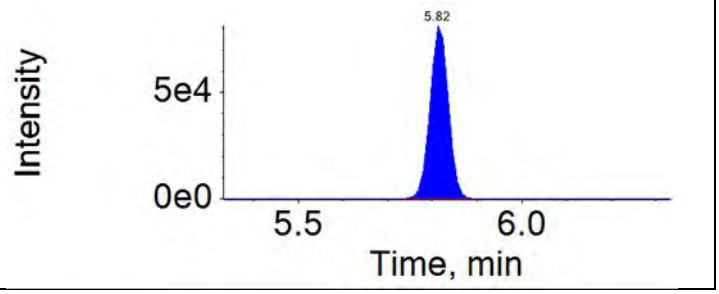
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



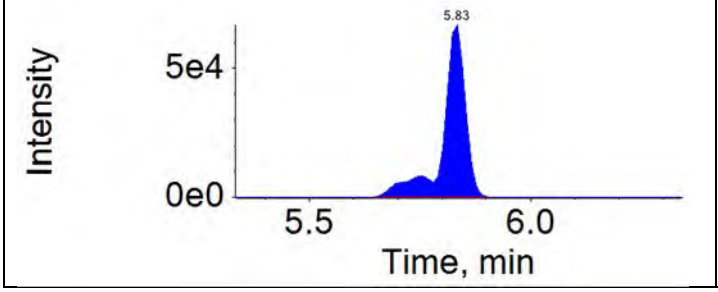


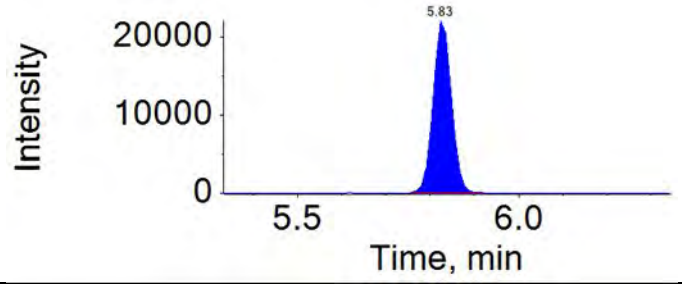
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

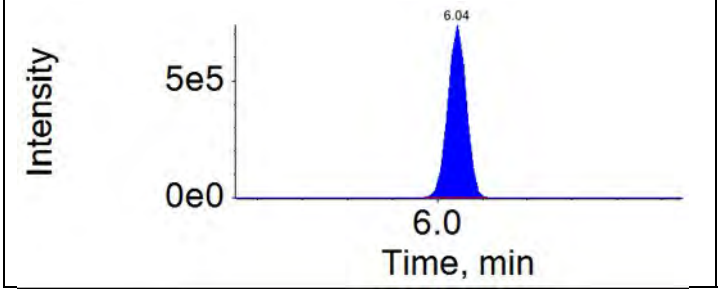
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

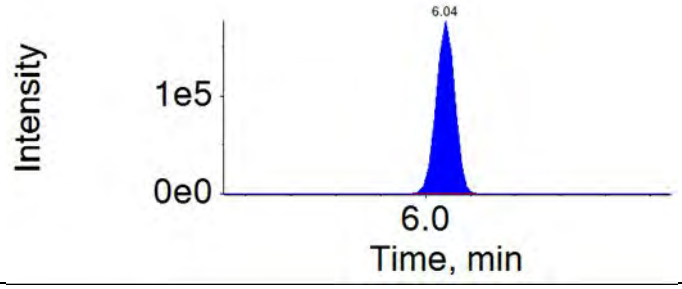
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



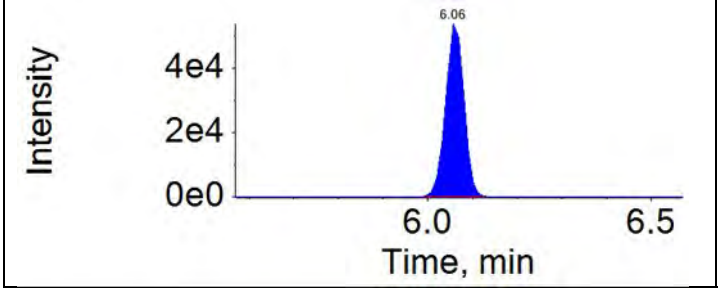


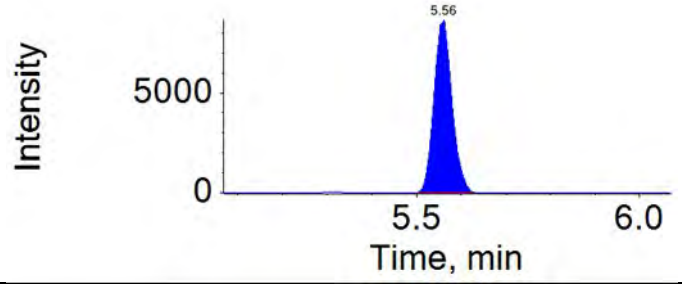
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



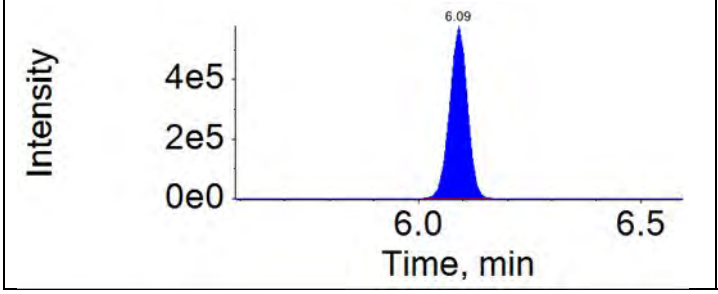


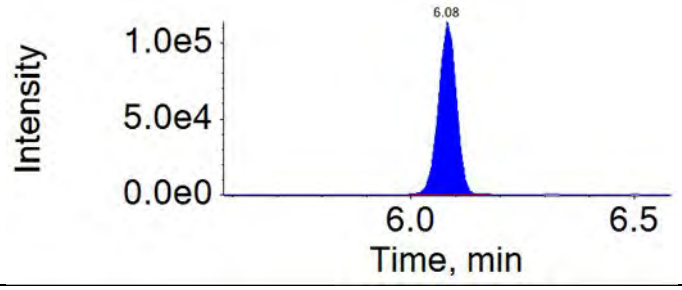
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



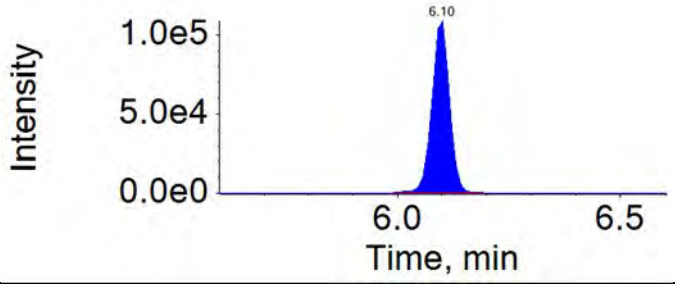


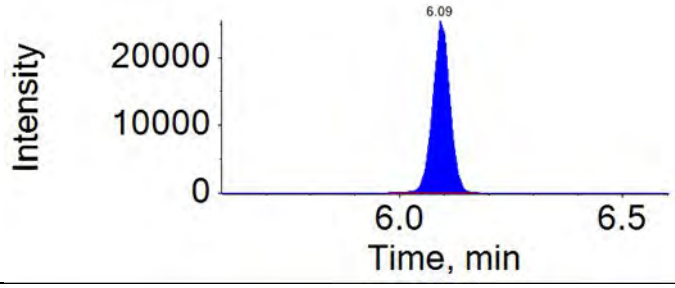
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

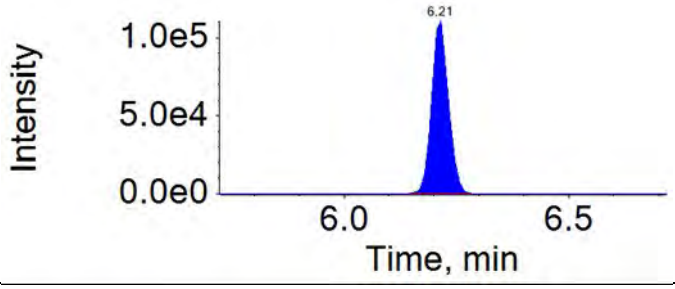
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

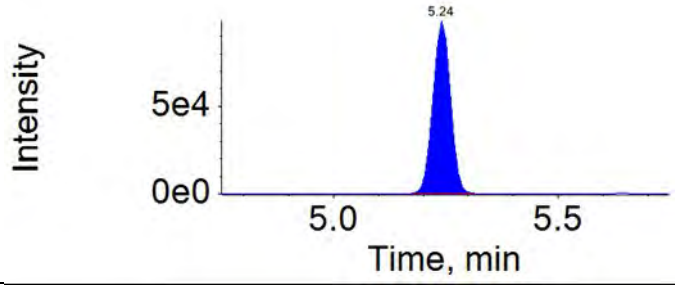
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



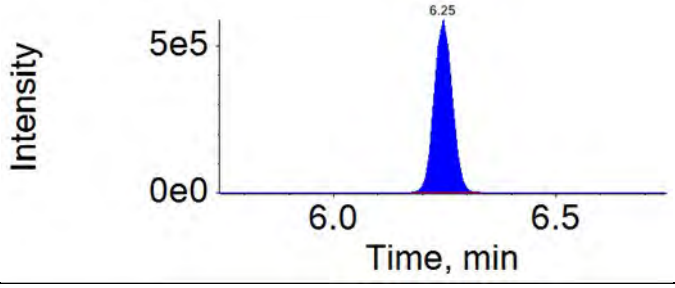


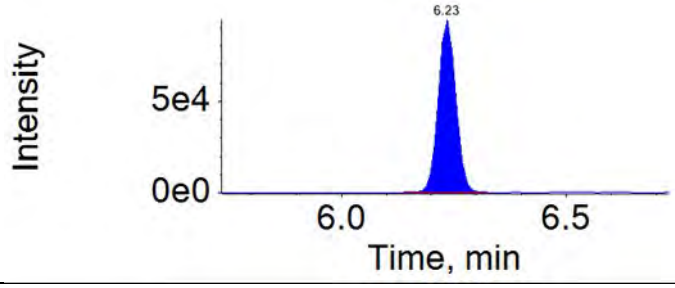
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



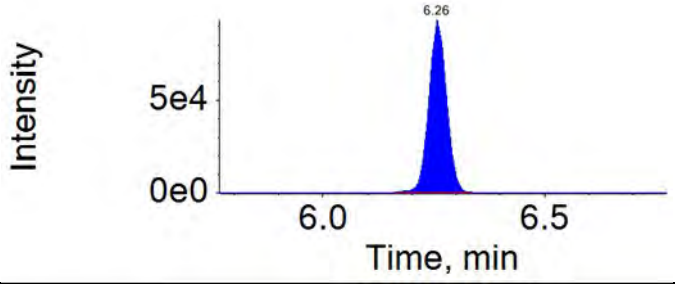


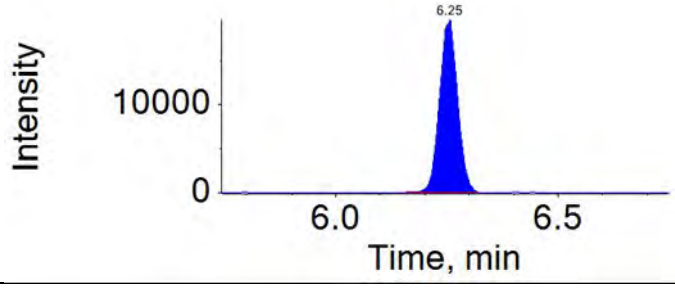
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

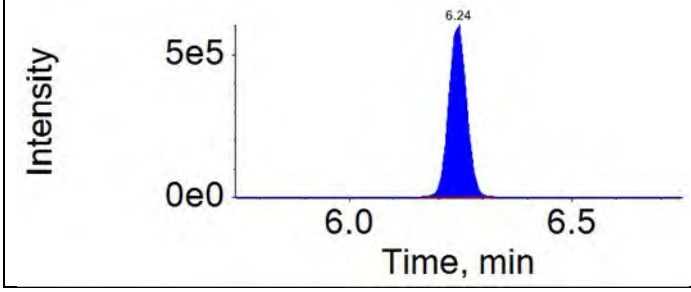
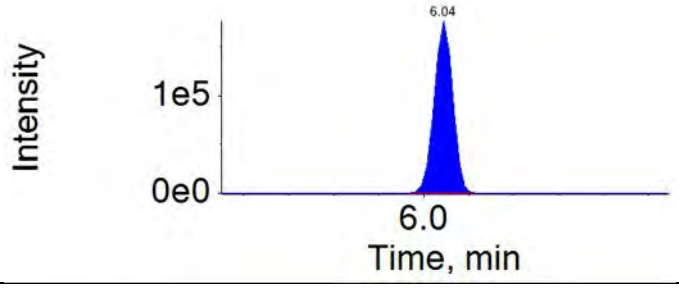


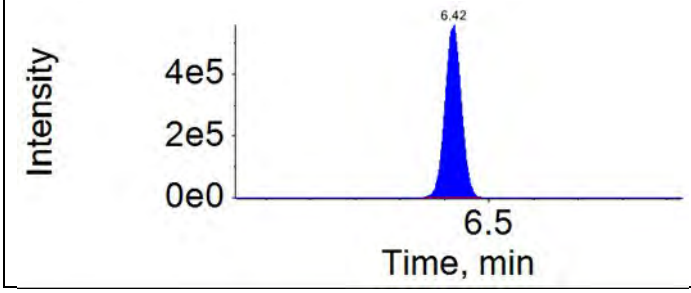
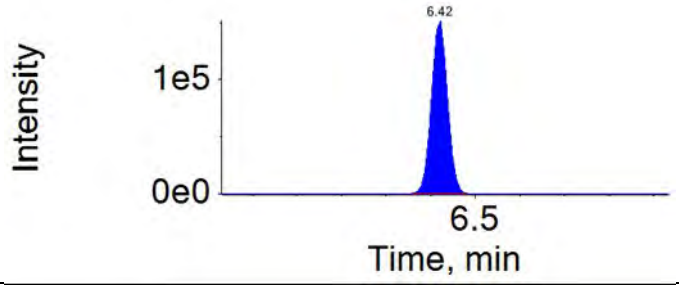


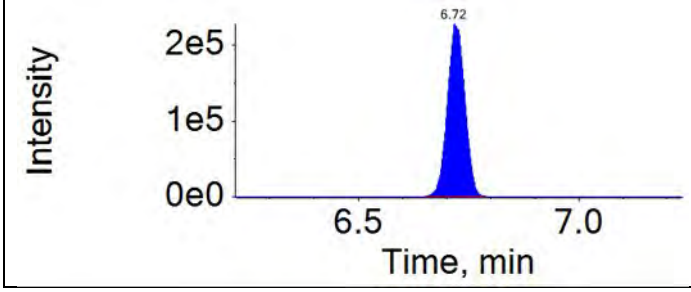
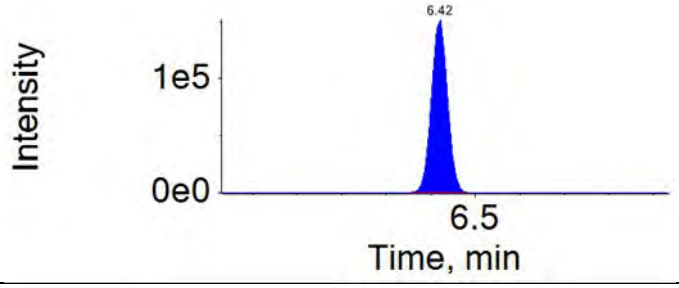
APPROVED
By MCD at 6:33 pm, 11/12/18

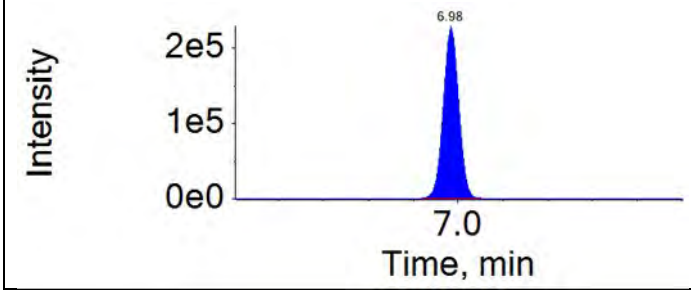
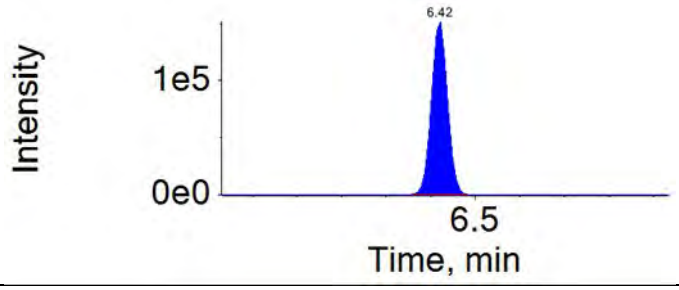
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

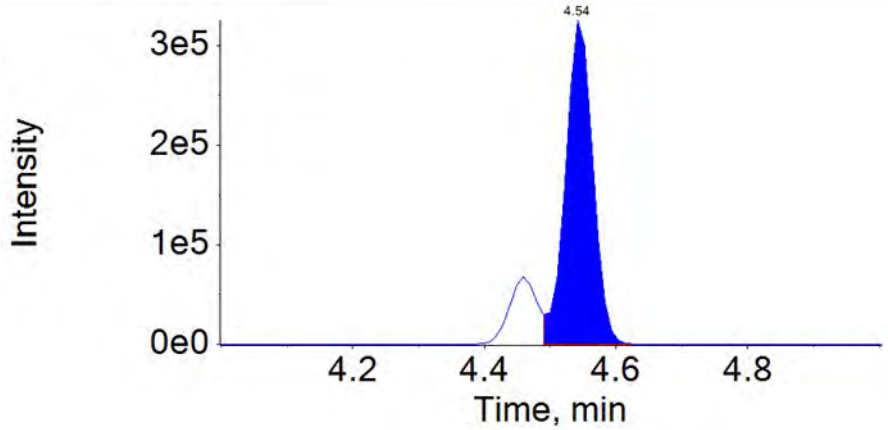
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

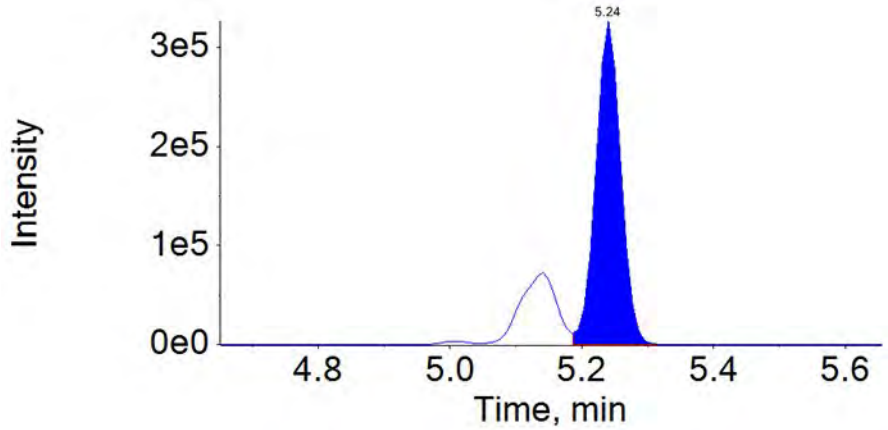
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
943687.14
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



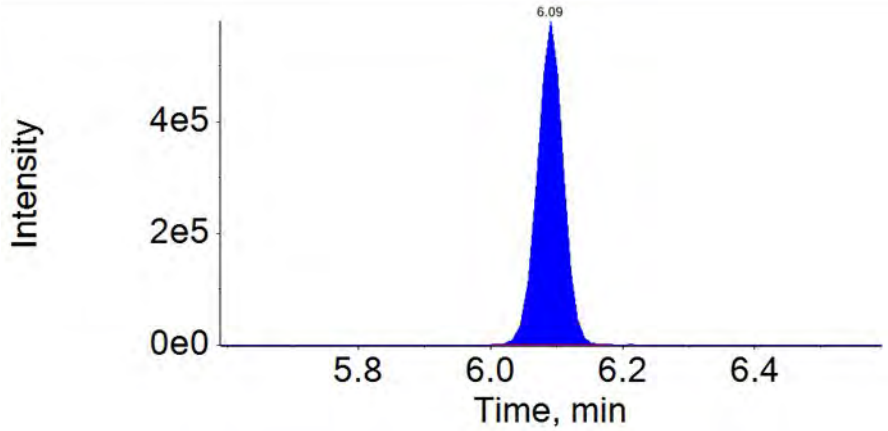
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
860586.56
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
NMePFOSAE
RT (min.):
6.09
Peak Area:
1591493.63
Mass Range:
616.0 / 59.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5

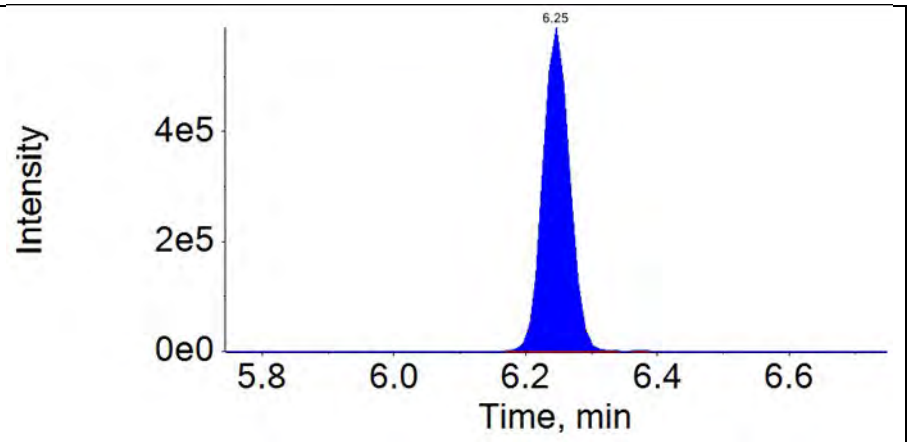


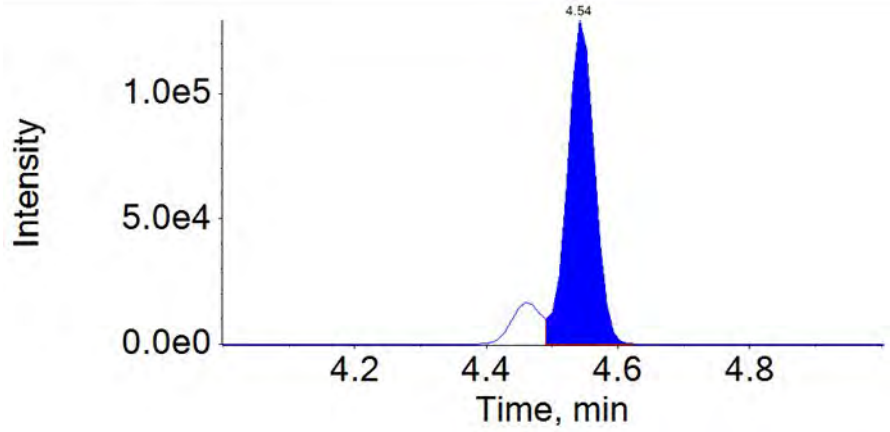
Integration Comment: incorrect integration

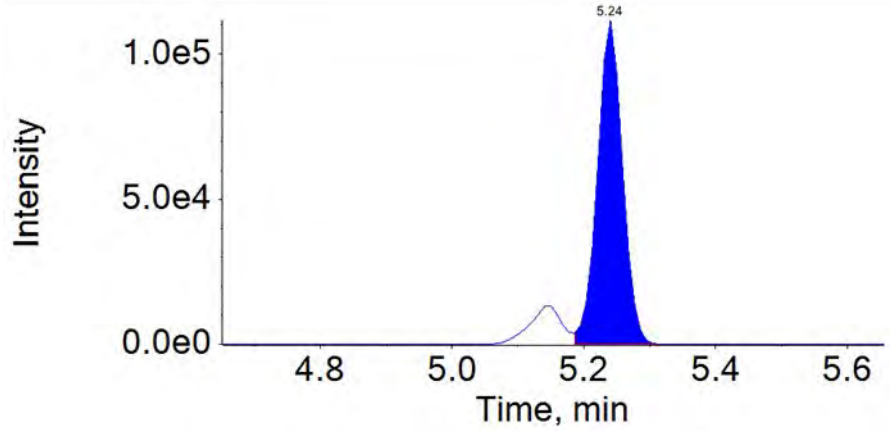
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtPFOSAE **RT (min.):** 6.25 **Peak Area:** 1662069.44 **Mass Range:** 630.0 / 59.0 **File Name:** 18NOV12DCAL-46.wiff **Sample Name:** CAL5	 **Integration Comment:** incorrect integration

Component Name: PFHxS_2 **RT (min.):** 4.54 **Peak Area:** 369522.57 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-46.wiff **Sample Name:** CAL5	 **Integration Comment:** incorrect integration

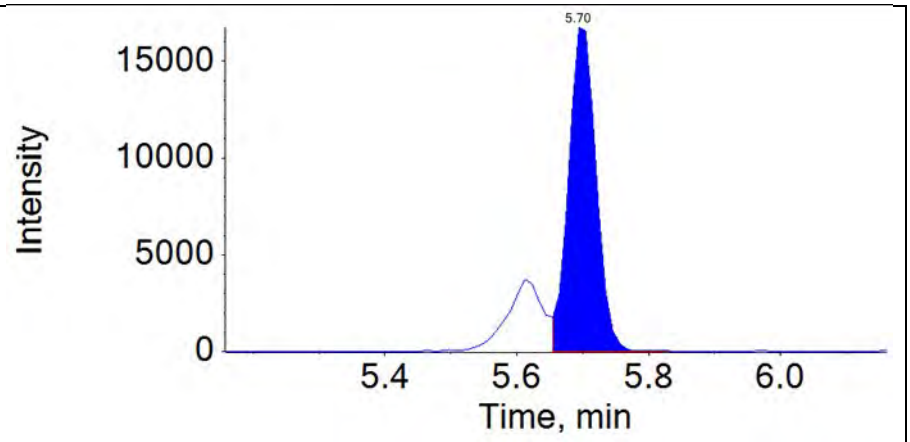
Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 295251.82 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-46.wiff **Sample Name:** CAL5	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

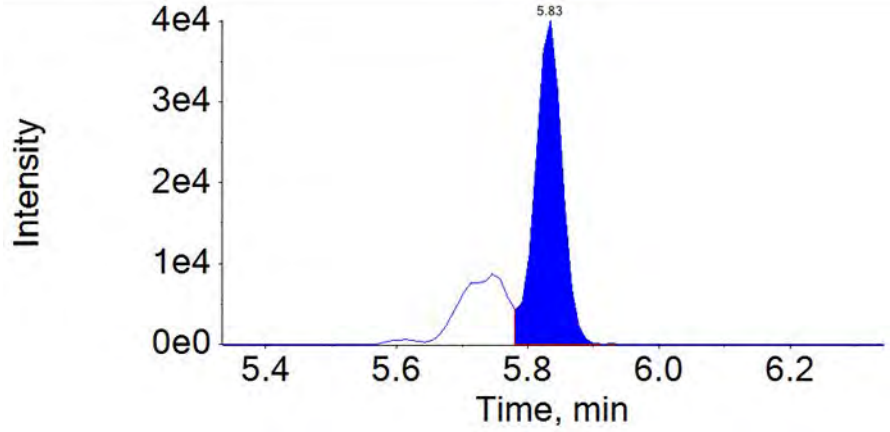
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
48911.60
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



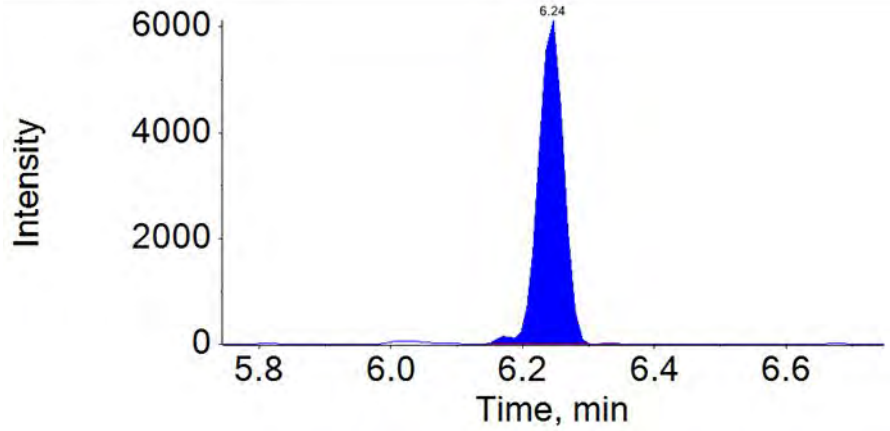
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
114677.93
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
16434.79
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

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By MCD at 6:33 pm, 11/12/18

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By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 6:33 pm, 11/12/18

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Ion Ratio Report

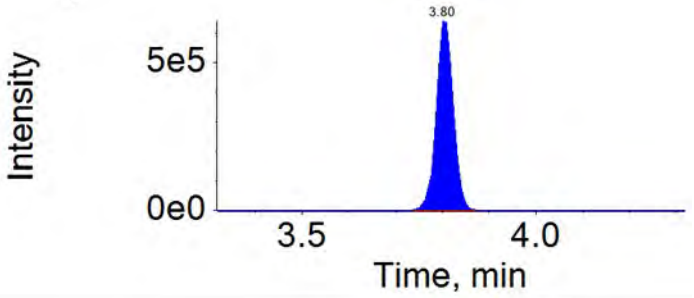
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-46.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	1630613.49	A	0.3619	0.3539			
PFBS_2	3.80	1.00	577021.23	A	0.3619	0.3539	-2	50	
4:2-FTS	4.12	1.00	344695.89	A	0.6730	0.5792			
4:2 FTS_2	4.12	1.00	199643.08	A	0.6730	0.5792		#NA!	
PFHxA	4.15	1.00	3158486.41	A	0.0117	0.0109			
PFHxA_2	4.15	1.00	34335.08	A	0.0117	0.0109	-7	50	
PFPeS	4.17	1.10	815928.18	A	0.5191	0.5405			
PFPeS_2	4.17	1.10	440987.79	A	0.5191	0.5405	4	50	
PFHpA	4.54	1.00	3269561.01	A	0.0563	0.0518			
PFHpA_2	4.54	1.00	169510.99	A	0.0563	0.0518	-8	50	
PFHxS	4.54	1.00	1138604.25	M	0.3428	0.3697			
PFHxS_2	4.54	1.00	420898.36	M	0.3428	0.3697	8	50	
6:2-FTS	4.90	1.00	260254.34	A	0.6604	0.6706			
6:2 FTS_2	4.90	1.00	174514.29	A	0.6604	0.6706		#NA!	
PFHpS	4.90	1.08	1145559.80	A	0.4066	0.4043			
PFHpS_2	4.90	1.08	463097.70	A	0.4066	0.4043	-1	50	
PFOA	4.91	1.00	3291549.40	A	0.0562	0.0563			
PFOA_2	4.91	1.00	185238.19	A	0.0562	0.0563	0	50	
PFOS	5.24	1.00	1147826.77	M	0.2968	0.2969			
PFOS_2	5.24	1.00	340771.88	M	0.2968	0.2969	0	50	
PFNA	5.26	1.00	2725089.71	A	0.0229	0.0218			
PFNA_2	5.26	1.00	59324.51	A	0.0229	0.0218	-5	50	
PFNS	5.53	1.06	725402.00	A	0.4828	0.4661			
PFNS_2	5.53	1.06	338109.67	A	0.4828	0.4661	-3	50	
PFDA	5.56	1.00	2309359.54	A	0.0081	0.0056			
PFDA_2	5.56	1.00	12923.91	A	0.0081	0.0056	-31	50	
8:2-FTS	5.56	1.00	206213.12	A	0.6814	0.6384			
8:2 FTS_2	5.56	1.00	131655.86	A	0.6814	0.6384		#NA!	
NMeFOSAA	5.70	1.00	250711.49	A	0.2569	0.2507			
NMeFOSAA_2	5.70	1.00	62849.33	M	0.2569	0.2507	-2	50	
PFDS	5.79	1.10	578877.50	A	0.5144	0.4977			
PFDS_2	5.79	1.10	288112.49	A	0.5144	0.4977	-3	50	
PFUnDA	5.82	1.00	1773582.60	A	0.0058	0.0044			
PFUnDA_2	5.82	1.00	7755.59	A	0.0058	0.0044	-25	50	
NEtFOSAA	5.83	1.00	237197.18	A	0.7253	0.6651			
NEtFOSAA_2	5.83	1.00	157758.05	M	0.7253	0.6651	-8	50	
PFDoDA	6.04	1.00	2099385.04	A	0.0157	0.0116			
PFDoDA_2	6.04	1.00	24326.91	A	0.0157	0.0116	-26	50	
10:2-FTS	6.06	1.09	153343.55	A	0.6356	0.6979			
10:2 FTS_2	6.06	1.09	107018.53	A	0.6356	0.6979		#NA!	
PFTrDA	6.24	1.03	1679407.24	A	0.0086	0.0096			
PFTrDA_2	6.24	1.03	16152.60	M	0.0086	0.0096	12	50	
PFTeDA	6.42	1.00	1418276.72	A	0.0062	0.0062			
PFTeDA_2	6.42	1.00	8850.65	A	0.0062	0.0062	0	50	
PFHxDA	6.72	1.05	627350.68	A	0.0683	0.0680			
PFHxDA_2	6.72	1.05	42651.35	A	0.0683	0.0680	0	50	
PFODA	6.98	1.09	544296.46	A	0.0277	0.0265			
PFODA_2	6.98	1.09	14445.27	A	0.0277	0.0265	-4	50	

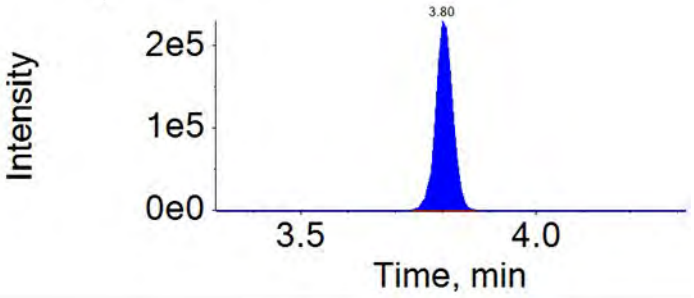
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

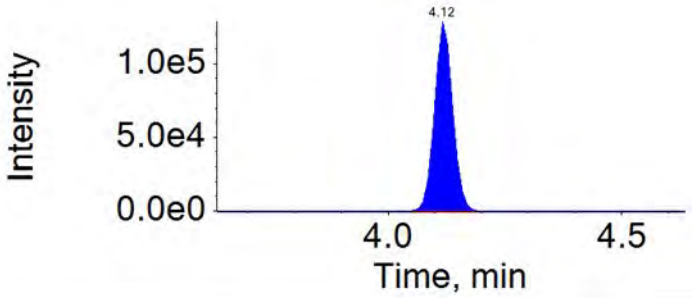
Component: PFBS
Primary Mass: 299.0 / 80.0



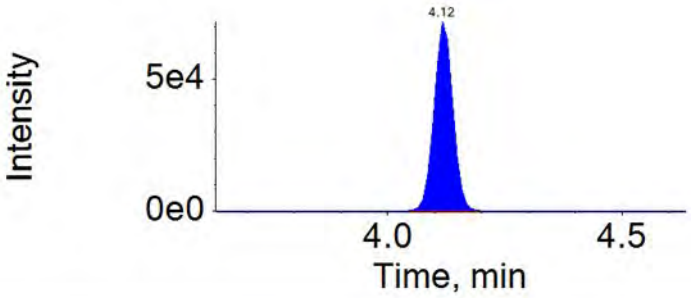
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



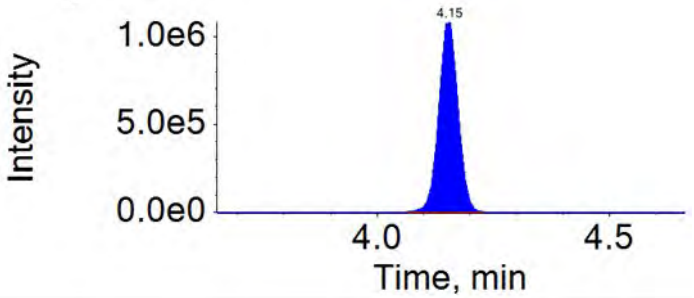
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



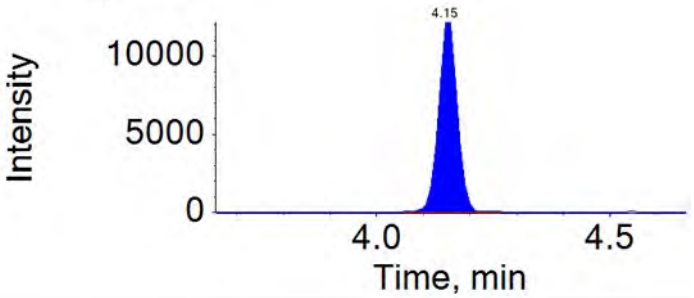
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



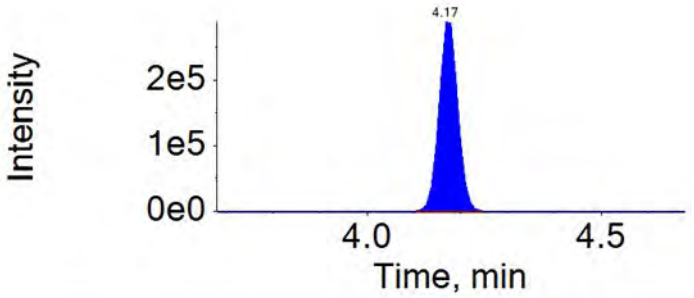
Component: PFHxA
Primary Mass: 313.0 / 269.0



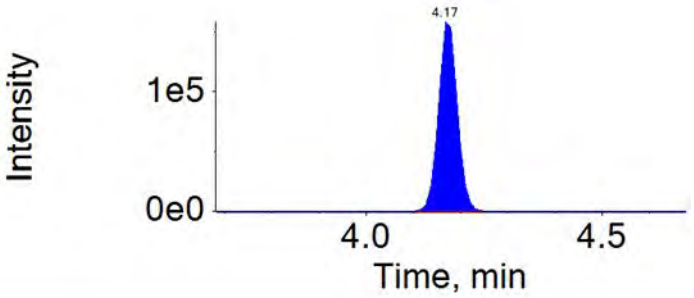
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By MCD at 6:33 pm, 11/12/18

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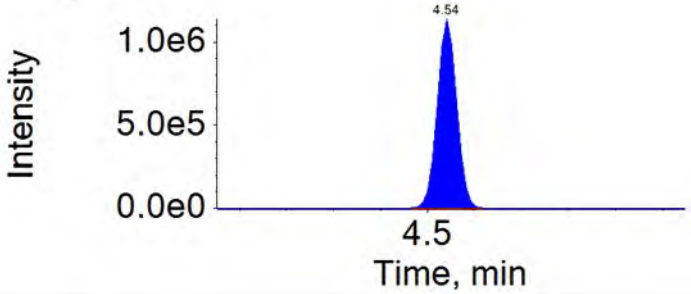
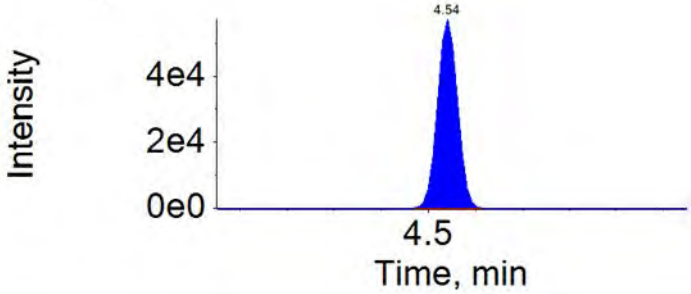
By HMK at 10:53 am, 11/13/18

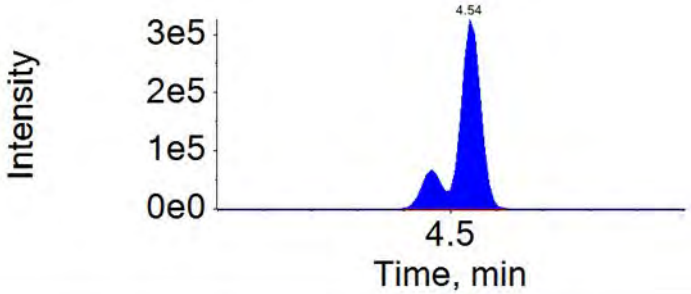
Component: PFHpA
Primary Mass: 363.0 / 319.0



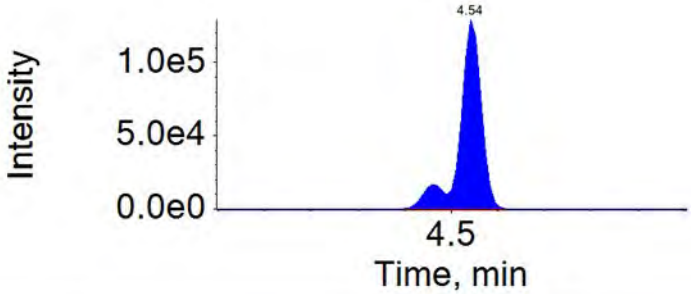
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



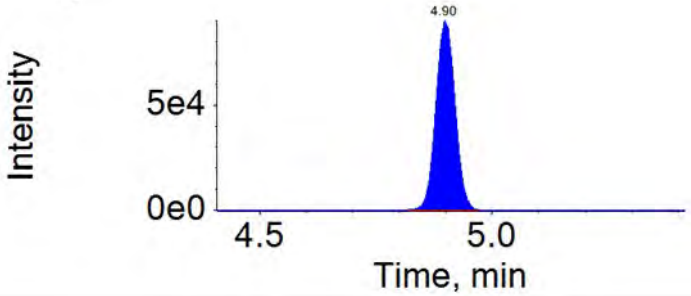
Component: PFHxS
Primary Mass: 399.0 / 80.0



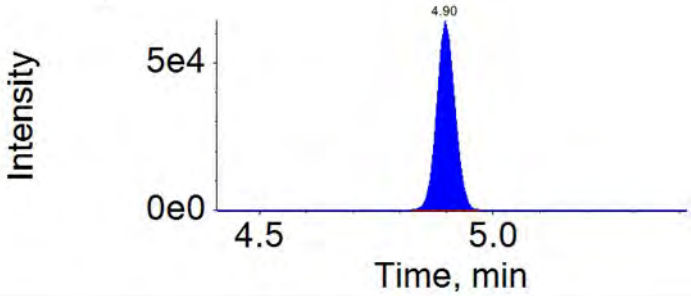
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



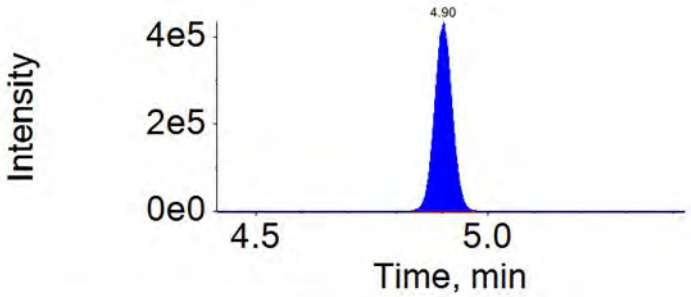
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



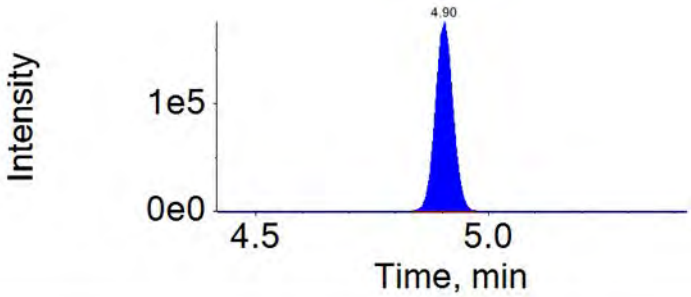
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By MCD at 6:33 pm, 11/12/18

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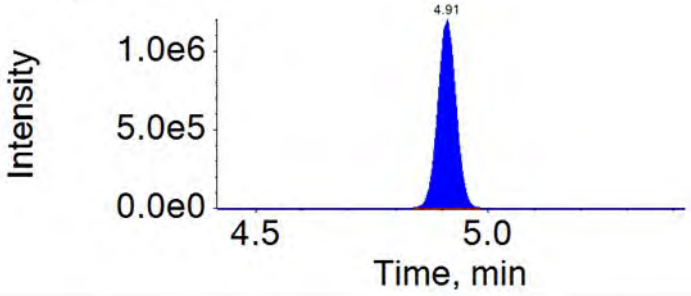
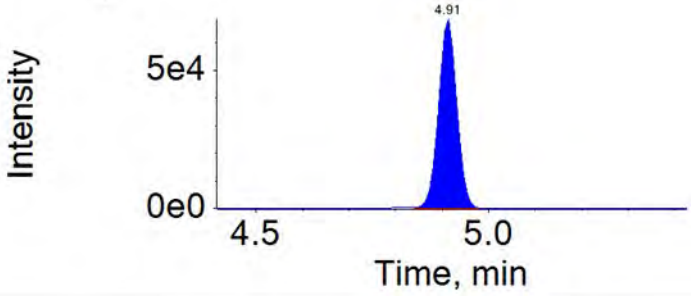
By HMK at 10:53 am, 11/13/18

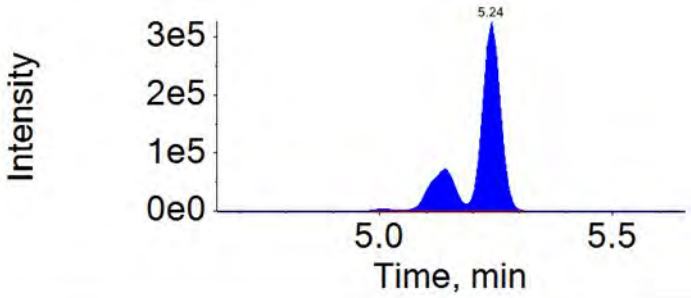
Component: PFOA
Primary Mass: 413.0 / 369.0



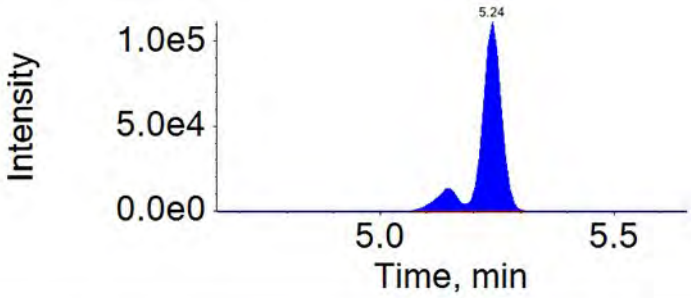
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



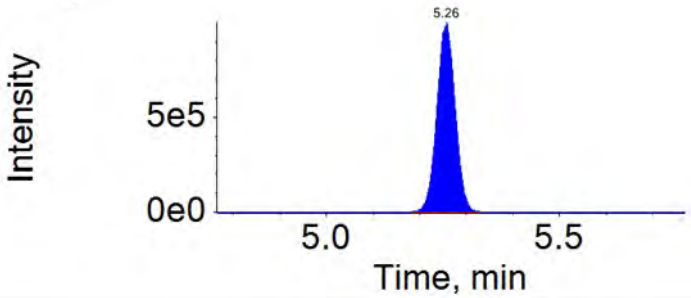
Component: PFOS
Primary Mass: 499.0 / 80.0



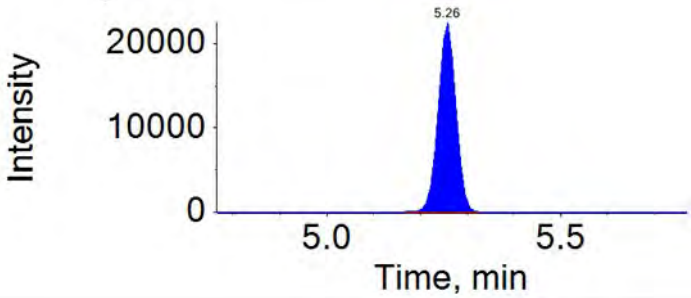
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



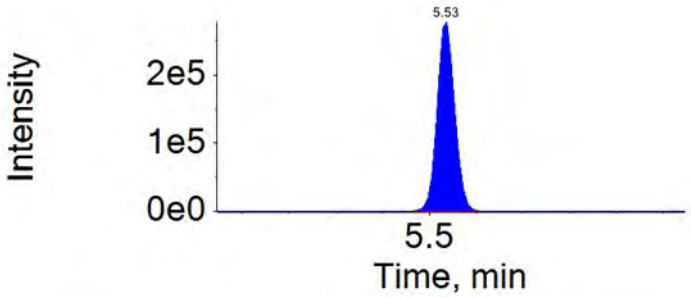
Component: PFNA
Primary Mass: 463.0 / 419.0



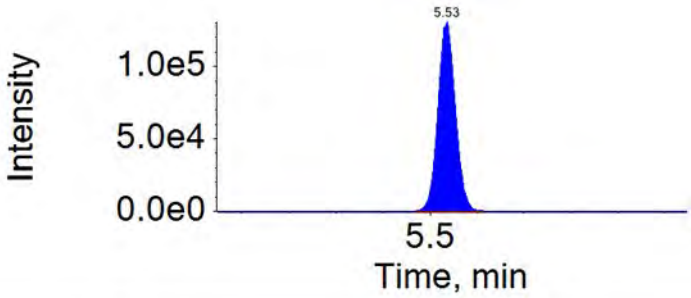
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



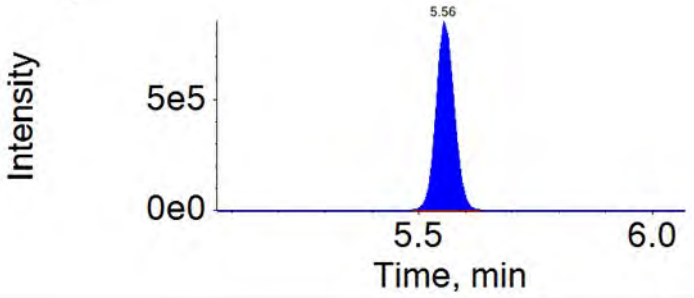
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



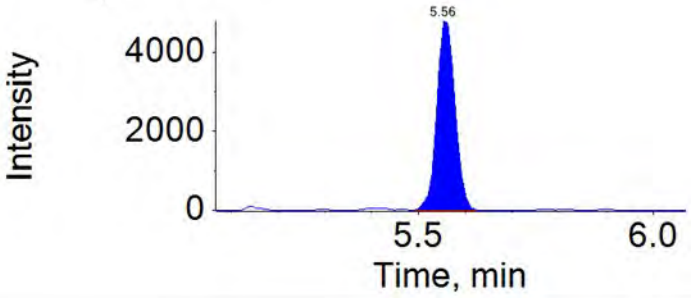
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

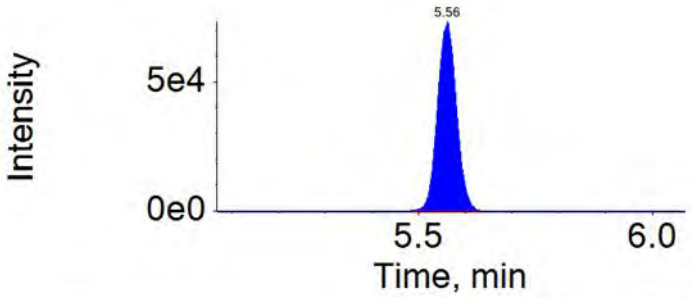
Component: PFDA
Primary Mass: 513.0 / 469.0



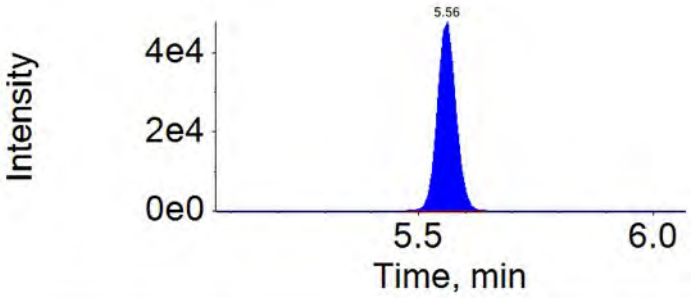
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



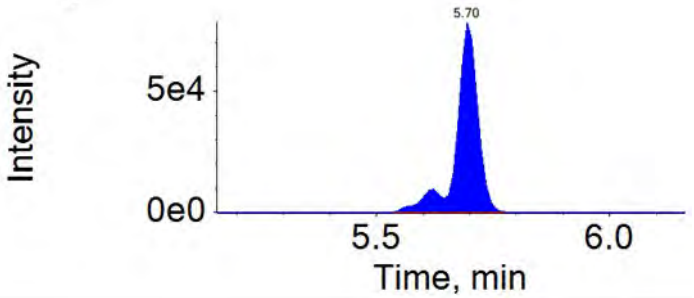
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



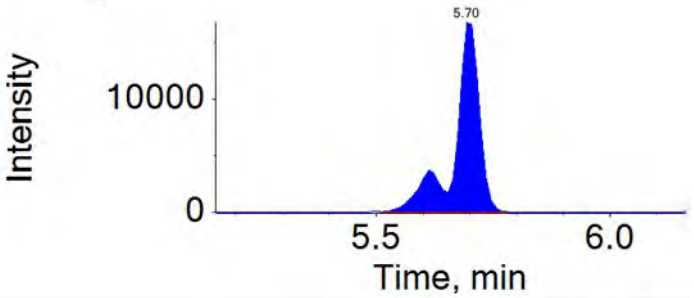
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



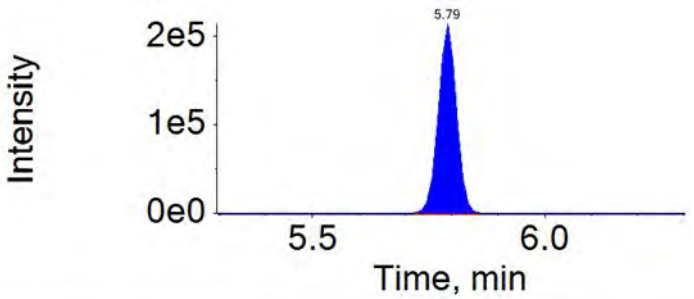
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



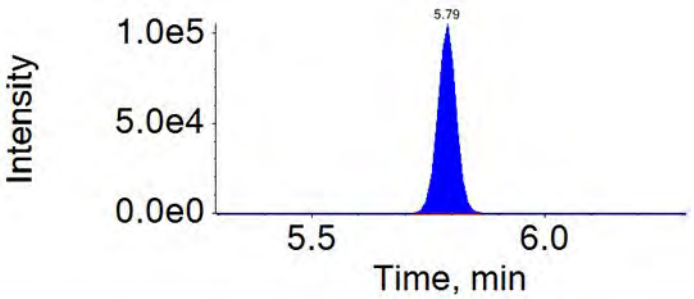
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



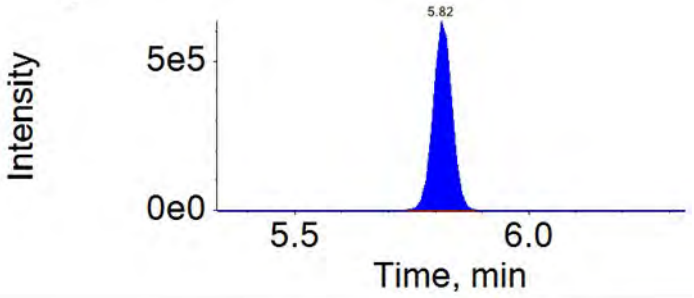
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



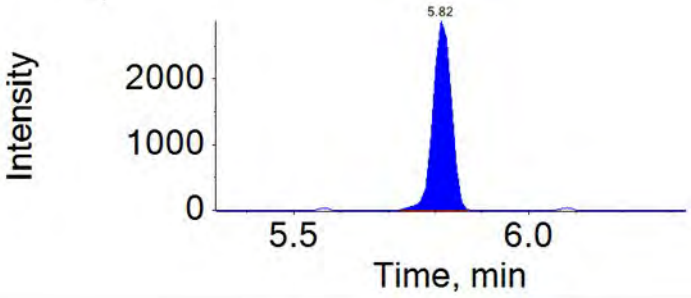
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

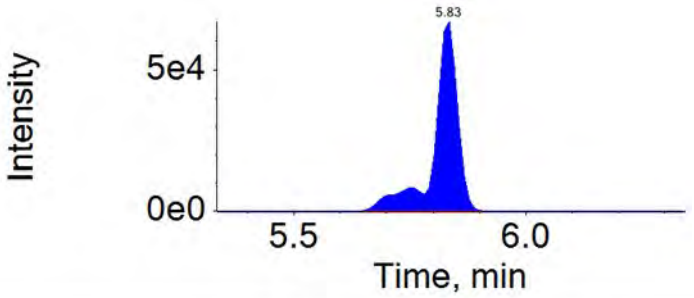
Component: PFUnDA
Primary Mass: 563.0 / 519.0



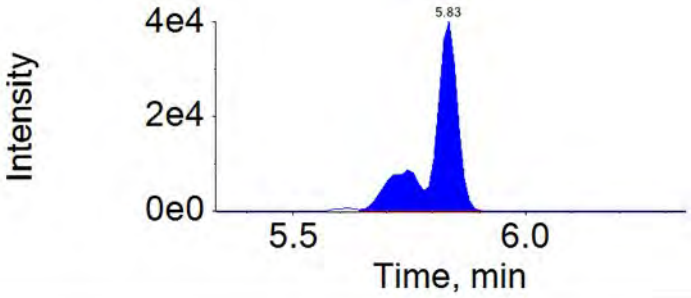
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



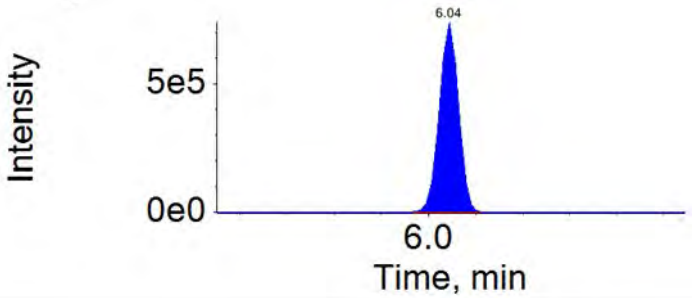
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



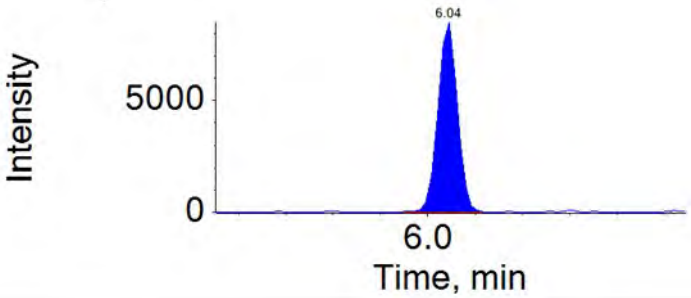
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



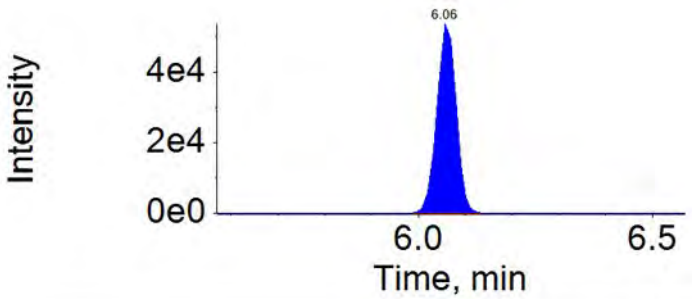
Component: PFDoDA
Primary Mass: 613.0 / 569.0



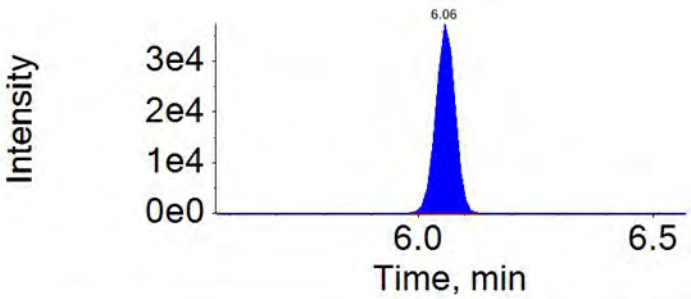
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



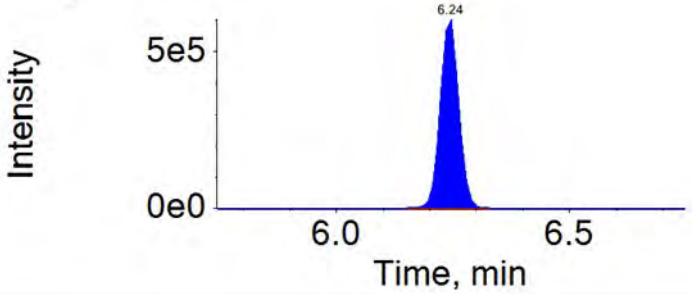
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



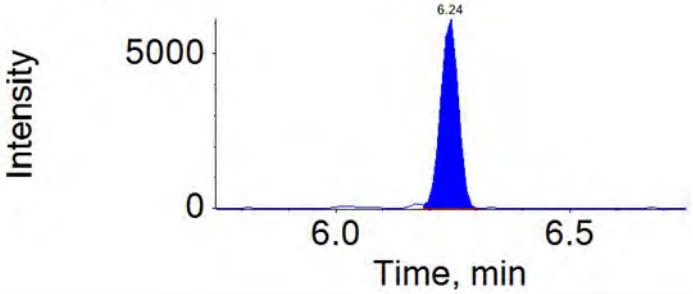
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

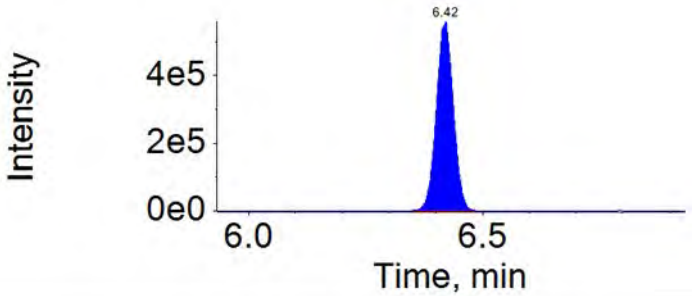
Component: PFTrDA
Primary Mass: 663.0 / 619.0



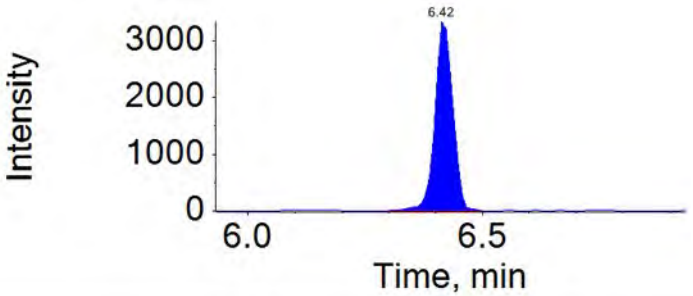
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



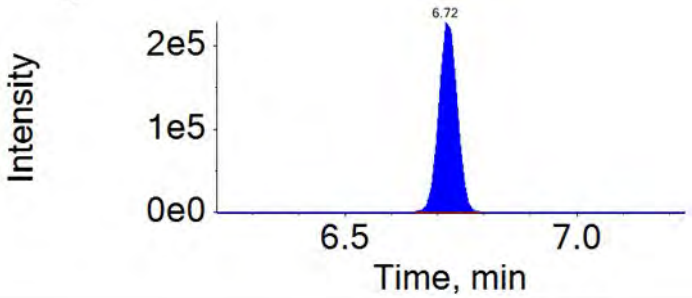
Component: PFTeDA
Primary Mass: 713.0 / 669.0



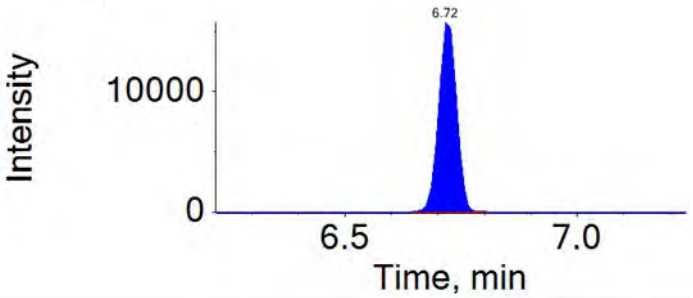
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



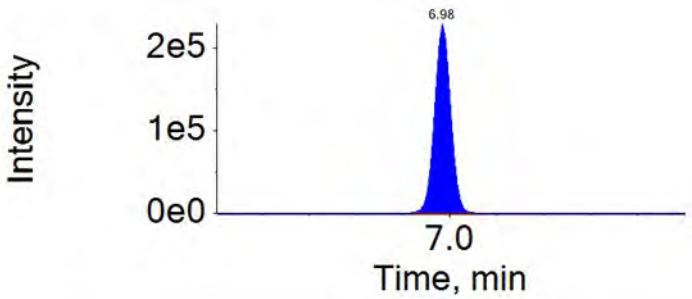
Component: PFHxDA
Primary Mass: 813.0 / 769.0



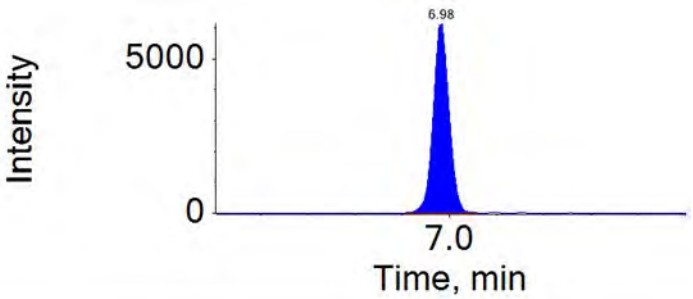
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV12DCAL-47.wiff
Sample ID:	CALBRN61833B			**Acquis Date:**		2018-11-12T15:51:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	555817.9	659926.2	-16	50	
13C2-PFOA	5.0	422900.5	450219.7	-6	50	
13C4-PFOS	4.8	231712.1	249205.8	-7	50	
13C2-PFDA	5.0	237446.9	278743.9	-15	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	633648.4	13C3-PFBA	555817.9	1.140	5.000	5.111	102	70-130	
E13C5-PFPeA	635977.8	13C3-PFBA	555817.9	1.144	5.000	5.132	103	70-130	
E13C3-PFBS	378676.8	13C3-PFBA	555817.9	0.681	4.650	4.809	103	70-130	
E13C2-4:2-FTS	41422.2	13C2-PFOA	422900.5	0.098	4.670	4.362	93	70-130	
E13C5-PFHxA	568205.8	13C2-PFOA	422900.5	1.344	5.000	4.854	97	70-130	
E13C3-PFHxS	284116.5	13C2-PFOA	422900.5	0.672	4.730	4.610	97	70-130	
E13C4-PFHpA	455005.8	13C2-PFOA	422900.5	1.076	5.000	4.847	97	70-130	
E13C2-6:2-FTS	27988.5	13C2-PFOA	422900.5	0.066	4.750	4.428	93	70-130	
E13C8-PFOA	707130.3	13C2-PFOA	422900.5	1.672	5.000	4.607	92	70-130	
E13C8-PFOS	253129.2	13C4-PFOS	231712.1	1.092	4.780	4.840	101	70-130	
E13C9-PFNA	413811.4	13C4-PFOS	231712.1	1.786	5.000	4.979	100	70-130	
E13C6-PFDA	522613.8	13C2-PFDA	237446.9	2.201	5.000	5.136	103	70-130	
E13C2-8:2-FTS	22899.0	13C2-PFDA	237446.9	0.096	4.790	4.810	100	70-130	
E13C8-PFOSA	539992.5	13C2-PFDA	237446.9	2.274	5.000	5.042	101	70-130	
Ed3-NMeFOSAA	70320.3	13C2-PFDA	237446.9	0.296	5.000	5.346	107	70-130	
E13C7-PFUnDA	208574.1	13C2-PFDA	237446.9	0.878	5.000	5.100	102	70-130	
Ed5-NEtFOSAA	57308.1	13C2-PFDA	237446.9	0.241	5.000	5.106	102	70-130	
E13C2-PFDoDA	477105.5	13C2-PFDA	237446.9	2.009	5.000	5.217	104	70-130	
Ed7-NMePFOSAE	272639.0	13C2-PFDA	237446.9	1.148	5.000	4.969	99	70-130	
Ed3-NMePFOSA	68215.9	13C2-PFDA	237446.9	0.287	5.000	5.220	104	70-130	
Ed9-NEtPFOSAE	242587.5	13C2-PFDA	237446.9	1.022	5.000	5.314	106	70-130	
Ed5-NEtPFOSA	56004.0	13C2-PFDA	237446.9	0.236	5.000	5.533	111	70-130	
E13C2-PFTeDA	352892.2	13C2-PFDA	237446.9	1.486	5.000	5.218	104	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

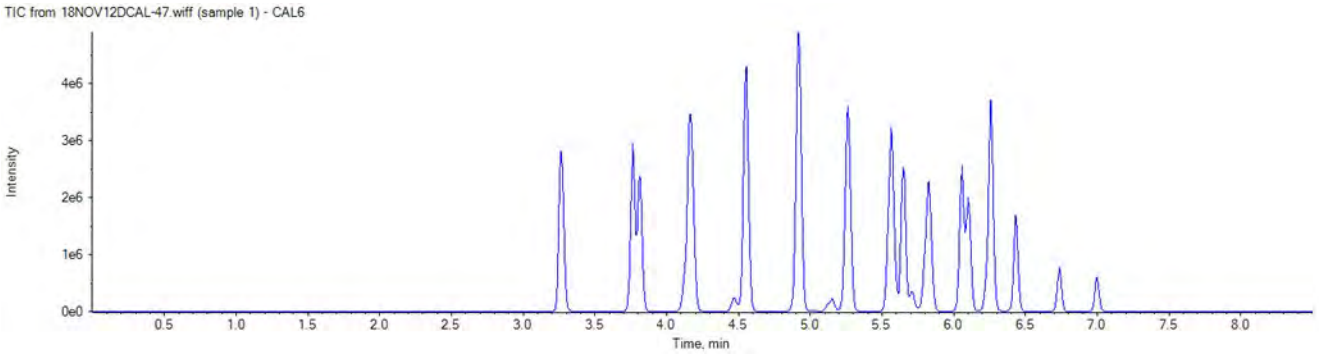
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-47.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	5765353.4		A	13C4-PFBA	3.27	633648.4	9.099	50.404
PFPeA	3.77	1.000	5570221.7		A	13C5-PFPeA	3.76	635977.8	8.759	50.702
PFBS	3.81	1.000	3588084.2		A	13C3-PFBS	3.81	378676.8	9.475	45.072
4:2-FTS	4.13	1.000	738294.0		A	13C2-4:2-FTS	4.13	41422.2	17.824	48.392
PFHxA	4.16	1.000	6593779.0		A	13C5-PFHxA	4.16	568205.8	11.605	48.453
PFPeS	4.18	1.100	1847826.8		A	13C3-PFBS	3.81	378676.8	4.880	47.375
PFHpA	4.55	1.000	6648455.3		A	13C4-PFHpA	4.55	455005.8	14.612	48.434
PFHxS	4.55	1.000	2662852.0		M	13C3-PFHxS	4.55	284116.5	9.372	45.444
6:2-FTS	4.91	1.000	523949.5		A	13C2-6:2-FTS	4.91	27988.5	18.720	45.301
PFHpS	4.91	1.080	2604868.6		A	13C3-PFHxS	4.55	284116.5	9.168	48.262
PFOA	4.92	1.000	6758642.8		A	13C8-PFOA	4.92	707130.3	9.558	51.047
PFOS	5.25	1.000	2664957.2		M	13C8-PFOS	5.25	253129.2	10.528	46.040
PFNA	5.27	1.000	5820576.6		A	13C9-PFNA	5.27	413811.4	14.066	50.720
PFNS	5.55	1.060	1709959.5		A	13C8-PFOS	5.25	253129.2	6.755	47.262
PFDA	5.57	1.000	4802967.8		A	13C6-PFDA	5.57	522613.8	9.190	48.722
8:2-FTS	5.57	1.000	469719.6		A	13C2-8:2-FTS	5.57	22899.0	20.513	47.825
PFOSA	5.65	1.000	5530440.6		A	13C8-PFOSA	5.65	539992.5	10.242	50.024
NMeFOSAA	5.71	1.000	627854.4		M	d3-NMeFOSAA	5.71	70320.3	8.928	50.461
PFDS	5.80	1.100	1313570.3		A	13C8-PFOS	5.25	253129.2	5.189	47.020
PFUnDA	5.83	1.000	3923979.2		A	13C7-PFUnDA	5.83	208574.1	18.813	49.183
NEtFOSAA	5.84	1.000	551865.7		A	d5-NEtFOSAA	5.84	57308.1	9.630	50.481
PFDoDA	6.06	1.000	4582985.5		A	13C2-PFDoDA	6.06	477105.5	9.606	48.914
10:2-FTS	6.07	1.090	348263.2		A	13C2-8:2-FTS	5.57	22899.0	15.209	50.658
NMePFOSAE	6.10	1.000	3484588.8		A	d7-NMePFOSAE	6.09	272639.0	12.781	53.193
NMePFOSA	6.11	1.000	670429.6		A	d3-NMePFOSA	6.11	68215.9	9.828	48.485
PFDoS	6.23	1.190	711567.5		A	13C8-PFOS	5.25	253129.2	2.811	49.234
NEtPFOSAE	6.26	1.000	3677006.6		A	d9-NEtPFOSAE	6.25	242587.5	15.157	48.629
NEtPFOSA	6.27	1.000	599280.4		A	d5-NEtPFOSA	6.27	56004.0	10.701	49.142
PFTrDA	6.26	1.030	3691733.8		A	13C2-PFDoDA	6.06	477105.5	7.738	48.838
PFTeDA	6.43	1.000	3149020.2		A	13C2-PFTeDA	6.43	352892.2	8.923	50.021
PFHxDA	6.74	1.050	1533920.2		A	13C2-PFTeDA	6.43	352892.2	4.347	51.786
PFODA	7.00	1.090	1270897.6		A	13C2-PFTeDA	6.43	352892.2	3.601	50.157

Total Ion Chromatogram

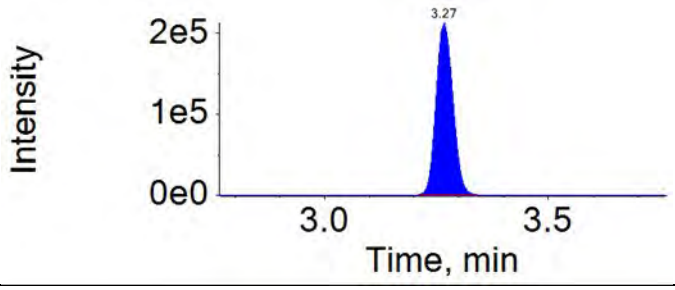


APPROVED
By MCD at 6:33 pm, 11/12/18

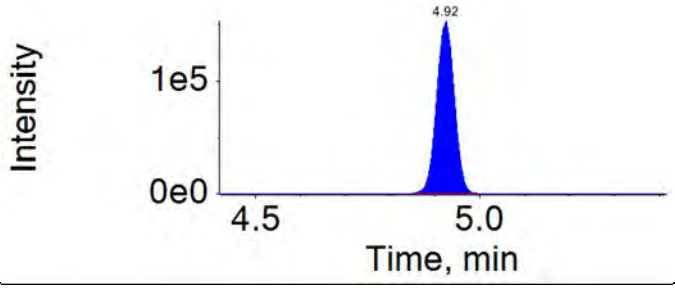
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

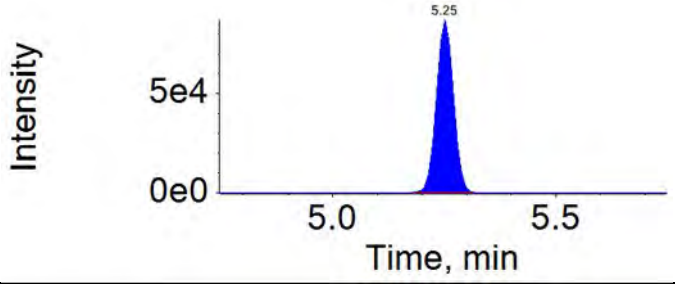
Injection Standard: 13C3-PFBA
216.0 / 172.0



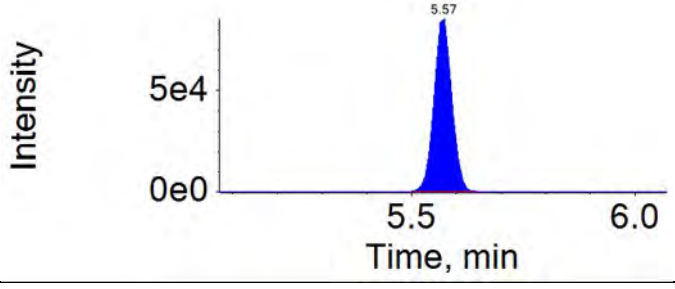
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

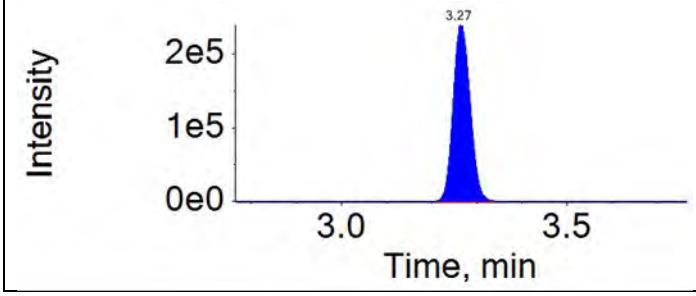


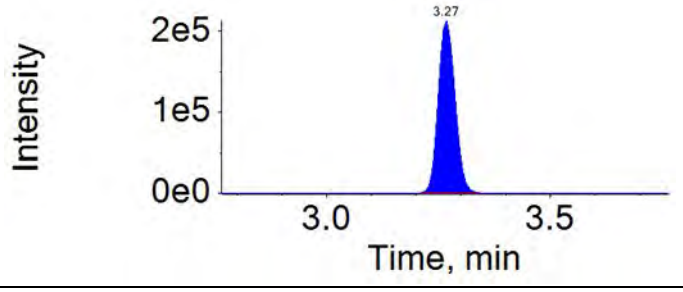
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

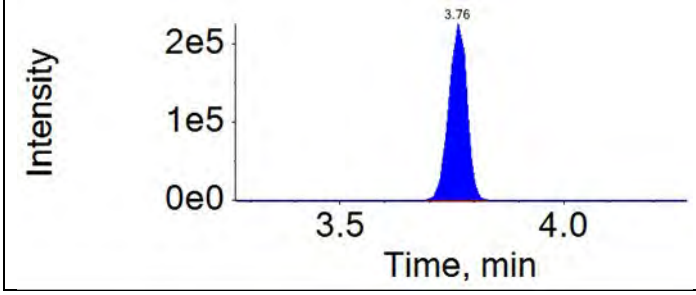
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

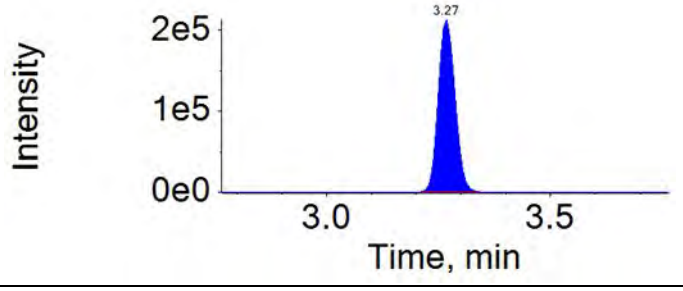
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



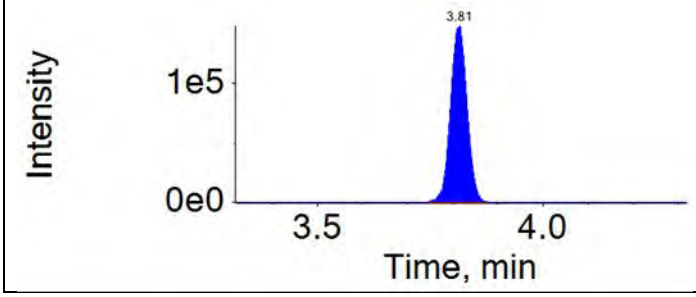


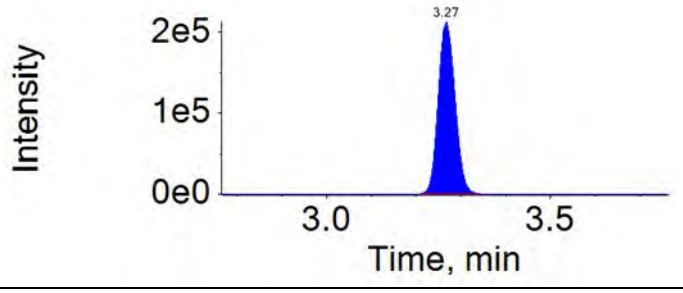
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



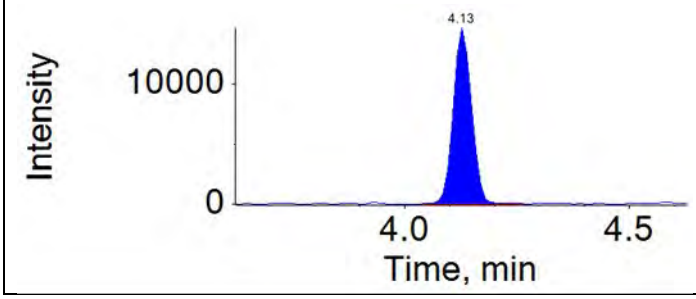


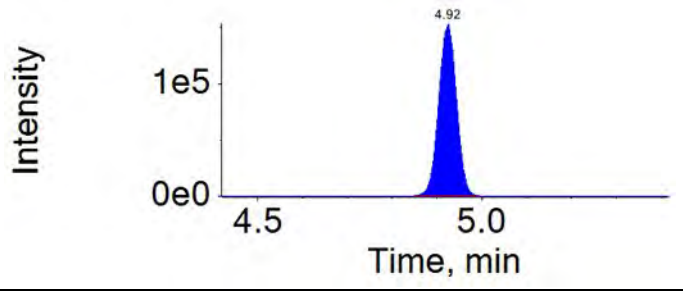
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



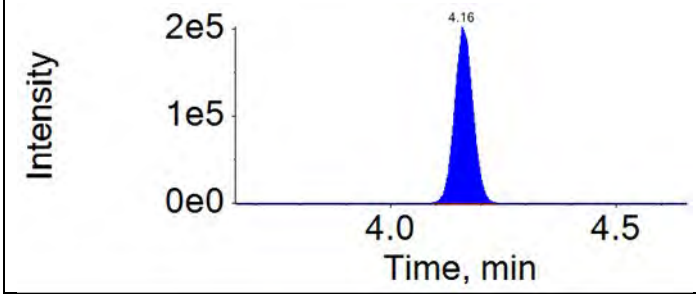


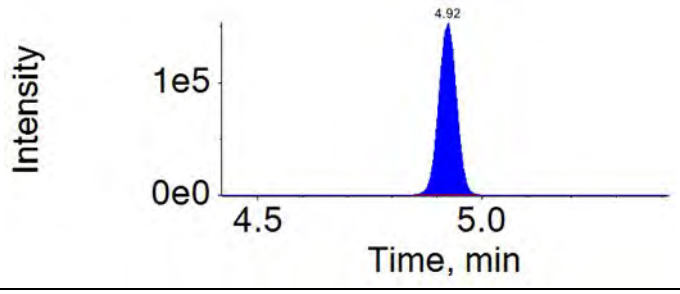
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

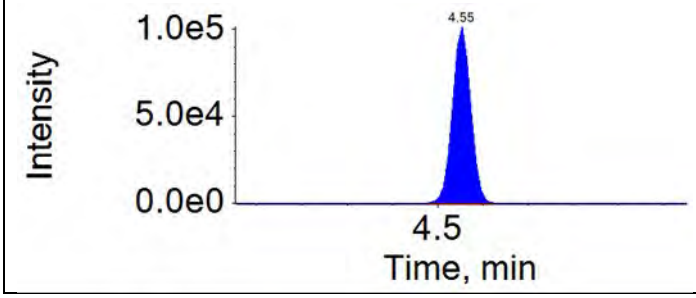
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

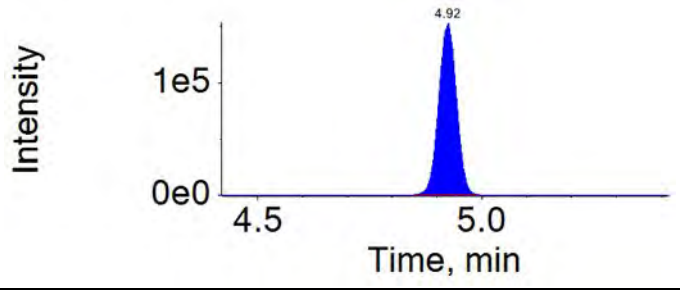
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



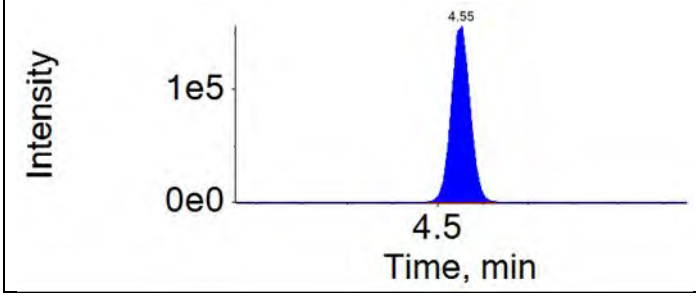


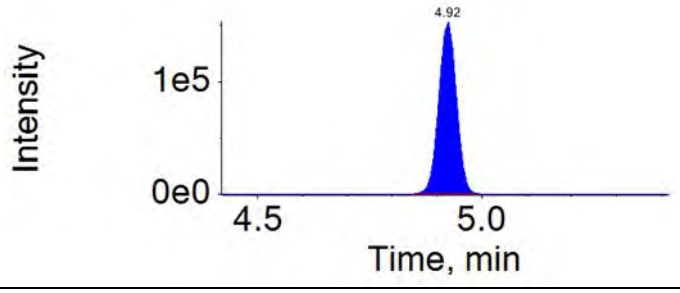
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



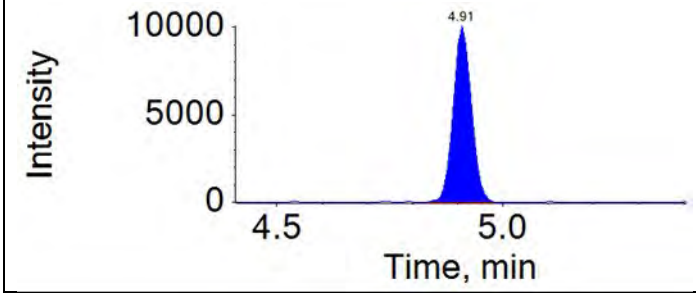


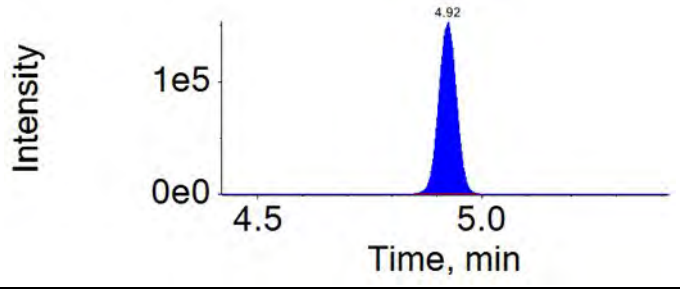
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

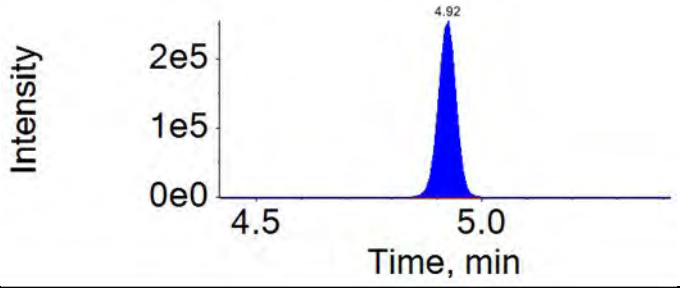
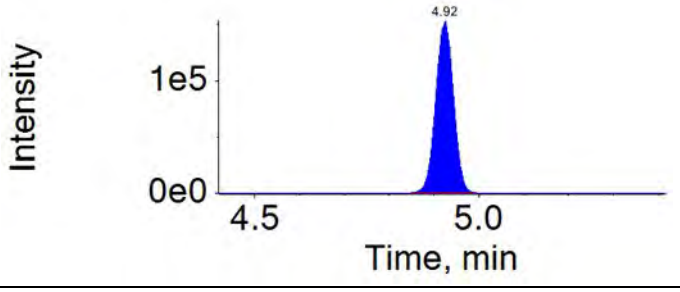


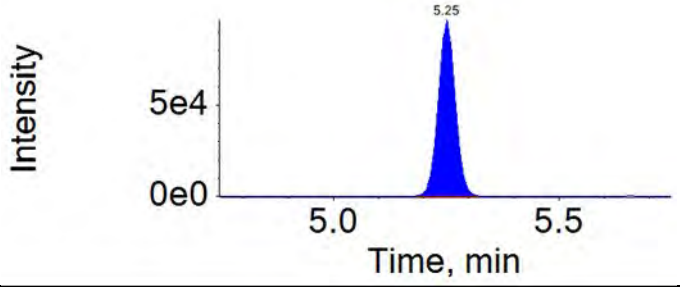
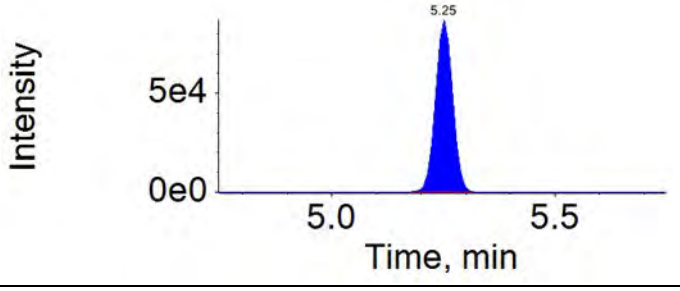


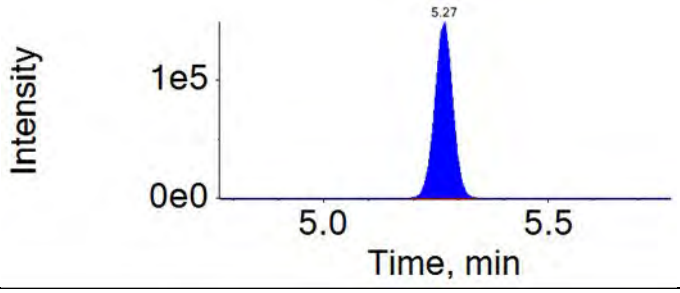
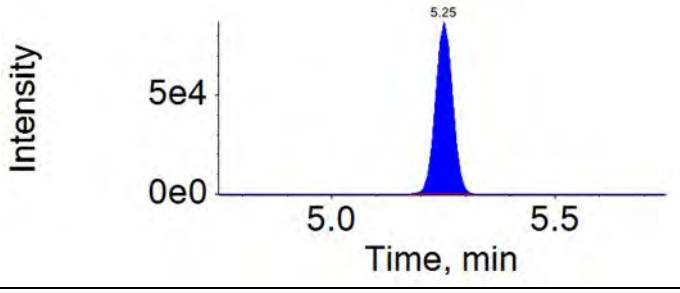
APPROVED
By MCD at 6:33 pm, 11/12/18

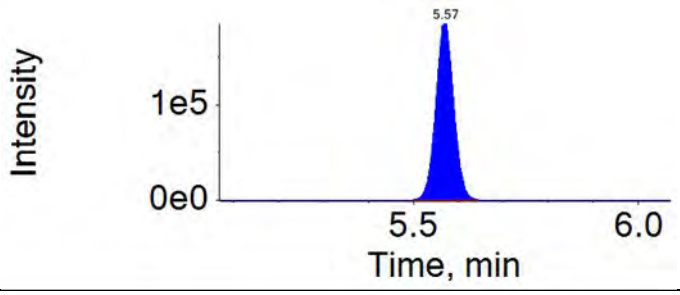
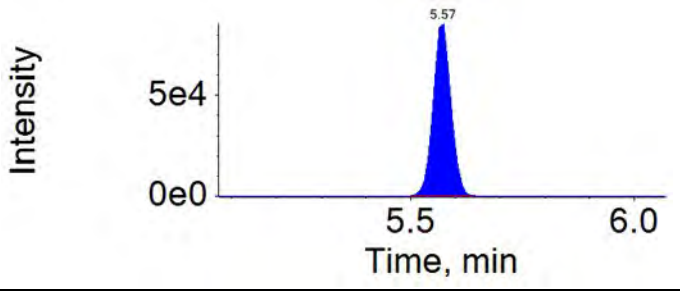
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

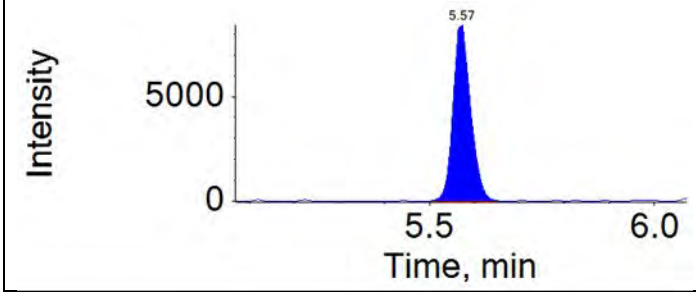
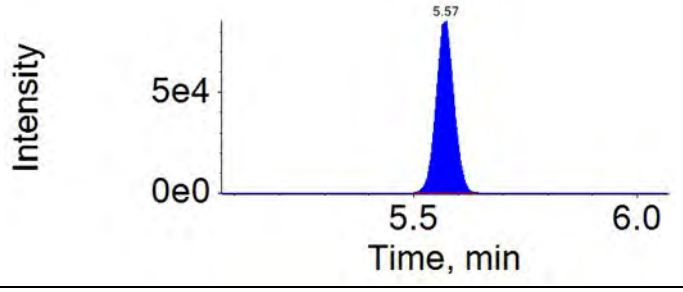
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

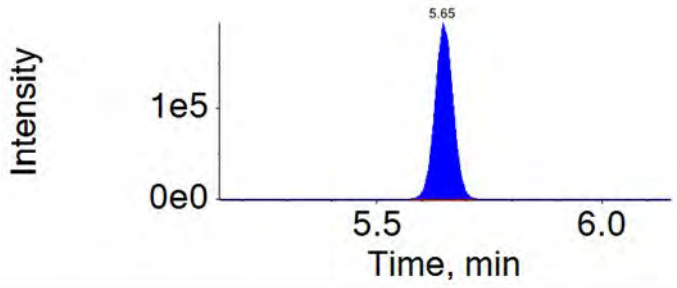
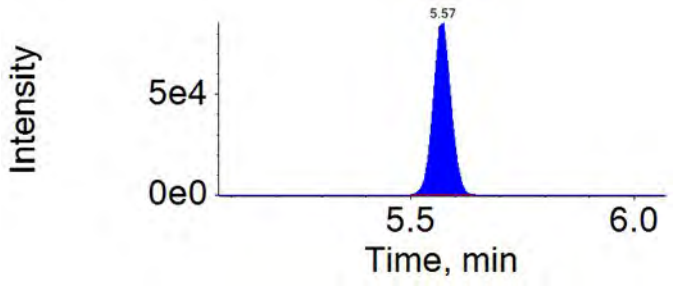
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

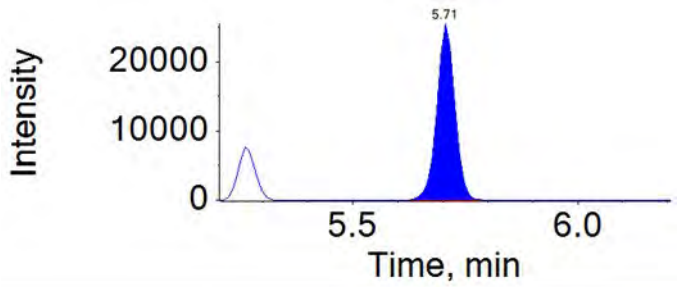
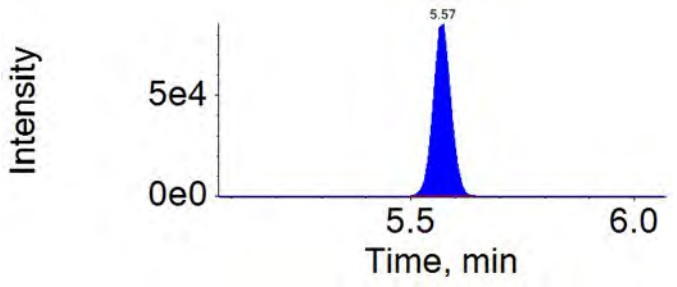
APPROVED
By MCD at 6:33 pm, 11/12/18

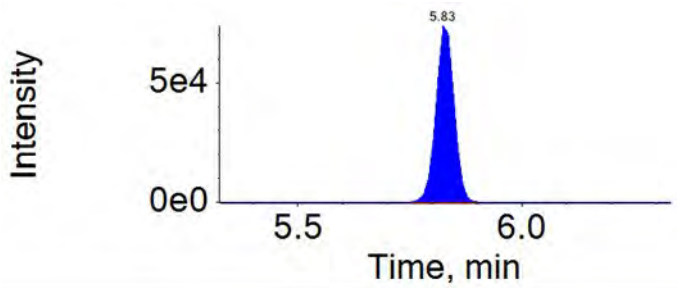
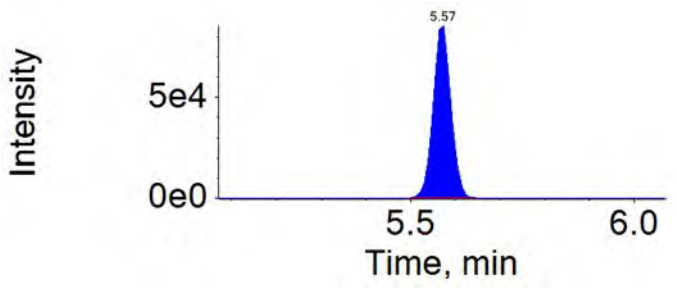
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

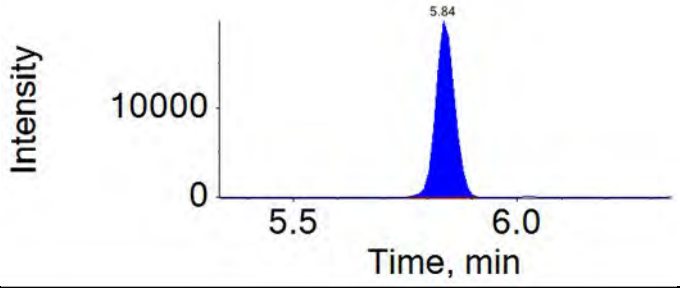
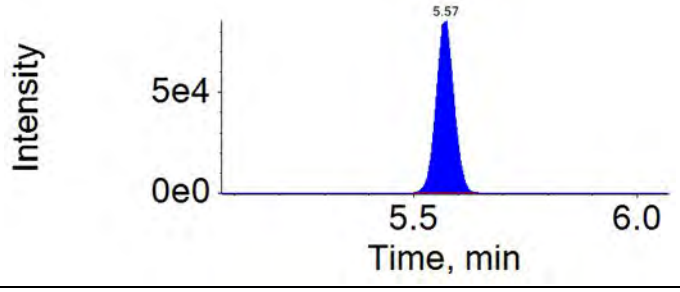
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

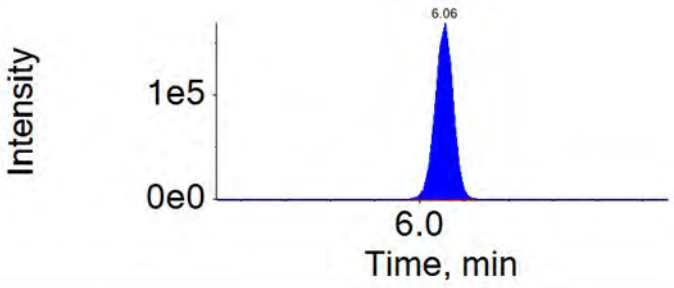
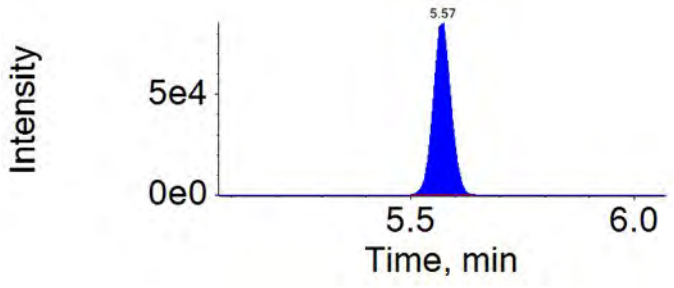
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

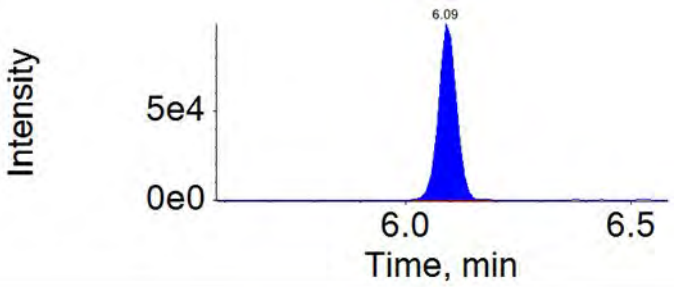
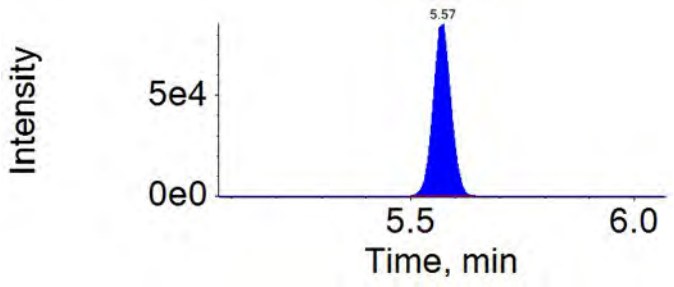
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

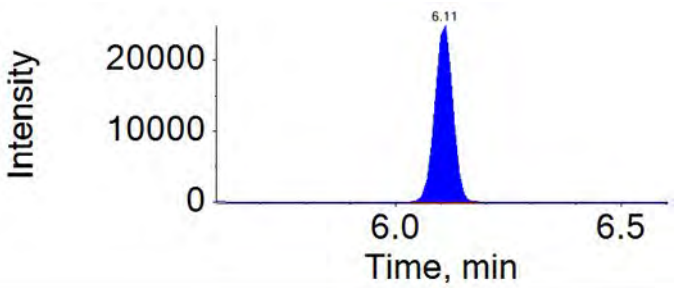
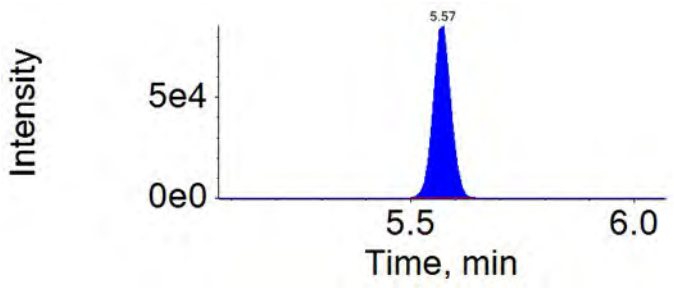
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

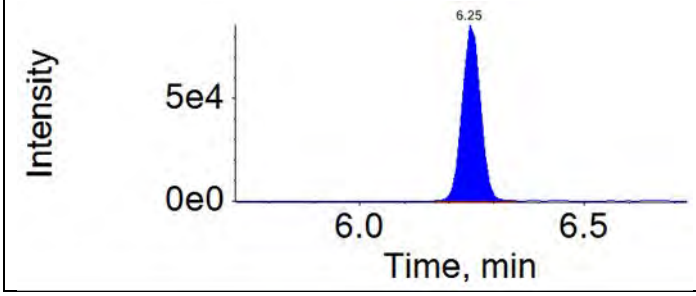
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

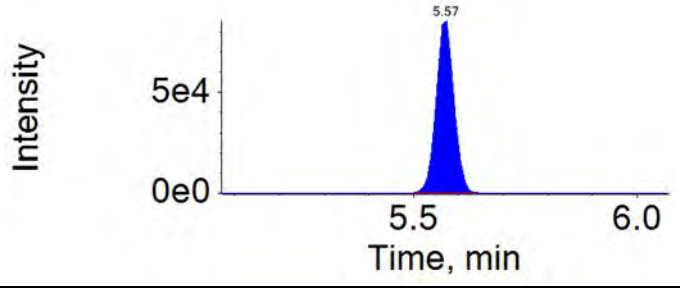
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

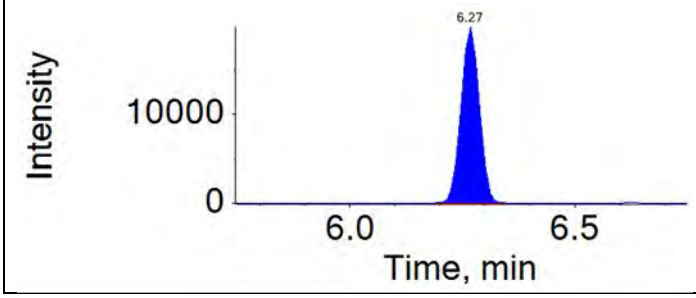
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

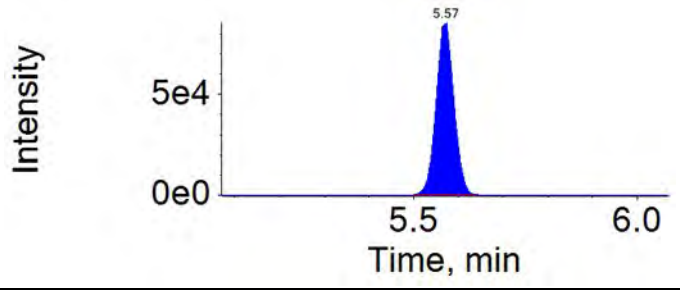
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



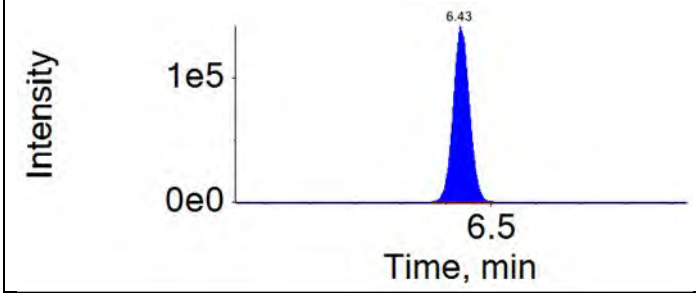


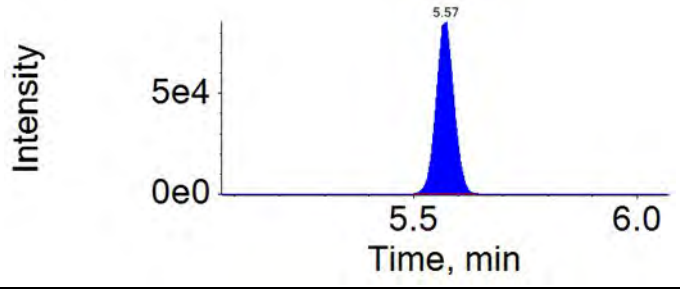
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



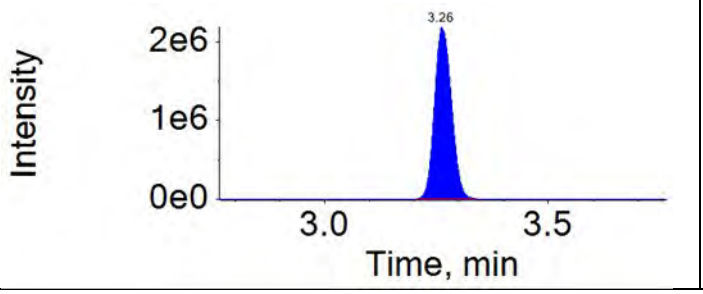


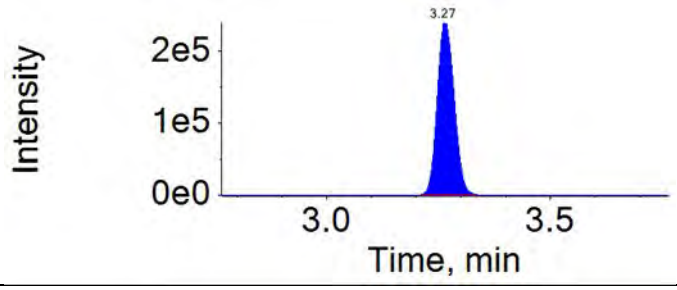
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

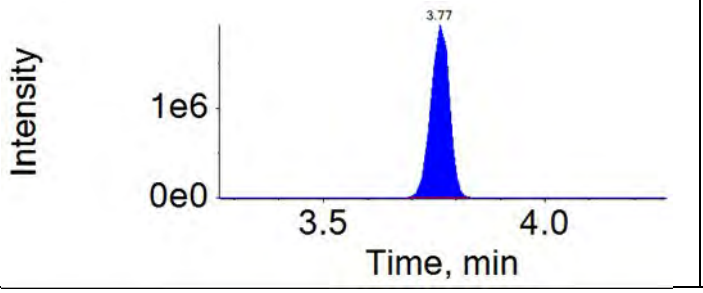
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

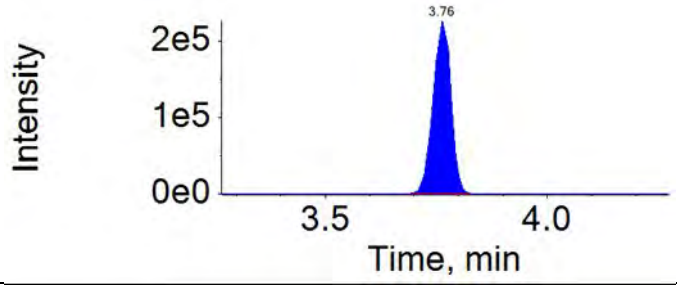
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



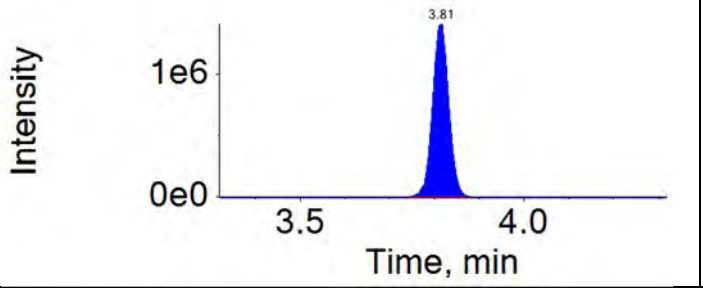


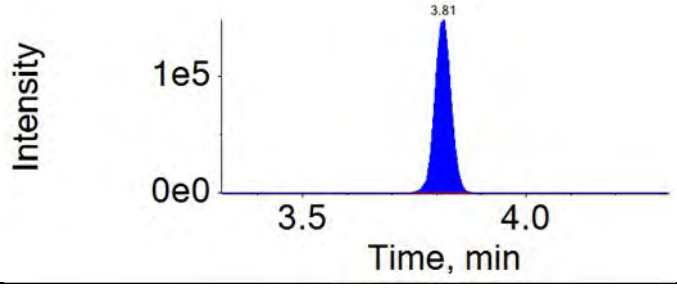
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



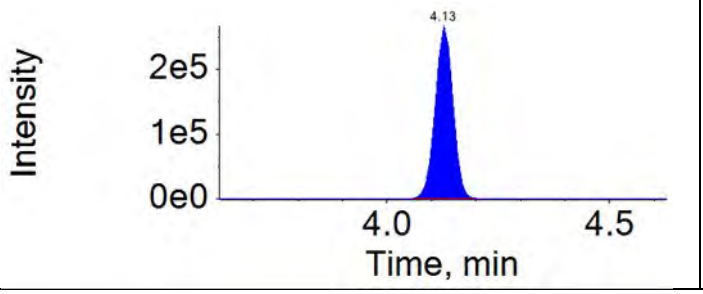


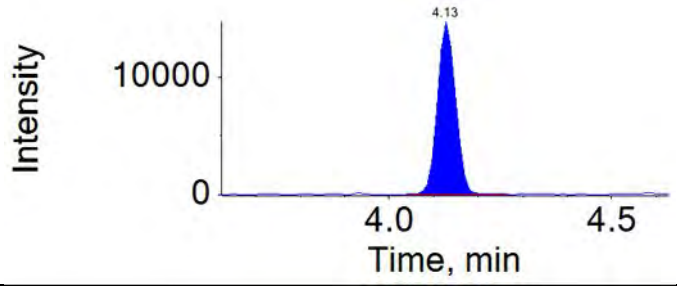
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



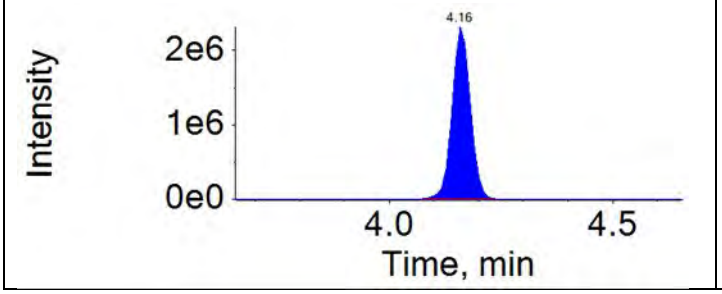


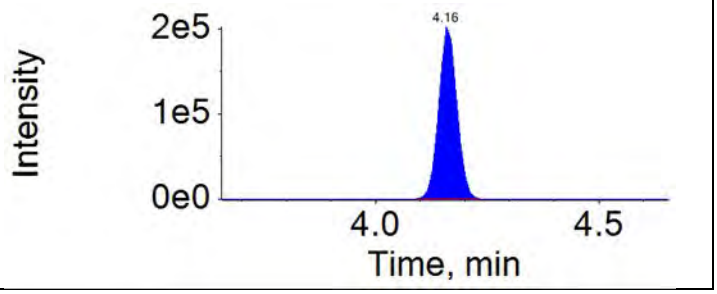
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

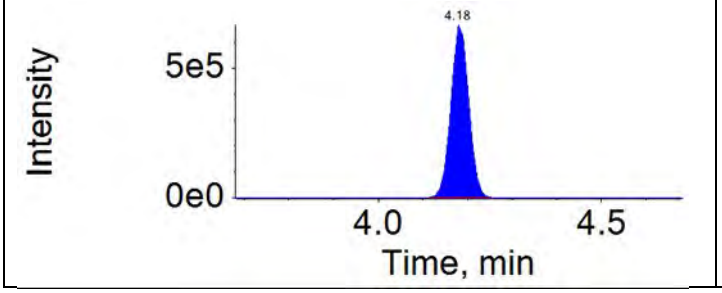
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

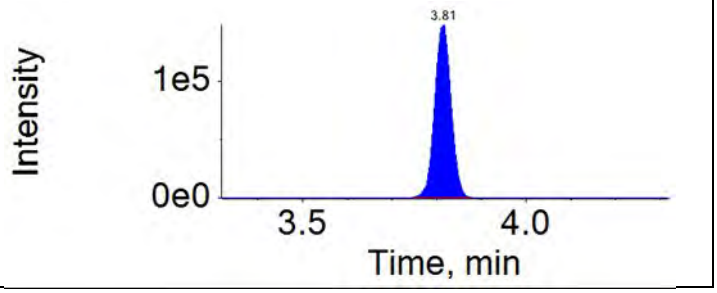
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



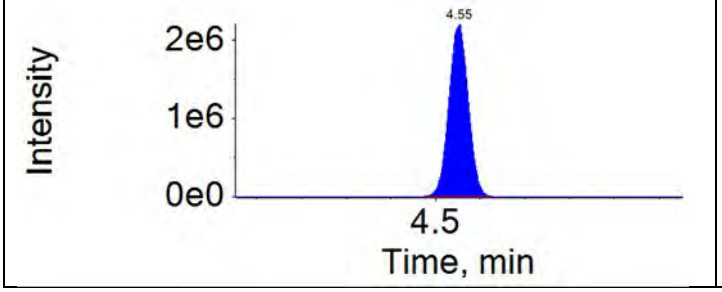


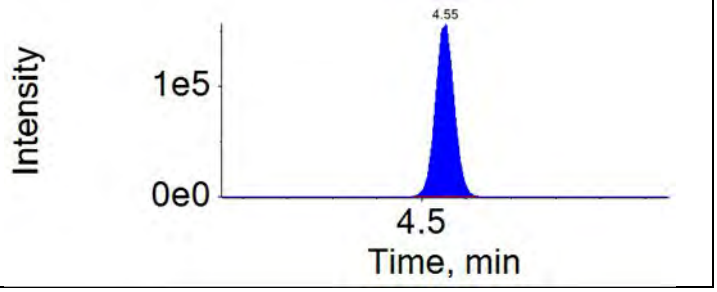
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



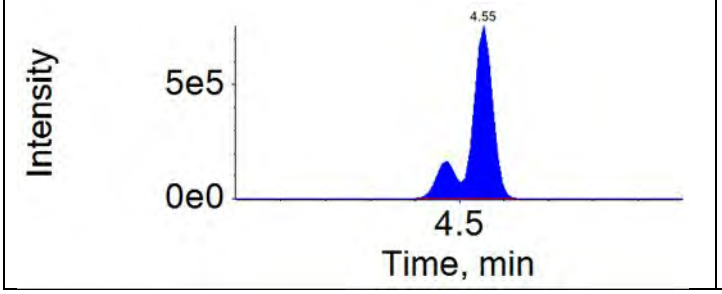


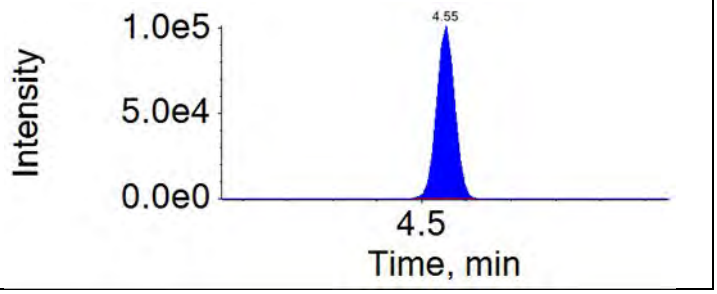
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



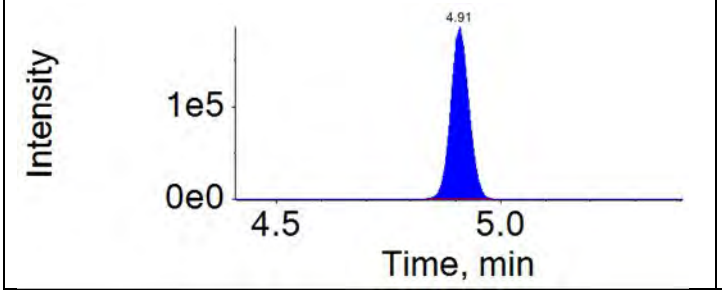


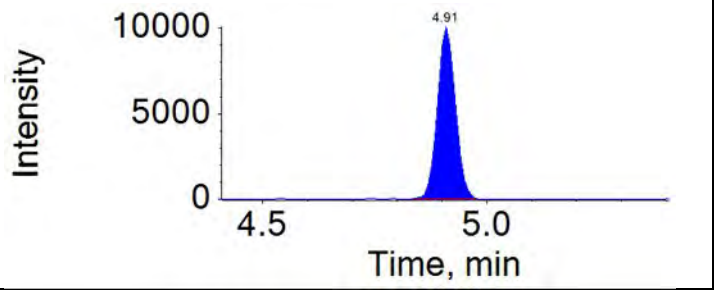
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

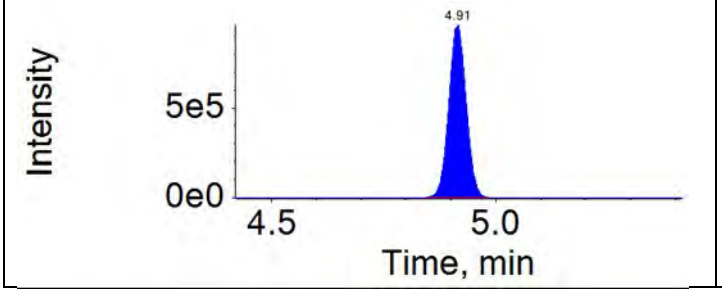
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

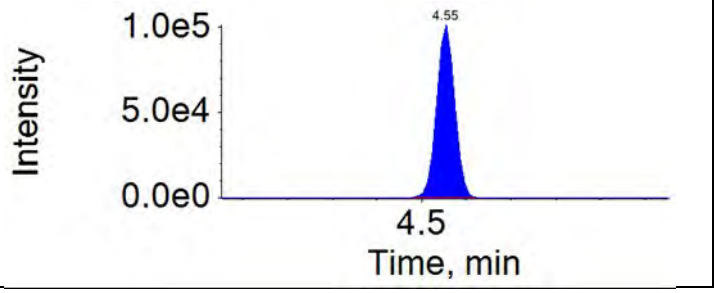
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



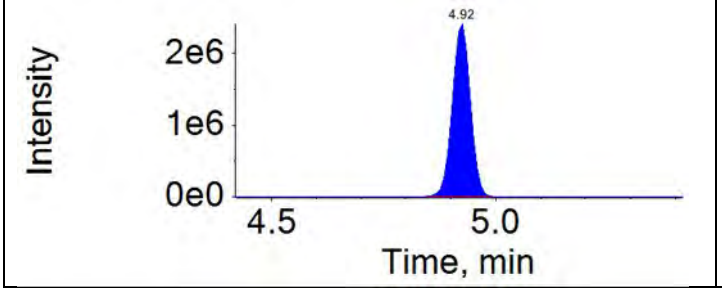


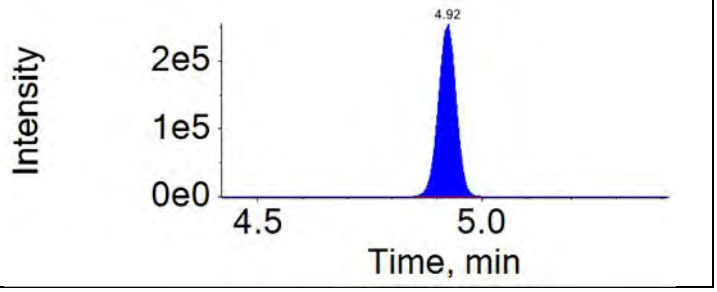
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



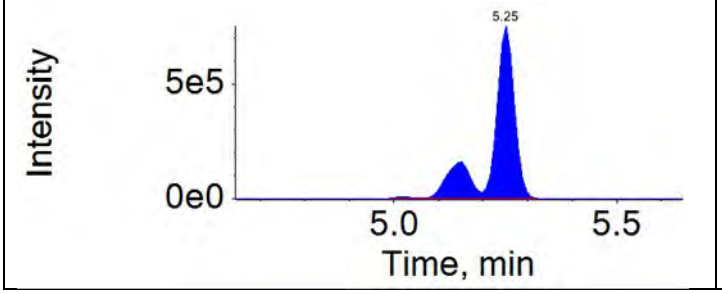


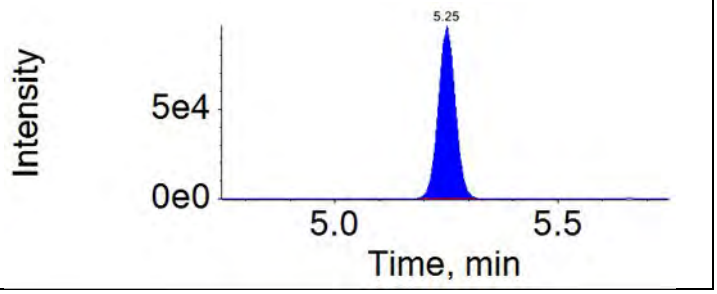
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



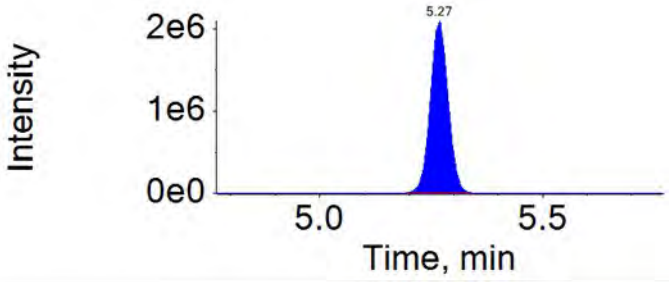


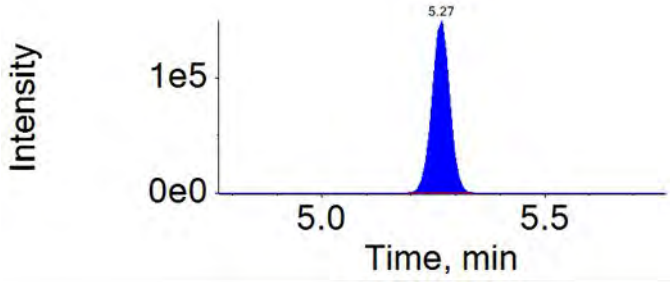
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

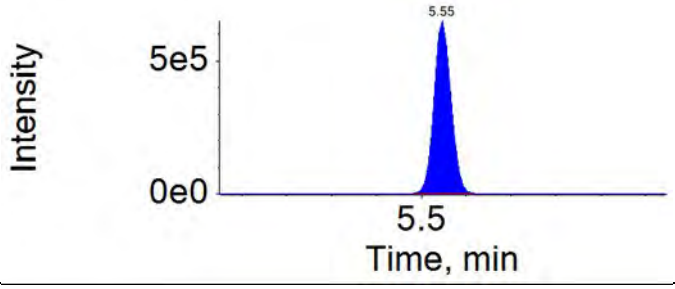
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

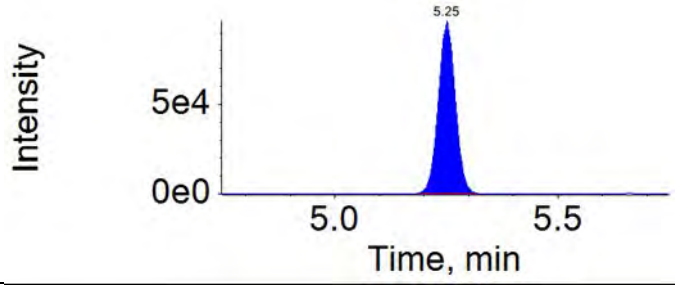
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



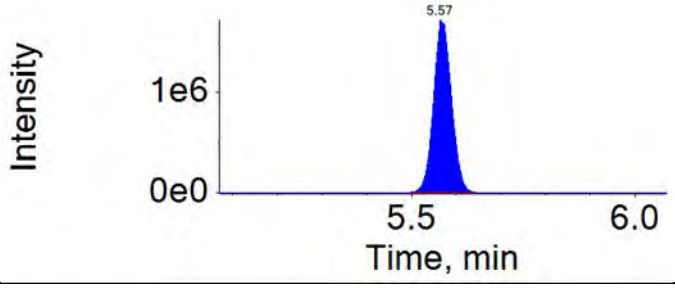


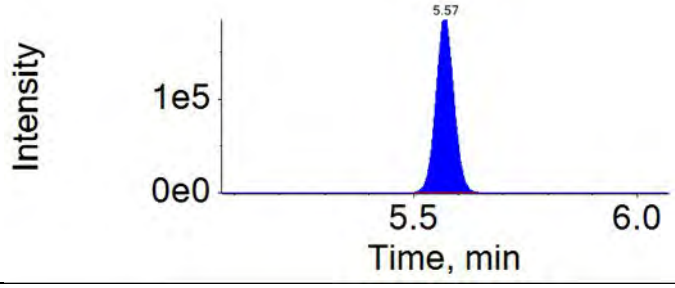
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



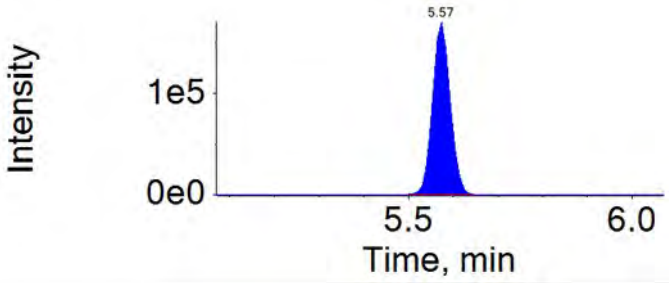


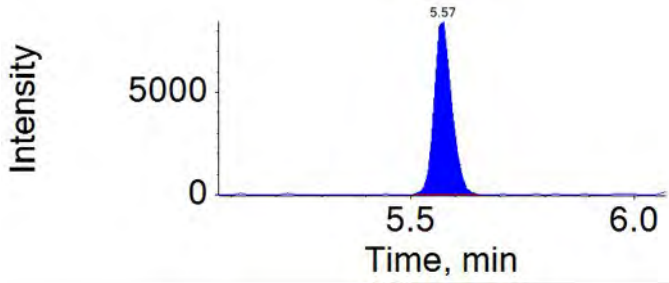
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



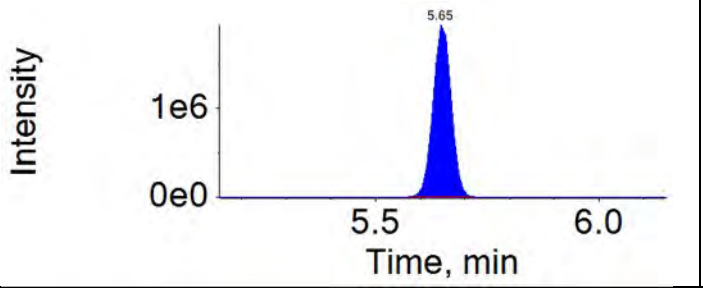


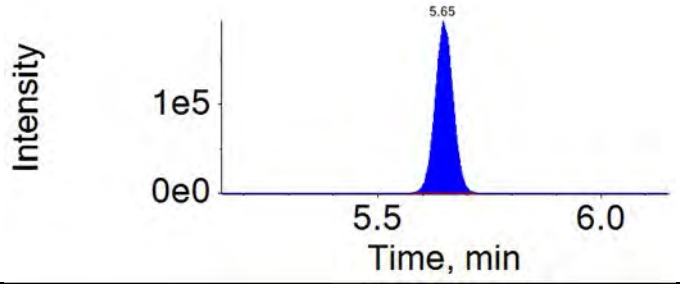
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

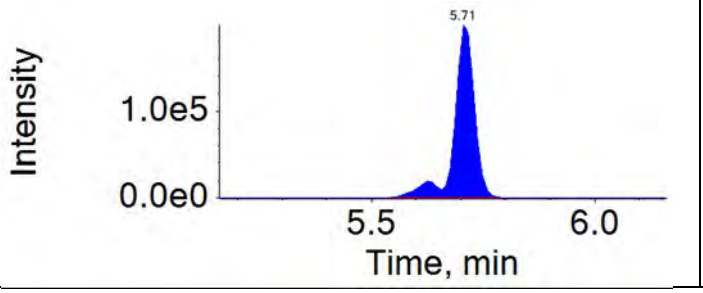
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

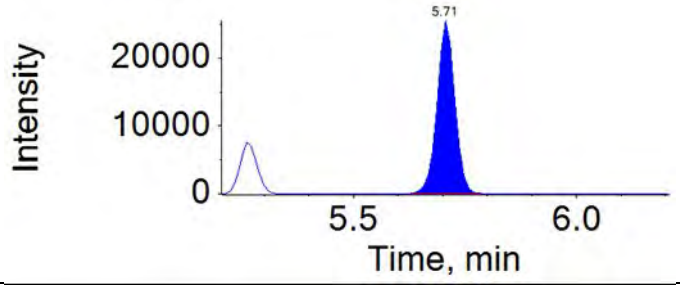
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



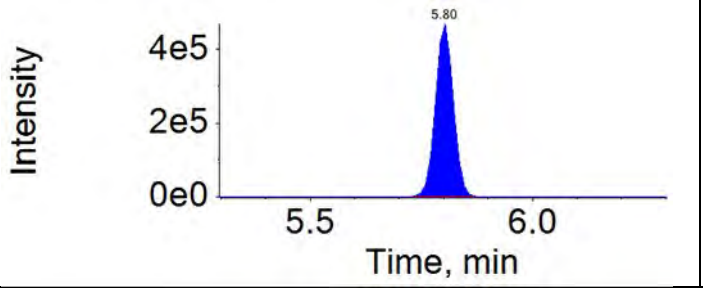


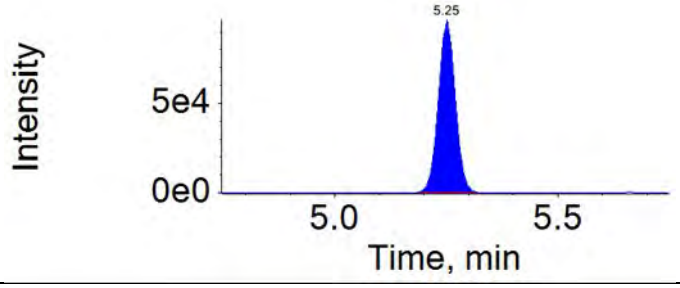
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



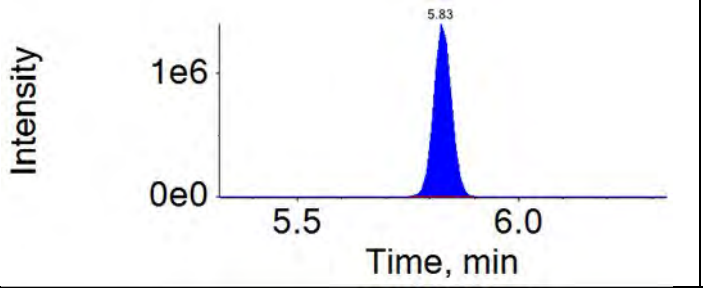


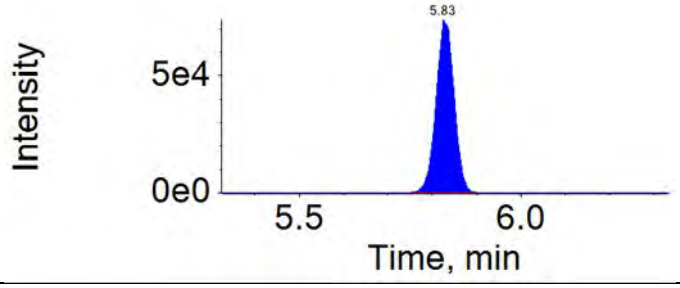
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

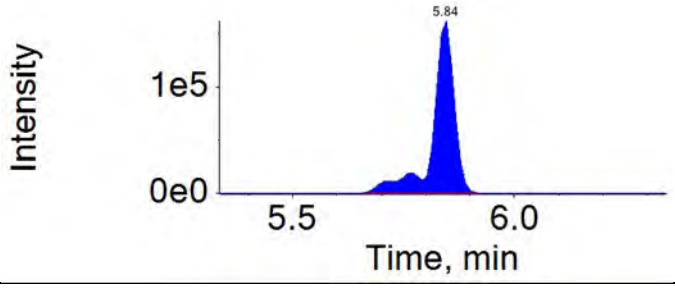
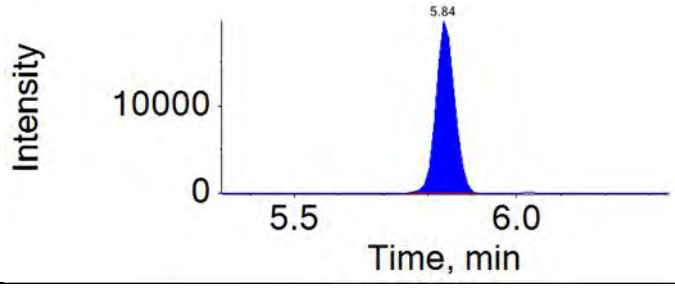


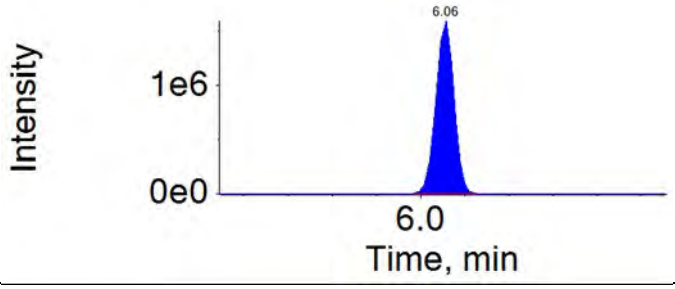
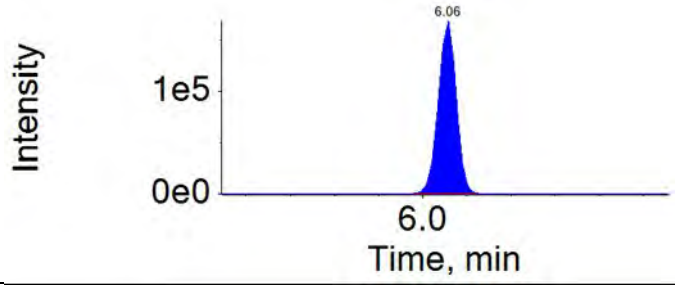


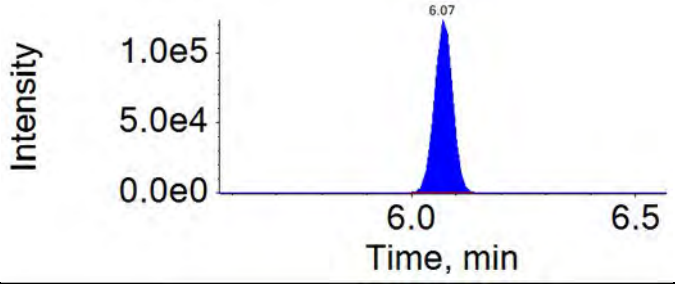
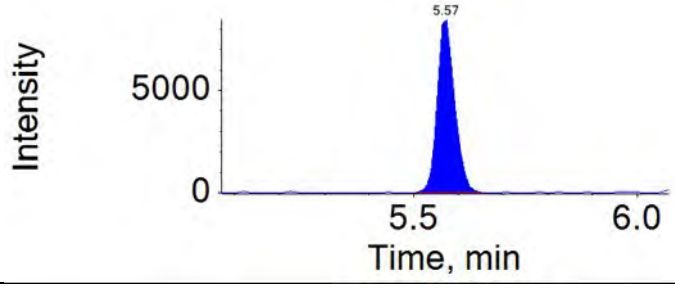
APPROVED
By MCD at 6:33 pm, 11/12/18

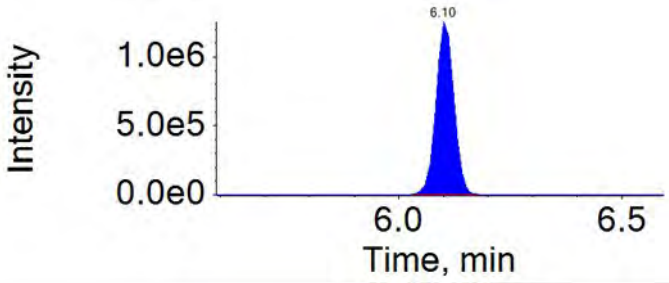
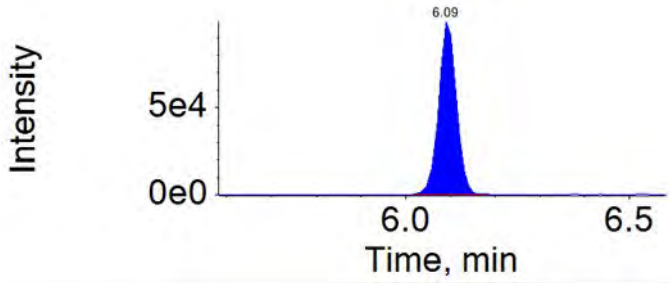
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

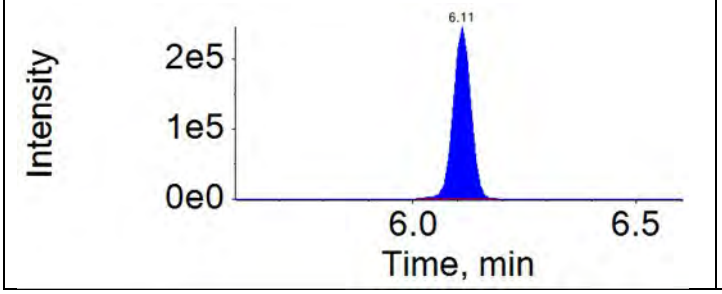
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

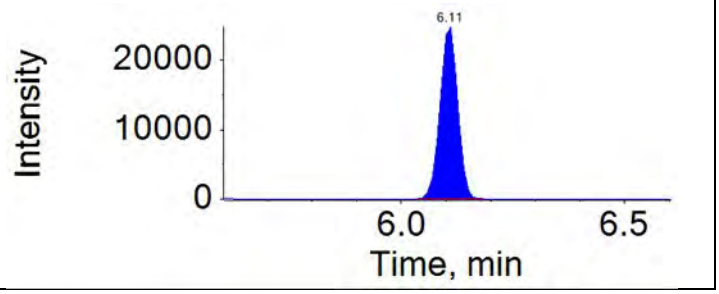
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

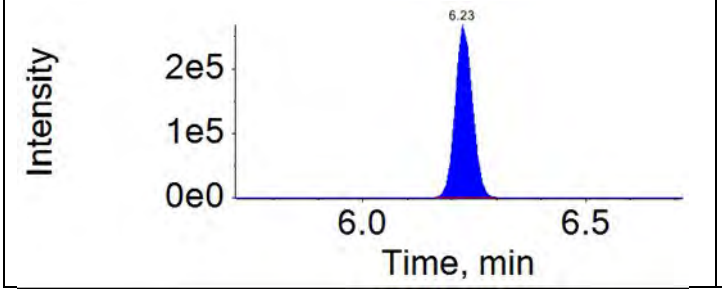
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

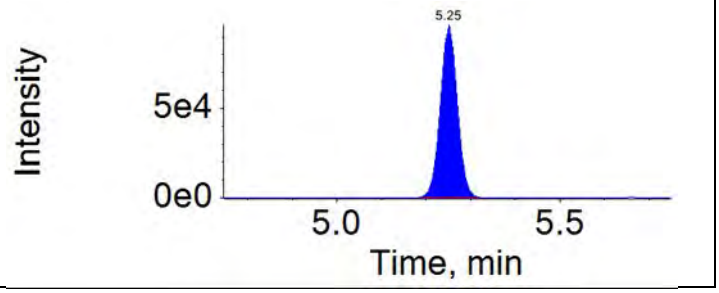
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



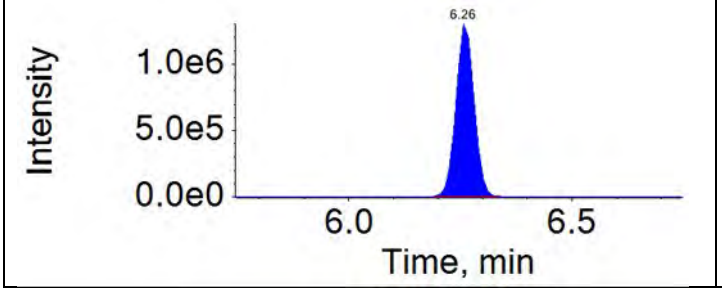


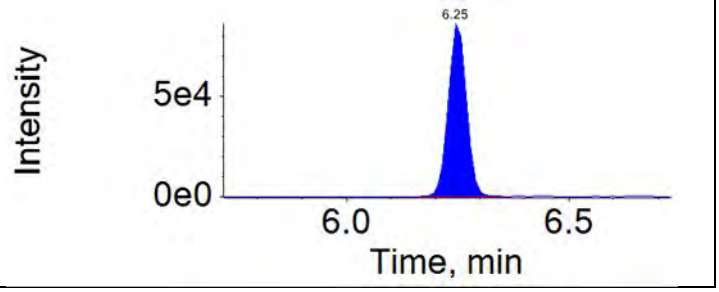
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



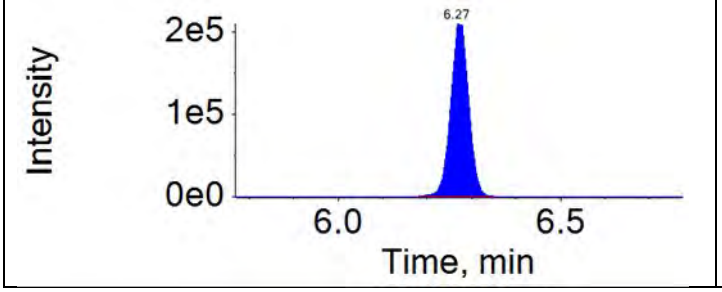


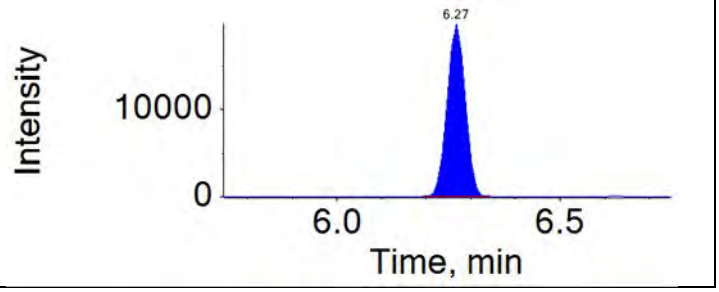
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



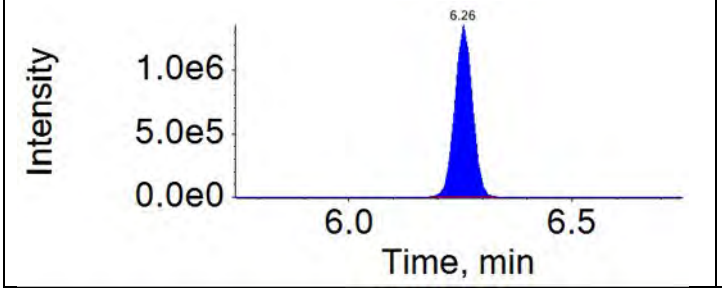


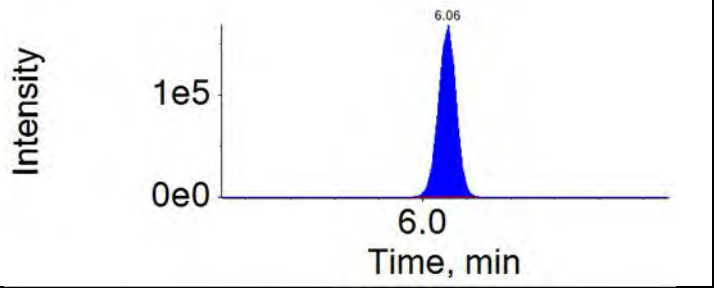
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

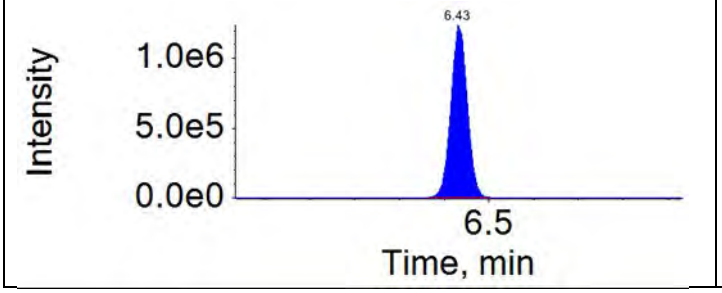
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

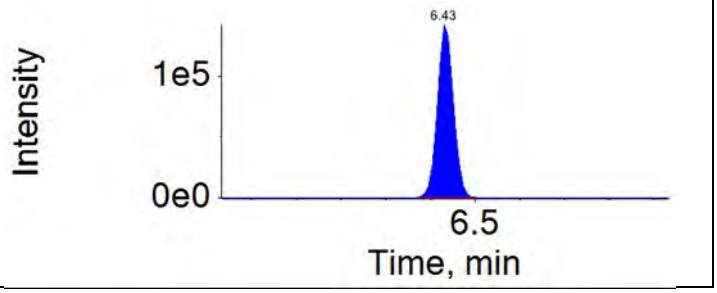
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



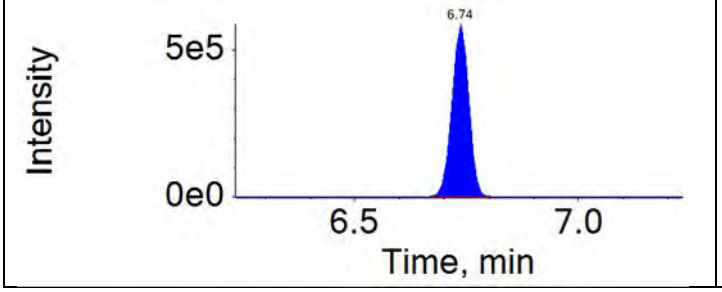


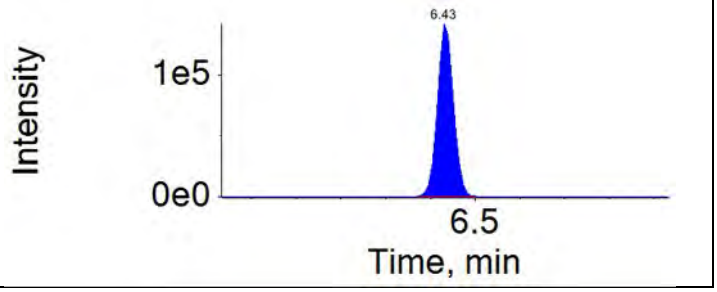
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



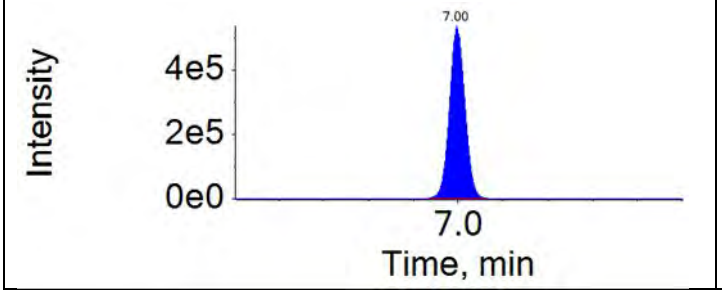


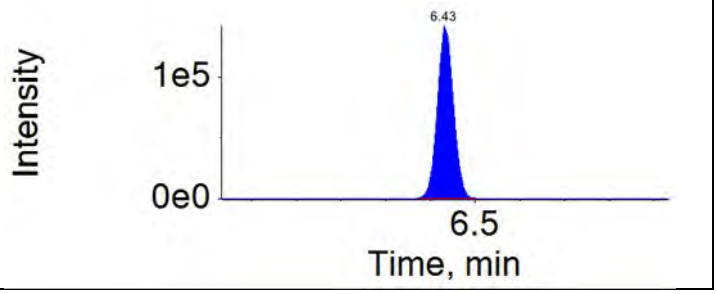
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



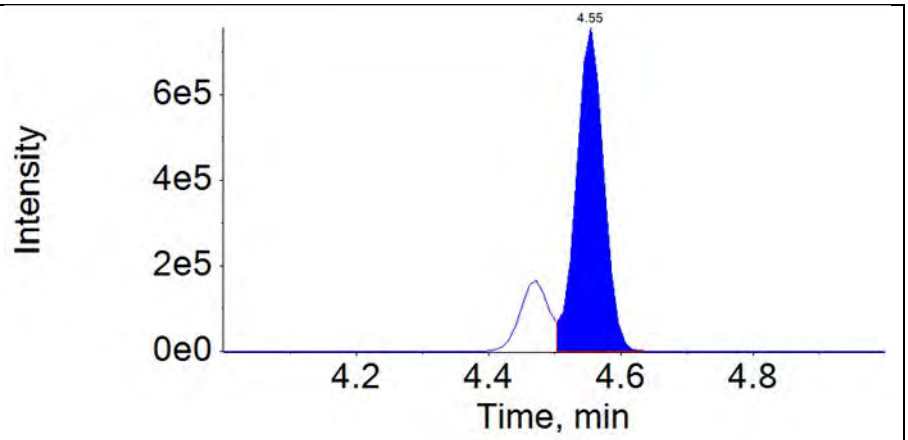


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

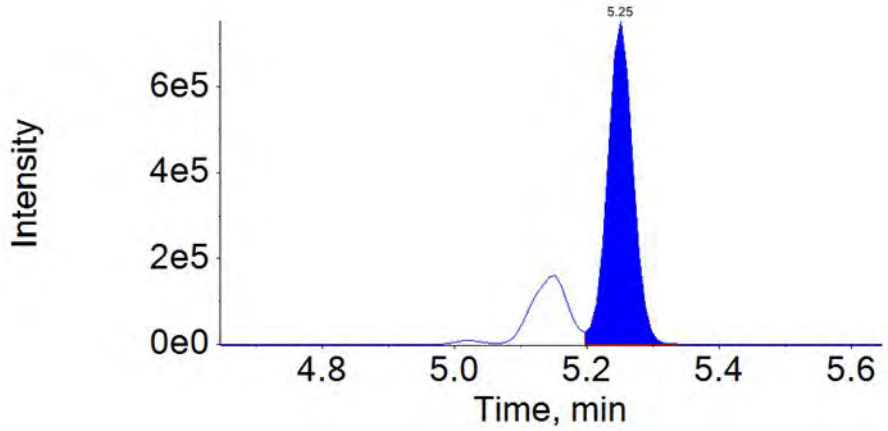
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
2168276.79
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



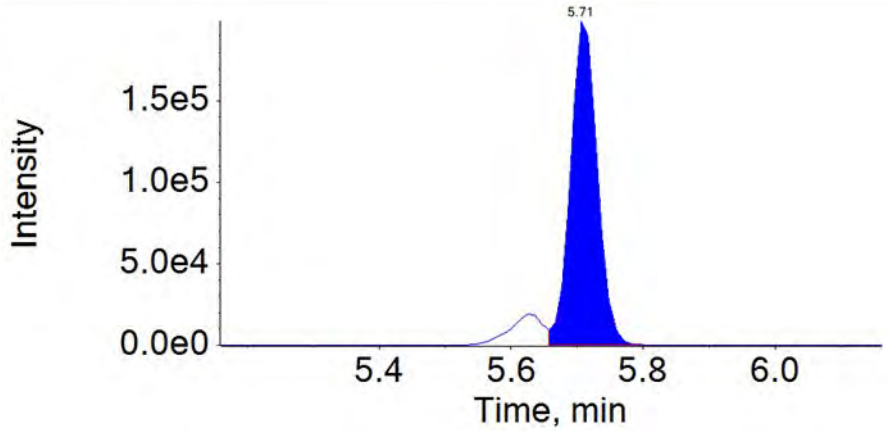
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
2015391.27
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
561930.92
Mass Range:
570.0 / 419.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6

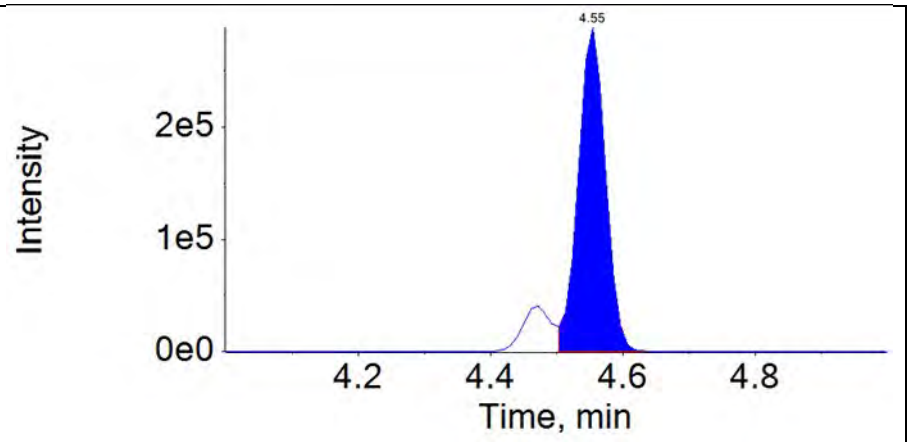


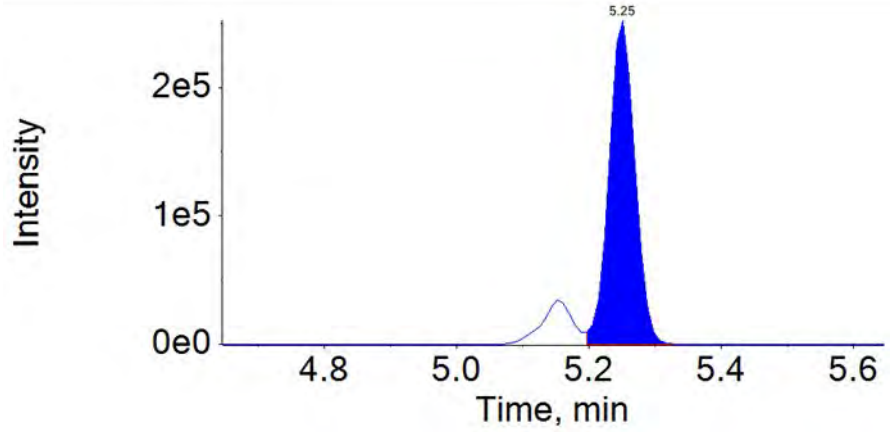
Integration Comment: incorrect integration

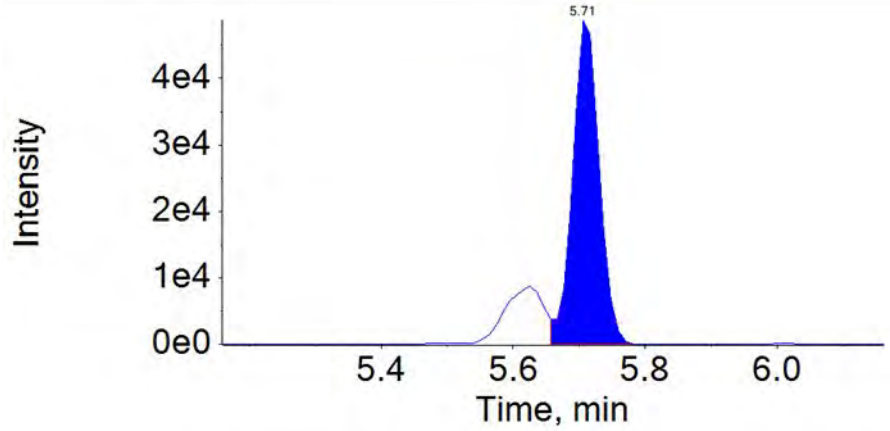
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS_2 **RT (min.):** 4.55 **Peak Area:** 827831.34 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-47.wiff **Sample Name:** CAL6	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 689553.42 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-47.wiff **Sample Name:** CAL6	 **Integration Comment:** incorrect integration

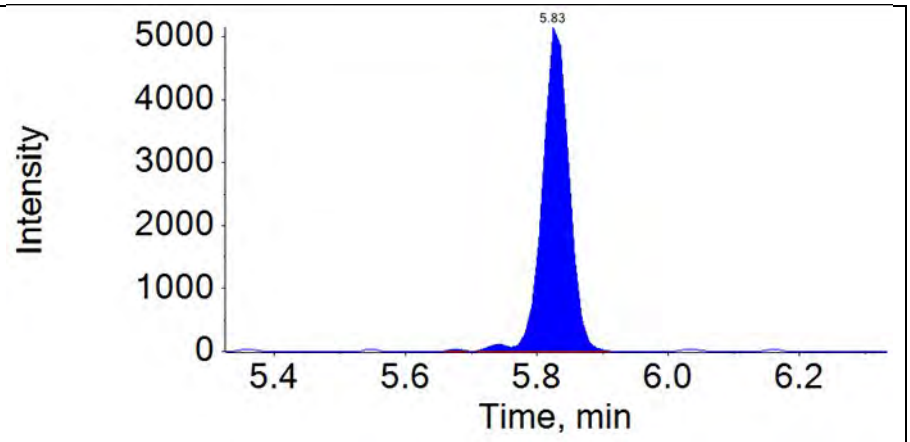
Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 136171.13 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV12DCAL-47.wiff **Sample Name:** CAL6	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

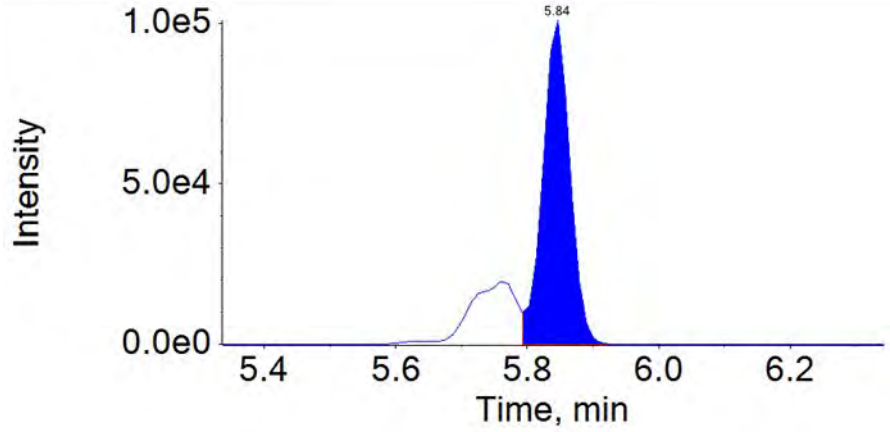
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
5.83
Peak Area:
14552.55
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



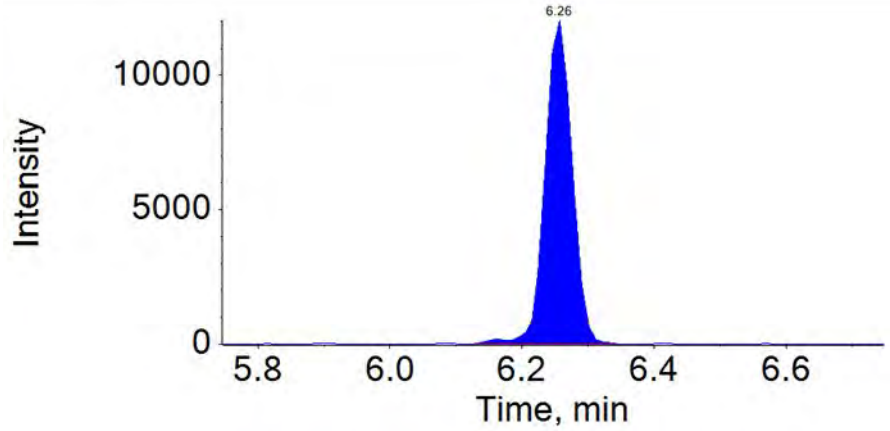
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
290918.50
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.26
Peak Area:
34575.92
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

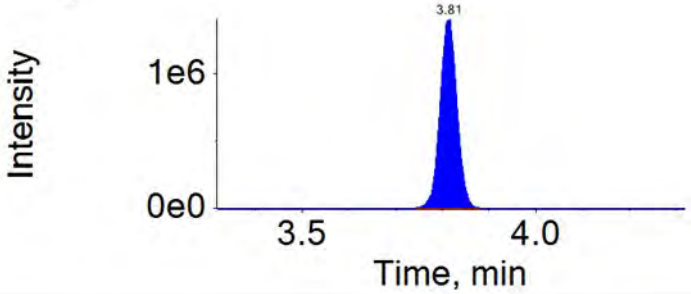
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-47.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3588084.15	A	0.3619	0.3688			
PFBS_2	3.81	1.00	1323155.38	A	0.3619	0.3688	2	50	
4:2-FTS	4.13	1.00	738293.95	A	0.6730	0.6272			
4:2 FTS_2	4.13	1.00	463074.71	A	0.6730	0.6272		#NA!	
PFHxA	4.16	1.00	6593778.96	A	0.0117	0.0113			
PFHxA_2	4.16	1.00	74578.79	A	0.0117	0.0113	-3	50	
PFPeS	4.18	1.10	1847826.78	A	0.5191	0.5187			
PFPeS_2	4.18	1.10	958558.40	A	0.5191	0.5187	0	50	
PFHpA	4.55	1.00	6648455.32	A	0.0563	0.0564			
PFHpA_2	4.55	1.00	375071.53	A	0.0563	0.0564	0	50	
PFHxS	4.55	1.00	2662852.00	M	0.3428	0.3565			
PFHxS_2	4.55	1.00	949378.20	M	0.3428	0.3565	4	50	
6:2-FTS	4.91	1.00	523949.46	A	0.6604	0.6368			
6:2 FTS_2	4.91	1.00	333633.12	A	0.6604	0.6368		#NA!	
PFHpS	4.91	1.08	2604868.63	A	0.4066	0.4130			
PFHpS_2	4.91	1.08	1075742.12	A	0.4066	0.4130	2	50	
PFOA	4.92	1.00	6758642.79	A	0.0562	0.0574			
PFOA_2	4.92	1.00	387863.69	A	0.0562	0.0574	2	50	
PFOS	5.25	1.00	2664957.22	M	0.2968	0.3006			
PFOS_2	5.25	1.00	801195.47	M	0.2968	0.3006	1	50	
PFNA	5.27	1.00	5820576.59	A	0.0229	0.0205			
PFNA_2	5.27	1.00	119436.95	A	0.0229	0.0205	-10	50	
PFNS	5.55	1.06	1709959.45	A	0.4828	0.4693			
PFNS_2	5.55	1.06	802535.42	A	0.4828	0.4693	-3	50	
PFDA	5.57	1.00	4802967.81	A	0.0081	0.0072			
PFDA_2	5.57	1.00	34768.56	A	0.0081	0.0072	-10	50	
8:2-FTS	5.57	1.00	469719.63	A	0.6814	0.5683			
8:2 FTS_2	5.57	1.00	266934.57	A	0.6814	0.5683		#NA!	
NMeFOSAA	5.71	1.00	627854.43	M	0.2569	0.2739			
NMeFOSAA_2	5.71	1.00	171981.91	M	0.2569	0.2739	7	50	
PFDS	5.80	1.10	1313570.32	A	0.5144	0.4832			
PFDS_2	5.80	1.11	634717.73	A	0.5144	0.4832	-6	50	
PFUnDA	5.83	1.00	3923979.21	A	0.0058	0.0036			
PFUnDA_2	5.83	1.00	14257.68	M	0.0058	0.0036	-38	50	
NEtFOSAA	5.84	1.00	551865.73	A	0.7253	0.6936			
NEtFOSAA_2	5.84	1.00	382778.11	M	0.7253	0.6936	-4	50	
PFDoDA	6.06	1.00	4582985.49	A	0.0157	0.0136			
PFDoDA_2	6.06	1.00	62235.50	A	0.0157	0.0136	-13	50	
10:2-FTS	6.07	1.09	348263.21	A	0.6356	0.6654			
10:2 FTS_2	6.07	1.09	231731.38	A	0.6356	0.6654		#NA!	
PFTrDA	6.26	1.03	3691733.76	A	0.0086	0.0093			
PFTrDA_2	6.26	1.03	34255.33	M	0.0086	0.0093	8	50	
PFTeDA	6.43	1.00	3149020.22	A	0.0062	0.0065			
PFTeDA_2	6.43	1.00	20486.74	A	0.0062	0.0065	4	50	
PFHxDA	6.74	1.05	1533920.21	A	0.0683	0.0655			
PFHxDA_2	6.73	1.05	100532.17	A	0.0683	0.0655	-4	50	
PFODA	7.00	1.09	1270897.62	A	0.0277	0.0264			
PFODA_2	7.00	1.09	33518.79	A	0.0277	0.0264	-5	50	

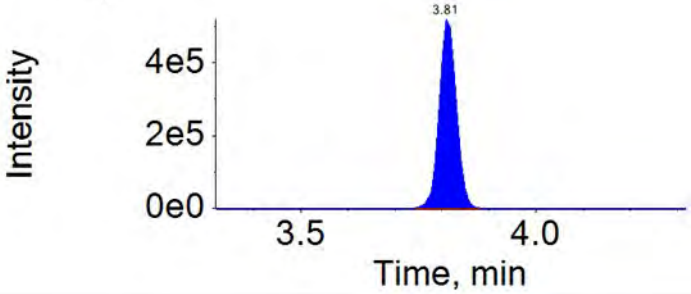
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

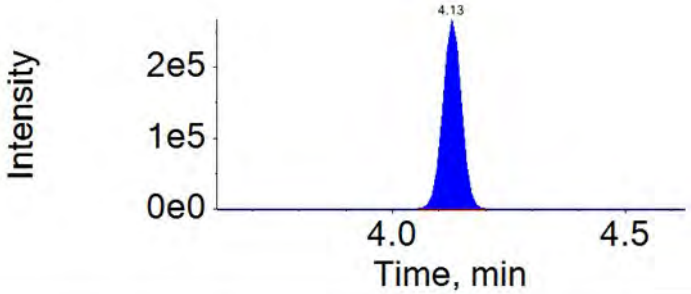
Component: PFBS
Primary Mass: 299.0 / 80.0



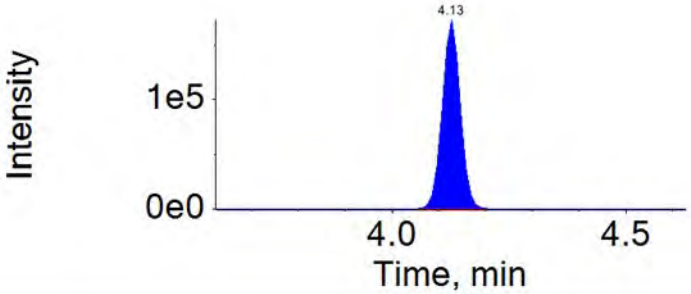
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



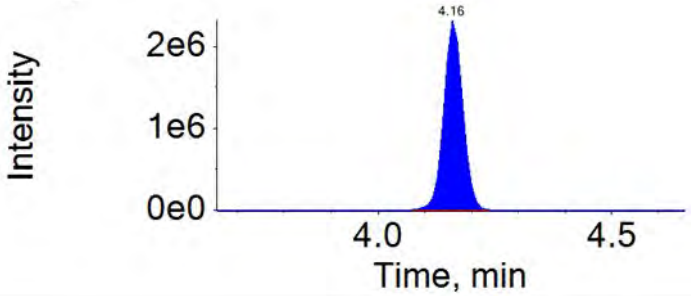
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



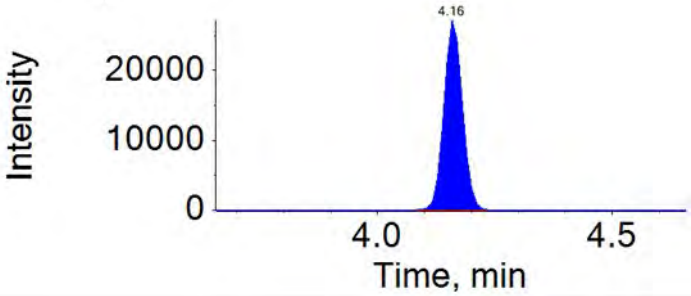
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



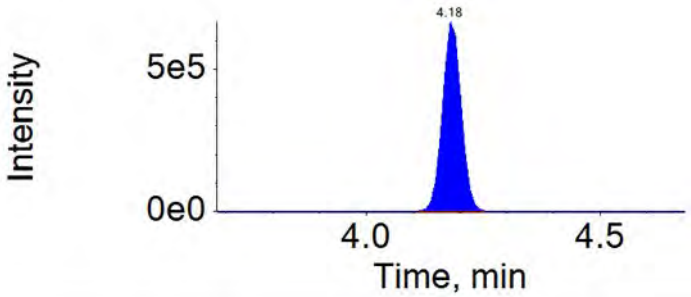
Component: PFHxA
Primary Mass: 313.0 / 269.0



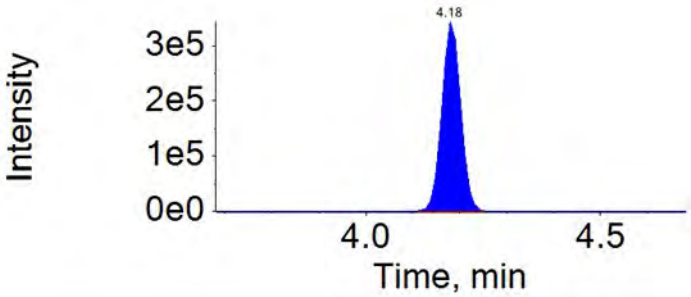
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



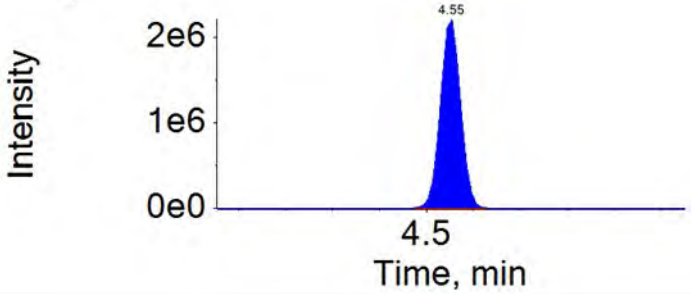
Component: PFPeS
Primary Mass: 349.0 / 80.0



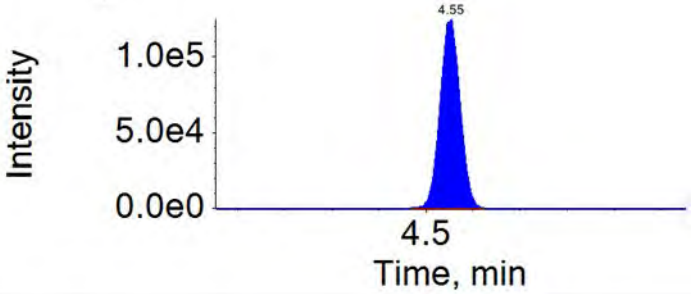
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



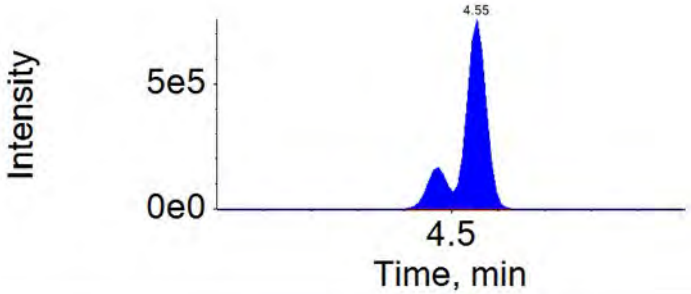
Component: PFHpA
Primary Mass: 363.0 / 319.0



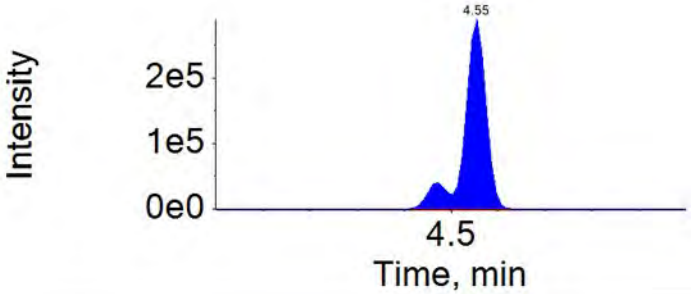
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



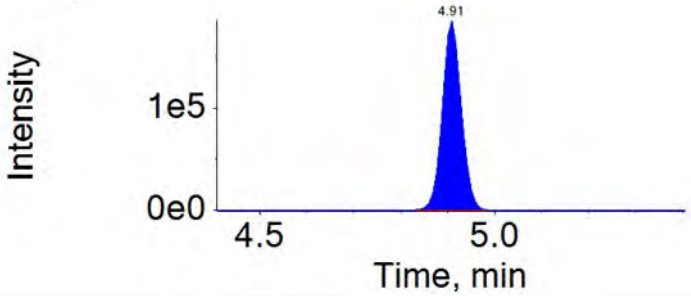
Component: PFHxS
Primary Mass: 399.0 / 80.0



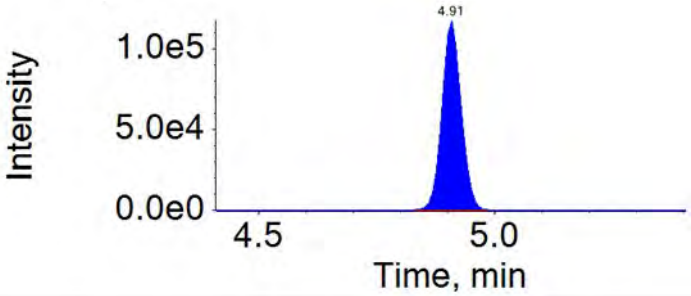
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



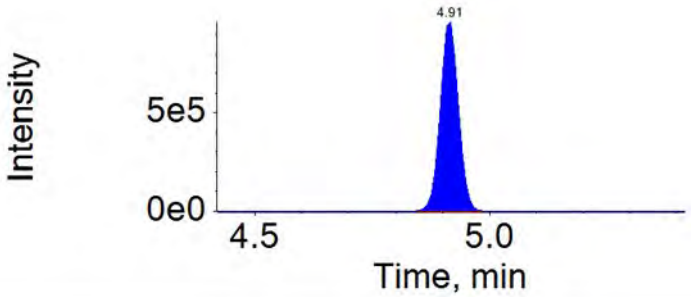
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



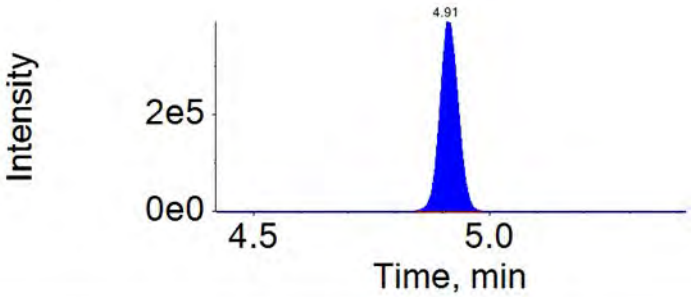
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



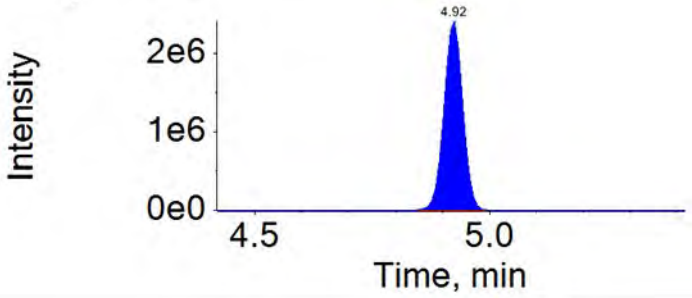
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



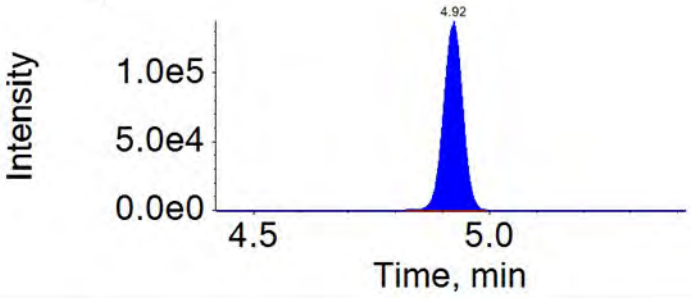
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

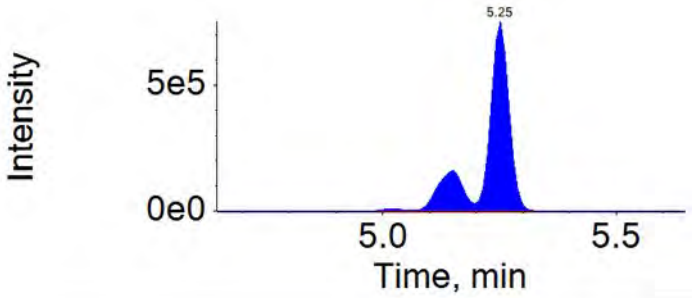
Component: PFOA
Primary Mass: 413.0 / 369.0



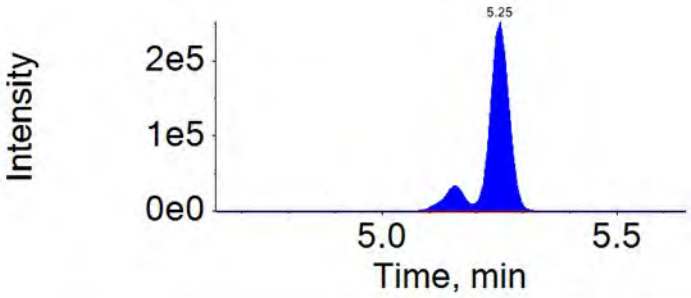
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



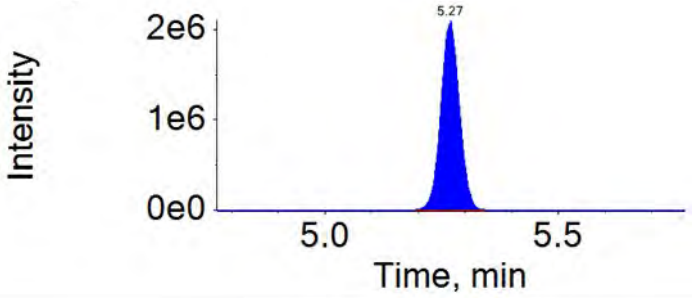
Component: PFOS
Primary Mass: 499.0 / 80.0



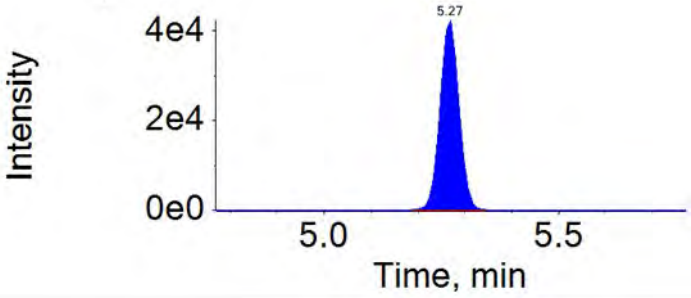
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



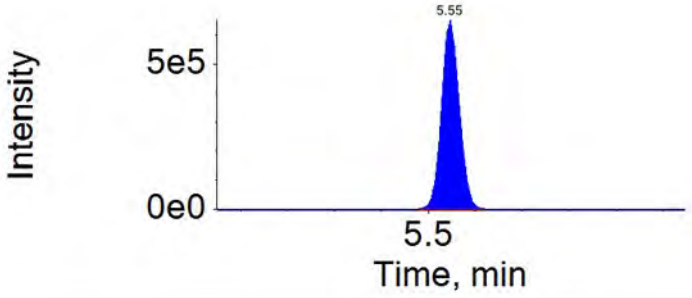
Component: PFNA
Primary Mass: 463.0 / 419.0



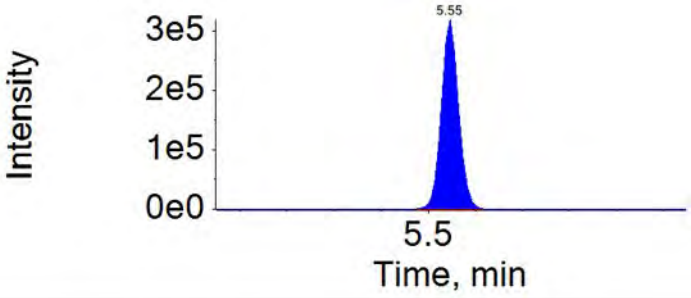
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



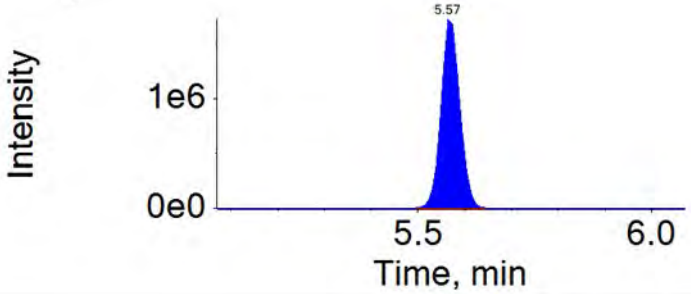
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



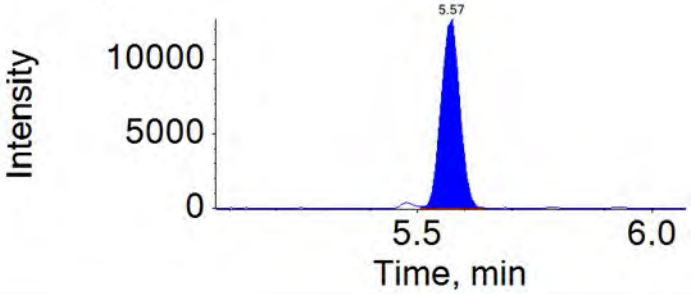
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

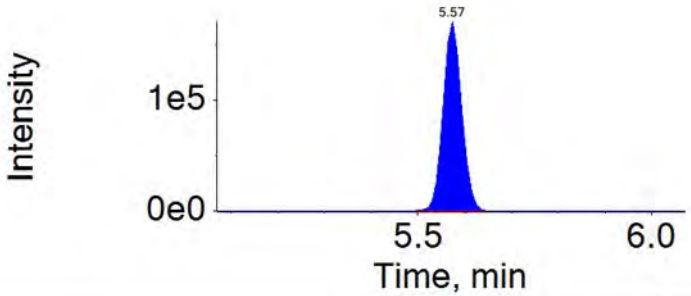
Component: PFDA
Primary Mass: 513.0 / 469.0



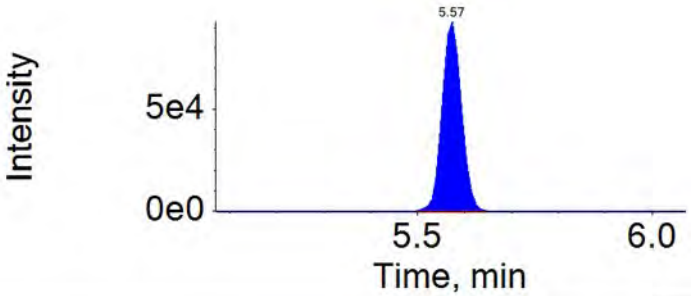
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



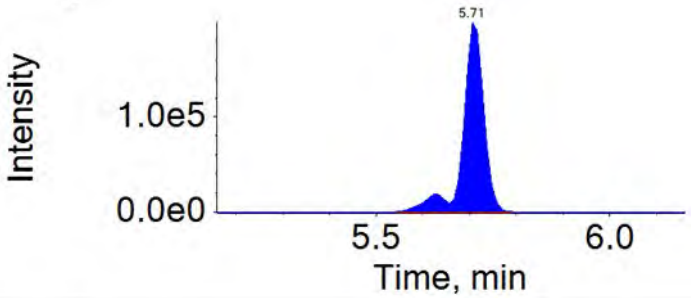
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



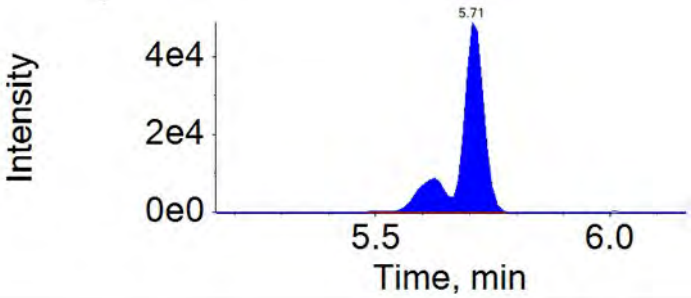
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



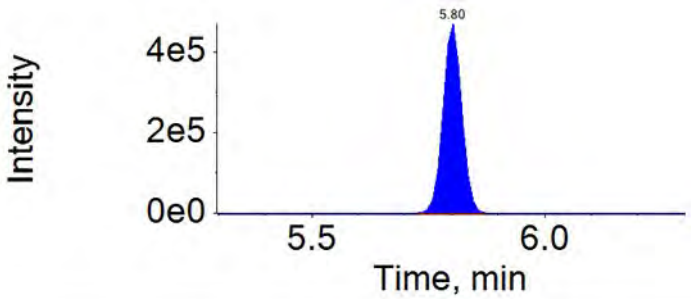
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



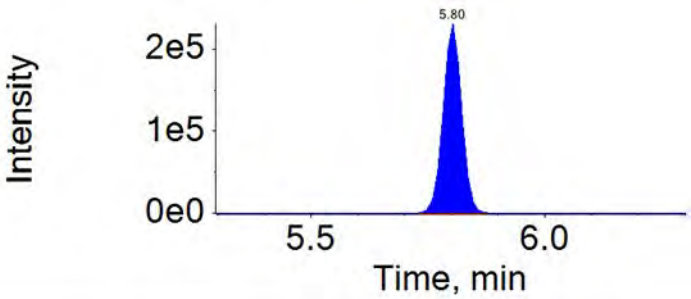
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



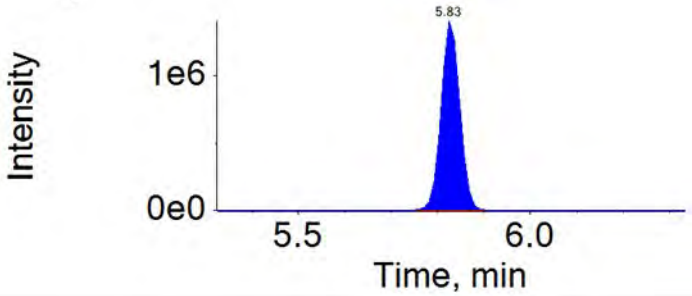
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



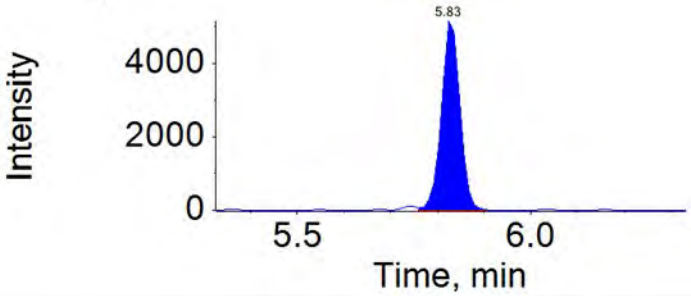
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

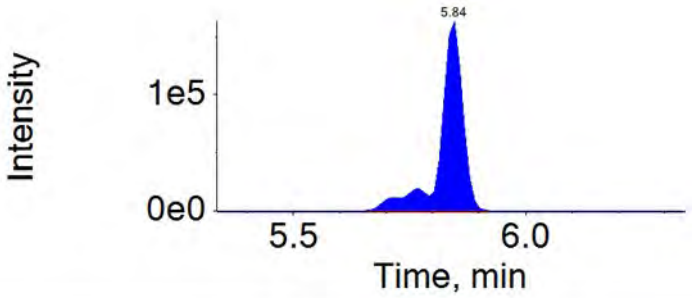
Component: PFUnDA
Primary Mass: 563.0 / 519.0



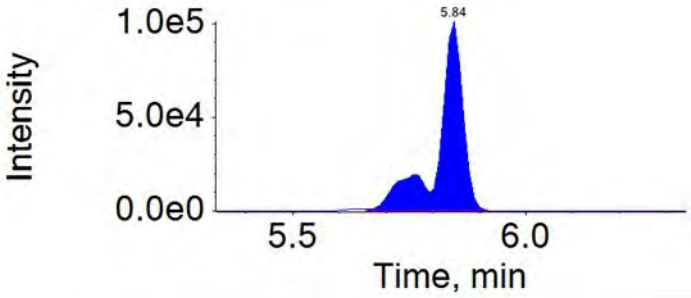
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



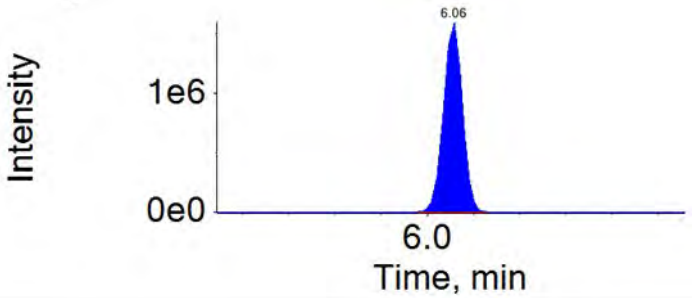
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



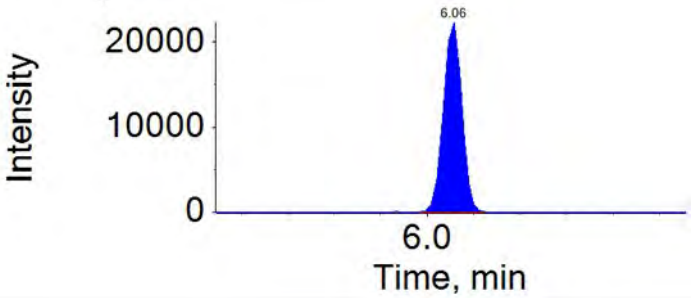
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



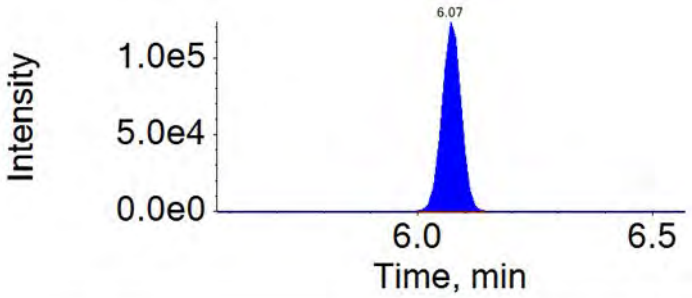
Component: PFDoDA
Primary Mass: 613.0 / 569.0



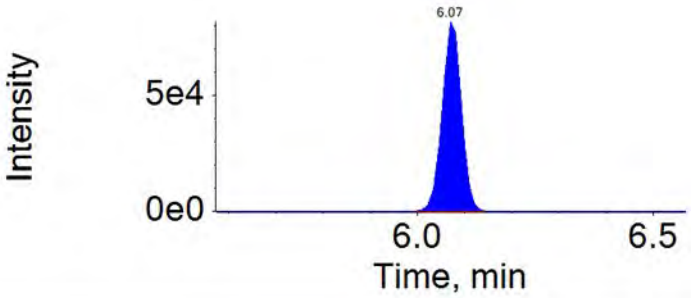
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



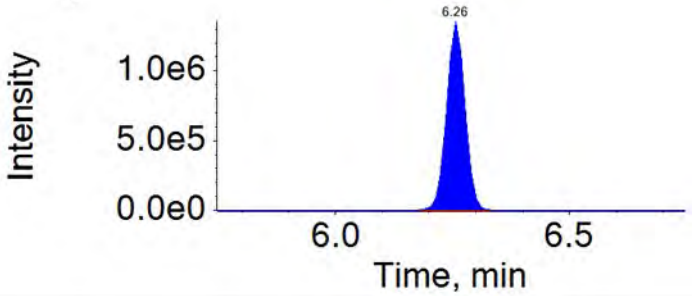
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



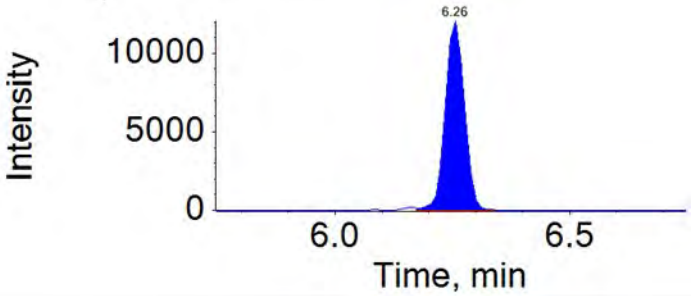
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

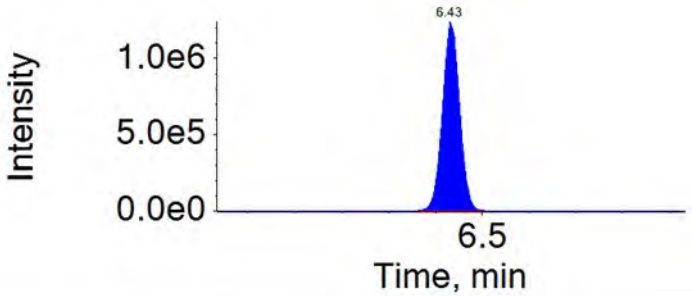
Component: PFTrDA
Primary Mass: 663.0 / 619.0



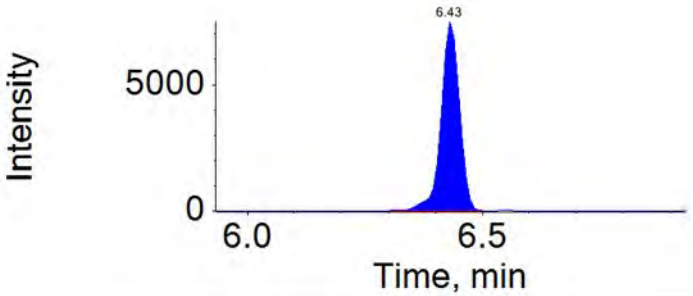
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



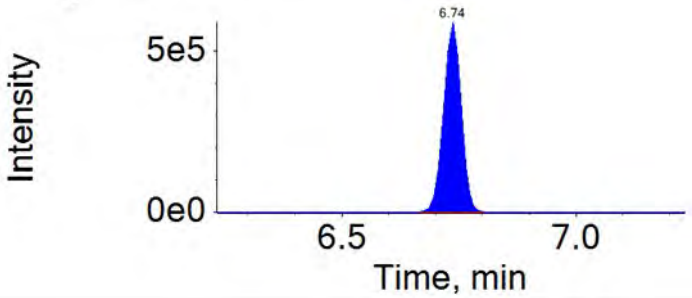
Component: PFTeDA
Primary Mass: 713.0 / 669.0



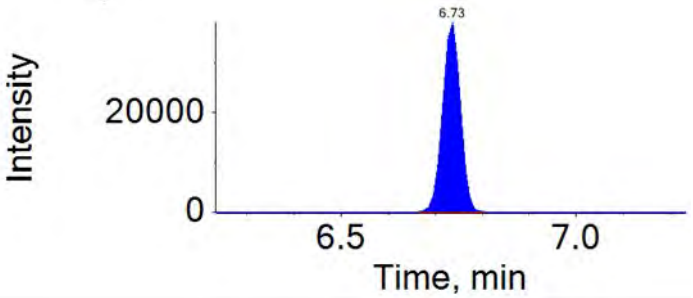
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



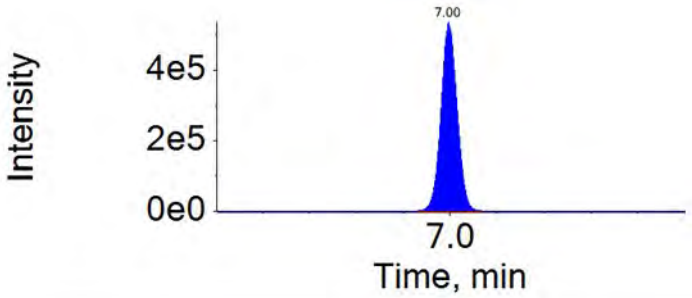
Component: PFHxDA
Primary Mass: 813.0 / 769.0



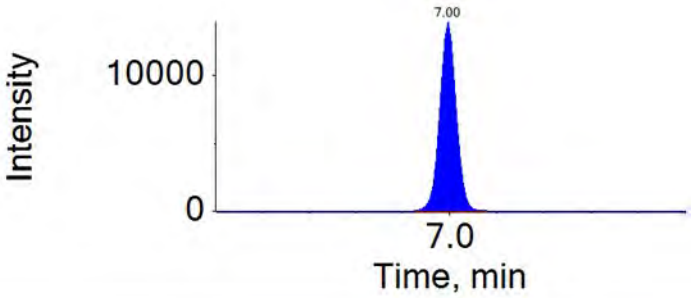
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV12DCAL-48.wiff
Sample ID:	CALBRN71833B			**Acquis Date:**		2018-11-12T16:00:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	510525.8	659926.2	-23	50	
13C2-PFOA	5.0	368158.3	450219.7	-18	50	
13C4-PFOS	4.8	233532.7	249205.8	-6	50	
13C2-PFDA	5.0	233825.1	278743.9	-16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	557392.8	13C3-PFBA	510525.8	1.092	5.000	4.895	98	70-130	
E13C5-PFPeA	581688.7	13C3-PFBA	510525.8	1.139	5.000	5.110	102	70-130	
E13C3-PFBS	361166.0	13C3-PFBA	510525.8	0.707	4.650	4.994	107	70-130	
E13C2-4:2-FTS	40505.1	13C2-PFOA	368158.3	0.110	4.670	4.900	105	70-130	
E13C5-PFHxA	509808.0	13C2-PFOA	368158.3	1.385	5.000	5.002	100	70-130	
E13C3-PFHxS	267182.8	13C2-PFOA	368158.3	0.726	4.730	4.980	105	70-130	
E13C4-PFHpA	401203.9	13C2-PFOA	368158.3	1.090	5.000	4.910	98	70-130	
E13C2-6:2-FTS	27180.2	13C2-PFOA	368158.3	0.074	4.750	4.939	104	70-130	
E13C8-PFOA	607669.5	13C2-PFOA	368158.3	1.651	5.000	4.548	91	70-130	
E13C8-PFOS	242617.5	13C4-PFOS	233532.7	1.039	4.780	4.603	96	70-130	
E13C9-PFNA	377369.8	13C4-PFOS	233532.7	1.616	5.000	4.505	90	70-130	
E13C6-PFDA	479333.1	13C2-PFDA	233825.1	2.050	5.000	4.784	96	70-130	
E13C2-8:2-FTS	22711.0	13C2-PFDA	233825.1	0.097	4.790	4.844	101	70-130	
E13C8-PFOSA	554092.6	13C2-PFDA	233825.1	2.370	5.000	5.254	105	70-130	
Ed3-NMeFOSAA	67250.5	13C2-PFDA	233825.1	0.288	5.000	5.192	104	70-130	
E13C7-PFUnDA	199746.8	13C2-PFDA	233825.1	0.854	5.000	4.960	99	70-130	
Ed5-NEtFOSAA	58049.5	13C2-PFDA	233825.1	0.248	5.000	5.252	105	70-130	
E13C2-PFDoDA	474393.8	13C2-PFDA	233825.1	2.029	5.000	5.268	105	70-130	
Ed7-NMePFOSAE	272283.1	13C2-PFDA	233825.1	1.164	5.000	5.039	101	70-130	
Ed3-NMePFOSA	74110.3	13C2-PFDA	233825.1	0.317	5.000	5.758	115	70-130	
Ed9-NEtPFOSAE	240346.5	13C2-PFDA	233825.1	1.028	5.000	5.346	107	70-130	
Ed5-NEtPFOSA	53297.9	13C2-PFDA	233825.1	0.228	5.000	5.347	107	70-130	
E13C2-PFTeDA	346256.6	13C2-PFDA	233825.1	1.481	5.000	5.199	104	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

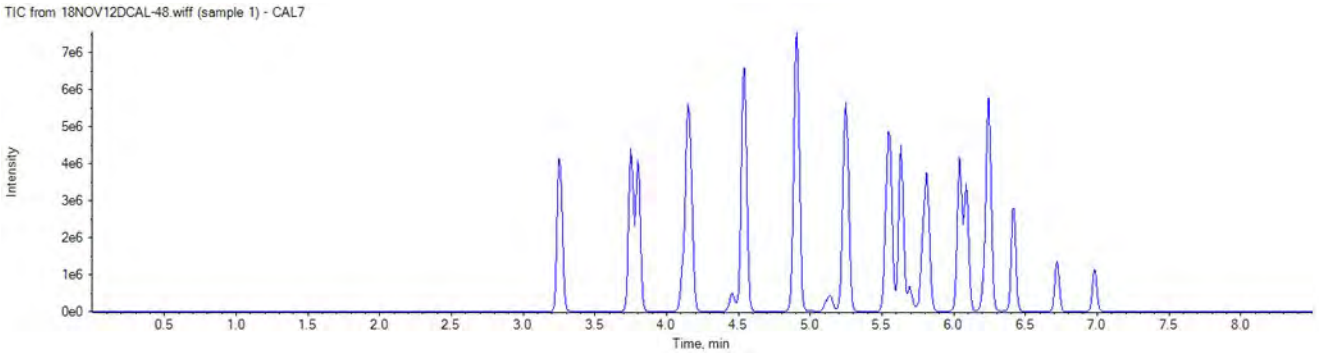
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-48.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	9834601.7		A	13C4-PFBA	3.25	557392.8	17.644	97.743
PFPeA	3.75	1.000	9756431.5		A	13C5-PFPeA	3.75	581688.7	16.773	97.094
PFBS	3.80	1.000	6615935.3		A	13C3-PFBS	3.80	361166.0	18.318	87.136
4:2-FTS	4.11	1.000	1379983.9		A	13C2-4:2-FTS	4.11	40505.1	34.069	92.499
PFHxA	4.15	1.000	11059420.3		A	13C5-PFHxA	4.15	509808.0	21.693	90.577
PFPeS	4.17	1.100	3482095.9		A	13C3-PFBS	3.80	361166.0	9.641	93.602
PFHpA	4.54	1.000	10981922.8		A	13C4-PFHpA	4.54	401203.9	27.372	90.732
PFHxS	4.54	1.000	5048349.8		M	13C3-PFHxS	4.54	267182.8	18.895	91.615
6:2-FTS	4.89	1.000	869227.2		A	13C2-6:2-FTS	4.89	27180.2	31.980	77.388
PFHpS	4.90	1.080	4784682.8		A	13C3-PFHxS	4.54	267182.8	17.908	94.267
PFOA	4.91	1.000	10991740.1		A	13C8-PFOA	4.91	607669.5	18.088	96.608
PFOS	5.24	1.000	5138367.0		M	13C8-PFOS	5.24	242617.5	21.179	92.617
PFNA	5.25	1.000	10084288.3		A	13C9-PFNA	5.25	377369.8	26.723	96.360
PFNS	5.53	1.060	3386860.5		A	13C8-PFOS	5.24	242617.5	13.960	97.666
PFDA	5.55	1.000	8104726.6		A	13C6-PFDA	5.55	479333.1	16.908	89.640
8:2-FTS	5.56	1.000	804019.5		A	13C2-8:2-FTS	5.56	22711.0	35.402	82.540
PFOSA	5.63	1.000	10169176.9		A	13C8-PFOSA	5.63	554092.6	18.353	89.642
NMeFOSAA	5.69	1.000	1191981.7		M	d3-NMeFOSAA	5.69	67250.5	17.725	100.173
PFDS	5.79	1.110	2606720.7		A	13C8-PFOS	5.24	242617.5	10.744	97.353
PFUnDA	5.81	1.000	6802701.2		A	13C7-PFUnDA	5.81	199746.8	34.057	89.032
NEtFOSAA	5.83	1.000	1046636.1		M	d5-NEtFOSAA	5.82	58049.5	18.030	94.517
PFDoDA	6.04	1.000	8171355.4		A	13C2-PFDoDA	6.04	474393.8	17.225	87.711
10:2-FTS	6.06	1.090	632223.7		A	13C2-8:2-FTS	5.56	22711.0	27.838	92.724
NMePFOSAE	6.09	1.000	6272486.3		A	d7-NMePFOSAE	6.08	272283.1	23.037	95.876
NMePFOSA	6.09	1.000	1310162.9		A	d3-NMePFOSA	6.09	74110.3	17.679	87.214
PFDoS	6.21	1.190	1336765.3		A	13C8-PFOS	5.24	242617.5	5.510	96.500
NEtPFOSAE	6.25	1.000	6557402.5		A	d9-NEtPFOSAE	6.23	240346.5	27.283	87.532
NEtPFOSA	6.26	1.000	1148933.0		A	d5-NEtPFOSA	6.25	53297.9	21.557	98.999
PFTrDA	6.24	1.030	6281239.0		A	13C2-PFDoDA	6.04	474393.8	13.241	83.569
PFTeDA	6.42	1.000	6092875.7		A	13C2-PFTeDA	6.42	346256.6	17.596	98.638
PFHxDA	6.72	1.050	2866097.3		A	13C2-PFTeDA	6.42	346256.6	8.277	98.615
PFODA	6.98	1.090	2488863.6		A	13C2-PFTeDA	6.42	346256.6	7.188	100.107

Total Ion Chromatogram

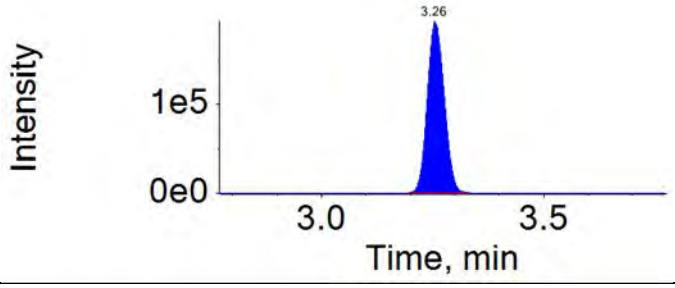


APPROVED
By MCD at 6:33 pm, 11/12/18

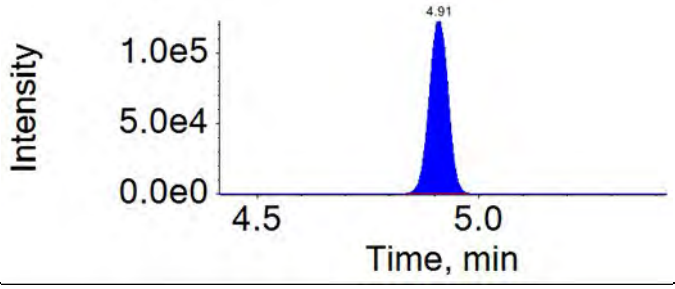
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

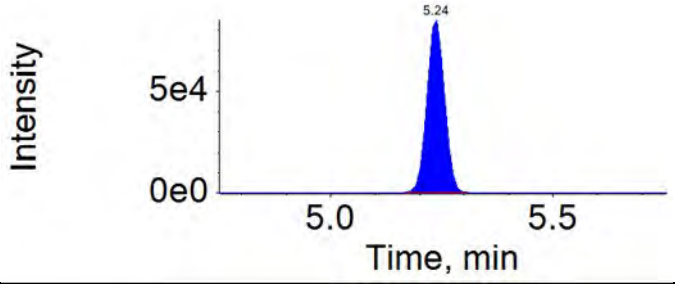
Injection Standard: 13C3-PFBA
216.0 / 172.0



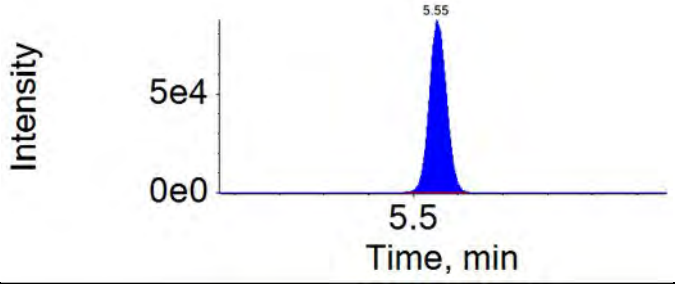
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

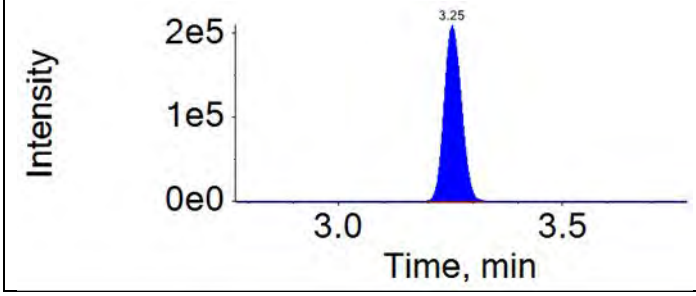


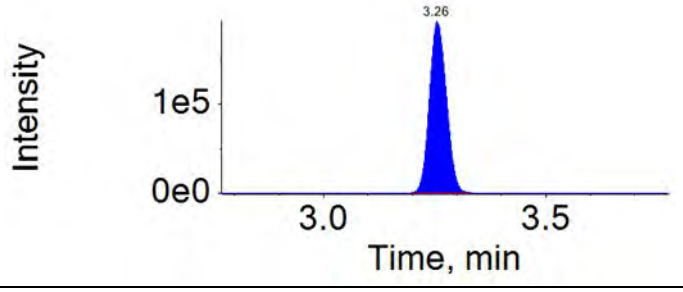
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

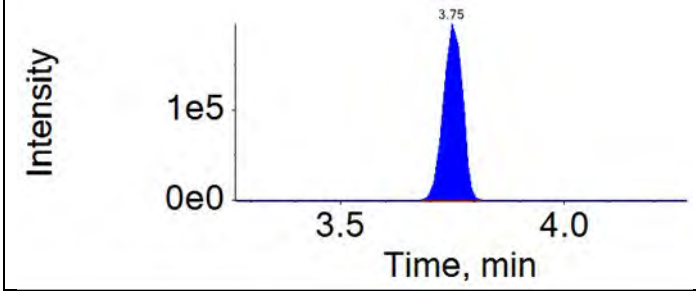
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

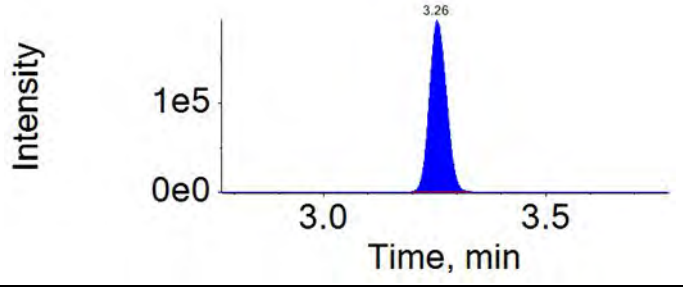
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



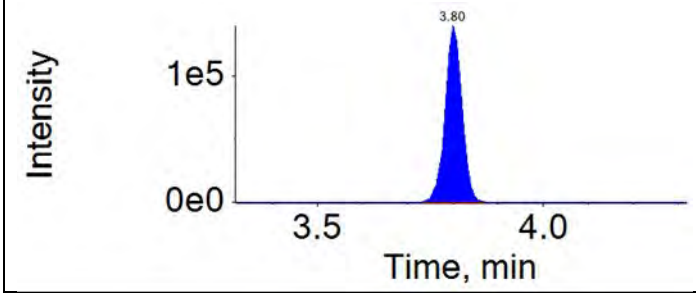


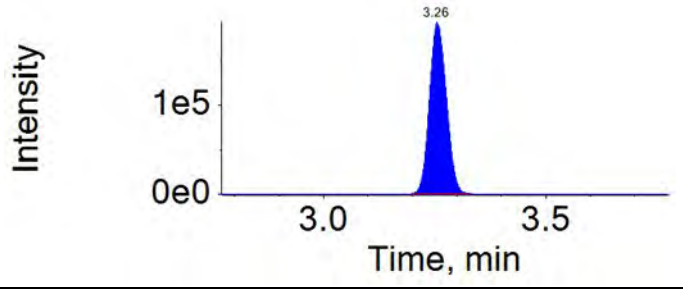
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



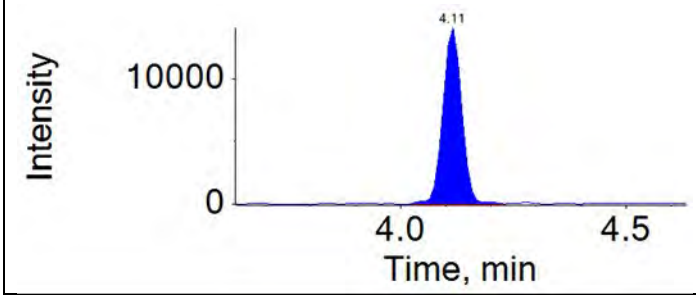


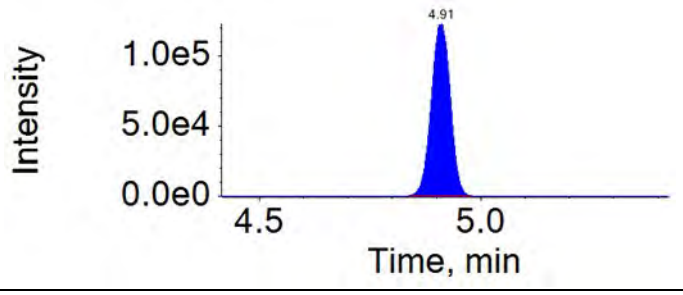
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

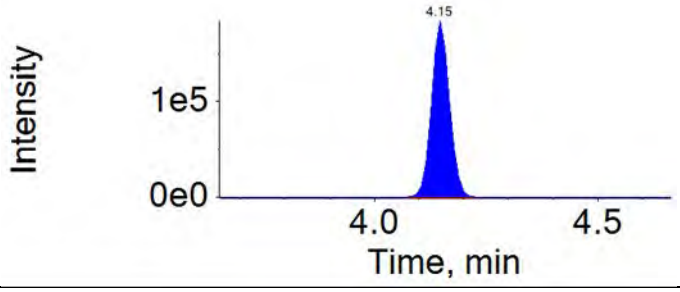
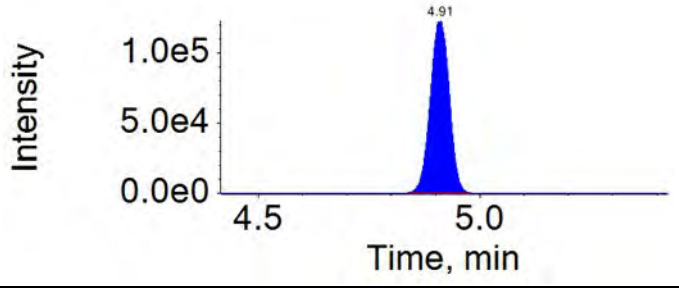


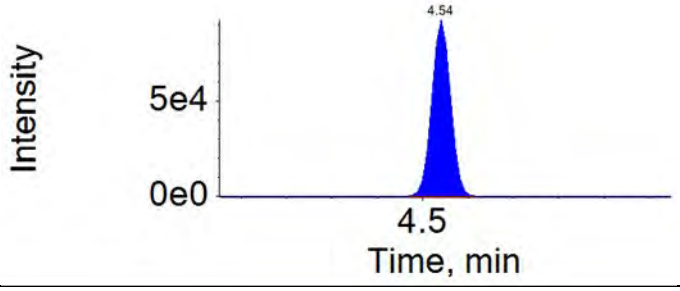
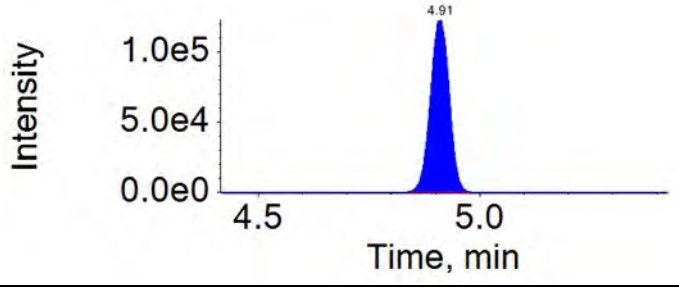


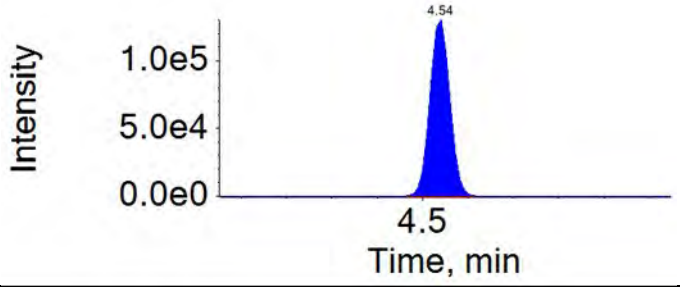
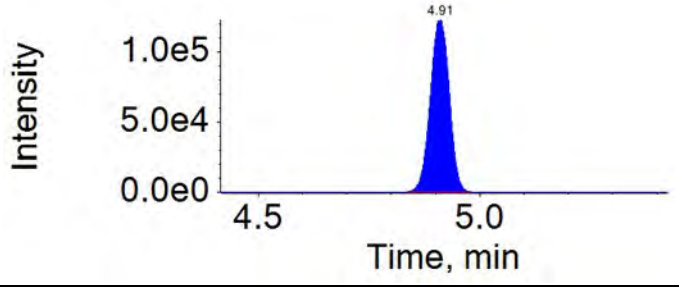
APPROVED
By MCD at 6:33 pm, 11/12/18

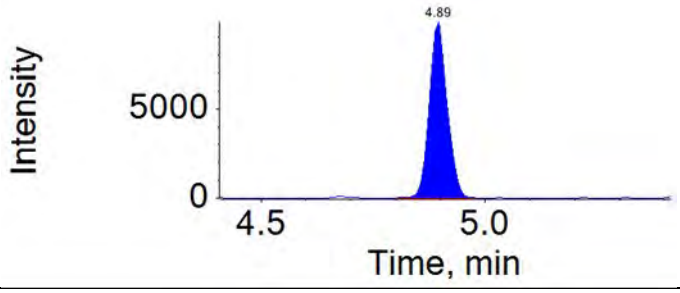
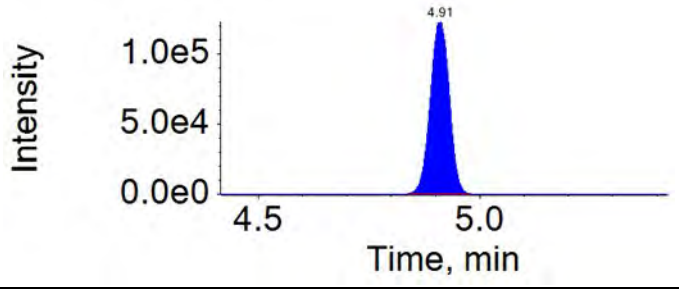
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

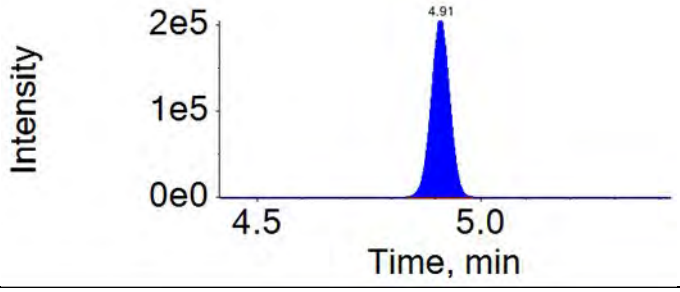
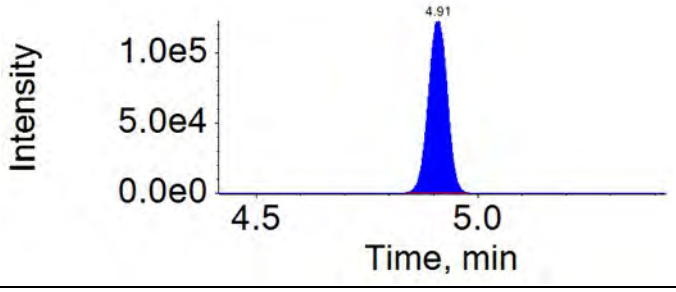
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

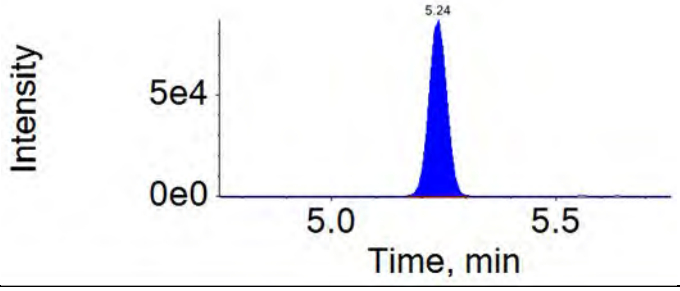
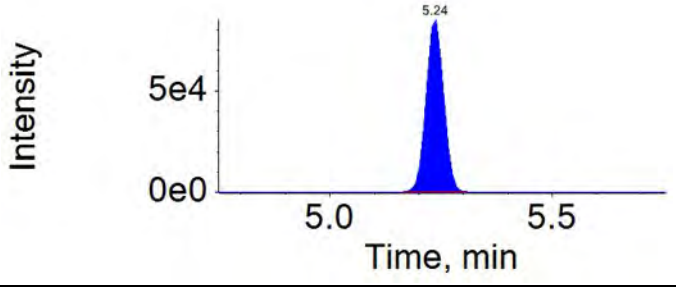
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

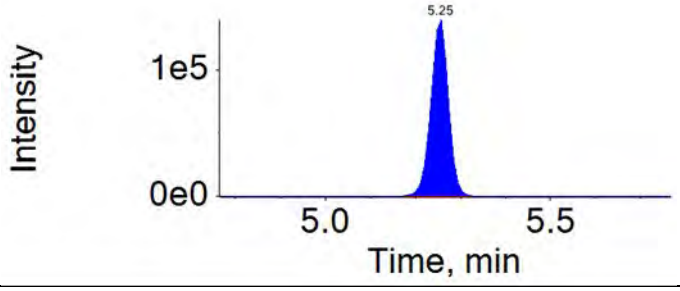
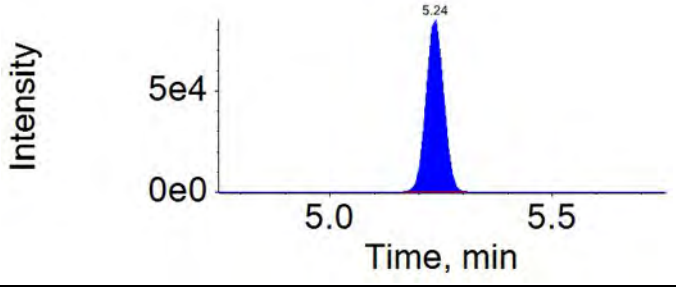
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

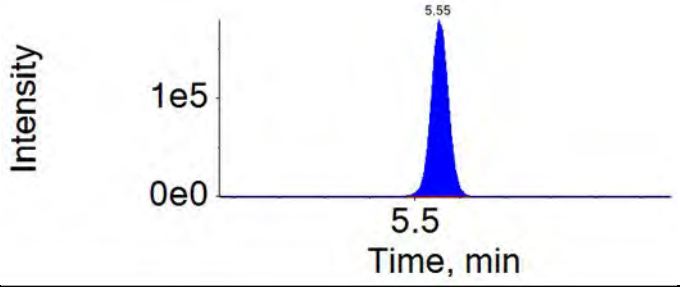
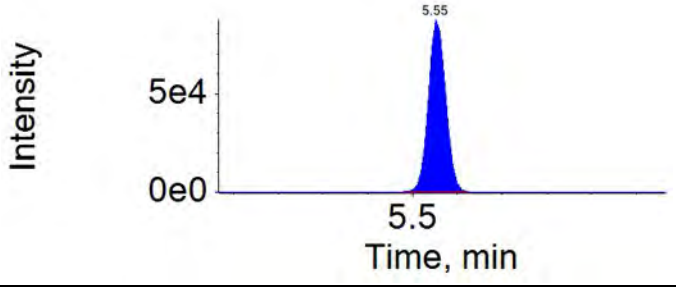
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

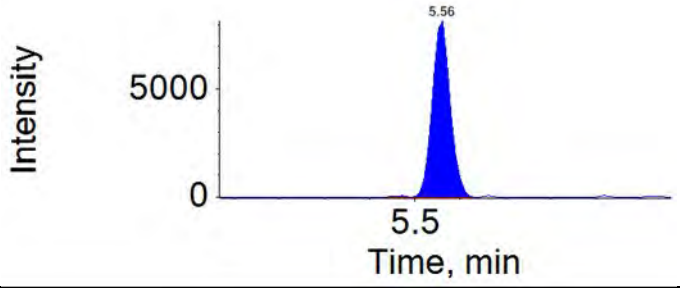
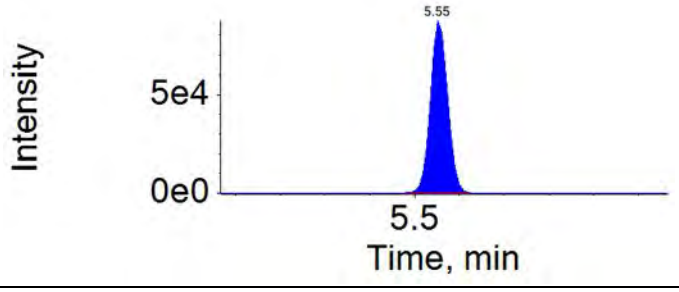
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

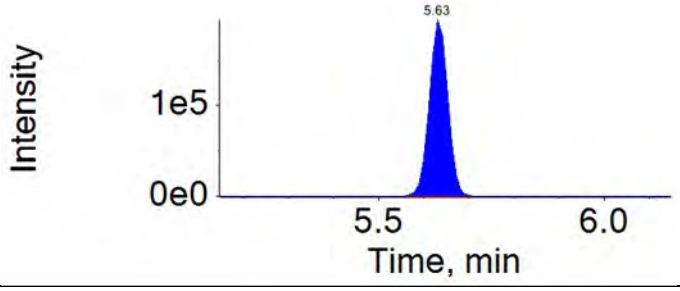
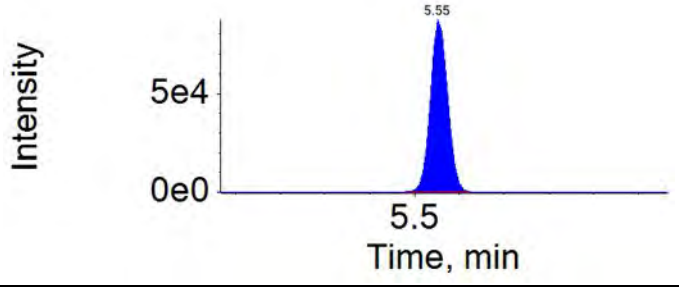
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

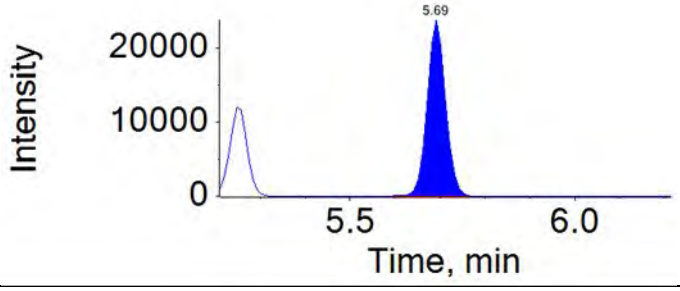
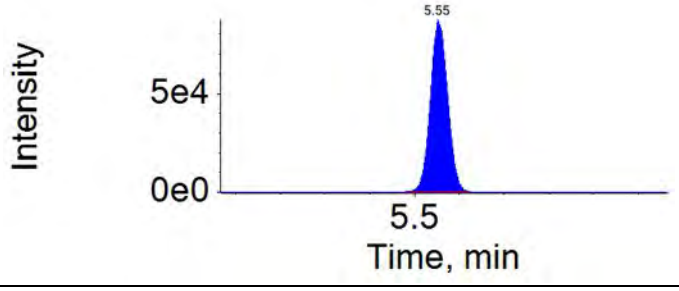
APPROVED
By MCD at 6:33 pm, 11/12/18

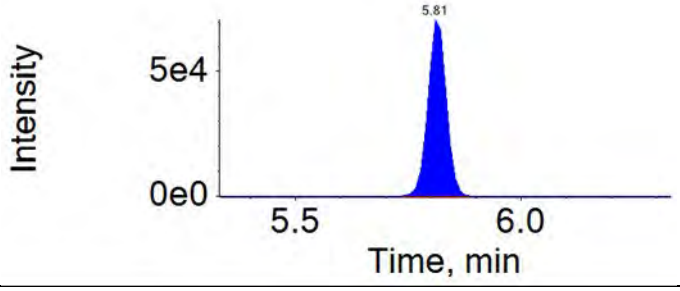
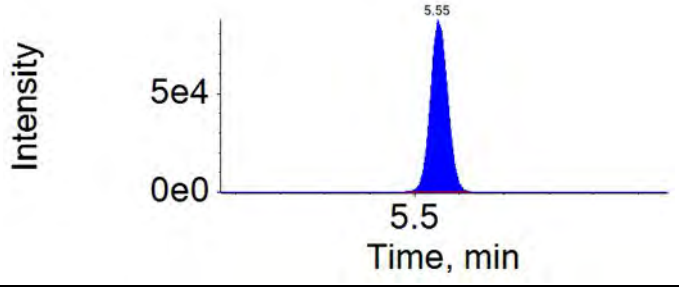
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

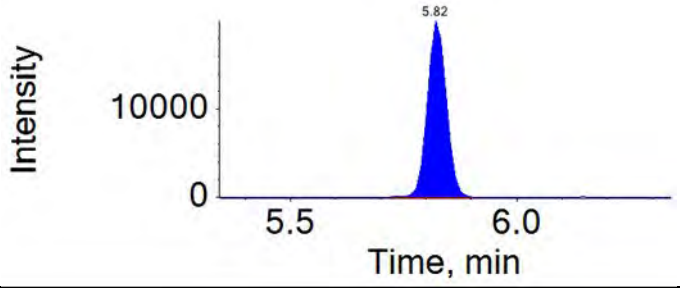
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

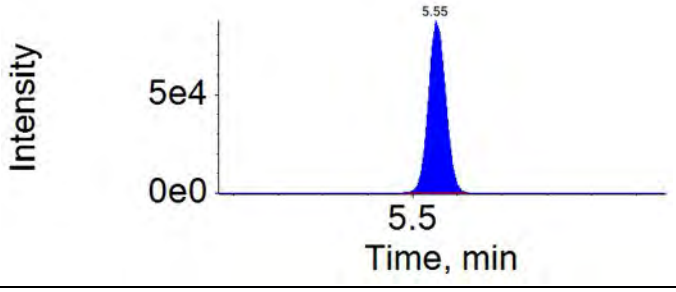
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

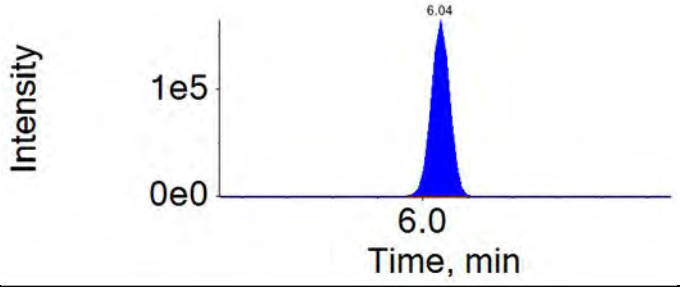
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

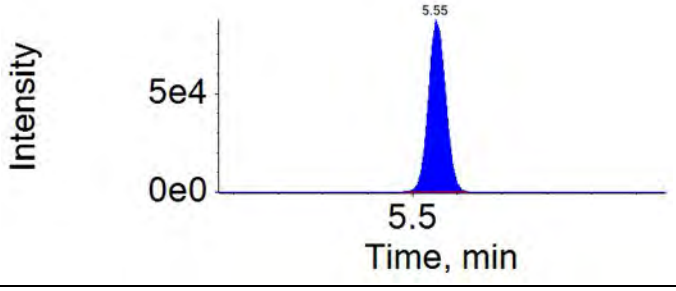
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



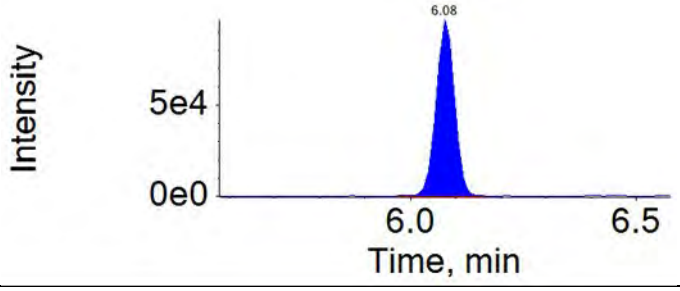


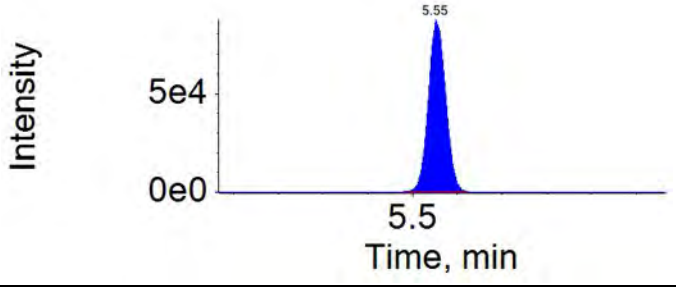
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



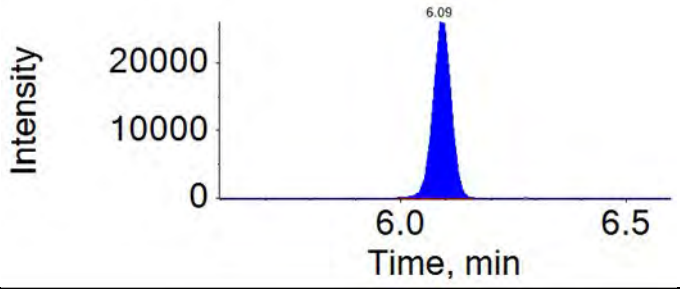


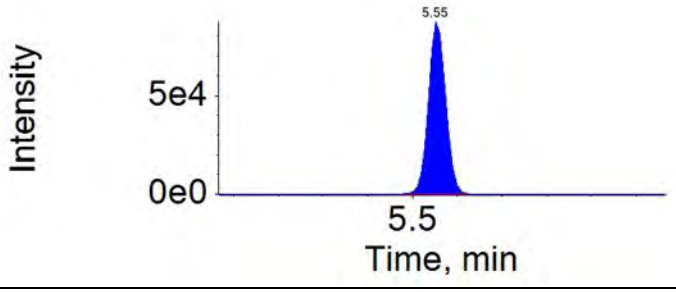
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



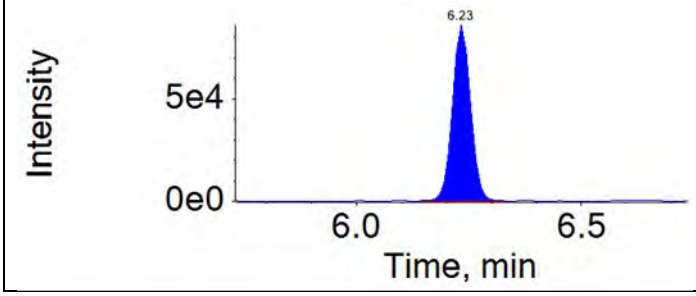


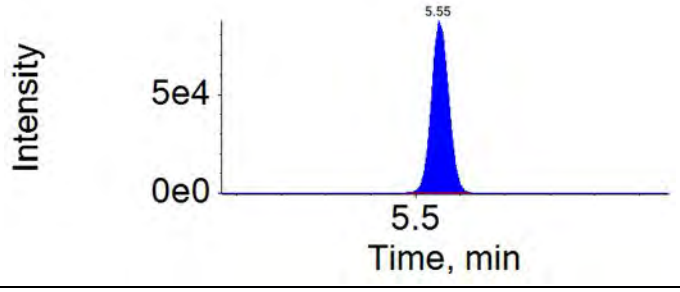
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

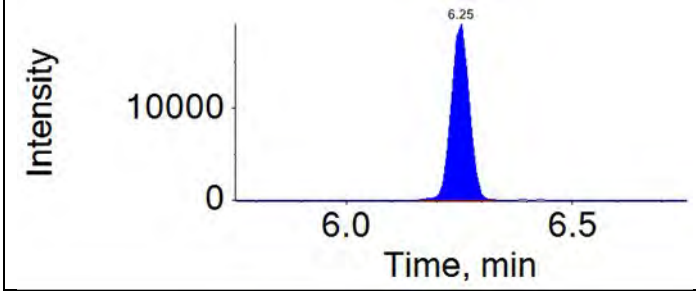
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

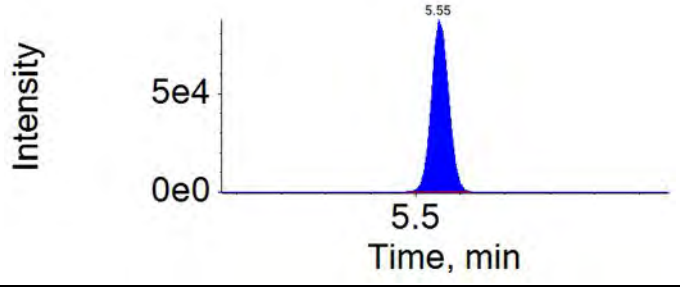
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



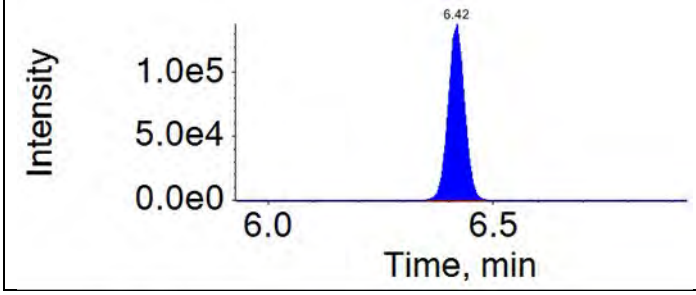


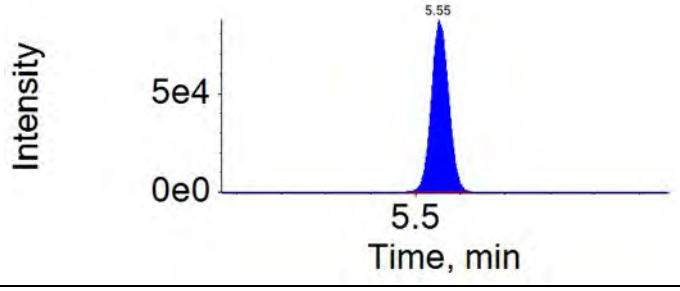
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





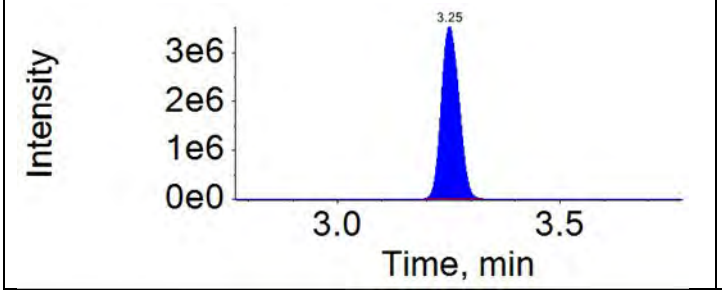
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

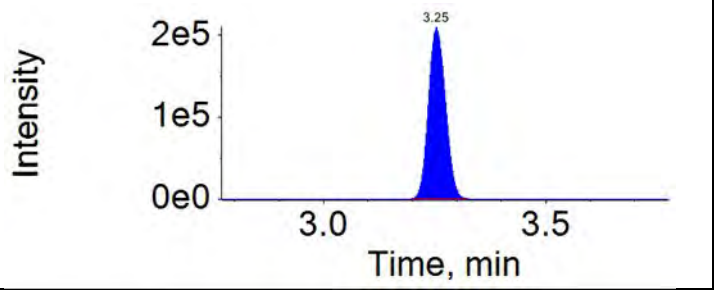




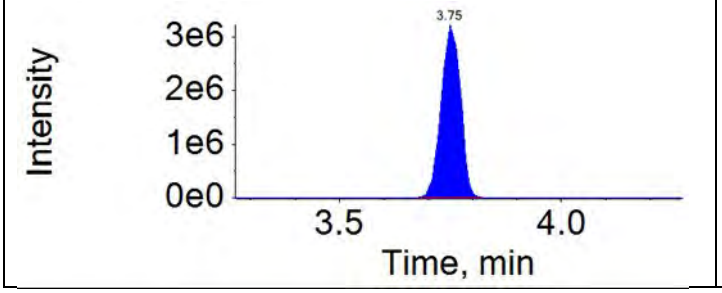
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

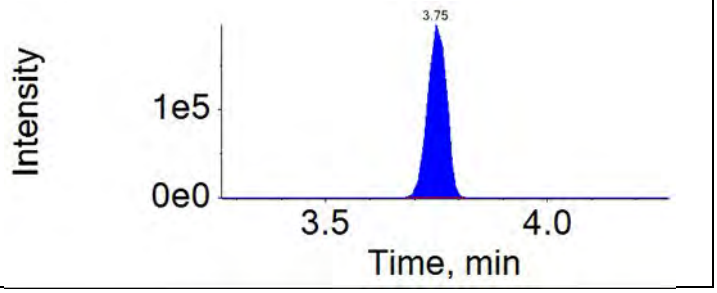
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



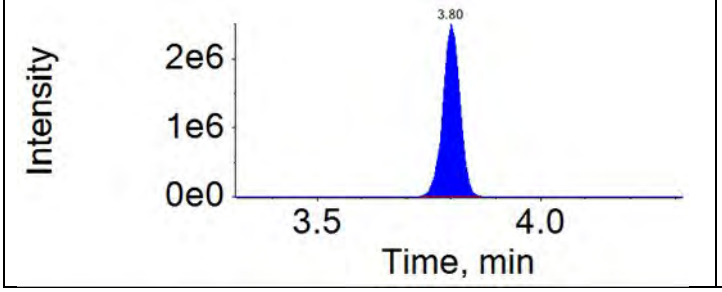


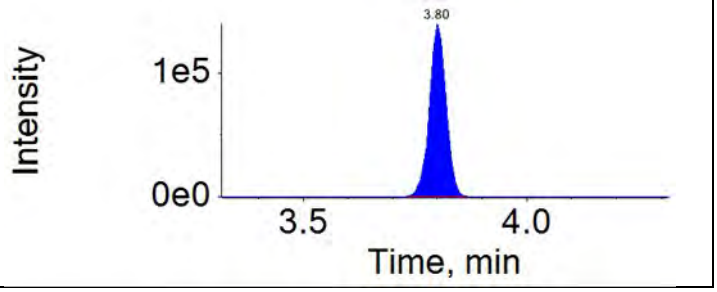
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



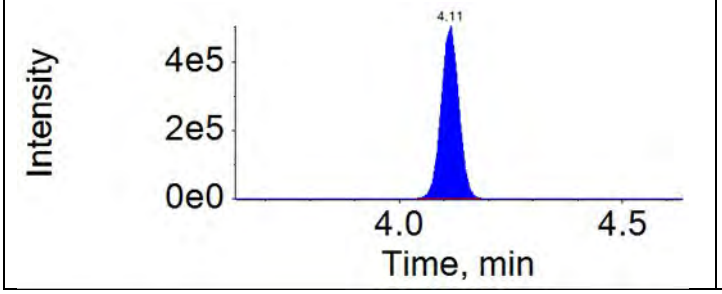


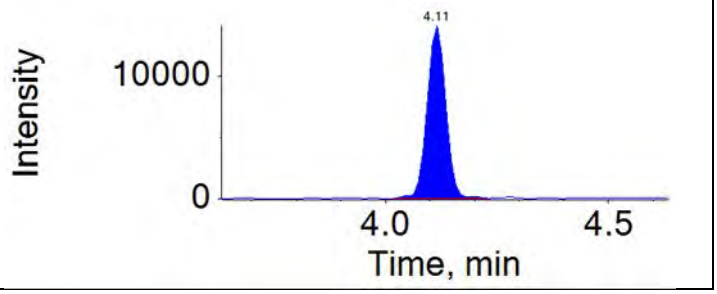
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



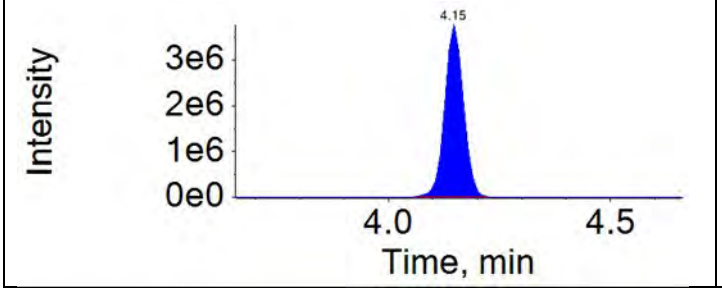


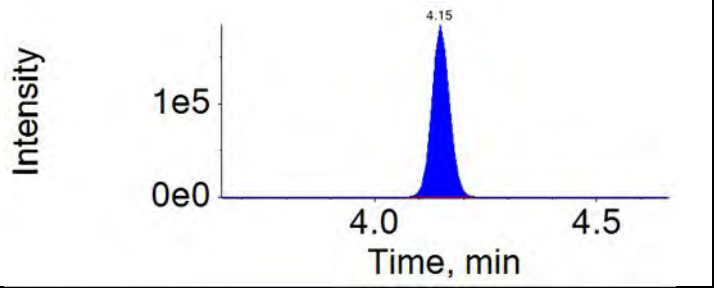
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

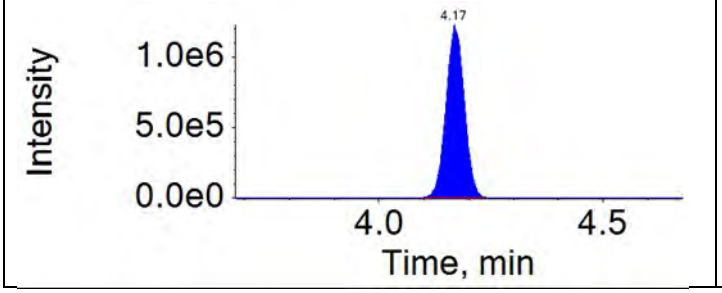
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

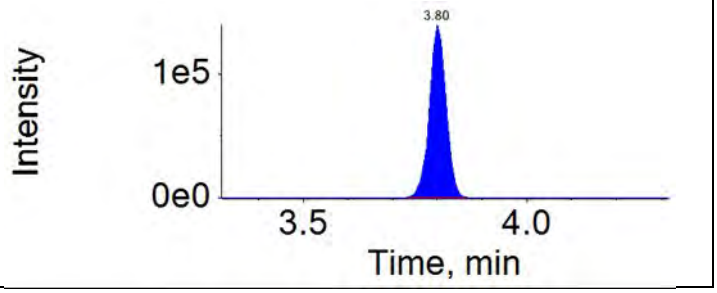
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



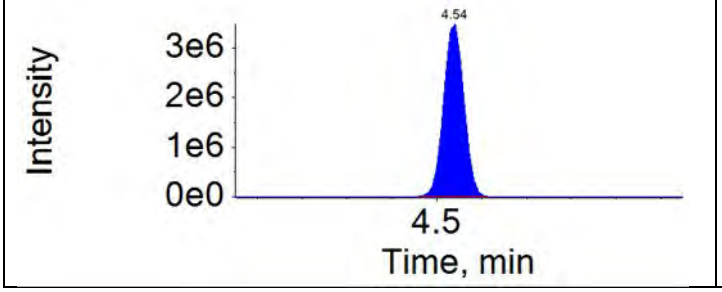


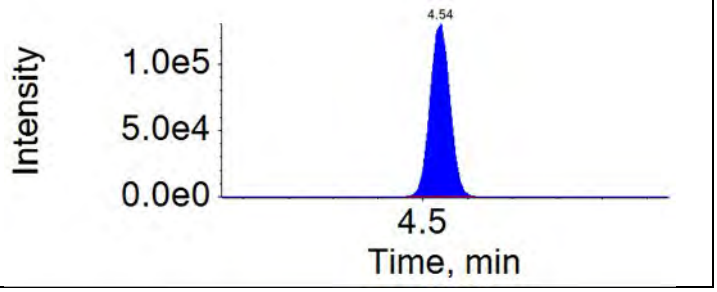
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



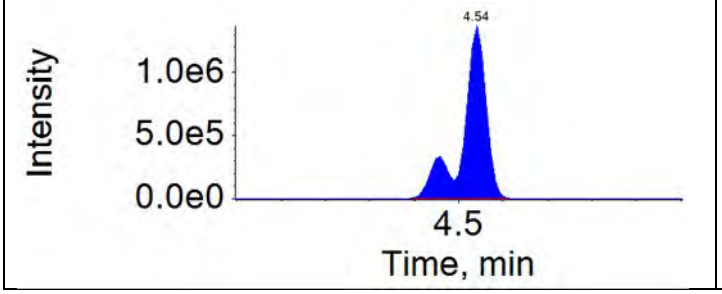


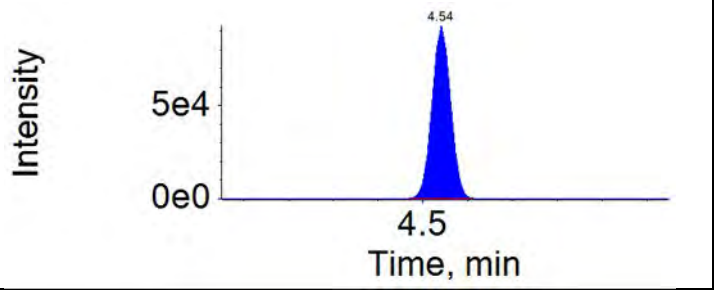
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



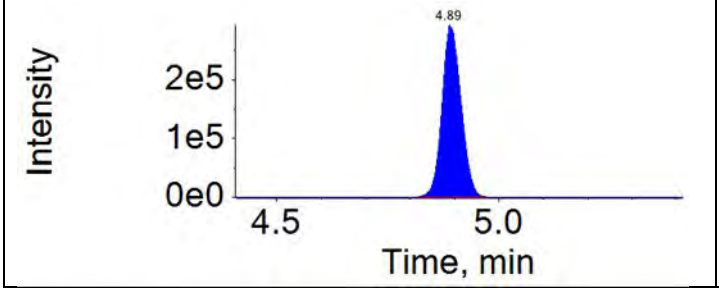


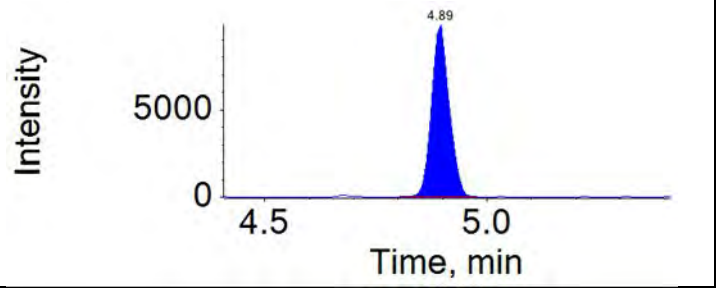
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

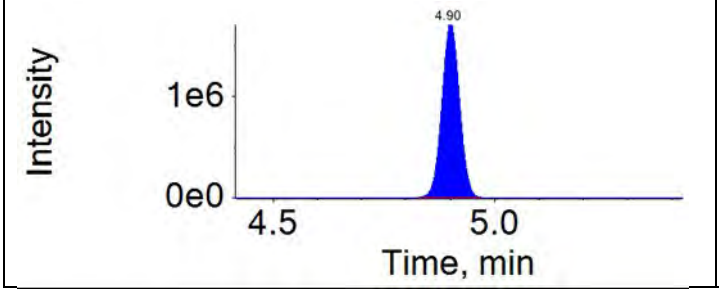
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

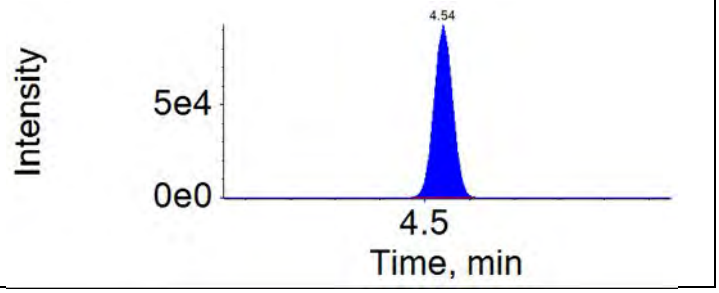
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



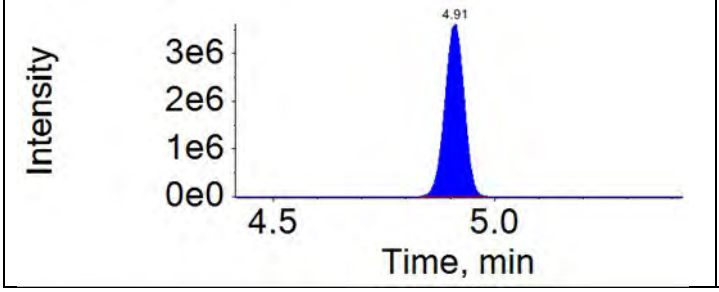


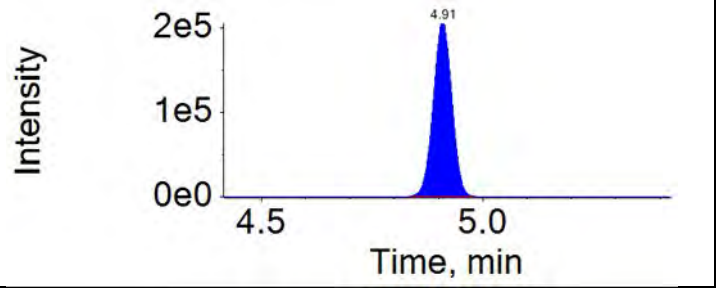
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



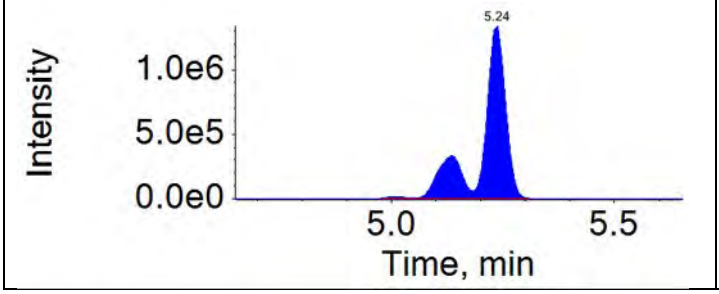


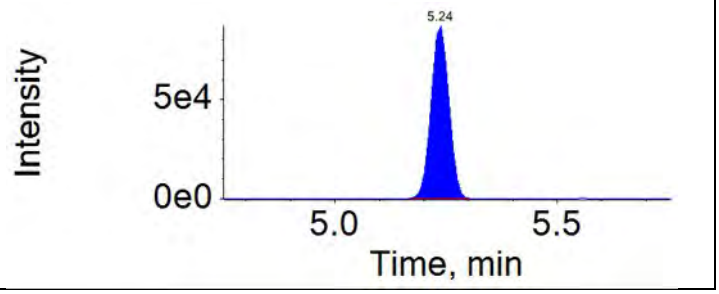
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



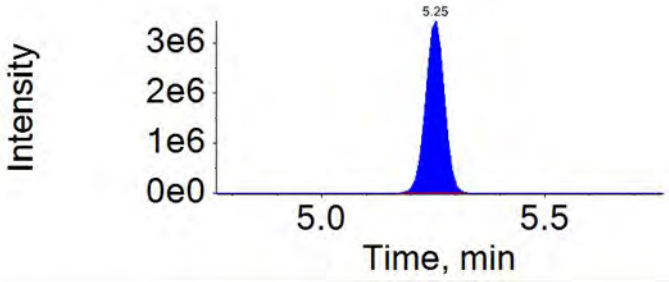


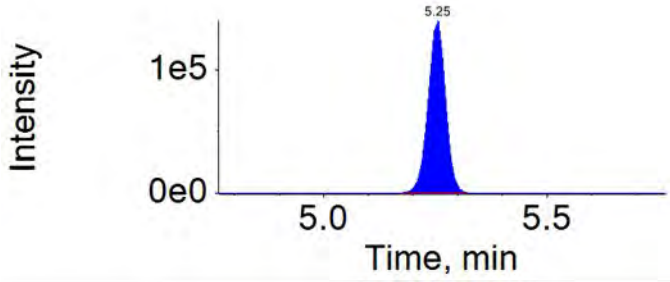
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

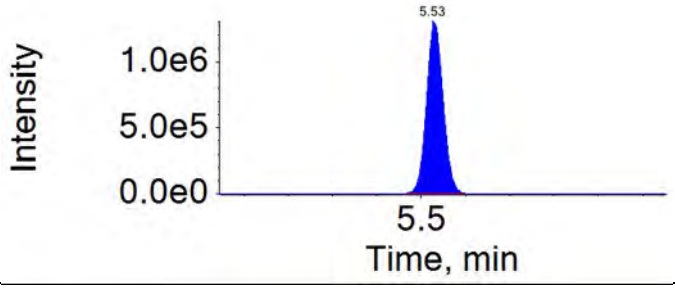
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

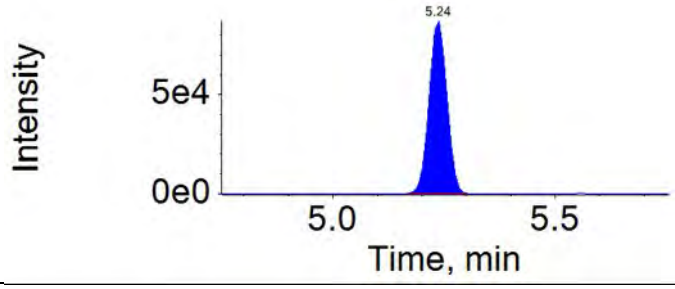
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



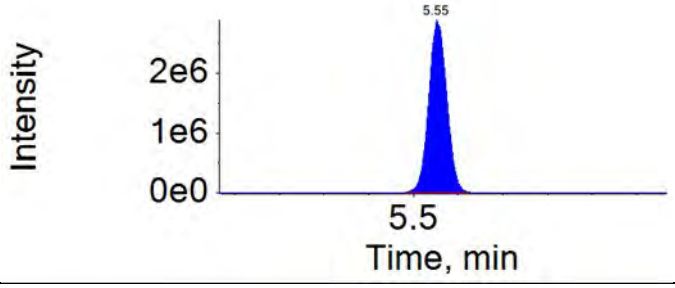


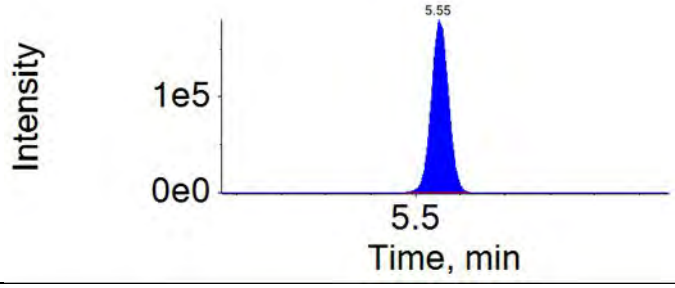
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



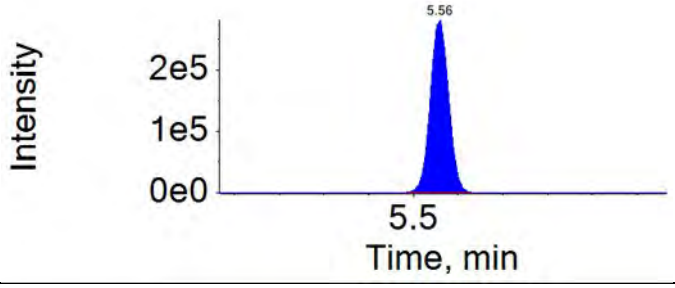


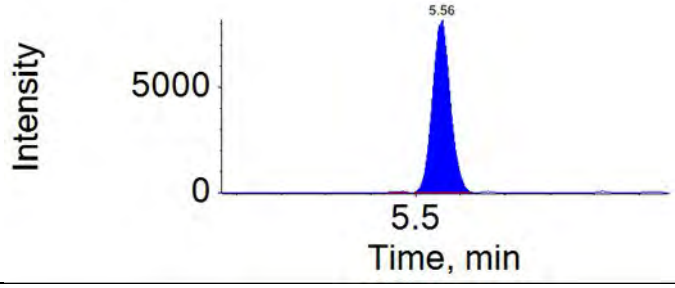
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



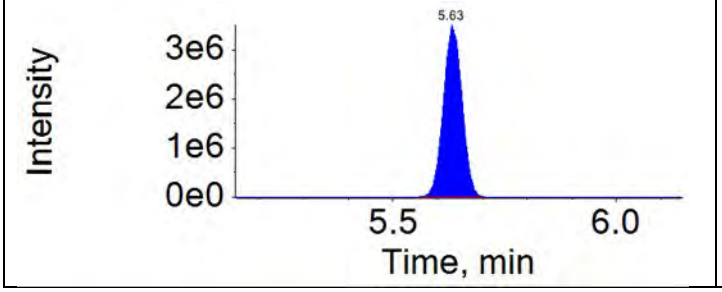


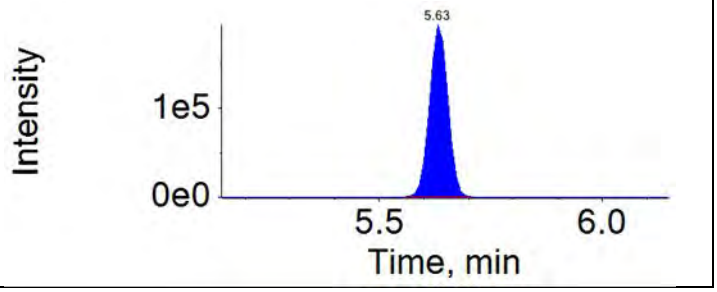
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

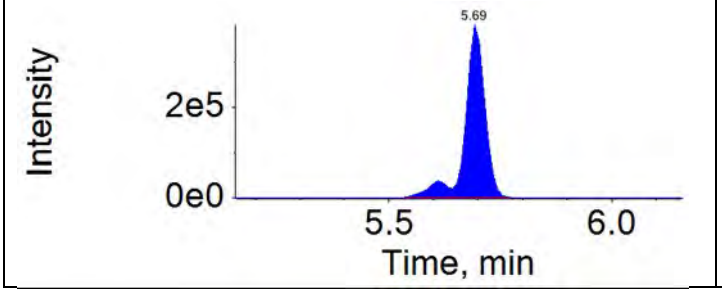
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

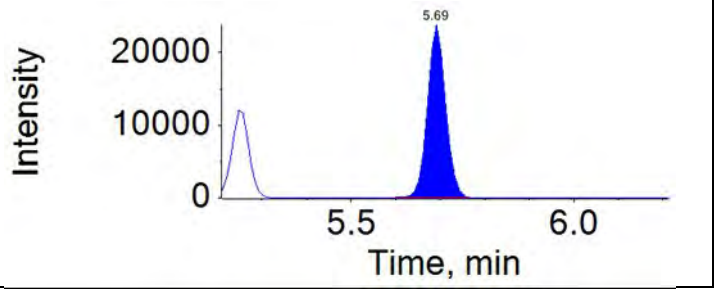
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



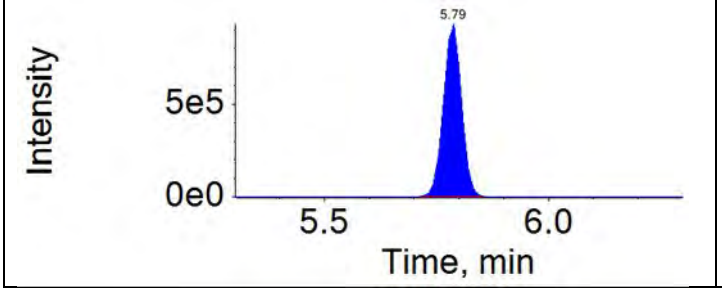


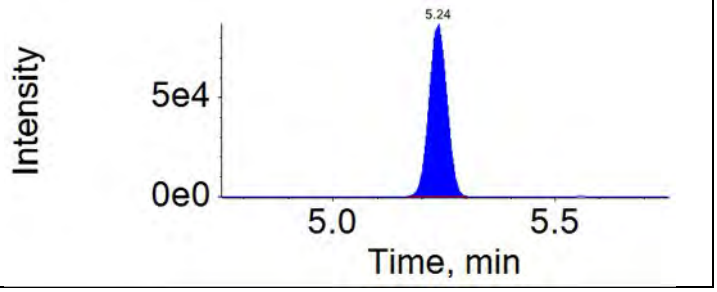
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



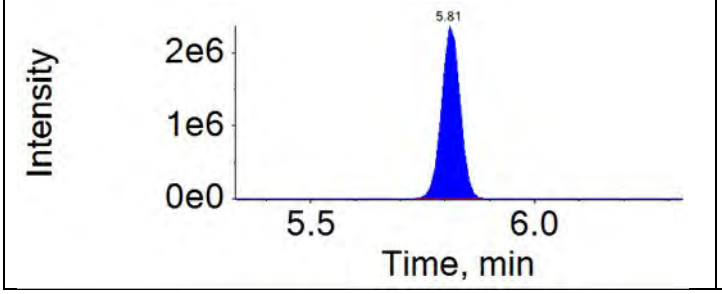


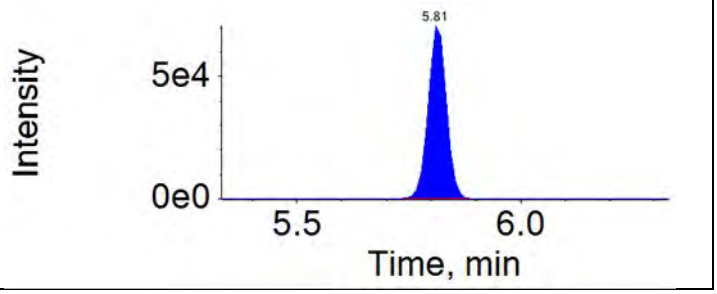
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



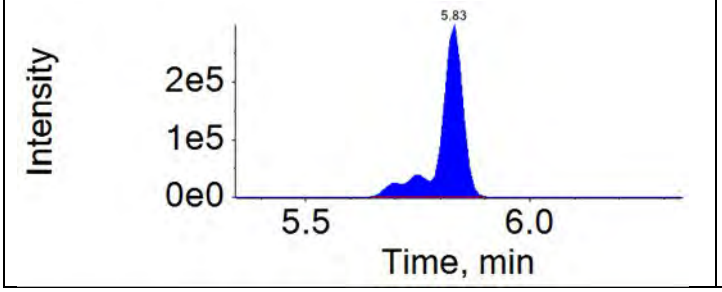


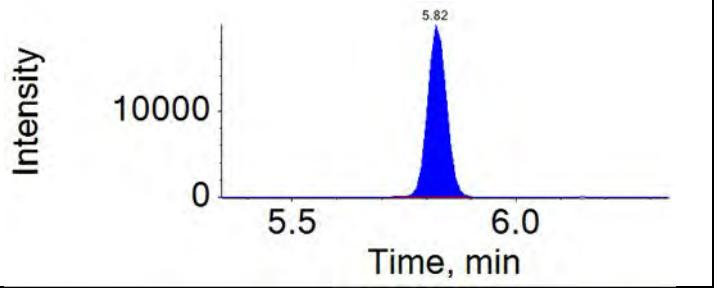
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

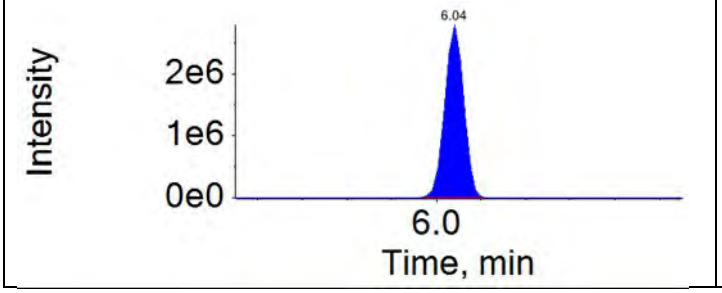
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

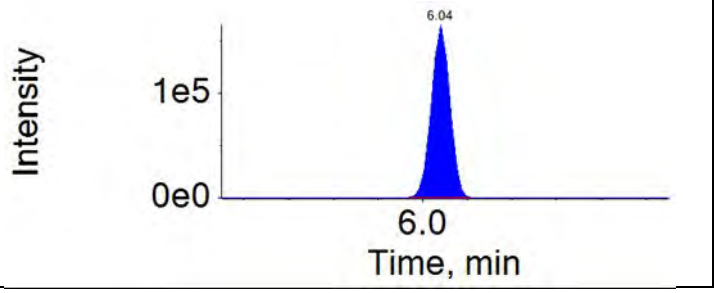
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



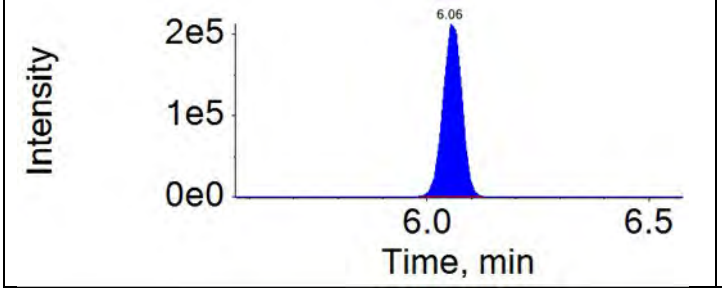


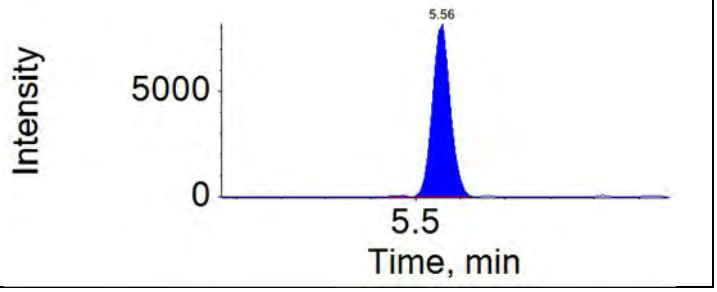
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



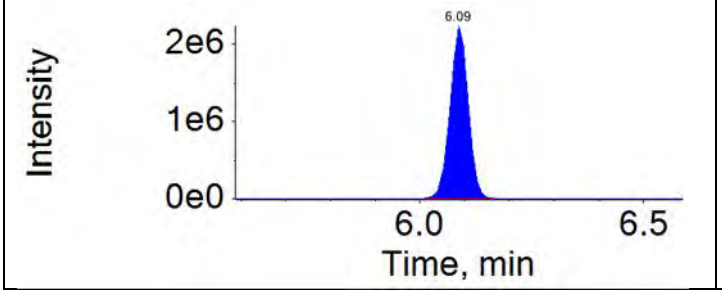


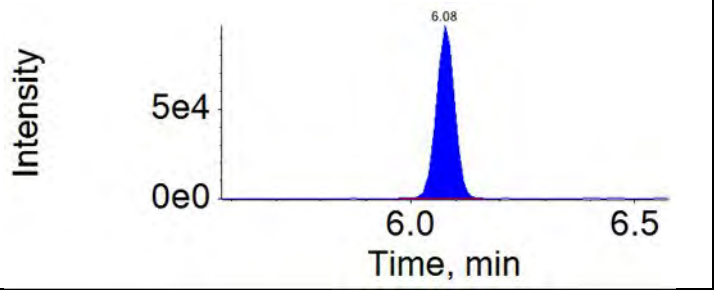
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



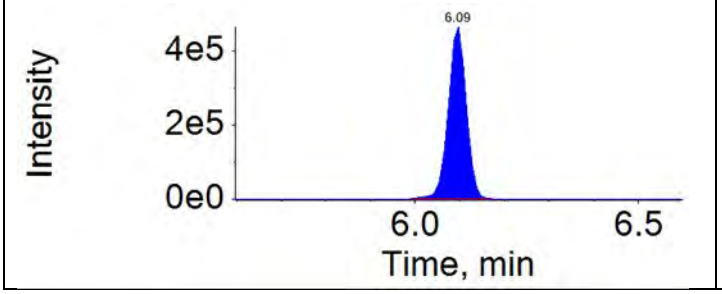


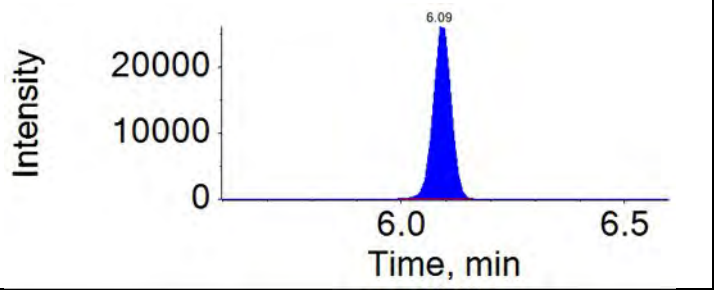
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

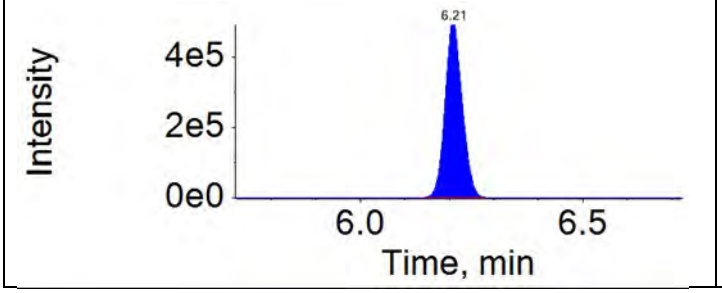
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

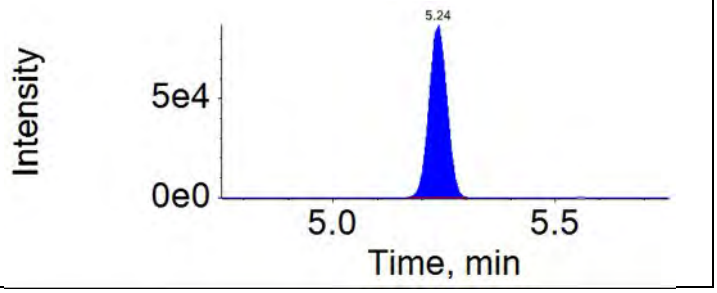
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



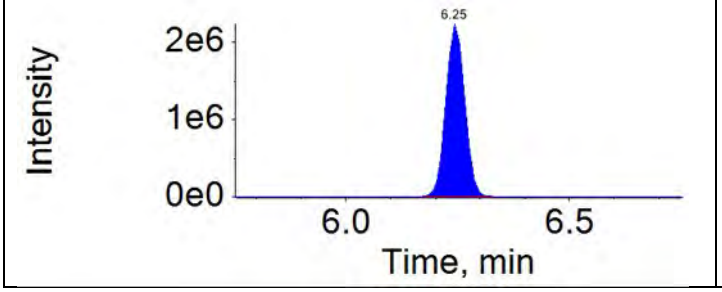


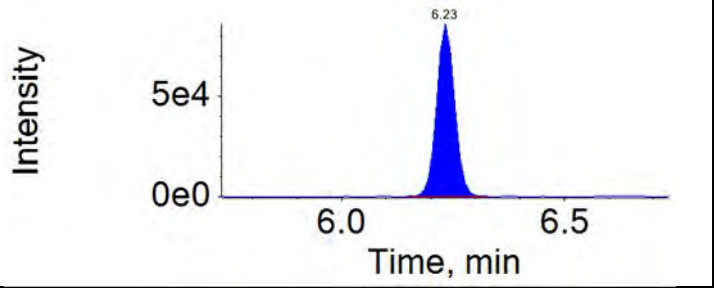
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



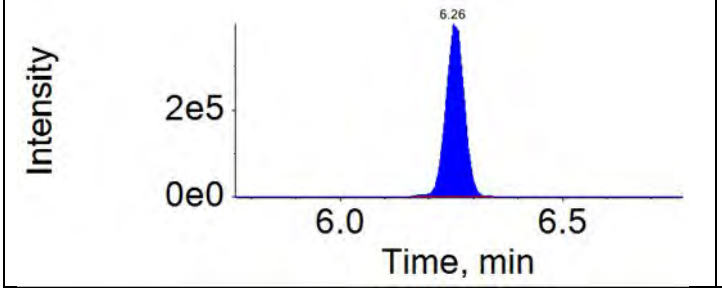


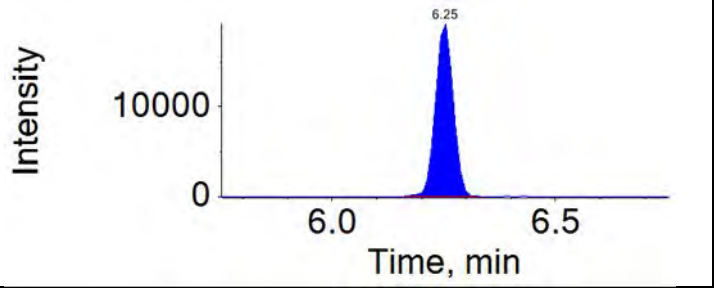
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



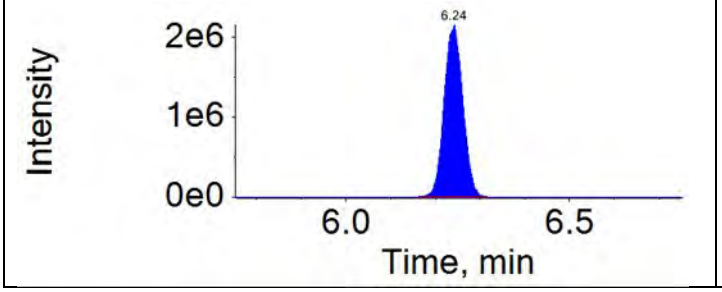


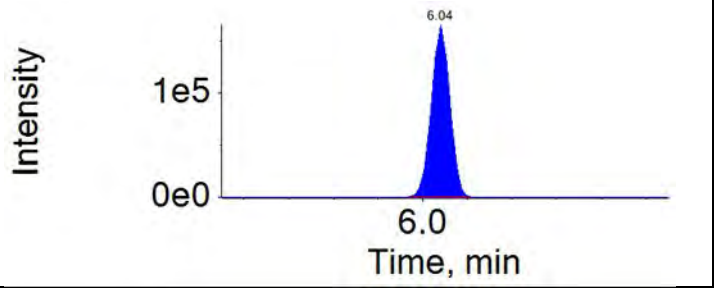
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

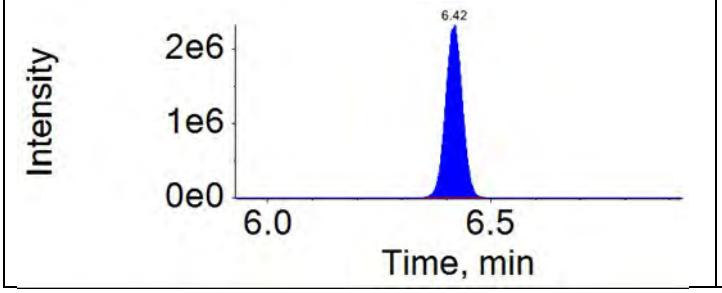
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

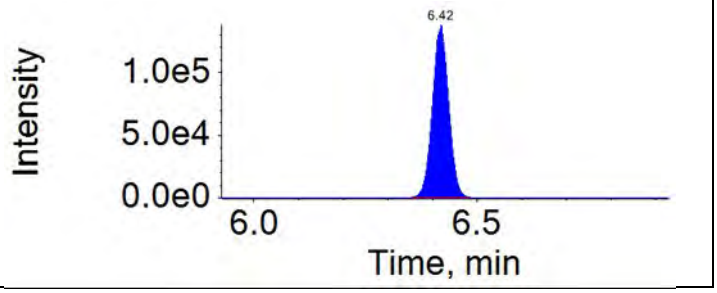
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



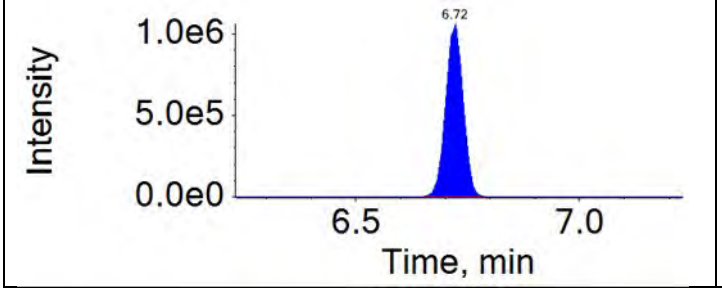


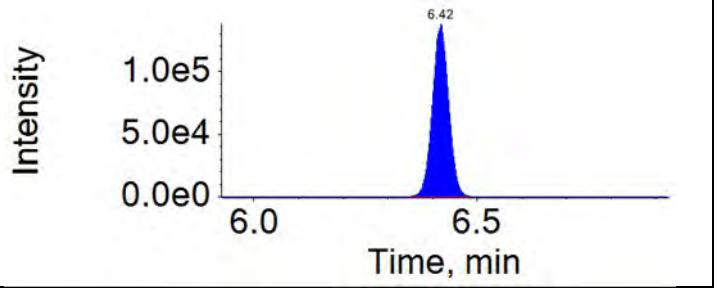
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



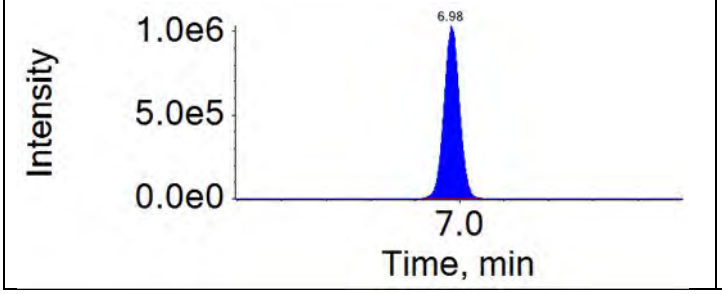


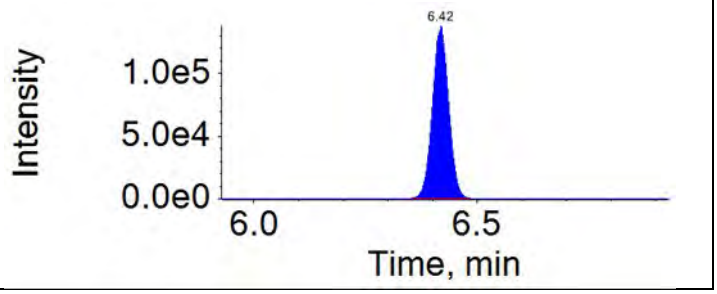
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



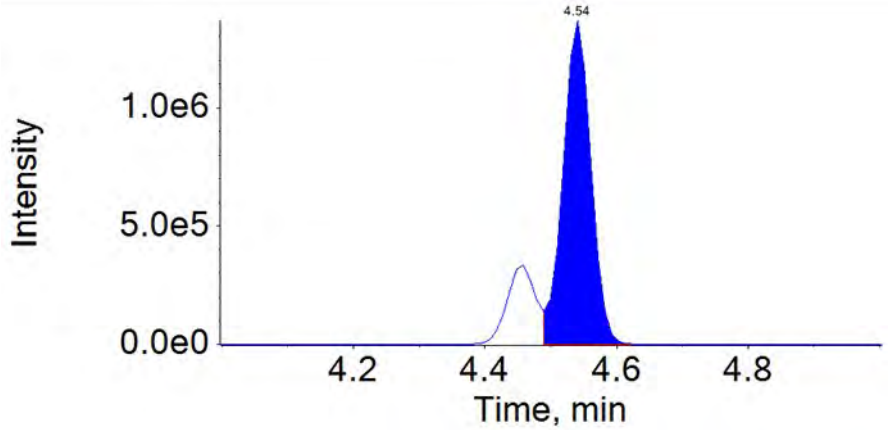


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

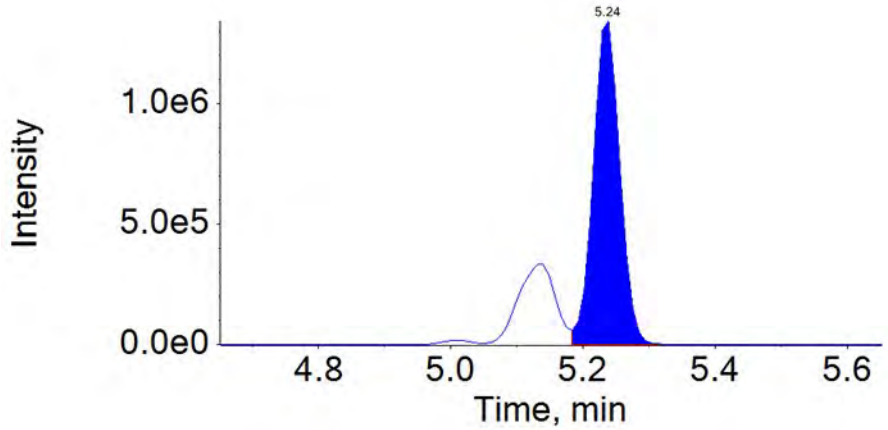
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
4044983.17
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



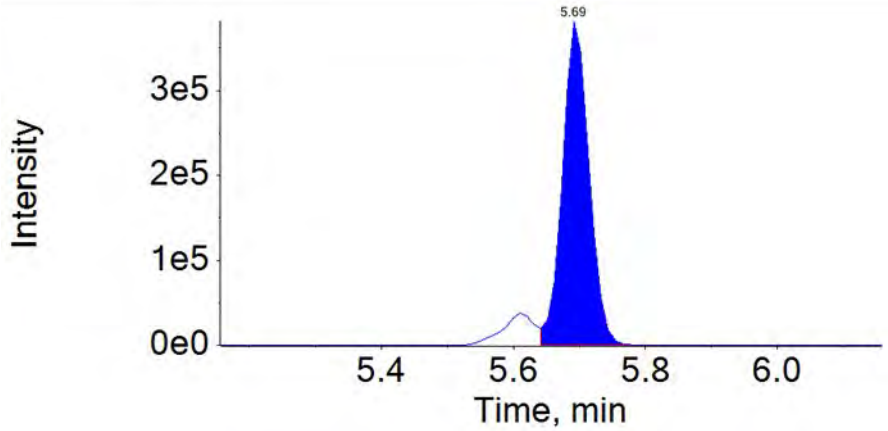
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
3770924.60
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.69
Peak Area:
1065914.33
Mass Range:
570.0 / 419.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7

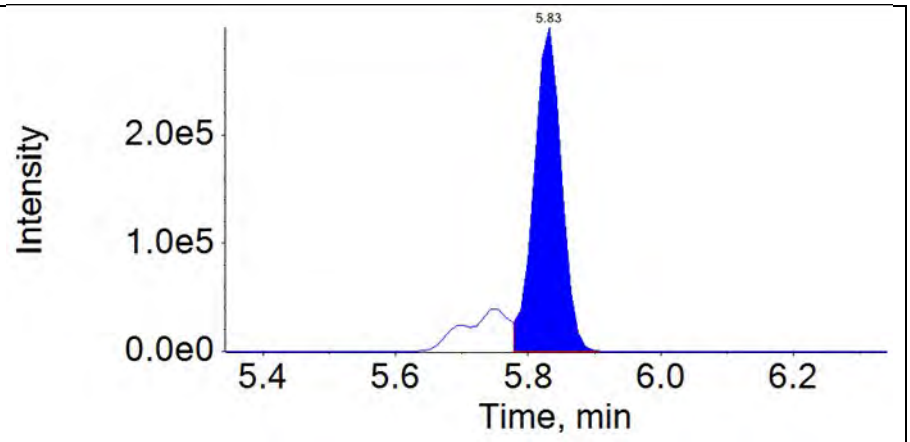


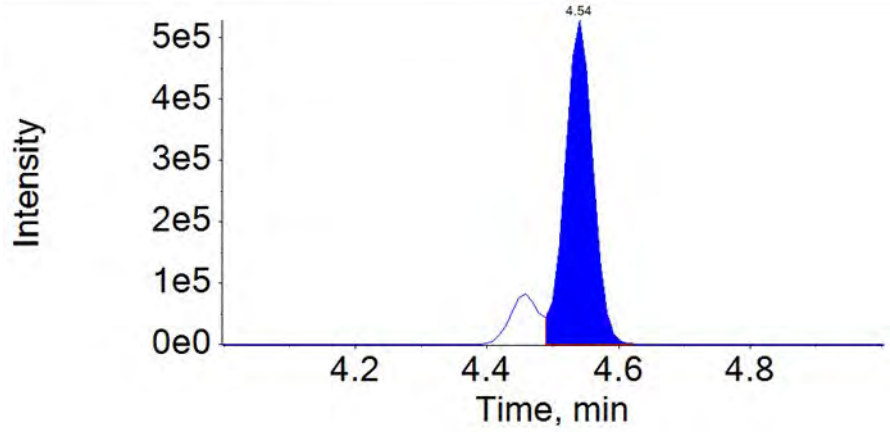
Integration Comment: incorrect integration

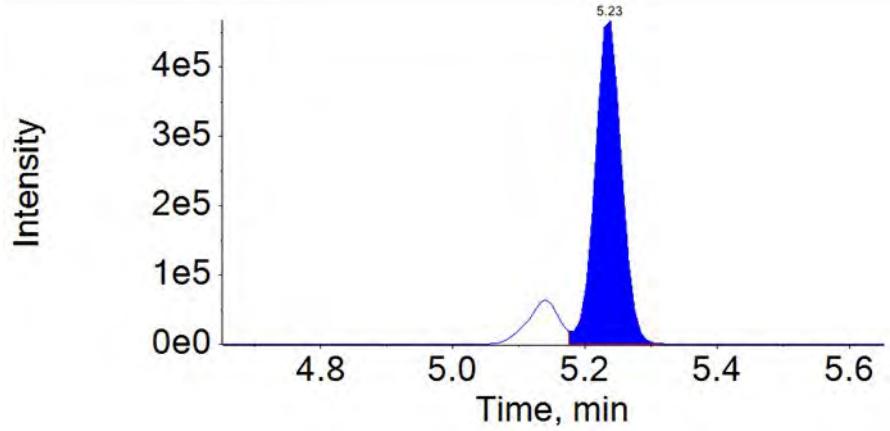
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA **RT (min.):** 5.83 **Peak Area:** 862135.47 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV12DCAL-48.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

Component Name: PFHxS_2 **RT (min.):** 4.54 **Peak Area:** 1552233.65 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV12DCAL-48.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

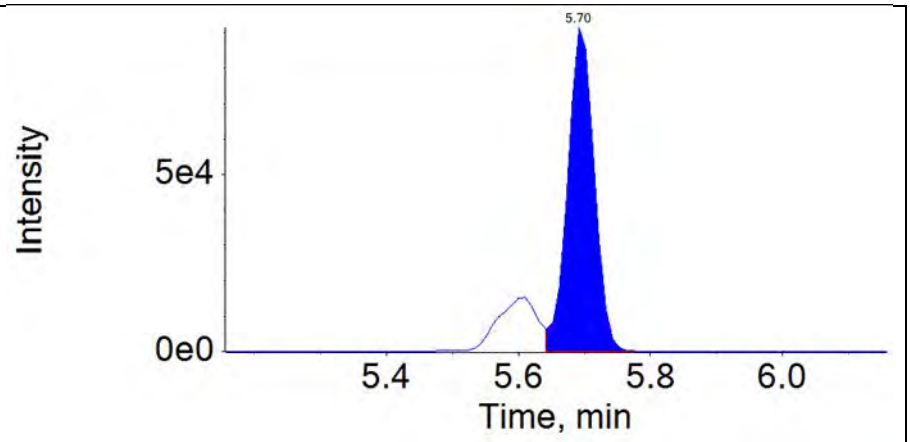
Component Name: PFOS_2 **RT (min.):** 5.23 **Peak Area:** 1316284.93 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-48.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

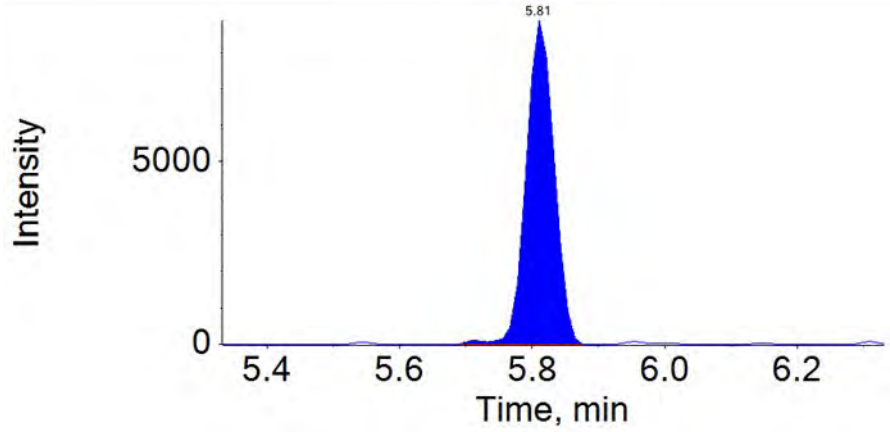
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
256419.22
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



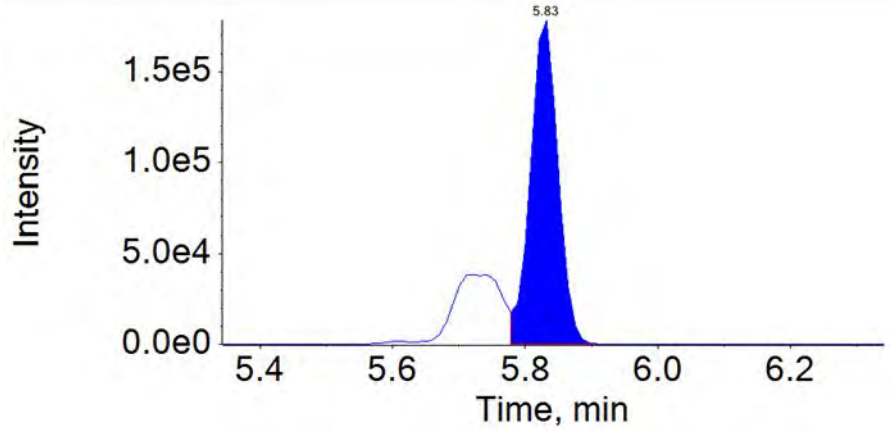
Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.81
Peak Area:
26121.92
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
517079.85
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

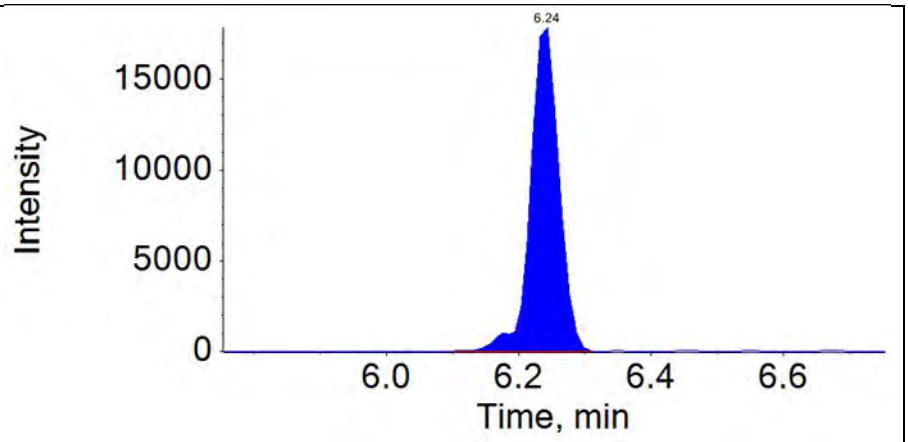
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
53950.01
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

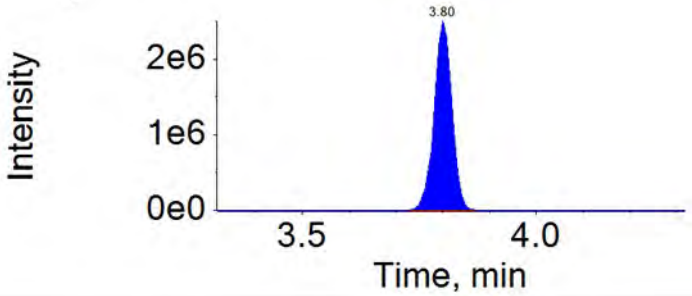
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-48.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	6615935.34	A	0.3619	0.3803			
PFBS_2	3.80	1.00	2515947.77	A	0.3619	0.3803	5	50	
4:2-FTS	4.11	1.00	1379983.90	A	0.6730	0.6491			
4:2 FTS_2	4.11	1.00	895801.93	A	0.6730	0.6491		#NA!	
PFHxA	4.15	1.00	11059420.28	A	0.0117	0.0124			
PFHxA_2	4.15	1.00	136818.87	A	0.0117	0.0124	6	50	
PFPeS	4.17	1.10	3482095.87	A	0.5191	0.5217			
PFPeS_2	4.17	1.10	1816709.54	A	0.5191	0.5217	1	50	
PFHpA	4.54	1.00	10981922.82	A	0.0563	0.0563			
PFHpA_2	4.54	1.00	618128.71	A	0.0563	0.0563	0	50	
PFHxS	4.54	1.00	5048349.82	M	0.3428	0.3562			
PFHxS_2	4.54	1.00	1798400.55	M	0.3428	0.3562	4	50	
6:2-FTS	4.89	1.00	869227.19	A	0.6604	0.6365			
6:2 FTS_2	4.89	1.00	553300.52	A	0.6604	0.6365		#NA!	
PFHpS	4.90	1.08	4784682.82	A	0.4066	0.4068			
PFHpS_2	4.90	1.08	1946425.33	A	0.4066	0.4068	0	50	
PFOA	4.91	1.00	10991740.12	A	0.0562	0.0611			
PFOA_2	4.91	1.00	671295.39	A	0.0562	0.0611	9	50	
PFOS	5.24	1.00	5138366.95	M	0.2968	0.2975			
PFOS_2	5.23	1.00	1528751.71	M	0.2968	0.2975	0	50	
PFNA	5.25	1.00	10084288.28	A	0.0229	0.0213			
PFNA_2	5.25	1.00	214560.66	A	0.0229	0.0213	-7	50	
PFNS	5.53	1.06	3386860.46	A	0.4828	0.4408			
PFNS_2	5.53	1.06	1492987.09	A	0.4828	0.4408	-9	50	
PFDA	5.55	1.00	8104726.61	A	0.0081	0.0071			
PFDA_2	5.55	1.00	57305.88	A	0.0081	0.0071	-12	50	
8:2-FTS	5.56	1.00	804019.53	A	0.6814	0.5854			
8:2 FTS_2	5.56	1.00	470706.51	A	0.6814	0.5854		#NA!	
NMeFOSAA	5.69	1.00	1191981.70	M	0.2569	0.2688			
NMeFOSAA_2	5.70	1.00	320371.24	M	0.2569	0.2688	5	50	
PFDS	5.79	1.11	2606720.69	A	0.5144	0.4749			
PFDS_2	5.79	1.10	1238034.03	A	0.5144	0.4749	-8	50	
PFUnDA	5.81	1.00	6802701.21	A	0.0058	0.0038			
PFUnDA_2	5.81	1.00	25933.20	M	0.0058	0.0038	-34	50	
NEtFOSAA	5.83	1.00	1046636.11	M	0.7253	0.6803			
NEtFOSAA_2	5.83	1.00	711980.18	M	0.7253	0.6803	-6	50	
PFDoDA	6.04	1.00	8171355.35	A	0.0157	0.0138			
PFDoDA_2	6.04	1.00	113144.85	A	0.0157	0.0138	-12	50	
10:2-FTS	6.06	1.09	632223.71	A	0.6356	0.6817			
10:2 FTS_2	6.06	1.09	431003.27	A	0.6356	0.6817		#NA!	
PFTrDA	6.24	1.03	6281239.03	A	0.0086	0.0083			
PFTrDA_2	6.24	1.03	52325.72	M	0.0086	0.0083	-3	50	
PFTeDA	6.42	1.00	6092875.66	A	0.0062	0.0060			
PFTeDA_2	6.42	1.00	36395.60	A	0.0062	0.0060	-4	50	
PFHxDA	6.72	1.05	2866097.32	A	0.0683	0.0642			
PFHxDA_2	6.72	1.05	183981.95	A	0.0683	0.0642	-6	50	
PFODA	6.98	1.09	2488863.64	A	0.0277	0.0267			
PFODA_2	6.98	1.09	66332.27	A	0.0277	0.0267	-4	50	

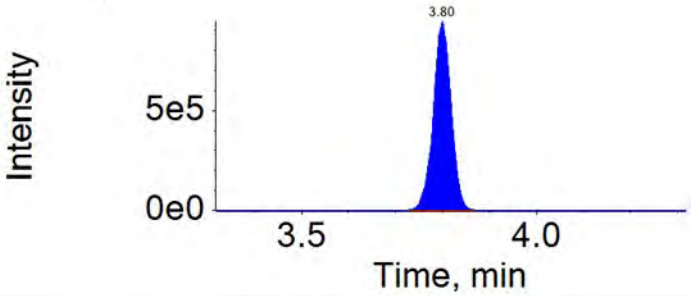
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

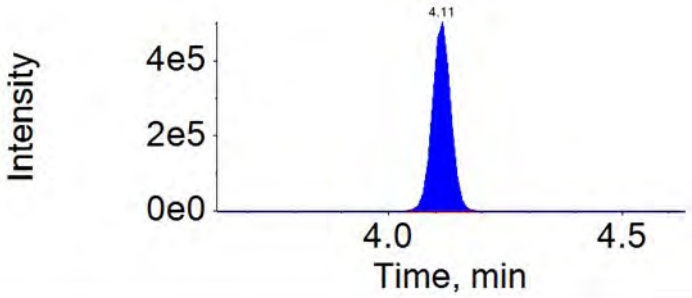
Component: PFBS
Primary Mass: 299.0 / 80.0



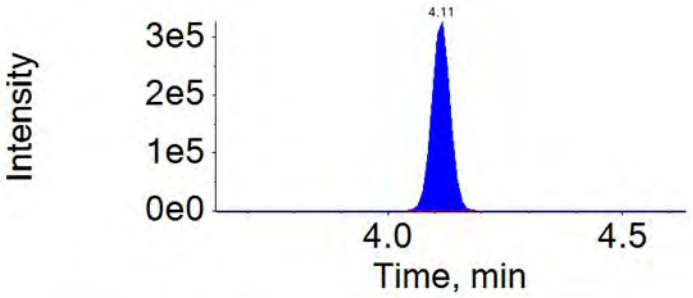
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



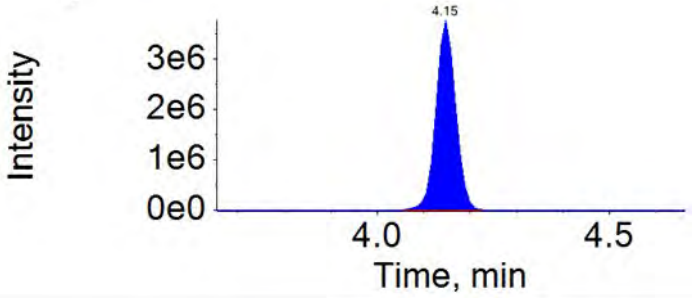
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



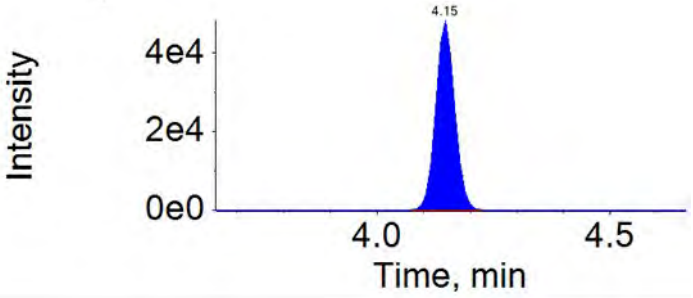
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



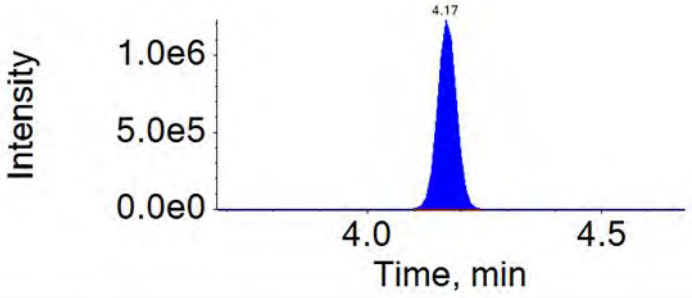
Component: PFHxA
Primary Mass: 313.0 / 269.0



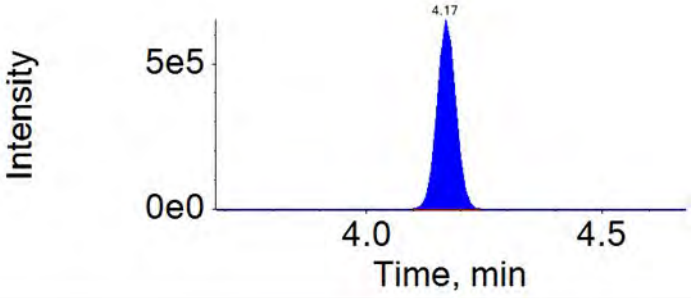
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By MCD at 6:33 pm, 11/12/18

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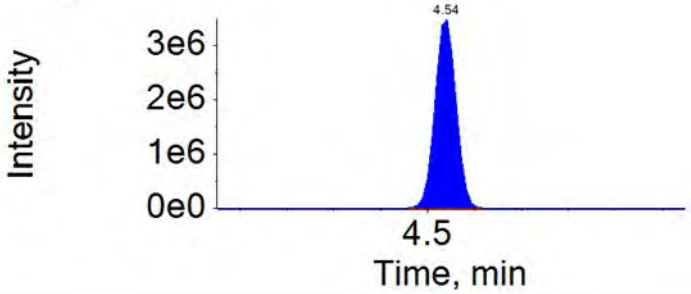
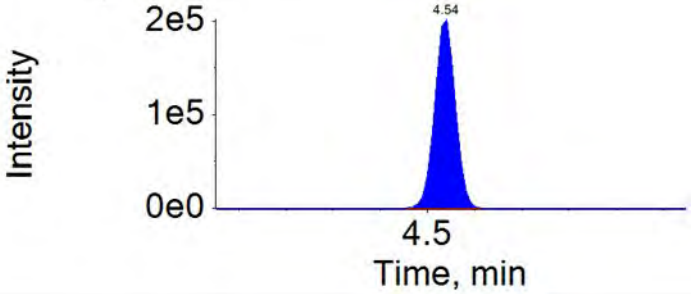
By HMK at 10:53 am, 11/13/18

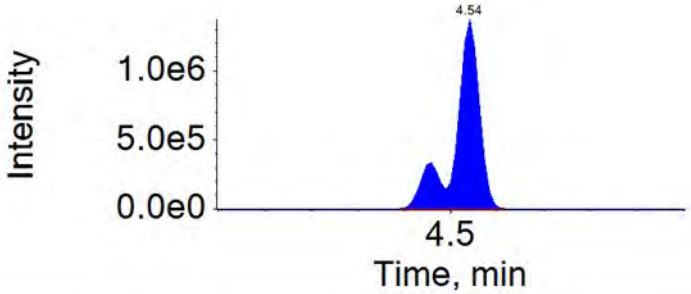
Component: PFHpA
Primary Mass: 363.0 / 319.0



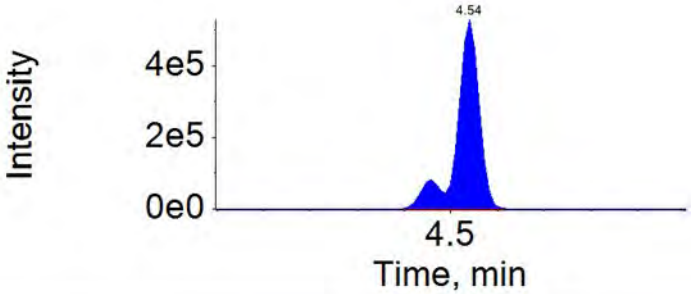
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



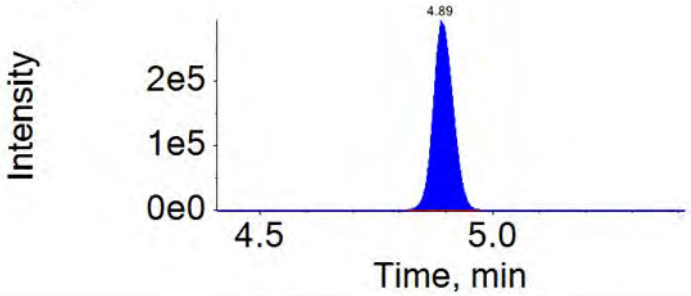
Component: PFHxS
Primary Mass: 399.0 / 80.0



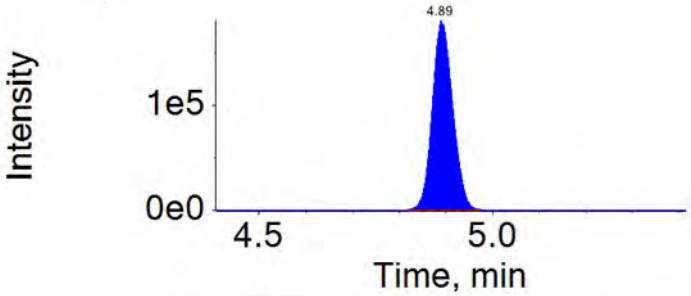
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



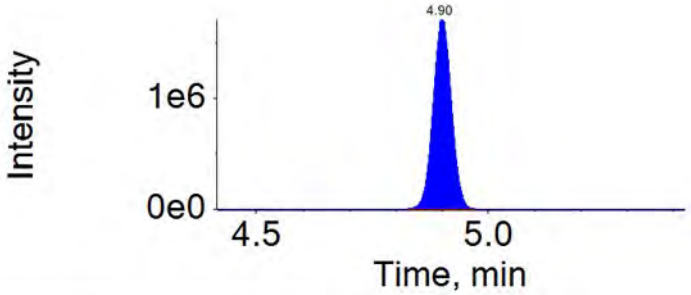
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



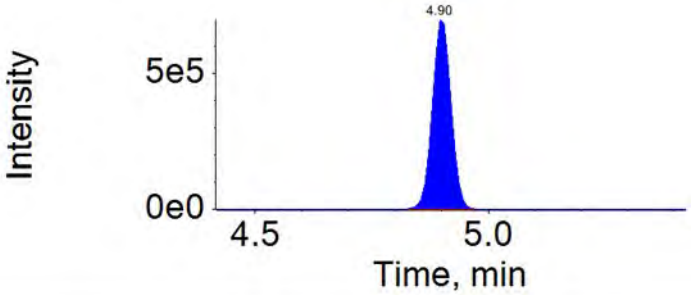
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



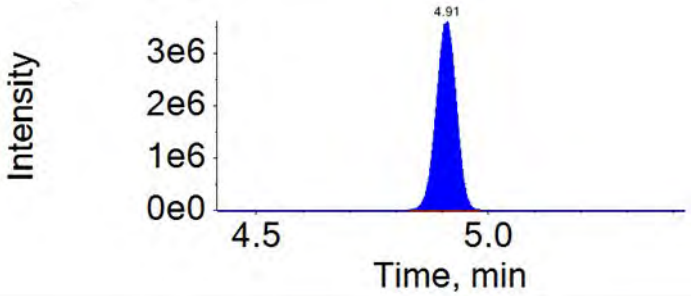
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



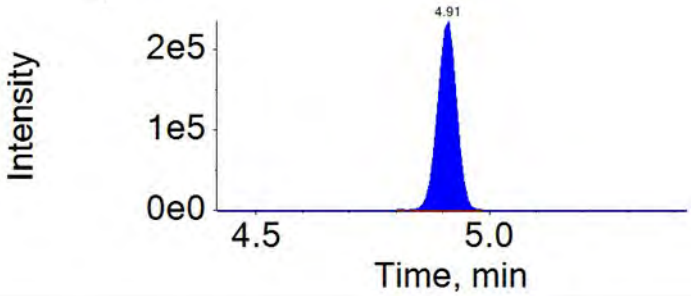
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

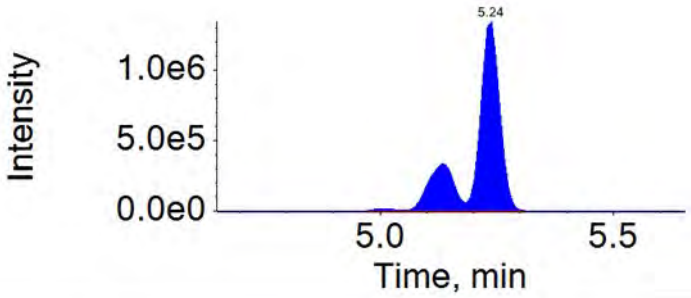
Component: PFOA
Primary Mass: 413.0 / 369.0



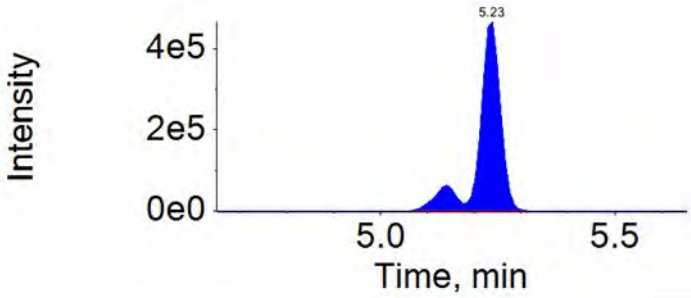
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



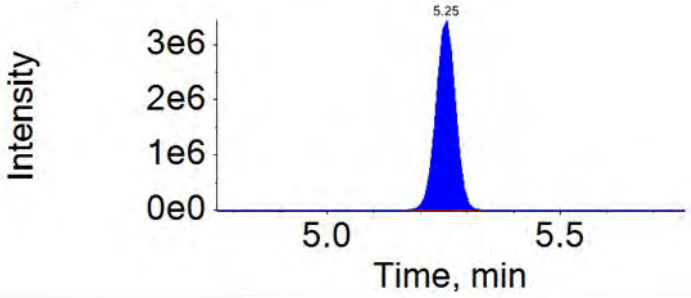
Component: PFOS
Primary Mass: 499.0 / 80.0



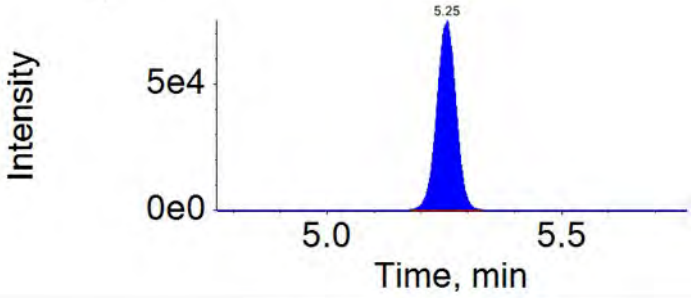
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



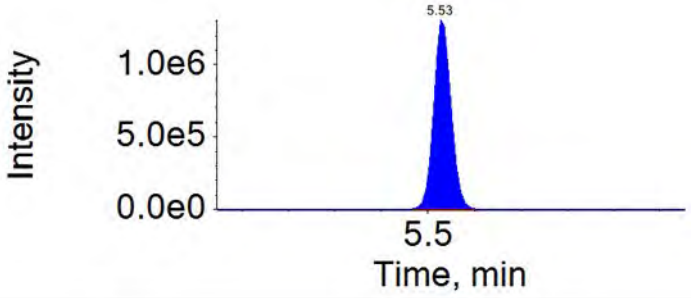
Component: PFNA
Primary Mass: 463.0 / 419.0



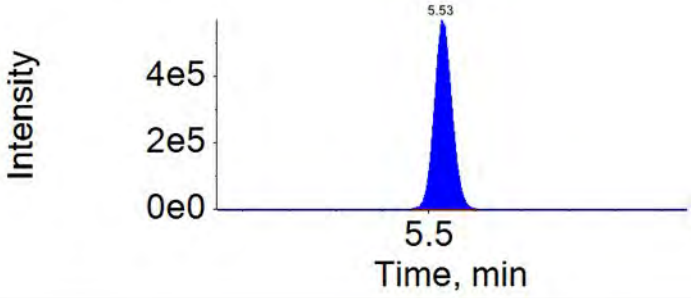
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



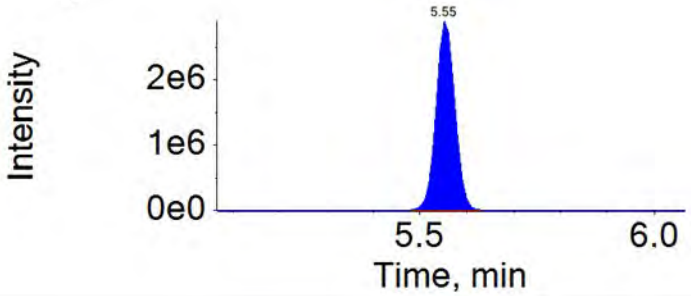
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



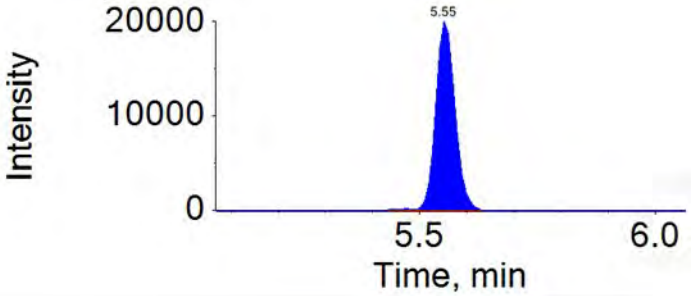
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

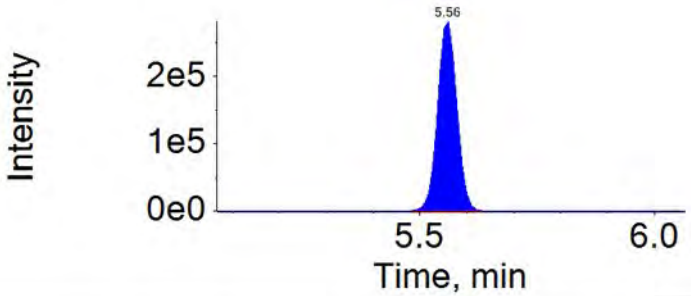
Component: PFDA
Primary Mass: 513.0 / 469.0



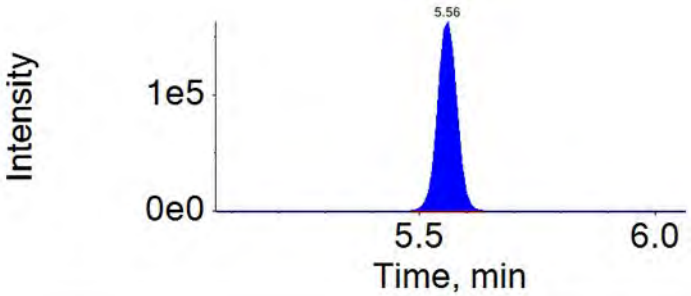
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



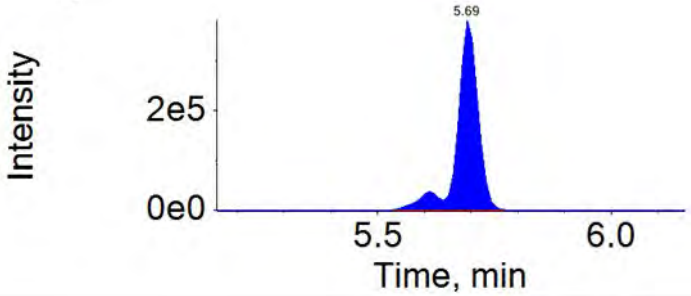
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



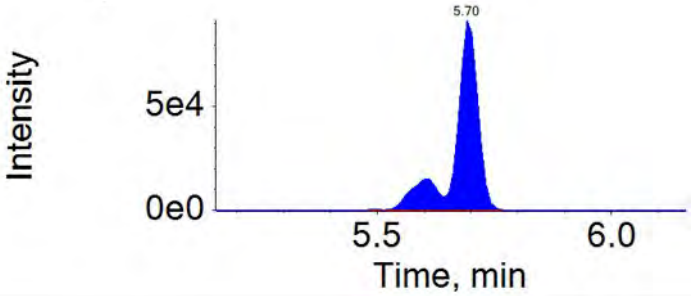
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



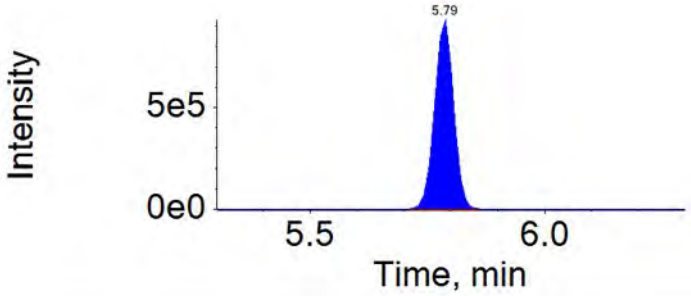
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



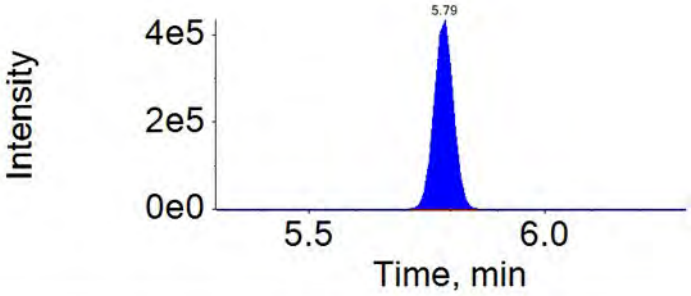
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



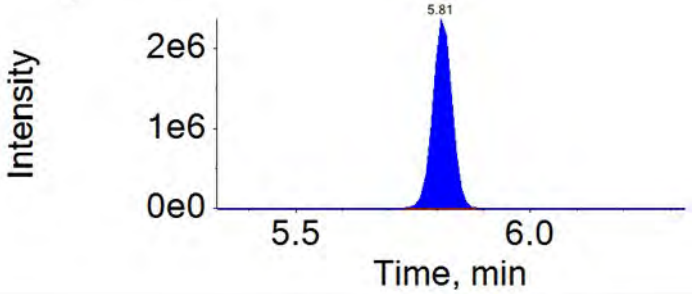
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



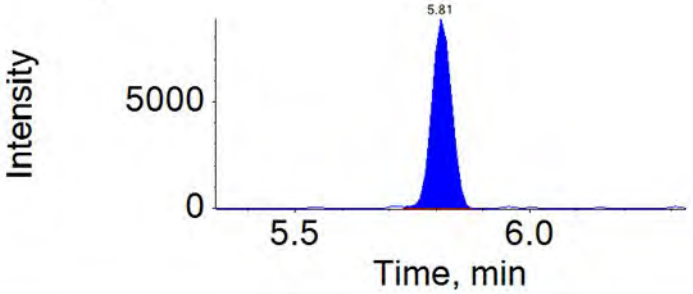
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

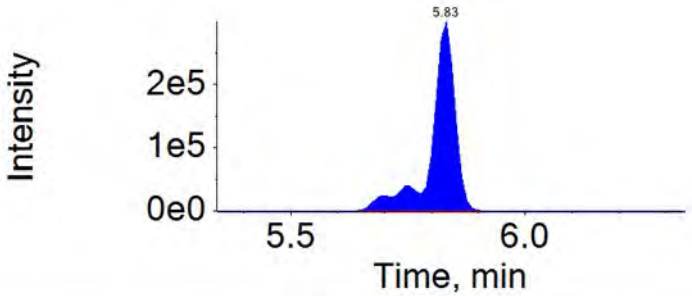
Component: PFUnDA
Primary Mass: 563.0 / 519.0



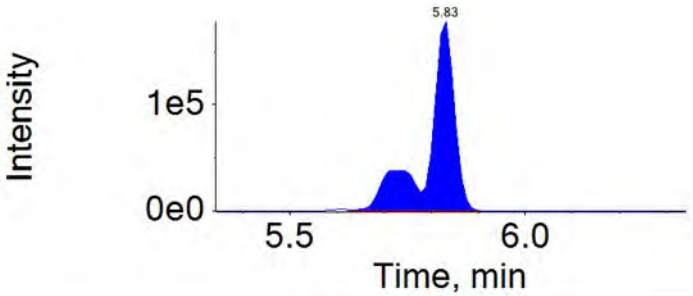
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



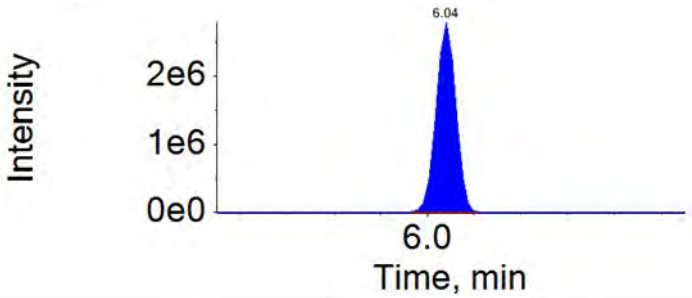
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



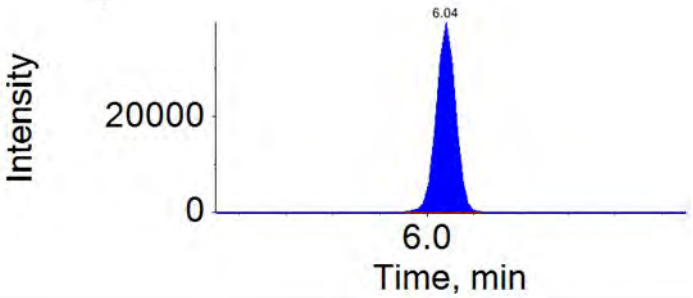
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



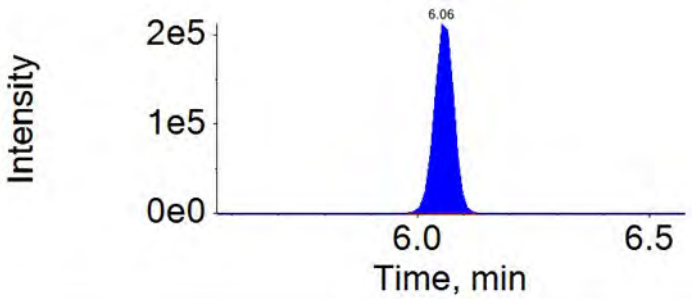
Component: PFDoDA
Primary Mass: 613.0 / 569.0



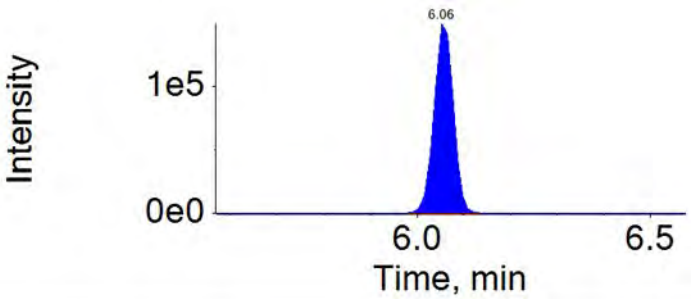
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



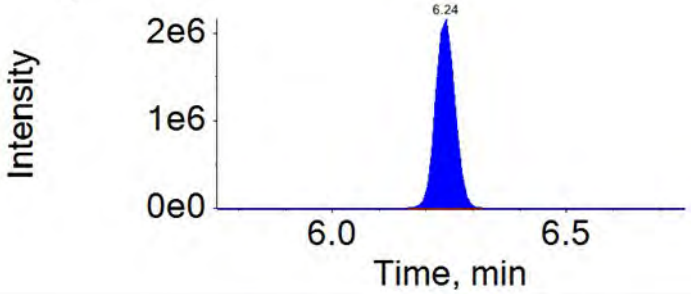
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



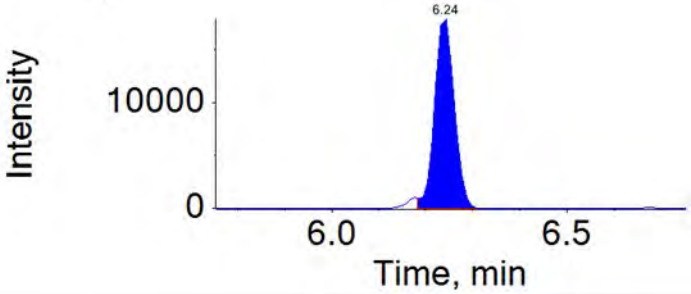
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

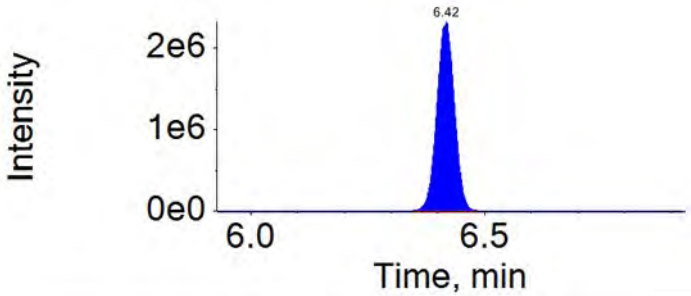
Component: PFTrDA
Primary Mass: 663.0 / 619.0



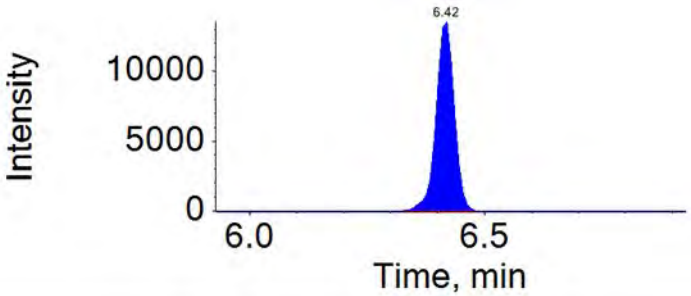
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



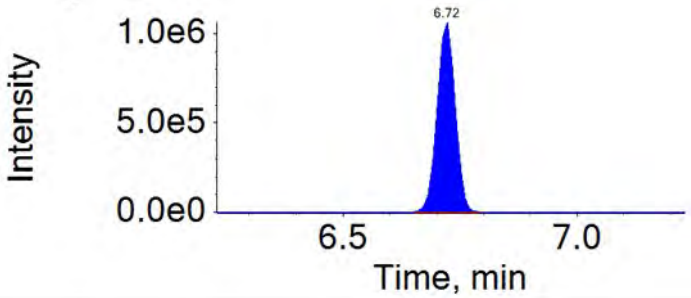
Component: PFTeDA
Primary Mass: 713.0 / 669.0



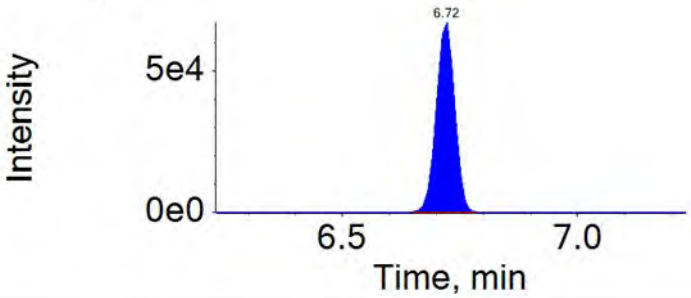
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



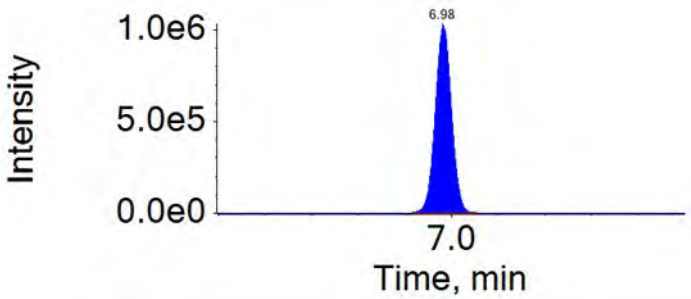
Component: PFHxDA
Primary Mass: 813.0 / 769.0



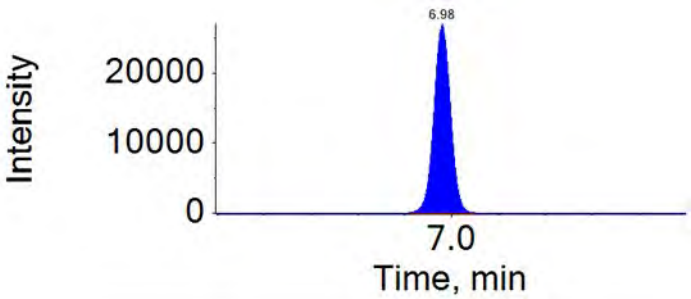
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV12DCAL-49.wiff
Sample ID:	methanol			**Acquis Date:**		11/12/2018 4:09:09 PM
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	705408.6	659926.2	7	50	
13C2-PFOA	5.0	484266.1	450219.7	8	50	
13C4-PFOS	4.8	261290.0	249205.8	5	50	
13C2-PFDA	5.0	303665.7	278743.9	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778730.1	13C3-PFBA	705408.6	1.104	5.000	4.949	99	70-130	
E13C5-PFPeA	758823.9	13C3-PFBA	705408.6	1.076	5.000	4.825	96	70-130	
E13C3-PFBS	456635.4	13C3-PFBA	705408.6	0.647	4.650	4.570	98	70-130	
E13C2-4:2-FTS	57620.0	13C2-PFOA	484266.1	0.119	4.670	5.299	113	70-130	
E13C5-PFHxA	665797.6	13C2-PFOA	484266.1	1.375	5.000	4.966	99	70-130	
E13C3-PFHxS	372925.2	13C2-PFOA	484266.1	0.770	4.730	5.284	112	70-130	
E13C4-PFHpA	547261.8	13C2-PFOA	484266.1	1.130	5.000	5.091	102	70-130	
E13C2-6:2-FTS	39087.0	13C2-PFOA	484266.1	0.081	4.750	5.400	114	70-130	
E13C8-PFOA	901909.5	13C2-PFOA	484266.1	1.862	5.000	5.131	103	70-130	
E13C8-PFOS	289703.0	13C4-PFOS	261290.0	1.109	4.780	4.913	103	70-130	
E13C9-PFNA	509013.2	13C4-PFOS	261290.0	1.948	5.000	5.432	109	70-130	
E13C6-PFDA	643925.8	13C2-PFDA	303665.7	2.121	5.000	4.948	99	70-130	
E13C2-8:2-FTS	27339.0	13C2-PFDA	303665.7	0.090	4.790	4.490	94	70-130	
E13C8-PFOSA	681332.9	13C2-PFDA	303665.7	2.244	5.000	4.974	99	70-130	
Ed3-NMeFOSAA	73694.3	13C2-PFDA	303665.7	0.243	5.000	4.381	88	70-130	
E13C7-PFUnDA	265353.1	13C2-PFDA	303665.7	0.874	5.000	5.073	101	70-130	
Ed5-NEtFOSAA	59646.1	13C2-PFDA	303665.7	0.196	5.000	4.156	83	70-130	
E13C2-PFDoDA	576780.7	13C2-PFDA	303665.7	1.899	5.000	4.932	99	70-130	
Ed7-NMePFOSAE	354624.2	13C2-PFDA	303665.7	1.168	5.000	5.054	101	70-130	
Ed3-NMePFOSA	79601.3	13C2-PFDA	303665.7	0.262	5.000	4.763	95	70-130	
Ed9-NEtPFOSAE	287722.3	13C2-PFDA	303665.7	0.947	5.000	4.928	99	70-130	
Ed5-NEtPFOSA	59772.3	13C2-PFDA	303665.7	0.197	5.000	4.617	92	70-130	
E13C2-PFTeDA	418729.7	13C2-PFDA	303665.7	1.379	5.000	4.841	97	70-130	

APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

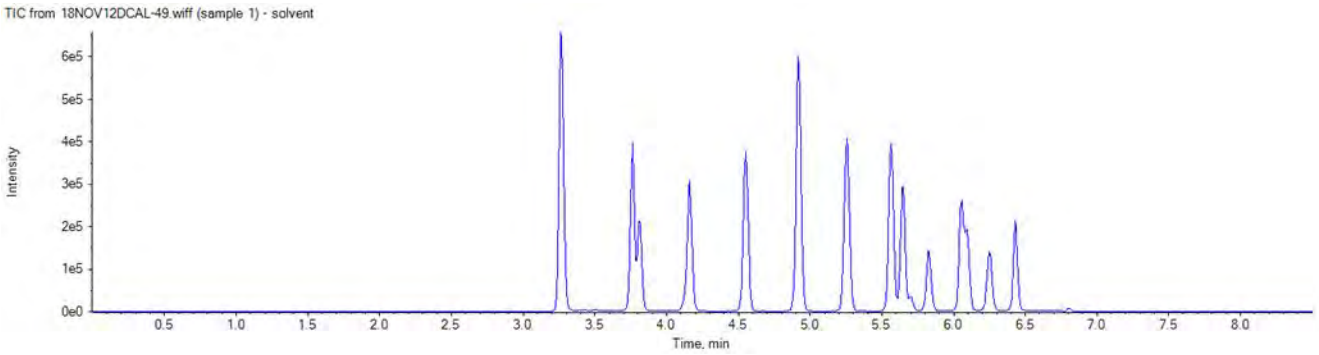
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-49.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	778730.1	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	758823.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	57620.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	665797.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	547261.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	39087.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	901909.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	509013.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	643925.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	681332.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	73694.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	265353.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	59646.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	576780.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	354624.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	79601.3	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	287722.3	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	59772.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	576780.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	
PFHxDA	6.73	1.050	2221.7		A	13C2-PFTeDA	6.43	418729.7	0.005	0.063
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	

Total Ion Chromatogram

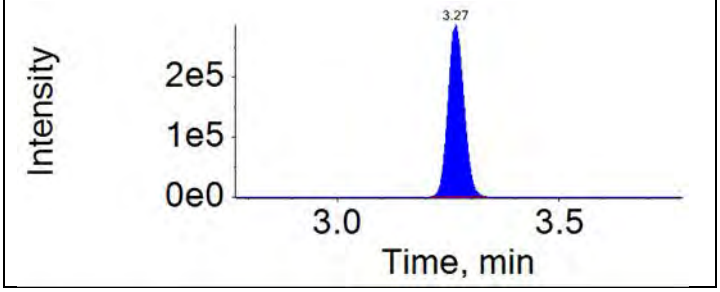


APPROVED
By JPT at 8:42 am, 11/20/18

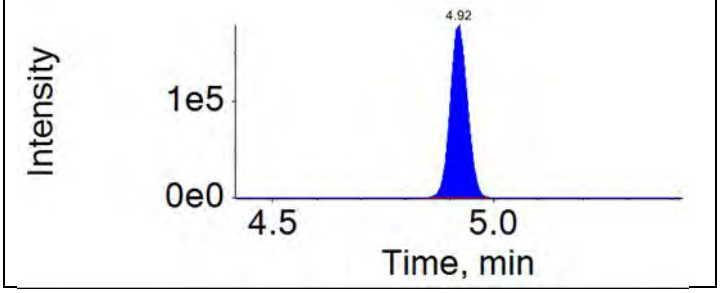
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

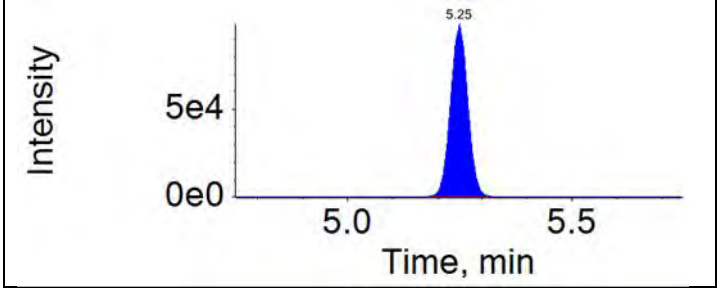
Injection Standard: 13C3-PFBA
216.0 / 172.0



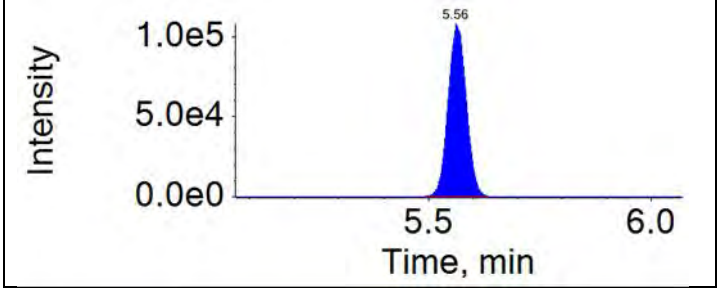
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

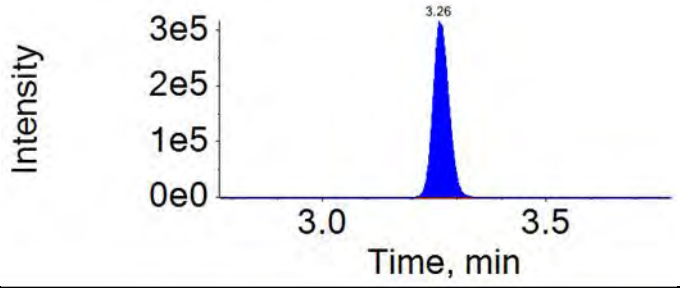


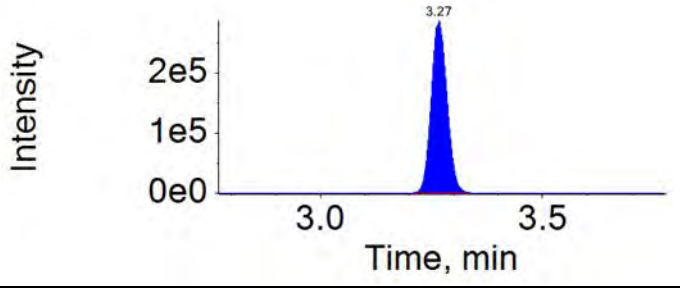
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

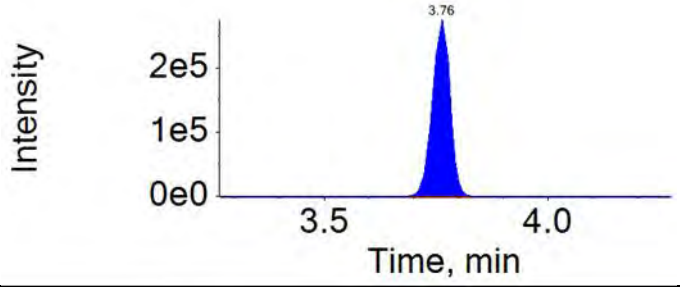
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

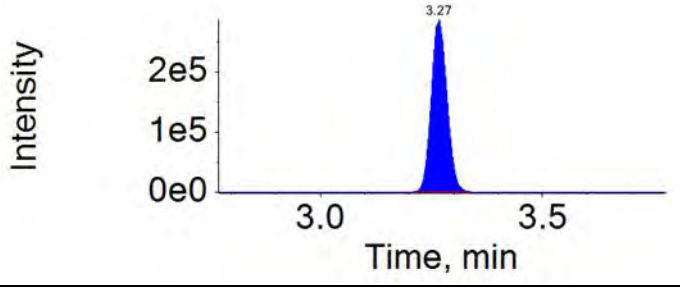
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



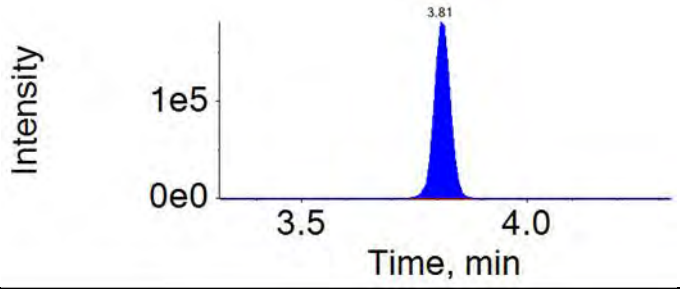


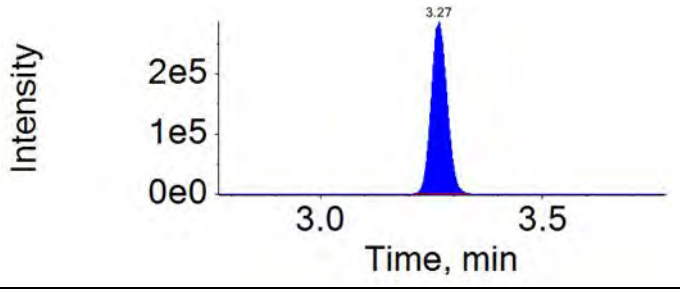
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



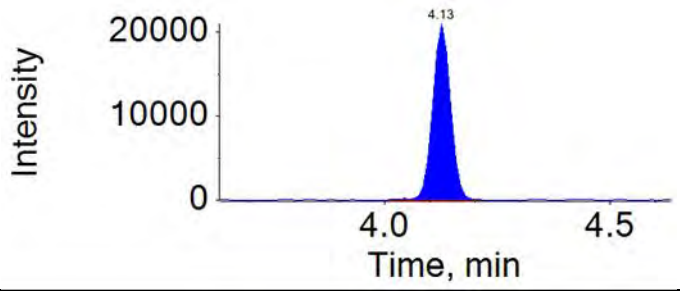


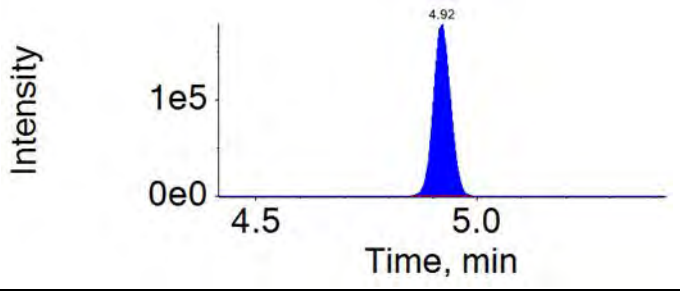
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



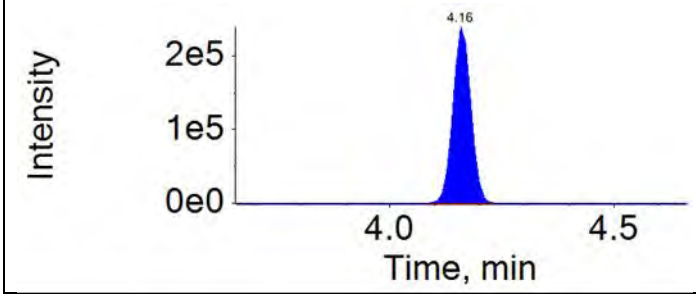


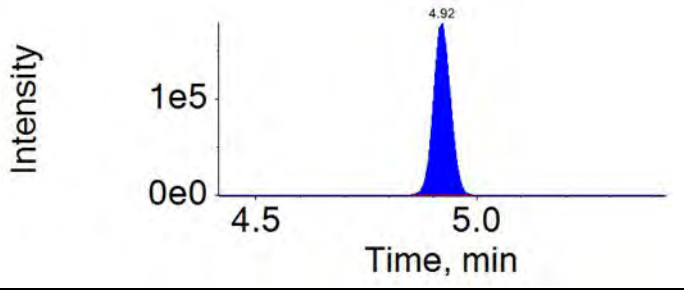
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

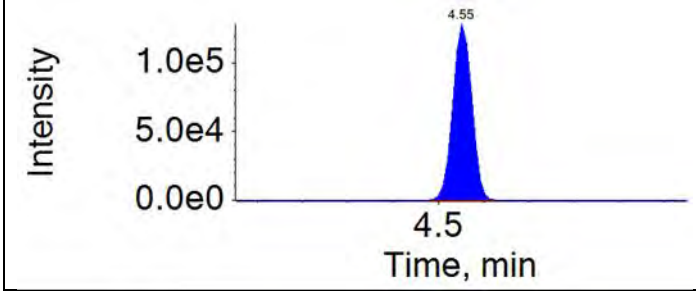
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

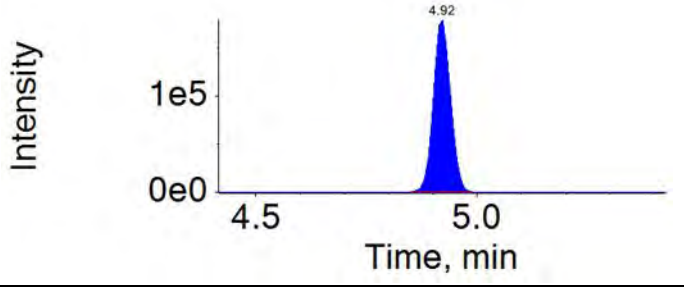
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



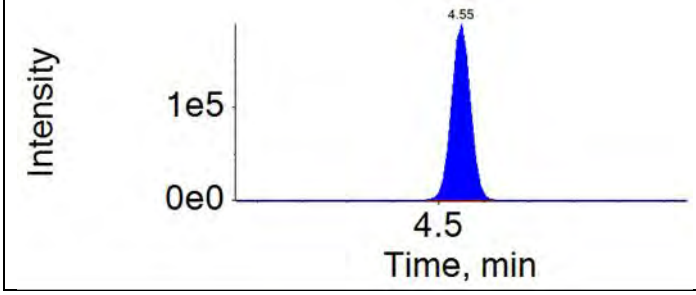


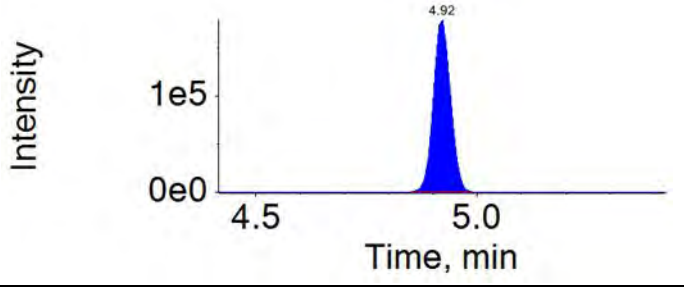
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



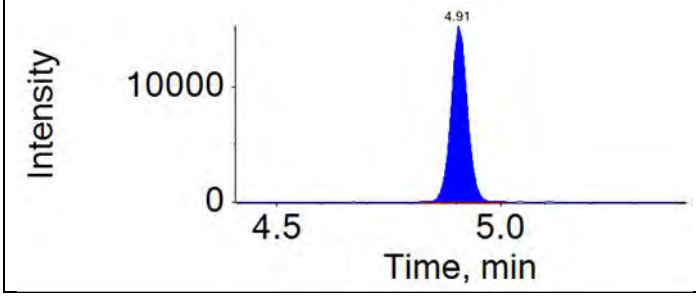


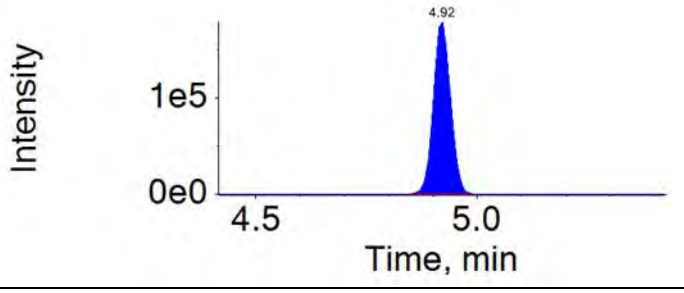
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



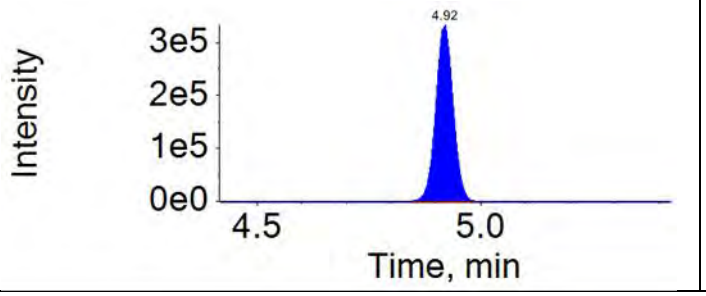


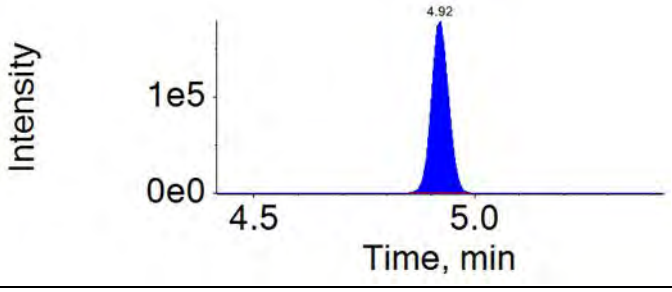
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

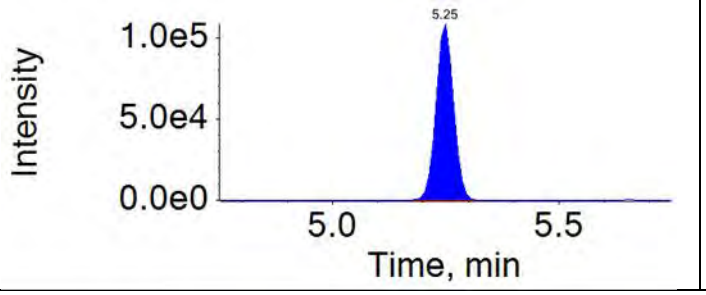
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

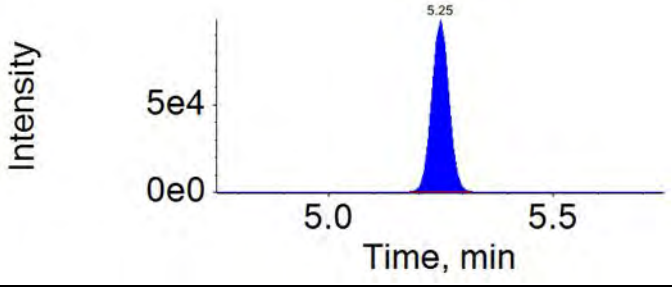
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



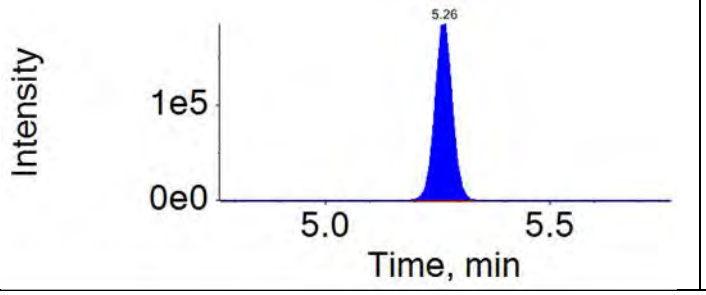


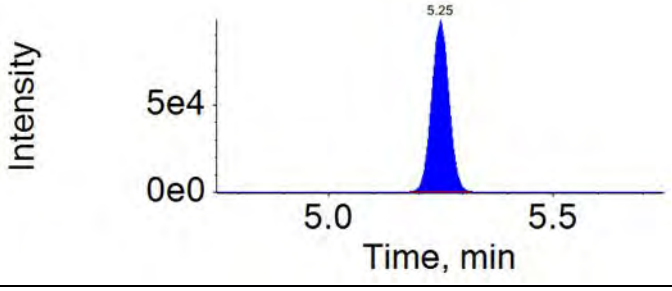
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



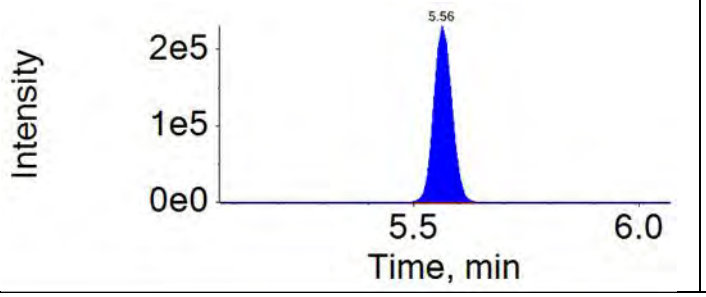


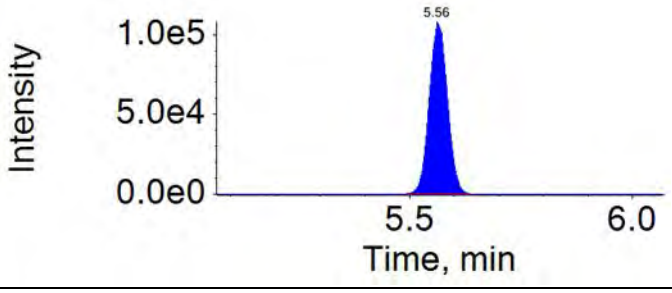
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



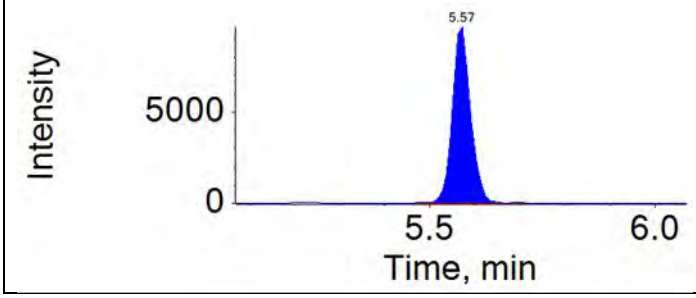


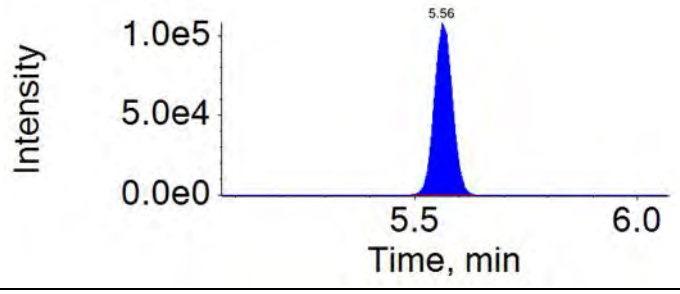
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

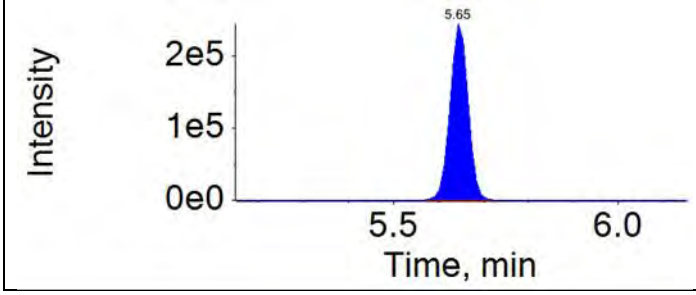
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

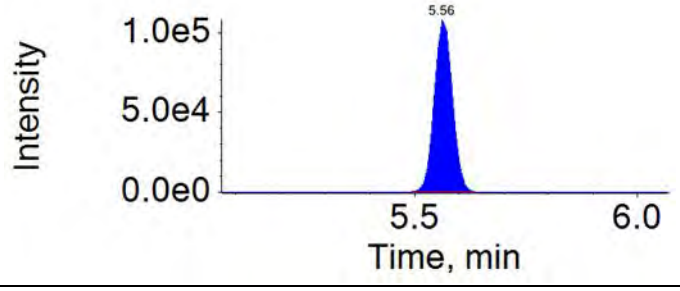
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



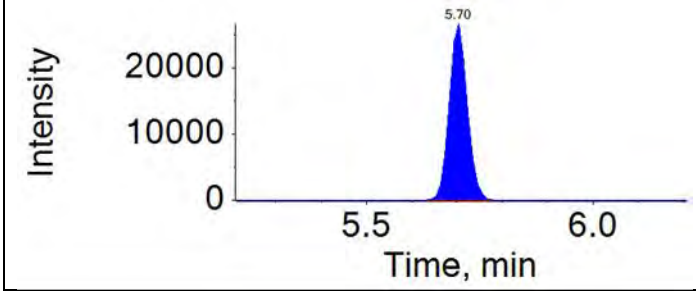


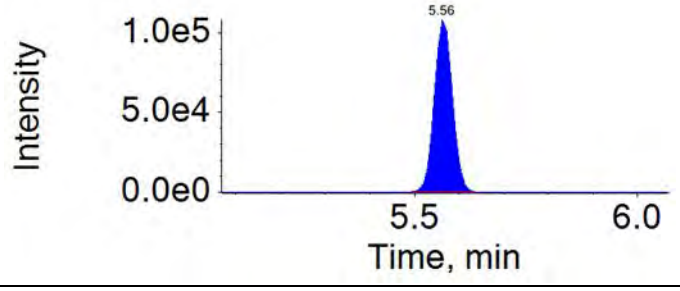
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



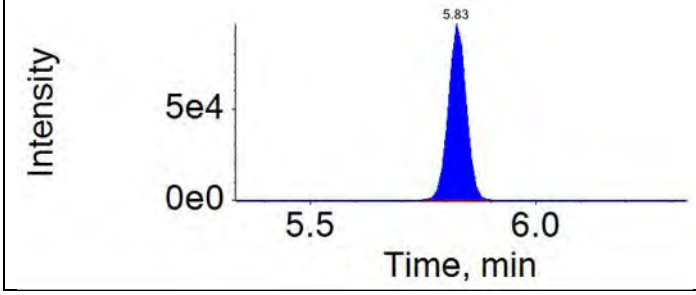


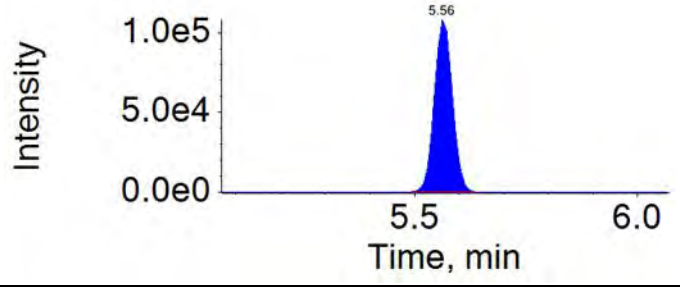
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



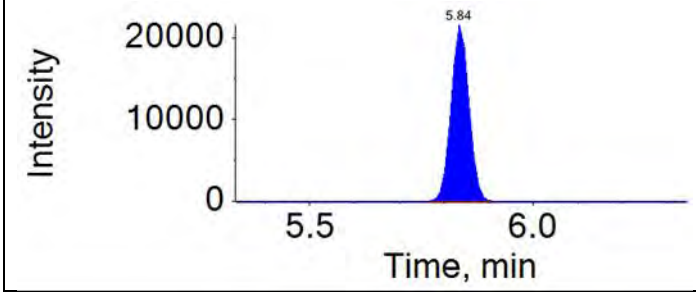


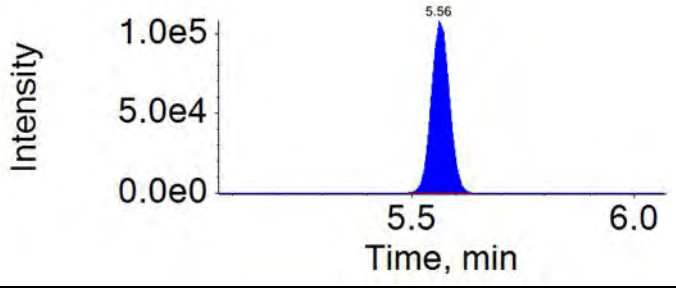
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

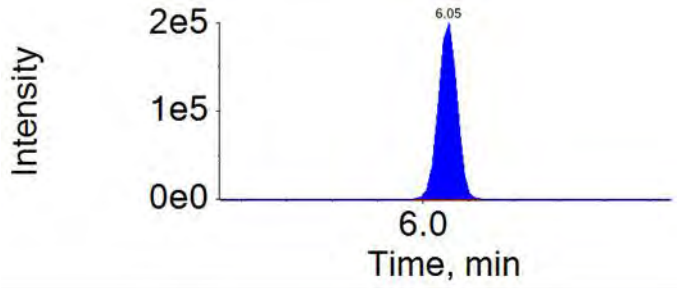
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

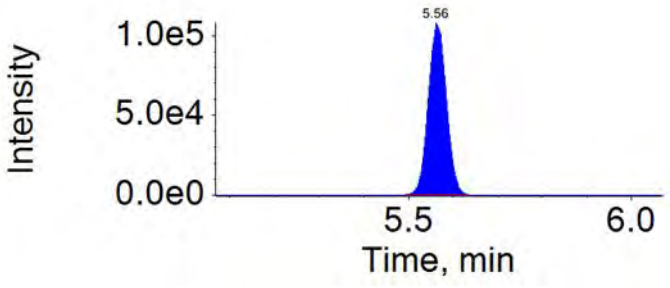
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



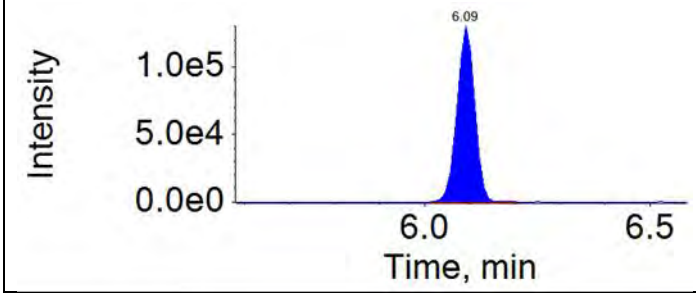


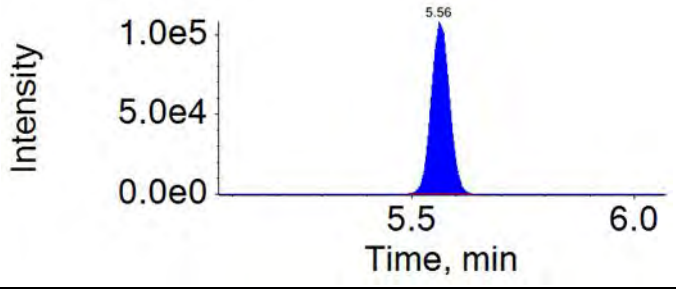
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



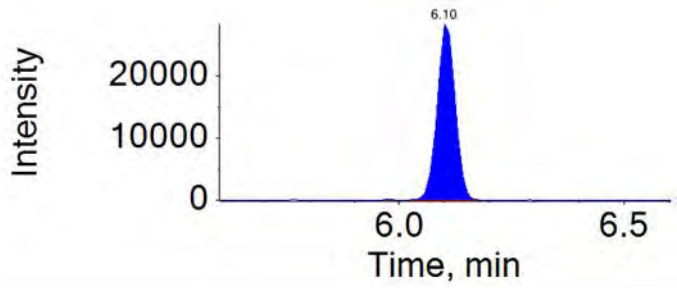


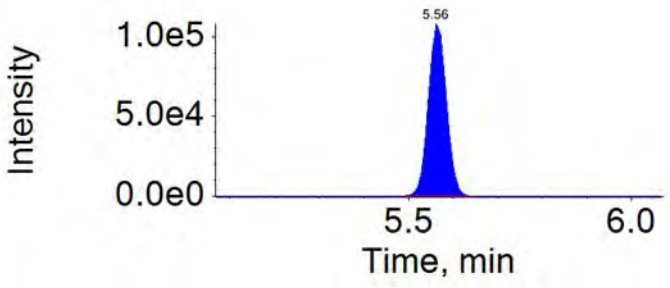
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





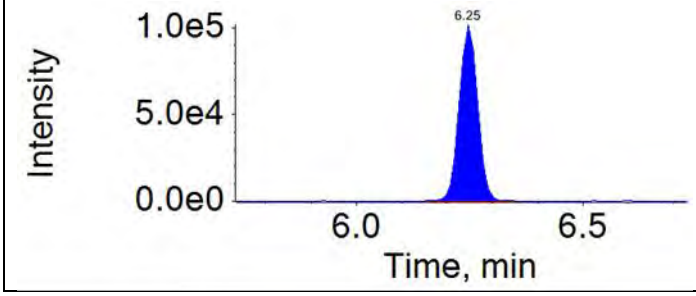
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

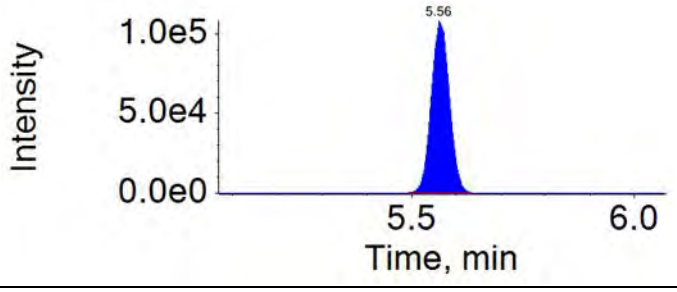




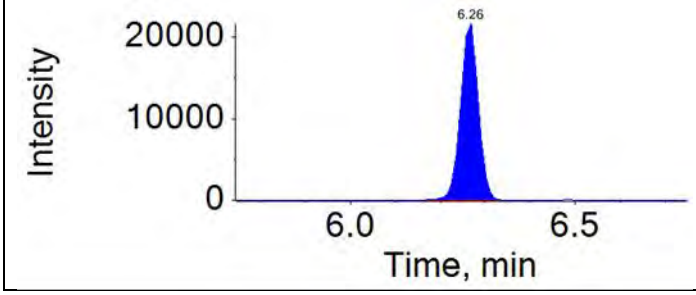
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

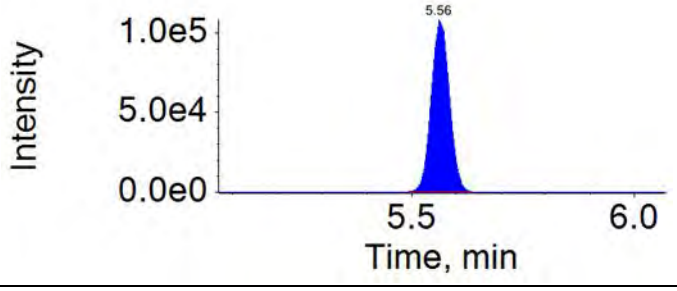
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



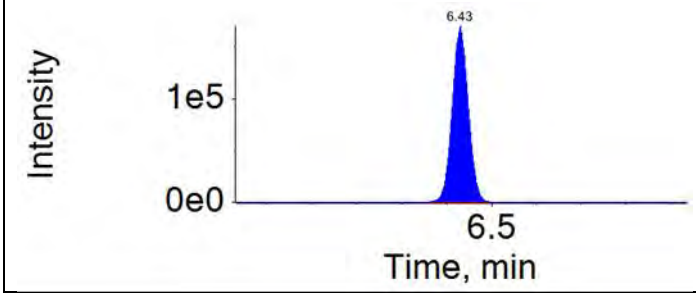


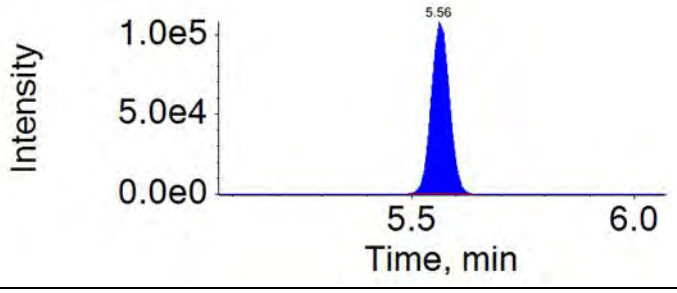
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



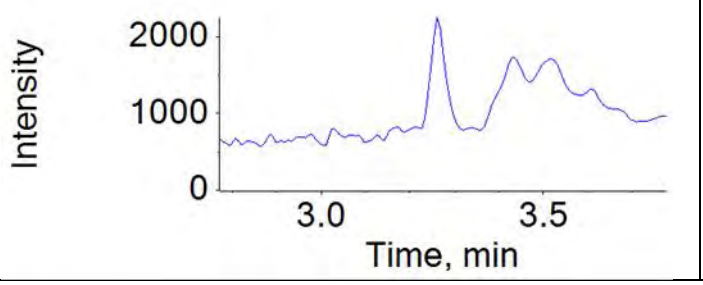


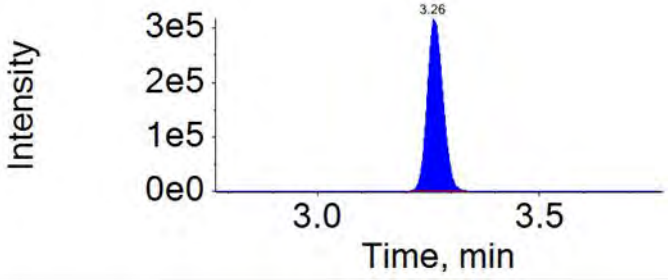
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

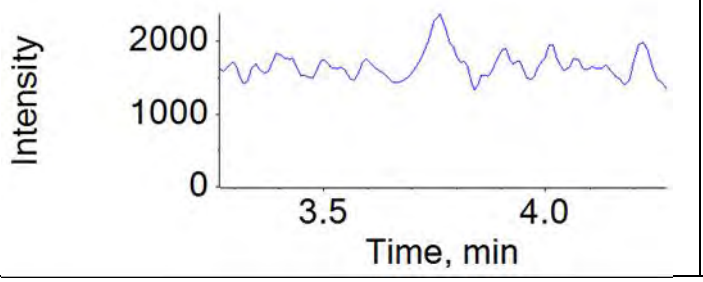
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

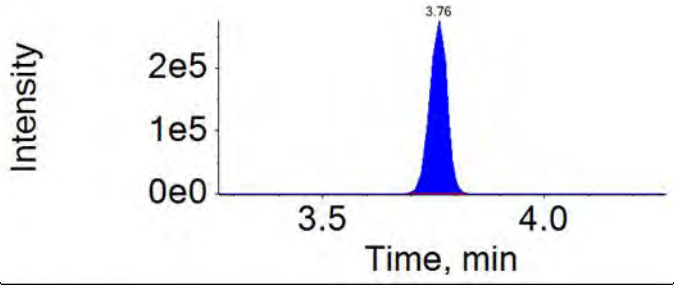
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



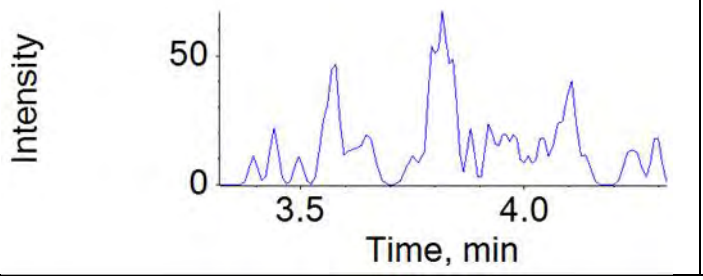


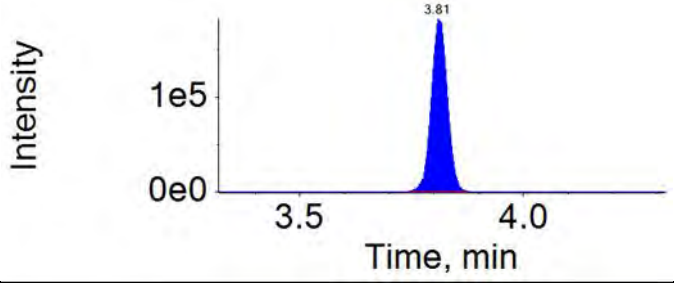
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



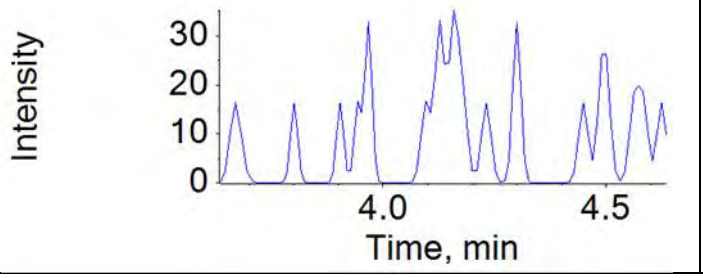


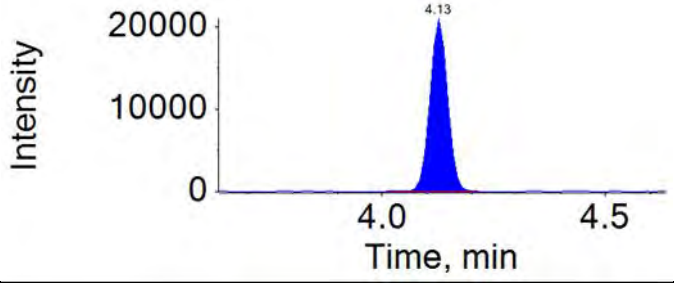
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



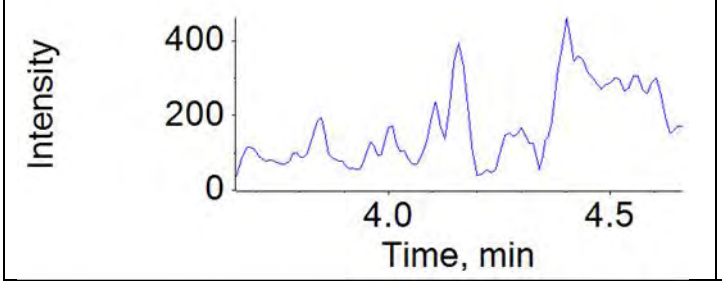


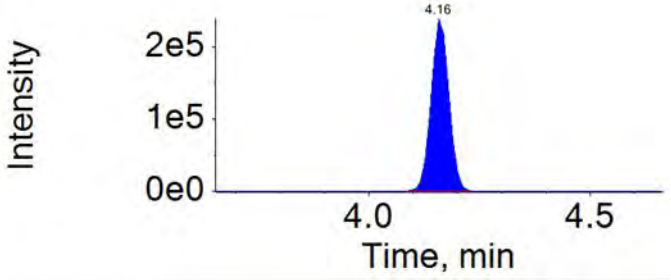
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

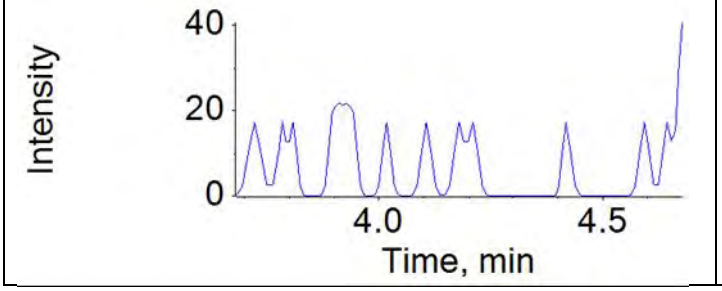
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

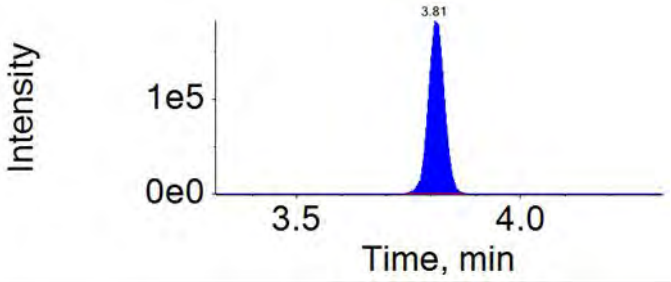
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



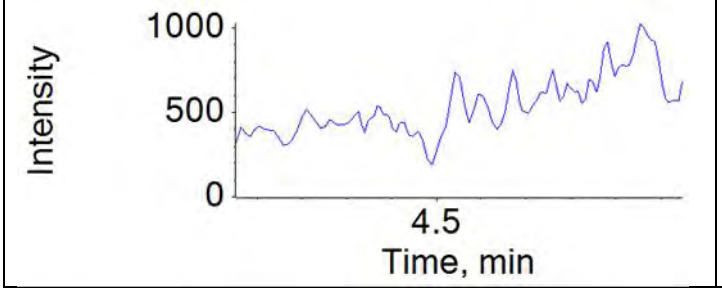


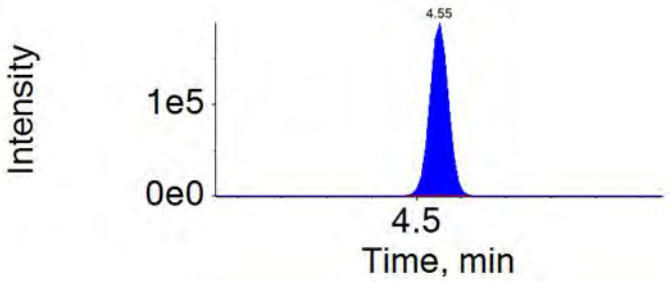
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



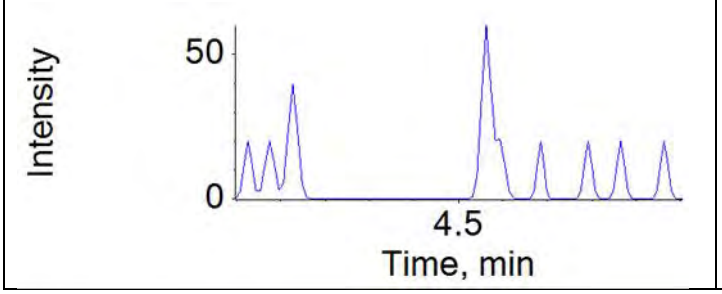


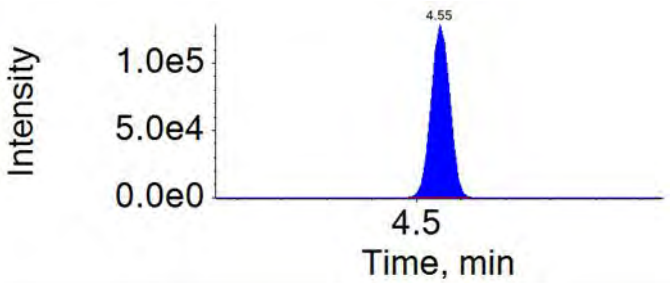
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



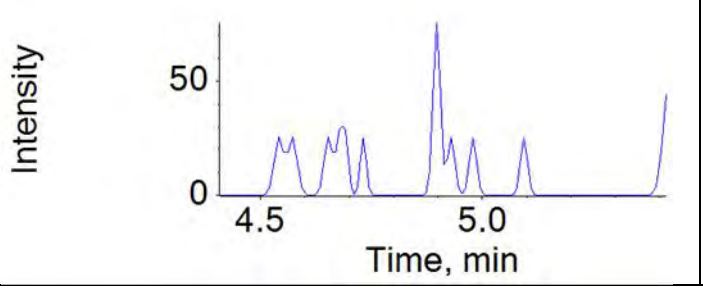


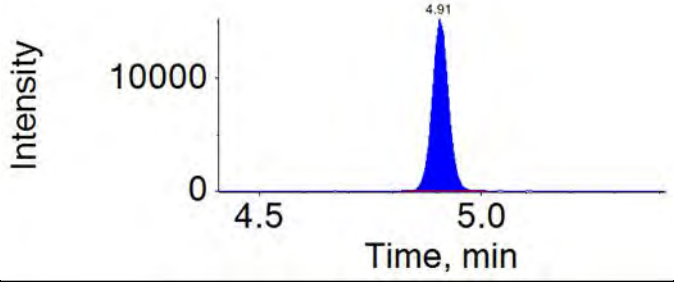
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

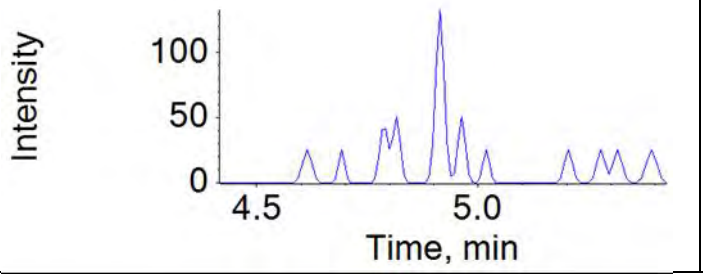
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

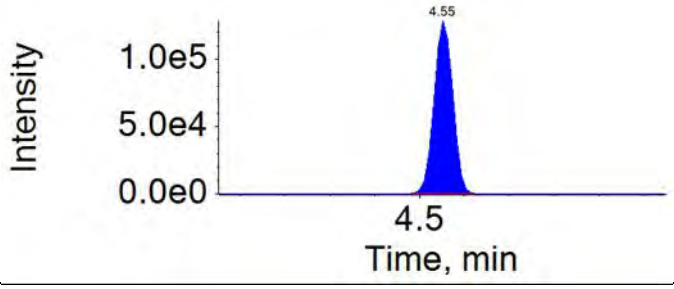
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



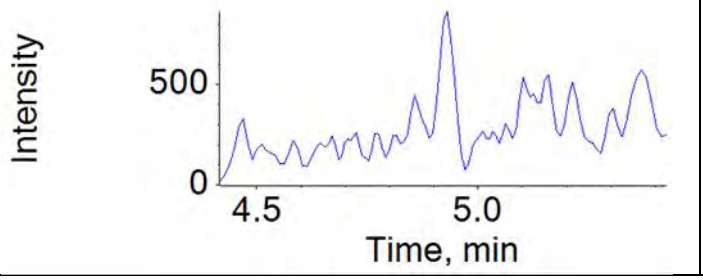


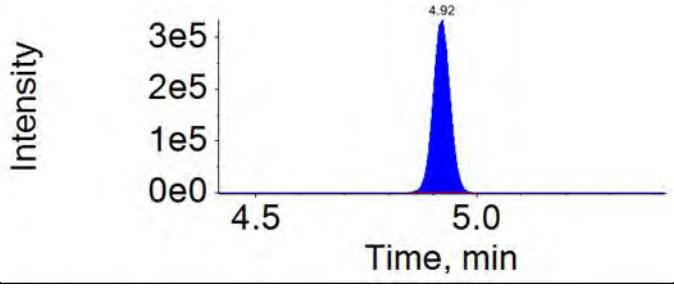
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



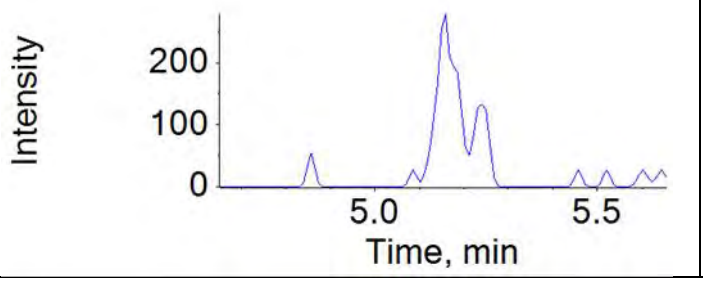


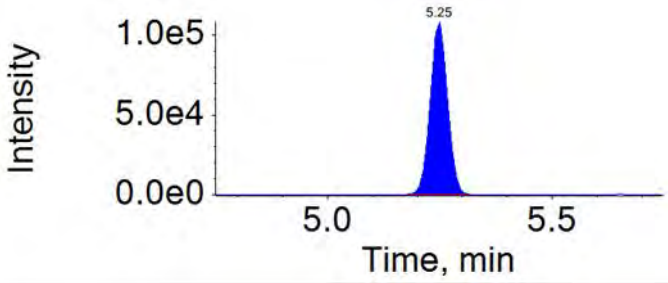
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



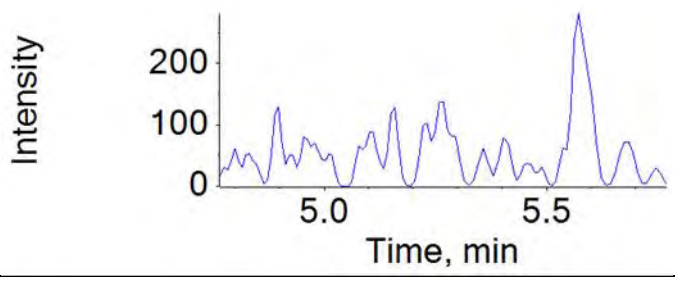


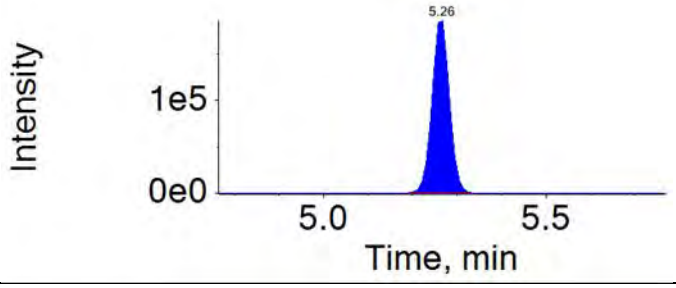
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

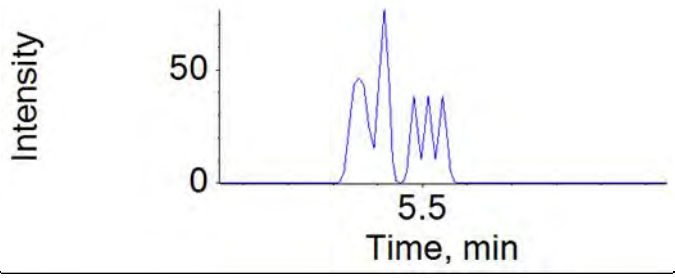
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

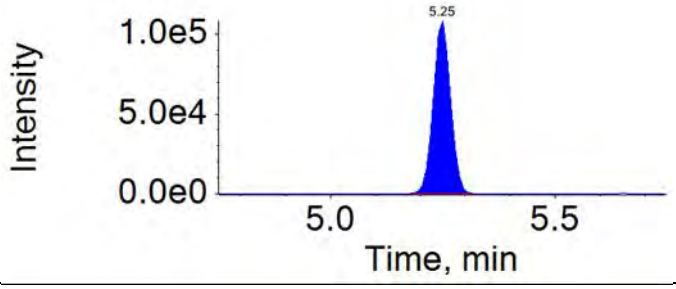
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



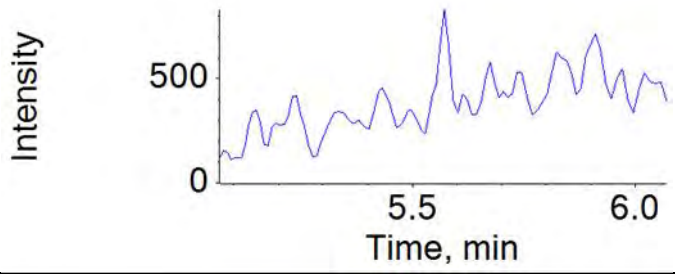


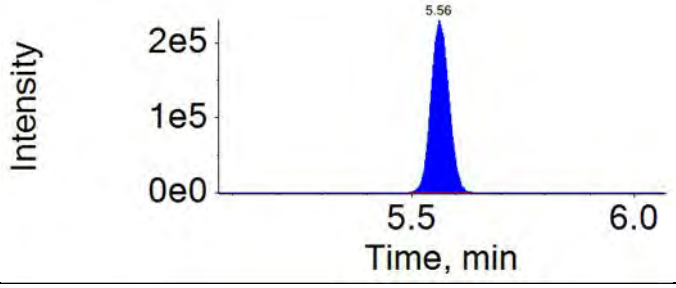
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



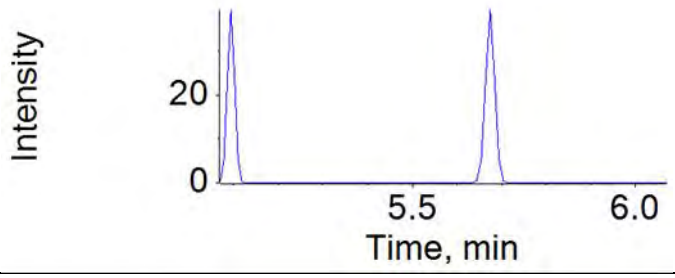


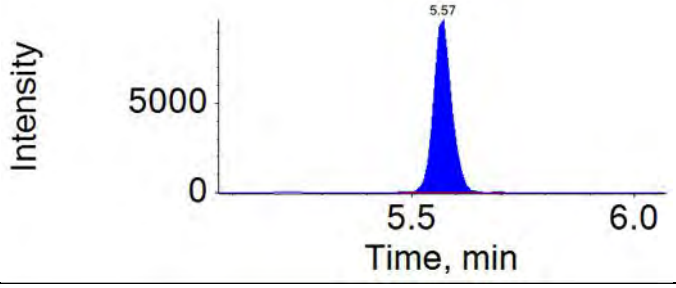
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



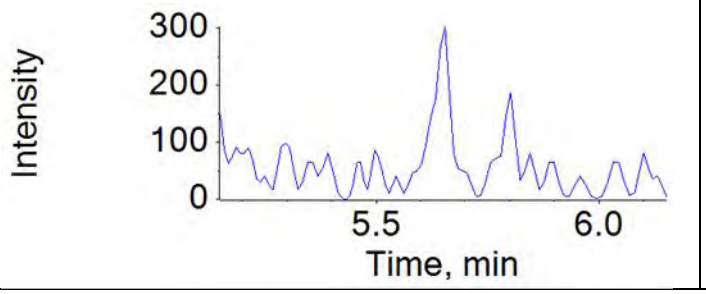


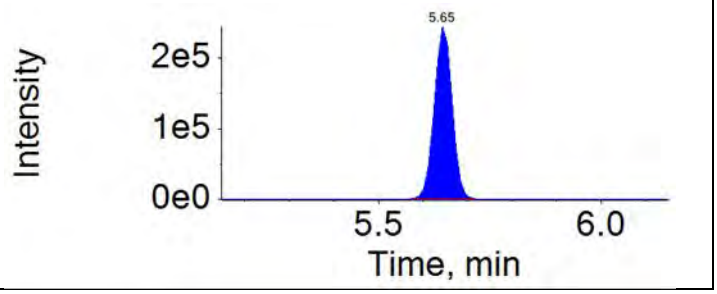
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

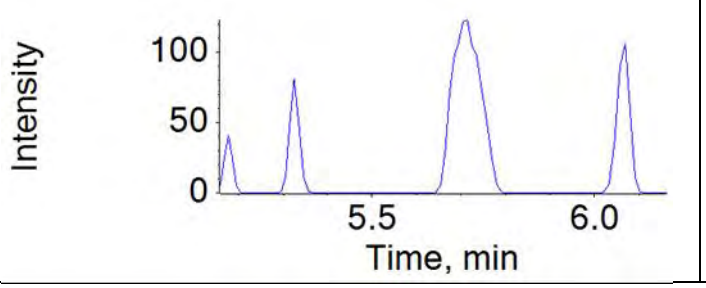
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

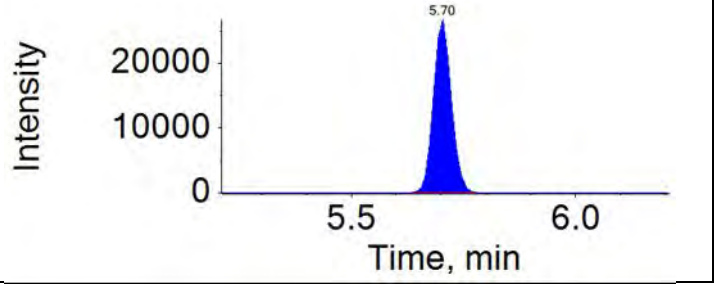
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



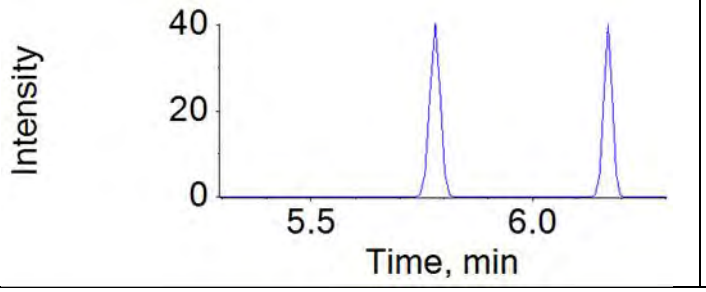


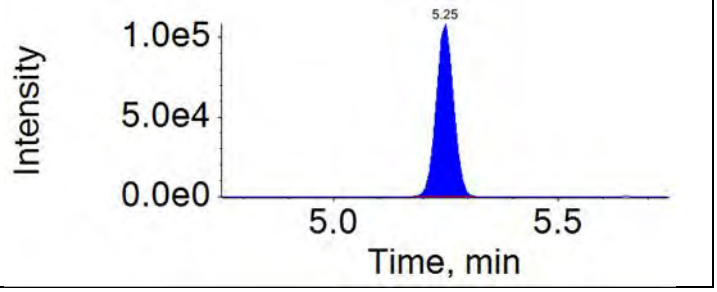
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



