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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, and the Sample Location Report, SDG BSI01

Marine Corps Ballistics Base Barstow
Barstow, California

November 2019

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED

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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 10/31/18

SDG# BSI01

GROUP	SAMPLE NUMBERS
2005301	9881534-9881545

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:** **01/21/2019**

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 BSI01 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
9881534	OU1-Bldg371-W-01-01	10/31/2018 09:15	11/02/2018 10:10
9881535	OU1-Bldg371-W-01-02	10/31/2018 09:25	11/02/2018 10:10
9881536	OU1-Bldg371-S-01-01	10/31/2018 09:34	11/02/2018 10:10
9881537	OU1-Bldg371-S-01-03	10/31/2018 10:25	11/02/2018 10:10
9881538	OU1-Bldg371-S-01-03MS	10/31/2018 10:25	11/02/2018 10:10
9881539	OU1-Bldg371-S-01-03MSD	10/31/2018 10:25	11/02/2018 10:10
9881540	OU1-Bldg371-S-01-05	10/31/2018 10:40	11/02/2018 10:10
9881541	OU1-Bldg371-S-01-08	10/31/2018 10:58	11/02/2018 10:10
9881542	OU1-Bldg371-S-01-10	10/31/2018 11:00	11/02/2018 10:10
9881543	OU1-Bldg371-S-01-12	10/31/2018 11:02	11/02/2018 10:10
9881544	OU1-Bldg371-S-02-01	10/31/2018 11:40	11/02/2018 10:10
9881545	OU1-Bldg371-S-02-03	10/31/2018 12:03	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 followed by dispersive cleanup of the extract using graphitized carbon. 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 1 gram sample of soil/sediment is sonicated with an acetonitrile/methanol solution followed by dispersive cleanup of the extract using graphitized carbon. 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
00118 Moisture
00121 Moisture Duplicate

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: December 06, 2018 15:52

Project: Barstow Site Inspection

Account #: 43806
Group Number: 2005301
SDG: BSI01
State of Sample Origin: CA

Electronic Copy To Gutierrez Canales Engineering Attn: Jesse MacNeill

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-Bldg371-W-01-01 Grab Potable Water	10/31/2018 09:15	9881534
OU1-Bldg371-W-01-02 Grab Potable Water	10/31/2018 09:25	9881535
OU1-Bldg371-S-01-01 Grab Soil	10/31/2018 09:34	9881536
OU1-Bldg371-S-01-03 Grab Soil	10/31/2018 10:25	9881537
OU1-Bldg371-S-01-03MS Grab Soil	10/31/2018 10:25	9881538
OU1-Bldg371-S-01-03MSD Grab Soil	10/31/2018 10:25	9881539
OU1-Bldg371-S-01-05 Grab Soil	10/31/2018 10:40	9881540
OU1-Bldg371-S-01-08 Grab Soil	10/31/2018 10:58	9881541
OU1-Bldg371-S-01-10 Grab Soil	10/31/2018 11:00	9881542
OU1-Bldg371-S-01-12 Grab Soil	10/31/2018 11:02	9881543
OU1-Bldg371-S-02-01 Grab Soil	10/31/2018 11:40	9881544
OU1-Bldg371-S-02-03 Grab Soil	10/31/2018 12:03	9881545

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 #: 2005301

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 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: 9881536

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

Sample #s: 9881545

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

Sample #s: 9881541

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

Sample #s: 9881540, 9881542, 9881543

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

Sample #s: 9881535

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

Sample #s: 9881537, 9881539

The following analytes were manually integrated due to incorrect integrations:

Perfluorotetradecanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9881538

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

Sample #s: 9881544

The following analytes were manually integrated due to incorrect integrations: Perfluoroundecanoic acid, Perfluorododecanoic acid, Perfluorotetradecanoic acid, Perfluoro-octanesulfonate

Batch #: 18311004 (Sample number(s): 9881536-9881539, 9881541, 9881544-9881545 UNSPK: 9881537)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Perfluorooctanoic acid, Perfluorononanoic acid, Perfluorodecanoic acid, Perfluorotetradecanoic acid, Perfluorohexanoic acid, Perfluoroheptanoic acid, Perfluoro-octanesulfonate

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Perfluorooctanoic acid, Perfluorononanoic acid, Perfluorohexanoic acid, Perfluoroheptanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Perfluorooctanoic acid, Perfluorononanoic acid, Perfluorohexanoic acid, Perfluoroheptanoic acid, Perfluoro-octanesulfonate, NMeFOSAA

Batch #: 18314009 (Sample number(s): 9881540 UNSPK: 9881540)

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluorohexanesulfonate, Perfluoro-octanesulfonate

SM 2540 G-1997 %Moisture Calc, Wet Chemistry

Batch #: 18311820007A (Sample number(s): 9881536-9881541, 9881544-9881545 BKG: 9881537)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture, Moisture, Moisture Duplicate

Sample Description: **OU1-Bldg371-W-01-01 Grab Potable Water MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 09:15
SDG#: BSI01-01

Gutierrez Canales Engineering
ELLE Sample #: PW 9881534
ELLE Group #: 2005301
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.	0.86	2.1	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14434	NMeFOSAA	2355-31-9	N.D.	0.86	2.1	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14434	Perfluorobutanesulfonate	375-73-5	N.D.	0.26	0.94	1.7	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.43	1.0	1.7	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.43	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	0.94	1.7	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.43	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	N.D.	0.43	1.0	1.7	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.43	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.	0.43	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 22:55	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

Sample Description: **OU1-Bldg371-W-01-02 Grab Potable Water MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 09:25
SDG#: BSI01-02

Gutierrez Canales Engineering
ELLE Sample #: PW 9881535
ELLE Group #: 2005301
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.	0.86	2.1	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14434	NMeFOSAA	2355-31-9	N.D.	0.86	2.1	2.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14434	Perfluorobutanesulfonate	375-73-5	N.D.	0.26	0.95	1.7	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.43	1.0	1.7	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.43	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	0.95	1.7	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.43	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	0.54 J	0.43	1.0	1.7	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.43	1.0	1.7	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.52	1.0	1.7	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.52	1.0	1.7	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.43	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 23:04	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

Sample Description: **OU1-Bldg371-S-01-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 09:34
SDG#: BSI01-03

Gutierrez Canales Engineering
ELLE Sample #: SW 9881536
ELLE Group #: 2005301
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.	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.75	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.64	0.94	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	20	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	2.8	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	12	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	2.3	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	3.4	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	26	0.19	0.64	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.64	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.64	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.64	0.75	1
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	18311004	11/09/2018 01:11	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-01-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 10:25
SDG#: BSI01-04BKG

Gutierrez Canales Engineering
ELLE Sample #: SW 9881537
ELLE Group #: 2005301
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	1.6	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	0.28 J	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	3.3	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	3.6	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	4.0	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	6.0	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	10	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	11	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	0.56 J	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	2.7	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	18311004	11/09/2018 01:20	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-01-03MS Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 10:25
SDG#: BSI01-04MS

Gutierrez Canales Engineering
ELLE Sample #: SW 9881538
ELLE Group #: 2005301
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	1.1 J	0.49	2.0	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.6 J	0.49	2.0	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.5	0.20	0.59	0.78	1
14478	Perfluorodecanoic acid	335-76-2	2.7	0.29	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	1.9	0.20	0.67	0.78	1
14478	Perfluoroheptanoic acid	375-85-9	3.7	0.20	0.67	0.78	1
14478	Perfluorohexanesulfonate	355-46-4	3.6	0.20	0.63	0.78	1
14478	Perfluorohexanoic acid	307-24-4	4.3	0.20	0.67	0.78	1
14478	Perfluorononanoic acid	375-95-1	4.7	0.20	0.67	0.78	1
14478	Perfluoro-octanesulfonate	1763-23-1	8.1	0.20	0.64	0.78	1
14478	Perfluorooctanoic acid	335-67-1	8.4	0.20	0.67	0.78	1
14478	Perfluorotetradecanoic acid	376-06-7	1.7	0.20	0.67	0.78	1
14478	Perfluorotridecanoic acid	72629-94-8	1.7	0.20	0.67	0.78	1
14478	Perfluoroundecanoic acid	2058-94-8	1.9	0.20	0.67	0.78	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	2.7	0.50	0.50	0.50	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
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 01:29	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-01-03MSD Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 10:25
SDG#: BSI01-04MSD

Gutierrez Canales Engineering
ELLE Sample #: SW 9881539
ELLE Group #: 2005301
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	1.4 J	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.1 J	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.4	0.19	0.56	0.75	1
14478	Perfluorodecanoic acid	335-76-2	3.5	0.28	0.64	0.93	1
14478	Perfluorododecanoic acid	307-55-1	1.8	0.19	0.64	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	5.3	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	4.8	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	5.9	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	8.3	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	14	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	13	0.19	0.64	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	1.7	0.19	0.64	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	1.5	0.19	0.64	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	2.2	0.19	0.64	0.75	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	2.7	0.50	0.50	0.50	1
00121	Moisture Duplicate	n.a.	2.2	0.50	0.50	0.50	1
	The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						

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	18311004	11/09/2018 01:38	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1
00121	Moisture Duplicate	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-01-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 10:40
SDG#: BSI01-05

Gutierrez Canales Engineering
ELLE Sample #: SW 9881540
ELLE Group #: 2005301
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	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	0.88	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	3.6	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	0.84	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	5.3	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	1.0	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
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.8	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	18314009	11/13/2018 02:14	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18314009	11/11/2018 16:30	Danielle D McCully	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-01-08 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 10:58
SDG#: BSI01-06

Gutierrez Canales Engineering
ELLE Sample #: SW 9881541
ELLE Group #: 2005301
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.	0.52	2.1	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.52	2.1	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.21	0.62	0.83	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.31	0.71	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.21	0.71	0.83	1
14478	Perfluoroheptanoic acid	375-85-9	0.94	0.21	0.71	0.83	1
14478	Perfluorohexanesulfonate	355-46-4	5.0	0.21	0.67	0.83	1
14478	Perfluorohexanoic acid	307-24-4	3.3	0.21	0.71	0.83	1
14478	Perfluorononanoic acid	375-95-1	0.22 J	0.21	0.71	0.83	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.8	0.21	0.68	0.83	1
14478	Perfluorooctanoic acid	335-67-1	0.89	0.21	0.71	0.83	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.21	0.71	0.83	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.21	0.71	0.83	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.21	0.71	0.83	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	4.8	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	18311004	11/09/2018 01:56	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-01-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 11:00
SDG#: BSI01-07

Gutierrez Canales Engineering
ELLE Sample #: SW 9881542
ELLE Group #: 2005301
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.	0.51	2.0	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.51	2.0	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.61	0.82	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.31	0.70	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.70	0.82	1
14478	Perfluoroheptanoic acid	375-85-9	0.27 J	0.20	0.70	0.82	1
14478	Perfluorohexanesulfonate	355-46-4	1.5	0.20	0.66	0.82	1
14478	Perfluorohexanoic acid	307-24-4	1.2	0.20	0.70	0.82	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.70	0.82	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.32 J	0.20	0.67	0.82	1
14478	Perfluorooctanoic acid	335-67-1	0.25 J	0.20	0.70	0.82	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.70	0.82	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.70	0.82	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.70	0.82	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	4.3	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	18332003	11/29/2018 18:22	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002A	12/03/2018 10:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-01-12 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 11:02
SDG#: BSI01-08

Gutierrez Canales Engineering
ELLE Sample #: SW 9881543
ELLE Group #: 2005301
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	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	0.40 J	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	2.4	0.20	0.64	0.79	1
14478	Perfluorohexanoic acid	307-24-4	1.8	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	N.D.	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	0.30 J	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
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	3.1	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	18332003	11/29/2018 18:31	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002A	12/03/2018 10:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-02-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 11:40
SDG#: BSI01-09

Gutierrez Canales Engineering
ELLE Sample #: SW 9881544
ELLE Group #: 2005301
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	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.							
14478	NMeFOSAA	2355-31-9	N.D.		0.49	2.0	2.9	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	0.73	J	0.29	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	0.42	J	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	0.68	J	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	0.44	J	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	4.2		0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	150		2.0	6.4	7.9	10
14478	Perfluorooctanoic acid	335-67-1	3.8		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
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**		**%**	**%**	**%**	
00111	Moisture	n.a.	1.1		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	18311004	11/09/2018 02:05	Joshua P Trost	1
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/09/2018 19:32	Marissa C Drexinger	10
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Sample Description: **OU1-Bldg371-S-02-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/31/2018 12:03
SDG#: BSI01-10

Gutierrez Canales Engineering
ELLE Sample #: SW 9881545
ELLE Group #: 2005301
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.	0.46	1.8	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.46	1.8	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.18	0.55	0.74	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.63	0.92	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.18	0.63	0.74	1
14478	Perfluoroheptanoic acid	375-85-9	0.65 J	0.18	0.63	0.74	1
14478	Perfluorohexanesulfonate	355-46-4	3.3	0.18	0.59	0.74	1
14478	Perfluorohexanoic acid	307-24-4	0.92	0.18	0.63	0.74	1
14478	Perfluorononanoic acid	375-95-1	0.36 J	0.18	0.63	0.74	1
14478	Perfluoro-octanesulfonate	1763-23-1	12	0.18	0.60	0.74	1
14478	Perfluorooctanoic acid	335-67-1	2.9	0.18	0.63	0.74	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.18	0.63	0.74	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.18	0.63	0.74	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.18	0.63	0.74	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.7	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	18311004	11/09/2018 02:14	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311004	11/07/2018 07:35	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18311820007A	11/07/2018 15:37	Larry E Bevins	1

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

Quality Control Summary

Client Name: Gutierrez Canales Engineering Group Number: 2005301
Reported: 12/06/2018 15:52

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: 18311004	Sample number(s): 9881536-9881539,9881541,9881544-9881545			
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
Batch number: 18314009	Sample number(s): 9881540			
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
Batch number: 18332003	Sample number(s): 9881542-9881543			
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

*- 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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	ng/g	ng/g	ng/g	ng/g
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): 9881534-9881535			
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 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: 18311004	Sample number(s): 9881536-9881539,9881541,9881544-9881545								
NEtFOSAA	1.36	1.40			103		70-130		
NMeFOSAA	1.36	1.03			76		70-130		
Perfluorobutanesulfonate	1.20	1.46			122		70-130		
Perfluorodecanoic acid	1.36	1.61			118		70-130		
Perfluorododecanoic acid	1.36	1.57			115		70-130		
Perfluoroheptanoic acid	1.36	1.69			125		70-130		
Perfluorohexanesulfonate	1.29	1.61			125		70-130		
Perfluorohexanoic acid	1.36	1.68			123		70-130		
Perfluorononanoic acid	1.36	1.60			118		70-130		
Perfluoro-octanesulfonate	1.30	1.51			116		70-130		
Perfluorooctanoic acid	1.36	1.60			118		70-130		
Perfluorotetradecanoic acid	1.36	1.62			119		70-130		

*- Outside of specification
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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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

LCS/LCSD (continued)

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
Perfluorotridecanoic acid	1.36	1.50			110		70-130		
Perfluoroundecanoic acid	1.36	1.71			126		70-130		
Batch number: 18314009	Sample number(s): 9881540								
NEtFOSAA	1.36	1.26	1.36	1.30	93	96	70-130	3	30
NMeFOSAA	1.36	1.07	1.36	1.29	79	95	70-130	19	30
Perfluorobutanesulfonate	1.20	1.14	1.20	1.12	95	93	70-130	2	30
Perfluorodecanoic acid	1.36	1.34	1.36	1.33	99	98	70-130	1	30
Perfluorododecanoic acid	1.36	1.25	1.36	1.30	92	96	70-130	4	30
Perfluoroheptanoic acid	1.36	1.41	1.36	1.36	104	100	70-130	3	30
Perfluorohexanesulfonate	1.29	1.23	1.29	1.16	96	90	70-130	6	30
Perfluorohexanoic acid	1.36	1.33	1.36	1.32	98	97	70-130	1	30
Perfluorononanoic acid	1.36	1.36	1.36	1.38	100	102	70-130	2	30
Perfluoro-octanesulfonate	1.30	1.15	1.30	1.20	89	92	70-130	4	30
Perfluorooctanoic acid	1.36	1.42	1.36	1.36	104	100	70-130	4	30
Perfluorotetradecanoic acid	1.36	1.37	1.36	1.37	101	101	70-130	0	30
Perfluorotridecanoic acid	1.36	1.35	1.36	1.34	99	98	70-130	1	30
Perfluoroundecanoic acid	1.36	1.34	1.36	1.19	98	87	70-130	12	30
Batch number: 18332003	Sample number(s): 9881542-9881543								
NEtFOSAA	1.36	1.24			91		70-130		
NMeFOSAA	1.36	1.13			83		70-130		
Perfluorobutanesulfonate	1.20	1.12			93		70-130		
Perfluorodecanoic acid	1.36	1.23			90		70-130		
Perfluorododecanoic acid	1.36	1.25			92		70-130		
Perfluoroheptanoic acid	1.36	1.28			94		70-130		
Perfluorohexanesulfonate	1.29	1.06			82		70-130		
Perfluorohexanoic acid	1.36	1.29			95		70-130		
Perfluorononanoic acid	1.36	1.31			97		70-130		
Perfluoro-octanesulfonate	1.30	0.910			70		70-130		
Perfluorooctanoic acid	1.36	1.15			85		70-130		
Perfluorotetradecanoic acid	1.36	1.26			93		70-130		
Perfluorotridecanoic acid	1.36	1.36			100		70-130		
Perfluoroundecanoic acid	1.36	1.35			100		70-130		
	ng/l	ng/l	ng/l	ng/l					
Batch number: 18314006	Sample number(s): 9881534-9881535								
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		

*- Outside of specification
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(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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
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: 18311820007A	Sample number(s): 9881536-9881541,9881544-9881545								
Moisture	89.5	89.37			100		99-101		
Moisture	89.5	89.37			100		99-101		
Moisture Duplicate	89.5	89.37			100		99-101		
Batch number: 18337820002A	Sample number(s): 9881542-9881543								
Moisture	89.5	89.37			100		99-101		

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: 18311004	Sample number(s): 9881536-9881539,9881541,9881544-9881545 UNSPK: 9881537									
NEtFOSAA	N.D.	1.30	1.03	1.24	1.36	79	110	70-130	28	30
NMeFOSAA	N.D.	1.30	1.53	1.24	1.02	119	83	70-130	40*	30
Perfluorobutanesulfonate	N.D.	1.15	1.42	1.09	1.33	124	122	70-130	6	30
Perfluorodecanoic acid	1.54	1.30	2.59	1.24	3.44	81	154*	70-130	28	30
Perfluorododecanoic acid	0.273	1.30	1.84	1.24	1.78	121	122	70-130	3	30
Perfluoroheptanoic acid	3.22	1.30	3.62	1.24	5.15	31*	156*	70-130	35*	30
Perfluorohexanesulfonate	3.54	1.23	3.47	1.17	4.68	-4*	97	70-130	29	30
Perfluorohexanoic acid	3.88	1.30	4.18	1.24	5.76	23*	152*	70-130	32*	30
Perfluorononanoic acid	5.87	1.30	4.60	1.24	8.12	-97 (2)	182 (2)	70-130	55*	30
Perfluoro-octanesulfonate	10.14	1.24	7.91	1.18	13.27	-179 (2)	265 (2)	70-130	51*	30
Perfluorooctanoic acid	10.29	1.30	8.14	1.24	12.57	-165 (2)	184 (2)	70-130	43*	30
Perfluorotetradecanoic acid	N.D.	1.30	1.68	1.24	1.67	130	135*	70-130	0	30
Perfluorotridecanoic acid	N.D.	1.30	1.64	1.24	1.46	127	118	70-130	11	30
Perfluoroundecanoic acid	0.543	1.30	1.82	1.24	2.10	99	126	70-130	14	30
Batch number: 18314009	Sample number(s): 9881540 UNSPK: 9881540									
NEtFOSAA	N.D.	1.30	1.27			98		70-130		
NMeFOSAA	N.D.	1.30	1.09			85		70-130		

*- Outside of specification
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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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

MS/MSD (continued)

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
Perfluorobutanesulfonate	N.D.	1.15	1.13			99		70-130		
Perfluorodecanoic acid	N.D.	1.30	1.38			107		70-130		
Perfluorododecanoic acid	N.D.	1.30	1.18			91		70-130		
Perfluoroheptanoic acid	0.830	1.30	2.45			125		70-130		
Perfluorohexanesulfonate	3.42	1.23	5.34			157*		70-130		
Perfluorohexanoic acid	0.795	1.30	2.34			119		70-130		
Perfluorononanoic acid	N.D.	1.30	1.43			110		70-130		
Perfluoro-octanesulfonate	5.01	1.24	7.70			218 (2)		70-130		
Perfluorooctanoic acid	0.979	1.30	2.44			113		70-130		
Perfluorotetradecanoic acid	N.D.	1.30	1.36			105		70-130		
Perfluorotridecanoic acid	N.D.	1.30	1.46			113		70-130		
Perfluoroundecanoic acid	N.D.	1.30	1.13			87		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 18311820007A	Sample number(s): 9881536-9881541,9881544-9881545 BKG: 9881537			
Moisture	2.71	2.16	23* (1)	5
Moisture	2.71	2.16	23* (1)	5
Moisture Duplicate	2.71	2.16	23* (1)	5

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: 18311004

	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)
9881536	68	0.56	77	0.37	75	0.56	76	0.56	81	0.56	77	0.83
9881537	67	0.58	69	0.38	69	0.58	66	0.58	74	0.58	73	0.87
9881538	62	0.57	70	0.38	72	0.57	69	0.57	73	0.57	72	0.86
9881539	65	0.55	67	0.36	70	0.55	66	0.55	70	0.55	65	0.82

*- Outside of specification
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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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

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: 18311004

	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)
9881541	71	0.59	72	0.40	73	0.59	74	0.59	79	0.59	76	0.89
9881544	64	0.58	70	0.39	72	0.58	68	0.58	75	0.58	69	0.87
9881545	64	0.55	68	0.36	71	0.55	67	0.55	74	0.55	69	0.82
Blank	63	1.2	72	0.80	71	1.2	69	1.2	74	1.2	68	1.8
LCS	65	1.2	75	0.80	73	1.2	76	1.2	78	1.2	69	1.8
MS	62	0.57	70	0.38	72	0.57	69	0.57	73	0.57	72	0.86
MSD	65	0.55	67	0.36	70	0.55	66	0.55	70	0.55	65	0.82
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/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881536	74	0.37	79	0.56	65	0.83	79	0.56	65	0.83	81	0.56
9881537	72	0.38	73	0.58	61	0.87	71	0.58	57	0.87	68	0.58
9881538	78	0.38	73	0.57	61	0.86	78	0.57	64	0.86	67	0.57
9881539	65	0.36	71	0.55	67	0.82	75	0.55	59	0.82	68	0.55
9881541	74	0.40	75	0.59	58	0.89	77	0.59	65	0.89	73	0.59
9881544	70	0.39	60	0.58	59	0.87	61	0.58	55	0.87	59	0.58
9881545	72	0.36	71	0.55	55	0.82	73	0.55	54	0.82	69	0.55
Blank	68	0.80	72	1.2	72	1.8	77	1.2	66	1.8	69	1.2
LCS	73	0.80	71	1.2	75	1.8	68	1.2	65	1.8	70	1.2
MS	78	0.38	73	0.57	61	0.86	78	0.57	64	0.86	67	0.57
MSD	65	0.36	71	0.55	67	0.82	75	0.55	59	0.82	68	0.55
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9881536	72	0.56
9881537	65	0.58
9881538	62	0.57
9881539	64	0.55
9881541	68	0.59
9881544	55	0.58
9881545	65	0.55
Blank	62	1.2
LCS	62	1.2
MS	62	0.57

*- Outside of specification
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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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

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: 18311004

	13C2-PFTeDA %Rec	LOD (ng/g)
MSD	64	0.55
Limits:	50-150	

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

	13C3-PFBS %Rec	LOD (ng/l)	13C5-PFHxA %Rec	LOD (ng/l)	13C3-PFHxS %Rec	LOD (ng/l)	13C4-PFHpA %Rec	LOD (ng/l)	13C8-PFOA %Rec	LOD (ng/l)	13C8-PFOS %Rec	LOD (ng/l)
9881534	84	8.6	97	1.7	90	8.6	91	1.7	92	1.7	95	8.6
9881535	69	8.6	70	1.7	71	8.6	75	1.7	70	1.7	91	8.6
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 %Rec	LOD (ng/l)	13C6-PFDA %Rec	LOD (ng/l)	d3-NMeFOSAA %Rec	LOD (ng/l)	13C7-PFUnDA %Rec	LOD (ng/l)	d5-NEtFOSAA %Rec	LOD (ng/l)	13C2-PFDoDA %Rec	LOD (ng/l)
9881534	96	1.7	84	1.7	90	6.9	86	3.4	71	6.9	78	4.3
9881535	101	1.7	78	1.7	68	6.9	87	3.4	56	6.9	80	4.3
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	LOD (ng/l)
9881534	70	4.3
9881535	99	4.3
Blank	71	5.0
LCS	77	5.0
Limits:	50-150	

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18314009

*- 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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

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: 18314009

	13C3-PFBS %Rec	13C3-PFBS LOD (ng/g)	13C5-PFHxA %Rec	13C5-PFHxA LOD (ng/g)	13C3-PFHxS %Rec	13C3-PFHxS LOD (ng/g)	13C4-PFHpA %Rec	13C4-PFHpA LOD (ng/g)	13C8-PFOA %Rec	13C8-PFOA LOD (ng/g)	13C8-PFOS %Rec	13C8-PFOS LOD (ng/g)
9881540	100	0.56	102	0.37	98	0.56	98	0.56	104	0.56	110	0.84
Blank	92	1.2	100	0.80	95	1.2	96	1.2	98	1.2	98	1.8
LCS	97	1.2	108	0.80	104	1.2	106	1.2	108	1.2	97	1.8
LCSD	100	1.2	103	0.80	96	1.2	99	1.2	106	1.2	101	1.8
MS	93	0.57	106	0.38	102	0.57	102	0.57	111	0.57	95	0.86
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA %Rec	13C9-PFNA LOD (ng/g)	13C6-PFDA %Rec	13C6-PFDA LOD (ng/g)	d3-NMeFOSAA %Rec	d3-NMeFOSAA LOD (ng/g)	13C7-PFUnDA %Rec	13C7-PFUnDA LOD (ng/g)	d5-NEtFOSAA %Rec	d5-NEtFOSAA LOD (ng/g)	13C2-PFDoDA %Rec	13C2-PFDoDA LOD (ng/g)
9881540	101	0.37	95	0.56	55	0.84	99	0.56	63	0.84	90	0.56
Blank	101	0.80	93	1.2	103	1.8	96	1.2	83	1.8	90	1.2
LCS	104	0.80	97	1.2	100	1.8	96	1.2	87	1.8	93	1.2
LCSD	106	0.80	96	1.2	99	1.8	100	1.2	89	1.8	99	1.2
MS	98	0.38	98	0.57	55	0.86	109	0.57	59	0.86	94	0.57
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA %Rec	13C2-PFTeDA LOD (ng/g)
9881540	87	0.56
Blank	89	1.2
LCS	90	1.2
LCSD	91	1.2
MS	93	0.57
Limits:	50-150	

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18332003

	13C3-PFBS %Rec	13C3-PFBS LOD (ng/g)	13C5-PFHxA %Rec	13C5-PFHxA LOD (ng/g)	13C3-PFHxS %Rec	13C3-PFHxS LOD (ng/g)	13C4-PFHpA %Rec	13C4-PFHpA LOD (ng/g)	13C8-PFOA %Rec	13C8-PFOA LOD (ng/g)	13C8-PFOS %Rec	13C8-PFOS LOD (ng/g)
9881542	80	0.59	88	0.39	94	0.59	87	0.59	95	0.59	83	0.88
9881543	82	0.58	80	0.38	90	0.58	84	0.58	90	0.58	86	0.87
Blank	94	1.2	102	0.80	111	1.2	100	1.2	105	1.2	97	1.8
LCS	79	1.2	82	0.80	94	1.2	82	1.2	91	1.2	85	1.8

*- 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.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 12/06/2018 15:52

Group Number: 2005301

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: 18332003

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881542	74	0.39	87	0.59	83	0.88	84	0.59	81	0.88	80	0.59
9881543	79	0.38	94	0.58	104	0.87	89	0.58	93	0.87	90	0.58
Blank	91	0.80	103	1.2	131	1.8	104	1.2	104	1.8	103	1.2
LCS	74	0.80	85	1.2	106	1.8	88	1.2	94	1.8	84	1.2

	13C2-PFTeDA	
Limits:	50-150	
	%Rec	LOD (ng/g)
9881542	79	0.59
9881543	84	0.58
Blank	95	1.2
LCS	82	1.2
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 # 200530 Sample # 9881534-45

COC # 568577

Client Information

Client: GCE
Acct. #:
Project Name/#: Barstow Site Inspection 146-CH9-006
PWSID #:
Project Manager: Eric Rider
P.O. #:
Sampler: Hayden Azzaz
Quote #:
State where samples were collected: CA
For Compliance: Yes ☐ No ☒

Matrix

Soil ☒ Sediment ☐ Tissue ☐ Water Potable ☒ Ground ☐ NPDES ☐ Surface ☐ Other: No. of containers

Total # of Containers (HA)

Analysis Requested

Preservation and Filtration Codes

PFAS (EPA 537 Mod) LC/MS/MS (ISH 15.1)

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/Sediment	Water	Other	Total # of Containers	PFAS (EPA 537 Mod) LC/MS/MS (ISH 15.1)	Remarks
OU2-Bldg 371-W-01-01	10/31/18	9:15	X			W	2		✓	
OU1-Bldg 371-W-01-02	10/31/18	9:25	X			W	2		✓	
OU2-Bldg 371-S-01-01	10/31/18	9:34	X		S	~~S~~ (HA)	2		✓	
OU1-Bldg 371-S-01-03	10/31/18	10:25	X		S	~~S~~ (HA)	6		✓	MS/MSD
OU1-Bldg 371-S-01-05	10/31/18	10:40	X		S	~~S~~ (HA)	2		✓	
OU1-Bldg 371-S-01-08	10/31/18	10:58	X		S	~~S~~ (HA)	2		✓	
OU1-Bldg 371-S-01-10	10/31/18	11:00	X		S	~~S~~ (HA)	2		Archive	Archive
OU1-Bldg 371-S-01-12	10/31/18	11:02	X		S	~~S~~ (HA)	2		Archive	Archive
OU1-Bldg 371-S-02-01	10/31/18	11:40	X		S		2		✓	~~Archive~~ (HA)
OU1-Bldg 371-S-02-03	10/31/18	12:03	X		S		2		✓	

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: jmacneil@nejaw.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
	11/1/18	0740			
				11-1-18	
				1625	1018

EDD Required? (Yes) No
If yes, format: NEBO, 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 0.5-7.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231984

Group Number(s): 200530/

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:	Yes
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 17605-2425
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

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: BSI01

PFAS Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9881534	OU1-Bldg371-W-01-01	X		1	
9881535	OU1-Bldg371-W-01-02	X		1	
9881536	OU1-Bldg371-S-01-01		X	1	
9881537	OU1-Bldg371-S-01-03		X	1	Unspiked
9881538	OU1-Bldg371-S-01-03MS		X	1	Matrix Spike
9881539	OU1-Bldg371-S-01-03MSD		X	1	Matrix Spike Duplicate
9881540	OU1-Bldg371-S-01-05		X	1	
9881541	OU1-Bldg371-S-01-08		X	1	
9881542	OU1-Bldg371-S-01-10		X	1	
9881543	OU1-Bldg371-S-01-12		X	1	
9881544	OU1-Bldg371-S-02-01		X	1; 10	
9881545	OU1-Bldg371-S-02-03		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.