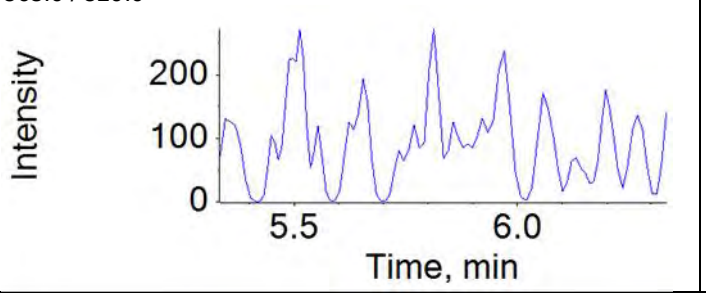


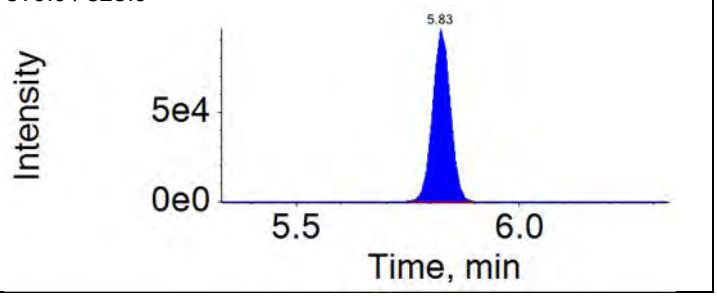
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



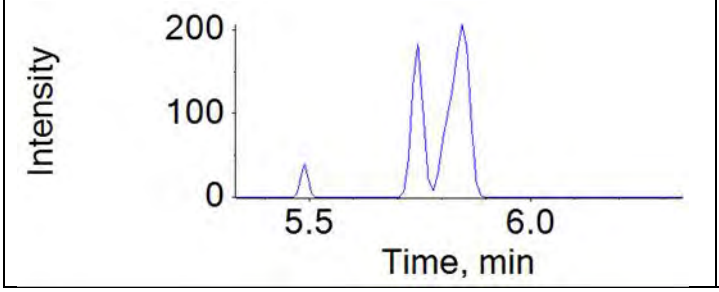


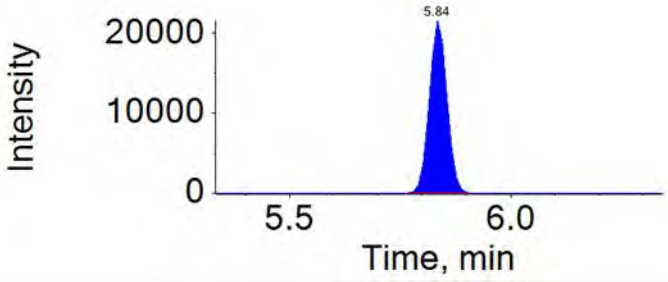
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

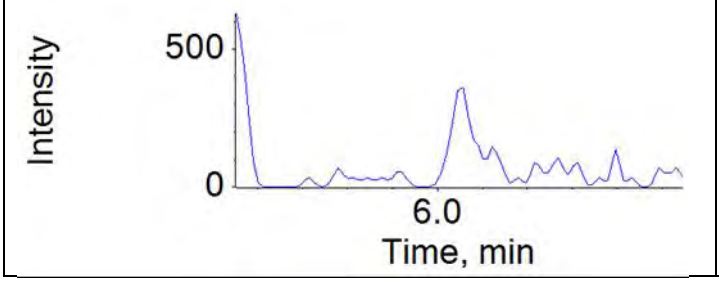
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

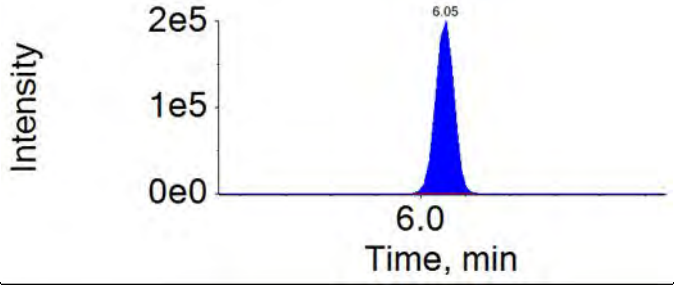
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



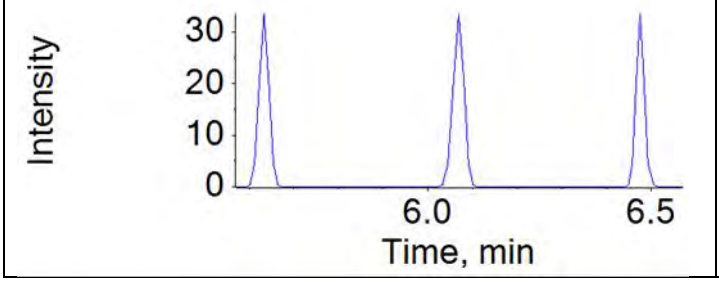


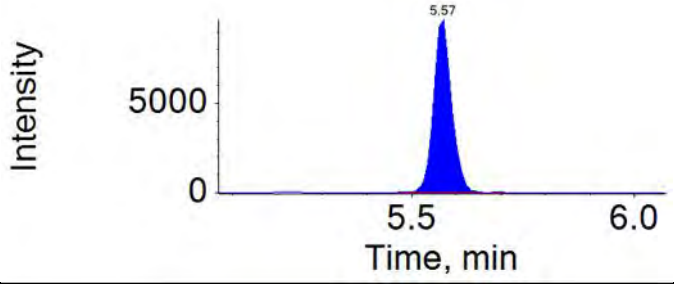
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



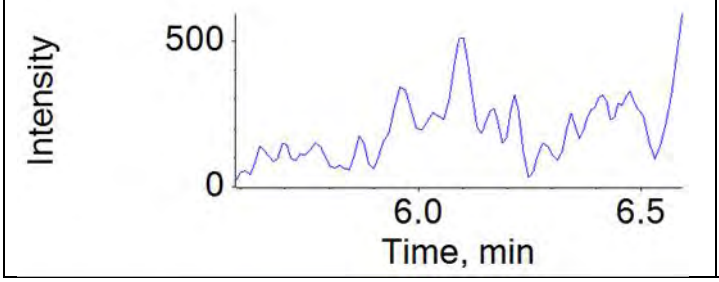


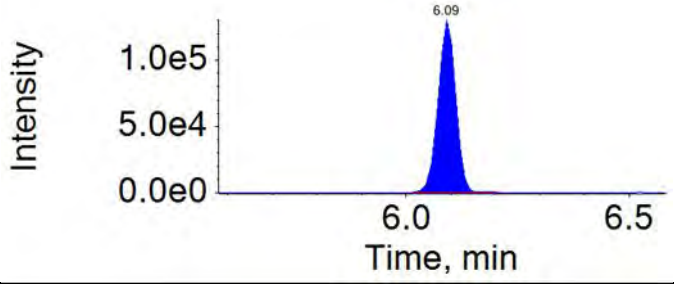
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



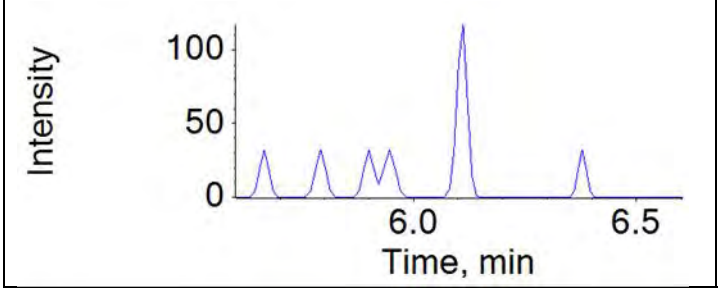


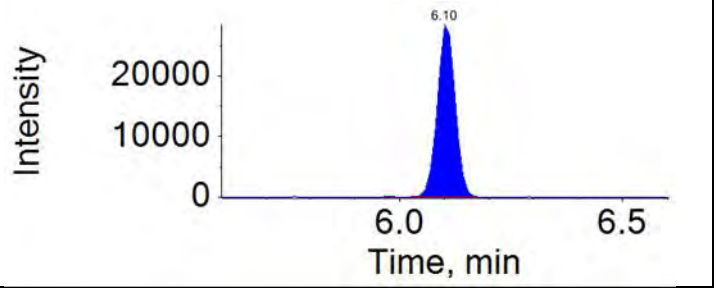
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

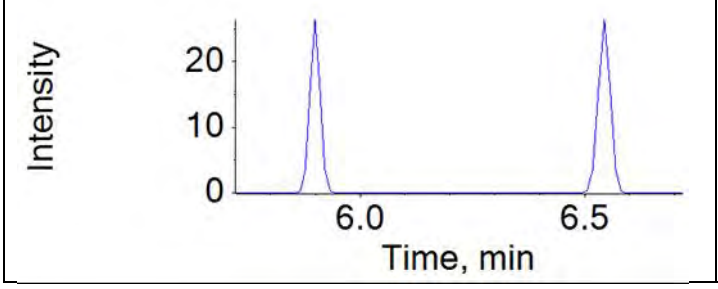
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

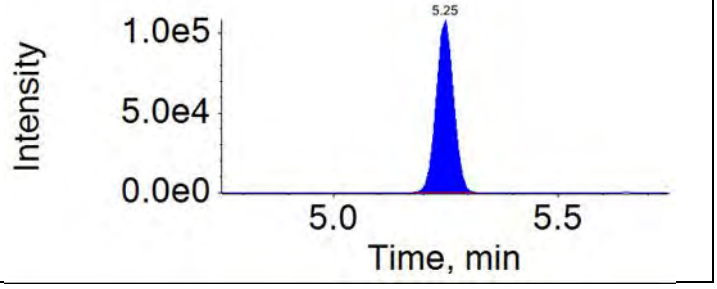
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



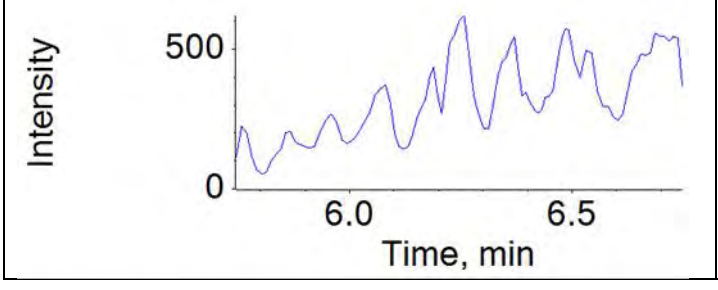


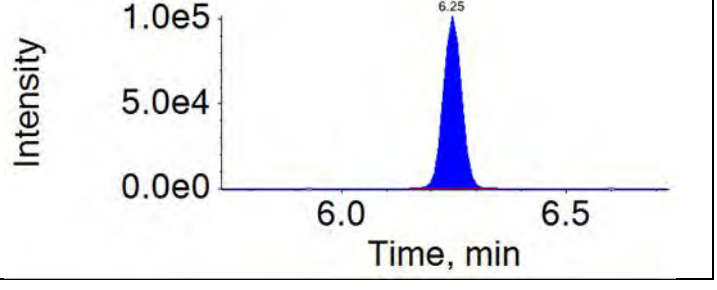
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



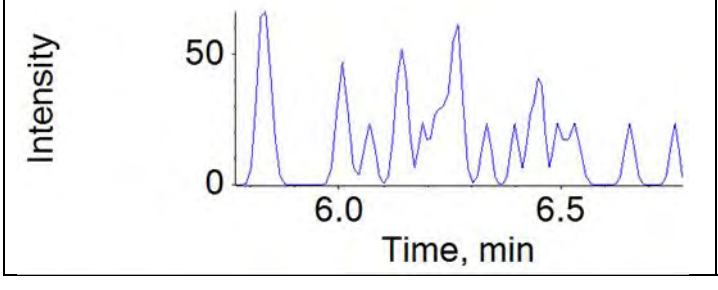


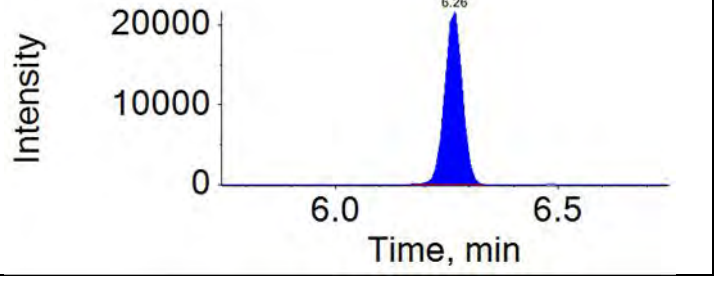
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



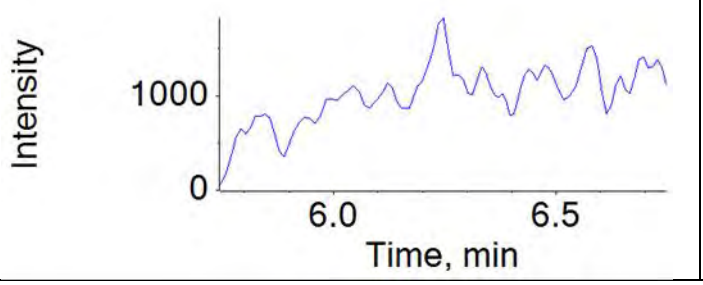


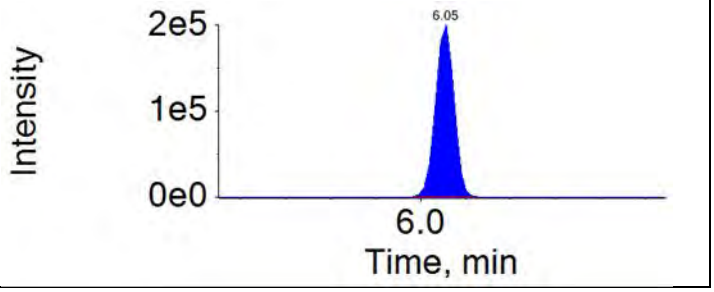
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

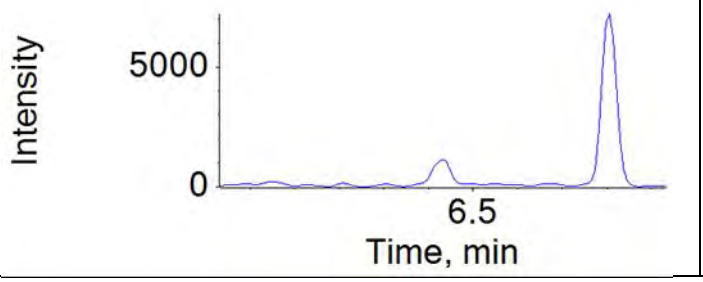
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

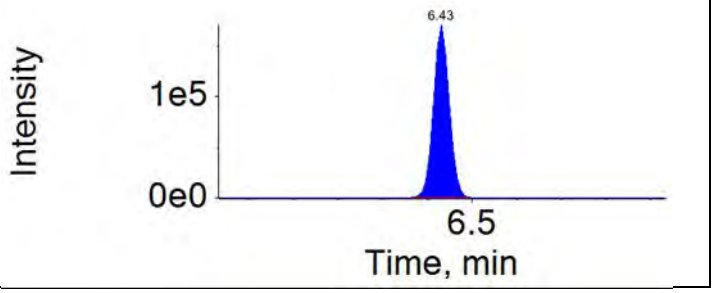
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



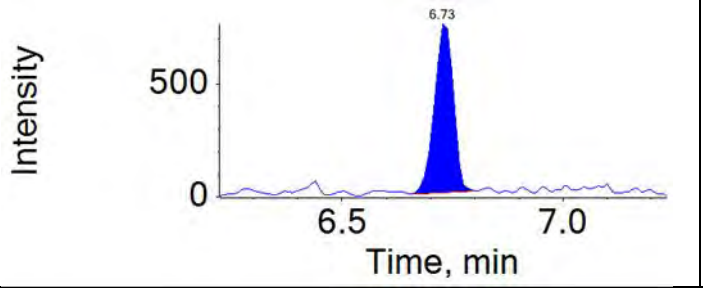


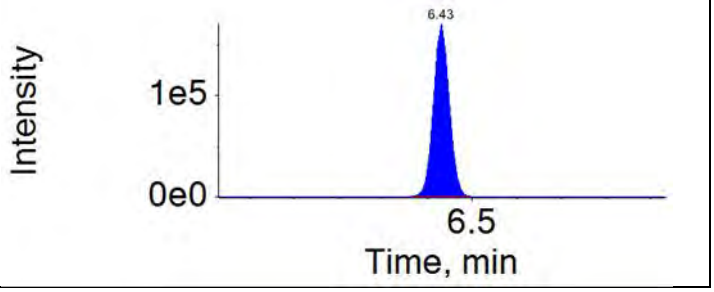
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



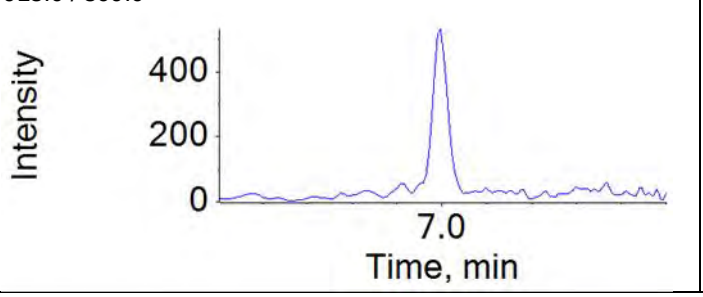


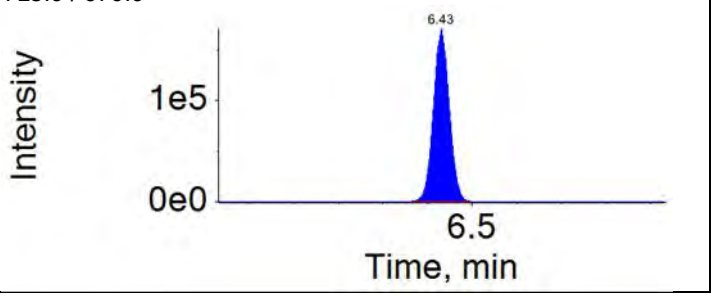
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

Ion Ratio Report

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-49.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	5.81	1.00	64.89	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	6.73	1.05	2221.67	A	N/A	1.0000			
PFHxDA_2	6.74	1.05	133.29	A	N/A	0.0600	-11	50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

APPROVED
By JPT at 8:42 am, 11/20/18

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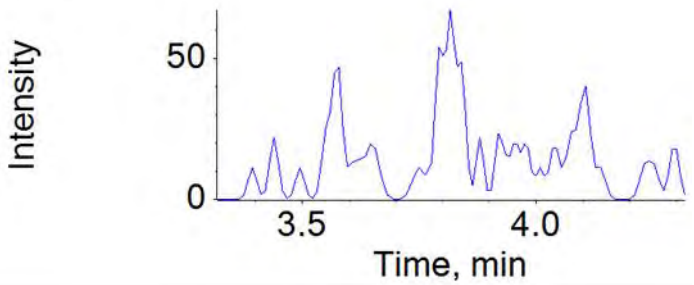
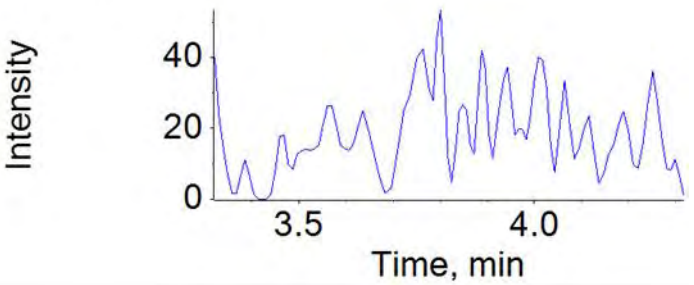
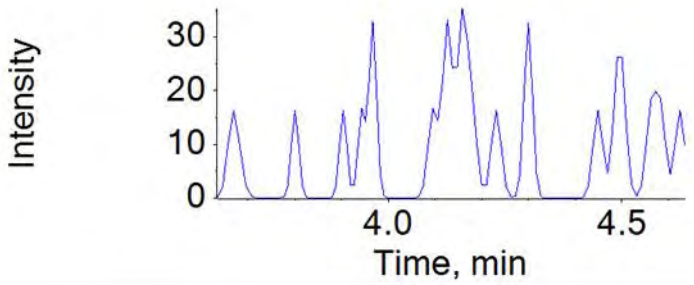
Component: PFBS
Primary Mass: 299.0 / 80.0



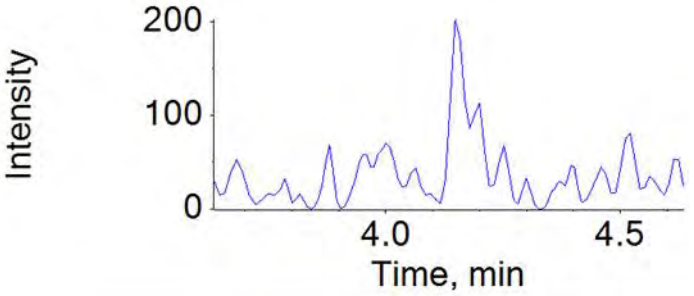
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



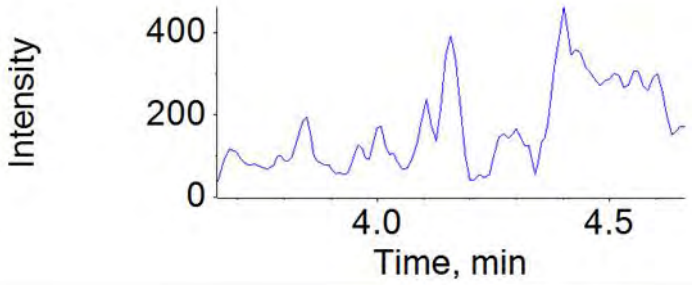
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



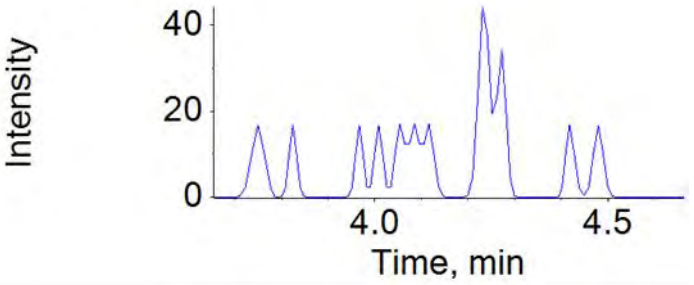
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



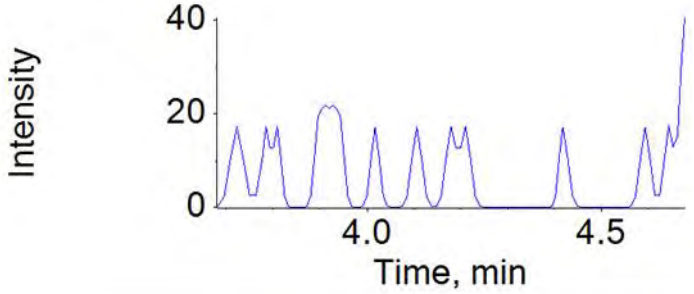
Component: PFHxA
Primary Mass: 313.0 / 269.0



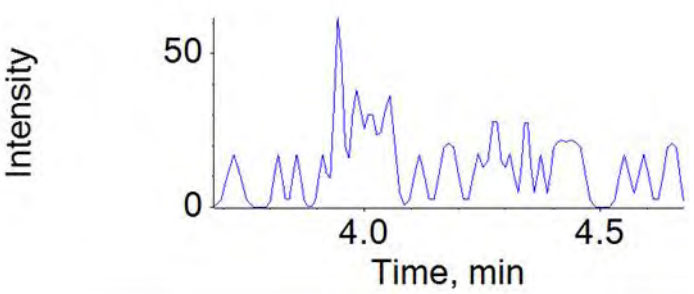
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



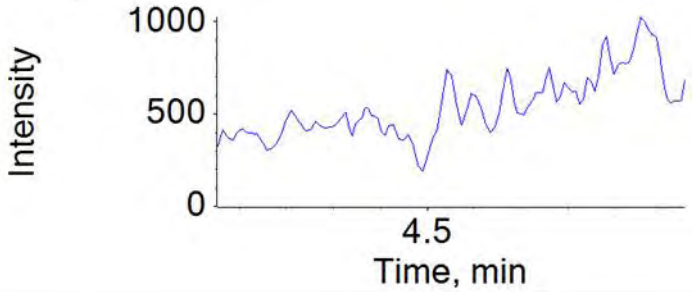
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



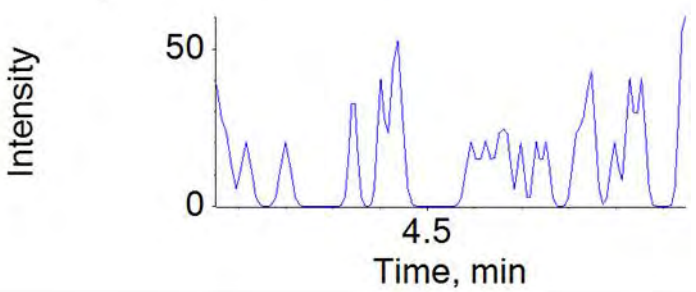
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

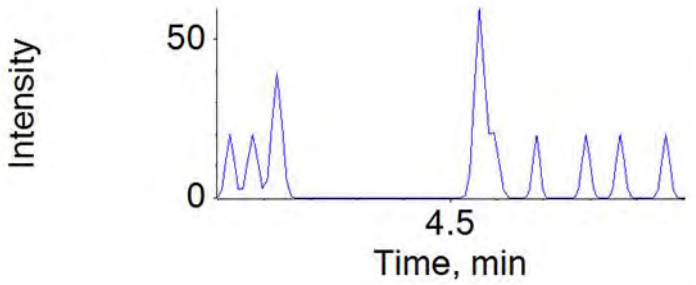
Component: PFHpA
Primary Mass: 363.0 / 319.0



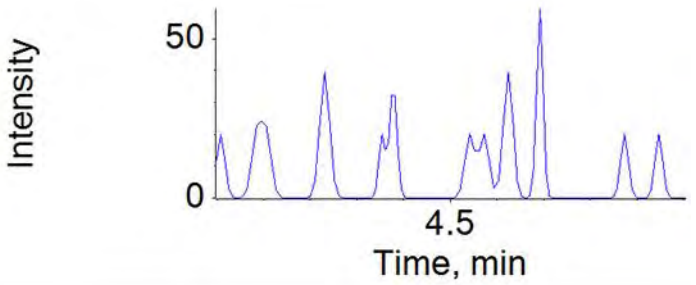
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



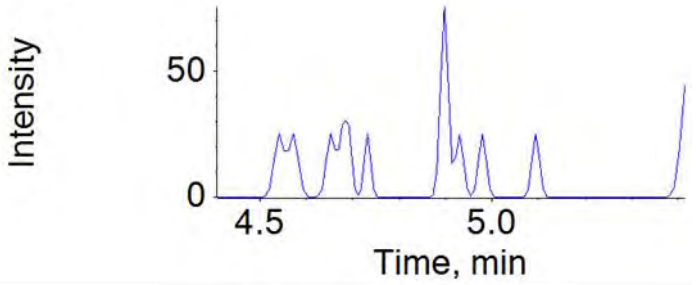
Component: PFHxS
Primary Mass: 399.0 / 80.0



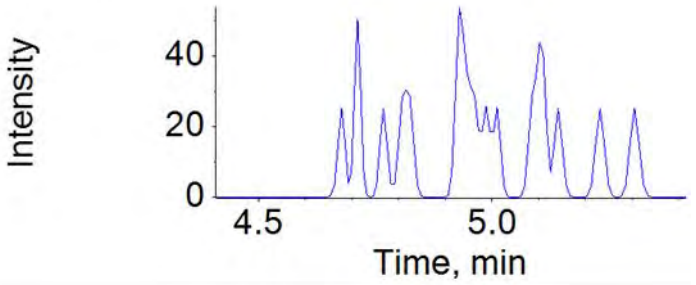
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



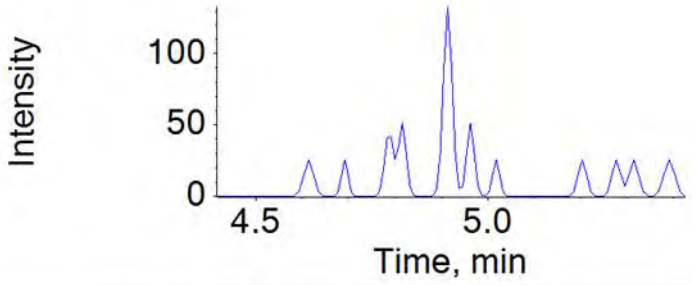
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



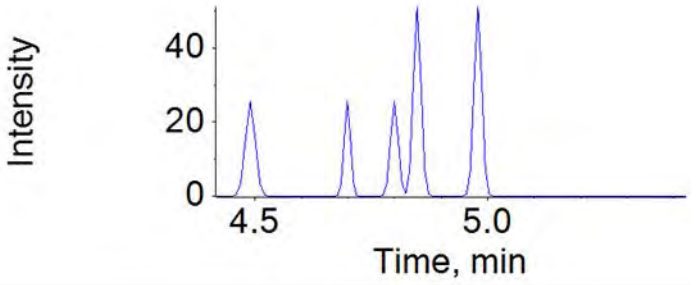
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



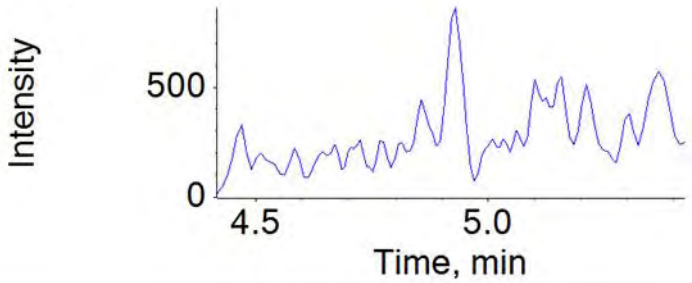
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



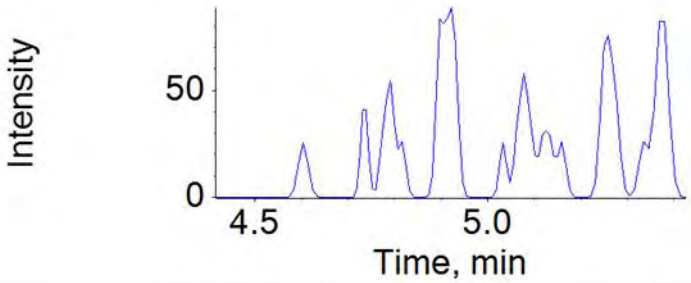
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

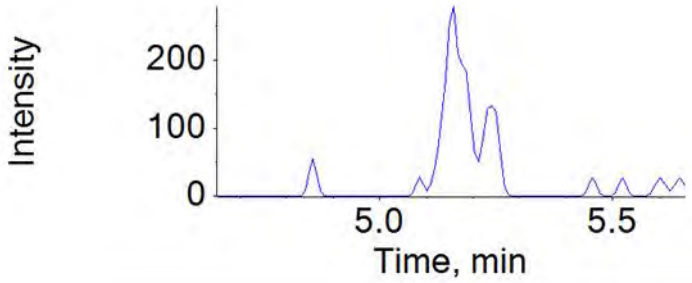
Component: PFOA
Primary Mass: 413.0 / 369.0



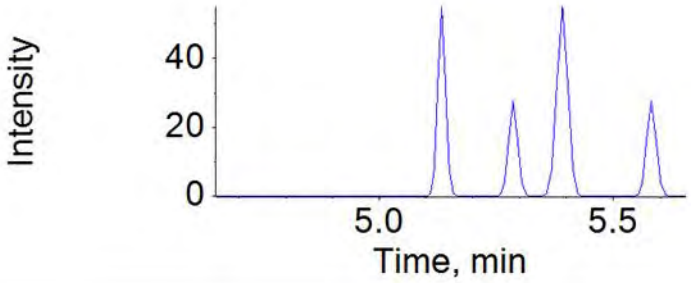
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



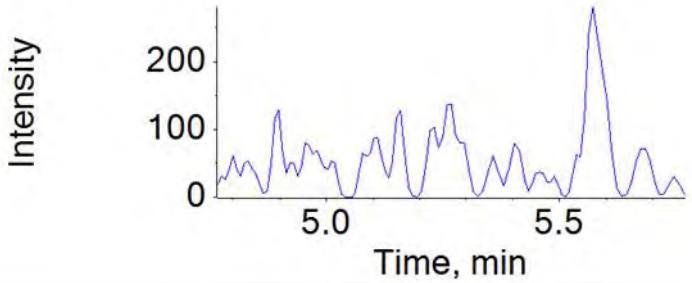
Component: PFOS
Primary Mass: 499.0 / 80.0



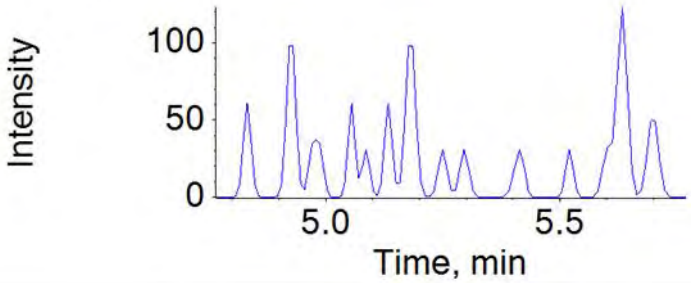
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



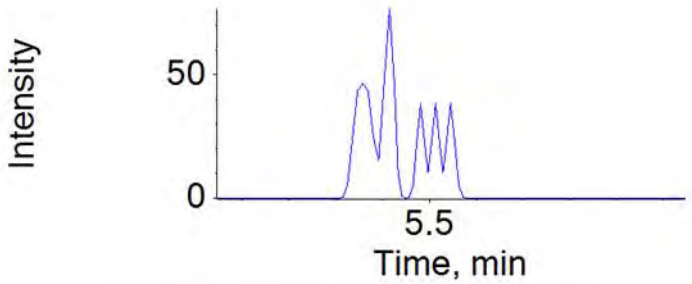
Component: PFNA
Primary Mass: 463.0 / 419.0



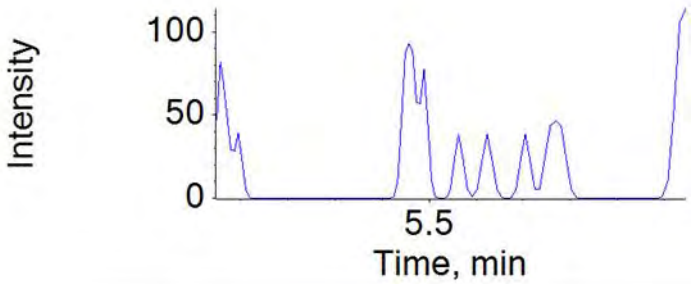
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



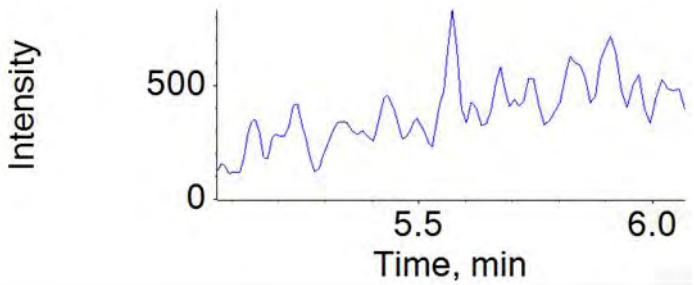
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



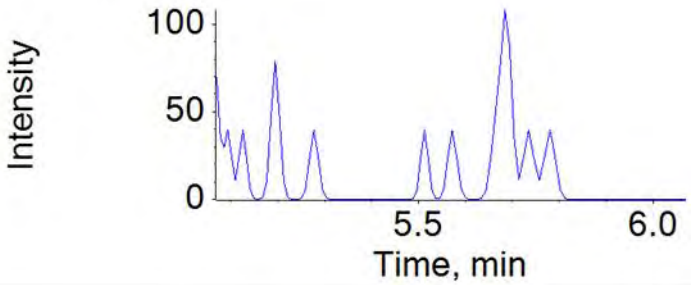
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

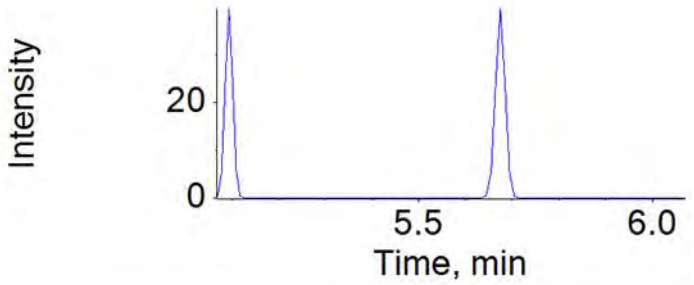
Component: PFDA
Primary Mass: 513.0 / 469.0



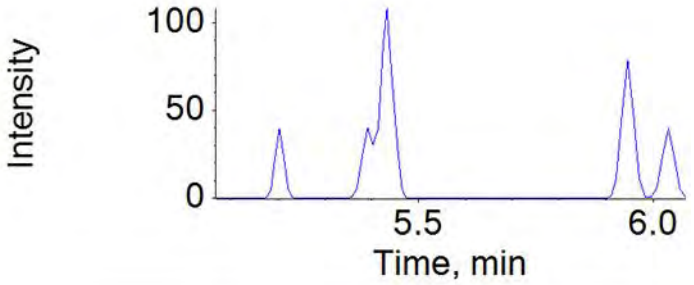
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



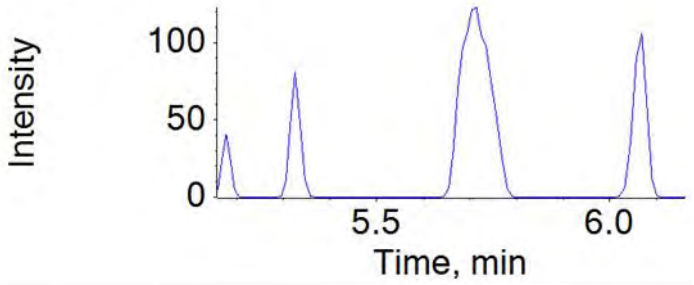
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



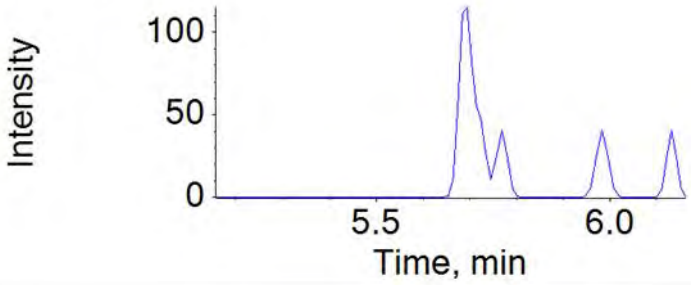
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



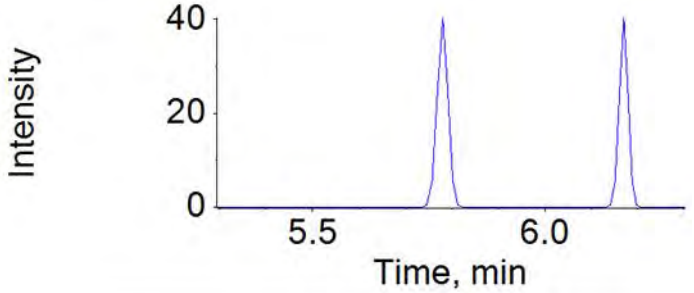
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



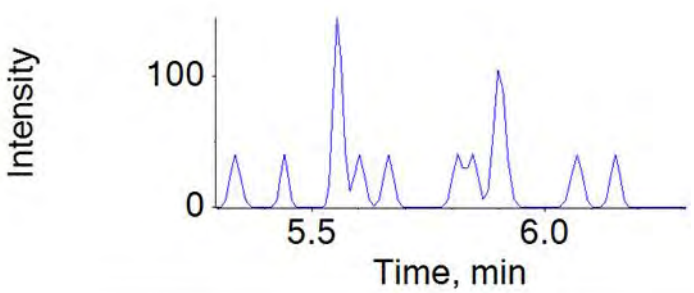
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



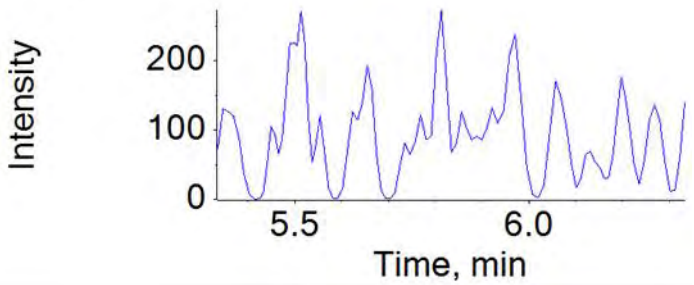
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



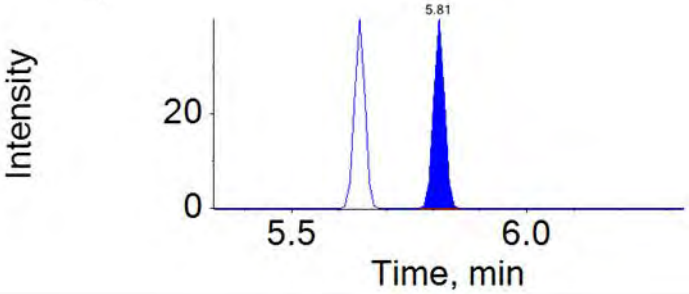
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

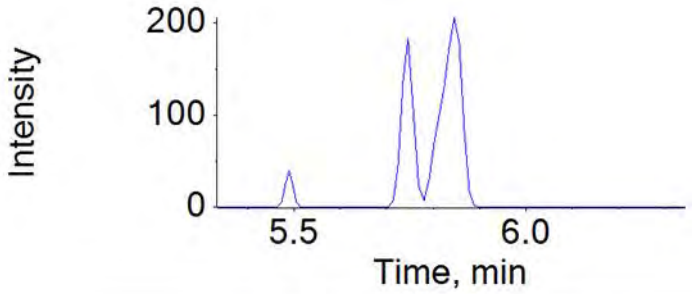
Component: PFUnDA
Primary Mass: 563.0 / 519.0



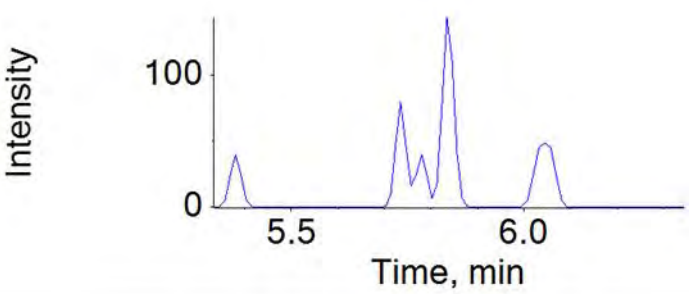
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



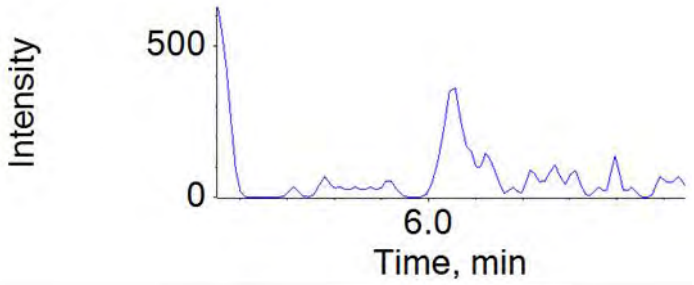
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



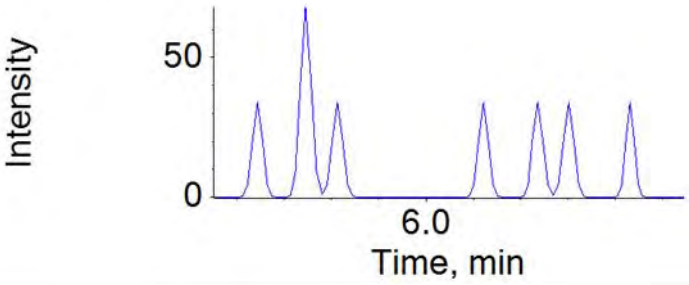
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



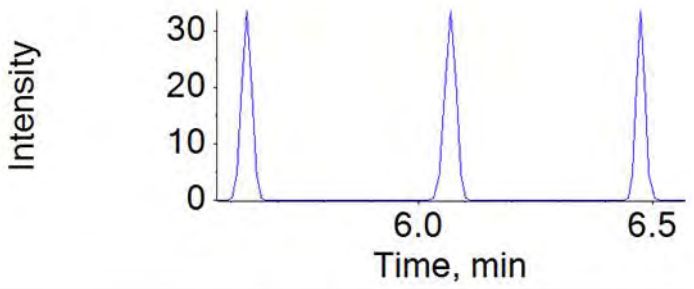
Component: PFDoDA
Primary Mass: 613.0 / 569.0



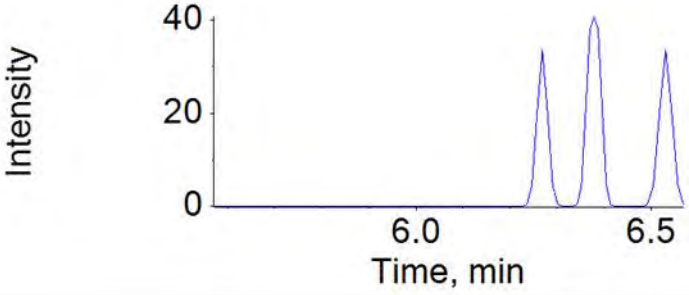
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



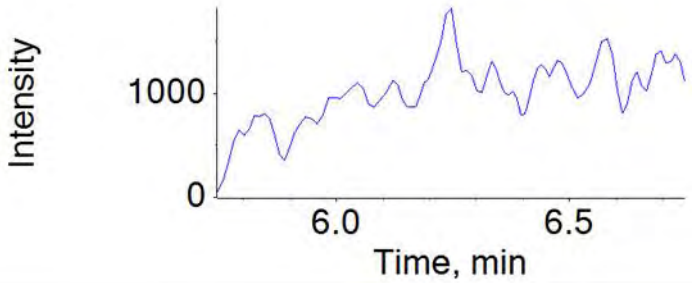
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



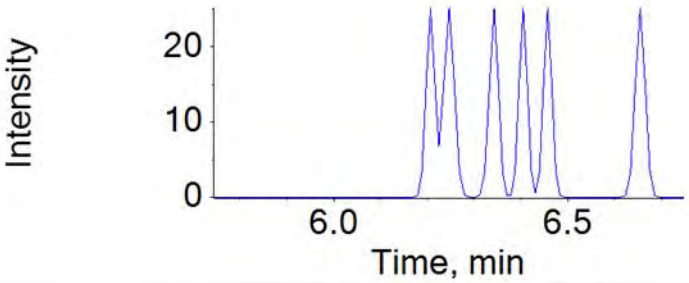
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

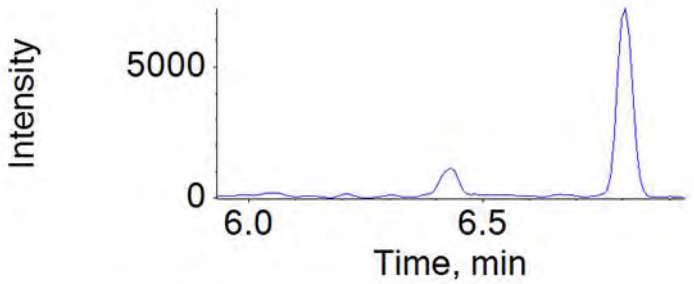
Component: PFTrDA
Primary Mass: 663.0 / 619.0



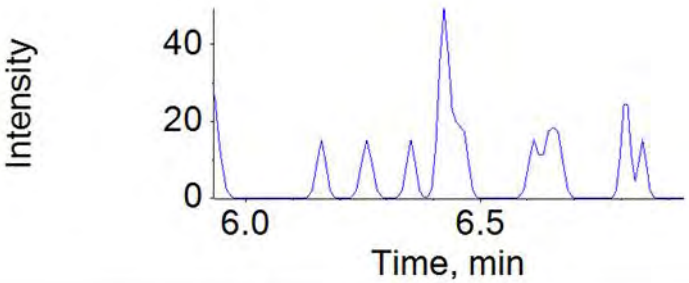
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



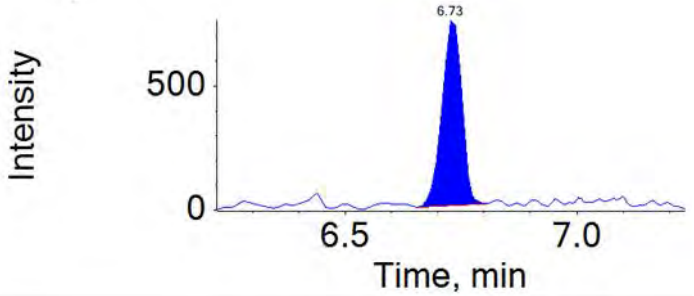
Component: PFTeDA
Primary Mass: 713.0 / 669.0



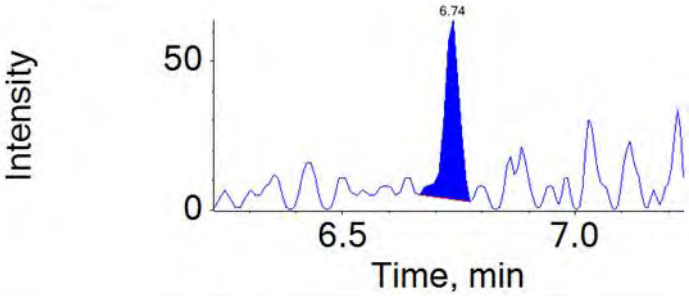
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



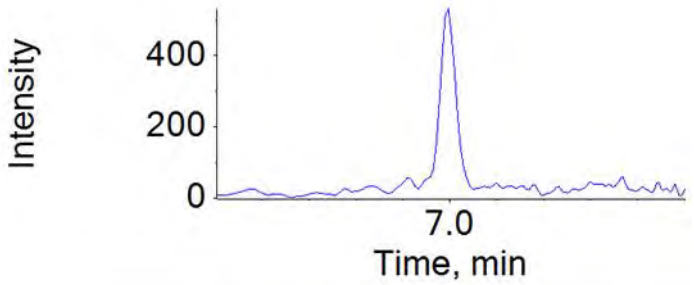
Component: PFHxDA
Primary Mass: 813.0 / 769.0



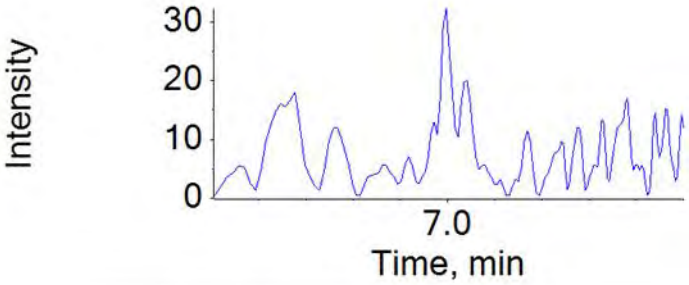
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV12DCAL-41.wiff
Sample ID:	MDLMODX1833F			**Acquis Date:**		2018-11-12T14:56:51
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	633265.0	659926.2	-4	50	
13C2-PFOA	5.0	422926.0	450219.7	-6	50	
13C4-PFOS	4.8	238608.2	249205.8	-4	50	
13C2-PFDA	5.0	268362.6	278743.9	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	710466.9	13C3-PFBA	633265.0	1.122	5.000	5.030	101	70-130	
E13C5-PFPeA	681259.0	13C3-PFBA	633265.0	1.076	5.000	4.825	97	70-130	
E13C3-PFBS	393264.2	13C3-PFBA	633265.0	0.621	4.650	4.384	94	70-130	
E13C2-4:2-FTS	44526.6	13C2-PFOA	422926.0	0.105	4.670	4.689	100	70-130	
E13C5-PFHxA	637812.0	13C2-PFOA	422926.0	1.508	5.000	5.448	109	70-130	
E13C3-PFHxS	301527.6	13C2-PFOA	422926.0	0.713	4.730	4.892	103	70-130	
E13C4-PFHpA	476944.8	13C2-PFOA	422926.0	1.128	5.000	5.081	102	70-130	
E13C2-6:2-FTS	30514.4	13C2-PFOA	422926.0	0.072	4.750	4.827	102	70-130	
E13C8-PFOA	779343.3	13C2-PFOA	422926.0	1.843	5.000	5.077	102	70-130	
E13C8-PFOS	248479.3	13C4-PFOS	238608.2	1.041	4.780	4.614	97	70-130	
E13C9-PFNA	435787.7	13C4-PFOS	238608.2	1.826	5.000	5.092	102	70-130	
E13C6-PFDA	583105.1	13C2-PFDA	268362.6	2.173	5.000	5.070	101	70-130	
E13C2-8:2-FTS	24193.5	13C2-PFDA	268362.6	0.090	4.790	4.496	94	70-130	
E13C8-PFOSA	559143.9	13C2-PFDA	268362.6	2.084	5.000	4.619	92	70-130	
Ed3-NMeFOSAA	63421.6	13C2-PFDA	268362.6	0.236	5.000	4.266	85	70-130	
E13C7-PFUnDA	227858.5	13C2-PFDA	268362.6	0.849	5.000	4.930	99	70-130	
Ed5-NEtFOSAA	57840.8	13C2-PFDA	268362.6	0.216	5.000	4.560	91	70-130	
E13C2-PFDoDA	487146.2	13C2-PFDA	268362.6	1.815	5.000	4.713	94	70-130	
Ed7-NMePFOSAE	286690.6	13C2-PFDA	268362.6	1.068	5.000	4.623	92	70-130	
Ed3-NMePFOSA	71517.2	13C2-PFDA	268362.6	0.266	5.000	4.842	97	70-130	
Ed9-NEtPFOSAE	252037.2	13C2-PFDA	268362.6	0.939	5.000	4.885	98	70-130	
Ed5-NEtPFOSA	54637.9	13C2-PFDA	268362.6	0.204	5.000	4.776	96	70-130	
E13C2-PFTeDA	362820.8	13C2-PFDA	268362.6	1.352	5.000	4.746	95	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

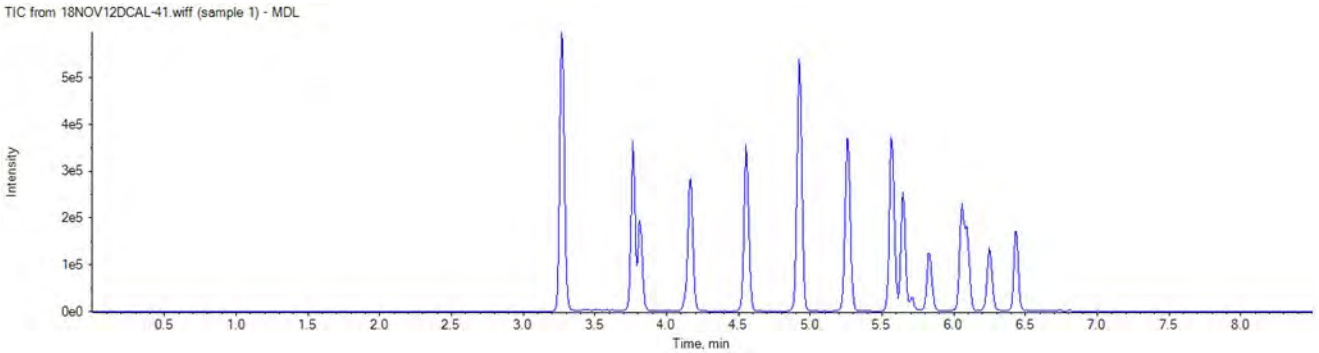
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-41.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	22532.9		A	13C4-PFBA	3.27	710466.9	0.032	0.176
PFPeA	3.77	1.000	20193.5		M	13C5-PFPeA	3.77	681259.0	0.030	0.172
PFBS	3.81	1.000	9248.3		A	13C3-PFBS	3.81	393264.2	0.024	0.112
4:2-FTS	4.13	1.000	1329.9		A	13C2-4:2-FTS	4.13	44526.6	0.030	0.081
PFHxA	4.17	1.000	21601.6		A	13C5-PFHxA	4.17	637812.0	0.034	0.141
PFPeS	4.19	1.100	4484.8		A	13C3-PFBS	3.81	393264.2	0.011	0.111
PFHpA	4.56	1.000	22043.5		A	13C4-PFHpA	4.55	476944.8	0.046	0.153
PFHxS	4.56	1.000	8143.5		M	13C3-PFHxS	4.56	301527.6	0.027	0.131
6:2-FTS	4.91	1.000	1176.2		M	13C2-6:2-FTS	4.91	30514.4	0.039	0.093
PFHpS	4.92	1.080	7117.5		A	13C3-PFHxS	4.56	301527.6	0.024	0.124
PFOA	4.93	1.000	18045.0		A	13C8-PFOA	4.93	779343.3	0.023	0.124
PFOS	5.25	1.000	6416.9		A	13C8-PFOS	5.25	248479.3	0.026	0.113
PFNA	5.27	1.000	18065.1		M	13C9-PFNA	5.27	435787.7	0.041	0.149
PFNS	5.54	1.060	3661.2		A	13C8-PFOS	5.25	248479.3	0.015	0.103
PFDA	5.57	1.000	17350.5		A	13C6-PFDA	5.57	583105.1	0.030	0.158
8:2-FTS	5.57	1.000	1475.2		A	13C2-8:2-FTS	5.57	24193.5	0.061	0.142
PFOSA	5.64	1.000	10288.3		A	13C8-PFOSA	5.65	559143.9	0.018	0.090
NMeFOSAA	5.72	1.000	1372.4		A	d3-NMeFOSAA	5.71	63421.6	0.022	0.122
PFDS	5.80	1.100	2648.8		A	13C8-PFOS	5.25	248479.3	0.011	0.097
PFUnDA	5.83	1.000	12215.3		M	13C7-PFUnDA	5.83	227858.5	0.054	0.140
NEtFOSAA	5.84	1.000	1937.8		A	d5-NEtFOSAA	5.84	57840.8	0.034	0.176
PFDoDA	6.06	1.000	14033.1		A	13C2-PFDoDA	6.06	487146.2	0.029	0.147
10:2-FTS	6.06	1.090	352.6		M	13C2-8:2-FTS	5.57	24193.5	0.015	0.049
NMePFOSAE	6.10	1.000	9218.1		A	d7-NMePFOSAE	6.09	286690.6	0.032	0.134
NMePFOSA	6.11	1.000	1339.8		A	d3-NMePFOSA	6.11	71517.2	0.019	0.092
PFDoS	6.22	1.180	1425.7		A	13C8-PFOS	5.25	248479.3	0.006	0.100
NEtPFOSAE	6.26	1.000	10510.3		A	d9-NEtPFOSAE	6.25	252037.2	0.042	0.134
NEtPFOSA	6.28	1.000	1191.3		M	d5-NEtPFOSA	6.27	54637.9	0.022	0.100
PFTrDA	6.26	1.030	7825.5		M	13C2-PFDoDA	6.06	487146.2	0.016	0.101
PFTeDA	6.43	1.000	8938.5		A	13C2-PFTeDA	6.43	362820.8	0.025	0.138
PFHxDA	6.74	1.050	3934.2		A	13C2-PFTeDA	6.43	362820.8	0.011	0.129
PFODA	7.00	1.090	2726.4		A	13C2-PFTeDA	6.43	362820.8	0.008	0.105

Total Ion Chromatogram

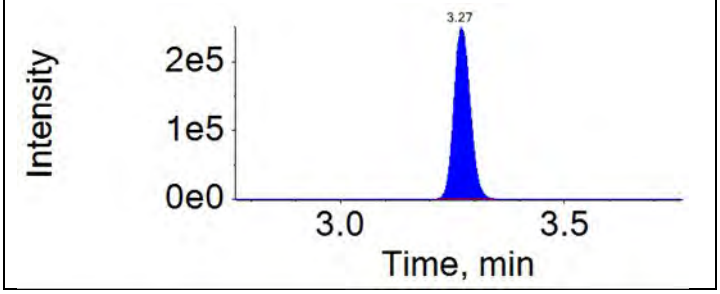


APPROVED
By MCD at 6:34 pm, 11/12/18

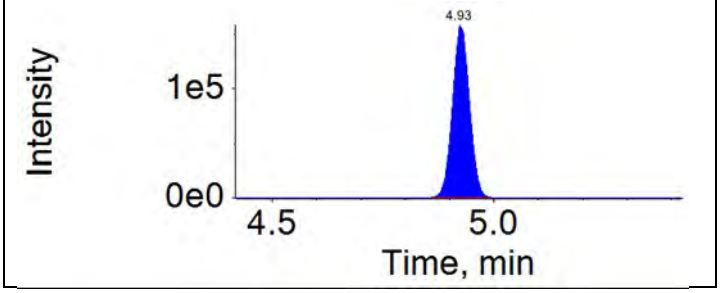
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

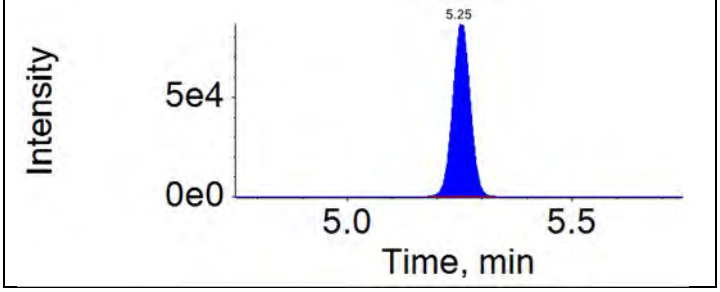
Injection Standard: 13C3-PFBA
216.0 / 172.0



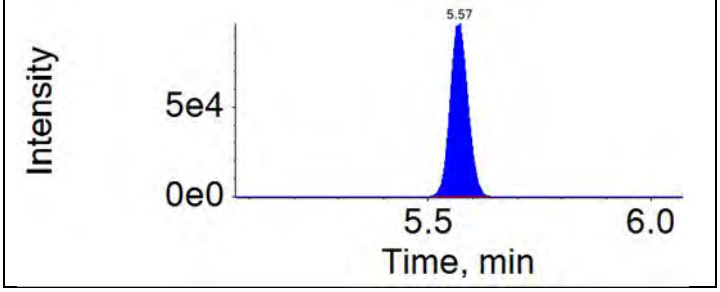
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

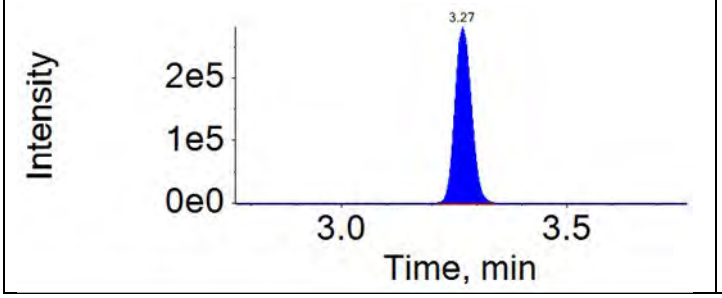


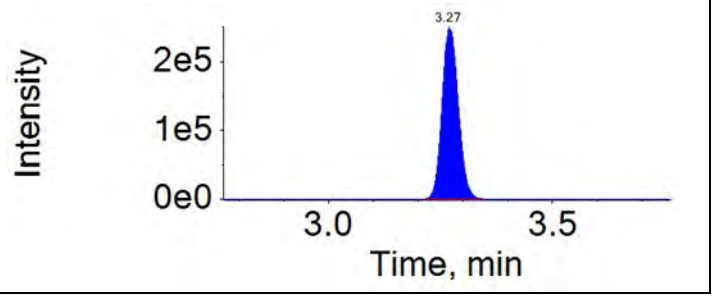
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

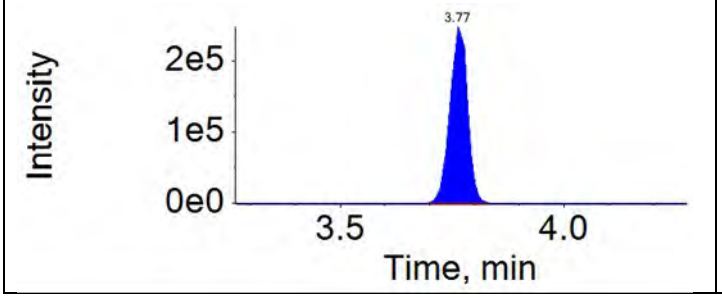
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

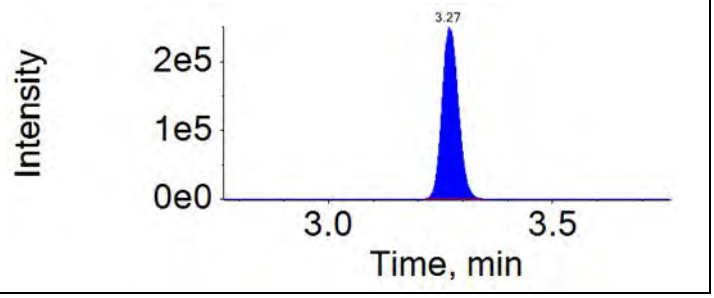
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



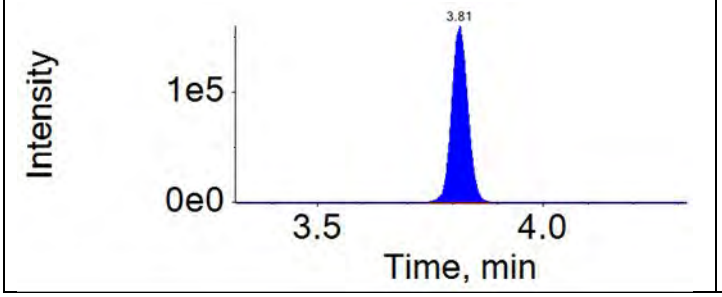


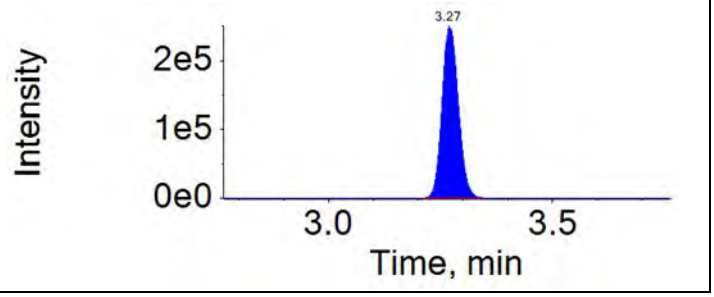
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



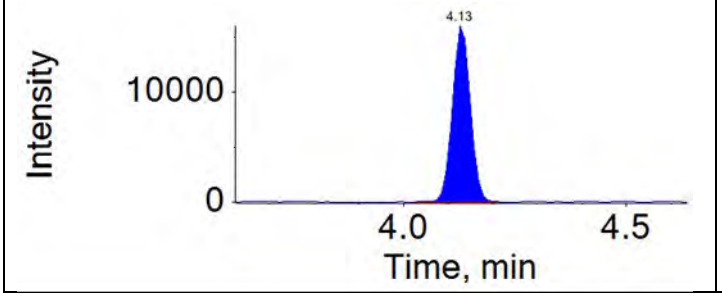


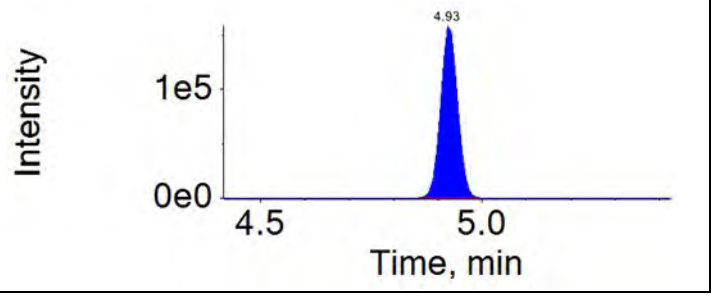
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





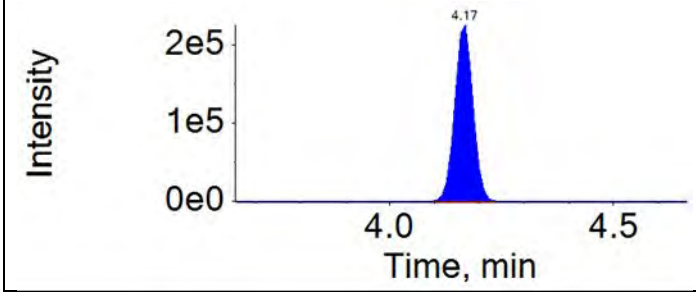
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

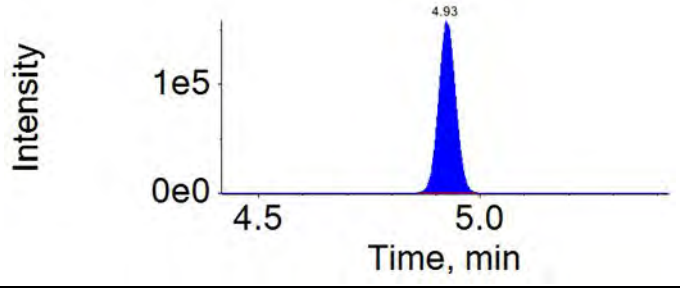




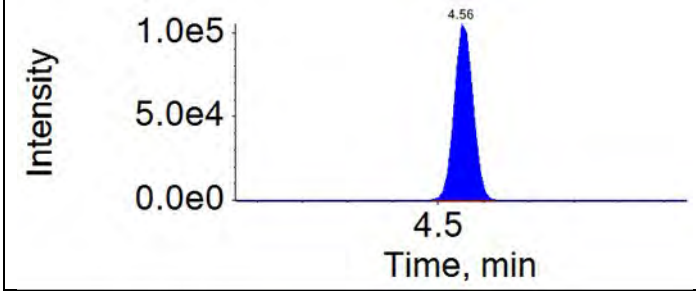
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

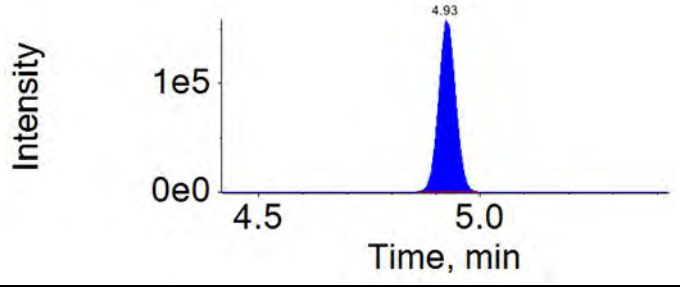
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



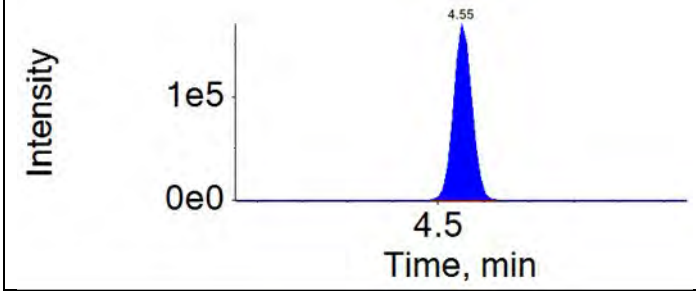


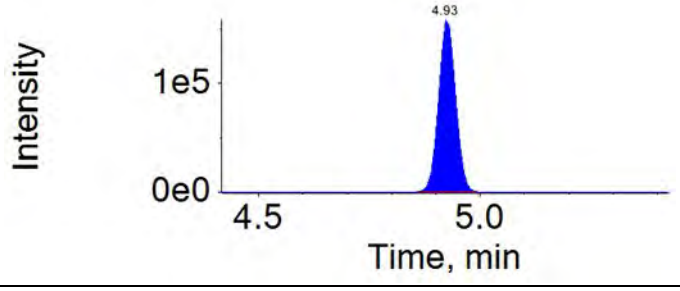
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



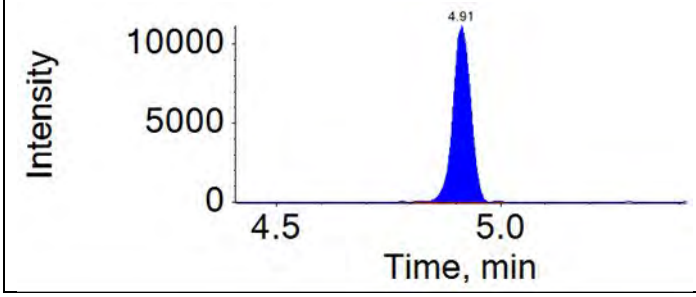


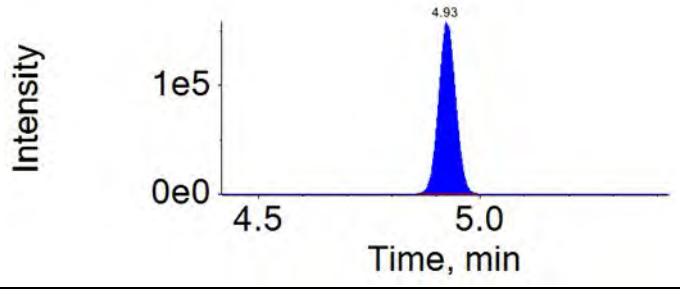
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

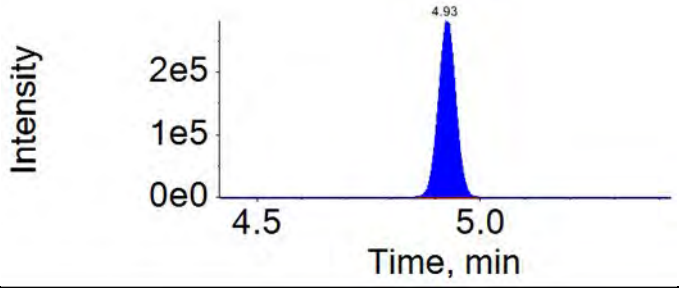
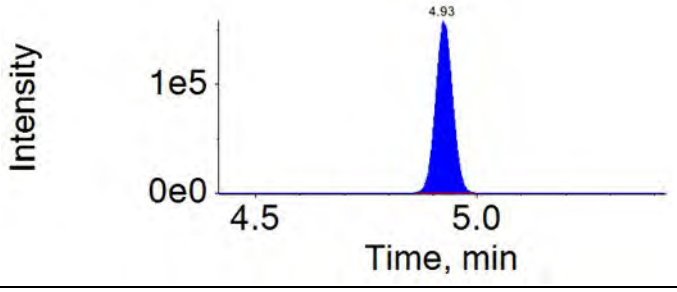


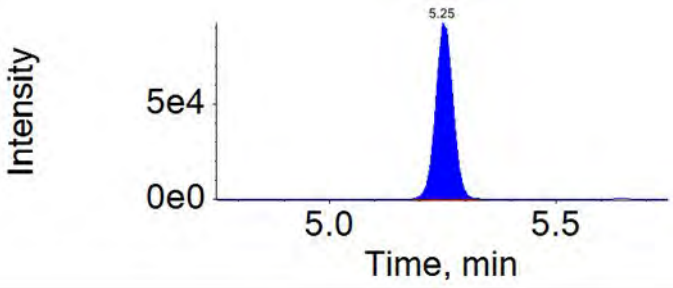
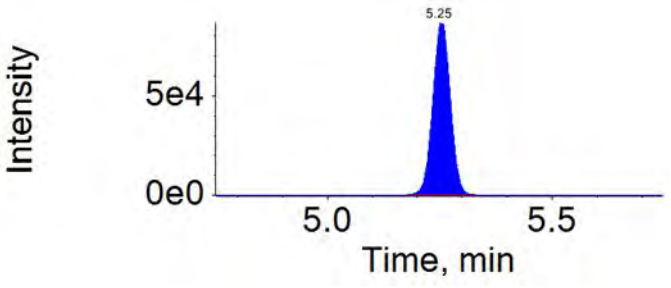


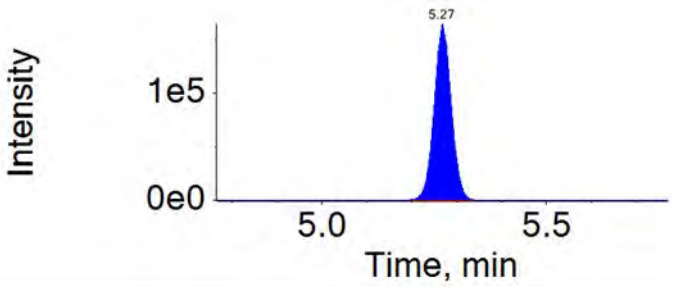
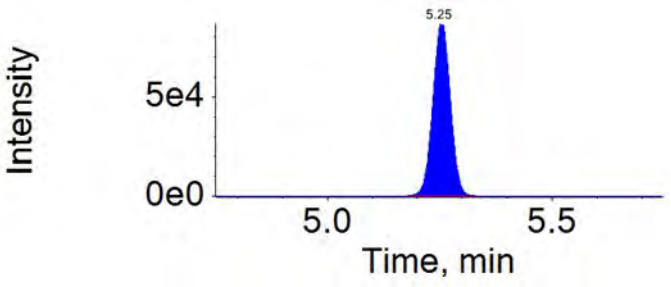
APPROVED
By MCD at 6:34 pm, 11/12/18

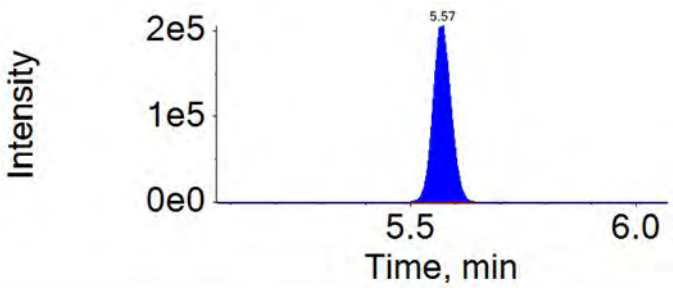
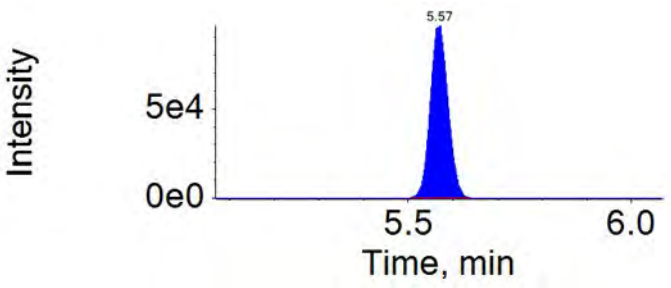
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

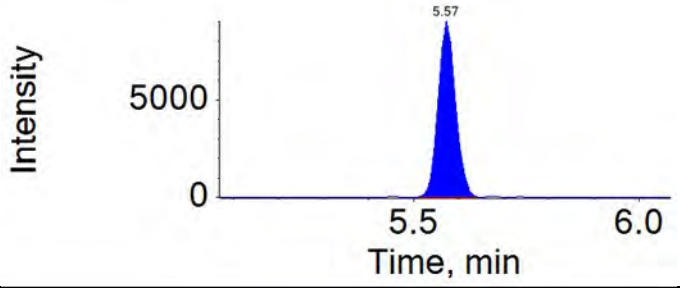
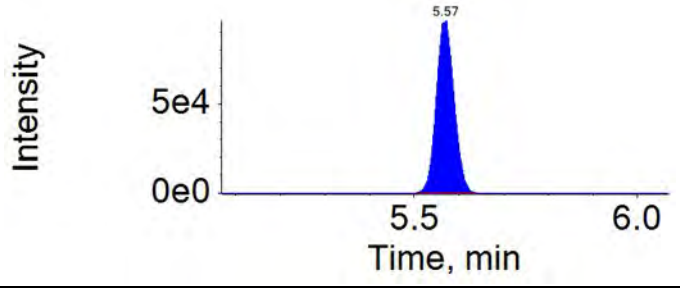
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

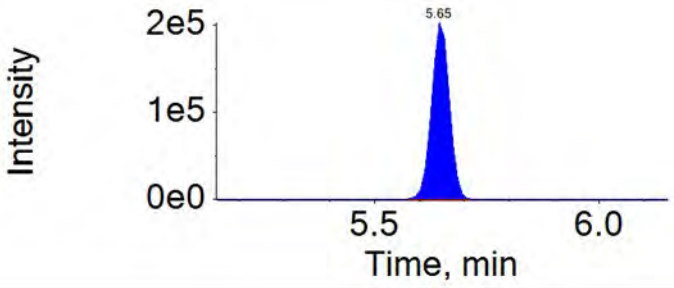
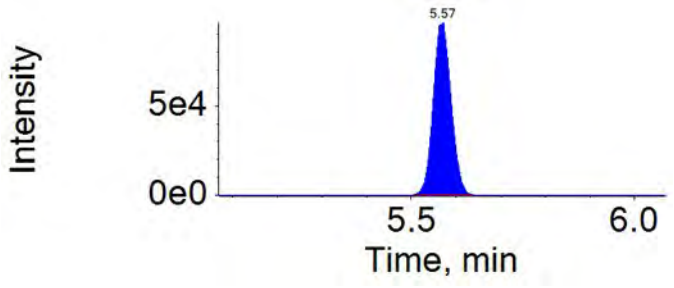
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

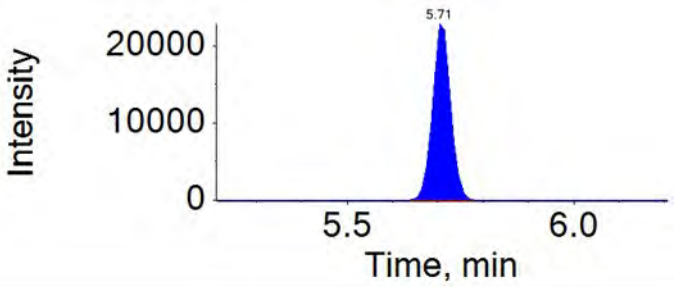
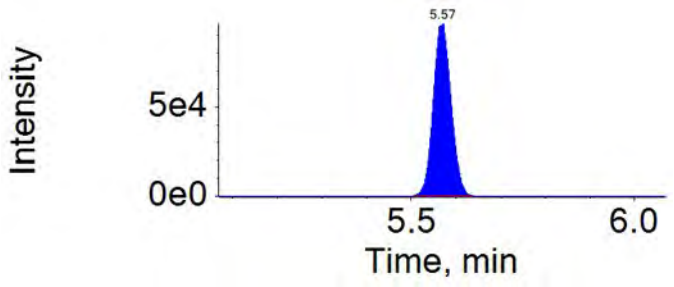
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

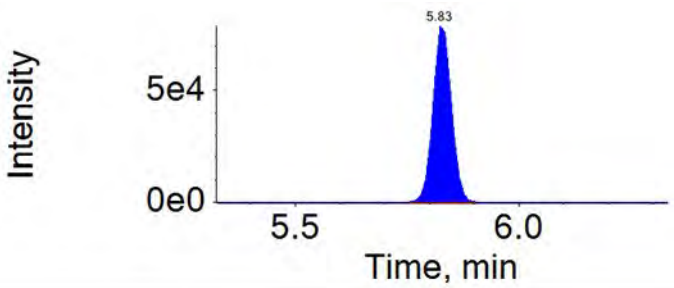
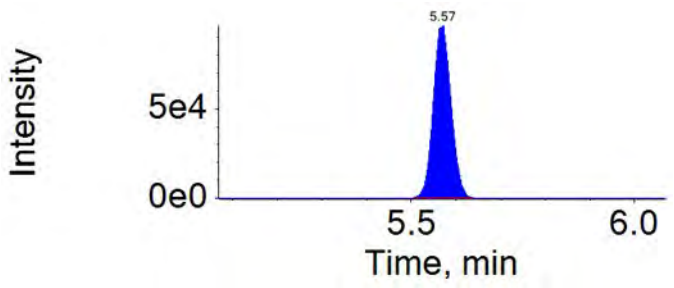
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

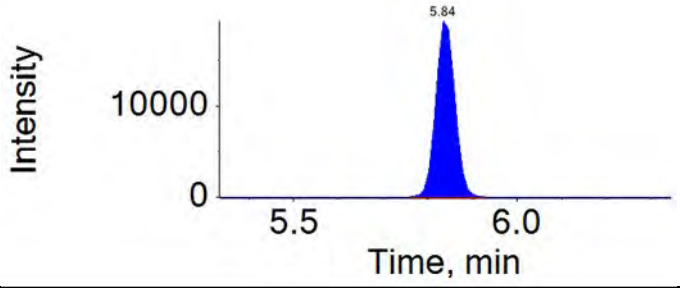
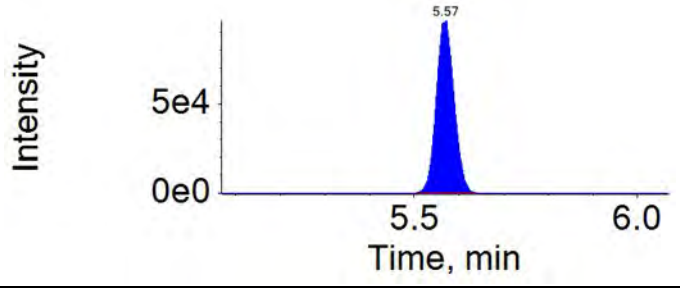
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

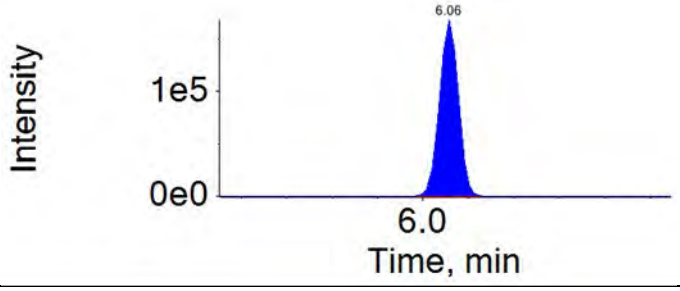
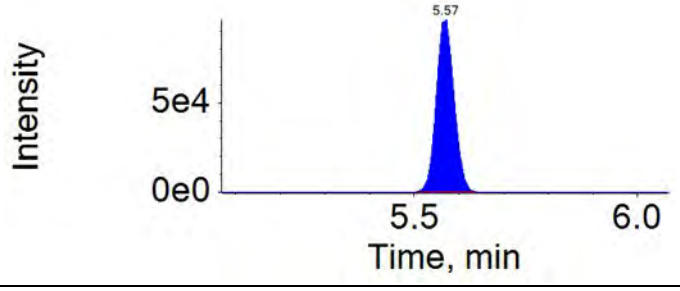
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

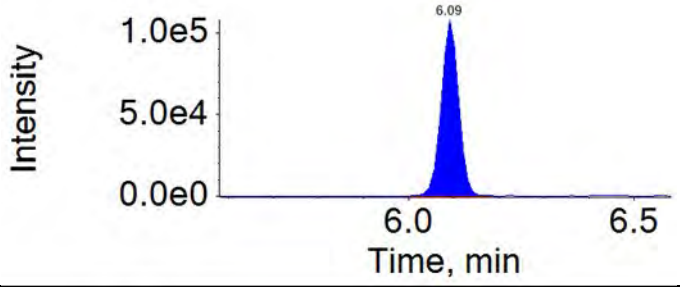
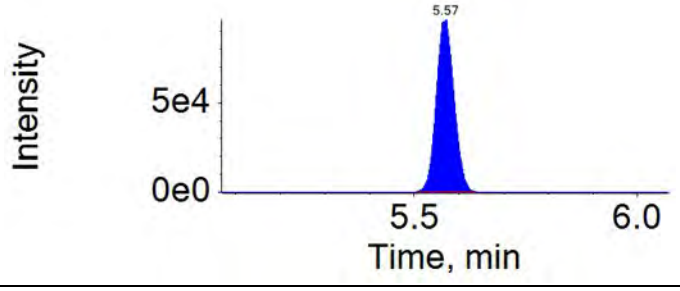
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

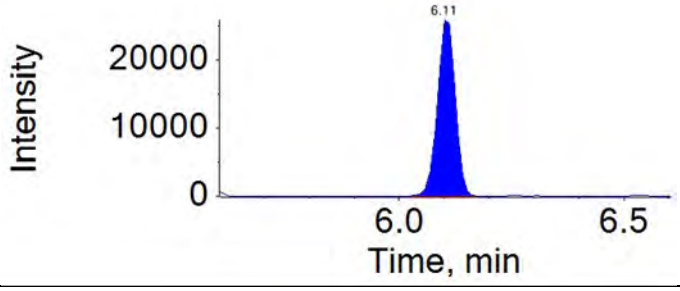
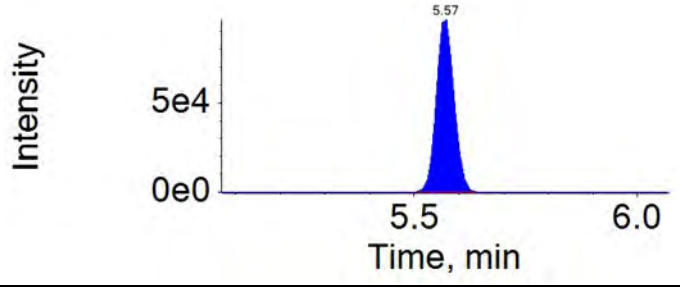
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

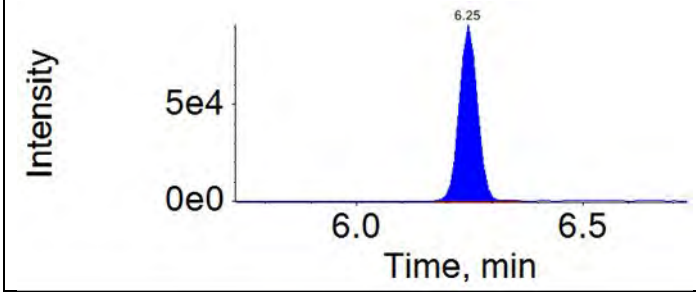
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

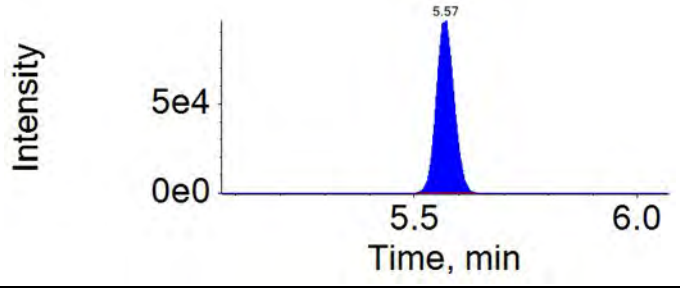
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

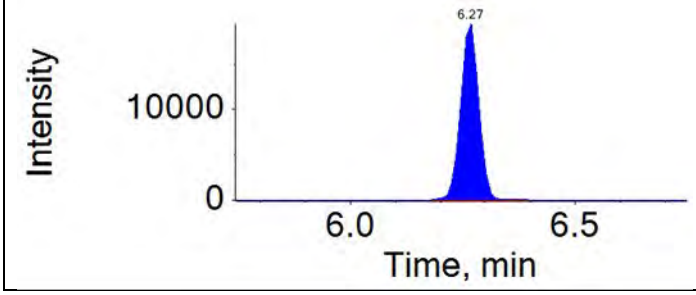
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

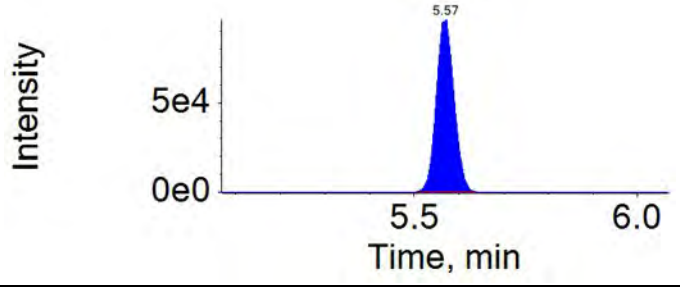
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



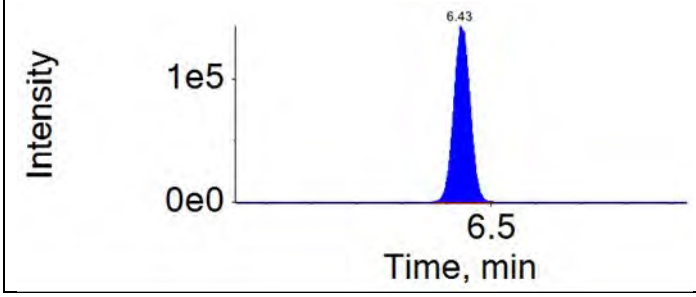


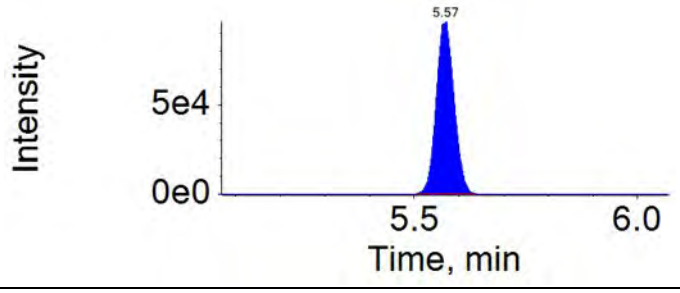
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



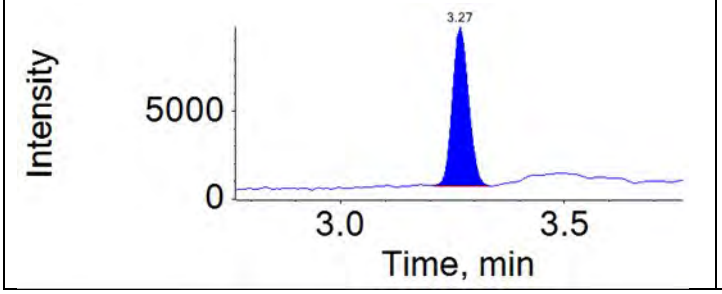


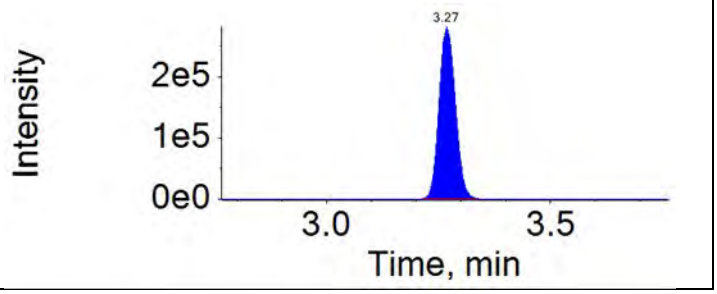
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

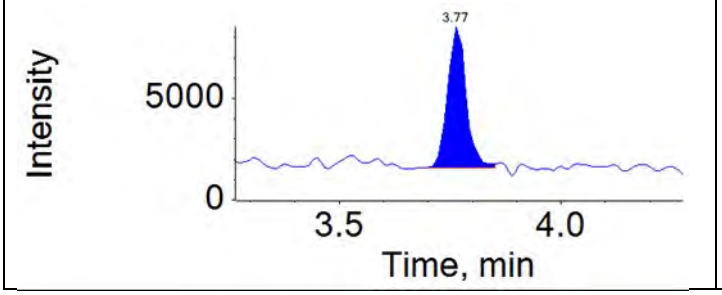
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

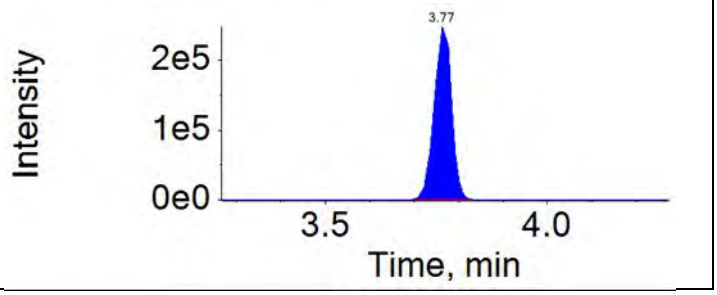
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



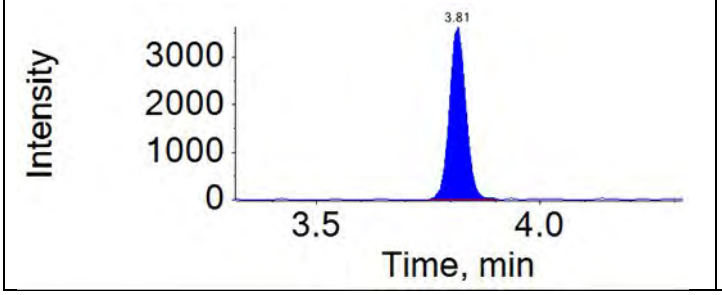


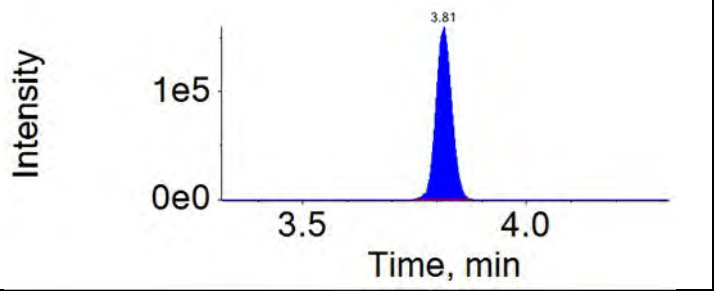
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



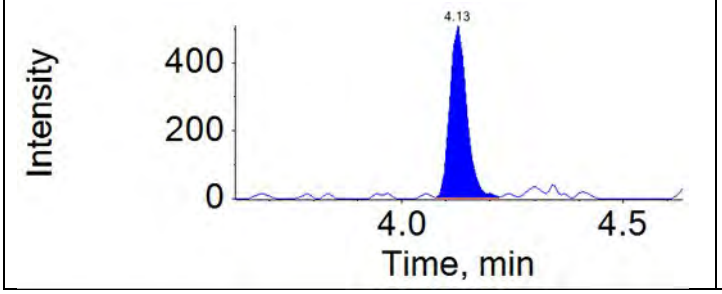


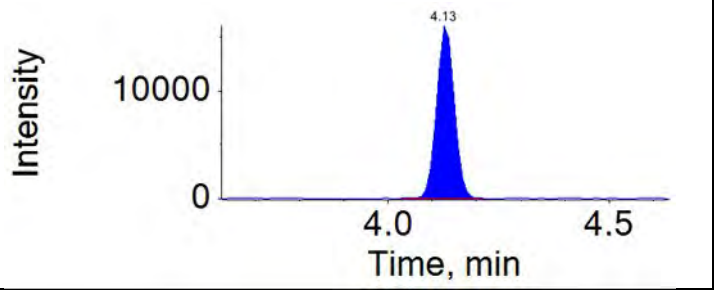
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



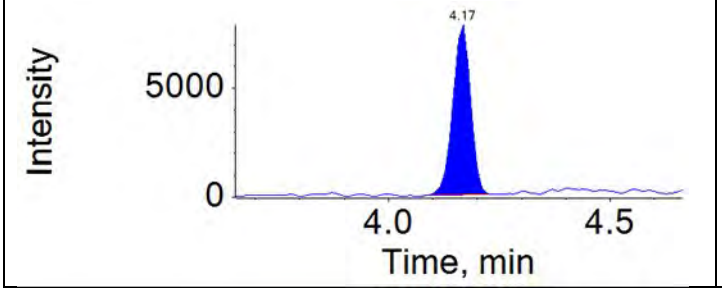


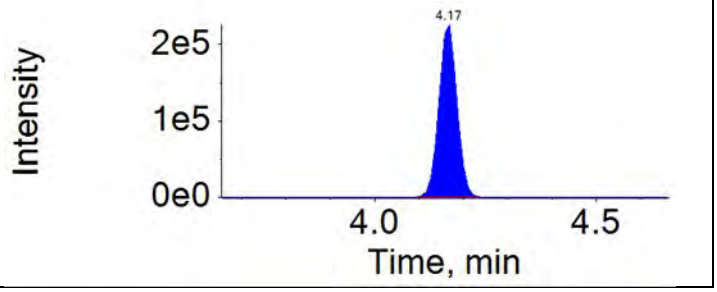
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

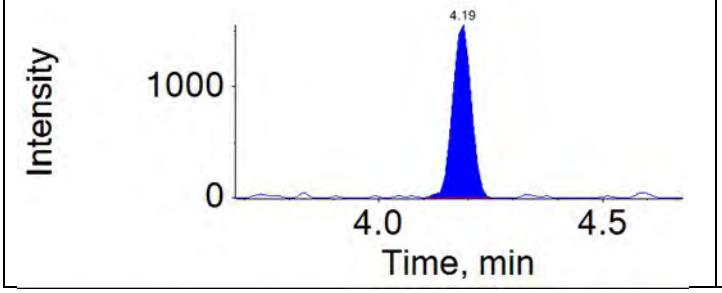
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

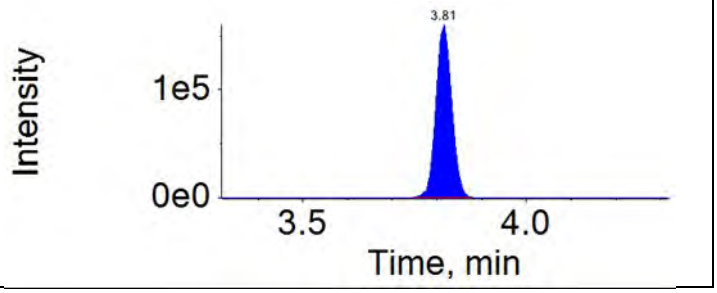
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



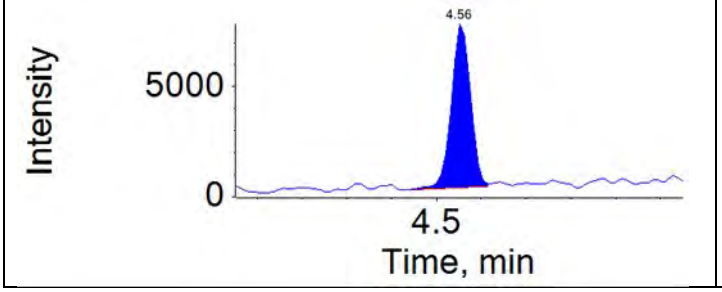


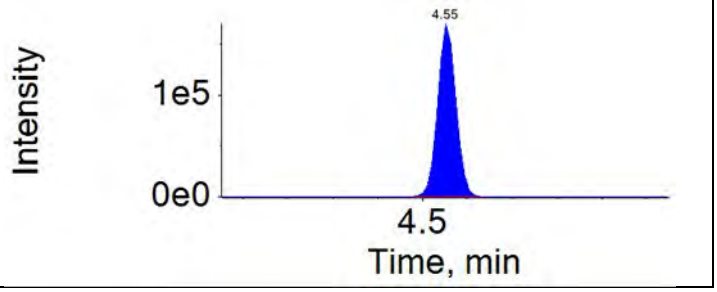
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



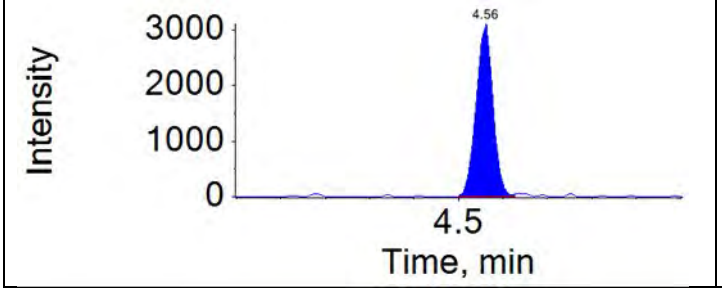


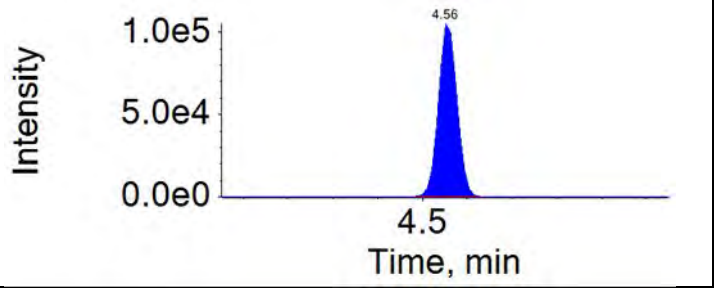
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



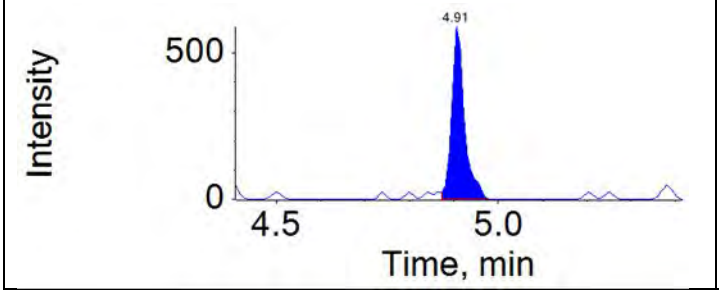


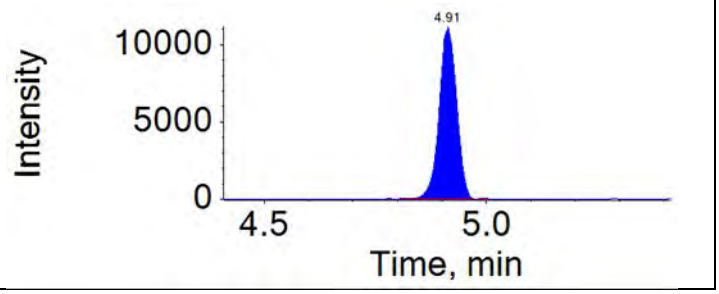
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

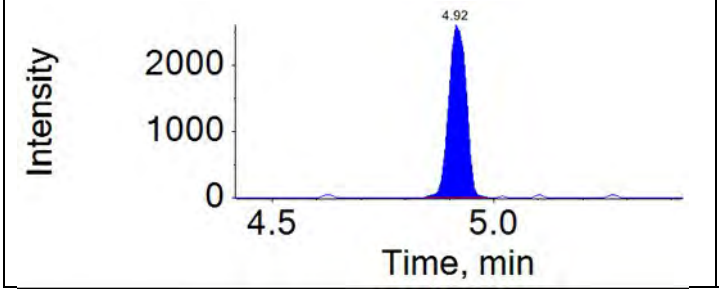
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

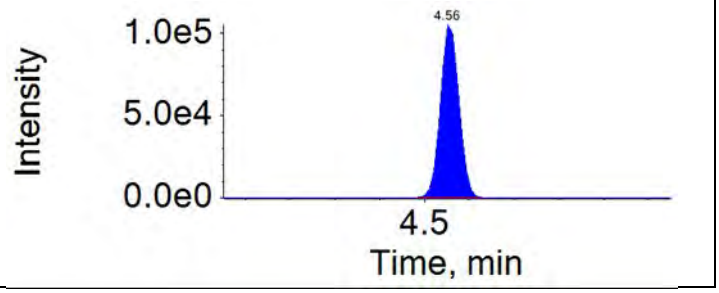
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



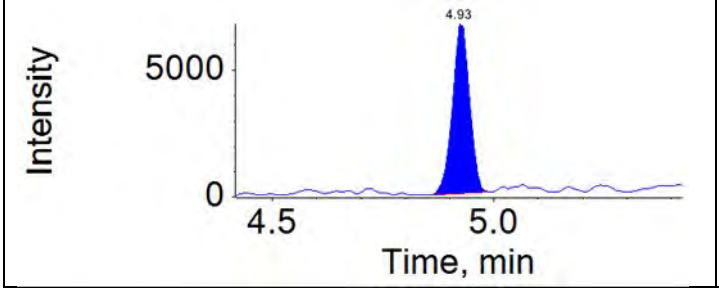


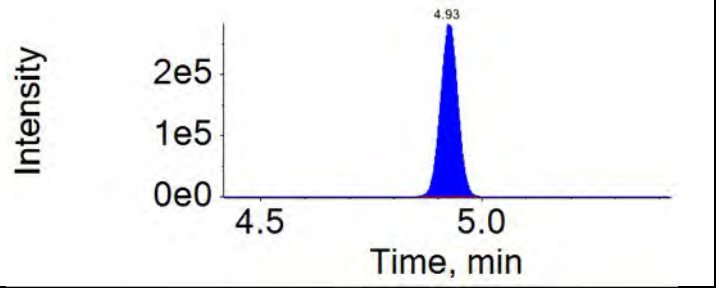
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



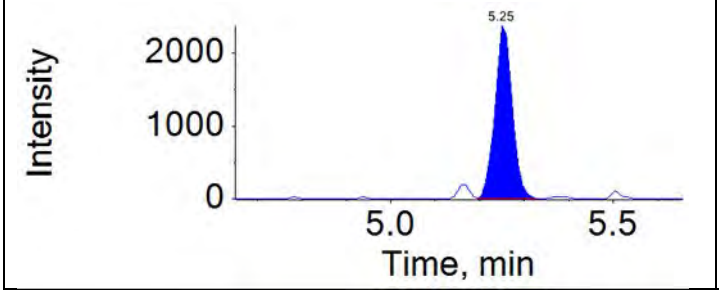


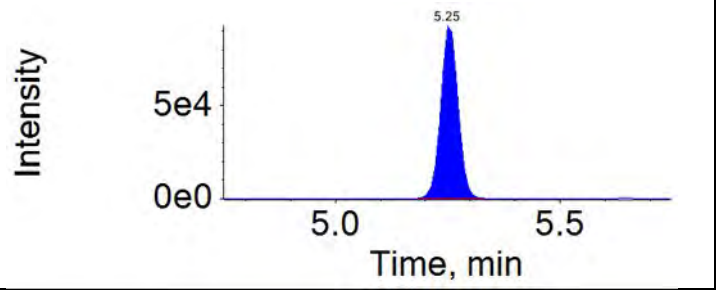
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



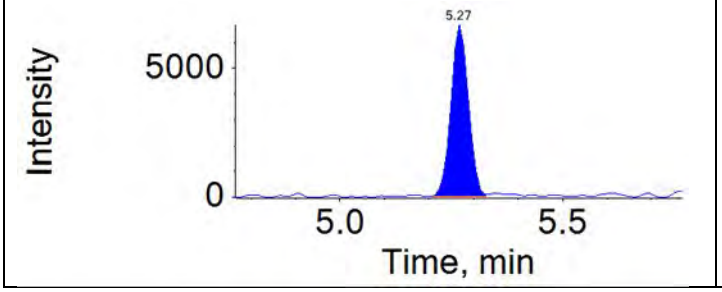


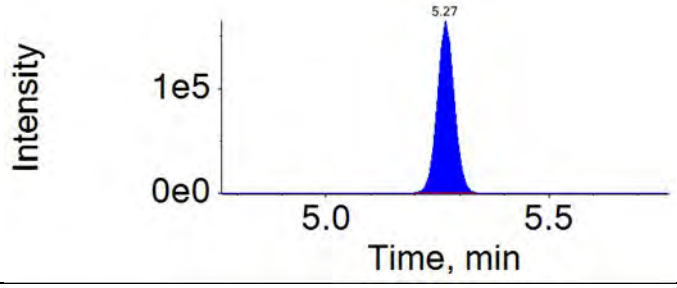
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

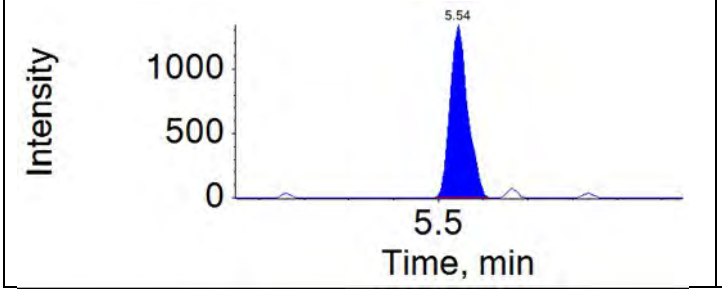
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

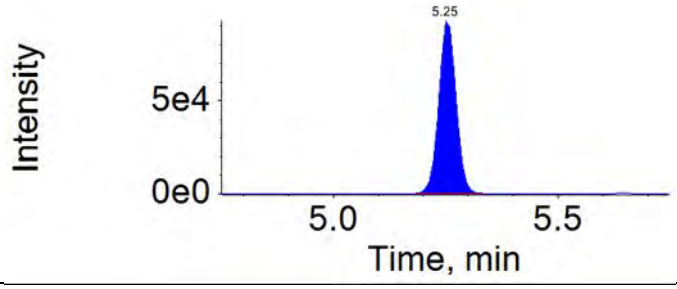
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



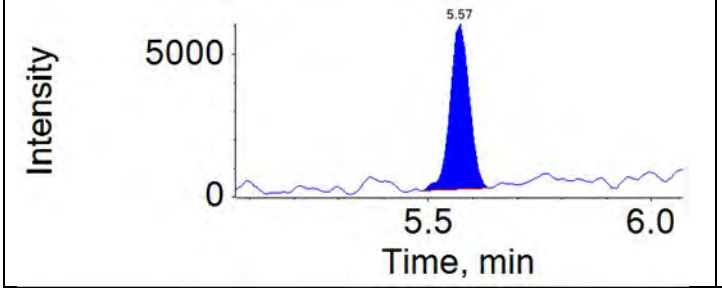


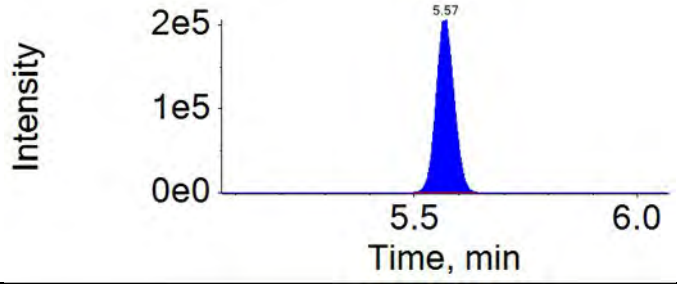
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



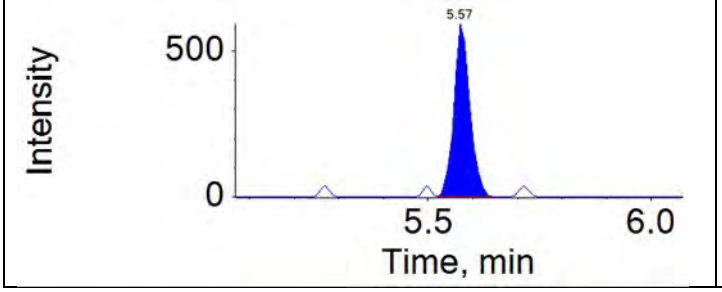


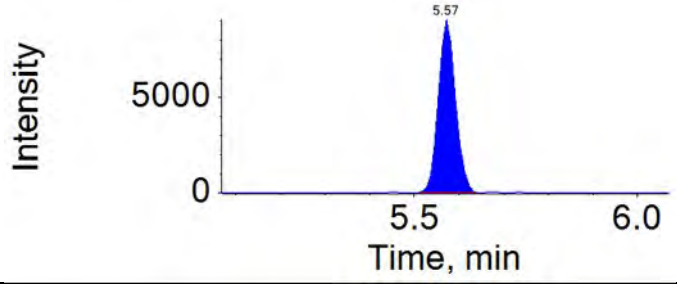
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



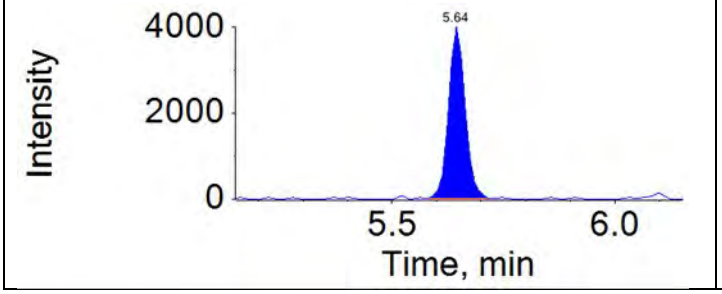


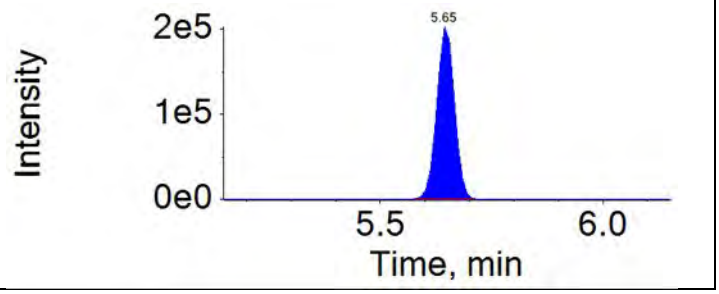
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

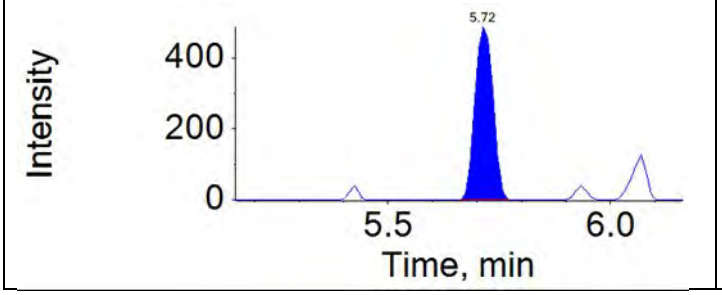
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

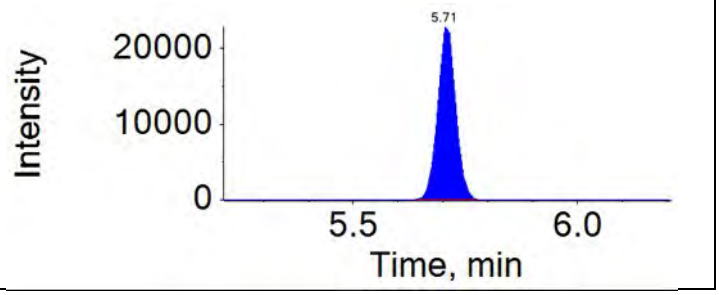
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



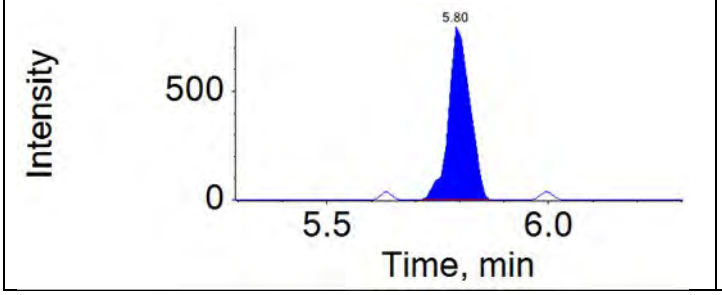


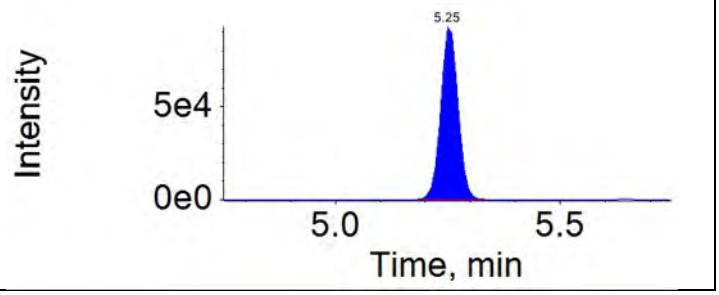
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



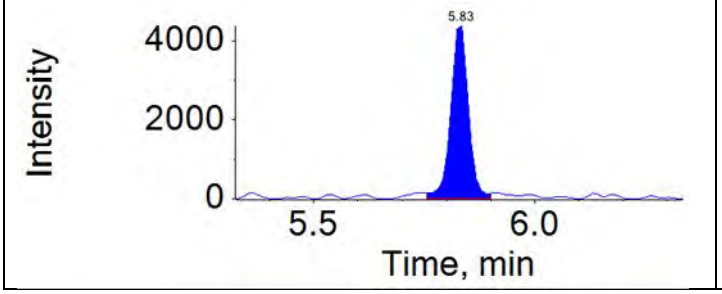


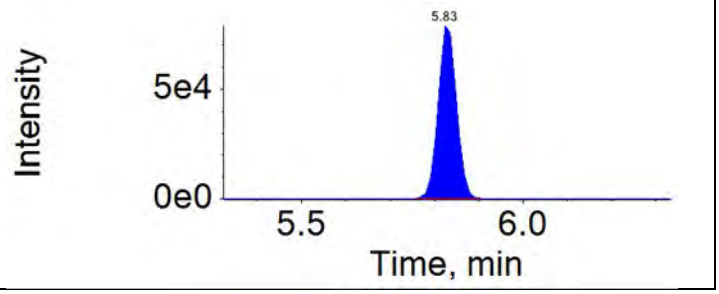
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



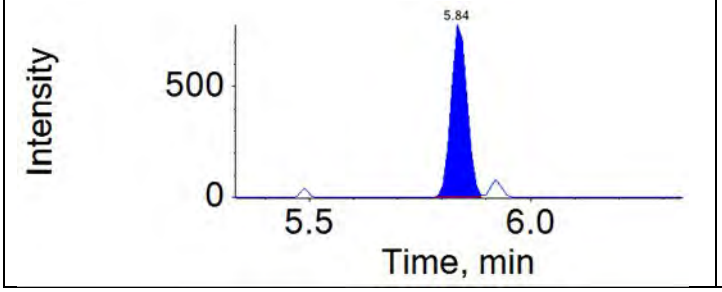


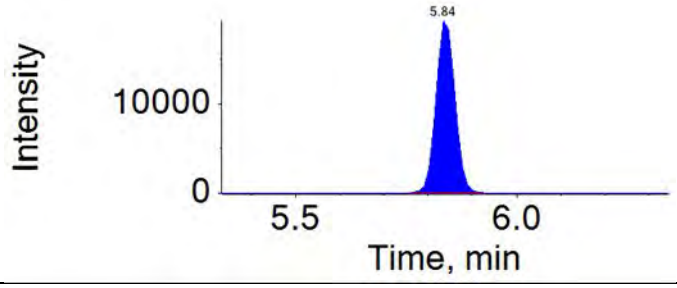
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

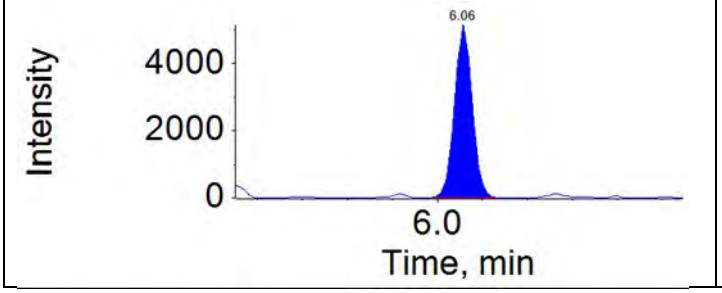
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

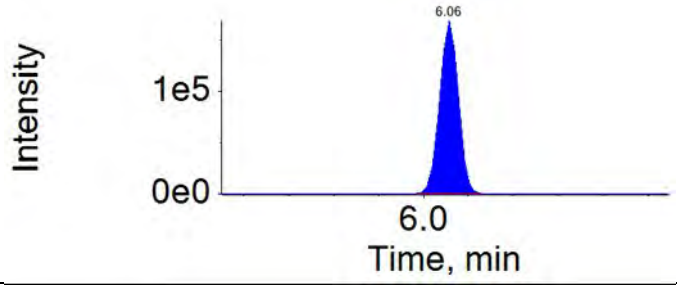
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



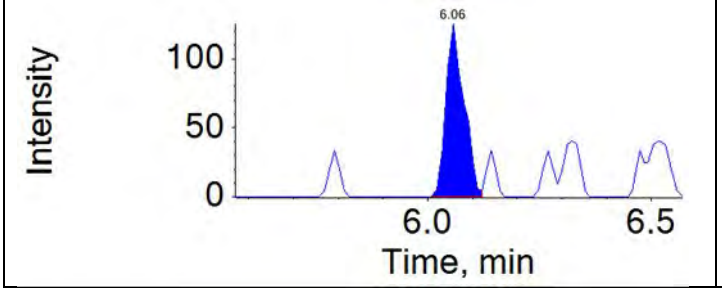


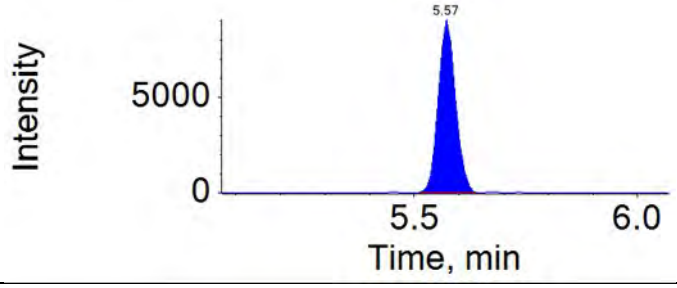
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



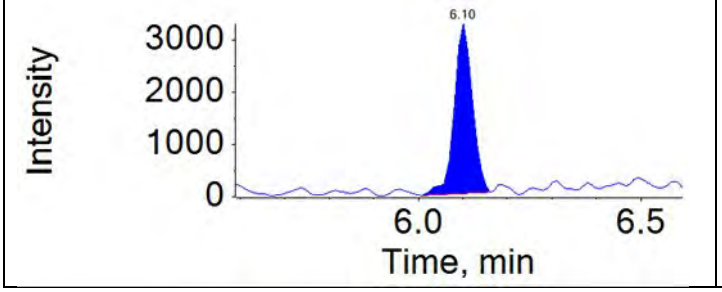


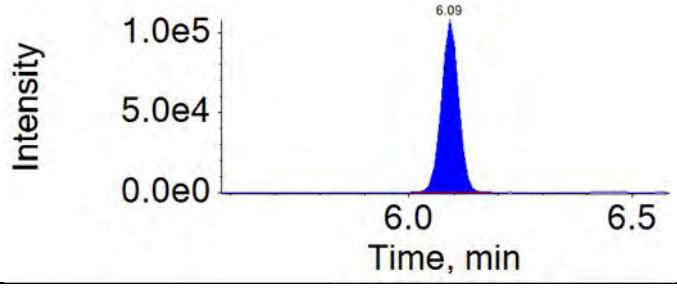
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



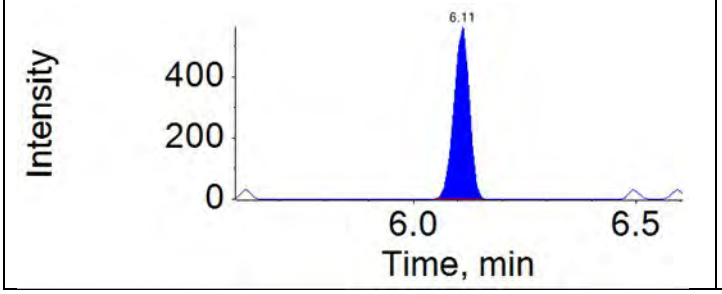


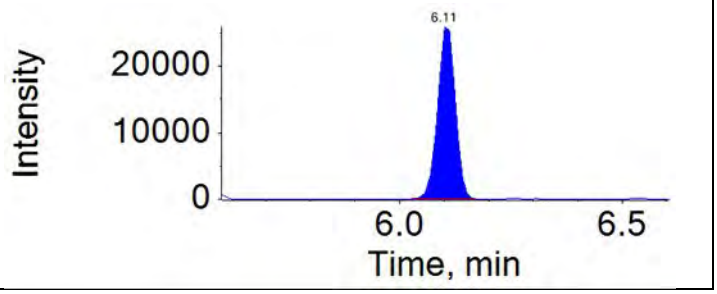
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

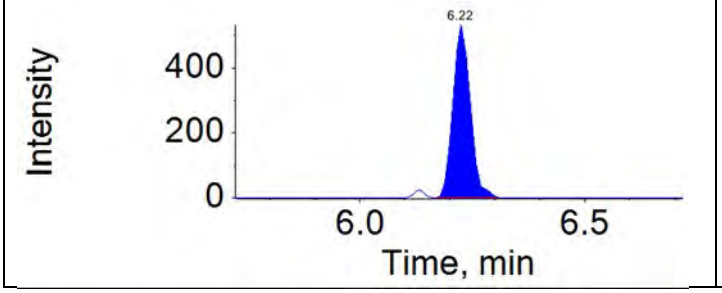
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

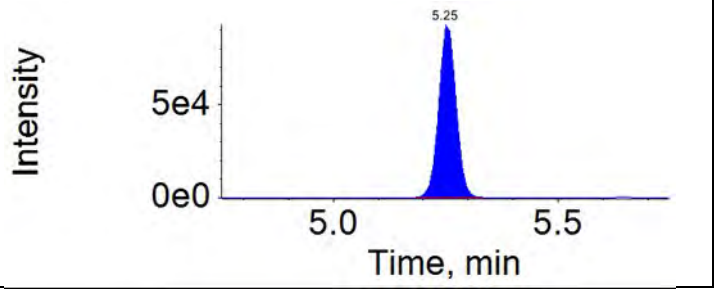
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



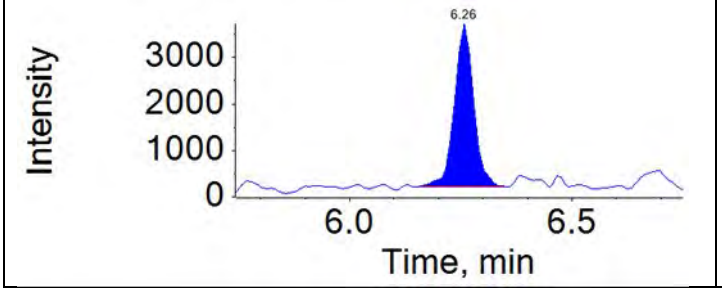


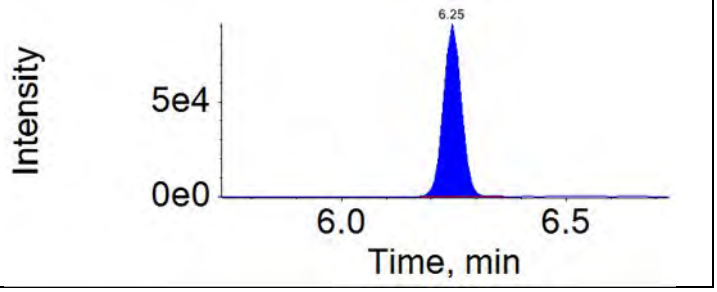
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



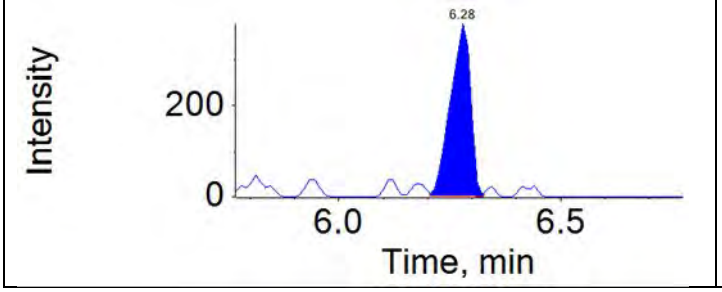


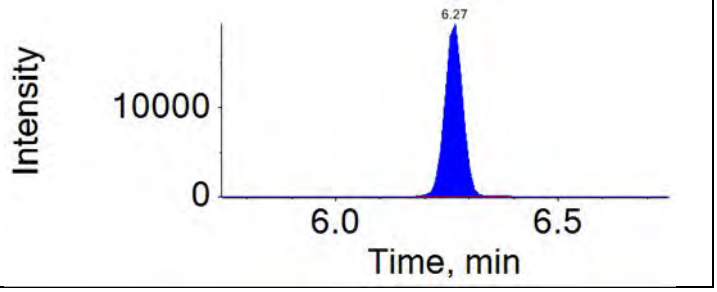
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

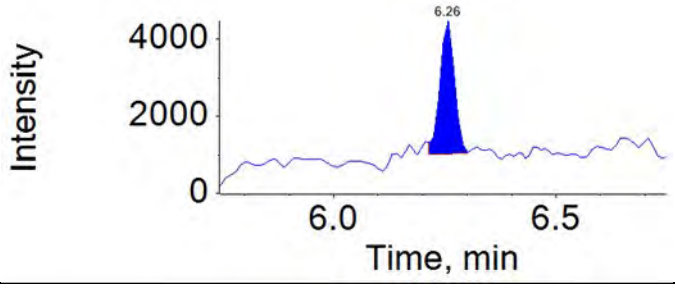
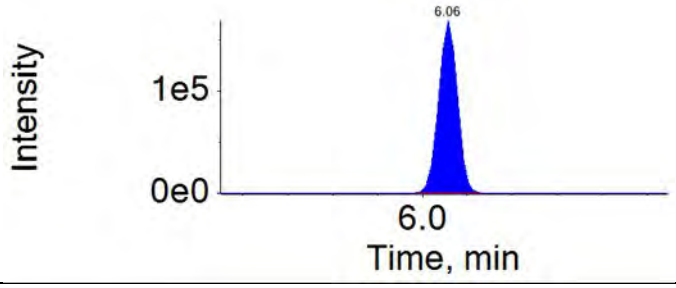


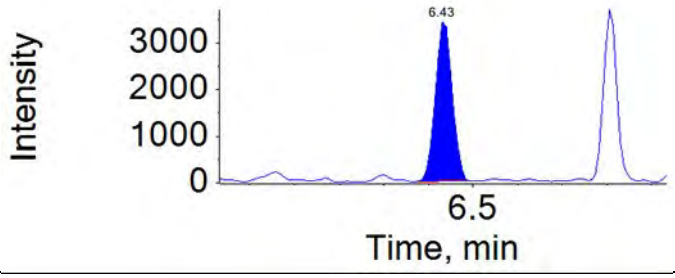
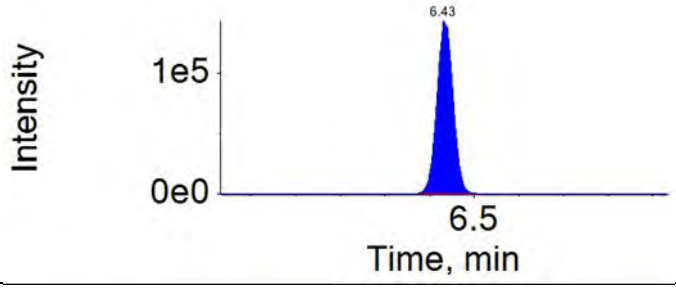


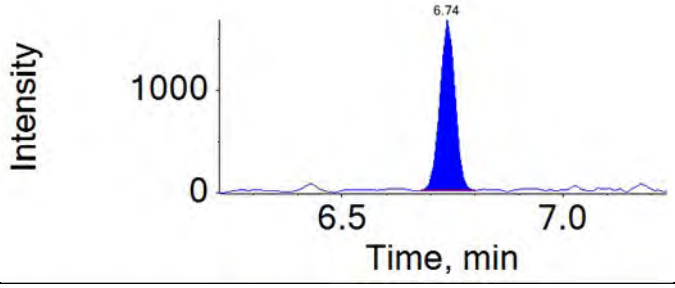
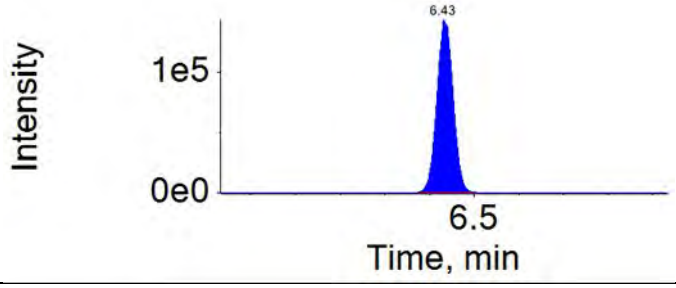
APPROVED
By MCD at 6:34 pm, 11/12/18

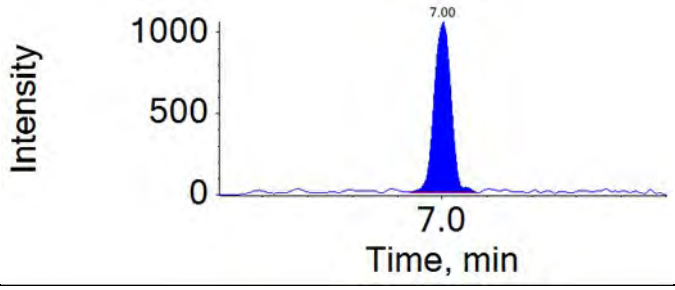
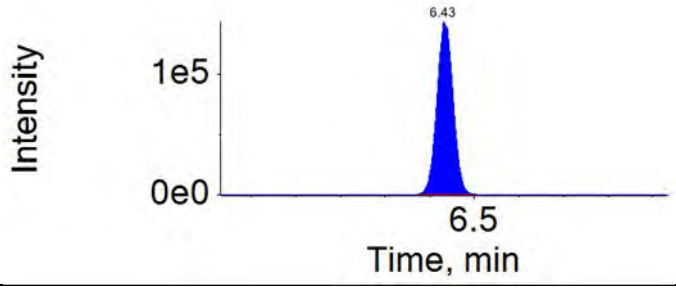
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

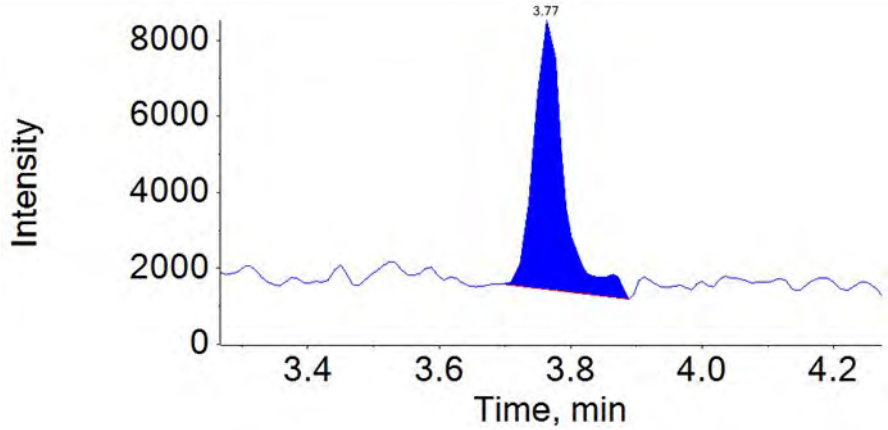
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

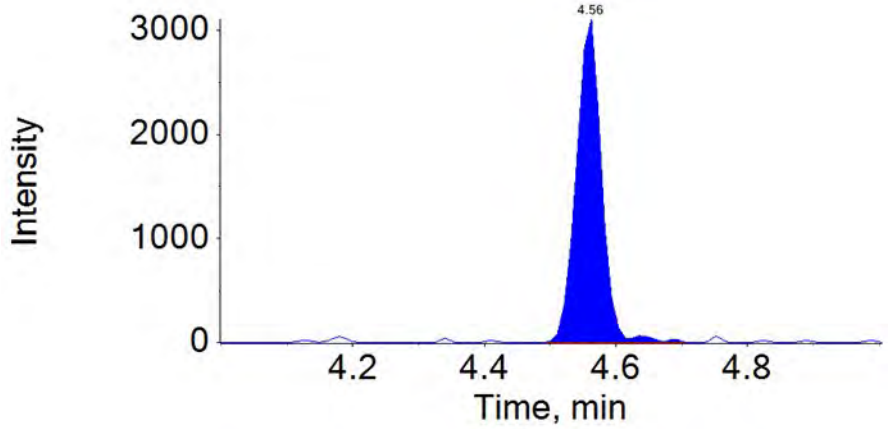
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.77
Peak Area:
22570.74
Mass Range:
263.0 / 219.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



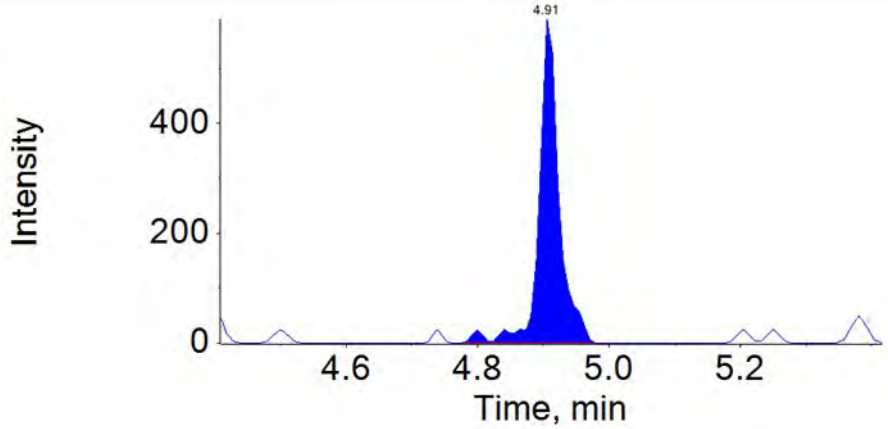
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
8305.21
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
6:2-FTS
RT (min.):
4.91
Peak Area:
1264.35
Mass Range:
427.0 / 407.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



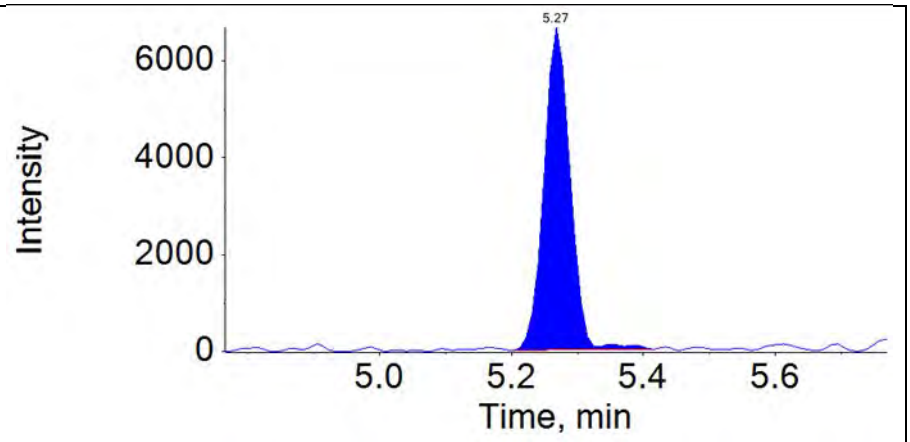
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

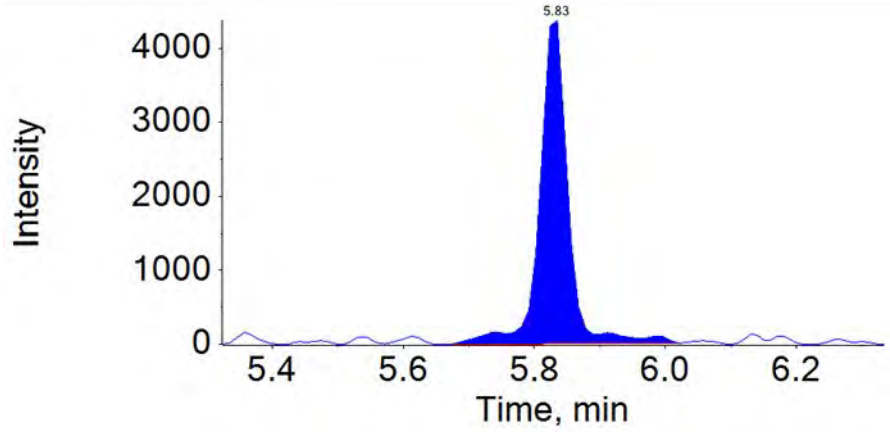
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
18397.36
Mass Range:
463.0 / 419.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



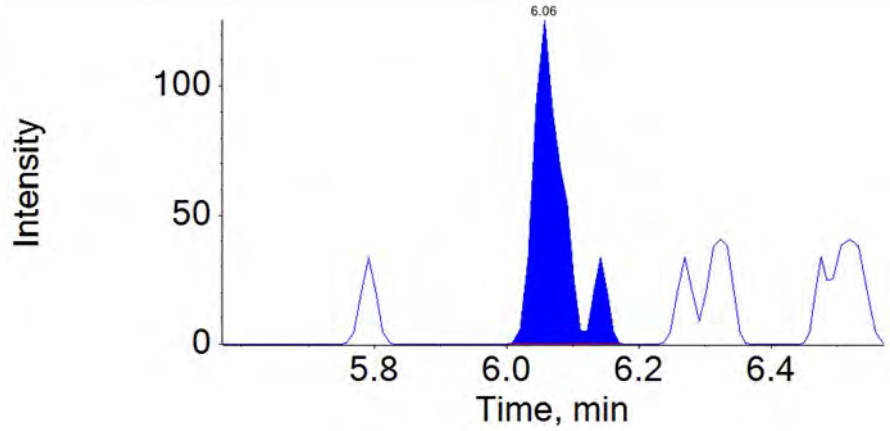
Integration Comment: incorrect integration

Component Name:
PFUnDA
RT (min.):
5.83
Peak Area:
13277.76
Mass Range:
563.0 / 519.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
6.06
Peak Area:
401.71
Mass Range:
627.0 / 607.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



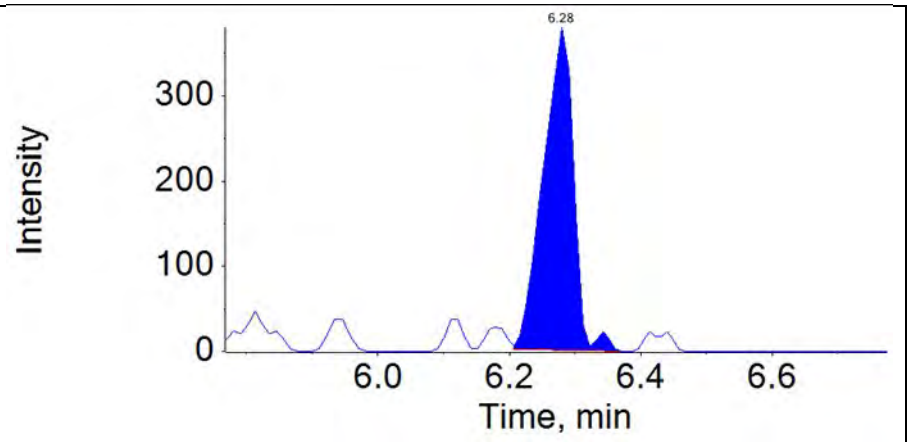
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

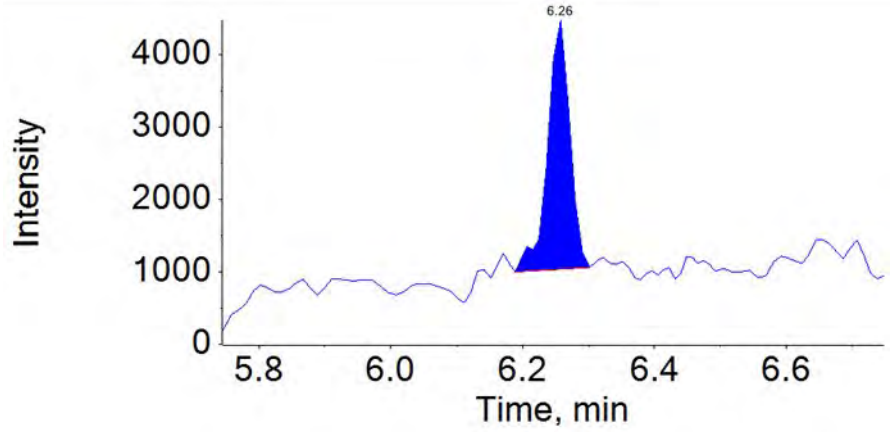
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.28
Peak Area:
1221.08
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



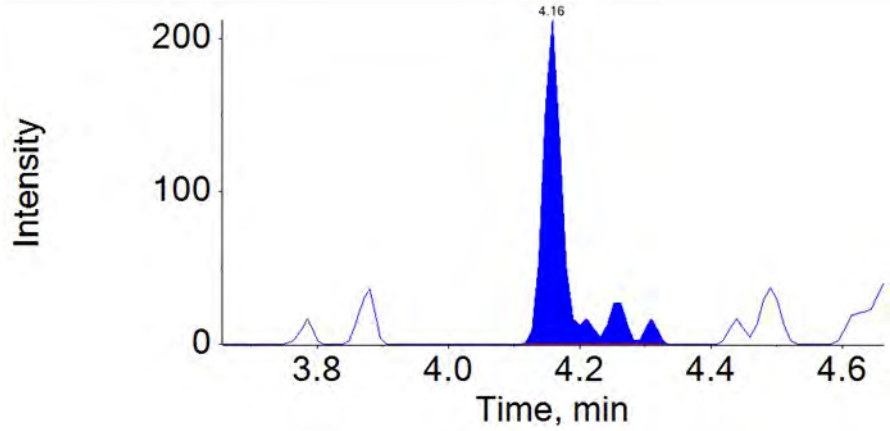
Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.26
Peak Area:
8070.84
Mass Range:
663.0 / 619.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.16
Peak Area:
496.72
Mass Range:
313.0 / 119.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



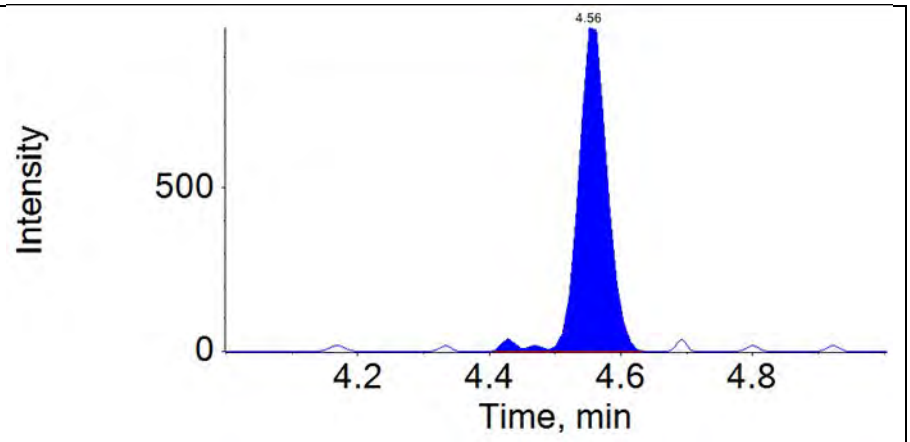
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

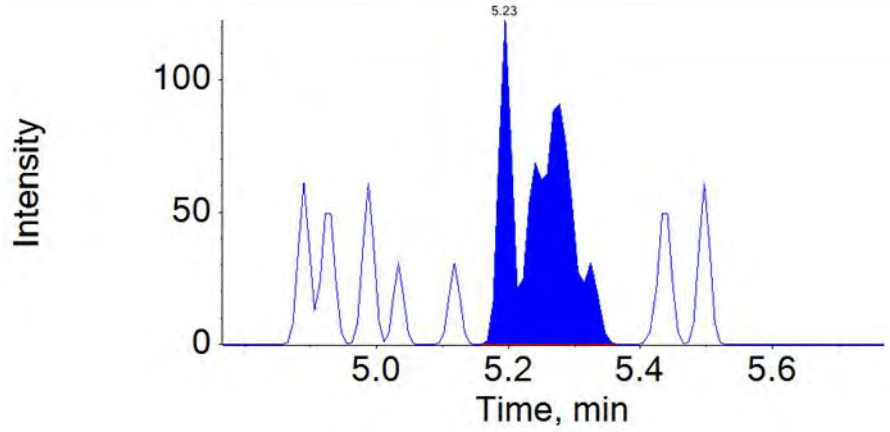
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3074.31
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



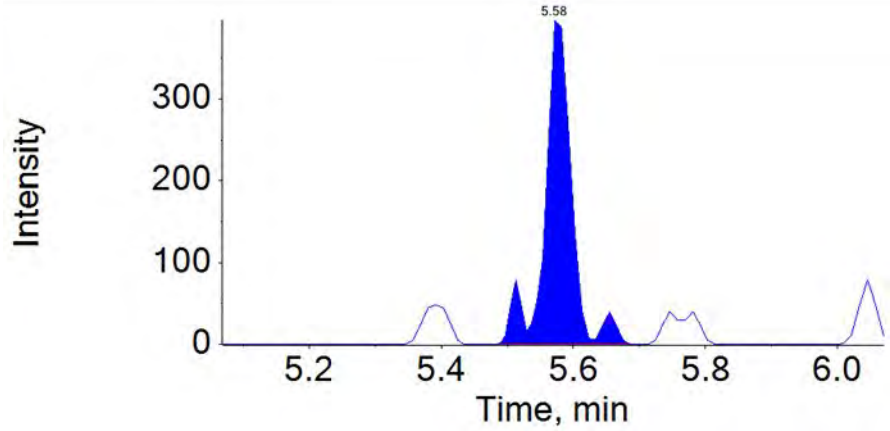
Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.23
Peak Area:
553.54
Mass Range:
463.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
8:2 FTS_2
RT (min.):
5.58
Peak Area:
1126.66
Mass Range:
527.0 / 81.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



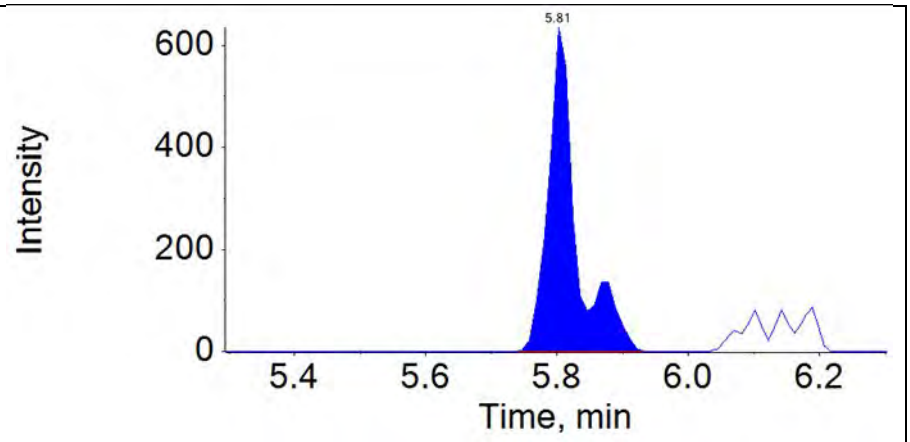
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

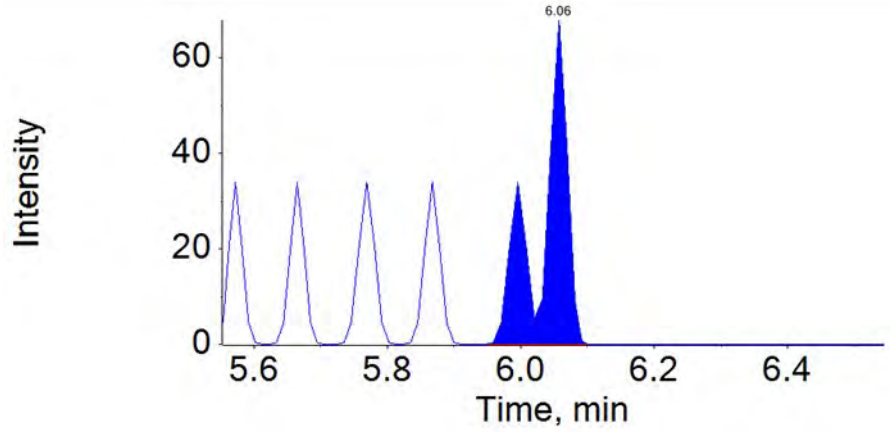
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDS_2
RT (min.):
5.81
Peak Area:
1909.26
Mass Range:
599.0 / 99.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
186.10
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

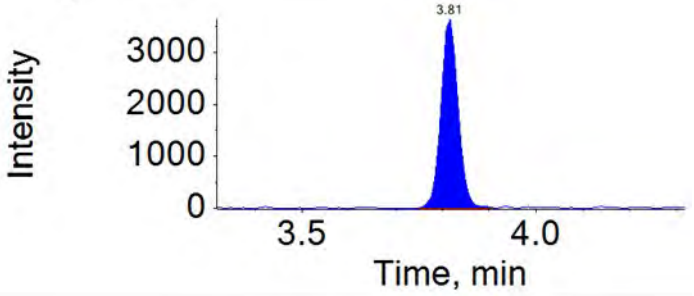
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-41.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	9248.27	A	0.3619	0.4009			
PFBS_2	3.81	1.00	3707.95	A	0.3619	0.4009	11	50	
4:2-FTS	4.13	1.00	1329.90	A	0.6730	1.1531			
4:2 FTS_2	4.14	1.00	1533.53	A	0.6730	1.1531		#NA!	
PFHxA	4.17	1.00	21601.58	A	0.0117	0.0185			
PFHxA_2	4.16	1.00	400.56	M	0.0117	0.0185	59	50	OOS
PFPeS	4.19	1.10	4484.75	A	0.5191	0.5939			
PFPeS_2	4.18	1.10	2663.62	A	0.5191	0.5939	14	50	
PFHpA	4.56	1.00	22043.51	A	0.0563	0.0598			
PFHpA_2	4.54	1.00	1317.81	A	0.0563	0.0598	6	50	
PFHxS	4.56	1.00	8143.51	M	0.3428	0.3665			
PFHxS_2	4.56	1.00	2984.60	M	0.3428	0.3665	7	50	
6:2-FTS	4.91	1.00	1176.17	M	0.6604	0.6555			
6:2 FTS_2	4.91	1.00	771.04	A	0.6604	0.6555		#NA!	
PFHpS	4.92	1.08	7117.47	A	0.4066	0.3729			
PFHpS_2	4.92	1.08	2653.97	A	0.4066	0.3729	-8	50	
PFOA	4.93	1.00	18045.03	A	0.0562	0.0847			
PFOA_2	4.92	1.00	1528.65	A	0.0562	0.0847	51	50	OOS
PFOS	5.25	1.00	6416.89	A	0.2968	0.3439			
PFOS_2	5.25	1.00	2206.80	A	0.2968	0.3439	16	50	
PFNA	5.27	1.00	18065.11	M	0.0229	0.0217			
PFNA_2	5.27	1.00	391.14	M	0.0229	0.0217	-5	50	
PFNS	5.54	1.06	3661.22	A	0.4828	0.5154			
PFNS_2	5.55	1.06	1886.87	A	0.4828	0.5154	7	50	
PFDA	5.57	1.00	17350.54	A	0.0081	0.0034			
PFDA_2	5.58	1.00	58.57	A	0.0081	0.0034	-58	50	OOS
8:2-FTS	5.57	1.00	1475.16	A	0.6814	0.6626			
8:2 FTS_2	5.58	1.00	977.44	M	0.6814	0.6626		#NA!	
NMeFOSAA	5.72	1.00	1372.38	A	0.2569	0.3580			
NMeFOSAA_2	5.70	1.00	491.32	A	0.2569	0.3580	39	50	
PFDS	5.80	1.10	2648.79	A	0.5144	0.5845			
PFDS_2	5.81	1.10	1548.24	M	0.5144	0.5845	14	50	
PFUnDA	5.83	1.00	12215.29	M	0.0058	0.0269			
PFUnDA_2	5.82	1.00	328.37	A	0.0058	0.0269	362	50	OOS
NEtFOSAA	5.84	1.00	1937.77	A	0.7253	0.5676			
NEtFOSAA_2	5.85	1.00	1099.93	A	0.7253	0.5676	-22	50	
PFDoDA	6.06	1.00	14033.14	A	0.0157	0.0089			
PFDoDA_2	6.06	1.00	124.75	M	0.0157	0.0089	-43	50	
10:2-FTS	6.06	1.09	352.60	M	0.6356	0.9381			
10:2 FTS_2	6.08	1.09	330.78	A	0.6356	0.9381		#NA!	
PFTrDA	6.26	1.03	7825.51	M	0.0086	0.0105			
PFTrDA_2	6.26	1.03	82.38	A	0.0086	0.0105	23	50	
PFTeDA	6.43	1.00	8938.53	A	0.0062	0.0089			
PFTeDA_2	6.43	1.00	79.25	A	0.0062	0.0089	42	50	
PFHxDA	6.74	1.05	3934.22	A	0.0683	0.0745			
PFHxDA_2	6.74	1.05	292.96	A	0.0683	0.0745	9	50	
PFODA	7.00	1.09	2726.36	A	0.0277	0.0224			
PFODA_2	6.99	1.09	61.09	A	0.0277	0.0224	-19	50	

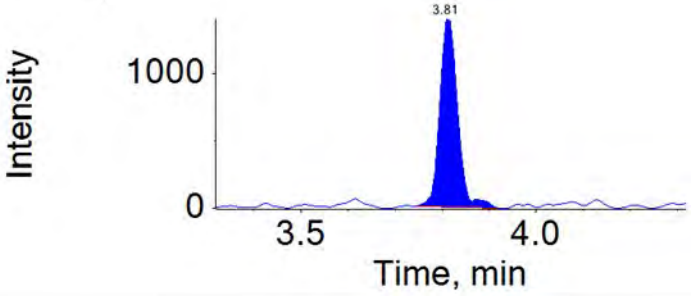
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

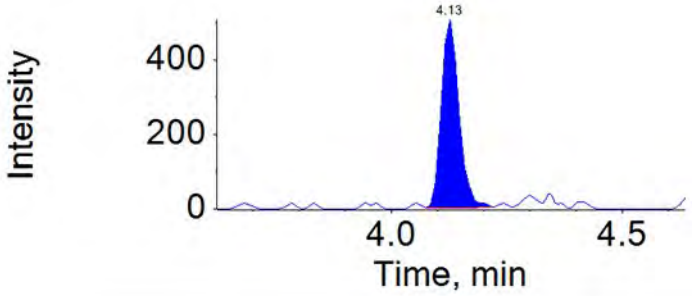
Component: PFBS
Primary Mass: 299.0 / 80.0



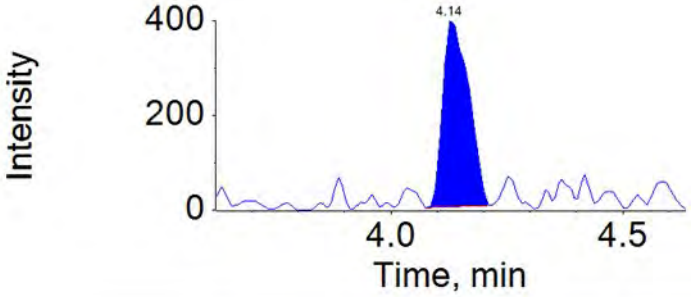
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



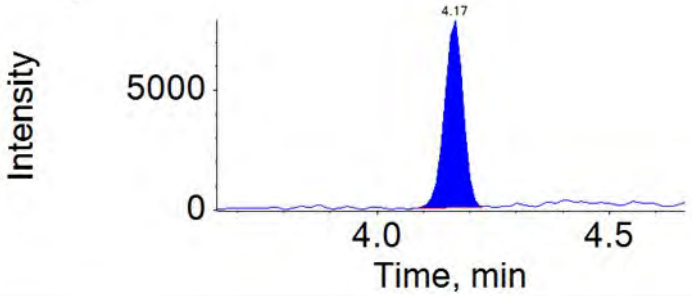
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



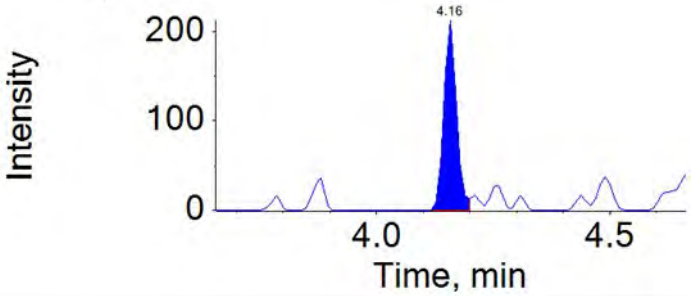
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



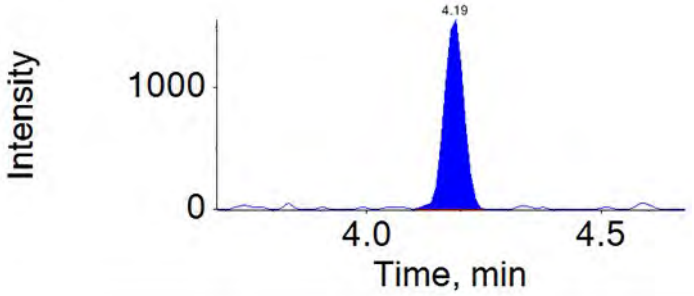
Component: PFHxA
Primary Mass: 313.0 / 269.0



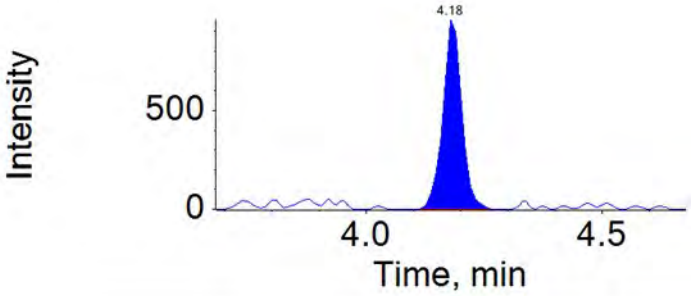
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



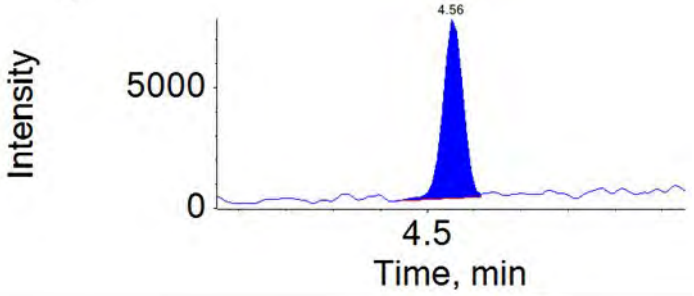
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



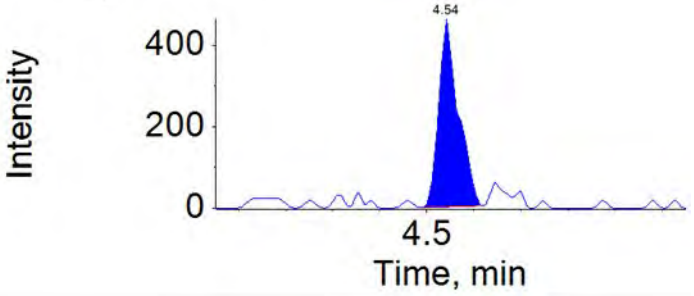
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

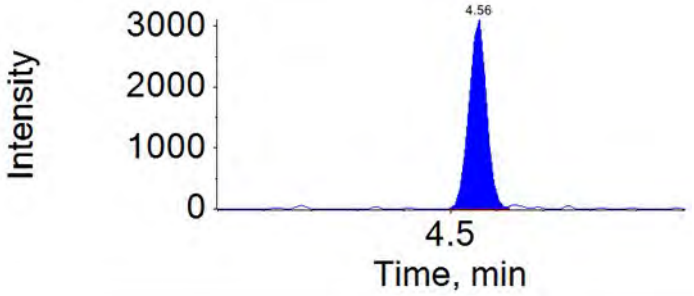
Component: PFHpA
Primary Mass: 363.0 / 319.0



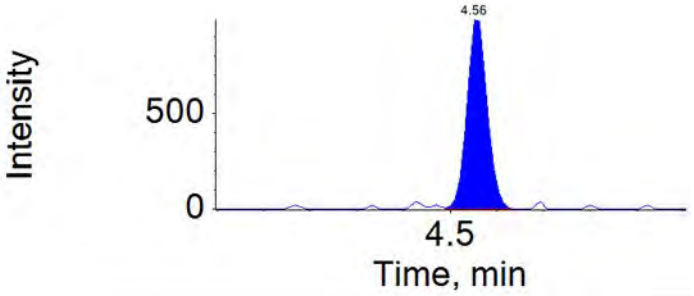
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



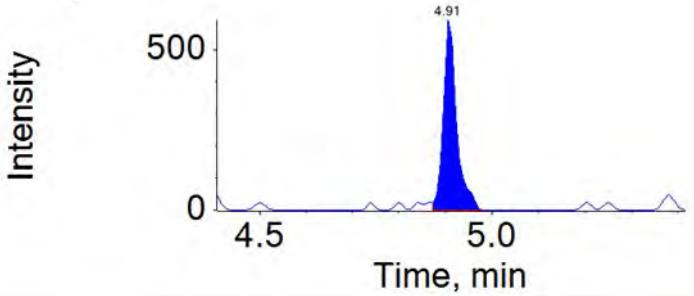
Component: PFHxS
Primary Mass: 399.0 / 80.0



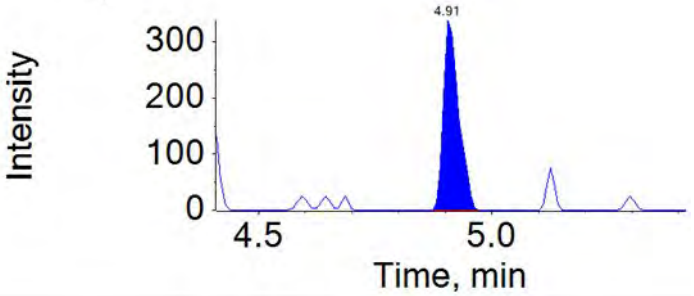
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



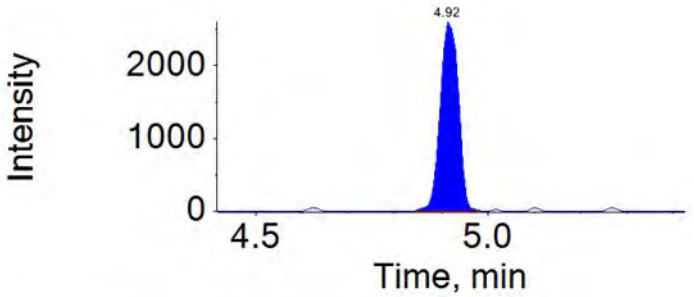
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



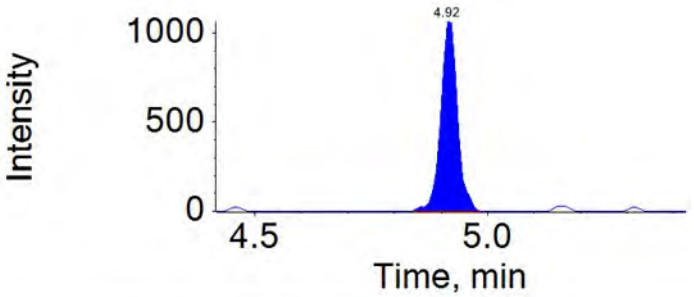
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



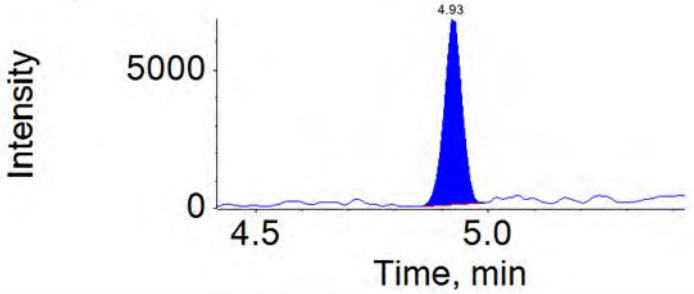
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



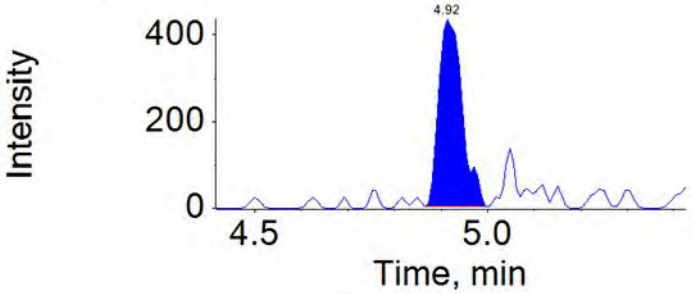
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

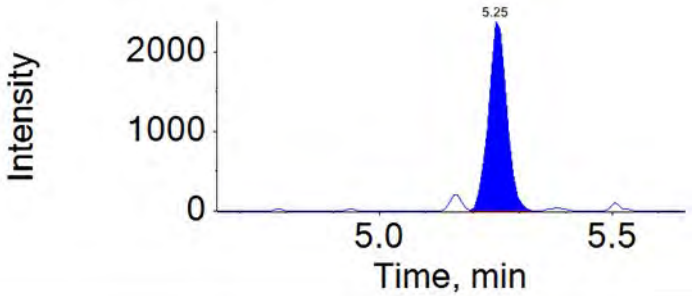
Component: PFOA
Primary Mass: 413.0 / 369.0



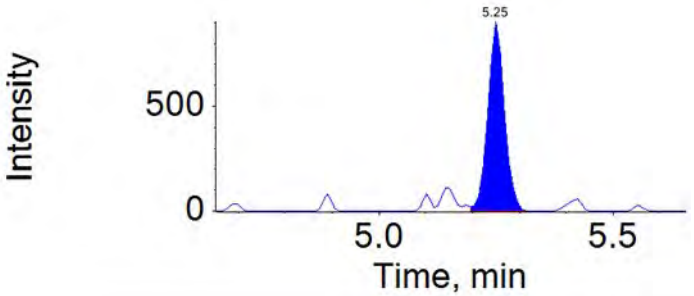
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



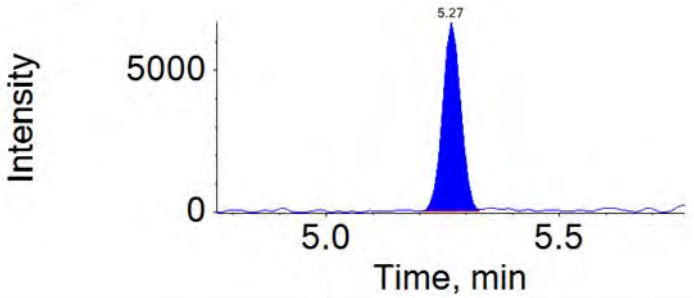
Component: PFOS
Primary Mass: 499.0 / 80.0



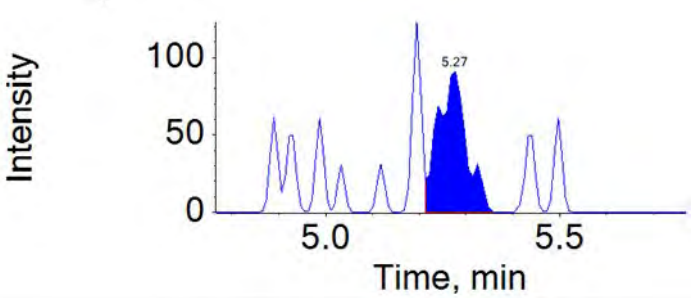
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



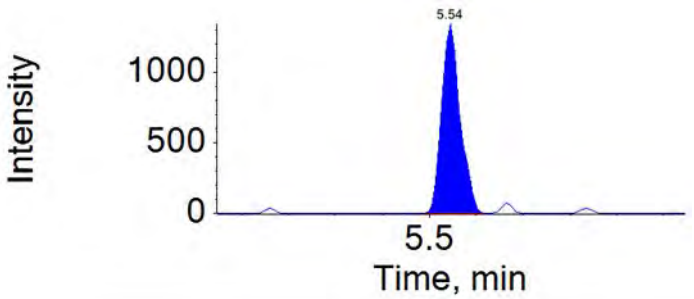
Component: PFNA
Primary Mass: 463.0 / 419.0



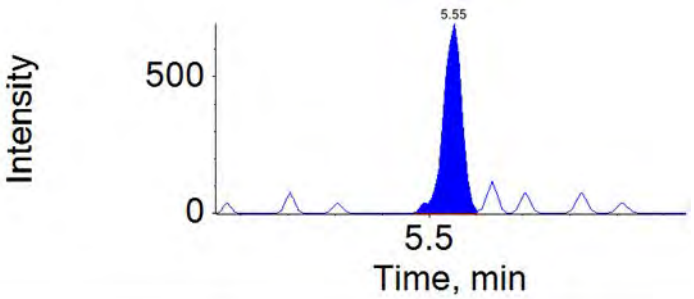
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



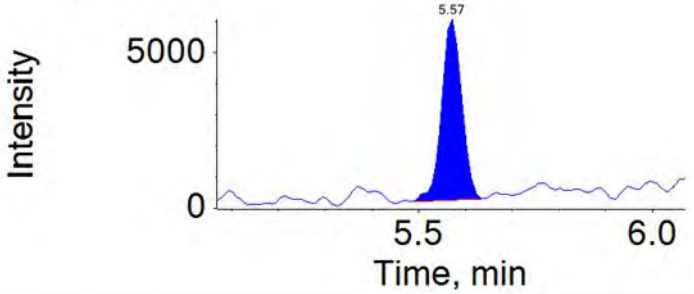
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



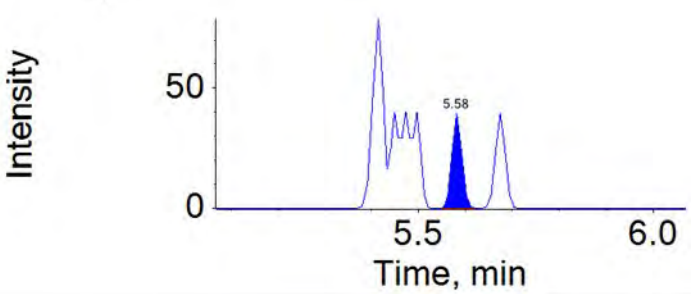
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

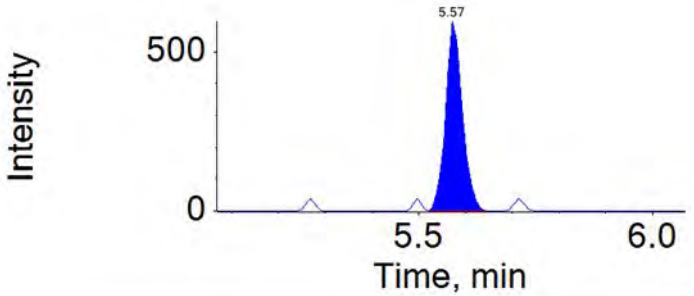
Component: PFDA
Primary Mass: 513.0 / 469.0



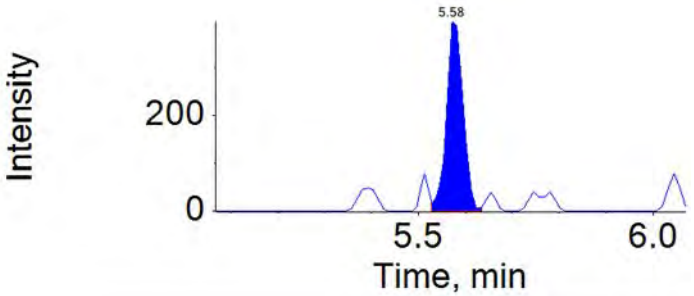
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



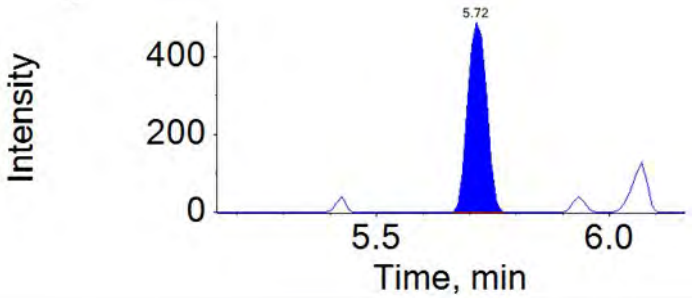
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



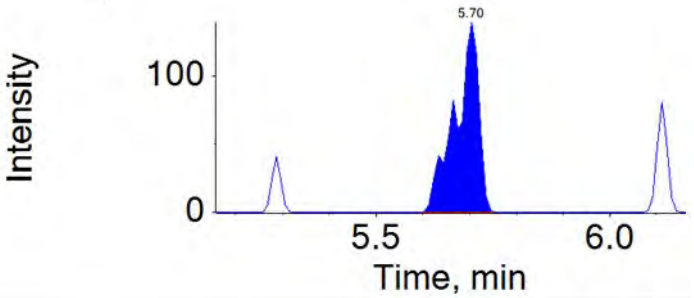
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



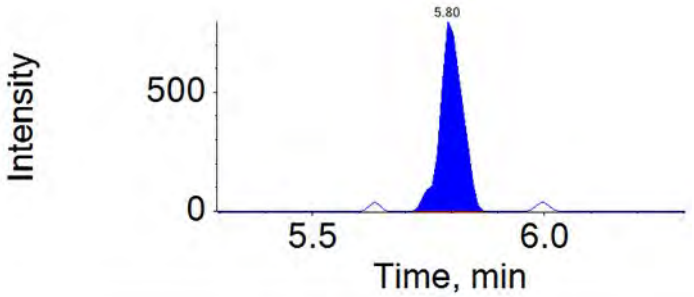
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



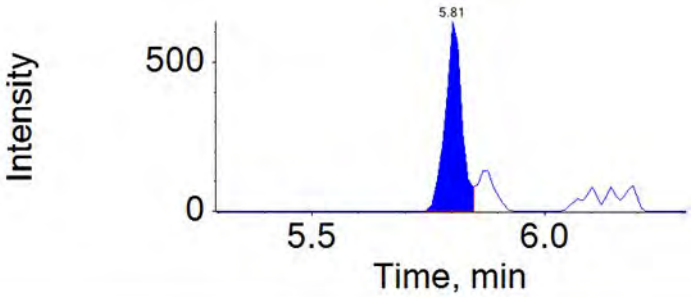
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



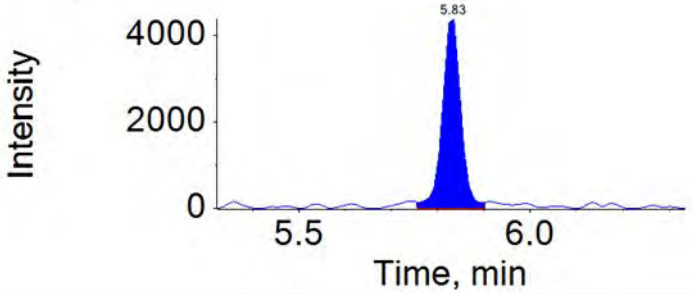
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



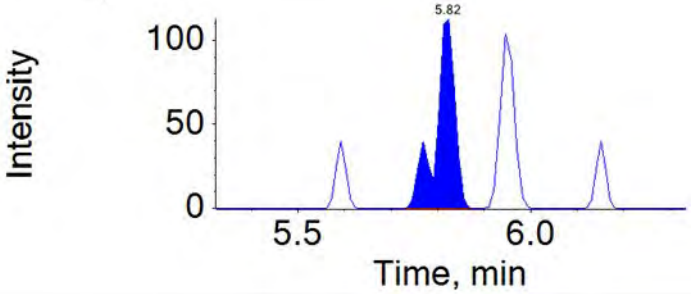
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

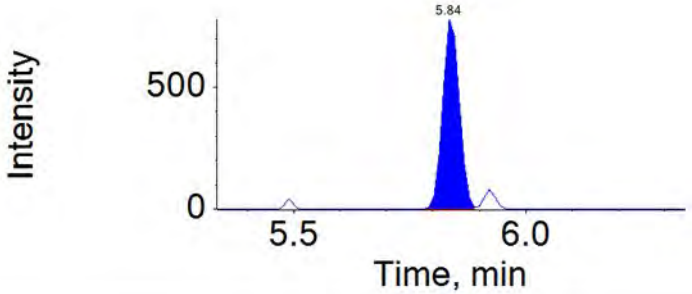
Component: PFUnDA
Primary Mass: 563.0 / 519.0



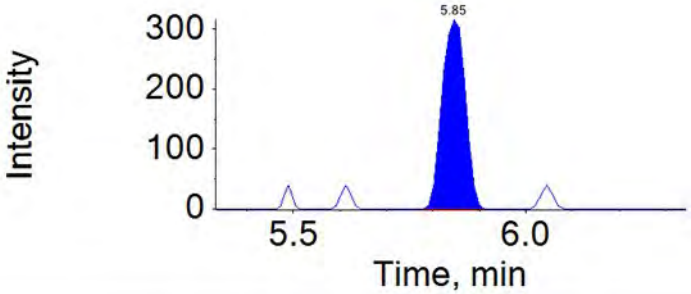
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



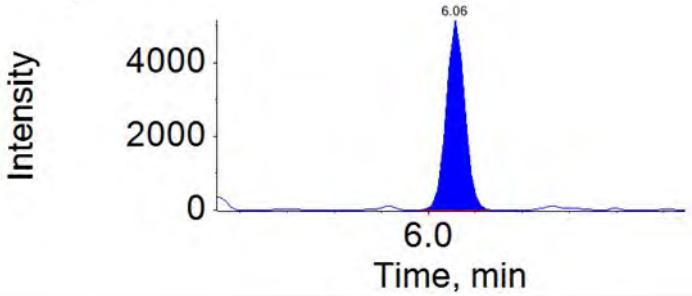
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



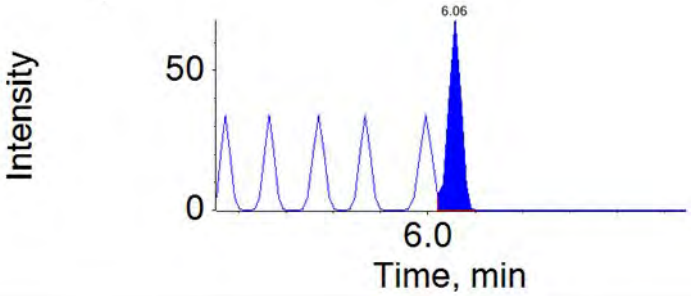
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



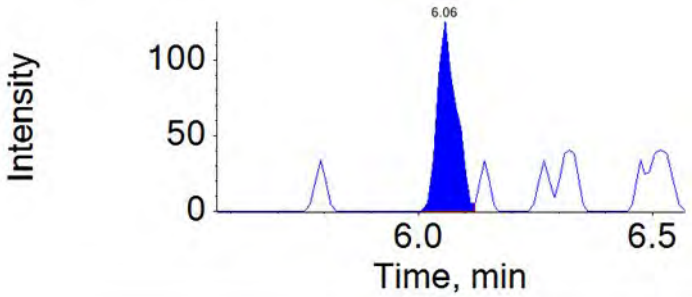
Component: PFDoDA
Primary Mass: 613.0 / 569.0



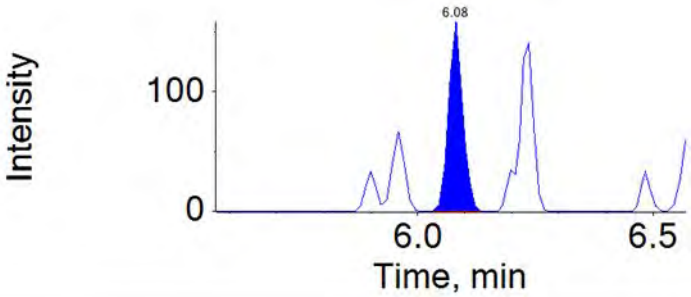
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



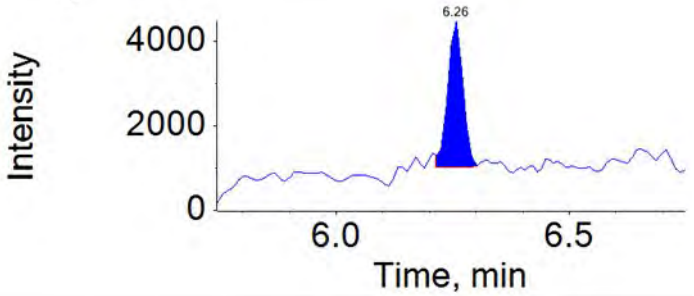
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



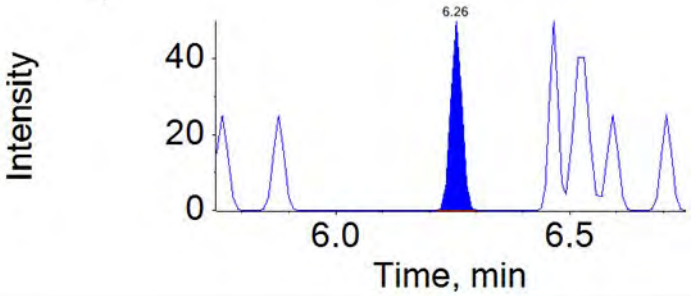
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

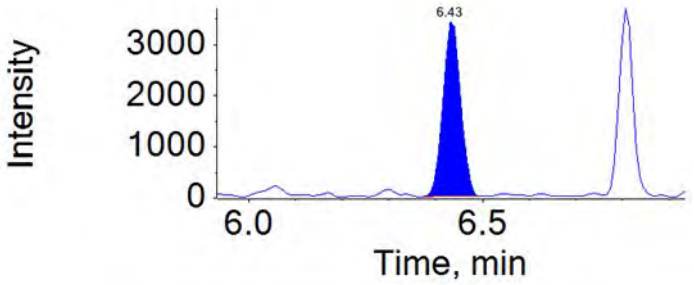
Component: PFTrDA
Primary Mass: 663.0 / 619.0



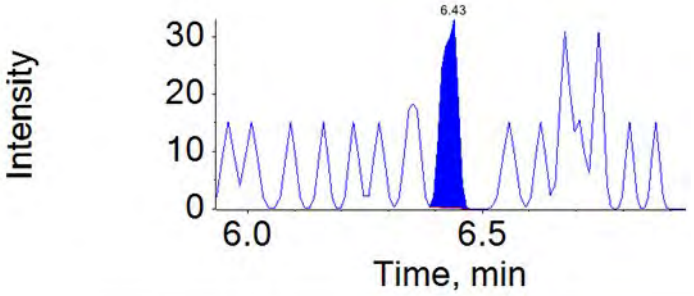
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



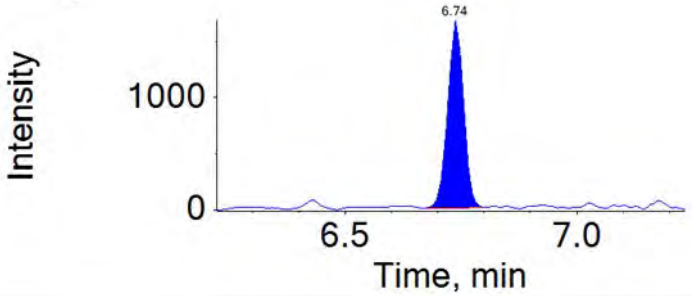
Component: PFTeDA
Primary Mass: 713.0 / 669.0



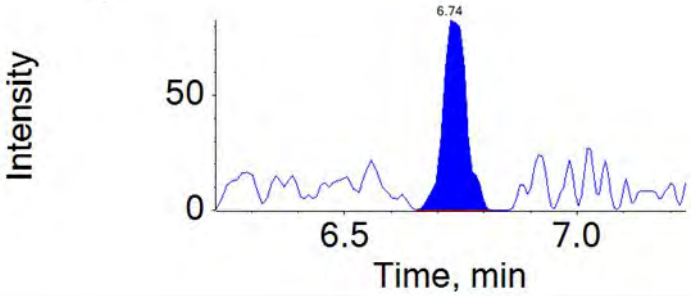
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



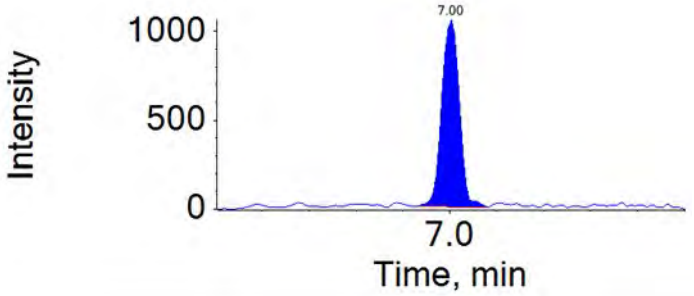
Component: PFHxDA
Primary Mass: 813.0 / 769.0



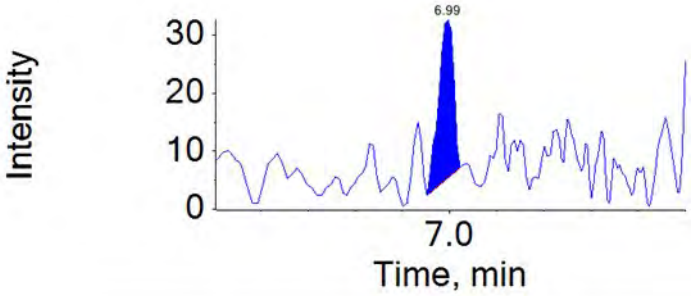
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV12DCAL-50.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-12T16:18:11
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	655209.3	659926.2	-1	50	
13C2-PFOA	5.0	452726.2	450219.7	1	50	
13C4-PFOS	4.8	253010.3	249205.8	2	50	
13C2-PFDA	5.0	277002.7	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	715834.4	13C3-PFBA	655209.3	1.093	5.000	4.898	98	70-130	
E13C5-PFPeA	699482.2	13C3-PFBA	655209.3	1.068	5.000	4.788	96	70-130	
E13C3-PFBS	394903.4	13C3-PFBA	655209.3	0.603	4.650	4.255	91	70-130	
E13C2-4:2-FTS	47297.3	13C2-PFOA	452726.2	0.104	4.670	4.653	100	70-130	
E13C5-PFHxA	613579.4	13C2-PFOA	452726.2	1.355	5.000	4.896	98	70-130	
E13C3-PFHxS	304897.8	13C2-PFOA	452726.2	0.673	4.730	4.621	98	70-130	
E13C4-PFHpA	485394.9	13C2-PFOA	452726.2	1.072	5.000	4.830	97	70-130	
E13C2-6:2-FTS	31532.8	13C2-PFOA	452726.2	0.070	4.750	4.660	98	70-130	
E13C8-PFOA	843573.3	13C2-PFOA	452726.2	1.863	5.000	5.134	103	70-130	
E13C8-PFOS	266211.4	13C4-PFOS	253010.3	1.052	4.780	4.662	98	70-130	
E13C9-PFNA	458821.5	13C4-PFOS	253010.3	1.813	5.000	5.056	101	70-130	
E13C6-PFDA	590290.3	13C2-PFDA	277002.7	2.131	5.000	4.973	99	70-130	
E13C2-8:2-FTS	22188.9	13C2-PFDA	277002.7	0.080	4.790	3.995	83	70-130	
E13C8-PFOSA	587080.1	13C2-PFDA	277002.7	2.119	5.000	4.699	94	70-130	
Ed3-NMeFOSAA	70133.2	13C2-PFDA	277002.7	0.253	5.000	4.570	91	70-130	
E13C7-PFUnDA	228363.9	13C2-PFDA	277002.7	0.824	5.000	4.786	96	70-130	
Ed5-NEtFOSAA	59551.3	13C2-PFDA	277002.7	0.215	5.000	4.548	91	70-130	
E13C2-PFDoDA	495858.1	13C2-PFDA	277002.7	1.790	5.000	4.648	93	70-130	
Ed7-NMePFOSAE	299185.4	13C2-PFDA	277002.7	1.080	5.000	4.674	93	70-130	
Ed3-NMePFOSA	75186.9	13C2-PFDA	277002.7	0.271	5.000	4.931	99	70-130	
Ed9-NEtPFOSAE	255149.8	13C2-PFDA	277002.7	0.921	5.000	4.791	96	70-130	
Ed5-NEtPFOSA	53596.2	13C2-PFDA	277002.7	0.193	5.000	4.539	91	70-130	
E13C2-PFTeDA	365300.2	13C2-PFDA	277002.7	1.319	5.000	4.630	93	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

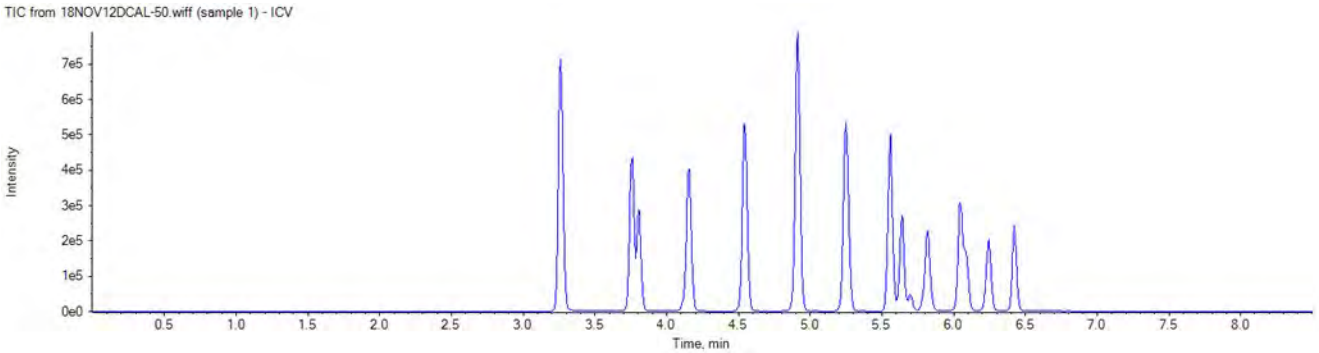
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-50.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	270820.6		A	13C4-PFBA	3.26	715834.4	0.378	2.096
PFPeA	3.76	1.000	265646.8		A	13C5-PFPeA	3.76	699482.2	0.380	2.198
PFBS	3.80	1.000	150059.6		A	13C3-PFBS	3.81	394903.4	0.380	1.808
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	47297.3	N/A	
PFHxA	4.15	1.000	328694.3		A	13C5-PFHxA	4.15	613579.4	0.536	2.237
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	394903.4	N/A	
PFHpA	4.54	1.000	316975.3		A	13C4-PFHpA	4.54	485394.9	0.653	2.165
PFHxS	4.55	1.000	115564.2		A	13C3-PFHxS	4.55	304897.8	0.379	1.838
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	31532.8	N/A	
PFHpS	4.91	1.080	118318.7		A	13C3-PFHxS	4.55	304897.8	0.388	2.043
PFOA	4.91	1.000	332094.4		A	13C8-PFOA	4.91	843573.3	0.394	2.103
PFOS	5.24	1.000	100952.5		M	13C8-PFOS	5.24	266211.4	0.379	1.658
PFNA	5.26	1.000	271240.4		A	13C9-PFNA	5.26	458821.5	0.591	2.132
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
PFDA	5.56	1.000	224279.8		A	13C6-PFDA	5.56	590290.3	0.380	2.014
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	587080.1	N/A	
NMeFOSAA	5.70	1.000	30591.9		A	d3-NMeFOSAA	5.70	70133.2	0.436	2.465
PFDS	5.79	1.110	52860.9		M	13C8-PFOS	5.24	266211.4	0.199	1.799
PFUnDA	5.82	1.000	183511.3		A	13C7-PFUnDA	5.82	228363.9	0.804	2.101
NEtFOSAA	5.83	1.000	26149.3		A	d5-NEtFOSAA	5.83	59551.3	0.439	2.302
PFDoDA	6.05	1.000	185295.0		A	13C2-PFDoDA	6.05	495858.1	0.374	1.903
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	299185.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	75186.9	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	255149.8	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	53596.2	N/A	
PFTrDA	6.25	1.030	165153.1		A	13C2-PFDoDA	6.05	495858.1	0.333	2.102
PFTeDA	6.42	1.000	135651.0		A	13C2-PFTeDA	6.42	365300.2	0.371	2.082
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	

Total Ion Chromatogram

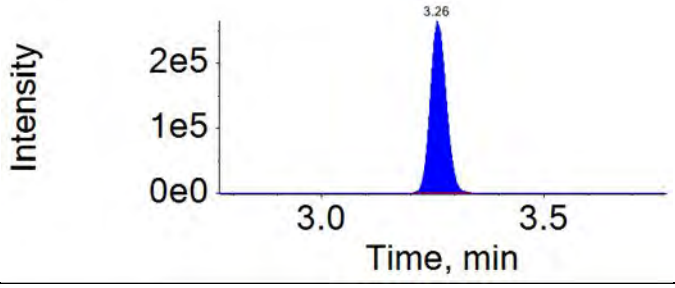


APPROVED
By MCD at 6:34 pm, 11/12/18

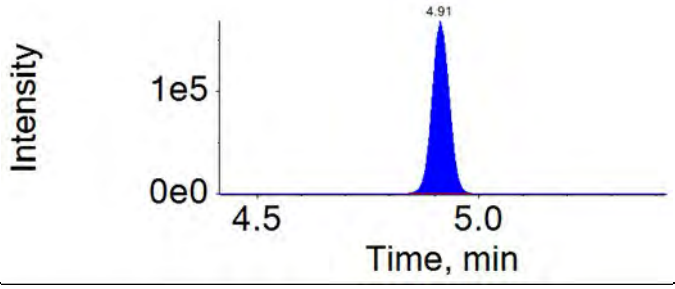
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

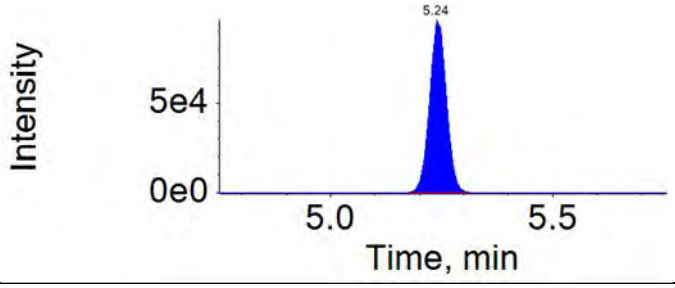
Injection Standard: 13C3-PFBA
216.0 / 172.0



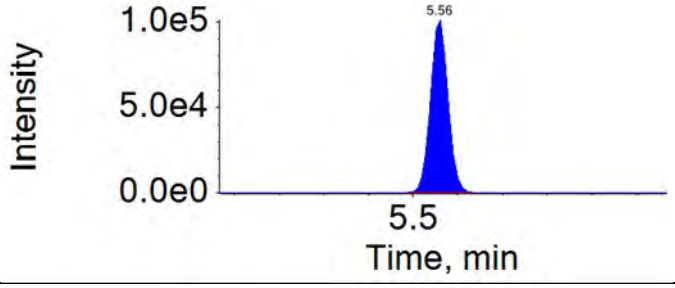
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

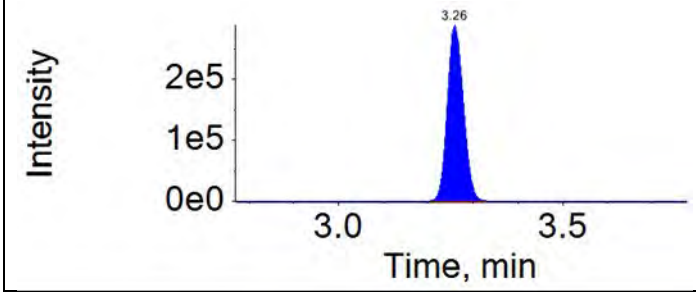


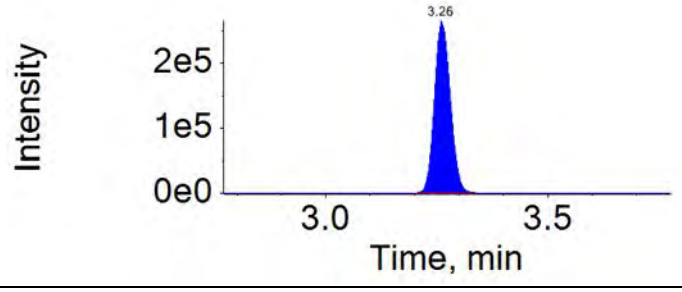
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

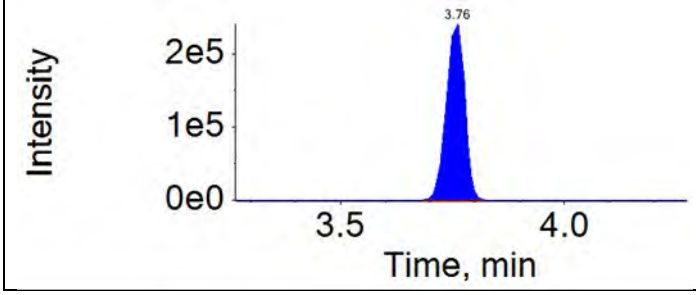
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

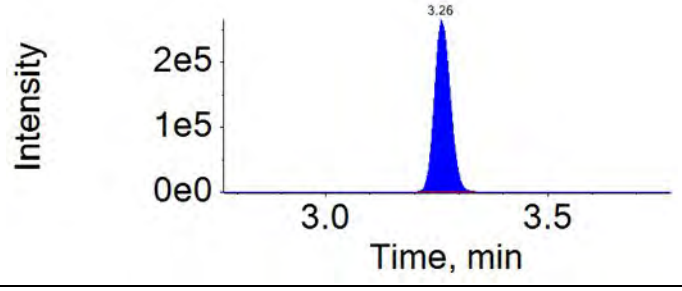
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



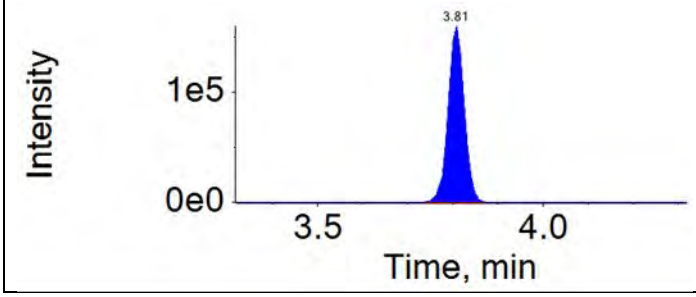


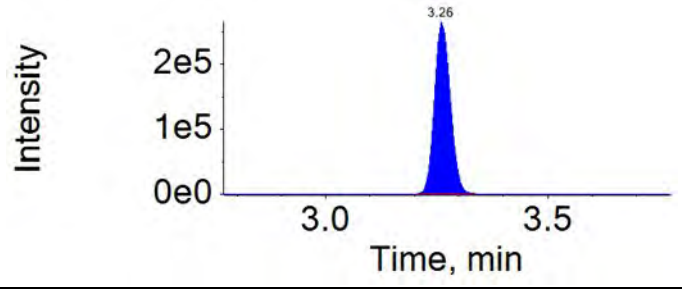
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



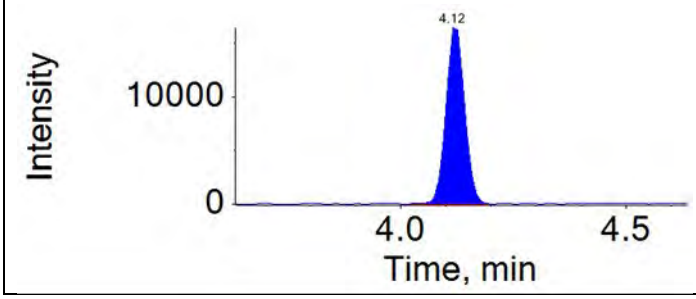


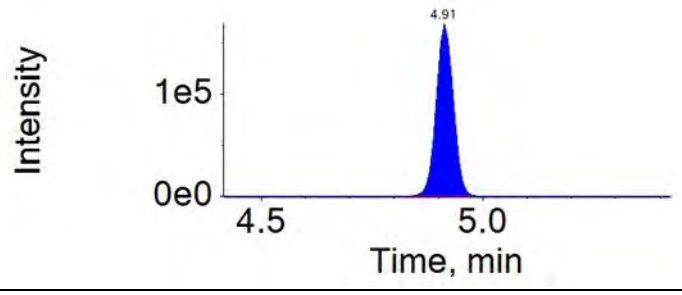
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





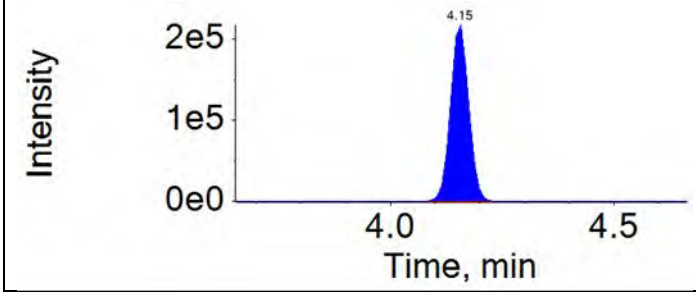
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

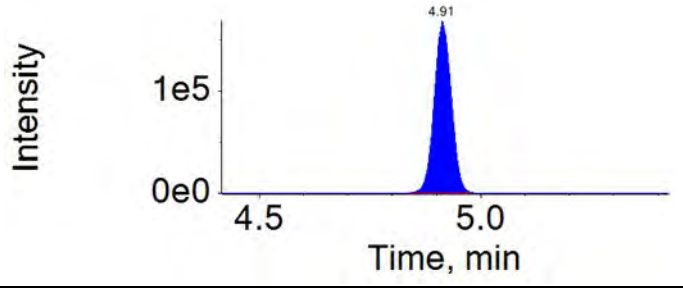




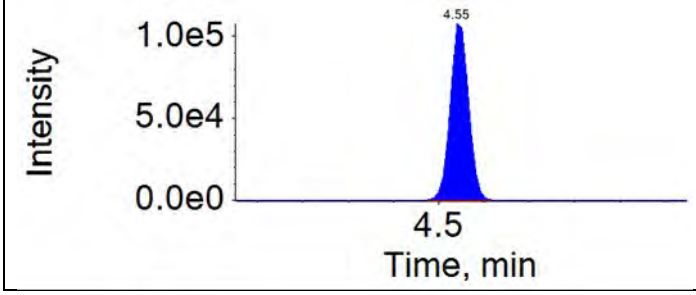
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

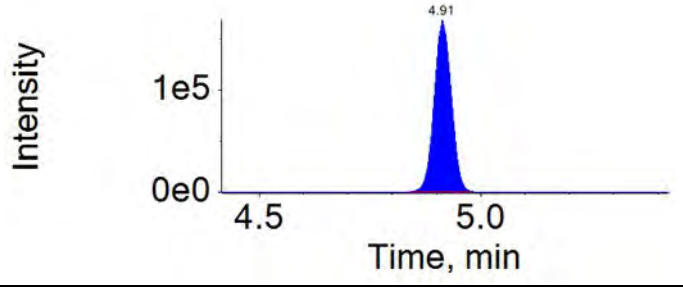
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



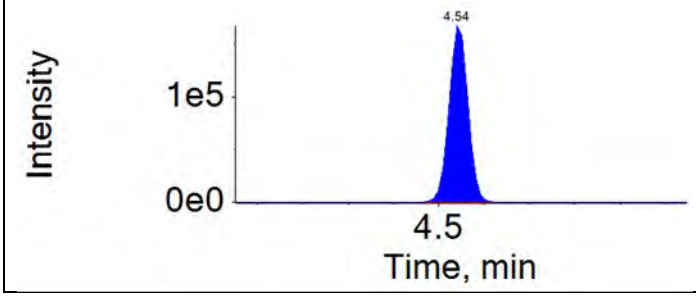


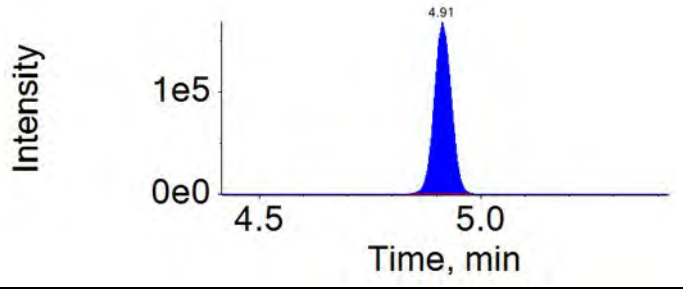
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



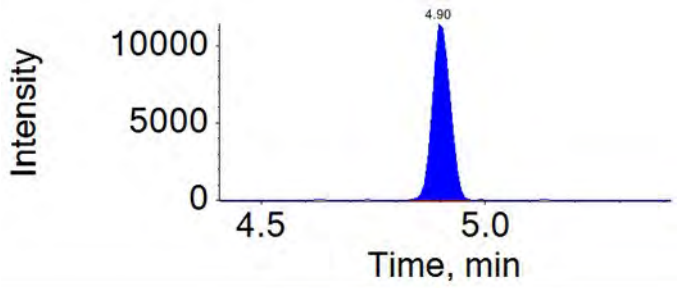


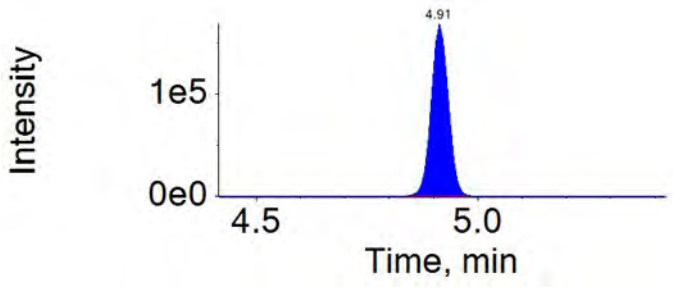
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

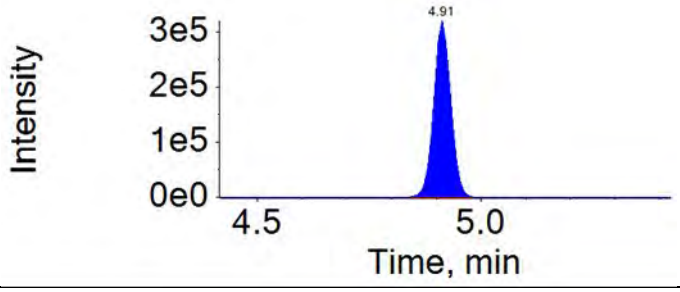
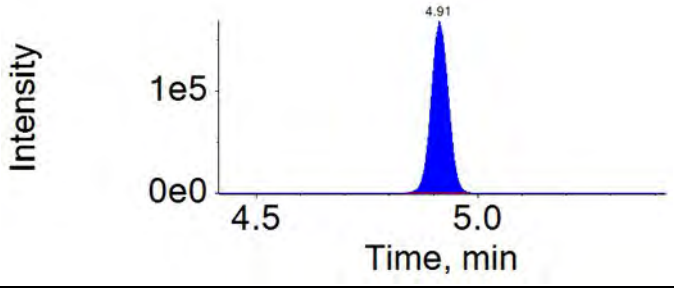


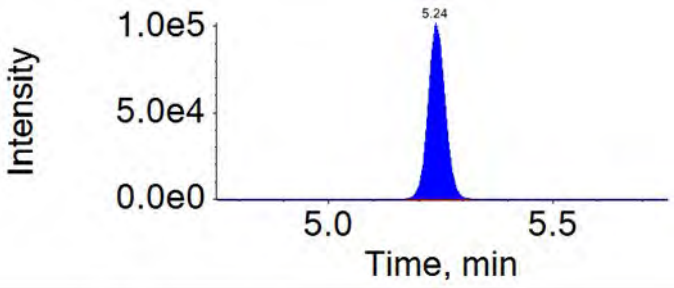
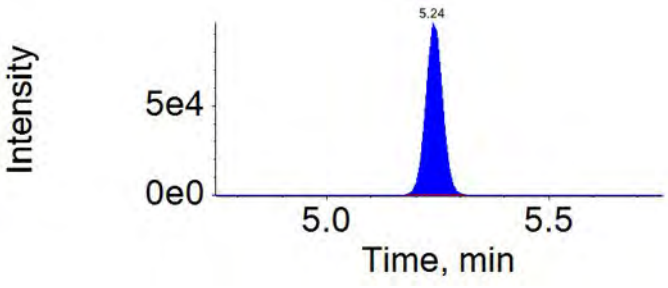


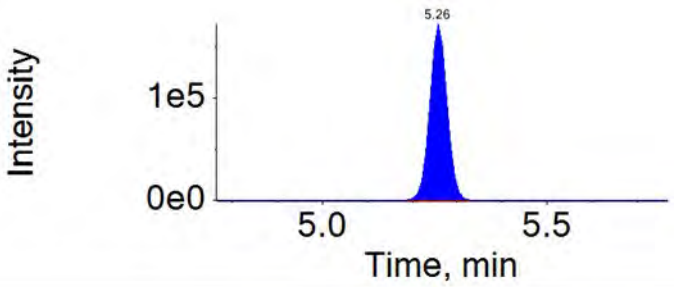
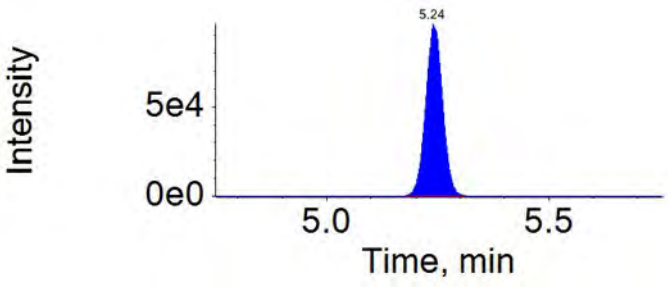
APPROVED
By MCD at 6:34 pm, 11/12/18

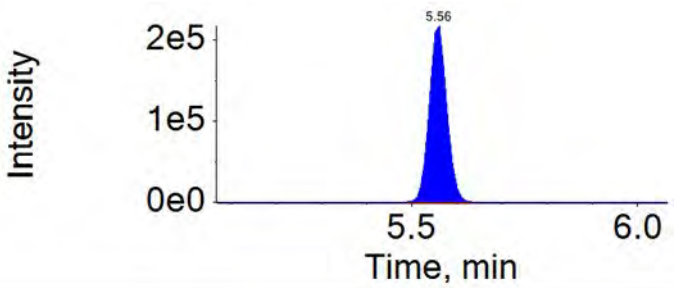
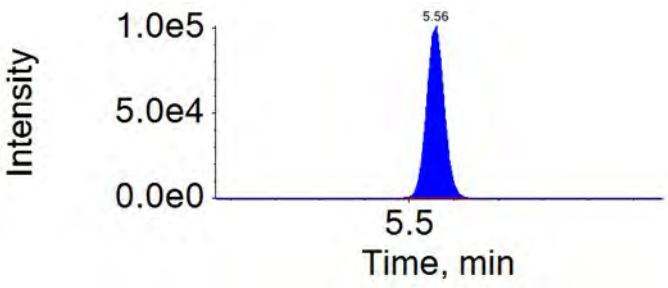
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

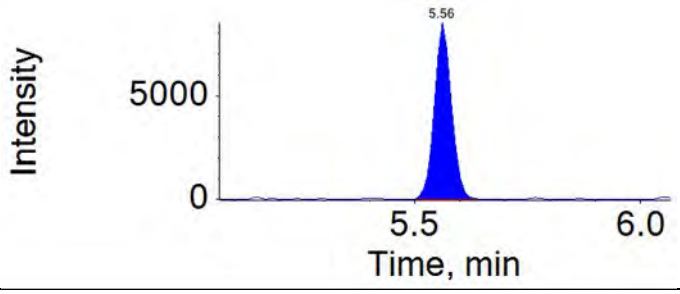
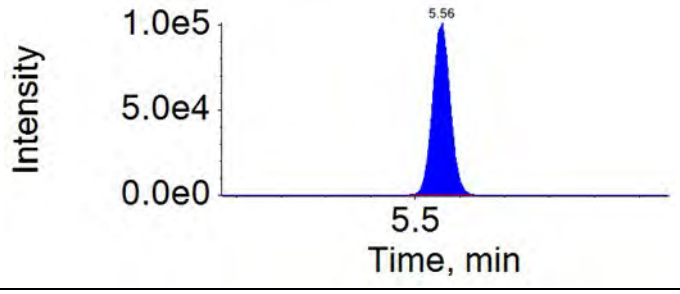
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

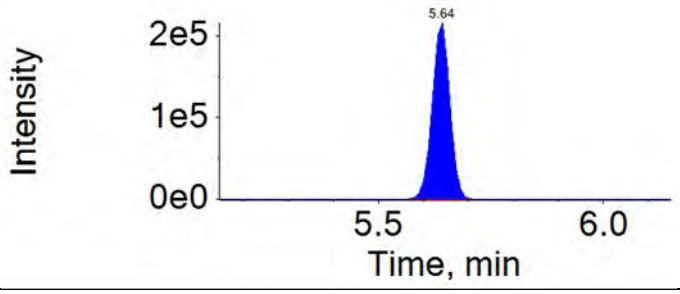
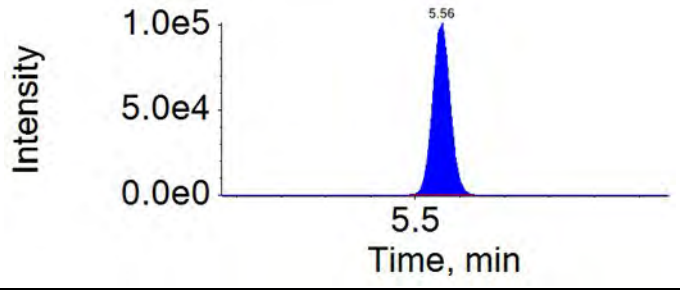
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

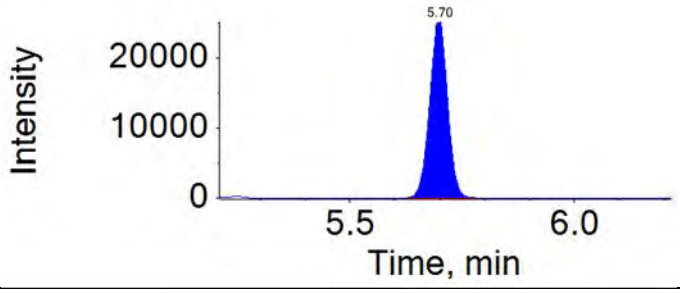
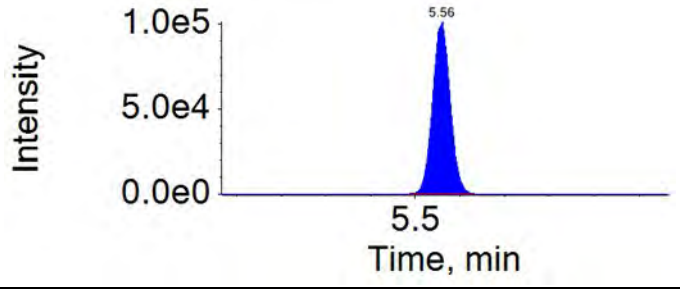
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

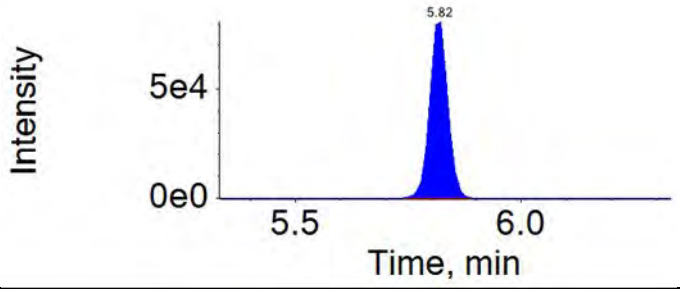
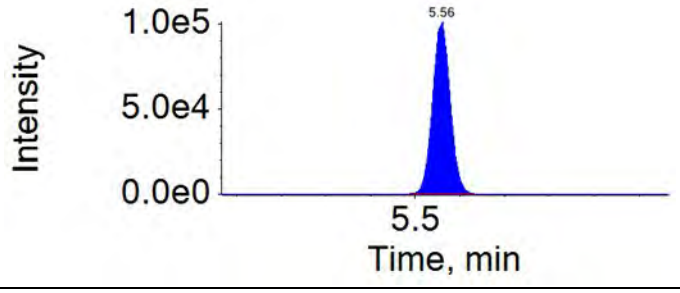
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

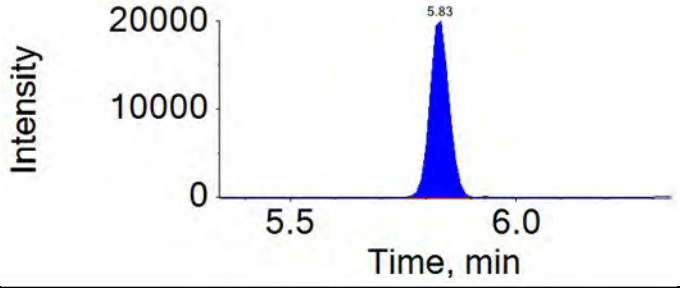
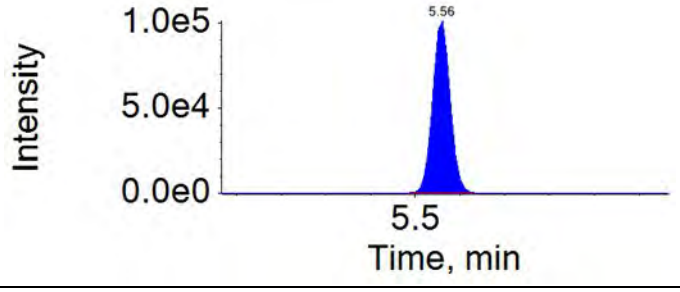
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

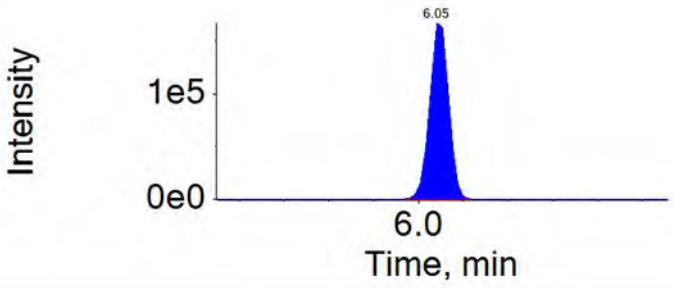
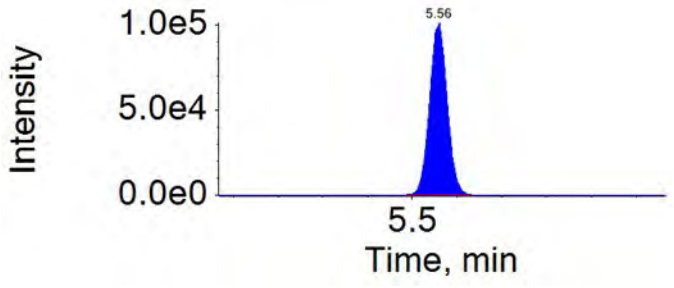
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

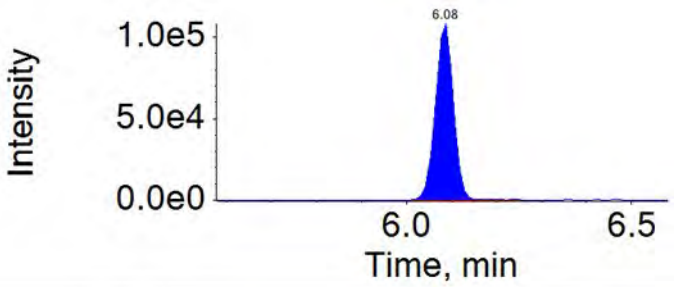
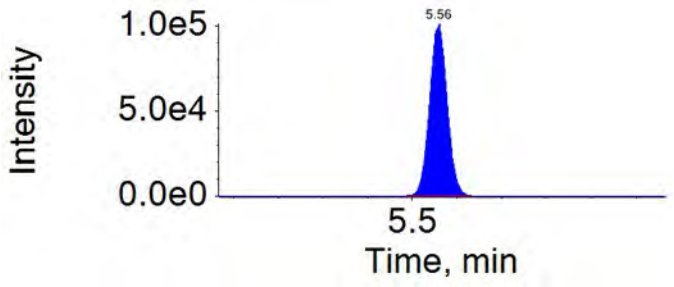
APPROVED
By MCD at 6:34 pm, 11/12/18

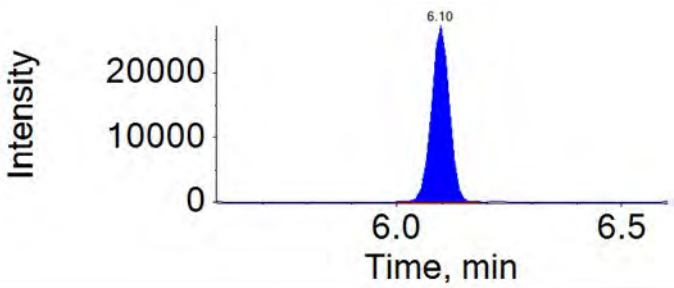
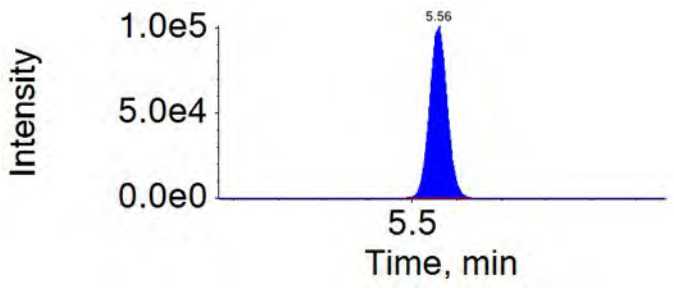
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

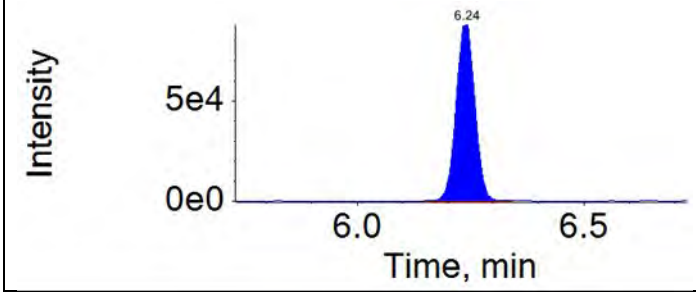
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

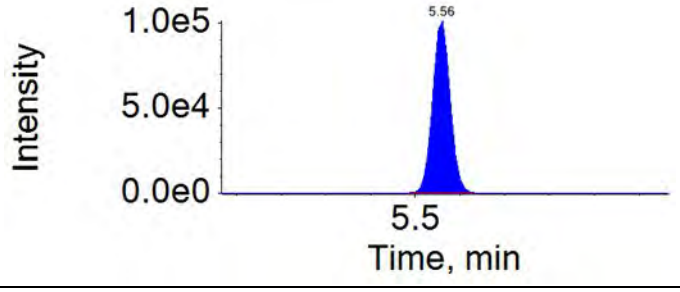
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

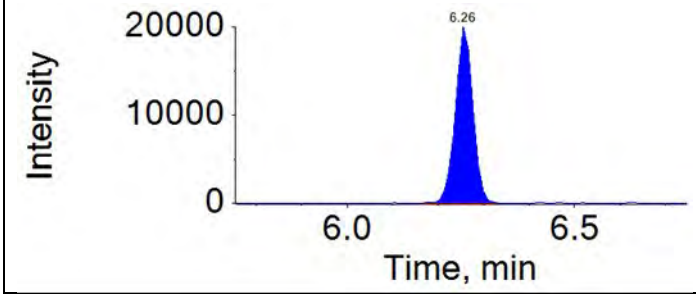
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

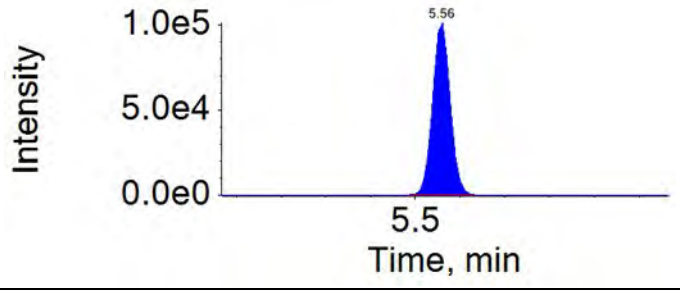
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



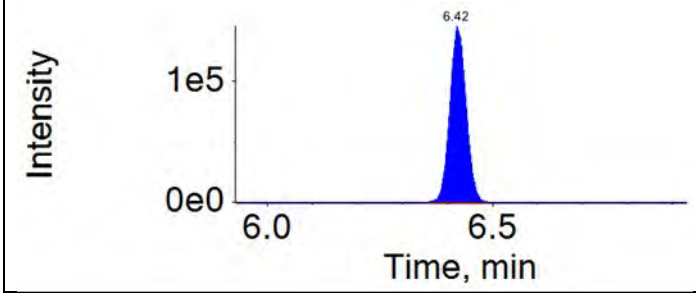


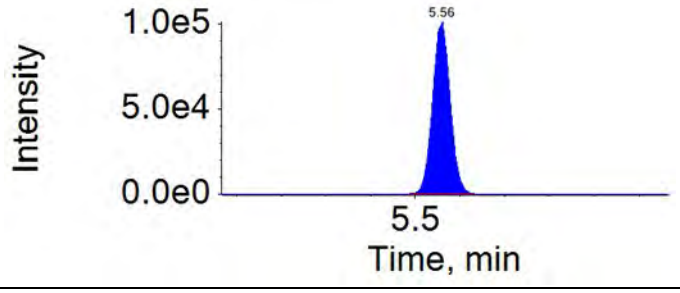
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

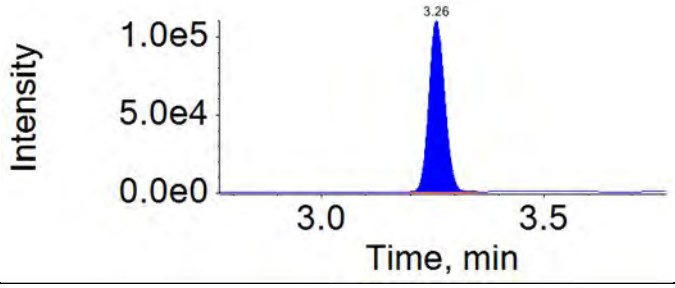
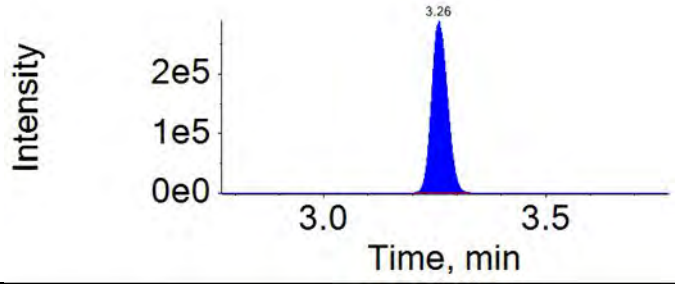


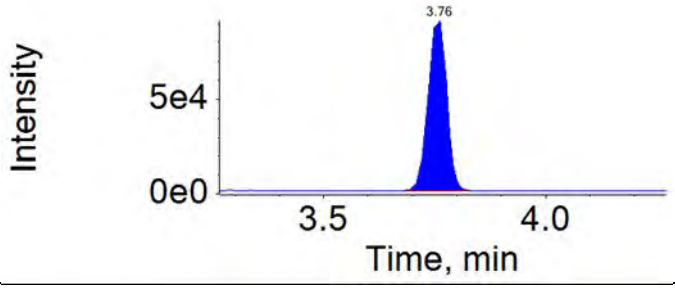
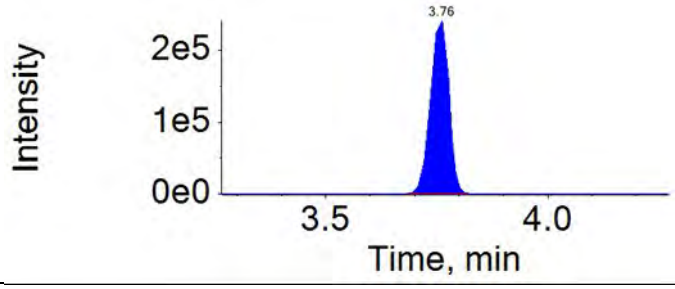


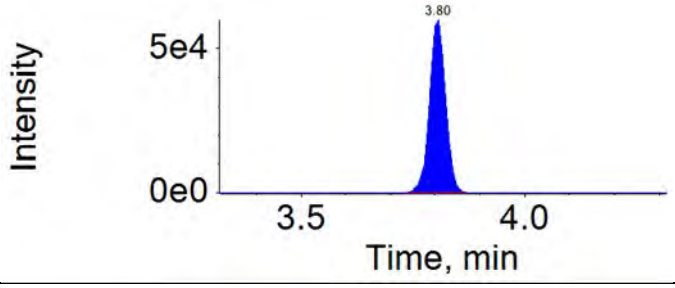
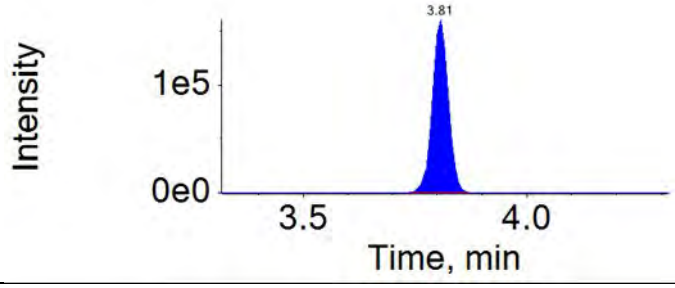
APPROVED
By MCD at 6:34 pm, 11/12/18

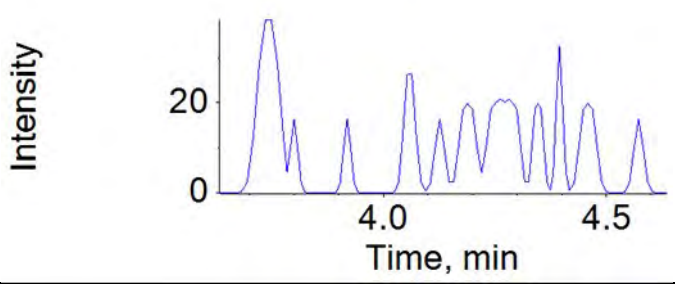
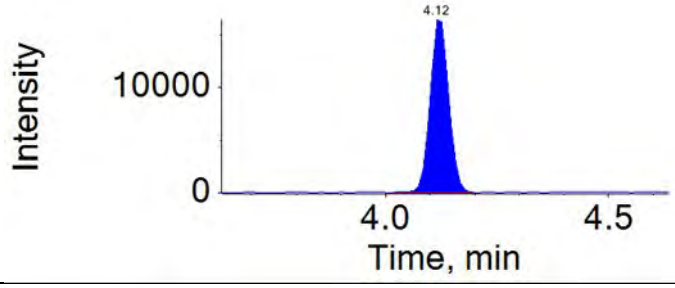
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

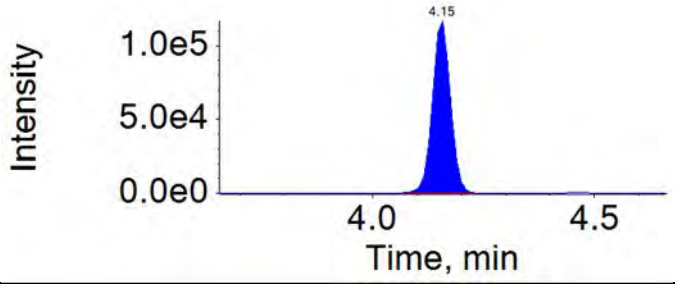
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

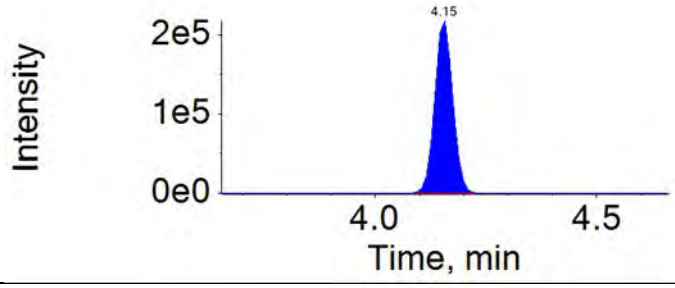
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

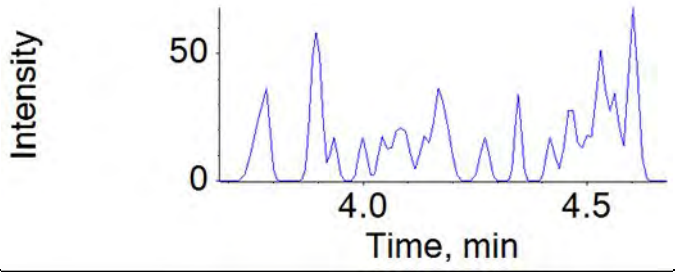
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

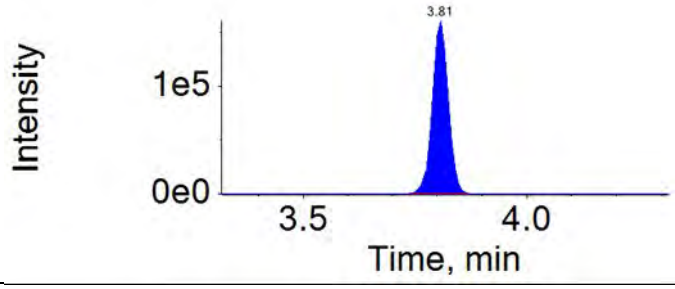
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



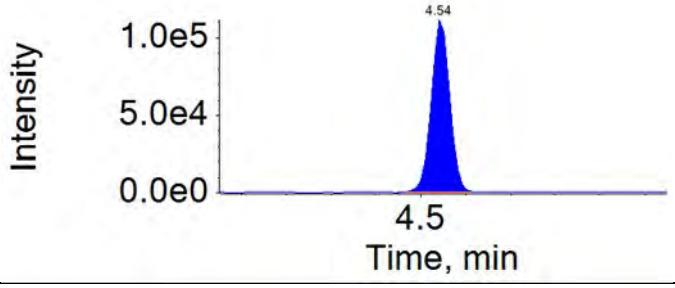


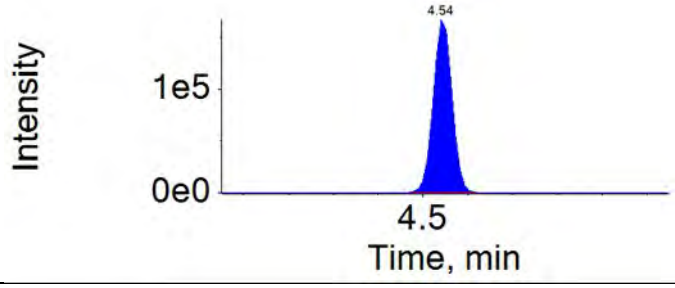
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



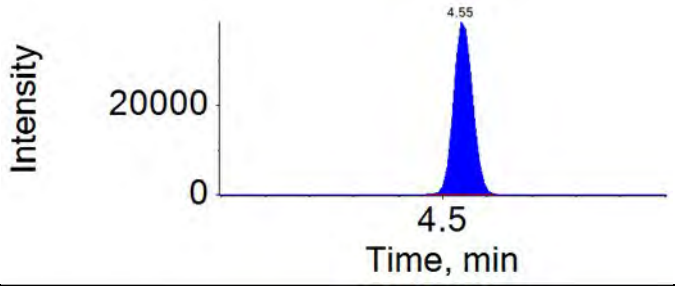


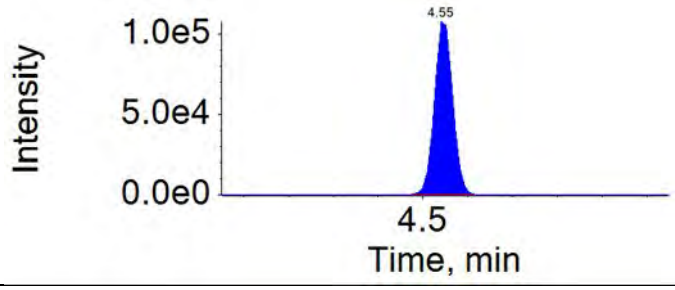
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



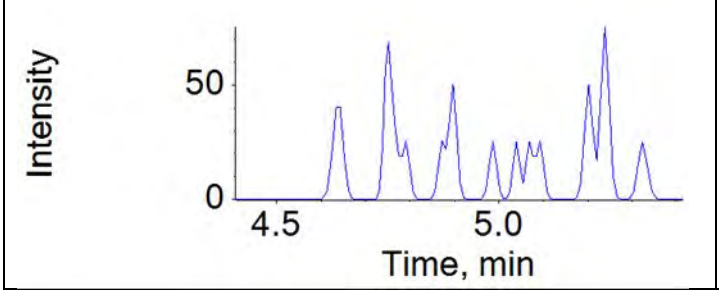


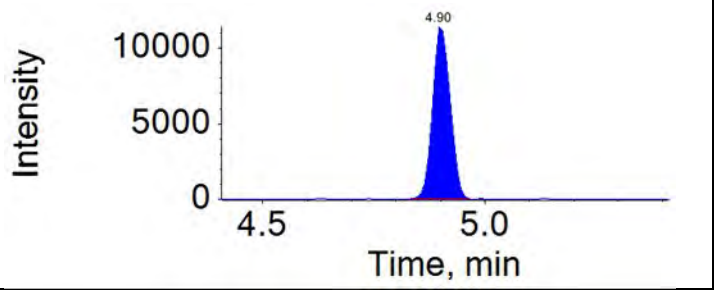
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

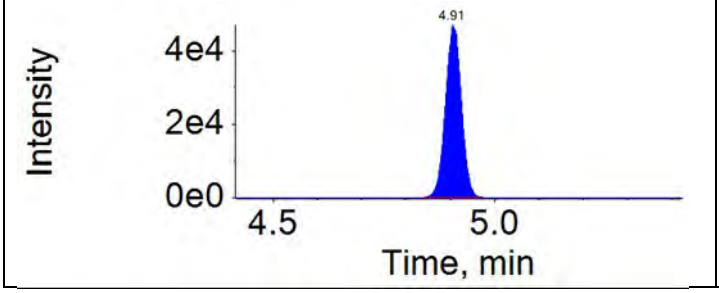
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

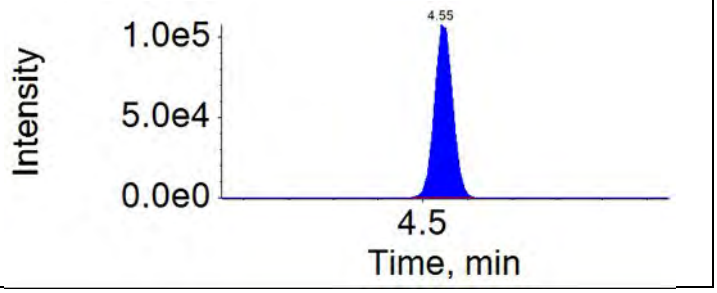
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



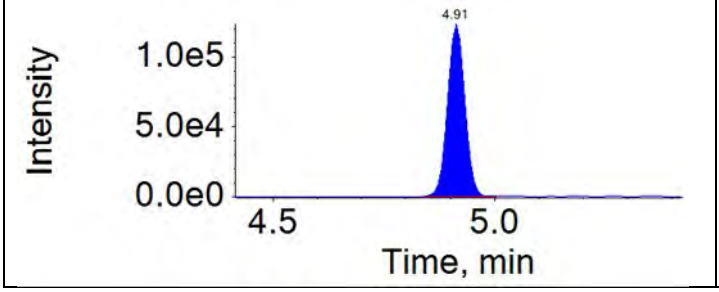


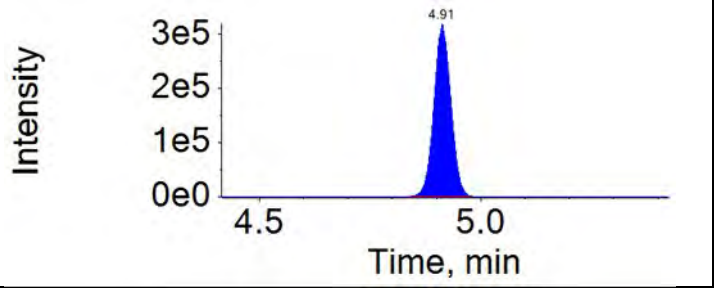
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



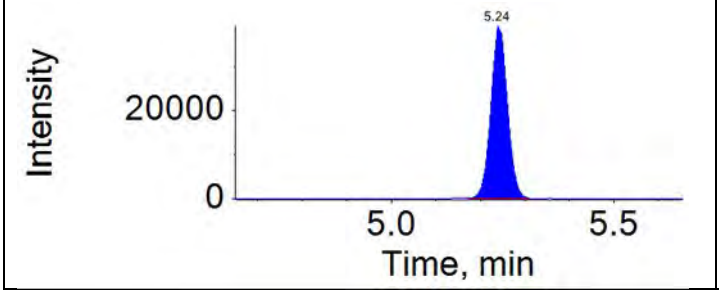


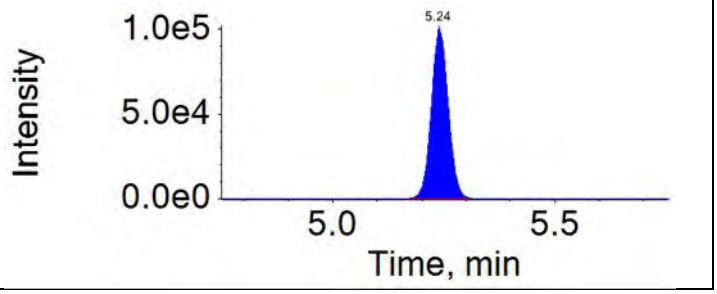
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



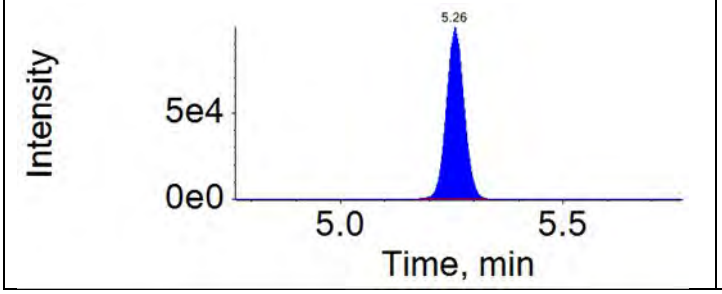


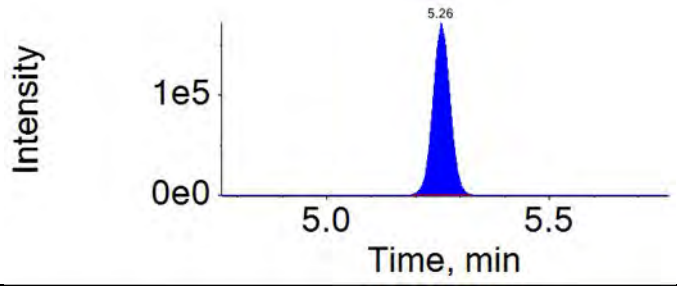
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

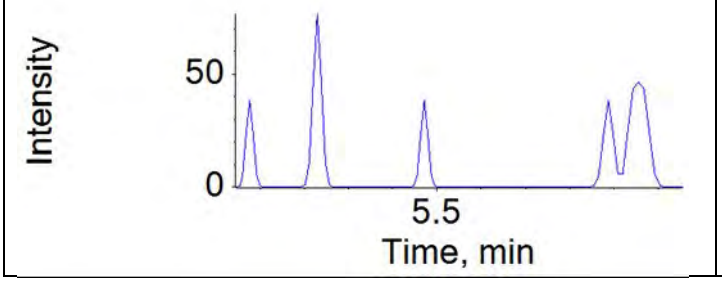
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

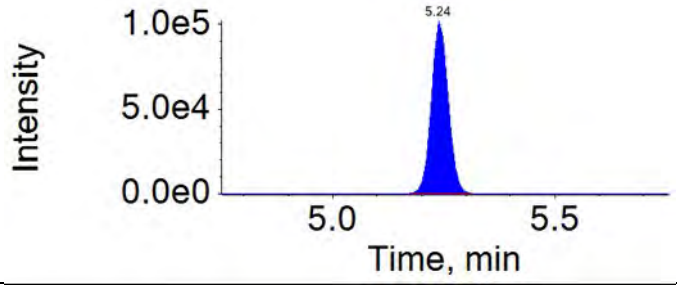
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



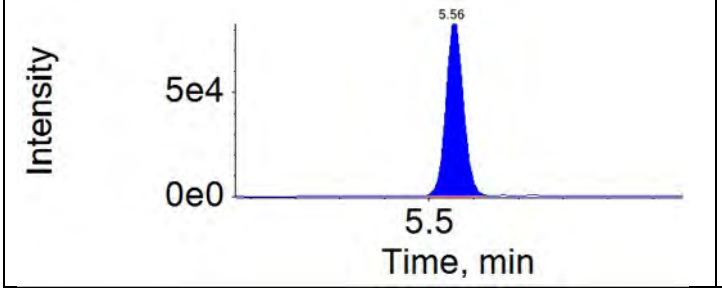


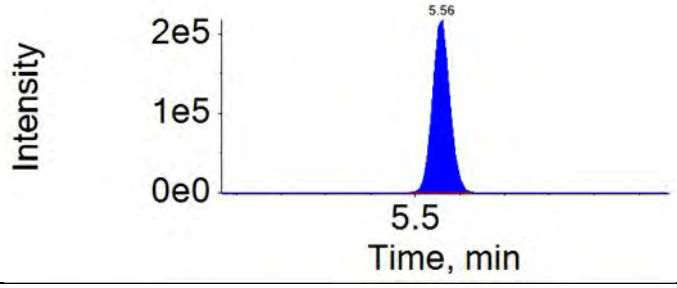
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



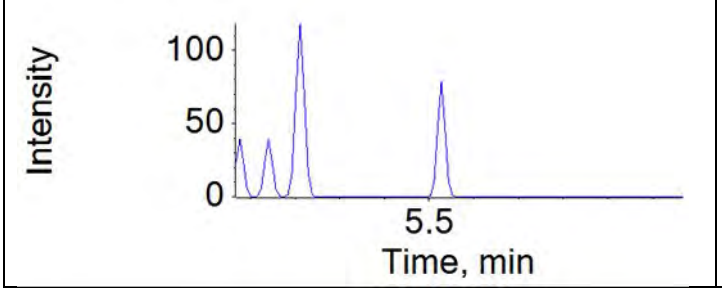


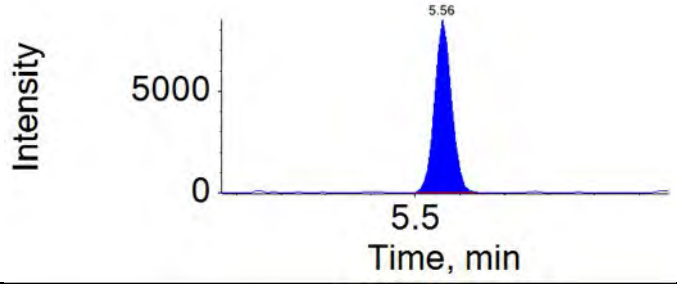
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



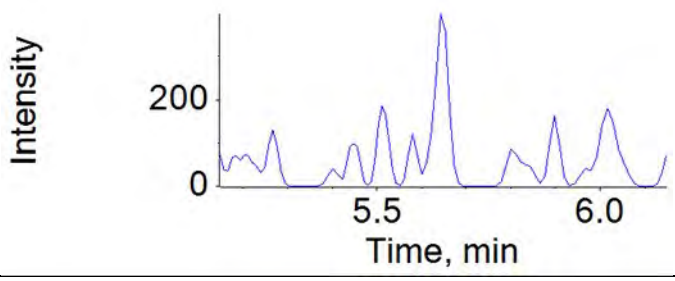


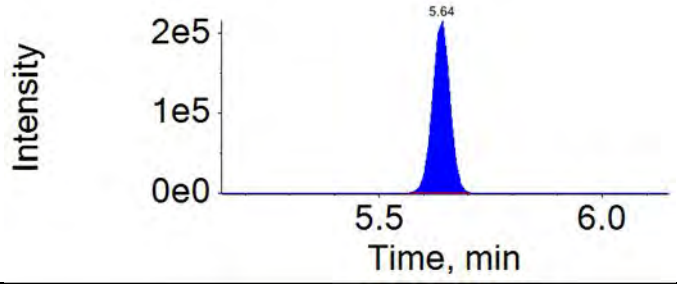
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

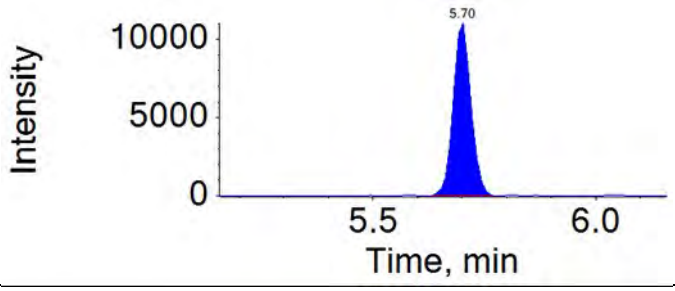
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

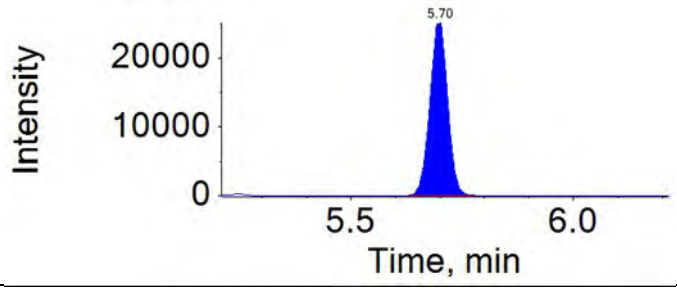
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



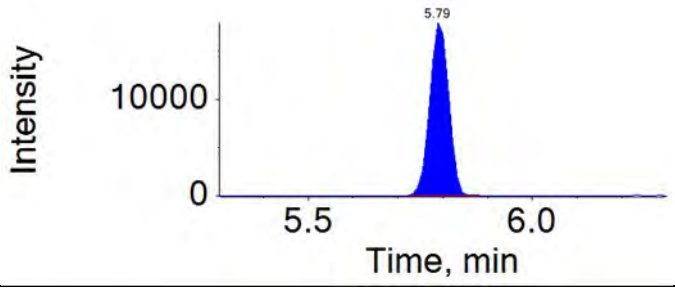


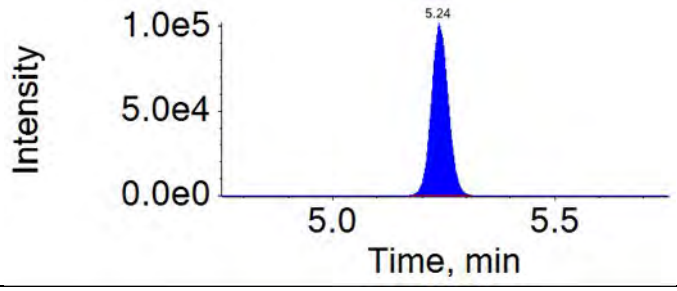
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



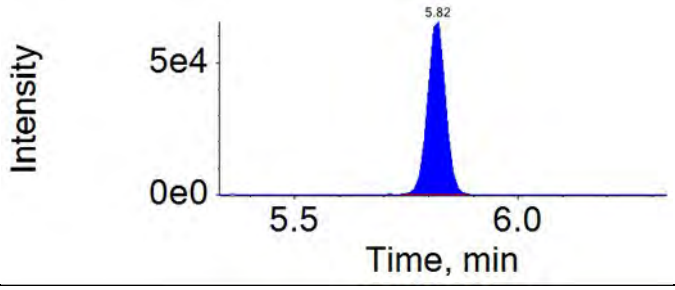


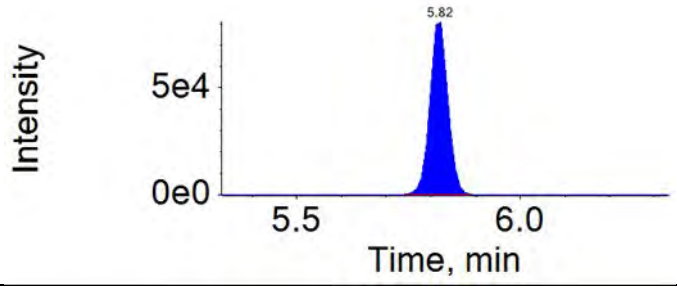
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



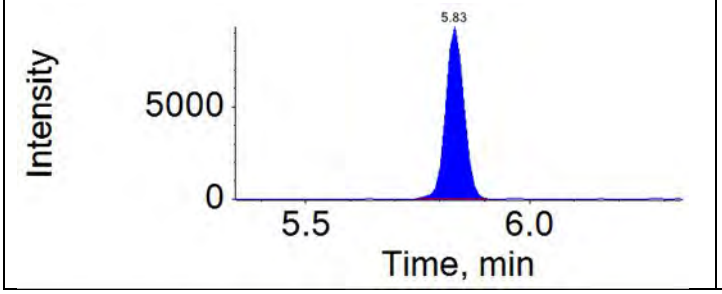


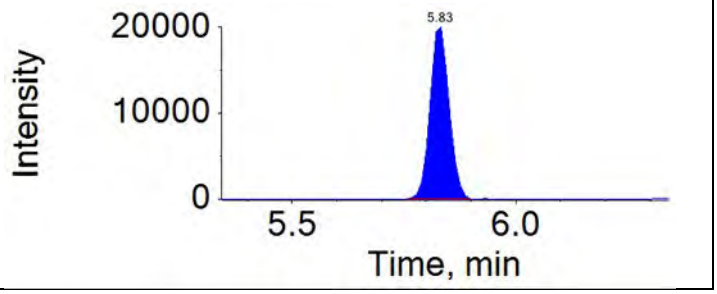
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

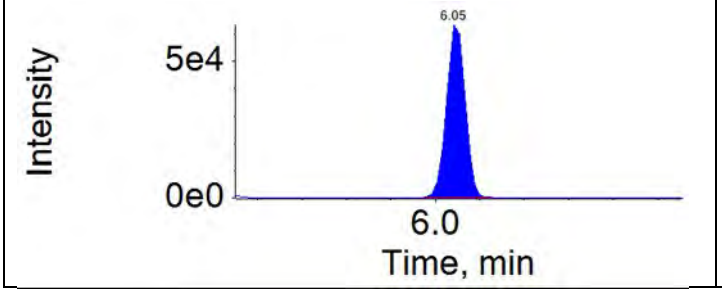
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

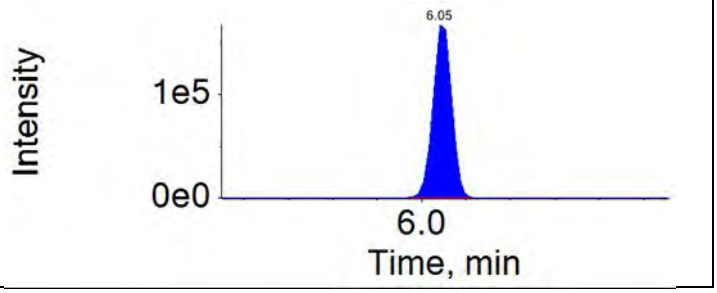
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



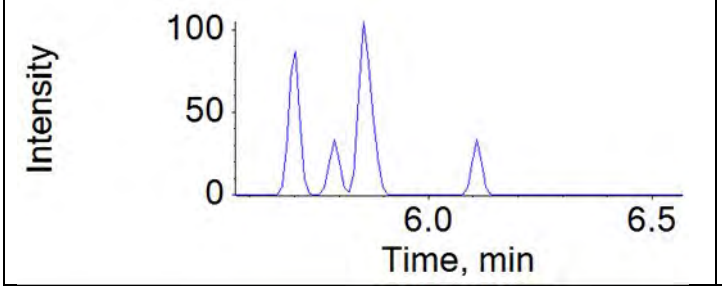


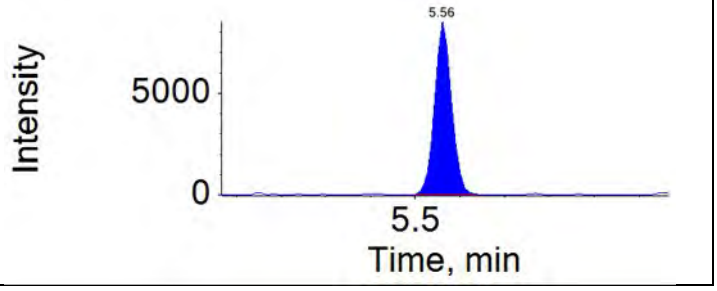
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



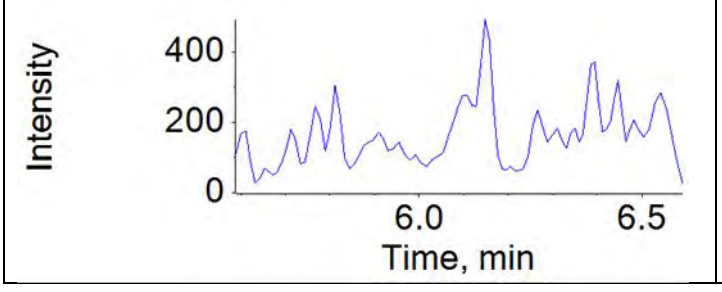


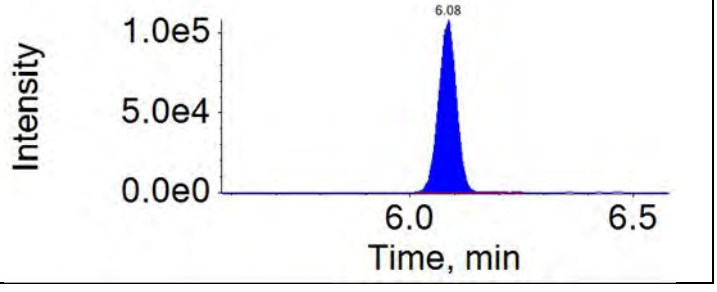
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



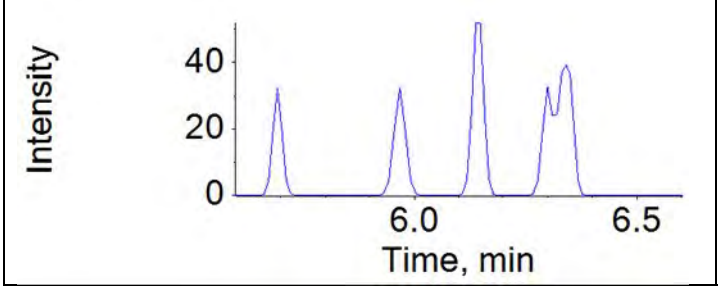


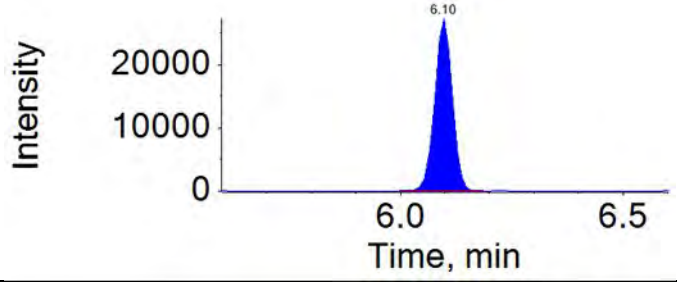
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

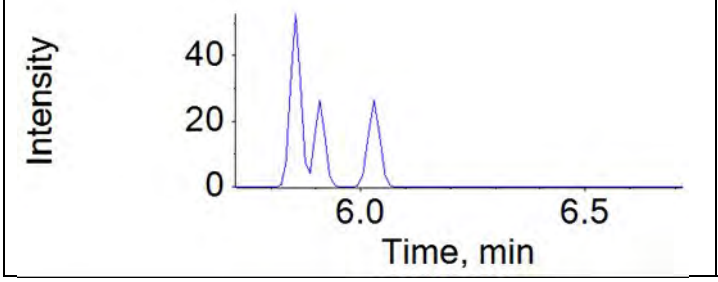
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

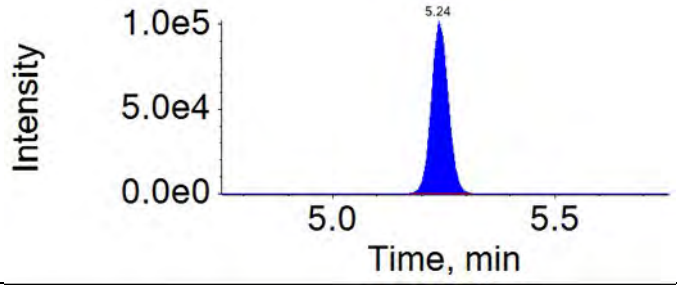
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



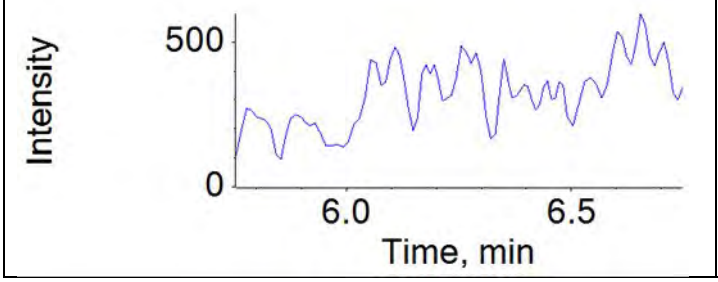


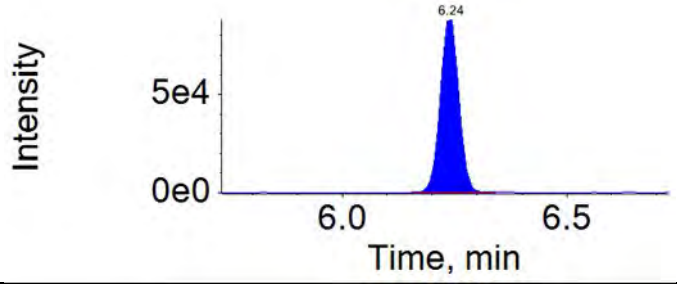
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



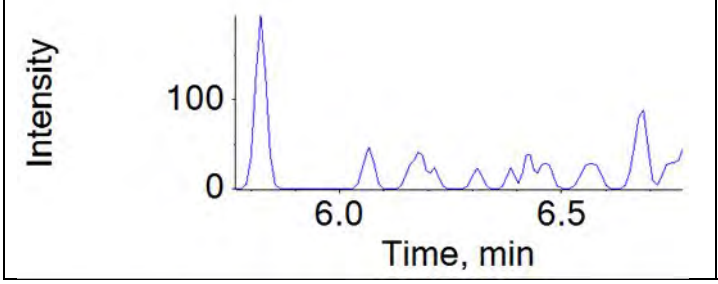


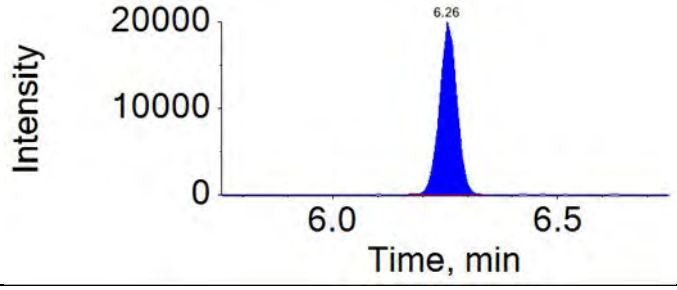
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



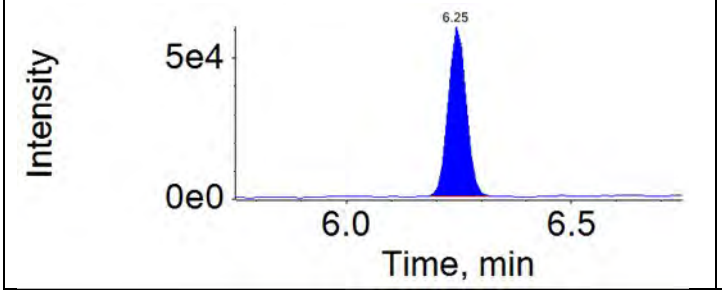


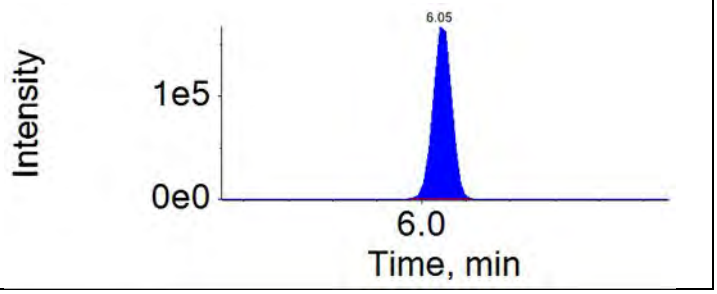
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

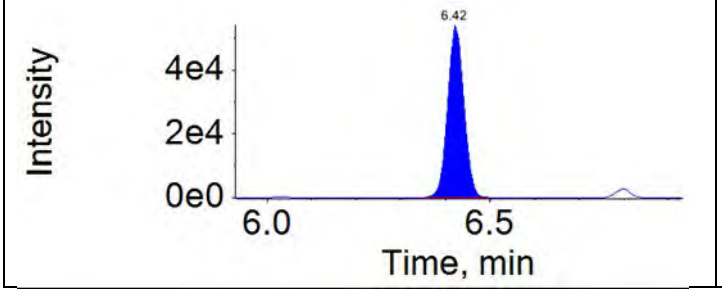
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

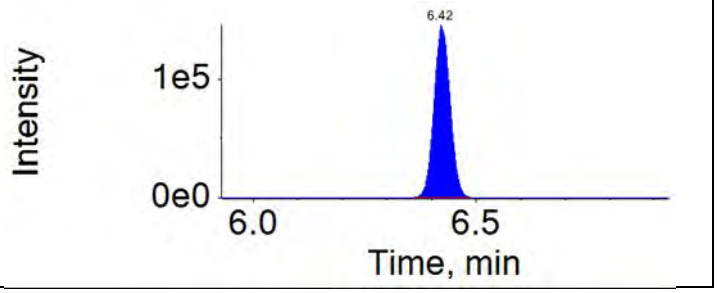
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



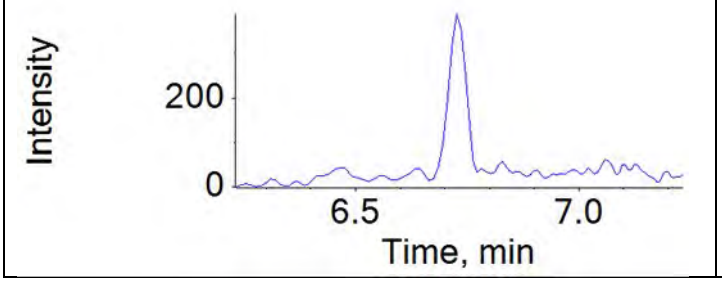


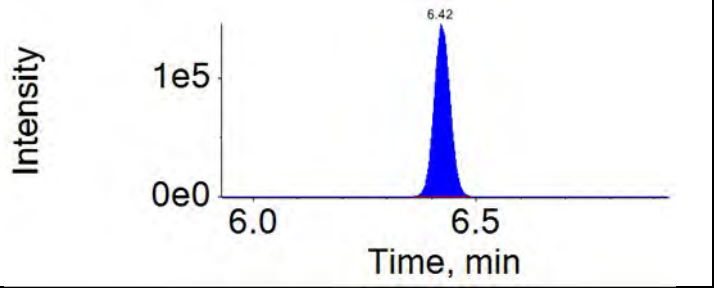
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



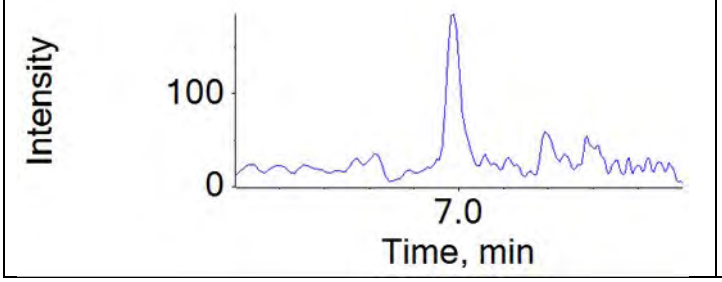


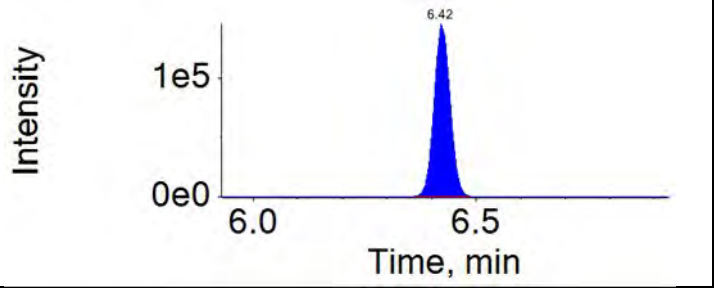
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



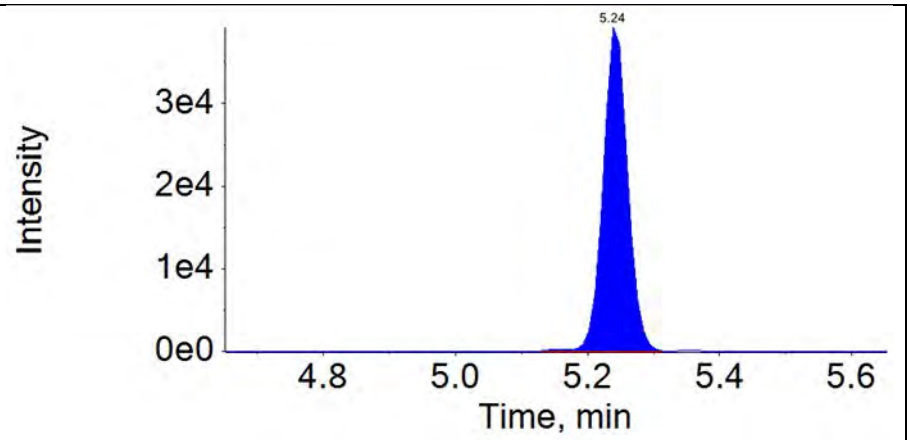


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

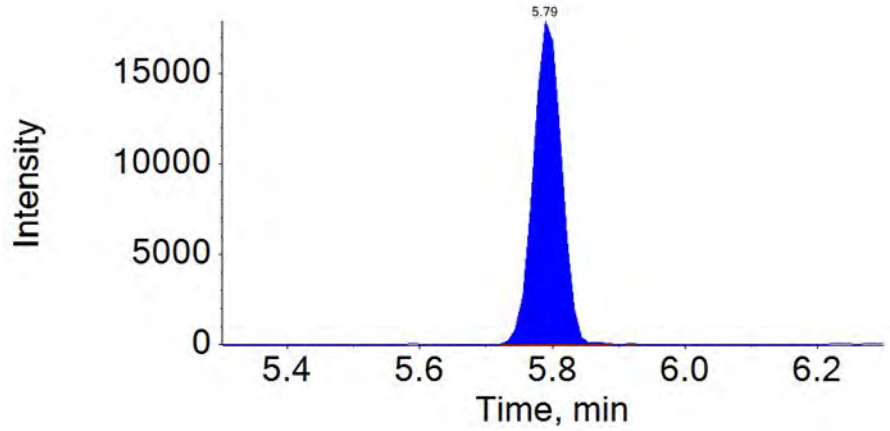
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
101508.83
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



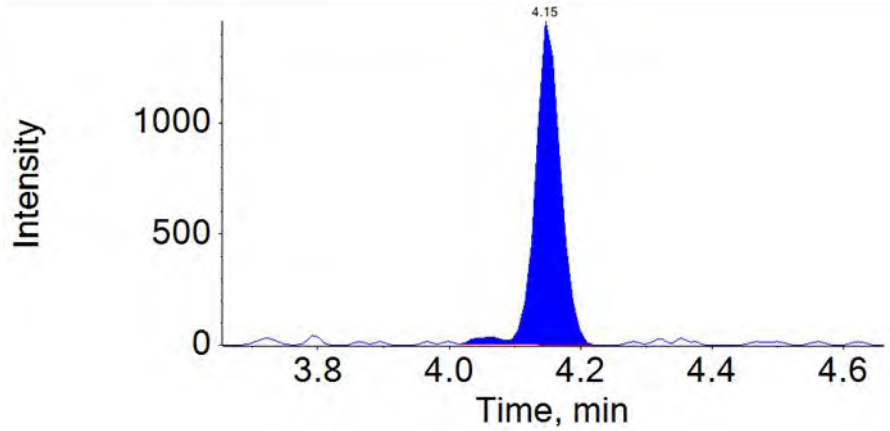
Integration Comment: incorrect integration

Component Name:
PFDS
RT (min.):
5.79
Peak Area:
52928.55
Mass Range:
599.0 / 80.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.15
Peak Area:
3909.75
Mass Range:
313.0 / 119.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

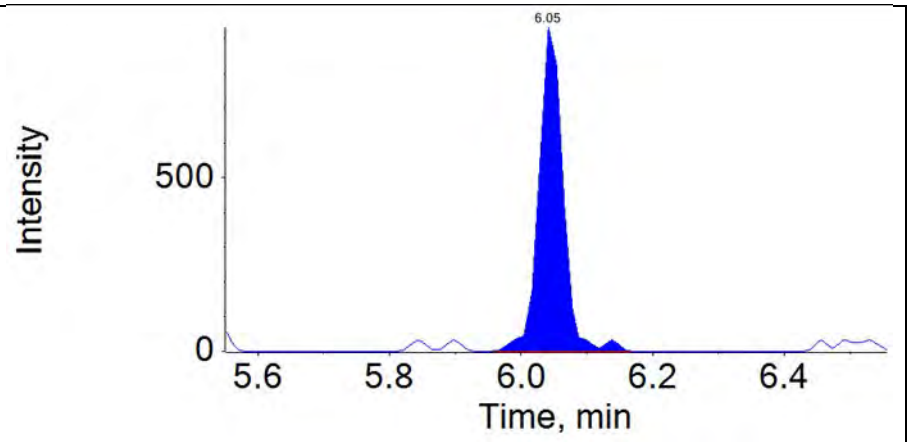
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

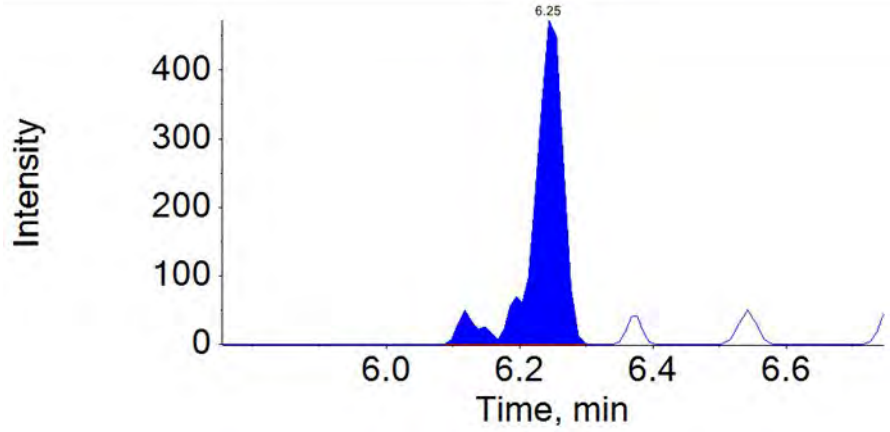
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
2399.87
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
1468.60
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

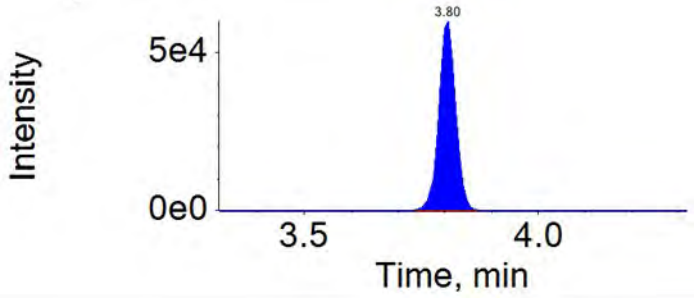
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-50.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	150059.59	A	0.3619	0.3773			
PFBS_2	3.81	1.00	56617.66	A	0.3619	0.3773	4	50	
4:2-FTS	N/A	N/A	N/A	A	0.6730	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	0.6730	N/A		#NA!	
PFHxA	4.15	1.00	328694.28	A	0.0117	0.0117			
PFHxA_2	4.15	1.00	3829.67	M	0.0117	0.0117	0	50	
PFPeS	N/A	N/A	N/A	A	0.5191	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5191	N/A		50	
PFHpA	4.54	1.00	316975.28	A	0.0563	0.0530			
PFHpA_2	4.54	1.00	16790.55	A	0.0563	0.0530	-6	50	
PFHxS	4.55	1.00	115564.23	A	0.3428	0.3340			
PFHxS_2	4.55	1.00	38596.78	A	0.3428	0.3340	-3	50	
6:2-FTS	N/A	N/A	N/A	A	0.6604	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	0.6604	N/A		#NA!	
PFHpS	4.91	1.08	118318.71	A	0.4066	0.3735			
PFHpS_2	4.91	1.08	44193.16	A	0.4066	0.3735	-8	50	
PFOA	4.91	1.00	332094.35	A	0.0562	0.0559			
PFOA_2	4.91	1.00	18574.54	A	0.0562	0.0559	0	50	
PFOS	5.24	1.00	100952.54	M	0.2968	0.3741			
PFOS_2	5.24	1.00	37762.78	A	0.2968	0.3741	26	50	
PFNA	5.26	1.00	271240.37	A	0.0229	0.0190			
PFNA_2	5.26	1.00	5150.39	A	0.0229	0.0190	-17	50	
PFNS	N/A	N/A	N/A	A	0.4828	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4828	N/A		50	
PFDA	5.56	1.00	224279.75	A	0.0081	0.0061			
PFDA_2	5.56	1.00	1372.75	A	0.0081	0.0061	-24	50	
8:2-FTS	N/A	N/A	N/A	A	0.6814	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	0.6814	N/A		#NA!	
NMeFOSAA	5.70	1.00	30591.86	A	0.2569	0.2719			
NMeFOSAA_2	5.70	1.00	8316.89	A	0.2569	0.2719	6	50	
PFDS	5.79	1.11	52860.94	M	0.5144	0.5291			
PFDS_2	5.79	1.11	27969.61	A	0.5144	0.5291	3	50	
PFUnDA	5.82	1.00	183511.26	A	0.0058	0.0078			
PFUnDA_2	5.82	1.00	1432.36	A	0.0058	0.0078	34	50	
NEtFOSAA	5.83	1.00	26149.34	A	0.7253	0.6365			
NEtFOSAA_2	5.83	1.00	16644.93	A	0.7253	0.6365	-12	50	
PFDoDA	6.05	1.00	185295.04	A	0.0157	0.0127			
PFDoDA_2	6.05	1.00	2348.96	M	0.0157	0.0127	-19	50	
10:2-FTS	N/A	N/A	N/A	A	0.6356	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	0.6356	N/A		#NA!	
PFTrDA	6.25	1.03	165153.11	A	0.0086	0.0082			
PFTrDA_2	6.25	1.03	1356.95	M	0.0086	0.0082	-4	50	
PFTeDA	6.42	1.00	135650.98	A	0.0062	0.0054			
PFTeDA_2	6.42	1.00	727.00	A	0.0062	0.0054	-14	50	
PFHxDA	N/A	N/A	N/A	A	0.0683	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0683	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0277	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0277	N/A		50	

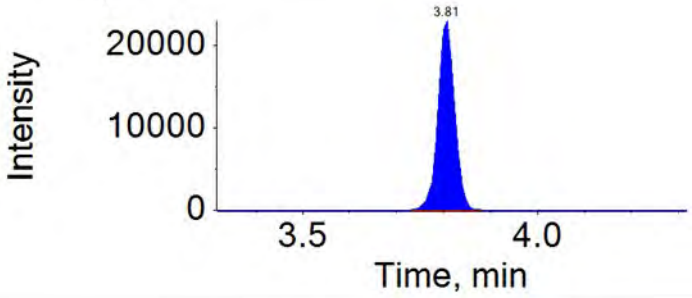
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

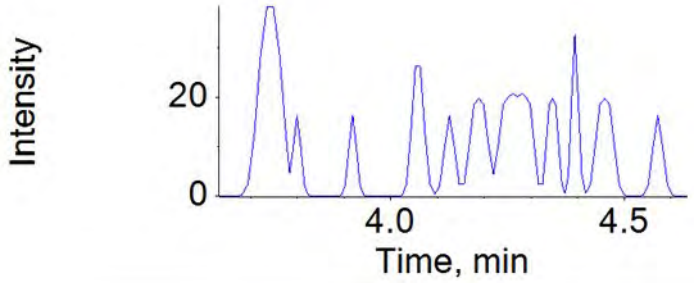
Component: PFBS
Primary Mass: 299.0 / 80.0



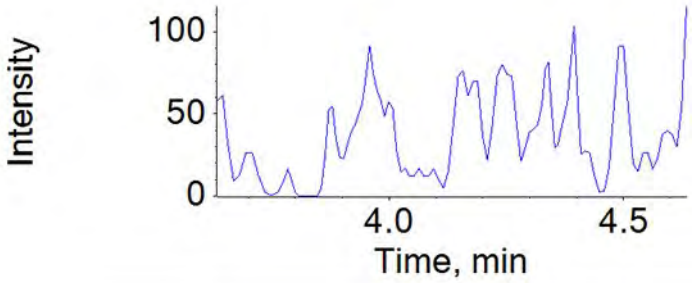
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



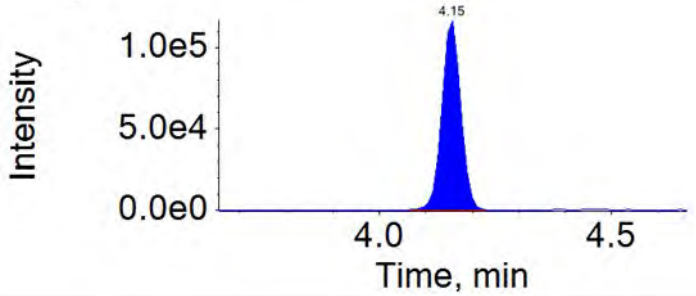
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



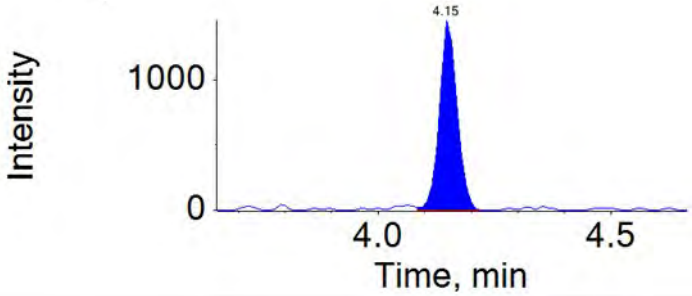
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



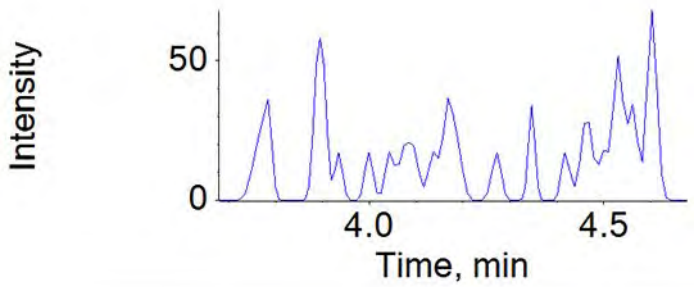
Component: PFHxA
Primary Mass: 313.0 / 269.0



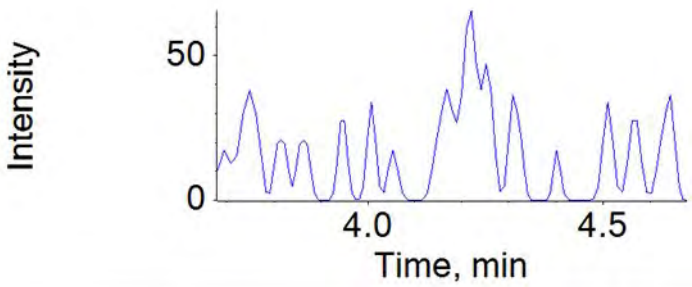
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



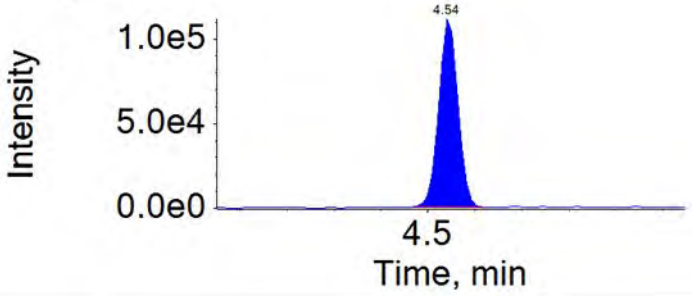
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



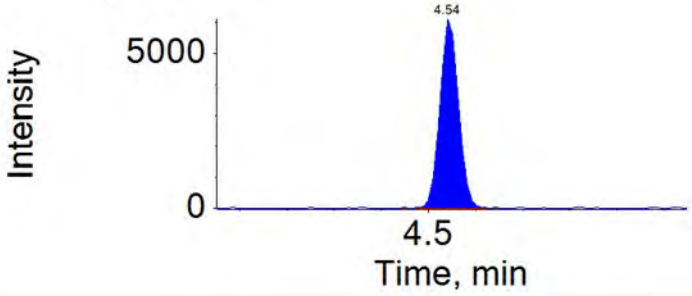
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

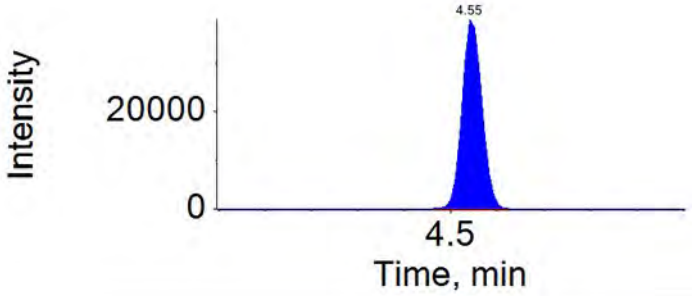
Component: PFHpA
Primary Mass: 363.0 / 319.0



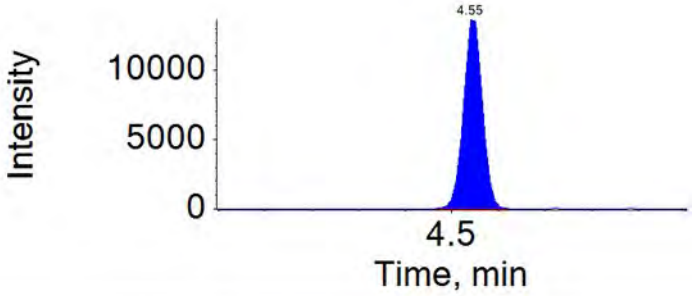
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



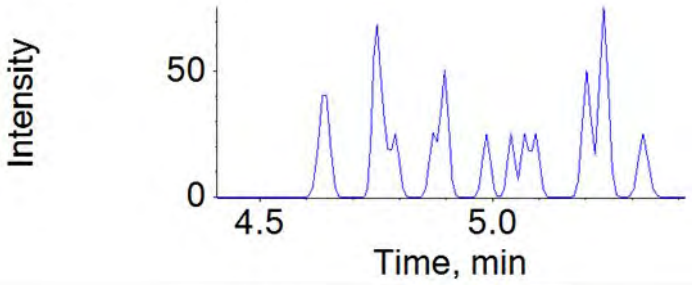
Component: PFHxS
Primary Mass: 399.0 / 80.0



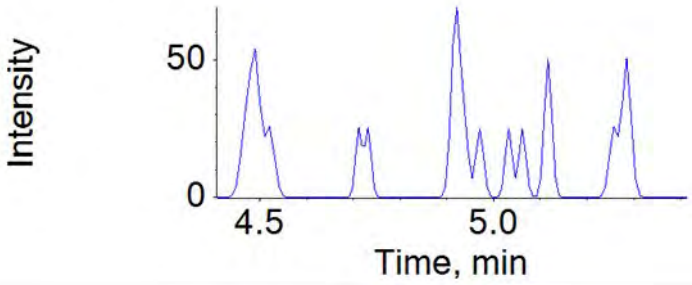
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



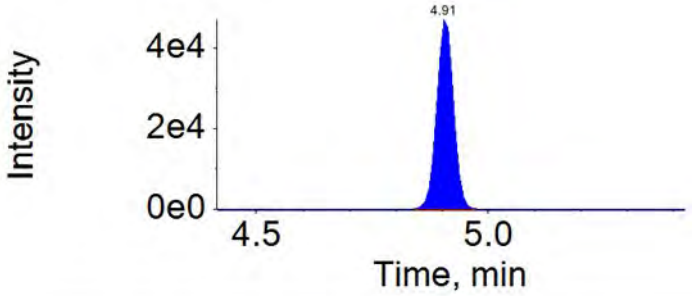
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



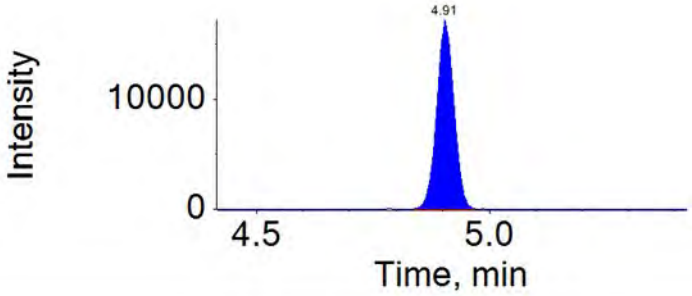
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



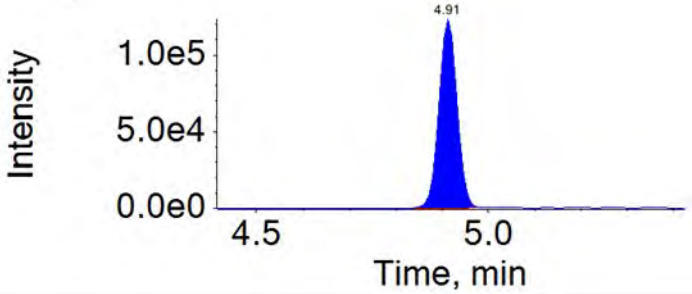
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



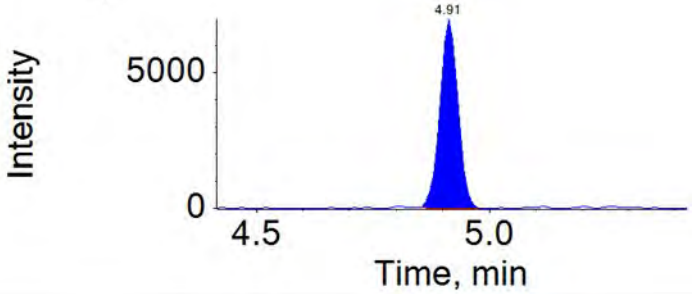
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

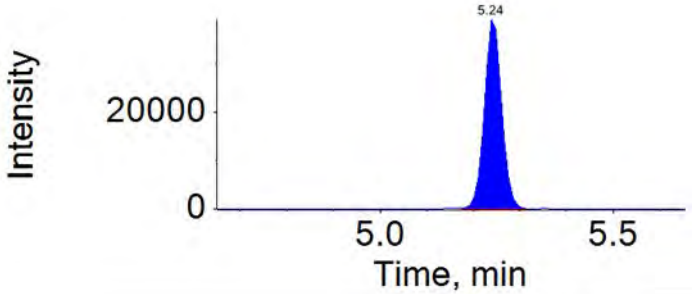
Component: PFOA
Primary Mass: 413.0 / 369.0



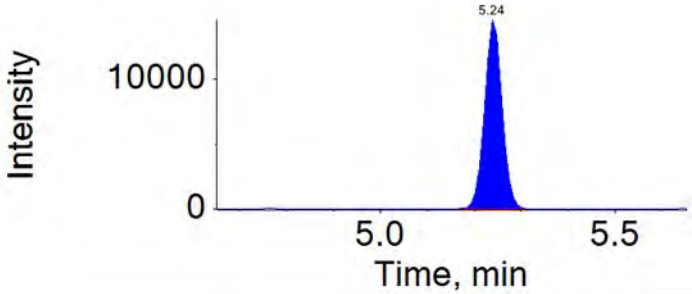
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



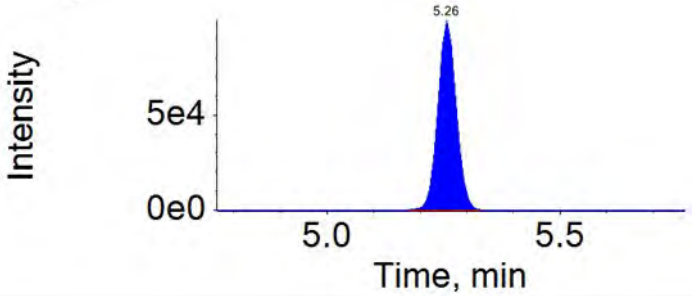
Component: PFOS
Primary Mass: 499.0 / 80.0



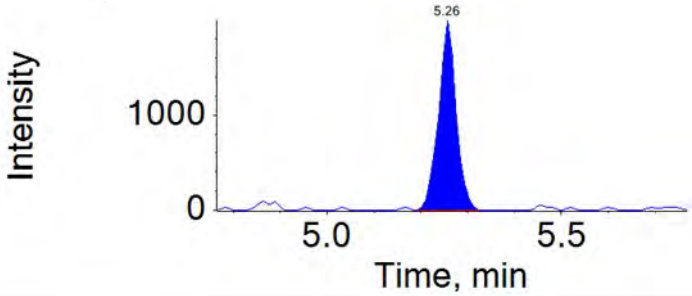
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



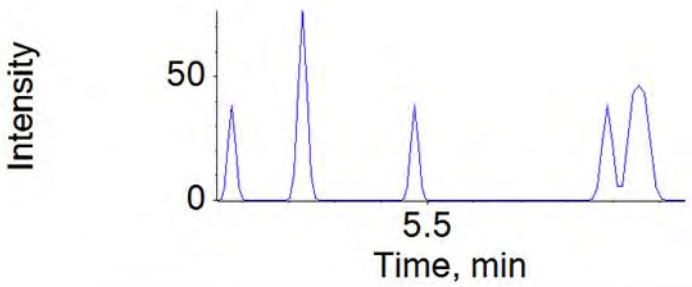
Component: PFNA
Primary Mass: 463.0 / 419.0



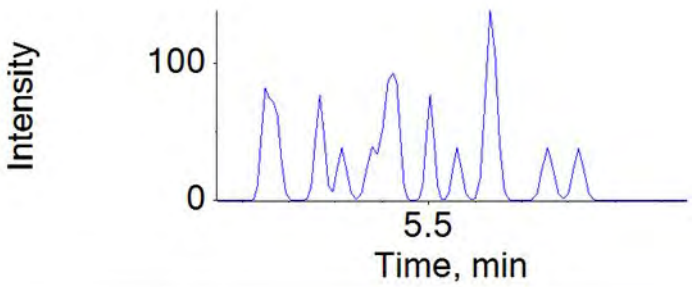
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



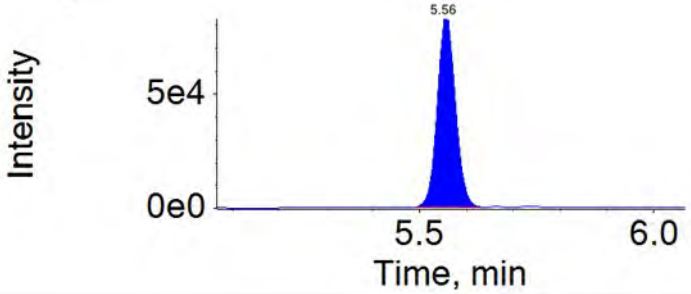
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



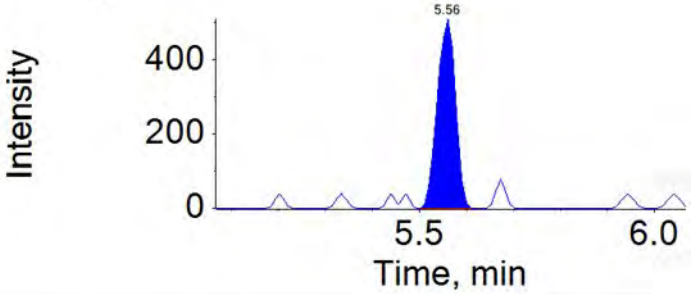
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

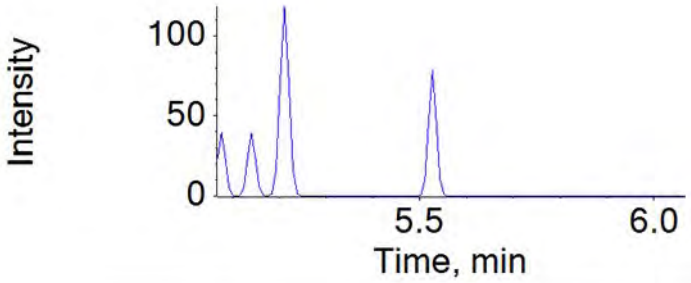
Component: PFDA
Primary Mass: 513.0 / 469.0



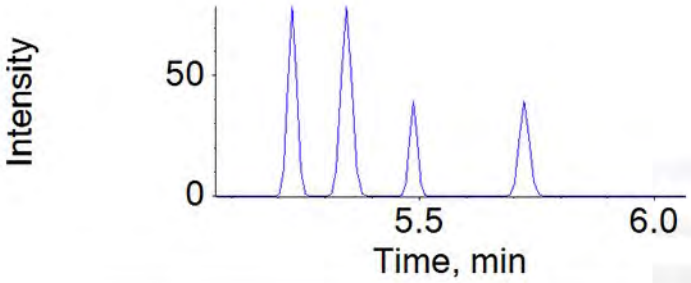
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



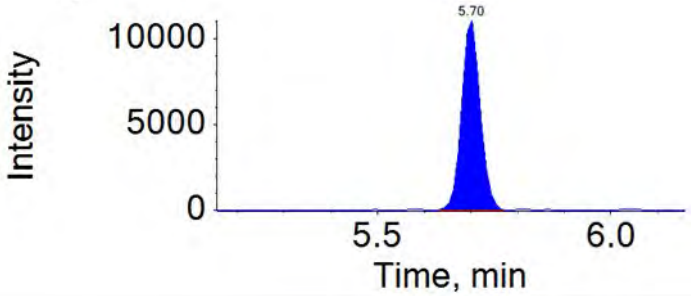
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



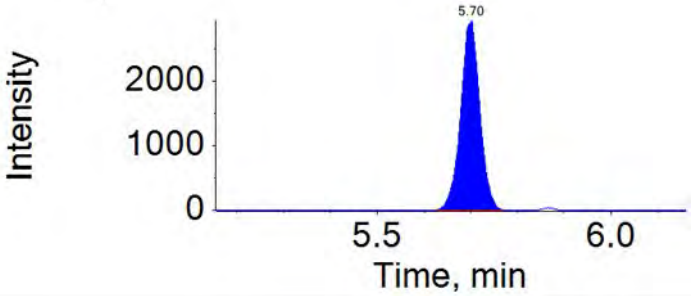
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



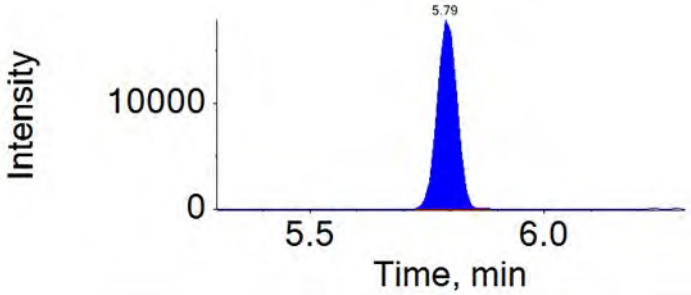
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



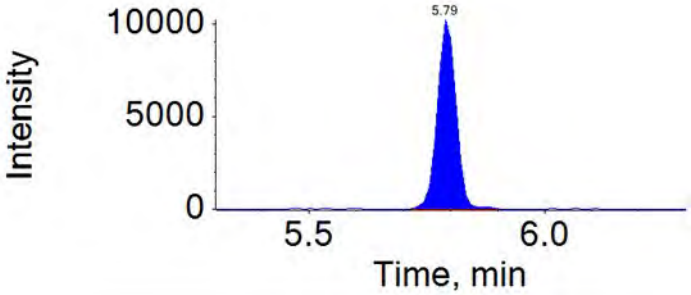
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



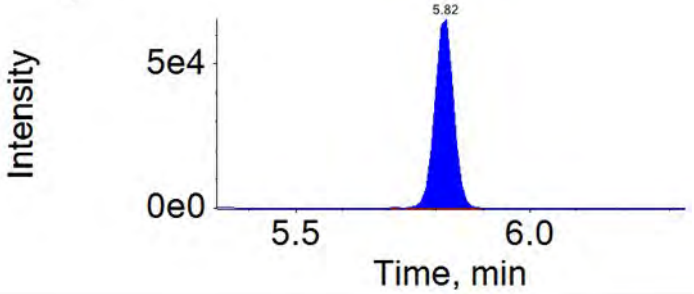
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



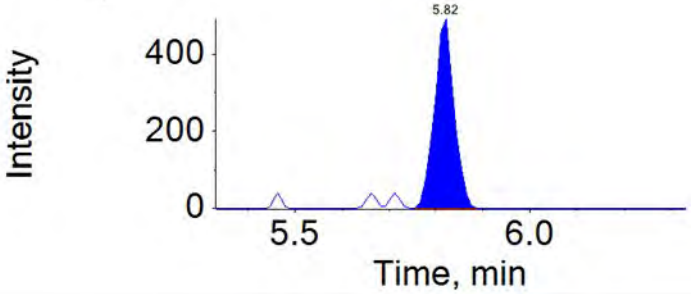
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

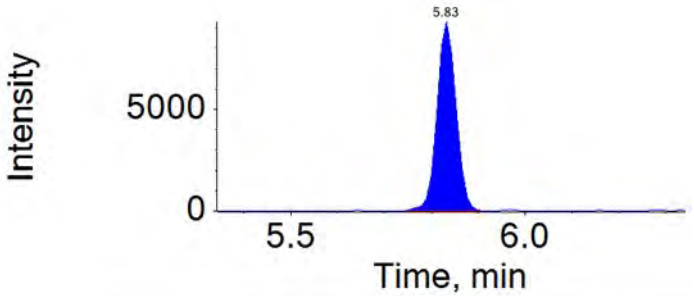
Component: PFUnDA
Primary Mass: 563.0 / 519.0



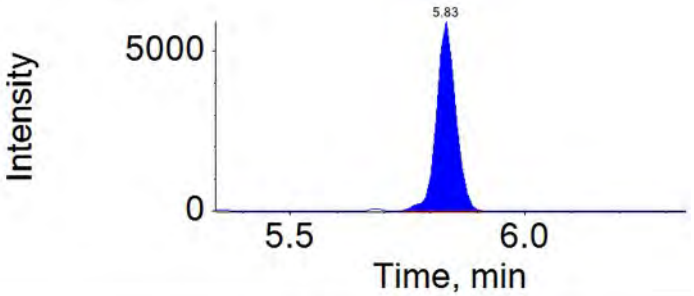
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



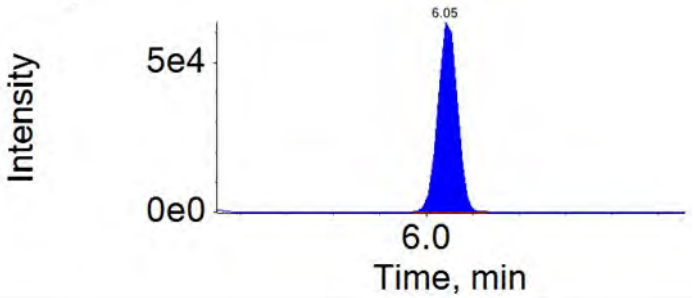
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



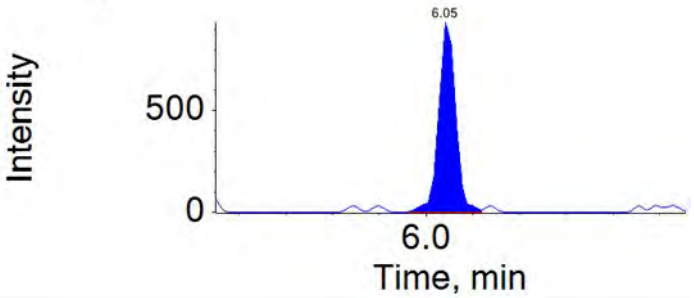
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



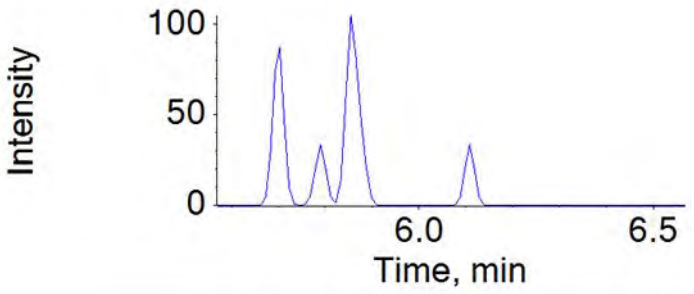
Component: PFDoDA
Primary Mass: 613.0 / 569.0



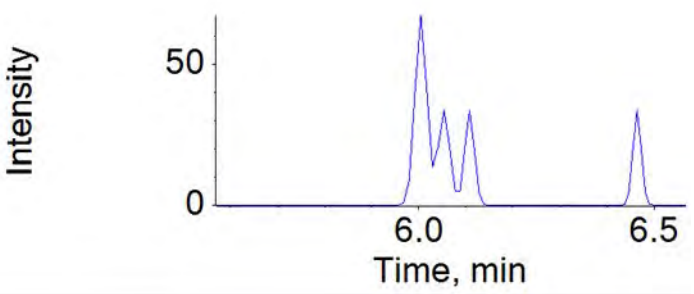
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



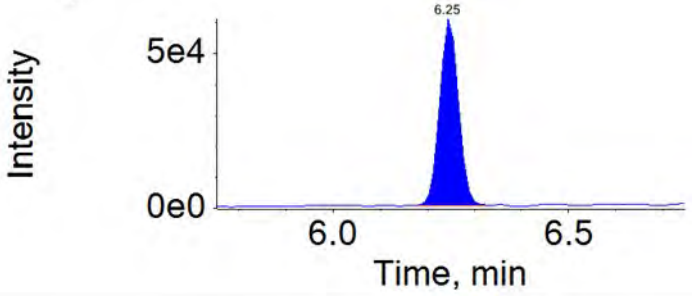
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



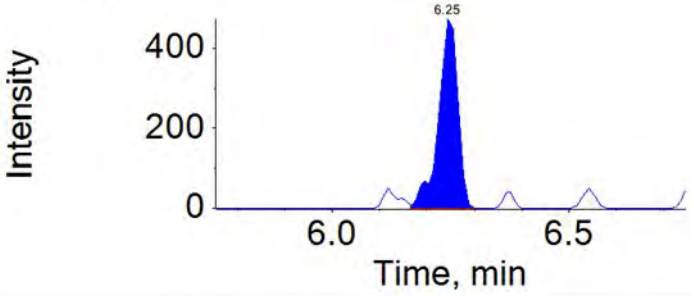
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

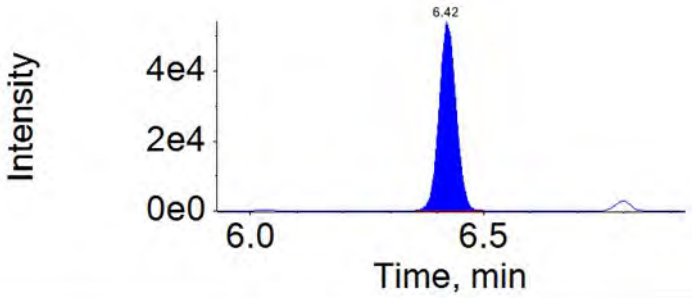
Component: PFTrDA
Primary Mass: 663.0 / 619.0



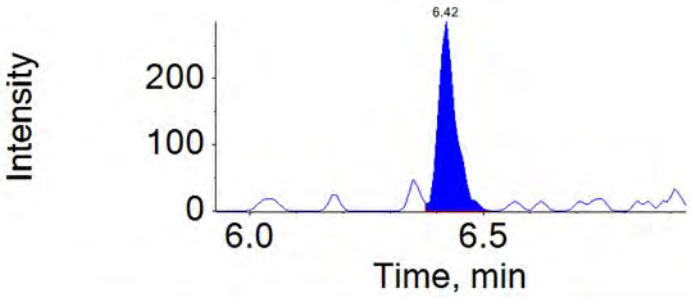
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



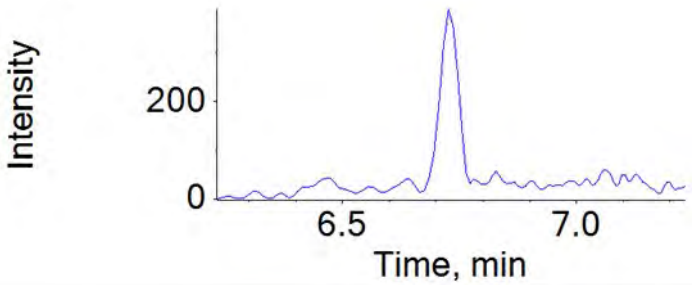
Component: PFTeDA
Primary Mass: 713.0 / 669.0



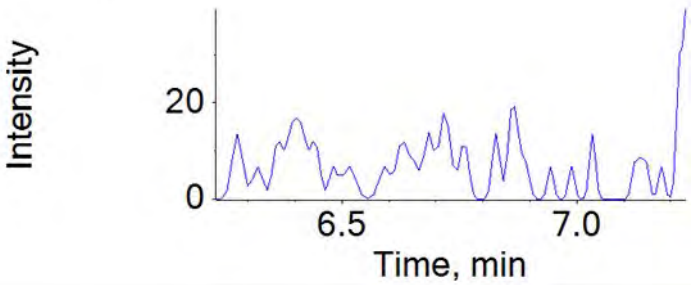
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



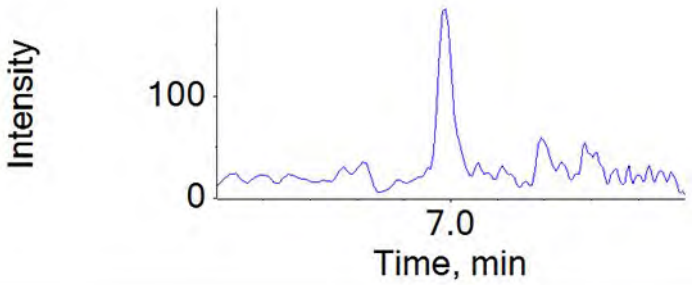
Component: PFHxDA
Primary Mass: 813.0 / 769.0



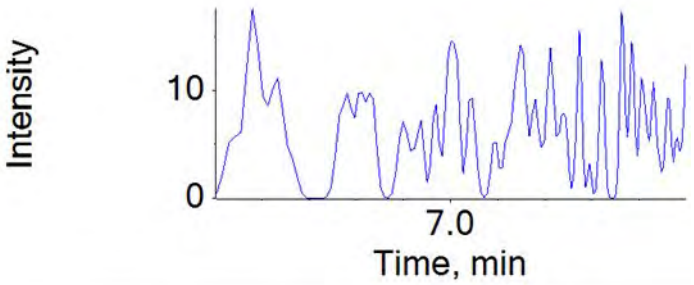
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV12DCAL-51.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-12T16:27:15
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	682528.6	659926.2	3	50	
13C2-PFOA	5.0	446810.2	450219.7	-1	50	
13C4-PFOS	4.8	256014.8	249205.8	3	50	
13C2-PFDA	5.0	295115.2	278743.9	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735331.8	13C3-PFBA	682528.6	1.077	5.000	4.830	97	70-130	
E13C5-PFPeA	714738.5	13C3-PFBA	682528.6	1.047	5.000	4.697	94	70-130	
E13C3-PFBS	418749.4	13C3-PFBA	682528.6	0.614	4.650	4.331	93	70-130	
E13C2-4:2-FTS	45470.2	13C2-PFOA	446810.2	0.102	4.670	4.532	97	70-130	
E13C5-PFHxA	624943.7	13C2-PFOA	446810.2	1.399	5.000	5.052	101	70-130	
E13C3-PFHxS	318599.1	13C2-PFOA	446810.2	0.713	4.730	4.893	103	70-130	
E13C4-PFHpA	492218.6	13C2-PFOA	446810.2	1.102	5.000	4.963	99	70-130	
E13C2-6:2-FTS	35757.3	13C2-PFOA	446810.2	0.080	4.750	5.354	113	70-130	
E13C8-PFOA	860795.2	13C2-PFOA	446810.2	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	257626.7	13C4-PFOS	256014.8	1.006	4.780	4.459	93	70-130	
E13C9-PFNA	443649.2	13C4-PFOS	256014.8	1.733	5.000	4.832	97	70-130	
E13C6-PFDA	588492.8	13C2-PFDA	295115.2	1.994	5.000	4.653	93	70-130	
E13C2-8:2-FTS	26035.6	13C2-PFDA	295115.2	0.088	4.790	4.400	92	70-130	
E13C8-PFOSA	615348.9	13C2-PFDA	295115.2	2.085	5.000	4.623	92	70-130	
Ed3-NMeFOSAA	69196.9	13C2-PFDA	295115.2	0.234	5.000	4.232	85	70-130	
E13C7-PFUnDA	249433.8	13C2-PFDA	295115.2	0.845	5.000	4.907	98	70-130	
Ed5-NEtFOSAA	70399.3	13C2-PFDA	295115.2	0.239	5.000	5.047	101	70-130	
E13C2-PFDoDA	502206.8	13C2-PFDA	295115.2	1.702	5.000	4.418	88	70-130	
Ed7-NMePFOSAE	314874.3	13C2-PFDA	295115.2	1.067	5.000	4.617	92	70-130	
Ed3-NMePFOSA	80287.6	13C2-PFDA	295115.2	0.272	5.000	4.943	99	70-130	
Ed9-NEtPFOSAE	265747.6	13C2-PFDA	295115.2	0.900	5.000	4.683	94	70-130	
Ed5-NEtPFOSA	56128.1	13C2-PFDA	295115.2	0.190	5.000	4.462	89	70-130	
E13C2-PFTeDA	379002.1	13C2-PFDA	295115.2	1.284	5.000	4.509	90	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

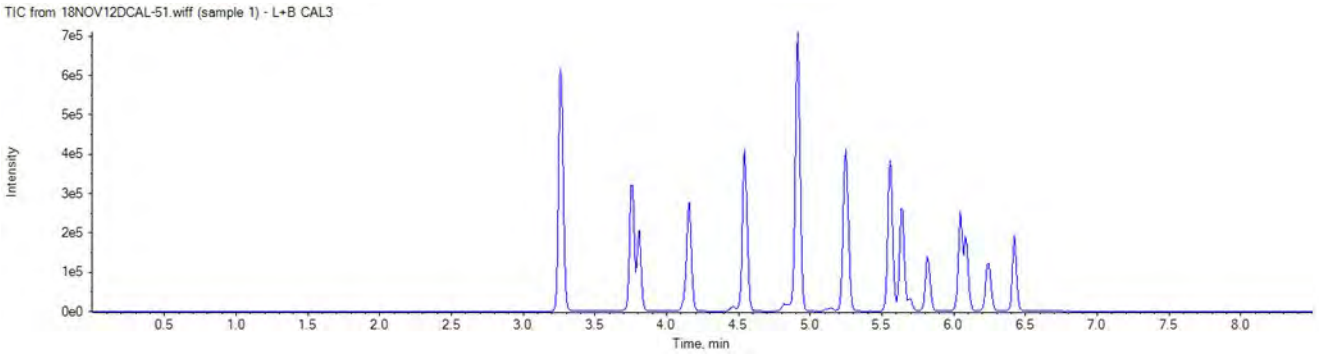
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-51.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	735331.8	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	714738.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	45470.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	624943.7	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	492218.6	N/A	
PFHxS	4.55	1.000	122359.8		M	13C3-PFHxS	4.55	318599.1	0.384	1.862
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	35757.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	318599.1	N/A	
PFOA	4.91	1.000	312625.4		M	13C8-PFOA	4.91	860795.2	0.363	1.940
PFOS	5.24	1.000	105809.8		M	13C8-PFOS	5.24	257626.7	0.411	1.796
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	443649.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	588492.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	615348.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	69196.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	249433.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	70399.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	502206.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	314874.3	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	80287.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	265747.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	56128.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	502206.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	

Total Ion Chromatogram

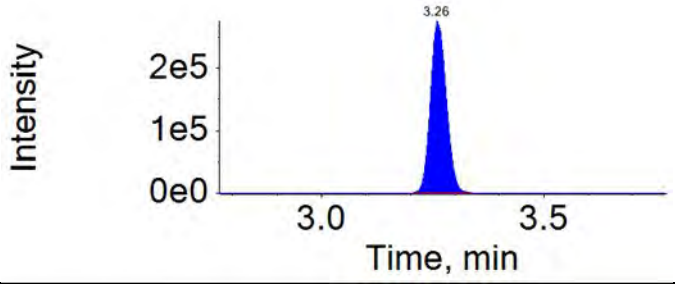


APPROVED
By MCD at 6:34 pm, 11/12/18

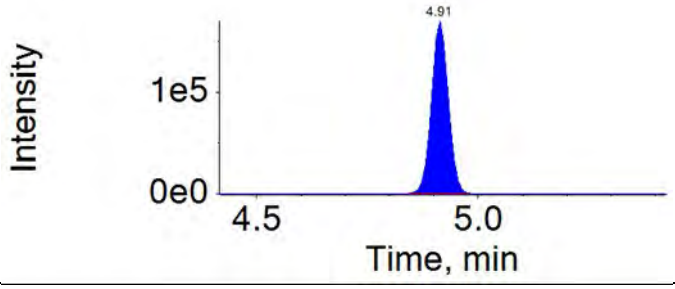
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

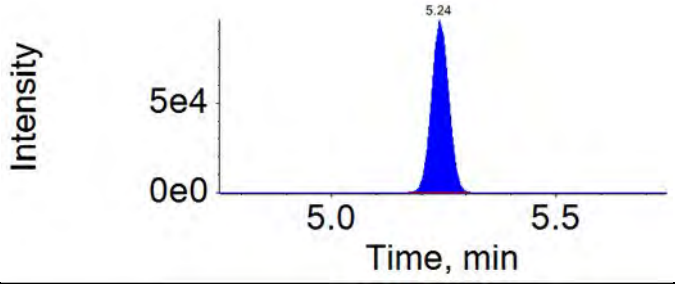
Injection Standard: 13C3-PFBA
216.0 / 172.0



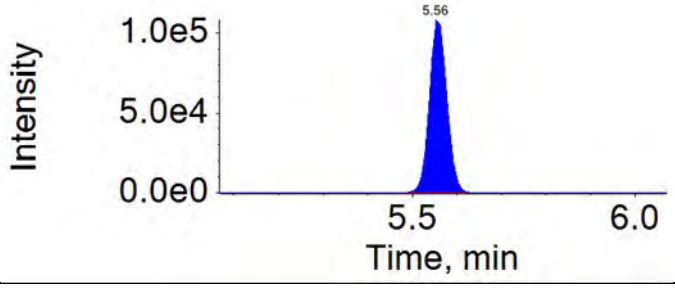
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

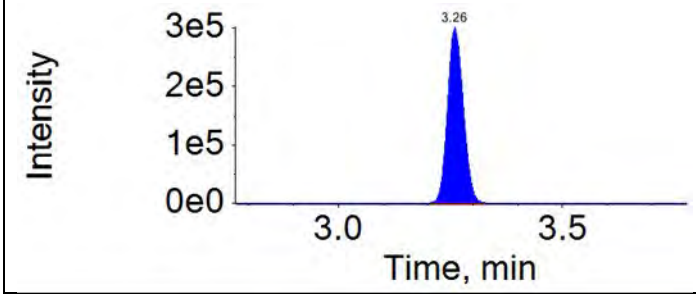


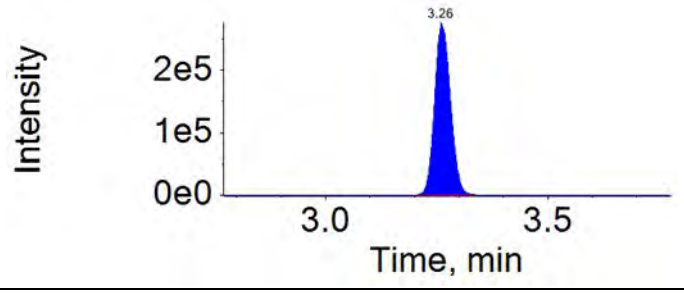
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

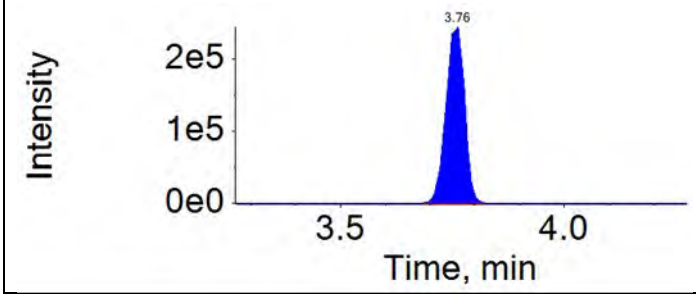
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

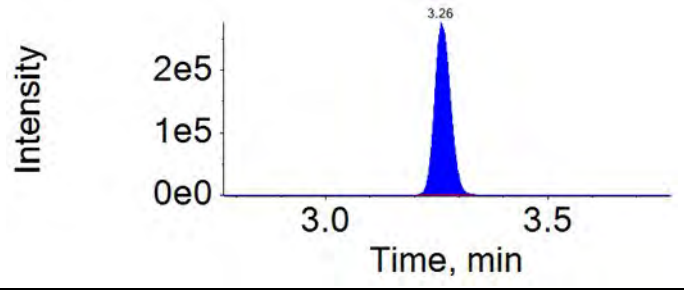
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



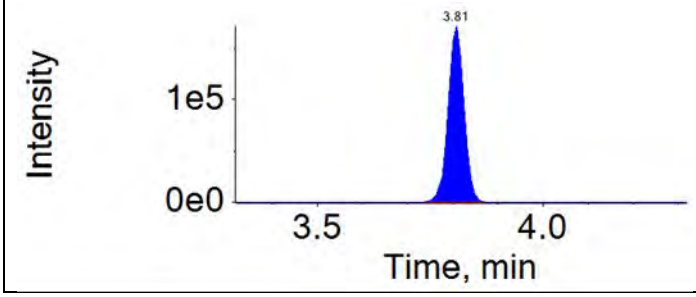


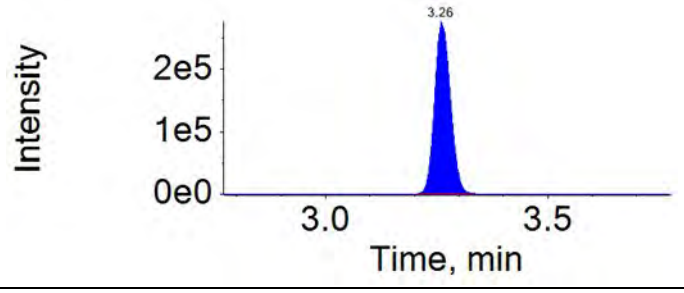
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



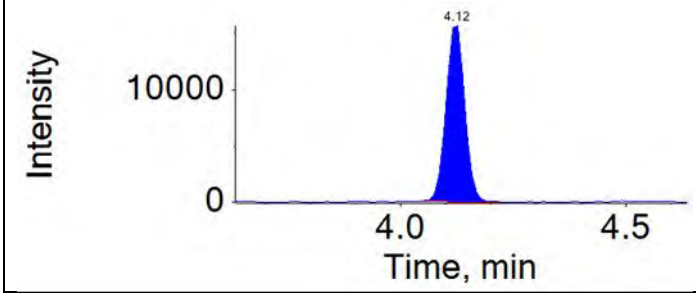


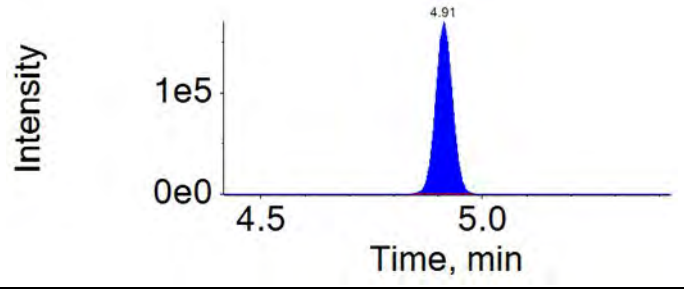
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



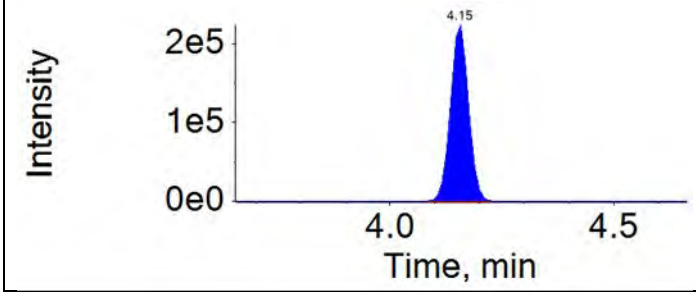


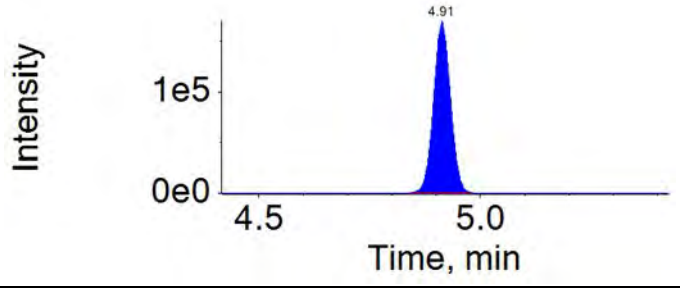
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

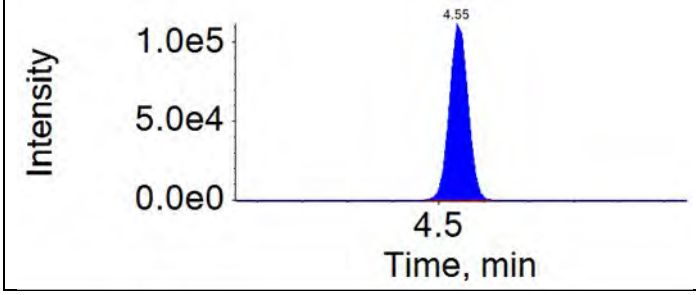
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

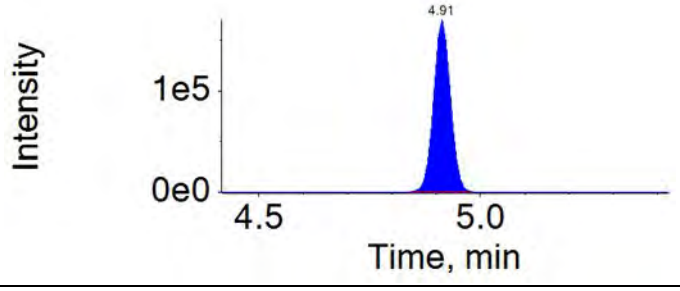
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



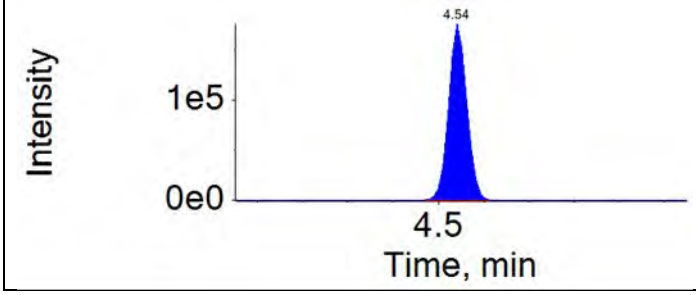


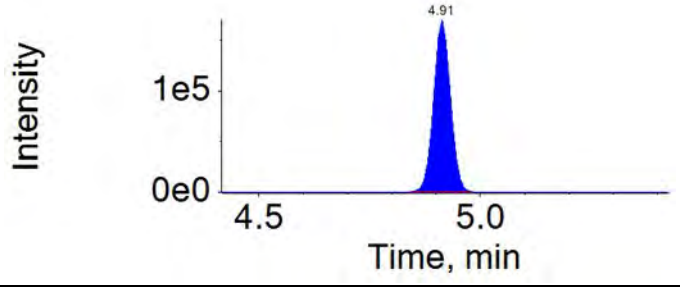
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



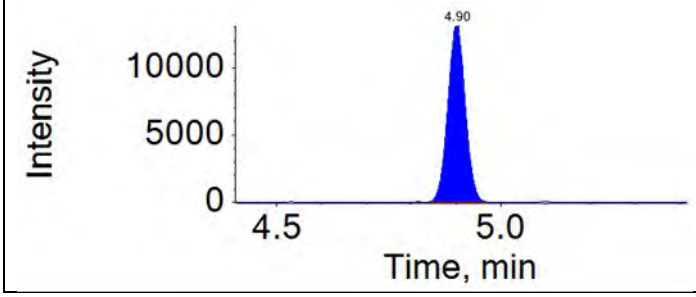


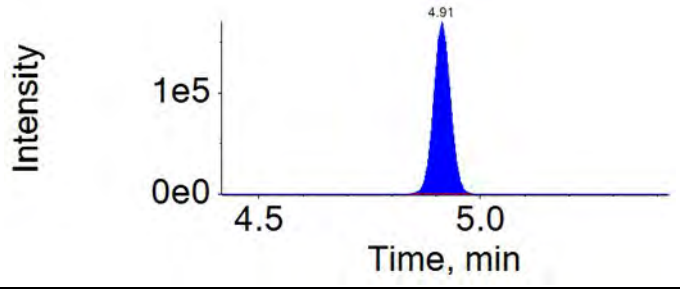
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

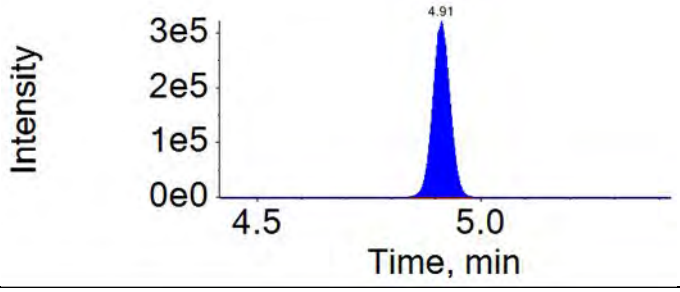
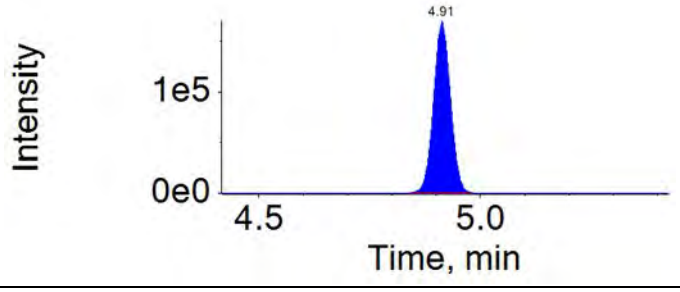


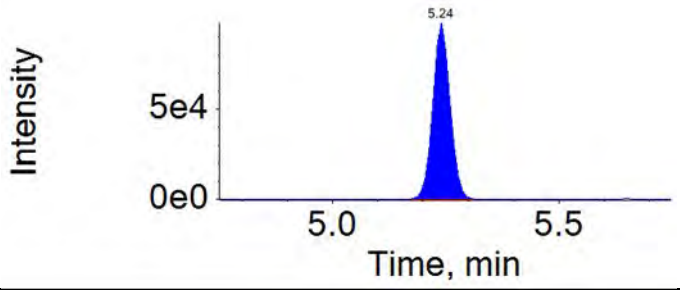
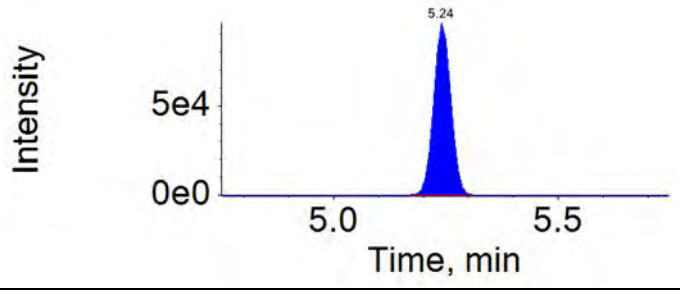


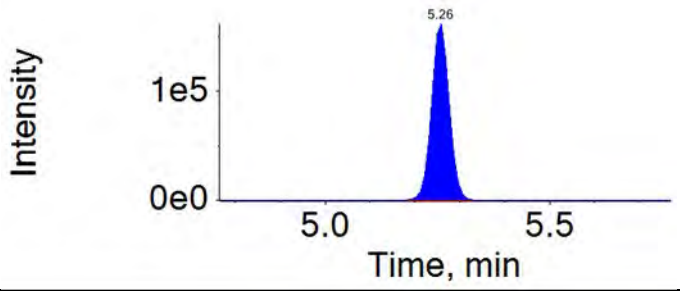
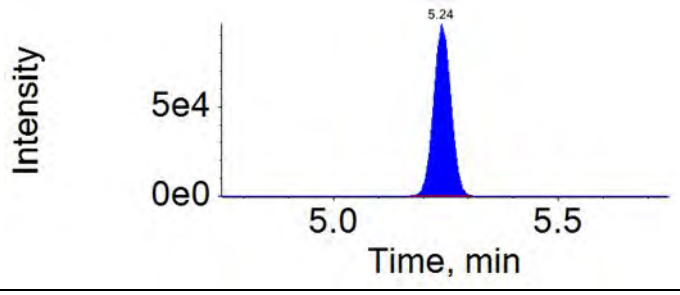
APPROVED
By MCD at 6:34 pm, 11/12/18

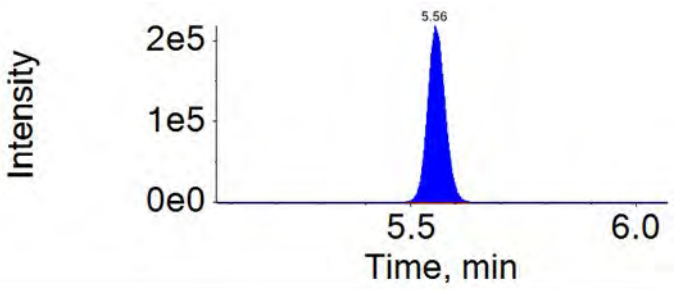
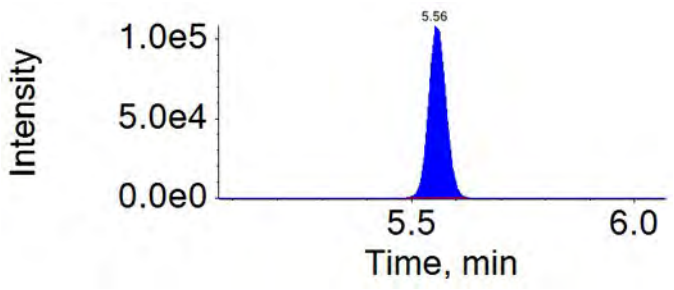
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

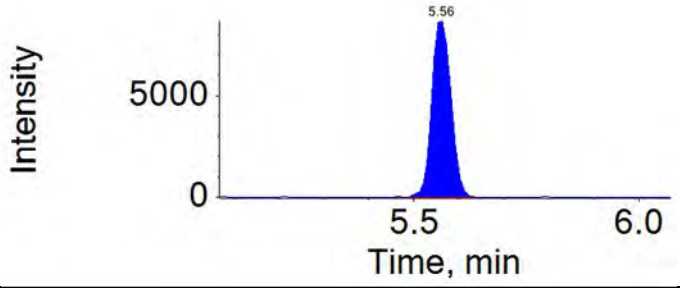
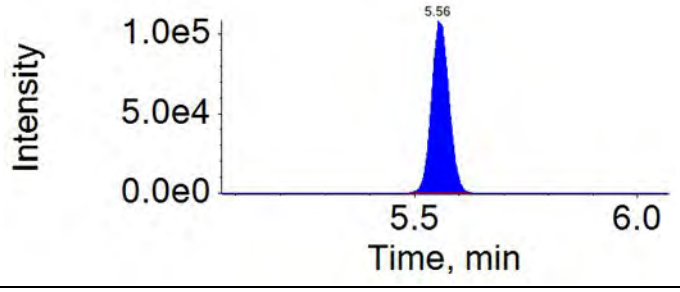
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

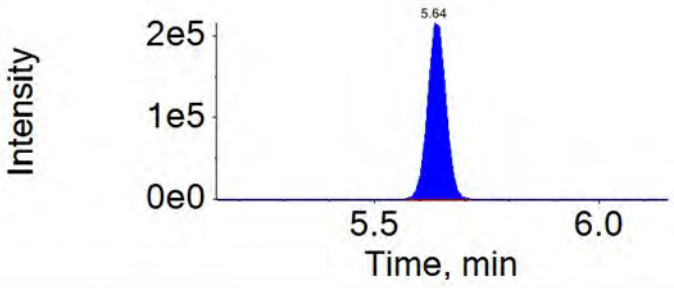
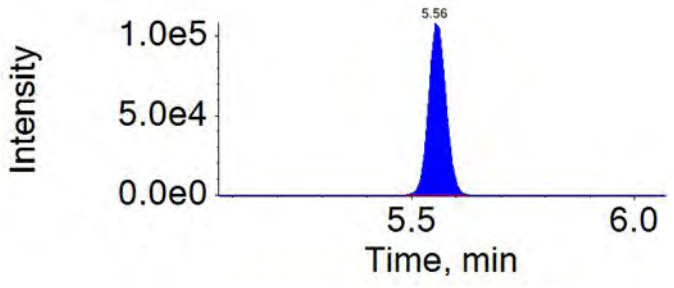
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

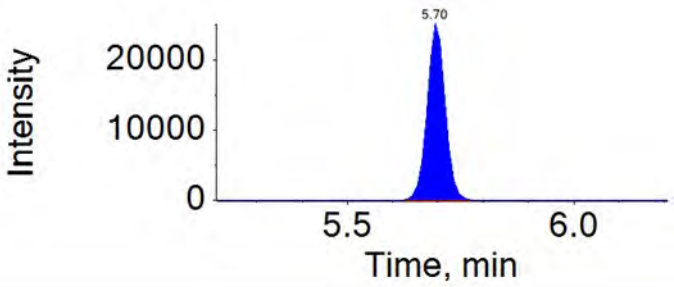
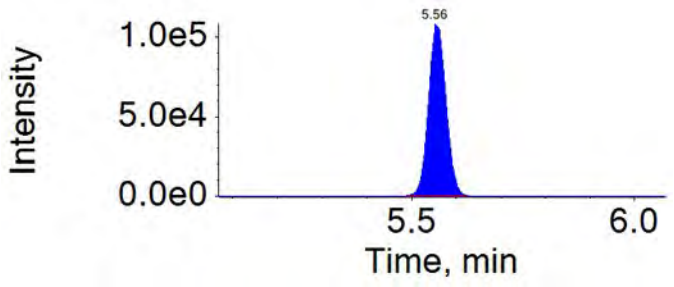
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

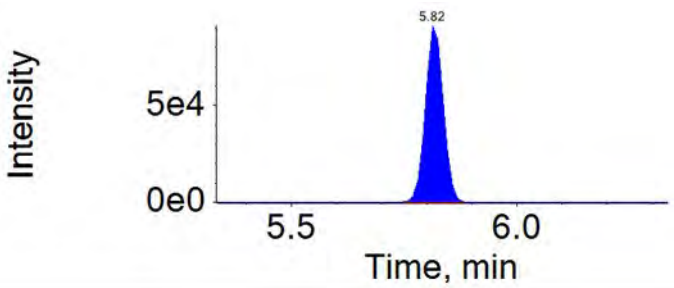
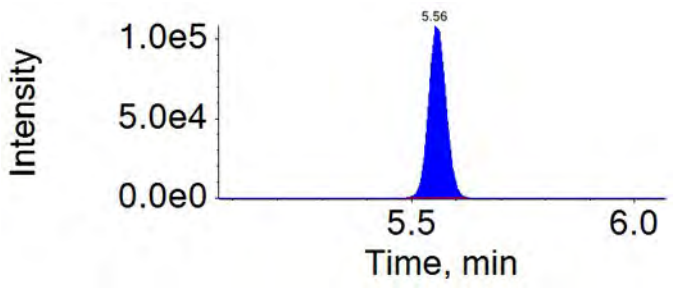
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

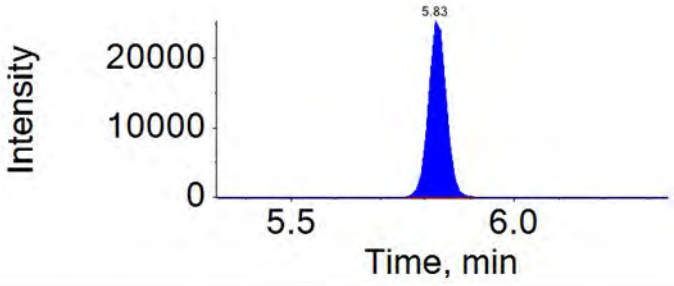
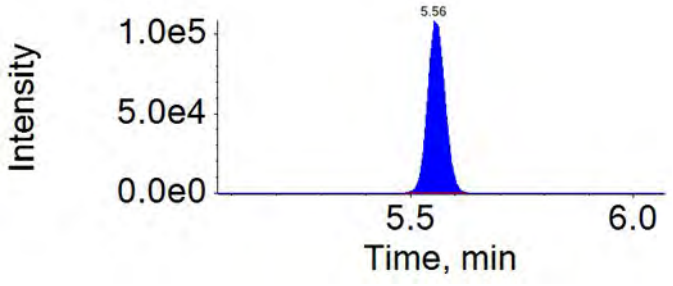
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

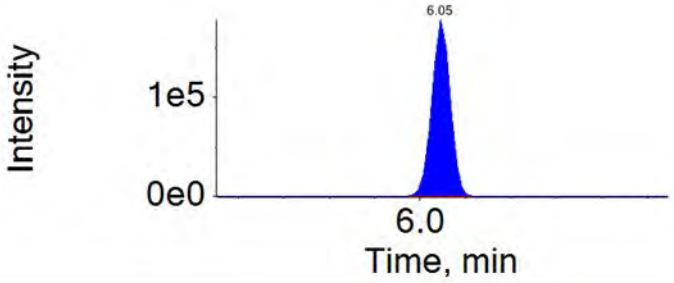
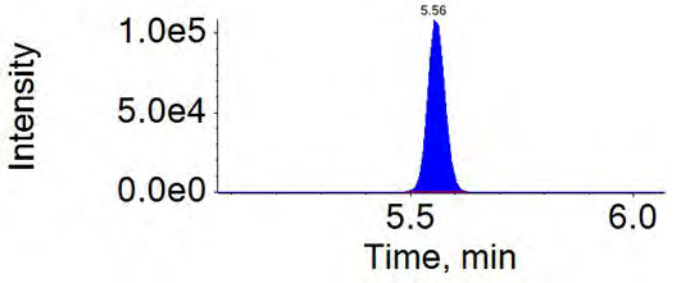
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

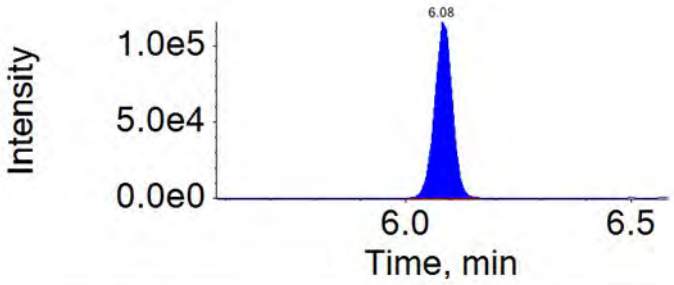
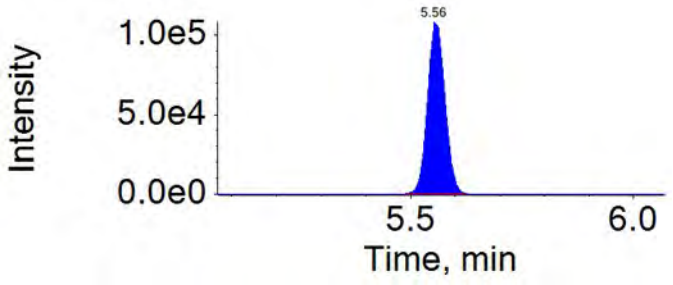
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

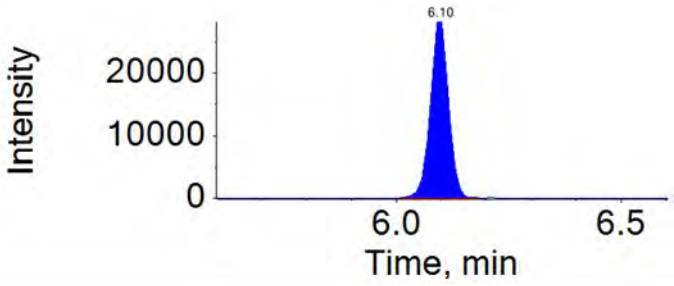
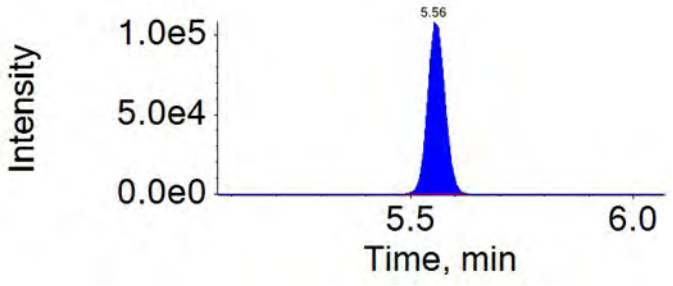
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

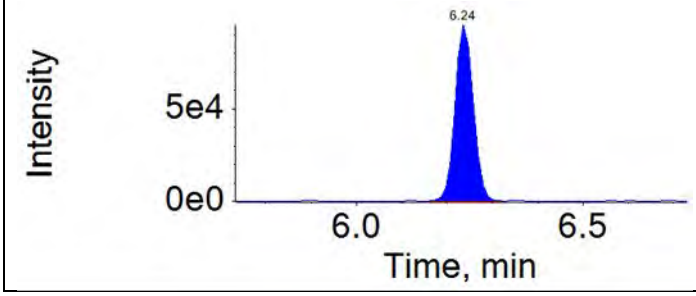
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

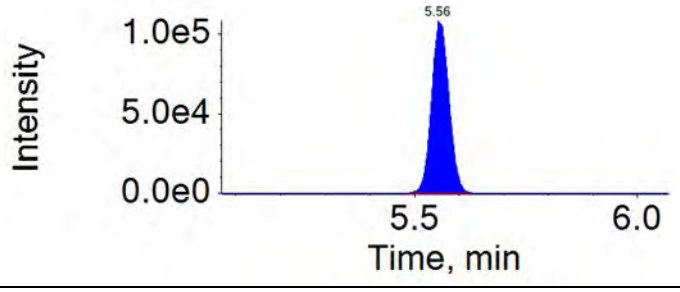
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

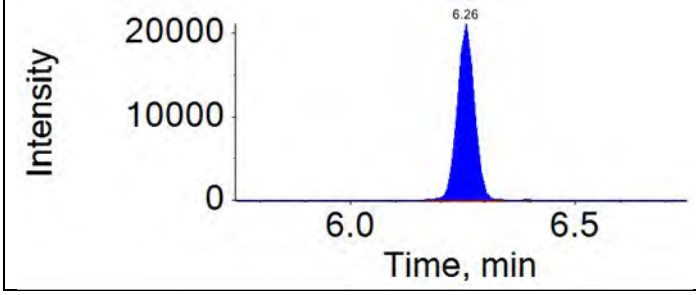
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

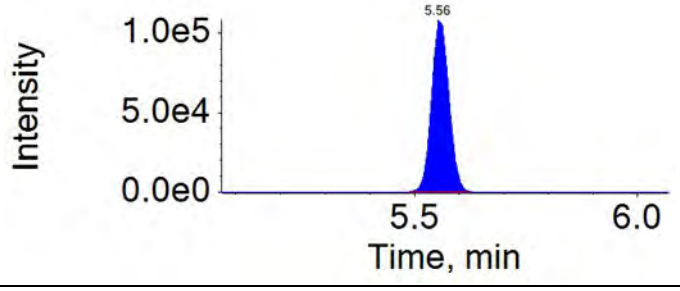
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



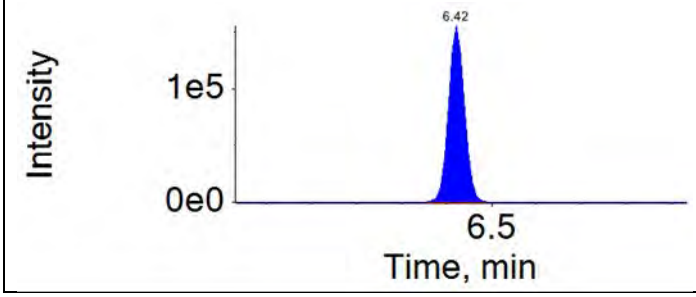


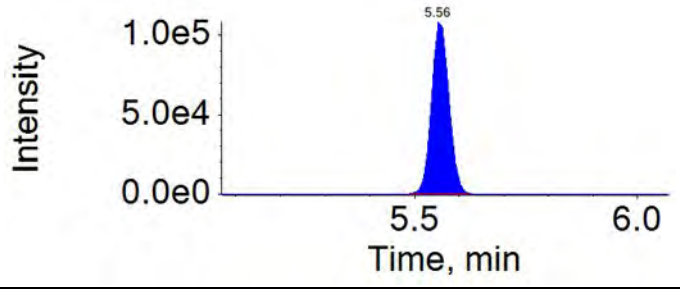
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



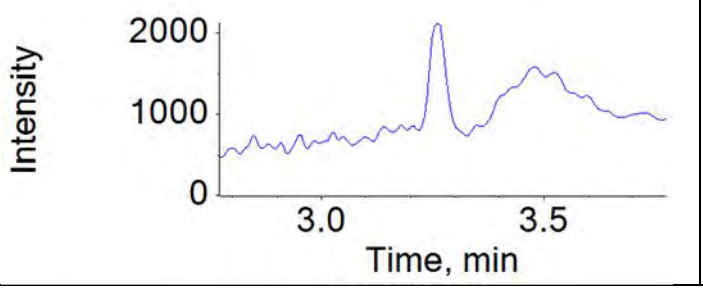


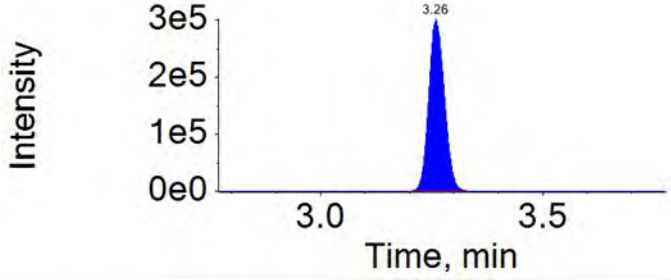
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

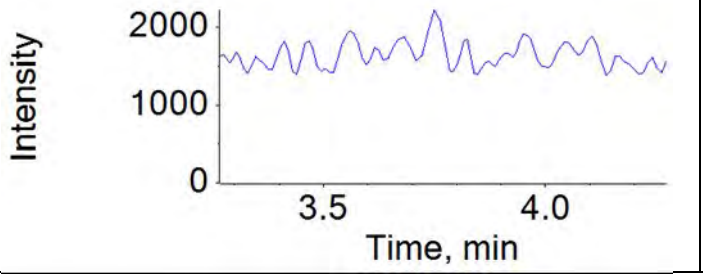
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

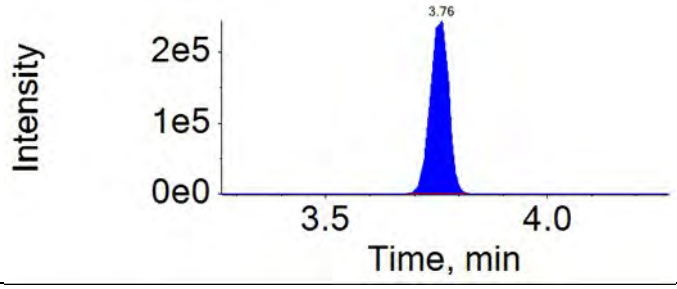
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



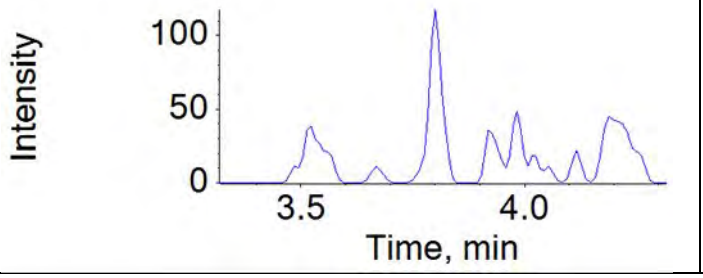


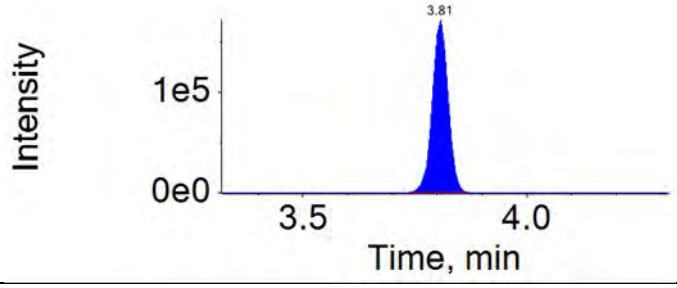
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



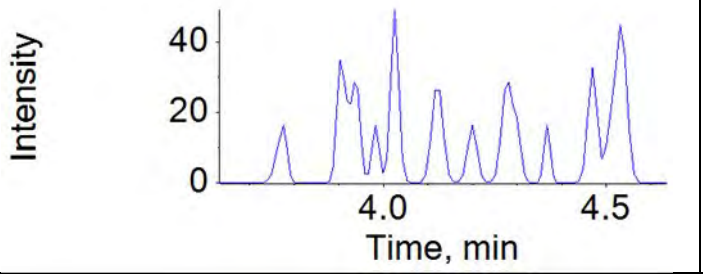


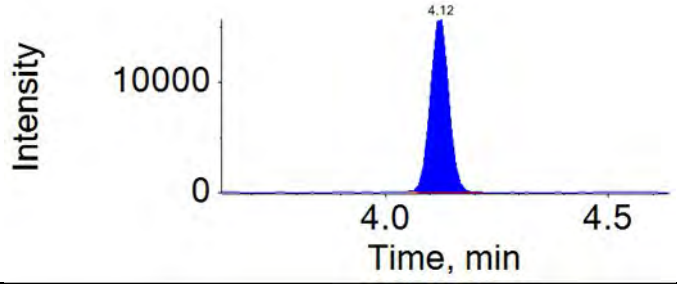
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



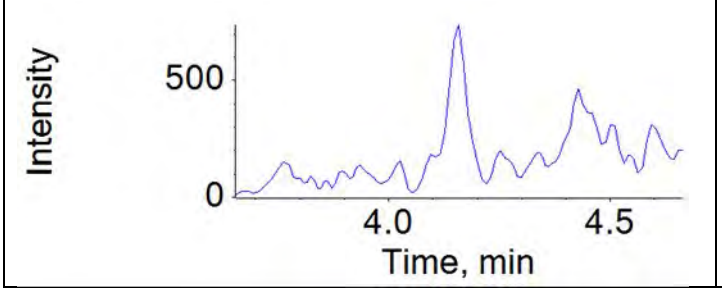


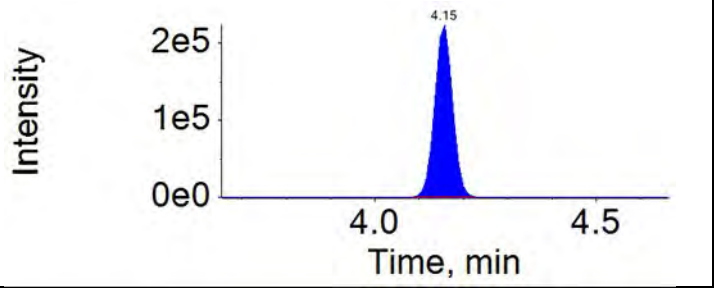
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

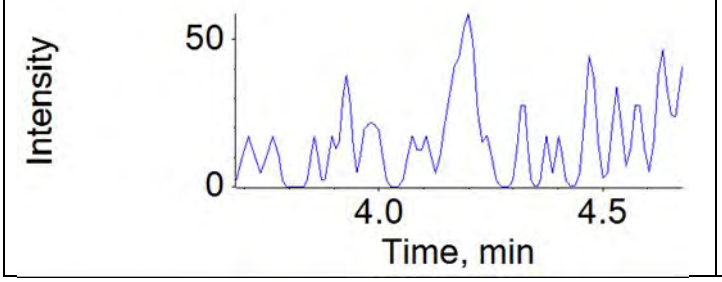
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

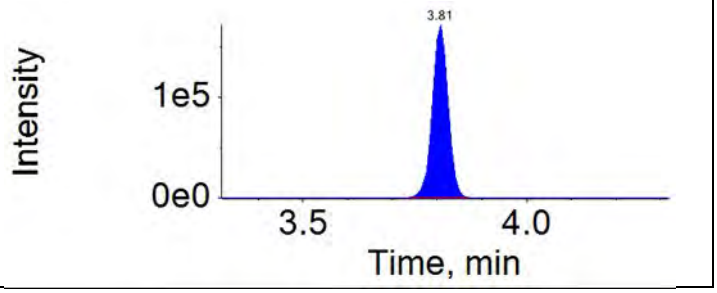
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



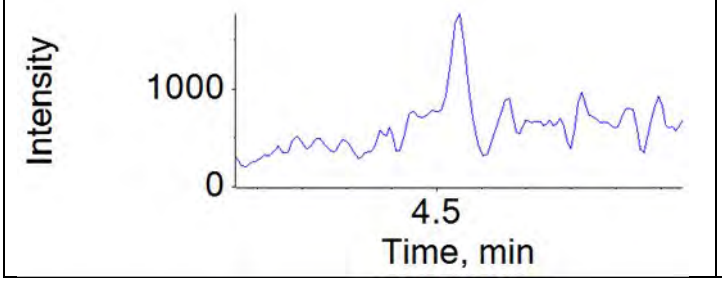


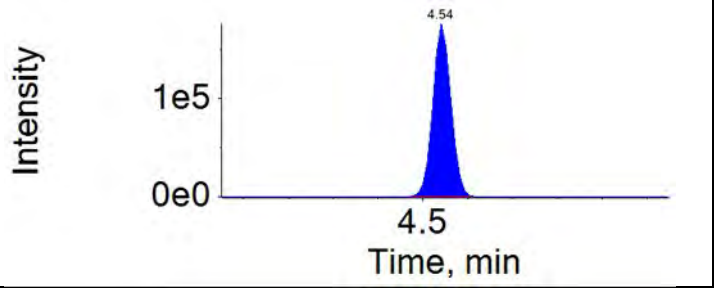
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



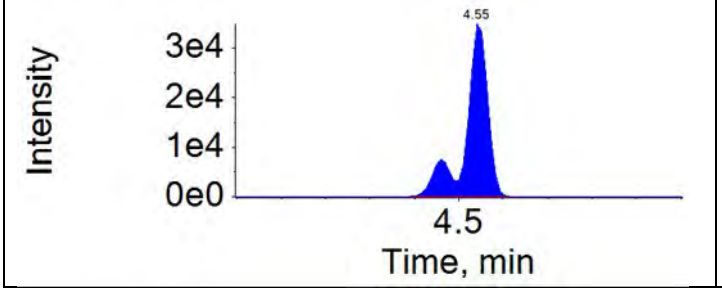


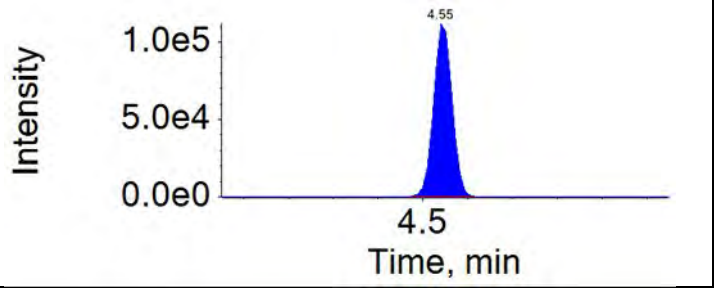
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





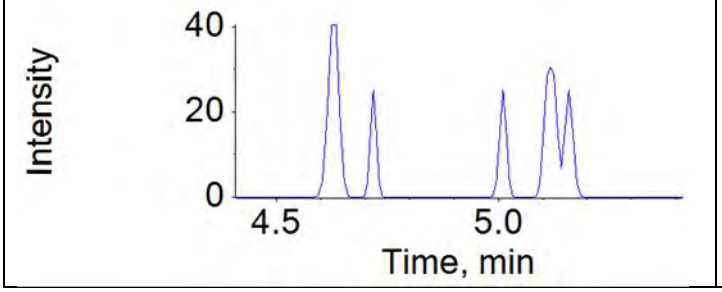
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

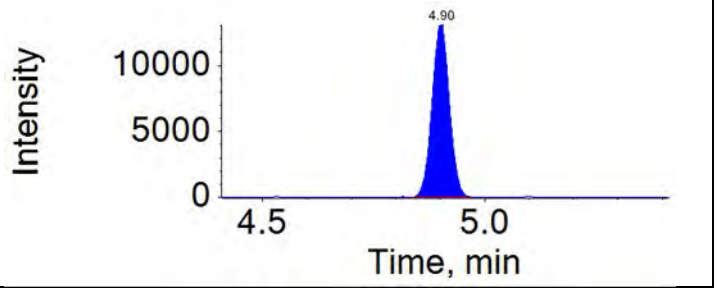




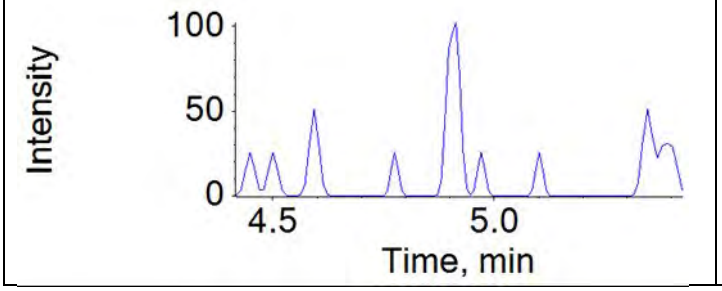
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

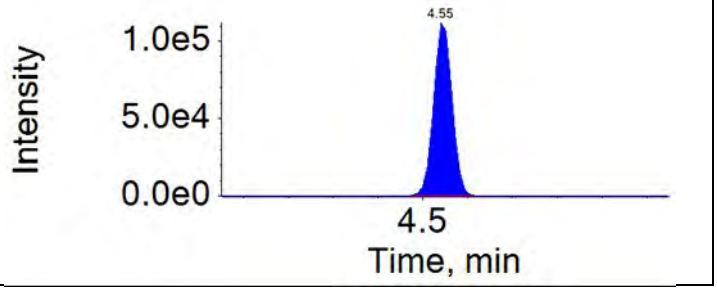
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



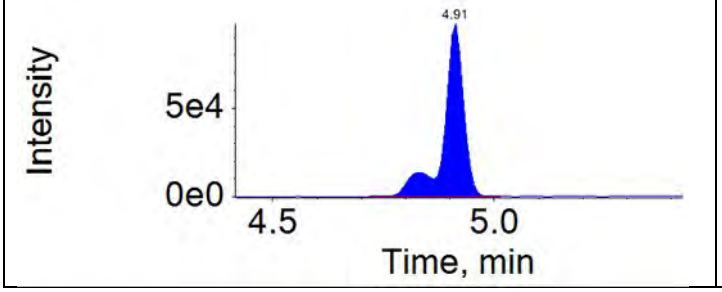


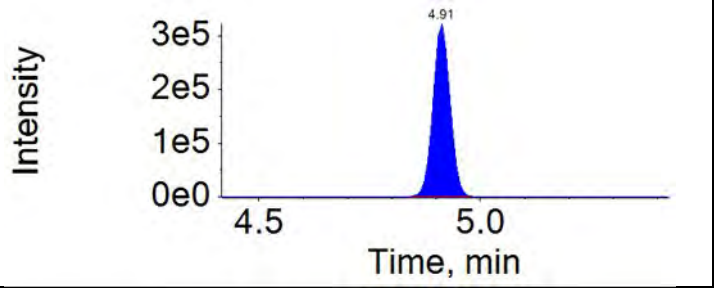
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



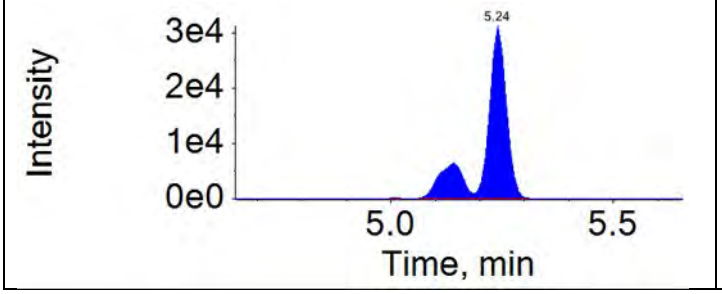


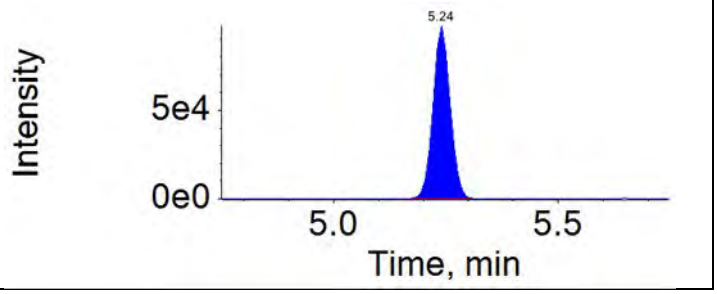
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



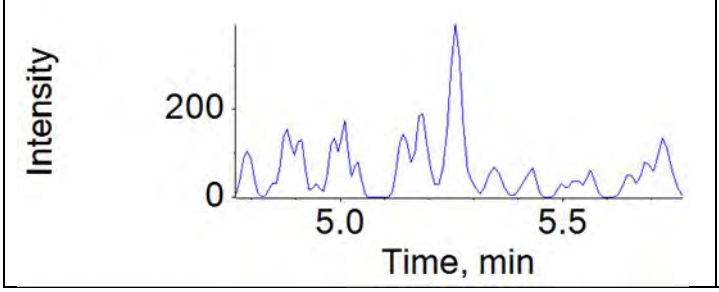


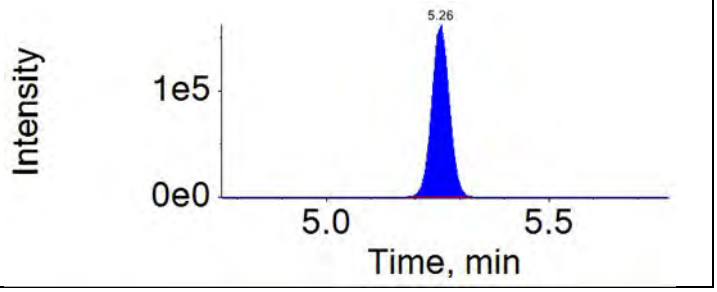
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

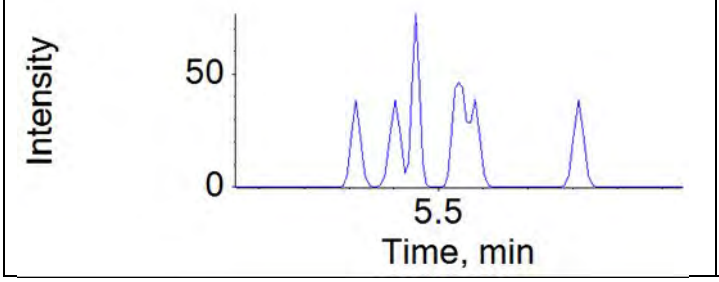
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

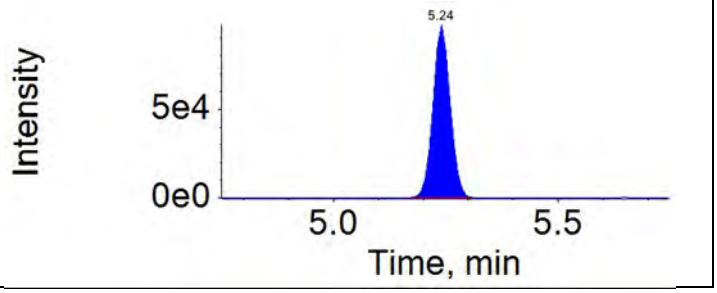
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



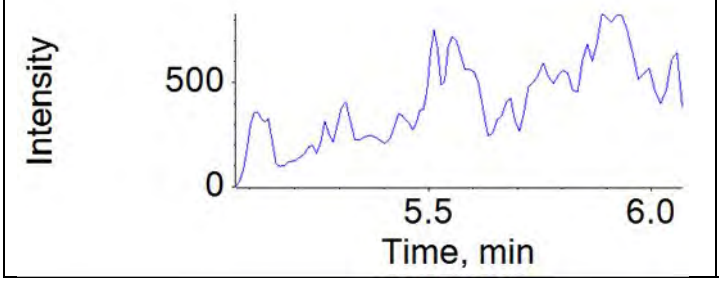


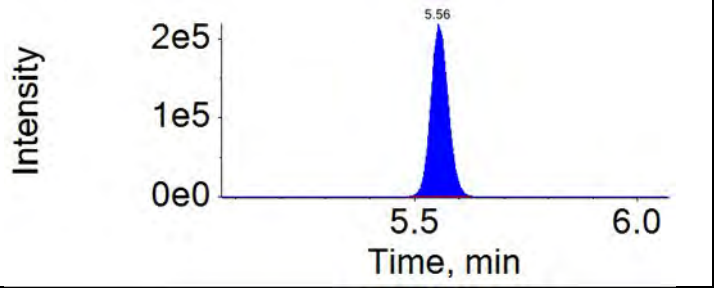
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



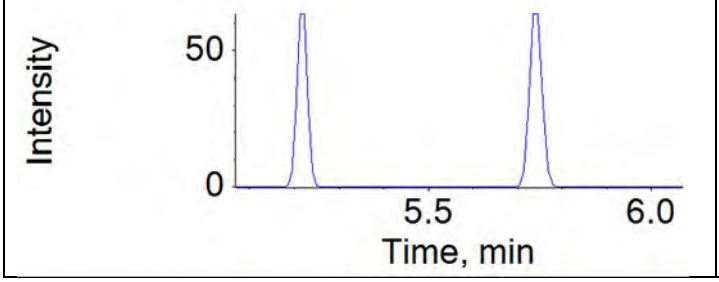


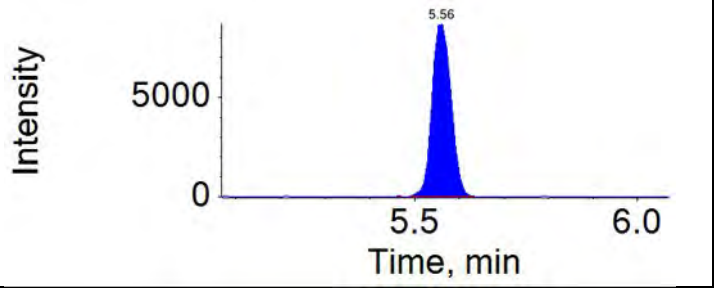
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



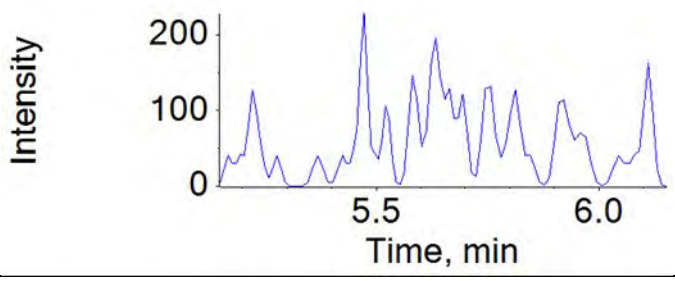


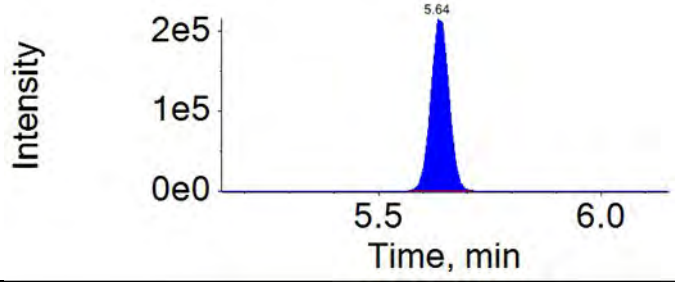
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

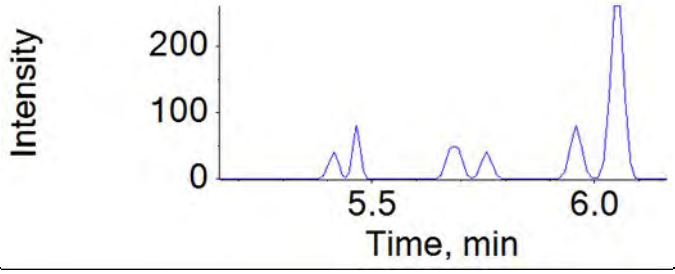
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

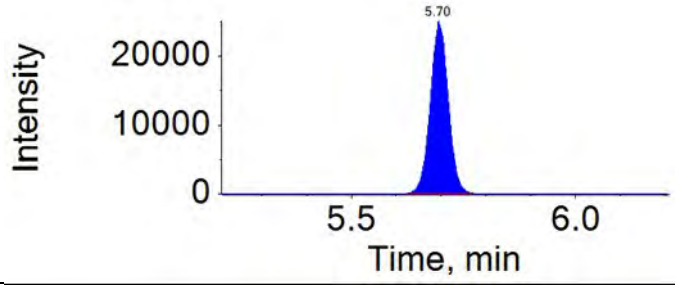
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



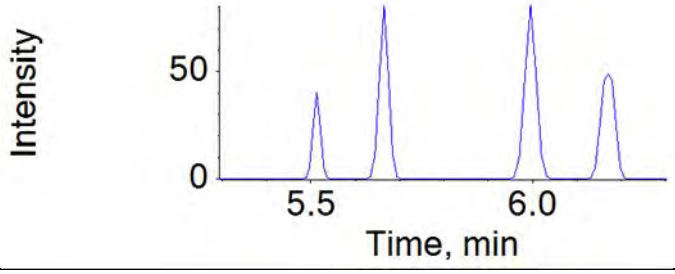


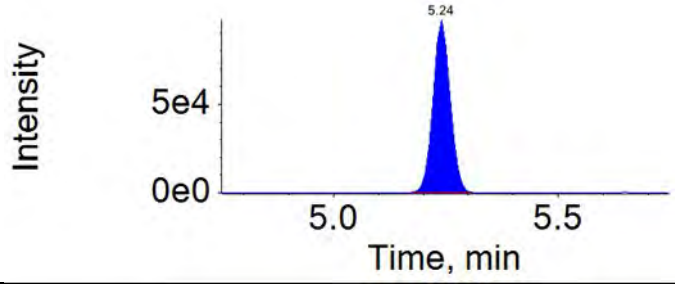
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



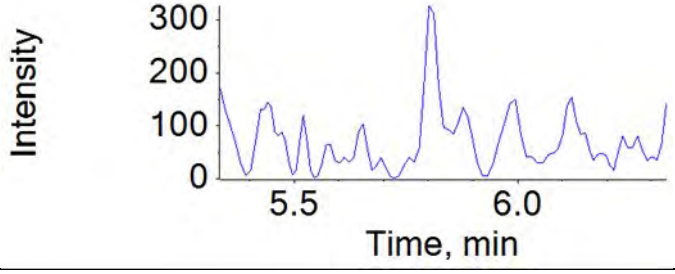


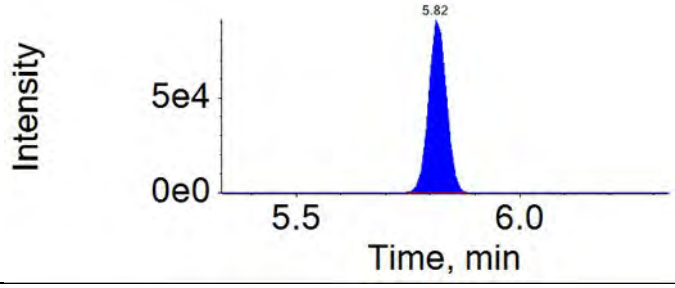
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



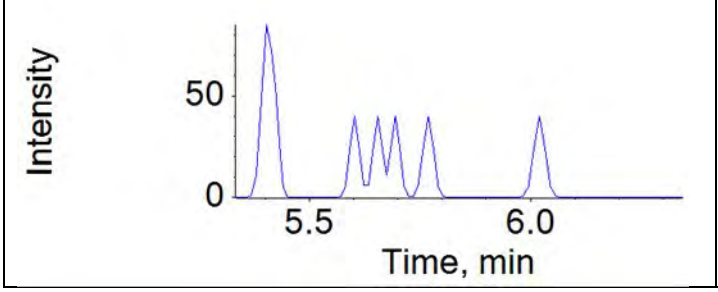


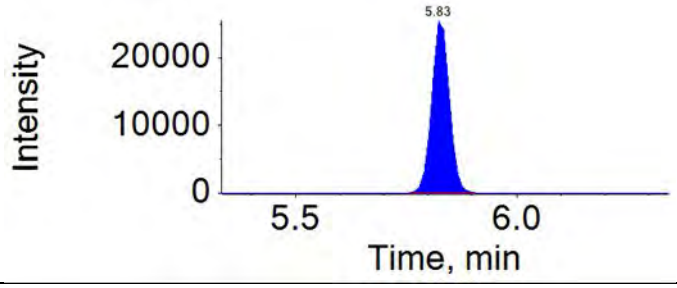
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

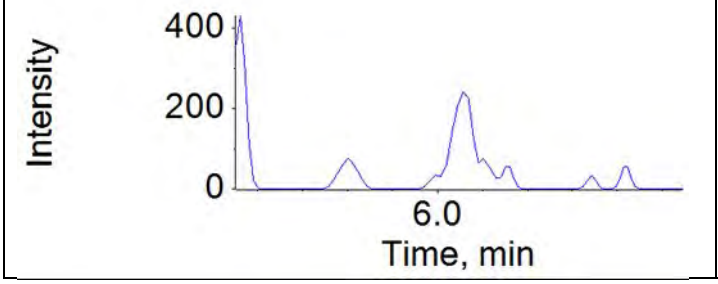
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

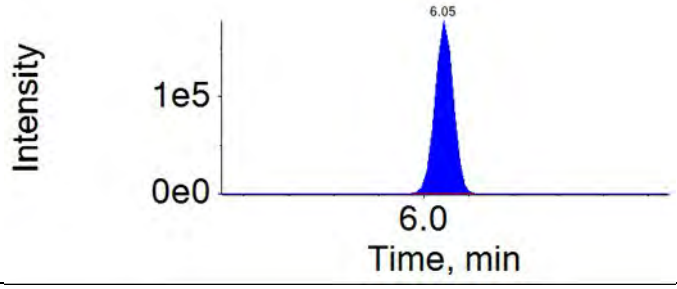
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



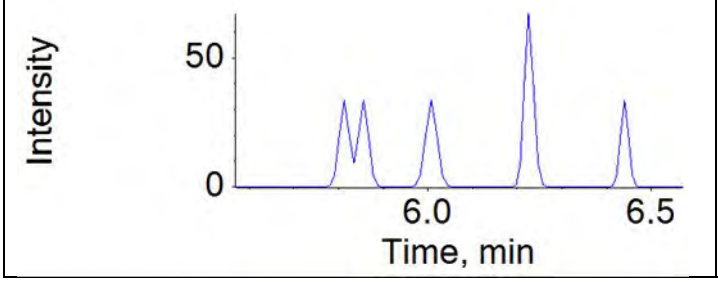


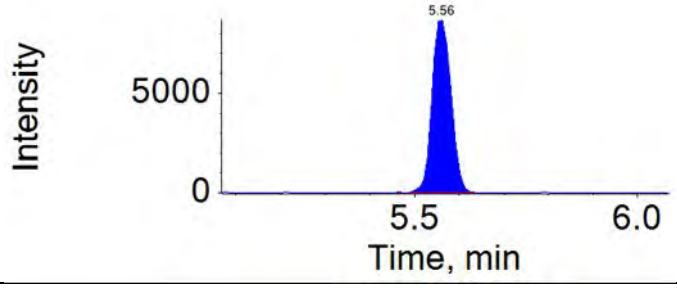
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



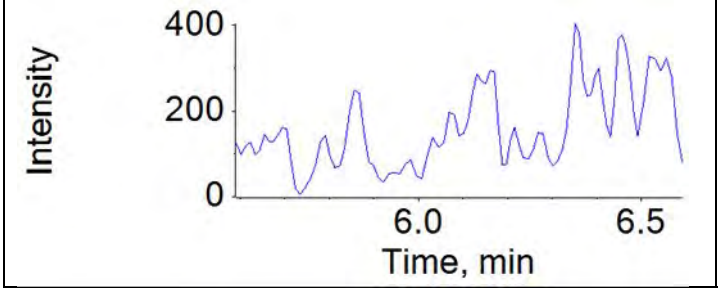


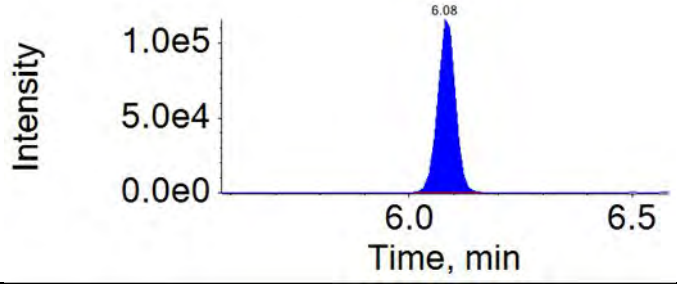
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



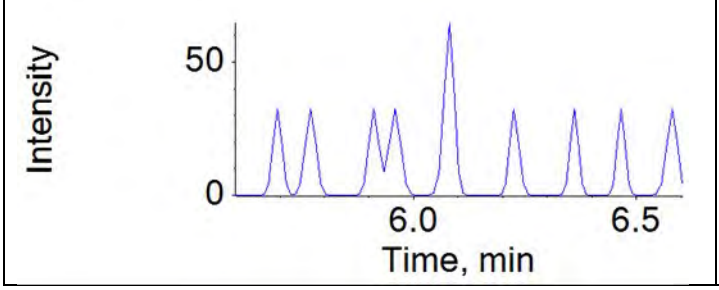


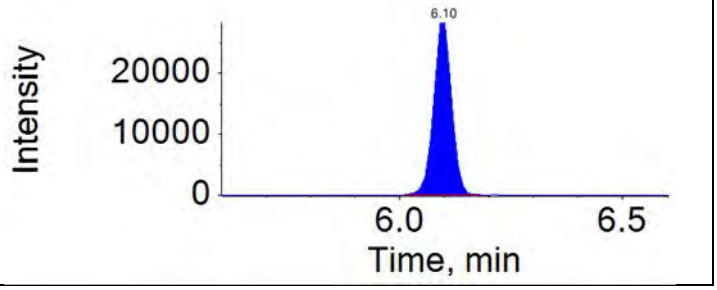
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

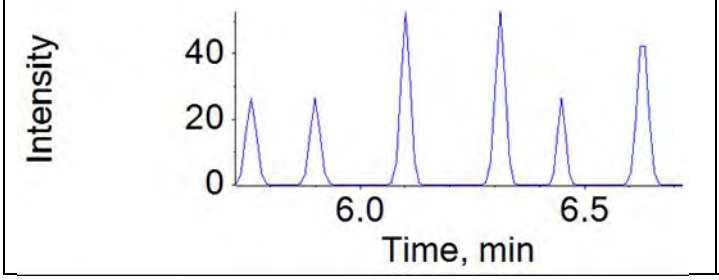
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

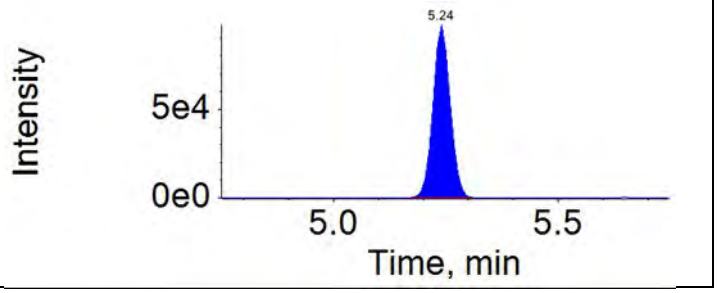
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



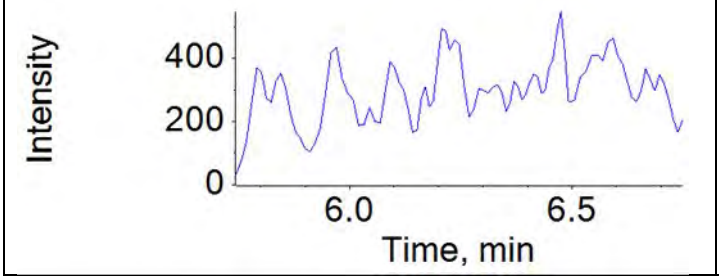


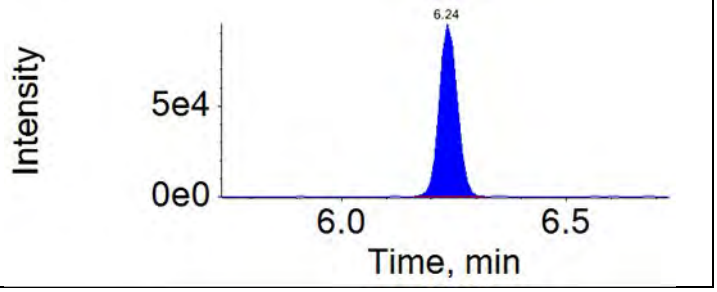
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



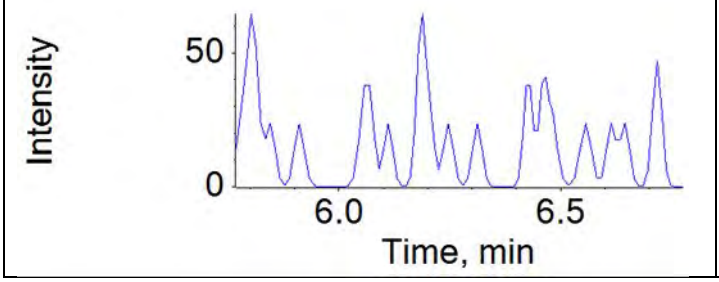


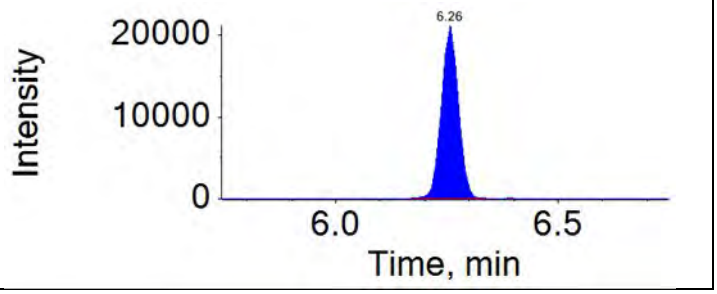
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



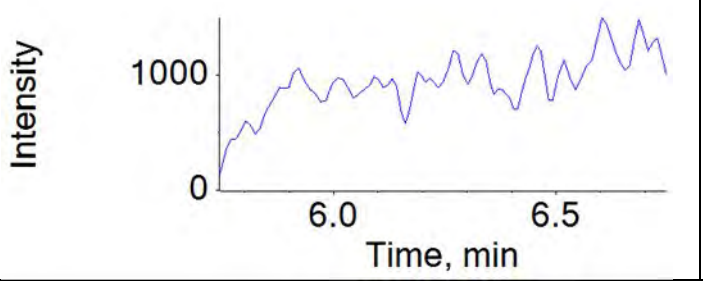


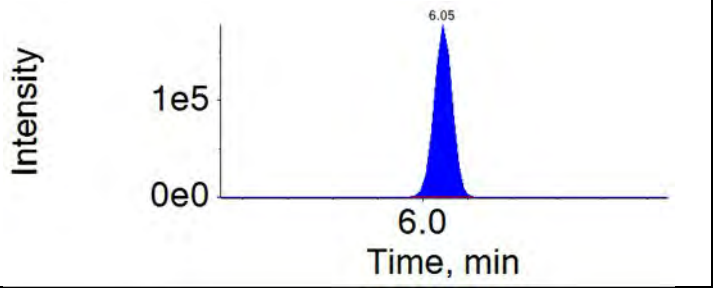
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

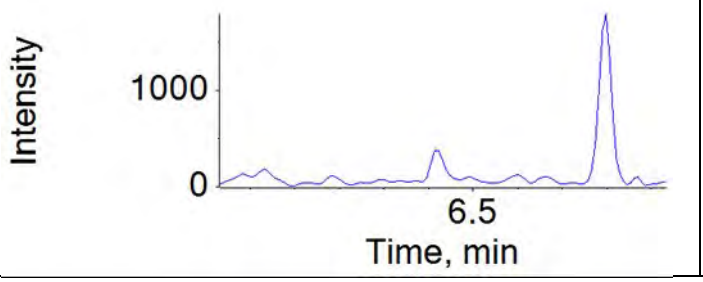
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

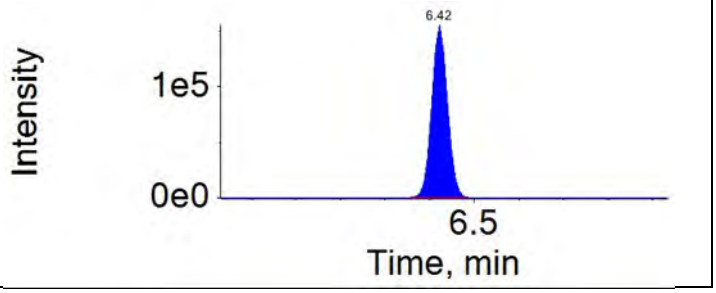
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



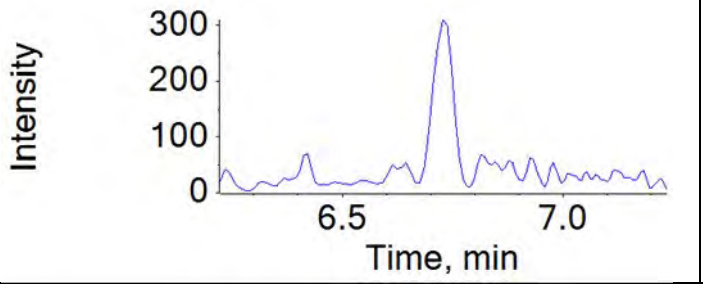


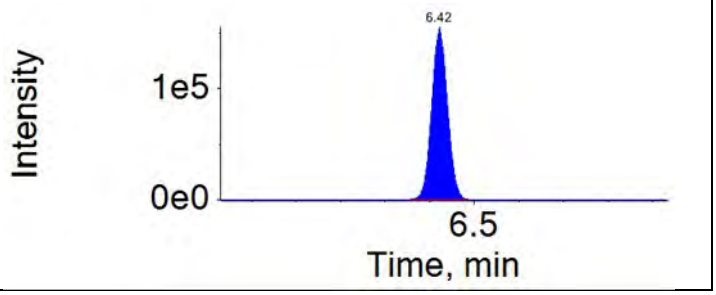
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



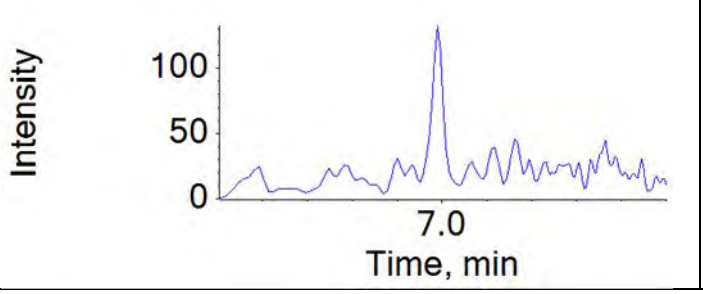


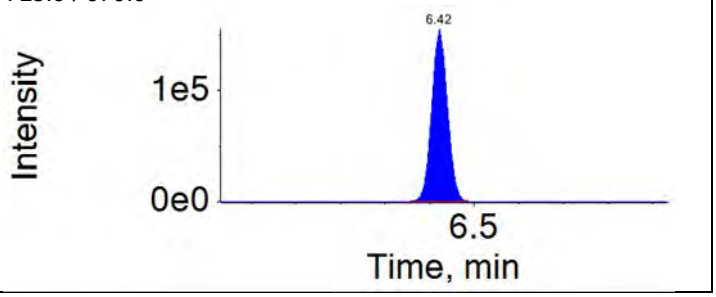
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



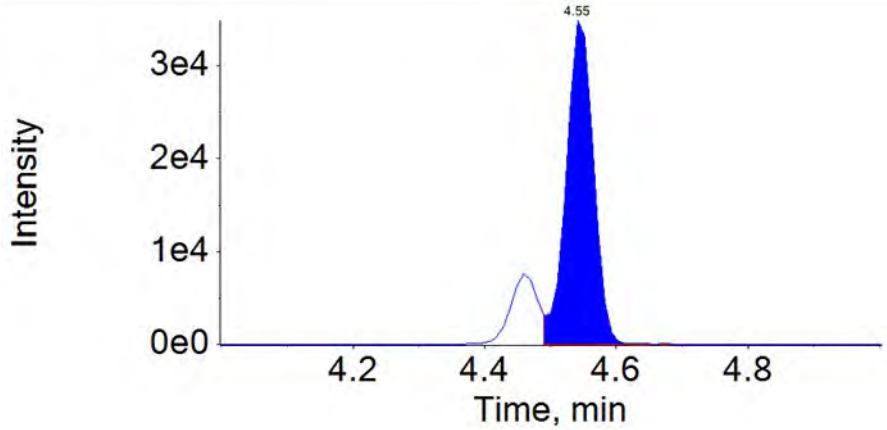


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

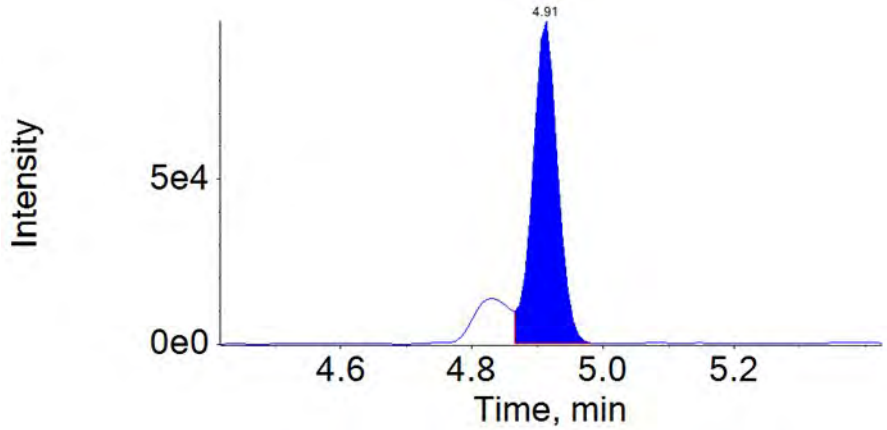
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
101341.11
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



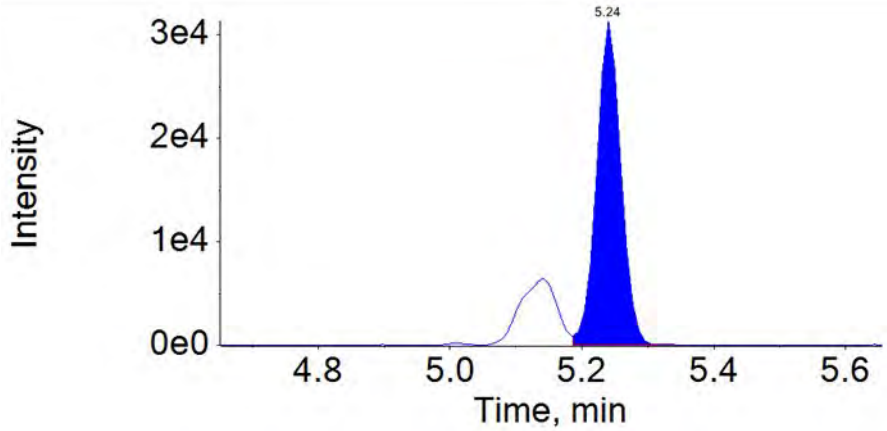
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
258567.11
Mass Range:
413.0 / 369.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
80546.10
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



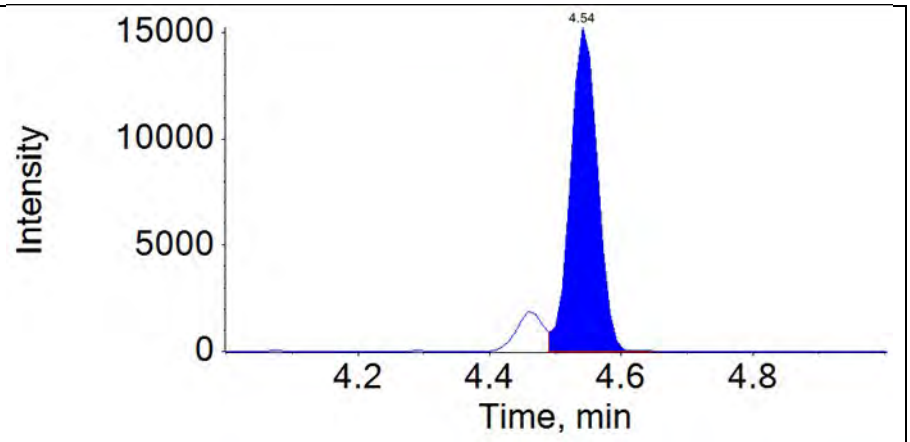
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

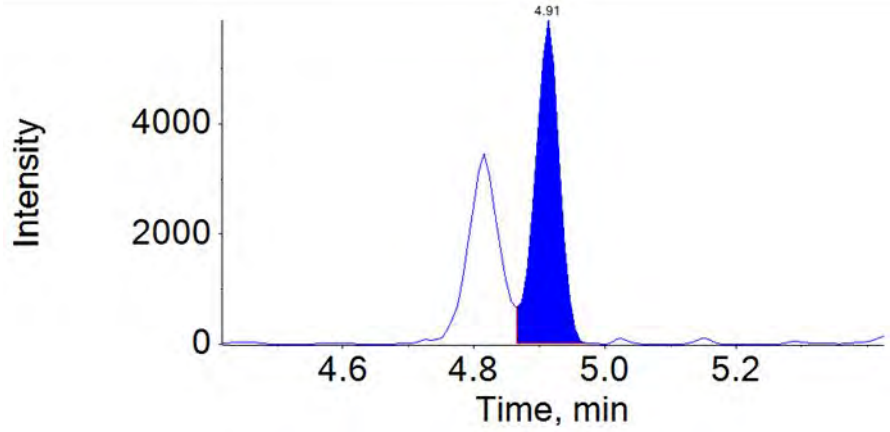
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
43554.75
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



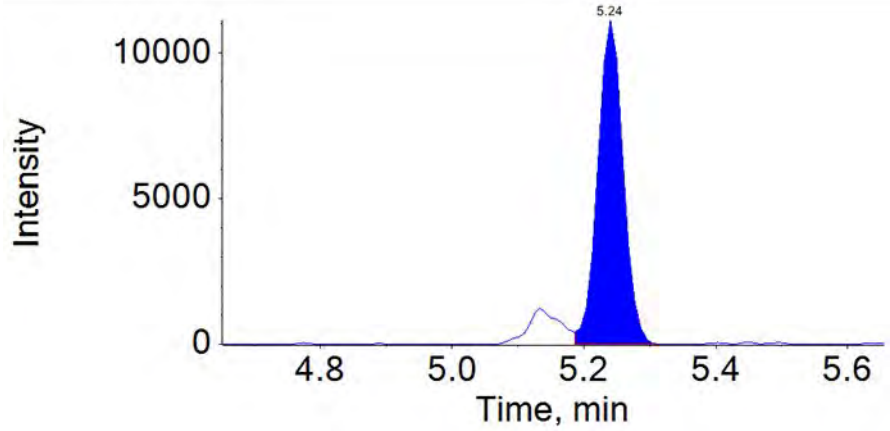
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
15059.21
Mass Range:
413.0 / 169.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
29829.42
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

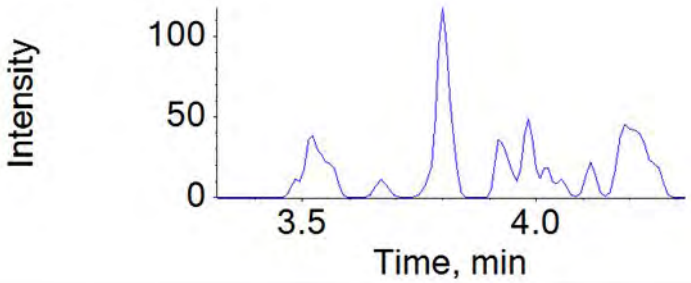
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-51.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	0.3619	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3619	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	0.6730	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	0.6730	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	0.0117	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0117	N/A		50	
PFPeS	N/A	N/A	N/A	A	0.5191	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5191	N/A		50	
PFHpA	N/A	N/A	N/A	A	0.0563	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0563	N/A		50	
PFHxS	4.55	1.00	122359.84	M	0.3428	0.3979			
PFHxS_2	4.54	1.00	48686.07	M	0.3428	0.3979	16	50	
6:2-FTS	N/A	N/A	N/A	A	0.6604	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	0.6604	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	0.4066	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.4066	N/A		50	
PFOA	4.91	1.00	312625.40	M	0.0562	0.0855			
PFOA_2	4.90	1.00	26736.79	M	0.0562	0.0855	52	50	OOS
PFOS	5.24	1.00	105809.81	M	0.2968	0.3212			
PFOS_2	5.24	1.00	33989.74	M	0.2968	0.3212	8	50	
PFNA	N/A	N/A	N/A	A	0.0229	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0229	N/A		50	
PFNS	N/A	N/A	N/A	A	0.4828	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4828	N/A		50	
PFDA	N/A	N/A	N/A	A	0.0081	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0081	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	0.6814	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	0.6814	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	0.2569	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2569	N/A		50	
PFDS	N/A	N/A	N/A	A	0.5144	N/A			
PFDS_2	N/A	N/A	N/A	A	0.5144	N/A		50	
PFUnDA	N/A	N/A	N/A	A	0.0058	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0058	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	0.7253	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.7253	N/A		50	
PFDoDA	N/A	N/A	N/A	A	0.0157	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0157	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	0.6356	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	0.6356	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	0.0086	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0086	N/A		50	
PFTeDA	N/A	N/A	N/A	A	0.0062	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0062	N/A		50	
PFHxDA	N/A	N/A	N/A	A	0.0683	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0683	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0277	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0277	N/A		50	

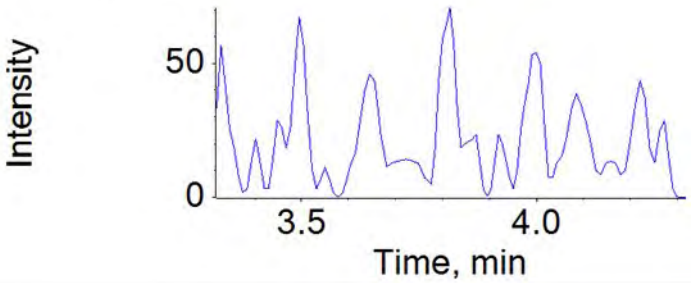
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

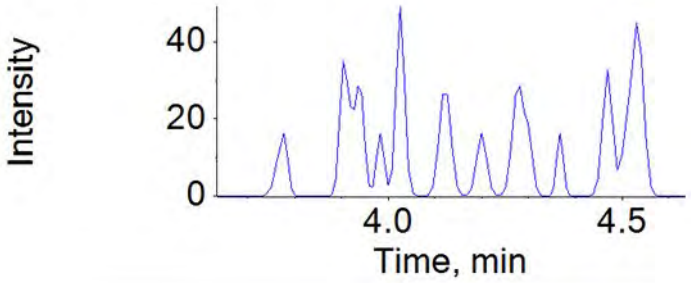
Component: PFBS
Primary Mass: 299.0 / 80.0



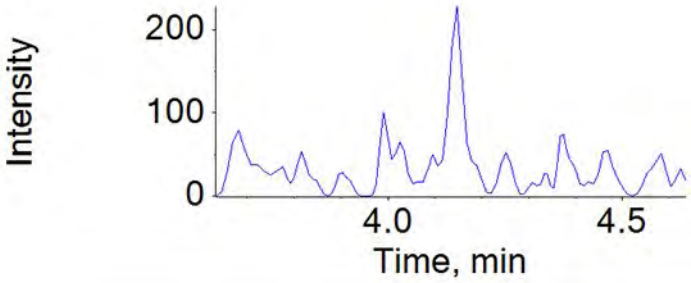
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



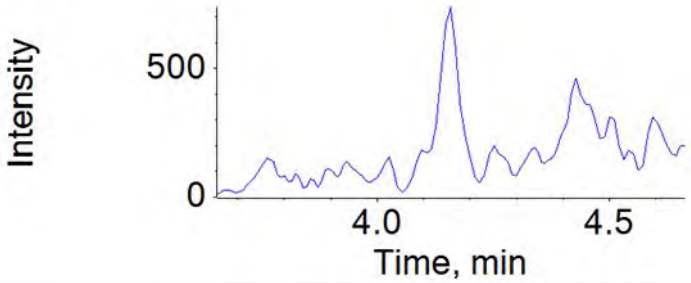
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



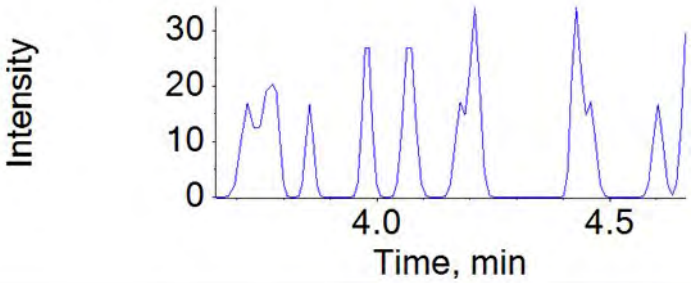
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



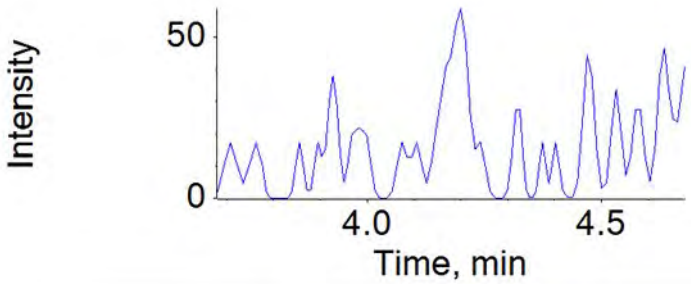
Component: PFHxA
Primary Mass: 313.0 / 269.0



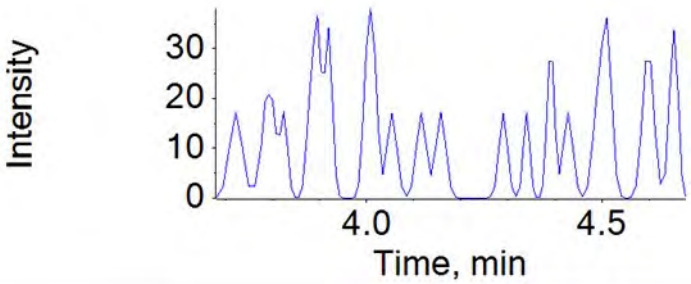
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



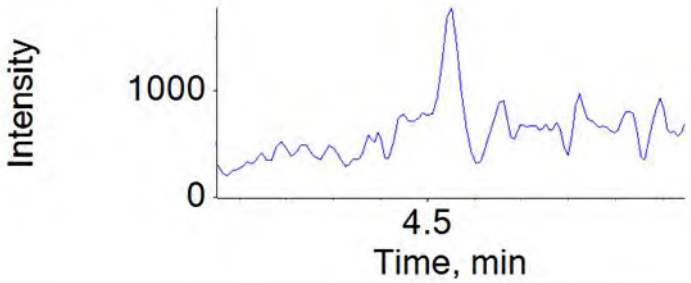
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



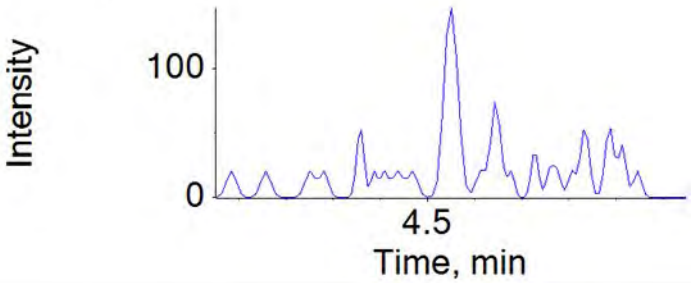
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

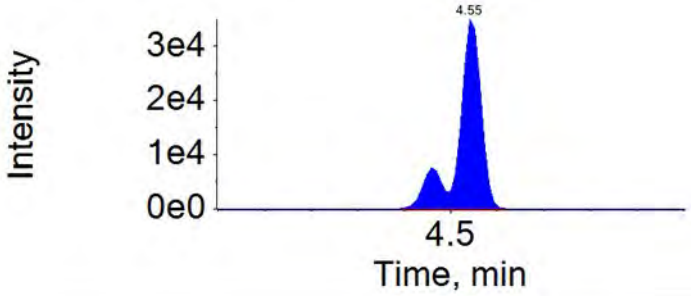
Component: PFHpA
Primary Mass: 363.0 / 319.0



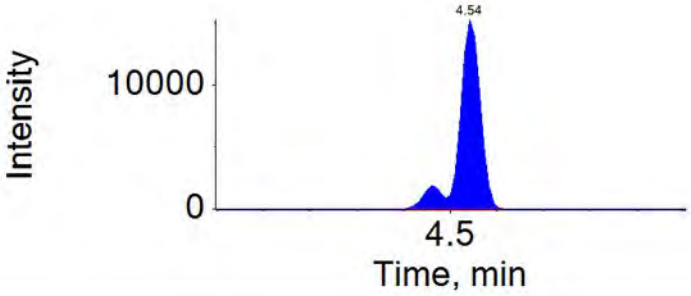
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



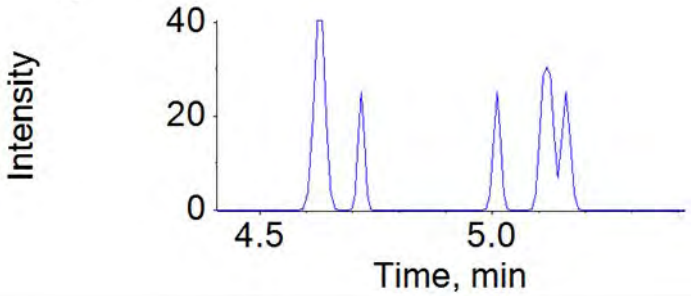
Component: PFHxS
Primary Mass: 399.0 / 80.0



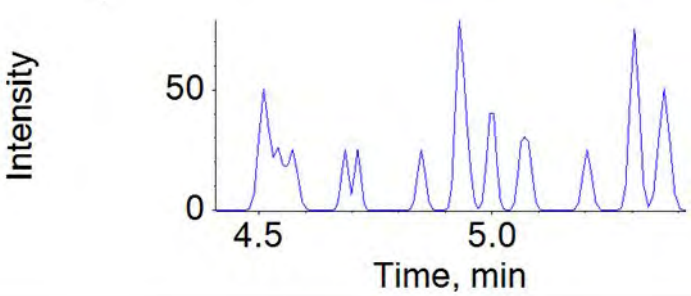
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



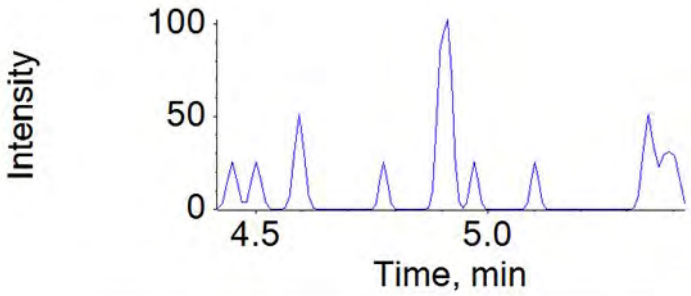
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



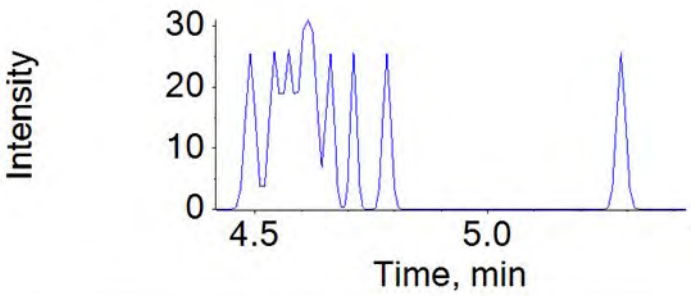
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



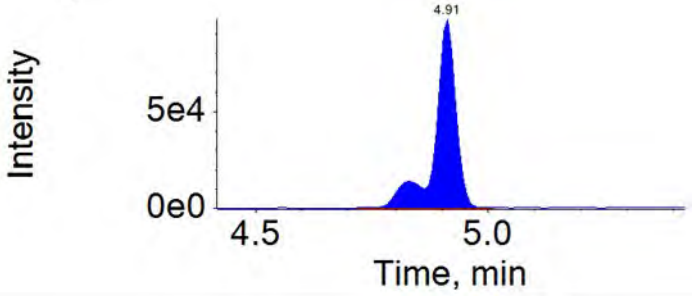
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



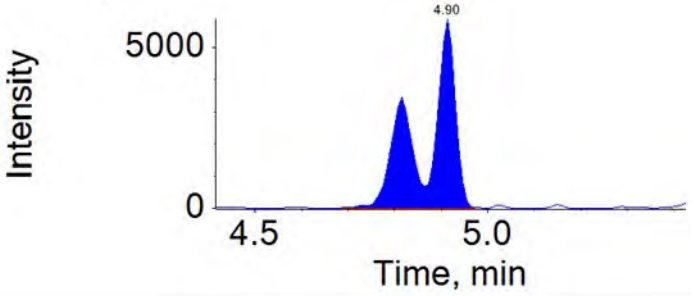
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

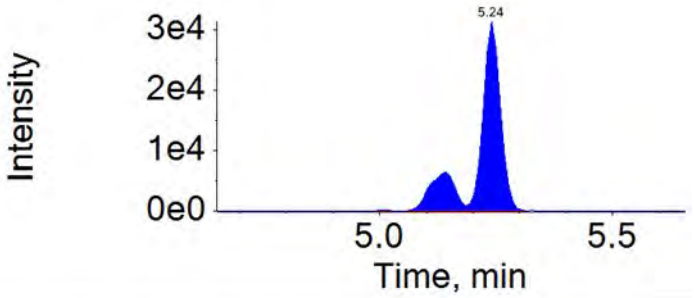
Component: PFOA
Primary Mass: 413.0 / 369.0



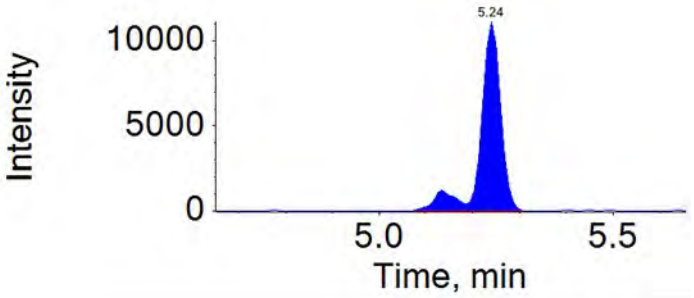
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



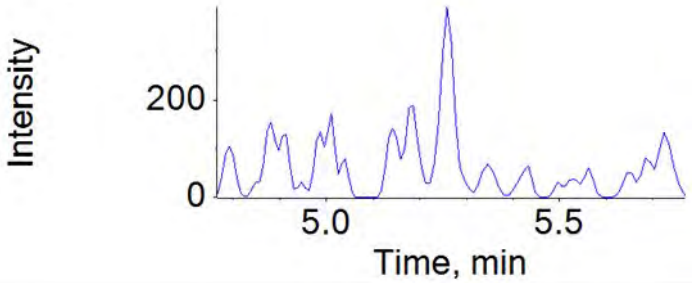
Component: PFOS
Primary Mass: 499.0 / 80.0



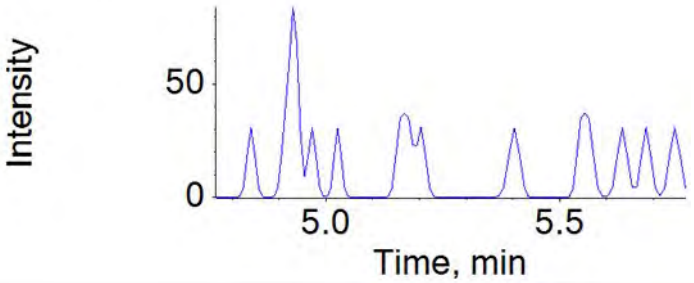
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



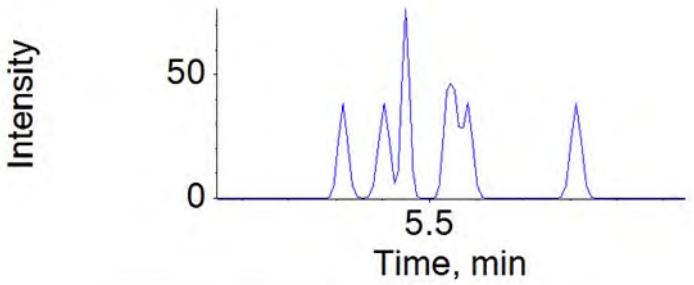
Component: PFNA
Primary Mass: 463.0 / 419.0



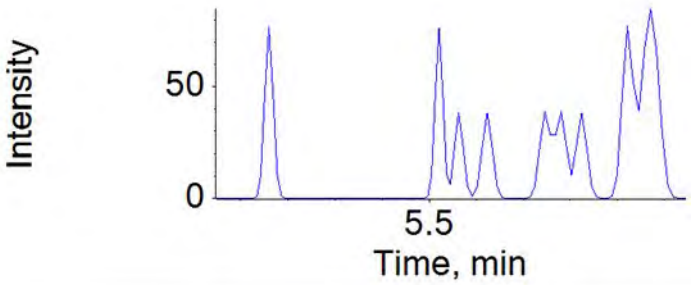
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



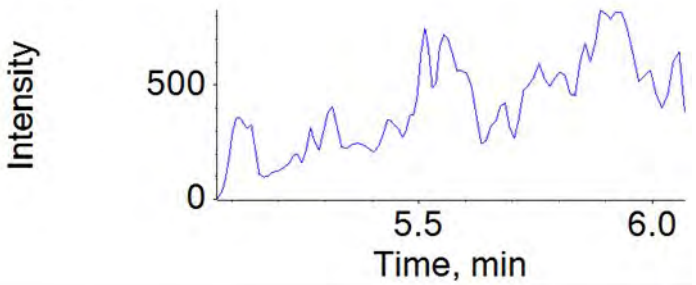
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



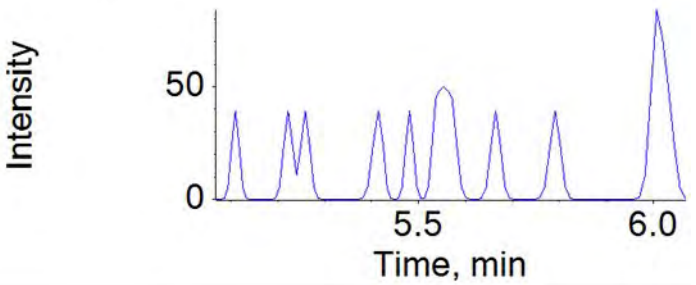
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

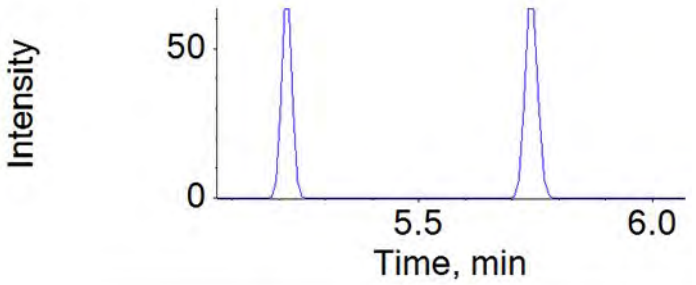
Component: PFDA
Primary Mass: 513.0 / 469.0



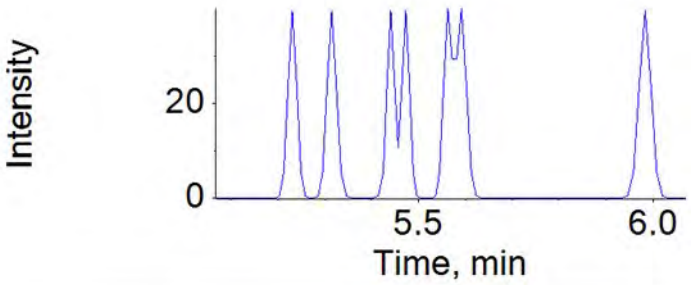
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



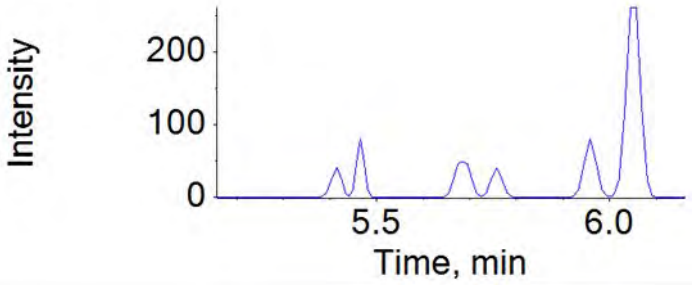
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



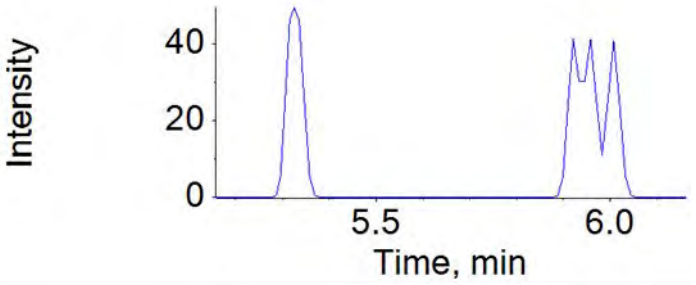
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



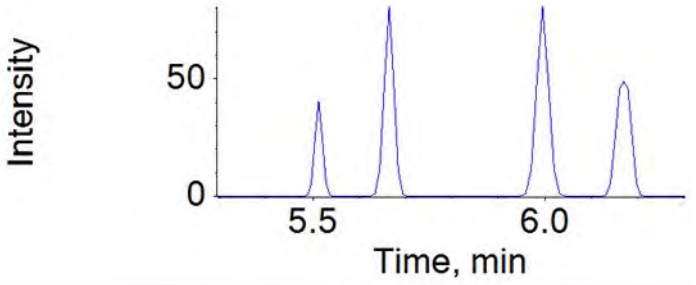
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



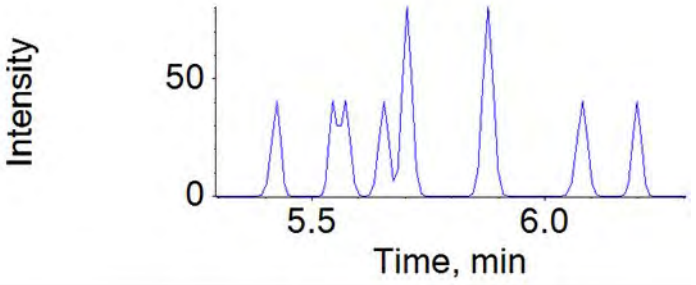
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



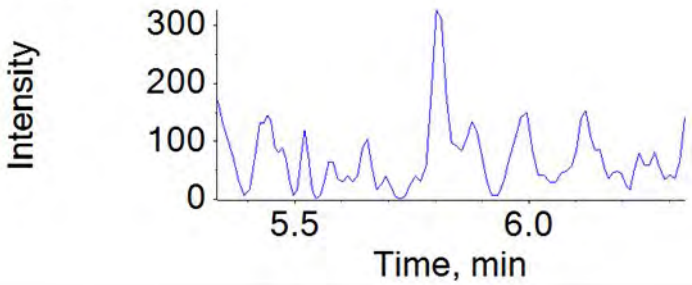
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



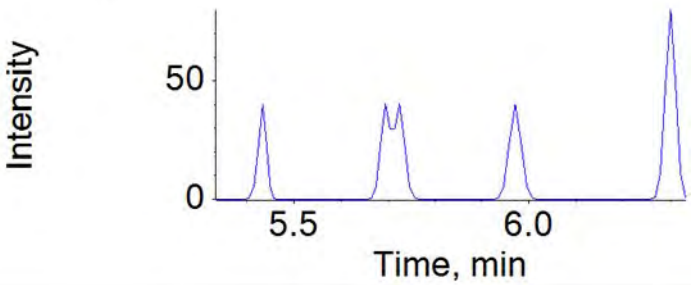
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

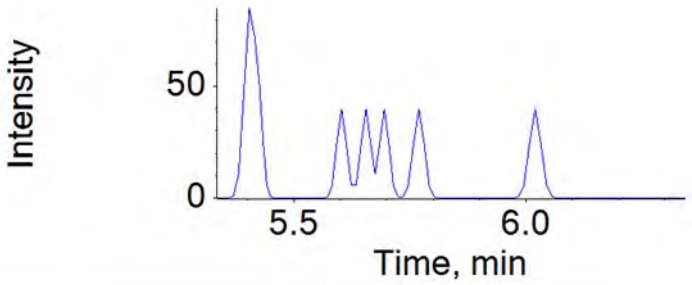
Component: PFUnDA
Primary Mass: 563.0 / 519.0



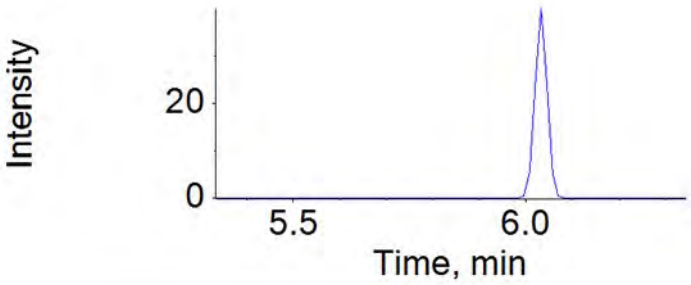
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



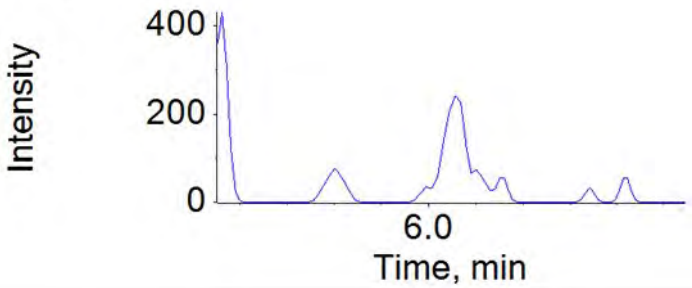
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



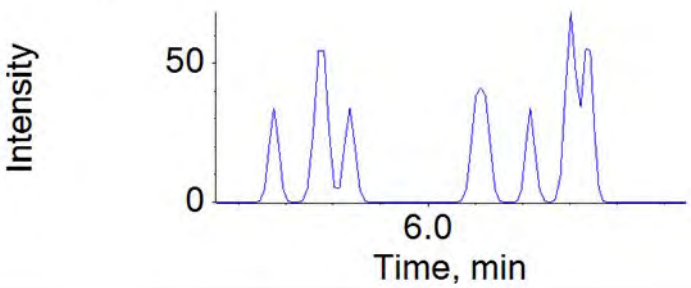
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



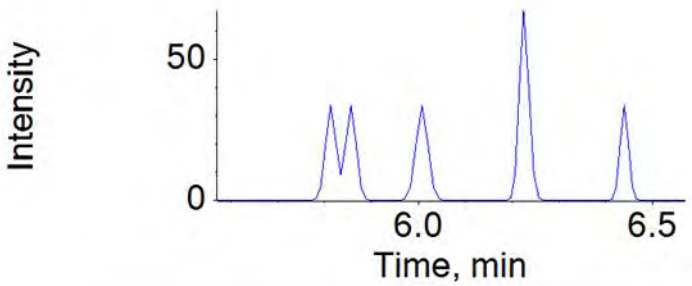
Component: PFDoDA
Primary Mass: 613.0 / 569.0



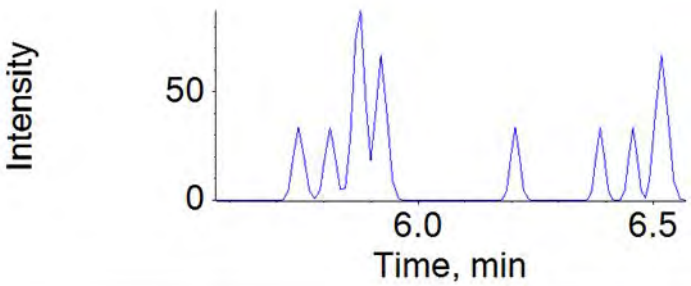
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



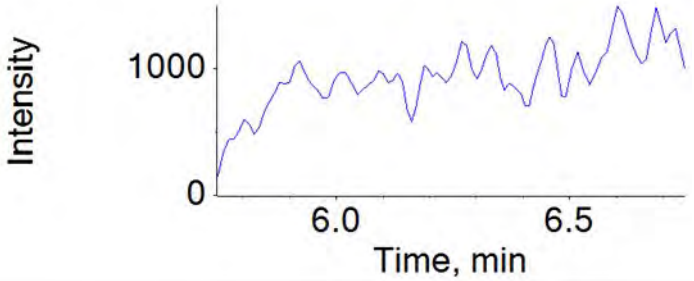
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



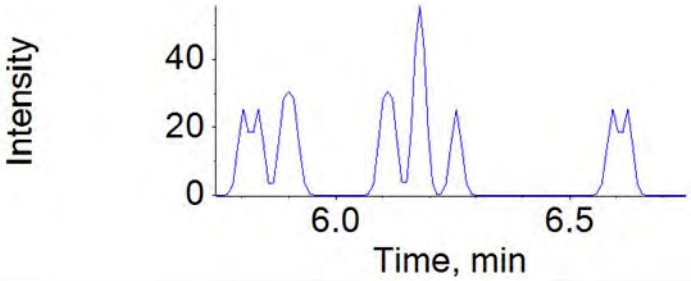
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



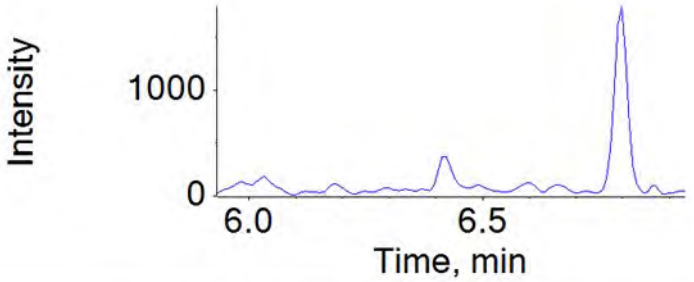
Component: PFTrDA
Primary Mass: 663.0 / 619.0



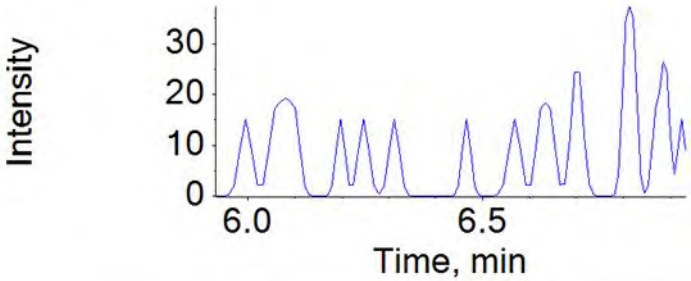
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



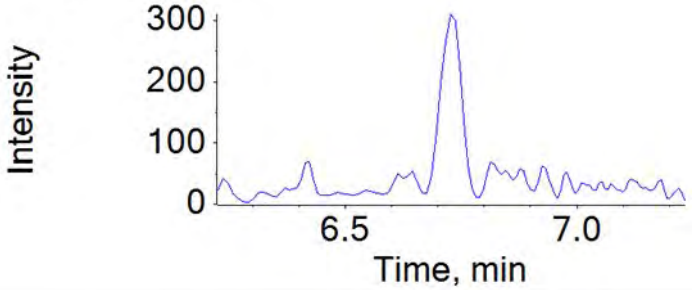
Component: PFTeDA
Primary Mass: 713.0 / 669.0



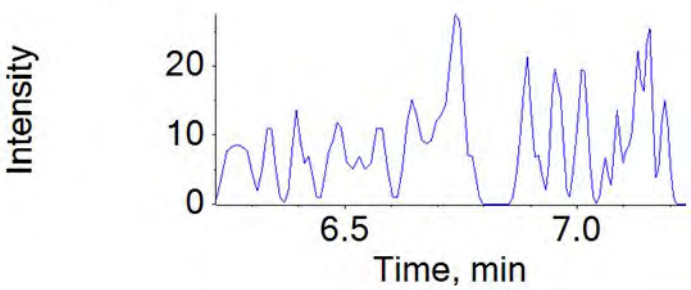
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



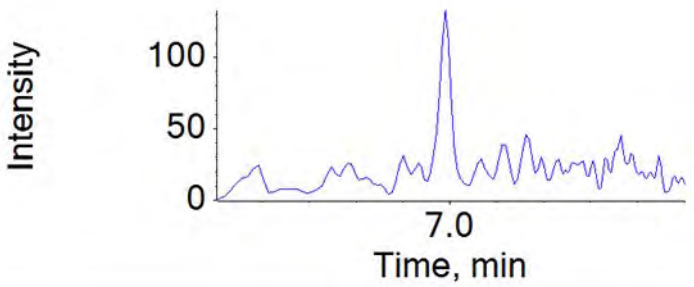
Component: PFHxDA
Primary Mass: 813.0 / 769.0



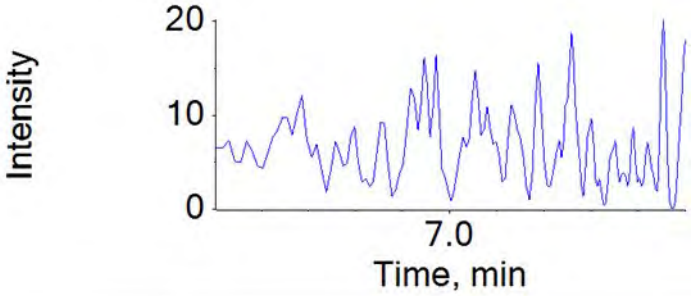
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



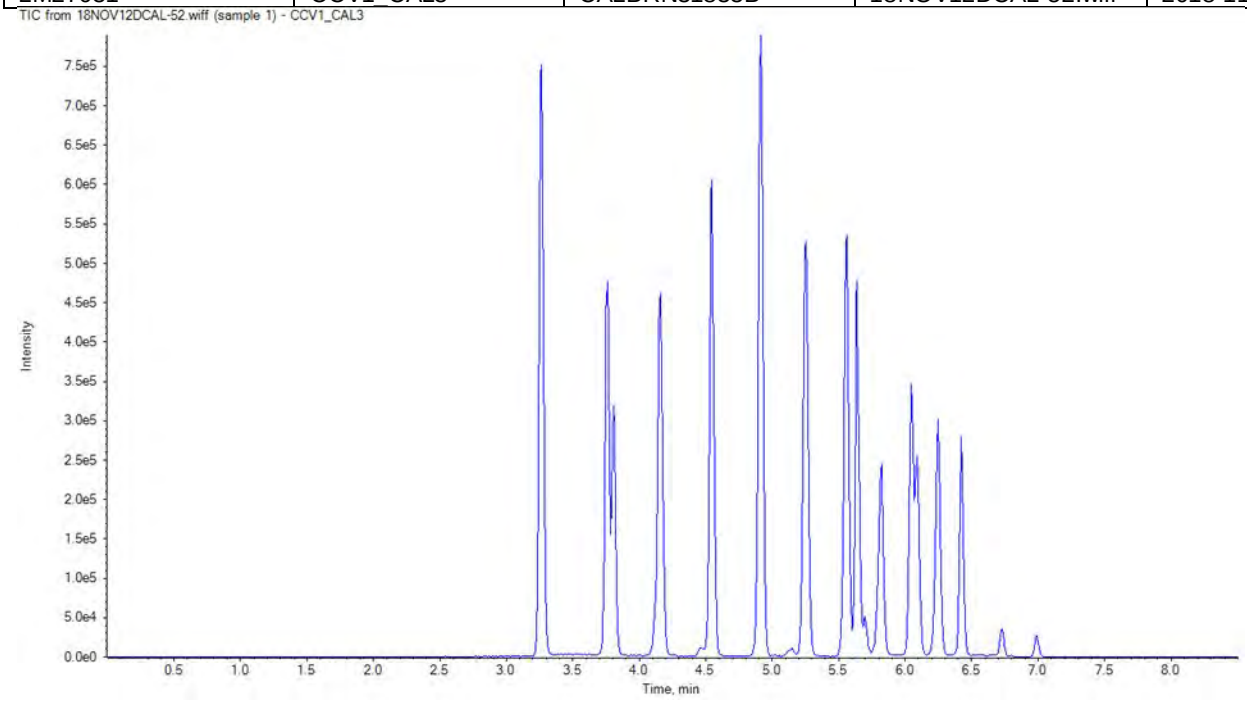
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	303662.2	10	13C4-PFBA	735275.5	5.0	0.413	3.26	1.000	2.000	2.288	14	30	
PFPeA	301109.0	11	13C5-PFPeA	741612.6	5.0	0.406	3.76	1.000	2.000	2.350	18	30	
PFBS	166889.6	10	13C3-PFBS	428368.4	4.7	0.390	3.81	1.000	1.770	1.853	5	30	
4:2-FTS	33008.9	12	13C2-4:2-FTS	45542.8	4.7	0.725	4.12	1.000	1.870	1.968	5	30	
PFHxA	362326.0	12	13C5-PFHxA	638944.4	5.0	0.567	4.16	1.000	2.000	2.368	18	30	
PFPeS	87834.9	11	13C3-PFBS	428368.4	4.7	0.205	4.18	1.100	1.880	1.991	6	30	
PFHpA	361271.6	11	13C4-PFHpA	513535.0	5.0	0.703	4.54	1.000	2.000	2.332	17	30	
PFHxS	128396.1	18	13C3-PFHxS	315408.2	4.7	0.407	4.55	1.000	1.820	1.974	8	30	
6:2-FTS	30500.7	11	13C2-6:2-FTS	31026.1	4.8	0.983	4.90	1.000	1.900	2.379	25	30	
PFHpS	122801.7	11	13C3-PFHxS	315408.2	4.7	0.389	4.91	1.080	1.900	2.050	8	30	
PFOA	370358.7	11	13C8-PFOA	845332.9	5.0	0.438	4.91	1.000	2.000	2.340	17	30	
PFOS	122332.0	21	13C8-PFOS	260810.5	4.8	0.469	5.24	1.000	1.850	2.051	11	30	
PFNA	292557.2	11	13C9-PFNA	468762.7	5.0	0.624	5.26	1.000	2.000	2.250	13	30	
PFNS	76021.2	11	13C8-PFOS	260810.5	4.8	0.291	5.54	1.060	1.920	2.039	6	30	
PFDA	253956.7	11	13C6-PFDA	610394.1	5.0	0.416	5.56	1.000	2.000	2.206	10	30	
8:2-FTS	22335.5	11	13C2-8:2-FTS	28002.9	4.8	0.798	5.56	1.000	1.920	1.860	-3	30	
PFOSA	236734.8	12	13C8-PFOSA	697263.3	5.0	0.340	5.64	1.000	2.000	1.658	-17	30	
NMeFOSAA	28733.4	18	d3-NMeFOSAA	73784.5	5.0	0.389	5.70	1.000	2.000	2.201	10	30	
PFDS	62507.8	11	13C8-PFOS	260810.5	4.8	0.240	5.79	1.110	1.930	2.172	13	30	
PFUnDA	199322.4	12	13C7-PFUnDA	244775.8	5.0	0.814	5.82	1.000	2.000	2.129	6	30	
NEtFOSAA	24531.9	20	d5-NEtFOSAA	70158.9	5.0	0.350	5.83	1.000	2.000	1.833	-8	30	
PFDoDA	228792.9	12	13C2-PFDoDA	497113.0	5.0	0.460	6.05	1.000	2.000	2.344	17	30	
10:2-FTS	14411.1	11	13C2-8:2-FTS	28002.9	4.8	0.515	6.06	1.090	1.930	1.714	-11	30	
NMePFOSAE	172466.5	11	d7-NMePFOSAE	300873.2	5.0	0.573	6.09	1.000	2.000	2.386	19	30	
NMePFOSA	31464.1	12	d3-NMePFOSA	75068.4	5.0	0.419	6.10	1.000	2.000	2.068	3	30	
PFDoS	33762.2	11	13C8-PFOS	260810.5	4.8	0.129	6.22	1.190	1.940	2.267	17	30	
NEtPFOSAE	180928.5	11	d9-NEtPFOSAE	250299.2	5.0	0.723	6.25	1.000	2.000	2.319	16	30	
NEtPFOSA	26529.3	11	d5-NEtPFOSA	59631.6	5.0	0.445	6.26	1.000	2.000	2.043	2	30	
PFTrDA	185154.6	11	13C2-PFDoDA	497113.0	5.0	0.372	6.25	1.030	2.000	2.351	18	30	
PFTeDA	159904.6	10	13C2-PFTeDA	379642.6	5.0	0.421	6.42	1.000	2.000	2.361	18	30	
PFHxDA	68393.8	11	13C2-PFTeDA	379642.6	5.0	0.180	6.73	1.050	2.000	2.146	7	30	
PFODA	58092.4	10	13C2-PFTeDA	379642.6	5.0	0.153	6.99	1.090	2.000	2.131	7	30	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV12DCAL-52.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T16:36:17
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735275.5	13C3-PFBA	664284.7	1.107	5.000	4.962	99	70-130	
E13C5-PFPeA	741612.6	13C3-PFBA	664284.7	1.116	5.000	5.007	100	70-130	
E13C3-PFBS	428368.4	13C3-PFBA	664284.7	0.645	4.650	4.552	98	70-130	
E13C2-4:2-FTS	45542.8	13C2-PFOA	438739.4	0.104	4.670	4.623	99	70-130	
E13C5-PFHxA	638944.4	13C2-PFOA	438739.4	1.456	5.000	5.261	105	70-130	
E13C3-PFHxS	315408.2	13C2-PFOA	438739.4	0.719	4.730	4.933	104	70-130	
E13C4-PFHpA	513535.0	13C2-PFOA	438739.4	1.170	5.000	5.273	105	70-130	
E13C2-6:2-FTS	31026.1	13C2-PFOA	438739.4	0.071	4.750	4.731	100	70-130	
E13C8-PFOA	845332.9	13C2-PFOA	438739.4	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	260810.5	13C4-PFOS	248122.9	1.051	4.780	4.657	97	70-130	
E13C9-PFNA	468762.7	13C4-PFOS	248122.9	1.889	5.000	5.267	105	70-130	
E13C6-PFDA	610394.1	13C2-PFDA	280671.6	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	28002.9	13C2-PFDA	280671.6	0.100	4.790	4.976	104	70-130	
E13C8-PFOSA	697263.3	13C2-PFDA	280671.6	2.484	5.000	5.508	110	70-130	
Ed3-NMeFOSAA	73784.5	13C2-PFDA	280671.6	0.263	5.000	4.745	95	70-130	
E13C7-PFUnDA	244775.8	13C2-PFDA	280671.6	0.872	5.000	5.063	101	70-130	
Ed5-NEtFOSAA	70158.9	13C2-PFDA	280671.6	0.250	5.000	5.288	106	70-130	
E13C2-PFDoDA	497113.0	13C2-PFDA	280671.6	1.771	5.000	4.599	92	70-130	
Ed7-NMePFOSAE	300873.2	13C2-PFDA	280671.6	1.072	5.000	4.639	93	70-130	
Ed3-NMePFOSA	75068.4	13C2-PFDA	280671.6	0.267	5.000	4.859	97	70-130	
Ed9-NEtPFOSAE	250299.2	13C2-PFDA	280671.6	0.892	5.000	4.638	93	70-130	
Ed5-NEtPFOSA	59631.6	13C2-PFDA	280671.6	0.212	5.000	4.984	100	70-130	
E13C2-PFTeDA	379642.6	13C2-PFDA	280671.6	1.353	5.000	4.749	95	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

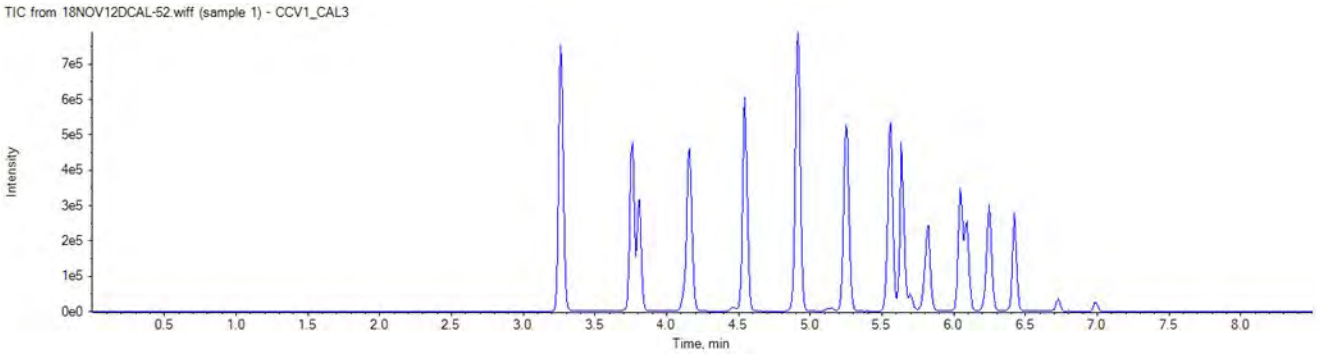
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-52.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	303662.2		A	13C4-PFBA	3.26	735275.5	0.413	2.288
PFPeA	3.76	1.000	301109.0		A	13C5-PFPeA	3.76	741612.6	0.406	2.350
PFBS	3.81	1.000	166889.6		A	13C3-PFBS	3.81	428368.4	0.390	1.853
4:2-FTS	4.12	1.000	33008.9		A	13C2-4:2-FTS	4.12	45542.8	0.725	1.968
PFHxA	4.16	1.000	362326.0		A	13C5-PFHxA	4.16	638944.4	0.567	2.368
PFPeS	4.18	1.100	87834.9		A	13C3-PFBS	3.81	428368.4	0.205	1.991
PFHpA	4.54	1.000	361271.6		A	13C4-PFHpA	4.54	513535.0	0.703	2.332
PFHxS	4.55	1.000	128396.1		M	13C3-PFHxS	4.55	315408.2	0.407	1.974
6:2-FTS	4.90	1.000	30500.7		A	13C2-6:2-FTS	4.90	31026.1	0.983	2.379
PFHpS	4.91	1.080	122801.7		A	13C3-PFHxS	4.55	315408.2	0.389	2.050
PFOA	4.91	1.000	370358.7		A	13C8-PFOA	4.91	845332.9	0.438	2.340
PFOS	5.24	1.000	122332.0		M	13C8-PFOS	5.24	260810.5	0.469	2.051
PFNA	5.26	1.000	292557.2		A	13C9-PFNA	5.26	468762.7	0.624	2.250
PFNS	5.54	1.060	76021.2		A	13C8-PFOS	5.24	260810.5	0.291	2.039
PFDA	5.56	1.000	253956.7		A	13C6-PFDA	5.56	610394.1	0.416	2.206
8:2-FTS	5.56	1.000	22335.5		A	13C2-8:2-FTS	5.56	28002.9	0.798	1.860
PFOSA	5.64	1.000	236734.8		A	13C8-PFOSA	5.64	697263.3	0.340	1.658
NMeFOSAA	5.70	1.000	28733.4		A	d3-NMeFOSAA	5.70	73784.5	0.389	2.201
PFDS	5.79	1.110	62507.8		A	13C8-PFOS	5.24	260810.5	0.240	2.172
PFUnDA	5.82	1.000	199322.4		A	13C7-PFUnDA	5.82	244775.8	0.814	2.129
NEtFOSAA	5.83	1.000	24531.9		A	d5-NEtFOSAA	5.83	70158.9	0.350	1.833
PFDoDA	6.05	1.000	228792.9		A	13C2-PFDoDA	6.05	497113.0	0.460	2.344
10:2-FTS	6.06	1.090	14411.1		A	13C2-8:2-FTS	5.56	28002.9	0.515	1.714
NMePFOSAE	6.09	1.000	172466.5		A	d7-NMePFOSAE	6.09	300873.2	0.573	2.386
NMePFOSA	6.10	1.000	31464.1		A	d3-NMePFOSA	6.10	75068.4	0.419	2.068
PFDoS	6.22	1.190	33762.2		A	13C8-PFOS	5.24	260810.5	0.129	2.267
NEtPFOSAE	6.25	1.000	180928.5		A	d9-NEtPFOSAE	6.24	250299.2	0.723	2.319
NEtPFOSA	6.26	1.000	26529.3		A	d5-NEtPFOSA	6.26	59631.6	0.445	2.043
PFTrDA	6.25	1.030	185154.6		A	13C2-PFDoDA	6.05	497113.0	0.372	2.351
PFTeDA	6.42	1.000	159904.6		A	13C2-PFTeDA	6.42	379642.6	0.421	2.361
PFHxDA	6.73	1.050	68393.8		A	13C2-PFTeDA	6.42	379642.6	0.180	2.146
PFODA	6.99	1.090	58092.4		A	13C2-PFTeDA	6.42	379642.6	0.153	2.131

Total Ion Chromatogram

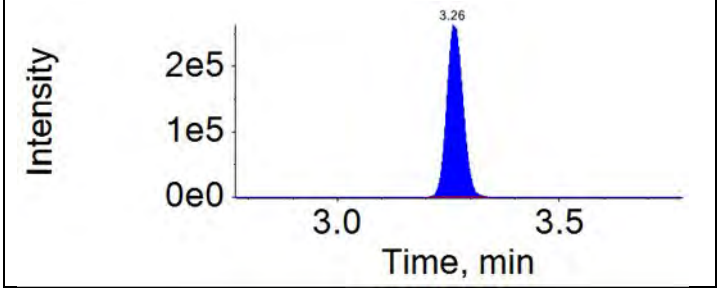


APPROVED
By MCD at 6:34 pm, 11/12/18

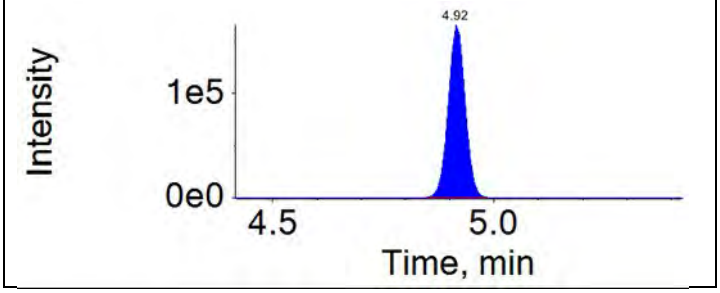
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

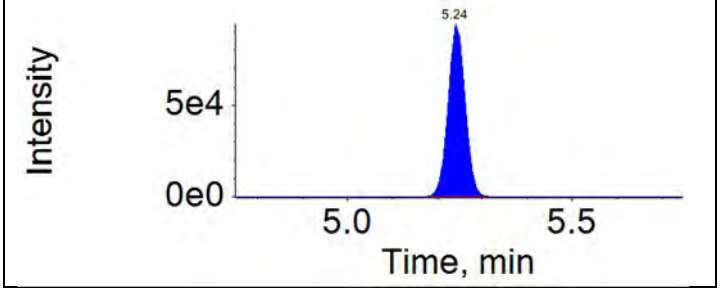
Injection Standard: 13C3-PFBA
216.0 / 172.0



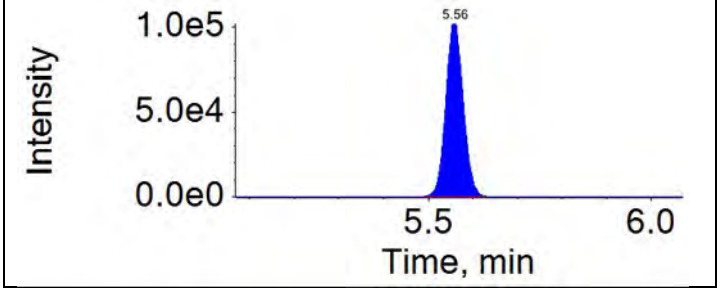
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

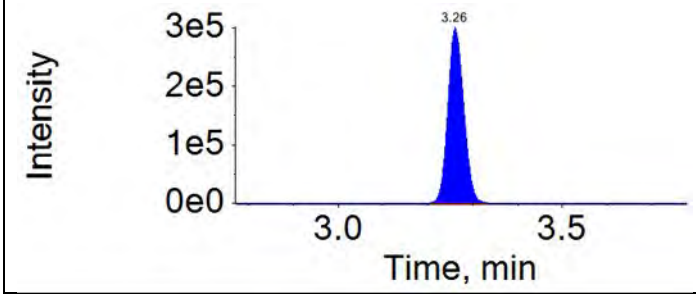


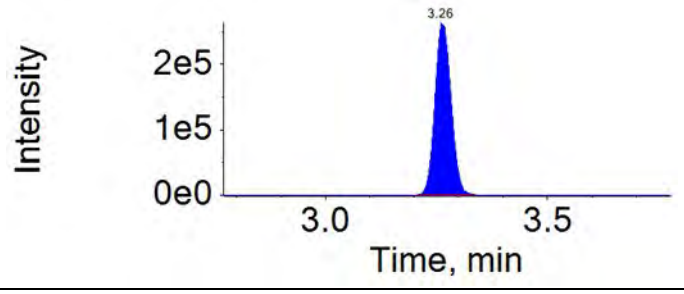
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

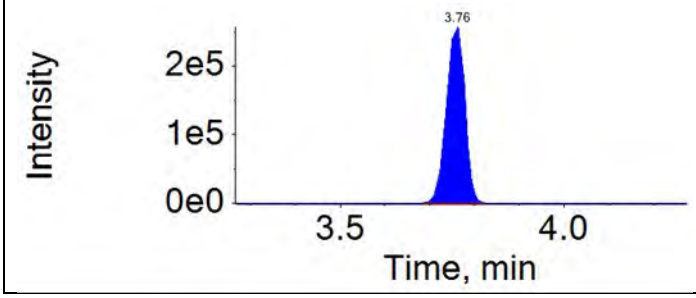
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

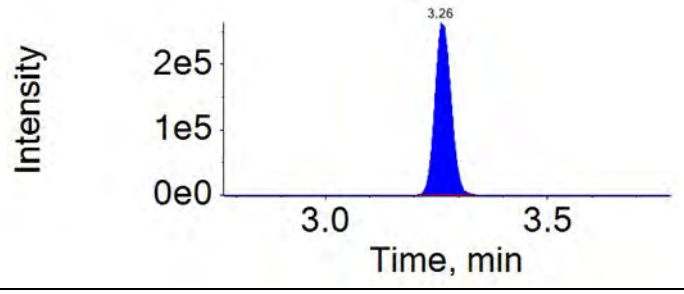
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



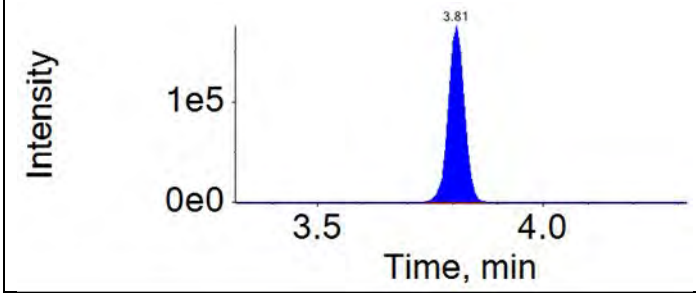


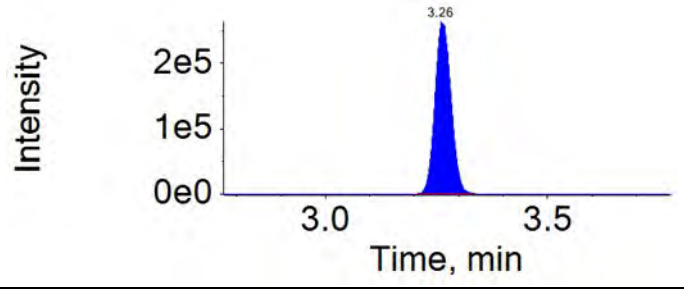
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



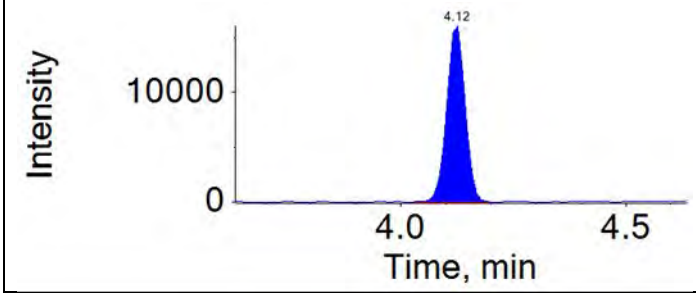


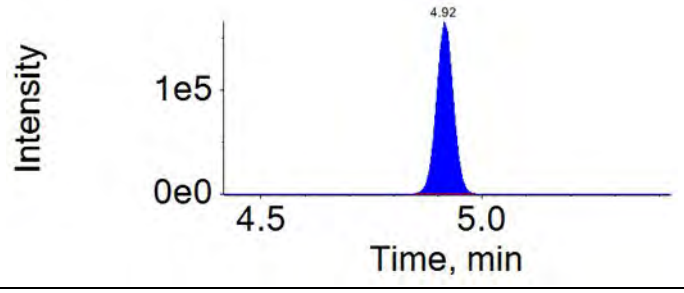
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



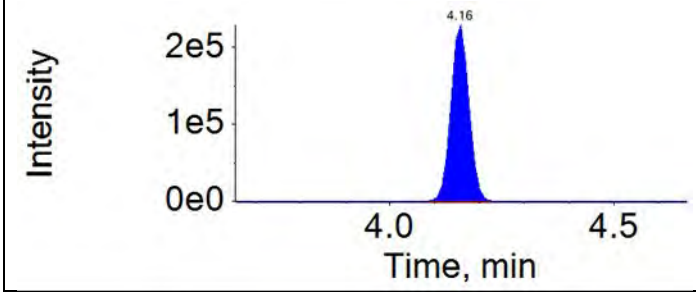


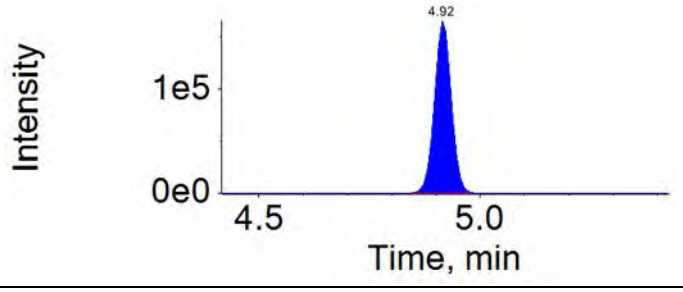
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

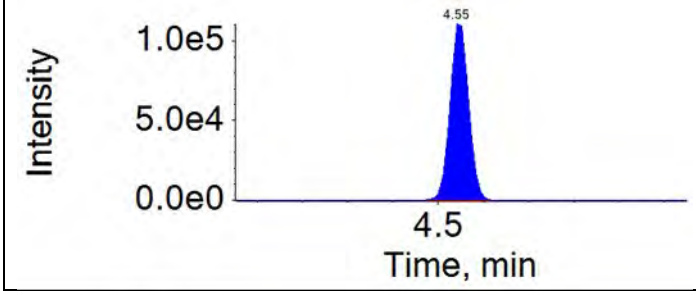
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

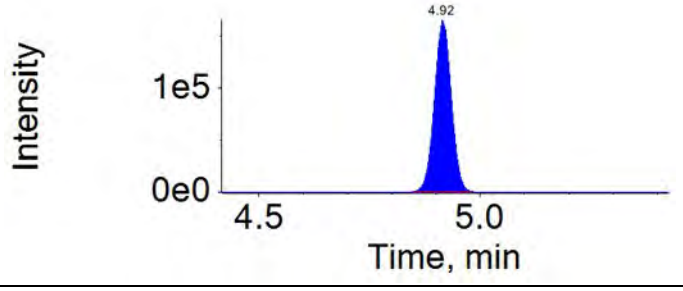
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



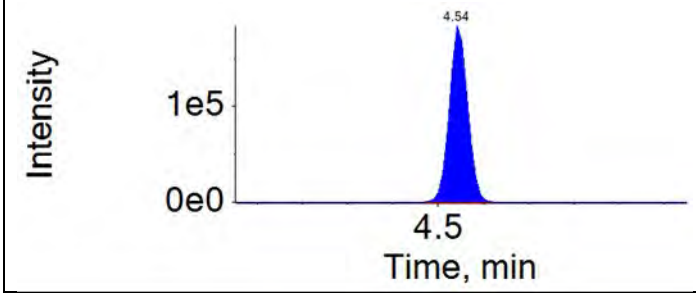


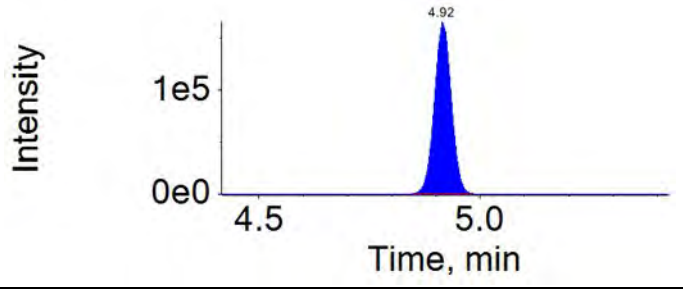
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



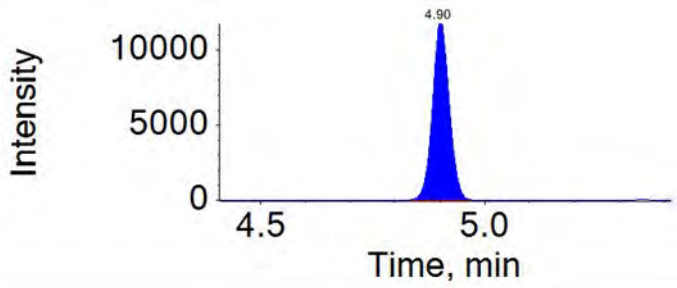


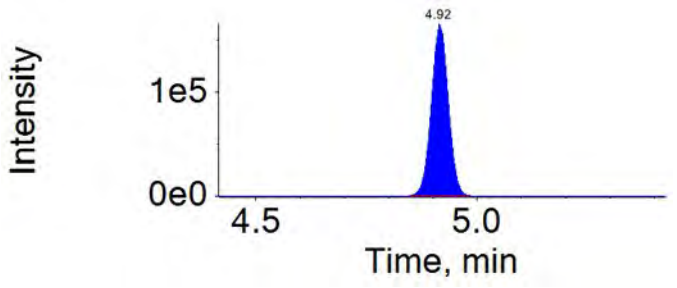
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

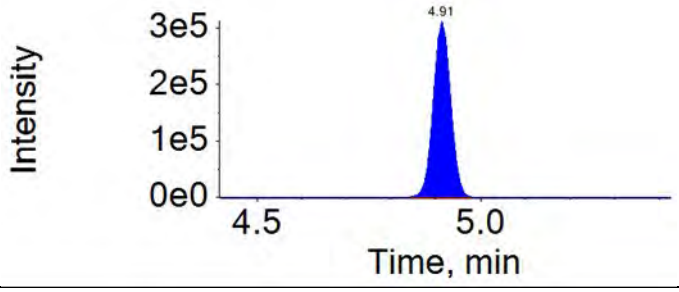
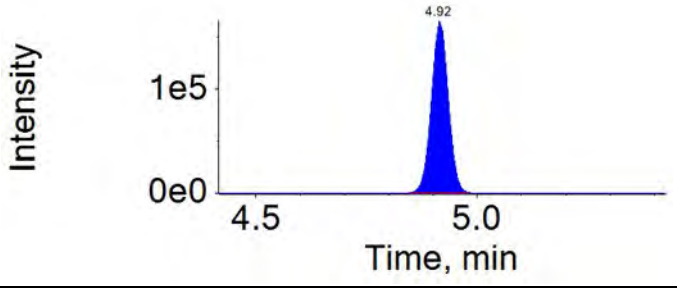


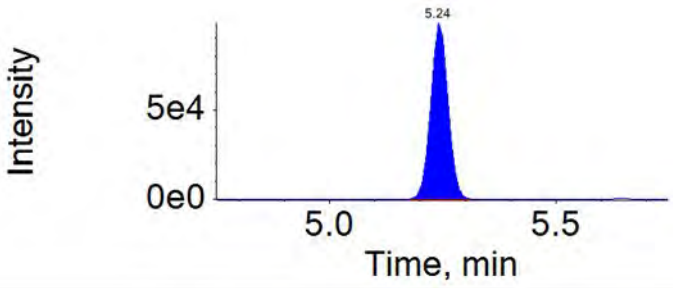
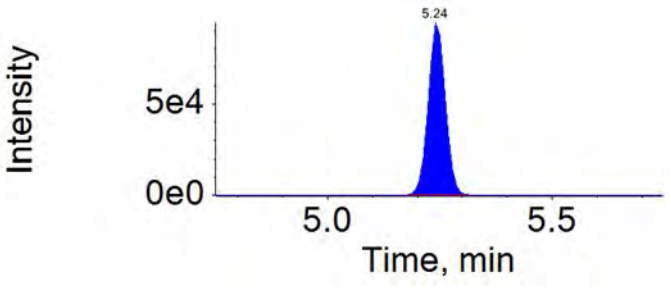


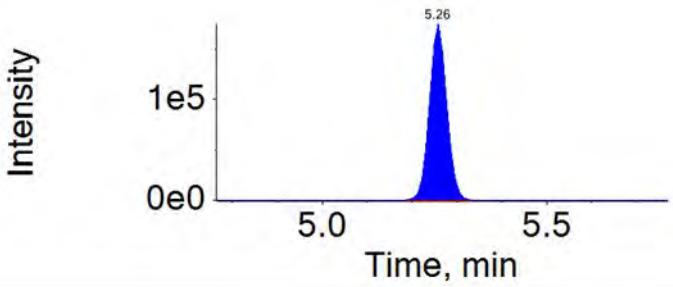
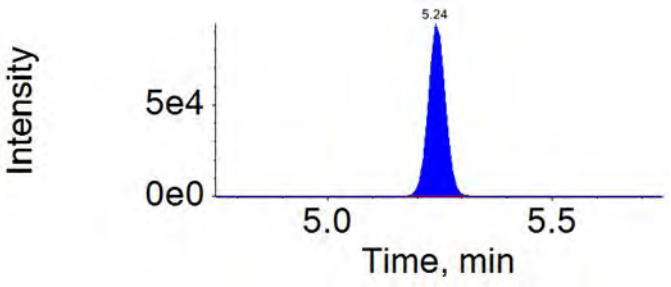
APPROVED
By MCD at 6:34 pm, 11/12/18

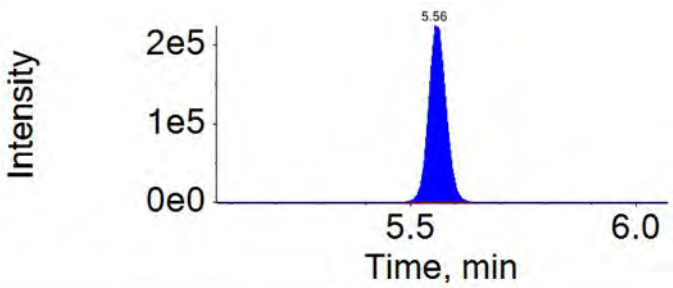
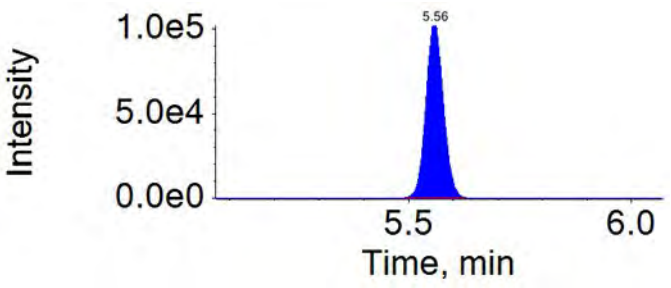
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

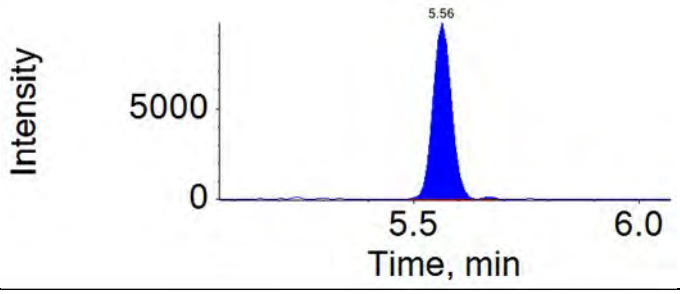
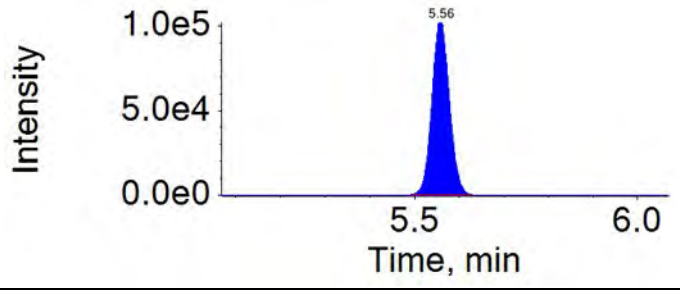
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

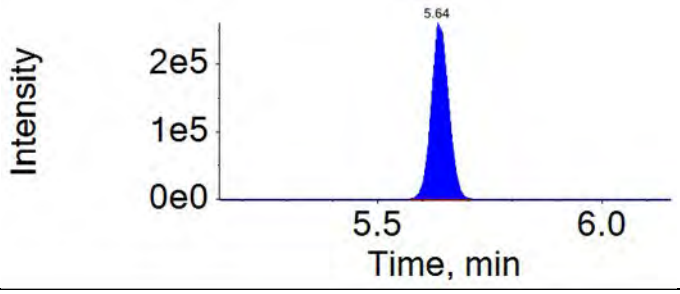
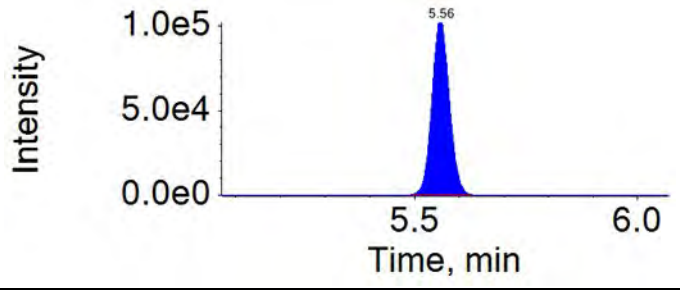
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

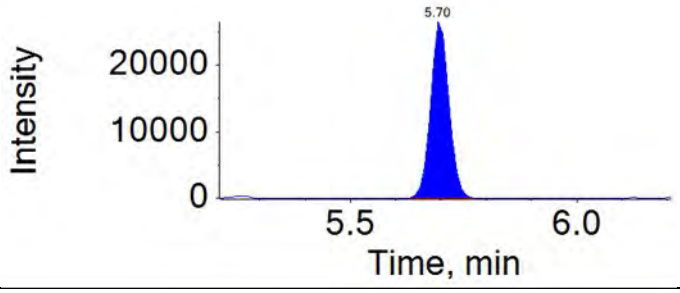
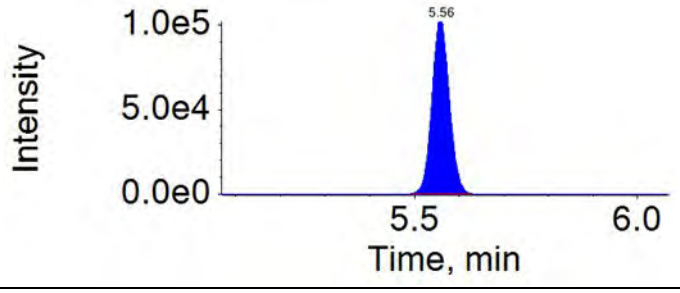
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

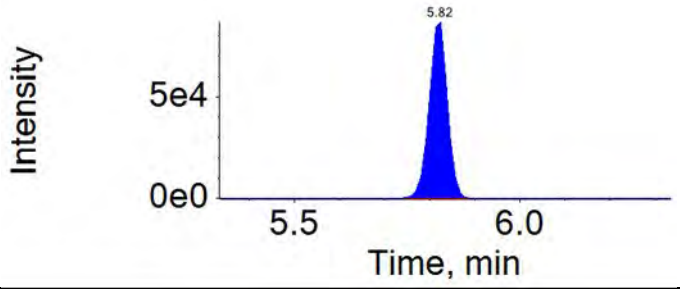
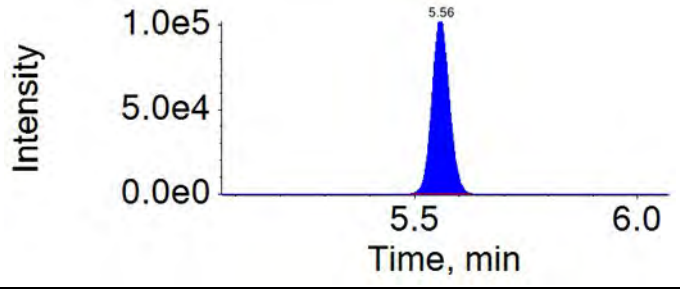
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

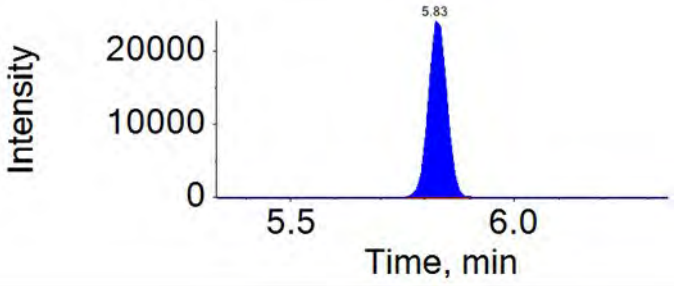
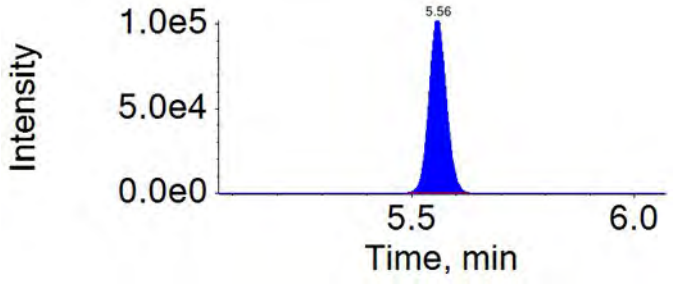
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

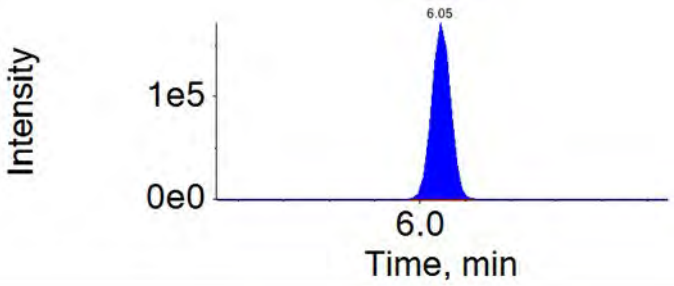
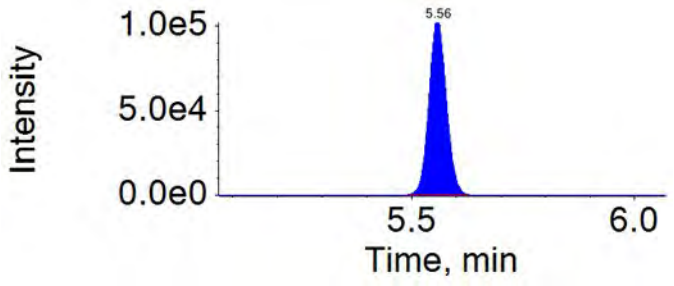
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

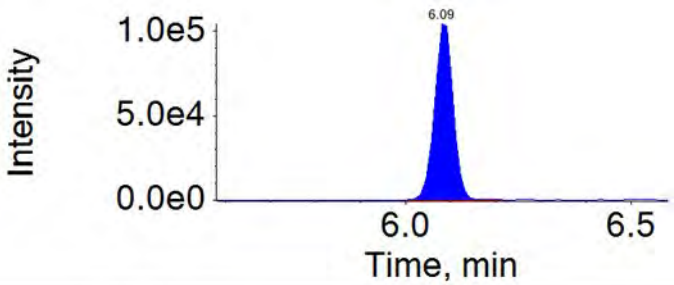
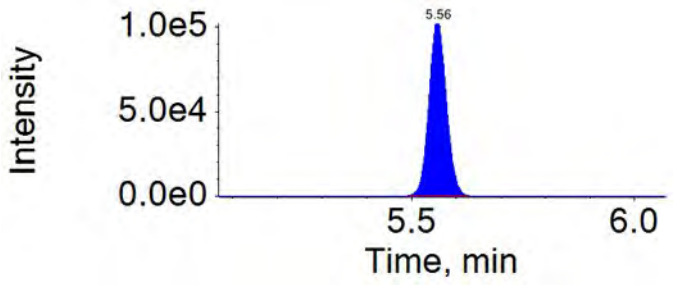
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

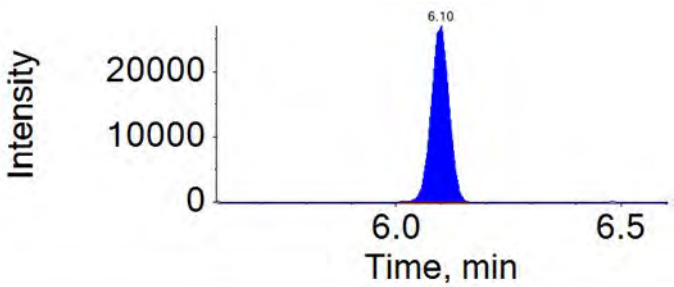
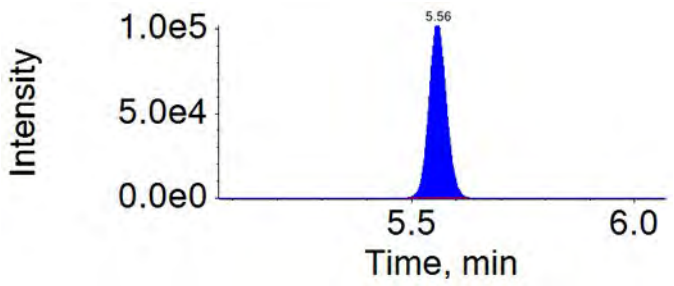
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

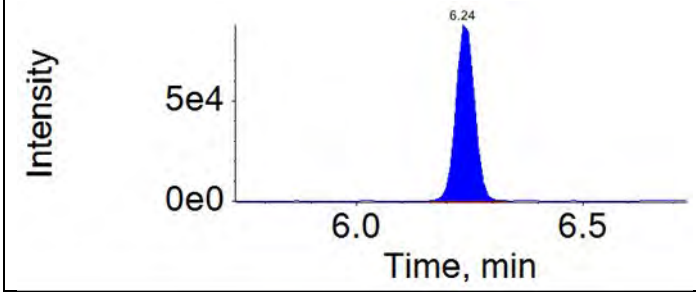
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

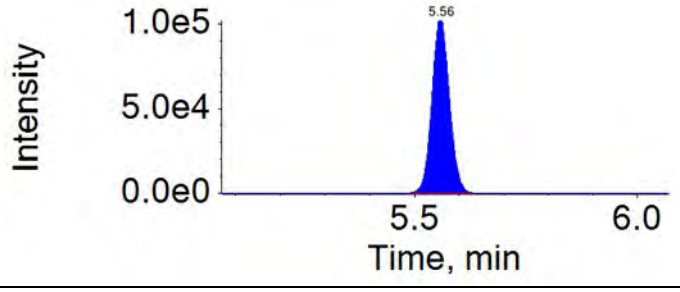
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

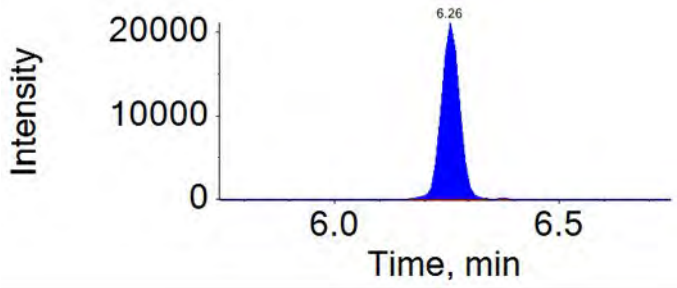
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

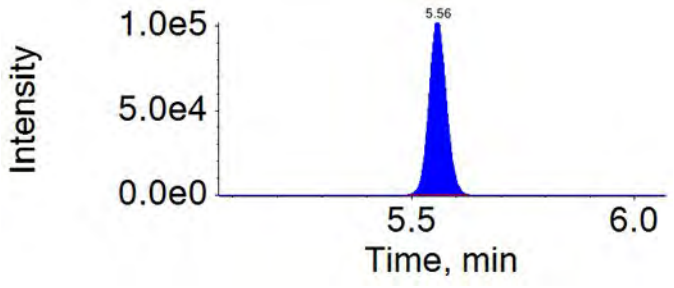
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



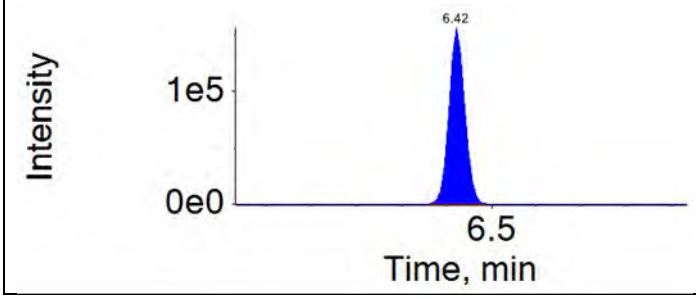


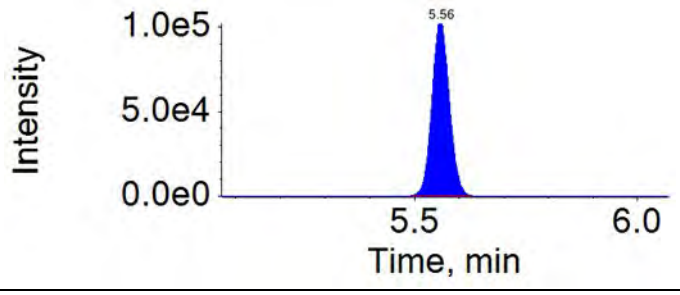
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



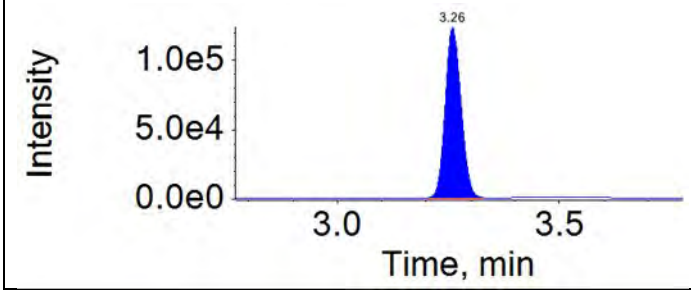


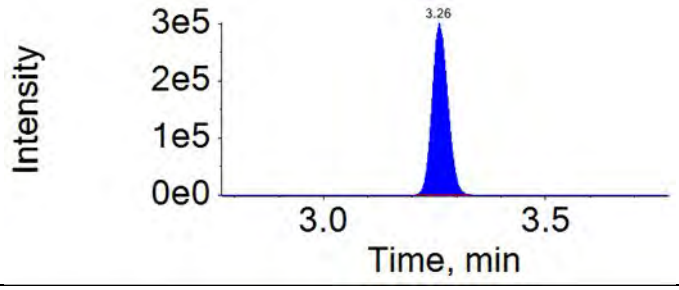
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

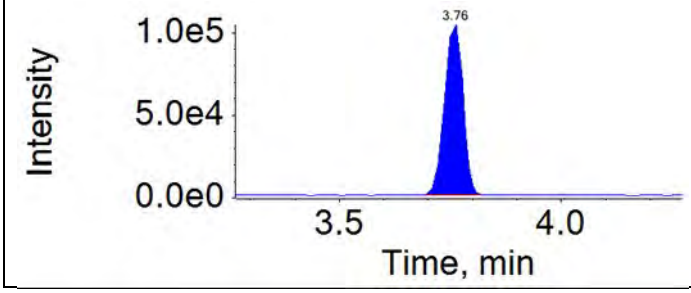
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

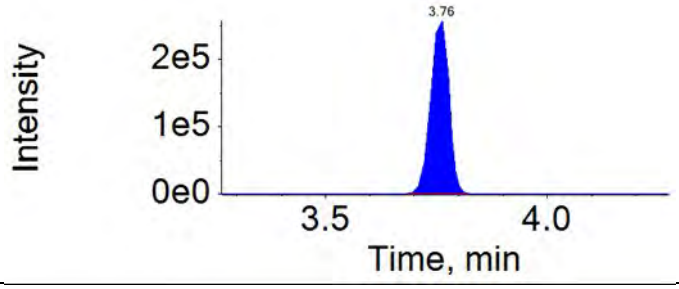
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



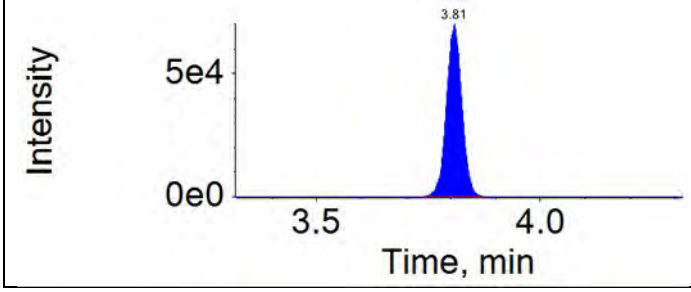


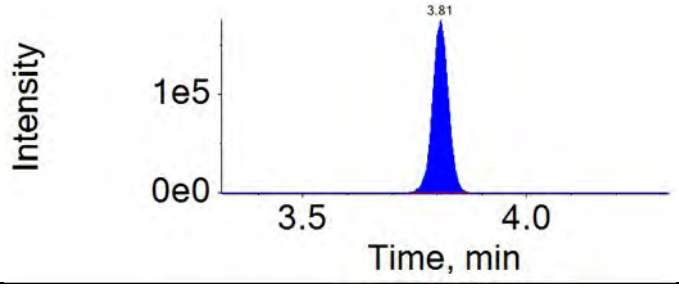
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



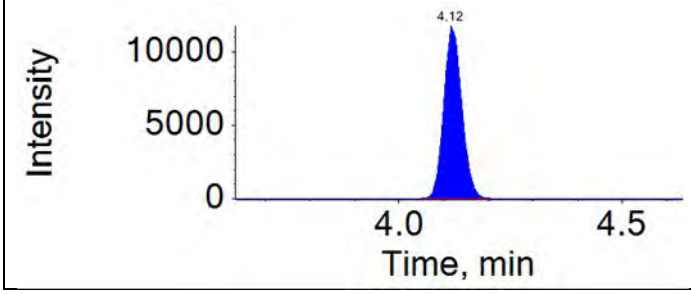


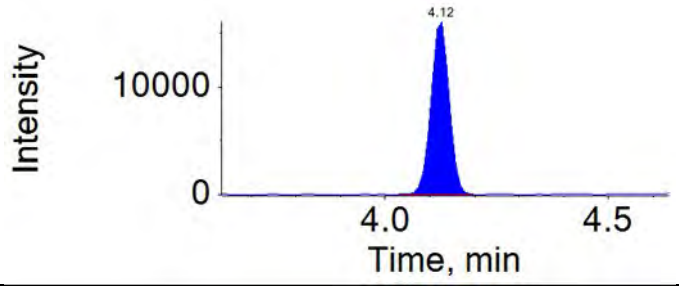
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



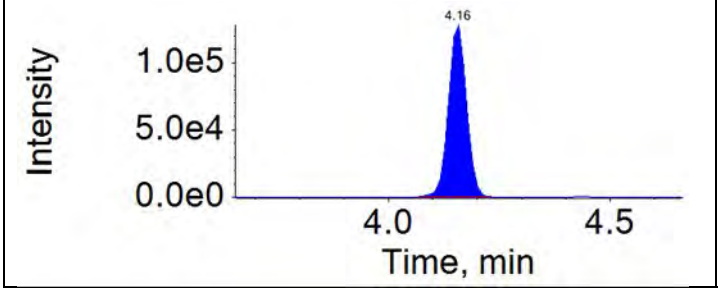


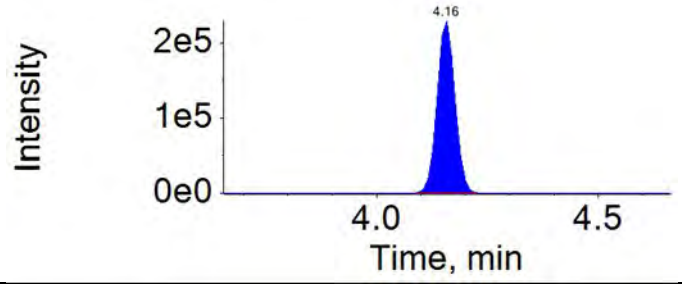
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

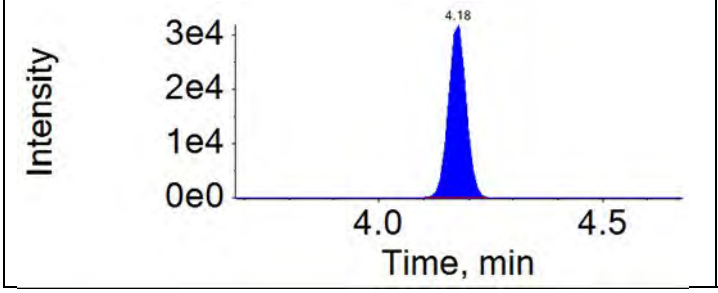
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

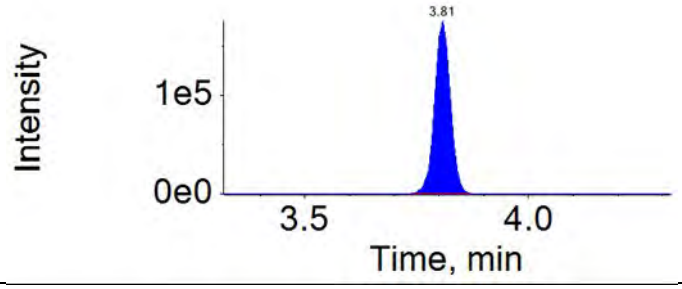
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



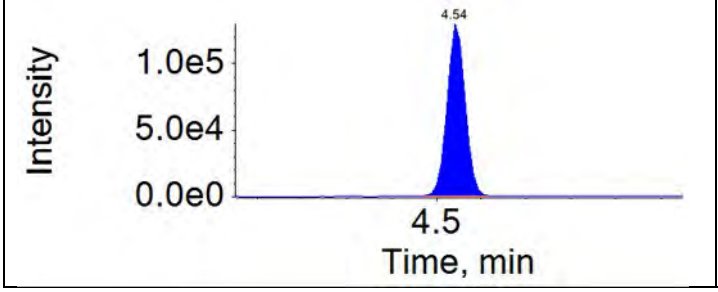


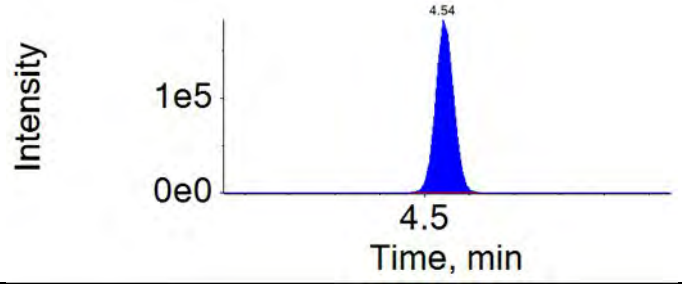
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



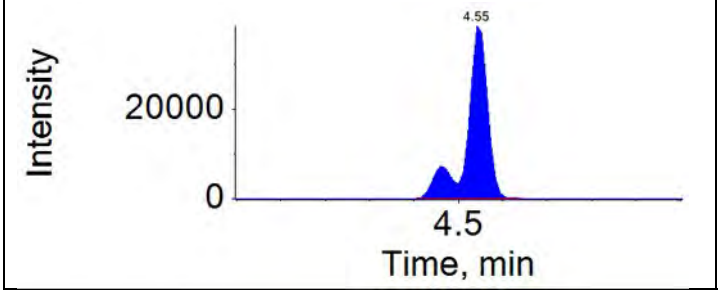


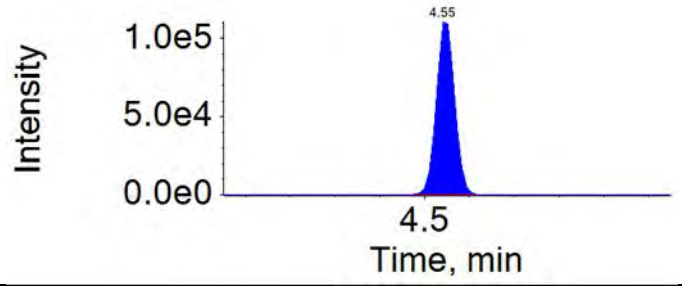
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



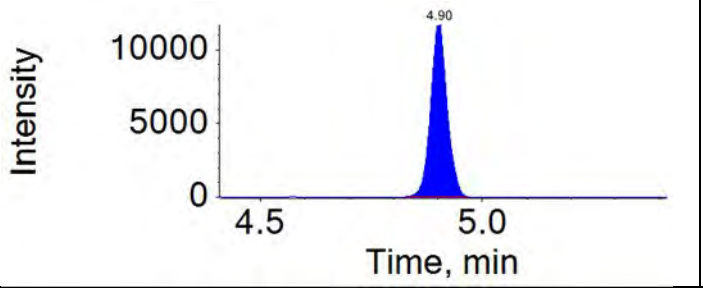


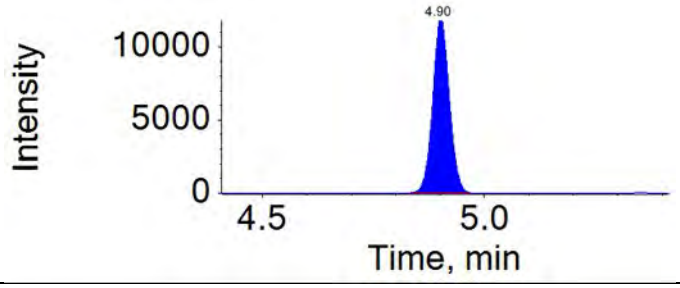
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

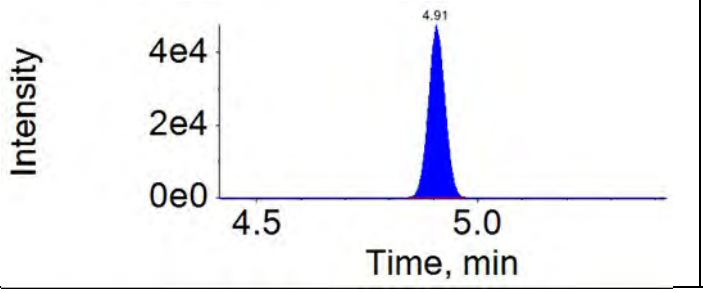
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

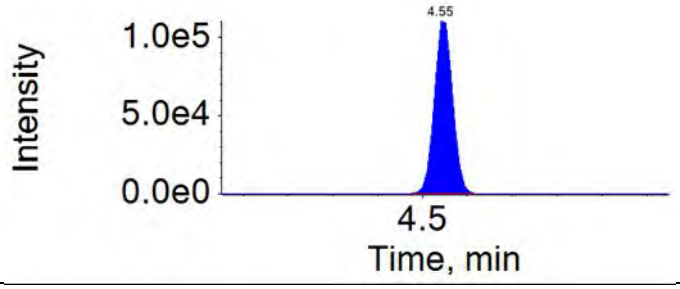
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



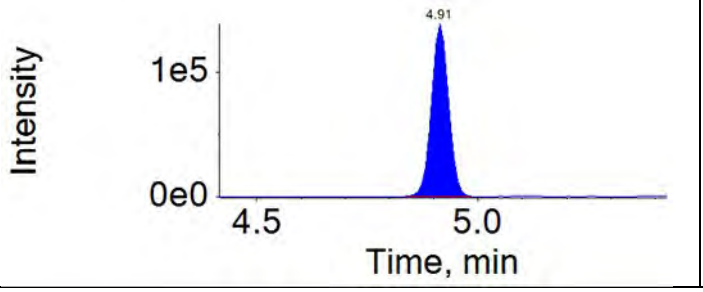


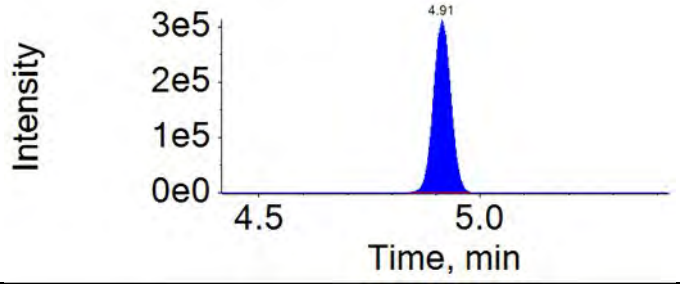
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



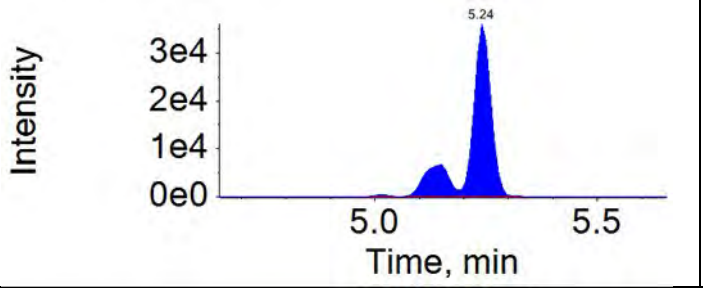


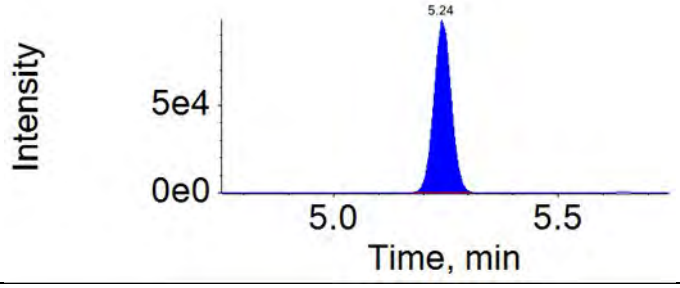
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



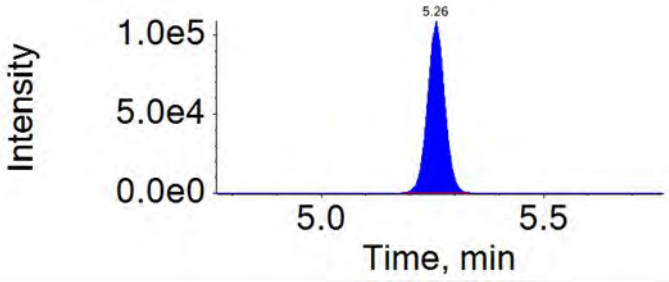


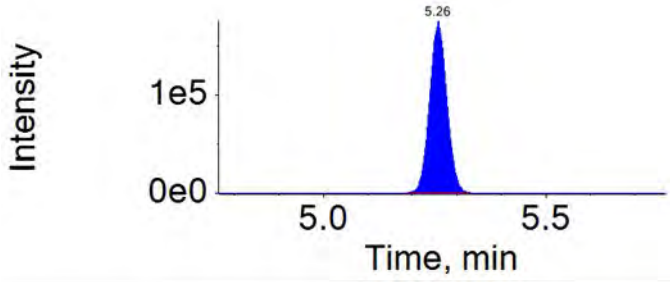
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

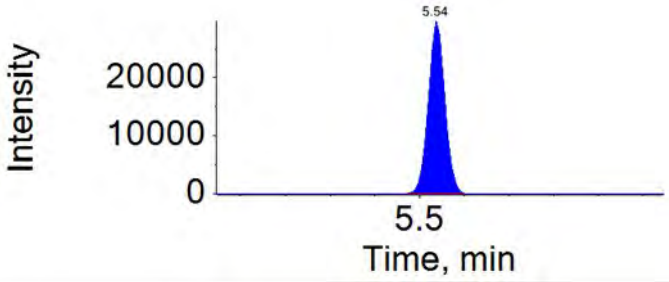
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

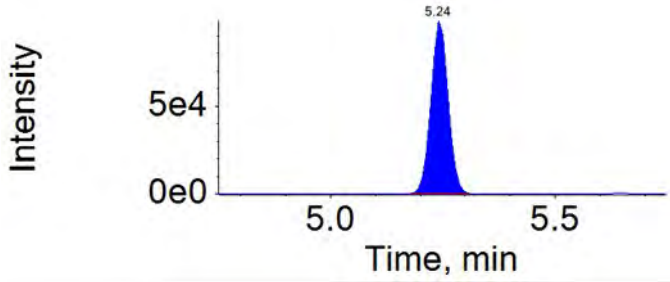
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



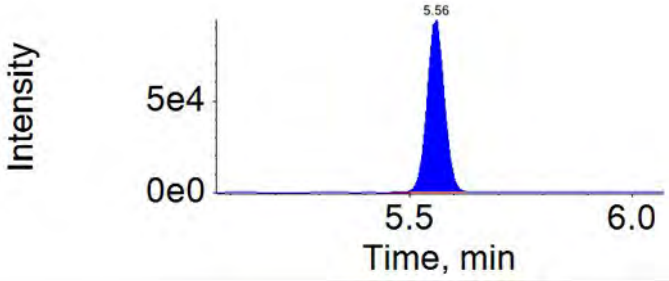


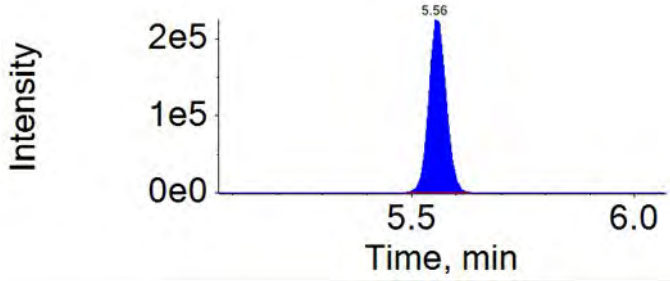
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



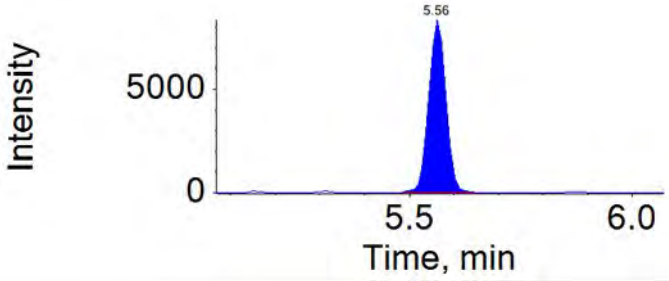


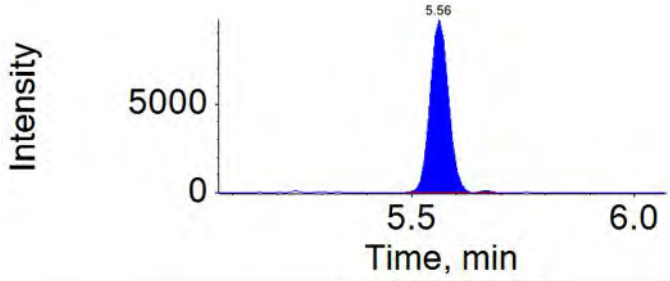
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



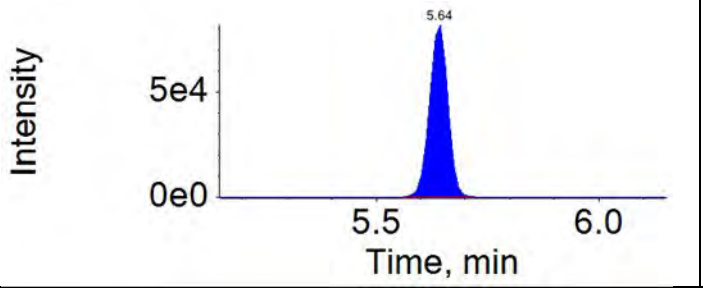


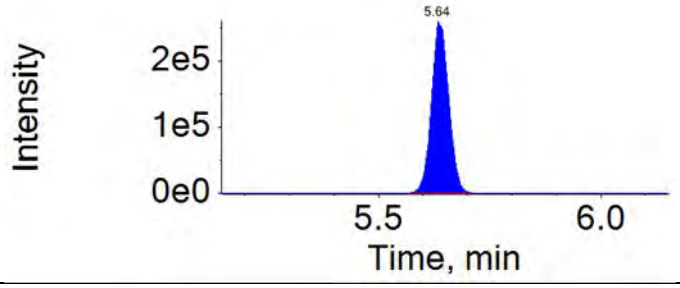
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

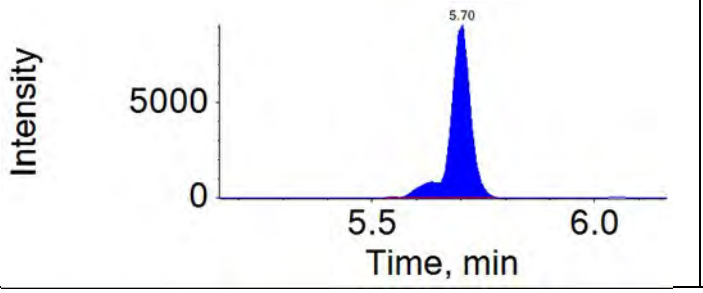
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

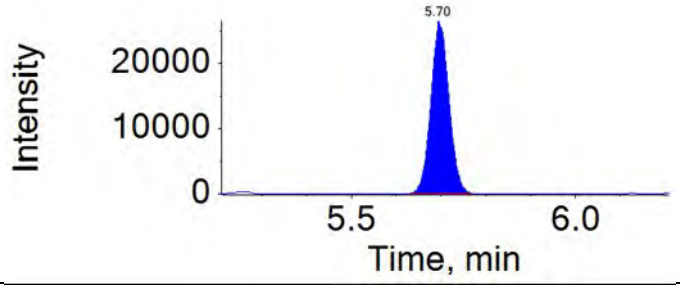
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



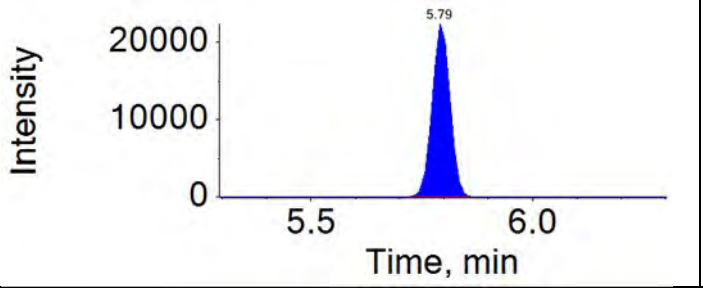


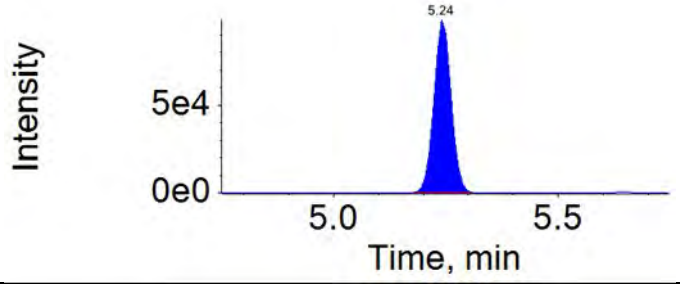
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



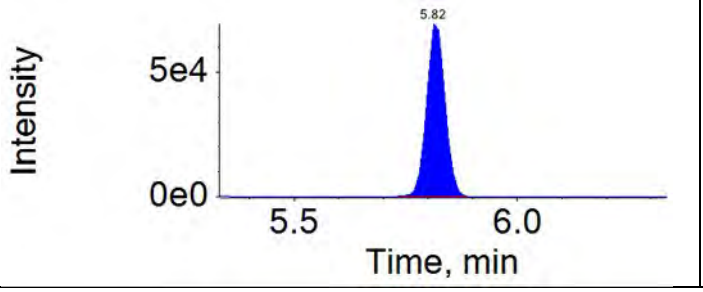


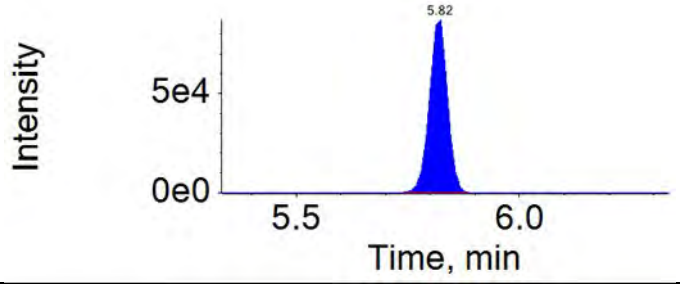
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



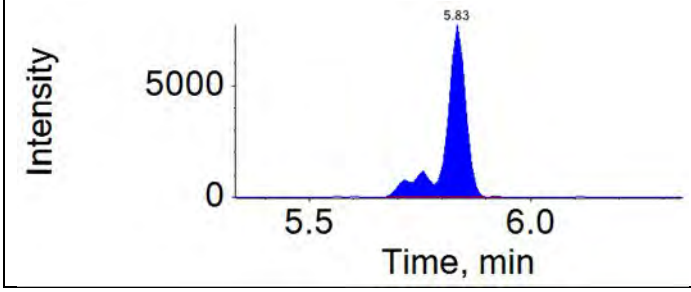


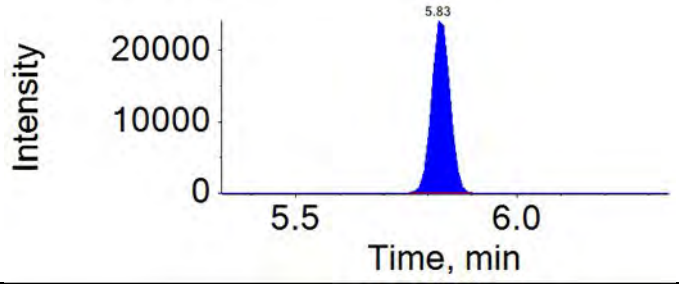
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

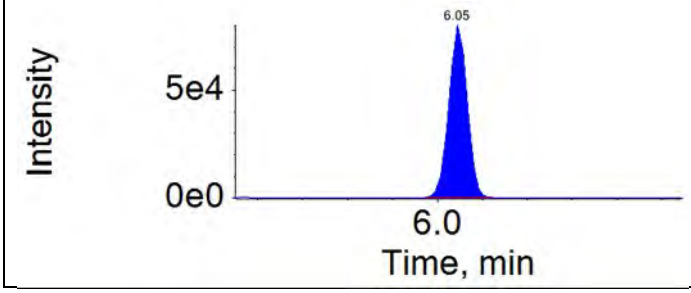
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

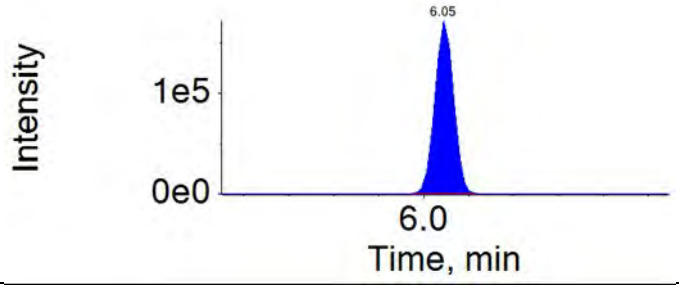
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



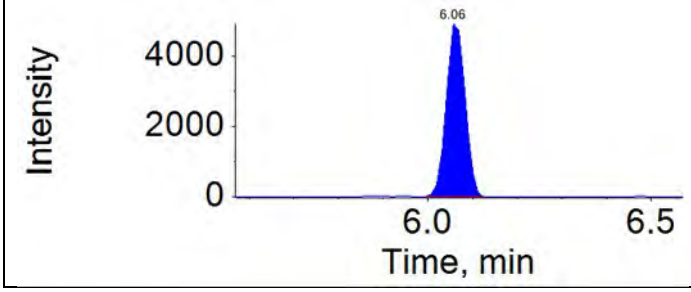


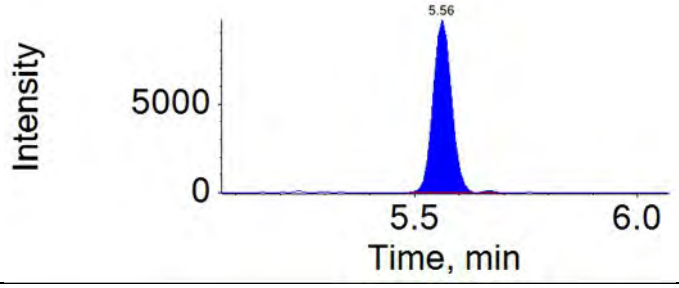
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



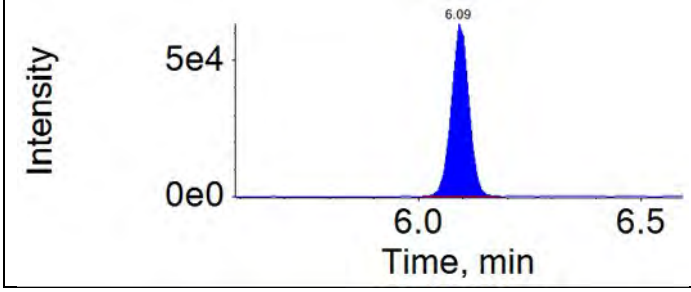


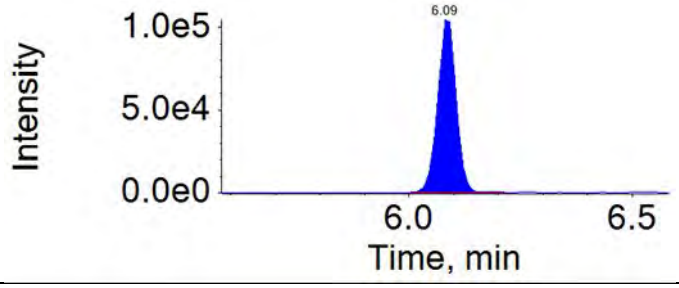
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



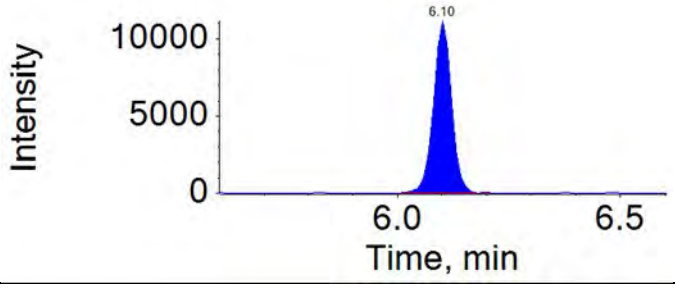


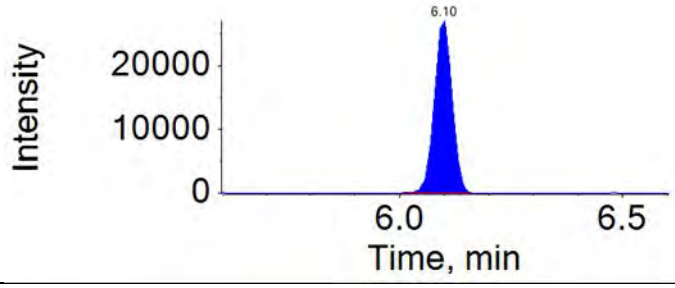
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

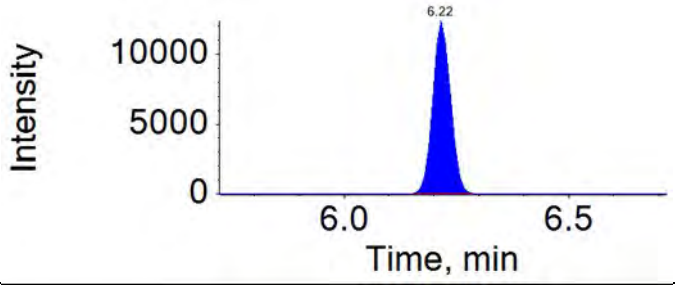
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

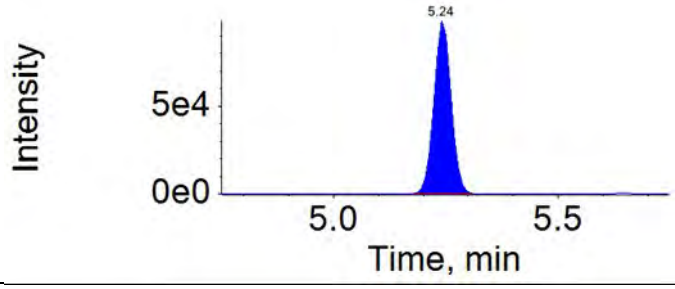
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



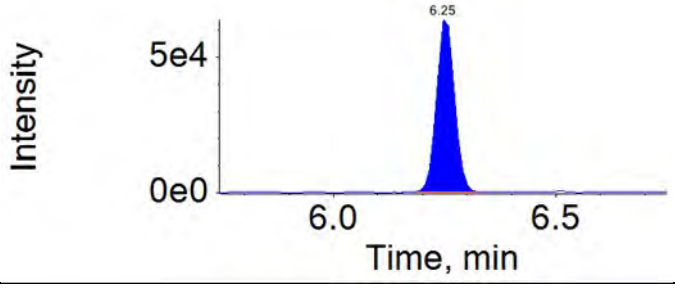


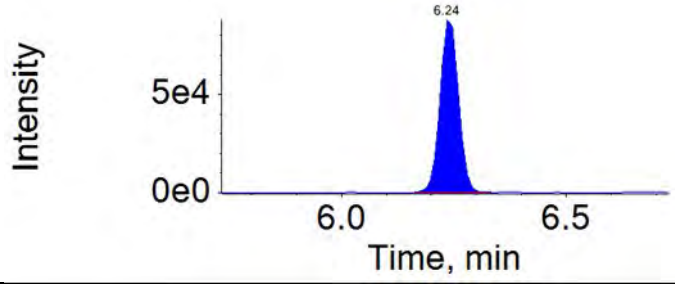
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



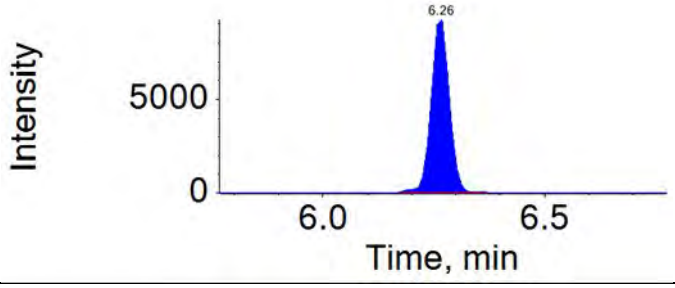


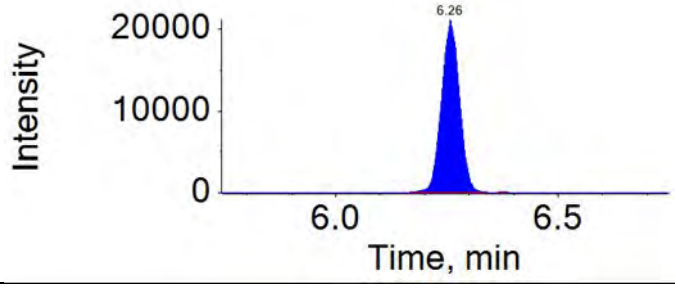
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



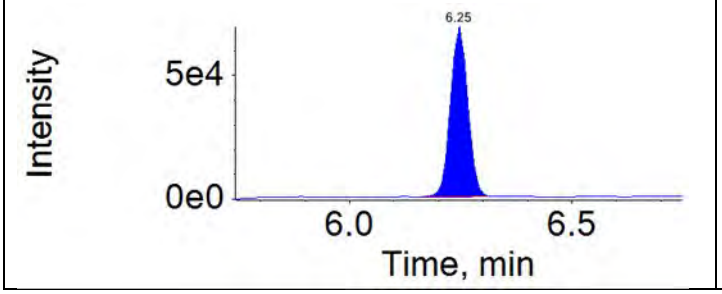


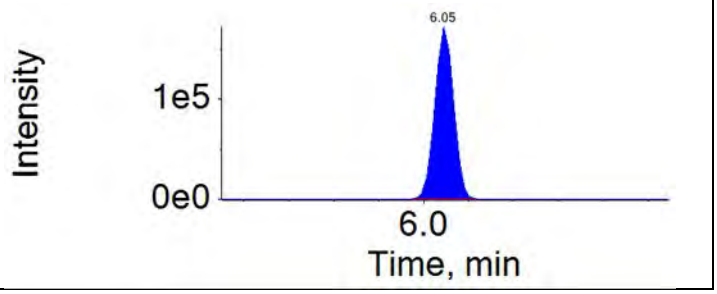
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

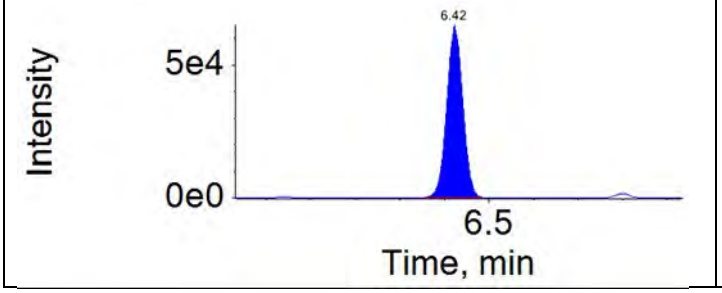
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

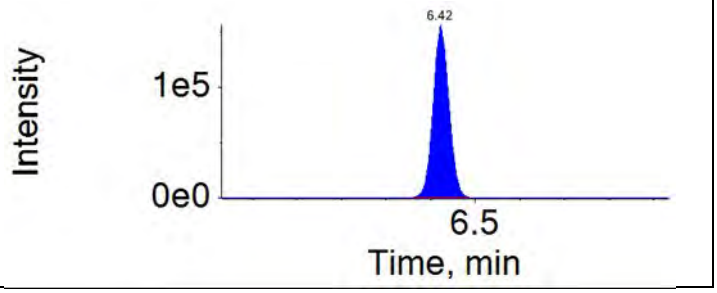
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



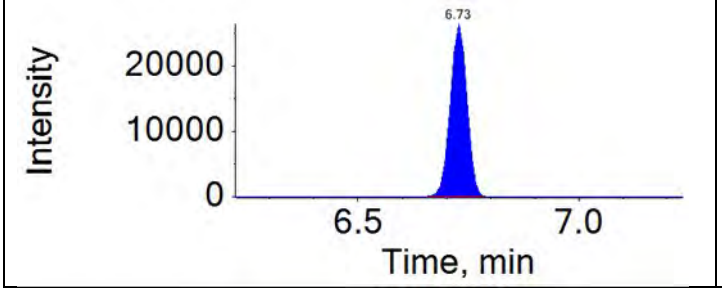


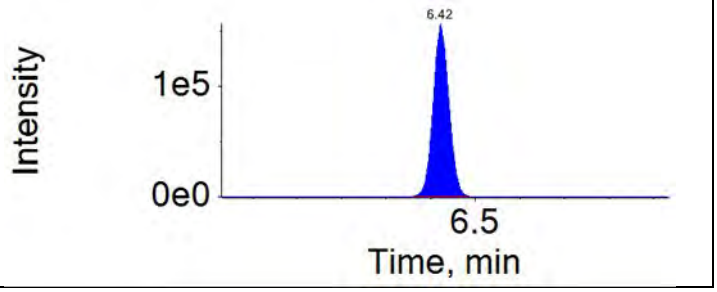
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



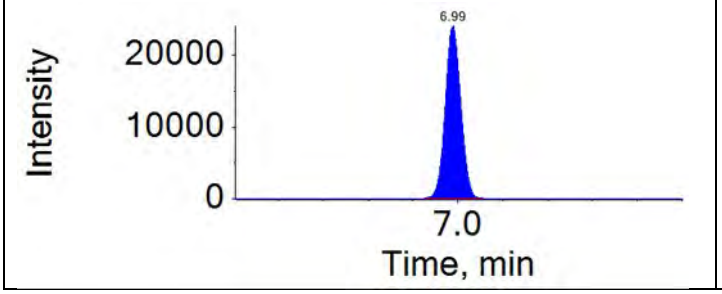


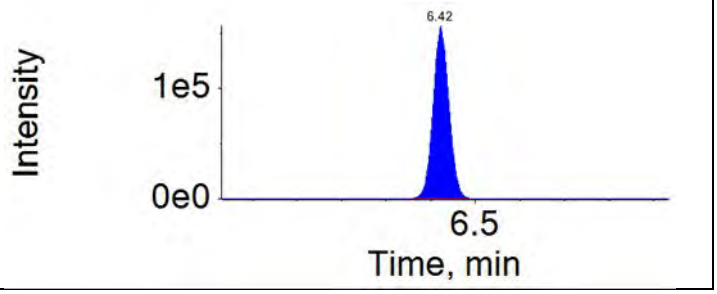
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



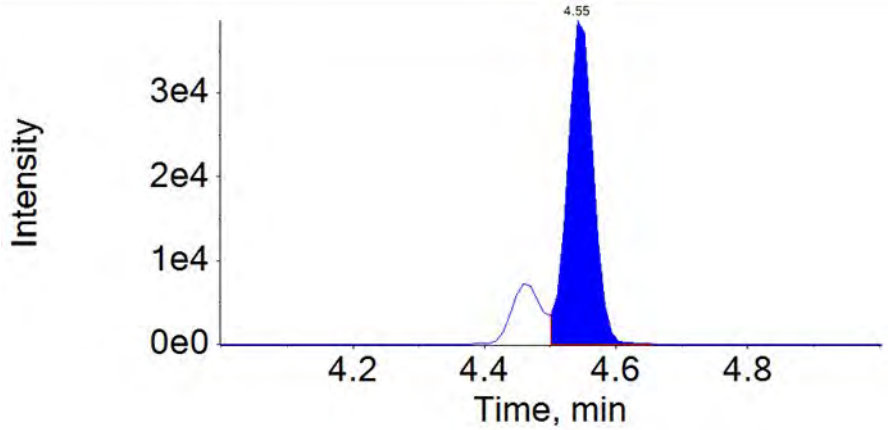


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

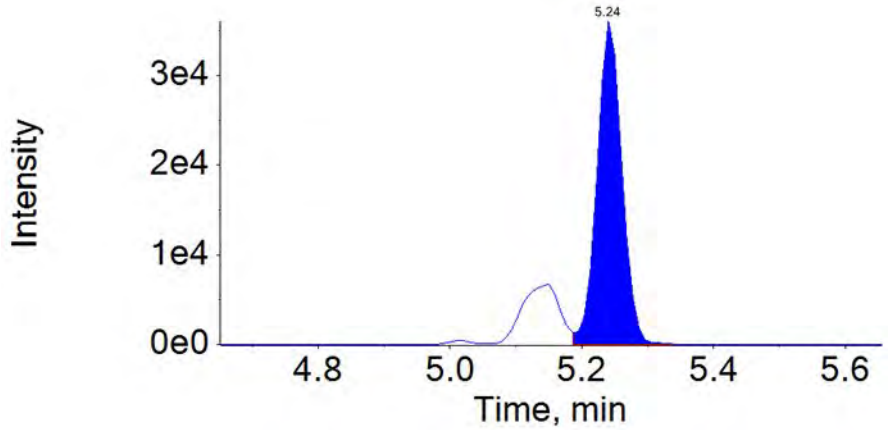
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
105576.75
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



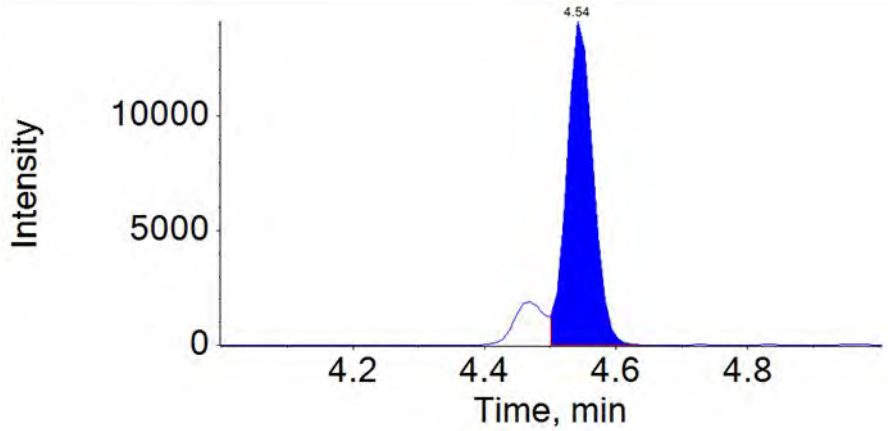
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
94723.88
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
39165.47
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



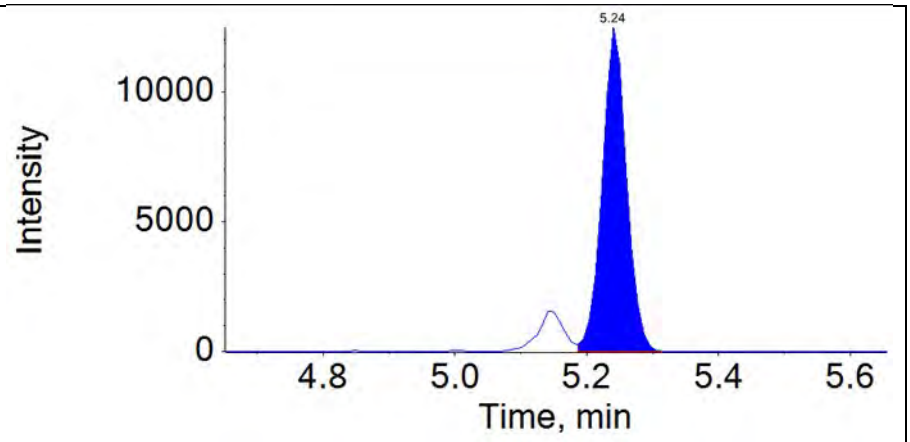
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

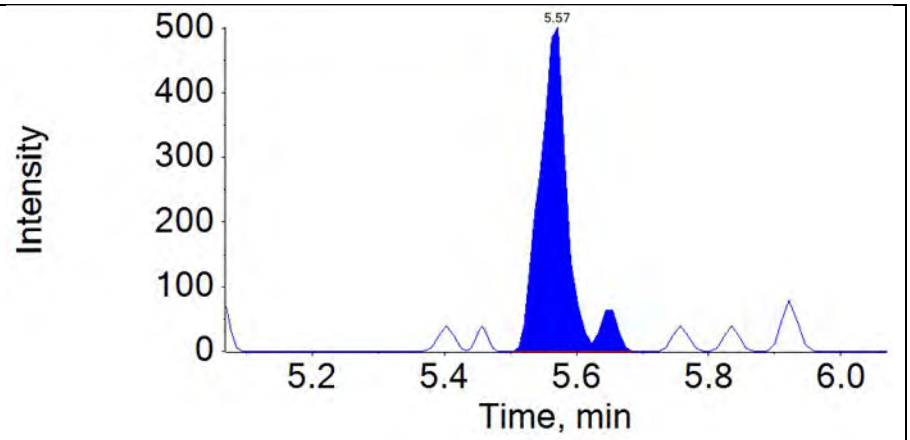
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2
RT (min.): 5.24
Peak Area: 32024.51
Mass Range: 499.0 / 99.0
File Name: 18NOV12DCAL-52.wiff
Sample Name: CCV1_CAL3



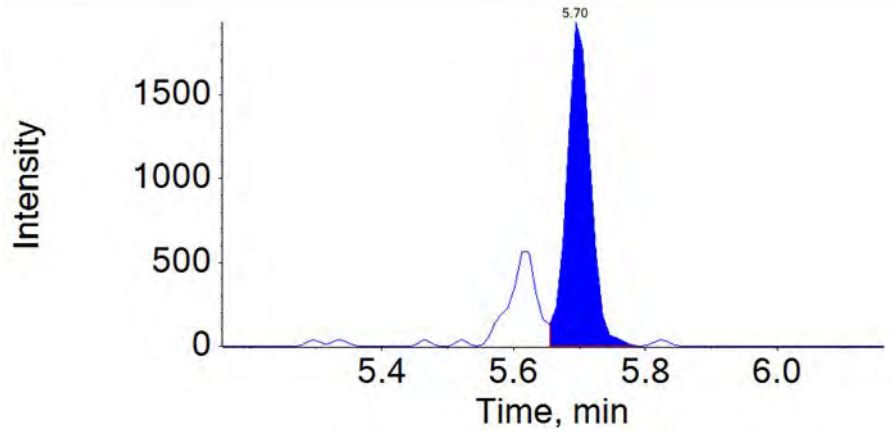
Integration Comment: incorrect integration

Component Name: PFDA_2
RT (min.): 5.57
Peak Area: 1525.22
Mass Range: 513.0 / 169.0
File Name: 18NOV12DCAL-52.wiff
Sample Name: CCV1_CAL3



Integration Comment: incorrect integration

Component Name: NMeFOSAA_2
RT (min.): 5.70
Peak Area: 4786.64
Mass Range: 570.0 / 483.0
File Name: 18NOV12DCAL-52.wiff
Sample Name: CCV1_CAL3

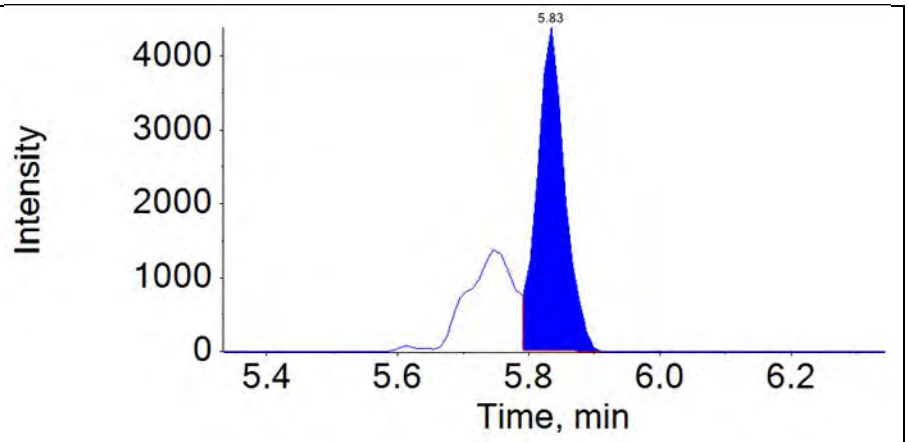


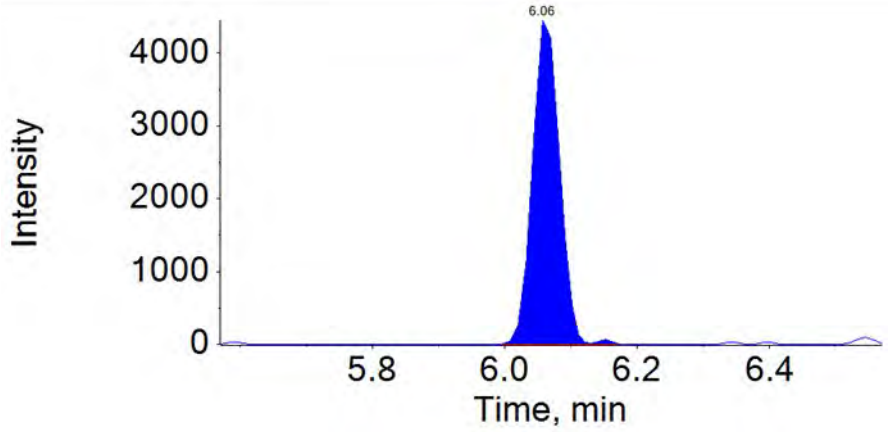
Integration Comment: incorrect integration

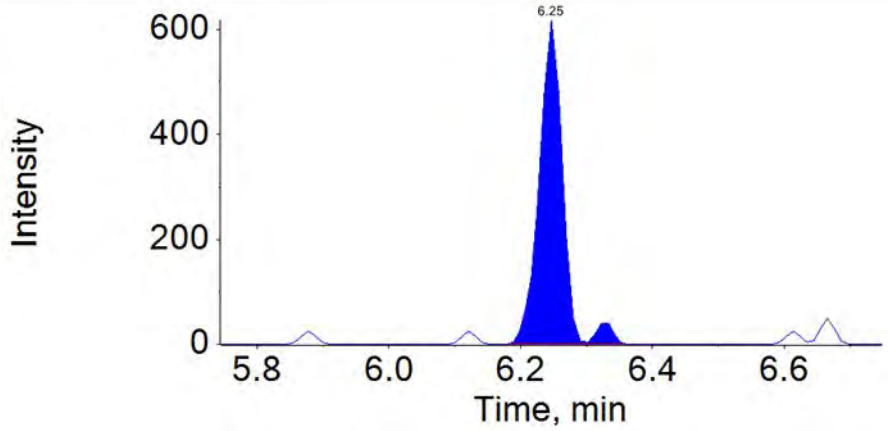
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA_2 **RT (min.):** 5.83 **Peak Area:** 12735.31 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

Component Name: 10:2 FTS_2 **RT (min.):** 6.06 **Peak Area:** 12750.49 **Mass Range:** 627.0 / 81.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

Component Name: PFTrDA_2 **RT (min.):** 6.25 **Peak Area:** 1561.97 **Mass Range:** 663.0 / 169.0 **File Name:** 18NOV12DCAL-52.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

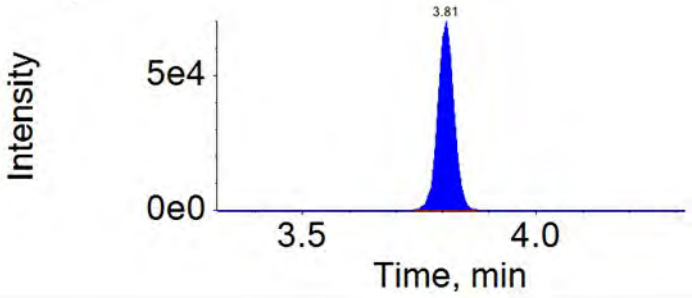
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-52.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	166889.60	A	0.3619	0.3759			
PFBS_2	3.81	1.00	62739.70	A	0.3619	0.3759	4	50	
4:2-FTS	4.12	1.00	33008.94	A	0.6730	0.6769			
4:2 FTS_2	4.12	1.00	22342.63	A	0.6730	0.6769		#NA!	
PFHxA	4.16	1.00	362325.97	A	0.0117	0.0114			
PFHxA_2	4.16	1.00	4119.87	A	0.0117	0.0114	-2	50	
PFPeS	4.18	1.10	87834.91	A	0.5191	0.5380			
PFPeS_2	4.17	1.10	47259.43	A	0.5191	0.5380	4	50	
PFHpA	4.54	1.00	361271.55	A	0.0563	0.0528			
PFHpA_2	4.54	1.00	19075.67	A	0.0563	0.0528	-6	50	
PFHxS	4.55	1.00	128396.13	M	0.3428	0.3526			
PFHxS_2	4.54	1.00	45266.10	M	0.3428	0.3526	3	50	
6:2-FTS	4.90	1.00	30500.72	A	0.6604	0.6139			
6:2 FTS_2	4.90	1.00	18723.69	A	0.6604	0.6139		#NA!	
PFHpS	4.91	1.08	122801.74	A	0.4066	0.3898			
PFHpS_2	4.91	1.08	47867.04	A	0.4066	0.3898	-4	50	
PFOA	4.91	1.00	370358.65	A	0.0562	0.0572			
PFOA_2	4.91	1.00	21182.05	A	0.0562	0.0572	2	50	
PFOS	5.24	1.00	122332.00	M	0.2968	0.2965			
PFOS_2	5.24	1.00	36275.78	M	0.2968	0.2965	0	50	
PFNA	5.26	1.00	292557.20	A	0.0229	0.0191			
PFNA_2	5.26	1.00	5601.50	A	0.0229	0.0191	-16	50	
PFNS	5.54	1.06	76021.24	A	0.4828	0.4752			
PFNS_2	5.54	1.06	36125.34	A	0.4828	0.4752	-2	50	
PFDA	5.56	1.00	253956.70	A	0.0081	0.0055			
PFDA_2	5.57	1.00	1404.60	M	0.0081	0.0055	-32	50	
8:2-FTS	5.56	1.00	22335.45	A	0.6814	0.6085			
8:2 FTS_2	5.56	1.00	13590.39	A	0.6814	0.6085		#NA!	
NMeFOSAA	5.70	1.00	28733.42	A	0.2569	0.2248			
NMeFOSAA_2	5.70	1.00	6459.32	M	0.2569	0.2248	-12	50	
PFDS	5.79	1.11	62507.84	A	0.5144	0.4958			
PFDS_2	5.79	1.10	30989.83	A	0.5144	0.4958	-4	50	
PFUnDA	5.82	1.00	199322.38	A	0.0058	0.0036			
PFUnDA_2	5.82	1.00	716.12	A	0.0058	0.0036	-38	50	
NEtFOSAA	5.83	1.00	24531.93	A	0.7253	0.7928			
NEtFOSAA_2	5.83	1.00	19448.32	M	0.7253	0.7928	9	50	
PFDoDA	6.05	1.00	228792.93	A	0.0157	0.0084			
PFDoDA_2	6.05	1.00	1930.67	A	0.0157	0.0084	-46	50	
10:2-FTS	6.06	1.09	14411.12	A	0.6356	0.8781			
10:2 FTS_2	6.06	1.09	12654.02	M	0.6356	0.8781		#NA!	
PFTrDA	6.25	1.03	185154.57	A	0.0086	0.0080			
PFTrDA_2	6.25	1.03	1486.41	M	0.0086	0.0080	-6	50	
PFTeDA	6.42	1.00	159904.63	A	0.0062	0.0061			
PFTeDA_2	6.42	1.00	982.46	A	0.0062	0.0061	-2	50	
PFHxDA	6.73	1.05	68393.80	A	0.0683	0.0584			
PFHxDA_2	6.73	1.05	3992.51	A	0.0683	0.0584	-14	50	
PFODA	6.99	1.09	58092.41	A	0.0277	0.0262			
PFODA_2	6.99	1.09	1524.27	A	0.0277	0.0262	-5	50	

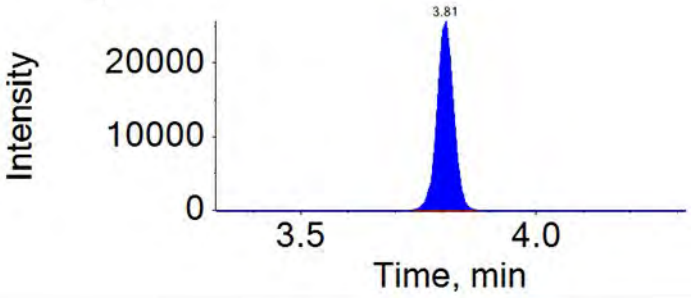
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

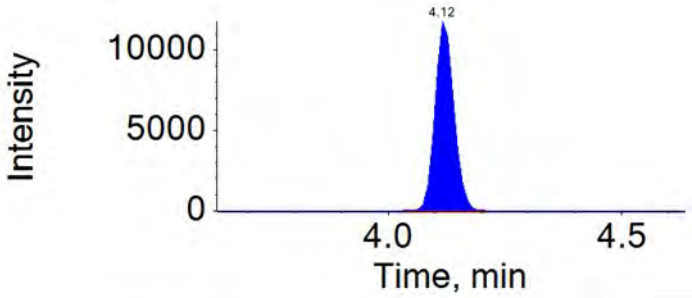
Component: PFBS
Primary Mass: 299.0 / 80.0



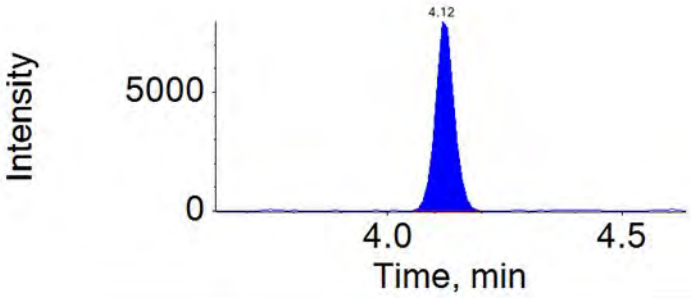
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



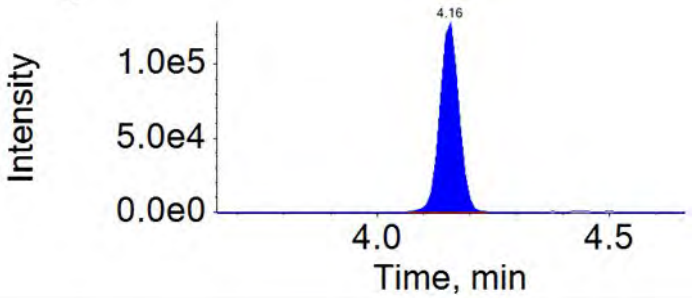
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



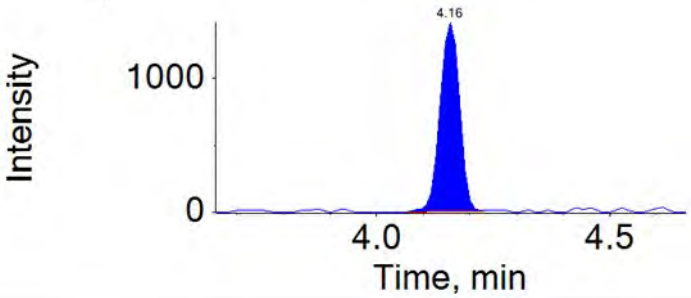
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



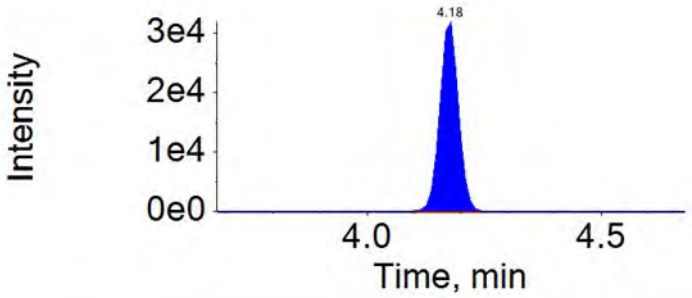
Component: PFHxA
Primary Mass: 313.0 / 269.0



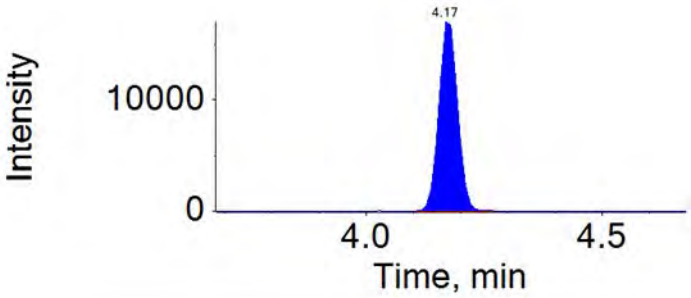
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



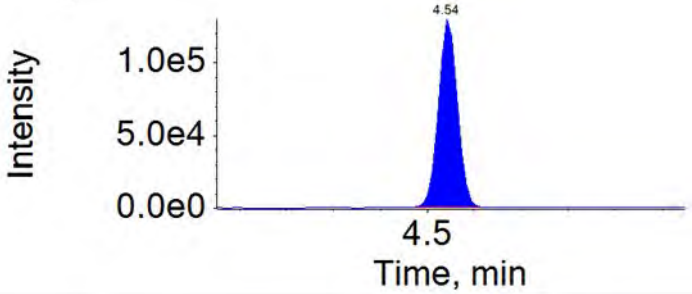
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



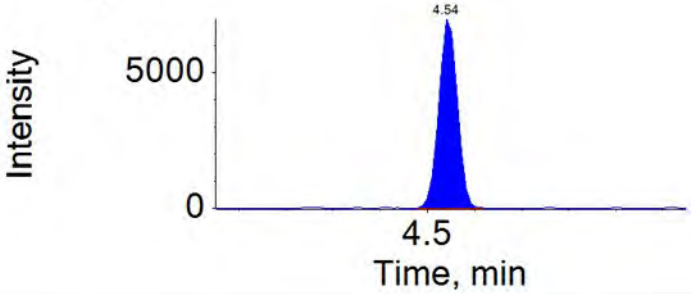
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

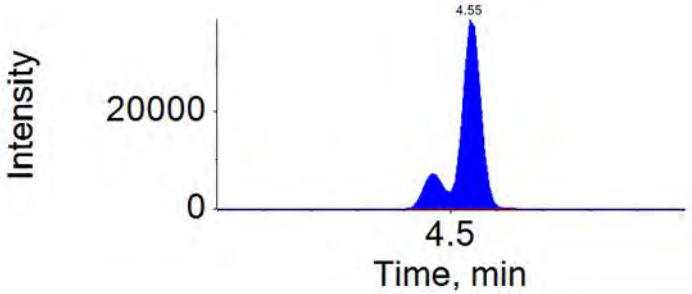
Component: PFHpA
Primary Mass: 363.0 / 319.0



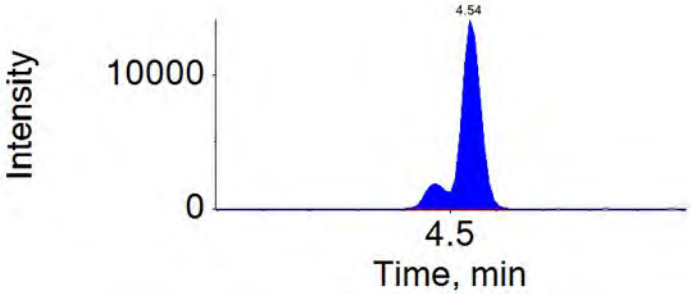
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



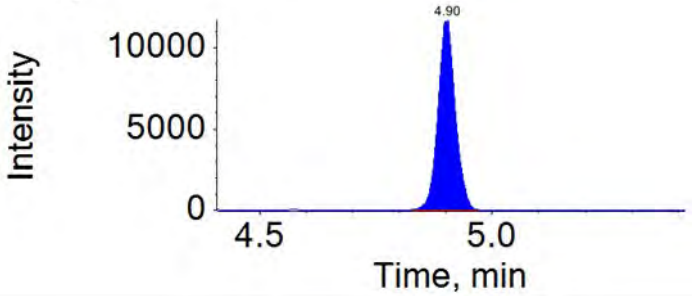
Component: PFHxS
Primary Mass: 399.0 / 80.0



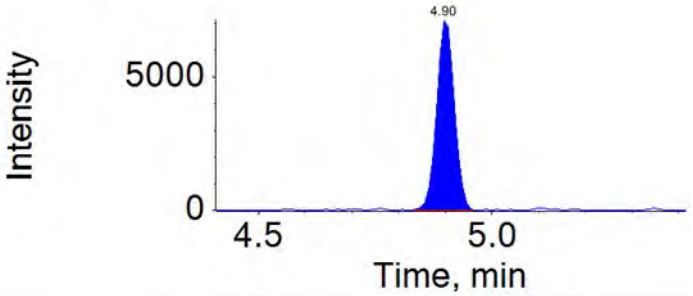
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



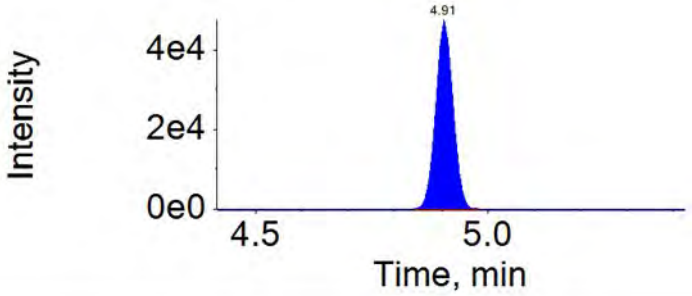
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



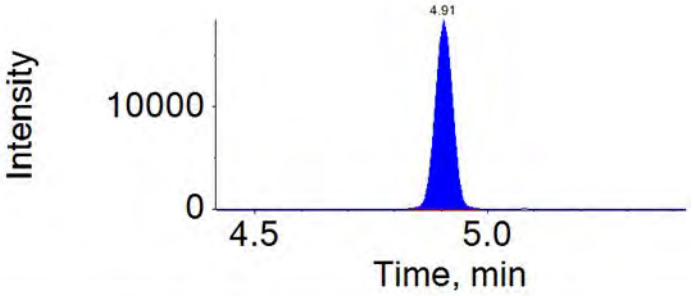
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



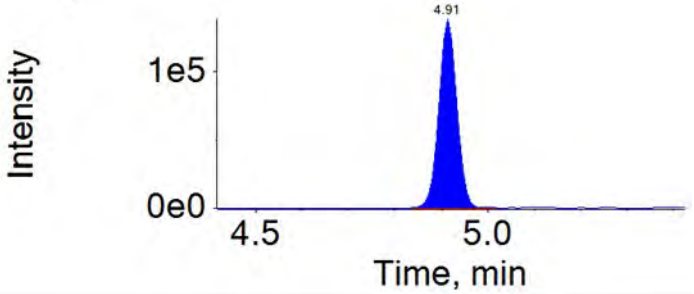
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



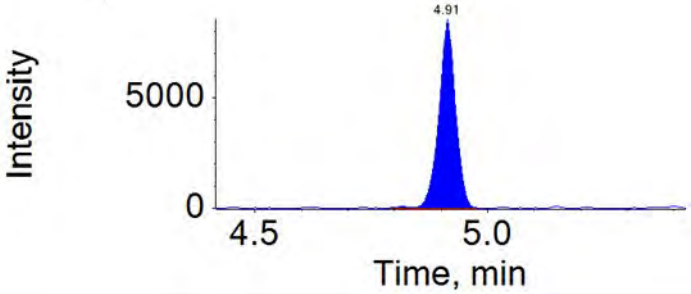
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

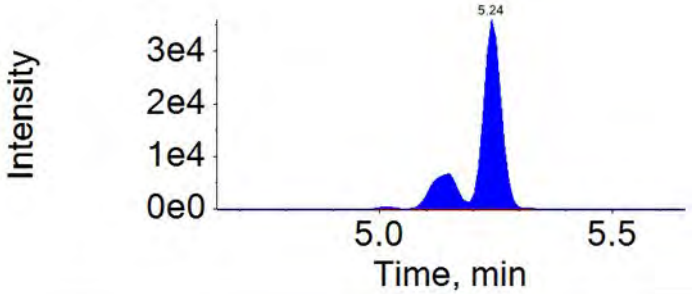
Component: PFOA
Primary Mass: 413.0 / 369.0



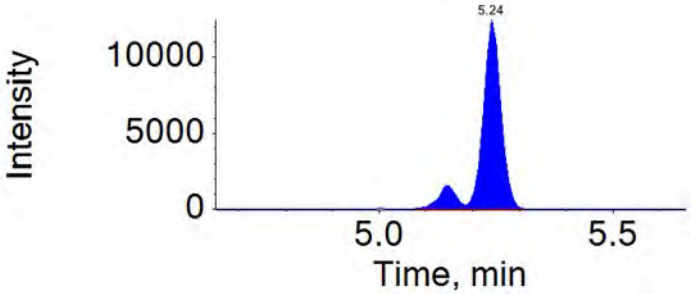
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



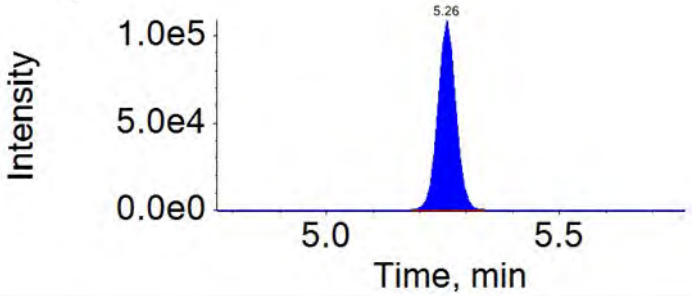
Component: PFOS
Primary Mass: 499.0 / 80.0



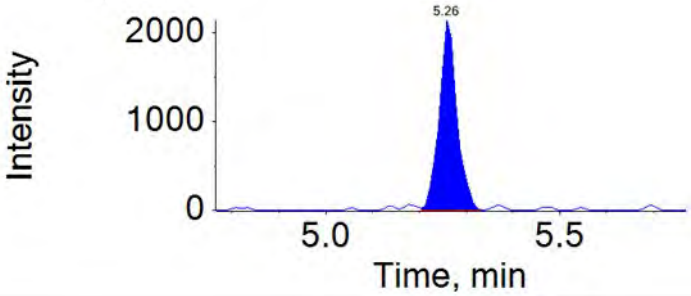
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



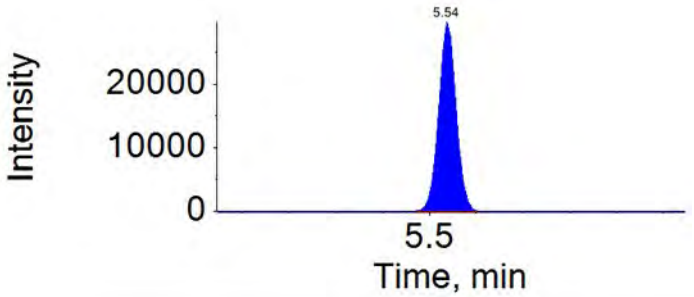
Component: PFNA
Primary Mass: 463.0 / 419.0



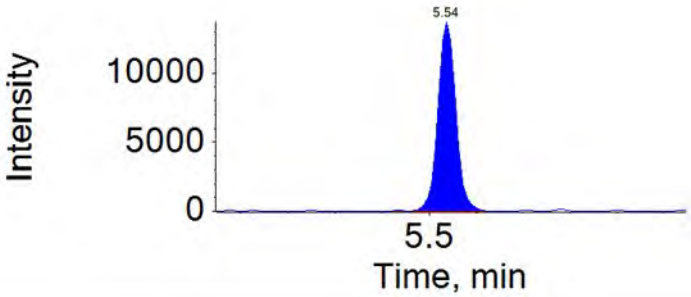
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



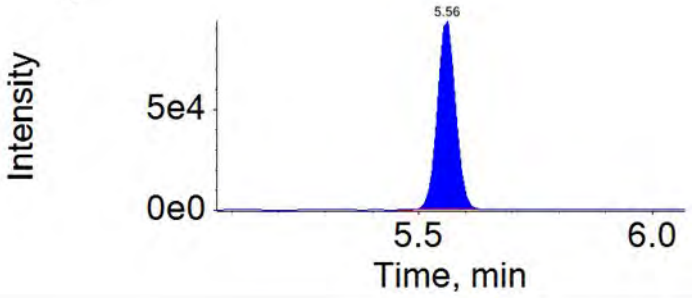
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



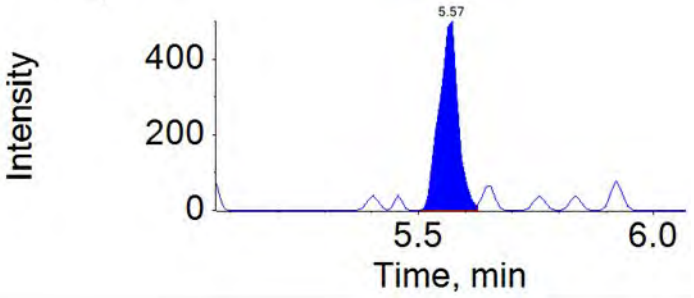
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

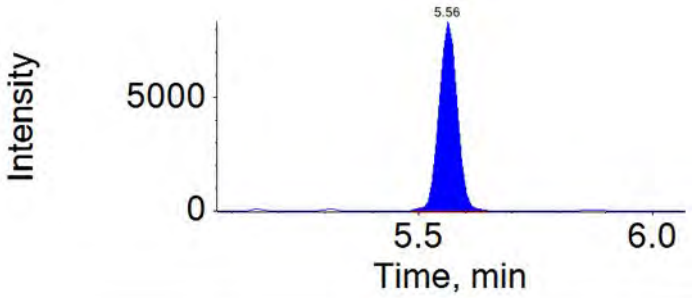
Component: PFDA
Primary Mass: 513.0 / 469.0



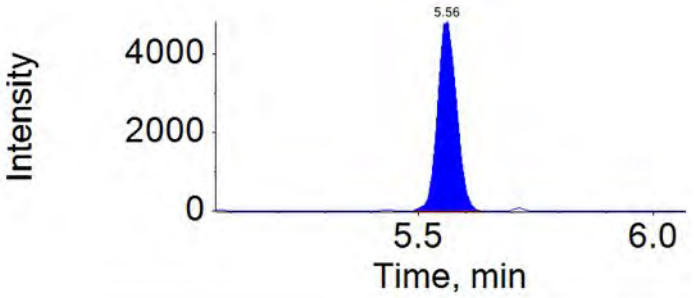
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



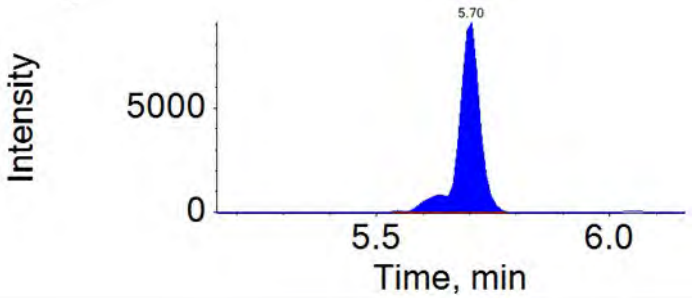
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



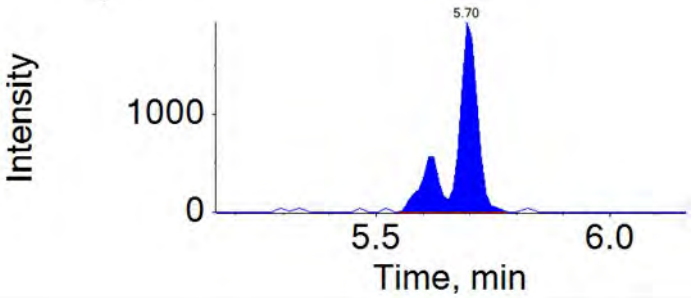
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



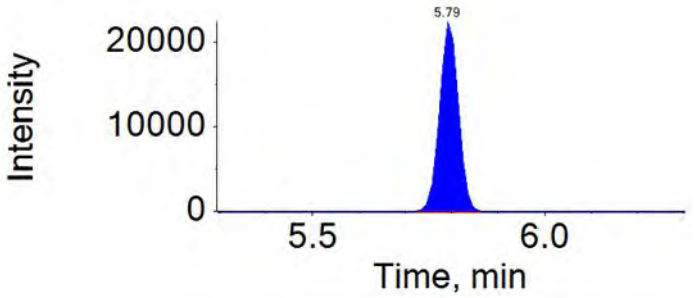
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



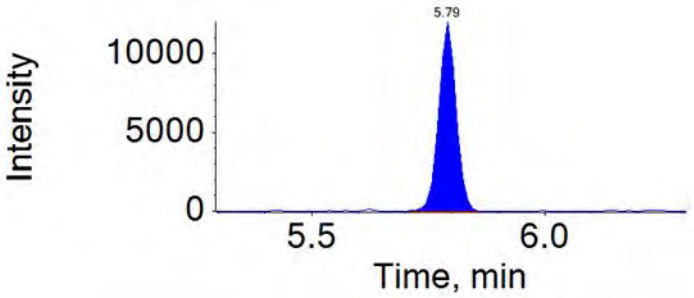
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



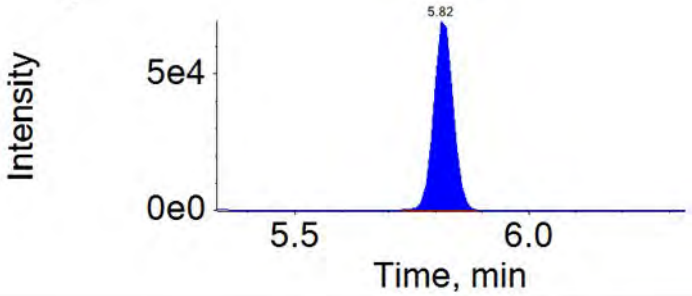
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



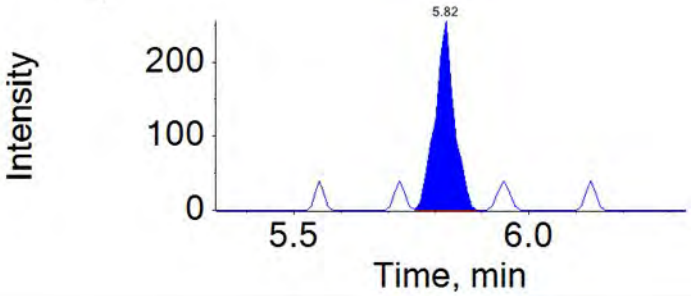
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

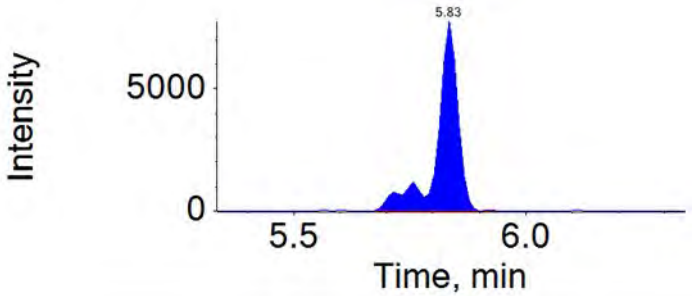
Component: PFUnDA
Primary Mass: 563.0 / 519.0



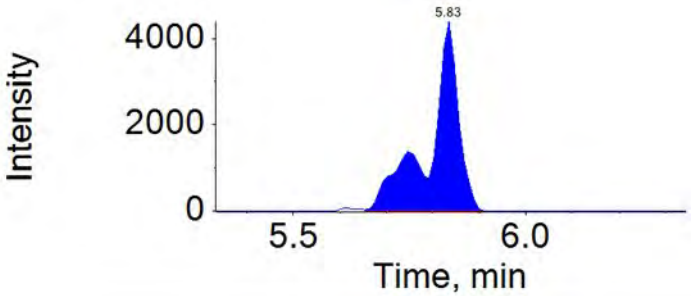
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



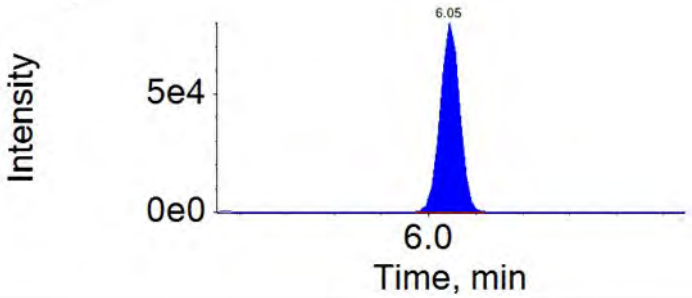
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



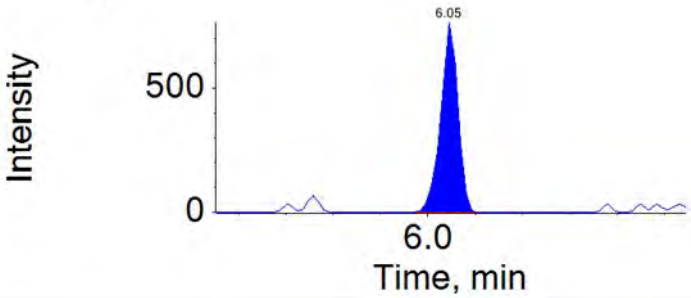
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



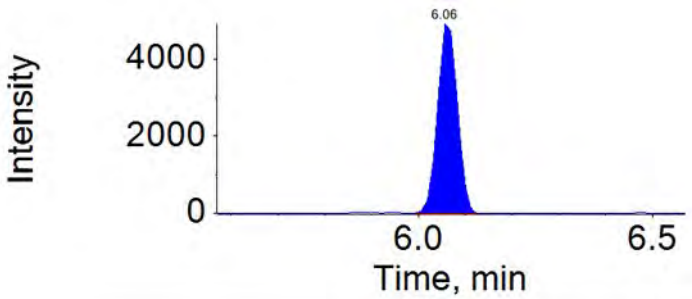
Component: PFDoDA
Primary Mass: 613.0 / 569.0



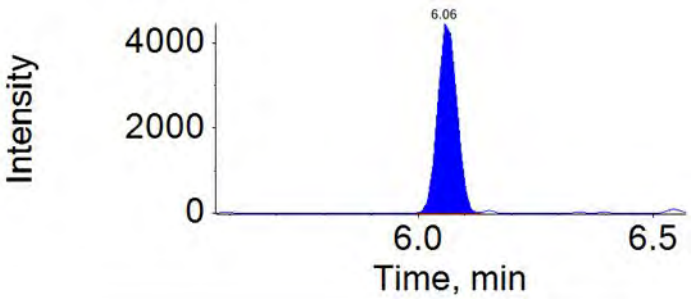
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



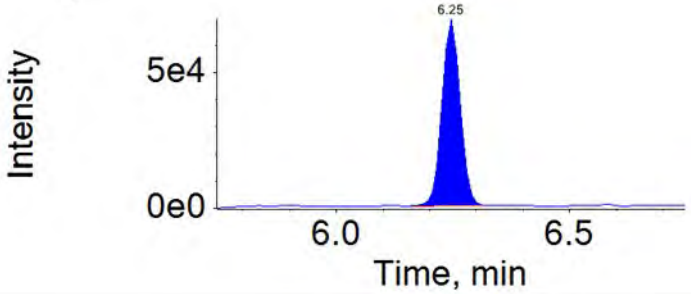
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



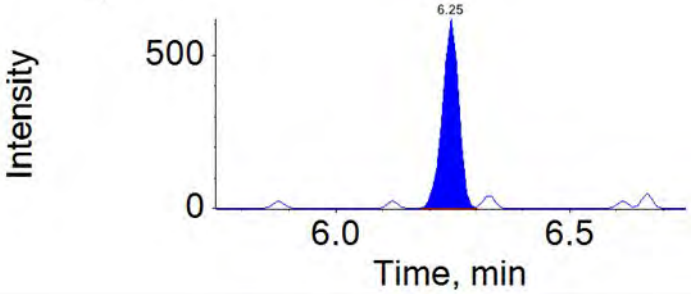
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

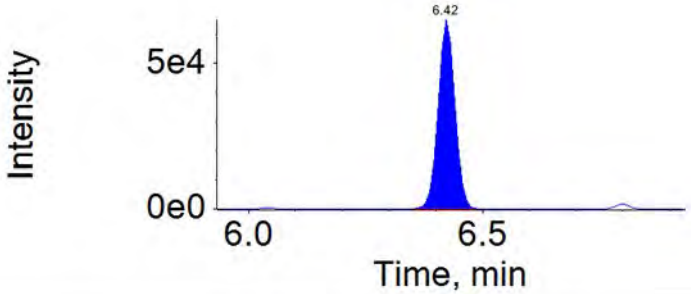
Component: PFTrDA
Primary Mass: 663.0 / 619.0



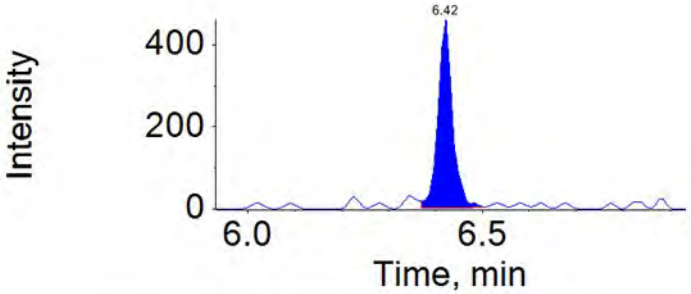
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



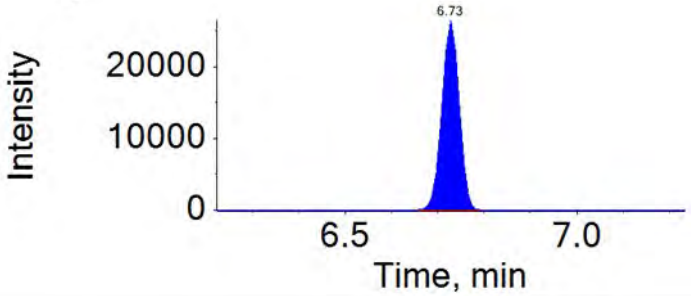
Component: PFTeDA
Primary Mass: 713.0 / 669.0



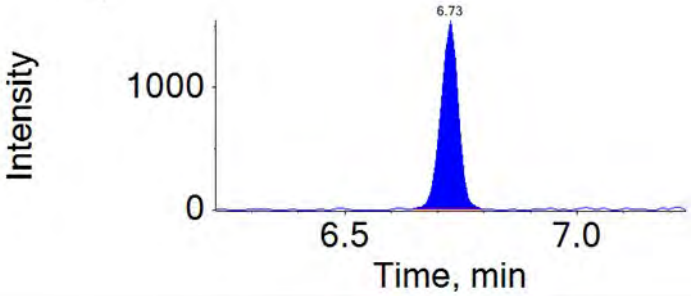
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



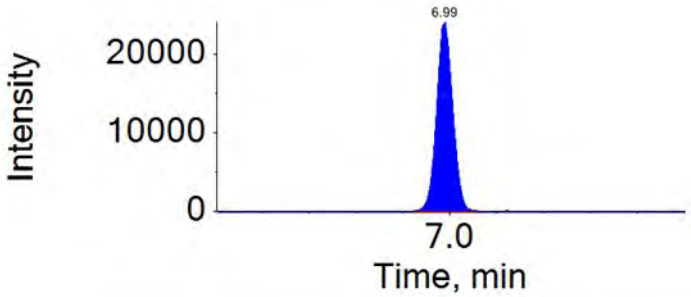
Component: PFHxDA
Primary Mass: 813.0 / 769.0



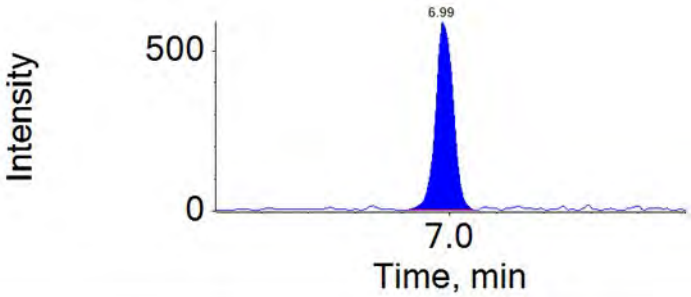
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



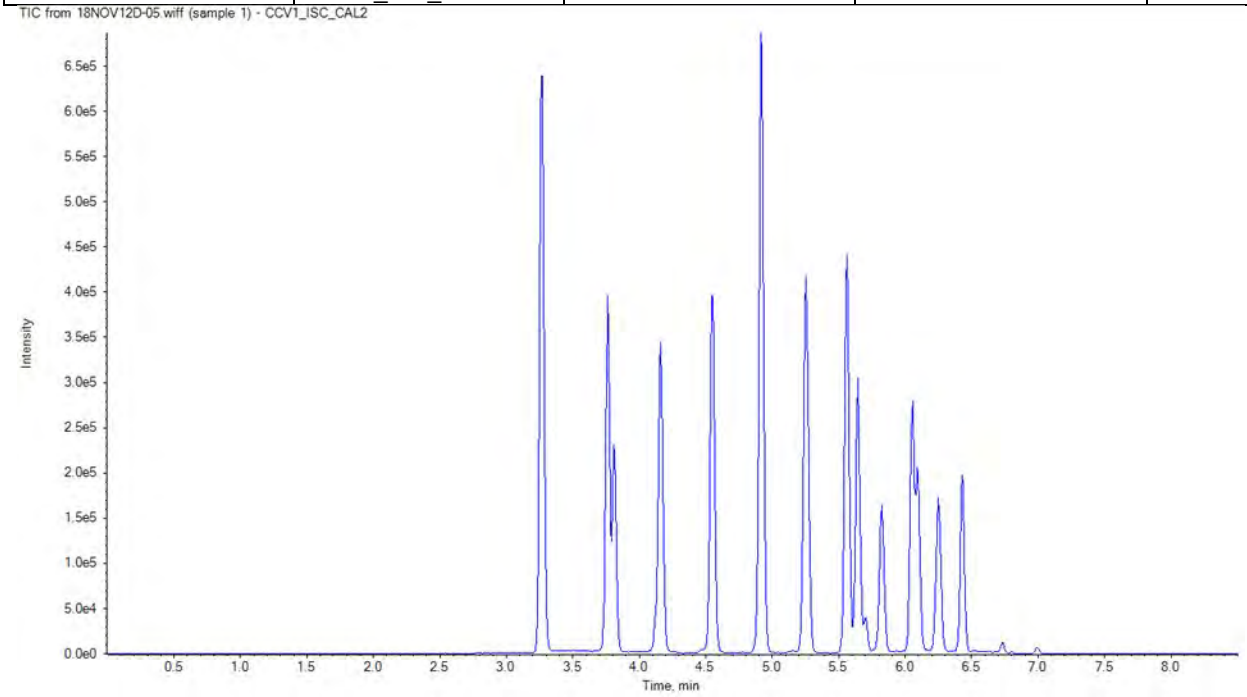
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV12D-05.wiff	2018-11-12T17:21:36



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	653019.5	659926.2	-1	50	
13C2-PFOA	5.0	460051.8	450219.7	2	50	
13C4-PFOS	4.8	246521.2	249205.8	-1	50	
13C2-PFDA	5.0	292717.8	278743.9	5	50	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV12D-05.wiff	2018-11-12T17:21:36

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	78557.0	10	13C4-PFBA	759618.7	5.0	0.103	3.26	1.000	0.600	0.573	-5	30	
PFPeA	78261.7	12	13C5-PFPeA	731579.8	5.0	0.107	3.76	1.000	0.600	0.619	3	30	
PFBS	40715.3	11	13C3-PFBS	427605.3	4.7	0.095	3.81	1.000	0.531	0.453	-15	30	
4:2-FTS	11234.3	11	13C2-4:2-FTS	48267.7	4.7	0.233	4.12	1.000	0.560	0.632	13	30	
PFHxA	94419.1	12	13C5-PFHxA	665991.1	5.0	0.142	4.16	1.000	0.600	0.592	-1	30	
PFPeS	22520.0	11	13C3-PFBS	427605.3	4.7	0.053	4.18	1.100	0.563	0.511	-9	30	
PFHpA	94703.4	12	13C4-PFHpA	515157.4	5.0	0.184	4.55	1.000	0.600	0.609	2	30	
PFHxS	31116.0	19	13C3-PFHxS	312372.4	4.7	0.100	4.55	1.000	0.547	0.483	-12	30	
6:2-FTS	7251.1	11	13C2-6:2-FTS	32906.8	4.8	0.220	4.91	1.000	0.569	0.533	-6	30	
PFHpS	33565.2	11	13C3-PFHxS	312372.4	4.7	0.107	4.91	1.080	0.571	0.566	-1	30	
PFOA	97268.8	11	13C8-PFOA	906076.3	5.0	0.107	4.92	1.000	0.600	0.573	-4	30	
PFOS	29101.9	21	13C8-PFOS	272463.6	4.8	0.107	5.25	1.000	0.555	0.467	-16	30	
PFNA	74726.2	11	13C9-PFNA	470836.1	5.0	0.159	5.26	1.000	0.600	0.572	-5	30	
PFNS	21280.8	11	13C8-PFOS	272463.6	4.8	0.078	5.54	1.060	0.576	0.546	-5	30	
PFDA	61208.1	11	13C6-PFDA	617340.8	5.0	0.099	5.56	1.000	0.600	0.526	-12	30	
8:2-FTS	6888.9	11	13C2-8:2-FTS	29145.0	4.8	0.236	5.56	1.000	0.575	0.551	-4	30	
PFOSA	67438.1	12	13C8-PFOSA	605816.1	5.0	0.111	5.64	1.000	0.600	0.544	-9	30	
NMeFOSAA	7803.6	22	d3-NMeFOSAA	75793.3	5.0	0.103	5.70	1.000	0.600	0.582	-3	30	
PFDS	16863.0	12	13C8-PFOS	272463.6	4.8	0.062	5.80	1.110	0.578	0.561	-3	30	
PFUnDA	50785.7	12	13C7-PFUnDA	255941.5	5.0	0.198	5.82	1.000	0.600	0.519	-14	30	
NEtFOSAA	6353.1	23	d5-NEtFOSAA	63458.3	5.0	0.100	5.83	1.000	0.600	0.525	-13	30	
PFDoDA	56256.7	11	13C2-PFDoDA	544805.3	5.0	0.103	6.05	1.000	0.600	0.526	-12	30	
10:2-FTS	4386.3	13	13C2-8:2-FTS	29145.0	4.8	0.150	6.07	1.090	0.578	0.501	-13	30	
NMePFOSAE	47816.0	11	d7-NMePFOSAE	324193.1	5.0	0.147	6.10	1.000	0.600	0.614	2	30	
NMePFOSA	7746.5	12	d3-NMePFOSA	79325.6	5.0	0.098	6.11	1.000	0.600	0.482	-20	30	
PFDoS	7863.8	11	13C8-PFOS	272463.6	4.8	0.029	6.22	1.190	0.581	0.505	-13	30	
NEtPFOSAE	47560.7	11	d9-NEtPFOSAE	265622.4	5.0	0.179	6.26	1.000	0.600	0.574	-4	30	
NEtPFOSA	7352.4	11	d5-NEtPFOSA	59158.0	5.0	0.124	6.27	1.000	0.600	0.571	-5	30	
PFTrDA	47478.9	12	13C2-PFDoDA	544805.3	5.0	0.087	6.25	1.030	0.600	0.550	-8	30	
PFTeDA	37143.0	11	13C2-PFTeDA	375963.1	5.0	0.099	6.43	1.000	0.600	0.554	-8	30	
PFHxDA	19260.7	10	13C2-PFTeDA	375963.1	5.0	0.051	6.73	1.050	0.600	0.610	2	30	
PFODA	14710.9	10	13C2-PFTeDA	375963.1	5.0	0.039	6.99	1.090	0.600	0.545	-9	30	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV12D-05.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-12T17:21:36
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV1-2
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	653019.5	659926.2	-1	50	
13C2-PFOA	5.0	460051.8	450219.7	2	50	
13C4-PFOS	4.8	246521.2	249205.8	-1	50	
13C2-PFDA	5.0	292717.8	278743.9	5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	759618.7	13C3-PFBA	653019.5	1.163	5.000	5.215	104	70-130	
E13C5-PFPeA	731579.8	13C3-PFBA	653019.5	1.120	5.000	5.025	100	70-130	
E13C3-PFBS	427605.3	13C3-PFBA	653019.5	0.655	4.650	4.622	99	70-130	
E13C2-4:2-FTS	48267.7	13C2-PFOA	460051.8	0.105	4.670	4.673	100	70-130	
E13C5-PFHxA	665991.1	13C2-PFOA	460051.8	1.448	5.000	5.229	105	70-130	
E13C3-PFHxS	312372.4	13C2-PFOA	460051.8	0.679	4.730	4.659	99	70-130	
E13C4-PFHpA	515157.4	13C2-PFOA	460051.8	1.120	5.000	5.045	101	70-130	
E13C2-6:2-FTS	32906.8	13C2-PFOA	460051.8	0.072	4.750	4.786	101	70-130	
E13C8-PFOA	906076.3	13C2-PFOA	460051.8	1.970	5.000	5.426	109	70-130	
E13C8-PFOS	272463.6	13C4-PFOS	246521.2	1.105	4.780	4.897	102	70-130	
E13C9-PFNA	470836.1	13C4-PFOS	246521.2	1.910	5.000	5.325	107	70-130	
E13C6-PFDA	617340.8	13C2-PFDA	292717.8	2.109	5.000	4.922	98	70-130	
E13C2-8:2-FTS	29145.0	13C2-PFDA	292717.8	0.100	4.790	4.966	104	70-130	
E13C8-PFOSA	605816.1	13C2-PFDA	292717.8	2.070	5.000	4.588	92	70-130	
Ed3-NMeFOSAA	75793.3	13C2-PFDA	292717.8	0.259	5.000	4.674	93	70-130	
E13C7-PFUnDA	255941.5	13C2-PFDA	292717.8	0.874	5.000	5.076	102	70-130	
Ed5-NEtFOSAA	63458.3	13C2-PFDA	292717.8	0.217	5.000	4.586	92	70-130	
E13C2-PFDoDA	544805.3	13C2-PFDA	292717.8	1.861	5.000	4.832	97	70-130	
Ed7-NMePFOSAE	324193.1	13C2-PFDA	292717.8	1.108	5.000	4.793	96	70-130	
Ed3-NMePFOSA	79325.6	13C2-PFDA	292717.8	0.271	5.000	4.924	98	70-130	
Ed9-NEtPFOSAE	265622.4	13C2-PFDA	292717.8	0.907	5.000	4.720	94	70-130	
Ed5-NEtPFOSA	59158.0	13C2-PFDA	292717.8	0.202	5.000	4.741	95	70-130	
E13C2-PFTeDA	375963.1	13C2-PFDA	292717.8	1.284	5.000	4.509	90	70-130	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

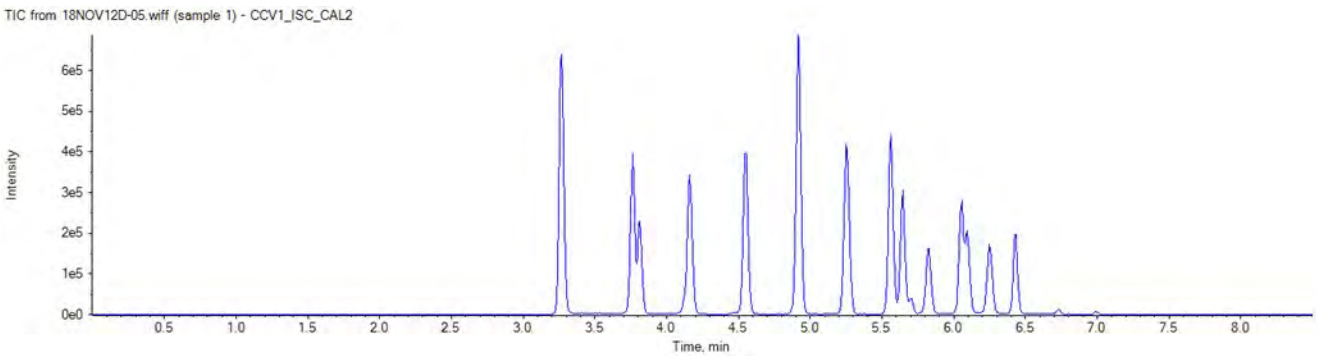
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	78557.0		A	13C4-PFBA	3.26	759618.7	0.103	0.573
PFPeA	3.76	1.000	78261.7		A	13C5-PFPeA	3.76	731579.8	0.107	0.619
PFBS	3.81	1.000	40715.3		A	13C3-PFBS	3.81	427605.3	0.095	0.453
4:2-FTS	4.12	1.000	11234.3		A	13C2-4:2-FTS	4.13	48267.7	0.233	0.632
PFHxA	4.16	1.000	94419.1		A	13C5-PFHxA	4.16	665991.1	0.142	0.592
PFPeS	4.18	1.100	22520.0		A	13C3-PFBS	3.81	427605.3	0.053	0.511
PFHpA	4.55	1.000	94703.4		A	13C4-PFHpA	4.55	515157.4	0.184	0.609
PFHxS	4.55	1.000	31116.0		M	13C3-PFHxS	4.55	312372.4	0.100	0.483
6:2-FTS	4.91	1.000	7251.1		A	13C2-6:2-FTS	4.91	32906.8	0.220	0.533
PFHpS	4.91	1.080	33565.2		A	13C3-PFHxS	4.55	312372.4	0.107	0.566
PFOA	4.92	1.000	97268.8		A	13C8-PFOA	4.92	906076.3	0.107	0.573
PFOS	5.25	1.000	29101.9		M	13C8-PFOS	5.25	272463.6	0.107	0.467
PFNA	5.26	1.000	74726.2		A	13C9-PFNA	5.26	470836.1	0.159	0.572
PFNS	5.54	1.060	21280.8		A	13C8-PFOS	5.25	272463.6	0.078	0.546
PFDA	5.56	1.000	61208.1		A	13C6-PFDA	5.56	617340.8	0.099	0.526
8:2-FTS	5.56	1.000	6888.9		A	13C2-8:2-FTS	5.57	29145.0	0.236	0.551
PFOSA	5.64	1.000	67438.1		A	13C8-PFOSA	5.64	605816.1	0.111	0.544
NMeFOSAA	5.70	1.000	7803.6		M	d3-NMeFOSAA	5.70	75793.3	0.103	0.582
PFDS	5.80	1.110	16863.0		A	13C8-PFOS	5.25	272463.6	0.062	0.561
PFUnDA	5.82	1.000	50785.7		A	13C7-PFUnDA	5.82	255941.5	0.198	0.519
NEtFOSAA	5.83	1.000	6353.1		M	d5-NEtFOSAA	5.83	63458.3	0.100	0.525
PFDoDA	6.05	1.000	56256.7		A	13C2-PFDoDA	6.05	544805.3	0.103	0.526
10:2-FTS	6.07	1.090	4386.3		A	13C2-8:2-FTS	5.57	29145.0	0.150	0.501
NMePFOSAE	6.10	1.000	47816.0		A	d7-NMePFOSAE	6.09	324193.1	0.147	0.614
NMePFOSA	6.11	1.000	7746.5		M	d3-NMePFOSA	6.11	79325.6	0.098	0.482
PFDoS	6.22	1.190	7863.8		A	13C8-PFOS	5.25	272463.6	0.029	0.505
NEtPFOSAE	6.26	1.000	47560.7		A	d9-NEtPFOSAE	6.25	265622.4	0.179	0.574
NEtPFOSA	6.27	1.000	7352.4		A	d5-NEtPFOSA	6.26	59158.0	0.124	0.571
PFTrDA	6.25	1.030	47478.9		A	13C2-PFDoDA	6.05	544805.3	0.087	0.550
PFTeDA	6.43	1.000	37143.0		A	13C2-PFTeDA	6.43	375963.1	0.099	0.554
PFHxDA	6.73	1.050	19260.7		A	13C2-PFTeDA	6.43	375963.1	0.051	0.610
PFODA	6.99	1.090	14710.9		A	13C2-PFTeDA	6.43	375963.1	0.039	0.545

Total Ion Chromatogram

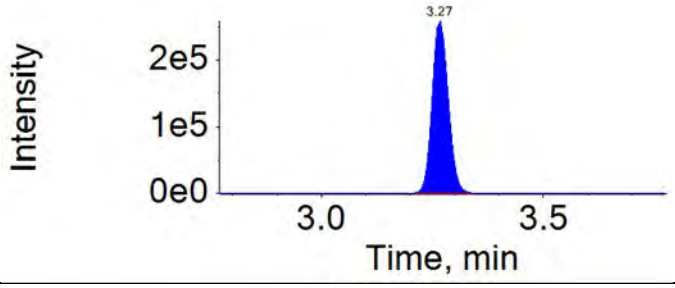


APPROVED
By MCD at 7:46 pm, 11/12/18

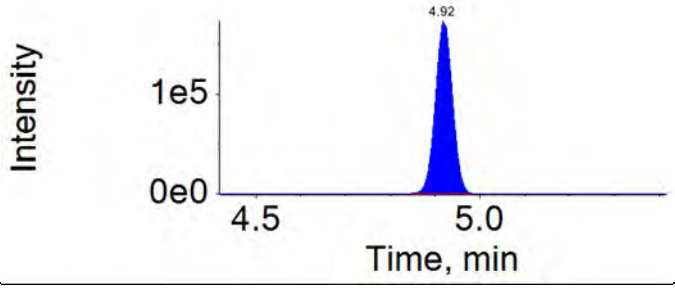
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

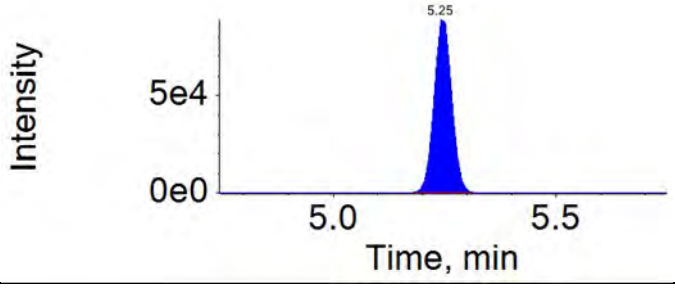
Injection Standard: 13C3-PFBA
216.0 / 172.0



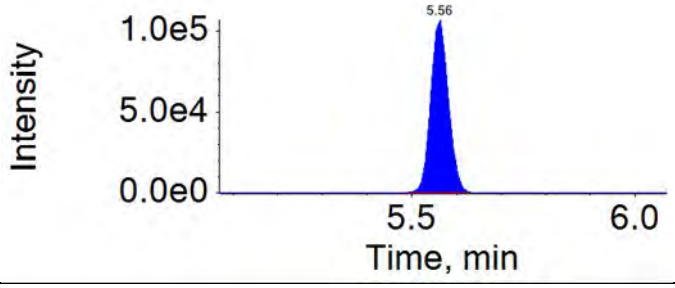
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

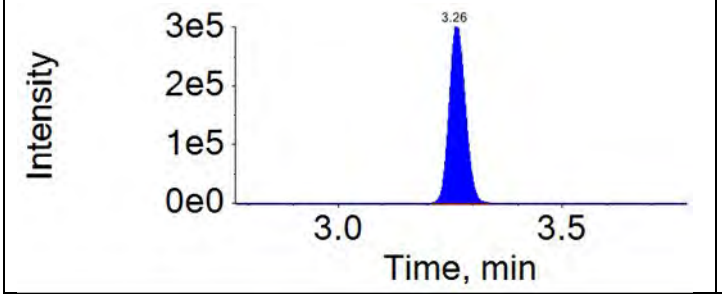


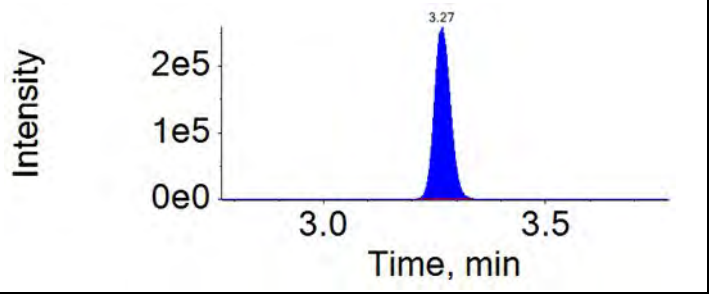
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

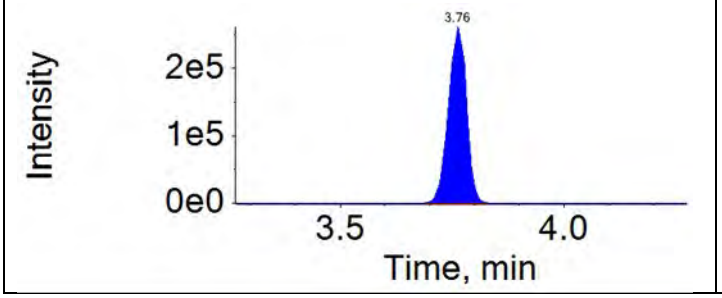
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

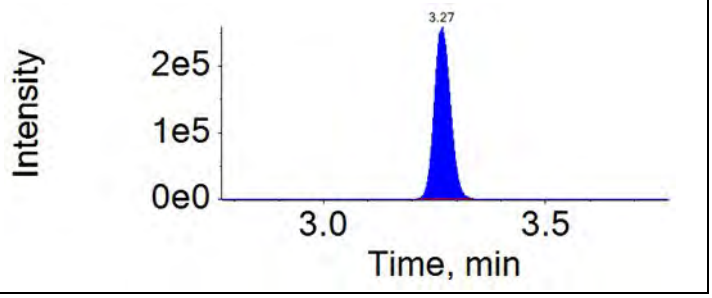
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



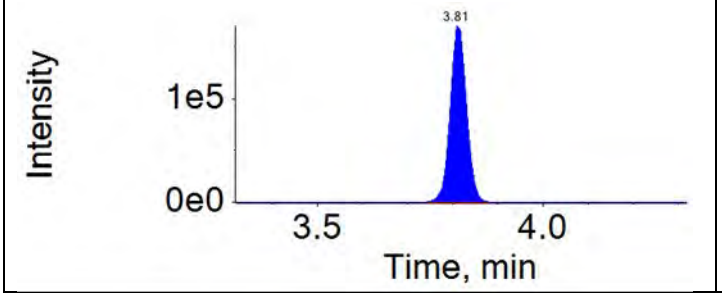


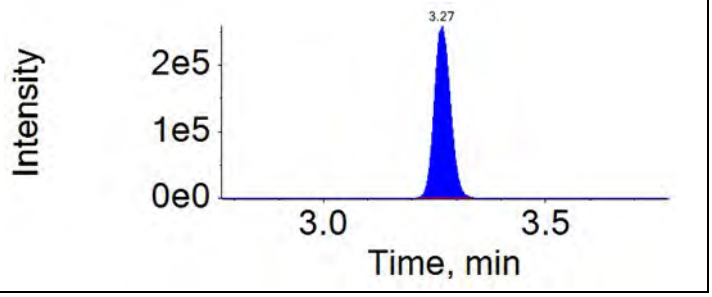
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



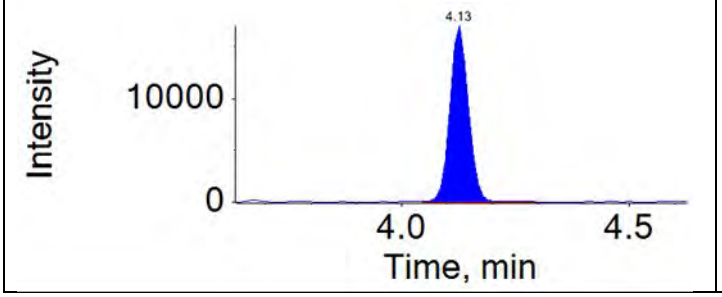


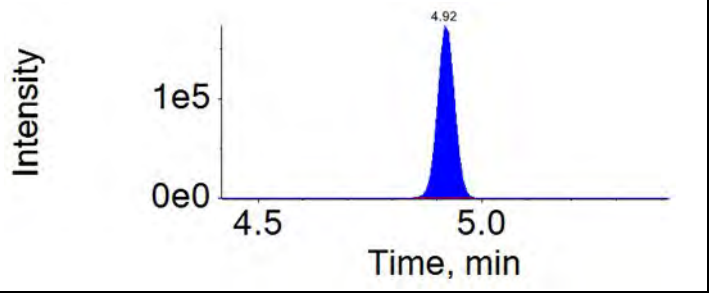
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





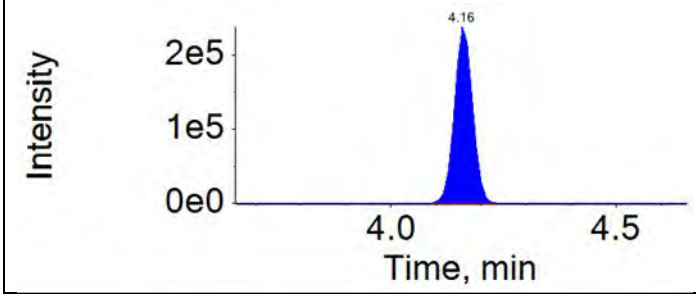
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

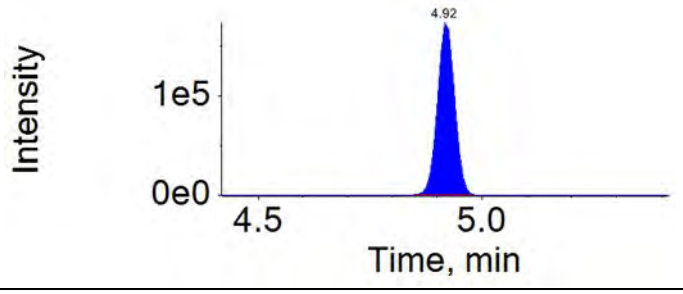




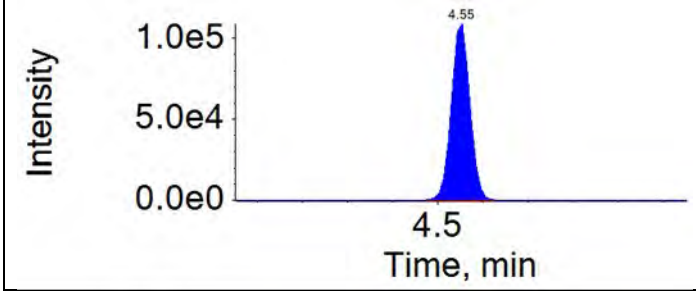
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

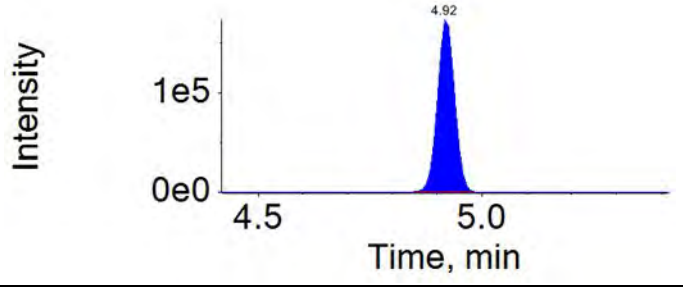
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



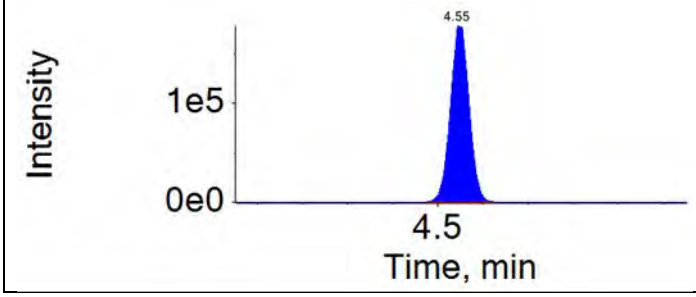


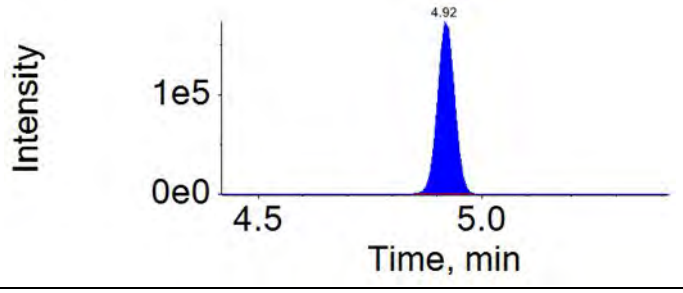
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



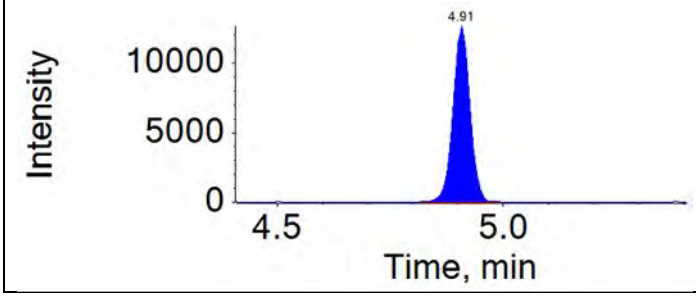


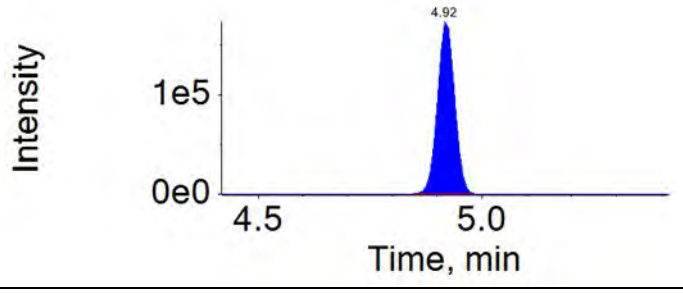
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

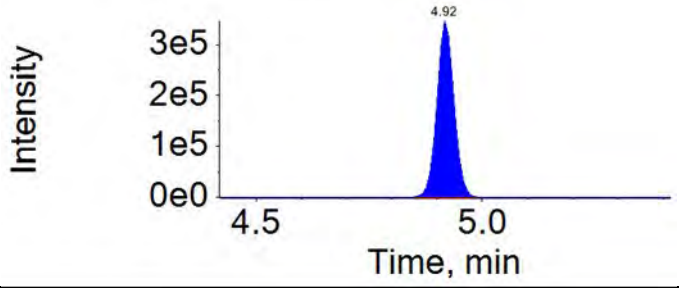
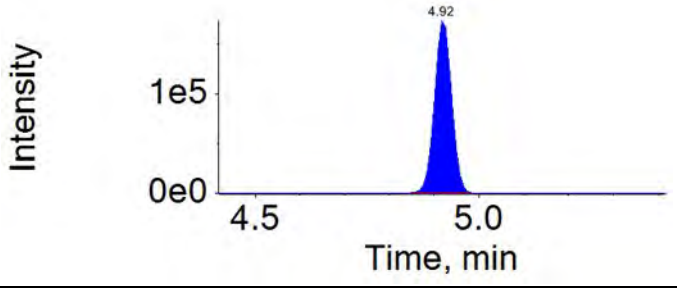


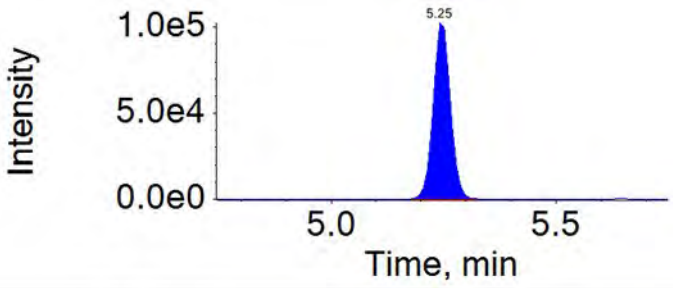
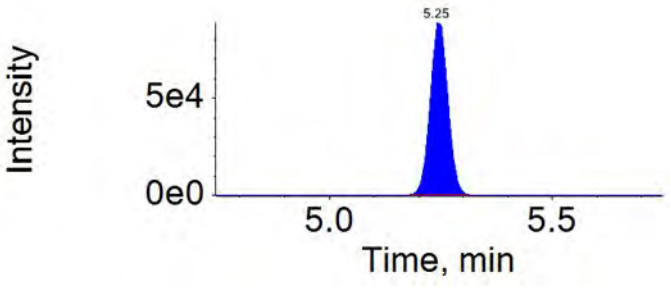


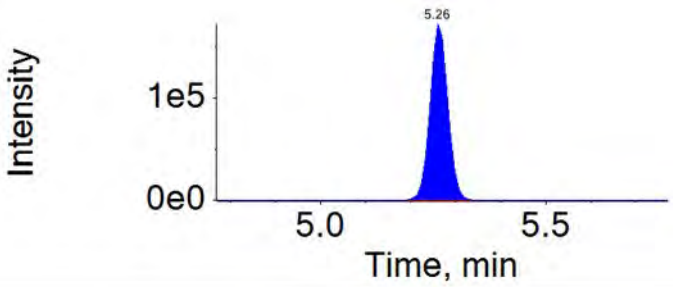
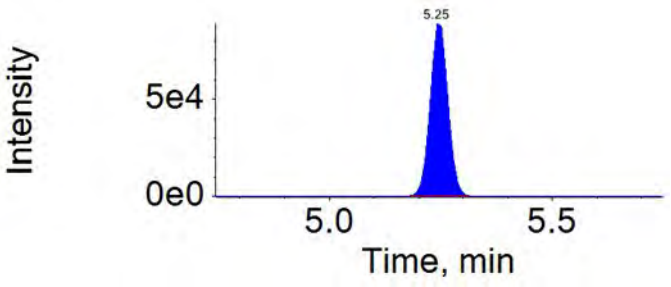
APPROVED
By MCD at 7:46 pm, 11/12/18

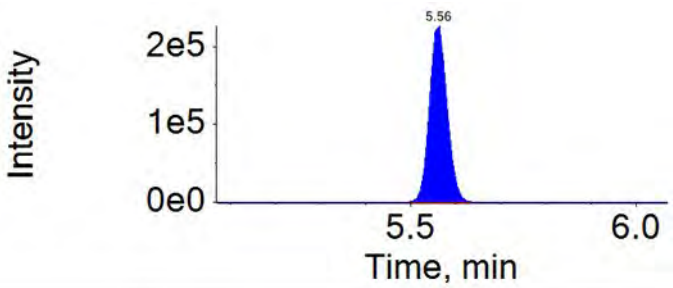
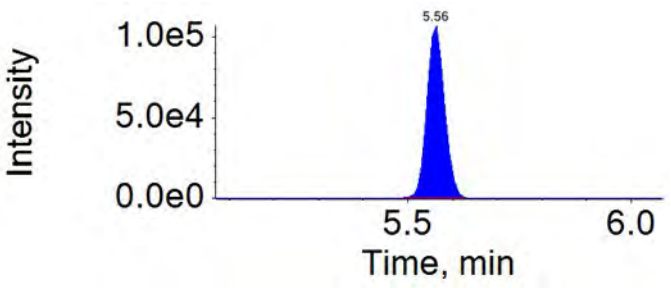
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

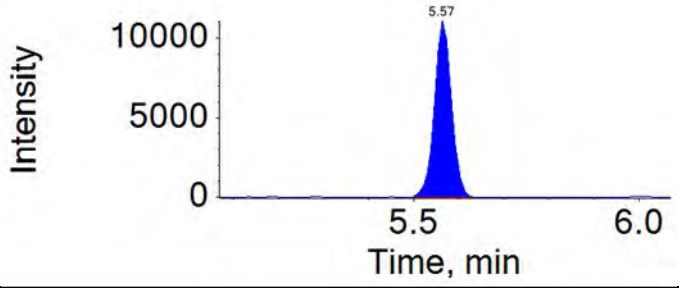
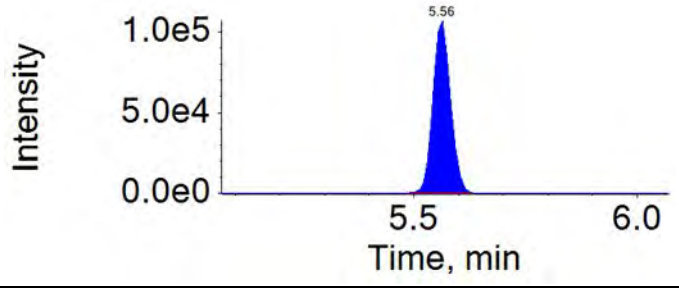
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

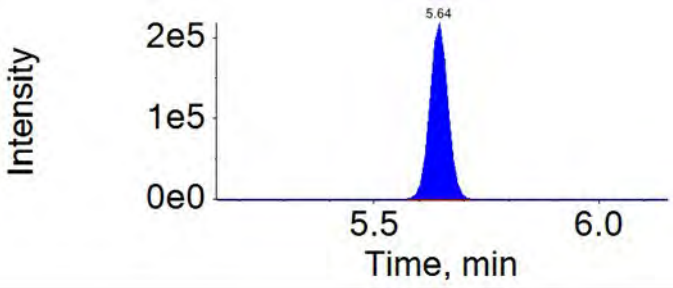
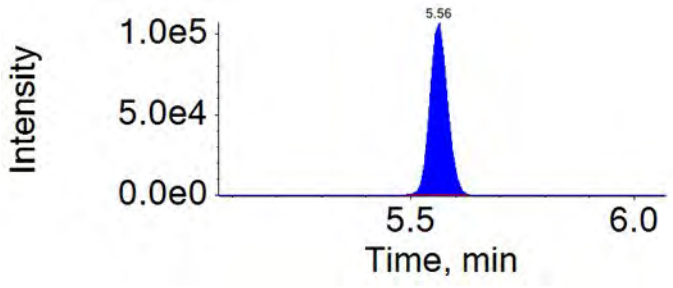
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

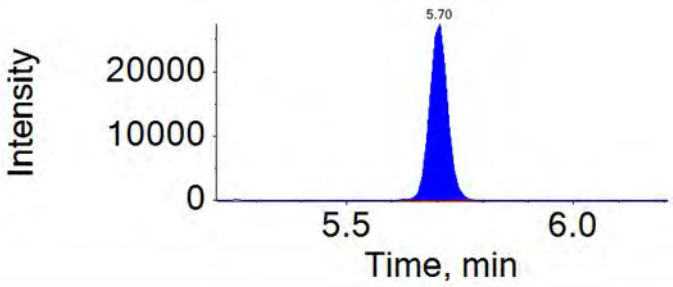
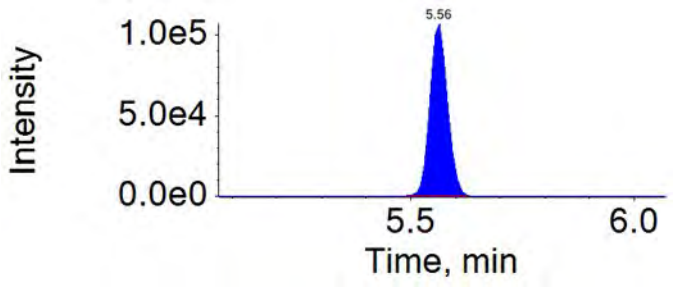
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

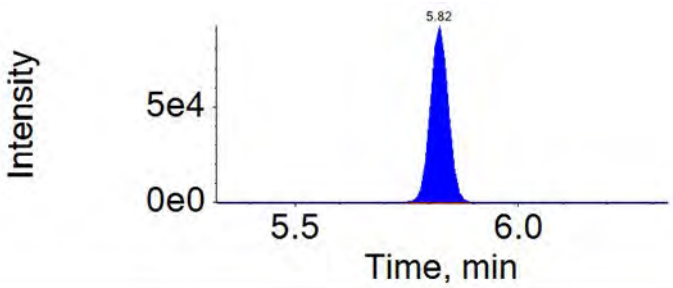
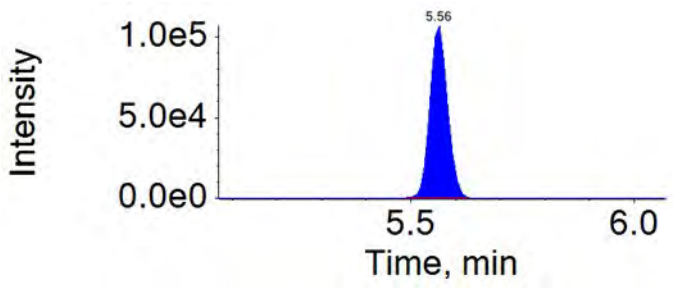
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

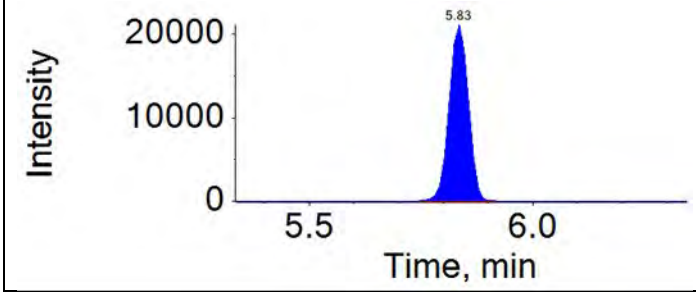
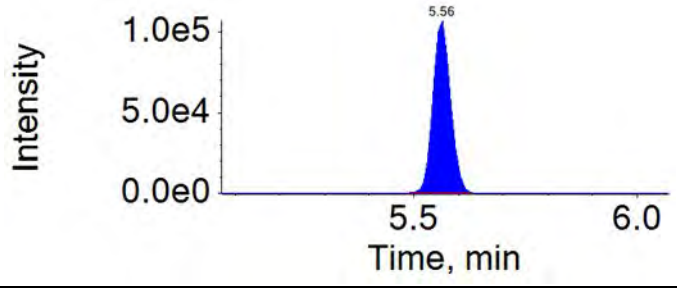
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

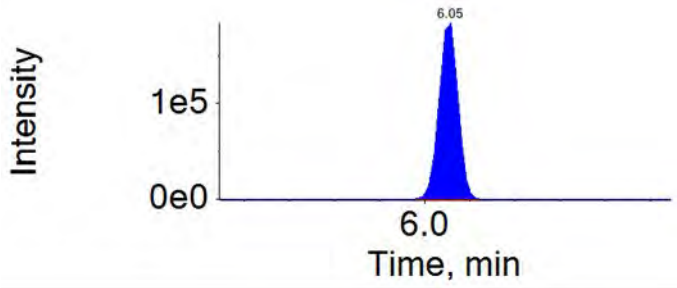
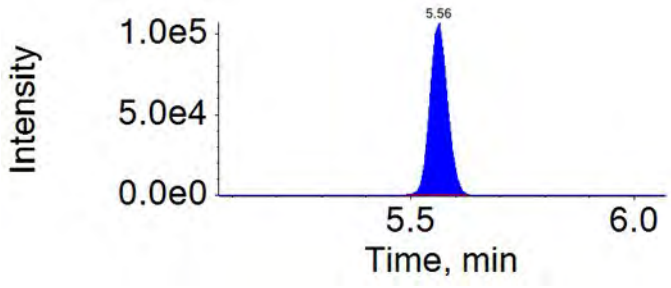
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

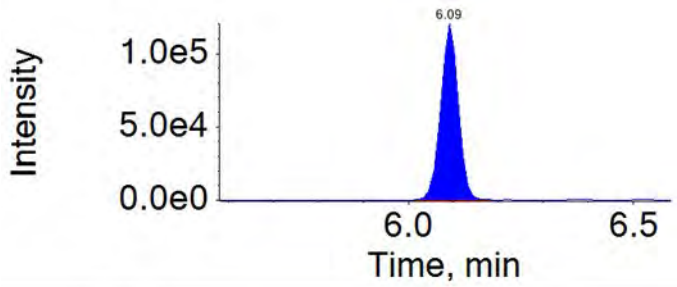
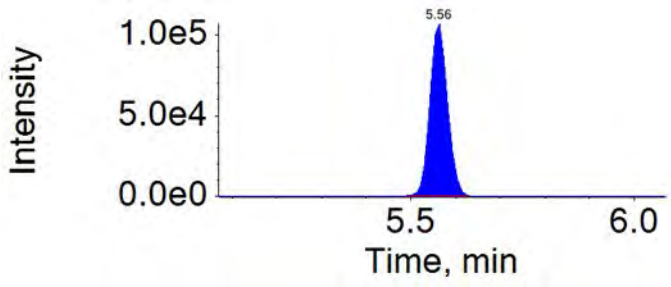
APPROVED
By MCD at 7:46 pm, 11/12/18

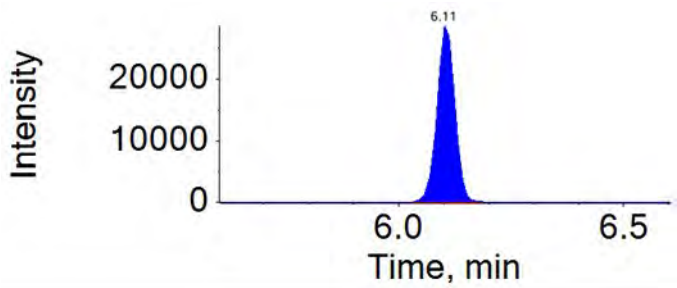
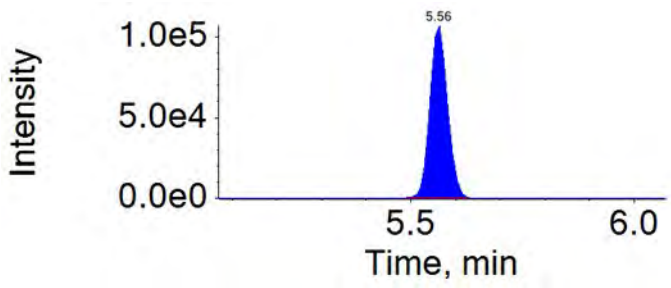
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

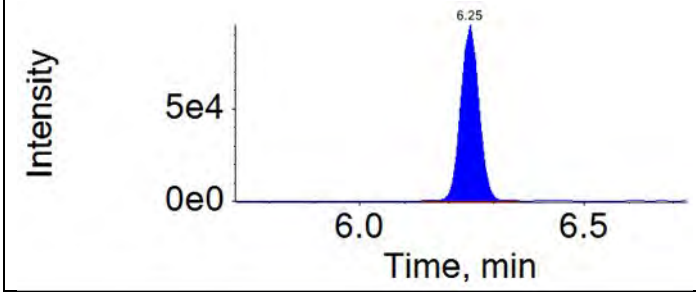
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

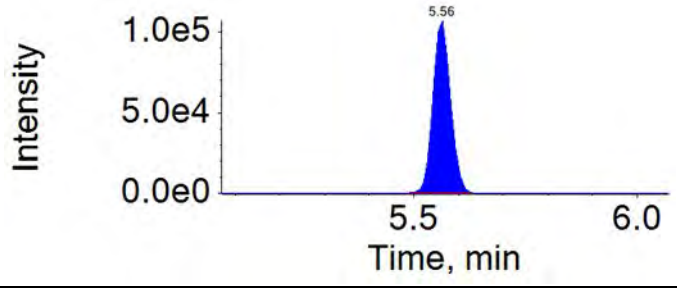
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

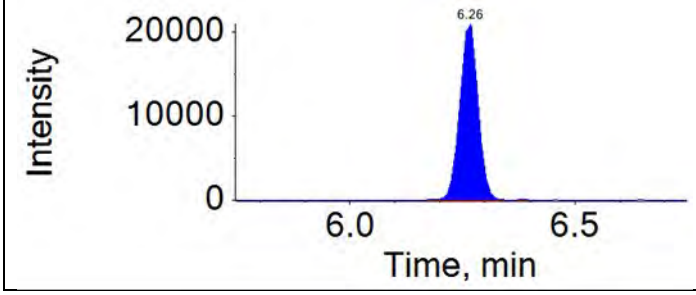
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

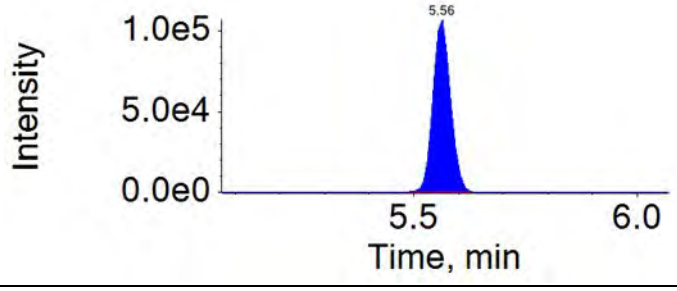
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



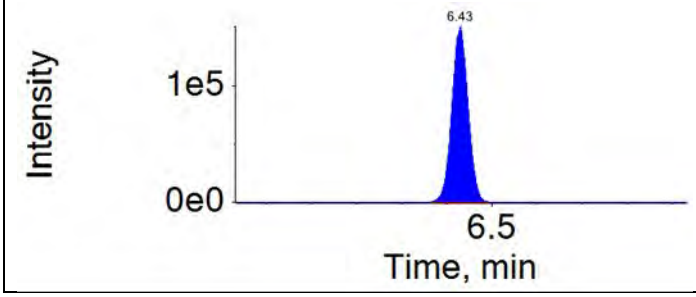


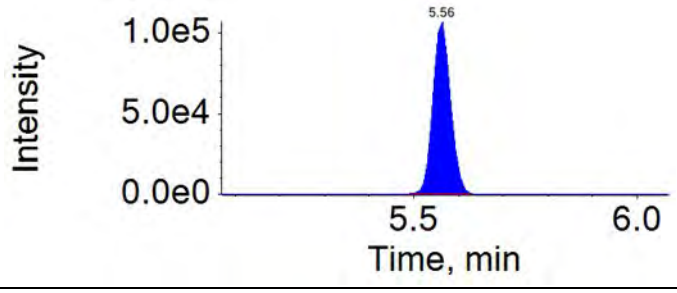
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





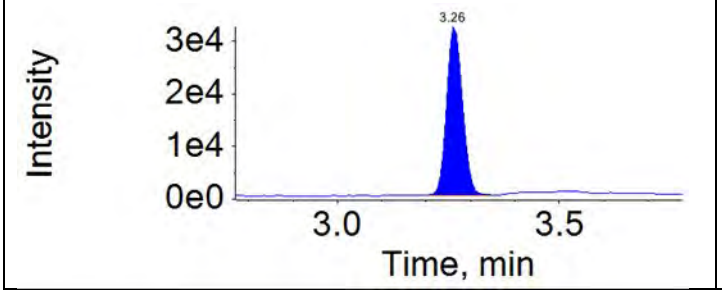
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

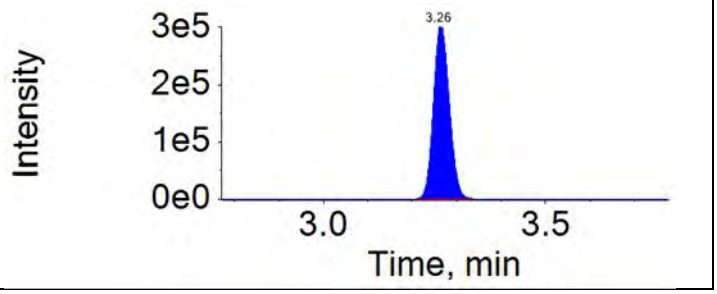




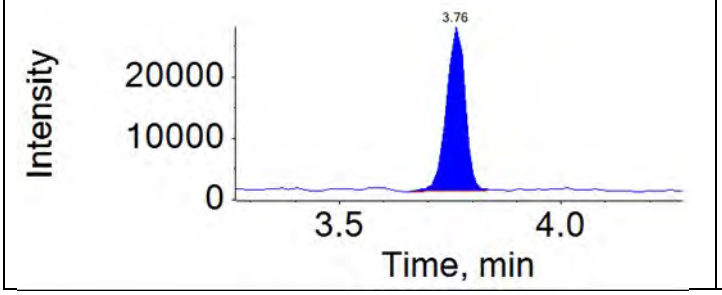
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

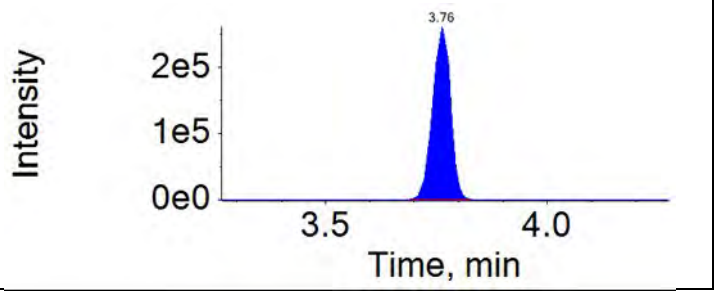
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



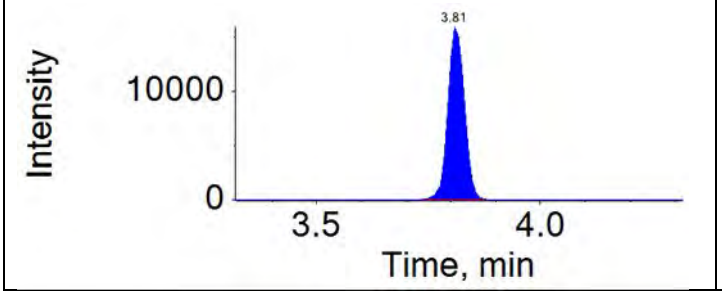


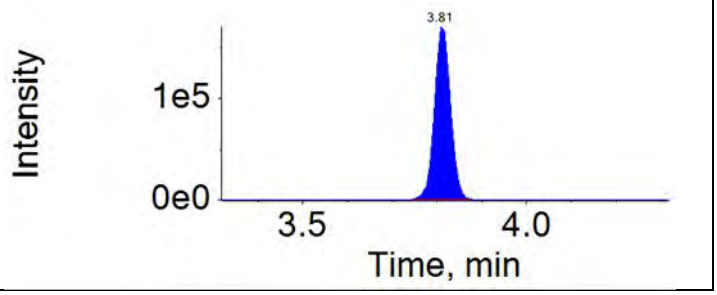
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



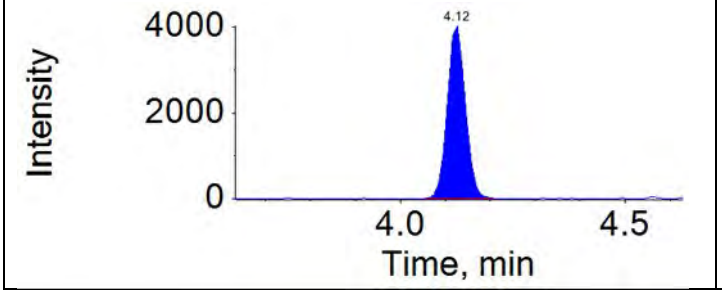


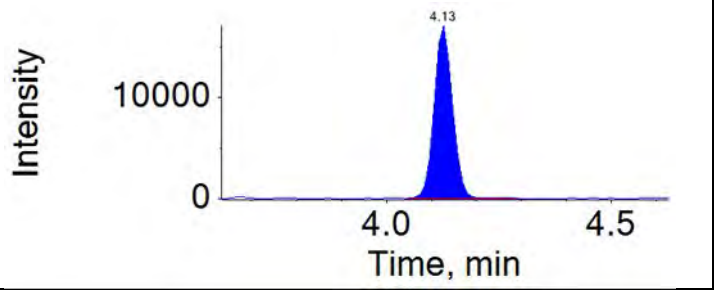
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



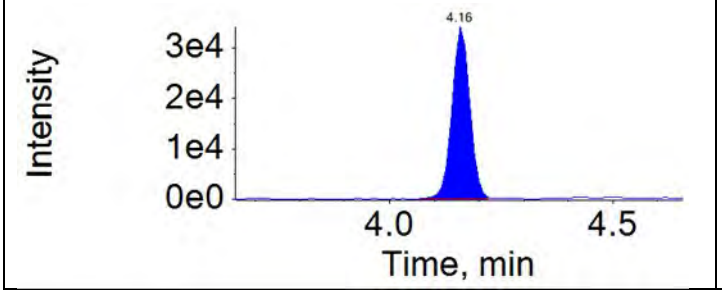


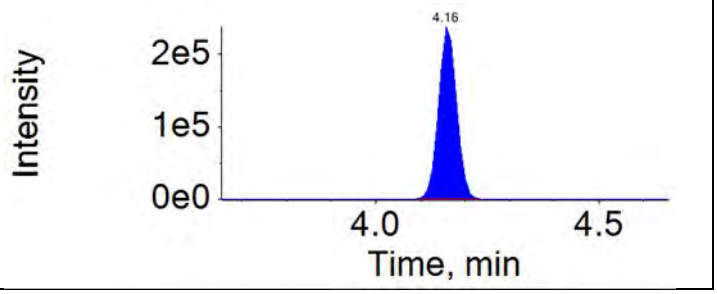
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

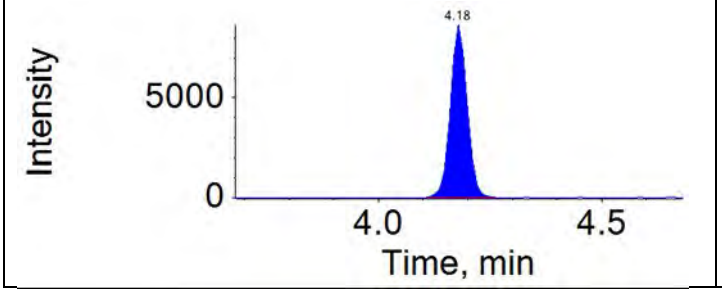
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

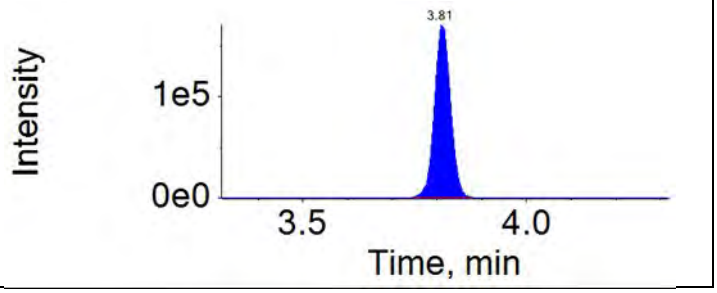
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



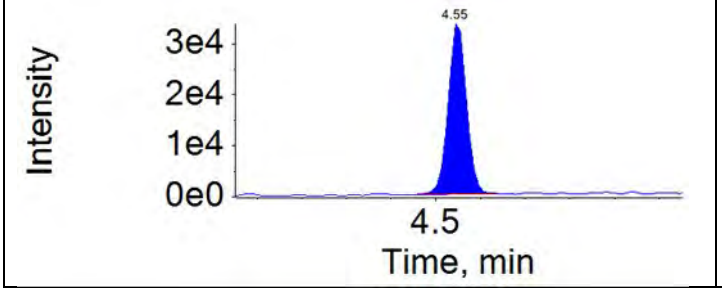


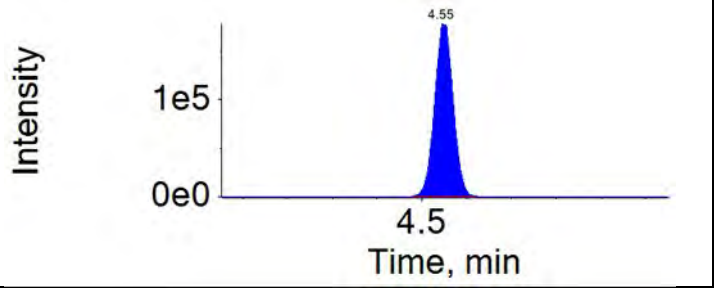
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



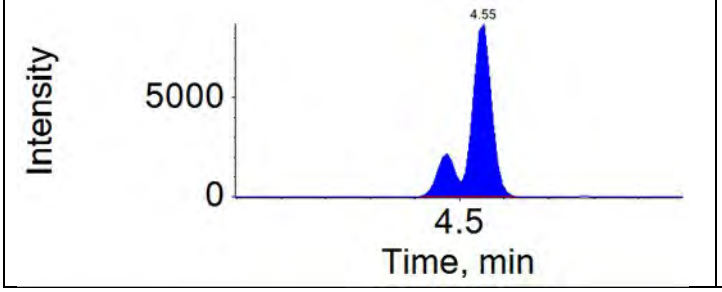


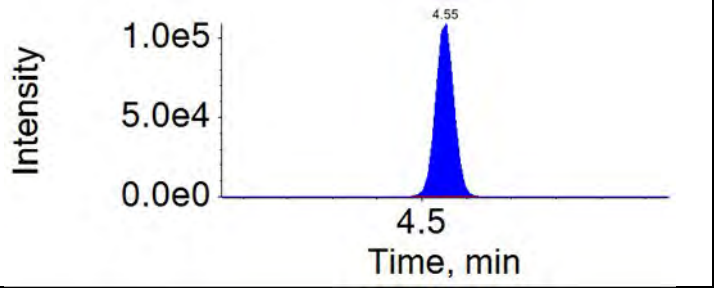
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



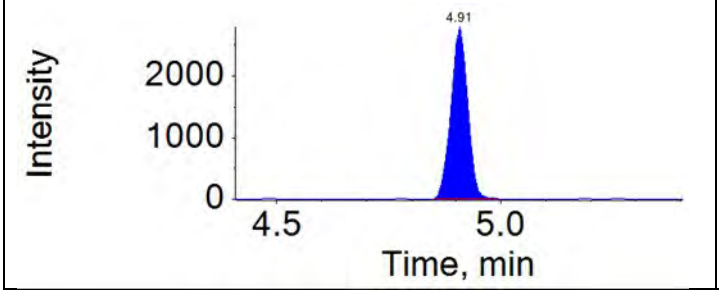


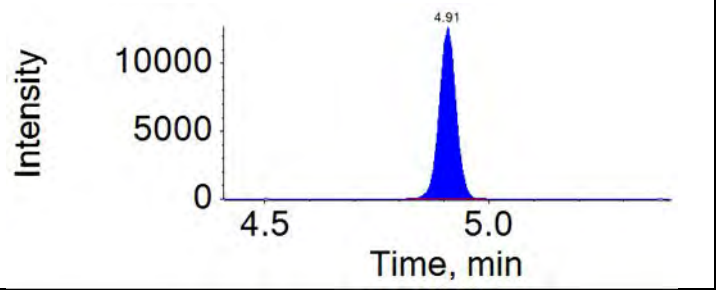
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

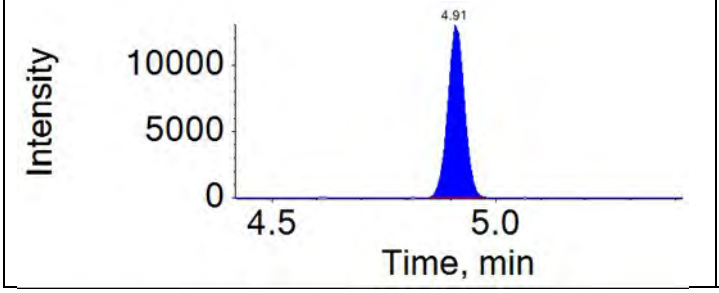
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

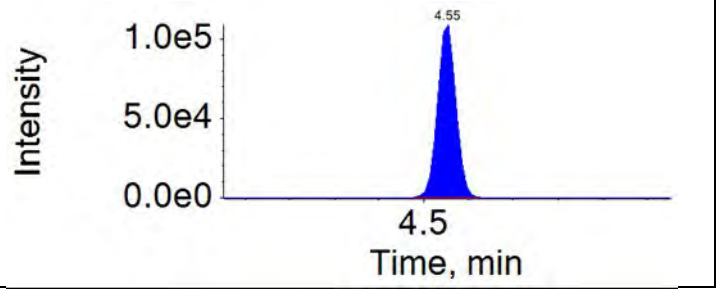
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



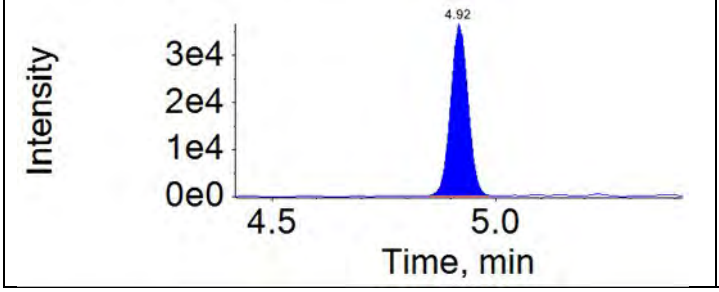


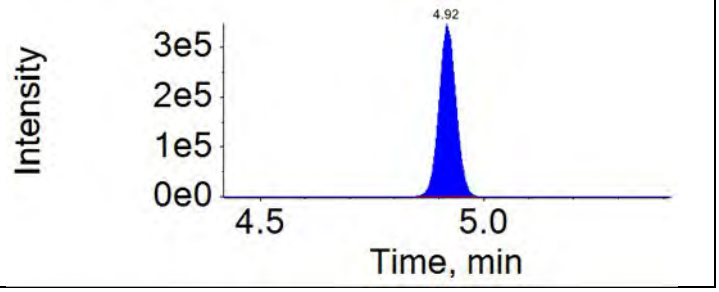
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



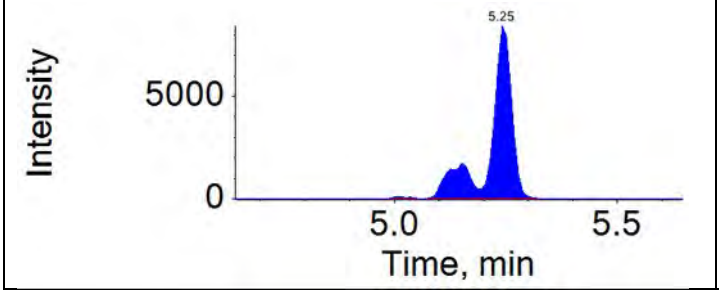


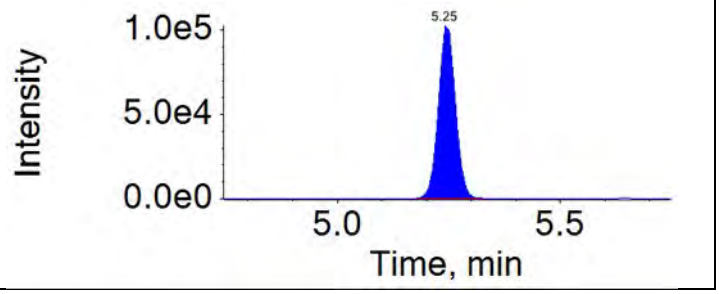
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



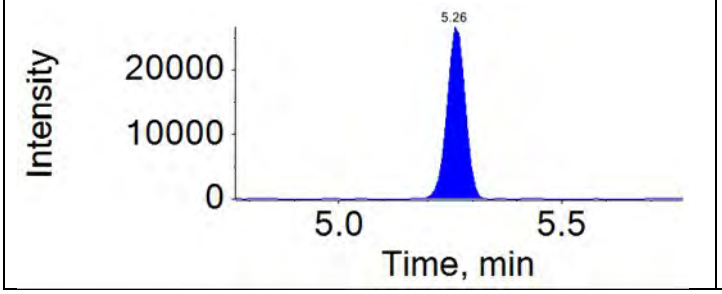


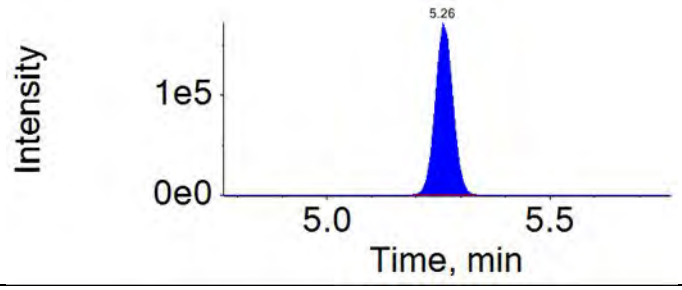
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

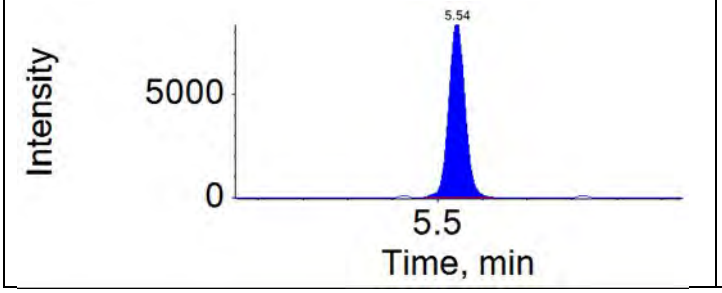
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

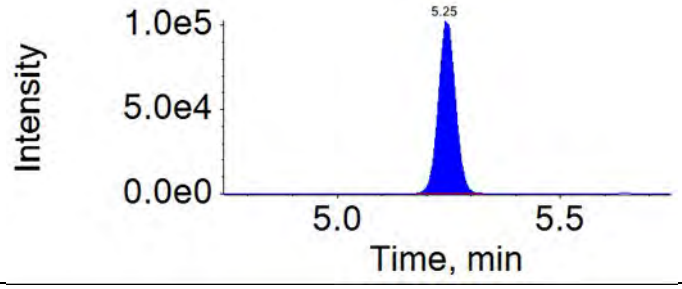
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



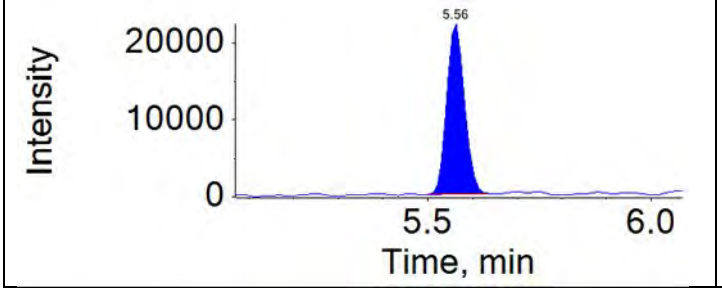


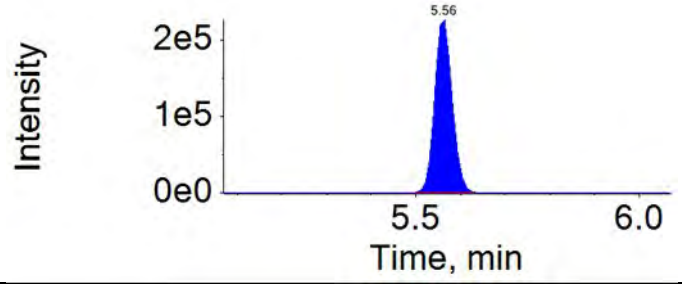
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



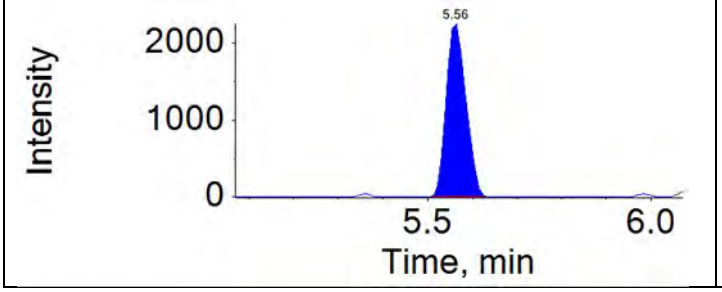


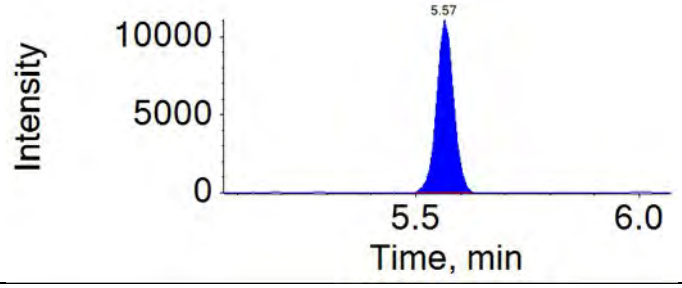
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

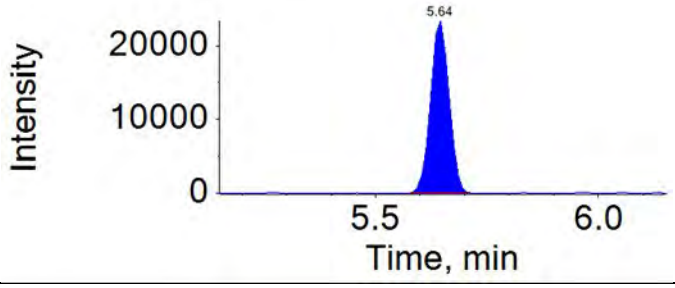
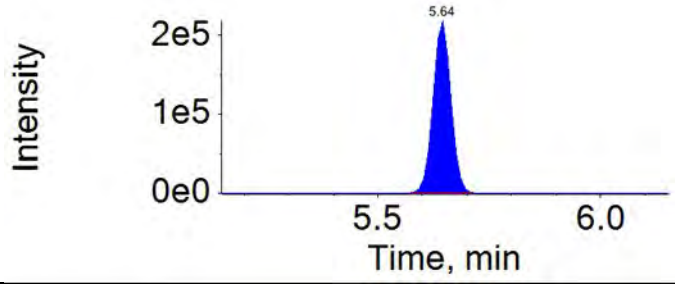


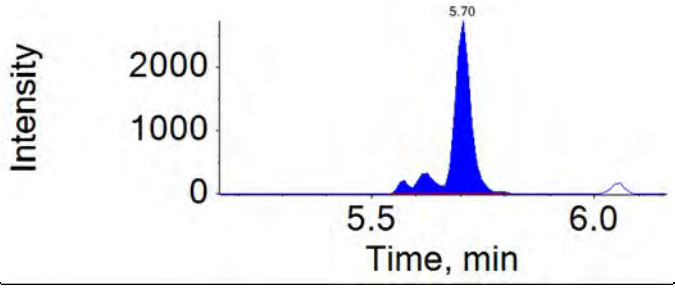
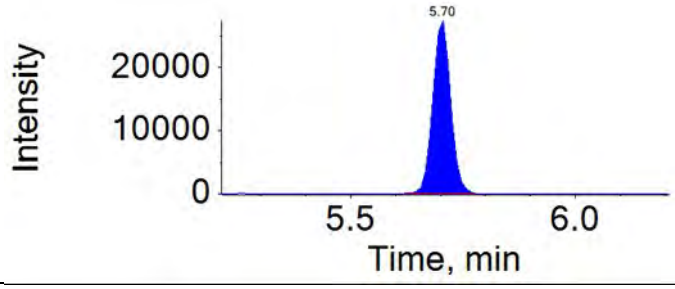


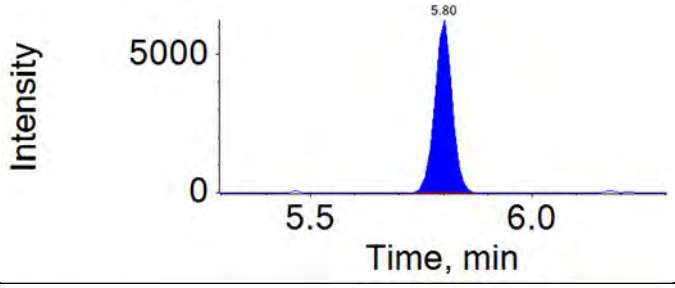
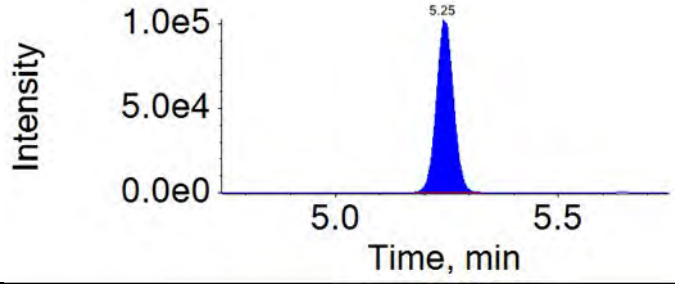
APPROVED
By MCD at 7:46 pm, 11/12/18

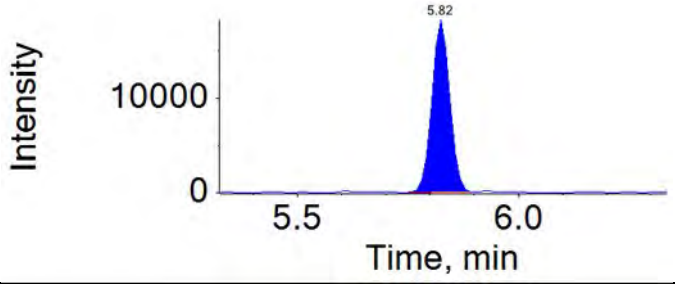
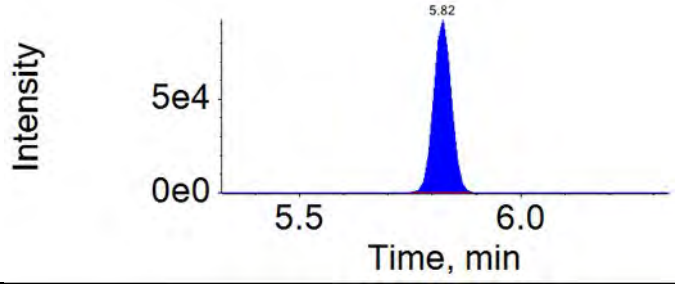
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

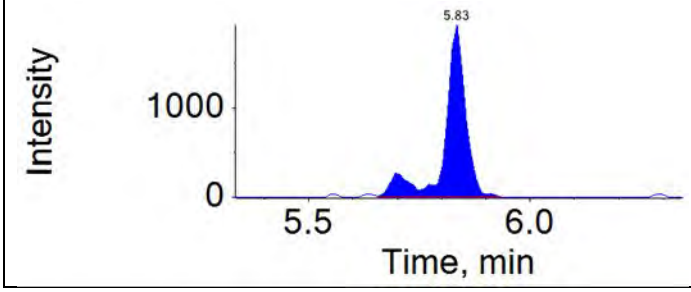
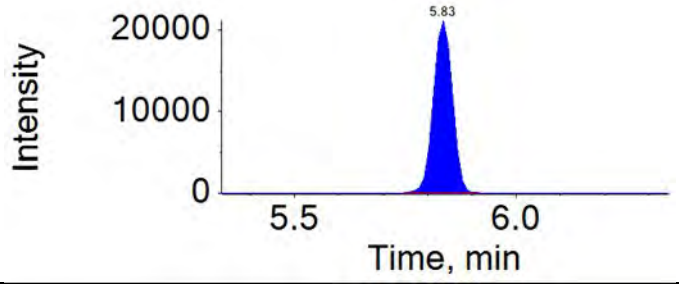
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

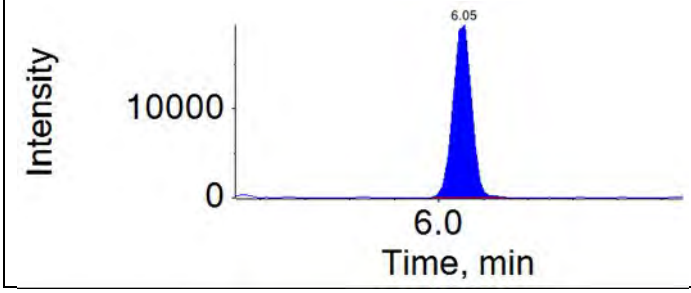
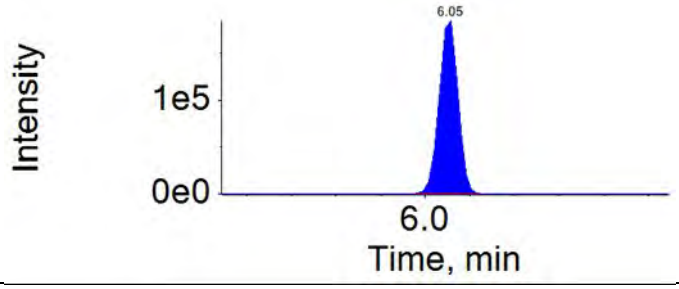
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

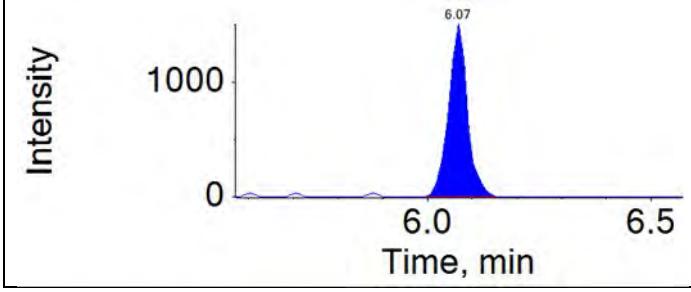
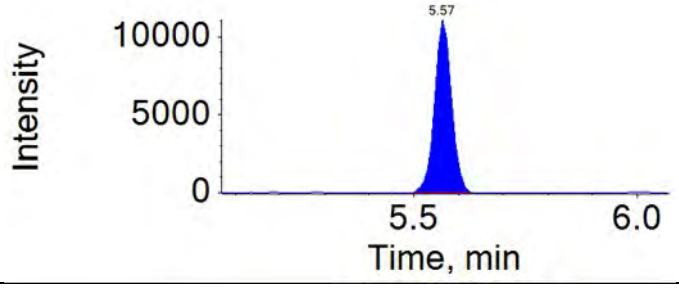
APPROVED
By MCD at 7:46 pm, 11/12/18

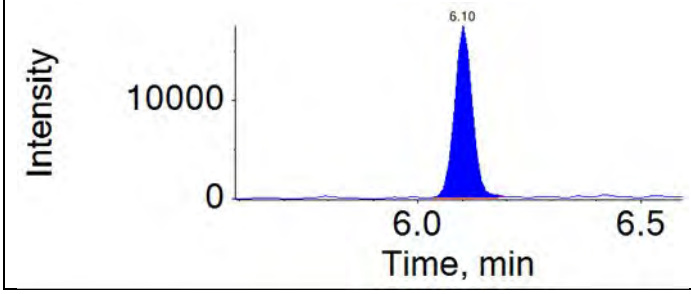
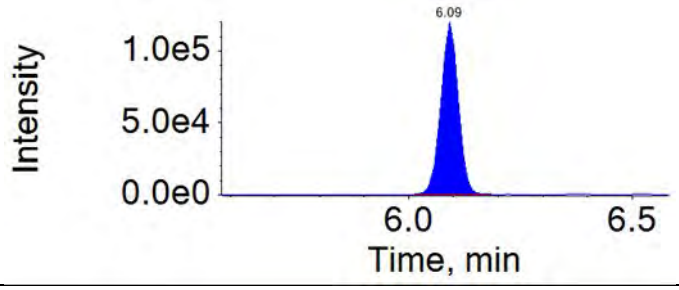
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

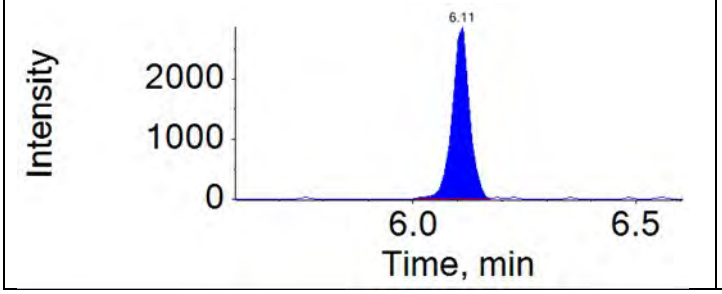
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

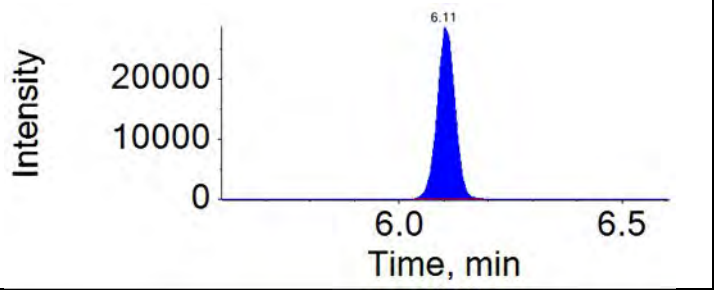
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

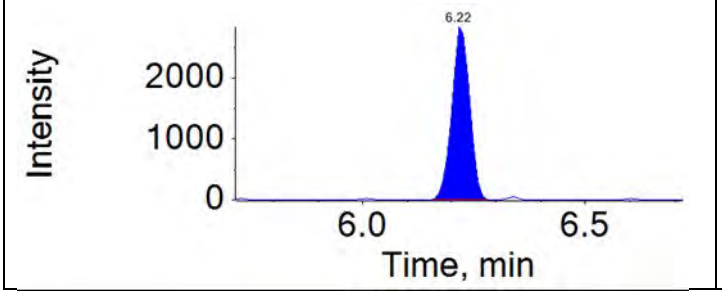
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

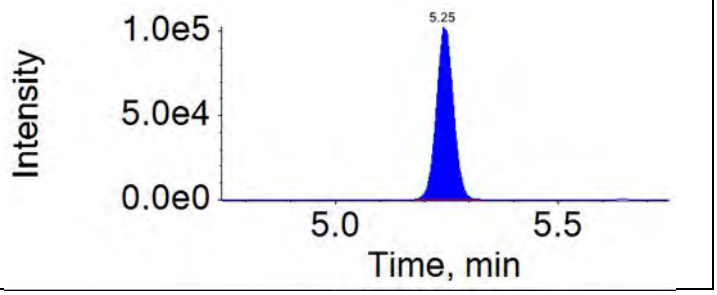
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



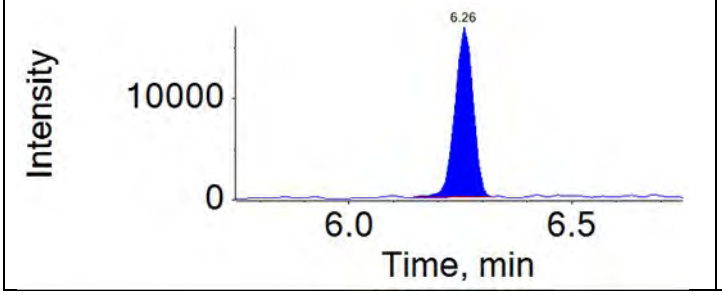


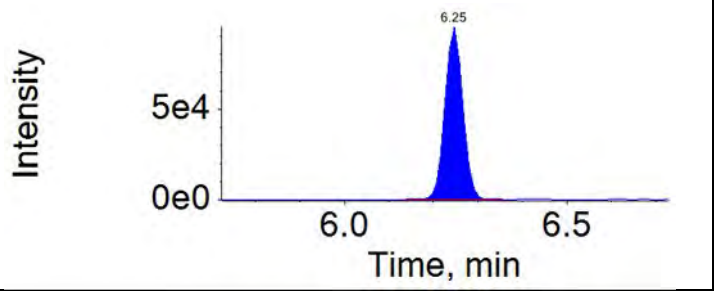
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



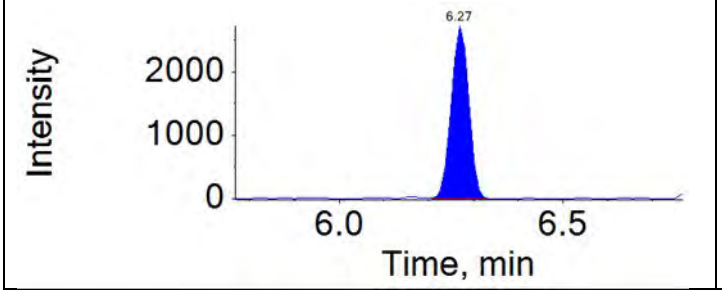


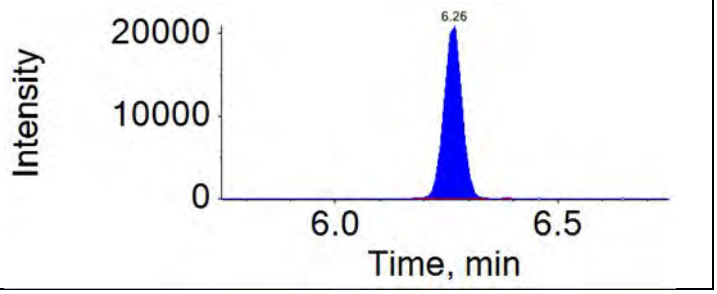
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

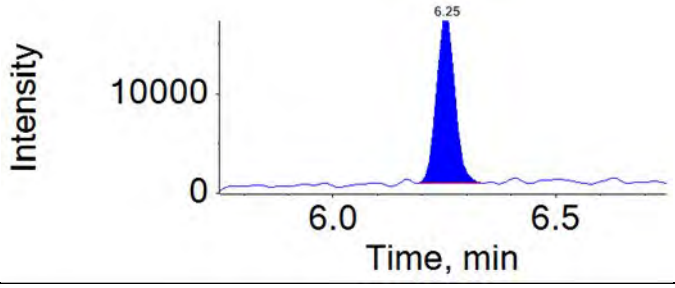
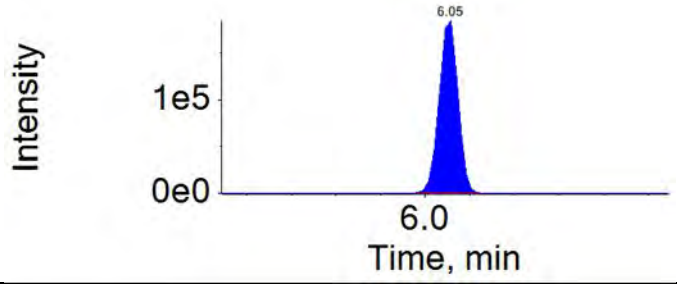


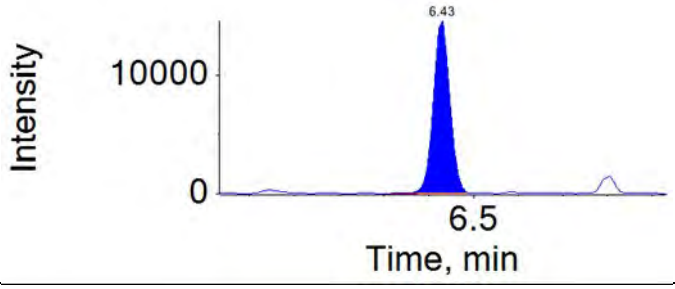
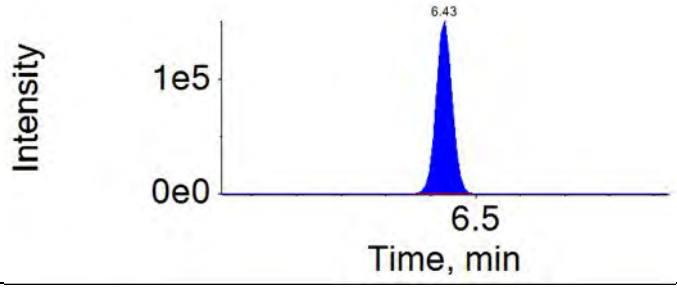


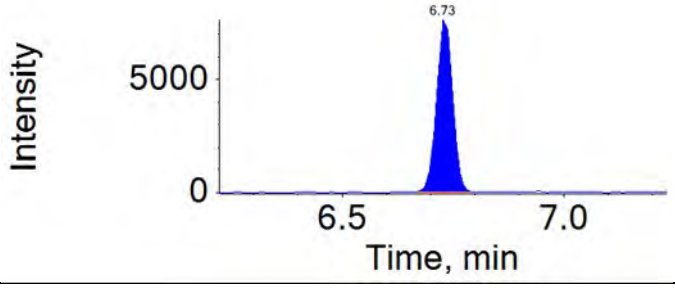
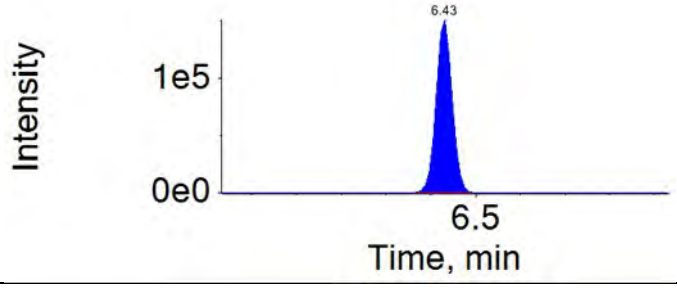
APPROVED
By MCD at 7:46 pm, 11/12/18

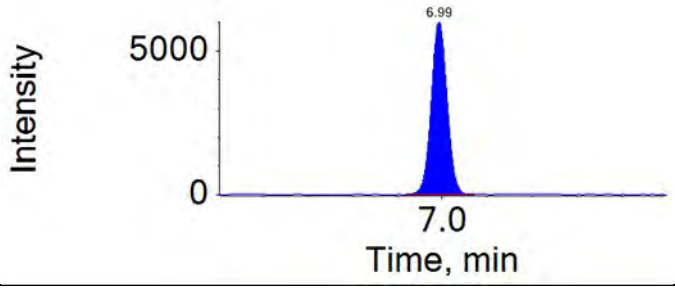
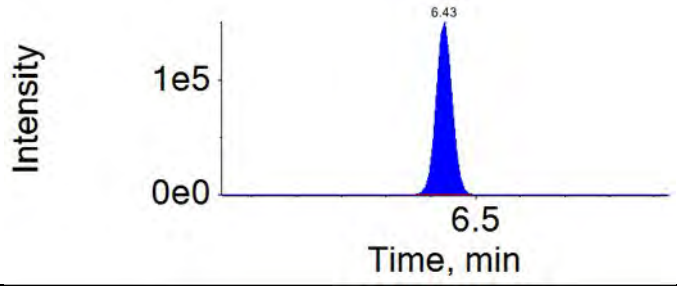
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

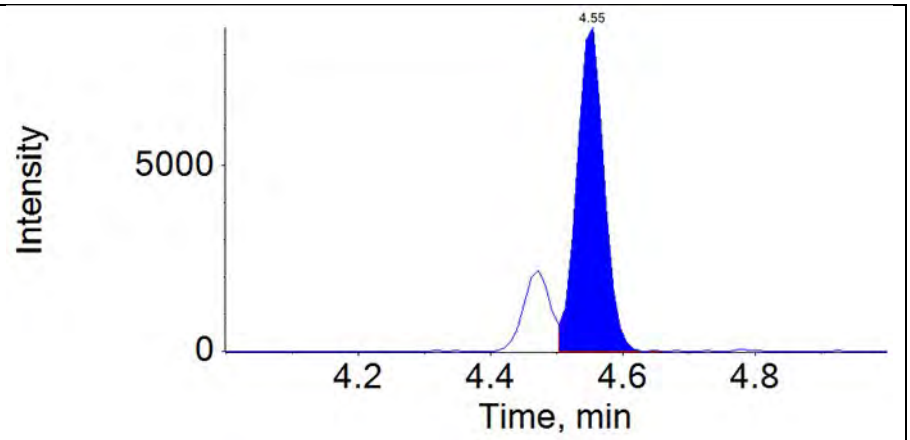
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

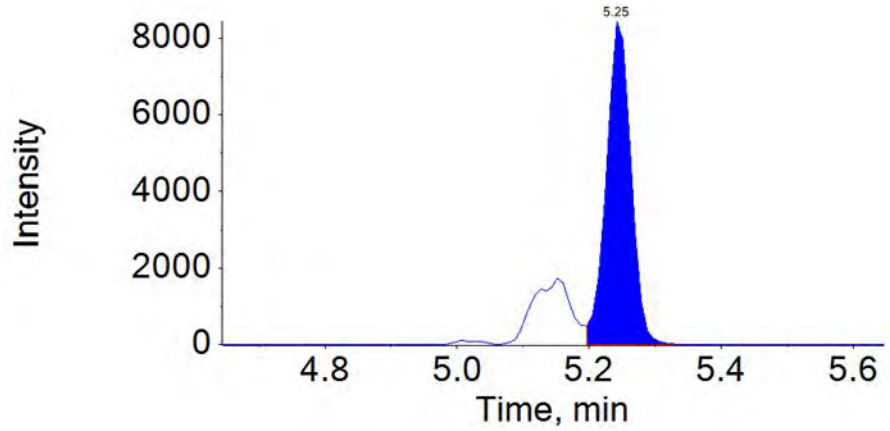
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

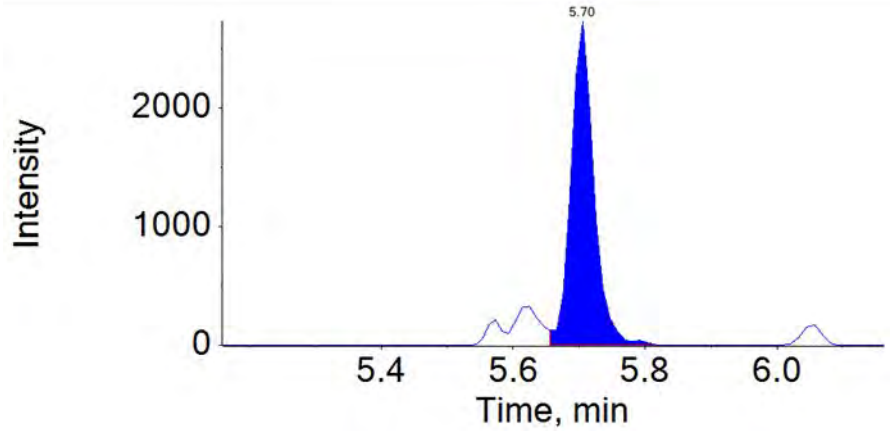
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 25019.0 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.25 **Peak Area:** 21859.3 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NMeFOSAA **RT (min.):** 5.70 **Peak Area:** 6576.0 **Mass Range:** 570.0 / 419.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

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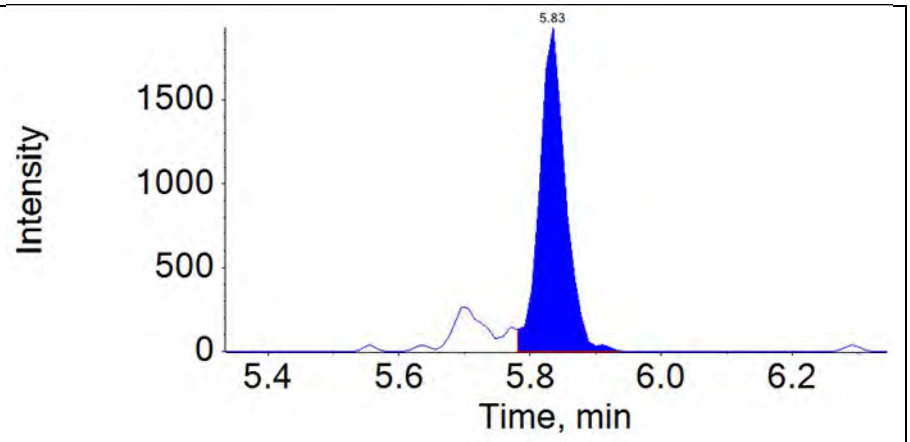
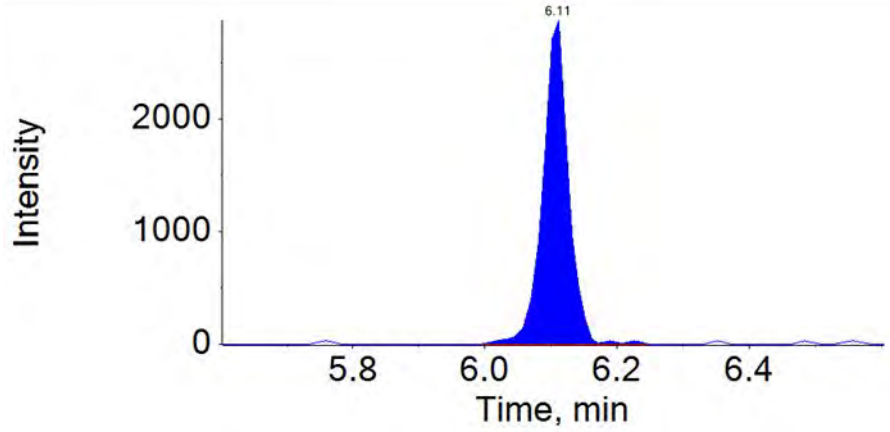
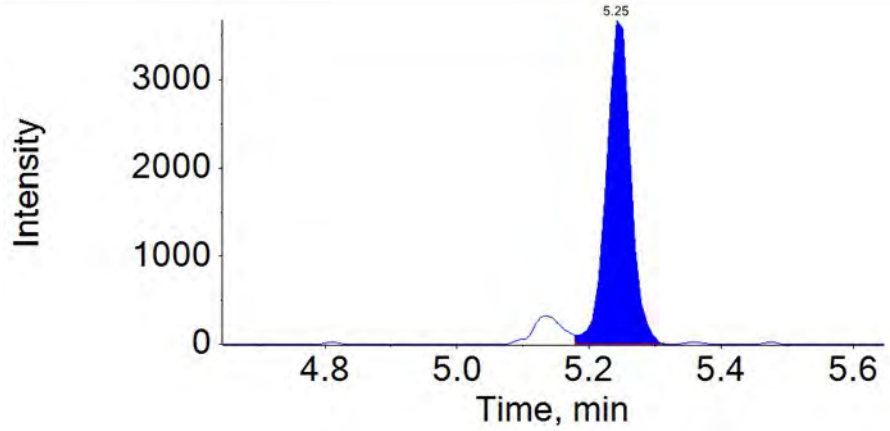
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA **RT (min.):** 5.83 **Peak Area:** 5300.0 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NMePFOSA **RT (min.):** 6.11 **Peak Area:** 7839.0 **Mass Range:** 512.0 / 169.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 9521.7 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

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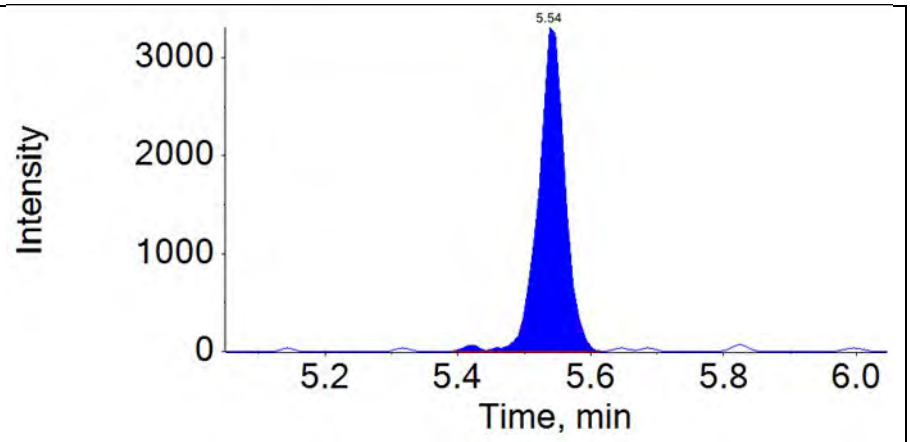
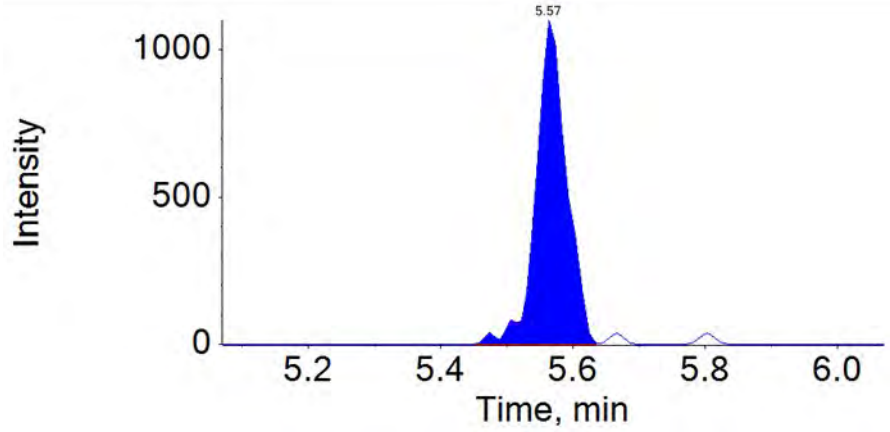
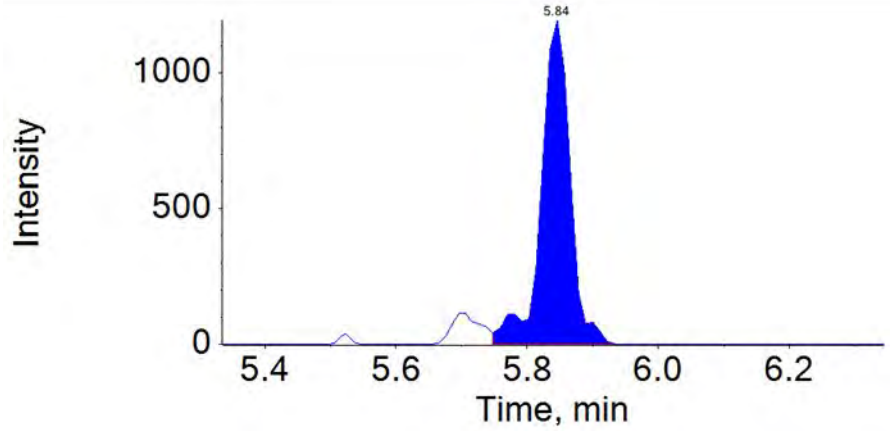
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFNS_2 **RT (min.):** 5.54 **Peak Area:** 9279.2 **Mass Range:** 549.0 / 99.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: 8:2 FTS_2 **RT (min.):** 5.57 **Peak Area:** 3541.1 **Mass Range:** 527.0 / 81.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.84 **Peak Area:** 3702.3 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV12D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

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By MCD at 7:46 pm, 11/12/18

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By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 7:46 pm, 11/12/18

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Ion Ratio Report

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	40715.3	A	N/A	0.3906			
PFBS_2	3.81	1.00	15902.0	A	N/A	0.3906	8	50	
4:2-FTS	4.12	1.00	11234.3	A	N/A	0.5979			
4:2 FTS_2	4.13	1.00	6716.5	A	N/A	0.5979		#NA!	
PFHxA	4.16	1.00	94419.1	A	N/A	0.0129			
PFHxA_2	4.16	1.00	1215.5	A	N/A	0.0129	10	50	
PFPeS	4.18	1.10	22520.0	A	N/A	0.5041			
PFPeS_2	4.18	1.10	11351.9	A	N/A	0.5041	-3	50	
PFHpA	4.55	1.00	94703.4	A	N/A	0.0563			
PFHpA_2	4.55	1.00	5331.7	A	N/A	0.0563	0	50	
PFHxS	4.55	1.00	31116.0	M	N/A	0.3316			
PFHxS_2	4.55	1.00	10319.5	A	N/A	0.3316	-3	50	
6:2-FTS	4.91	1.00	7251.1	A	N/A	0.6715			
6:2 FTS_2	4.91	1.00	4869.2	A	N/A	0.6715		#NA!	
PFHpS	4.91	1.08	33565.2	A	N/A	0.3376			
PFHpS_2	4.91	1.08	11331.8	A	N/A	0.3376	-17	50	
PFOA	4.92	1.00	97268.8	A	N/A	0.0544			
PFOA_2	4.91	1.00	5290.4	A	N/A	0.0544	-3	50	
PFOS	5.25	1.00	29101.9	M	N/A	0.3621			
PFOS_2	5.25	1.00	10538.2	M	N/A	0.3621	22	50	
PFNA	5.26	1.00	74726.2	A	N/A	0.0205			
PFNA_2	5.27	1.00	1528.2	A	N/A	0.0205	-11	50	
PFNS	5.54	1.06	21280.8	A	N/A	0.4311			
PFNS_2	5.54	1.06	9173.8	M	N/A	0.4311	-11	50	
PFDA	5.56	1.00	61208.1	A	N/A	0.0038			
PFDA_2	5.55	1.00	232.9	A	N/A	0.0038	-53	50	OOS
8:2-FTS	5.56	1.00	6888.9	A	N/A	0.5073			
8:2 FTS_2	5.57	1.00	3494.5	M	N/A	0.5073		#NA!	
NMeFOSAA	5.70	1.00	7803.6	M	N/A	0.3014			
NMeFOSAA_2	5.71	1.00	2352.3	A	N/A	0.3014	17	50	
PFDS	5.80	1.11	16863.0	A	N/A	0.4542			
PFDS_2	5.80	1.11	7659.4	A	N/A	0.4542	-12	50	
PFUnDA	5.82	1.00	50785.7	A	N/A	0.0026			
PFUnDA_2	5.84	1.00	129.8	A	N/A	0.0026	-56	50	OOS
NEtFOSAA	5.83	1.00	6353.1	M	N/A	0.6384			
NEtFOSAA_2	5.84	1.00	4055.6	M	N/A	0.6384	-12	50	
PFDoDA	6.05	1.00	56256.7	A	N/A	0.0155			
PFDoDA_2	6.05	1.00	870.7	A	N/A	0.0155	-1	50	
10:2-FTS	6.07	1.09	4386.3	A	N/A	0.7830			
10:2 FTS_2	6.07	1.09	3434.5	A	N/A	0.7830		#NA!	
PFTrDA	6.25	1.03	47478.9	A	N/A	0.0141			
PFTrDA_2	6.25	1.03	667.5	A	N/A	0.0141	64	50	OOS
PFTeDA	6.43	1.00	37143.0	A	N/A	0.0027			
PFTeDA_2	6.45	1.00	100.7	A	N/A	0.0027	-57	50	OOS
PFHxDA	6.73	1.05	19260.7	A	N/A	0.0722			
PFHxDA_2	6.73	1.05	1390.3	A	N/A	0.0722	6	50	
PFODA	6.99	1.09	14710.9	A	N/A	0.0258			
PFODA_2	6.99	1.09	379.6	A	N/A	0.0258	-7	50	

APPROVED
By MCD at 7:46 pm, 11/12/18

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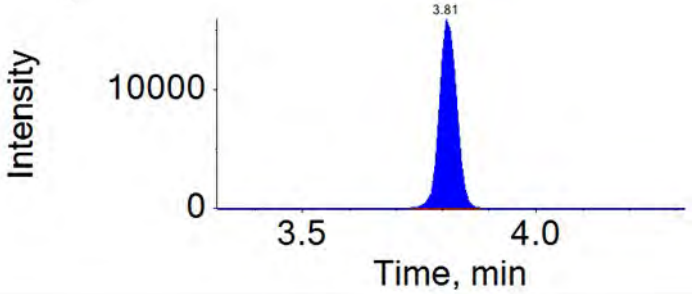
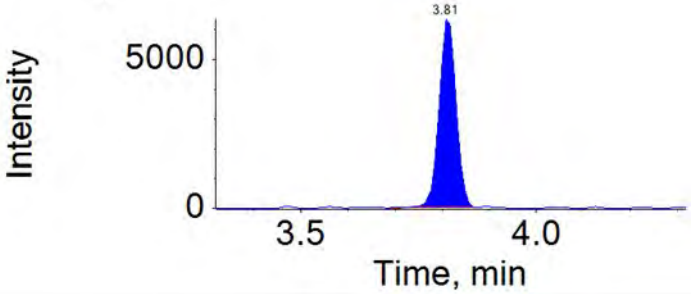
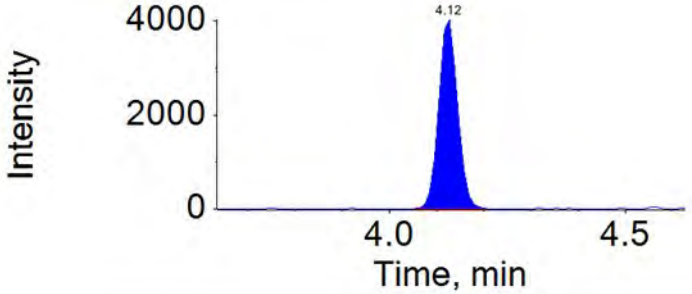
Component: PFBS
Primary Mass: 299.0 / 80.0



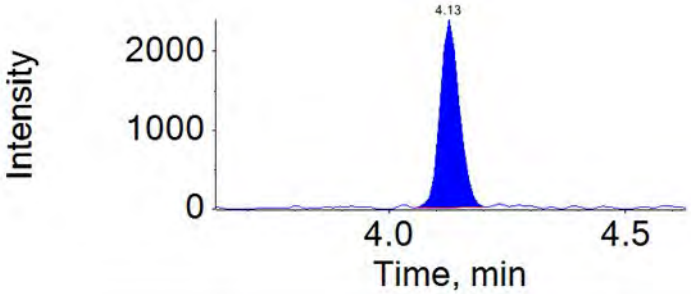
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



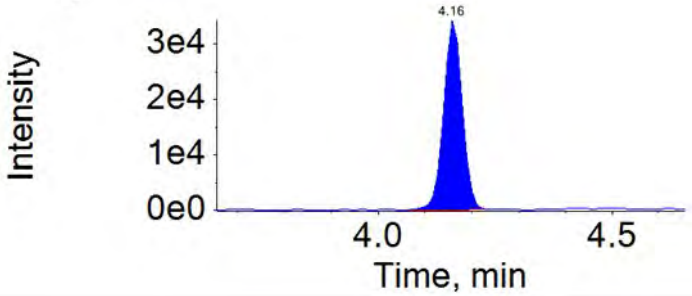
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



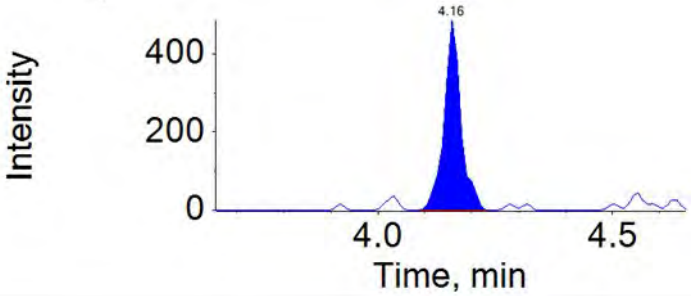
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



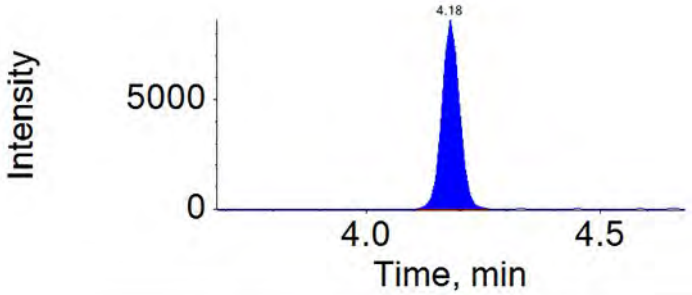
Component: PFHxA
Primary Mass: 313.0 / 269.0



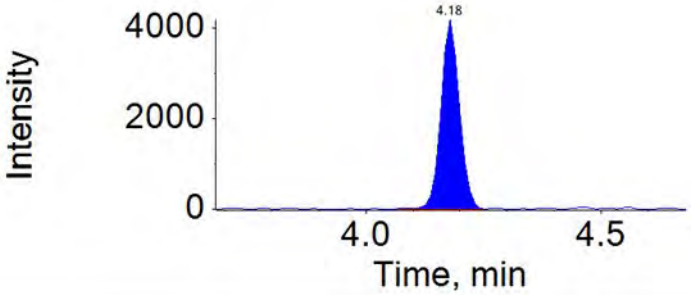
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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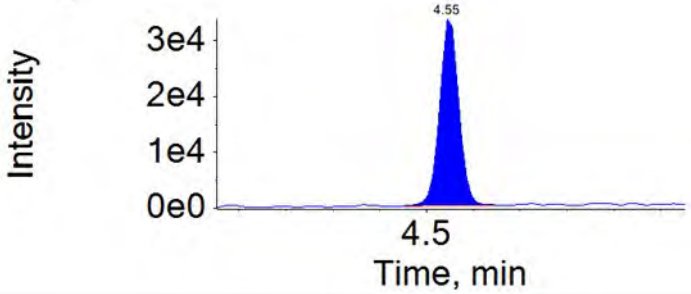
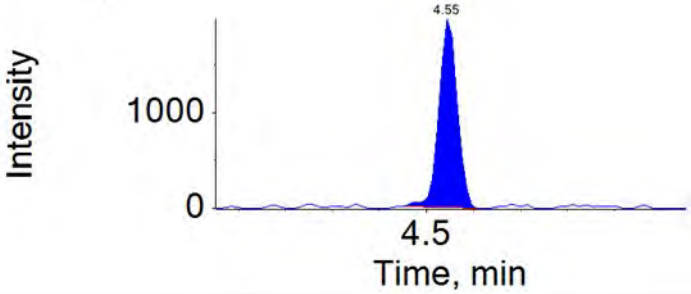
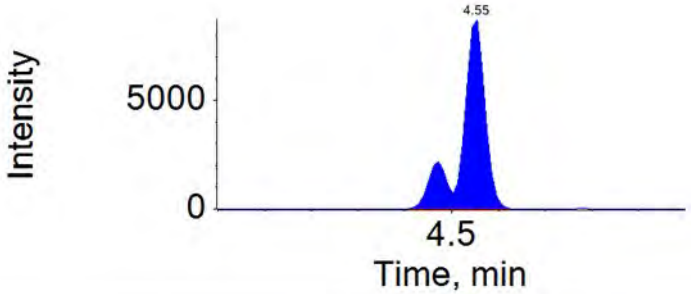
Component: PFHpA
Primary Mass: 363.0 / 319.0



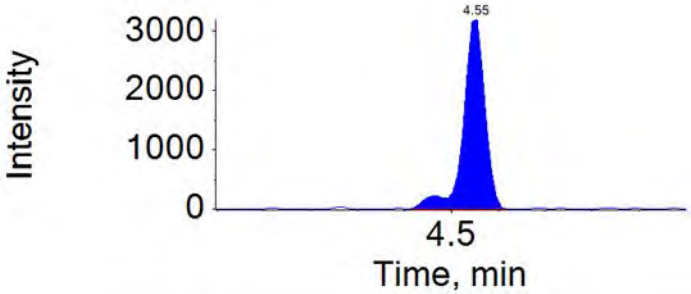
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



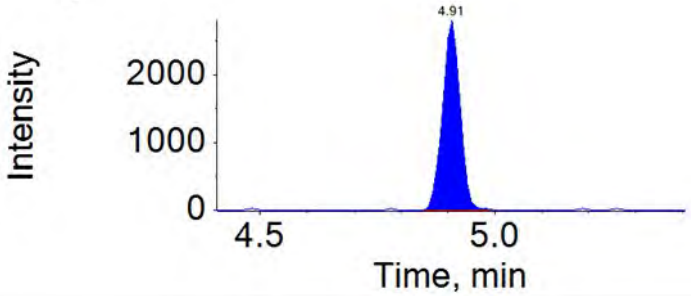
Component: PFHxS
Primary Mass: 399.0 / 80.0



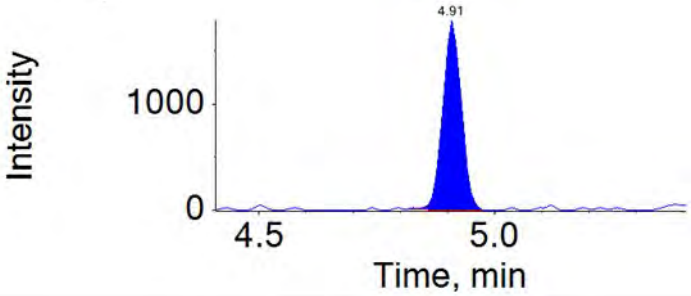
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



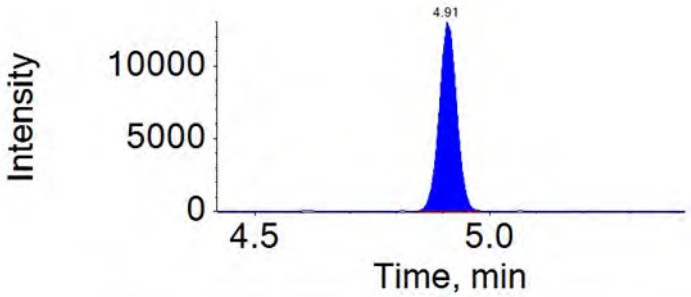
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



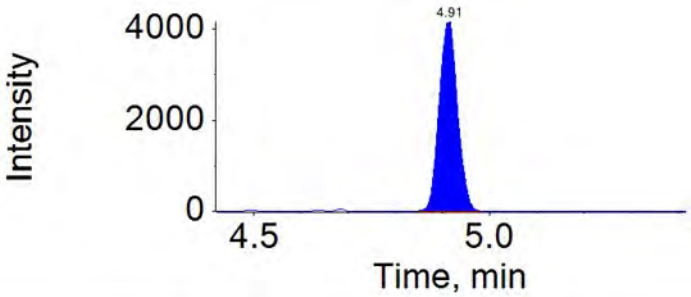
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By MCD at 7:46 pm, 11/12/18

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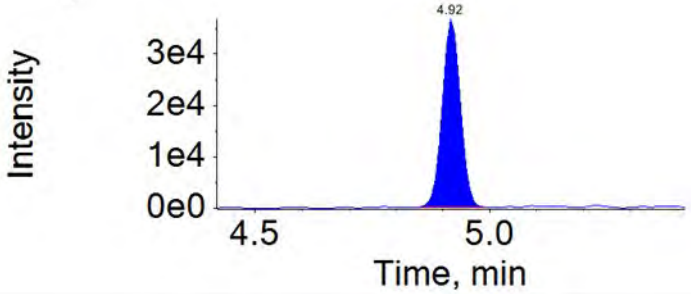
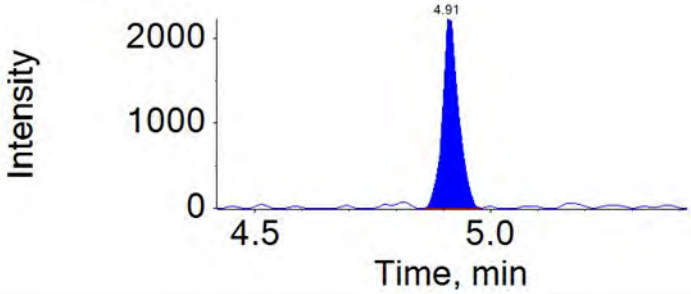
By HMK at 11:56 am, 11/13/18

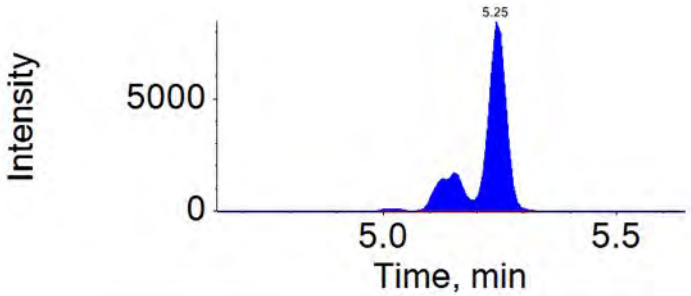
Component: PFOA
Primary Mass: 413.0 / 369.0



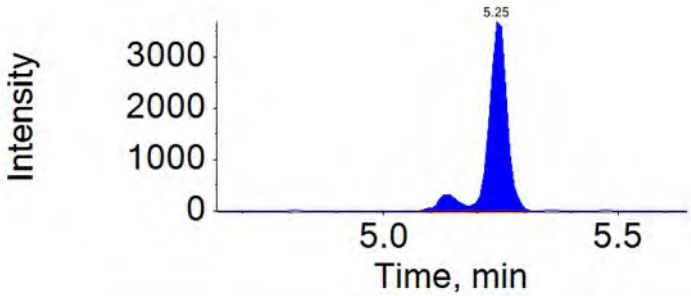
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



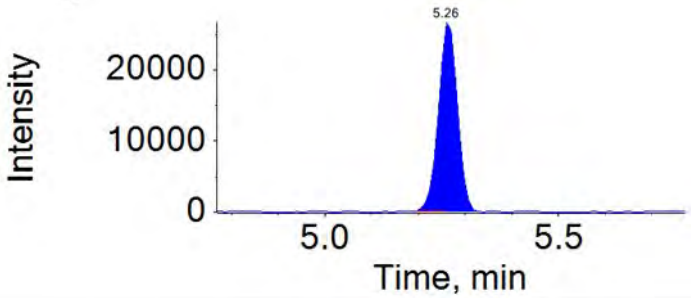
Component: PFOS
Primary Mass: 499.0 / 80.0



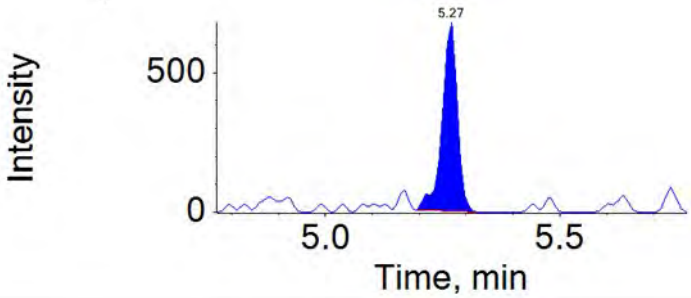
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



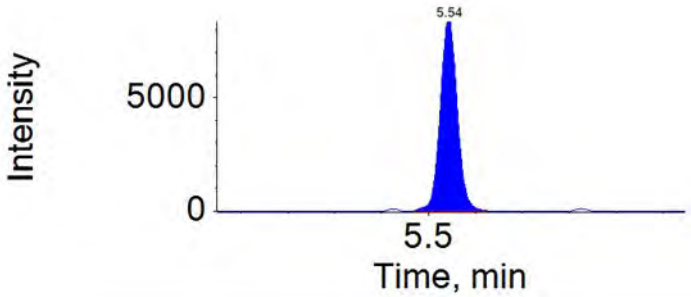
Component: PFNA
Primary Mass: 463.0 / 419.0



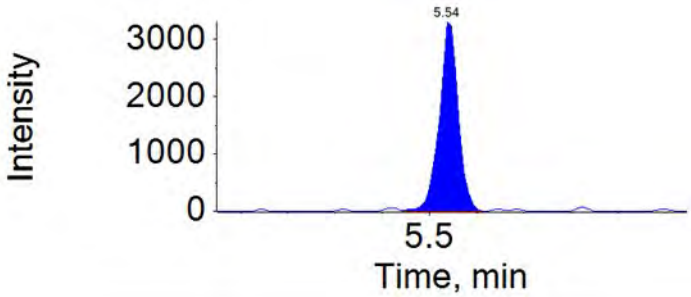
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



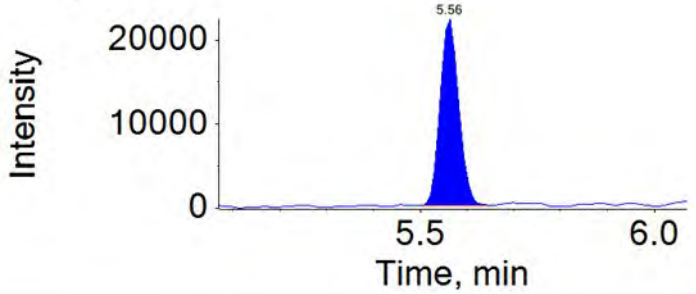
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



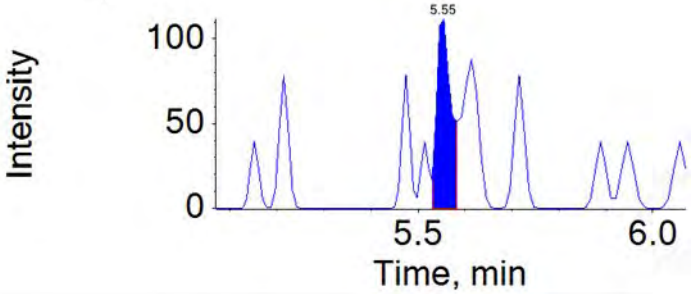
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

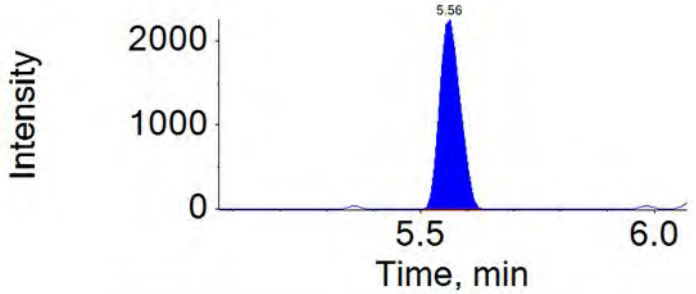
Component: PFDA
Primary Mass: 513.0 / 469.0



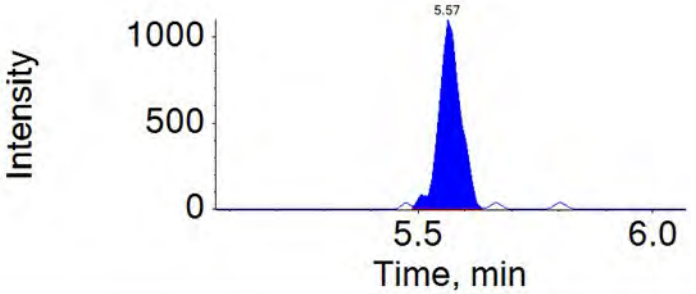
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



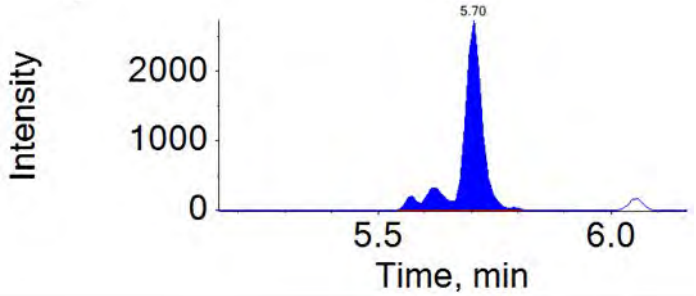
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



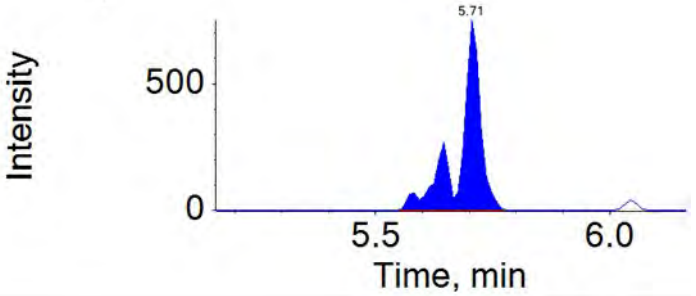
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



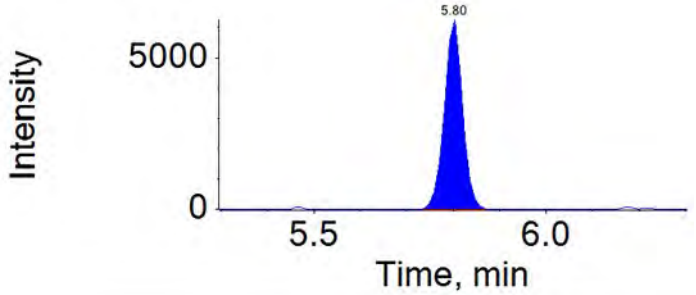
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



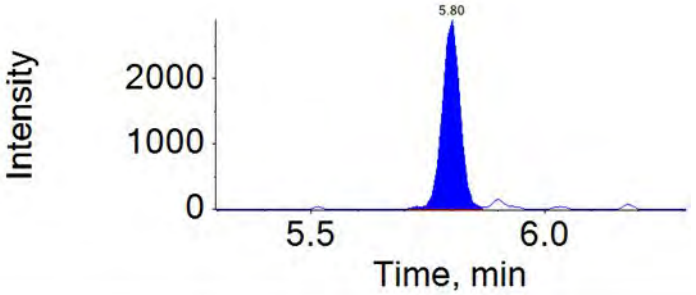
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



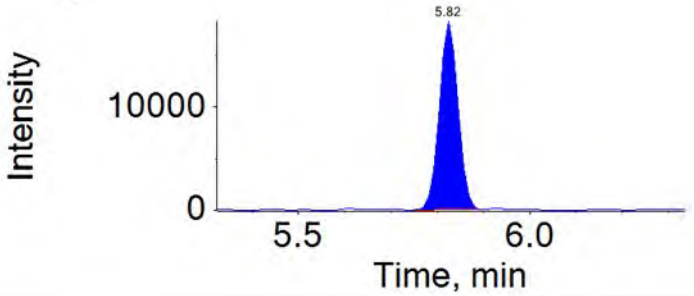
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



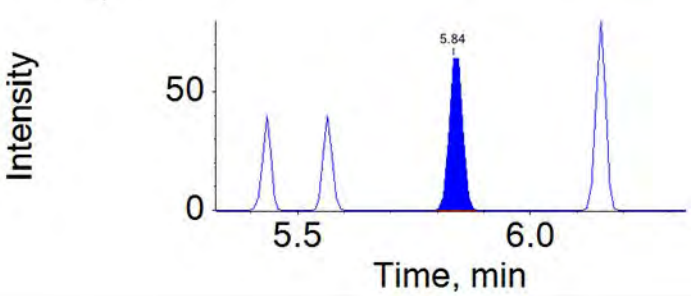
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

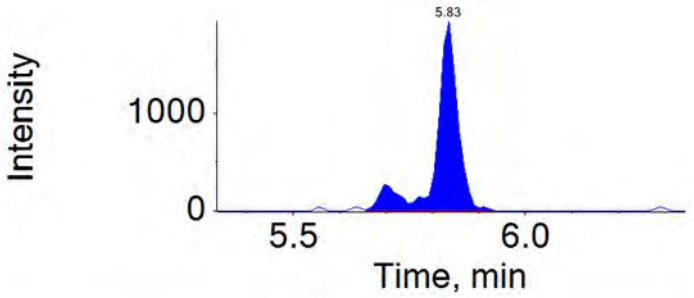
Component: PFUnDA
Primary Mass: 563.0 / 519.0



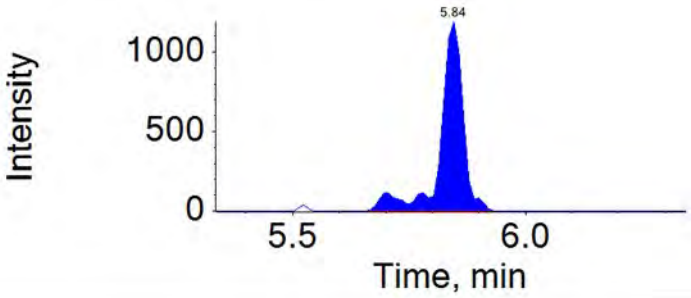
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



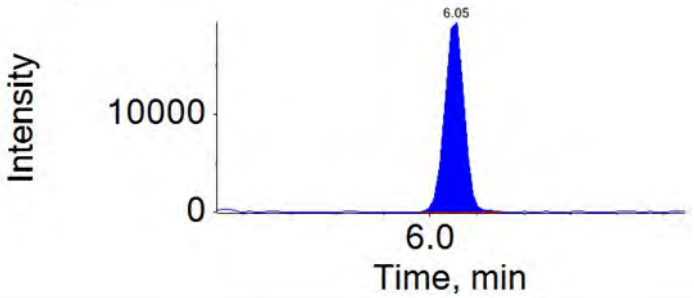
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



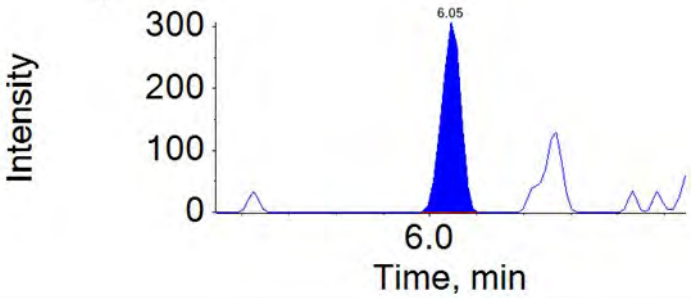
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



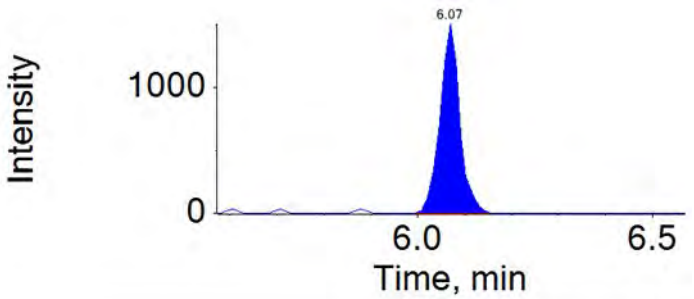
Component: PFDoDA
Primary Mass: 613.0 / 569.0



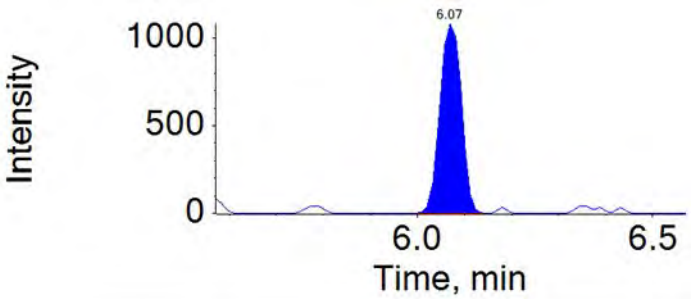
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



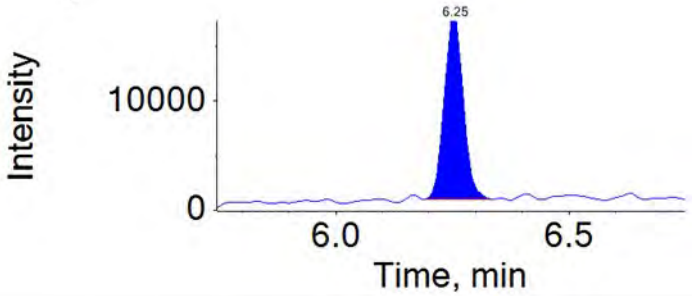
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



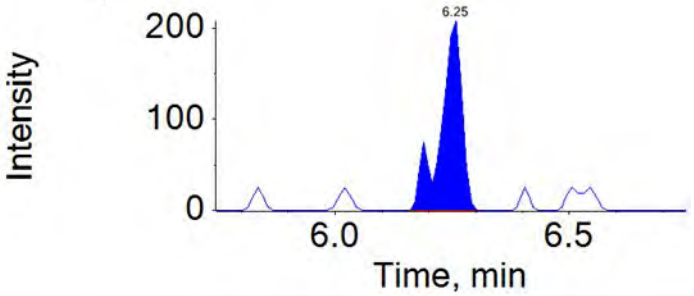
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

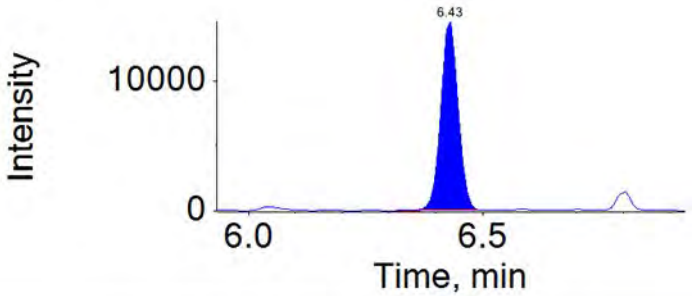
Component: PFTrDA
Primary Mass: 663.0 / 619.0



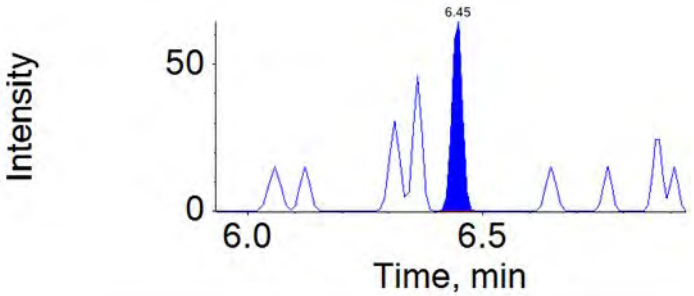
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



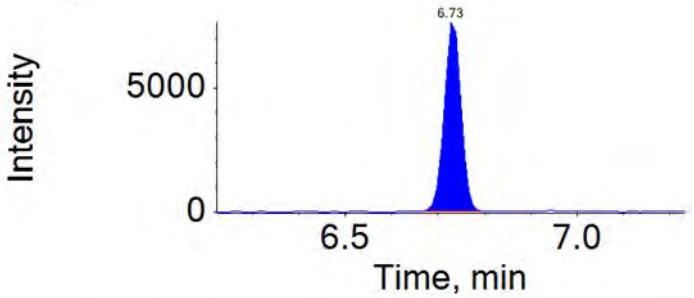
Component: PFTeDA
Primary Mass: 713.0 / 669.0



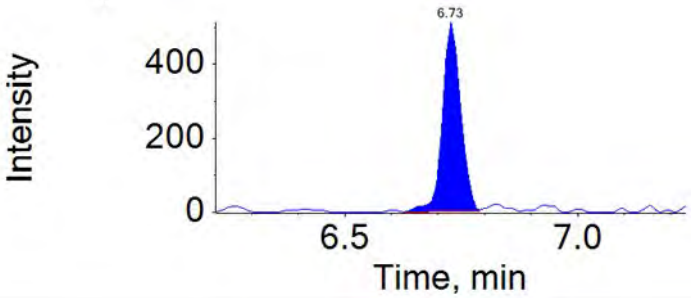
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



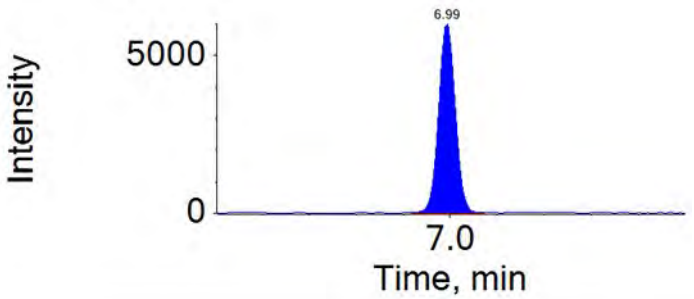
Component: PFHxDA
Primary Mass: 813.0 / 769.0



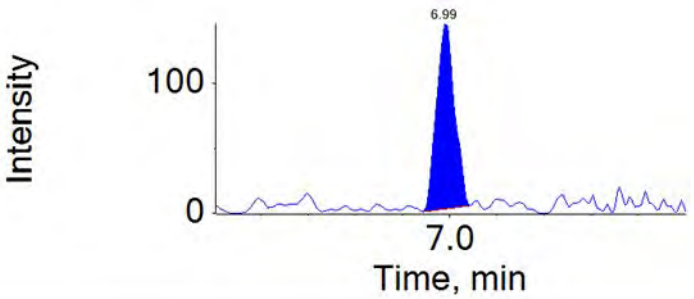
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV12D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-12T17:30:36
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV1-2
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	700678.2	659926.2	6	50	
13C2-PFOA	5.0	501862.4	450219.7	11	50	
13C4-PFOS	4.8	265827.8	249205.8	7	50	
13C2-PFDA	5.0	313532.3	278743.9	12	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778338.6	13C3-PFBA	700678.2	1.111	5.000	4.980	100	70-130	
E13C5-PFPeA	771183.8	13C3-PFBA	700678.2	1.101	5.000	4.937	99	70-130	
E13C3-PFBS	454738.5	13C3-PFBA	700678.2	0.649	4.650	4.581	99	70-130	
E13C2-4:2-FTS	54302.6	13C2-PFOA	501862.4	0.108	4.670	4.819	103	70-130	
E13C5-PFHxA	679071.8	13C2-PFOA	501862.4	1.353	5.000	4.888	98	70-130	
E13C3-PFHxS	344474.4	13C2-PFOA	501862.4	0.686	4.730	4.710	100	70-130	
E13C4-PFHpA	532521.5	13C2-PFOA	501862.4	1.061	5.000	4.780	96	70-130	
E13C2-6:2-FTS	37008.0	13C2-PFOA	501862.4	0.074	4.750	4.934	104	70-130	
E13C8-PFOA	918519.6	13C2-PFOA	501862.4	1.830	5.000	5.043	101	70-130	
E13C8-PFOS	289403.4	13C4-PFOS	265827.8	1.089	4.780	4.824	101	70-130	
E13C9-PFNA	484906.2	13C4-PFOS	265827.8	1.824	5.000	5.086	102	70-130	
E13C6-PFDA	652793.5	13C2-PFDA	313532.3	2.082	5.000	4.859	97	70-130	
E13C2-8:2-FTS	30551.9	13C2-PFDA	313532.3	0.097	4.790	4.860	101	70-130	
E13C8-PFOSA	652323.3	13C2-PFDA	313532.3	2.081	5.000	4.613	92	70-130	
Ed3-NMeFOSAA	76377.2	13C2-PFDA	313532.3	0.244	5.000	4.397	88	70-130	
E13C7-PFUnDA	271896.6	13C2-PFDA	313532.3	0.867	5.000	5.035	101	70-130	
Ed5-NEtFOSAA	60822.1	13C2-PFDA	313532.3	0.194	5.000	4.104	82	70-130	
E13C2-PFDoDA	565062.9	13C2-PFDA	313532.3	1.802	5.000	4.679	94	70-130	
Ed7-NMePFOSAE	349234.7	13C2-PFDA	313532.3	1.114	5.000	4.820	96	70-130	
Ed3-NMePFOSA	80586.7	13C2-PFDA	313532.3	0.257	5.000	4.670	93	70-130	
Ed9-NEtPFOSAE	267606.0	13C2-PFDA	313532.3	0.854	5.000	4.439	89	70-130	
Ed5-NEtPFOSA	61370.7	13C2-PFDA	313532.3	0.196	5.000	4.592	92	70-130	
E13C2-PFTeDA	416788.0	13C2-PFDA	313532.3	1.329	5.000	4.667	93	70-130	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

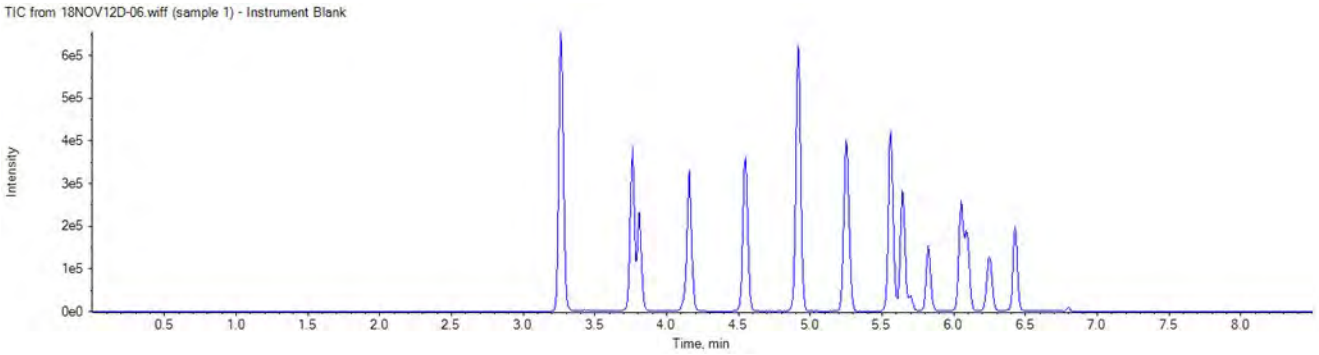
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	778338.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	771183.8	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	454738.5	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	54302.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	679071.8	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	454738.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	532521.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	344474.4	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	37008.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	344474.4	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	918519.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	484906.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	652793.5	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30551.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	652323.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	76377.2	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	271896.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	60822.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	565062.9	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30551.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	349234.7	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	80586.7	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	289403.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	267606.0	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	61370.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	565062.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	416788.0	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	416788.0	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	416788.0	N/A	

Total Ion Chromatogram

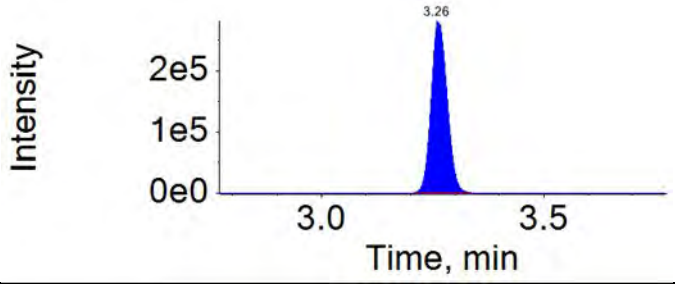


APPROVED
By MCD at 7:46 pm, 11/12/18

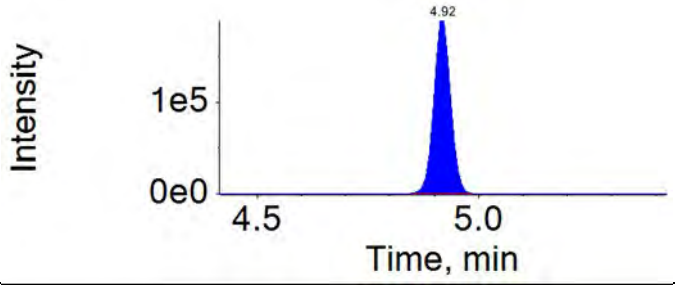
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

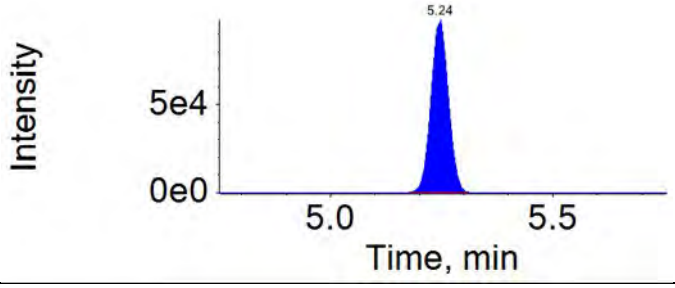
Injection Standard: 13C3-PFBA
216.0 / 172.0



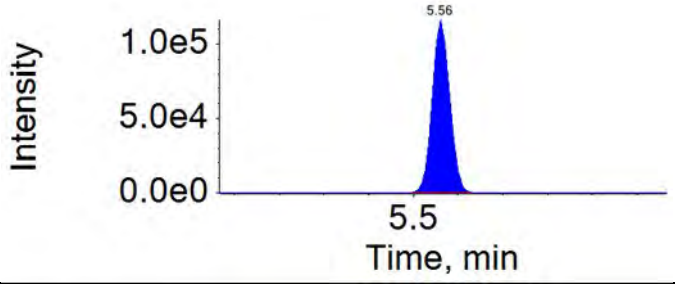
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

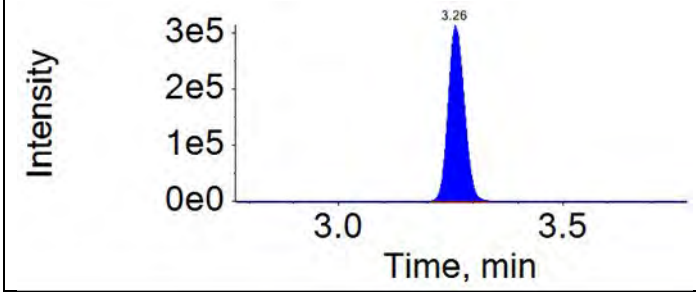


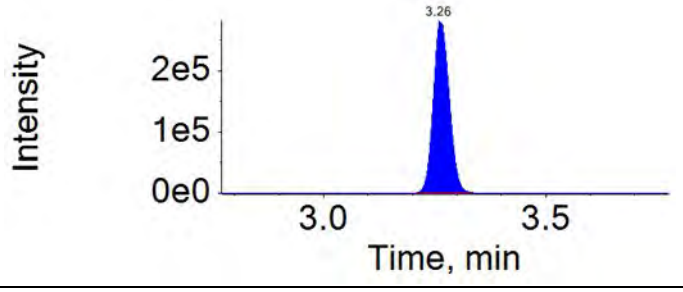
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

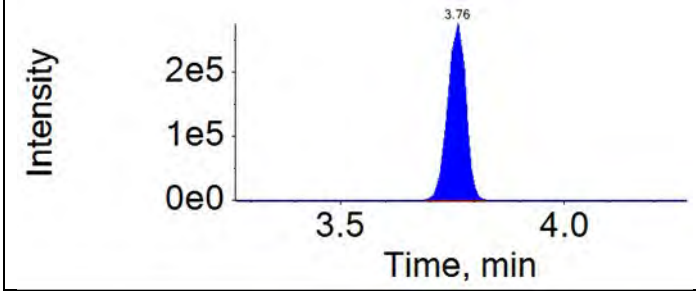
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

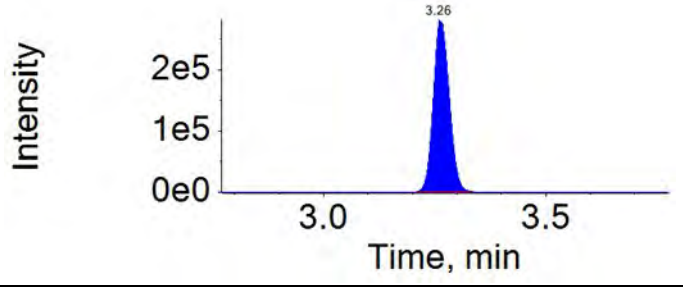
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



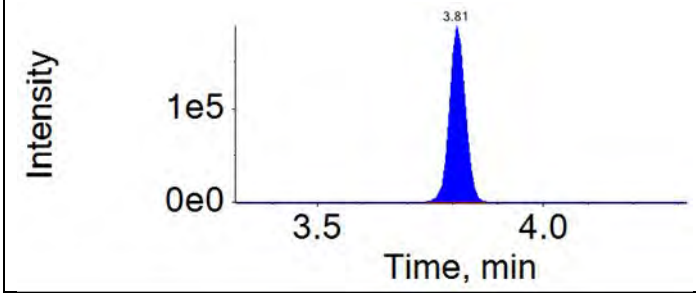


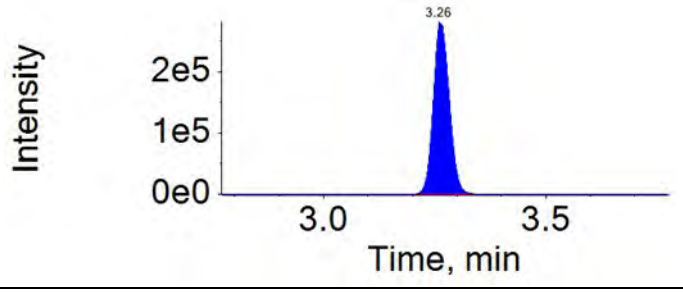
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



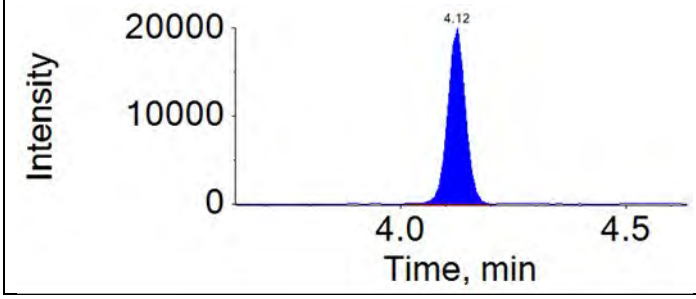


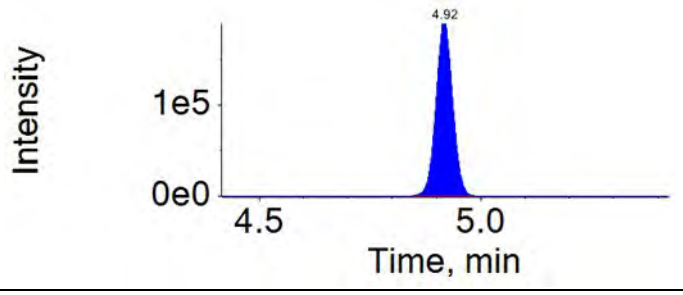
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



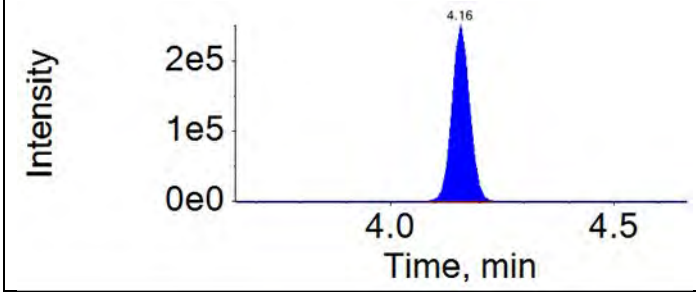


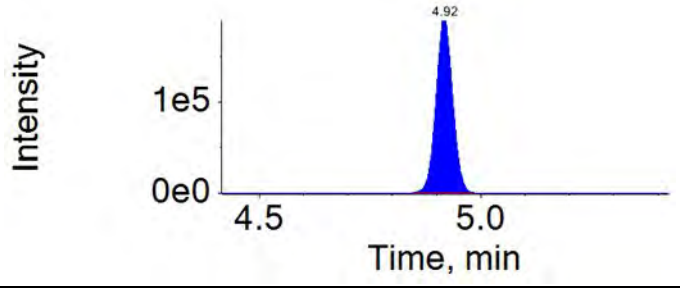
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

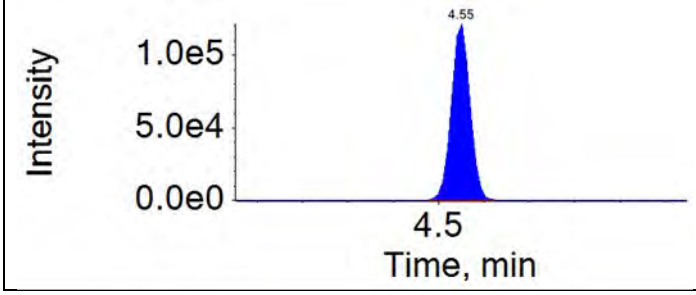
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

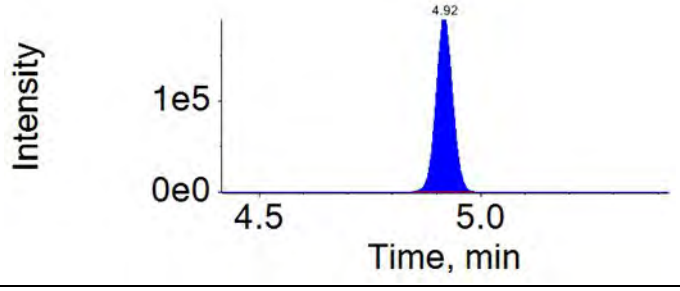
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



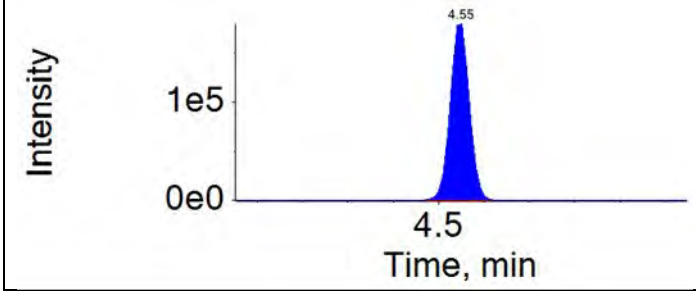


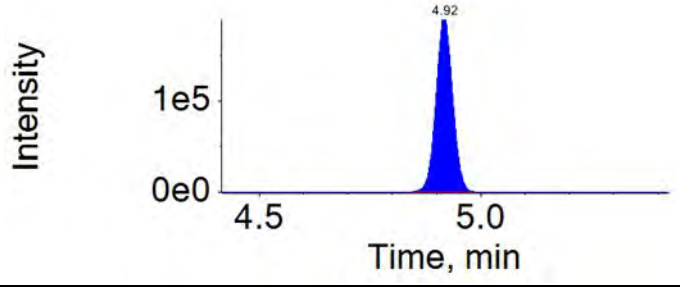
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



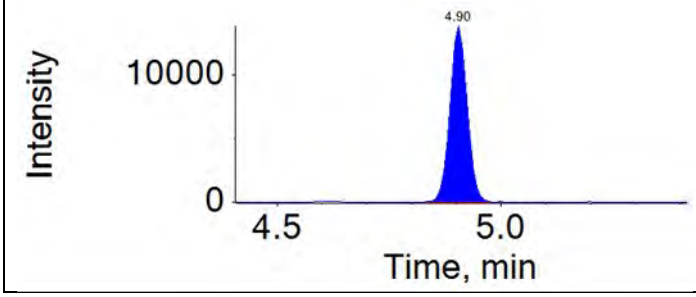


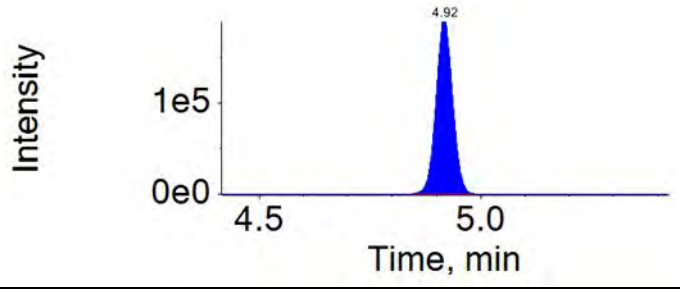
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

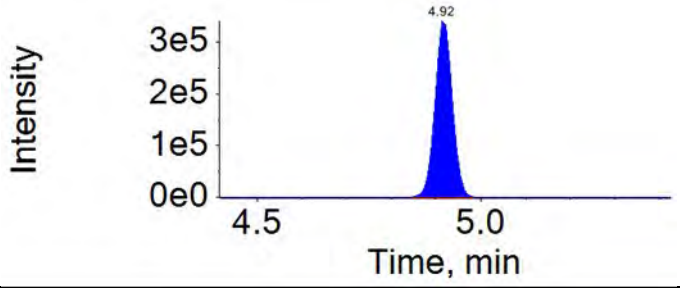
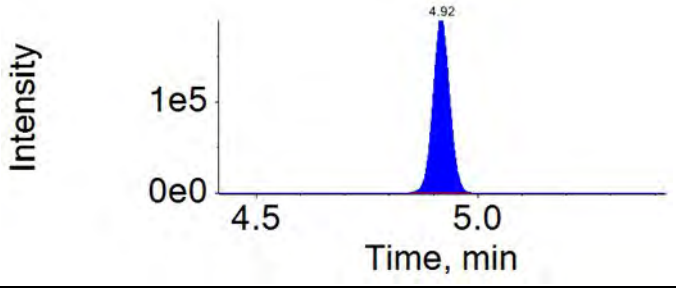


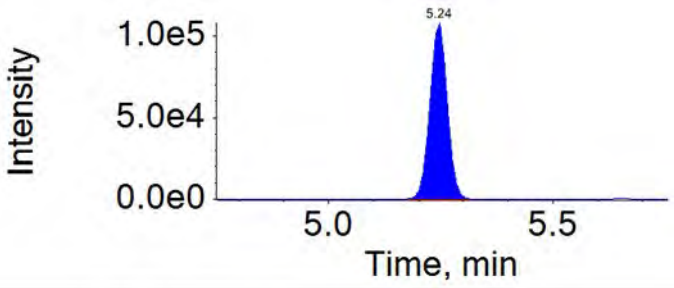
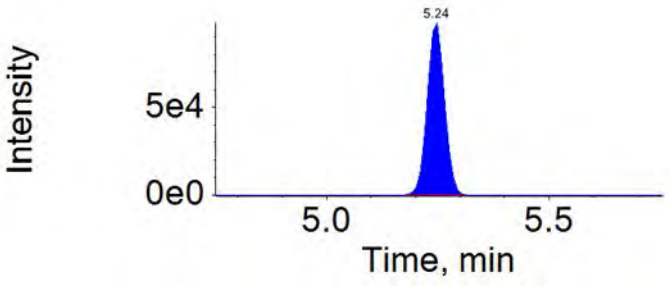


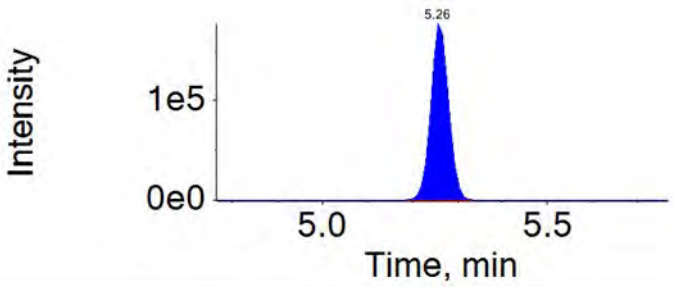
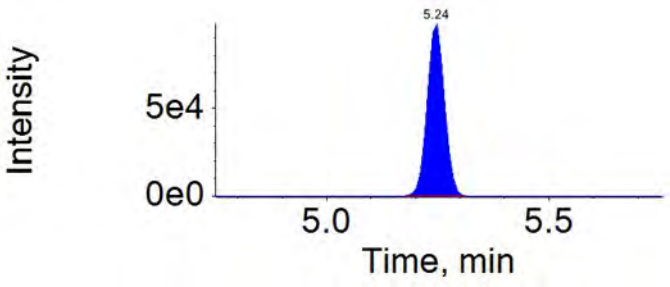
APPROVED
By MCD at 7:46 pm, 11/12/18

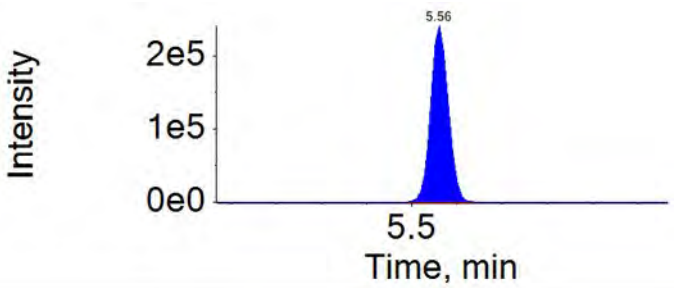
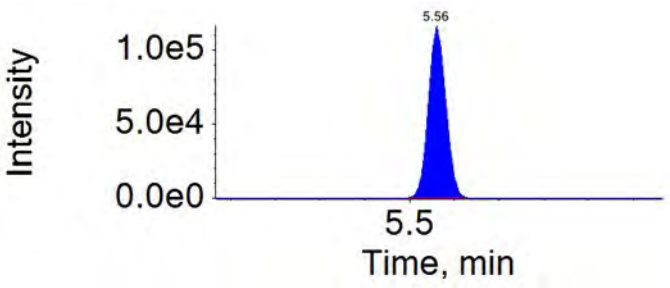
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

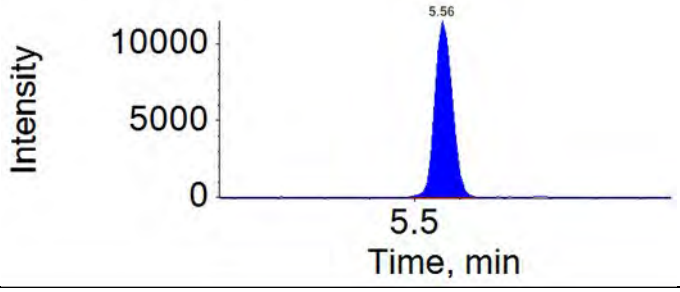
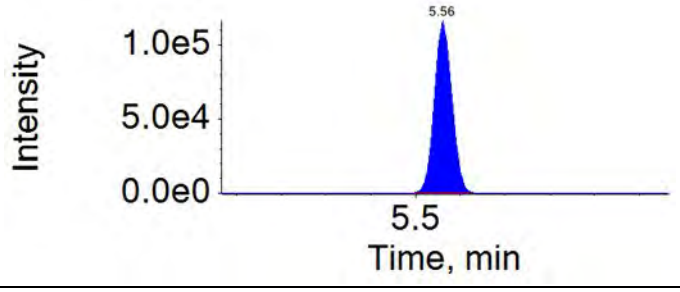
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

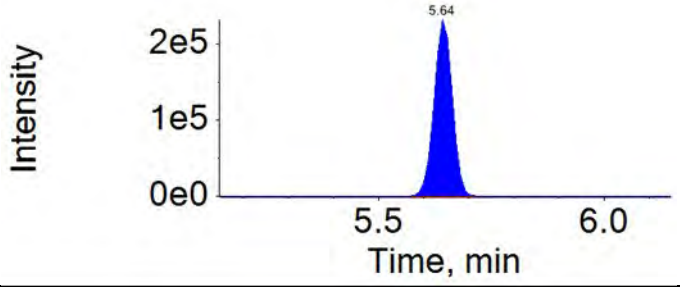
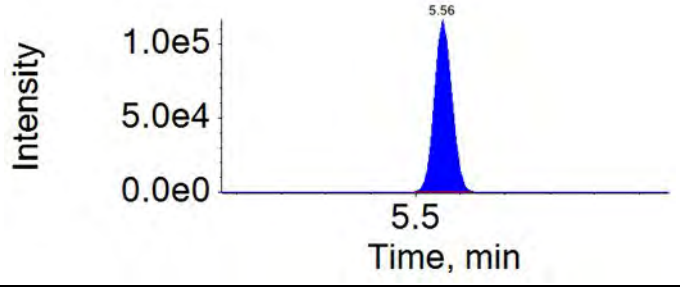
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

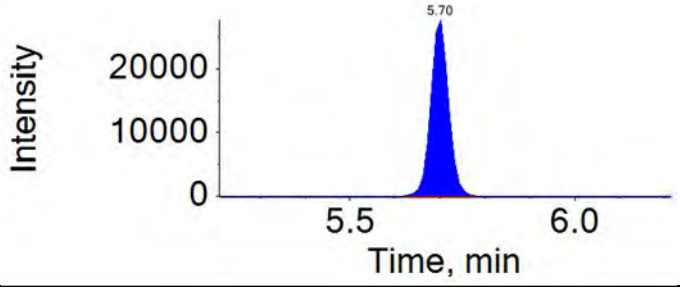
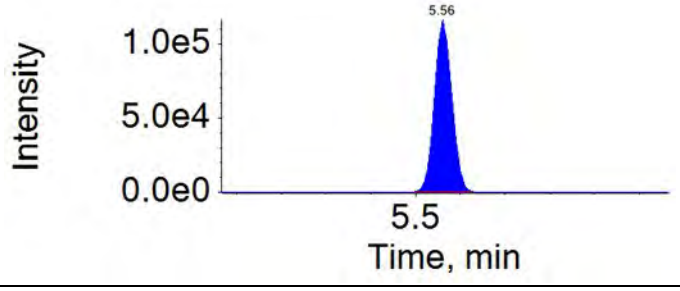
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

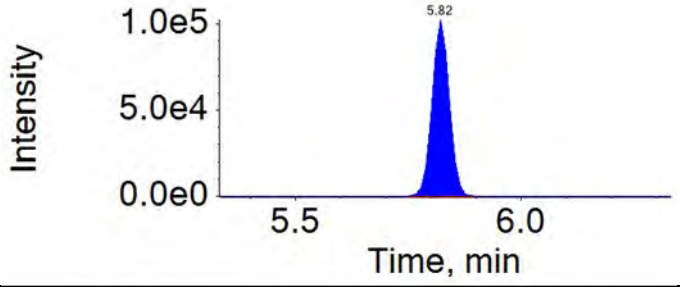
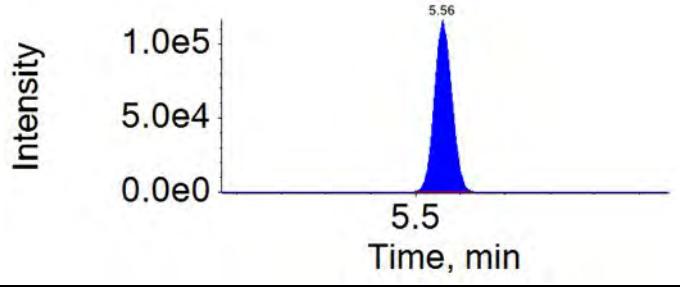
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

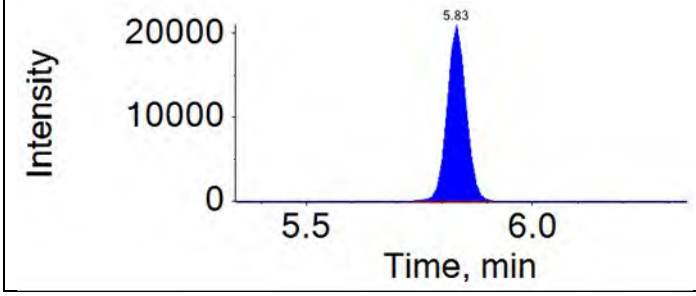
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

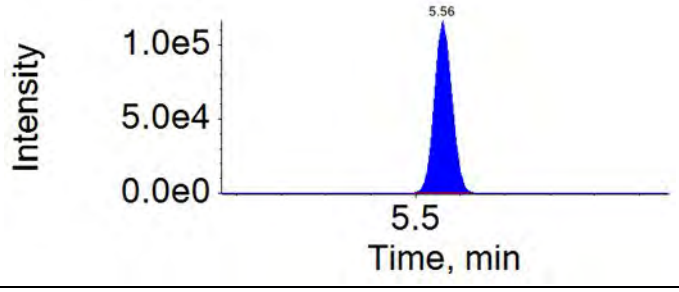
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

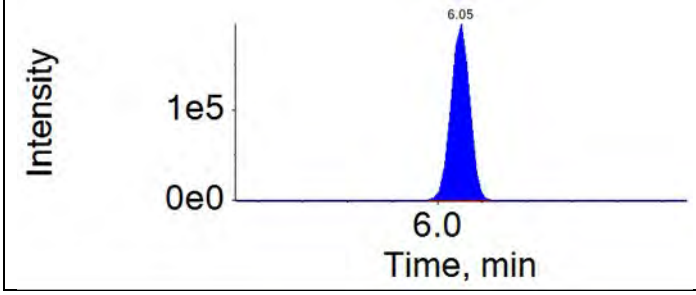
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

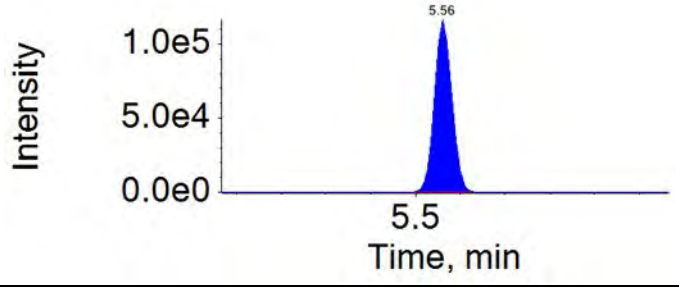
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



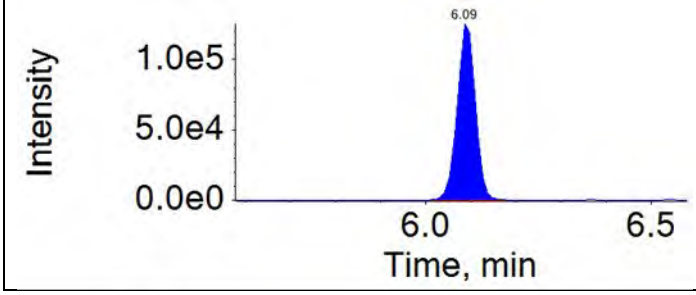


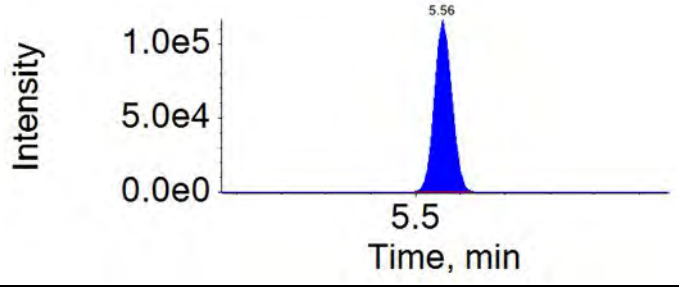
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



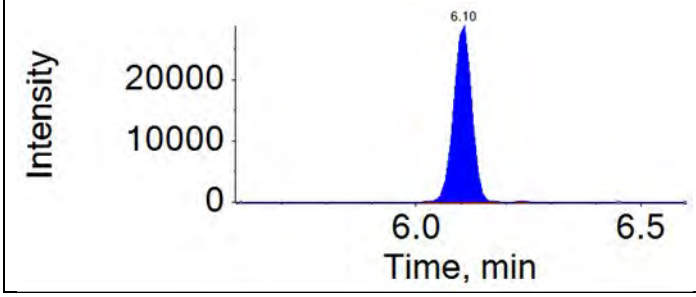


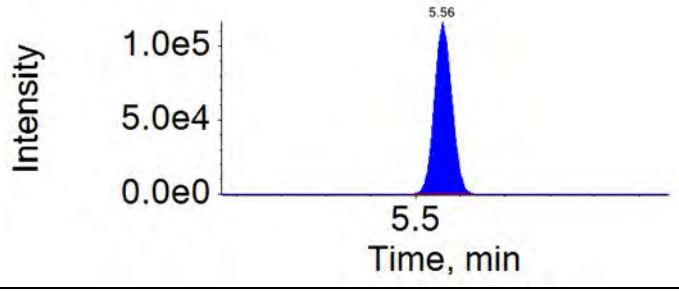
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



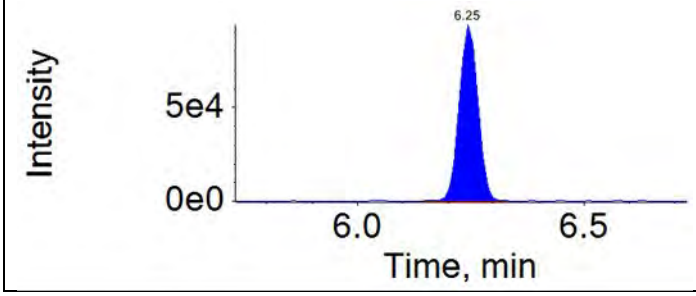


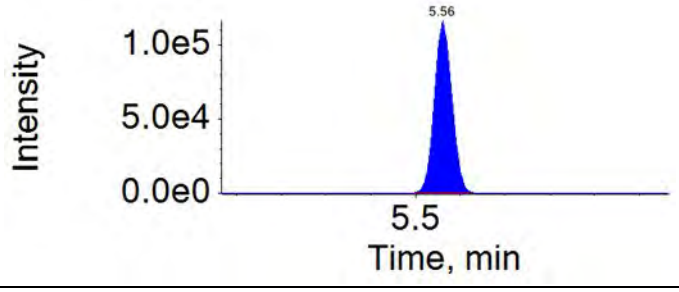
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

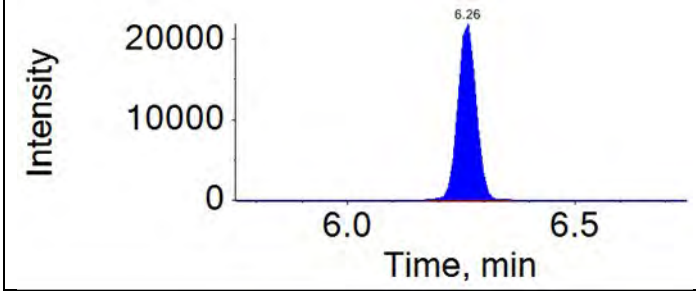
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

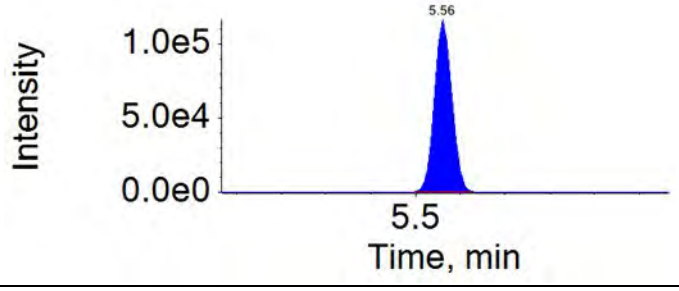
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



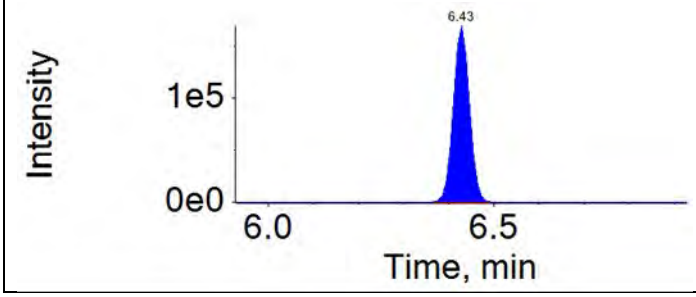


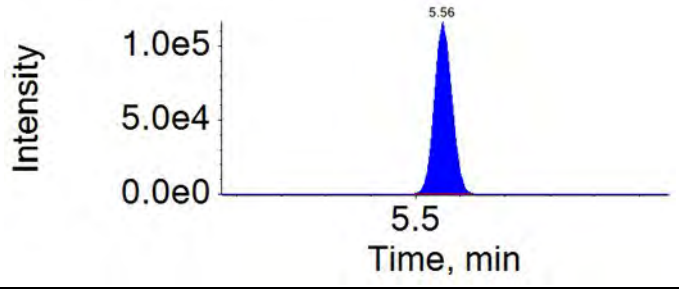
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



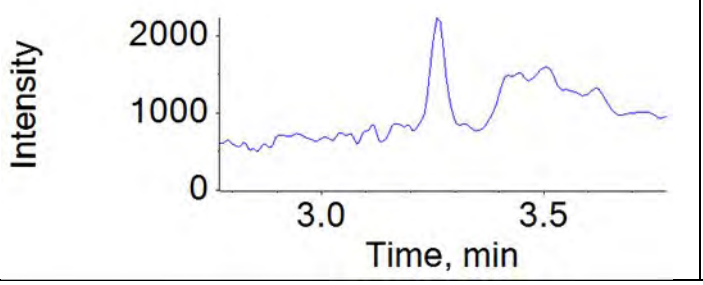


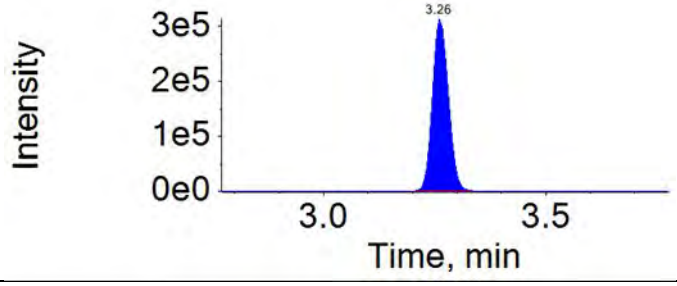
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

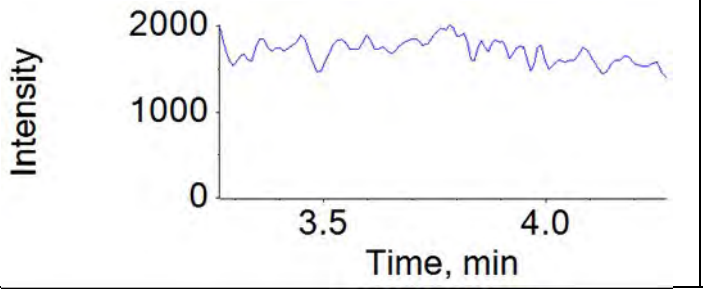
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

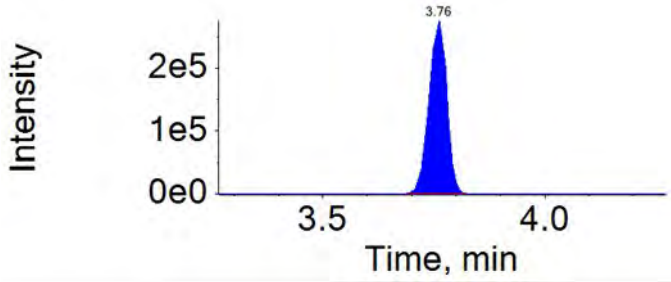
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



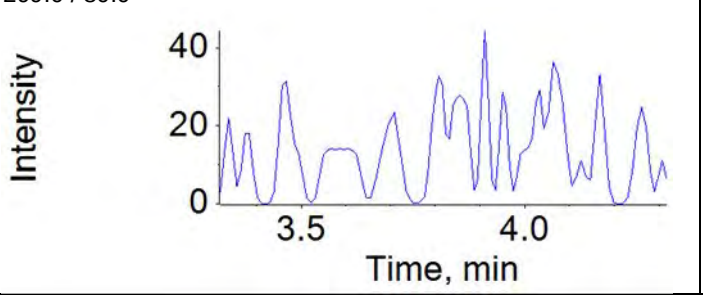


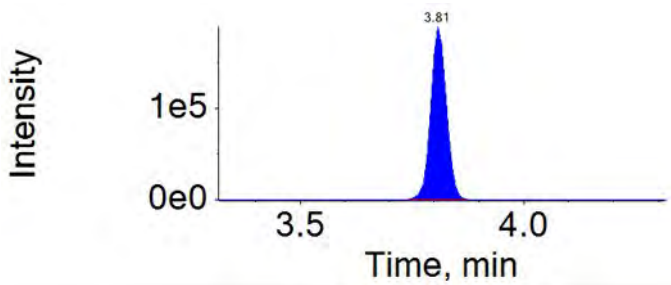
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



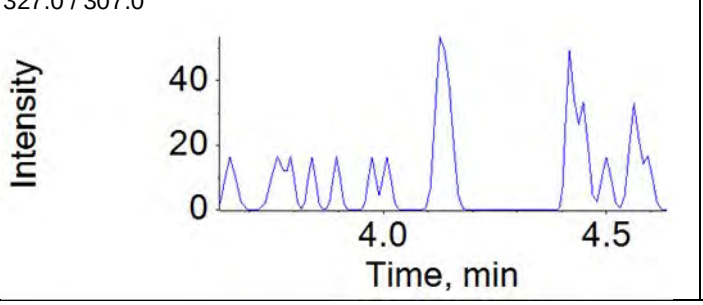


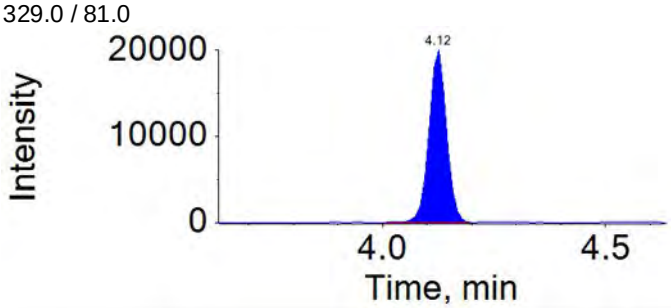
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



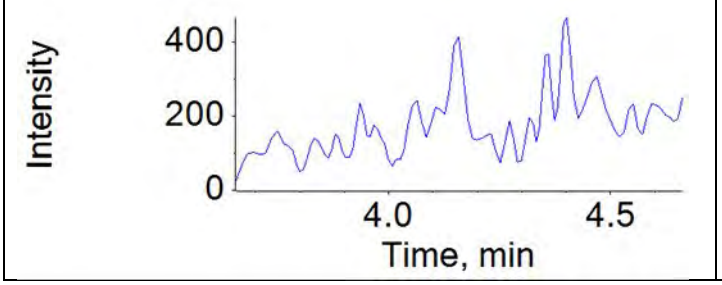


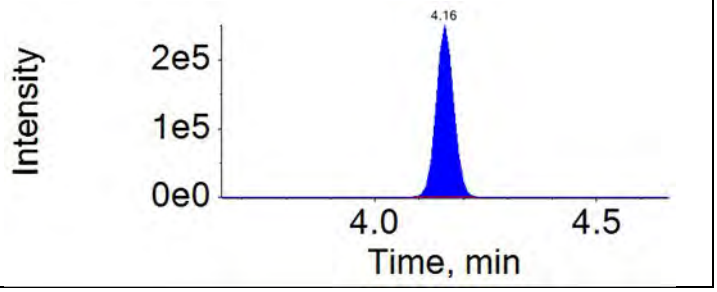
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

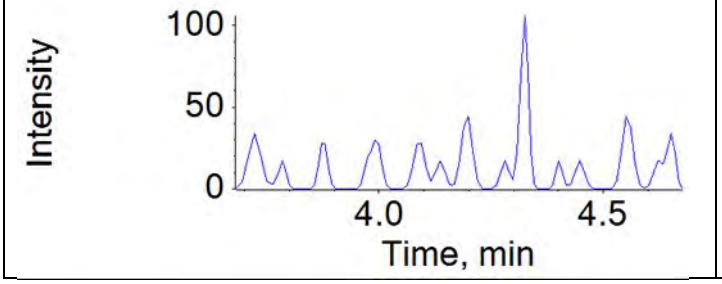
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

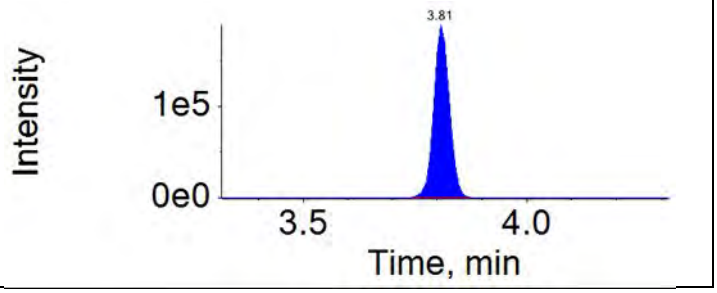
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



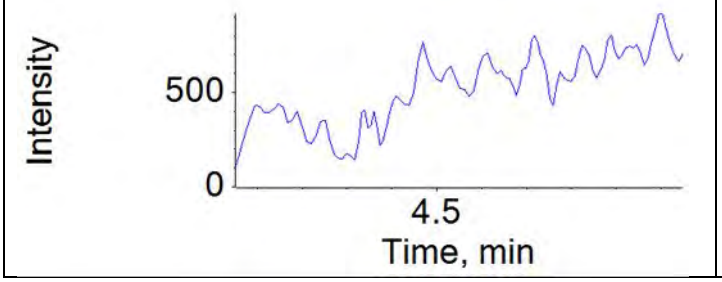


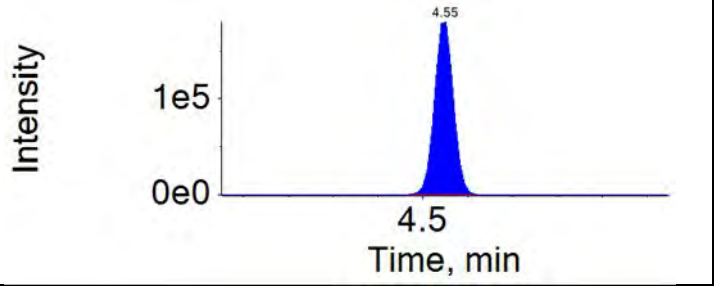
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



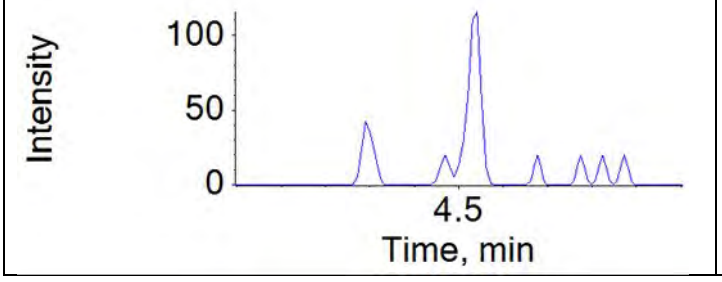


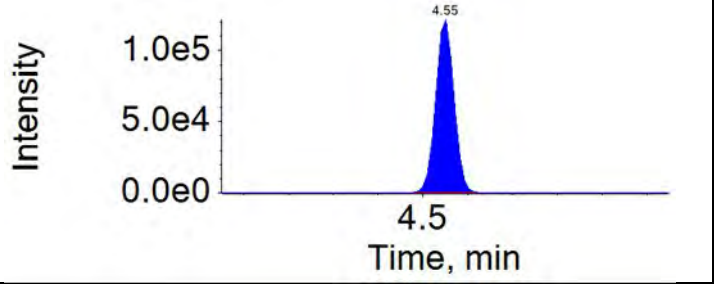
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

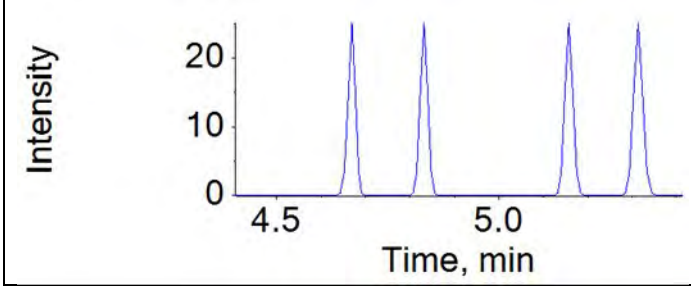
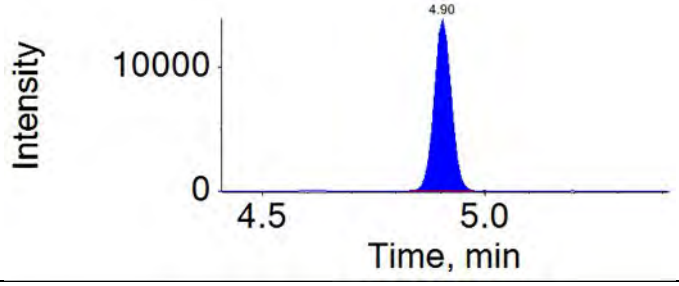


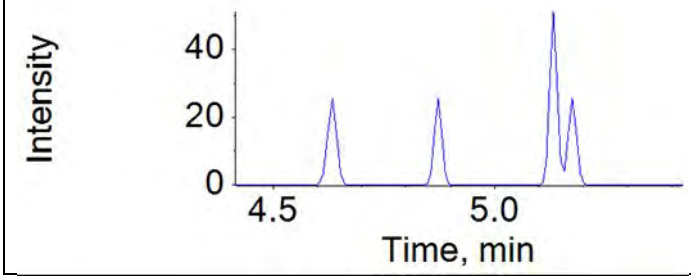
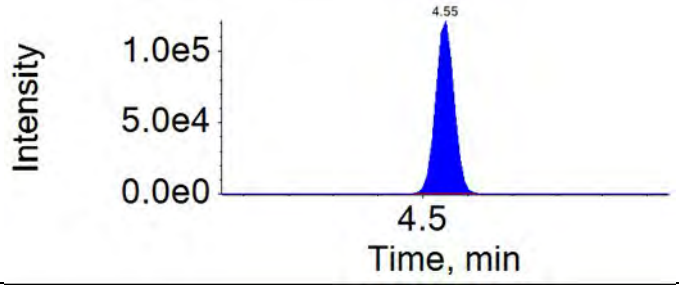


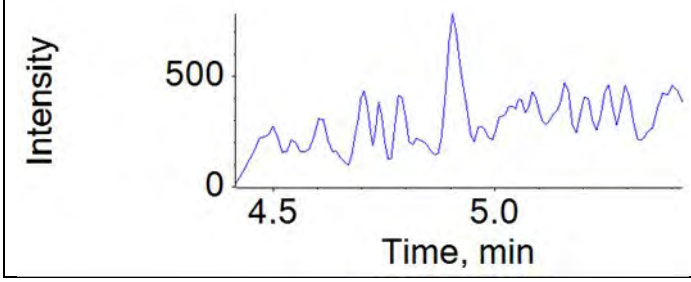
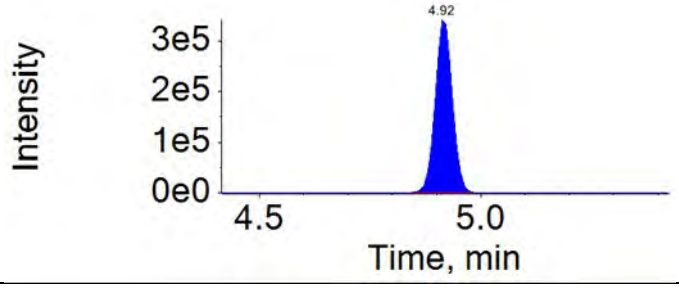
APPROVED
By MCD at 7:46 pm, 11/12/18

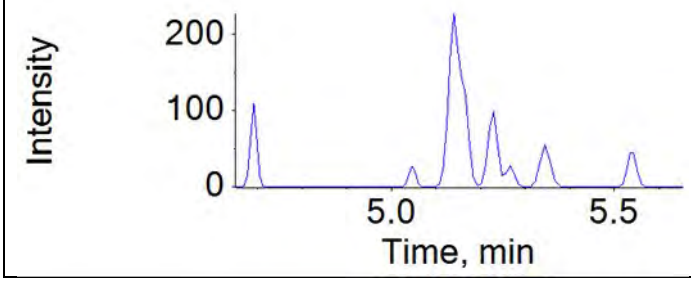
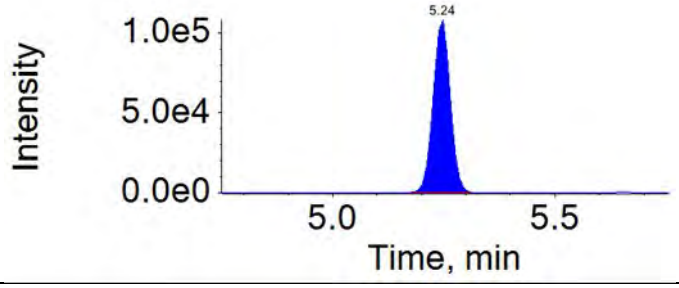
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

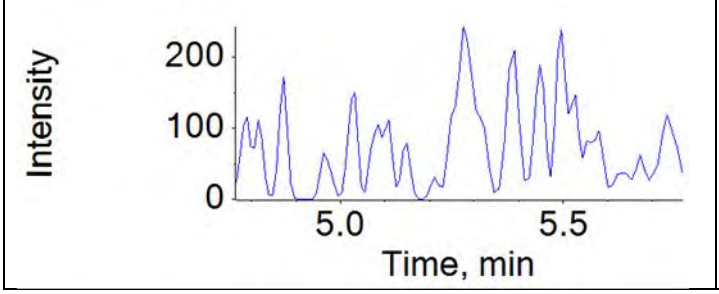
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

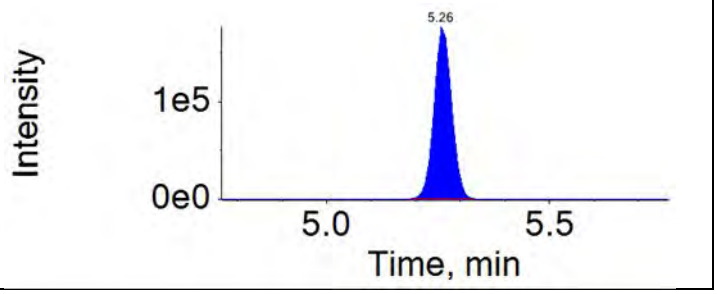
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

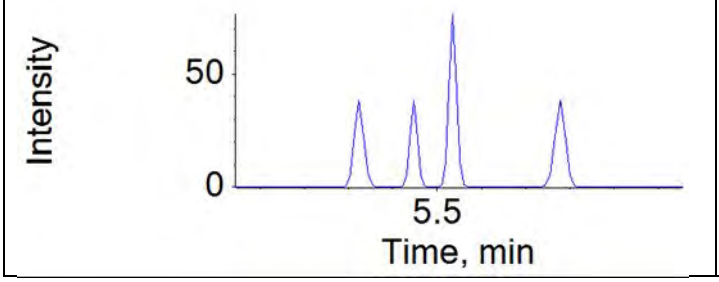
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

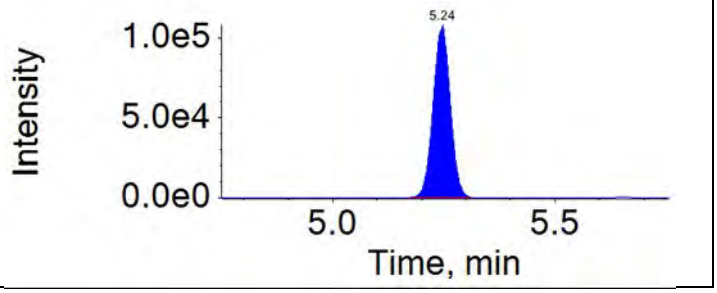
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



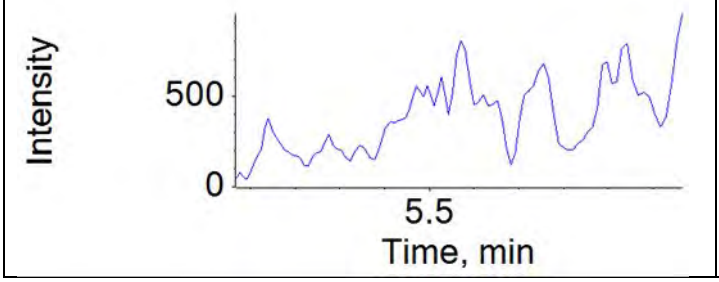


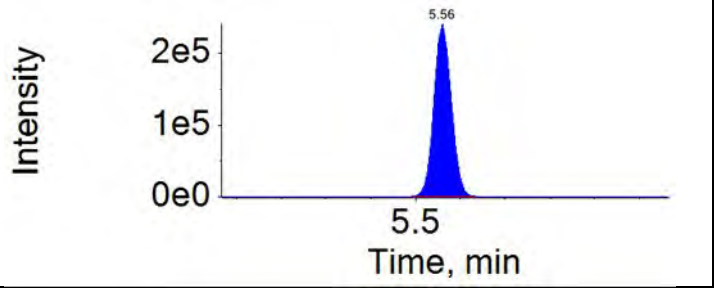
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



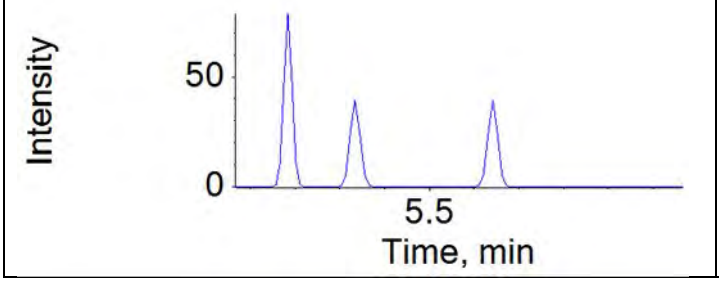


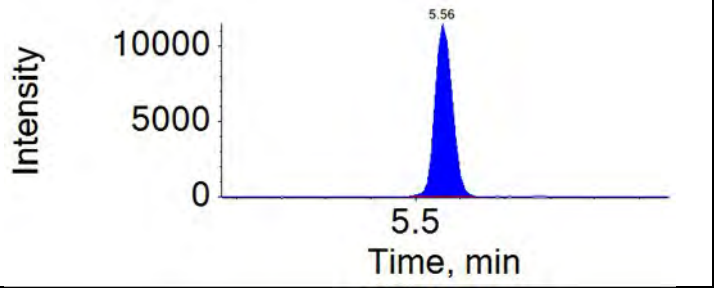
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





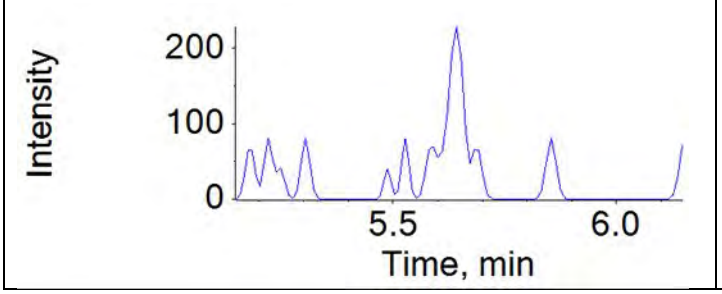
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

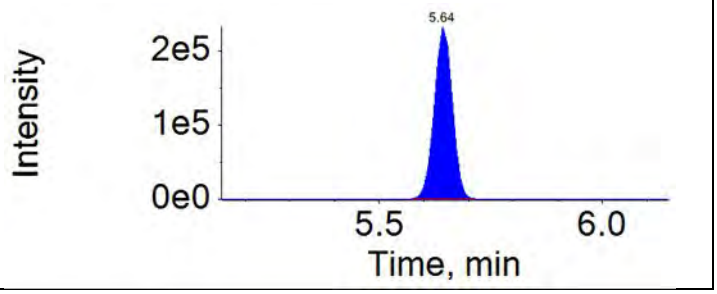




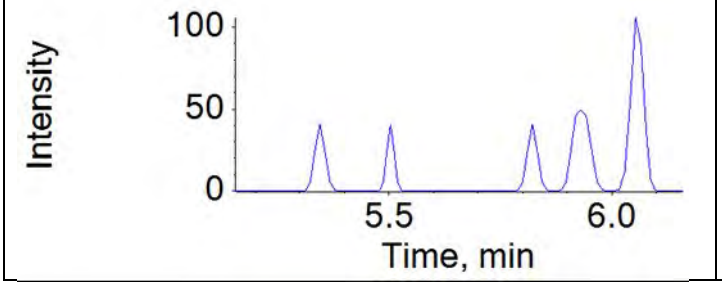
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

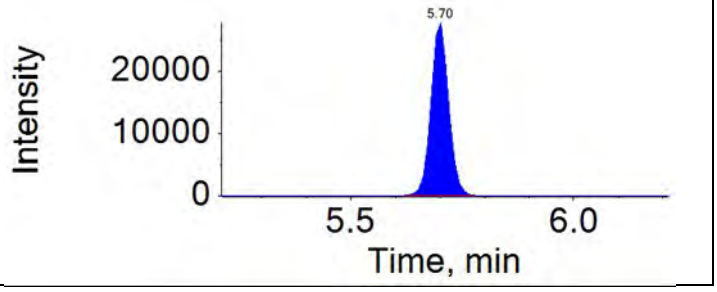
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



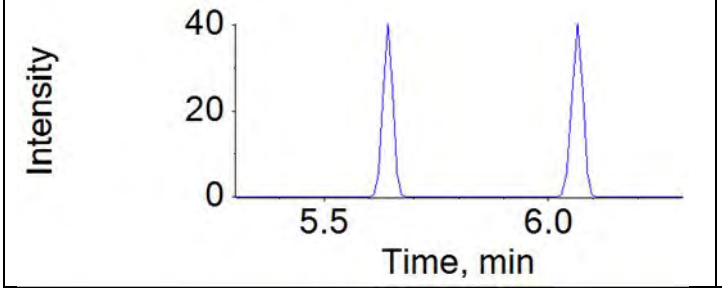


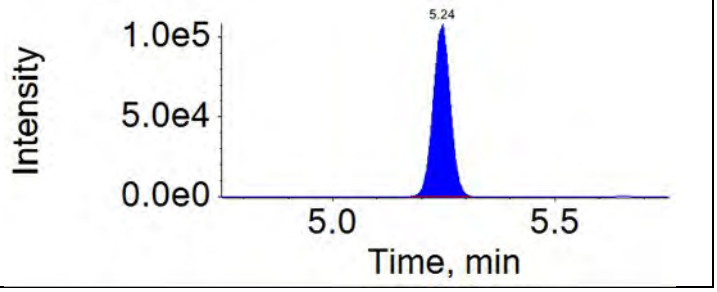
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



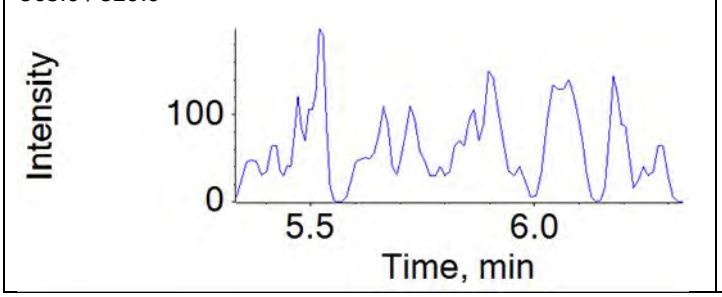


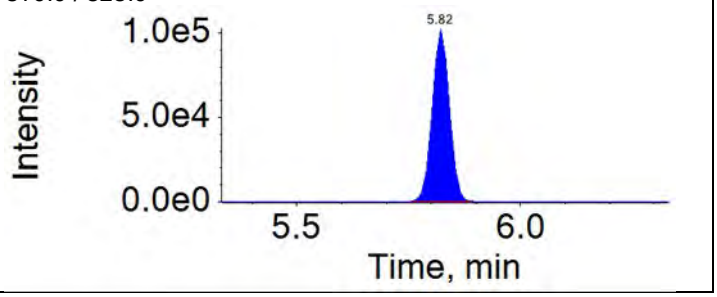
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



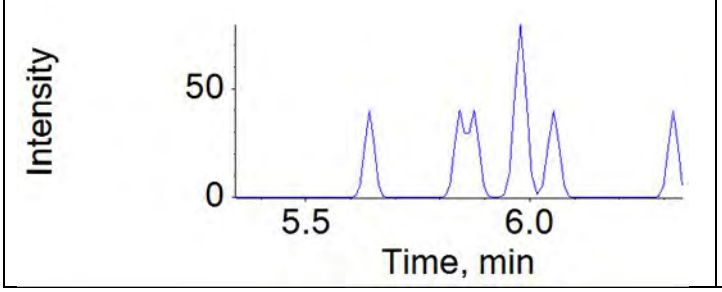


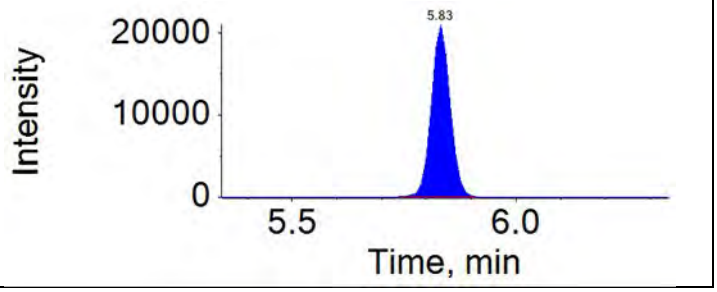
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

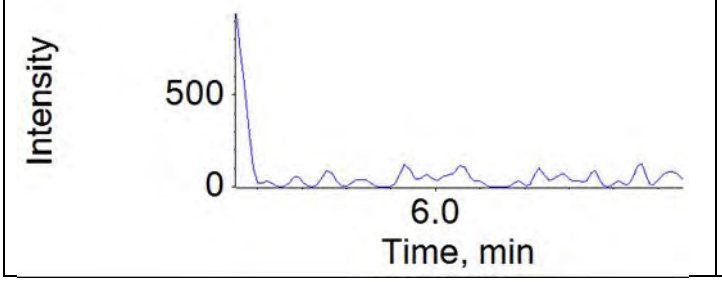
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

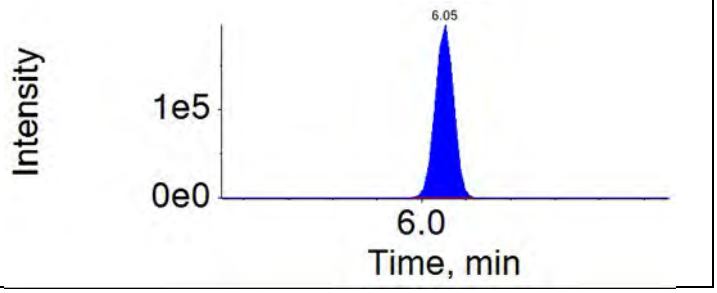
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



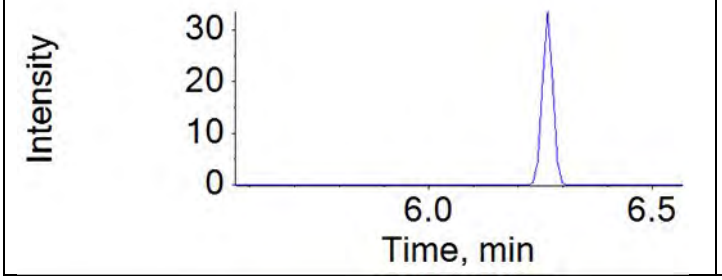


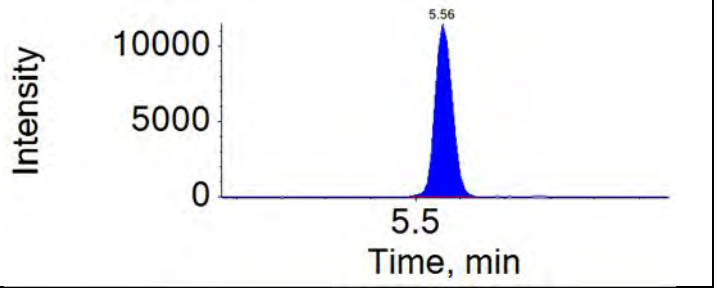
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



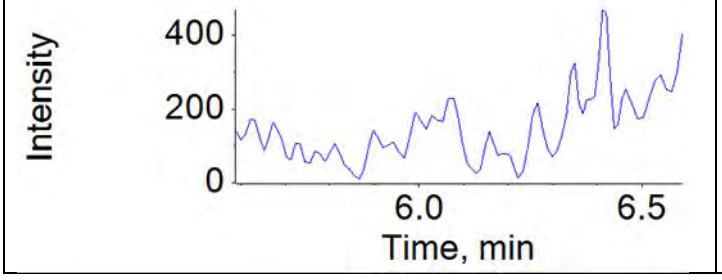


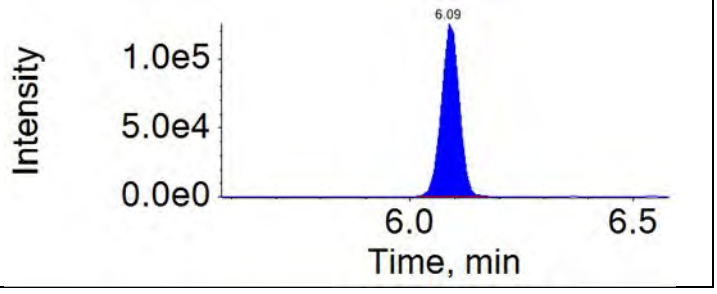
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



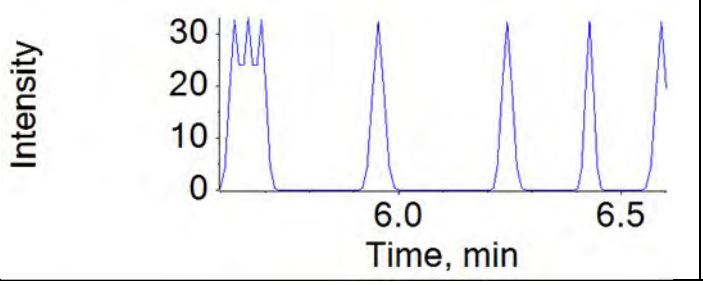


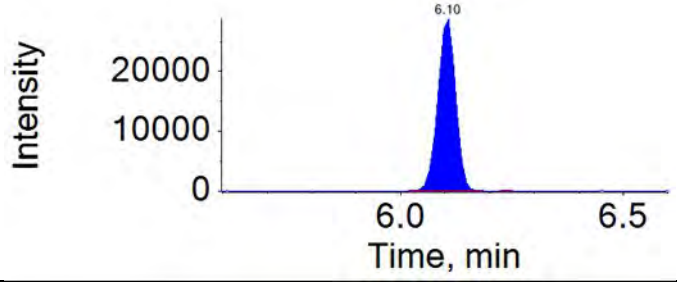
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

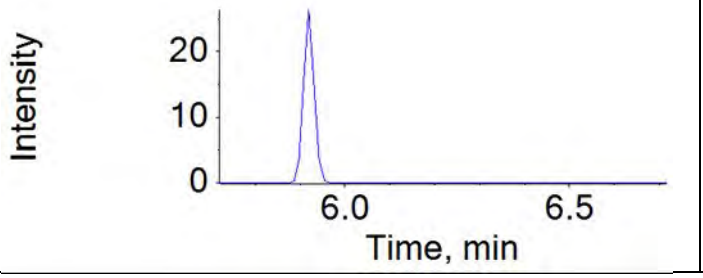
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

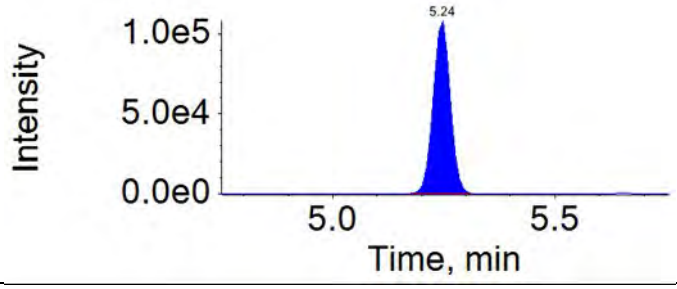
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