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI01

PFAS Group

Fraction: PFAS by LC/MS/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: 18311004 (Sample number(s): 9881536-9881539, 9881541, 9881544-9881545, UNSPK: 9881537)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: NMeFOSAA, Perfluoroheptanoic acid, Perfluorohexanoic acid, Perfluorononanoic acid, Perfluoro-octanesulfonate, Perfluorooctanoic acid

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: Perfluoroheptanoic acid, Perfluorohexanesulfonate, Perfluorohexanoic acid, Perfluorononanoic acid, Perfluoro-octanesulfonate, Perfluorooctanoic acid

The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:Perfluorodecanoic acid, Perfluoroheptanoic acid, Perfluorohexanoic acid, Perfluorononanoic acid, Perfluoro-octanesulfonate, Perfluorooctanoic acid, Perfluorotetradecanoic acid

Batch#: 18314009 (Sample number(s): 9881540, UNSPK: 9881540)
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluorohexanesulfonate, Perfluoro-octanesulfonate

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: BSI01

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFAS in Soil by LC/MS/MS-DoD	18311004	BLK311004B	11/09/2018 00:53
		LCS311004Q	11/09/2018 01:02
		9881536	11/09/2018 01:11
		9881537 UNSPK	11/09/2018 01:20
		9881538 MS	11/09/2018 01:29
		9881539 MSD	11/09/2018 01:38
		9881541	11/09/2018 01:56
		9881544	11/09/2018 02:05
		9881544	11/09/2018 19:32
		9881545	11/09/2018 02:14
PFAS in Soil by LC/MS/MS-DoD	18314009	BLK314009B	11/13/2018 01:47
		LCS314009Q	11/13/2018 01:56
		LCSDAY	11/13/2018 02:05
		9881540 UNSPK	11/13/2018 02:14
		9881540 MS	11/13/2018 04:47
PFAS in Soil by LC/MS/MS-DoD	18332003	BLK332003B	11/29/2018 18:04
		LCS332003Q	11/29/2018 18:13
		9881542	11/29/2018 18:22
		9881543	11/29/2018 18:31
PFAS in Water by LC/MS/MS-DoD	18314006	BLK314006B	11/12/2018 22:37
		LCS314006Q	11/12/2018 22:46
		9881534	11/12/2018 22:55
		9881535	11/12/2018 23:04

Quality Control Summary
Method Blank
PFAS Group
SDG: BSI01
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18311004 / BLK311004B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/09/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/09/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/09/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/09/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/09/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/09/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/09/18	N.D.	ng/g	0.50	2.0	3.0

18314009 / BLK314009B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/13/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/13/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/13/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/13/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0

18332003 / BLK332003B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/29/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/29/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/29/18	N.D.	ng/g	0.20	0.64	0.80

Quality Control Summary
Method Blank
PFAS Group
SDG: BSI01
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18332003 / BLK332003B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluoro-octanesulfonate	11/29/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0

Quality Control Summary
Method Blank
PFAS Group
SDG: BSI01
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

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: SOIL

18311004		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
BLK311004	11/09/18 00:53	69	62	63	71	69
LCS311004	11/09/18 01:02	70	62	65	73	76
9881536	11/09/18 01:11	81	72	68	75	76
9881537	11/09/18 01:20	68	65	67	69	66
9881538MS	11/09/18 01:29	67	62	62	72	69
9881539MSD	11/09/18 01:38	68	64	65	70	66
9881541	11/09/18 01:56	73	68	71	73	74
9881544	11/09/18 02:05	59	55	64	72	68
9881545	11/09/18 02:14	69	65	64	71	67
9881544DL	11/09/18 19:32	105	97	92	95	95

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: SOIL

18311004		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
BLK311004	11/09/18 00:53	72	72	77	74	68
LCS311004	11/09/18 01:02	75	71	68	78	69
9881536	11/09/18 01:11	77	79	79	81	77
9881537	11/09/18 01:20	69	73	71	74	73
9881538MS	11/09/18 01:29	70	73	78	73	72
9881539MSD	11/09/18 01:38	67	71	75	70	65
9881541	11/09/18 01:56	72	75	77	79	76
9881544	11/09/18 02:05	70	60	61	75	69
9881545	11/09/18 02:14	68	71	73	74	69
9881544DL	11/09/18 19:32	101	102	100	102	99

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: SOIL

18311004		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK311004	11/09/18 00:53	68	72	66
LCS311004	11/09/18 01:02	73	75	65
9881536	11/09/18 01:11	74	65	65
9881537	11/09/18 01:20	72	61	57
9881538MS	11/09/18 01:29	78	61	64
9881539MSD	11/09/18 01:38	65	67	59
9881541	11/09/18 01:56	74	58	65
9881544	11/09/18 02:05	70	59	55
9881545	11/09/18 02:14	72	55	54
9881544DL	11/09/18 19:32	98	107	105

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: WATER

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
9881534	11/12/18 22:55	78	70	84	90	91
9881535	11/12/18 23:04	80	99	69	71	75

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: WATER

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
9881534	11/12/18 22:55	97	84	86	92	95
9881535	11/12/18 23:04	70	78	87	70	91

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: WATER

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
9881534	11/12/18 22:55	96	90	71
9881535	11/12/18 23:04	101	68	56

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: WATER

18314009		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
BLK314009	11/13/18 01:47	90	89	92	95	96
LCS314009	11/13/18 01:56	93	90	97	104	106
LCSDA	11/13/18 02:05	99	91	100	96	99
9881540	11/13/18 02:14	90	87	100	98	98
9881540MS	11/13/18 04:47	94	93	93	102	102

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: WATER

18314009		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
BLK314009	11/13/18 01:47	100	93	96	98	98
LCS314009	11/13/18 01:56	108	97	96	108	97
LCSDA	11/13/18 02:05	103	96	100	106	101
9881540	11/13/18 02:14	102	95	99	104	110
9881540MS	11/13/18 04:47	106	98	109	111	95

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: WATER

18314009		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK314009	11/13/18 01:47	101	103	83
LCS314009	11/13/18 01:56	104	100	87
LCSDA	11/13/18 02:05	106	99	89
9881540	11/13/18 02:14	101	55	63
9881540MS	11/13/18 04:47	98	55	59

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: SOIL

18332003		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
BLK332003	11/29/18 18:04	103	95	94	111	100
LCS332003	11/29/18 18:13	84	82	79	94	82
9881542	11/29/18 18:22	80	79	80	94	87
9881543	11/29/18 18:31	90	84	82	90	84

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: SOIL

18332003		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
BLK332003	11/29/18 18:04	102	103	104	105	97
LCS332003	11/29/18 18:13	82	85	88	91	85
9881542	11/29/18 18:22	88	87	84	95	83
9881543	11/29/18 18:31	80	94	89	90	86

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI01
Matrix: SOIL

18332003		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK332003	11/29/18 18:04	91	131	104
LCS332003	11/29/18 18:13	74	106	94
9881542	11/29/18 18:22	74	83	81
9881543	11/29/18 18:31	79	104	93

* Outside QC Limits

PFAS Group
Fraction: PFAS by LC/MS/MS

UNSPK: 9881537 MS: 9881538 MSD: 9881539 **Analyte**	Batch: **18311004** (Sample number(s): 9881536-9881539, 9881541, 9881544-9881545)								
	Spike Added ng/g MS/MSD	**Unspiked Conc ng/g**	**MS Conc ng/g**	**MSD Conc ng/g**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.30 / 1.24	10.29	8.14	12.57	-165 (2)	184 (2)	70-130	43 *	30
Perfluorononanoic acid	1.30 / 1.24	5.87	4.60	8.12	-97 (2)	182 (2)	70-130	55 *	30
Perfluorodecanoic acid	1.30 / 1.24	1.54	2.59	3.44	81	154 *	70-130	28	30
Perfluoroundecanoic acid	1.30 / 1.24	0.543 J	1.82	2.10	99	126	70-130	14	30
Perfluorododecanoic acid	1.30 / 1.24	0.273 J	1.84	1.78	121	122	70-130	3	30
Perfluorotridecanoic acid	1.30 / 1.24	N.D.	1.64	1.46	127	118	70-130	11	30
Perfluorotetradecanoic acid	1.30 / 1.24	N.D.	1.68	1.67	130	135 *	70-130	0	30
Perfluorohexanoic acid	1.30 / 1.24	3.88	4.18	5.76	23 *	152 *	70-130	32 *	30
Perfluoroheptanoic acid	1.30 / 1.24	3.22	3.62	5.15	31 *	156 *	70-130	35 *	30
Perfluorobutanesulfonate	1.15 / 1.09	N.D.	1.42	1.33	124	122	70-130	6	30
Perfluorohexanesulfonate	1.23 / 1.17	3.54	3.47	4.68	-4 *	97	70-130	29	30
Perfluoro-octanesulfonate	1.24 / 1.18	10.14	7.91	13.27	-179 (2)	265 (2)	70-130	51 *	30
NEtFOSAA	1.30 / 1.24	N.D.	1.03 J	1.36 J	79	110	70-130	28	30
NMeFOSAA	1.30 / 1.24	N.D.	1.53 J	1.02 J	119	83	70-130	40 *	30

UNSPK: 9881540 MS: 9881540 **Analyte**	Batch: **18314009** (Sample number(s): 9881540)								
	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	1.30	0.979	2.44	NA	113	NA	70-130	NA	NA
Perfluorononanoic acid	1.30	N.D.	1.43	NA	110	NA	70-130	NA	NA
Perfluorodecanoic acid	1.30	N.D.	1.38	NA	107	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.30	N.D.	1.13	NA	87	NA	70-130	NA	NA
Perfluorododecanoic acid	1.30	N.D.	1.18	NA	91	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.30	N.D.	1.46	NA	113	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.30	N.D.	1.36	NA	105	NA	70-130	NA	NA
Perfluorohexanoic acid	1.30	0.795	2.34	NA	119	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.30	0.830	2.45	NA	125	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.15	N.D.	1.13	NA	99	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.23	3.42	5.34	NA	157 *	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.24	5.01	7.70	NA	218 (2)	NA	70-130	NA	NA
NEtFOSAA	1.30	N.D.	1.27 J	NA	98	NA	70-130	NA	NA
NMeFOSAA	1.30	N.D.	1.09 J	NA	85	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: BSI01
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS311004Q	Batch: **18311004** (Sample number(s): 9881536-9881539, 9881541, 9881544-9881545)							
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	1.60	NA	118	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.60	NA	118	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.61	NA	118	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.71	NA	126	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.57	NA	115	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.50	NA	110	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.62	NA	119	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.68	NA	123	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.69	NA	125	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.46	NA	122	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.61	NA	125	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.51	NA	116	NA	70-130	NA	NA
NEtFOSAA	1.36	1.40 J	NA	103	NA	70-130	NA	NA
NMeFOSAA	1.36	1.03 J	NA	76	NA	70-130	NA	NA

LCS: LCS314009Q LCSD: LCSDAY	Batch: **18314009** (Sample number(s): 9881540)							
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	1.42	1.36	104	100	70-130	4	30
Perfluorononanoic acid	1.36	1.36	1.38	100	102	70-130	2	30
Perfluorodecanoic acid	1.36	1.34	1.33	99	98	70-130	1	30
Perfluoroundecanoic acid	1.36	1.34	1.19	98	87	70-130	12	30
Perfluorododecanoic acid	1.36	1.25	1.30	92	96	70-130	4	30
Perfluorotridecanoic acid	1.36	1.35	1.34	99	98	70-130	1	30
Perfluorotetradecanoic acid	1.36	1.37	1.37	101	101	70-130	0	30
Perfluorohexanoic acid	1.36	1.33	1.32	98	97	70-130	1	30
Perfluoroheptanoic acid	1.36	1.41	1.36	104	100	70-130	3	30
Perfluorobutanesulfonate	1.20	1.14	1.12	95	93	70-130	2	30
Perfluorohexanesulfonate	1.29	1.23	1.16	96	90	70-130	6	30
Perfluoro-octanesulfonate	1.30	1.15	1.20	89	92	70-130	4	30
NEtFOSAA	1.36	1.26 J	1.30 J	93	96	70-130	3	30
NMeFOSAA	1.36	1.07 J	1.29 J	79	95	70-130	19	30

LCS: LCS332003Q	Batch: **18332003** (Sample number(s): 9881542-9881543)							
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	1.15	NA	85	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.31	NA	97	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.23	NA	90	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.35	NA	100	NA	70-130	NA	NA

PFAS Group

Fraction: PFAS by LC/MS/MS

LCS: LCS332003Q	Batch: **18332003** (Sample number(s): 9881542-9881543)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorododecanoic acid	1.36	1.25	NA	92	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.36	NA	100	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.26	NA	93	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.29	NA	95	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.28	NA	94	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.12	NA	93	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.06	NA	82	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	0.910	NA	70	NA	70-130	NA	NA
NEtFOSAA	1.36	1.24 J	NA	91	NA	70-130	NA	NA
NMeFOSAA	1.36	1.13 J	NA	83	NA	70-130	NA	NA

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

SDG: BSI01
Matrix: LIQUID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS314006Q	Batch: **18314006** (Sample number(s): 9881534-9881535)							
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

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.: BSI01

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
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LC/MS/MS

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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
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LC/MS/MS

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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

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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
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LC/MS/MS

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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
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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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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

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

SDG No.: BSI01

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= ;

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

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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

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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

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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

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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

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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

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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

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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

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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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Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
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CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.237	18.4	±30
CAL2	0.107	0.60	0.584	-2.7	±30
CAL3	0.406	2.00	2.225	11.2	±30
CAL4	1.463	8.00	8.021	0.3	±30
CAL5	3.811	20.00	20.892	4.5	±30
CAL6	8.910	50.00	48.841	-2.3	±30
CAL7	15.845	100.00	86.862	-13.1	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.20	0.225	12.5	±30
CAL2	0.103	0.60	0.505	-15.8	±30
CAL3	0.466	2.00	2.284	14.2	±30
CAL4	1.556	8.00	7.634	-4.6	±30
CAL5	4.107	20.00	20.152	0.8	±30
CAL6	9.020	50.00	44.258	-11.5	±30
CAL7	16.145	100.00	79.219	-20.8	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.18	0.194	9.4	±30
CAL2	0.098	0.53	0.475	-10.6	±30
CAL3	0.401	1.77	1.948	10.1	±30
CAL4	1.393	7.08	6.761	-4.5	±30
CAL5	3.638	17.70	17.661	-0.2	±30
CAL6	9.036	44.20	43.864	-0.8	±30
CAL7	18.326	88.40	88.956	0.6	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.075	0.19	0.200	6.8	±30
CAL2	0.202	0.56	0.540	-3.7	±30
CAL3	0.800	1.87	2.142	14.5	±30
CAL4	2.854	7.47	7.640	2.3	±30
CAL5	7.396	18.70	19.798	5.9	±30
CAL6	17.601	46.70	47.117	0.9	±30
CAL7	34.162	93.40	91.451	-2.1	±30

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CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.058	0.20	0.233	16.5	±30
CAL2	0.146	0.60	0.586	-2.4	±30
CAL3	0.551	2.00	2.211	10.5	±30
CAL4	2.004	8.00	8.042	0.5	±30
CAL5	4.915	20.00	19.728	-1.4	±30
CAL6	11.061	50.00	44.400	-11.2	±30
CAL7	20.035	100.00	80.421	-19.6	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.020	0.19	0.207	10.1	±30
CAL2	0.054	0.56	0.549	-2.4	±30
CAL3	0.213	1.88	2.157	14.7	±30
CAL4	0.735	7.50	7.436	-0.9	±30
CAL5	1.909	18.80	19.314	2.7	±30
CAL6	4.502	46.90	45.538	-2.9	±30
CAL7	9.335	93.80	94.429	0.7	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.078	0.20	0.240	19.9	±30
CAL2	0.184	0.60	0.567	-5.5	±30
CAL3	0.725	2.00	2.238	11.9	±30
CAL4	2.537	8.00	7.829	-2.1	±30
CAL5	6.457	20.00	19.926	-0.4	±30
CAL6	14.179	50.00	43.759	-12.5	±30
CAL7	23.161	100.00	71.480	-28.5	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.18	0.181	-0.6	±30
CAL2	0.093	0.55	0.435	-20.6	±30
CAL3	0.391	1.82	1.831	0.6	±30
CAL4	1.405	7.30	6.580	-9.9	±30
CAL5	3.854	18.20	18.044	-0.9	±30
CAL6	9.382	45.60	43.929	-3.7	±30
CAL7	20.044	91.20	93.850	2.9	±30

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CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.087	0.19	0.226	18.9	±30
CAL2	0.227	0.57	0.591	3.9	±30
CAL3	0.823	1.90	2.149	13.1	±30
CAL4	3.275	7.58	8.546	12.7	±30
CAL5	7.342	19.00	19.156	0.8	±30
CAL6	17.619	47.40	45.972	-3.0	±30
CAL7	33.528	94.80	87.481	-7.7	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.19	0.209	10.2	±30
CAL2	0.097	0.57	0.485	-15.1	±30
CAL3	0.396	1.90	1.976	4.0	±30
CAL4	1.490	7.61	7.439	-2.2	±30
CAL5	3.788	19.00	18.906	-0.5	±30
CAL6	9.599	47.60	47.909	0.6	±30
CAL7	19.064	95.20	95.147	-0.1	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.213	6.6	±30
CAL2	0.103	0.60	0.533	-11.1	±30
CAL3	0.425	2.00	2.197	9.8	±30
CAL4	1.618	8.00	8.361	4.5	±30
CAL5	3.950	20.00	20.411	2.1	±30
CAL6	9.499	50.00	49.084	-1.8	±30
CAL7	17.301	100.00	89.401	-10.6	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.19	0.172	-7.0	±30
CAL2	0.109	0.56	0.457	-17.6	±30
CAL3	0.450	1.85	1.888	2.1	±30
CAL4	1.627	7.40	6.826	-7.8	±30
CAL5	4.356	18.50	18.273	-1.2	±30
CAL6	10.840	46.30	45.472	-1.8	±30
CAL7	22.481	92.60	94.301	1.8	±30

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Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.060	0.20	0.229	14.7	±30
CAL2	0.156	0.60	0.599	-0.1	±30
CAL3	0.588	2.00	2.253	12.6	±30
CAL4	2.104	8.00	8.064	0.8	±30
CAL5	5.611	20.00	21.504	7.5	±30
CAL6	12.565	50.00	48.151	-3.7	±30
CAL7	23.016	100.00	88.201	-11.8	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.031	0.19	0.193	0.7	±30
CAL2	0.077	0.58	0.486	-15.7	±30
CAL3	0.295	1.92	1.864	-2.9	±30
CAL4	1.249	7.68	7.885	2.7	±30
CAL5	3.037	19.20	19.177	-0.1	±30
CAL6	7.581	48.00	47.867	-0.3	±30
CAL7	15.220	96.00	96.096	0.1	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.222	11.2	±30
CAL2	0.108	0.60	0.612	2.0	±30
CAL3	0.417	2.00	2.360	18.0	±30
CAL4	1.454	8.00	8.227	2.8	±30
CAL5	3.687	20.00	20.868	4.3	±30
CAL6	8.633	50.00	48.868	-2.3	±30
CAL7	17.604	100.00	99.643	-0.4	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.104	0.19	0.197	2.4	±30
CAL2	0.284	0.58	0.536	-6.9	±30
CAL3	1.067	1.92	2.011	4.8	±30
CAL4	3.846	7.66	7.253	-5.3	±30
CAL5	10.368	19.20	19.551	1.8	±30
CAL6	21.098	47.90	39.786	-16.9	±30
CAL7	39.430	95.80	74.355	-22.4	±30

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CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.212	5.9	±30
CAL2	0.111	0.60	0.562	-6.3	±30
CAL3	0.420	2.00	2.128	6.4	±30
CAL4	1.562	8.00	7.914	-1.1	±30
CAL5	4.013	20.00	20.329	1.6	±30
CAL6	9.802	50.00	49.655	-0.7	±30
CAL7	17.627	100.00	89.294	-10.7	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.030	0.20	0.193	-3.7	±30
CAL2	0.091	0.60	0.582	-3.0	±30
CAL3	0.348	2.00	2.220	11.0	±30
CAL4	1.243	8.00	7.928	-0.9	±30
CAL5	3.230	20.00	20.602	3.0	±30
CAL6	7.997	50.00	51.010	2.0	±30
CAL7	15.405	100.00	98.267	-1.7	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.171	-11.6	±30
CAL2	0.059	0.58	0.471	-18.5	±30
CAL3	0.260	1.93	2.060	6.8	±30
CAL4	0.956	7.70	7.582	-1.5	±30
CAL5	2.461	19.30	19.512	1.1	±30
CAL6	5.967	48.20	47.309	-1.8	±30
CAL7	12.246	96.30	97.096	0.8	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.062	0.20	0.222	10.9	±30
CAL2	0.157	0.60	0.563	-6.2	±30
CAL3	0.626	2.00	2.236	11.8	±30
CAL4	2.346	8.00	8.387	4.8	±30
CAL5	5.860	20.00	20.945	4.7	±30
CAL6	14.523	50.00	51.912	3.8	±30
CAL7	27.007	100.00	96.536	-3.5	±30

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NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.194	-3.2	±30
CAL2	0.115	0.60	0.560	-6.7	±30
CAL3	0.407	2.00	1.980	-1.0	±30
CAL4	1.473	8.00	7.175	-10.3	±30
CAL5	4.109	20.00	20.014	0.1	±30
CAL6	10.300	50.00	50.166	0.3	±30
CAL7	20.679	100.00	100.712	0.7	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.249	24.6	±30
CAL2	0.107	0.60	0.589	-1.9	±30
CAL3	0.446	2.00	2.442	22.1	±30
CAL4	1.434	8.00	7.854	-1.8	±30
CAL5	3.673	20.00	20.121	0.6	±30
CAL6	9.045	50.00	49.545	-0.9	±30
CAL7	16.657	100.00	91.243	-8.8	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.097	0.19	0.214	10.9	±30
CAL2	0.277	0.58	0.610	5.6	±30
CAL3	1.087	1.93	2.396	24.1	±30
CAL4	3.492	7.71	7.701	-0.1	±30
CAL5	10.411	19.30	22.957	18.9	±30
CAL6	21.857	48.20	48.197	0.0	±30
CAL7	41.828	96.40	92.235	-4.3	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.049	0.20	0.207	3.7	±30
CAL2	0.139	0.60	0.587	-2.2	±30
CAL3	0.532	2.00	2.239	12.0	±30
CAL4	1.893	8.00	7.968	-0.4	±30
CAL5	5.008	20.00	21.073	5.4	±30
CAL6	12.293	50.00	51.733	3.5	±30
CAL7	23.048	100.00	96.993	-3.0	±30

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CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.20	0.203	1.3	±30
CAL2	0.108	0.60	0.575	-4.1	±30
CAL3	0.411	2.00	2.179	9.0	±30
CAL4	1.485	8.00	7.873	-1.6	±30
CAL5	3.882	20.00	20.577	2.9	±30
CAL6	9.378	50.00	49.716	-0.6	±30
CAL7	18.802	100.00	99.677	-0.3	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.013	0.19	0.181	-6.8	±30
CAL2	0.037	0.58	0.531	-8.6	±30
CAL3	0.132	1.94	1.892	-2.5	±30
CAL4	0.539	7.74	7.744	0.0	±30
CAL5	1.303	19.40	18.718	-3.5	±30
CAL6	3.225	48.40	46.320	-4.3	±30
CAL7	6.940	96.80	99.670	3.0	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.068	0.20	0.245	22.4	±30
CAL2	0.166	0.60	0.596	-0.6	±30
CAL3	0.706	2.00	2.540	27.0	±30
CAL4	2.364	8.00	8.504	6.3	±30
CAL5	6.065	20.00	21.818	9.1	±30
CAL6	13.925	50.00	50.088	0.2	±30
CAL7	26.969	100.00	97.008	-3.0	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.048	0.20	0.217	8.3	±30
CAL2	0.118	0.60	0.530	-11.6	±30
CAL3	0.473	2.00	2.122	6.1	±30
CAL4	1.779	8.00	7.975	-0.3	±30
CAL5	4.417	20.00	19.796	-1.0	±30
CAL6	11.703	50.00	52.452	4.9	±30
CAL7	21.801	100.00	97.709	-2.3	±30

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Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.249	24.7	±30
CAL2	0.103	0.60	0.621	3.5	±30
CAL3	0.427	2.00	2.576	28.8	±30
CAL4	1.410	8.00	8.500	6.2	±30
CAL5	3.304	20.00	19.916	-0.4	±30
CAL6	8.119	50.00	48.938	-2.1	±30
CAL7	14.467	100.00	87.197	-12.8	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.221	10.5	±30
CAL2	0.103	0.60	0.583	-2.8	±30
CAL3	0.406	2.00	2.303	15.2	±30
CAL4	1.418	8.00	8.033	0.4	±30
CAL5	3.685	20.00	20.882	4.4	±30
CAL6	8.609	50.00	48.777	-2.4	±30
CAL7	15.696	100.00	88.936	-11.1	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.20	0.251	25.6	±30
CAL2	0.051	0.60	0.588	-1.9	±30
CAL3	0.206	2.00	2.359	17.9	±30
CAL4	0.728	8.00	8.321	4.0	±30
CAL5	1.973	20.00	22.560	12.8	±30
CAL6	4.311	50.00	49.281	-1.4	±30
CAL7	8.524	100.00	97.440	-2.6	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.016	0.20	0.219	9.6	±30
CAL2	0.042	0.60	0.565	-5.8	±30
CAL3	0.165	2.00	2.201	10.0	±30
CAL4	0.598	8.00	7.964	-0.4	±30
CAL5	1.619	20.00	21.571	7.9	±30
CAL6	3.728	50.00	49.663	-0.7	±30
CAL7	7.403	100.00	98.616	-1.4	±30

* Outside QC Limits

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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.: BSI01

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

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

SDG No.: BSI01

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

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

SDG No.: BSI01

Instrument ID: 27631

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Lab File Names: CAL1=18NOV28DCAL-06.WIFF; CAL2=18NOV28DCAL-07.WIFF; CAL3=18NOV28DCAL-08.WIFF;
CAL4=18NOV28DCAL-09.WIFF; CAL5=18NOV28DCAL-10.WIFF; CAL6=18NOV28DCAL-11.WIFF;
CAL7=18NOV28DCAL-12.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.080	0.888	1.015	0.915	0.953	0.891	---	7
Perfluoropentanoic acid	1.146	0.858	1.164	0.972	1.027	---	---	11
Perfluorobutanesulfonate	1.048	0.856	1.054	0.915	0.956	0.951	0.964	7
4:2 fluorotelomersulfonate	1.863	1.681	1.998	1.784	1.847	1.760	1.708	6
Perfluorohexanoic acid	1.451	1.216	1.377	1.252	1.229	---	---	7
Perfluoropentanesulfonate	0.506	0.448	0.528	0.456	0.472	0.446	0.463	6
Perfluoroheptanoic acid	1.943	1.531	1.813	1.585	1.614	---	---	9
Perfluorohexanesulfonate	1.004	0.803	1.016	0.911	1.002	0.973	1.040	8
6:2 fluorotelomersulfonate	2.165	1.891	2.059	2.052	1.835	1.766	---	7
Perfluoroheptanesulfonate	1.044	0.805	0.986	0.926	0.943	0.954	0.947	7
Perfluorooctanoic acid	1.031	0.860	1.063	1.011	0.988	0.950	---	7
Perfluoro-octanesulfonate	1.059	0.938	1.163	1.051	1.126	1.119	1.160	7
Perfluorononanoic acid	1.496	1.303	1.470	1.315	1.403	1.256	---	6
Perfluorononanesulfonate	0.763	0.638	0.735	0.777	0.756	0.755	0.758	6
Perfluorodecanoic acid	0.983	0.901	1.042	0.908	0.922	0.863	0.880	6
8:2 fluorotelomersulfonate	2.600	2.366	2.661	2.405	2.587	---	---	5
Perfluorooctanesulfonamide	1.045	0.925	1.050	0.976	1.003	0.980	---	4
NMeFOSAA	0.755	0.760	0.870	0.777	0.807	0.800	0.770	5
Perfluorodecanesulfonate	0.533	0.491	0.644	0.594	0.609	0.592	0.608	8
Perfluoroundecanoic acid	1.551	1.312	1.564	1.466	1.465	1.452	1.350	6
NEtFOSAA	0.994	0.958	1.016	0.921	1.027	1.030	1.034	4
Perfluorododecanoic acid	1.137	0.896	1.115	0.896	0.918	0.904	---	11
10:2-fluorotelomersulfonate	2.409	2.294	2.697	2.170	2.584	2.172	2.078	9
NMePFOSAE	1.232	1.162	1.330	1.183	1.252	1.229	1.152	5
NMePFOSA	0.955	0.904	1.028	0.928	0.970	0.938	0.940	4
Perfluorododecanesulfonate	0.310	0.304	0.325	0.333	0.321	0.319	0.343	4
NEtPFOSAE	1.702	1.382	1.766	1.478	1.516	1.392	1.348	10
NEtPFOSA	1.208	0.986	1.184	1.112	1.104	1.170	1.090	6
Perfluorotridecanoic acid	1.034	0.859	1.068	0.881	0.826	0.812	---	11
Perfluorotetradecanoic acid	0.975	0.858	1.016	0.886	0.921	0.861	---	6
Perfluorohexadecanoic acid	0.549	0.429	0.516	0.455	0.493	0.431	0.426	10
Perfluorooctadecanoic acid	0.411	0.354	0.413	0.374	0.405	0.373	0.370	6

--- Calibration point does not apply

* = % RSD > 20

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

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.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV08D-05.WIFF

Date/Time Analyzed: 11/08/2018 12:24 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	10.01	±30
Perfluoropentanoic acid	0.50	0.56	12.19	±30
Perfluorobutanesulfonate	0.44	0.44	0.21	±30
4:2 fluorotelomersulfonate	0.47	0.49	4.23	±30
Perfluorohexanoic acid	0.50	0.56	11.37	±30
Perfluoropentanesulfonate	0.47	0.50	6.68	±30
Perfluorohexanesulfonate	0.47	0.47	-0.75	±30
Perfluoroheptanoic acid	0.50	0.54	7.06	±30
6:2 fluorotelomersulfonate	0.47	0.55	16.56	±30
Perfluoroheptanesulfonate	0.48	0.48	1.26	±30
Perfluorooctanoic acid	0.50	0.52	3.35	±30
Perfluoro-octanesulfonate	0.48	0.51	6.67	±30
Perfluorononanoic acid	0.50	0.57	13.85	±30
Perfluorononanesulfonate	0.48	0.49	1.94	±30
Perfluorodecanoic acid	0.50	0.54	8.90	±30
8:2 fluorotelomersulfonate	0.48	0.49	1.38	±30
Perfluorooctanesulfonamide	0.50	0.53	6.66	±30
NMeFOSAA	0.50	0.56	11.14	±30
Perfluorodecanesulfonate	0.48	0.44	-8.46	±30
Perfluoroundecanoic acid	0.50	0.53	5.05	±30
NEtFOSAA	0.50	0.49	-2.83	±30
Perfluorododecanoic acid	0.50	0.57	13.47	±30
10:2-fluorotelomersulfonate	0.48	0.62	27.81	±30
NMePFOSAE	0.50	0.56	12.18	±30
NMePFOSA	0.50	0.60	20.48	±30
Perfluorododecanesulfonate	0.48	0.45	-6.81	±30
NEtPFOSAE	0.50	0.53	5.21	±30
NEtPFOSA	0.50	0.44	-11.15	±30
Perfluorotridecanoic acid	0.50	0.53	5.71	±30
Perfluorotetradecanoic acid	0.50	0.56	12.63	±30
Perfluorohexadecanoic acid	0.50	0.54	8.44	±30
Perfluorooctadecanoic acid	0.50	0.52	4.62	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV08D-86.WIFF

Date/Time Analyzed: 11/09/2018 00:35 Lab Sample ID: CCV8_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	2.15	7.37	±30
Perfluoropentanoic acid	2.00	2.04	1.83	±30
Perfluorobutanesulfonate	1.77	1.82	2.75	±30
4:2 fluorotelomersulfonate	1.87	1.76	-5.94	±30
Perfluorohexanoic acid	2.00	2.11	5.48	±30
Perfluoropentanesulfonate	1.88	1.94	3.42	±30
Perfluorohexanesulfonate	1.89	1.87	-1.01	±30
Perfluoroheptanoic acid	2.00	2.14	6.97	±30
6:2 fluorotelomersulfonate	1.90	2.23	17.83	±30
Perfluoroheptanesulfonate	1.90	1.88	-0.89	±30
Perfluorooctanoic acid	2.00	2.11	5.48	±30
Perfluoro-octanesulfonate	1.91	1.99	4.35	±30
Perfluorononanoic acid	2.00	2.11	5.44	±30
Perfluorononanesulfonate	1.92	1.92	0.02	±30
Perfluorodecanoic acid	2.00	1.86	-6.94	±30
8:2 fluorotelomersulfonate	1.92	1.76	-8.08	±30
Perfluorooctanesulfonamide	2.00	2.09	4.53	±30
NMeFOSAA	2.00	2.09	4.31	±30
Perfluorodecanesulfonate	1.93	1.94	0.51	±30
Perfluoroundecanoic acid	2.00	2.00	-0.07	±30
NEtFOSAA	2.00	1.81	-9.31	±30
Perfluorododecanoic acid	2.00	2.03	1.60	±30
10:2-fluorotelomersulfonate	1.93	1.70	-11.65	±30
NMePFOSAE	2.00	2.06	2.76	±30
NMePFOSA	2.00	2.19	9.72	±30
Perfluorododecanesulfonate	1.94	1.83	-5.88	±30
NEtPFOSAE	2.00	2.13	6.33	±30
NEtPFOSA	2.00	1.69	-15.31	±30
Perfluorotridecanoic acid	2.00	1.97	-1.69	±30
Perfluorotetradecanoic acid	2.00	2.19	9.29	±30
Perfluorohexadecanoic acid	2.00	2.05	2.60	±30
Perfluorooctadecanoic acid	2.00	2.17	8.33	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV08D-98.WIFF

Date/Time Analyzed: 11/09/2018 02:23 Lab Sample ID: CCV9_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	8.56	6.99	±30
Perfluoropentanoic acid	8.00	8.73	9.18	±30
Perfluorobutanesulfonate	7.08	7.57	6.96	±30
4:2 fluorotelomersulfonate	7.47	7.85	5.10	±30
Perfluorohexanoic acid	8.00	8.25	3.17	±30
Perfluoropentanesulfonate	7.50	7.69	2.56	±30
Perfluorohexanesulfonate	7.56	7.51	-0.62	±30
Perfluoroheptanoic acid	8.00	8.70	8.79	±30
6:2 fluorotelomersulfonate	7.58	9.21	21.41	±30
Perfluoroheptanesulfonate	7.61	7.57	-0.54	±30
Perfluorooctanoic acid	8.00	8.52	6.46	±30
Perfluoro-octanesulfonate	7.65	8.19	7.00	±30
Perfluorononanoic acid	8.00	8.20	2.55	±30
Perfluorononanesulfonate	7.68	8.25	7.38	±30
Perfluorodecanoic acid	8.00	8.27	3.40	±30
8:2 fluorotelomersulfonate	7.66	7.68	0.16	±30
Perfluorooctanesulfonamide	8.00	8.86	10.80	±30
NMeFOSAA	8.00	8.38	4.76	±30
Perfluorodecanesulfonate	7.70	7.76	0.75	±30
Perfluoroundecanoic acid	8.00	8.37	4.67	±30
NEtFOSAA	8.00	8.38	4.78	±30
Perfluorododecanoic acid	8.00	8.08	1.03	±30
10:2-fluorotelomersulfonate	7.71	7.66	-0.73	±30
NMePFOSAE	8.00	8.60	7.46	±30
NMePFOSA	8.00	9.06	13.29	±30
Perfluorododecanesulfonate	7.74	7.46	-3.63	±30
NEtPFOSAE	8.00	8.91	11.36	±30
NEtPFOSA	8.00	7.43	-7.07	±30
Perfluorotridecanoic acid	8.00	7.49	-6.43	±30
Perfluorotetradecanoic acid	8.00	8.72	9.02	±30
Perfluorohexadecanoic acid	8.00	8.83	10.35	±30
Perfluorooctadecanoic acid	8.00	8.80	10.00	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV09D-03.WIFF

Date/Time Analyzed: 11/09/2018 04:56 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	0.54	7.87	±30
Perfluoropentanoic acid	0.50	0.55	10.31	±30
Perfluorobutanesulfonate	0.44	0.45	2.98	±30
4:2 fluorotelomersulfonate	0.47	0.52	10.54	±30
Perfluorohexanoic acid	0.50	0.58	16.39	±30
Perfluoropentanesulfonate	0.47	0.47	-0.76	±30
Perfluorohexanesulfonate	0.47	0.47	-0.05	±30
Perfluoroheptanoic acid	0.50	0.54	8.64	±30
6:2 fluorotelomersulfonate	0.47	0.54	13.88	±30
Perfluoroheptanesulfonate	0.48	0.47	-1.08	±30
Perfluorooctanoic acid	0.50	0.55	9.34	±30
Perfluoro-octanesulfonate	0.48	0.55	14.79	±30
Perfluorononanoic acid	0.50	0.53	5.38	±30
Perfluorononanesulfonate	0.48	0.50	5.17	±30
Perfluorodecanoic acid	0.50	0.55	9.15	±30
8:2 fluorotelomersulfonate	0.48	0.47	-2.00	±30
Perfluorooctanesulfonamide	0.50	0.56	11.05	±30
NMeFOSAA	0.50	0.47	-6.24	±30
Perfluorodecanesulfonate	0.48	0.49	1.85	±30
Perfluoroundecanoic acid	0.50	0.53	6.13	±30
NEtFOSAA	0.50	0.54	7.04	±30
Perfluorododecanoic acid	0.50	0.50	-0.23	±30
10:2-fluorotelomersulfonate	0.48	0.45	-7.45	±30
NMePFOSAE	0.50	0.55	10.93	±30
NMePFOSA	0.50	0.56	11.94	±30
Perfluorododecanesulfonate	0.48	0.59	22.71	±30
NEtPFOSAE	0.50	0.56	12.33	±30
NEtPFOSA	0.50	0.41	-17.10	±30
Perfluorotridecanoic acid	0.50	0.49	-1.60	±30
Perfluorotetradecanoic acid	0.50	0.52	4.56	±30
Perfluorohexadecanoic acid	0.50	0.54	7.30	±30
Perfluorooctadecanoic acid	0.50	0.56	11.23	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV09D-93.WIFF

Date/Time Analyzed: 11/09/2018 18:28 Lab Sample ID: CCV9_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	8.71	8.84	±30
Perfluoropentanoic acid	8.00	8.51	6.38	±30
Perfluorobutanesulfonate	7.08	7.15	0.95	±30
4:2 fluorotelomersulfonate	7.47	7.24	-3.07	±30
Perfluorohexanoic acid	8.00	8.43	5.43	±30
Perfluoropentanesulfonate	7.50	7.46	-0.55	±30
Perfluorohexanesulfonate	7.56	7.43	-1.71	±30
Perfluoroheptanoic acid	8.00	8.29	3.66	±30
6:2 fluorotelomersulfonate	7.58	8.31	9.54	±30
Perfluoroheptanesulfonate	7.61	7.75	1.79	±30
Perfluorooctanoic acid	8.00	8.65	8.08	±30
Perfluoro-octanesulfonate	7.65	7.61	-0.47	±30
Perfluorononanoic acid	8.00	8.29	3.65	±30
Perfluorononanesulfonate	7.68	7.90	2.86	±30
Perfluorodecanoic acid	8.00	8.80	10.06	±30
8:2 fluorotelomersulfonate	7.66	8.14	6.23	±30
Perfluorooctanesulfonamide	8.00	8.47	5.92	±30
NMeFOSAA	8.00	7.77	-2.90	±30
Perfluorodecanesulfonate	7.70	8.21	6.67	±30
Perfluoroundecanoic acid	8.00	9.23	15.42	±30
NEtFOSAA	8.00	7.71	-3.57	±30
Perfluorododecanoic acid	8.00	7.84	-2.02	±30
10:2-fluorotelomersulfonate	7.71	8.32	7.90	±30
NMePFOSAE	8.00	8.91	11.33	±30
NMePFOSA	8.00	8.09	1.07	±30
Perfluorododecanesulfonate	7.74	7.30	-5.71	±30
NEtPFOSAE	8.00	8.86	10.75	±30
NEtPFOSA	8.00	8.08	1.02	±30
Perfluorotridecanoic acid	8.00	7.51	-6.15	±30
Perfluorotetradecanoic acid	8.00	8.67	8.39	±30
Perfluorohexadecanoic acid	8.00	8.80	10.06	±30
Perfluorooctadecanoic acid	8.00	9.04	12.97	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV09D-101.WIFF

Date/Time Analyzed: 11/09/2018 19:41 Lab Sample ID: CCV10_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	0.56	11.33	±30
Perfluoropentanoic acid	0.50	0.53	5.57	±30
Perfluorobutanesulfonate	0.44	0.43	-2.23	±30
4:2 fluorotelomersulfonate	0.47	0.50	6.59	±30
Perfluorohexanoic acid	0.50	0.55	10.48	±30
Perfluoropentanesulfonate	0.47	0.44	-5.66	±30
Perfluorohexanesulfonate	0.47	0.48	0.88	±30
Perfluoroheptanoic acid	0.50	0.58	15.97	±30
6:2 fluorotelomersulfonate	0.47	0.43	-9.93	±30
Perfluoroheptanesulfonate	0.48	0.50	5.50	±30
Perfluorooctanoic acid	0.50	0.53	5.93	±30
Perfluoro-octanesulfonate	0.48	0.52	8.45	±30
Perfluorononanoic acid	0.50	0.55	9.94	±30
Perfluorononanesulfonate	0.48	0.48	-0.91	±30
Perfluorodecanoic acid	0.50	0.54	7.01	±30
8:2 fluorotelomersulfonate	0.48	0.50	5.27	±30
Perfluorooctanesulfonamide	0.50	0.54	8.08	±30
NMeFOSAA	0.50	0.56	11.92	±30
Perfluorodecanesulfonate	0.48	0.59	22.65	±30
Perfluoroundecanoic acid	0.50	0.55	10.34	±30
NEtFOSAA	0.50	0.39	-21.99	±30
Perfluorododecanoic acid	0.50	0.54	8.06	±30
10:2-fluorotelomersulfonate	0.48	0.48	0.12	±30
NMePFOSAE	0.50	0.54	7.54	±30
NMePFOSA	0.50	0.61	21.04	±30
Perfluorododecanesulfonate	0.48	0.47	-2.55	±30
NEtPFOSAE	0.50	0.52	4.82	±30
NEtPFOSA	0.50	0.47	-6.55	±30
Perfluorotridecanoic acid	0.50	0.53	5.56	±30
Perfluorotetradecanoic acid	0.50	0.56	11.43	±30
Perfluorohexadecanoic acid	0.50	0.59	18.36	±30
Perfluorooctadecanoic acid	0.50	0.56	12.19	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

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

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

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.: BSI01

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

* Outside QC Limits.

FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

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.: BSI01

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.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV12D-70.WIFF

Date/Time Analyzed: 11/13/2018 03:08 Lab Sample ID: CCV7_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	-2.40	±30
Perfluoropentanoic acid	0.60	0.57	-5.27	±30
Perfluorobutanesulfonate	0.53	0.48	-9.96	±30
4:2 fluorotelomersulfonate	0.56	0.53	-4.59	±30
Perfluorohexanoic acid	0.60	0.57	-4.88	±30
Perfluoropentanesulfonate	0.56	0.48	-15.15	±30
Perfluoroheptanoic acid	0.60	0.57	-4.53	±30
Perfluorohexanesulfonate	0.55	0.47	-13.45	±30
6:2 fluorotelomersulfonate	0.57	0.60	5.55	±30
Perfluoroheptanesulfonate	0.57	0.49	-13.86	±30
Perfluorooctanoic acid	0.60	0.57	-4.43	±30
Perfluoro-octanesulfonate	0.56	0.48	-12.61	±30
Perfluorononanoic acid	0.60	0.59	-0.85	±30
Perfluorononanesulfonate	0.58	0.45	-22.51	±30
Perfluorodecanoic acid	0.60	0.57	-5.76	±30
8:2 fluorotelomersulfonate	0.58	0.56	-2.24	±30
Perfluorooctanesulfonamide	0.60	0.55	-8.75	±30
NMeFOSAA	0.60	0.63	4.51	±30
Perfluorodecanesulfonate	0.58	0.51	-11.11	±30
Perfluoroundecanoic acid	0.60	0.56	-5.92	±30
NEtFOSAA	0.60	0.44	-26.19	±30
Perfluorododecanoic acid	0.60	0.53	-11.69	±30
10:2-fluorotelomersulfonate	0.58	0.57	-1.47	±30
NMePFOSAE	0.60	0.61	1.05	±30
NMePFOSA	0.60	0.54	-10.45	±30
Perfluorododecanesulfonate	0.58	0.53	-9.07	±30
NEtPFOSAE	0.60	0.56	-6.81	±30
NEtPFOSA	0.60	0.68	12.57	±30
Perfluorotridecanoic acid	0.60	0.59	-2.20	±30
Perfluorotetradecanoic acid	0.60	0.52	-12.87	±30
Perfluorohexadecanoic acid	0.60	0.57	-5.14	±30
Perfluorooctadecanoic acid	0.60	0.53	-11.84	±30

FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV12D-82.WIFF

Date/Time Analyzed: 11/13/2018 04:56 Lab Sample ID: CCV8_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	2.26	12.89	±30
Perfluoropentanoic acid	2.00	2.36	17.93	±30
Perfluorobutanesulfonate	1.77	1.94	9.66	±30
4:2 fluorotelomersulfonate	1.87	2.19	17.16	±30
Perfluorohexanoic acid	2.00	2.24	11.93	±30
Perfluoropentanesulfonate	1.88	1.97	5.05	±30
Perfluoroheptanoic acid	2.00	2.44	22.15	±30
Perfluorohexanesulfonate	1.82	1.87	2.59	±30
6:2 fluorotelomersulfonate	1.90	1.97	3.53	±30
Perfluoroheptanesulfonate	1.90	2.09	9.77	±30
Perfluorooctanoic acid	2.00	2.35	17.63	±30
Perfluoro-octanesulfonate	1.85	1.97	6.72	±30
Perfluorononanoic acid	2.00	2.31	15.67	±30
Perfluorononanesulfonate	1.92	1.90	-0.97	±30
Perfluorodecanoic acid	2.00	2.23	11.57	±30
8:2 fluorotelomersulfonate	1.92	2.24	16.80	±30
Perfluorooctanesulfonamide	2.00	2.09	4.71	±30
NMeFOSAA	2.00	2.15	7.43	±30
Perfluorodecanesulfonate	1.93	1.94	0.50	±30
Perfluoroundecanoic acid	2.00	2.17	8.27	±30
NEtFOSAA	2.00	2.07	3.69	±30
Perfluorododecanoic acid	2.00	2.37	18.41	±30
10:2-fluorotelomersulfonate	1.93	2.27	17.65	±30
NMePFOSAE	2.00	2.33	16.72	±30
NMePFOSA	2.00	2.19	9.72	±30
Perfluorododecanesulfonate	1.94	2.05	5.72	±30
NEtPFOSAE	2.00	2.32	16.11	±30
NEtPFOSA	2.00	2.11	5.68	±30
Perfluorotridecanoic acid	2.00	2.24	11.77	±30
Perfluorotetradecanoic acid	2.00	2.18	8.87	±30
Perfluorohexadecanoic acid	2.00	2.26	13.18	±30
Perfluorooctadecanoic acid	2.00	2.06	3.19	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV28DCAL-16.WIFF

Date/Time Analyzed: 11/28/2018 15:12 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.29	14.50	±30
Perfluoropentanoic acid	2.00	2.15	7.30	±30
Perfluorobutanesulfonate	1.77	1.90	7.57	±30
4:2 fluorotelomersulfonate	1.87	2.10	12.26	±30
Perfluorohexanoic acid	2.00	2.32	16.20	±30
Perfluoropentanesulfonate	1.88	2.10	11.73	±30
Perfluoroheptanoic acid	2.00	2.13	6.53	±30
Perfluorohexanesulfonate	1.82	1.84	1.19	±30
6:2 fluorotelomersulfonate	1.90	2.35	23.67	±30
Perfluoroheptanesulfonate	1.90	2.07	8.75	±30
Perfluorooctanoic acid	2.00	2.15	7.45	±30
Perfluoro-octanesulfonate	1.85	1.89	2.39	±30
Perfluorononanoic acid	2.00	2.37	18.31	±30
Perfluorononanesulfonate	1.92	1.96	2.24	±30
Perfluorodecanoic acid	2.00	2.38	18.95	±30
8:2 fluorotelomersulfonate	1.92	1.87	-2.39	±30
Perfluorooctanesulfonamide	2.00	2.10	4.85	±30
NMeFOSAA	2.00	2.08	3.82	±30
Perfluorodecanesulfonate	1.93	2.07	7.49	±30
Perfluoroundecanoic acid	2.00	2.39	19.73	±30
NEtFOSAA	2.00	1.90	-5.08	±30
Perfluorododecanoic acid	2.00	2.49	24.44	±30
10:2-fluorotelomersulfonate	1.93	2.22	14.77	±30
NMePFOSAE	2.00	2.10	5.15	±30
NMePFOSA	2.00	2.11	5.69	±30
Perfluorododecanesulfonate	1.94	1.96	1.21	±30
NEtPFOSAE	2.00	2.30	14.93	±30
NEtPFOSA	2.00	2.22	10.99	±30
Perfluorotridecanoic acid	2.00	2.59	29.28	±30
Perfluorotetradecanoic acid	2.00	2.29	14.59	±30
Perfluorohexadecanoic acid	2.00	2.22	11.22	±30
Perfluorooctadecanoic acid	2.00	2.22	11.09	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV29D-05.WIFF

Date/Time Analyzed: 11/29/2018 10:33 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.59	-1.98	±30
Perfluoropentanoic acid	0.60	0.52	-14.14	±30
Perfluorobutanesulfonate	0.53	0.47	-10.86	±30
4:2 fluorotelomersulfonate	0.56	0.49	-13.37	±30
Perfluorohexanoic acid	0.60	0.58	-2.77	±30
Perfluoropentanesulfonate	0.56	0.57	0.99	±30
Perfluoroheptanoic acid	0.60	0.56	-6.28	±30
Perfluorohexanesulfonate	0.55	0.48	-12.13	±30
6:2 fluorotelomersulfonate	0.57	0.64	12.30	±30
Perfluoroheptanesulfonate	0.57	0.49	-14.63	±30
Perfluorooctanoic acid	0.60	0.53	-11.76	±30
Perfluoro-octanesulfonate	0.56	0.51	-8.84	±30
Perfluorononanoic acid	0.60	0.55	-7.57	±30
Perfluorononanesulfonate	0.58	0.45	-21.13	±30
Perfluorodecanoic acid	0.60	0.58	-4.04	±30
8:2 fluorotelomersulfonate	0.58	0.51	-11.58	±30
Perfluorooctanesulfonamide	0.60	0.53	-10.95	±30
NMeFOSAA	0.60	0.54	-9.99	±30
Perfluorodecanesulfonate	0.58	0.56	-3.35	±30
Perfluoroundecanoic acid	0.60	0.58	-3.79	±30
NEtFOSAA	0.60	0.52	-12.77	±30
Perfluorododecanoic acid	0.60	0.60	0.40	±30
10:2-fluorotelomersulfonate	0.58	0.59	1.43	±30
NMePFOSAE	0.60	0.59	-1.65	±30
NMePFOSA	0.60	0.52	-14.03	±30
Perfluorododecanesulfonate	0.58	0.49	-15.15	±30
NEtPFOSAE	0.60	0.58	-3.30	±30
NEtPFOSA	0.60	0.50	-17.33	±30
Perfluorotridecanoic acid	0.60	0.66	9.17	±30
Perfluorotetradecanoic acid	0.60	0.60	0.18	±30
Perfluorohexadecanoic acid	0.60	0.61	2.42	±30
Perfluorooctadecanoic acid	0.60	0.56	-5.99	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV29D-52.WIFF

Date/Time Analyzed: 11/29/2018 17:37 Lab Sample ID: CCV5_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.24	12.08	±30
Perfluoropentanoic acid	2.00	2.10	5.00	±30
Perfluorobutanesulfonate	1.77	1.97	11.32	±30
4:2 fluorotelomersulfonate	1.87	2.13	14.12	±30
Perfluorohexanoic acid	2.00	2.37	18.38	±30
Perfluoropentanesulfonate	1.88	2.13	13.27	±30
Perfluoroheptanoic acid	2.00	2.24	11.85	±30
Perfluorohexanesulfonate	1.82	1.82	-0.10	±30
6:2 fluorotelomersulfonate	1.90	2.31	21.74	±30
Perfluoroheptanesulfonate	1.90	1.97	3.62	±30
Perfluorooctanoic acid	2.00	2.19	9.74	±30
Perfluoro-octanesulfonate	1.85	1.73	-6.32	±30
Perfluorononanoic acid	2.00	2.29	14.58	±30
Perfluorononanesulfonate	1.92	1.84	-3.91	±30
Perfluorodecanoic acid	2.00	2.26	13.23	±30
8:2 fluorotelomersulfonate	1.92	1.83	-4.47	±30
Perfluorooctanesulfonamide	2.00	2.11	5.65	±30
NMeFOSAA	2.00	2.25	12.29	±30
Perfluorodecanesulfonate	1.93	1.88	-2.44	±30
Perfluoroundecanoic acid	2.00	2.24	12.04	±30
NEtFOSAA	2.00	2.27	13.26	±30
Perfluorododecanoic acid	2.00	2.24	11.88	±30
10:2-fluorotelomersulfonate	1.93	2.14	10.97	±30
NMePFOSAE	2.00	2.24	11.91	±30
NMePFOSA	2.00	2.27	13.75	±30
Perfluorododecanesulfonate	1.94	1.84	-5.06	±30
NEtPFOSAE	2.00	2.43	21.53	±30
NEtPFOSA	2.00	2.13	6.63	±30
Perfluorotridecanoic acid	2.00	2.51	25.70	±30
Perfluorotetradecanoic acid	2.00	2.29	14.50	±30
Perfluorohexadecanoic acid	2.00	2.31	15.50	±30
Perfluorooctadecanoic acid	2.00	2.20	10.10	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI01

Instrument ID: 27631 Lab File ID: 18NOV29D-64.WIFF

Date/Time Analyzed: 11/29/2018 19:25 Lab Sample ID: CCV6_CAL4

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.16	2.03	±30
Perfluoropentanoic acid	8.00	7.11	-11.08	±30
Perfluorobutanesulfonate	7.08	7.07	-0.12	±30
4:2 fluorotelomersulfonate	7.47	7.32	-2.02	±30
Perfluorohexanoic acid	8.00	8.16	1.96	±30
Perfluoropentanesulfonate	7.50	7.77	3.53	±30
Perfluoroheptanoic acid	8.00	7.80	-2.52	±30
Perfluorohexanesulfonate	7.30	6.78	-7.11	±30
6:2 fluorotelomersulfonate	7.58	8.06	6.29	±30
Perfluoroheptanesulfonate	7.61	7.48	-1.72	±30
Perfluorooctanoic acid	8.00	8.14	1.75	±30
Perfluoro-octanesulfonate	7.40	6.68	-9.71	±30
Perfluorononanoic acid	8.00	7.92	-0.97	±30
Perfluorononanesulfonate	7.68	7.11	-7.42	±30
Perfluorodecanoic acid	8.00	8.89	11.08	±30
8:2 fluorotelomersulfonate	7.66	7.36	-3.88	±30
Perfluorooctanesulfonamide	8.00	7.93	-0.83	±30
NMeFOSAA	8.00	7.77	-2.92	±30
Perfluorodecanesulfonate	7.70	7.14	-7.33	±30
Perfluoroundecanoic acid	8.00	8.04	0.51	±30
NEtFOSAA	8.00	7.69	-3.84	±30
Perfluorododecanoic acid	8.00	8.51	6.41	±30
10:2-fluorotelomersulfonate	7.71	8.18	6.04	±30
NMePFOSAE	8.00	8.01	0.07	±30
NMePFOSA	8.00	8.07	0.88	±30
Perfluorododecanesulfonate	7.74	7.30	-5.64	±30
NEtPFOSAE	8.00	8.53	6.66	±30
NEtPFOSA	8.00	7.51	-6.10	±30
Perfluorotridecanoic acid	8.00	9.20	14.98	±30
Perfluorotetradecanoic acid	8.00	8.37	4.65	±30
Perfluorohexadecanoic acid	8.00	8.82	10.29	±30
Perfluorooctadecanoic acid	8.00	8.26	3.28	±30

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI01
Matrix: SOIL

Batch: 18311004 File Name:18NOV08D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		315408	491983	728840	255568
LOWER LIMIT		157704	245992	364420	127784
UPPER LIMIT		473112	737975	1093260	383352
LAB SAMPLE ID	**DATE ANALYZED**				
BLK311004	11/09/18 00:53	385800	611088	896331	350046
LCS311004	11/09/18 01:02	396694	606974	889938	335742
9881536	11/09/18 01:11	368261	609519	881544	336148
9881537	11/09/18 01:20	377444	623018	873491	317807
9881538MS	11/09/18 01:29	363749	593245	858194	317794
9881539MSD	11/09/18 01:38	372593	626239	877097	341060
9881541	11/09/18 01:56	367445	604212	851610	314811
9881544	11/09/18 02:05	429467	596325	841118	307731
9881545	11/09/18 02:14	379160	627390	901113	339358

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.: BSI01
Matrix: SOIL

Batch: 18311004 File Name:18NOV09D-03.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		307277	506877	725975	274910
LOWER LIMIT		153639	253439	362988	137455
UPPER LIMIT		460916	760316	1088963	412365
LAB SAMPLE ID	**DATE ANALYZED**				
9881544DL	11/09/18 19:32	300616	512946	731667	264069

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.: BSI01
Matrix: WATER

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
9881534	11/12/18 22:55	323105	480907	714896	258787
9881535	11/12/18 23:04	359510	623019	848496	261776

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.: BSI01
Matrix: WATER

Batch: 18314009 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**				
BLK314009	11/13/18 01:47	315320	496771	699270	262662
LCS314009	11/13/18 01:56	322354	471810	690128	270962
LCSDA	11/13/18 02:05	322064	503976	701271	264539
9881540	11/13/18 02:14	324880	498279	678233	258653
9881540MS	11/13/18 04:47	294063	463357	692297	263532

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.: BSI01
Matrix: SOIL

Batch: 18332003 File Name:18NOV29D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		451203	495984	906425	296262
LOWER LIMIT		225602	247992	453213	148131
UPPER LIMIT		676805	743976	1359638	444393
LAB SAMPLE ID	**DATE ANALYZED**				
BLK332003	11/29/18 18:04	538786	583595	1052099	370221
LCS332003	11/29/18 18:13	557510	600874	1066377	371549
9881542	11/29/18 18:22	586790	580539	1057894	369268
9881543	11/29/18 18:31	538956	600445	1078296	354136

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

Sample Name:	9881534			**Data File:**		18NOV12D-42.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314006 OU1-Bldg371-W-01-01 Grab Potable Water			**Acquis Date:**		2018-11-12T22:55:42
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	71			**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.:	0.29139			**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	714895.6	659926.2	8	50	
13C2-PFOA	5.0	480907.1	450219.7	7	50	
13C4-PFOS	4.8	258786.8	249205.8	4	50	
13C2-PFDA	5.0	323105.3	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
E13C3-PFBS	397675.3	13C3-PFBA	714895.6	0.556	15.958	13.476	84	50-150	
E13C5-PFHxA	646385.5	13C2-PFOA	480907.1	1.344	17.159	16.663	97	50-150	
E13C3-PFHxS	296799.6	13C2-PFOA	480907.1	0.617	16.233	14.533	90	50-150	
E13C4-PFHpA	485483.2	13C2-PFOA	480907.1	1.010	17.159	15.608	91	50-150	
E13C8-PFOA	805294.8	13C2-PFOA	480907.1	1.675	17.159	15.833	92	50-150	
E13C8-PFOS	264265.2	13C4-PFOS	258786.8	1.021	16.404	15.528	95	50-150	
E13C9-PFNA	446469.8	13C4-PFOS	258786.8	1.725	17.159	16.508	96	50-150	
E13C6-PFDA	583864.7	13C2-PFDA	323105.3	1.807	17.159	14.472	84	50-150	
Ed3-NMeFOSAA	80233.5	13C2-PFDA	323105.3	0.248	17.159	15.383	90	50-150	
E13C7-PFUnDA	238662.3	13C2-PFDA	323105.3	0.739	17.159	14.718	86	50-150	
Ed5-NEtFOSAA	54489.3	13C2-PFDA	323105.3	0.169	17.159	12.244	71	50-150	
E13C2-PFDoDA	485519.1	13C2-PFDA	323105.3	1.503	17.159	13.389	78	50-150	
E13C2-PFTeDA	324120.7	13C2-PFDA	323105.3	1.003	17.159	12.086	70	50-150	

APPROVED
By MCD at 8:20 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

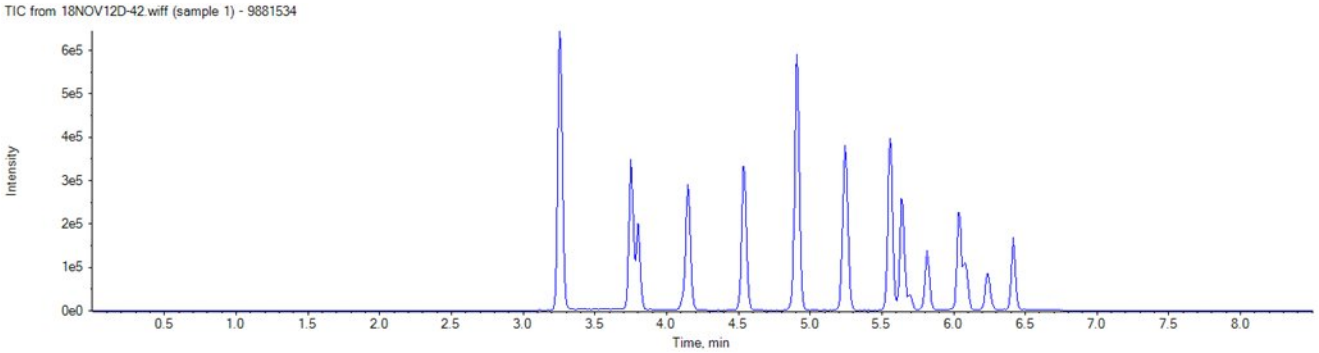
Analyte Quantitation Peak Table

Sample Name: 9881534 **Instrument Name:** LM27631 **File Name:** 18NOV12D-42.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.29139	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	397675.3	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	646385.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	485483.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	296799.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	805294.8	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	264265.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	446469.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	583864.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	80233.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	238662.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	54489.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	485519.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	485519.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	324120.7	N/A	

Total Ion Chromatogram

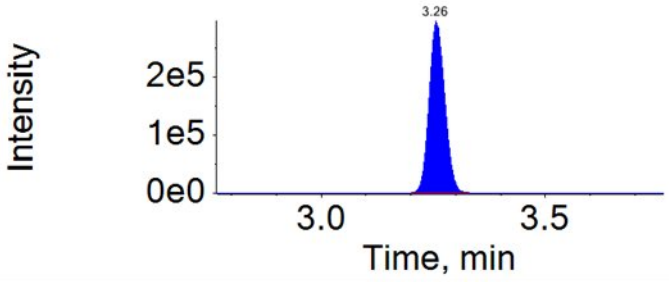


APPROVED
By MCD at 8:20 pm, 11/13/18

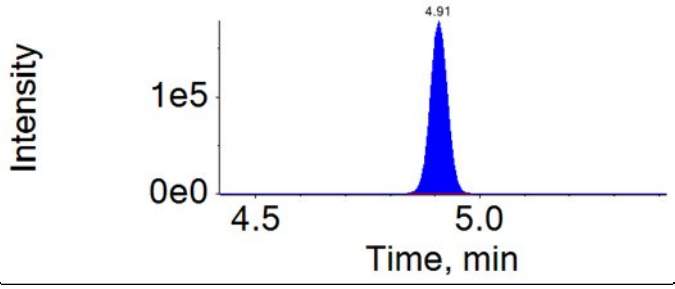
REVIEWED
By umar at 2:22 pm, 11/15/18

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

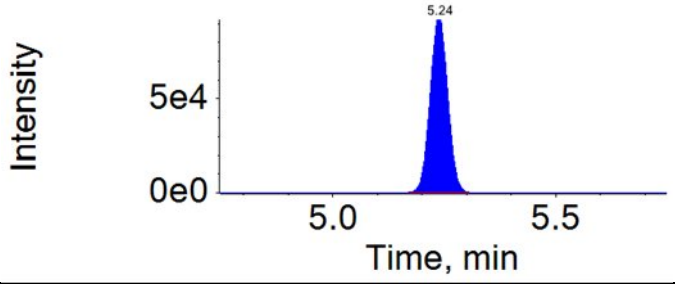
Injection Standard: 13C3-PFBA
216.0 / 172.0



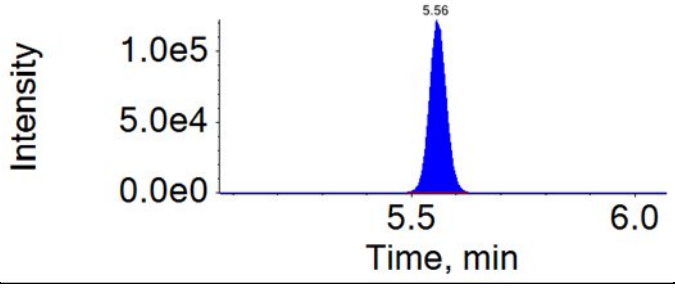
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



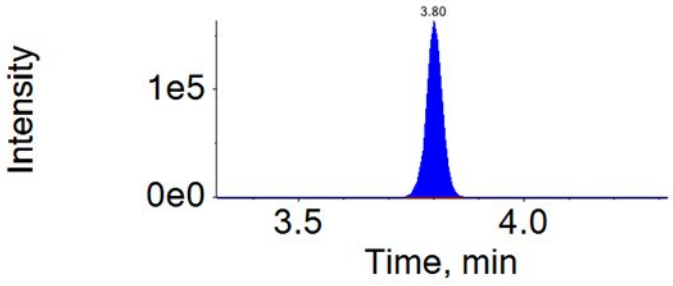
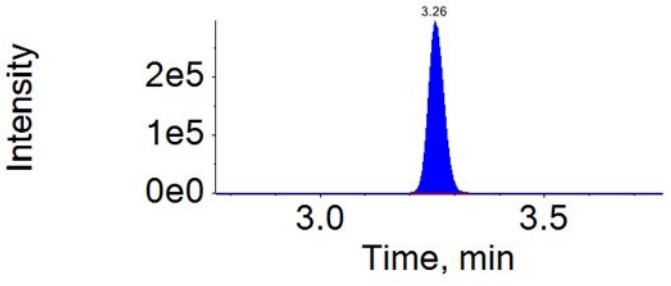
Injection Standard: 13C2-PFDA
515.0 / 470.0

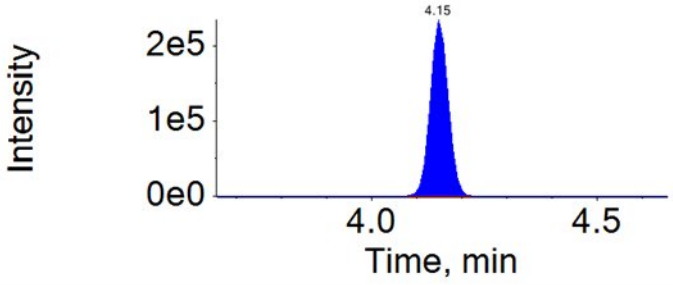
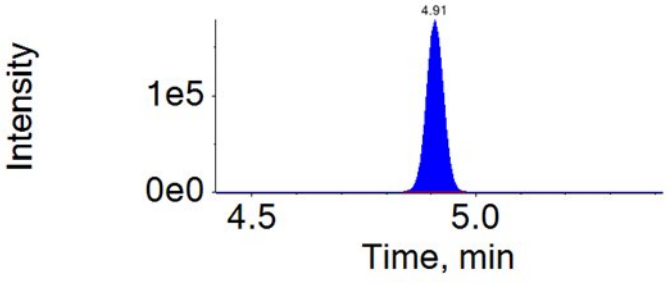


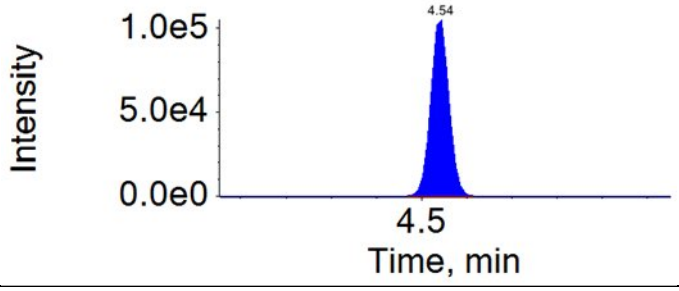
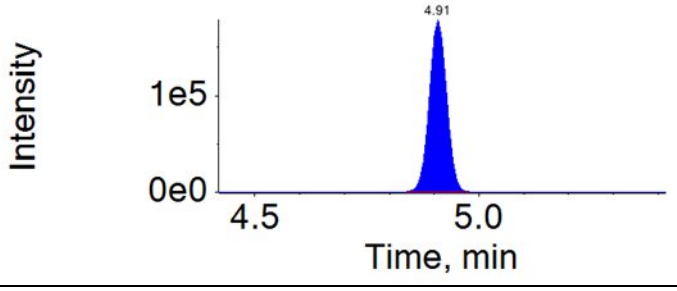
APPROVED
By MCD at 8:20 pm, 11/13/18

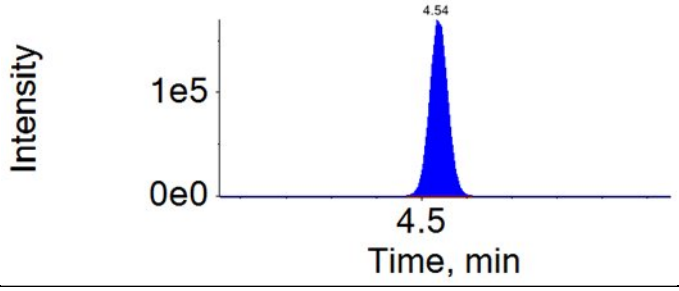
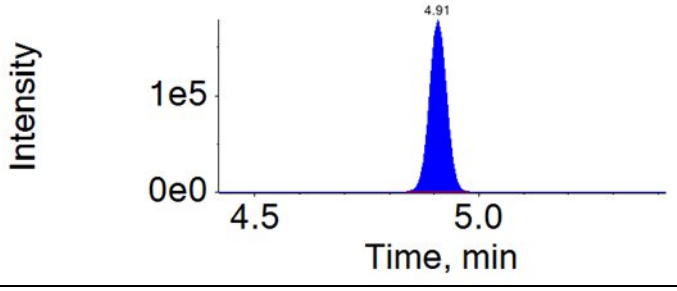
REVIEWED
By umar at 2:22 pm, 11/15/18

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
	

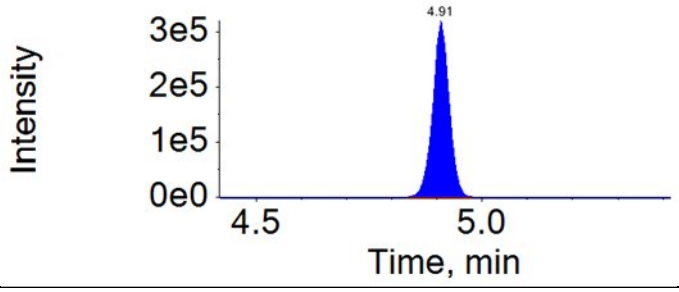
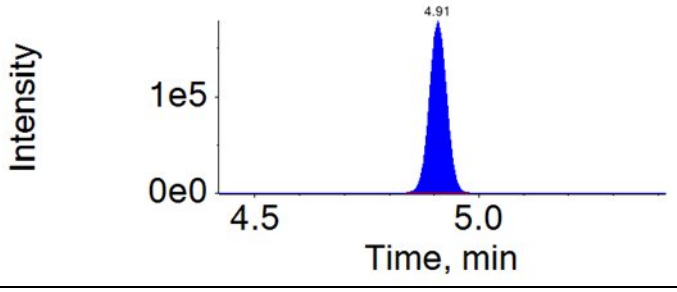
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

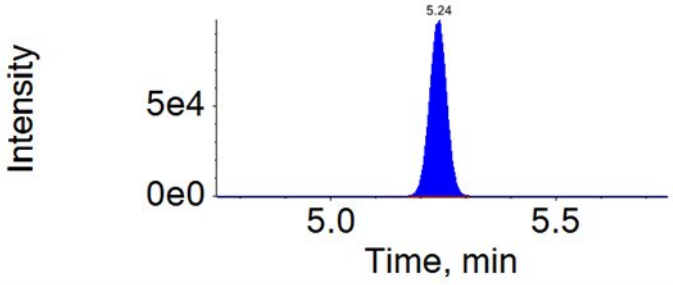
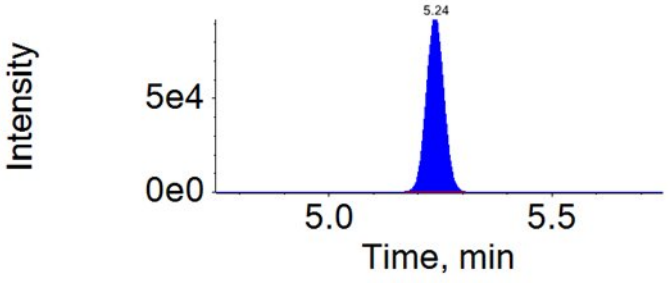
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

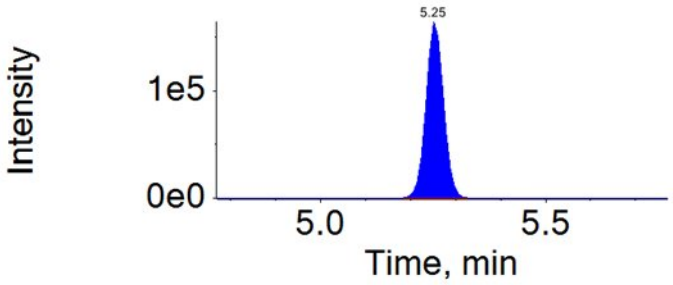
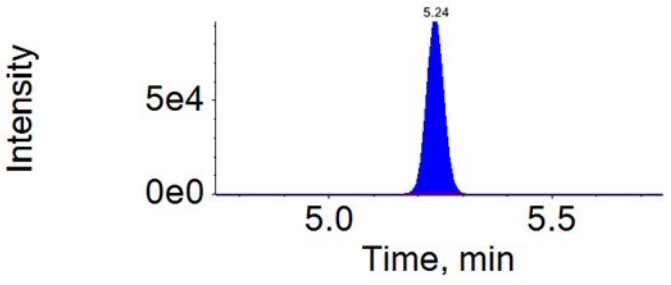
APPROVED
By MCD at 8:20 pm, 11/13/18