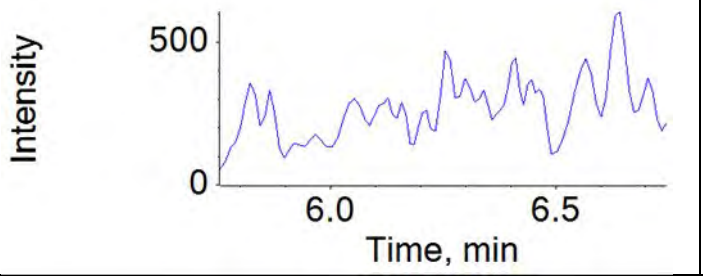


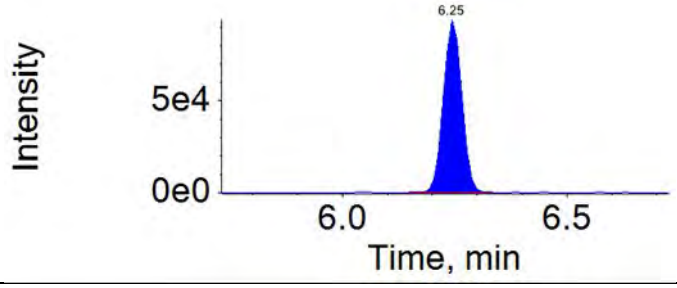
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



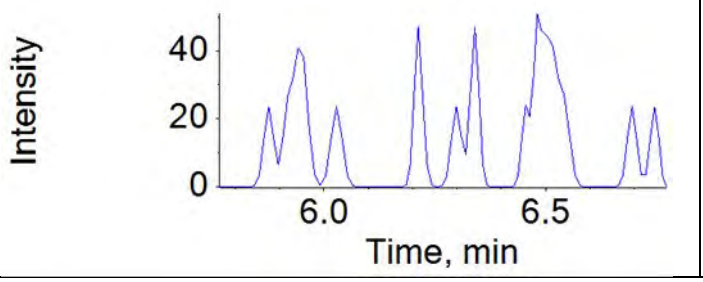


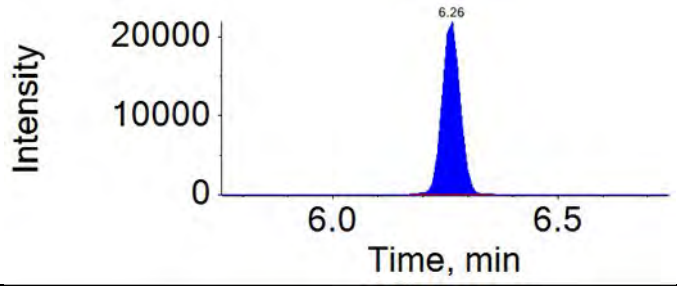
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



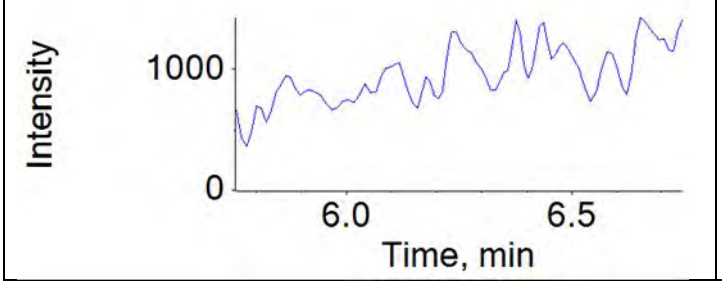


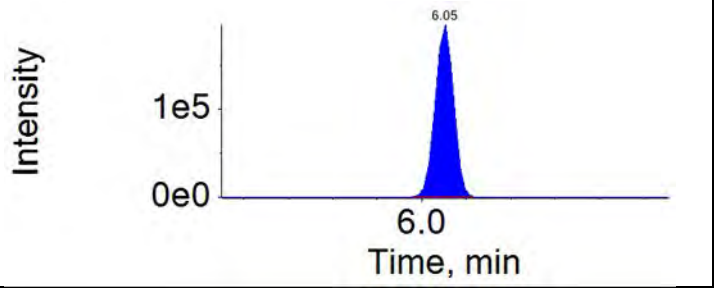
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

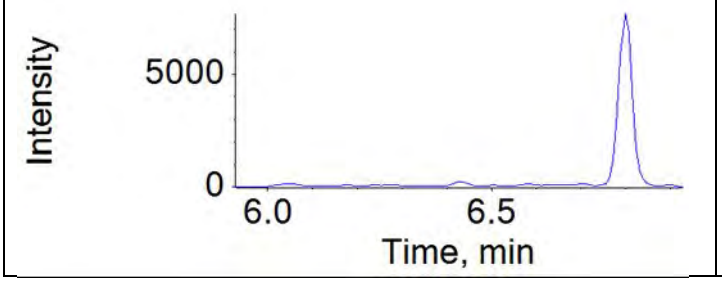
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

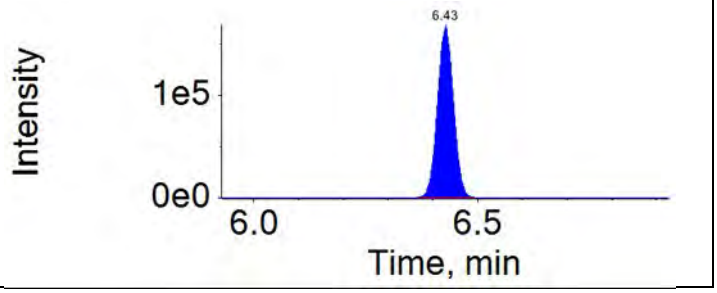
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



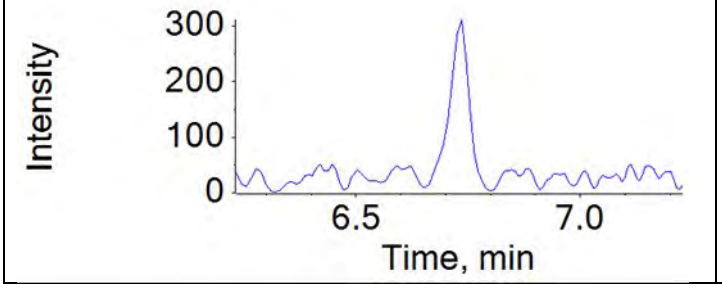


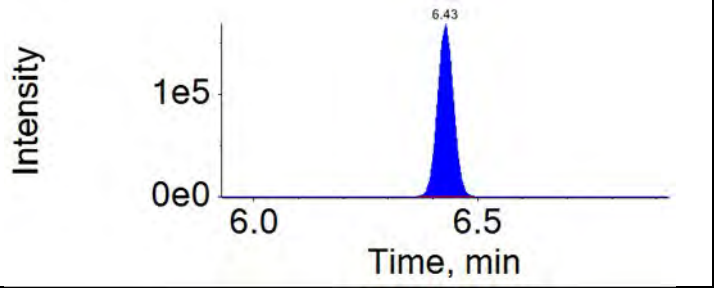
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



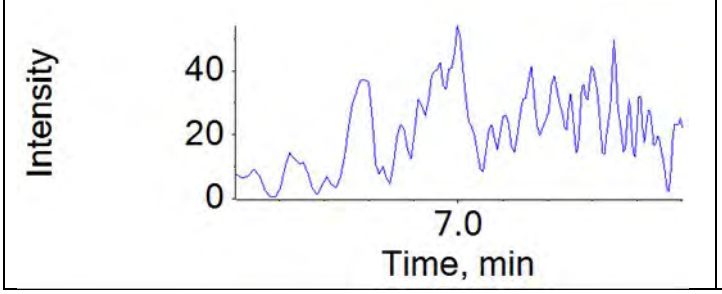


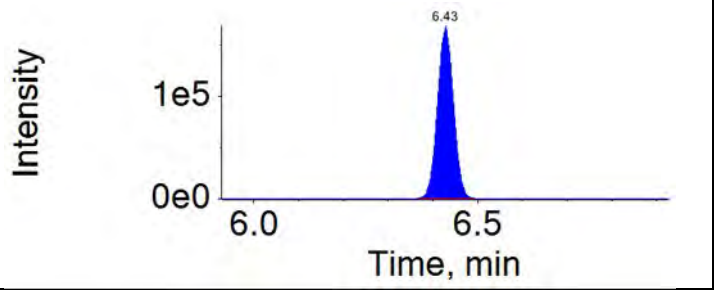
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Ion Ratio Report

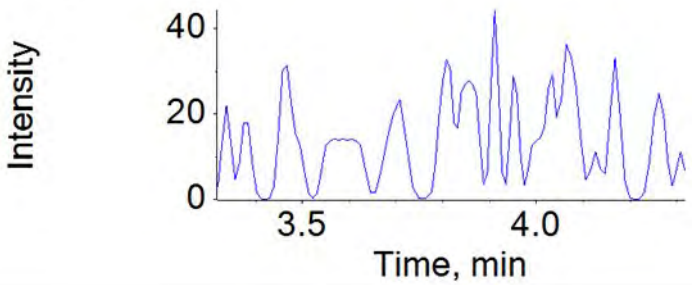
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

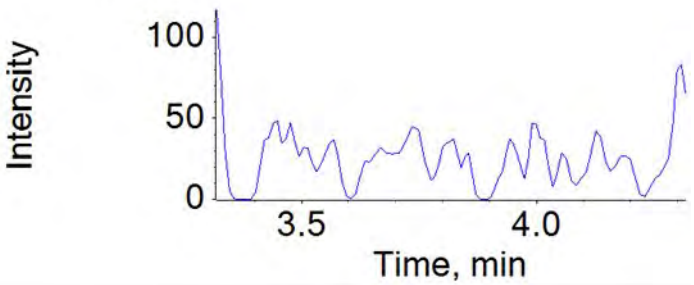
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

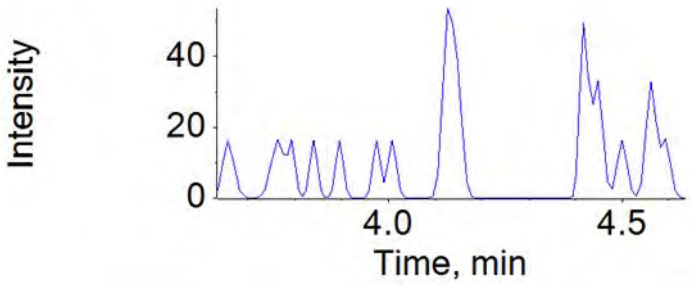
Component: PFBS
Primary Mass: 299.0 / 80.0



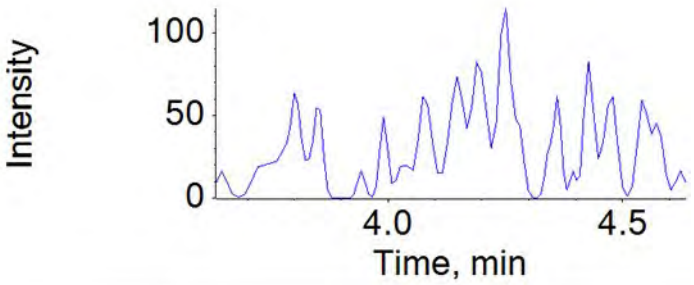
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



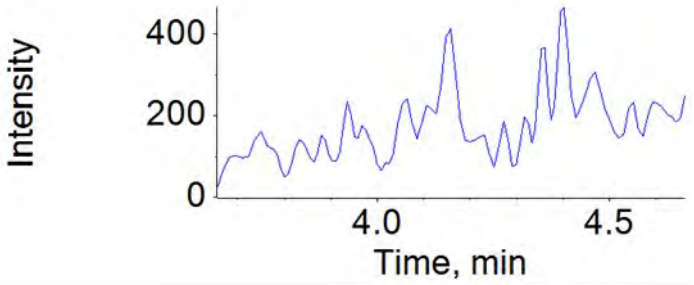
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



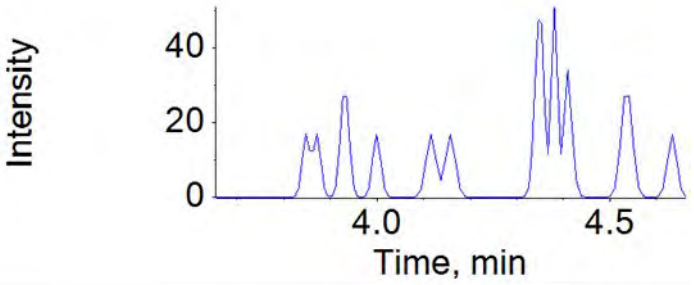
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



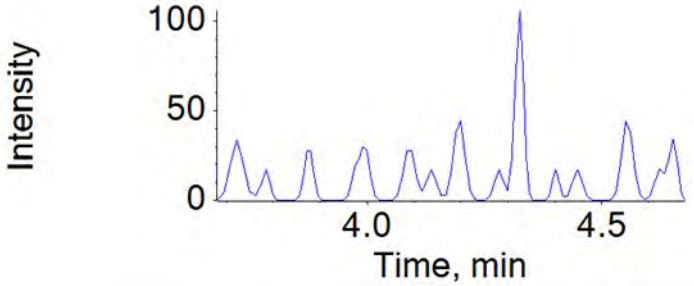
Component: PFHxA
Primary Mass: 313.0 / 269.0



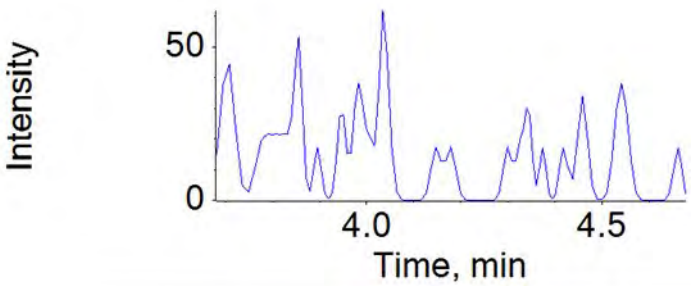
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



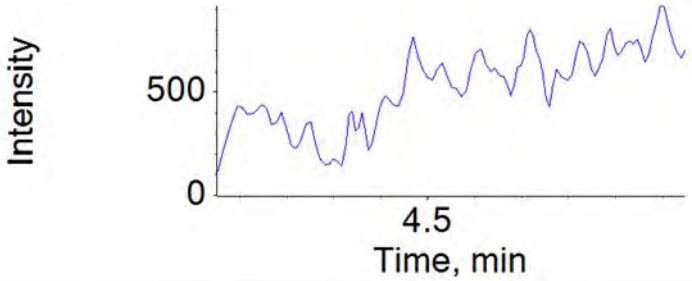
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



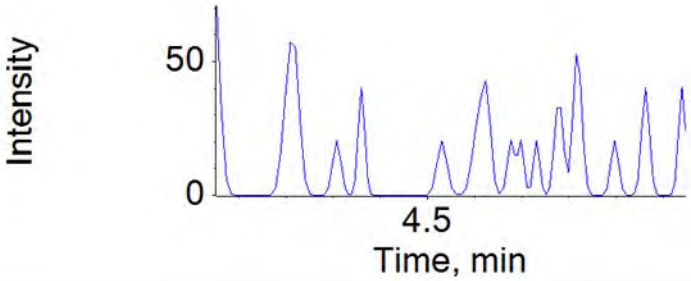
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

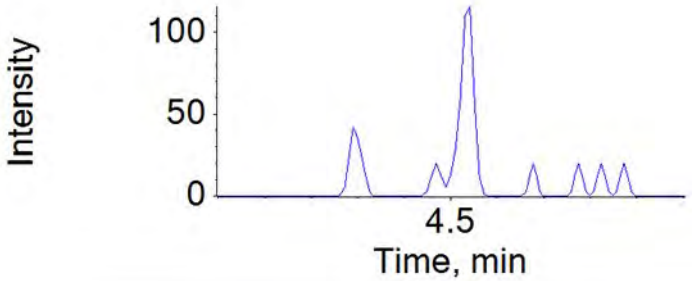
Component: PFHpA
Primary Mass: 363.0 / 319.0



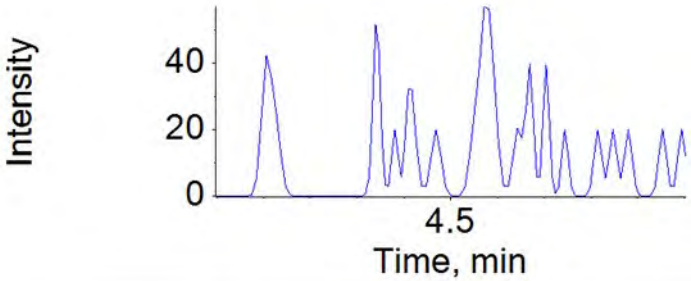
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



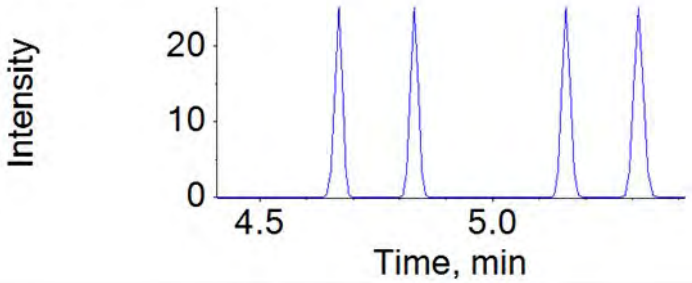
Component: PFHxS
Primary Mass: 399.0 / 80.0



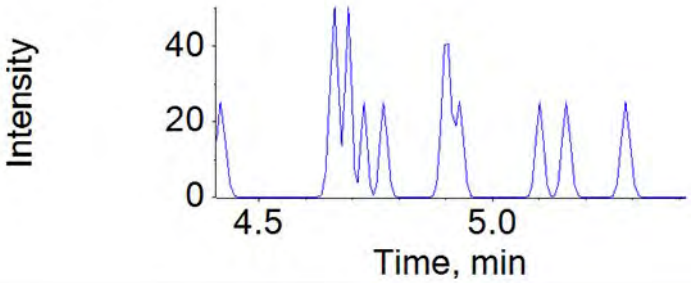
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



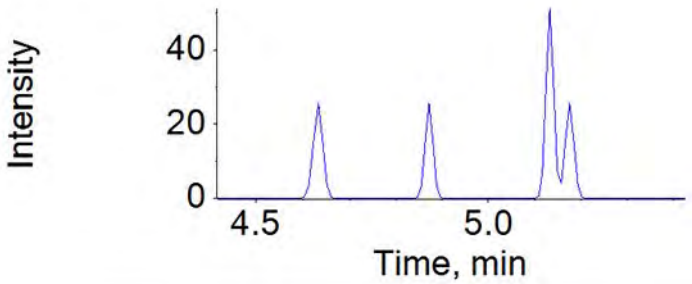
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



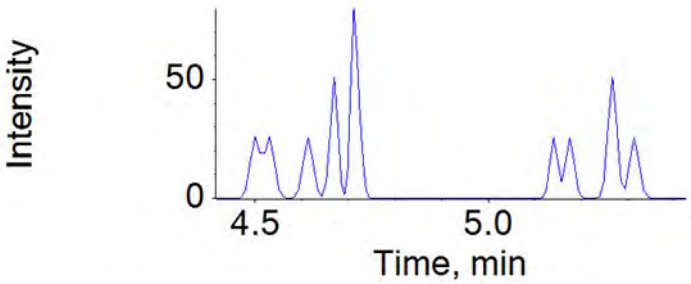
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



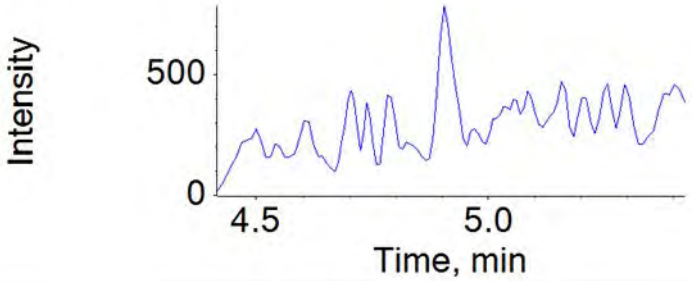
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



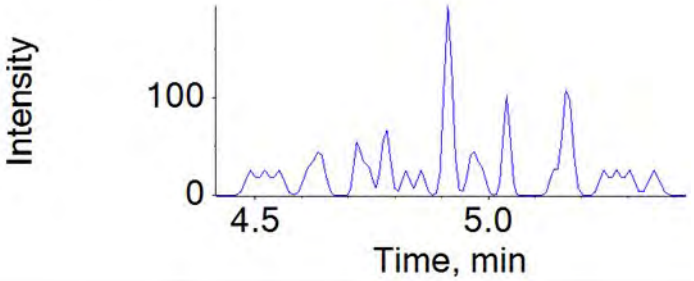
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

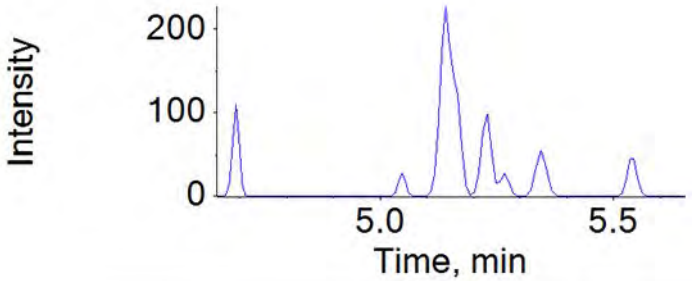
Component: PFOA
Primary Mass: 413.0 / 369.0



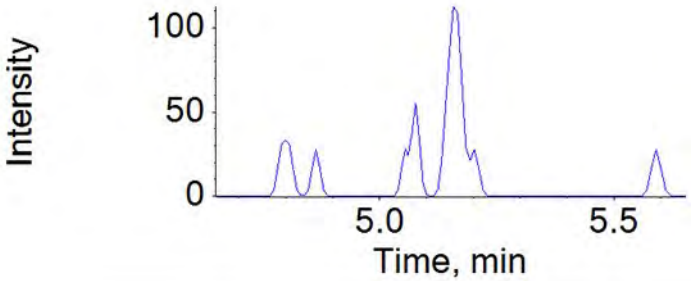
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



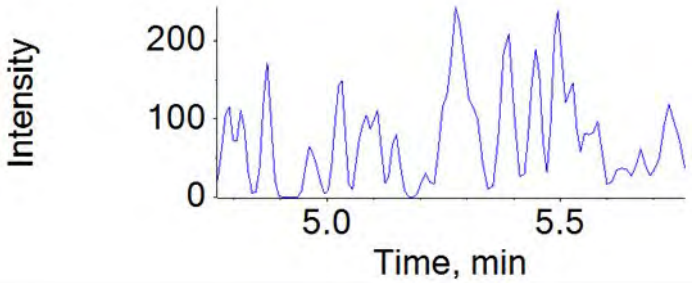
Component: PFOS
Primary Mass: 499.0 / 80.0



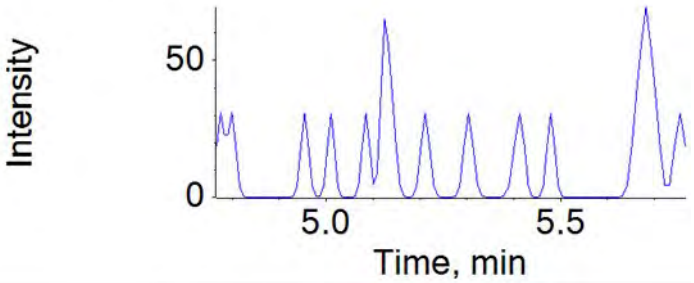
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



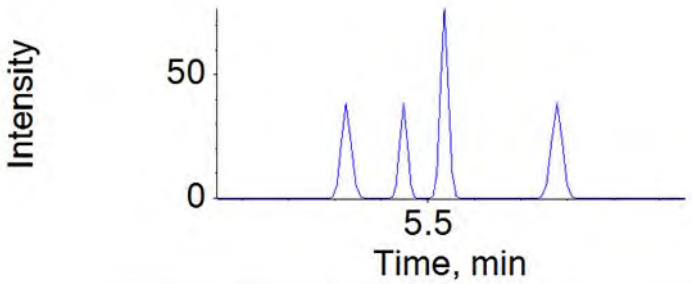
Component: PFNA
Primary Mass: 463.0 / 419.0



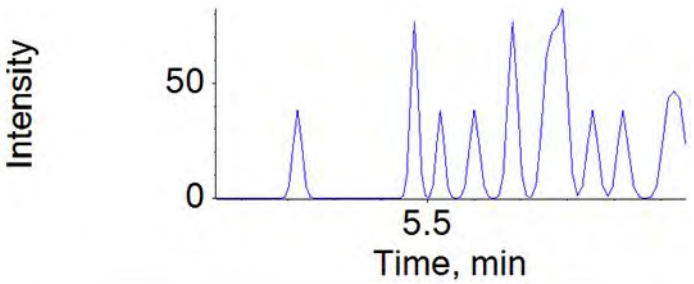
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



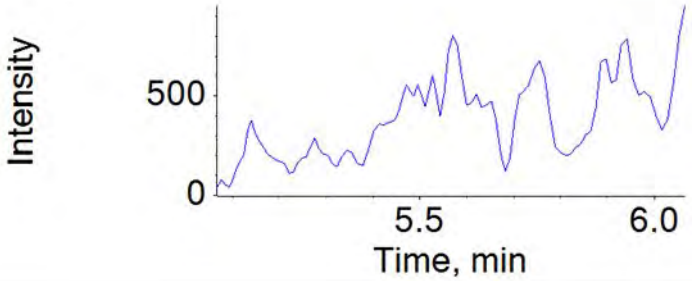
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



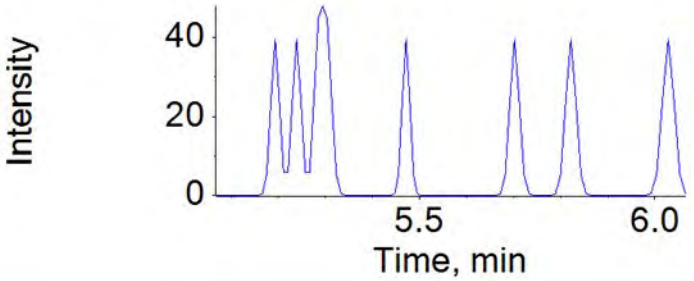
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

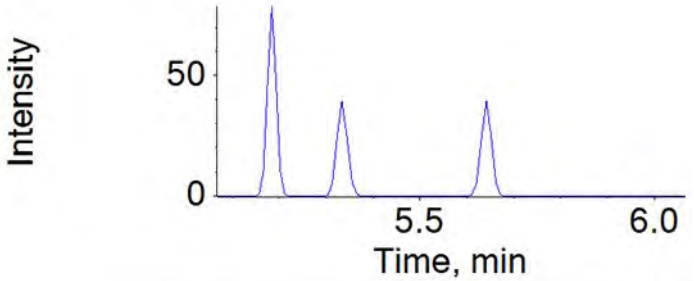
Component: PFDA
Primary Mass: 513.0 / 469.0



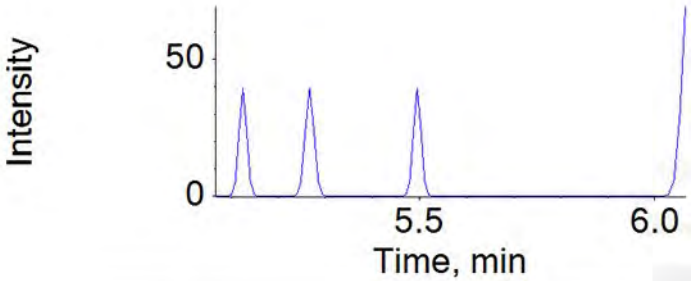
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



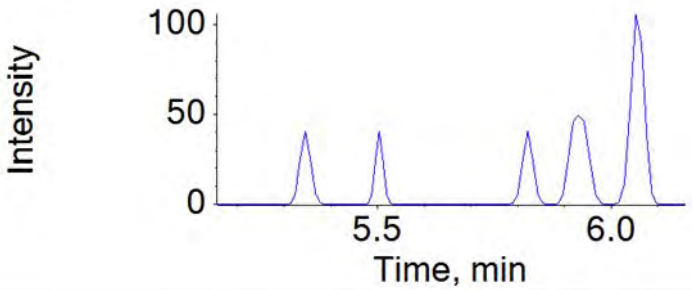
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



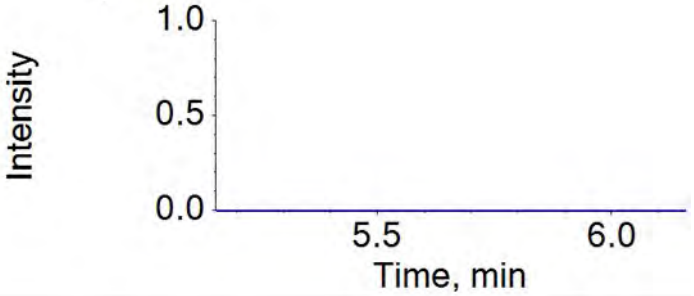
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



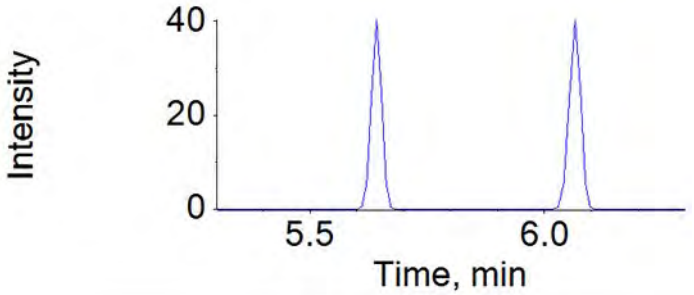
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



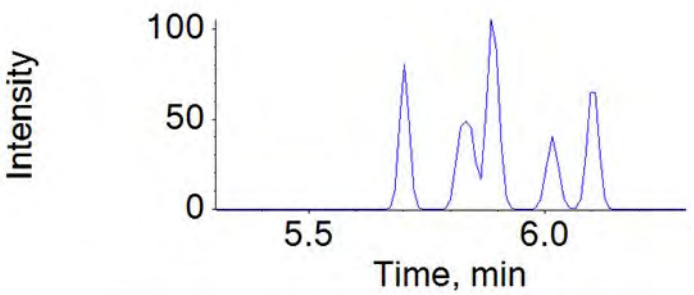
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



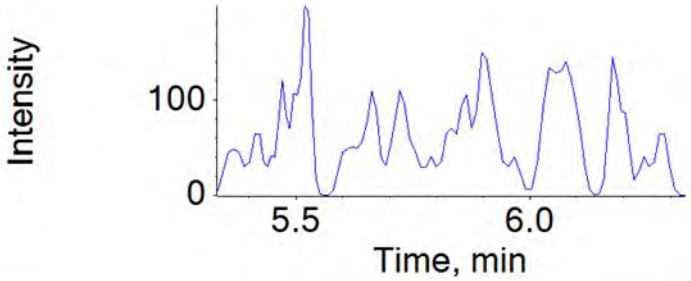
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



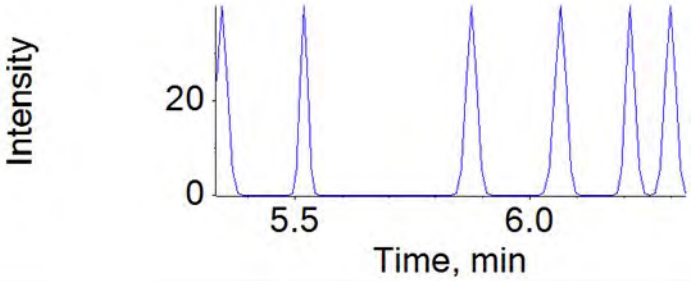
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

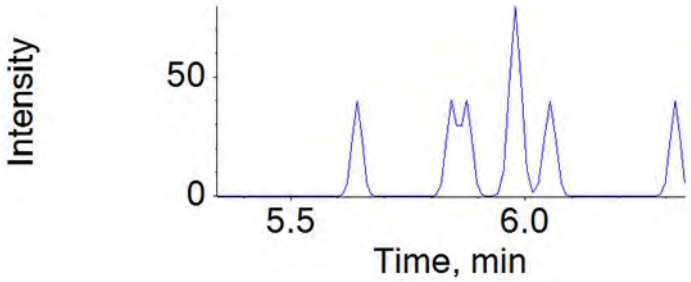
Component: PFUnDA
Primary Mass: 563.0 / 519.0



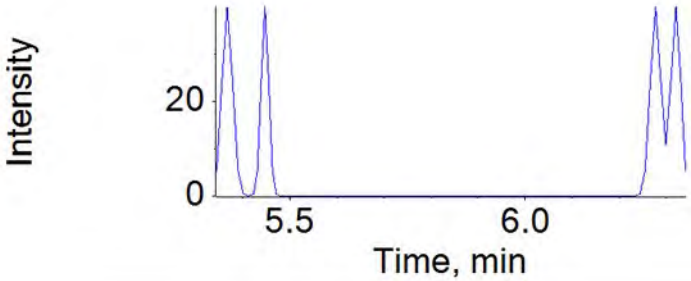
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



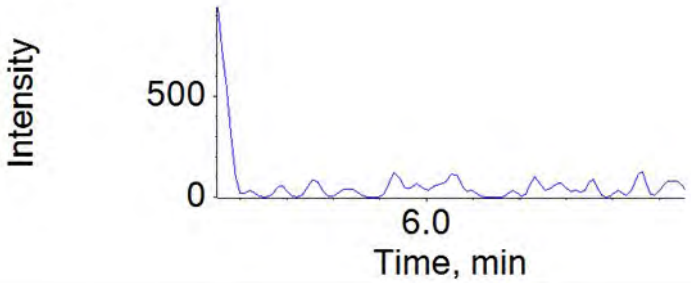
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



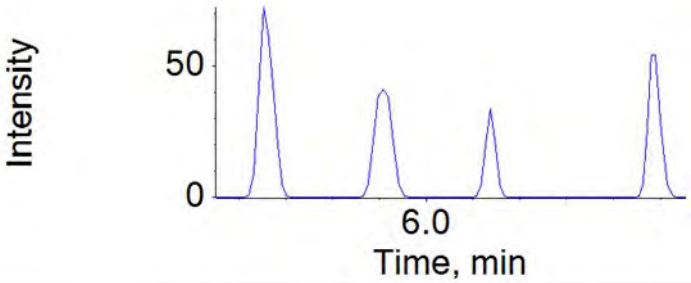
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



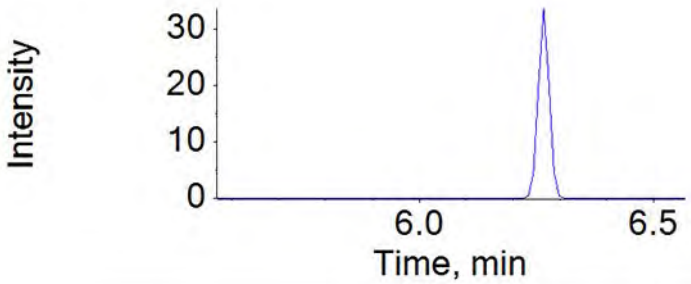
Component: PFDoDA
Primary Mass: 613.0 / 569.0



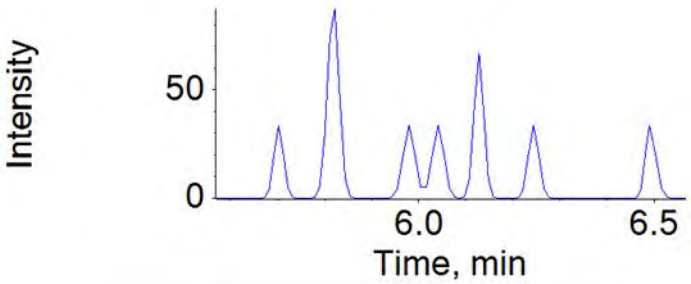
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



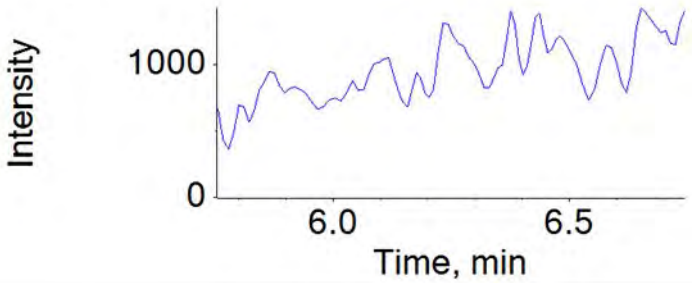
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



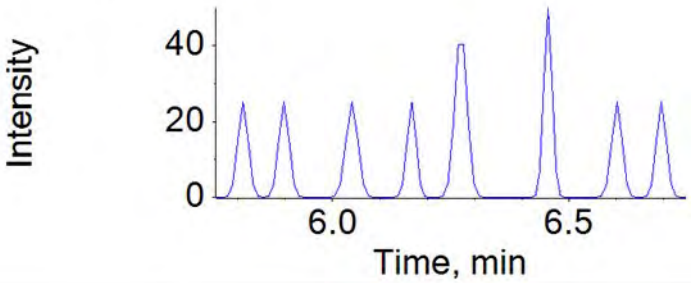
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

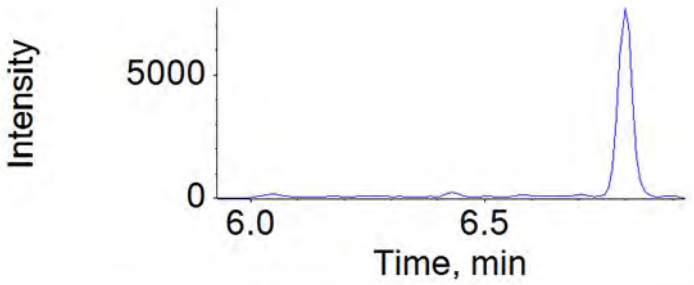
Component: PFTrDA
Primary Mass: 663.0 / 619.0



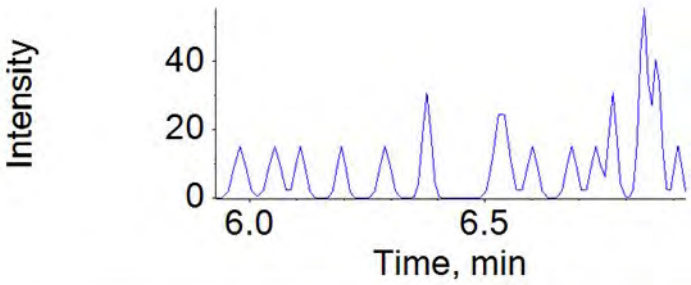
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



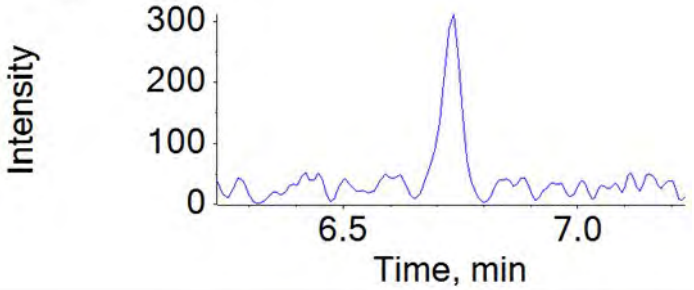
Component: PFTeDA
Primary Mass: 713.0 / 669.0



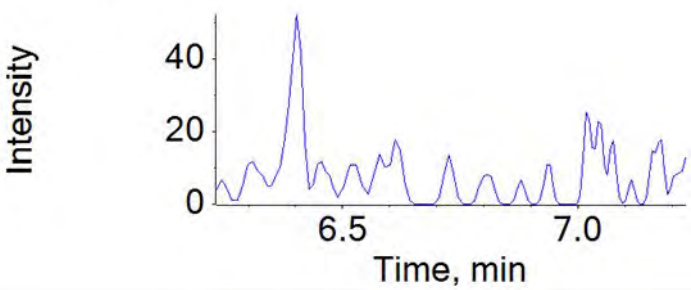
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



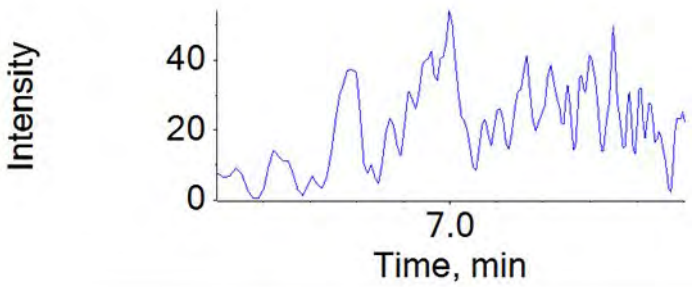
Component: PFHxDA
Primary Mass: 813.0 / 769.0



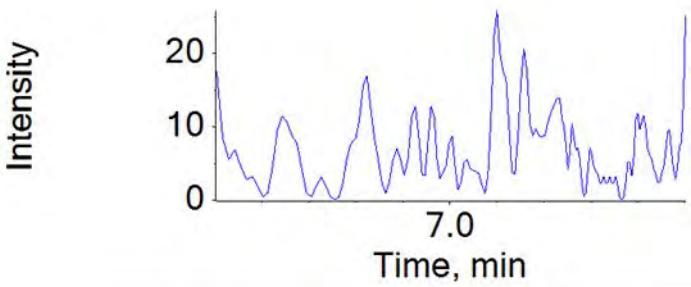
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



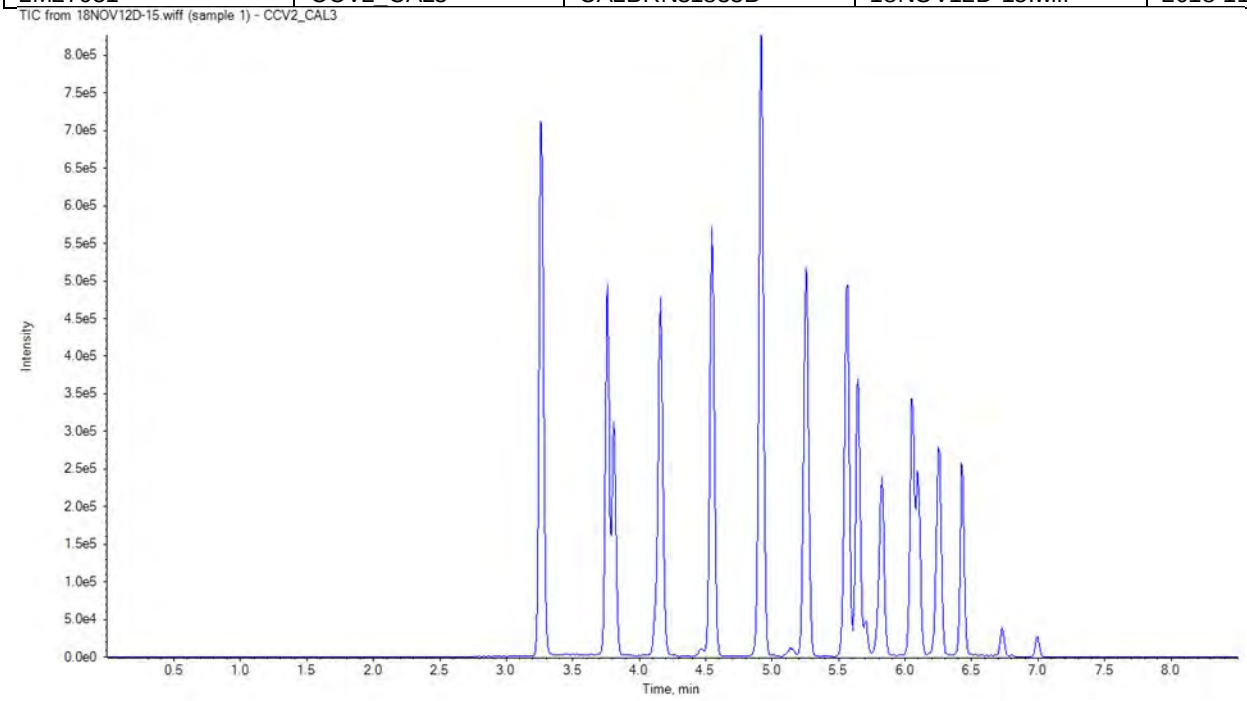
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV12D-15.wiff	2018-11-12T18:51:51



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	660664.4	659926.2	0	50	
13C2-PFOA	5.0	440157.1	450219.7	-2	50	
13C4-PFOS	4.8	239627.0	249205.8	-4	50	
13C2-PFDA	5.0	276533.4	278743.9	-1	50	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV12D-15.wiff	2018-11-12T18:51:51

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	294834.2	10	13C4-PFBA	731274.3	5.0	0.403	3.26	1.000	2.000	2.234	12	30	
PFPeA	297477.3	11	13C5-PFPeA	715666.1	5.0	0.416	3.76	1.000	2.000	2.406	20	30	
PFBS	170982.7	10	13C3-PFBS	416114.2	4.7	0.411	3.81	1.000	1.770	1.955	10	30	
4:2-FTS	36941.1	11	13C2-4:2-FTS	50211.9	4.7	0.736	4.12	1.000	1.870	1.997	7	30	
PFHxA	356359.5	11	13C5-PFHxA	650477.1	5.0	0.548	4.16	1.000	2.000	2.287	14	30	
PFPeS	83244.0	11	13C3-PFBS	416114.2	4.7	0.200	4.18	1.100	1.880	1.942	3	30	
PFHpA	363666.9	11	13C4-PFHpA	511705.6	5.0	0.711	4.55	1.000	2.000	2.356	18	30	
PFHxS	121992.5	18	13C3-PFHxS	306884.7	4.7	0.398	4.55	1.000	1.820	1.927	6	30	
6:2-FTS	28781.9	11	13C2-6:2-FTS	33992.5	4.8	0.847	4.91	1.000	1.900	2.049	8	30	
PFHpS	121148.7	11	13C3-PFHxS	306884.7	4.7	0.395	4.91	1.080	1.900	2.078	9	30	
PFOA	356899.8	11	13C8-PFOA	881048.1	5.0	0.405	4.92	1.000	2.000	2.164	8	30	
PFOS	120453.7	22	13C8-PFOS	260679.7	4.8	0.462	5.25	1.000	1.850	2.021	9	30	
PFNA	292951.4	11	13C9-PFNA	454836.2	5.0	0.644	5.26	1.000	2.000	2.323	16	30	
PFNS	72098.4	11	13C8-PFOS	260679.7	4.8	0.277	5.54	1.060	1.920	1.935	1	30	
PFDA	247127.6	11	13C6-PFDA	584120.4	5.0	0.423	5.56	1.000	2.000	2.243	12	30	
8:2-FTS	22932.5	11	13C2-8:2-FTS	25315.5	4.8	0.906	5.56	1.000	1.920	2.112	10	30	
PFOSA	268884.9	11	13C8-PFOSA	614372.3	5.0	0.438	5.64	1.000	2.000	2.138	7	30	
NMeFOSAA	25773.2	18	d3-NMeFOSAA	72787.8	5.0	0.354	5.70	1.000	2.000	2.001	0	30	
PFDS	64574.9	12	13C8-PFOS	260679.7	4.8	0.248	5.80	1.110	1.930	2.245	16	30	
PFUnDA	203649.6	11	13C7-PFUnDA	245734.5	5.0	0.829	5.82	1.000	2.000	2.167	8	30	
NEtFOSAA	24982.9	21	d5-NEtFOSAA	59841.0	5.0	0.417	5.84	1.000	2.000	2.189	9	30	
PFDoDA	222595.7	12	13C2-PFDoDA	502294.9	5.0	0.443	6.05	1.000	2.000	2.257	13	30	
10:2-FTS	17800.7	11	13C2-8:2-FTS	25315.5	4.8	0.703	6.07	1.090	1.930	2.342	21	30	
NMePFOSAE	170235.8	11	d7-NMePFOSAE	300195.0	5.0	0.567	6.10	1.000	2.000	2.360	18	30	
NMePFOSA	29675.1	11	d3-NMePFOSA	76016.4	5.0	0.390	6.11	1.000	2.000	1.926	-4	30	
PFDoS	32744.7	11	13C8-PFOS	260679.7	4.8	0.126	6.22	1.190	1.940	2.200	13	30	
NEtPFOSAE	173243.4	11	d9-NEtPFOSAE	265577.0	5.0	0.652	6.26	1.000	2.000	2.093	5	30	
NEtPFOSA	26160.1	11	d5-NEtPFOSA	58649.6	5.0	0.446	6.27	1.000	2.000	2.048	2	30	
PFTrDA	182274.0	11	13C2-PFDoDA	502294.9	5.0	0.363	6.25	1.030	2.000	2.290	15	30	
PFTeDA	149191.2	10	13C2-PFTeDA	376433.7	5.0	0.396	6.43	1.000	2.000	2.222	11	30	
PFHxDA	71894.6	11	13C2-PFTeDA	376433.7	5.0	0.191	6.73	1.050	2.000	2.275	14	30	
PFODA	58431.8	10	13C2-PFTeDA	376433.7	5.0	0.155	6.99	1.090	2.000	2.162	8	30	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCCV1-2 11/12/2018 7:38:10 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV2_CAL3			**Data File:**		18NOV12D-15.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T18:51:51
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV1-2
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	660664.4	659926.2	0	50	
13C2-PFOA	5.0	440157.1	450219.7	-2	50	
13C4-PFOS	4.8	239627.0	249205.8	-4	50	
13C2-PFDA	5.0	276533.4	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	731274.3	13C3-PFBA	660664.4	1.107	5.000	4.963	99	70-130	
E13C5-PFPeA	715666.1	13C3-PFBA	660664.4	1.083	5.000	4.859	97	70-130	
E13C3-PFBS	416114.2	13C3-PFBA	660664.4	0.630	4.650	4.446	96	70-130	
E13C2-4:2-FTS	50211.9	13C2-PFOA	440157.1	0.114	4.670	5.081	109	70-130	
E13C5-PFHxA	650477.1	13C2-PFOA	440157.1	1.478	5.000	5.338	107	70-130	
E13C3-PFHxS	306884.7	13C2-PFOA	440157.1	0.697	4.730	4.784	101	70-130	
E13C4-PFHpA	511705.6	13C2-PFOA	440157.1	1.163	5.000	5.237	105	70-130	
E13C2-6:2-FTS	33992.5	13C2-PFOA	440157.1	0.077	4.750	5.167	109	70-130	
E13C8-PFOA	881048.1	13C2-PFOA	440157.1	2.002	5.000	5.515	110	70-130	
E13C8-PFOS	260679.7	13C4-PFOS	239627.0	1.088	4.780	4.820	101	70-130	
E13C9-PFNA	454836.2	13C4-PFOS	239627.0	1.898	5.000	5.292	106	70-130	
E13C6-PFDA	584120.4	13C2-PFDA	276533.4	2.112	5.000	4.929	99	70-130	
E13C2-8:2-FTS	25315.5	13C2-PFDA	276533.4	0.092	4.790	4.566	95	70-130	
E13C8-PFOSA	614372.3	13C2-PFDA	276533.4	2.222	5.000	4.925	99	70-130	
Ed3-NMeFOSAA	72787.8	13C2-PFDA	276533.4	0.263	5.000	4.751	95	70-130	
E13C7-PFUnDA	245734.5	13C2-PFDA	276533.4	0.889	5.000	5.159	103	70-130	
Ed5-NEtFOSAA	59841.0	13C2-PFDA	276533.4	0.216	5.000	4.578	92	70-130	
E13C2-PFDoDA	502294.9	13C2-PFDA	276533.4	1.816	5.000	4.716	94	70-130	
Ed7-NMePFOSAE	300195.0	13C2-PFDA	276533.4	1.086	5.000	4.698	94	70-130	
Ed3-NMePFOSA	76016.4	13C2-PFDA	276533.4	0.275	5.000	4.994	100	70-130	
Ed9-NEtPFOSAE	265577.0	13C2-PFDA	276533.4	0.960	5.000	4.995	100	70-130	
Ed5-NEtPFOSA	58649.6	13C2-PFDA	276533.4	0.212	5.000	4.975	100	70-130	
E13C2-PFTeDA	376433.7	13C2-PFDA	276533.4	1.361	5.000	4.779	96	70-130	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

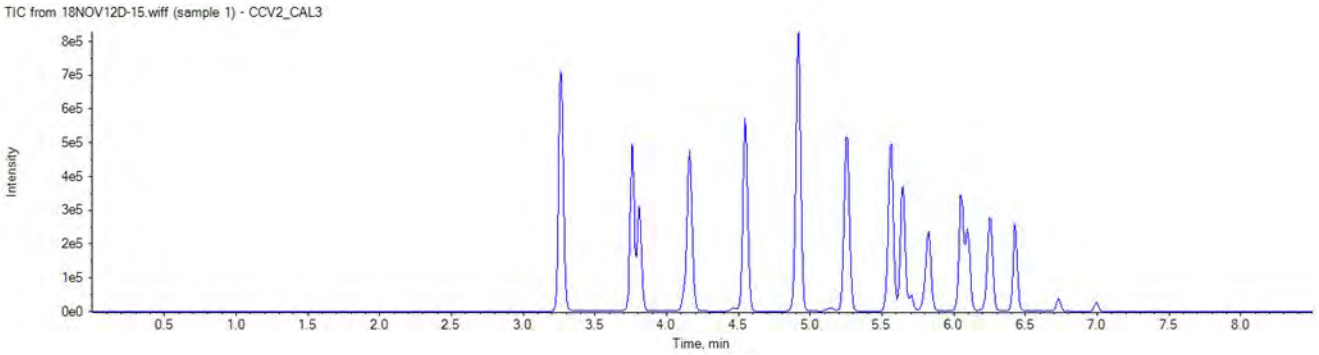
Analyte Quantitation Peak Table

Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12D-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	294834.2		A	13C4-PFBA	3.26	731274.3	0.403	2.234
PFPeA	3.76	1.000	297477.3		A	13C5-PFPeA	3.76	715666.1	0.416	2.406
PFBS	3.81	1.000	170982.7		A	13C3-PFBS	3.81	416114.2	0.411	1.955
4:2-FTS	4.12	1.000	36941.1		A	13C2-4:2-FTS	4.12	50211.9	0.736	1.997
PFHxA	4.16	1.000	356359.5		A	13C5-PFHxA	4.16	650477.1	0.548	2.287
PFPeS	4.18	1.100	83244.0		A	13C3-PFBS	3.81	416114.2	0.200	1.942
PFHpA	4.55	1.000	363666.9		A	13C4-PFHpA	4.55	511705.6	0.711	2.356
PFHxS	4.55	1.000	121992.5		M	13C3-PFHxS	4.55	306884.7	0.398	1.927
6:2-FTS	4.91	1.000	28781.9		A	13C2-6:2-FTS	4.91	33992.5	0.847	2.049
PFHpS	4.91	1.080	121148.7		A	13C3-PFHxS	4.55	306884.7	0.395	2.078
PFOA	4.92	1.000	356899.8		A	13C8-PFOA	4.92	881048.1	0.405	2.164
PFOS	5.25	1.000	120453.7		M	13C8-PFOS	5.25	260679.7	0.462	2.021
PFNA	5.26	1.000	292951.4		A	13C9-PFNA	5.26	454836.2	0.644	2.323
PFNS	5.54	1.060	72098.4		A	13C8-PFOS	5.25	260679.7	0.277	1.935
PFDA	5.56	1.000	247127.6		A	13C6-PFDA	5.56	584120.4	0.423	2.243
8:2-FTS	5.56	1.000	22932.5		A	13C2-8:2-FTS	5.57	25315.5	0.906	2.112
PFOSA	5.64	1.000	268884.9		A	13C8-PFOSA	5.64	614372.3	0.438	2.138
NMeFOSAA	5.70	1.000	25773.2		A	d3-NMeFOSAA	5.70	72787.8	0.354	2.001
PFDS	5.80	1.110	64574.9		A	13C8-PFOS	5.25	260679.7	0.248	2.245
PFUnDA	5.82	1.000	203649.6		A	13C7-PFUnDA	5.82	245734.5	0.829	2.167
NEtFOSAA	5.84	1.000	24982.9		M	d5-NEtFOSAA	5.83	59841.0	0.417	2.189
PFDoDA	6.05	1.000	222595.7		A	13C2-PFDoDA	6.05	502294.9	0.443	2.257
10:2-FTS	6.07	1.090	17800.7		A	13C2-8:2-FTS	5.57	25315.5	0.703	2.342
NMePFOSAE	6.10	1.000	170235.8		A	d7-NMePFOSAE	6.09	300195.0	0.567	2.360
NMePFOSA	6.11	1.000	29675.1		M	d3-NMePFOSA	6.11	76016.4	0.390	1.926
PFDoS	6.22	1.190	32744.7		A	13C8-PFOS	5.25	260679.7	0.126	2.200
NEtPFOSAE	6.26	1.000	173243.4		A	d9-NEtPFOSAE	6.25	265577.0	0.652	2.093
NEtPFOSA	6.27	1.000	26160.1		A	d5-NEtPFOSA	6.27	58649.6	0.446	2.048
PFTrDA	6.25	1.030	182274.0		A	13C2-PFDoDA	6.05	502294.9	0.363	2.290
PFTeDA	6.43	1.000	149191.2		A	13C2-PFTeDA	6.43	376433.7	0.396	2.222
PFHxDA	6.73	1.050	71894.6		A	13C2-PFTeDA	6.43	376433.7	0.191	2.275
PFODA	6.99	1.090	58431.8		A	13C2-PFTeDA	6.43	376433.7	0.155	2.162

Total Ion Chromatogram

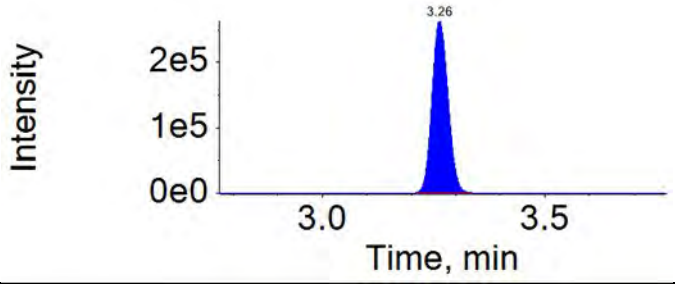


APPROVED
By MCD at 7:46 pm, 11/12/18

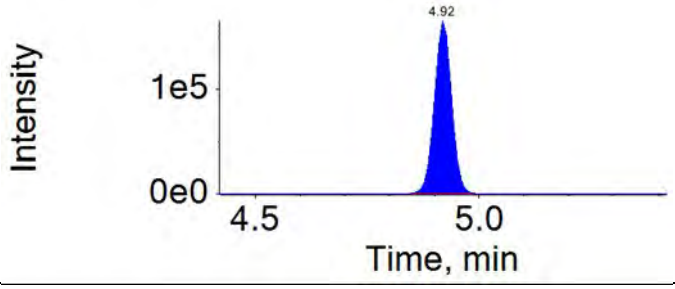
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

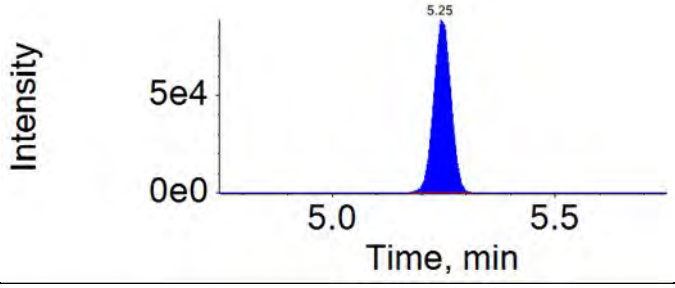
Injection Standard: 13C3-PFBA
216.0 / 172.0



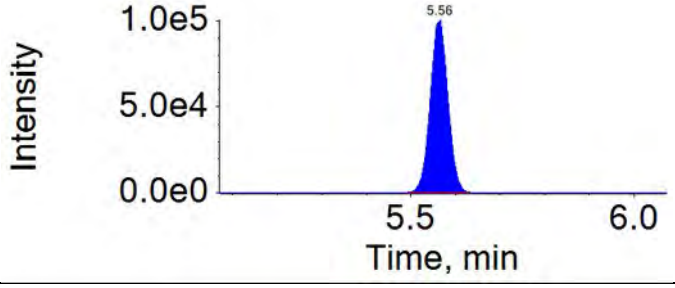
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



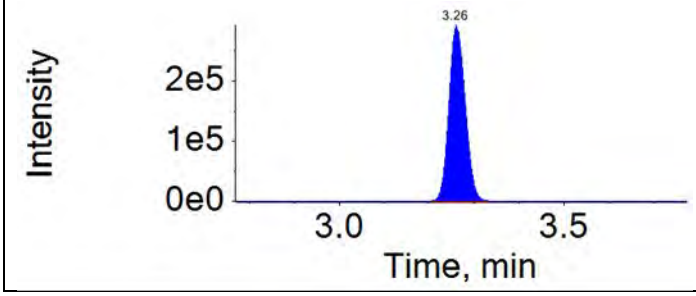
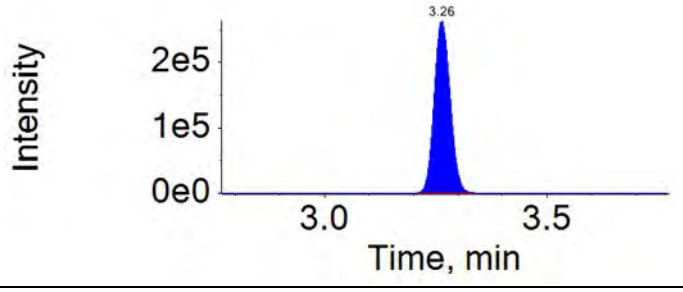
Injection Standard: 13C2-PFDA
515.0 / 470.0

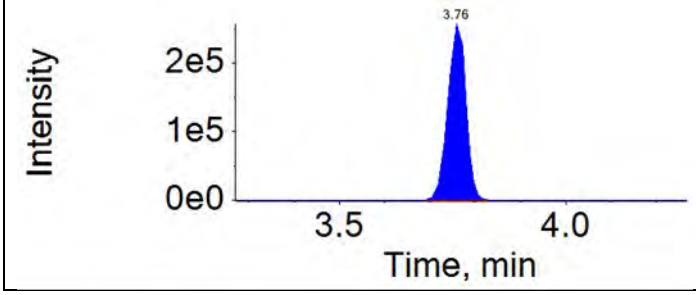
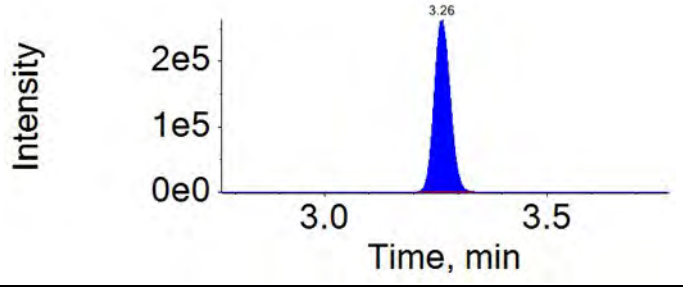


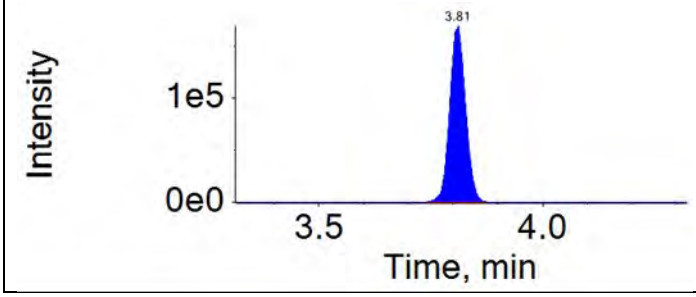
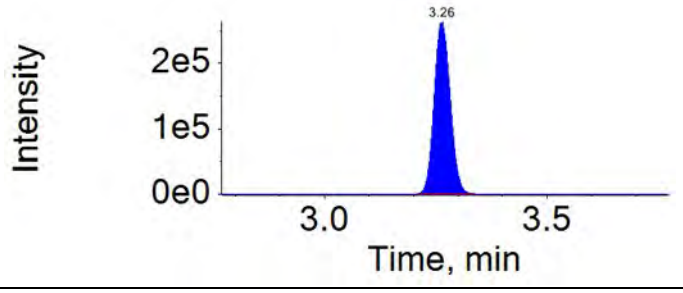
APPROVED
By MCD at 7:46 pm, 11/12/18

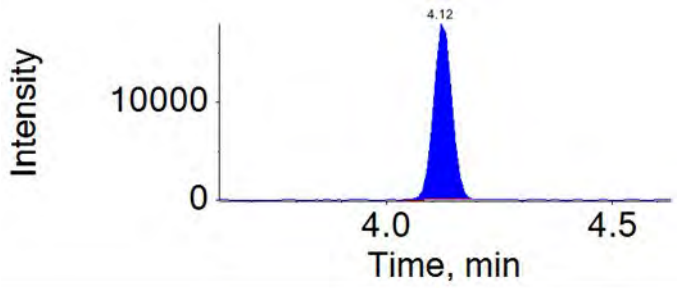
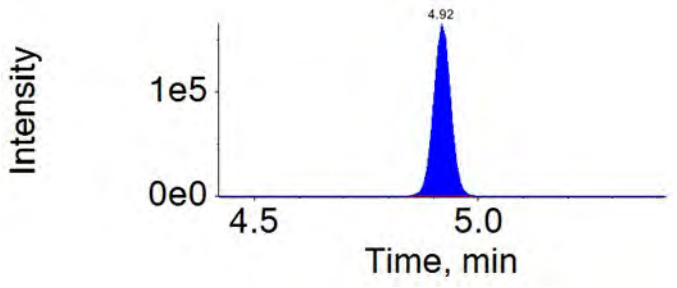
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

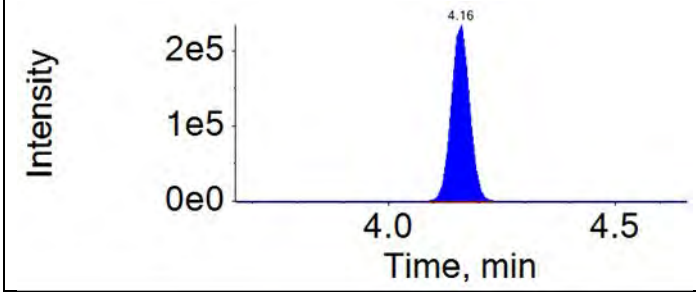
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

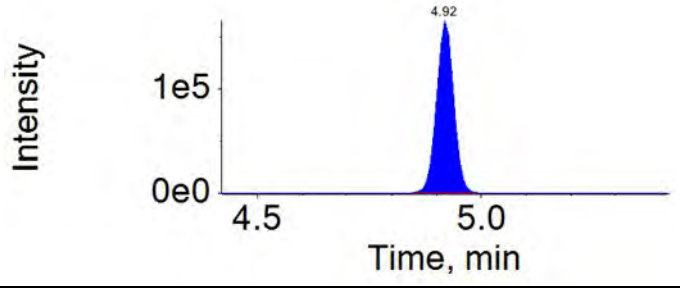
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

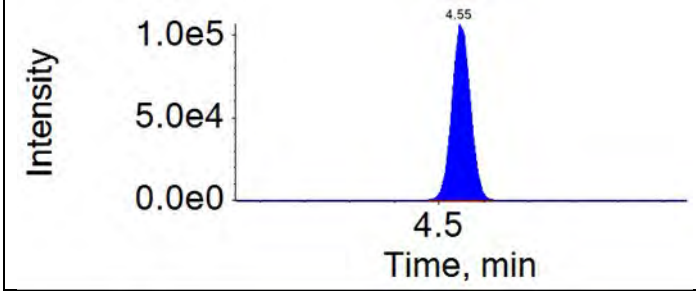
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

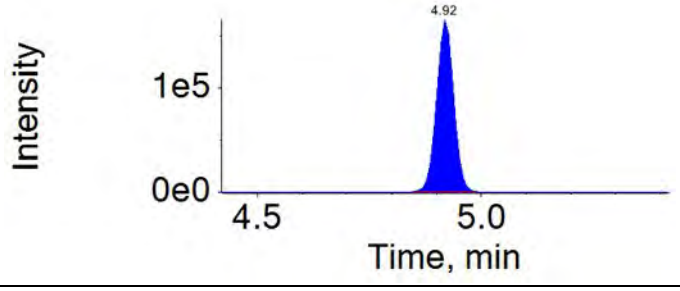
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



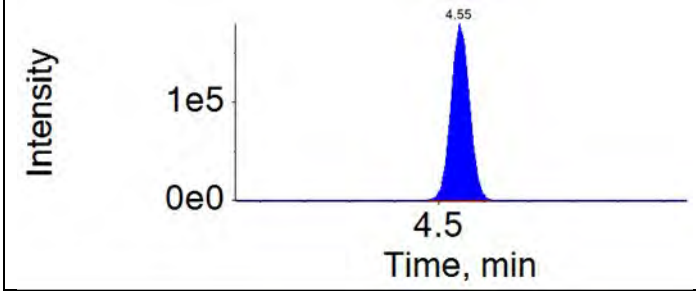


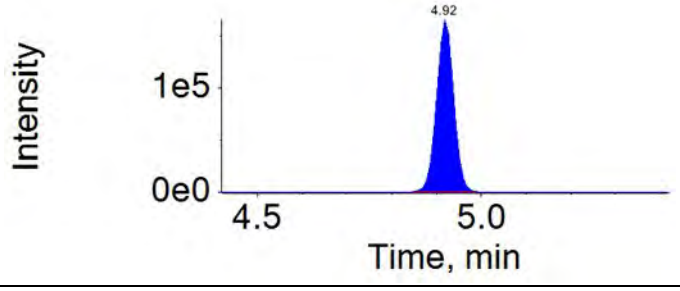
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



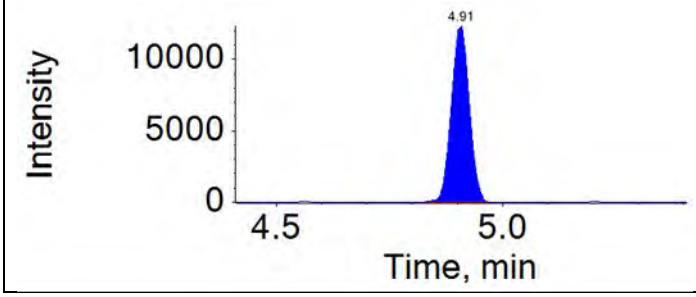


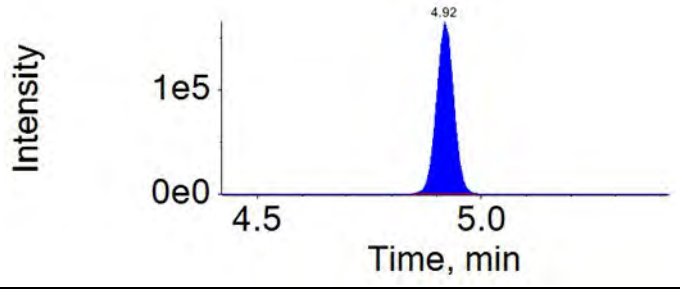
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

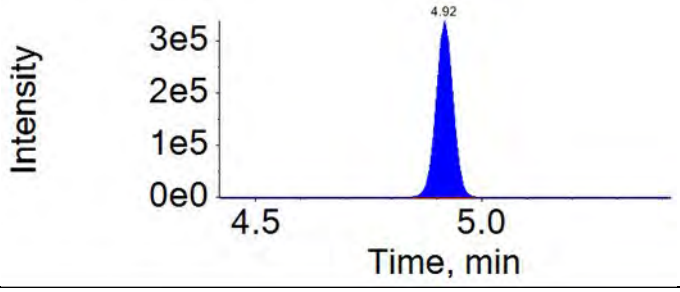
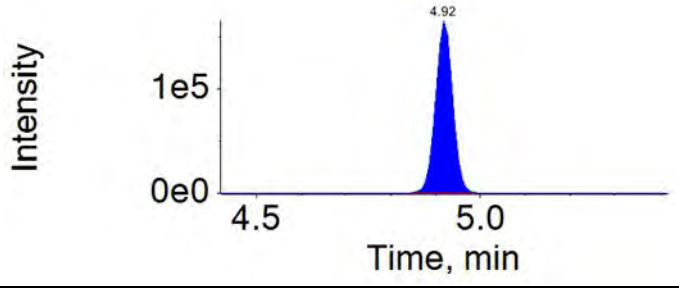


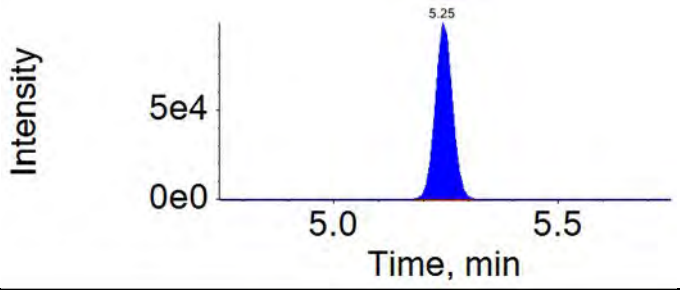
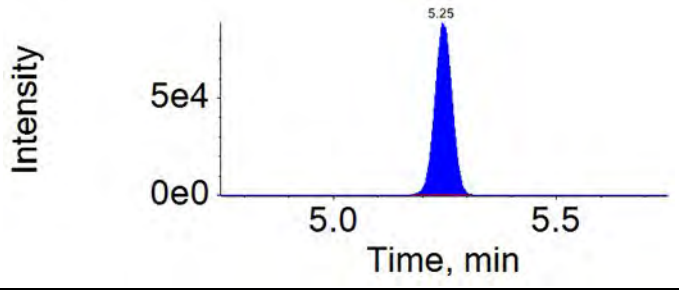


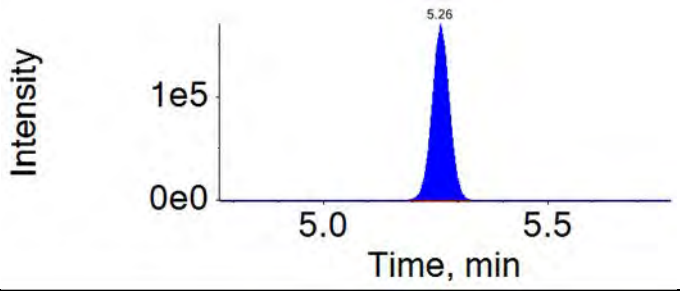
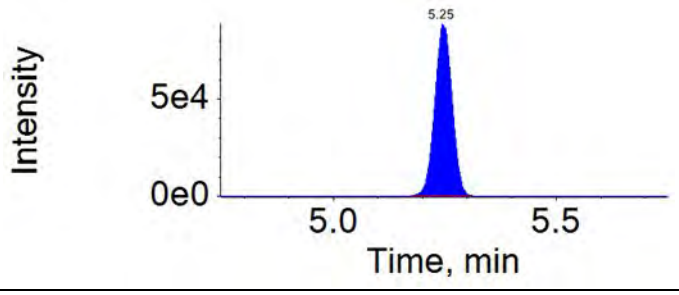
APPROVED
By MCD at 7:46 pm, 11/12/18

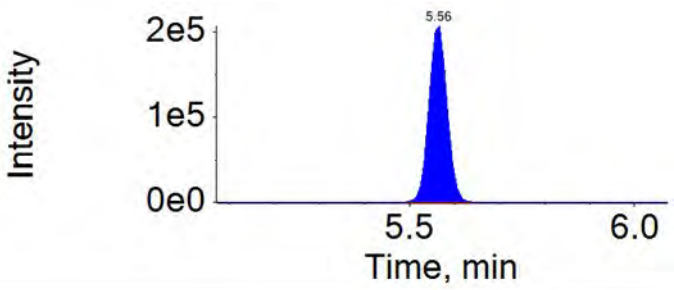
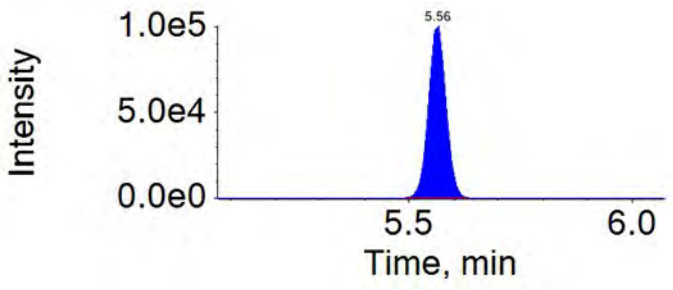
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

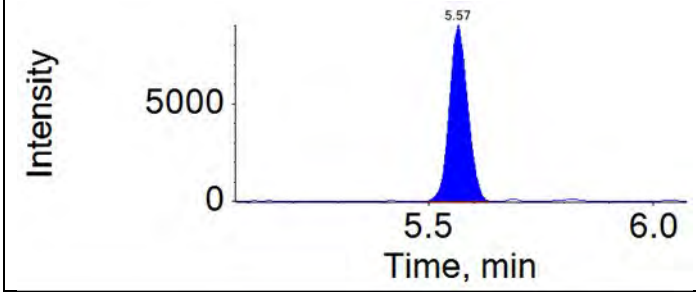
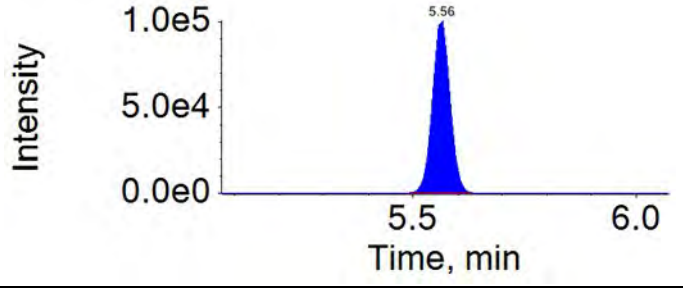
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

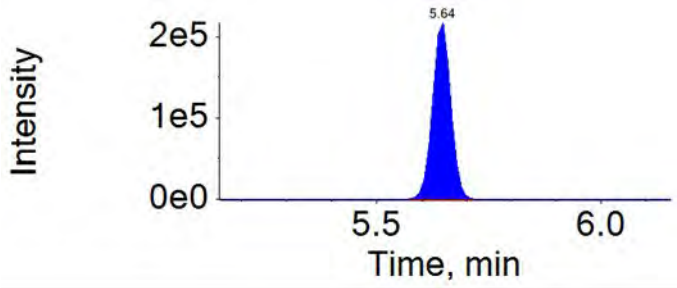
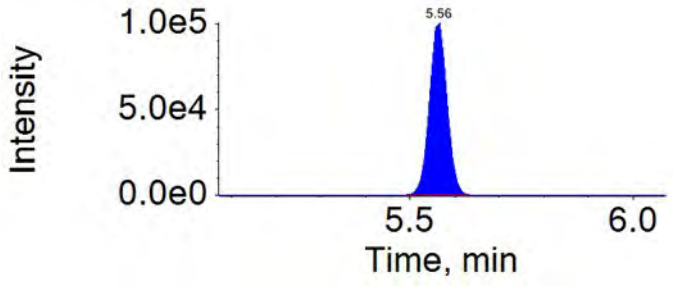
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

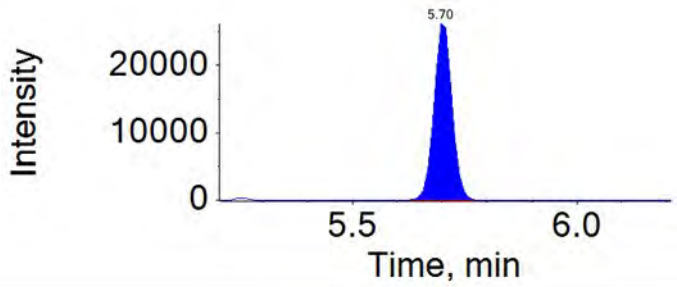
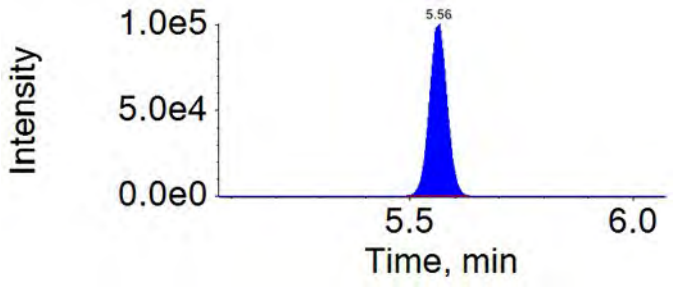
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

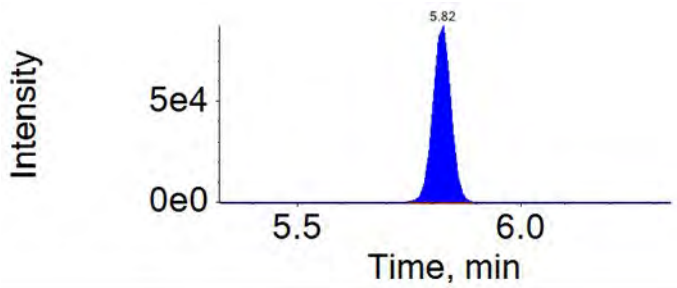
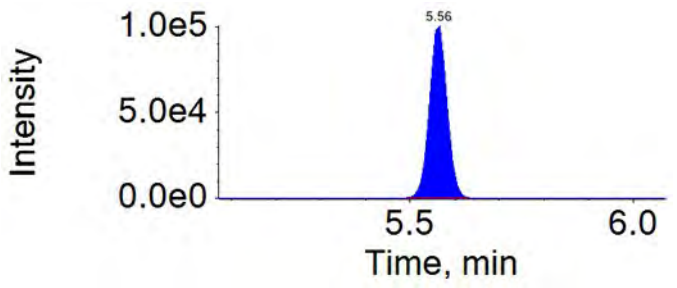
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

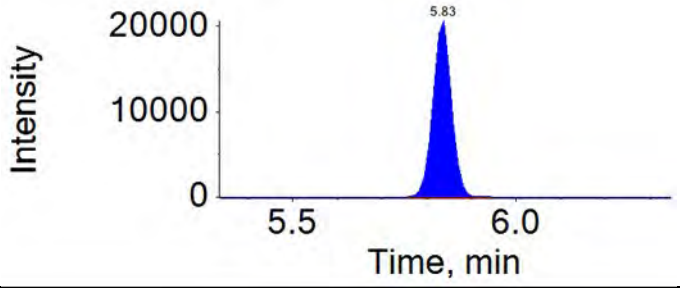
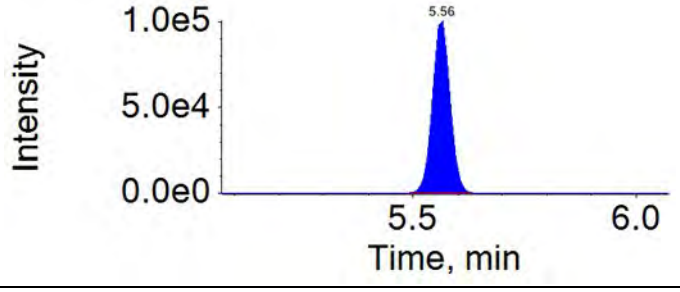
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

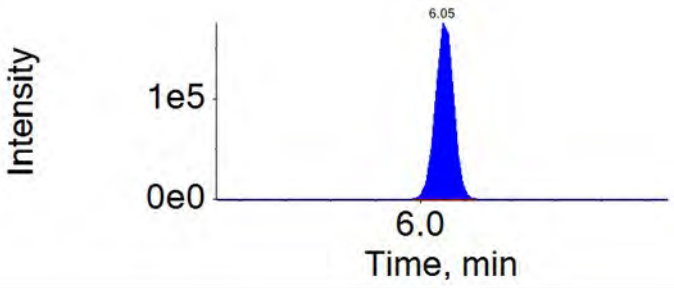
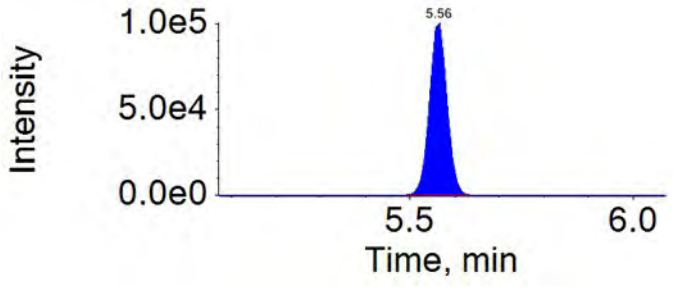
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

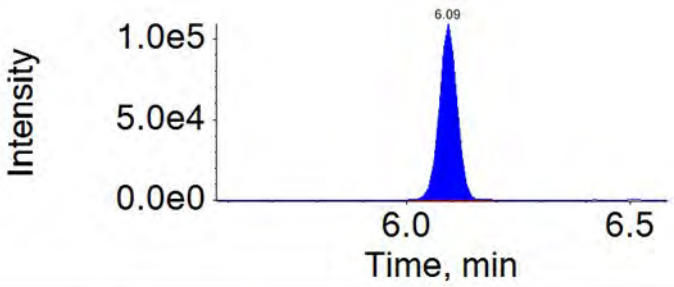
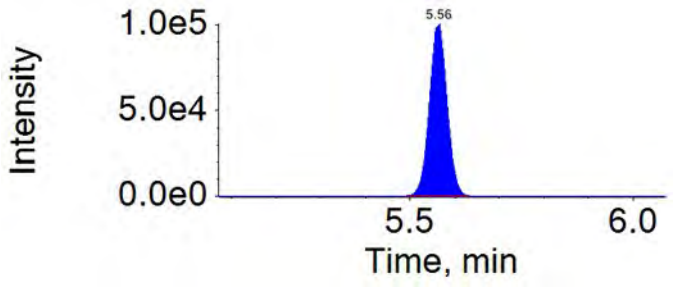
APPROVED
By MCD at 7:46 pm, 11/12/18

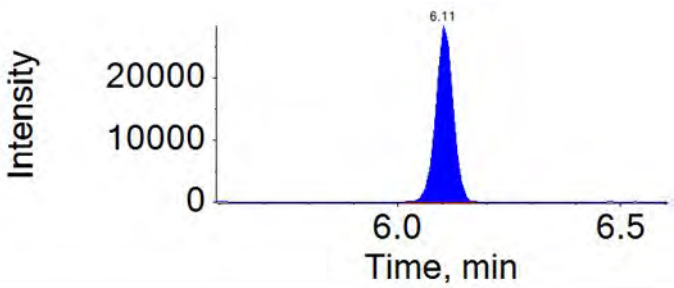
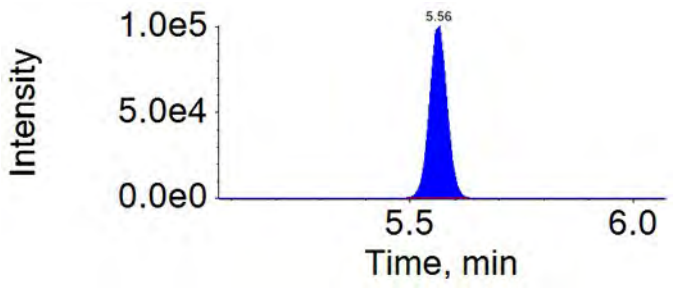
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

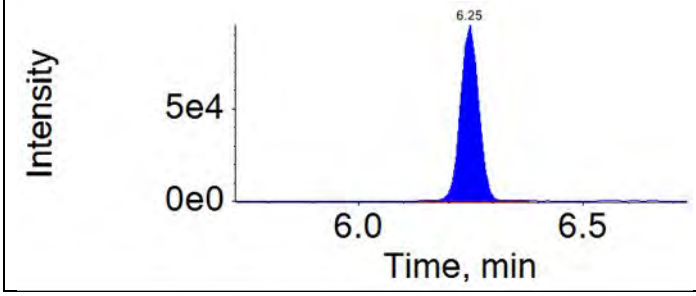
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

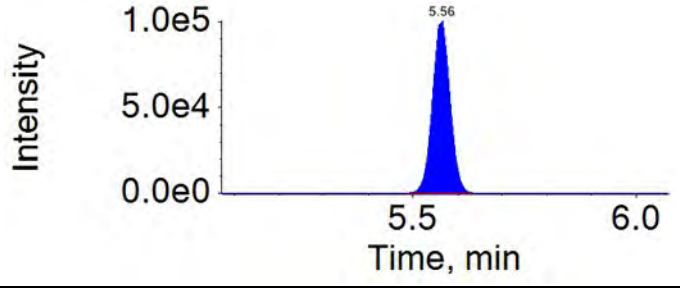
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

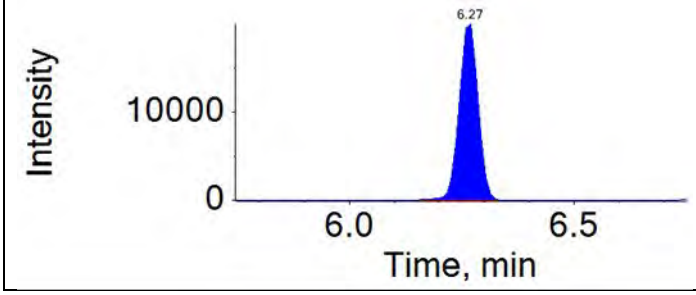
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

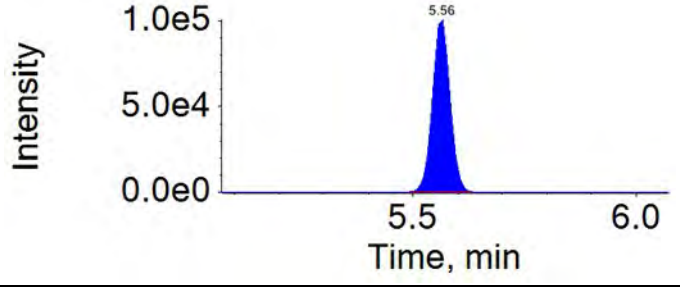
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



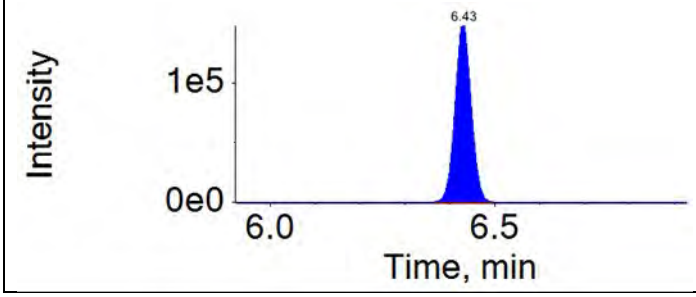


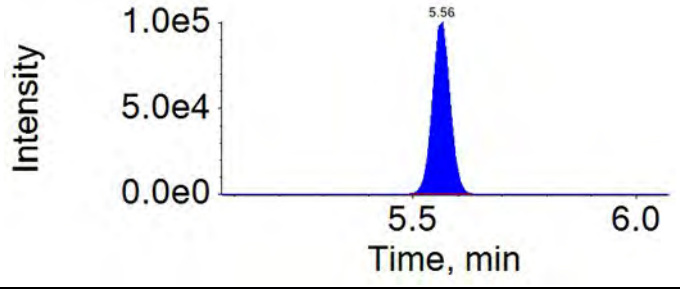
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



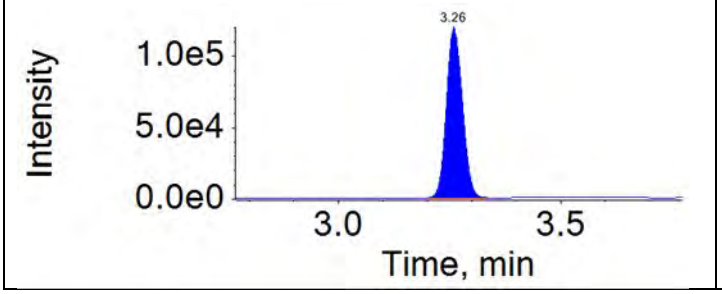


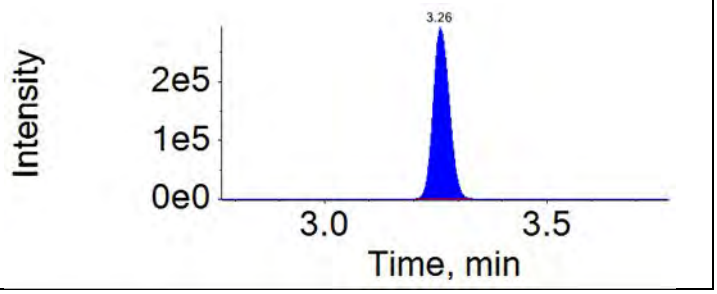
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

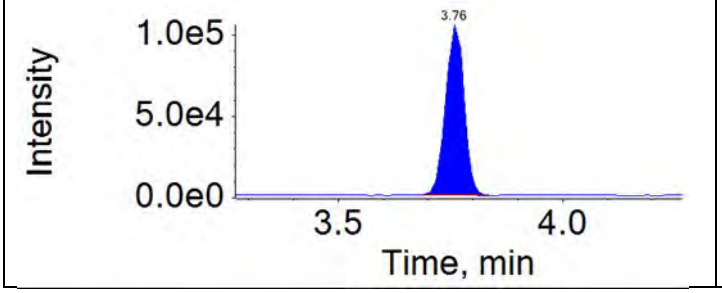
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

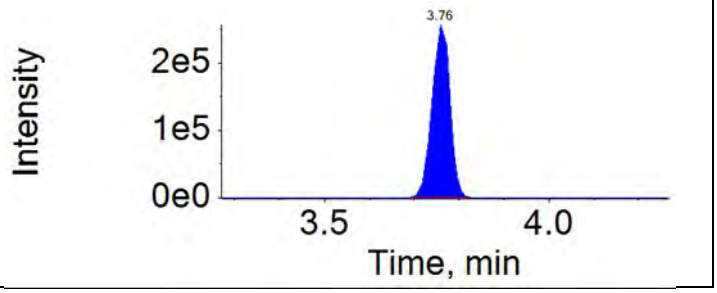
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



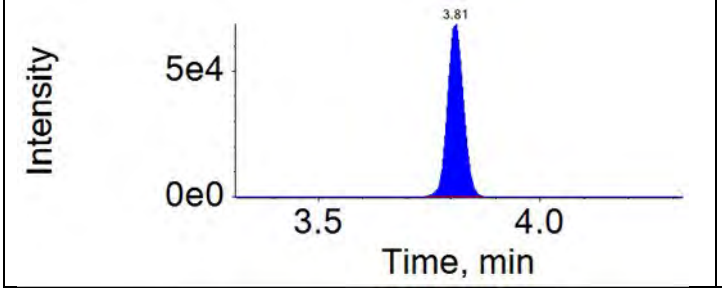


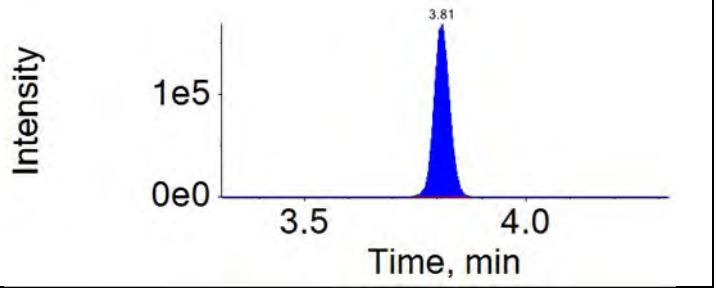
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



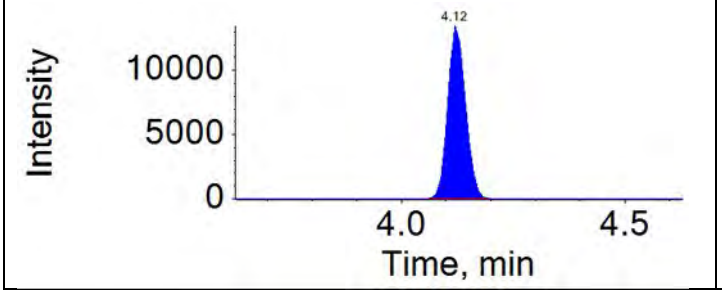


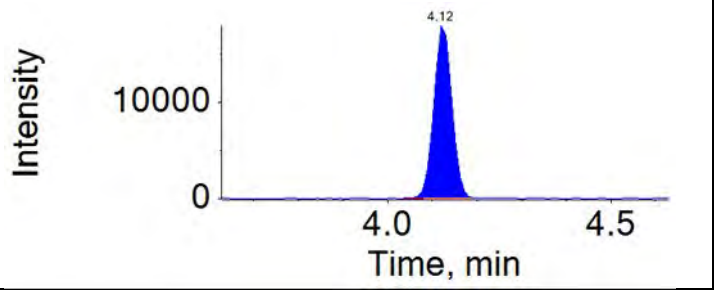
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

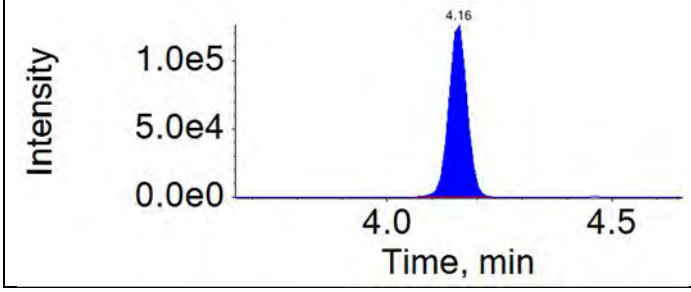
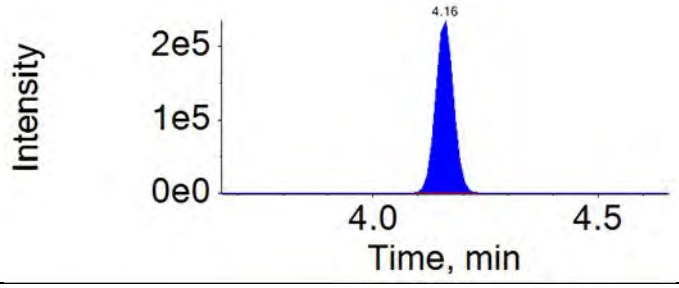


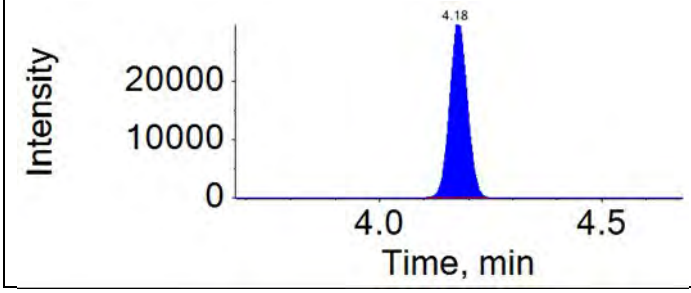
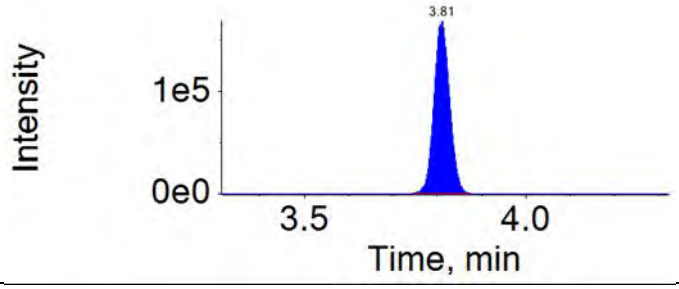


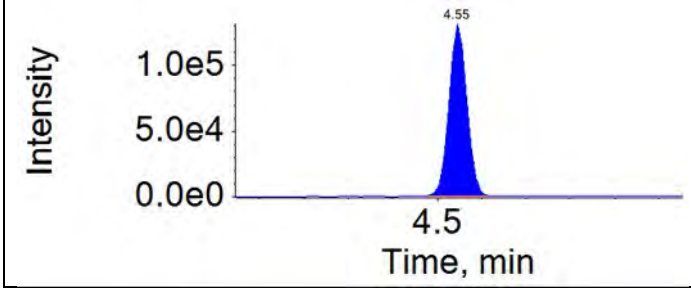
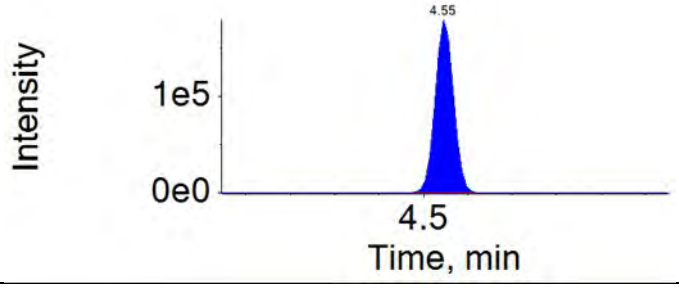
APPROVED
By MCD at 7:46 pm, 11/12/18

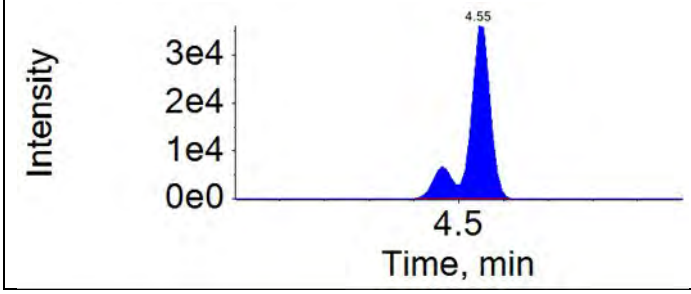
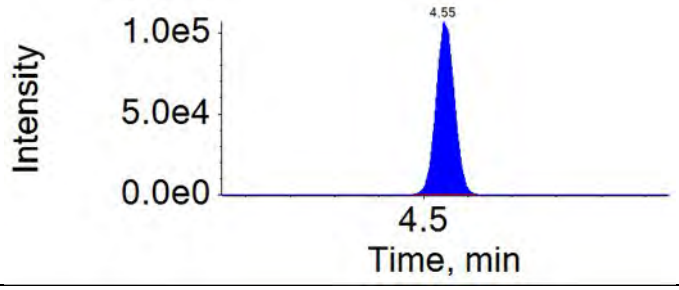
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

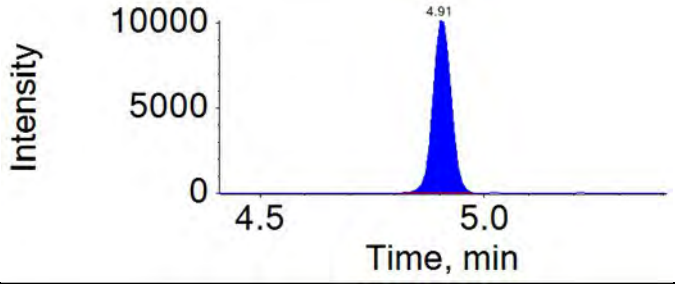
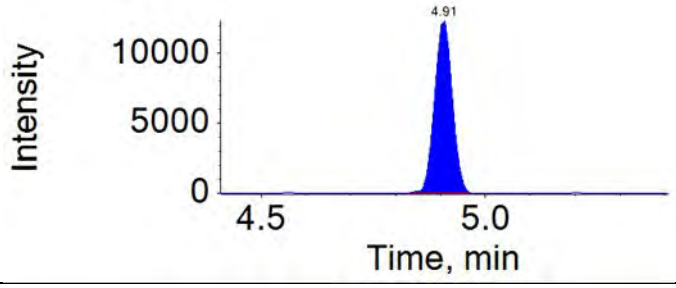
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

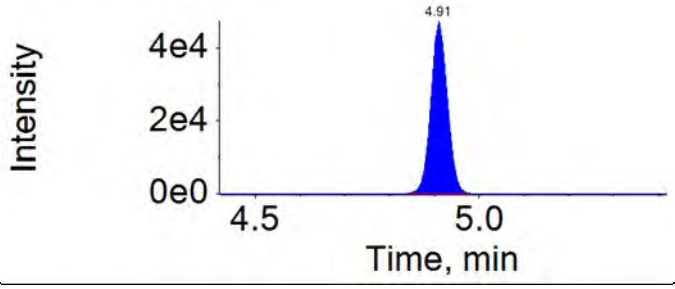
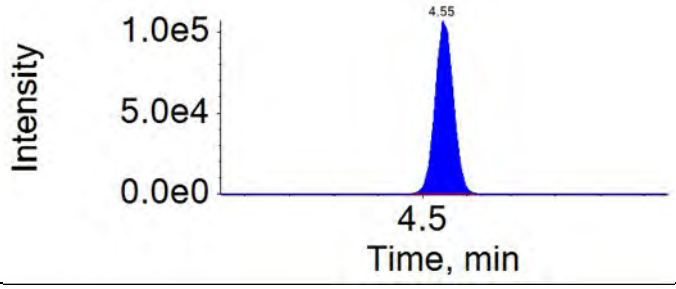
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

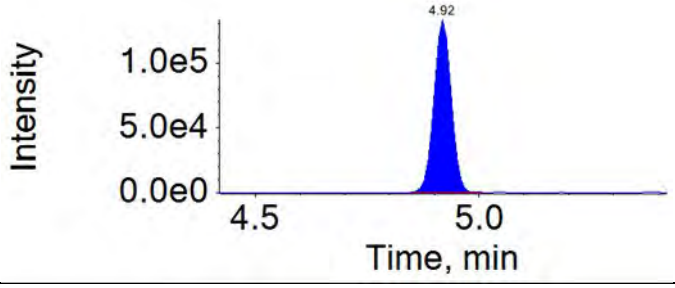
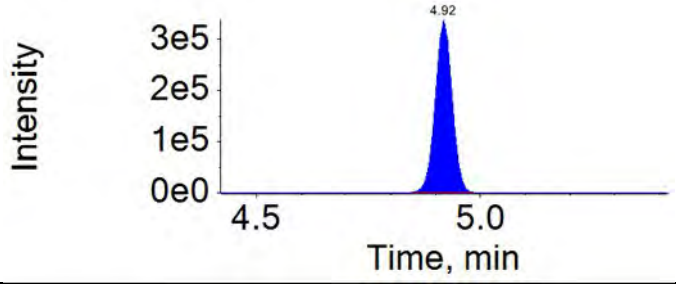
APPROVED
By MCD at 7:46 pm, 11/12/18

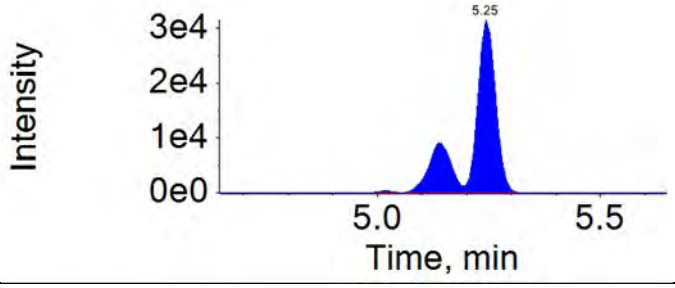
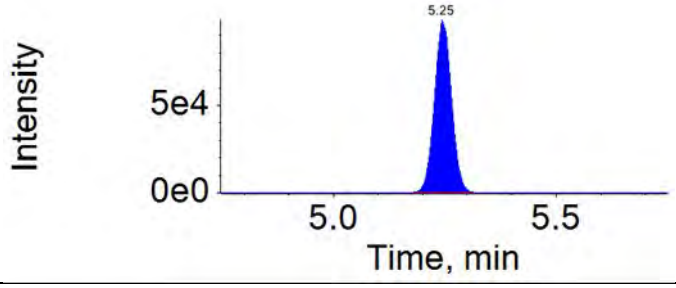
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

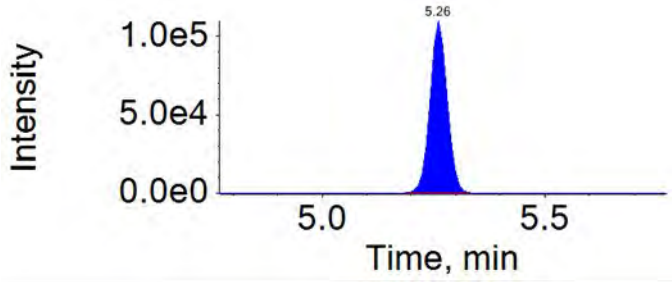
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

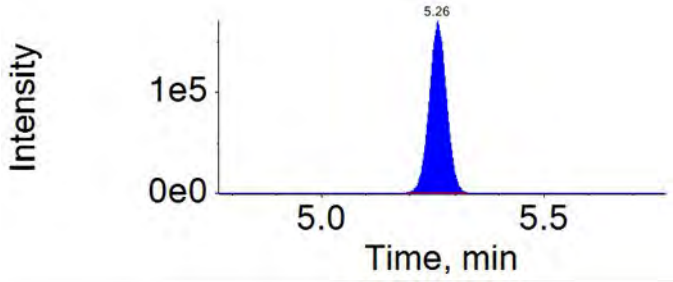
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

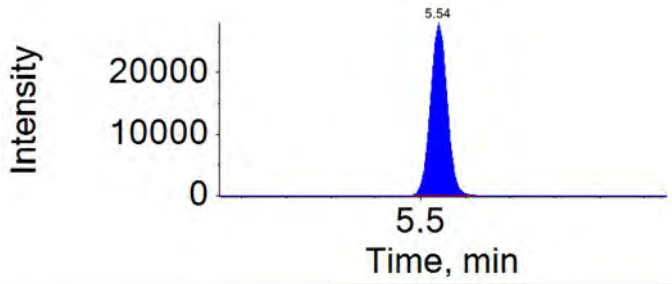
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

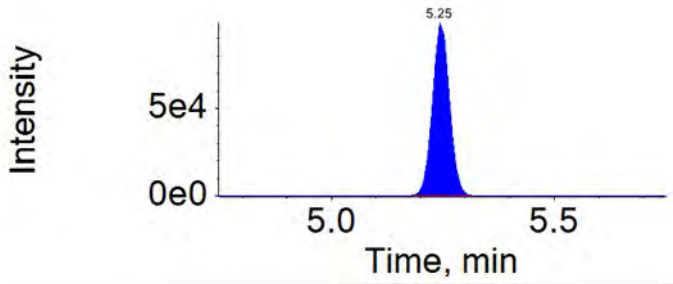
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



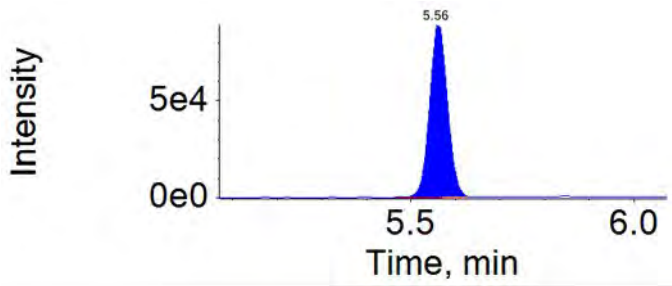


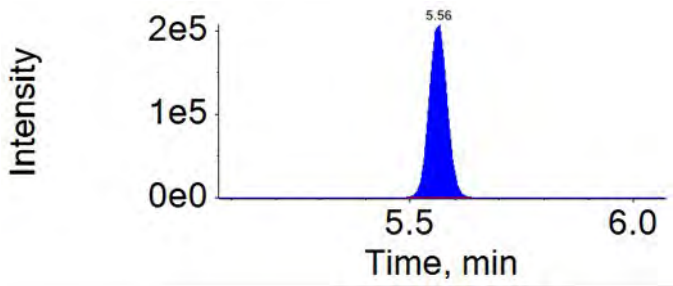
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



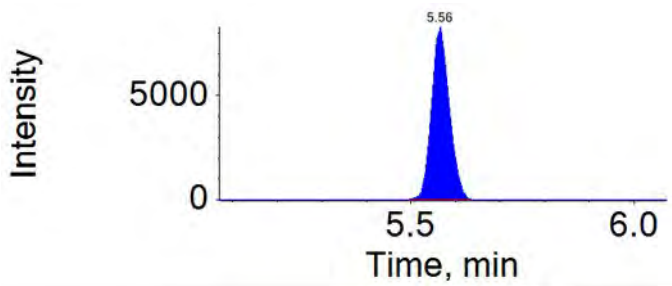


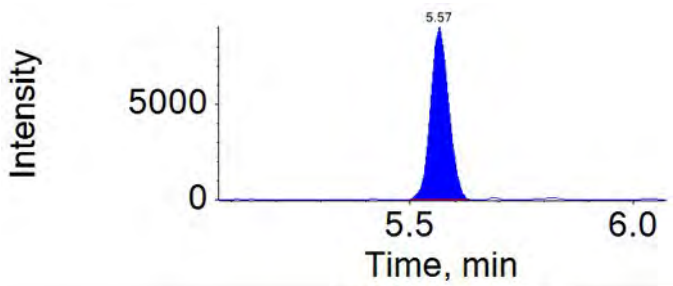
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

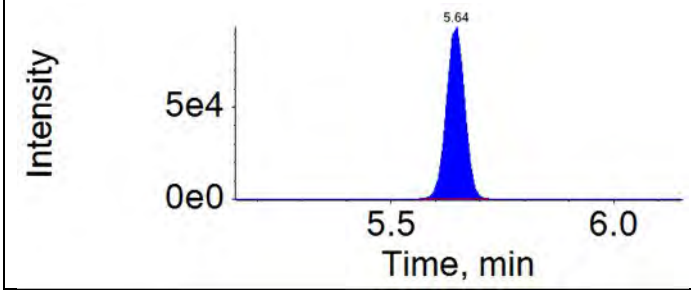
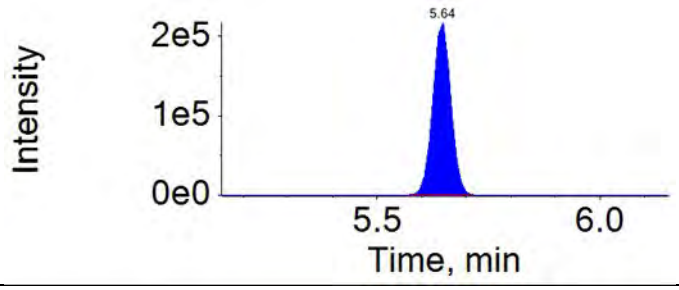


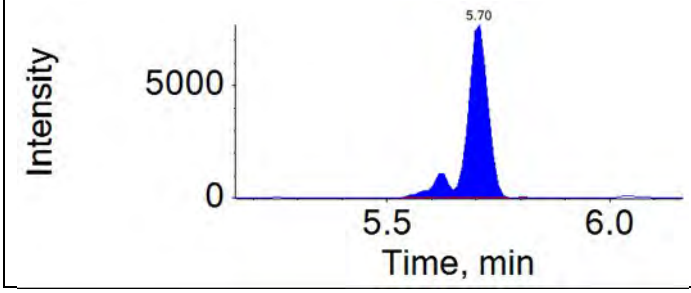
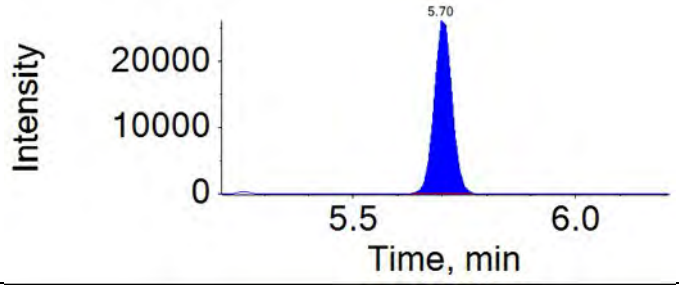


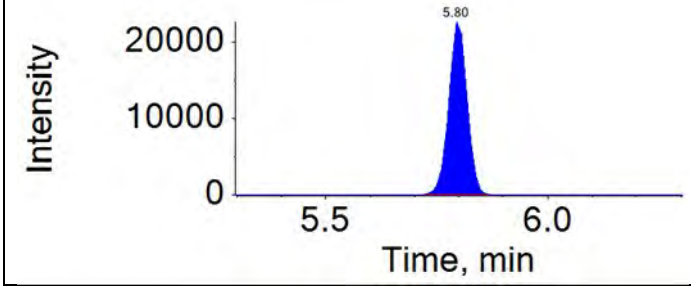
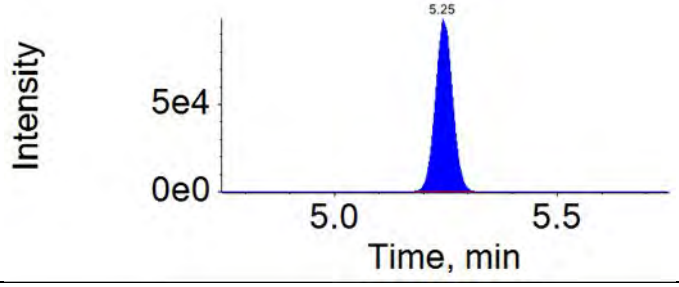
APPROVED
By MCD at 7:46 pm, 11/12/18

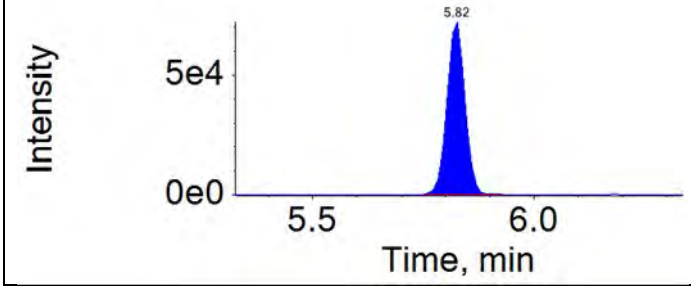
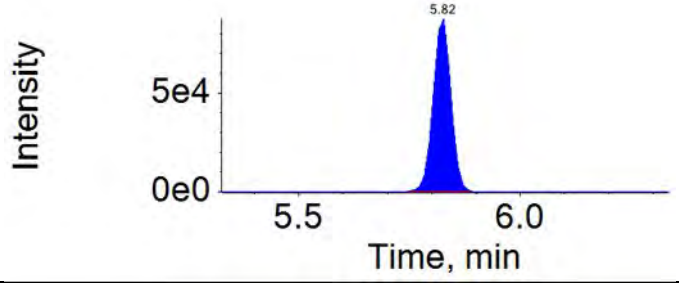
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

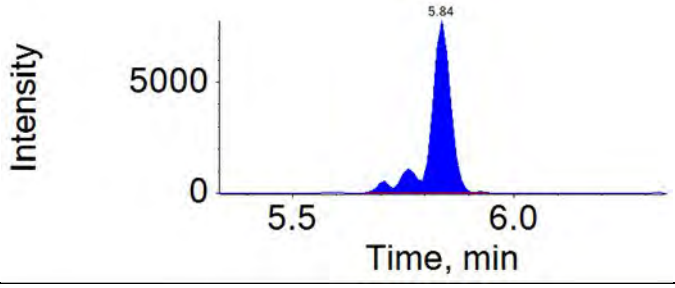
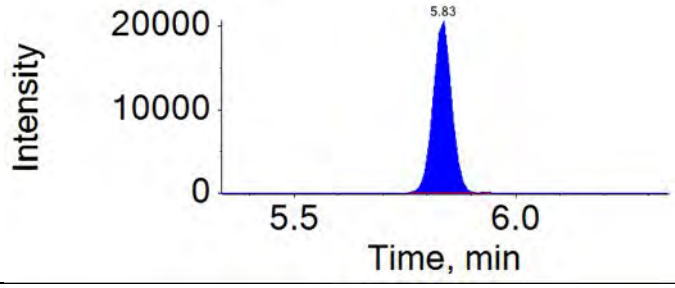
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

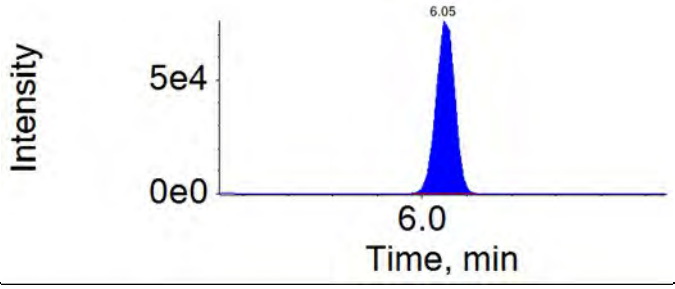
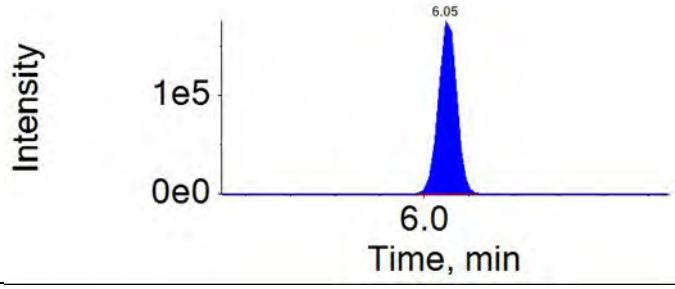
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

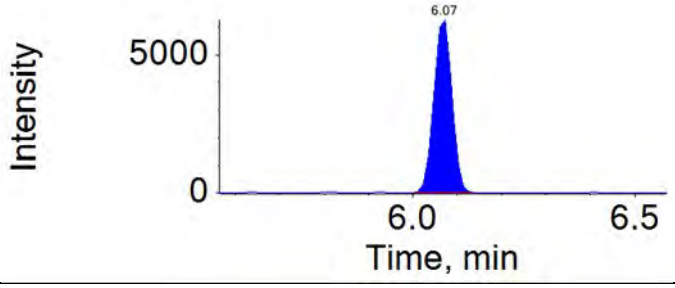
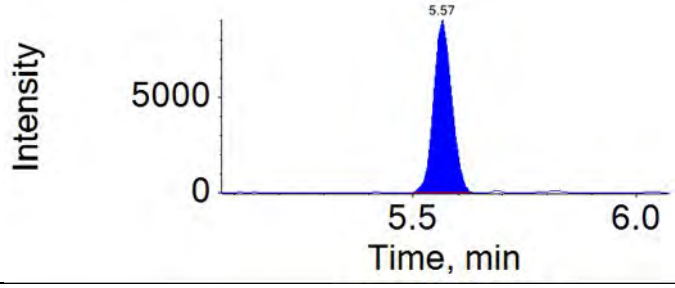
APPROVED
By MCD at 7:46 pm, 11/12/18

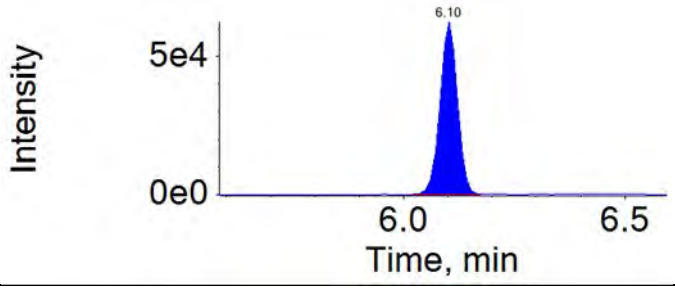
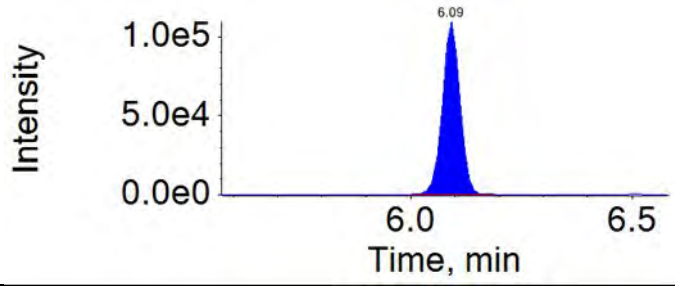
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

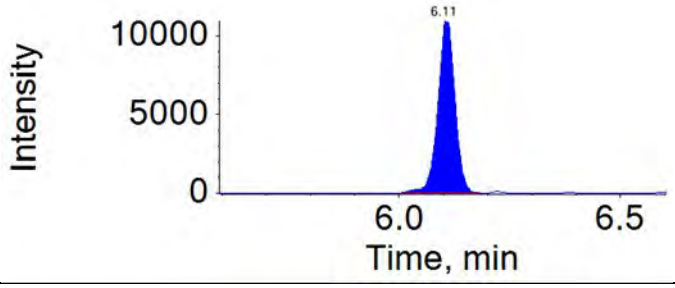
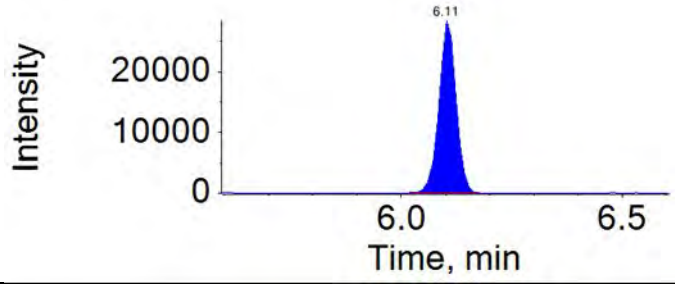
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

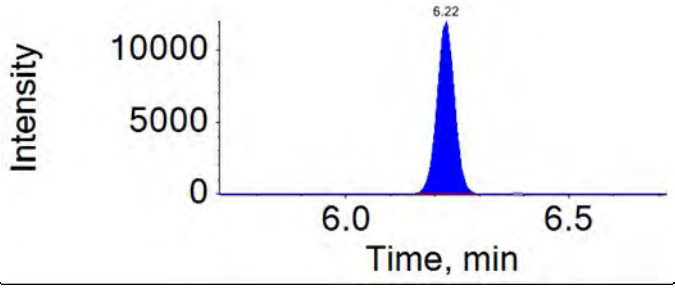
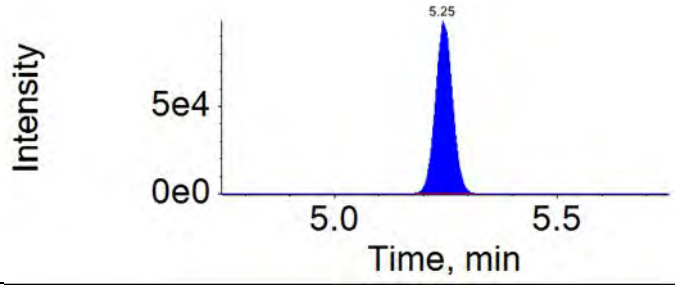
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

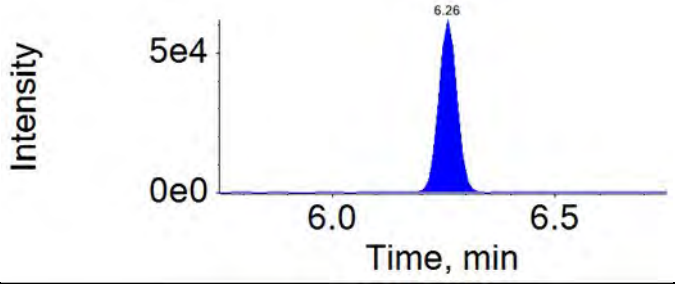
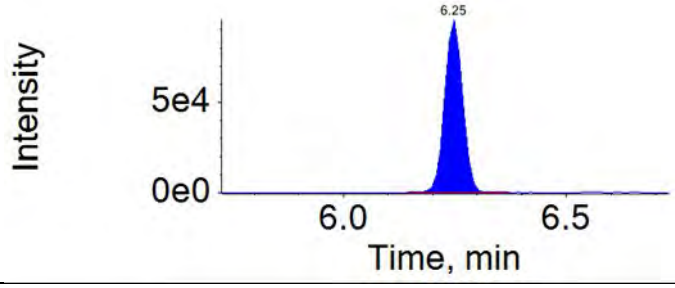
APPROVED
By MCD at 7:46 pm, 11/12/18

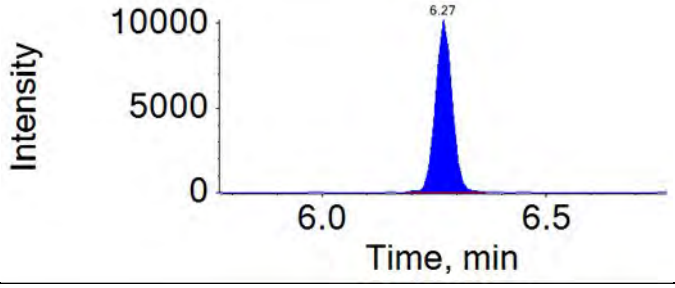
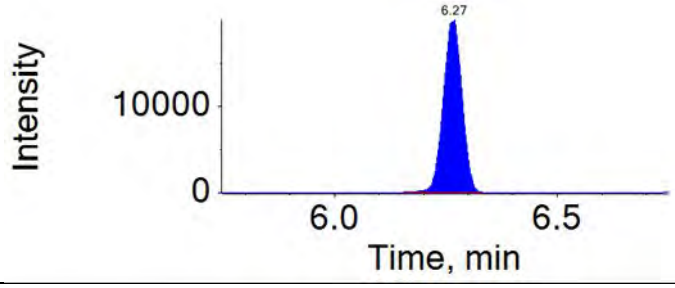
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0
	

Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0
	

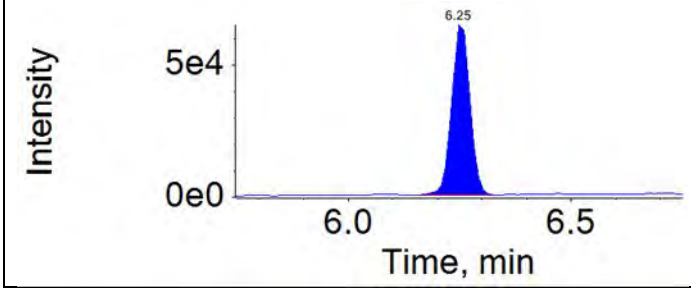
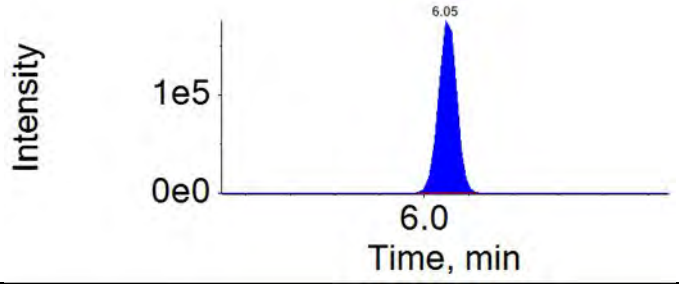
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0
	

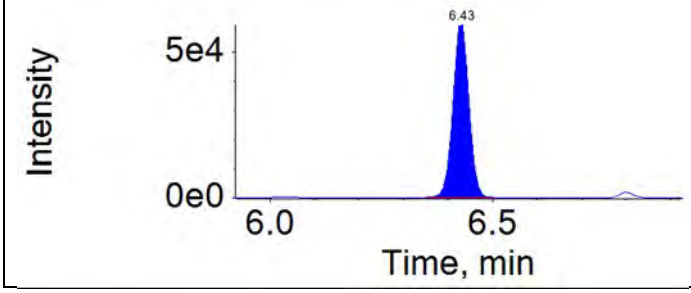
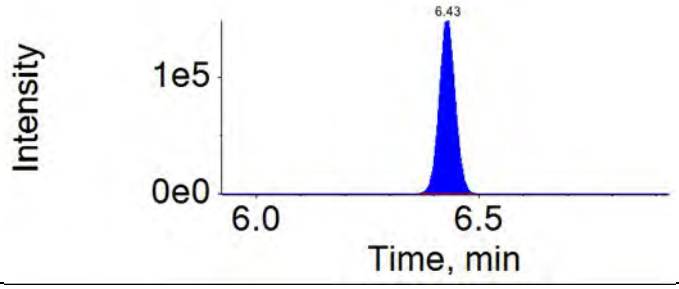
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0
	

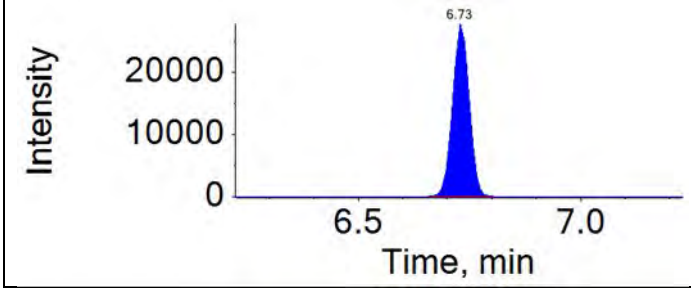
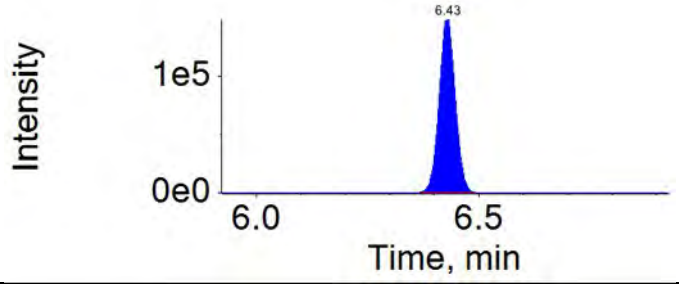
APPROVED
By MCD at 7:46 pm, 11/12/18

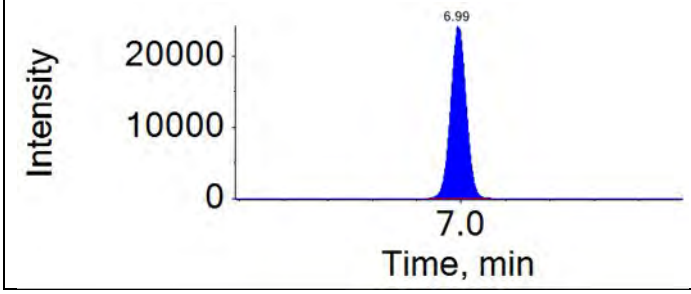
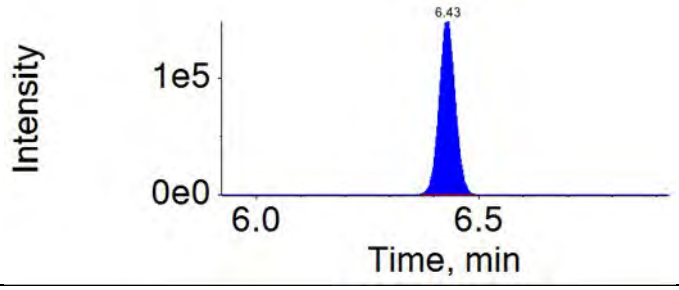
REVIEWED
By HMK at 11:56 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV1-2 11/12/2018 7:40:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

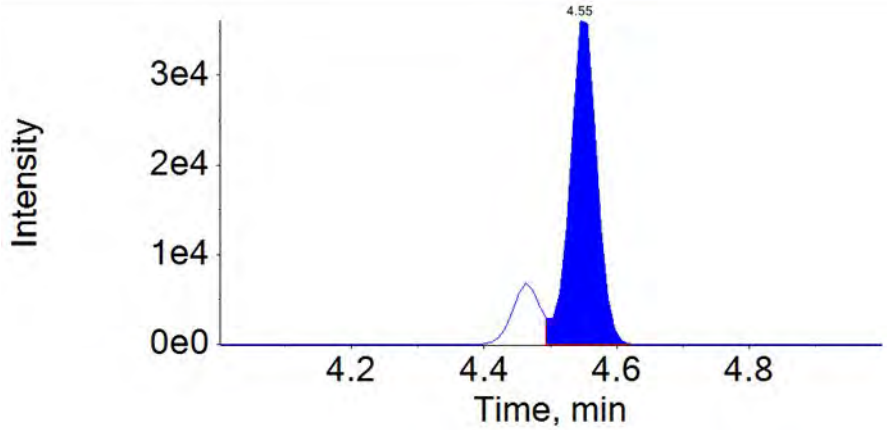
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

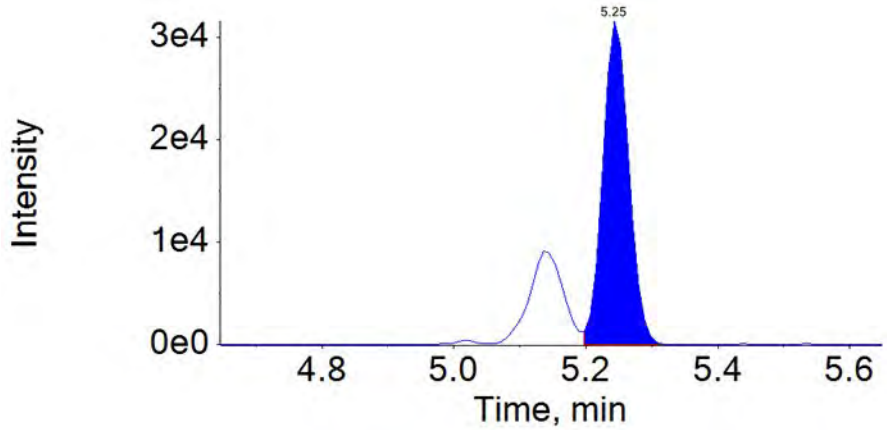
Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
102830.0
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-15.wiff
Sample Name:
CCV2_CAL3



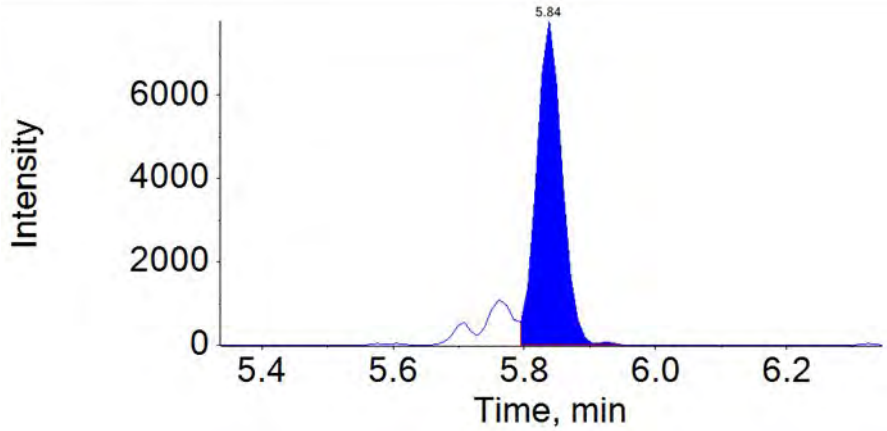
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
86381.3
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-15.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
21001.0
Mass Range:
584.0 / 419.0
File Name:
18NOV12D-15.wiff
Sample Name:
CCV2_CAL3



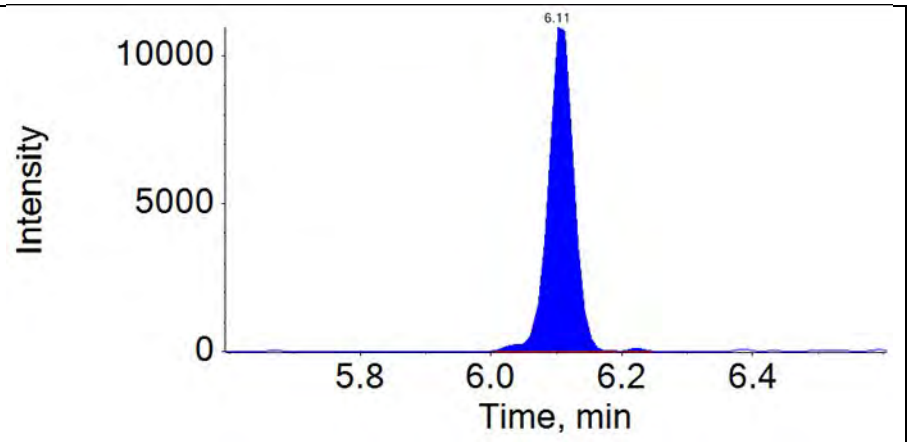
Integration Comment: incorrect integration

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

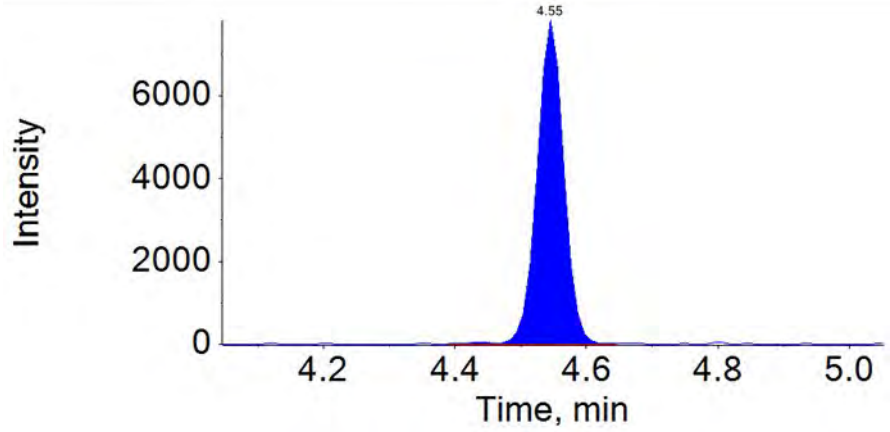
Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMePFOSA
RT (min.):
6.11
Peak Area:
29861.7
Mass Range:
512.0 / 169.0
File Name:
18NOV12D-15.wiff
Sample Name:
CCV2_CAL3



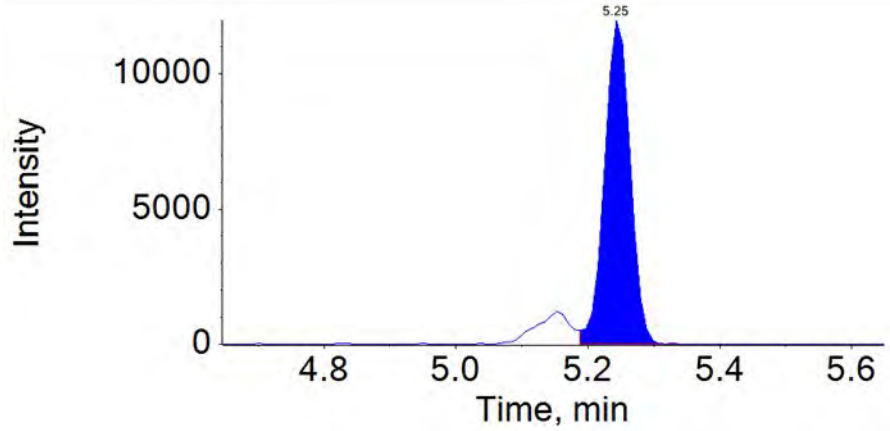
Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.55
Peak Area:
22211.1
Mass Range:
363.0 / 169.0
File Name:
18NOV12D-15.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
32567.8
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-15.wiff
Sample Name:
CCV2_CAL3

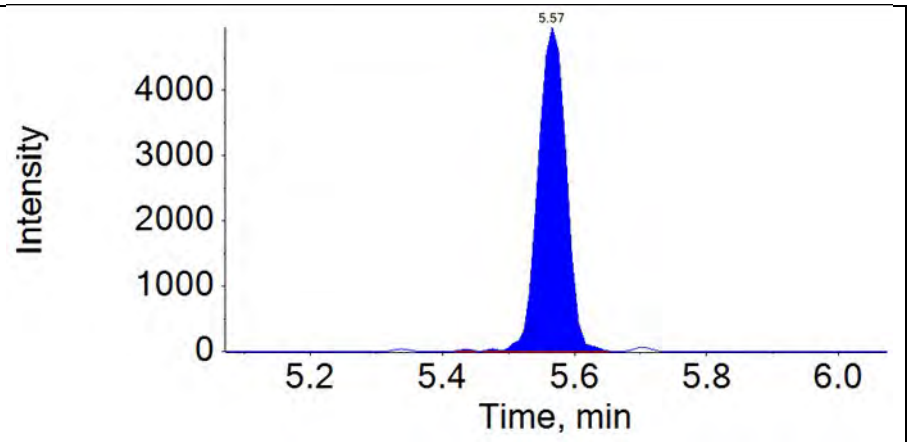


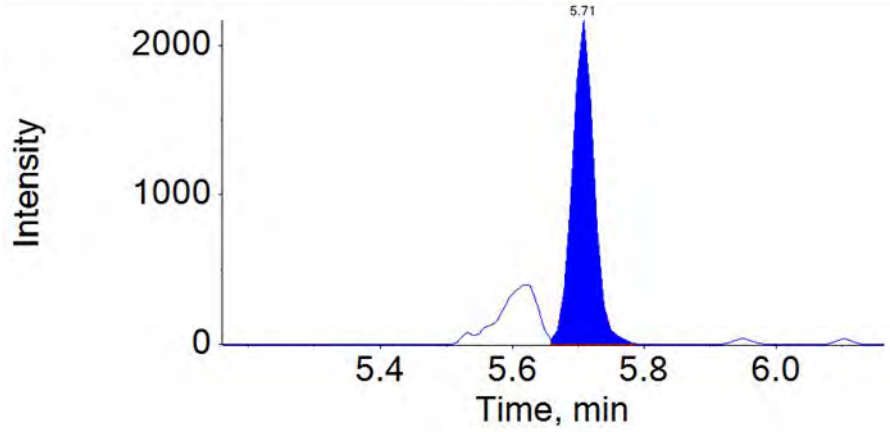
Integration Comment: incorrect integration

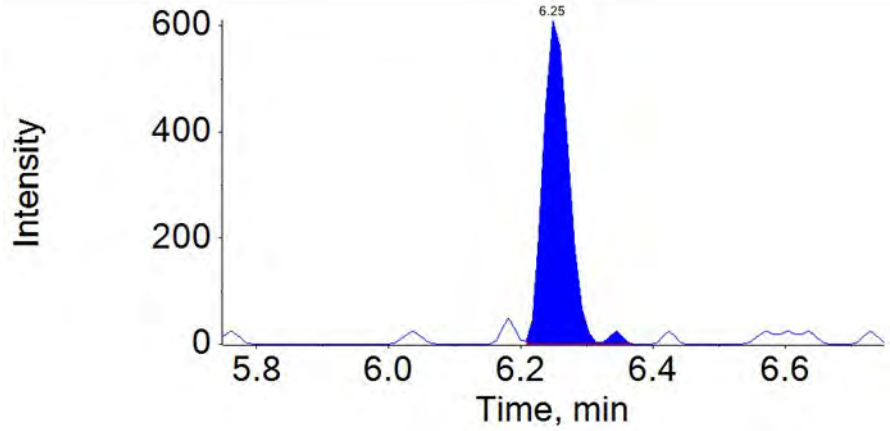
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: 8:2 FTS_2 **RT (min.):** 5.57 **Peak Area:** 14697.9 **Mass Range:** 527.0 / 81.0 **File Name:** 18NOV12D-15.wiff **Sample Name:** CCV2_CAL3	 **Integration Comment:** incorrect integration

Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 4953.9 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV12D-15.wiff **Sample Name:** CCV2_CAL3	 **Integration Comment:** incorrect integration

Component Name: PFTrDA_2 **RT (min.):** 6.25 **Peak Area:** 1667.9 **Mass Range:** 663.0 / 169.0 **File Name:** 18NOV12D-15.wiff **Sample Name:** CCV2_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Results Table Name: 18NOV12DCCV1-2
Results Table Date: 11/12/2018 7:40:04 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Ion Ratio Report

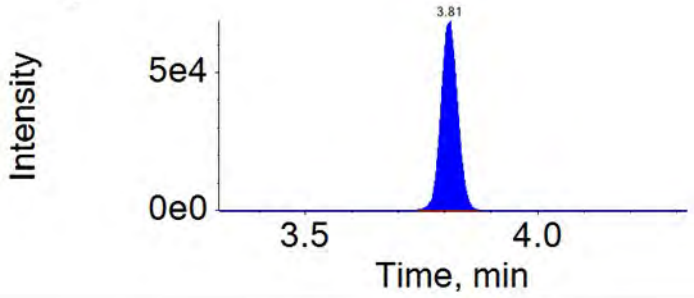
Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12D-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	170982.7	A	N/A	0.3659			
PFBS_2	3.81	1.00	62556.9	A	N/A	0.3659	1	50	
4:2-FTS	4.12	1.00	36941.1	A	N/A	0.6462			
4:2 FTS_2	4.12	1.00	23872.8	A	N/A	0.6462		#NA!	
PFHxA	4.16	1.00	356359.5	A	N/A	0.0093			
PFHxA_2	4.16	1.00	3310.0	A	N/A	0.0093	-20	50	
PFPeS	4.18	1.10	83244.0	A	N/A	0.5487			
PFPeS_2	4.18	1.10	45674.1	A	N/A	0.5487	6	50	
PFHpA	4.55	1.00	363666.9	A	N/A	0.0607			
PFHpA_2	4.55	1.00	22057.5	M	N/A	0.0607	8	50	
PFHxS	4.55	1.00	121992.5	M	N/A	0.3360			
PFHxS_2	4.55	1.00	40989.9	A	N/A	0.3360	-2	50	
6:2-FTS	4.91	1.00	28781.9	A	N/A	0.7147			
6:2 FTS_2	4.91	1.00	20570.4	A	N/A	0.7147		#NA!	
PFHpS	4.91	1.08	121148.7	A	N/A	0.3856			
PFHpS_2	4.91	1.08	46719.4	A	N/A	0.3856	-5	50	
PFOA	4.92	1.00	356899.8	A	N/A	0.0571			
PFOA_2	4.92	1.00	20374.2	A	N/A	0.0571	2	50	
PFOS	5.25	1.00	120453.7	M	N/A	0.3075			
PFOS_2	5.25	1.00	37037.1	M	N/A	0.3075	4	50	
PFNA	5.26	1.00	292951.4	A	N/A	0.0204			
PFNA_2	5.26	1.00	5967.7	A	N/A	0.0204	-11	50	
PFNS	5.54	1.06	72098.4	A	N/A	0.4786			
PFNS_2	5.54	1.06	34504.9	A	N/A	0.4786	-1	50	
PFDA	5.56	1.00	247127.6	A	N/A	0.0069			
PFDA_2	5.57	1.00	1714.1	A	N/A	0.0069	-14	50	
8:2-FTS	5.56	1.00	22932.5	A	N/A	0.6367			
8:2 FTS_2	5.57	1.00	14600.3	M	N/A	0.6367		#NA!	
NMeFOSAA	5.70	1.00	25773.2	A	N/A	0.2563			
NMeFOSAA_2	5.71	1.00	6605.8	M	N/A	0.2563	0	50	
PFDS	5.80	1.11	64574.9	A	N/A	0.4913			
PFDS_2	5.80	1.11	31723.6	A	N/A	0.4913	-5	50	
PFUnDA	5.82	1.00	203649.6	A	N/A	0.0045			
PFUnDA_2	5.81	1.00	917.0	A	N/A	0.0045	-23	50	
NEtFOSAA	5.84	1.00	24982.9	M	N/A	0.6854			
NEtFOSAA_2	5.84	1.00	17123.1	A	N/A	0.6854	-5	50	
PFDoDA	6.05	1.00	222595.7	A	N/A	0.0090			
PFDoDA_2	6.05	1.00	2005.4	A	N/A	0.0090	-42	50	
10:2-FTS	6.07	1.09	17800.7	A	N/A	0.6805			
10:2 FTS_2	6.07	1.09	12113.5	A	N/A	0.6805		#NA!	
PFTrDA	6.25	1.03	182274.0	A	N/A	0.0090			
PFTrDA_2	6.25	1.03	1634.0	M	N/A	0.0090	5	50	
PFTeDA	6.43	1.00	149191.2	A	N/A	0.0073			
PFTeDA_2	6.43	1.00	1092.2	A	N/A	0.0073	17	50	
PFHxDA	6.73	1.05	71894.6	A	N/A	0.0613			
PFHxDA_2	6.73	1.05	4408.7	A	N/A	0.0613	-10	50	
PFODA	6.99	1.09	58431.8	A	N/A	0.0272			
PFODA_2	6.99	1.09	1591.1	A	N/A	0.0272	-2	50	

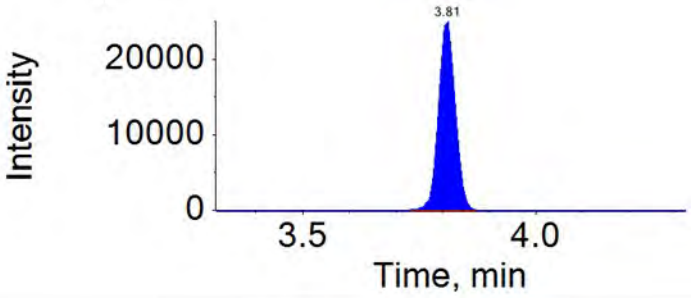
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

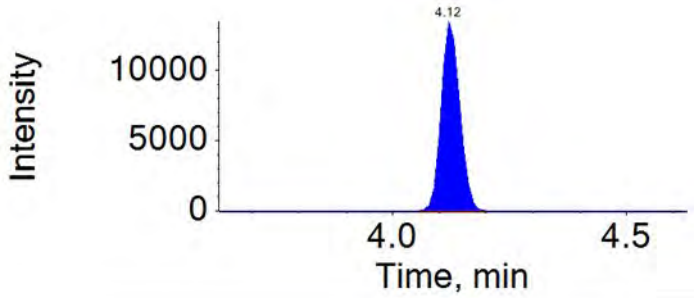
Component: PFBS
Primary Mass: 299.0 / 80.0



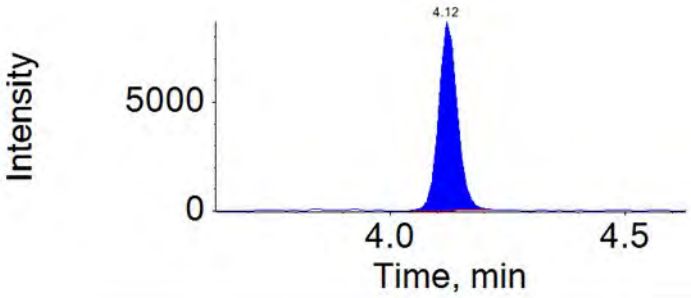
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



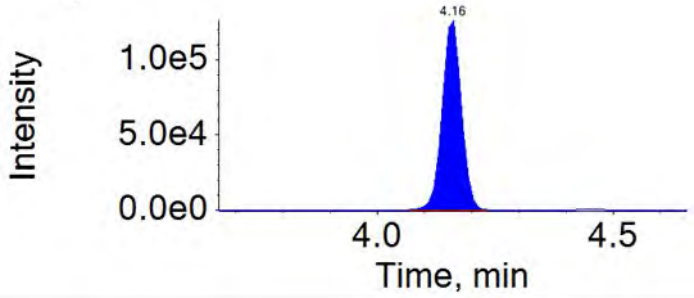
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



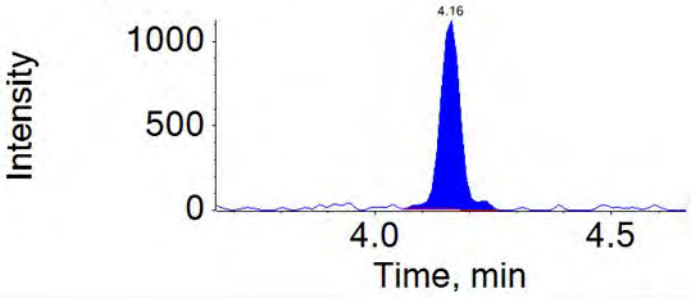
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



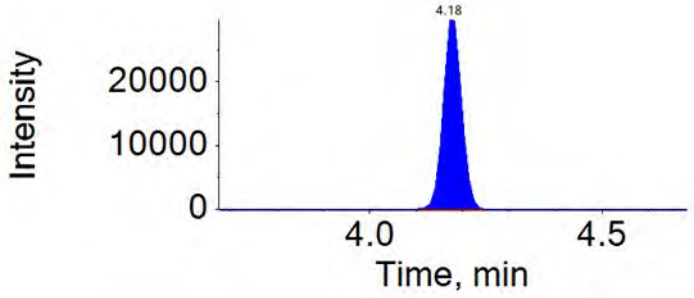
Component: PFHxA
Primary Mass: 313.0 / 269.0



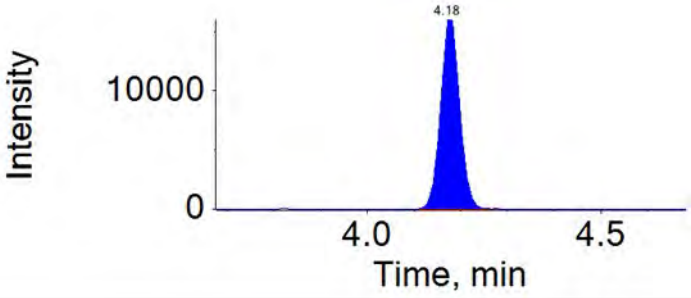
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



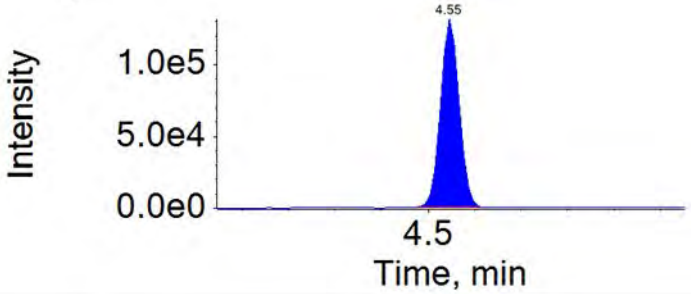
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



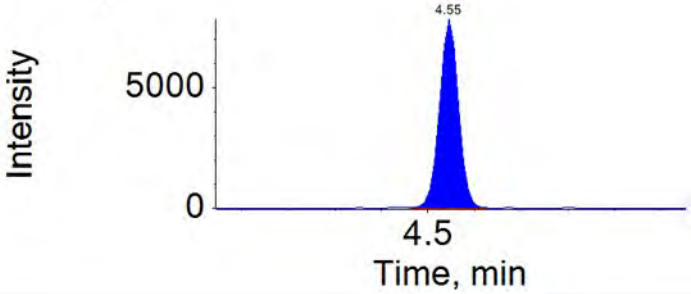
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

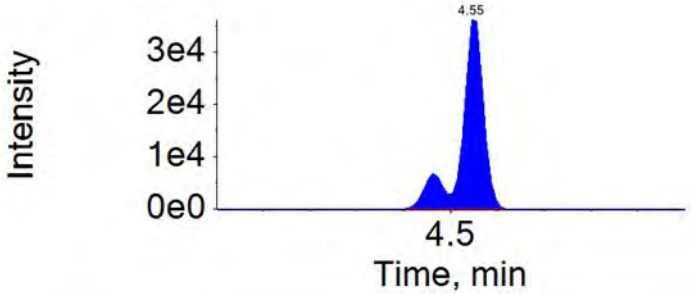
Component: PFHpA
Primary Mass: 363.0 / 319.0



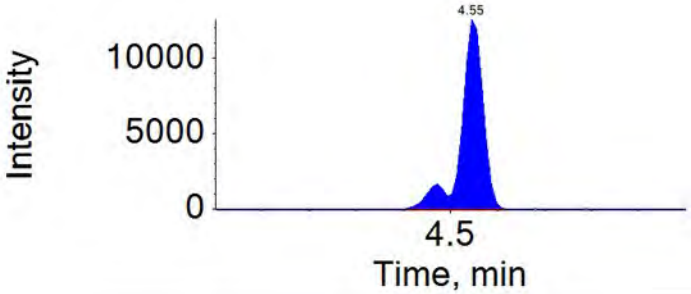
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



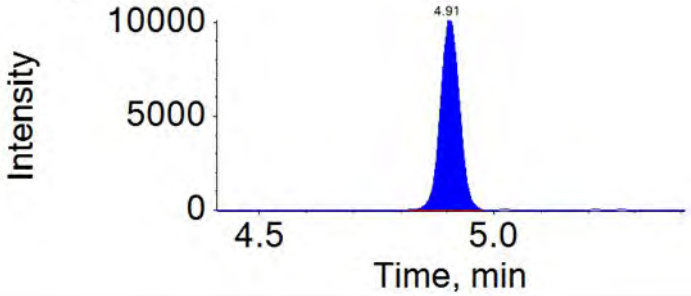
Component: PFHxS
Primary Mass: 399.0 / 80.0



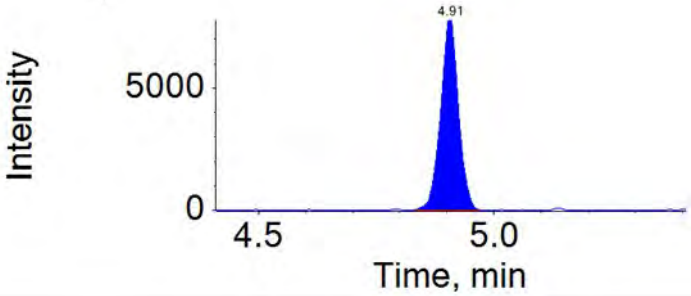
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



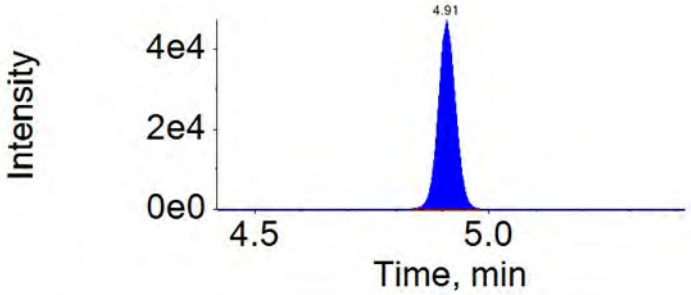
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



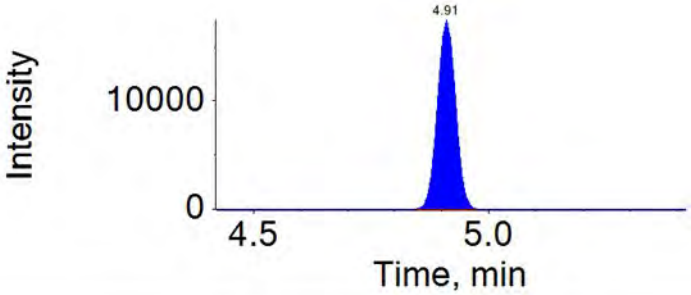
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



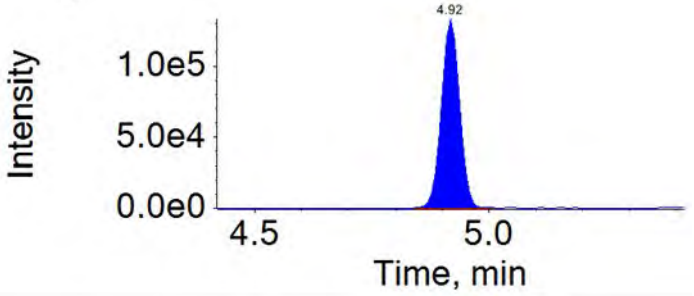
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



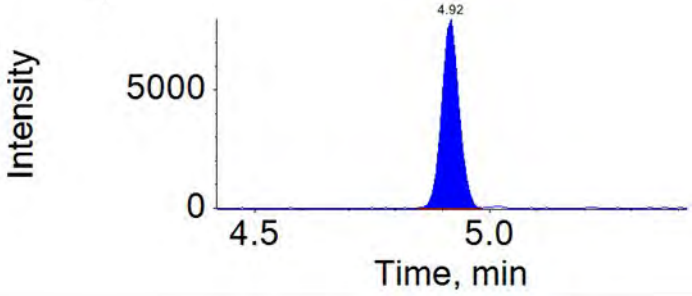
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

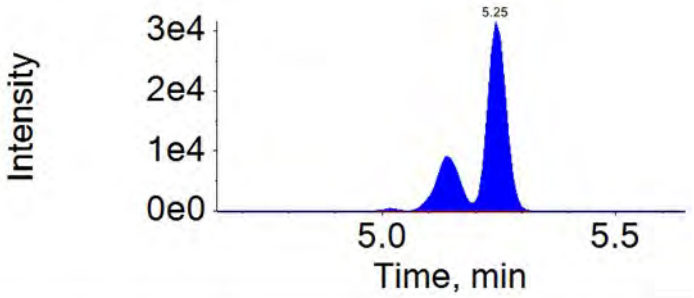
Component: PFOA
Primary Mass: 413.0 / 369.0



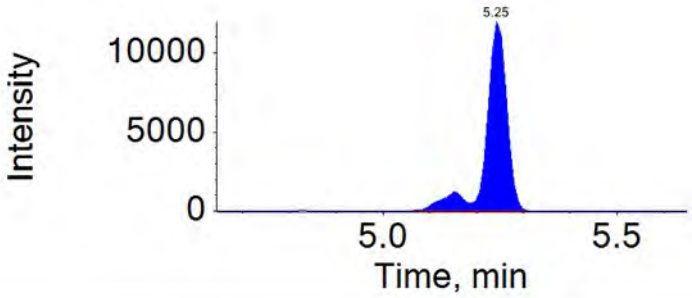
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



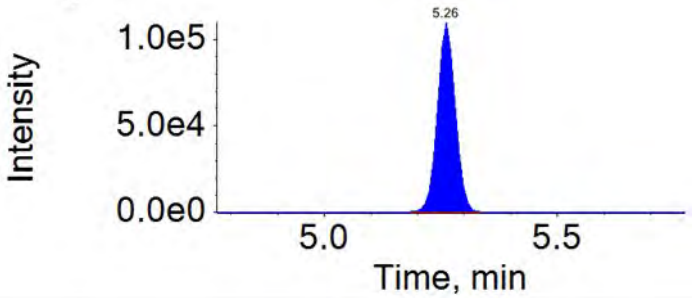
Component: PFOS
Primary Mass: 499.0 / 80.0



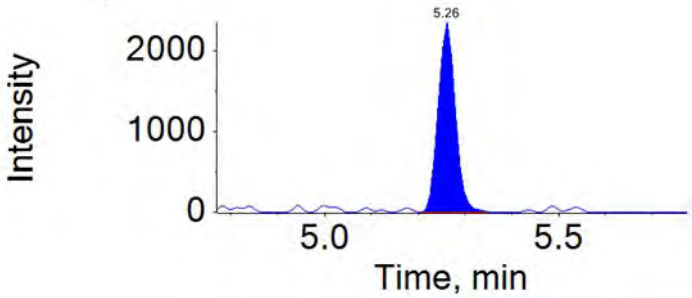
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



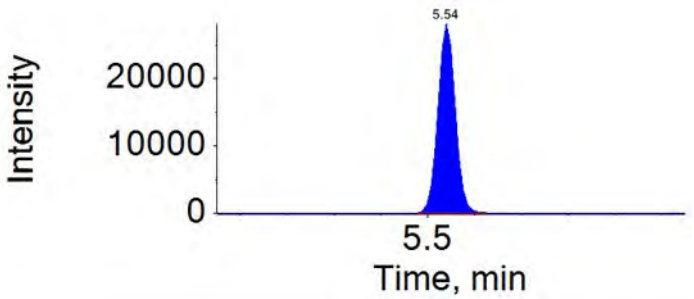
Component: PFNA
Primary Mass: 463.0 / 419.0



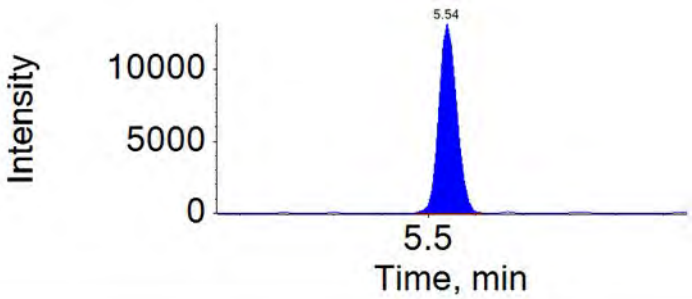
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



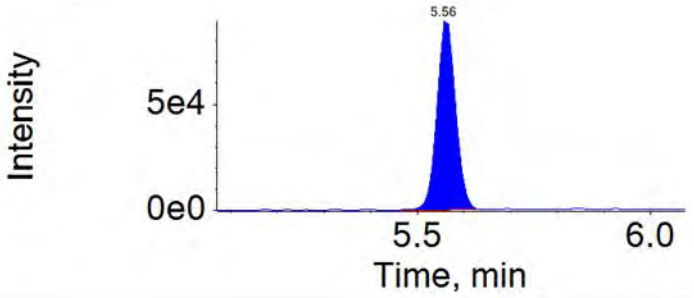
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



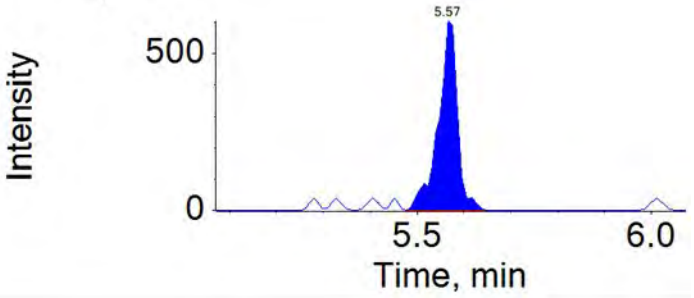
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

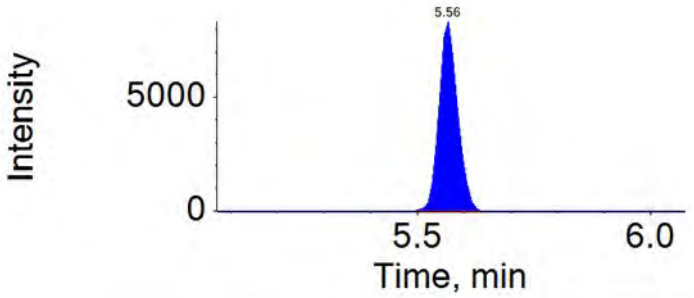
Component: PFDA
Primary Mass: 513.0 / 469.0



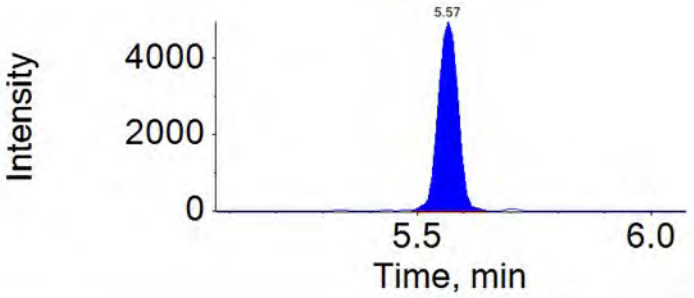
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



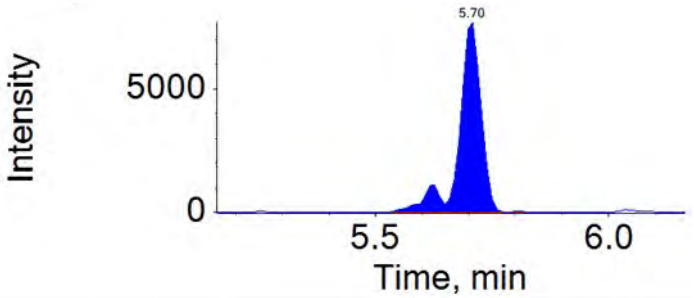
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



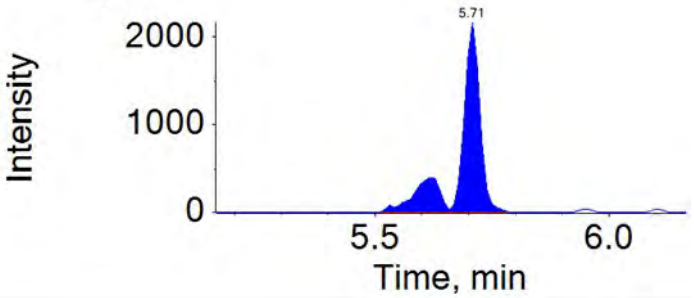
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



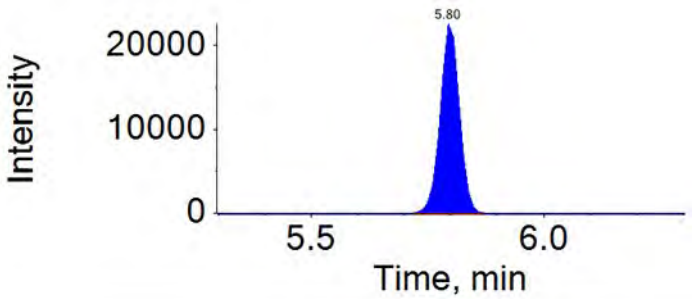
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



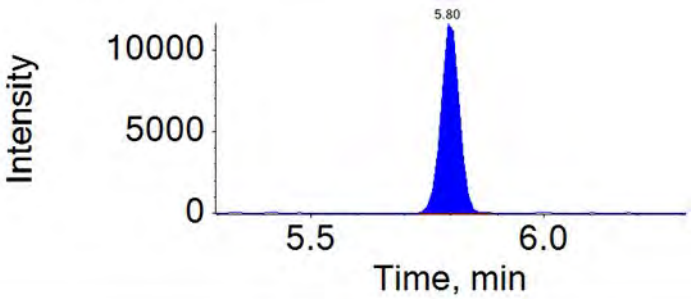
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



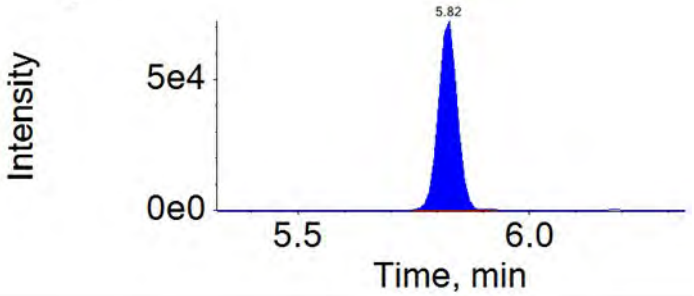
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



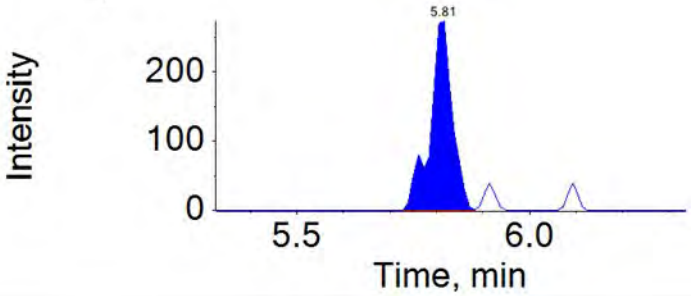
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

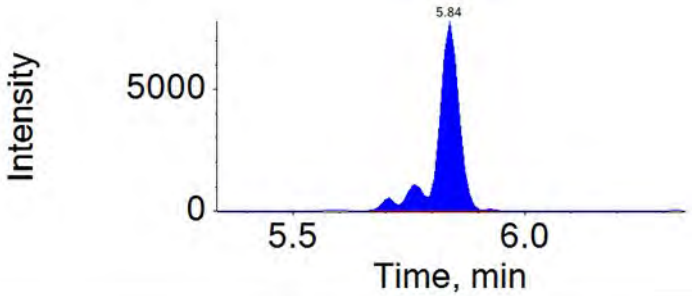
Component: PFUnDA
Primary Mass: 563.0 / 519.0



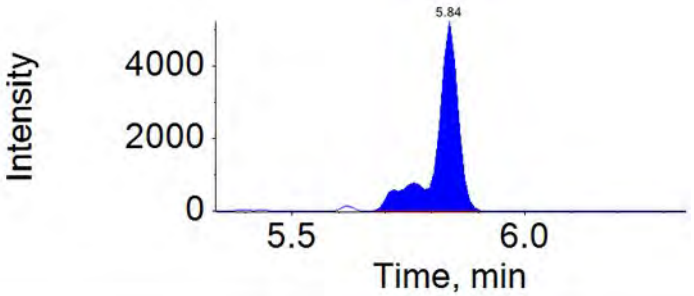
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



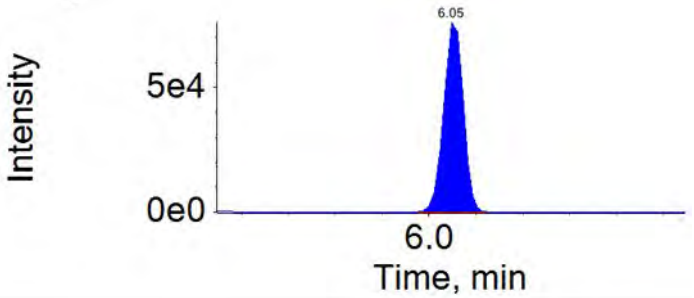
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



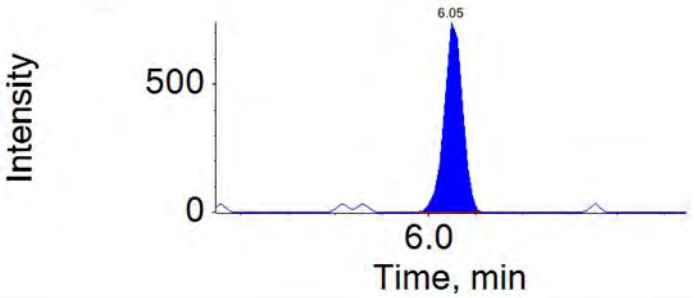
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



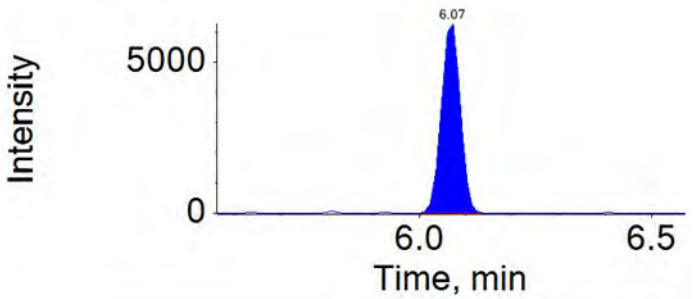
Component: PFDoDA
Primary Mass: 613.0 / 569.0



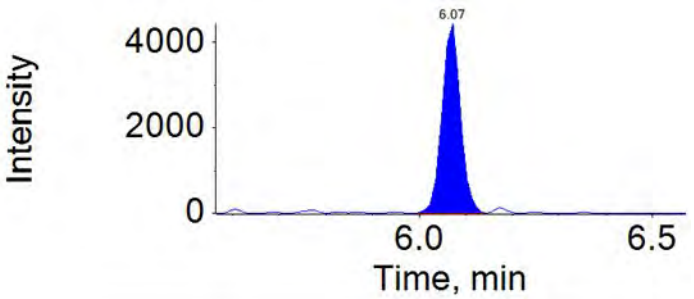
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



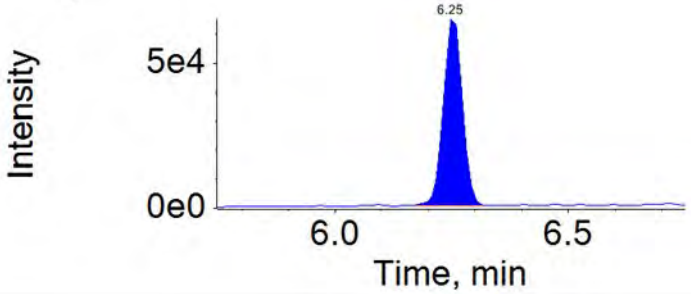
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



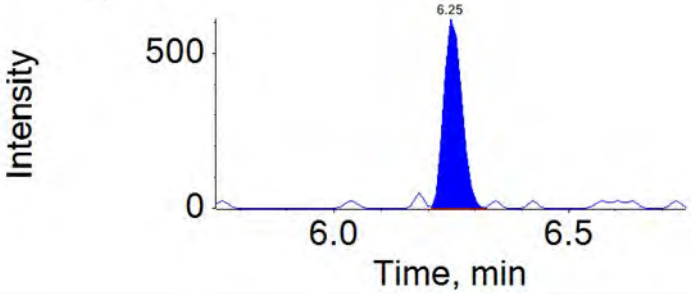
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



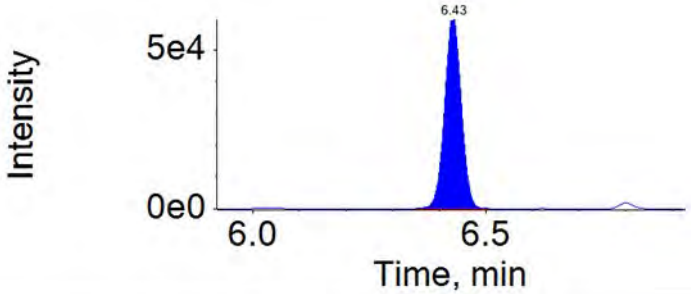
Component: PFTrDA
Primary Mass: 663.0 / 619.0



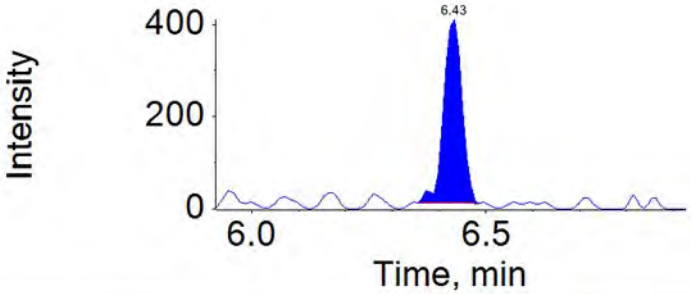
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



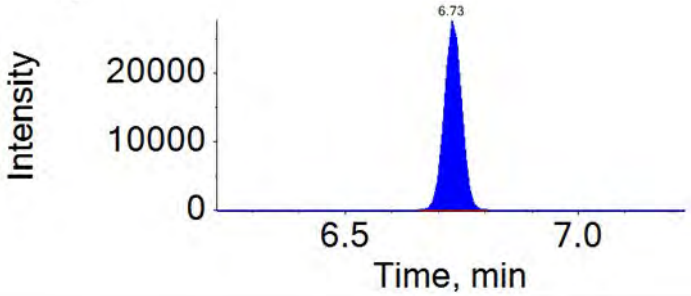
Component: PFTeDA
Primary Mass: 713.0 / 669.0



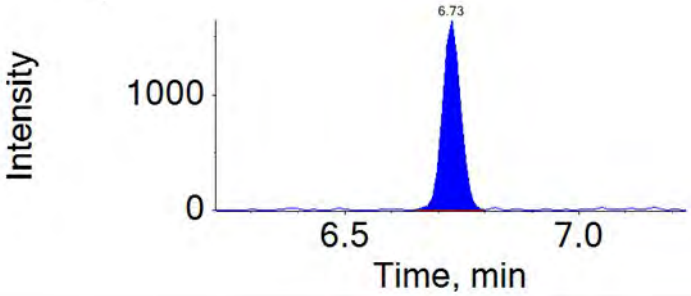
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



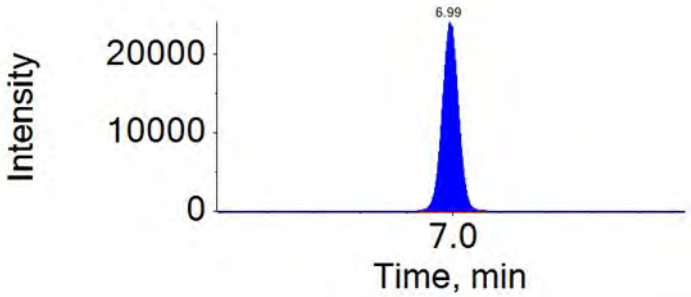
Component: PFHxDA
Primary Mass: 813.0 / 769.0



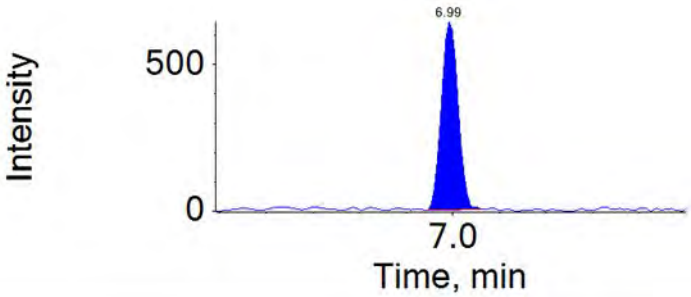
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



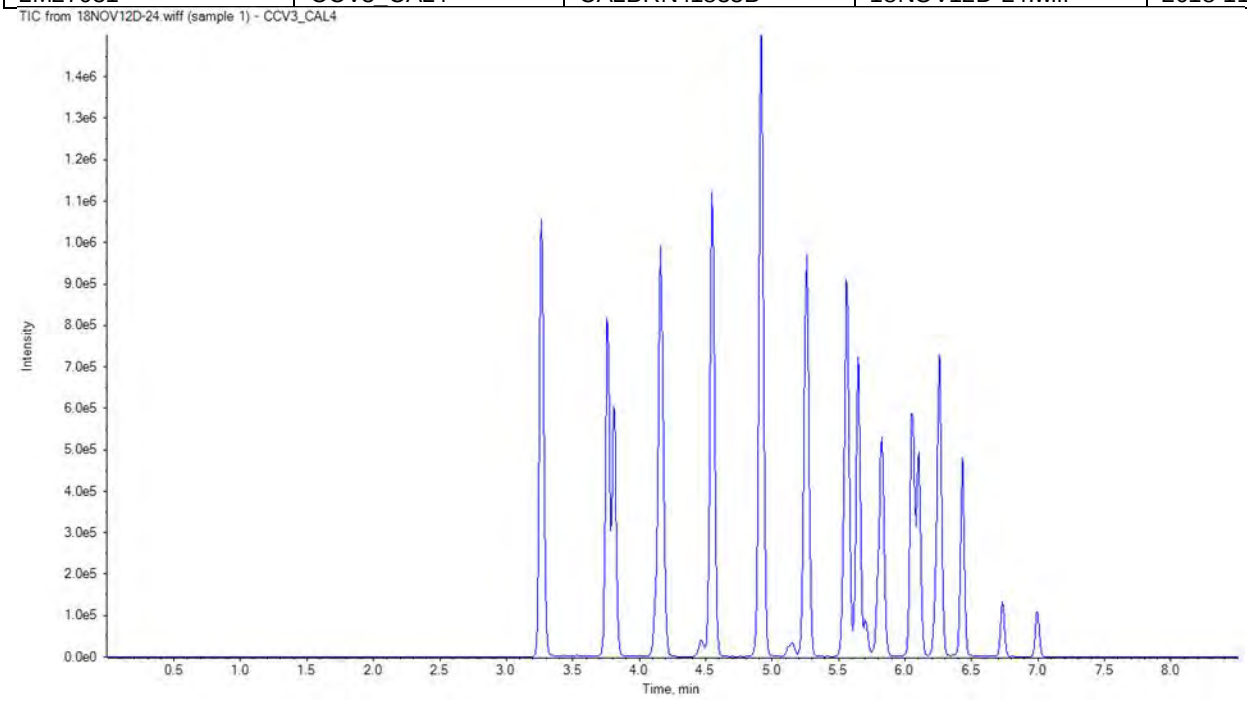
APPROVED
By MCD at 7:46 pm, 11/12/18

REVIEWED
By HMK at 11:56 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3_CAL4	CALBRN41833B	18NOV12D-24.wiff	2018-11-12T20:13:03



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664620.8	659926.2	1	50	
13C2-PFOA	5.0	472384.6	450219.7	5	50	
13C4-PFOS	4.8	255724.0	249205.8	3	50	
13C2-PFDA	5.0	285209.6	278743.9	2	50	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3_CAL4	CALBRN41833B	18NOV12D-24.wiff	2018-11-12T20:13:03

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1073458.0	10	13C4-PFBA	721703.7	5.0	1.487	3.26	1.000	8.000	8.240	3	30	
PFPeA	1061612.2	11	13C5-PFPeA	704170.0	5.0	1.508	3.76	1.000	8.000	8.727	9	30	
PFBS	613977.2	10	13C3-PFBS	424457.5	4.7	1.446	3.81	1.000	7.080	6.881	-3	30	
4:2-FTS	137791.8	12	13C2-4:2-FTS	43826.7	4.7	3.144	4.13	1.000	7.470	8.536	14	30	
PFHxA	1332890.9	12	13C5-PFHxA	648080.3	5.0	2.057	4.16	1.000	8.000	8.587	7	30	
PFPeS	322349.8	11	13C3-PFBS	424457.5	4.7	0.759	4.18	1.100	7.500	7.373	-2	30	
PFHpA	1315373.3	12	13C4-PFHpA	518995.9	5.0	2.534	4.55	1.000	8.000	8.401	5	30	
PFHxS	462076.8	19	13C3-PFHxS	301011.1	4.7	1.535	4.55	1.000	7.300	7.443	2	30	
6:2-FTS	104460.0	11	13C2-6:2-FTS	33442.6	4.8	3.124	4.91	1.000	7.580	7.559	0	30	
PFHpS	444364.3	11	13C3-PFHxS	301011.1	4.7	1.476	4.91	1.080	7.610	7.771	2	30	
PFOA	1305386.2	11	13C8-PFOA	851532.4	5.0	1.533	4.92	1.000	8.000	8.187	2	30	
PFOS	439054.0	22	13C8-PFOS	267745.7	4.8	1.640	5.25	1.000	7.400	7.171	-3	30	
PFNA	1089849.2	11	13C9-PFNA	443213.5	5.0	2.459	5.26	1.000	8.000	8.867	11	30	
PFNS	289879.8	11	13C8-PFOS	267745.7	4.8	1.083	5.54	1.060	7.680	7.575	-1	30	
PFDA	872161.3	11	13C6-PFDA	583606.0	5.0	1.494	5.56	1.000	8.000	7.923	-1	30	
8:2-FTS	88438.9	11	13C2-8:2-FTS	24650.7	4.8	3.588	5.57	1.000	7.660	8.365	9	30	
PFOSA	967690.1	11	13C8-PFOSA	638199.6	5.0	1.516	5.65	1.000	8.000	7.406	-7	30	
NMeFOSAA	106517.6	19	d3-NMeFOSAA	65907.6	5.0	1.616	5.70	1.000	8.000	9.134	14	30	
PFDS	229280.1	11	13C8-PFOS	267745.7	4.8	0.856	5.80	1.100	7.700	7.759	1	30	
PFUnDA	748520.9	11	13C7-PFUnDA	238025.3	5.0	3.145	5.82	1.000	8.000	8.221	3	30	
NEtFOSAA	91649.6	22	d5-NEtFOSAA	66168.9	5.0	1.385	5.84	1.000	8.000	7.261	-9	30	
PFDoDA	791042.4	12	13C2-PFDoDA	517446.6	5.0	1.529	6.05	1.000	8.000	7.785	-3	30	
10:2-FTS	64309.7	12	13C2-8:2-FTS	24650.7	4.8	2.609	6.07	1.090	7.710	8.690	13	30	
NMePFOSAE	612986.5	11	d7-NMePFOSAE	300444.2	5.0	2.040	6.10	1.000	8.000	8.491	6	30	
NMePFOSA	119869.5	11	d3-NMePFOSA	71775.4	5.0	1.670	6.11	1.000	8.000	8.239	3	30	
PFDoS	116156.7	11	13C8-PFOS	267745.7	4.8	0.434	6.22	1.190	7.740	7.598	-2	30	
NEtPFOSAE	650416.6	11	d9-NEtPFOSAE	248092.1	5.0	2.622	6.26	1.000	8.000	8.411	5	30	
NEtPFOSA	96668.8	11	d5-NEtPFOSA	58313.5	5.0	1.658	6.27	1.000	8.000	7.613	-5	30	
PFTrDA	642819.9	11	13C2-PFDoDA	517446.6	5.0	1.242	6.25	1.030	8.000	7.841	-2	30	
PFTeDA	560487.6	10	13C2-PFTeDA	384177.8	5.0	1.459	6.43	1.000	8.000	8.178	2	30	
PFHxDA	258849.7	11	13C2-PFTeDA	384177.8	5.0	0.674	6.73	1.050	8.000	8.027	0	30	
PFODA	232853.6	10	13C2-PFTeDA	384177.8	5.0	0.606	6.99	1.090	8.000	8.441	6	30	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV3_CAL4			**Data File:**		18NOV12D-24.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-12T20:13:03
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664620.8	659926.2	1	50	
13C2-PFOA	5.0	472384.6	450219.7	5	50	
13C4-PFOS	4.8	255724.0	249205.8	3	50	
13C2-PFDA	5.0	285209.6	278743.9	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	721703.7	13C3-PFBA	664620.8	1.086	5.000	4.868	97	70-130	
E13C5-PFPeA	704170.0	13C3-PFBA	664620.8	1.060	5.000	4.752	95	70-130	
E13C3-PFBS	424457.5	13C3-PFBA	664620.8	0.639	4.650	4.508	97	70-130	
E13C2-4:2-FTS	43826.7	13C2-PFOA	472384.6	0.093	4.670	4.132	88	70-130	
E13C5-PFHxA	648080.3	13C2-PFOA	472384.6	1.372	5.000	4.956	99	70-130	
E13C3-PFHxS	301011.1	13C2-PFOA	472384.6	0.637	4.730	4.372	92	70-130	
E13C4-PFHpA	518995.9	13C2-PFOA	472384.6	1.099	5.000	4.950	99	70-130	
E13C2-6:2-FTS	33442.6	13C2-PFOA	472384.6	0.071	4.750	4.737	100	70-130	
E13C8-PFOA	851532.4	13C2-PFOA	472384.6	1.803	5.000	4.966	99	70-130	
E13C8-PFOS	267745.7	13C4-PFOS	255724.0	1.047	4.780	4.639	97	70-130	
E13C9-PFNA	443213.5	13C4-PFOS	255724.0	1.733	5.000	4.832	97	70-130	
E13C6-PFDA	583606.0	13C2-PFDA	285209.6	2.046	5.000	4.775	96	70-130	
E13C2-8:2-FTS	24650.7	13C2-PFDA	285209.6	0.086	4.790	4.310	90	70-130	
E13C8-PFOSA	638199.6	13C2-PFDA	285209.6	2.238	5.000	4.961	99	70-130	
Ed3-NMeFOSAA	65907.6	13C2-PFDA	285209.6	0.231	5.000	4.171	83	70-130	
E13C7-PFUnDA	238025.3	13C2-PFDA	285209.6	0.835	5.000	4.845	97	70-130	
Ed5-NEtFOSAA	66168.9	13C2-PFDA	285209.6	0.232	5.000	4.908	98	70-130	
E13C2-PFDoDA	517446.6	13C2-PFDA	285209.6	1.814	5.000	4.710	94	70-130	
Ed7-NMePFOSAE	300444.2	13C2-PFDA	285209.6	1.053	5.000	4.559	91	70-130	
Ed3-NMePFOSA	71775.4	13C2-PFDA	285209.6	0.252	5.000	4.572	91	70-130	
Ed9-NEtPFOSAE	248092.1	13C2-PFDA	285209.6	0.870	5.000	4.524	90	70-130	
Ed5-NEtPFOSA	58313.5	13C2-PFDA	285209.6	0.204	5.000	4.796	96	70-130	
E13C2-PFTeDA	384177.8	13C2-PFDA	285209.6	1.347	5.000	4.729	95	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

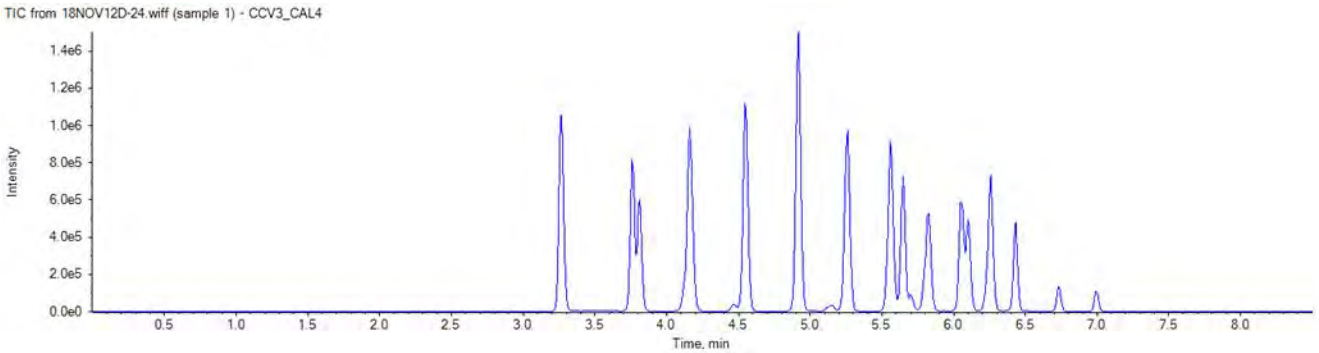
Analyte Quantitation Peak Table

Sample Name: CCV3_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12D-24.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1073458.0		A	13C4-PFBA	3.26	721703.7	1.487	8.240
PFPeA	3.76	1.000	1061612.2		A	13C5-PFPeA	3.76	704170.0	1.508	8.727
PFBS	3.81	1.000	613977.2		A	13C3-PFBS	3.81	424457.5	1.446	6.881
4:2-FTS	4.13	1.000	137791.8		A	13C2-4:2-FTS	4.13	43826.7	3.144	8.536
PFHxA	4.16	1.000	1332890.9		A	13C5-PFHxA	4.16	648080.3	2.057	8.587
PFPeS	4.18	1.100	322349.8		A	13C3-PFBS	3.81	424457.5	0.759	7.373
PFHpA	4.55	1.000	1315373.3		A	13C4-PFHpA	4.55	518995.9	2.534	8.401
PFHxS	4.55	1.000	462076.8		M	13C3-PFHxS	4.55	301011.1	1.535	7.443
6:2-FTS	4.91	1.000	104460.0		A	13C2-6:2-FTS	4.91	33442.6	3.124	7.559
PFHpS	4.91	1.080	444364.3		A	13C3-PFHxS	4.55	301011.1	1.476	7.771
PFOA	4.92	1.000	1305386.2		A	13C8-PFOA	4.92	851532.4	1.533	8.187
PFOS	5.25	1.000	439054.0		M	13C8-PFOS	5.25	267745.7	1.640	7.171
PFNA	5.26	1.000	1089849.2		A	13C9-PFNA	5.26	443213.5	2.459	8.867
PFNS	5.54	1.060	289879.8		A	13C8-PFOS	5.25	267745.7	1.083	7.575
PFDA	5.56	1.000	872161.3		A	13C6-PFDA	5.56	583606.0	1.494	7.923
8:2-FTS	5.57	1.000	88438.9		A	13C2-8:2-FTS	5.57	24650.7	3.588	8.365
PFOSA	5.65	1.000	967690.1		A	13C8-PFOSA	5.65	638199.6	1.516	7.406
NMeFOSAA	5.70	1.000	106517.6		M	d3-NMeFOSAA	5.70	65907.6	1.616	9.134
PFDS	5.80	1.100	229280.1		A	13C8-PFOS	5.25	267745.7	0.856	7.759
PFUnDA	5.82	1.000	748520.9		A	13C7-PFUnDA	5.82	238025.3	3.145	8.221
NEtFOSAA	5.84	1.000	91649.6		A	d5-NEtFOSAA	5.84	66168.9	1.385	7.261
PFDoDA	6.05	1.000	791042.4		A	13C2-PFDoDA	6.05	517446.6	1.529	7.785
10:2-FTS	6.07	1.090	64309.7		A	13C2-8:2-FTS	5.57	24650.7	2.609	8.690
NMePFOSAE	6.10	1.000	612986.5		A	d7-NMePFOSAE	6.09	300444.2	2.040	8.491
NMePFOSA	6.11	1.000	119869.5		A	d3-NMePFOSA	6.11	71775.4	1.670	8.239
PFDoS	6.22	1.190	116156.7		A	13C8-PFOS	5.25	267745.7	0.434	7.598
NEtPFOSAE	6.26	1.000	650416.6		A	d9-NEtPFOSAE	6.25	248092.1	2.622	8.411
NEtPFOSA	6.27	1.000	96668.8		A	d5-NEtPFOSA	6.27	58313.5	1.658	7.613
PFTrDA	6.25	1.030	642819.9		A	13C2-PFDoDA	6.05	517446.6	1.242	7.841
PFTeDA	6.43	1.000	560487.6		A	13C2-PFTeDA	6.43	384177.8	1.459	8.178
PFHxDA	6.73	1.050	258849.7		A	13C2-PFTeDA	6.43	384177.8	0.674	8.027
PFODA	6.99	1.090	232853.6		A	13C2-PFTeDA	6.43	384177.8	0.606	8.441

Total Ion Chromatogram

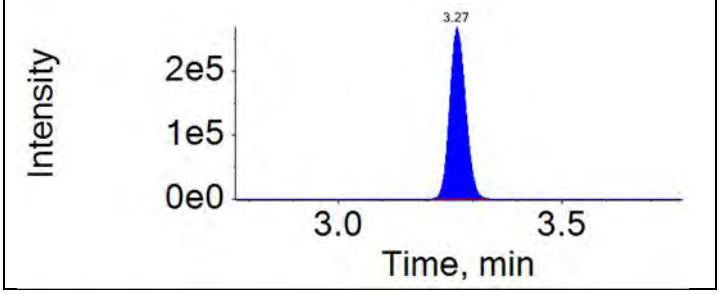


APPROVED
By JPT at 10:23 am, 11/13/18

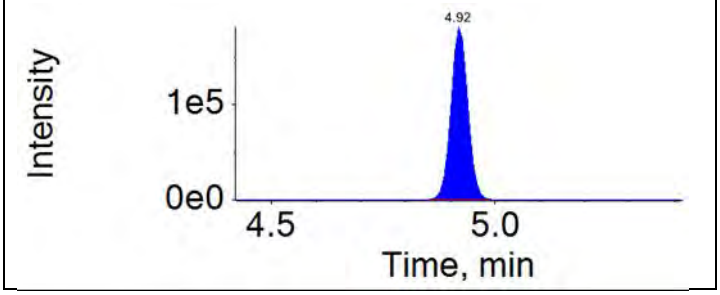
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

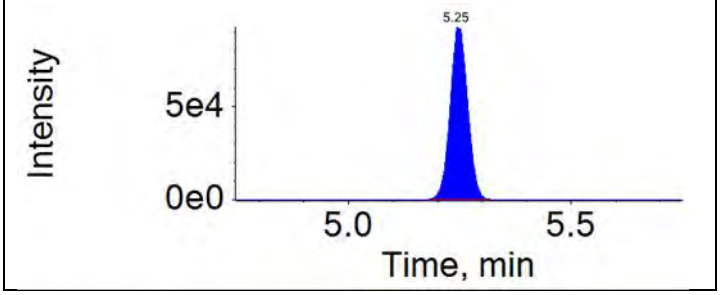
Injection Standard: 13C3-PFBA
216.0 / 172.0



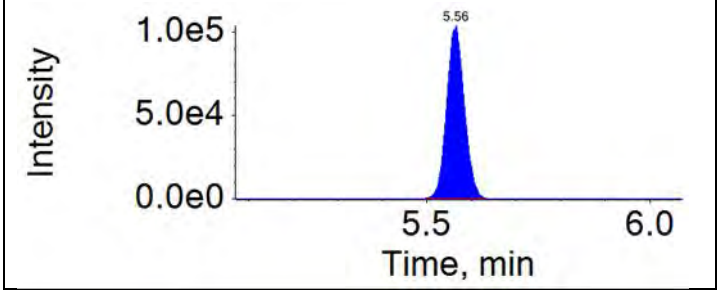
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



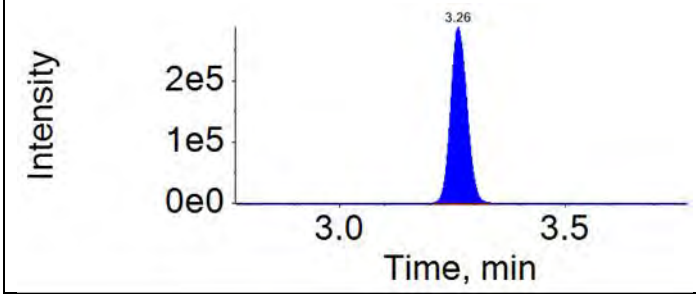
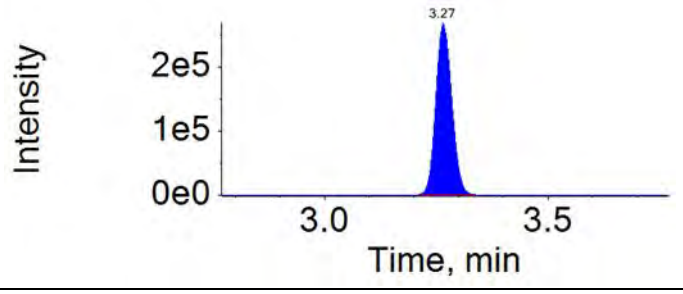
Injection Standard: 13C2-PFDA
515.0 / 470.0

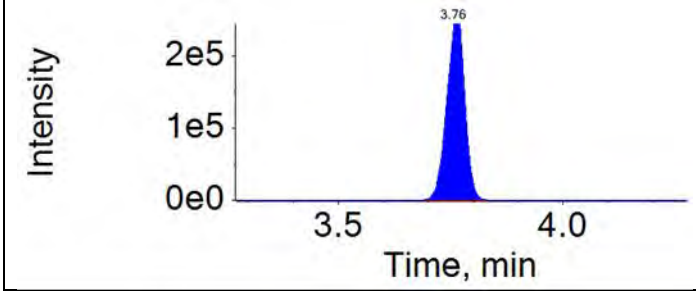
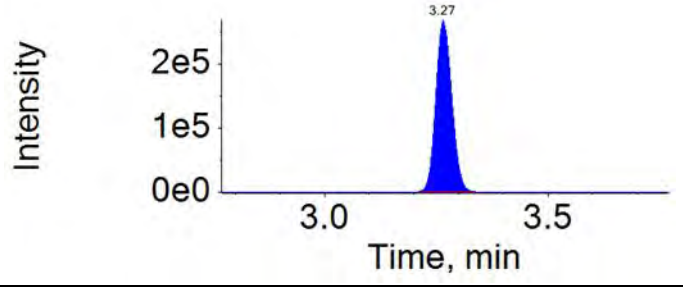


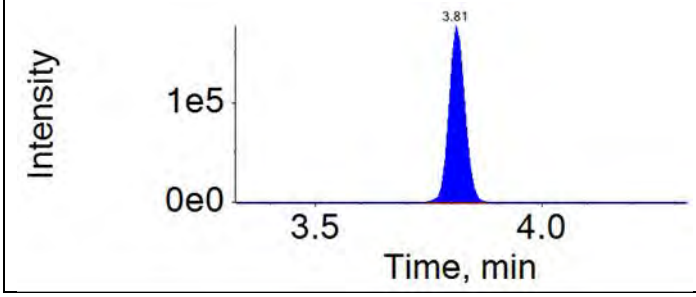
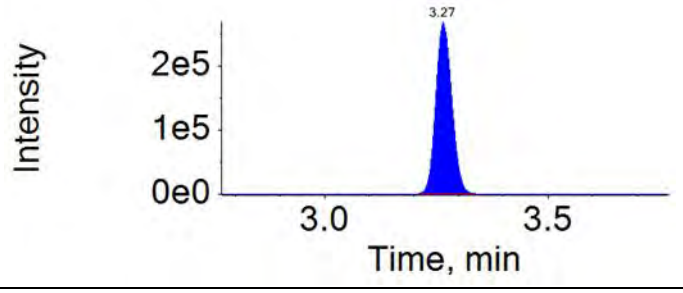
APPROVED
By JPT at 10:23 am, 11/13/18

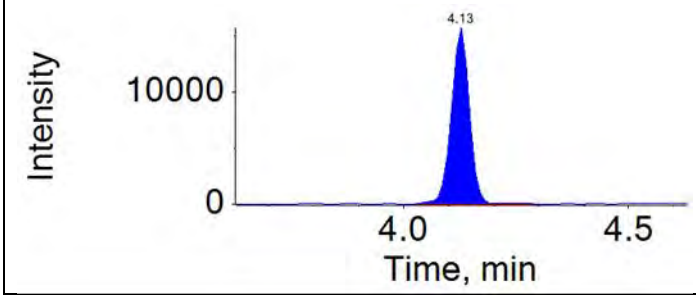
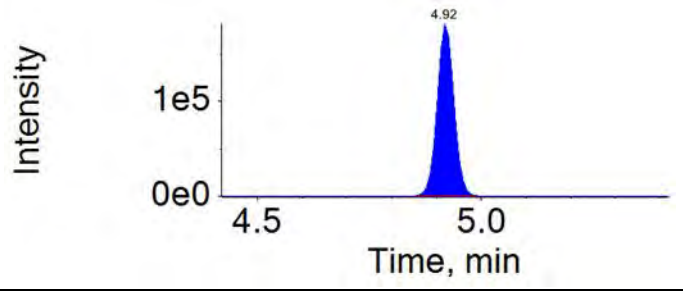
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

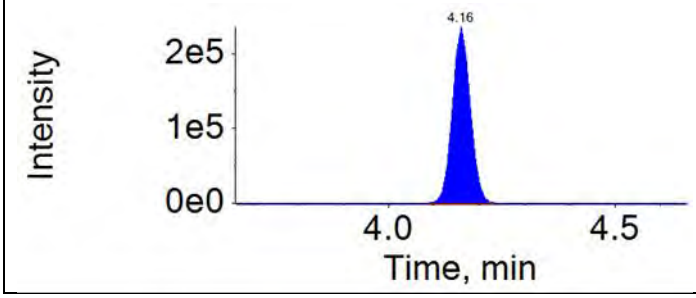
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

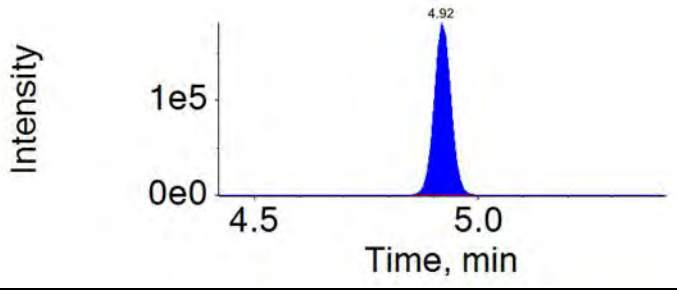
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

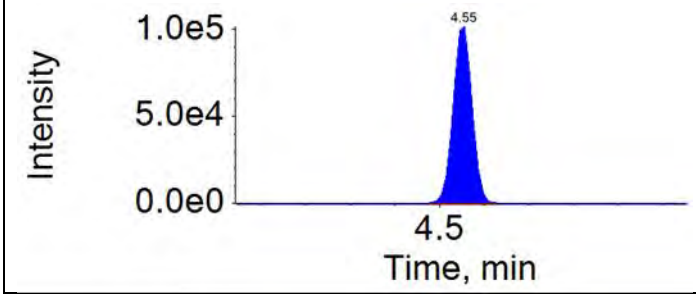
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

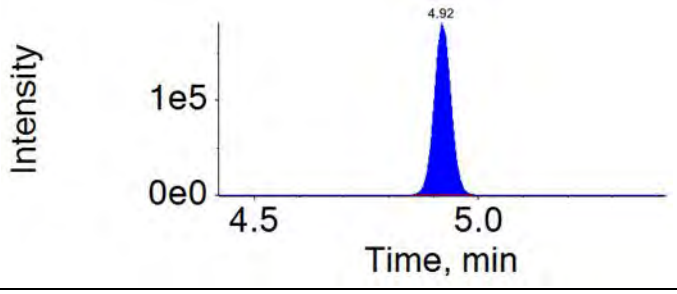
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



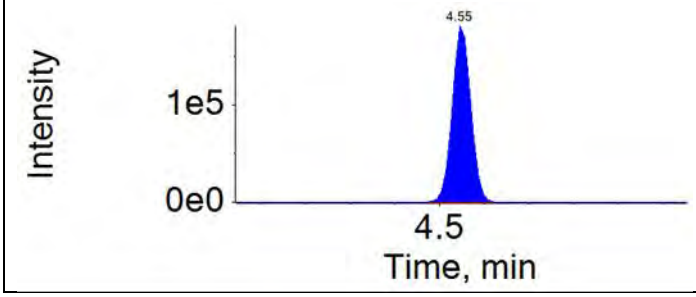


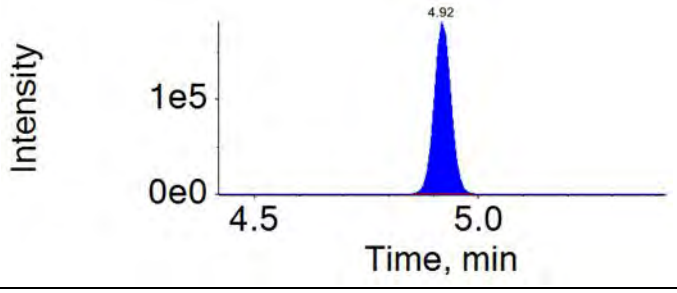
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



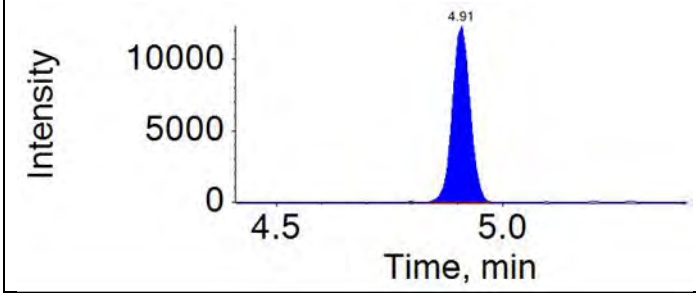


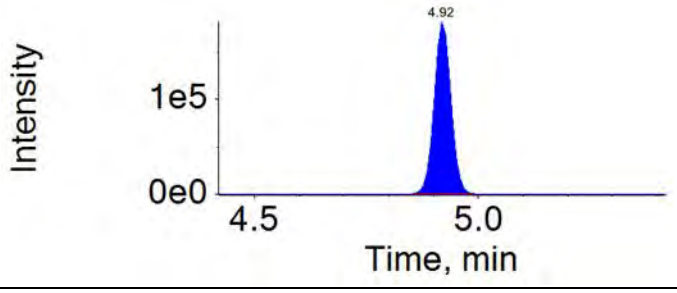
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

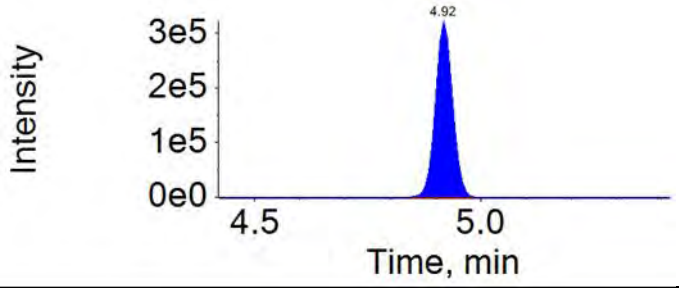
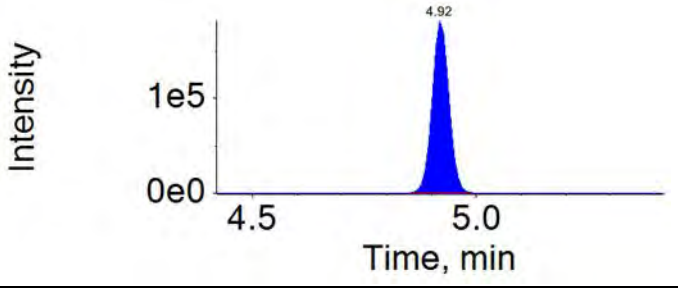


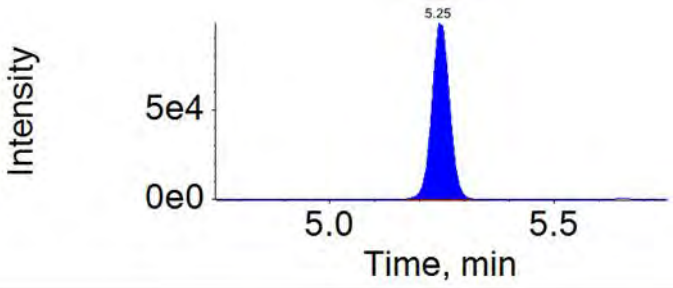
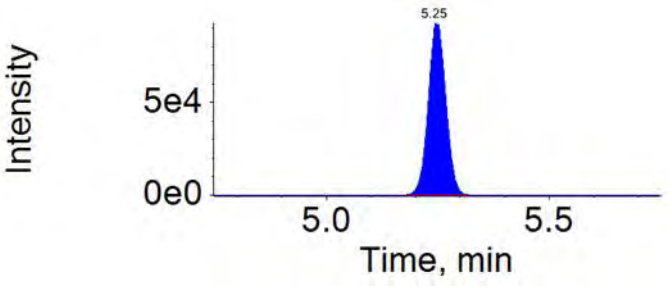


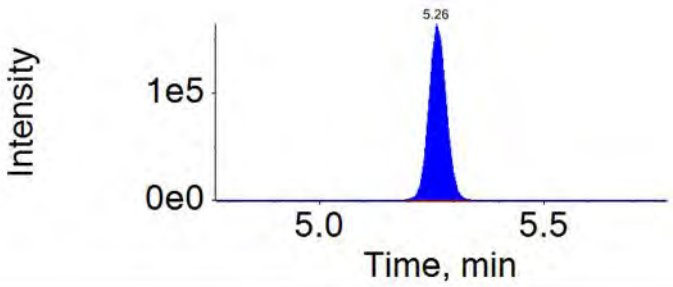
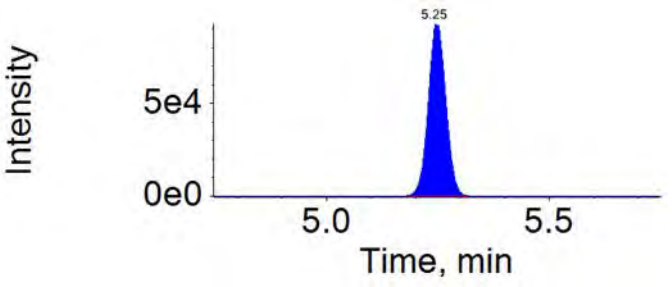
APPROVED
By JPT at 10:23 am, 11/13/18

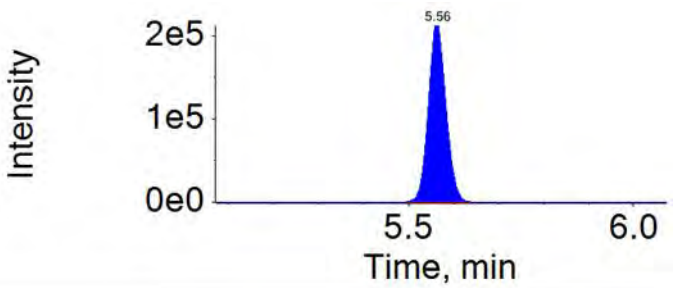
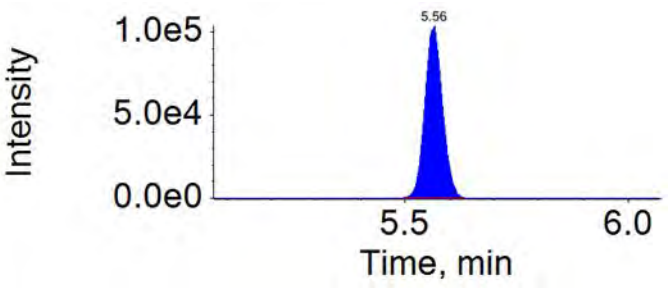
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

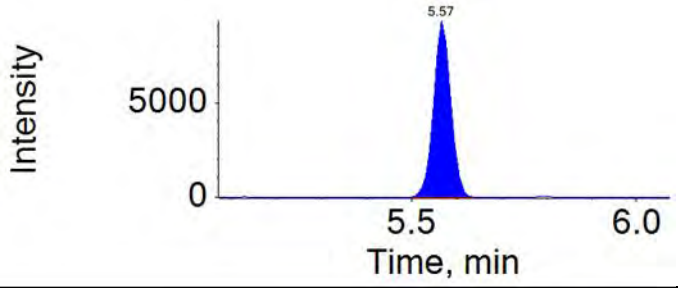
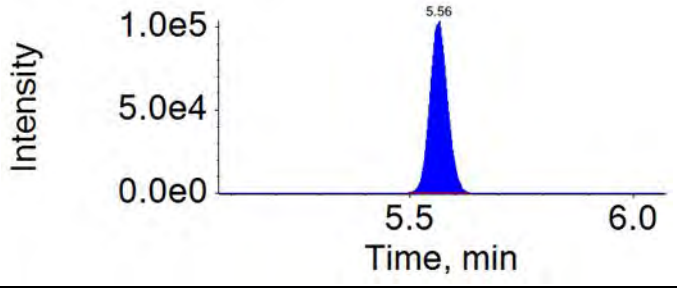
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

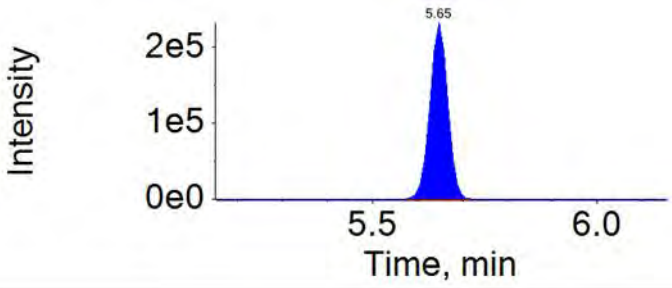
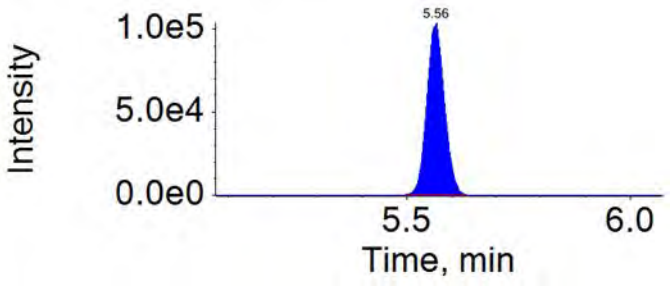
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

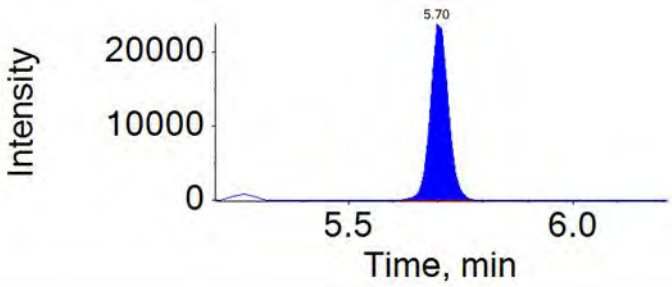
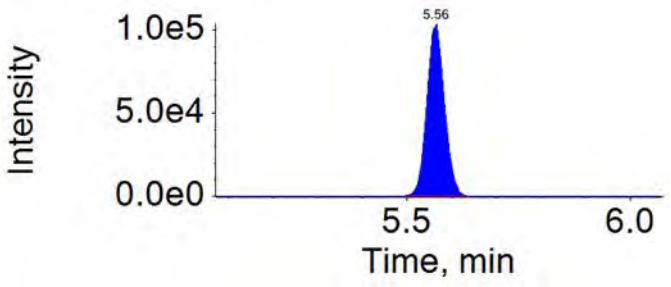
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

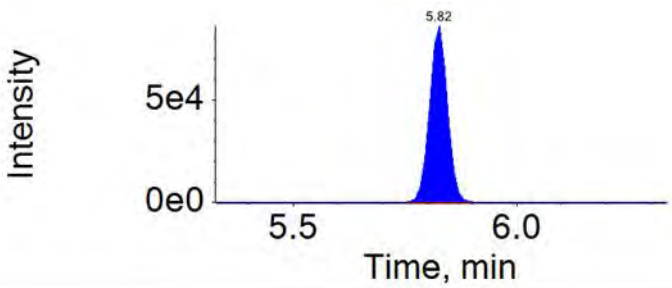
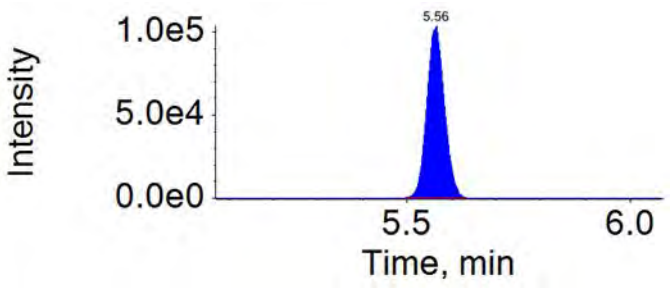
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

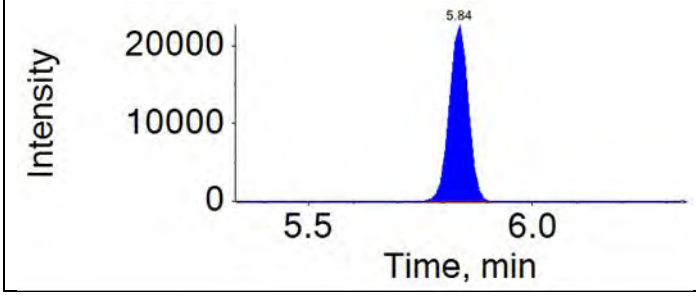
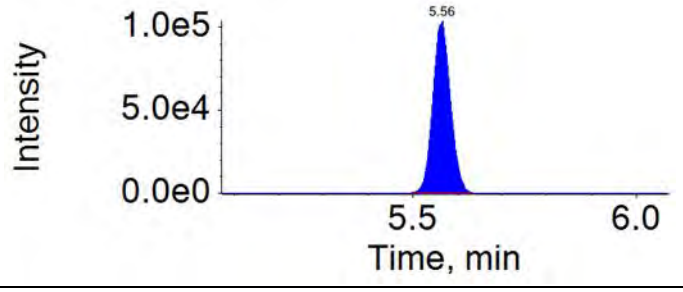
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

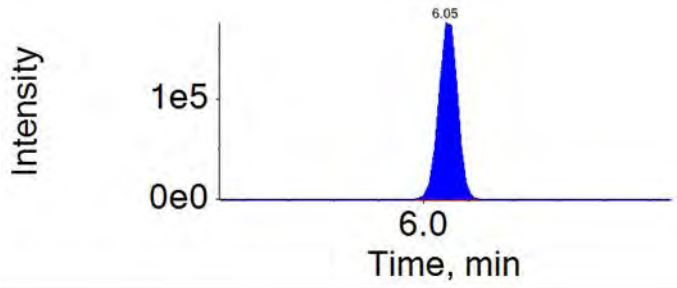
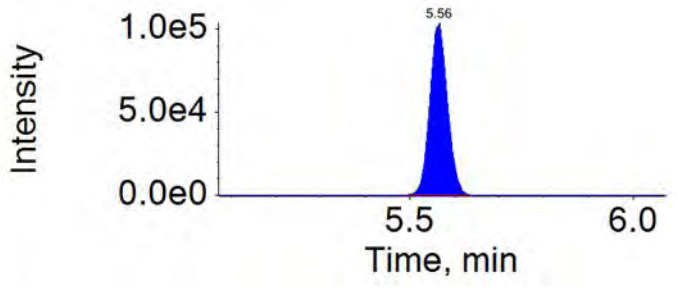
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

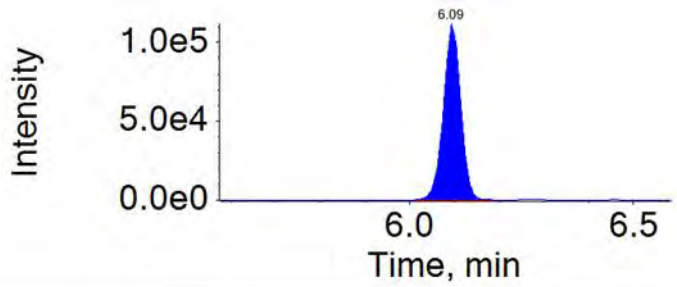
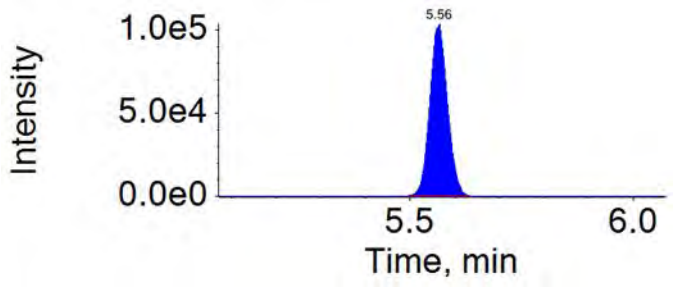
APPROVED
By JPT at 10:23 am, 11/13/18

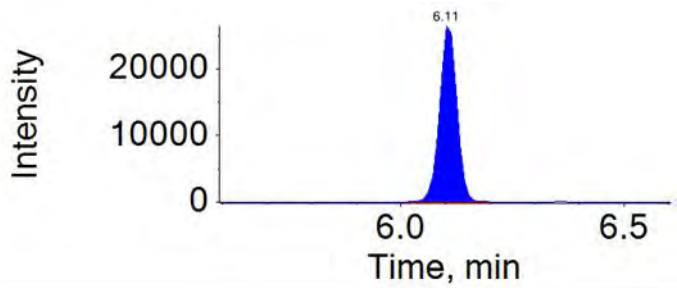
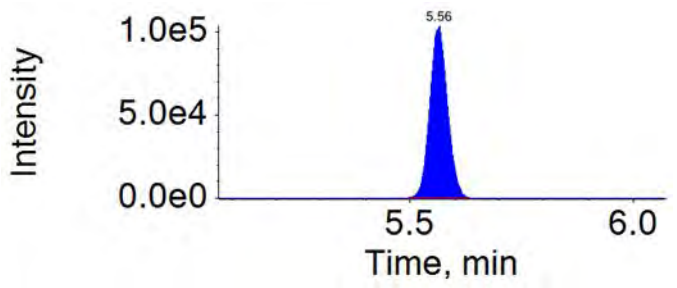
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

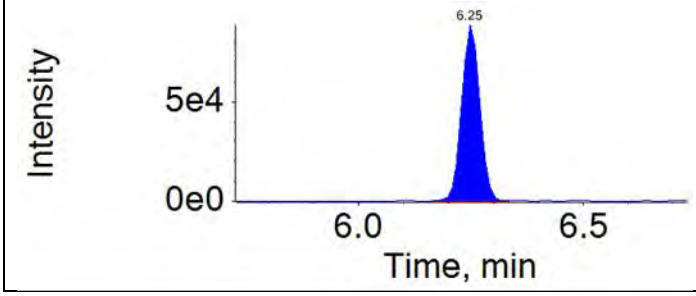
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

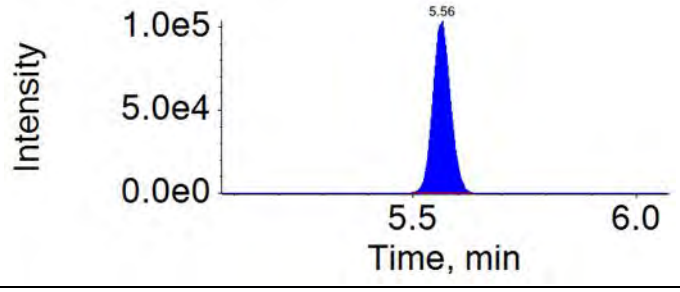
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

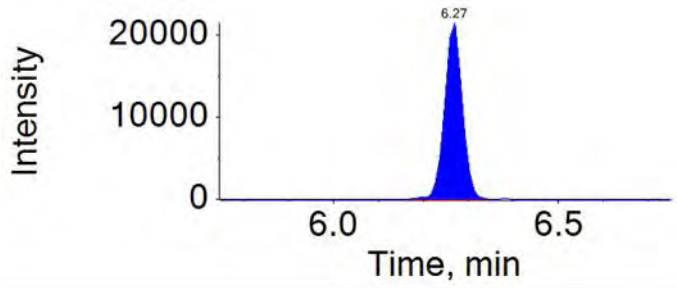
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

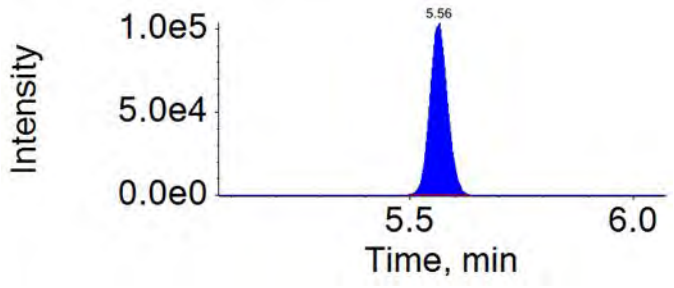
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



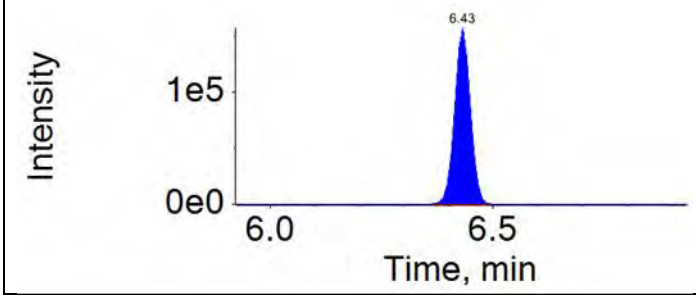


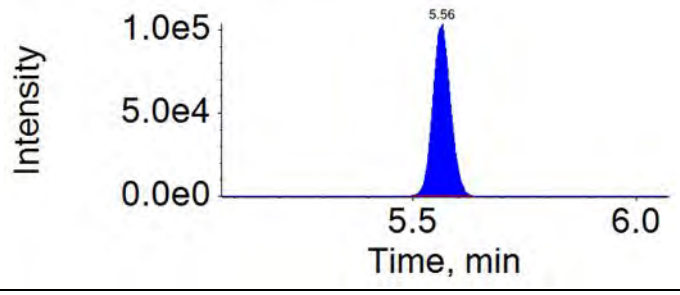
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



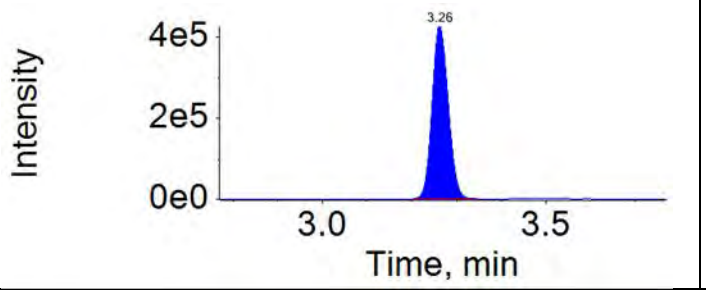


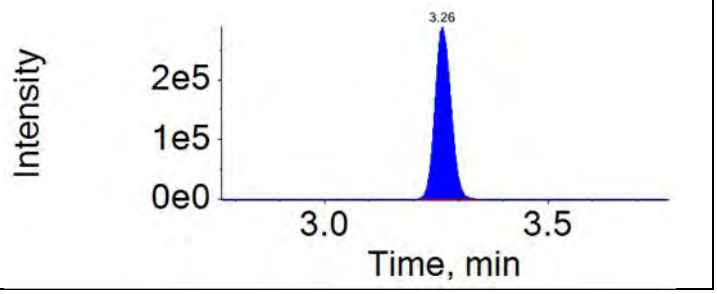
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

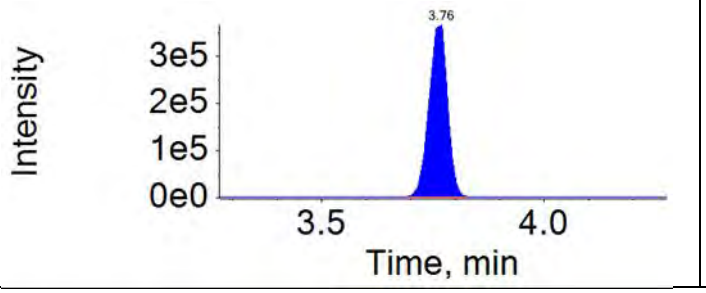
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

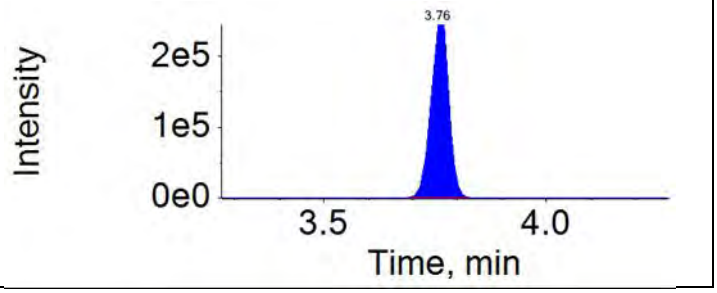
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



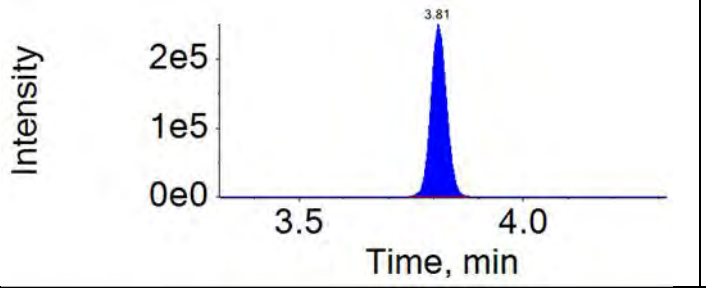


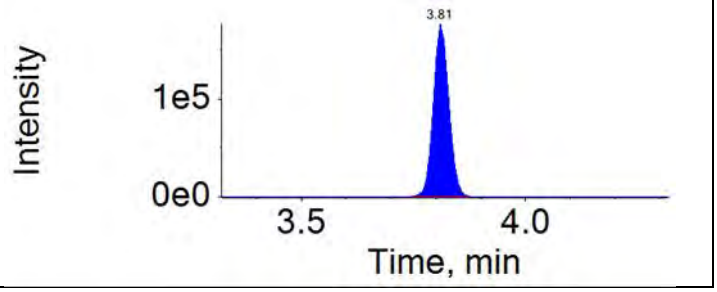
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



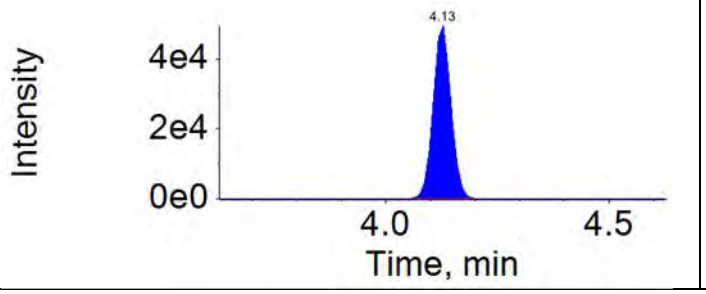


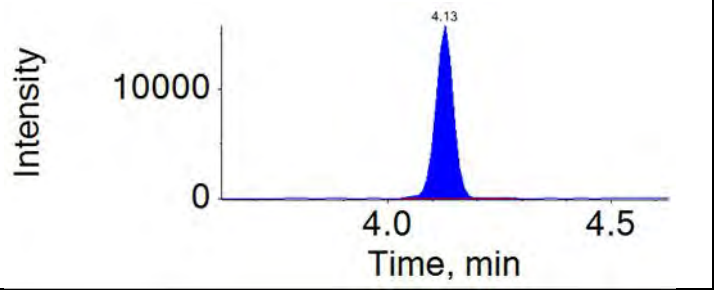
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



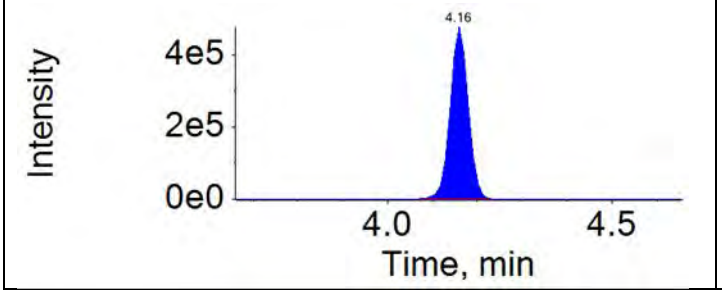


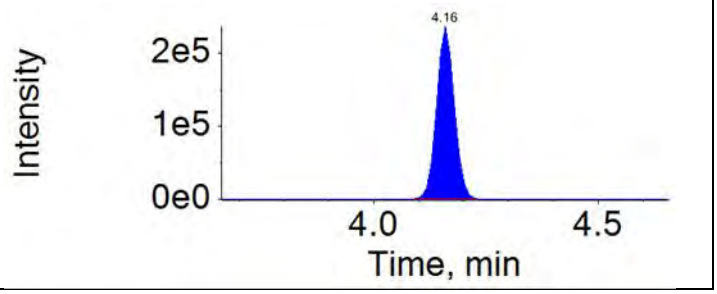
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

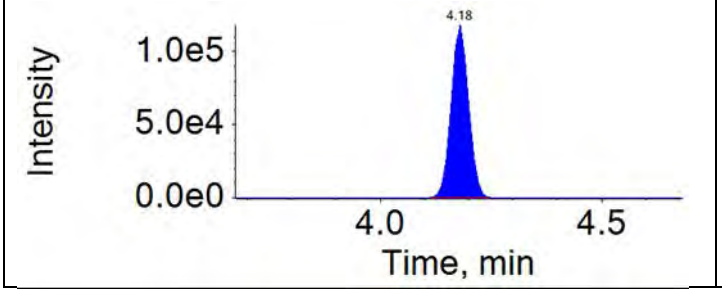
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

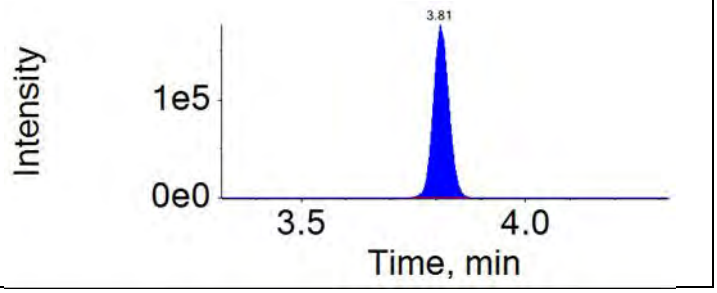
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



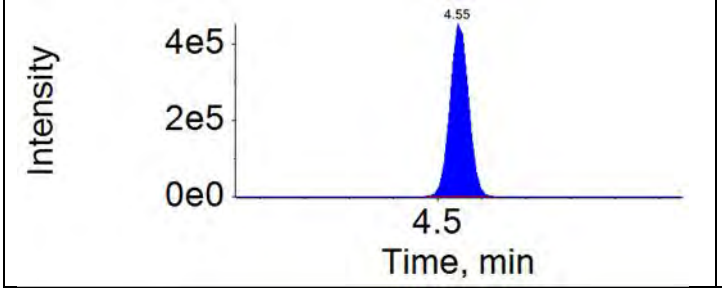


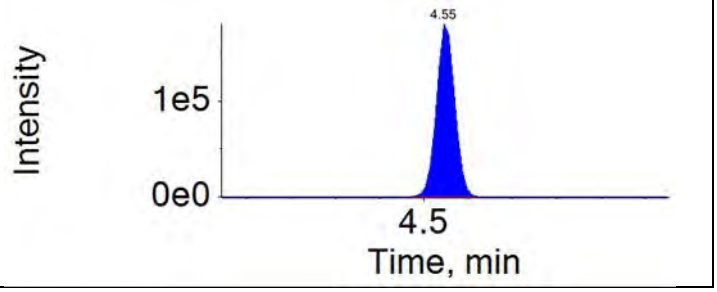
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



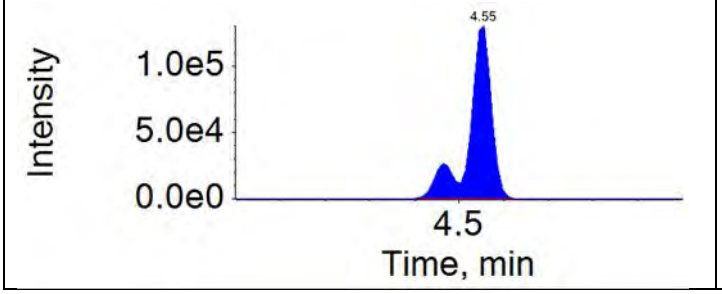


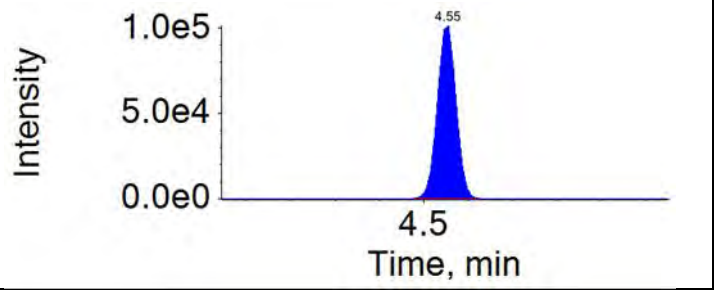
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



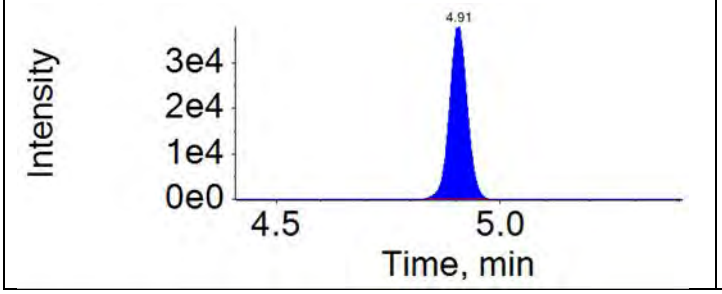


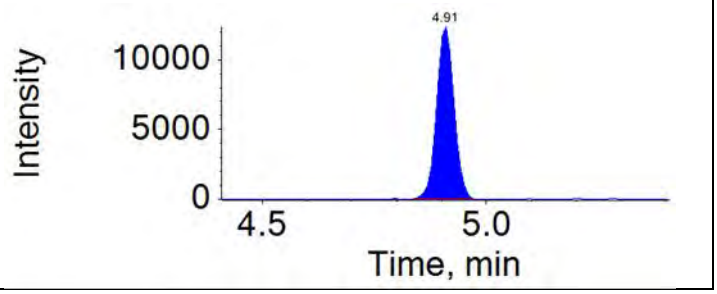
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

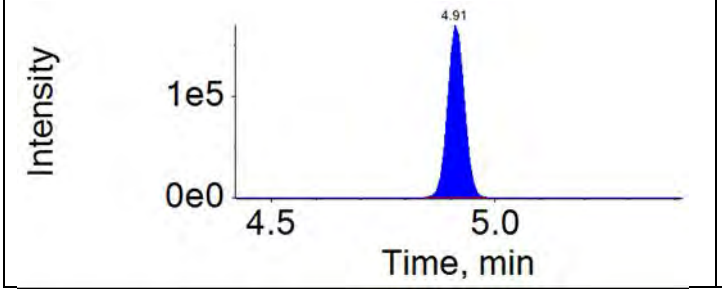
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

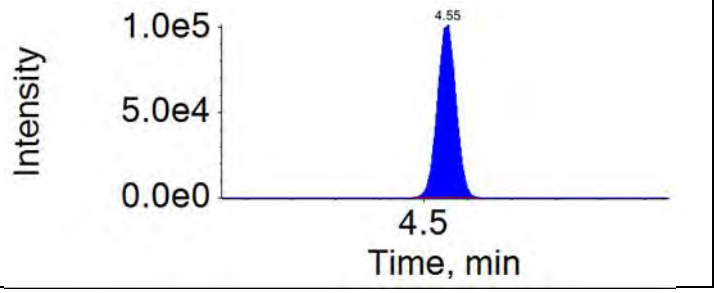
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



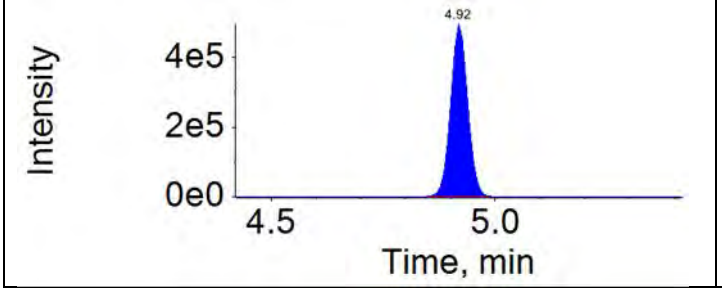


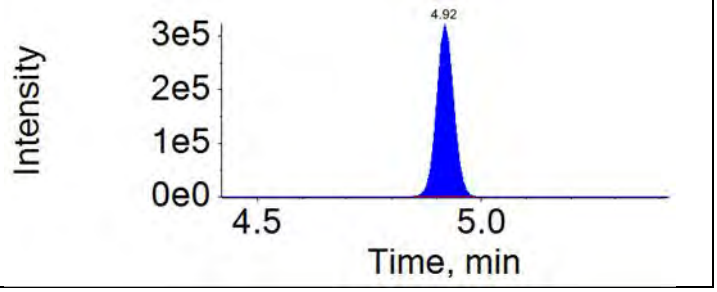
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



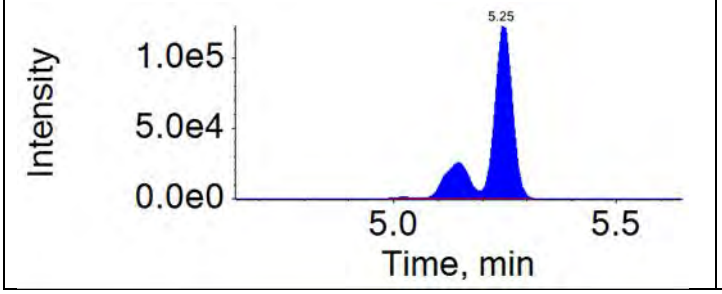


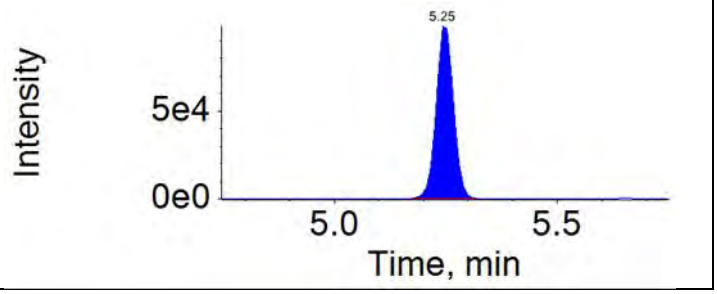
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



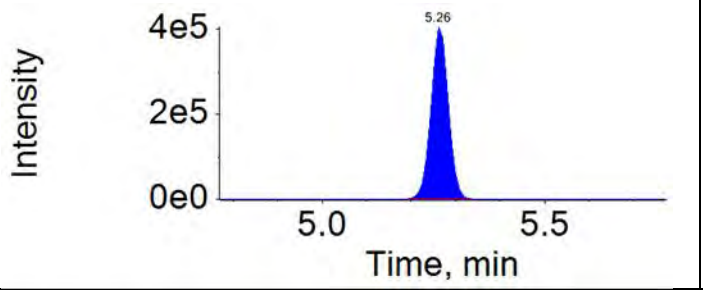


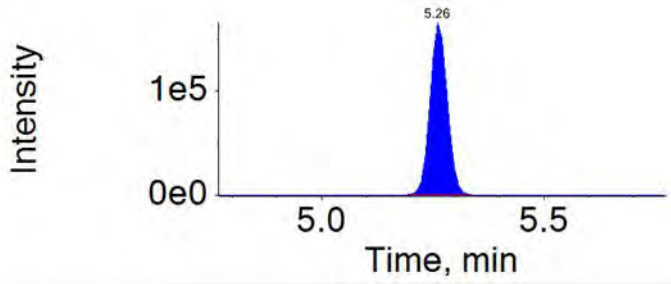
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

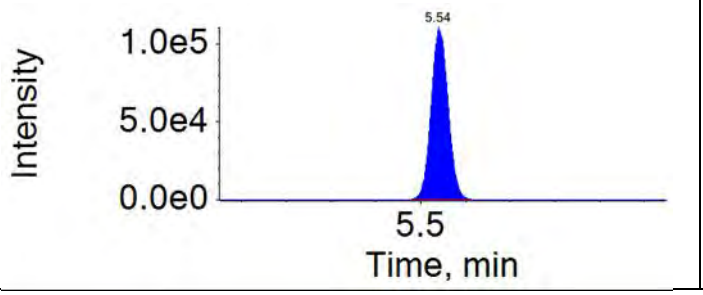
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

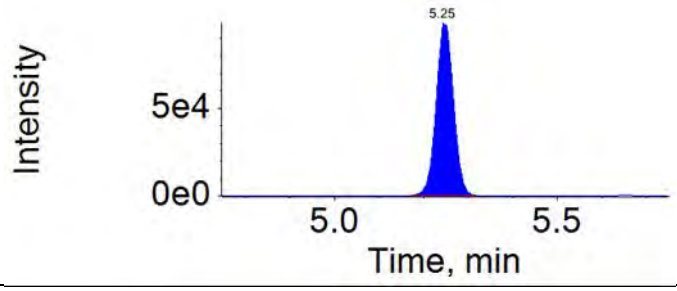
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



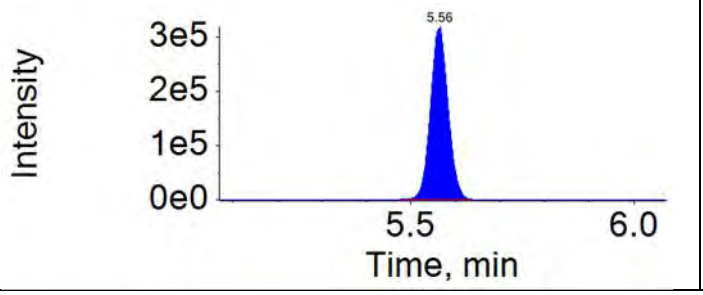


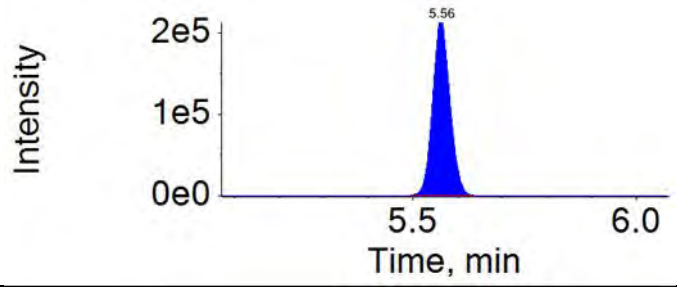
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



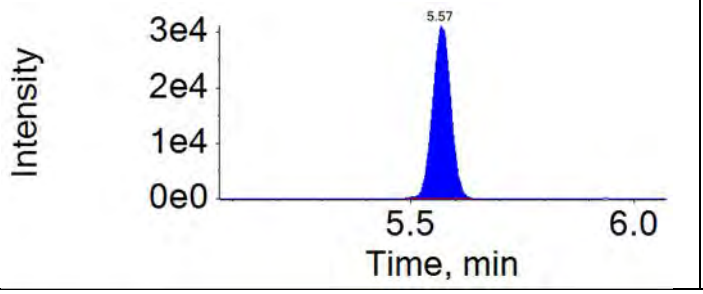


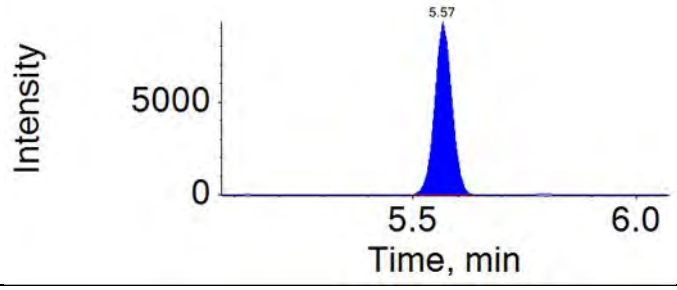
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



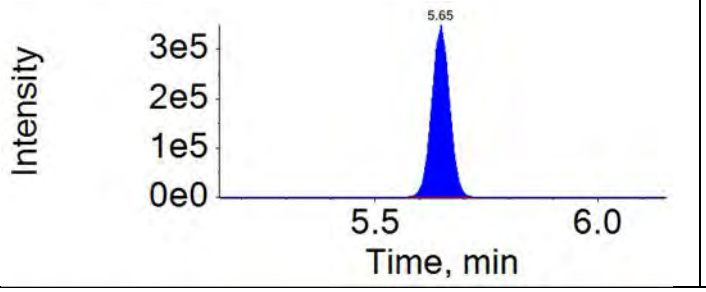


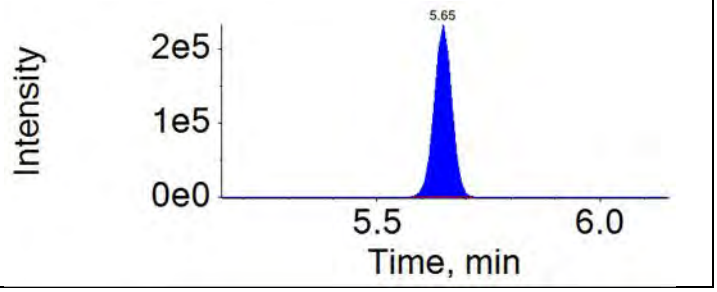
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

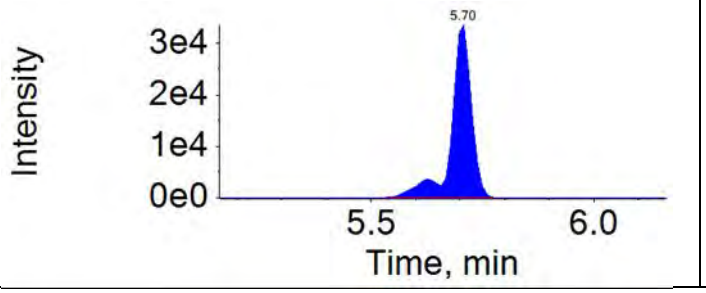
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

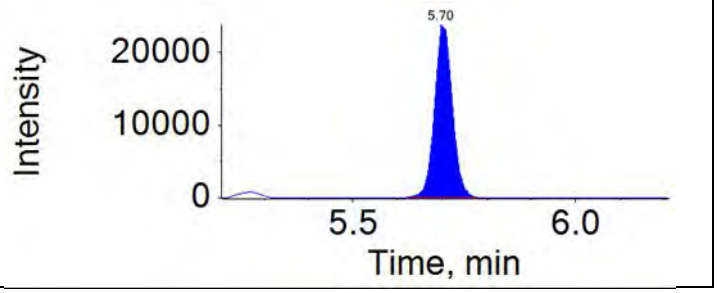
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



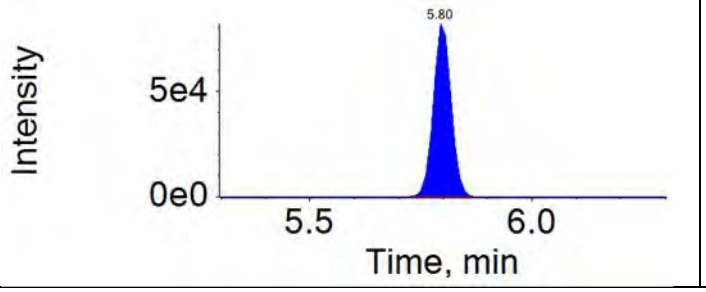


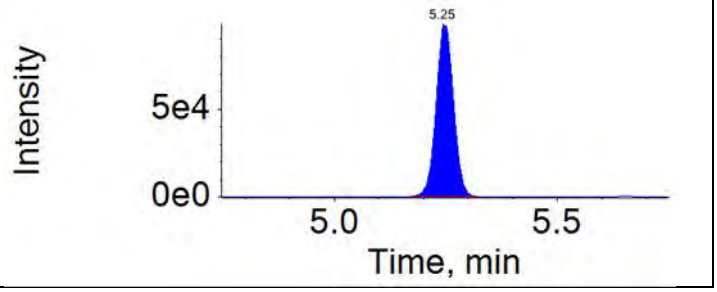
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



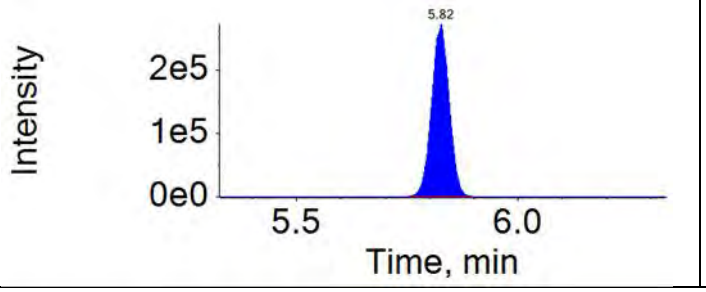


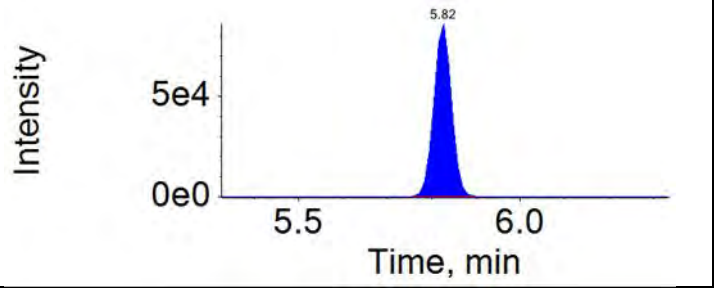
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



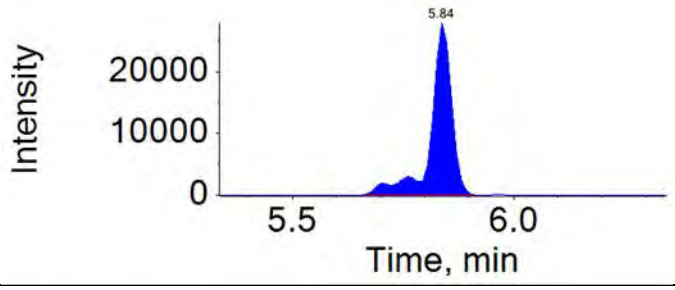


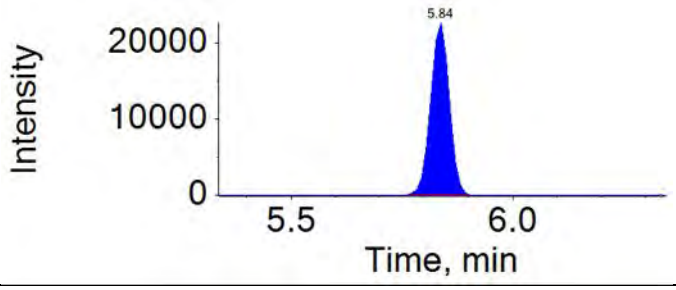
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

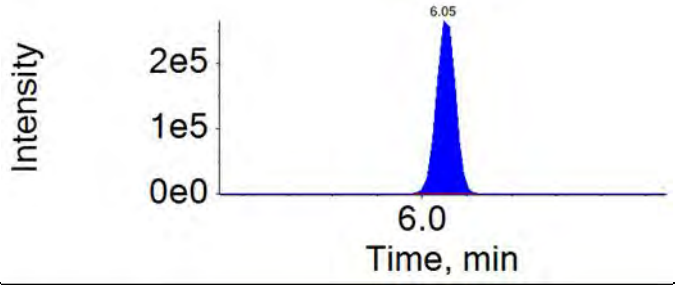
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

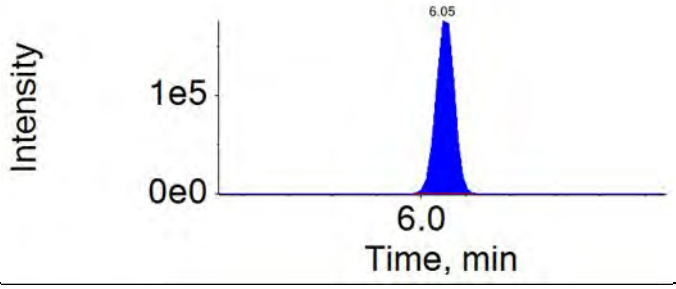
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



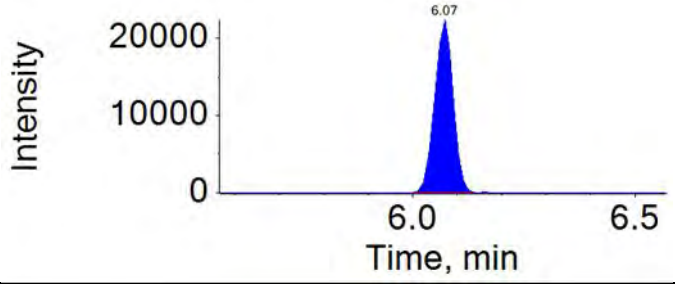


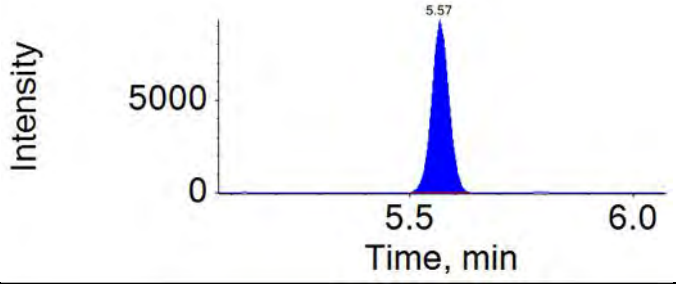
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



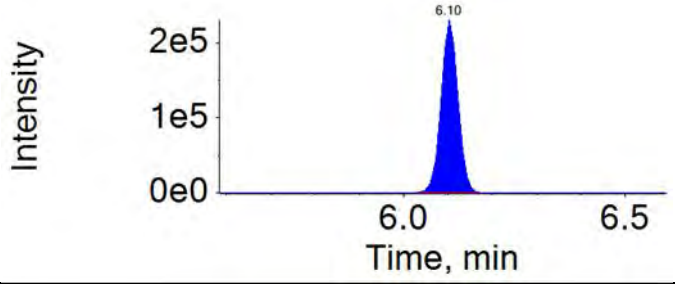


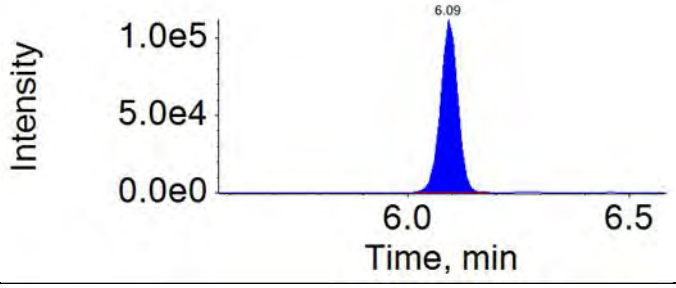
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



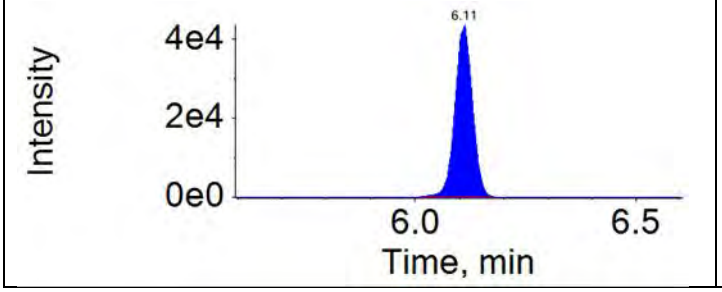


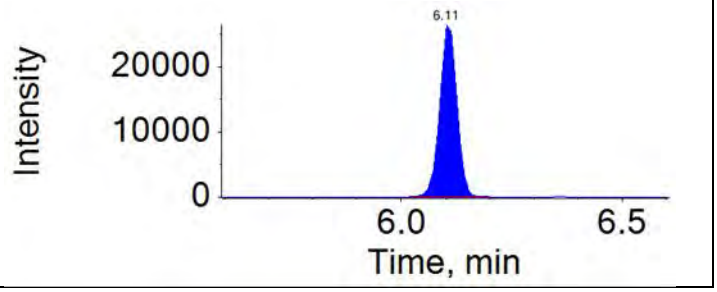
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

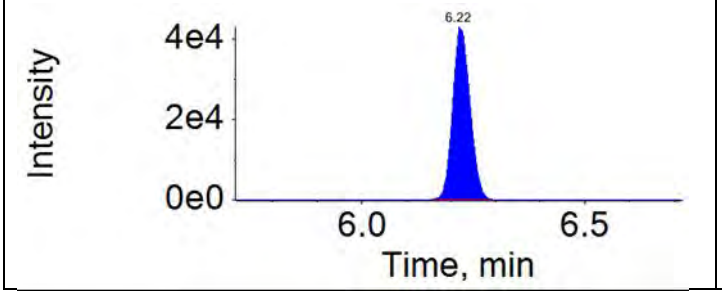
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

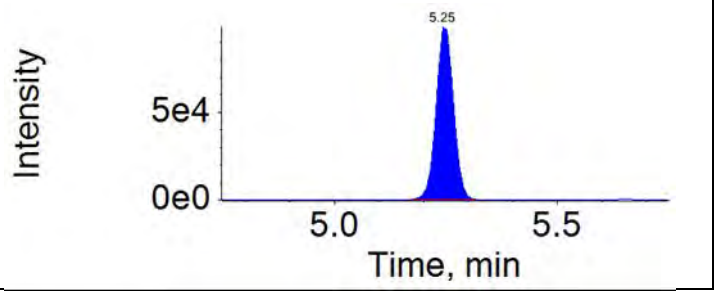
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



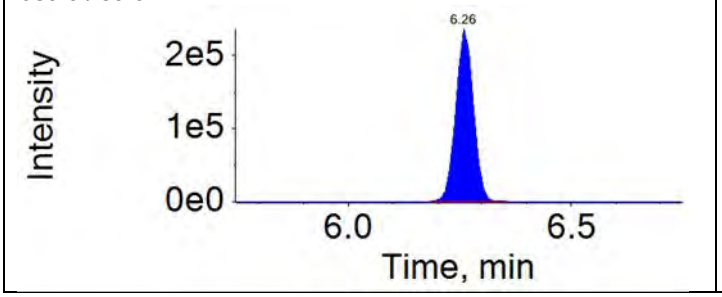


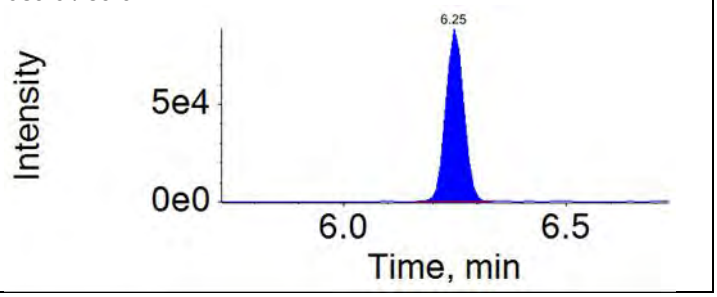
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



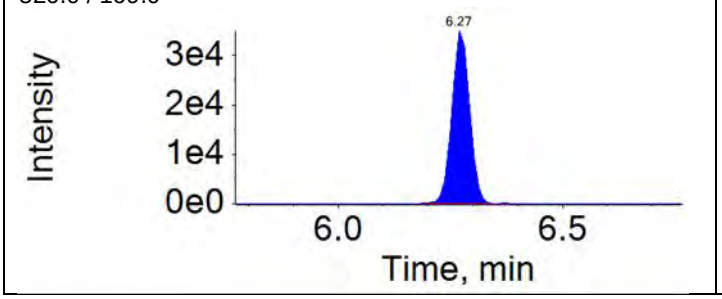


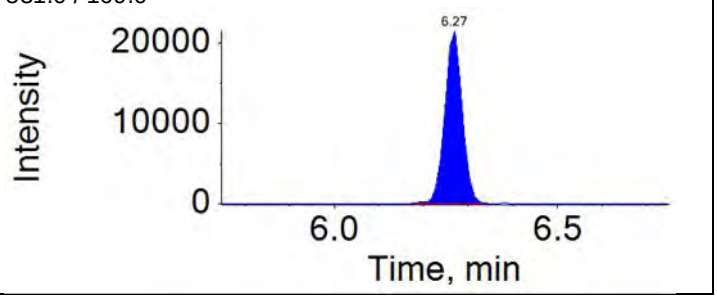
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

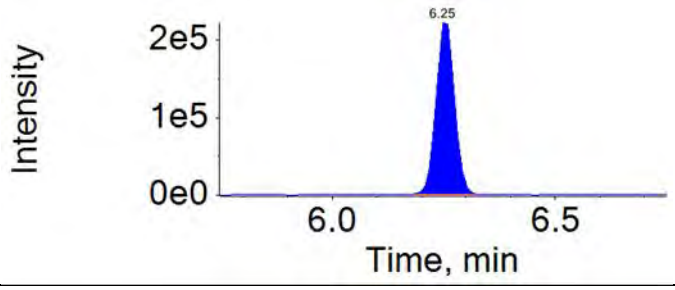
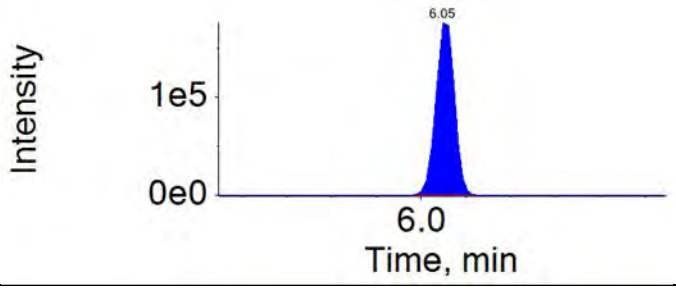


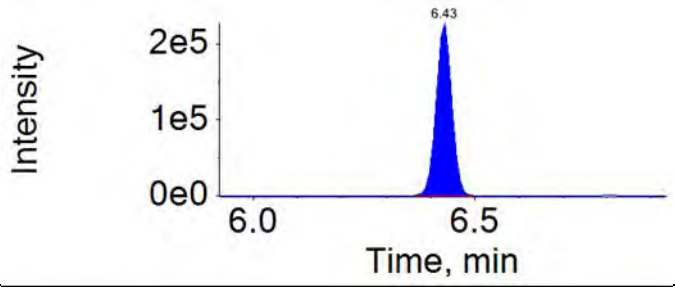
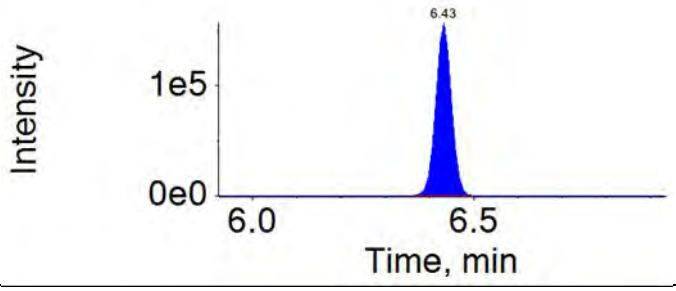


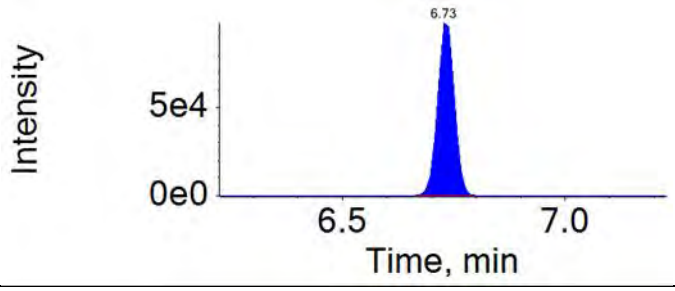
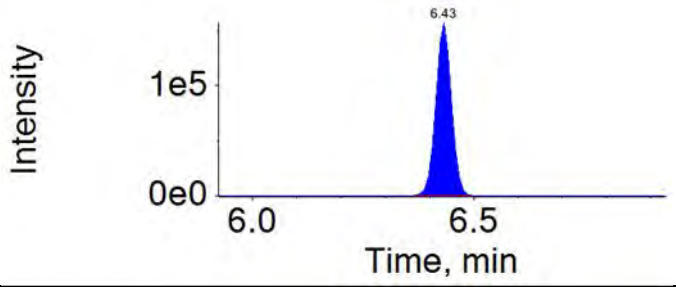
APPROVED
By JPT at 10:23 am, 11/13/18

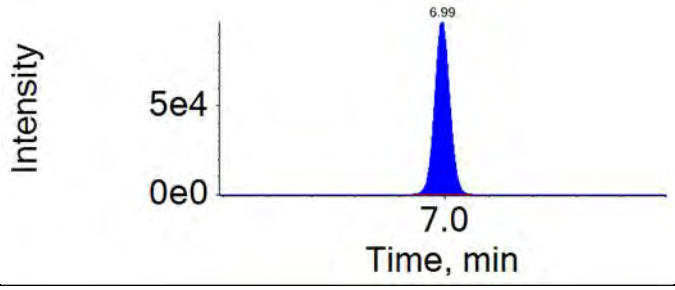
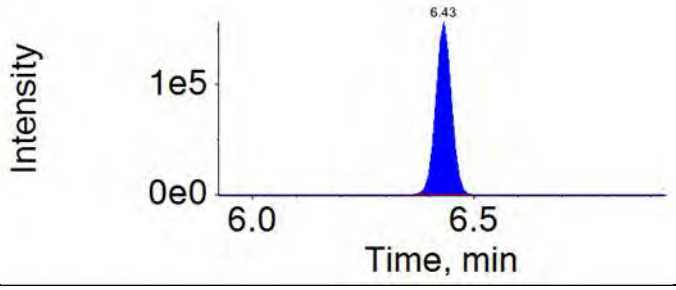
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

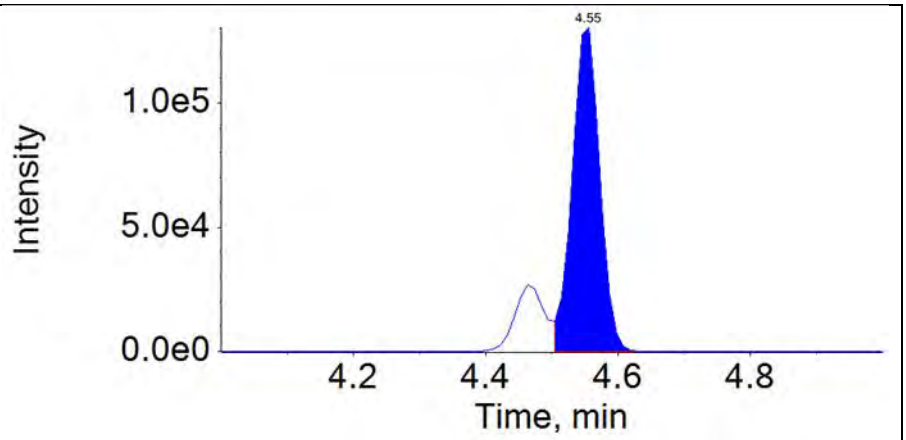
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

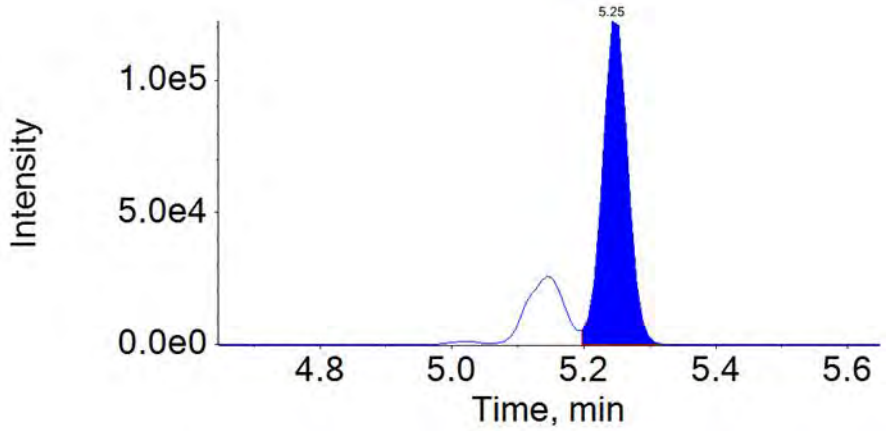
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
378179.8
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-24.wiff
Sample Name:
CCV3_CAL4



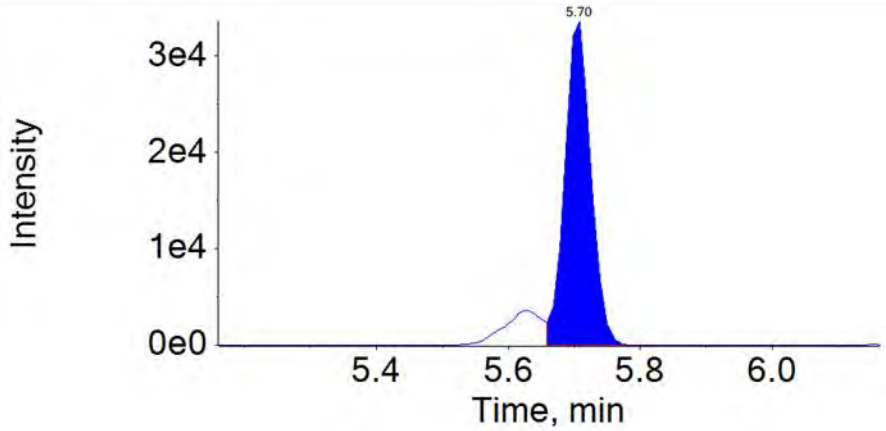
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
332025.8
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-24.wiff
Sample Name:
CCV3_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
92169.2
Mass Range:
570.0 / 419.0
File Name:
18NOV12D-24.wiff
Sample Name:
CCV3_CAL4



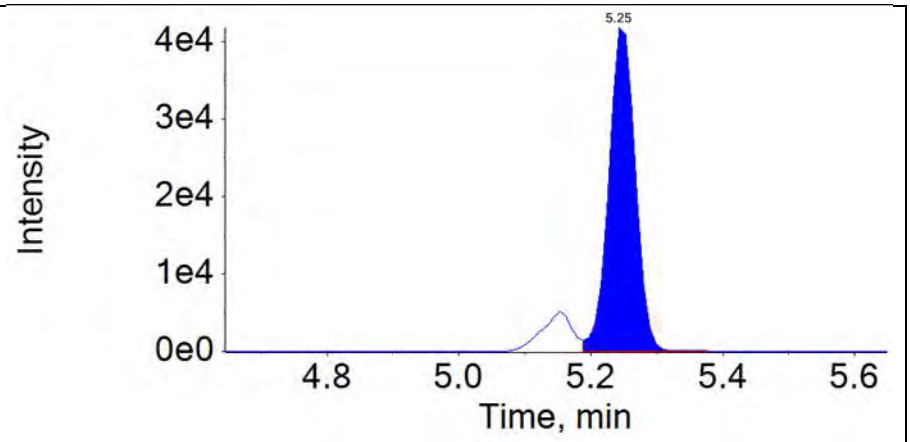
Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

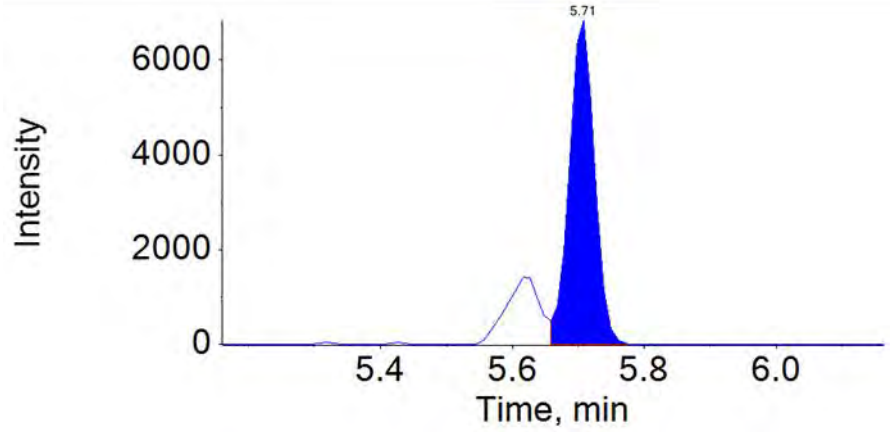
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
117844.6
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-24.wiff
Sample Name:
CCV3_CAL4



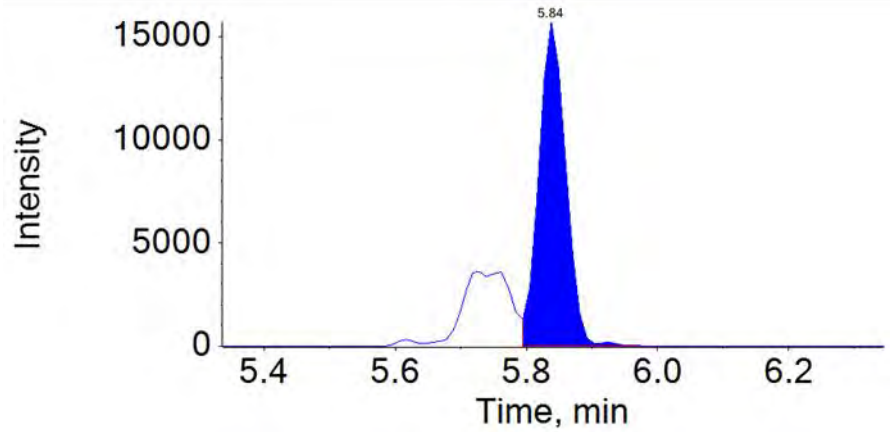
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
18172.8
Mass Range:
570.0 / 483.0
File Name:
18NOV12D-24.wiff
Sample Name:
CCV3_CAL4



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
44940.0
Mass Range:
584.0 / 526.0
File Name:
18NOV12D-24.wiff
Sample Name:
CCV3_CAL4



Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Ion Ratio Report

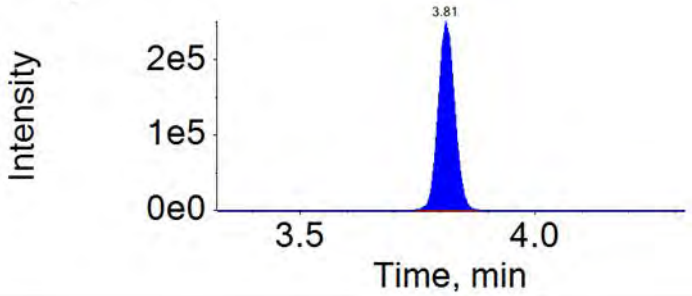
Sample Name: CCV3_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12D-24.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	613977.2	A	N/A	1.0000			
PFBS_2	3.81	1.00	229863.8	A	N/A	0.3744	3	50	
4:2-FTS	4.13	1.00	137791.8	A	N/A	1.0000			
4:2 FTS_2	4.13	1.00	86145.9	A	N/A	0.6252		#NA!	
PFHxA	4.16	1.00	1332890.9	A	N/A	1.0000			
PFHxA_2	4.16	1.00	14608.6	A	N/A	0.0110	-7	50	
PFPeS	4.18	1.10	322349.8	A	N/A	1.0000			
PFPeS_2	4.18	1.10	167213.6	A	N/A	0.5187	0	50	
PFHpA	4.55	1.00	1315373.3	A	N/A	1.0000			
PFHpA_2	4.55	1.00	71385.5	A	N/A	0.0543	-4	50	
PFHxS	4.55	1.00	462076.8	M	N/A	1.0000			
PFHxS_2	4.55	1.00	162244.8	A	N/A	0.3511	2	50	
6:2-FTS	4.91	1.00	104460.0	A	N/A	1.0000			
6:2 FTS_2	4.91	1.00	65718.0	A	N/A	0.6291		#NA!	
PFHpS	4.91	1.08	444364.3	A	N/A	1.0000			
PFHpS_2	4.91	1.08	176231.6	A	N/A	0.3966	-2	50	
PFOA	4.92	1.00	1305386.2	A	N/A	1.0000			
PFOA_2	4.92	1.00	77230.4	A	N/A	0.0592	4	50	
PFOS	5.25	1.00	439054.0	M	N/A	1.0000			
PFOS_2	5.25	1.00	134361.9	M	N/A	0.3060	3	50	
PFNA	5.26	1.00	1089849.2	A	N/A	1.0000			
PFNA_2	5.26	1.00	21521.0	A	N/A	0.0197	-13	50	
PFNS	5.54	1.06	289879.8	A	N/A	1.0000			
PFNS_2	5.54	1.06	129578.7	A	N/A	0.4470	-6	50	
PFDA	5.56	1.00	872161.3	A	N/A	1.0000			
PFDA_2	5.56	1.00	5679.6	A	N/A	0.0065	-18	50	
8:2-FTS	5.57	1.00	88438.9	A	N/A	1.0000			
8:2 FTS_2	5.57	1.00	51120.1	A	N/A	0.5780		#NA!	
NMeFOSAA	5.70	1.00	106517.6	M	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	23296.1	M	N/A	0.2187	-15	50	
PFDS	5.80	1.10	229280.1	A	N/A	1.0000			
PFDS_2	5.80	1.10	114012.7	A	N/A	0.4973	-2	50	
PFUnDA	5.82	1.00	748520.9	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	3249.1	A	N/A	0.0043	-22	50	
NEtFOSAA	5.84	1.00	91649.6	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	63537.8	M	N/A	0.6933	-4	50	
PFDoDA	6.05	1.00	791042.4	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	8389.8	A	N/A	0.0106	-31	50	
10:2-FTS	6.07	1.09	64309.7	A	N/A	1.0000			
10:2 FTS_2	6.07	1.09	41477.6	A	N/A	0.6450		#NA!	
PFTrDA	6.25	1.03	642819.9	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	5535.7	A	N/A	0.0086	1	50	
PFTeDA	6.43	1.00	560487.6	A	N/A	1.0000			
PFTeDA_2	6.43	1.00	3534.4	A	N/A	0.0063	2	50	
PFHxDA	6.73	1.05	258849.7	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	15433.2	A	N/A	0.0596	-12	50	
PFODA	6.99	1.09	232853.6	A	N/A	1.0000			
PFODA_2	6.99	1.09	6262.3	A	N/A	0.0269	-2	50	

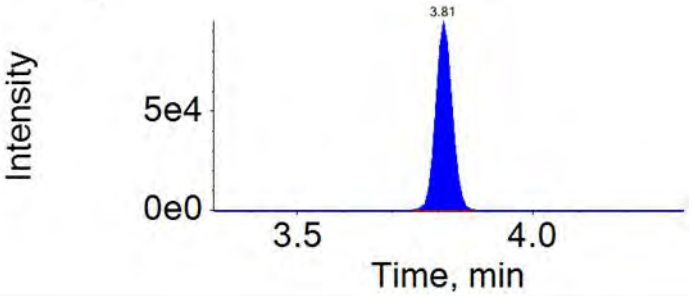
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

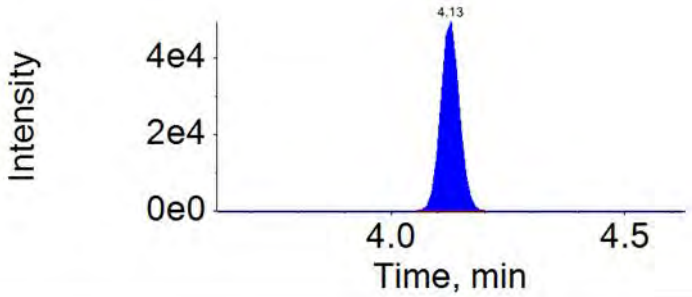
Component: PFBS
Primary Mass: 299.0 / 80.0



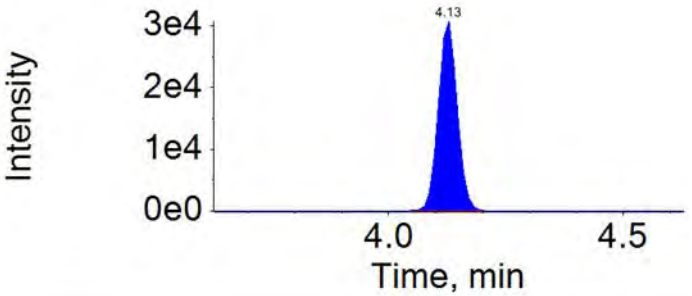
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



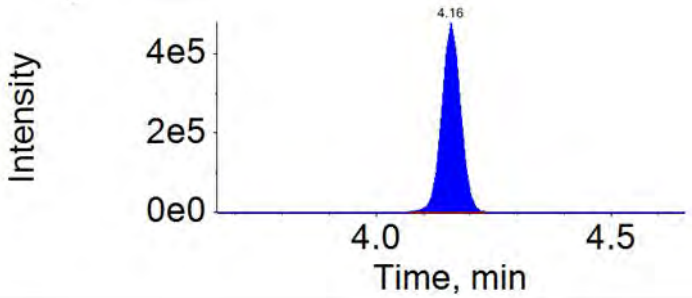
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



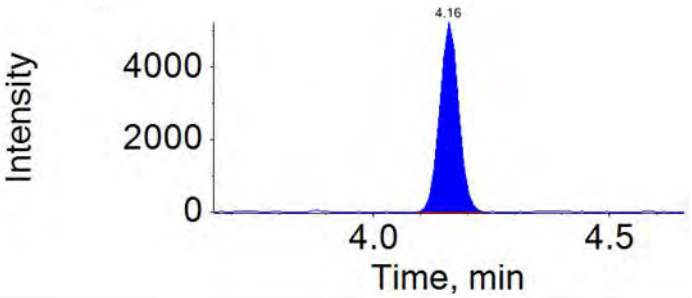
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



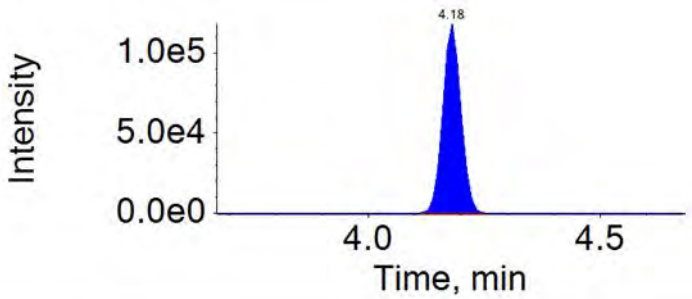
Component: PFHxA
Primary Mass: 313.0 / 269.0



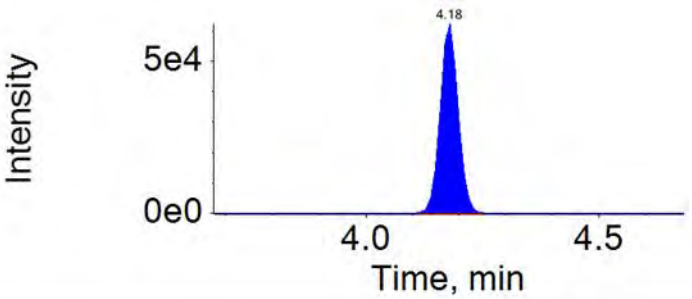
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



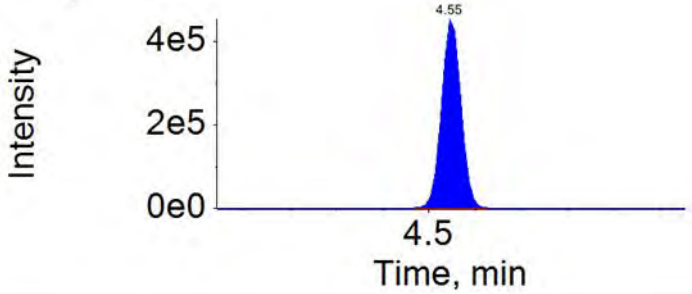
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



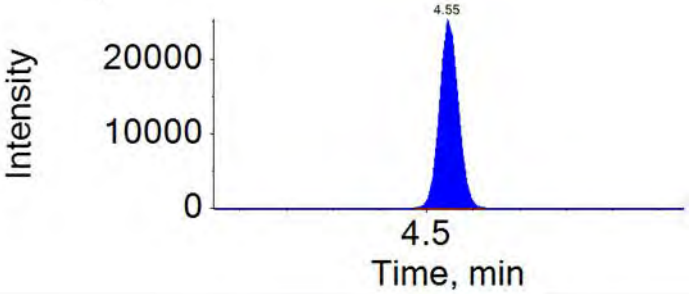
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

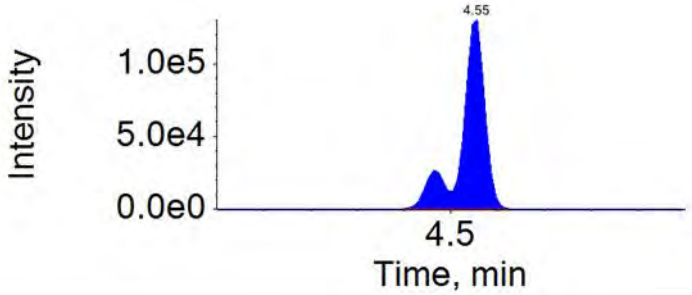
Component: PFHpA
Primary Mass: 363.0 / 319.0



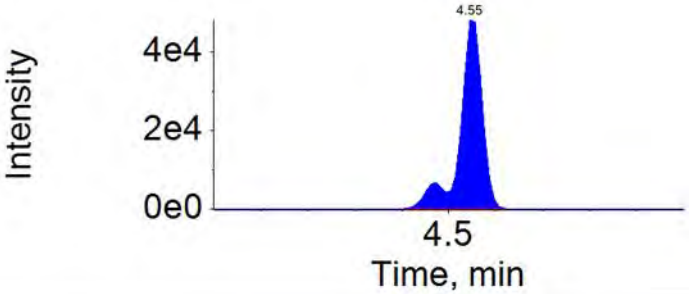
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



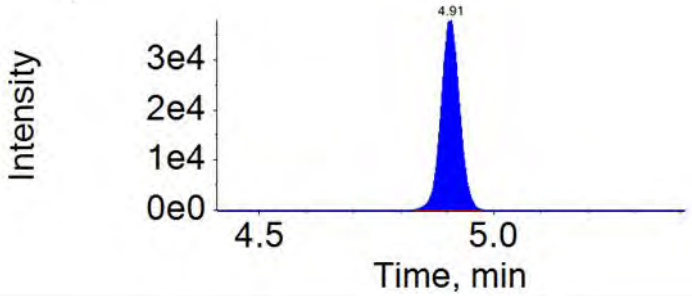
Component: PFHxS
Primary Mass: 399.0 / 80.0



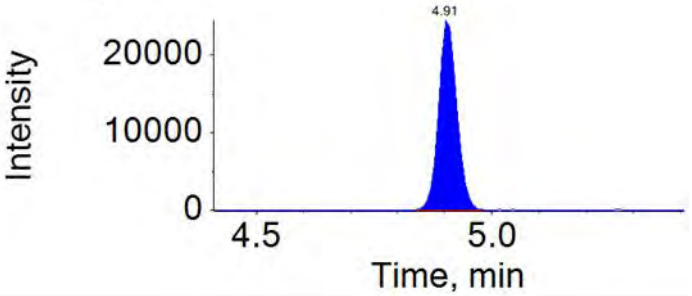
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



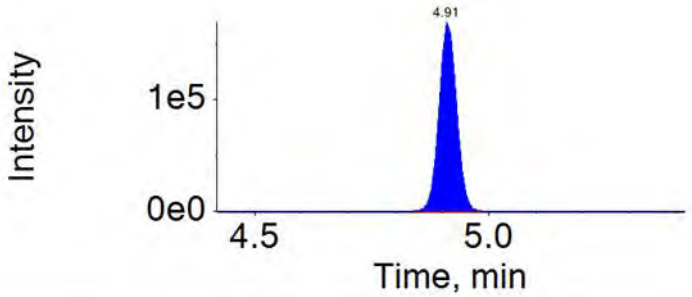
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



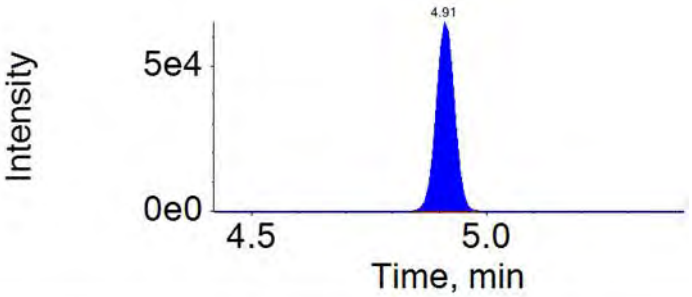
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



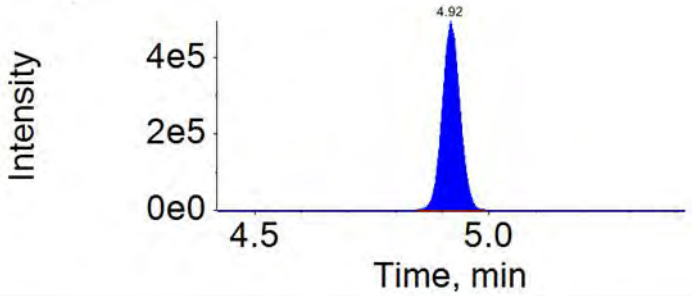
Component: PFHpS
Primary Mass: 449.0 / 80.0



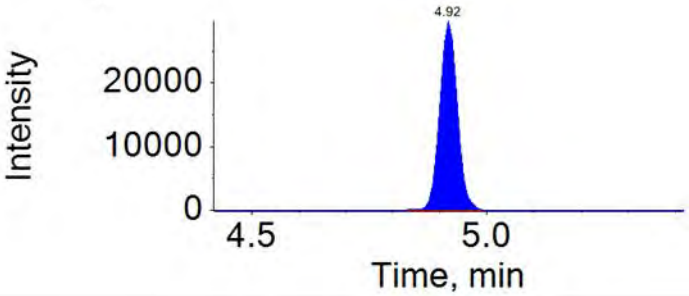
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



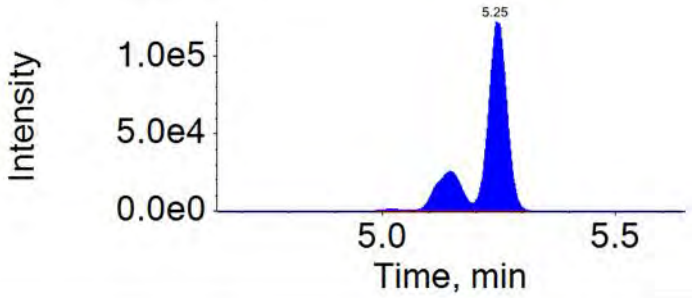
Component: PFOA
Primary Mass: 413.0 / 369.0



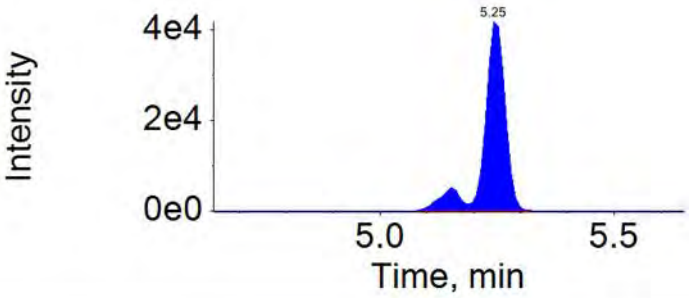
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



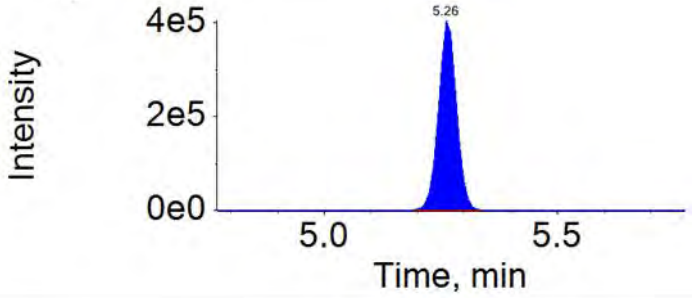
Component: PFOS
Primary Mass: 499.0 / 80.0



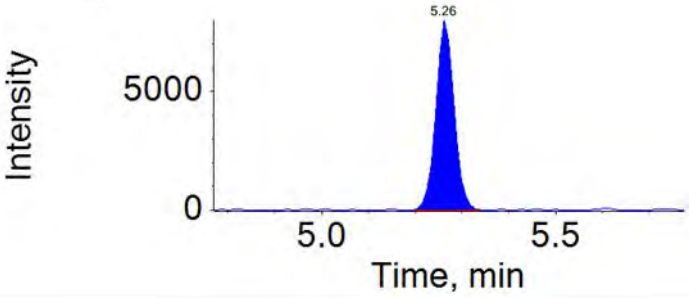
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



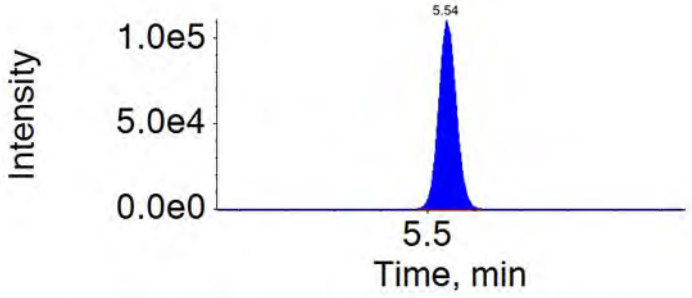
Component: PFNA
Primary Mass: 463.0 / 419.0



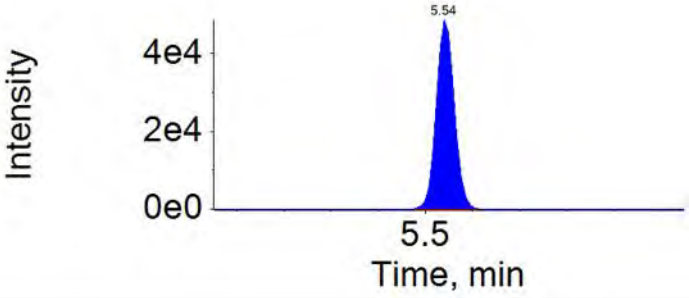
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



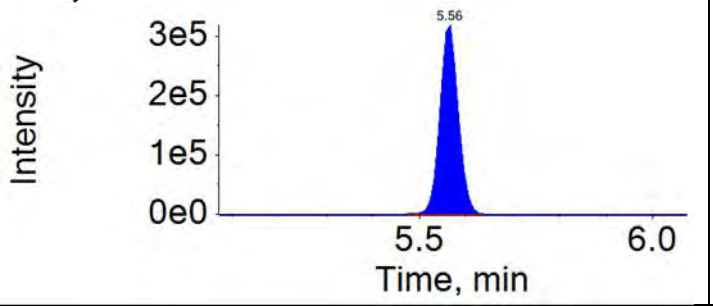
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



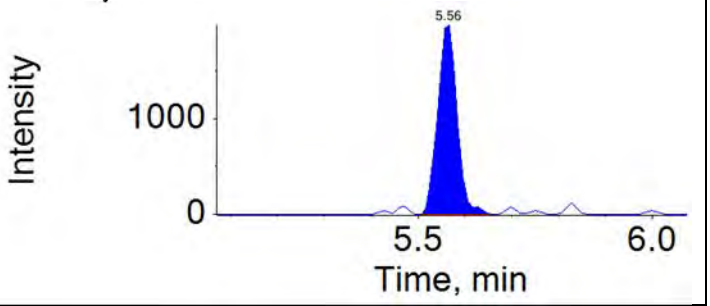
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

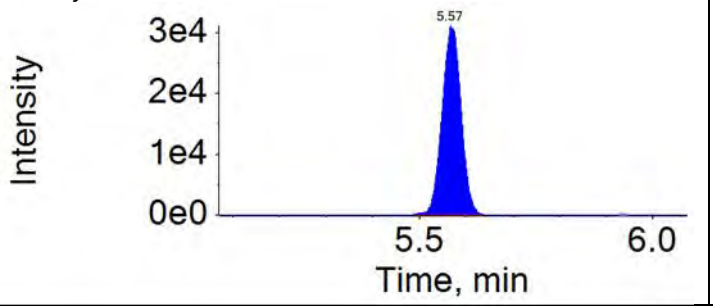
Component: PFDA
Primary Mass: 513.0 / 469.0



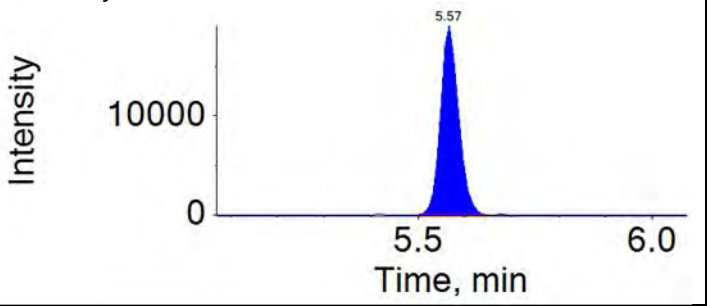
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



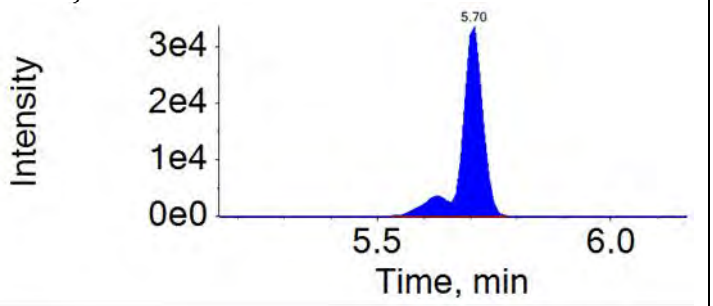
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



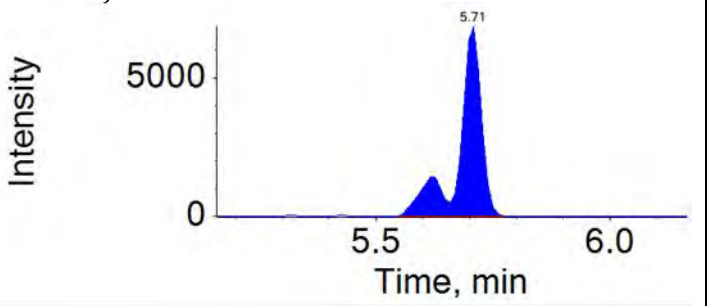
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



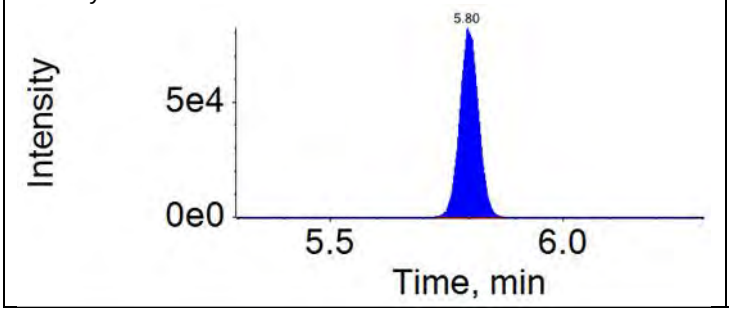
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



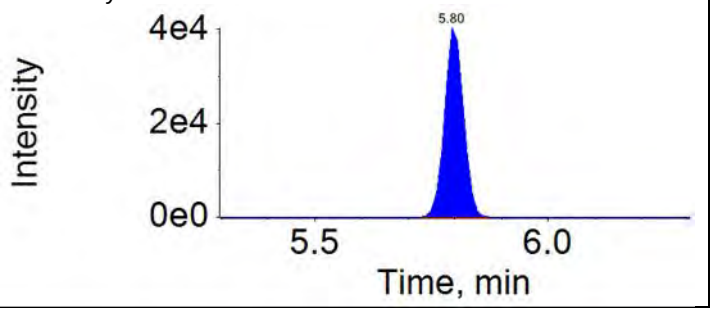
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



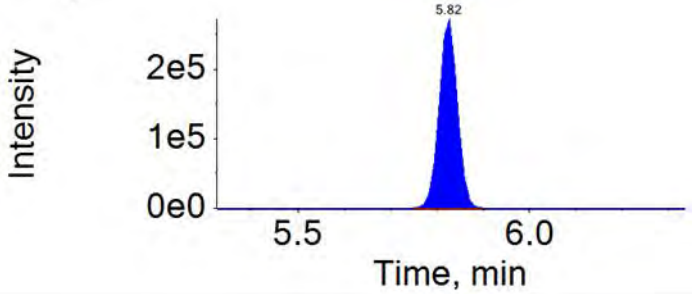
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



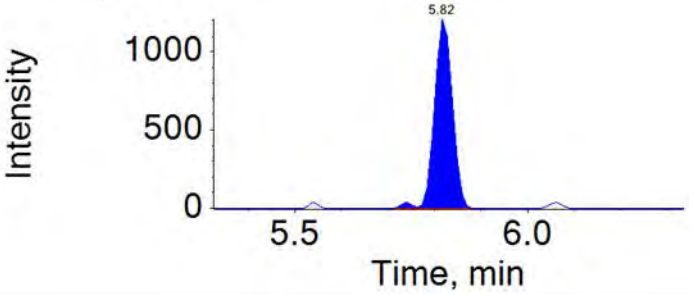
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

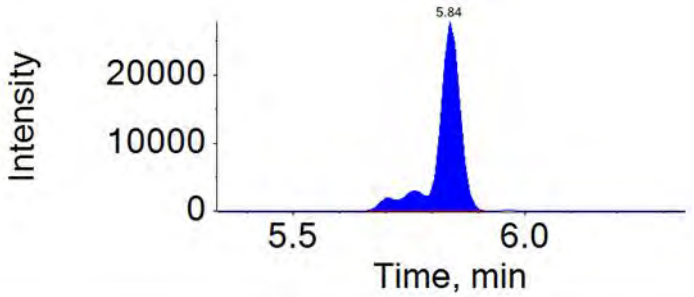
Component: PFUnDA
Primary Mass: 563.0 / 519.0



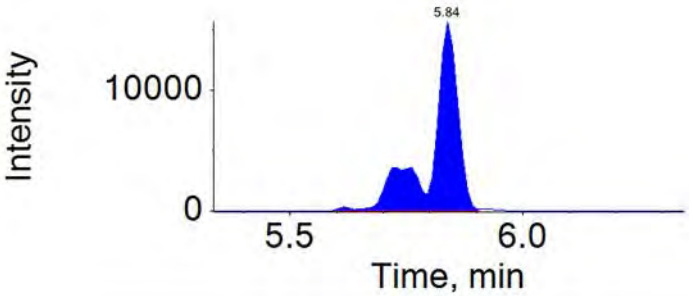
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



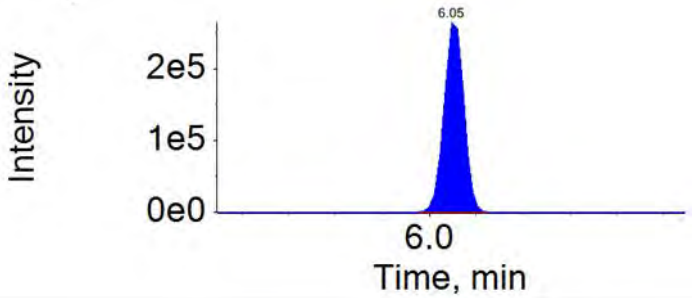
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



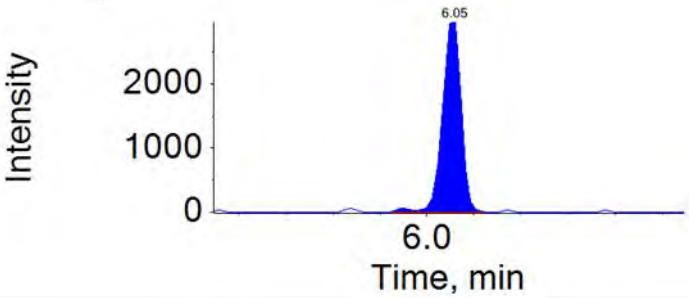
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



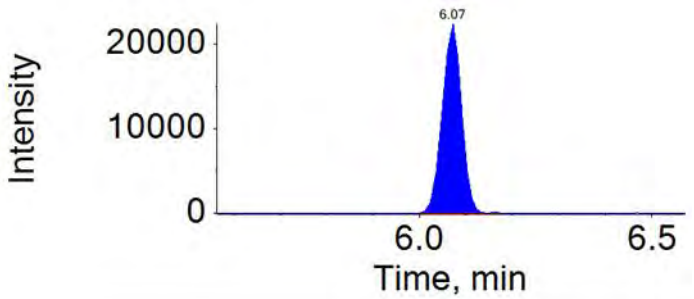
Component: PFDoDA
Primary Mass: 613.0 / 569.0



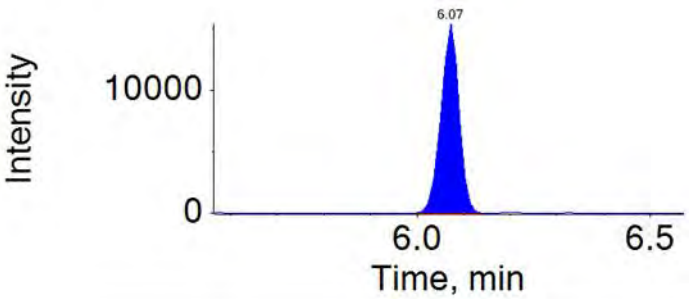
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



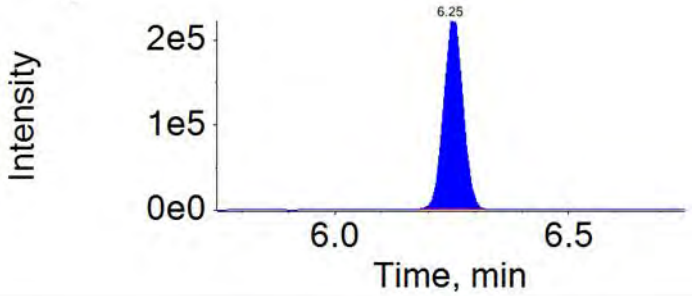
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



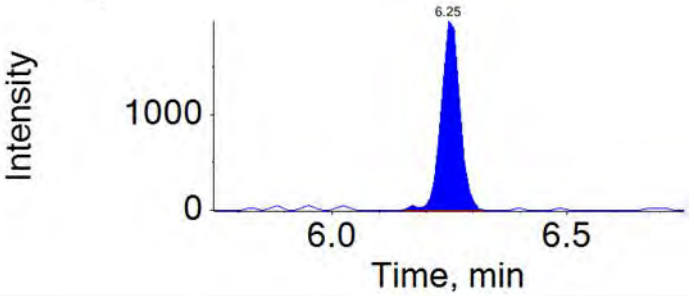
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

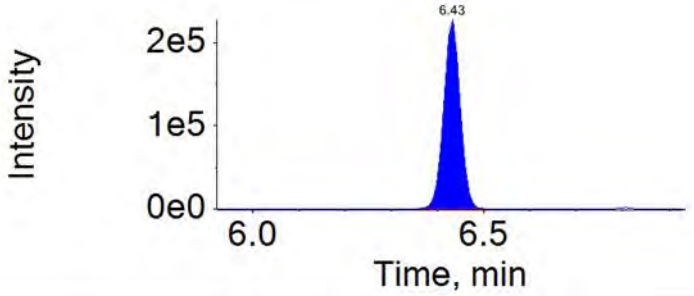
Component: PFTrDA
Primary Mass: 663.0 / 619.0



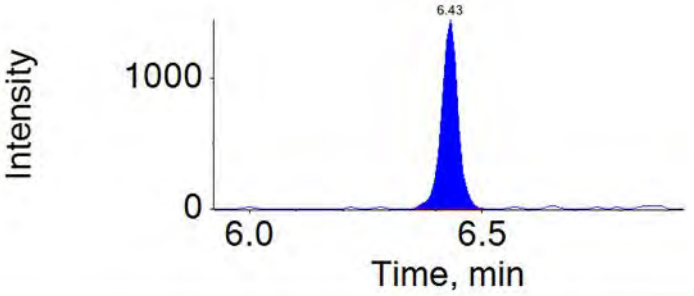
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



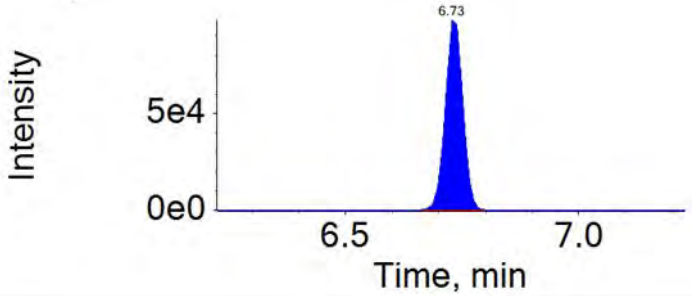
Component: PFTeDA
Primary Mass: 713.0 / 669.0



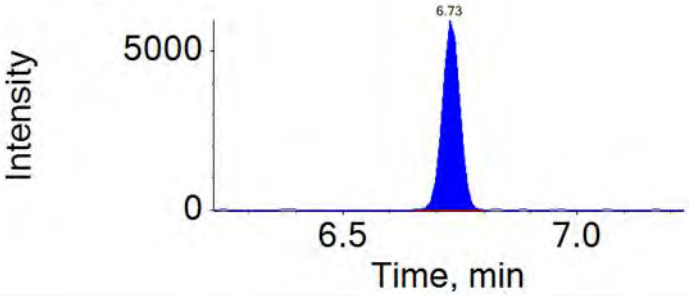
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



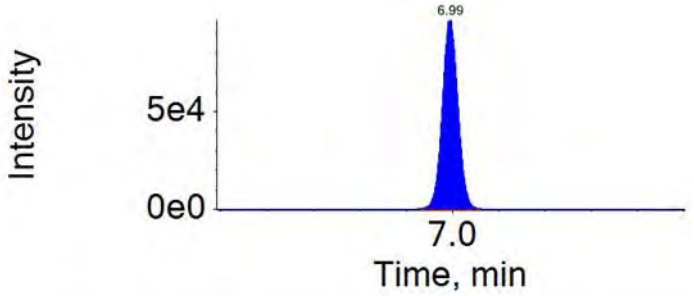
Component: PFHxDA
Primary Mass: 813.0 / 769.0



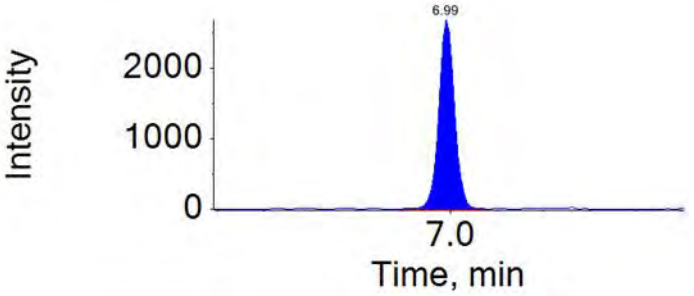
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



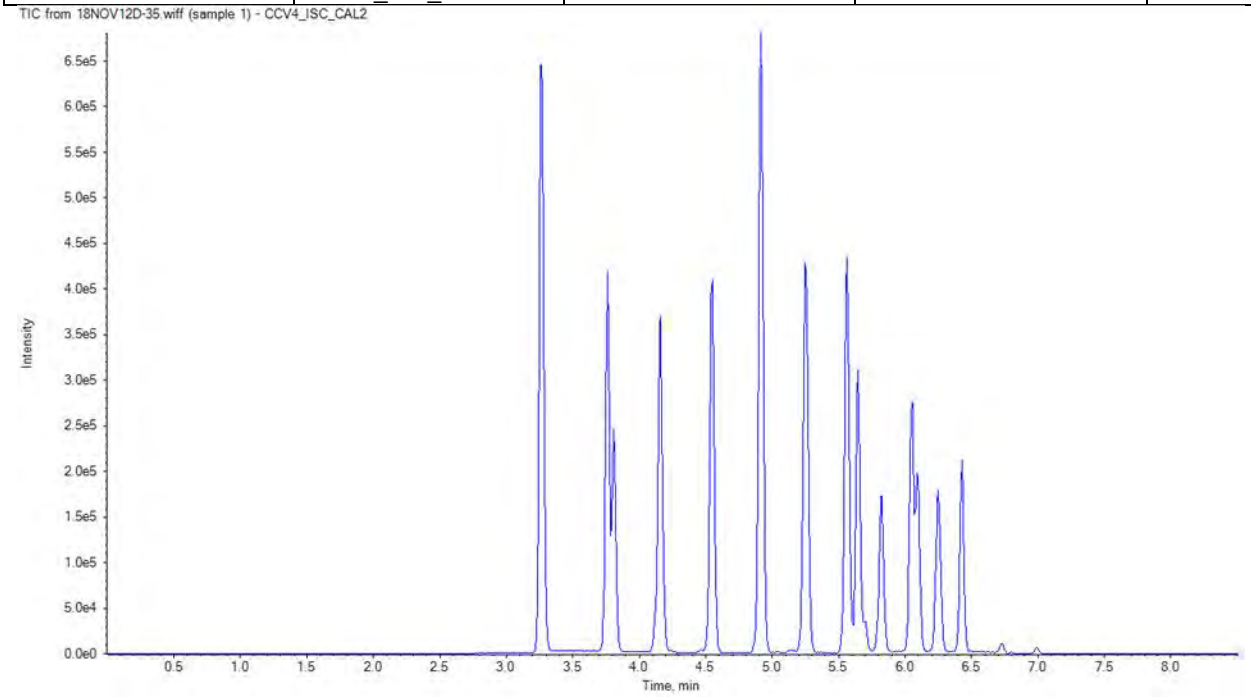
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV4_ISC_CAL2	CALBRN21833C	18NOV12D-35.wiff	2018-11-12T21:52:30



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	662643.9	659926.2	0	50	
13C2-PFOA	5.0	470112.9	450219.7	4	50	
13C4-PFOS	4.8	247168.2	249205.8	-1	50	
13C2-PFDA	5.0	270194.6	278743.9	-3	50	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV4_ISC_CAL2	CALBRN21833C	18NOV12D-35.wiff	2018-11-12T21:52:30

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	81355.7	10	13C4-PFBA	761470.2	5.0	0.107	3.26	1.000	0.600	0.592	-1	30	
PFPeA	78311.0	11	13C5-PFPeA	766187.7	5.0	0.102	3.76	1.000	0.600	0.592	-1	30	
PFBS	45066.2	11	13C3-PFBS	435960.5	4.7	0.103	3.81	1.000	0.531	0.492	-7	30	
4:2-FTS	10399.0	11	13C2-4:2-FTS	46493.3	4.7	0.224	4.12	1.000	0.560	0.607	8	30	
PFHxA	91487.0	12	13C5-PFHxA	682454.5	5.0	0.134	4.16	1.000	0.600	0.560	-7	30	
PFPeS	22954.6	11	13C3-PFBS	435960.5	4.7	0.053	4.18	1.100	0.563	0.511	-9	30	
PFHpA	95466.7	12	13C4-PFHpA	507062.5	5.0	0.188	4.55	1.000	0.600	0.624	4	30	
PFHxS	32219.2	19	13C3-PFHxS	324049.4	4.7	0.099	4.55	1.000	0.547	0.482	-12	30	
6:2-FTS	6911.2	11	13C2-6:2-FTS	31714.0	4.8	0.218	4.90	1.000	0.569	0.527	-7	30	
PFHpS	33929.7	10	13C3-PFHxS	324049.4	4.7	0.105	4.91	1.080	0.571	0.551	-3	30	
PFOA	97123.0	11	13C8-PFOA	938643.1	5.0	0.103	4.92	1.000	0.600	0.553	-8	30	
PFOS	33092.8	22	13C8-PFOS	293508.5	4.8	0.113	5.24	1.000	0.555	0.493	-11	30	
PFNA	82024.9	11	13C9-PFNA	466005.3	5.0	0.176	5.26	1.000	0.600	0.635	6	30	
PFNS	22070.4	11	13C8-PFOS	293508.5	4.8	0.075	5.54	1.060	0.576	0.526	-9	30	
PFDA	67587.3	11	13C6-PFDA	631646.0	5.0	0.107	5.56	1.000	0.600	0.567	-5	30	
8:2-FTS	6168.3	13	13C2-8:2-FTS	28179.3	4.8	0.219	5.57	1.000	0.575	0.510	-11	30	
PFOSA	63630.4	11	13C8-PFOSA	632253.0	5.0	0.101	5.65	1.000	0.600	0.492	-18	30	
NMeFOSAA	6931.1	17	d3-NMeFOSAA	68965.6	5.0	0.101	5.70	1.000	0.600	0.568	-5	30	
PFDS	15622.4	11	13C8-PFOS	293508.5	4.8	0.053	5.80	1.110	0.578	0.482	-17	30	
PFUnDA	55755.4	12	13C7-PFUnDA	256922.3	5.0	0.217	5.82	1.000	0.600	0.567	-5	30	
NEtFOSAA	6578.7	22	d5-NEtFOSAA	68297.8	5.0	0.096	5.84	1.000	0.600	0.505	-16	30	
PFDoDA	58154.0	12	13C2-PFDoDA	555217.8	5.0	0.105	6.05	1.000	0.600	0.533	-11	30	
10:2-FTS	5269.4	11	13C2-8:2-FTS	28179.3	4.8	0.187	6.07	1.090	0.578	0.623	8	30	
NMePFOSAE	46567.8	12	d7-NMePFOSAE	326619.4	5.0	0.143	6.10	1.000	0.600	0.593	-1	30	
NMePFOSA	8464.3	12	d3-NMePFOSA	77734.4	5.0	0.109	6.11	1.000	0.600	0.537	-10	30	
PFDoS	7308.9	11	13C8-PFOS	293508.5	4.8	0.025	6.22	1.190	0.581	0.436	-25	30	
NEtPFOSAE	45841.7	12	d9-NEtPFOSAE	275174.5	5.0	0.167	6.26	1.000	0.600	0.534	-11	30	
NEtPFOSA	8144.5	12	d5-NEtPFOSA	60796.0	5.0	0.134	6.27	1.000	0.600	0.615	3	30	
PFTrDA	50331.5	11	13C2-PFDoDA	555217.8	5.0	0.091	6.25	1.030	0.600	0.572	-5	30	
PFTeDA	39345.2	10	13C2-PFTeDA	397518.7	5.0	0.099	6.43	1.000	0.600	0.555	-8	30	
PFHxDA	19492.8	11	13C2-PFTeDA	397518.7	5.0	0.049	6.73	1.050	0.600	0.584	-3	30	
PFODA	15126.3	10	13C2-PFTeDA	397518.7	5.0	0.038	6.99	1.090	0.600	0.530	-12	30	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV4_ISC_CAL2			**Data File:**		18NOV12D-35.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-12T21:52:30
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	662643.9	659926.2	0	50	
13C2-PFOA	5.0	470112.9	450219.7	4	50	
13C4-PFOS	4.8	247168.2	249205.8	-1	50	
13C2-PFDA	5.0	270194.6	278743.9	-3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	761470.2	13C3-PFBA	662643.9	1.149	5.000	5.152	103	70-130	
E13C5-PFPeA	766187.7	13C3-PFBA	662643.9	1.156	5.000	5.186	104	70-130	
E13C3-PFBS	435960.5	13C3-PFBA	662643.9	0.658	4.650	4.644	100	70-130	
E13C2-4:2-FTS	46493.3	13C2-PFOA	470112.9	0.099	4.670	4.405	94	70-130	
E13C5-PFHxA	682454.5	13C2-PFOA	470112.9	1.452	5.000	5.244	105	70-130	
E13C3-PFHxS	324049.4	13C2-PFOA	470112.9	0.689	4.730	4.730	100	70-130	
E13C4-PFHpA	507062.5	13C2-PFOA	470112.9	1.079	5.000	4.859	97	70-130	
E13C2-6:2-FTS	31714.0	13C2-PFOA	470112.9	0.067	4.750	4.513	95	70-130	
E13C8-PFOA	938643.1	13C2-PFOA	470112.9	1.997	5.000	5.501	110	70-130	
E13C8-PFOS	293508.5	13C4-PFOS	247168.2	1.187	4.780	5.262	110	70-130	
E13C9-PFNA	466005.3	13C4-PFOS	247168.2	1.885	5.000	5.257	105	70-130	
E13C6-PFDA	631646.0	13C2-PFDA	270194.6	2.338	5.000	5.455	109	70-130	
E13C2-8:2-FTS	28179.3	13C2-PFDA	270194.6	0.104	4.790	5.201	109	70-130	
E13C8-PFOSA	632253.0	13C2-PFDA	270194.6	2.340	5.000	5.188	104	70-130	
Ed3-NMeFOSAA	68965.6	13C2-PFDA	270194.6	0.255	5.000	4.607	92	70-130	
E13C7-PFUnDA	256922.3	13C2-PFDA	270194.6	0.951	5.000	5.521	110	70-130	
Ed5-NEtFOSAA	68297.8	13C2-PFDA	270194.6	0.253	5.000	5.348	107	70-130	
E13C2-PFDoDA	555217.8	13C2-PFDA	270194.6	2.055	5.000	5.335	107	70-130	
Ed7-NMePFOSAE	326619.4	13C2-PFDA	270194.6	1.209	5.000	5.231	105	70-130	
Ed3-NMePFOSA	77734.4	13C2-PFDA	270194.6	0.288	5.000	5.227	105	70-130	
Ed9-NEtPFOSAE	275174.5	13C2-PFDA	270194.6	1.018	5.000	5.297	106	70-130	
Ed5-NEtPFOSA	60796.0	13C2-PFDA	270194.6	0.225	5.000	5.278	106	70-130	
E13C2-PFTeDA	397518.7	13C2-PFDA	270194.6	1.471	5.000	5.165	103	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

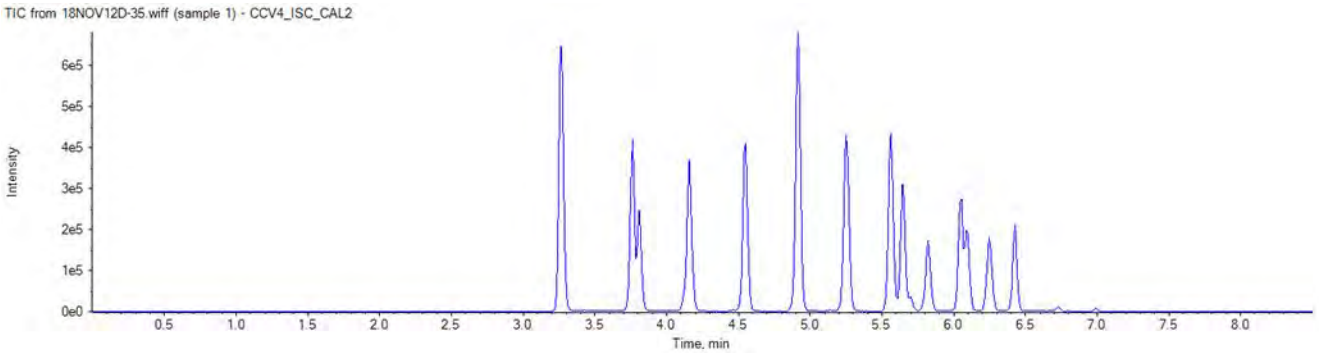
Analyte Quantitation Peak Table

Sample Name: CCV4_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-35.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	81355.7		A	13C4-PFBA	3.26	761470.2	0.107	0.592
PFPeA	3.76	1.000	78311.0		A	13C5-PFPeA	3.76	766187.7	0.102	0.592
PFBS	3.81	1.000	45066.2		A	13C3-PFBS	3.81	435960.5	0.103	0.492
4:2-FTS	4.12	1.000	10399.0		A	13C2-4:2-FTS	4.12	46493.3	0.224	0.607
PFHxA	4.16	1.000	91487.0		A	13C5-PFHxA	4.16	682454.5	0.134	0.560
PFPeS	4.18	1.100	22954.6		A	13C3-PFBS	3.81	435960.5	0.053	0.511
PFHpA	4.55	1.000	95466.7		M	13C4-PFHpA	4.55	507062.5	0.188	0.624
PFHxS	4.55	1.000	32219.2		M	13C3-PFHxS	4.55	324049.4	0.099	0.482
6:2-FTS	4.90	1.000	6911.2		A	13C2-6:2-FTS	4.90	31714.0	0.218	0.527
PFHpS	4.91	1.080	33929.7		A	13C3-PFHxS	4.55	324049.4	0.105	0.551
PFOA	4.92	1.000	97123.0		A	13C8-PFOA	4.92	938643.1	0.103	0.553
PFOS	5.24	1.000	33092.8		M	13C8-PFOS	5.24	293508.5	0.113	0.493
PFNA	5.26	1.000	82024.9		M	13C9-PFNA	5.26	466005.3	0.176	0.635
PFNS	5.54	1.060	22070.4		A	13C8-PFOS	5.24	293508.5	0.075	0.526
PFDA	5.56	1.000	67587.3		M	13C6-PFDA	5.56	631646.0	0.107	0.567
8:2-FTS	5.57	1.000	6168.3		A	13C2-8:2-FTS	5.57	28179.3	0.219	0.510
PFOSA	5.65	1.000	63630.4		A	13C8-PFOSA	5.65	632253.0	0.101	0.492
NMeFOSAA	5.70	1.000	6931.1		A	d3-NMeFOSAA	5.70	68965.6	0.101	0.568
PFDS	5.80	1.110	15622.4		A	13C8-PFOS	5.24	293508.5	0.053	0.482
PFUnDA	5.82	1.000	55755.4		M	13C7-PFUnDA	5.82	256922.3	0.217	0.567
NEtFOSAA	5.84	1.000	6578.7		A	d5-NEtFOSAA	5.83	68297.8	0.096	0.505
PFDoDA	6.05	1.000	58154.0		A	13C2-PFDoDA	6.05	555217.8	0.105	0.533
10:2-FTS	6.07	1.090	5269.4		A	13C2-8:2-FTS	5.57	28179.3	0.187	0.623
NMePFOSAE	6.10	1.000	46567.8		A	d7-NMePFOSAE	6.09	326619.4	0.143	0.593
NMePFOSA	6.11	1.000	8464.3		A	d3-NMePFOSA	6.10	77734.4	0.109	0.537
PFDoS	6.22	1.190	7308.9		M	13C8-PFOS	5.24	293508.5	0.025	0.436
NEtPFOSAE	6.26	1.000	45841.7		M	d9-NEtPFOSAE	6.24	275174.5	0.167	0.534
NEtPFOSA	6.27	1.000	8144.5		A	d5-NEtPFOSA	6.26	60796.0	0.134	0.615
PFTrDA	6.25	1.030	50331.5		M	13C2-PFDoDA	6.05	555217.8	0.091	0.572
PFTeDA	6.43	1.000	39345.2		M	13C2-PFTeDA	6.43	397518.7	0.099	0.555
PFHxDA	6.73	1.050	19492.8		A	13C2-PFTeDA	6.43	397518.7	0.049	0.584
PFODA	6.99	1.090	15126.3		A	13C2-PFTeDA	6.43	397518.7	0.038	0.530

Total Ion Chromatogram

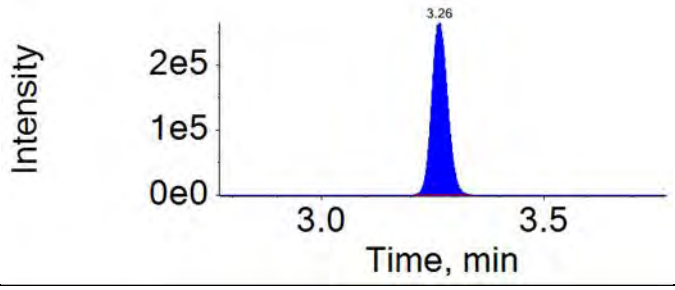


APPROVED
By JPT at 10:23 am, 11/13/18

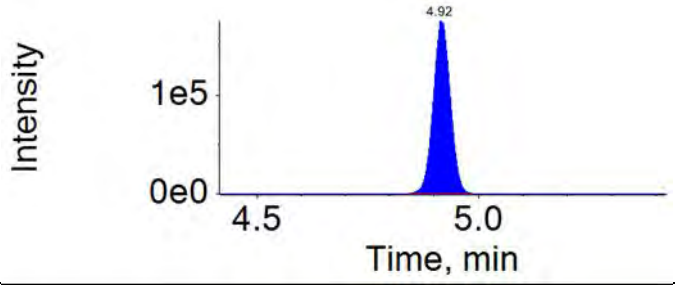
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

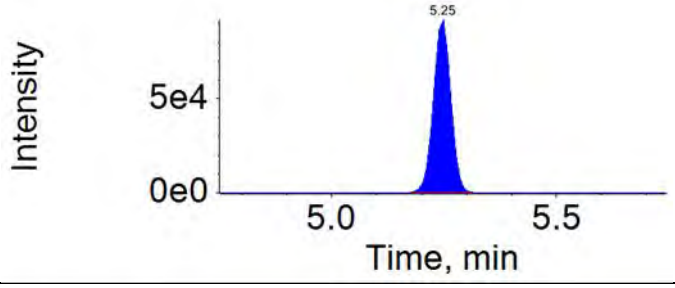
Injection Standard: 13C3-PFBA
216.0 / 172.0



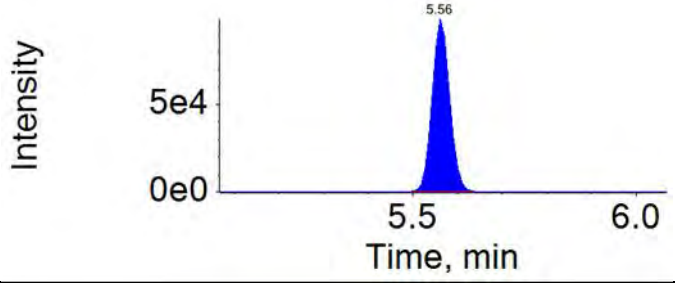
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



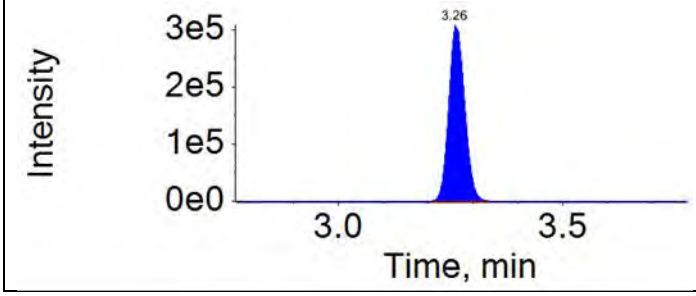
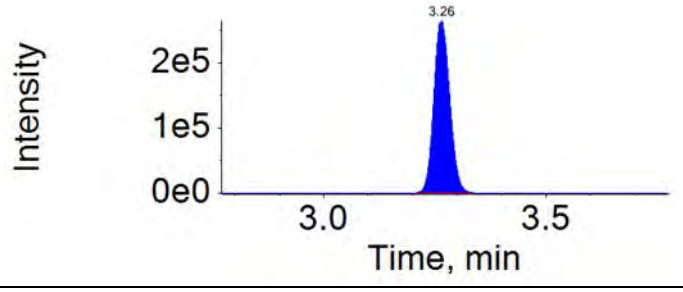
Injection Standard: 13C2-PFDA
515.0 / 470.0

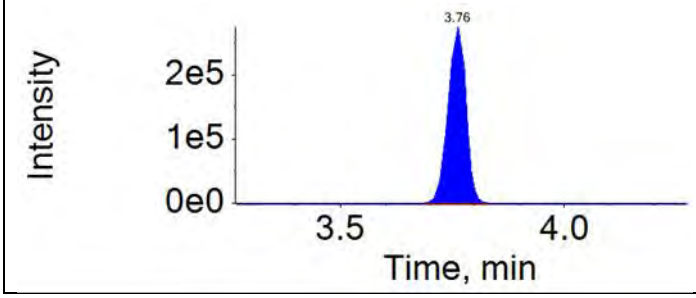
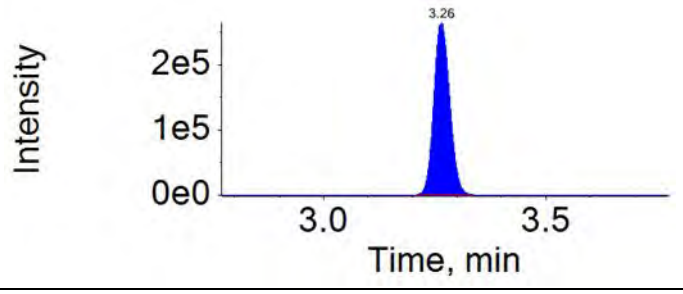


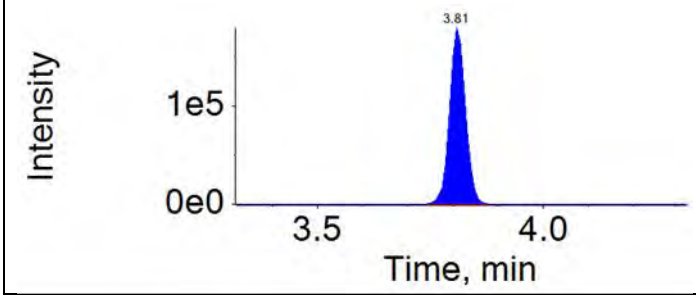
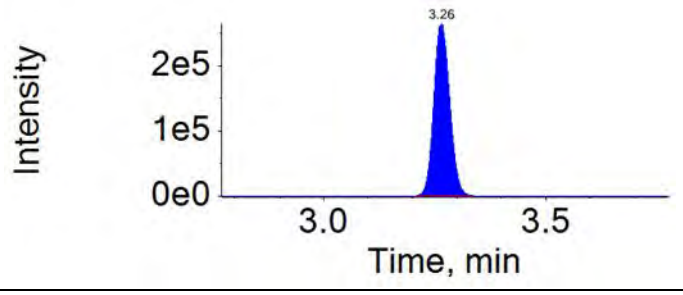
APPROVED
By JPT at 10:23 am, 11/13/18

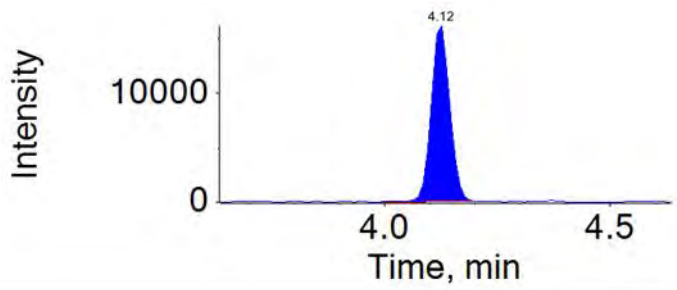
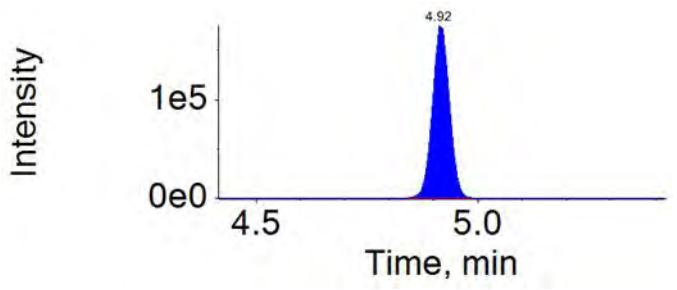
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

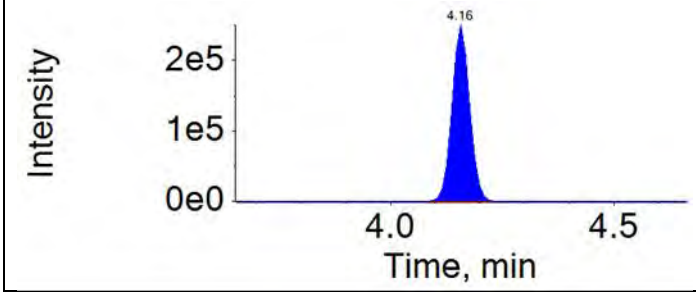
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

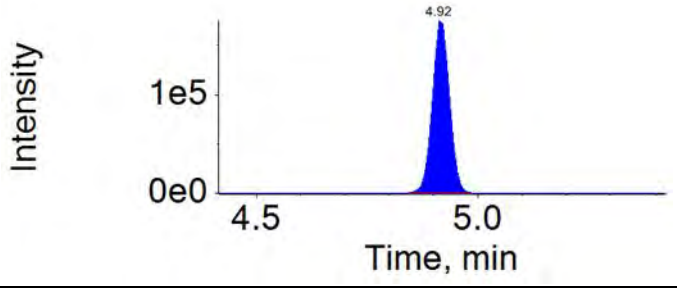
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

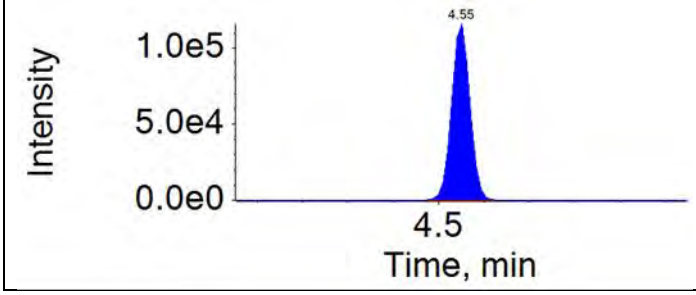
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

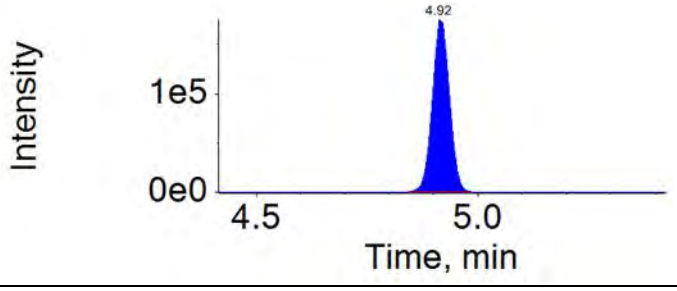
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



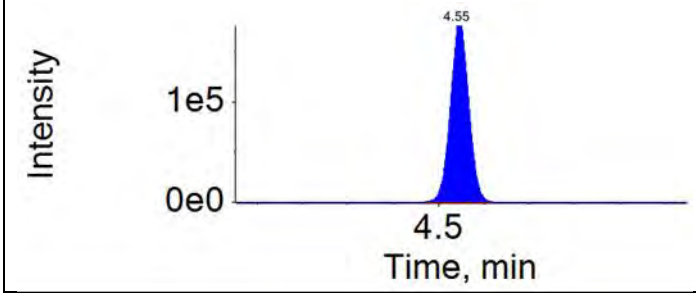


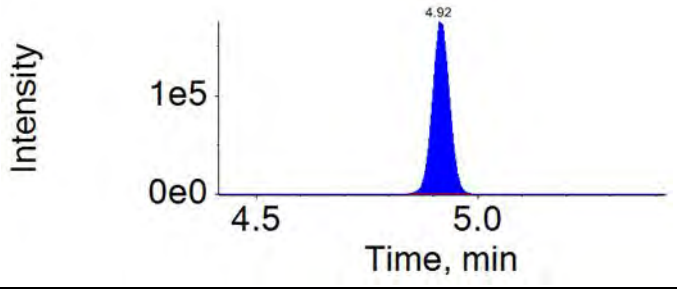
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



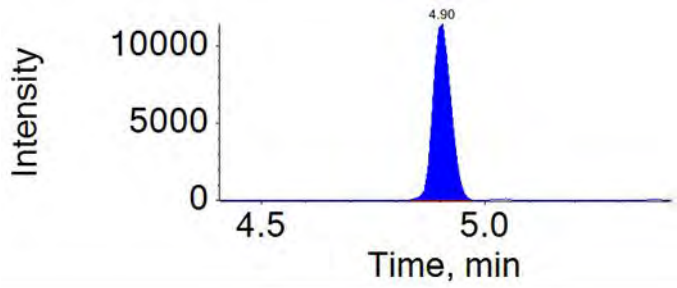


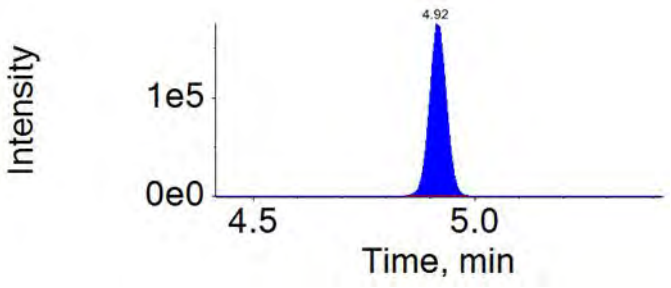
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

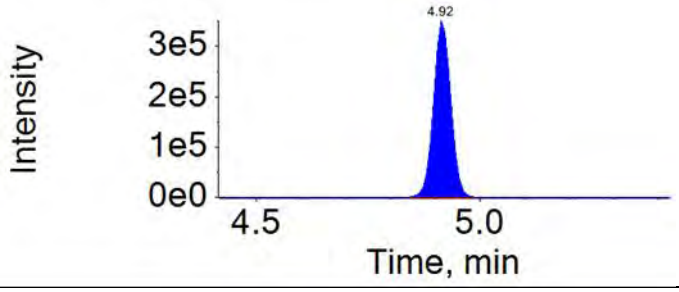
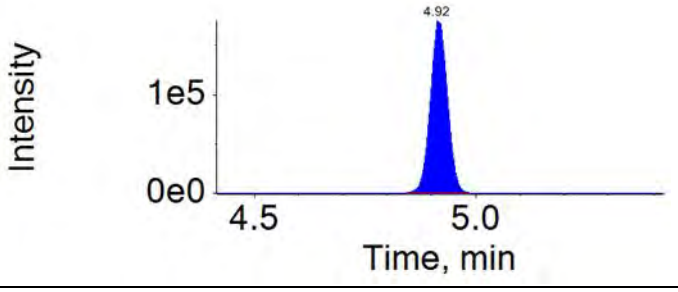


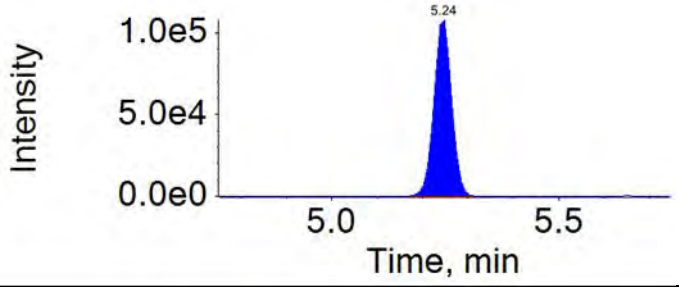
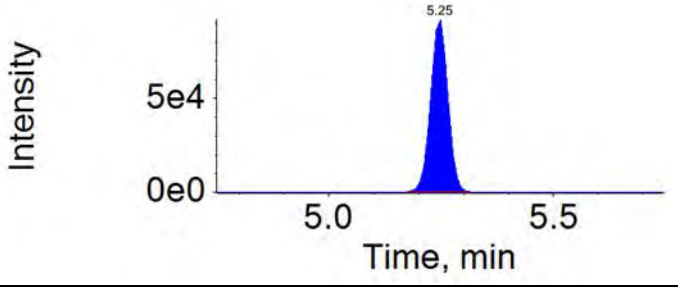


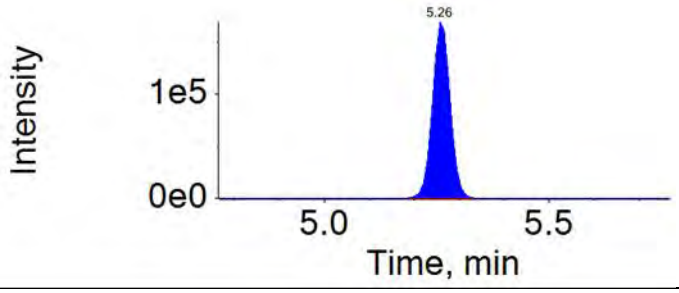
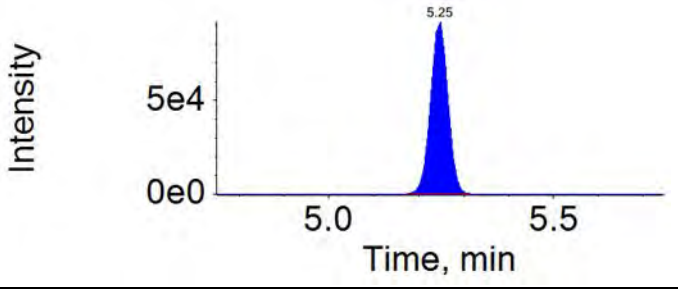
APPROVED
By JPT at 10:23 am, 11/13/18

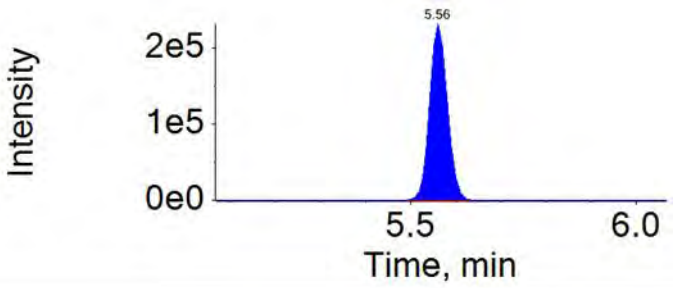
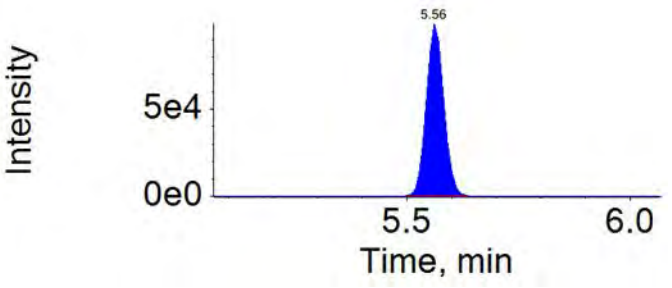
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

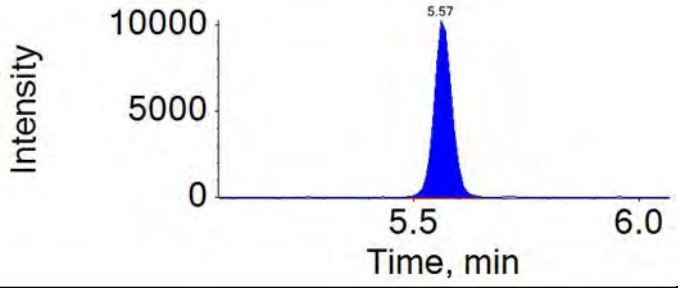
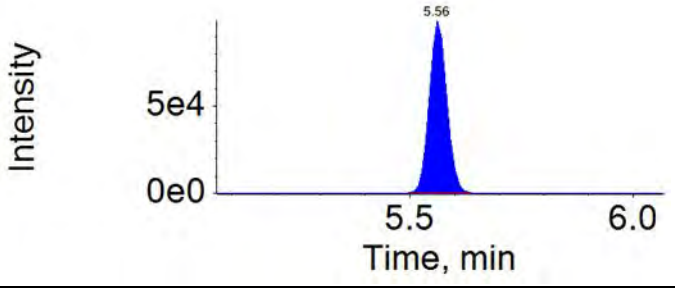
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

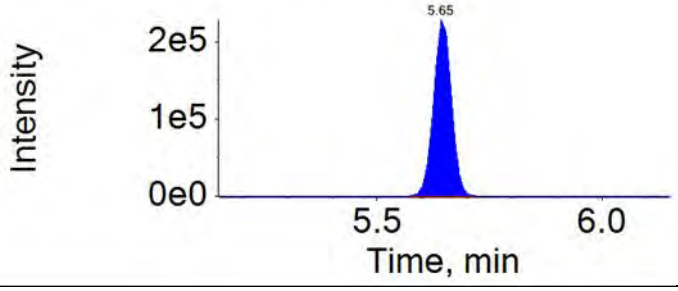
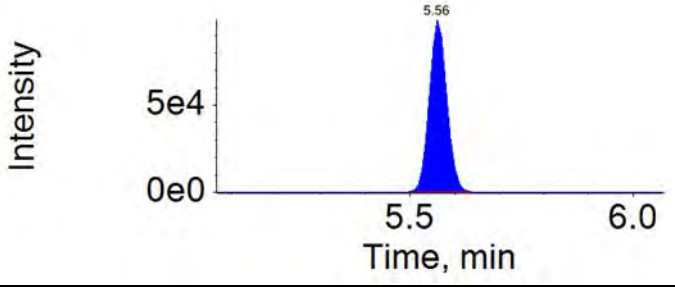
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

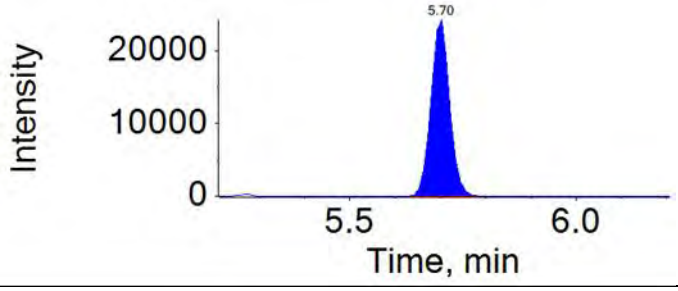
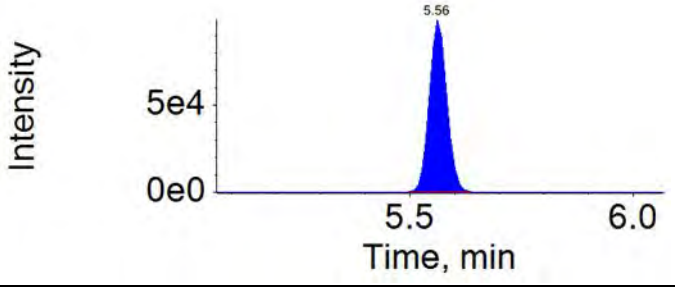
APPROVED
By JPT at 10:23 am, 11/13/18

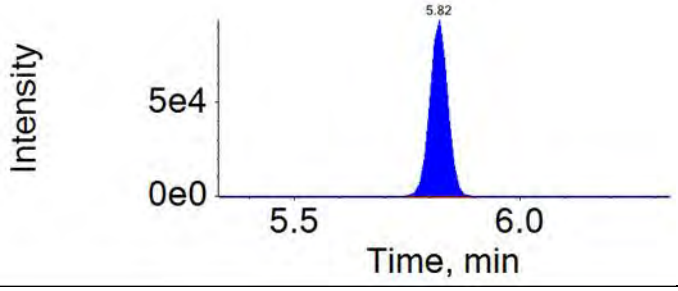
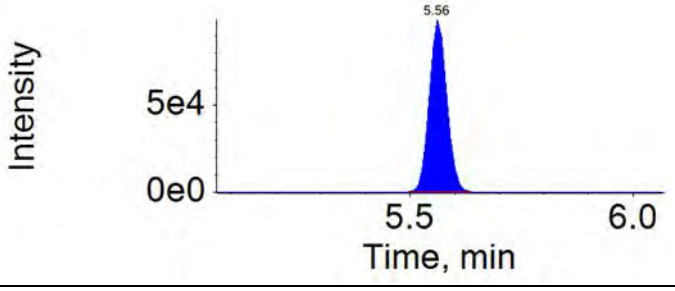
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

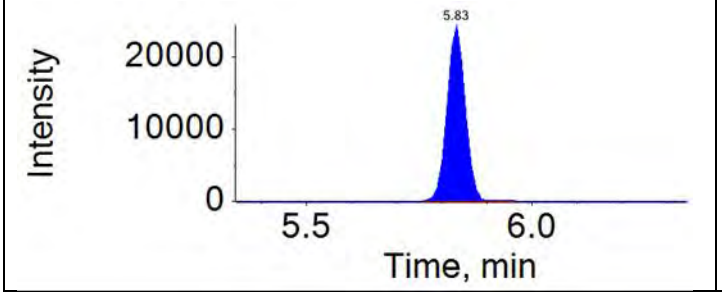
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

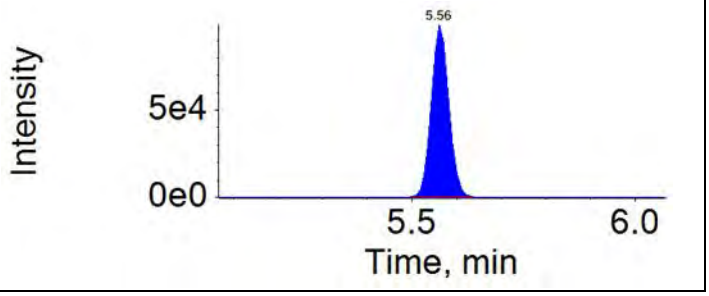
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

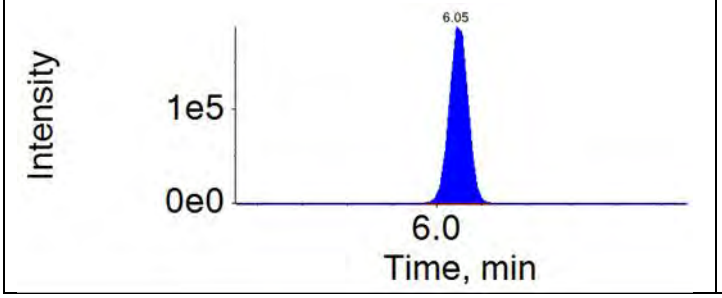
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

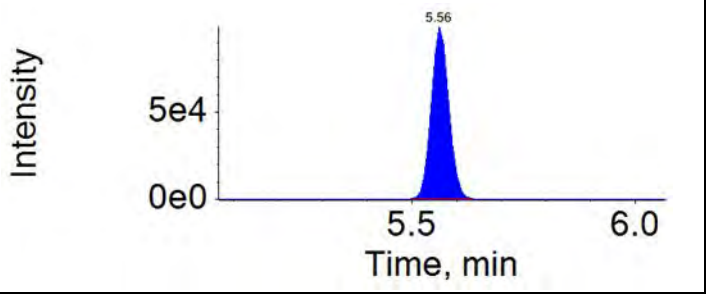
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



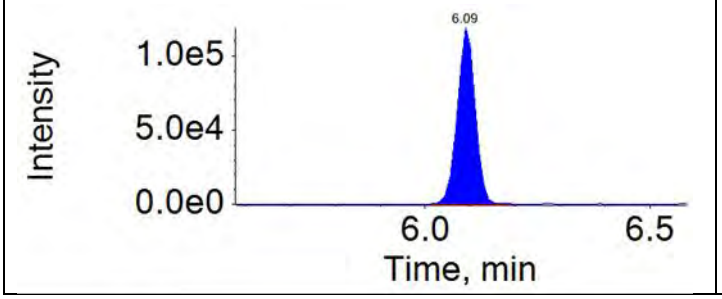


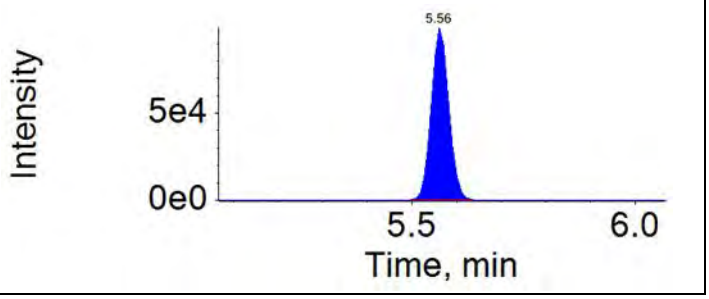
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



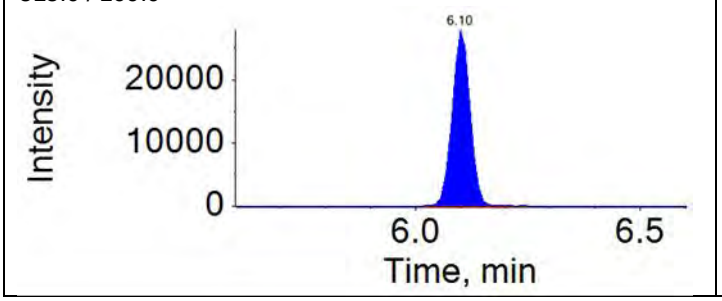


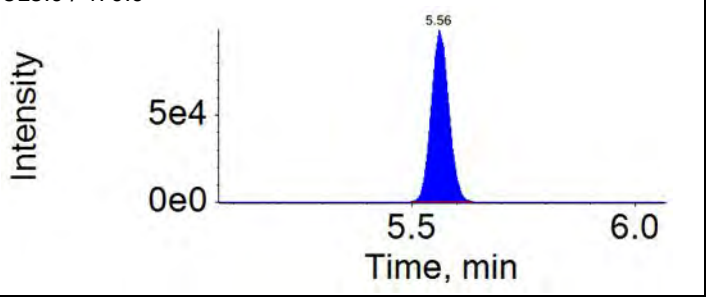
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



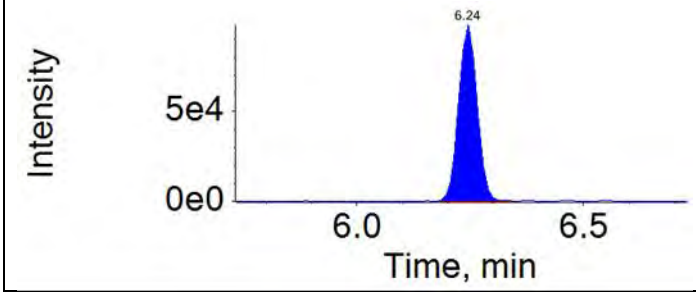


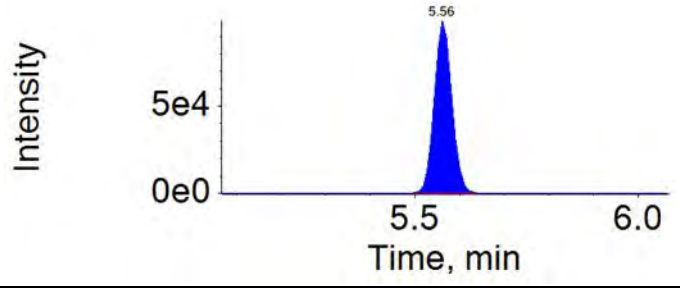
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

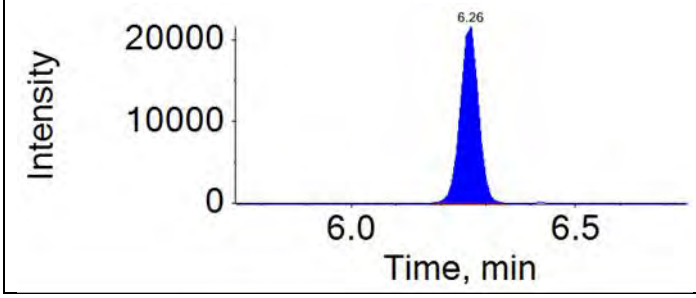
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

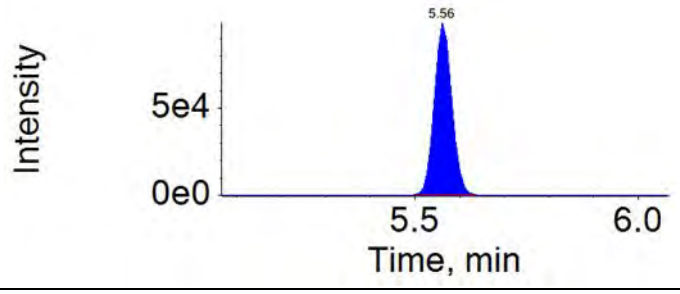
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



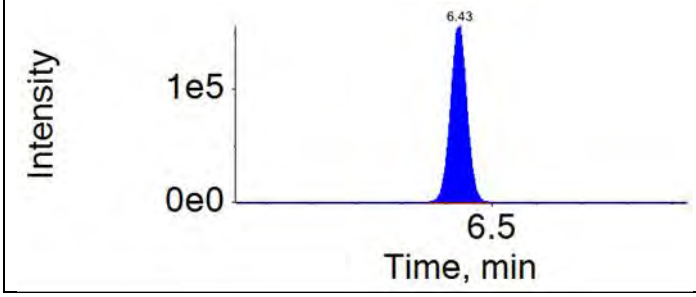


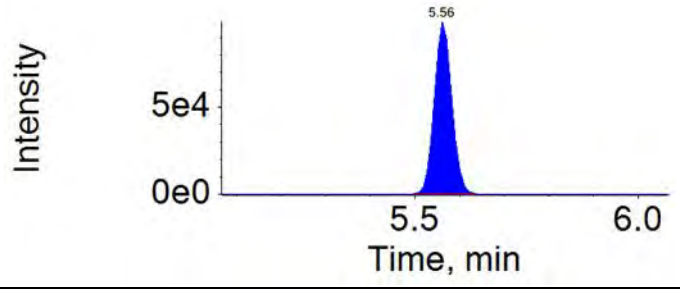
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



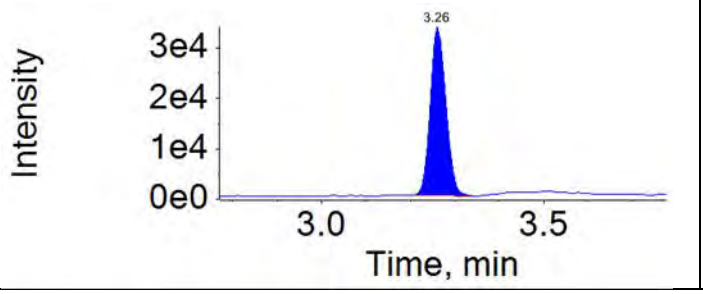


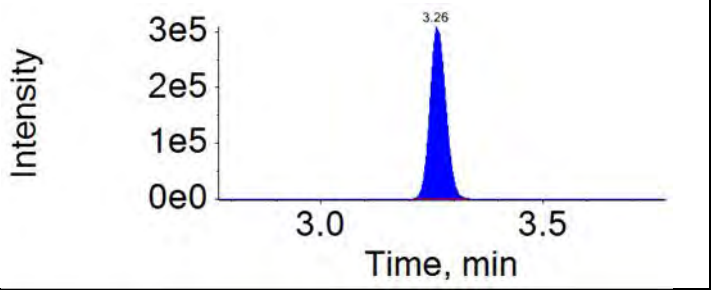
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

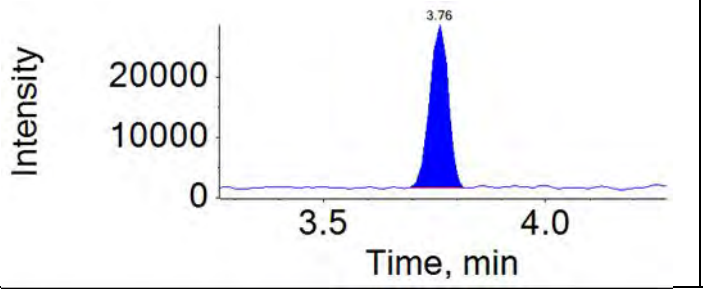
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

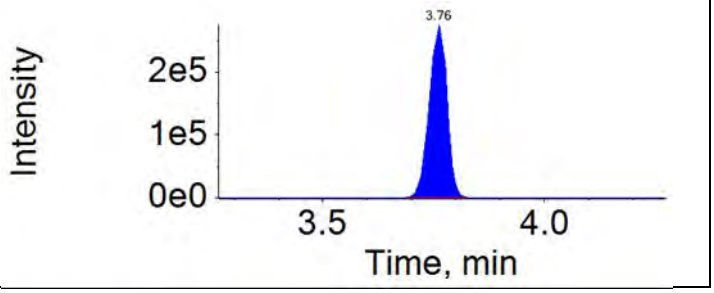
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



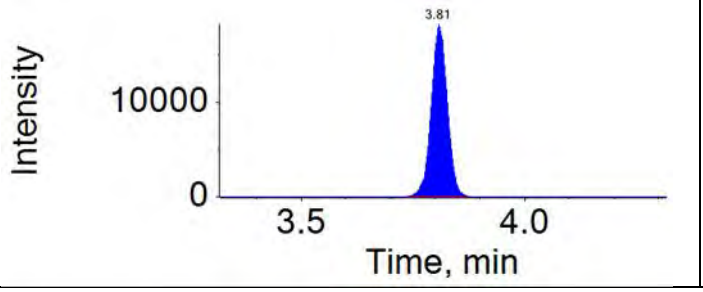


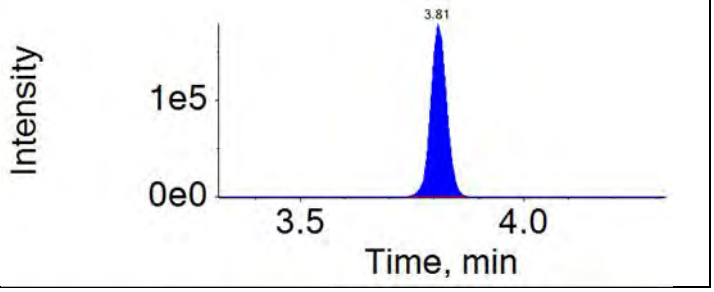
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



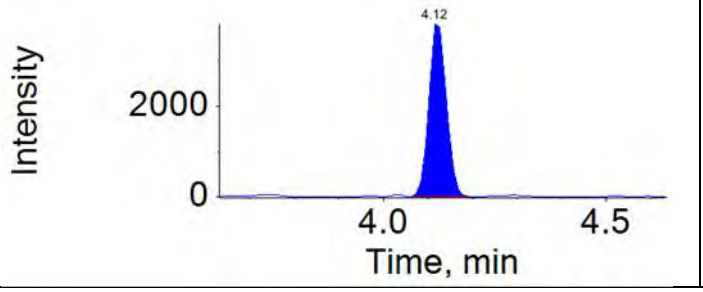


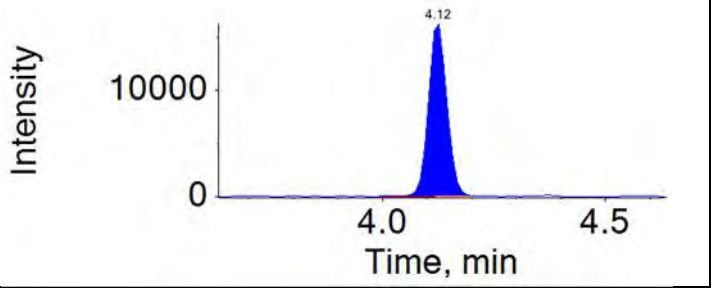
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

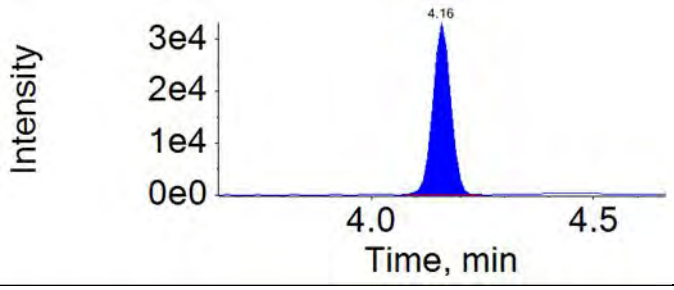
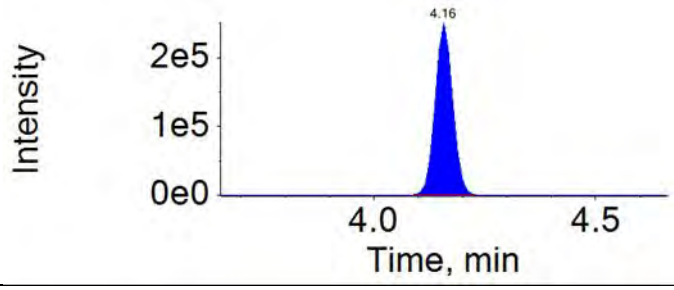


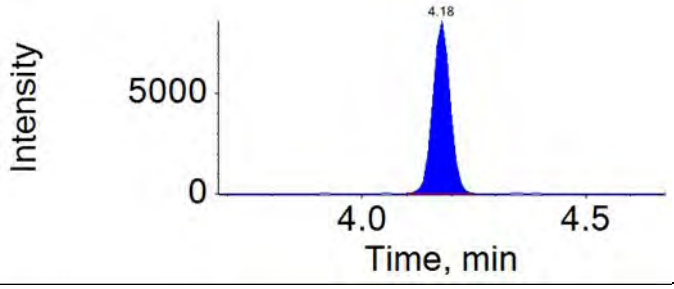
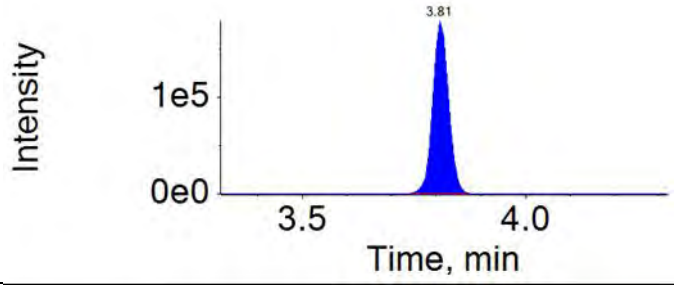


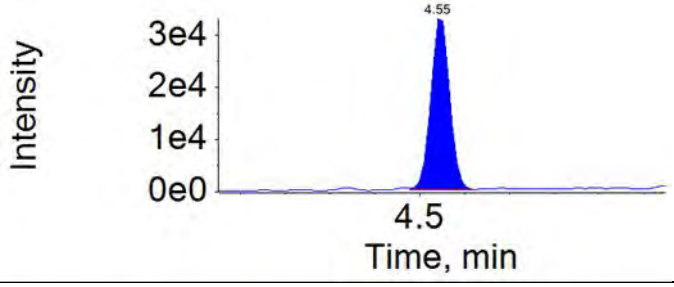
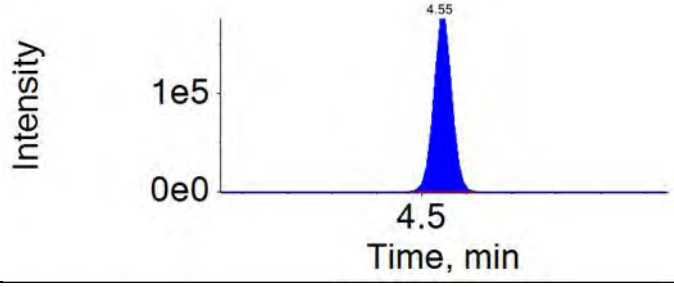
APPROVED
By JPT at 10:23 am, 11/13/18

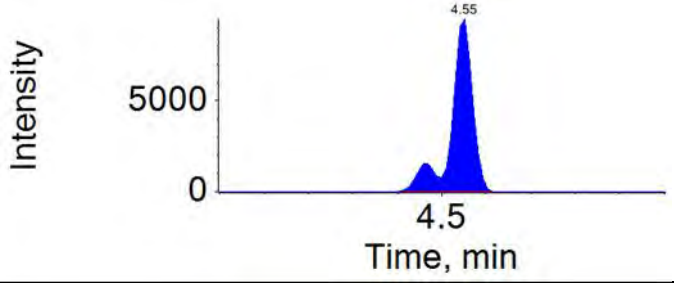
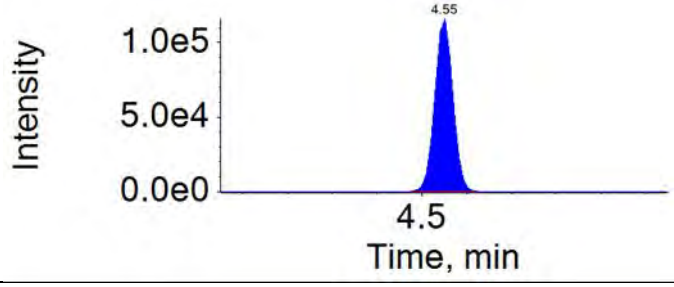
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

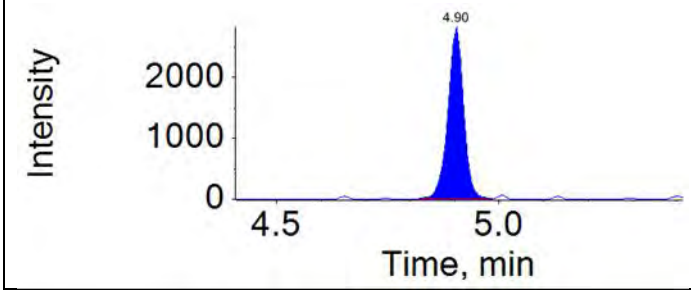
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

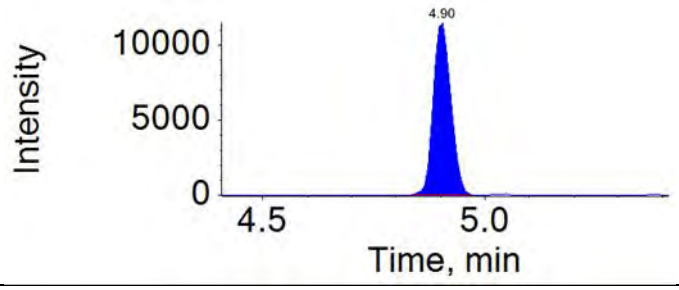
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

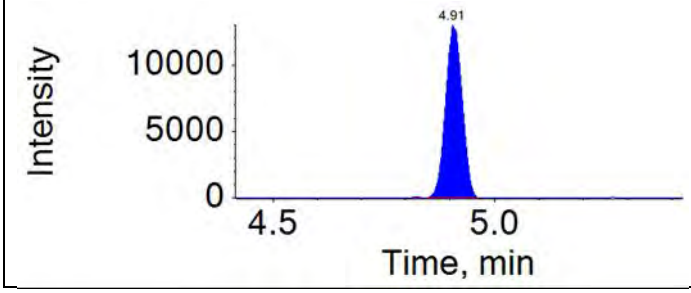
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

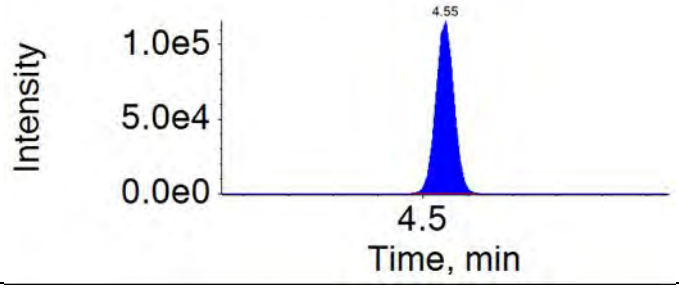
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



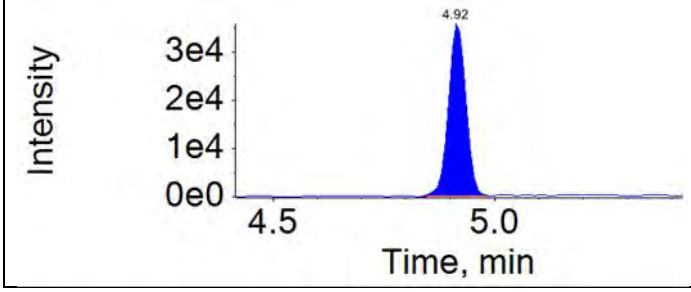


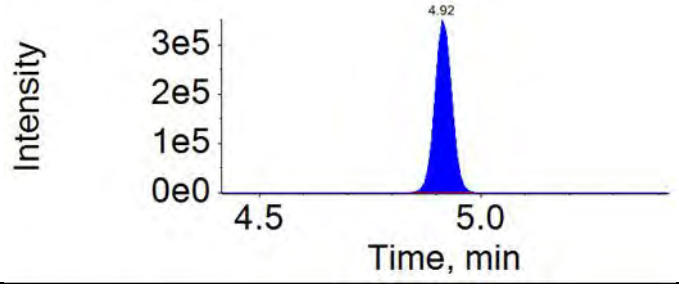
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



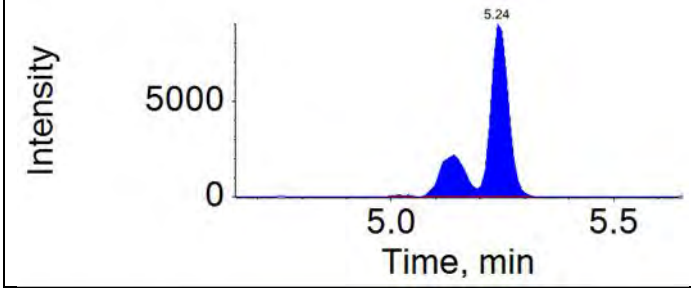


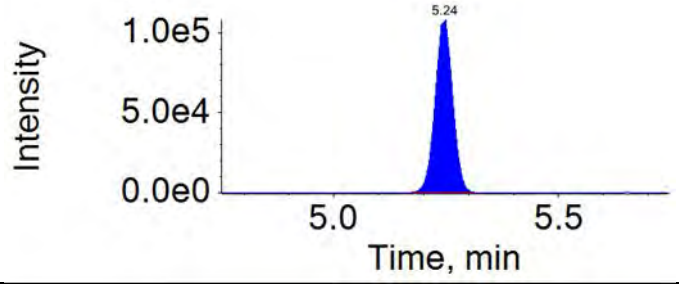
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



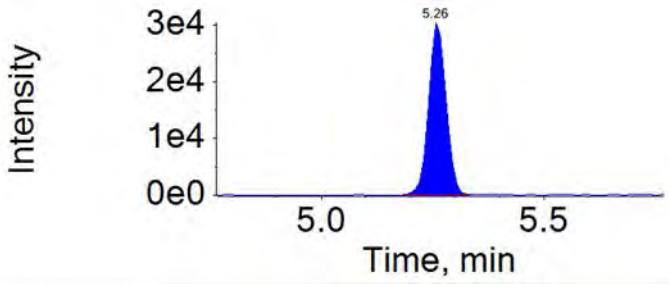


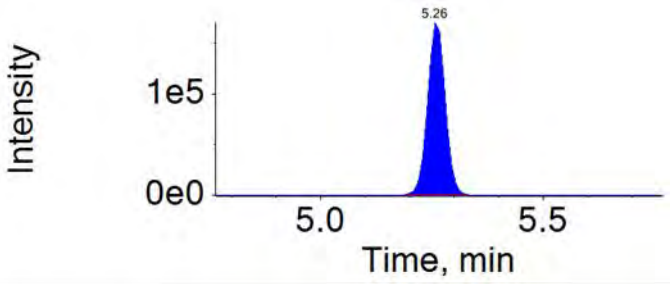
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

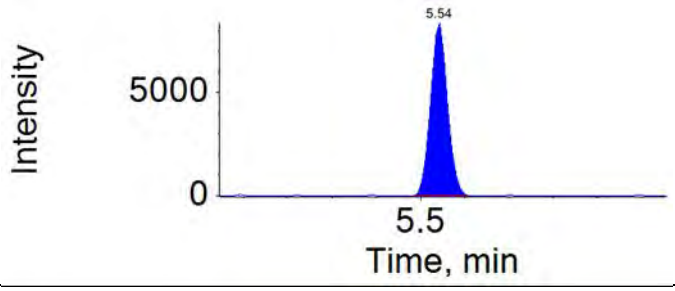
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

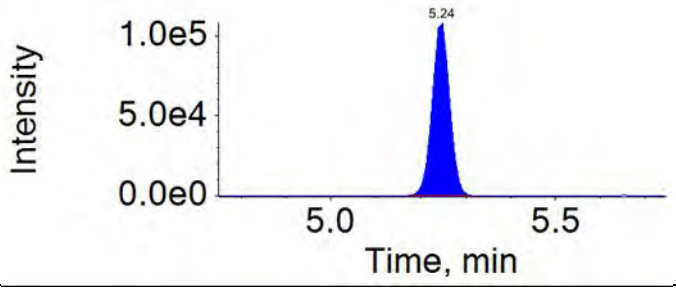
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



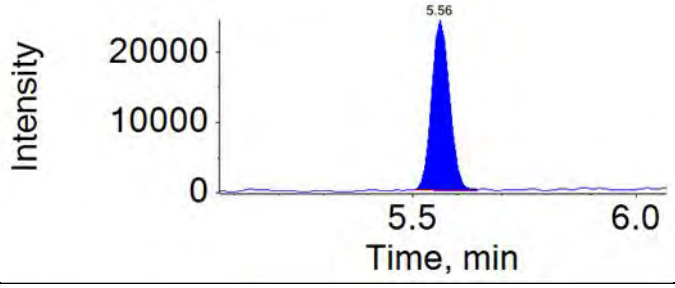


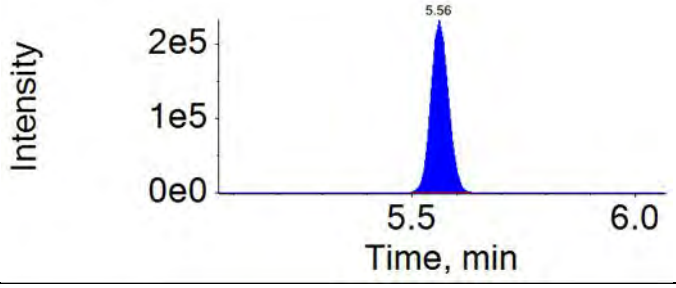
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



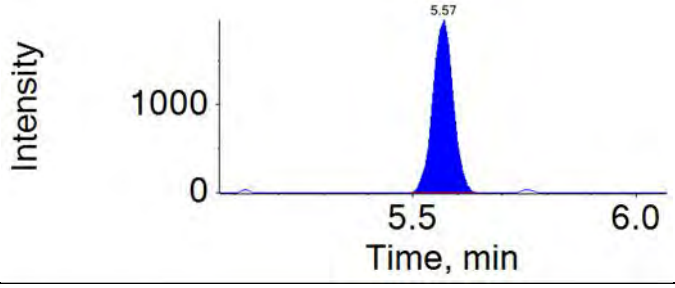


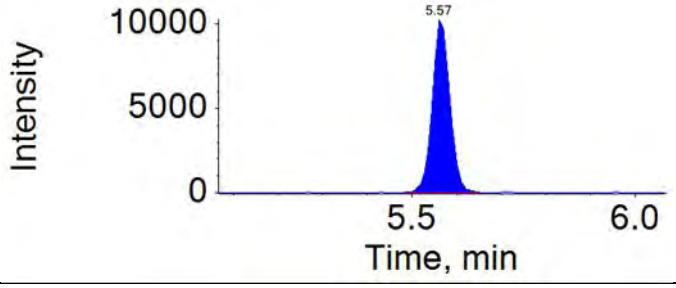
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



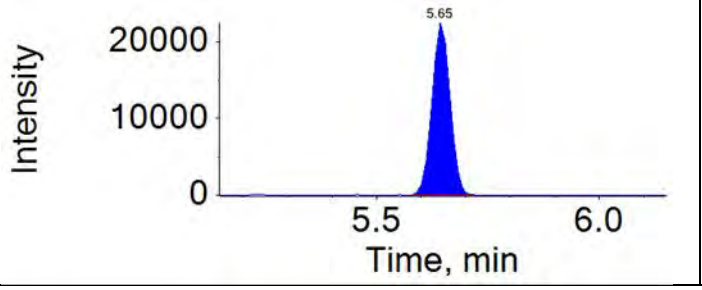


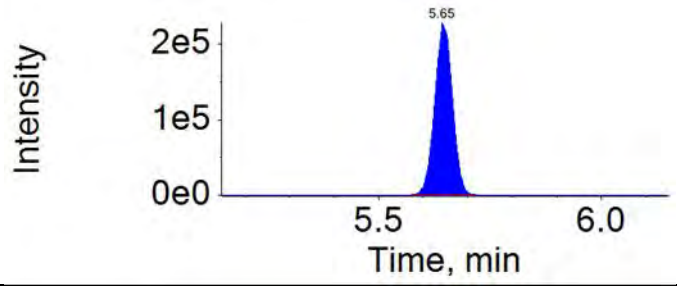
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

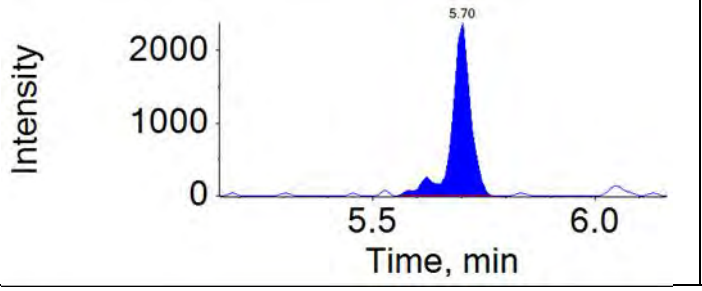
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

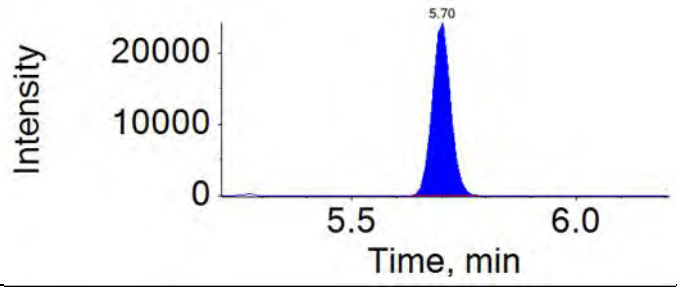
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



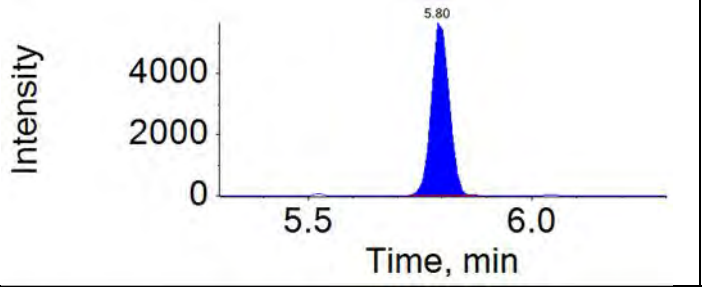


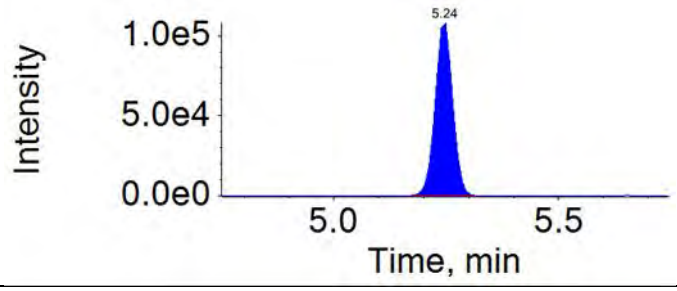
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



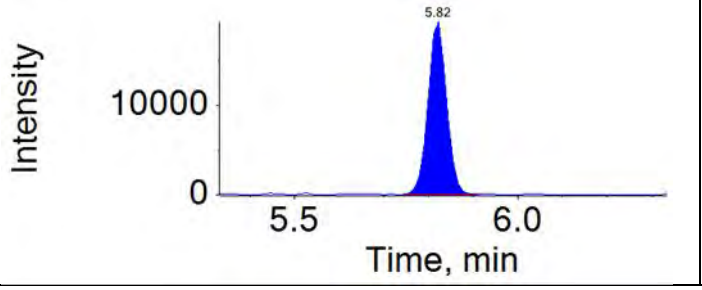


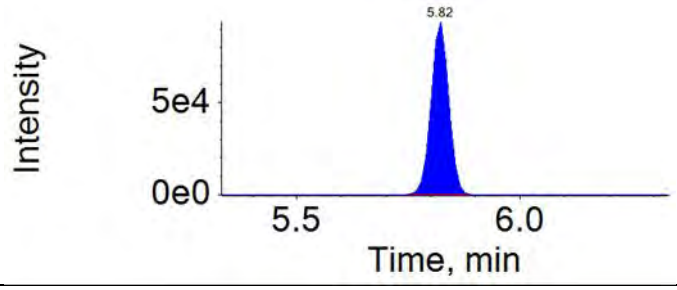
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



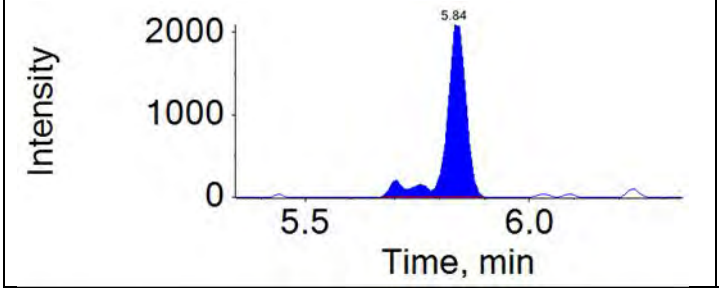


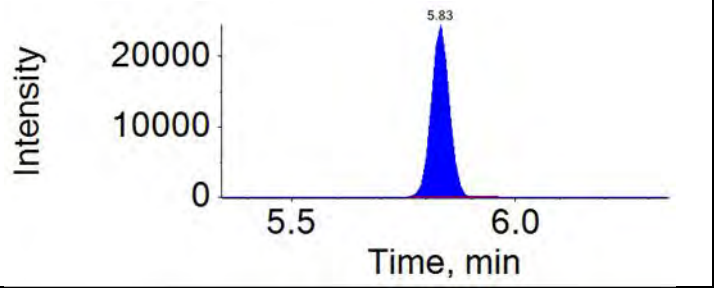
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

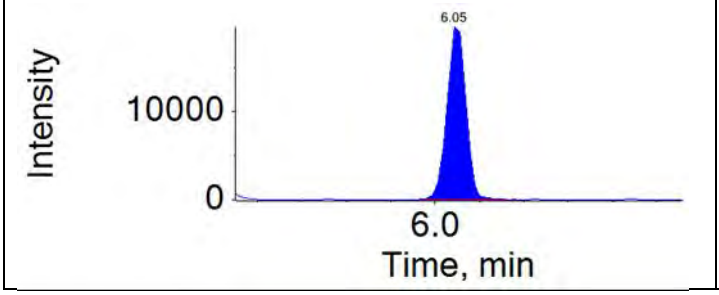
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

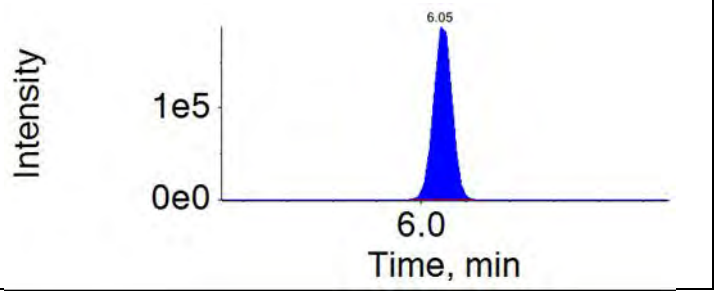
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



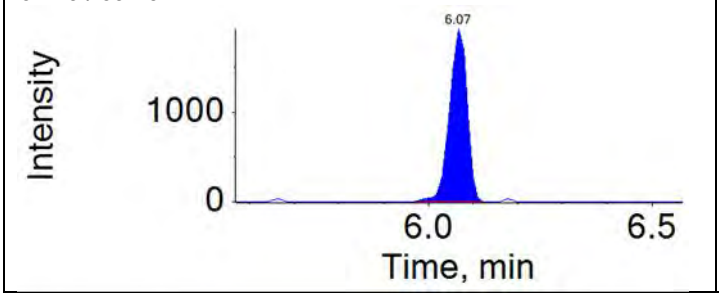


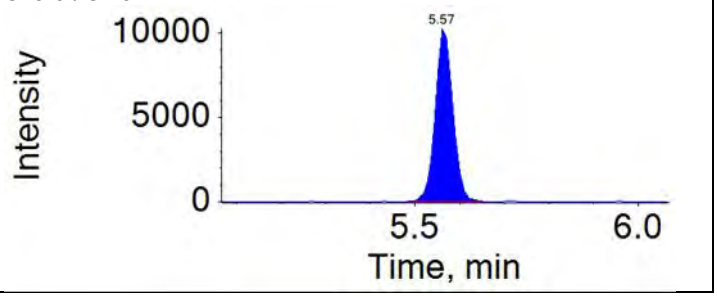
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



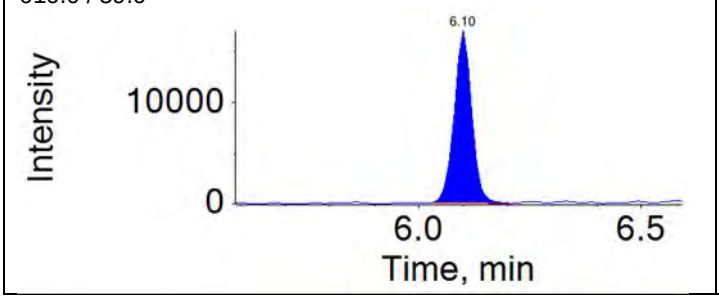


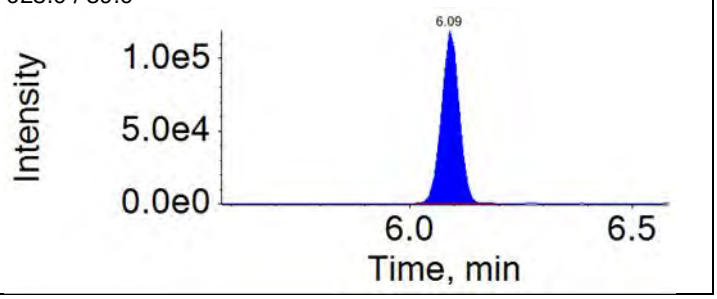
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



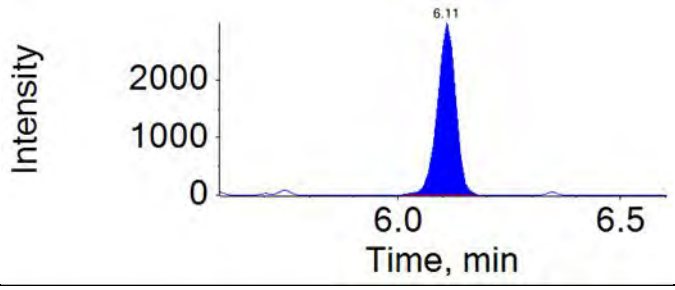


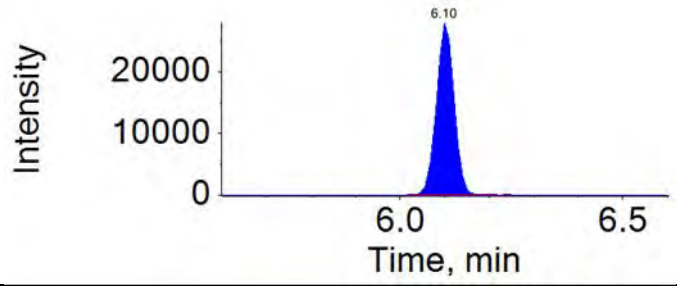
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

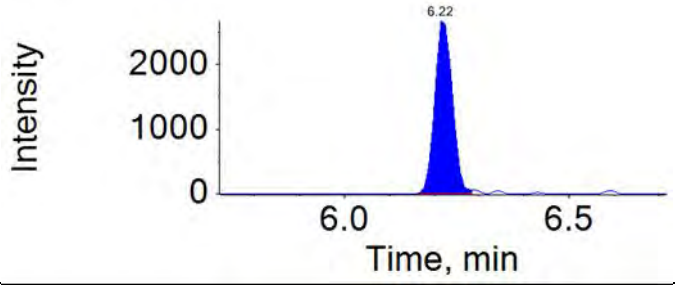
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

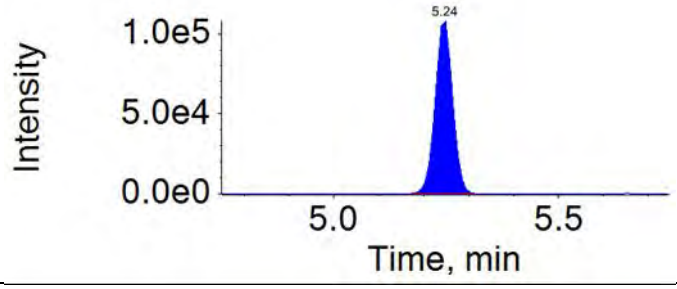
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



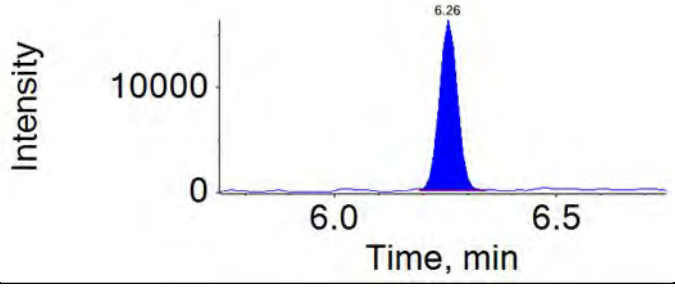


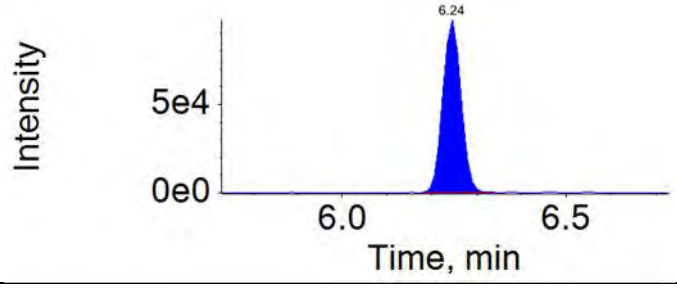
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



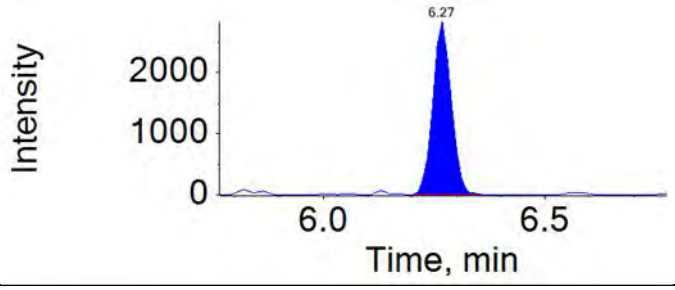


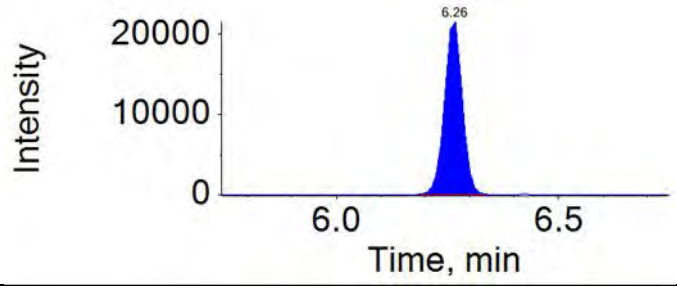
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



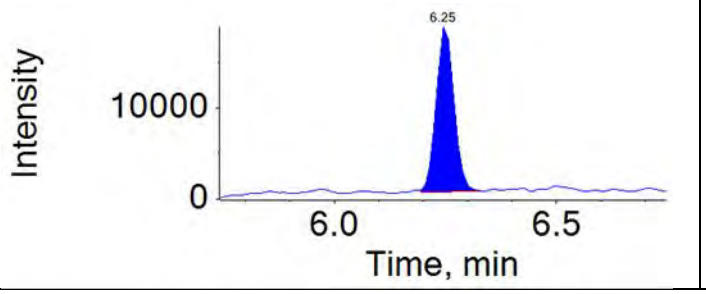


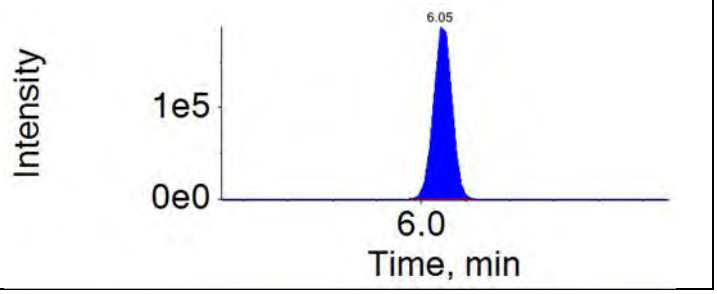
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

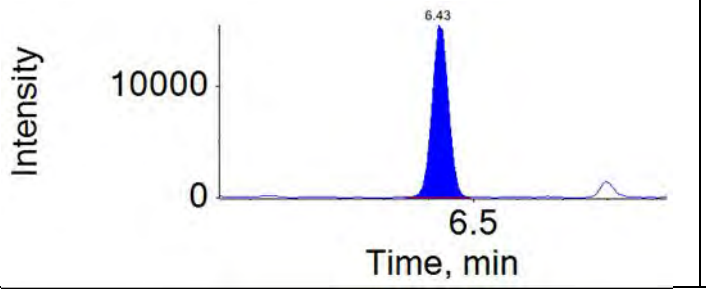
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

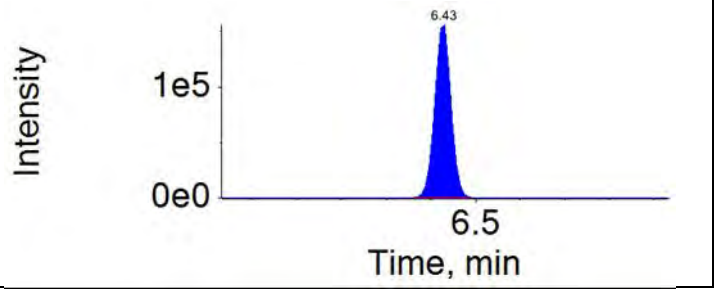
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



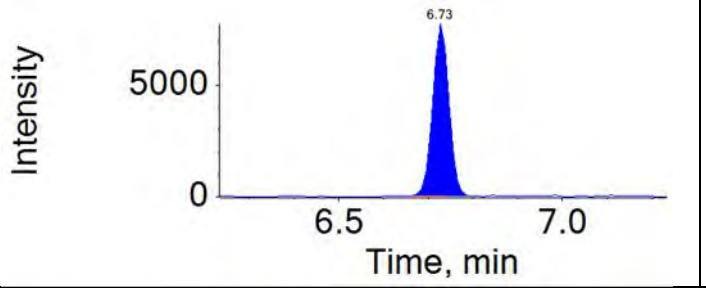


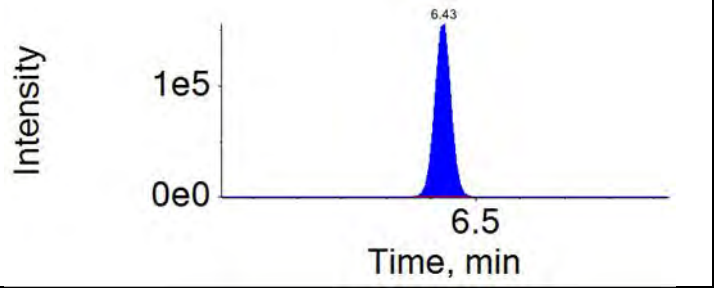
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



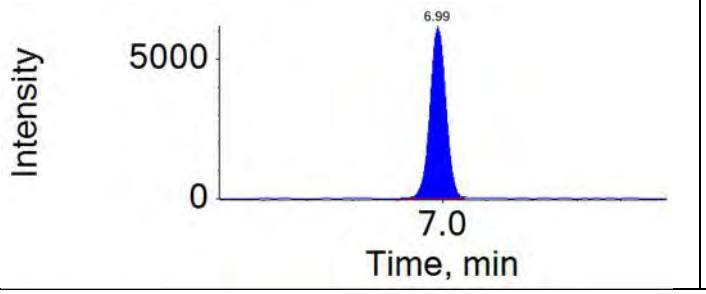


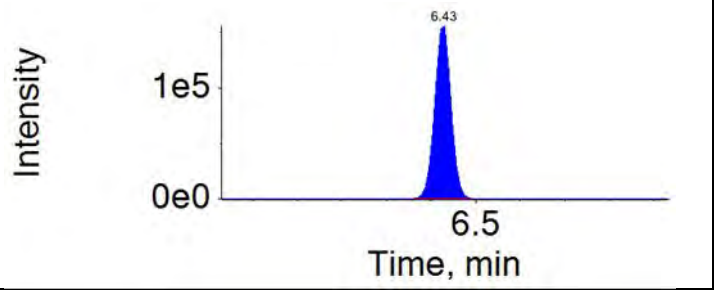
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



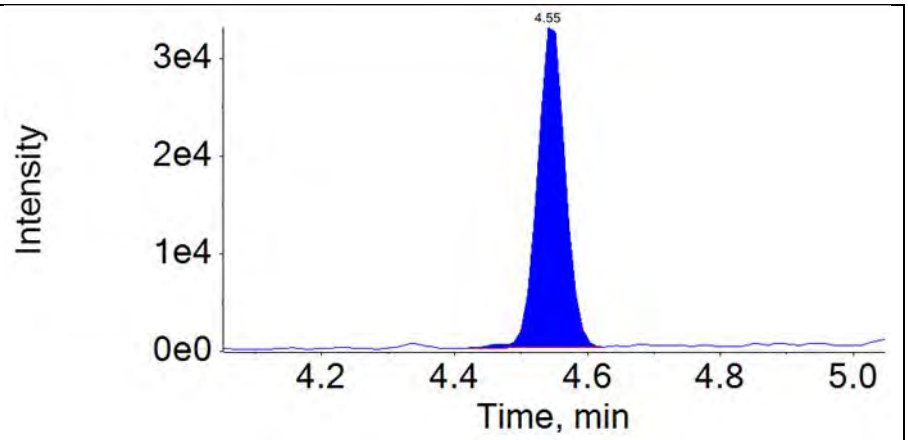


APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

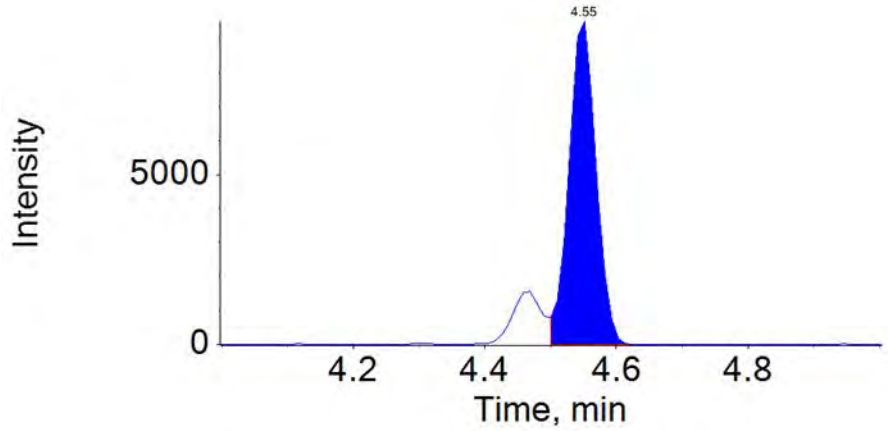
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
96170.5
Mass Range:
363.0 / 319.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



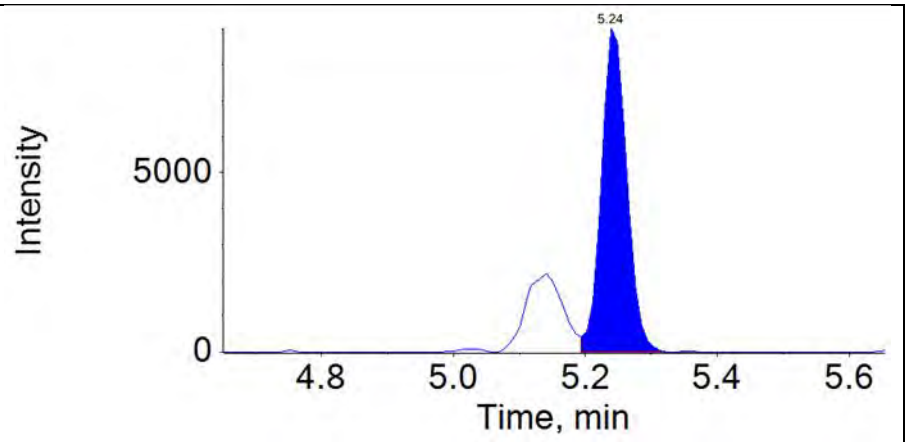
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
27302.7
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
24229.2
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



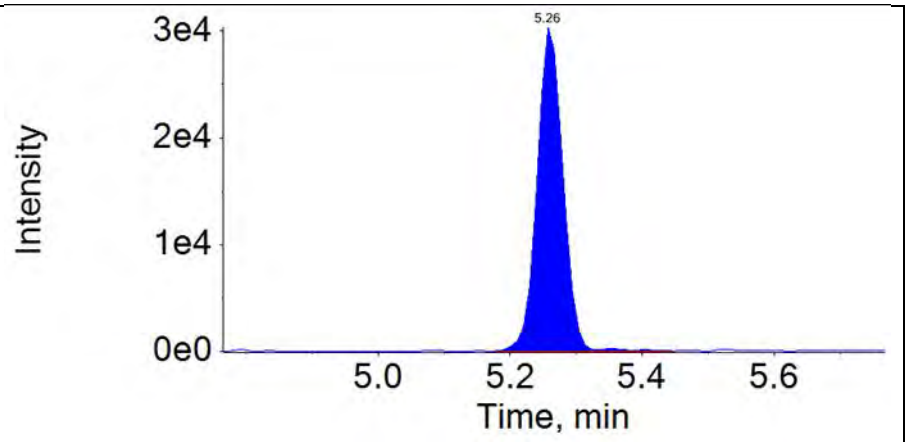
Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

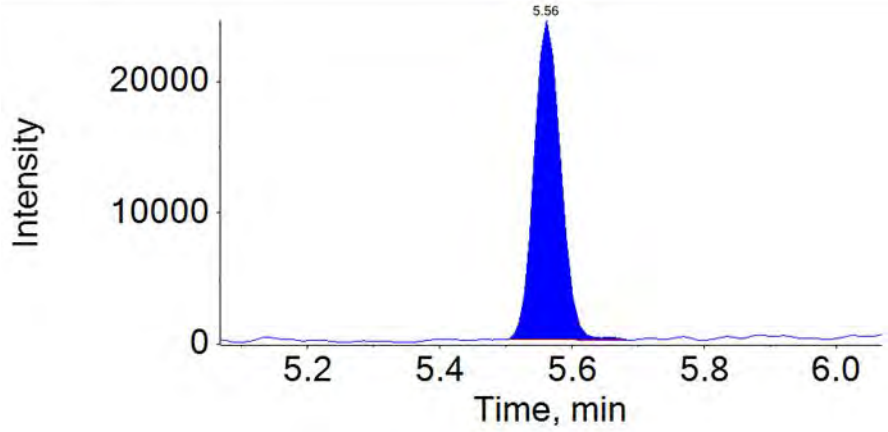
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA
RT (min.):
5.26
Peak Area:
82791.6
Mass Range:
463.0 / 419.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



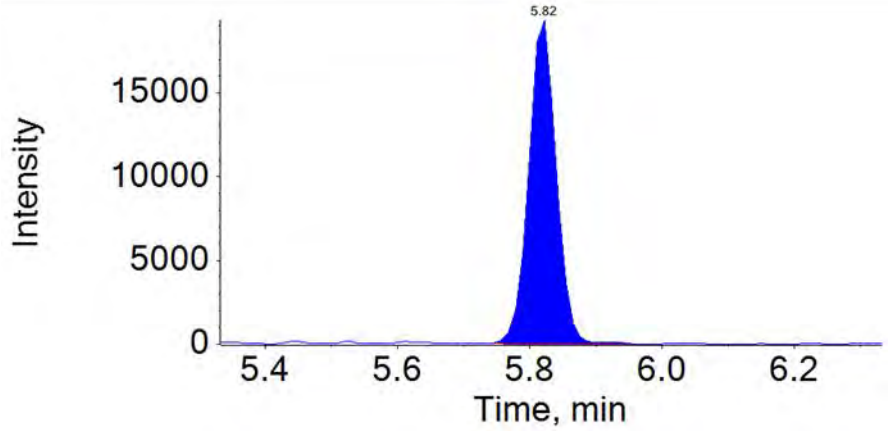
Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.56
Peak Area:
67959.2
Mass Range:
513.0 / 469.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFUnDA
RT (min.):
5.82
Peak Area:
56017.4
Mass Range:
563.0 / 519.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2

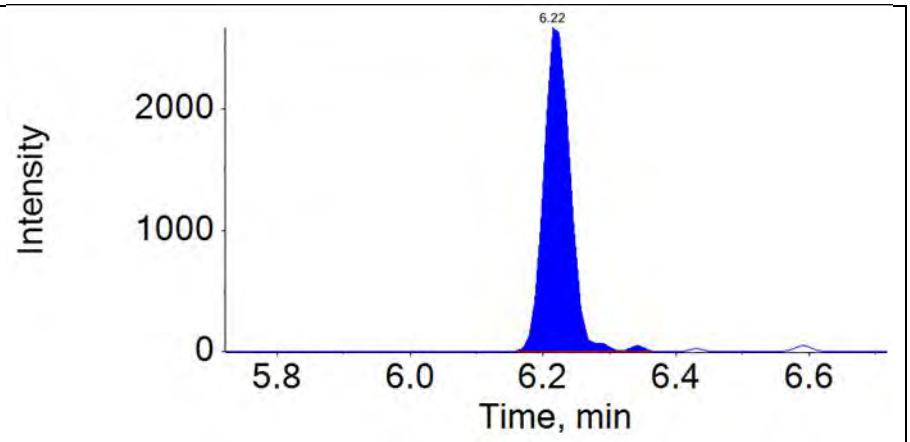


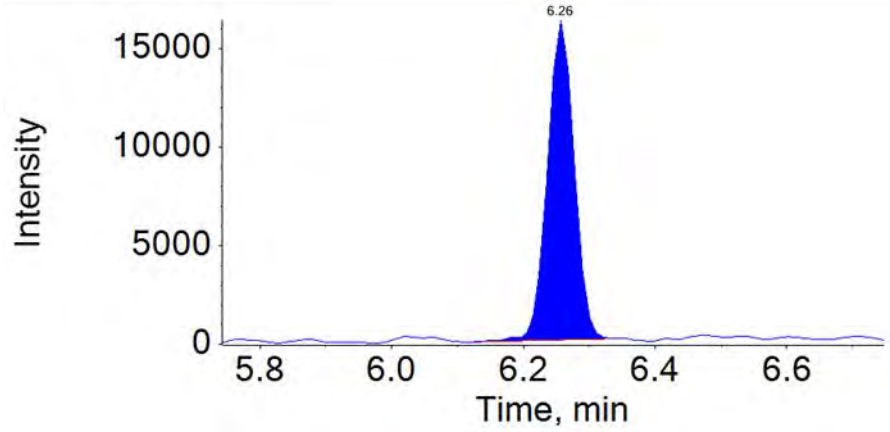
Integration Comment: incorrect integration

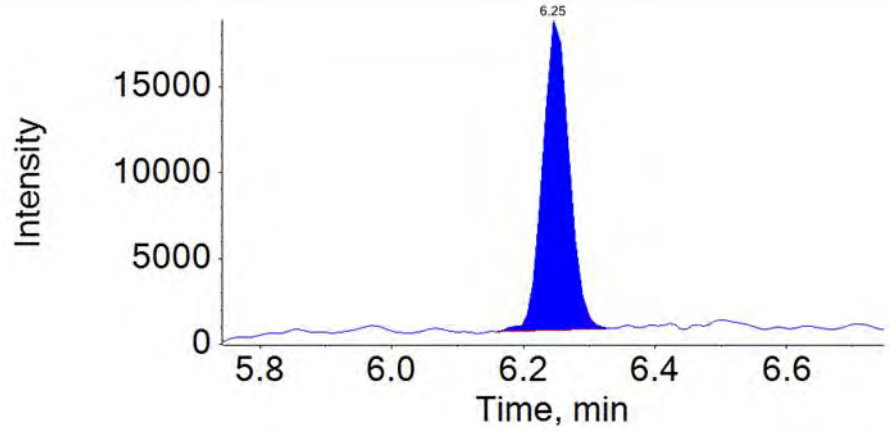
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFDoS **RT (min.):** 6.22 **Peak Area:** 7462.8 **Mass Range:** 699.0 / 80.0 **File Name:** 18NOV12D-35.wiff **Sample Name:** CCV4_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NEtPFOSAE **RT (min.):** 6.26 **Peak Area:** 45832.0 **Mass Range:** 630.0 / 59.0 **File Name:** 18NOV12D-35.wiff **Sample Name:** CCV4_ISC_CAL2	 **Integration Comment:** incorrect integration

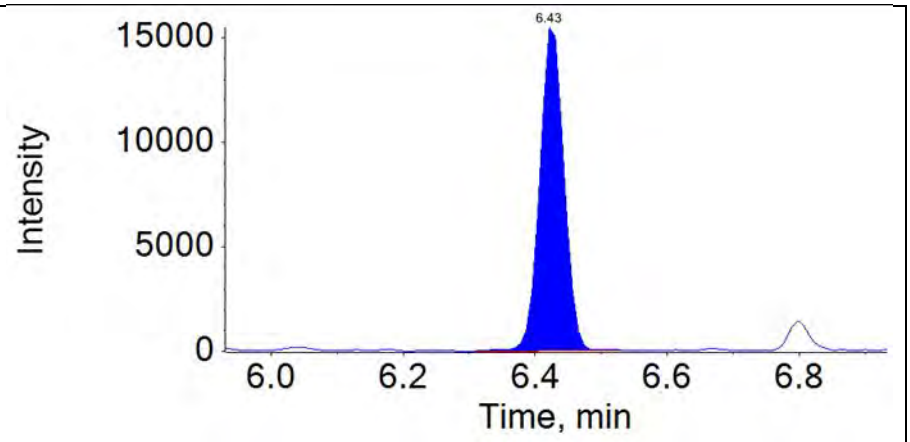
Component Name: PFTrDA **RT (min.):** 6.25 **Peak Area:** 50513.7 **Mass Range:** 663.0 / 619.0 **File Name:** 18NOV12D-35.wiff **Sample Name:** CCV4_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

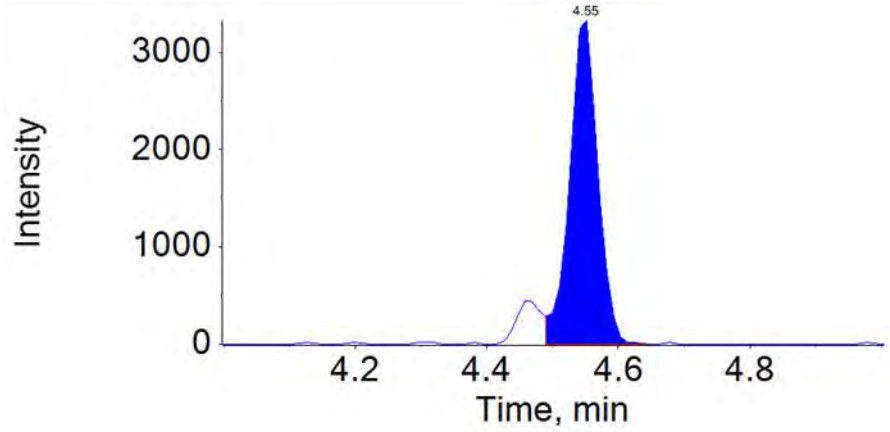
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTeDA
RT (min.):
6.43
Peak Area:
39604.0
Mass Range:
713.0 / 669.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



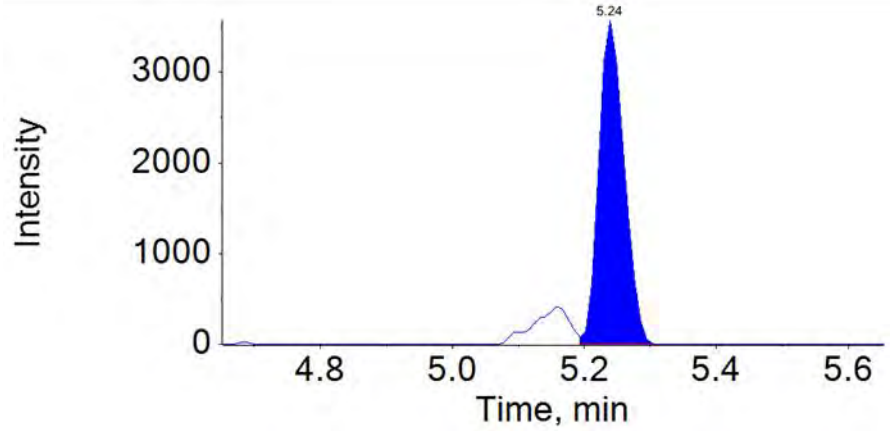
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
9996.3
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
9504.5
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-35.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

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By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Ion Ratio Report

Sample Name: CCV4_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12D-35.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	45066.2	A	N/A	1.0000			
PFBS_2	3.81	1.00	15952.7	A	N/A	0.3540	-3	50	
4:2-FTS	4.12	1.00	10399.0	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	6992.0	A	N/A	0.6724		#NA!	
PFHxA	4.16	1.00	91487.0	A	N/A	1.0000			
PFHxA_2	4.16	1.00	995.2	A	N/A	0.0109	-7	50	
PFPeS	4.18	1.10	22954.6	A	N/A	1.0000			
PFPeS_2	4.18	1.10	11412.4	A	N/A	0.4972	-4	50	
PFHpA	4.55	1.00	95466.7	M	N/A	1.0000			
PFHpA_2	4.55	1.00	5313.6	A	N/A	0.0557	-1	50	
PFHxS	4.55	1.00	32219.2	M	N/A	1.0000			
PFHxS_2	4.55	1.00	11166.8	M	N/A	0.3466	1	50	
6:2-FTS	4.90	1.00	6911.2	A	N/A	1.0000			
6:2 FTS_2	4.91	1.00	4687.2	A	N/A	0.6782		#NA!	
PFHpS	4.91	1.08	33929.7	A	N/A	1.0000			
PFHpS_2	4.91	1.08	12017.9	A	N/A	0.3542	-13	50	
PFOA	4.92	1.00	97123.0	A	N/A	1.0000			
PFOA_2	4.92	1.00	5333.5	A	N/A	0.0549	-3	50	
PFOS	5.24	1.00	33092.8	M	N/A	1.0000			
PFOS_2	5.24	1.00	11082.0	M	N/A	0.3349	13	50	
PFNA	5.26	1.00	82024.9	M	N/A	1.0000			
PFNA_2	5.26	1.00	1804.0	A	N/A	0.0220	-3	50	
PFNS	5.54	1.06	22070.4	A	N/A	1.0000			
PFNS_2	5.54	1.06	8279.5	A	N/A	0.3751	-21	50	
PFDA	5.56	1.00	67587.3	M	N/A	1.0000			
PFDA_2	5.57	1.00	335.5	A	N/A	0.0050	-37	50	
8:2-FTS	5.57	1.00	6168.3	A	N/A	1.0000			
8:2 FTS_2	5.57	1.00	3024.9	A	N/A	0.4904		#NA!	
NMeFOSAA	5.70	1.00	6931.1	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	1049.7	A	N/A	0.1514	-41	50	
PFDS	5.80	1.11	15622.4	A	N/A	1.0000			
PFDS_2	5.79	1.10	7430.8	A	N/A	0.4756	-7	50	
PFUnDA	5.82	1.00	55755.4	M	N/A	1.0000			
PFUnDA_2	5.84	1.00	194.6	A	N/A	0.0035	-37	50	
NEtFOSAA	5.84	1.00	6578.7	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	3627.2	A	N/A	0.5513	-23	50	
PFDoDA	6.05	1.00	58154.0	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	979.6	A	N/A	0.0168	9	50	
10:2-FTS	6.07	1.09	5269.4	A	N/A	1.0000			
10:2 FTS_2	6.07	1.09	3638.3	A	N/A	0.6905		#NA!	
PFTrDA	6.25	1.03	50331.5	M	N/A	1.0000			
PFTrDA_2	6.23	1.03	309.7	A	N/A	0.0062	-28	50	
PFTeDA	6.43	1.00	39345.2	M	N/A	1.0000			
PFTeDA_2	6.42	1.00	381.1	A	N/A	0.0097	56	50	OOS
PFHxDA	6.73	1.05	19492.8	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1310.1	A	N/A	0.0672	-1	50	
PFODA	6.99	1.09	15126.3	A	N/A	1.0000			
PFODA_2	6.98	1.09	470.7	A	N/A	0.0311	13	50	

APPROVED
By JPT at 10:23 am, 11/13/18

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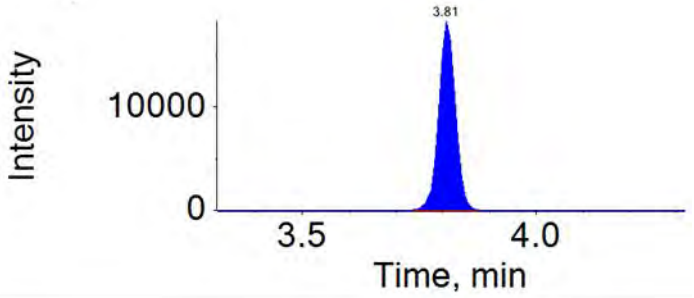
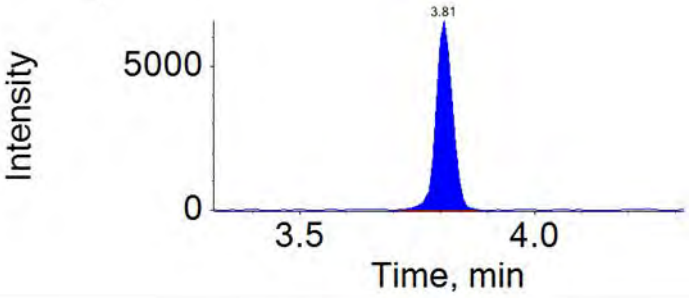
By HMK at 2:17 pm, 11/13/18

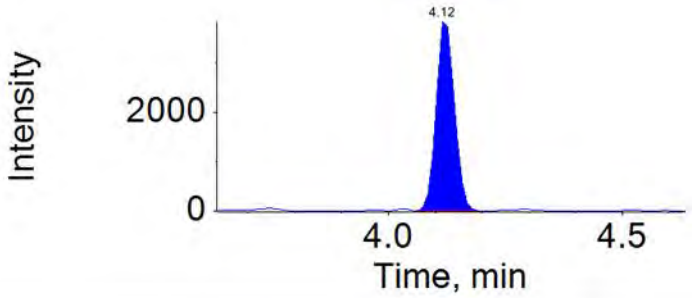
Component: PFBS
Primary Mass: 299.0 / 80.0



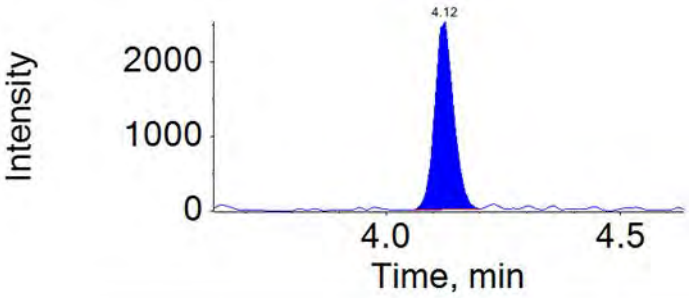
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



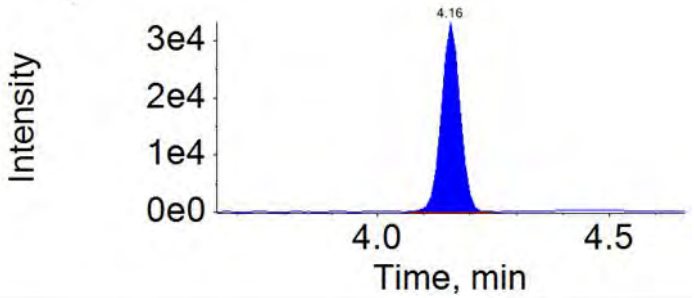
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



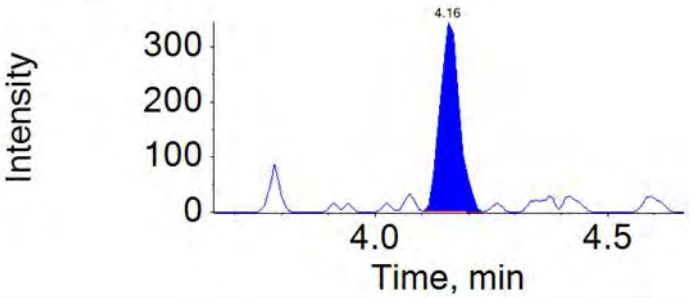
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



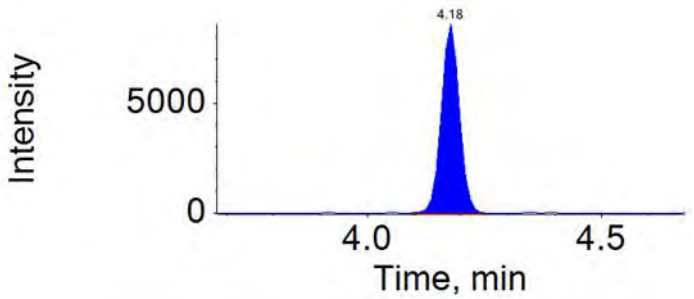
Component: PFHxA
Primary Mass: 313.0 / 269.0



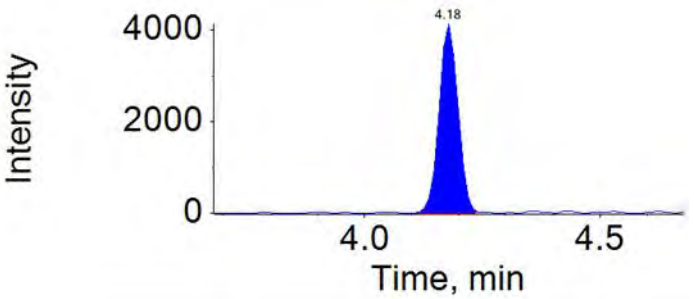
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 10:23 am, 11/13/18

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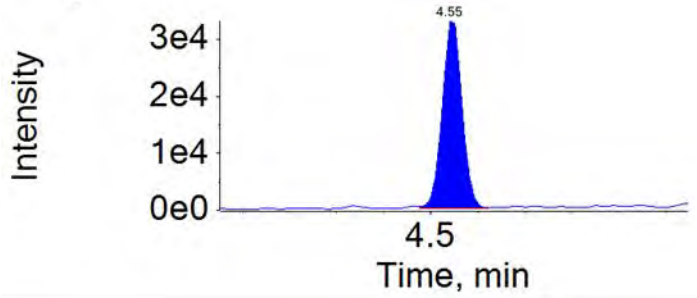
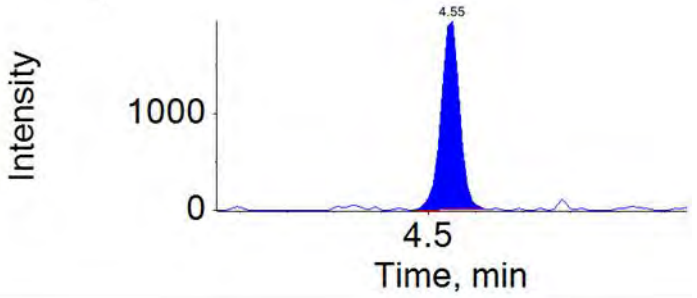
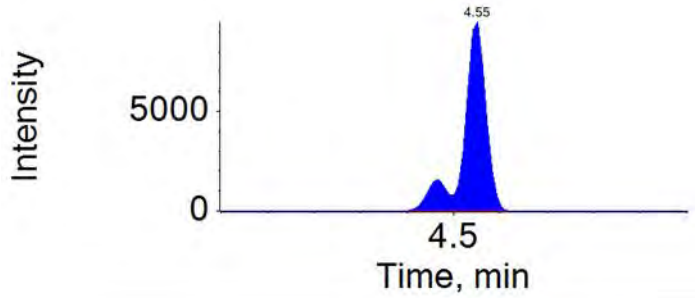
Component: PFHpA
Primary Mass: 363.0 / 319.0



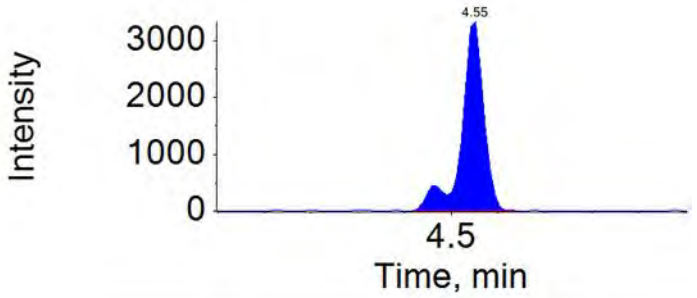
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



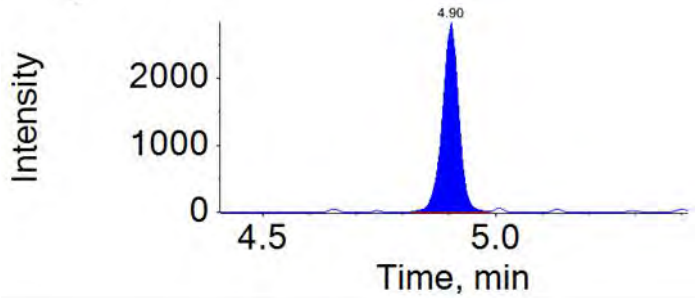
Component: PFHxS
Primary Mass: 399.0 / 80.0



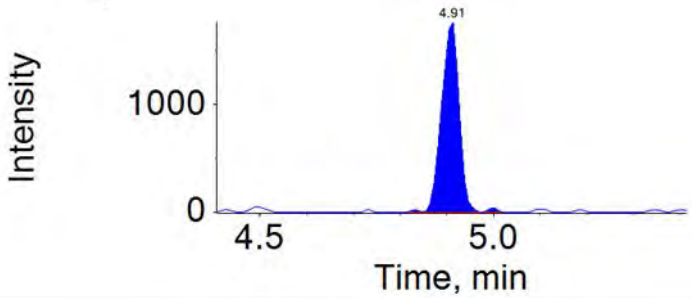
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



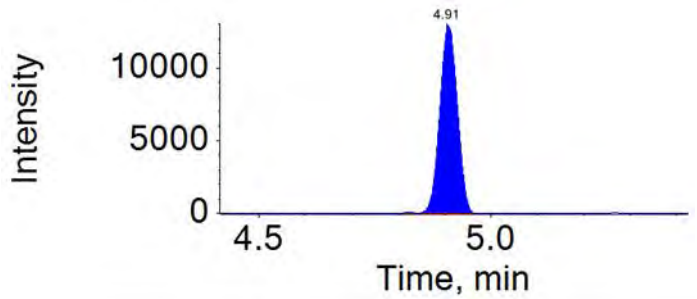
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



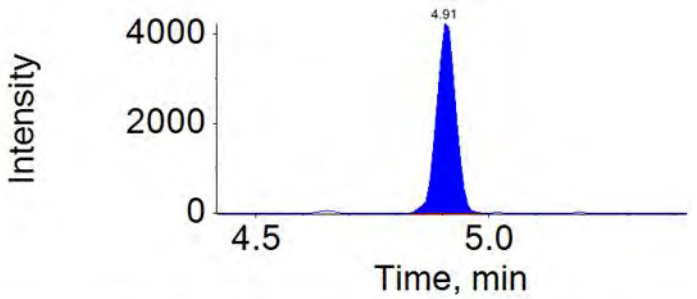
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 10:23 am, 11/13/18

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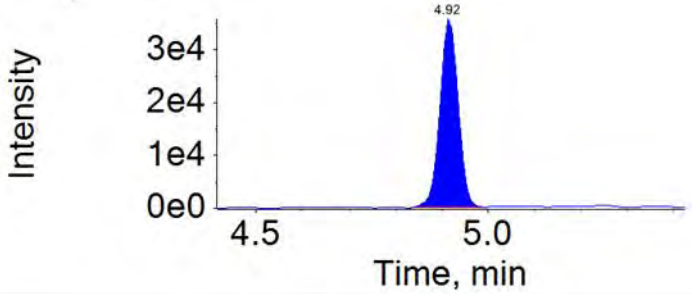
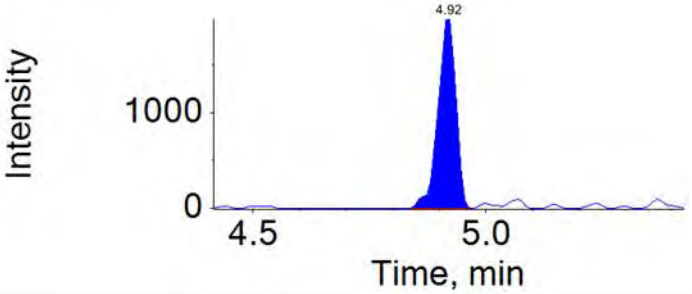
By HMK at 2:17 pm, 11/13/18

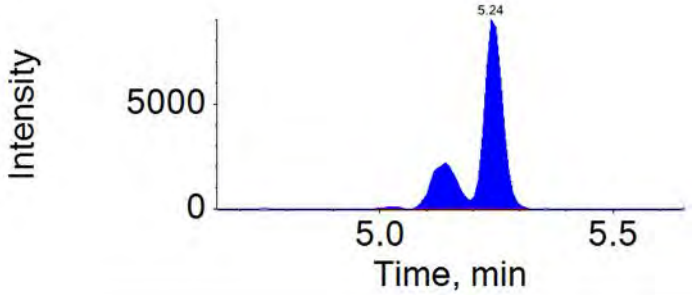
Component: PFOA
Primary Mass: 413.0 / 369.0



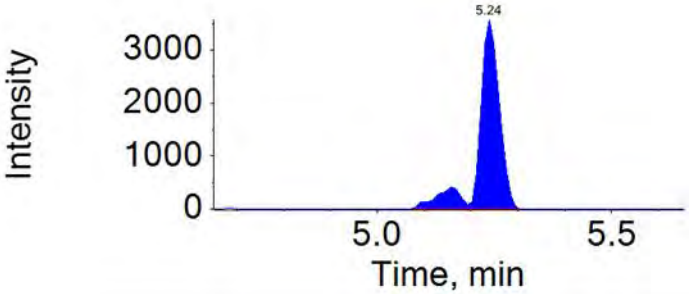
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



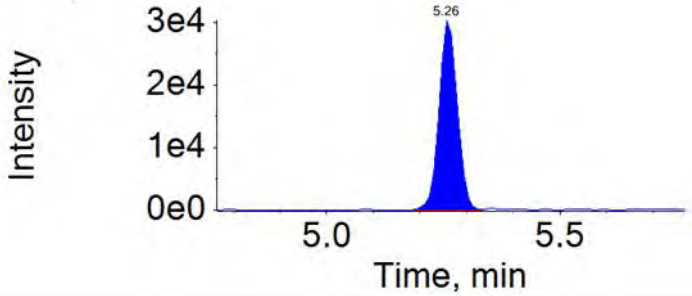
Component: PFOS
Primary Mass: 499.0 / 80.0



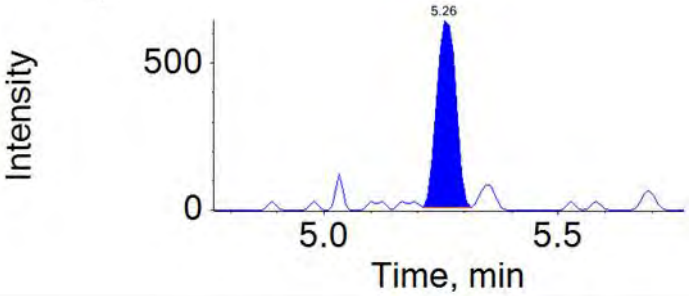
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



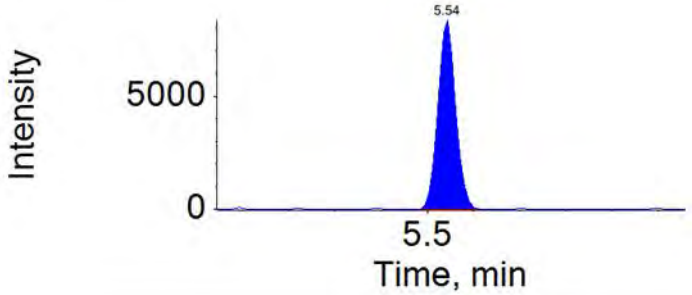
Component: PFNA
Primary Mass: 463.0 / 419.0



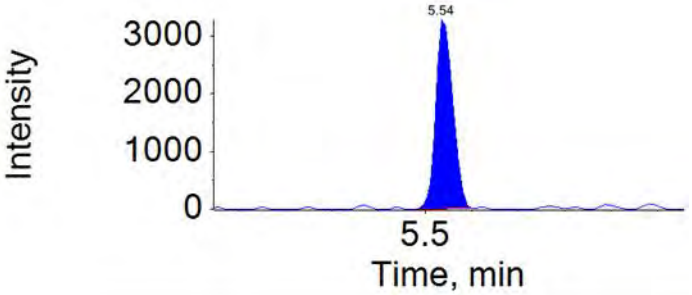
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



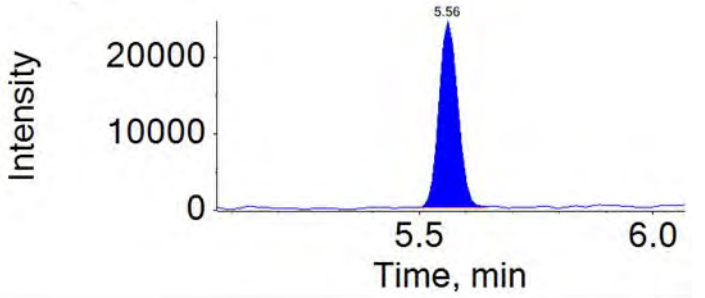
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



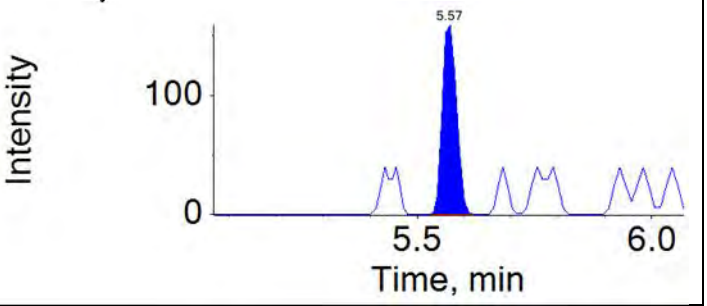
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

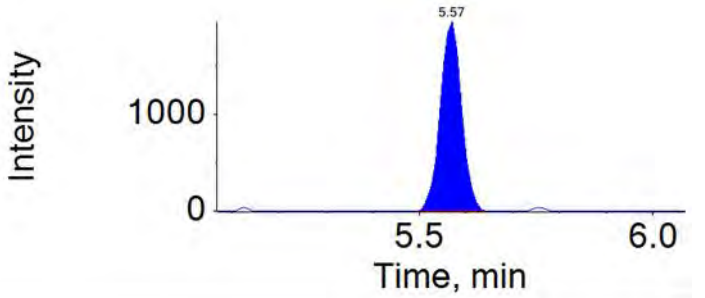
Component: PFDA
Primary Mass: 513.0 / 469.0



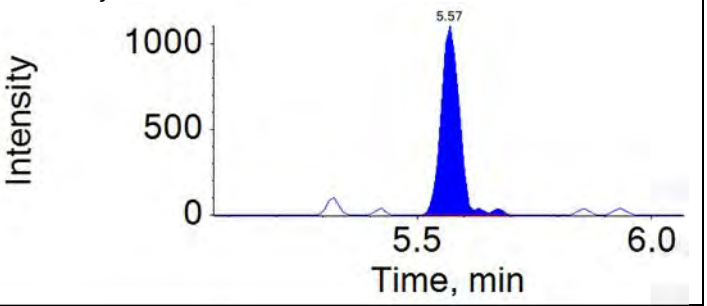
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



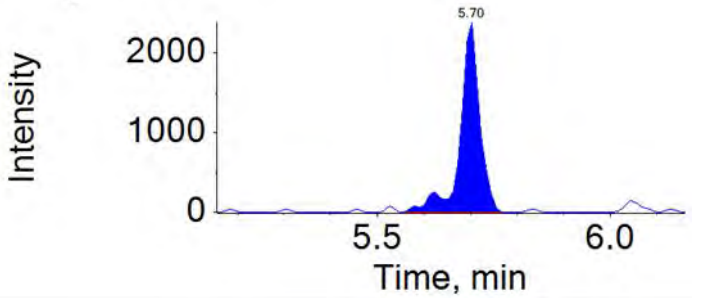
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



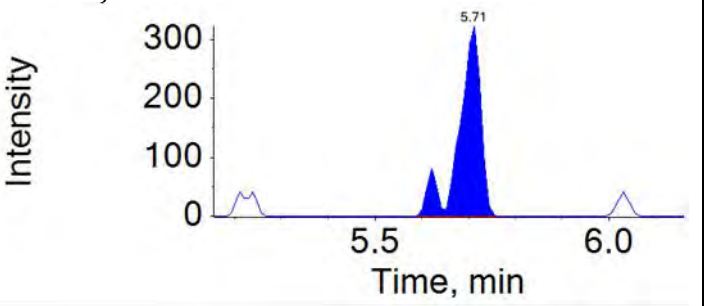
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



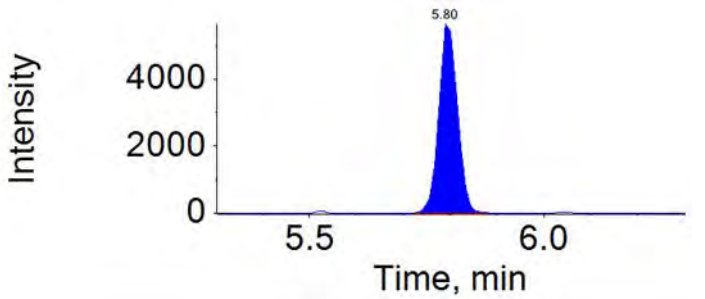
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



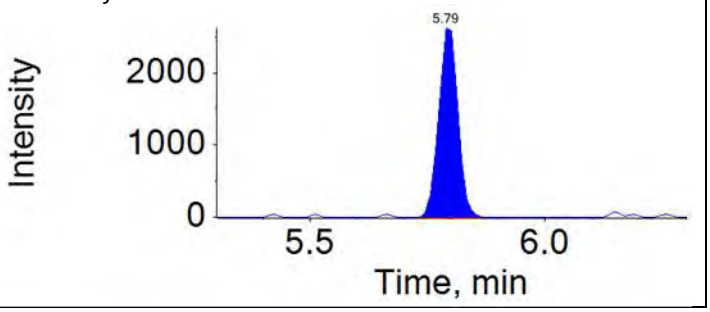
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



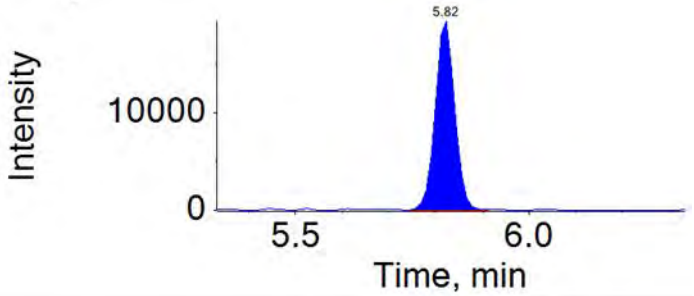
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



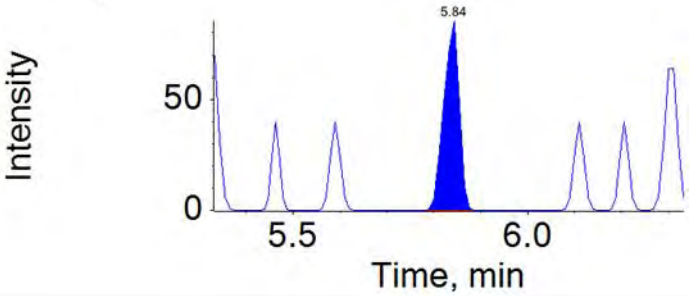
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

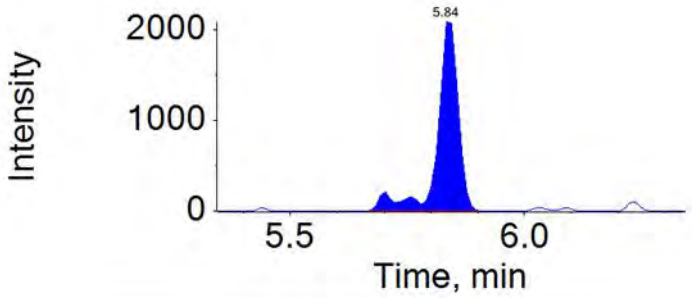
Component: PFUnDA
Primary Mass: 563.0 / 519.0



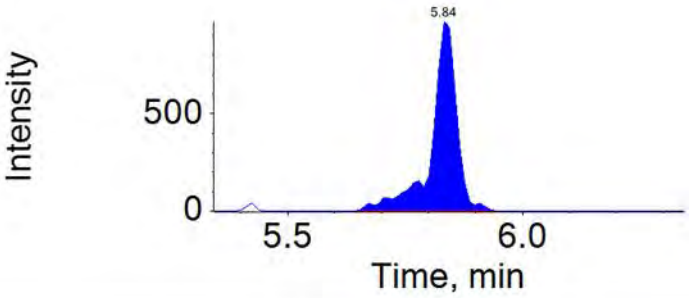
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



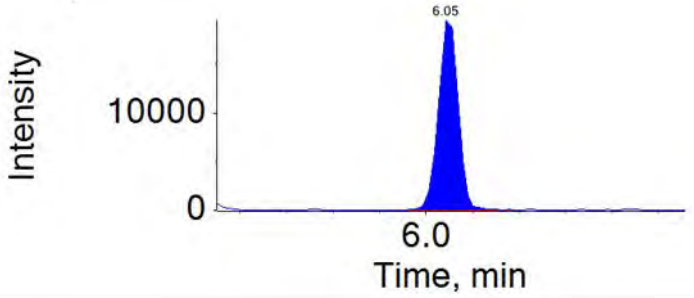
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



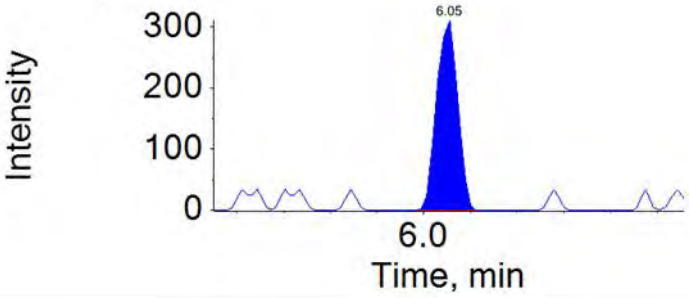
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



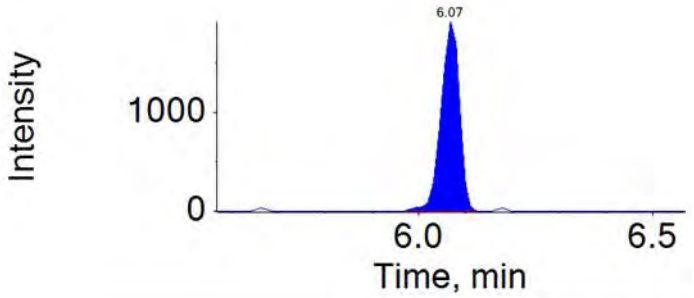
Component: PFDoDA
Primary Mass: 613.0 / 569.0



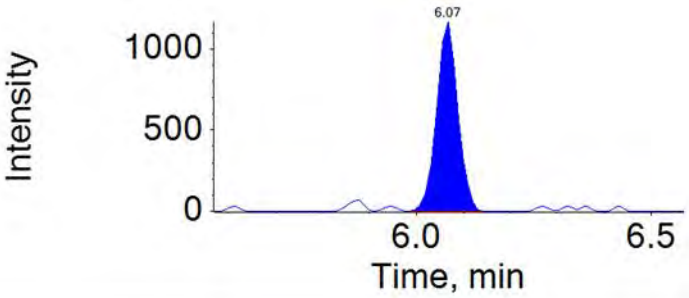
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



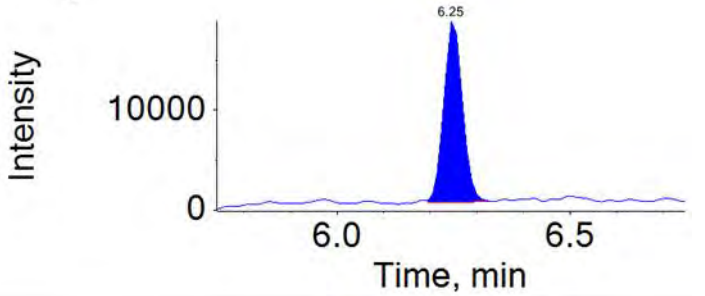
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



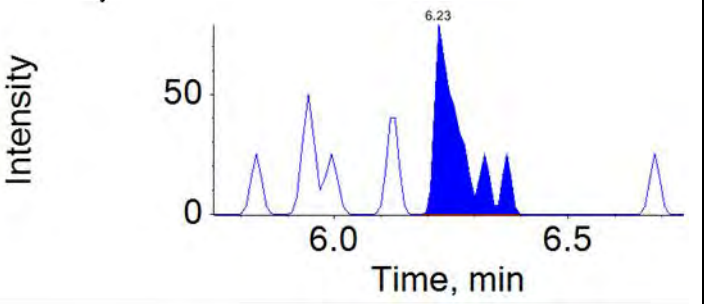
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

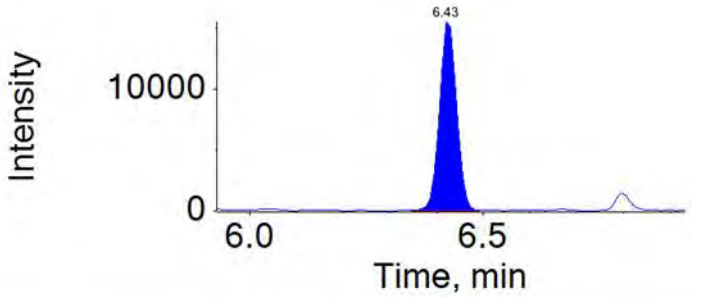
Component: PFTrDA
Primary Mass: 663.0 / 619.0



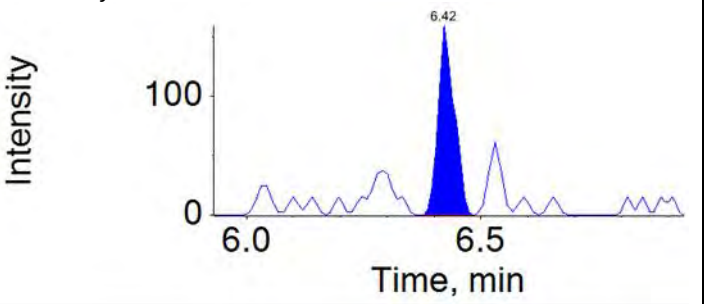
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



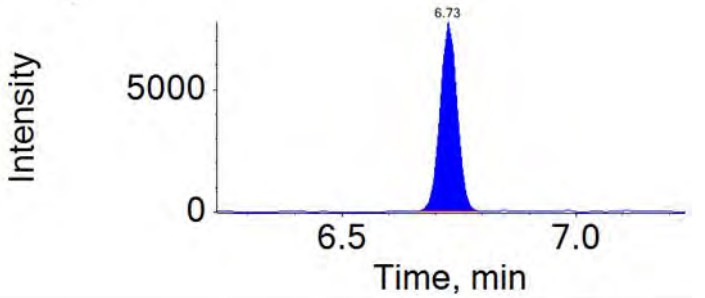
Component: PFTeDA
Primary Mass: 713.0 / 669.0



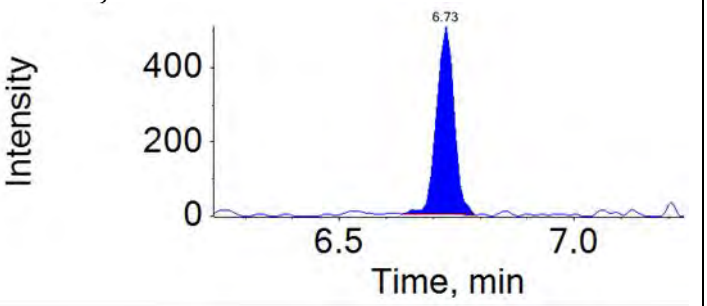
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



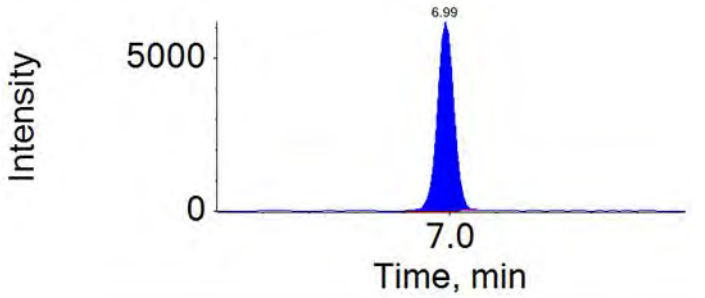
Component: PFHxDA
Primary Mass: 813.0 / 769.0



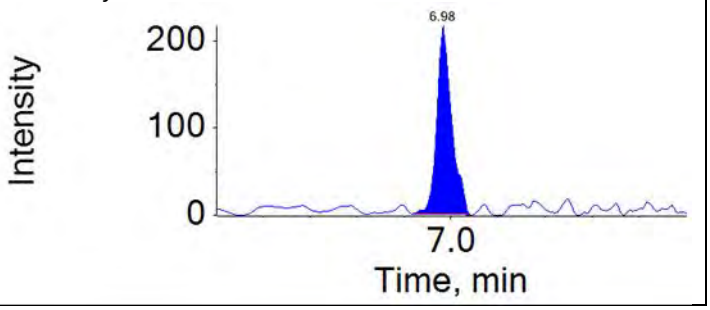
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV12D-71.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-13T03:17:33
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	697321.6	659926.2	6	50	
13C2-PFOA	5.0	497803.7	450219.7	11	50	
13C4-PFOS	4.8	275021.7	249205.8	10	50	
13C2-PFDA	5.0	301663.5	278743.9	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771621.7	13C3-PFBA	697321.6	1.107	5.000	4.961	99	70-130	
E13C5-PFPeA	783833.6	13C3-PFBA	697321.6	1.124	5.000	5.042	101	70-130	
E13C3-PFBS	456189.9	13C3-PFBA	697321.6	0.654	4.650	4.618	99	70-130	
E13C2-4:2-FTS	52339.5	13C2-PFOA	497803.7	0.105	4.670	4.683	100	70-130	
E13C5-PFHxA	673746.3	13C2-PFOA	497803.7	1.353	5.000	4.889	98	70-130	
E13C3-PFHxS	357291.6	13C2-PFOA	497803.7	0.718	4.730	4.925	104	70-130	
E13C4-PFHpA	553727.4	13C2-PFOA	497803.7	1.112	5.000	5.011	100	70-130	
E13C2-6:2-FTS	41520.7	13C2-PFOA	497803.7	0.083	4.750	5.580	117	70-130	
E13C8-PFOA	964074.5	13C2-PFOA	497803.7	1.937	5.000	5.336	107	70-130	
E13C8-PFOS	303765.2	13C4-PFOS	275021.7	1.105	4.780	4.894	102	70-130	
E13C9-PFNA	511665.4	13C4-PFOS	275021.7	1.860	5.000	5.187	104	70-130	
E13C6-PFDA	682687.0	13C2-PFDA	301663.5	2.263	5.000	5.281	106	70-130	
E13C2-8:2-FTS	28451.6	13C2-PFDA	301663.5	0.094	4.790	4.704	98	70-130	
E13C8-PFOSA	662257.7	13C2-PFDA	301663.5	2.195	5.000	4.867	97	70-130	
Ed3-NMeFOSAA	73048.1	13C2-PFDA	301663.5	0.242	5.000	4.371	87	70-130	
E13C7-PFUnDA	275514.1	13C2-PFDA	301663.5	0.913	5.000	5.303	106	70-130	
Ed5-NEtFOSAA	69016.7	13C2-PFDA	301663.5	0.229	5.000	4.840	97	70-130	
E13C2-PFDoDA	600781.2	13C2-PFDA	301663.5	1.992	5.000	5.171	103	70-130	
Ed7-NMePFOSAE	344641.0	13C2-PFDA	301663.5	1.142	5.000	4.944	99	70-130	
Ed3-NMePFOSA	77204.1	13C2-PFDA	301663.5	0.256	5.000	4.650	93	70-130	
Ed9-NEtPFOSAE	284074.7	13C2-PFDA	301663.5	0.942	5.000	4.898	98	70-130	
Ed5-NEtPFOSA	60467.1	13C2-PFDA	301663.5	0.200	5.000	4.702	94	70-130	
E13C2-PFTeDA	417729.5	13C2-PFDA	301663.5	1.385	5.000	4.861	97	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

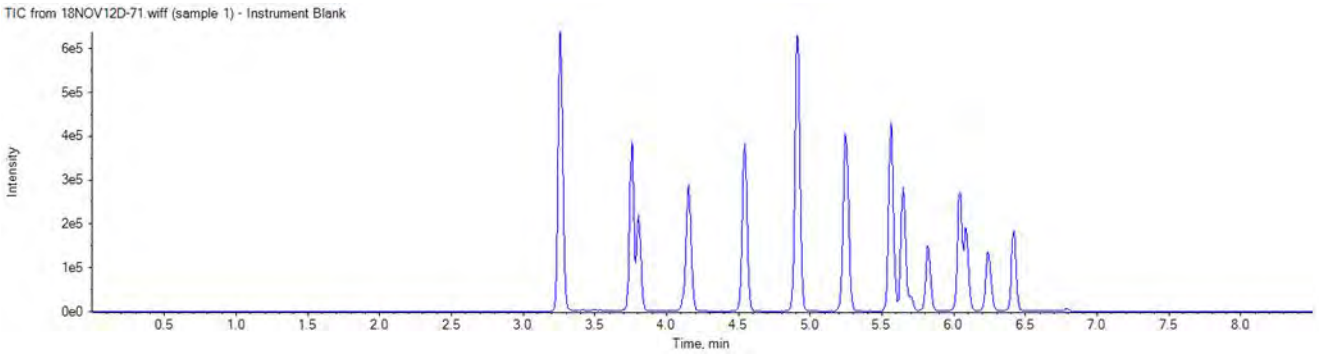
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-71.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	771621.7	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	783833.6	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456189.9	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	52339.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	673746.3	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456189.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	553727.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	357291.6	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	41520.7	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	357291.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	964074.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	511665.4	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	682687.0	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	28451.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	662257.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	73048.1	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	275514.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	69016.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	600781.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	28451.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	344641.0	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	77204.1	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	303765.2	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	284074.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	60467.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	600781.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	417729.5	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	417729.5	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	417729.5	N/A	

Total Ion Chromatogram

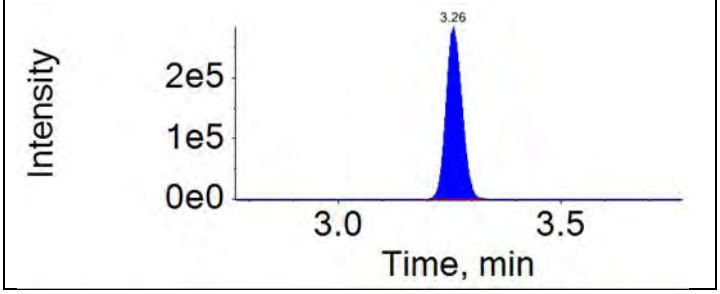


APPROVED
By JPT at 10:23 am, 11/13/18

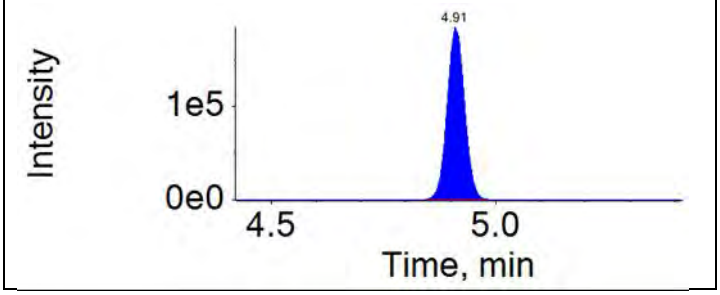
REVIEWED
By UMJS at 3:32 pm, 11/26/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

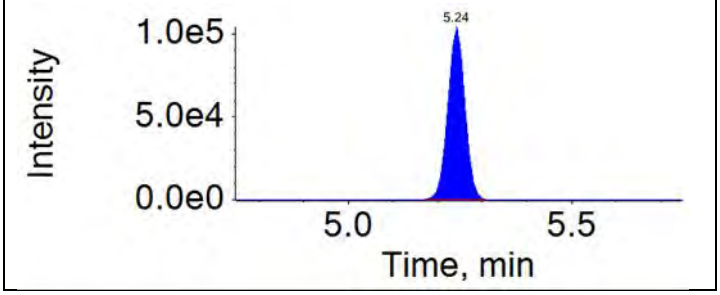
Injection Standard: 13C3-PFBA
216.0 / 172.0



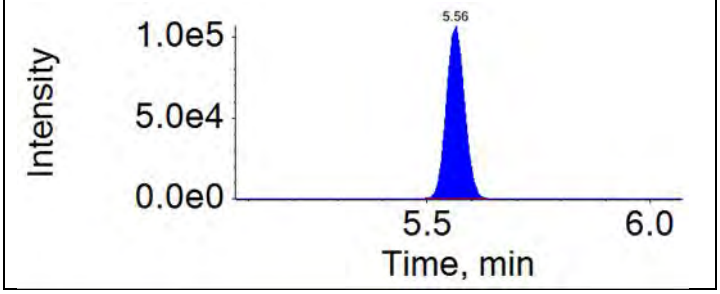
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

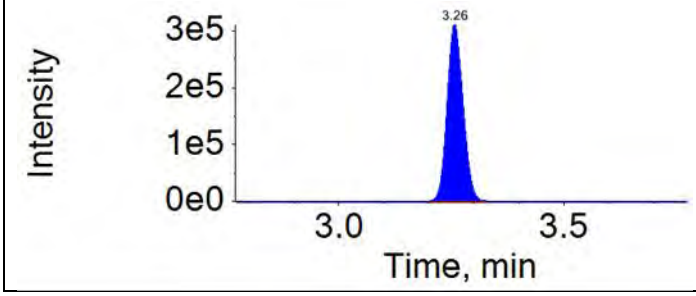


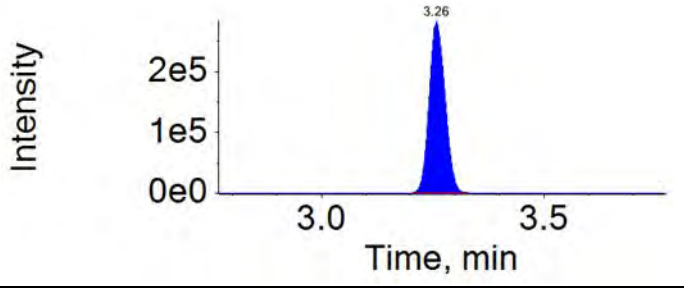
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

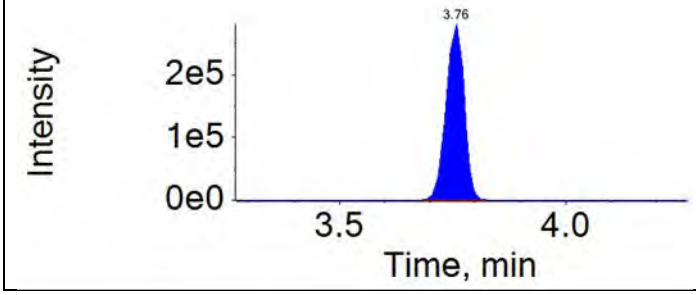
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

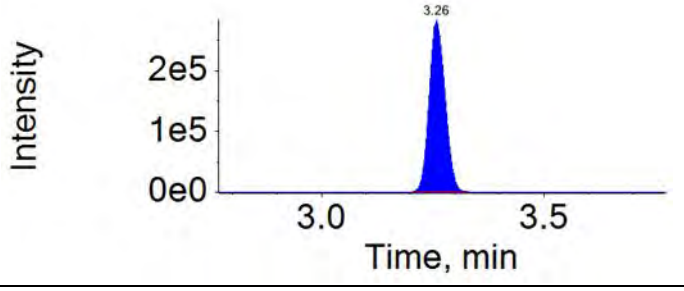
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



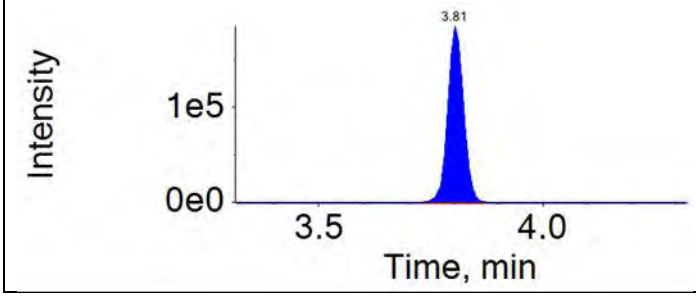


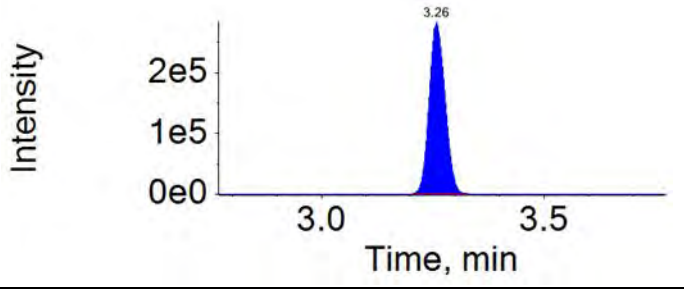
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



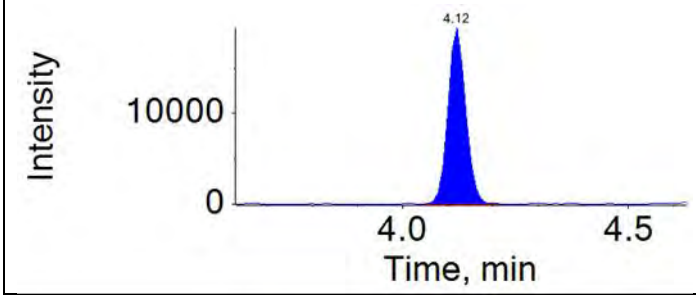


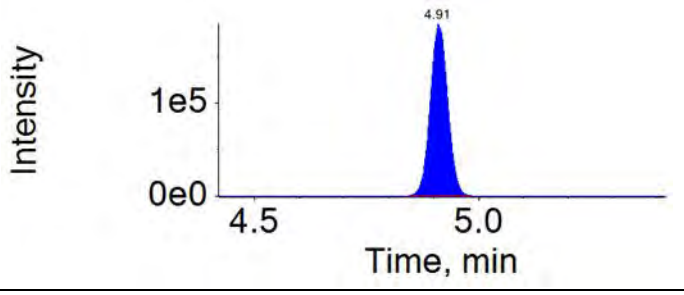
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





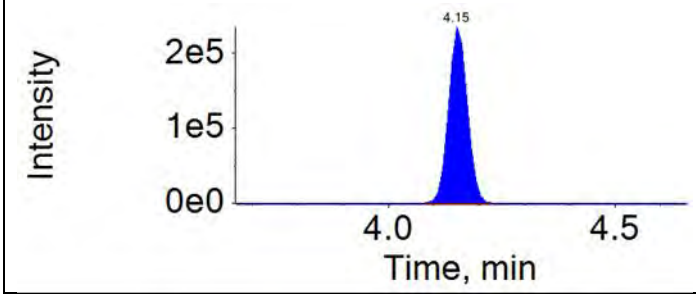
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

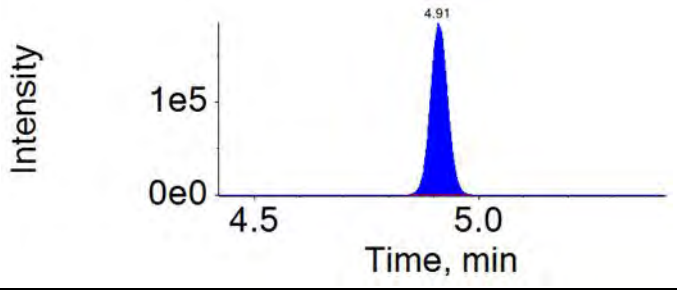




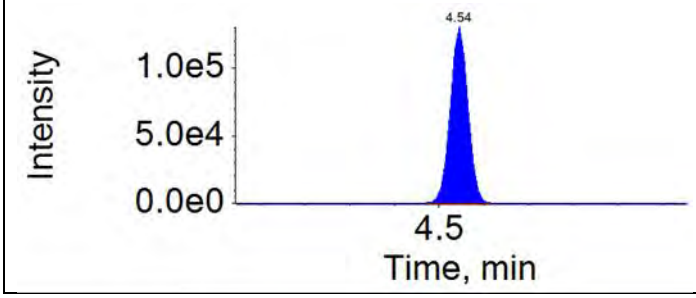
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

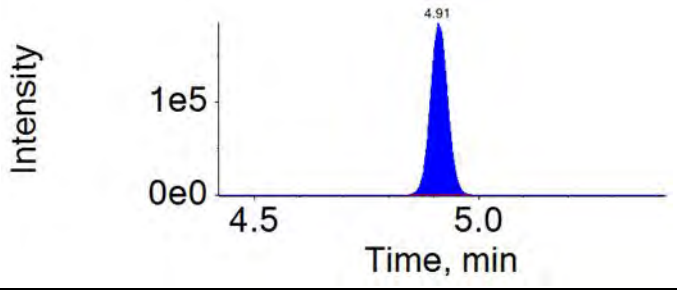
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



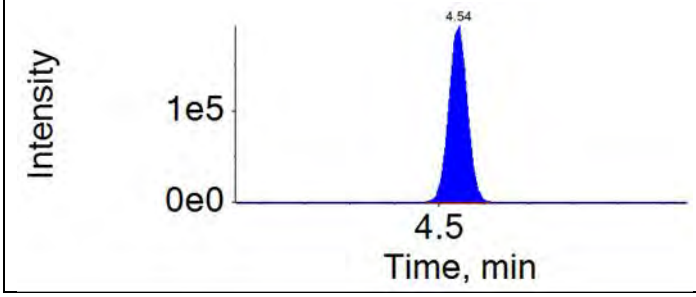


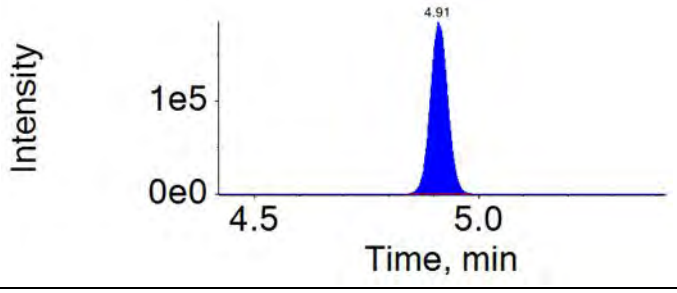
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



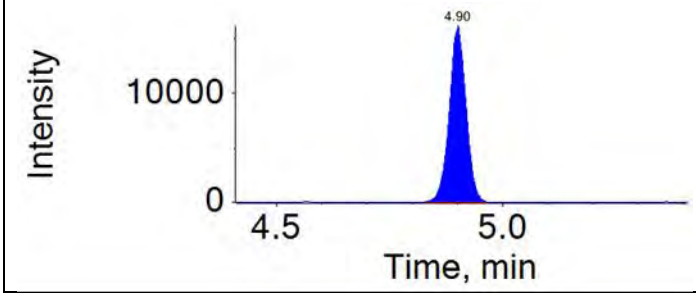


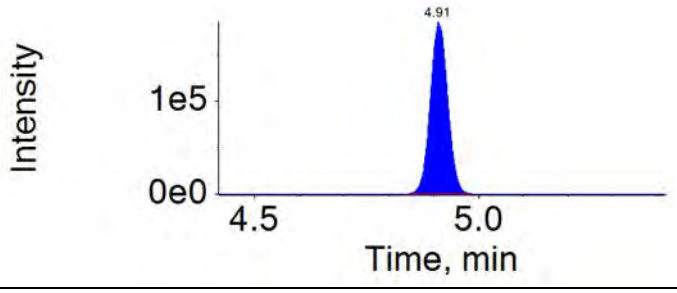
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



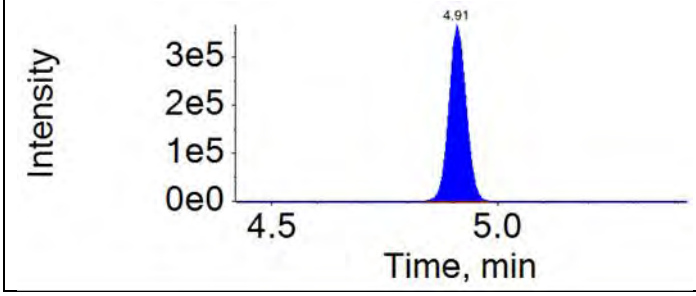
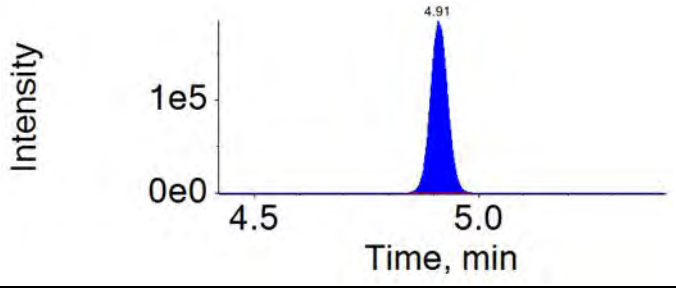


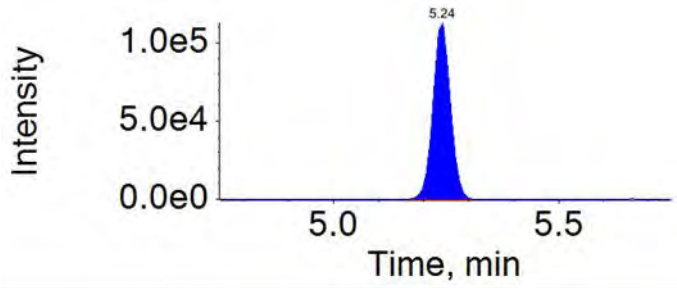
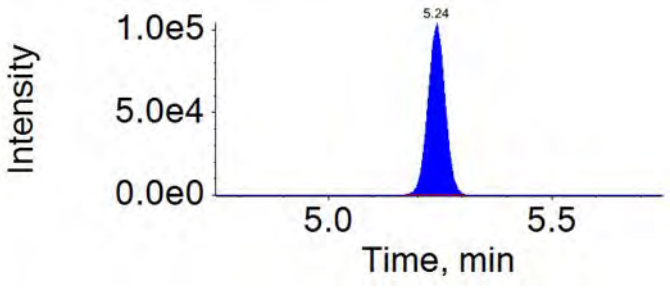
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

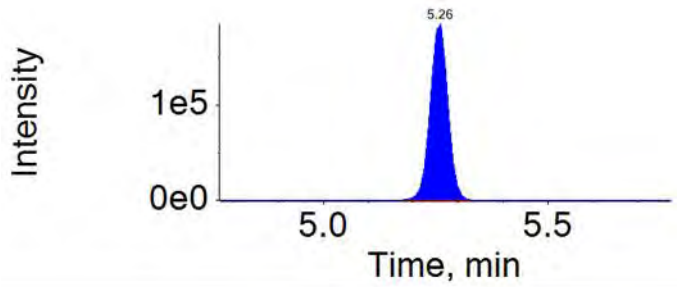
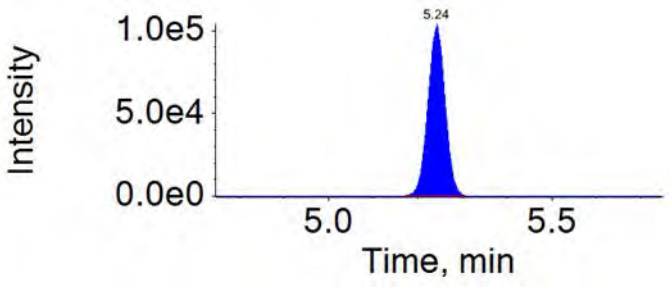


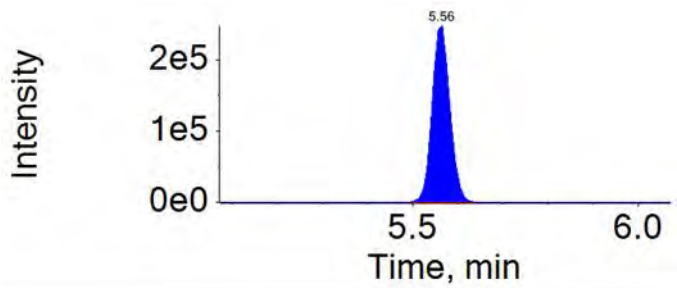
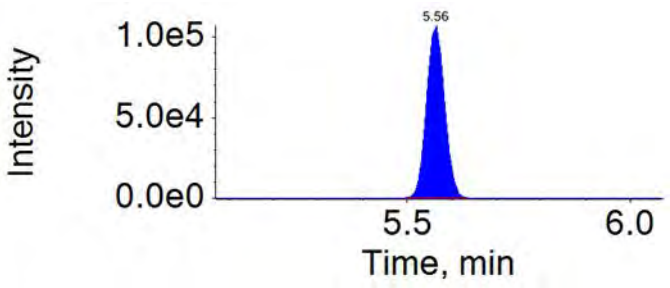


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

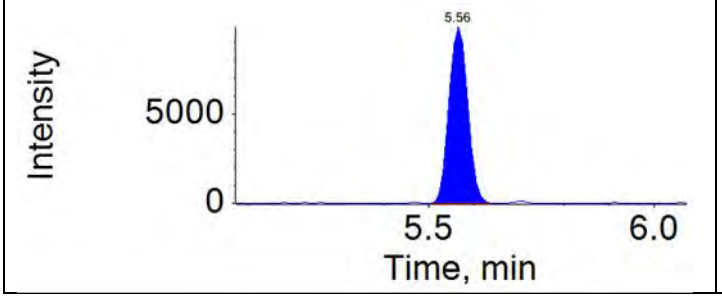
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

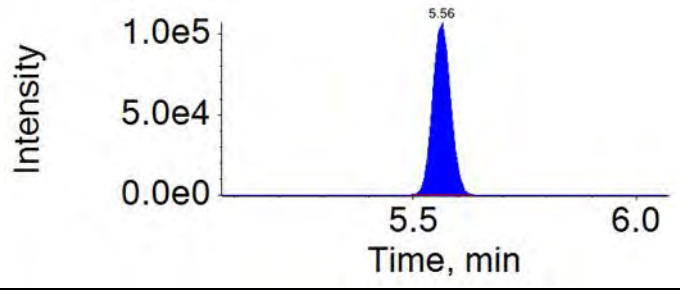
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

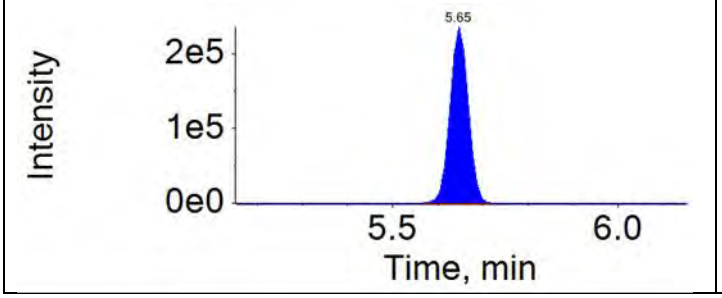
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

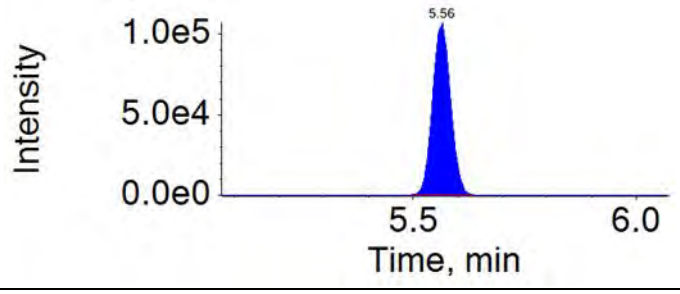
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



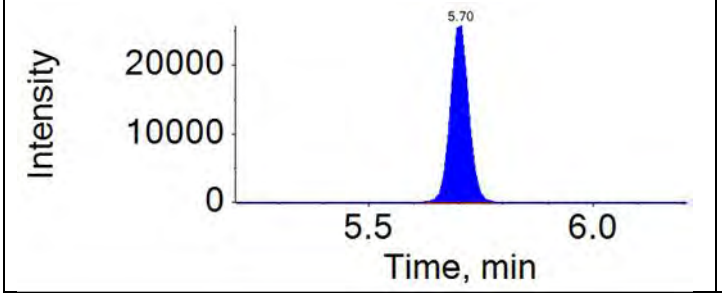


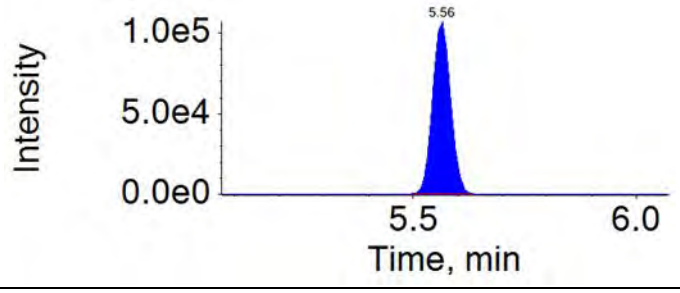
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



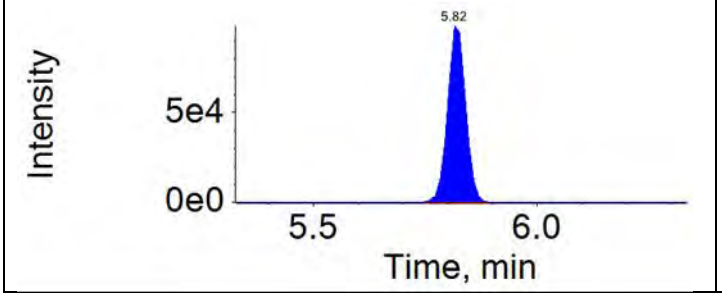


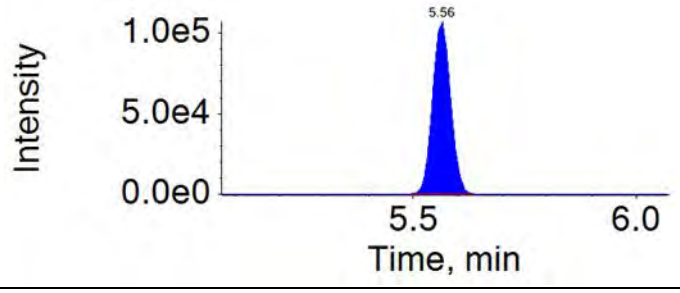
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





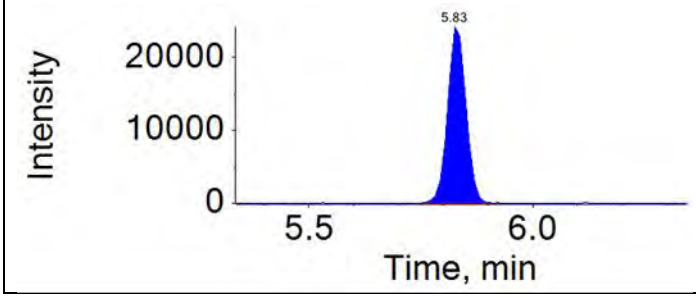
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

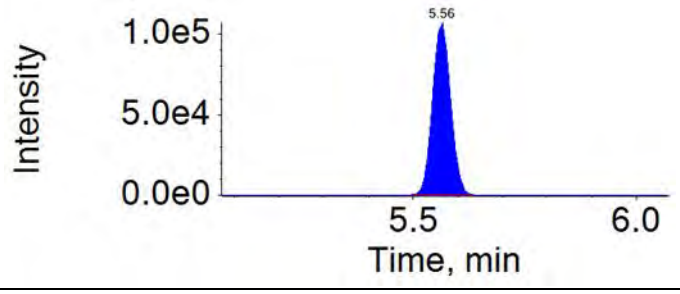




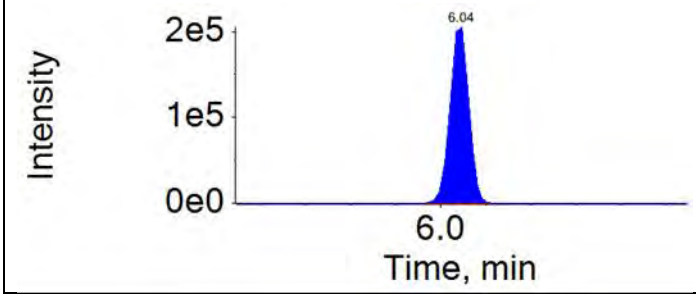
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

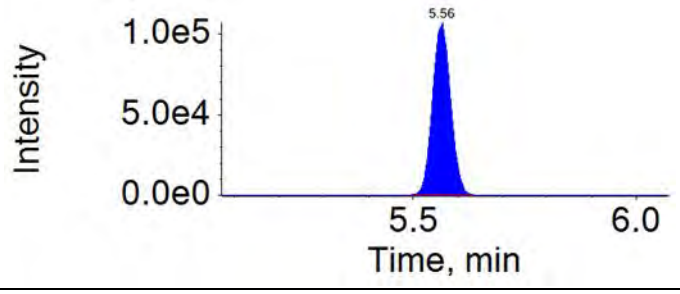
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



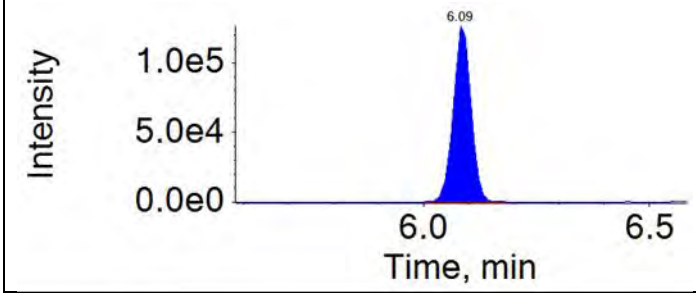


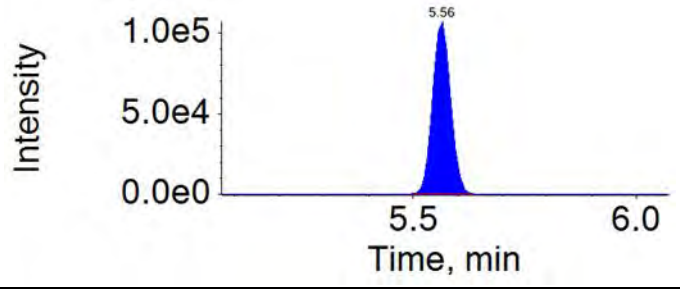
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



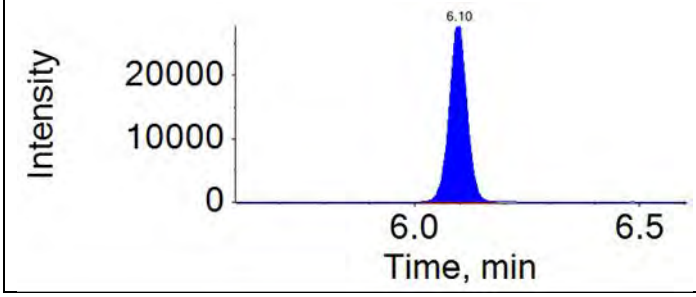


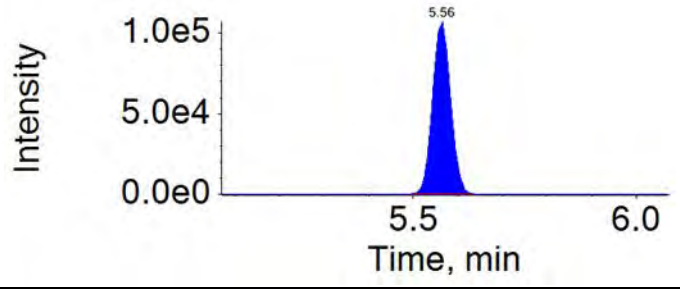
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





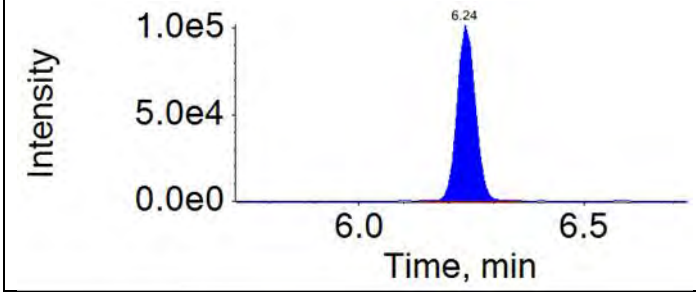
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

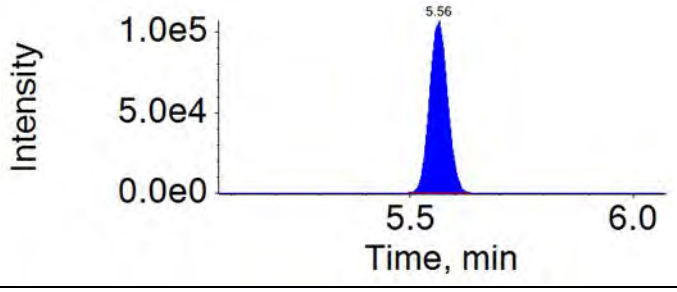




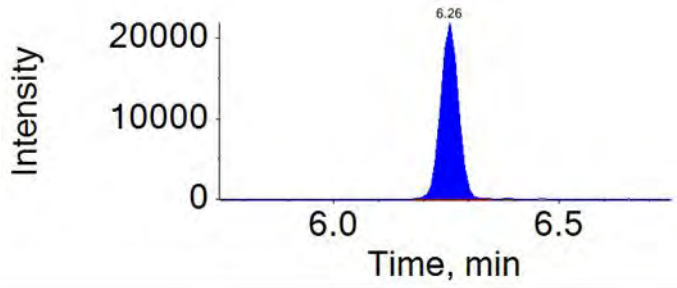
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

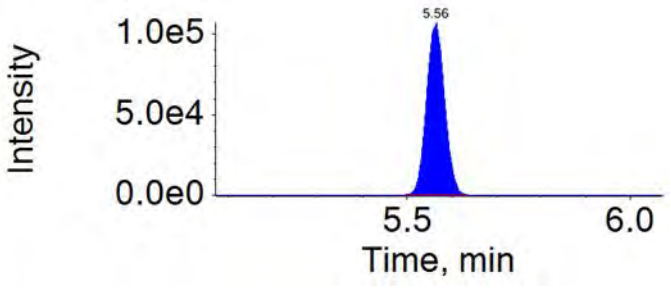
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



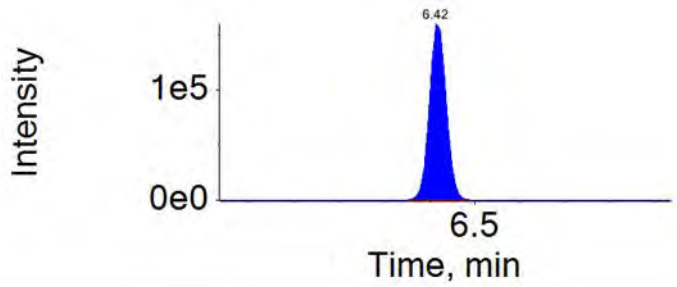


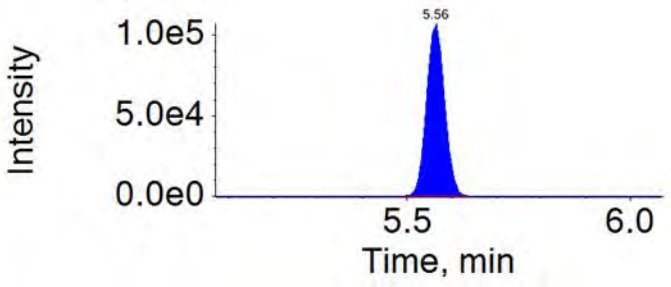
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0



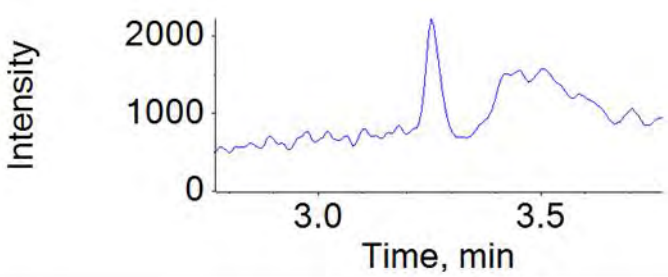
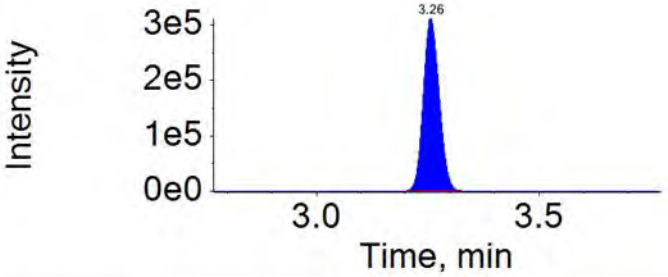


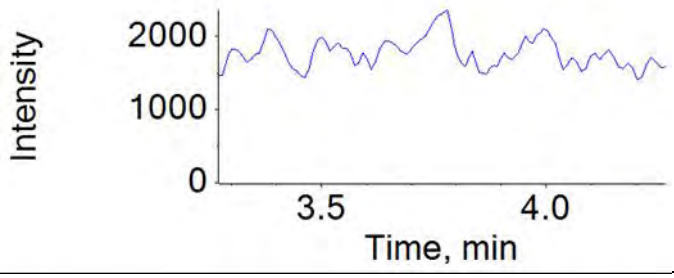
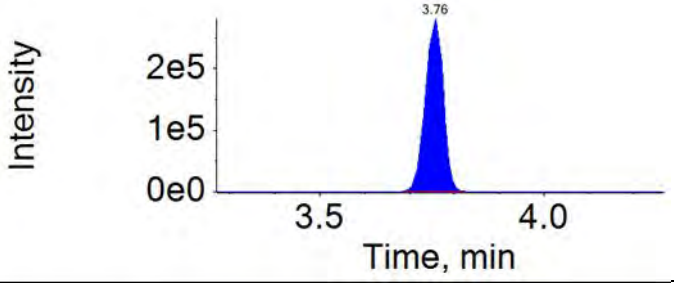
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

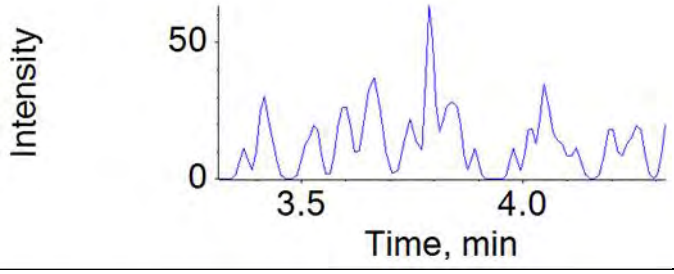
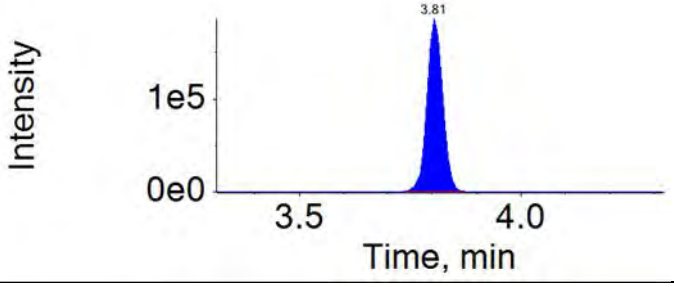


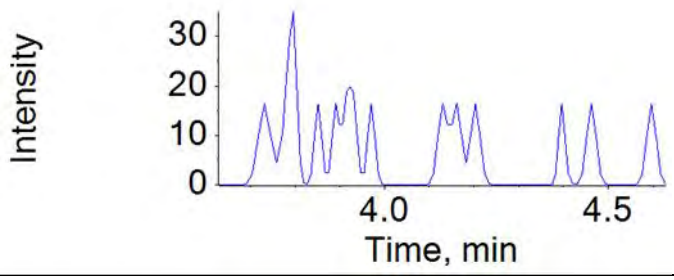
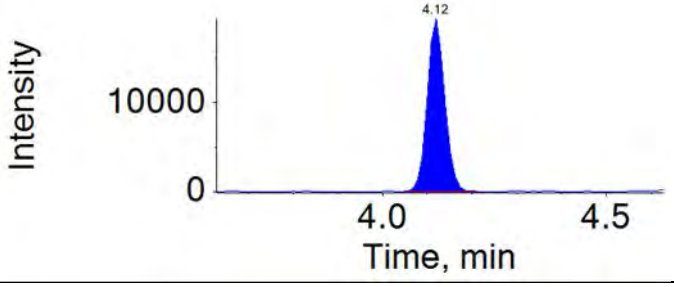


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

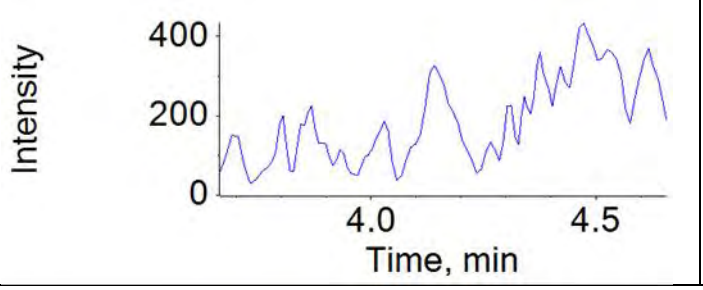
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

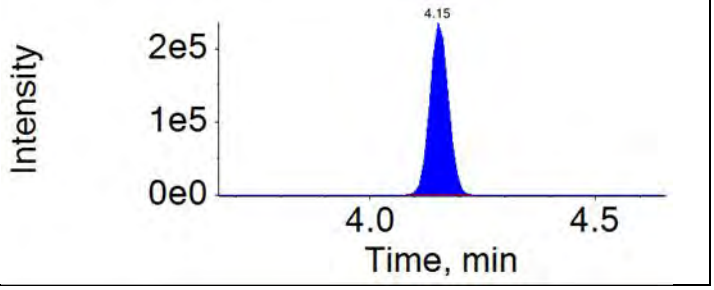
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

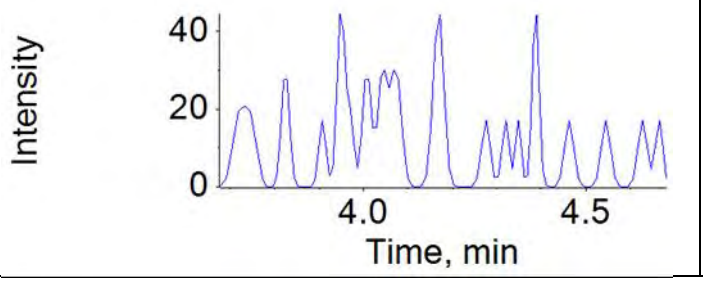
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

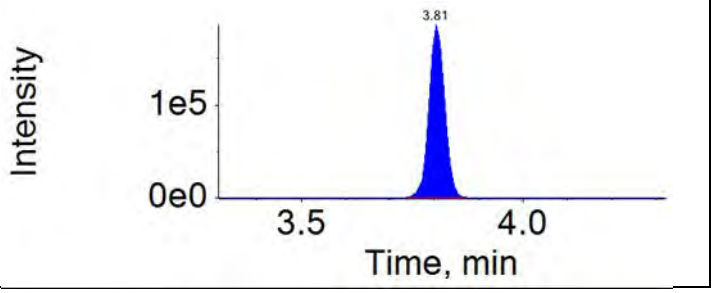
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



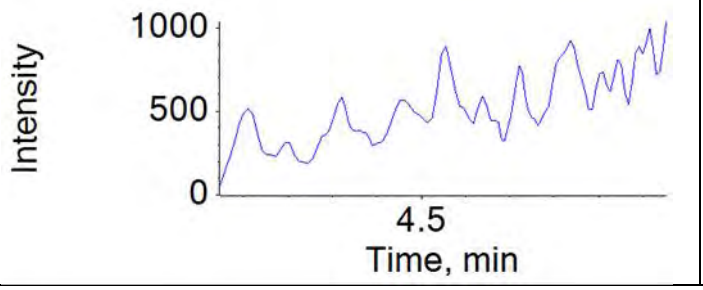


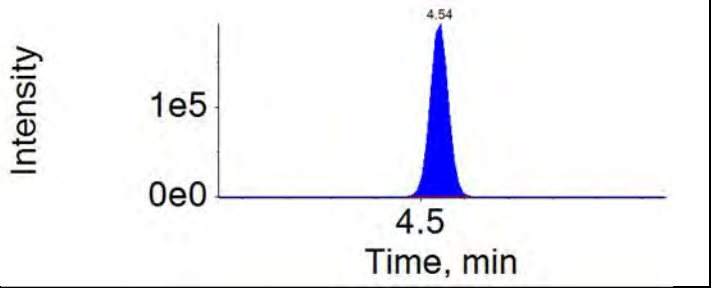
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



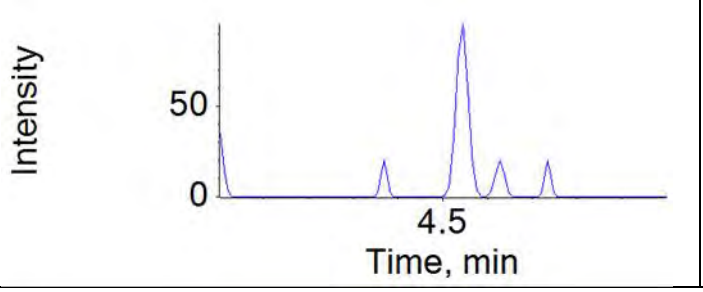


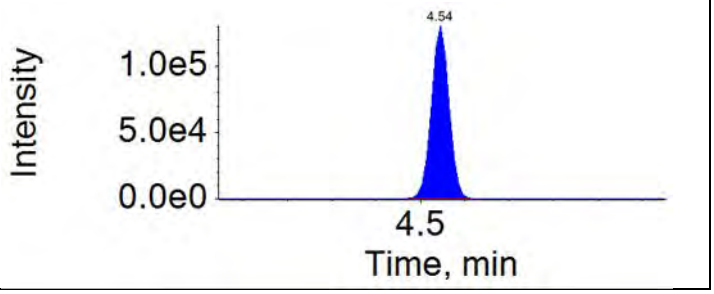
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



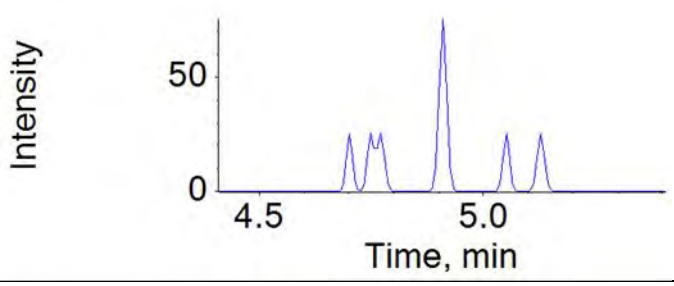
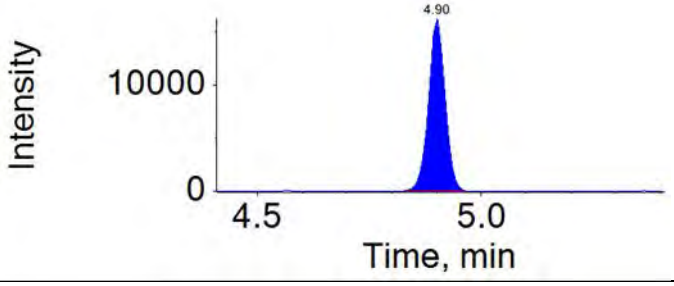


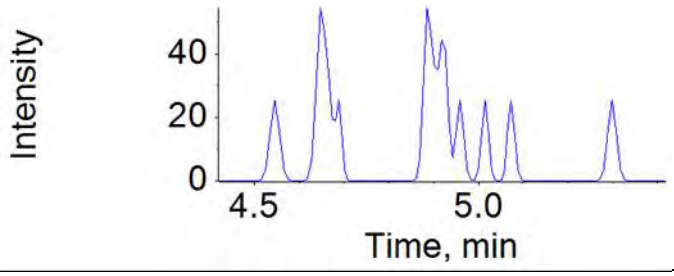
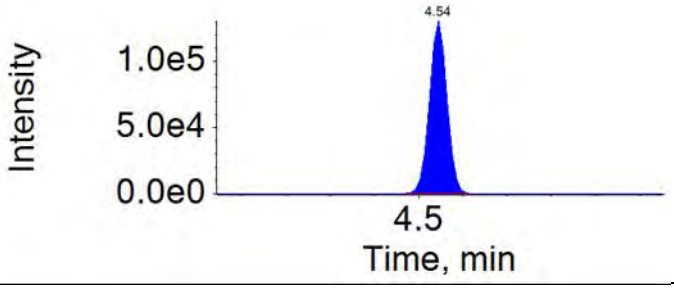
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

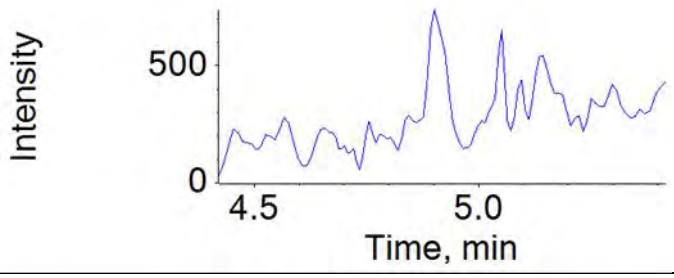
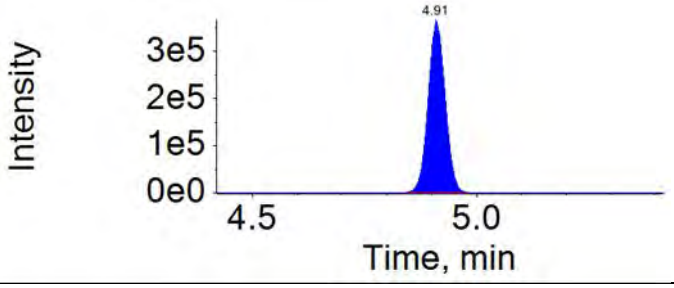


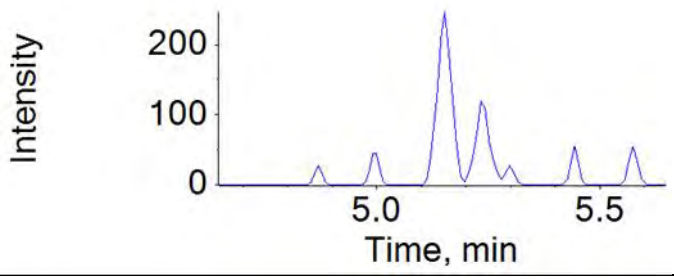
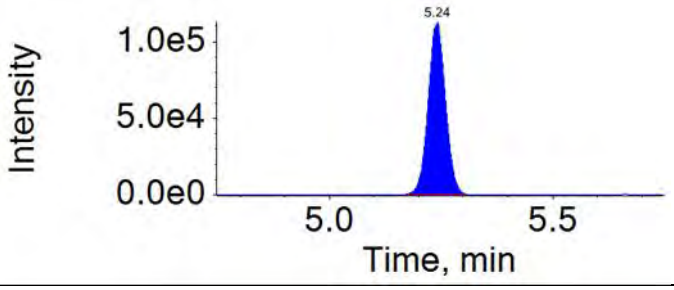


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

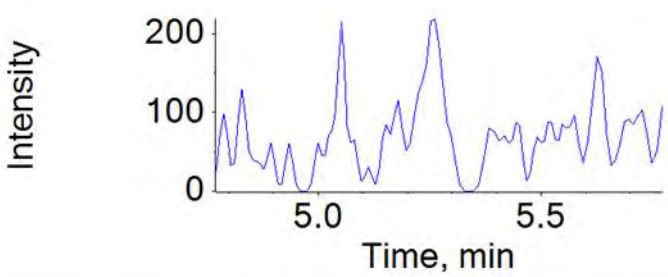
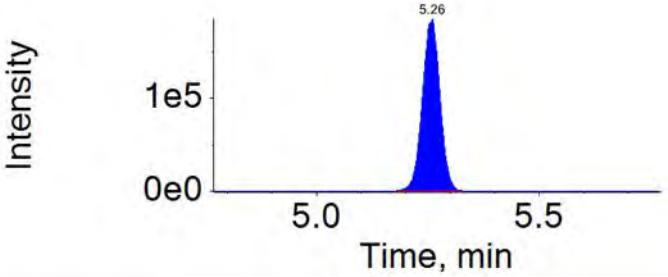
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

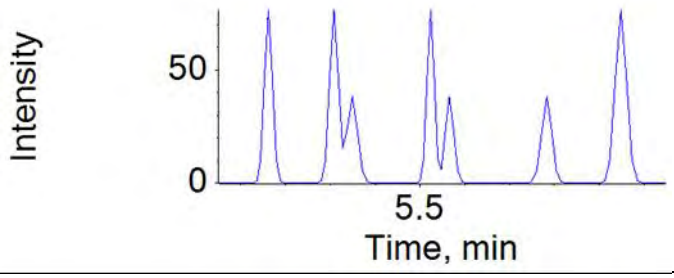
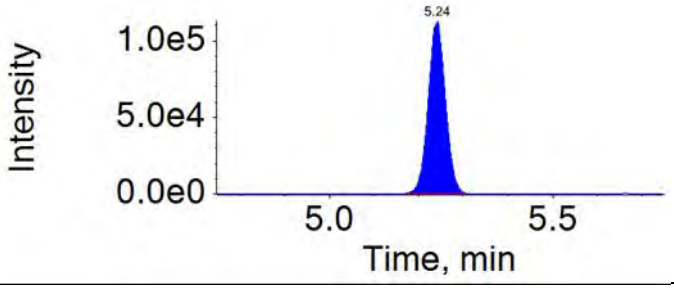
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

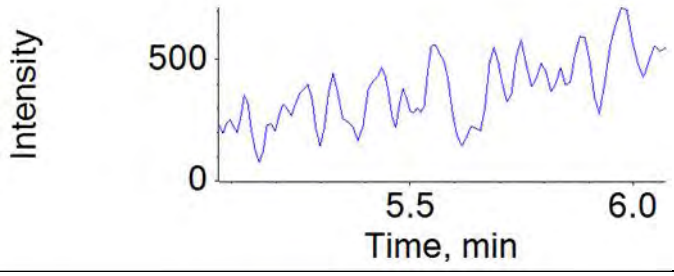
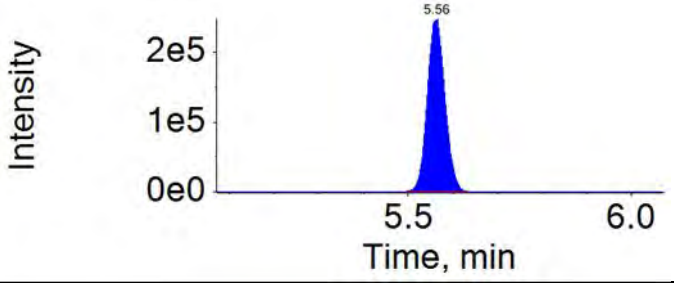
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

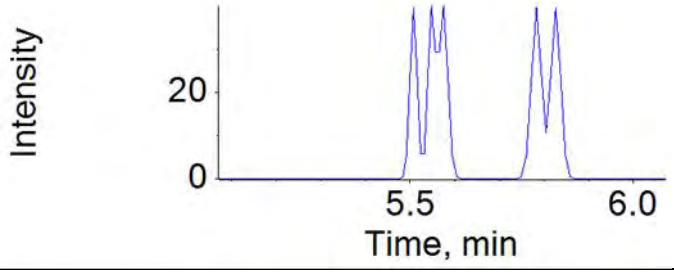
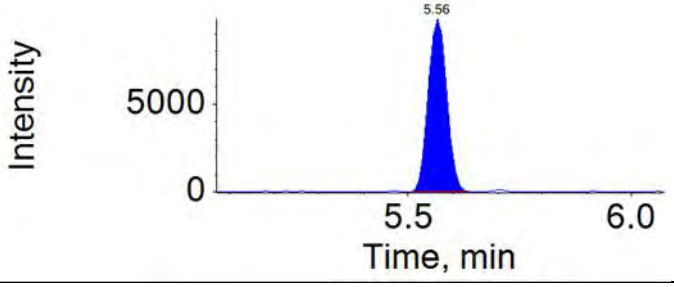
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

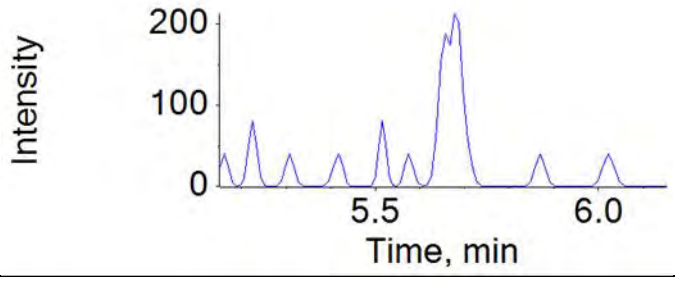
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

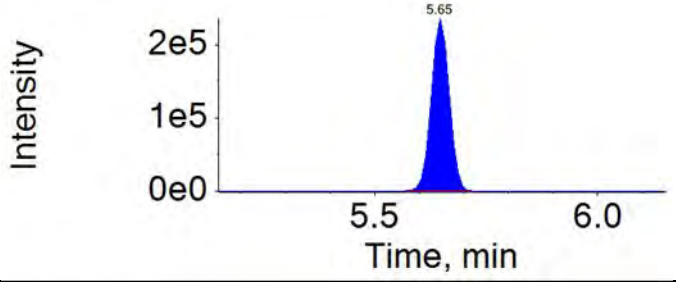
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

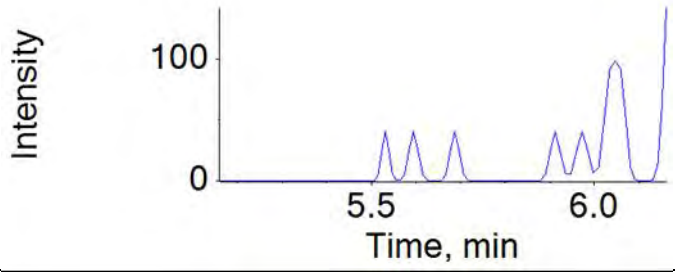
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

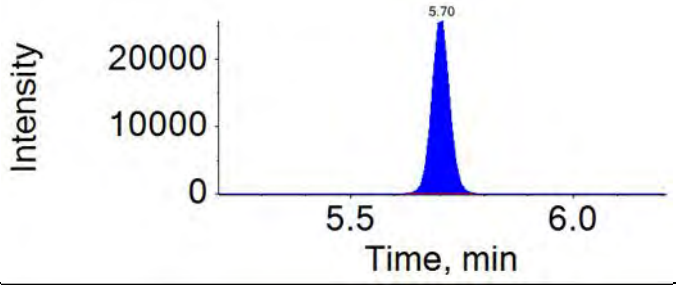
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



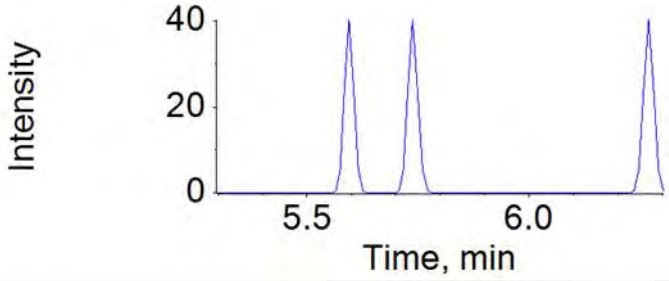


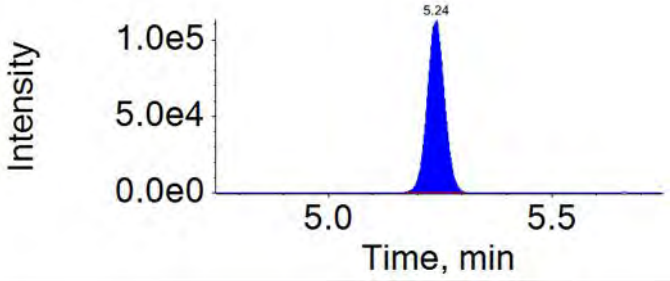
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



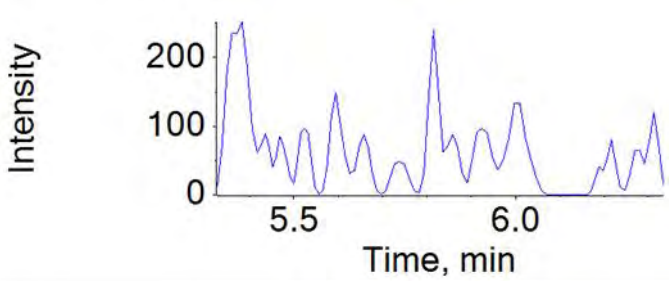


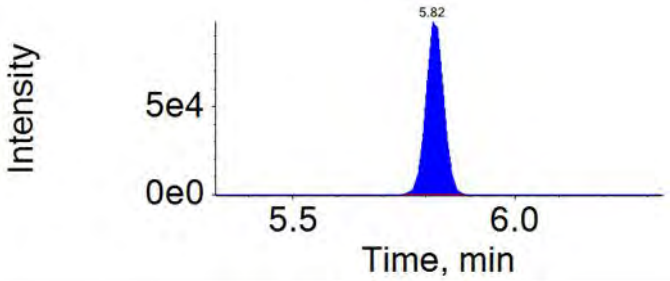
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





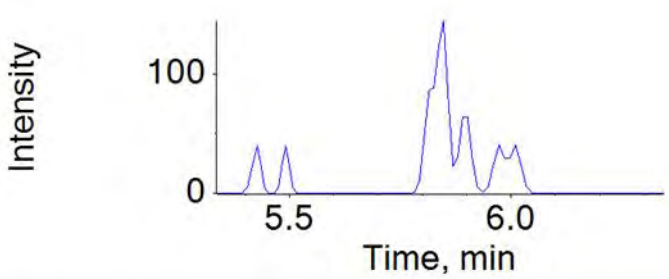
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

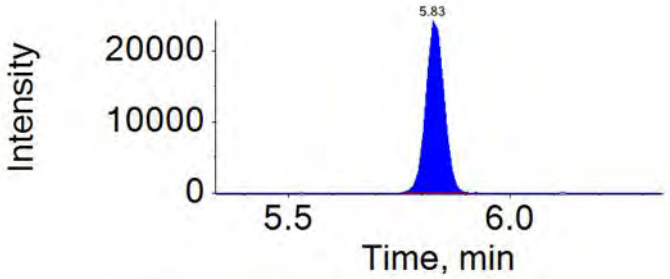




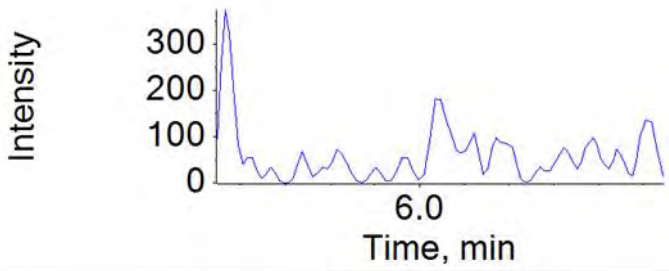
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

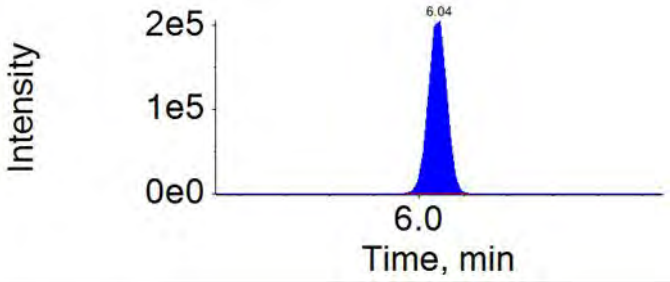
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



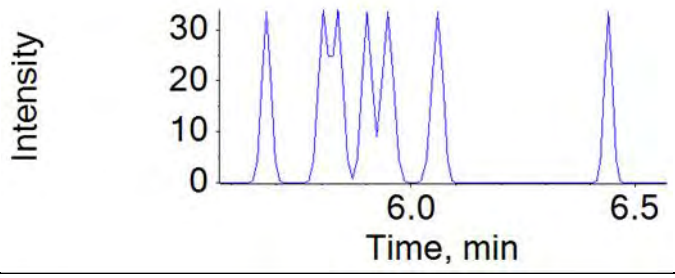


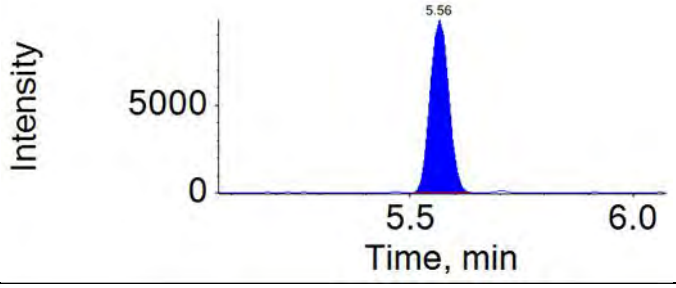
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



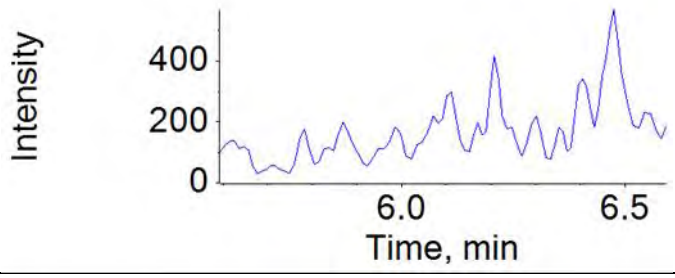


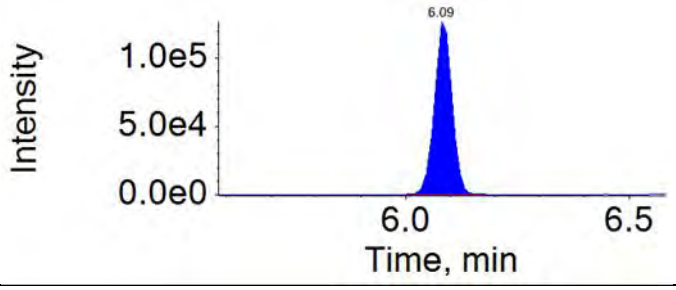
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





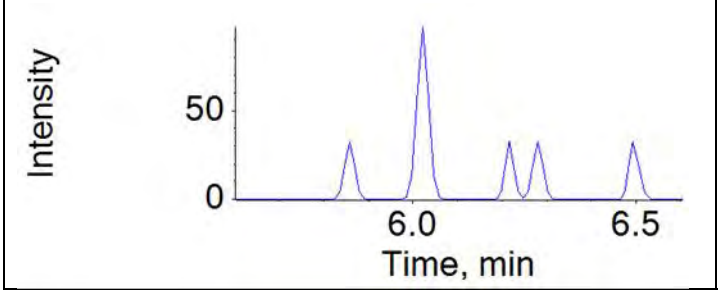
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

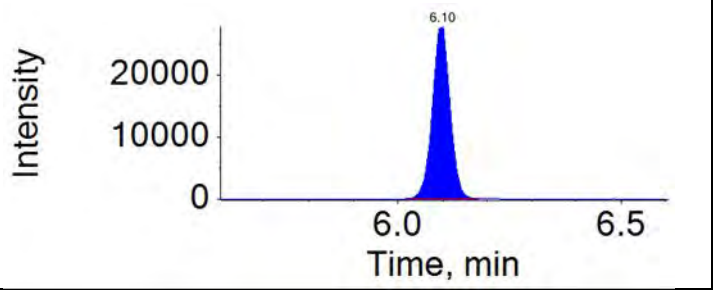




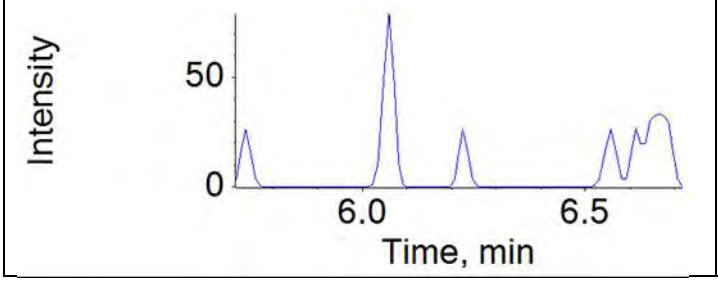
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

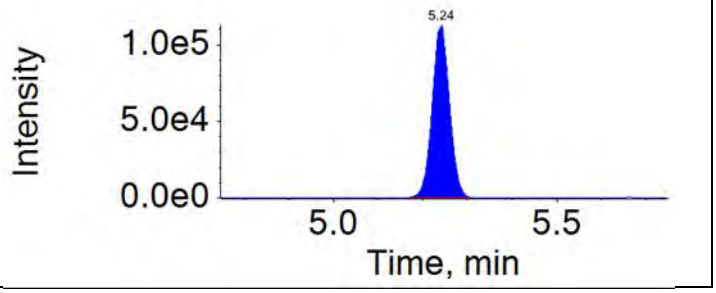
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



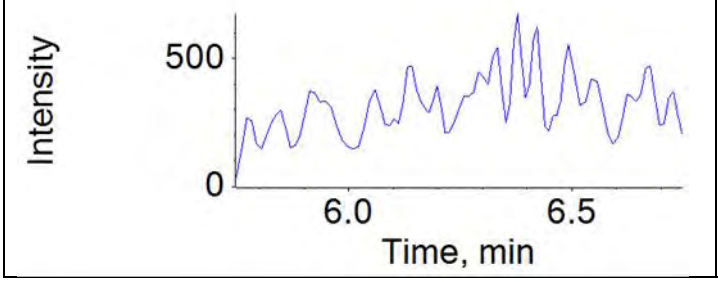


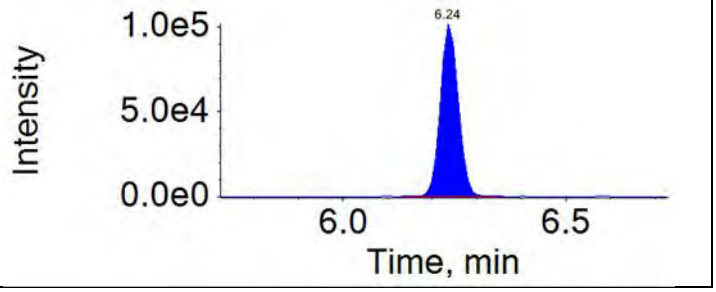
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



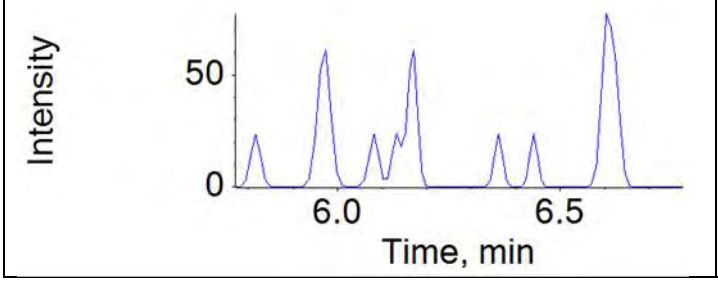


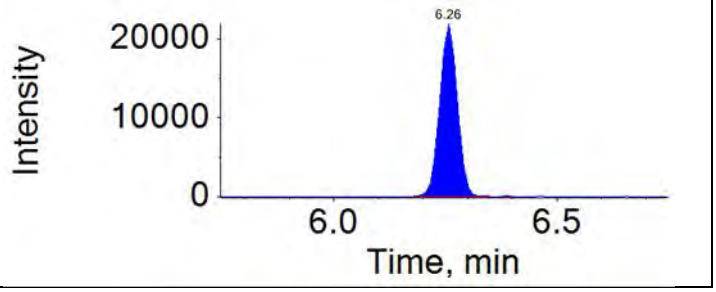
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





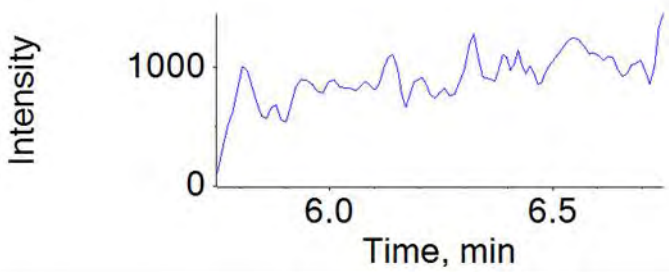
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

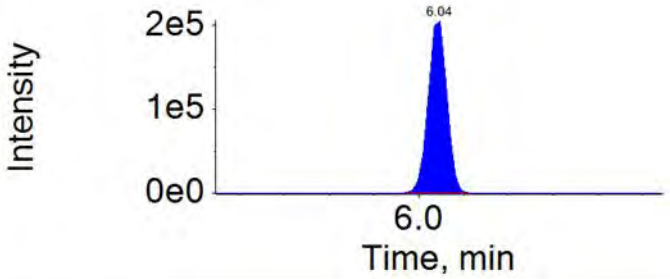




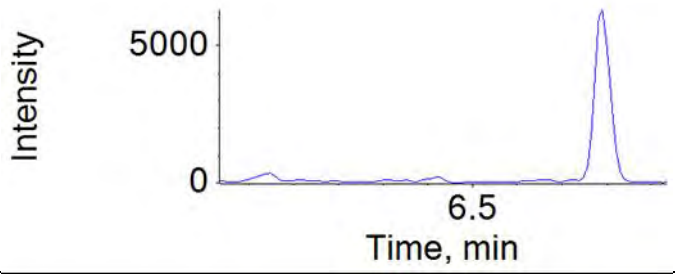
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

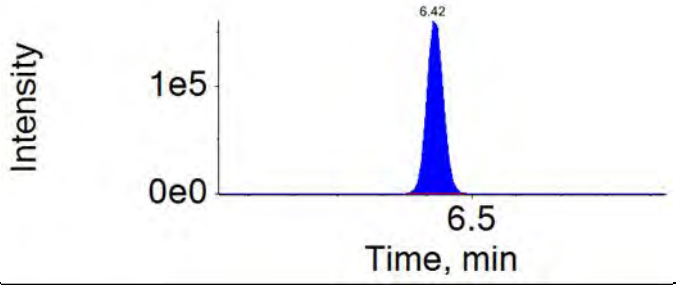
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



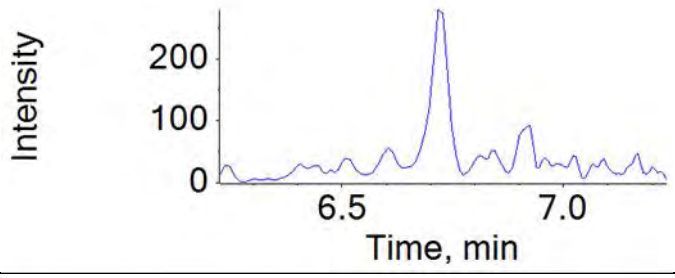


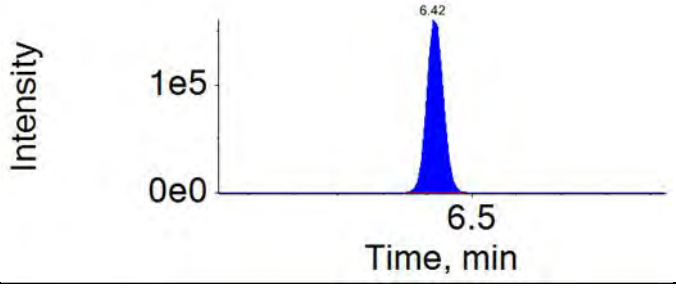
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



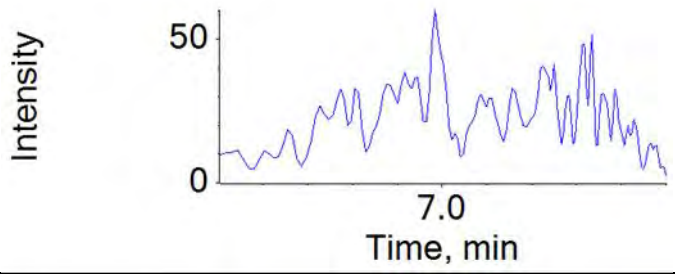


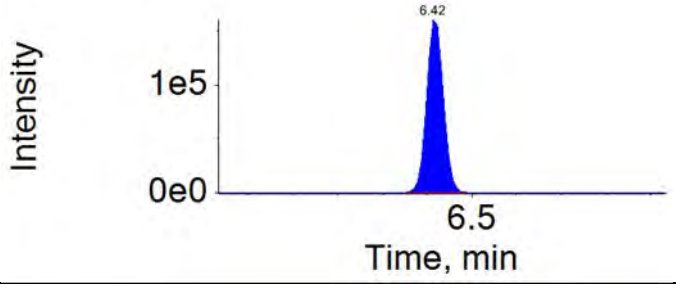
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





Ion Ratio Report

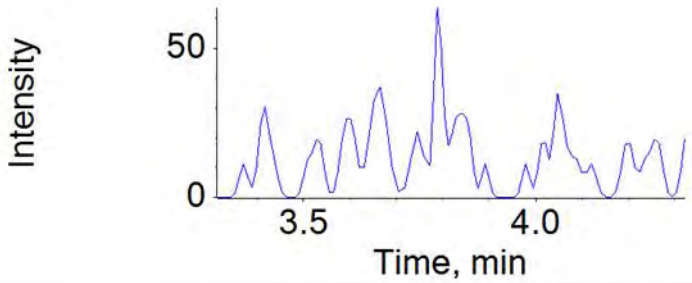
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV12D-71.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

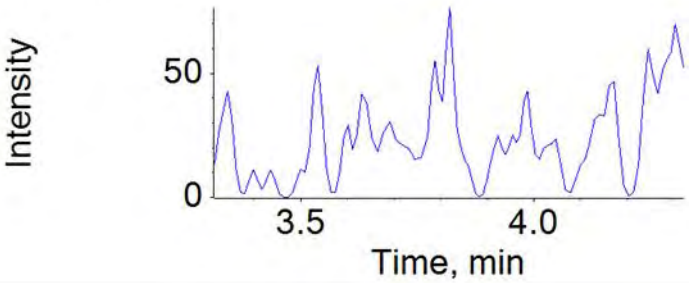
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

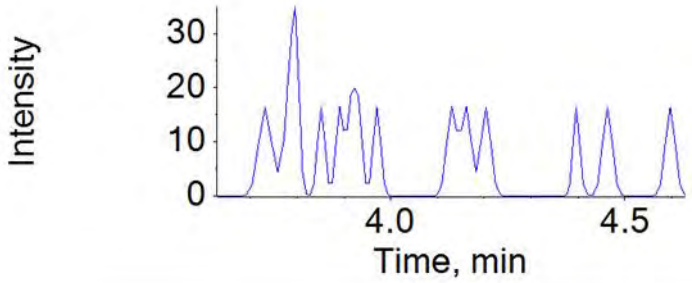
Component: PFBS
Primary Mass: 299.0 / 80.0



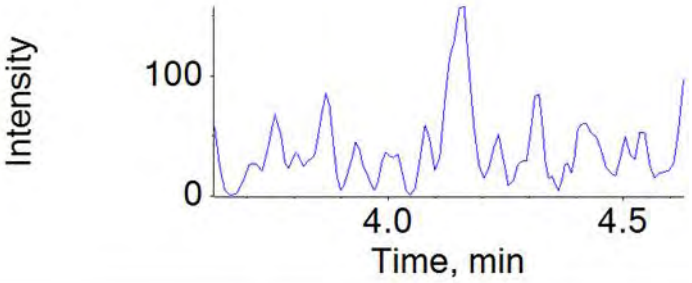
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



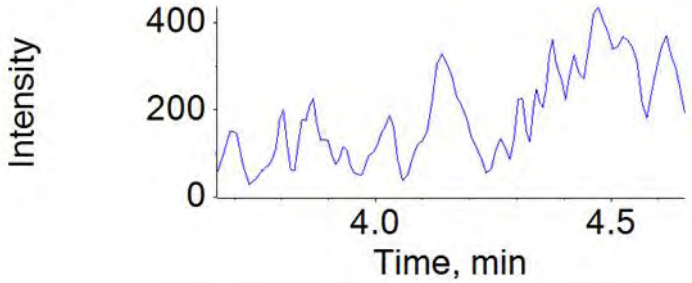
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



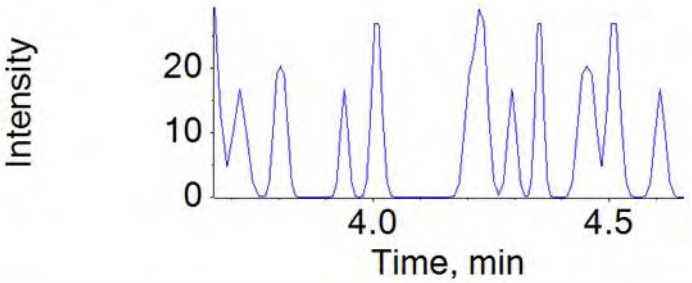
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



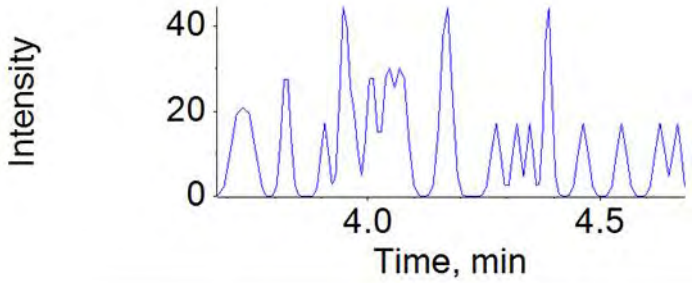
Component: PFHxA
Primary Mass: 313.0 / 269.0



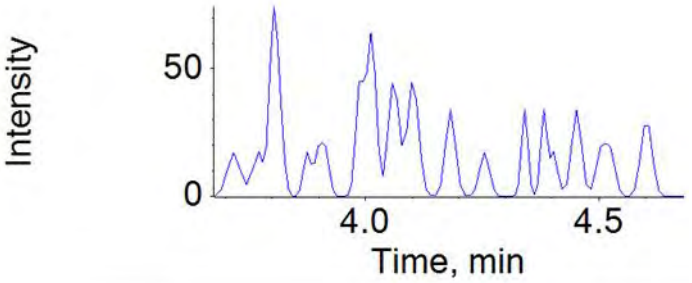
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



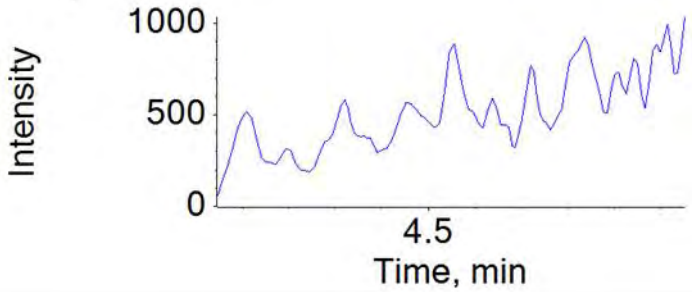
Component: PFPeS
Primary Mass: 349.0 / 80.0



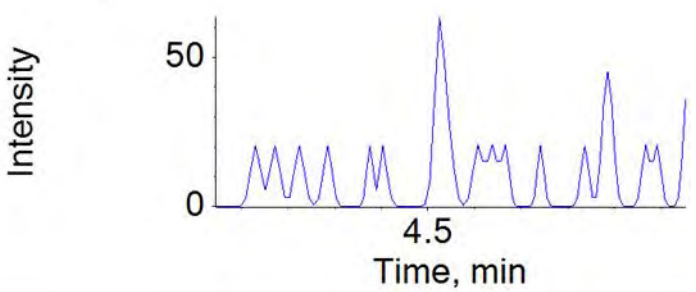
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



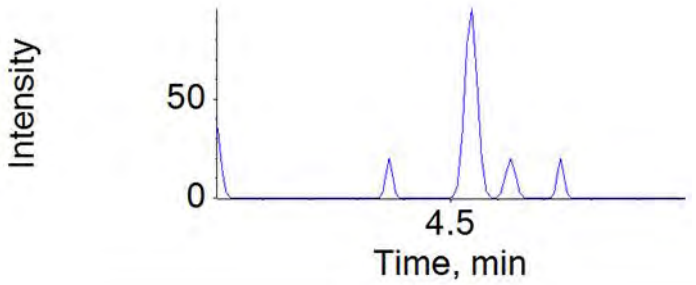
Component: PFHpA
Primary Mass: 363.0 / 319.0



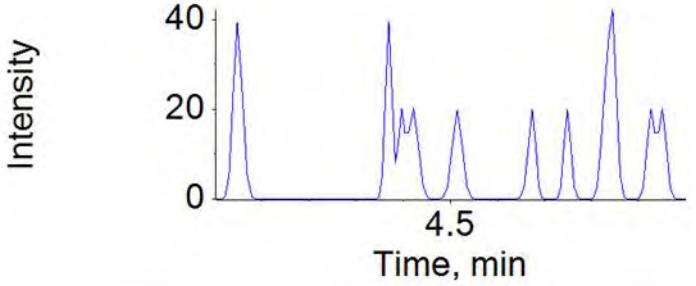
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



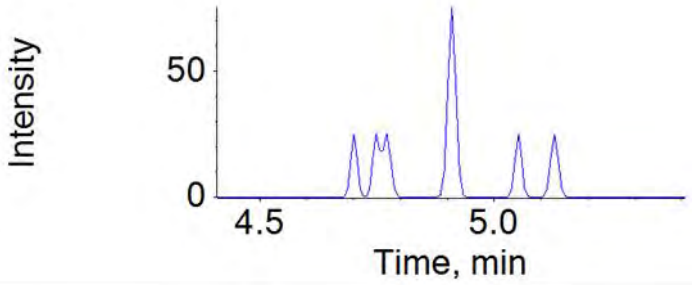
Component: PFHxS
Primary Mass: 399.0 / 80.0



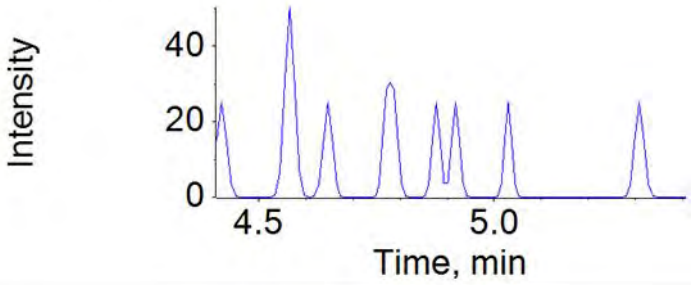
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



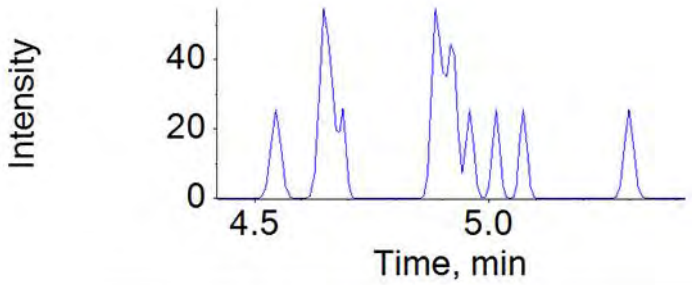
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



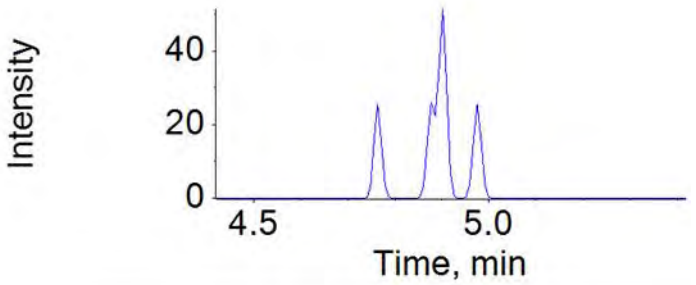
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



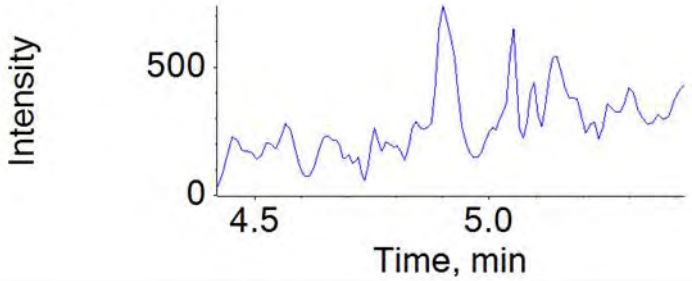
Component: PFHpS
Primary Mass: 449.0 / 80.0



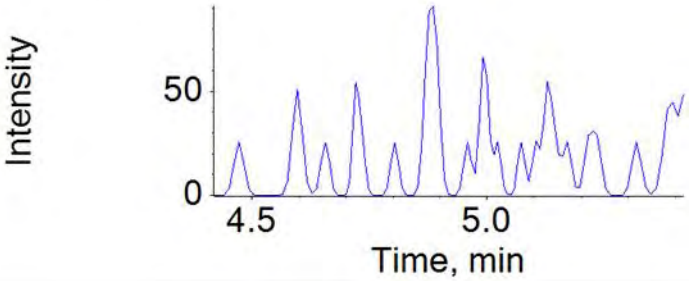
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



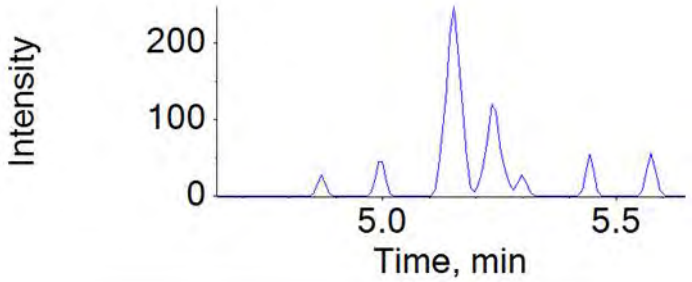
Component: PFOA
Primary Mass: 413.0 / 369.0



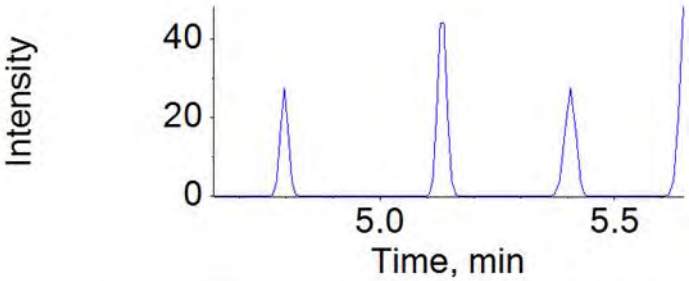
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



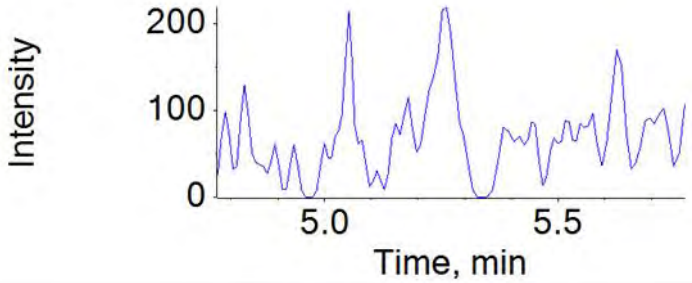
Component: PFOS
Primary Mass: 499.0 / 80.0



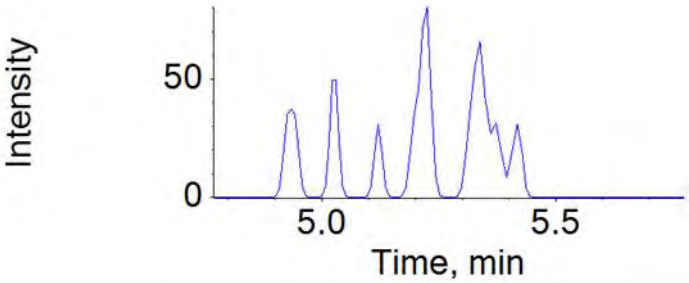
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



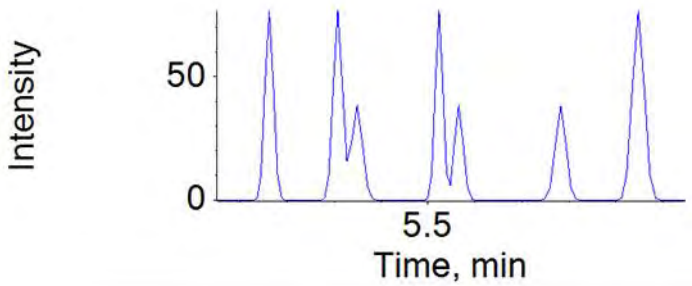
Component: PFNA
Primary Mass: 463.0 / 419.0



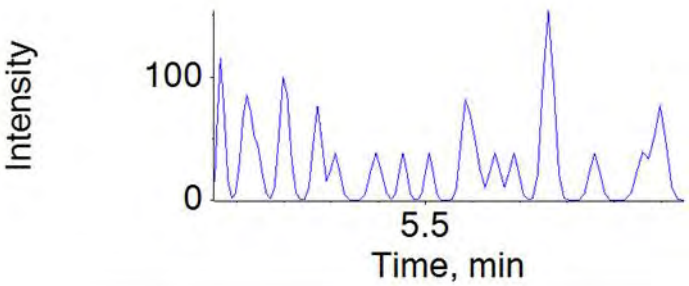
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



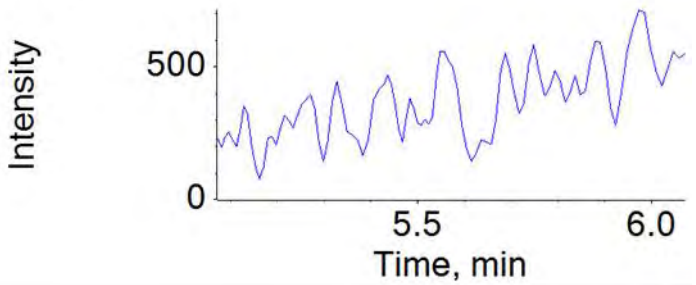
Component: PFNS
Primary Mass: 549.0 / 80.0



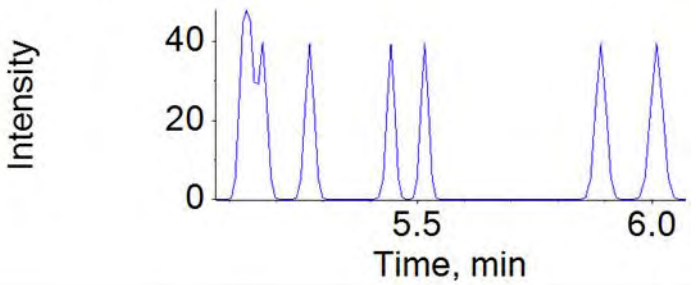
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



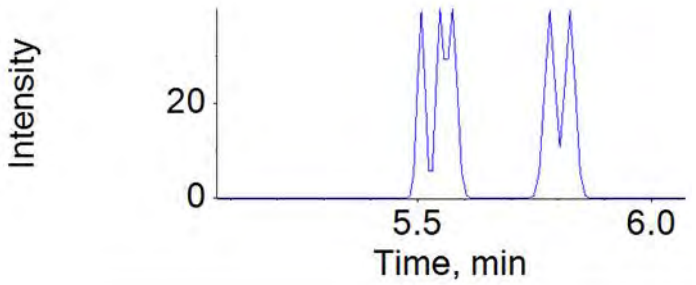
Component: PFDA
Primary Mass: 513.0 / 469.0



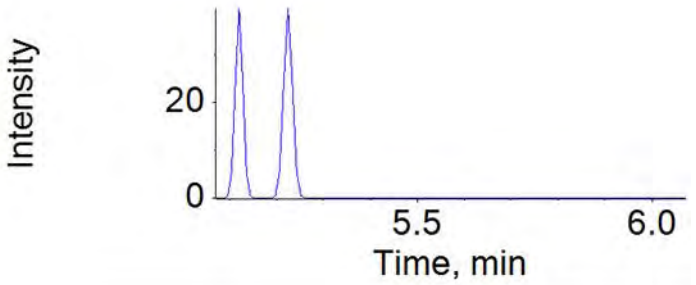
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



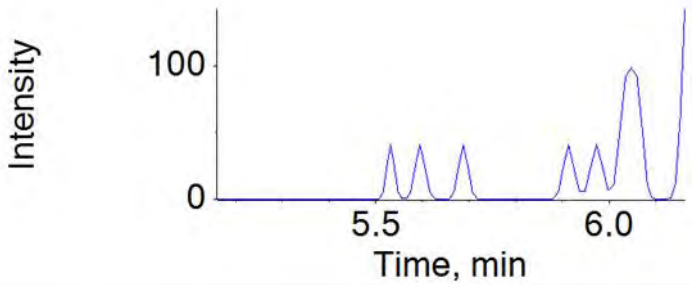
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



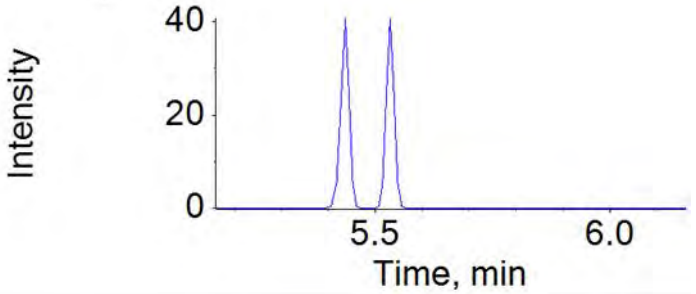
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



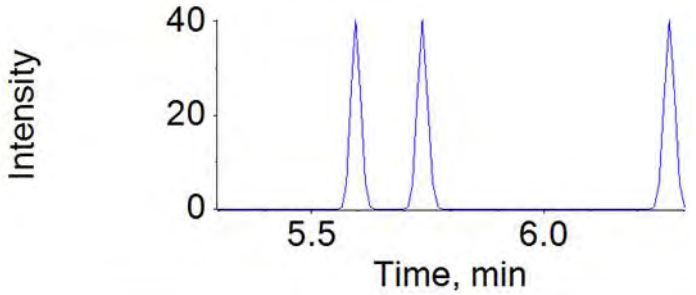
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



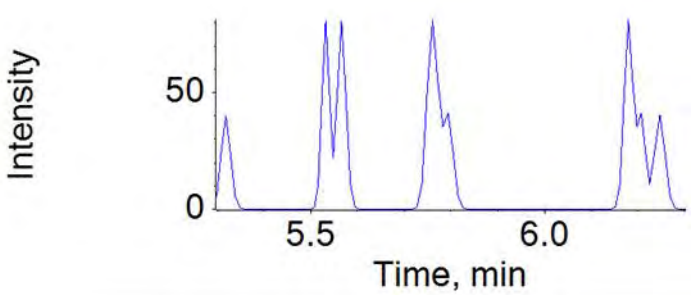
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



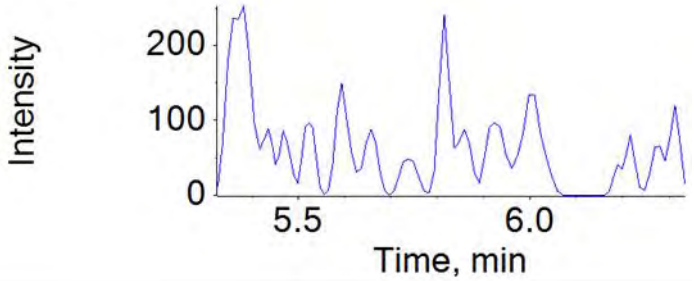
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



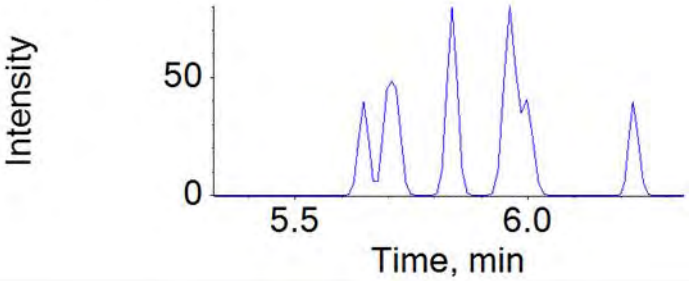
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By UMJS at 3:32 pm, 11/26/18

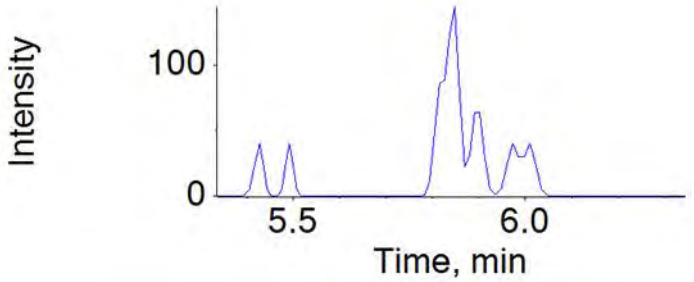
Component: PFUnDA
Primary Mass: 563.0 / 519.0



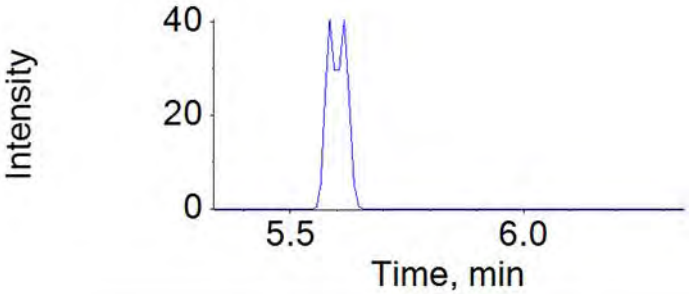
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



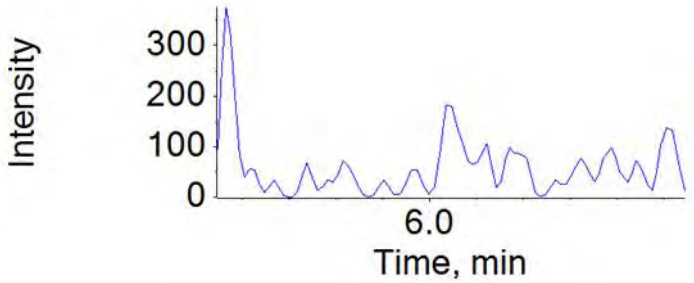
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



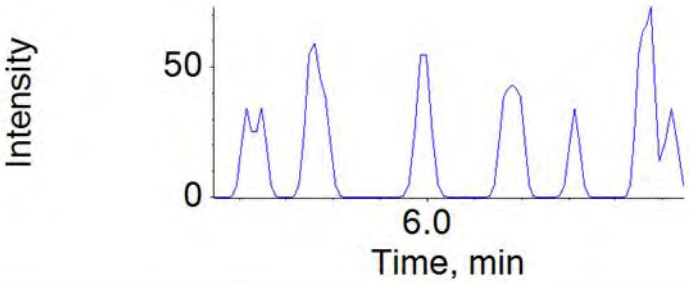
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



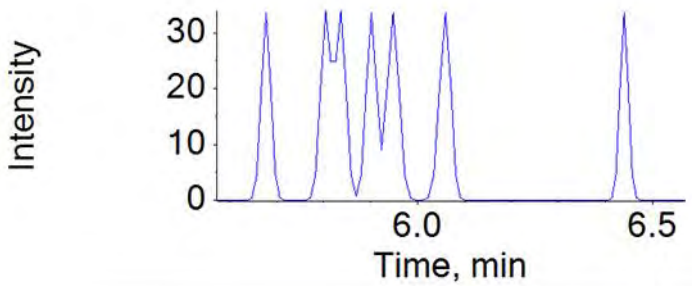
Component: PFDoDA
Primary Mass: 613.0 / 569.0



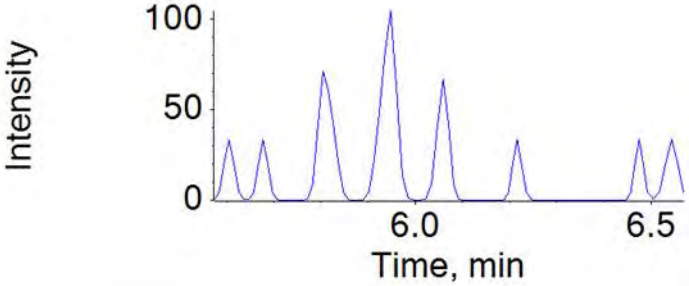
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



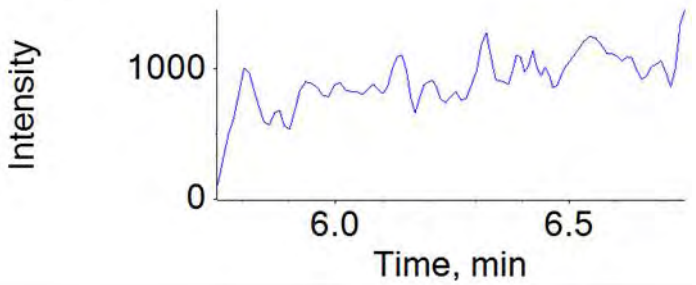
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



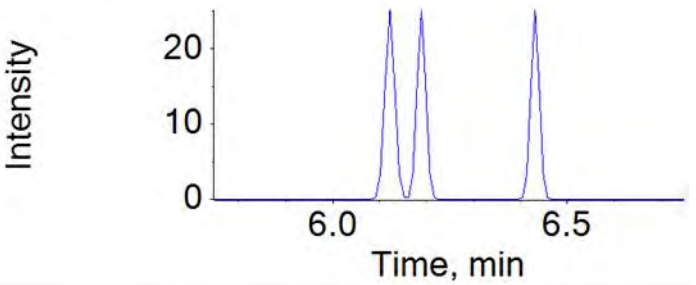
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



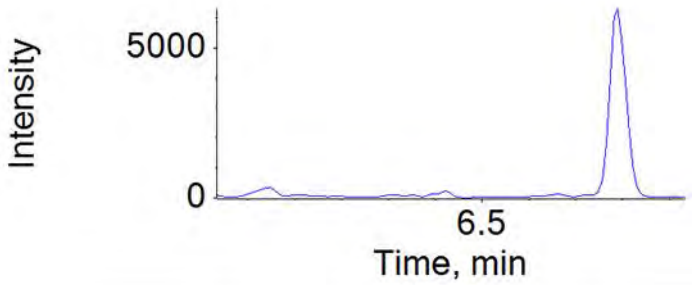
Component: PFTrDA
Primary Mass: 663.0 / 619.0



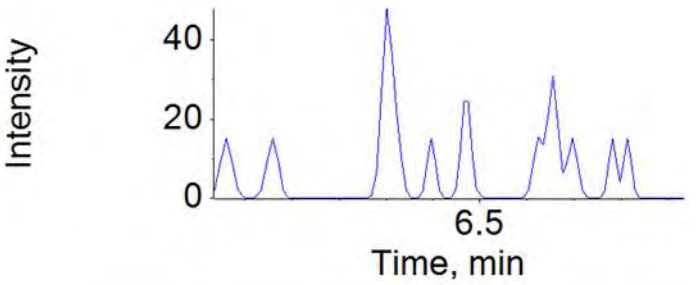
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



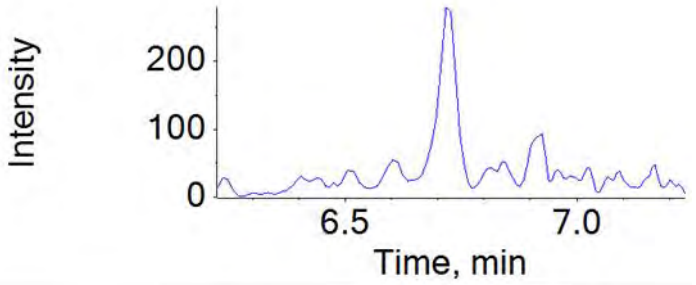
Component: PFTeDA
Primary Mass: 713.0 / 669.0



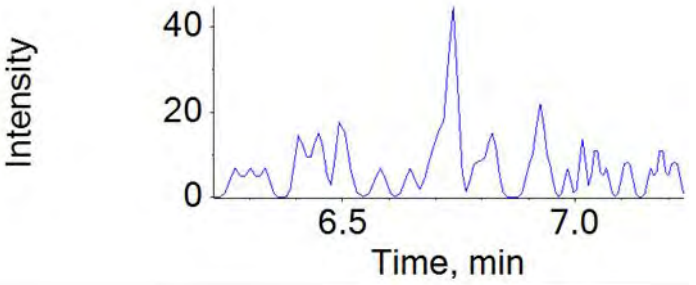
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



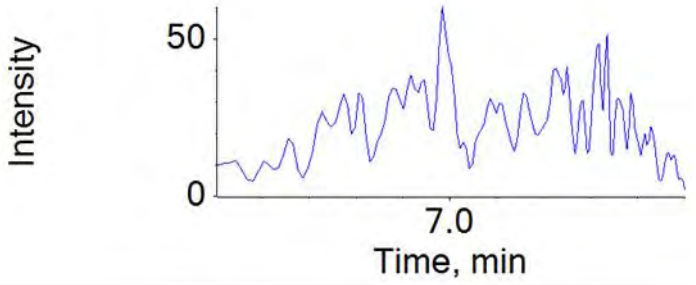
Component: PFHxDA
Primary Mass: 813.0 / 769.0



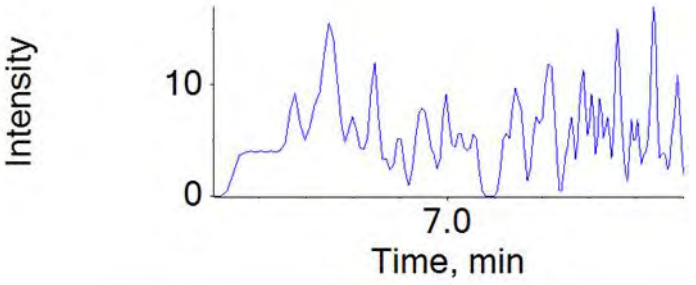
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



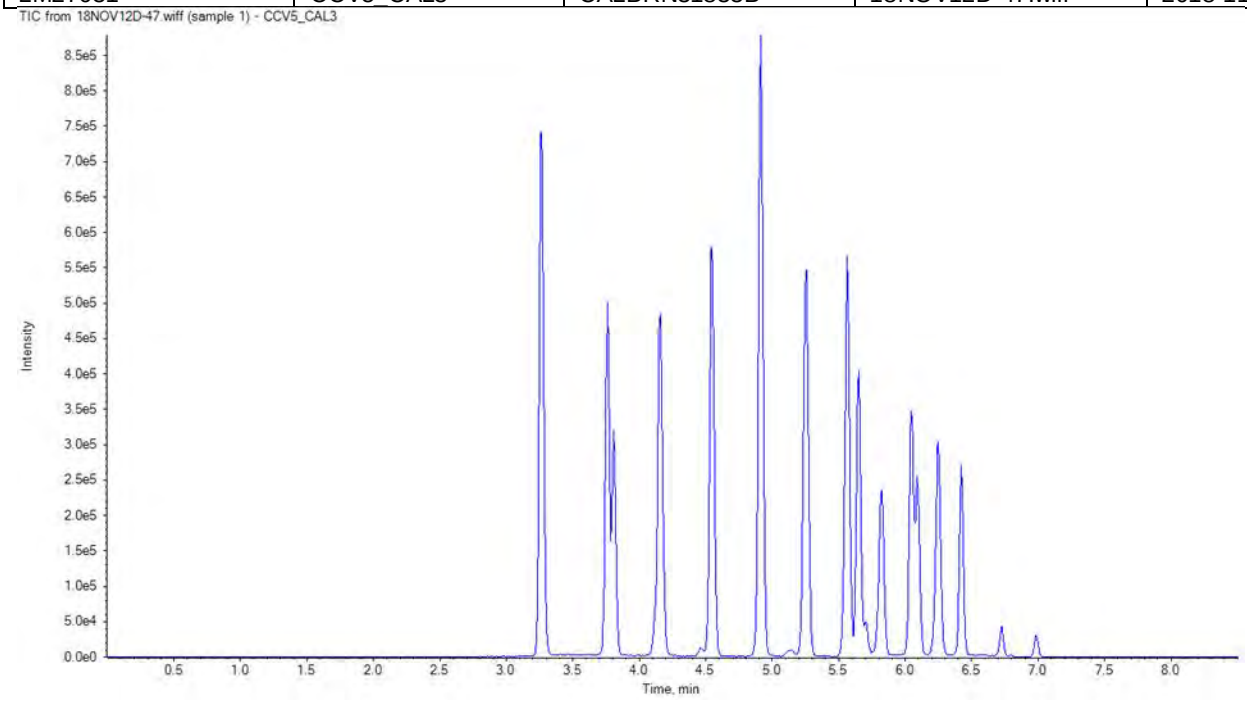
Component: PFODA_2
Secondary Mass: 913.0 / 169.0



Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV12D-47.wiff	2018-11-12T23:40:51



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	666975.7	659926.2	1	50	
13C2-PFOA	5.0	454871.2	450219.7	1	50	
13C4-PFOS	4.8	255041.1	249205.8	2	50	
13C2-PFDA	5.0	291392.8	278743.9	5	50	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV12D-47.wiff	2018-11-12T23:40:51

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	304975.4	10	13C4-PFBA	742444.1	5.0	0.411	3.26	1.000	2.000	2.276	14	30	
PFPeA	308632.6	11	13C5-PFPeA	737433.0	5.0	0.419	3.76	1.000	2.000	2.423	21	30	
PFBS	165427.2	11	13C3-PFBS	424887.0	4.7	0.389	3.81	1.000	1.770	1.852	5	30	
4:2-FTS	38851.7	12	13C2-4:2-FTS	47151.8	4.7	0.824	4.12	1.000	1.870	2.237	20	30	
PFHxA	365563.6	12	13C5-PFHxA	687672.6	5.0	0.532	4.16	1.000	2.000	2.220	11	30	
PFPeS	87775.5	11	13C3-PFBS	424887.0	4.7	0.207	4.18	1.100	1.880	2.006	7	30	
PFHpA	376810.4	11	13C4-PFHpA	531811.9	5.0	0.709	4.55	1.000	2.000	2.349	17	30	
PFHxS	127858.7	18	13C3-PFHxS	309819.0	4.7	0.413	4.55	1.000	1.820	2.001	10	30	
6:2-FTS	30668.9	11	13C2-6:2-FTS	34831.5	4.8	0.880	4.90	1.000	1.900	2.131	12	30	
PFHpS	119438.7	11	13C3-PFHxS	309819.0	4.7	0.386	4.91	1.080	1.900	2.029	7	30	
PFOA	376978.4	11	13C8-PFOA	934753.5	5.0	0.403	4.91	1.000	2.000	2.154	8	30	
PFOS	128651.5	22	13C8-PFOS	285105.1	4.8	0.451	5.24	1.000	1.850	1.973	7	30	
PFNA	318183.9	11	13C9-PFNA	473402.6	5.0	0.672	5.26	1.000	2.000	2.424	21	30	
PFNS	80390.2	11	13C8-PFOS	285105.1	4.8	0.282	5.54	1.060	1.920	1.973	3	30	
PFDA	265515.8	11	13C6-PFDA	624437.3	5.0	0.425	5.57	1.000	2.000	2.254	13	30	
8:2-FTS	25376.4	12	13C2-8:2-FTS	24755.6	4.8	1.025	5.57	1.000	1.920	2.390	24	30	
PFOSA	273529.9	11	13C8-PFOSA	649519.3	5.0	0.421	5.65	1.000	2.000	2.057	3	30	
NMeFOSAA	30069.3	18	d3-NMeFOSAA	70907.5	5.0	0.424	5.71	1.000	2.000	2.397	20	30	
PFDS	61496.7	11	13C8-PFOS	285105.1	4.8	0.216	5.80	1.110	1.930	1.954	1	30	
PFUnDA	209468.8	11	13C7-PFUnDA	242166.8	5.0	0.865	5.82	1.000	2.000	2.261	13	30	
NEtFOSAA	23415.4	22	d5-NEtFOSAA	66681.2	5.0	0.351	5.84	1.000	2.000	1.841	-8	30	
PFDoDA	225352.6	12	13C2-PFDoDA	548478.1	5.0	0.411	6.05	1.000	2.000	2.092	5	30	
10:2-FTS	17725.4	11	13C2-8:2-FTS	24755.6	4.8	0.716	6.07	1.090	1.930	2.385	24	30	
NMePFOSAE	163205.9	12	d7-NMePFOSAE	309773.1	5.0	0.527	6.10	1.000	2.000	2.193	10	30	
NMePFOSA	27500.1	11	d3-NMePFOSA	78865.3	5.0	0.349	6.10	1.000	2.000	1.720	-14	30	
PFDoS	32137.7	11	13C8-PFOS	285105.1	4.8	0.113	6.22	1.190	1.940	1.974	2	30	
NEtPFOSAE	191934.6	11	d9-NEtPFOSAE	268953.4	5.0	0.714	6.25	1.000	2.000	2.290	14	30	
NEtPFOSA	24494.8	11	d5-NEtPFOSA	62108.3	5.0	0.394	6.27	1.000	2.000	1.811	-9	30	
PFTrDA	193520.3	11	13C2-PFDoDA	548478.1	5.0	0.353	6.24	1.030	2.000	2.227	11	30	
PFTeDA	162067.3	10	13C2-PFTeDA	397928.9	5.0	0.407	6.42	1.000	2.000	2.283	14	30	
PFHxDA	75958.0	11	13C2-PFTeDA	397928.9	5.0	0.191	6.73	1.050	2.000	2.274	14	30	
PFODA	63018.4	10	13C2-PFTeDA	397928.9	5.0	0.158	6.99	1.090	2.000	2.206	10	30	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV5_CAL3			**Data File:**		18NOV12D-47.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T23:40:51
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	666975.7	659926.2	1	50	
13C2-PFOA	5.0	454871.2	450219.7	1	50	
13C4-PFOS	4.8	255041.1	249205.8	2	50	
13C2-PFDA	5.0	291392.8	278743.9	5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	742444.1	13C3-PFBA	666975.7	1.113	5.000	4.991	100	70-130	
E13C5-PFPeA	737433.0	13C3-PFBA	666975.7	1.106	5.000	4.959	99	70-130	
E13C3-PFBS	424887.0	13C3-PFBA	666975.7	0.637	4.650	4.497	97	70-130	
E13C2-4:2-FTS	47151.8	13C2-PFOA	454871.2	0.104	4.670	4.617	99	70-130	
E13C5-PFHxA	687672.6	13C2-PFOA	454871.2	1.512	5.000	5.461	109	70-130	
E13C3-PFHxS	309819.0	13C2-PFOA	454871.2	0.681	4.730	4.674	99	70-130	
E13C4-PFHpA	531811.9	13C2-PFOA	454871.2	1.169	5.000	5.267	105	70-130	
E13C2-6:2-FTS	34831.5	13C2-PFOA	454871.2	0.077	4.750	5.123	108	70-130	
E13C8-PFOA	934753.5	13C2-PFOA	454871.2	2.055	5.000	5.662	113	70-130	
E13C8-PFOS	285105.1	13C4-PFOS	255041.1	1.118	4.780	4.953	104	70-130	
E13C9-PFNA	473402.6	13C4-PFOS	255041.1	1.856	5.000	5.175	104	70-130	
E13C6-PFDA	624437.3	13C2-PFDA	291392.8	2.143	5.000	5.001	100	70-130	
E13C2-8:2-FTS	24755.6	13C2-PFDA	291392.8	0.085	4.790	4.237	88	70-130	
E13C8-PFOSA	649519.3	13C2-PFDA	291392.8	2.229	5.000	4.942	99	70-130	
Ed3-NMeFOSAA	70907.5	13C2-PFDA	291392.8	0.243	5.000	4.392	88	70-130	
E13C7-PFUnDA	242166.8	13C2-PFDA	291392.8	0.831	5.000	4.825	97	70-130	
Ed5-NEtFOSAA	66681.2	13C2-PFDA	291392.8	0.229	5.000	4.841	97	70-130	
E13C2-PFDoDA	548478.1	13C2-PFDA	291392.8	1.882	5.000	4.887	98	70-130	
Ed7-NMePFOSAE	309773.1	13C2-PFDA	291392.8	1.063	5.000	4.600	92	70-130	
Ed3-NMePFOSA	78865.3	13C2-PFDA	291392.8	0.271	5.000	4.917	98	70-130	
Ed9-NEtPFOSAE	268953.4	13C2-PFDA	291392.8	0.923	5.000	4.801	96	70-130	
Ed5-NEtPFOSA	62108.3	13C2-PFDA	291392.8	0.213	5.000	5.000	100	70-130	
E13C2-PFTeDA	397928.9	13C2-PFDA	291392.8	1.366	5.000	4.794	96	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

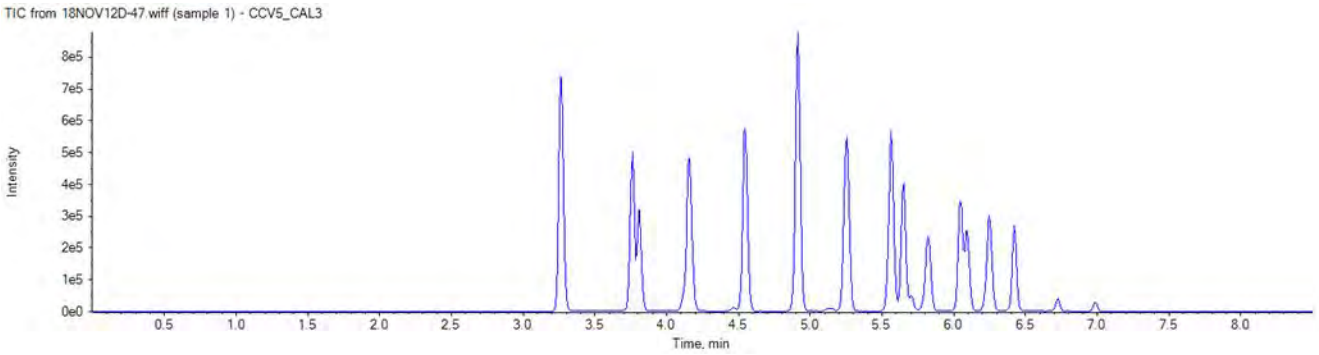
Analyte Quantitation Peak Table

Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12D-47.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	304975.4		A	13C4-PFBA	3.26	742444.1	0.411	2.276
PFPeA	3.76	1.000	308632.6		A	13C5-PFPeA	3.76	737433.0	0.419	2.423
PFBS	3.81	1.000	165427.2		A	13C3-PFBS	3.81	424887.0	0.389	1.852
4:2-FTS	4.12	1.000	38851.7		A	13C2-4:2-FTS	4.12	47151.8	0.824	2.237
PFHxA	4.16	1.000	365563.6		A	13C5-PFHxA	4.16	687672.6	0.532	2.220
PFPeS	4.18	1.100	87775.5		A	13C3-PFBS	3.81	424887.0	0.207	2.006
PFHpA	4.55	1.000	376810.4		A	13C4-PFHpA	4.55	531811.9	0.709	2.349
PFHxS	4.55	1.000	127858.7		M	13C3-PFHxS	4.55	309819.0	0.413	2.001
6:2-FTS	4.90	1.000	30668.9		A	13C2-6:2-FTS	4.90	34831.5	0.880	2.131
PFHpS	4.91	1.080	119438.7		A	13C3-PFHxS	4.55	309819.0	0.386	2.029
PFOA	4.91	1.000	376978.4		A	13C8-PFOA	4.91	934753.5	0.403	2.154
PFOS	5.24	1.000	128651.5		M	13C8-PFOS	5.24	285105.1	0.451	1.973
PFNA	5.26	1.000	318183.9		A	13C9-PFNA	5.26	473402.6	0.672	2.424
PFNS	5.54	1.060	80390.2		A	13C8-PFOS	5.24	285105.1	0.282	1.973
PFDA	5.57	1.000	265515.8		A	13C6-PFDA	5.57	624437.3	0.425	2.254
8:2-FTS	5.57	1.000	25376.4		A	13C2-8:2-FTS	5.57	24755.6	1.025	2.390
PFOSA	5.65	1.000	273529.9		A	13C8-PFOSA	5.65	649519.3	0.421	2.057
NMeFOSAA	5.71	1.000	30069.3		M	d3-NMeFOSAA	5.70	70907.5	0.424	2.397
PFDS	5.80	1.110	61496.7		A	13C8-PFOS	5.24	285105.1	0.216	1.954
PFUnDA	5.82	1.000	209468.8		A	13C7-PFUnDA	5.82	242166.8	0.865	2.261
NEtFOSAA	5.84	1.000	23415.4		M	d5-NEtFOSAA	5.83	66681.2	0.351	1.841
PFDoDA	6.05	1.000	225352.6		A	13C2-PFDoDA	6.05	548478.1	0.411	2.092
10:2-FTS	6.07	1.090	17725.4		A	13C2-8:2-FTS	5.57	24755.6	0.716	2.385
NMePFOSAE	6.10	1.000	163205.9		A	d7-NMePFOSAE	6.09	309773.1	0.527	2.193
NMePFOSA	6.10	1.000	27500.1		M	d3-NMePFOSA	6.10	78865.3	0.349	1.720
PFDoS	6.22	1.190	32137.7		A	13C8-PFOS	5.24	285105.1	0.113	1.974
NEtPFOSAE	6.25	1.000	191934.6		A	d9-NEtPFOSAE	6.24	268953.4	0.714	2.290
NEtPFOSA	6.27	1.000	24494.8		A	d5-NEtPFOSA	6.26	62108.3	0.394	1.811
PFTrDA	6.24	1.030	193520.3		A	13C2-PFDoDA	6.05	548478.1	0.353	2.227
PFTeDA	6.42	1.000	162067.3		A	13C2-PFTeDA	6.42	397928.9	0.407	2.283
PFHxDA	6.73	1.050	75958.0		A	13C2-PFTeDA	6.42	397928.9	0.191	2.274
PFODA	6.99	1.090	63018.4		A	13C2-PFTeDA	6.42	397928.9	0.158	2.206

Total Ion Chromatogram

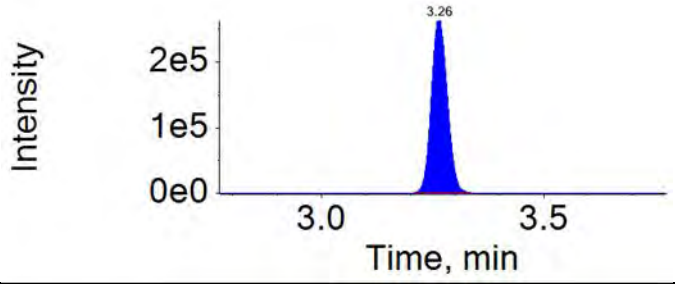


APPROVED
By JPT at 10:23 am, 11/13/18

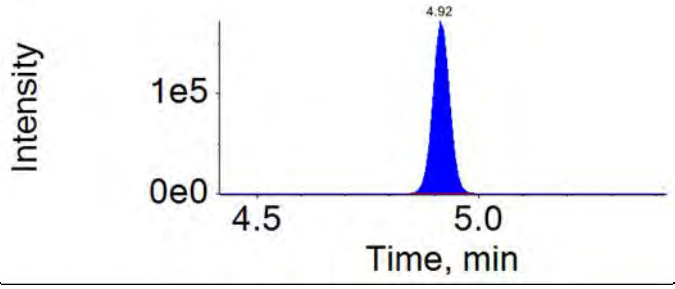
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

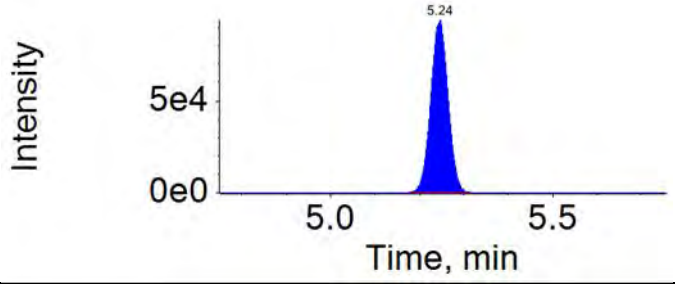
Injection Standard: 13C3-PFBA
216.0 / 172.0



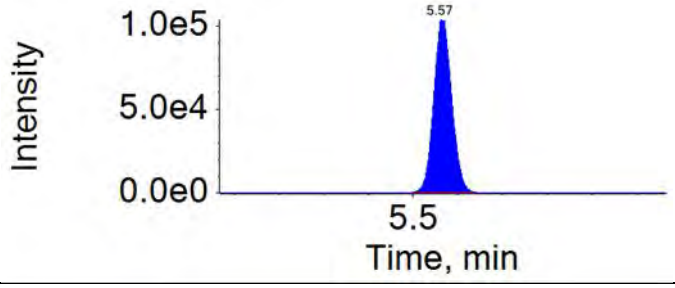
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

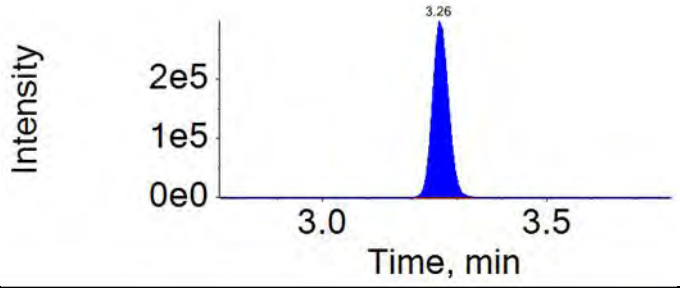


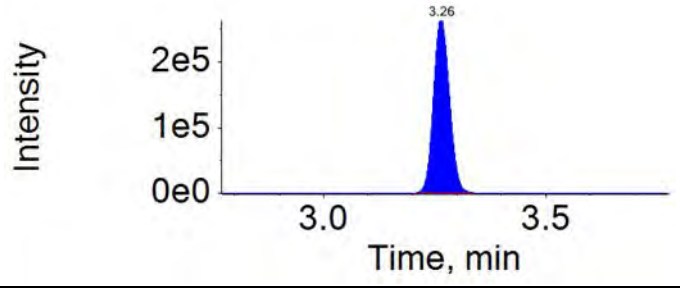
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

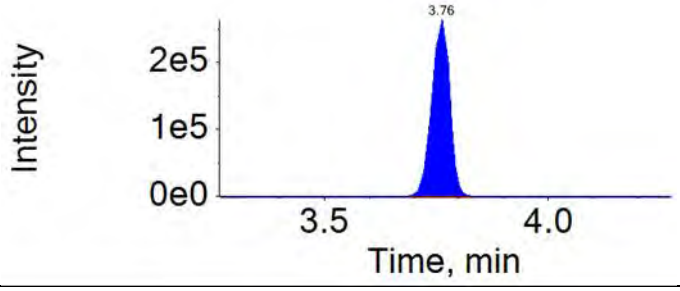
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

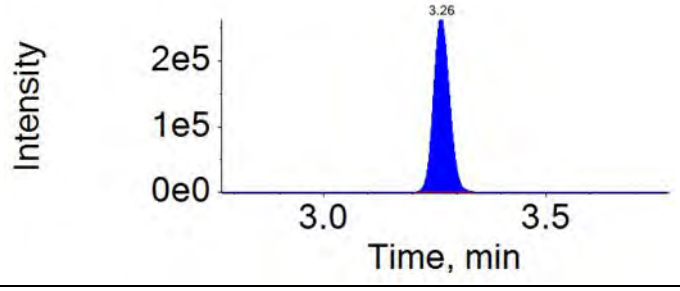
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



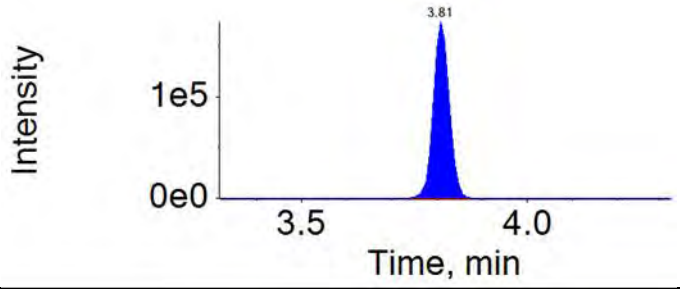


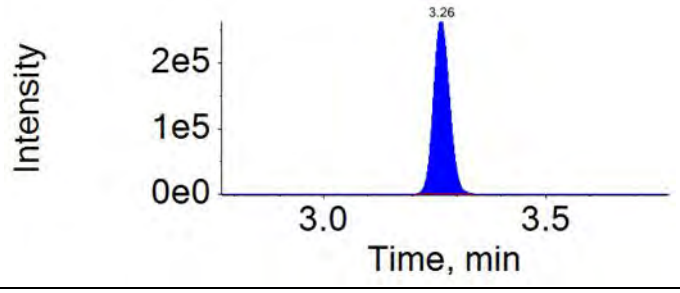
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



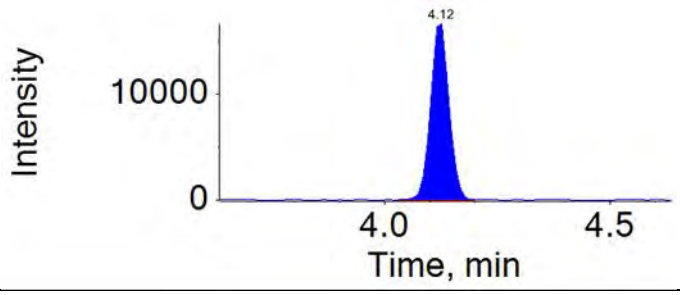


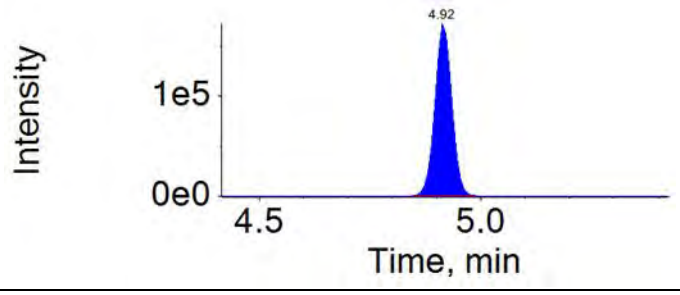
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





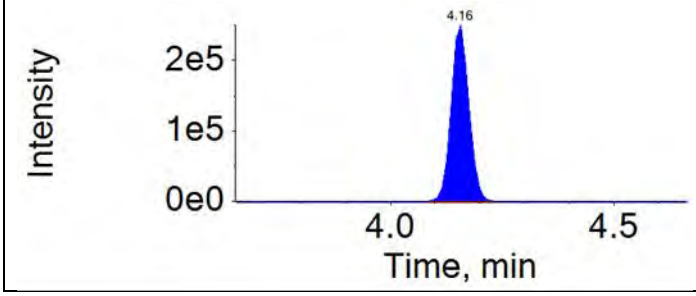
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

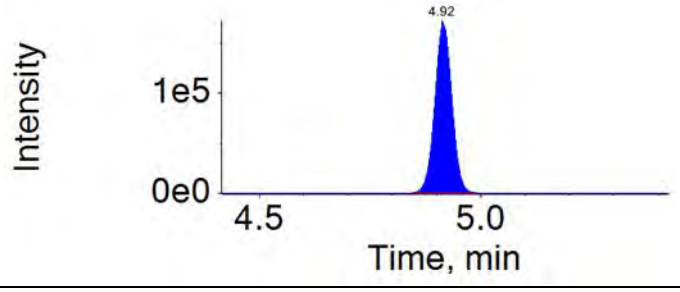




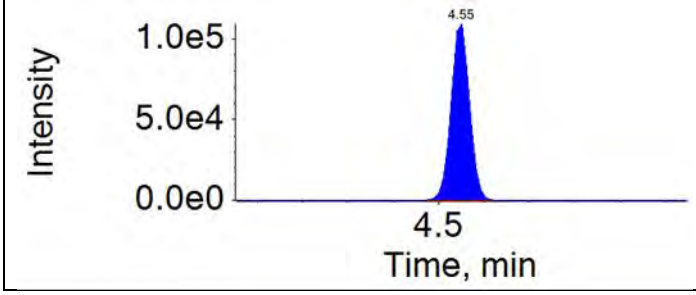
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

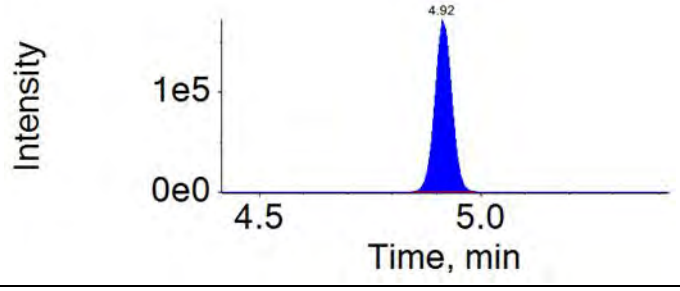
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



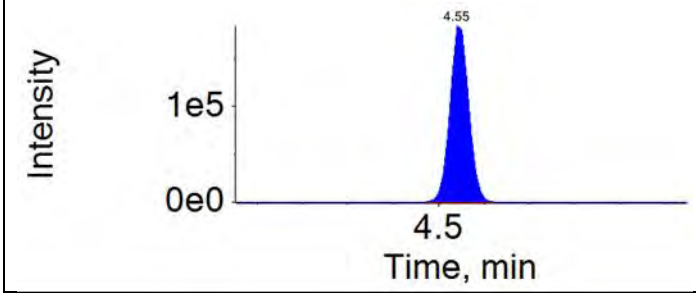


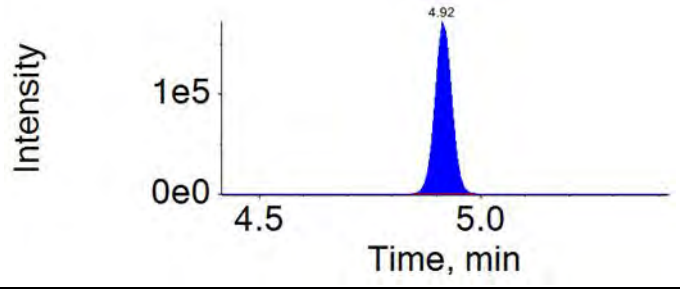
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



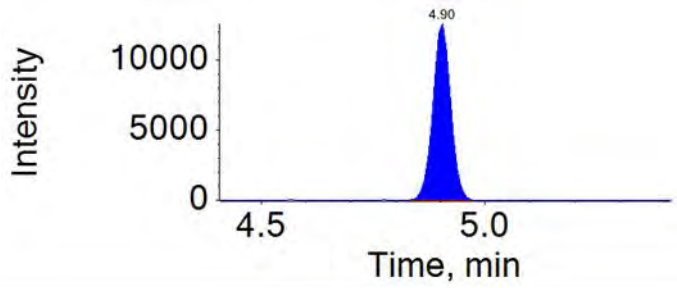


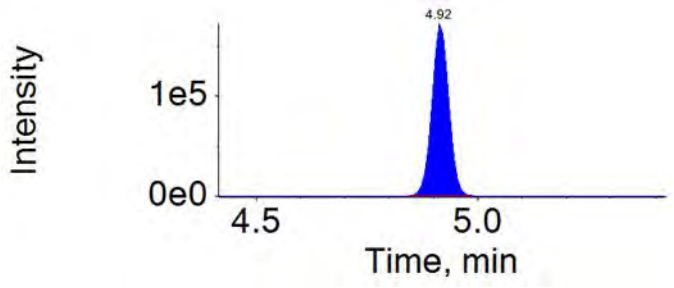
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

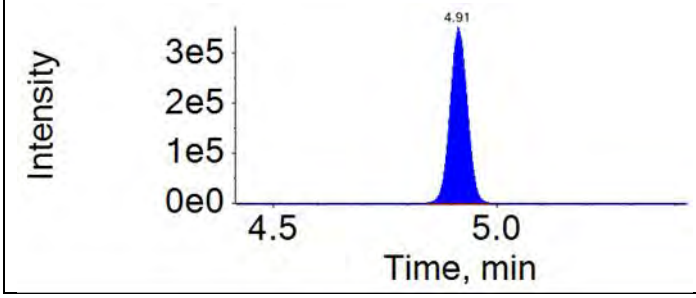
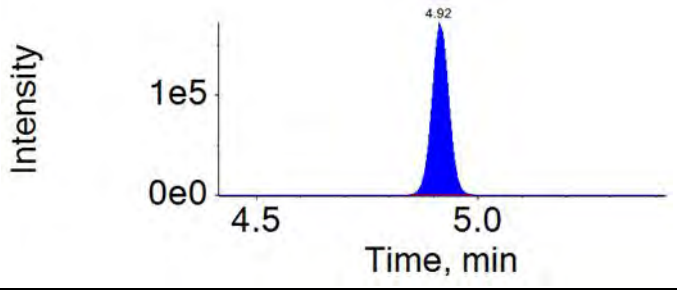


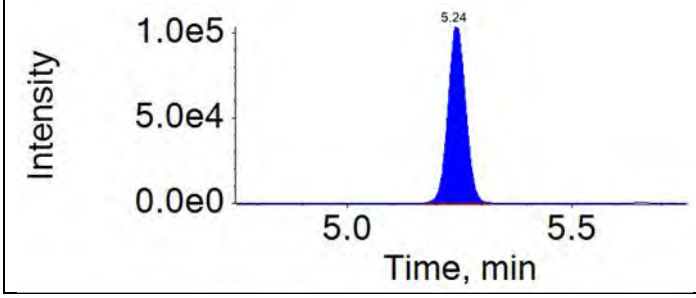
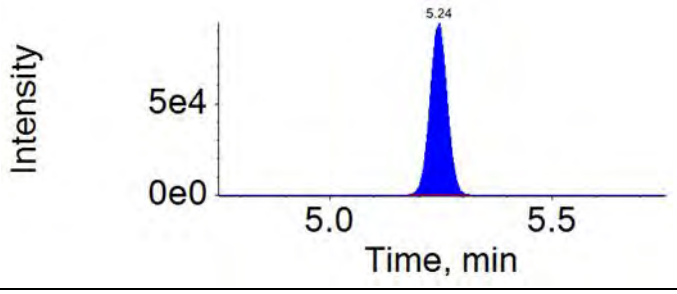


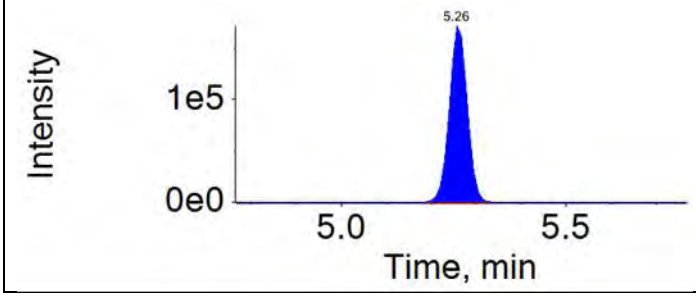
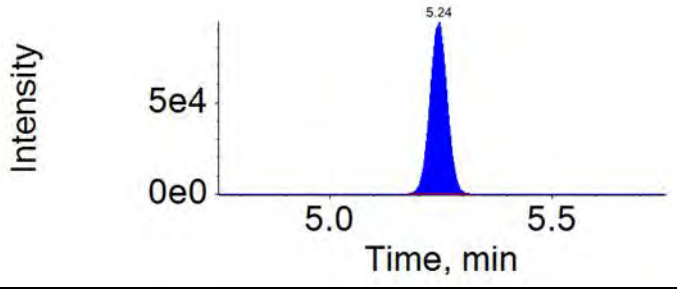
APPROVED
By JPT at 10:23 am, 11/13/18

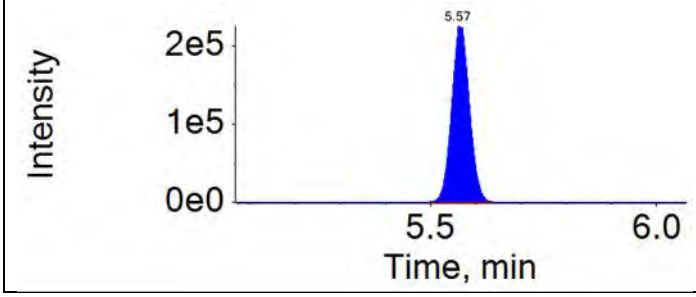
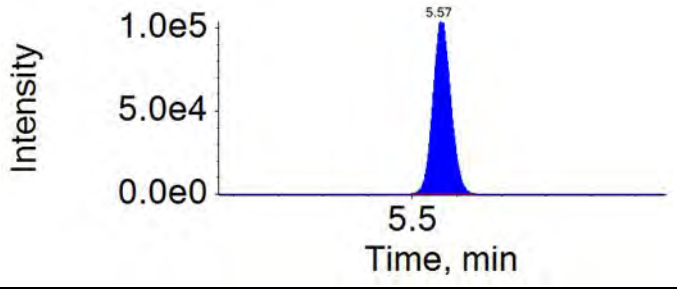
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

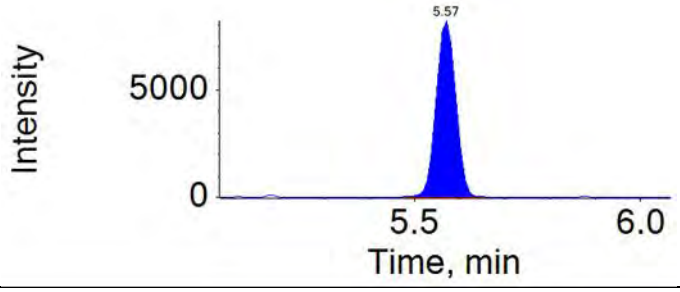
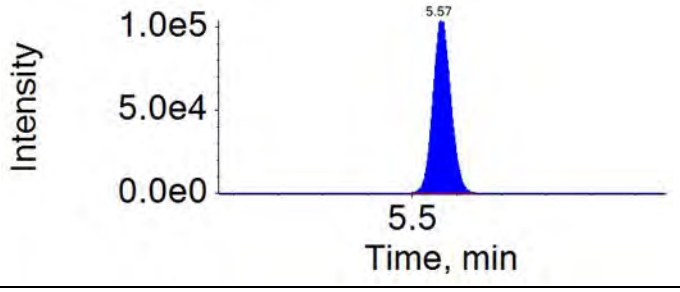
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

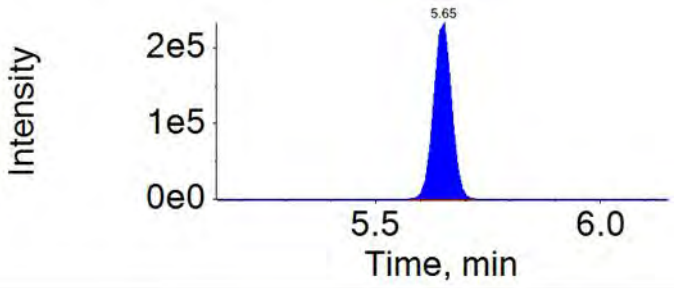
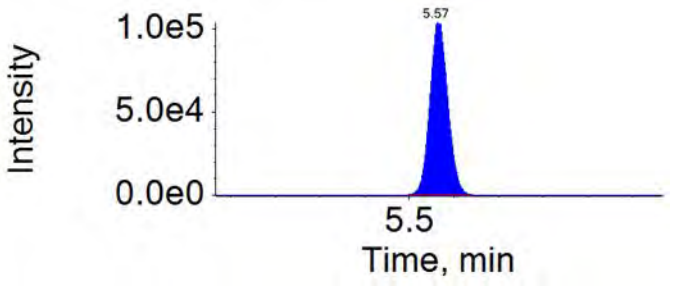
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

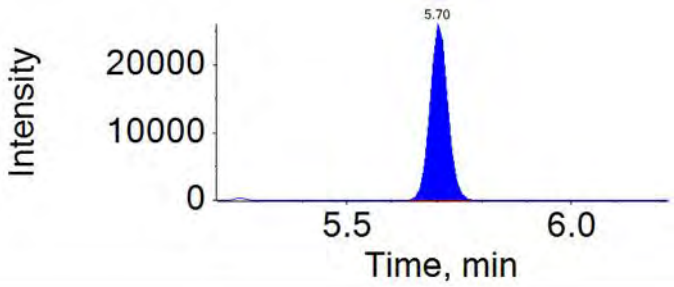
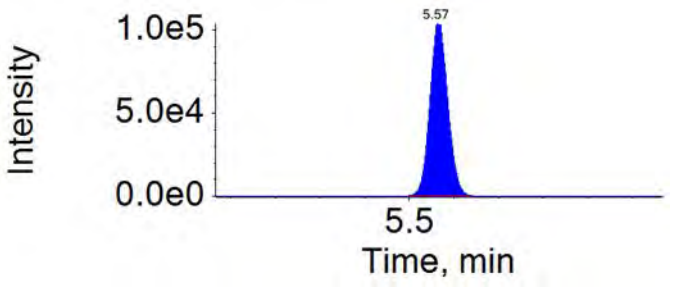
APPROVED
By JPT at 10:23 am, 11/13/18

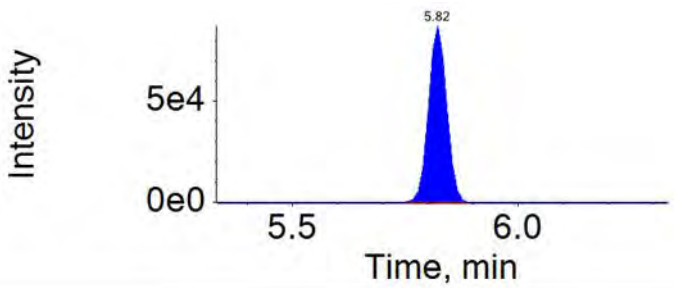
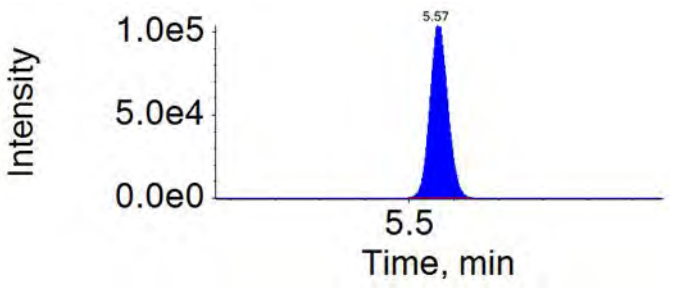
REVIEWED
By HMK at 2:17 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

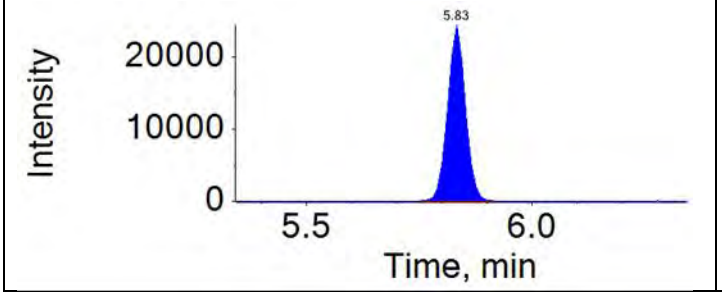
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

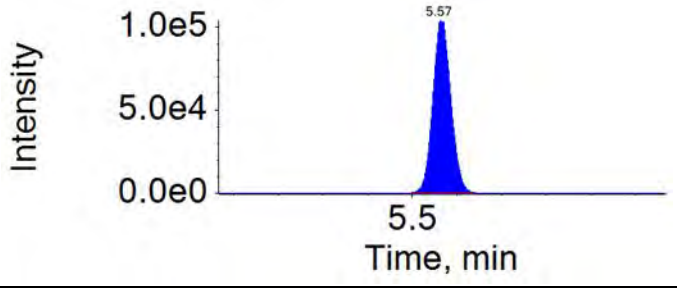
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

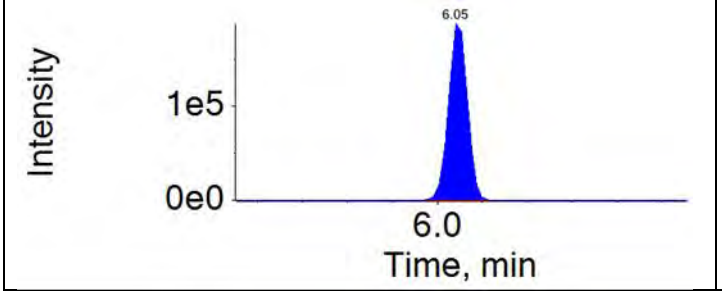
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

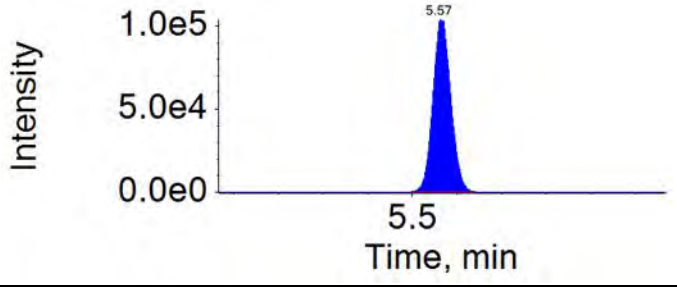
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



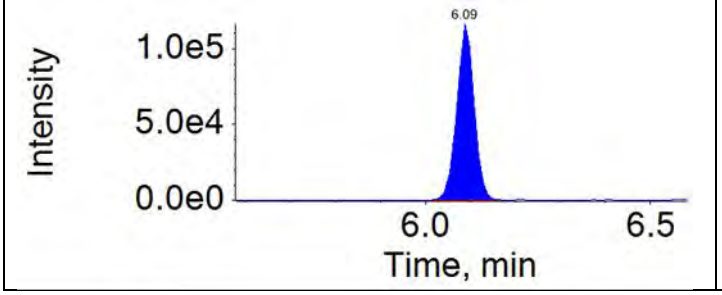


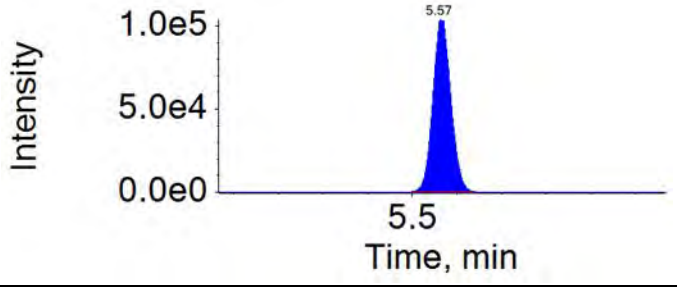
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



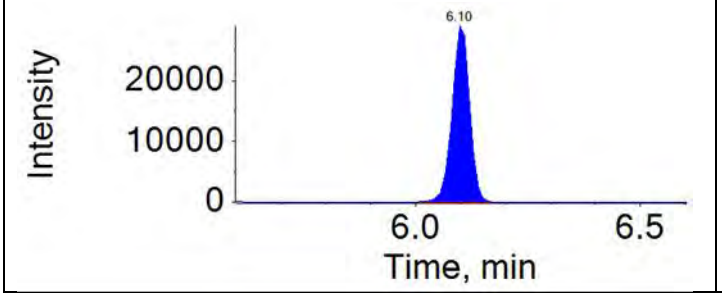


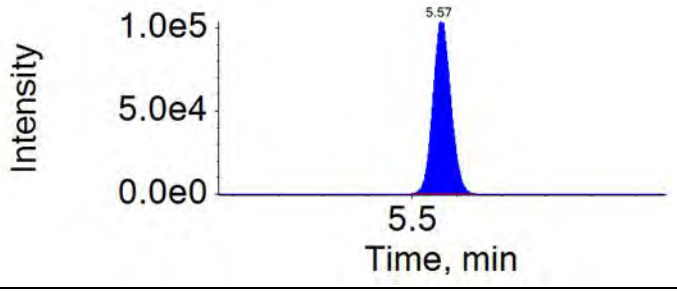
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



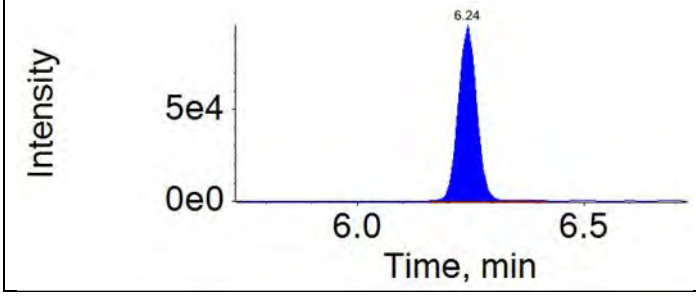


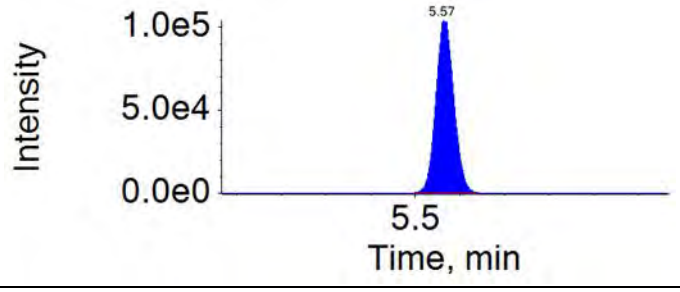
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

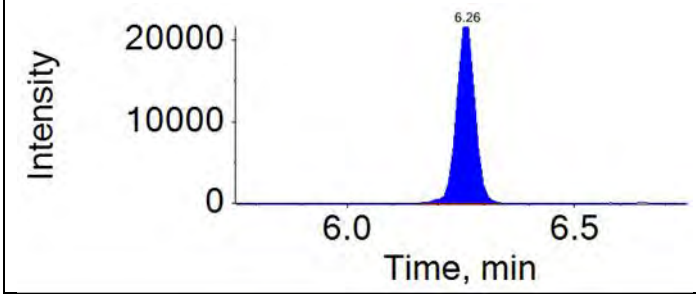
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

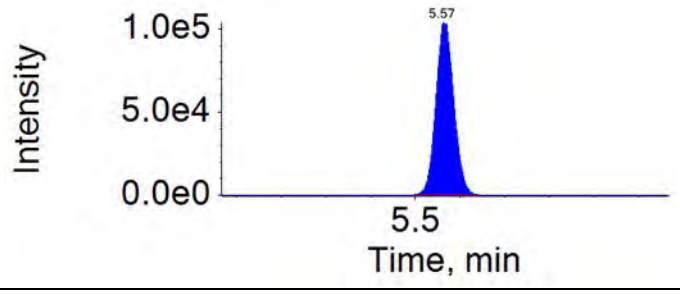
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



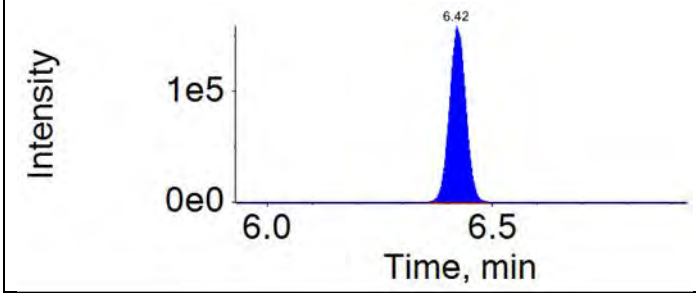


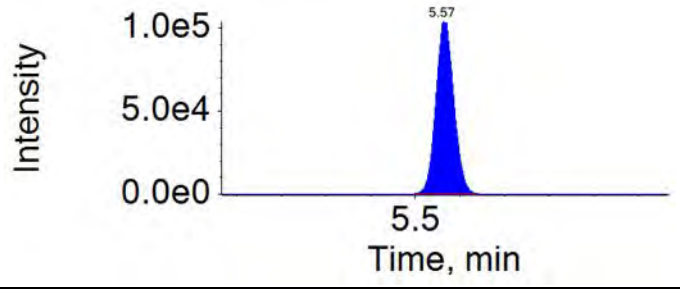
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



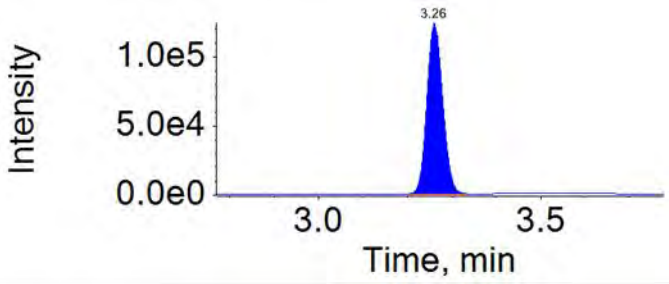


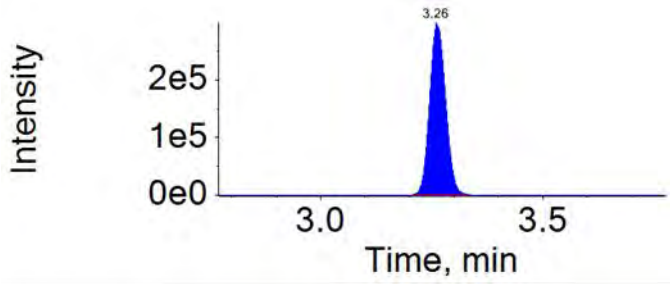
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

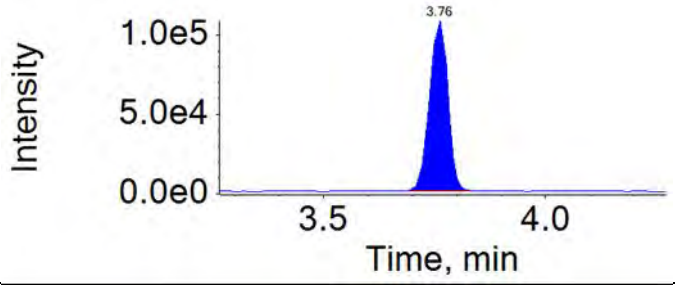
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

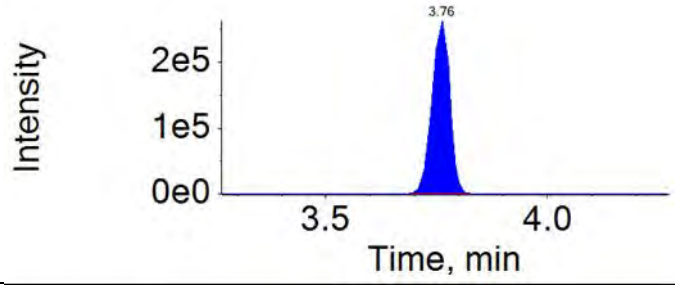
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



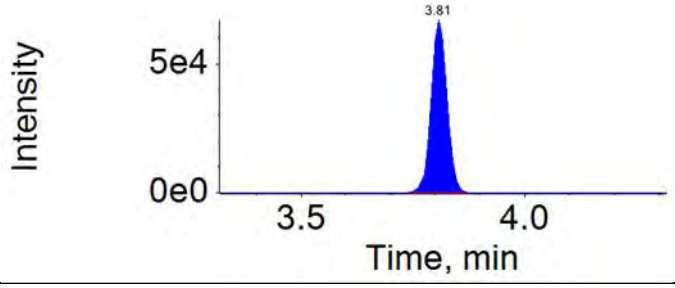


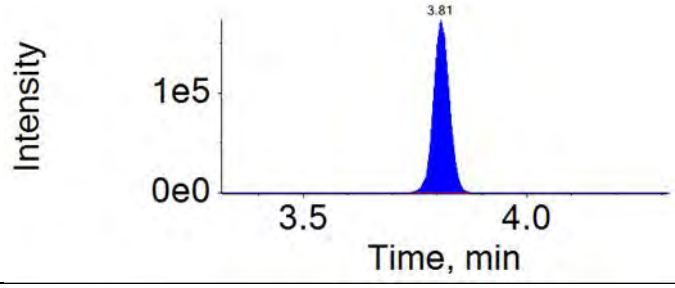
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



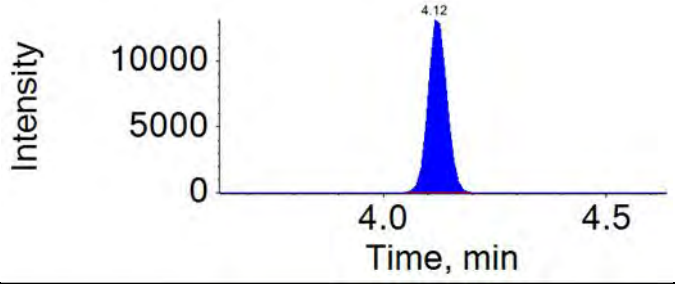


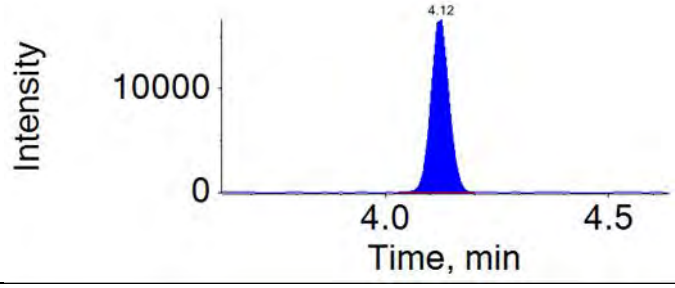
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



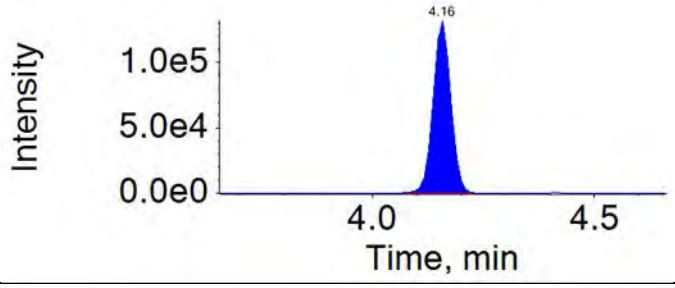


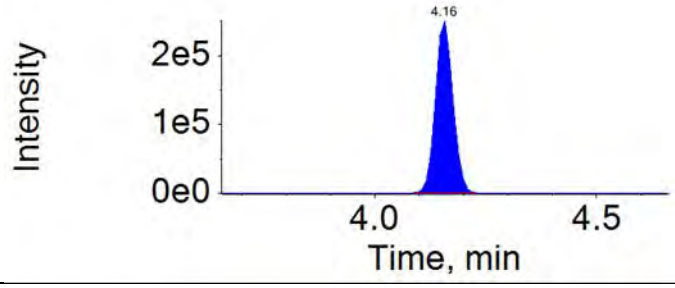
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

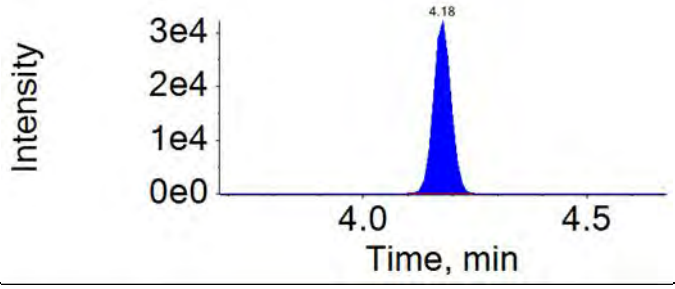
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

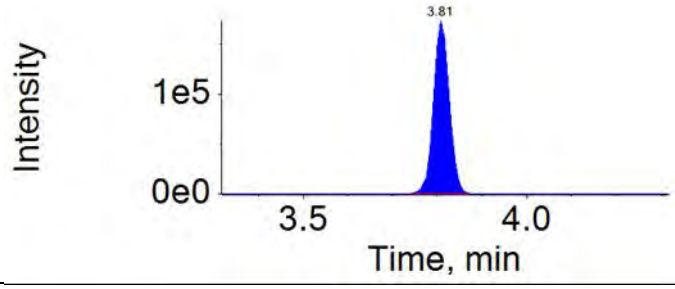
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



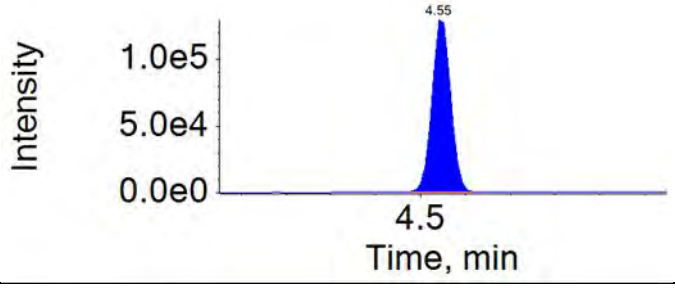


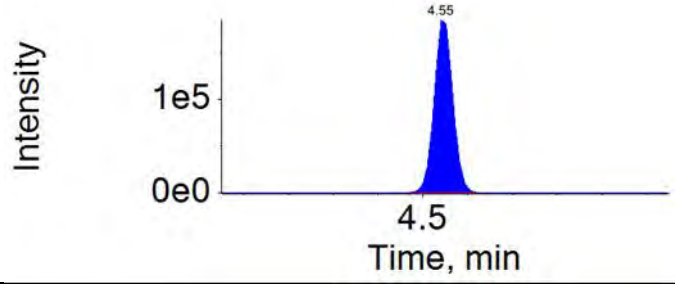
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



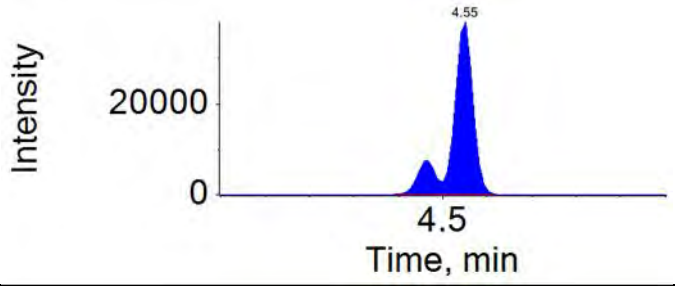


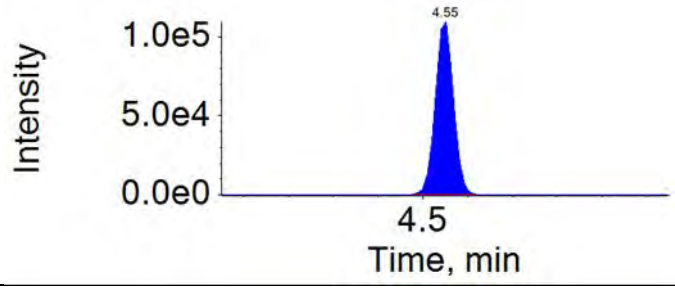
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



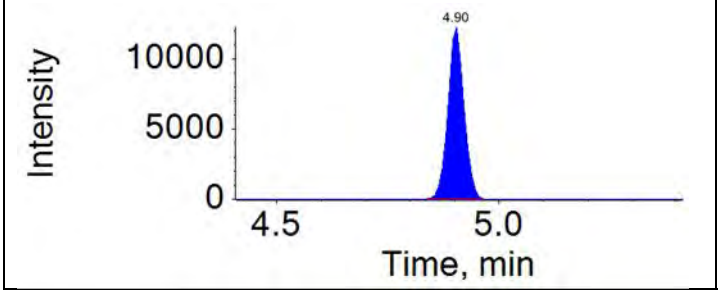


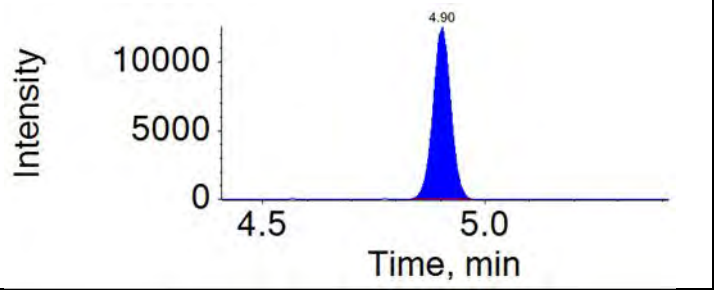
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

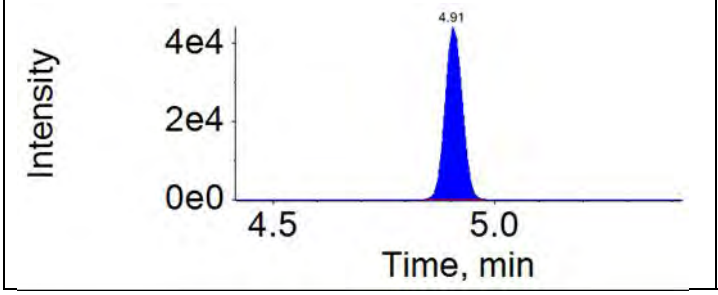
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

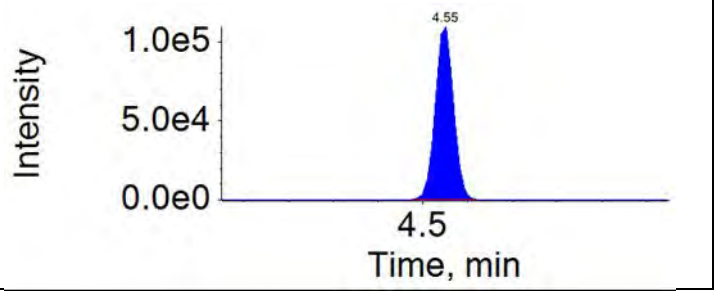
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



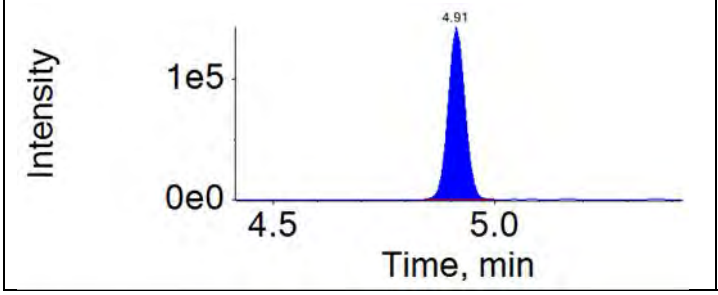


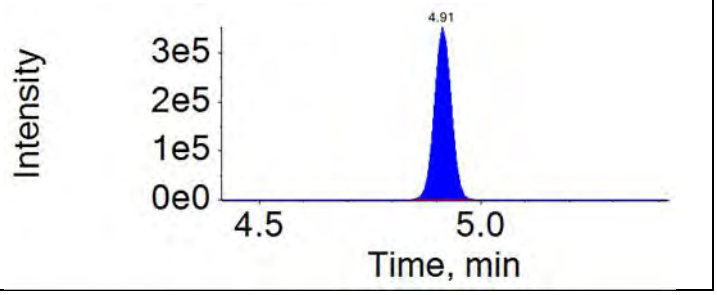
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



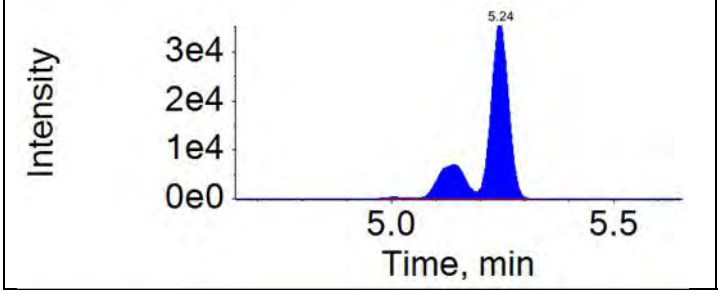


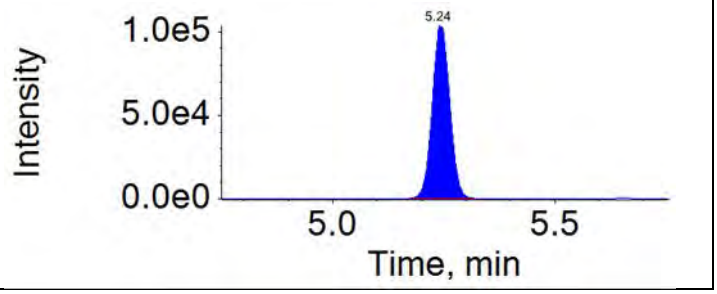
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



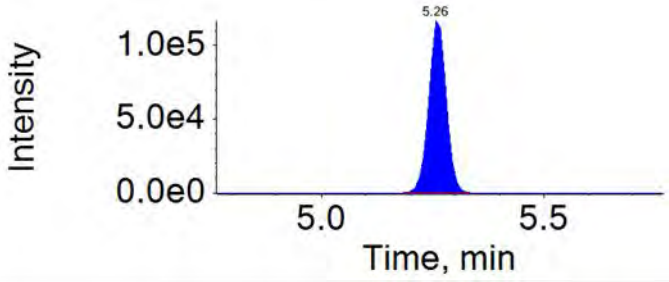


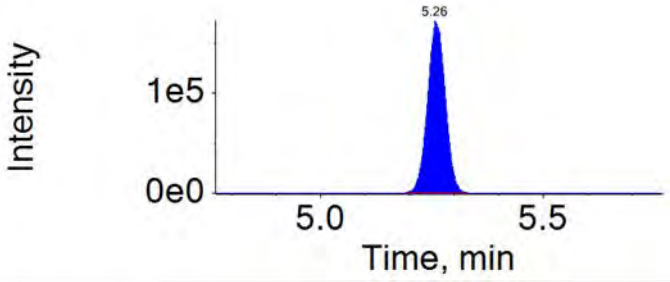
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

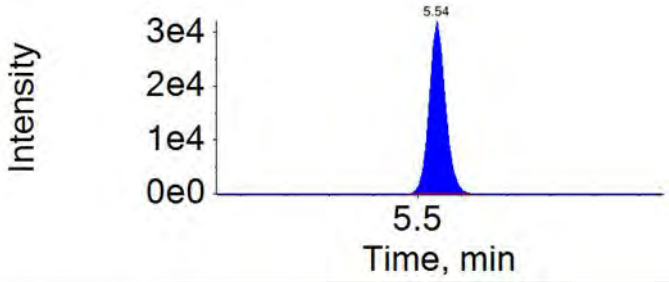
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

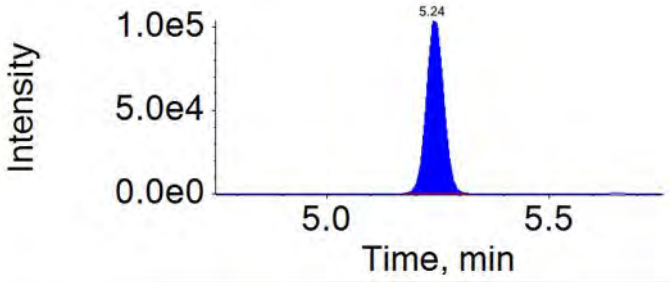
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



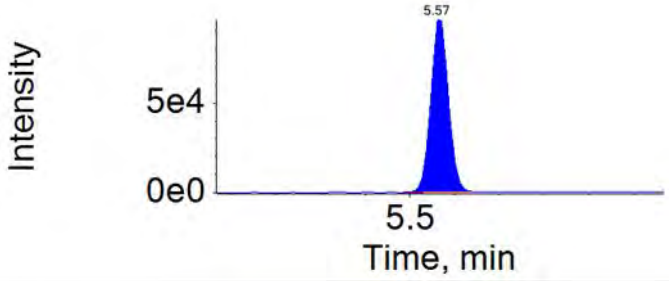


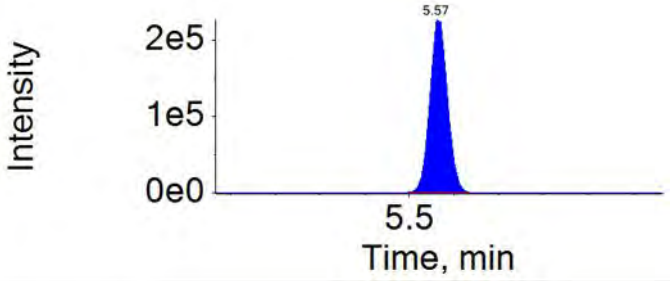
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



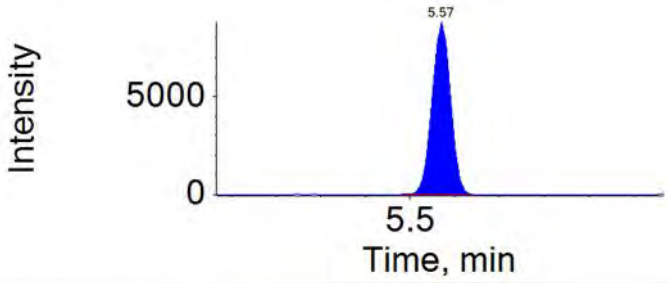


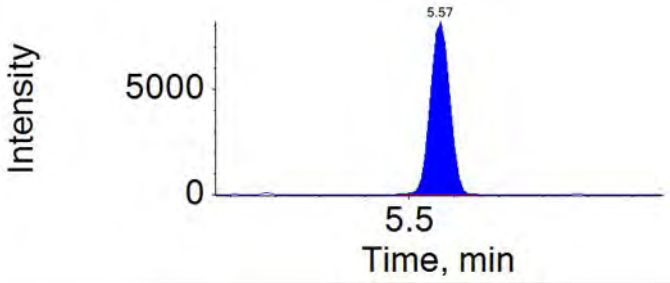
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



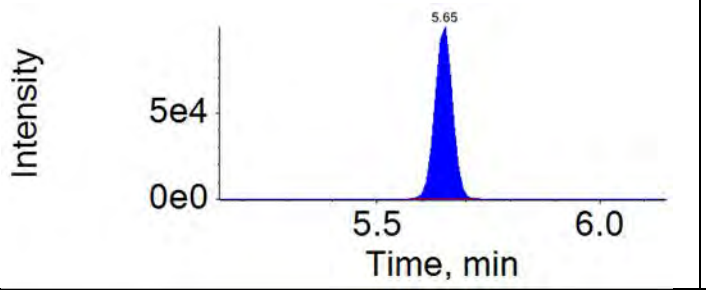


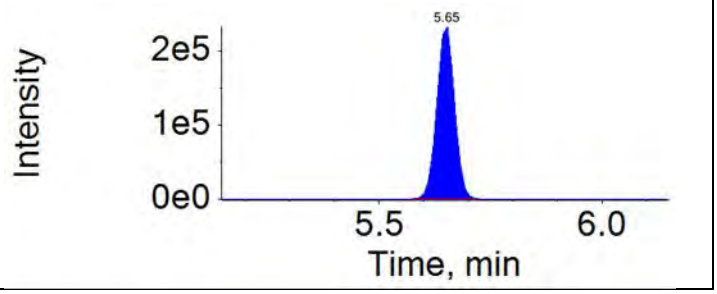
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

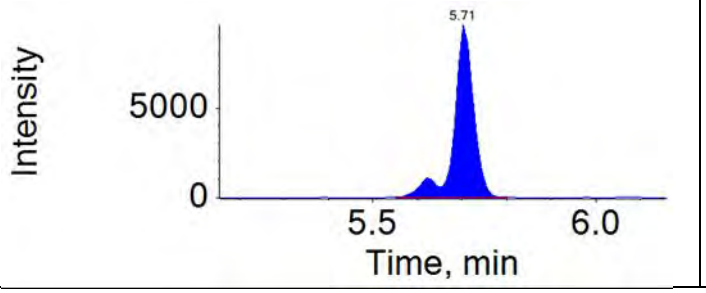
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

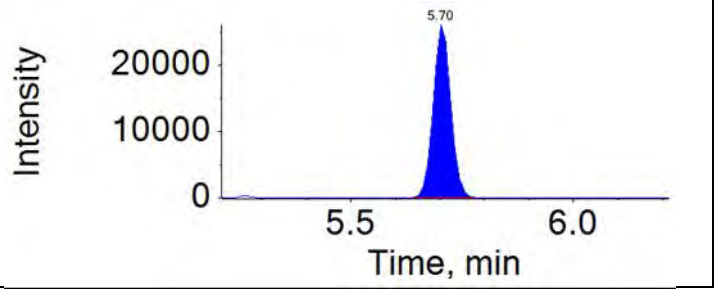
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



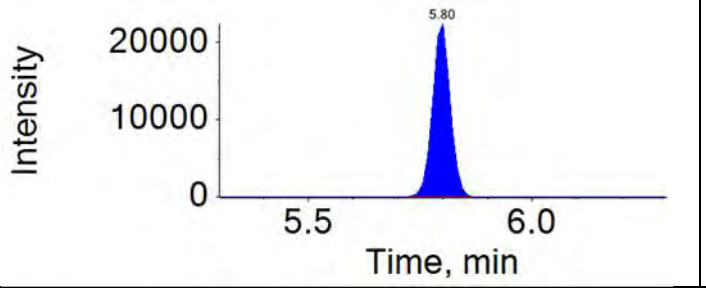


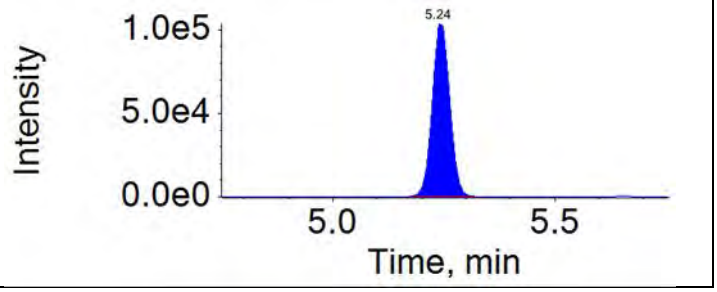
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



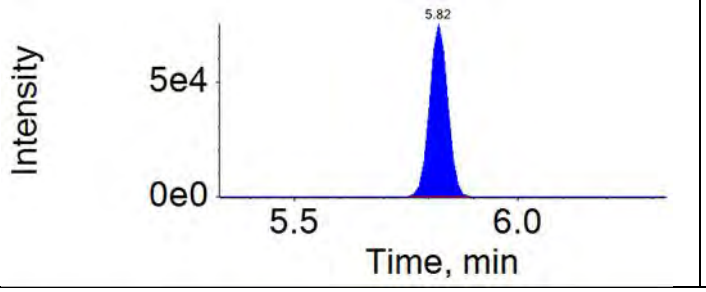


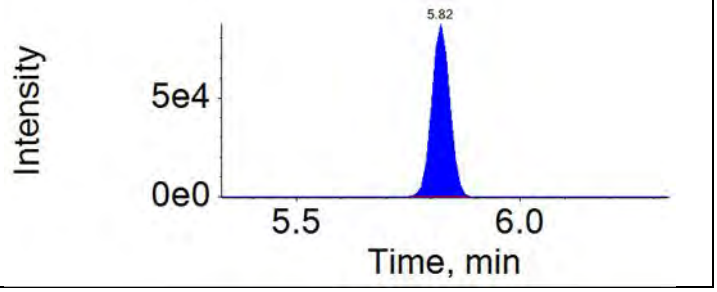
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



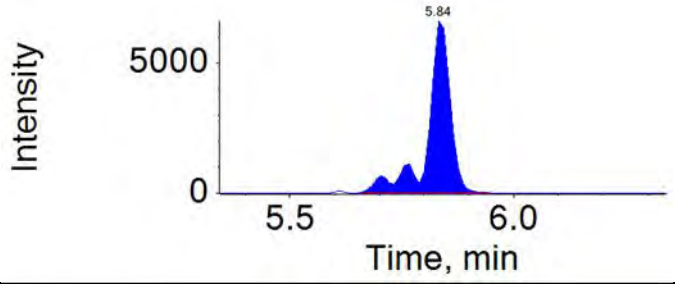


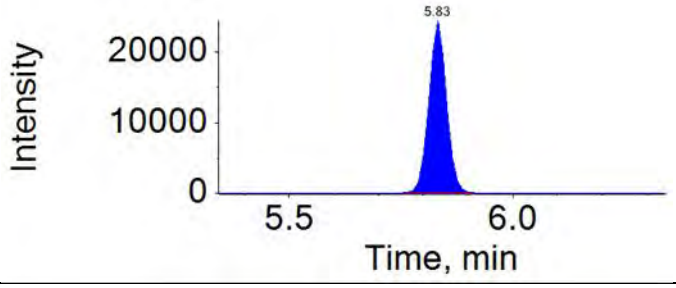
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

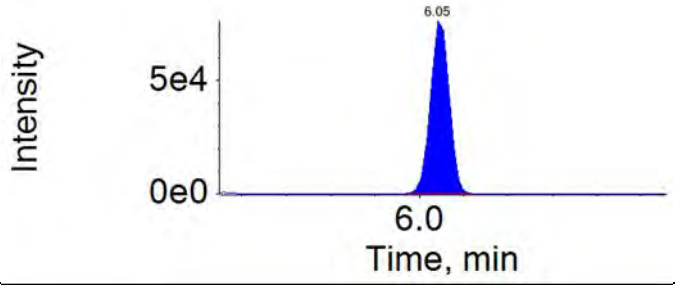
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

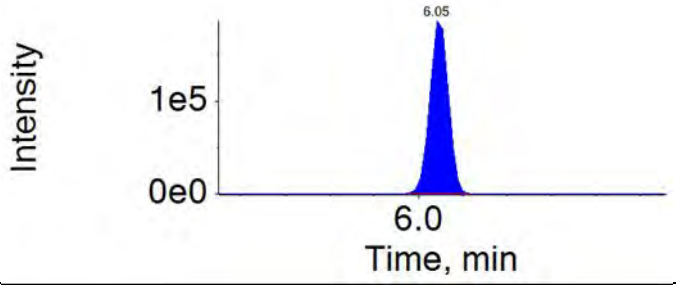
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



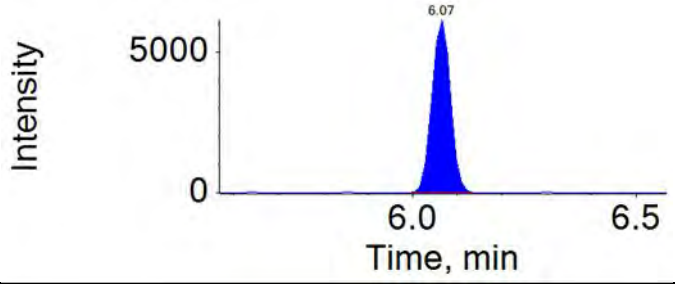


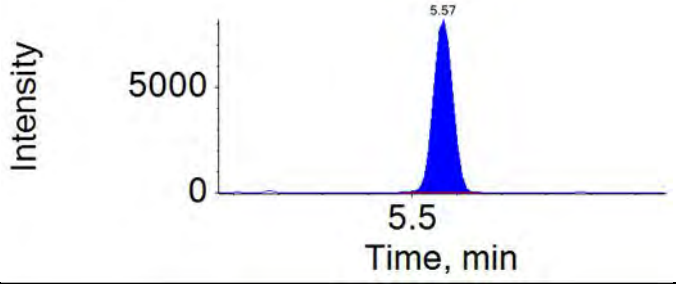
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



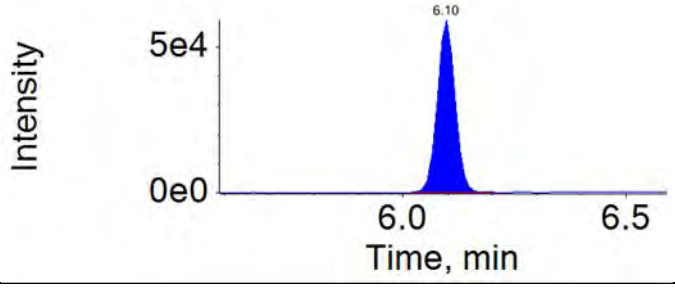


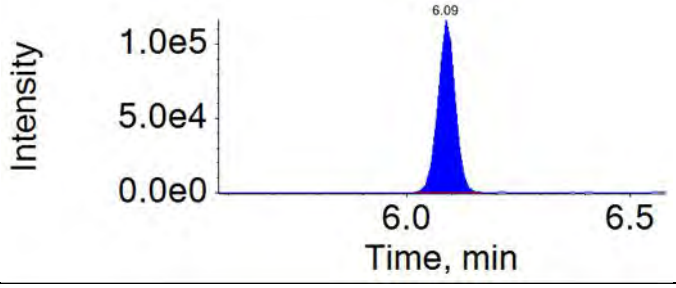
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



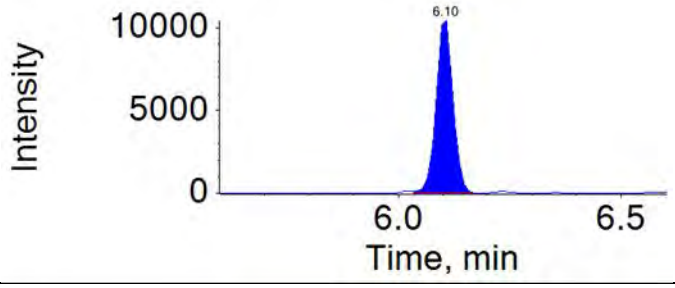


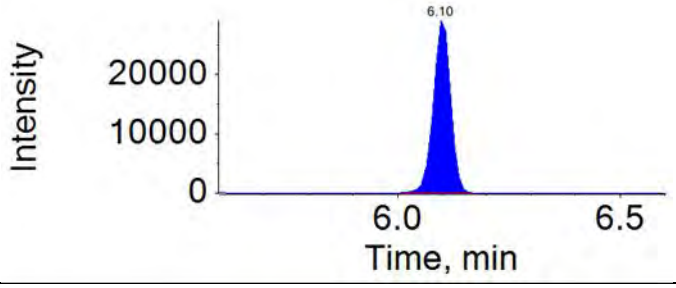
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

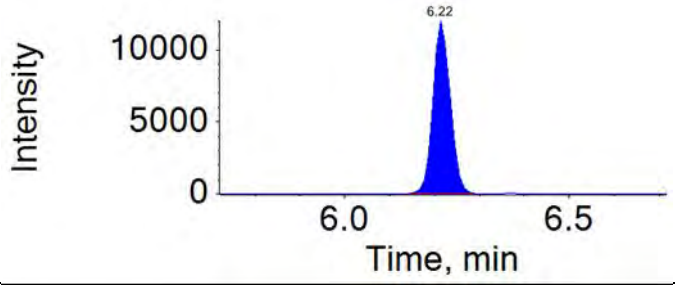
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

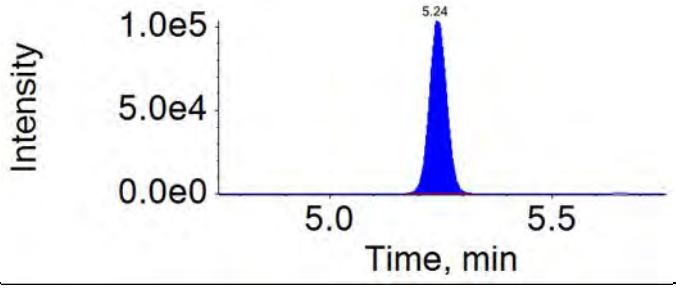
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



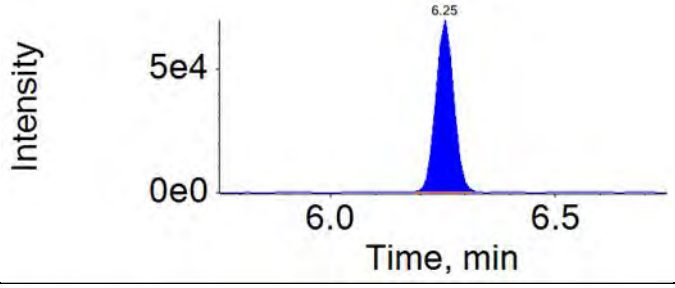


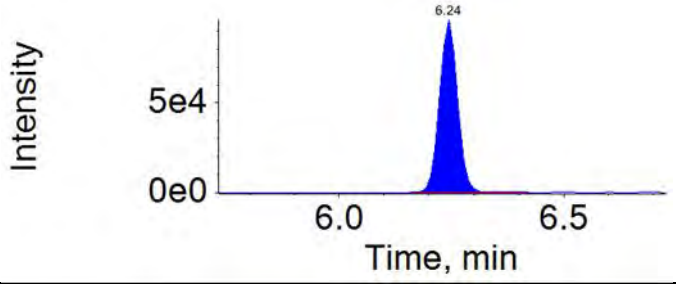
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



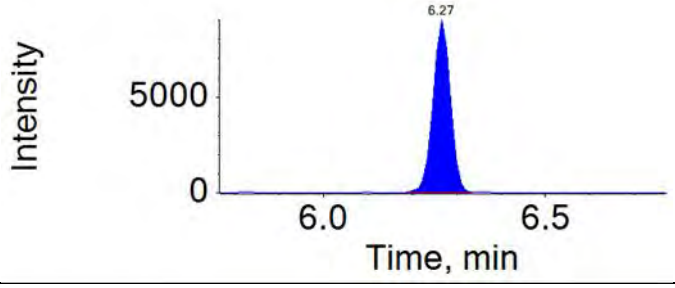


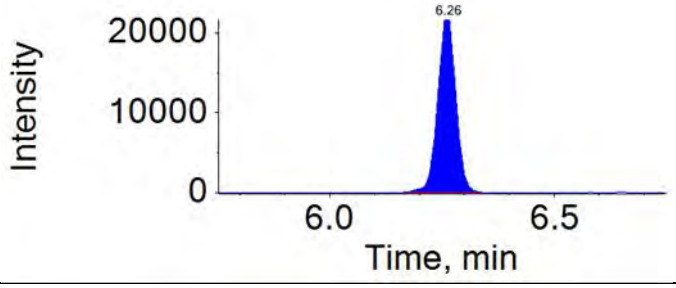
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



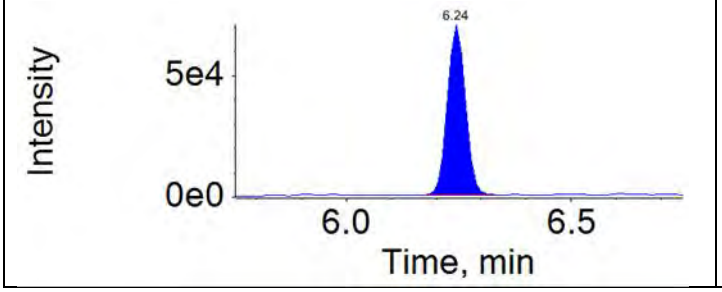


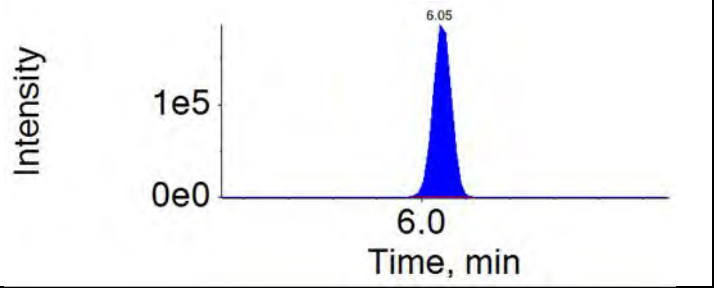
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

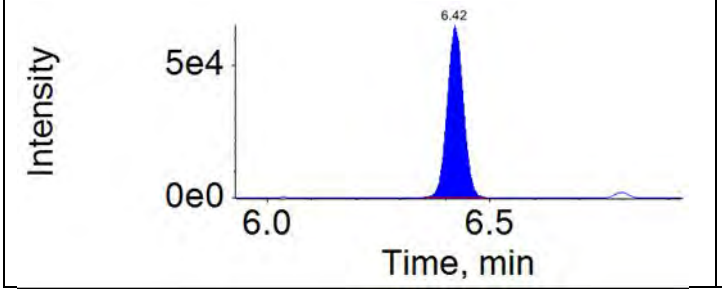
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

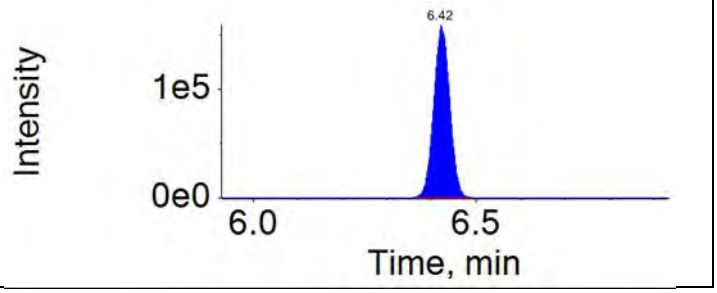
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



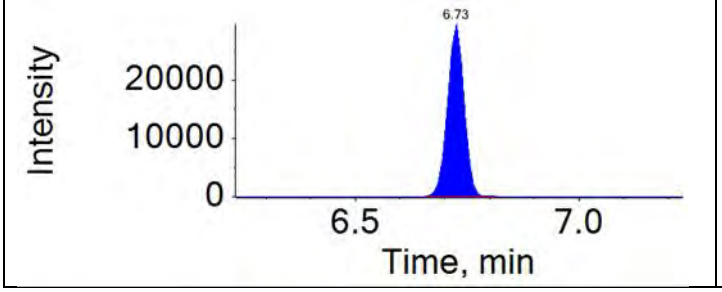


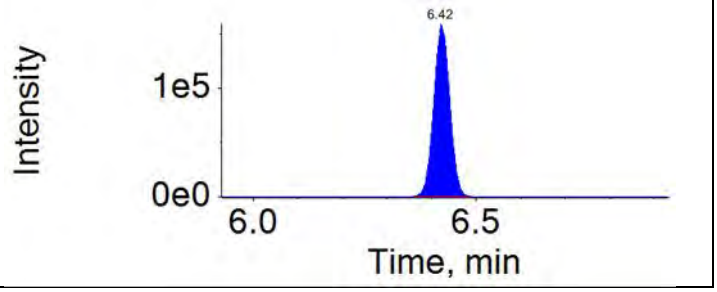
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



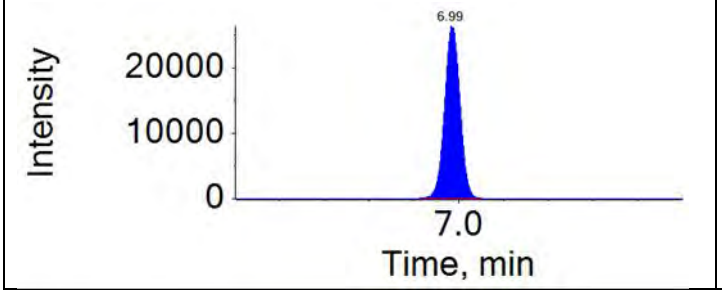


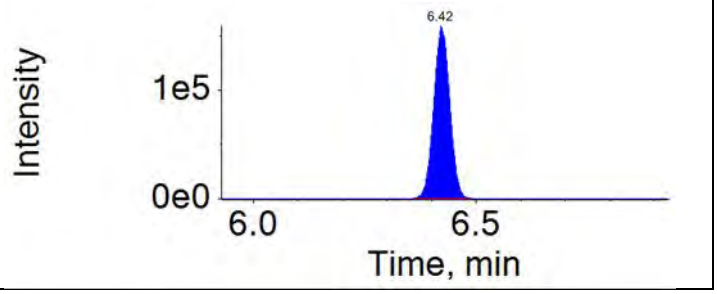
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

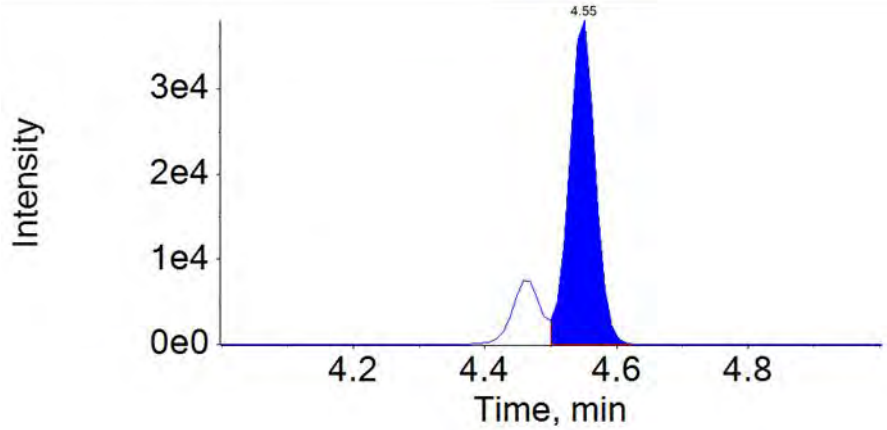


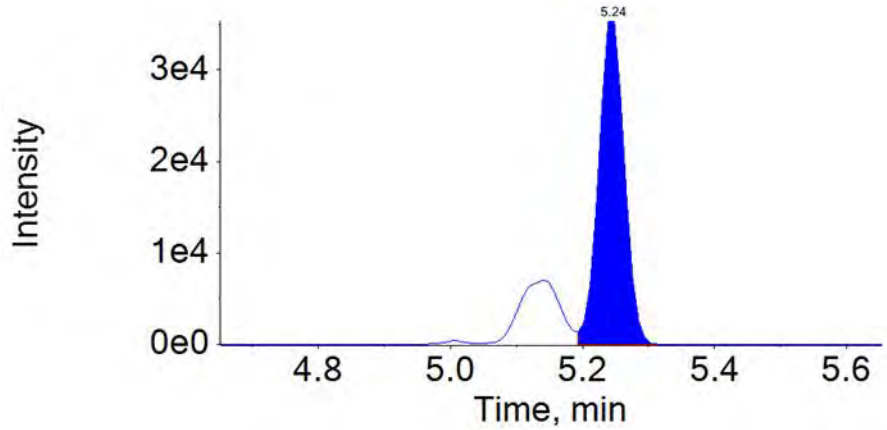


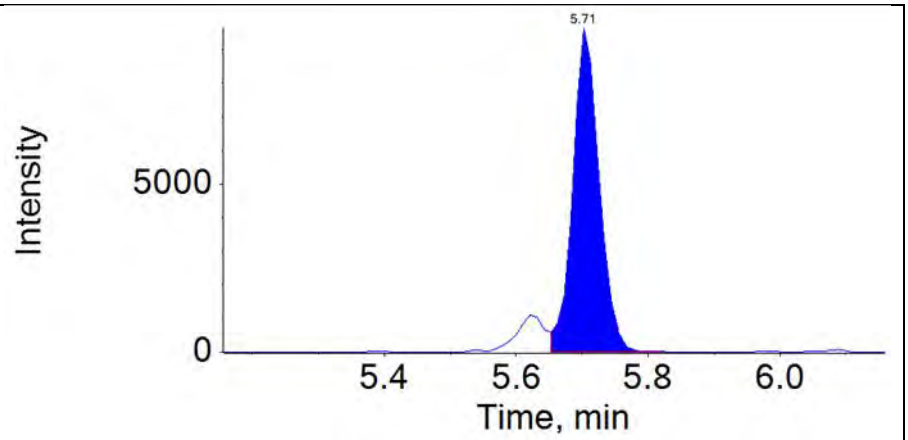
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 105284.3 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12D-47.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.24 **Peak Area:** 96903.6 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV12D-47.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

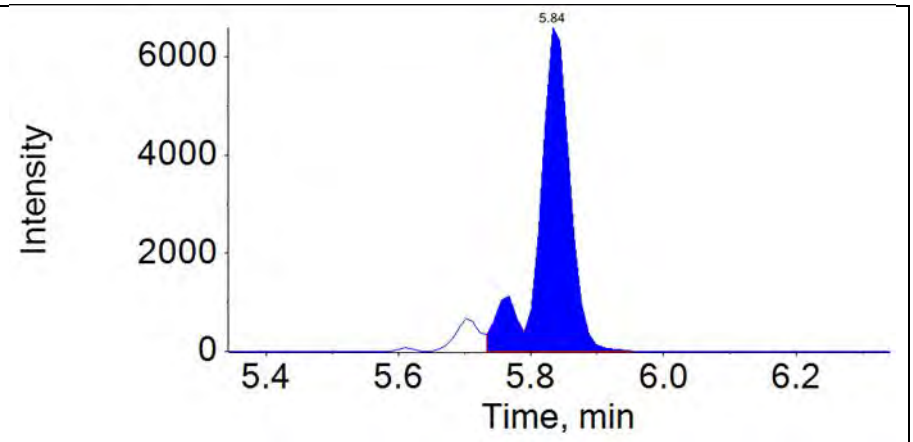
Component Name: NMeFOSAA **RT (min.):** 5.71 **Peak Area:** 26847.5 **Mass Range:** 570.0 / 419.0 **File Name:** 18NOV12D-47.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

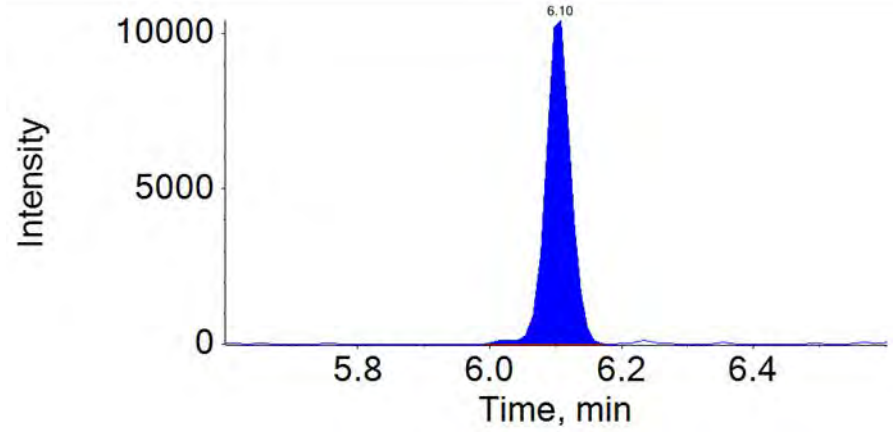
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
21704.5
Mass Range:
584.0 / 419.0
File Name:
18NOV12D-47.wiff
Sample Name:
CCV5_CAL3



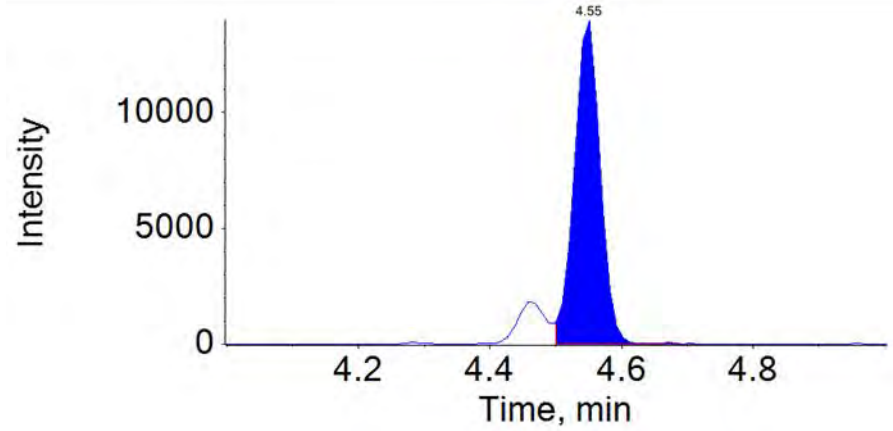
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
27745.0
Mass Range:
512.0 / 169.0
File Name:
18NOV12D-47.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
38497.5
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-47.wiff
Sample Name:
CCV5_CAL3

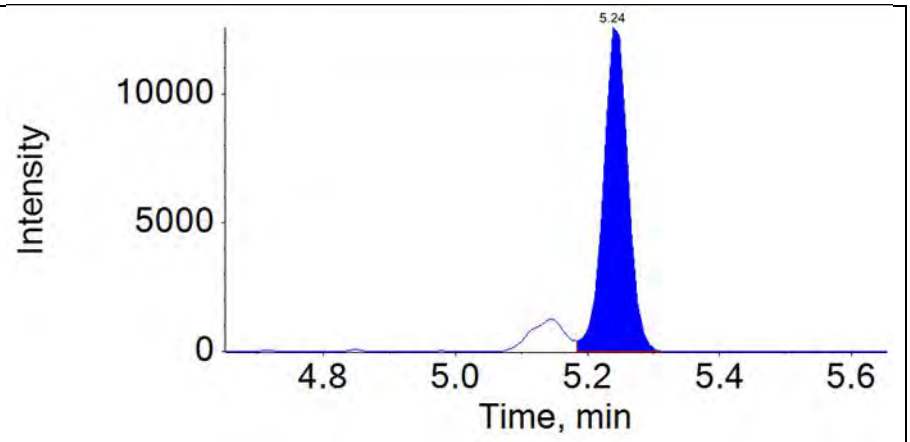


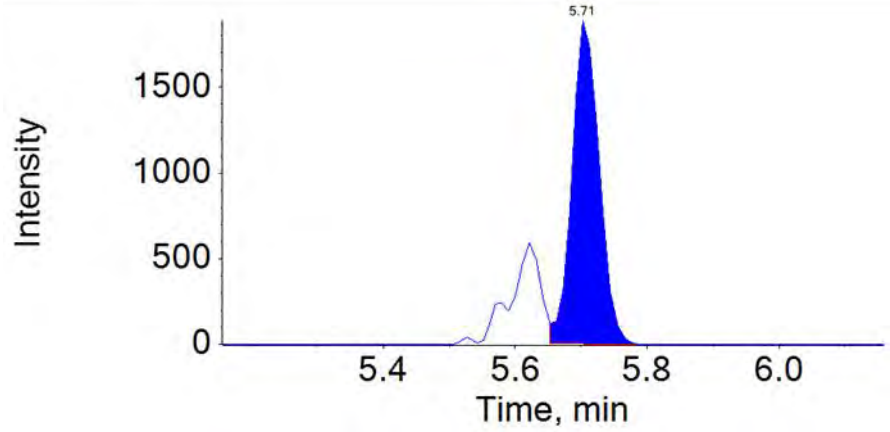
Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 32591.5 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12D-47.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 5403.8 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV12D-47.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Ion Ratio Report

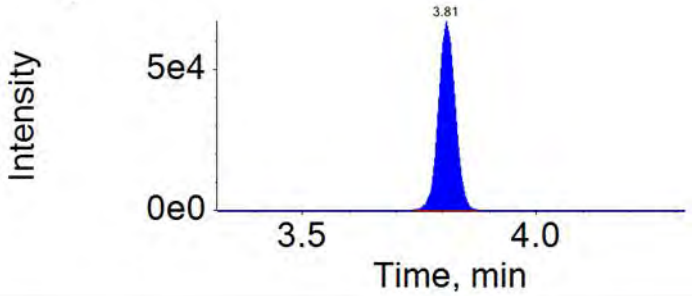
Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12D-47.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	165427.2	A	N/A	1.0000			
PFBS_2	3.81	1.00	61838.2	A	N/A	0.3738	3	50	
4:2-FTS	4.12	1.00	38851.7	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	24495.3	A	N/A	0.6305		#NA!	
PFHxA	4.16	1.00	365563.6	A	N/A	1.0000			
PFHxA_2	4.15	1.00	3762.3	A	N/A	0.0103	-12	50	
PFPeS	4.18	1.10	87775.5	A	N/A	1.0000			
PFPeS_2	4.18	1.10	47226.3	A	N/A	0.5380	4	50	
PFHpA	4.55	1.00	376810.4	A	N/A	1.0000			
PFHpA_2	4.55	1.00	21339.2	A	N/A	0.0566	1	50	
PFHxS	4.55	1.00	127858.7	M	N/A	1.0000			
PFHxS_2	4.55	1.00	43902.1	M	N/A	0.3434	0	50	
6:2-FTS	4.90	1.00	30668.9	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	20145.0	A	N/A	0.6569		#NA!	
PFHpS	4.91	1.08	119438.7	A	N/A	1.0000			
PFHpS_2	4.91	1.08	49399.8	A	N/A	0.4136	2	50	
PFOA	4.91	1.00	376978.4	A	N/A	1.0000			
PFOA_2	4.91	1.00	20499.8	A	N/A	0.0544	-4	50	
PFOS	5.24	1.00	128651.5	M	N/A	1.0000			
PFOS_2	5.24	1.00	37187.5	M	N/A	0.2891	-3	50	
PFNA	5.26	1.00	318183.9	A	N/A	1.0000			
PFNA_2	5.26	1.00	6246.3	A	N/A	0.0196	-13	50	
PFNS	5.54	1.06	80390.2	A	N/A	1.0000			
PFNS_2	5.54	1.06	38649.2	A	N/A	0.4808	1	50	
PFDA	5.57	1.00	265515.8	A	N/A	1.0000			
PFDA_2	5.57	1.00	1991.3	A	N/A	0.0075	-5	50	
8:2-FTS	5.57	1.00	25376.4	A	N/A	1.0000			
8:2 FTS_2	5.57	1.00	16804.9	A	N/A	0.6622		#NA!	
NMeFOSAA	5.71	1.00	30069.3	M	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	7266.1	M	N/A	0.2416	-7	50	
PFDS	5.80	1.11	61496.7	A	N/A	1.0000			
PFDS_2	5.80	1.11	28243.7	A	N/A	0.4593	-10	50	
PFUnDA	5.82	1.00	209468.8	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	653.6	A	N/A	0.0031	-44	50	
NEtFOSAA	5.84	1.00	23415.4	M	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	15937.5	A	N/A	0.6806	-5	50	
PFDoDA	6.05	1.00	225352.6	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	3462.1	A	N/A	0.0154	0	50	
10:2-FTS	6.07	1.09	17725.4	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	11952.8	A	N/A	0.6743		#NA!	
PFTrDA	6.24	1.03	193520.3	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	1313.4	A	N/A	0.0068	-21	50	
PFTeDA	6.42	1.00	162067.3	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	1144.7	A	N/A	0.0071	14	50	
PFHxDA	6.73	1.05	75958.0	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	4336.8	A	N/A	0.0571	-16	50	
PFODA	6.99	1.09	63018.4	A	N/A	1.0000			
PFODA_2	6.98	1.09	1639.9	A	N/A	0.0260	-6	50	

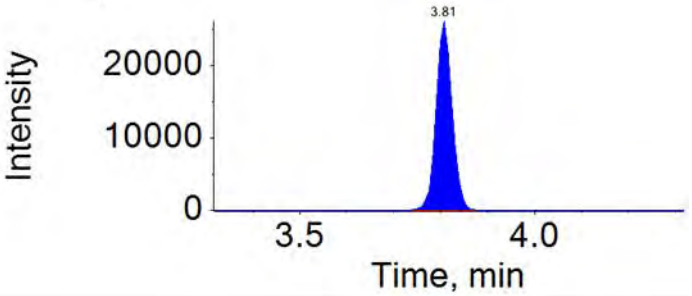
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

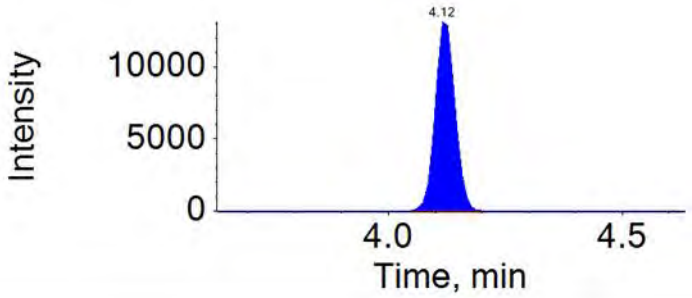
Component: PFBS
Primary Mass: 299.0 / 80.0



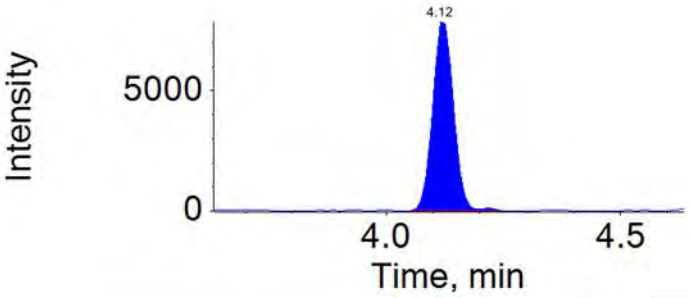
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



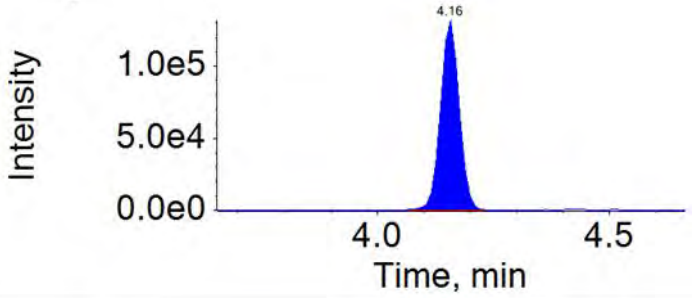
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



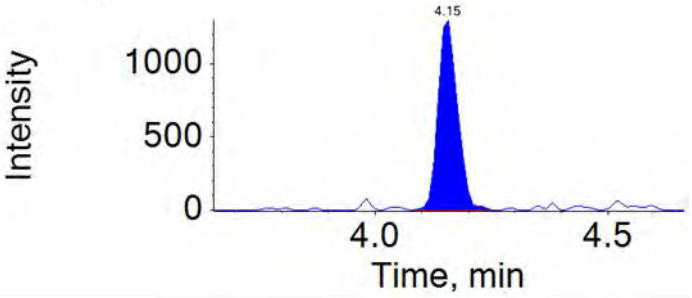
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



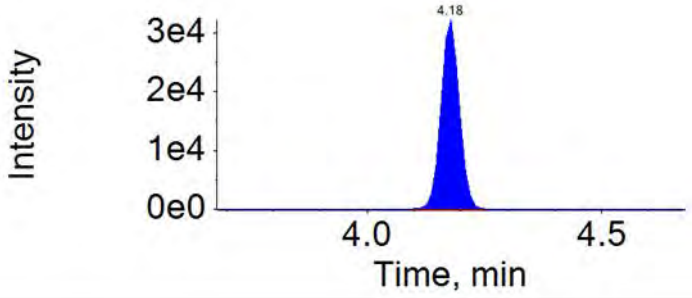
Component: PFHxA
Primary Mass: 313.0 / 269.0



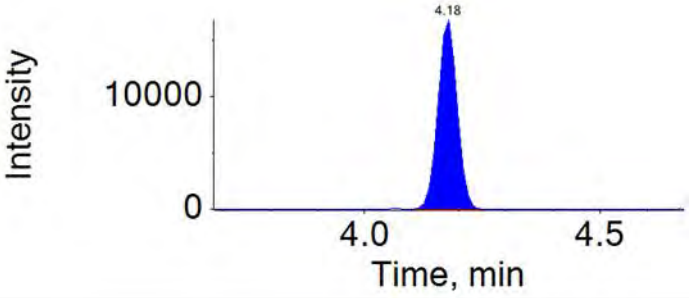
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



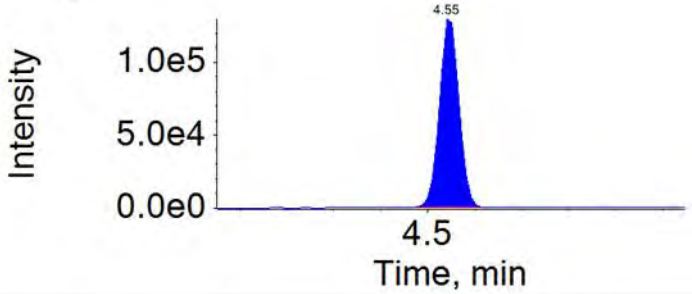
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



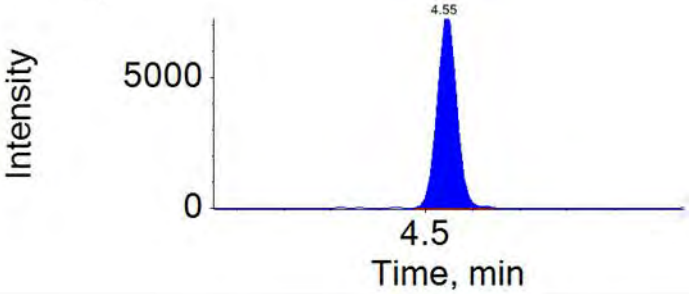
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

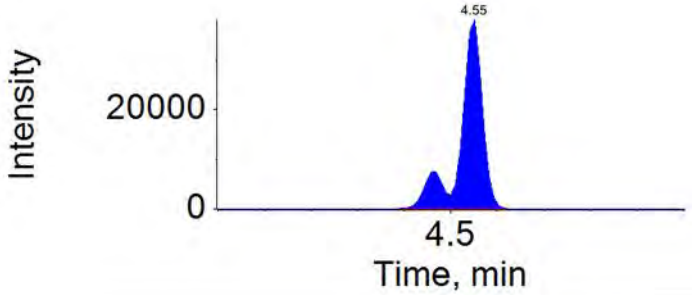
Component: PFHpA
Primary Mass: 363.0 / 319.0



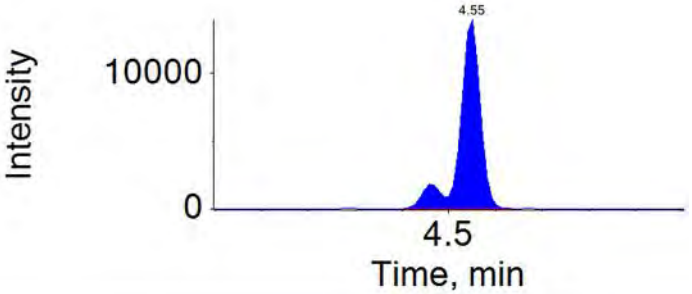
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



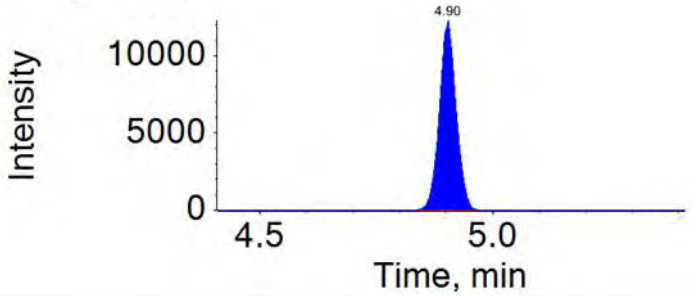
Component: PFHxS
Primary Mass: 399.0 / 80.0



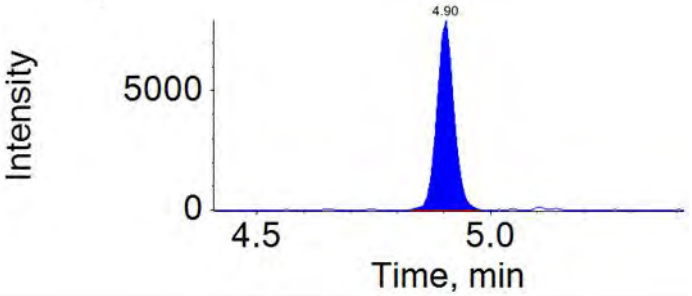
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



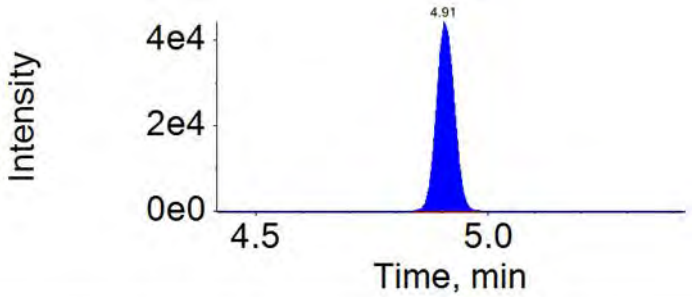
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



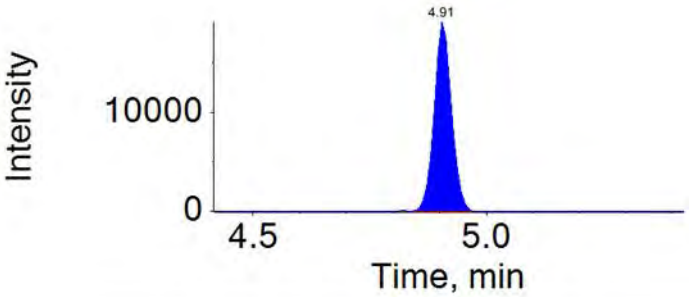
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



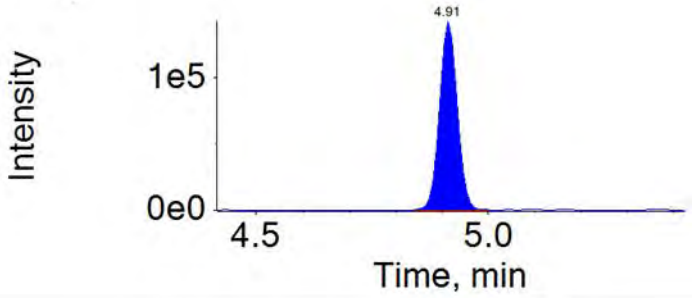
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



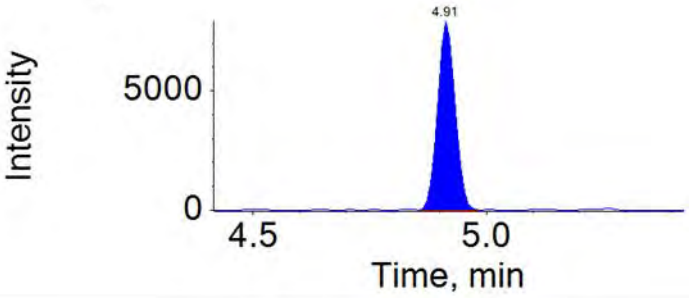
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

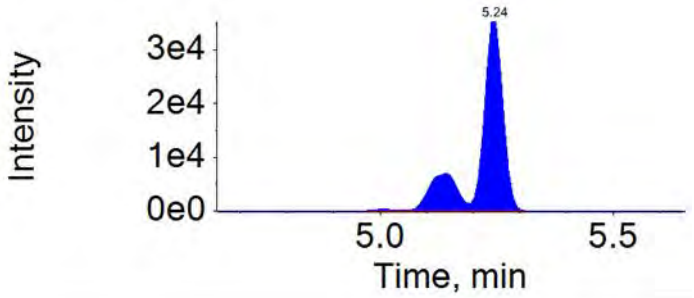
Component: PFOA
Primary Mass: 413.0 / 369.0



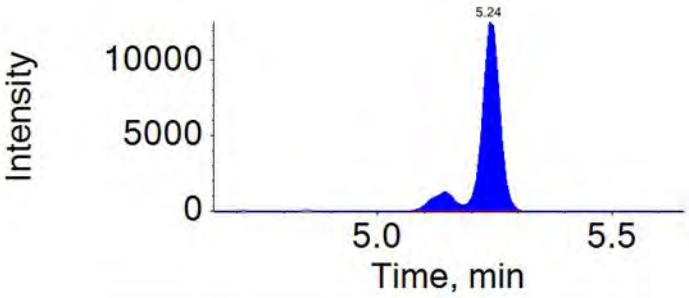
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



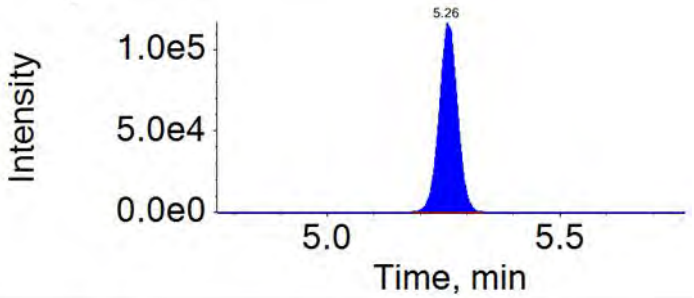
Component: PFOS
Primary Mass: 499.0 / 80.0



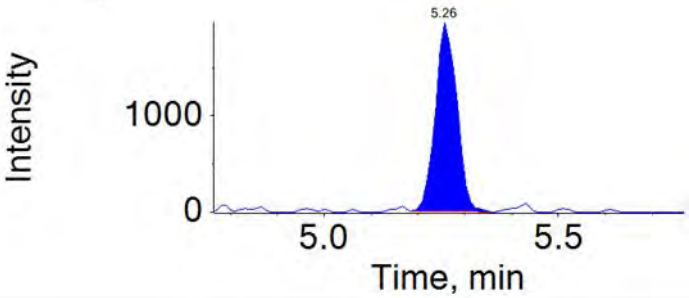
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



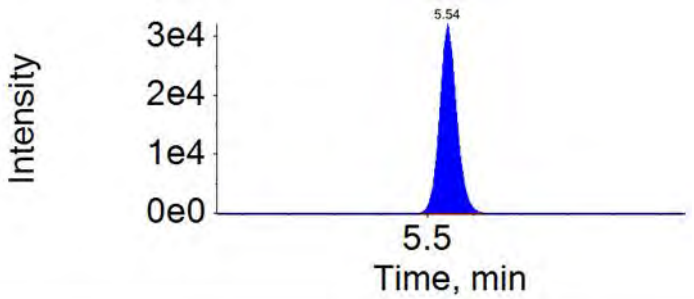
Component: PFNA
Primary Mass: 463.0 / 419.0



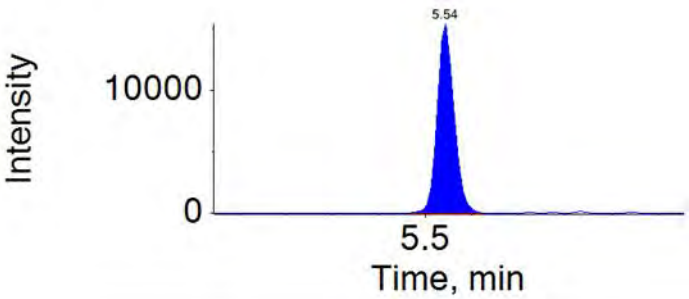
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



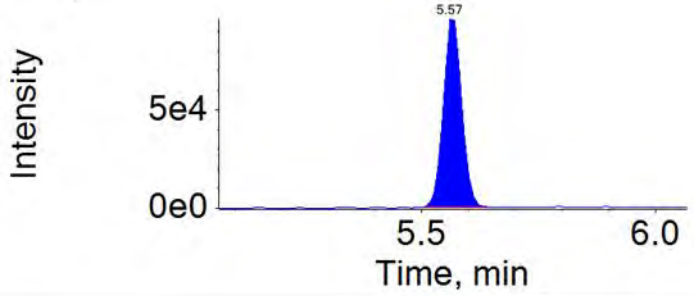
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



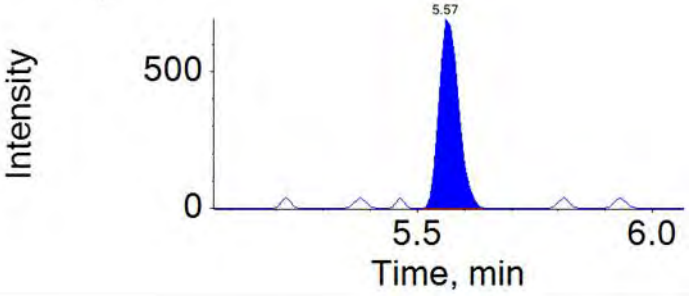
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

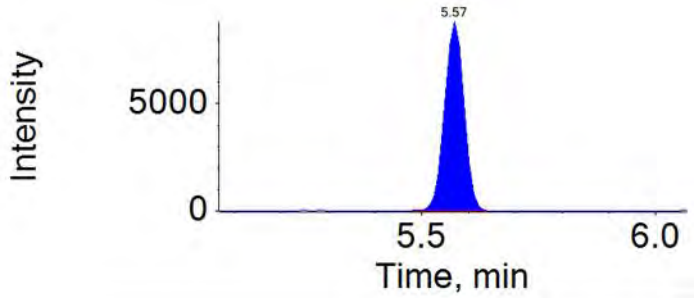
Component: PFDA
Primary Mass: 513.0 / 469.0



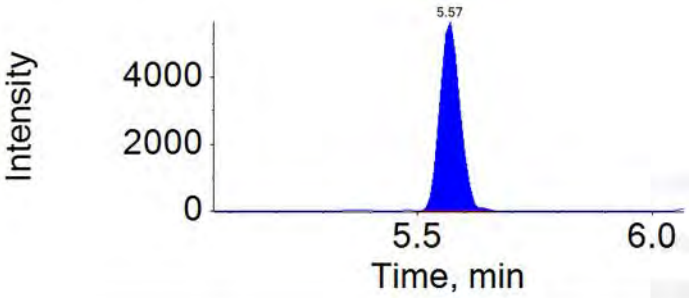
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



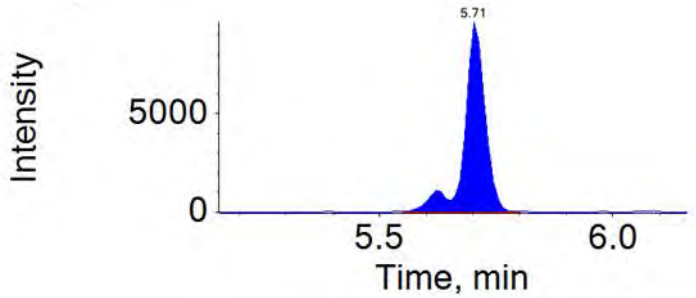
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



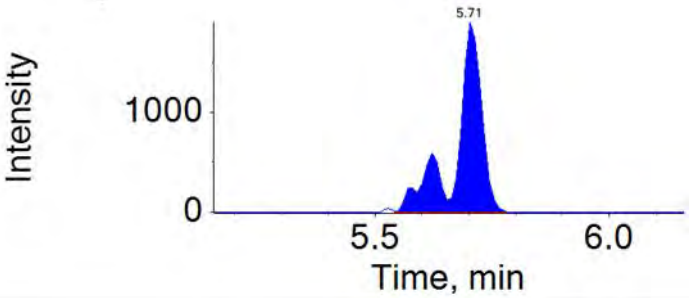
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



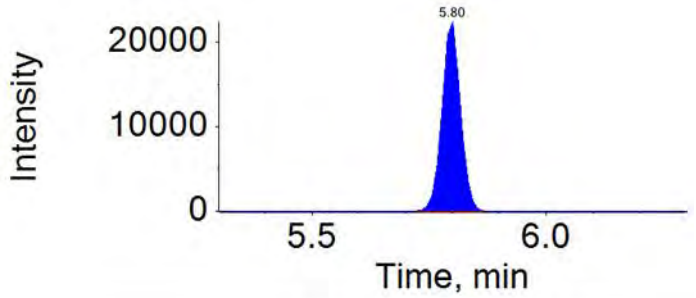
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



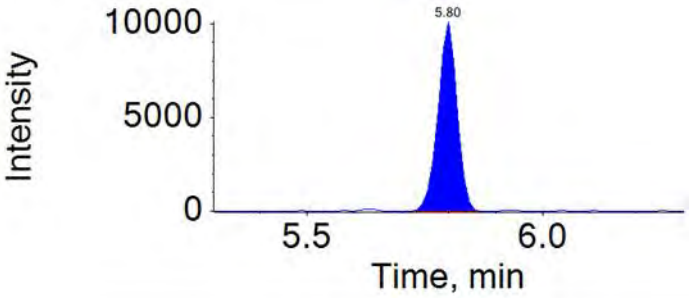
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



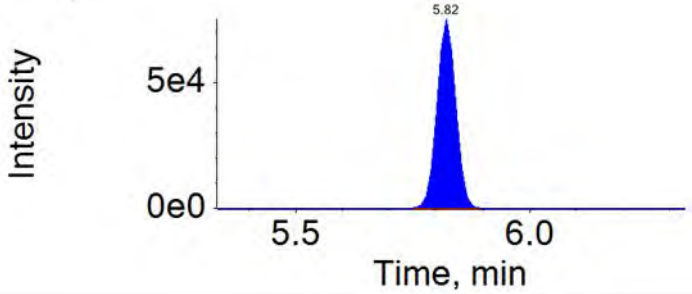
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



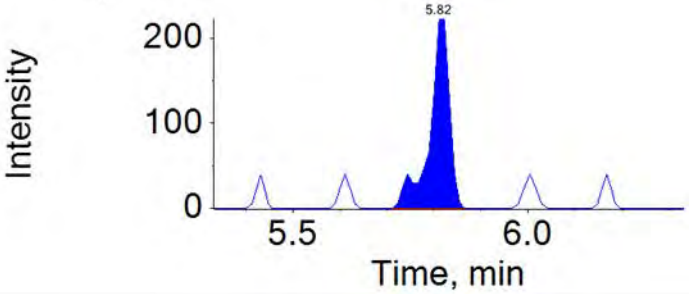
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

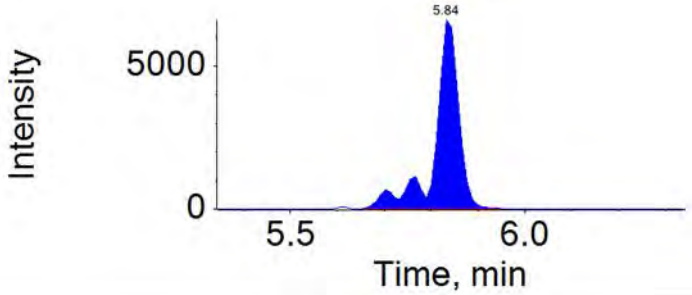
Component: PFUnDA
Primary Mass: 563.0 / 519.0



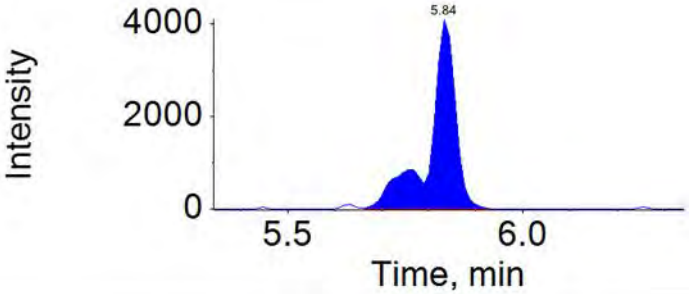
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



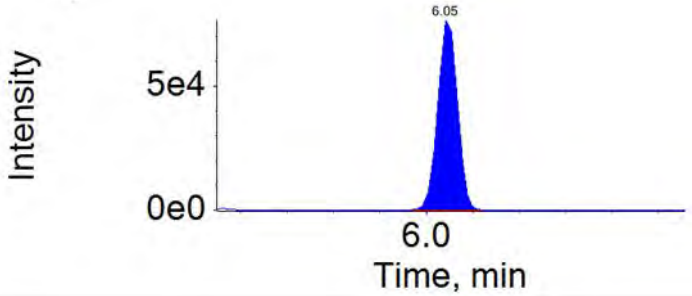
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



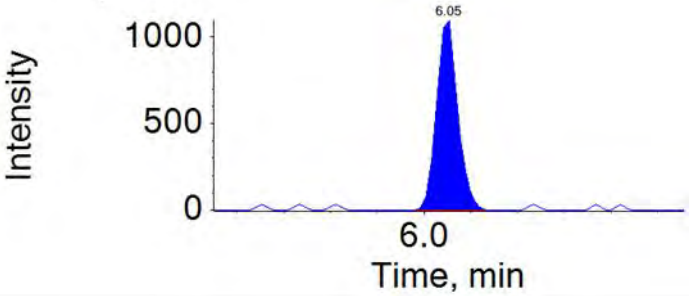
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



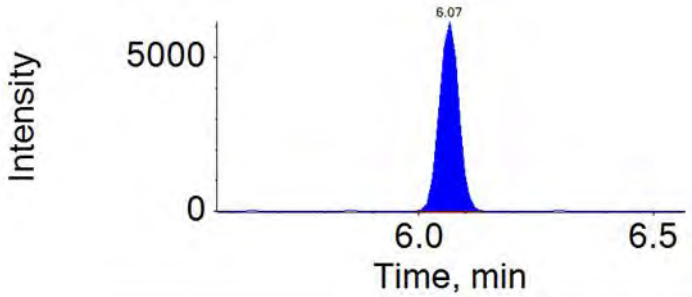
Component: PFDoDA
Primary Mass: 613.0 / 569.0



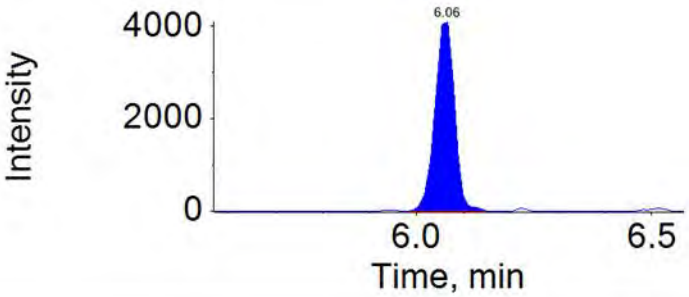
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



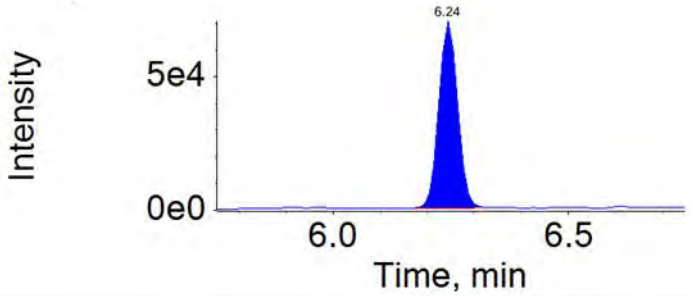
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



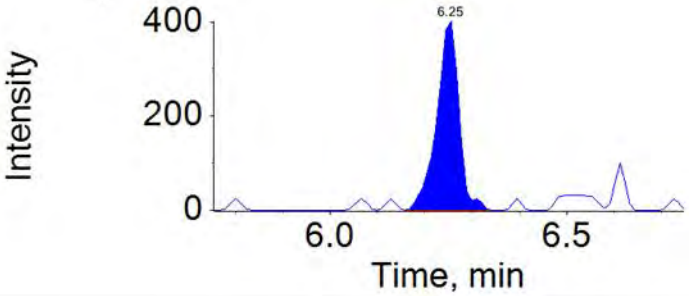
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



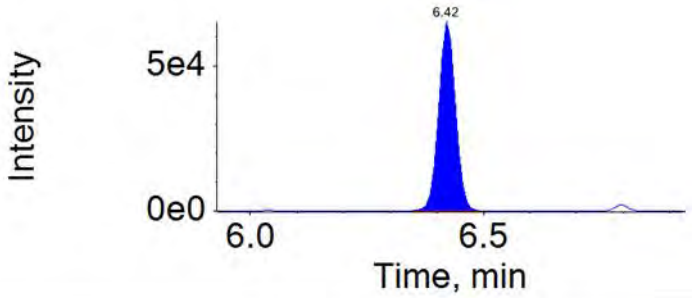
Component: PFTrDA
Primary Mass: 663.0 / 619.0



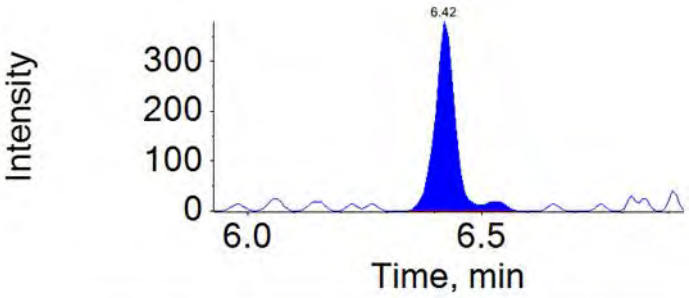
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



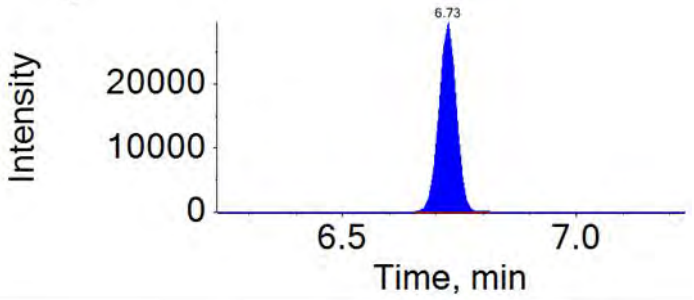
Component: PFTeDA
Primary Mass: 713.0 / 669.0



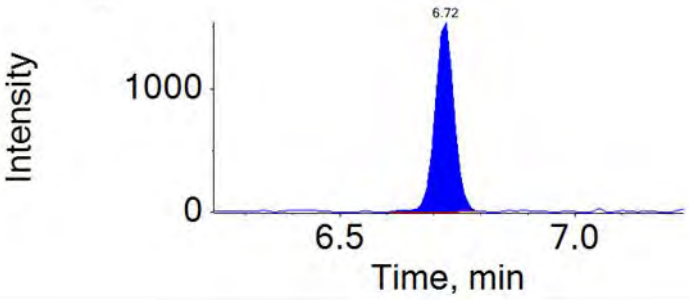
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



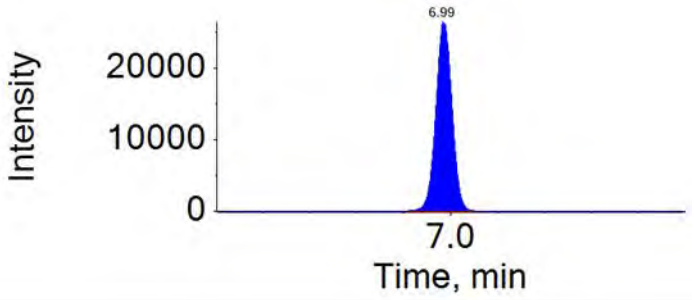
Component: PFHxDA
Primary Mass: 813.0 / 769.0



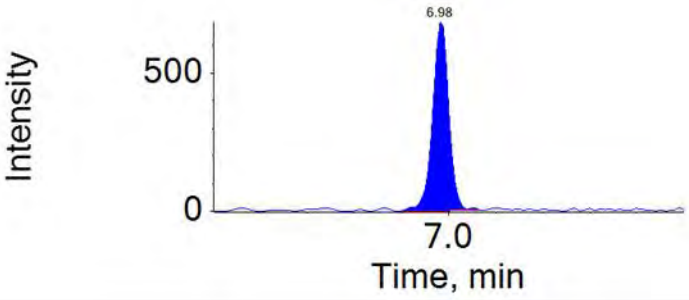
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



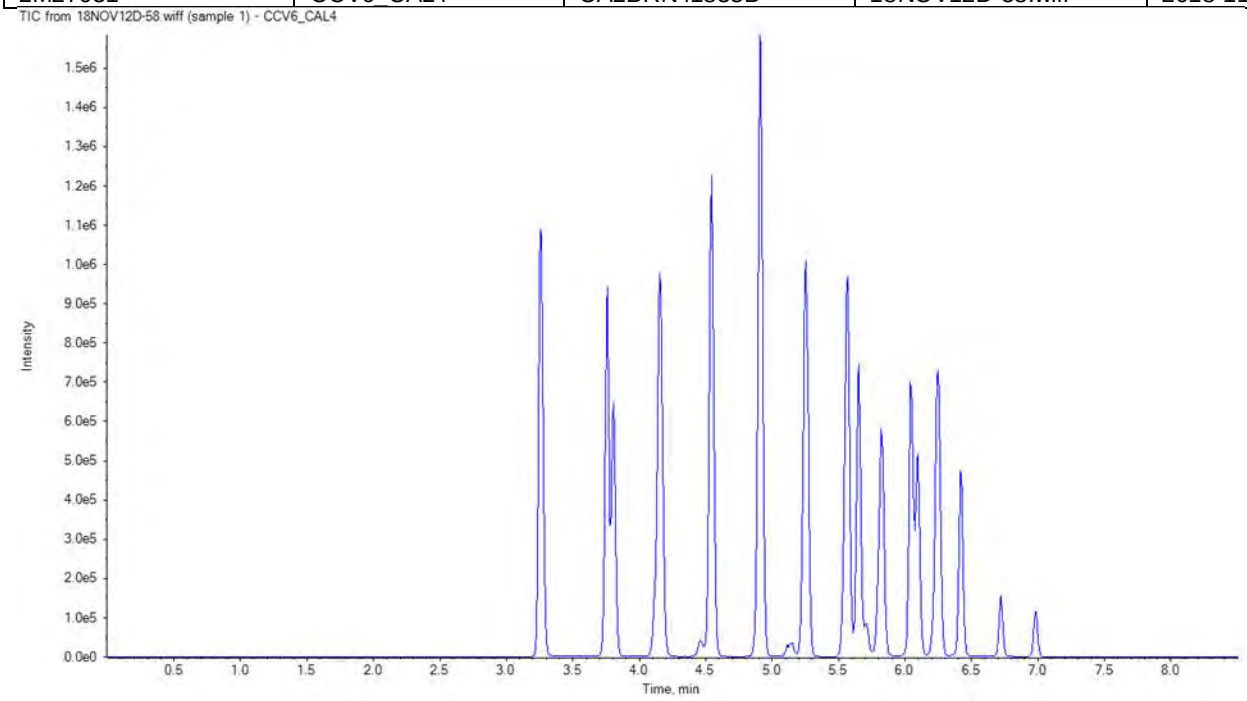
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By HMK at 2:17 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV12D-58.wiff	2018-11-13T01:20:06



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	694943.9	659926.2	5	50	
13C2-PFOA	5.0	519786.2	450219.7	15	50	
13C4-PFOS	4.8	270198.2	249205.8	8	50	
13C2-PFDA	5.0	316423.1	278743.9	14	50	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV12D-58.wiff	2018-11-13T01:20:06

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1105568.8	10	13C4-PFBA	760029.1	5.0	1.455	3.26	1.000	8.000	8.058	1	30	
PFPeA	1127259.1	11	13C5-PFPeA	759638.3	5.0	1.484	3.76	1.000	8.000	8.590	7	30	
PFBS	650121.6	10	13C3-PFBS	446027.4	4.7	1.458	3.81	1.000	7.080	6.933	-2	30	
4:2-FTS	150233.4	11	13C2-4:2-FTS	54881.6	4.7	2.737	4.12	1.000	7.470	7.432	-1	30	
PFHxA	1348987.8	12	13C5-PFHxA	695243.0	5.0	1.940	4.15	1.000	8.000	8.101	1	30	
PFPeS	319026.2	11	13C3-PFBS	446027.4	4.7	0.715	4.17	1.100	7.500	6.944	-7	30	
PFHpA	1384443.9	12	13C4-PFHpA	541625.6	5.0	2.556	4.54	1.000	8.000	8.473	6	30	
PFHxS	517754.3	19	13C3-PFHxS	339752.8	4.7	1.524	4.55	1.000	7.300	7.389	1	30	
6:2-FTS	113664.7	11	13C2-6:2-FTS	33652.2	4.8	3.378	4.90	1.000	7.580	8.173	8	30	
PFHpS	467674.4	11	13C3-PFHxS	339752.8	4.7	1.377	4.91	1.080	7.610	7.246	-5	30	
PFOA	1421585.9	11	13C8-PFOA	883150.2	5.0	1.610	4.91	1.000	8.000	8.597	7	30	
PFOS	478066.3	22	13C8-PFOS	282689.5	4.8	1.691	5.24	1.000	7.400	7.395	0	30	
PFNA	1179828.0	12	13C9-PFNA	501340.6	5.0	2.353	5.26	1.000	8.000	8.486	6	30	
PFNS	300128.1	11	13C8-PFOS	282689.5	4.8	1.062	5.54	1.060	7.680	7.428	-3	30	
PFDA	961061.7	11	13C6-PFDA	647591.8	5.0	1.484	5.57	1.000	8.000	7.868	-2	30	
8:2-FTS	96931.6	11	13C2-8:2-FTS	25579.6	4.8	3.789	5.57	1.000	7.660	8.835	15	30	
PFOSA	1008057.1	11	13C8-PFOSA	641137.8	5.0	1.572	5.65	1.000	8.000	7.680	-4	30	
NMeFOSAA	108210.9	19	d3-NMeFOSAA	73403.0	5.0	1.474	5.71	1.000	8.000	8.332	4	30	
PFDS	229123.3	11	13C8-PFOS	282689.5	4.8	0.811	5.80	1.110	7.700	7.344	-5	30	
PFUnDA	804226.7	11	13C7-PFUnDA	266920.0	5.0	3.013	5.82	1.000	8.000	7.877	-2	30	
NEtFOSAA	95358.9	21	d5-NEtFOSAA	69388.5	5.0	1.374	5.84	1.000	8.000	7.204	-10	30	
PFDoDA	903550.9	12	13C2-PFDoDA	564228.7	5.0	1.601	6.04	1.000	8.000	8.155	2	30	
10:2-FTS	67615.6	11	13C2-8:2-FTS	25579.6	4.8	2.643	6.06	1.090	7.710	8.805	14	30	
NMePFOSAE	663106.2	11	d7-NMePFOSAE	318171.3	5.0	2.084	6.10	1.000	8.000	8.674	8	30	
NMePFOSA	117948.1	11	d3-NMePFOSA	75466.9	5.0	1.563	6.10	1.000	8.000	7.710	-4	30	
PFDoS	118024.9	11	13C8-PFOS	282689.5	4.8	0.418	6.21	1.190	7.740	7.312	-6	30	
NEtPFOSAE	685532.3	11	d9-NEtPFOSAE	281982.8	5.0	2.431	6.25	1.000	8.000	7.800	-3	30	
NEtPFOSA	103077.1	11	d5-NEtPFOSA	56290.4	5.0	1.831	6.27	1.000	8.000	8.410	5	30	
PFTrDA	775027.4	11	13C2-PFDoDA	564228.7	5.0	1.374	6.24	1.030	8.000	8.670	8	30	
PFTeDA	594227.5	11	13C2-PFTeDA	403537.1	5.0	1.473	6.42	1.000	8.000	8.255	3	30	
PFHxDA	290625.8	11	13C2-PFTeDA	403537.1	5.0	0.720	6.72	1.050	8.000	8.580	7	30	
PFODA	248289.9	10	13C2-PFTeDA	403537.1	5.0	0.615	6.98	1.090	8.000	8.569	7	30	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV6_CAL4			**Data File:**		18NOV12D-58.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-13T01:20:06
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCCV3-11
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	694943.9	659926.2	5	50	
13C2-PFOA	5.0	519786.2	450219.7	15	50	
13C4-PFOS	4.8	270198.2	249205.8	8	50	
13C2-PFDA	5.0	316423.1	278743.9	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	760029.1	13C3-PFBA	694943.9	1.094	5.000	4.903	98	70-130	
E13C5-PFPeA	759638.3	13C3-PFBA	694943.9	1.093	5.000	4.903	98	70-130	
E13C3-PFBS	446027.4	13C3-PFBA	694943.9	0.642	4.650	4.531	97	70-130	
E13C2-4:2-FTS	54881.6	13C2-PFOA	519786.2	0.106	4.670	4.703	101	70-130	
E13C5-PFHxA	695243.0	13C2-PFOA	519786.2	1.338	5.000	4.832	97	70-130	
E13C3-PFHxS	339752.8	13C2-PFOA	519786.2	0.654	4.730	4.485	95	70-130	
E13C4-PFHpA	541625.6	13C2-PFOA	519786.2	1.042	5.000	4.694	94	70-130	
E13C2-6:2-FTS	33652.2	13C2-PFOA	519786.2	0.065	4.750	4.332	91	70-130	
E13C8-PFOA	883150.2	13C2-PFOA	519786.2	1.699	5.000	4.681	94	70-130	
E13C8-PFOS	282689.5	13C4-PFOS	270198.2	1.046	4.780	4.636	97	70-130	
E13C9-PFNA	501340.6	13C4-PFOS	270198.2	1.855	5.000	5.173	103	70-130	
E13C6-PFDA	647591.8	13C2-PFDA	316423.1	2.047	5.000	4.776	96	70-130	
E13C2-8:2-FTS	25579.6	13C2-PFDA	316423.1	0.081	4.790	4.032	84	70-130	
E13C8-PFOSA	641137.8	13C2-PFDA	316423.1	2.026	5.000	4.492	90	70-130	
Ed3-NMeFOSAA	73403.0	13C2-PFDA	316423.1	0.232	5.000	4.187	84	70-130	
E13C7-PFUnDA	266920.0	13C2-PFDA	316423.1	0.844	5.000	4.898	98	70-130	
Ed5-NEtFOSAA	69388.5	13C2-PFDA	316423.1	0.219	5.000	4.639	93	70-130	
E13C2-PFDoDA	564228.7	13C2-PFDA	316423.1	1.783	5.000	4.630	93	70-130	
Ed7-NMePFOSAE	318171.3	13C2-PFDA	316423.1	1.006	5.000	4.351	87	70-130	
Ed3-NMePFOSA	75466.9	13C2-PFDA	316423.1	0.239	5.000	4.333	87	70-130	
Ed9-NEtPFOSAE	281982.8	13C2-PFDA	316423.1	0.891	5.000	4.635	93	70-130	
Ed5-NEtPFOSA	56290.4	13C2-PFDA	316423.1	0.178	5.000	4.173	83	70-130	
E13C2-PFTeDA	403537.1	13C2-PFDA	316423.1	1.275	5.000	4.477	90	70-130	

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

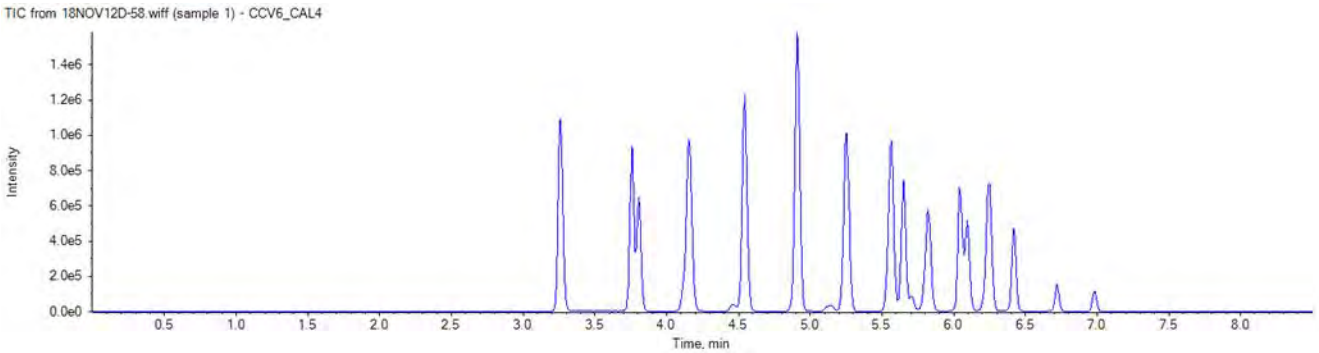
Analyte Quantitation Peak Table

Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12D-58.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1105568.8		A	13C4-PFBA	3.26	760029.1	1.455	8.058
PFPeA	3.76	1.000	1127259.1		A	13C5-PFPeA	3.76	759638.3	1.484	8.590
PFBS	3.81	1.000	650121.6		A	13C3-PFBS	3.81	446027.4	1.458	6.933
4:2-FTS	4.12	1.000	150233.4		A	13C2-4:2-FTS	4.12	54881.6	2.737	7.432
PFHxA	4.15	1.000	1348987.8		A	13C5-PFHxA	4.15	695243.0	1.940	8.101
PFPeS	4.17	1.100	319026.2		A	13C3-PFBS	3.81	446027.4	0.715	6.944
PFHpA	4.54	1.000	1384443.9		A	13C4-PFHpA	4.54	541625.6	2.556	8.473
PFHxS	4.55	1.000	517754.3		M	13C3-PFHxS	4.55	339752.8	1.524	7.389
6:2-FTS	4.90	1.000	113664.7		A	13C2-6:2-FTS	4.90	33652.2	3.378	8.173
PFHpS	4.91	1.080	467674.4		A	13C3-PFHxS	4.55	339752.8	1.377	7.246
PFOA	4.91	1.000	1421585.9		A	13C8-PFOA	4.91	883150.2	1.610	8.597
PFOS	5.24	1.000	478066.3		M	13C8-PFOS	5.24	282689.5	1.691	7.395
PFNA	5.26	1.000	1179828.0		A	13C9-PFNA	5.26	501340.6	2.353	8.486
PFNS	5.54	1.060	300128.1		A	13C8-PFOS	5.24	282689.5	1.062	7.428
PFDA	5.57	1.000	961061.7		A	13C6-PFDA	5.57	647591.8	1.484	7.868
8:2-FTS	5.57	1.000	96931.6		A	13C2-8:2-FTS	5.57	25579.6	3.789	8.835
PFOSA	5.65	1.000	1008057.1		A	13C8-PFOSA	5.65	641137.8	1.572	7.680
NMeFOSAA	5.71	1.000	108210.9		M	d3-NMeFOSAA	5.71	73403.0	1.474	8.332
PFDS	5.80	1.110	229123.3		A	13C8-PFOS	5.24	282689.5	0.811	7.344
PFUnDA	5.82	1.000	804226.7		A	13C7-PFUnDA	5.82	266920.0	3.013	7.877
NEtFOSAA	5.84	1.000	95358.9		A	d5-NEtFOSAA	5.84	69388.5	1.374	7.204
PFDoDA	6.04	1.000	903550.9		A	13C2-PFDoDA	6.04	564228.7	1.601	8.155
10:2-FTS	6.06	1.090	67615.6		A	13C2-8:2-FTS	5.57	25579.6	2.643	8.805
NMePFOSAE	6.10	1.000	663106.2		A	d7-NMePFOSAE	6.09	318171.3	2.084	8.674
NMePFOSA	6.10	1.000	117948.1		A	d3-NMePFOSA	6.10	75466.9	1.563	7.710
PFDoS	6.21	1.190	118024.9		A	13C8-PFOS	5.24	282689.5	0.418	7.312
NEtPFOSAE	6.25	1.000	685532.3		A	d9-NEtPFOSAE	6.24	281982.8	2.431	7.800
NEtPFOSA	6.27	1.000	103077.1		A	d5-NEtPFOSA	6.26	56290.4	1.831	8.410
PFTrDA	6.24	1.030	775027.4		A	13C2-PFDoDA	6.04	564228.7	1.374	8.670
PFTeDA	6.42	1.000	594227.5		A	13C2-PFTeDA	6.42	403537.1	1.473	8.255
PFHxDA	6.72	1.050	290625.8		A	13C2-PFTeDA	6.42	403537.1	0.720	8.580
PFODA	6.98	1.090	248289.9		A	13C2-PFTeDA	6.42	403537.1	0.615	8.569

Total Ion Chromatogram

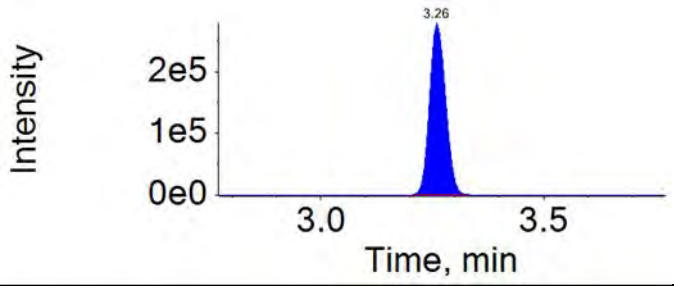


APPROVED
By JPT at 10:23 am, 11/13/18

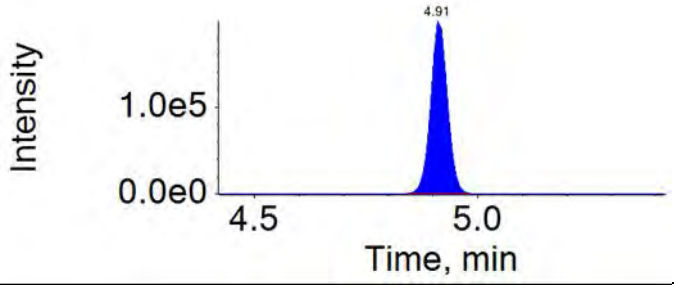
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

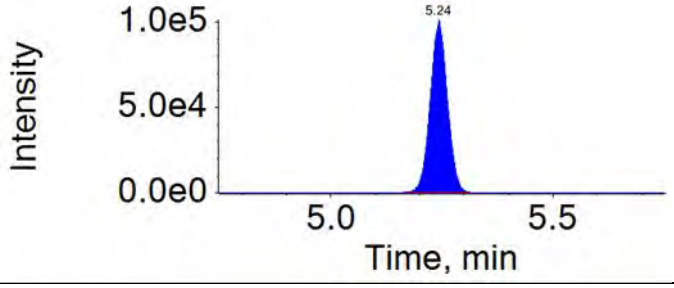
Injection Standard: 13C3-PFBA
216.0 / 172.0



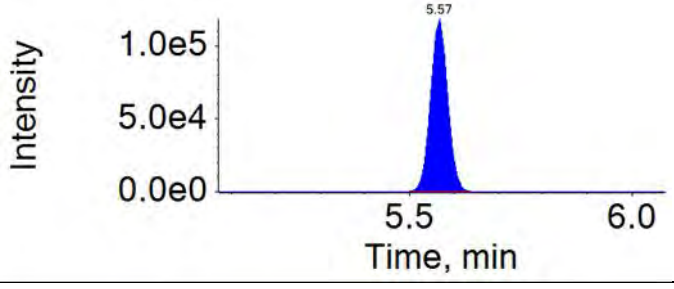
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

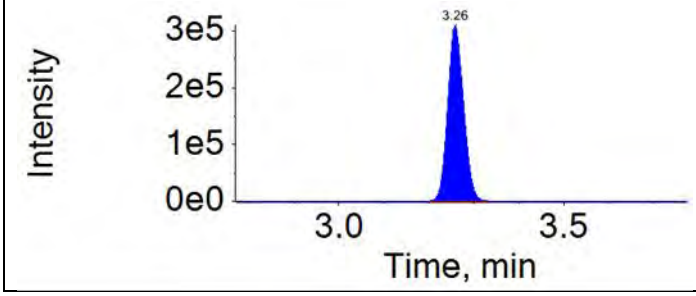


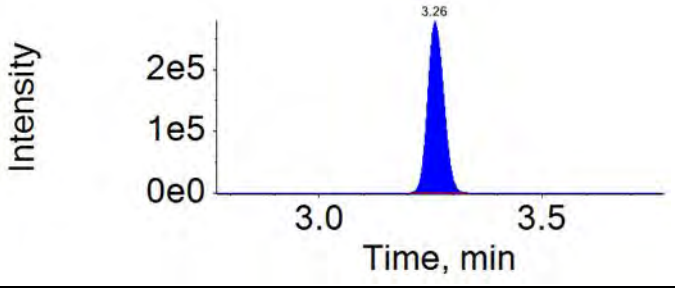
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

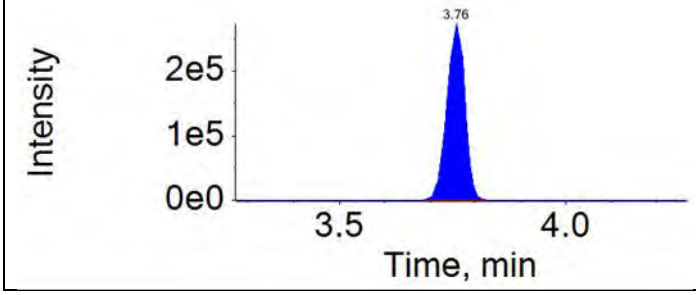
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

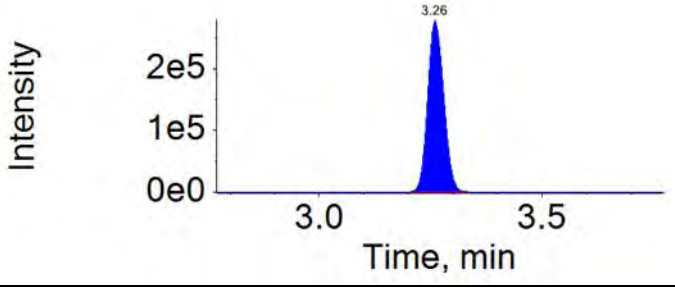
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



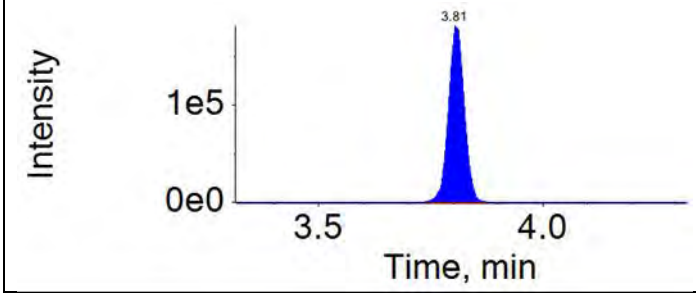


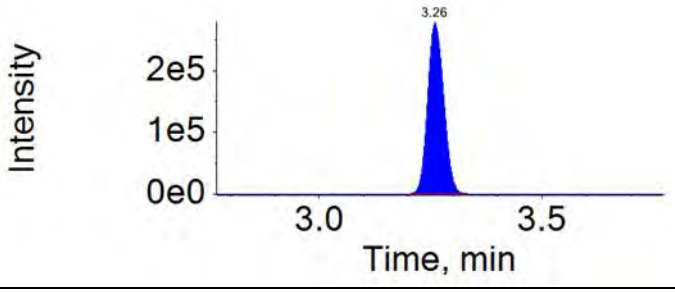
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



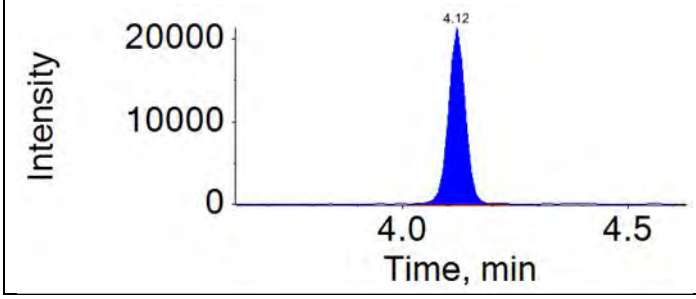


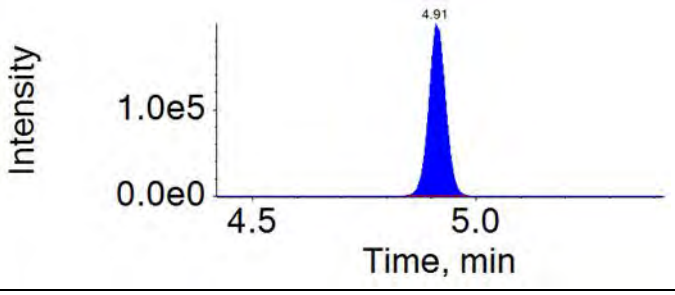
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



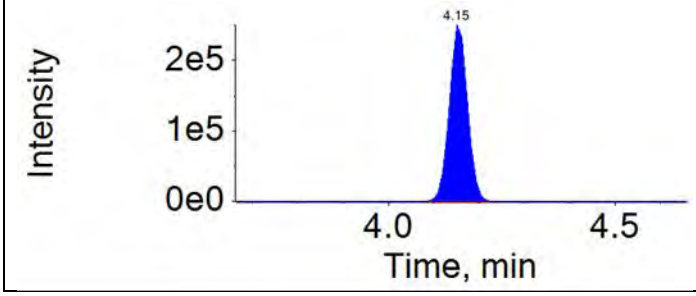


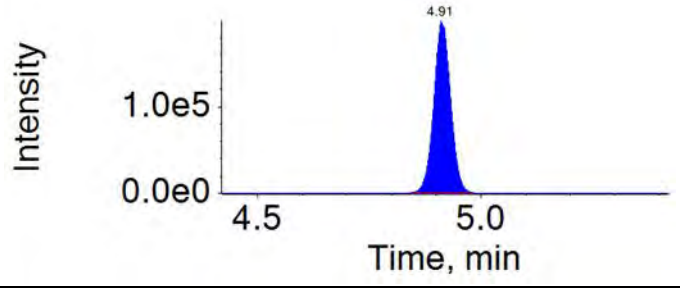
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

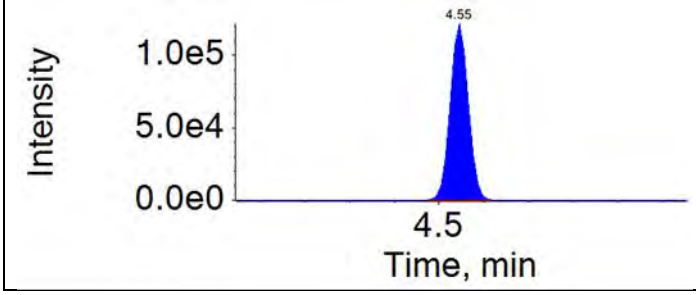
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

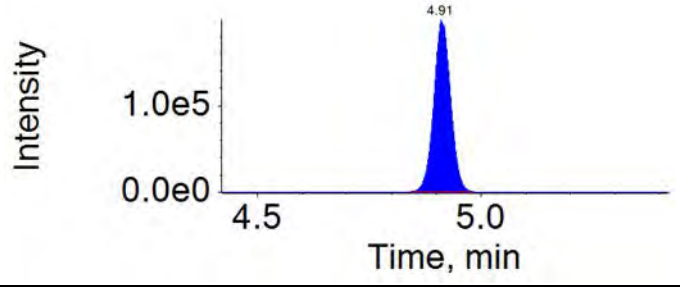
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



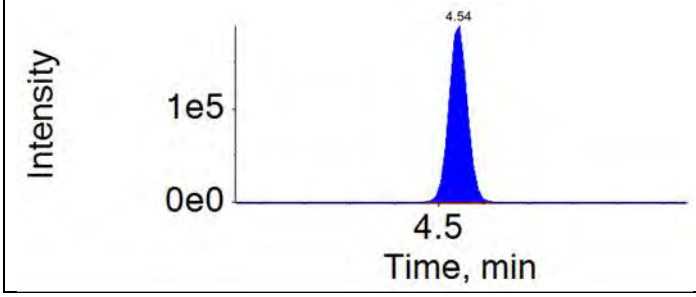


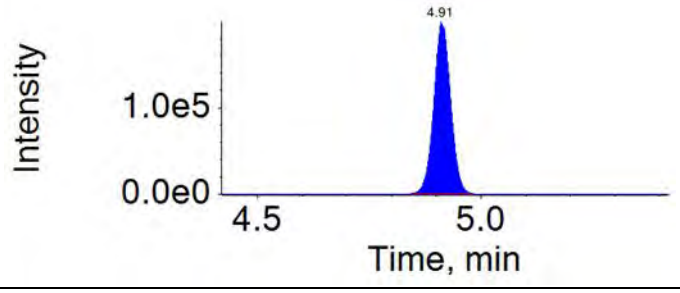
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



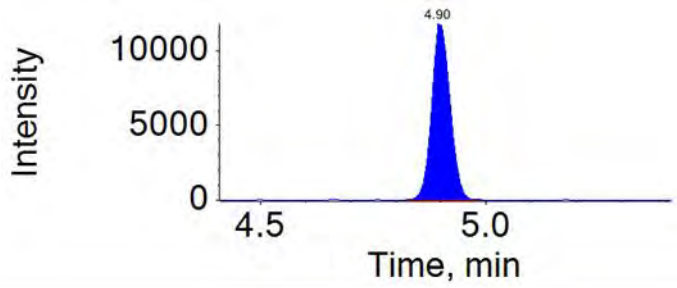


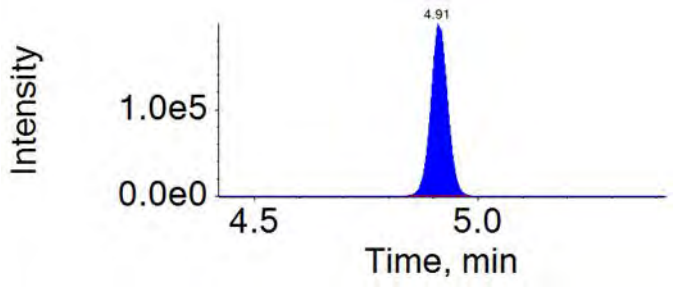
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

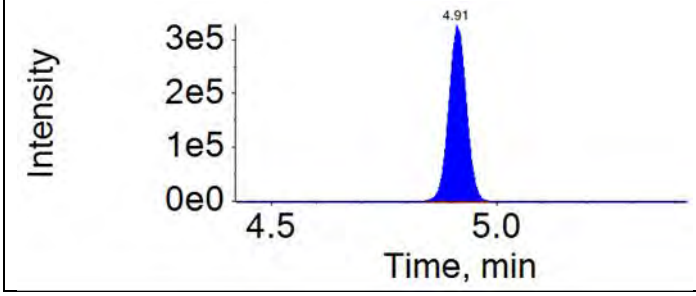
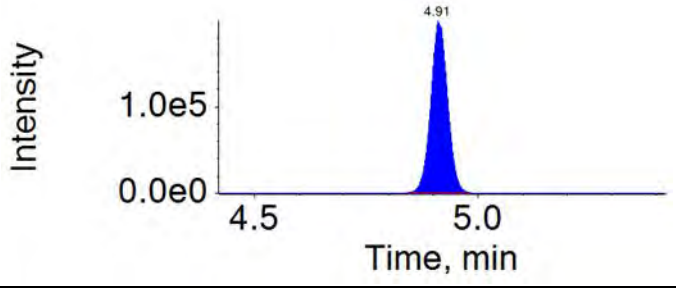


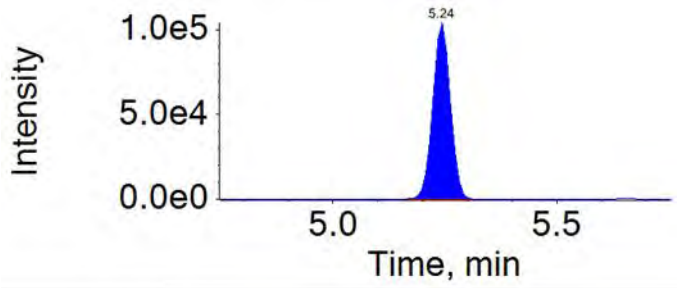
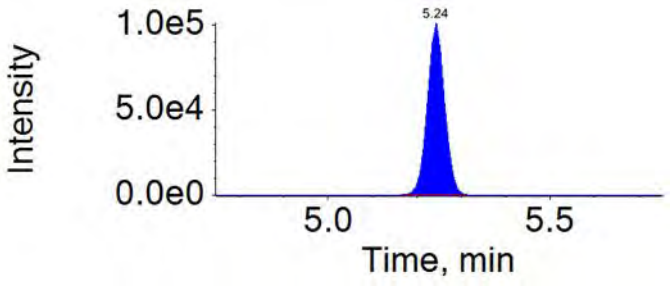


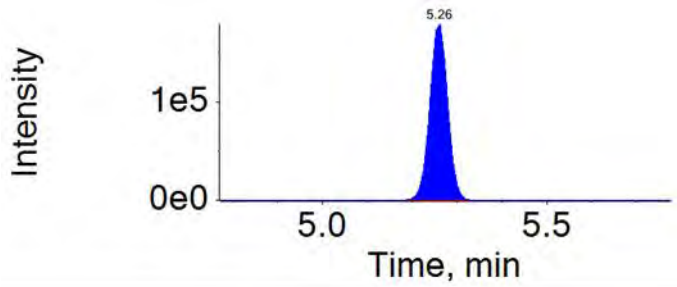
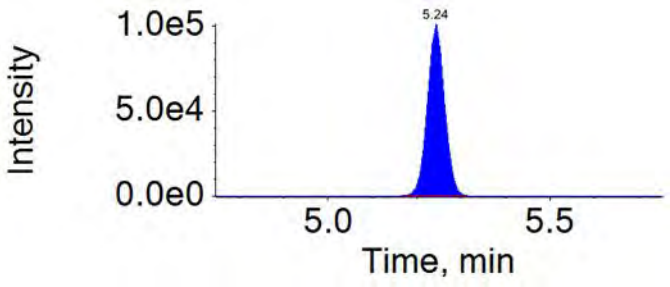
APPROVED
By JPT at 10:23 am, 11/13/18

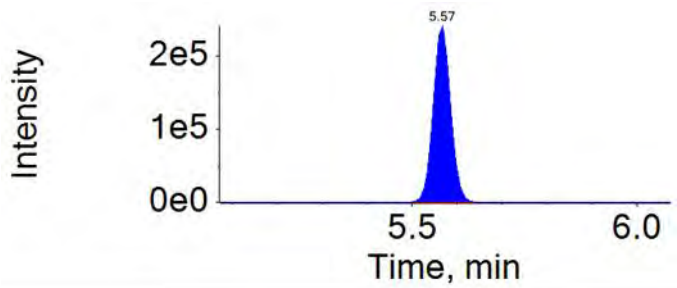
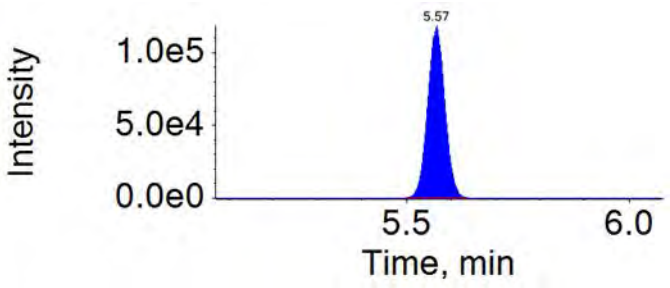
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

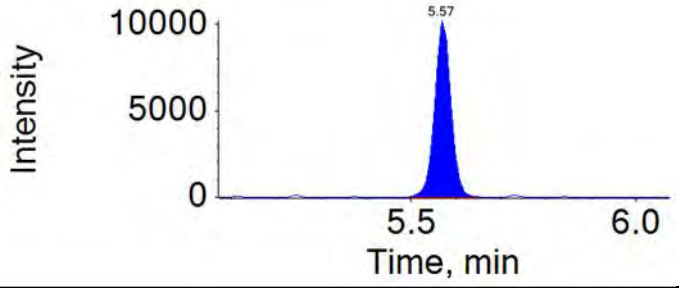
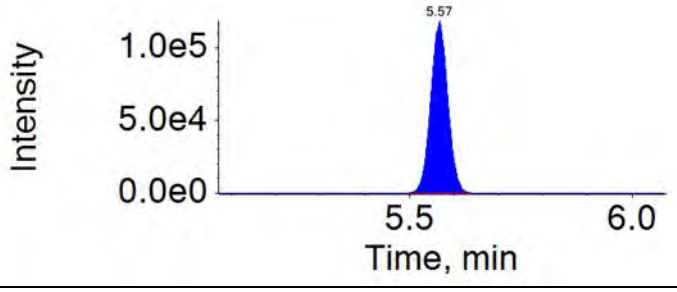
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

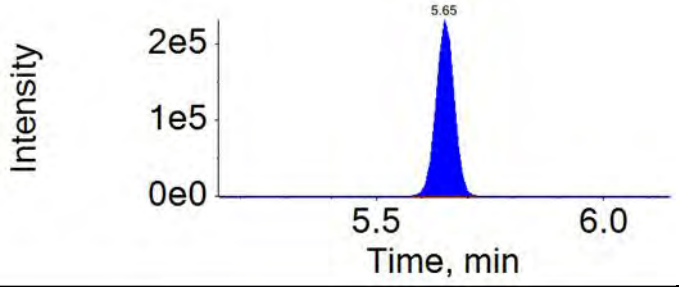
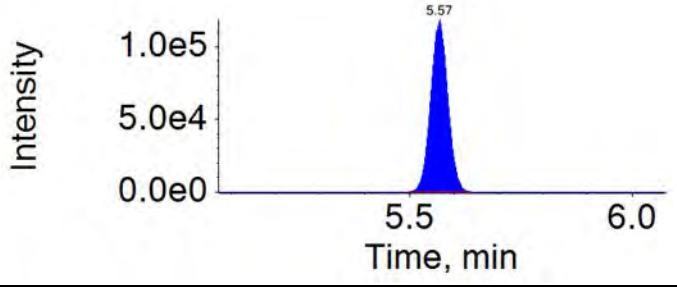
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

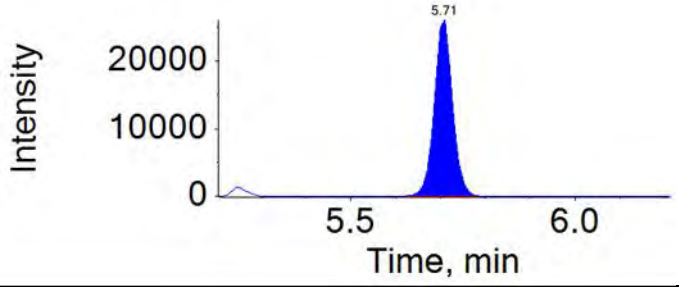
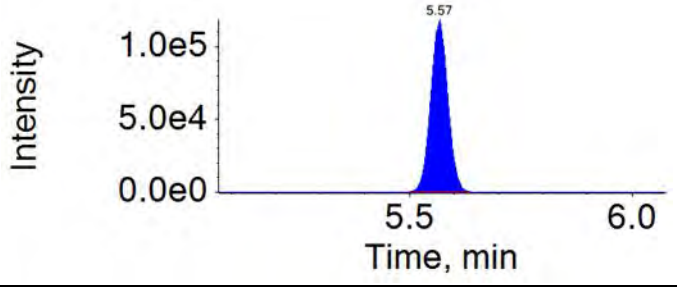
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

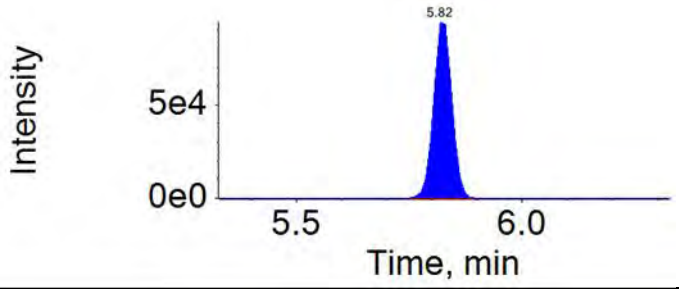
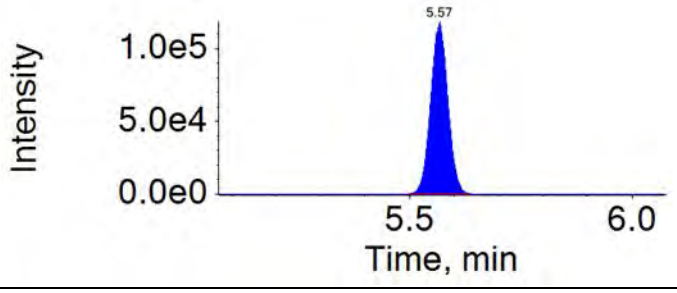
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

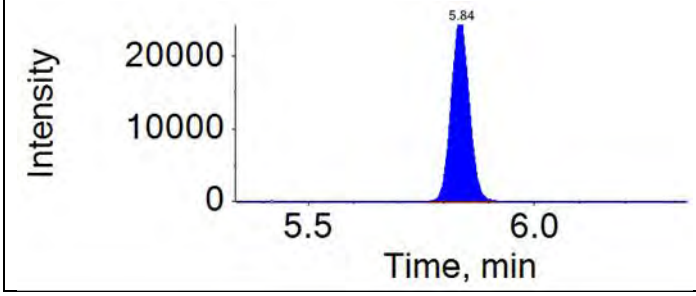
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

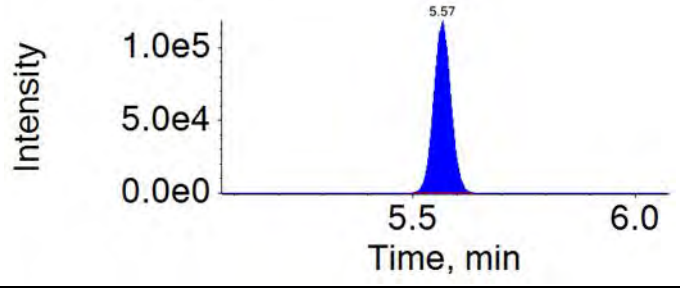
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

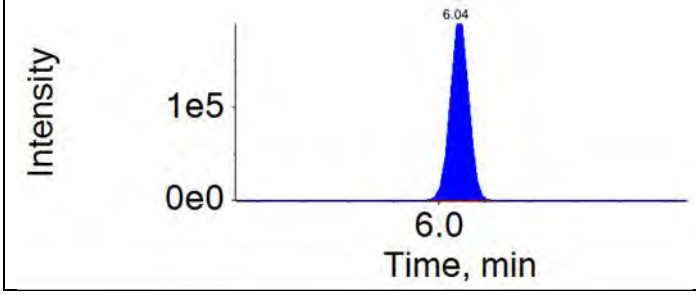
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

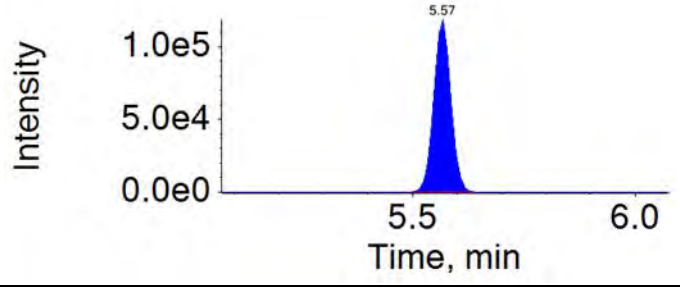
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



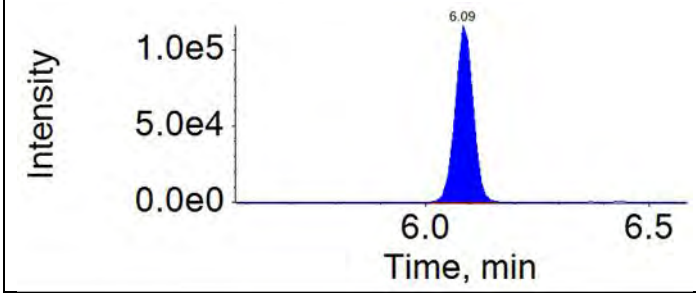


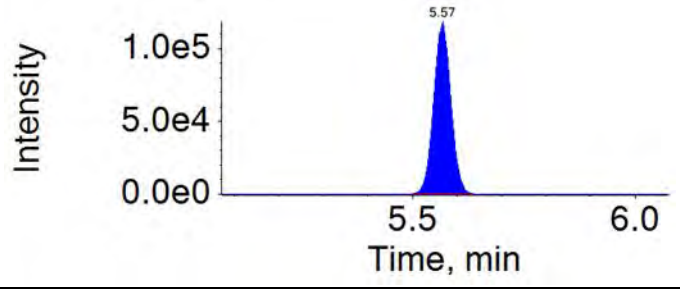
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



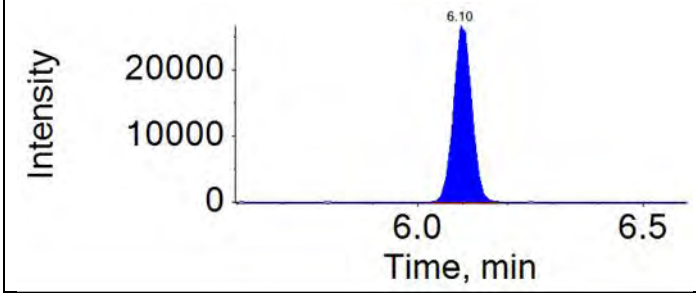


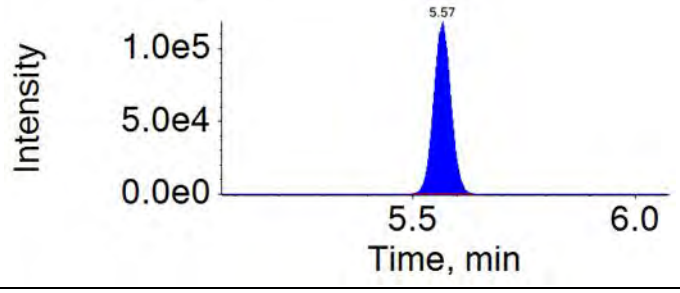
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



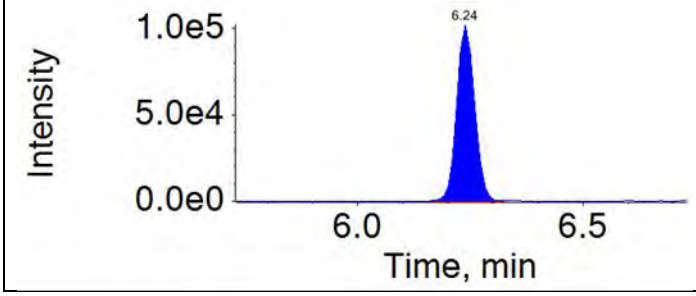


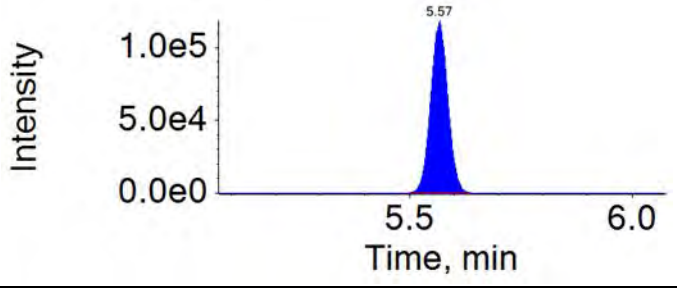
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

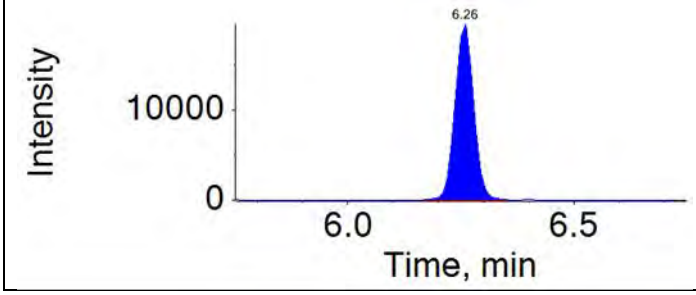
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

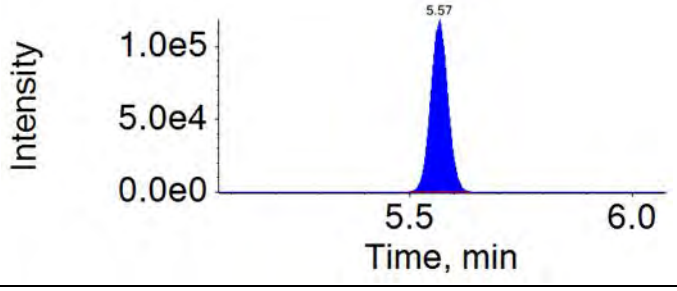
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



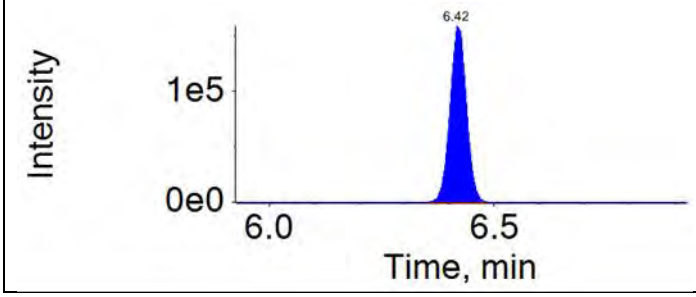


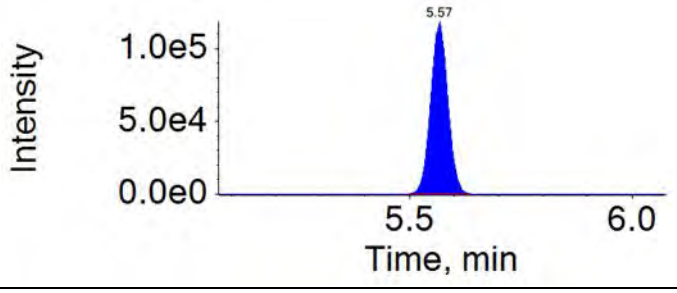
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



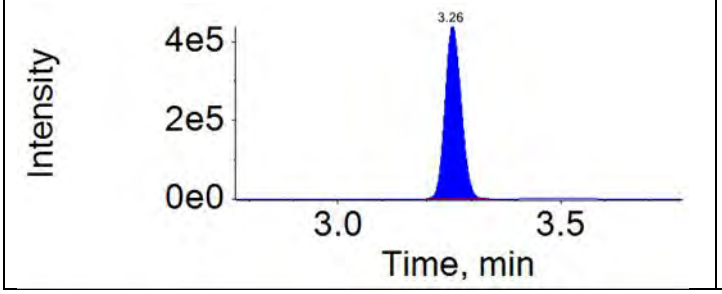


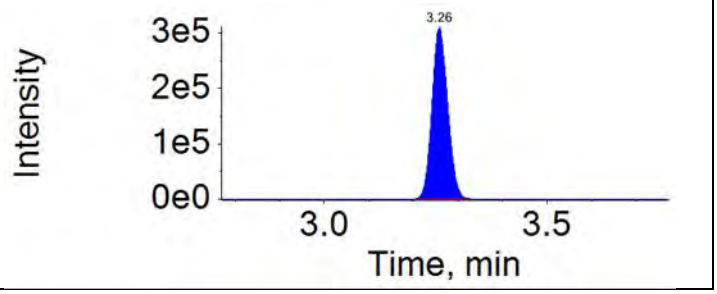
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

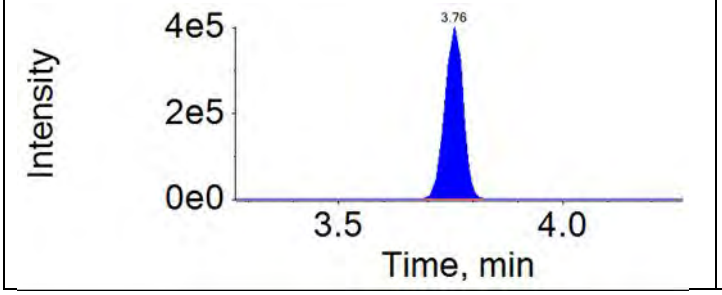
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

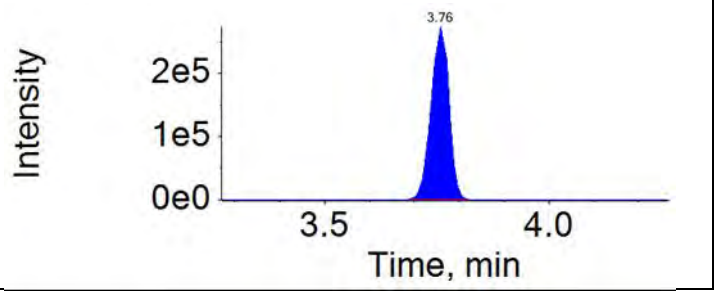
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



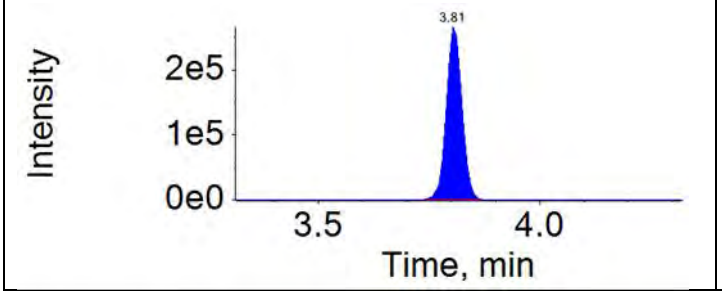


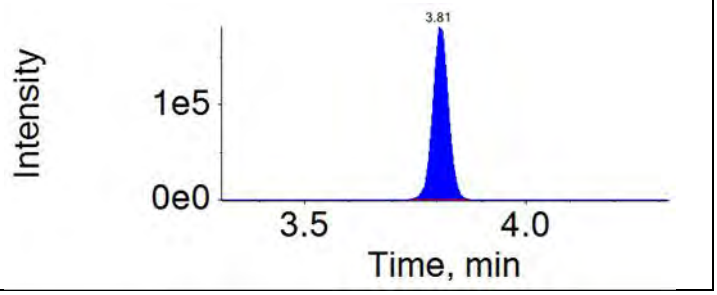
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



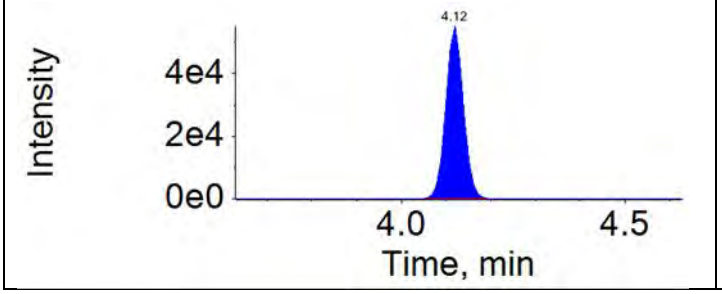


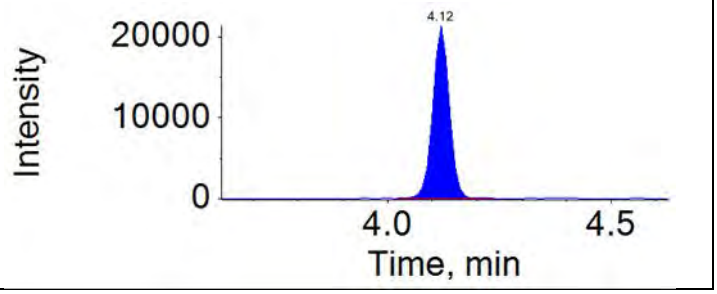
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



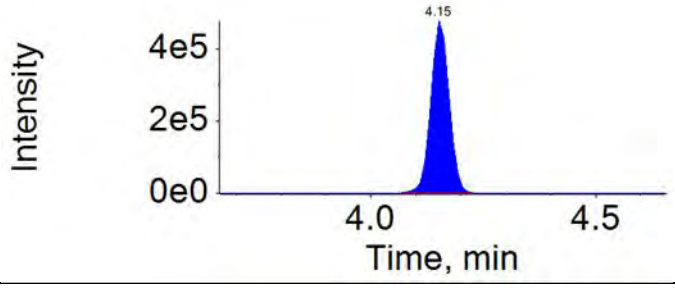


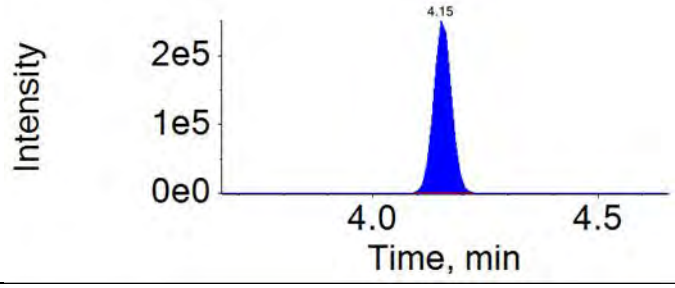
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

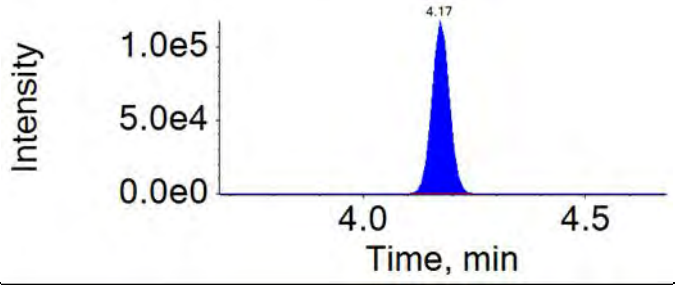
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

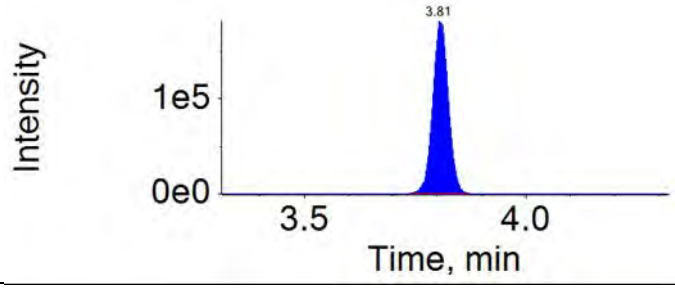
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



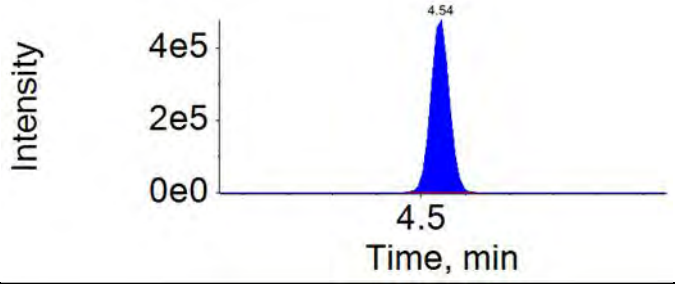


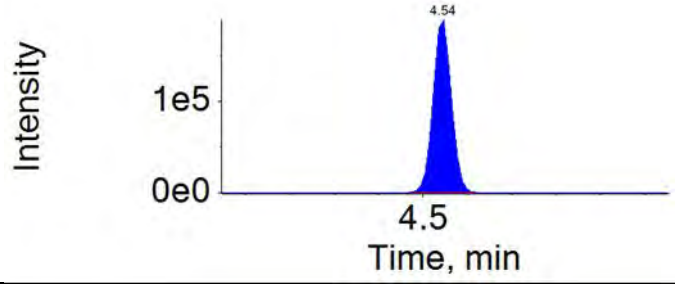
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



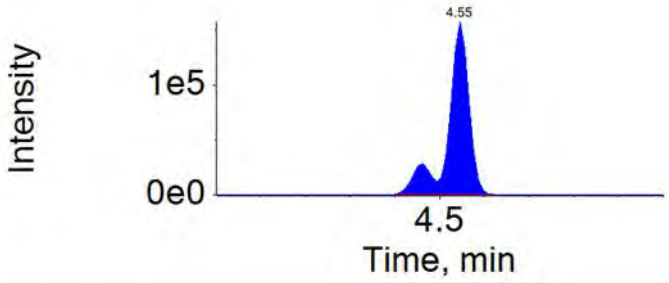


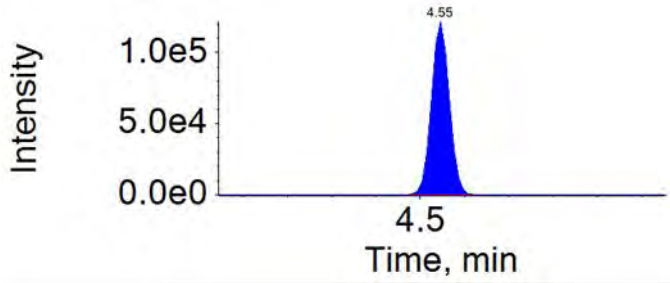
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

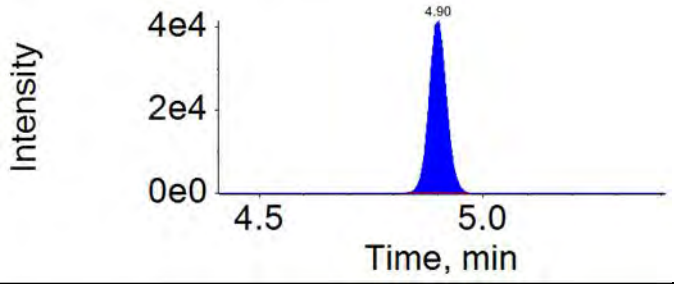
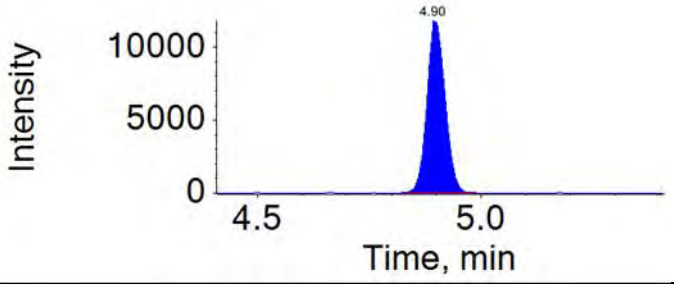


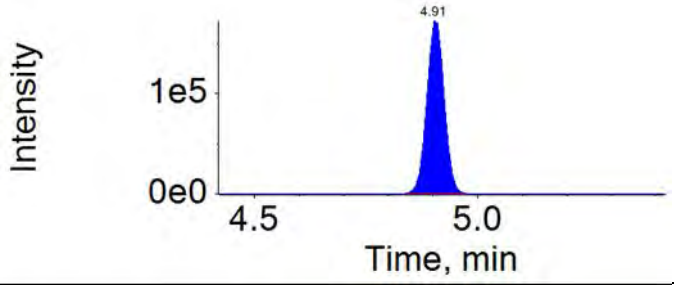
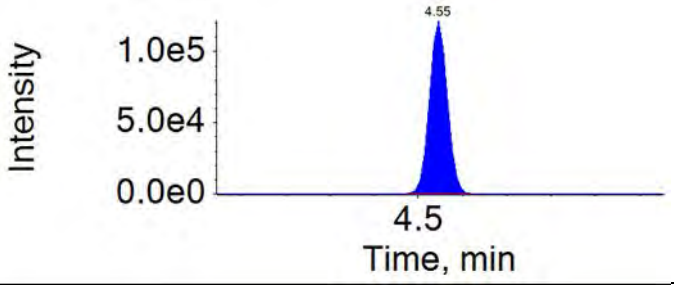


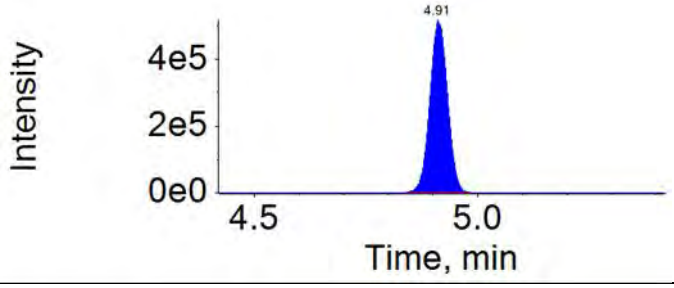
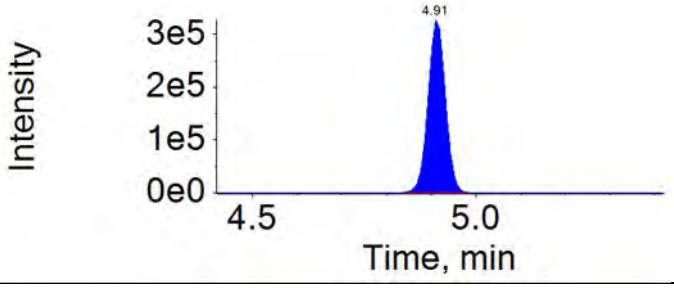
APPROVED
By JPT at 10:23 am, 11/13/18

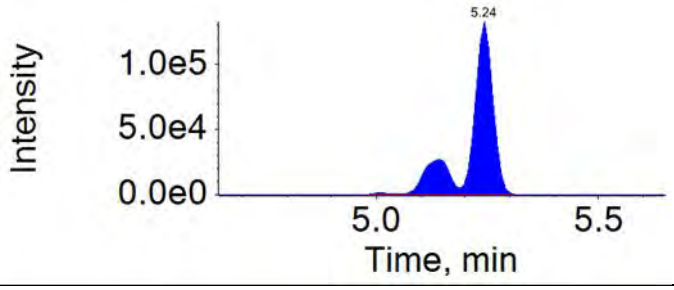
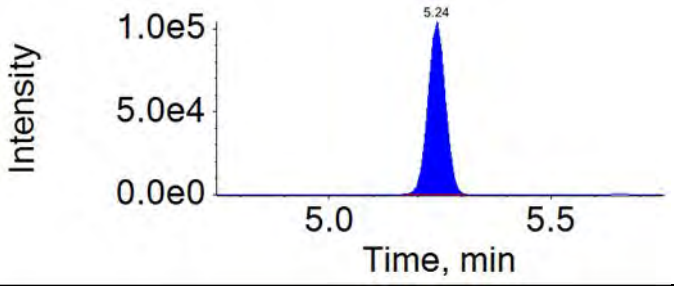
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

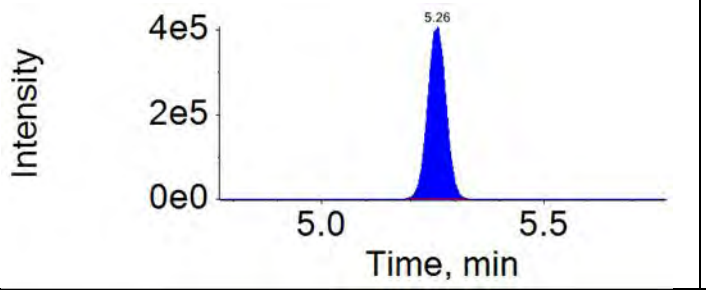
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

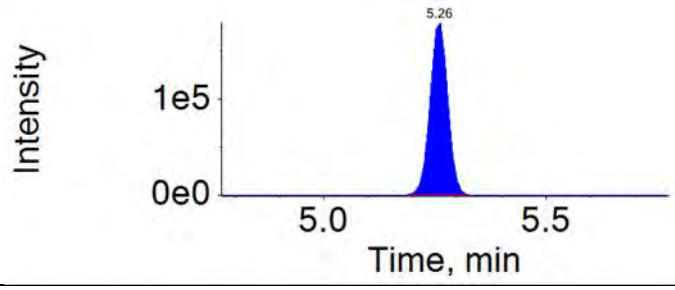
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

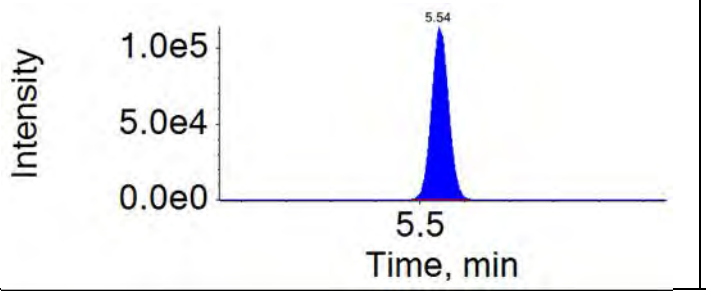
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

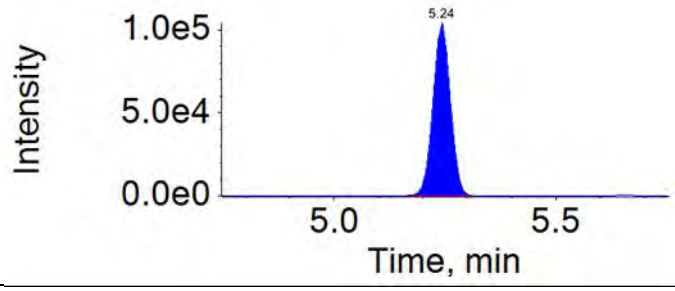
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



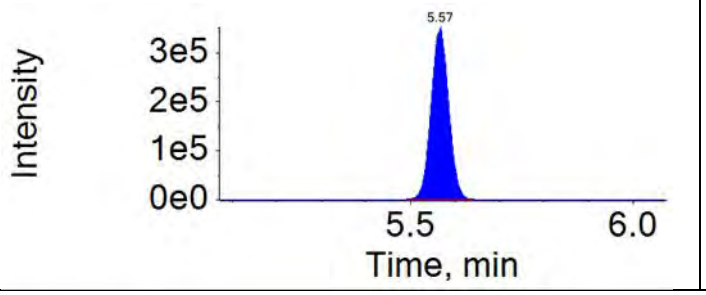


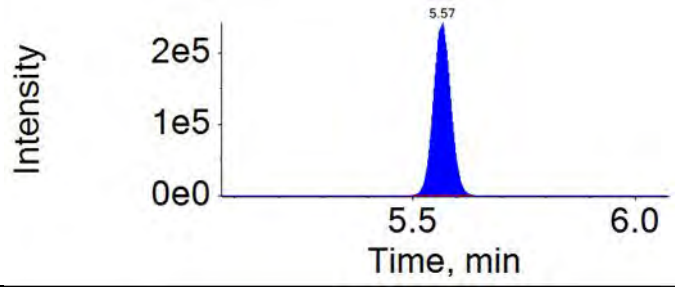
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



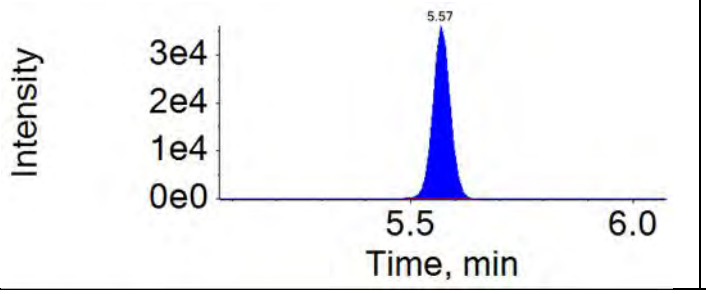


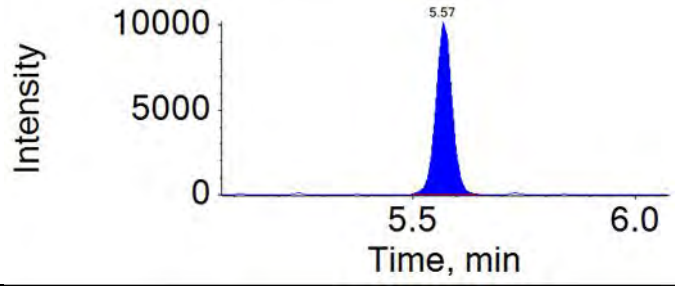
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



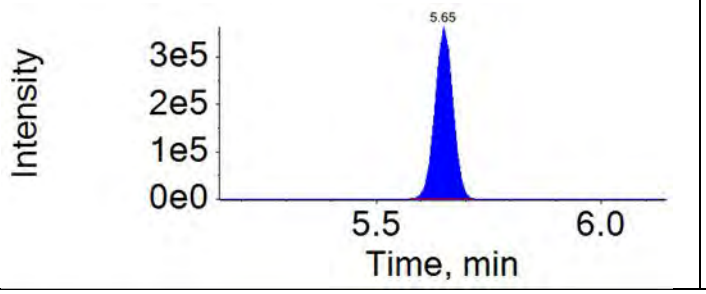


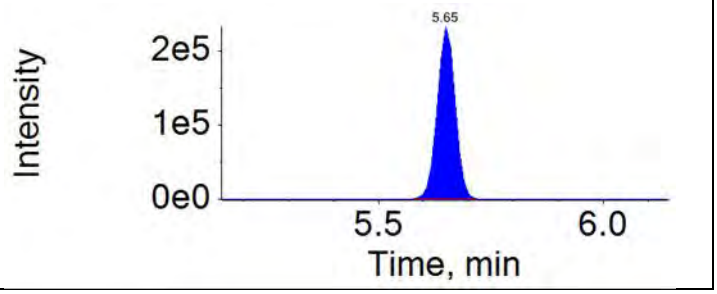
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

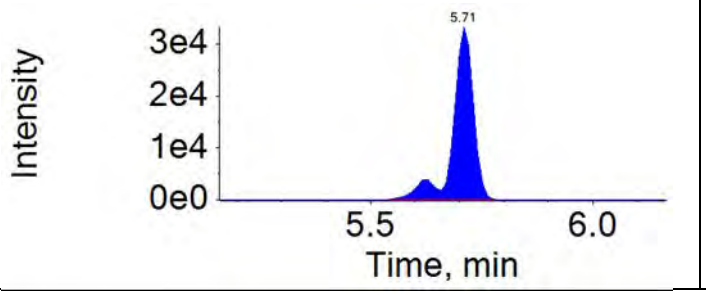
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

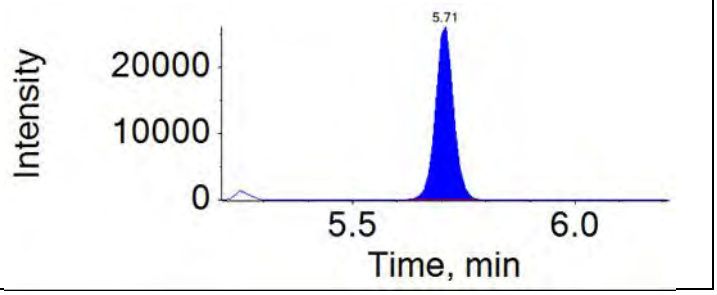
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



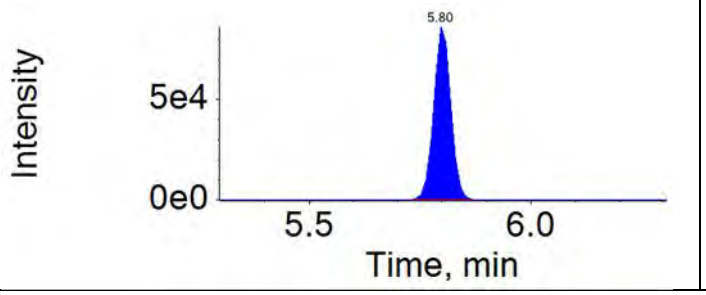


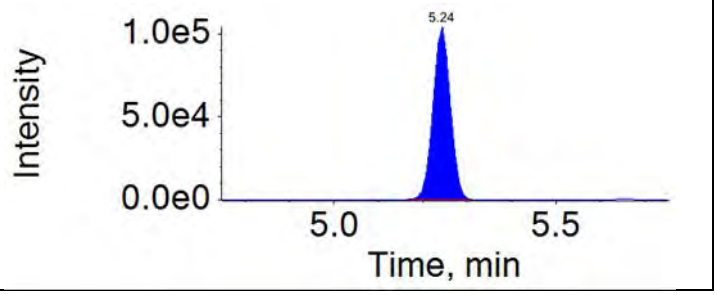
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



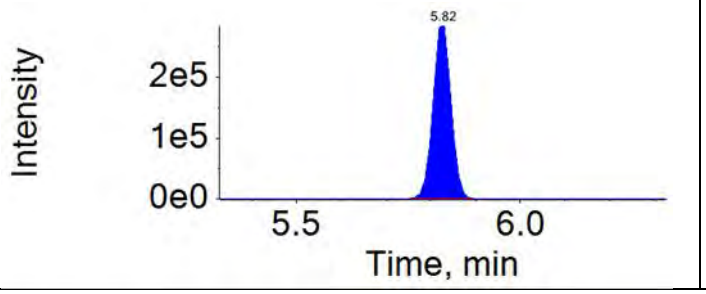


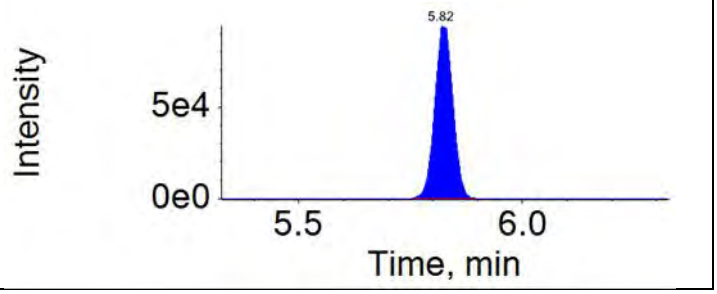
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



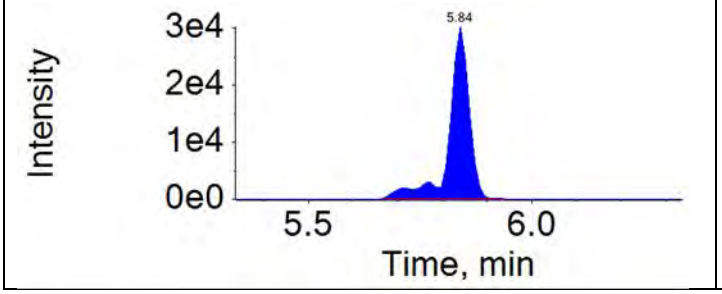


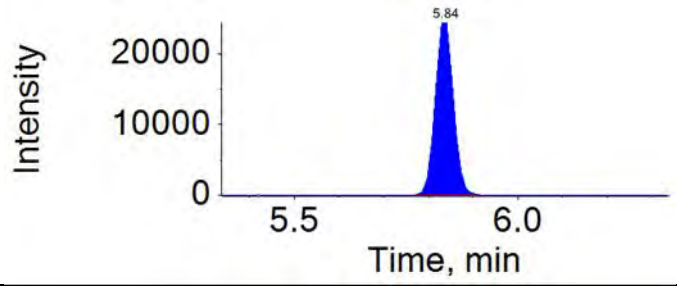
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

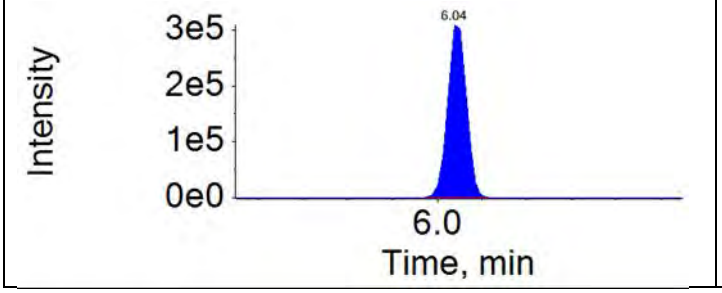
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