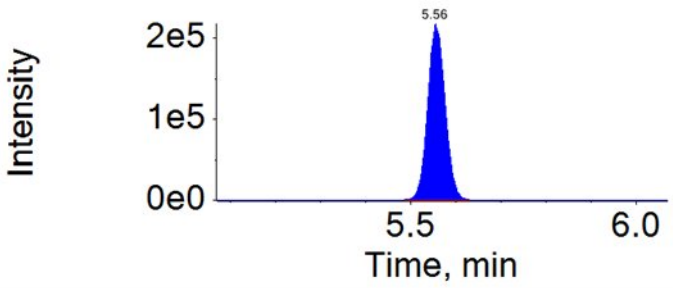
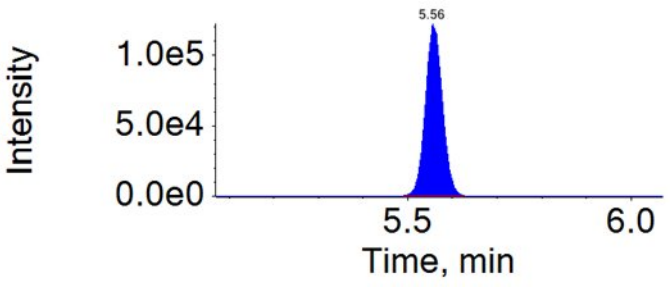
REVIEWED
By umar at 2:22 pm, 11/15/18

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
	

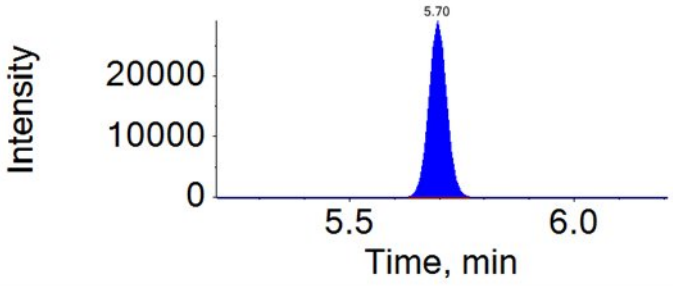
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

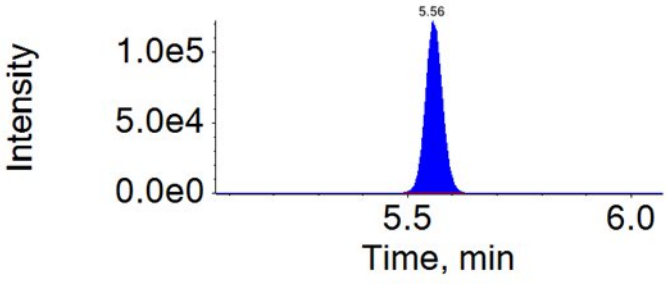
APPROVED
By MCD at 8:20 pm, 11/13/18

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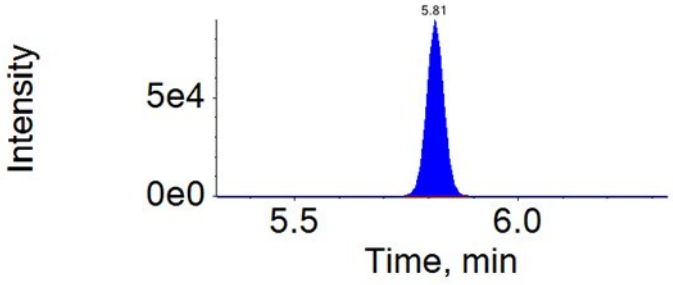
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

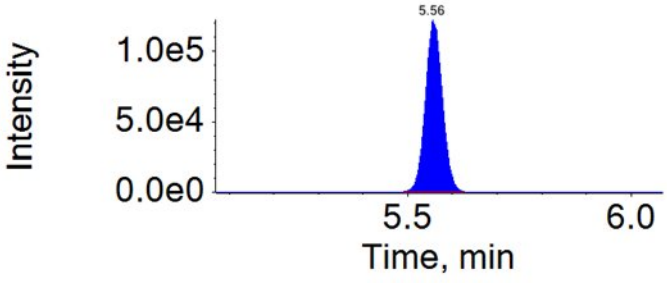
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



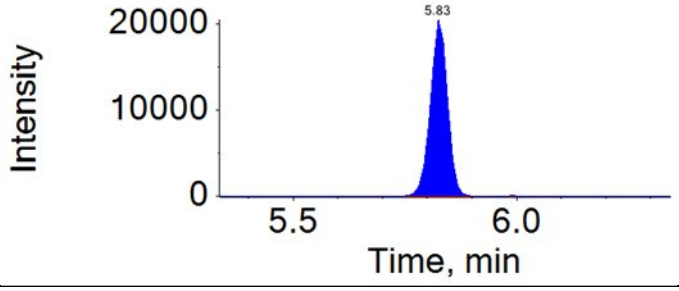


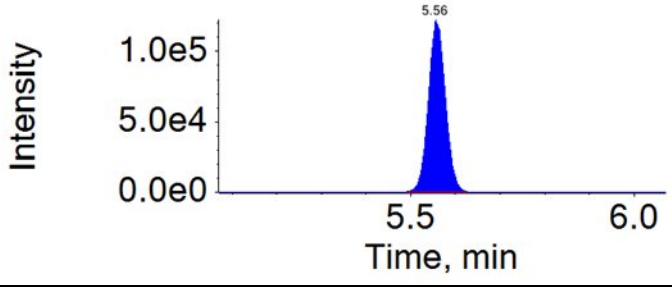
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



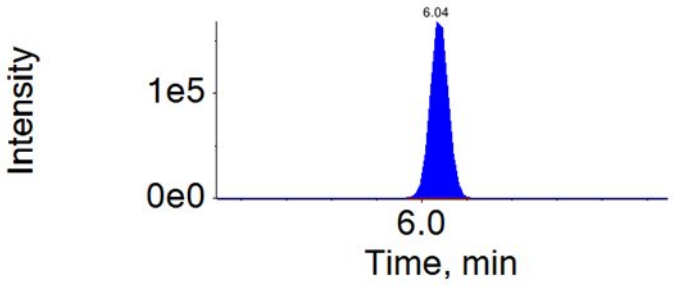


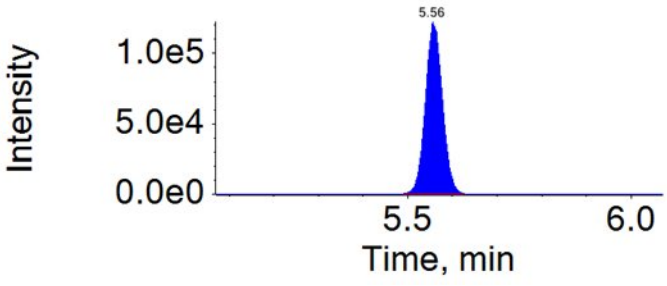
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





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



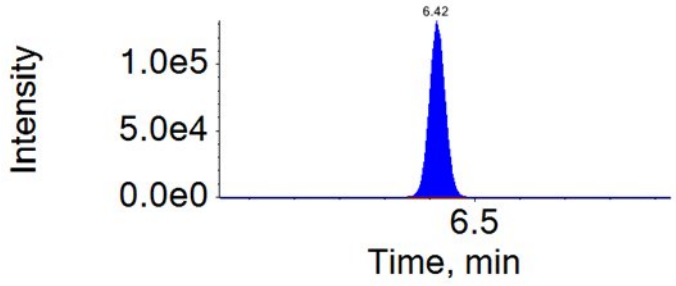


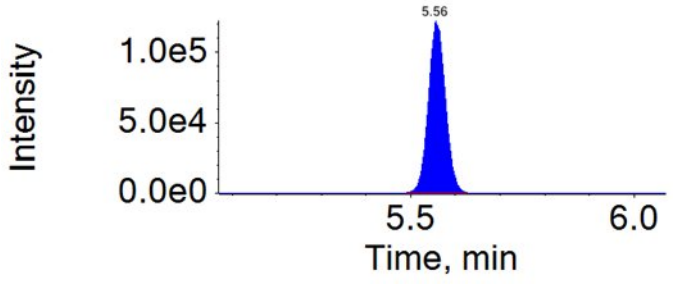
APPROVED
By MCD at 8:20 pm, 11/13/18

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



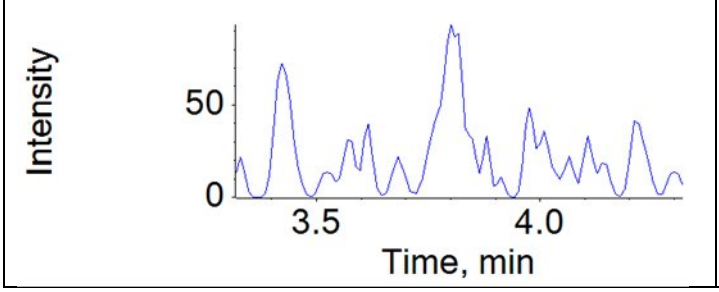


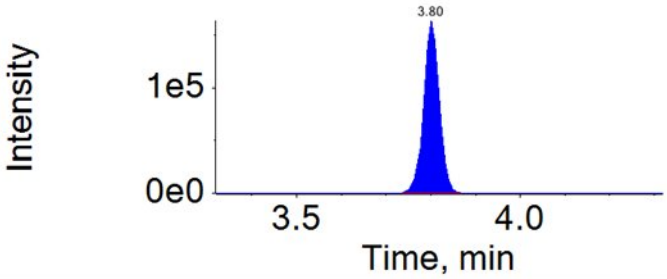
APPROVED
By MCD at 8:21 pm, 11/13/18

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

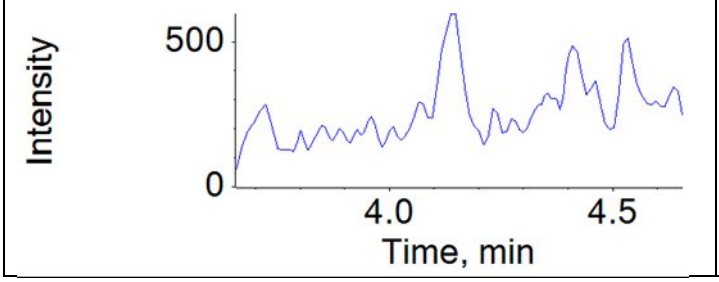
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

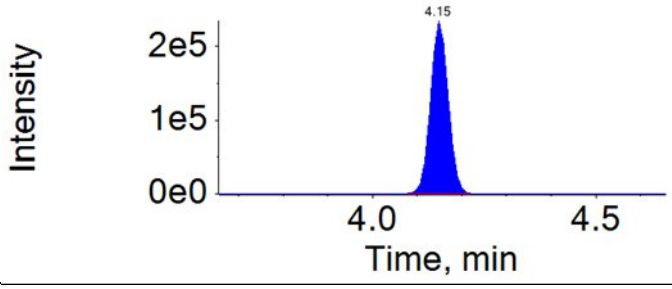
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



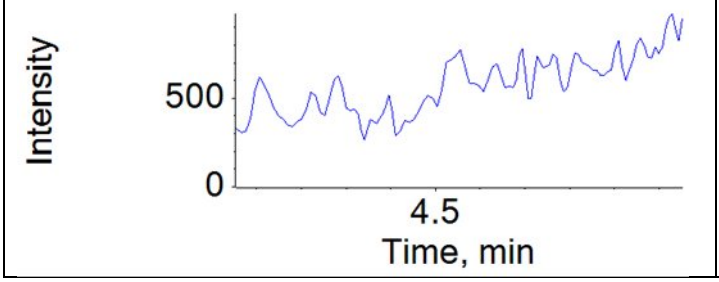


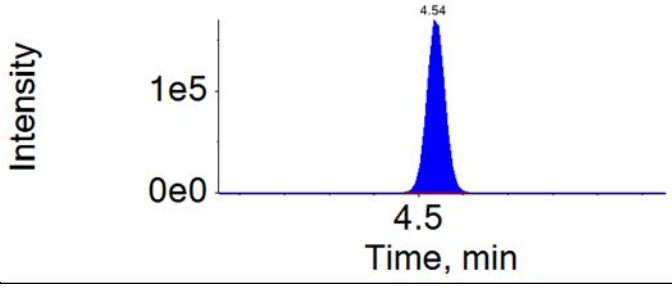
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



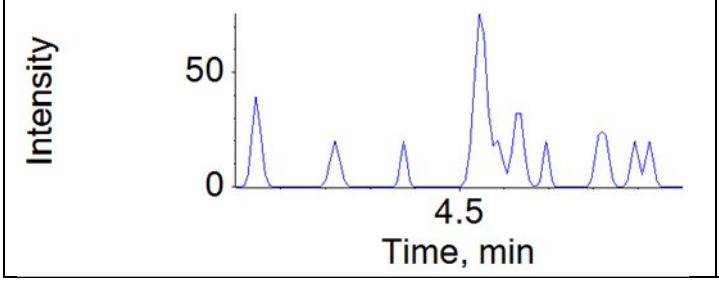


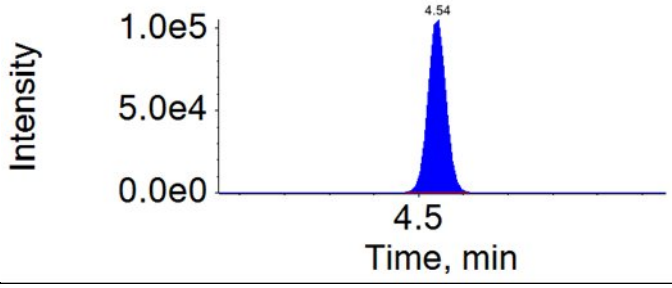
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





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



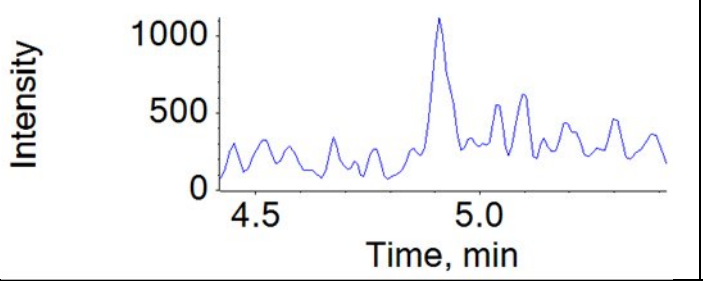


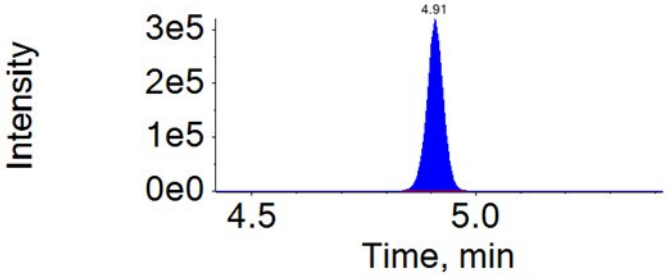
APPROVED
By MCD at 8:21 pm, 11/13/18

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

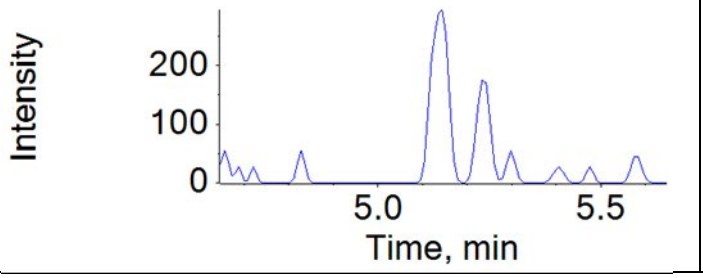
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

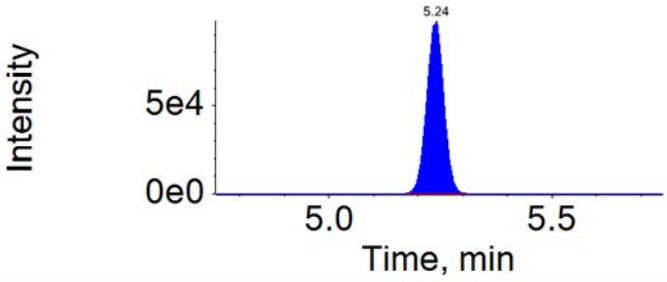
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



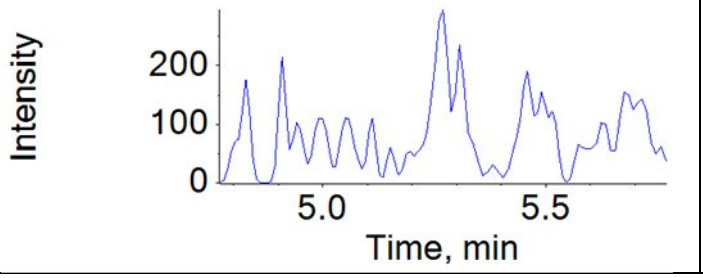


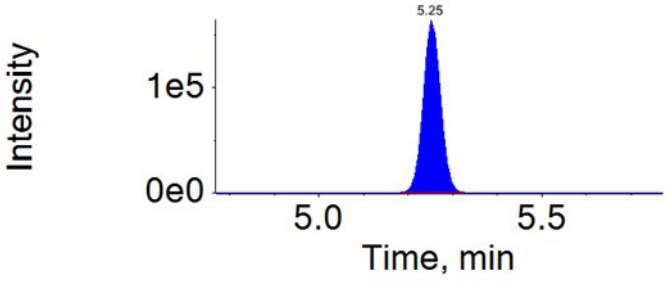
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



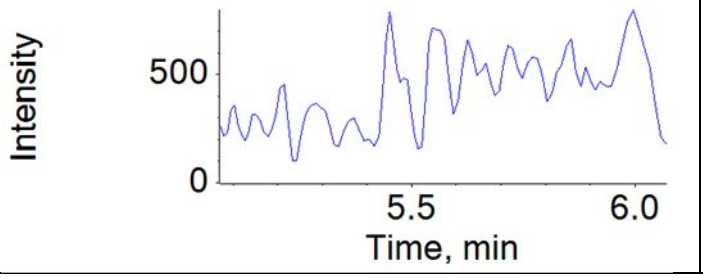


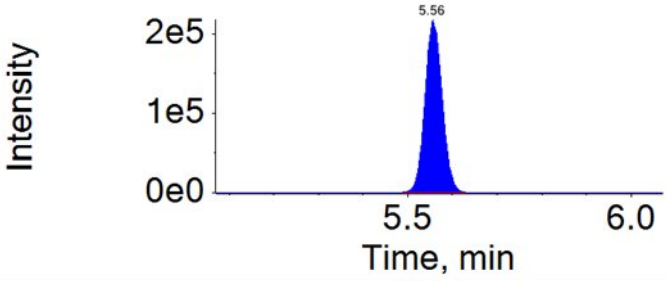
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





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



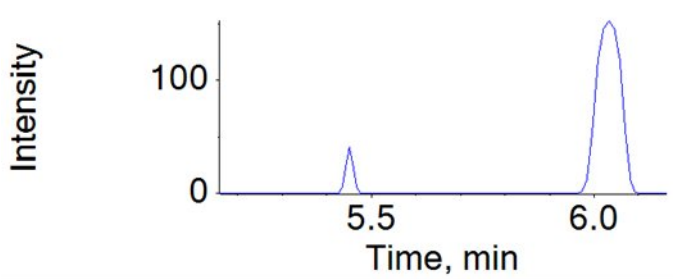


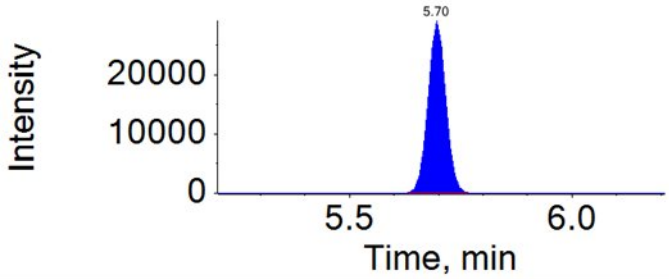
APPROVED
By MCD at 8:21 pm, 11/13/18

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

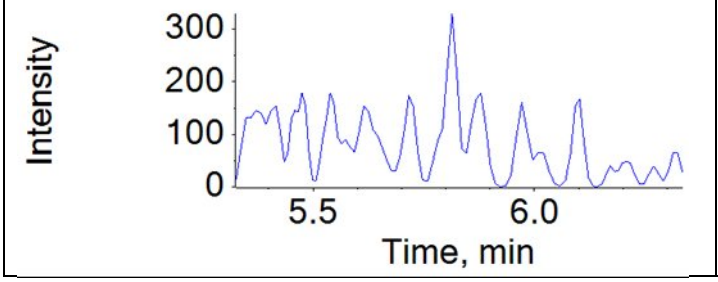
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

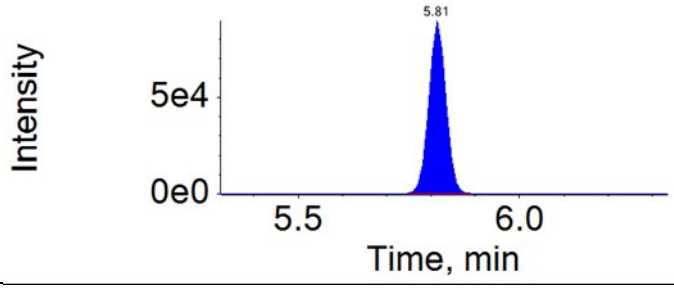
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



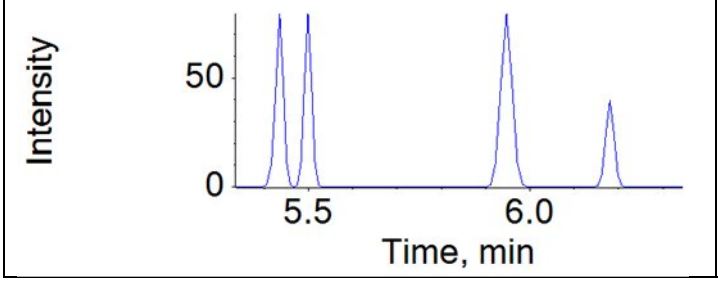


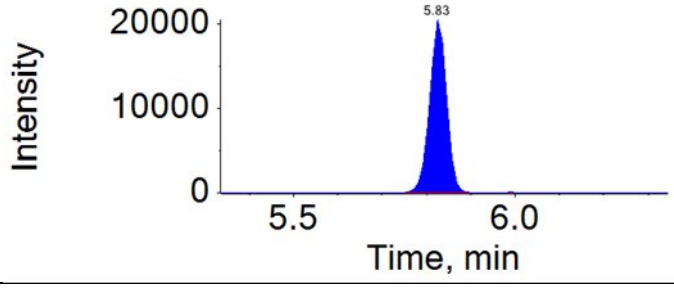
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



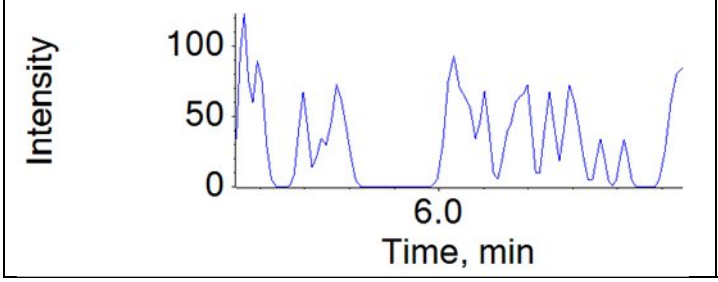


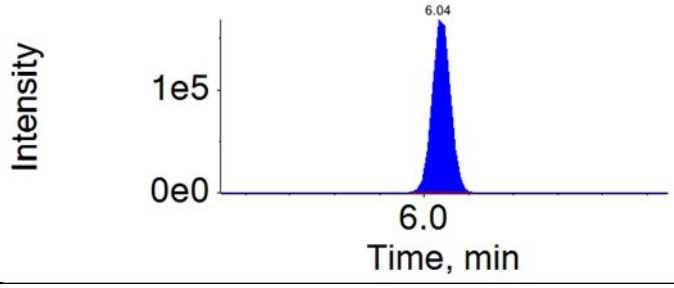
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



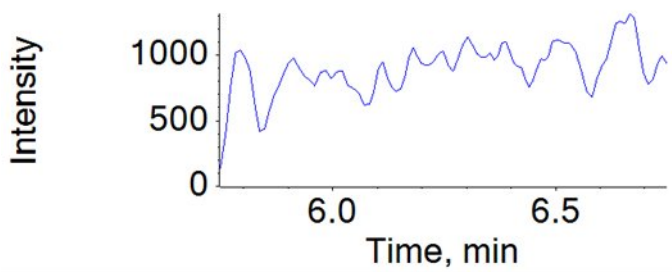


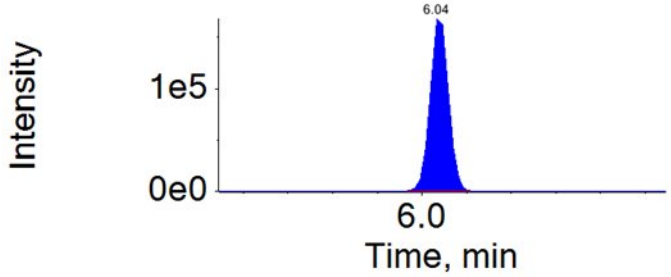
APPROVED
By MCD at 8:21 pm, 11/13/18

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

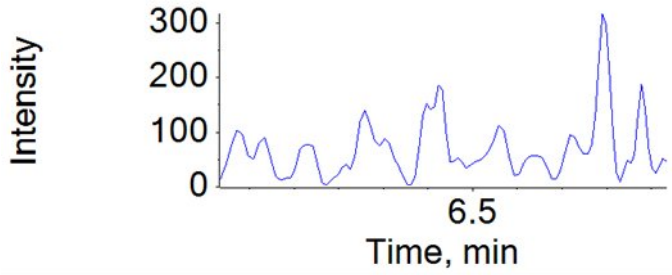
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

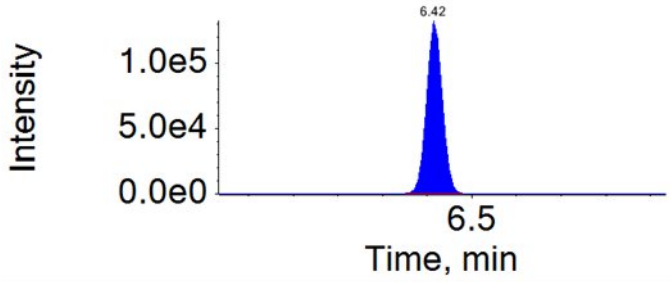
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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





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

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

Ion Ratio Report

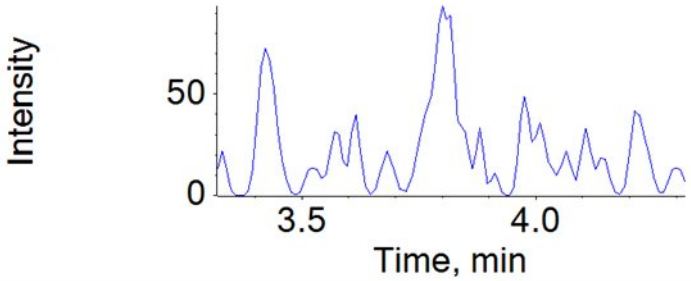
Sample Name: 9881534 **Instrument Name:** LM27631 **File Name:** 18NOV12D-42.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	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	
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	

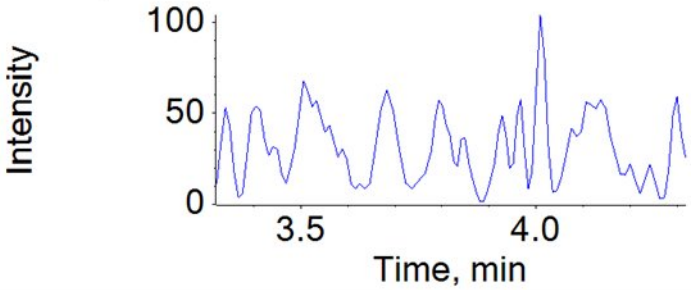
APPROVED
By MCD at 8:21 pm, 11/13/18

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

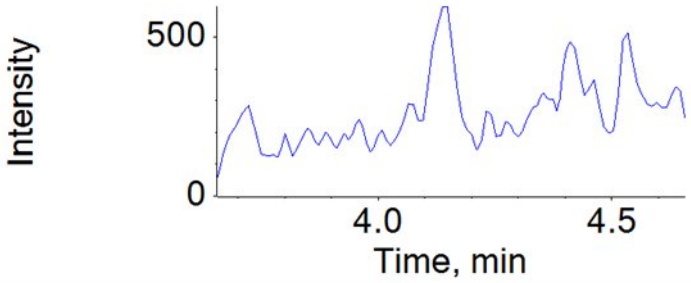
Component: PFBS
Primary Mass: 299.0 / 80.0



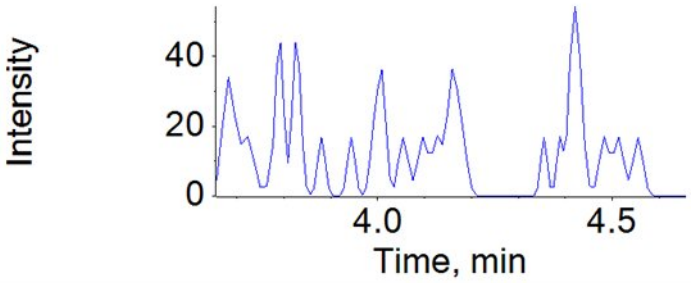
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



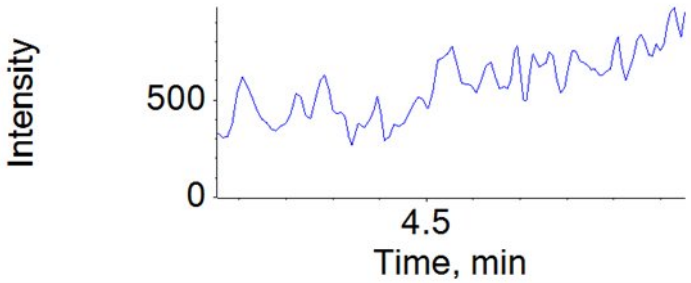
Component: PFHxA
Primary Mass: 313.0 / 269.0



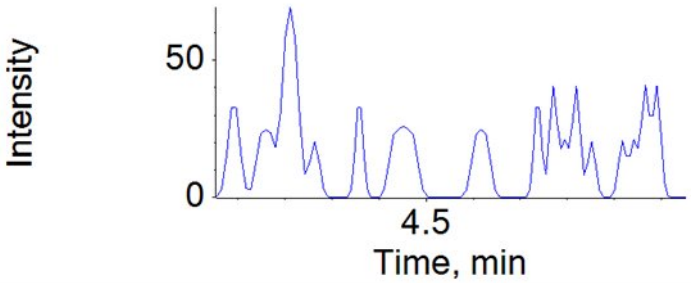
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



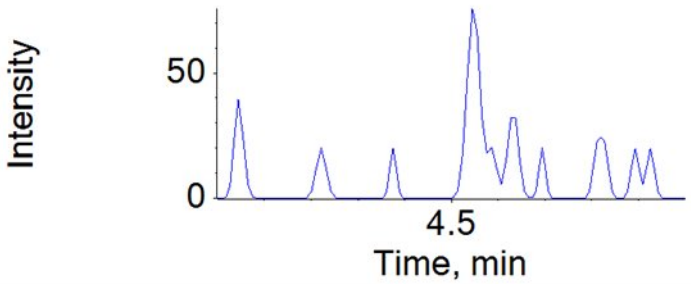
Component: PFHpA
Primary Mass: 363.0 / 319.0



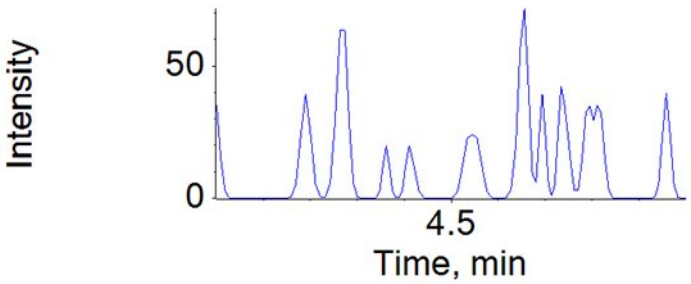
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



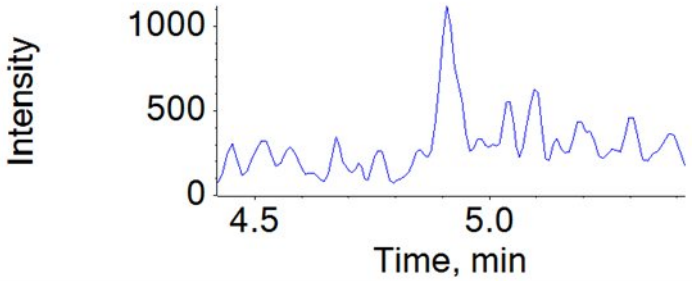
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



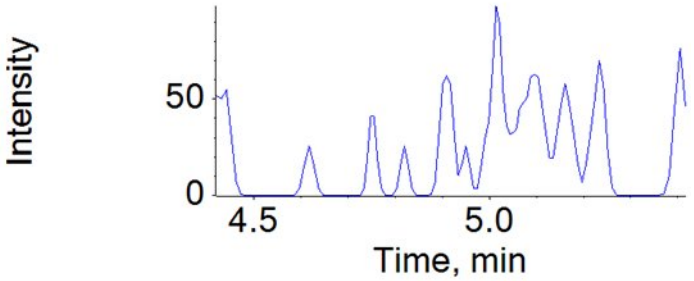
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REVIEWED
By umar at 2:22 pm, 11/15/18

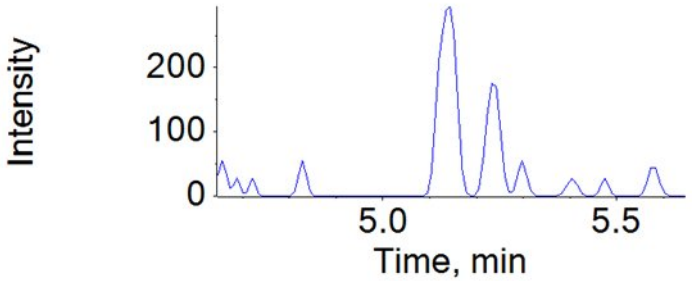
Component: PFOA
Primary Mass: 413.0 / 369.0



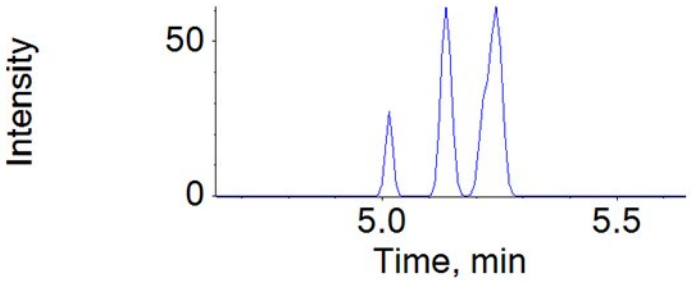
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



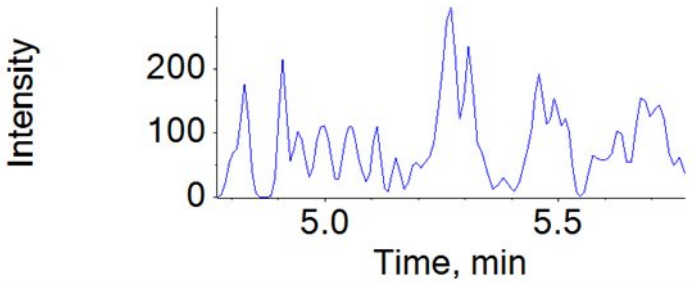
Component: PFOS
Primary Mass: 499.0 / 80.0