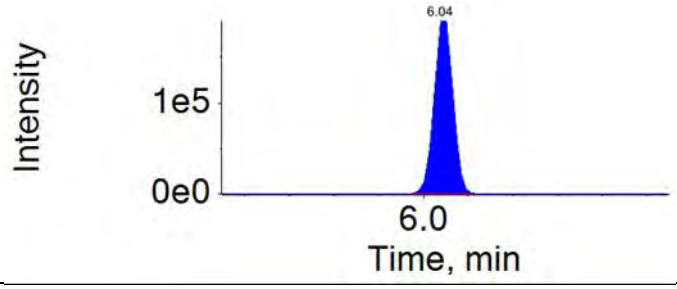
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



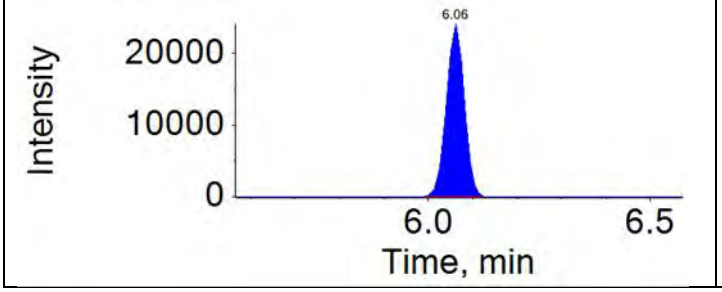


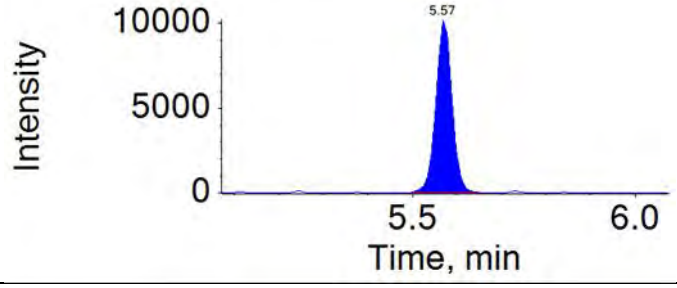
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



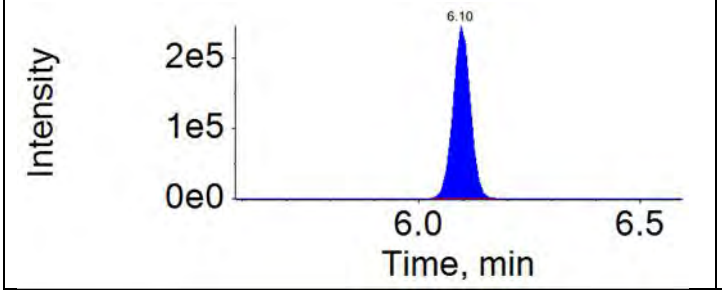


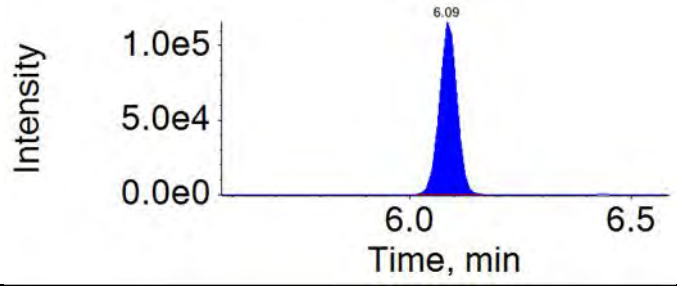
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



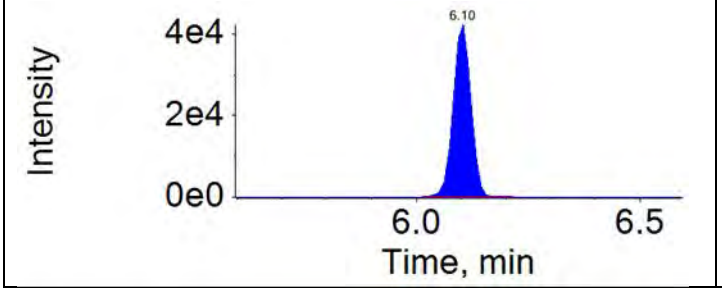


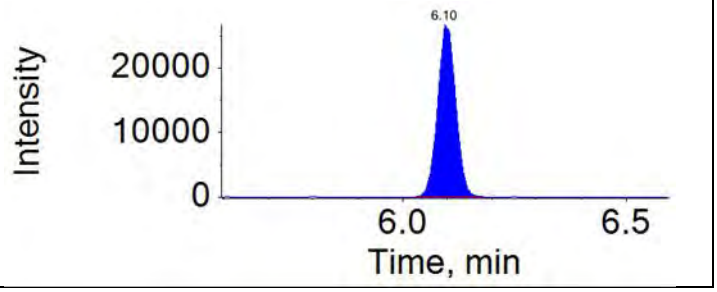
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

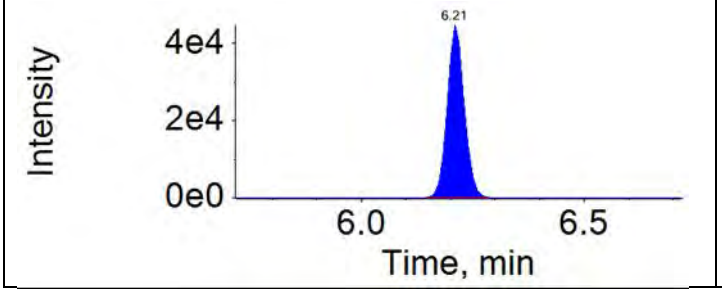
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

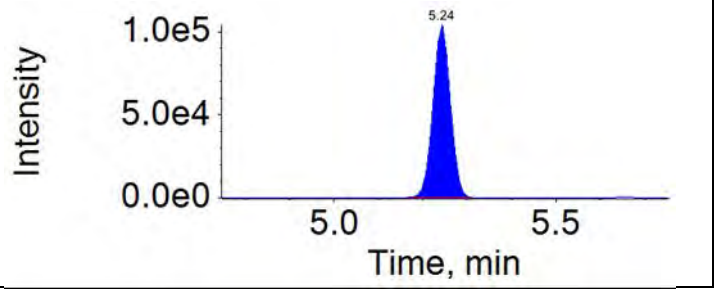
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



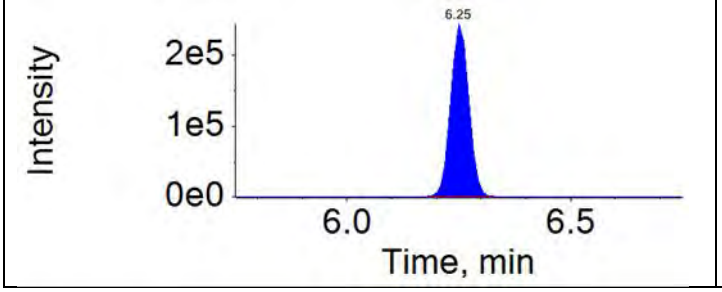


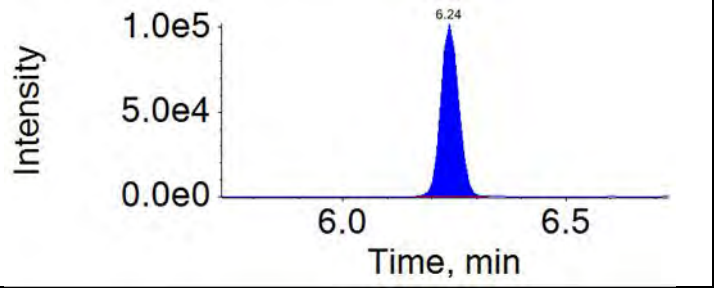
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



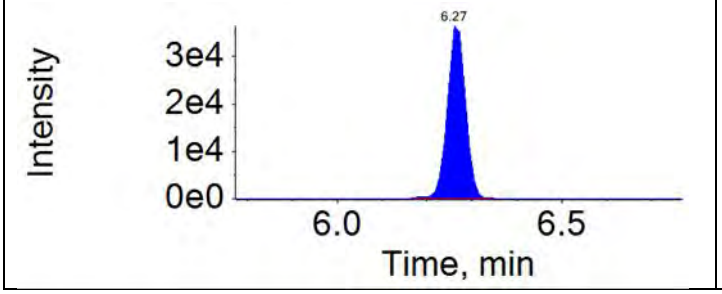


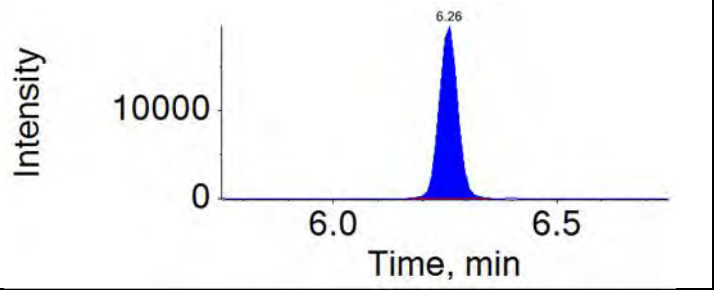
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

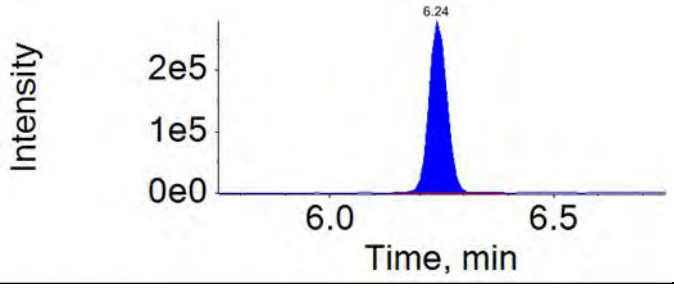
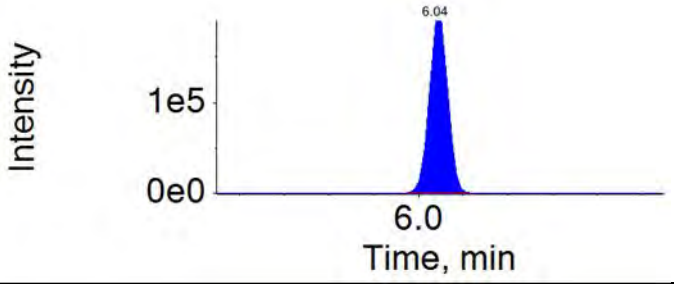


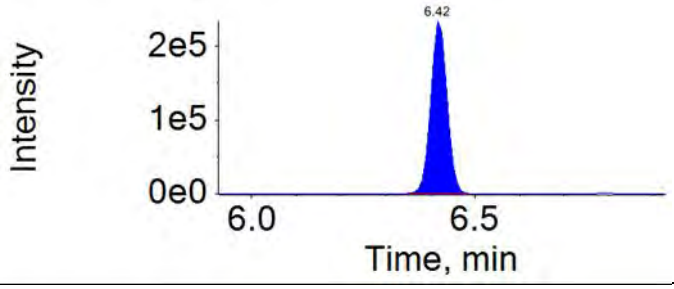
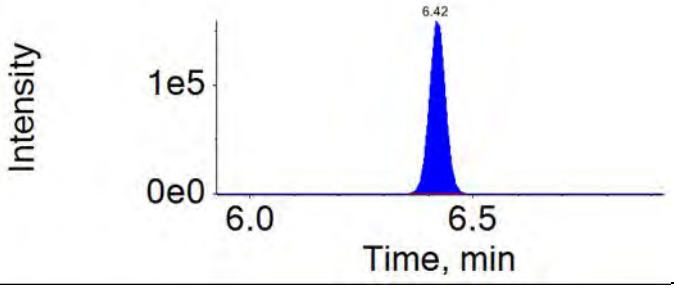


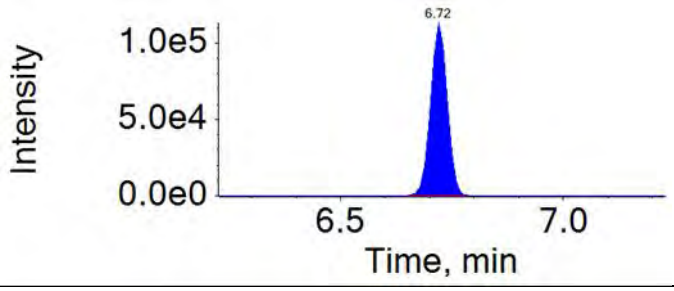
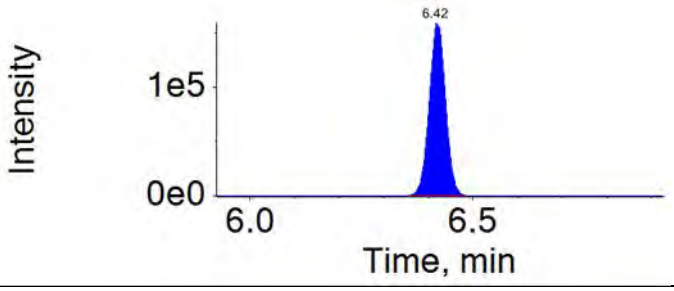
APPROVED
By JPT at 10:23 am, 11/13/18

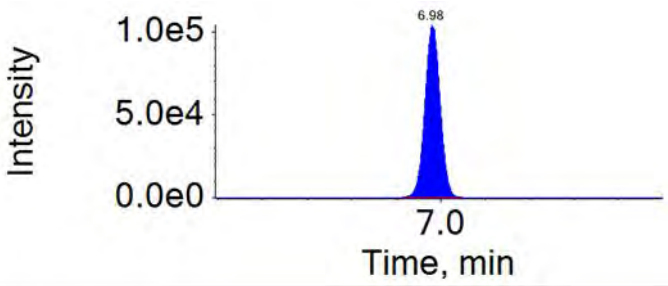
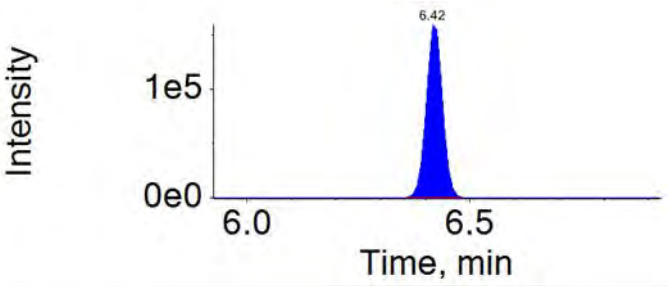
REVIEWED
By umar at 5:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCCV3-11 11/13/2018 10:08:47 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

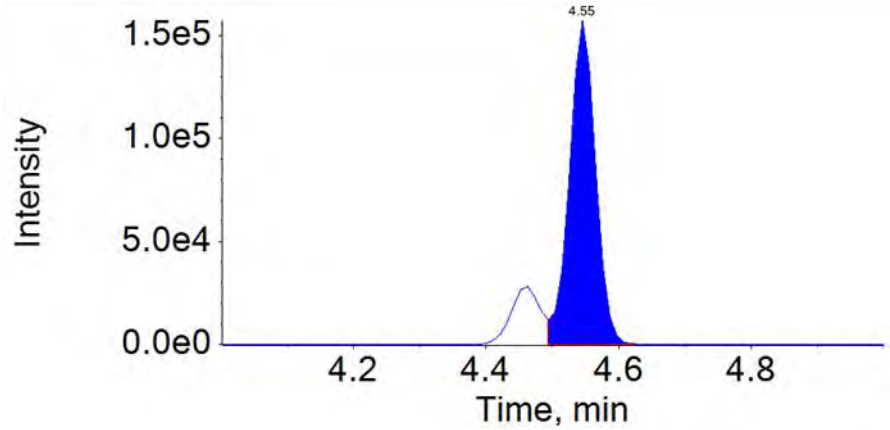
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

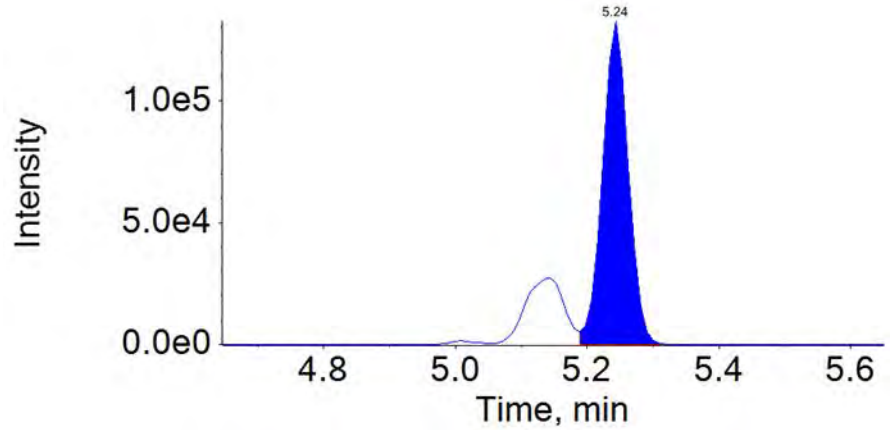
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

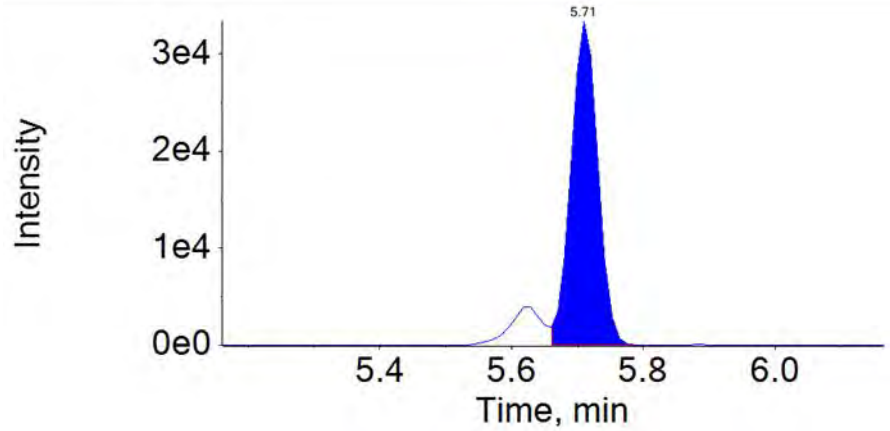
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 432351.5 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV12D-58.wiff **Sample Name:** CCV6_CAL4	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.24 **Peak Area:** 361424.2 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV12D-58.wiff **Sample Name:** CCV6_CAL4	 **Integration Comment:** incorrect integration

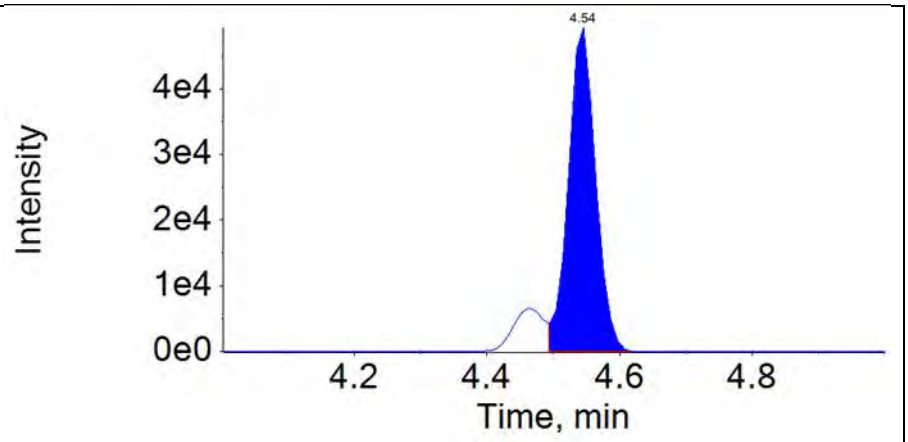
Component Name: NMeFOSAA **RT (min.):** 5.71 **Peak Area:** 94532.6 **Mass Range:** 570.0 / 419.0 **File Name:** 18NOV12D-58.wiff **Sample Name:** CCV6_CAL4	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

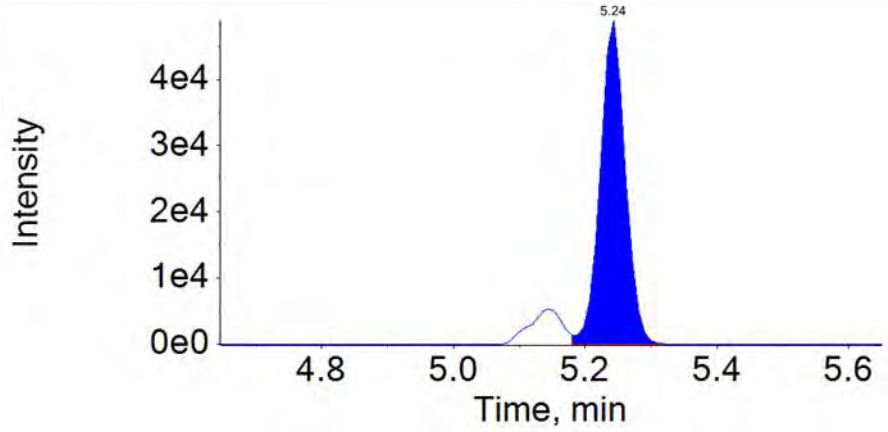
Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
141111.7
Mass Range:
399.0 / 99.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



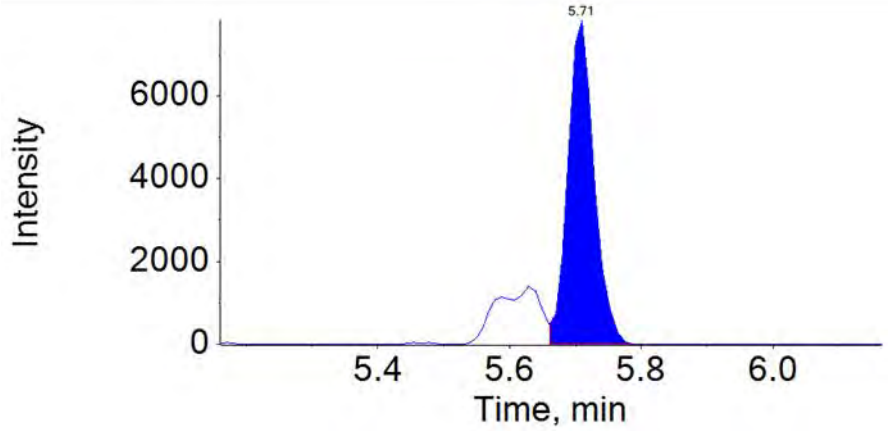
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
129888.3
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
21702.3
Mass Range:
570.0 / 483.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

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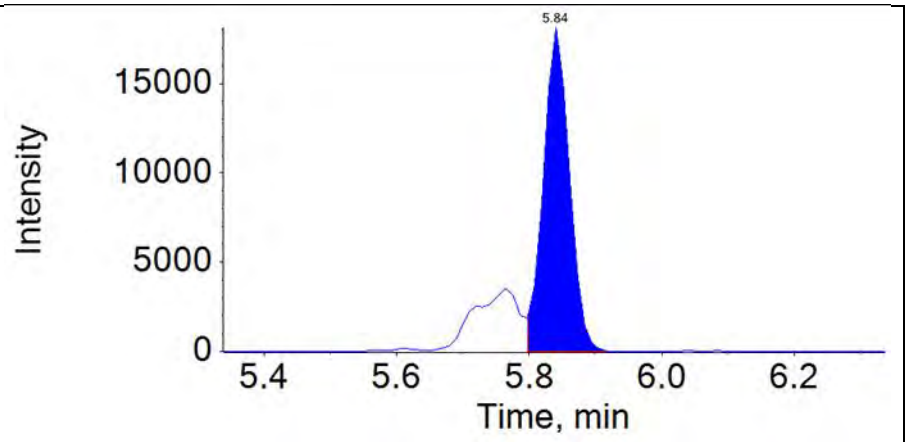
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
49487.3
Mass Range:
584.0 / 526.0
File Name:
18NOV12D-58.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

Results Table Name: 18NOV12DCCV3-11
Results Table Date: 11/13/2018 10:08:47 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12D-58.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	650121.6	A	N/A	1.0000			
PFBS_2	3.81	1.00	243270.4	A	N/A	0.3742	3	50	
4:2-FTS	4.12	1.00	150233.4	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	86381.2	A	N/A	0.5750		#NA!	
PFHxA	4.15	1.00	1348987.8	A	N/A	1.0000			
PFHxA_2	4.15	1.00	15975.5	A	N/A	0.0118	1	50	
PFPeS	4.17	1.10	319026.2	A	N/A	1.0000			
PFPeS_2	4.17	1.10	173011.5	A	N/A	0.5423	4	50	
PFHpA	4.54	1.00	1384443.9	A	N/A	1.0000			
PFHpA_2	4.54	1.00	75585.8	A	N/A	0.0546	-3	50	
PFHxS	4.55	1.00	517754.3	M	N/A	1.0000			
PFHxS_2	4.54	1.00	162008.9	M	N/A	0.3129	-9	50	
6:2-FTS	4.90	1.00	113664.7	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	72576.8	A	N/A	0.6385		#NA!	
PFHpS	4.91	1.08	467674.4	A	N/A	1.0000			
PFHpS_2	4.90	1.08	189233.9	A	N/A	0.4046	0	50	
PFOA	4.91	1.00	1421585.9	A	N/A	1.0000			
PFOA_2	4.91	1.00	80586.2	A	N/A	0.0567	0	50	
PFOS	5.24	1.00	478066.3	M	N/A	1.0000			
PFOS_2	5.24	1.00	148120.8	M	N/A	0.3098	4	50	
PFNA	5.26	1.00	1179828.0	A	N/A	1.0000			
PFNA_2	5.26	1.00	21195.4	A	N/A	0.0180	-21	50	
PFNS	5.54	1.06	300128.1	A	N/A	1.0000			
PFNS_2	5.54	1.06	138703.3	A	N/A	0.4621	-3	50	
PFDA	5.57	1.00	961061.7	A	N/A	1.0000			
PFDA_2	5.57	1.00	6570.1	A	N/A	0.0068	-14	50	
8:2-FTS	5.57	1.00	96931.6	A	N/A	1.0000			
8:2 FTS_2	5.57	1.00	57612.2	A	N/A	0.5944		#NA!	
NMeFOSAA	5.71	1.00	108210.9	M	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	28218.3	M	N/A	0.2608	1	50	
PFDS	5.80	1.11	229123.3	A	N/A	1.0000			
PFDS_2	5.80	1.11	110030.8	A	N/A	0.4802	-6	50	
PFUnDA	5.82	1.00	804226.7	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	3771.3	A	N/A	0.0047	-15	50	
NEtFOSAA	5.84	1.00	95358.9	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	66089.1	M	N/A	0.6931	-4	50	
PFDoDA	6.04	1.00	903550.9	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	10723.7	A	N/A	0.0119	-23	50	
10:2-FTS	6.06	1.09	67615.6	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	44602.5	A	N/A	0.6596		#NA!	
PFTrDA	6.24	1.03	775027.4	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	7327.0	A	N/A	0.0095	11	50	
PFTeDA	6.42	1.00	594227.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	3706.9	A	N/A	0.0062	0	50	
PFHxDA	6.72	1.05	290625.8	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	17475.7	A	N/A	0.0601	-11	50	
PFODA	6.98	1.09	248289.9	A	N/A	1.0000			
PFODA_2	6.98	1.09	6003.1	A	N/A	0.0242	-12	50	

APPROVED
By JPT at 10:23 am, 11/13/18

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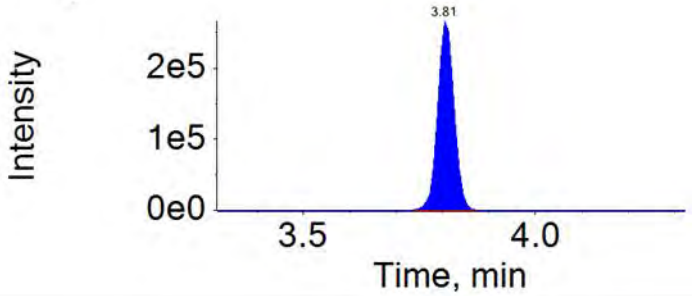
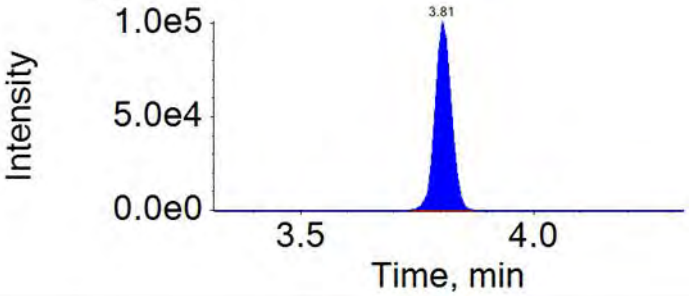
By umar at 5:20 pm, 11/13/18

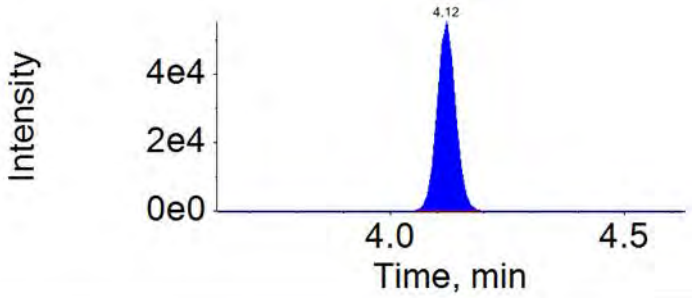
Component: PFBS
Primary Mass: 299.0 / 80.0



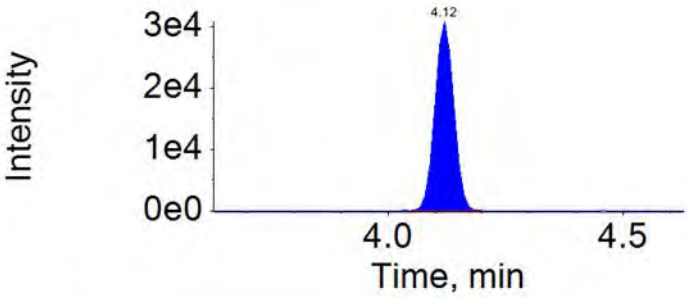
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



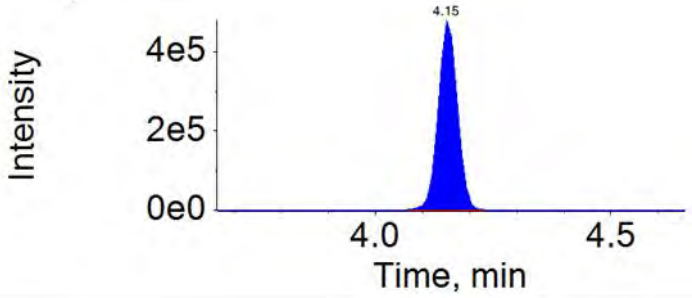
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



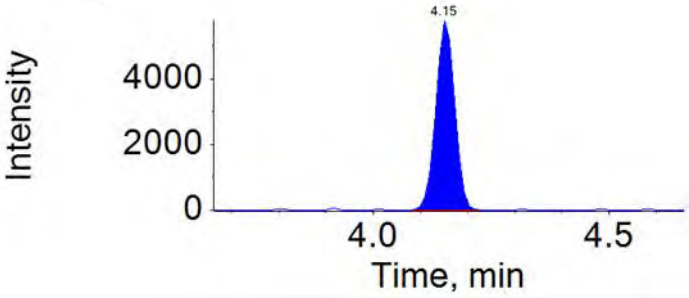
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



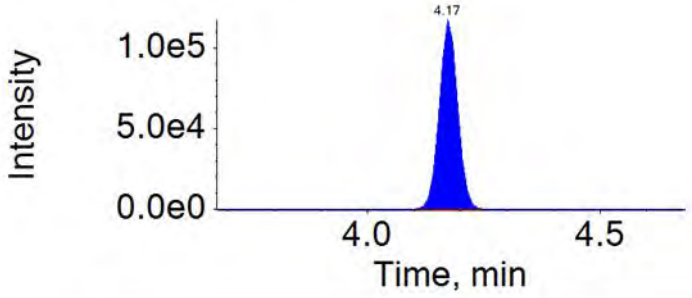
Component: PFHxA
Primary Mass: 313.0 / 269.0



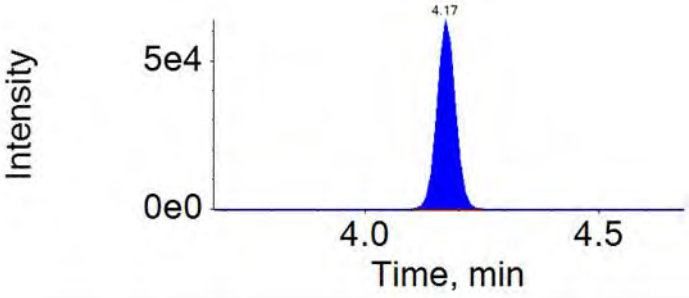
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



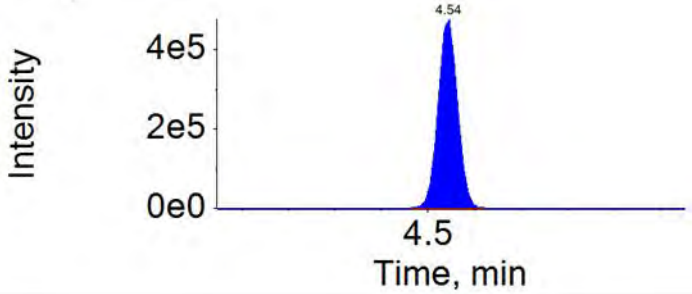
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



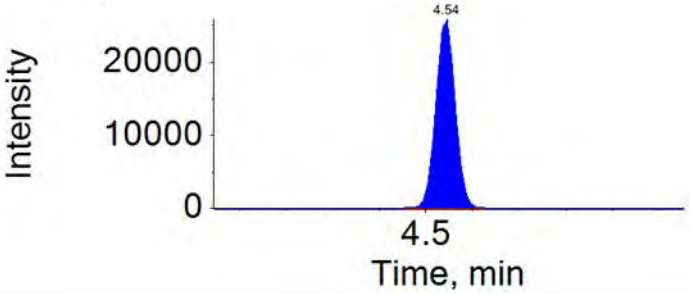
APPROVED
By JPT at 10:23 am, 11/13/18

REVIEWED
By umar at 5:20 pm, 11/13/18

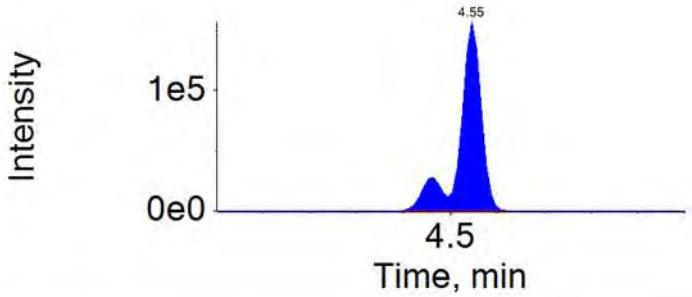
Component: PFHpA
Primary Mass: 363.0 / 319.0



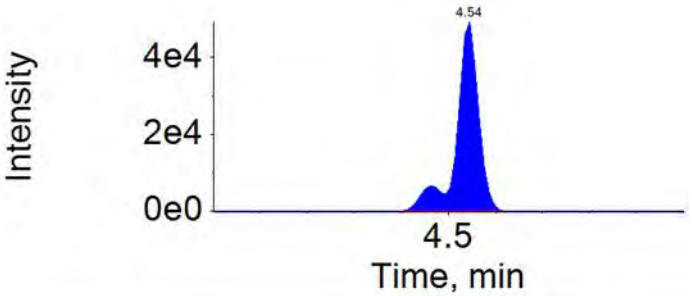
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



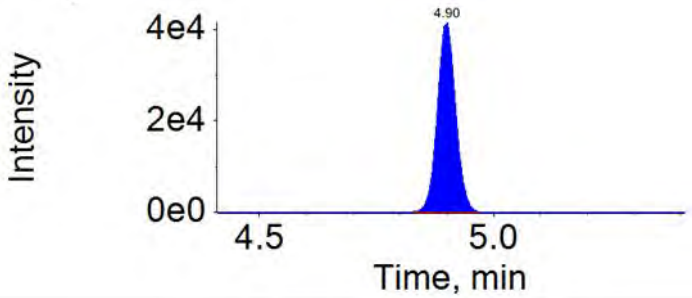
Component: PFHxS
Primary Mass: 399.0 / 80.0



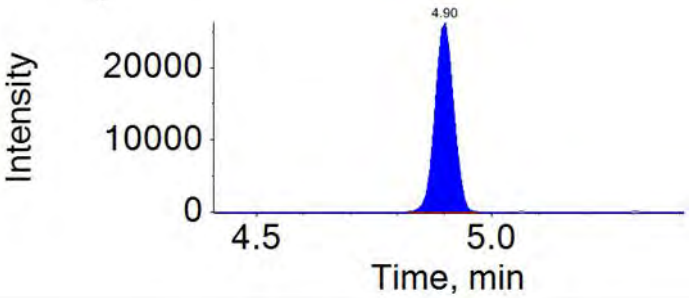
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



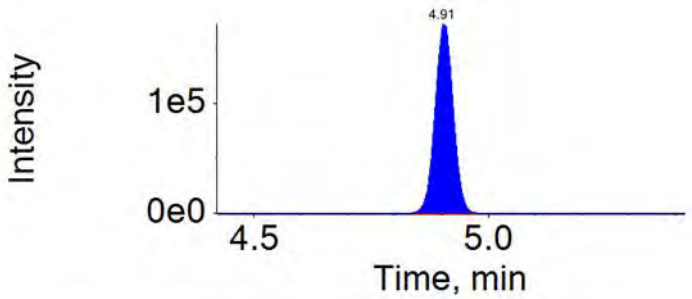
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



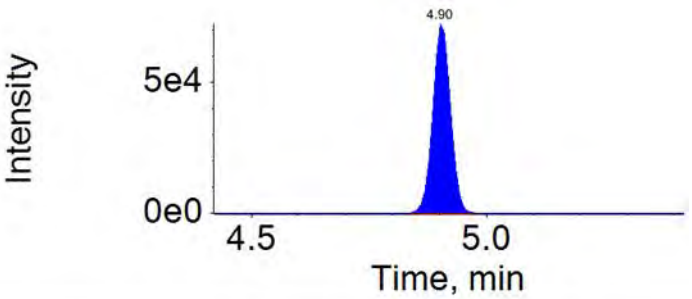
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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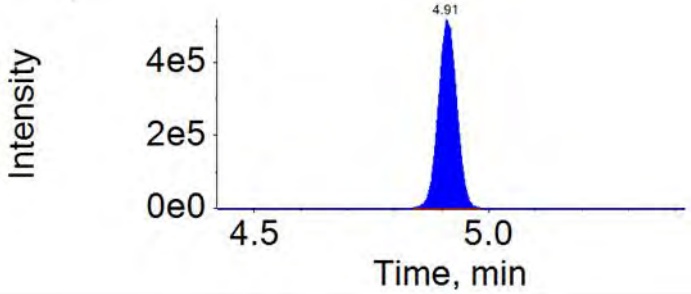
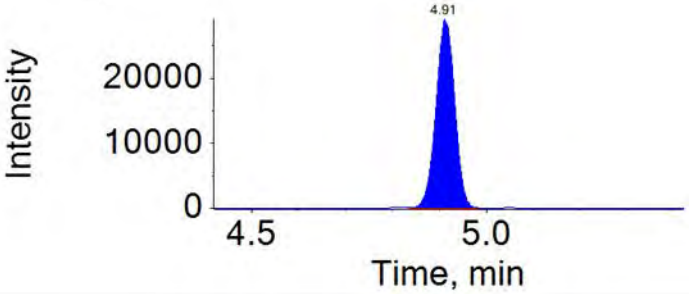
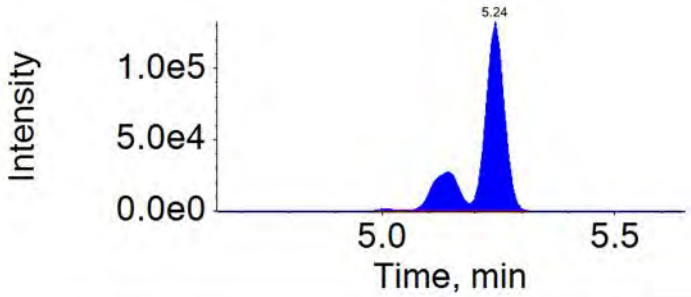
Component: PFOA
Primary Mass: 413.0 / 369.0



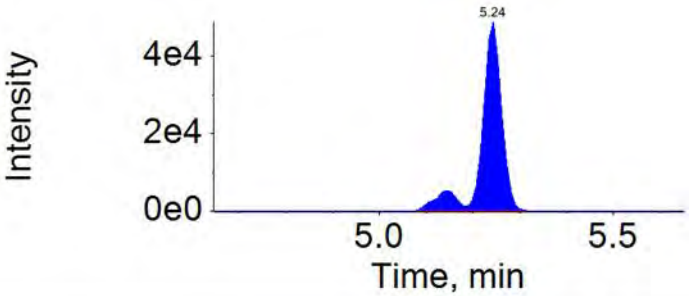
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



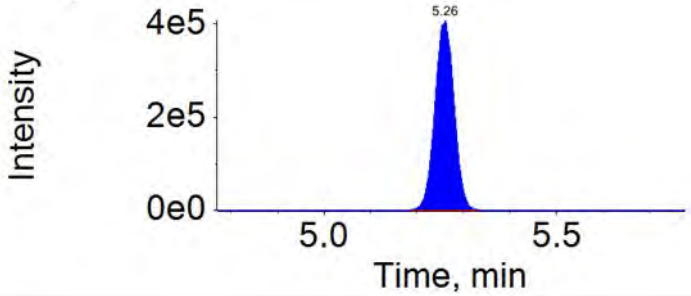
Component: PFOS
Primary Mass: 499.0 / 80.0



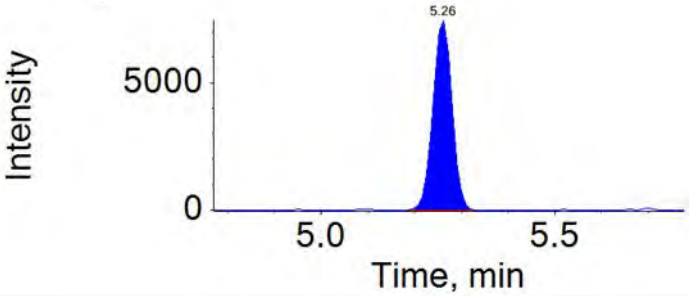
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



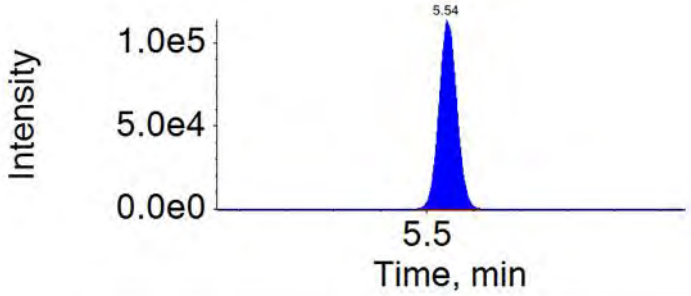
Component: PFNA
Primary Mass: 463.0 / 419.0



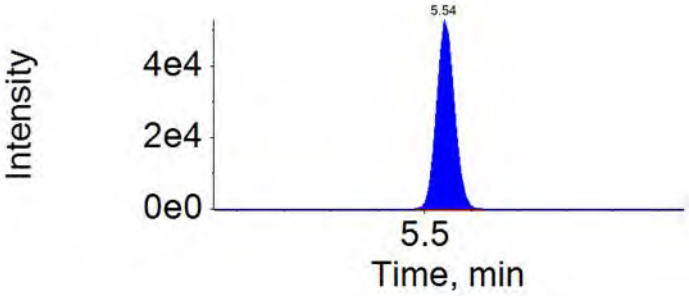
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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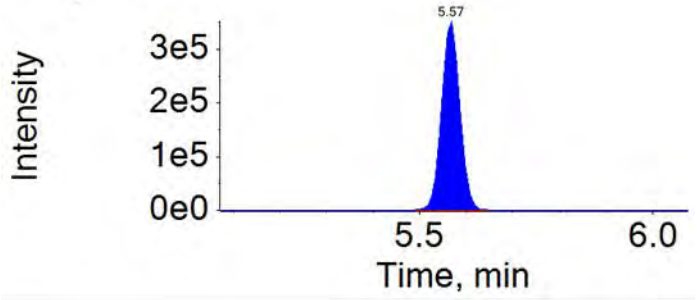
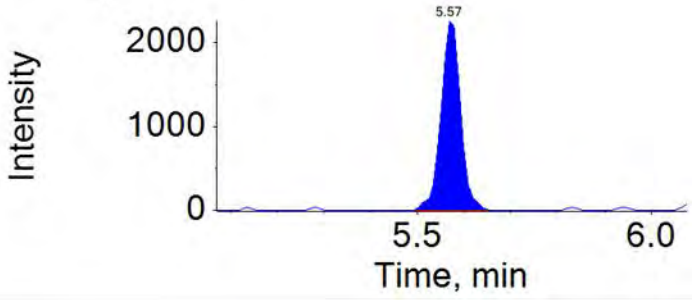
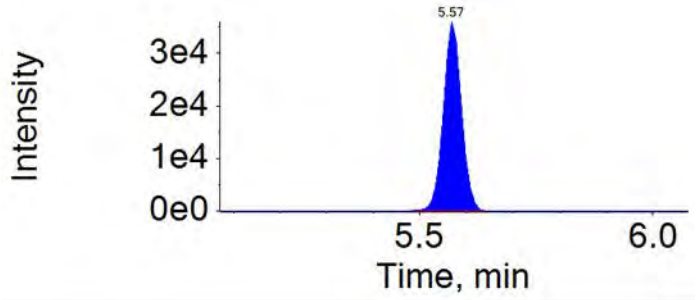
Component: PFDA
Primary Mass: 513.0 / 469.0



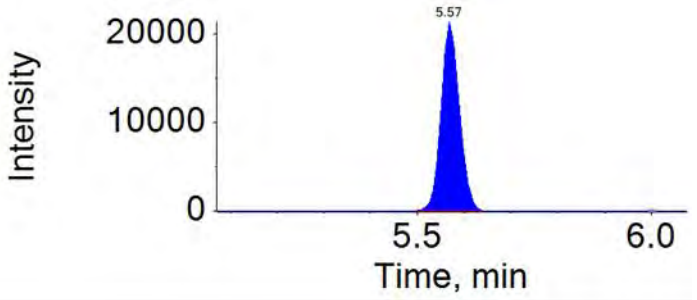
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



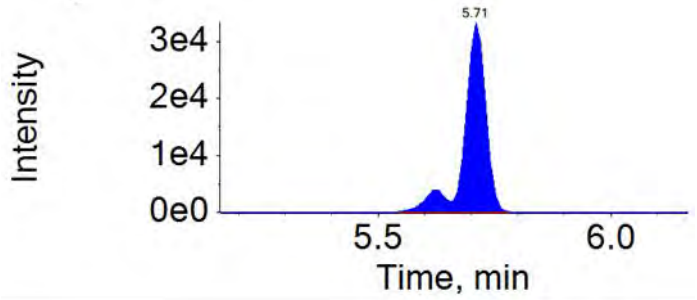
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



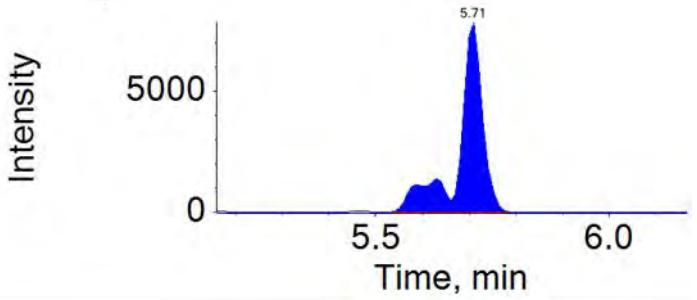
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



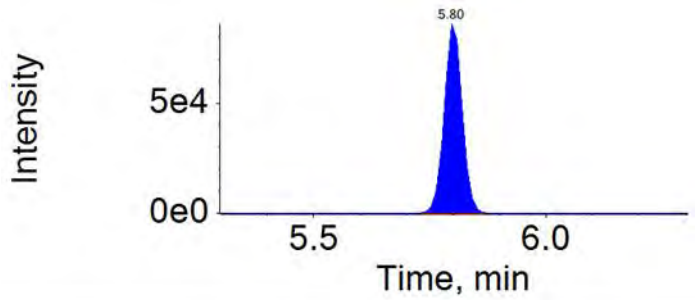
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



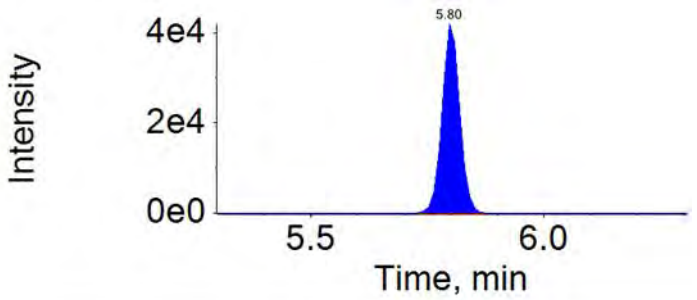
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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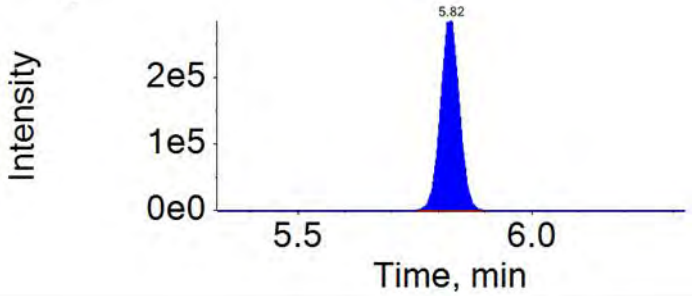
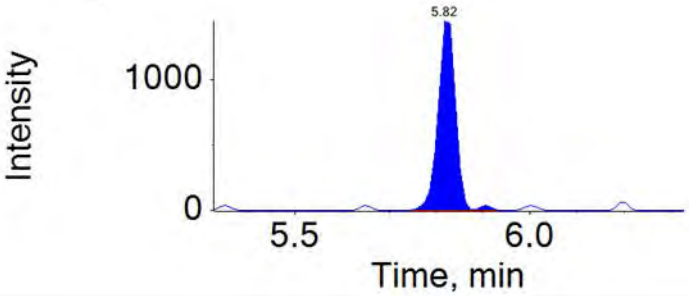
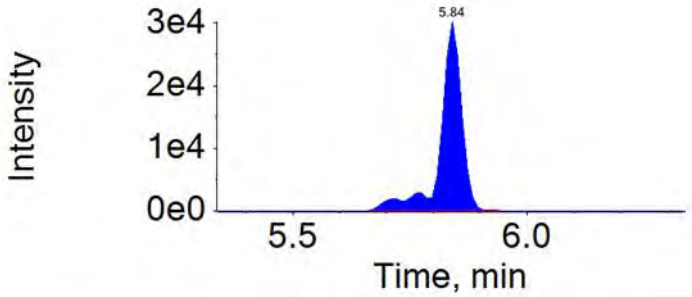
Component: PFUnDA
Primary Mass: 563.0 / 519.0



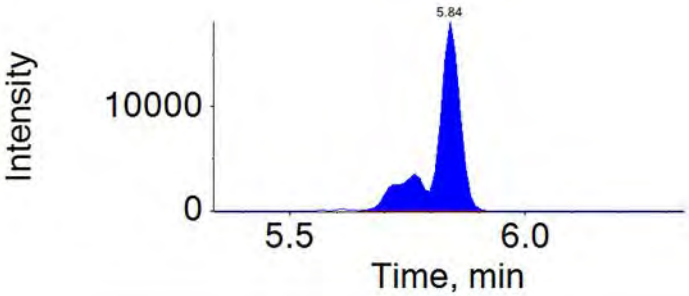
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



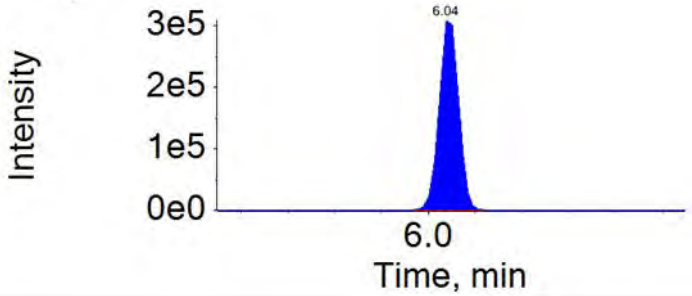
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



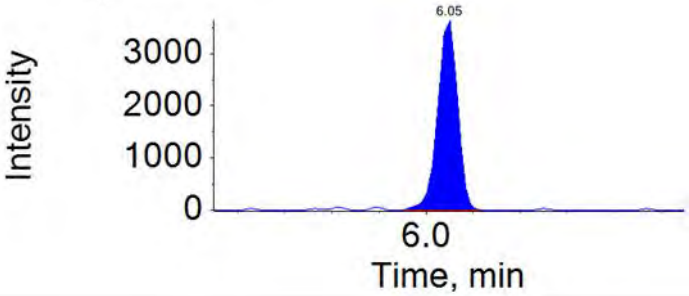
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



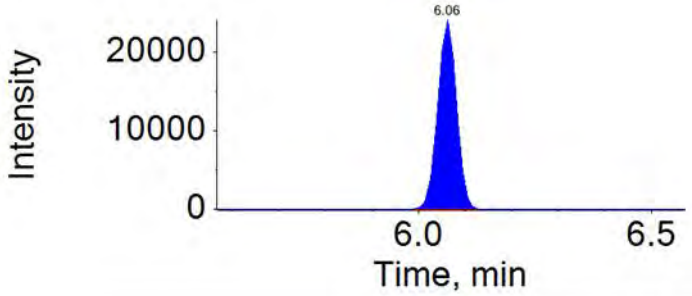
Component: PFDoDA
Primary Mass: 613.0 / 569.0



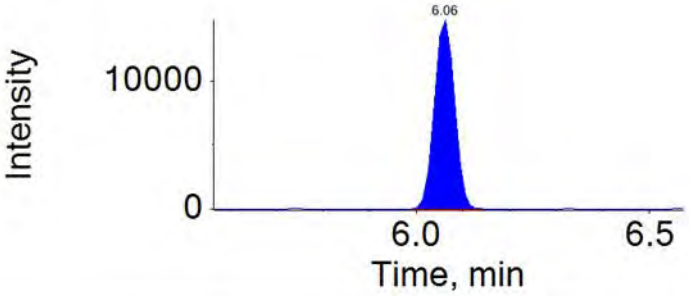
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



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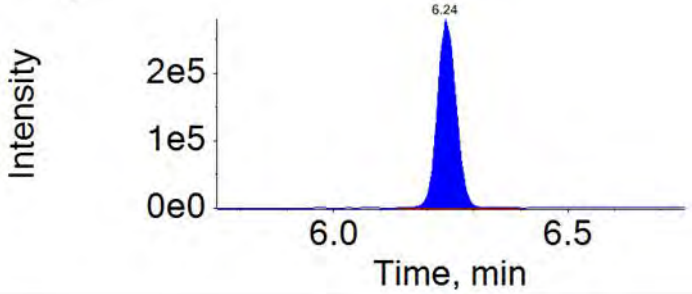
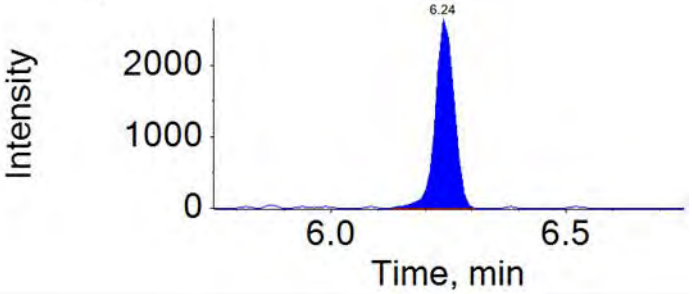
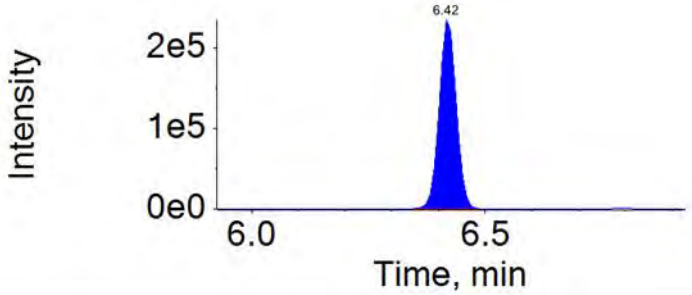
Component: PFTrDA
Primary Mass: 663.0 / 619.0



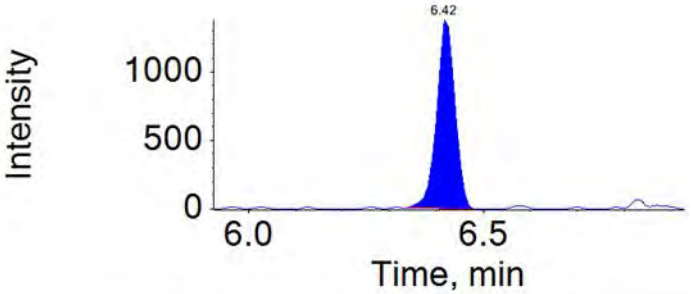
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



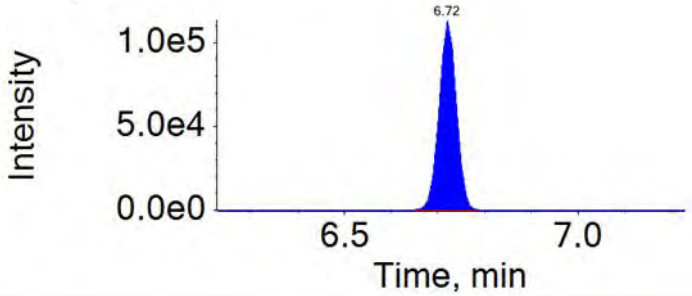
Component: PFTeDA
Primary Mass: 713.0 / 669.0



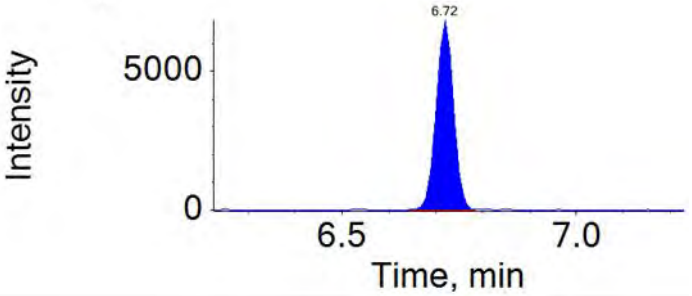
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



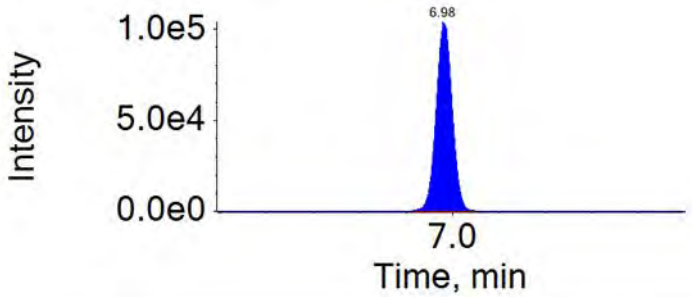
Component: PFHxDA
Primary Mass: 813.0 / 769.0



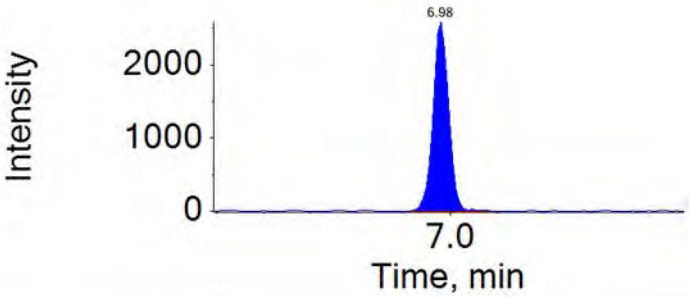
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



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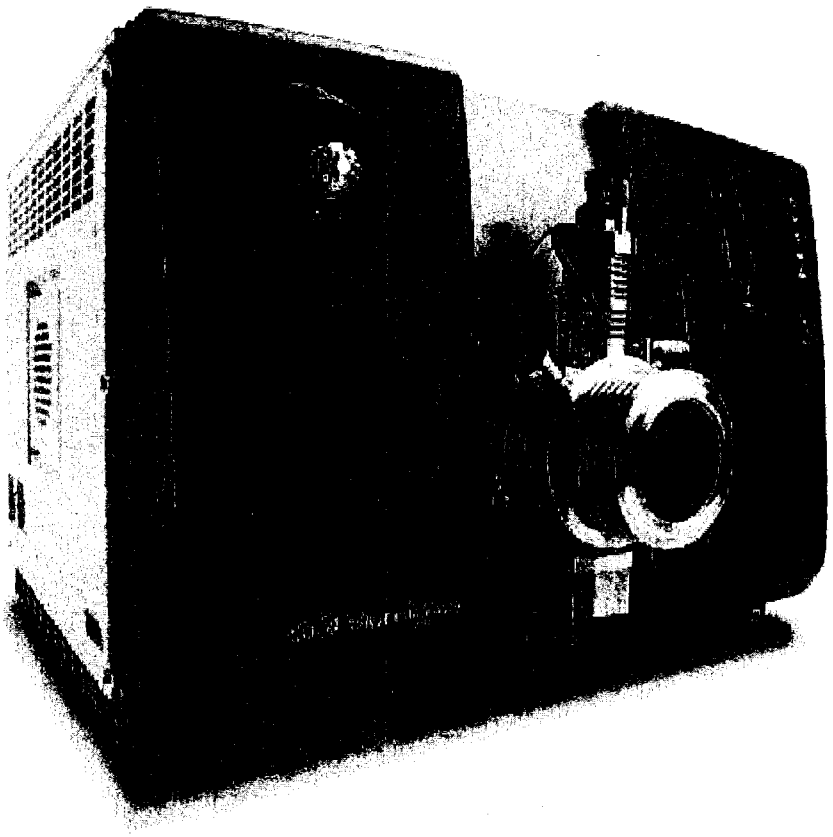
SCIEX

Triple Quad™ 4500 and Triple Quad™ 4500MD Systems

Installation Checklist and Data Log



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October 2016

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Installation Preparation 1

Note: For regulatory and safety information for the mass spectrometer, refer to the *System User Guide*.

Note: Before starting the installation, verify that the customer has completed the checklist in the *Site Planning Guide*.

Customer Information

Organization	Eurofins		
Address	2425 New Holland Pike Lancaster, PA 17601		
Telephone	717-556-7231	Fax	N/A
Contact name	Charles Neslund		
E-mail address	CharlesNeslund@eurofinsUS.com		

System Information

Table 1-1 Mass Spectrometer Information

Mass spectrometer location	A-223
Mass Spectrometer model name	4500QQQ
Mass spectrometer serial number	EB220251804
Firmware version	PIL1801
Roughing pump serial number	31001702300

Table 1-2 Acquisition Computer Information

Model	XE2	Service tag	5L3QLN2
OS version	Win7 64bit	OS service pack	SP1
Analyst® or Analyst® MD software version	1.7.0	Analyst® or Analyst® MD software hotfix	HF2
Cliquid® MD software version (4500MD systems only)	N/A		
MultiQuant™ or MultiQuant™ MD software version	3.0.3		

Table 1-3 Ion Source Information

Component	Serial Number
Turbo V™ ion source • TurboIonSpray® probe • APCI probe (if applicable)	2001171218 20380180321 20252180221
NanoSpray® ion source (if applicable, non-MD systems only)	N/A
DuoSpray™ ion source (if applicable, non-MD systems only) • TurboIonSpray® probe • APCI probe (if applicable)	N/A N/A N/A
Other/Third-party ion source (if applicable, non-MD systems only)	N/A

Table 1-4 System Components and Peripherals

Component	Serial Number
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Installation Checklist 2

The Field Service Employee (FSE) must complete this checklist to make sure that every step in the installation procedure is completed. The checklist also contains an installation acceptance form for the customer representative and the FSE to sign when the work is complete. Refer to Signoff on page 21.

Unpacking and Inspection

Task	Complete	N/A
Inspect the packaging: • Inspect all tip and shock indicators for signs of excessive shock or tilting. • Inspect the boxes for exterior damage.	☑	
Unpack and inspect all of the components.	☑	
(Optional) Unpack, inspect, and install the bench. 1. Inspect the packaging for exterior damage. 2. Unpack the bench and then inspect for damage. 3. Install the bench.	◉	◉

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Hardware Installation

Task	Complete	N/A
Install the mass spectrometer on the bench.	☑	
Affix the name plate on the front cover of the mass spectrometer (only applies to mass spectrometer with the prefix 'CJ' in the serial number).	☑	
Verify that the mains supply outlets for the roughing pump and the mass spectrometer deliver stable output voltages that meet the specified electrical requirements.	☑	
(Optional) Install the SCIEX-supplied UPS.	○	○
Install the roughing pump, connecting it to the mass spectrometer and the vent. Make sure that the roughing pump contains sufficient oil.	☑	
(Optional) Install the SCIEX-supplied gas generator.	○	○
Connect the gas lines.	☑	
Install and connect the drain bottle.	☑	
Install the Turbo V™ ion source. Refer to the *Turbo V™ Ion Source Operator Guide*. For 4500MD systems, refer to the *System User Guide*. For other systems, refer to the *Turbo V™ Ion Source Operator Guide*.	☑	
Adjust the stopper on the integrated syringe pump.	☑	
WARNING! Electrical Shock Hazard. Make sure that the system can be disconnected from the mains supply outlet in an emergency. Do not block the mains supply outlet. Plug in and turn on the roughing pump, and then plug in and turn on the mass spectrometer.	☑	

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Acquisition Computer Installation

Task	Complete	N/A
Install the computer and monitor on the computer table.	☑	
Connect the Ethernet cable from the computer to the mass spectrometer.	☑	
Turn on the computer.	☑	
Configure IP addresses for communication with the mass spectrometer.	☑	
(Optional) Connect the computer to the customer network.	◉	◉
Install the Analyst® or Analyst® MD software.	☑	
Install any applicable Analyst® or Analyst® MD software hotfixes.	◉	◉
(4500MD systems) Install the Cliquid® MD software.	◉	◉
Install the MultiQuant™ or MultiQuant™ MD software.	☑	
(If applicable, not for use with 4500MD systems) Install the StatusScope® agent on the acquisition computer, and then perform these tasks: • Discuss warranty coverage for the StatusScope® software. • If the customer wants the StatusScope® software installed, then complete the StatusScope® user access form. • If the customer does not want theStatusScope® software installed, then remove the StatusScope® software.	◉	◉
(Optional) Install and license any add-on software purchased and shipped with the system. • (Non-MD systems) If applicable, Cliquid® software has been installed. • Other Analyst® or Analyst® MD compatible add-on software shipped with the system has been installed.	◉	◉

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Task	Complete	N/A
Verify and update the firmware and configuration files.	☑	
Install the factory files.	☑	

Initialization and Verification

Note: Perform these tasks after the mass spectrometer reaches operating vacuum.

Task	Complete	N/A
Perform the high pressure source and blocked exhaust flow tests.		
Measure and tune the Q1, Q3, and QJet® coil boxes.	◉	◉
Perform all installation tests, print out the test results, and complete the Data Log.	☑	

Wrap-up

Task	Complete	N/A
Delete unnecessary files from the computers.	☑	
Back up the computer file systems, including the Analyst Data folder.	☑	
Create a computer image using the image utility.	☑	
Apply the biohazard labels included in the install kit. Apply one label to the ion source, and the other to the waste bottle. Find a vacant space that is clearly visible to affix the labels.	☑	

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Task	Complete	N/A
Complete all of the sections in the *Customer Familiarization Checklist*. Make a copy of the completed checklist and then give the original to the customer.	☑	
Inform the customer about the continuous improvement telephone surveys, and then advise the customer that a third party will call to obtain feedback.	☑	
Complete the *Installation Checklist and Data Log*: • Obtain customer acceptance. • Make a copy of the form and the test results. • Provide the customer with the originals. • (For MD systems only) E-mail this completed document and the test result files to servicedata@sciex.com.	☑	

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Data Log 3

Use this log to record the test data obtained during performance of the system verification tests during installation.

Note: Perform all procedures with the Turbo V™ ion source, unless otherwise specified.

Pre-test Pressure Verification is Complete	☑

Perform this test with the Analyst® or Analyst® MD software.

Test	Specification	Result
Vacuum chamber pressure with CAD gas off	0.4×10^{-5} torr ≤ $P_{CAD\ 0}$ ≤ 1.1×10^{-5} torr	0.7 x 10e-5 torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr ≤ ($P_{CAD\ 12} - P_{CAD\ 0}$) ≤ 2.8×10^{-5} torr	2.1 x 10e-5 torr

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Q1 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10)	☑

- **Test solution:** POS PPG, 2e-6 M
- **Flow rate:** 5 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
175.133	$\geq 8.0 \times 10^6$	1.6298e7	0.6 to 0.8	0.7105
500.380	$\geq 8.0 \times 10^6$	2.4240e7	0.6 to 0.8	0.6995
906.673	$\geq 2.0 \times 10^7$	3.2349e7	0.6 to 0.8	0.7151
1952.427	$\geq 8.8 \times 10^5$	1.8122e6	0.6 to 0.8	0.7423

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Q1 Positive PPGs Test is Complete: Peak Width for Identified Masses ☑

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

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Q3 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10)	☑

- **Test solution:** POS PPG, 2e-6 M
- **Flow rate:** 5 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
175.133	≥ 8.0×10^6	1.950[illegible]	0.6 to 0.8	0.6916
500.380	≥ 8.0×10^6	1.925[illegible]	0.6 to 0.8	0.7278
906.673	≥ 2.0×10^7	3.1634[illegible]	0.6 to 0.8	0.7403
1952.427	≥ 8.8×10^5	2.4968[illegible]	0.6 to 0.8	0.7828

Q3 Positive PPGs Test is Complete: Peak Width for Identified Masses ☑

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q1 Negative PPGs Test is Complete ☑

- **Test solution:** NEG PPG, 3e-4 M
- **Flow rate:** 10 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-1 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q1 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	≥ 1.8×10^7	2.23786e7	0.6 to 0.8	0.6638
1863.306	≥ 1.4×10^6	2.11046e6	0.6 to 0.8	0.7369

Table 3-2 Verification: Peak Width for Identified Masses for the Q1 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
44.998, 411.259, 585.385, 933.636 1223.845, 1572.097, 1863.306, 1979.389	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q3 Negative PPGs Test is Complete ☑

- **Test solution:** NEG PPG, 3e-4 M
- **Flow rate:** 10 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-3 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q3 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	≥ 1.8×10^7	2.6621e7	0.6 to 0.8	0.7288
1863.306	≥ 2.0×10^6	3.5734e6	0.6 to 0.8	0.7033

Table 3-4 Verification: Peak Width for Identified Masses for the Q3 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
44.998, 411.259, 585.385, 933.636 1223.845, 1572.097, 1863.306 1979.389	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

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Reserpine MS/MS Test is Complete	☑

- **Test solution:** Reserpine solution 0.167 pmol/µL
- **Flow rate:** 5 µL/min
- **Scan rate:** 10 Da/s (both MS and MS/MS)
- **Scan mode:** Product Ion (MS2)
- **Product Of:** 609.3 (or as calibrated)
- **Product Ion:** 195.1
- **Cycles:** 10
- **MCA:** On
- **Printouts required:** Spectra for masses 609.3 and 195.1, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-5 Verification for the Reserpine MS/MS Test

Specification	Result
Transmission efficiency $\frac{Intensity\ for\ ion\ at\ m/z\ 195.1}{Intensity\ for\ ion\ at\ m/z\ 609.2\ (or\ as\ calibrated)} \times 100 \geq 10\%$	[redacted]

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Turbo V™ Ion Source Acceptance Test is Complete	☑

Table 3-6 Verification for the Turbo V™ Ion Source Acceptance Test

Probe	Test	Specification	Result (Passed)
TurboIonSpray®	Set the temperature parameter to 500 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.	☑
APCI	Set the temperature parameter to 400 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.	☑

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Post-test Pressure Verification is Complete	☑

Perform this test with the Analyst® or Analyst® MD software.

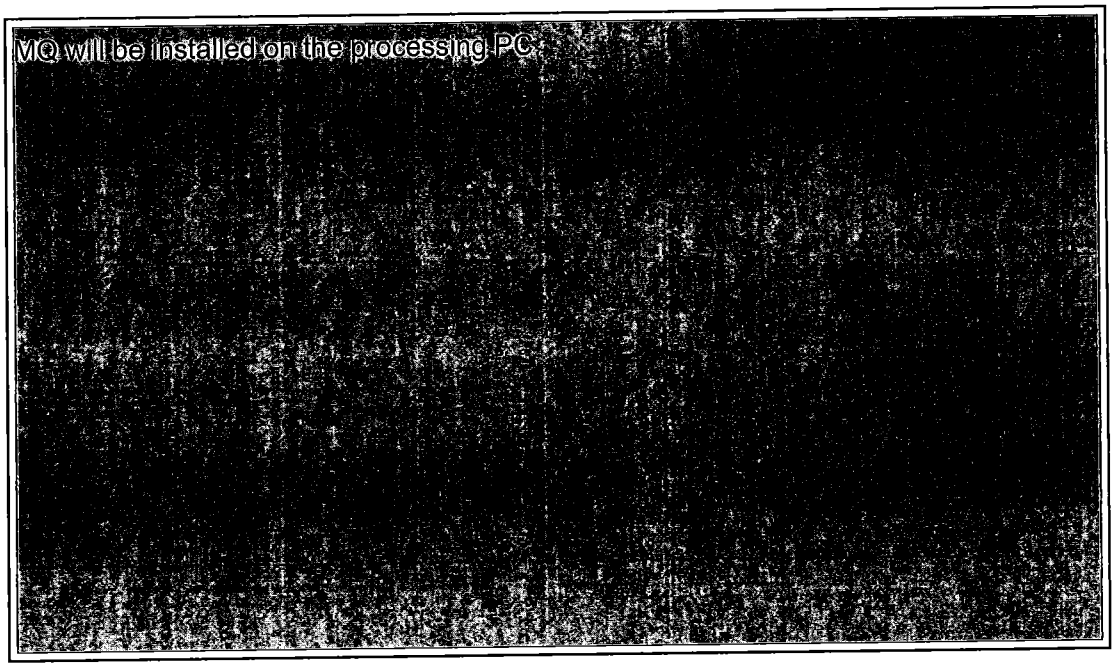
Test	Specification	Result
Vacuum chamber pressure with CAD gas off	0.4×10^{-5} torr ≤ $P_{CAD\ 0}$ ≤ 1.1×10^{-5} torr	0.4x10e-5torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr ≤ ($P_{CAD\ 12} - P_{CAD\ 0}$) ≤ 2.8×10^{-5} torr	2.1x10e-5torr

Signoff 4

Organization	Eurofins		
Customer contact name	[redacted]	Date (yyyy-mm-dd)	[redacted]
Customer contact signature*			
FSE name	Michael F Pennell	Date (yyyy-mm-dd)	2018-05-29
FSE signature			

* Signature required on hard copy only.

Comments and Exceptions



Revision History

Revision	Reason for Change	Date
A	First release of the combined *SCIEX Triple Quad™ 4500 and 4500MD System Installation Checklist and Data Log.* Replaces D5028556 E.	May 2014
B	Updated the installation test data.	December 2014
C	• Applied new template. • Updated the System Information, Acquisition Computer Installation, and Data Log sections.	October 2016

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

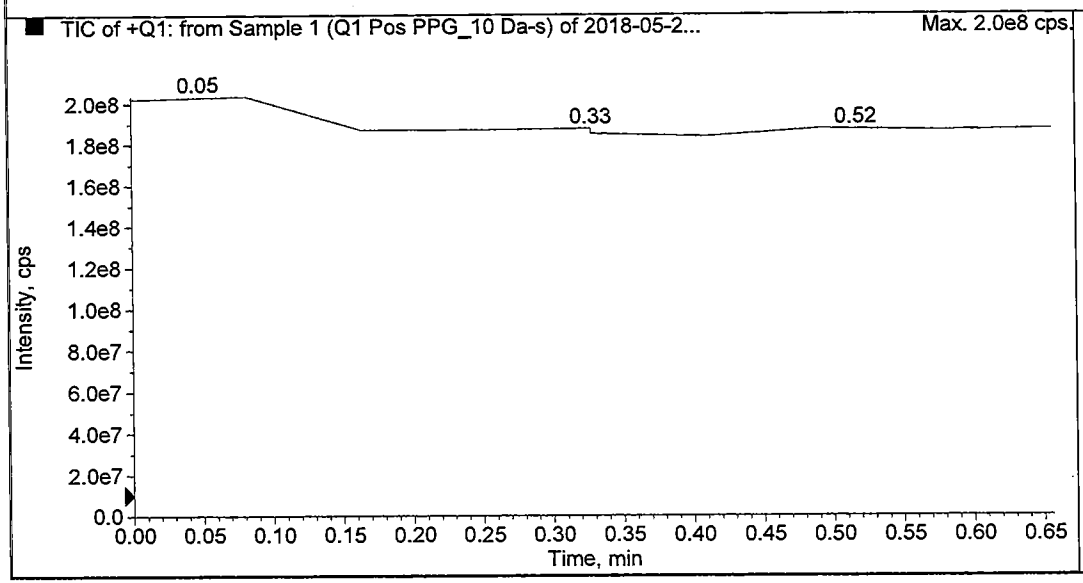
Mass Spectrometer Method Properties

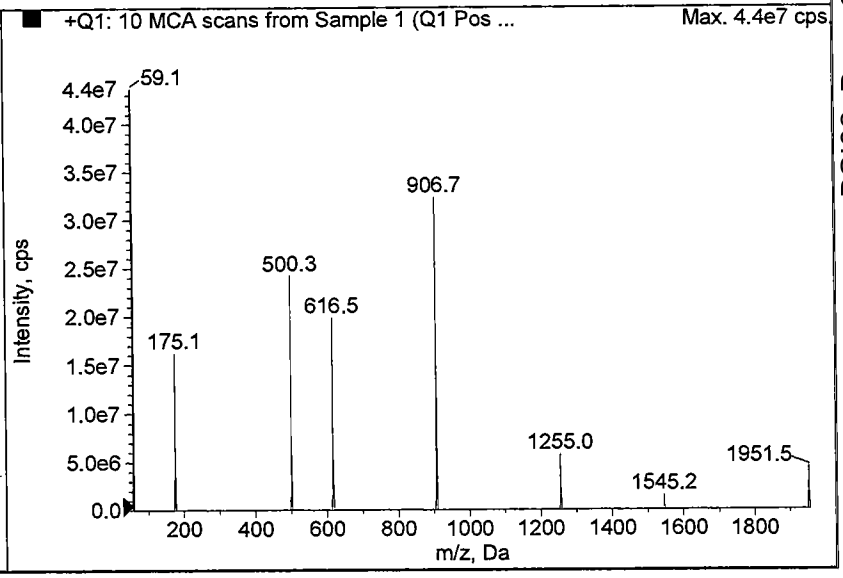
Period 1:

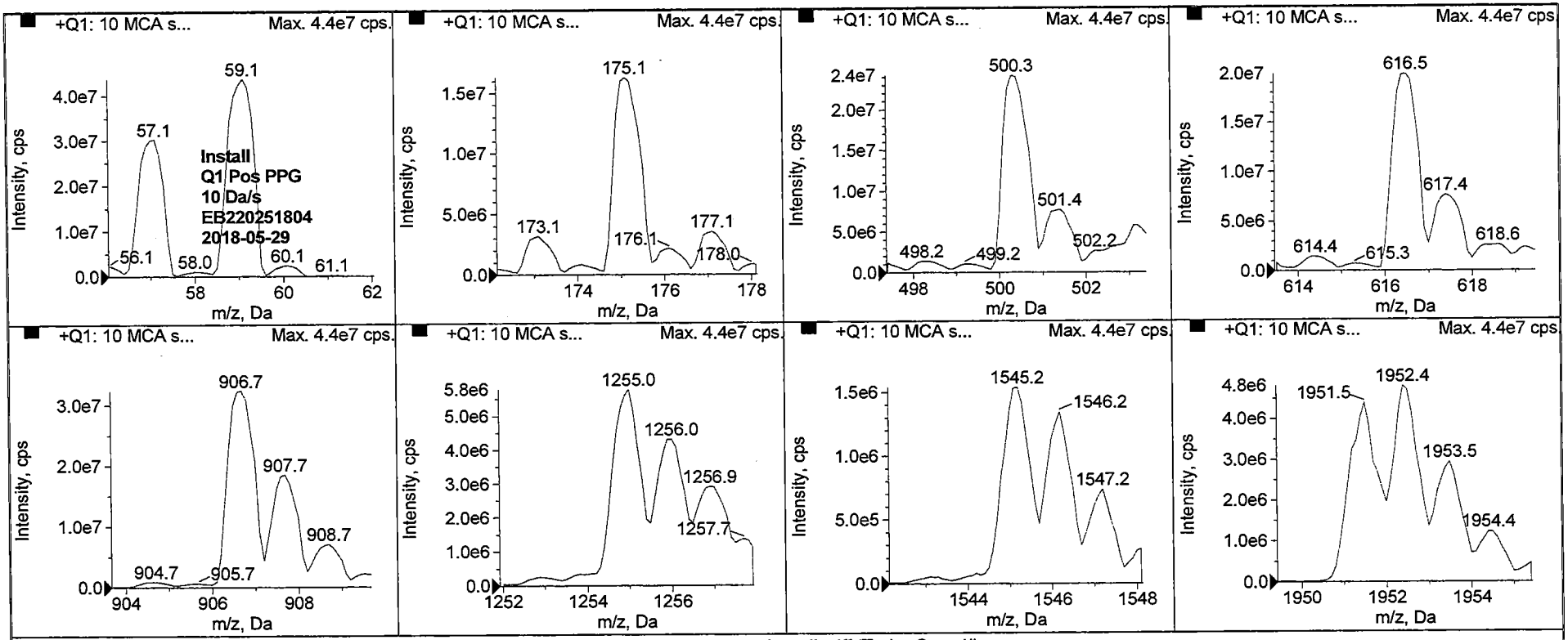
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 10 MCA scans from Sample 1 (Q1 Pos PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0559	4.3682e7	0.6931	-5.8810e-3
2	175.1330	175.1423	1.6298e7	0.7105	-9.3008e-3
3	500.3800	500.3732	2.4240e7	0.6995	6.8010e-3
4	616.4640	616.4825	1.9901e7	0.6890	-0.0185
5	906.6730	906.6804	3.2349e7	0.7151	-7.3891e-3
6	1254.9250	1254.9327	5.7895e6	0.7632	-7.6510e-3
7	1545.1340	1545.1665	1.5381e6	0.7694	-0.0325
8	1952.4270	1952.4521	4.8122e6	0.7423	-0.0251

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

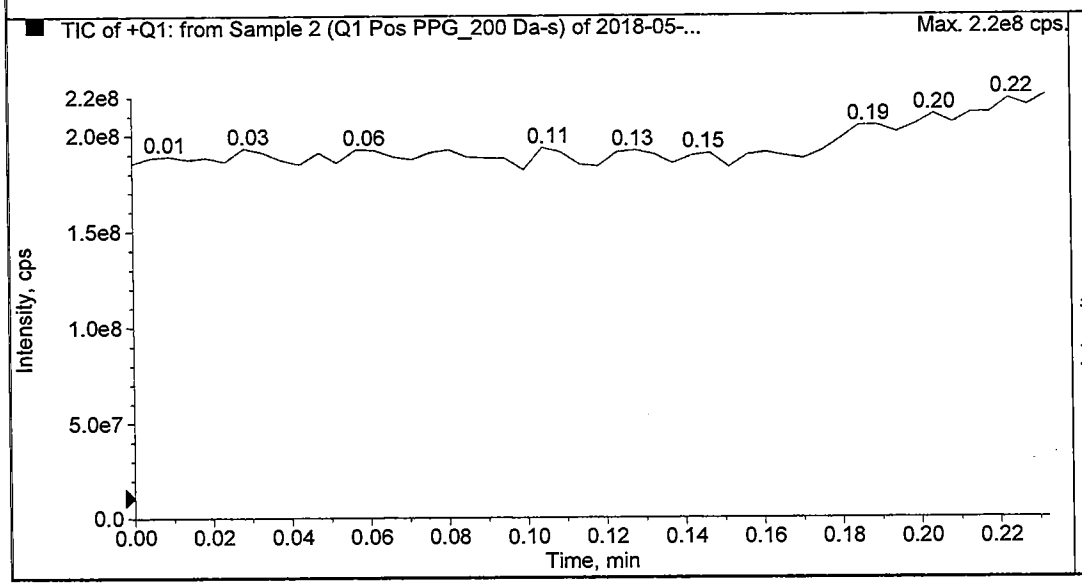
Mass Spectrometer Method Properties

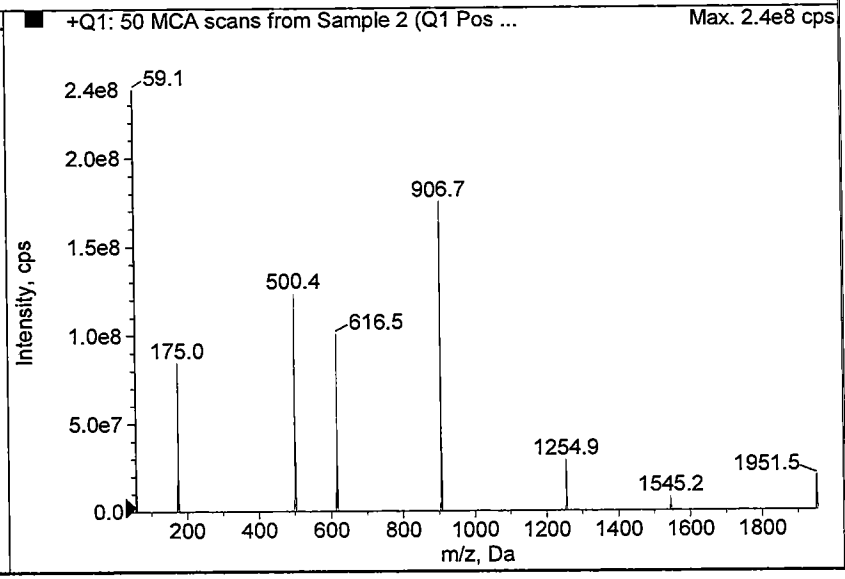
Period 1:

Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit





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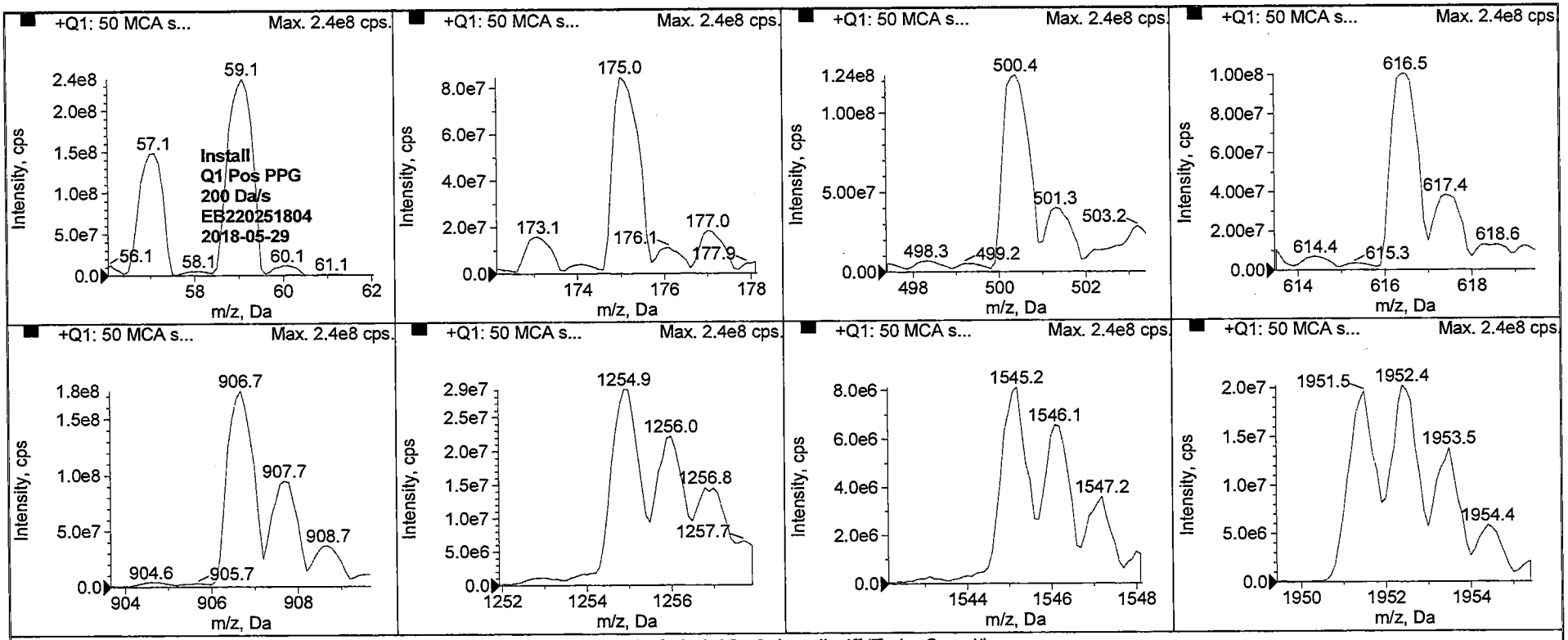


Peak List for " +Q1: 50 MCA scans from Sample 2 (Q1 Pos PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0570	2.3875e8	0.6632	-6.9868e-3
2	175.1330	175.1204	8.4656e7	0.7253	0.0126
3	500.3800	500.3915	1.2366e8	0.7160	-0.0115
4	616.4640	616.4631	1.0058e8	0.7191	9.0862e-4
5	906.6730	906.6801	1.7505e8	0.7187	-7.0740e-3
6	1254.9250	1254.9211	2.9174e7	0.7662	3.8790e-3
7	1545.1340	1545.1254	8.1140e6	0.7324	8.6264e-3
8	1952.4270	1952.4458	2.0214e7	0.7760	-0.0188

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

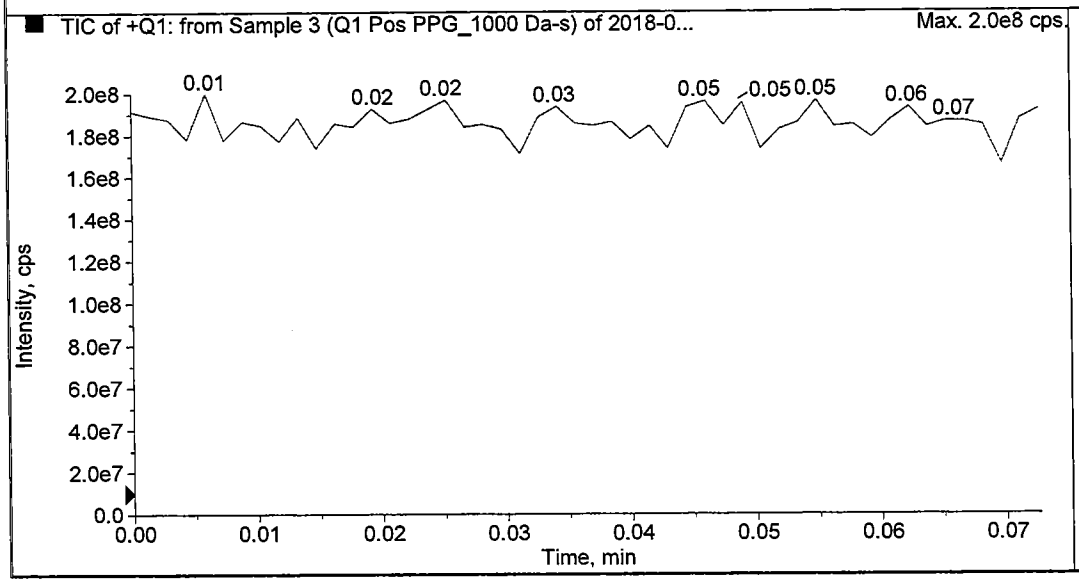
Mass Spectrometer Method Properties

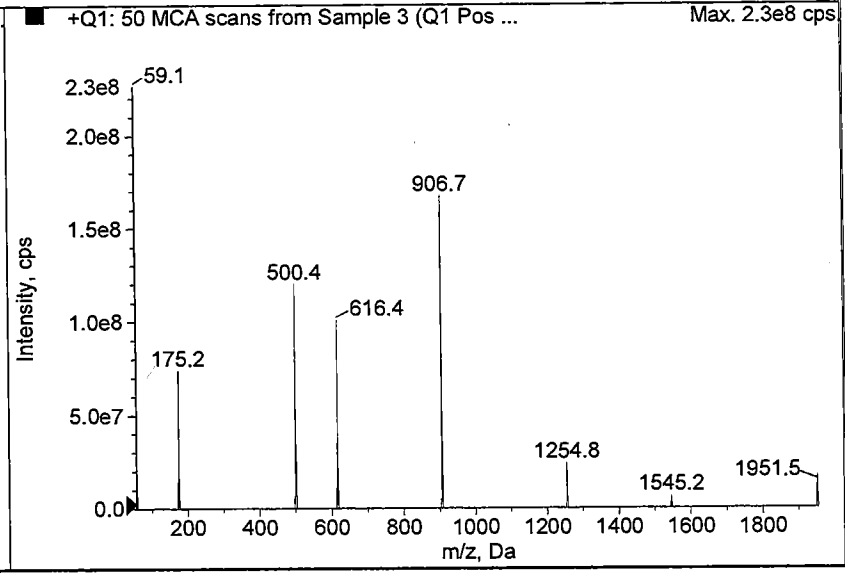
Period 1:

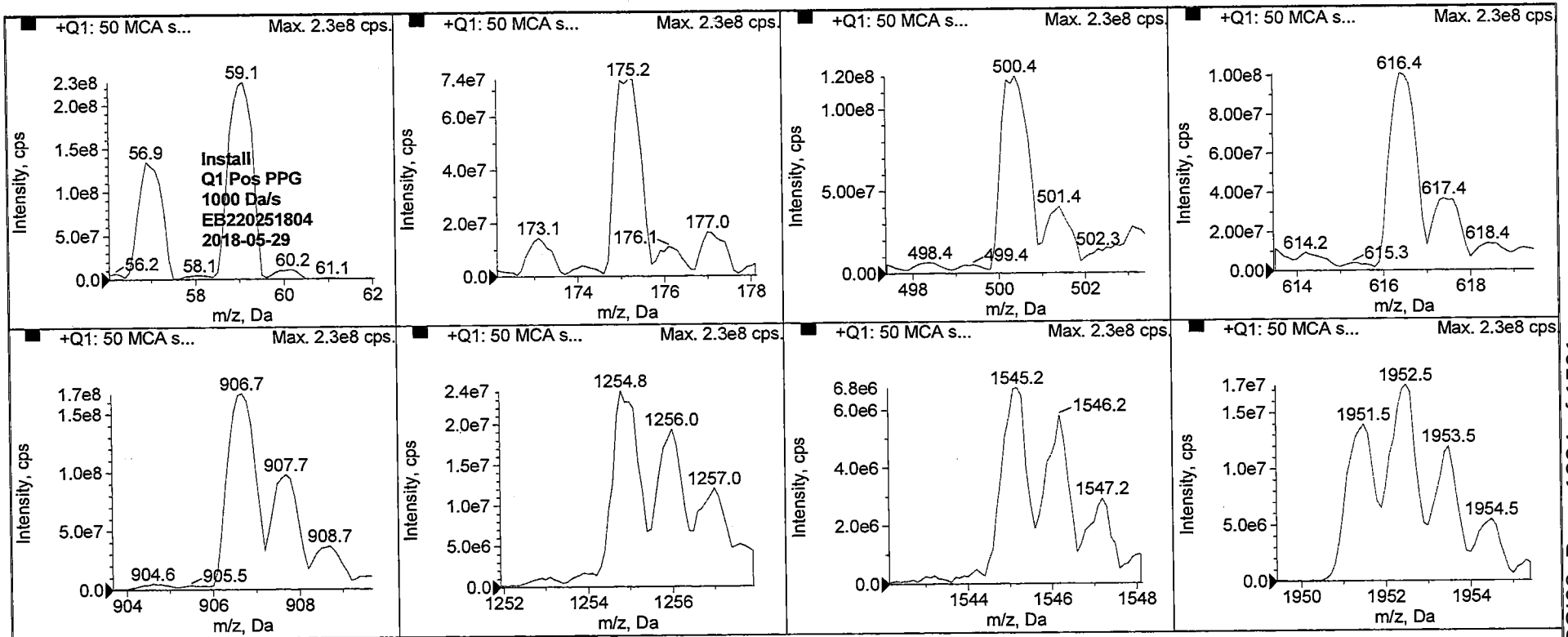
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 50 MCA scans from Sample 3 (Q1 Pos PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0540	2.2668e8	0.6411	-4.0020e-3
2	175.1330	175.1630	7.4160e7	0.7037	-0.0300
3	500.3800	500.3767	1.2013e8	0.7536	3.3425e-3
4	616.4640	616.4720	1.0080e8	0.7224	-8.0022e-3
5	906.6730	906.6738	1.6743e8	0.7638	-8.2831e-4
6	1254.9250	1254.9160	2.4100e7	0.7104	9.0009e-3
7	1545.1340	1545.1314	6.7600e6	0.6758	2.5866e-3
8	1952.4270	1952.4259	1.7440e7	0.7572	1.0770e-3

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

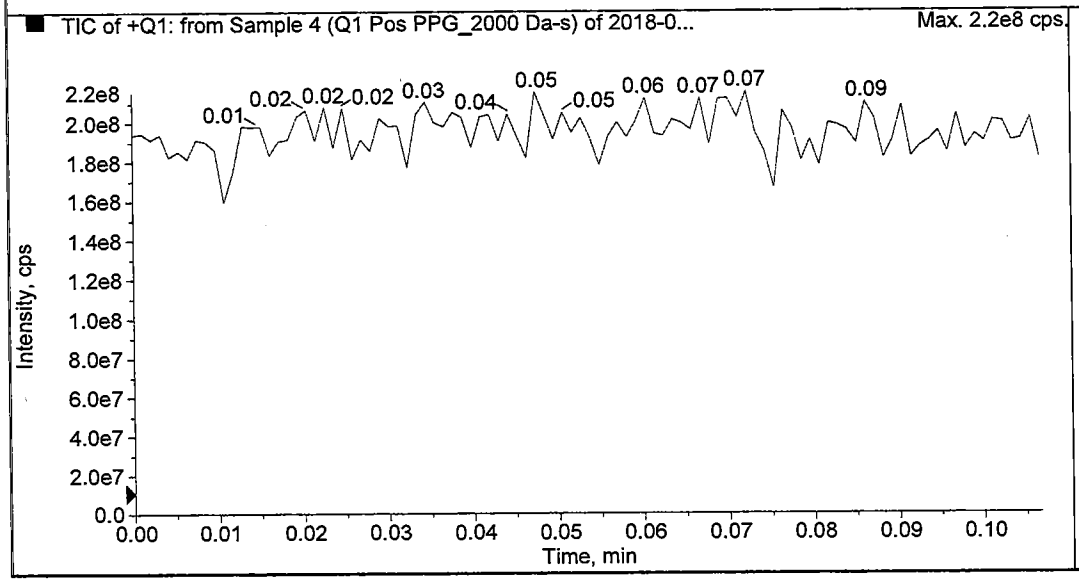
Mass Spectrometer Method Properties

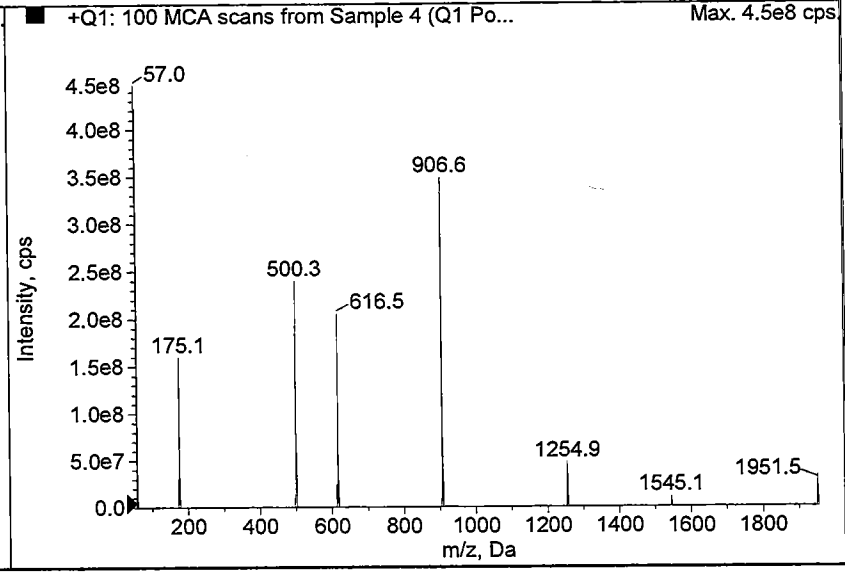
Period 1:

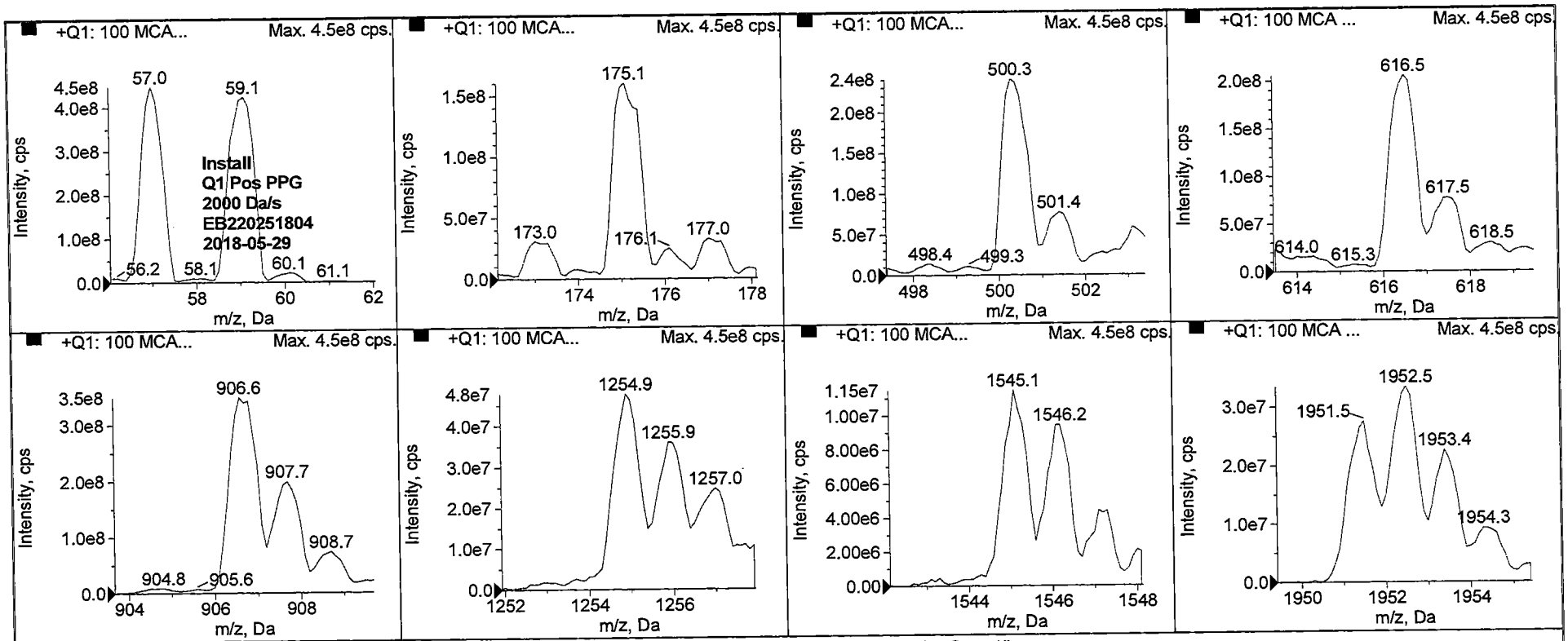
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 100 MCA scans from Sample 4 (Q1 Pos PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0541	4.2264e8	0.6747	-4.1197e-3
2	175.1330	175.1367	1.6034e8	0.7378	-3.7421e-3
3	500.3800	500.3744	2.4052e8	0.6995	5.5649e-3
4	616.4640	616.4767	2.0538e8	0.7070	-0.0127
5	906.6730	906.6844	3.4888e8	0.7414	-0.0114
6	1254.9250	1254.9130	4.7800e7	0.7332	0.0120
7	1545.1340	1545.1396	1.1460e7	0.6649	-5.5517e-3
8	1952.4270	1952.4475	3.3400e7	0.7743	-0.0205

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	5500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	1.1
CEM (CEM):	1800.0

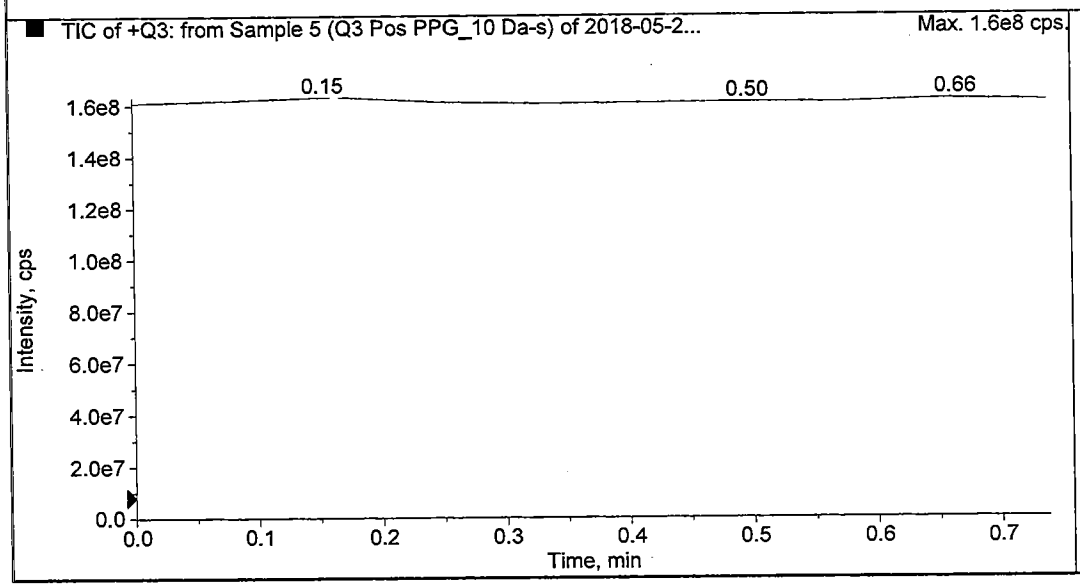
Mass Spectrometer Method Properties

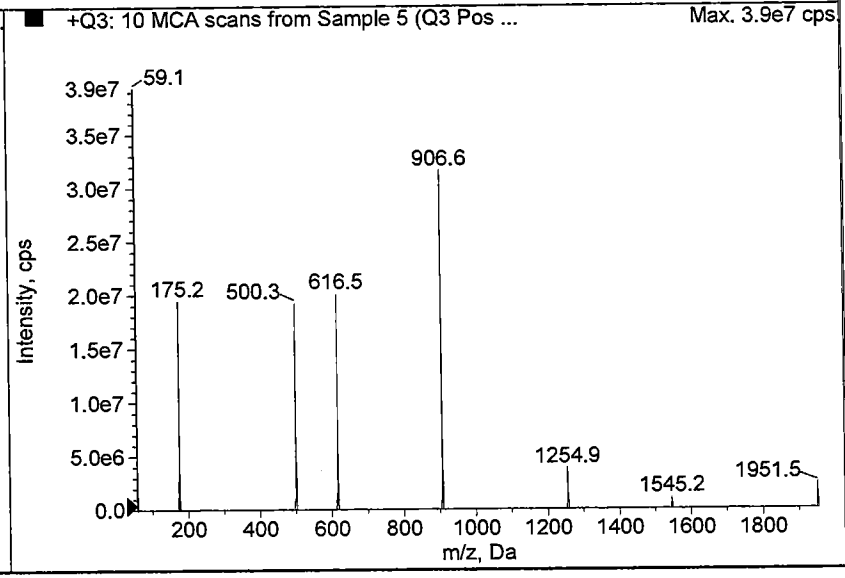
Period 1:

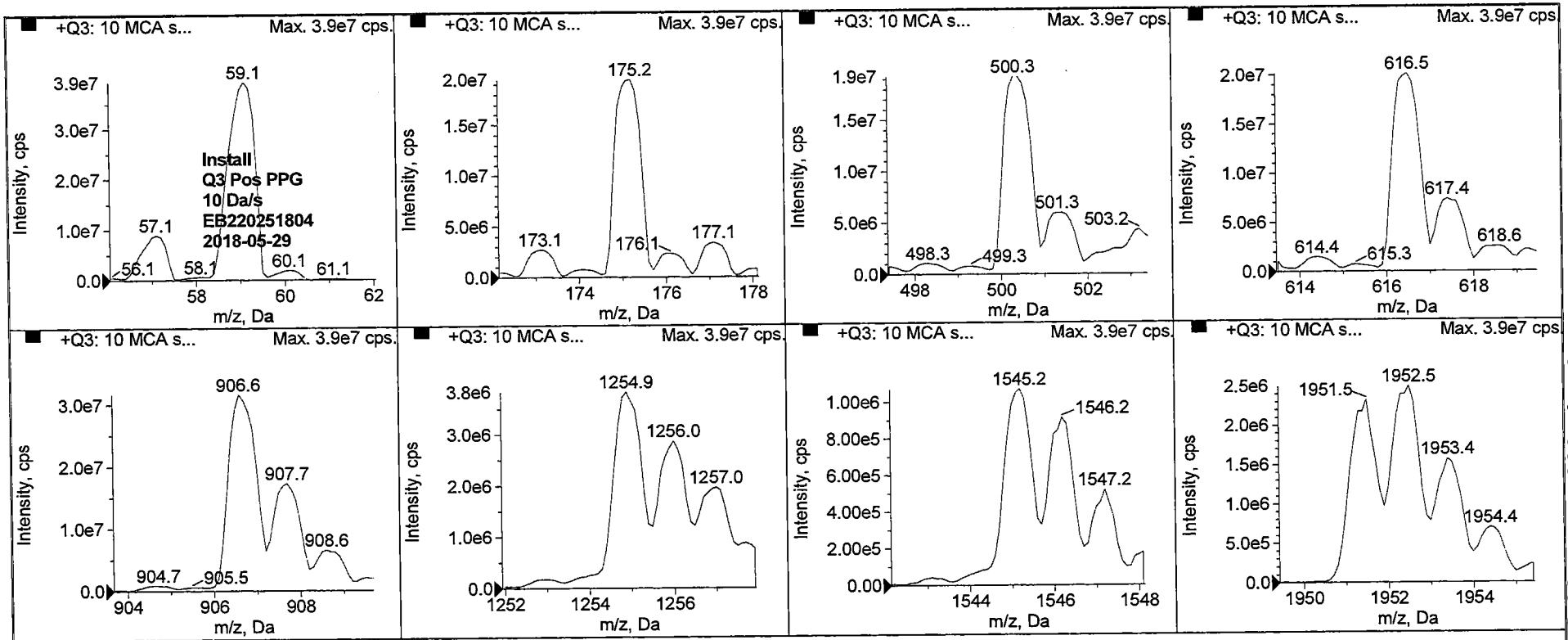
Scans in Period:	10
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q3 MS (Q3)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit







Peak List for "+Q3: 10 MCA scans from Sample 5 (Q3 Pos PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0600	3.9407e7	0.7175	-9.9728e-3
2	175.1330	175.1331	1.9501e7	0.6916	-1.2286e-4
3	500.3800	500.3823	1.9253e7	0.7278	-2.2612e-3
4	616.4640	616.4685	2.0128e7	0.7214	-4.5095e-3
5	906.6730	906.6736	3.1634e7	0.7403	-6.1273e-4
6	1254.9250	1254.9230	3.8338e6	0.7464	2.0449e-3
7	1545.1340	1545.1599	1.0717e6	0.7475	-0.0259
8	1952.4270	1952.4105	2.4968e6	0.7828	0.0165

Mass Spectrometer Method Properties

State Parameter Editor

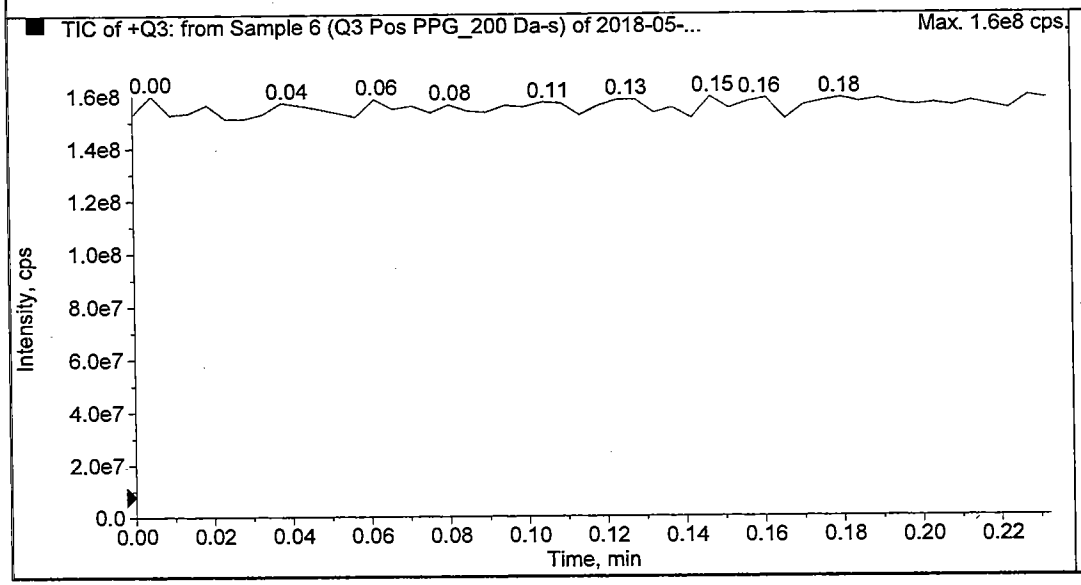
Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	5500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	1.0
CEM (CEM):	1800.0

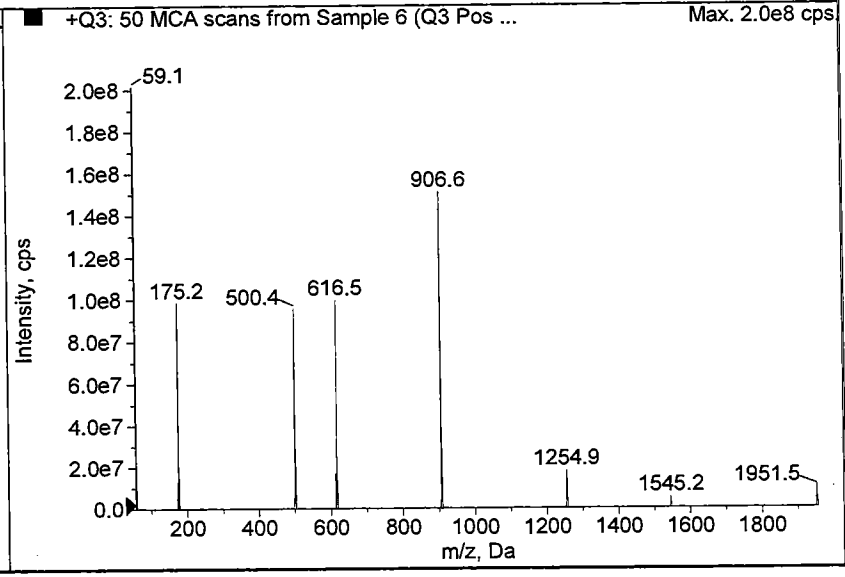
Period 1:

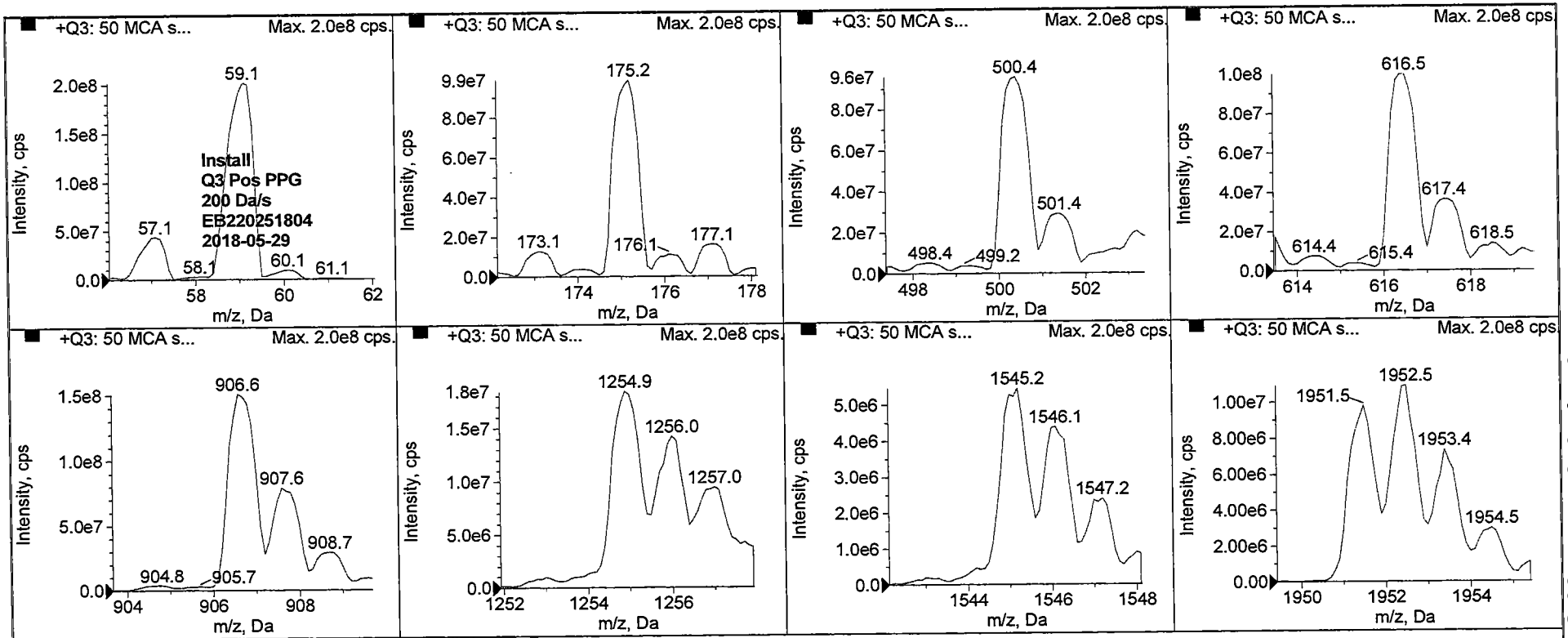
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q3 MS (Q3)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit







Peak List for " +Q3: 50 MCA scans from Sample 6 (Q3 Pos PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0535	2.0159e8	0.6898	-3.5186e-3
2	175.1330	175.1234	9.8734e7	0.6779	9.5931e-3
3	500.3800	500.3781	9.5670e7	0.7134	1.9254e-3
4	616.4640	616.4537	9.9852e7	0.7073	0.0103
5	906.6730	906.6796	1.5094e8	0.7211	-6.5779e-3
6	1254.9250	1254.9165	1.8432e7	0.7818	8.4504e-3
7	1545.1340	1545.1060	5.4540e6	0.7324	0.0280
8	1952.4270	1952.4363	1.0900e7	0.7220	-9.3366e-3

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	5500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	1.0
CEM (CEM):	1800.0

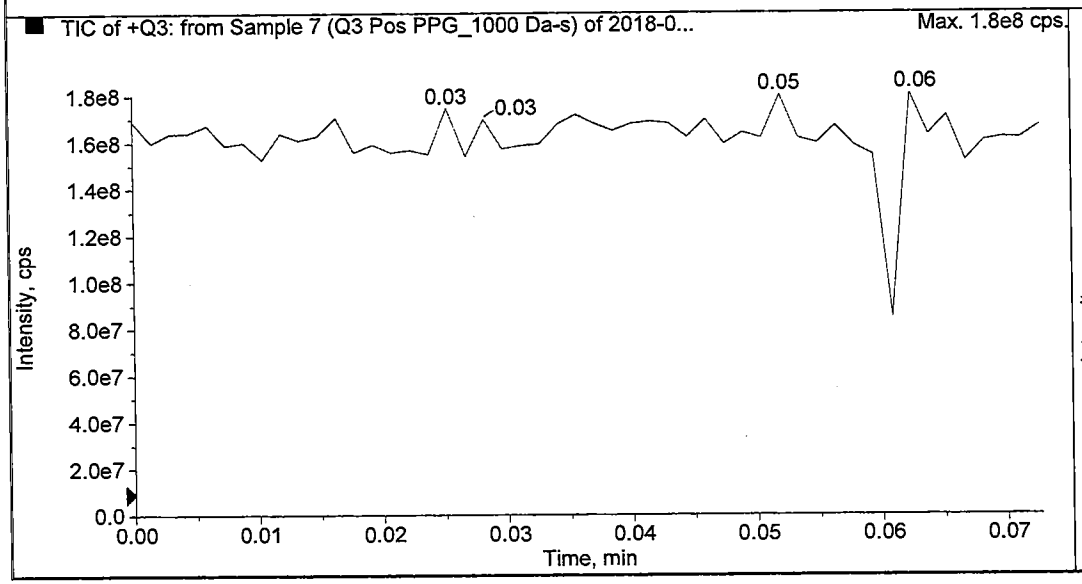
Mass Spectrometer Method Properties

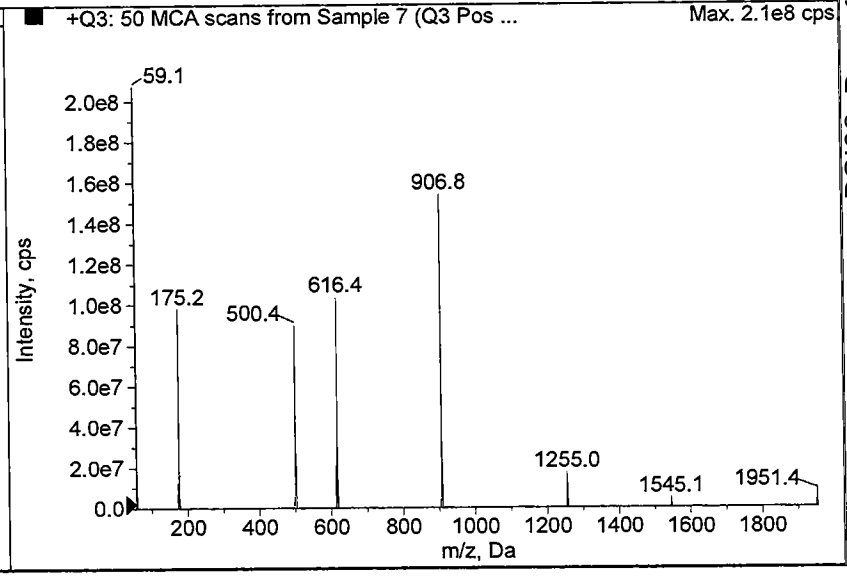
Period 1:

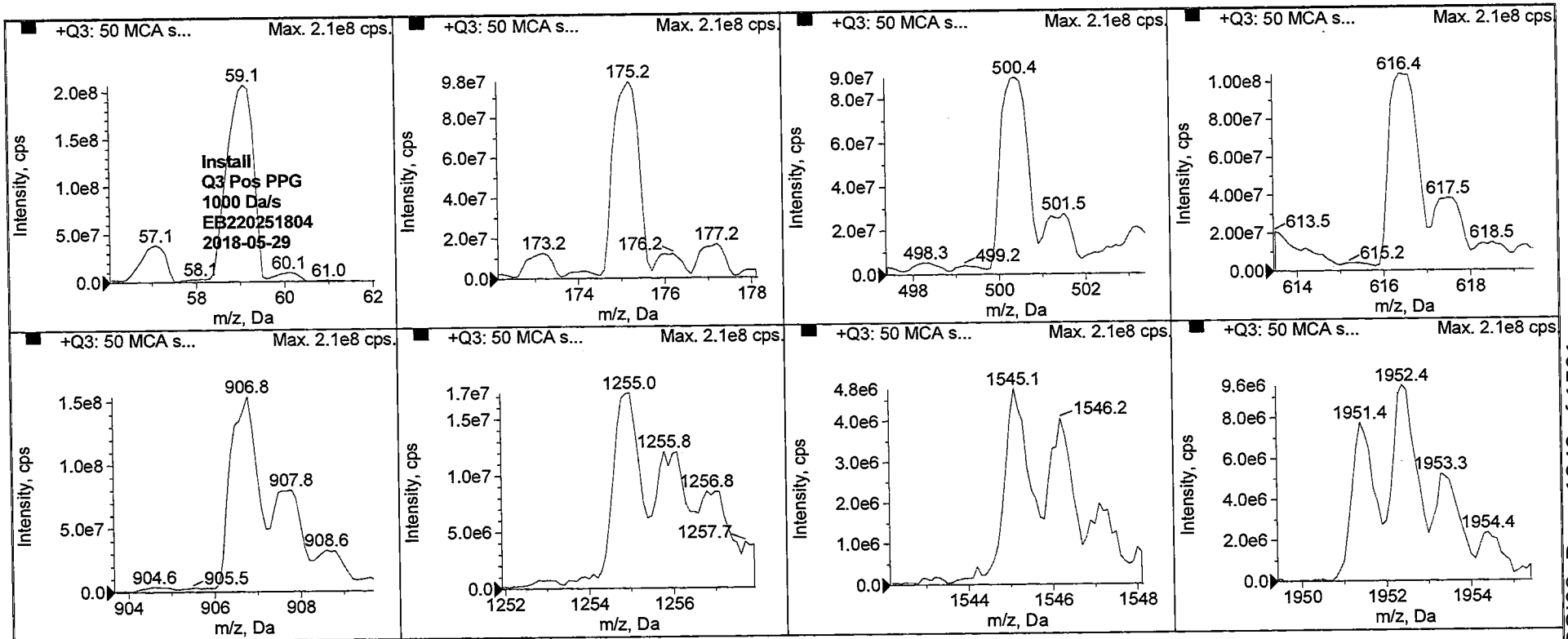
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q3 MS (Q3)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit







Peak List for " +Q3: 50 MCA scans from Sample 7 (Q3 Pos PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0525	2.0725e8	0.7070	-2.4950e-3
2	175.1330	175.1317	9.8190e7	0.6991	1.2969e-3
3	500.3800	500.3731	8.9990e7	0.7222	6.9400e-3
4	616.4640	616.4761	1.0393e8	0.7599	-0.0121
5	906.6730	906.6936	1.5407e8	0.7541	-0.0206
6	1254.9250	1254.9120	1.7310e7	0.7068	0.0130
7	1545.1340	1545.1453	4.7800e6	0.6227	-0.0113
8	1952.4270	1952.4249	9.5700e6	0.6631	2.0854e-3

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): 1.2

CEM (CEM): 1800.0

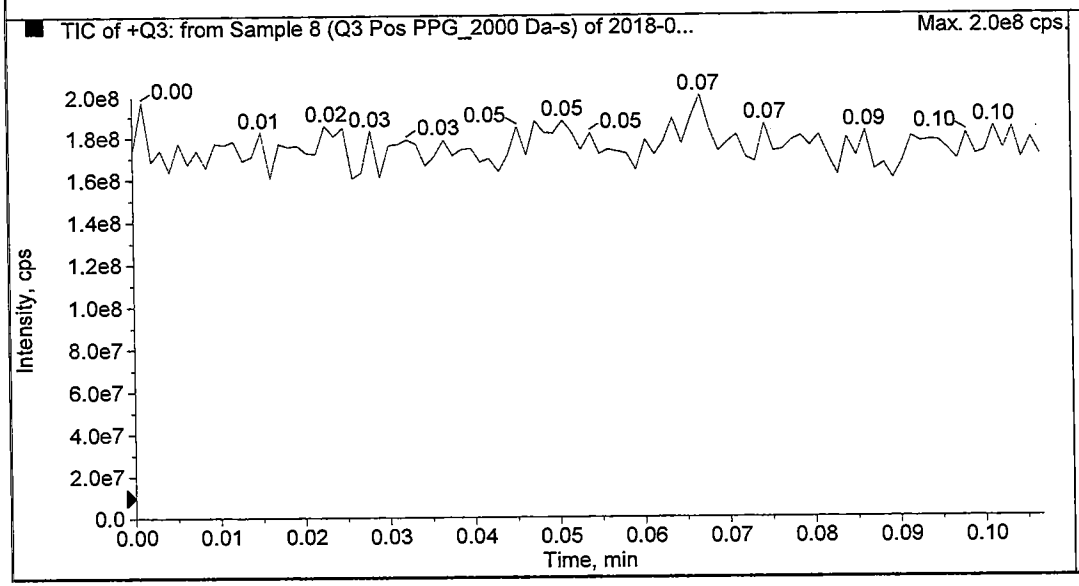
Mass Spectrometer Method Properties

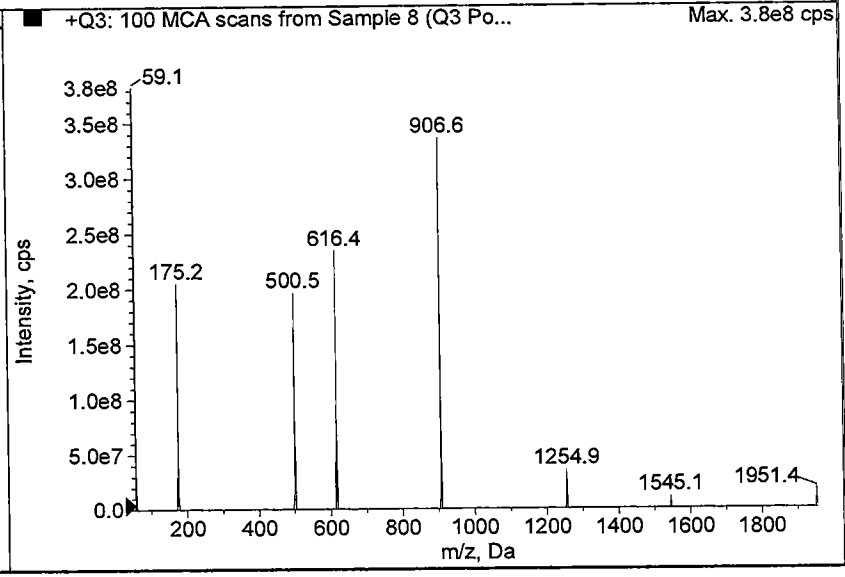
Period 1:

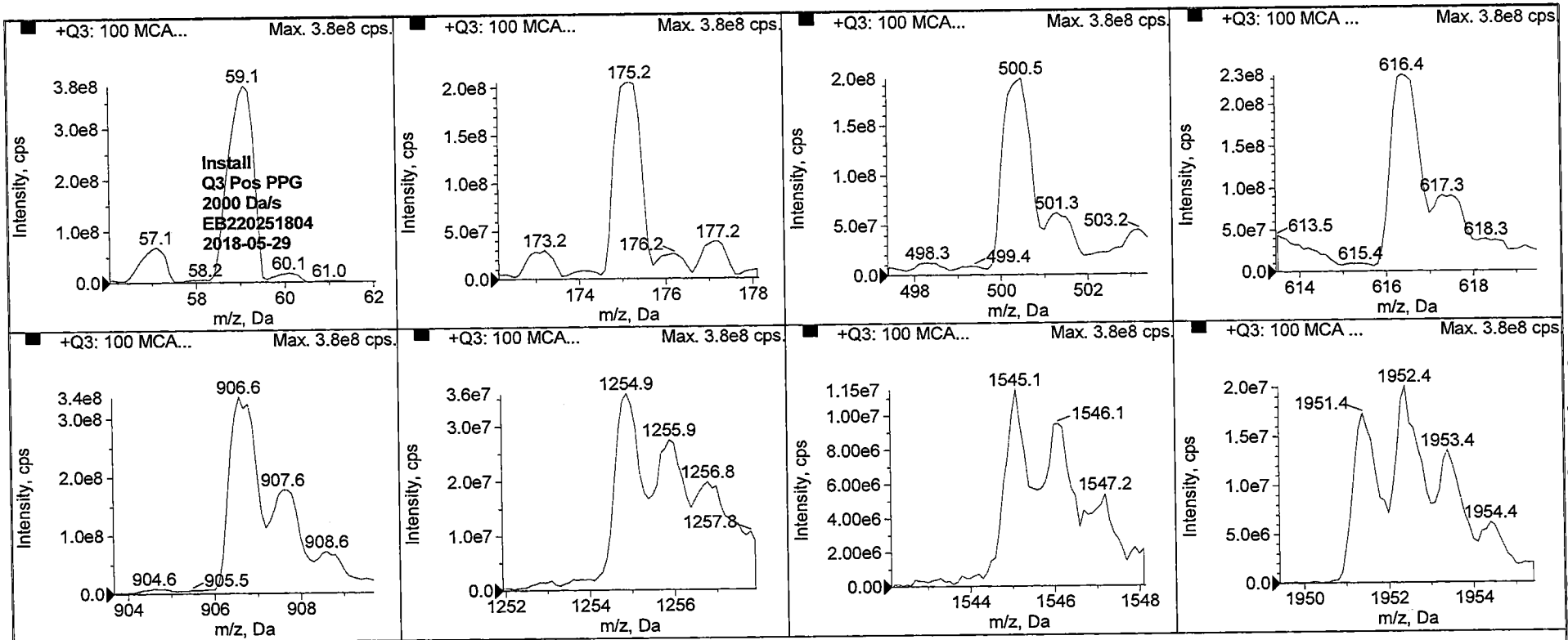
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " +Q3: 100 MCA scans from Sample 8 (Q3 Pos PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0613	3.8304e8	0.6857	-0.0113
2	175.1330	175.1384	2.0544e8	0.7196	-5.4303e-3
3	500.3800	500.3896	1.9692e8	0.7603	-9.6113e-3
4	616.4640	616.4545	2.3484e8	0.7563	9.5275e-3
5	906.6730	906.6804	3.3638e8	0.7428	-7.4202e-3
6	1254.9250	1254.9055	3.5980e7	0.7182	0.0195
7	1545.1340	1545.0988	1.1500e7	0.6834	0.0352
8	1952.4270	1952.4546	2.0100e7	0.7640	-0.0276

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

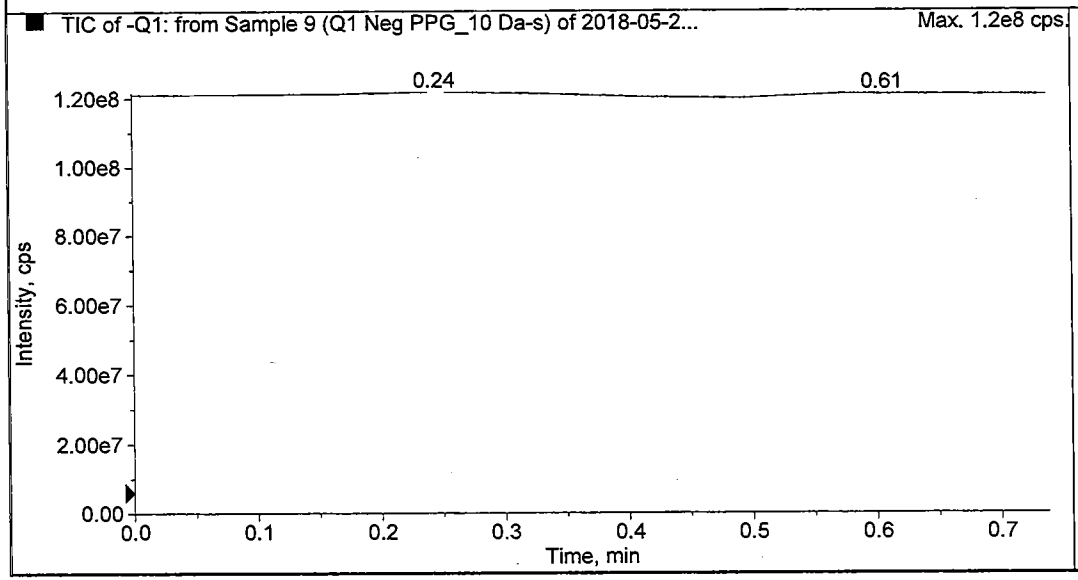
Mass Spectrometer Method Properties

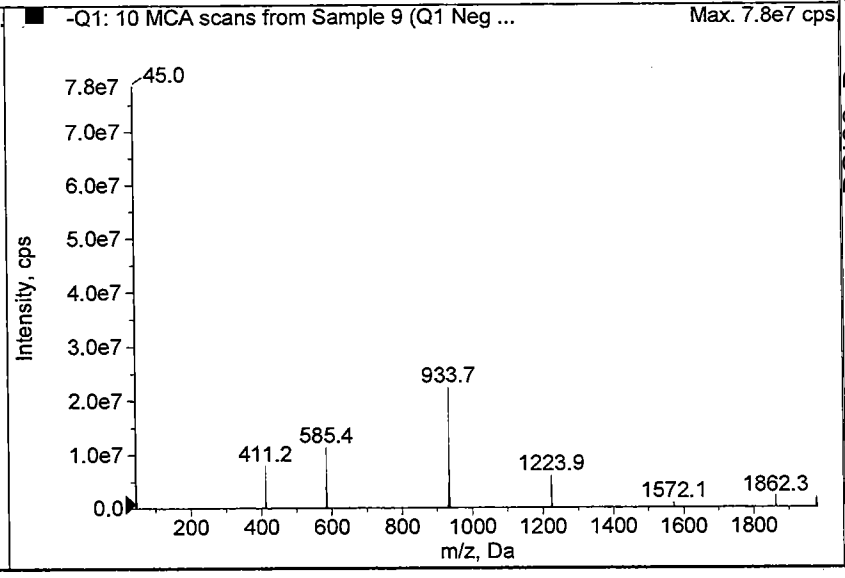
Period 1:

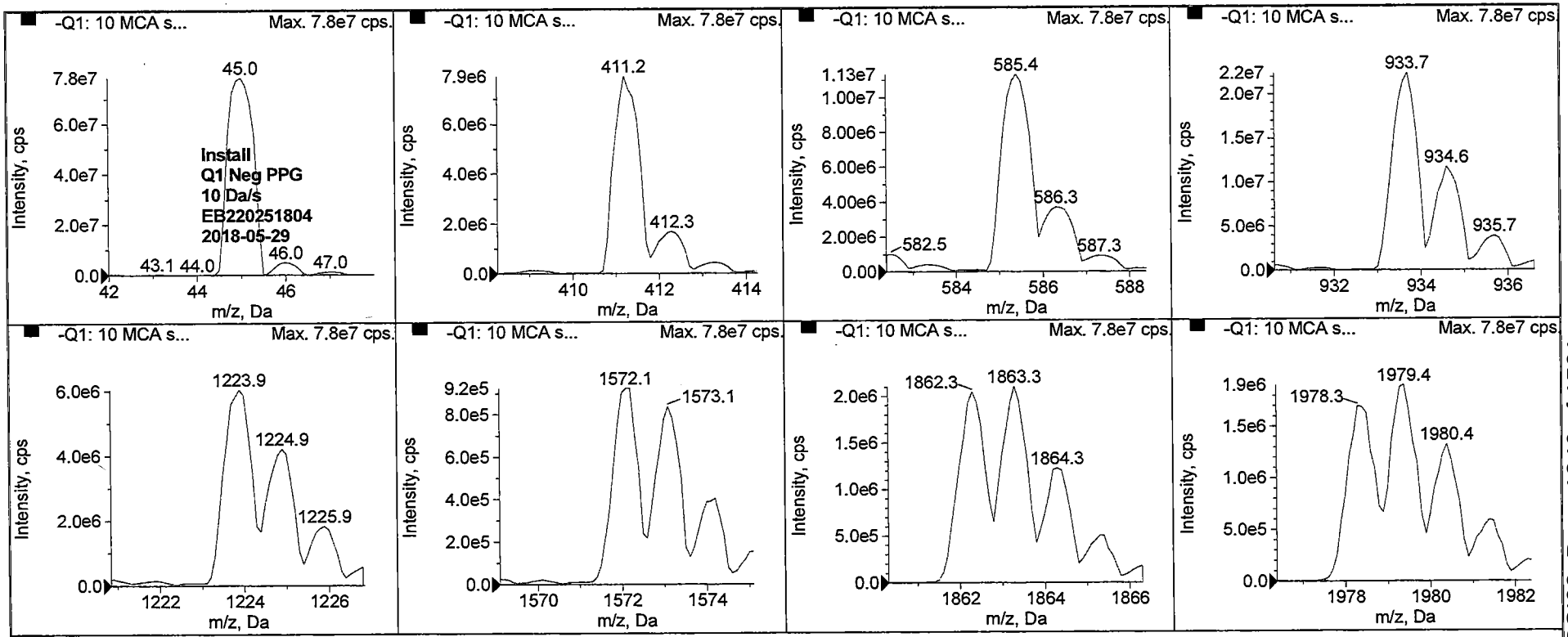
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for "-Q1: 10 MCA scans from Sample 9 (Q1 Neg PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9947	7.8484e7	0.6977	3.3302e-3
2	411.2590	411.2640	7.9184e6	0.7009	-4.9843e-3
3	585.3850	585.3944	1.1318e7	0.7674	-9.3834e-3
4	933.6360	933.6513	2.2378e7	0.6638	-0.0153
5	1223.8450	1223.8605	6.0413e6	0.7621	-0.0155
6	1572.0970	1572.0967	9.2320e5	0.6727	2.8078e-4
7	1863.3060	1863.2949	2.1046e6	0.7369	0.0111
8	1979.3890	1979.3655	1.8985e6	0.7323	0.0235

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

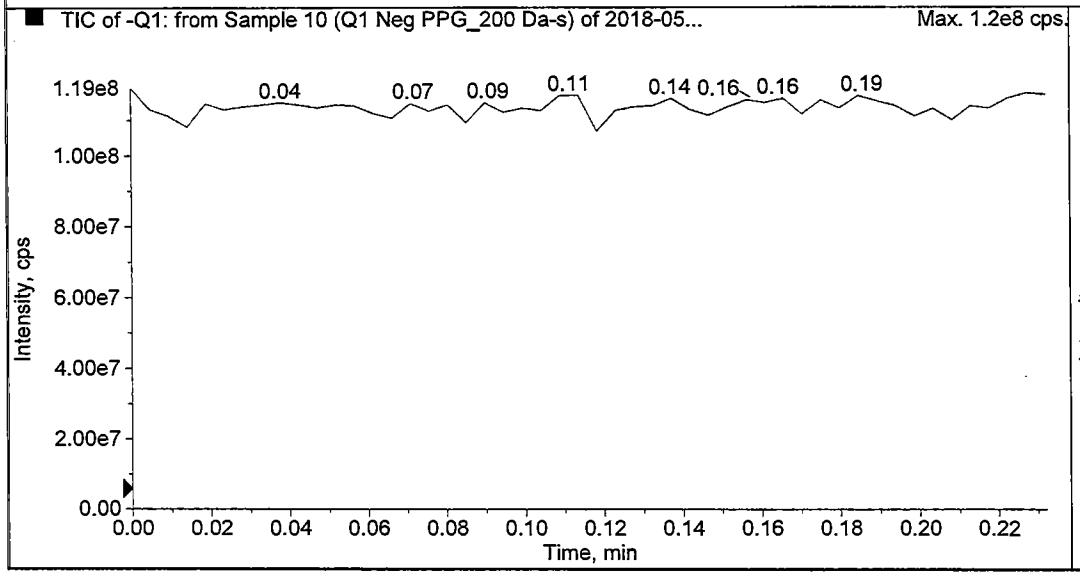
Mass Spectrometer Method Properties

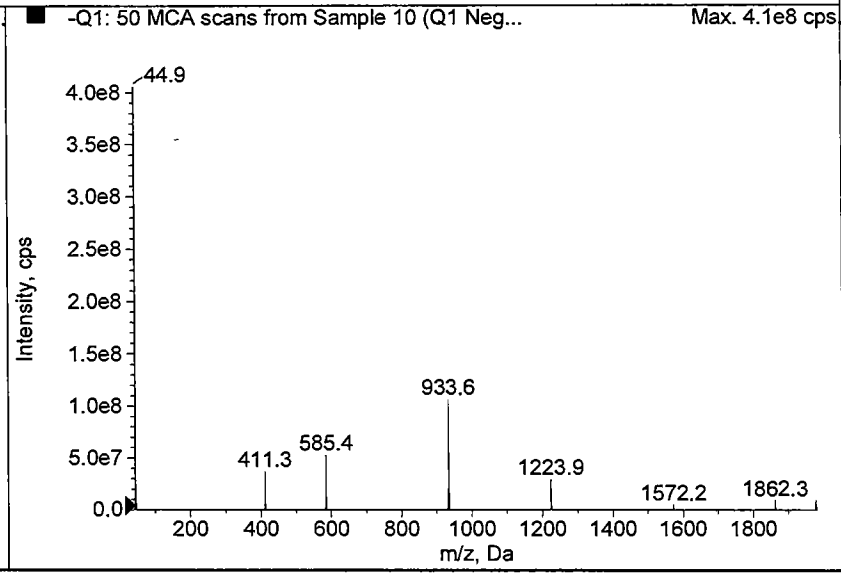
Period 1:

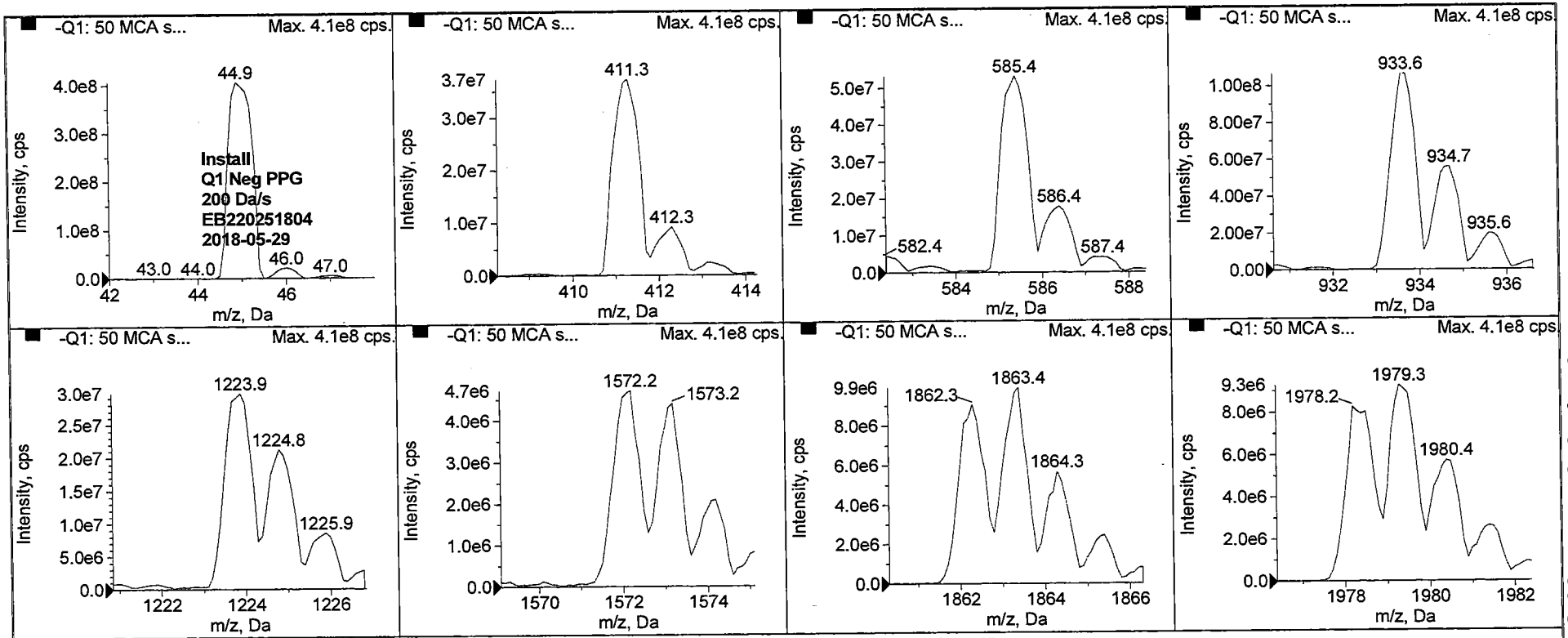
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for "-Q1: 50 MCA scans from Sample 10 (Q1 Neg PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9900	4.0582e8	0.6493	8.0001e-3
2	411.2590	411.2621	3.7274e7	0.7276	-3.1008e-3
3	585.3850	585.3787	5.3084e7	0.7168	6.3372e-3
4	933.6360	933.6551	1.0649e8	0.6450	-0.0191
5	1223.8450	1223.8398	2.9712e7	0.7456	5.1659e-3
6	1572.0970	1572.1026	4.7160e6	0.7330	-5.5764e-3
7	1863.3060	1863.3085	9.9060e6	0.6832	-2.5396e-3
8	1979.3890	1979.3715	9.2680e6	0.7385	0.0175

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

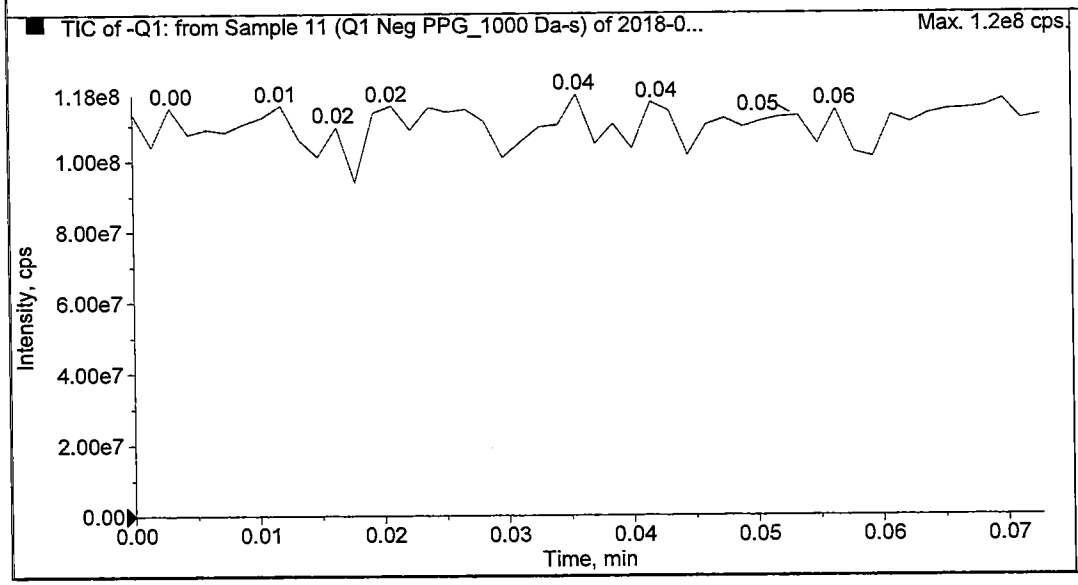
Mass Spectrometer Method Properties

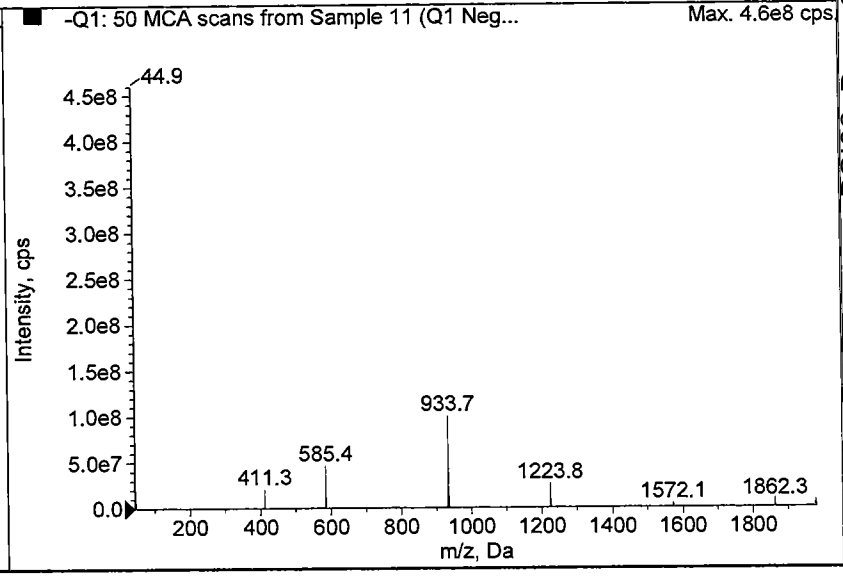
Period 1:

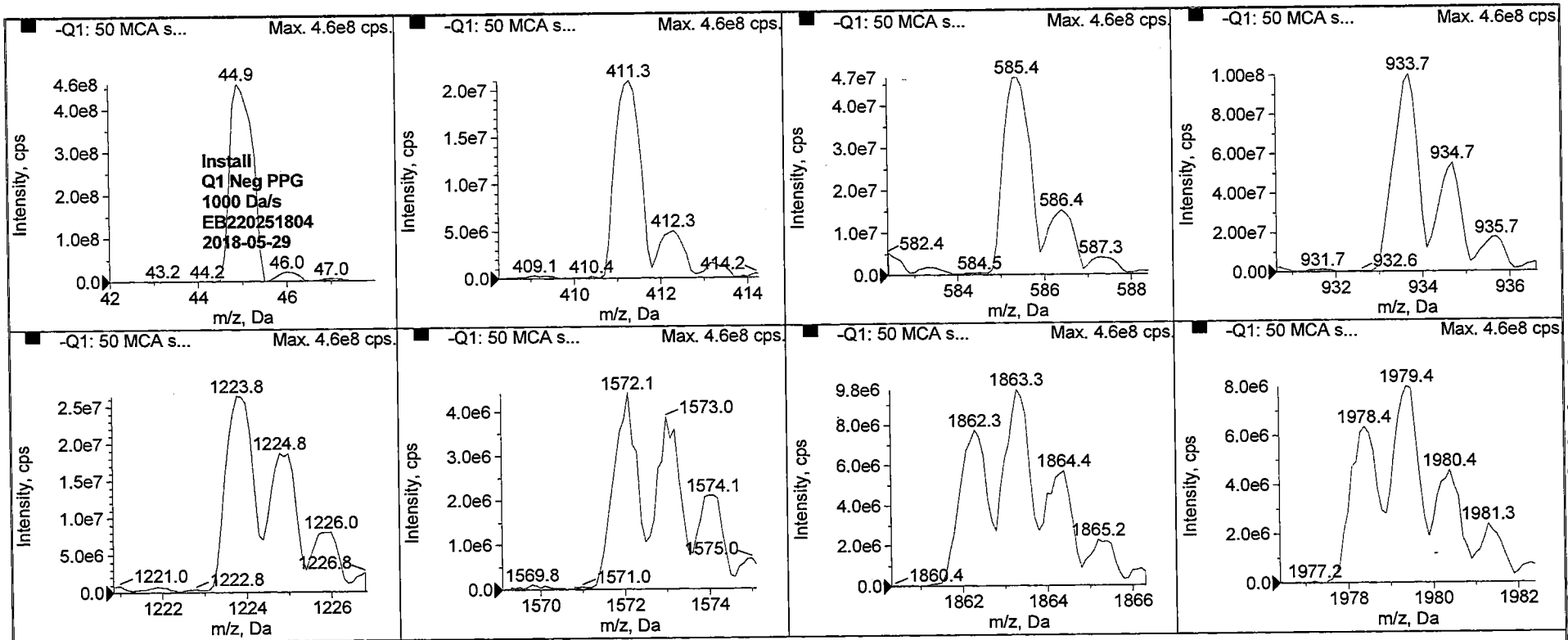
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for "-Q1: 50 MCA scans from Sample 11 (Q1 Neg PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	45.0048	4.6001e8	0.6178	-6.8036e-3
2	411.2590	411.2622	2.1000e7	0.6966	-3.2270e-3
3	585.3850	585.3835	4.6680e7	0.7152	1.4984e-3
4	933.6360	933.6542	1.0040e8	0.6380	-0.0182
5	1223.8450	1223.8506	2.6440e7	0.7474	-5.6084e-3
6	1572.0970	1572.0547	4.4200e6	0.6569	0.0423
7	1863.3060	1863.3097	9.7600e6	0.7294	-3.6879e-3
8	1979.3890	1979.3736	7.9900e6	0.7077	0.0154

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	-4500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	-10.0
Q1 Resolution:	Unit
Ion Energy 1 (IE1):	-1.0
CEM (CEM):	1900.0

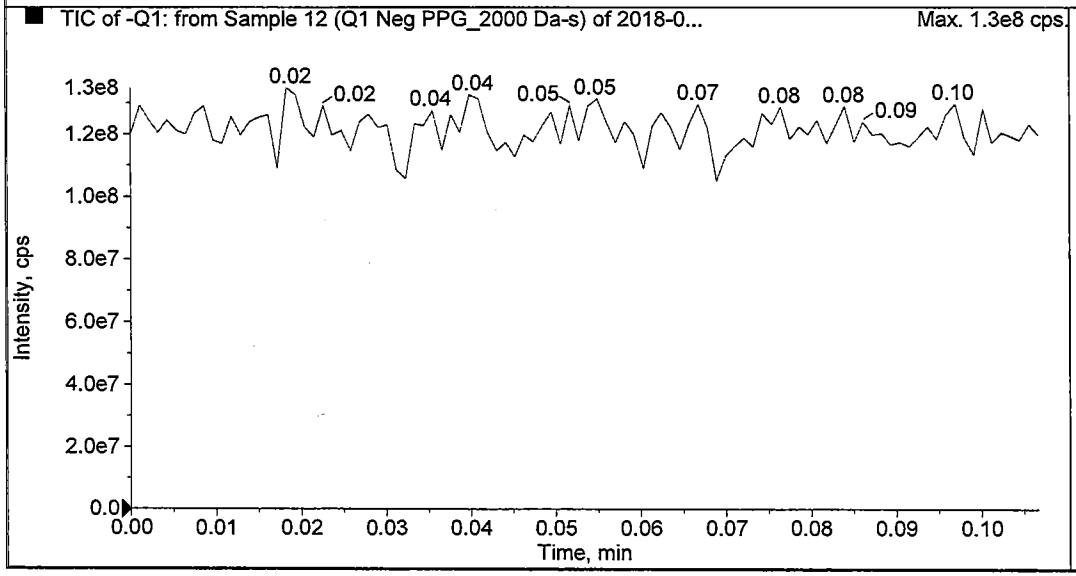
Mass Spectrometer Method Properties

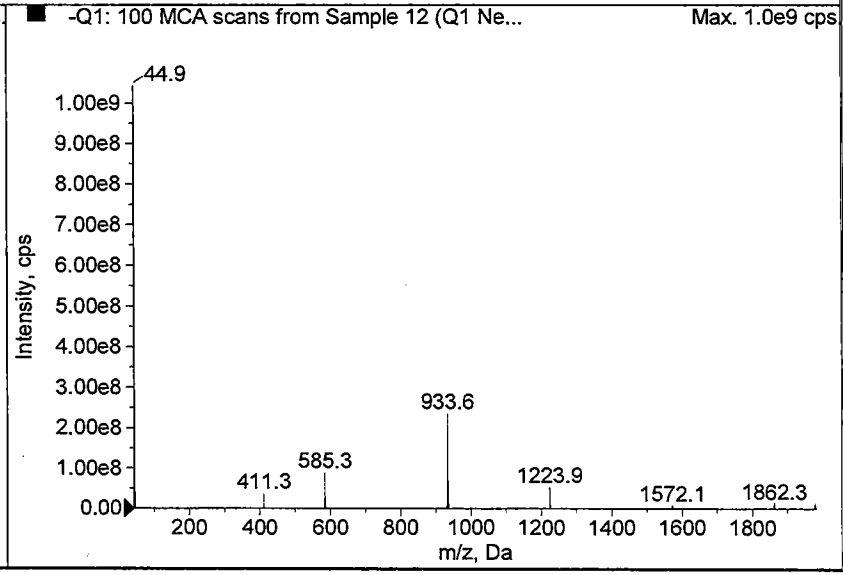
Period 1:

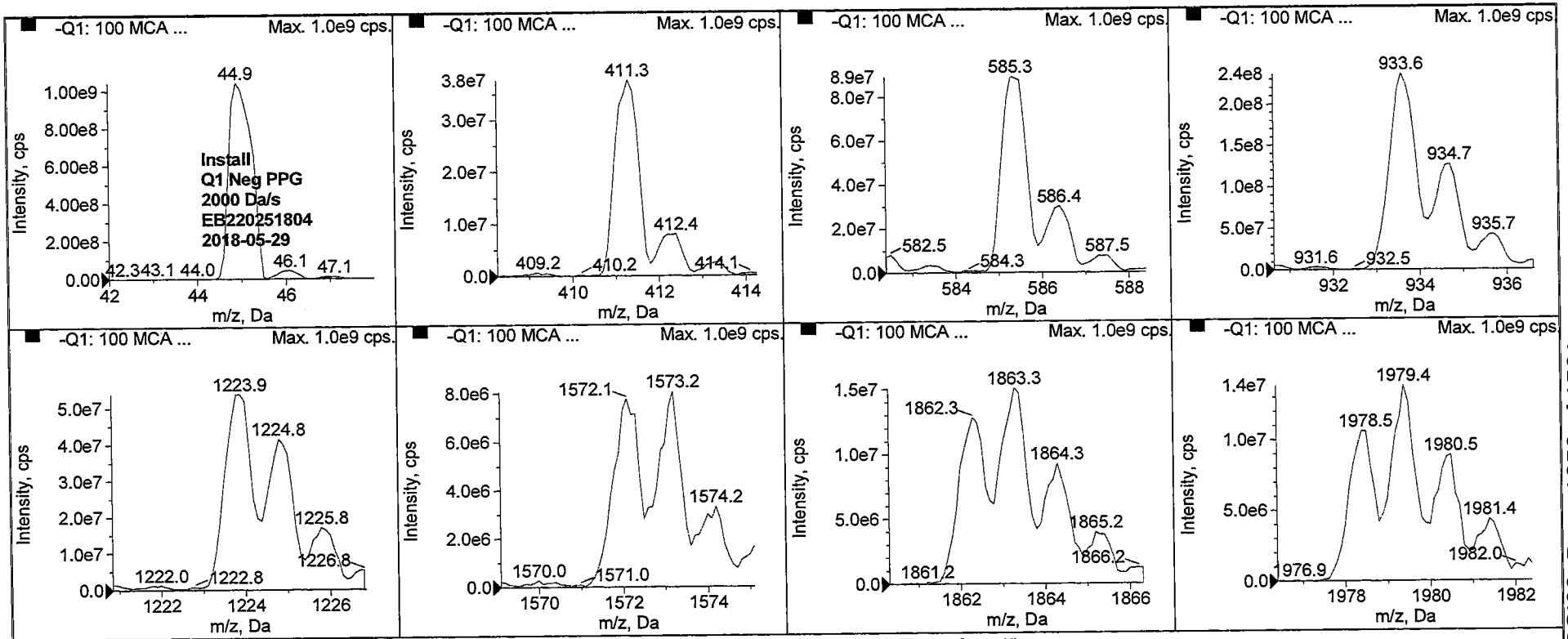
Scans in Period:	100
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q1 MS (Q1)
Polarity:	Negative
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q1:	Unit







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Peak List for "-Q1: 100 MCA scans from Sample 12 (Q1 Neg PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9988	1.0432e9	0.6290	-7.8776e-4
2	411.2590	411.2681	3.7700e7	0.6335	-9.0706e-3
3	585.3850	585.3670	8.9260e7	0.6465	0.0180
4	933.6360	933.6310	2.3632e8	0.6639	4.9633e-3
5	1223.8450	1223.8469	5.3740e7	0.7138	-1.8551e-3
6	1572.0970	1572.1139	7.7800e6	0.7223	-0.0169
7	1863.3060	1863.2638	1.5060e7	0.7553	0.0422
8	1979.3890	1979.3750	1.3800e7	0.6556	0.0140

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

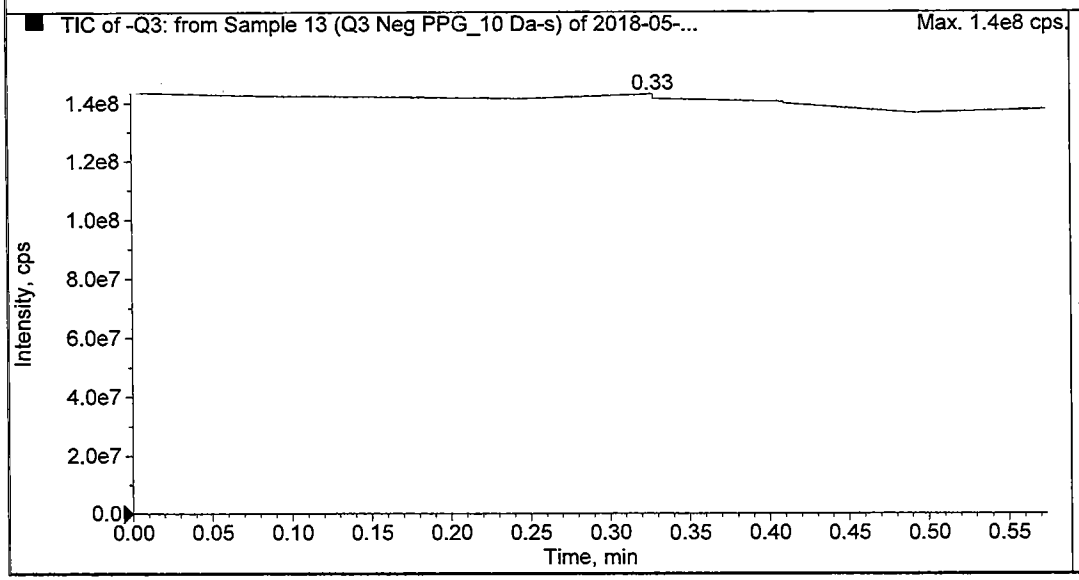
Mass Spectrometer Method Properties

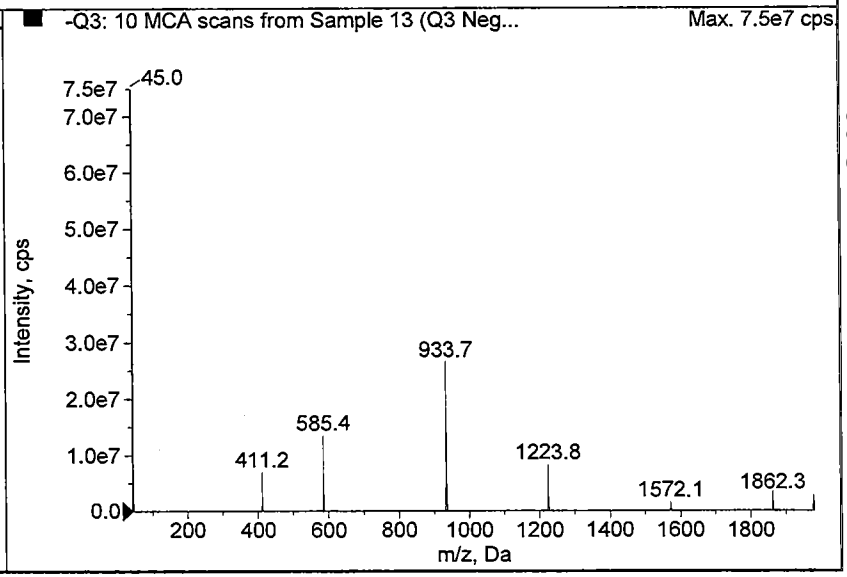
Period 1:

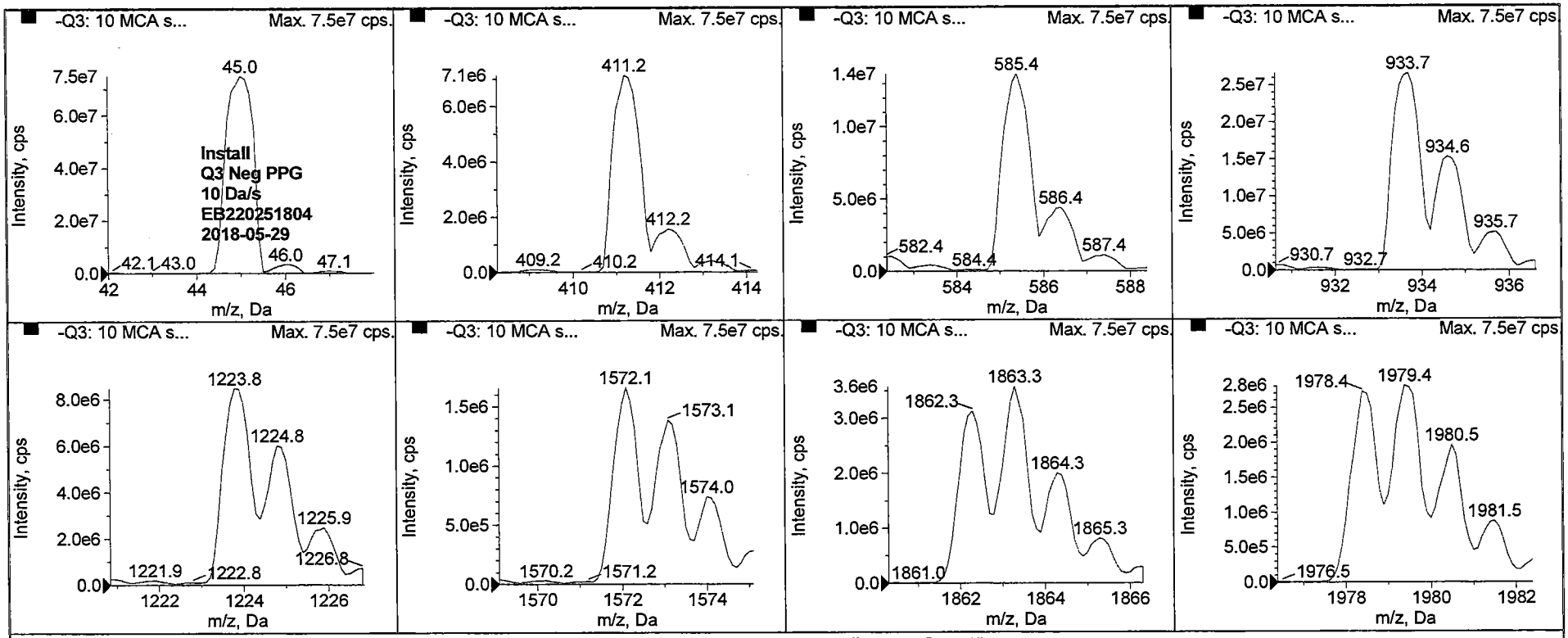
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for "-Q3: 10 MCA scans from Sample 13 (Q3 Neg PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9972	7.5007e7	0.7320	7.7711e-4
2	411.2590	411.2344	7.1361e6	0.7370	0.0246
3	585.3850	585.3868	1.3657e7	0.7362	-1.8161e-3
4	933.6360	933.6384	2.6621e7	0.7288	-2.4244e-3
5	1223.8450	1223.8430	8.4746e6	0.7528	1.9856e-3
6	1572.0970	1572.0927	1.6606e6	0.6651	4.2840e-3
7	1863.3060	1863.3066	3.5734e6	0.7033	-6.4400e-4
8	1979.3890	1979.4384	2.8091e6	0.7513	-0.0494

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	-4500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	-10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	-1.5
CEM (CEM):	1900.0

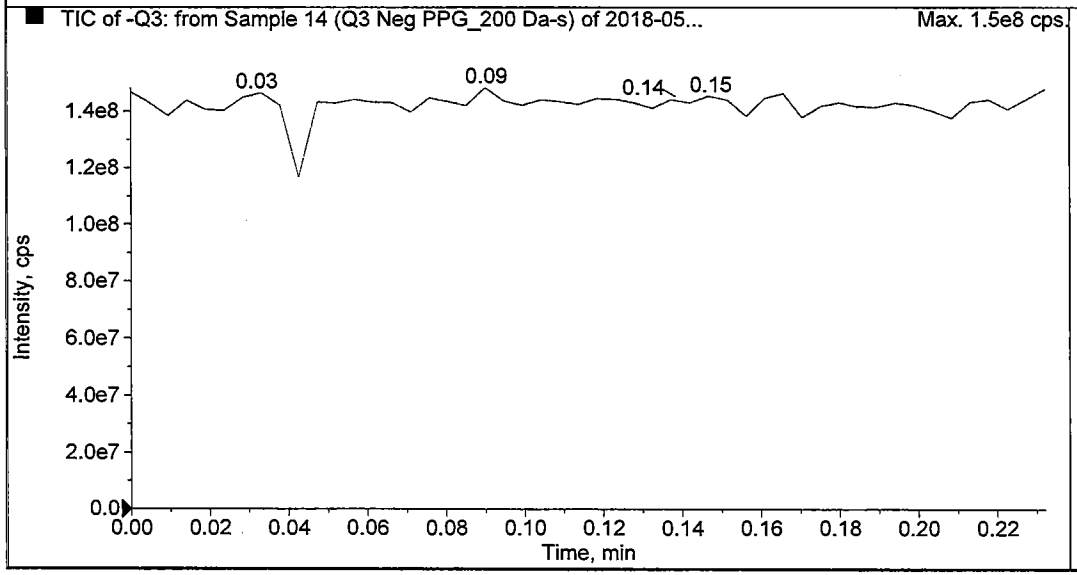
Mass Spectrometer Method Properties

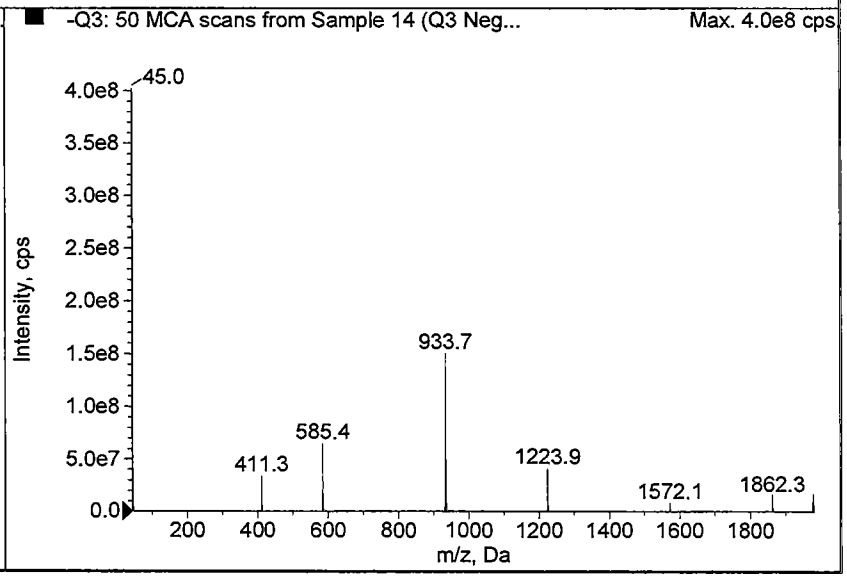
Period 1:

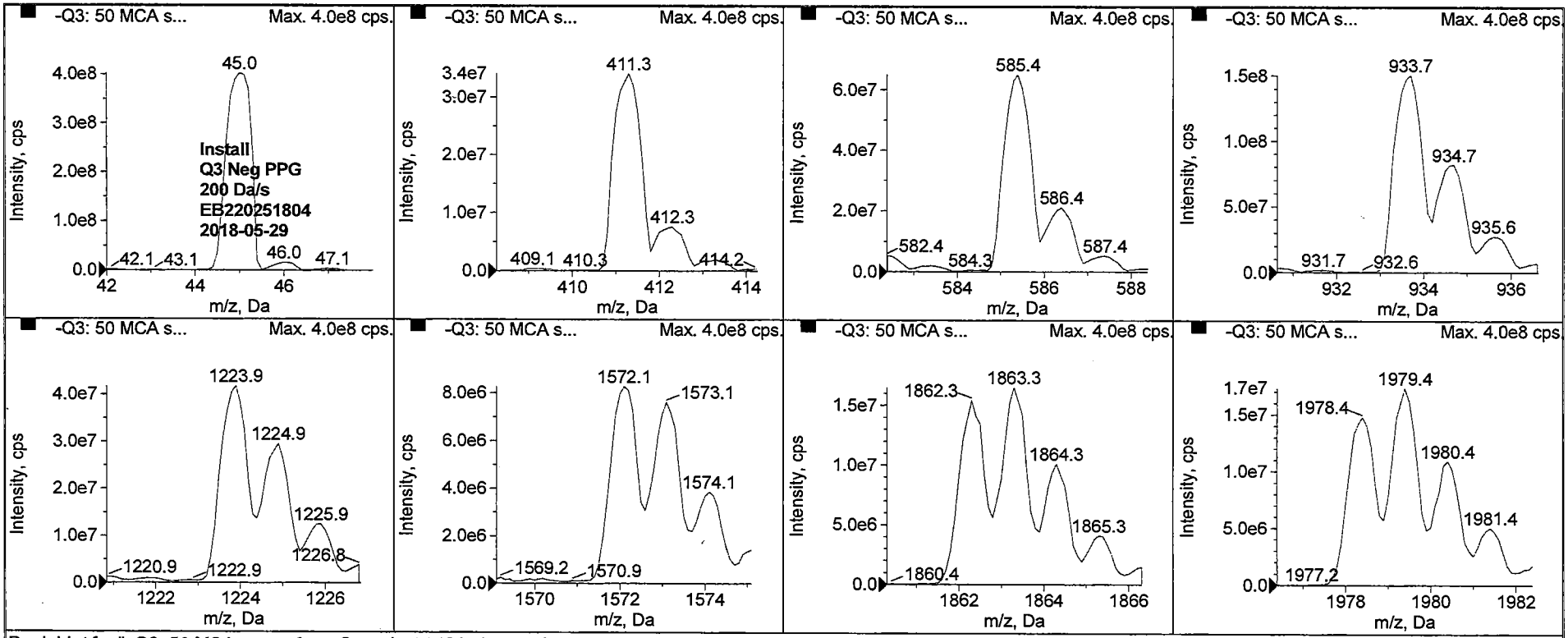
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q3 MS (Q3)
Polarity:	Negative
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit







Peak List for "-Q3: 50 MCA scans from Sample 14 (Q3 Neg PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9962	4.0241e8	0.6638	1.8369e-3
2	411.2590	411.2556	3.4052e7	0.7417	3.4492e-3
3	585.3850	585.3842	6.5036e7	0.7136	7.7195e-4
4	933.6360	933.6363	1.5056e8	0.7374	-3.0811e-4
5	1223.8450	1223.8530	4.1810e7	0.7279	-7.9656e-3
6	1572.0970	1572.1021	8.2680e6	0.7241	-5.0694e-3
7	1863.3060	1863.3199	1.6482e7	0.6755	-0.0139
8	1979.3890	1979.3879	1.7328e7	0.7116	1.1118e-3

Sate Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

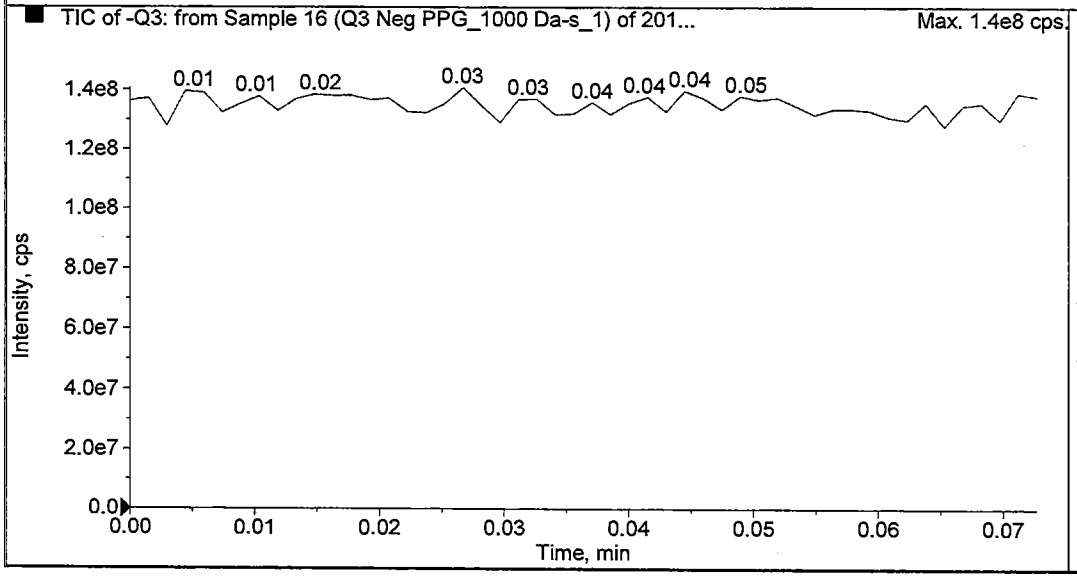
Mass Spectrometer Method Properties

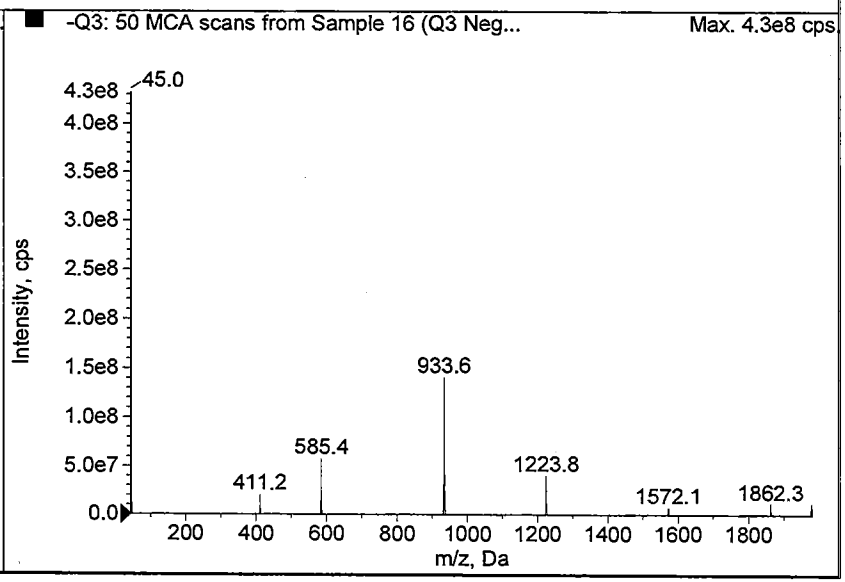
Period 1:

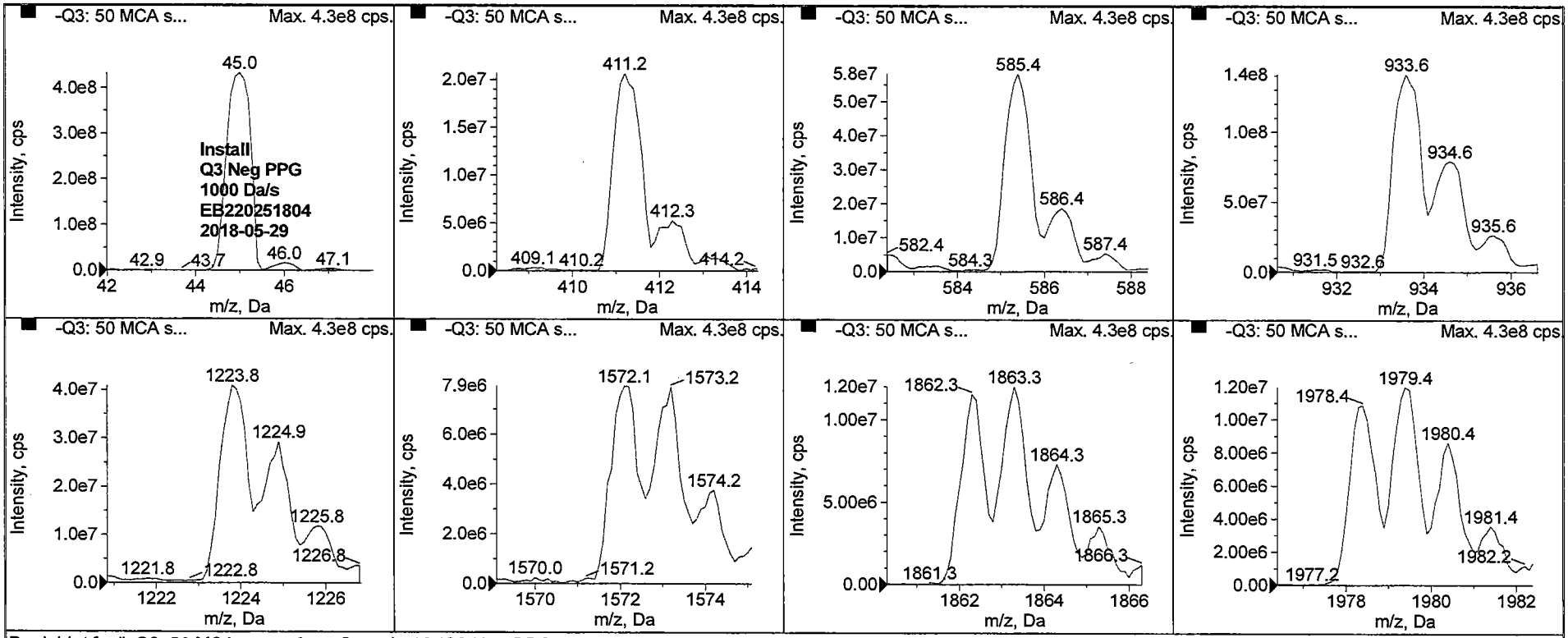
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for "-Q3: 50 MCA scans from Sample 16 (Q3 Neg PPG_1000 Da-s_1) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9825	4.3310e8	0.6384	0.0155
2	411.2590	411.2576	2.0660e7	0.7352	1.4357e-3
3	585.3850	585.3827	5.8190e7	0.6719	2.2702e-3
4	933.6360	933.6150	1.4107e8	0.7226	0.0210
5	1223.8450	1223.8394	4.0960e7	0.7336	5.6019e-3
6	1572.0970	1572.1001	7.9400e6	0.7950	-3.0523e-3
7	1863.3060	1863.2902	1.2010e7	0.6806	0.0158
8	1979.3890	1979.4012	1.1960e7	0.7138	-0.0122

Sate Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

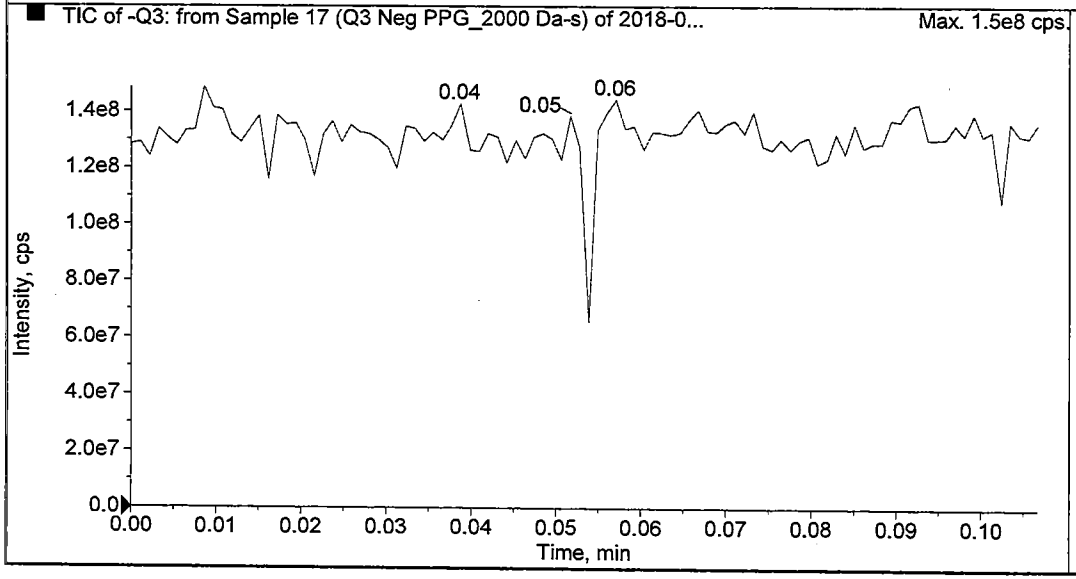
Mass Spectrometer Method Properties

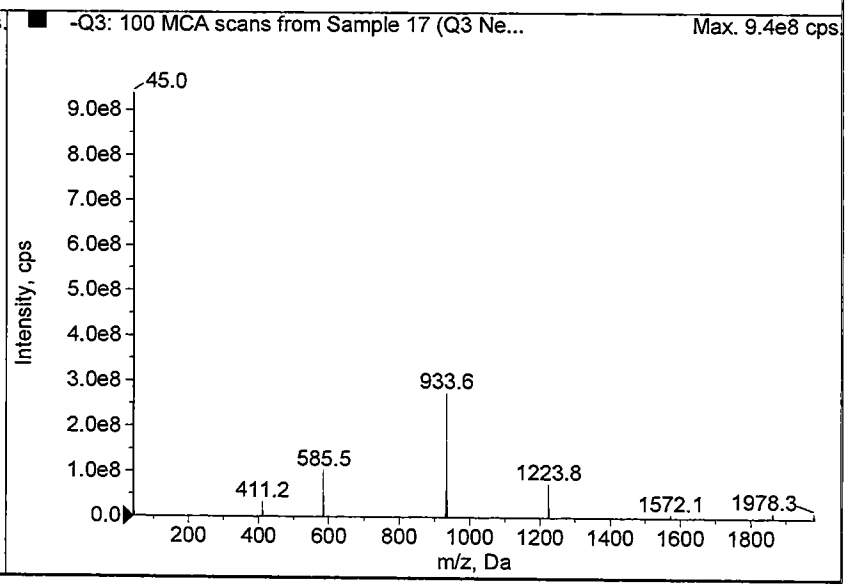
Period 1:

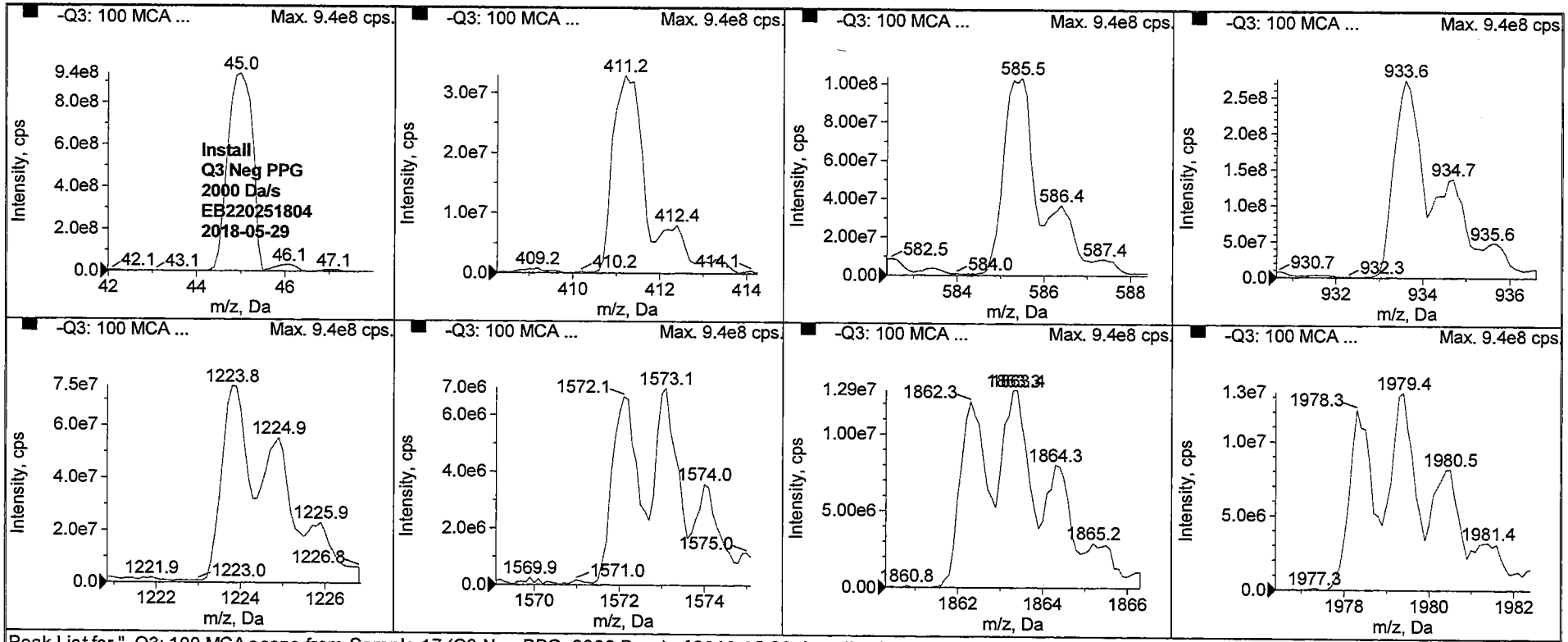
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for "-Q3: 100 MCA scans from Sample 17 (Q3 Neg PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9950	9.3786e8	0.6643	2.9882e-3
2	411.2590	411.2370	3.2920e7	0.7732	0.0220
3	585.3850	585.3850	1.0332e8	0.6994	-4.8105e-6
4	933.6360	933.6288	2.7486e8	0.7105	7.2155e-3
5	1223.8450	1223.8546	7.5140e7	0.6946	-9.5568e-3
6	1572.0970	1572.1115	6.6600e6	0.6890	-0.0145
7	1863.3060	1863.3250	1.2880e7	0.7704	-0.0190
8	1979.3890	1979.3741	1.3320e7	0.6259	0.0149

Sate Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 28.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Declustering Potential (DP): 135.0
Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

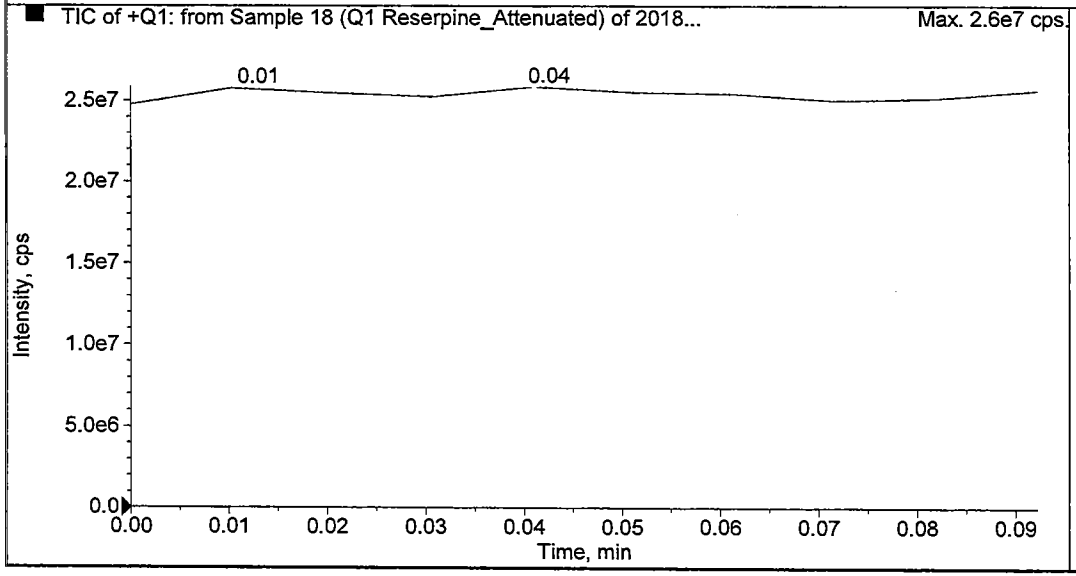
Mass Spectrometer Method Properties

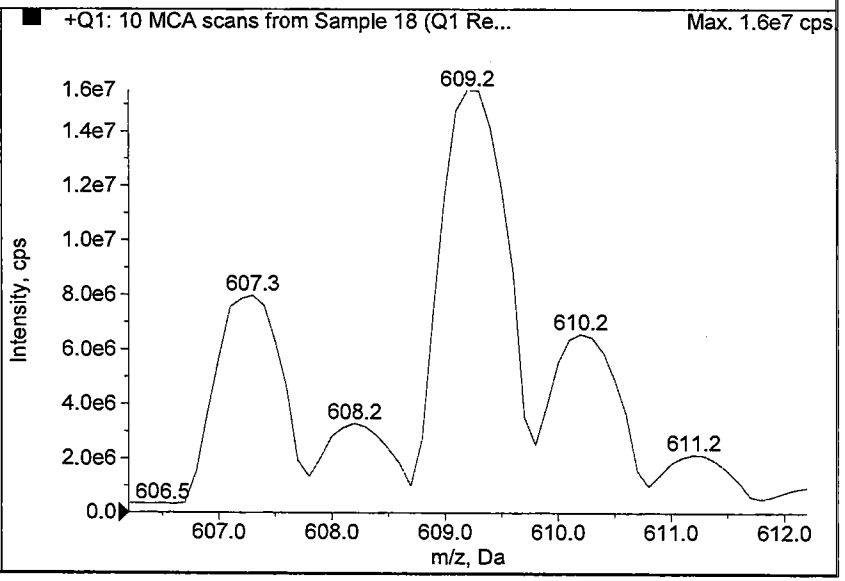
Period 1:

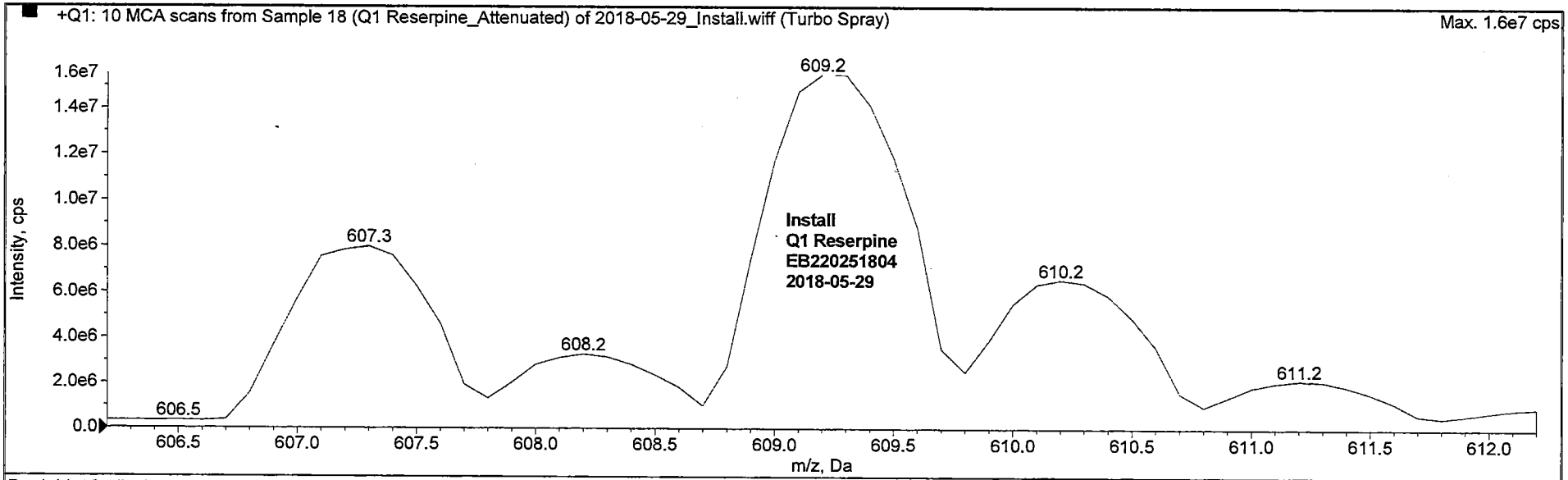
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 10 MCA scans from Sample 18 (Q1 Reserpine_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	n/a	n/a	n/a	n/a
2	609.2810	609.2580	1.5520e7	0.7138	0.0230

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 28.0
Collision Gas (CAD): 9
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Declustering Potential (DP): 135.0
Entrance Potential (EP): 10.0
Collision Energy (CE): 44.5
Collision Cell Exit Potential (CXP): 6.2

Q1 Resolution: Unit Q3 Resolution: Unit
Ion Energy 1 (IE1): 1.2

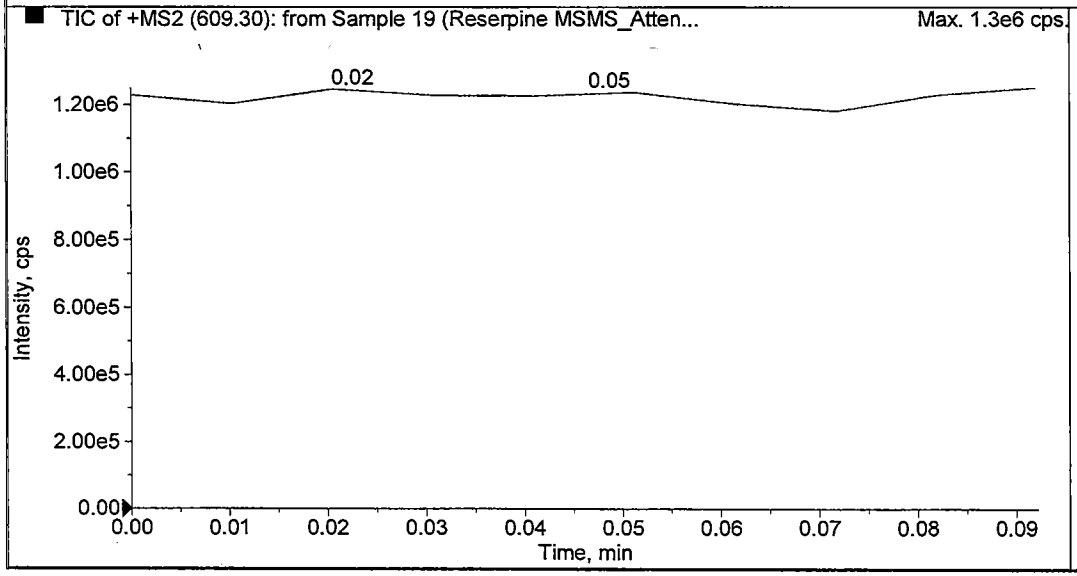
Mass Spectrometer Method Properties

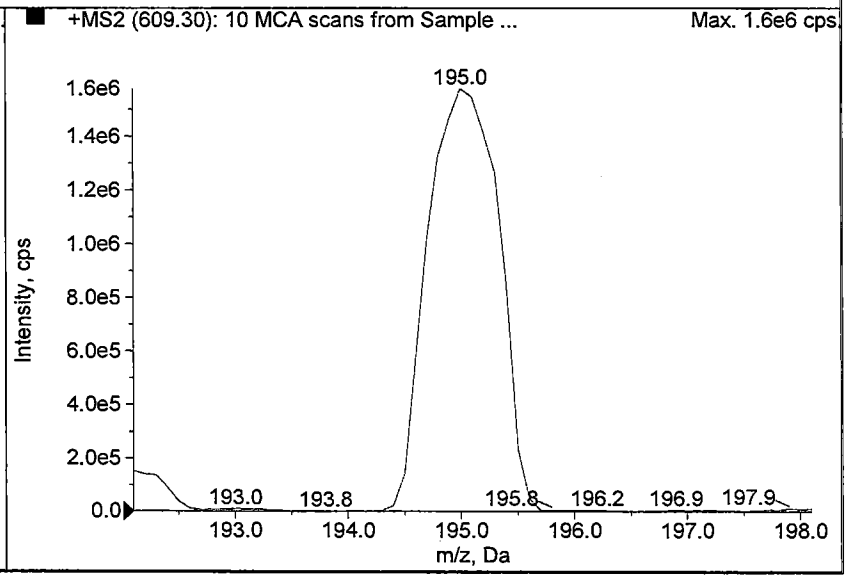
Period 1:

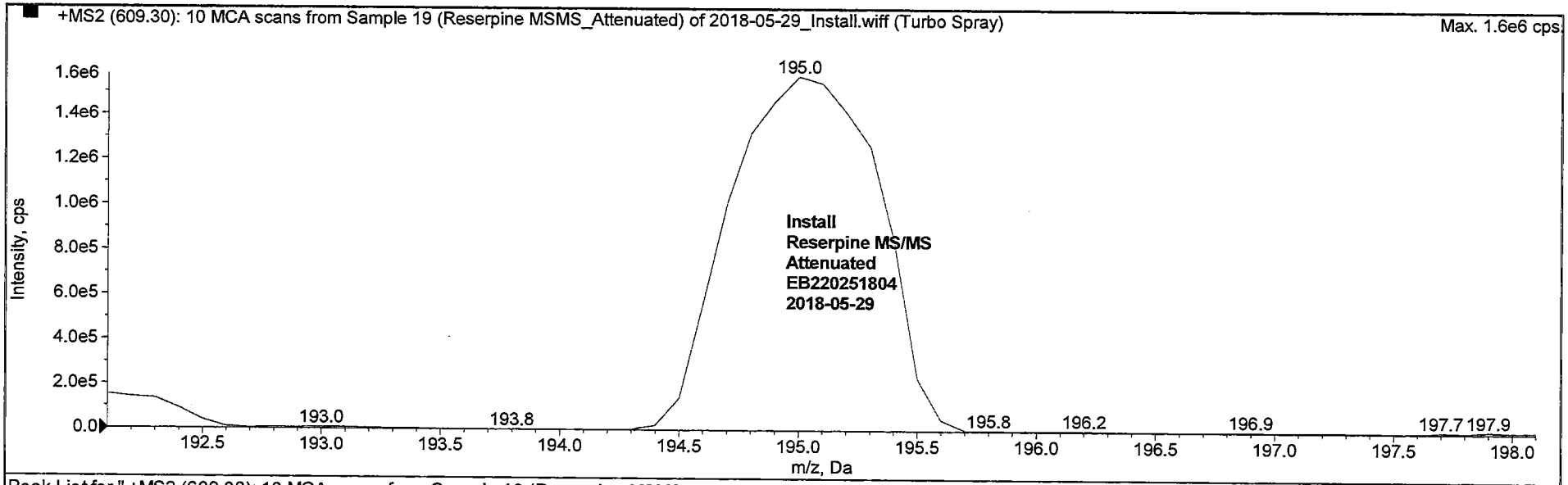
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Product Ion (MS2)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Product Of: 609.30 Da







Peak List for "+MS2 (609.30): 10 MCA scans from Sample 19 (Reserpine MSMS_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	195.0306	1.5772e6	0.7615	0.0694
2	609.2810	n/a	n/a	n/a	n/a

Raw QC Data

PFAS by LC/MS/MS

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	BLK309005			**Data File:**		18NOV07D-14.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005			**Acquis Date:**		2018-11-07T13:17:51
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	13			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	813265.8	730410.6	11	50	
13C2-PFOA	5.0	565629.7	524423.6	8	50	
13C4-PFOS	4.8	295029.3	274061.7	8	50	
13C2-PFDA	5.0	353255.9	311442.1	13	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	687712.9	13C3-PFBA	813265.8	0.846	10.000	7.827	78	50-150	
E13C5-PFPeA	705431.1	13C3-PFBA	813265.8	0.867	10.000	7.557	76	50-150	
E13C3-PFBS	366965.7	13C3-PFBA	813265.8	0.451	9.300	6.623	71	50-150	
E13C2-4:2-FTS	47546.0	13C2-PFOA	565629.7	0.084	9.340	7.586	81	50-150	
E13C5-PFHxA	607849.4	13C2-PFOA	565629.7	1.075	10.000	7.906	79	50-150	
E13C3-PFHxS	300122.6	13C2-PFOA	565629.7	0.531	9.460	7.618	81	50-150	
E13C4-PFHpA	479868.7	13C2-PFOA	565629.7	0.848	10.000	7.719	77	50-150	
E13C2-6:2-FTS	34660.3	13C2-PFOA	565629.7	0.061	9.500	8.172	86	50-150	
E13C8-PFOA	837045.3	13C2-PFOA	565629.7	1.480	10.000	8.254	83	50-150	
E13C8-PFOS	247398.7	13C4-PFOS	295029.3	0.839	9.560	7.416	78	50-150	
E13C9-PFNA	437366.8	13C4-PFOS	295029.3	1.482	10.000	8.099	81	50-150	
E13C6-PFDA	547845.7	13C2-PFDA	353255.9	1.551	10.000	7.800	78	50-150	
E13C2-8:2-FTS	23707.6	13C2-PFDA	353255.9	0.067	9.580	7.102	74	50-150	
E13C8-PFOSA	664608.5	13C2-PFDA	353255.9	1.881	10.000	8.211	82	50-150	
Ed3-NMeFOSAA	74292.7	13C2-PFDA	353255.9	0.210	10.000	7.822	78	50-150	
E13C7-PFUnDA	241073.9	13C2-PFDA	353255.9	0.682	10.000	7.874	79	50-150	
Ed5-NEtFOSAA	58510.9	13C2-PFDA	353255.9	0.166	10.000	7.666	77	50-150	
E13C2-PFDoDA	498314.2	13C2-PFDA	353255.9	1.411	10.000	7.606	76	50-150	
Ed7-NMePFOSAE	300545.6	13C2-PFDA	353255.9	0.851	10.000	7.913	79	50-150	
Ed3-NMePFOSA	73016.7	13C2-PFDA	353255.9	0.207	10.000	7.568	76	50-150	
Ed9-NEtPFOSAE	246567.2	13C2-PFDA	353255.9	0.698	10.000	7.972	80	50-150	
Ed5-NEtPFOSA	57009.4	13C2-PFDA	353255.9	0.161	10.000	7.474	75	50-150	
E13C2-PFTeDA	373196.2	13C2-PFDA	353255.9	1.056	10.000	7.606	76	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

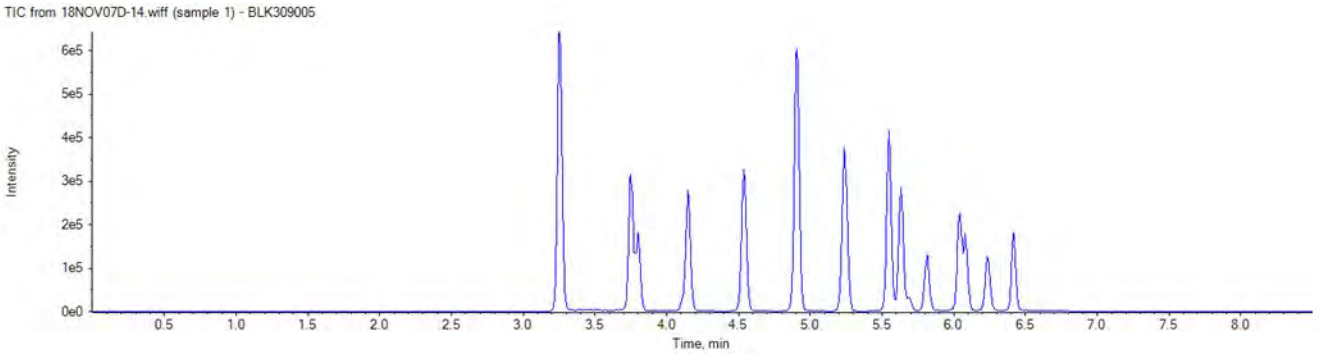
Analyte Quantitation Peak Table

Sample Name: BLK309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.25	687712.9	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.75	705431.1	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	366965.7	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	47546.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	607849.4	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	366965.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	300122.6	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	479868.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	34660.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	300122.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	837045.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	437366.8	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	547845.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	23707.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.63	664608.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	74292.7	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	241073.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	58510.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	498314.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	23707.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	300545.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	73016.7	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.23	246567.2	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	57009.4	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	498314.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	373196.2	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	373196.2	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	373196.2	N/A	

Total Ion Chromatogram

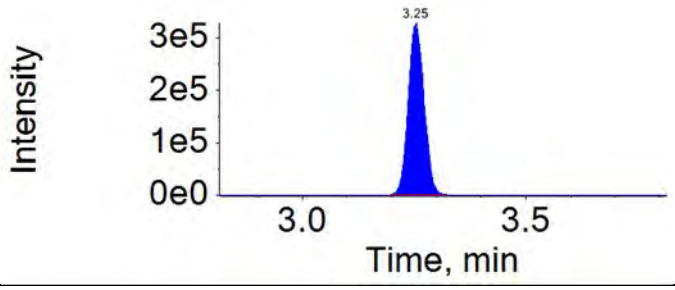


APPROVED
By MCD at 4:42 pm, 11/8/18

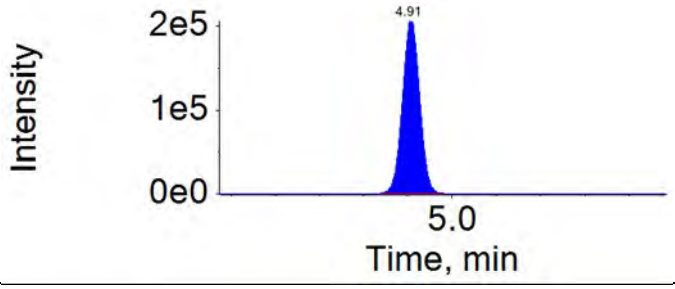
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

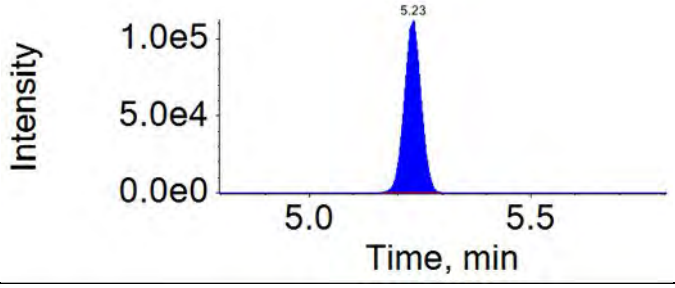
Injection Standard: 13C3-PFBA
216.0 / 172.0



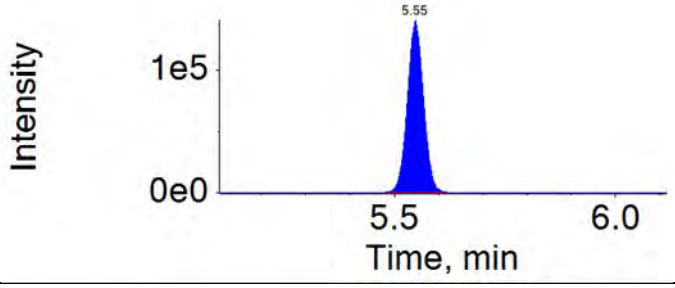
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



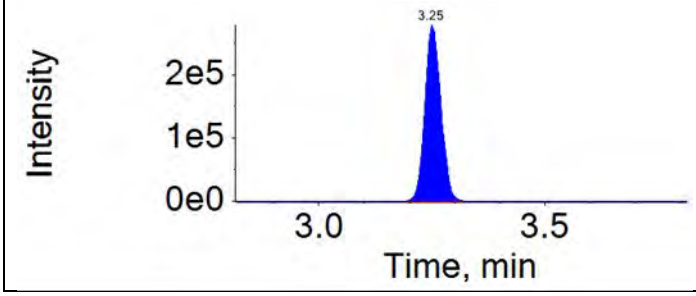
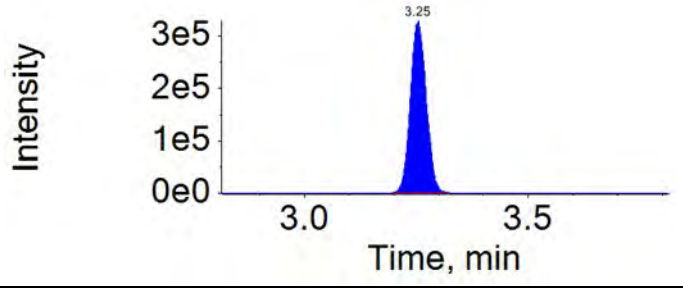
Injection Standard: 13C2-PFDA
515.0 / 470.0

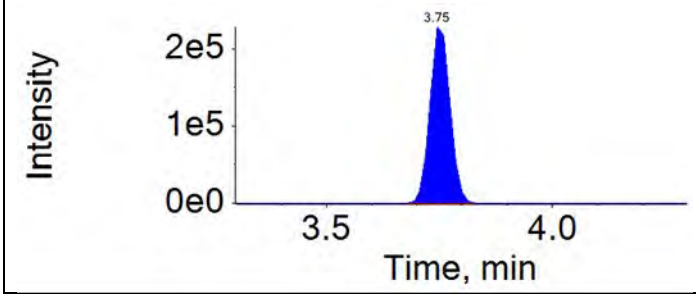
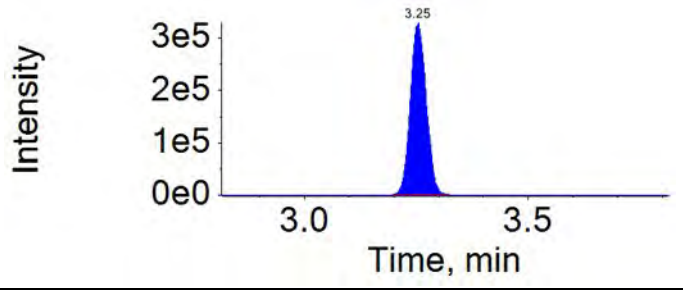


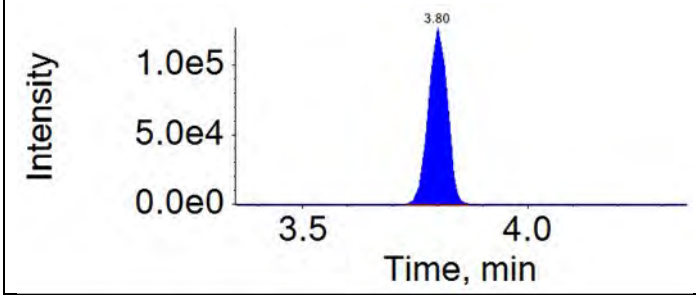
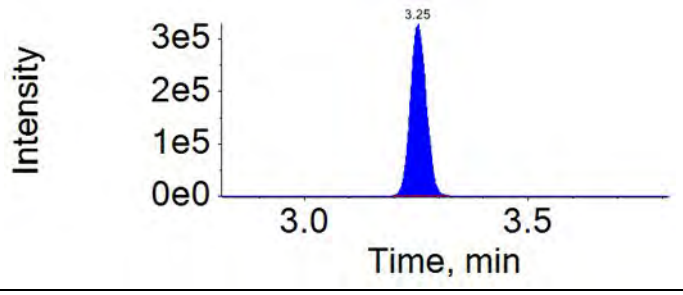
APPROVED
By MCD at 4:42 pm, 11/8/18

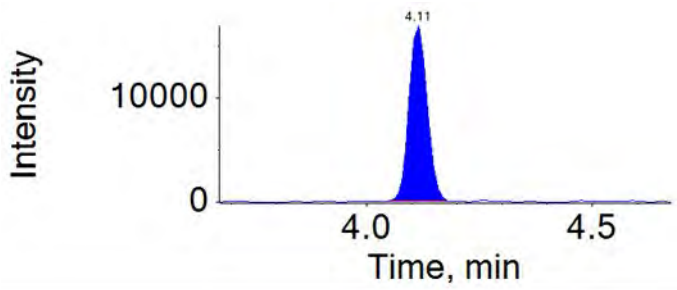
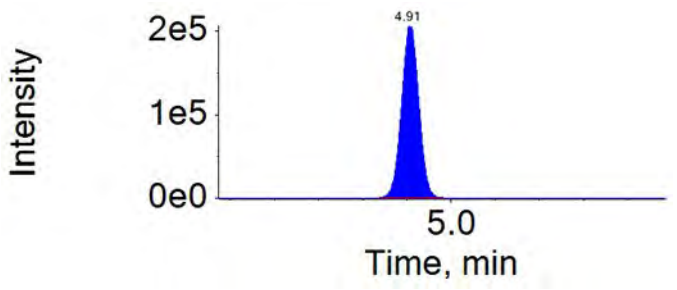
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

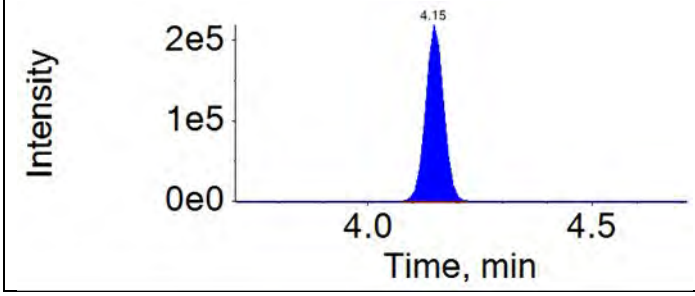
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

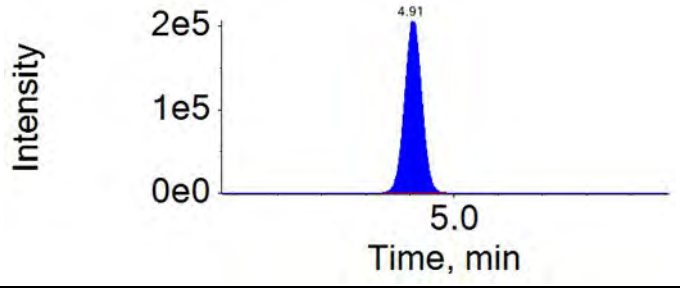
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

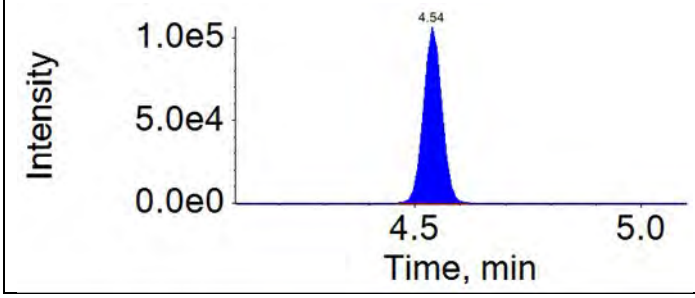
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

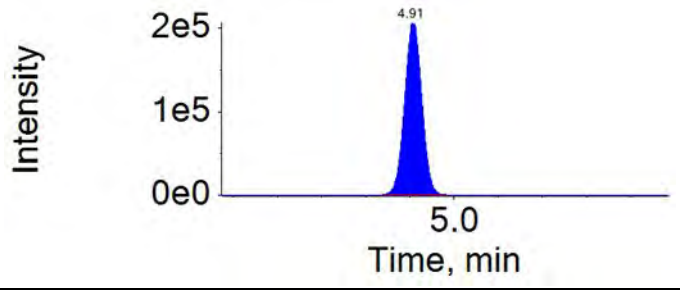
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



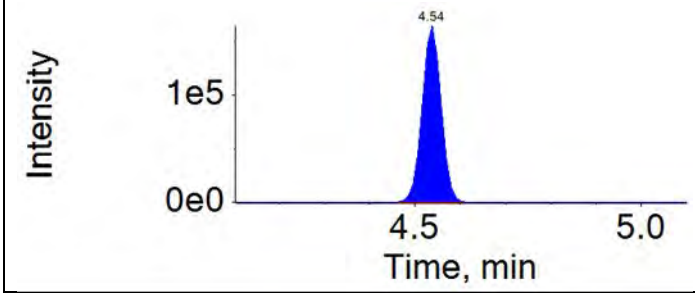


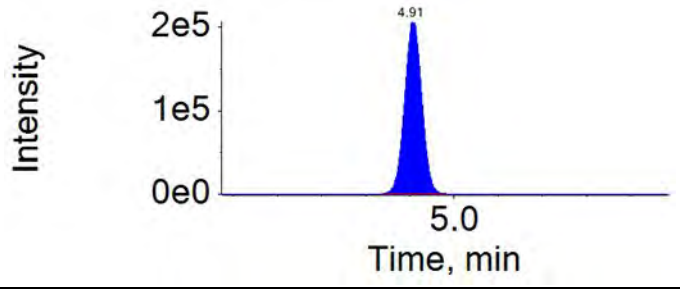
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



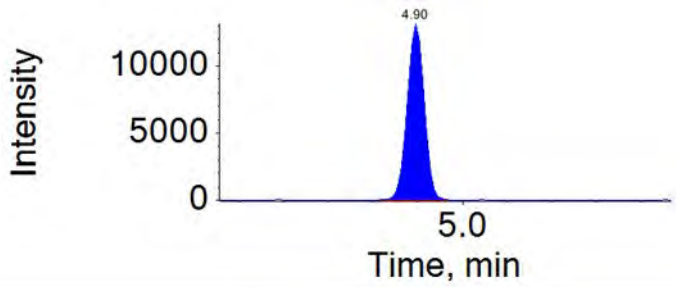


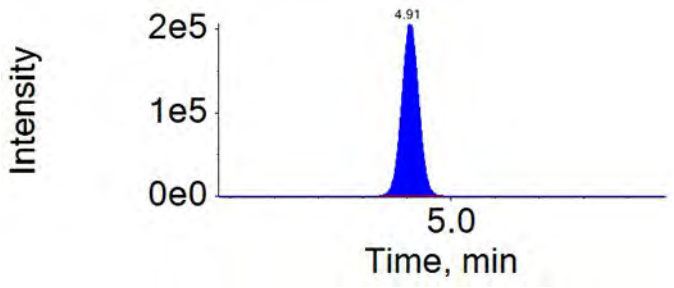
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

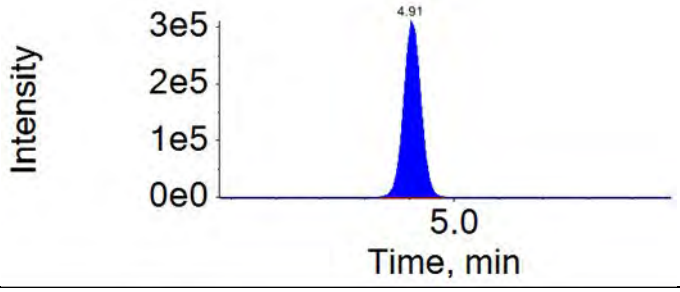
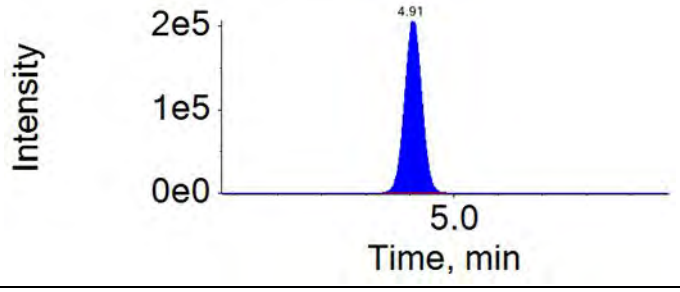


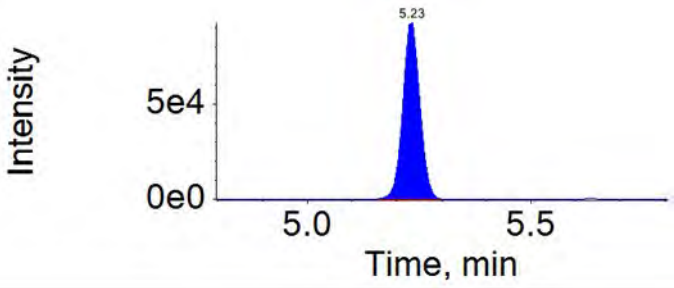
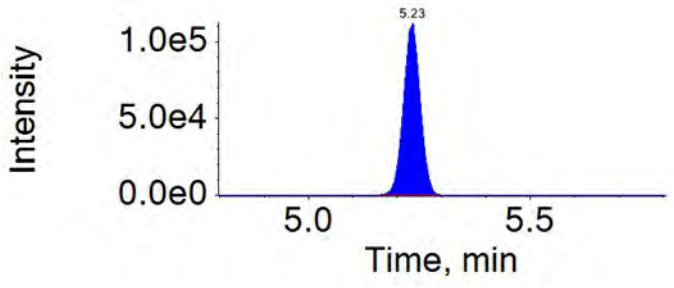


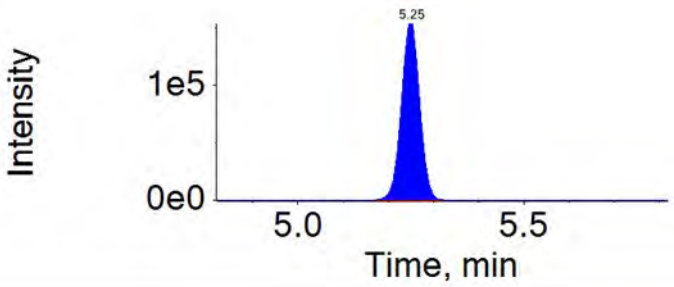
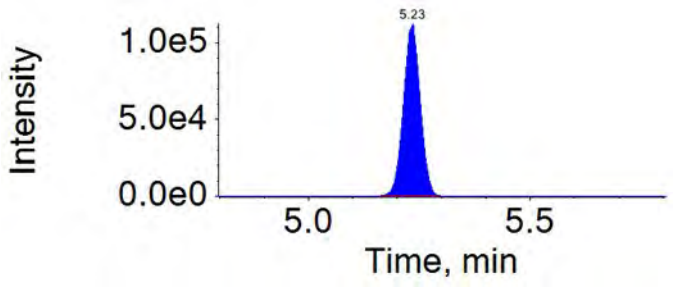
APPROVED
By MCD at 4:42 pm, 11/8/18

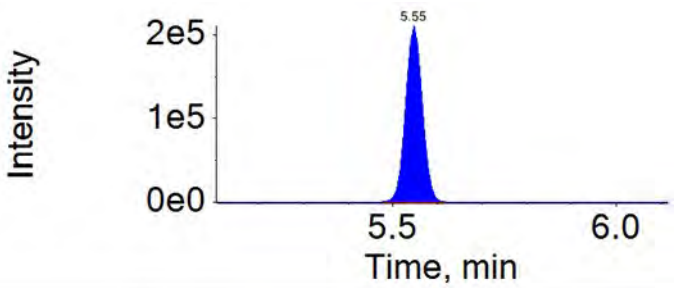
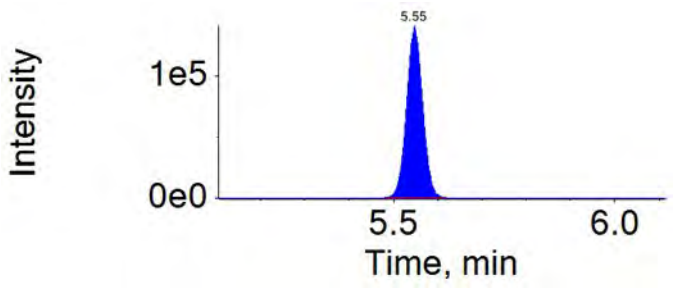
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

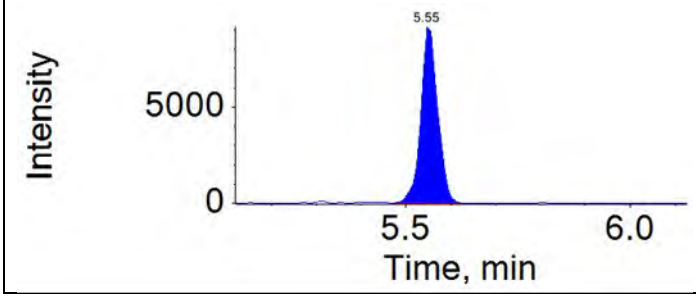
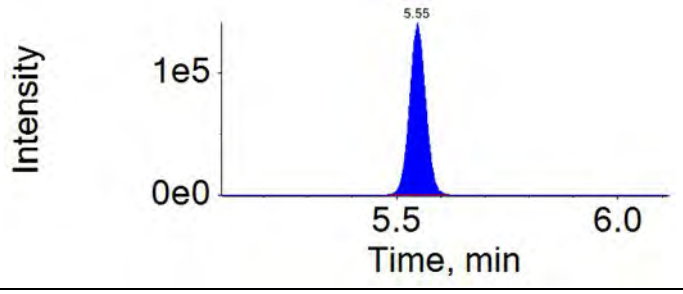
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

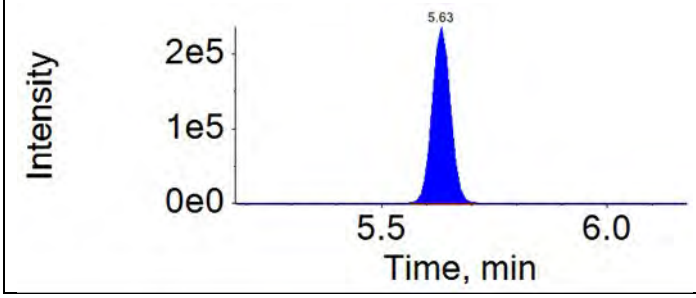
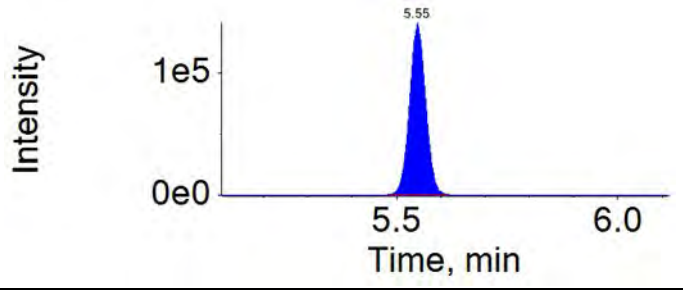
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

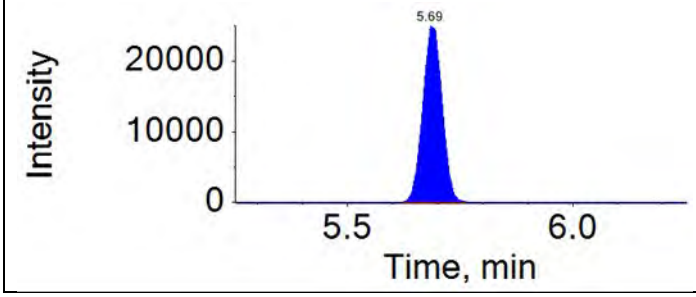
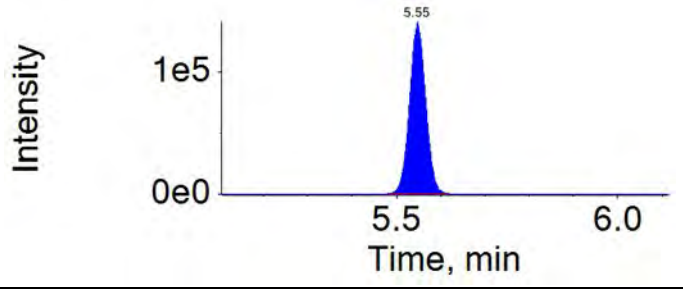
APPROVED
By MCD at 4:42 pm, 11/8/18

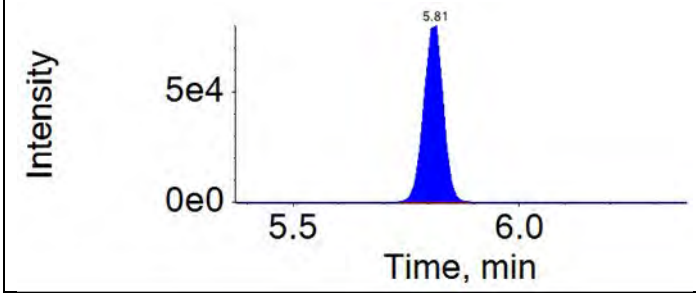
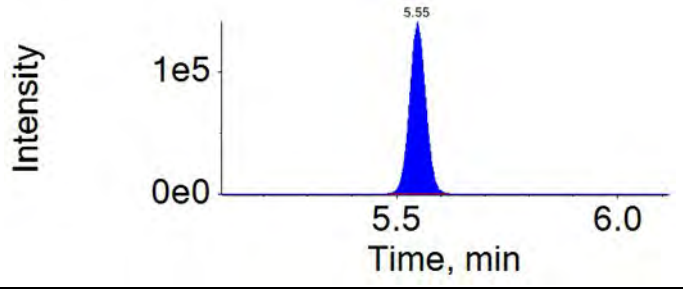
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

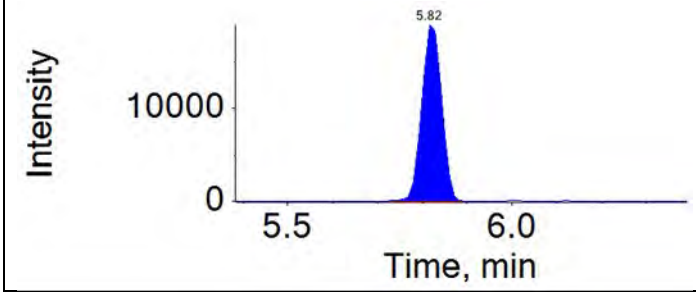
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

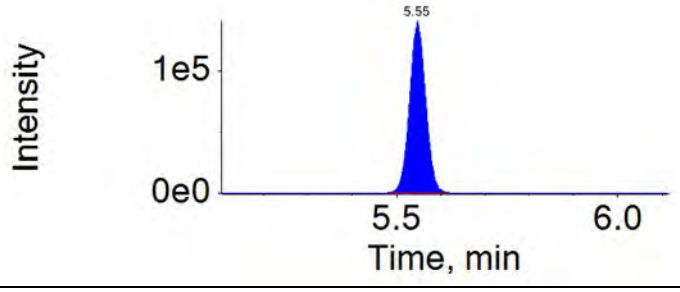
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

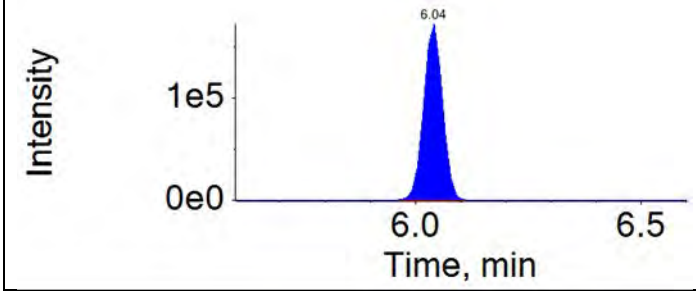
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

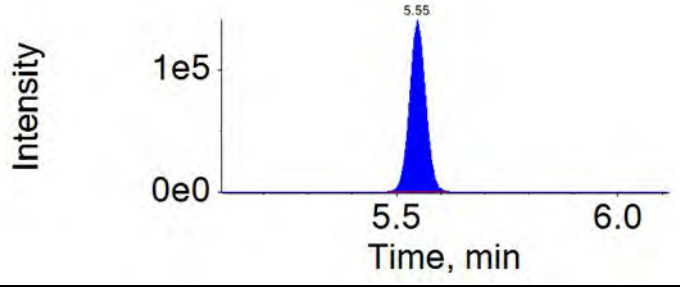
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



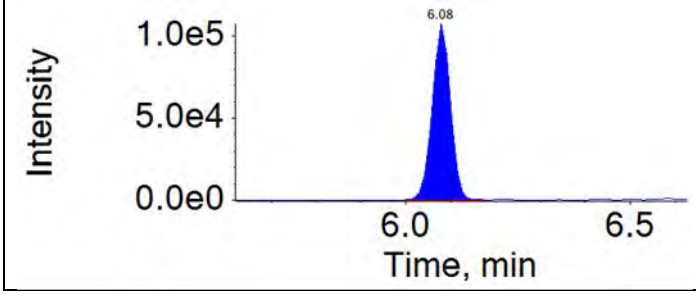


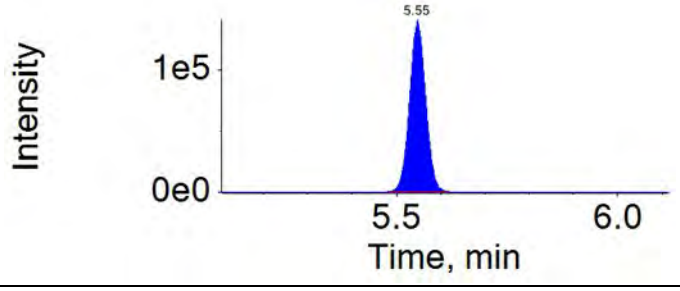
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



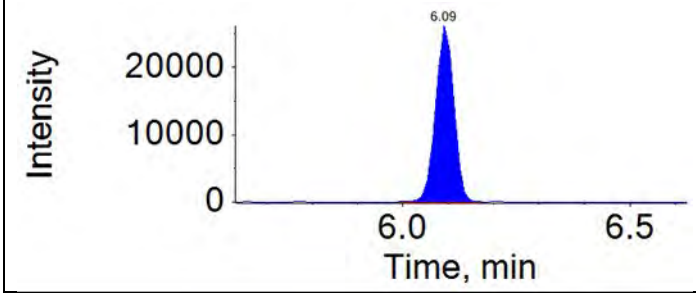


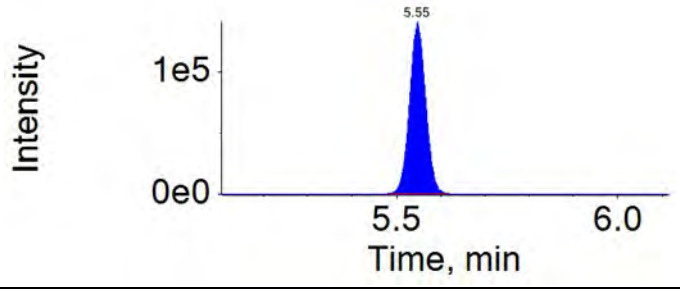
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



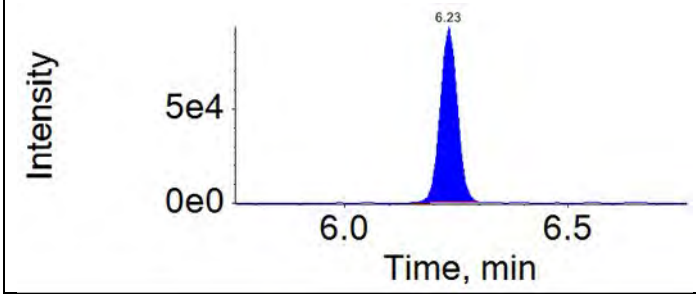


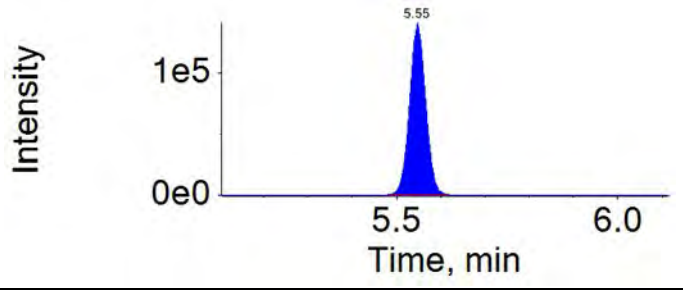
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

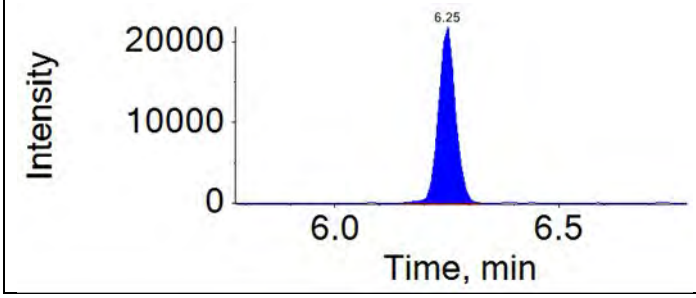
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

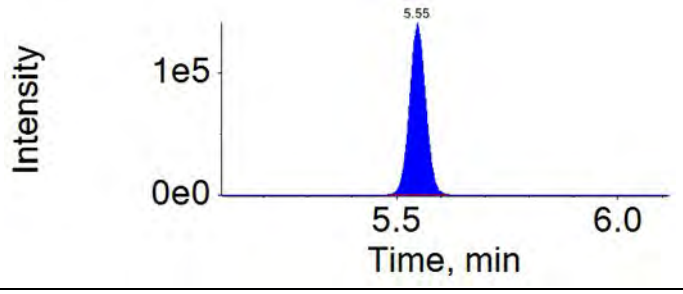
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



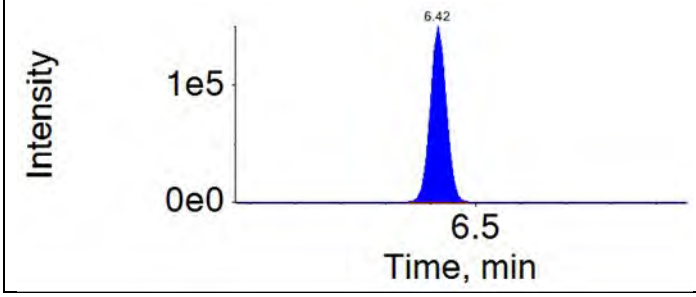


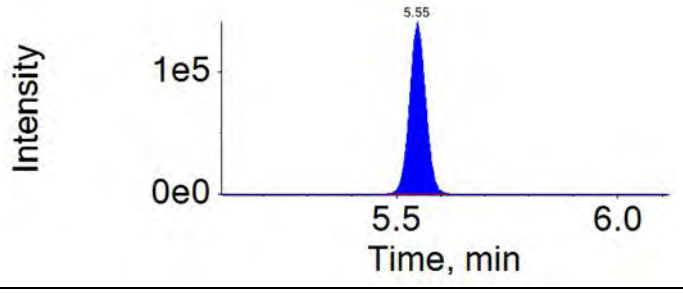
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



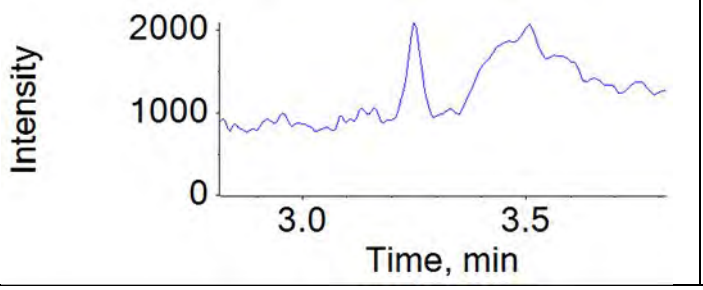


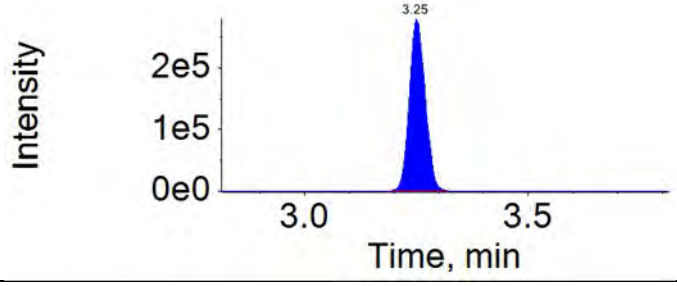
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

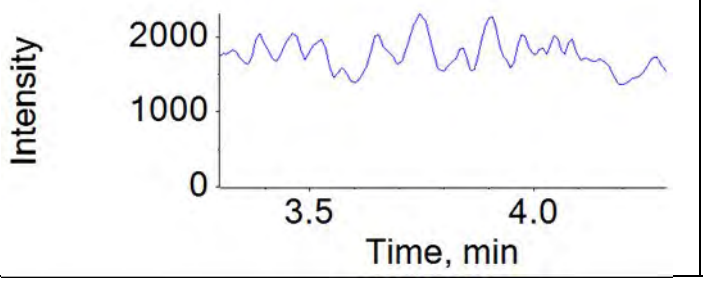
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

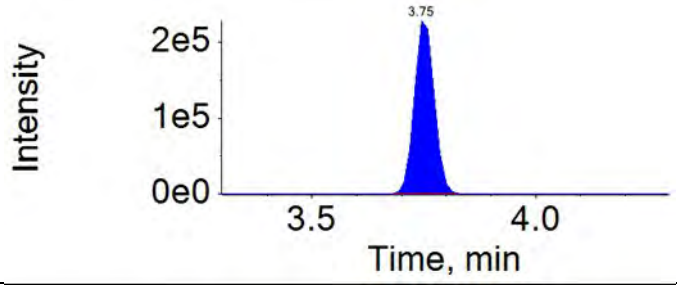
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



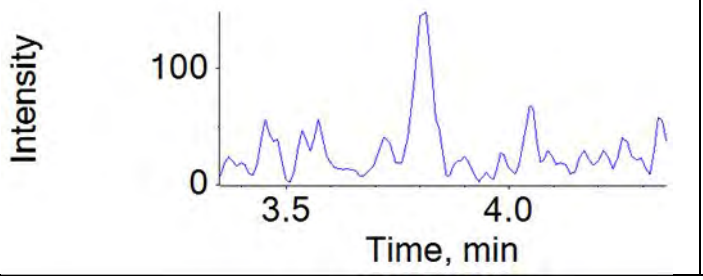


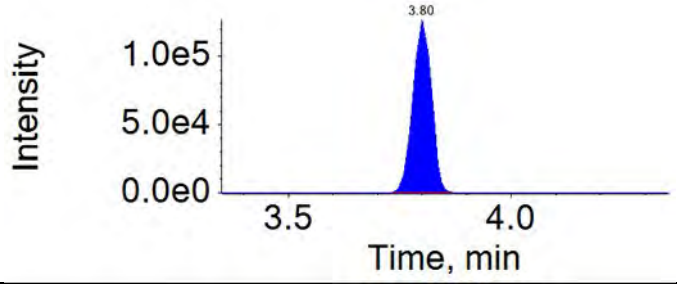
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



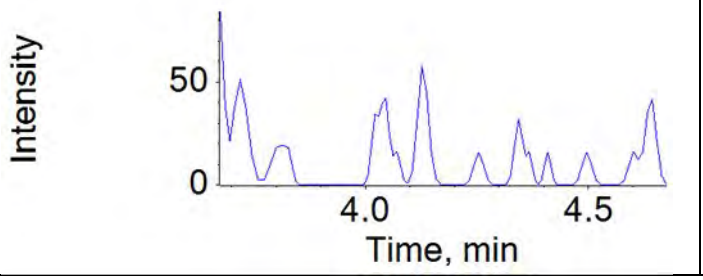


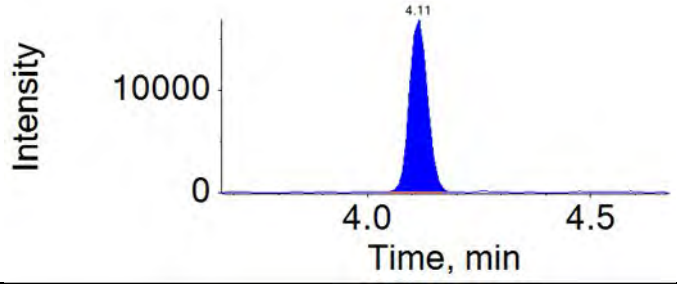
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



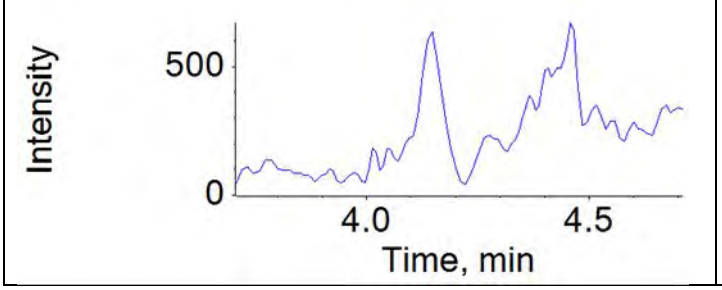


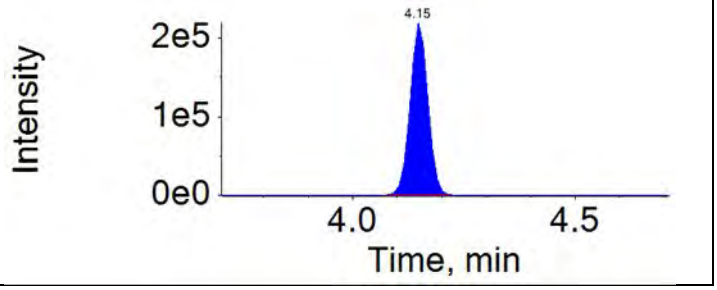
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

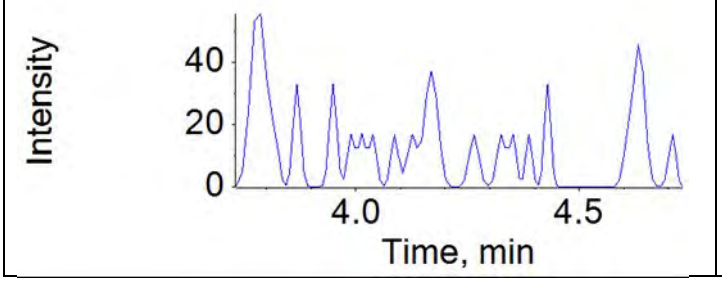
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

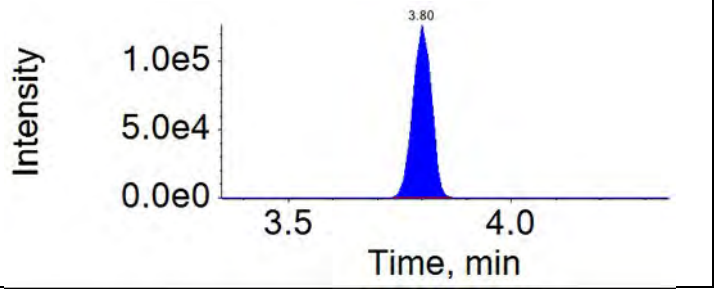
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



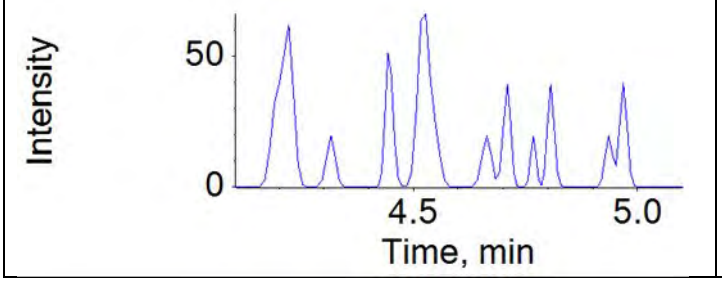


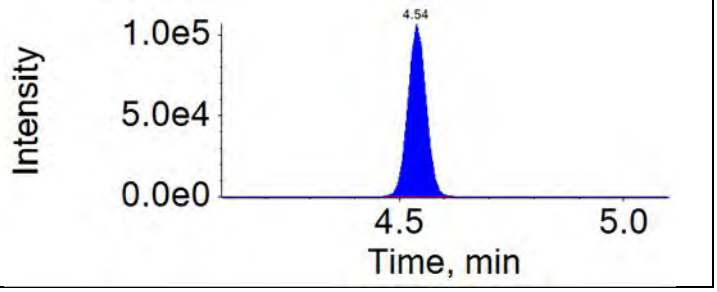
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



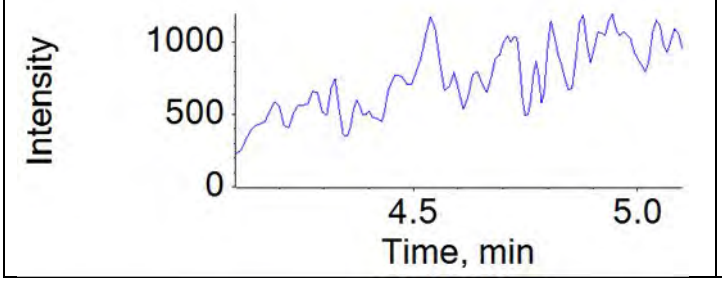


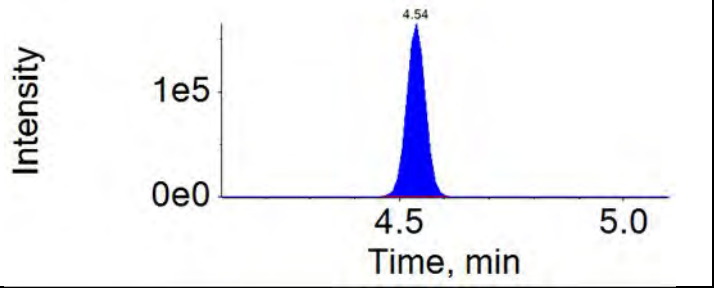
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





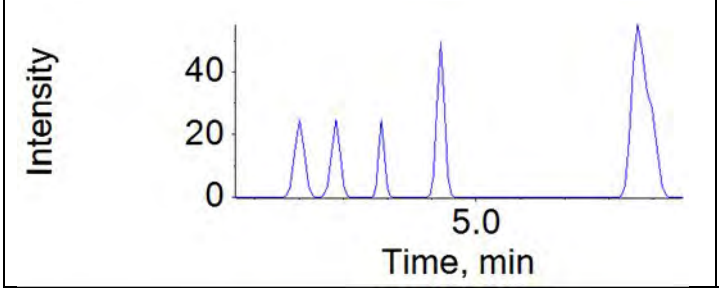
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

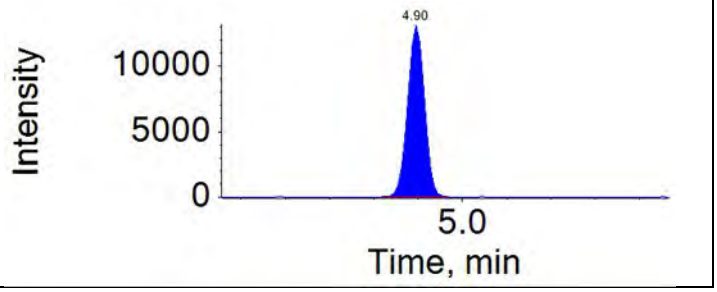




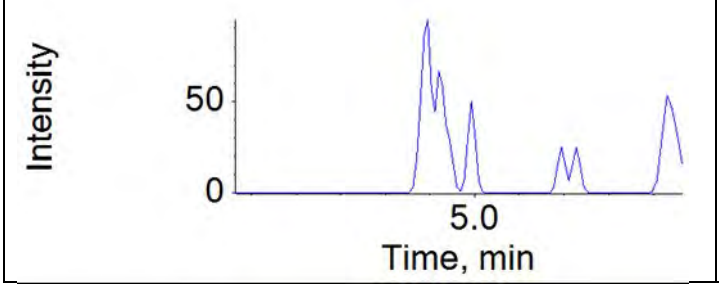
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

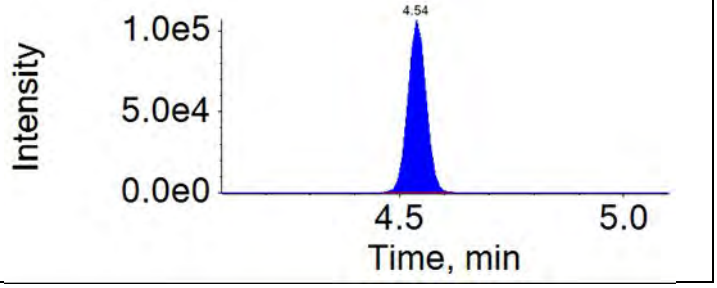
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



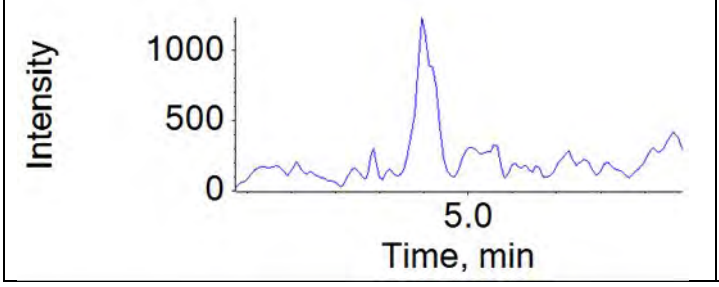


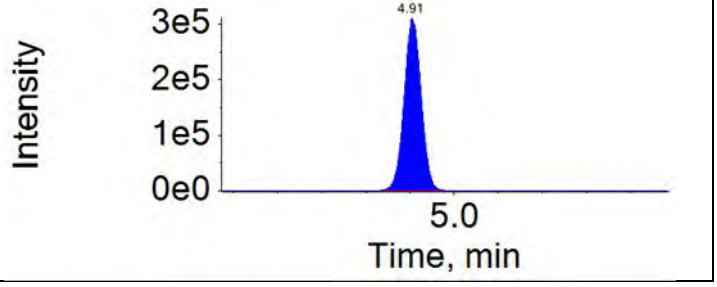
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



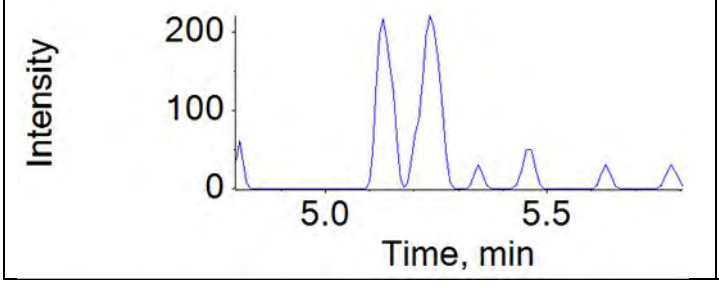


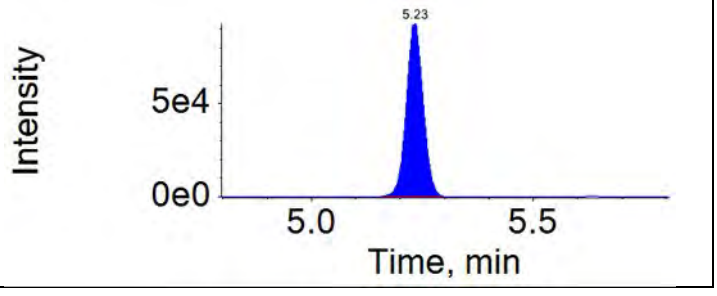
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



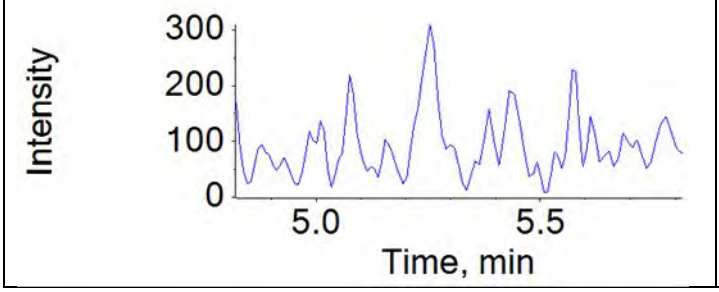


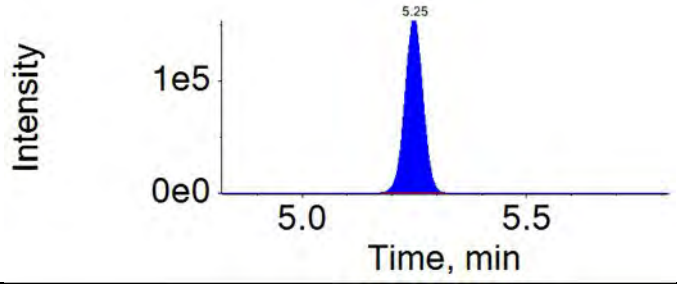
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

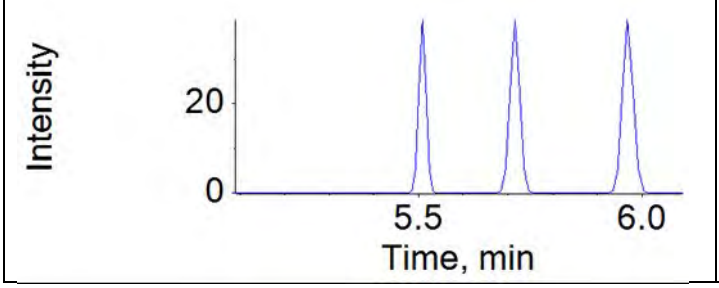
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

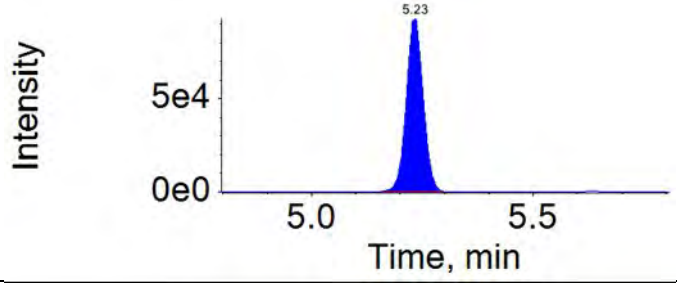
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



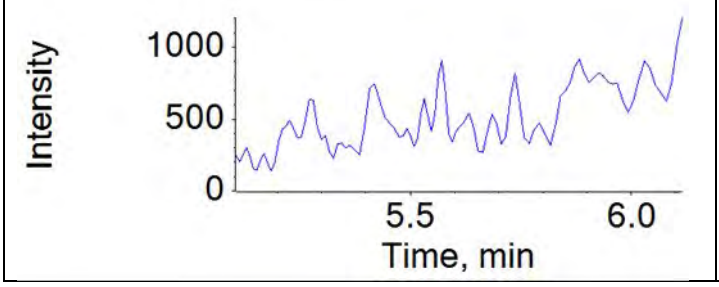


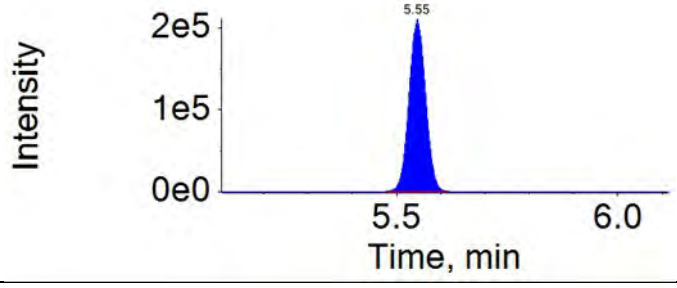
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



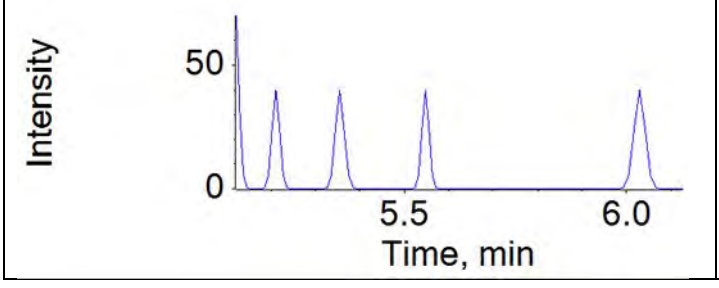


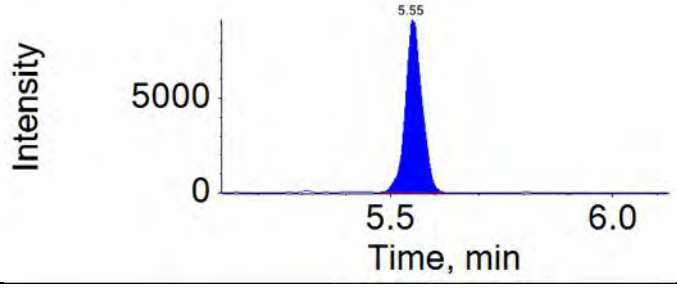
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



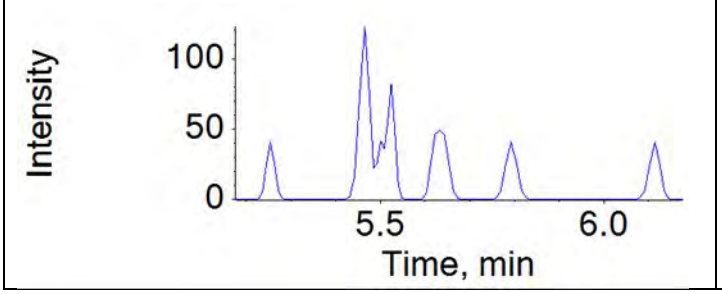


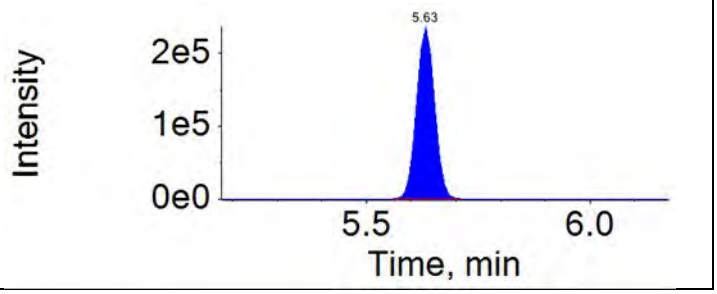
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

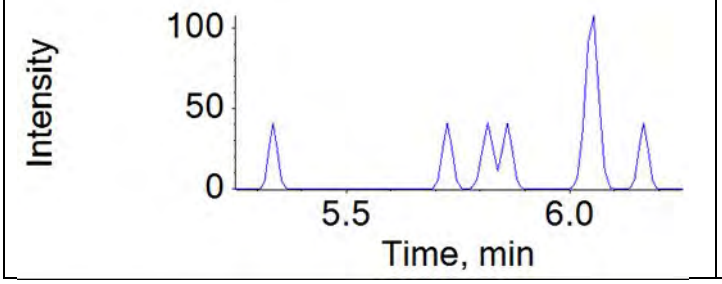
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

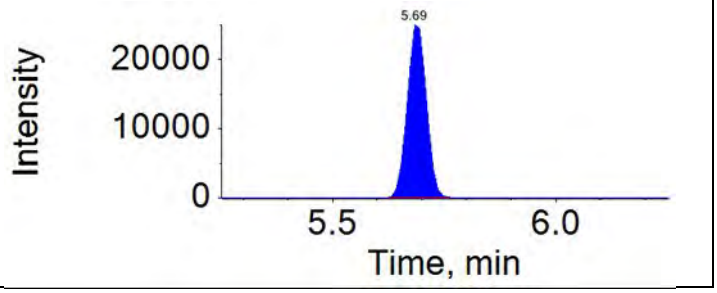
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



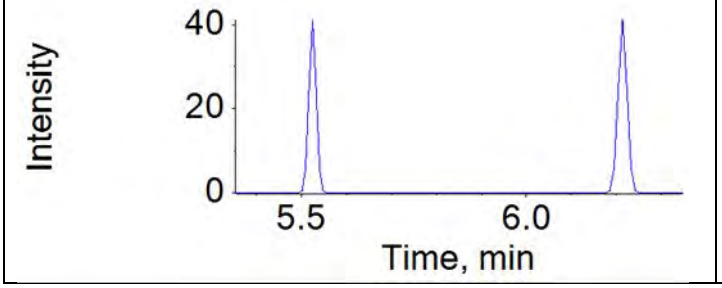


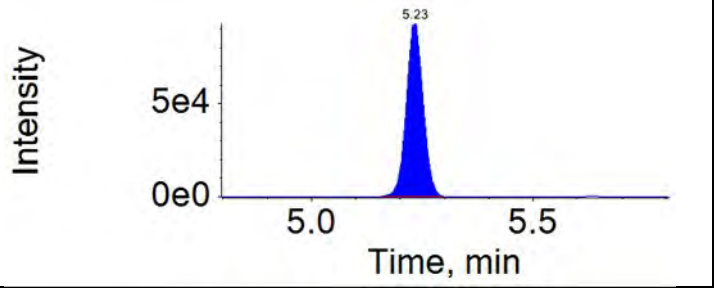
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



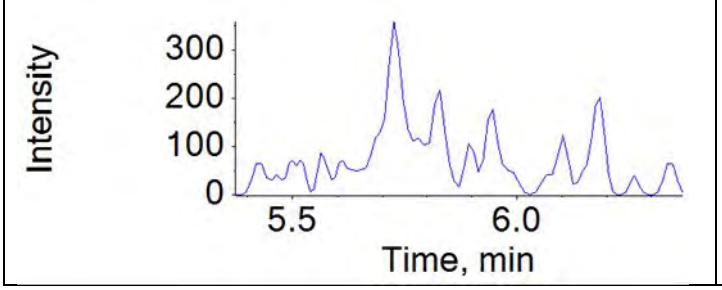


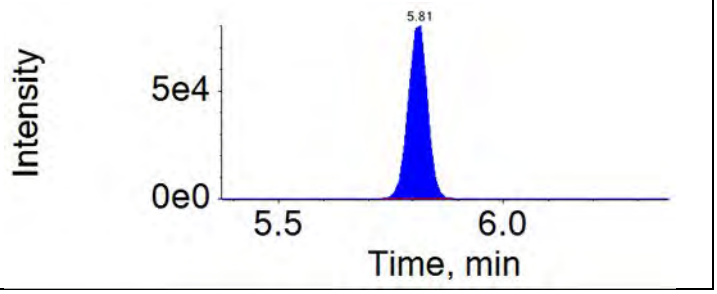
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



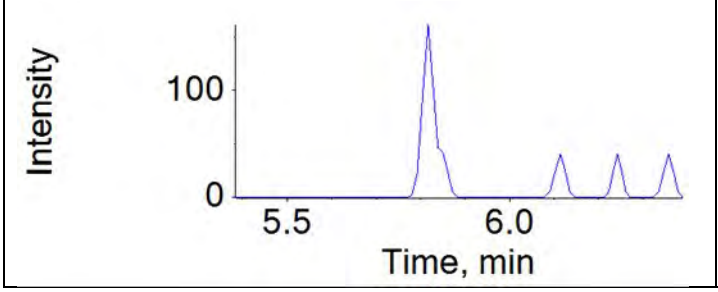


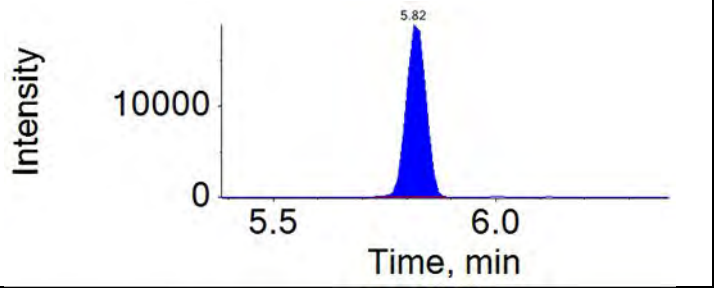
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

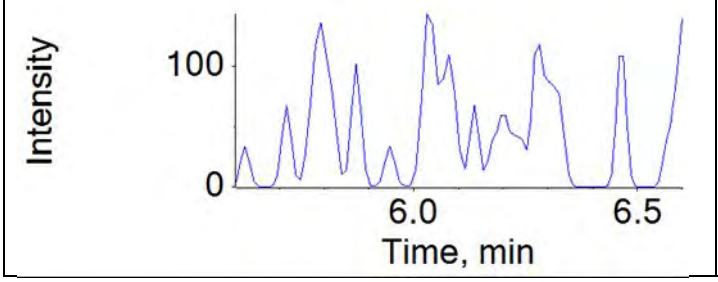
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

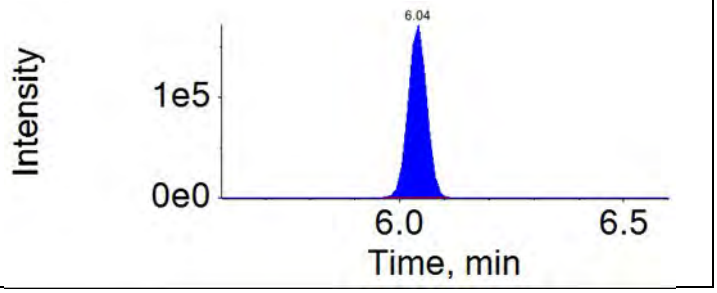
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



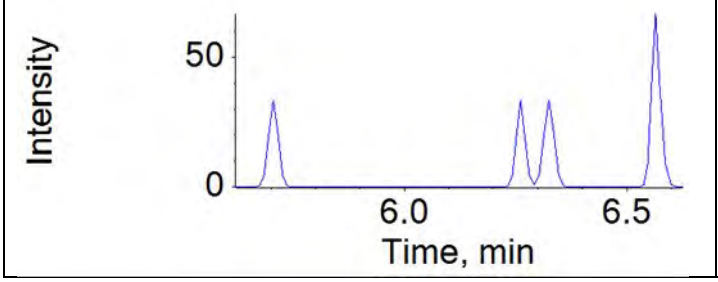


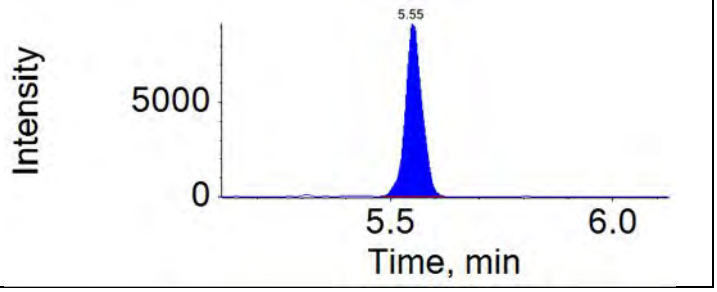
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



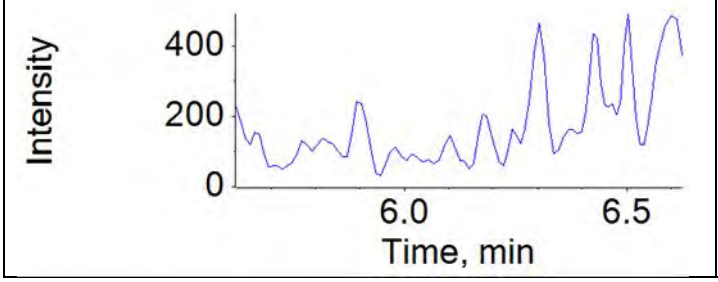


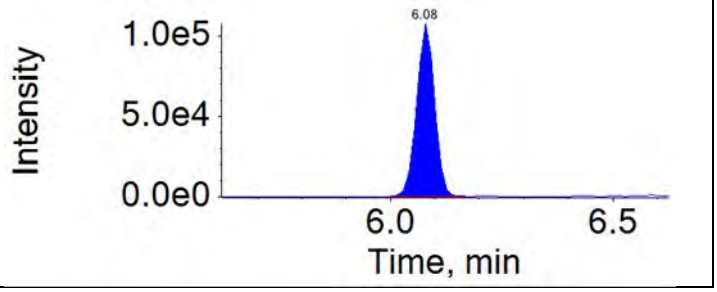
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





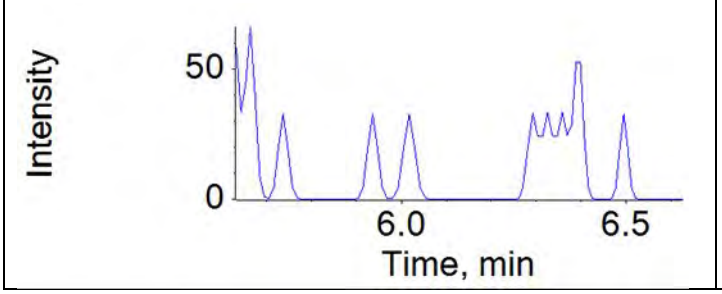
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

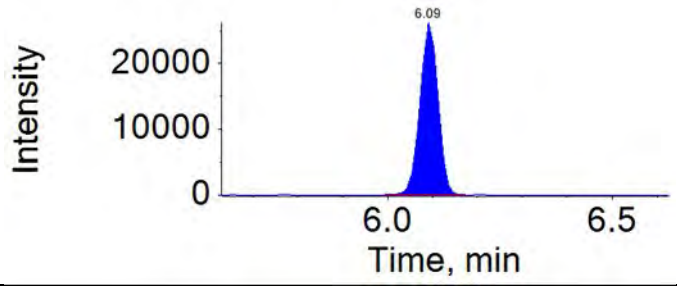




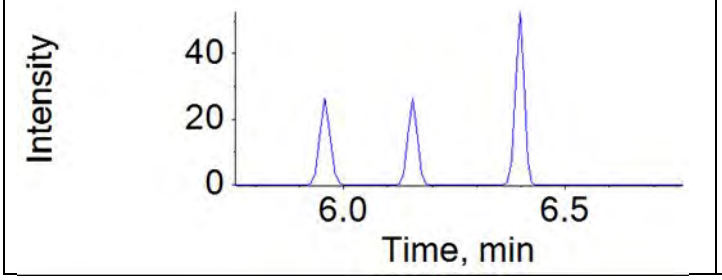
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

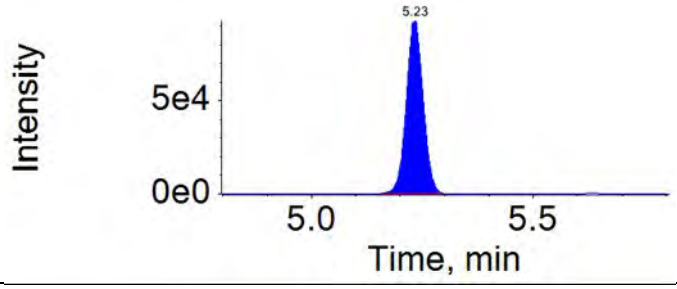
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



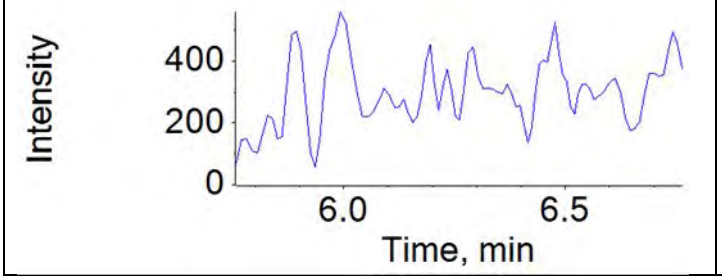


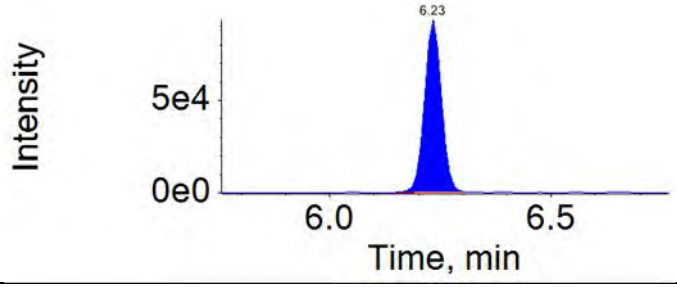
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



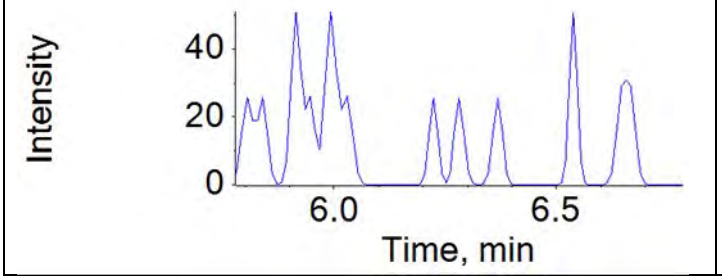


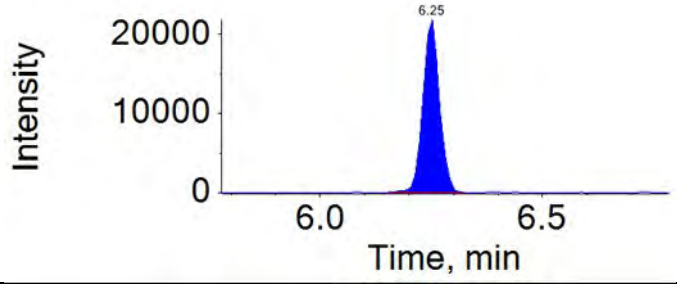
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



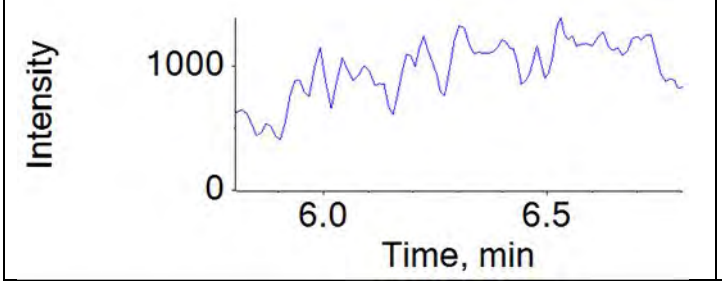


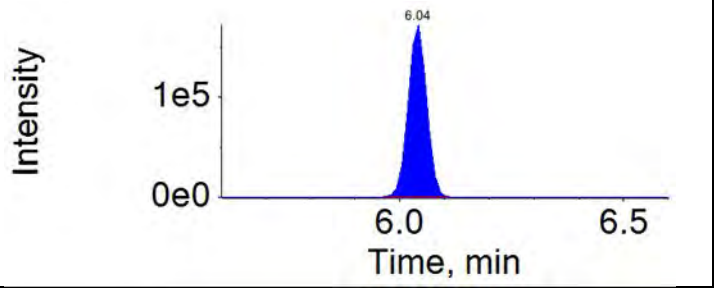
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

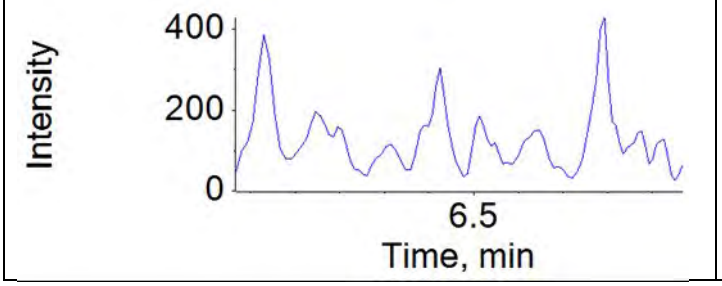
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

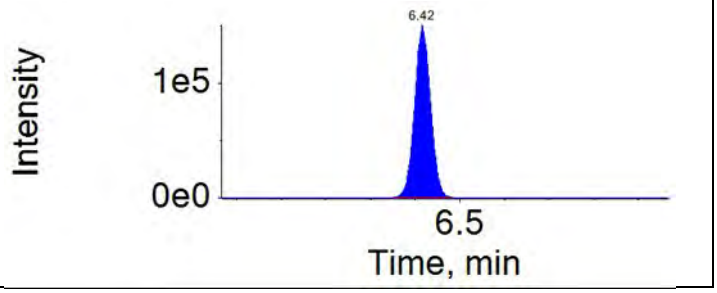
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



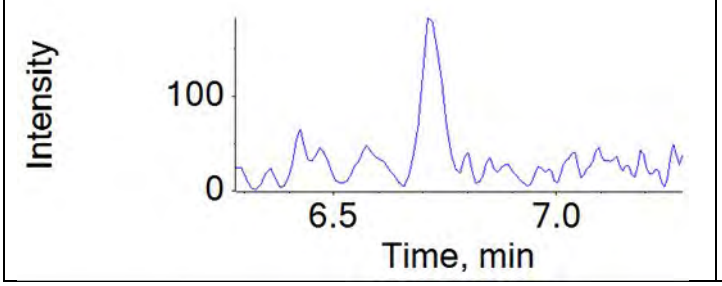


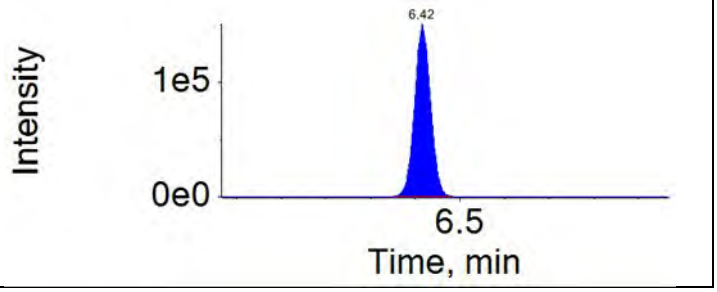
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



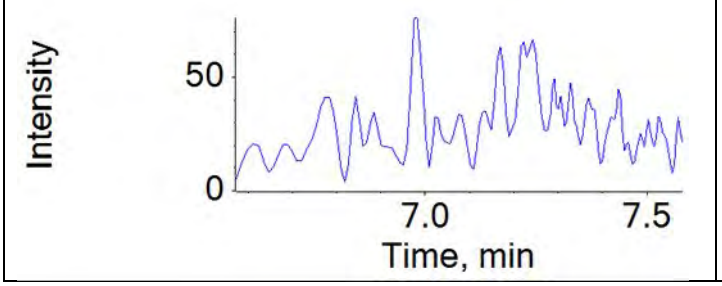


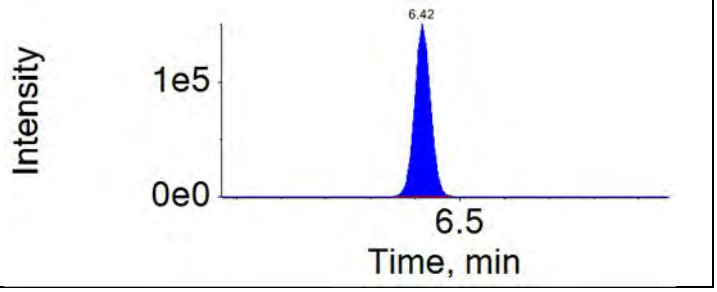
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





Ion Ratio Report

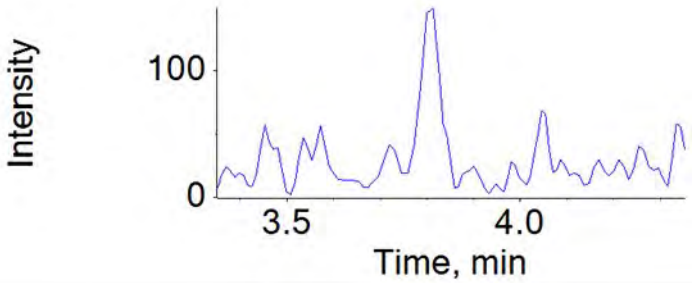
Sample Name: BLK309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

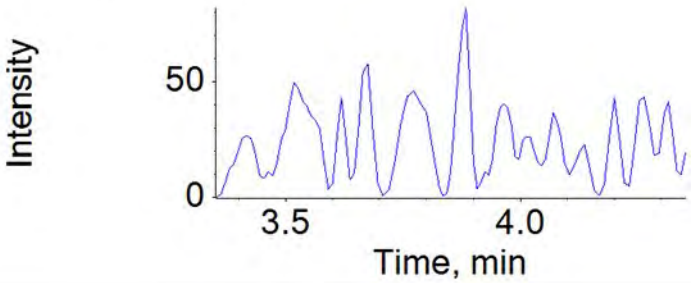
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

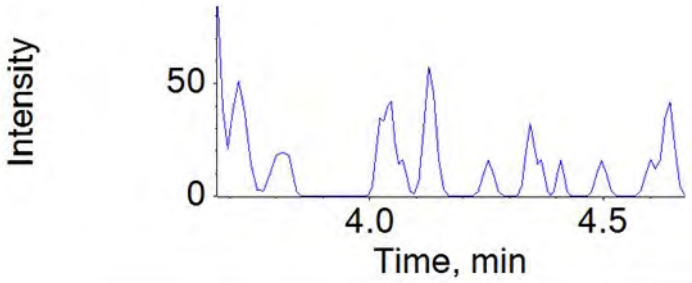
Component: PFBS
Primary Mass: 299.0 / 80.0



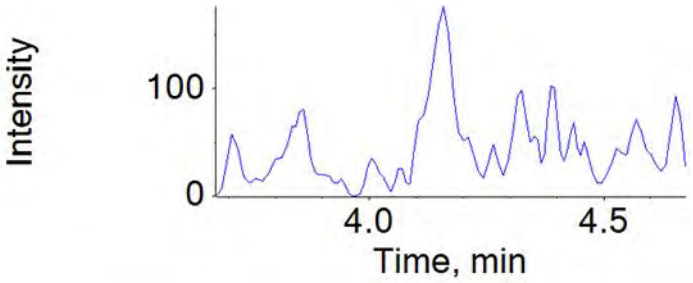
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



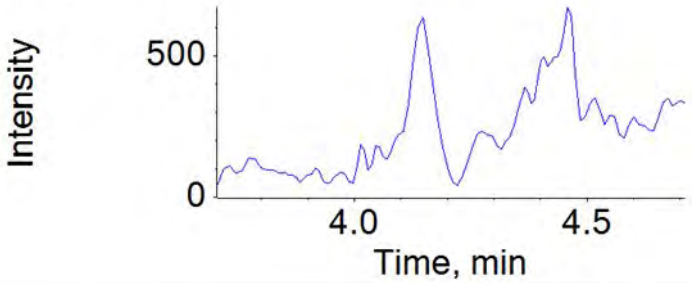
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



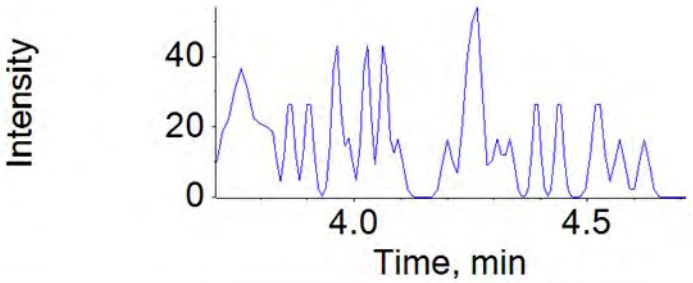
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



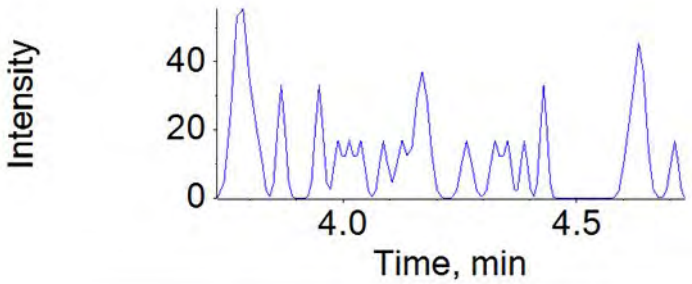
Component: PFHxA
Primary Mass: 313.0 / 269.0



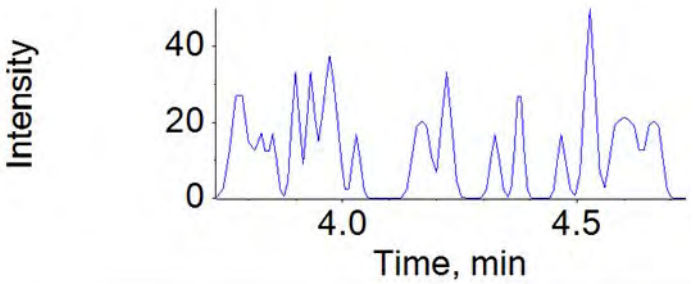
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



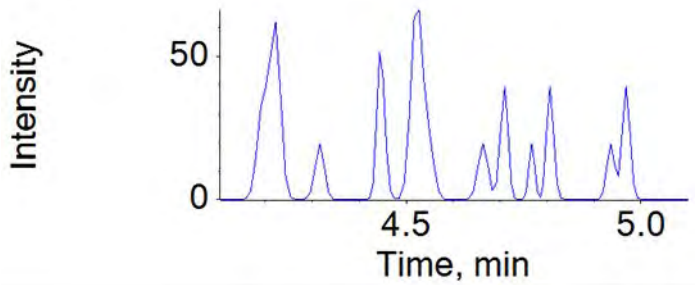
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



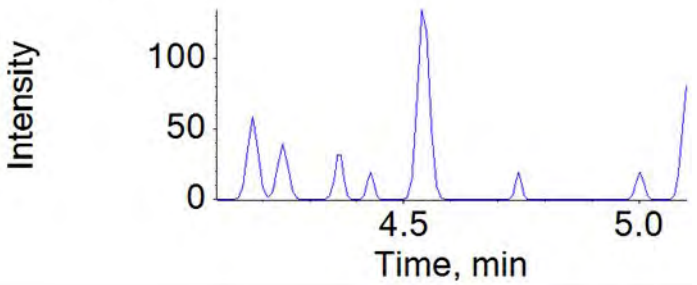
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

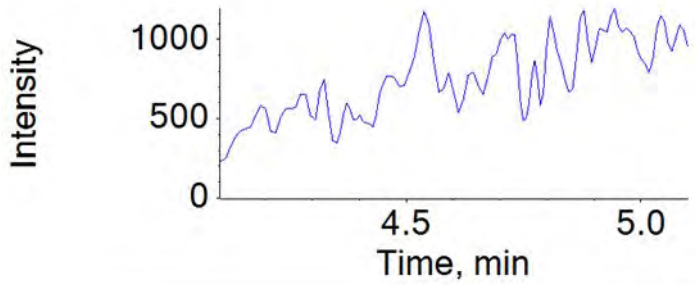
Component: PFHxS
Primary Mass: 399.0 / 80.0



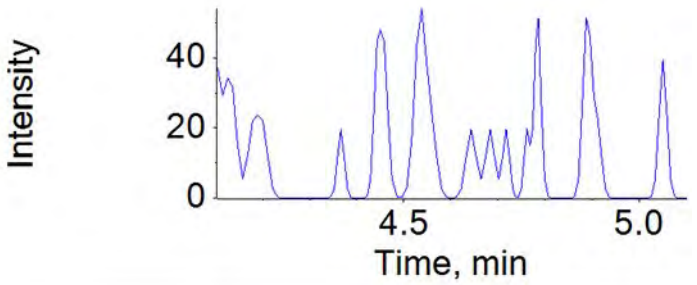
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



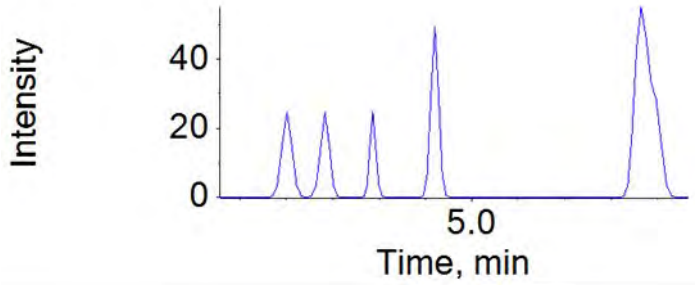
Component: PFHpA
Primary Mass: 363.0 / 319.0



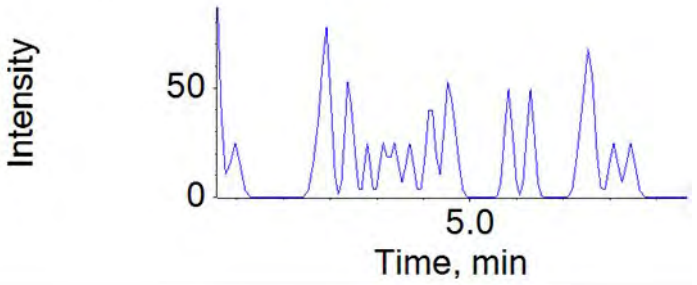
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



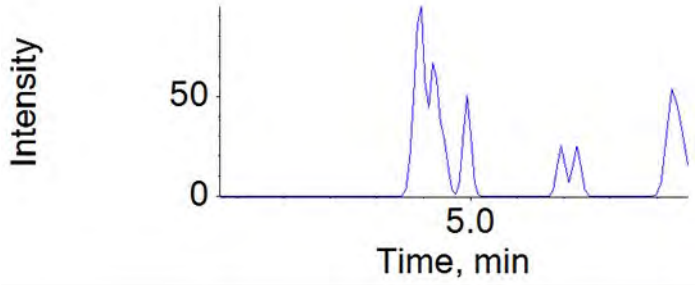
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



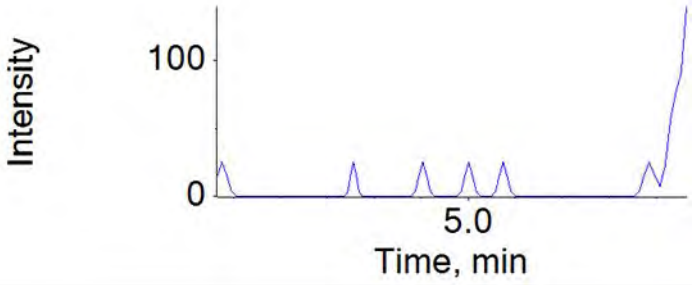
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



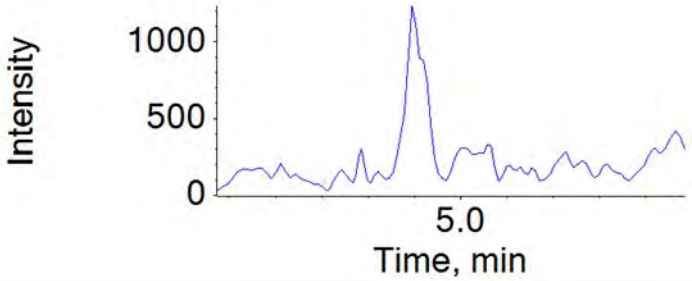
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



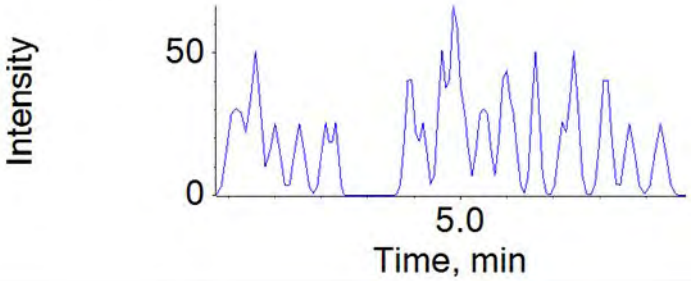
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

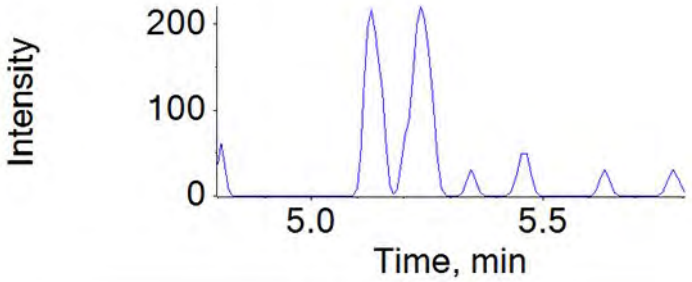
Component: PFOA
Primary Mass: 413.0 / 369.0



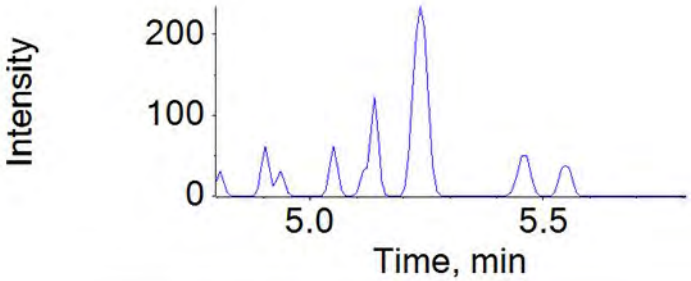
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



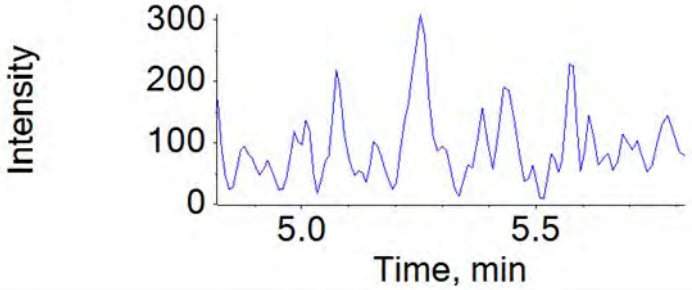
Component: PFOS
Primary Mass: 499.0 / 80.0



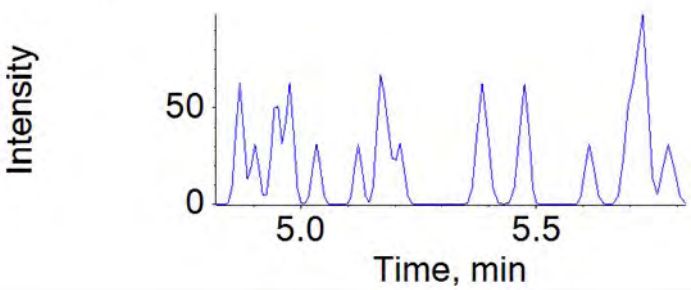
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



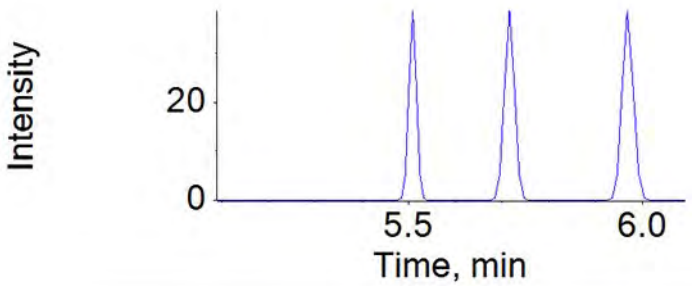
Component: PFNA
Primary Mass: 463.0 / 419.0



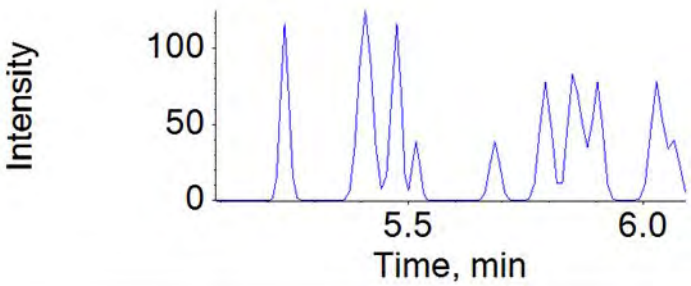
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



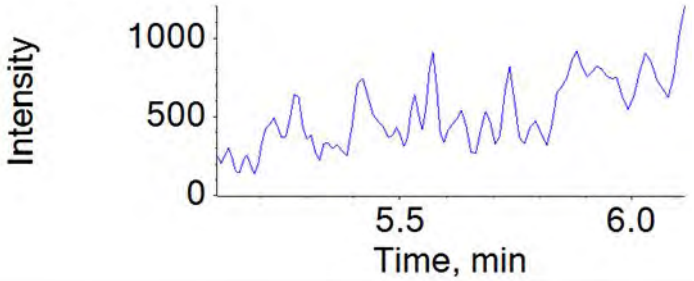
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



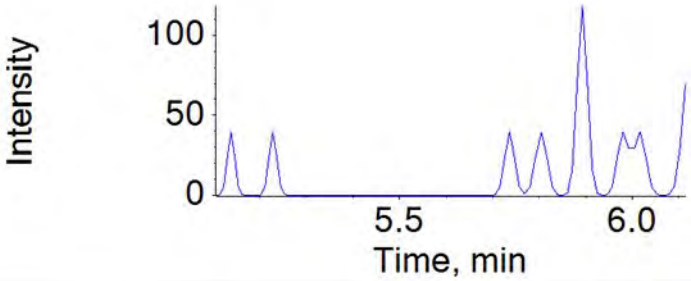
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

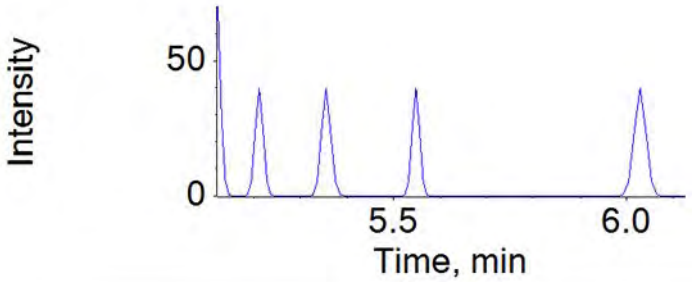
Component: PFDA
Primary Mass: 513.0 / 469.0



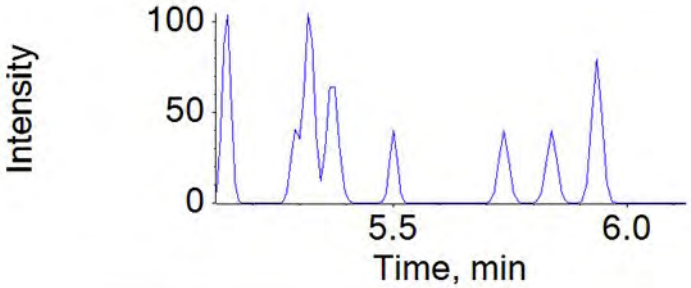
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



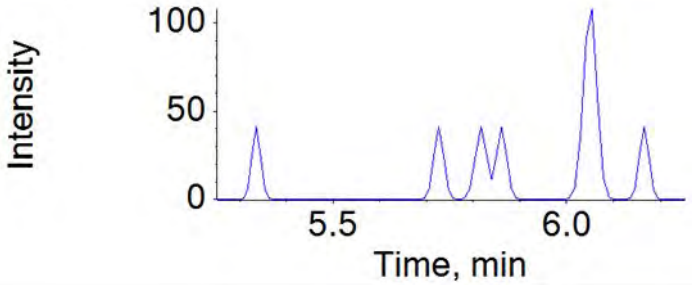
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



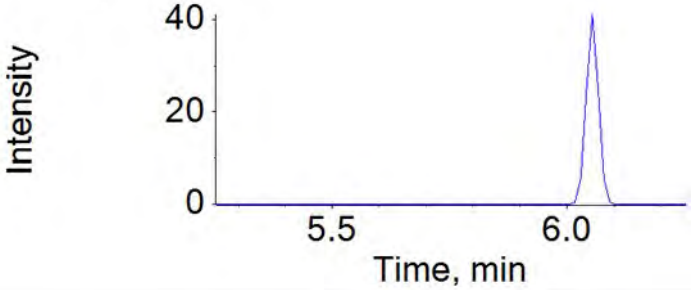
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



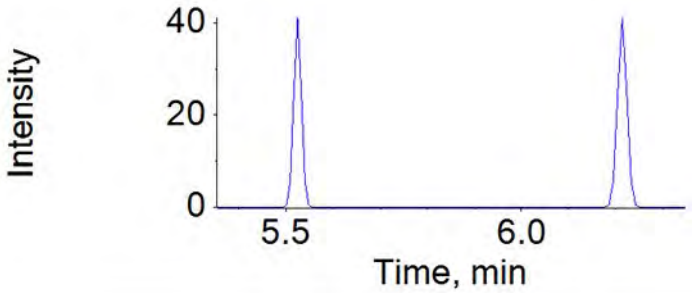
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



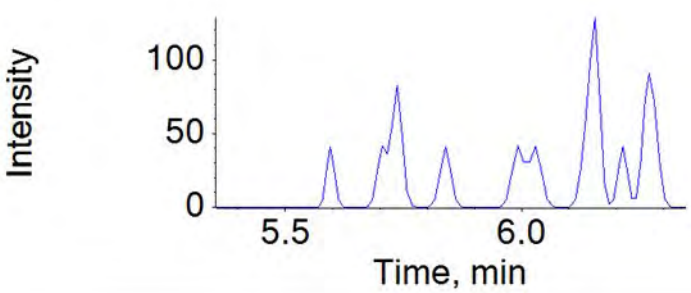
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



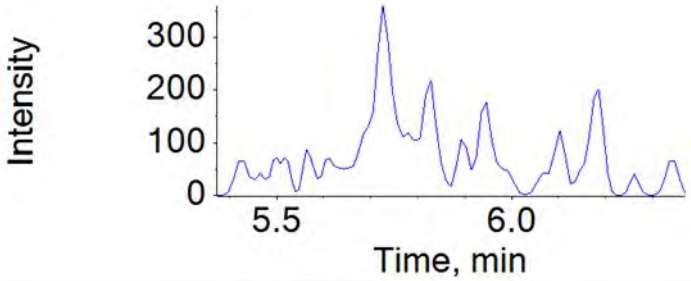
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



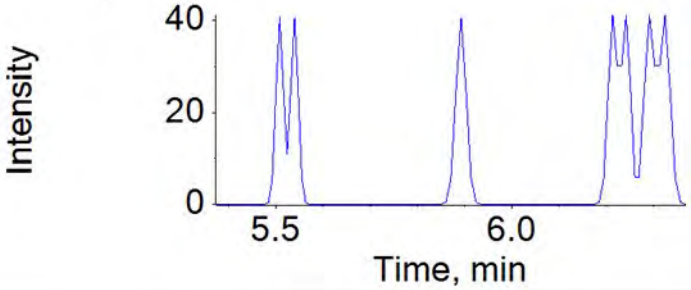
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

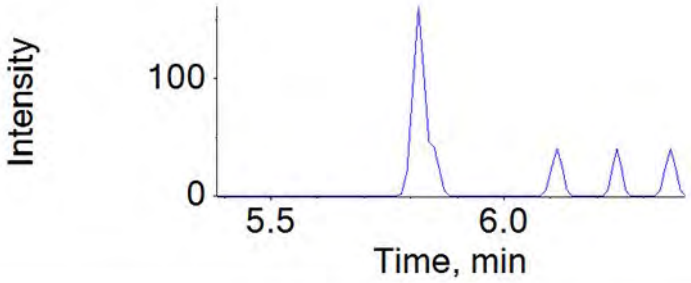
Component: PFUnDA
Primary Mass: 563.0 / 519.0



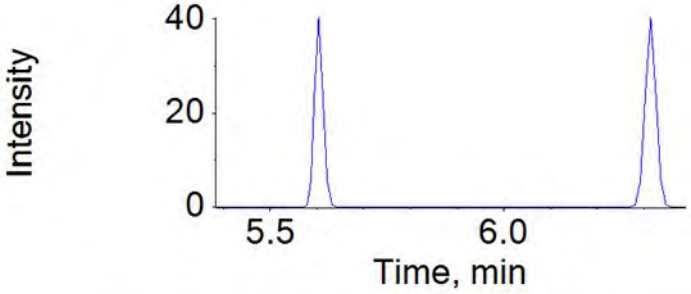
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



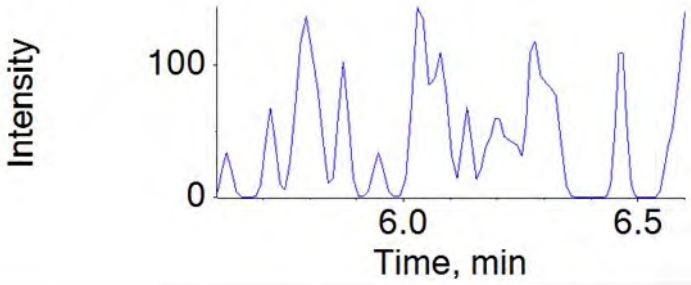
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



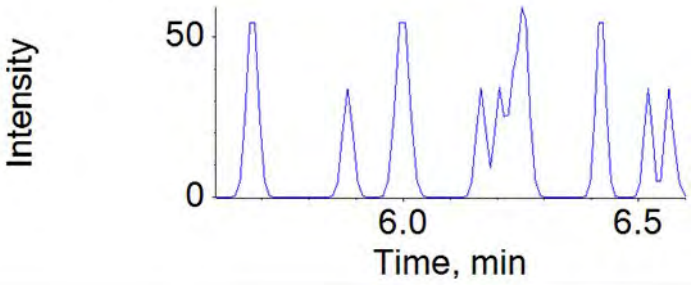
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



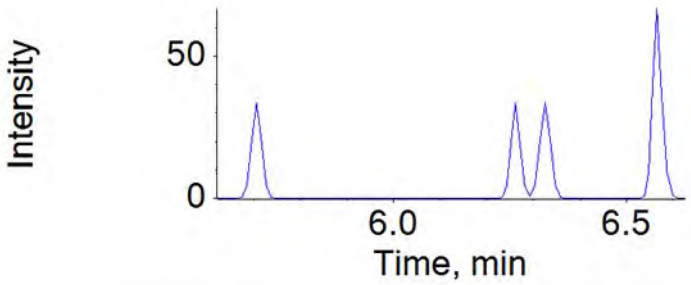
Component: PFDoDA
Primary Mass: 613.0 / 569.0



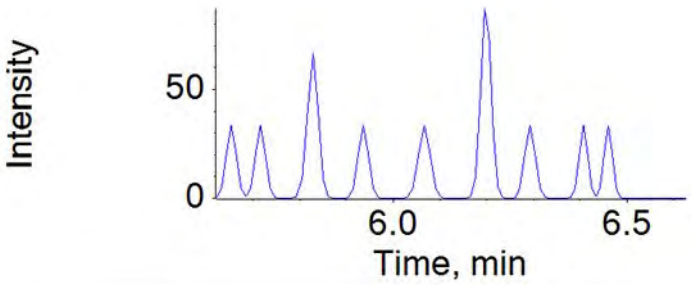
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



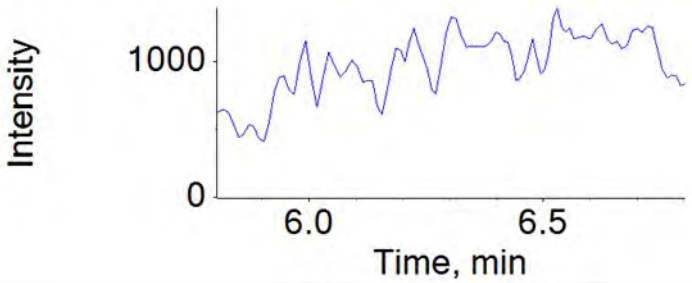
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



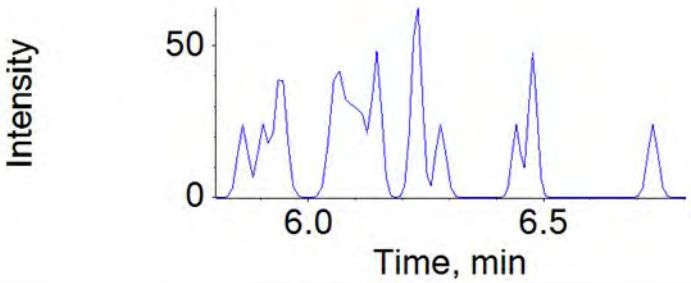
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

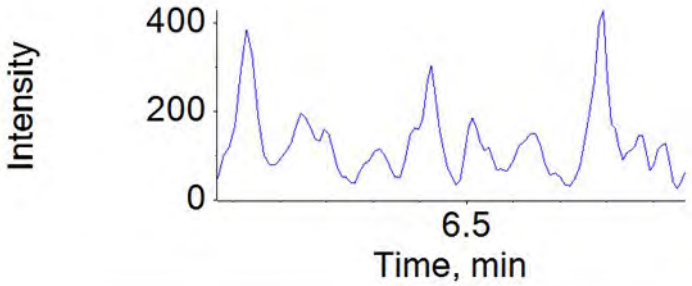
Component: PFTrDA
Primary Mass: 663.0 / 619.0



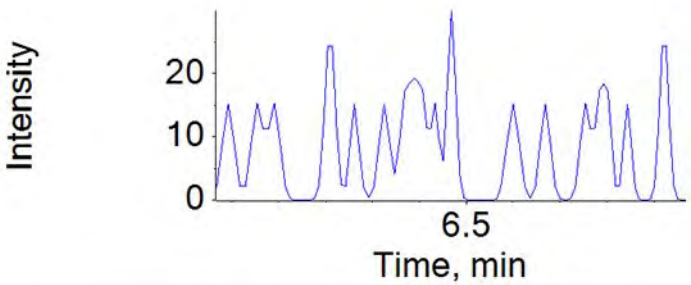
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



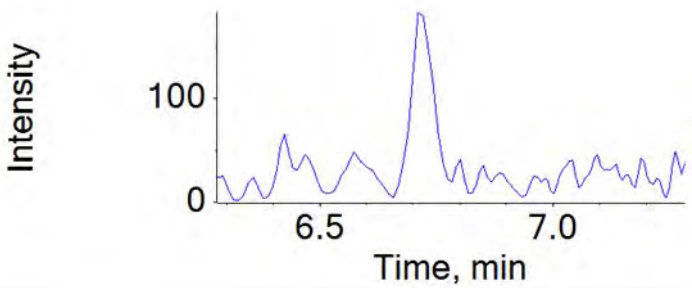
Component: PFTeDA
Primary Mass: 713.0 / 669.0



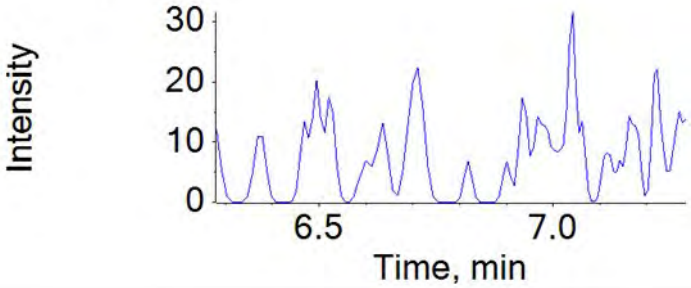
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



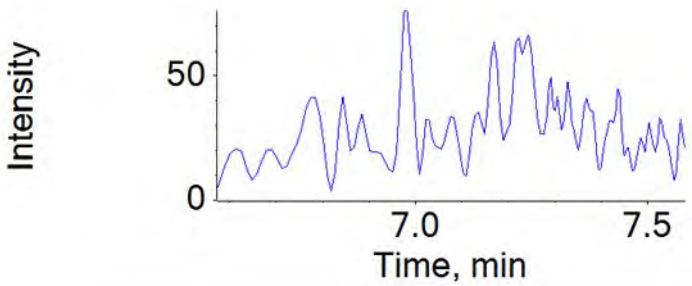
Component: PFHxDA
Primary Mass: 813.0 / 769.0



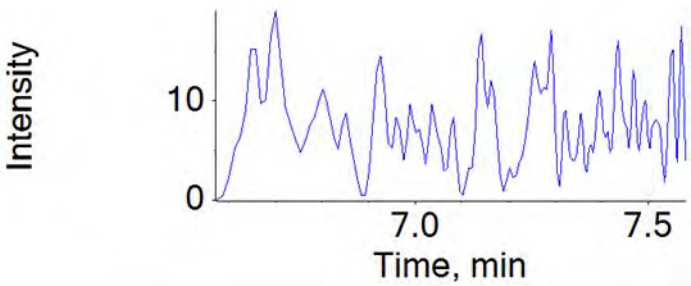
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	BLK313005			**Data File:**		18NOV12D-16.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18313005			**Acquis Date:**		2018-11-12T19:00:51
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	35			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18313005
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18313005			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	704295.5	659926.2	7	50	
13C2-PFOA	5.0	477711.8	450219.7	6	50	
13C4-PFOS	4.8	265255.9	249205.8	6	50	
13C2-PFDA	5.0	307142.0	278743.9	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	561531.5	13C3-PFBA	704295.5	0.797	10.000	7.149	71	50-150	
E13C5-PFPeA	560041.2	13C3-PFBA	704295.5	0.795	10.000	7.133	71	50-150	
E13C3-PFBS	326776.2	13C3-PFBA	704295.5	0.464	9.300	6.551	70	50-150	
E13C2-4:2-FTS	36574.2	13C2-PFOA	477711.8	0.077	9.340	6.820	73	50-150	
E13C5-PFHxA	499267.9	13C2-PFOA	477711.8	1.045	10.000	7.551	76	50-150	
E13C3-PFHxS	241053.7	13C2-PFOA	477711.8	0.505	9.460	6.925	73	50-150	
E13C4-PFHpA	384958.6	13C2-PFOA	477711.8	0.806	10.000	7.261	73	50-150	
E13C2-6:2-FTS	26386.8	13C2-PFOA	477711.8	0.055	9.500	7.391	78	50-150	
E13C8-PFOA	675611.2	13C2-PFOA	477711.8	1.414	10.000	7.793	78	50-150	
E13C8-PFOS	199178.2	13C4-PFOS	265255.9	0.751	9.560	6.654	70	50-150	
E13C9-PFNA	347784.7	13C4-PFOS	265255.9	1.311	10.000	7.311	73	50-150	
E13C6-PFDA	477484.1	13C2-PFDA	307142.0	1.555	10.000	7.256	73	50-150	
E13C2-8:2-FTS	22608.4	13C2-PFDA	307142.0	0.074	9.580	7.342	77	50-150	
E13C8-PFOSA	536782.9	13C2-PFDA	307142.0	1.748	10.000	7.749	77	50-150	
Ed3-NMeFOSAA	57991.5	13C2-PFDA	307142.0	0.189	10.000	6.816	68	50-150	
E13C7-PFUnDA	193255.5	13C2-PFDA	307142.0	0.629	10.000	7.306	73	50-150	
Ed5-NEtFOSAA	45497.0	13C2-PFDA	307142.0	0.148	10.000	6.268	63	50-150	
E13C2-PFDoDA	405240.8	13C2-PFDA	307142.0	1.319	10.000	6.851	69	50-150	
Ed7-NMePFOSAE	247295.2	13C2-PFDA	307142.0	0.805	10.000	6.968	70	50-150	
Ed3-NMePFOSA	61221.9	13C2-PFDA	307142.0	0.199	10.000	7.243	72	50-150	
Ed9-NEtPFOSAE	222170.2	13C2-PFDA	307142.0	0.723	10.000	7.524	75	50-150	
Ed5-NEtPFOSA	47125.9	13C2-PFDA	307142.0	0.153	10.000	7.199	72	50-150	
E13C2-PFTeDA	284597.4	13C2-PFDA	307142.0	0.927	10.000	6.506	65	50-150	

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

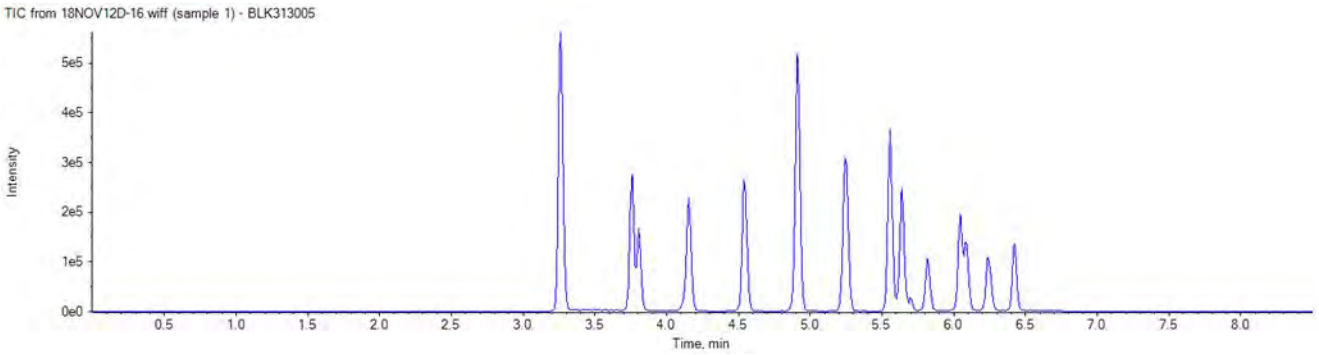
Analyte Quantitation Peak Table

Sample Name: BLK313005 **Instrument Name:** LM27631 **File Name:** 18NOV12D-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	561531.5	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	560041.2	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	326776.2	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	36574.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	499267.9	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	326776.2	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	384958.6	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	241053.8	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	26386.8	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	241053.8	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	675611.2	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	199178.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	347784.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	199178.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	477484.1	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22608.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	536782.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	57991.5	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	199178.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	193255.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	45497.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	405240.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22608.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	247295.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	61221.9	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	199178.2	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	222170.2	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	47125.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	405240.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	284597.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	284597.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	284597.4	N/A	

Total Ion Chromatogram

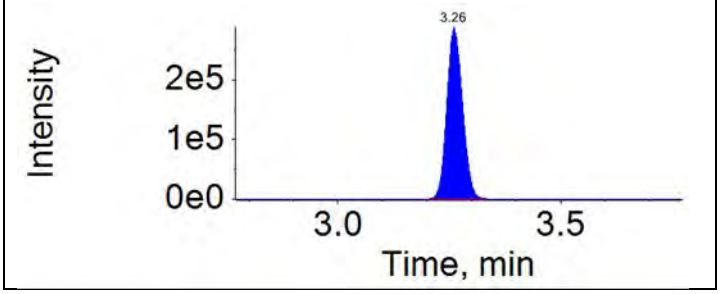


APPROVED
By JPT at 12:34 pm, 11/13/18

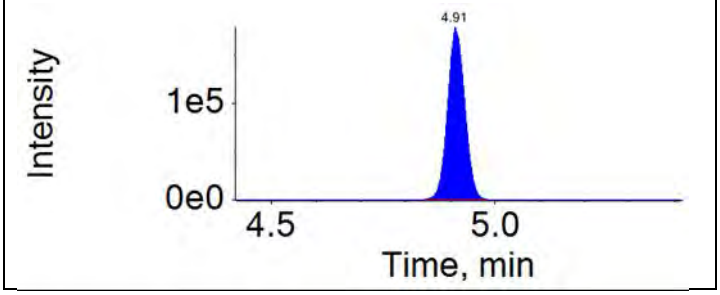
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

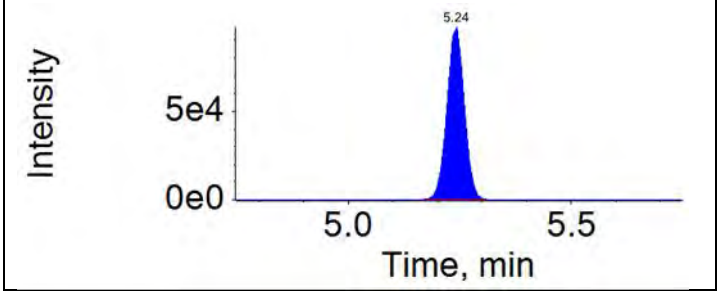
Injection Standard: 13C3-PFBA
216.0 / 172.0



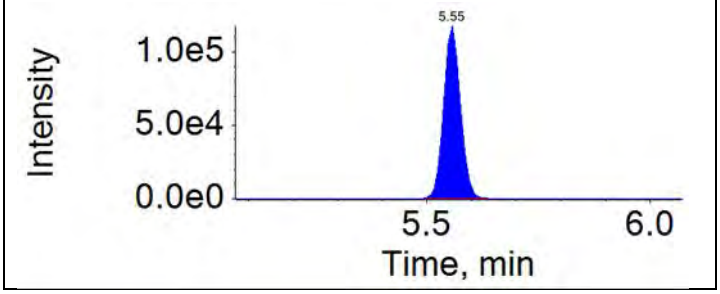
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

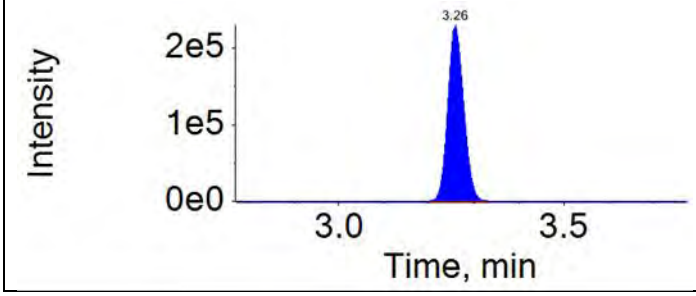


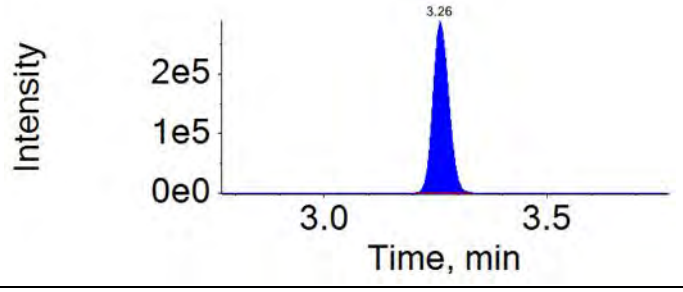
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

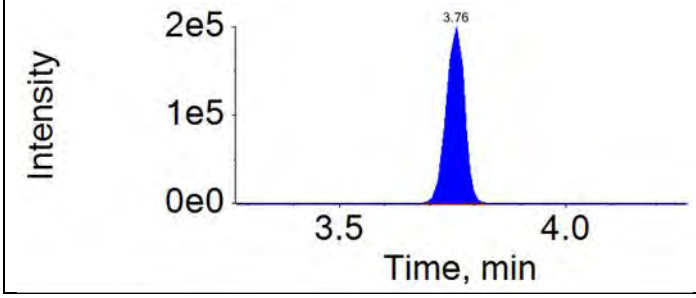
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

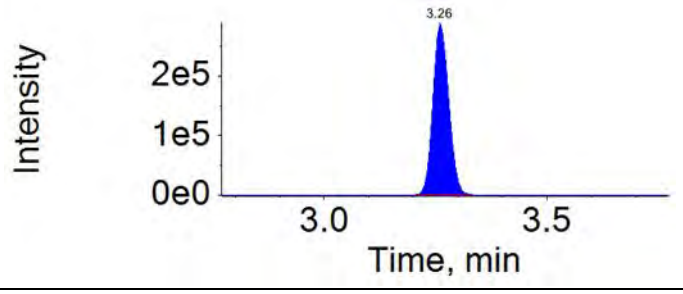
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



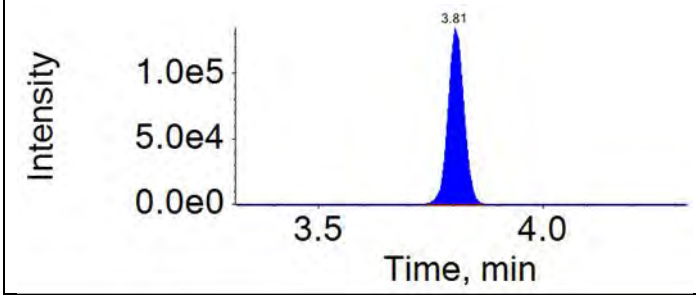


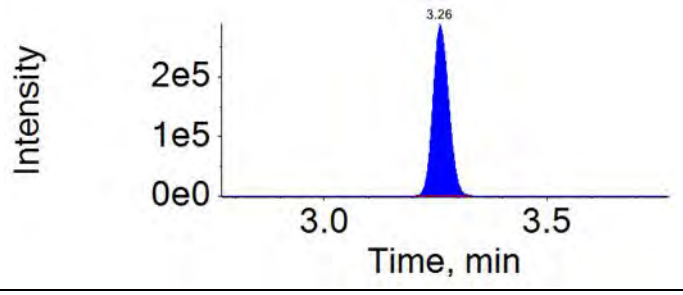
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



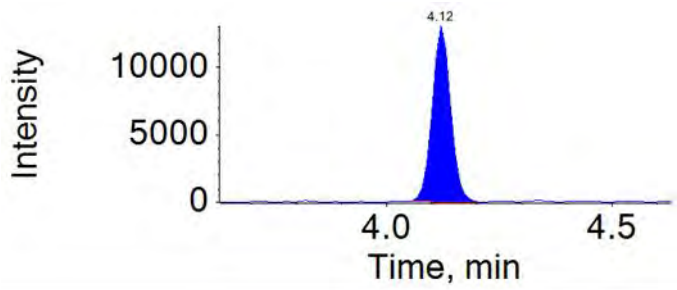


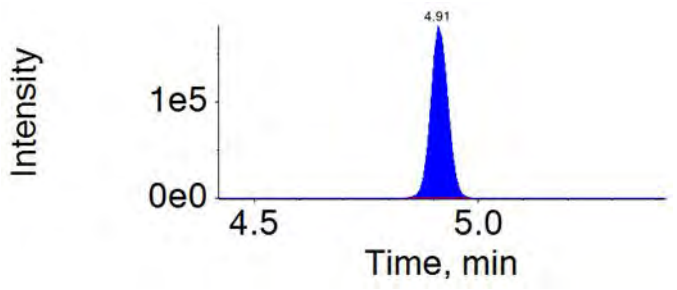
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



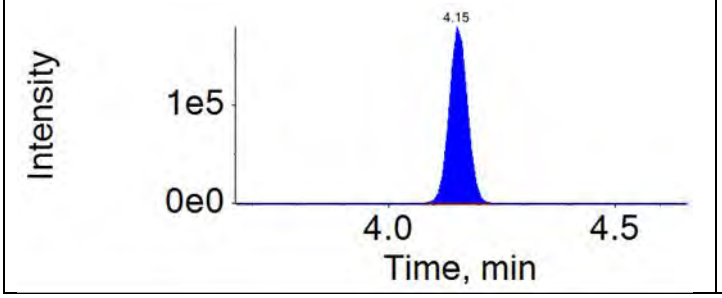


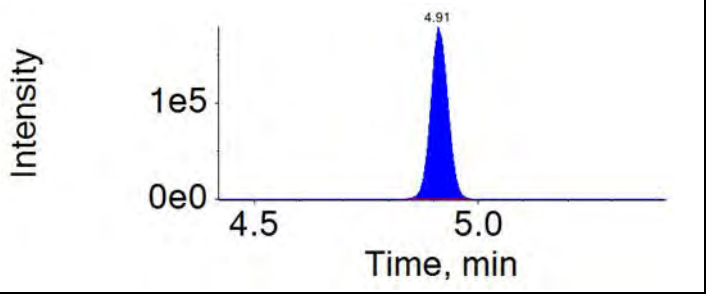
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

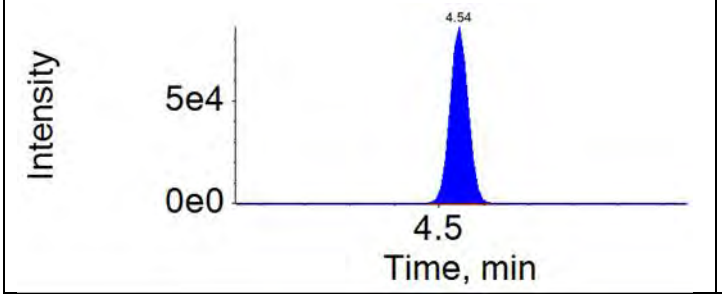
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

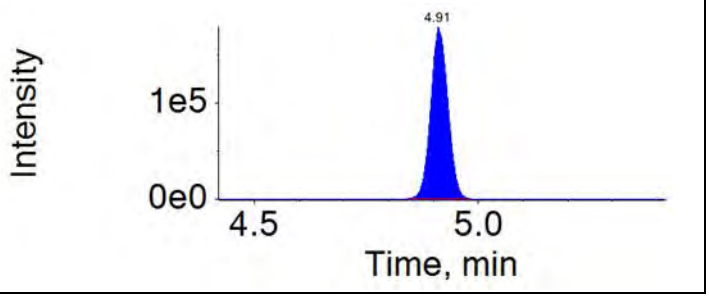
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



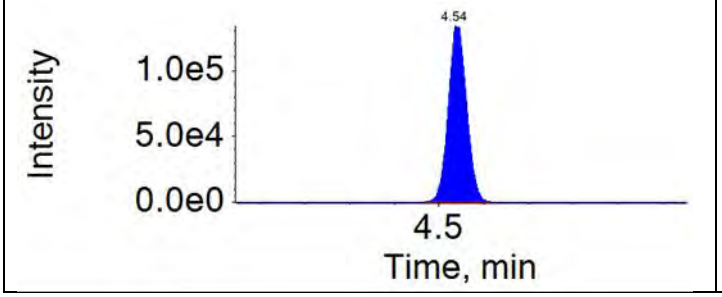


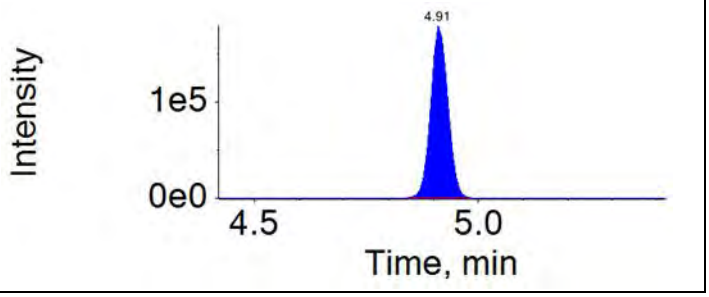
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



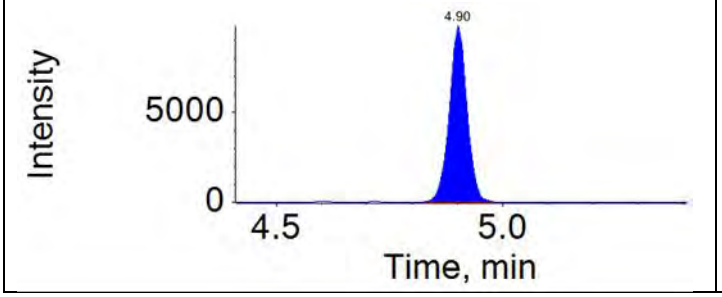


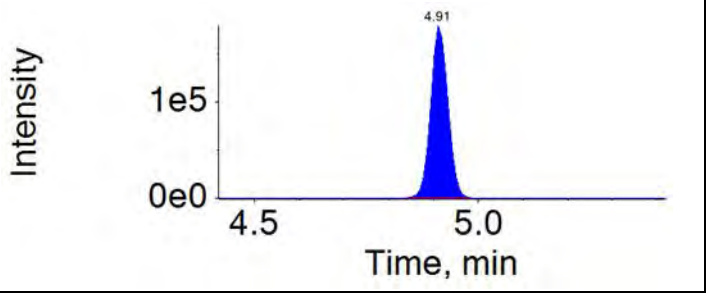
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

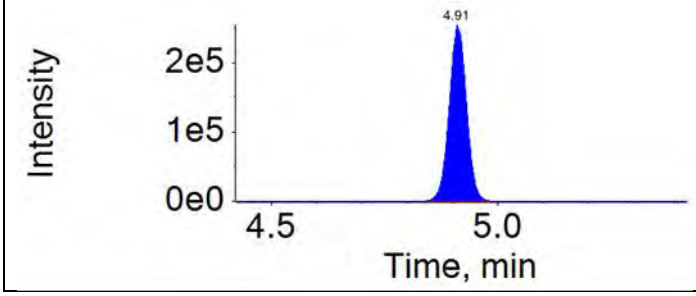
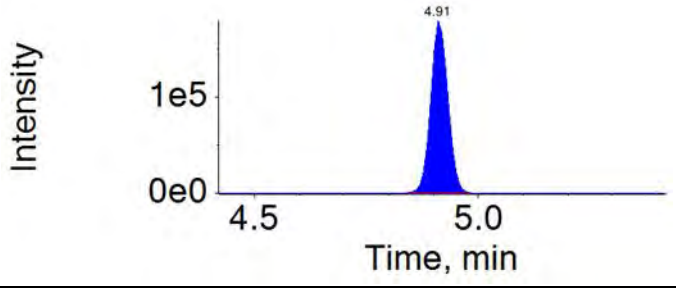


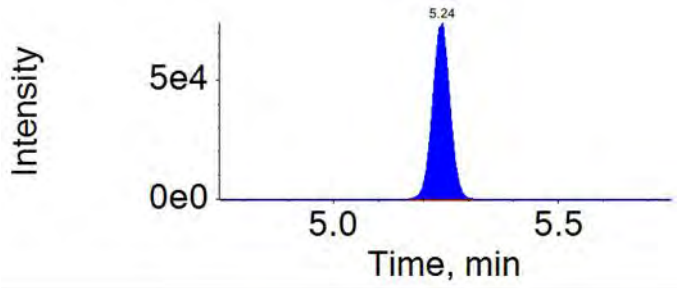
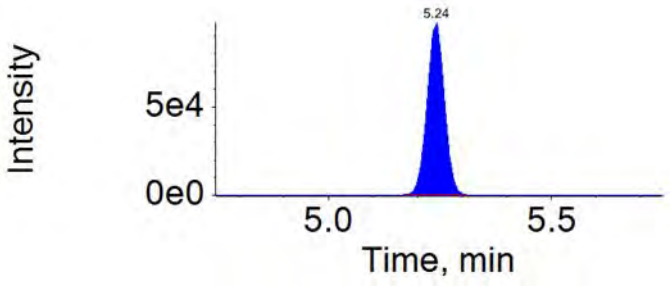


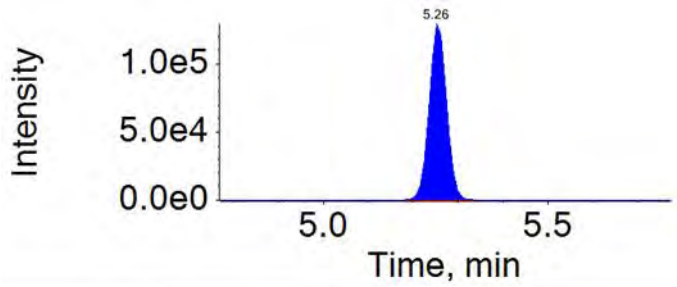
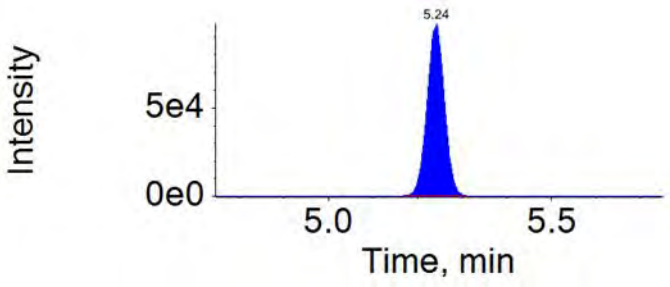
APPROVED
By JPT at 12:34 pm, 11/13/18

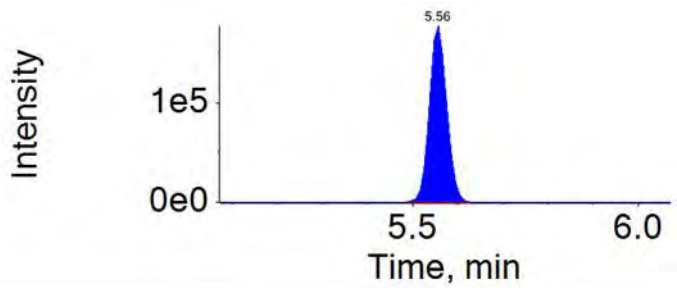
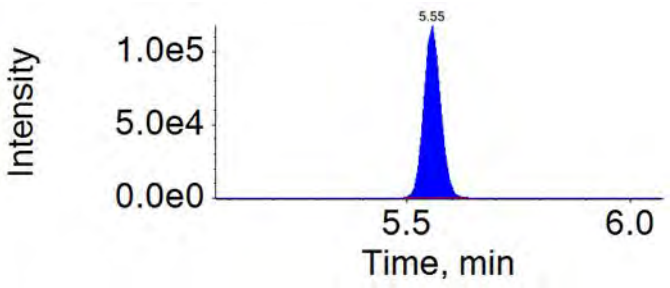
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

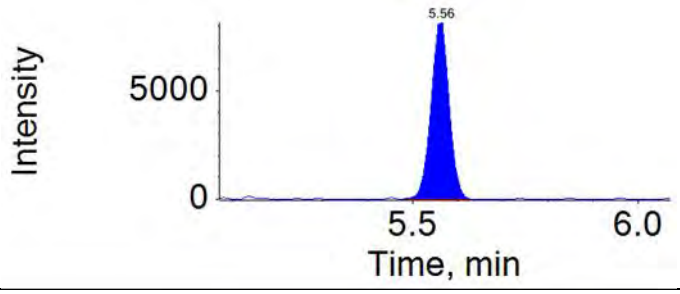
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

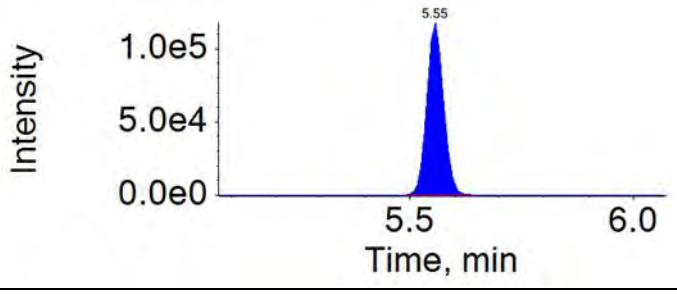
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

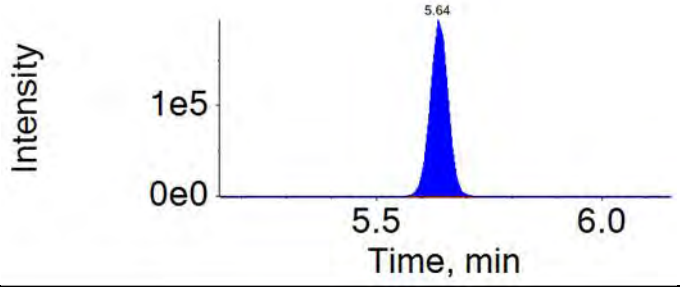
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

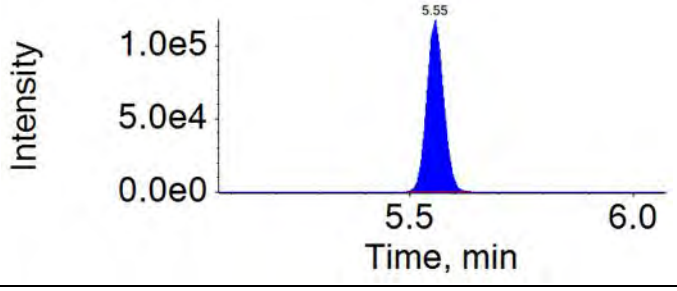
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



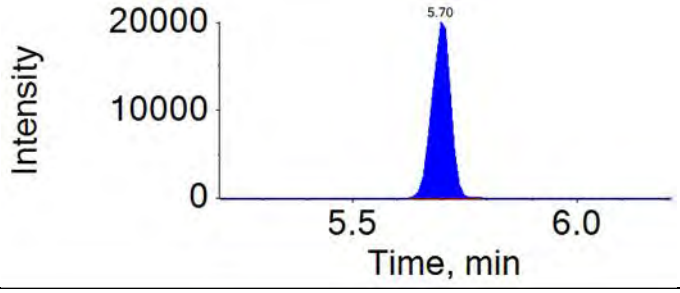


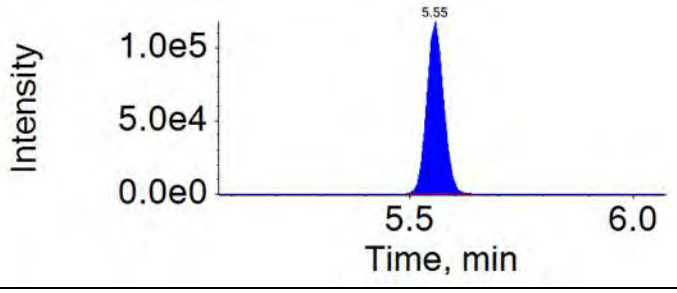
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



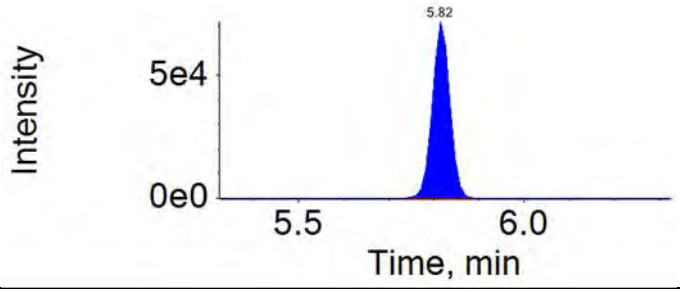


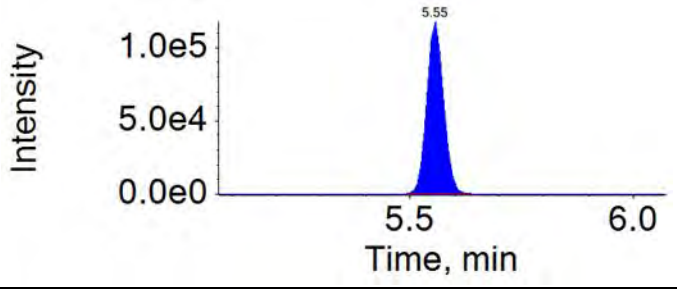
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

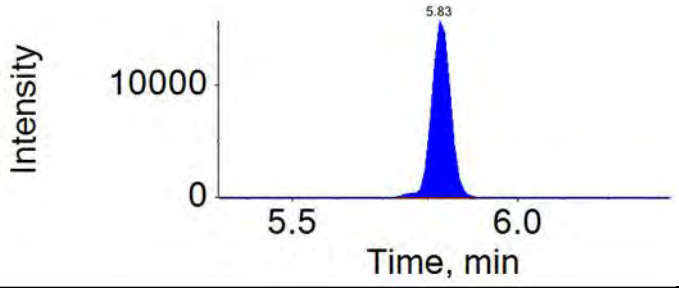
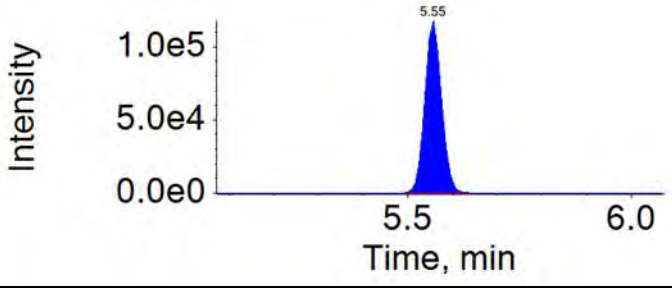


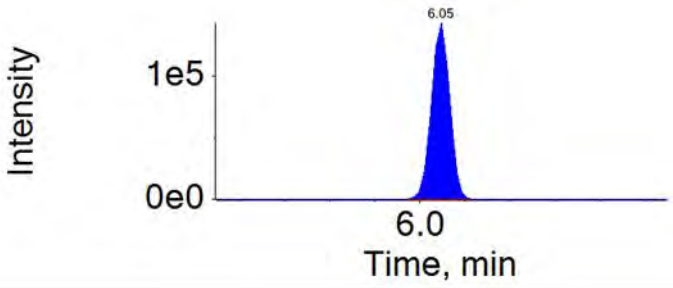
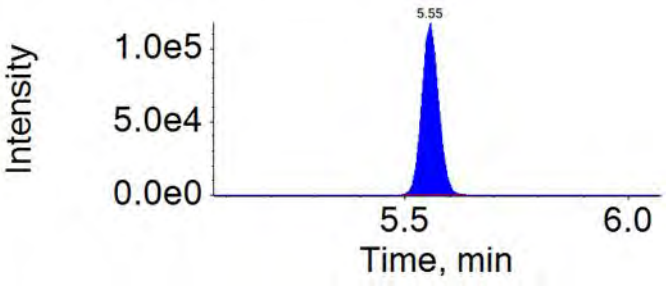


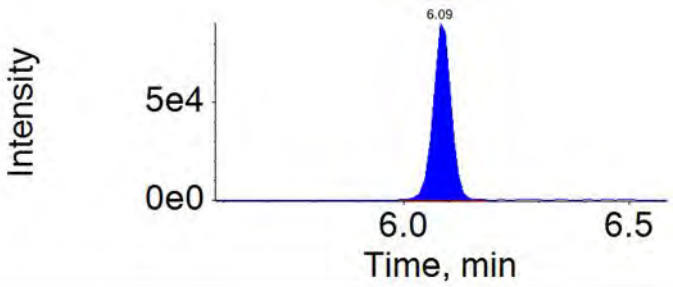
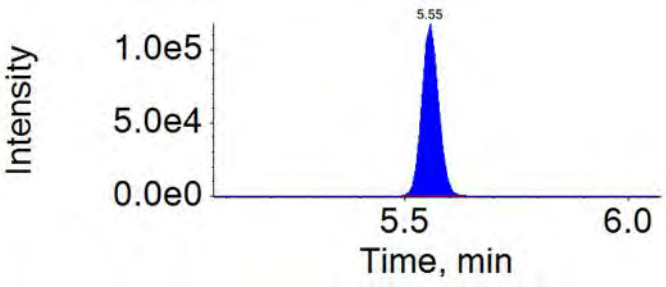
APPROVED
By JPT at 12:34 pm, 11/13/18

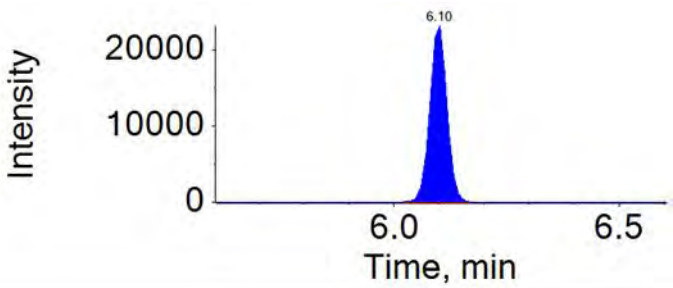
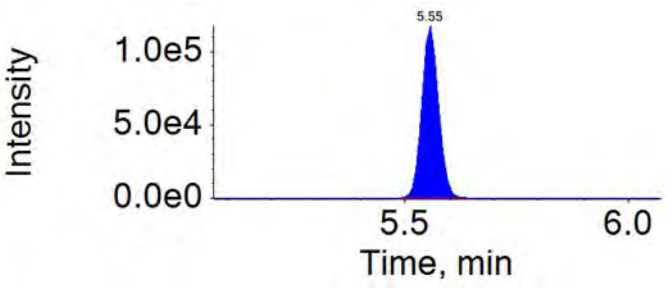
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

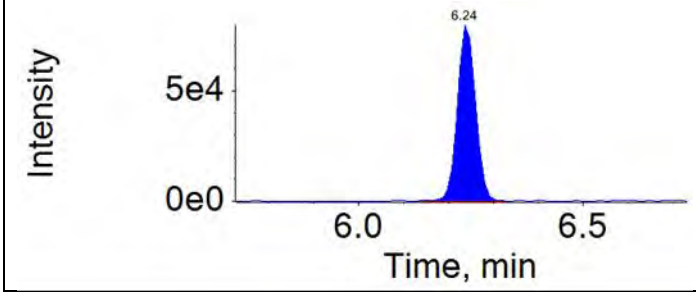
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

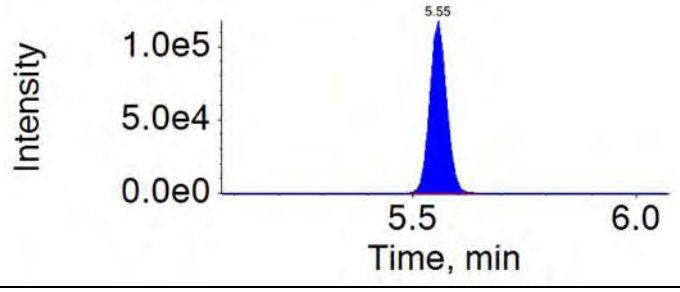
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

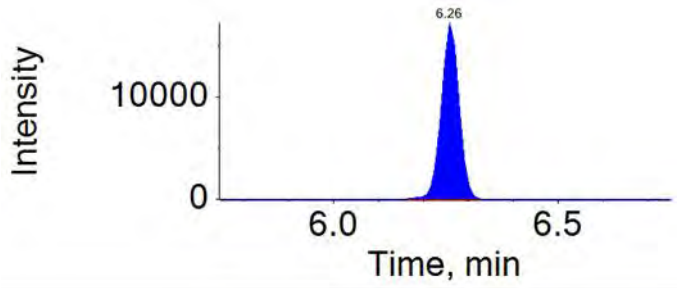
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

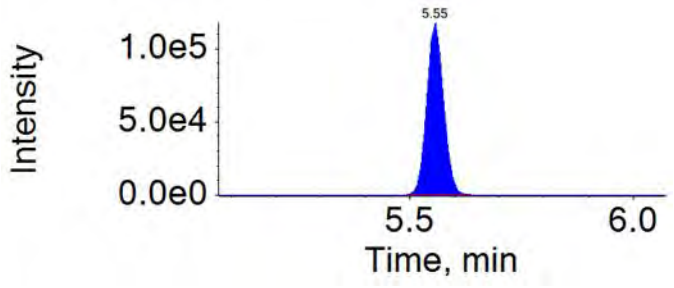
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



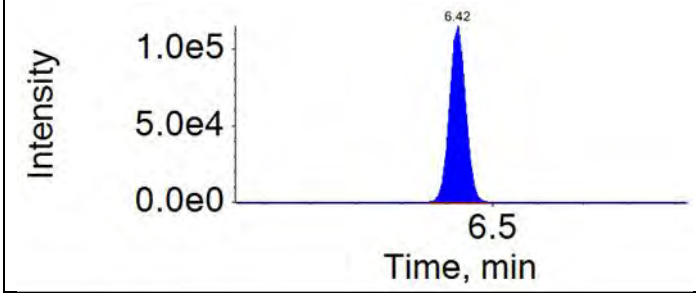


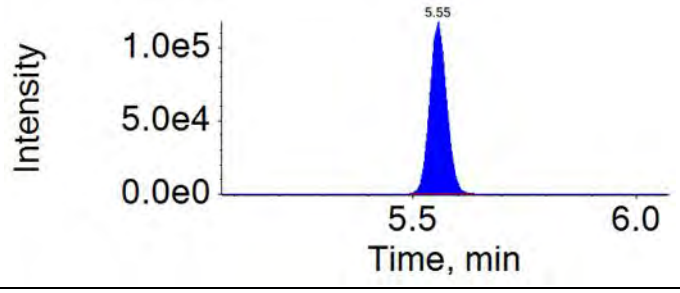
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



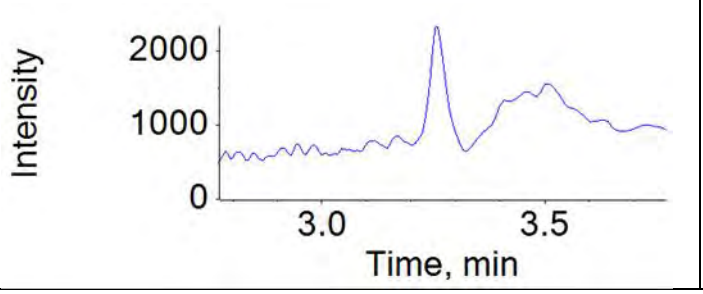


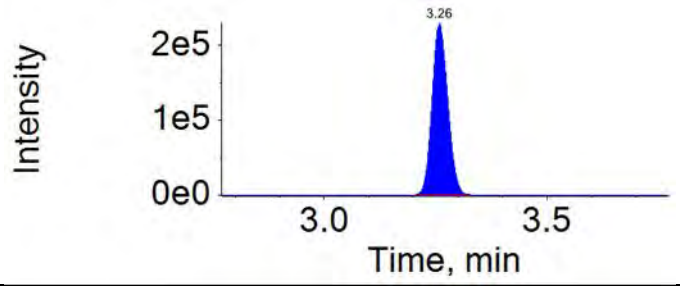
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

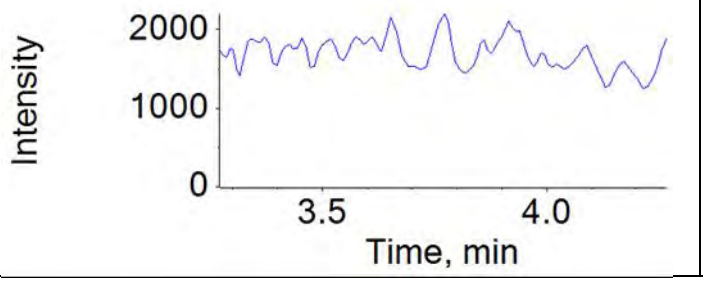
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

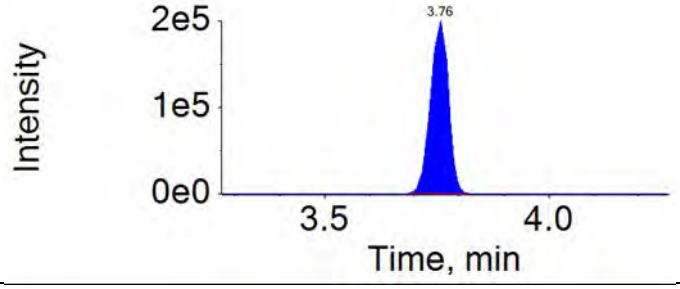
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



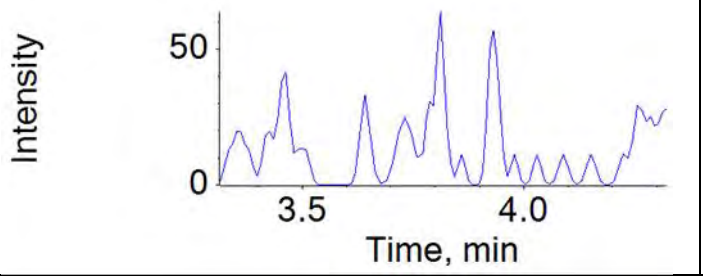


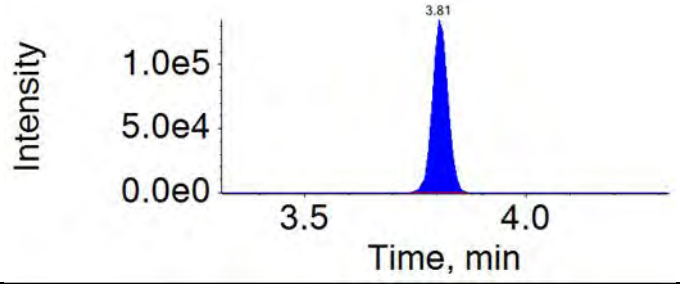
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



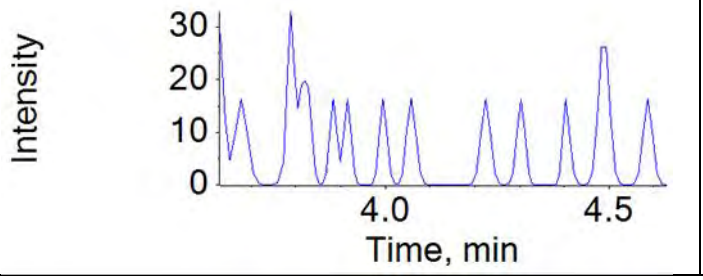


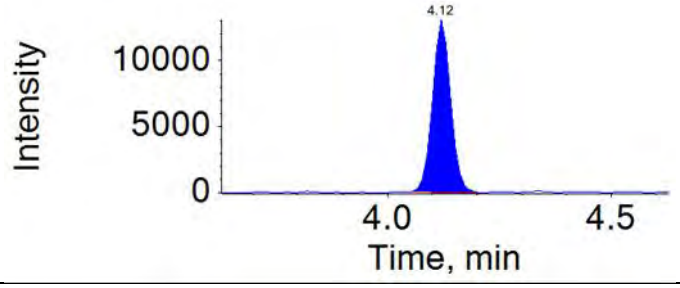
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



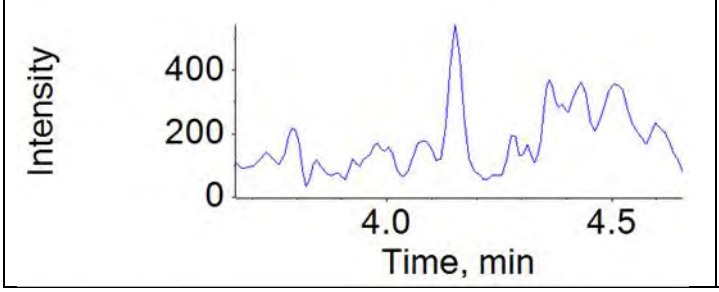


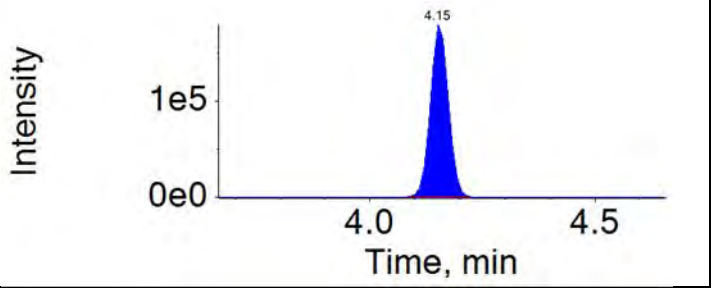
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

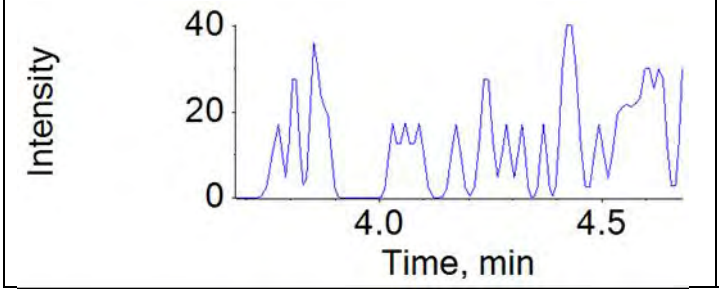
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

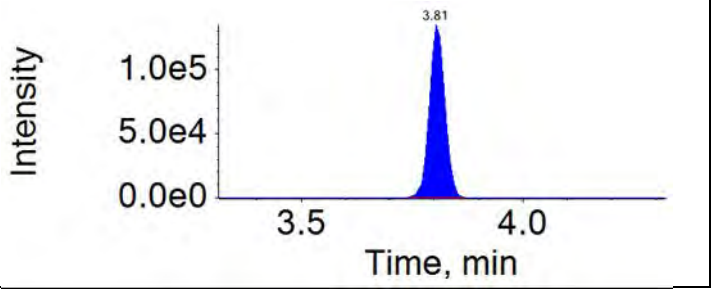
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



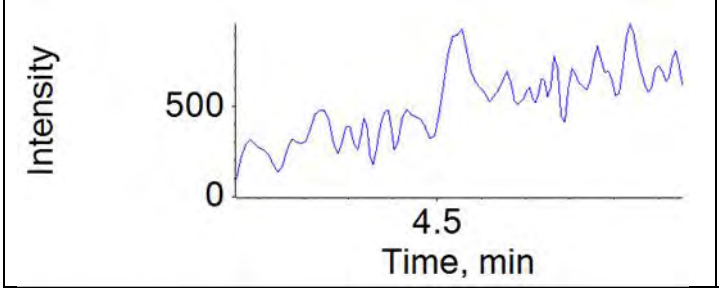


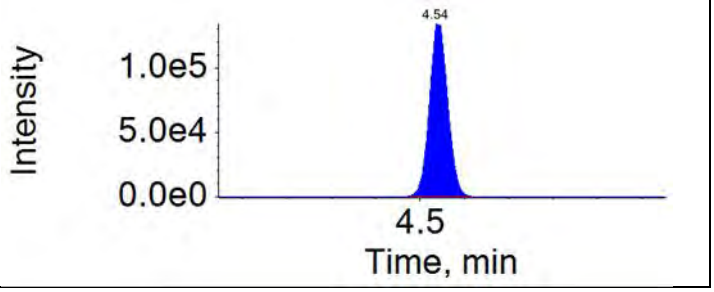
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



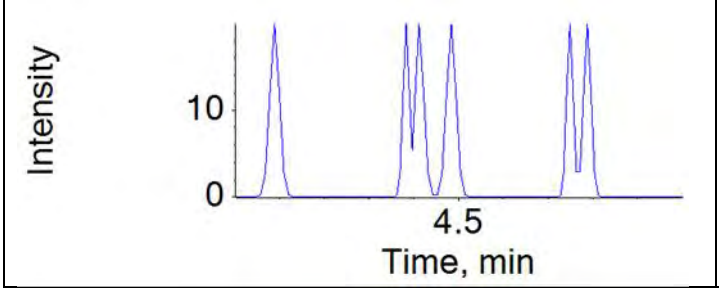


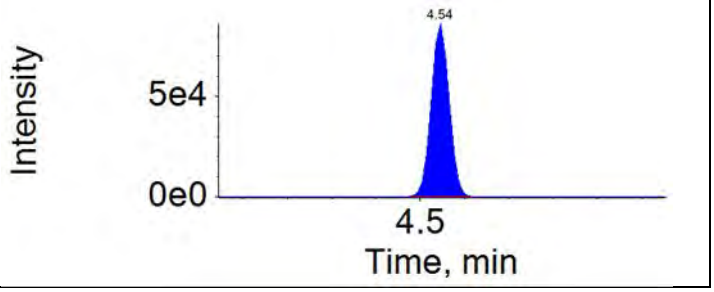
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

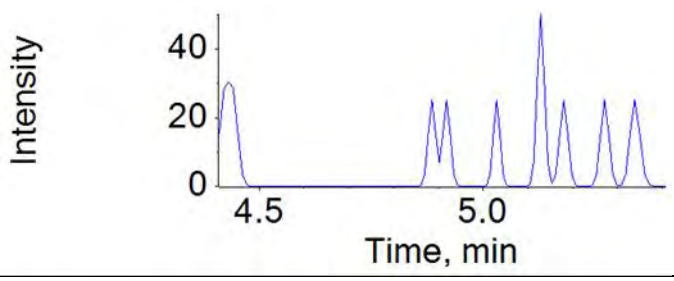
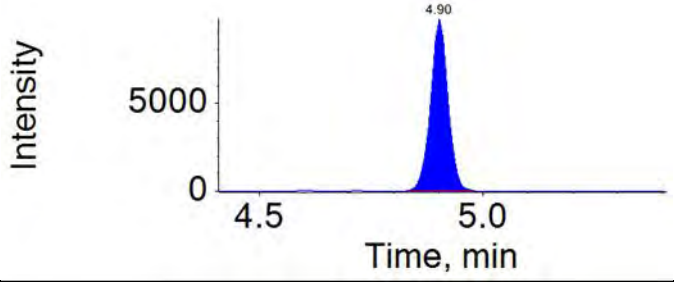


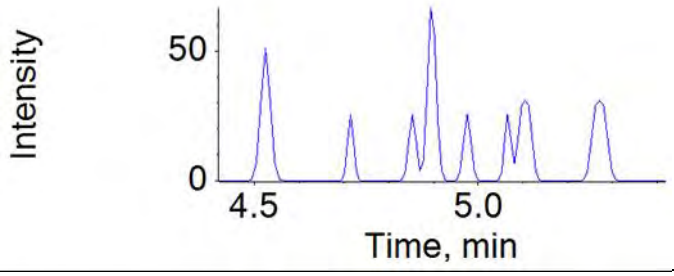
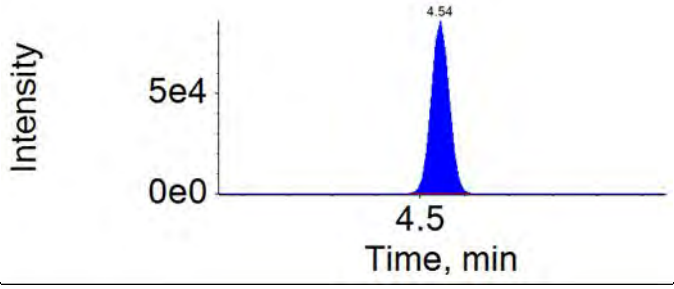


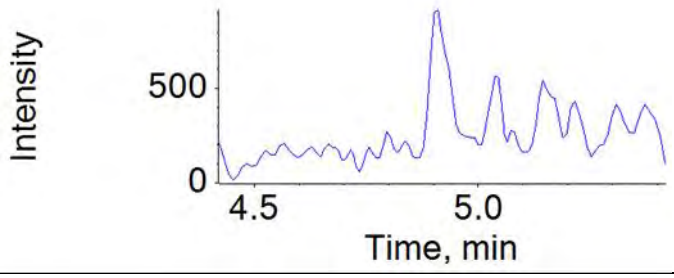
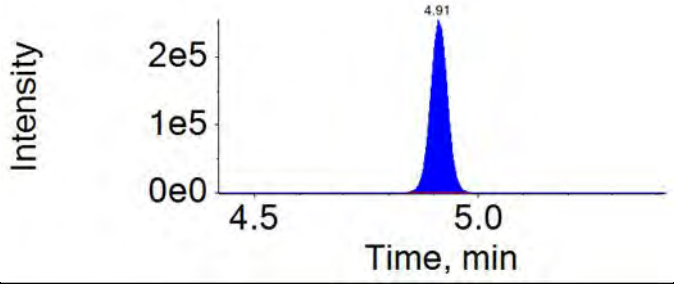
APPROVED
By JPT at 12:34 pm, 11/13/18

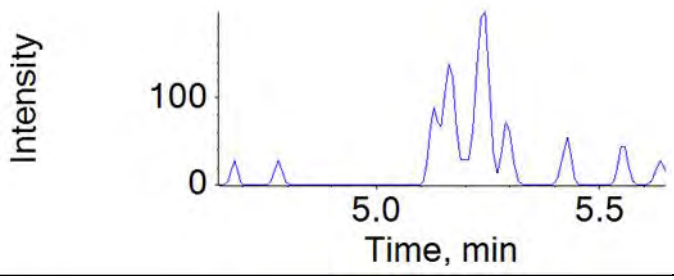
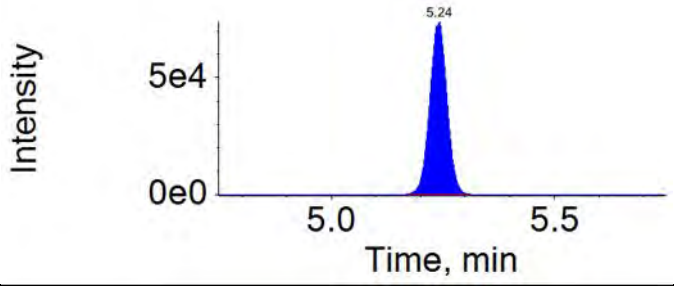
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

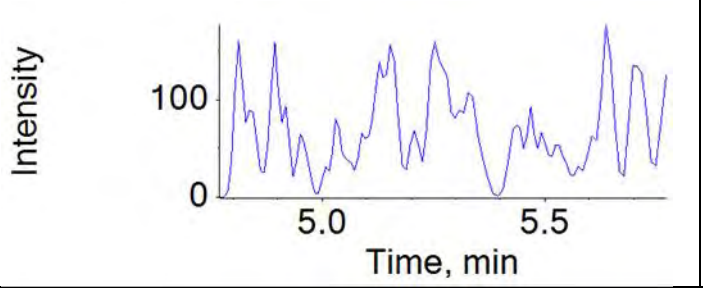
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

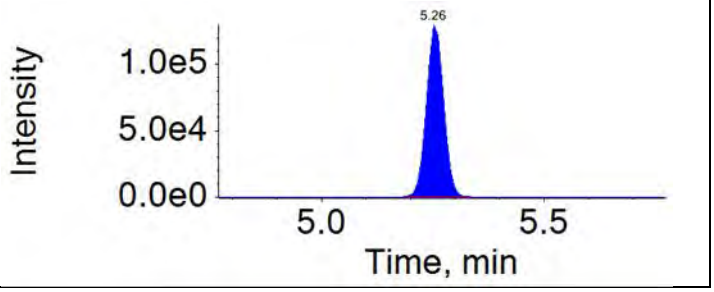
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

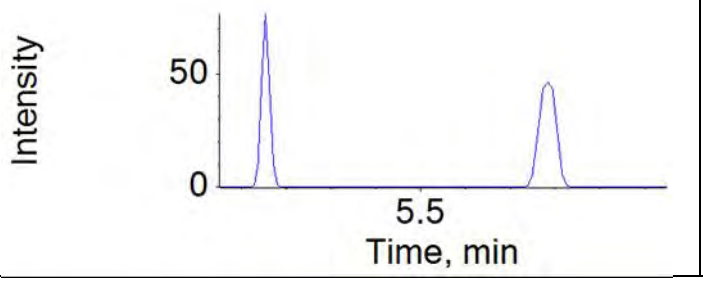
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

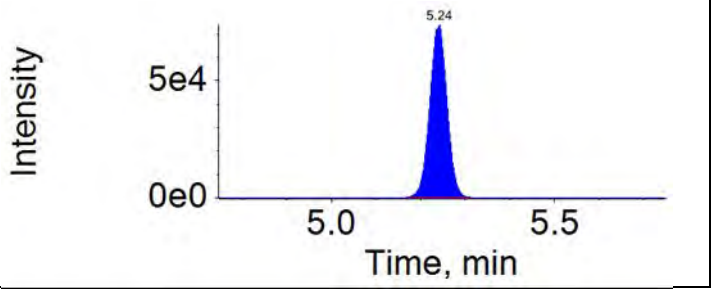
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



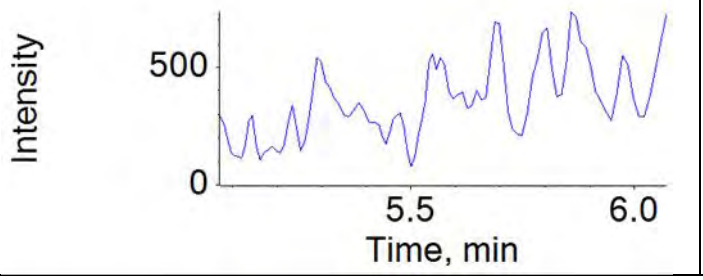


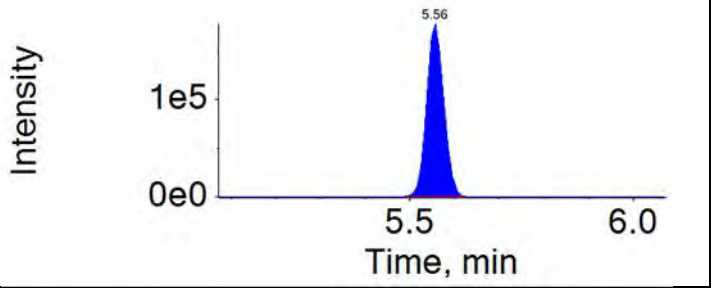
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



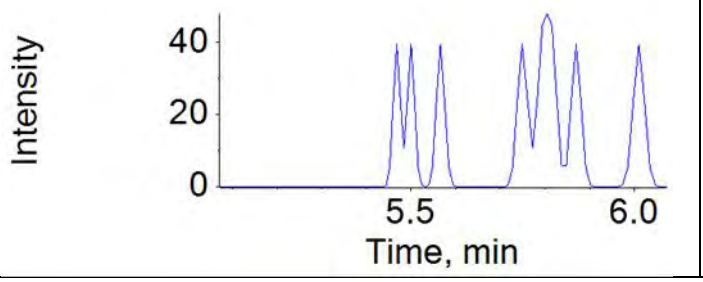


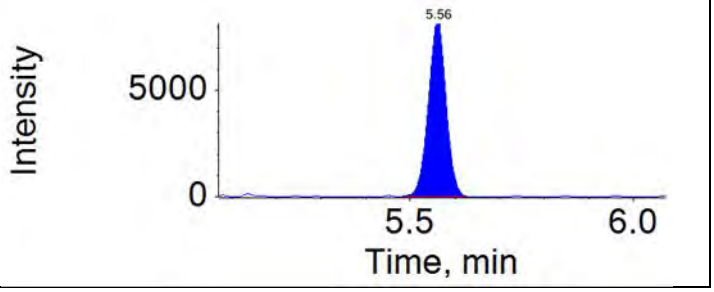
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



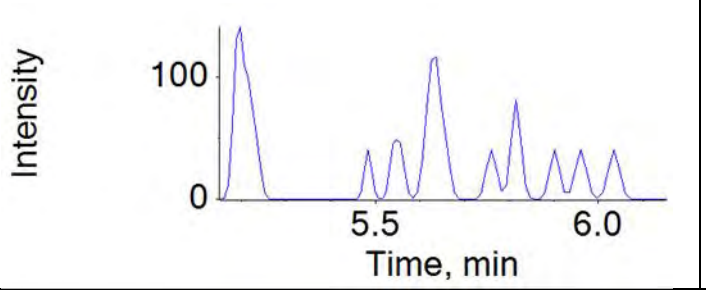


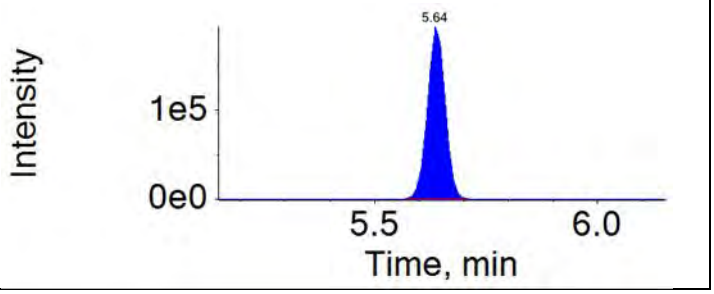
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

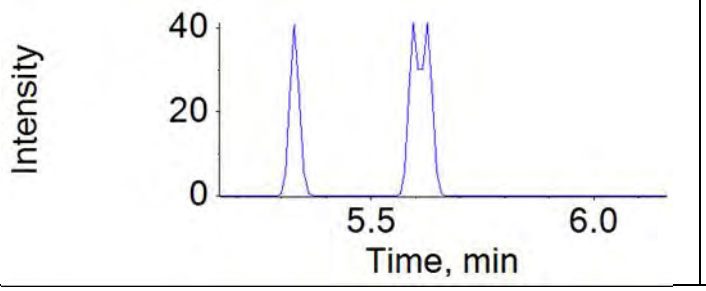
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

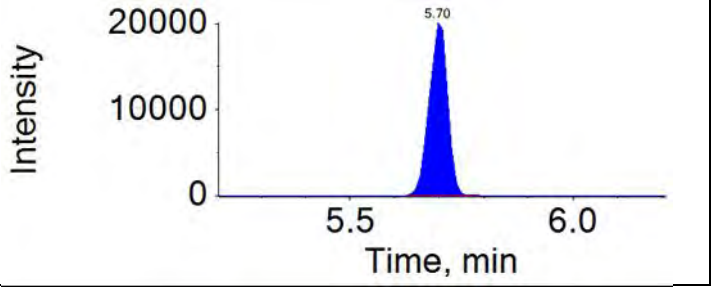
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



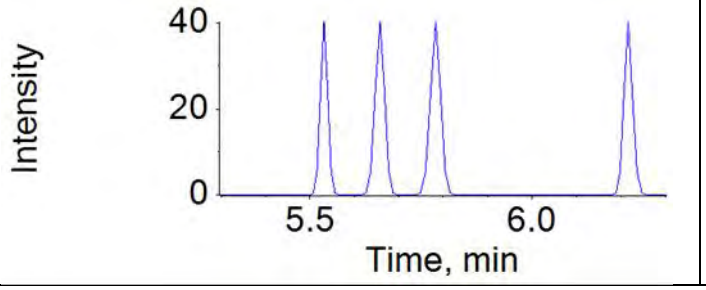


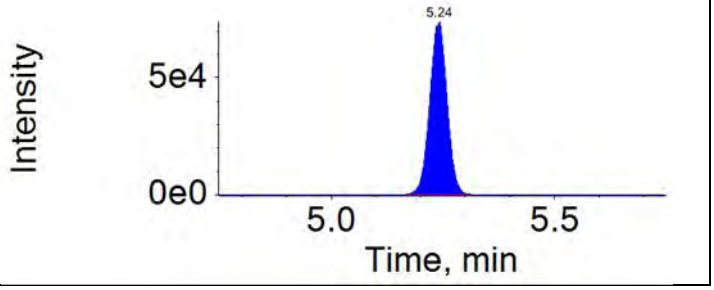
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



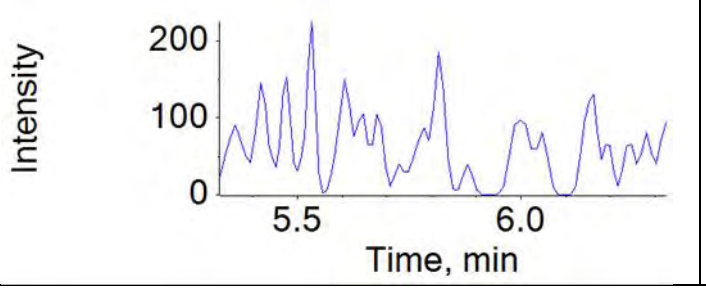


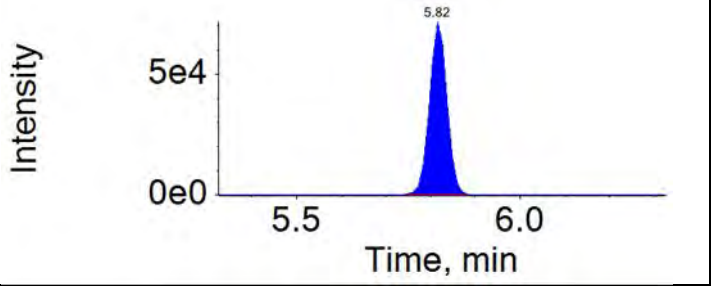
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



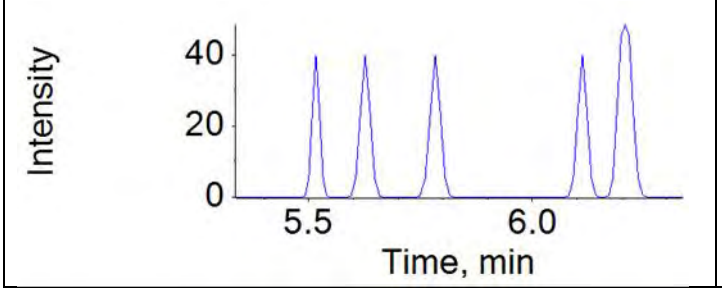


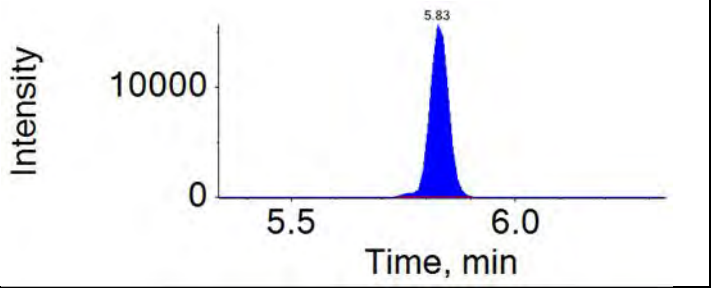
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

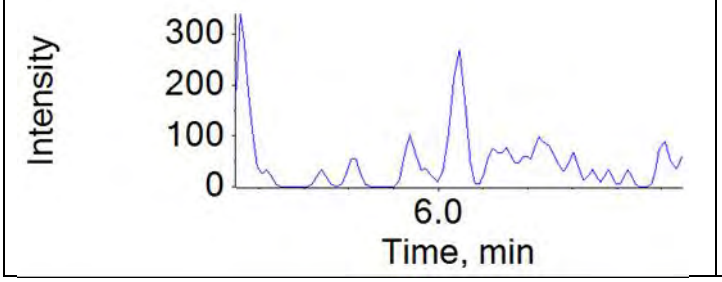
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

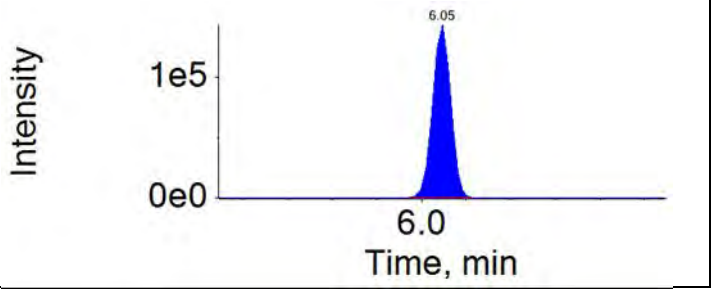
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



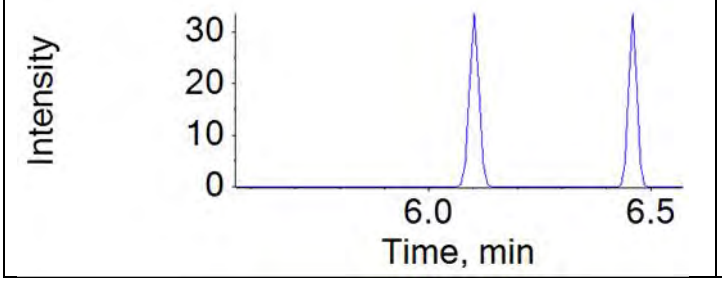


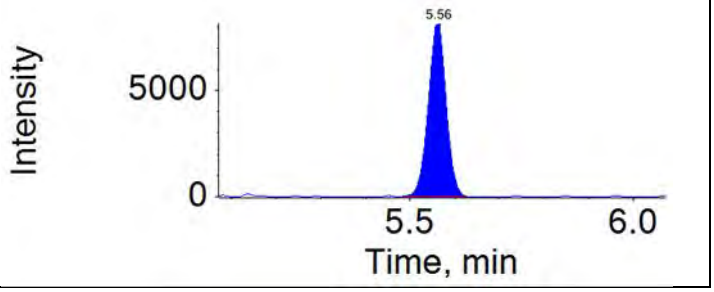
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



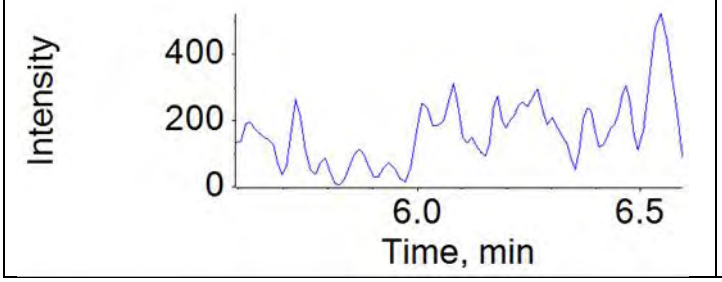


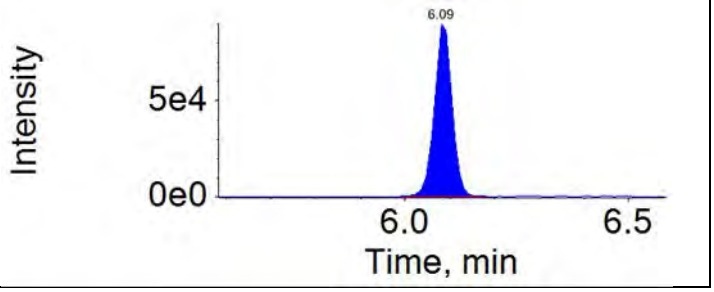
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



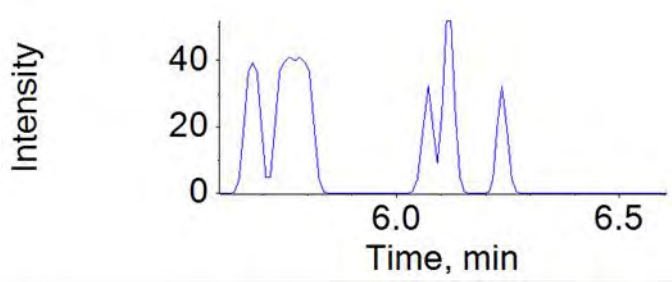


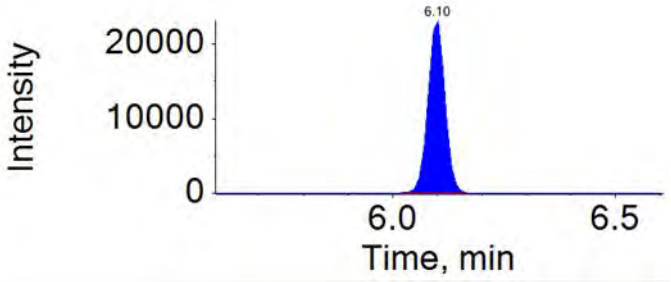
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

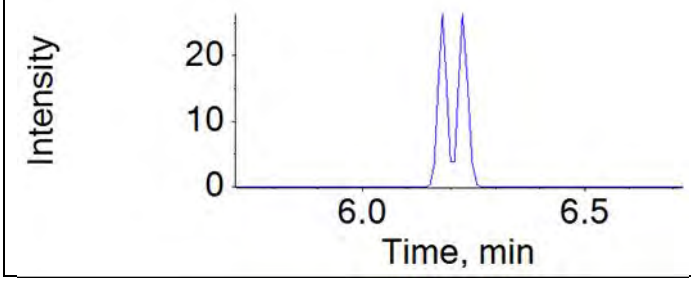
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

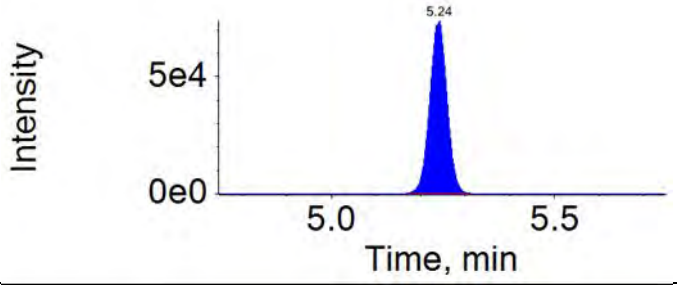
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



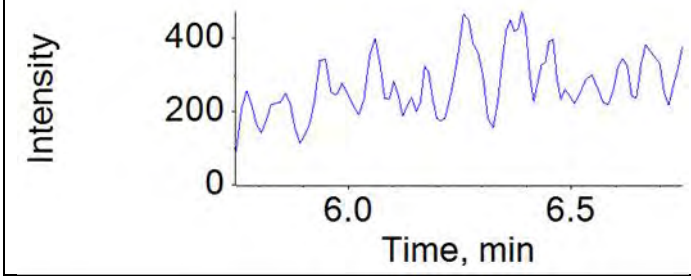


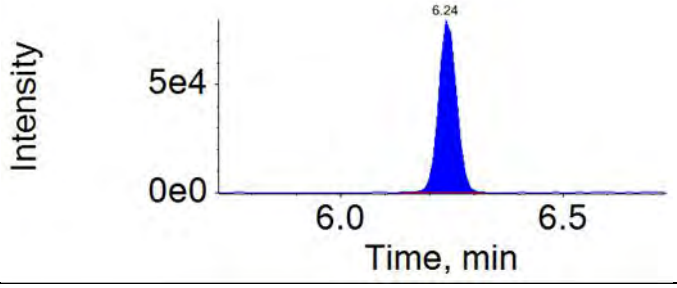
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



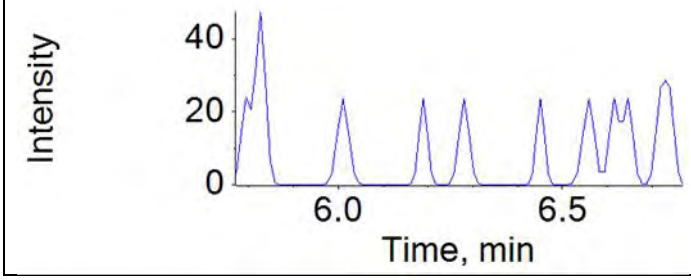


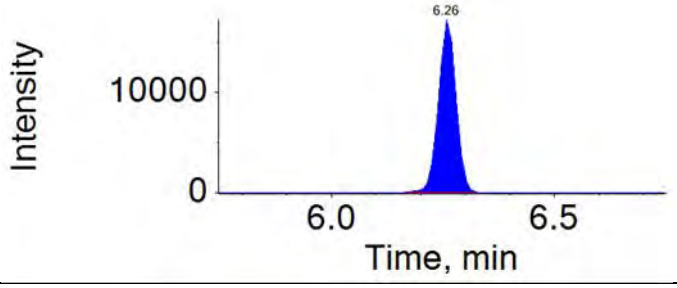
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



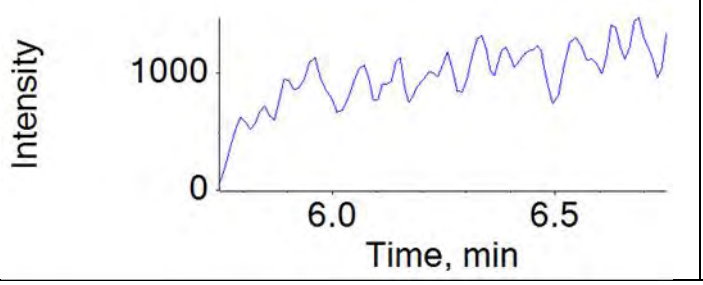


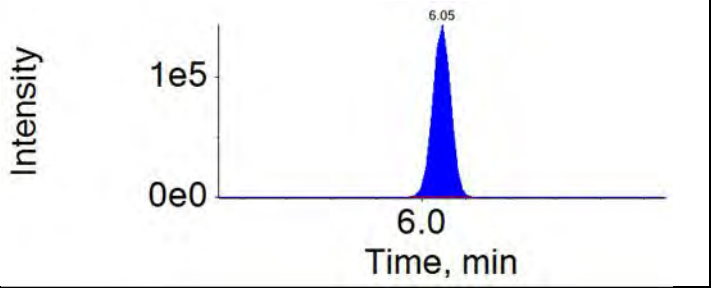
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