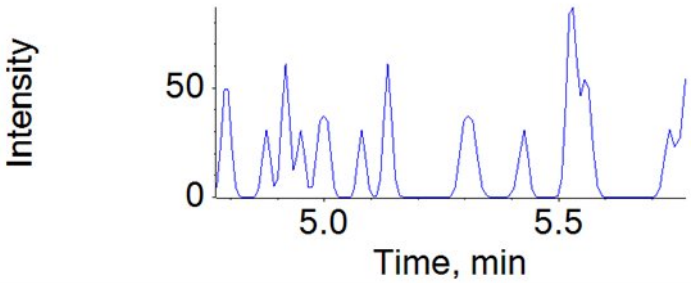
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



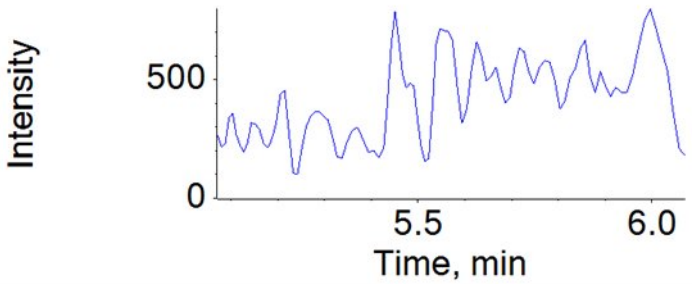
Component: PFNA
Primary Mass: 463.0 / 419.0



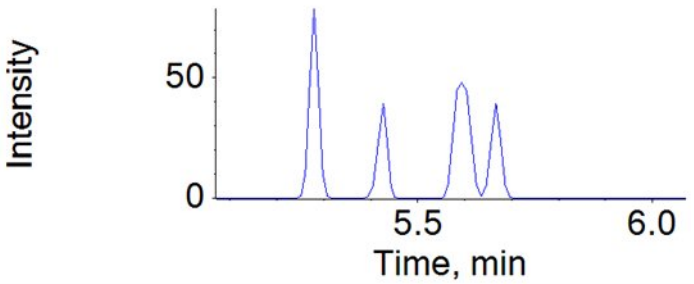
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



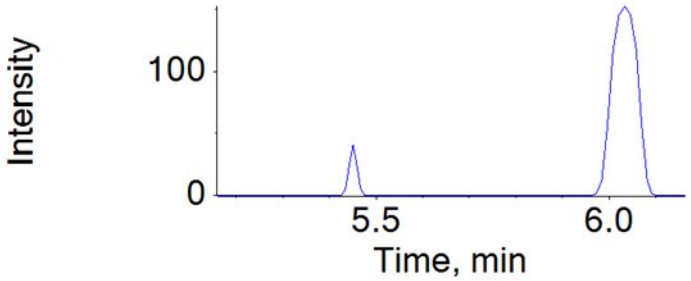
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



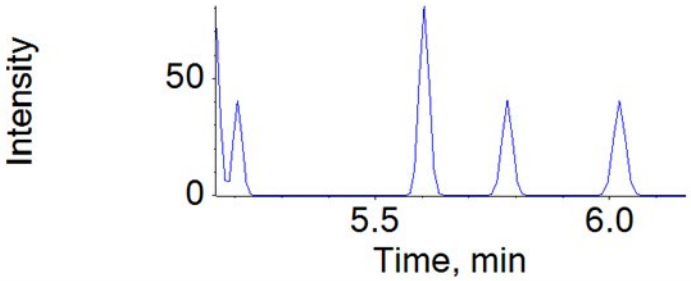
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By umar at 2:22 pm, 11/15/18

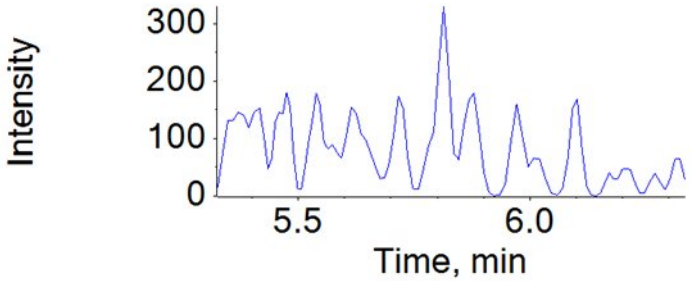
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



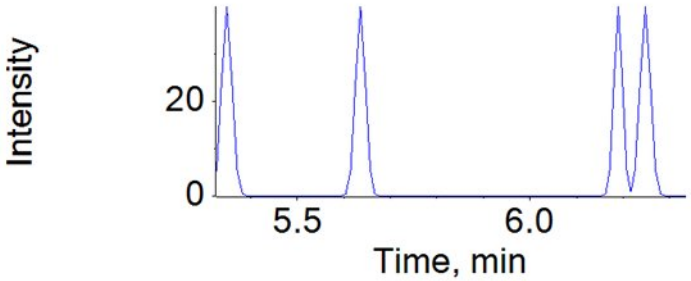
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



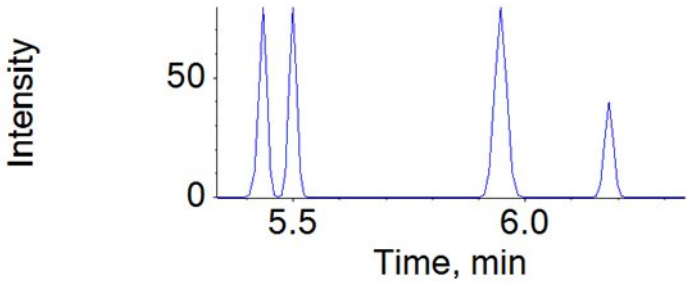
Component: PFUnDA
Primary Mass: 563.0 / 519.0



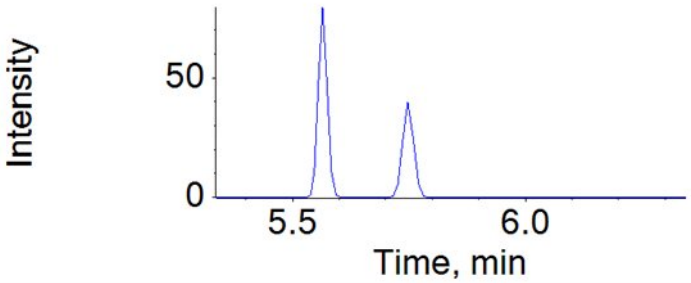
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Secondary Mass: 563.0 / 169.0



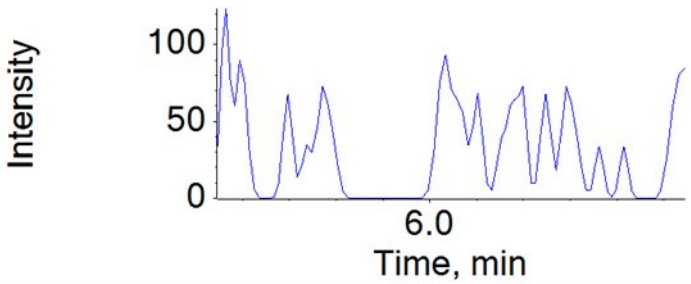
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



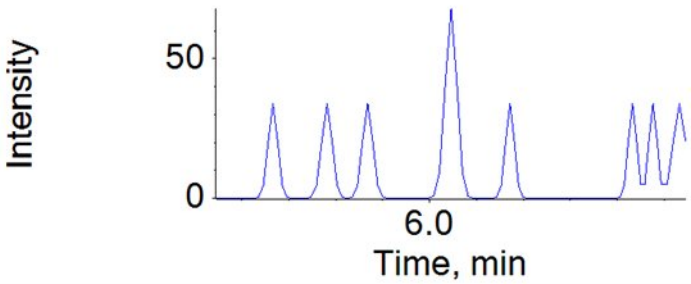
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



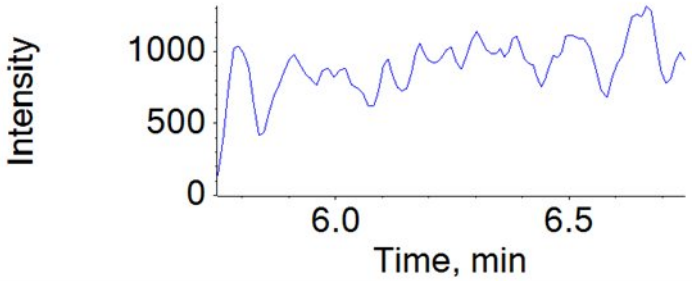
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Secondary Mass: 613.0 / 169.0



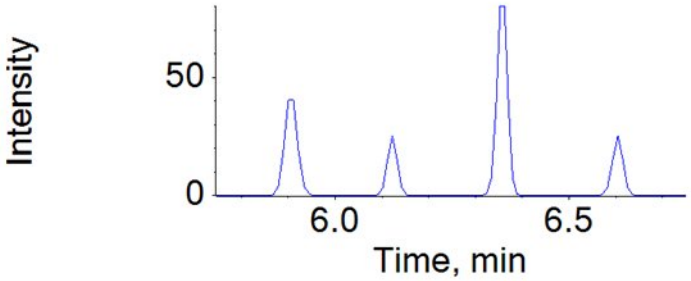
APPROVED
By MCD at 8:21 pm, 11/13/18

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

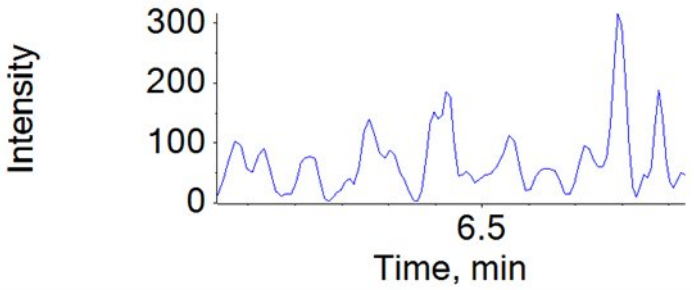
Component: PFTrDA
Primary Mass: 663.0 / 619.0



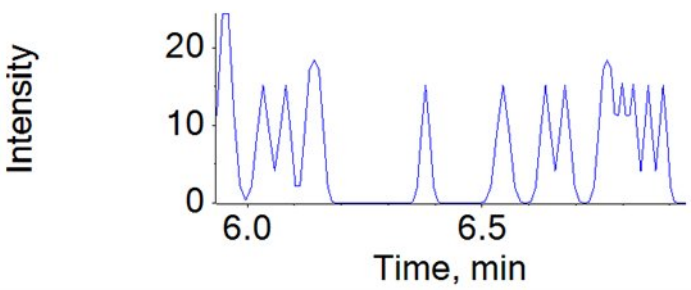
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



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

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

Sample Name:	9881535			**Data File:**		18NOV12D-43.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314006 OU1-Bldg371-W-01-02 Grab Potable Water			**Acquis Date:**		2018-11-12T23:04:42
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	72			**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.:	0.29014			**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	848495.9	659926.2	29	50	
13C2-PFOA	5.0	623018.6	450219.7	38	50	
13C4-PFOS	4.8	261775.8	249205.8	5	50	
13C2-PFDA	5.0	359509.6	278743.9	29	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	385158.0	13C3-PFBA	848495.9	0.454	16.027	11.044	69	50-150	
E13C5-PFHxA	602392.6	13C2-PFOA	623018.6	0.967	17.233	12.038	70	50-150	
E13C3-PFHxS	304120.9	13C2-PFOA	623018.6	0.488	16.302	11.545	71	50-150	
E13C4-PFHpA	517292.7	13C2-PFOA	623018.6	0.830	17.233	12.892	75	50-150	
E13C8-PFOA	794219.7	13C2-PFOA	623018.6	1.275	17.233	12.105	70	50-150	
E13C8-PFOS	257890.4	13C4-PFOS	261775.8	0.985	16.475	15.045	91	50-150	
E13C9-PFNA	471879.8	13C4-PFOS	261775.8	1.803	17.233	17.322	101	50-150	
E13C6-PFDA	599456.0	13C2-PFDA	359509.6	1.667	17.233	13.411	78	50-150	
Ed3-NMeFOSAA	67590.2	13C2-PFDA	359509.6	0.188	17.233	11.697	68	50-150	
E13C7-PFUnDA	269595.5	13C2-PFDA	359509.6	0.750	17.233	15.006	87	50-150	
Ed5-NEtFOSAA	47655.8	13C2-PFDA	359509.6	0.133	17.233	9.666	56	50-150	
E13C2-PFDoDA	557158.8	13C2-PFDA	359509.6	1.550	17.233	13.868	80	50-150	
E13C2-PFTeDA	507937.2	13C2-PFDA	359509.6	1.413	17.233	17.096	99	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

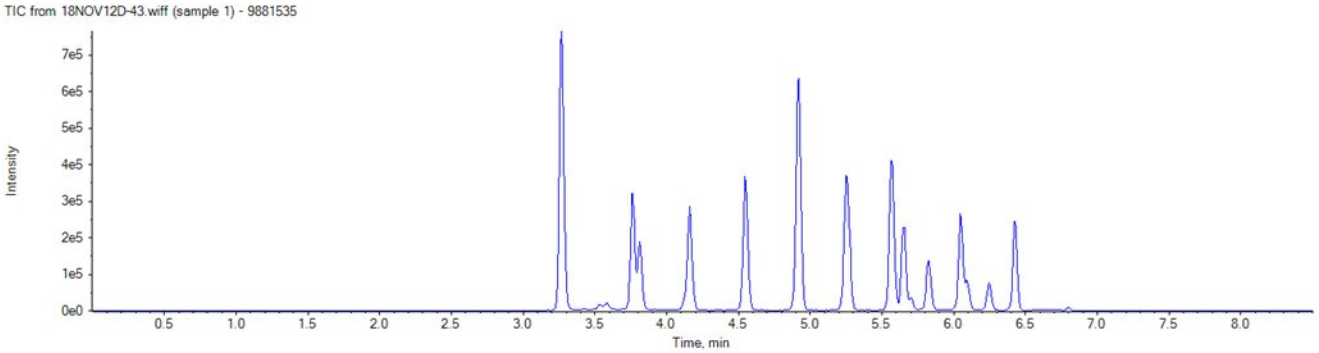
Analyte Quantitation Peak Table

Sample Name: 9881535 **Instrument Name:** LM27631 **File Name:** 18NOV12D-43.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.29014	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	3.81	385158.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	602392.6	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	517292.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	304120.9	N/A	
PFOA	4.92	1.000	10586.3		M	13C8-PFOA	4.92	794219.7	0.013	0.245
PFOS	5.24	1.000	9265.9		M	13C8-PFOS	5.25	257890.4	0.036	0.542
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	471879.8	N/A	
PFDA	5.57	1.000	11487.9		A	13C6-PFDA	5.57	599456.0	0.019	0.350
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	67590.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	269595.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	47655.8	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	557158.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	557158.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	507937.2	N/A	

Total Ion Chromatogram

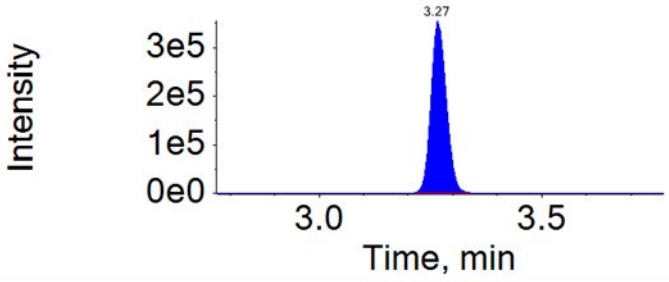


APPROVED
By MCD at 8:21 pm, 11/13/18

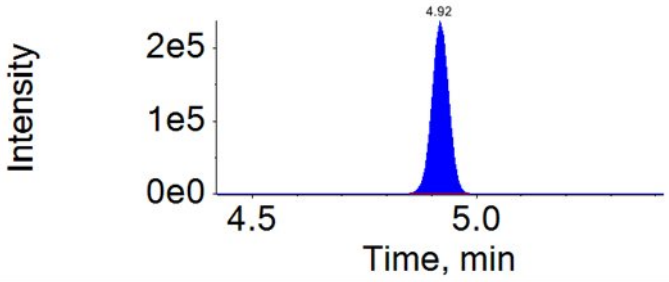
REVIEWED
By umar at 2:22 pm, 11/15/18

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

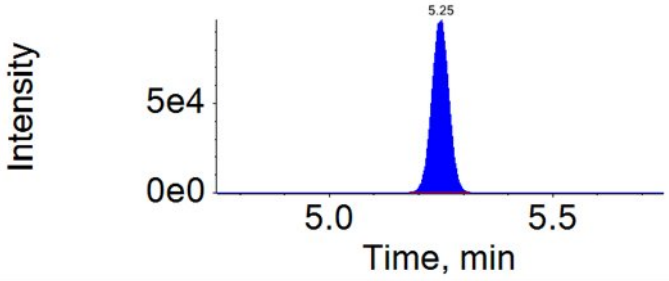
Injection Standard: 13C3-PFBA
216.0 / 172.0



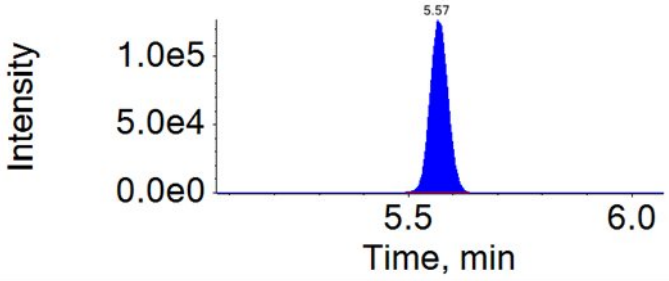
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



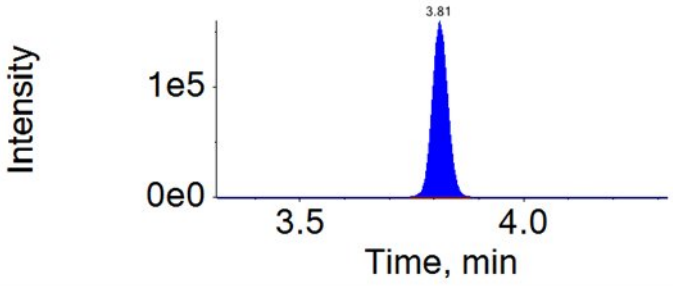
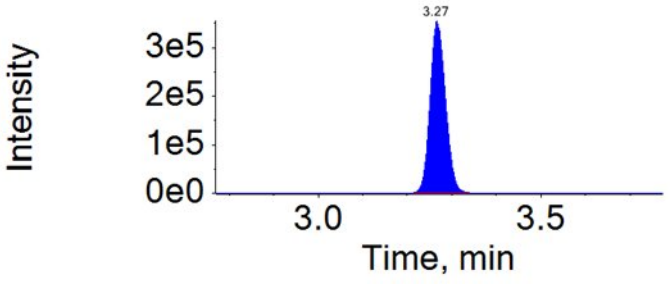
Injection Standard: 13C2-PFDA
515.0 / 470.0

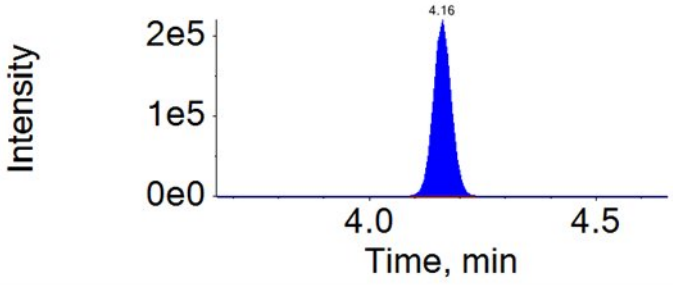
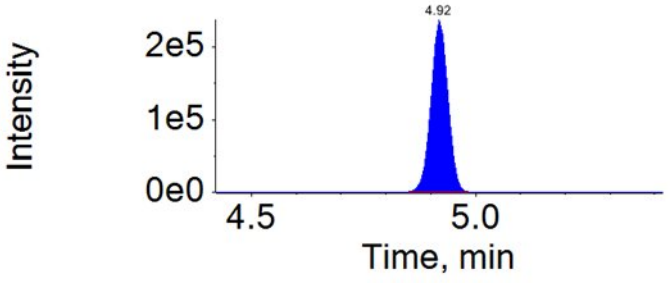


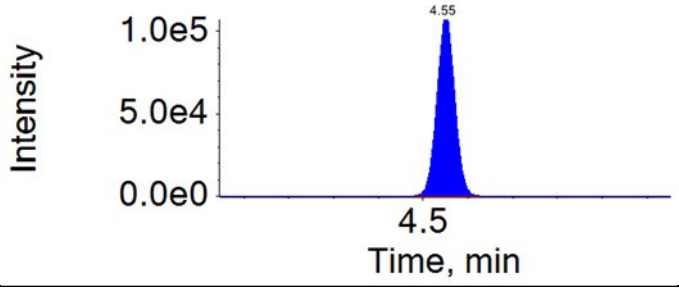
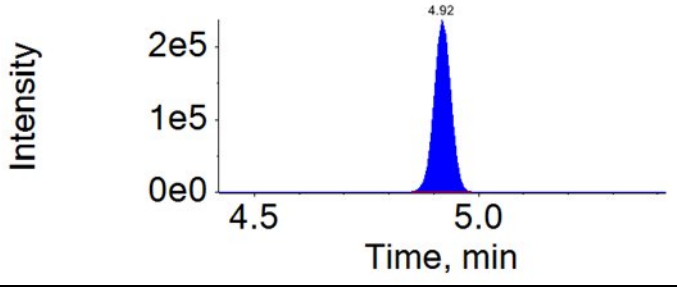
APPROVED
By MCD at 8:21 pm, 11/13/18

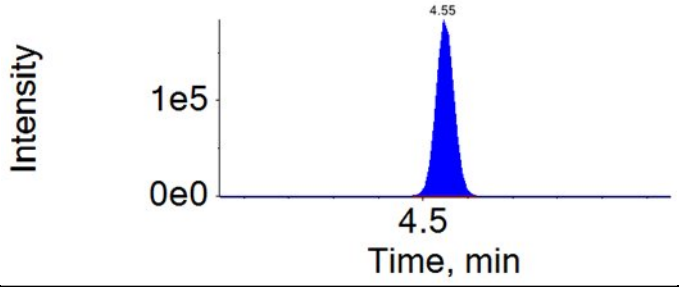
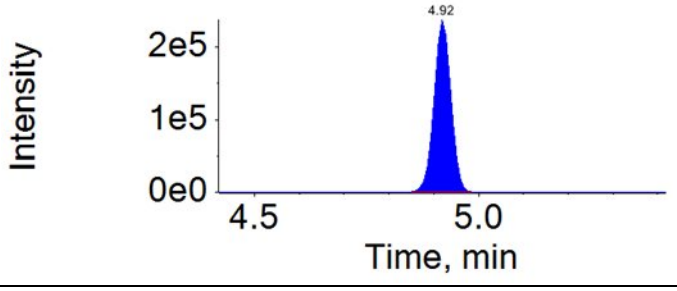
REVIEWED
By umar at 2:22 pm, 11/15/18

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
	

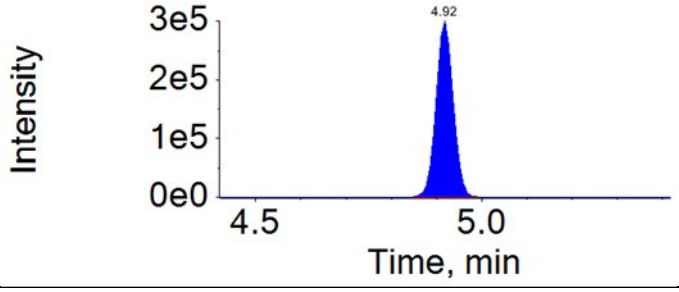
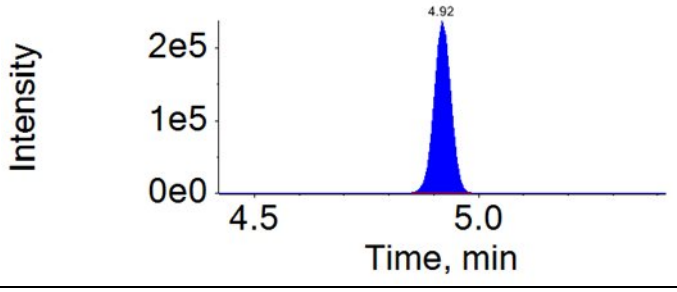
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

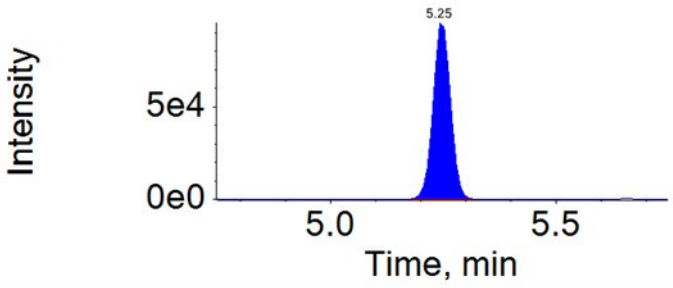
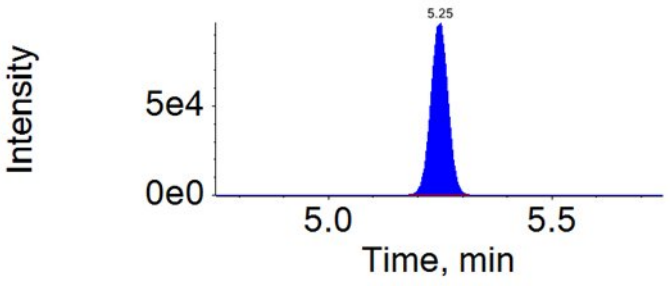
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

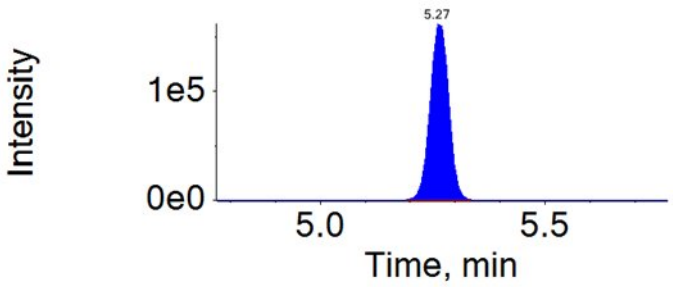
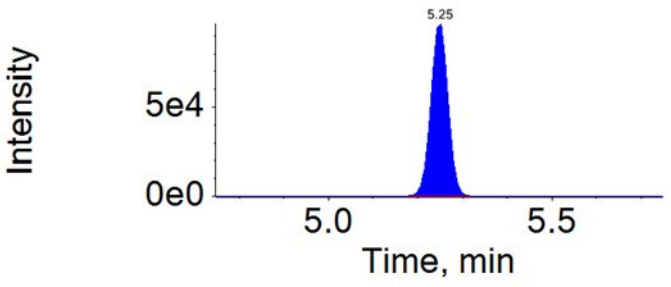
APPROVED
By MCD at 8:21 pm, 11/13/18

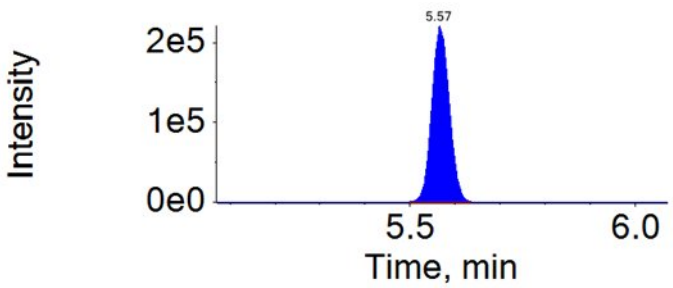
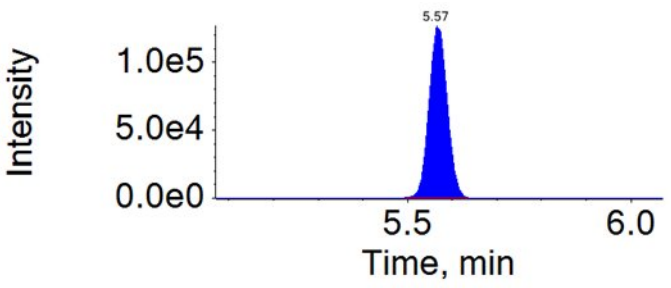
REVIEWED
By umar at 2:22 pm, 11/15/18

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
	

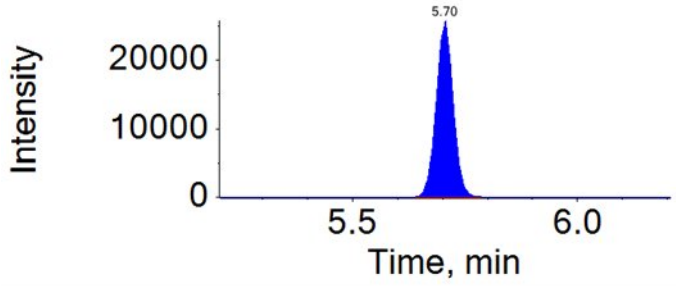
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

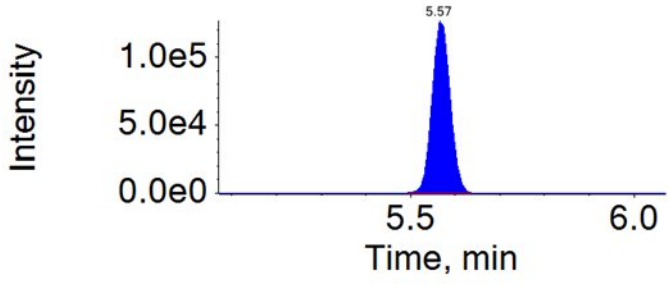
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

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

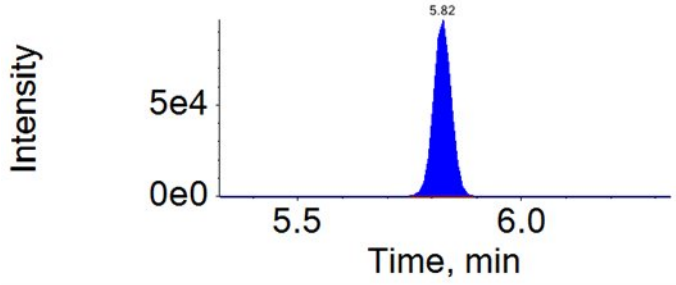
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

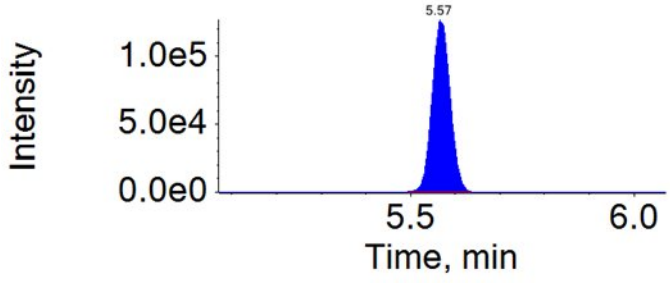
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



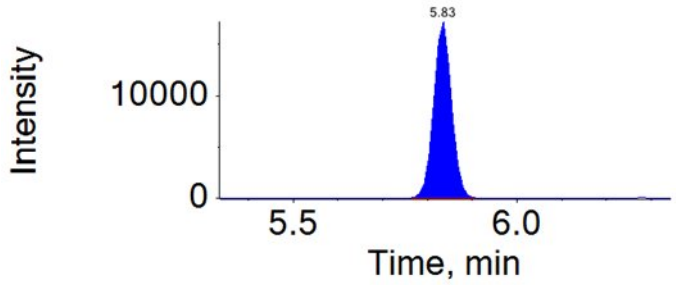


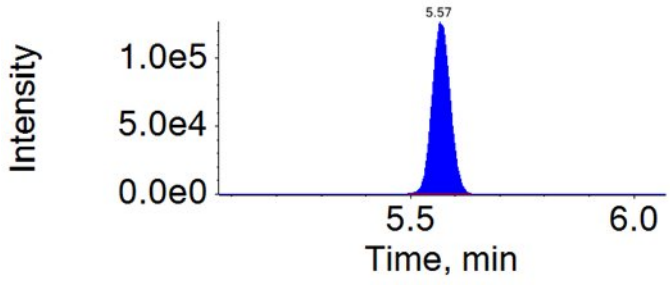
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



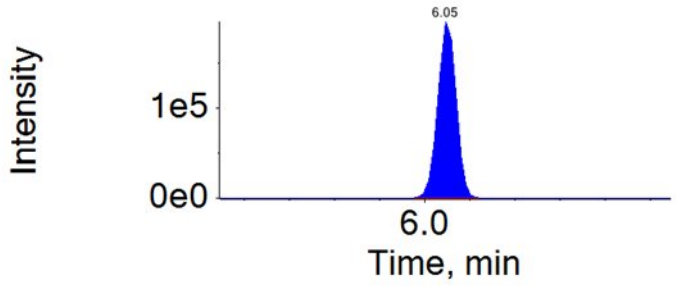


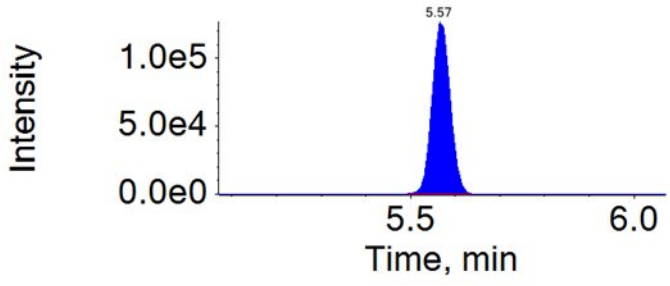
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



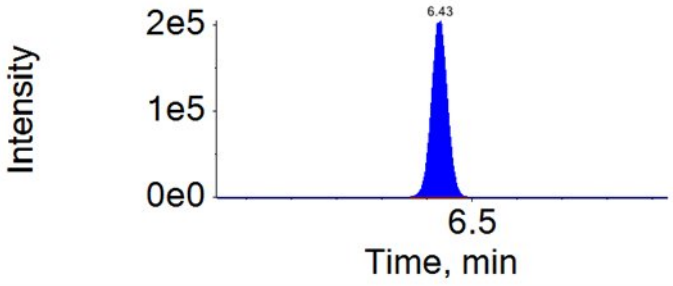
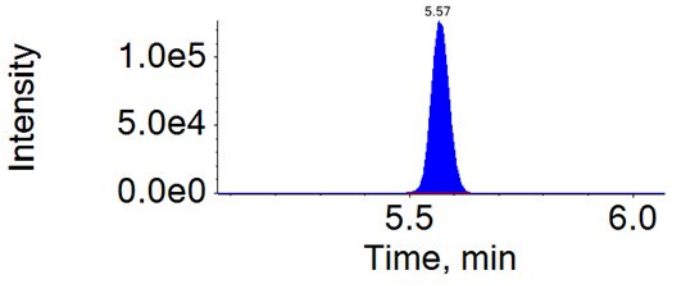


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



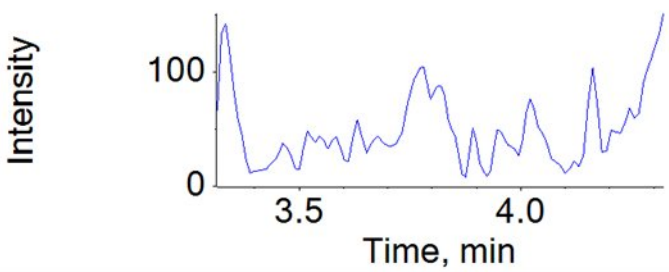


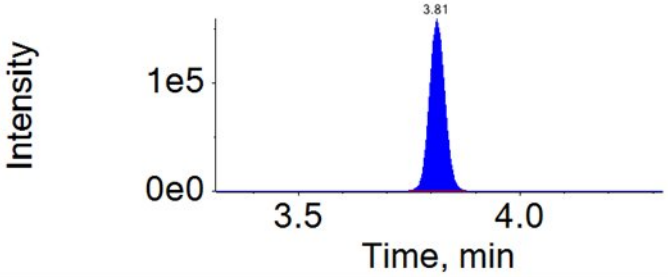
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

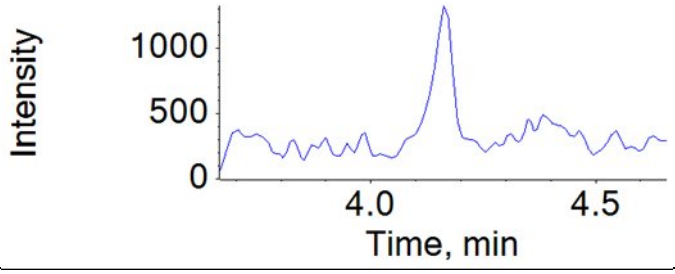
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

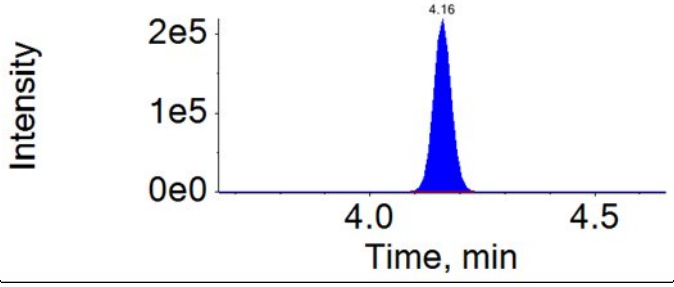
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



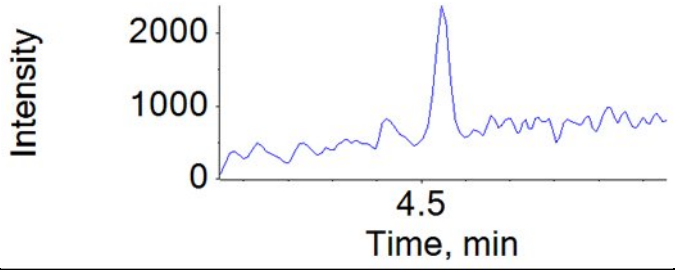


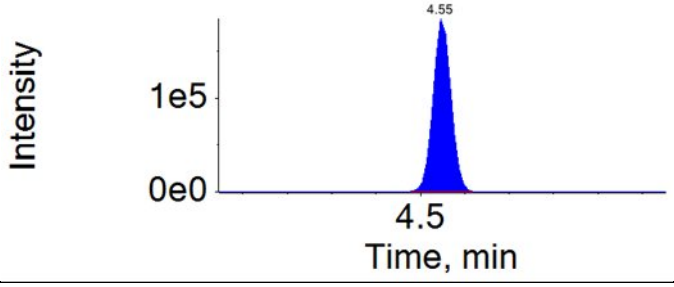
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



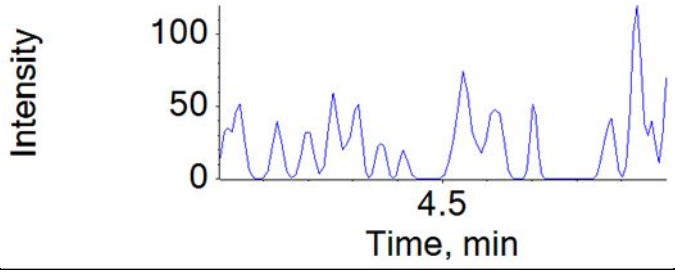


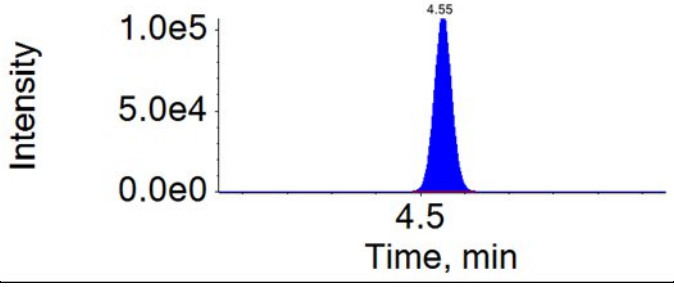
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





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



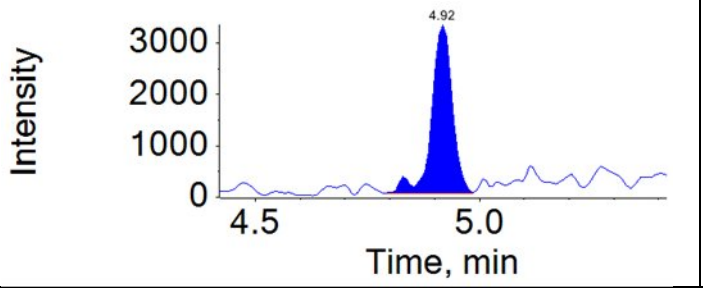


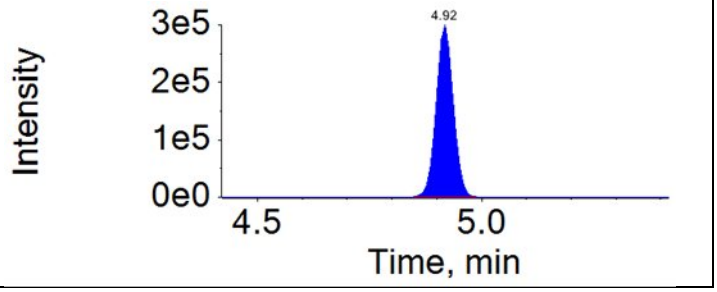
APPROVED
By MCD at 8:21 pm, 11/13/18

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

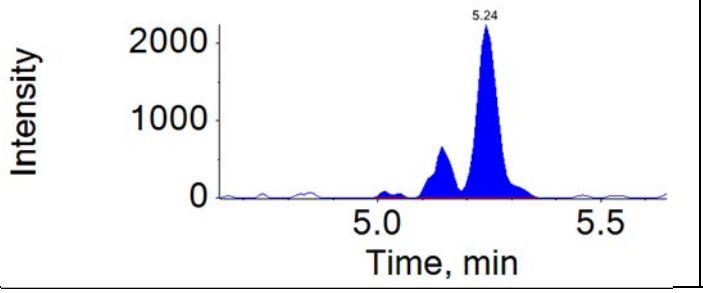
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

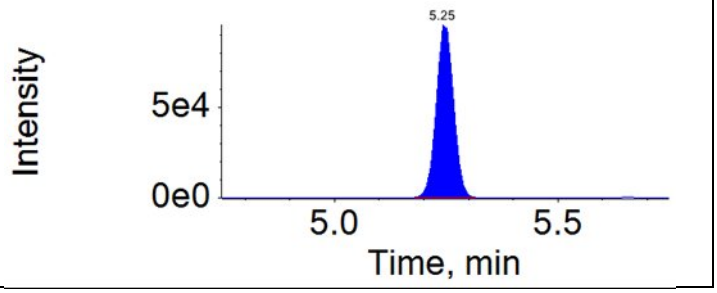
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



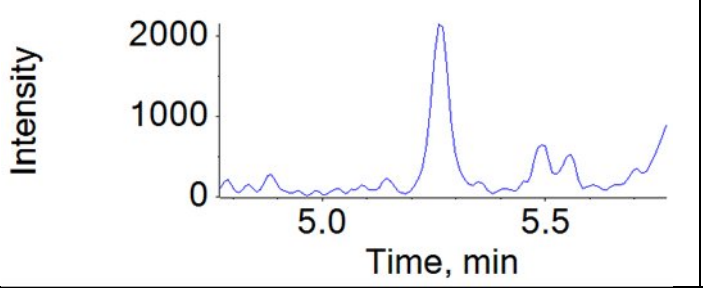


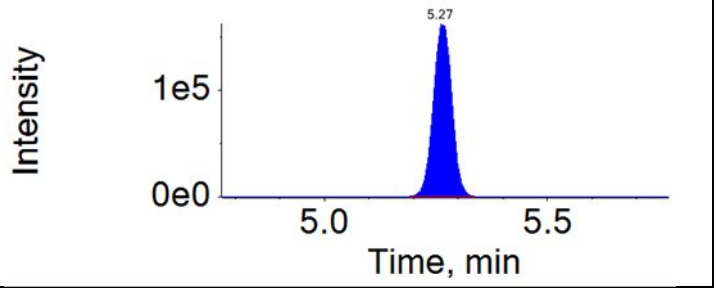
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



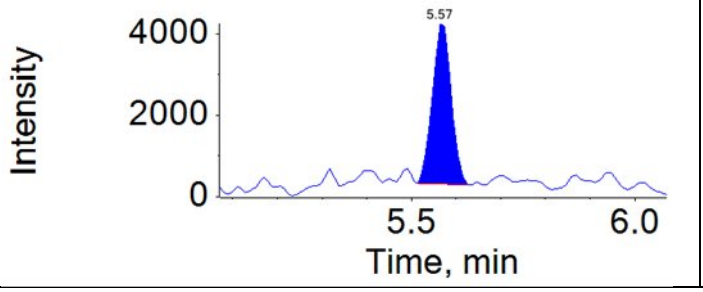


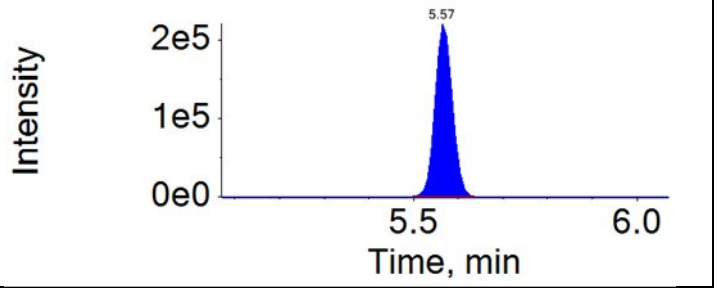
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





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



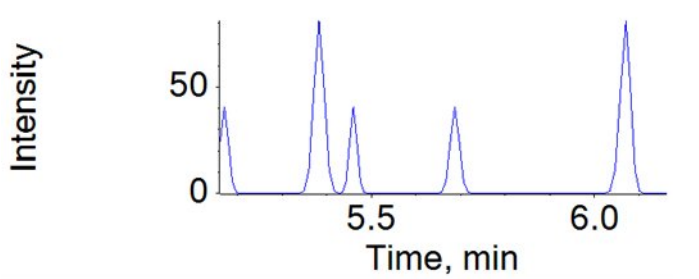


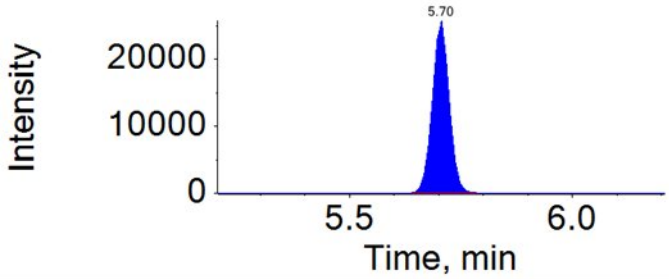
APPROVED
By MCD at 8:21 pm, 11/13/18

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

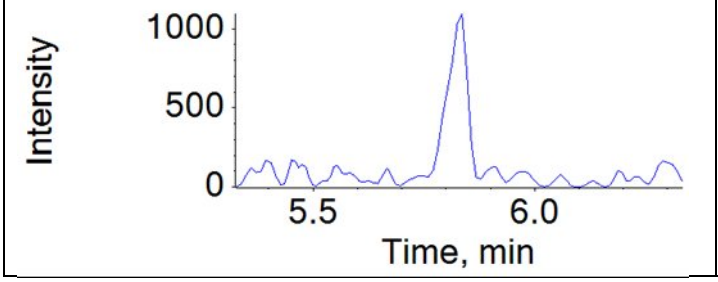
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

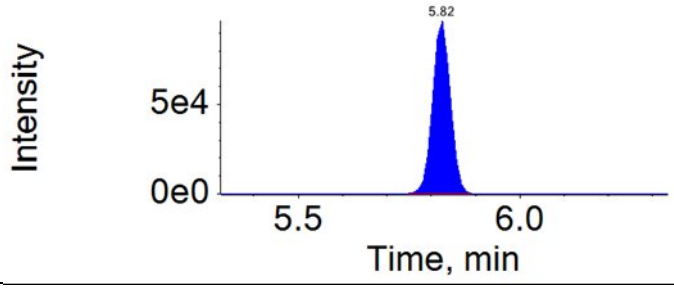
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



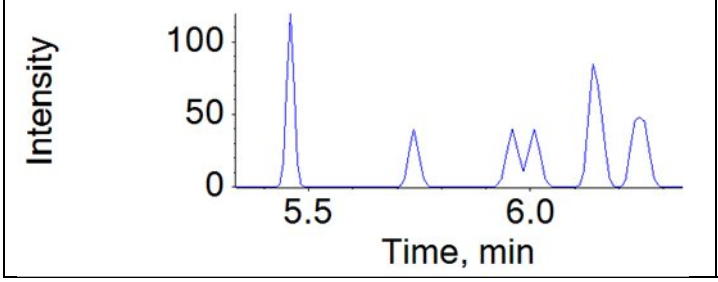


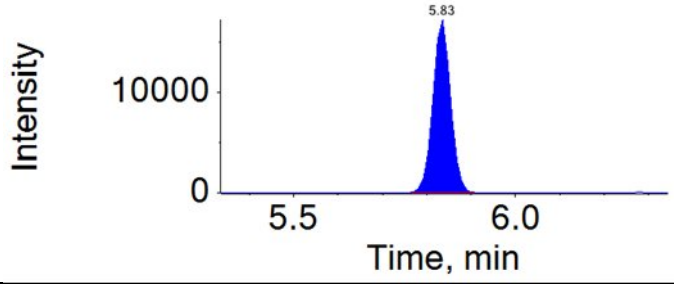
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



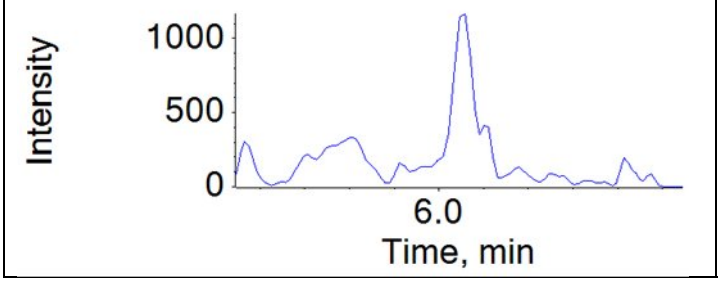


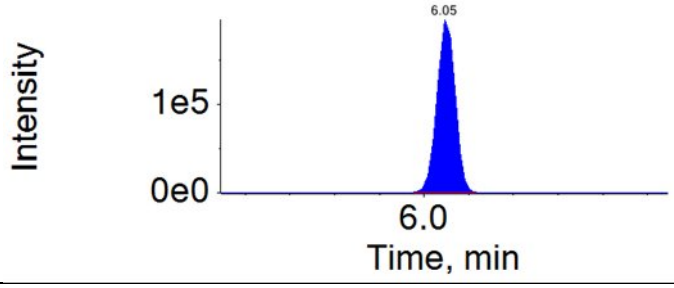
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



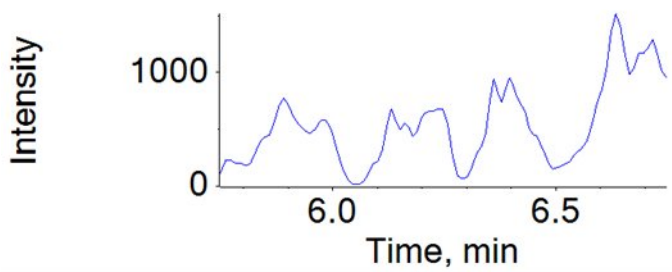


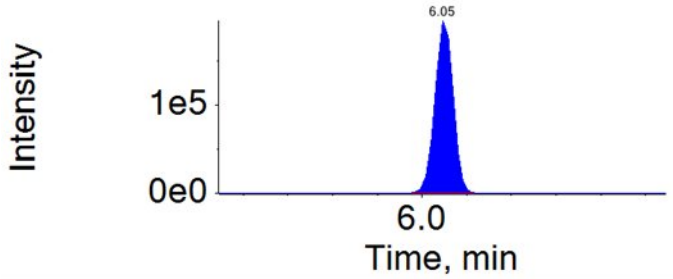
APPROVED
By MCD at 8:21 pm, 11/13/18

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

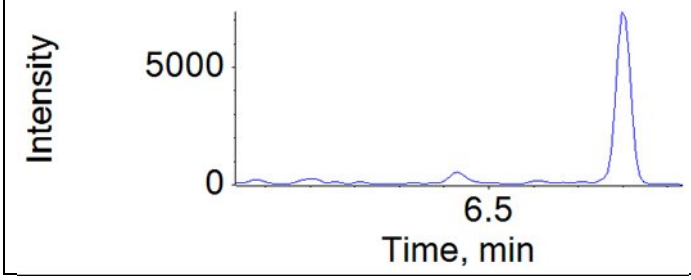
ICAL Name: 18NOV12DCAL **Result Table:** 18314006 11/13/2018 8:06:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

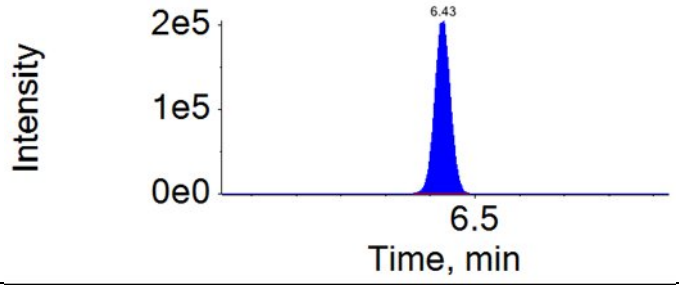
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





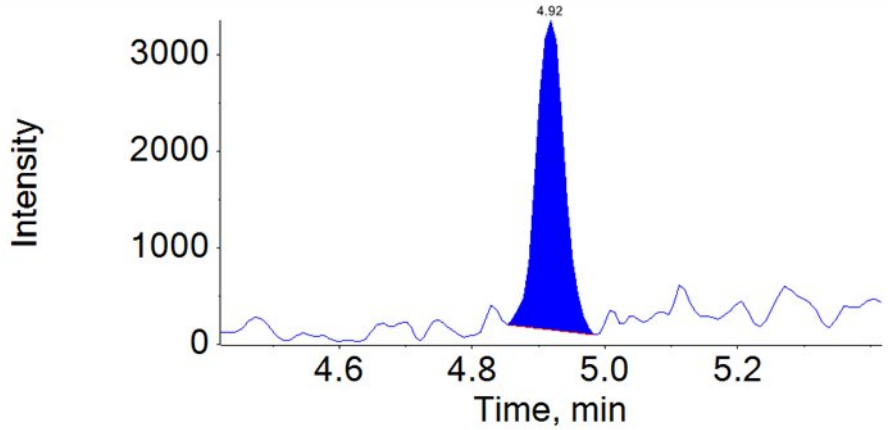
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





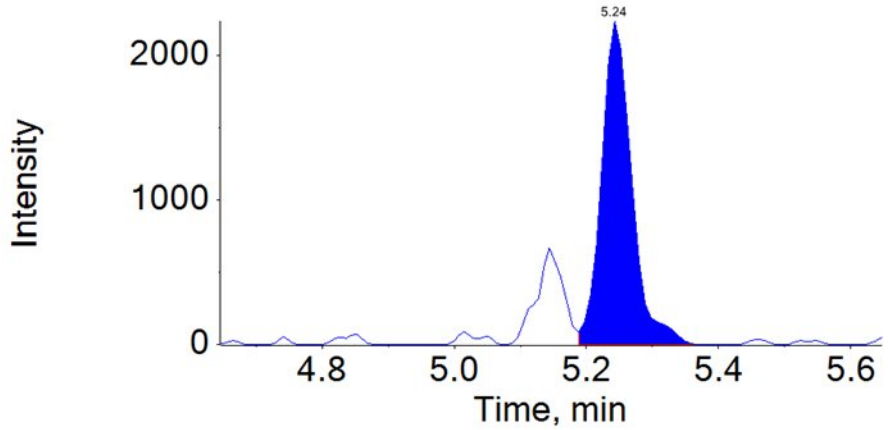
Results Table Name: 18314006
Results Table Date: 11/13/2018 8:06:19 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
9439.82
Mass Range:
413.0 / 369.0
File Name:
18NOV12D-43.wiff
Sample Name:
9881535



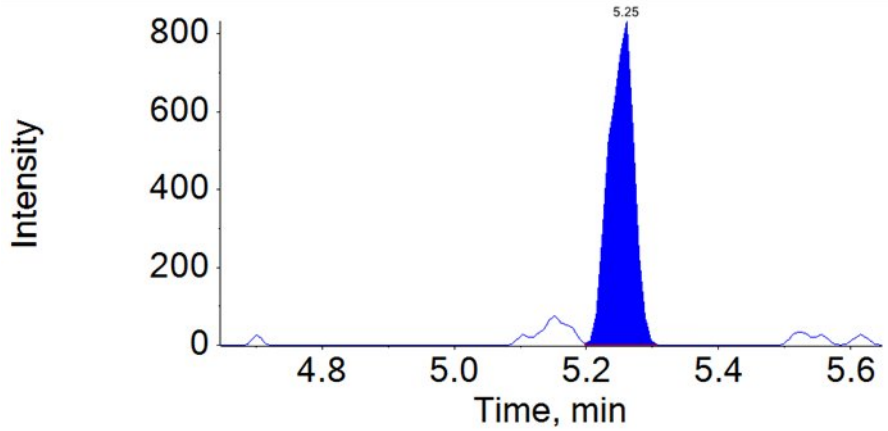
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
7162.81
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-43.wiff
Sample Name:
9881535



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
2200.56
Mass Range:
499.0 / 99.0
File Name:
18NOV12D-43.wiff
Sample Name:
9881535



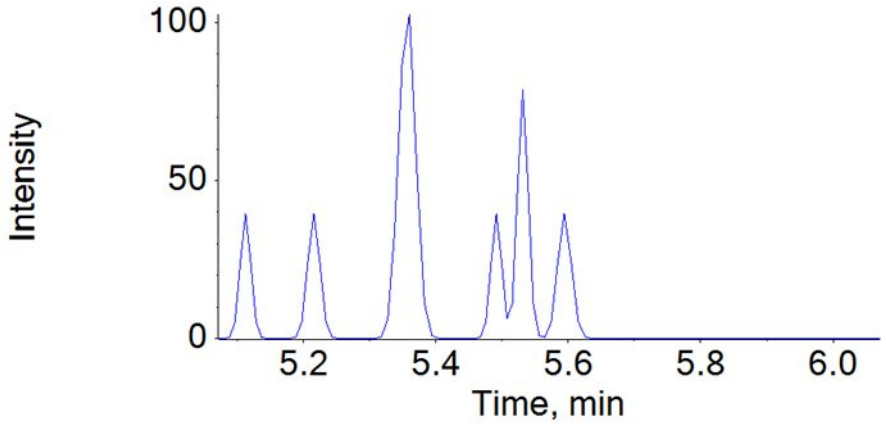
Integration Comment: incorrect integration

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:
PFDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
513.0 / 169.0
File Name:
18NOV12D-43.wiff
Sample Name:
9881535



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

Ion Ratio Report

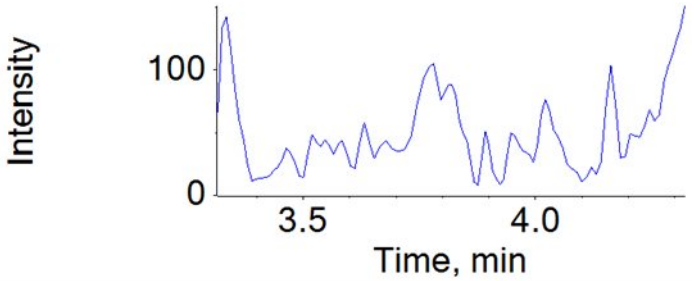
Sample Name: 9881535 **Instrument Name:** LM27631 **File Name:** 18NOV12D-43.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	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	
PFOA	4.92	1.00	10586.27	M	N/A	0.0653			
PFOA_2	4.92	1.00	691.35	A	N/A	0.0653	16	50	
PFOS	5.24	1.00	9265.92	M	N/A	0.2639			
PFOS_2	5.25	1.00	2445.35	M	N/A	0.2639	2	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	5.57	1.00	11487.86	A	N/A	0.0053			
PFDA_2	5.59	1.00	60.45	M	N/A	0.0053	-35	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	

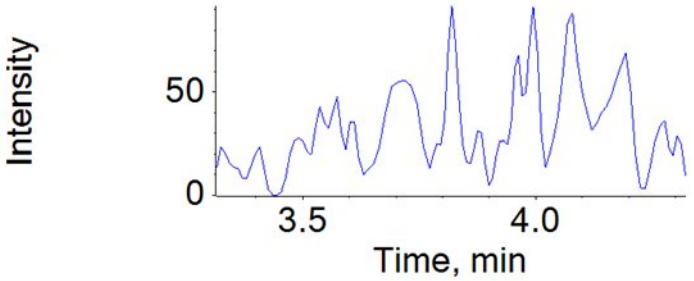
APPROVED
By MCD at 8:21 pm, 11/13/18

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

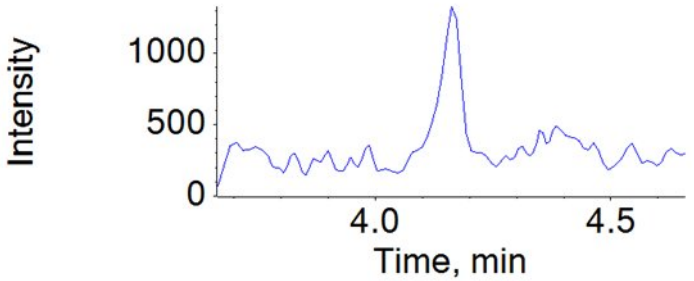
Component: PFBS
Primary Mass: 299.0 / 80.0



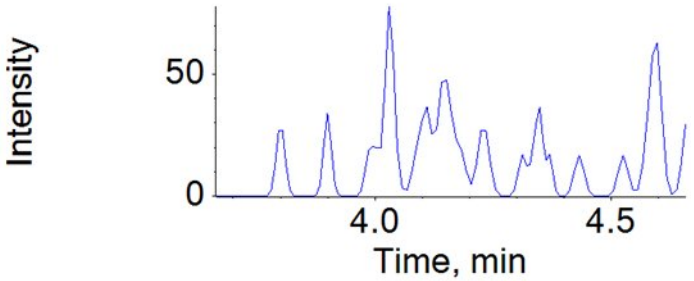
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



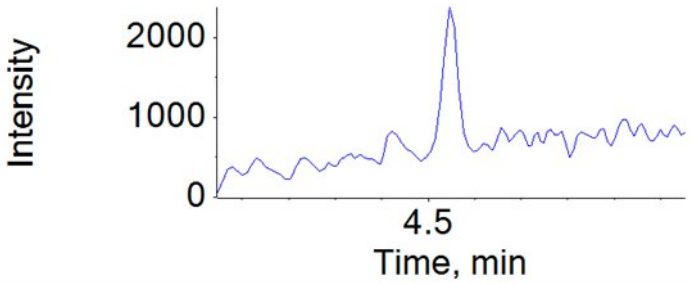
Component: PFHxA
Primary Mass: 313.0 / 269.0



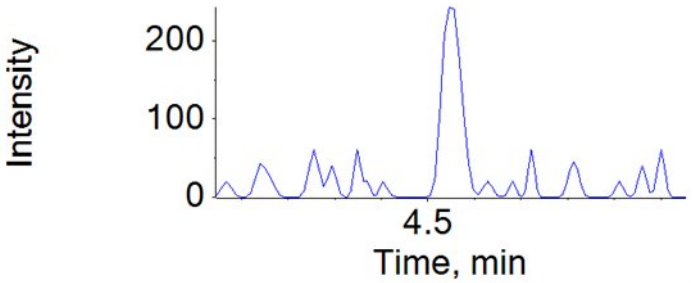
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



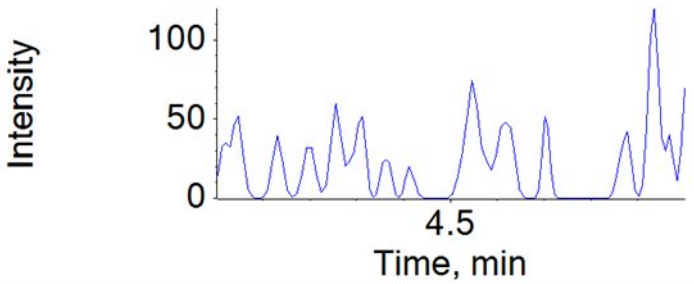
Component: PFHpA
Primary Mass: 363.0 / 319.0



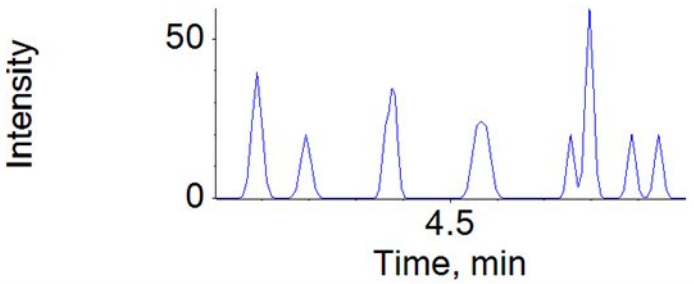
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



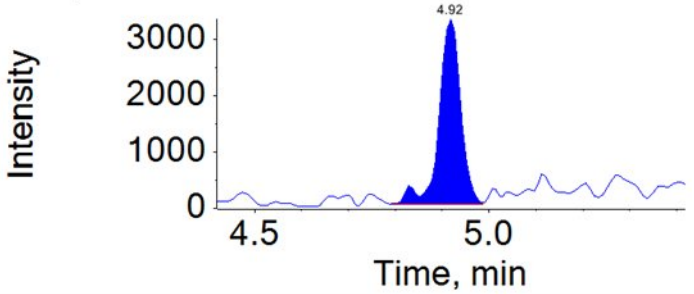
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



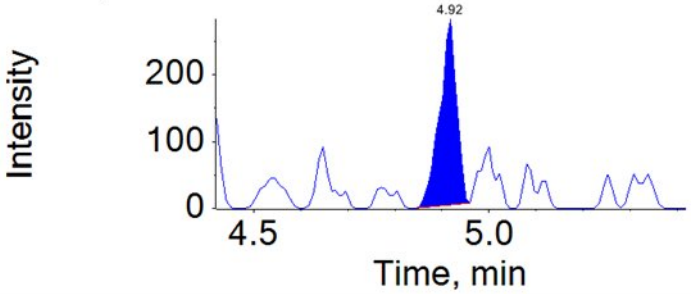
APPROVED
By MCD at 8:21 pm, 11/13/18

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

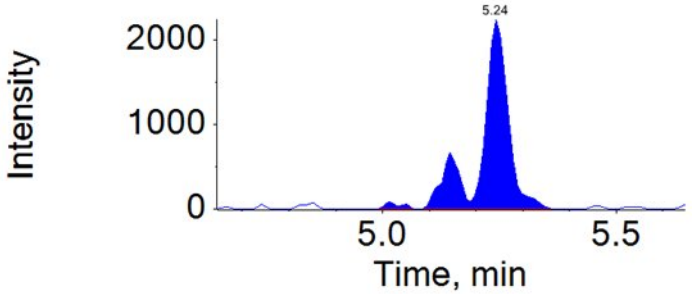
Component: PFOA
Primary Mass: 413.0 / 369.0



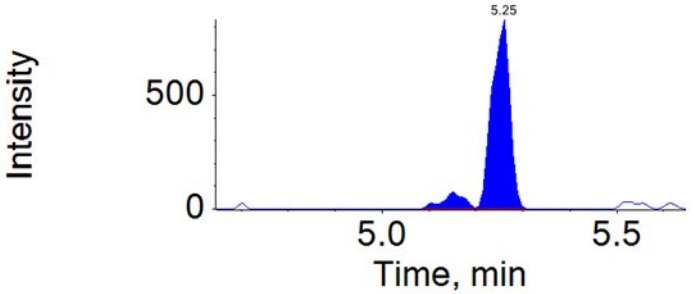
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



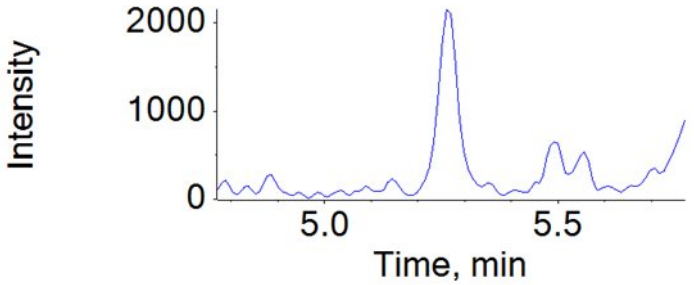
Component: PFOS
Primary Mass: 499.0 / 80.0



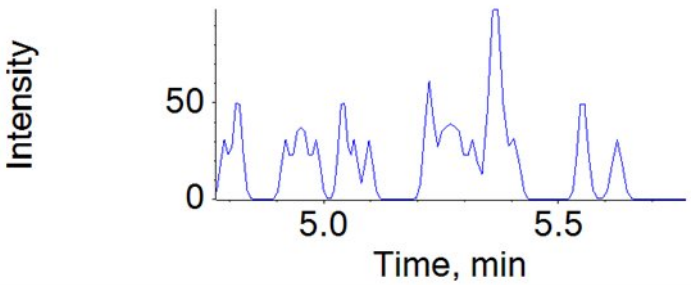
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



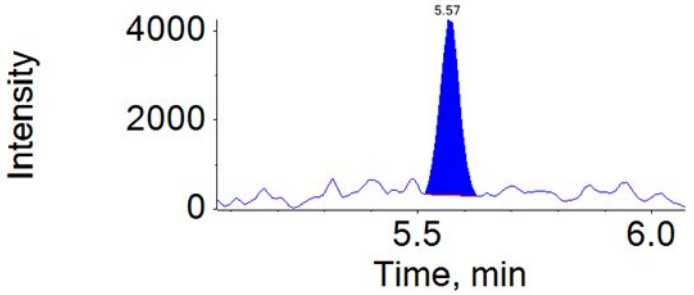
Component: PFNA
Primary Mass: 463.0 / 419.0



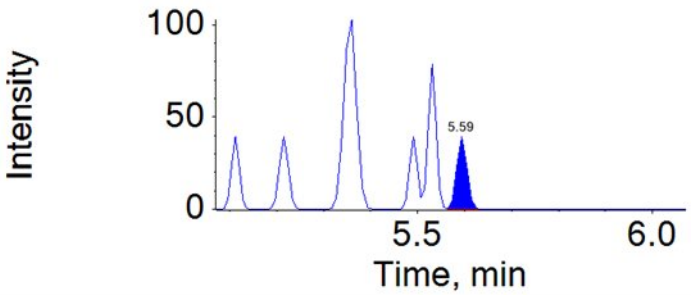
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



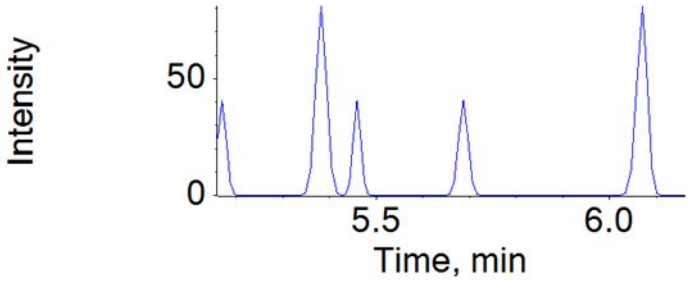
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