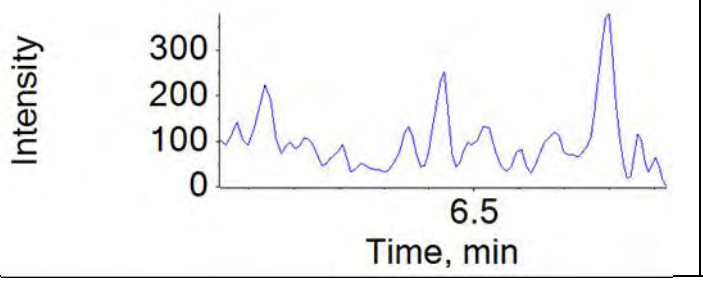
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

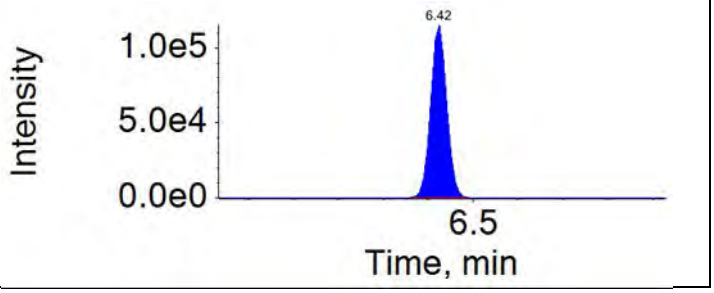
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



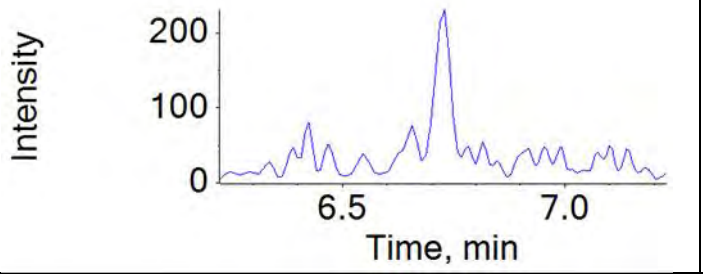


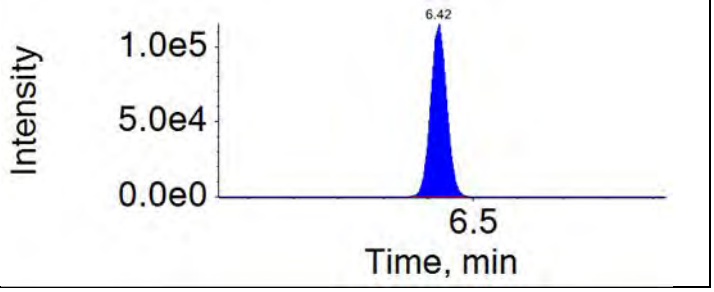
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



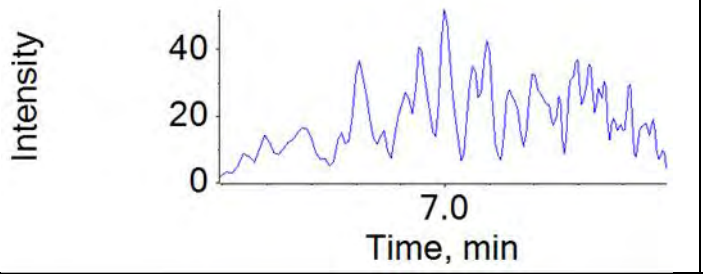


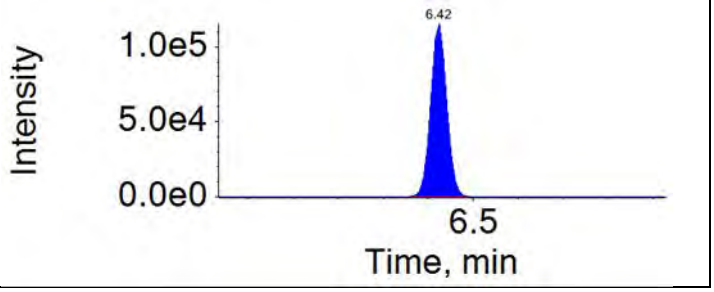
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Ion Ratio Report

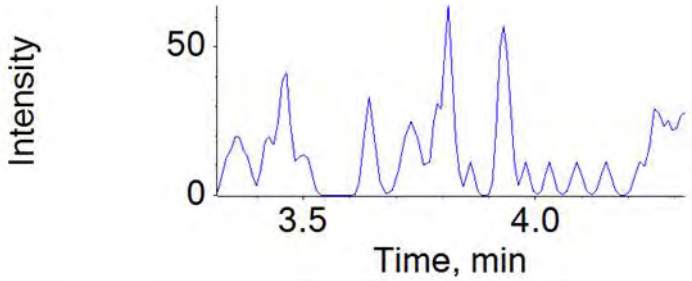
Sample Name: BLK313005 **Instrument Name:** LM27631 **File Name:** 18NOV12D-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

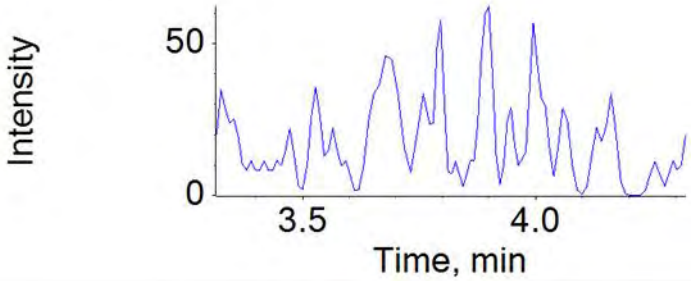
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

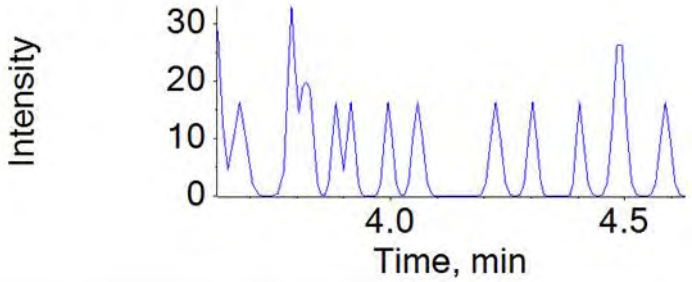
Component: PFBS
Primary Mass: 299.0 / 80.0



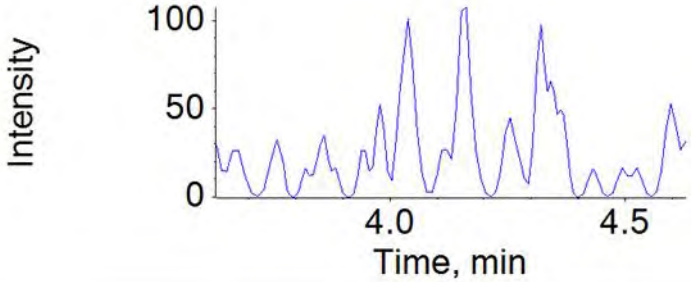
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



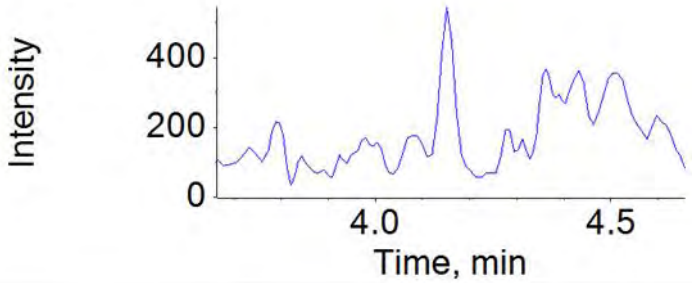
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



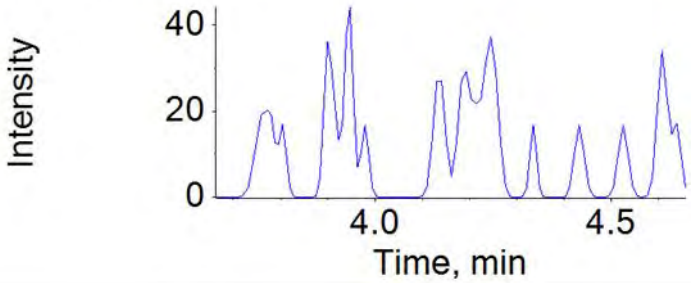
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



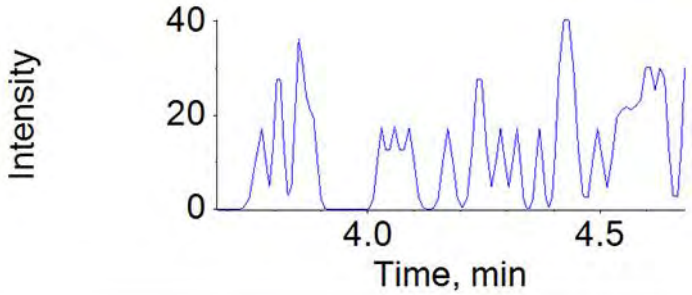
Component: PFHxA
Primary Mass: 313.0 / 269.0



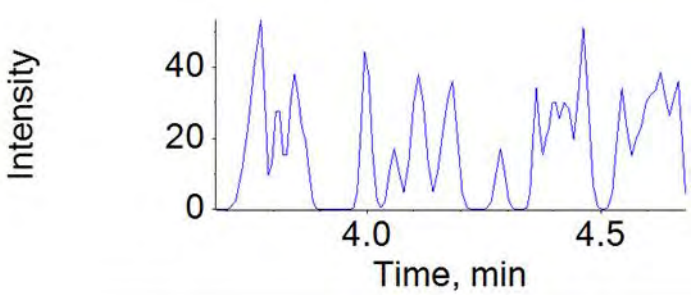
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



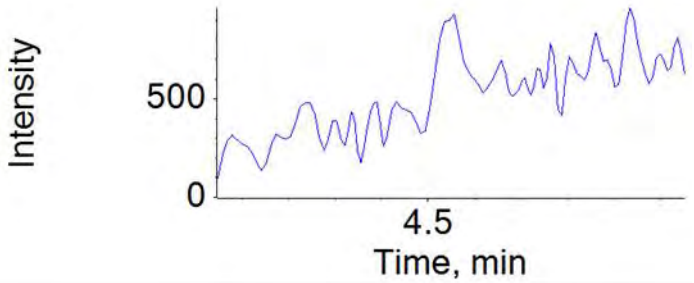
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



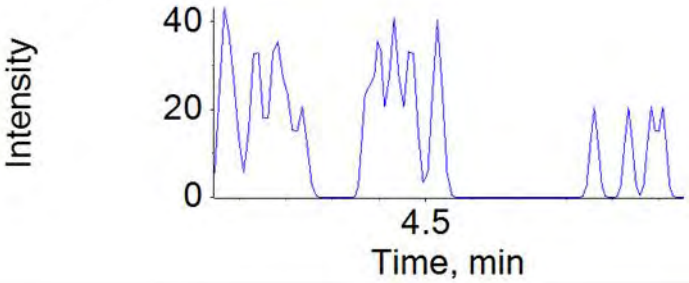
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

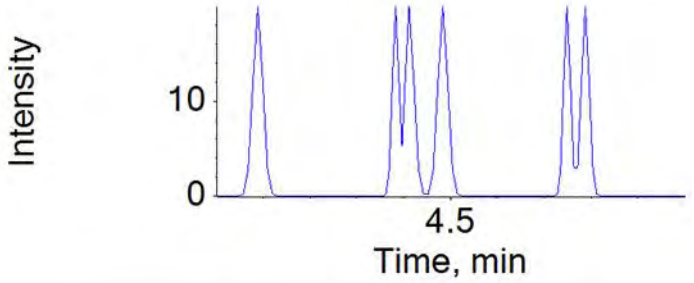
Component: PFHpA
Primary Mass: 363.0 / 319.0



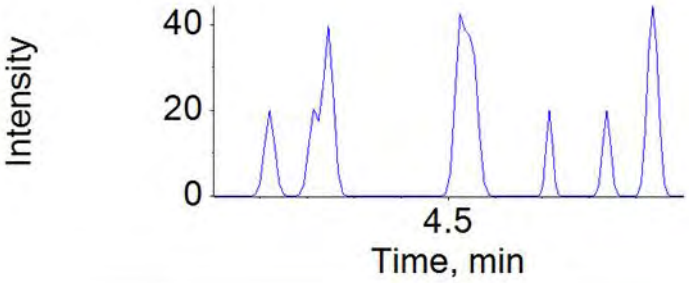
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



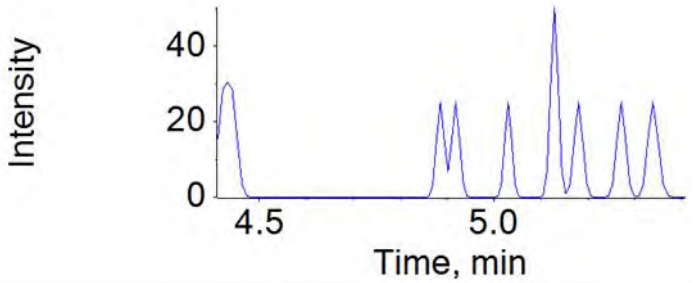
Component: PFHxS
Primary Mass: 399.0 / 80.0



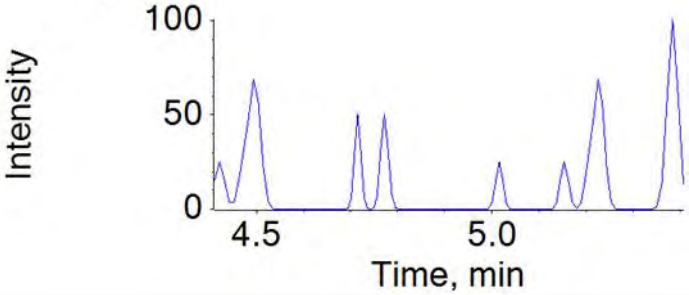
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



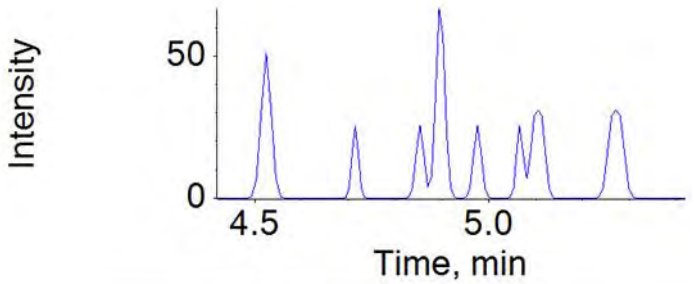
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



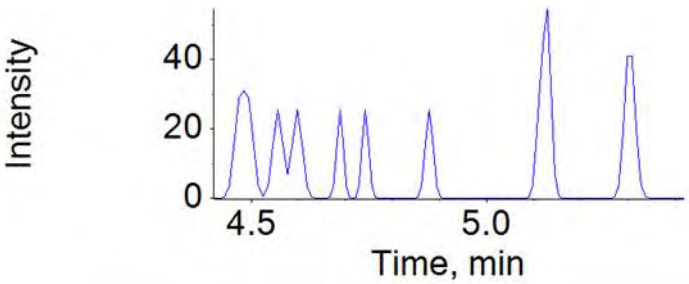
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



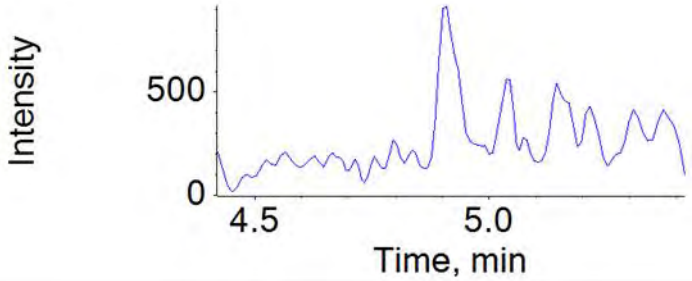
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



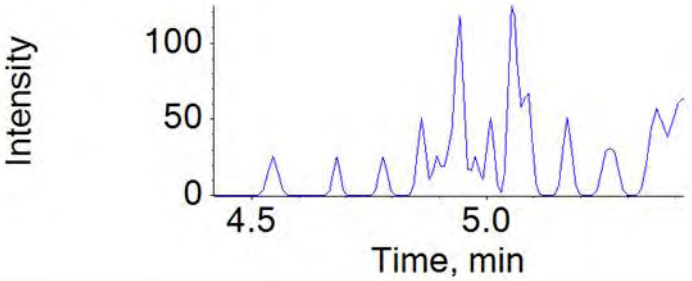
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

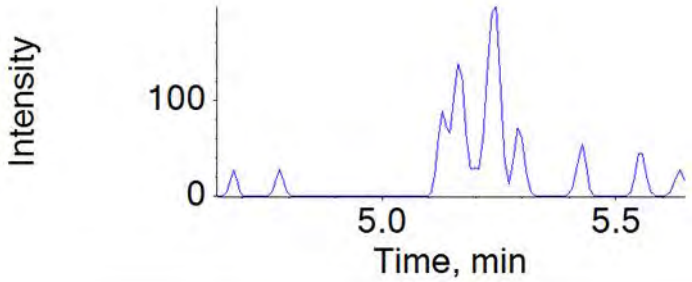
Component: PFOA
Primary Mass: 413.0 / 369.0



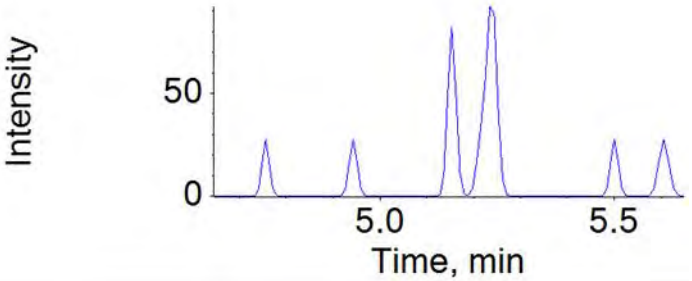
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



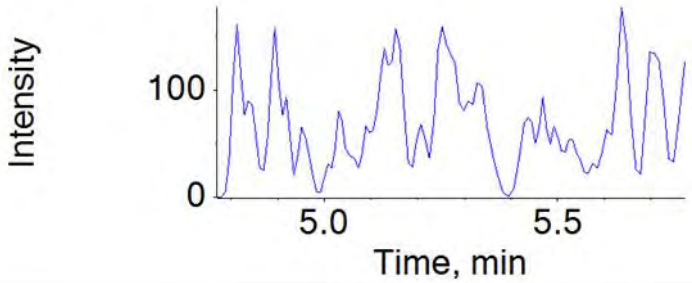
Component: PFOS
Primary Mass: 499.0 / 80.0



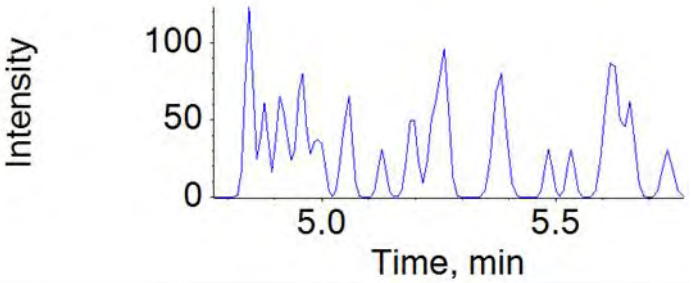
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



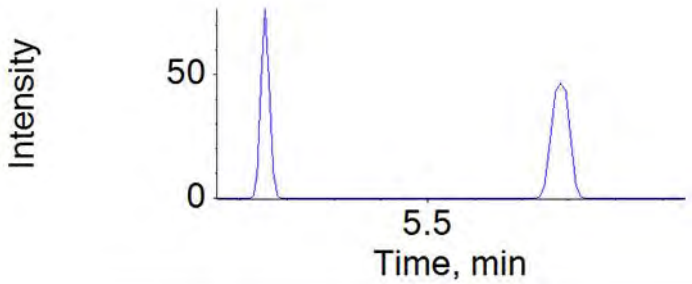
Component: PFNA
Primary Mass: 463.0 / 419.0



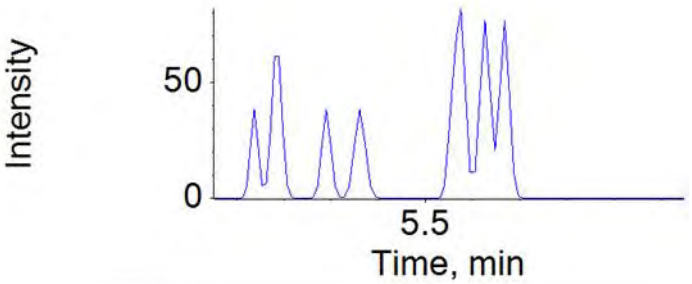
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



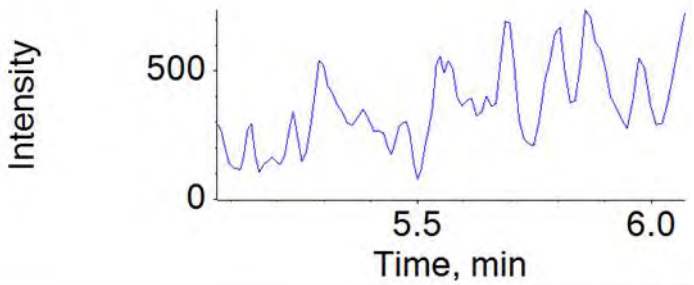
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



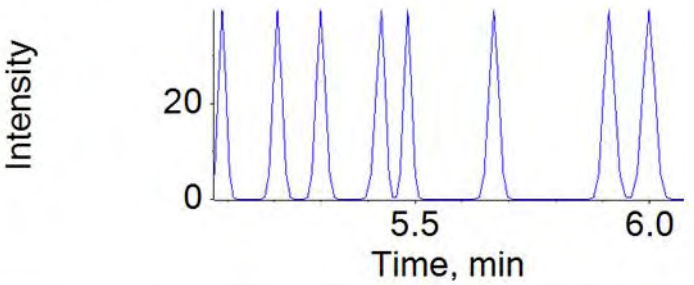
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

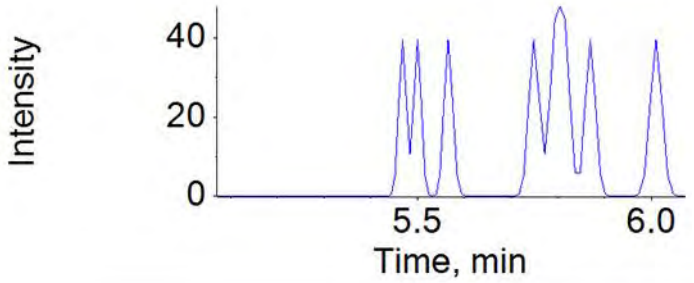
Component: PFDA
Primary Mass: 513.0 / 469.0



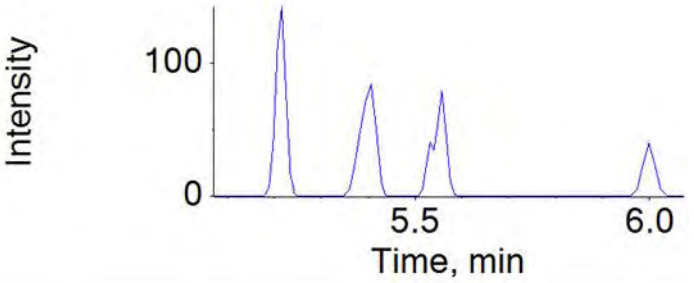
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



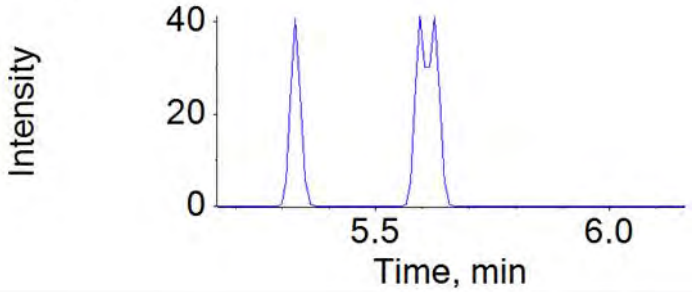
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



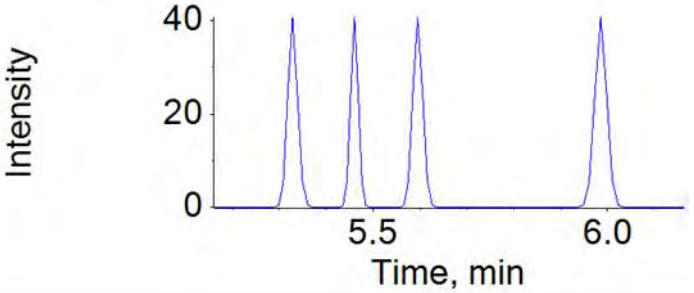
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



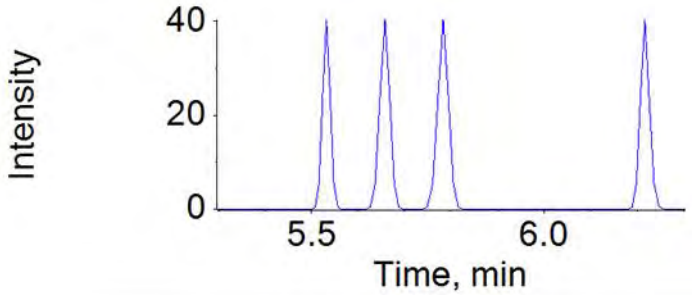
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



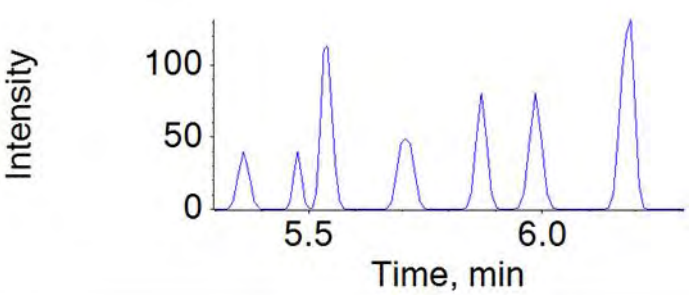
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



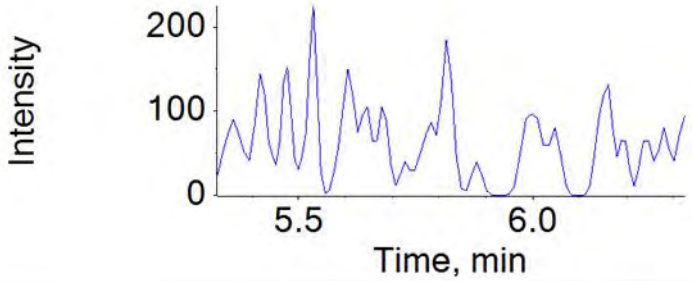
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



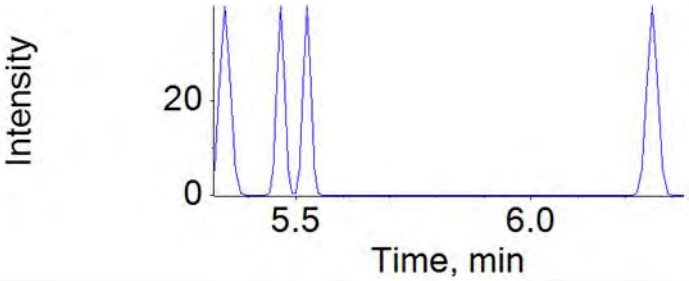
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

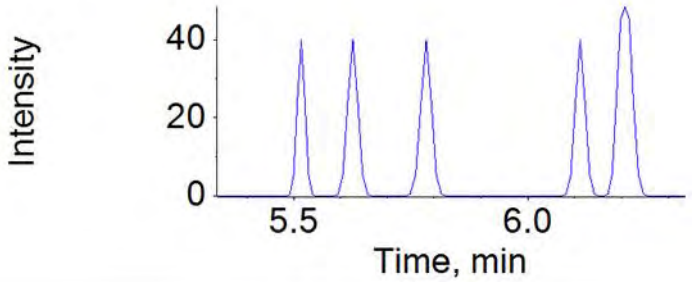
Component: PFUnDA
Primary Mass: 563.0 / 519.0



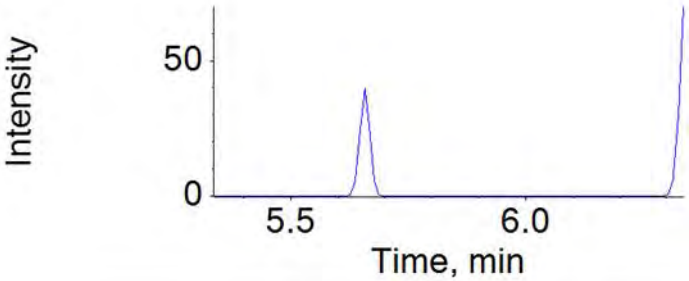
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



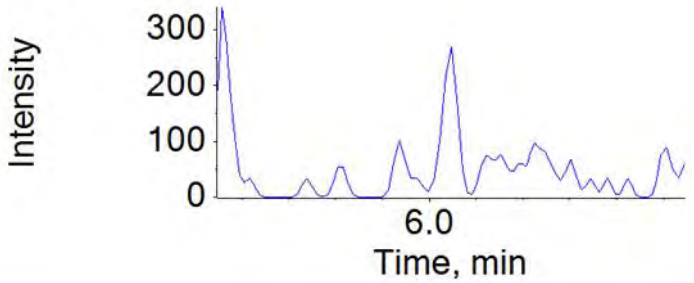
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



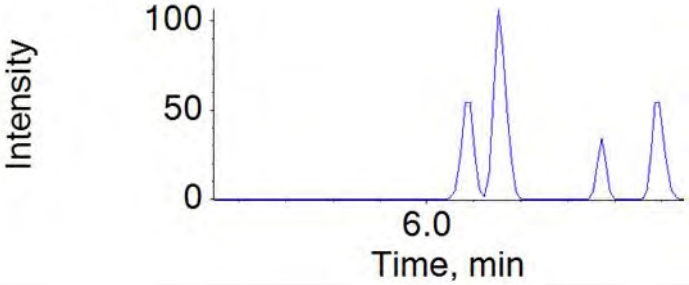
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



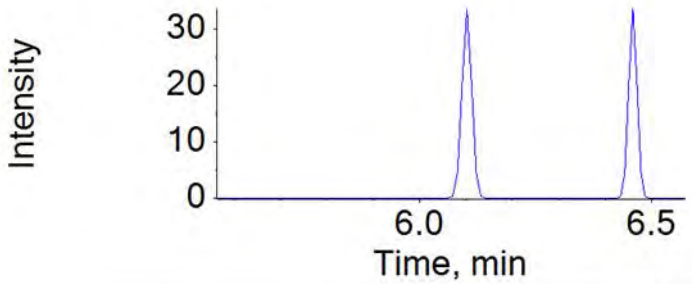
Component: PFDoDA
Primary Mass: 613.0 / 569.0



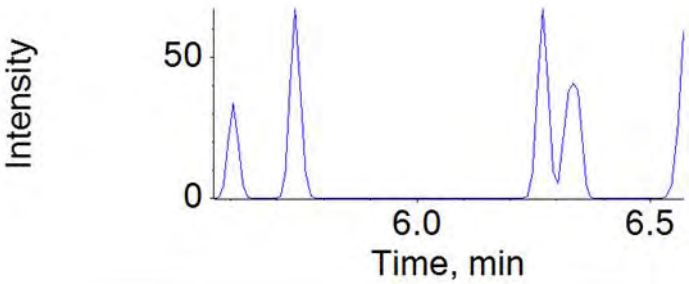
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



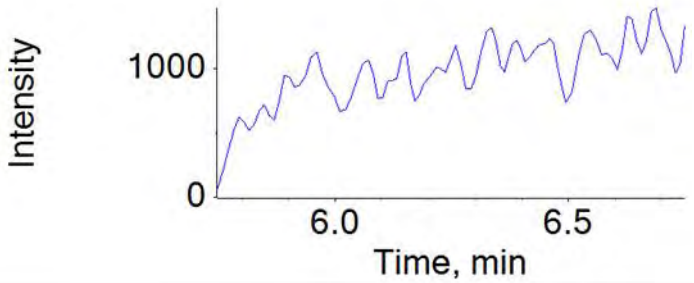
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



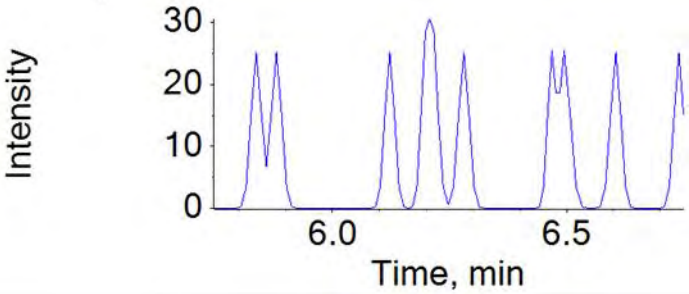
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

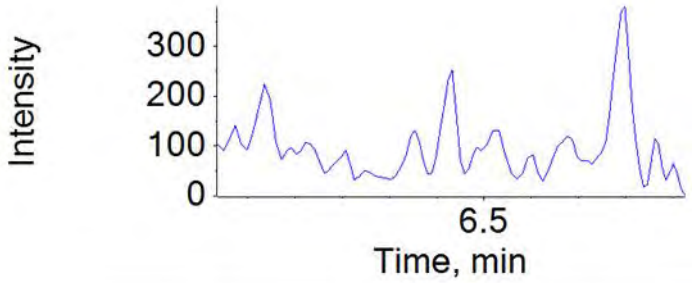
Component: PFTrDA
Primary Mass: 663.0 / 619.0



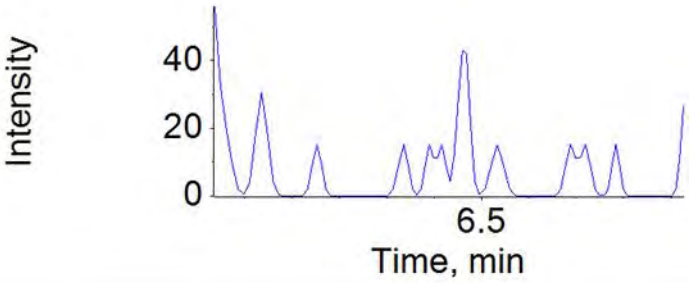
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



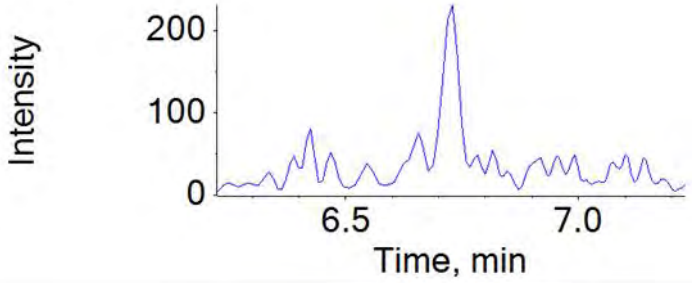
Component: PFTeDA
Primary Mass: 713.0 / 669.0



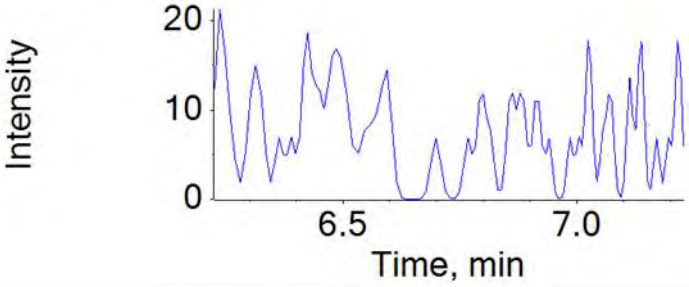
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



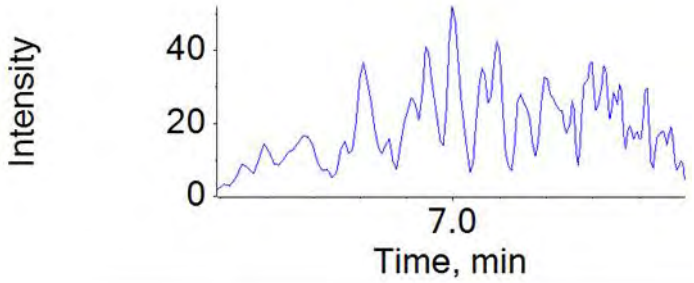
Component: PFHxDA
Primary Mass: 813.0 / 769.0



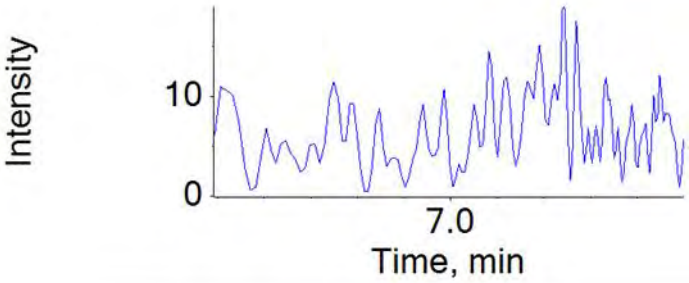
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	BLK314006			**Data File:**		18NOV12D-40.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314006			**Acquis Date:**		2018-11-12T22:37:42
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	69			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314006
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314006			**Operator:**		MCD7824
Sample Wt.:	0.25000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	698915.4	659926.2	6	50	
13C2-PFOA	5.0	492840.4	450219.7	9	50	
13C4-PFOS	4.8	264794.3	249205.8	6	50	
13C2-PFDA	5.0	301445.5	278743.9	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	692271.6	13C3-PFBA	698915.4	0.990	20.000	17.763	89	50-150	
E13C5-PFPeA	677034.2	13C3-PFBA	698915.4	0.969	20.000	17.379	87	50-150	
E13C3-PFBS	376236.7	13C3-PFBA	698915.4	0.538	18.600	15.200	82	50-150	
E13C2-4:2-FTS	41314.6	13C2-PFOA	492840.4	0.084	18.680	14.934	80	50-150	
E13C5-PFHxA	614399.9	13C2-PFOA	492840.4	1.247	20.000	18.013	90	50-150	
E13C3-PFHxS	276003.3	13C2-PFOA	492840.4	0.560	18.920	15.371	81	50-150	
E13C4-PFHpA	492739.1	13C2-PFOA	492840.4	1.000	20.000	18.017	90	50-150	
E13C2-6:2-FTS	30853.4	13C2-PFOA	492840.4	0.063	19.000	16.754	88	50-150	
E13C8-PFOA	806624.7	13C2-PFOA	492840.4	1.637	20.000	18.037	90	50-150	
E13C8-PFOS	239491.5	13C4-PFOS	264794.3	0.904	19.120	16.030	84	50-150	
E13C9-PFNA	424569.7	13C4-PFOS	264794.3	1.603	20.000	17.882	89	50-150	
E13C6-PFDA	559866.0	13C2-PFDA	301445.5	1.857	20.000	17.336	87	50-150	
E13C2-8:2-FTS	24199.6	13C2-PFDA	301445.5	0.080	19.160	16.014	84	50-150	
E13C8-PFOSA	555701.3	13C2-PFDA	301445.5	1.843	20.000	16.348	82	50-150	
Ed3-NMeFOSAA	71138.7	13C2-PFDA	301445.5	0.236	20.000	17.039	85	50-150	
E13C7-PFUnDA	227675.4	13C2-PFDA	301445.5	0.755	20.000	17.540	88	50-150	
Ed5-NEtFOSAA	53508.7	13C2-PFDA	301445.5	0.178	20.000	15.022	75	50-150	
E13C2-PFDoDA	427853.7	13C2-PFDA	301445.5	1.419	20.000	14.740	74	50-150	
Ed7-NMePFOSAE	138805.2	13C2-PFDA	301445.5	0.460	20.000	7.971	40	50-150	OOS
Ed3-NMePFOSA	39443.3	13C2-PFDA	301445.5	0.131	20.000	9.509	48	50-150	OOS
Ed9-NEtPFOSAE	116741.3	13C2-PFDA	301445.5	0.387	20.000	8.057	40	50-150	OOS
Ed5-NEtPFOSA	28831.0	13C2-PFDA	301445.5	0.096	20.000	8.974	45	50-150	OOS
E13C2-PFTeDA	306470.8	13C2-PFDA	301445.5	1.017	20.000	14.277	71	50-150	

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

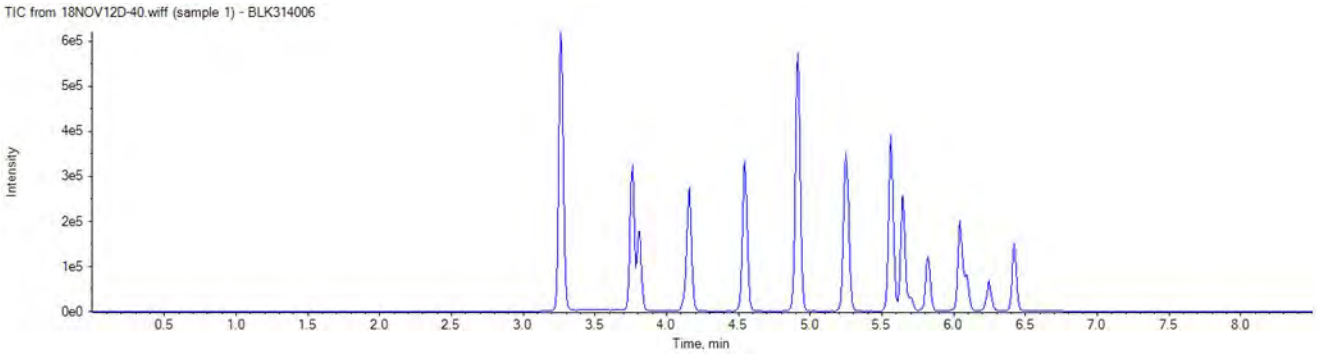
Analyte Quantitation Peak Table

Sample Name: BLK314006 **Instrument Name:** LM27631 **File Name:** 18NOV12D-40.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.25000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	692271.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	677034.2	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	376236.7	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	41314.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	614399.9	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	376236.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	492739.1	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	276003.3	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	30853.4	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	276003.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	806624.7	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239491.5	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	424569.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239491.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	559866.0	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	24199.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	555701.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	71138.7	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239491.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	227675.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	53508.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	427853.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	24199.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	138805.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	39443.3	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239491.5	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	116741.3	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	28831.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	427853.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	306470.8	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	306470.8	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	306470.8	N/A	

Total Ion Chromatogram

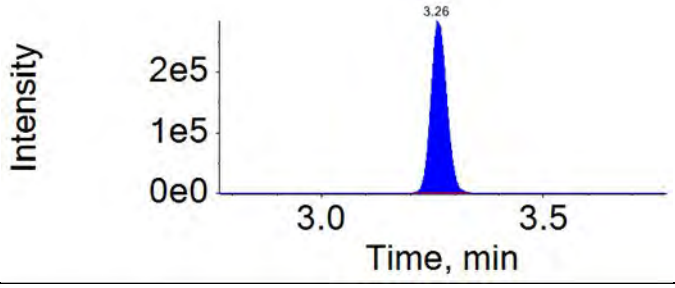


APPROVED
By MCD at 8:21 pm, 11/13/18

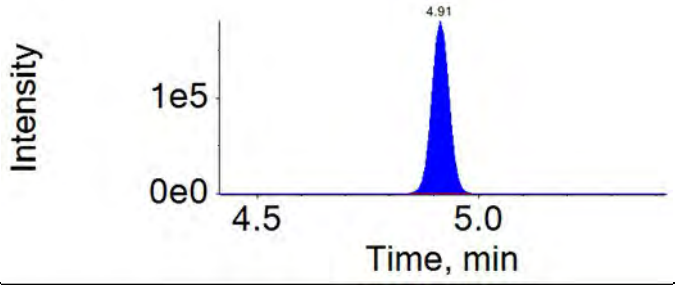
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

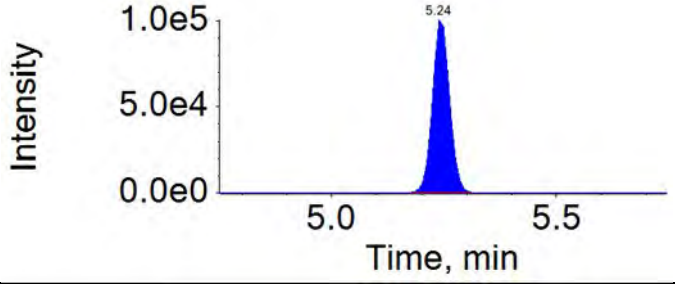
Injection Standard: 13C3-PFBA
216.0 / 172.0



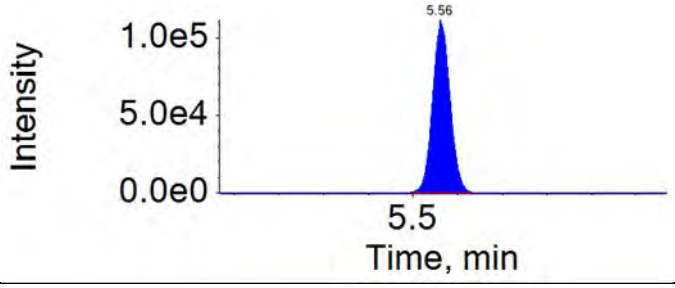
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

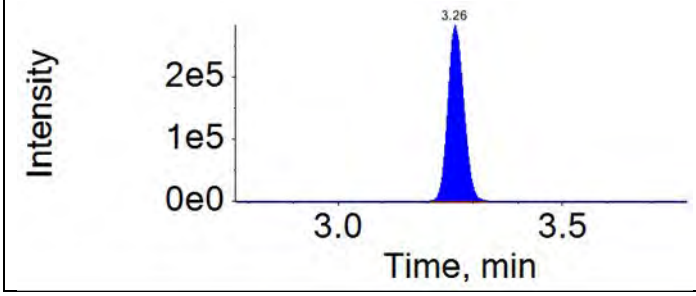


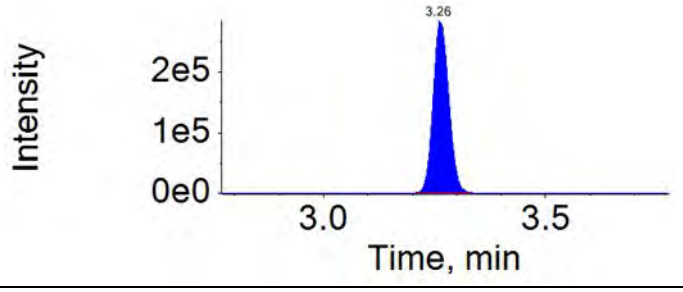
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

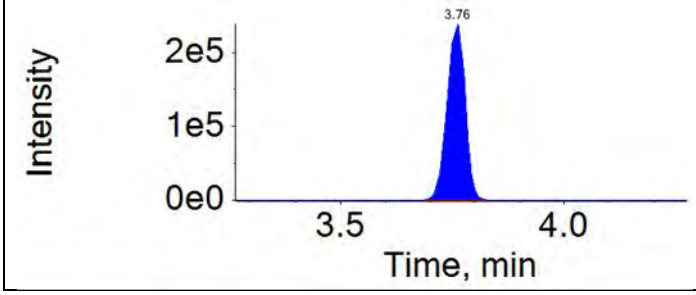
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

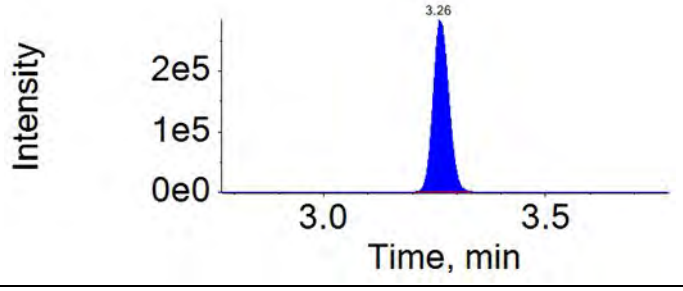
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



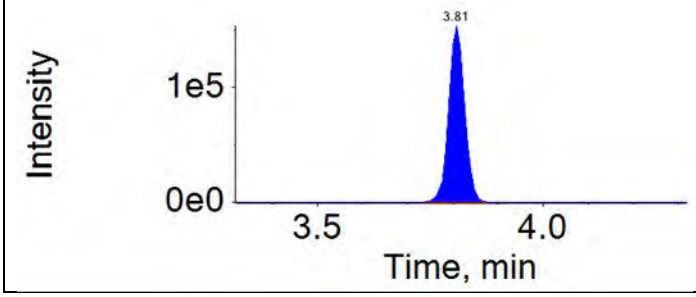


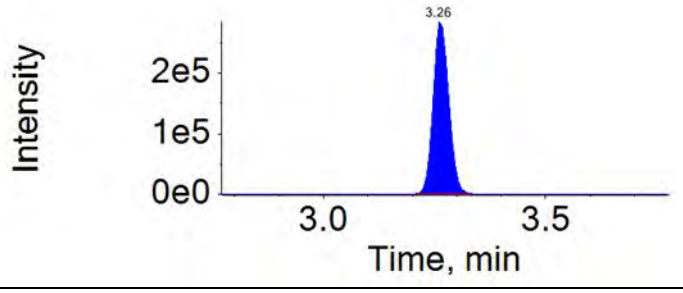
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



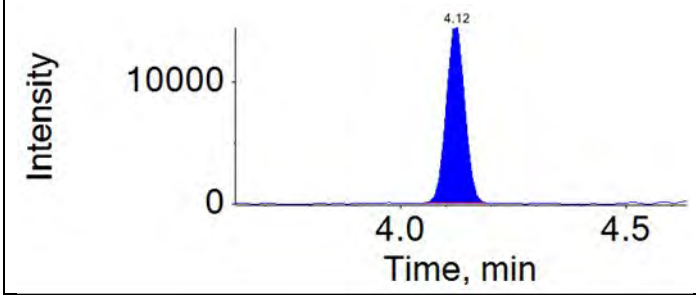


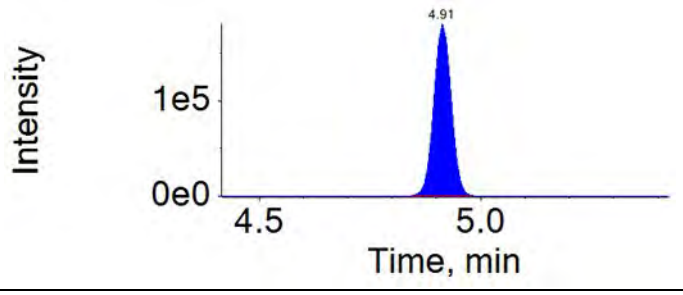
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





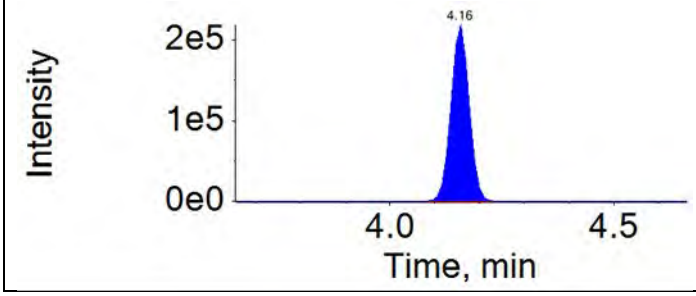
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

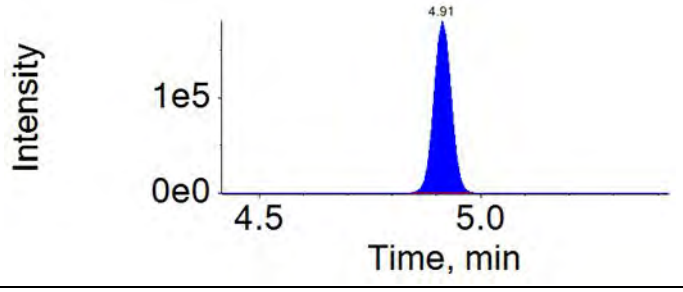




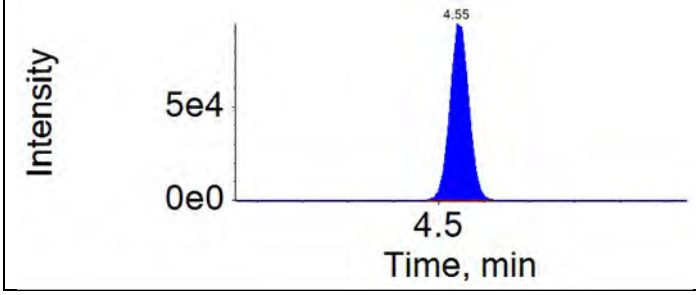
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

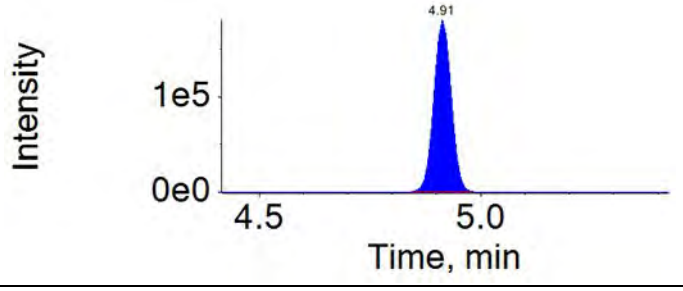
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



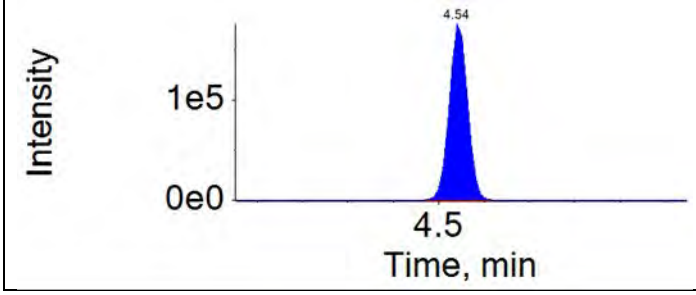


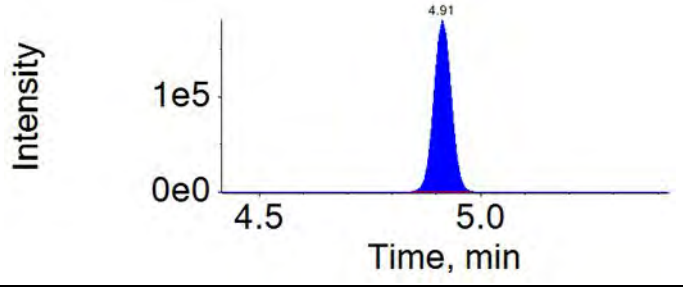
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



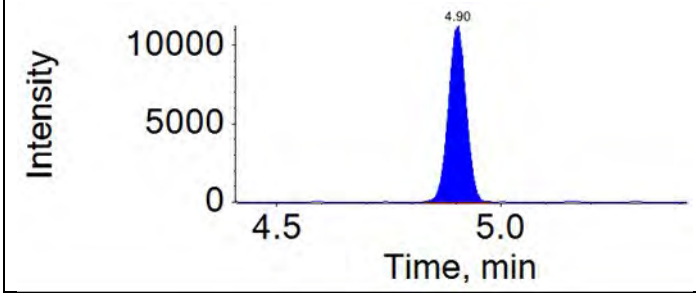


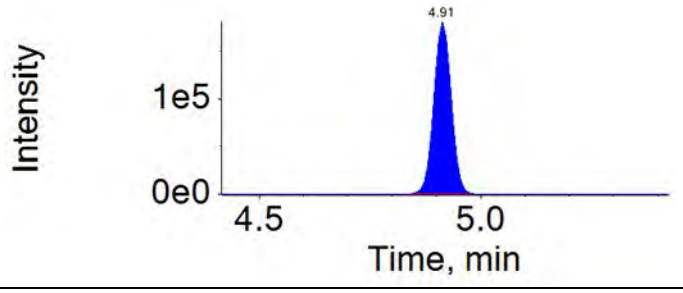
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

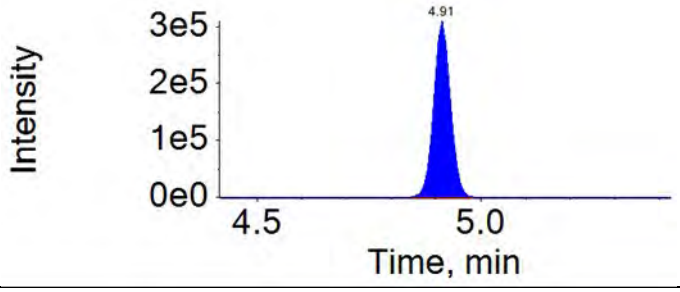
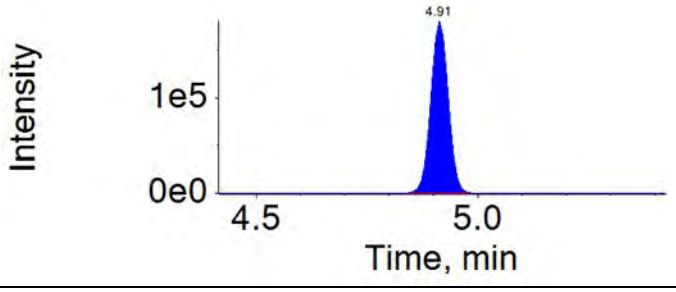


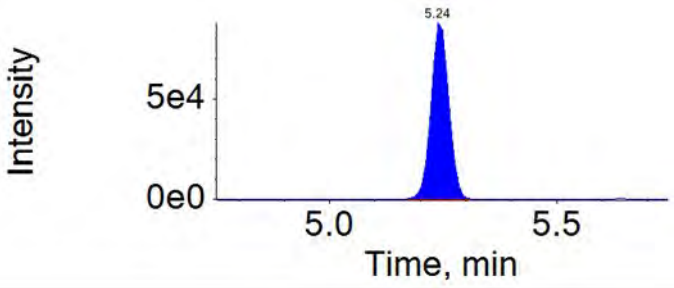
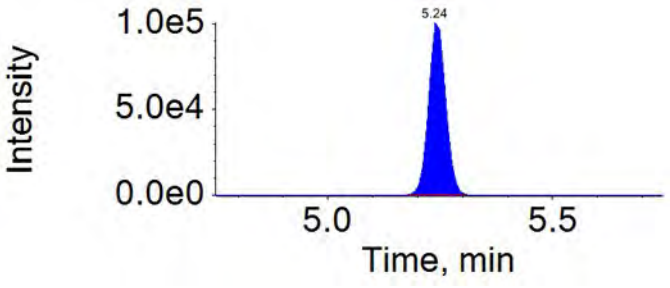


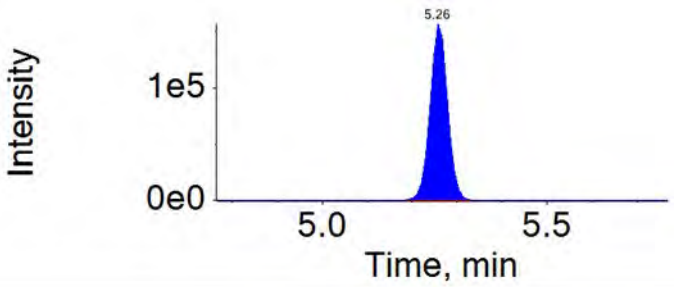
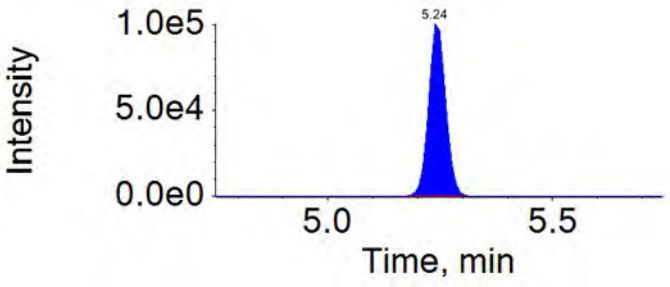
APPROVED
By MCD at 8:21 pm, 11/13/18

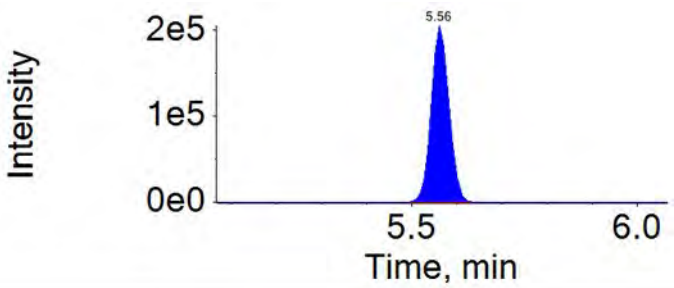
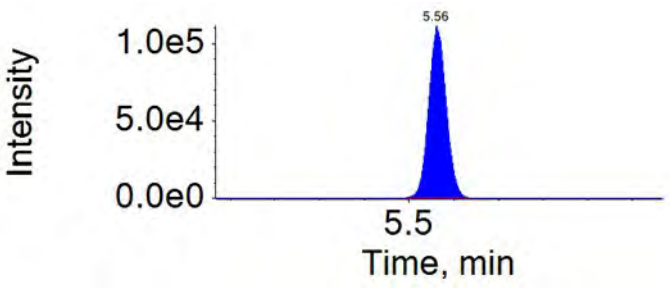
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

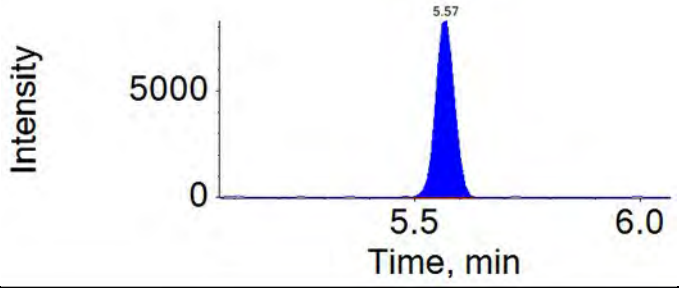
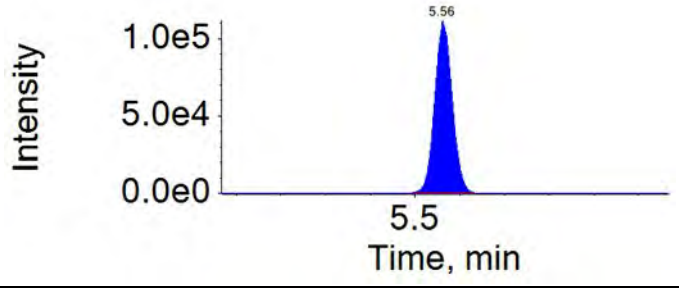
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

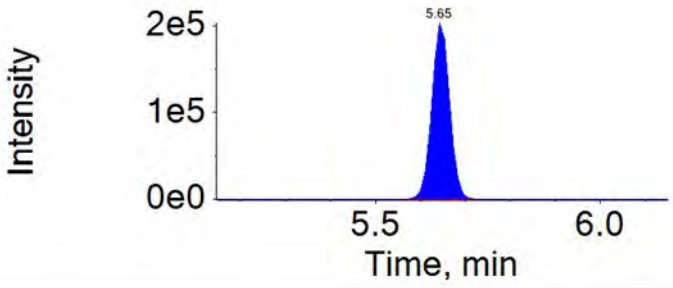
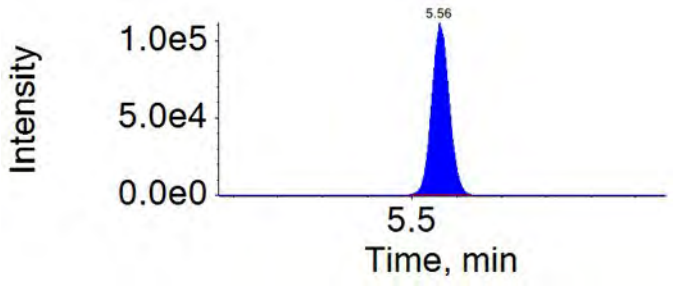
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

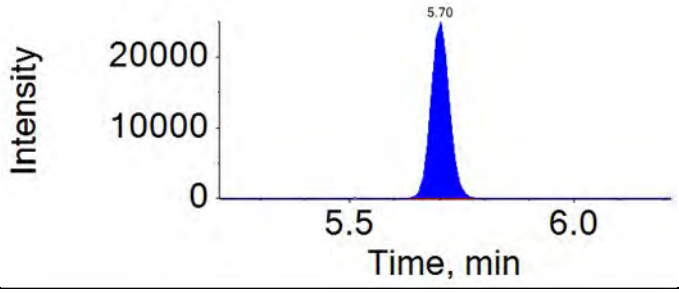
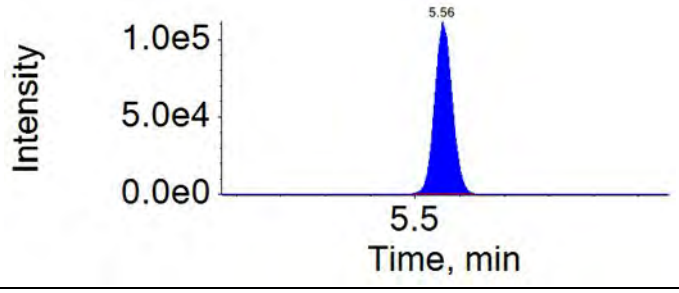
APPROVED
By MCD at 8:21 pm, 11/13/18

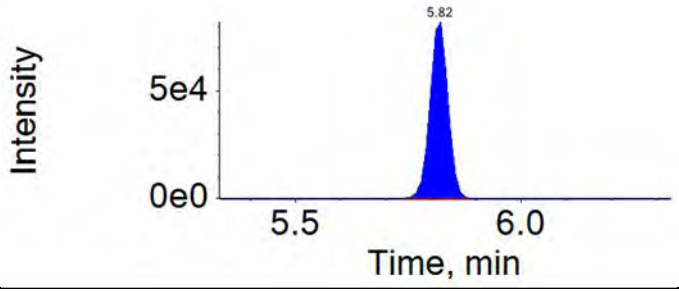
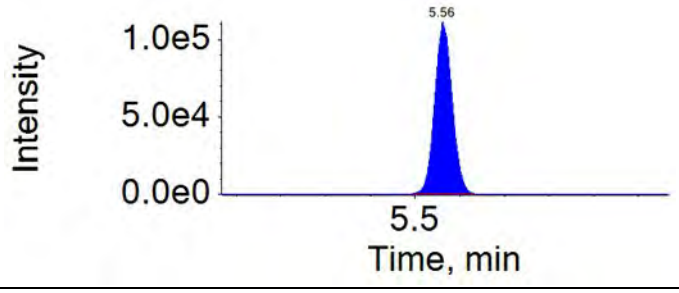
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

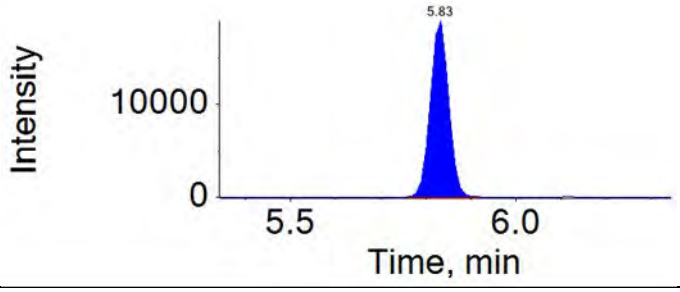
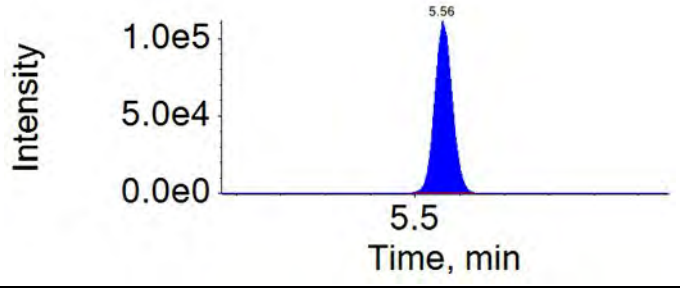
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

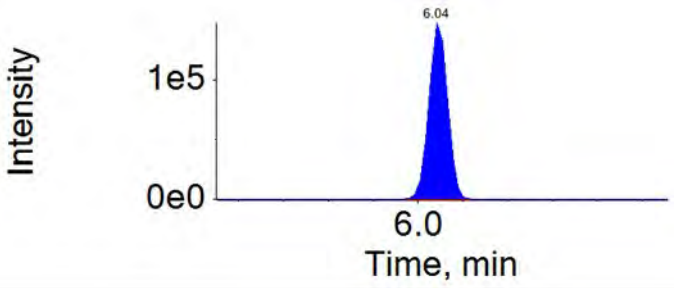
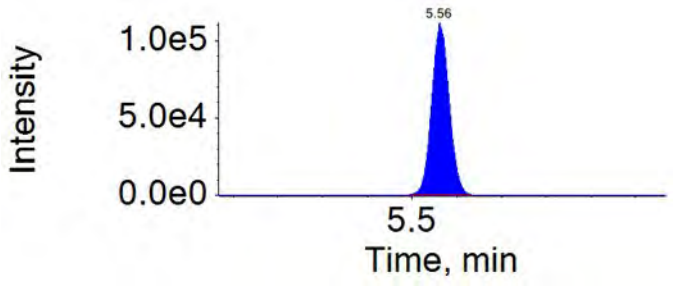
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

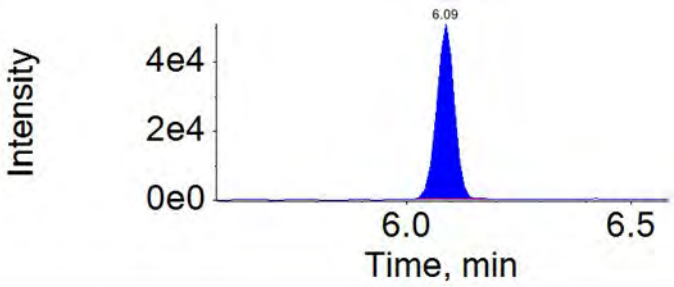
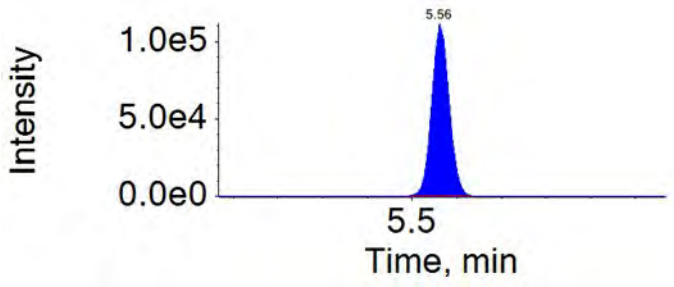
APPROVED
By MCD at 8:21 pm, 11/13/18

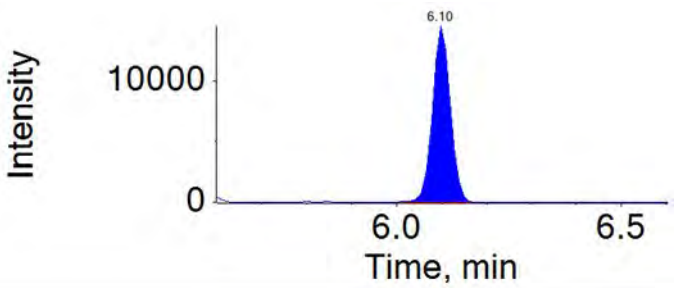
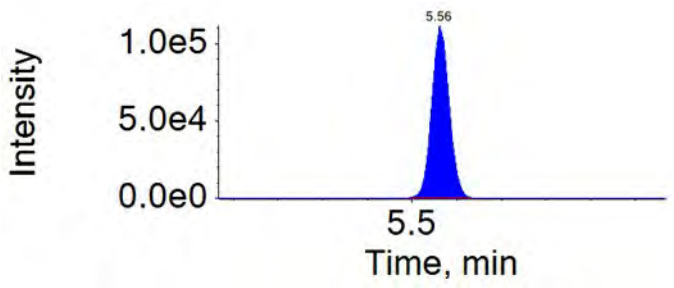
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

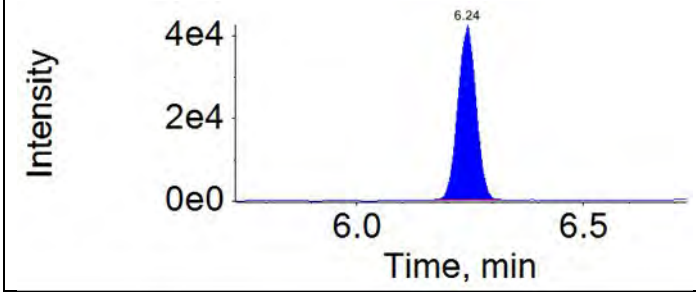
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

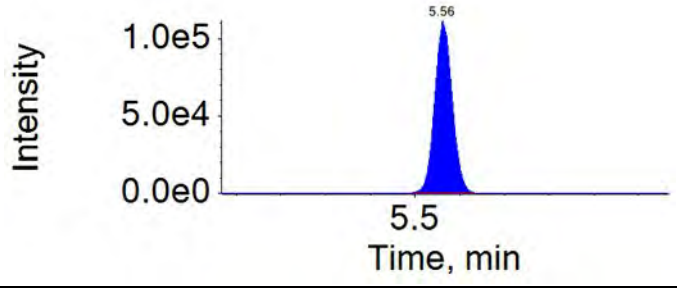
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

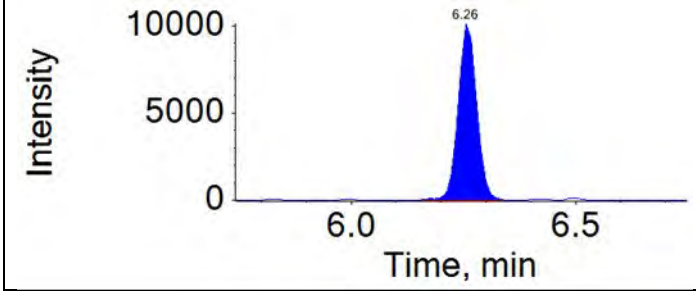
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

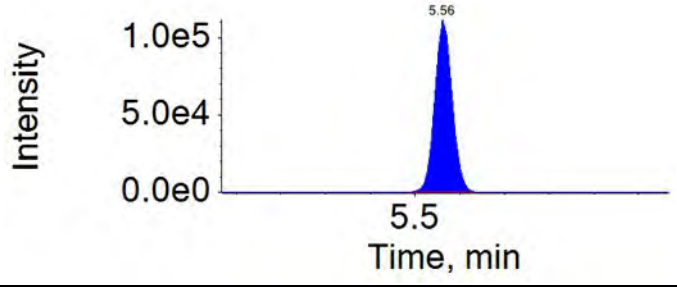
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



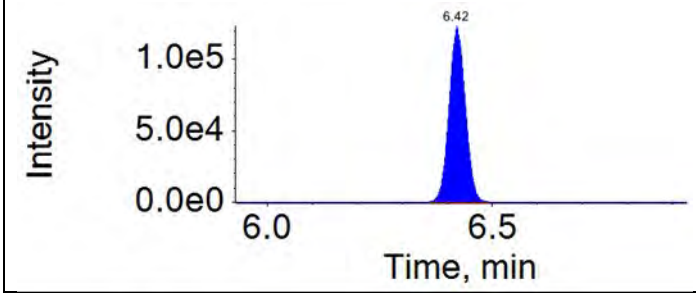


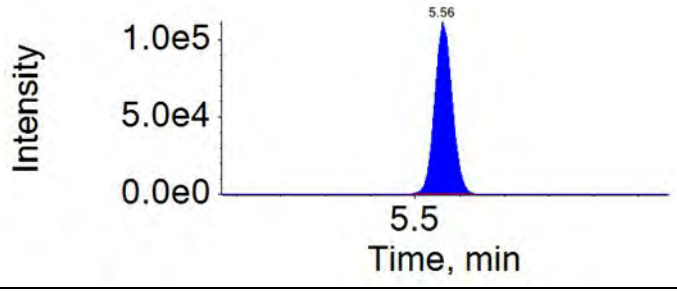
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



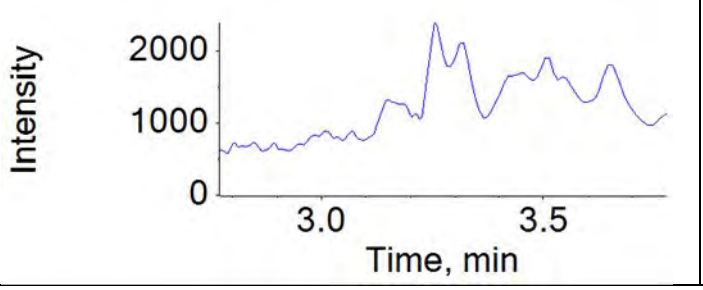


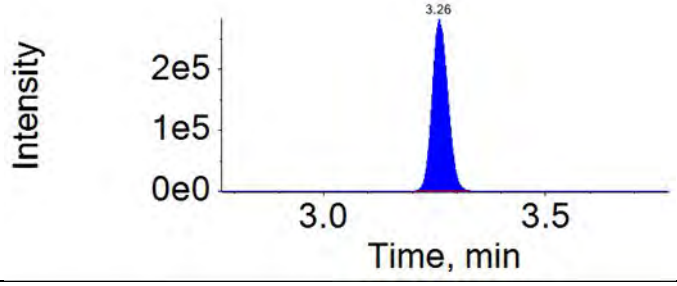
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

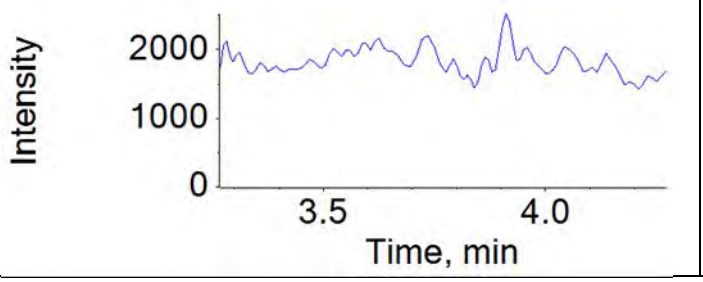
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

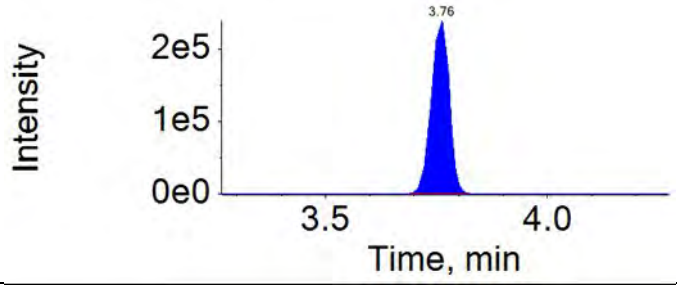
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



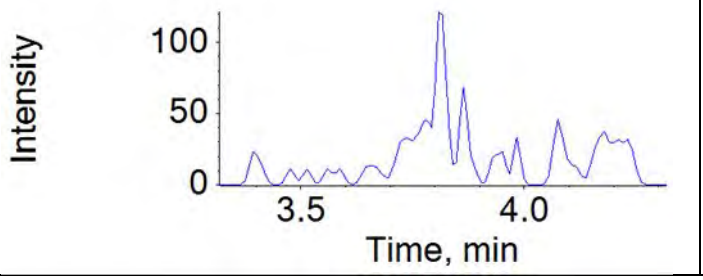


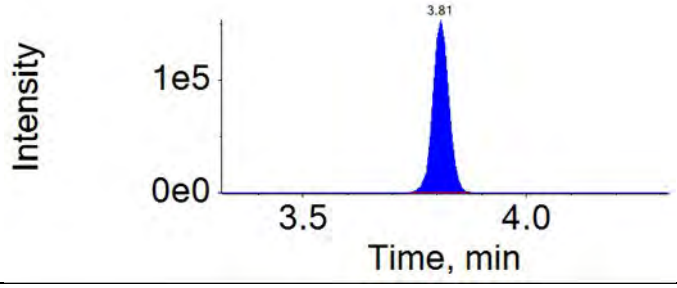
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



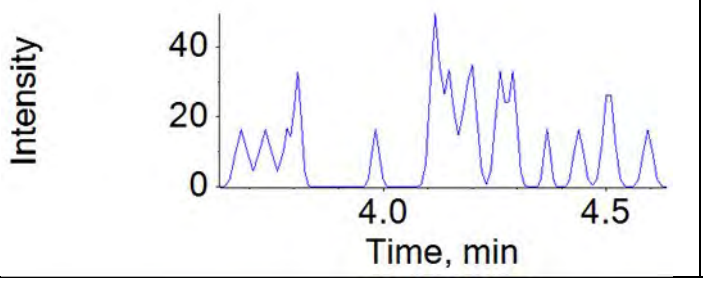


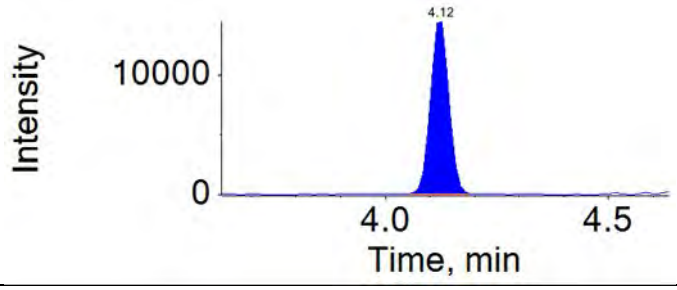
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



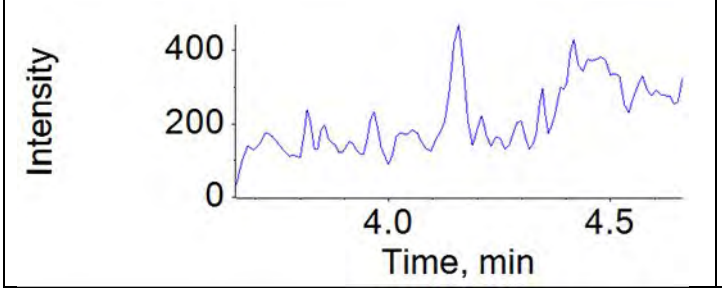


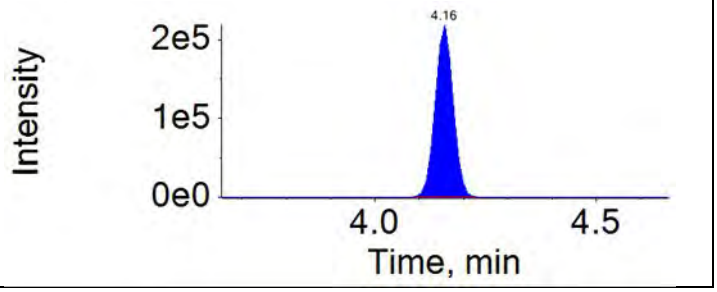
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

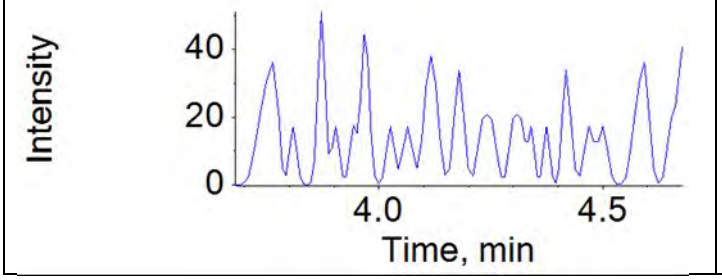
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

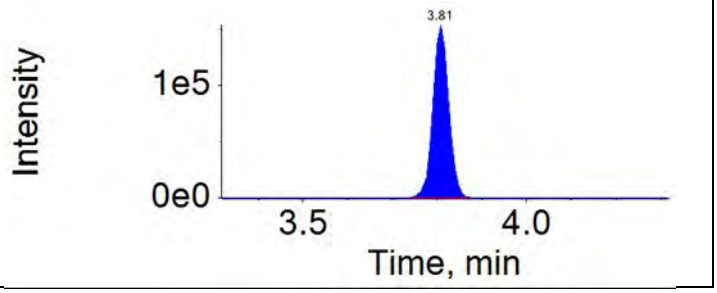
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



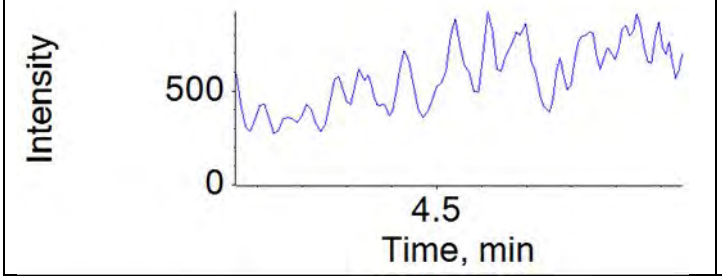


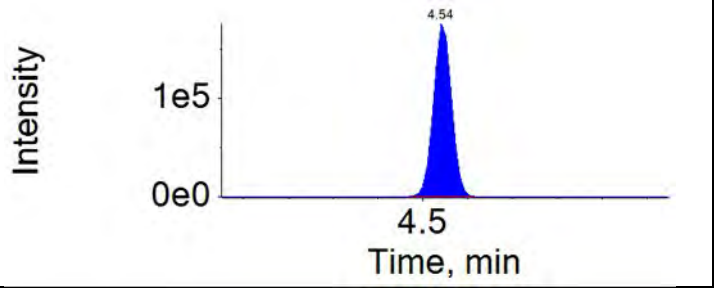
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



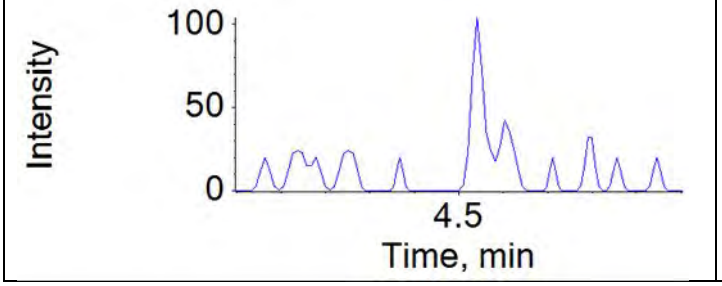


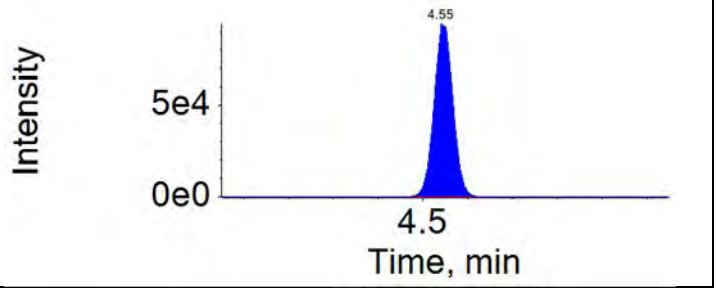
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

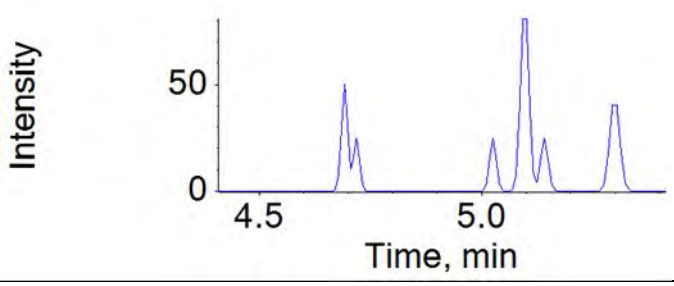
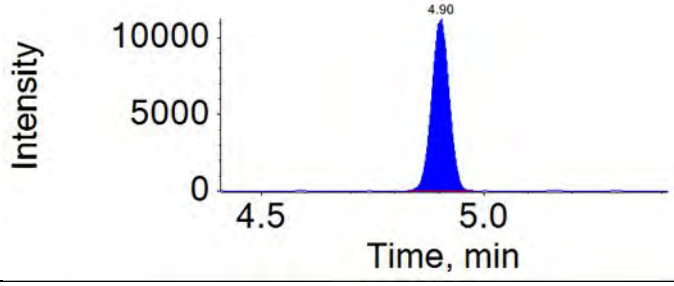


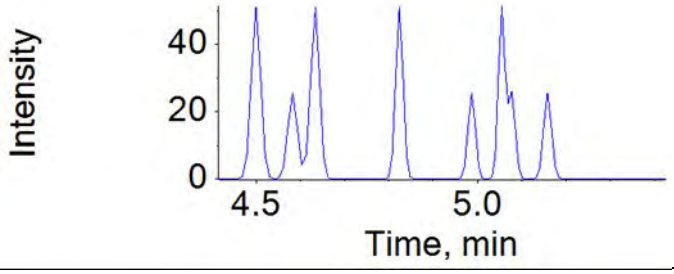
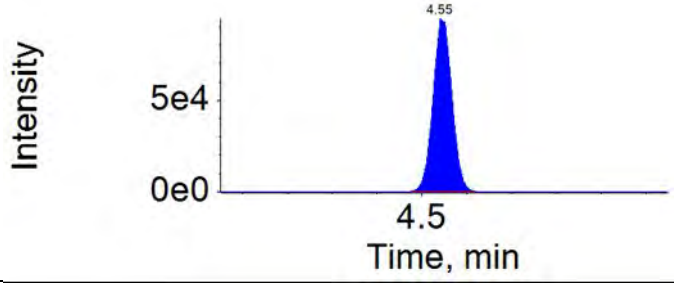


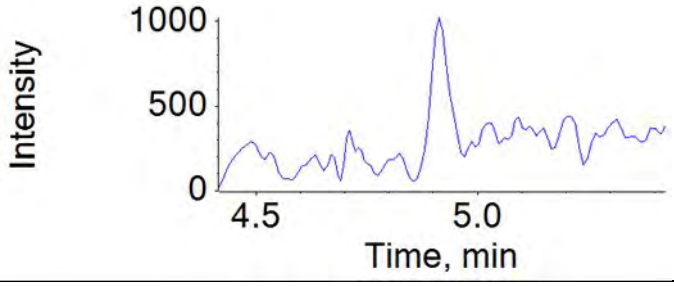
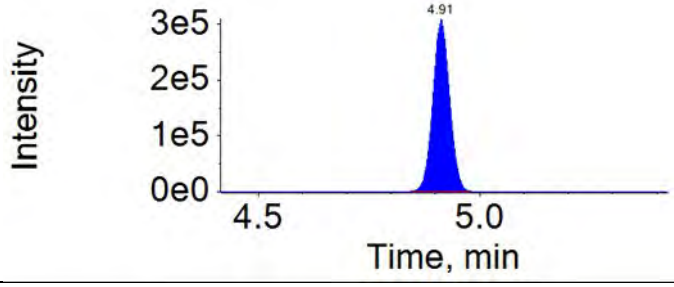
APPROVED
By MCD at 8:21 pm, 11/13/18

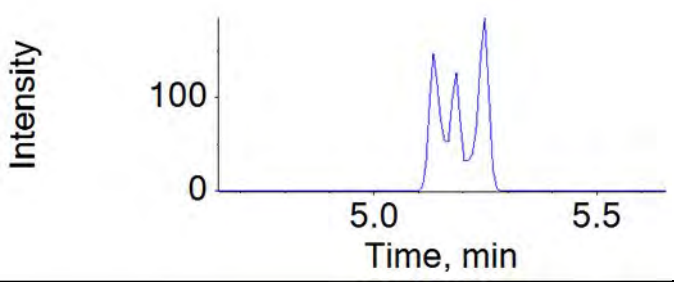
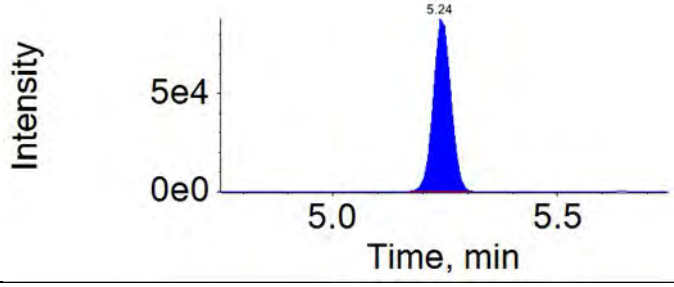
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

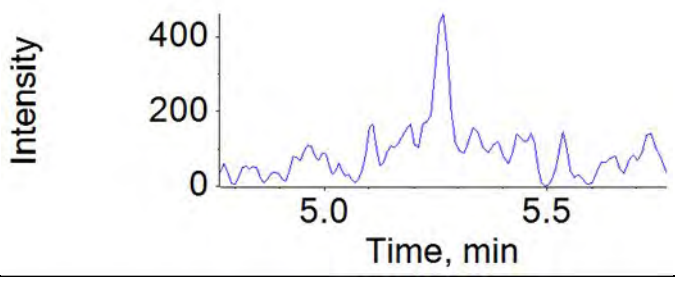
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

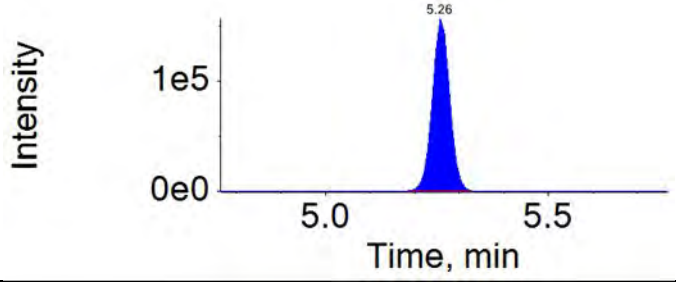
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

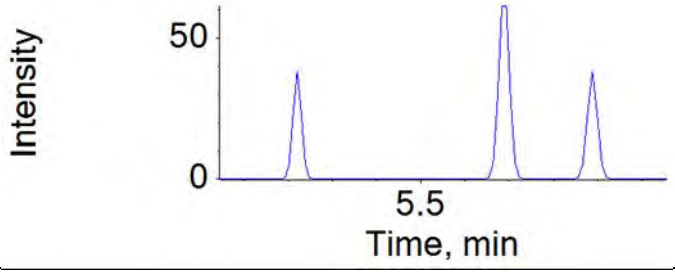
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

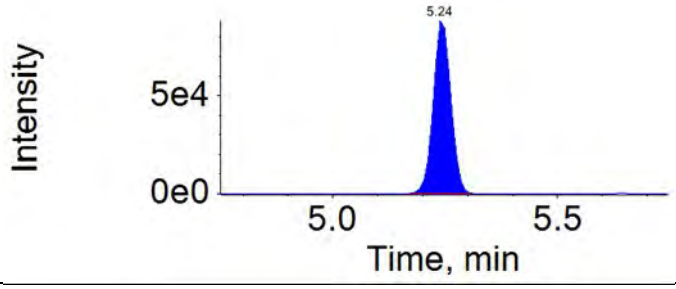
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



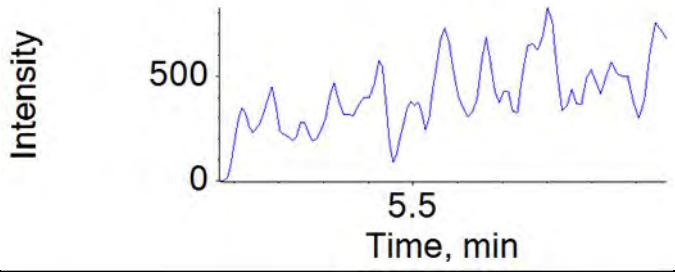


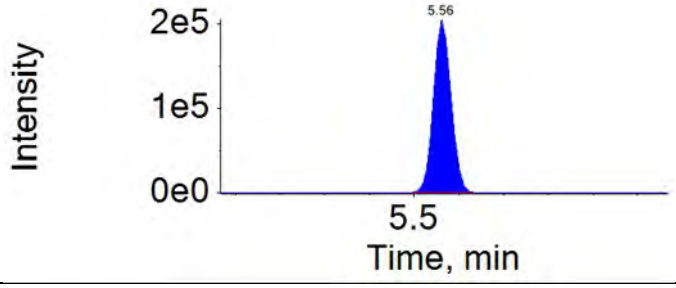
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



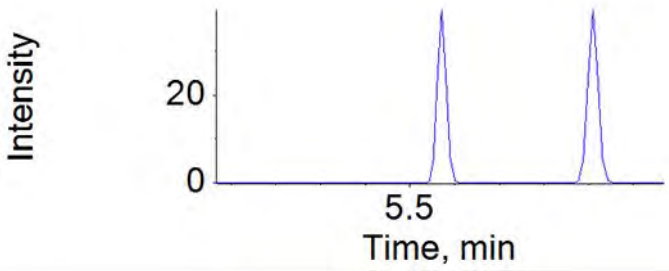


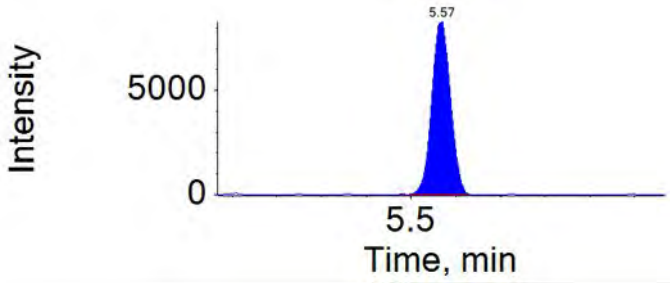
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



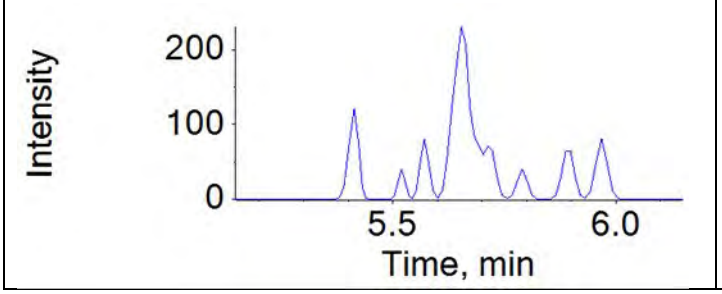


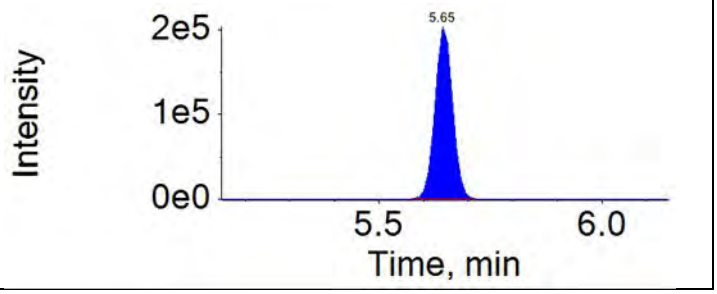
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

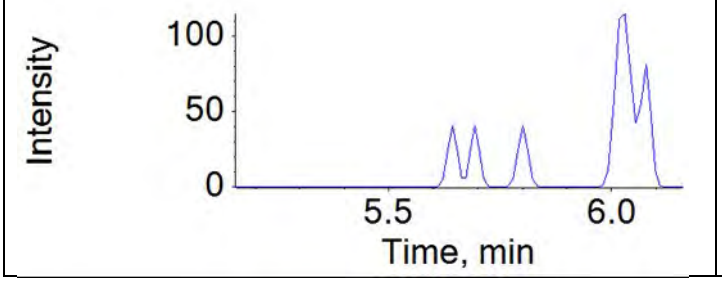
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

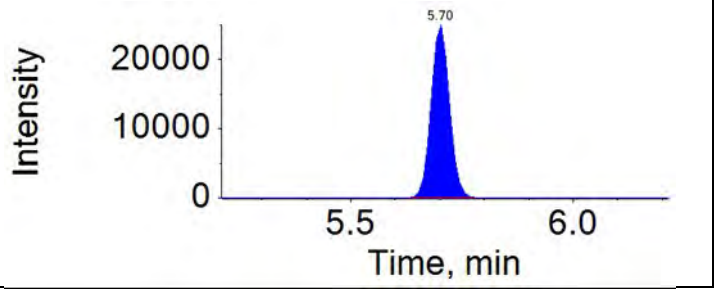
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



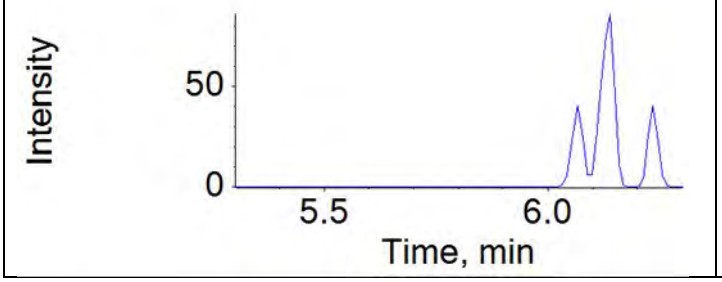


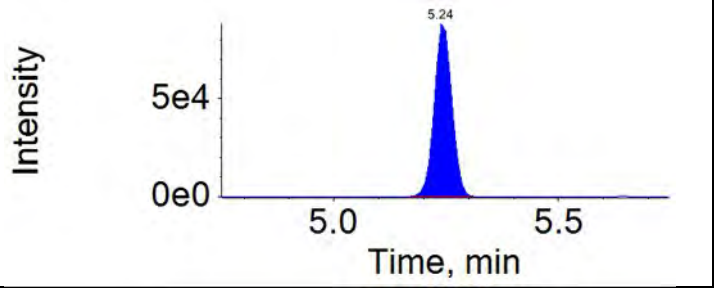
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



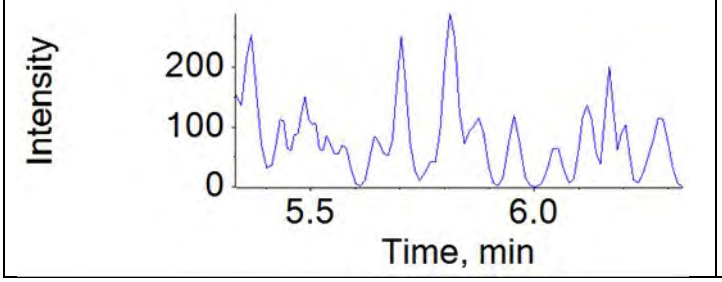


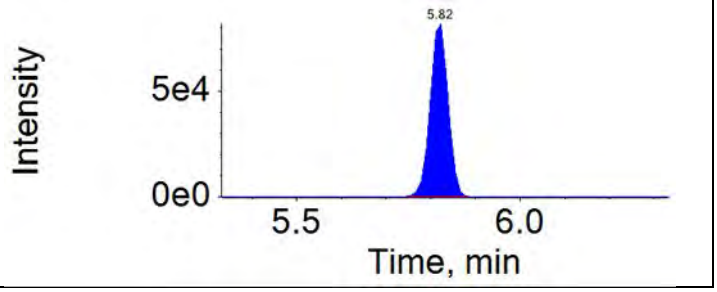
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



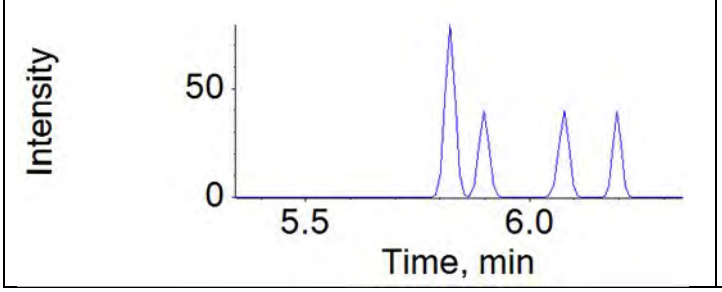


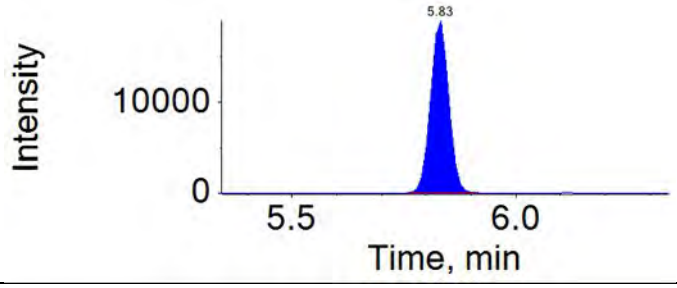
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

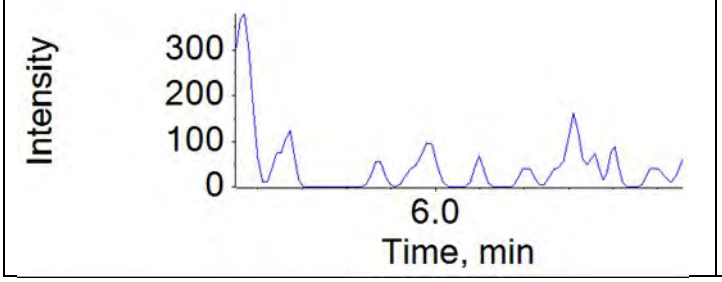
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

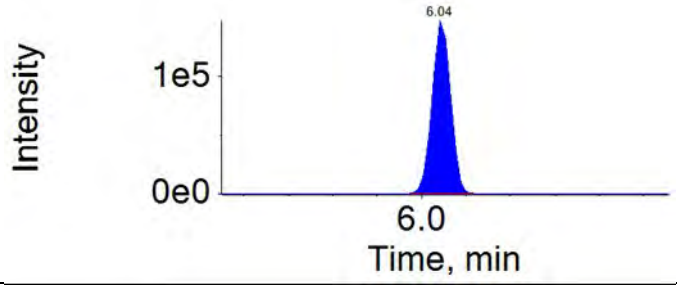
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



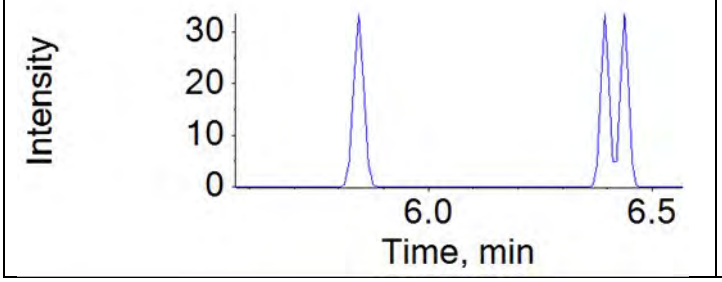


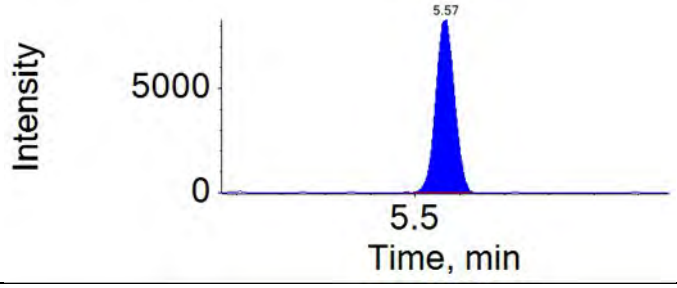
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



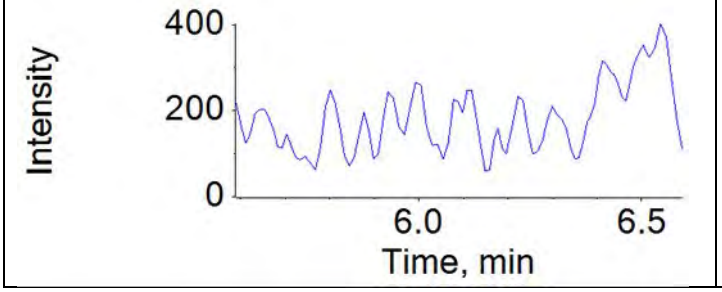


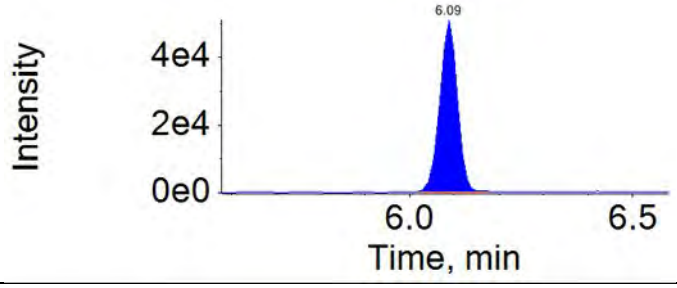
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



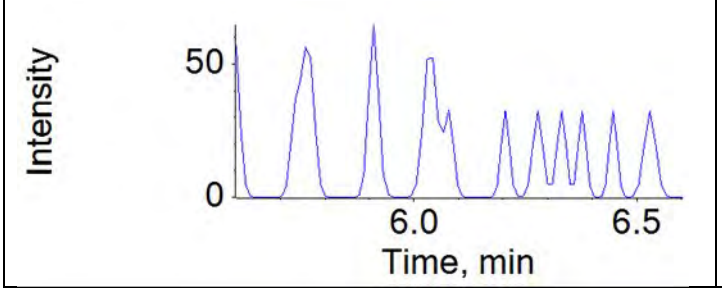


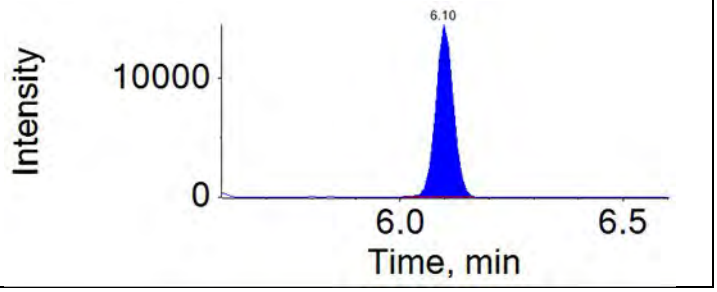
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

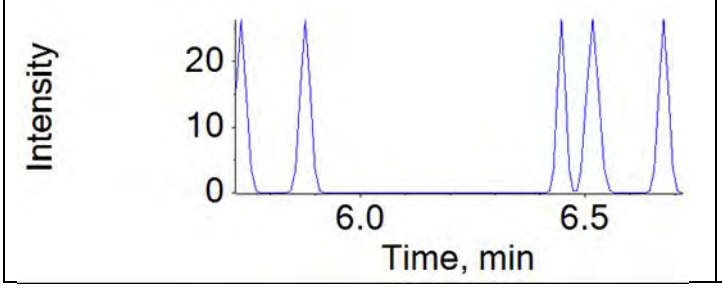
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

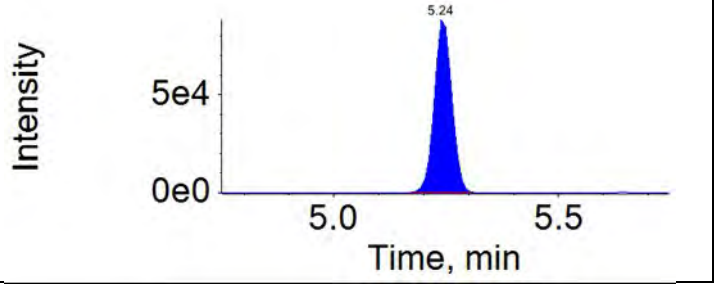
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



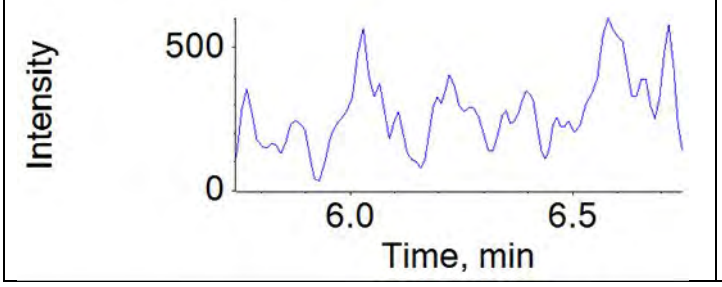


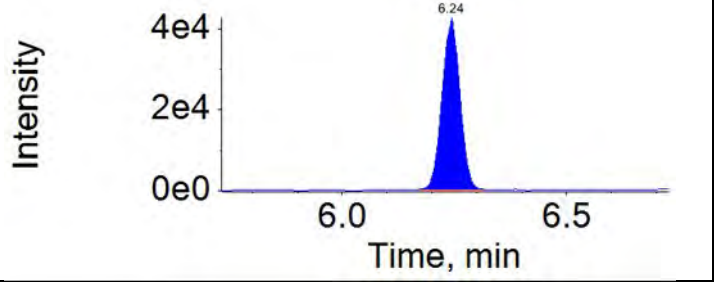
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



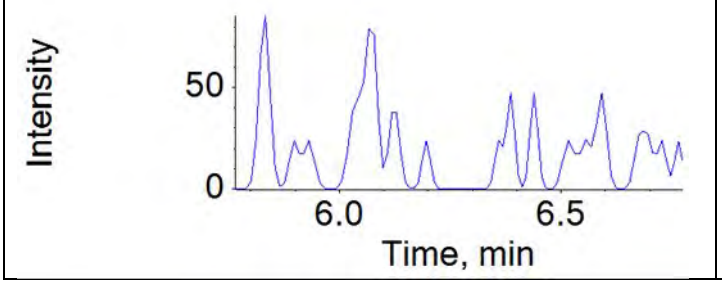


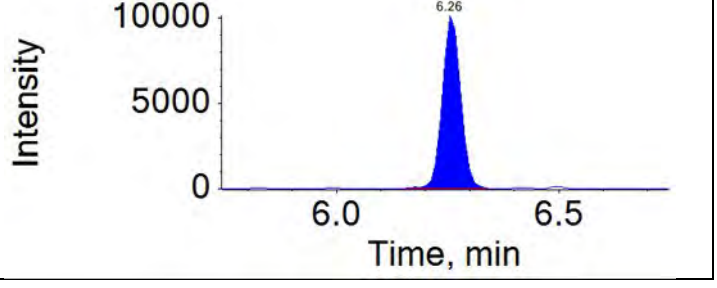
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

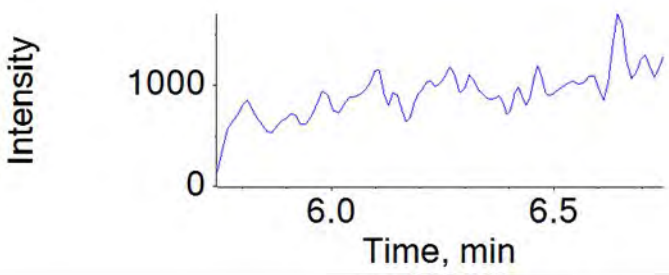
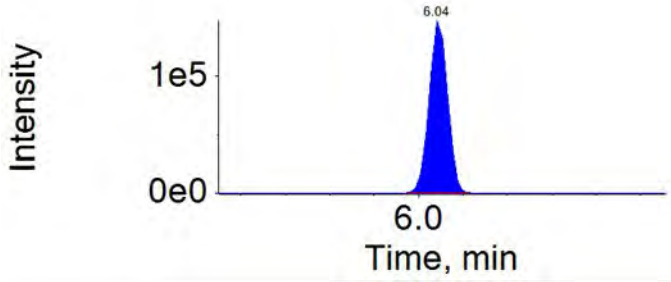


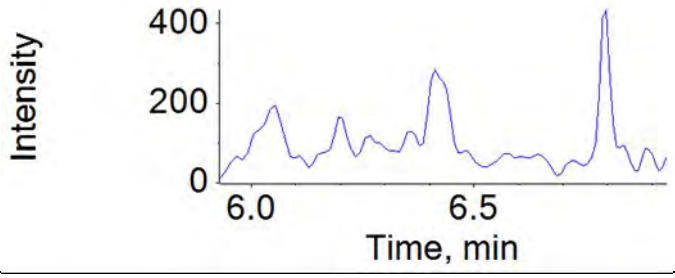
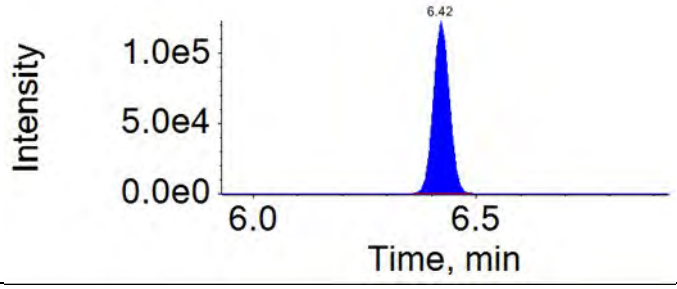


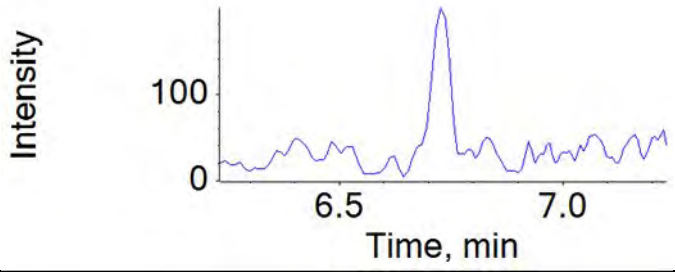
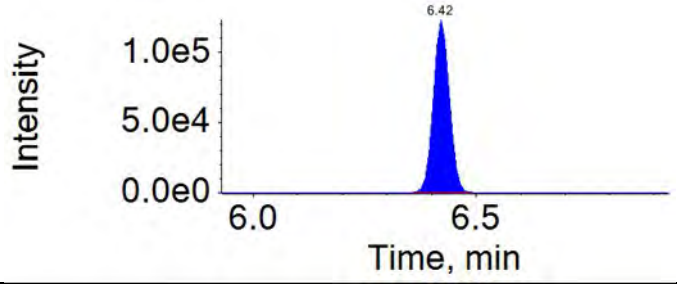
APPROVED
By MCD at 8:21 pm, 11/13/18

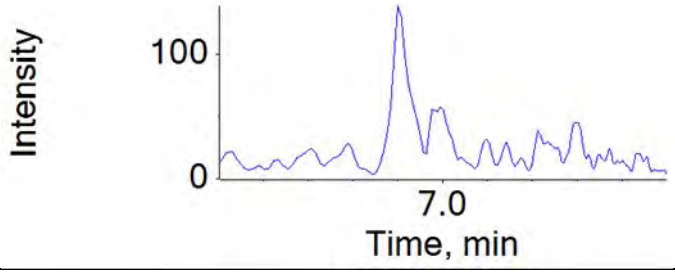
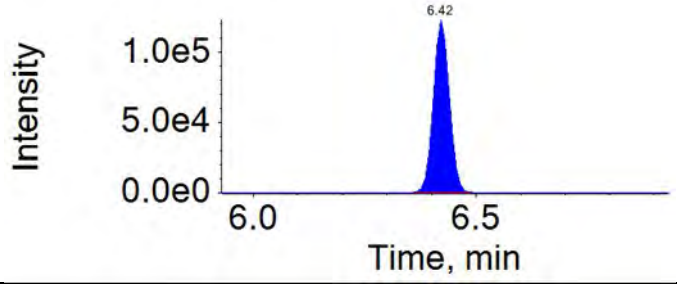
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Ion Ratio Report

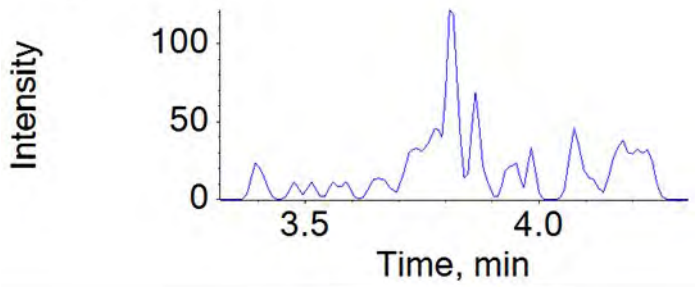
Sample Name: BLK314006 **Instrument Name:** LM27631 **File Name:** 18NOV12D-40.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

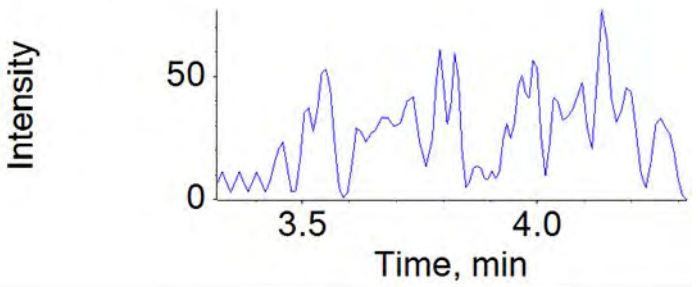
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

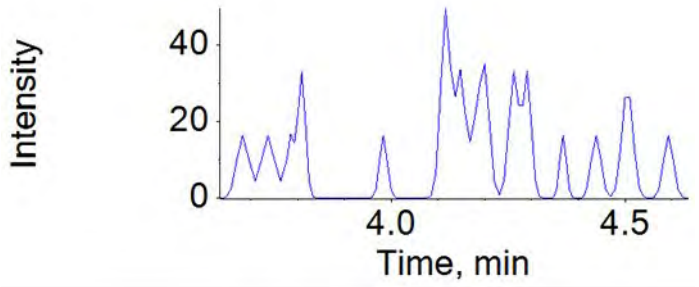
Component: PFBS
Primary Mass: 299.0 / 80.0



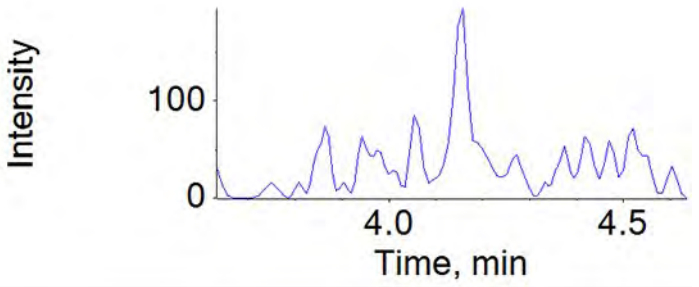
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



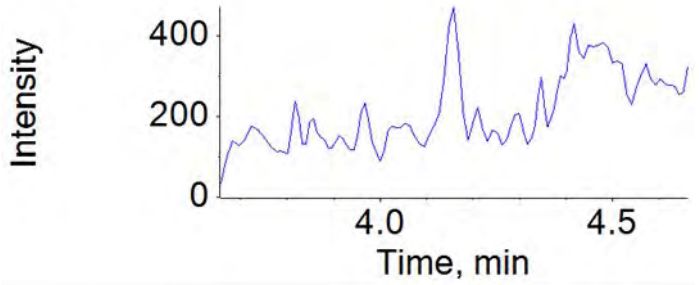
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



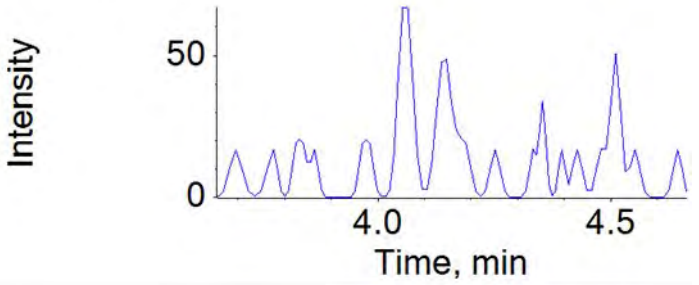
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



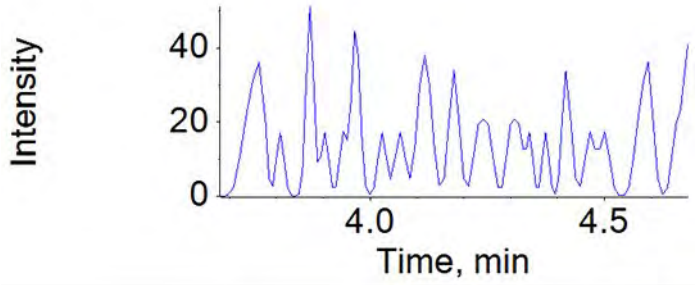
Component: PFHxA
Primary Mass: 313.0 / 269.0



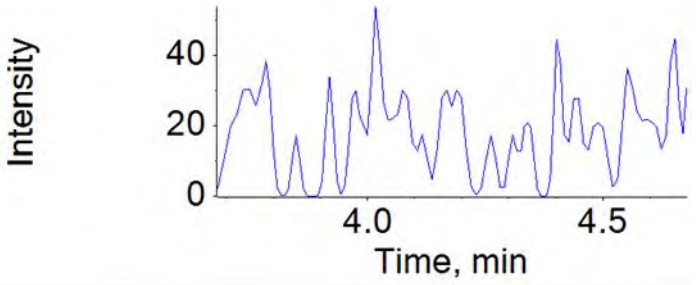
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



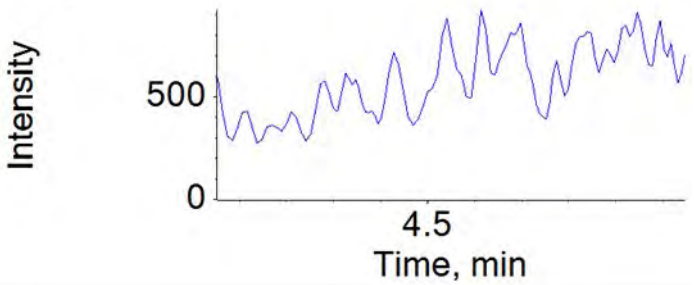
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



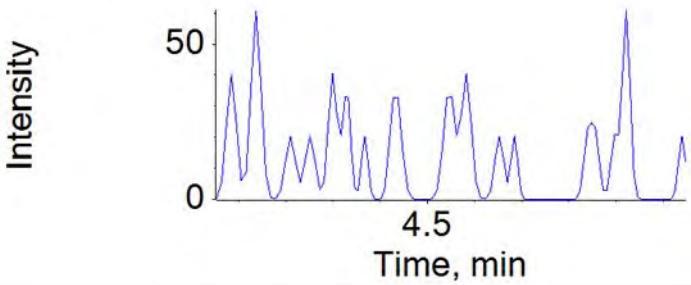
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

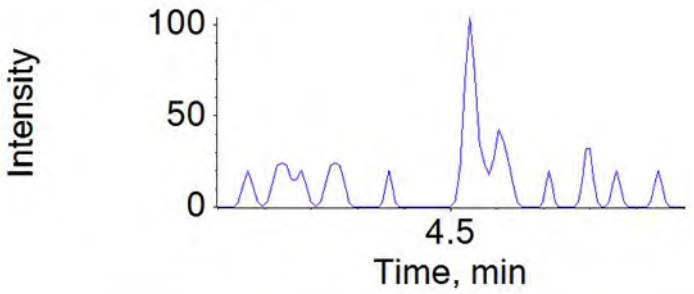
Component: PFHpA
Primary Mass: 363.0 / 319.0



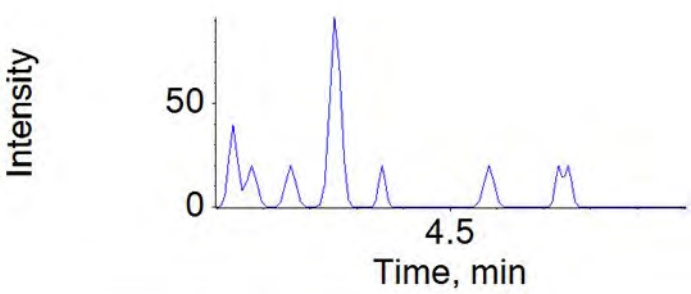
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



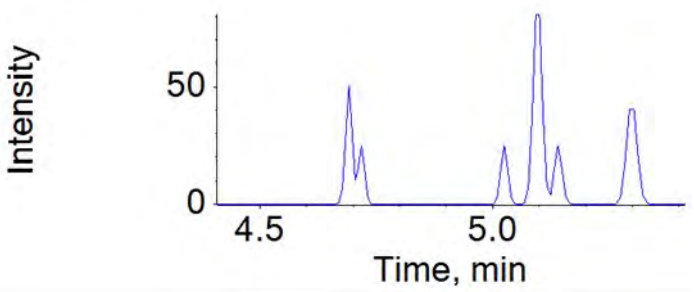
Component: PFHxS
Primary Mass: 399.0 / 80.0



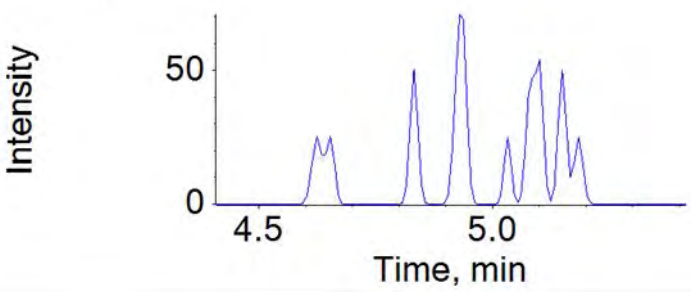
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



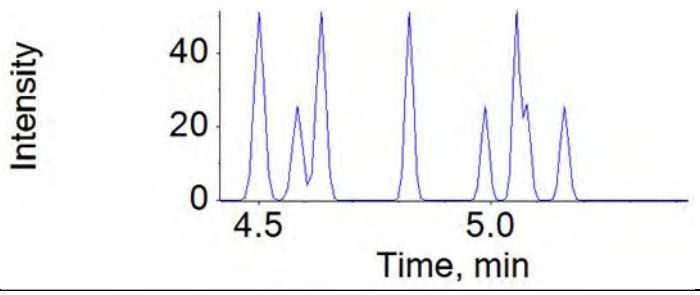
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



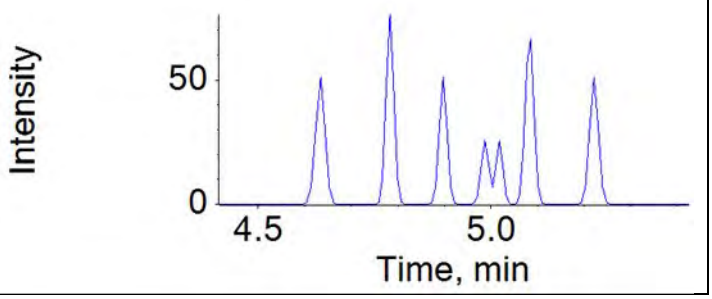
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



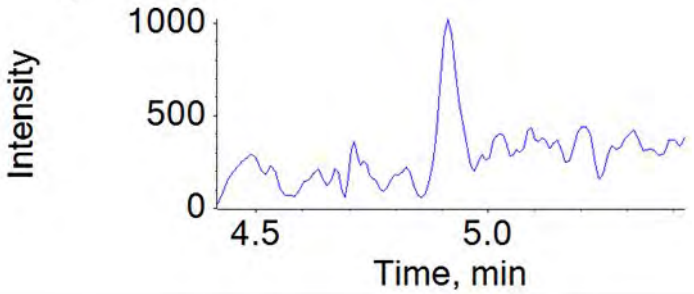
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



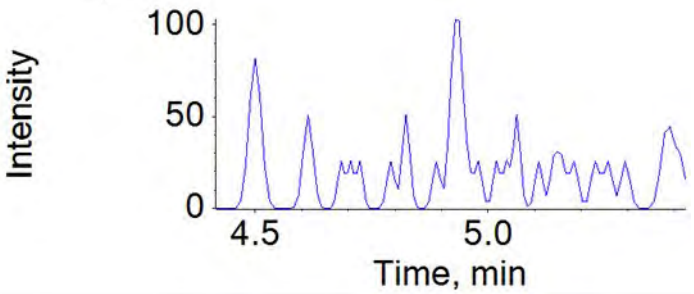
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

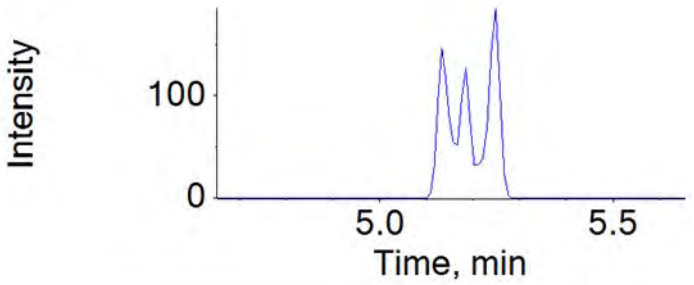
Component: PFOA
Primary Mass: 413.0 / 369.0



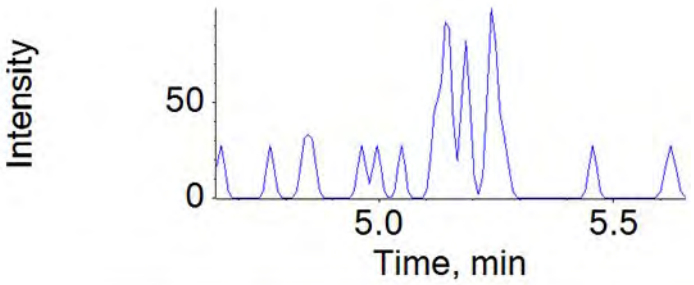
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



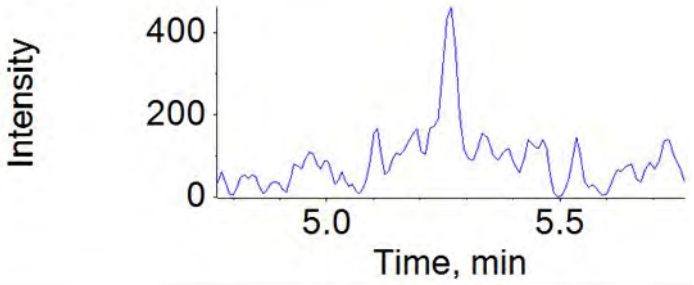
Component: PFOS
Primary Mass: 499.0 / 80.0



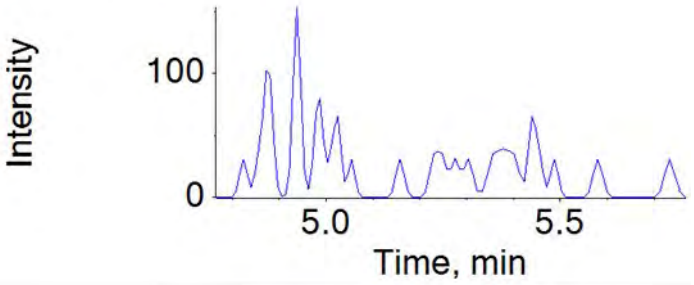
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



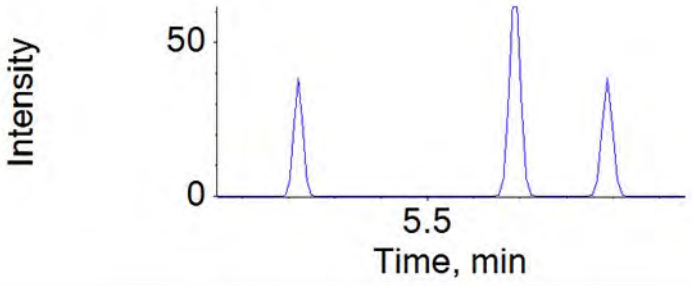
Component: PFNA
Primary Mass: 463.0 / 419.0



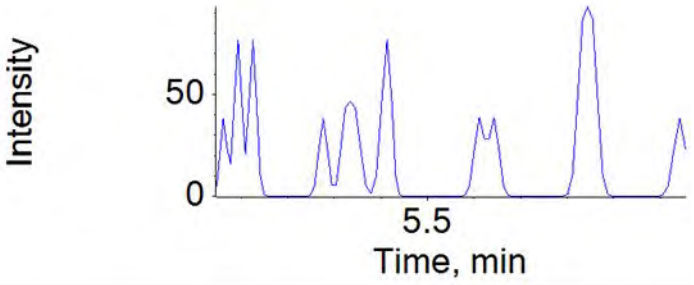
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



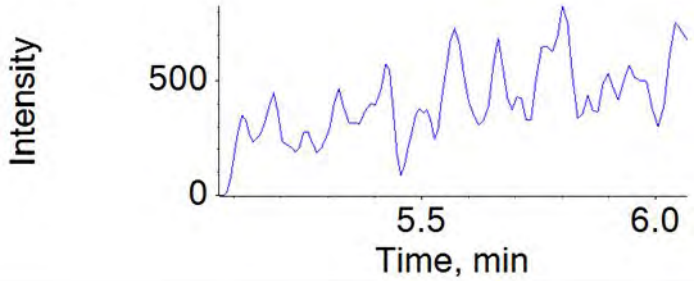
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



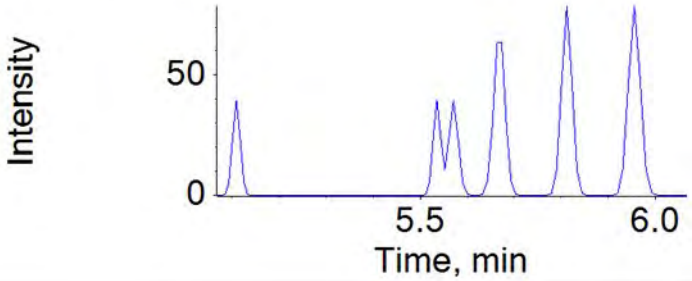
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

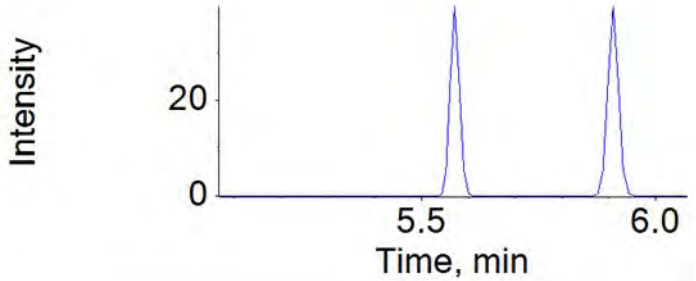
Component: PFDA
Primary Mass: 513.0 / 469.0



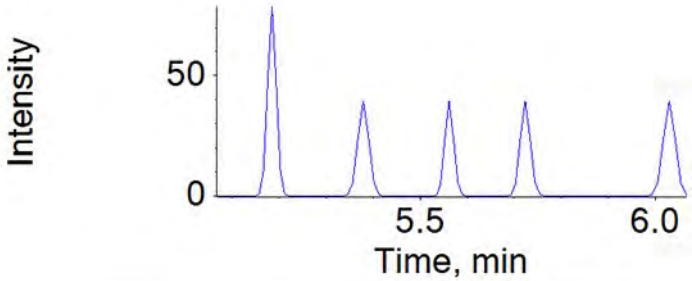
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



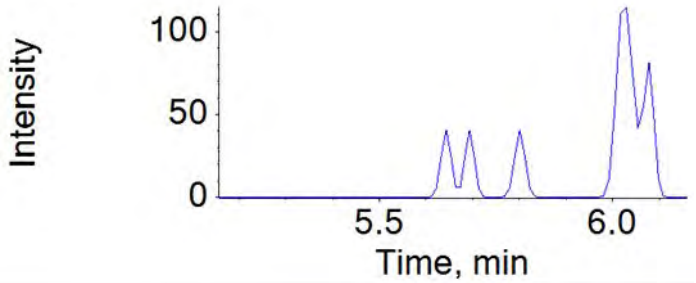
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



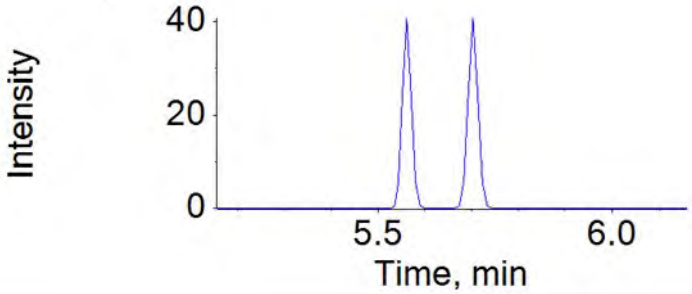
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



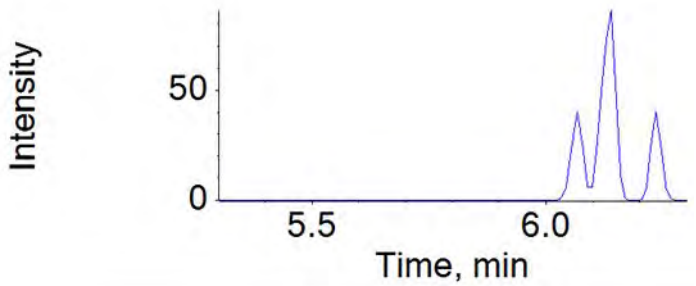
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



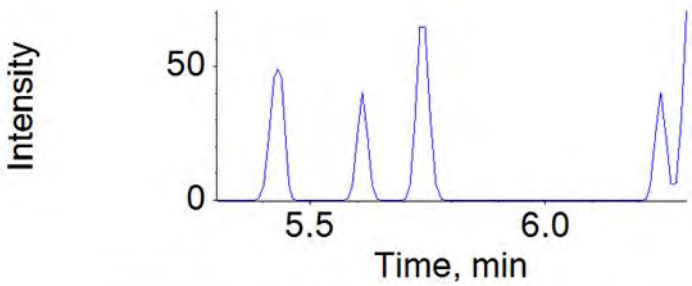
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



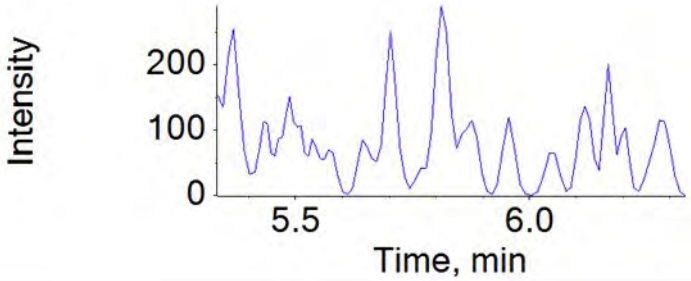
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



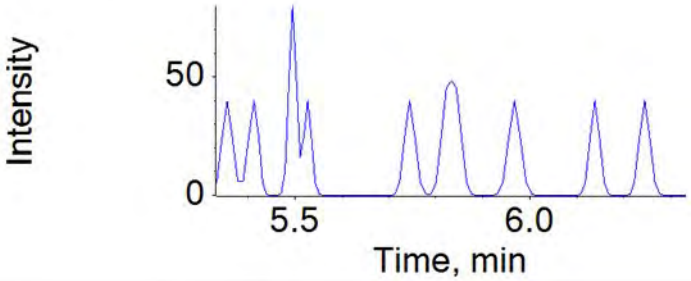
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

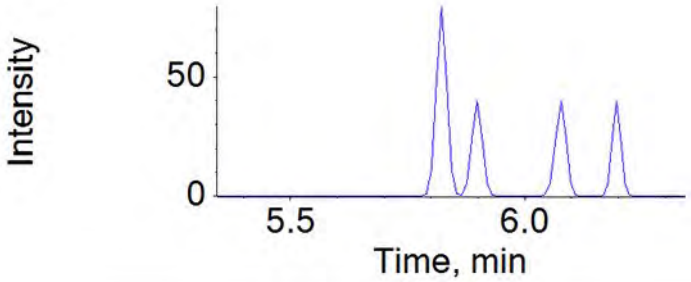
Component: PFUnDA
Primary Mass: 563.0 / 519.0



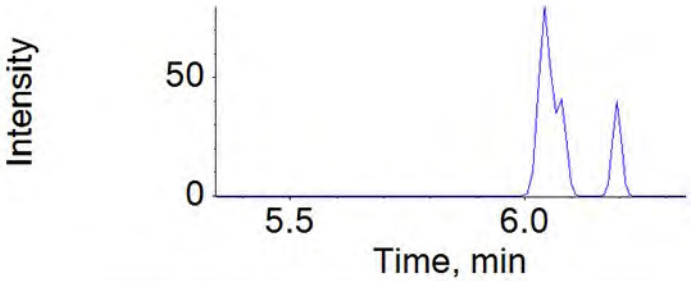
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



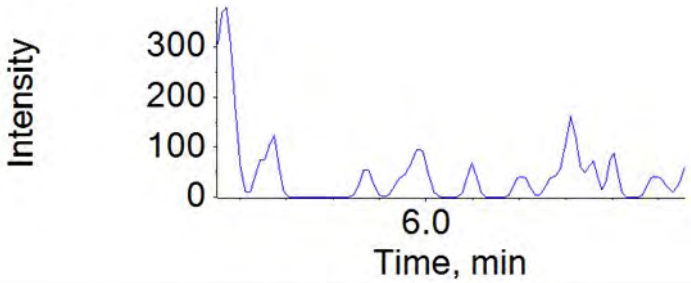
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



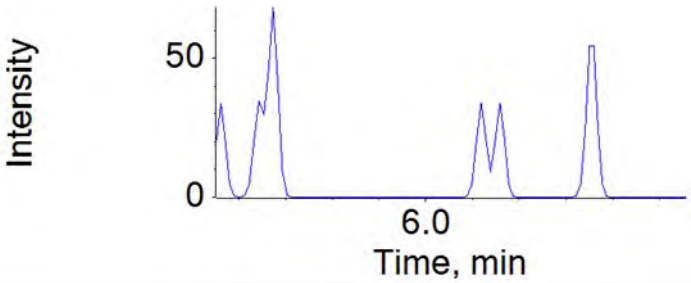
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



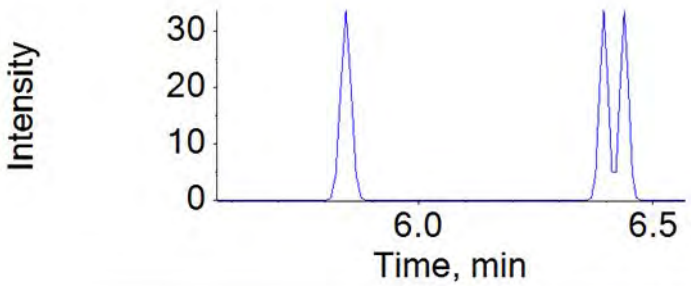
Component: PFDoDA
Primary Mass: 613.0 / 569.0



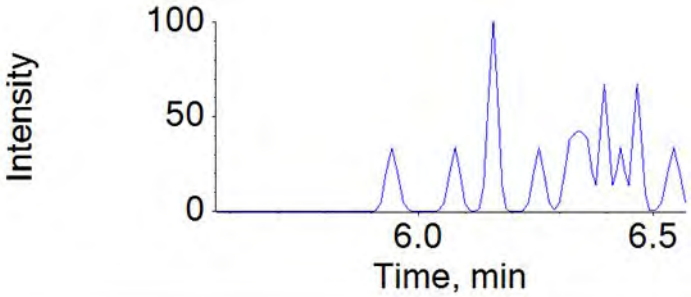
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



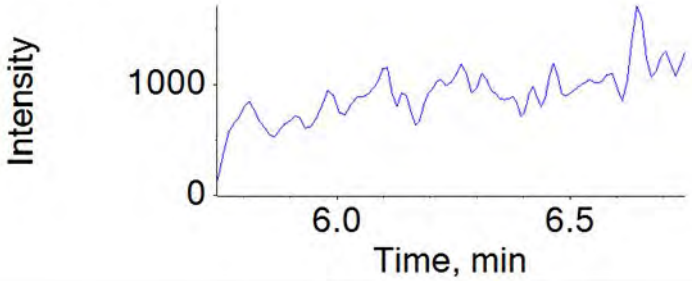
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



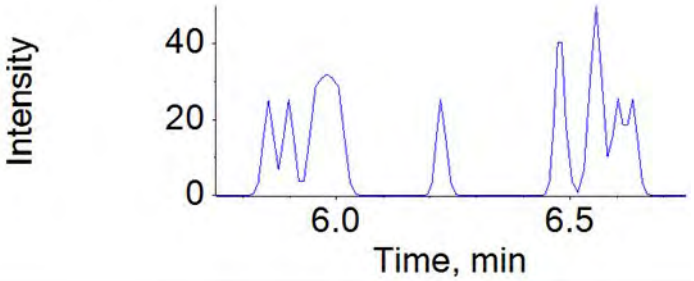
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

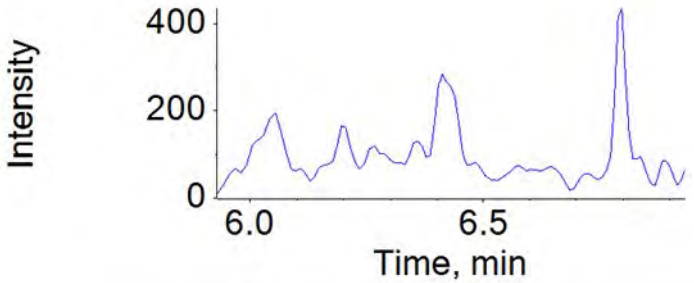
Component: PFTrDA
Primary Mass: 663.0 / 619.0



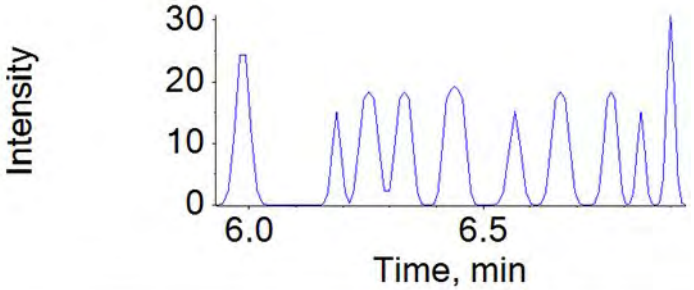
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



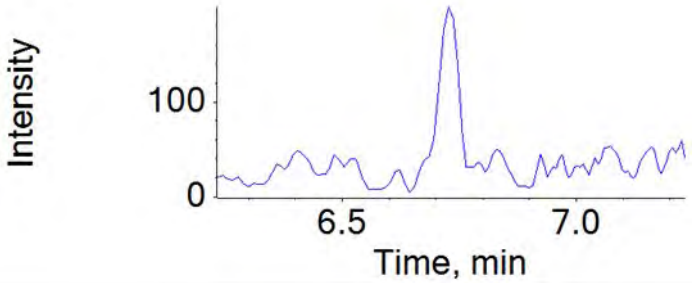
Component: PFTeDA
Primary Mass: 713.0 / 669.0



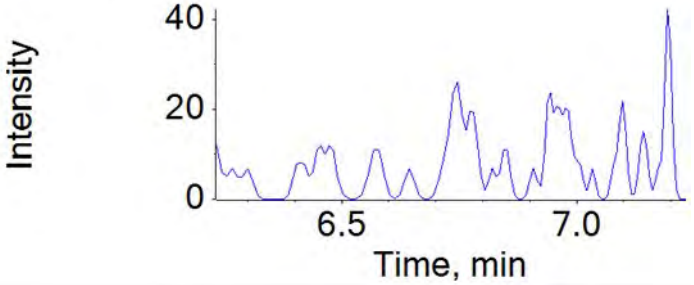
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



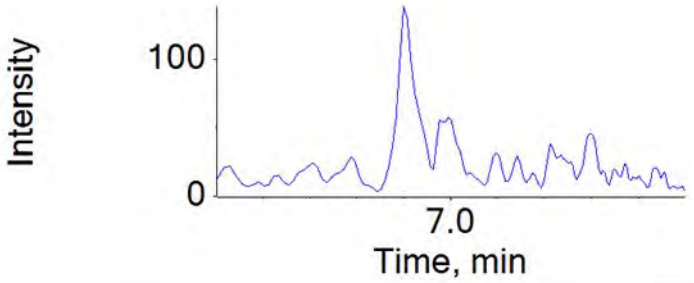
Component: PFHxDA
Primary Mass: 813.0 / 769.0



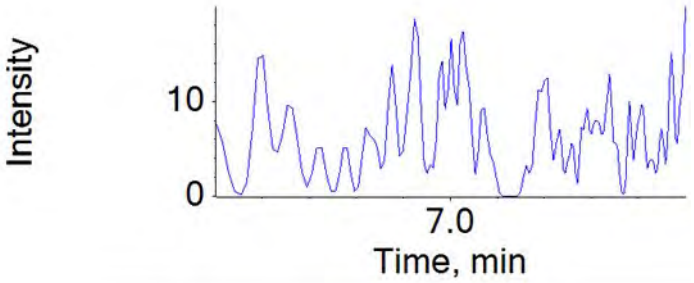
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



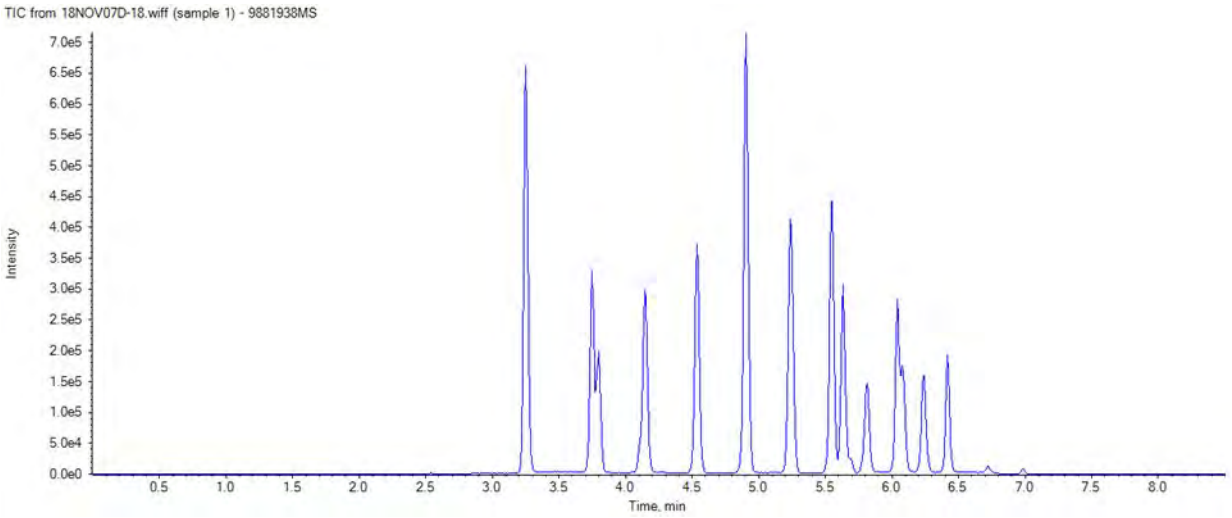
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Matrix Spike Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881938MS	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-GW-9-S-01-05 Grab Soil	18NOV07D-18.wiff	2018-11-07T13:54:00



Injection Standard Area Reference File**:** 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	759370.0	730410.6	4	50	
13C2-PFOA	5.00	591519.6	524423.6	13	50	
13C4-PFOS	4.78	291401.2	274061.7	6	50	
13C2-PFDA	5.00	352116.9	311442.1	13	50	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

Matrix Spike Recovery

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:31:36 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881938MS	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-GW-9-S-01-05 Grab Soil	18NOV07D-18.wiff	2018-11-07T13:54:00

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	44975.6	350978.8	0.128	1.178	1.267	107	70-130	
PFHxA	105128.5	551720.6	0.191	1.333	1.602	120	70-130	
PFHxS	36081.8	270300.4	0.133	1.261	1.327	105	70-130	
PFHpA	112172.2	453483.0	0.247	1.333	1.631	122	70-130	
PFOA	117797.9	805413.1	0.146	1.333	1.615	121	70-130	
PFOS	55975.3	231861.3	0.241	1.275	2.455	193	70-130	OOS
PFNA	93468.0	407069.4	0.230	1.333	1.683	126	70-130	
PFDA	71345.8	536347.6	0.133	1.333	1.435	108	70-130	
NMeFOSAA	6255.7	46206.0	0.135	1.333	1.366	102	70-130	
PFUnDA	55794.9	241676.5	0.231	1.333	1.298	97	70-130	
NEtFOSAA	4985.9	40181.1	0.124	1.333	1.046	78	70-130	
PFDoDA	62868.3	496630.0	0.127	1.333	1.345	101	70-130	
PFTrDA	54809.9	496630.0	0.110	1.333	1.365	102	70-130	
PFTeDA	45606.2	346607.1	0.132	1.333	1.515	114	70-130	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

Matrix Spike Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881938MS			**Data File:**		18NOV07D-18.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-GW-9-S-01-05 Grab Soil			**Acquis Date:**		2018-11-07T13:54:00
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	17			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.02000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	759370.0	730410.6	4	50	
13C2-PFOA	5.0	591519.6	524423.6	13	50	
13C4-PFOS	4.8	291401.2	274061.7	6	50	
13C2-PFDA	5.0	352116.9	311442.1	13	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	350978.8	13C3-PFBA	759370.0	0.462	9.118	6.651	73	50-150	
E13C5-PFHxA	551720.6	13C2-PFOA	591519.6	0.933	9.804	6.727	69	50-150	
E13C3-PFHxS	270300.4	13C2-PFOA	591519.6	0.457	9.275	6.432	69	50-150	
E13C4-PFHpA	453483.0	13C2-PFOA	591519.6	0.767	9.804	6.838	70	50-150	
E13C8-PFOA	805413.1	13C2-PFOA	591519.6	1.362	9.804	7.445	76	50-150	
E13C8-PFOS	231861.3	13C4-PFOS	291401.2	0.796	9.373	6.899	74	50-150	
E13C9-PFNA	407069.4	13C4-PFOS	291401.2	1.397	9.804	7.482	76	50-150	
E13C6-PFDA	536347.6	13C2-PFDA	352116.9	1.523	9.804	7.511	77	50-150	
Ed3-NMeFOSAA	46206.0	13C2-PFDA	352116.9	0.131	9.804	4.785	49	50-150	OOS
E13C7-PFUnDA	241676.5	13C2-PFDA	352116.9	0.686	9.804	7.764	79	50-150	
Ed5-NEtFOSAA	40181.1	13C2-PFDA	352116.9	0.114	9.804	5.178	53	50-150	
E13C2-PFDoDA	496630.0	13C2-PFDA	352116.9	1.410	9.804	7.455	76	50-150	
E13C2-PFTeDA	346607.1	13C2-PFDA	352116.9	0.984	9.804	6.948	71	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

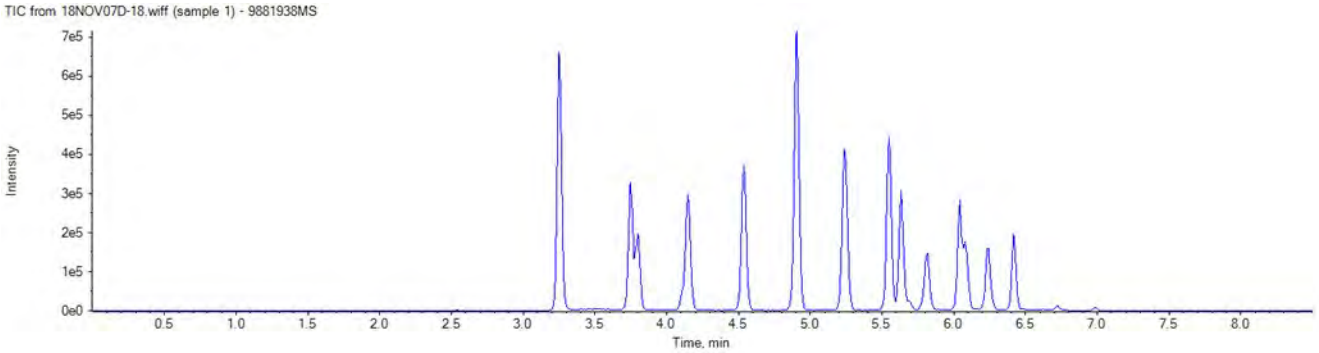
Analyte Quantitation Peak Table

Sample Name: 9881938MS **Instrument Name:** LM27631 **File Name:** 18NOV07D-18.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.02000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.80	1.000	44975.6		A	13C3-PFBS	3.80	350978.8	0.128	1.267
PFHxA	4.15	1.000	105128.5		A	13C5-PFHxA	4.15	551720.6	0.191	1.602
PFHxS	4.54	1.000	36081.8		A	13C3-PFHxS	4.54	270300.4	0.133	1.327
PFHpA	4.54	1.000	112172.2		A	13C4-PFHpA	4.54	453483.0	0.247	1.631
PFOA	4.91	1.000	117797.9		A	13C8-PFOA	4.91	805413.1	0.146	1.615
PFOS	5.23	1.000	55975.3		M	13C8-PFOS	5.23	231861.3	0.241	2.455
PFNA	5.25	1.000	93468.0		A	13C9-PFNA	5.25	407069.4	0.230	1.683
PFDA	5.55	1.000	71345.8		A	13C6-PFDA	5.55	536347.6	0.133	1.435
NMeFOSAA	5.69	1.000	6255.7		A	d3-NMeFOSAA	5.69	46206.0	0.135	1.366
PFUnDA	5.81	1.000	55794.9		A	13C7-PFUnDA	5.81	241676.5	0.231	1.298
NEtFOSAA	5.83	1.000	4985.9		A	d5-NEtFOSAA	5.82	40181.1	0.124	1.046
PFDoDA	6.04	1.000	62868.3		A	13C2-PFDoDA	6.04	496630.0	0.127	1.345
PFTrDA	6.24	1.030	54809.9		A	13C2-PFDoDA	6.04	496630.0	0.110	1.365
PFTeDA	6.42	1.000	45606.2		A	13C2-PFTeDA	6.42	346607.1	0.132	1.515

Total Ion Chromatogram

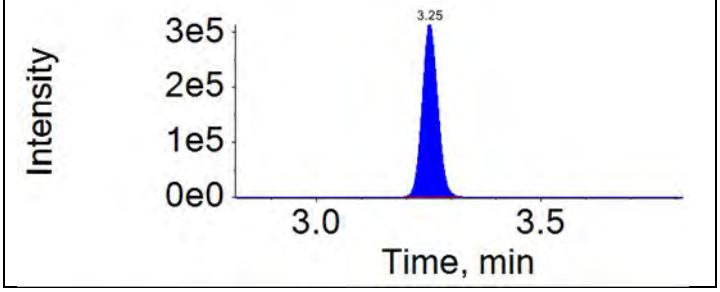


APPROVED
By MCD at 4:42 pm, 11/8/18

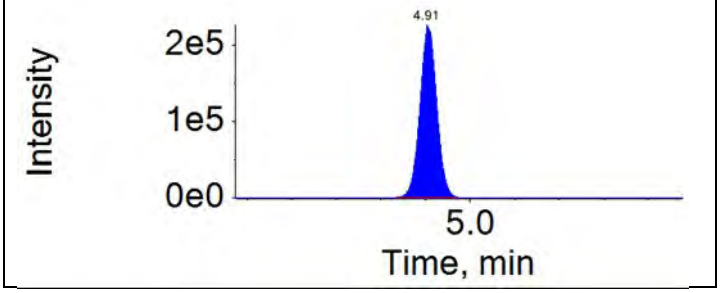
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

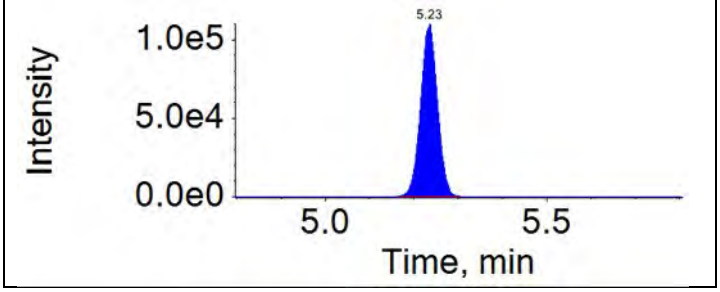
Injection Standard: 13C3-PFBA
216.0 / 172.0



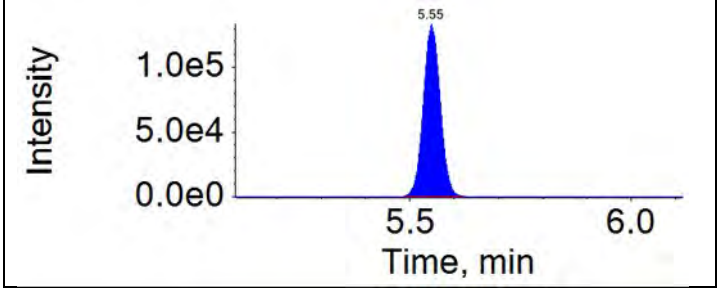
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



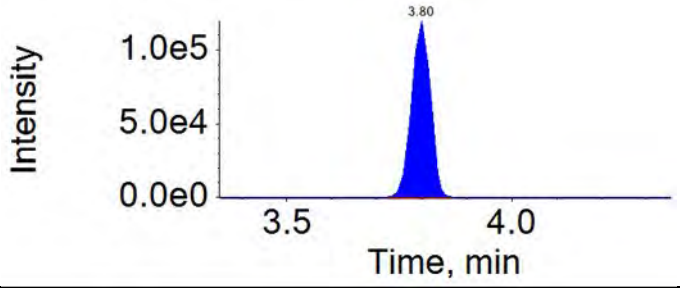
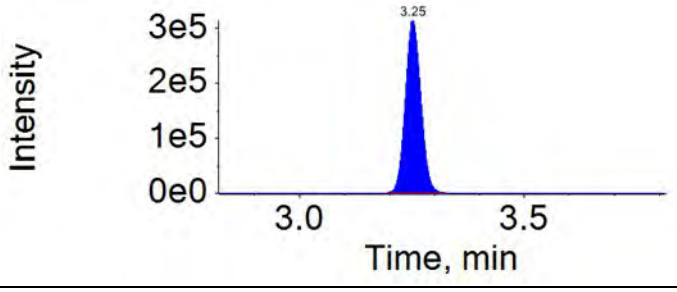
Injection Standard: 13C2-PFDA
515.0 / 470.0

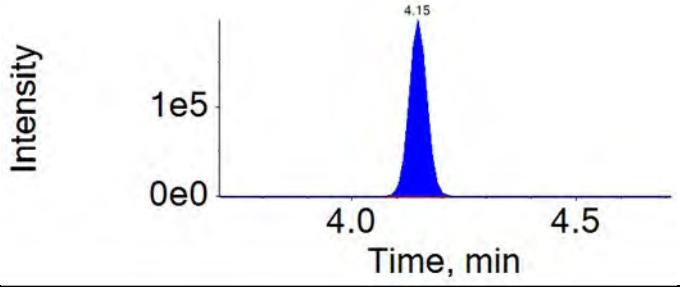
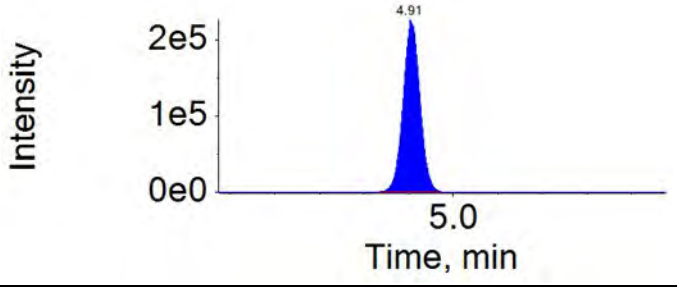


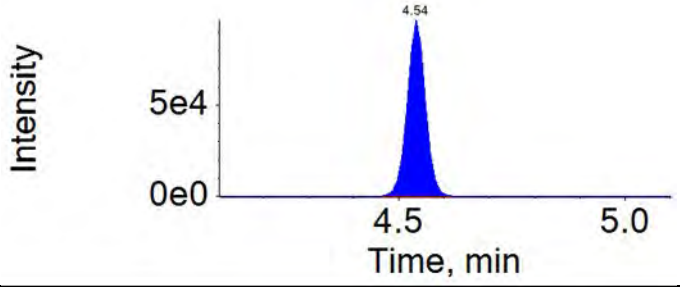
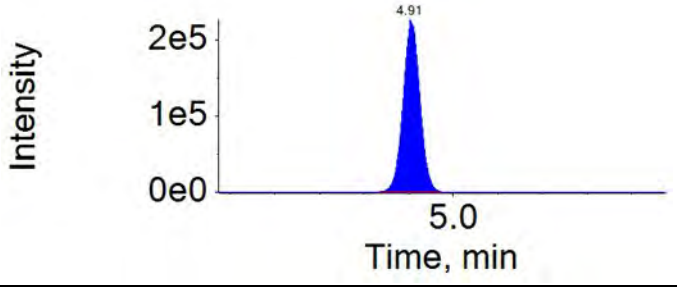
APPROVED
By MCD at 4:42 pm, 11/8/18

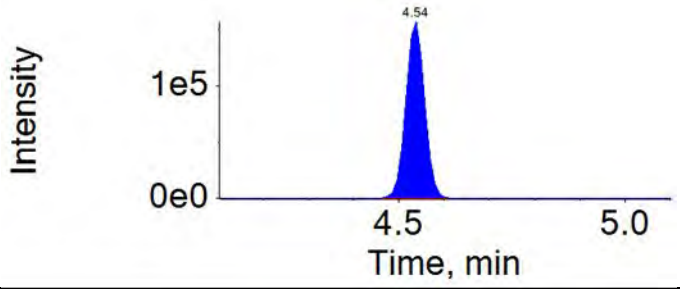
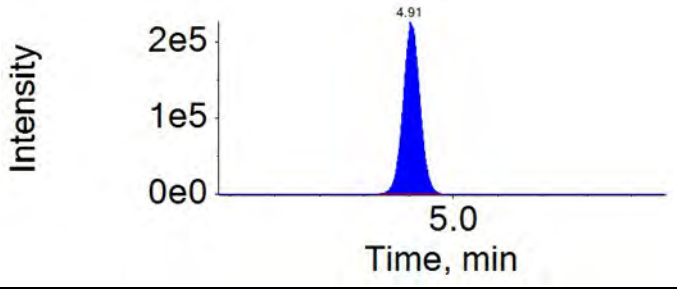
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

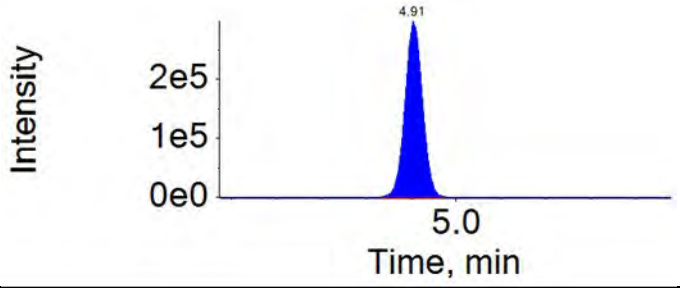
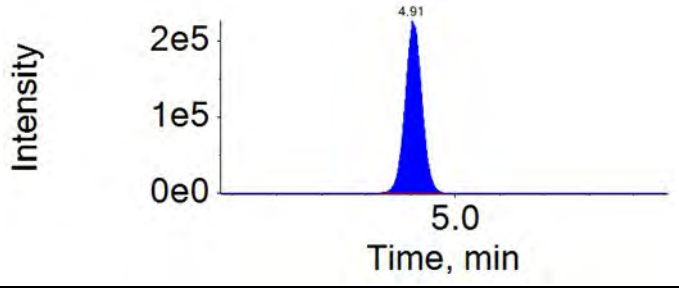
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

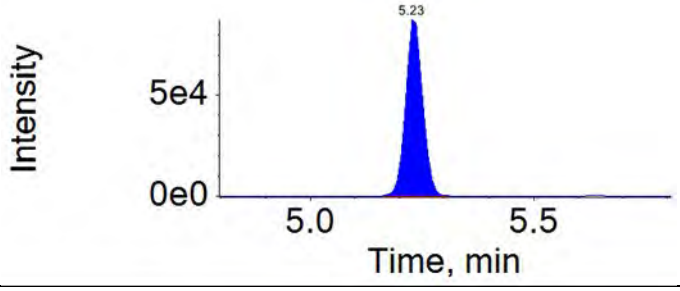
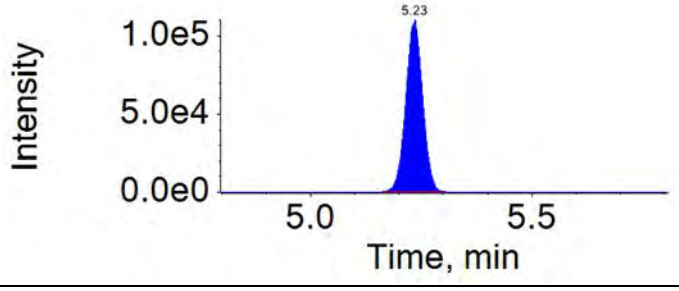
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

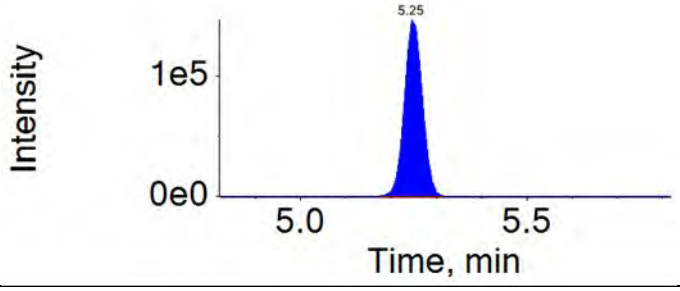
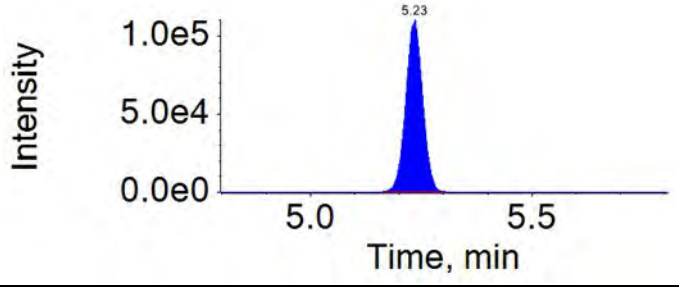
APPROVED
By MCD at 4:42 pm, 11/8/18

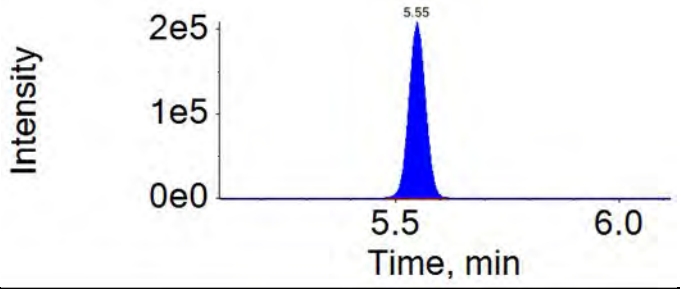
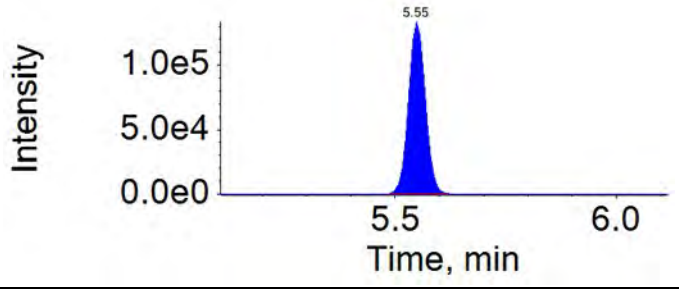
REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

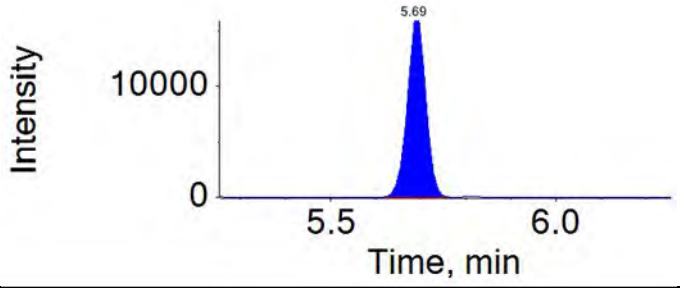
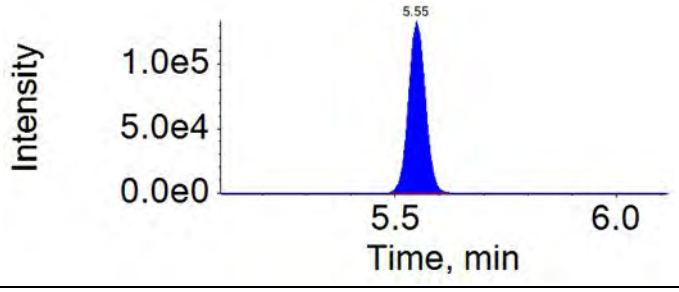
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

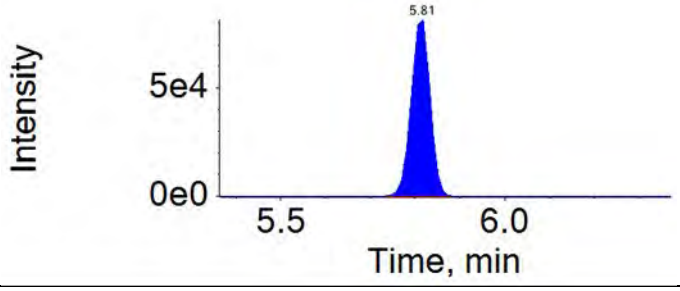
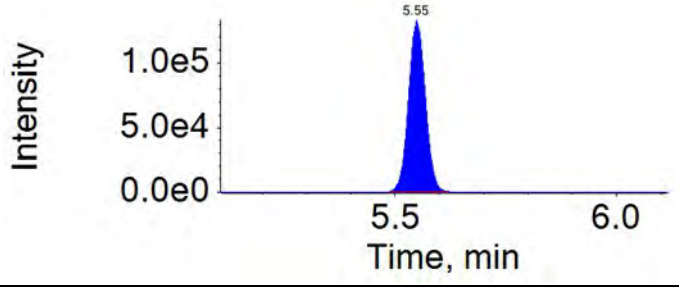
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

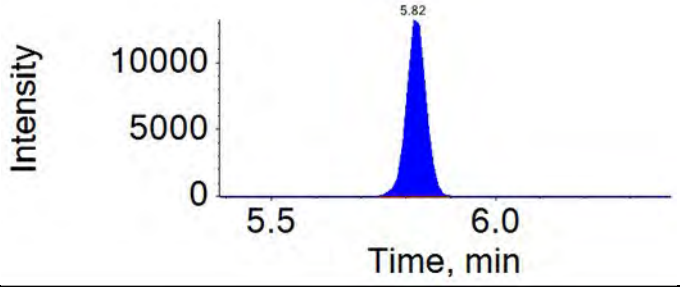
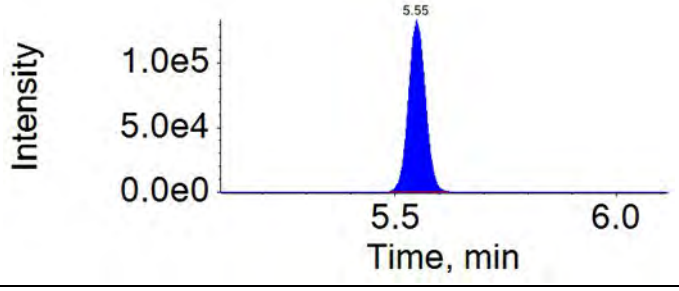
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

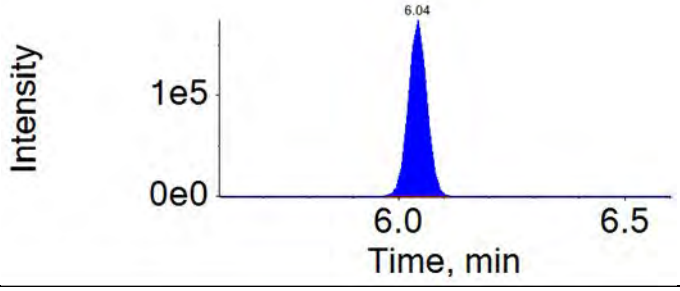
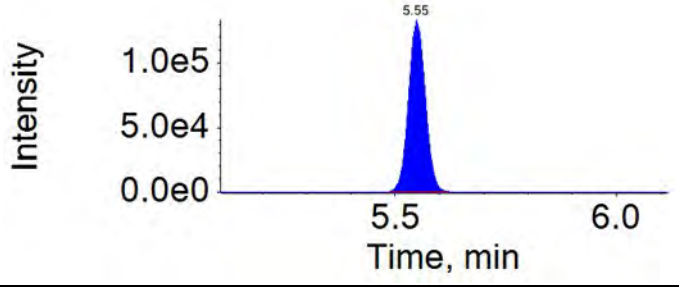
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

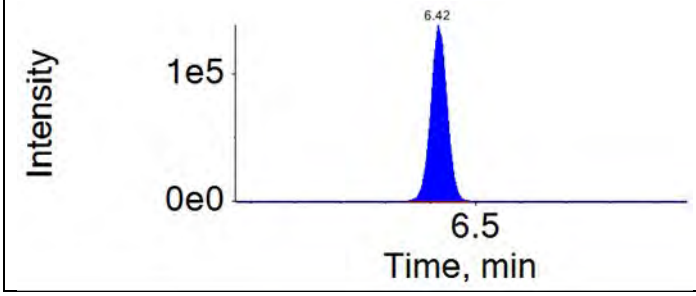
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

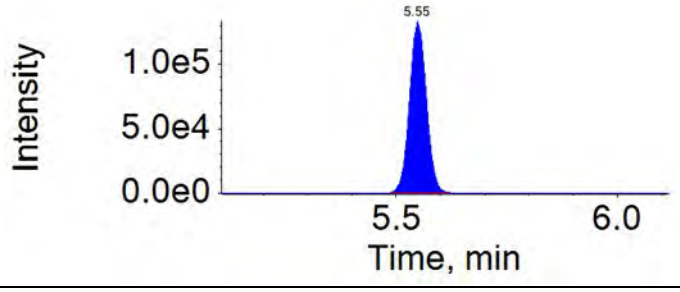
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



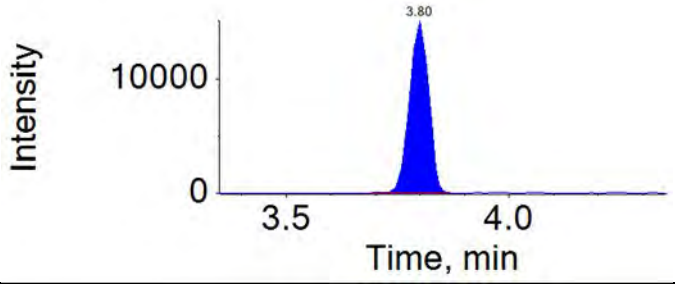


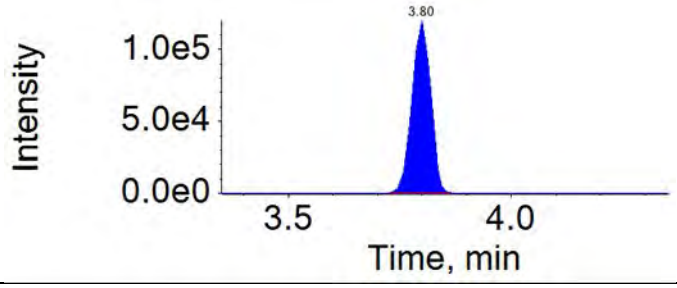
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

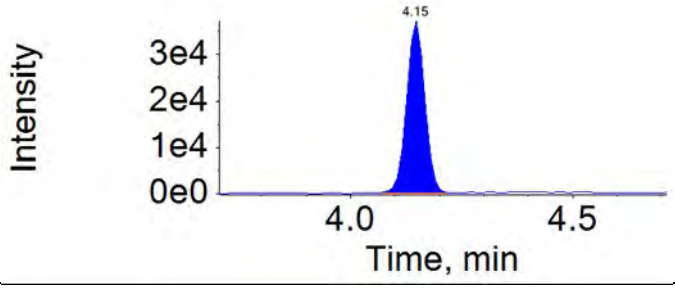
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

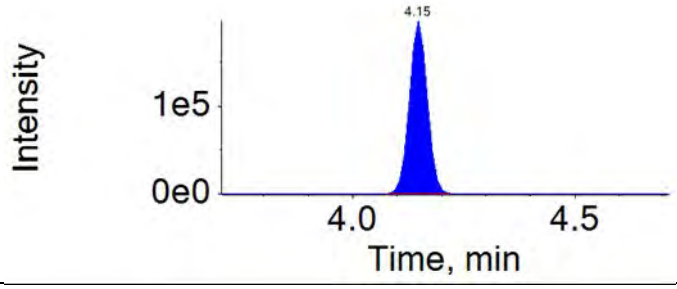
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



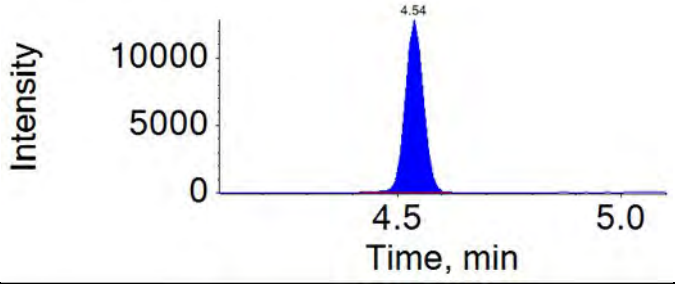


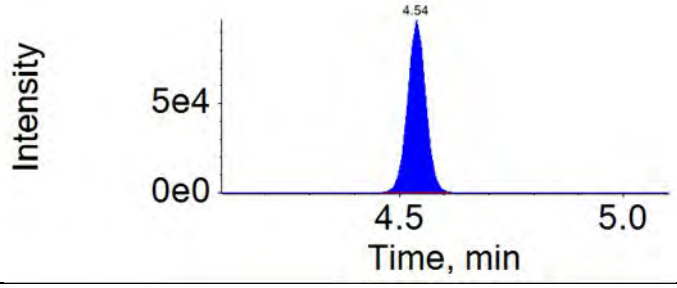
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



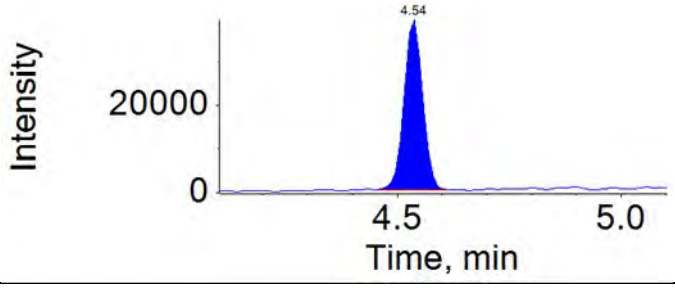


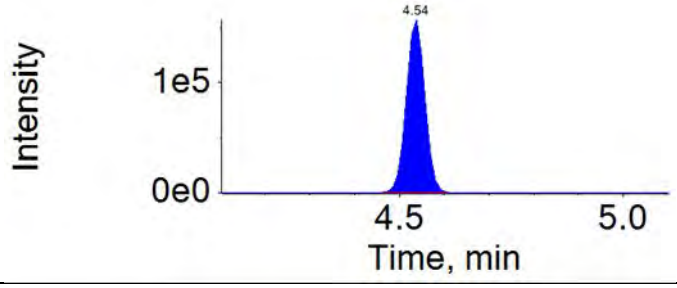
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





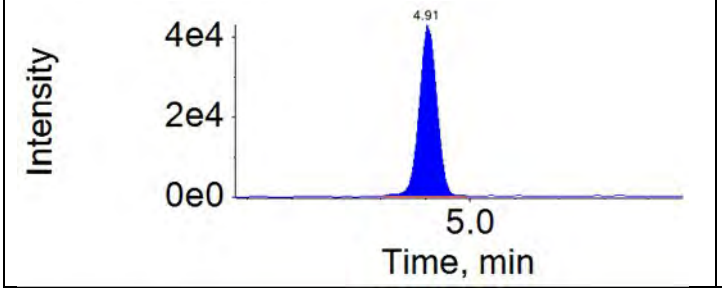
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

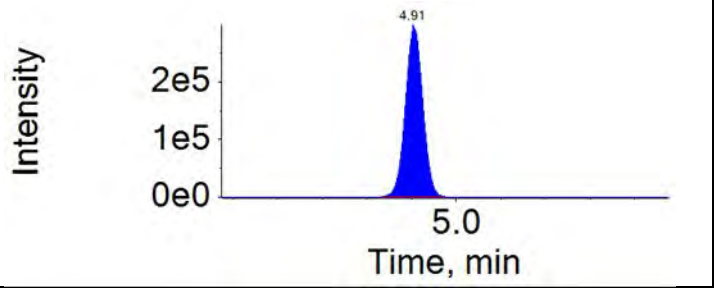




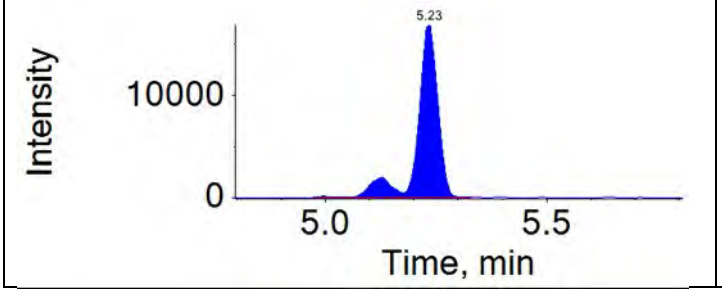
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

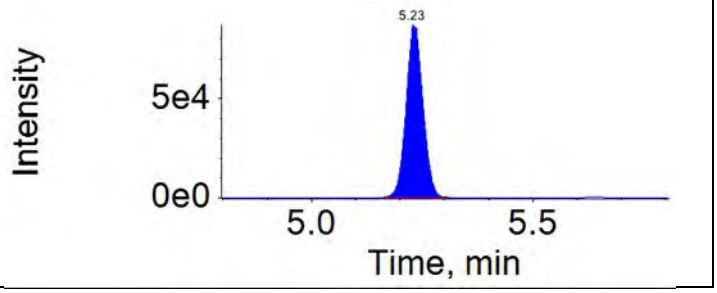
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



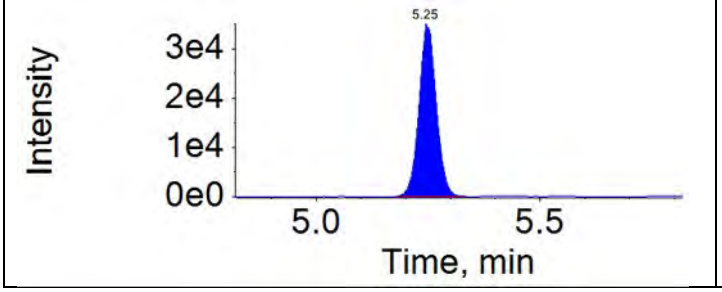


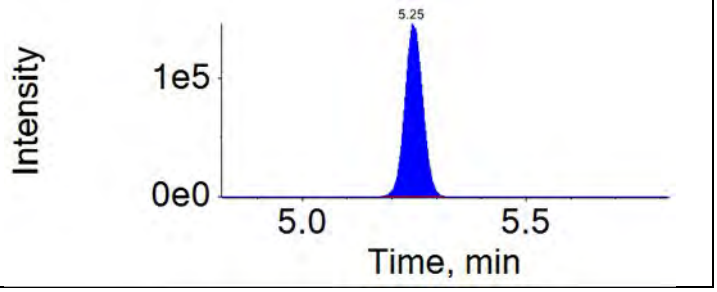
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



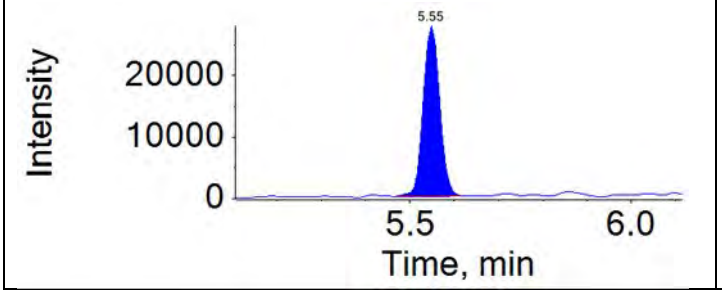


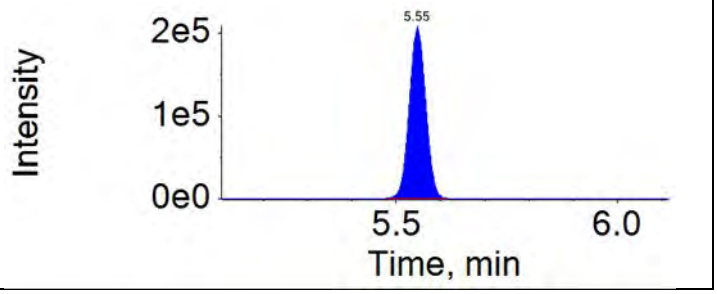
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



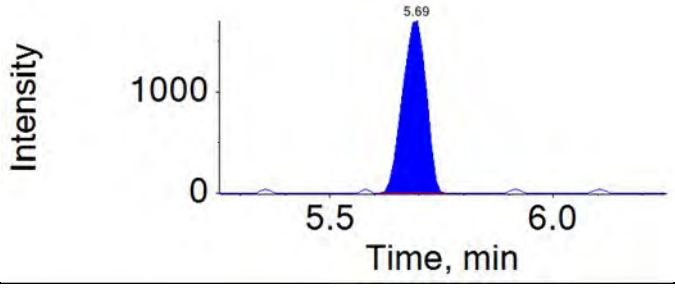


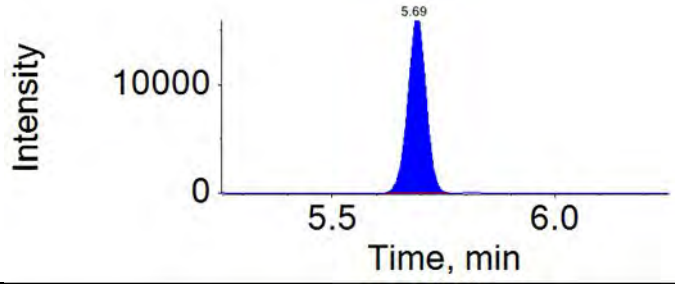
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

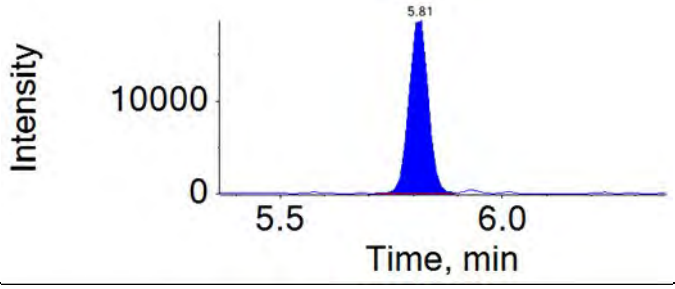
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

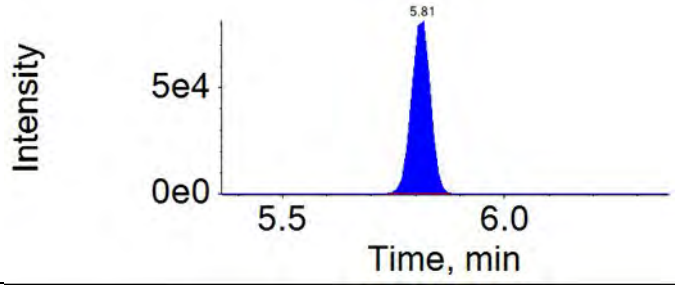
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



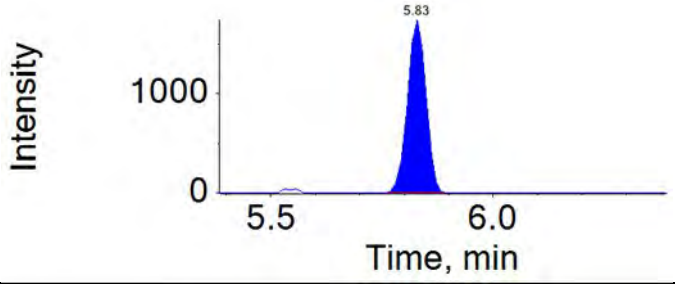


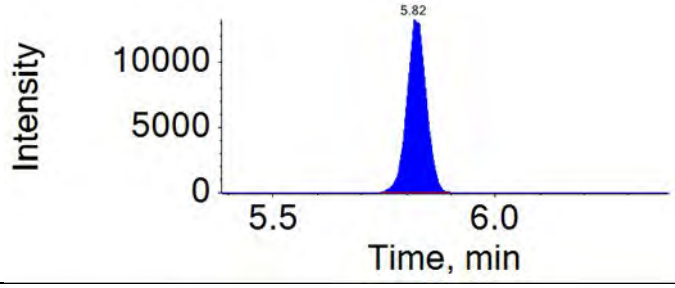
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



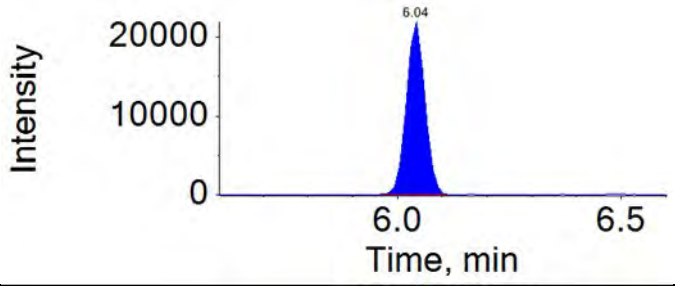


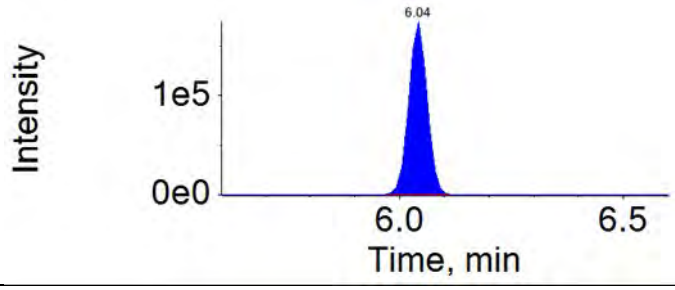
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0

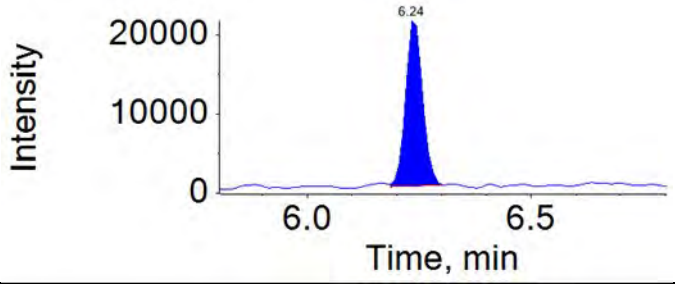
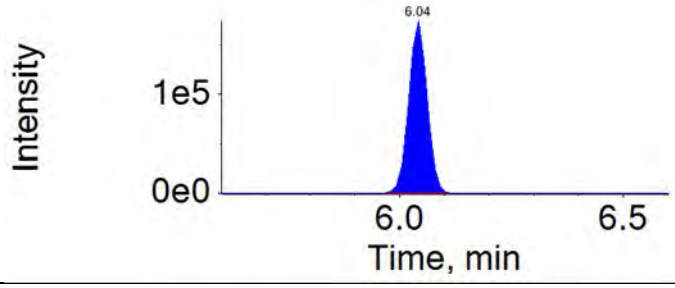


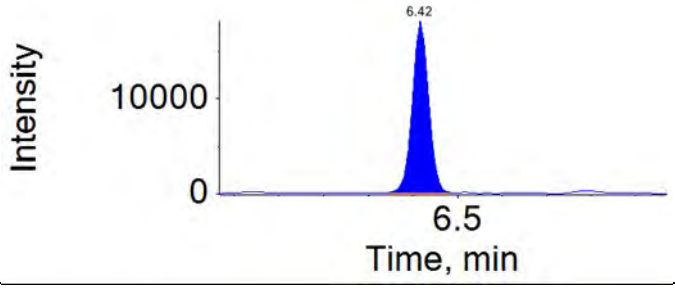
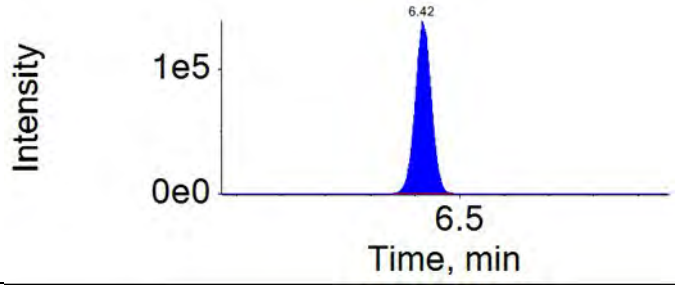


APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

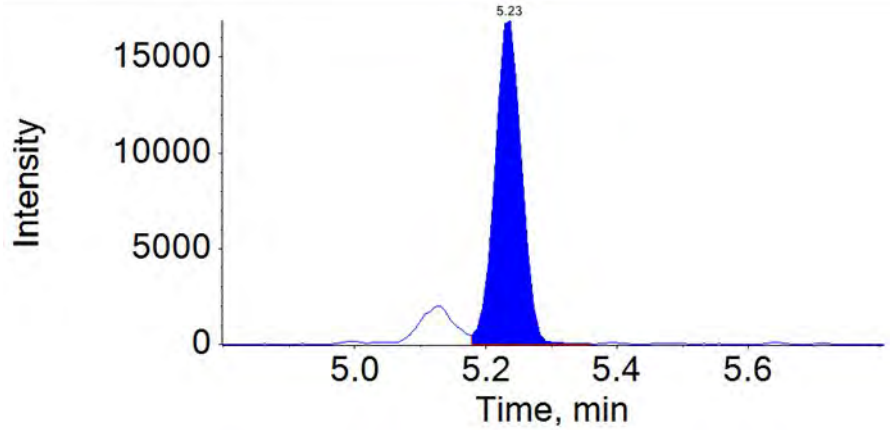
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

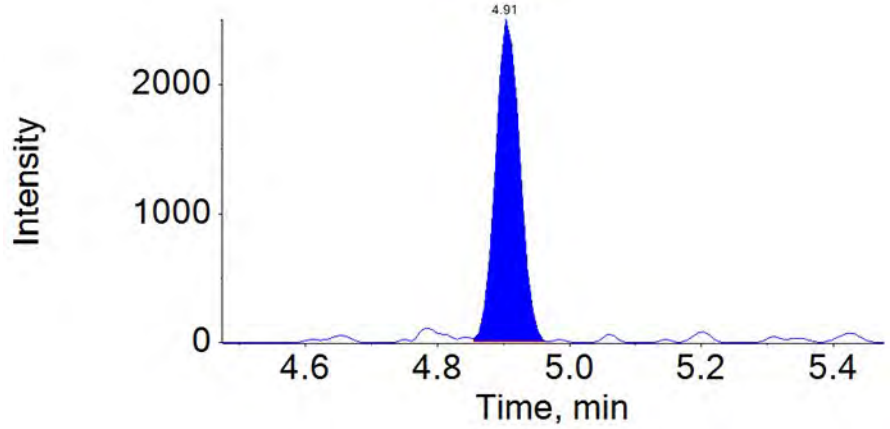
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
47937.5
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-18.wiff
Sample Name:
9881938MS



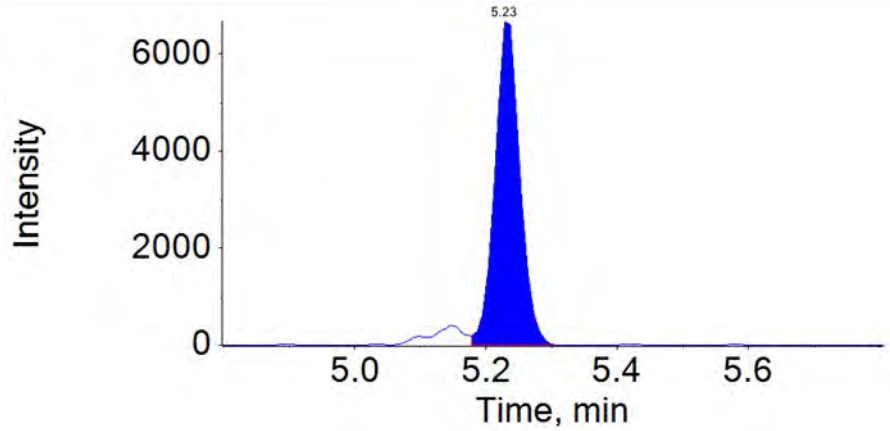
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
6424.2
Mass Range:
413.0 / 169.0
File Name:
18NOV07D-18.wiff
Sample Name:
9881938MS



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
17746.5
Mass Range:
499.0 / 99.0
File Name:
18NOV07D-18.wiff
Sample Name:
9881938MS



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

Ion Ratio Report

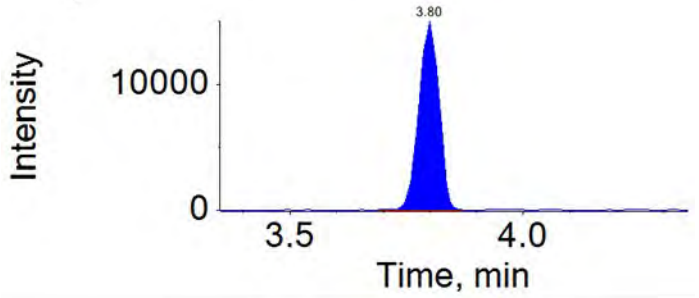
Sample Name: 9881938MS **Instrument Name:** LM27631 **File Name:** 18NOV07D-18.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	44975.6	A	N/A	0.4138			
PFBS_2	3.80	1.00	18612.8	A	N/A	0.4138	16	50	
PFHxA	4.15	1.00	105128.5	A	N/A	0.0136			
PFHxA_2	4.15	1.00	1431.3	A	N/A	0.0136	21	50	
PFHxS	4.54	1.00	36081.8	A	N/A	0.3582			
PFHxS_2	4.54	1.00	12923.8	A	N/A	0.3582	0	50	
PFHpA	4.54	1.00	112172.2	A	N/A	0.0588			
PFHpA_2	4.53	1.00	6592.4	A	N/A	0.0588	2	50	
PFOA	4.91	1.00	117797.9	A	N/A	0.0569			
PFOA_2	4.91	1.00	6705.2	M	N/A	0.0569	-11	50	
PFOS	5.23	1.00	55975.3	M	N/A	0.3432			
PFOS_2	5.23	1.00	19209.4	M	N/A	0.3432	-2	50	
PFNA	5.25	1.00	93468.0	A	N/A	0.0289			
PFNA_2	5.25	1.00	2702.8	A	N/A	0.0289	41	50	
PFDA	5.55	1.00	71345.8	A	N/A	0.0045			
PFDA_2	5.54	1.00	322.0	A	N/A	0.0045	-17	50	
NMeFOSAA	5.69	1.00	6255.7	A	N/A	0.0929			
NMeFOSAA_2	5.69	1.00	581.1	A	N/A	0.0929	-57	50	OOS
PFUnDA	5.81	1.00	55794.9	A	N/A	0.0084			
PFUnDA_2	5.81	1.00	469.5	A	N/A	0.0084	176	50	OOS
NEtFOSAA	5.83	1.00	4985.9	A	N/A	0.6829			
NEtFOSAA_2	5.83	1.00	3405.0	A	N/A	0.6829	13	50	
PFDoDA	6.04	1.00	62868.3	A	N/A	0.0231			
PFDoDA_2	6.04	1.00	1453.8	A	N/A	0.0231	120	50	OOS
PFTrDA	6.24	1.03	54809.9	A	N/A	0.0154			
PFTrDA_2	6.24	1.03	845.1	A	N/A	0.0154	61	50	OOS
PFTeDA	6.42	1.00	45606.2	A	N/A	0.0106			
PFTeDA_2	6.41	1.00	482.6	A	N/A	0.0106	96	50	OOS

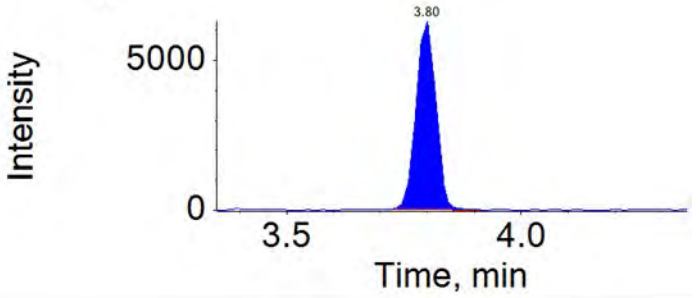
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

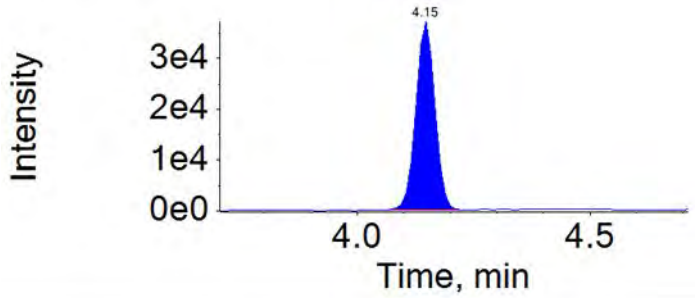
Component: PFBS
Primary Mass: 299.0 / 80.0



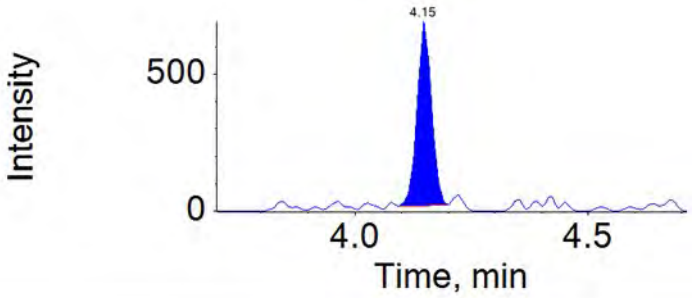
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



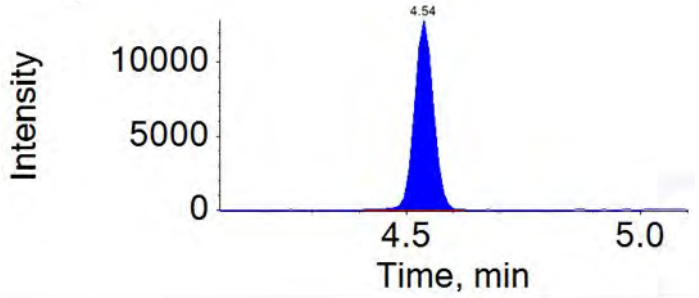
Component: PFHxA
Primary Mass: 313.0 / 269.0



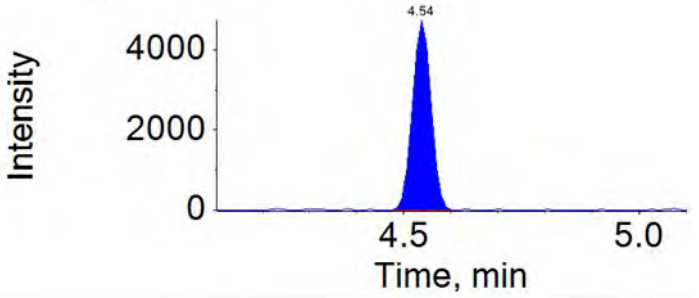
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



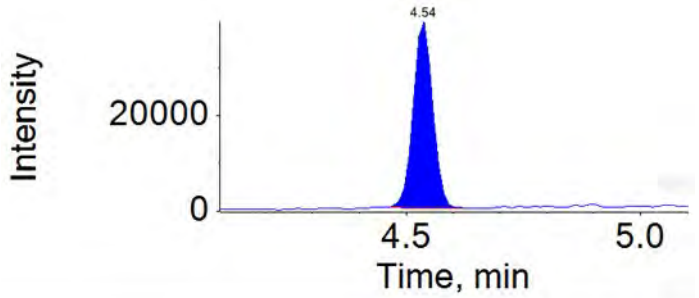
Component: PFHxS
Primary Mass: 399.0 / 80.0



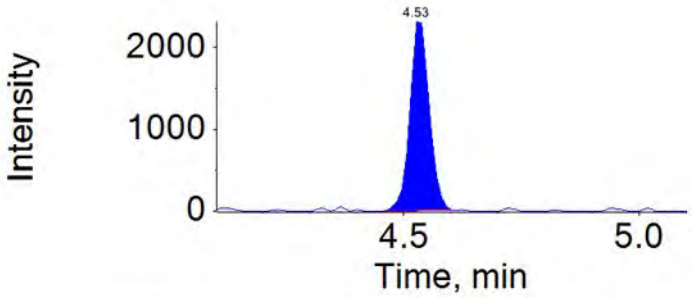
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



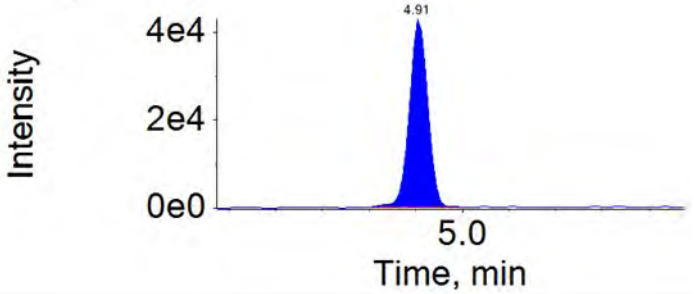
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



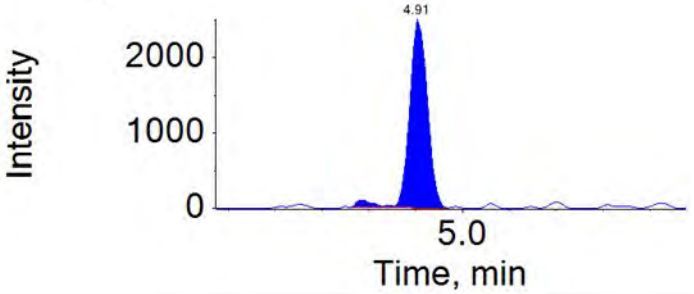
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

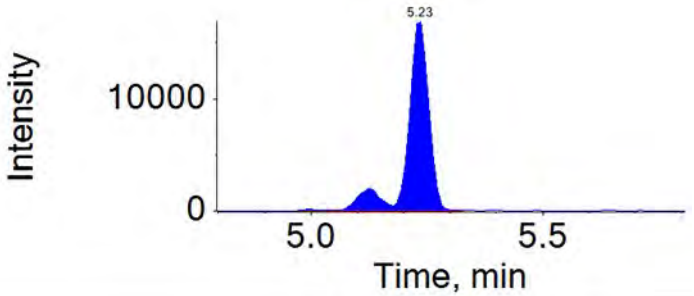
Component: PFOA
Primary Mass: 413.0 / 369.0



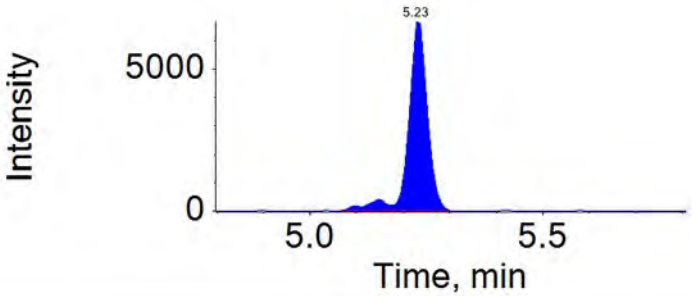
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



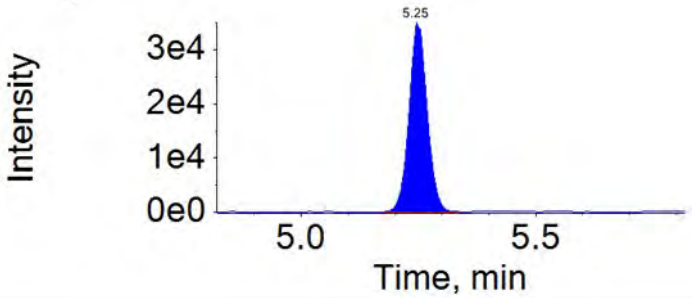
Component: PFOS
Primary Mass: 499.0 / 80.0



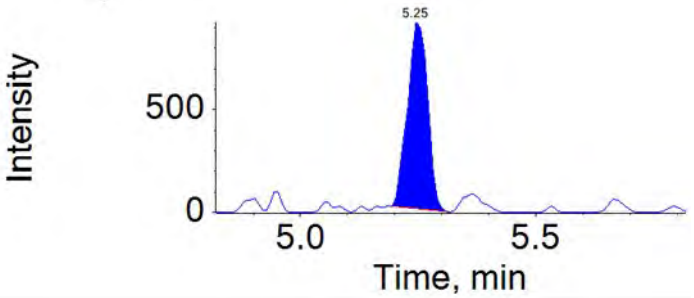
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



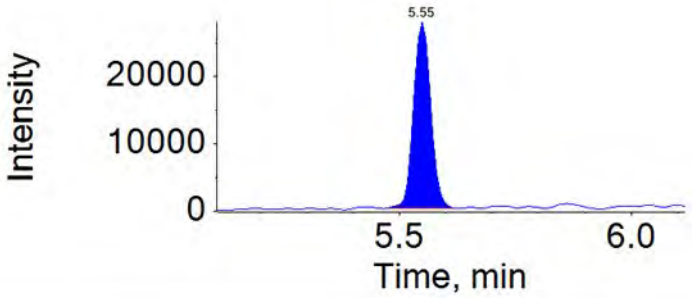
Component: PFNA
Primary Mass: 463.0 / 419.0



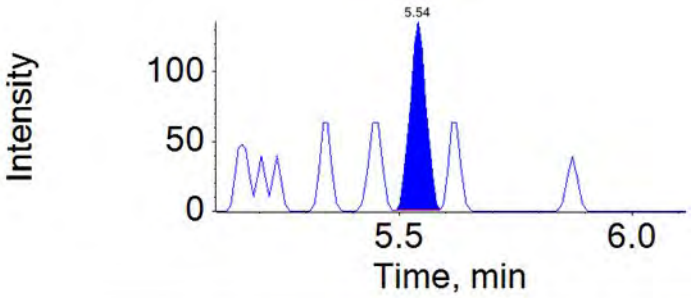
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



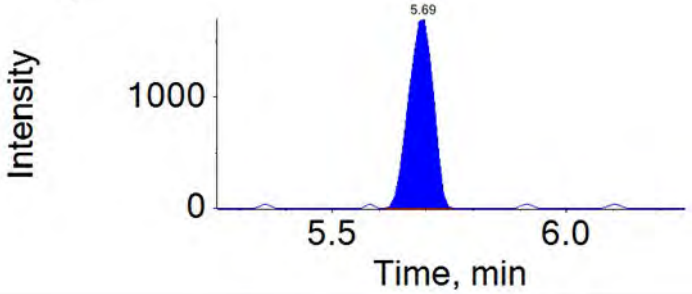
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



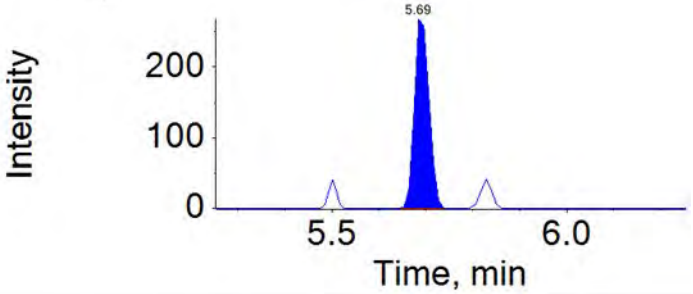
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

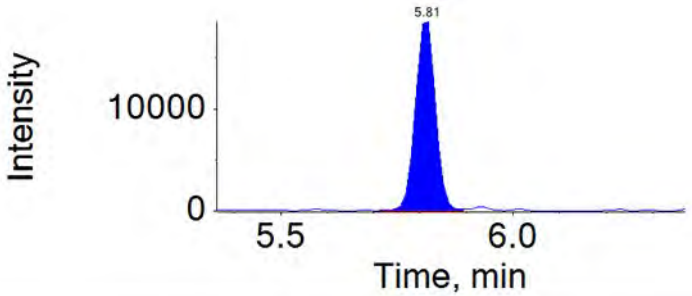
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



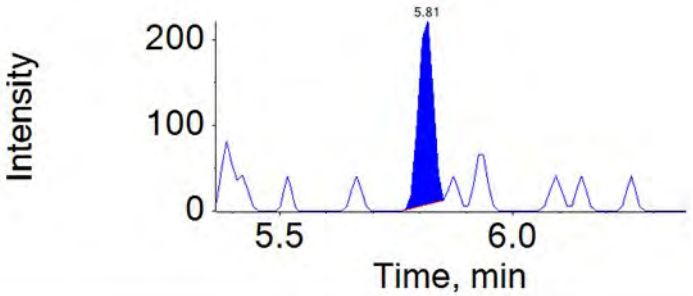
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



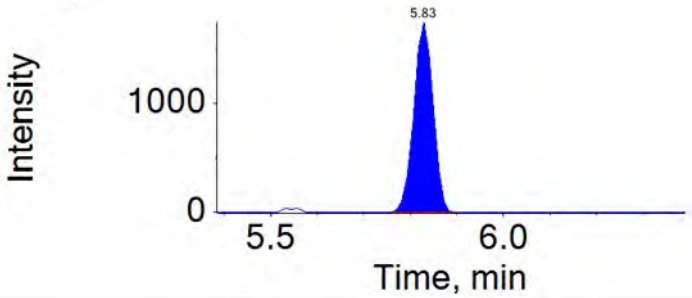
Component: PFUnDA
Primary Mass: 563.0 / 519.0



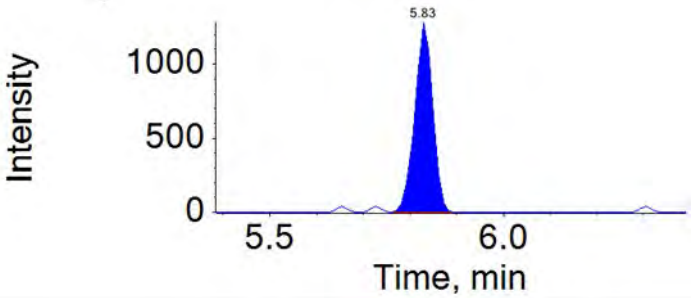
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



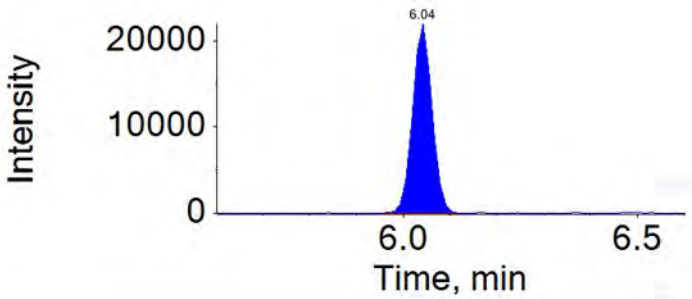
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



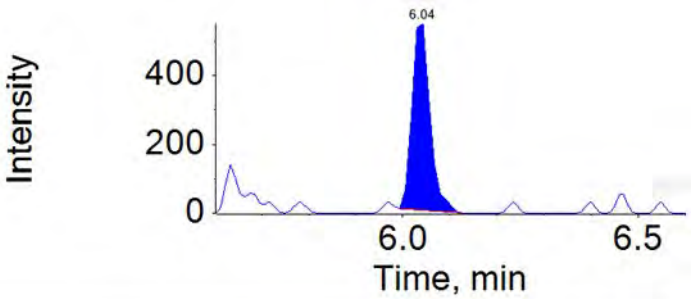
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



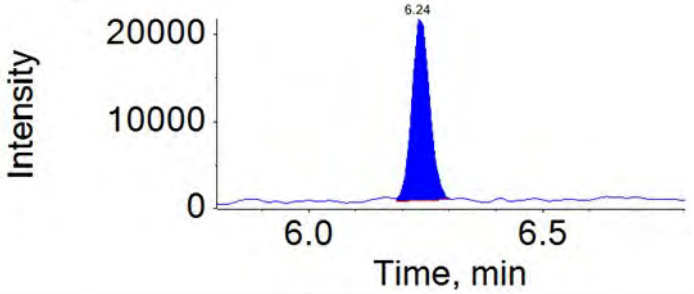
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



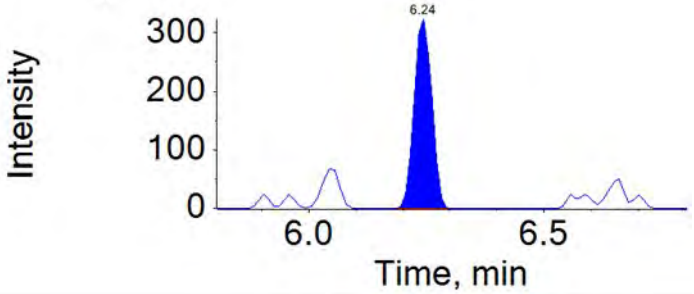
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

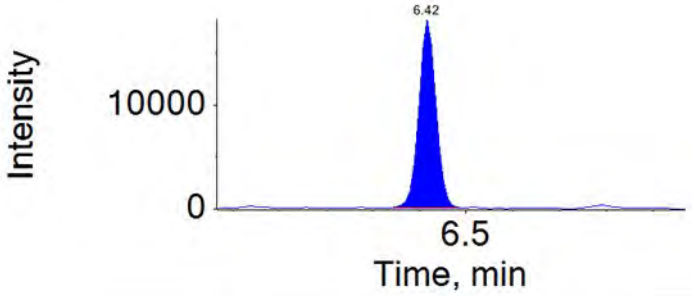
Component: PFTrDA
Primary Mass: 663.0 / 619.0



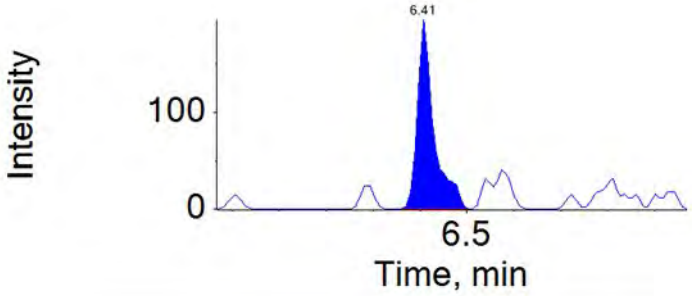
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



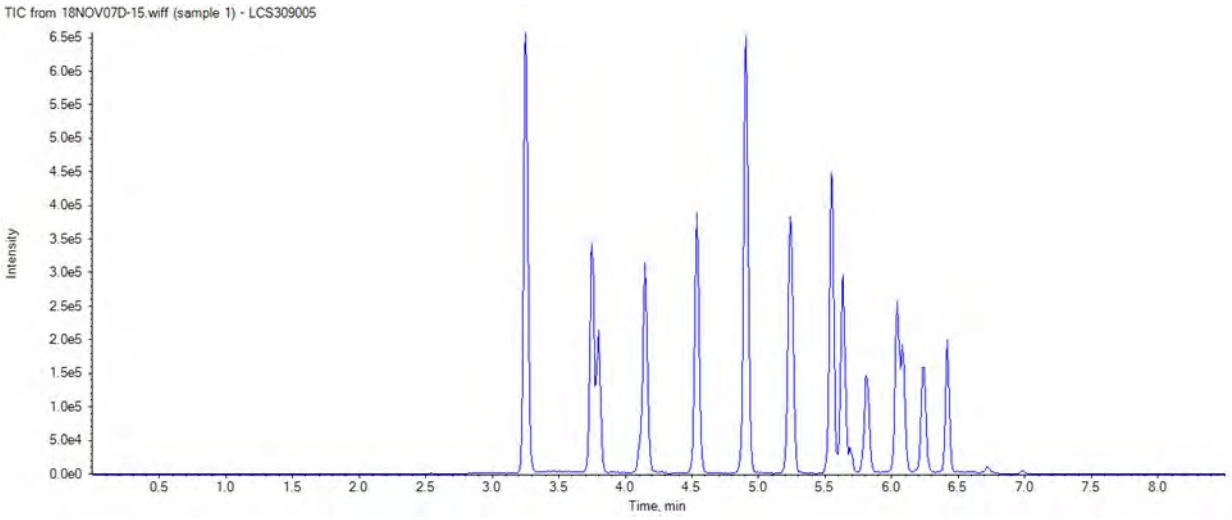
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:35 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS309005	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-15.wiff	2018-11-07T13:26:54



Injection Standard Area Reference File**:** 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	775986.5	730410.6	6	50	
13C2-PFOA	5.00	555051.6	524423.6	6	50	
13C4-PFOS	4.78	284083.0	274061.7	4	50	
13C2-PFDA	5.00	354733.0	311442.1	14	50	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:31:36 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS309005	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-15.wiff	2018-11-07T13:26:54

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	82236.0	633632.5	0.130	1.360	1.519	112	70-130	
PFPeA	84055.2	689144.4	0.122	1.360	1.450	107	70-130	
PFBS	45887.6	356355.1	0.129	1.202	1.298	108	70-130	
4:2-FTS	30487.2	48026.9	0.635	3.736	3.413	91	70-130	
PFHxA	97729.7	560540.4	0.174	1.360	1.495	110	70-130	
PFPeS	24539.1	356355.1	0.069	1.276	1.358	106	70-130	
PFHxS	37255.6	272536.2	0.137	1.286	1.386	108	70-130	
PFHpA	104785.0	457909.3	0.229	1.360	1.539	113	70-130	
6:2-FTS	24451.6	31096.8	0.786	3.792	3.923	103	70-130	
PFHpS	35174.7	272536.2	0.129	1.294	1.350	104	70-130	
PFOA	101588.4	766475.9	0.133	1.360	1.493	110	70-130	
PFOS	31319.4	231844.2	0.135	1.300	1.401	108	70-130	
PFNA	85971.3	401862.2	0.214	1.360	1.599	118	70-130	
PFNS	18204.9	231844.2	0.079	1.306	1.245	95	70-130	
PFDA	65460.7	529435.8	0.124	1.360	1.360	100	70-130	
8:2-FTS	22250.7	25492.1	0.873	3.832	3.935	103	70-130	
PFOSA	76908.1	603447.3	0.127	1.360	1.378	101	70-130	
NMeFOSAA	9283.3	68796.0	0.135	1.360	1.389	102	70-130	
PFDS	17711.6	231844.2	0.076	1.310	1.460	111	70-130	
PFUnDA	56345.9	238817.7	0.236	1.360	1.353	100	70-130	
NEtFOSAA	6993.7	52869.0	0.132	1.360	1.137	84	70-130	
PFDoDA	59022.0	478747.2	0.123	1.360	1.336	98	70-130	
10:2-FTS	13728.3	25492.1	0.539	3.856	3.354	87	70-130	
NMePFOSAE	47322.3	295387.3	0.160	1.360	1.436	106	70-130	
NMePFOSA	8364.6	67141.6	0.125	1.360	1.395	103	70-130	
PFDoS	6950.3	231844.2	0.030	1.316	1.157	88	70-130	
NEtPFOSAE	47432.7	234558.7	0.202	1.360	1.297	95	70-130	
NEtPFOSA	7758.3	60188.7	0.129	1.360	1.135	83	70-130	
PFTrDA	53802.0	478747.2	0.112	1.360	1.417	104	70-130	
PFTeDA	41507.4	348723.1	0.119	1.360	1.398	103	70-130	
PFHxDA	18562.0	348723.1	0.053	1.360	1.321	97	70-130	
PFODA	10342.3	348723.1	0.030	1.360	0.850	62	70-130	OOS

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCS309005			**Data File:**		18NOV07D-15.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005			**Acquis Date:**		2018-11-07T13:26:54
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	14			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	775986.5	730410.6	6	50	
13C2-PFOA	5.0	555051.6	524423.6	6	50	
13C4-PFOS	4.8	284083.0	274061.7	4	50	
13C2-PFDA	5.0	354733.0	311442.1	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	633632.5	13C3-PFBA	775986.5	0.817	10.000	7.557	76	50-150	
E13C5-PFPeA	689144.4	13C3-PFBA	775986.5	0.888	10.000	7.738	77	50-150	
E13C3-PFBS	356355.1	13C3-PFBA	775986.5	0.459	9.300	6.741	72	50-150	
E13C2-4:2-FTS	48026.9	13C2-PFOA	555051.6	0.087	9.340	7.809	84	50-150	
E13C5-PFHxA	560540.4	13C2-PFOA	555051.6	1.010	10.000	7.430	74	50-150	
E13C3-PFHxS	272536.2	13C2-PFOA	555051.6	0.491	9.460	7.050	75	50-150	
E13C4-PFHpA	457909.3	13C2-PFOA	555051.6	0.825	10.000	7.506	75	50-150	
E13C2-6:2-FTS	31096.8	13C2-PFOA	555051.6	0.056	9.500	7.472	79	50-150	
E13C8-PFOA	766475.9	13C2-PFOA	555051.6	1.381	10.000	7.702	77	50-150	
E13C8-PFOS	231844.2	13C4-PFOS	284083.0	0.816	9.560	7.217	75	50-150	
E13C9-PFNA	401862.2	13C4-PFOS	284083.0	1.415	10.000	7.728	77	50-150	
E13C6-PFDA	529435.8	13C2-PFDA	354733.0	1.492	10.000	7.507	75	50-150	
E13C2-8:2-FTS	25492.1	13C2-PFDA	354733.0	0.072	9.580	7.605	79	50-150	
E13C8-PFOSA	603447.3	13C2-PFDA	354733.0	1.701	10.000	7.424	74	50-150	
Ed3-NMeFOSAA	68796.0	13C2-PFDA	354733.0	0.194	10.000	7.213	72	50-150	
E13C7-PFUnDA	238817.7	13C2-PFDA	354733.0	0.673	10.000	7.767	78	50-150	
Ed5-NEtFOSAA	52869.0	13C2-PFDA	354733.0	0.149	10.000	6.898	69	50-150	
E13C2-PFDoDA	478747.2	13C2-PFDA	354733.0	1.350	10.000	7.277	73	50-150	
Ed7-NMePFOSAE	295387.3	13C2-PFDA	354733.0	0.833	10.000	7.745	77	50-150	
Ed3-NMePFOSA	67141.6	13C2-PFDA	354733.0	0.189	10.000	6.930	69	50-150	
Ed9-NEtPFOSAE	234558.7	13C2-PFDA	354733.0	0.661	10.000	7.552	76	50-150	
Ed5-NEtPFOSA	60188.7	13C2-PFDA	354733.0	0.170	10.000	7.857	79	50-150	
E13C2-PFTeDA	348723.1	13C2-PFDA	354733.0	0.983	10.000	7.078	71	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

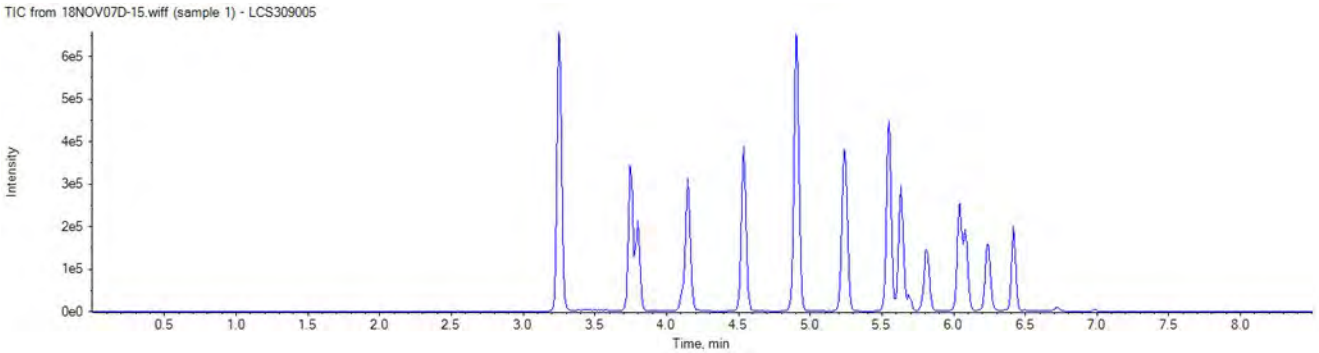
Analyte Quantitation Peak Table

Sample Name: LCS309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	82236.0		A	13C4-PFBA	3.25	633632.5	0.130	1.519
PFPeA	3.75	1.000	84055.2		A	13C5-PFPeA	3.75	689144.4	0.122	1.450
PFBS	3.80	1.000	45887.6		A	13C3-PFBS	3.80	356355.1	0.129	1.298
4:2-FTS	4.11	1.000	30487.2		A	13C2-4:2-FTS	4.11	48026.9	0.635	3.413
PFHxA	4.15	1.000	97729.7		A	13C5-PFHxA	4.15	560540.4	0.174	1.495
PFPeS	4.17	1.100	24539.1		A	13C3-PFBS	3.80	356355.1	0.069	1.358
PFHxS	4.54	1.000	37255.6		A	13C3-PFHxS	4.54	272536.2	0.137	1.386
PFHpA	4.54	1.000	104785.0		A	13C4-PFHpA	4.54	457909.3	0.229	1.539
6:2-FTS	4.90	1.000	24451.6		A	13C2-6:2-FTS	4.89	31096.8	0.786	3.923
PFHpS	4.90	1.080	35174.7		A	13C3-PFHxS	4.54	272536.2	0.129	1.350
PFOA	4.90	1.000	101588.4		A	13C8-PFOA	4.90	766475.9	0.133	1.493
PFOS	5.23	1.000	31319.4		A	13C8-PFOS	5.23	231844.2	0.135	1.401
PFNA	5.25	1.000	85971.3		A	13C9-PFNA	5.25	401862.2	0.214	1.599
PFNS	5.53	1.060	18204.9		A	13C8-PFOS	5.23	231844.2	0.079	1.245
PFDA	5.55	1.000	65460.7		A	13C6-PFDA	5.55	529435.8	0.124	1.360
8:2-FTS	5.55	1.000	22250.7		A	13C2-8:2-FTS	5.55	25492.1	0.873	3.935
PFOSA	5.63	1.000	76908.1		A	13C8-PFOSA	5.63	603447.3	0.127	1.378
NMeFOSAA	5.69	1.000	9283.3		A	d3-NMeFOSAA	5.69	68796.0	0.135	1.389
PFDS	5.78	1.110	17711.6		A	13C8-PFOS	5.23	231844.2	0.076	1.460
PFUnDA	5.81	1.000	56345.9		A	13C7-PFUnDA	5.81	238817.7	0.236	1.353
NEtFOSAA	5.83	1.000	6993.7		M	d5-NEtFOSAA	5.82	52869.0	0.132	1.137
PFDoDA	6.04	1.000	59022.0		A	13C2-PFDoDA	6.04	478747.2	0.123	1.336
10:2-FTS	6.05	1.090	13728.3		A	13C2-8:2-FTS	5.55	25492.1	0.539	3.354
NMePFOSAE	6.09	1.000	47322.3		A	d7-NMePFOSAE	6.08	295387.3	0.160	1.436
NMePFOSA	6.10	1.000	8364.6		M	d3-NMePFOSA	6.09	67141.6	0.125	1.395
PFDoS	6.21	1.190	6950.3		A	13C8-PFOS	5.23	231844.2	0.030	1.157
NEtPFOSAE	6.25	1.000	47432.7		M	d9-NEtPFOSAE	6.23	234558.7	0.202	1.297
NEtPFOSA	6.26	1.000	7758.3		M	d5-NEtPFOSA	6.25	60188.7	0.129	1.135
PFTrDA	6.24	1.030	53802.0		A	13C2-PFDoDA	6.04	478747.2	0.112	1.417
PFTeDA	6.42	1.000	41507.4		A	13C2-PFTeDA	6.42	348723.1	0.119	1.398
PFHxDA	6.72	1.050	18562.0		A	13C2-PFTeDA	6.42	348723.1	0.053	1.321
PFODA	6.98	1.090	10342.3		A	13C2-PFTeDA	6.42	348723.1	0.030	0.850

Total Ion Chromatogram

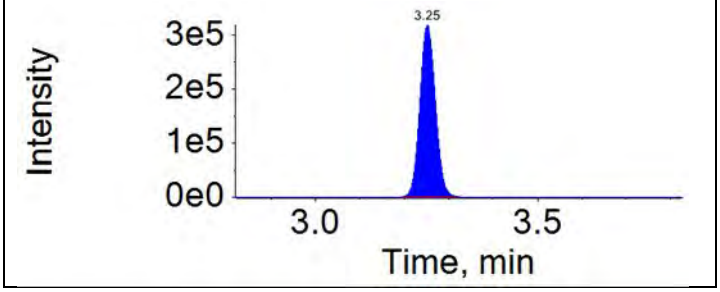


APPROVED
By MCD at 4:42 pm, 11/8/18

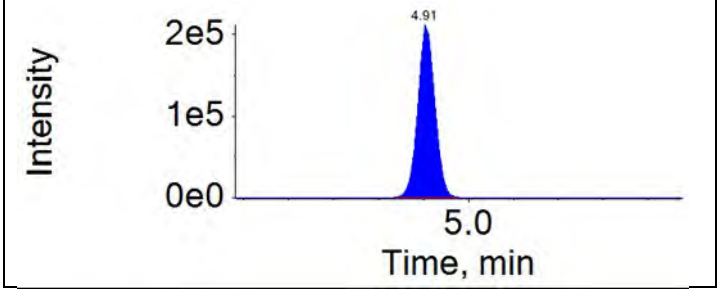
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

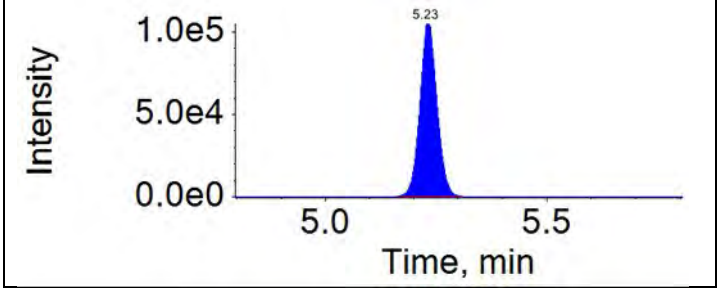
Injection Standard: 13C3-PFBA
216.0 / 172.0



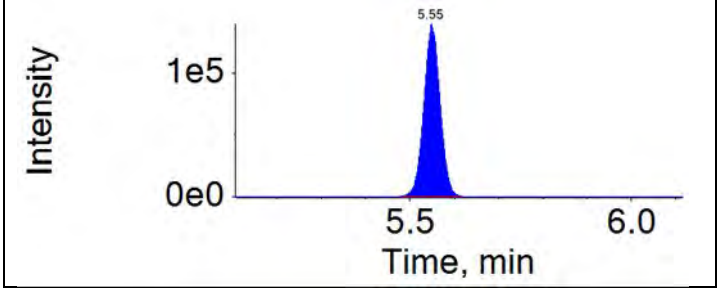
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



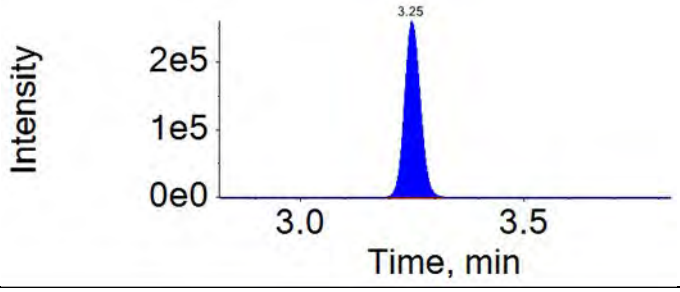
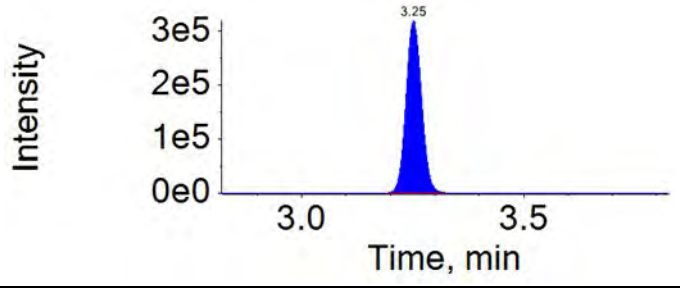
Injection Standard: 13C2-PFDA
515.0 / 470.0

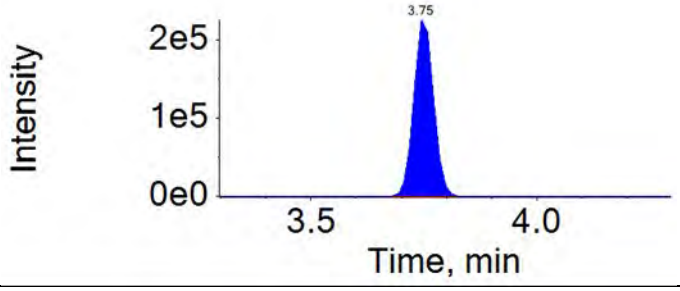
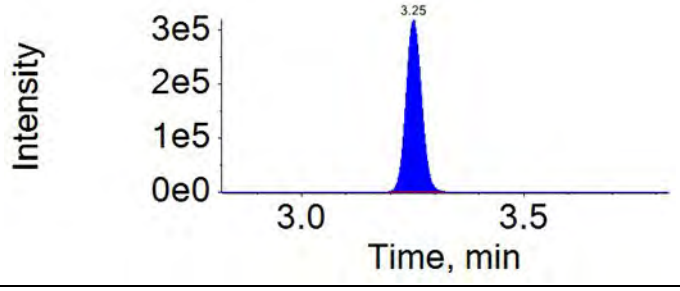


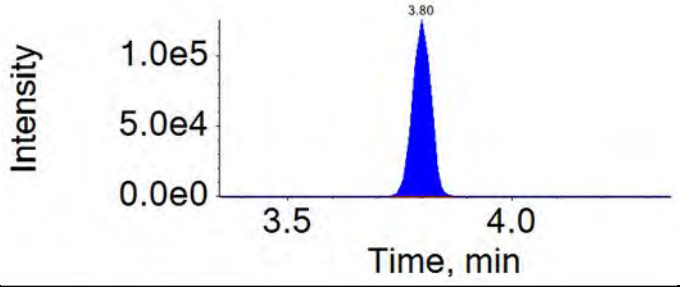
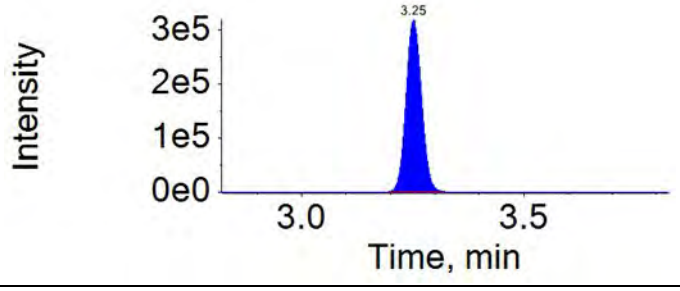
APPROVED
By MCD at 4:42 pm, 11/8/18

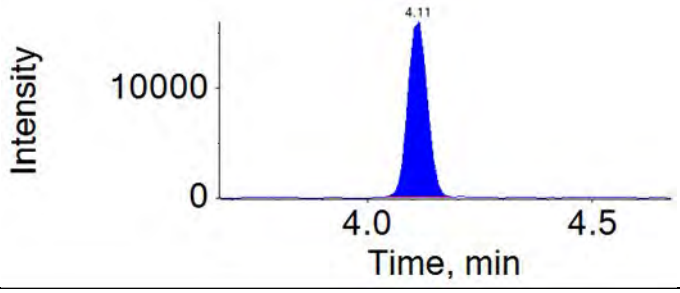
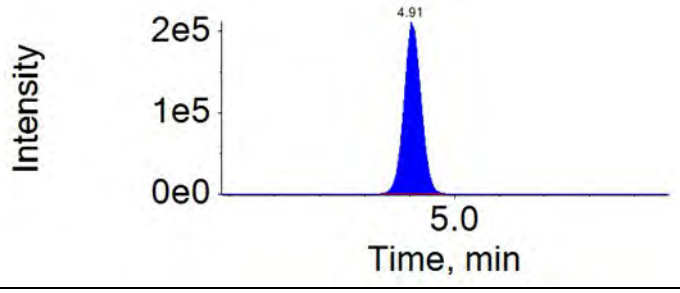
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

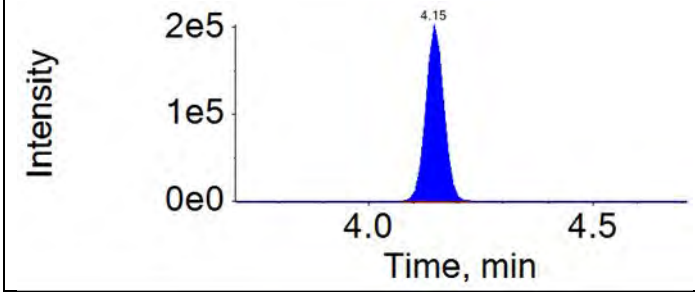
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

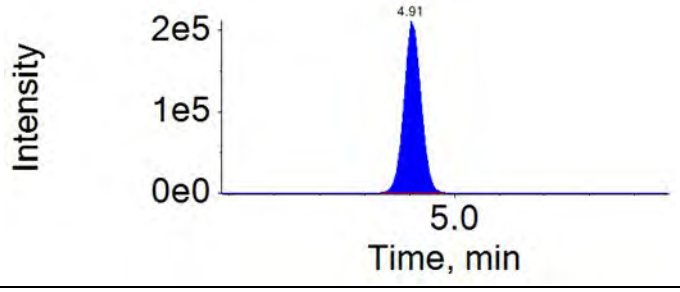
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

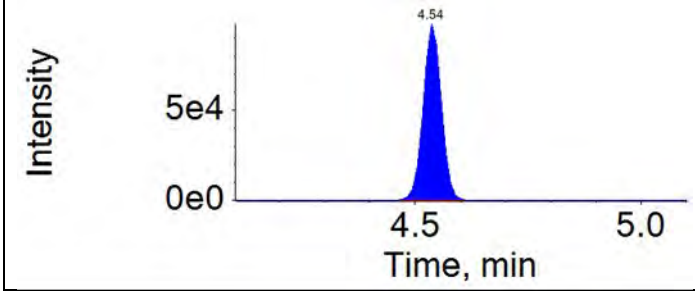
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

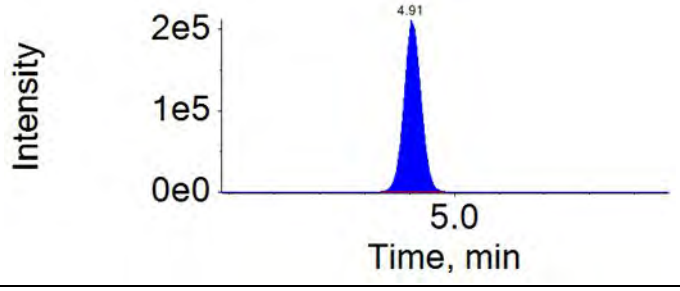
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



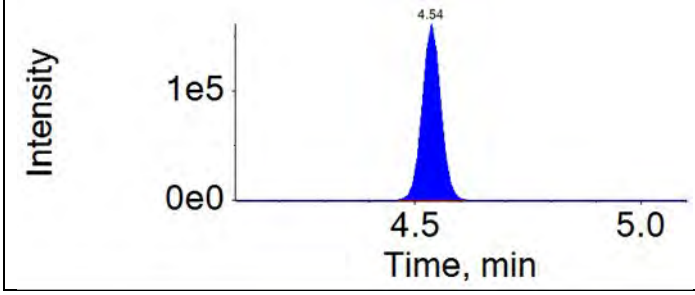


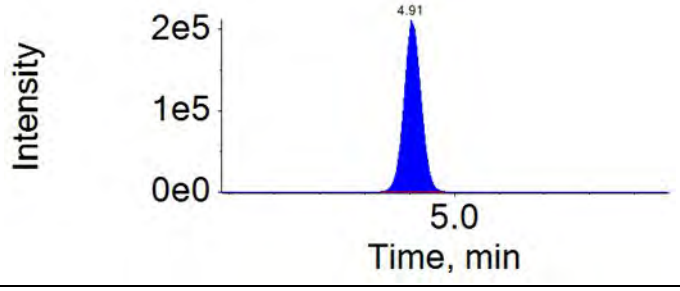
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



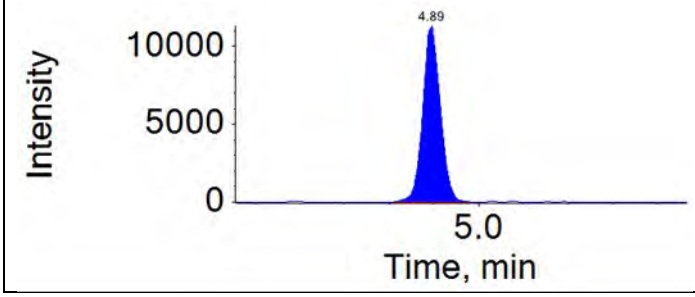


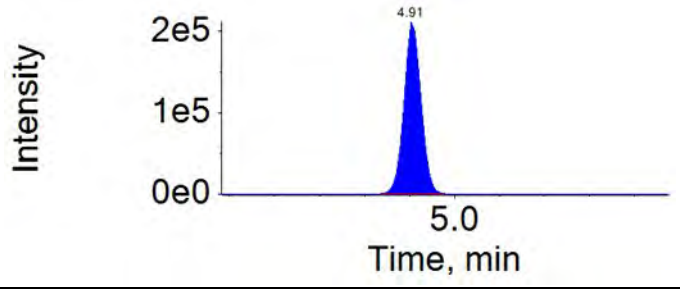
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

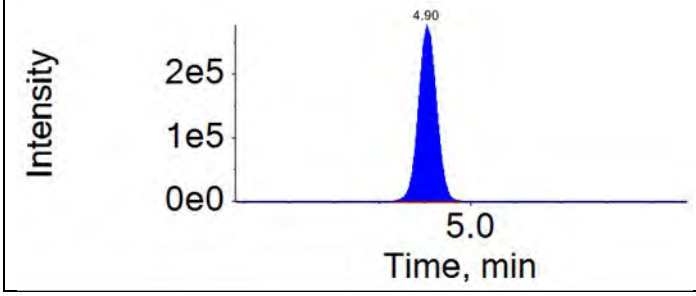
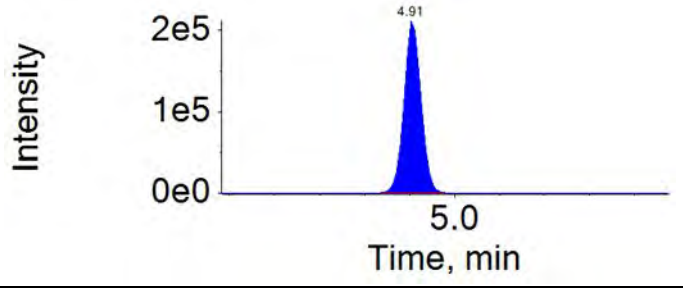


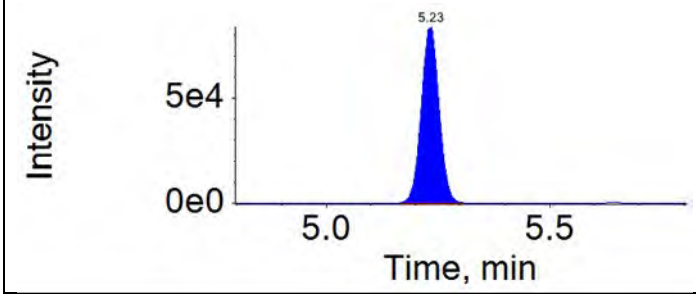
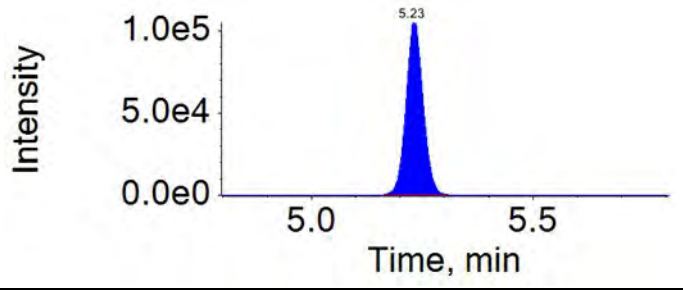


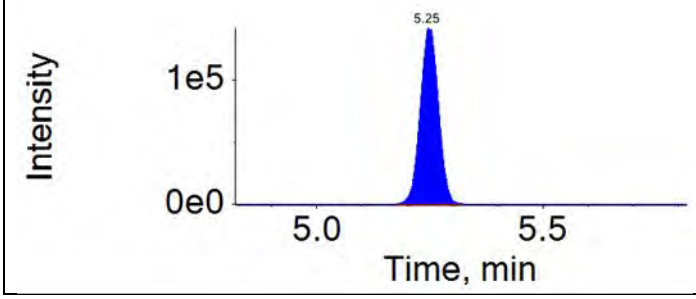
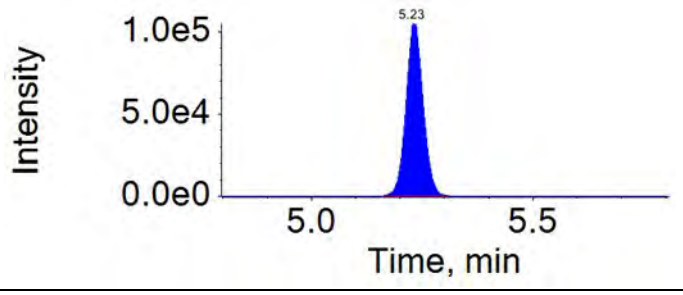
APPROVED
By MCD at 4:42 pm, 11/8/18

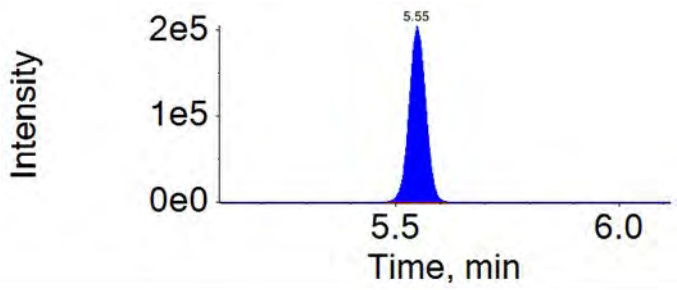
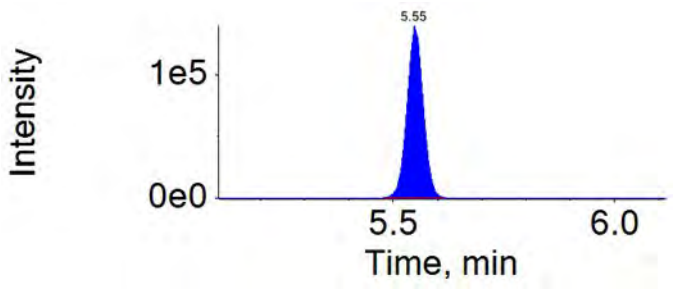
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

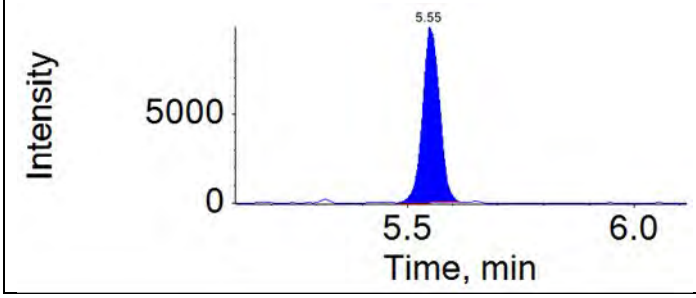
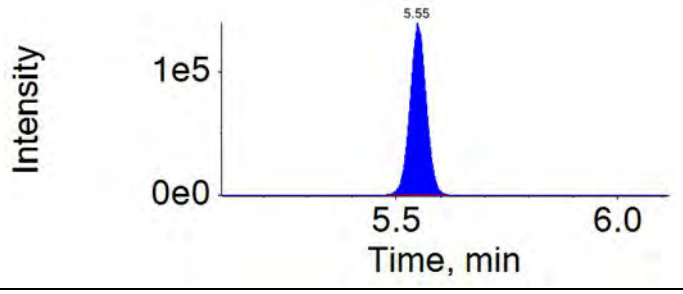
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

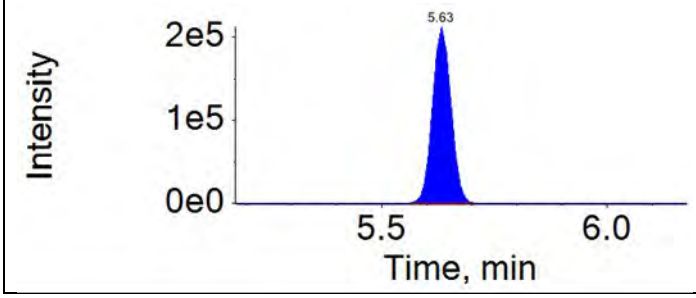
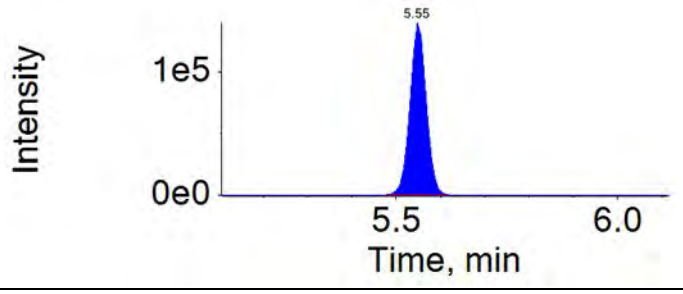
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

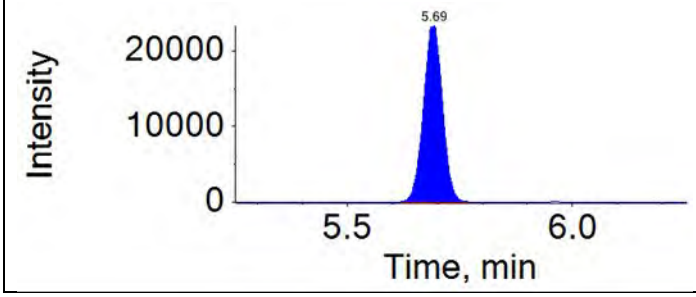
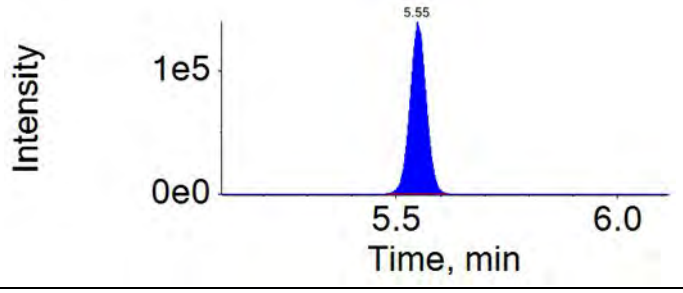
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

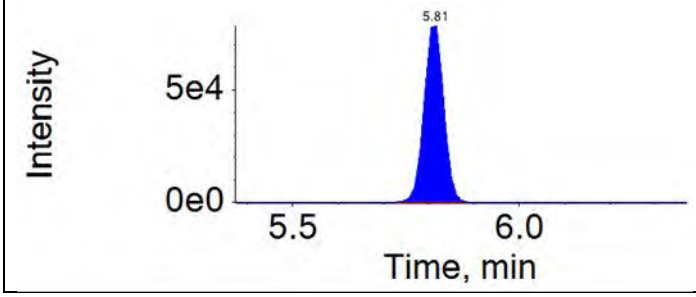
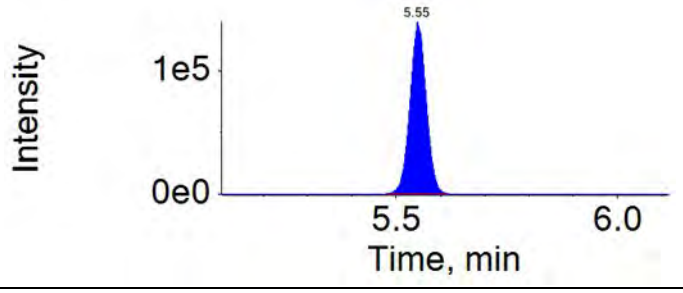
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

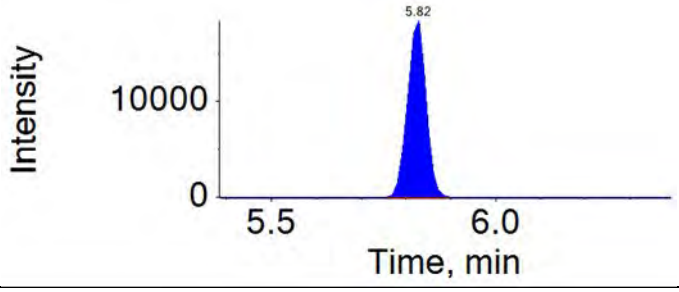
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

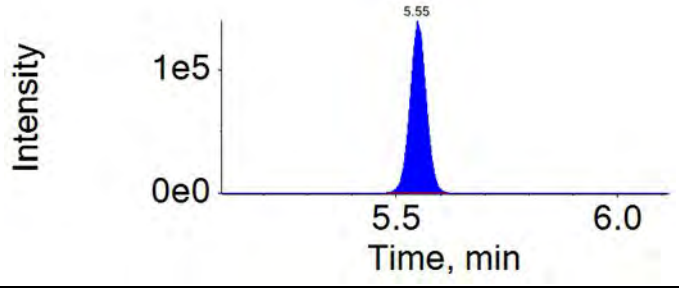
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

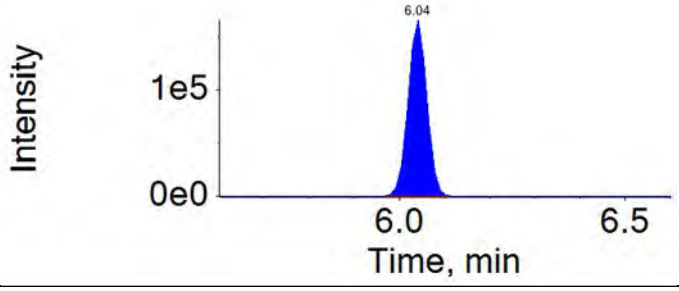
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

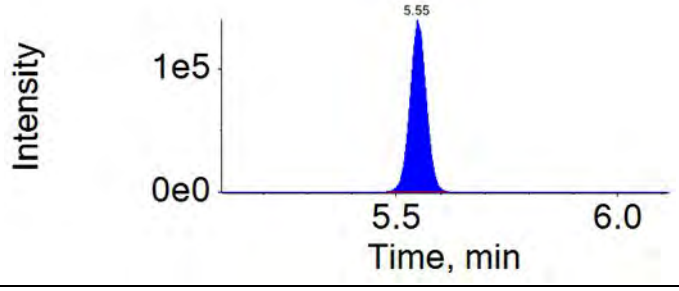
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



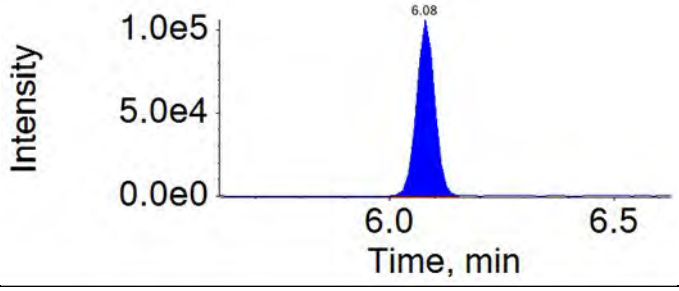


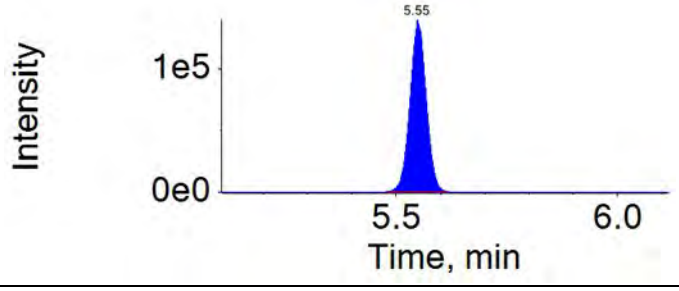
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



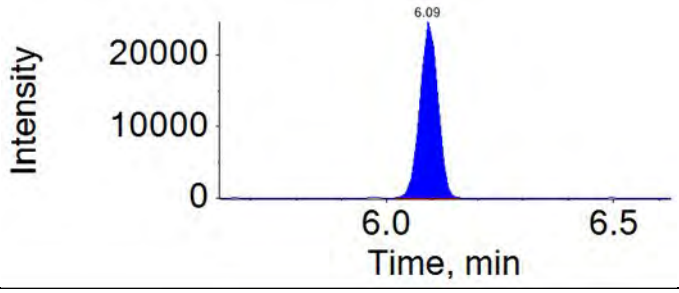


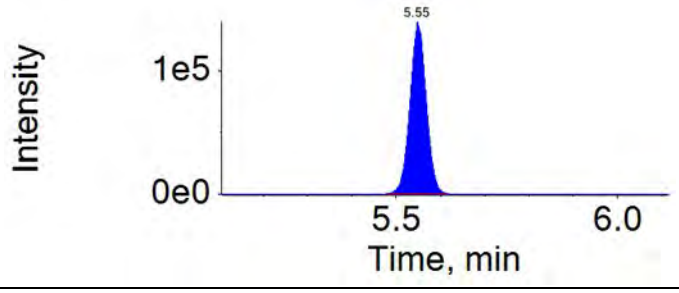
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





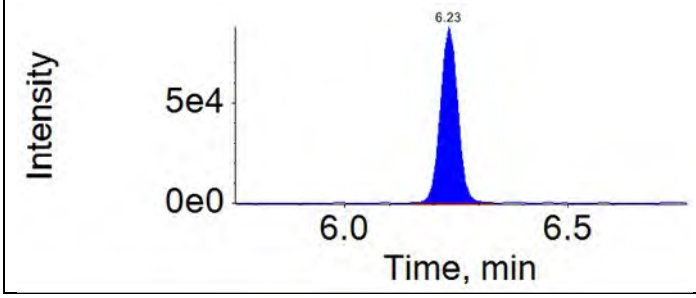
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

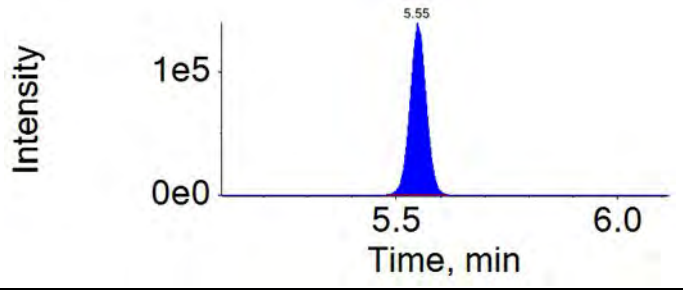




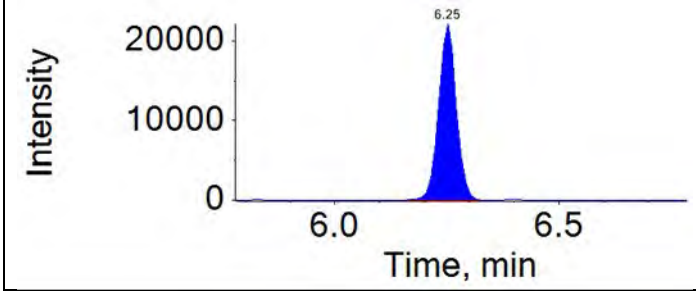
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

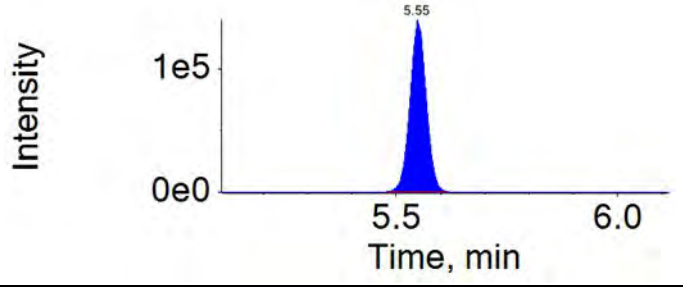
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



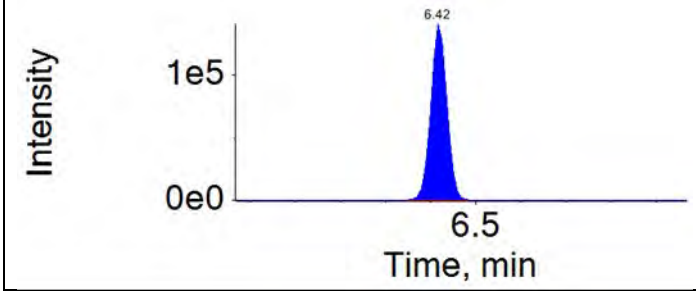


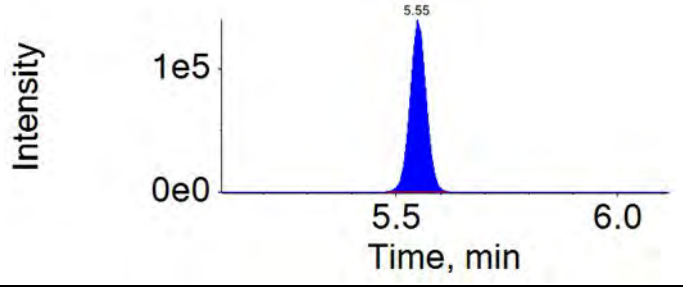
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

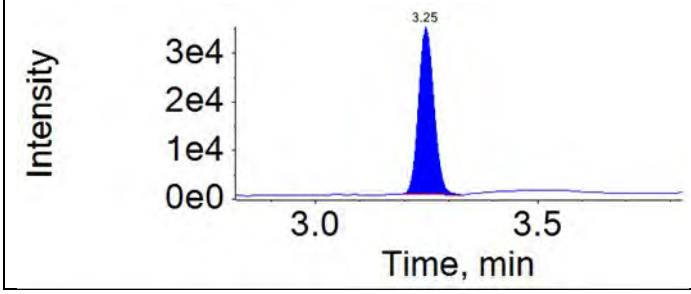
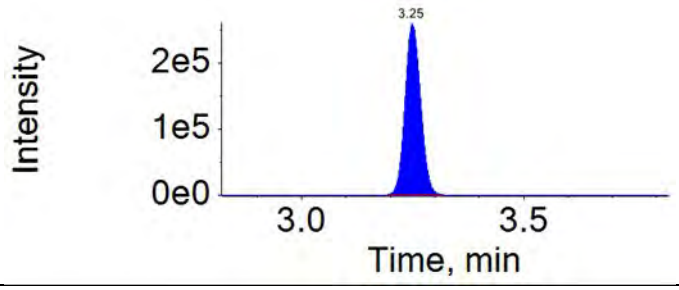


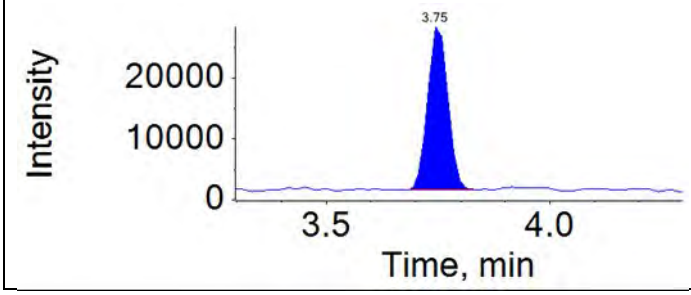
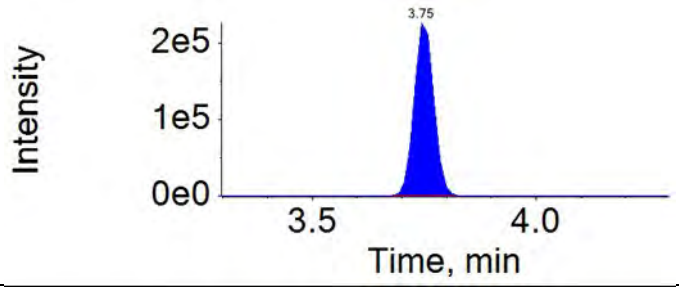


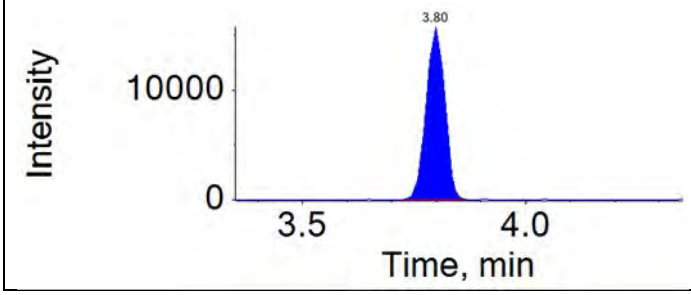
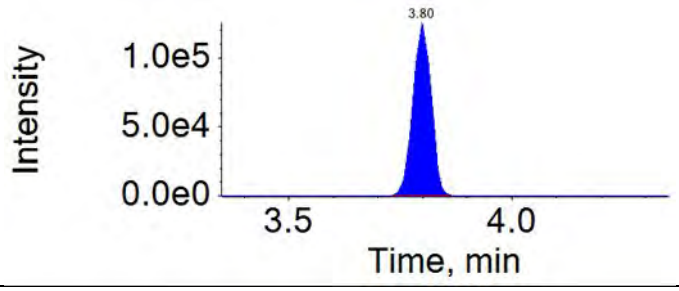
APPROVED
By MCD at 4:42 pm, 11/8/18

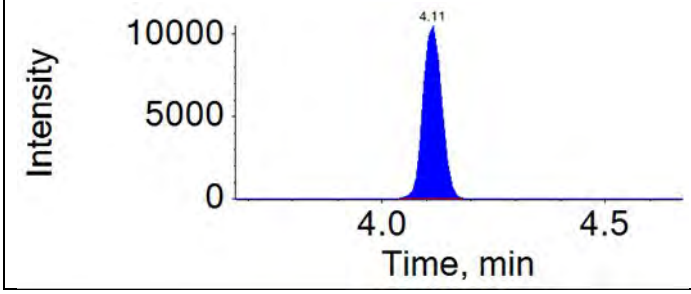
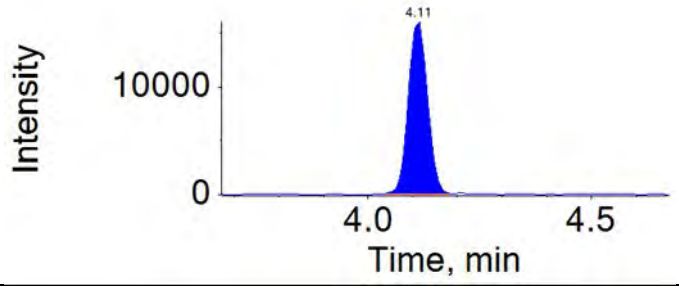
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

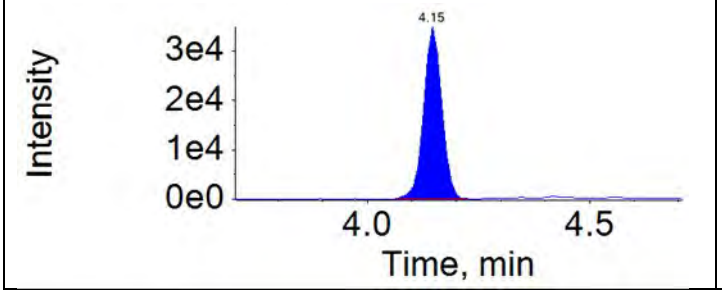
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

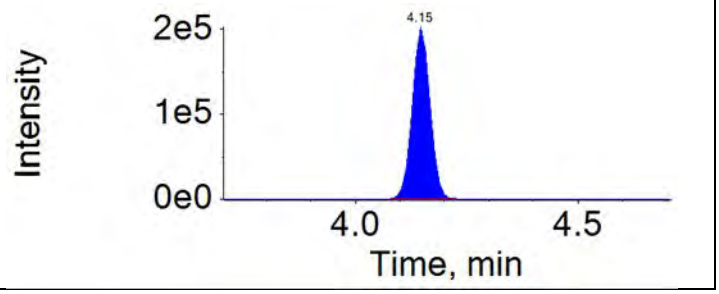
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

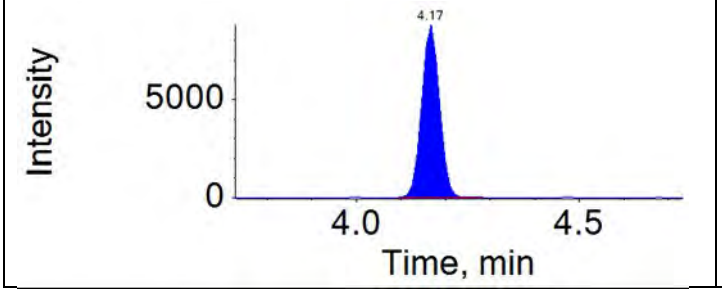
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

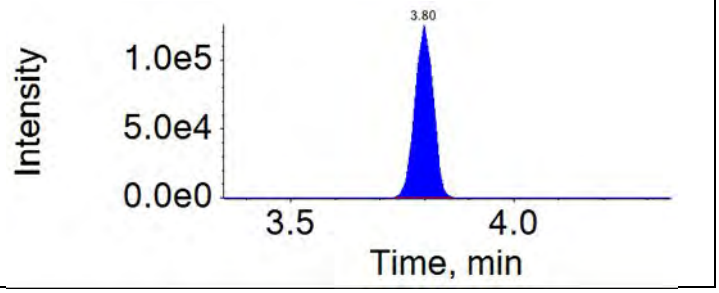
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



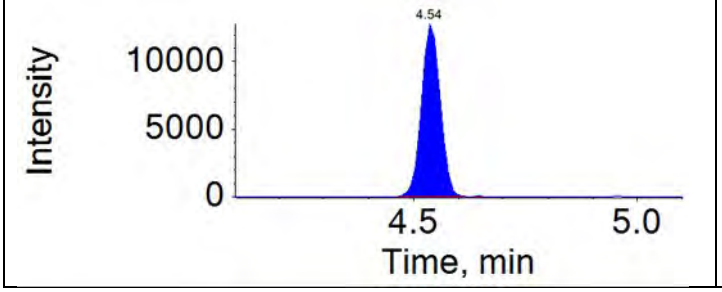


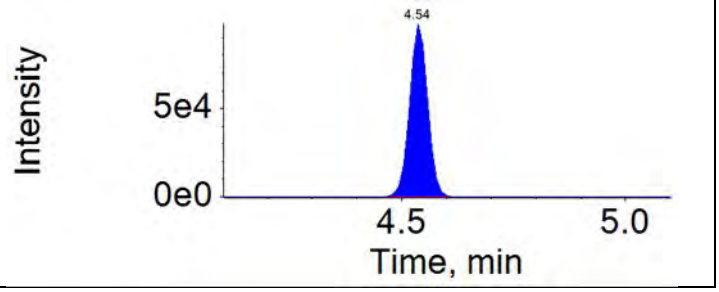
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



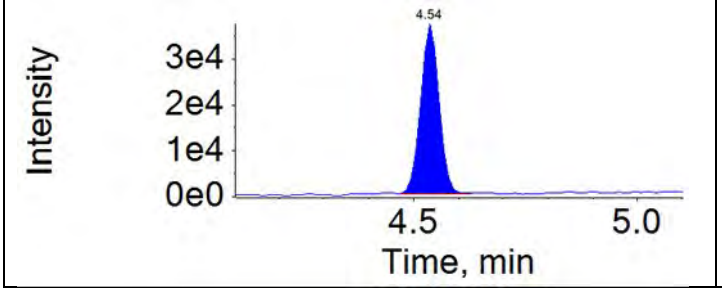


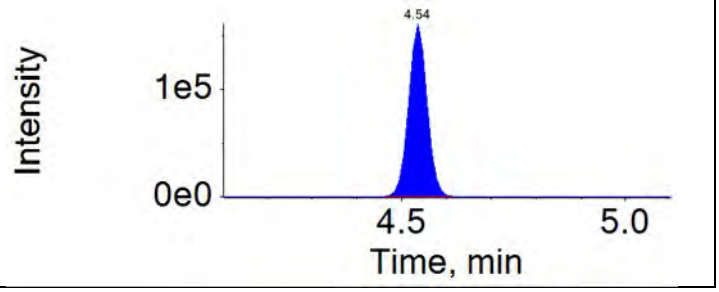
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



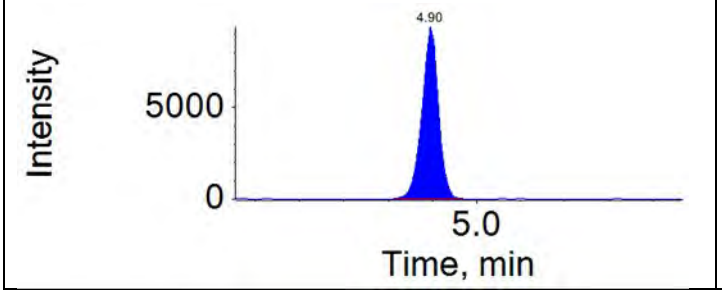


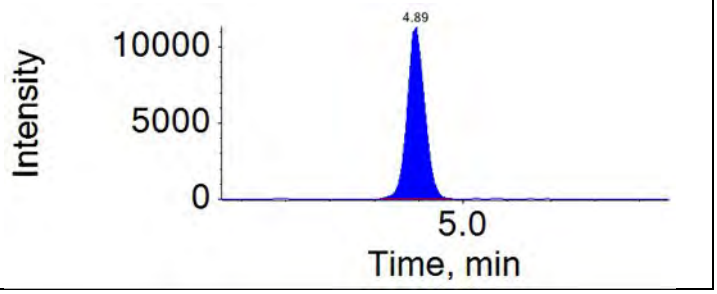
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

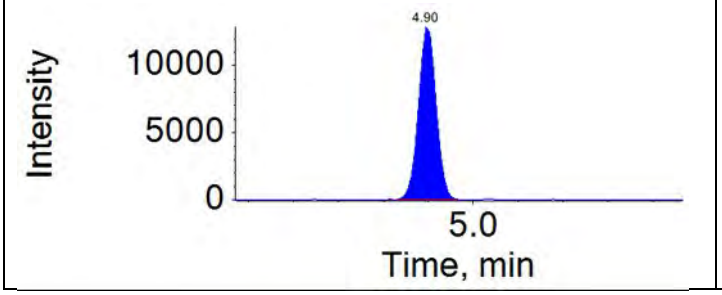
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

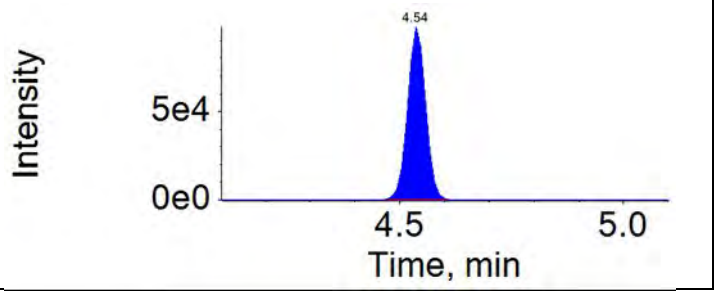
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



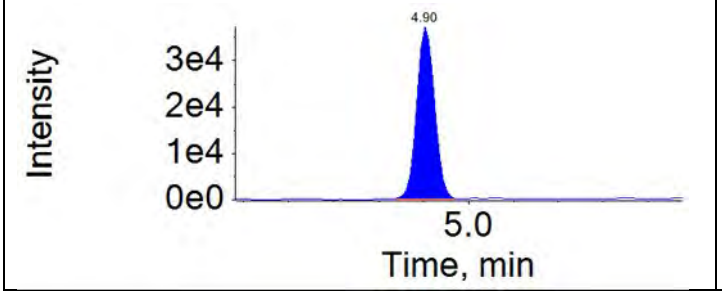


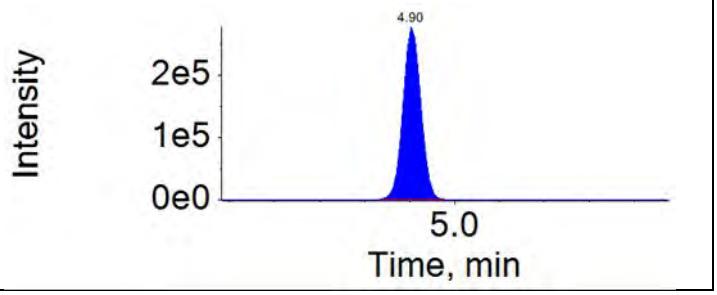
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



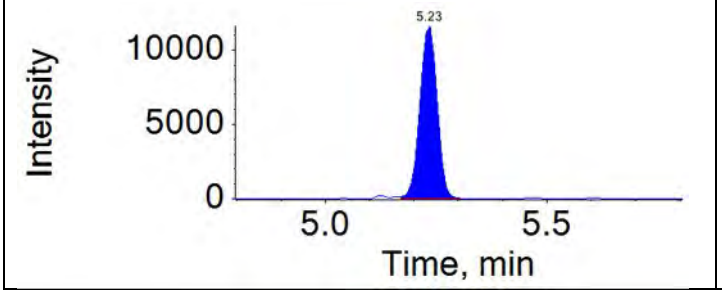


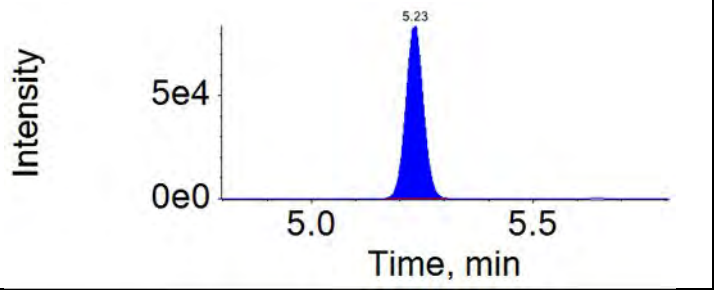
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



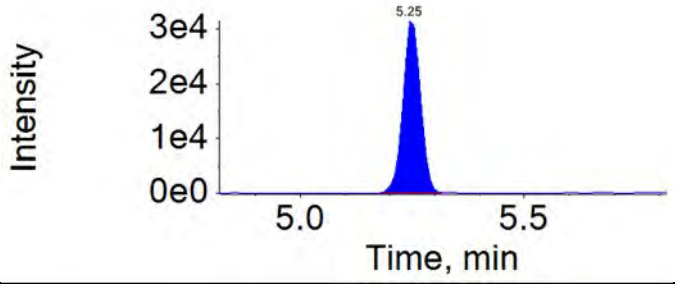


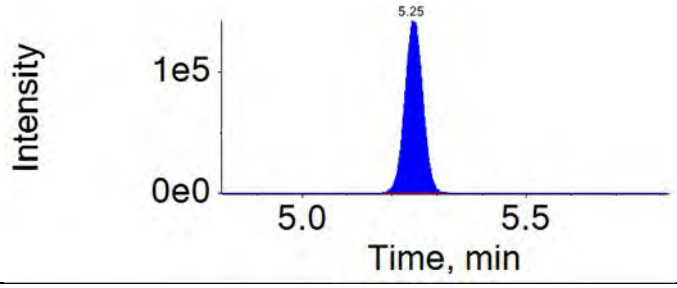
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

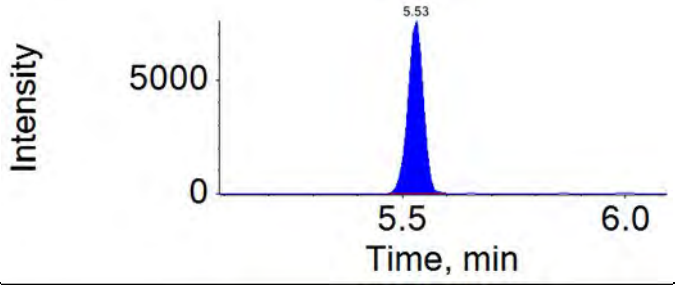
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

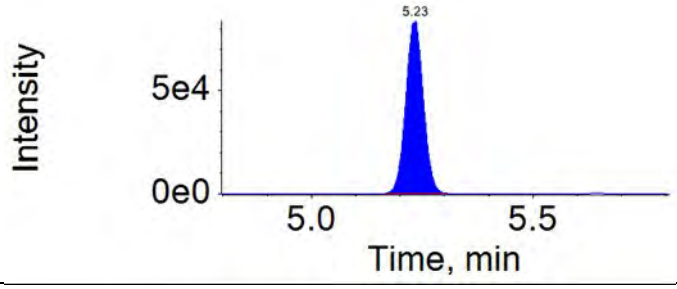
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



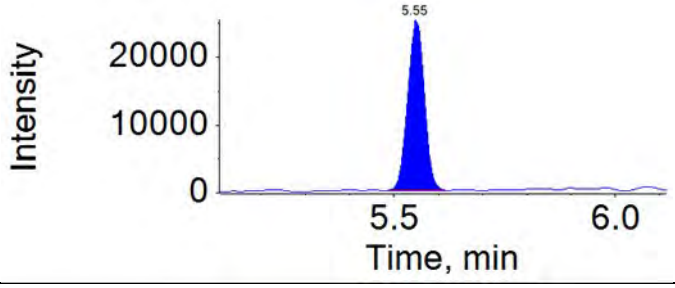


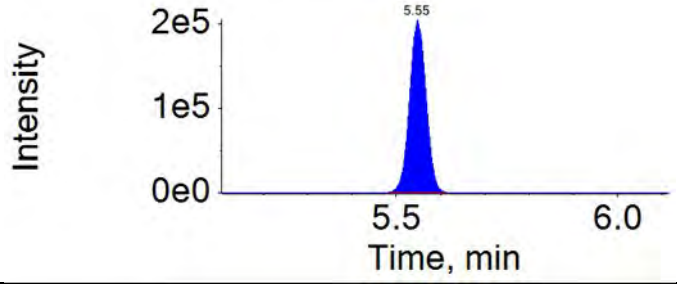
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



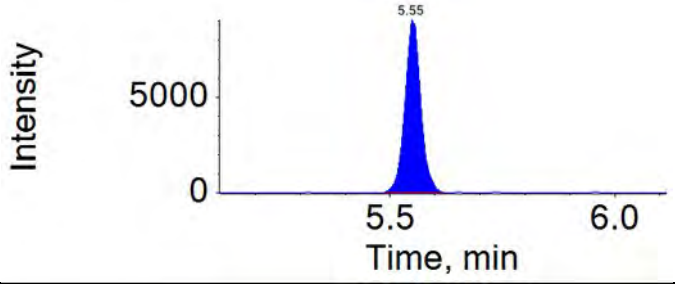


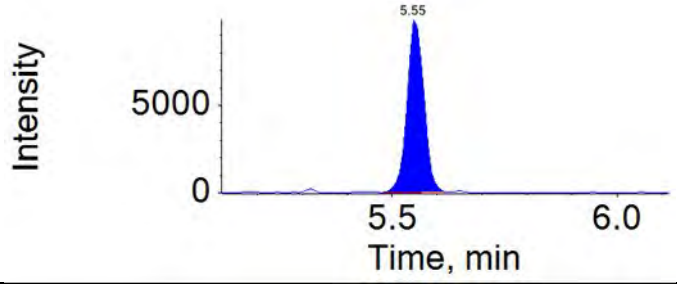
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



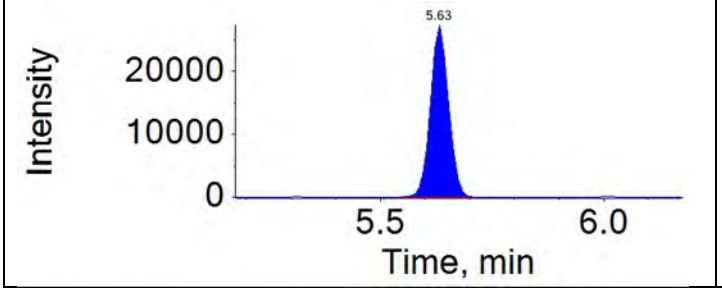


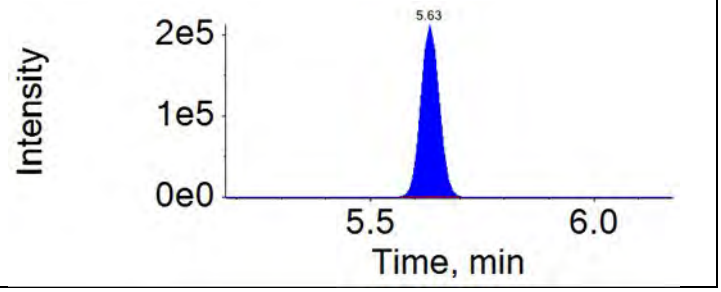
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

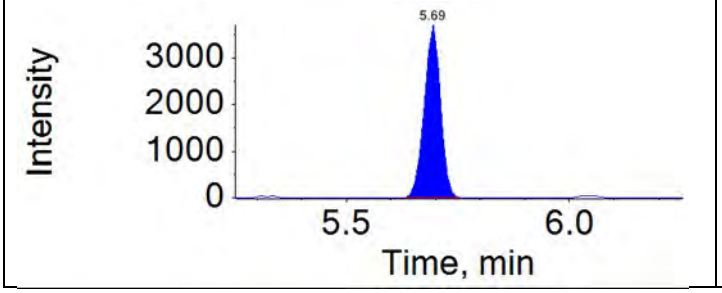
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

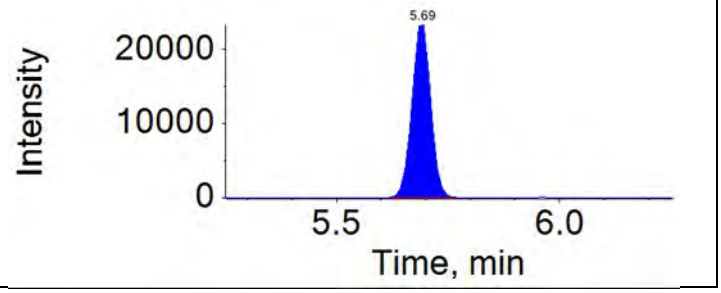
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



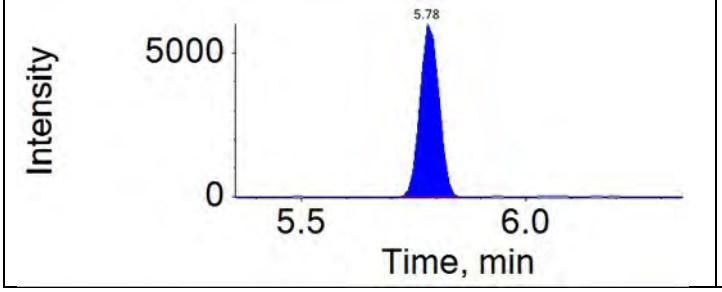


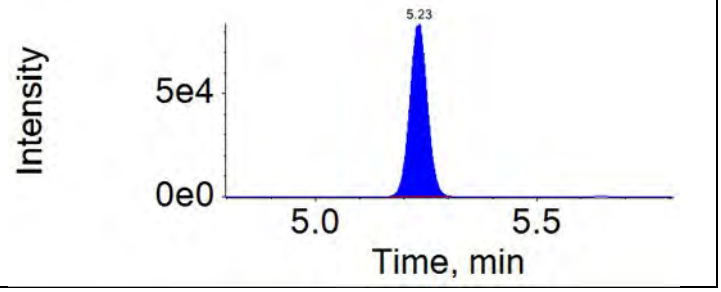
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



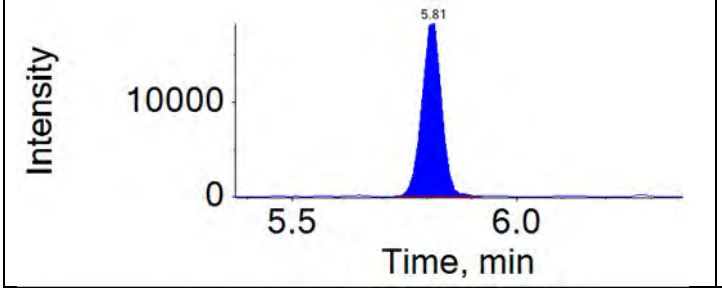


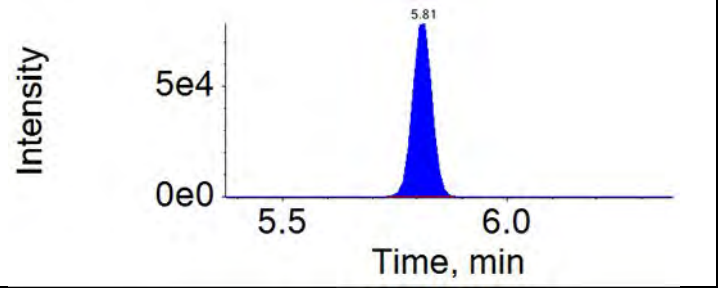
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



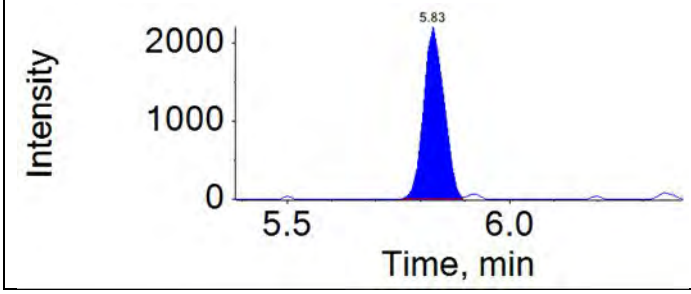


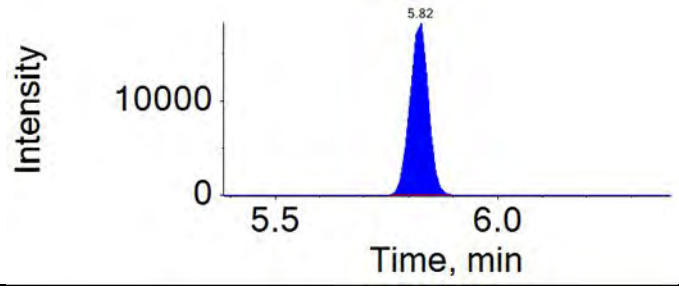
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

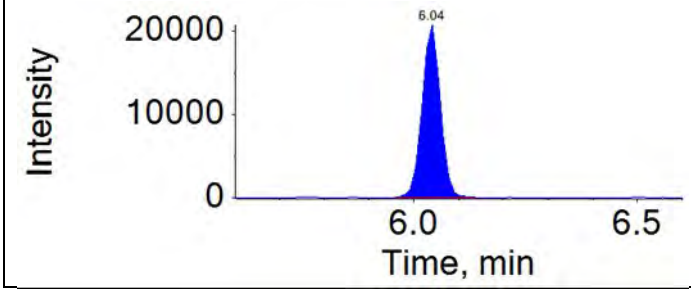
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

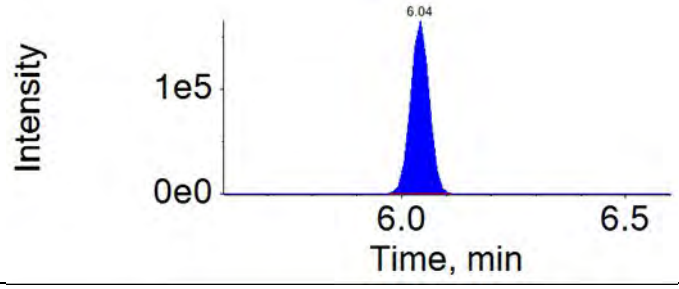
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



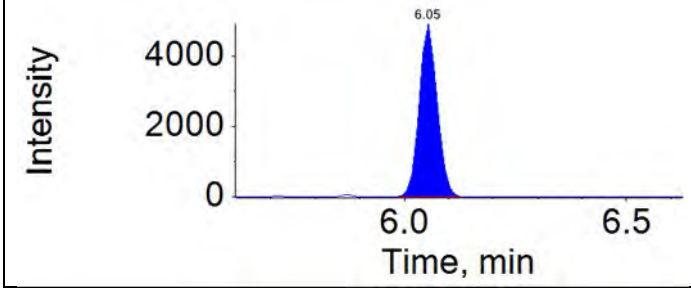


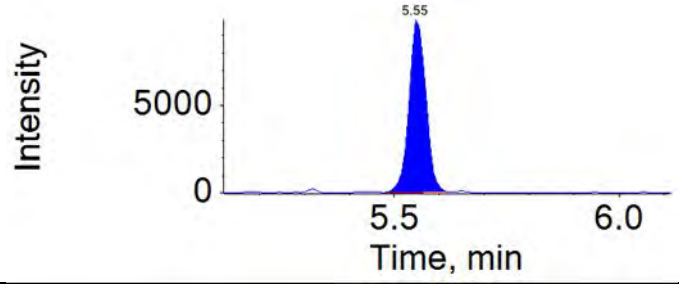
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



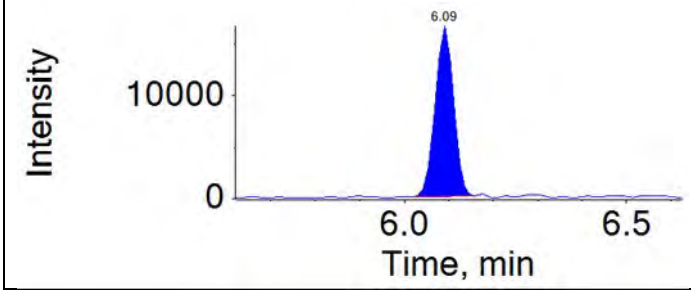


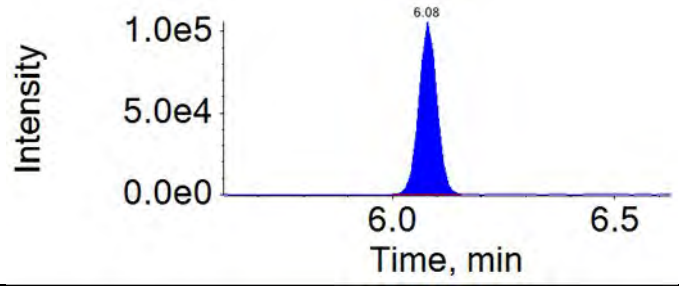
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



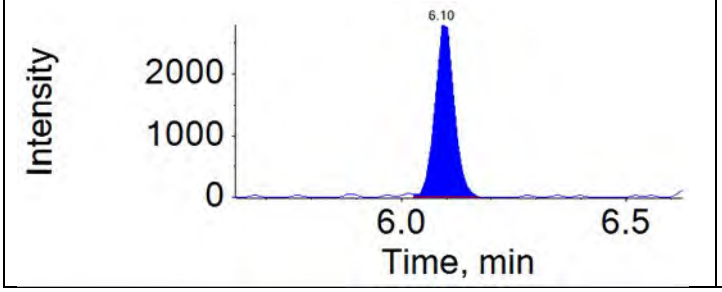


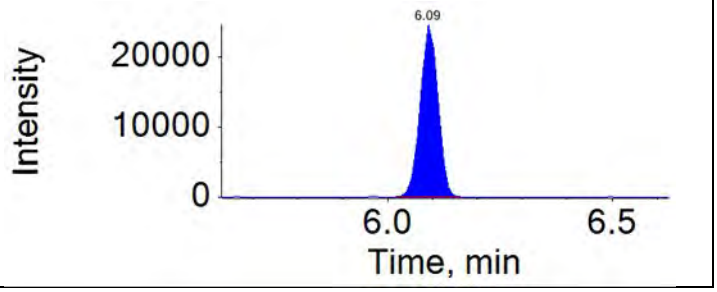
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

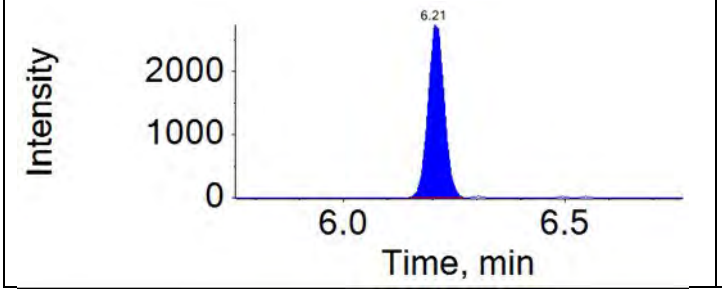
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

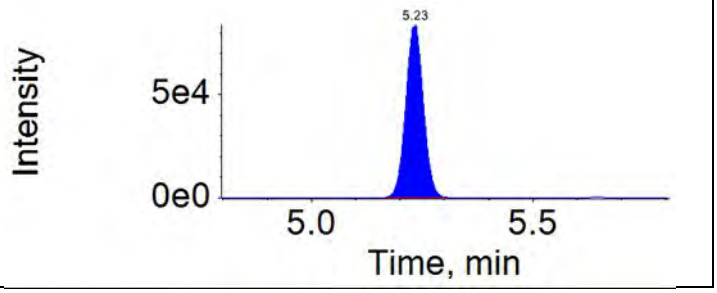
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



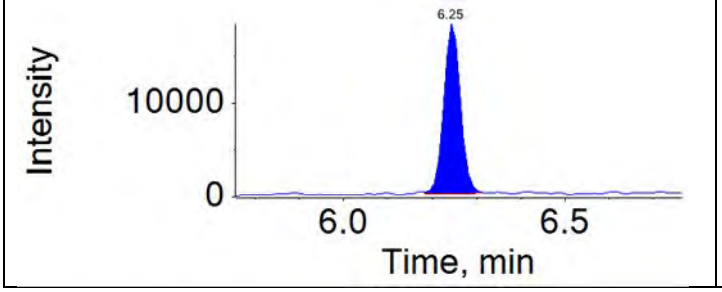


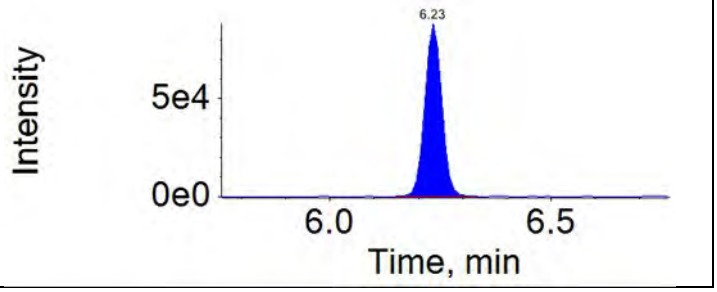
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



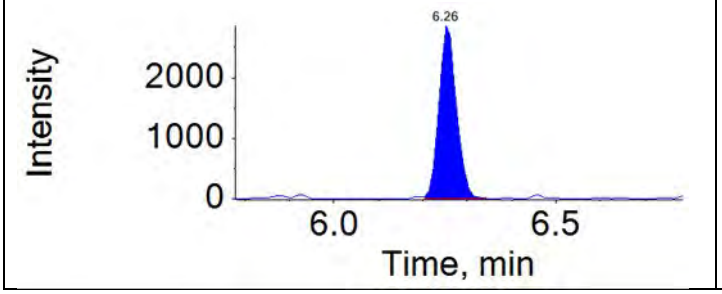


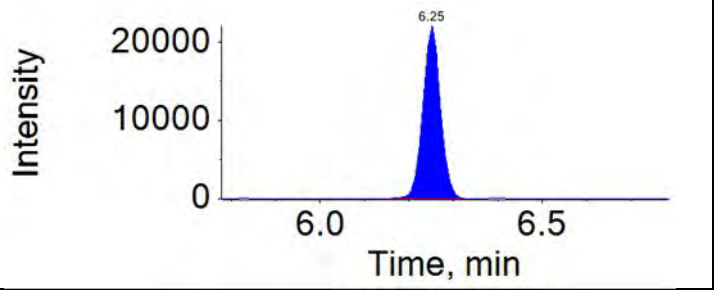
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

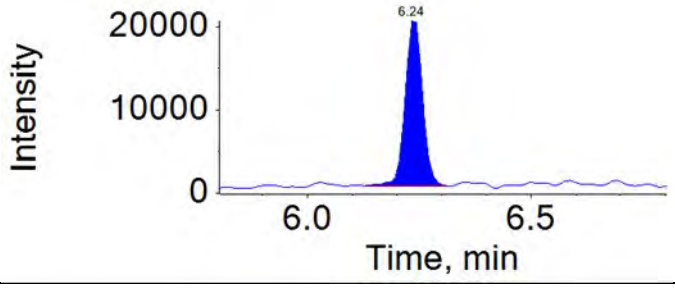
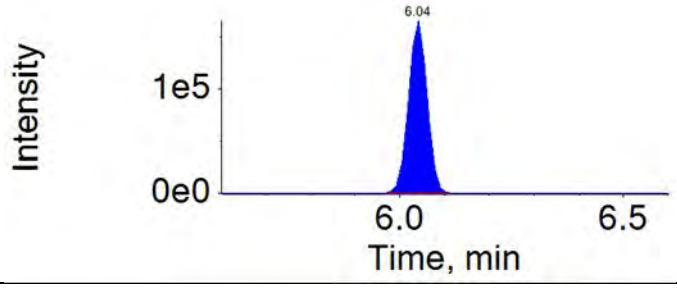


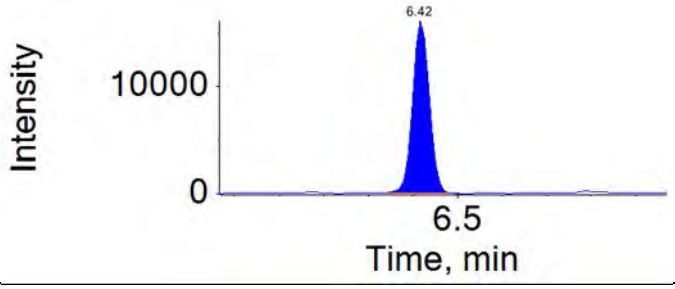
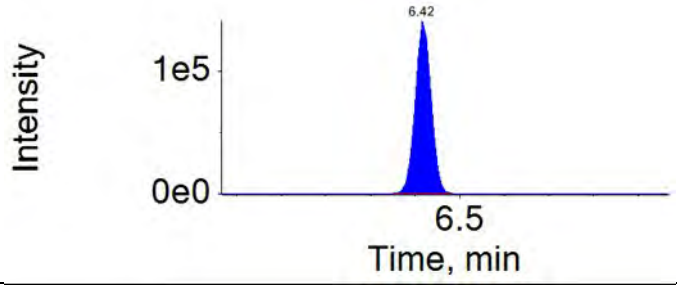


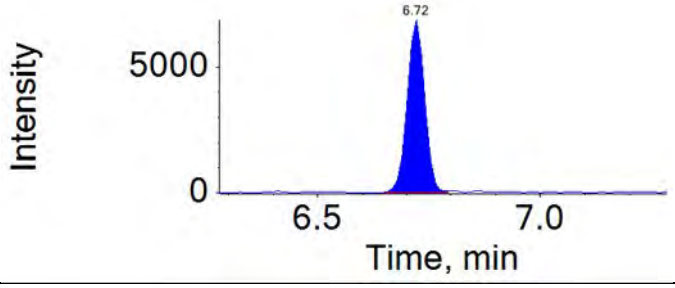
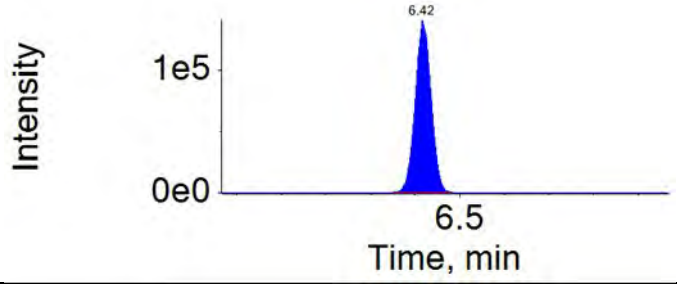
APPROVED
By MCD at 4:42 pm, 11/8/18

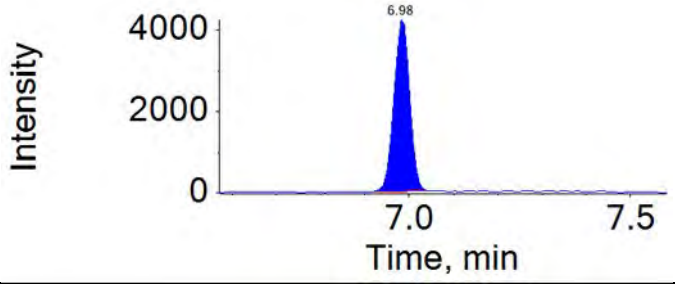
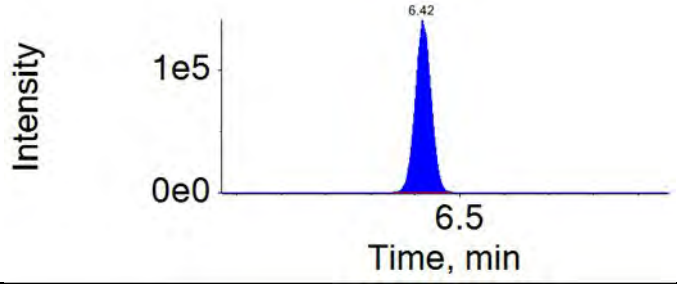
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

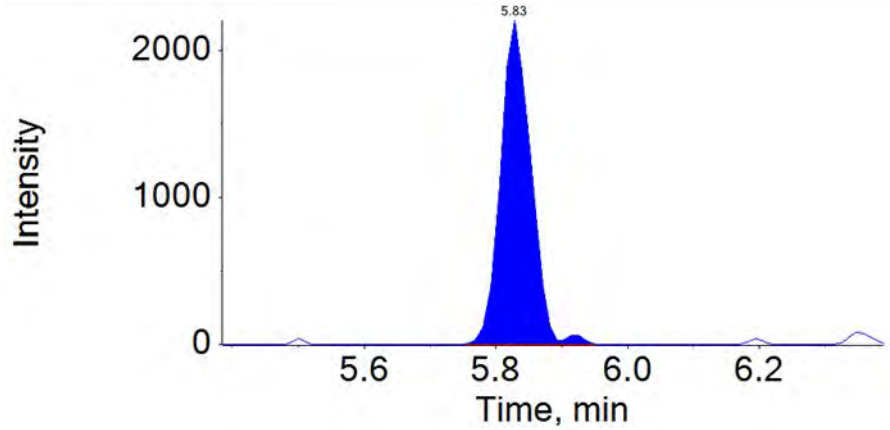
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

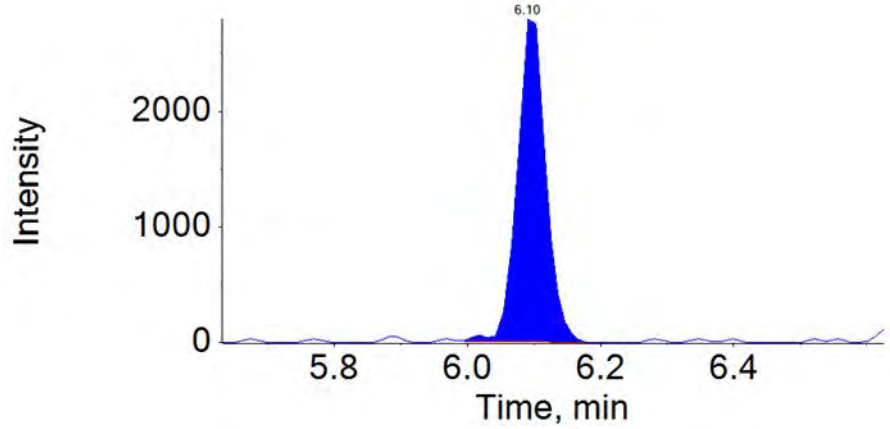
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
7126.3
Mass Range:
584.0 / 419.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



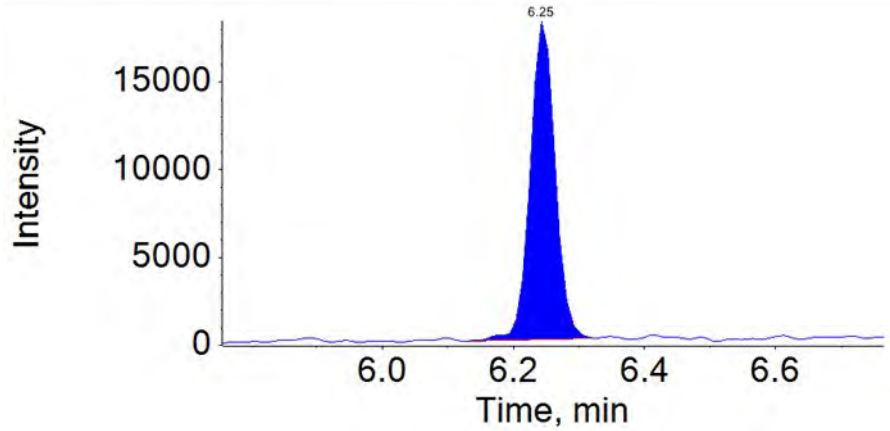
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
8380.9
Mass Range:
512.0 / 169.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



Integration Comment: incorrect integration

Component Name:
NEtPFOSAE
RT (min.):
6.25
Peak Area:
47855.4
Mass Range:
630.0 / 59.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



Integration Comment: incorrect integration

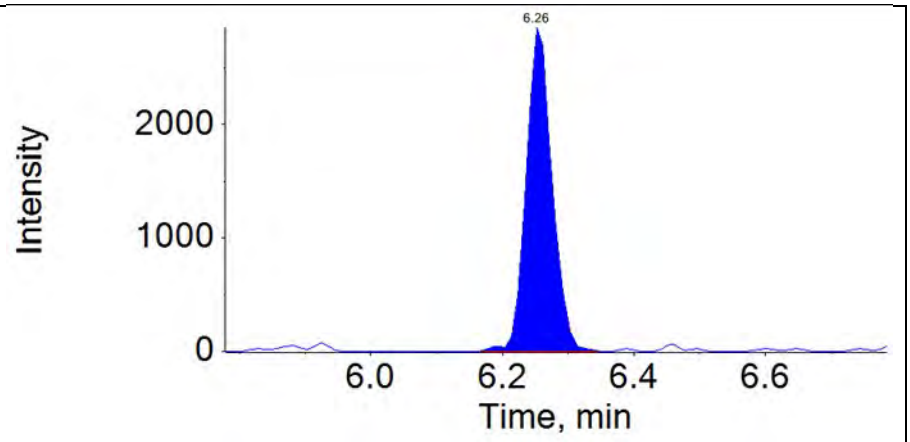
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
NEtPFOSA
RT (min.):
6.26
Peak Area:
7825.0
Mass Range:
526.0 / 169.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

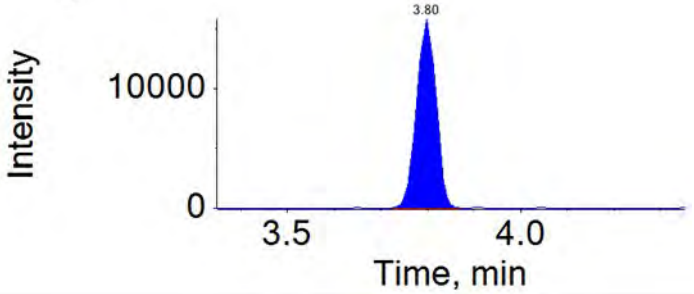
Sample Name: LCS309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	45887.6	A	N/A	0.3545			
PFBS_2	3.80	1.00	16265.9	A	N/A	0.3545	0	50	
4:2-FTS	4.11	1.00	30487.2	A	N/A	0.6053			
4:2-FTS_2	4.11	1.00	18453.8	A	N/A	0.6053	-6	50	
PFHxA	4.15	1.00	97729.7	A	N/A	0.0132			
PFHxA_2	4.15	1.00	1290.2	A	N/A	0.0132	17	50	
PFPeS	4.17	1.10	24539.1	A	N/A	0.5411			
PFPeS_2	4.17	1.10	13278.2	A	N/A	0.5411	0	50	
PFHxS	4.54	1.00	37255.6	A	N/A	0.3498			
PFHxS_2	4.54	1.00	13031.9	A	N/A	0.3498	-2	50	
PFHpA	4.54	1.00	104785.0	A	N/A	0.0587			
PFHpA_2	4.54	1.00	6152.5	A	N/A	0.0587	2	50	
6:2-FTS	4.90	1.00	24451.6	A	N/A	0.6690			
6:2-FTS_2	4.89	1.00	16359.3	A	N/A	0.6690	-2	50	
PFHpS	4.90	1.08	35174.7	A	N/A	0.3602			
PFHpS_2	4.90	1.08	12669.5	A	N/A	0.3602	-9	50	
PFOA	4.90	1.00	101588.4	A	N/A	0.0526			
PFOA_2	4.91	1.00	5344.7	A	N/A	0.0526	-18	50	
PFOS	5.23	1.00	31319.4	A	N/A	0.3790			
PFOS_2	5.24	1.00	11871.1	A	N/A	0.3790	8	50	
PFNA	5.25	1.00	85971.3	A	N/A	0.0216			
PFNA_2	5.25	1.00	1854.7	A	N/A	0.0216	5	50	
PFNS	5.53	1.06	18204.9	A	N/A	0.5016			
PFNS_2	5.53	1.06	9131.8	A	N/A	0.5016	3	50	
PFDA	5.55	1.00	65460.7	A	N/A	0.0078			
PFDA_2	5.56	1.00	512.3	A	N/A	0.0078	44	50	
8:2-FTS	5.55	1.00	22250.7	A	N/A	0.5618			
8:2-FTS_2	5.55	1.00	12501.5	A	N/A	0.5618	-10	50	
NMeFOSAA	5.69	1.00	9283.3	A	N/A	0.1807			
NMeFOSAA_2	5.69	1.00	1677.9	A	N/A	0.1807	-17	50	
PFDS	5.78	1.11	17711.6	A	N/A	0.4358			
PFDS_2	5.78	1.10	7719.3	A	N/A	0.4358	-5	50	
PFUnDA	5.81	1.00	56345.9	A	N/A	0.0013			
PFUnDA_2	5.81	1.00	73.9	A	N/A	0.0013	-57	50	OOS
NEtFOSAA	5.83	1.00	6993.7	M	N/A	0.7144			
NEtFOSAA_2	5.83	1.00	4996.3	A	N/A	0.7144	18	50	
PFDoDA	6.04	1.00	59022.0	A	N/A	0.0156			
PFDoDA_2	6.05	1.00	920.8	A	N/A	0.0156	49	50	
10:2-FTS	6.05	1.09	13728.3	A	N/A	0.5862			
10:2-FTS_2	6.06	1.09	8047.2	A	N/A	0.5862	-18	50	
PFTrDA	6.24	1.03	53802.0	A	N/A	0.0085			
PFTrDA_2	6.25	1.03	459.3	A	N/A	0.0085	-11	50	
PFTeDA	6.42	1.00	41507.4	A	N/A	0.0093			
PFTeDA_2	6.42	1.00	384.4	A	N/A	0.0093	72	50	OOS
PFHxDA	6.72	1.05	18562.0	A	N/A	0.0611			
PFHxDA_2	6.72	1.05	1134.2	A	N/A	0.0611	3	50	
PFODA	6.98	1.09	10342.3	A	N/A	0.0257			
PFODA_2	6.98	1.09	266.2	A	N/A	0.0257	1	50	

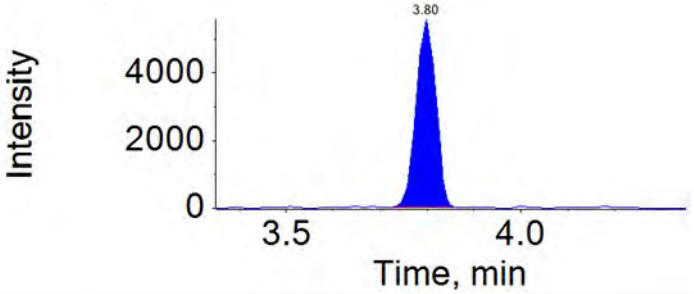
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

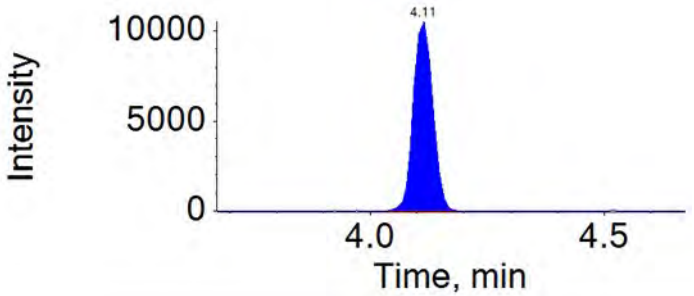
Component: PFBS
Primary Mass: 299.0 / 80.0



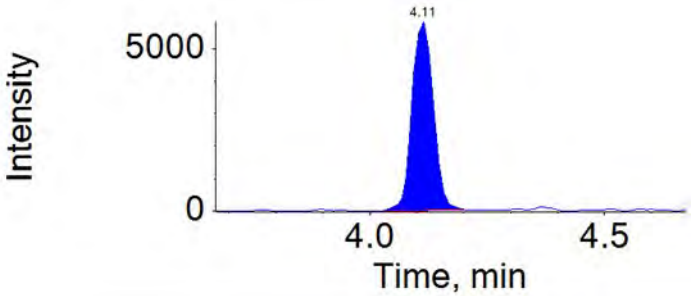
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



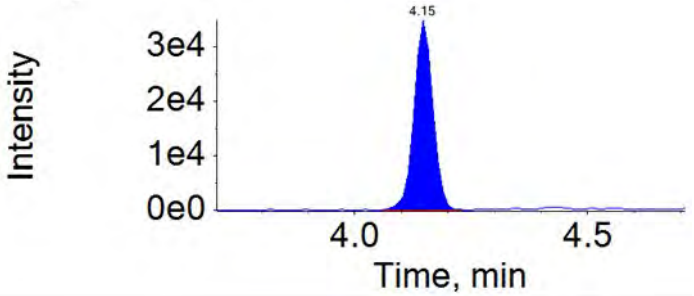
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



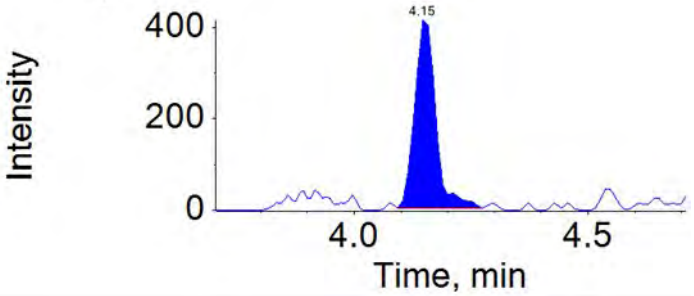
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



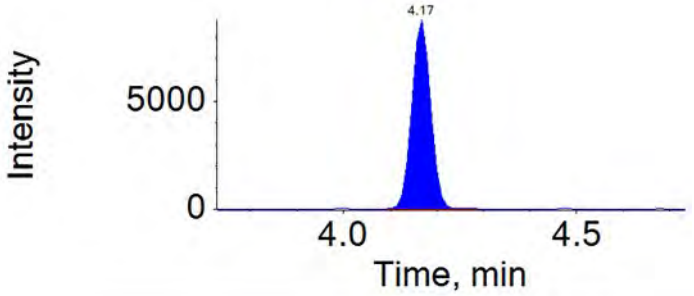
Component: PFHxA
Primary Mass: 313.0 / 269.0



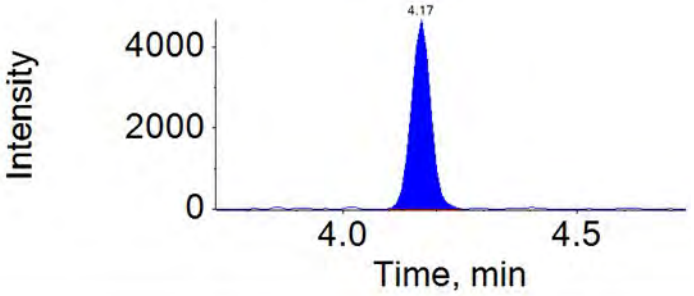
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



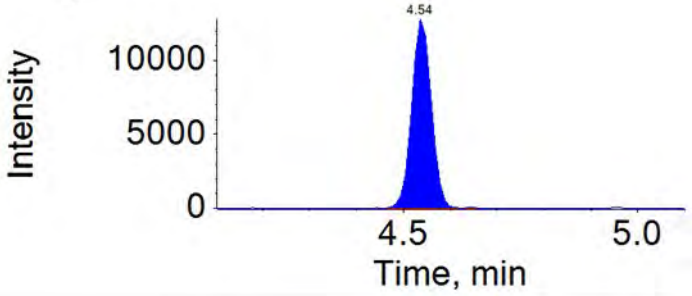
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



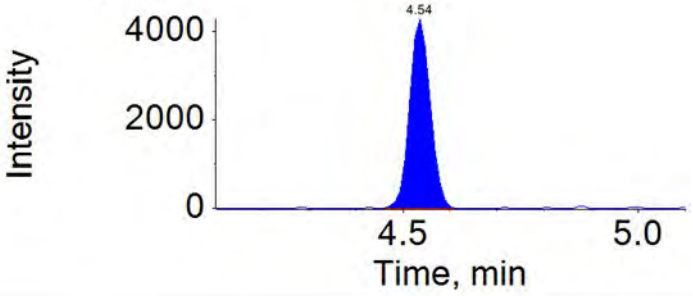
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

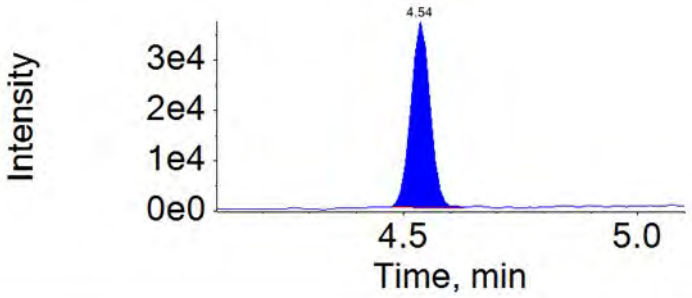
Component: PFHxS
Primary Mass: 399.0 / 80.0



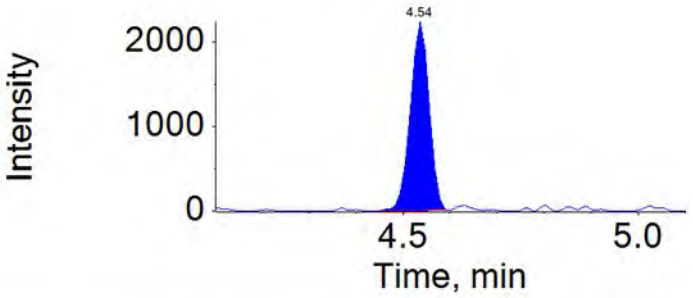
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



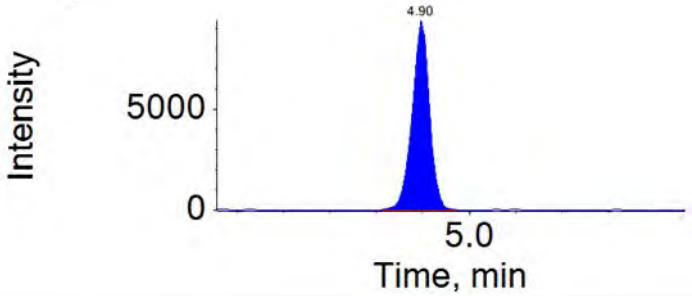
Component: PFHpA
Primary Mass: 363.0 / 319.0



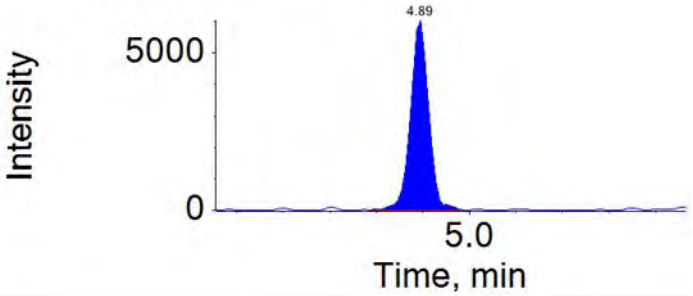
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



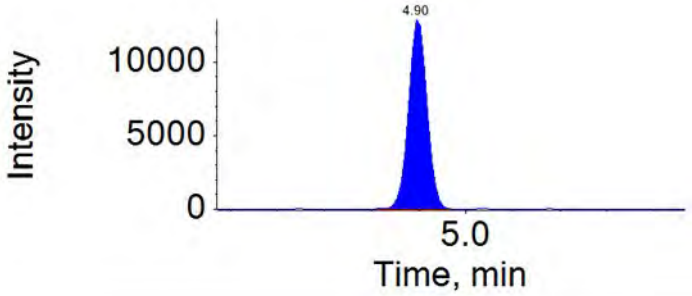
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



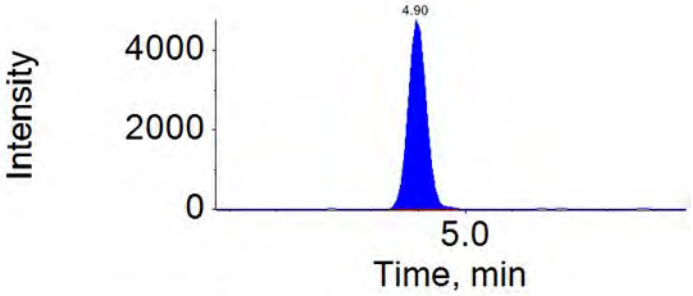
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



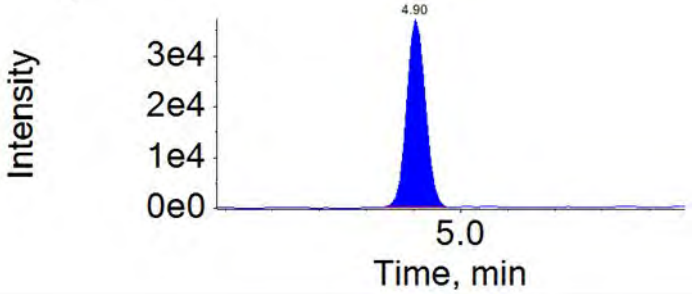
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



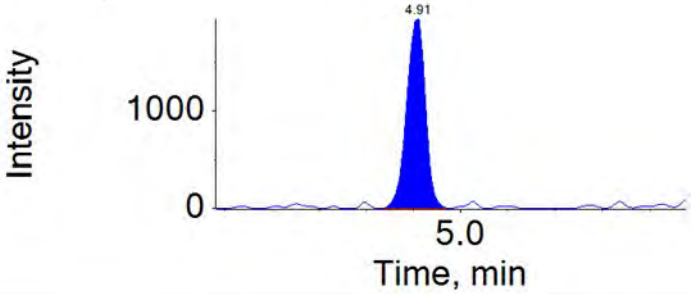
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

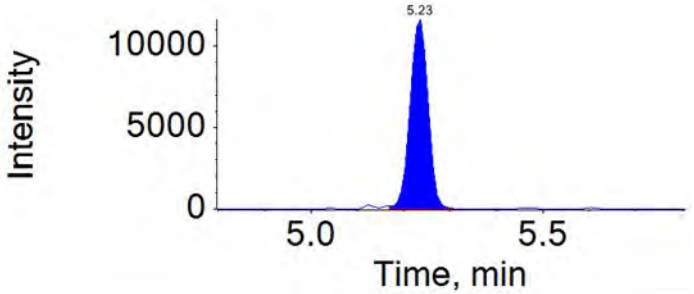
Component: PFOA
Primary Mass: 413.0 / 369.0



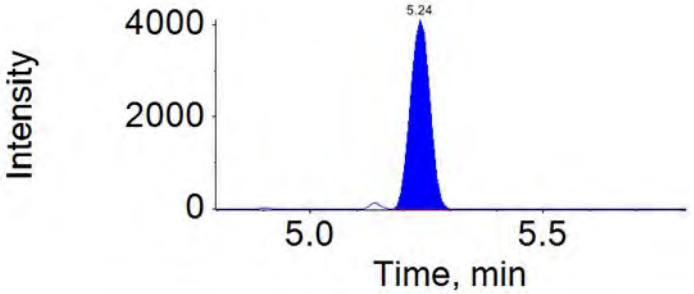
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



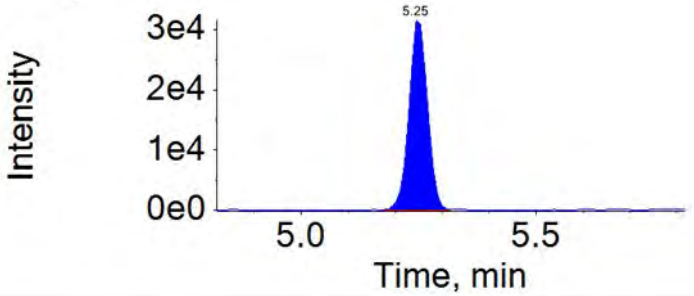
Component: PFOS
Primary Mass: 499.0 / 80.0



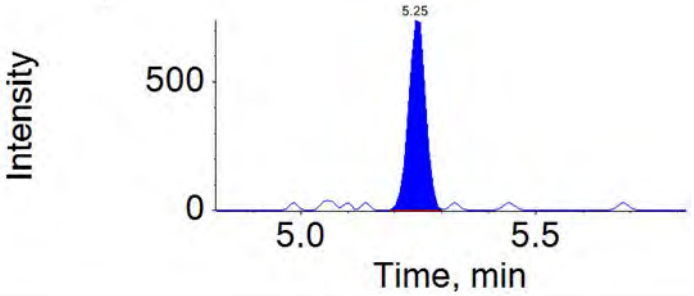
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



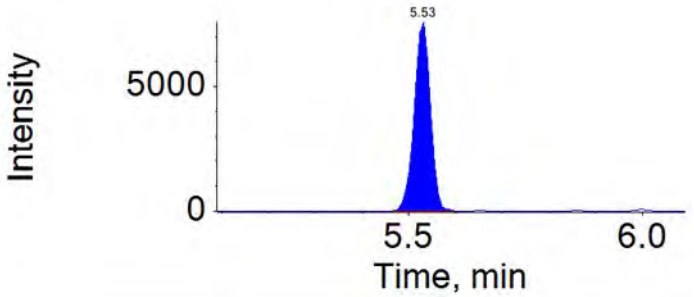
Component: PFNA
Primary Mass: 463.0 / 419.0



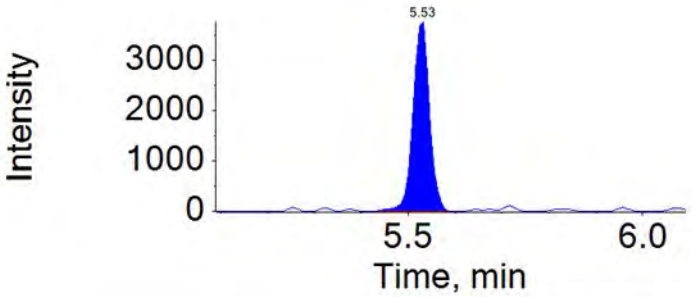
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



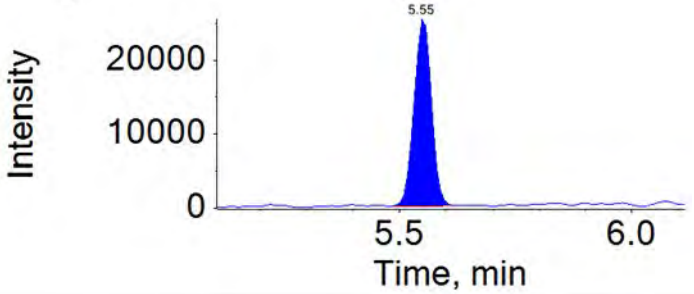
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



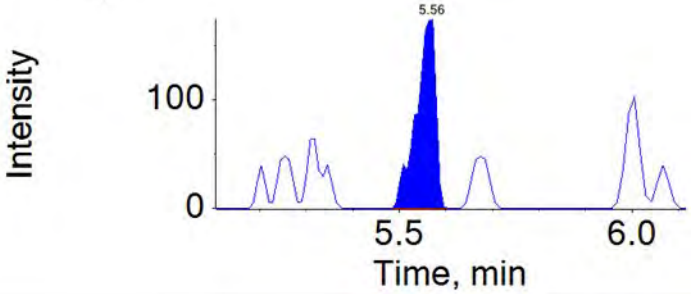
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

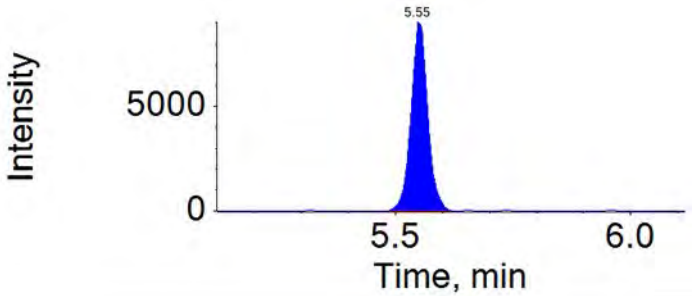
Component: PFDA
Primary Mass: 513.0 / 469.0



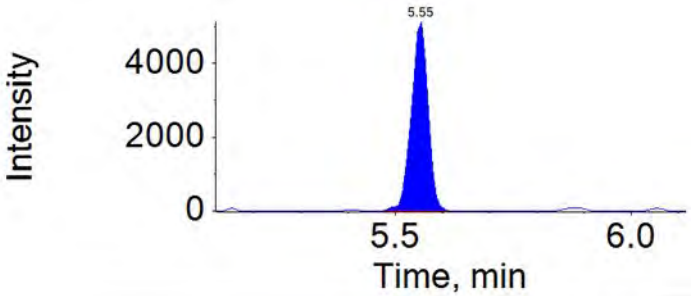
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



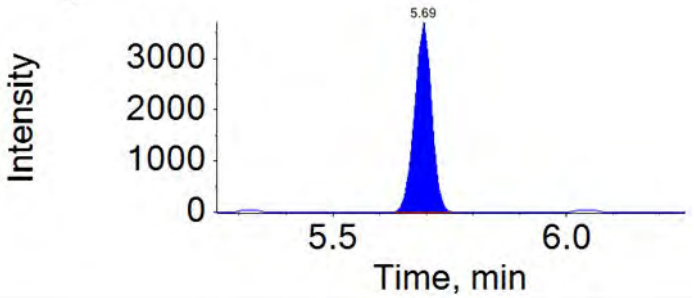
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



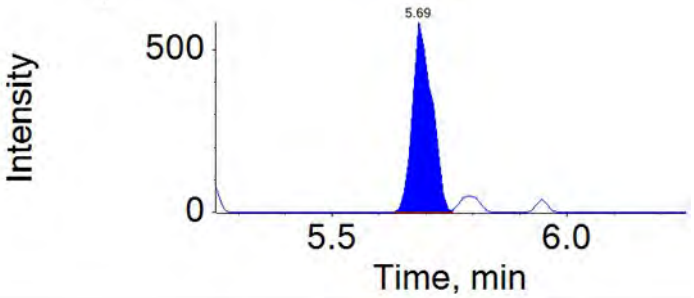
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



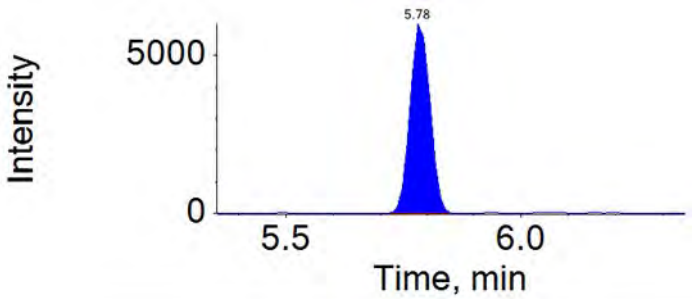
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



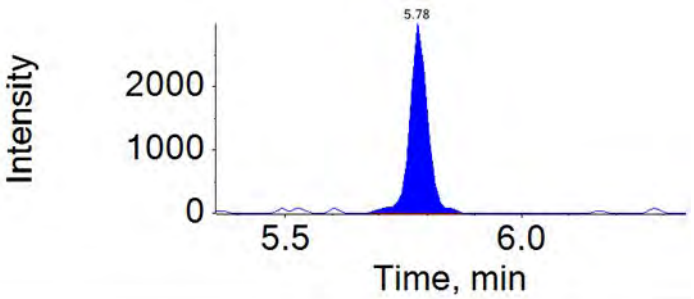
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



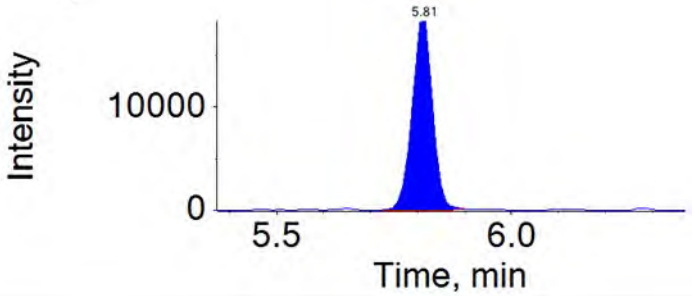
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



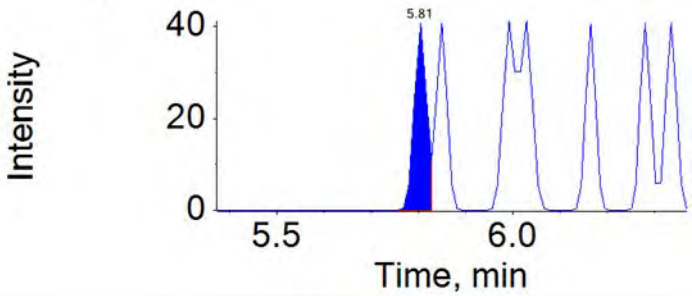
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

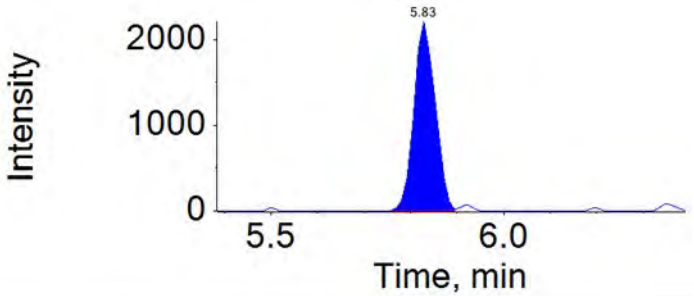
Component: PFUnDA
Primary Mass: 563.0 / 519.0



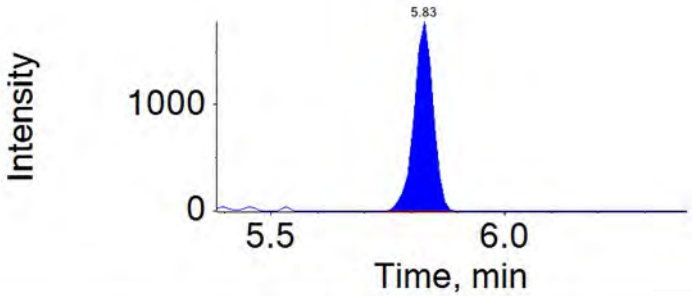
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



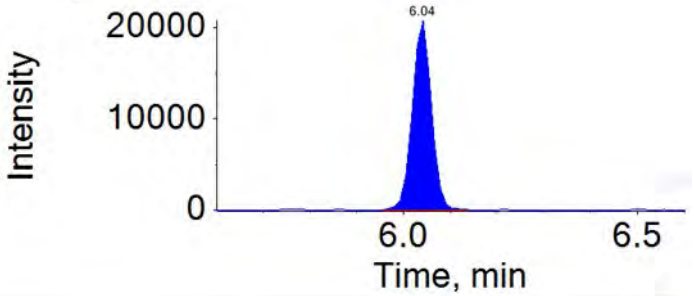
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



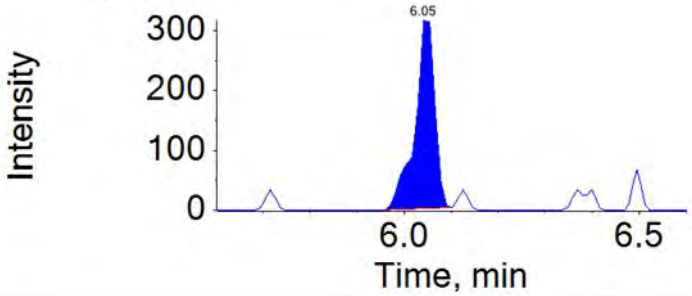
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



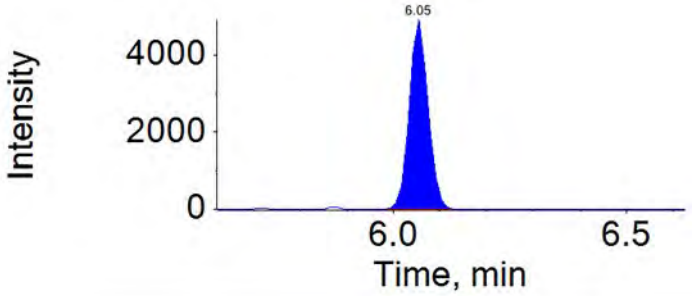
Component: PFDoDA
Primary Mass: 613.0 / 569.0



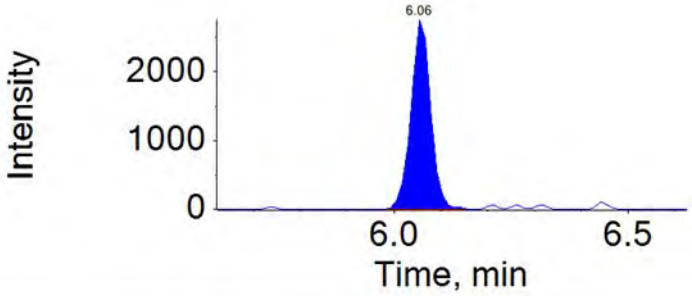
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



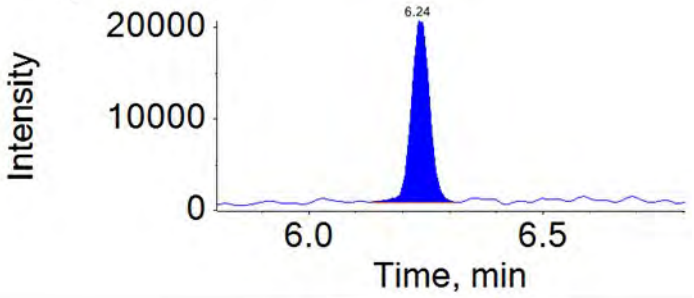
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



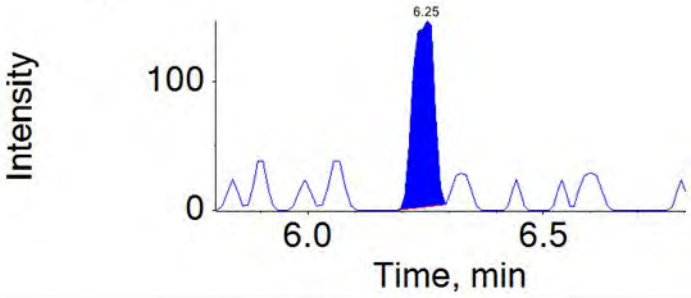
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

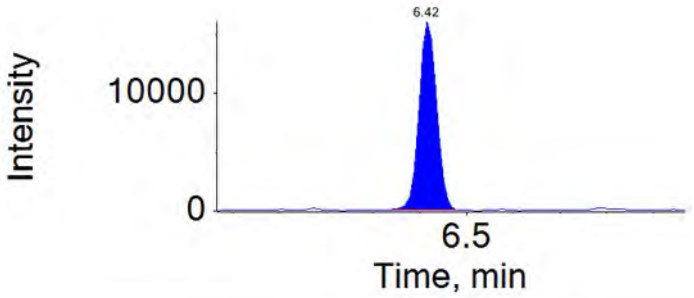
Component: PFTrDA
Primary Mass: 663.0 / 619.0



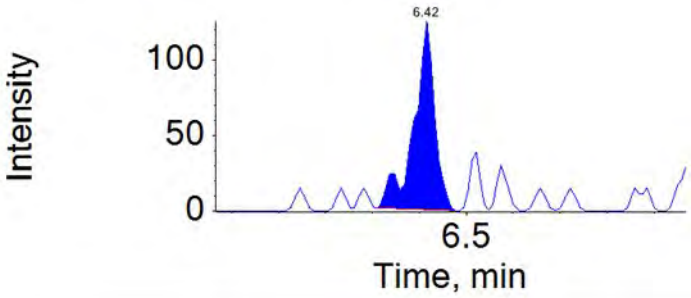
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



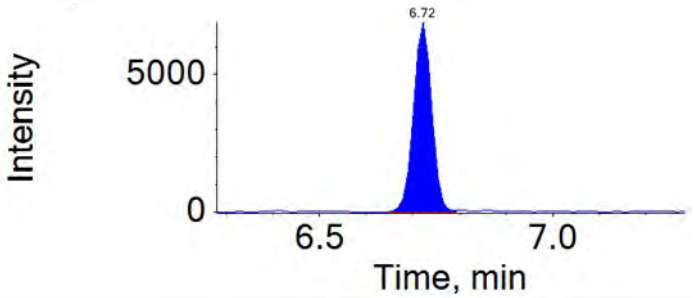
Component: PFTeDA
Primary Mass: 713.0 / 669.0



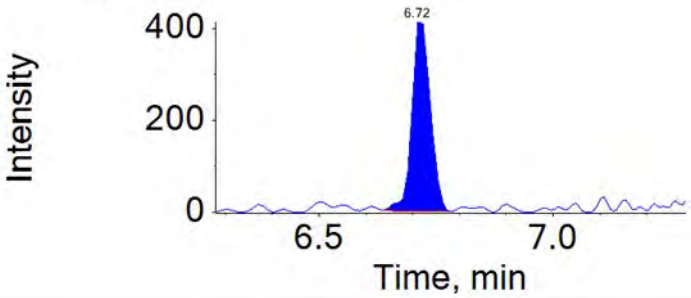
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



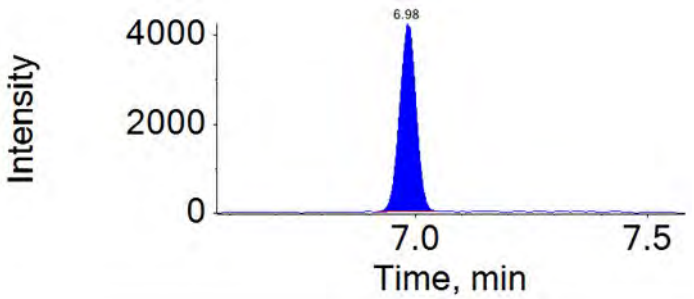
Component: PFHxDA
Primary Mass: 813.0 / 769.0



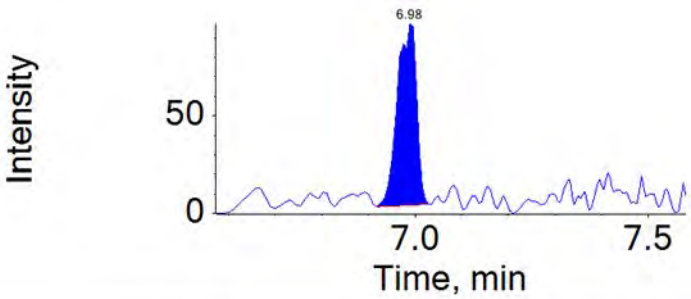
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



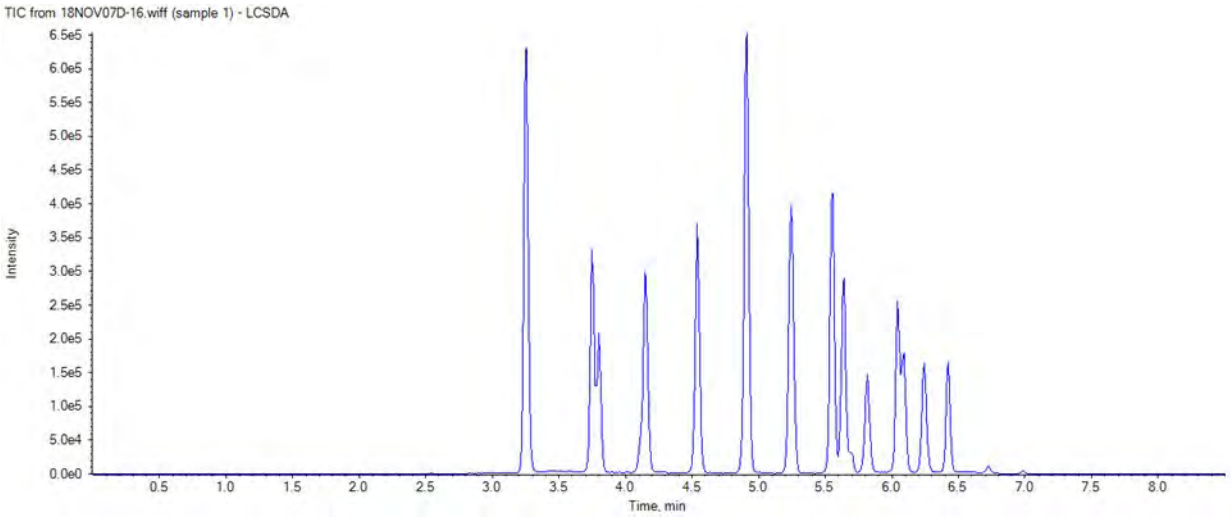
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCSDA	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-16.wiff	2018-11-07T13:35:57



Injection Standard Area Reference File**:** 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	766560.4	730410.6	5	50	
13C2-PFOA	5.00	565667.6	524423.6	8	50	
13C4-PFOS	4.78	288518.9	274061.7	5	50	
13C2-PFDA	5.00	382065.3	311442.1	23	50	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:31:36 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCSDA	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-16.wiff	2018-11-07T13:35:57

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	80694.8	602358.0	0.134	1.360	1.568	115	70-130	
PFPeA	88908.0	640601.5	0.139	1.360	1.650	121	70-130	
PFBS	44349.7	335681.8	0.132	1.202	1.332	111	70-130	
4:2-FTS	32701.6	44517.5	0.735	3.736	3.950	106	70-130	
PFHxA	102075.9	549252.4	0.186	1.360	1.594	117	70-130	
PFPeS	24375.5	335681.8	0.073	1.276	1.432	112	70-130	
PFHxS	36956.8	258647.1	0.143	1.286	1.449	113	70-130	
PFHpA	102237.8	419500.8	0.244	1.360	1.639	121	70-130	
6:2-FTS	24918.3	29008.2	0.859	3.792	4.286	113	70-130	
PFHpS	33529.9	258647.1	0.130	1.294	1.356	105	70-130	
PFOA	116400.2	760240.8	0.153	1.360	1.724	127	70-130	
PFOS	32818.4	226181.7	0.145	1.300	1.505	116	70-130	
PFNA	85945.4	403692.8	0.213	1.360	1.591	117	70-130	
PFNS	17505.3	226181.7	0.077	1.306	1.227	94	70-130	
PFDA	68655.3	476396.2	0.144	1.360	1.586	117	70-130	
8:2-FTS	19233.3	21649.8	0.888	3.832	4.005	105	70-130	
PFOSA	82098.0	598347.5	0.137	1.360	1.483	109	70-130	
NMeFOSAA	7928.5	63310.4	0.125	1.360	1.289	95	70-130	
PFDS	17149.3	226181.7	0.076	1.310	1.449	111	70-130	
PFUnDA	61560.5	209262.3	0.294	1.360	1.687	124	70-130	
NEtFOSAA	7820.8	50983.3	0.153	1.360	1.318	97	70-130	
PFDoDA	62639.7	461231.7	0.136	1.360	1.472	108	70-130	
10:2-FTS	12286.1	21649.8	0.567	3.856	3.534	92	70-130	
NMePFOSAE	48747.2	277030.8	0.176	1.360	1.577	116	70-130	
NMePFOSA	9061.1	69846.6	0.130	1.360	1.452	107	70-130	
PFDoS	7218.5	226181.7	0.032	1.316	1.232	94	70-130	
NEtPFOSAE	51520.8	230073.7	0.224	1.360	1.436	106	70-130	
NEtPFOSA	7427.8	56251.6	0.132	1.360	1.163	86	70-130	
PFTrDA	54877.3	461231.7	0.119	1.360	1.501	110	70-130	
PFTeDA	40196.8	311877.3	0.129	1.360	1.514	111	70-130	
PFHxDA	19040.7	311877.3	0.061	1.360	1.516	111	70-130	
PFODA	9759.1	311877.3	0.031	1.360	0.897	66	70-130	OOS

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCSDA			**Data File:**		18NOV07D-16.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005			**Acquis Date:**		2018-11-07T13:35:57
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	15			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	766560.4	730410.6	5	50	
13C2-PFOA	5.0	565667.6	524423.6	8	50	
13C4-PFOS	4.8	288518.9	274061.7	5	50	
13C2-PFDA	5.0	382065.3	311442.1	23	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	602358.0	13C3-PFBA	766560.4	0.786	10.000	7.273	73	50-150	
E13C5-PFPeA	640601.5	13C3-PFBA	766560.4	0.836	10.000	7.281	73	50-150	
E13C3-PFBS	335681.8	13C3-PFBA	766560.4	0.438	9.300	6.428	69	50-150	
E13C2-4:2-FTS	44517.5	13C2-PFOA	565667.6	0.079	9.340	7.102	76	50-150	
E13C5-PFHxA	549252.4	13C2-PFOA	565667.6	0.971	10.000	7.143	71	50-150	
E13C3-PFHxS	258647.1	13C2-PFOA	565667.6	0.457	9.460	6.565	69	50-150	
E13C4-PFHpA	419500.8	13C2-PFOA	565667.6	0.742	10.000	6.747	67	50-150	
E13C2-6:2-FTS	29008.2	13C2-PFOA	565667.6	0.051	9.500	6.839	72	50-150	
E13C8-PFOA	760240.8	13C2-PFOA	565667.6	1.344	10.000	7.496	75	50-150	
E13C8-PFOS	226181.7	13C4-PFOS	288518.9	0.784	9.560	6.933	73	50-150	
E13C9-PFNA	403692.8	13C4-PFOS	288518.9	1.399	10.000	7.644	76	50-150	
E13C6-PFDA	476396.2	13C2-PFDA	382065.3	1.247	10.000	6.271	63	50-150	
E13C2-8:2-FTS	21649.8	13C2-PFDA	382065.3	0.057	9.580	5.997	63	50-150	
E13C8-PFOSA	598347.4	13C2-PFDA	382065.3	1.566	10.000	6.835	68	50-150	
Ed3-NMeFOSAA	63310.4	13C2-PFDA	382065.3	0.166	10.000	6.163	62	50-150	
E13C7-PFUnDA	209262.3	13C2-PFDA	382065.3	0.548	10.000	6.319	63	50-150	
Ed5-NEtFOSAA	50983.3	13C2-PFDA	382065.3	0.133	10.000	6.176	62	50-150	
E13C2-PFDoDA	461231.7	13C2-PFDA	382065.3	1.207	10.000	6.509	65	50-150	
Ed7-NMePFOSAE	277030.8	13C2-PFDA	382065.3	0.725	10.000	6.744	67	50-150	
Ed3-NMePFOSA	69846.6	13C2-PFDA	382065.3	0.183	10.000	6.694	67	50-150	
Ed9-NEtPFOSAE	230073.7	13C2-PFDA	382065.3	0.602	10.000	6.878	69	50-150	
Ed5-NEtPFOSA	56251.6	13C2-PFDA	382065.3	0.147	10.000	6.818	68	50-150	
E13C2-PFTeDA	311877.3	13C2-PFDA	382065.3	0.816	10.000	5.877	59	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

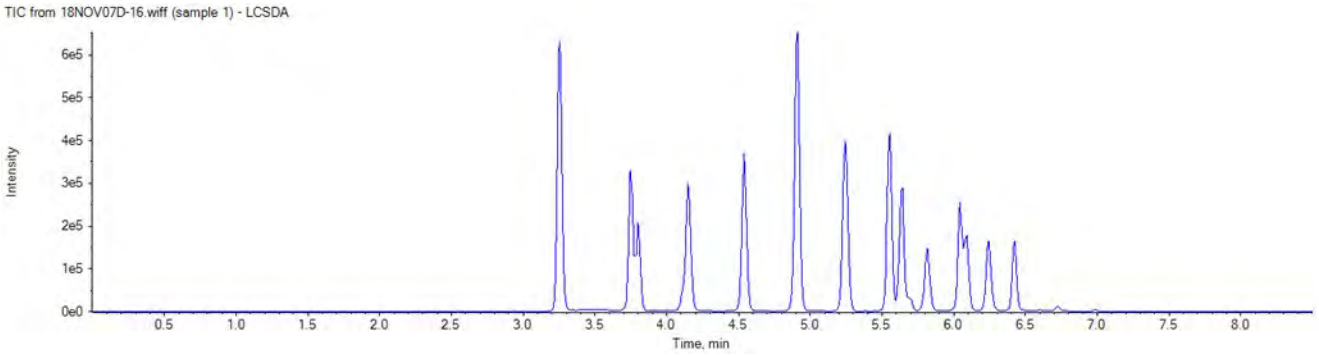
Analyte Quantitation Peak Table

Sample Name: LCSDA **Instrument Name:** LM27631 **File Name:** 18NOV07D-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	80694.8		A	13C4-PFBA	3.25	602358.0	0.134	1.568
PFPeA	3.75	1.000	88908.0		A	13C5-PFPeA	3.75	640601.5	0.139	1.650
PFBS	3.80	1.000	44349.7		A	13C3-PFBS	3.80	335681.8	0.132	1.332
4:2-FTS	4.11	1.000	32701.6		A	13C2-4:2-FTS	4.11	44517.5	0.735	3.950
PFHxA	4.15	1.000	102075.9		A	13C5-PFHxA	4.15	549252.4	0.186	1.594
PFPeS	4.17	1.100	24375.5		A	13C3-PFBS	3.80	335681.8	0.073	1.432
PFHxS	4.54	1.000	36956.8		A	13C3-PFHxS	4.54	258647.1	0.143	1.449
PFHpA	4.54	1.000	102237.8		A	13C4-PFHpA	4.54	419500.8	0.244	1.639
6:2-FTS	4.90	1.000	24918.3		A	13C2-6:2-FTS	4.90	29008.2	0.859	4.286
PFHpS	4.90	1.080	33529.9		A	13C3-PFHxS	4.54	258647.1	0.130	1.356
PFOA	4.91	1.000	116400.2		A	13C8-PFOA	4.91	760240.8	0.153	1.724
PFOS	5.24	1.000	32818.4		M	13C8-PFOS	5.24	226181.7	0.145	1.505
PFNA	5.25	1.000	85945.4		A	13C9-PFNA	5.25	403692.8	0.213	1.591
PFNS	5.53	1.060	17505.3		A	13C8-PFOS	5.24	226181.7	0.077	1.227
PFDA	5.55	1.000	68655.3		A	13C6-PFDA	5.55	476396.2	0.144	1.586
8:2-FTS	5.56	1.000	19233.3		A	13C2-8:2-FTS	5.55	21649.8	0.888	4.005
PFOSA	5.64	1.000	82098.0		A	13C8-PFOSA	5.64	598347.5	0.137	1.483
NMeFOSAA	5.70	1.000	7928.5		M	d3-NMeFOSAA	5.69	63310.4	0.125	1.289
PFDS	5.79	1.110	17149.3		A	13C8-PFOS	5.24	226181.7	0.076	1.449
PFUnDA	5.82	1.000	61560.5		A	13C7-PFUnDA	5.81	209262.3	0.294	1.687
NEtFOSAA	5.83	1.000	7820.8		M	d5-NEtFOSAA	5.83	50983.3	0.153	1.318
PFDoDA	6.04	1.000	62639.7		A	13C2-PFDoDA	6.04	461231.7	0.136	1.472
10:2-FTS	6.06	1.090	12286.1		M	13C2-8:2-FTS	5.55	21649.8	0.567	3.534
NMePFOSAE	6.09	1.000	48747.2		A	d7-NMePFOSAE	6.09	277030.8	0.176	1.577
NMePFOSA	6.10	1.000	9061.1		A	d3-NMePFOSA	6.10	69846.6	0.130	1.452
PFDoS	6.22	1.190	7218.5		A	13C8-PFOS	5.24	226181.7	0.032	1.232
NEtPFOSAE	6.25	1.000	51520.8		A	d9-NEtPFOSAE	6.24	230073.7	0.224	1.436
NEtPFOSA	6.27	1.000	7427.8		A	d5-NEtPFOSA	6.26	56251.6	0.132	1.163
PFTrDA	6.24	1.030	54877.3		A	13C2-PFDoDA	6.04	461231.7	0.119	1.501
PFTeDA	6.42	1.000	40196.8		A	13C2-PFTeDA	6.42	311877.3	0.129	1.514
PFHxDA	6.73	1.050	19040.7		A	13C2-PFTeDA	6.42	311877.3	0.061	1.516
PFODA	6.99	1.090	9759.1		A	13C2-PFTeDA	6.42	311877.3	0.031	0.897

Total Ion Chromatogram

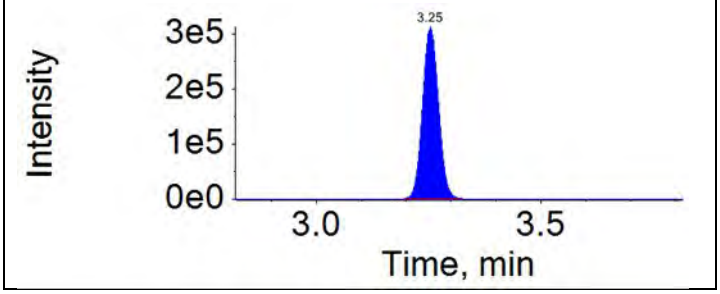


APPROVED
By MCD at 4:42 pm, 11/8/18

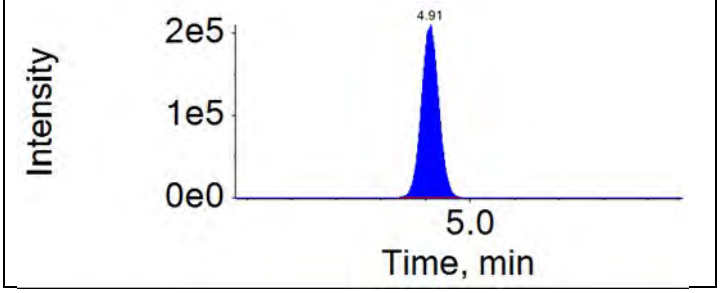
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

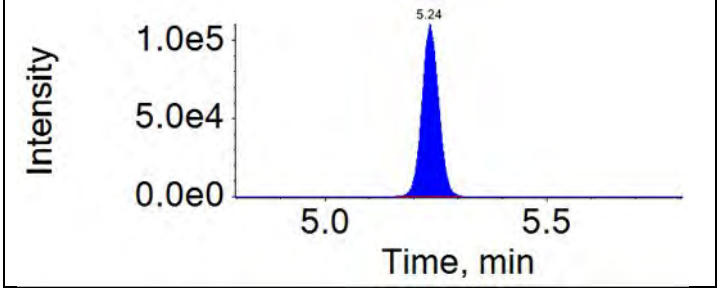
Injection Standard: 13C3-PFBA
216.0 / 172.0



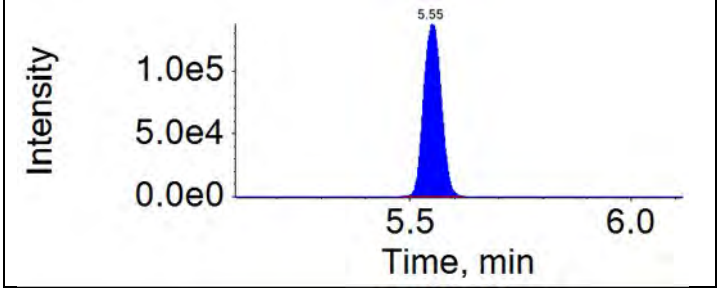
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

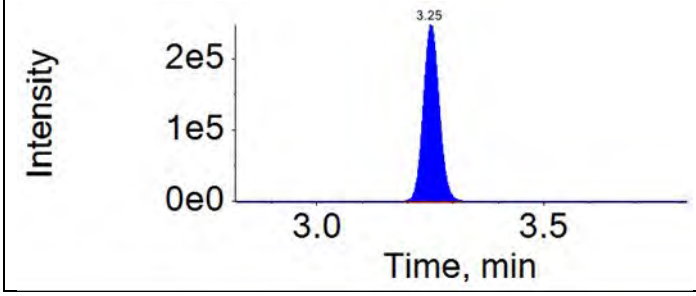


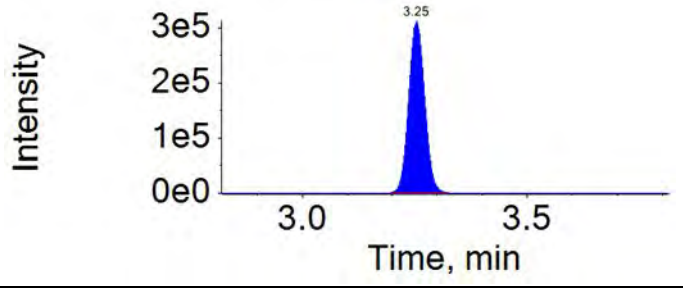
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

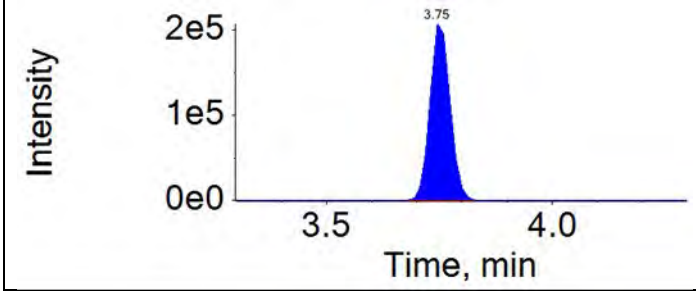
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

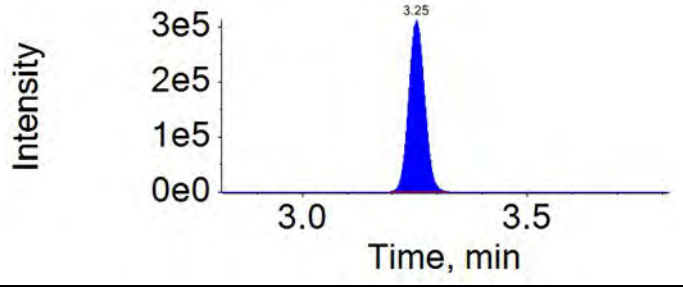
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



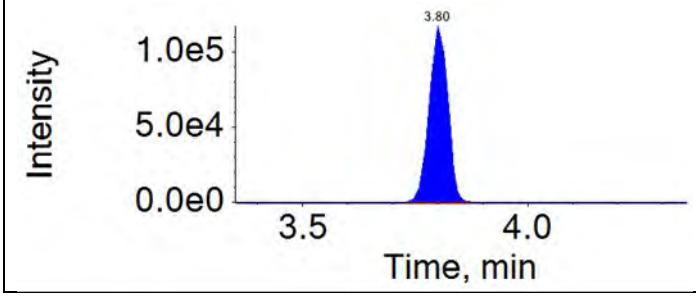


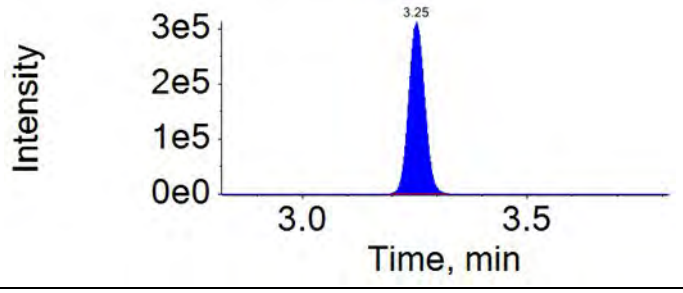
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



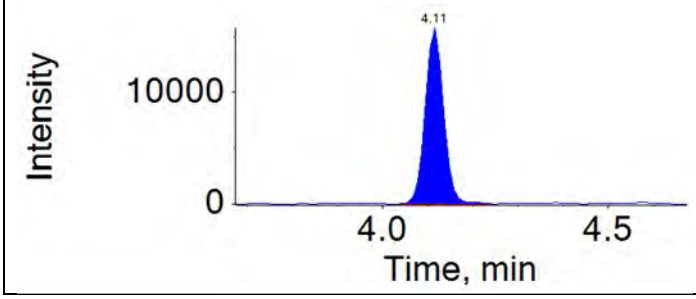


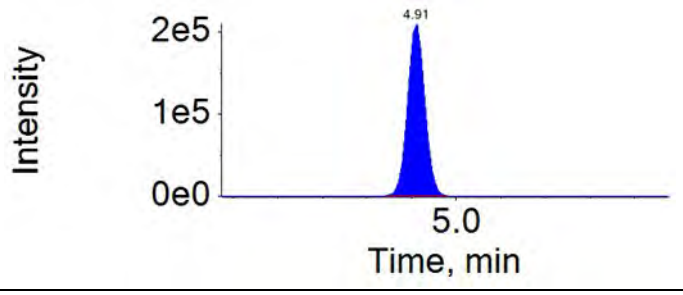
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



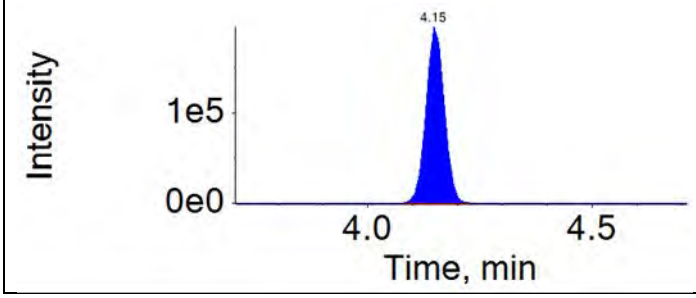


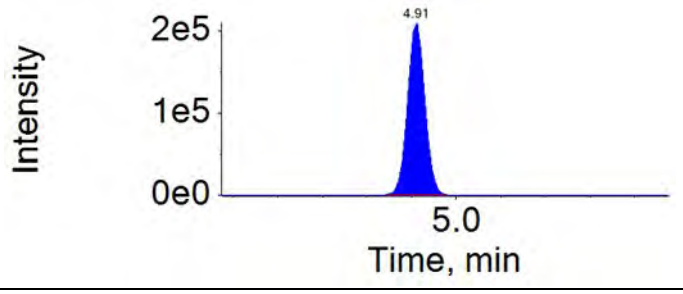
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

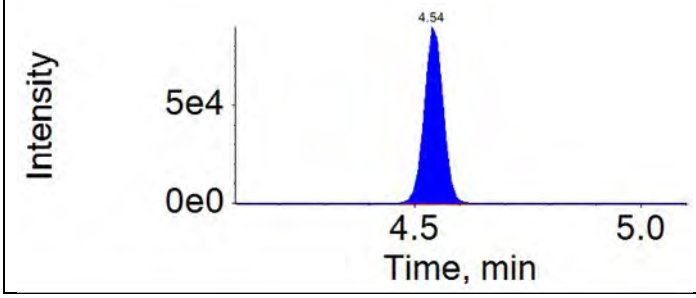
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

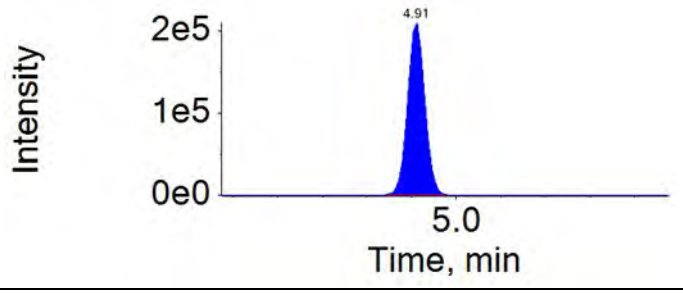
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



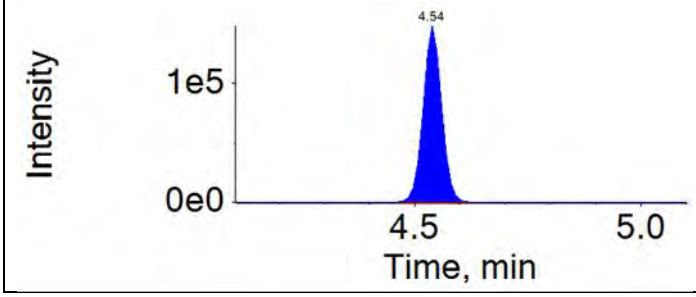


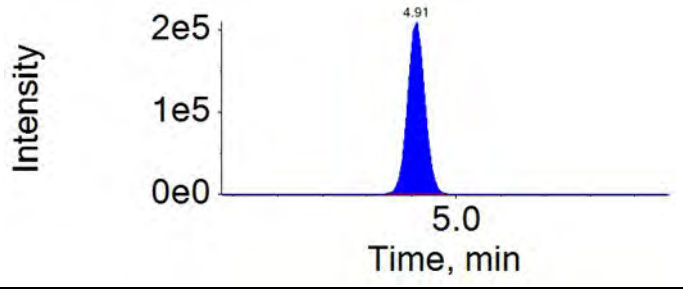
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



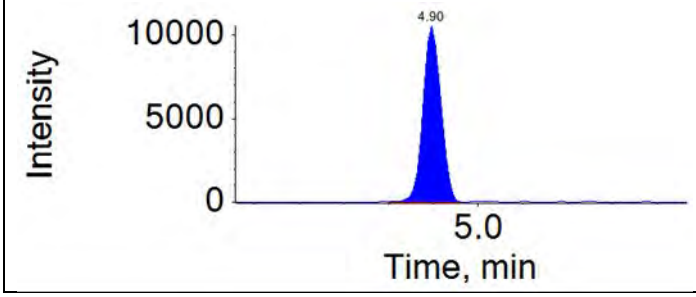


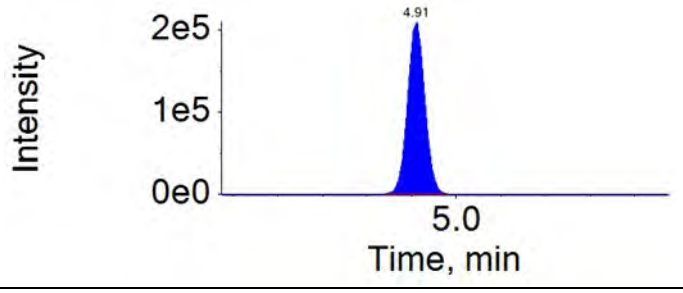
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

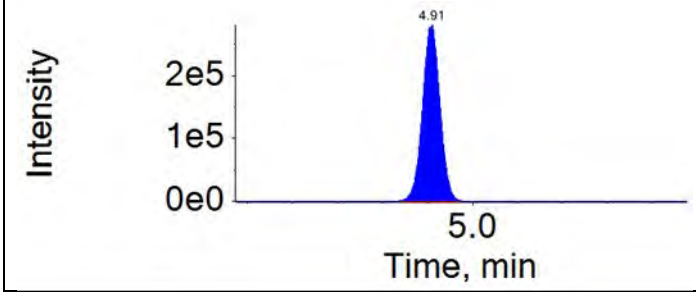
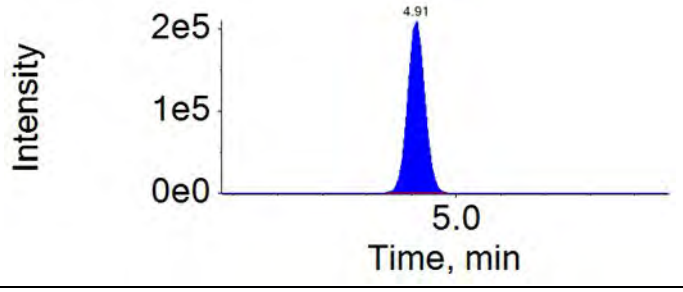


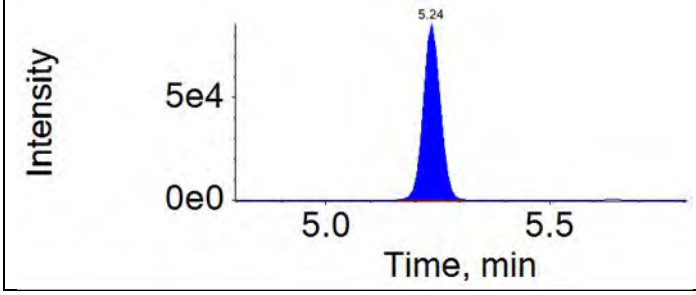
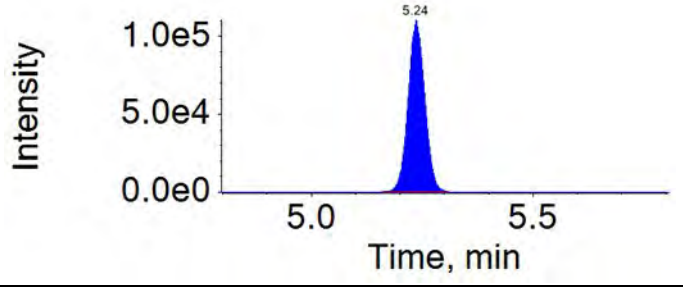


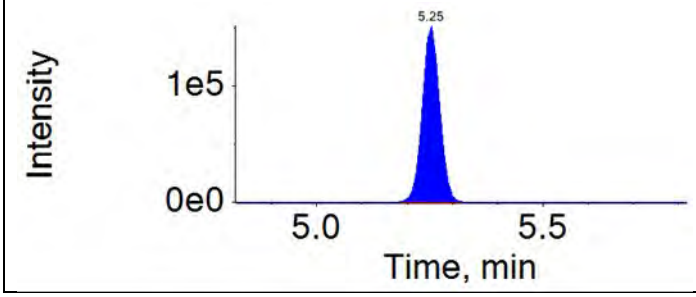
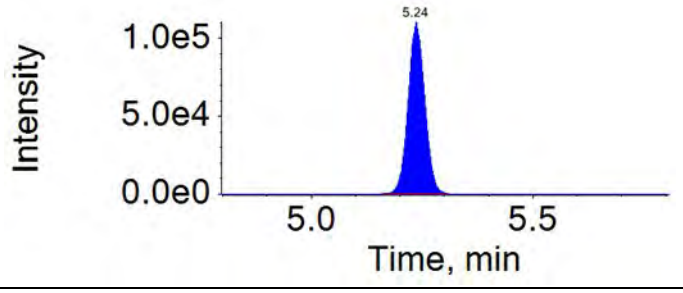
APPROVED
By MCD at 4:42 pm, 11/8/18

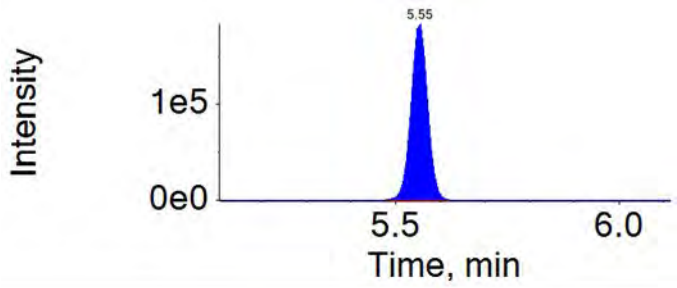
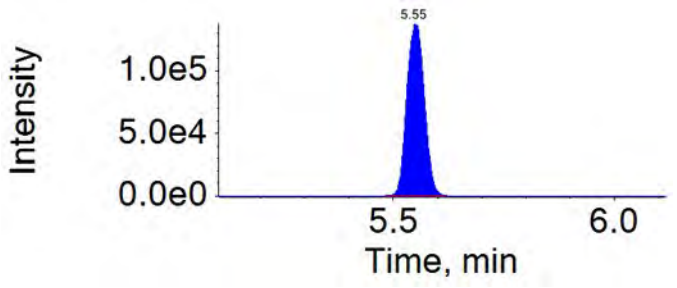
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

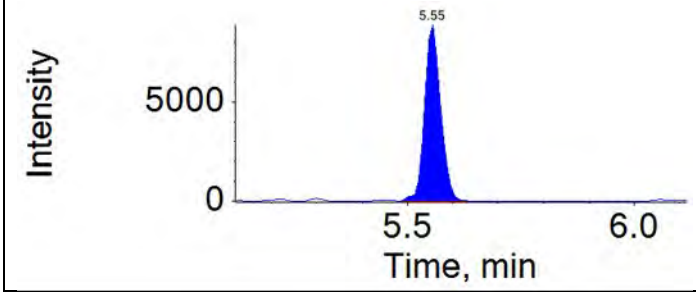
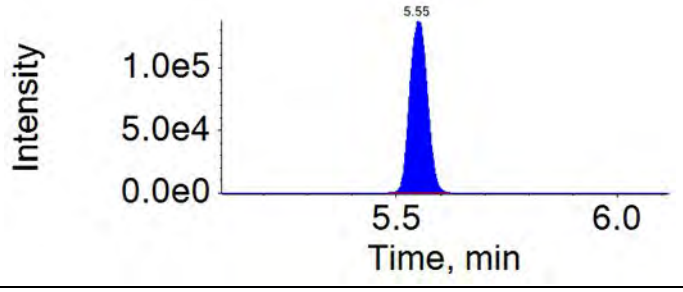
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

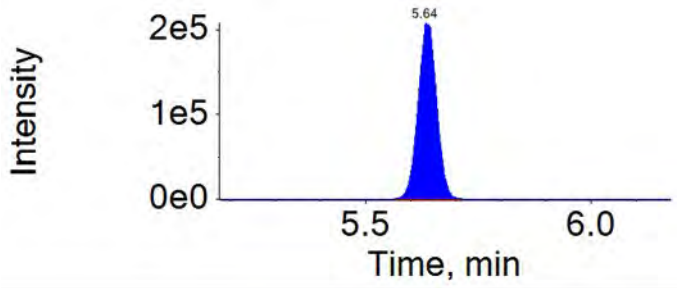
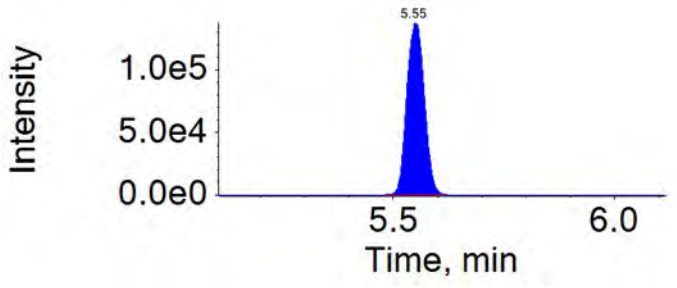
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

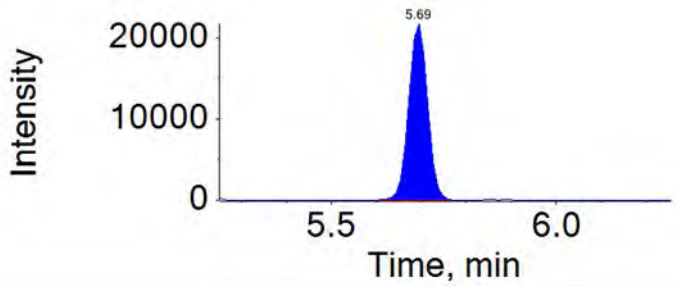
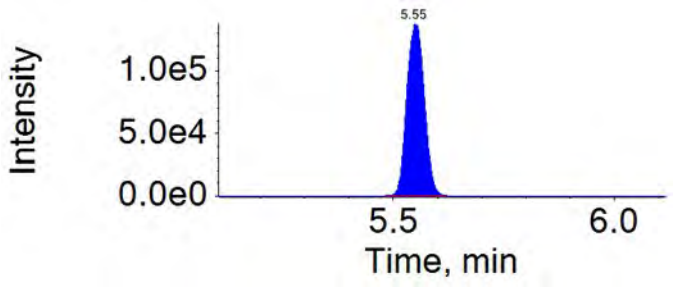
APPROVED
By MCD at 4:42 pm, 11/8/18

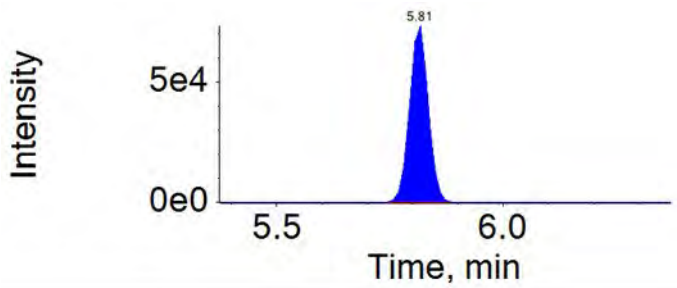
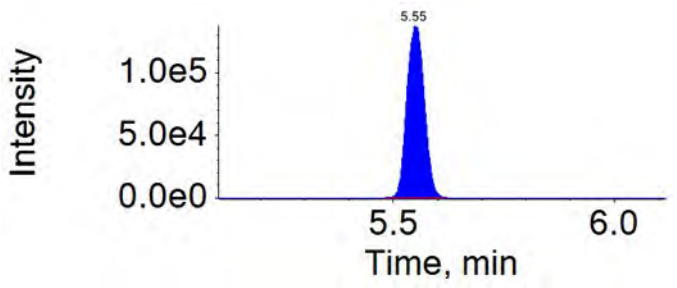
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

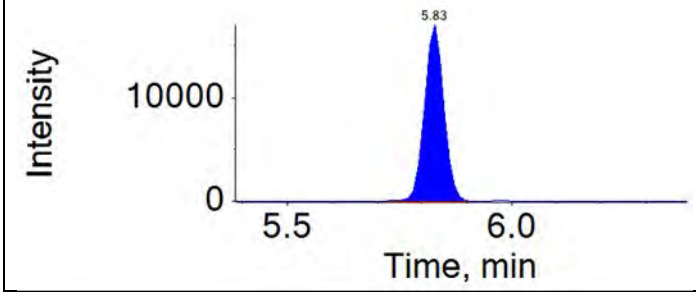
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

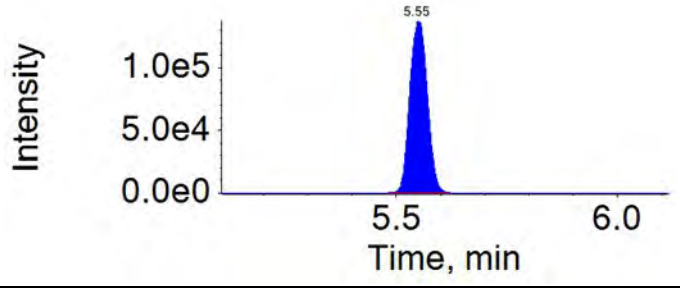
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

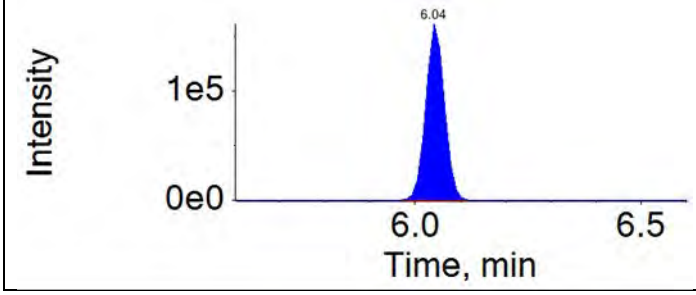
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

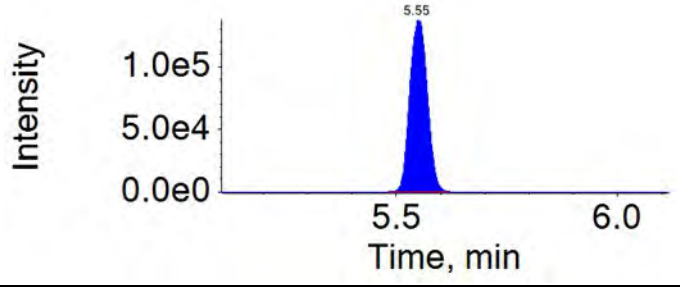
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