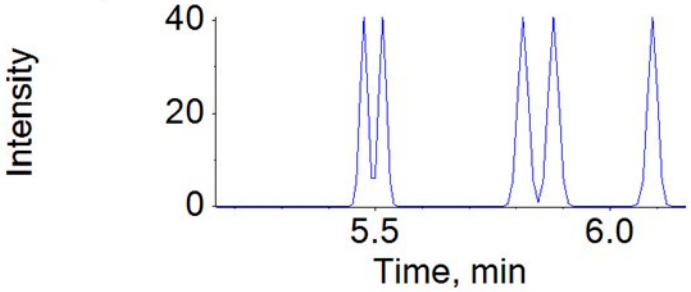
APPROVED
By MCD at 8:21 pm, 11/13/18

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

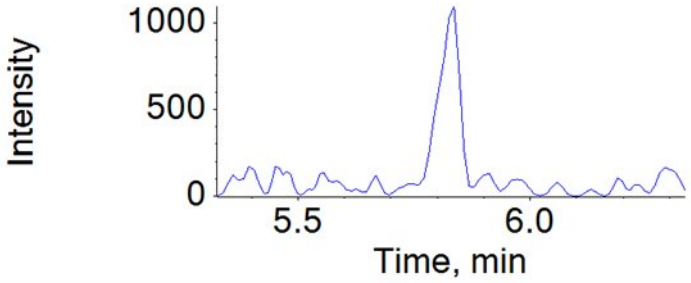
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



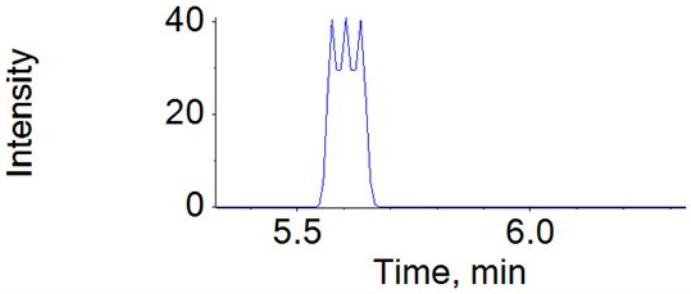
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



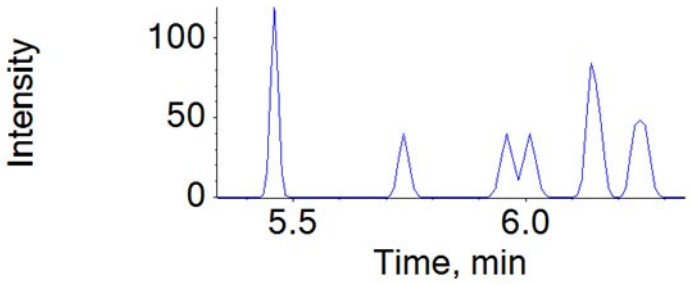
Component: PFUnDA
Primary Mass: 563.0 / 519.0



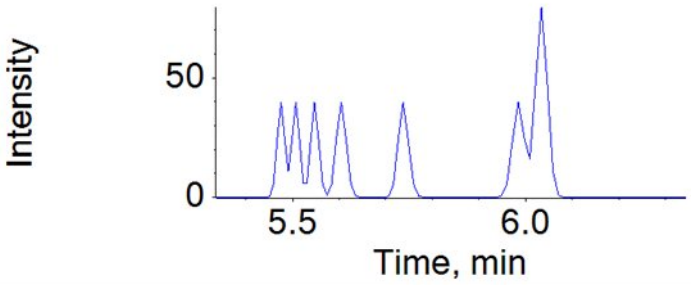
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



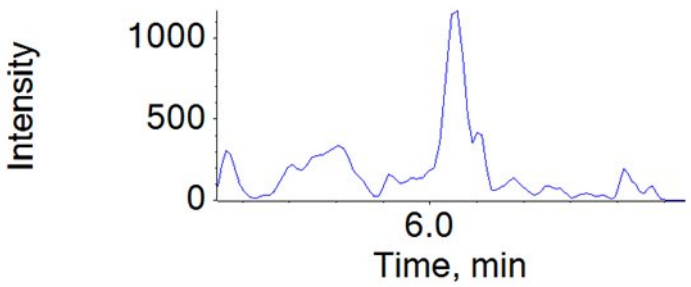
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



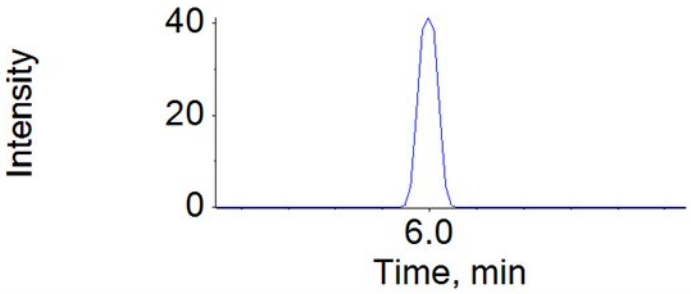
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



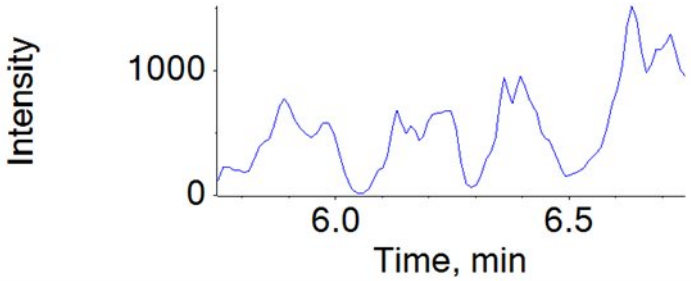
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



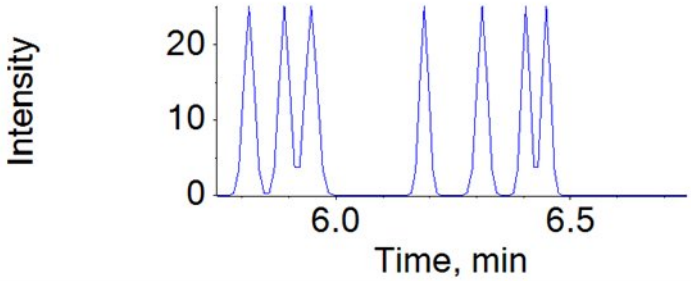
APPROVED
By MCD at 8:21 pm, 11/13/18

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

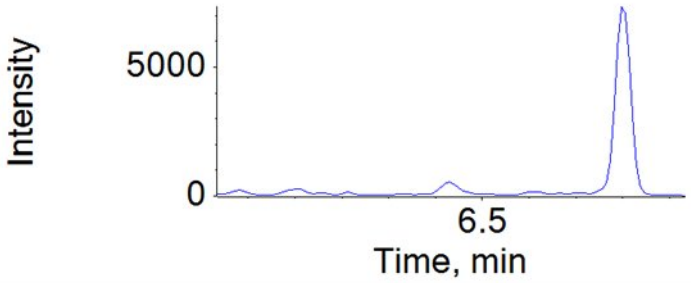
Component: PFTrDA
Primary Mass: 663.0 / 619.0



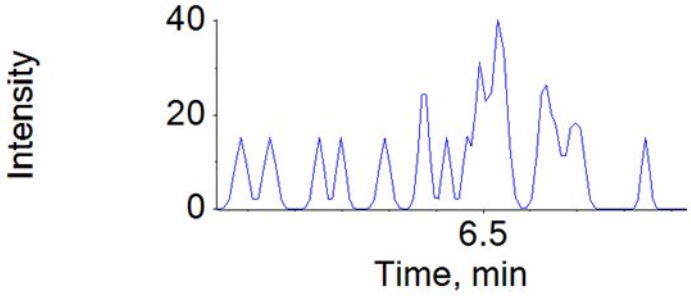
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



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

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

Result Table: 18311004 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881536			**Data File:**		18NOV08D-90.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-01-01 Grab Soil			**Acquis Date:**		2018-11-09T01:11:34
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	31			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.08000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

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	881543.9	728839.7	21	50	
13C2-PFOA	5.0	609519.4	491983.1	24	50	
13C4-PFOS	4.8	336148.5	255568.1	32	50	
13C2-PFDA	5.0	368261.3	315407.5	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	382544.4	13C3-PFBA	881543.9	0.434	8.611	5.898	68	50-150	
E13C5-PFHxA	640092.9	13C2-PFOA	609519.4	1.050	9.259	7.154	77	50-150	
E13C3-PFHxS	300585.4	13C2-PFOA	609519.4	0.493	8.759	6.556	75	50-150	
E13C4-PFHpA	509968.7	13C2-PFOA	609519.4	0.837	9.259	7.048	76	50-150	
E13C8-PFOA	883798.0	13C2-PFOA	609519.4	1.450	9.259	7.488	81	50-150	
E13C8-PFOS	278296.3	13C4-PFOS	336148.5	0.828	8.852	6.779	77	50-150	
E13C9-PFNA	457029.7	13C4-PFOS	336148.5	1.360	9.259	6.877	74	50-150	
E13C6-PFDA	578836.7	13C2-PFDA	368261.3	1.572	9.259	7.320	79	50-150	
Ed3-NMeFOSAA	64090.8	13C2-PFDA	368261.3	0.174	9.259	5.993	65	50-150	
E13C7-PFUnDA	252042.4	13C2-PFDA	368261.3	0.684	9.259	7.312	79	50-150	
Ed5-NEtFOSAA	51519.9	13C2-PFDA	368261.3	0.140	9.259	5.996	65	50-150	
E13C2-PFDoDA	555302.1	13C2-PFDA	368261.3	1.508	9.259	7.528	81	50-150	
E13C2-PFTeDA	369449.2	13C2-PFDA	368261.3	1.003	9.259	6.688	72	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

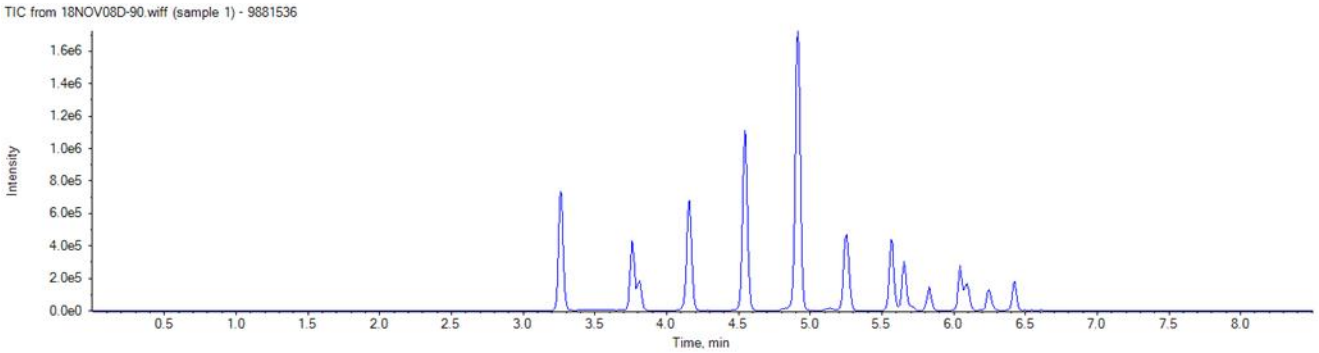
Analyte Quantitation Peak Table

Sample Name: 9881536 **Instrument Name:** LM27631 **File Name:** 18NOV08D-90.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.08000	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	382544.4	N/A	
PFHxA	4.16	1.000	958546.0		A	13C5-PFHxA	4.16	640092.9	1.498	11.893
PFHxS	4.55	1.000	87497.6		M	13C3-PFHxS	4.55	300585.4	0.291	2.732
PFHpA	4.54	1.000	1639597.5		A	13C4-PFHpA	4.55	509968.7	3.215	20.024
PFOA	4.91	1.000	2205707.7		A	13C8-PFOA	4.91	883798.0	2.496	26.023
PFOS	5.20	0.990	96546.3		M	13C8-PFOS	5.24	278296.3	0.347	3.331
PFNA	5.26	1.000	147736.3		A	13C9-PFNA	5.26	457029.7	0.323	2.237
PFDA	5.57	1.000	12469.6		M	13C6-PFDA	5.57	578836.7	0.022	0.219
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	64090.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	252042.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	51519.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	555302.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	555302.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	369449.2	N/A	

Total Ion Chromatogram

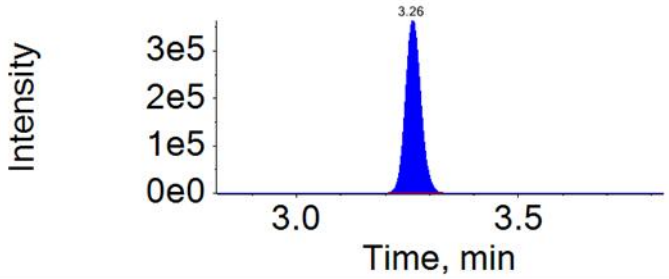


APPROVED
By JPT at 5:18 pm, 11/9/18

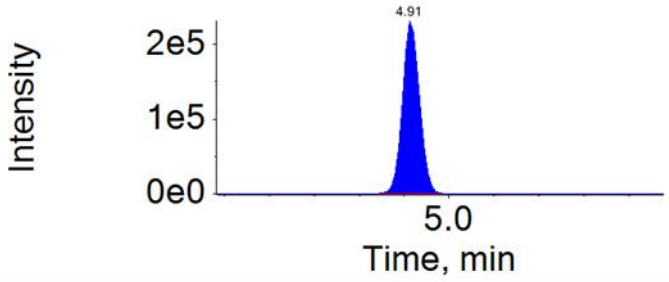
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

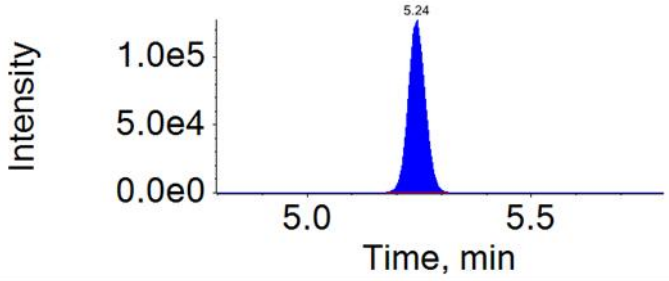
Injection Standard: 13C3-PFBA
216.0 / 172.0



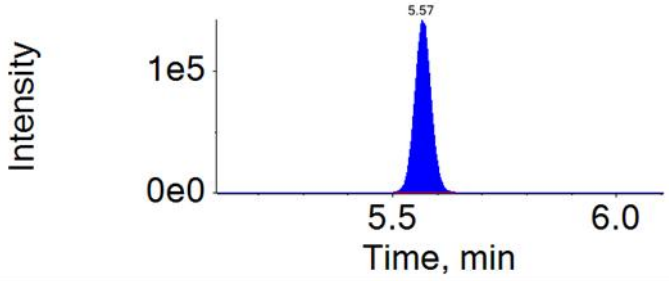
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

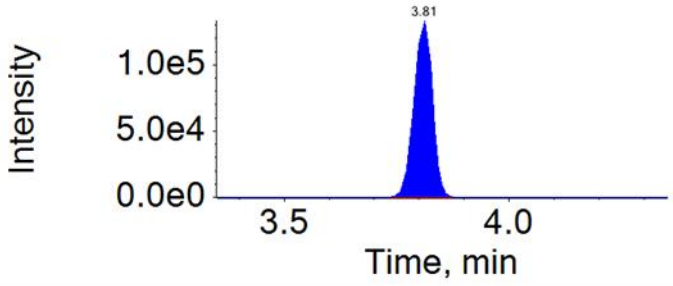


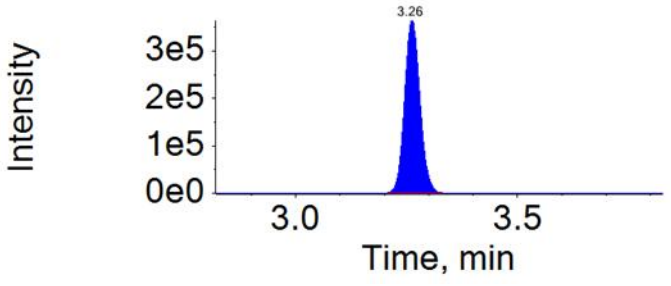
Injection Standard: 13C2-PFDA
515.0 / 470.0



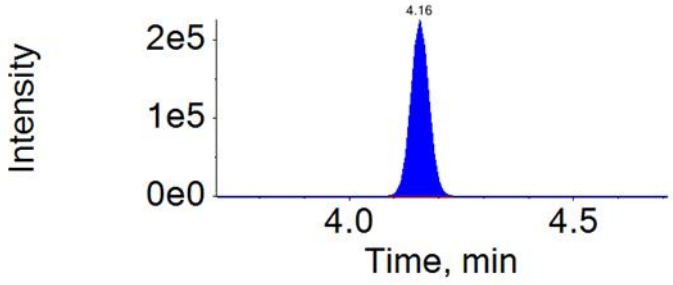
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

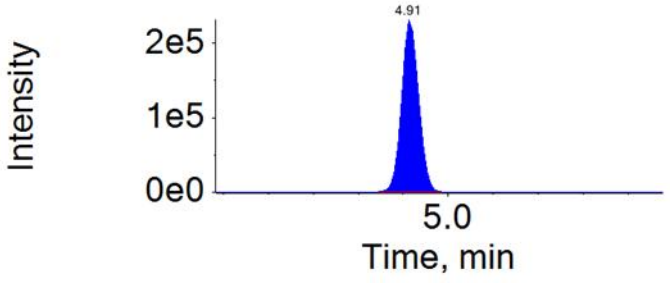
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



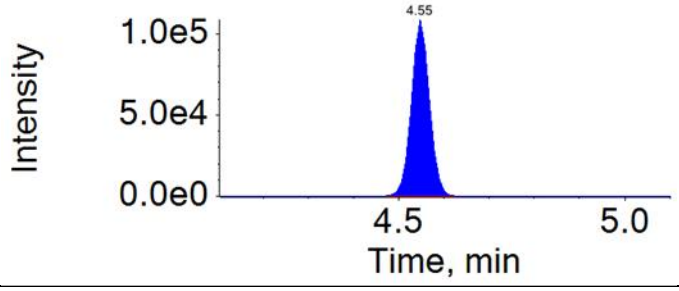


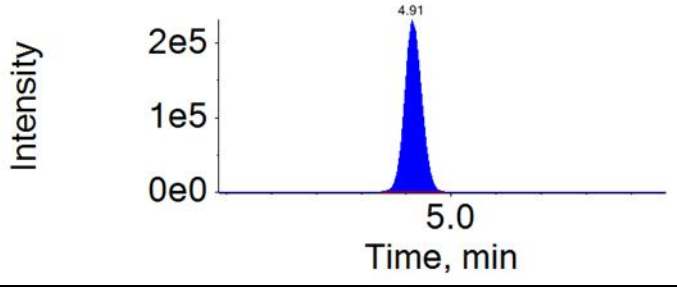
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



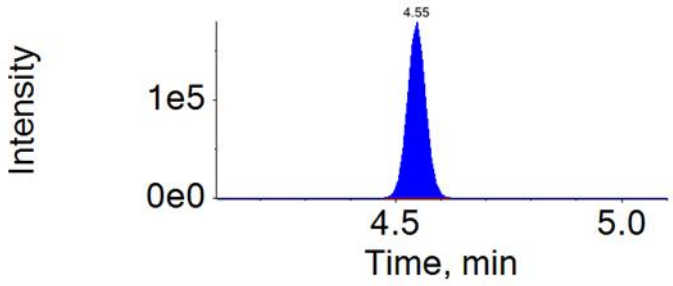


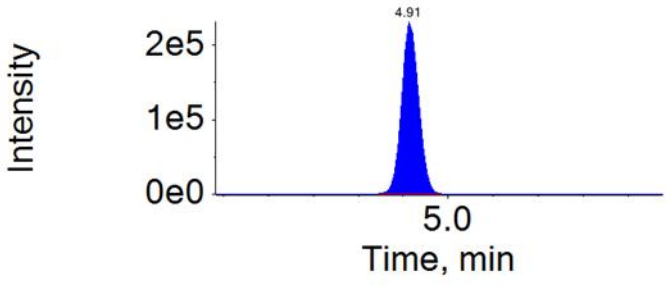
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





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

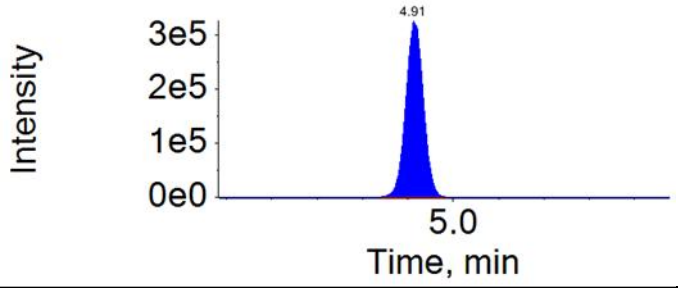
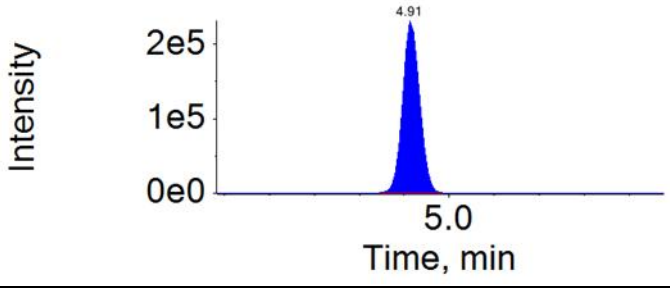


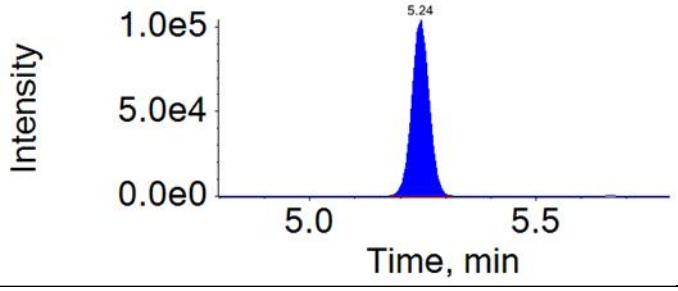
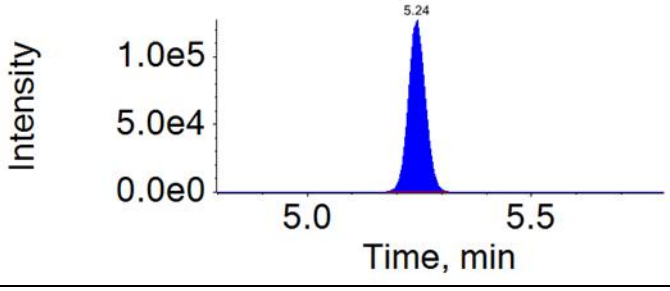


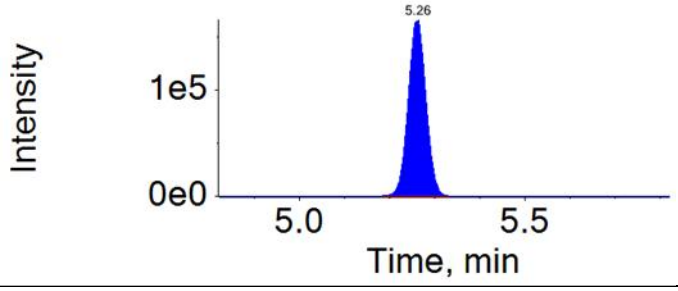
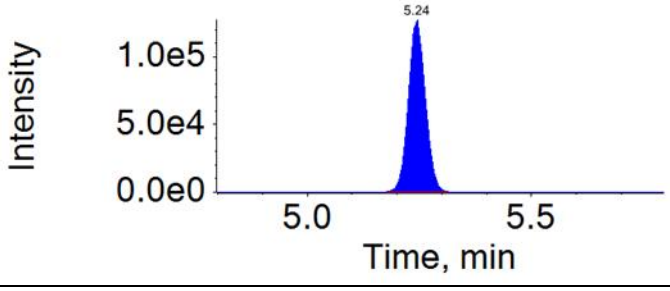
APPROVED
By JPT at 5:18 pm, 11/9/18

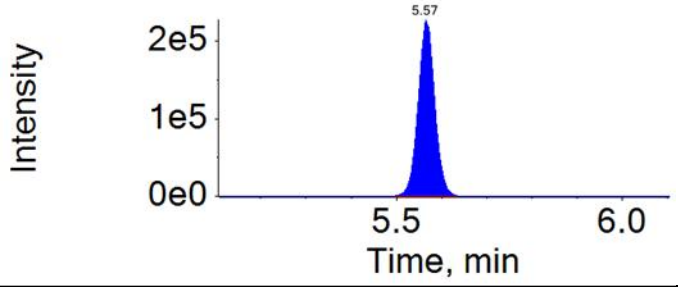
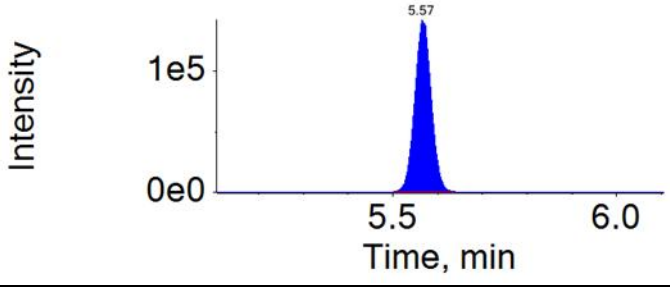
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

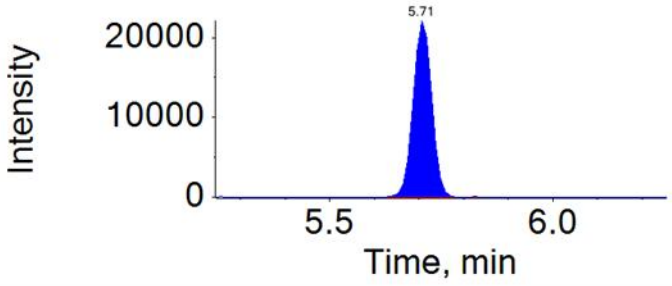
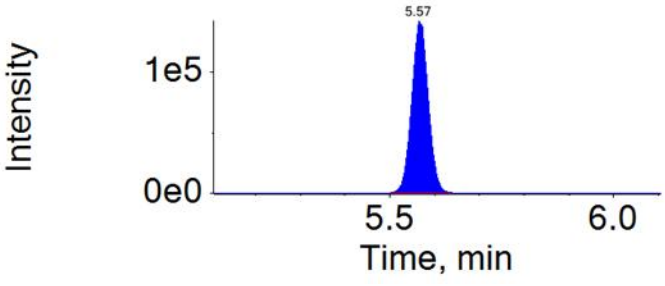
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

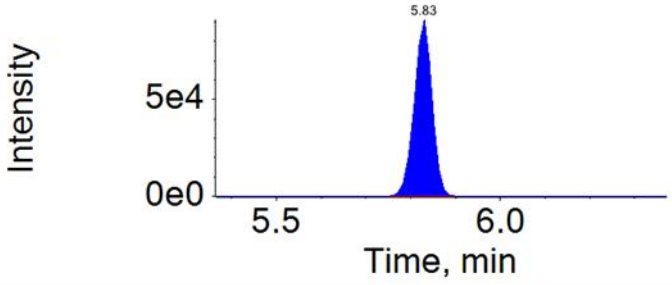
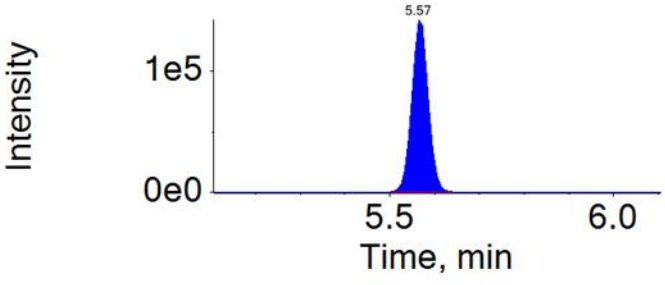
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

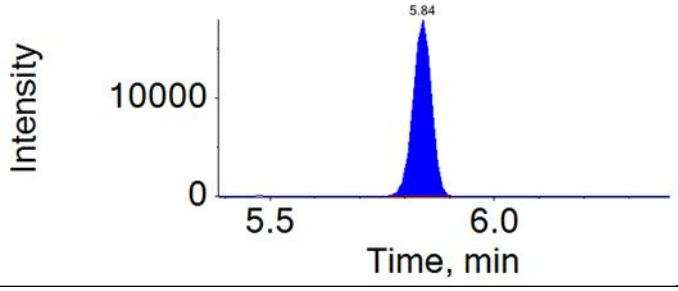
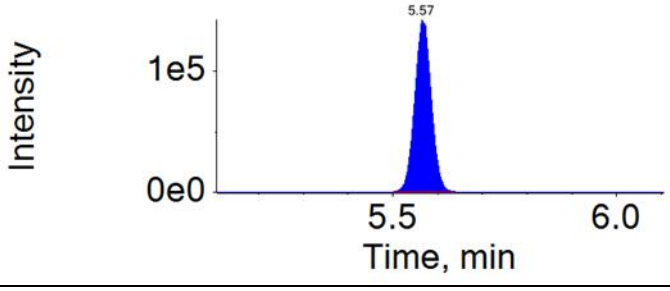
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

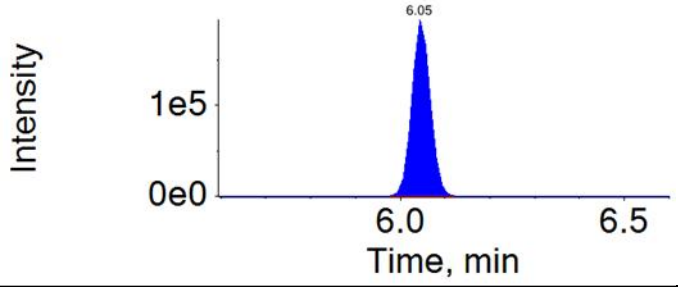
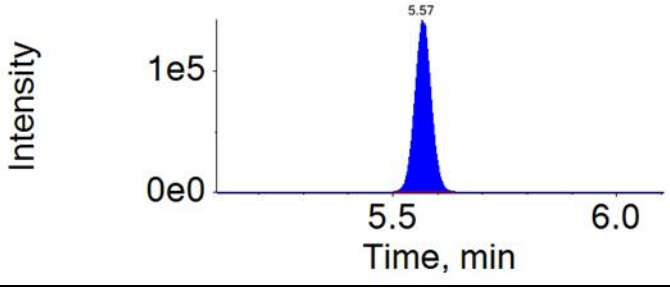
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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
	

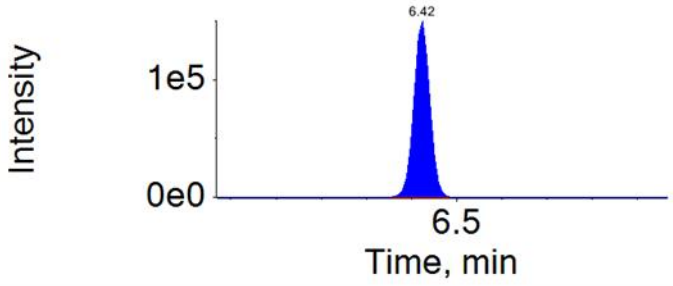
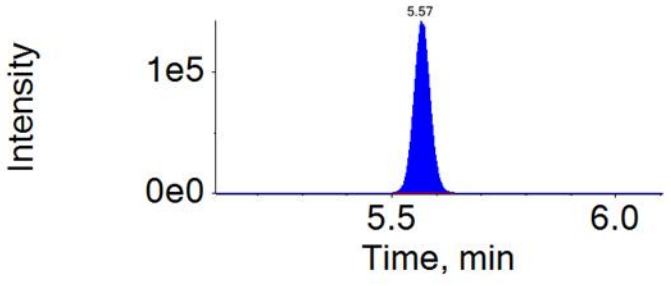
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

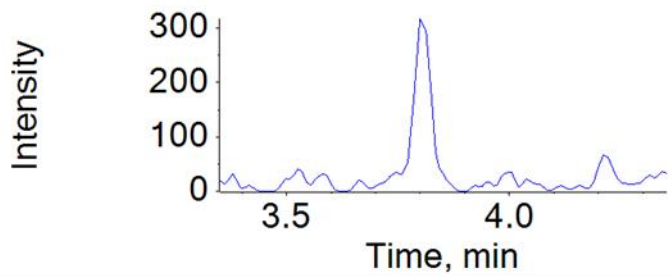
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

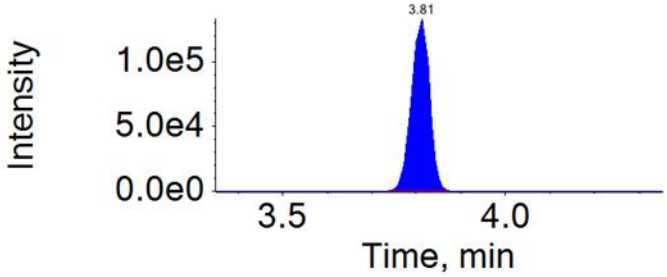
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

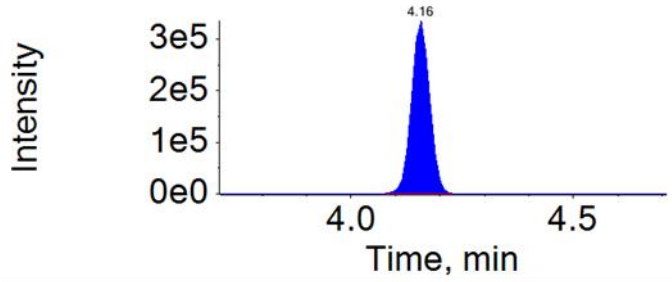
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

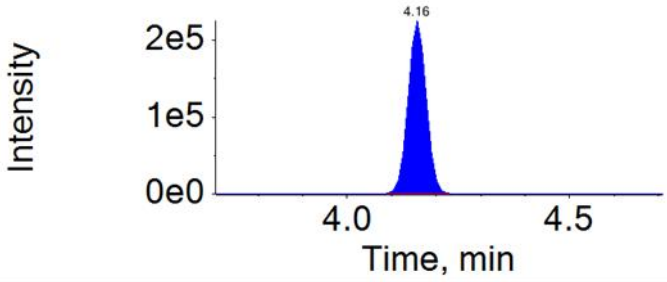
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



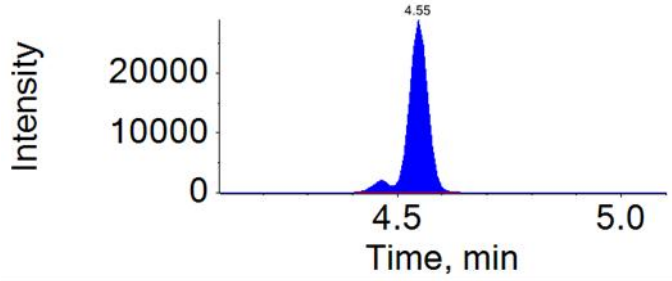


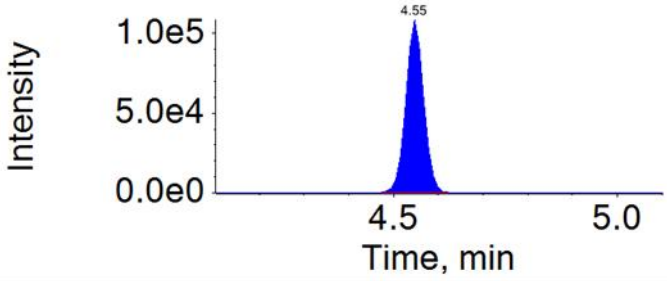
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