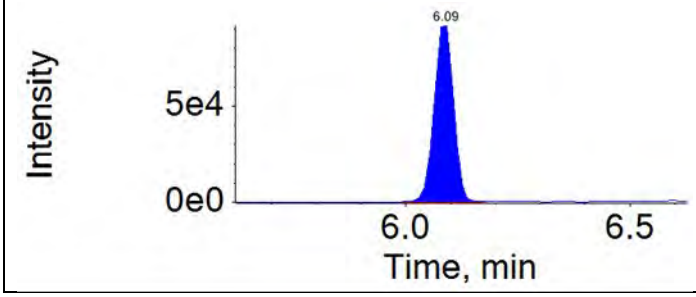


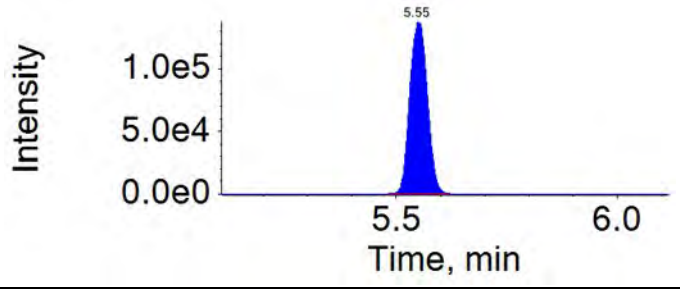
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



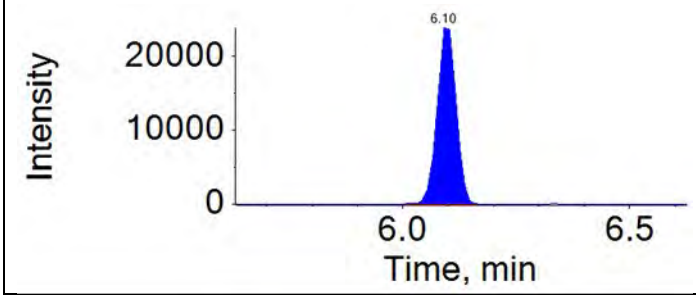


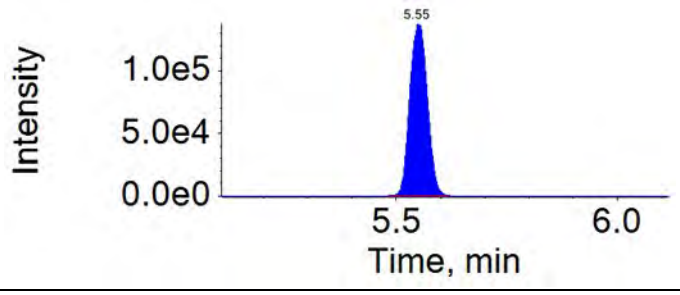
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



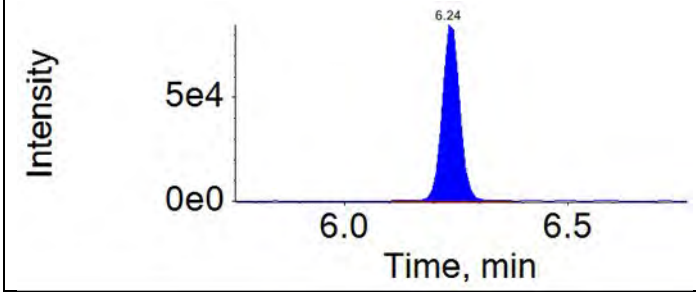


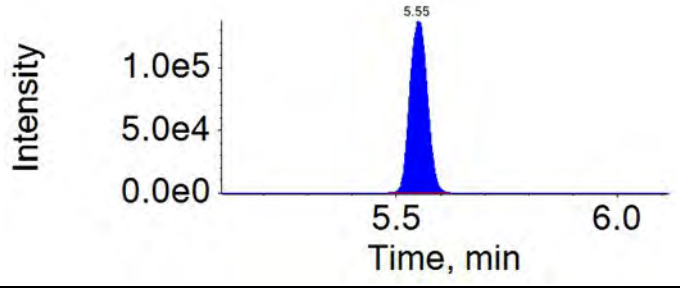
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

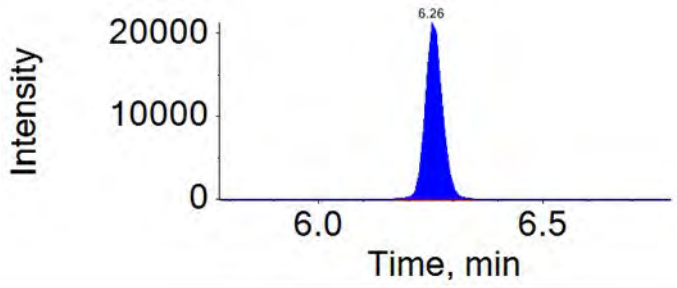
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

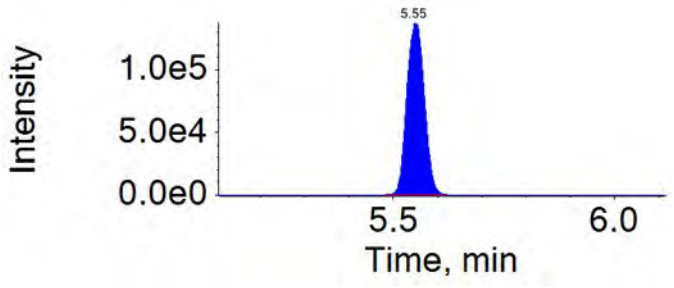
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



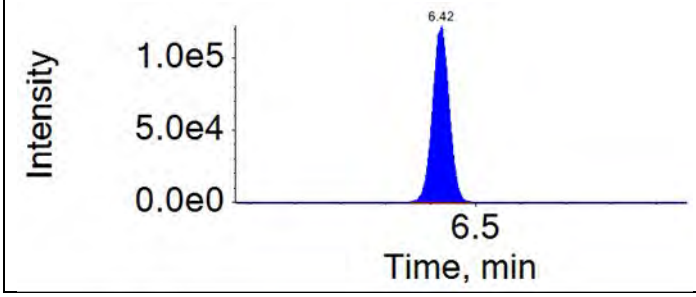


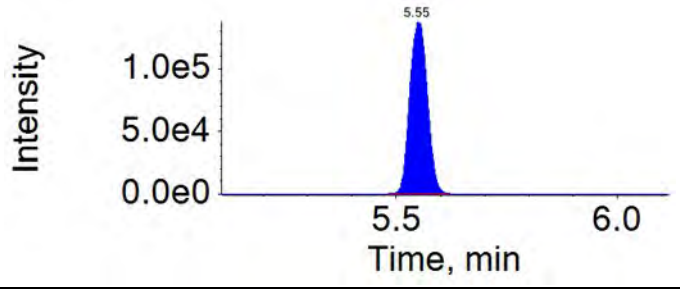
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

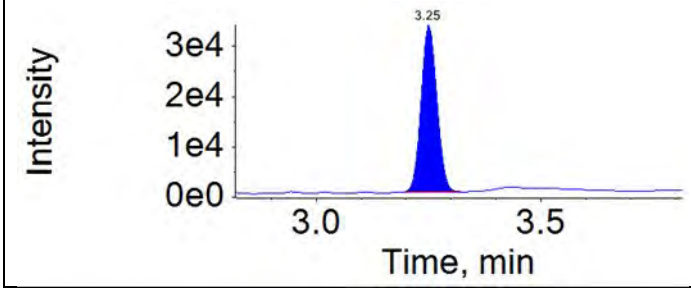
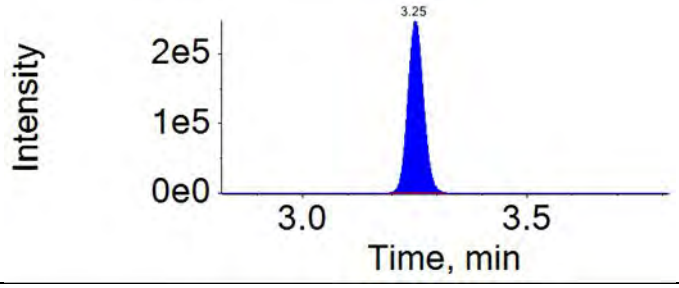


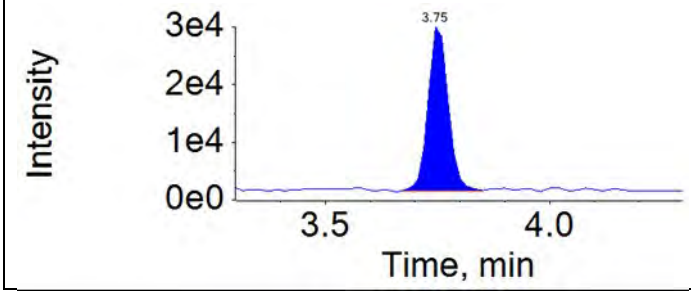
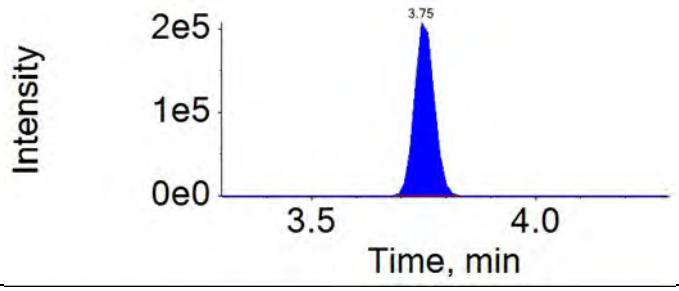


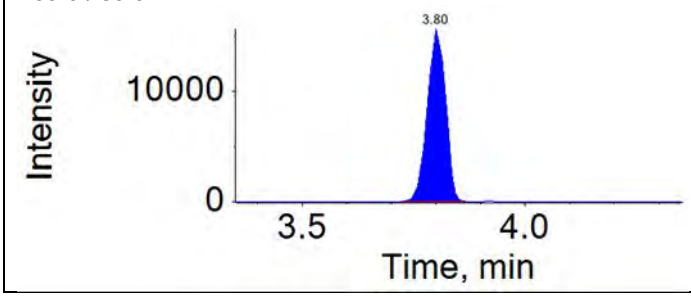
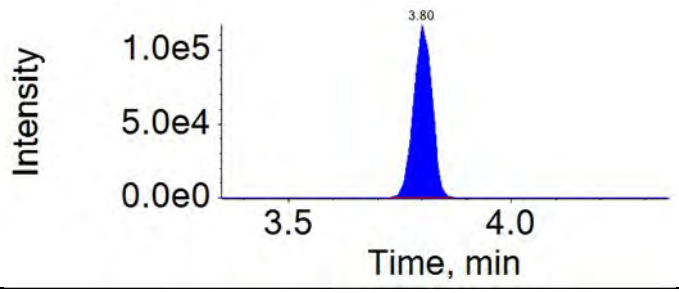
APPROVED
By MCD at 4:42 pm, 11/8/18

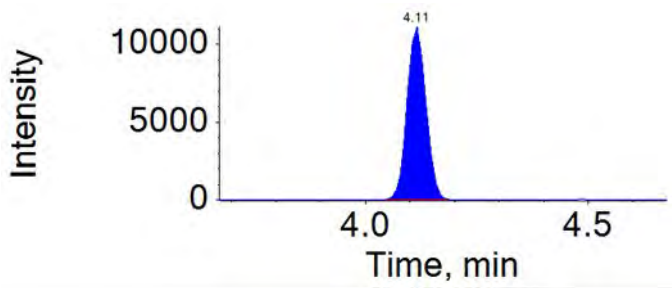
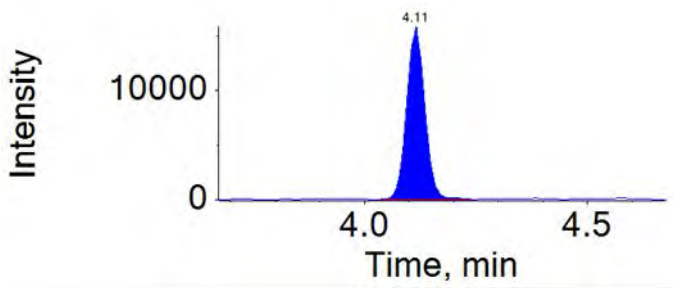
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

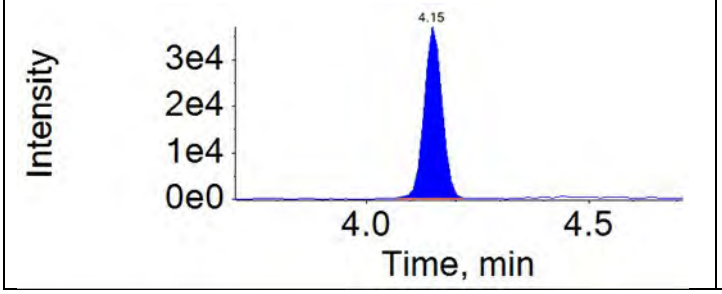
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

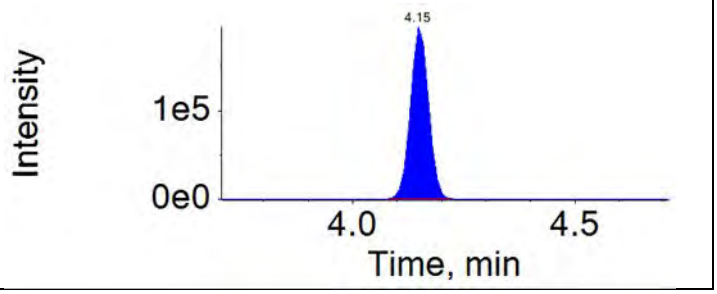
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

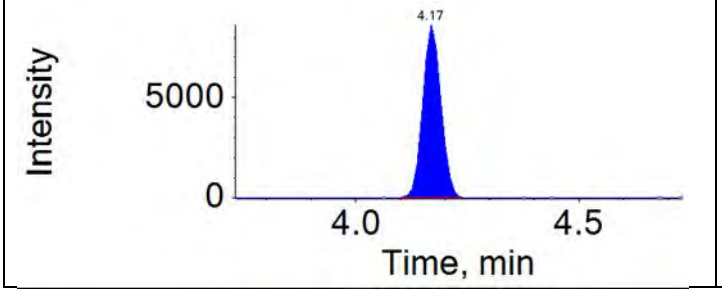
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

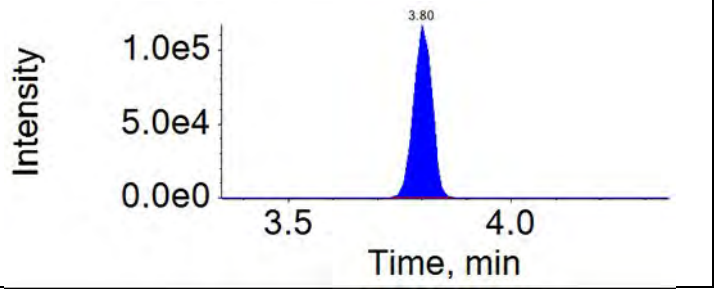
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



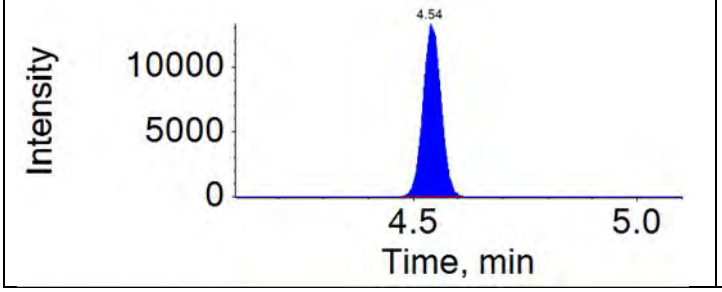


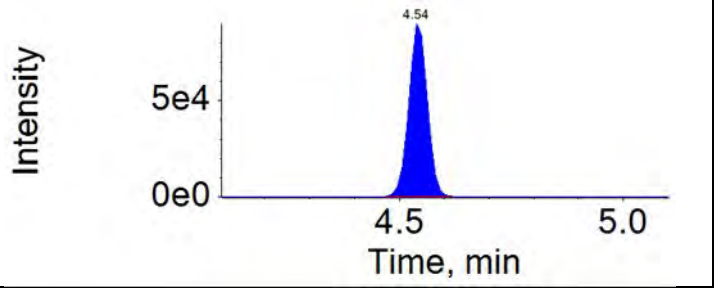
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



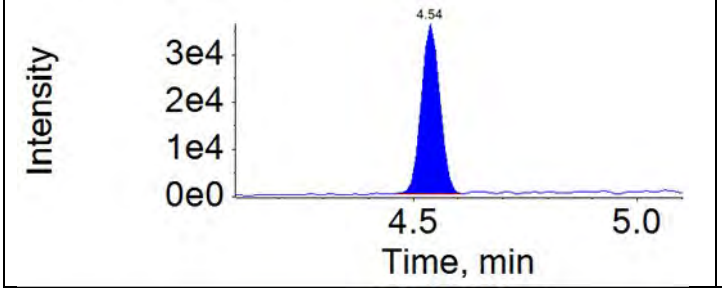


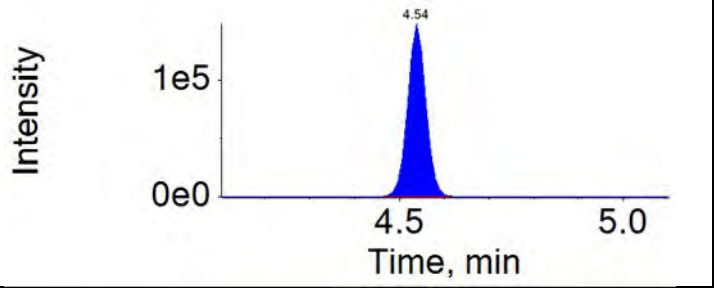
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

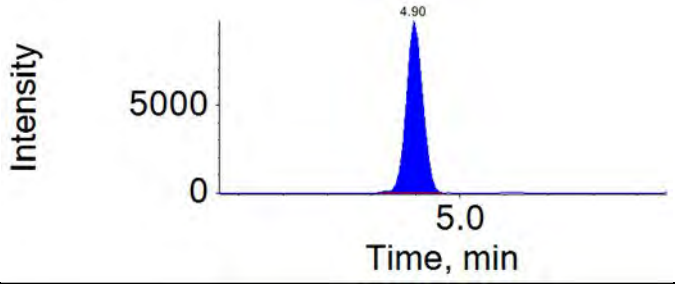
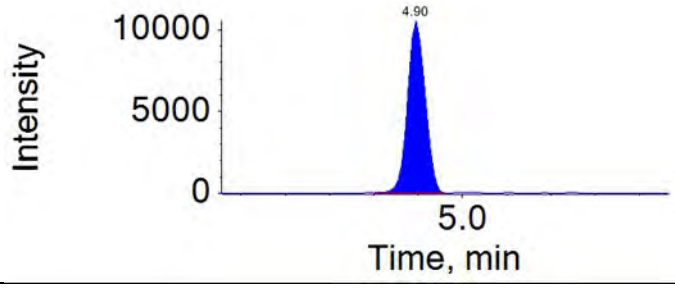


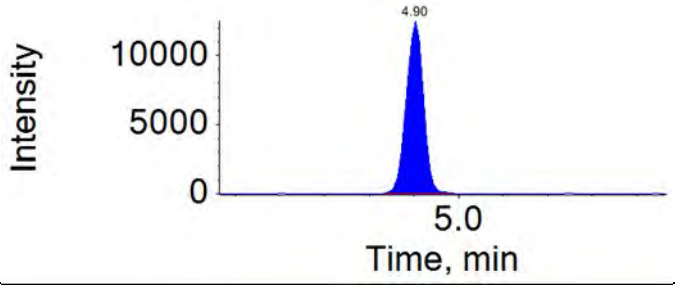
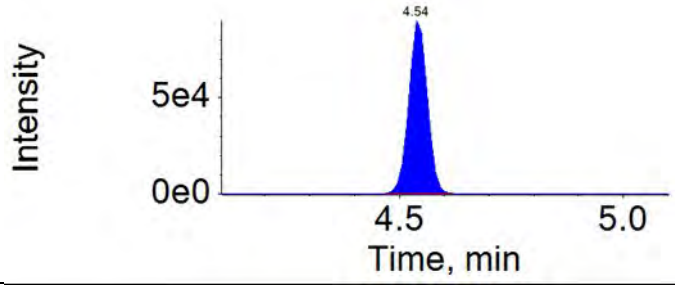


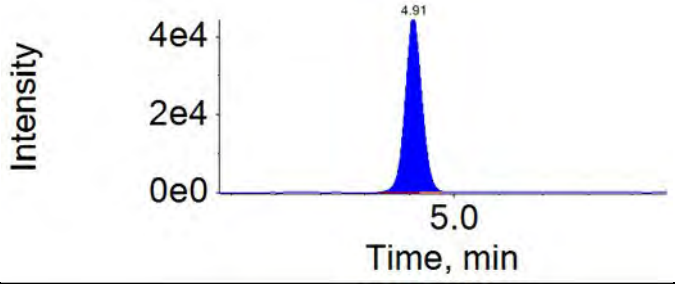
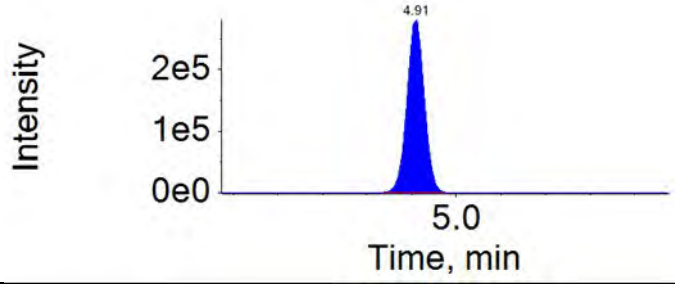
APPROVED
By MCD at 4:42 pm, 11/8/18

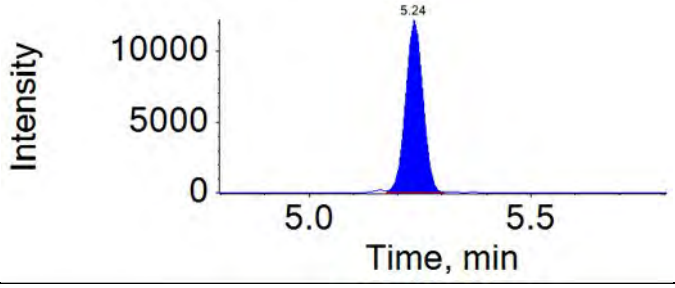
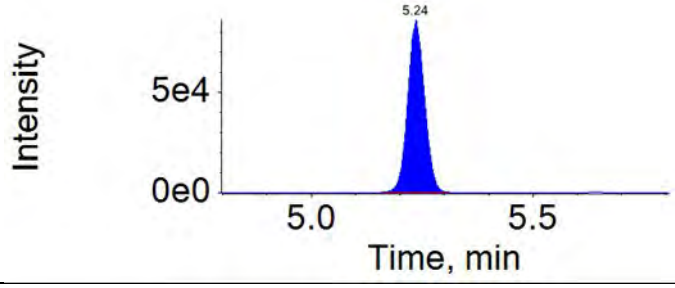
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

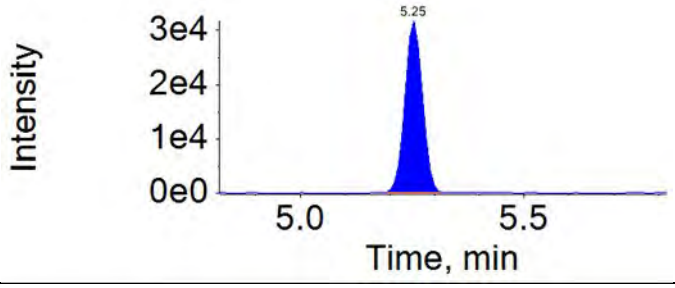
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

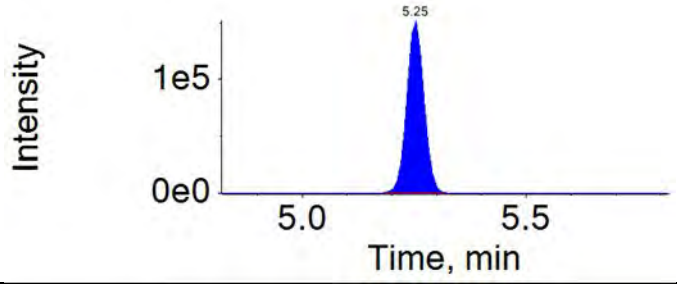
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

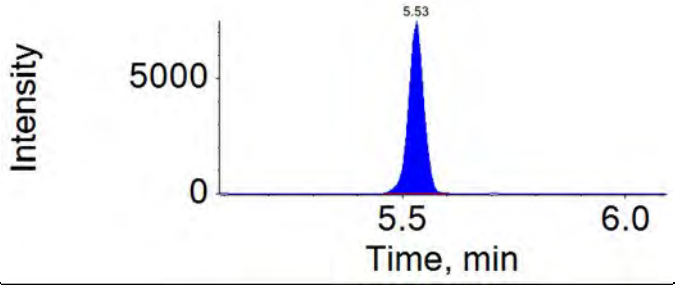
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

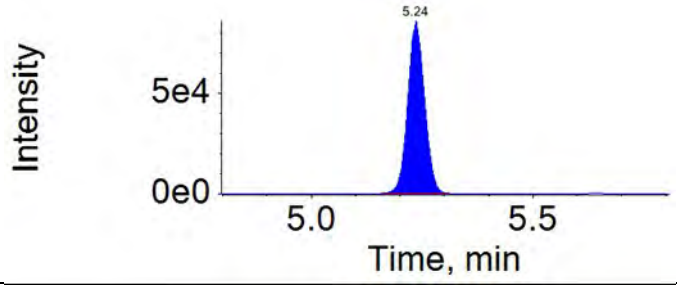
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



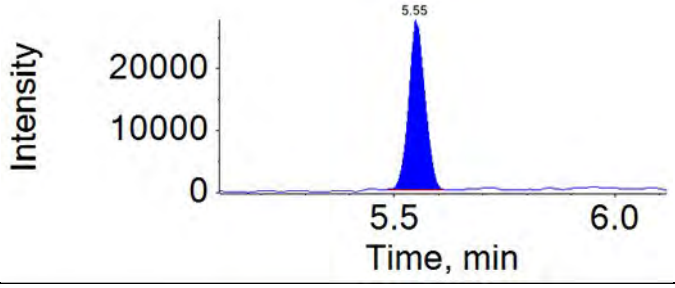


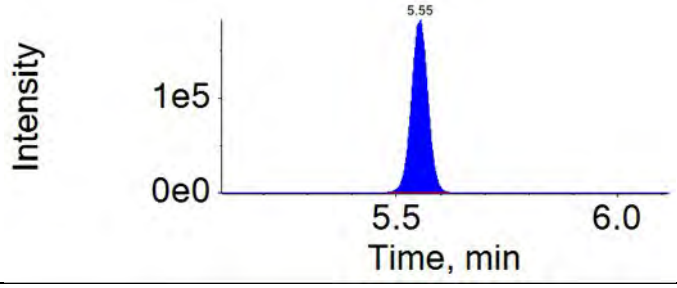
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



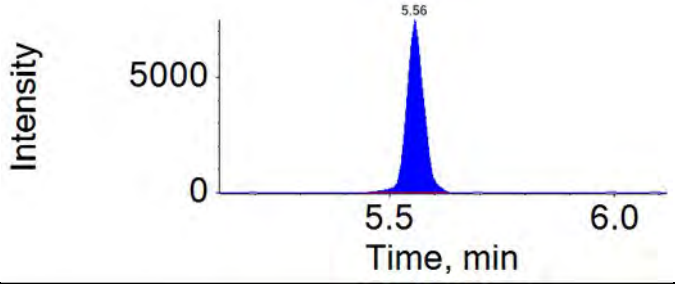


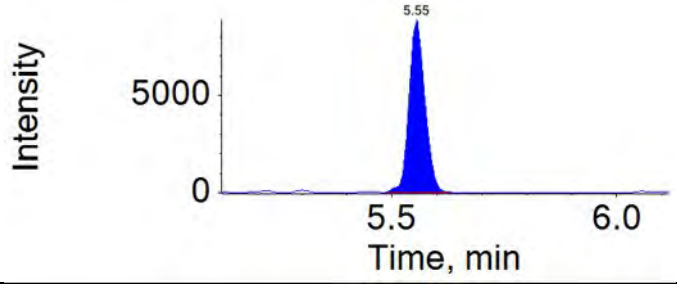
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

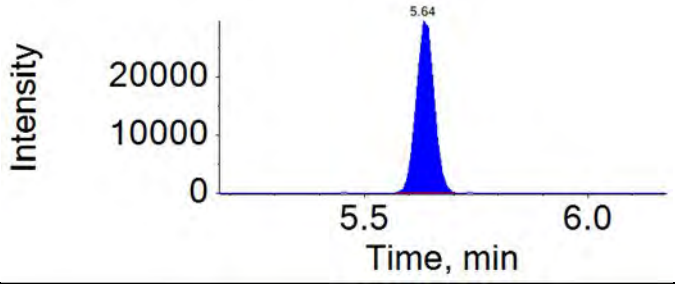
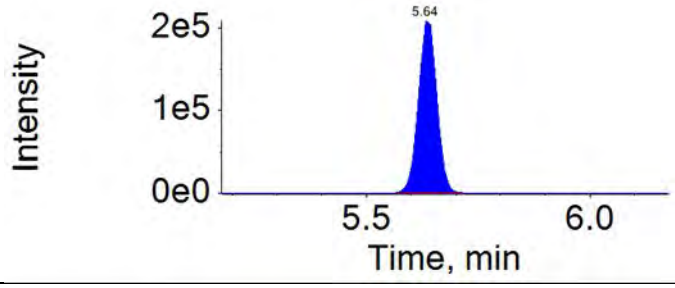


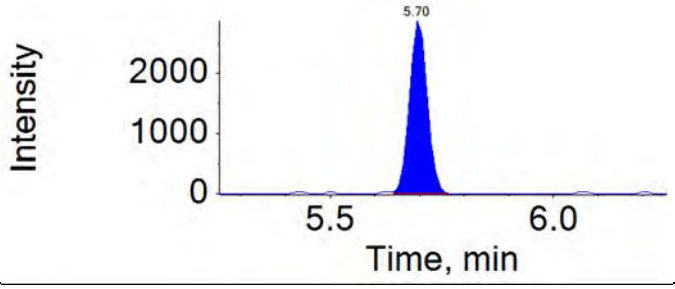
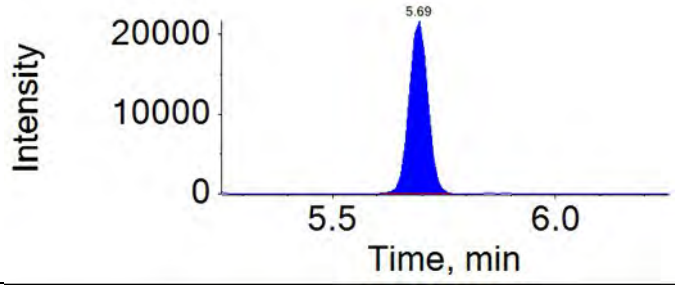


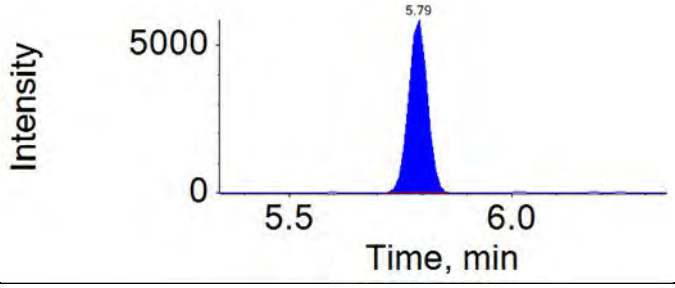
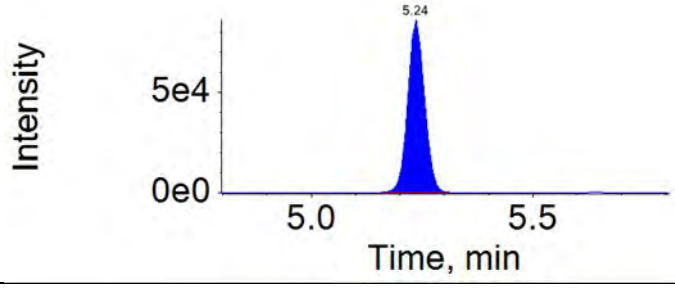
APPROVED
By MCD at 4:42 pm, 11/8/18

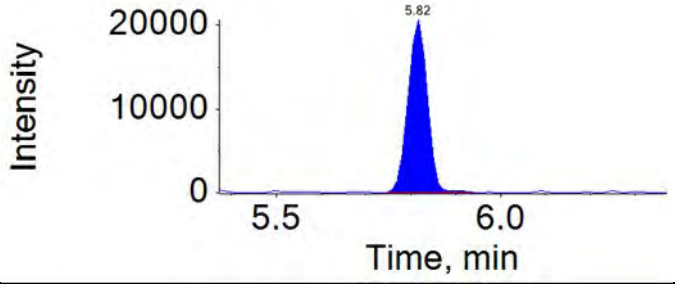
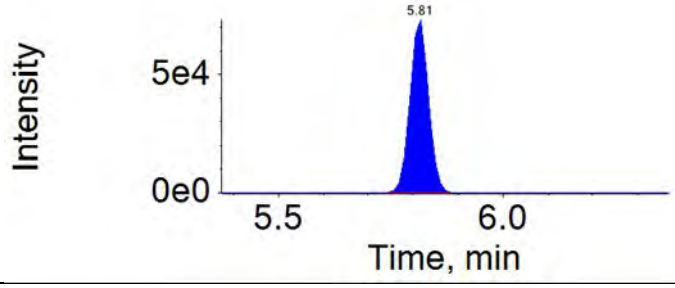
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

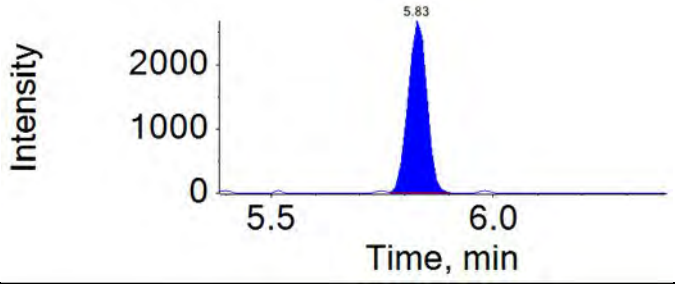
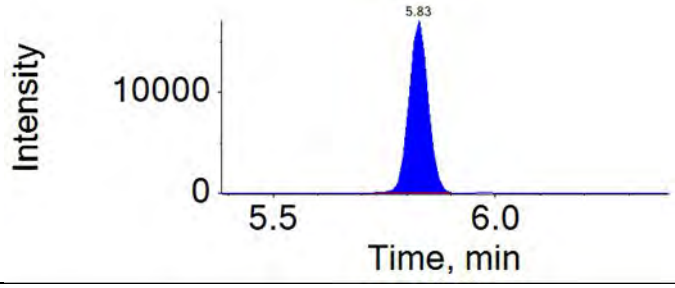
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

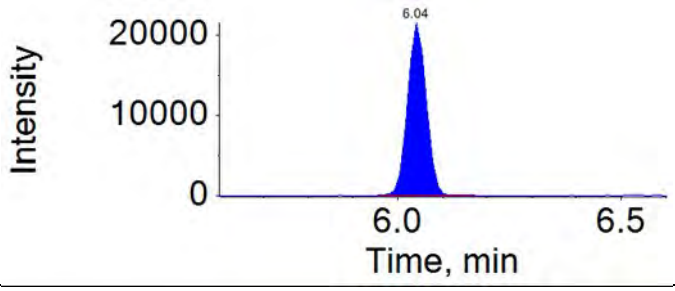
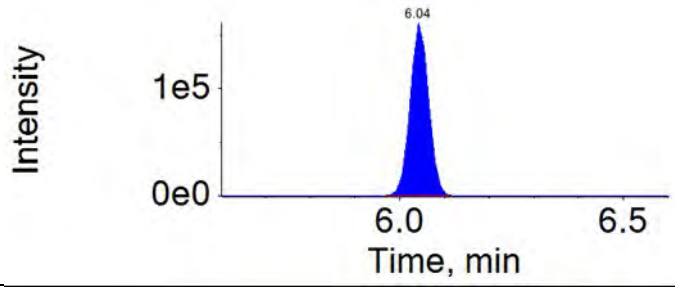
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

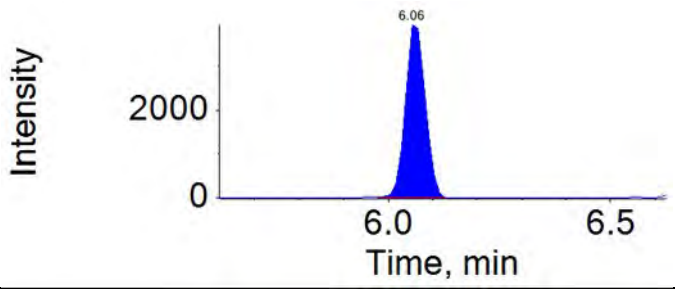
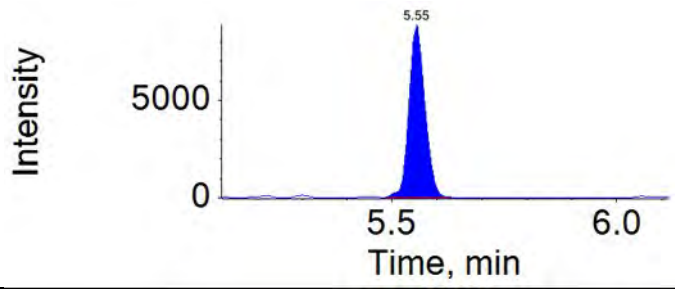
APPROVED
By MCD at 4:42 pm, 11/8/18

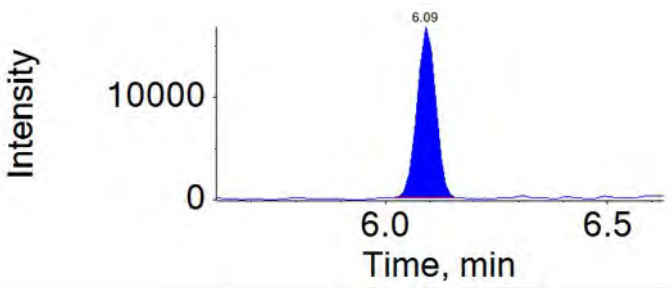
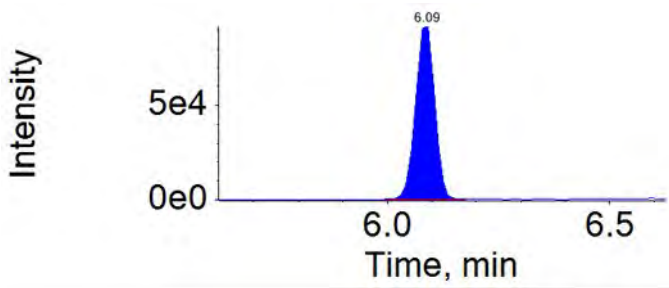
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

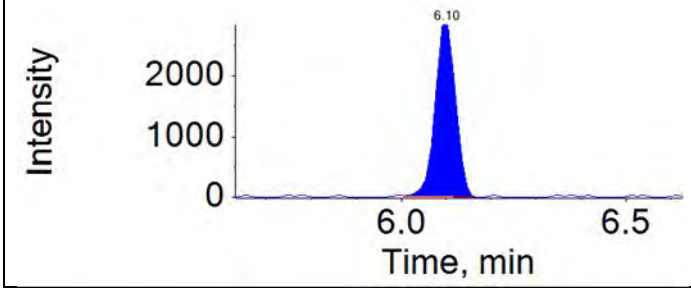
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

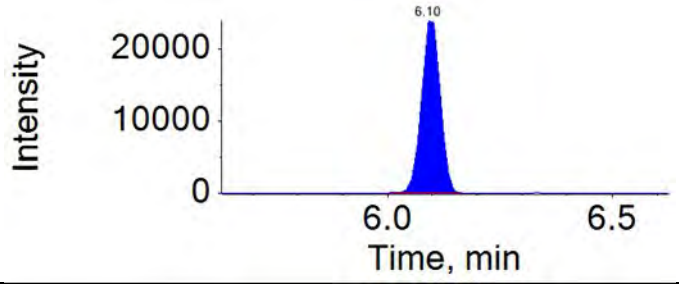
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

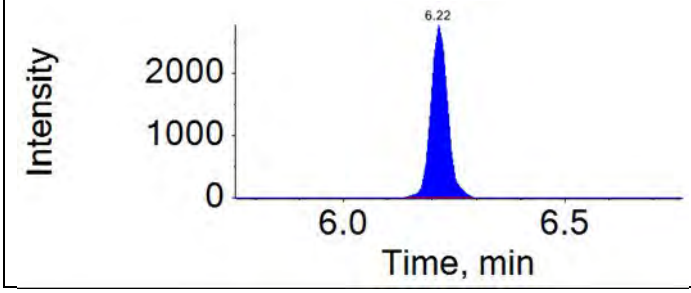
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

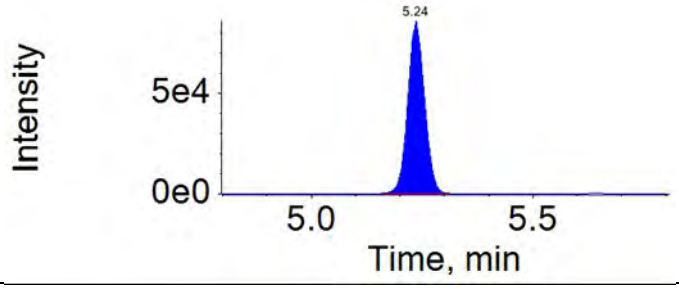
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



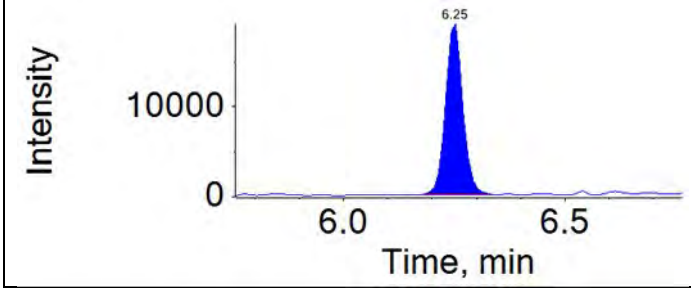


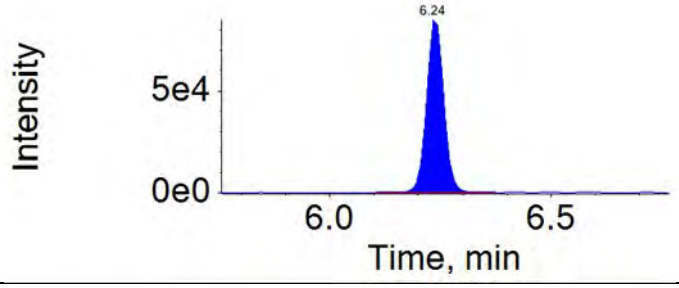
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



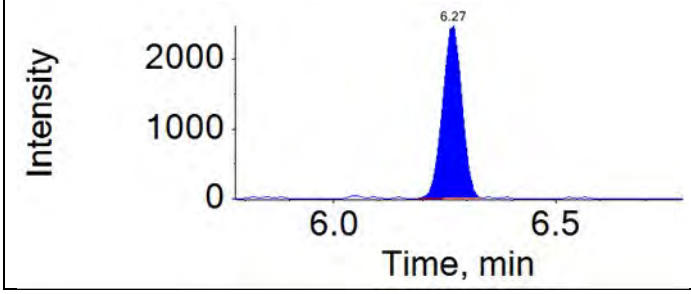


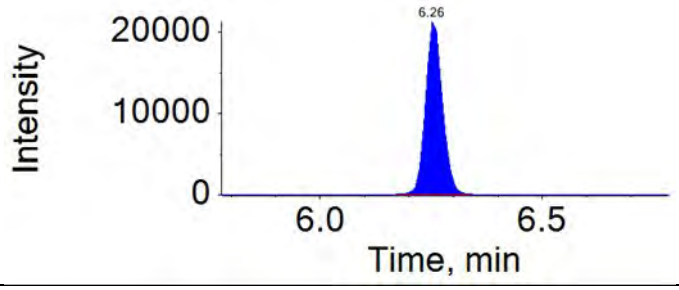
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

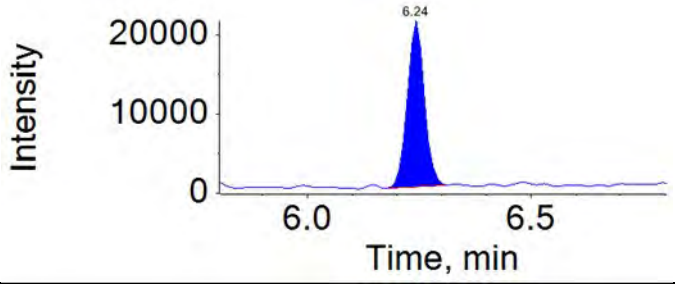
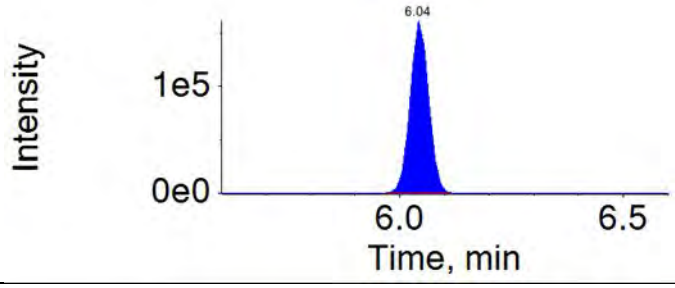


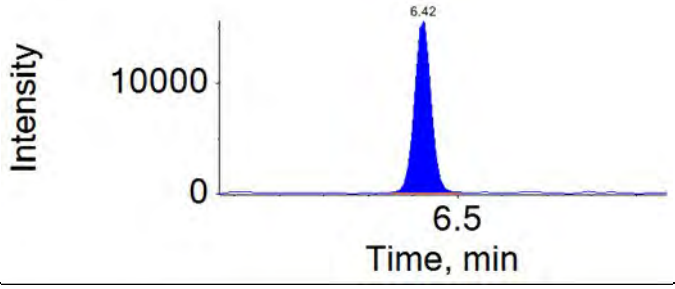
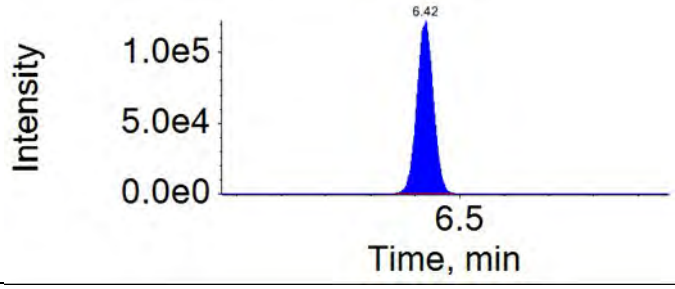


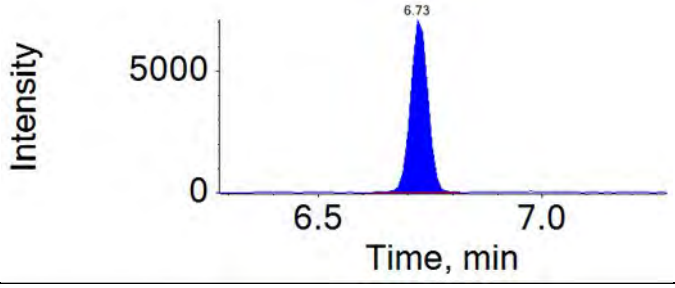
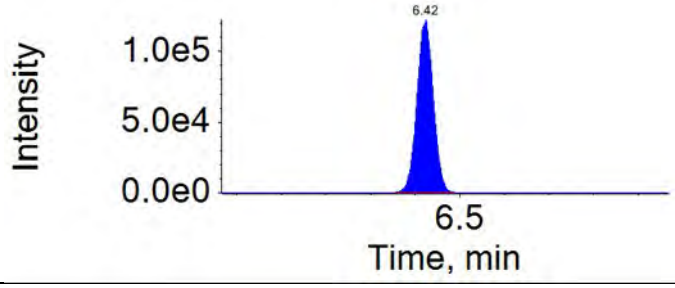
APPROVED
By MCD at 4:42 pm, 11/8/18

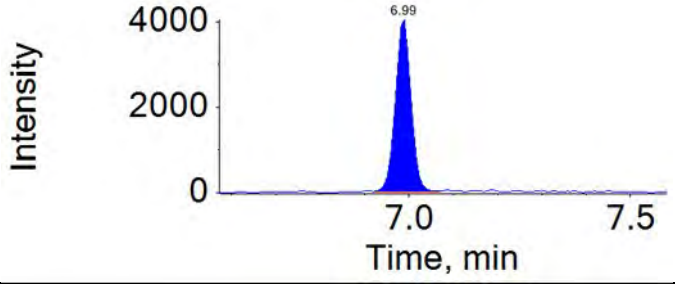
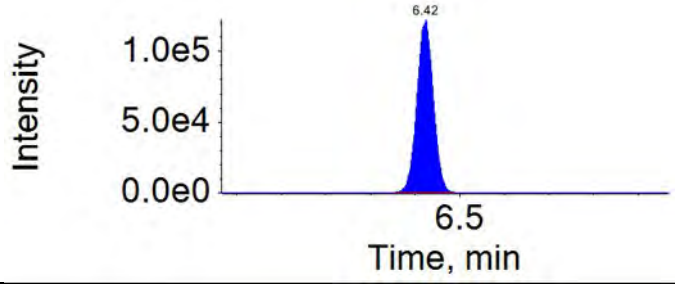
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

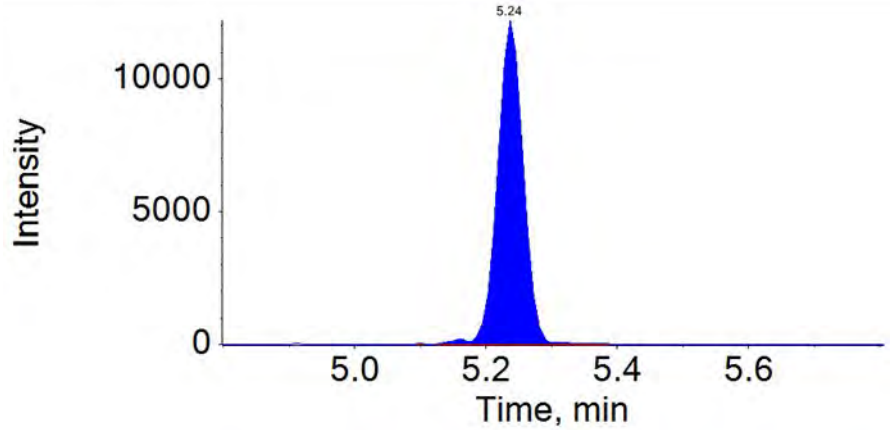
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

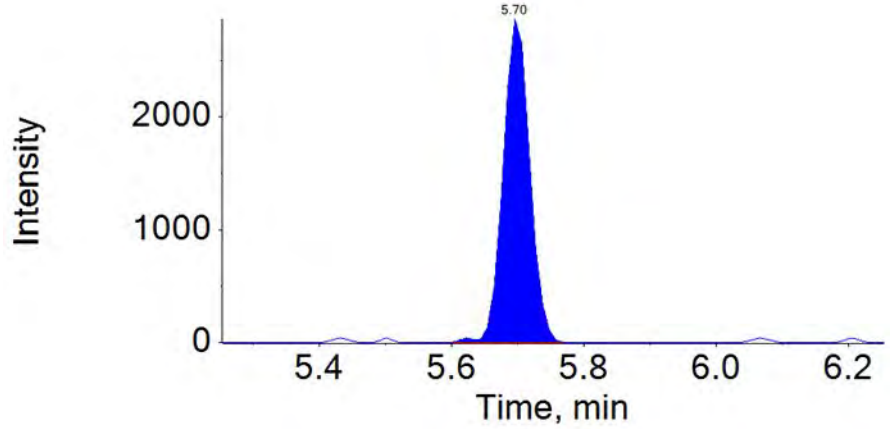
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
33469.9
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-16.wiff
Sample Name:
LCSDA



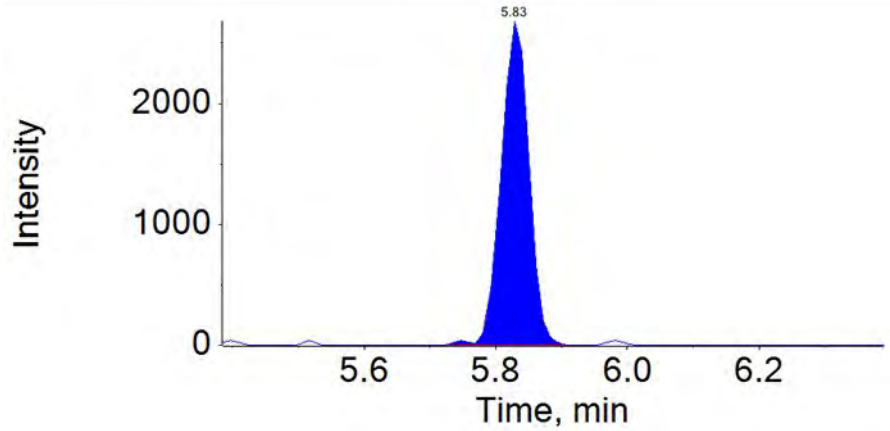
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
7992.6
Mass Range:
570.0 / 419.0
File Name:
18NOV07D-16.wiff
Sample Name:
LCSDA



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
7886.5
Mass Range:
584.0 / 419.0
File Name:
18NOV07D-16.wiff
Sample Name:
LCSDA

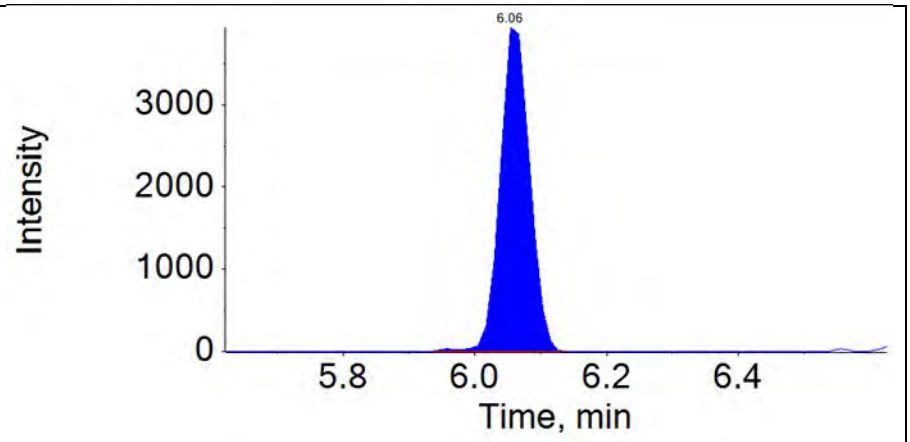


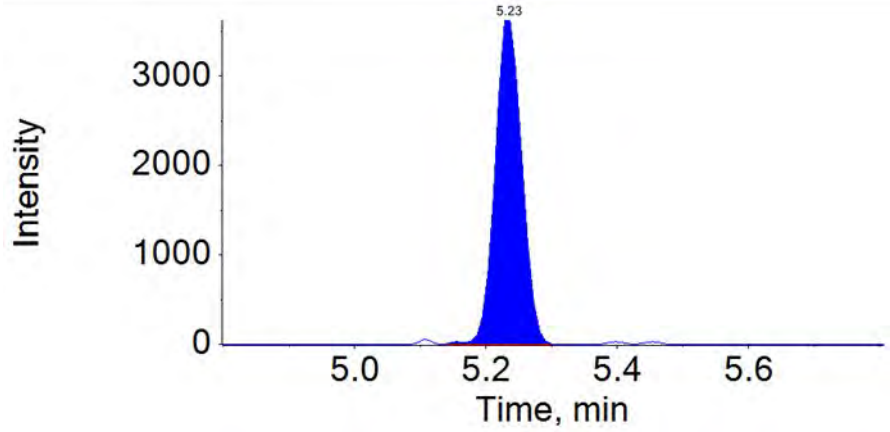
Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: 10:2-FTS **RT (min.):** 6.06 **Peak Area:** 12345.4 **Mass Range:** 627.0 / 607.0 **File Name:** 18NOV07D-16.wiff **Sample Name:** LCSDA	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.23 **Peak Area:** 10360.8 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV07D-16.wiff **Sample Name:** LCSDA	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

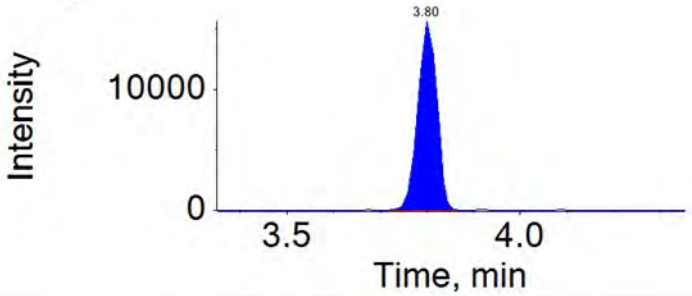
Sample Name: LCSDA **Instrument Name:** LM27631 **File Name:** 18NOV07D-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	44349.7	A	N/A	0.3782			
PFBS_2	3.80	1.00	16775.1	A	N/A	0.3782	6	50	
4:2-FTS	4.11	1.00	32701.6	A	N/A	0.5801			
4:2-FTS_2	4.11	1.00	18971.1	A	N/A	0.5801	-10	50	
PFHxA	4.15	1.00	102075.9	A	N/A	0.0120			
PFHxA_2	4.15	1.00	1225.1	A	N/A	0.0120	6	50	
PFPeS	4.17	1.10	24375.5	A	N/A	0.4415			
PFPeS_2	4.17	1.10	10763.0	A	N/A	0.4415	-19	50	
PFHxS	4.54	1.00	36956.8	A	N/A	0.3250			
PFHxS_2	4.54	1.00	12009.9	A	N/A	0.3250	-9	50	
PFHpA	4.54	1.00	102237.8	A	N/A	0.0563			
PFHpA_2	4.53	1.00	5755.7	A	N/A	0.0563	-2	50	
6:2-FTS	4.90	1.00	24918.3	A	N/A	0.6816			
6:2-FTS_2	4.90	1.00	16984.2	A	N/A	0.6816	0	50	
PFHpS	4.90	1.08	33529.9	A	N/A	0.3986			
PFHpS_2	4.90	1.08	13366.2	A	N/A	0.3986	1	50	
PFOA	4.91	1.00	116400.2	A	N/A	0.0528			
PFOA_2	4.91	1.00	6146.0	A	N/A	0.0528	-17	50	
PFOS	5.24	1.00	32818.4	M	N/A	0.3148			
PFOS_2	5.23	1.00	10331.9	M	N/A	0.3148	-11	50	
PFNA	5.25	1.00	85945.4	A	N/A	0.0223			
PFNA_2	5.25	1.00	1919.4	A	N/A	0.0223	9	50	
PFNS	5.53	1.06	17505.3	A	N/A	0.5491			
PFNS_2	5.53	1.06	9612.2	A	N/A	0.5491	12	50	
PFDA	5.55	1.00	68655.3	A	N/A	0.0061			
PFDA_2	5.55	1.00	418.7	A	N/A	0.0061	12	50	
8:2-FTS	5.56	1.00	19233.3	A	N/A	0.6292			
8:2-FTS_2	5.56	1.00	12101.6	A	N/A	0.6292	1	50	
NMeFOSAA	5.70	1.00	7928.5	M	N/A	0.2277			
NMeFOSAA_2	5.70	1.00	1805.4	A	N/A	0.2277	5	50	
PFDS	5.79	1.11	17149.3	A	N/A	0.4897			
PFDS_2	5.79	1.11	8398.0	A	N/A	0.4897	7	50	
PFUnDA	5.82	1.00	61560.5	A	N/A	0.0047			
PFUnDA_2	5.80	1.00	288.4	A	N/A	0.0047	54	50	OOS
NEtFOSAA	5.83	1.00	7820.8	M	N/A	0.7619			
NEtFOSAA_2	5.83	1.00	5958.8	A	N/A	0.7619	26	50	
PFDoDA	6.04	1.00	62639.7	A	N/A	0.0170			
PFDoDA_2	6.04	1.00	1065.2	A	N/A	0.0170	62	50	OOS
10:2-FTS	6.06	1.09	12286.1	M	N/A	0.6905			
10:2-FTS_2	6.06	1.09	8484.0	A	N/A	0.6905	-3	50	
PFTrDA	6.24	1.03	54877.3	A	N/A	0.0099			
PFTrDA_2	6.25	1.03	541.7	A	N/A	0.0099	3	50	
PFTeDA	6.42	1.00	40196.8	A	N/A	0.0063			
PFTeDA_2	6.41	1.00	252.1	A	N/A	0.0063	16	50	
PFHxDA	6.73	1.05	19040.7	A	N/A	0.0708			
PFHxDA_2	6.72	1.05	1347.9	A	N/A	0.0708	20	50	
PFODA	6.99	1.09	9759.1	A	N/A	0.0260			
PFODA_2	6.99	1.09	253.7	A	N/A	0.0260	2	50	

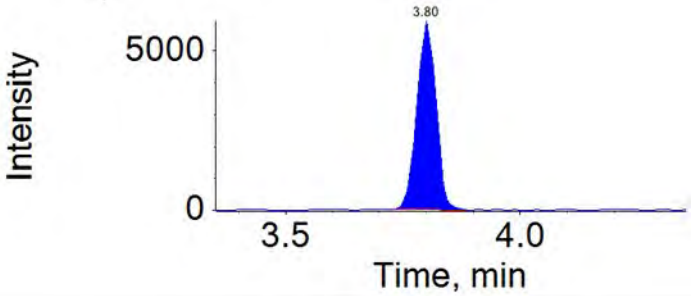
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

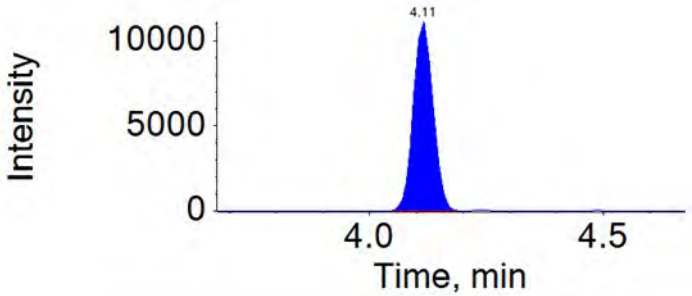
Component: PFBS
Primary Mass: 299.0 / 80.0



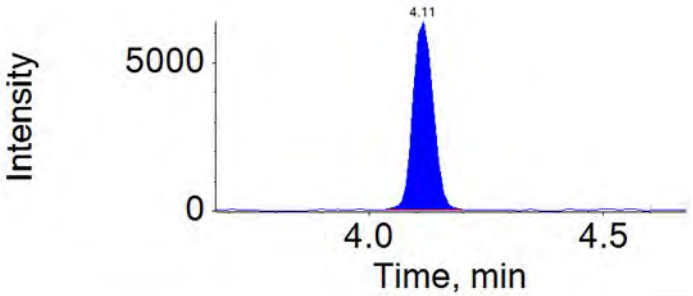
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



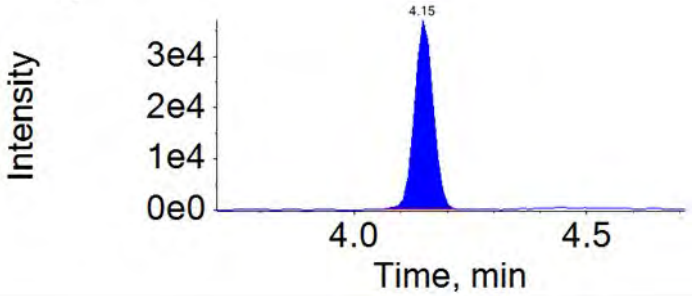
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



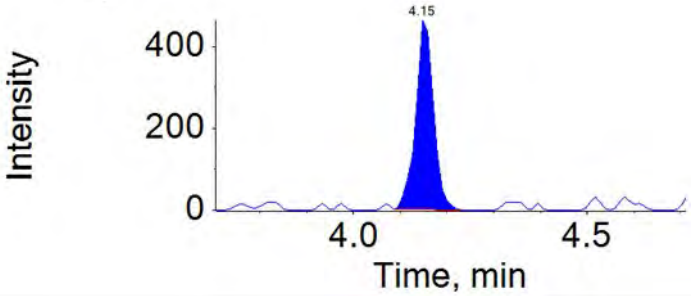
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



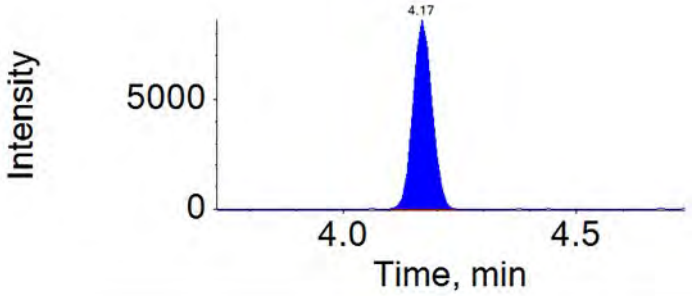
Component: PFHxA
Primary Mass: 313.0 / 269.0



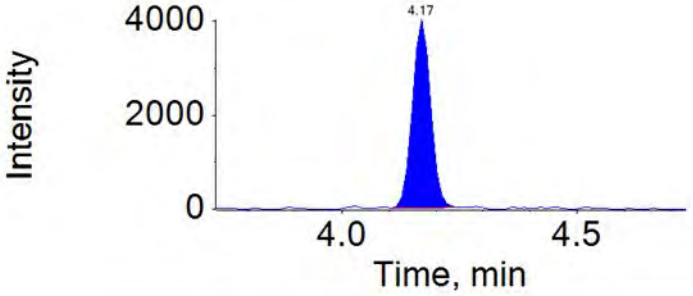
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



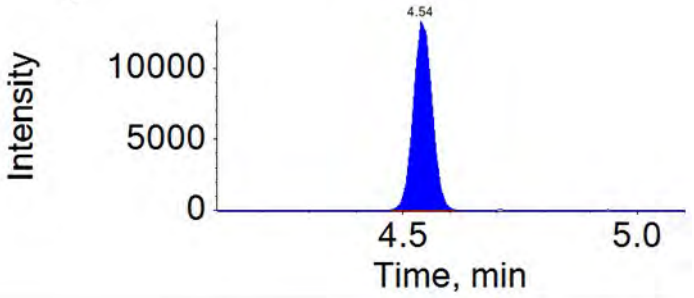
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



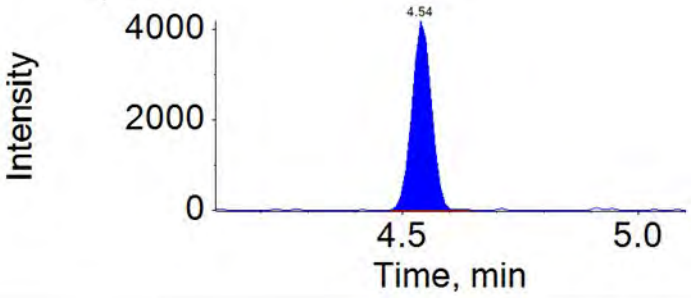
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

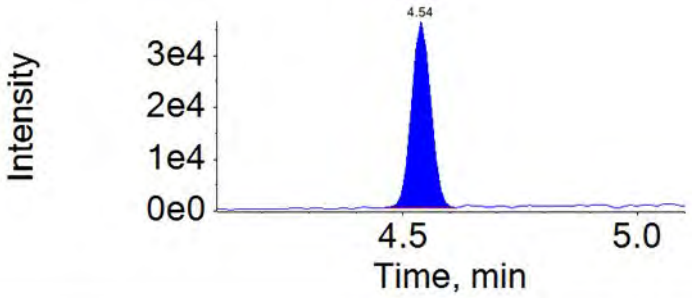
Component: PFHxS
Primary Mass: 399.0 / 80.0



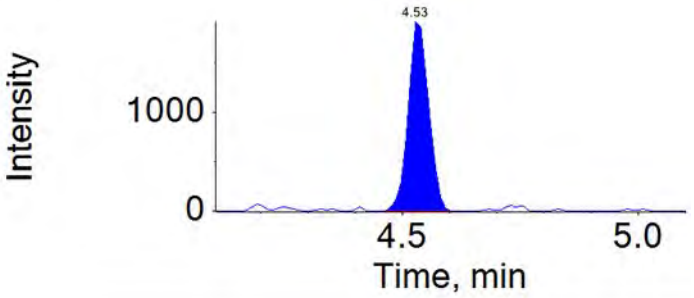
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



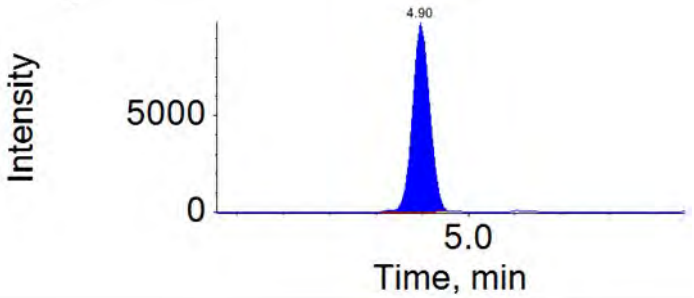
Component: PFHpA
Primary Mass: 363.0 / 319.0



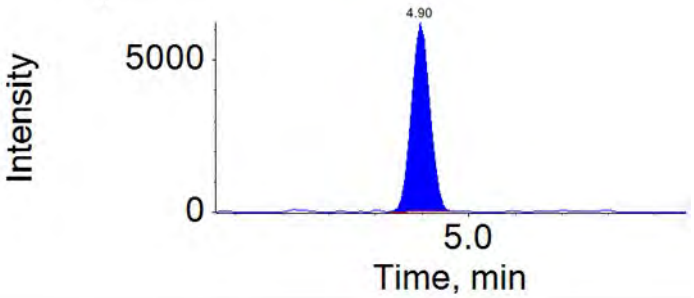
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



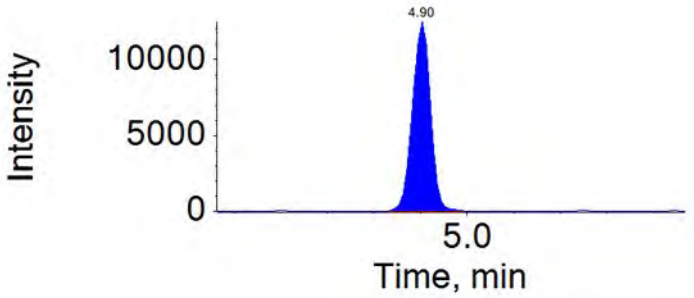
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



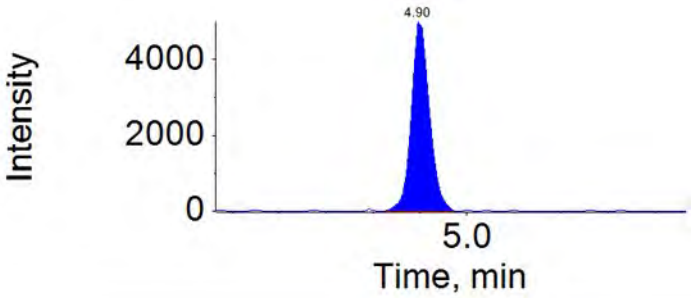
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



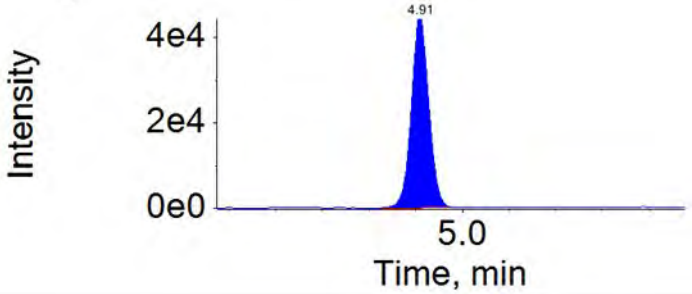
Component: PFHpS
Primary Mass: 449.0 / 80.0



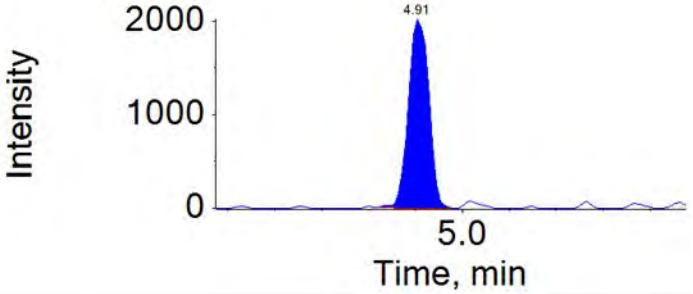
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



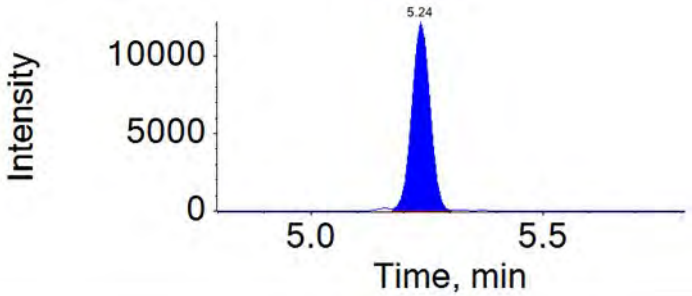
Component: PFOA
Primary Mass: 413.0 / 369.0



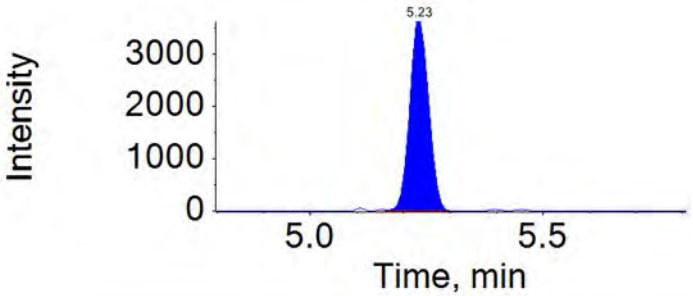
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



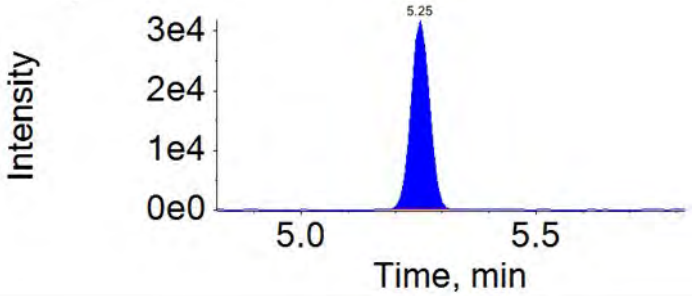
Component: PFOS
Primary Mass: 499.0 / 80.0



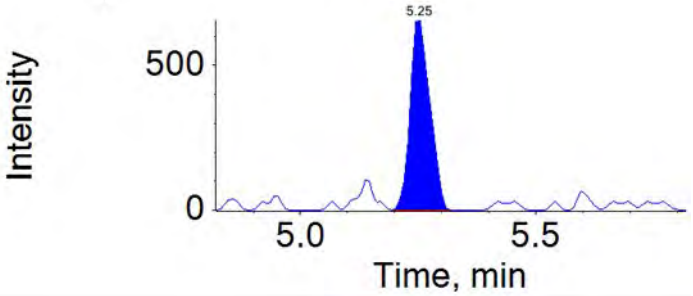
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



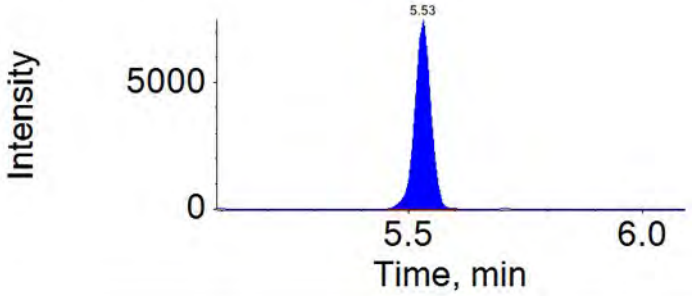
Component: PFNA
Primary Mass: 463.0 / 419.0



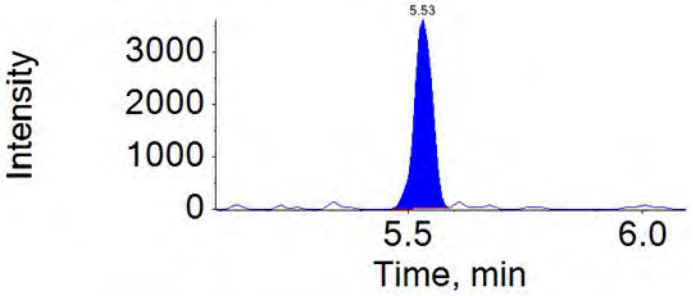
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



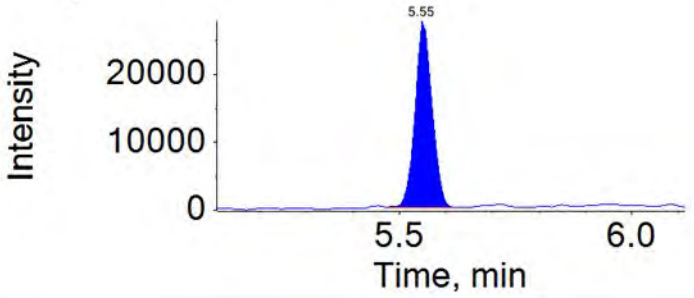
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



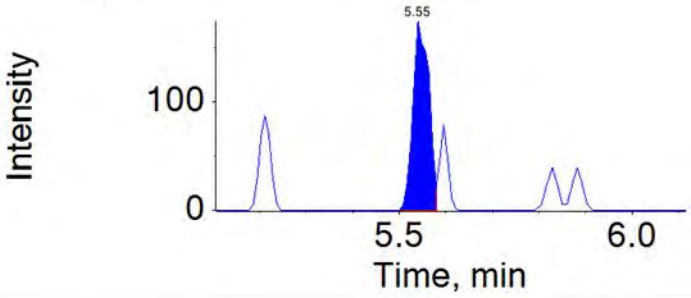
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

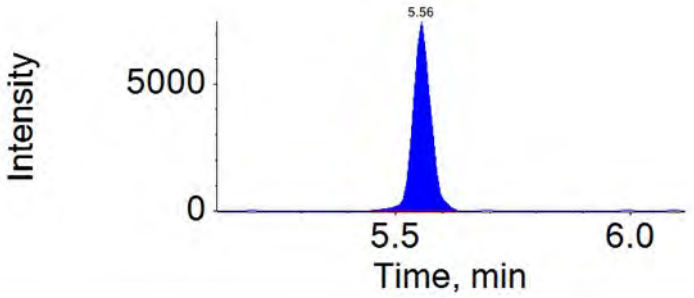
Component: PFDA
Primary Mass: 513.0 / 469.0



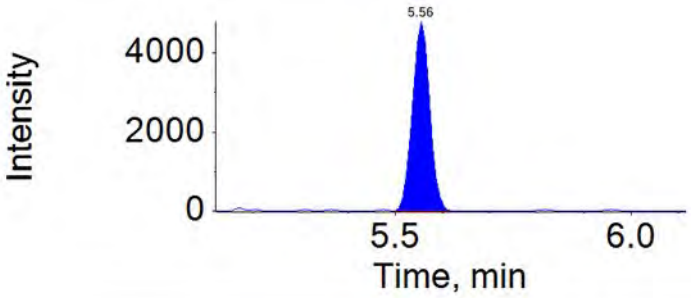
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



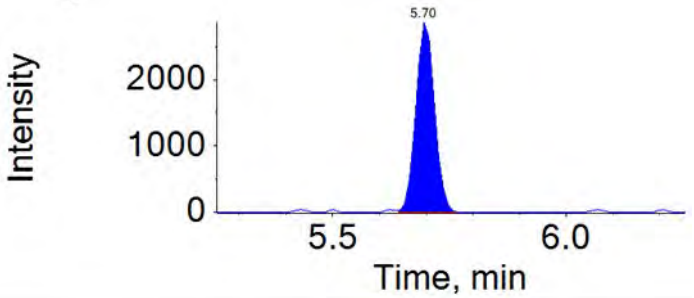
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



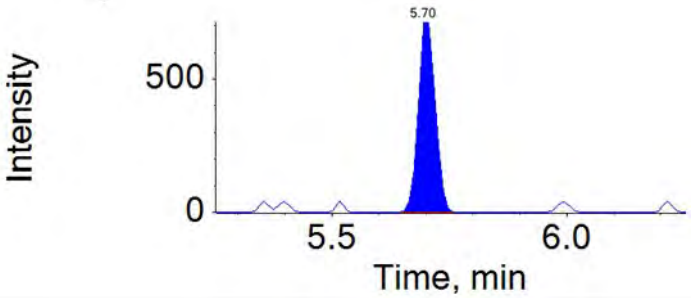
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



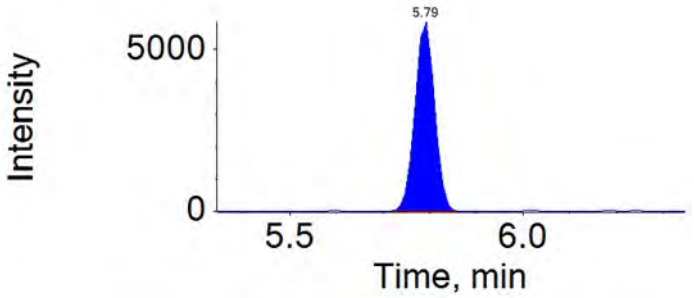
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



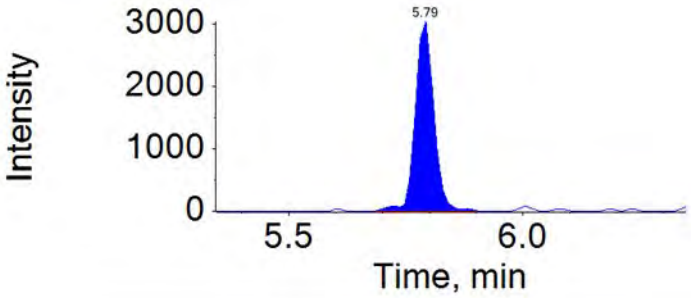
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



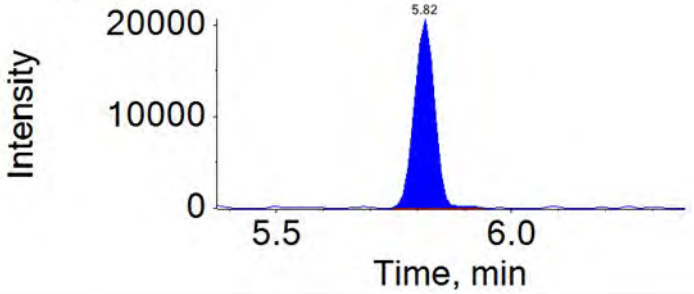
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



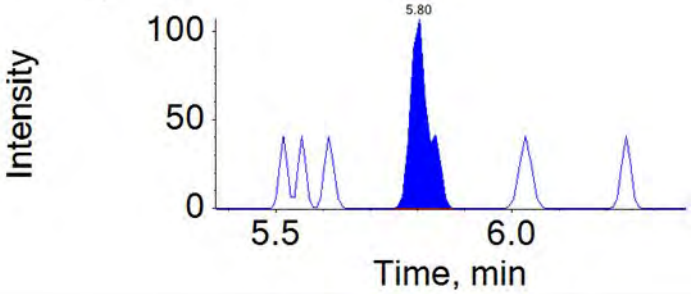
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

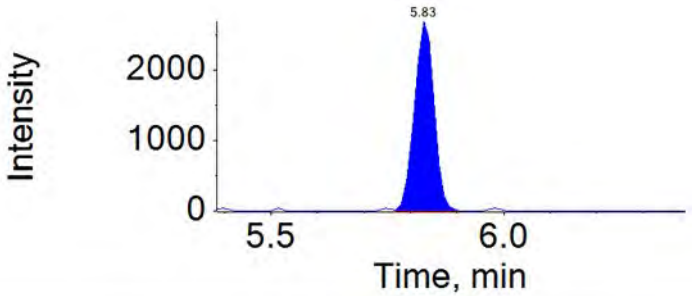
Component: PFUnDA
Primary Mass: 563.0 / 519.0



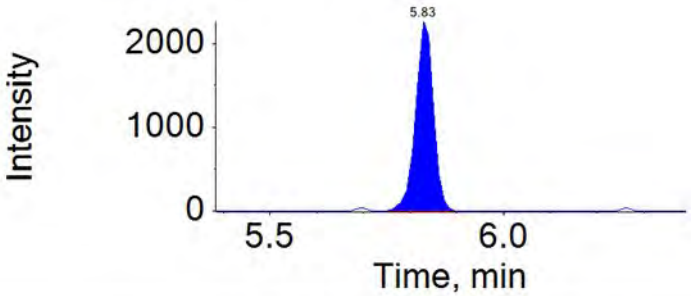
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



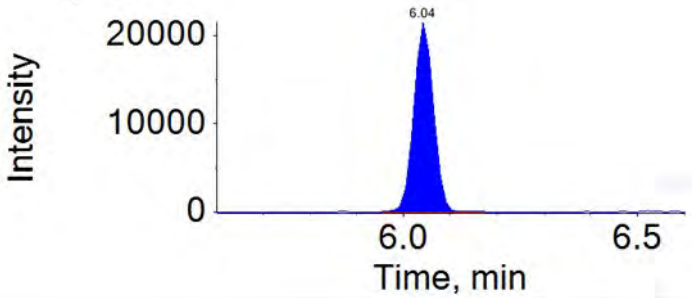
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



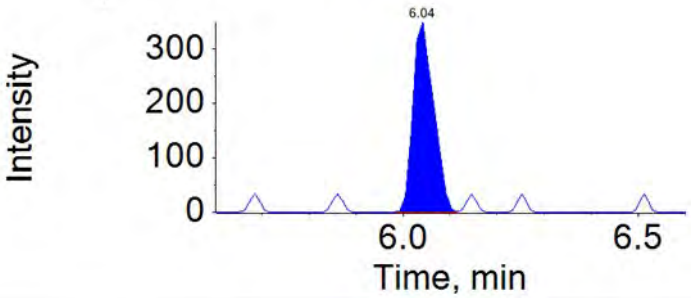
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



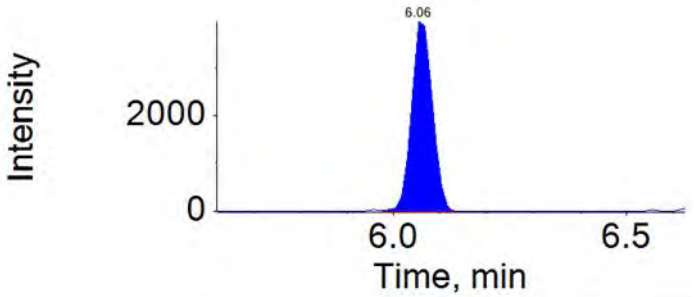
Component: PFDoDA
Primary Mass: 613.0 / 569.0



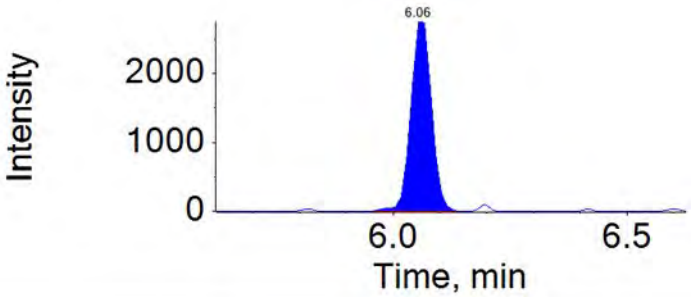
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



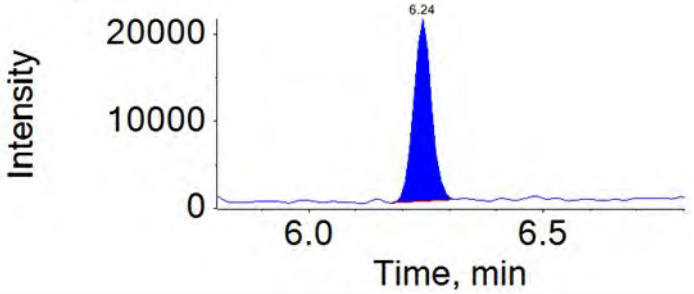
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



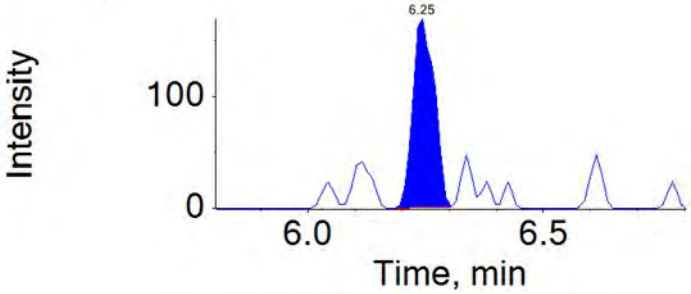
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



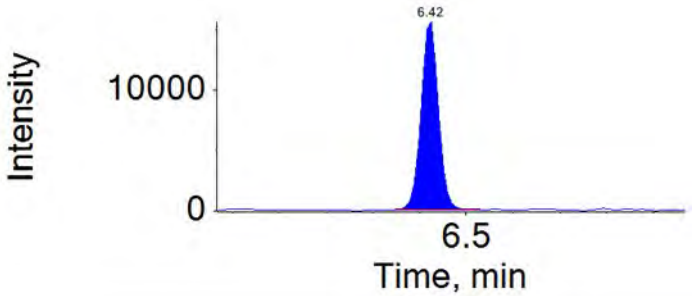
Component: PFTrDA
Primary Mass: 663.0 / 619.0



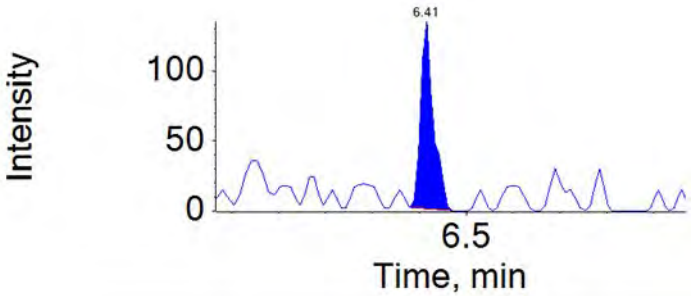
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



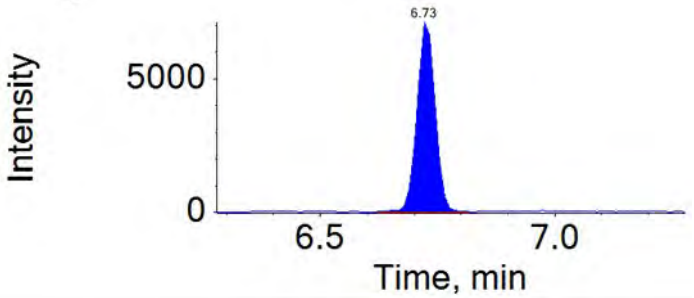
Component: PFTeDA
Primary Mass: 713.0 / 669.0



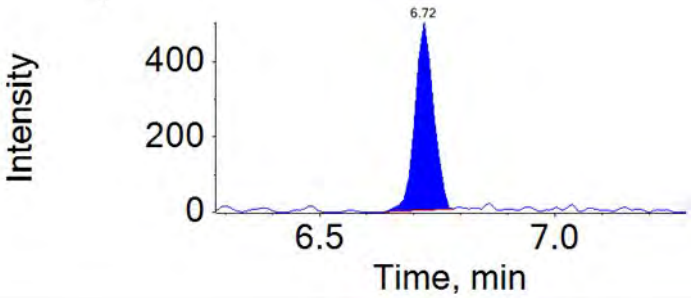
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



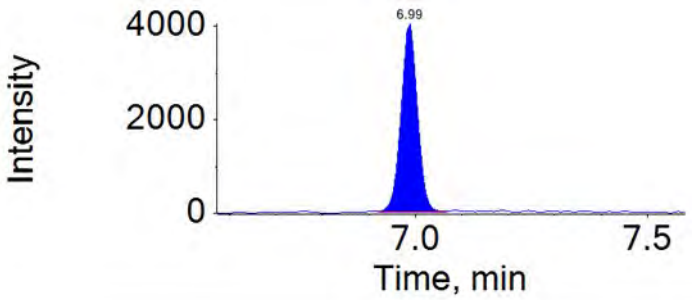
Component: PFHxDA
Primary Mass: 813.0 / 769.0



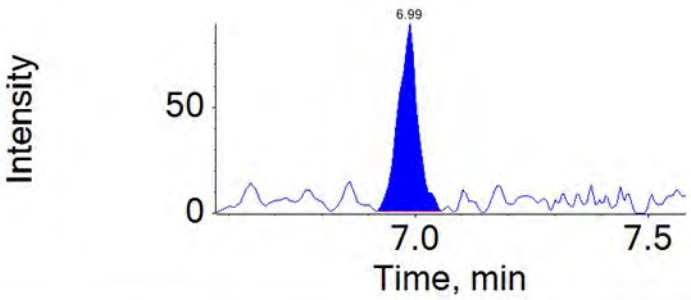
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



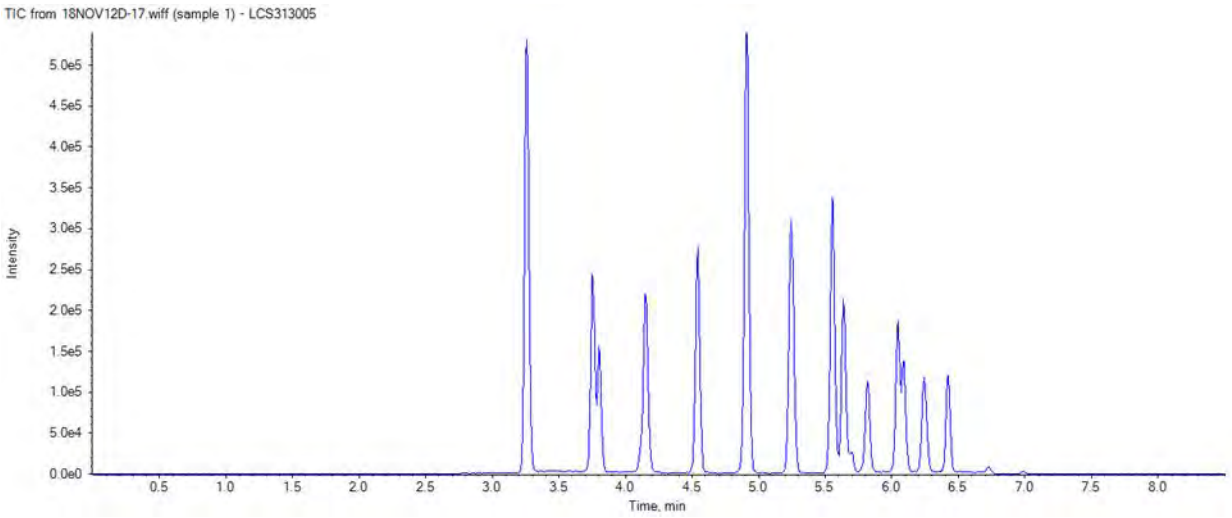
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18313005 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS313005	EPA 537 mod QSM 5.1 table B-15 18313005	18NOV12D-17.wiff	2018-11-12T19:09:51



Injection Standard Area Reference File**:** 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	681266.3	659926.2	3	50	
13C2-PFOA	5.00	496518.7	450219.7	10	50	
13C4-PFOS	4.78	253718.5	249205.8	2	50	
13C2-PFDA	5.00	312084.2	278743.9	12	50	

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS313005	EPA 537 mod QSM 5.1 table B-15 18313005	18NOV12D-17.wiff	2018-11-12T19:09:51

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	62300.5	483720.1	0.129	1.360	1.427	105	70-130	
PFPeA	61095.0	455066.2	0.134	1.360	1.554	114	70-130	
PFBS	36860.3	265512.1	0.139	1.204	1.321	110	70-130	
4:2-FTS	20207.3	31461.5	0.642	3.736	3.488	93	70-130	
PFHxA	68525.2	420262.1	0.163	1.360	1.362	100	70-130	
PFPeS	17439.1	265512.1	0.066	1.276	1.275	100	70-130	
PFHpA	71581.0	311985.9	0.229	1.360	1.521	112	70-130	
PFHxS	26352.1	204811.0	0.129	1.286	1.248	97	70-130	
6:2-FTS	17396.8	23576.8	0.738	3.792	3.571	94	70-130	
PFHpS	25932.3	204811.0	0.127	1.294	1.333	103	70-130	
PFOA	74919.0	579430.1	0.129	1.360	1.381	102	70-130	
PFOS	23248.1	168363.7	0.138	1.300	1.208	93	70-130	
PFNA	56146.9	307124.4	0.183	1.360	1.318	97	70-130	
PFNS	15290.7	168363.7	0.091	1.306	1.271	97	70-130	
PFDA	49700.4	372784.8	0.133	1.360	1.414	104	70-130	
8:2-FTS	11664.9	16487.8	0.707	3.832	3.299	86	70-130	
PFOSA	56728.9	436401.1	0.130	1.360	1.270	93	70-130	
NMeFOSAA	6438.0	52548.3	0.123	1.360	1.385	102	70-130	
PFDS	10611.4	168363.7	0.063	1.310	1.142	87	70-130	
PFUnDA	41983.8	167052.9	0.251	1.360	1.314	97	70-130	
NEtFOSAA	5436.2	40882.8	0.133	1.360	1.394	103	70-130	
PFDoDA	48344.4	331335.6	0.146	1.360	1.486	109	70-130	
10:2-FTS	9448.7	16487.8	0.573	3.856	3.818	99	70-130	
NMePFOSAE	34084.2	219461.2	0.155	1.360	1.293	95	70-130	
NMePFOSA	7076.1	48459.0	0.146	1.360	1.441	106	70-130	
PFDoS	6000.9	168363.7	0.036	1.316	1.249	95	70-130	
NEtPFOSAE	36354.5	179348.1	0.203	1.360	1.301	96	70-130	
NEtPFOSA	6085.8	36332.4	0.168	1.360	1.539	113	70-130	
PFTrDA	35529.8	331335.6	0.107	1.360	1.354	100	70-130	
PFTeDA	29249.9	232249.8	0.126	1.360	1.412	104	70-130	
PFHxDA	13533.7	232249.8	0.058	1.360	1.388	102	70-130	
PFODA	7116.8	232249.8	0.031	1.360	0.854	63	70-130	OOS

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18313005 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	LCS313005			**Data File:**		18NOV12D-17.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18313005			**Acquis Date:**		2018-11-12T19:09:51
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	36			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18313005
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18313005			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	681266.3	659926.2	3	50	
13C2-PFOA	5.0	496518.7	450219.7	10	50	
13C4-PFOS	4.8	253718.5	249205.8	2	50	
13C2-PFDA	5.0	312084.2	278743.9	12	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	483720.1	13C3-PFBA	681266.3	0.710	10.000	6.367	64	50-150	
E13C5-PFPeA	455066.2	13C3-PFBA	681266.3	0.668	10.000	5.992	60	50-150	
E13C3-PFBS	265512.1	13C3-PFBA	681266.3	0.390	9.300	5.502	59	50-150	
E13C2-4:2-FTS	31461.5	13C2-PFOA	496518.7	0.063	9.340	5.644	60	50-150	
E13C5-PFHxA	420262.1	13C2-PFOA	496518.7	0.846	10.000	6.115	61	50-150	
E13C3-PFHxS	204811.0	13C2-PFOA	496518.7	0.412	9.460	5.661	60	50-150	
E13C4-PFHpA	311985.9	13C2-PFOA	496518.7	0.628	10.000	5.662	57	50-150	
E13C2-6:2-FTS	23576.8	13C2-PFOA	496518.7	0.047	9.500	6.354	67	50-150	
E13C8-PFOA	579430.1	13C2-PFOA	496518.7	1.167	10.000	6.430	64	50-150	
E13C8-PFOS	168363.7	13C4-PFOS	253718.5	0.664	9.560	5.880	62	50-150	
E13C9-PFNA	307124.4	13C4-PFOS	253718.5	1.210	10.000	6.750	68	50-150	
E13C6-PFDA	372784.8	13C2-PFDA	312084.2	1.195	10.000	5.575	56	50-150	
E13C2-8:2-FTS	16487.8	13C2-PFDA	312084.2	0.053	9.580	5.270	55	50-150	
E13C8-PFOSA	436401.1	13C2-PFDA	312084.2	1.398	10.000	6.200	62	50-150	
Ed3-NMeFOSAA	52548.3	13C2-PFDA	312084.2	0.168	10.000	6.079	61	50-150	
E13C7-PFUnDA	167052.9	13C2-PFDA	312084.2	0.535	10.000	6.216	62	50-150	
Ed5-NEtFOSAA	40882.8	13C2-PFDA	312084.2	0.131	10.000	5.543	55	50-150	
E13C2-PFDoDA	331335.6	13C2-PFDA	312084.2	1.062	10.000	5.513	55	50-150	
Ed7-NMePFOSAE	219461.2	13C2-PFDA	312084.2	0.703	10.000	6.086	61	50-150	
Ed3-NMePFOSA	48459.0	13C2-PFDA	312084.2	0.155	10.000	5.642	56	50-150	
Ed9-NEtPFOSAE	179348.1	13C2-PFDA	312084.2	0.575	10.000	5.978	60	50-150	
Ed5-NEtPFOSA	36332.4	13C2-PFDA	312084.2	0.116	10.000	5.462	55	50-150	
E13C2-PFTeDA	232249.8	13C2-PFDA	312084.2	0.744	10.000	5.225	52	50-150	

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

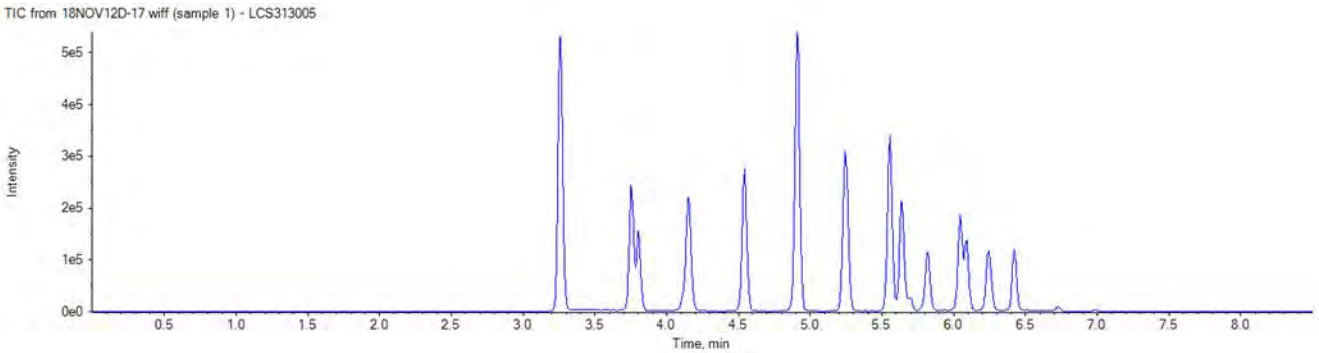
Analyte Quantitation Peak Table

Sample Name: LCS313005 **Instrument Name:** LM27631 **File Name:** 18NOV12D-17.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	62300.5		A	13C4-PFBA	3.26	483720.1	0.129	1.427
PFPeA	3.76	1.000	61095.0		A	13C5-PFPeA	3.75	455066.2	0.134	1.554
PFBS	3.80	1.000	36860.3		A	13C3-PFBS	3.80	265512.1	0.139	1.321
4:2-FTS	4.12	1.000	20207.3		A	13C2-4:2-FTS	4.12	31461.5	0.642	3.488
PFHxA	4.15	1.000	68525.2		A	13C5-PFHxA	4.15	420262.1	0.163	1.362
PFPeS	4.17	1.100	17439.1		A	13C3-PFBS	3.80	265512.1	0.066	1.275
PFHpA	4.54	1.000	71581.0		A	13C4-PFHpA	4.54	311985.9	0.229	1.521
PFHxS	4.54	1.000	26352.1		A	13C3-PFHxS	4.54	204811.0	0.129	1.248
6:2-FTS	4.90	1.000	17396.8		A	13C2-6:2-FTS	4.90	23576.8	0.738	3.571
PFHpS	4.90	1.080	25932.3		A	13C3-PFHxS	4.54	204811.0	0.127	1.333
PFOA	4.91	1.000	74919.0		A	13C8-PFOA	4.91	579430.1	0.129	1.381
PFOS	5.24	1.000	23248.1		M	13C8-PFOS	5.24	168363.7	0.138	1.208
PFNA	5.26	1.000	56146.9		A	13C9-PFNA	5.26	307124.4	0.183	1.318
PFNS	5.53	1.060	15290.7		M	13C8-PFOS	5.24	168363.7	0.091	1.271
PFDA	5.55	1.000	49700.4		A	13C6-PFDA	5.55	372784.8	0.133	1.414
8:2-FTS	5.56	1.000	11664.9		A	13C2-8:2-FTS	5.56	16487.8	0.707	3.299
PFOSA	5.64	1.000	56728.9		A	13C8-PFOSA	5.64	436401.1	0.130	1.270
NMeFOSAA	5.70	1.000	6438.0		A	d3-NMeFOSAA	5.70	52548.3	0.123	1.385
PFDS	5.79	1.110	10611.4		A	13C8-PFOS	5.24	168363.7	0.063	1.142
PFUnDA	5.82	1.000	41983.8		A	13C7-PFUnDA	5.82	167052.9	0.251	1.314
NEtFOSAA	5.83	1.000	5436.2		M	d5-NEtFOSAA	5.83	40882.8	0.133	1.394
PFDoDA	6.05	1.000	48344.4		M	13C2-PFDoDA	6.05	331335.6	0.146	1.486
10:2-FTS	6.06	1.090	9448.7		A	13C2-8:2-FTS	5.56	16487.8	0.573	3.818
NMePFOSAE	6.10	1.000	34084.2		A	d7-NMePFOSAE	6.09	219461.2	0.155	1.293
NMePFOSA	6.10	1.000	7076.1		M	d3-NMePFOSA	6.10	48459.0	0.146	1.441
PFDoS	6.22	1.190	6000.9		A	13C8-PFOS	5.24	168363.7	0.036	1.249
NEtPFOSAE	6.25	1.000	36354.5		M	d9-NEtPFOSAE	6.24	179348.1	0.203	1.301
NEtPFOSA	6.27	1.000	6085.8		M	d5-NEtPFOSA	6.26	36332.4	0.168	1.539
PFTrDA	6.24	1.030	35529.8		A	13C2-PFDoDA	6.05	331335.6	0.107	1.354
PFTeDA	6.42	1.000	29249.9		A	13C2-PFTeDA	6.42	232249.8	0.126	1.412
PFHxDA	6.73	1.050	13533.7		A	13C2-PFTeDA	6.42	232249.8	0.058	1.388
PFODA	6.99	1.090	7116.8		A	13C2-PFTeDA	6.42	232249.8	0.031	0.854

Total Ion Chromatogram

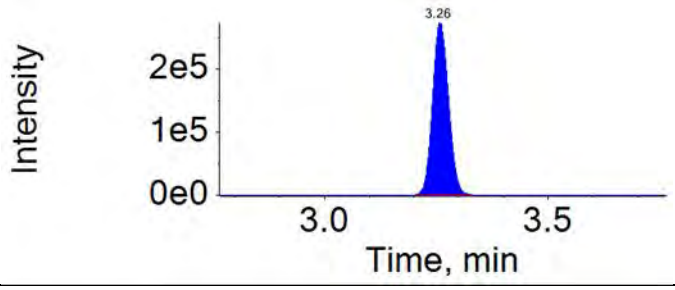


APPROVED
By JPT at 12:34 pm, 11/13/18

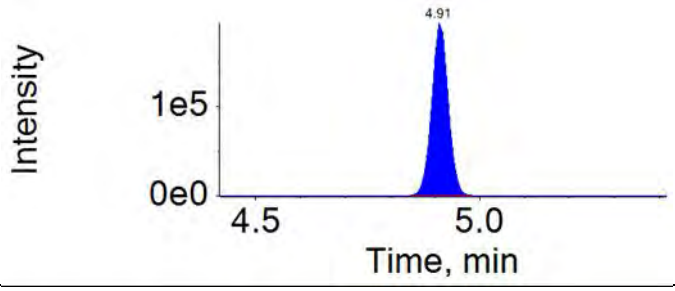
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

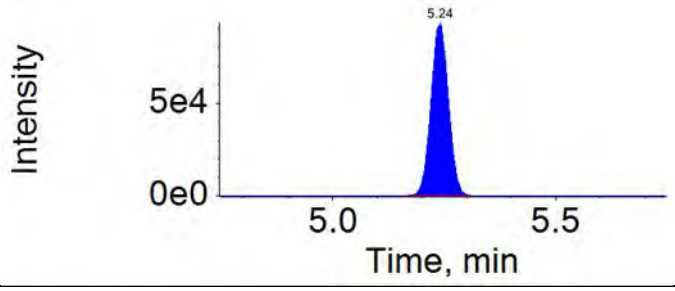
Injection Standard: 13C3-PFBA
216.0 / 172.0



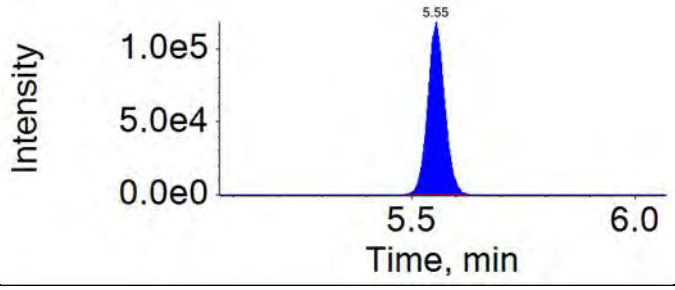
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

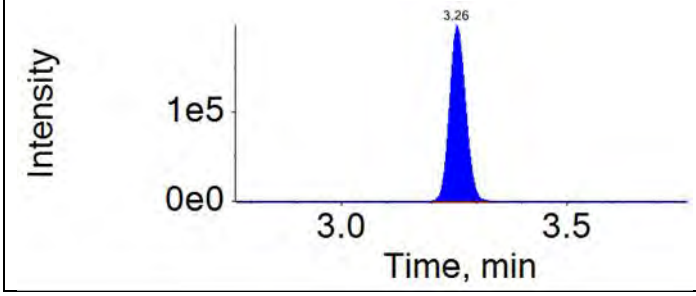


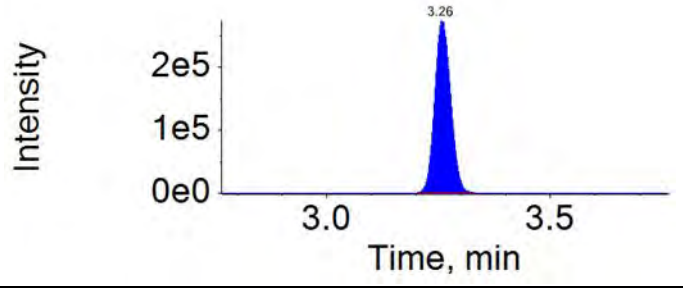
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

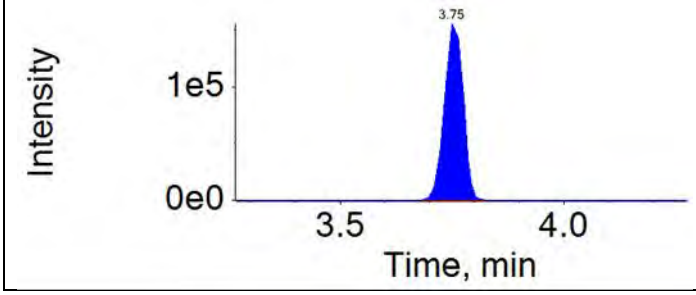
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

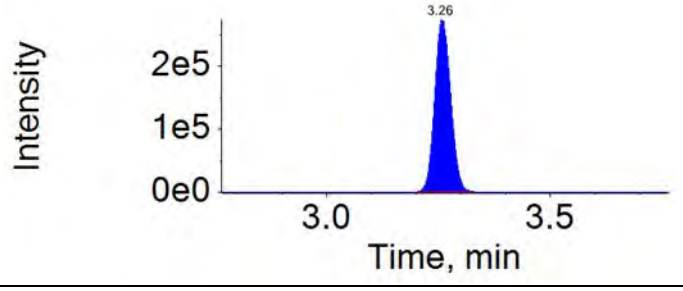
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



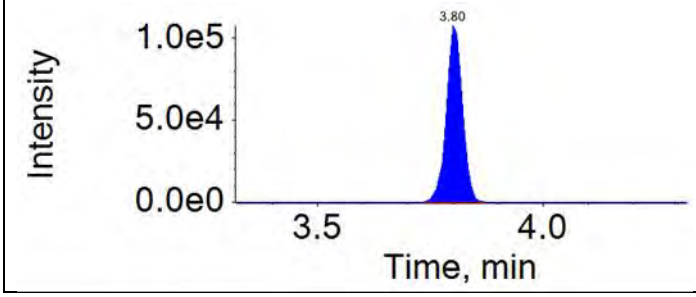


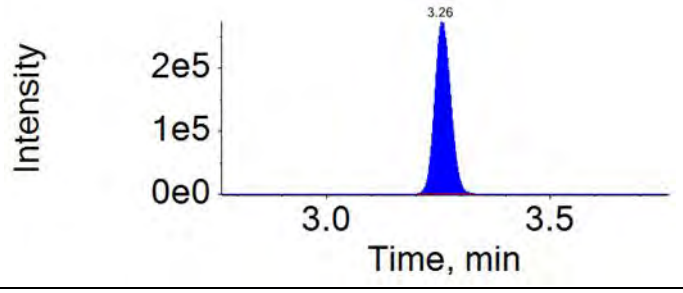
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



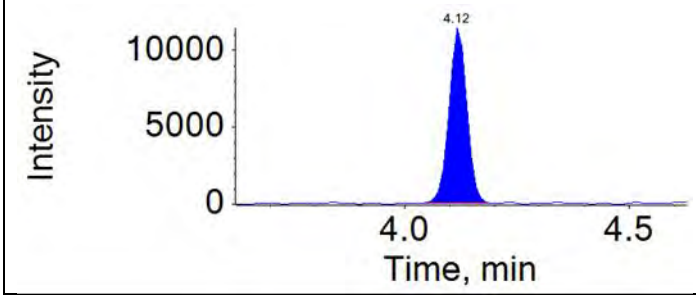


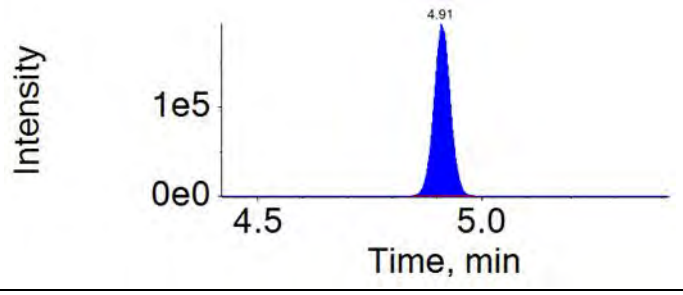
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



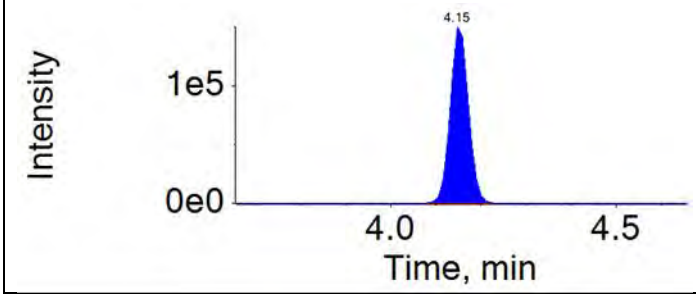


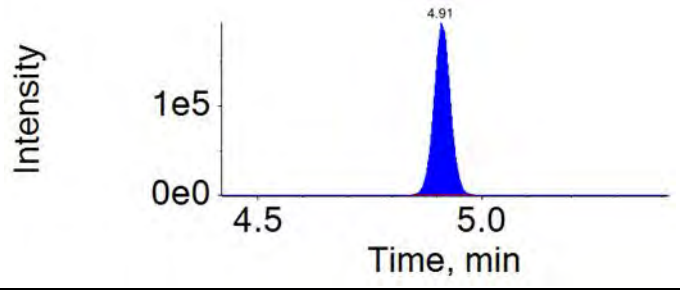
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

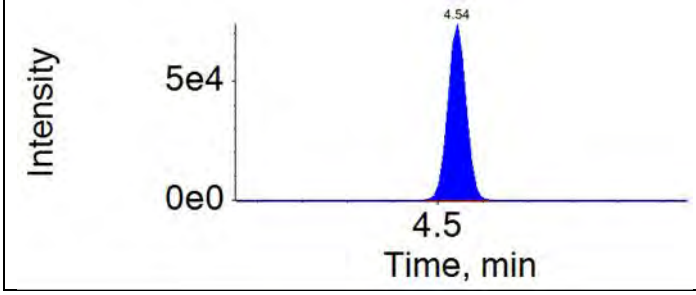
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

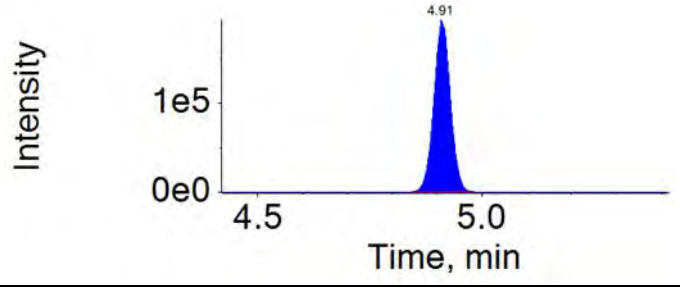
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



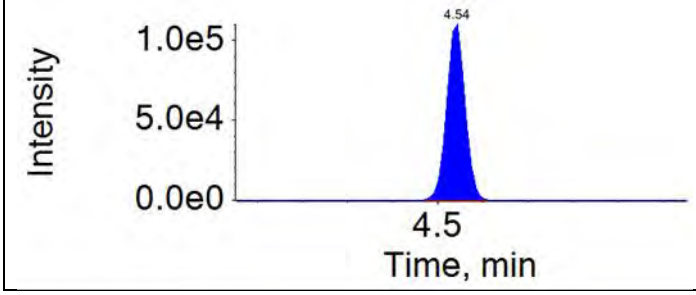


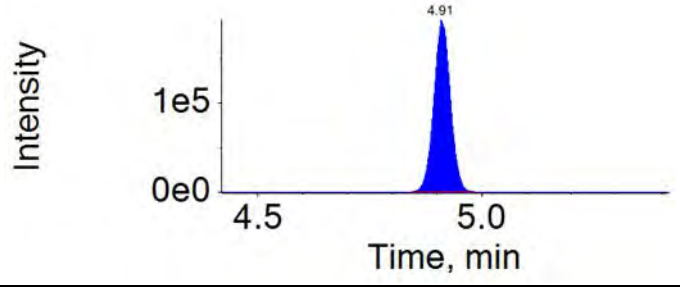
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



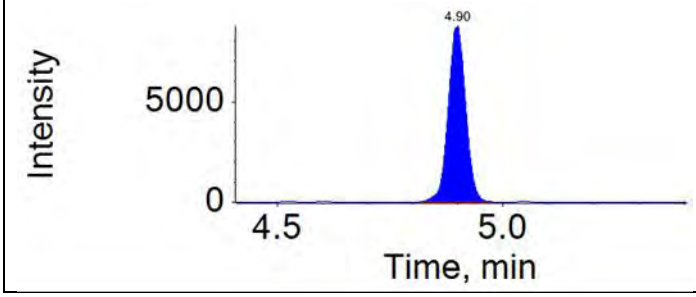


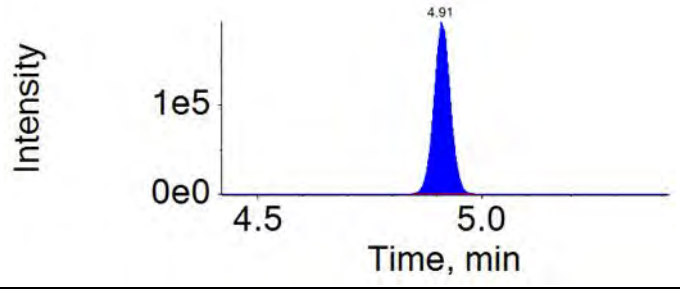
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

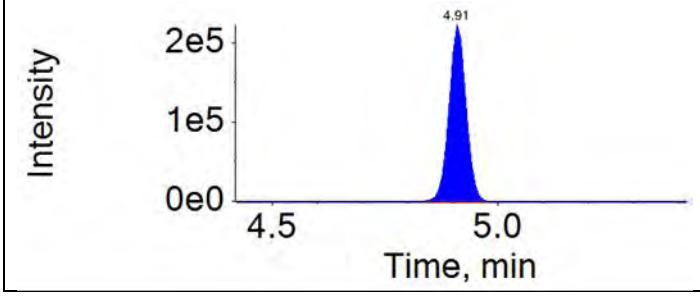
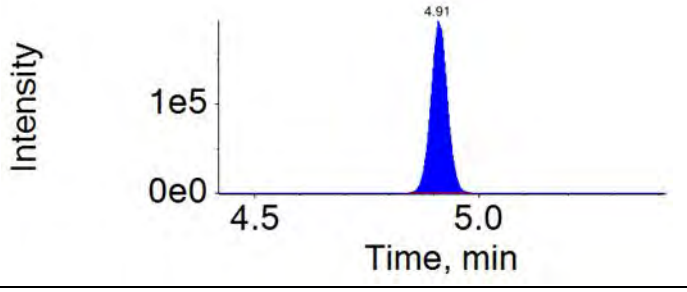


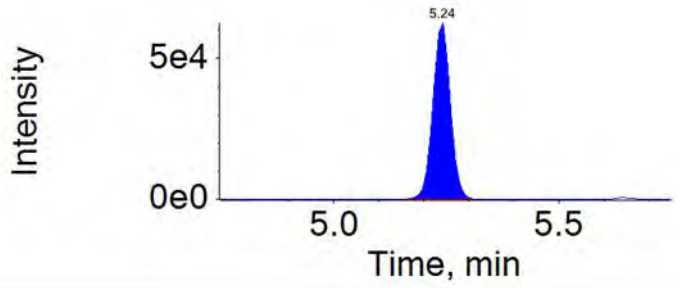
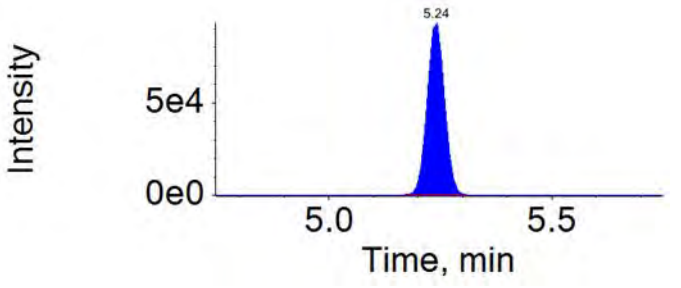


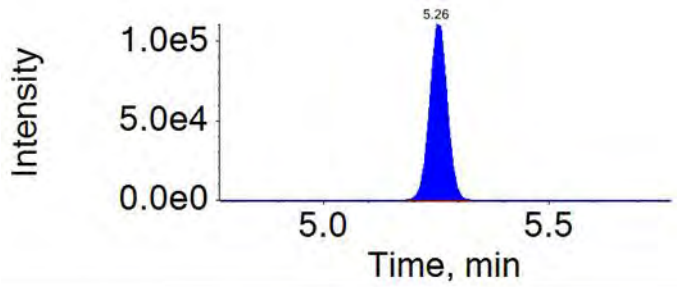
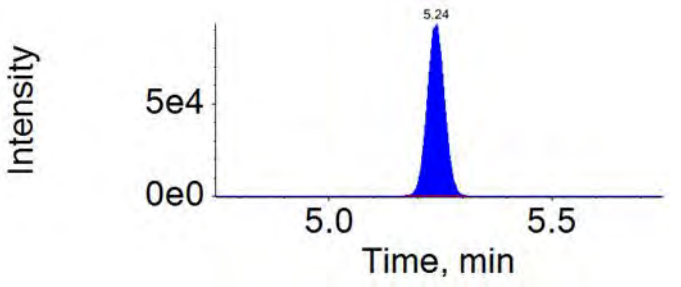
APPROVED
By JPT at 12:34 pm, 11/13/18

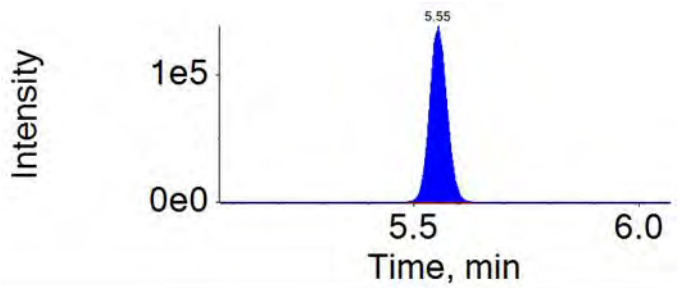
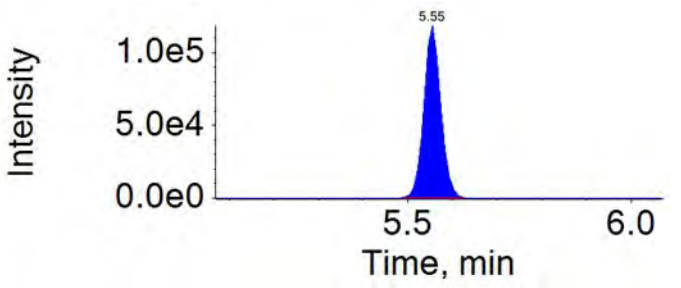
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

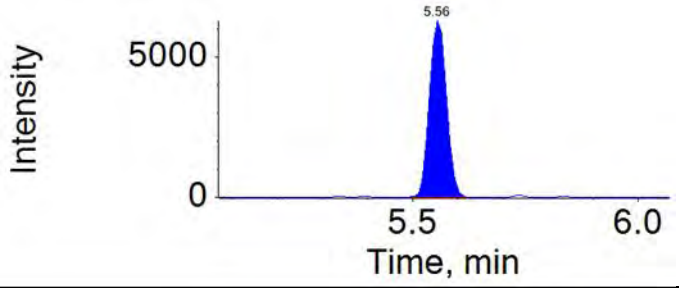
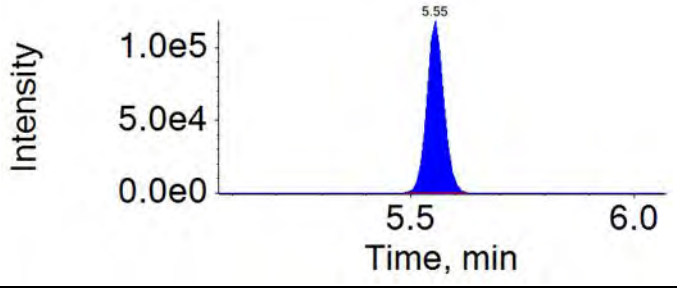
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

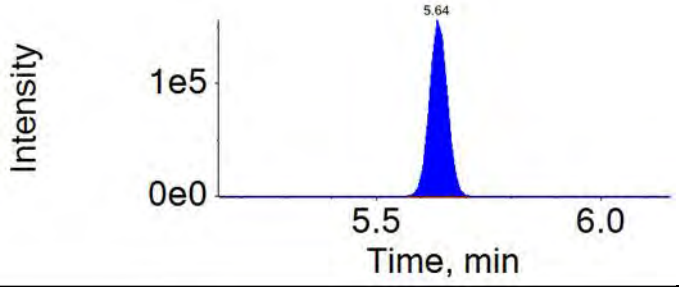
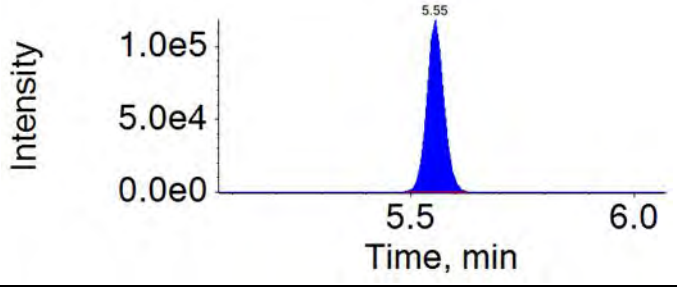
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

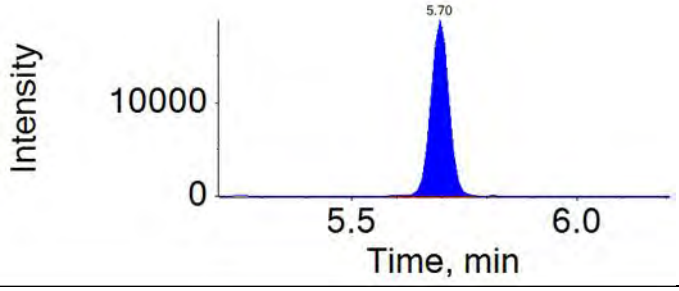
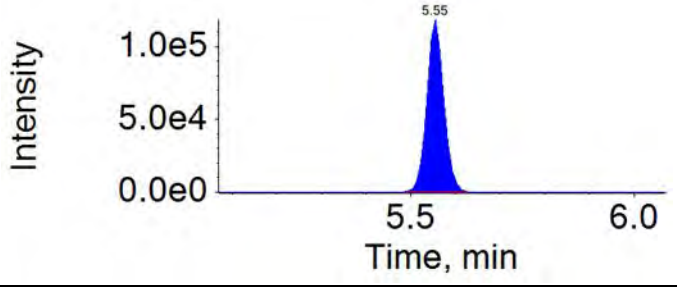
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

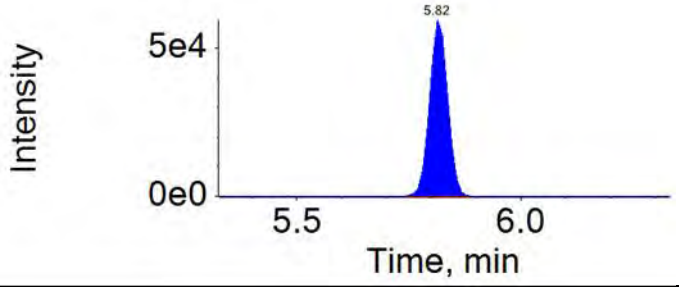
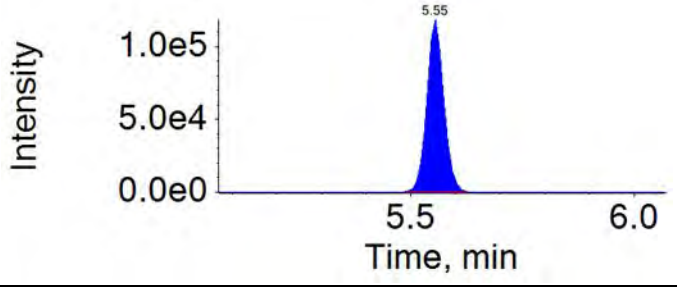
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

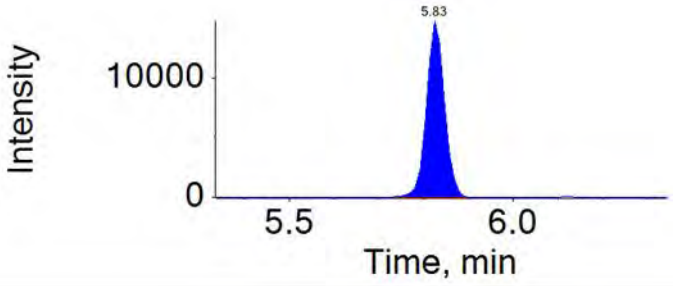
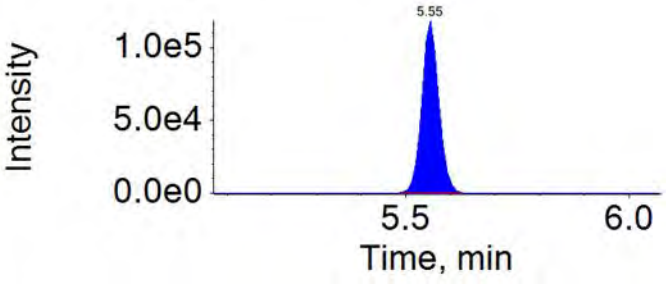
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

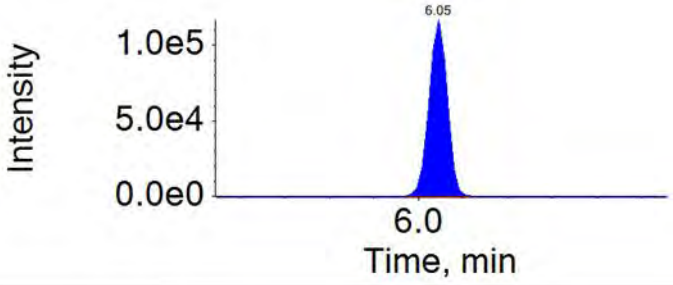
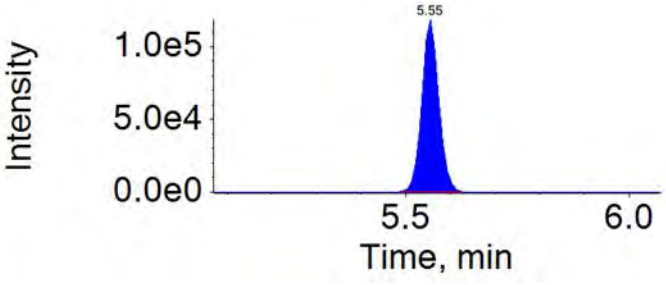
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

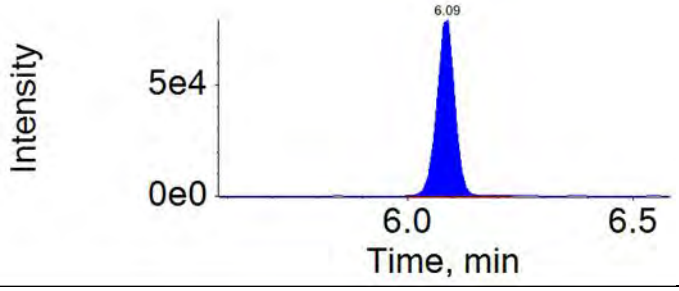
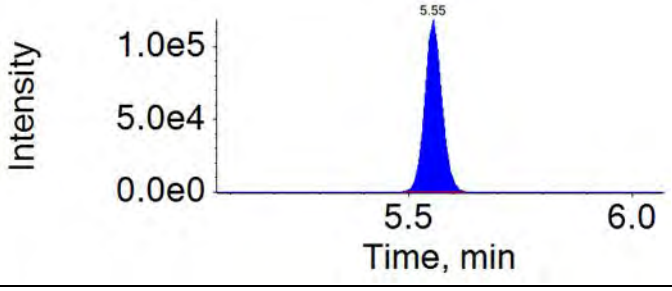
APPROVED
By JPT at 12:34 pm, 11/13/18

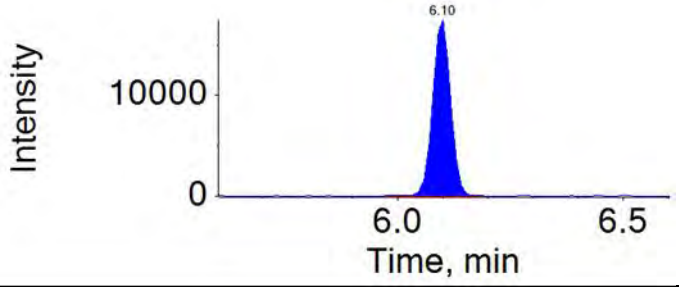
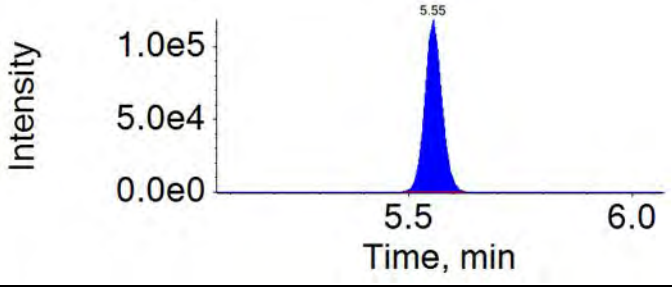
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

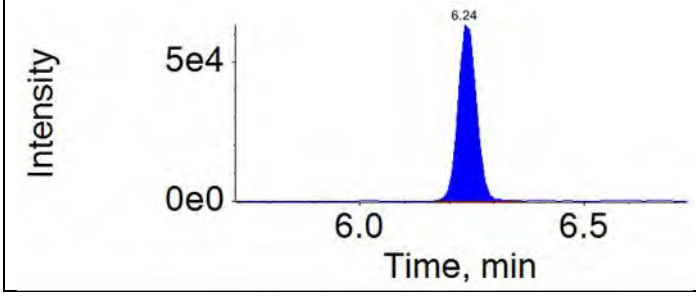
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

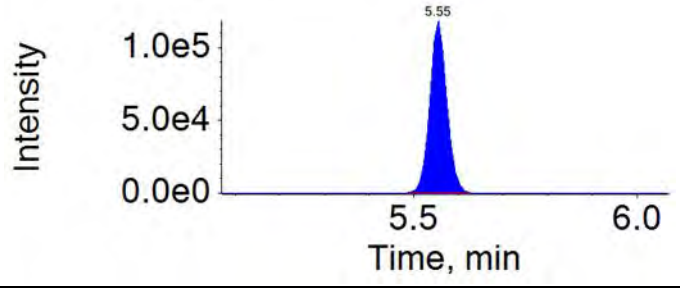
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

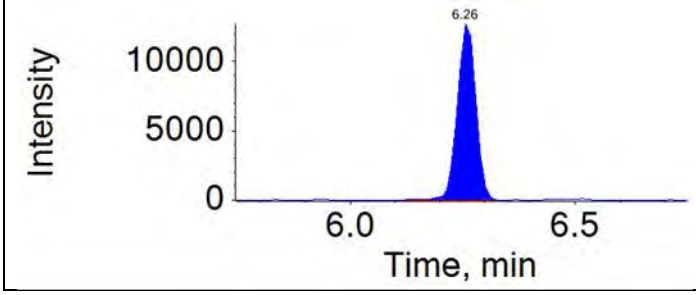
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

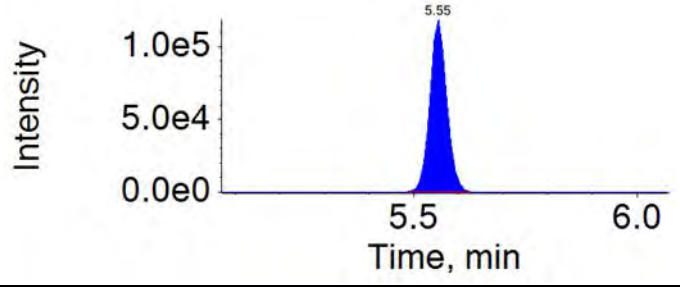
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



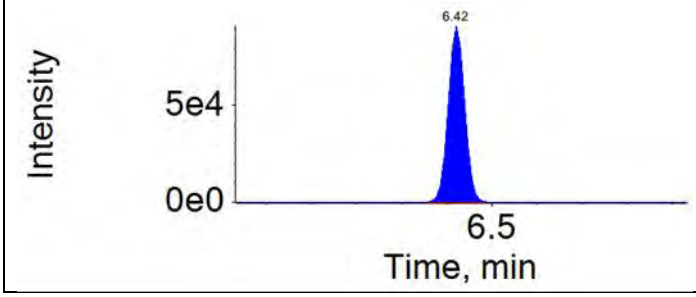


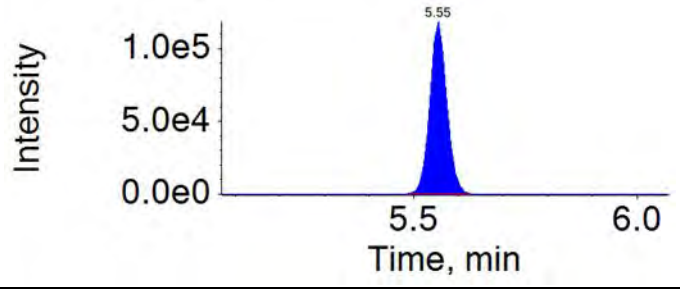
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

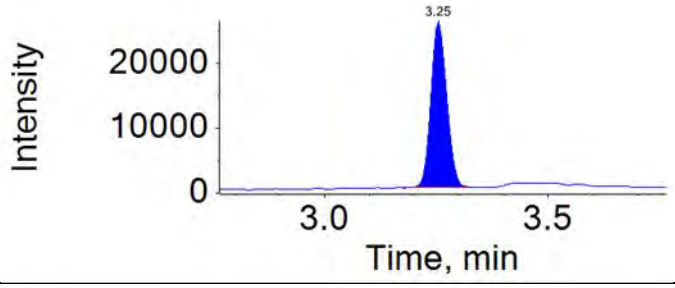
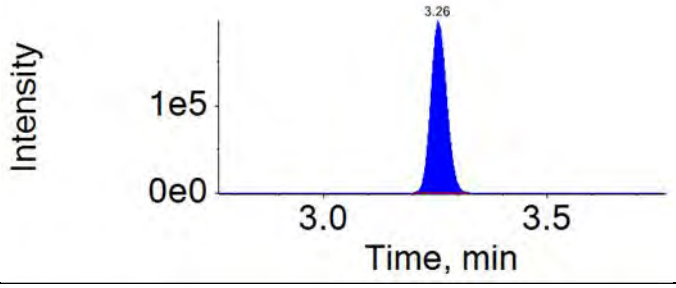


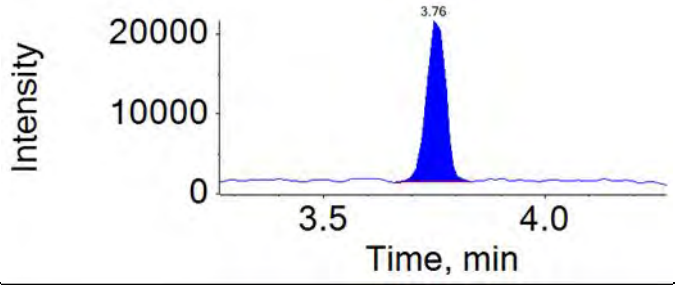
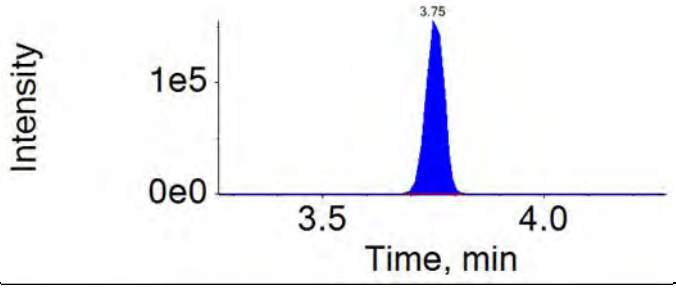


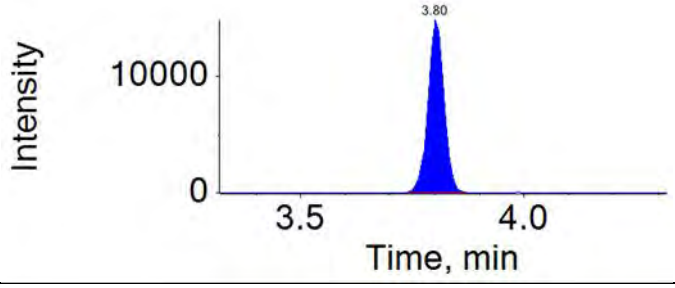
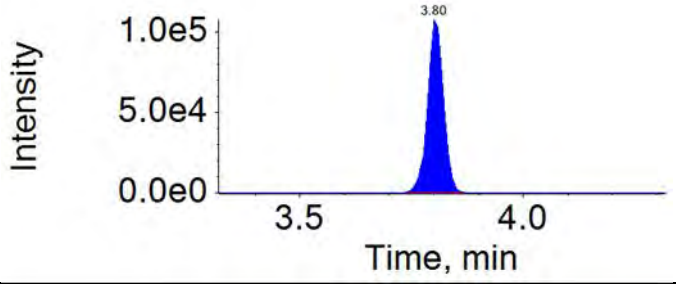
APPROVED
By JPT at 12:34 pm, 11/13/18

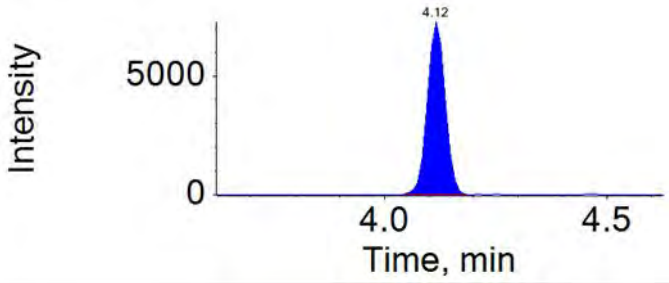
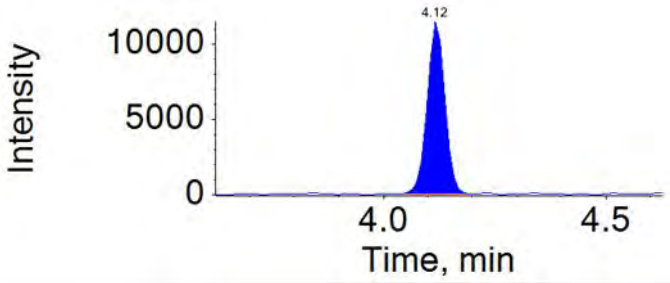
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

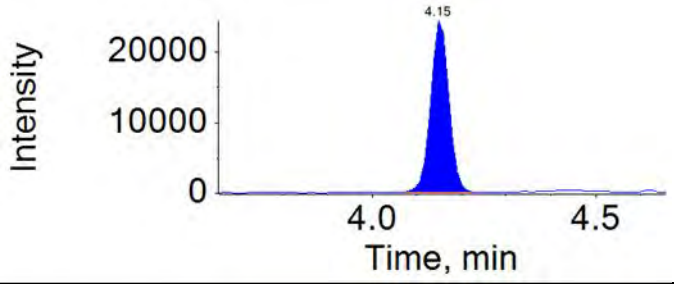
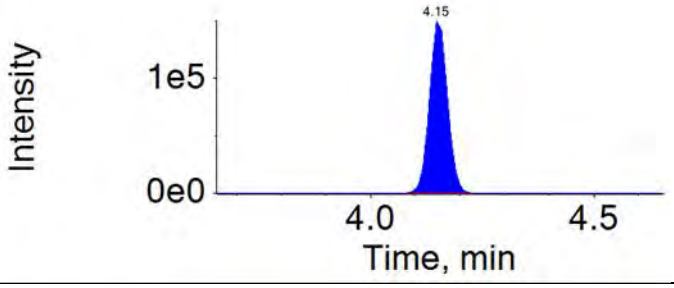
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

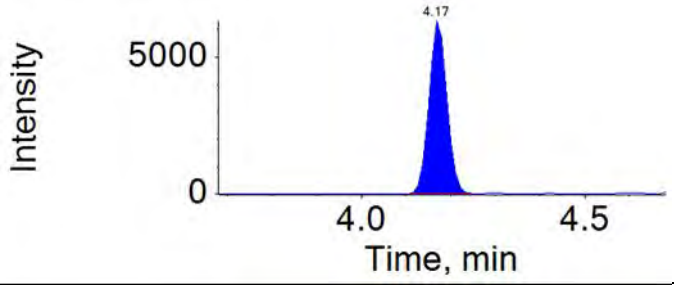
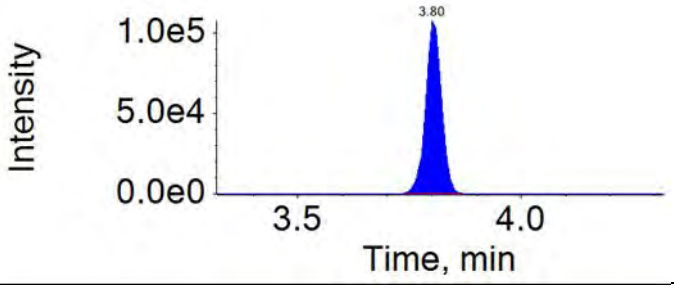
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

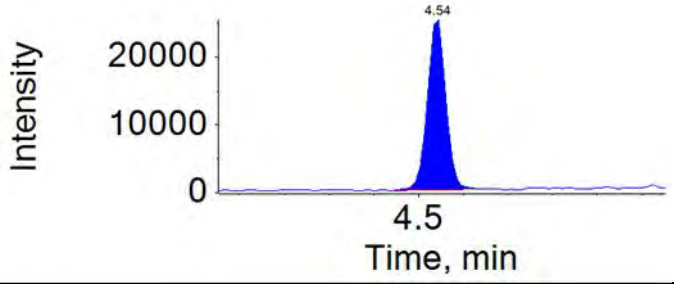
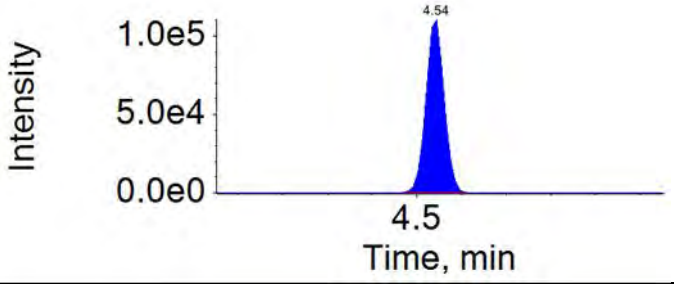
APPROVED
By JPT at 12:34 pm, 11/13/18

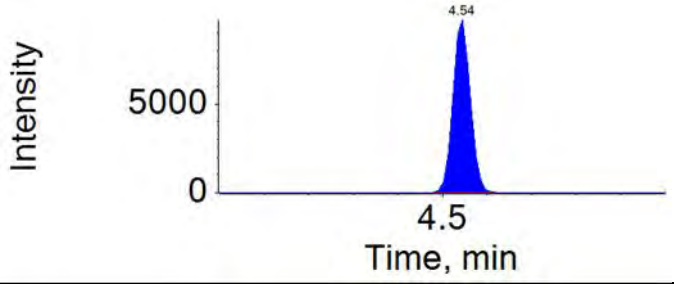
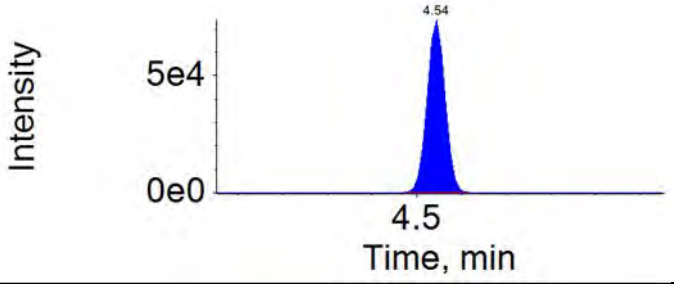
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

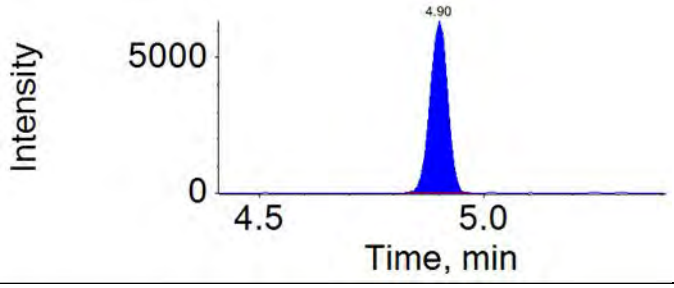
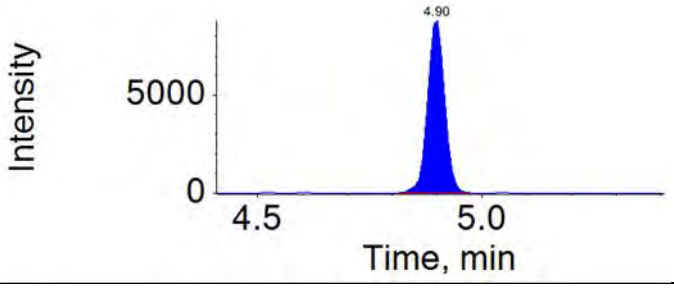
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

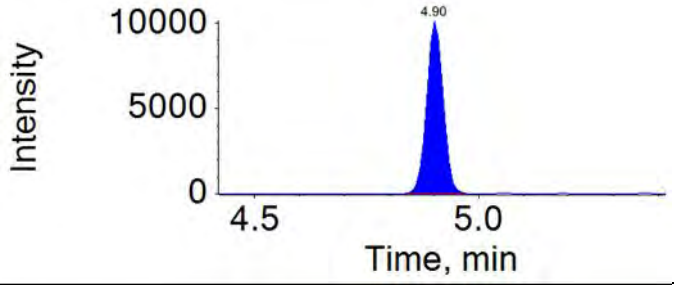
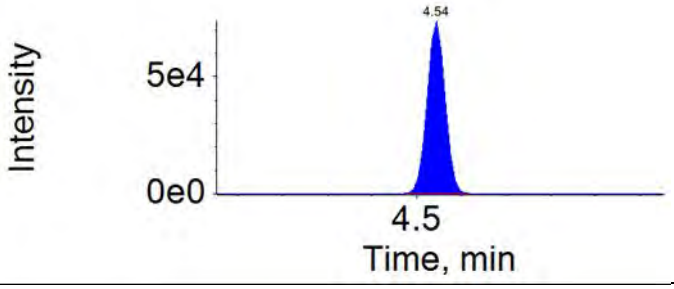
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

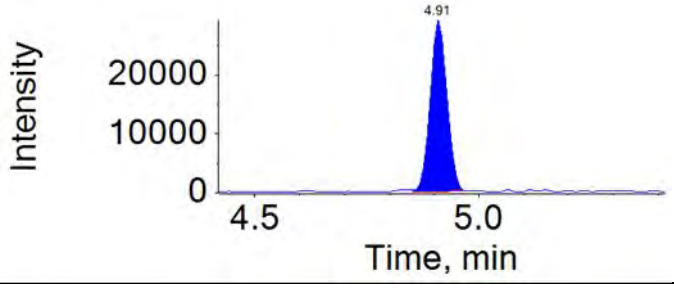
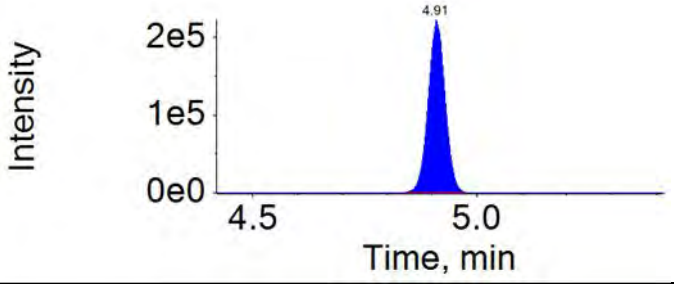
APPROVED
By JPT at 12:34 pm, 11/13/18

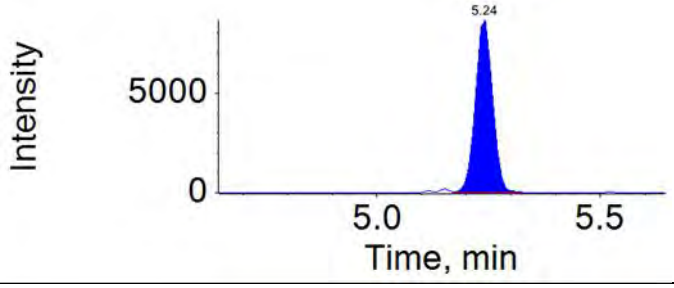
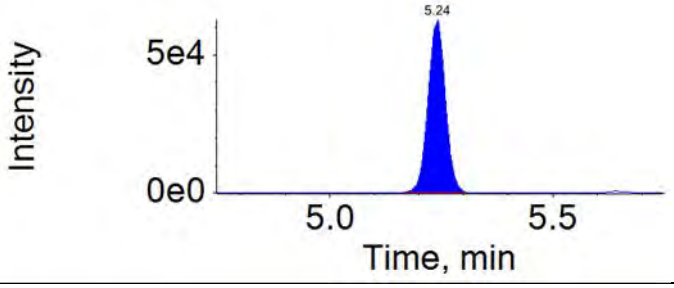
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

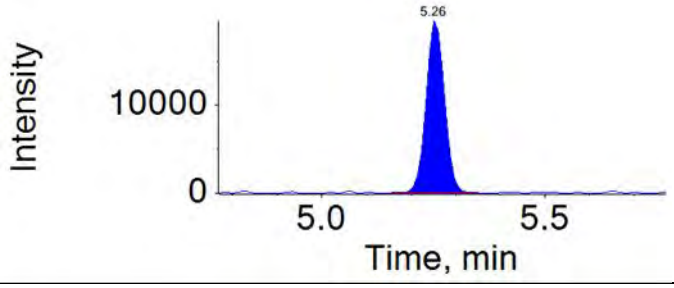
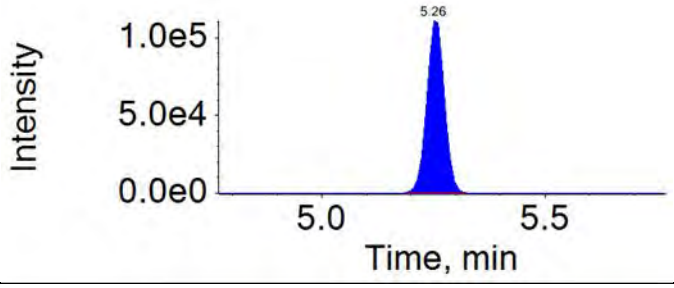
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

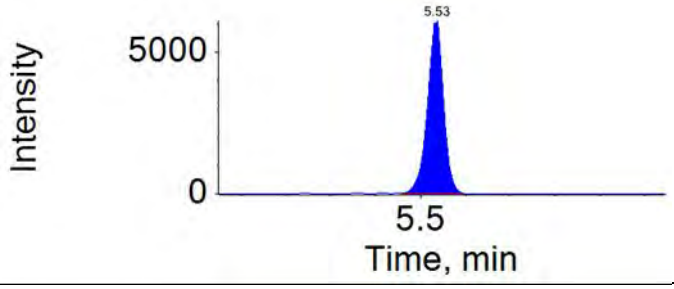
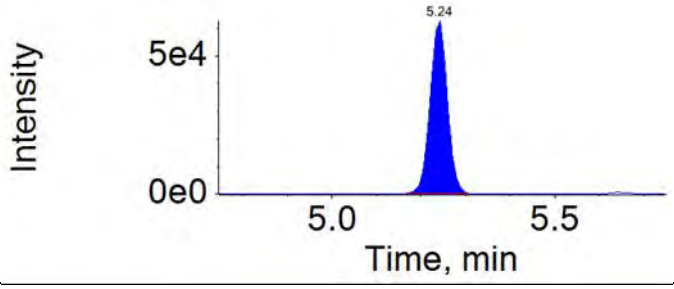
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

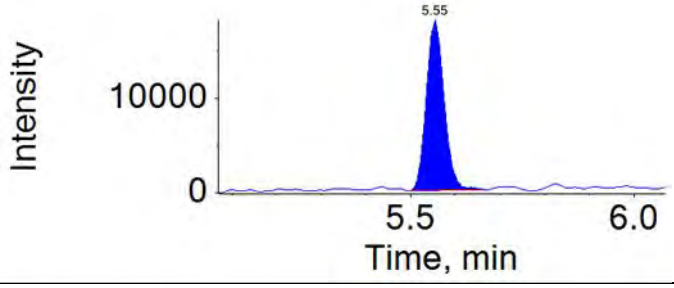
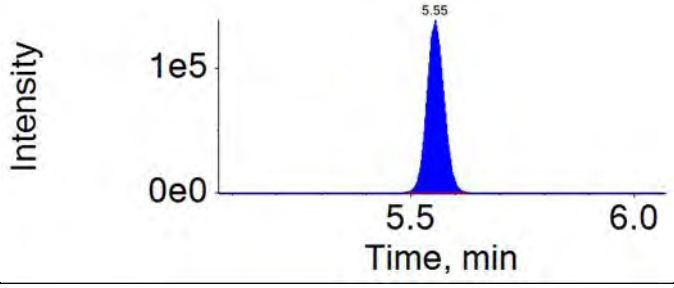
APPROVED
By JPT at 12:34 pm, 11/13/18

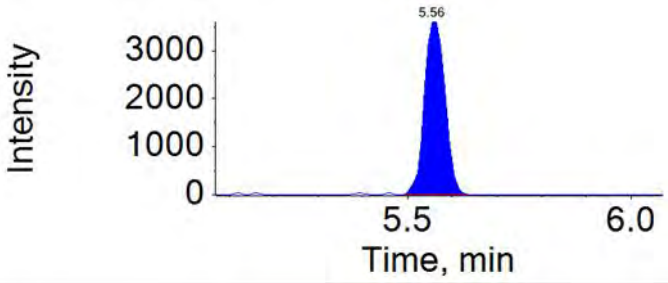
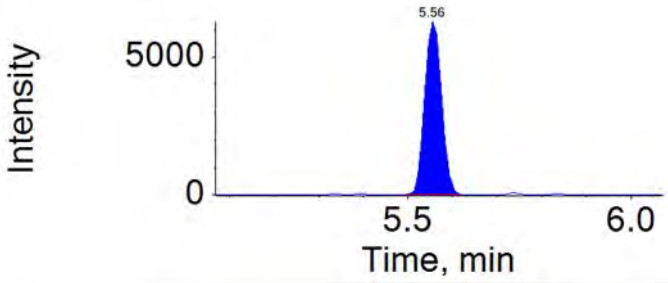
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

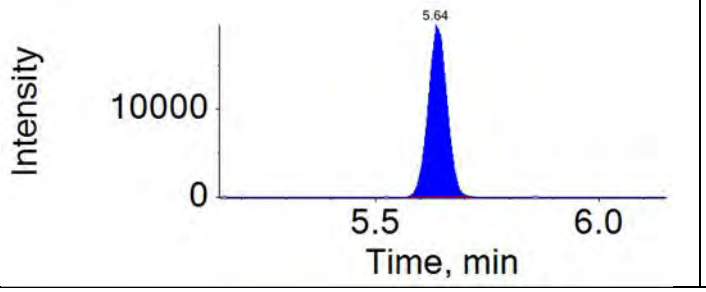
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

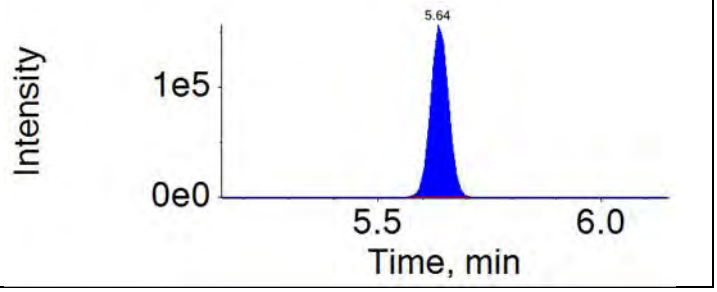
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

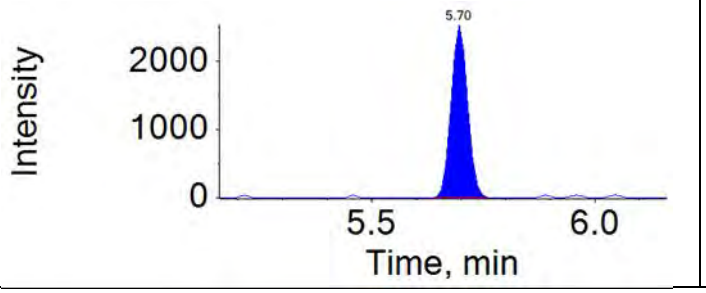
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

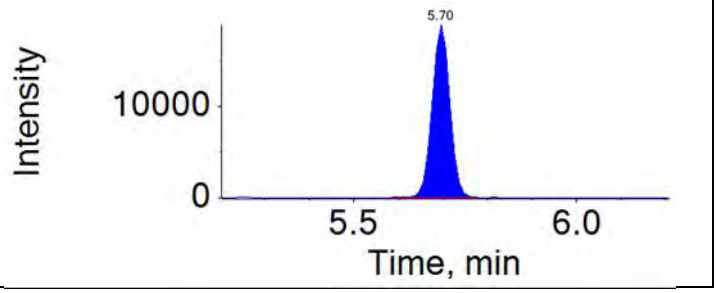
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



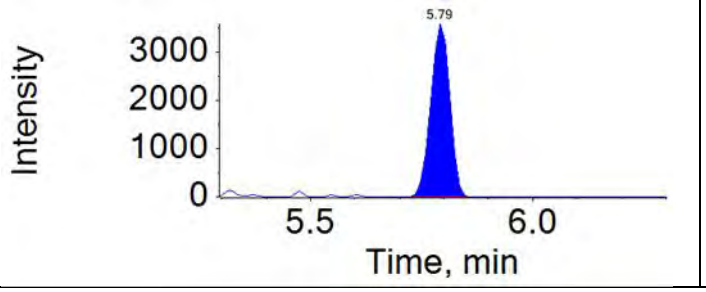


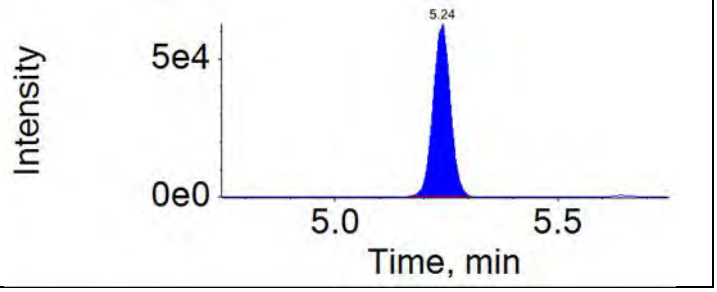
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



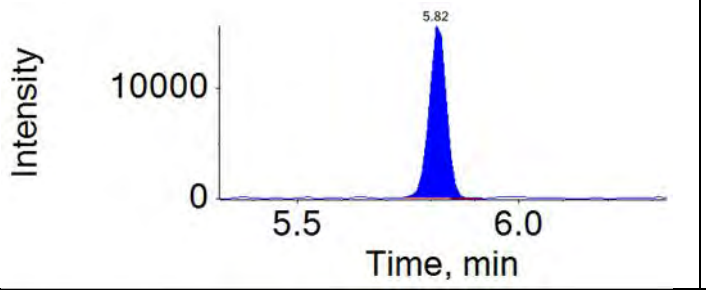


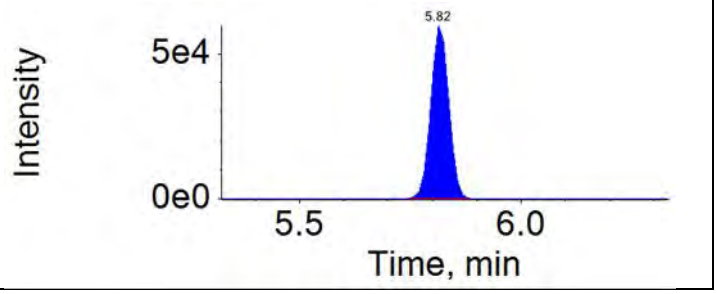
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



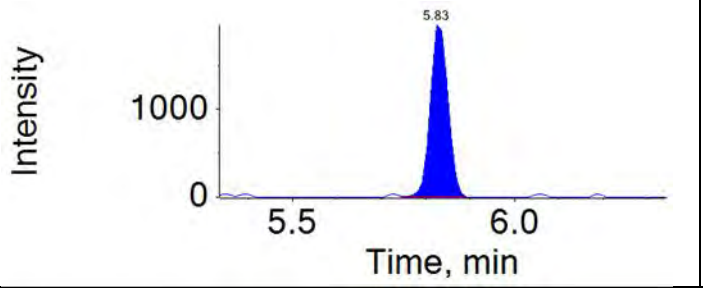


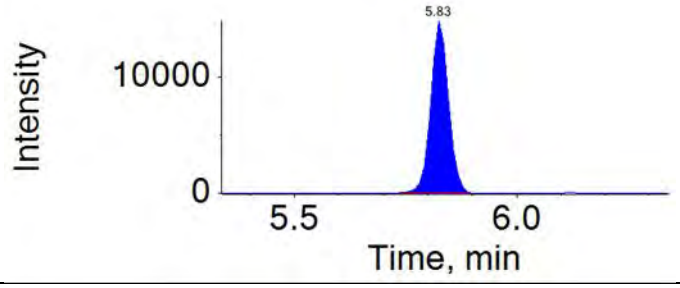
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

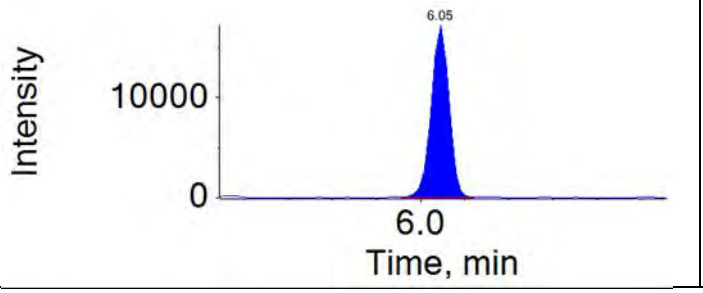
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

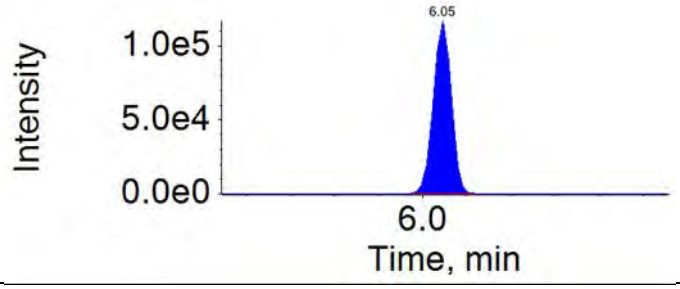
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



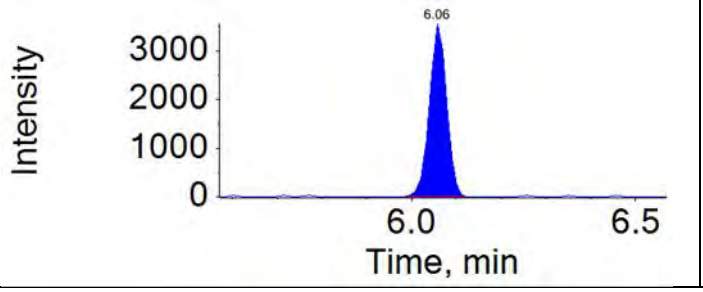


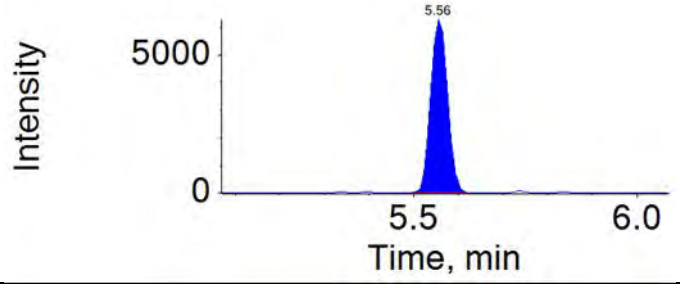
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



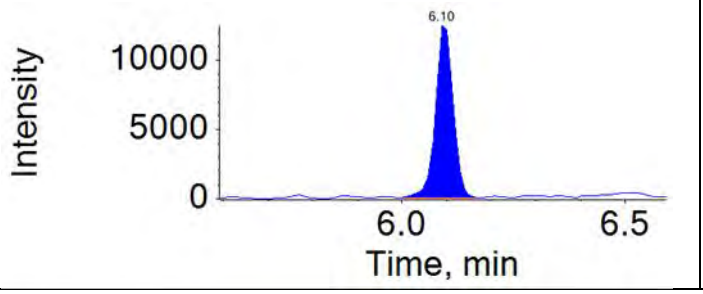


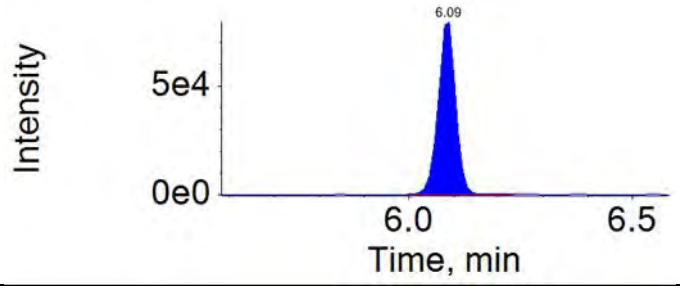
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



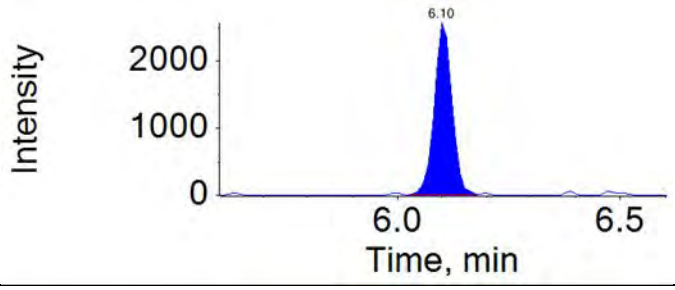


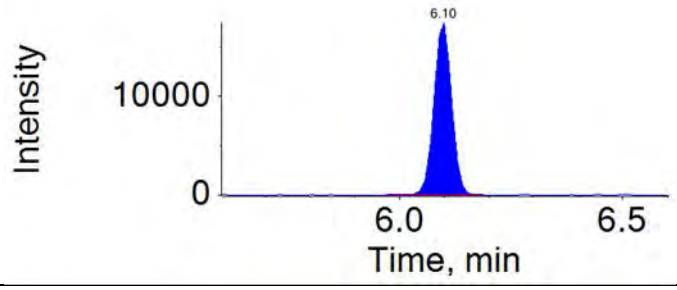
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

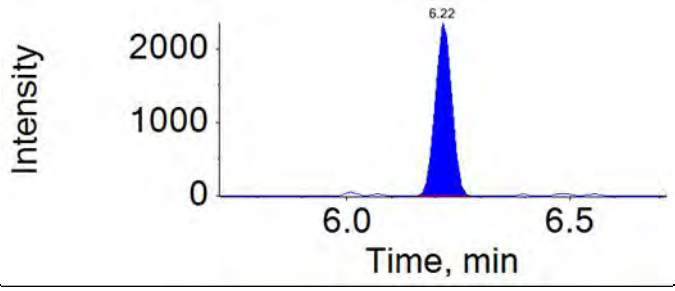
ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

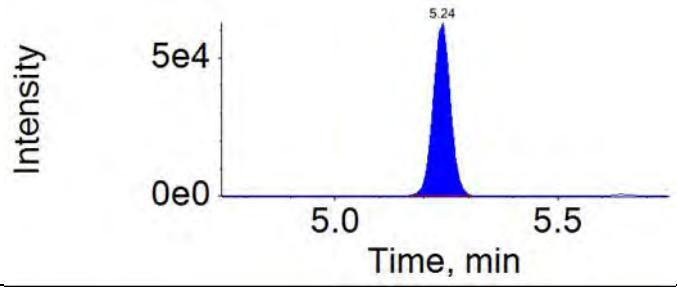
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



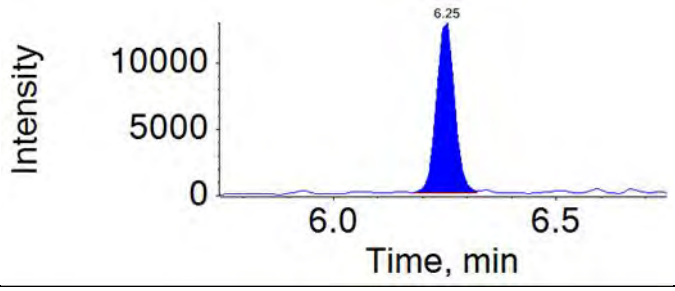


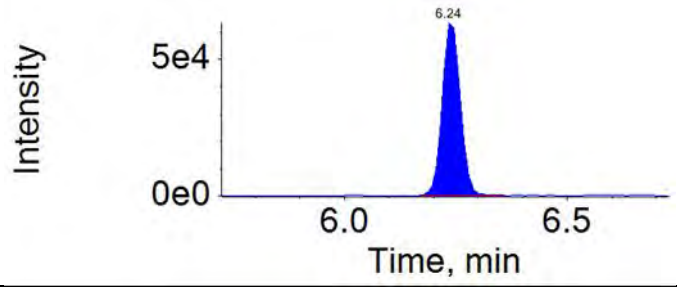
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



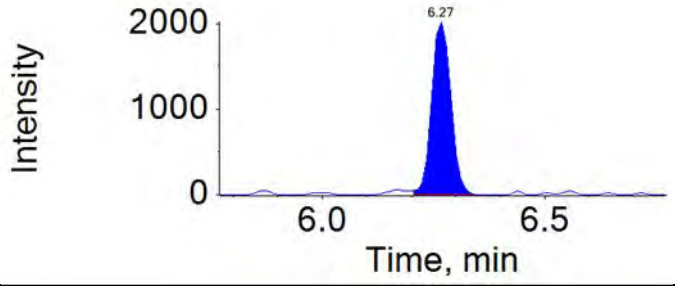


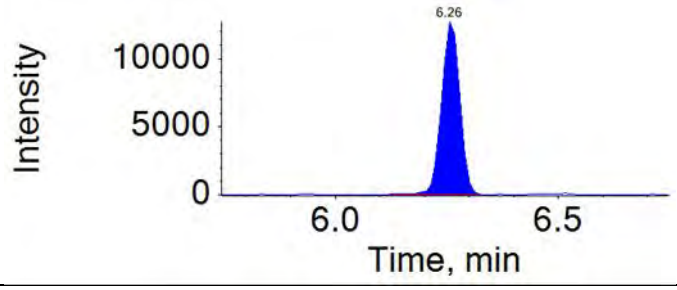
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

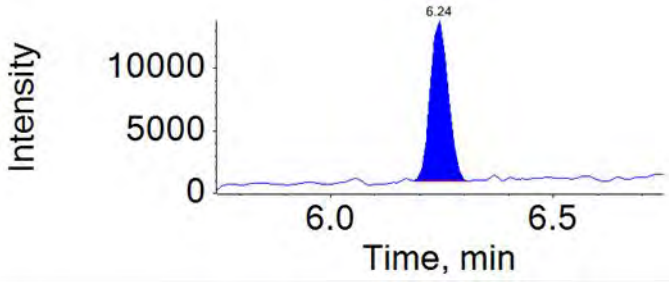
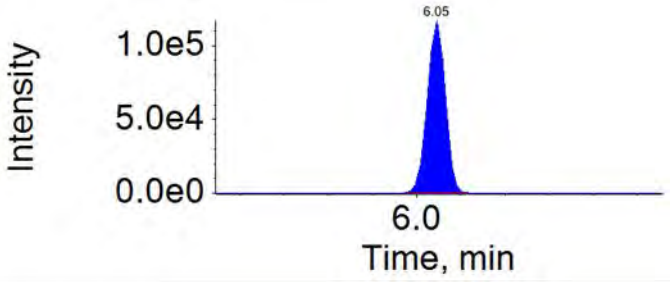


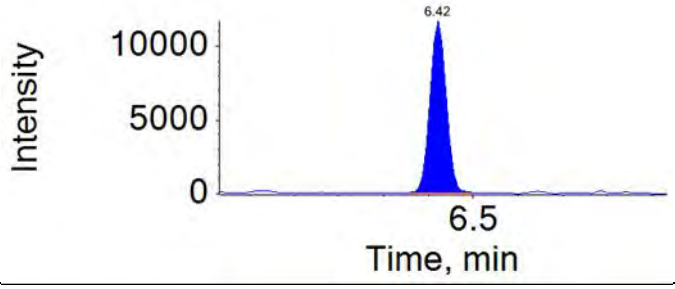
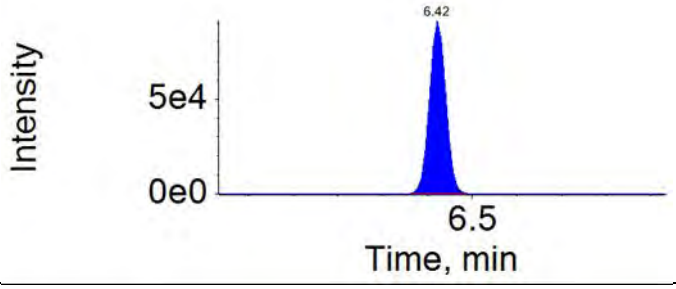


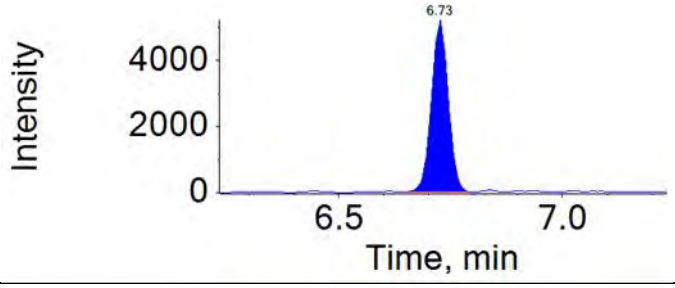
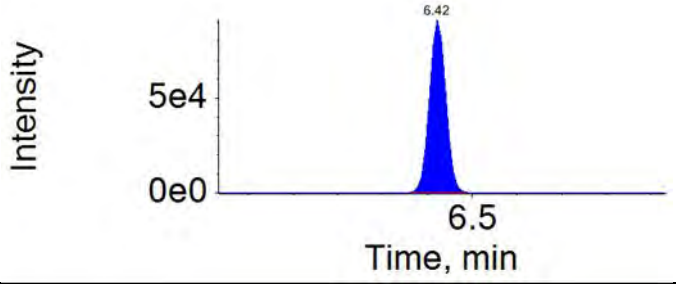
APPROVED
By JPT at 12:34 pm, 11/13/18

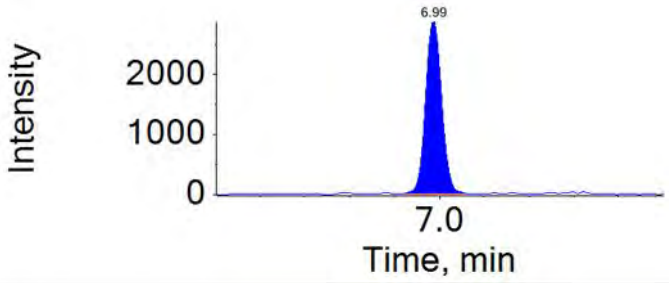
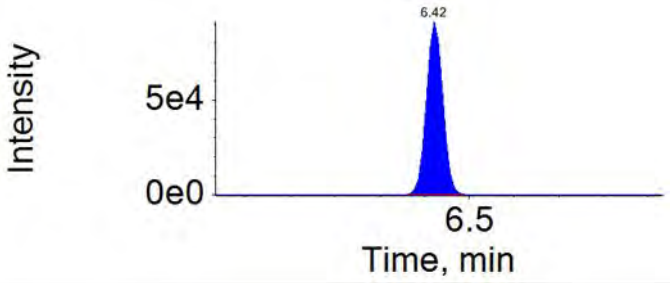
REVIEWED
By HMK at 2:20 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18313005 11/13/2018 12:05:34 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

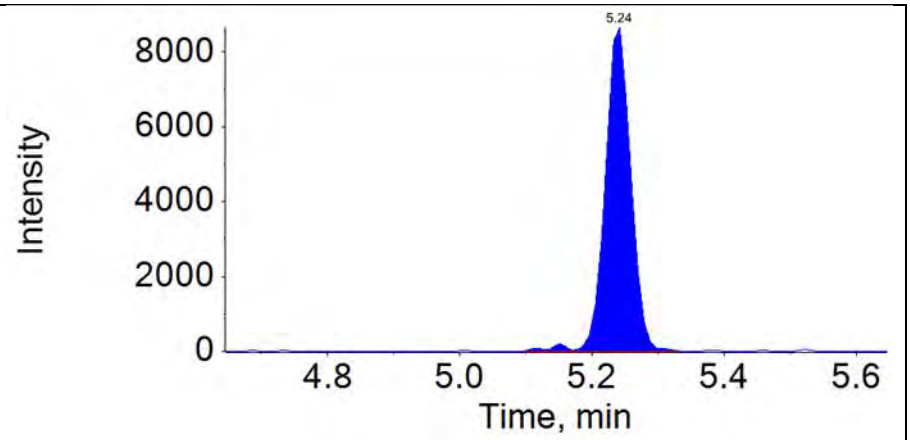
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

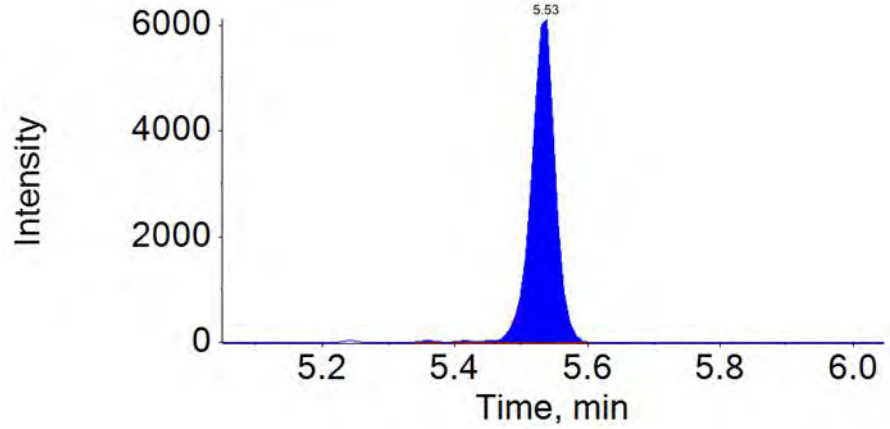
Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
23649.8
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



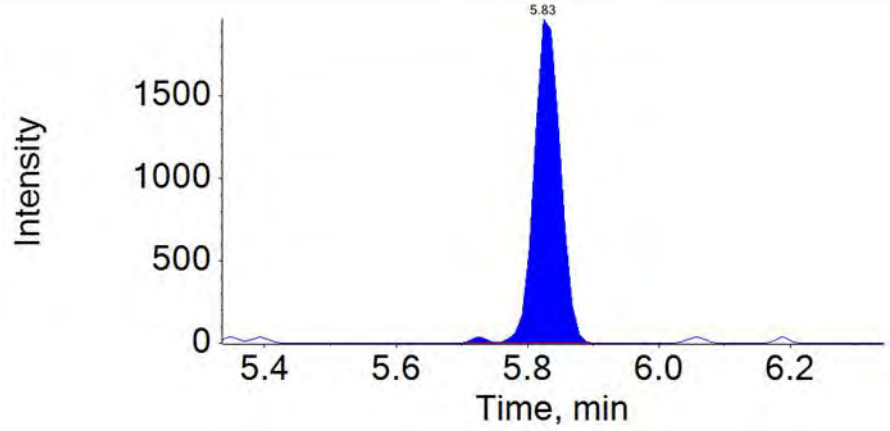
Integration Comment: incorrect integration

Component Name:
PFNS
RT (min.):
5.53
Peak Area:
15452.1
Mass Range:
549.0 / 80.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
5496.0
Mass Range:
584.0 / 419.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



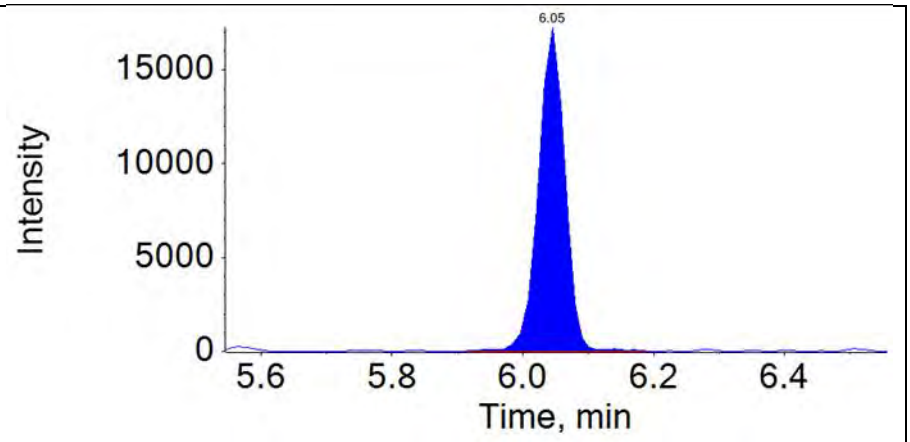
Integration Comment: incorrect integration

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

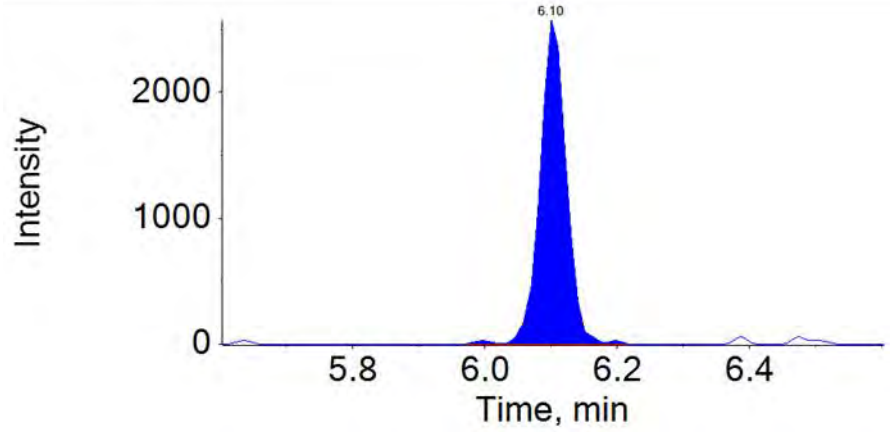
Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDoDA
RT (min.):
6.05
Peak Area:
48886.0
Mass Range:
613.0 / 569.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



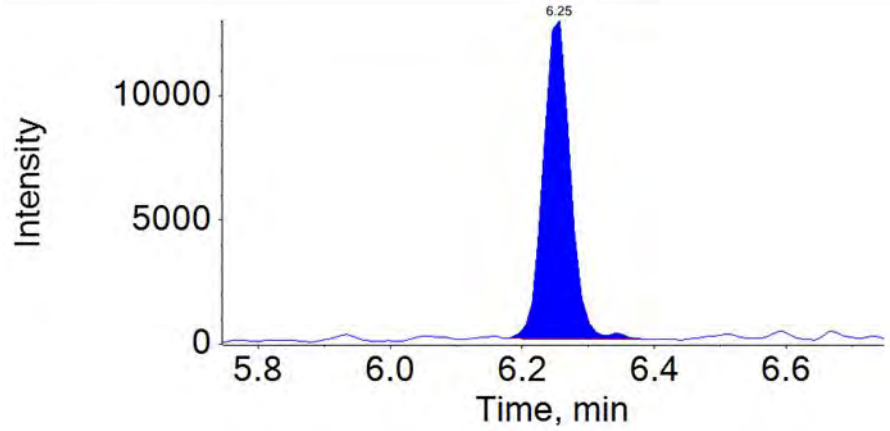
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
7179.9
Mass Range:
512.0 / 169.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



Integration Comment: incorrect integration

Component Name:
NEtPFOSAE
RT (min.):
6.25
Peak Area:
36830.2
Mass Range:
630.0 / 59.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



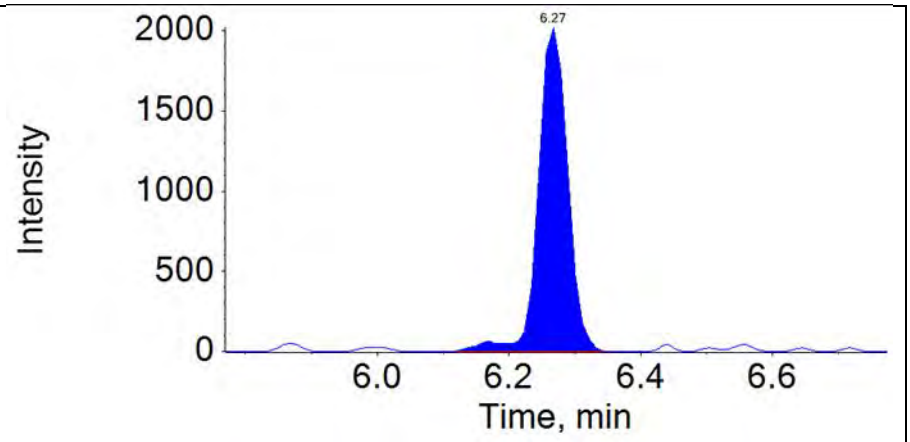
Integration Comment: incorrect integration

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

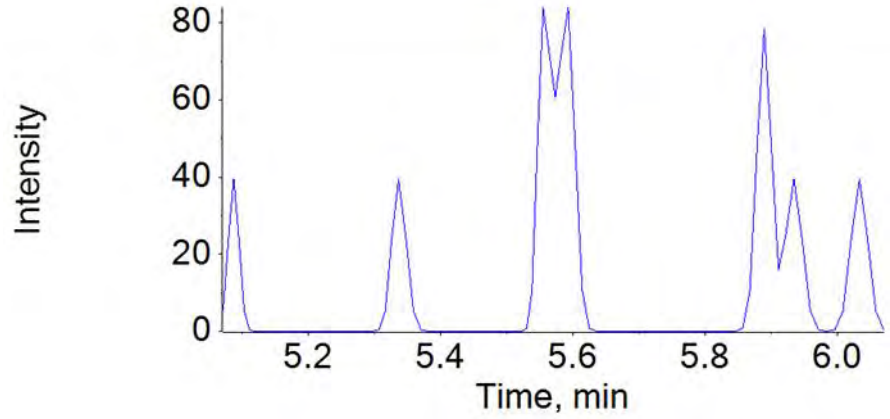
Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
6292.3
Mass Range:
526.0 / 169.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



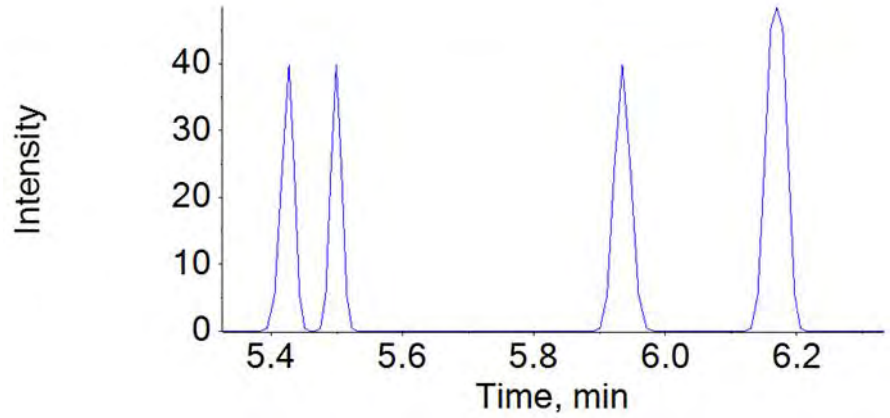
Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
513.0 / 169.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005



Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
563.0 / 169.0
File Name:
18NOV12D-17.wiff
Sample Name:
LCS313005

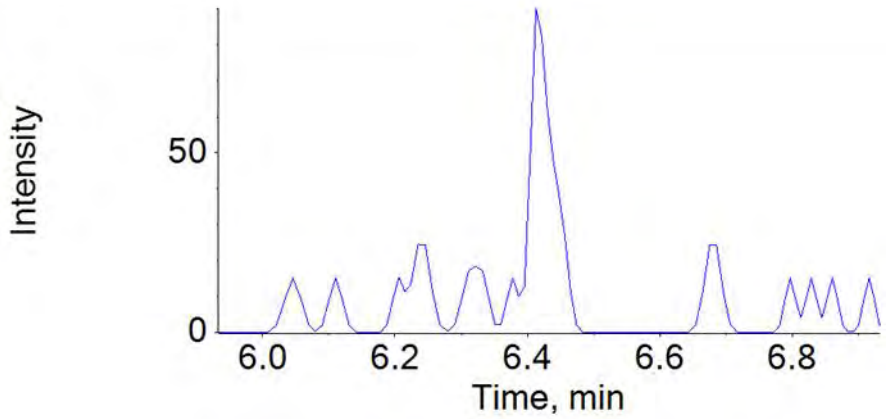


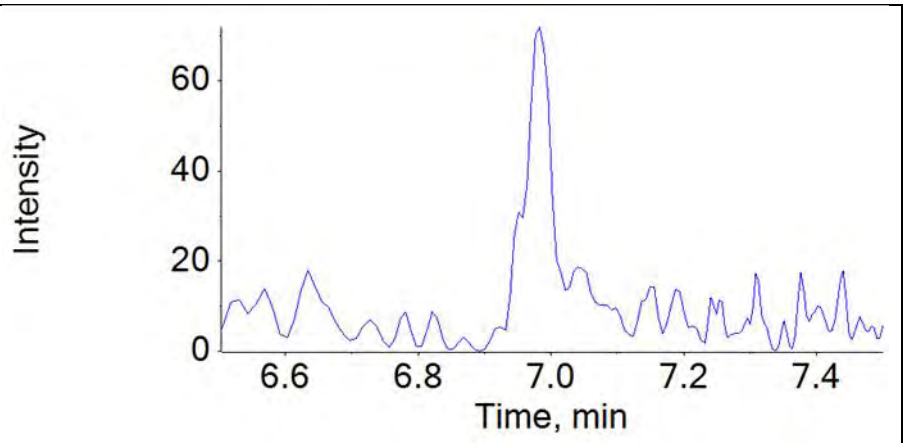
Integration Comment: incorrect integration

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFTeDA_2 **RT (min.):** N/A **Peak Area:** N/A **Mass Range:** 713.0 / 169.0 **File Name:** 18NOV12D-17.wiff **Sample Name:** LCS313005	 **Integration Comment:** incorrect integration

Component Name: PFODA_2 **RT (min.):** N/A **Peak Area:** N/A **Mass Range:** 913.0 / 169.0 **File Name:** 18NOV12D-17.wiff **Sample Name:** LCS313005	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Results Table Name: 18313005
Results Table Date: 11/13/2018 12:05:34 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Ion Ratio Report

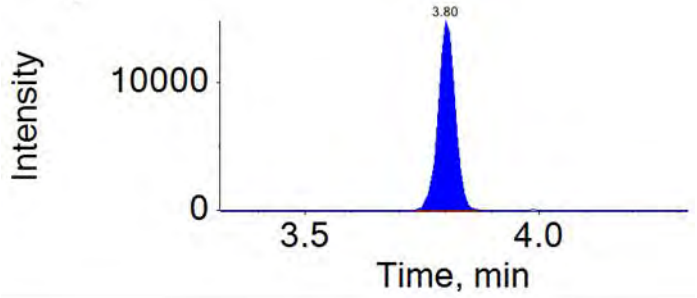
Sample Name: LCS313005 **Instrument Name:** LM27631 **File Name:** 18NOV12D-17.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	36860.3	A	N/A	1.0000			
PFBS_2	3.80	1.00	13427.8	A	N/A	0.3643	0	50	
4:2-FTS	4.12	1.00	20207.3	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	11808.3	A	N/A	0.5844		#NA!	
PFHxA	4.15	1.00	68525.2	A	N/A	1.0000			
PFHxA_2	4.16	1.00	790.4	A	N/A	0.0115	-2	50	
PFPeS	4.17	1.10	17439.1	A	N/A	1.0000			
PFPeS_2	4.17	1.10	8992.8	A	N/A	0.5157	-1	50	
PFHpA	4.54	1.00	71581.0	A	N/A	1.0000			
PFHpA_2	4.54	1.00	3938.4	A	N/A	0.0550	-2	50	
PFHxS	4.54	1.00	26352.1	A	N/A	1.0000			
PFHxS_2	4.54	1.00	10097.5	A	N/A	0.3832	26	50	
6:2-FTS	4.90	1.00	17396.8	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	10174.4	A	N/A	0.5848		#NA!	
PFHpS	4.90	1.08	25932.3	A	N/A	1.0000			
PFHpS_2	4.90	1.08	10798.9	A	N/A	0.4164	2	50	
PFOA	4.91	1.00	74919.0	A	N/A	1.0000			
PFOA_2	4.91	1.00	4297.7	A	N/A	0.0574	1	50	
PFOS	5.24	1.00	23248.1	M	N/A	1.0000			
PFOS_2	5.24	1.00	8412.9	A	N/A	0.3619	40	50	
PFNA	5.26	1.00	56146.9	A	N/A	1.0000			
PFNA_2	5.25	1.00	1397.1	A	N/A	0.0249	8	50	
PFNS	5.53	1.06	15290.7	M	N/A	1.0000			
PFNS_2	5.53	1.06	6619.8	A	N/A	0.4329	-9	50	
PFDA	5.55	1.00	49700.4	A	N/A	1.0000			
PFDA_2	5.57	1.00	280.8	M	N/A	0.0057	-29	50	
8:2-FTS	5.56	1.00	11664.9	A	N/A	1.0000			
8:2 FTS_2	5.56	1.00	7386.9	A	N/A	0.6333		#NA!	
NMeFOSAA	5.70	1.00	6438.0	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	1592.8	A	N/A	0.2474	16	50	
PFDS	5.79	1.11	10611.4	A	N/A	1.0000			
PFDS_2	5.79	1.11	5845.7	A	N/A	0.5509	8	50	
PFUnDA	5.82	1.00	41983.8	A	N/A	1.0000			
PFUnDA_2	5.93	1.02	72.6	M	N/A	0.0017	-58	50	OOS
NEtFOSAA	5.83	1.00	5436.2	M	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	3492.4	A	N/A	0.6424	11	50	
PFDoDA	6.05	1.00	48344.4	M	N/A	1.0000			
PFDoDA_2	6.05	1.00	648.9	A	N/A	0.0134	-18	50	
10:2-FTS	6.06	1.09	9448.7	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	6296.2	A	N/A	0.6664		#NA!	
PFTrDA	6.24	1.03	35529.8	A	N/A	1.0000			
PFTrDA_2	6.26	1.04	412.4	A	N/A	0.0116	26	50	
PFTeDA	6.42	1.00	29249.9	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	224.5	M	N/A	0.0077	20	50	
PFHxDA	6.73	1.05	13533.7	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	811.7	A	N/A	0.0600	-11	50	
PFODA	6.99	1.09	7116.8	A	N/A	1.0000			
PFODA_2	6.98	1.09	201.2	M	N/A	0.0283	5	50	

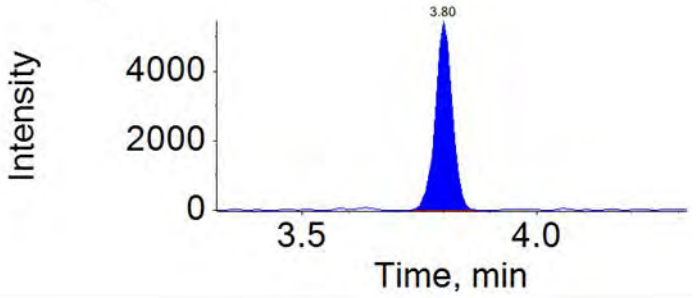
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

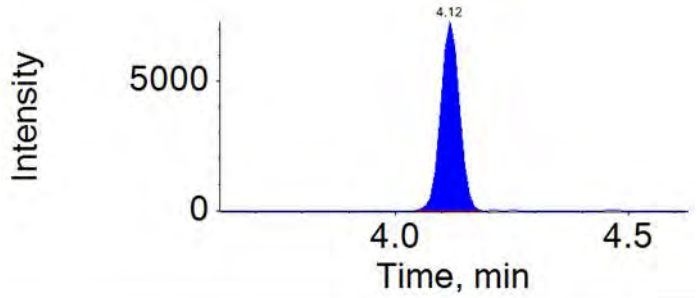
Component: PFBS
Primary Mass: 299.0 / 80.0



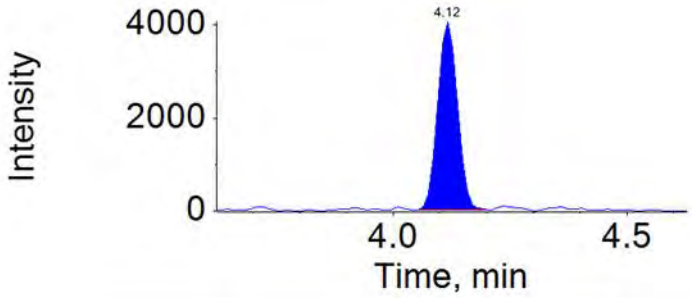
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



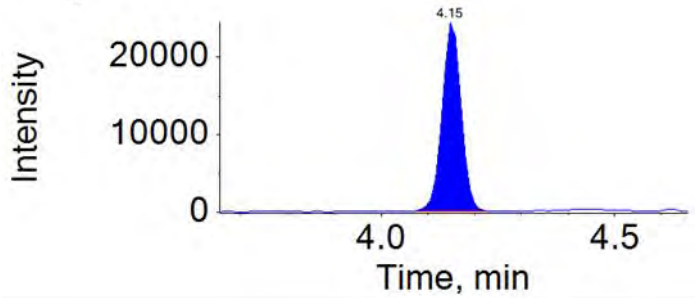
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



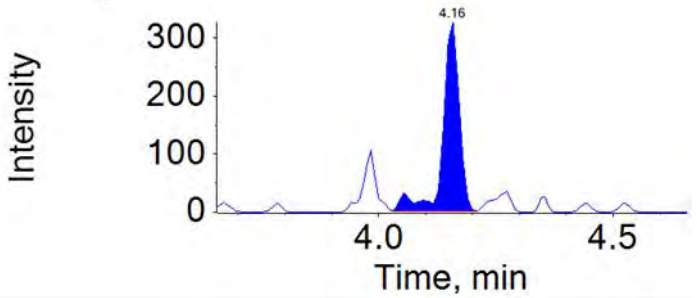
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



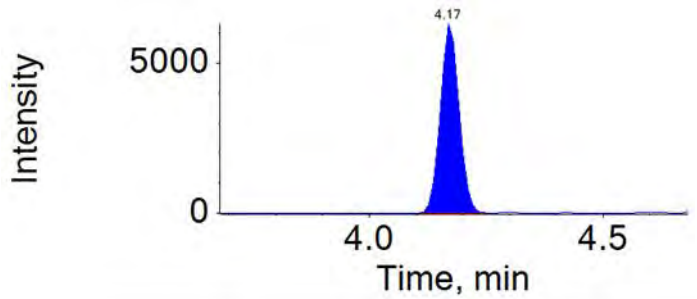
Component: PFHxA
Primary Mass: 313.0 / 269.0



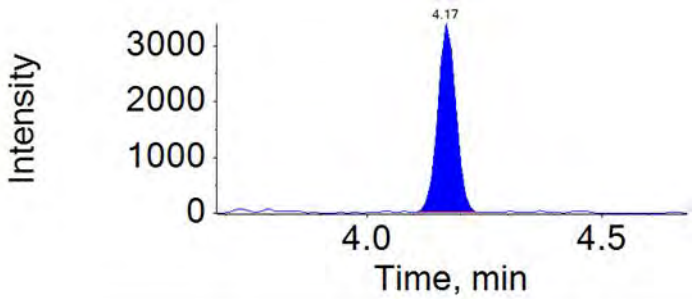
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



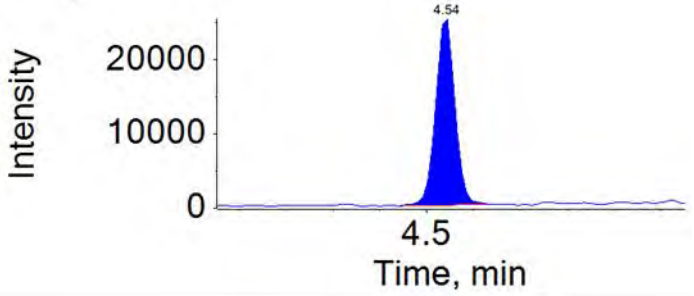
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



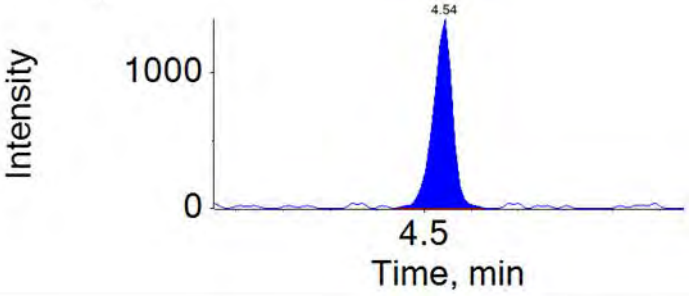
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

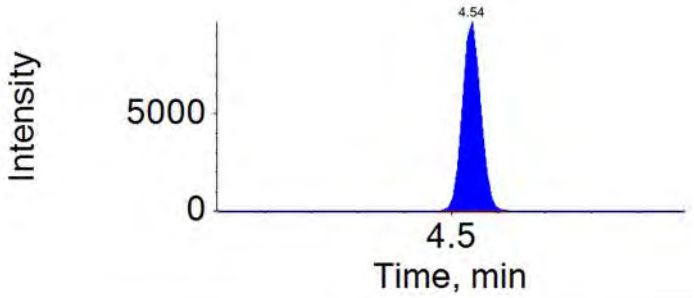
Component: PFHpA
Primary Mass: 363.0 / 319.0



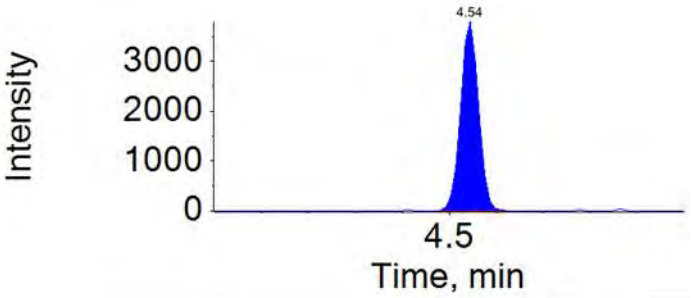
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



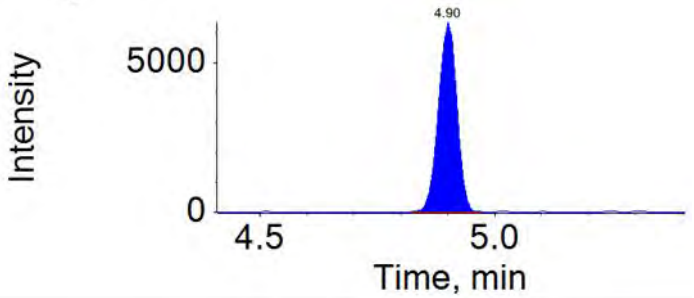
Component: PFHxS
Primary Mass: 399.0 / 80.0



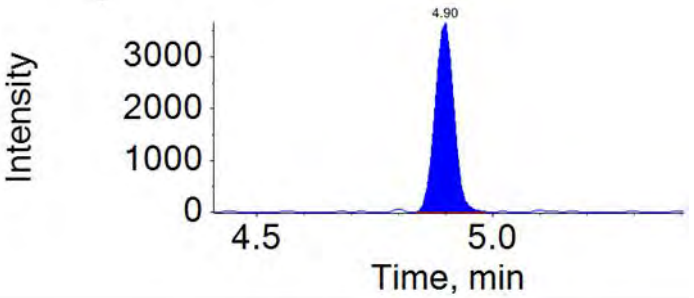
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



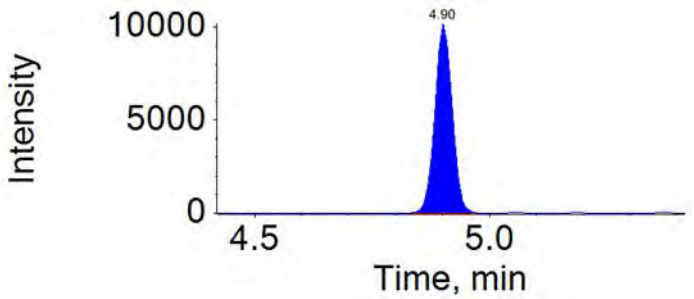
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



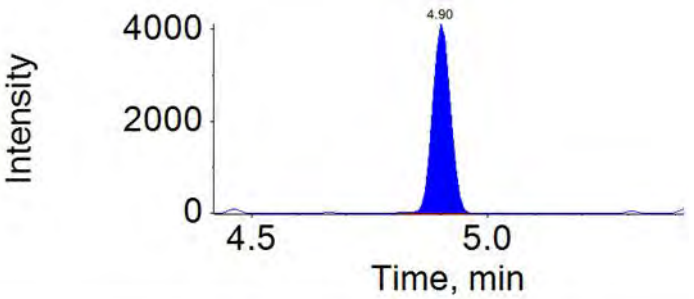
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



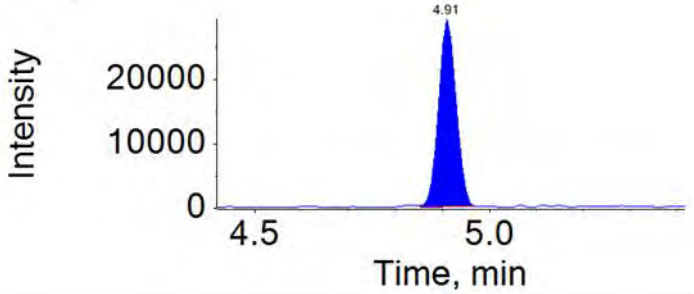
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



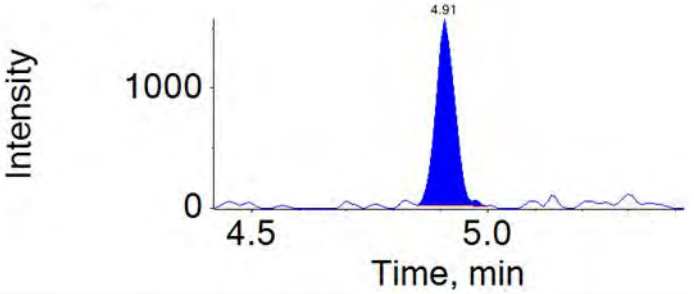
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

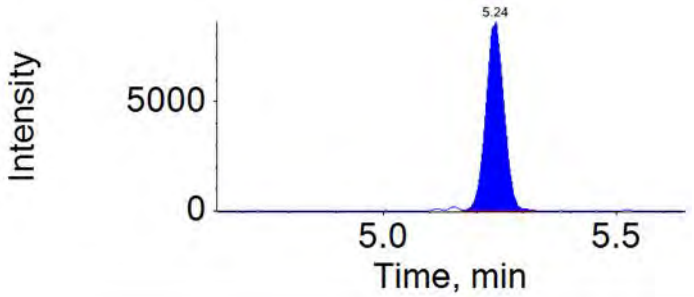
Component: PFOA
Primary Mass: 413.0 / 369.0



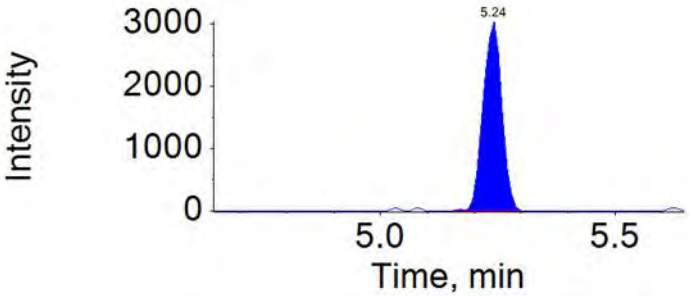
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



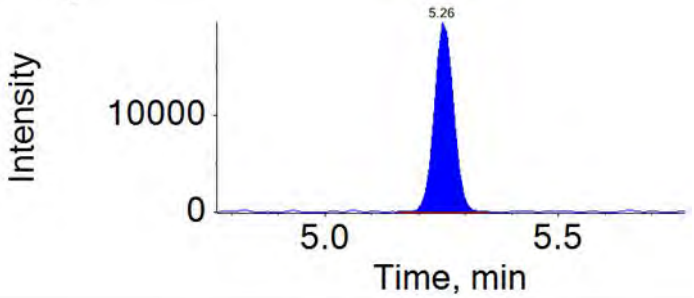
Component: PFOS
Primary Mass: 499.0 / 80.0



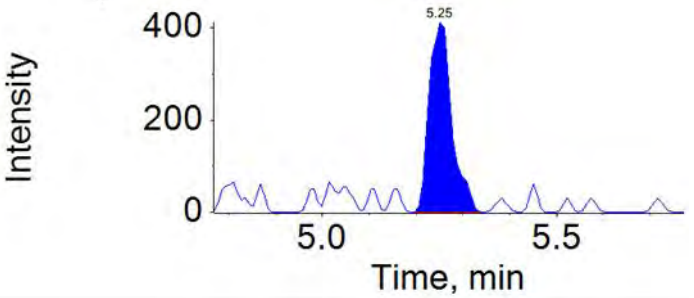
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



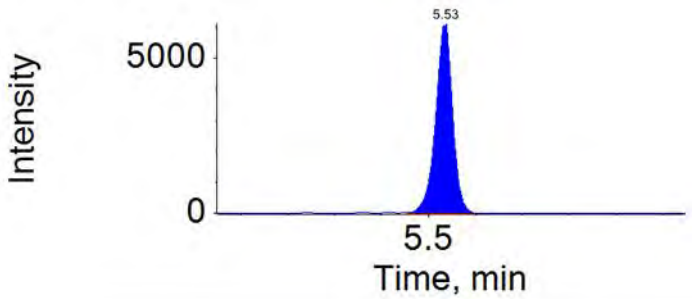
Component: PFNA
Primary Mass: 463.0 / 419.0



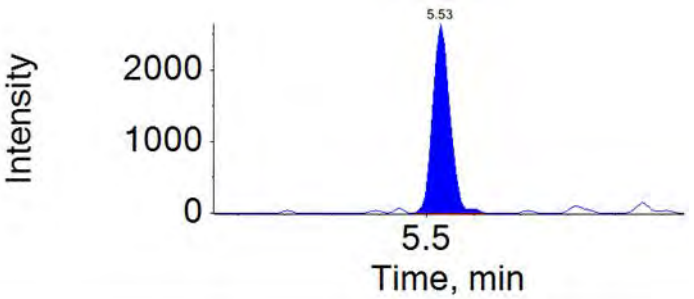
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



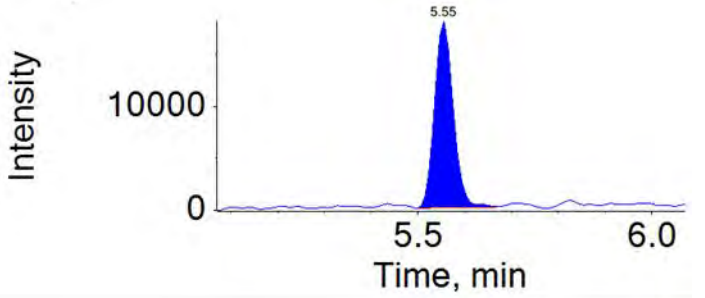
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



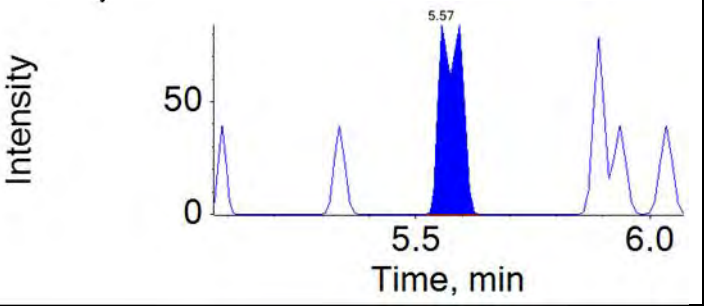
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

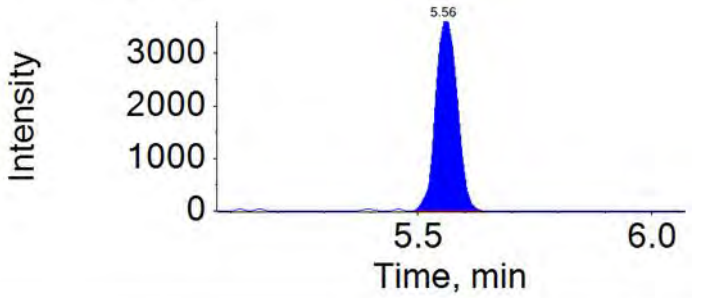
Component: PFDA
Primary Mass: 513.0 / 469.0



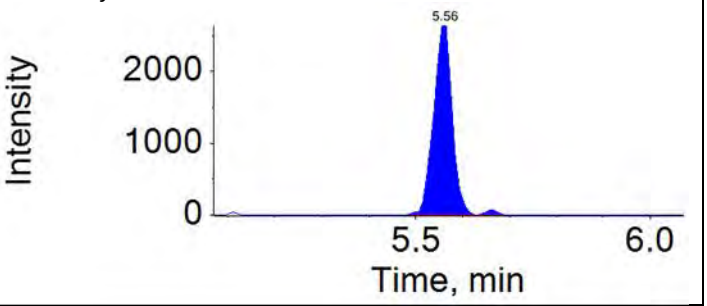
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



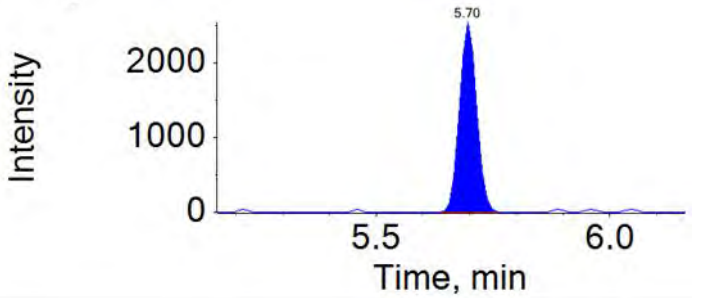
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



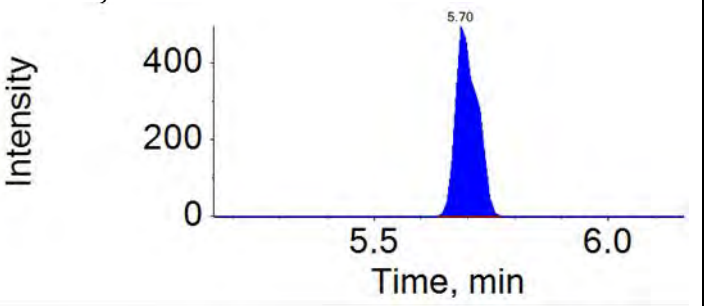
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



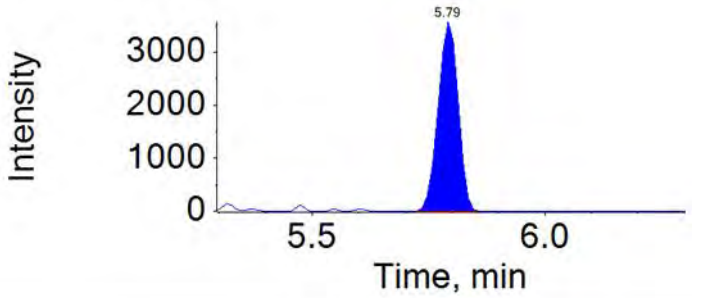
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



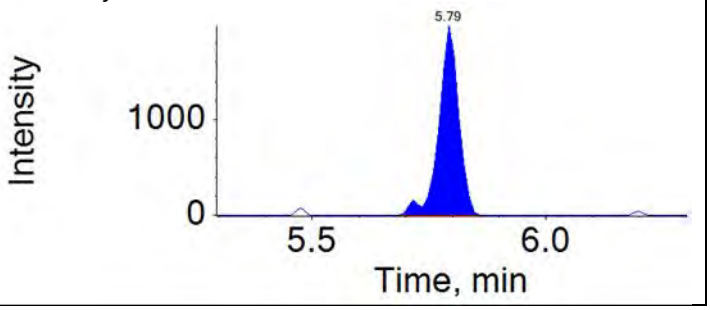
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



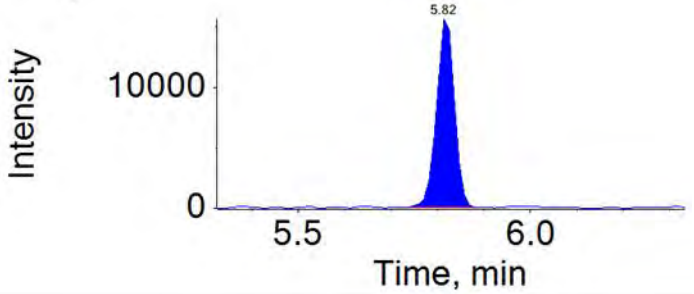
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



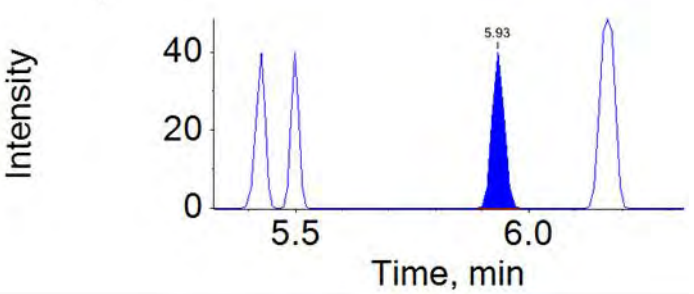
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

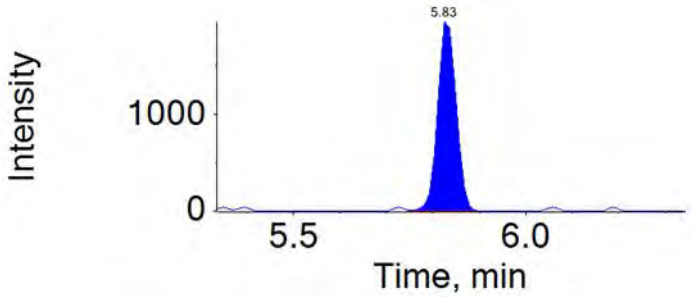
Component: PFUnDA
Primary Mass: 563.0 / 519.0



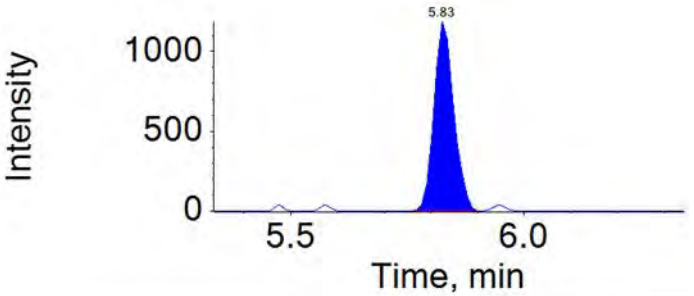
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



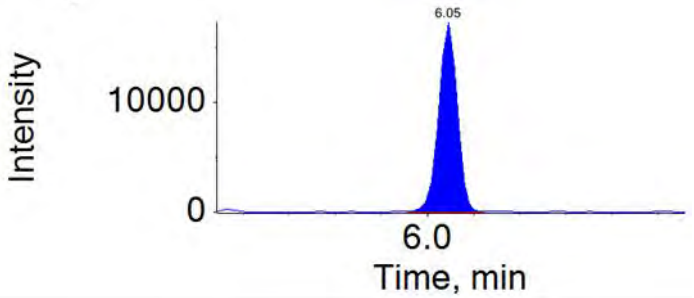
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



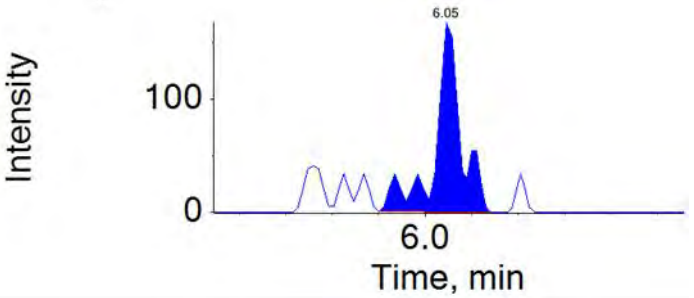
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



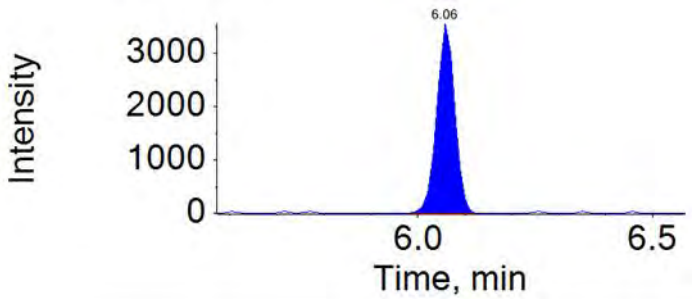
Component: PFDoDA
Primary Mass: 613.0 / 569.0



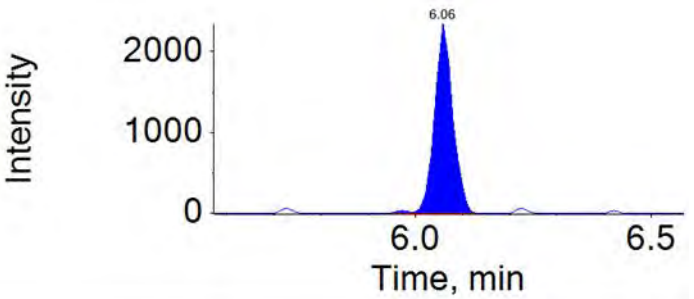
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



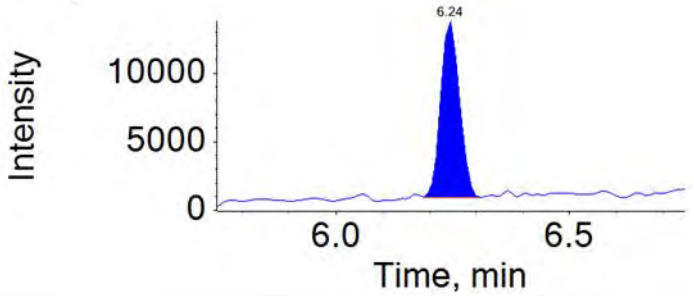
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



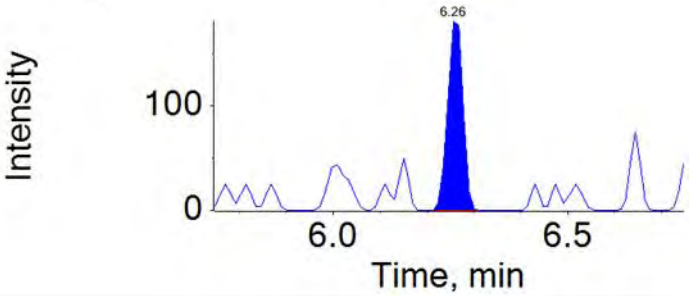
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

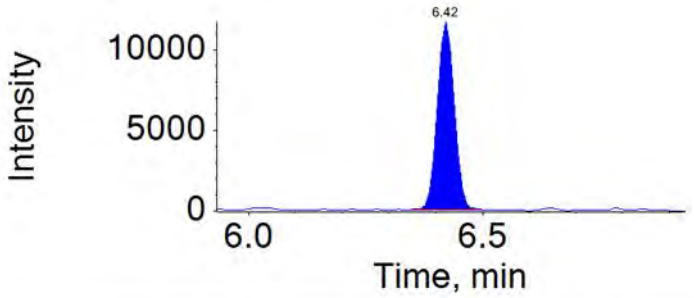
Component: PFTrDA
Primary Mass: 663.0 / 619.0



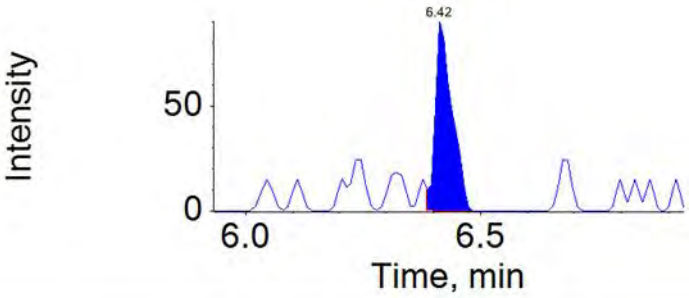
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



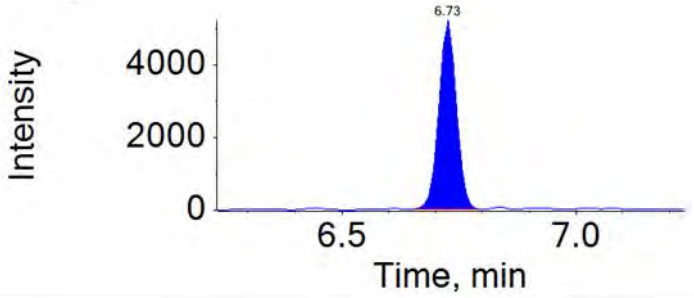
Component: PFTeDA
Primary Mass: 713.0 / 669.0



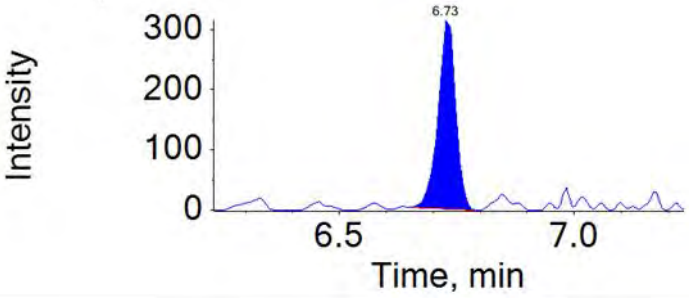
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



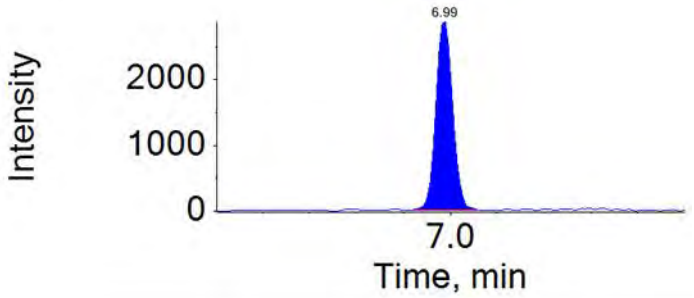
Component: PFHxDA
Primary Mass: 813.0 / 769.0



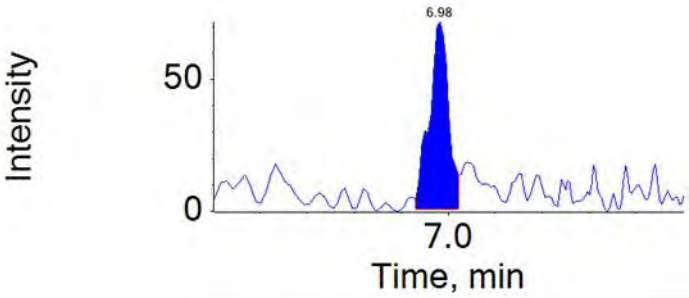
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



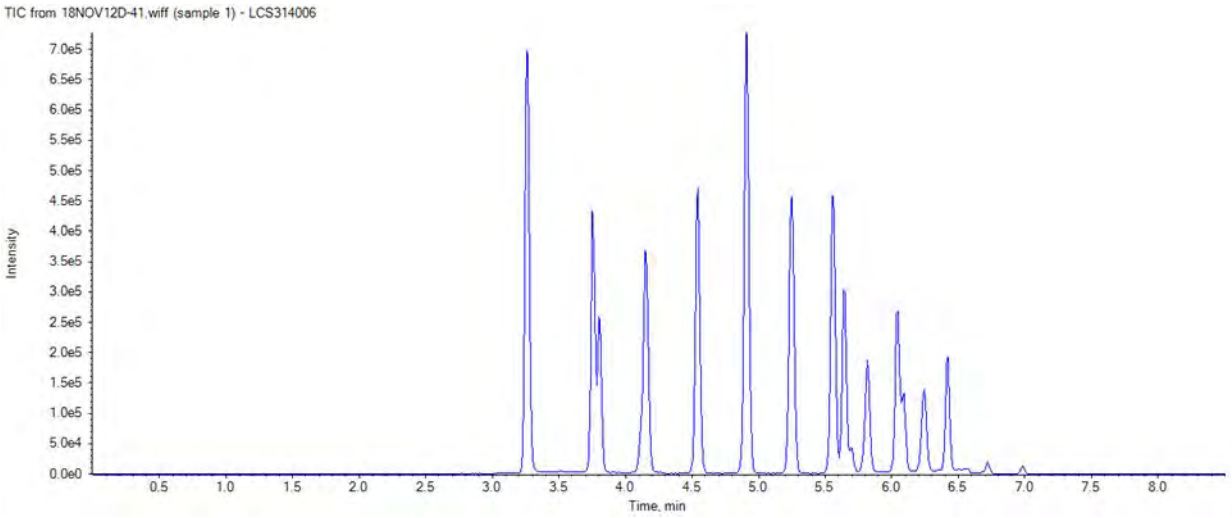
APPROVED
By JPT at 12:34 pm, 11/13/18

REVIEWED
By HMK at 2:20 pm, 11/13/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18314006 11/13/2018 8:01:57 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS314006	EPA 537 mod QSM 5.1 table B-15 18314006	18NOV12D-41.wiff	2018-11-12T22:46:42



Injection Standard Area Reference File**:** 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	706876.1	659926.2	7	50	
13C2-PFOA	5.00	483545.9	450219.7	7	50	
13C4-PFOS	4.78	262275.4	249205.8	5	50	
13C2-PFDA	5.00	298113.5	278743.9	7	50	

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:01:57 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS314006	EPA 537 mod QSM 5.1 table B-15 18314006	18NOV12D-41.wiff	2018-11-12T22:46:42

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	179929.7	708184.2	0.254	5.440	5.630	103	70-130	
PFPeA	168967.8	716081.1	0.236	5.440	5.464	100	70-130	
PFBS	99212.0	414092.6	0.240	4.812	4.559	95	72-127	
4:2-FTS	58991.6	45111.1	1.308	14.944	14.202	95	70-130	
PFHxA	209595.8	621380.5	0.337	5.440	5.634	104	77-132	
PFPeS	51164.4	414092.6	0.124	5.104	4.798	94	70-130	
PFHpA	208526.1	485736.6	0.429	5.440	5.692	105	75-139	
PFHxS	72480.7	301819.2	0.240	5.144	4.658	91	71-130	
6:2-FTS	47579.1	33888.3	1.404	15.168	13.590	90	70-130	
PFHpS	71132.0	301819.2	0.236	5.176	4.962	96	70-130	
PFOA	209962.6	817159.9	0.257	5.440	5.489	101	76-136	
PFOS	65889.0	248906.0	0.265	5.200	4.630	89	67-134	
PFNA	167593.9	456235.4	0.367	5.440	5.298	97	73-144	
PFNS	40109.3	248906.0	0.161	5.224	4.510	86	70-130	
PFDA	134109.4	568394.2	0.236	5.440	5.003	92	67-141	
8:2-FTS	35879.8	25473.3	1.409	15.328	13.136	86	70-130	
PFOSA	144082.1	557604.3	0.258	5.440	5.048	93	70-130	
NMeFOSAA	14966.5	71282.5	0.210	5.440	4.747	87	67-124	
PFDS	31212.7	248906.0	0.125	5.240	4.545	87	70-130	
PFUnDA	113786.0	221112.8	0.515	5.440	5.381	99	83-132	
NEtFOSAA	13644.6	56588.7	0.241	5.440	5.056	93	60-131	
PFDoDA	116138.3	463160.1	0.251	5.440	5.107	94	72-137	
10:2-FTS	21978.0	25473.3	0.863	15.424	11.495	75	70-130	
NMePFOSAE	59770.8	182355.5	0.328	5.440	5.457	100	70-130	
NMePFOSA	10453.8	41138.5	0.254	5.440	5.014	92	70-130	
PFDoS	16848.0	248906.0	0.068	5.280	4.742	90	70-130	
NEtPFOSAE	57115.2	146773.2	0.389	5.440	4.994	92	70-130	
NEtPFOSA	7599.7	30795.2	0.247	5.440	4.533	83	70-130	
PFTrDA	100743.9	463160.1	0.218	5.440	5.491	101	57-137	
PFTeDA	75418.9	325803.6	0.231	5.440	5.190	95	70-142	
PFHxDA	33841.9	325803.6	0.104	5.440	4.950	91	70-130	
PFODA	26124.9	325803.6	0.080	5.440	4.467	82	70-130	

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18314006 11/13/2018 8:01:57 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	LCS314006			**Data File:**		18NOV12D-41.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314006			**Acquis Date:**		2018-11-12T22:46:42
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	70			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314006
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314006			**Operator:**		MCD7824
Sample Wt.:	0.25000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	706876.1	659926.2	7	50	
13C2-PFOA	5.0	483545.9	450219.7	7	50	
13C4-PFOS	4.8	262275.4	249205.8	5	50	
13C2-PFDA	5.0	298113.5	278743.9	7	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	708184.2	13C3-PFBA	706876.1	1.002	20.000	17.967	90	50-150	
E13C5-PFPeA	716081.1	13C3-PFBA	706876.1	1.013	20.000	18.175	91	50-150	
E13C3-PFBS	414092.6	13C3-PFBA	706876.1	0.586	18.600	16.541	89	50-150	
E13C2-4:2-FTS	45111.1	13C2-PFOA	483545.9	0.093	18.680	16.620	89	50-150	
E13C5-PFHxA	621380.5	13C2-PFOA	483545.9	1.285	20.000	18.568	93	50-150	
E13C3-PFHxS	301819.2	13C2-PFOA	483545.9	0.624	18.920	17.132	91	50-150	
E13C4-PFHpA	485736.6	13C2-PFOA	483545.9	1.005	20.000	18.102	91	50-150	
E13C2-6:2-FTS	33888.3	13C2-PFOA	483545.9	0.070	19.000	18.756	99	50-150	
E13C8-PFOA	817159.9	13C2-PFOA	483545.9	1.690	20.000	18.624	93	50-150	
E13C8-PFOS	248906.0	13C4-PFOS	262275.4	0.949	19.120	16.820	88	50-150	
E13C9-PFNA	456235.4	13C4-PFOS	262275.4	1.740	20.000	19.400	97	50-150	
E13C6-PFDA	568394.2	13C2-PFDA	298113.5	1.907	20.000	17.797	89	50-150	
E13C2-8:2-FTS	25473.3	13C2-PFDA	298113.5	0.085	19.160	17.046	89	50-150	
E13C8-PFOSA	557604.3	13C2-PFDA	298113.5	1.870	20.000	16.587	83	50-150	
Ed3-NMeFOSAA	71282.5	13C2-PFDA	298113.5	0.239	20.000	17.264	86	50-150	
E13C7-PFUnDA	221112.8	13C2-PFDA	298113.5	0.742	20.000	17.225	86	50-150	
Ed5-NEtFOSAA	56588.7	13C2-PFDA	298113.5	0.190	20.000	16.064	80	50-150	
E13C2-PFDoDA	463160.1	13C2-PFDA	298113.5	1.554	20.000	16.135	81	50-150	
Ed7-NMePFOSAE	182355.5	13C2-PFDA	298113.5	0.612	20.000	10.588	53	50-150	
Ed3-NMePFOSA	41138.5	13C2-PFDA	298113.5	0.138	20.000	10.029	50	50-150	
Ed9-NEtPFOSAE	146773.2	13C2-PFDA	298113.5	0.492	20.000	10.243	51	50-150	
Ed5-NEtPFOSA	30795.2	13C2-PFDA	298113.5	0.103	20.000	9.693	48	50-150	OOS
E13C2-PFTeDA	325803.6	13C2-PFDA	298113.5	1.093	20.000	15.347	77	50-150	

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

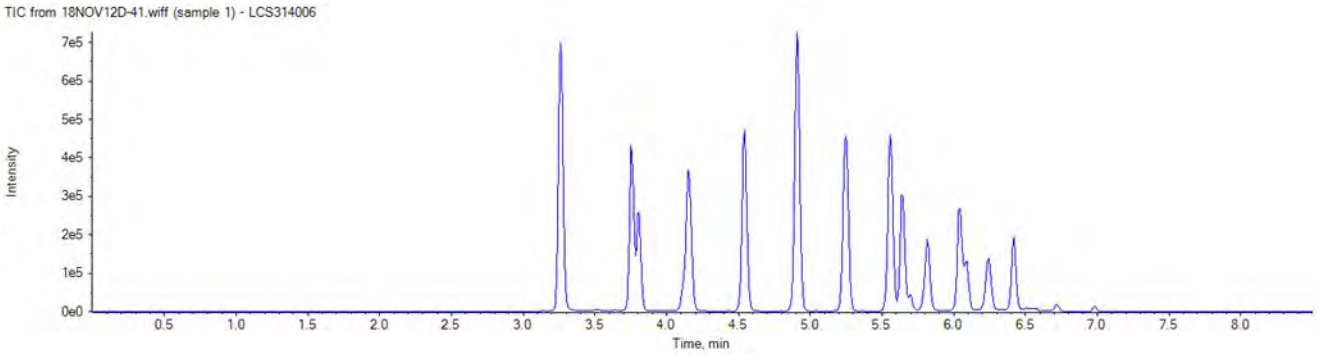
Analyte Quantitation Peak Table

Sample Name: LCS314006 **Instrument Name:** LM27631 **File Name:** 18NOV12D-41.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.25000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFBA	3.26	1.000	179929.7		A	13C4-PFBA	3.26	708184.2	0.254	5.630
PFPeA	3.76	1.000	168967.8		A	13C5-PFPeA	3.76	716081.1	0.236	5.464
PFBS	3.81	1.000	99212.0		A	13C3-PFBS	3.81	414092.6	0.240	4.559
4:2-FTS	4.12	1.000	58991.6		A	13C2-4:2-FTS	4.12	45111.1	1.308	14.202
PFHxA	4.15	1.000	209595.8		A	13C5-PFHxA	4.15	621380.5	0.337	5.634
PFPeS	4.17	1.100	51164.4		A	13C3-PFBS	3.81	414092.6	0.124	4.798
PFHpA	4.54	1.000	208526.1		A	13C4-PFHpA	4.54	485736.6	0.429	5.692
PFHxS	4.54	1.000	72480.7		A	13C3-PFHxS	4.54	301819.2	0.240	4.658
6:2-FTS	4.90	1.000	47579.1		A	13C2-6:2-FTS	4.90	33888.3	1.404	13.590
PFHpS	4.90	1.080	71132.0		A	13C3-PFHxS	4.54	301819.2	0.236	4.962
PFOA	4.91	1.000	209962.6		A	13C8-PFOA	4.91	817159.9	0.257	5.489
PFOS	5.24	1.000	65889.0		M	13C8-PFOS	5.24	248906.0	0.265	4.630
PFNA	5.26	1.000	167593.9		A	13C9-PFNA	5.26	456235.4	0.367	5.298
PFNS	5.54	1.060	40109.3		A	13C8-PFOS	5.24	248906.0	0.161	4.510
PFDA	5.56	1.000	134109.4		A	13C6-PFDA	5.56	568394.2	0.236	5.003
8:2-FTS	5.56	1.000	35879.8		A	13C2-8:2-FTS	5.56	25473.3	1.409	13.136
PFOSA	5.64	1.000	144082.1		A	13C8-PFOSA	5.64	557604.3	0.258	5.048
NMeFOSAA	5.70	1.000	14966.5		A	d3-NMeFOSAA	5.70	71282.5	0.210	4.747
PFDS	5.79	1.110	31212.7		A	13C8-PFOS	5.24	248906.0	0.125	4.545
PFUnDA	5.82	1.000	113786.0		A	13C7-PFUnDA	5.82	221112.8	0.515	5.381
NEtFOSAA	5.83	1.000	13644.6		A	d5-NEtFOSAA	5.83	56588.7	0.241	5.056
PFDoDA	6.04	1.000	116138.3		A	13C2-PFDoDA	6.04	463160.1	0.251	5.107
10:2-FTS	6.06	1.090	21978.0		A	13C2-8:2-FTS	5.56	25473.3	0.863	11.495
NMePFOSAE	6.09	1.000	59770.8		A	d7-NMePFOSAE	6.08	182355.5	0.328	5.457
NMePFOSA	6.10	1.000	10453.8		M	d3-NMePFOSA	6.10	41138.5	0.254	5.014
PFDoS	6.21	1.190	16848.0		M	13C8-PFOS	5.24	248906.0	0.068	4.742
NEtPFOSAE	6.25	1.000	57115.2		A	d9-NEtPFOSAE	6.24	146773.2	0.389	4.994
NEtPFOSA	6.26	1.000	7599.7		A	d5-NEtPFOSA	6.26	30795.2	0.247	4.533
PFTrDA	6.24	1.030	100743.9		A	13C2-PFDoDA	6.04	463160.1	0.218	5.491
PFTeDA	6.42	1.000	75418.9		A	13C2-PFTeDA	6.42	325803.6	0.231	5.190
PFHxDA	6.72	1.050	33841.9		A	13C2-PFTeDA	6.42	325803.6	0.104	4.950
PFODA	6.98	1.090	26124.9		A	13C2-PFTeDA	6.42	325803.6	0.080	4.467

Total Ion Chromatogram

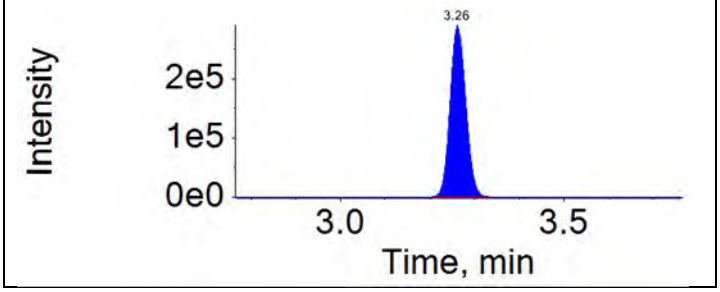


APPROVED
By MCD at 8:21 pm, 11/13/18

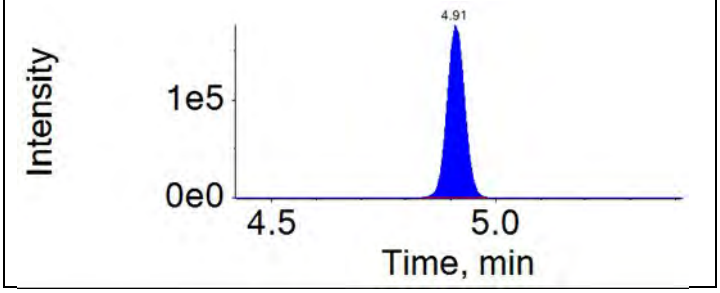
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

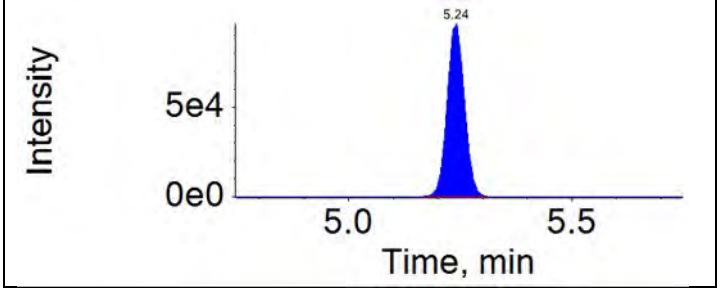
Injection Standard: 13C3-PFBA
216.0 / 172.0



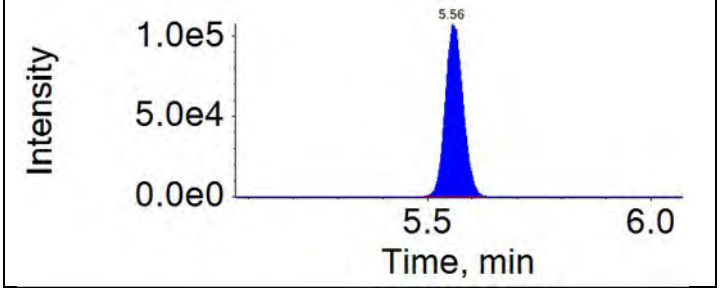
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

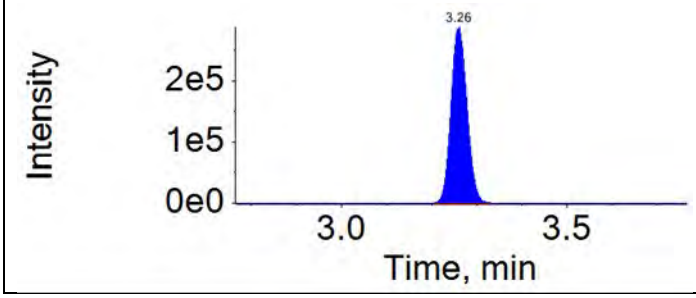


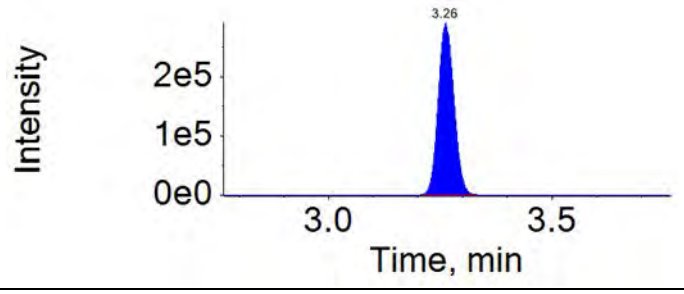
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

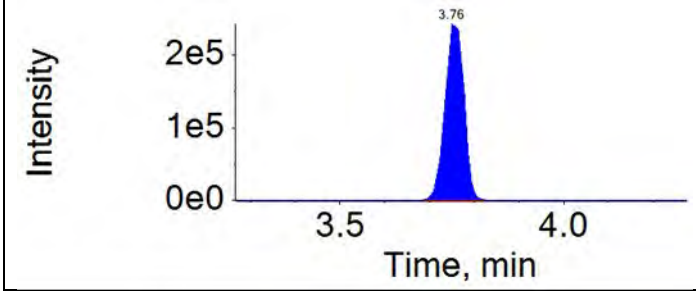
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

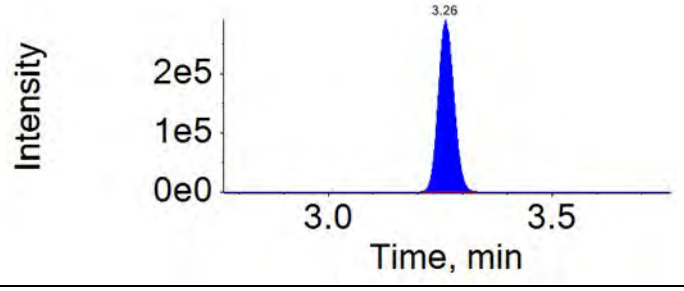
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



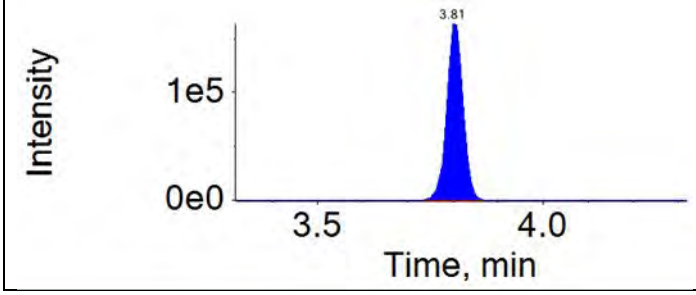


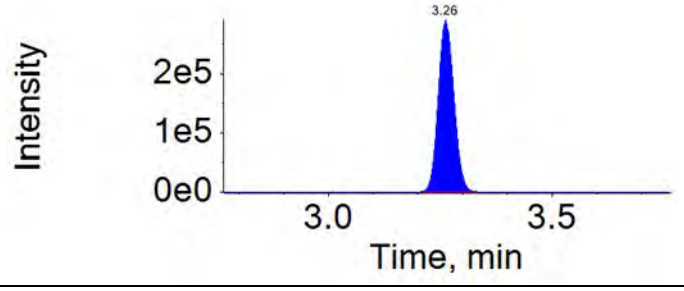
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



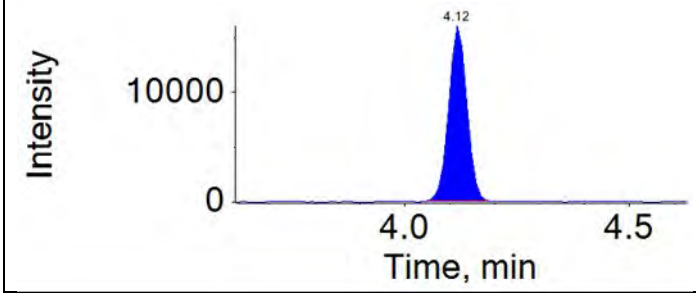


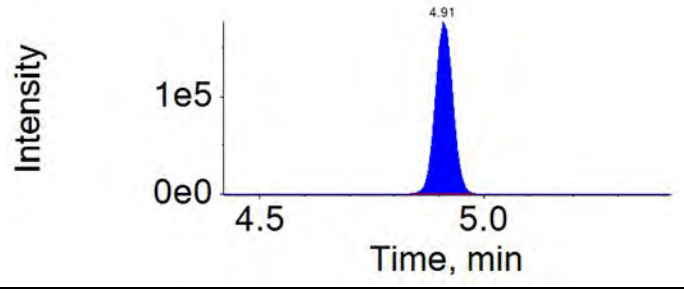
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





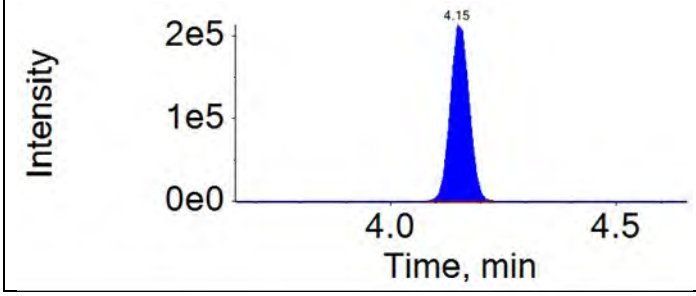
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

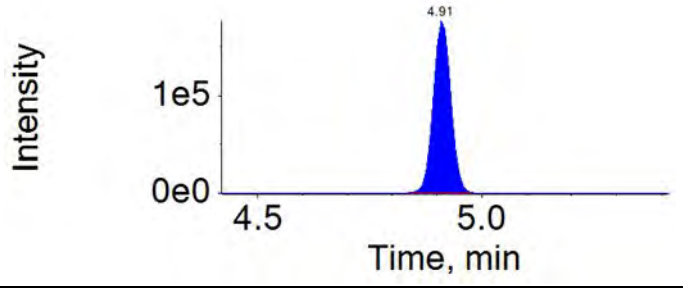




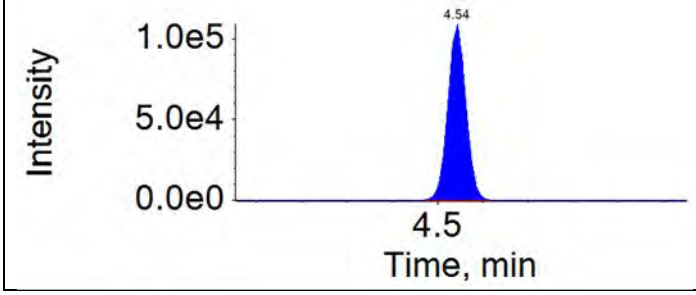
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

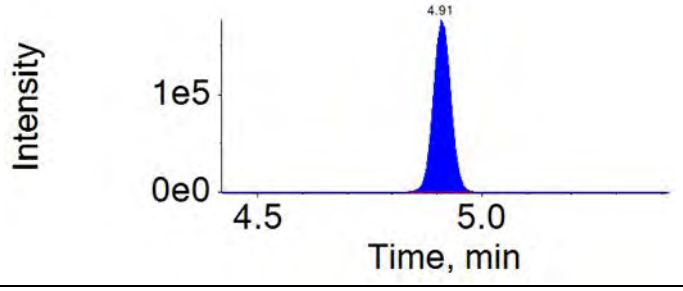
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



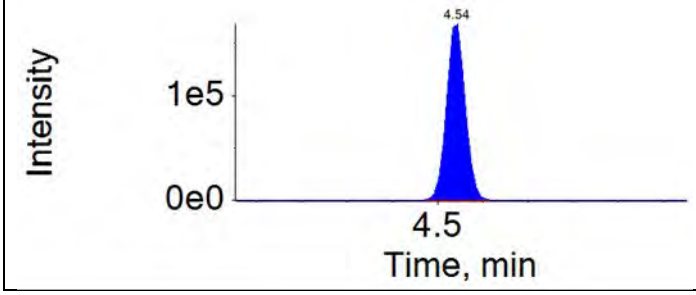


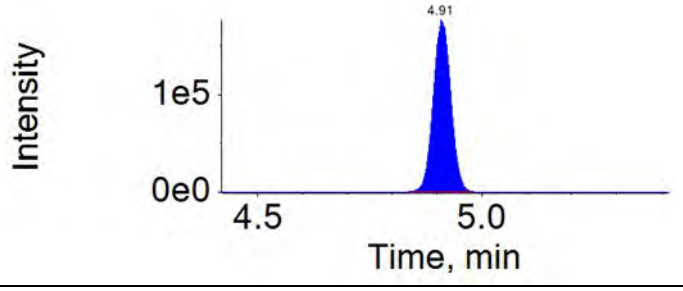
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



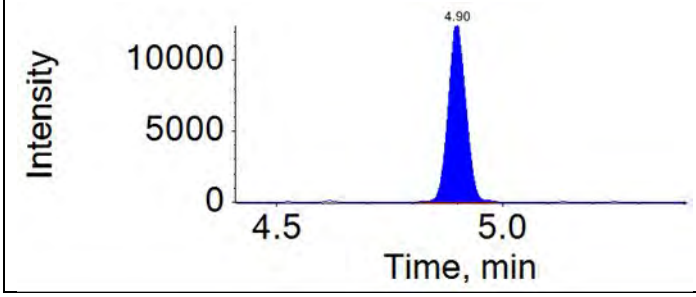


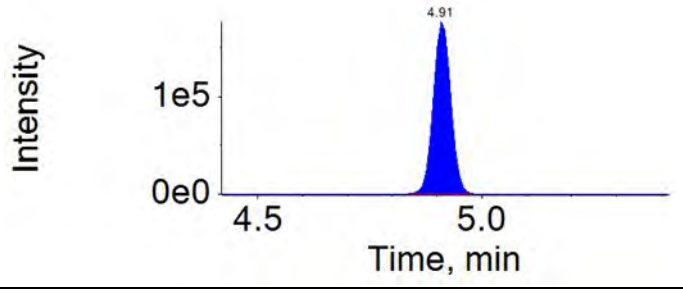
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

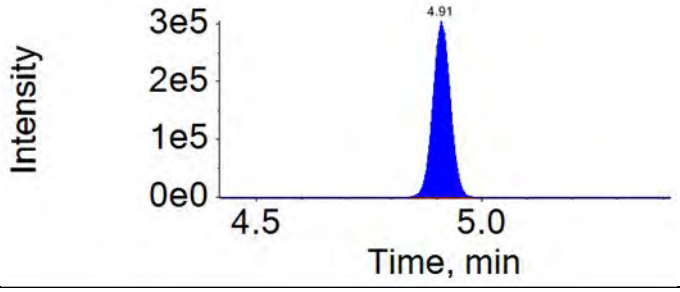
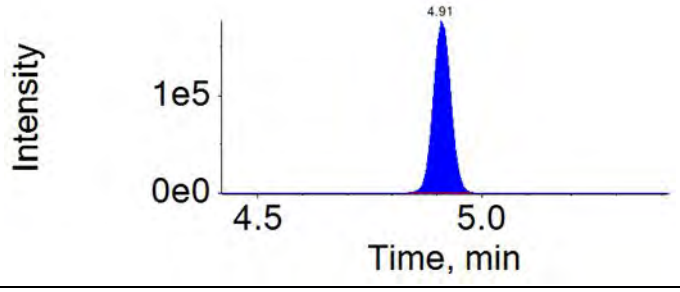


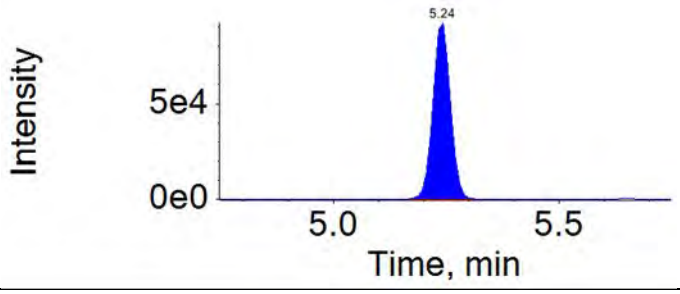
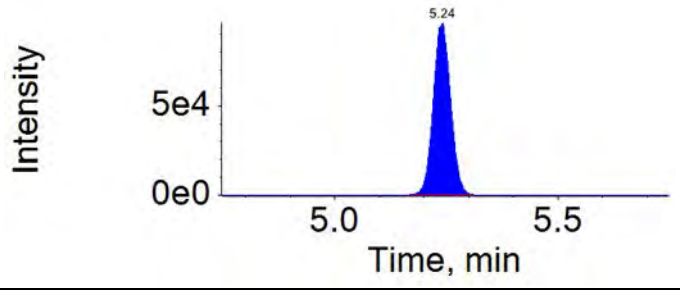


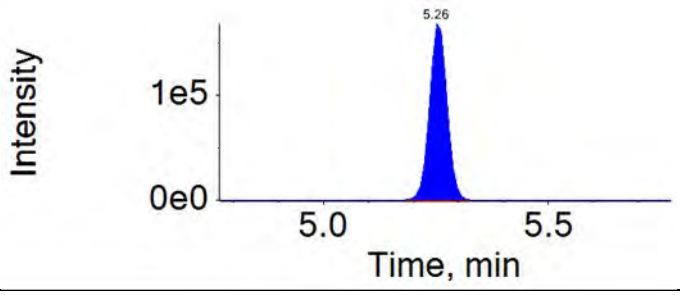
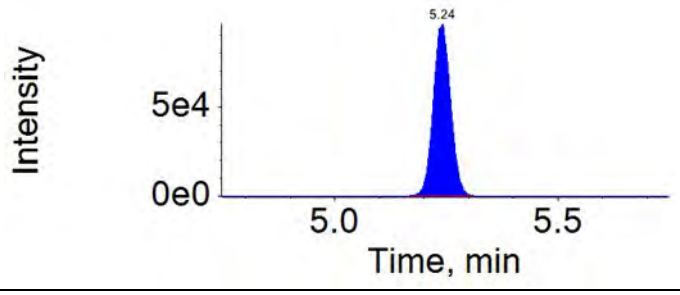
APPROVED
By MCD at 8:21 pm, 11/13/18

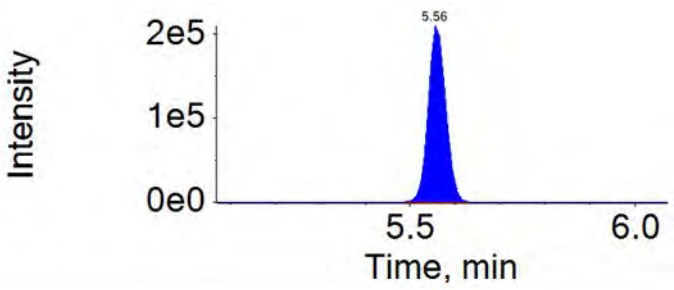
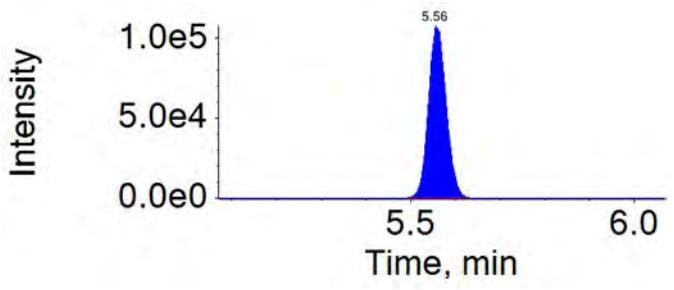
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

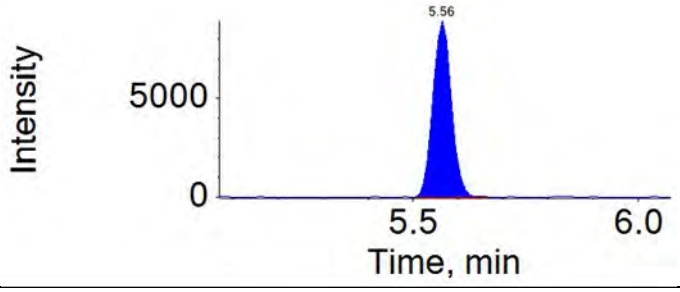
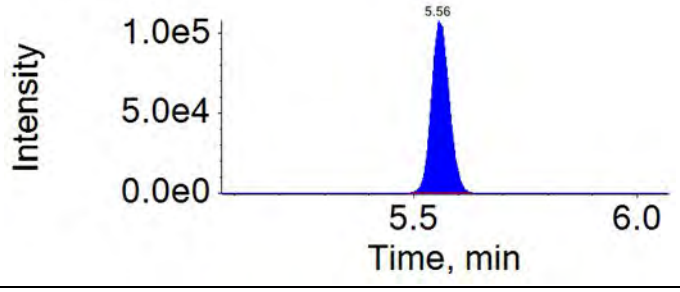
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

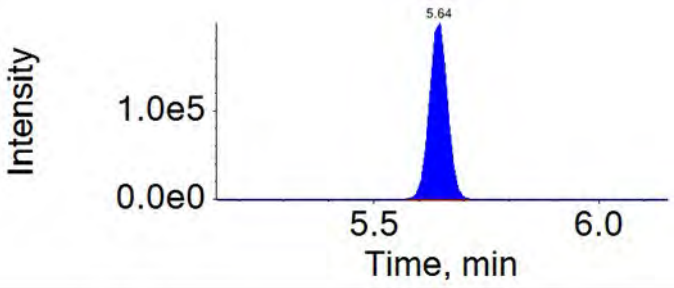
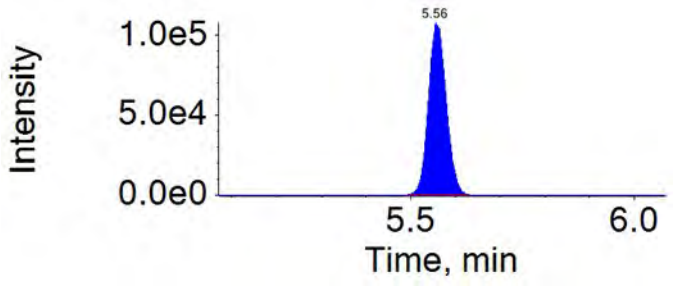
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

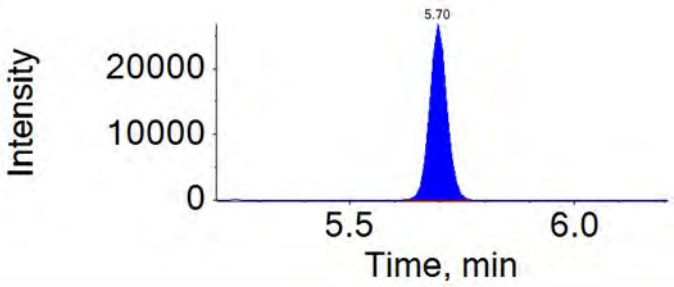
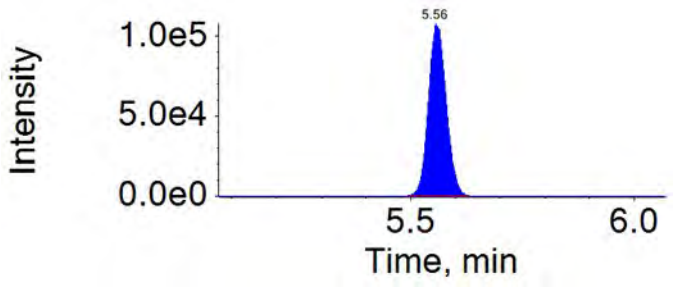
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

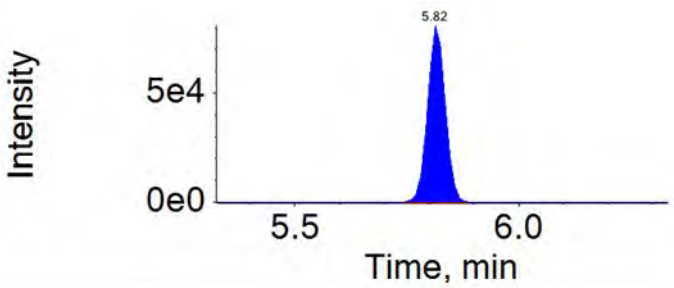
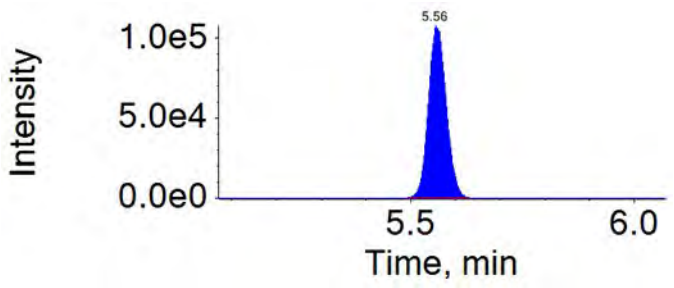
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

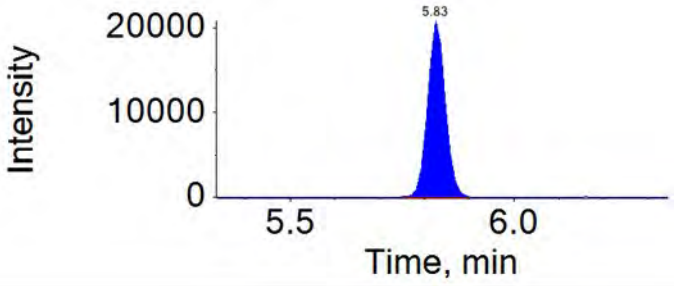
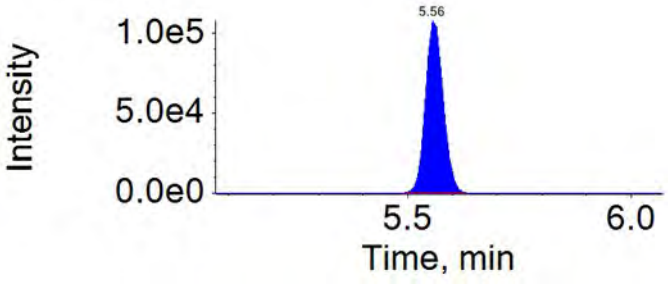
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

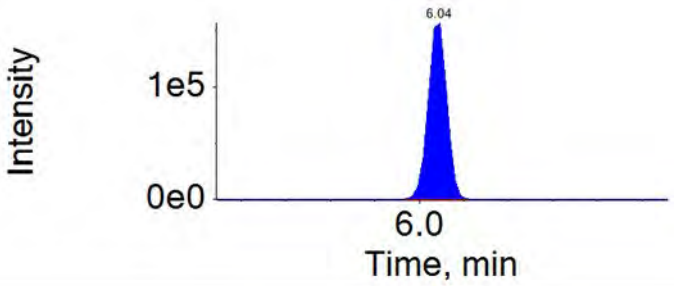
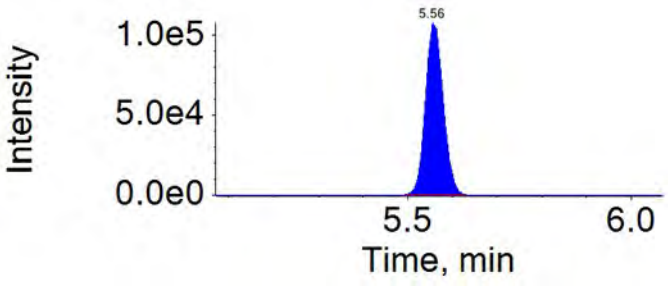
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

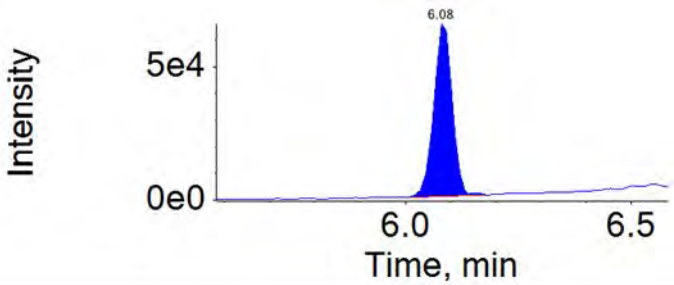
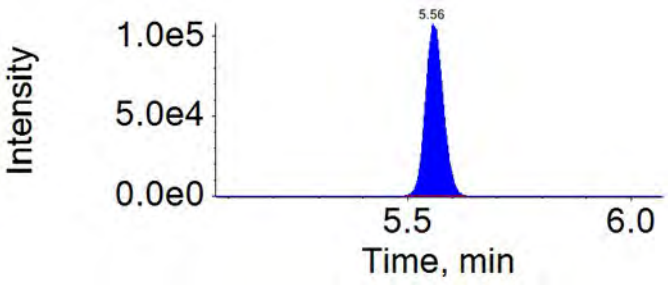
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

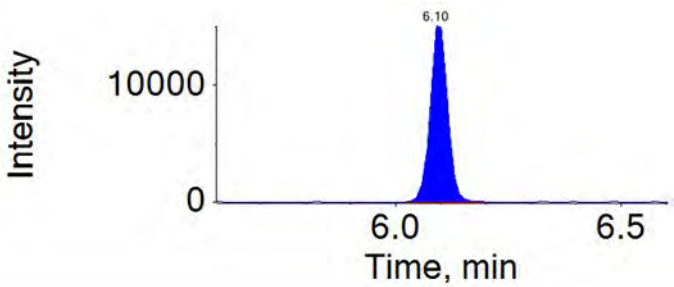
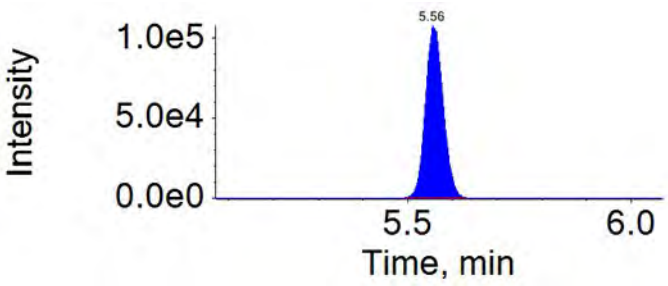
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

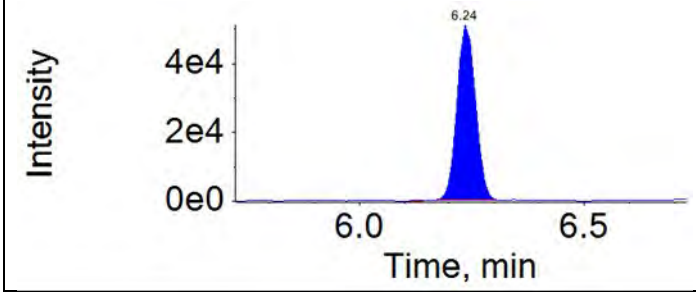
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

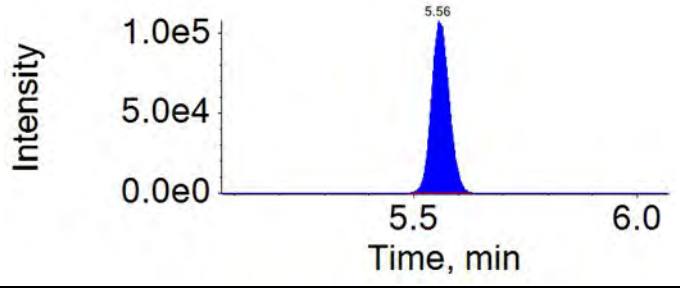
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

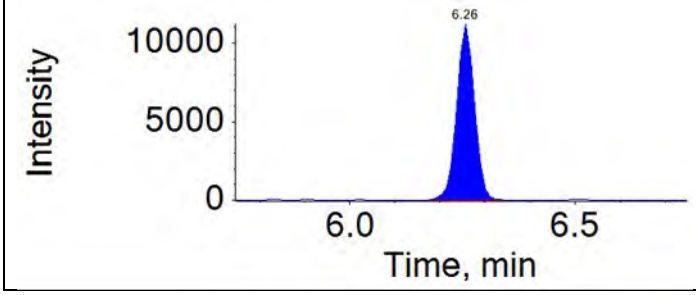
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

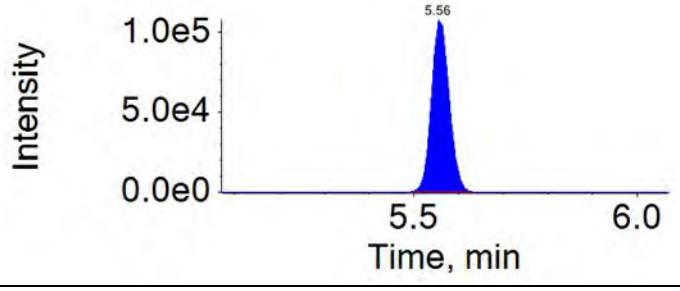
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



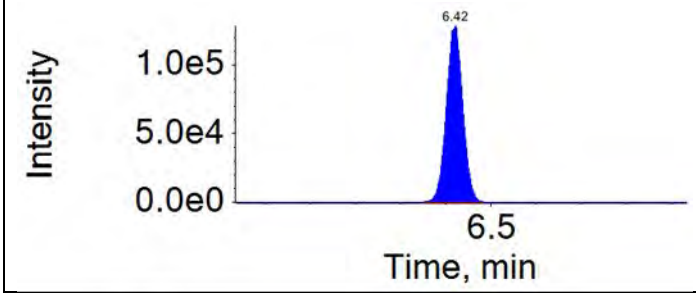


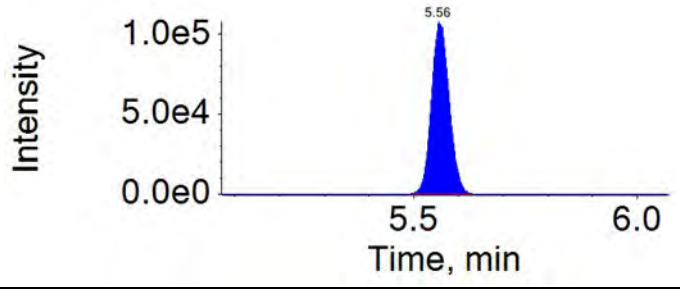
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

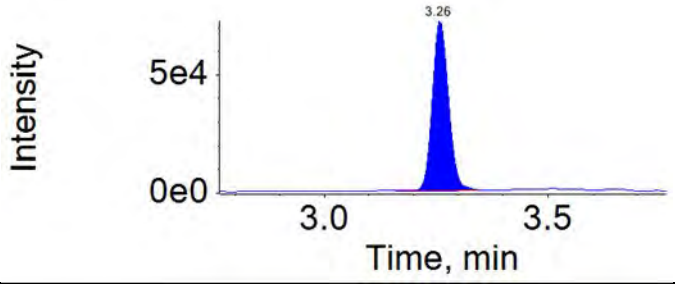
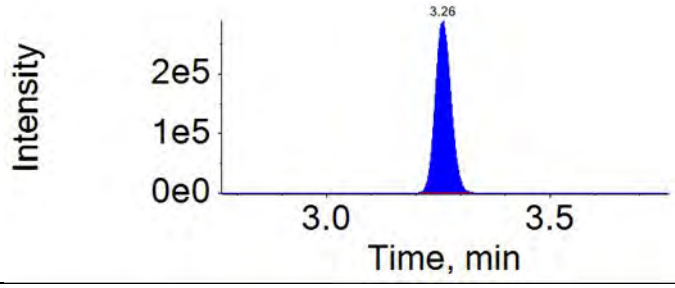


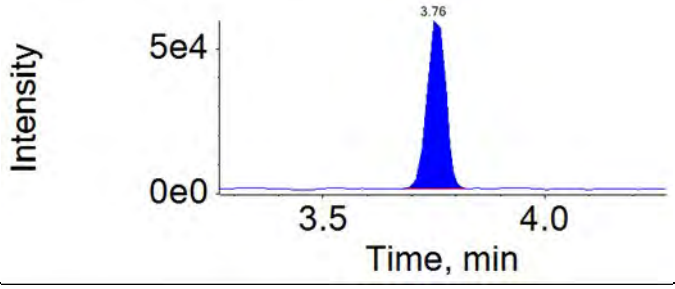
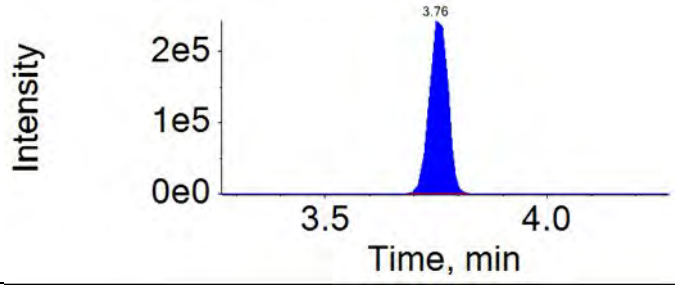


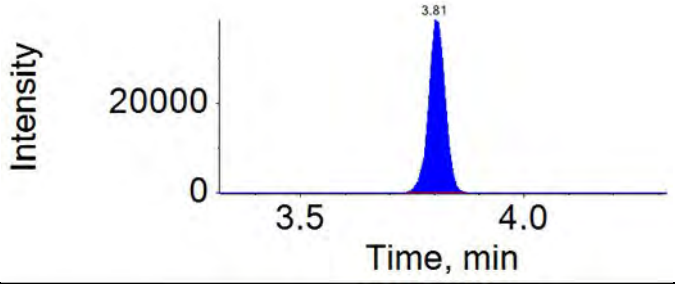
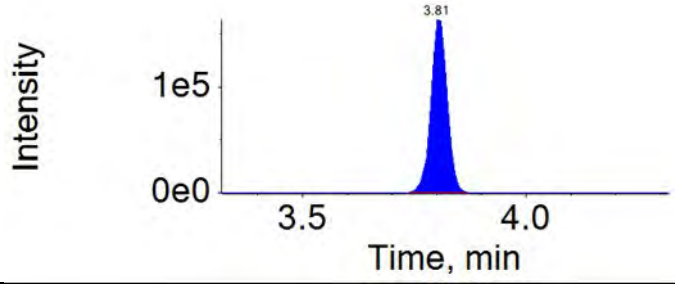
APPROVED
By MCD at 8:21 pm, 11/13/18

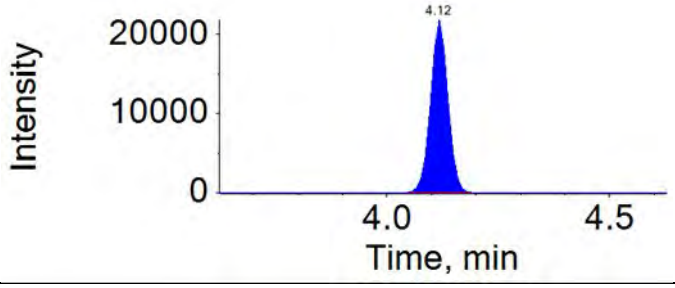
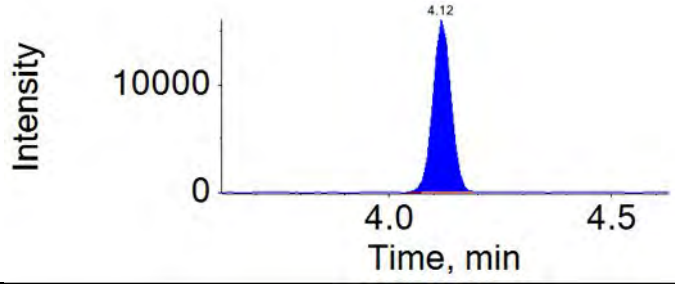
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

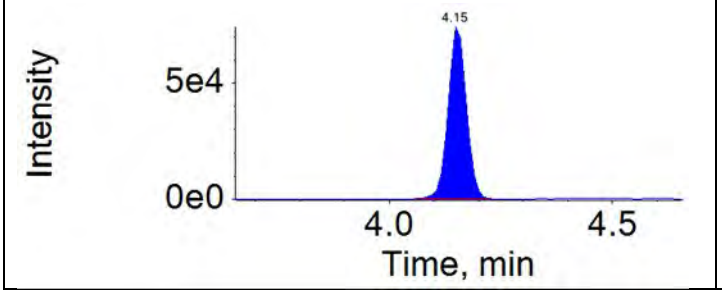
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

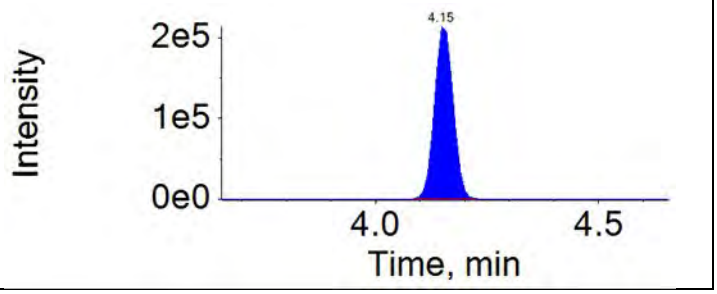
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

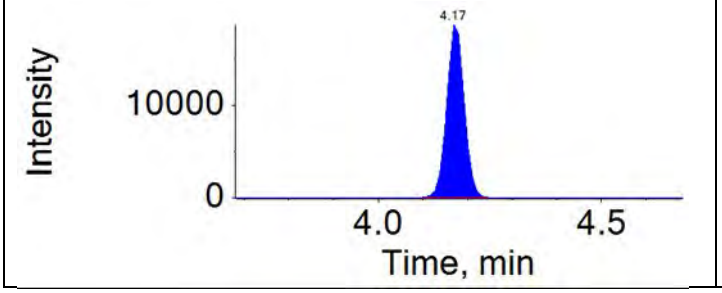
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

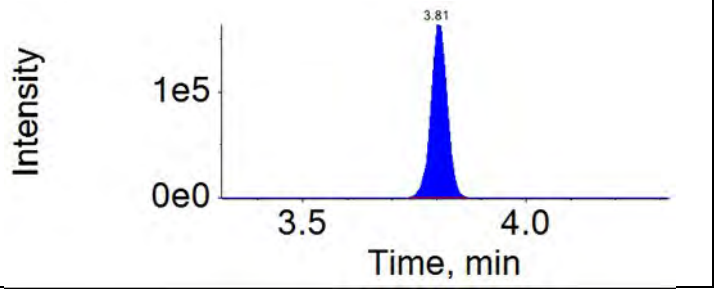
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



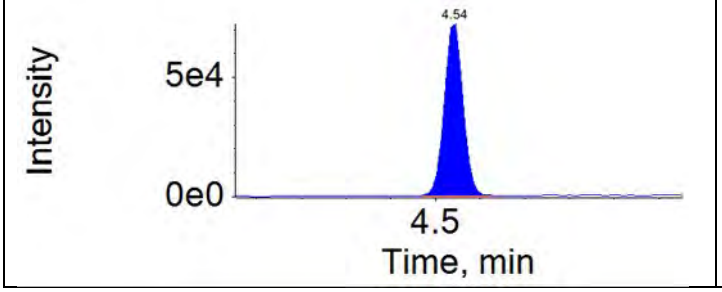


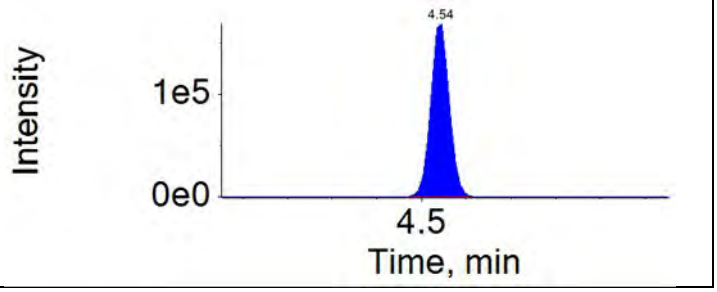
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



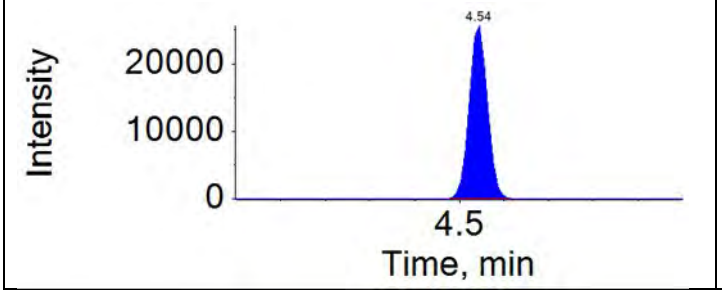


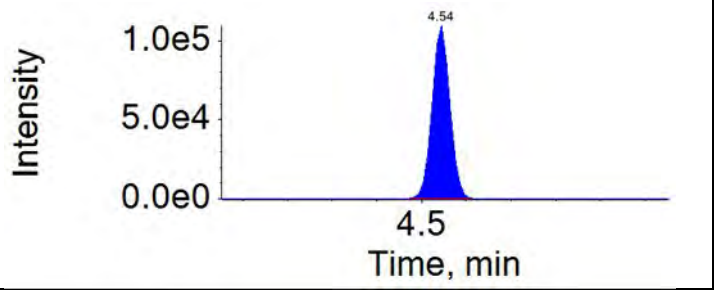
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

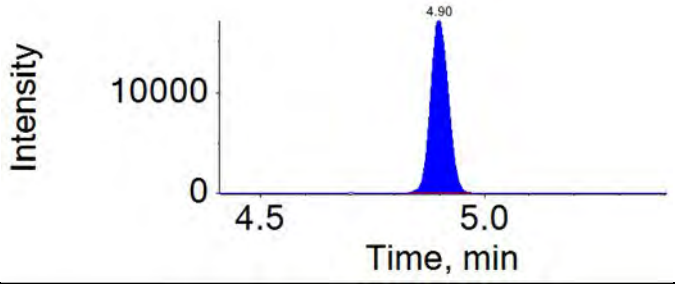
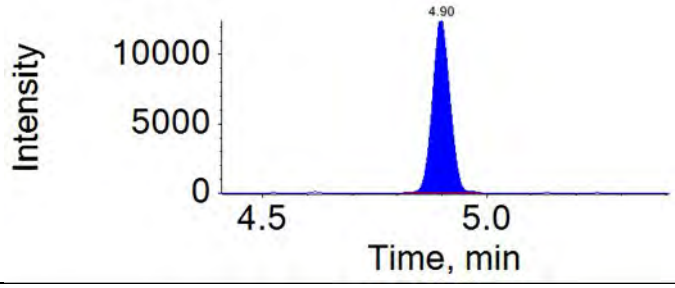


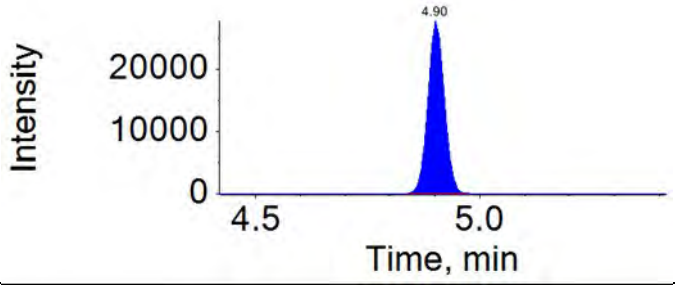
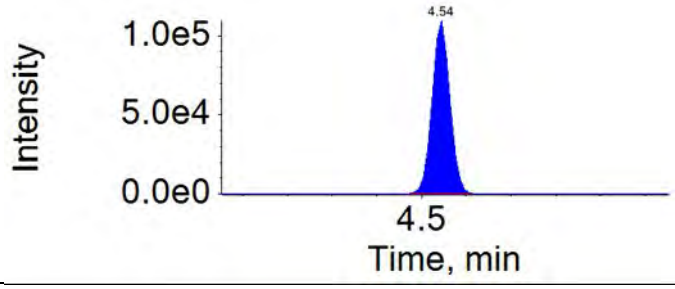


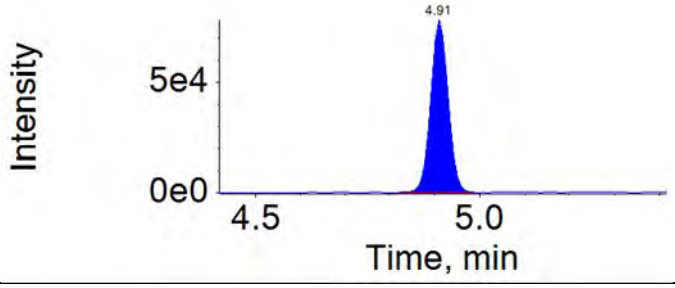
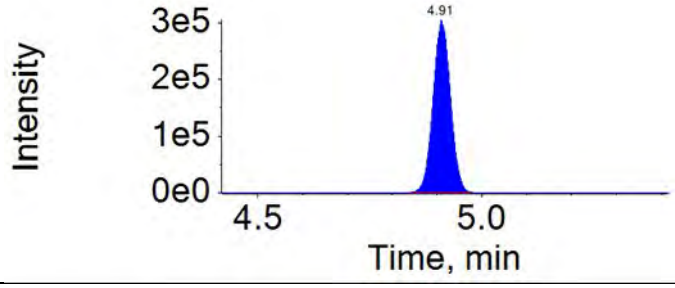
APPROVED
By MCD at 8:21 pm, 11/13/18

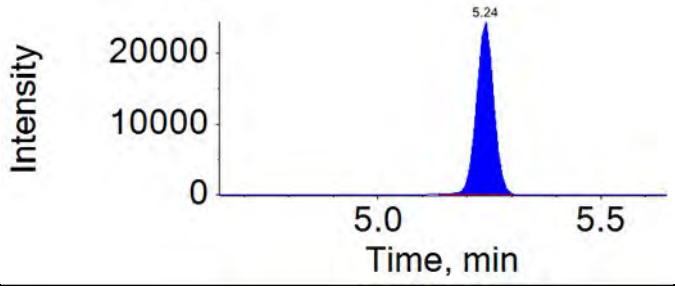
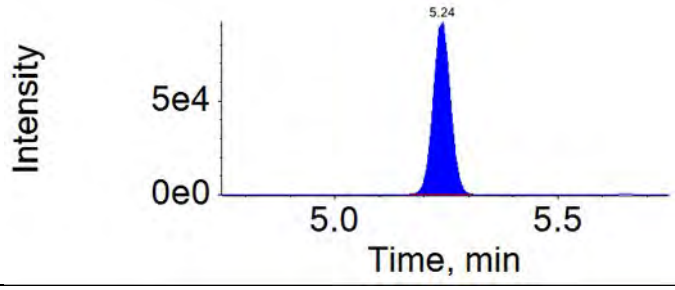
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

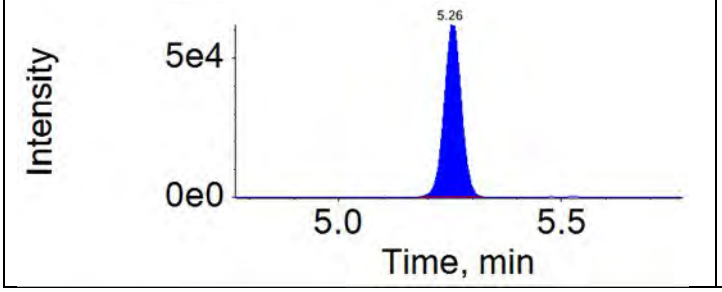
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

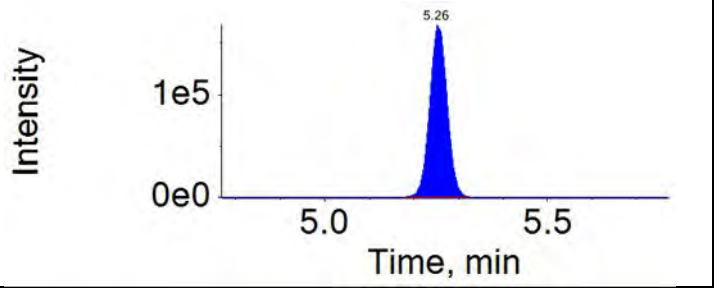
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

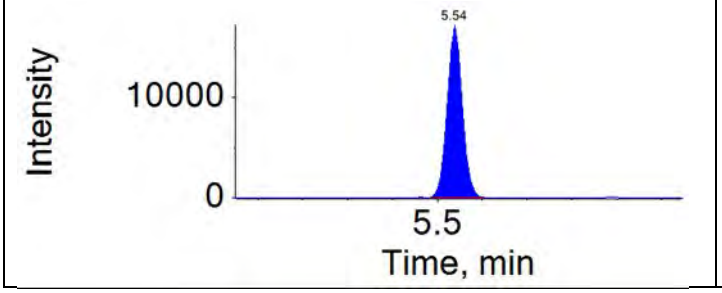
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

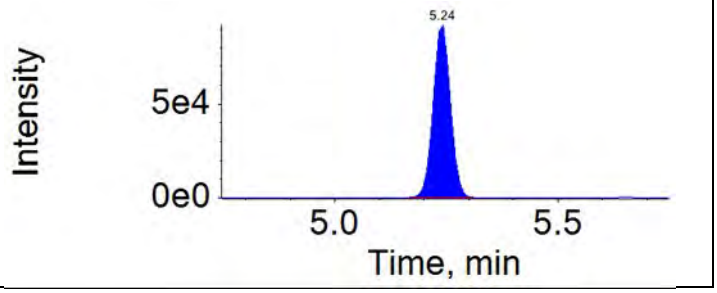
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



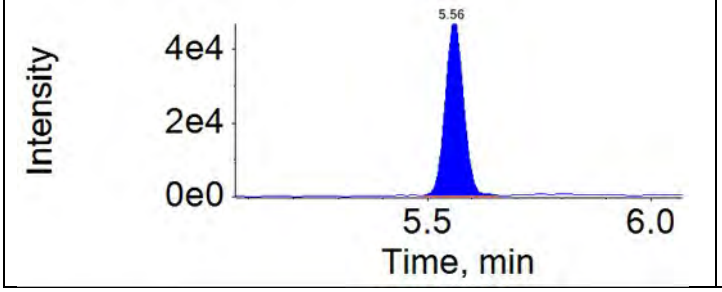


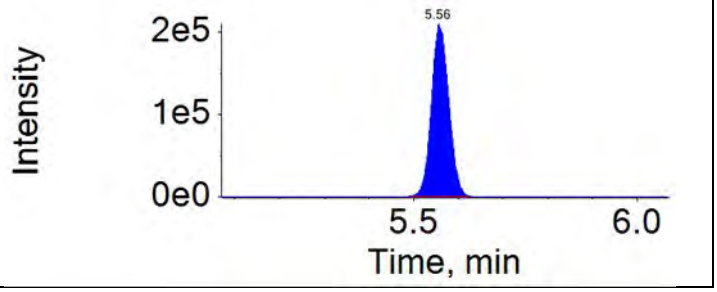
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



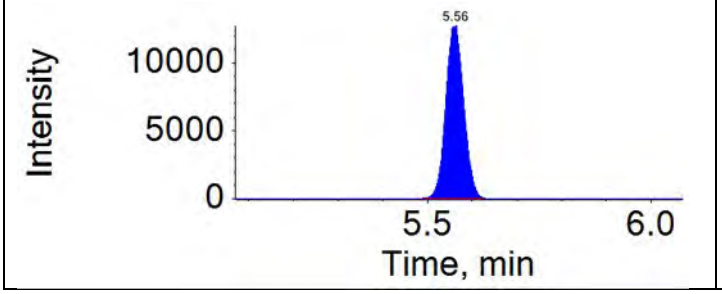


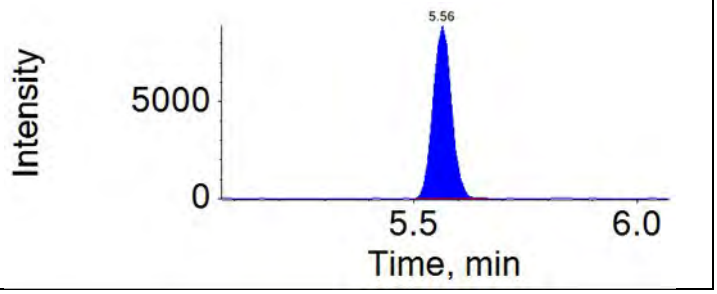
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

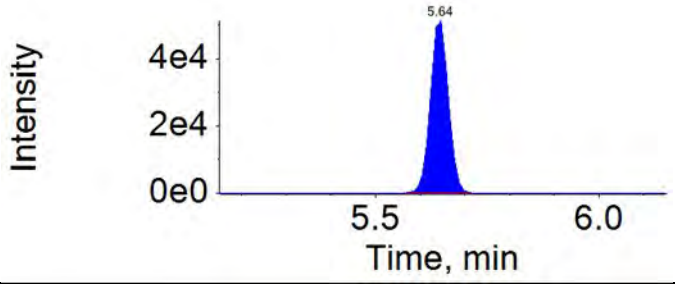
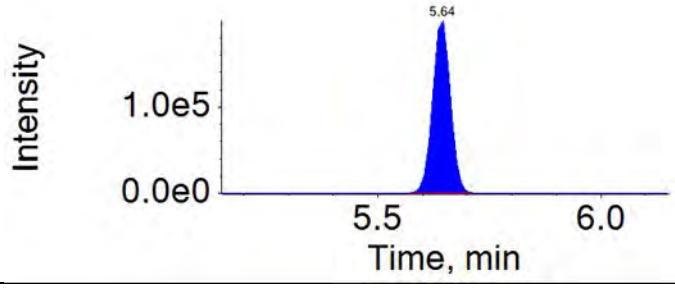


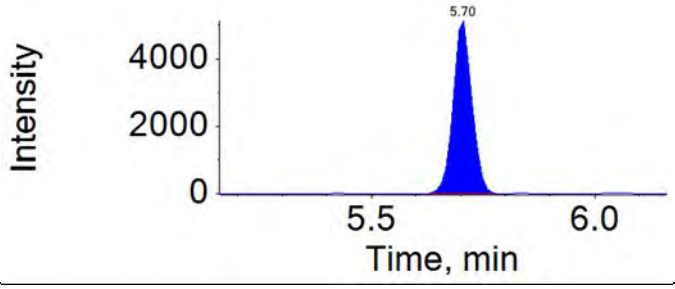
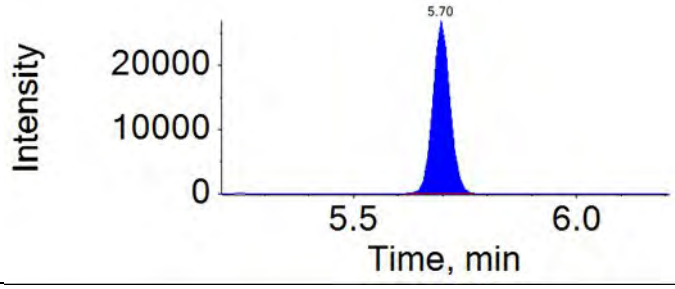


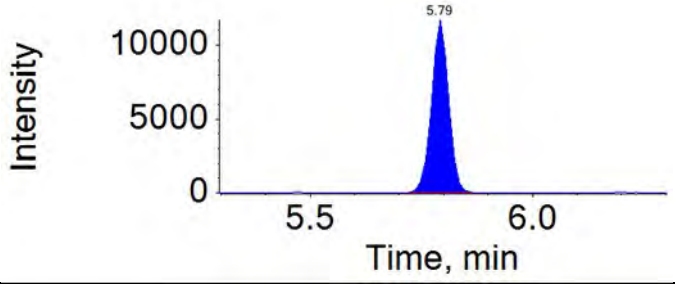
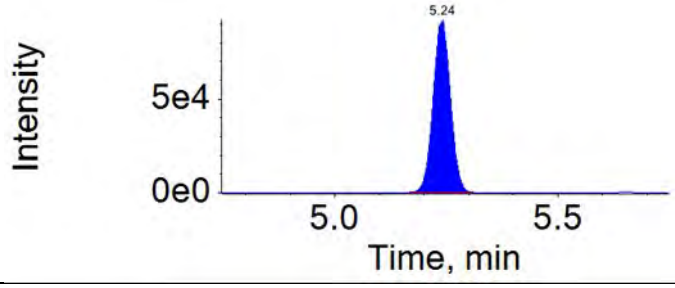
APPROVED
By MCD at 8:21 pm, 11/13/18

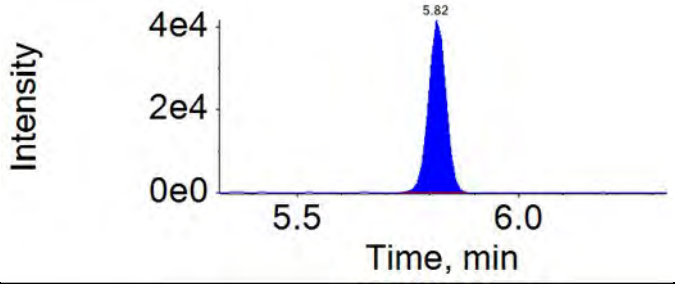
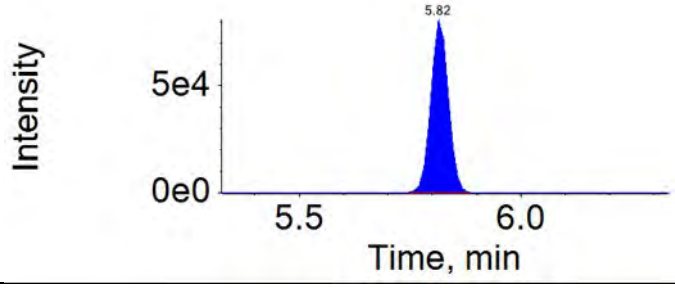
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

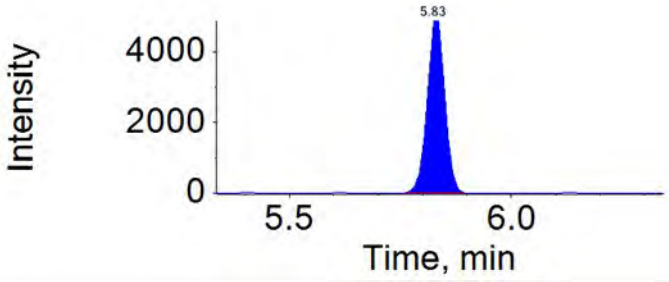
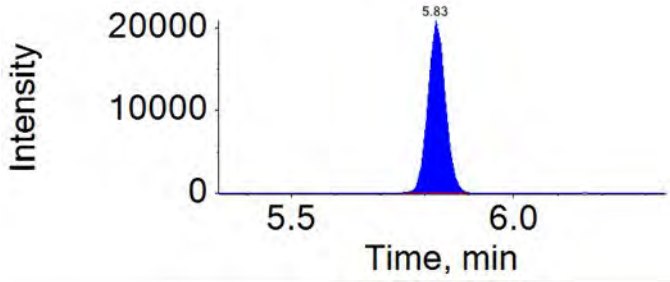
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

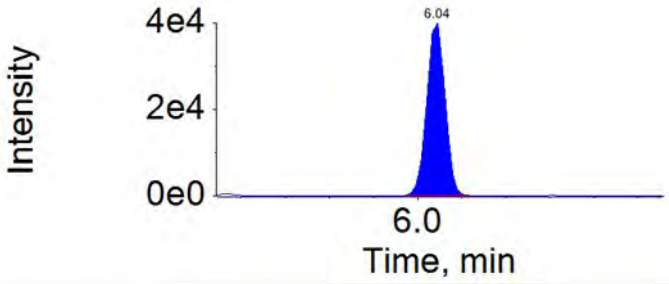
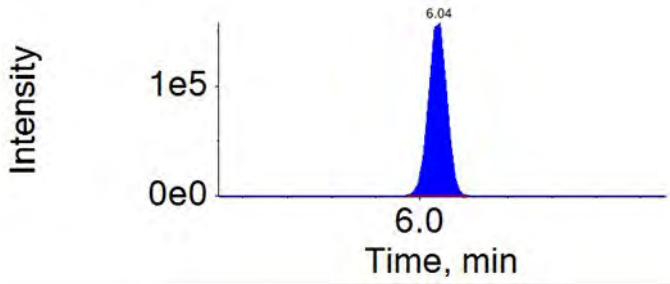
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

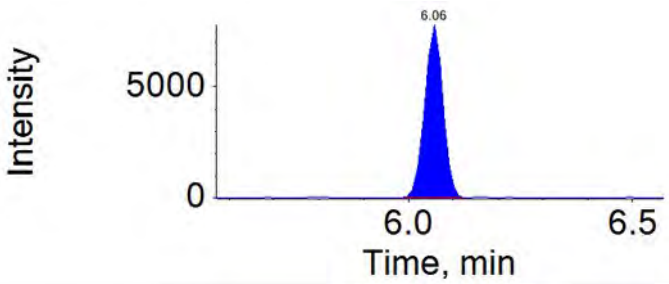
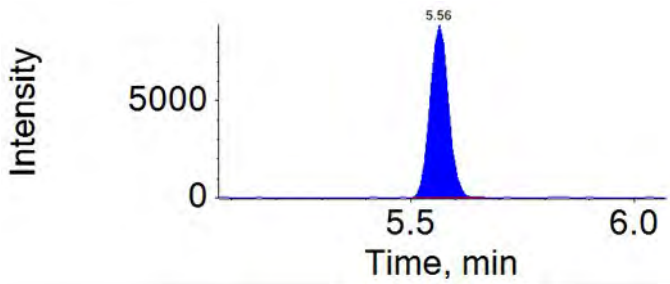
APPROVED
By MCD at 8:21 pm, 11/13/18

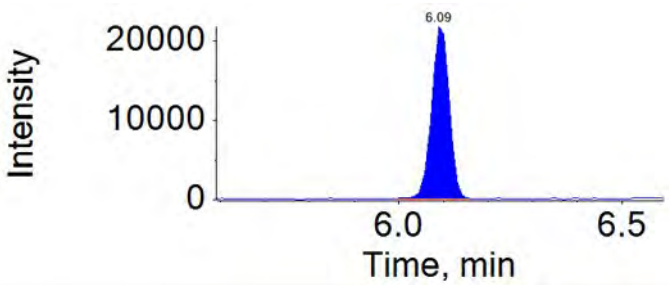
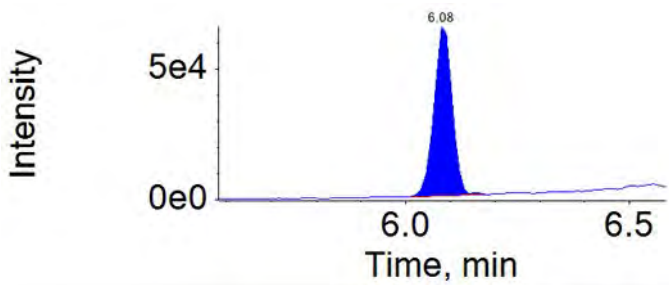
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

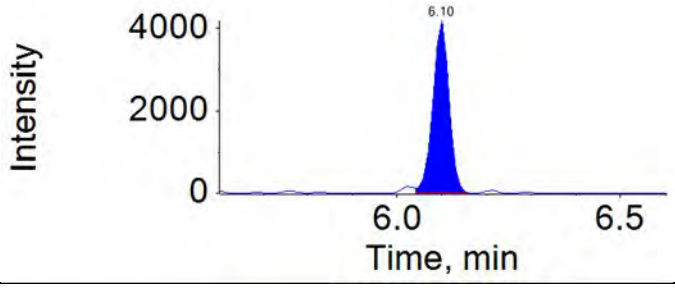
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

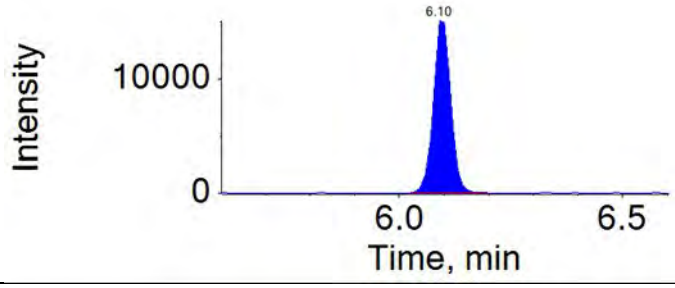
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

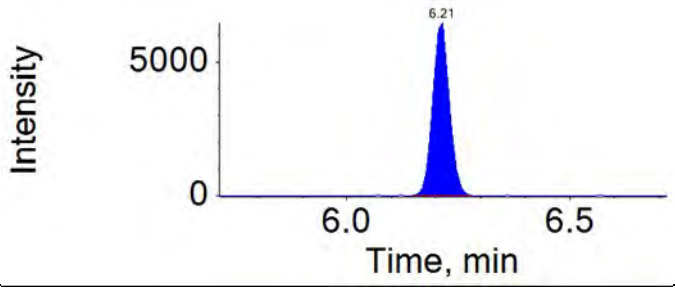
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

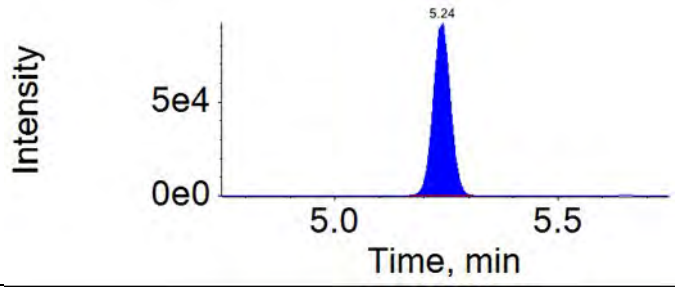
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



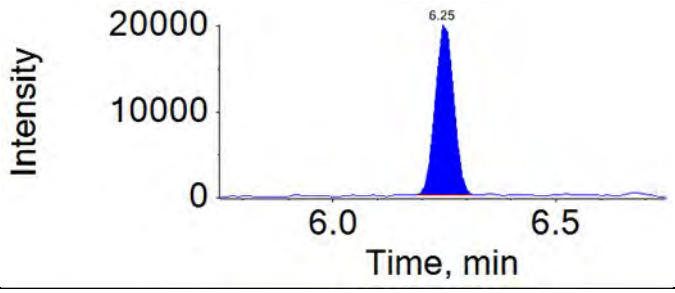


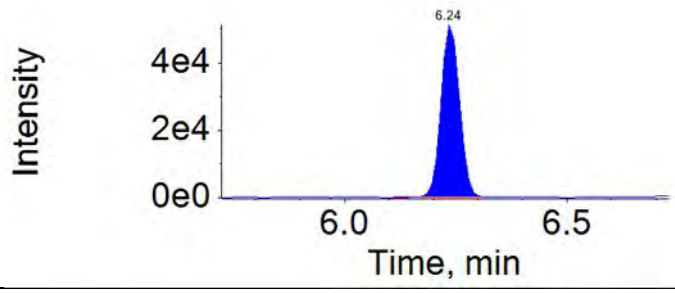
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



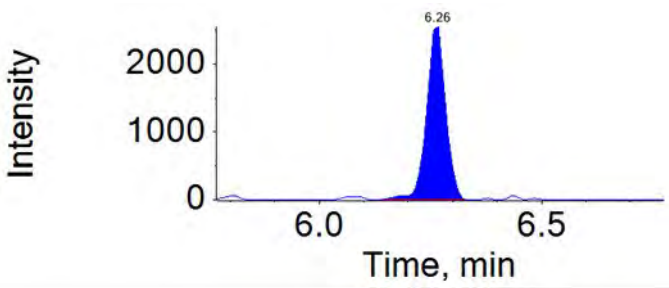


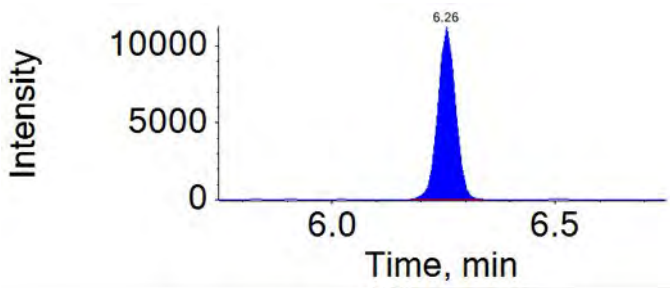
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

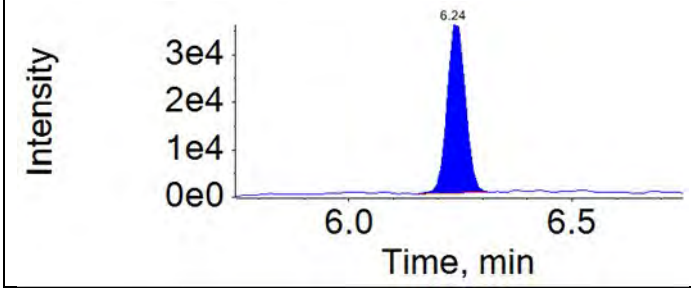
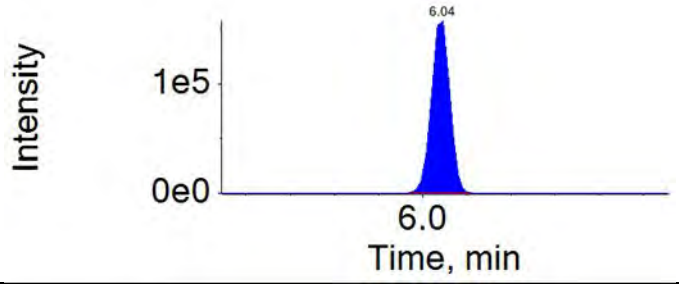


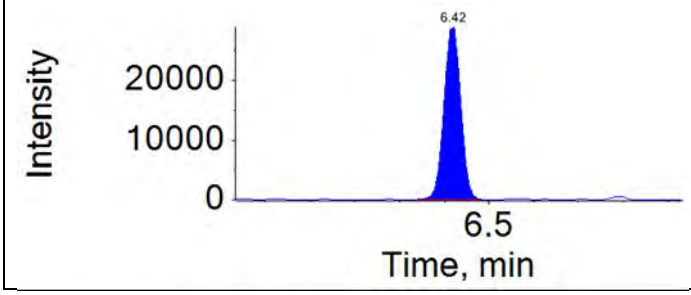
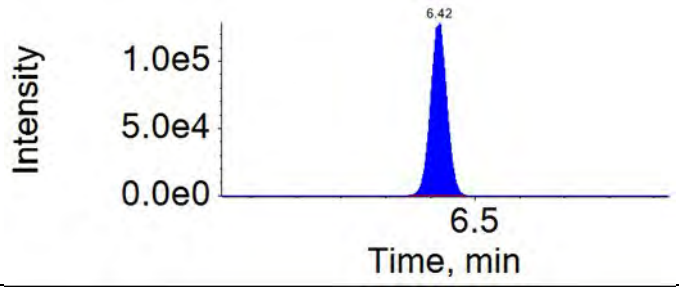


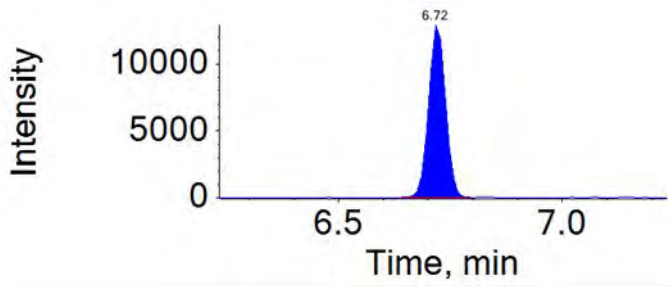
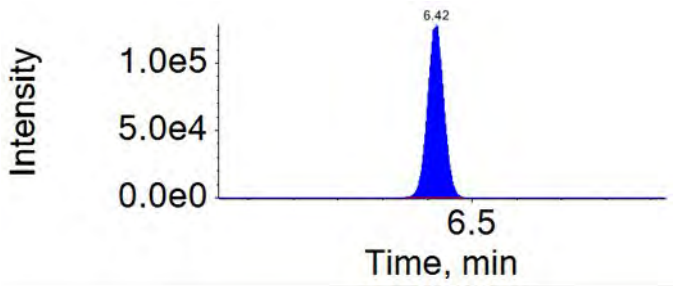
APPROVED
By MCD at 8:21 pm, 11/13/18

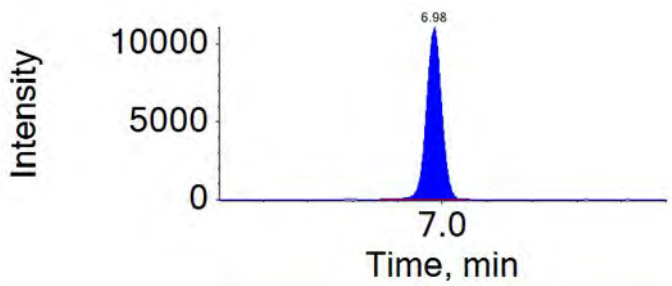
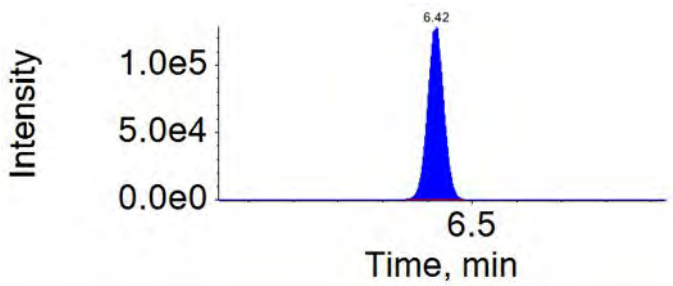
REVIEWED
By umar at 2:04 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

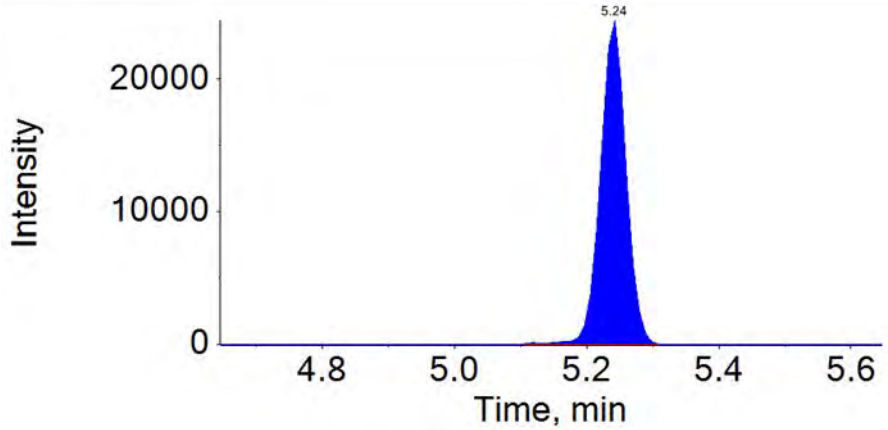
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

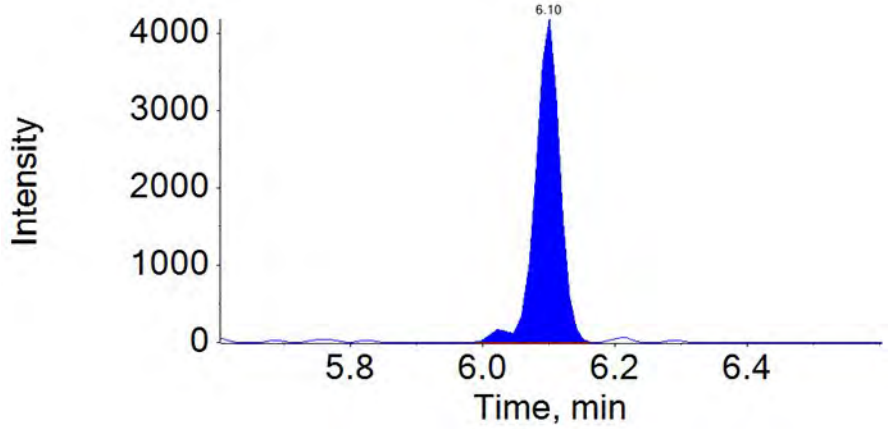
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

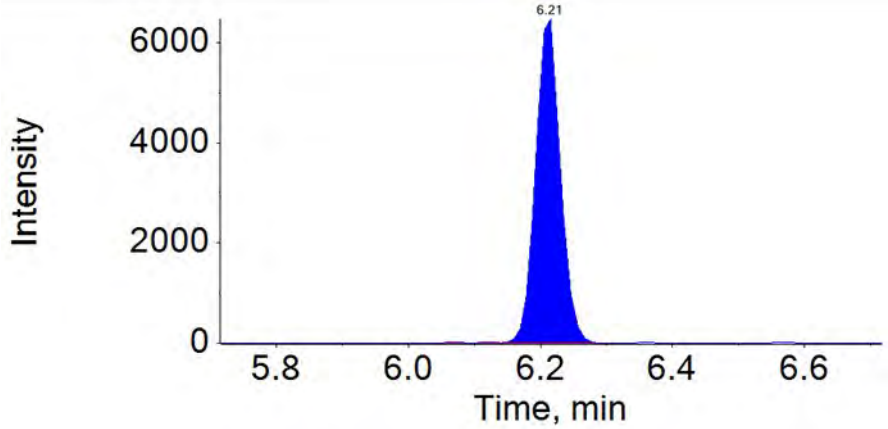
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS **RT (min.):** 5.24 **Peak Area:** 66117.02 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV12D-41.wiff **Sample Name:** LCS314006	 **Integration Comment:** incorrect integration

Component Name: NMePFOSA **RT (min.):** 6.10 **Peak Area:** 10779.60 **Mass Range:** 512.0 / 169.0 **File Name:** 18NOV12D-41.wiff **Sample Name:** LCS314006	 **Integration Comment:** incorrect integration

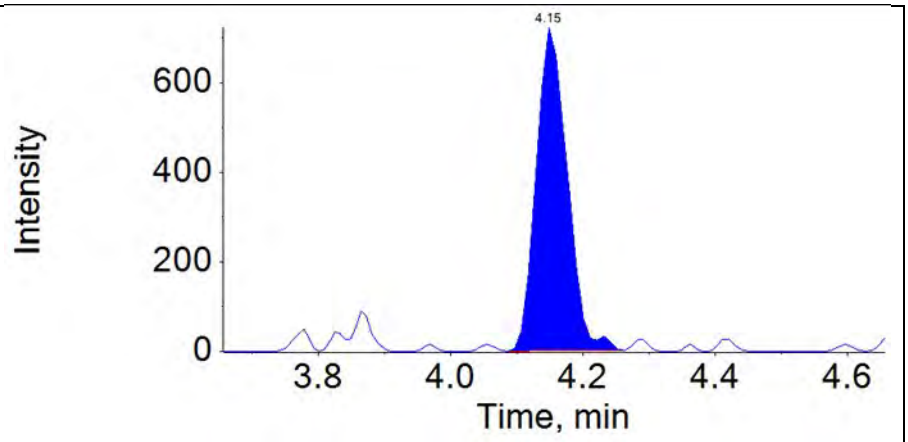
Component Name: PFDoS **RT (min.):** 6.21 **Peak Area:** 16930.10 **Mass Range:** 699.0 / 80.0 **File Name:** 18NOV12D-41.wiff **Sample Name:** LCS314006	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

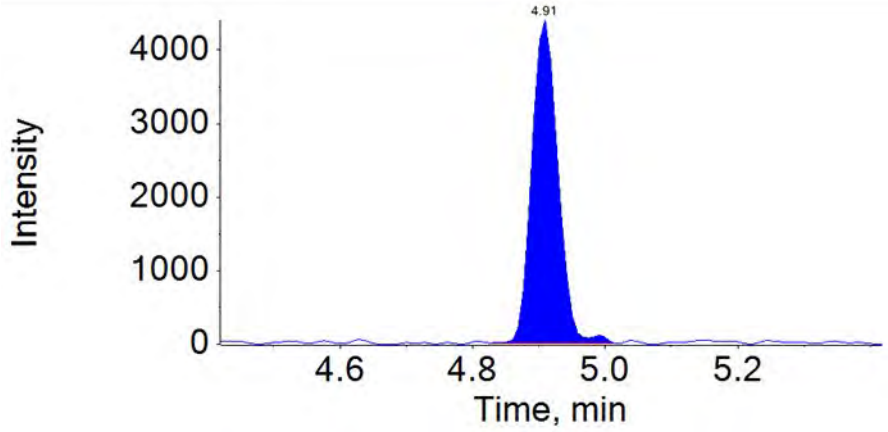
Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA_2
RT (min.):
4.15
Peak Area:
2359.78
Mass Range:
313.0 / 119.0
File Name:
18NOV12D-41.wiff
Sample Name:
LCS314006



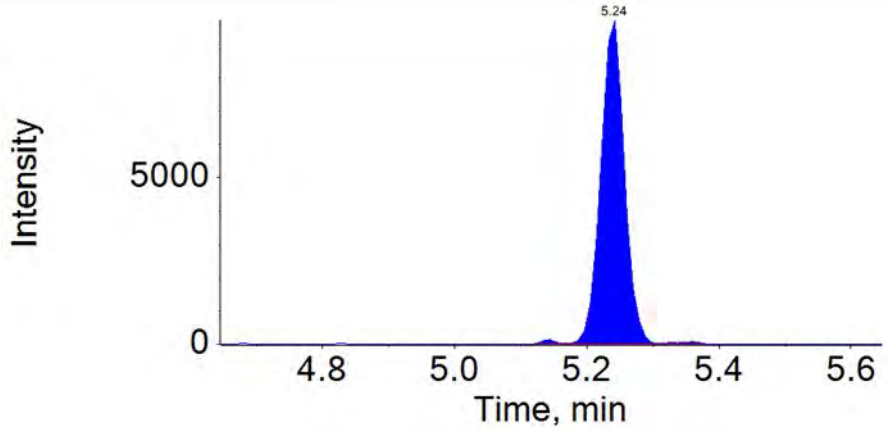
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
12074.80
Mass Range:
413.0 / 169.0
File Name:
18NOV12D-41.wiff
Sample Name:
LCS314006



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
24606.95
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-41.wiff
Sample Name:
LCS314006



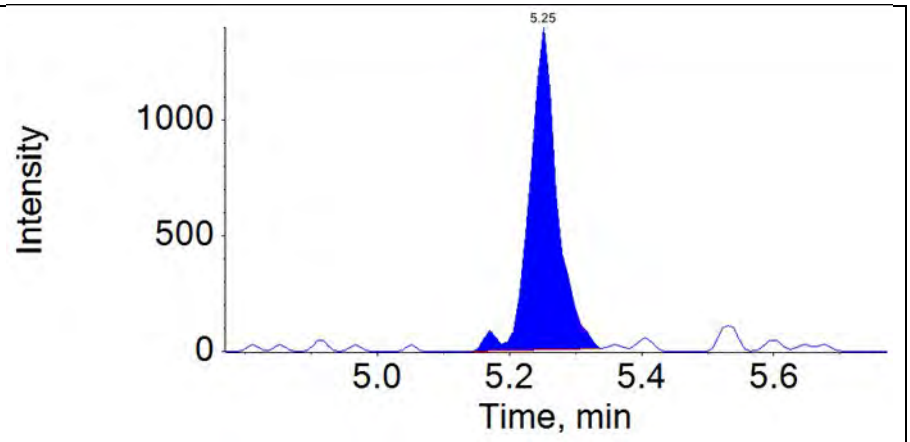
Integration Comment: incorrect integration

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

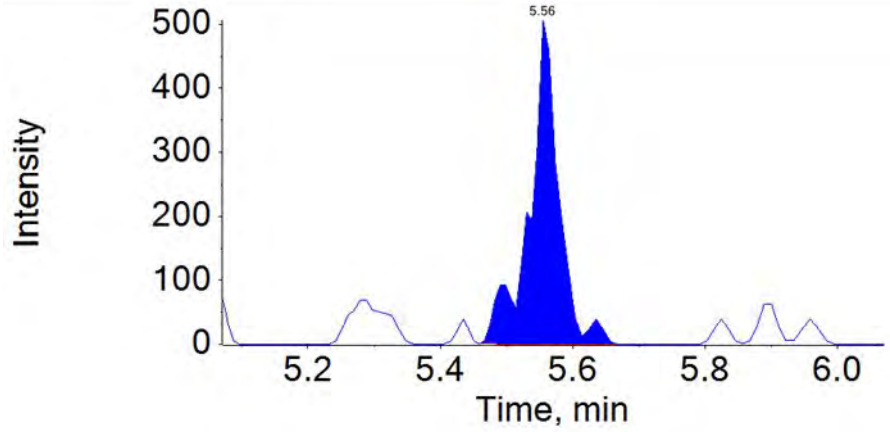
Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA_2
RT (min.):
5.25
Peak Area:
4073.92
Mass Range:
463.0 / 169.0
File Name:
18NOV12D-41.wiff
Sample Name:
LCS314006



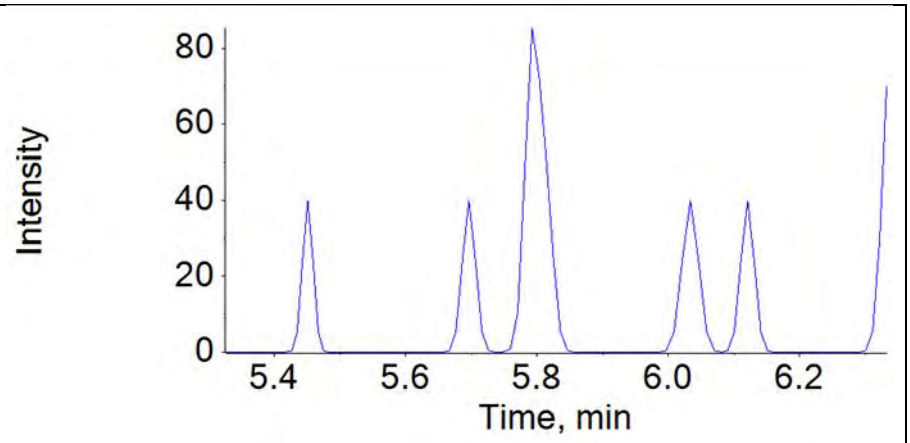
Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.56
Peak Area:
1564.49
Mass Range:
513.0 / 169.0
File Name:
18NOV12D-41.wiff
Sample Name:
LCS314006



Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
563.0 / 169.0
File Name:
18NOV12D-41.wiff
Sample Name:
LCS314006

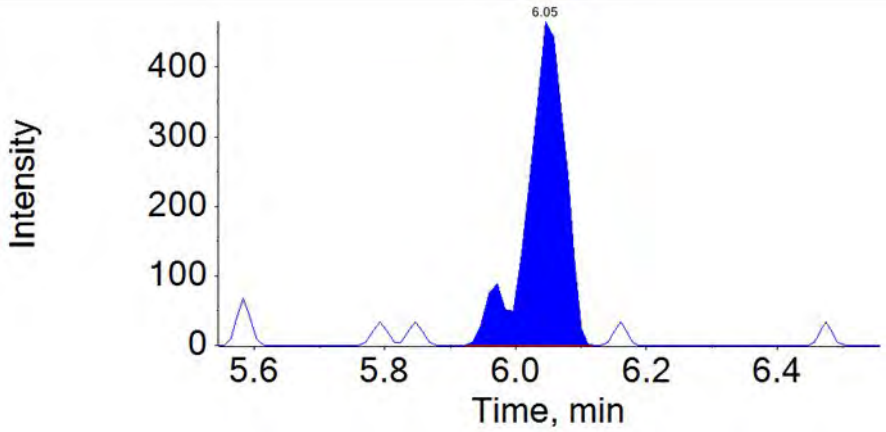


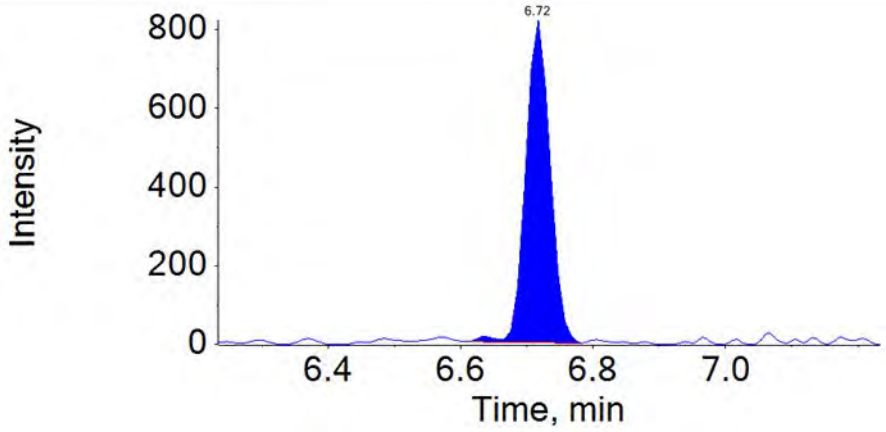
Integration Comment: incorrect integration

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFDoDA_2 **RT (min.):** 6.05 **Peak Area:** 1869.24 **Mass Range:** 613.0 / 169.0 **File Name:** 18NOV12D-41.wiff **Sample Name:** LCS314006	 **Integration Comment:** incorrect integration

Component Name: PFHxDA_2 **RT (min.):** 6.72 **Peak Area:** 2106.92 **Mass Range:** 813.0 / 169.0 **File Name:** 18NOV12D-41.wiff **Sample Name:** LCS314006	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

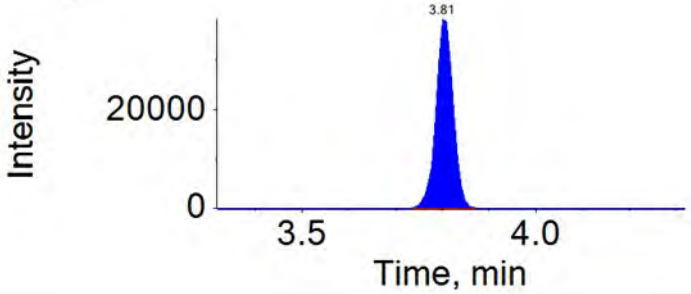
Sample Name: LCS314006 **Instrument Name:** LM27631 **File Name:** 18NOV12D-41.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	99212.04	A	N/A	0.3740			
PFBS_2	3.80	1.00	37104.38	A	N/A	0.3740	3	50	
4:2-FTS	4.12	1.00	58991.61	A	N/A	0.6276			
4:2 FTS_2	4.12	1.00	37021.19	A	N/A	0.6276		#NA!	
PFHxA	4.15	1.00	209595.84	A	N/A	0.0111			
PFHxA_2	4.15	1.00	2328.33	M	N/A	0.0111	-5	50	
PFPeS	4.17	1.10	51164.40	A	N/A	0.5269			
PFPeS_2	4.17	1.10	26958.23	A	N/A	0.5269	2	50	
PFHpA	4.54	1.00	208526.14	A	N/A	0.0581			
PFHpA_2	4.54	1.00	12119.81	A	N/A	0.0581	3	50	
PFHxS	4.54	1.00	72480.70	A	N/A	0.3901			
PFHxS_2	4.54	1.00	28272.49	A	N/A	0.3901	29	50	
6:2-FTS	4.90	1.00	47579.06	A	N/A	0.7030			
6:2 FTS_2	4.90	1.00	33447.06	A	N/A	0.7030		#NA!	
PFHpS	4.90	1.08	71132.03	A	N/A	0.3898			
PFHpS_2	4.90	1.08	27730.32	A	N/A	0.3898	-4	50	
PFOA	4.91	1.00	209962.64	A	N/A	0.0567			
PFOA_2	4.91	1.00	11902.22	M	N/A	0.0567	1	50	
PFOS	5.24	1.00	65888.97	M	N/A	0.3669			
PFOS_2	5.24	1.00	24177.62	M	N/A	0.3669	42	50	
PFNA	5.26	1.00	167593.85	A	N/A	0.0236			
PFNA_2	5.25	1.00	3952.21	M	N/A	0.0236	1	50	
PFNS	5.54	1.06	40109.27	A	N/A	0.5304			
PFNS_2	5.54	1.06	21274.75	A	N/A	0.5304	10	50	
PFDA	5.56	1.00	134109.41	A	N/A	0.0099			
PFDA_2	5.56	1.00	1333.85	M	N/A	0.0099	23	50	
8:2-FTS	5.56	1.00	35879.81	A	N/A	0.6866			
8:2 FTS_2	5.56	1.00	24636.21	A	N/A	0.6866		#NA!	
NMeFOSAA	5.70	1.00	14966.48	A	N/A	0.2603			
NMeFOSAA_2	5.70	1.00	3895.43	A	N/A	0.2603	23	50	
PFDS	5.79	1.11	31212.66	A	N/A	0.5530			
PFDS_2	5.79	1.11	17261.12	A	N/A	0.5530	7	50	
PFUnDA	5.82	1.00	113786.02	A	N/A	0.0017			
PFUnDA_2	5.80	1.00	194.90	M	N/A	0.0017	-60	50	OOS
NEtFOSAA	5.83	1.00	13644.64	A	N/A	0.6067			
NEtFOSAA_2	5.83	1.00	8277.60	A	N/A	0.6067	2	50	
PFDoDA	6.04	1.00	116138.25	A	N/A	0.0144			
PFDoDA_2	6.05	1.00	1671.04	M	N/A	0.0144	-14	50	
10:2-FTS	6.06	1.09	21978.00	A	N/A	0.8322			
10:2 FTS_2	6.06	1.09	18290.80	A	N/A	0.8322		#NA!	
PFTrDA	6.24	1.03	100743.92	A	N/A	0.0109			
PFTrDA_2	6.24	1.03	1095.21	A	N/A	0.0109	16	50	
PFTeDA	6.42	1.00	75418.86	A	N/A	0.0046			
PFTeDA_2	6.42	1.00	347.01	A	N/A	0.0046	-29	50	
PFHxDA	6.72	1.05	33841.92	A	N/A	0.0615			
PFHxDA_2	6.72	1.05	2082.24	M	N/A	0.0615	-10	50	
PFODA	6.98	1.09	26124.89	A	N/A	0.0279			
PFODA_2	6.98	1.09	729.66	A	N/A	0.0279	3	50	

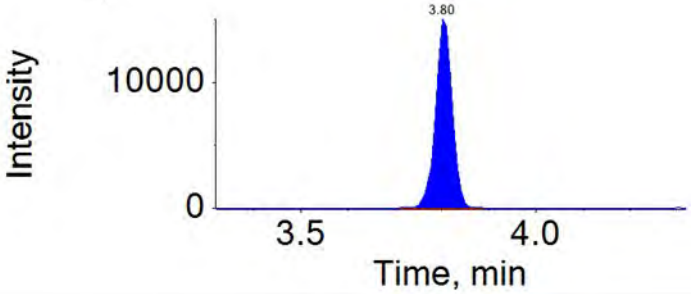
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

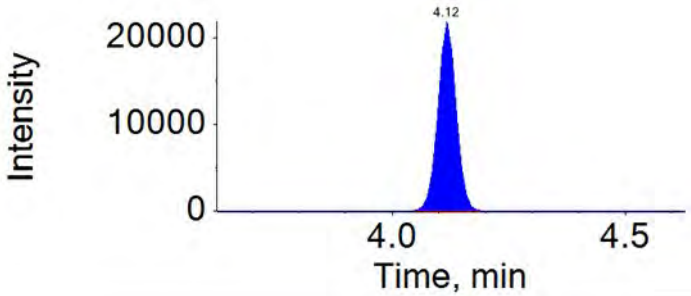
Component: PFBS
Primary Mass: 299.0 / 80.0



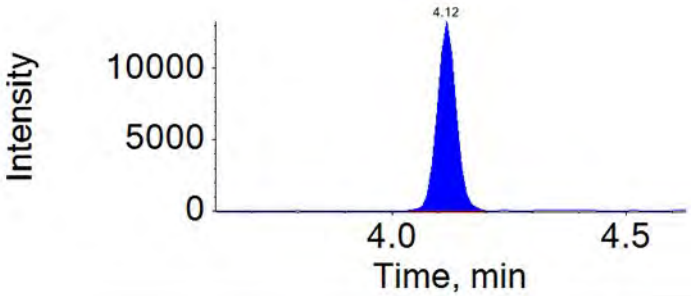
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



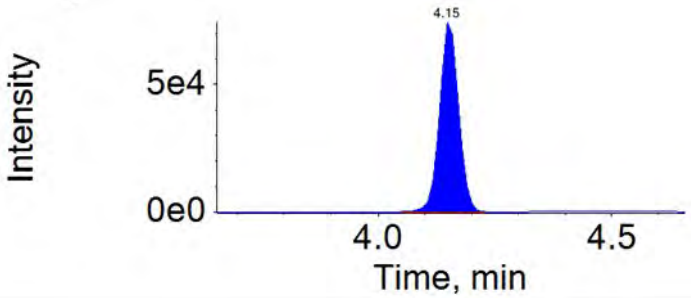
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



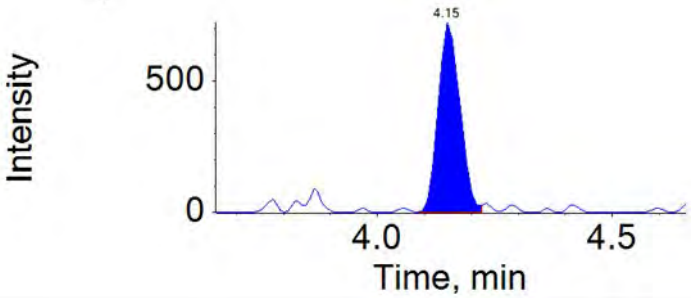
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



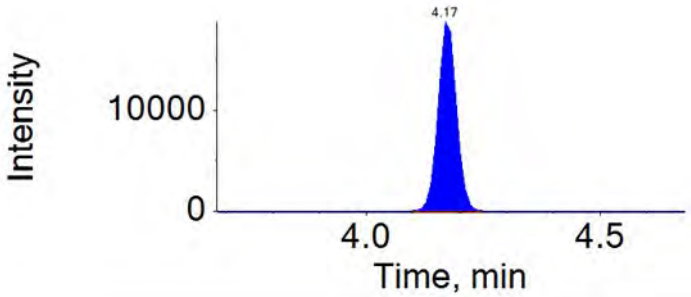
Component: PFHxA
Primary Mass: 313.0 / 269.0



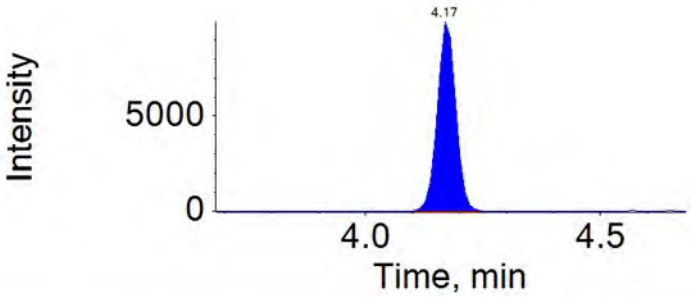
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



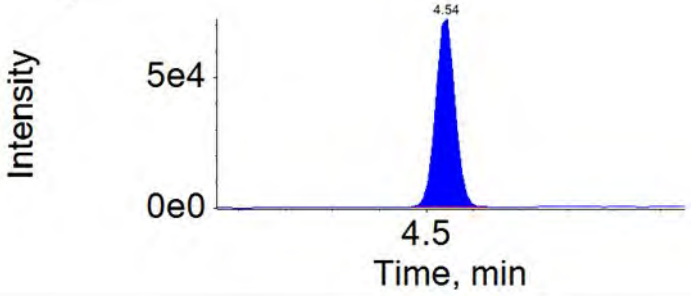
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



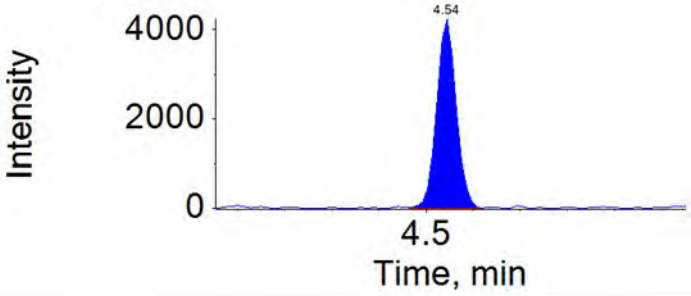
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

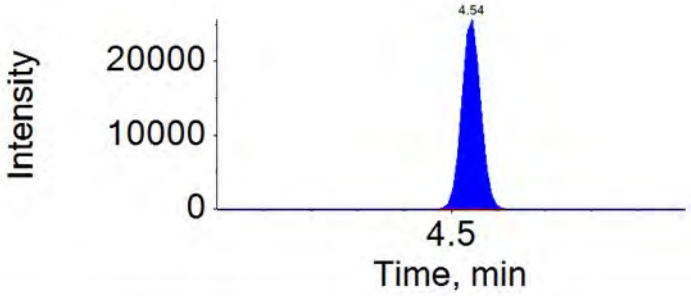
Component: PFHpA
Primary Mass: 363.0 / 319.0



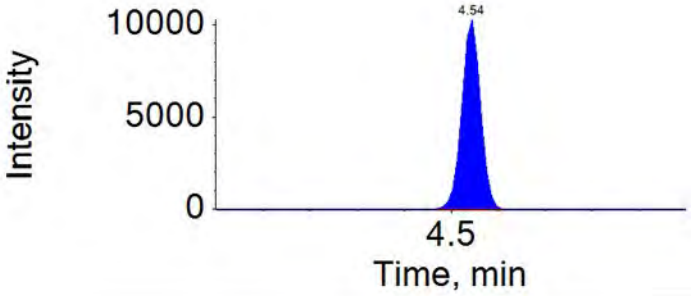
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



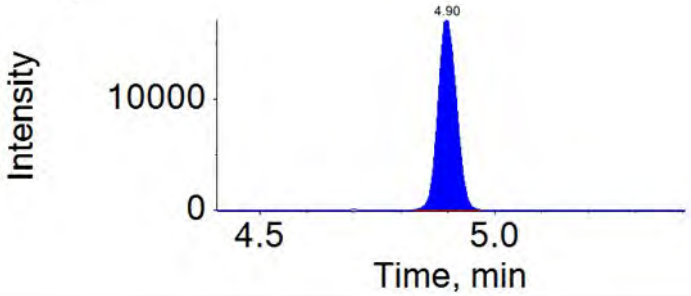
Component: PFHxS
Primary Mass: 399.0 / 80.0



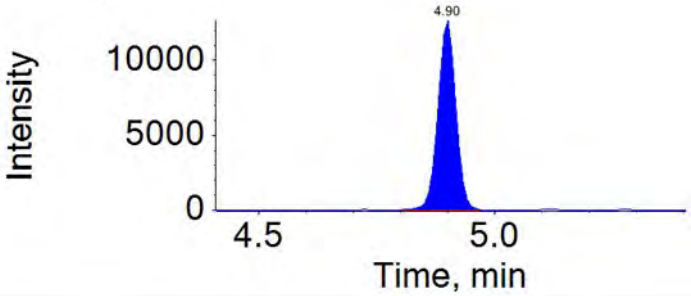
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



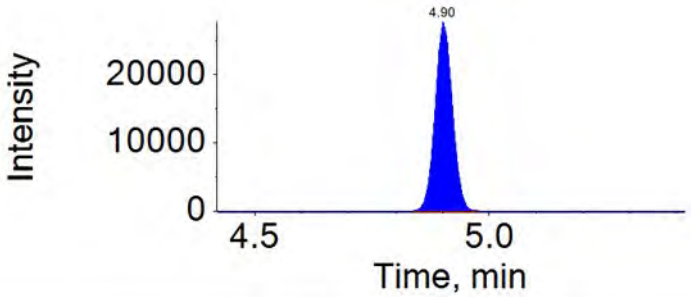
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



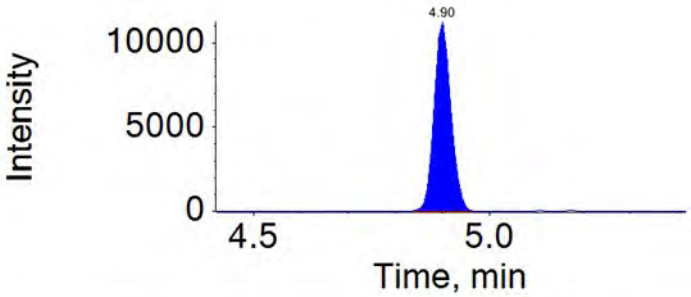
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



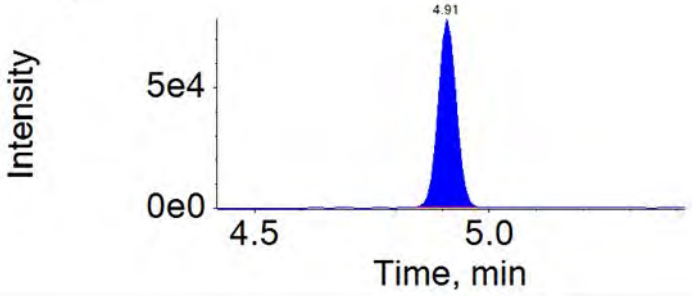
Component: PFHpS
Primary Mass: 449.0 / 80.0



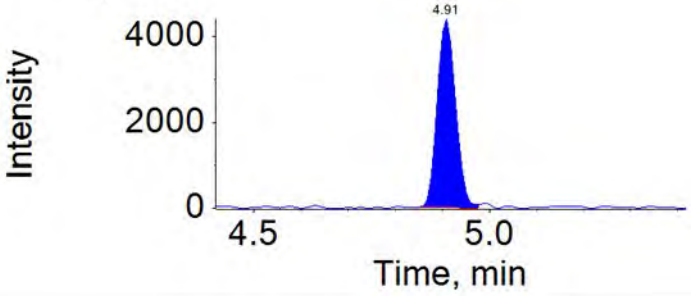
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



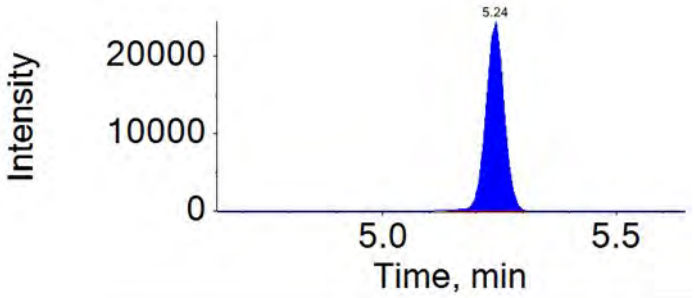
Component: PFOA
Primary Mass: 413.0 / 369.0



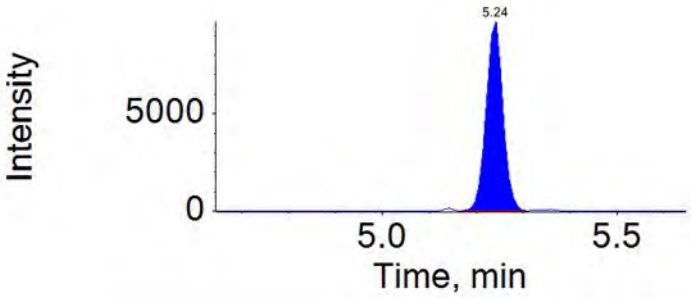
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



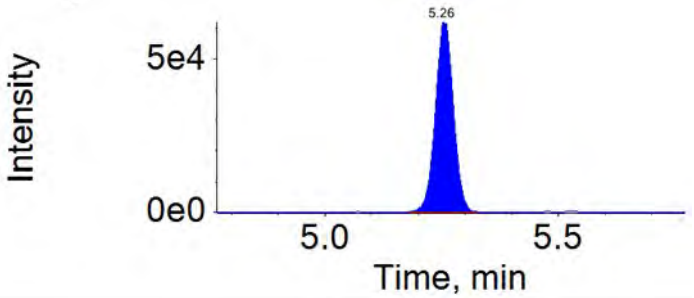
Component: PFOS
Primary Mass: 499.0 / 80.0



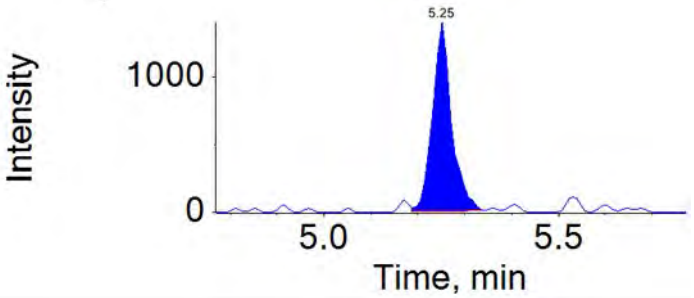
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



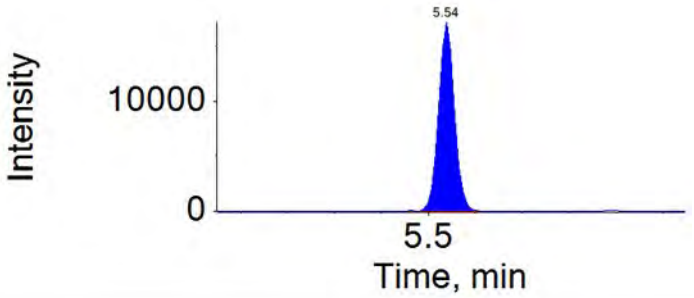
Component: PFNA
Primary Mass: 463.0 / 419.0



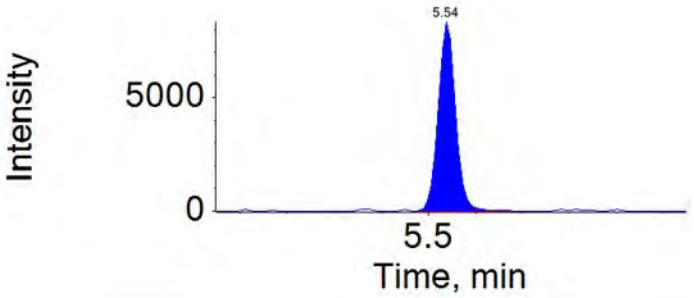
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



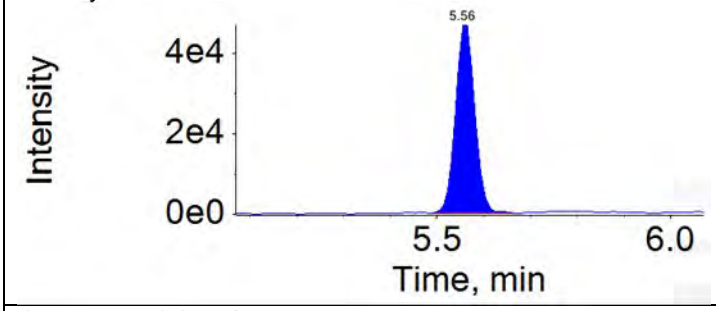
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



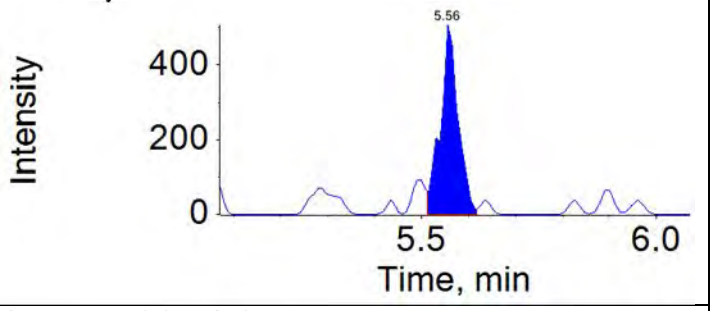
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

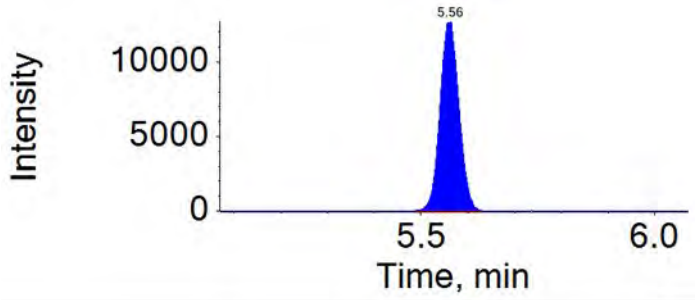
Component: PFDA
Primary Mass: 513.0 / 469.0



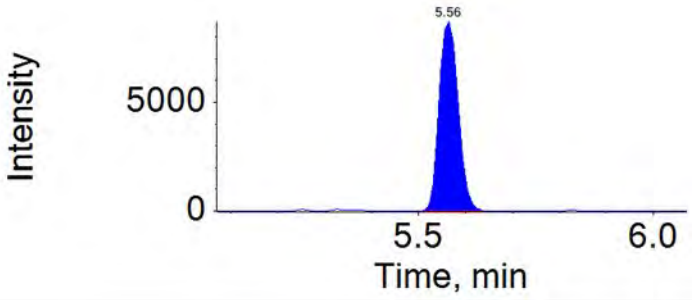
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



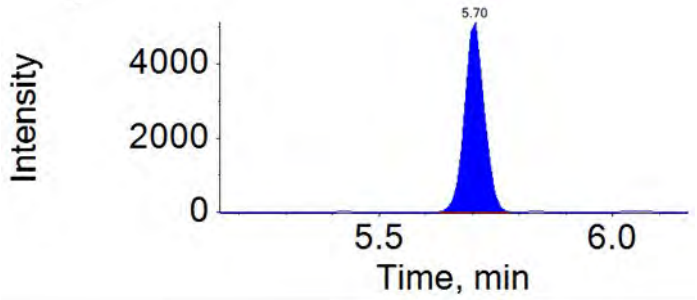
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



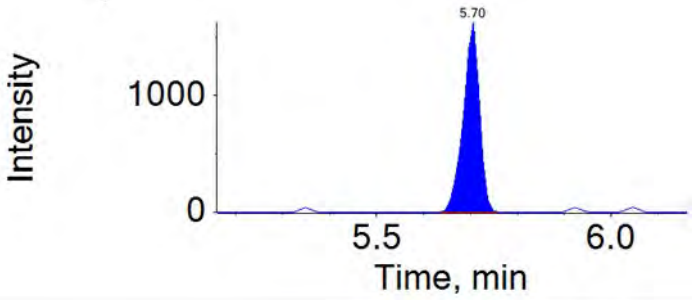
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



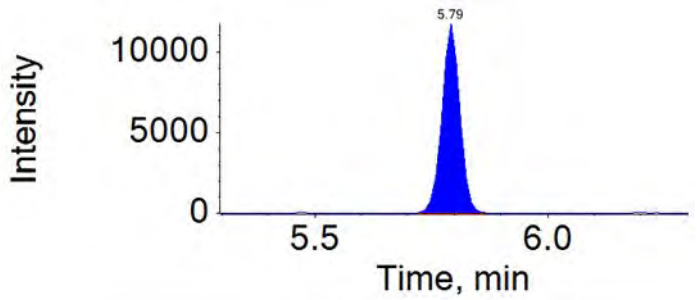
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



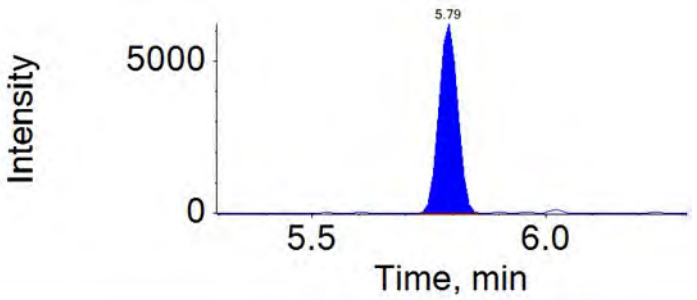
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



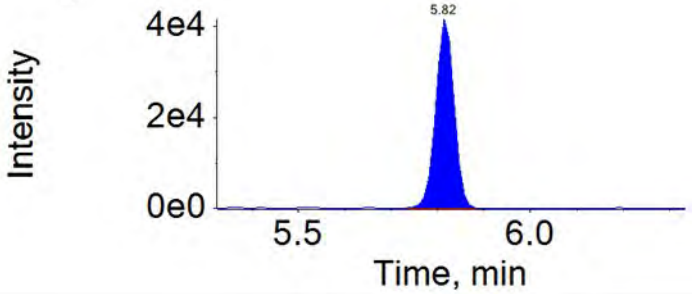
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



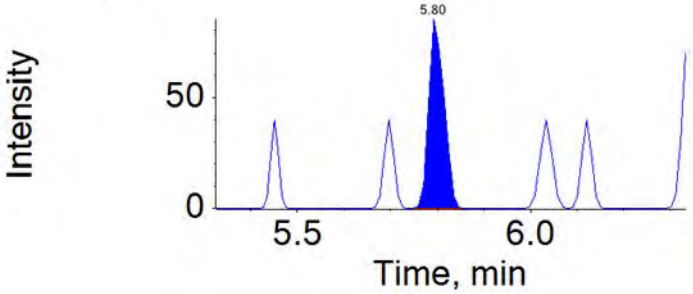
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

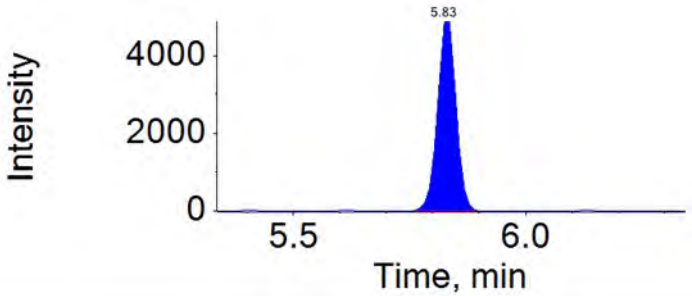
Component: PFUnDA
Primary Mass: 563.0 / 519.0



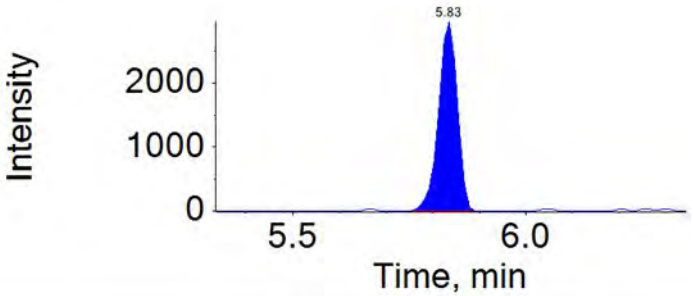
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



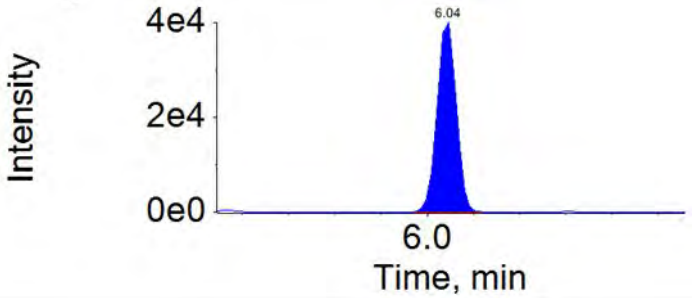
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



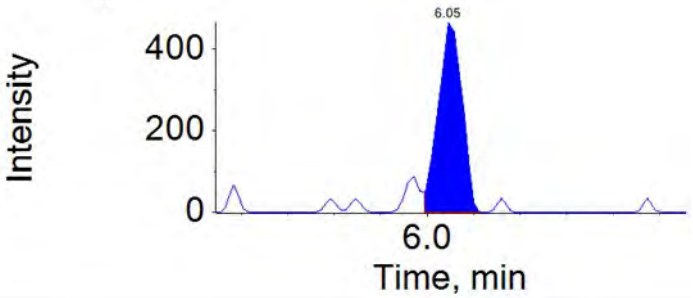
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



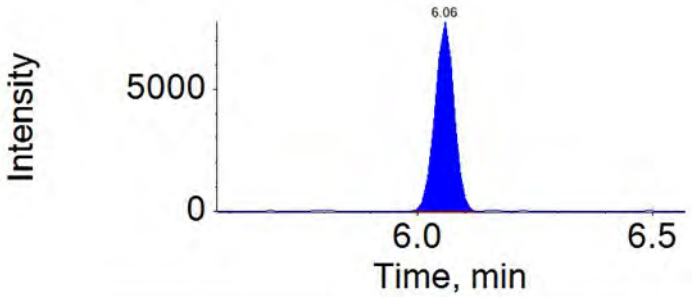
Component: PFDoDA
Primary Mass: 613.0 / 569.0



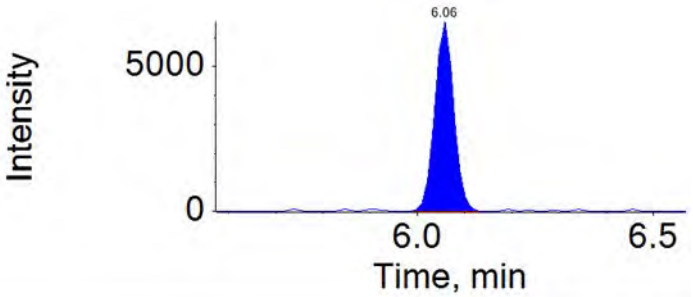
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



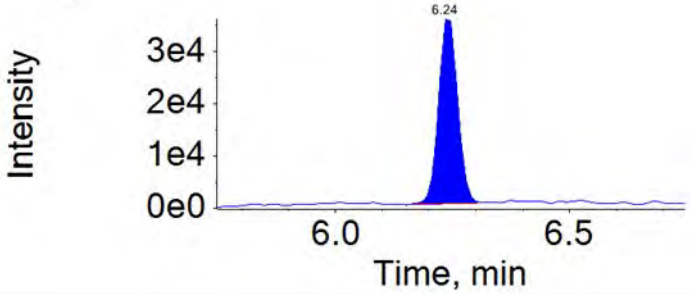
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



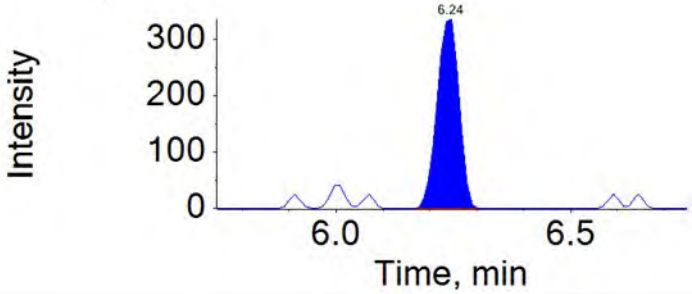
APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

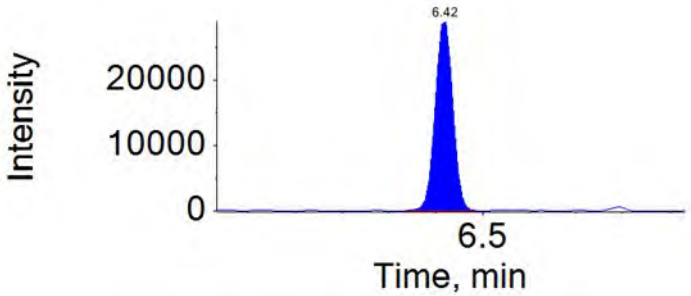
Component: PFTrDA
Primary Mass: 663.0 / 619.0



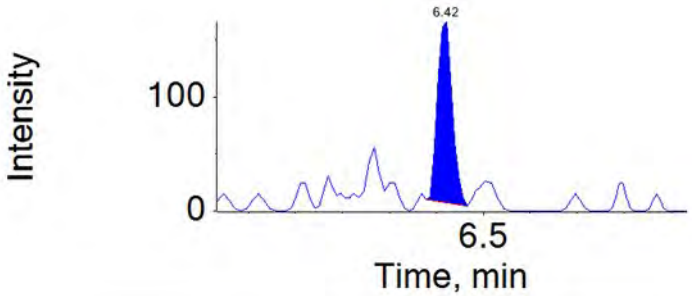
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



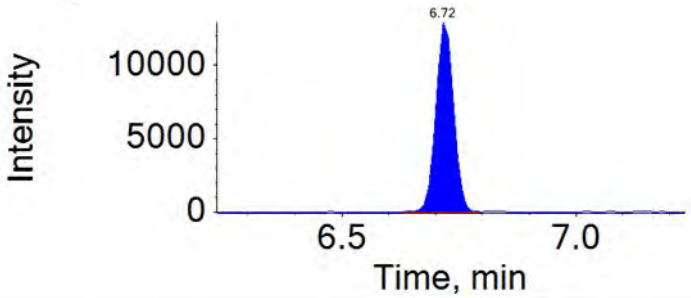
Component: PFTeDA
Primary Mass: 713.0 / 669.0



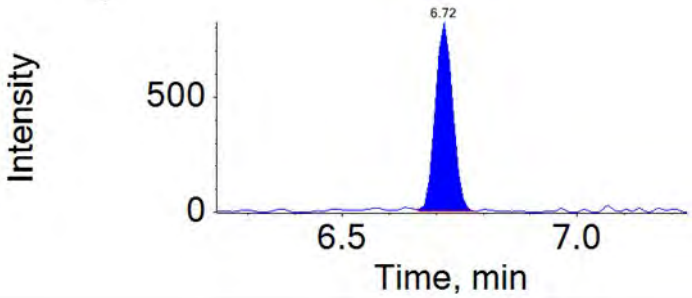
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



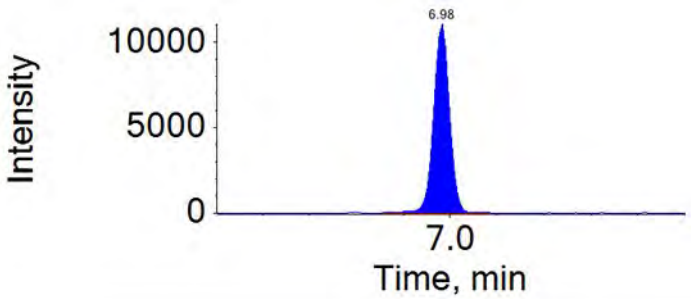
Component: PFHxDA
Primary Mass: 813.0 / 769.0



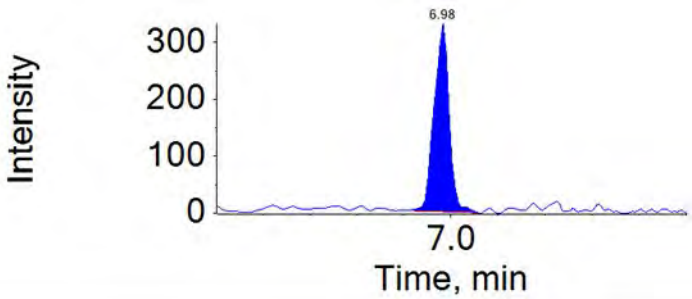
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 8:21 pm, 11/13/18

REVIEWED
By umar at 2:04 pm, 11/15/18

Preparation Logs

PFAS by LC/MS/MS

Organic Extraction Batchlog Assigned to: 12698 Courtney Fatta Reviewed by: MCD 7824 Start Date: 11/05/18 Start time: 11:55

18309005 Tech 1: PJR9213 Tech 2: CF12698 (Spiked)

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD

(3) mL CF12698 11/05/18

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments
	9881938MS	9S105MS	1.02	SSMODX1833BX	.05	MSMODX1833AP	.04	1.0	20	170	
	BLANKA	BLK309005	1.0	SSMODX1833BX	.05	N/A	N/A	1.0		Z	
	LCSA	LCS309005	1.0	SSMODX1833BX	.05	MSMODX1833AP	.04	1.0			
	LCSDA	LCSD309005	1.0	SSMODX1833BX	.05	MSMODX1833AP	.04	1.0	↓	Z	

Spike Solutions: Witness: PJR9213 Instrument: LM27631

MSMODX1833AP PFAS 537 Native Spike Sequence: 18NOV07DOD / 18NOV07D & 18NOV08D

SSMODX1833BX PFAS 537 Modified Extraction/Surrogate Spik

(3) mL

SBS Port #		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
	1	9881938	9S105	1.03	SSMODX1833BX	.05	1.0	20	170a		14478	11/13/2018	N
	2	9881939	9S110	1.02	SSMODX1833BX	.05	1.0		170a	Sand	14478	11/13/2018	N
	3	9881940	9S115	1.05	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	4	9881941	9S120	1.04	SSMODX1833BX	.05	1.0		170a	pebbles, Sand	14478	11/13/2018	N
	5	9881943	51721	1.06	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	6	9881944	51723	1.05	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	7	9881945	51725	1.08	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	8	9881946	51726	1.05	SSMODX1833BX	.05	1.0		170a	Sand	14478	11/13/2018	N
	9	9881949	51711	1.03	SSMODX1833BX	.05	1.0		170a	Sand	14478	11/13/2018	N
	10	9881950	51713	1.06	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	11	9881951	51715	1.07	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	12	9881952	51718	1.04	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	13	9881955	57351	1.05	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	14	9881956	57353	1.03	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	15	9881957	57355	1.04	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	16	9881958	57358	1.01	SSMODX1833BX	.05	1.0	↓	170a	pebbles	14478	11/13/2018	N

18309005

Organic Extraction Batchlog **18309005** (3) mL

Port#		Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
Z	17	9881961	57341	1.02	SSMODX1833BX	.05	1.0	20	170a		14478	11/13/2018	N
Z	18	9881962	57343	1.08	SSMODX1833BX	.05	1.0	↓	170a		14478	11/13/2018	N

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	170981031833B
Auto-pipette (dilutions)	N/A SPT12262 11/8/18 N/A
Auto-pipette (extract vialin	P1000-1
Envi-Carb	107563
Internal Standard	IS18309033A
Methanol	DV013-US
Sand	MKBW7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

CF12698 11/05/18

Balance #	B629764122	Sonic Bath ID	3800A	N-evap	A	24°C	SPE Manifold	—

18309005

DF = Dilution Factor FV = Final Volume Documented temps are NIST corrected.

N/A SPT12262 11/8/18

Organic Extraction Batchlog Assigned to: 12698 Courtney Fatta Reviewed by: JPT12262 Start Date: 11/09/18 Start time: 9:55

18313005 Tech 1: CF12698 Tech 2: CF12698

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

mL CF12698 11/09/18

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD (3)

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments
	9881929MS	10S15	1.10	SSMODX1833BZ	.05	MSMODX1833AQ	.04	1.0	20	170A	
	9881930MSD	10S15	1.07	SSMODX1833BZ	.05	MSMODX1833AQ	.04	1.0	"	170A	
	BLANKA	BLK313005	1.0	SSMODX1833BZ	.05	N/A	N/A	1.0	"	Z	
	LCSA	LCS313005	1.0	SSMODX1833BZ	.05	MSMODX1833AQ	.04	1.0	"	Z	

Spike Solutions: Witness: PJR9213 Instrument: LM27631

MSMODX1833AQ PFAS 537 Native Spike Sequence: 18NOV12DOD - 18NOV12D

SSMODX1833BZ PFAS 537 Modified Extraction/Surrogate Spik (3) mL

BS Port# 8 Page 1586 of 1591

	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
1	9881926 R	10S11	1.08	SSMODX1833BZ	.05	1.0	20	170a	Large Rocks	14478 DIO (8)	11/13/2018	N
2	9881927 R	10S13	1.06	SSMODX1833BZ	.05	1.0		170a		14478 DIO (8)	11/13/2018	N
3	9881928 R	BKG 10S15	1.01	SSMODX1833BZ	.05	1.0		170a		14478 DIO (8)	11/13/2018	N
4	9881940 R	9S115	1.06	SSMODX1833BZ	.05	1.0		170a	Large Rocks	14478	11/13/2018	N
5	9881963 R	57345	1.03	SSMODX1833BZ	.05	1.0		170a		14478	11/13/2018	N
6	9881964 R	57348	1.04	SSMODX1833BZ	.05	1.0		170a		14478	11/13/2018	N
7	9881967 R	C2111	1.06	SSMODX1833BZ	.05	1.0		170a	Pebbles	14478	11/13/2018	N
8	9881968 R	C2113	1.03	SSMODX1833BZ	.05	1.0		170a	Sand, pebbles	14478	11/13/2018	N
9	9881969 R	C2115	1.03	SSMODX1833BZ	.05	1.0		170a	Sand, pebbles	14478	11/13/2018	N
10	9881970 R	C2118	1.01	SSMODX1833BZ	.05	1.0		170a	Sand, pebbles	14478	11/13/2018	N
11	9881973 R	C2131	1.10	SSMODX1833BZ	.05	1.0		170a	Sand, pebbles	14478	11/13/2018	N
12	9881974 R	C2133	1.06	SSMODX1833BZ	.05	1.0		170a		14478	11/13/2018	N
13	9881975 R	C2135	1.05	SSMODX1833BZ	.05	1.0		170a		14478	11/13/2018	N
14	9881976 R	C2138	1.05	SSMODX1833BZ	.05	1.0		170a	Sand, pebbles	14478	11/13/2018	N

(8) DIO prepared using 877 µL methanol (DU401-US), 100 µL sample, and 22.5 µL surrogate (SSMODX1833BZ). 400 µL sch internalized w/ 20 µL IS183113BA. MCD 7824 11/19/18

18313005

Organic Extraction Batchlog **18313005**

Port#	Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	176981106/833A
Auto-pipette (dilutions)	P1000-1 + P100-1
Auto-pipette (extract vialin	P1000-1
Envi-Carb	107653
Internal Standard	IS1831133A
Methanol	DV013-US
Wand	MKBW7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

N/A SPT12262 11/13/18

CF12698 11/09/18

Balance #	B629764122	Sonic Bath ID	3800A	N-evap	C	26°C	SPE Manifold	N/A

18313005

FV = Final Volume

Documented temps are NIST corrected.

N/A SPT12262 11/13/18

Batch Page 1587 of 1591

Organic Extraction Batchlog Assigned to: 25478 Danielle McCully Reviewed by: MCD 7824 Start Date: 11/11/18 Start time: 16:10

18314006 Tech 1: DDM25478 Tech 2: PJR9213

Analyses on Batch: PFAS in Water by LC/MS/MS-DoD

Dept: 33 Prep Analysis: 14465 PFAS Water Prep - DoD ③ml DDM25478 11/11/18

Port#	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV ③ (uL)	IS amt (uL)	BC	Comments
4	9893170MS	19D06	290.06	SSMODX1833BZ	.025	MSMODX1833AQ	.04	1.00	20	173a	
5	9893171MSD	19D06	288.57	SSMODX1833BZ	.025	MSMODX1833AQ	.04	1.00		173a	
1	BLANKA	BLK314006	250	SSMODX1833BZ	.025	N/A	—	1.00		NA	
2	LCSA	LCS314006	250	SSMODX1833BZ	.025	MSMODX1833AQ	.04	1.00			

Spike Solutions: Witness: DMW102622 Instrument: HM27631

MSMODX1833AQ PFAS 537 Native Spike

SSMODX1833BZ PFAS 537 Modified Extraction/Surrogate Spik Sequence: 18NOV12000/18NOV12D

Port#	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ③ (uL)	IS Amt (uL)	BC	Comments	Analyses	Due Date	Prio
3	1 9881534 R	MCLE	291.39	SSMODX1833BZ	.025	1.00	20	173b		14434	11/13/2018	N
4	2 9881535 R	MCLE	290.14	SSMODX1833BZ	.025	1.00		173b		14434	11/13/2018	N
5	3 9881579 R	RB OU1C	274.95	SSMODX1833BZ	.025	1.00		173b		14434	11/13/2018	N
6	4 9881580 R	RB OU1C	269.55	SSMODX1833BZ	.025	1.00		173b		14434	11/13/2018	N
17	5 9881925 R	GW1(	295.32	SSMODX1833BZ	.025	1.00		173b		14434	11/13/2018	N
18	6 9881942 R	GW9(	294.71	SSMODX1833BZ	.025	1.00		173b		14434	11/13/2018	N
19	7 9881979 R	21W3	270.15	SSMODX1833BZ	.025	1.00		173b		14434	11/13/2018	N
10	8 9881980 R	21W3	287.42	SSMODX1833BZ	.025	1.00		173b		14434	11/13/2018	N
11	9 9893164 ②	EB 19D0	246.01	SSMODX1833BZ	.025	1.00		173a	opaque brown, sediment	14434	11/20/2018	N
12	10 9893165	EB 19D0	276.67	SSMODX1833BZ	.025	1.00		173a		14434	11/20/2018	N
1	11 9893166	EB 19D0	286.62	SSMODX1833BZ	.025	1.00		173a		14434	11/20/2018	N
2	12 9893167 ②	19D0	252.94	SSMODX1833BZ	.025	1.00		173a	opaque, brown, sediment	14434	11/20/2018	N
3	13 9893169	BKG 19D0	291.48	SSMODX1833BZ	.025	1.00		173a		14434	11/20/2018	N
6	14 9893176	FD 19D0	289.82	SSMODX1833BZ	.025	1.00		173a		14434	11/20/2018	N

② Sample poured into centrifuge tubes, centrifuge for 5min @ 3000 rpms, then decanted into new 250ml bottle. DDM25478 11/11/18

18314006

Organic Extraction Batchlog **18314006**

Port#	Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due Date	Prio

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
0.3% NH4OH:MeOH	2547811111833A
1:1 ACN:MeOH	2547811111833B
Auto-pipette (dilutions)	—
Auto-pipette (extract vialin	P1000-1
Envi-Carb	107563
Internal Standard	IS1831133A
Methanol	DV013-US
Milli-Q H2O	House A372
SPE Cartridge #1	6424575-01
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 9
Trizma	N/A

NA MCD7824 11/13/18

Balance #	B6207764122	SPE Manifold	11,12	N-evap	B	30 C	PJR9213 11/12/18

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

18314006

NA MCD7824 11/13/18

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Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
9881938	9S105
9881939	9S110
9881940	9S115
9881941	9S120

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name		LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number:	18312820004A	Sample number(s):		9881938-9881941		
Moisture		100		99-101		

Sample Matrix Quality Control

Analysis Name		BKG Conc	DUP Conc	RPD	RPD Max
Batch number:	18312820004A	Sample number(s):		9881938-9881941	
Moisture		7.0	6.6	5	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: **18312820004**

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
9881938	A	00111	1.0612	5.9064	6.8834	1.43	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881939	A	00111	1.0832	5.2660	6.2513	1.86	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881940	A	00111	1.0658	5.8193	6.7807	1.79	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881941	A	00111	1.0709	5.6447	6.6684	0.84	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
P881943BKG	A	00111	1.0658	5.3727	6.0631	6.99	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
P881943DUP	A	00111	1.0652	5.3072	6.0200	6.64	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
LCS 89.5% Std.		00111	1.0714	5.0619	1.6108	89.34	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)

CONTRACT_ID DO_CTO_NUMBER PHASE INSTALLATION_ID SAMPLE_NAME ANALYTICAL_METHOD LAB_NAME CONTRACTOR_NAME LEACHATE_METHOD SAMPLE_BASIS EXTRACTION_METHOD RESULT_TYPE SAMPLE_MEDIUM CLEANUP_METHOD QC_LEVEL LEACHATE_DATE LEACHATE_TIME EXTRACTION_DATE EXTRACTION_TIME ANALYSIS_DATE ANALYSIS_TIME LAB_SAMPLE_ID LAB_REPORT_DATE LAB_REPORT_NUMBER FILTER_SIZE DILUTION RUN_NUMBER PERCENT_MOISTURE PERCENT_LIPID ANALYTE_ID ANALYTE_VALUE ORIGINAL_ANALYTE_VALUE RESULT_UNITS LAB_QUALIFIER VALIDATOR_QUALIFIER FINAL_QUALIFIER DETECTED GC_COLUMN_TYPE ANALYSIS_RESULT_TYPE RADIOLOGICAL_ERROR RESULT_NARRATIVE RETENTION_TIME QC_CONTROL_LIMIT_CODE QC_ACCURACY_UPPER QC_ACCURACY_LOWER CONTROL_LIMIT_DATE RELATIVE_PCT_DIFF QC_NARRATIVE MDL CDL IDL PQL CRQL DETECTION_LIMIT VALIDATOR_DET_LIMIT VALIDATOR_MDL DL LOD LOQ SDG LEACH_LOT METHOD_BATCH PREP_BATCH RUN_BATCH ANALYSIS_BATCH VALIDATOR_NAME VALIDATION_QC VAL_DATE REPORTABLE_RESULT

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 Calculation EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108 13:07:00 9881938 20181119 2005361 0.00 1 1 1.4 -86 1.4 1.4 PCT Y TRG 0.50 0.50 0.50 0.50 0.50 BSI08 18312820004A 18312820004A 18312820004A Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 335-67-1 0.67 0 NG_G U N TRG 0.20 0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 375-95-1 0.67 0 NG_G U N TRG 0.20 0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 335-76-2 0.67 0 NG_G U N TRG 0.30 0.30 0.30 0.67 0.98 BSI08 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 2058-94-8 0.67 0 NG_G U N TRG 0.20 0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 307-55-1 0.67 0 NG_G U N TRG 0.20 0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 72629-94-8 0.67 0 NG_G U N TRG 0.20

0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 376-06-7
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0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
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0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
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11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 375-85-9
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0.20 0.20 0.67 0.79 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
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11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 375-73-5
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0.20 0.20 0.59 0.79 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
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11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 355-46-4
0.63 0 NG_G U N TRG 0.20
0.20 0.20 0.63 0.79 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
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0.90 0.90 NG_G Y TRG 0.20
0.20 0.20 0.64 0.79 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 13:45:00 9881938 20181119 2005361 0.00 1 1 1.4 2991-50-6
2.0 0 NG_G U N TRG 0.49
0.49 0.49 2.0 3.0 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
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0.49 0.49 2.0 3.0 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881939 20181119 2005361 0.00 1 1 1.9 -86 1.9 1.9 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50

BSI08 18312820004A 18312820004A 18312820004A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 335-67-1
0.68 0 NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 375-95-1
0.68 0 NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 335-76-2
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Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 2058-94-8
0.68 0 NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
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11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 307-55-1
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0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 72629-94-8
0.68 0 NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 376-06-7
0.68 0 NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 307-24-4
0.68 0 NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 375-85-9
0.68 0 NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI08 18309005 18309005 18309005 18309005

Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 375-73-5
0.60 0 NG_G U N TRG 0.20
0.20 0.20 0.60 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 355-46-4
0.64 0 NG_G U N TRG 0.20
0.20 0.20 0.64 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 1763-23-1
0.67 0.67 NG_G J Y TRG 0.20
0.20 0.20 0.65 0.80 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:03:00 9881939 20181119 2005361 0.00 1 1 1.9 2991-50-6
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0.50 0.50 2.0 3.0 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
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Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881940 20181119 2005361 0.00 1 1 1.8 -86 1.8 1.8 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI08 18312820004A 18312820004A 18312820004A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 335-67-1
0.66 0 NG_G U N TRG 0.19
0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 375-95-1
0.66 0 NG_G U N TRG 0.19
0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
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N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 335-76-2
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Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 2058-94-8
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0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
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EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 307-55-1
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0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
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N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 72629-94-8
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0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 376-06-7
0.66 0 NG_G U N TRG 0.19
0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 307-24-4
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0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 375-85-9
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0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 375-73-5
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0.19 0.19 0.58 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 355-46-4
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0.19 0.19 0.62 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 1763-23-1
1.0 1.0 NG_G Y TRG 0.19
0.19 0.19 0.63 0.78 BSI08 18309005 18309005 18309005 18309005
Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
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0.48 0.48 1.9 2.9 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-15 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:12:00 9881940 20181119 2005361 0.00 1 1 1.8 2355-31-9
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0.48 0.48 1.9 2.9 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881941 20181119 2005361 0.00 1 1 0.84 -86 0.84 0.84 PCT
Y TRG 0.50 0.50 0.50 0.50
0.50 BSI08 18312820004A 18312820004A 18312820004A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
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0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 375-95-1
0.66 0 NG_G U N TRG 0.19
0.19 0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 335-76-2
0.66 0 NG_G U N TRG 0.29
0.29 0.29 0.66 0.97 BSI08 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 2058-94-8 0.66 0
NG_G U N TRG 0.19 0.19
0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 307-55-1 0.66 0
NG_G U N TRG 0.19 0.19
0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 72629-94-8 0.66 0
NG_G U N TRG 0.19 0.19
0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 376-06-7 0.66 0
NG_G U N TRG 0.19 0.19

0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
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NG_G J Y TRG 0.19 0.19
0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005 Y
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EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 375-85-9 0.66 0
NG_G U N TRG 0.19 0.19
0.19 0.66 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 375-73-5 0.58 0
NG_G U N TRG 0.19 0.19
0.19 0.58 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 355-46-4 0.62 0
NG_G U N TRG 0.19 0.19
0.19 0.62 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 1763-23-1 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.78 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 2991-50-6 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-S-01-20 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:21:00 9881941 20181119 2005361 0.00 1 1 0.84 2355-31-9 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI08 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 335-67-1 1.0 0 NG_L U N
TRG 0.42 0.42 0.42 1.0 1.7 BSI08
18314006 18314006 18314006 18314006 Y
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BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 375-95-1 1.0 0 NG_L U N
TRG 0.34 0.34 0.34 1.0 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 335-76-2 1.0 0 NG_L U N
TRG 0.42 0.42 0.42 1.0 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 2058-94-8 1.0 0 NG_L U

N TRG 0.42 0.42 0.42 1.0 1.7
BSI08 18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 307-55-1 1.0 0 NG_L U N
TRG 0.42 0.42 0.42 1.0 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 72629-94-8 1.0 0 NG_L U
N TRG 0.51 0.51 0.51 1.0 1.7
BSI08 18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 376-06-7 1.0 0 NG_L U N
TRG 0.51 0.51 0.51 1.0 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 307-24-4 1.0 0 NG_L U N
TRG 0.42 0.42 0.42 1.0 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 375-85-9 1.0 0 NG_L U N
TRG 0.34 0.34 0.34 1.0 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 375-73-5 0.93 0 NG_L U N
TRG 0.25 0.25 0.25 0.93 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 355-46-4 0.93 0 NG_L U N
TRG 0.34 0.34 0.34 0.93 1.7 BSI08
18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 1763-23-1 0.62 0.62 NG_L J
Y TRG 0.42 0.42 0.42 1.0 1.7
BSI08 18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 2991-50-6 2.0 0 NG_L U
N TRG 0.85 0.85 0.85 2.0 2.5
BSI08 18314006 18314006 18314006 18314006 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GW-9-W-01 537_MOD EUROFINS
BRADY GCE II NONE NA METHOD 000 WP UNK 20181111 16:10:00 20181112
23:49:00 9881942 20181119 2005361 0.00 1 1 2355-31-9 2.0 0 NG_L U
N TRG 0.85 0.85 0.85 2.0 2.5
BSI08 18314006 18314006 18314006 18314006 Y
SAMPLE_NAME CONTRACT_ID DO_CTO_NUMBER PHASE INSTALLATION_ID SITE_NAME
LOCATION_NAME SPECIMEN_NAME BIOLOGICAL_CLASS SEX AGE_CLASS EXCAVATION_NAME

PARENT_SAMPLE_NAME SAMPLE_MATRIX SAMPLE_TYPE SAMPLING_EQUIPMENT PROJECT_PHASE COMPOSITE WATER_COLUMN COLLECT_DATE COLLECT_TIME DATUM_ELEV ELEV_UNITSDATUM_MLLW DATUM_DESC START_DEPTH END_DEPTH DEPTH_UNITS REMOVED REMOVED_DATE AMBIENT_BLANK EQUIPMENT_BLANK SOURCE_BLANK TRIP_BLANK SAMPLE_NARRATIVE

OU1-GW-9-S-01-05 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 GW-9-S-01 SO N N 20181029 11:55:00 05 FT

OU1-GW-9-S-01-10 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 GW-9-S-01 SO N N 20181029 12:06:00 10 FT

OU1-GW-9-S-01-15 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 GW-9-S-01 SO N N 20181029 12:10:00 15 FT

OU1-GW-9-S-01-20 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 GW-9-S-01 SO N N 20181029 12:15:00 20 FT

OU1-GW-9-W-01 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 GW-9-W-01 WP N N 20181029 11:50:00

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LCS18309005 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 SO BS N

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MS18309005 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 SO MS N 20181029 11:55:00

LCS18312820004A N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 SO BS N

BLK18314006 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 WP LB N

LCS18314006 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000 WP BS N