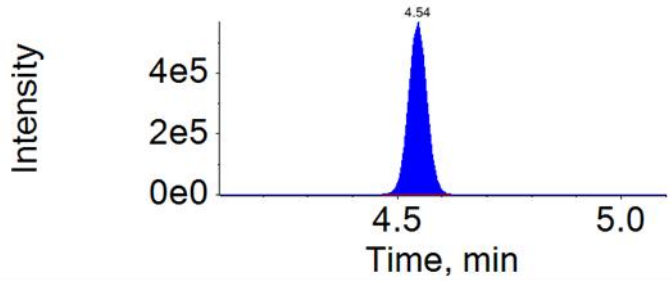


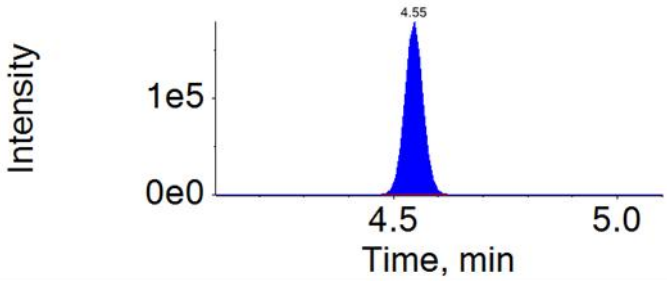
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

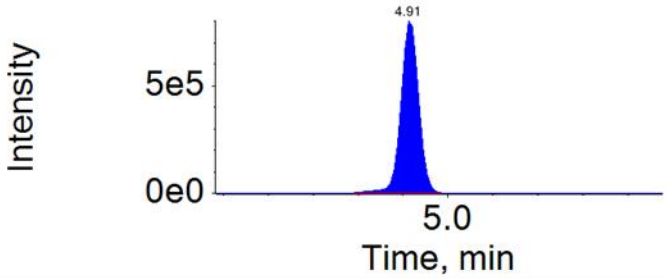
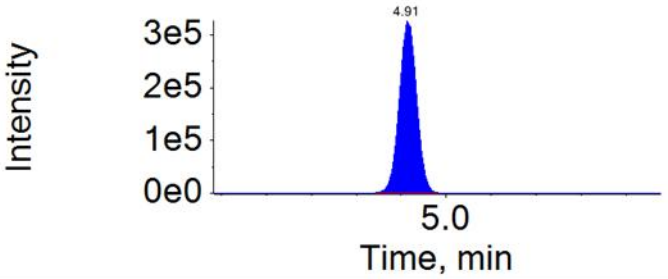


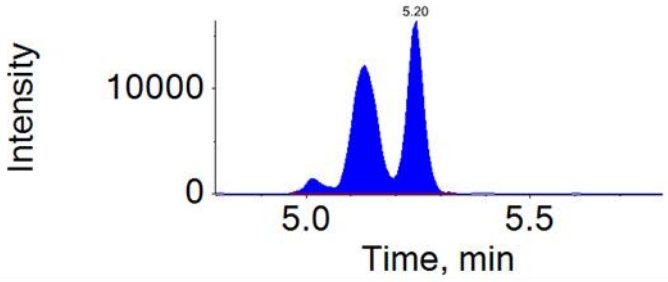
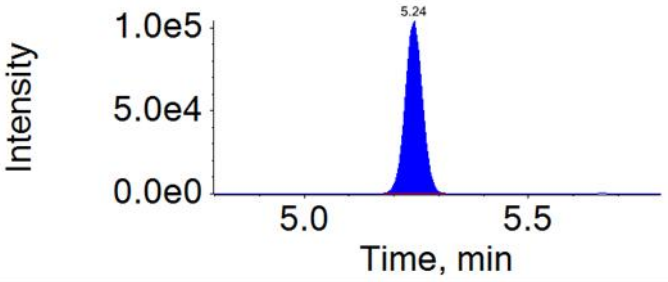


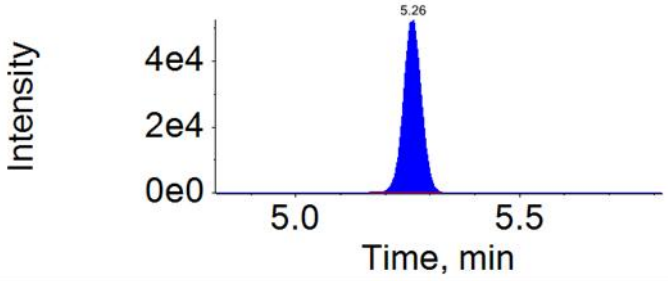
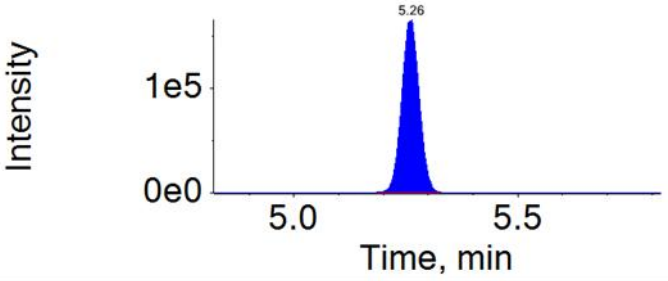
APPROVED
By JPT at 5:18 pm, 11/9/18

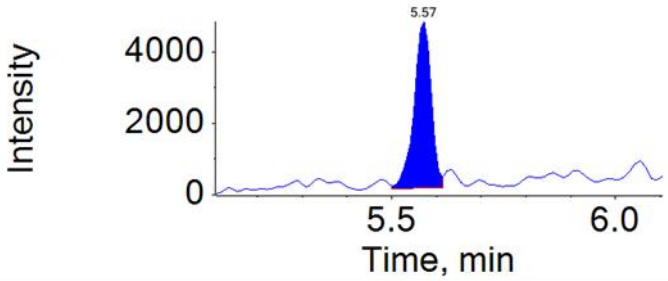
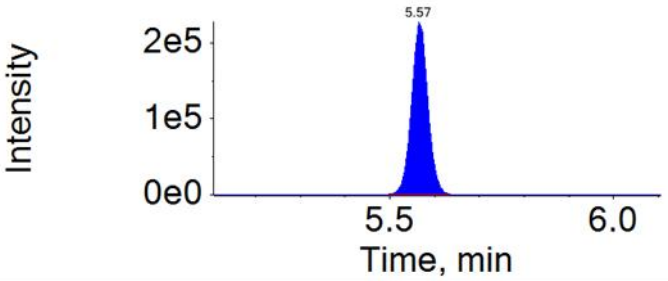
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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
	

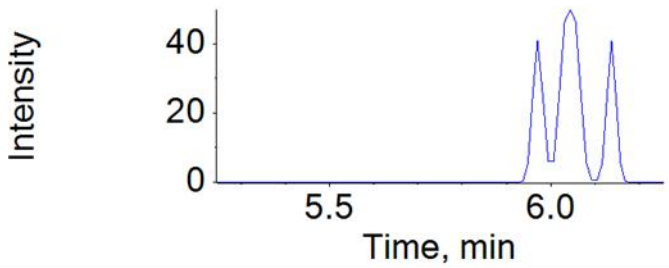
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

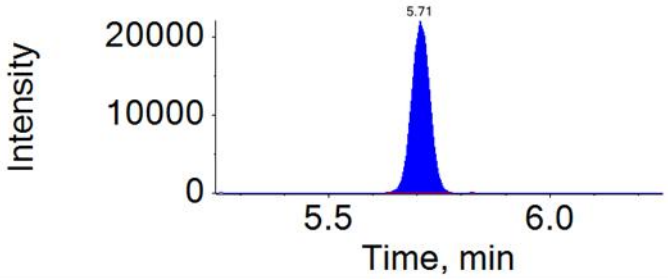
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REVIEWED
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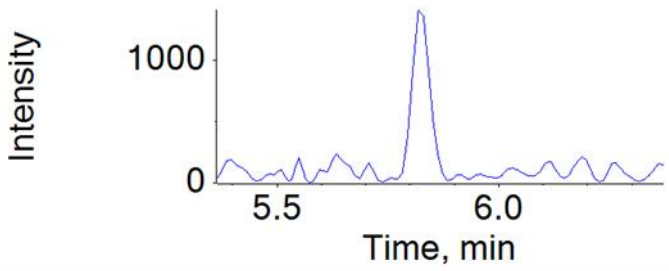
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

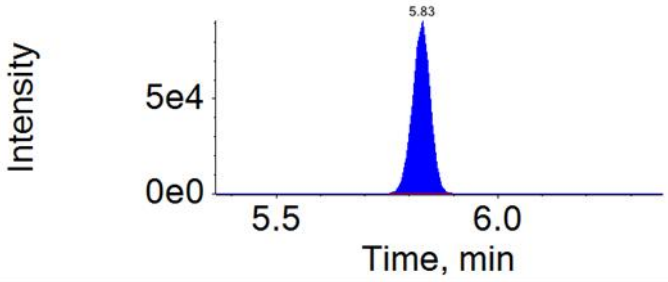
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



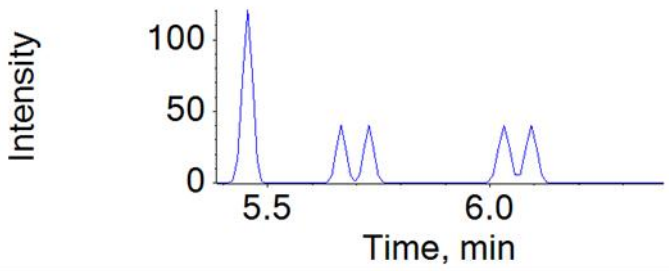


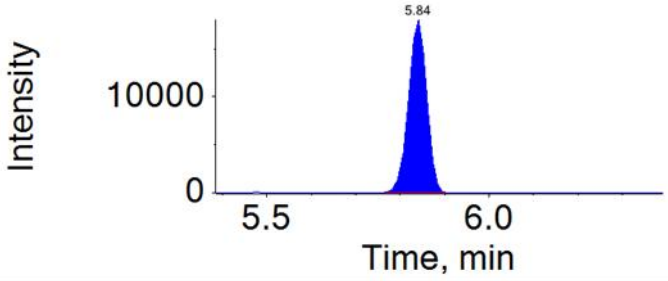
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



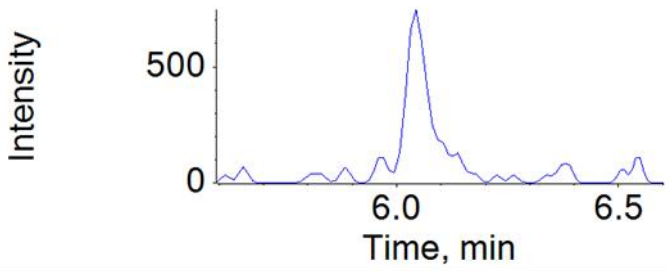


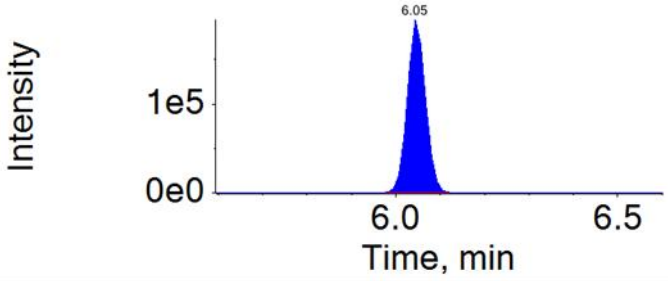
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



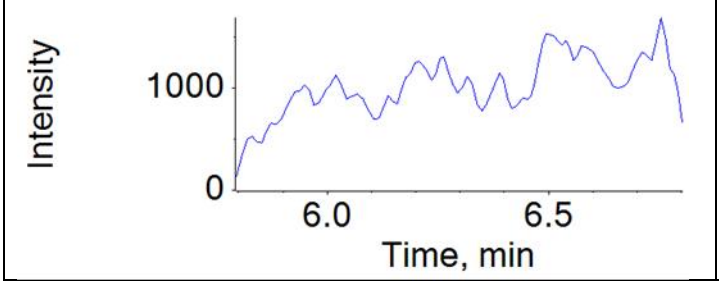


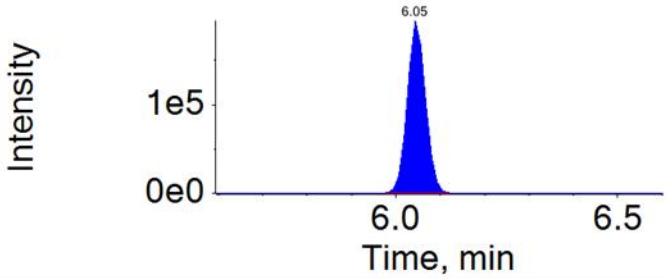
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

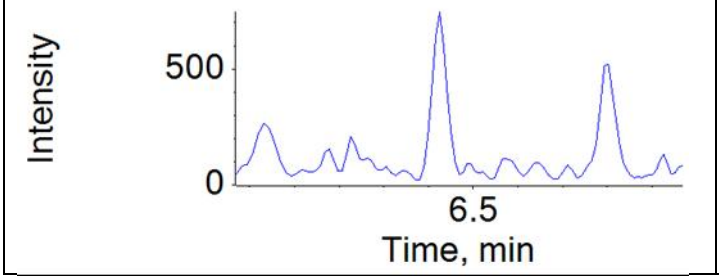
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

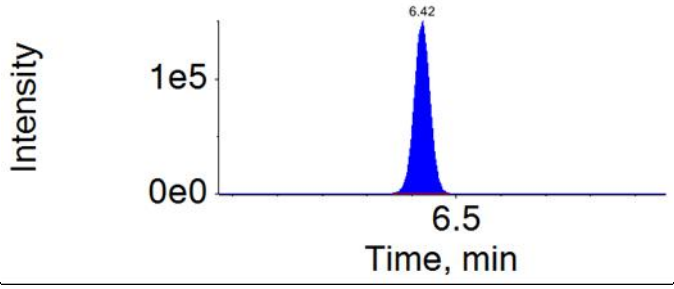
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



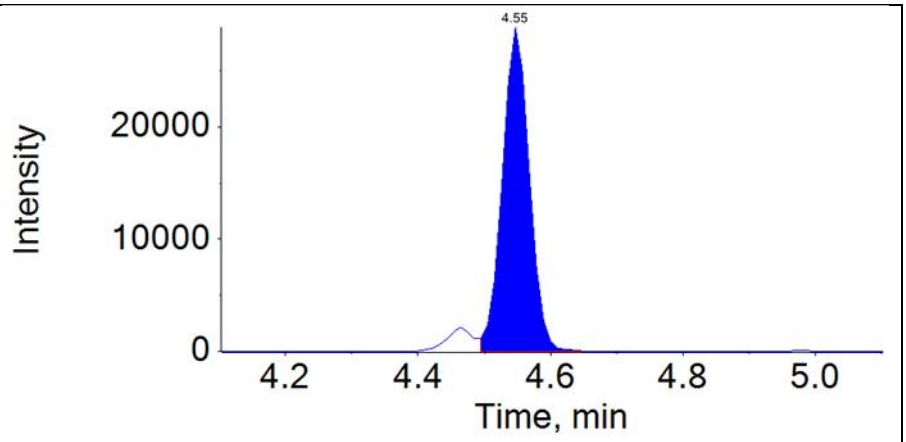


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

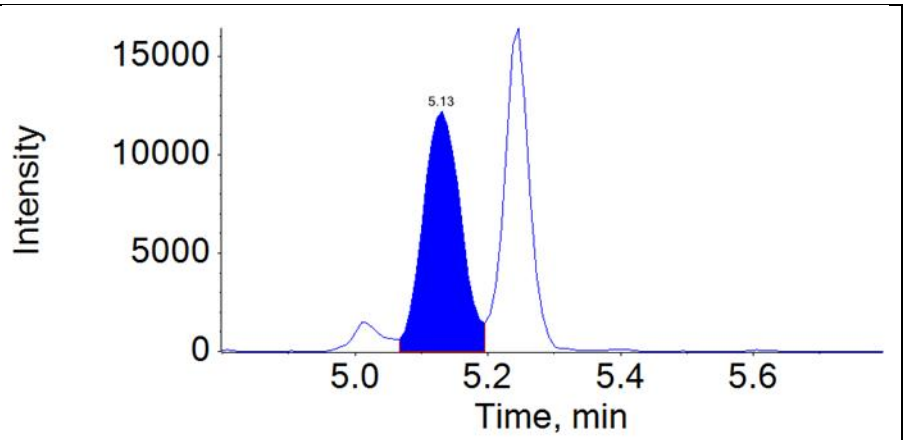
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
81543.9
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-90.wiff
Sample Name:
9881536



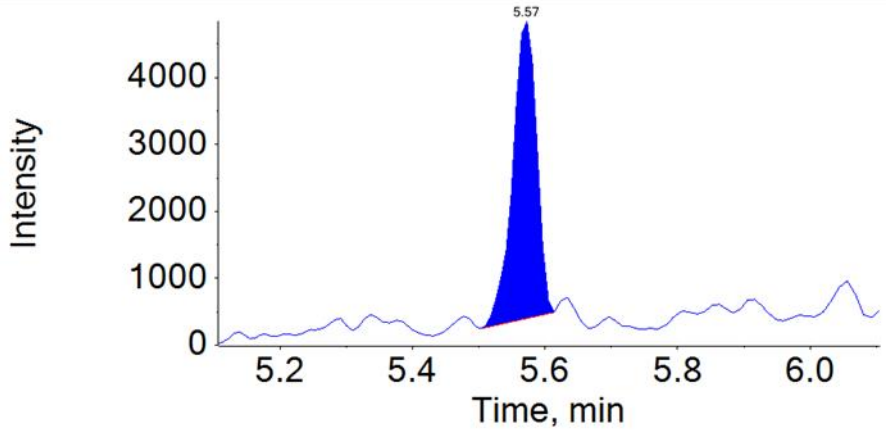
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.13
Peak Area:
48230.9
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-90.wiff
Sample Name:
9881536



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.57
Peak Area:
11236.6
Mass Range:
513.0 / 469.0
File Name:
18NOV08D-90.wiff
Sample Name:
9881536



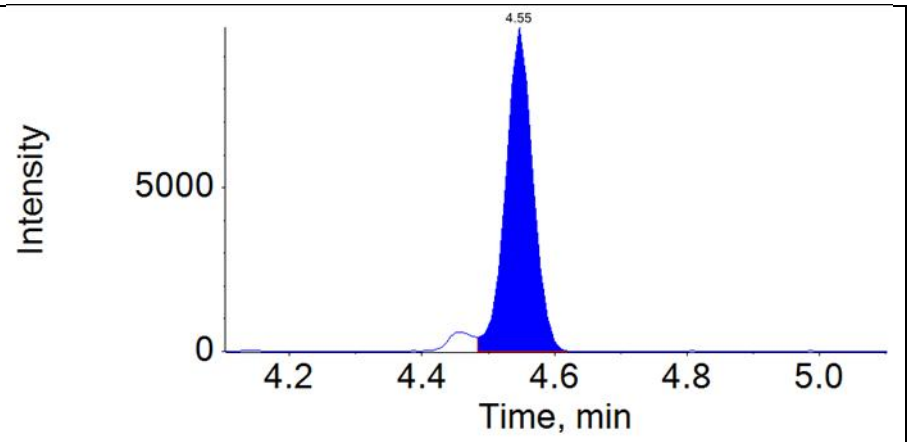
Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

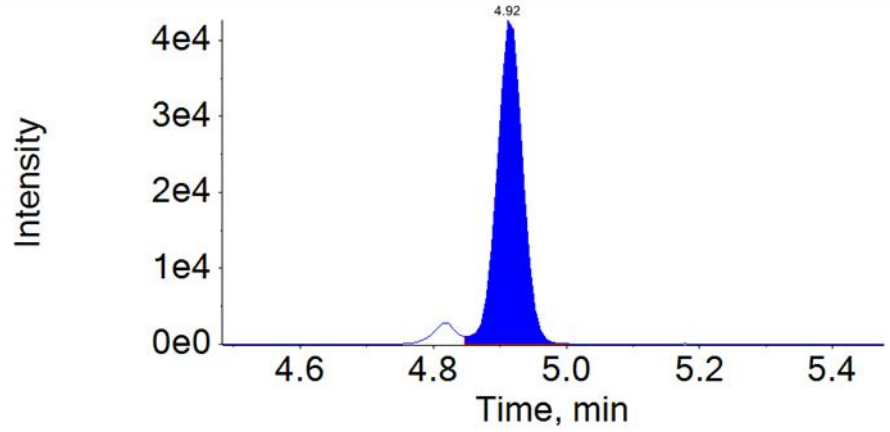
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
28109.5
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-90.wiff
Sample Name:
9881536



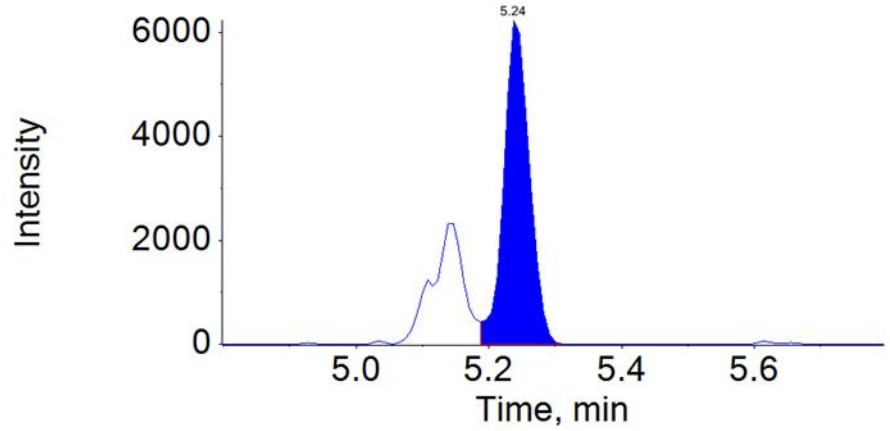
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
115912.7
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-90.wiff
Sample Name:
9881536



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
16752.1
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-90.wiff
Sample Name:
9881536



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

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

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

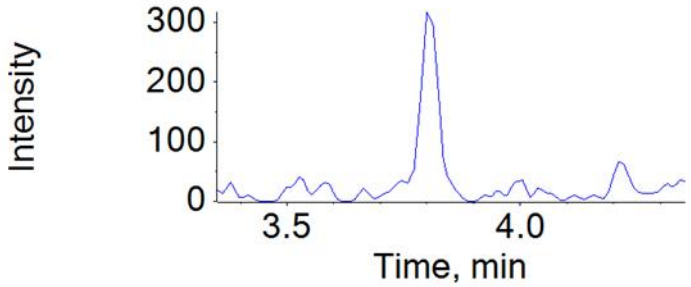
Sample Name: 9881536 **Instrument Name:** LM27631 **File Name:** 18NOV08D-90.wiff

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	4.16	1.00	958546.0	A	N/A	1.0000			
PFHxA_2	4.16	1.00	10535.2	A	N/A	0.0110	-4	50	
PFHxS	4.55	1.00	87497.6	M	N/A	1.0000			
PFHxS_2	4.55	1.00	29666.1	M	N/A	0.3391	-5	50	
PFHpA	4.54	1.00	1639597.5	A	N/A	1.0000			
PFHpA_2	4.54	1.00	86021.0	A	N/A	0.0525	-9	50	
PFOA	4.91	1.00	2205707.7	A	N/A	1.0000			
PFOA_2	4.92	1.00	123164.6	M	N/A	0.0558	-12	50	
PFOS	5.20	0.99	96546.3	M	N/A	1.0000			
PFOS_2	5.24	1.00	24644.8	M	N/A	0.2553	-27	50	
PFNA	5.26	1.00	147736.3	A	N/A	1.0000			
PFNA_2	5.26	1.00	2464.8	A	N/A	0.0167	-19	50	
PFDA	5.57	1.00	12469.6	M	N/A	1.0000			
PFDA_2	5.58	1.00	93.3	A	N/A	0.0075	32	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	5.83	0.96	225.9	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	

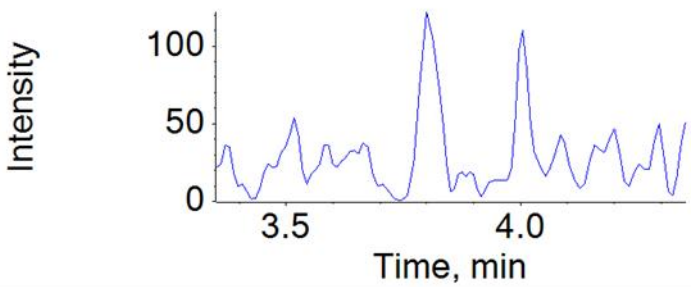
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

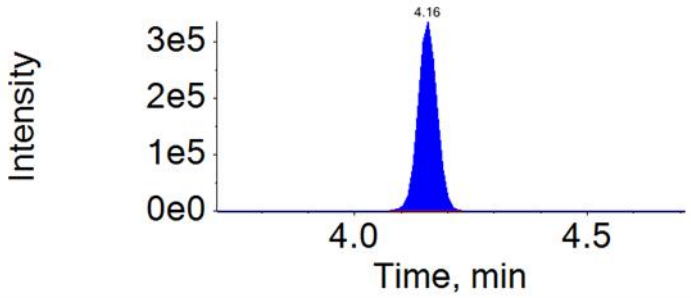
Component: PFBS
Primary Mass: 299.0 / 80.0



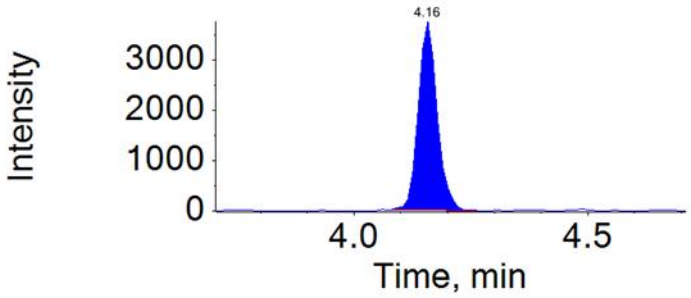
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



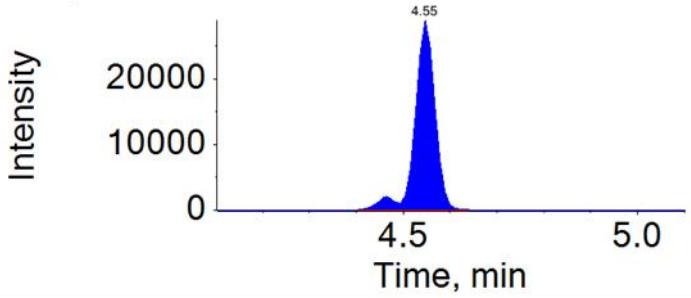
Component: PFHxA
Primary Mass: 313.0 / 269.0



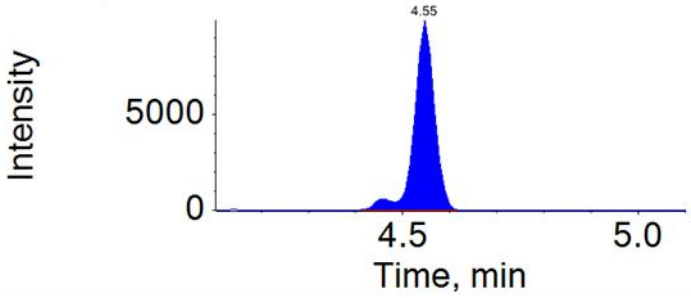
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



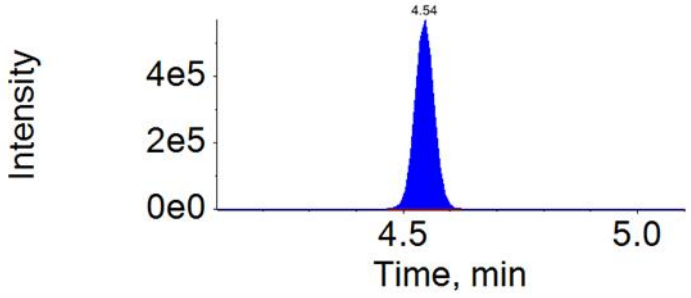
Component: PFHxS
Primary Mass: 399.0 / 80.0



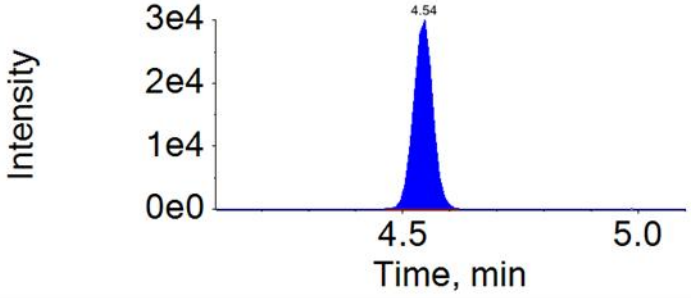
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



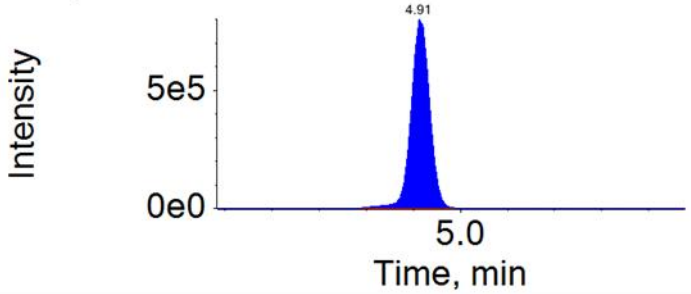
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



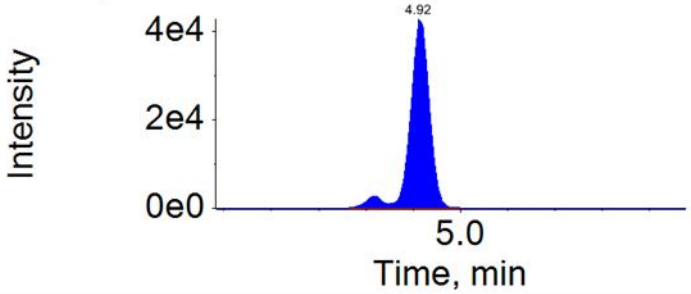
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

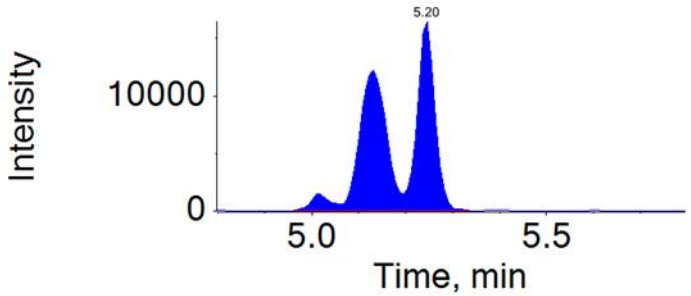
Component: PFOA
Primary Mass: 413.0 / 369.0



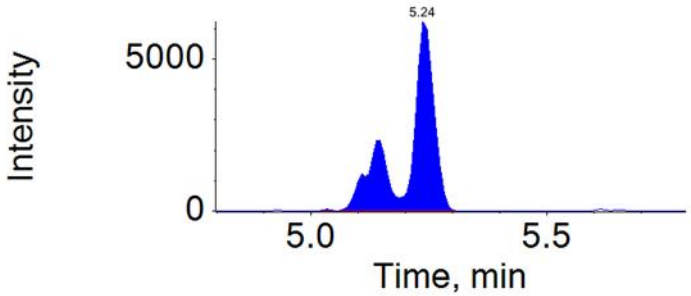
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



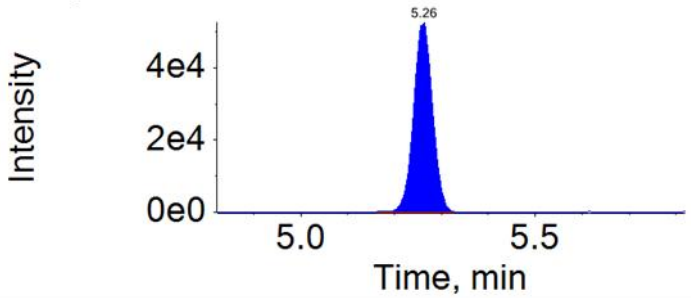
Component: PFOS
Primary Mass: 499.0 / 80.0



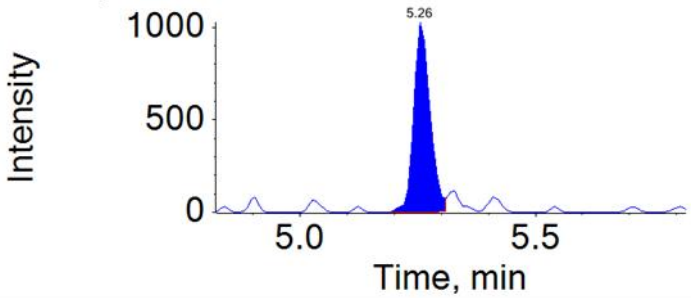
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Secondary Mass: 499.0 / 99.0



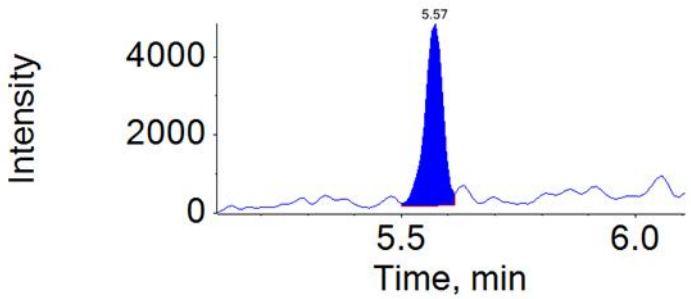
Component: PFNA
Primary Mass: 463.0 / 419.0



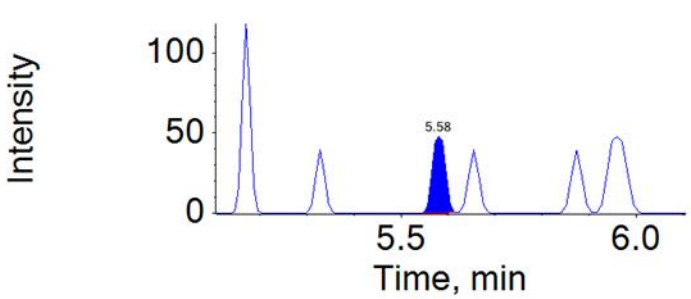
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



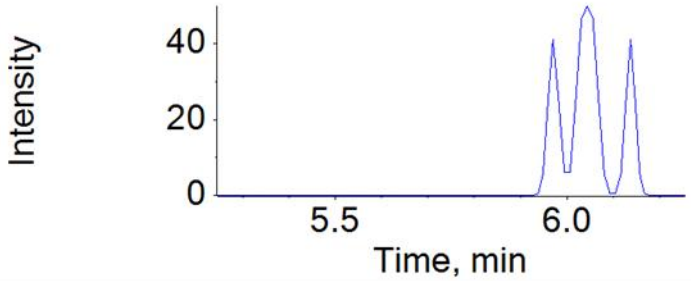
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



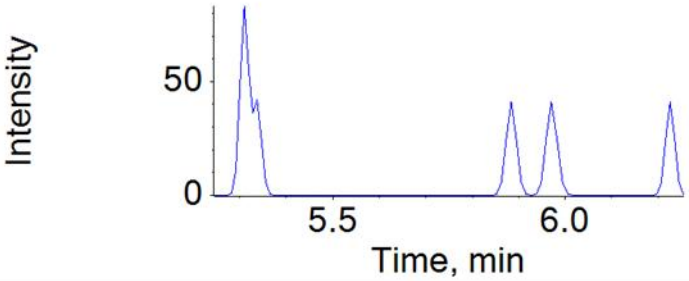
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REVIEWED
By umar at 4:40 pm, 11/12/18

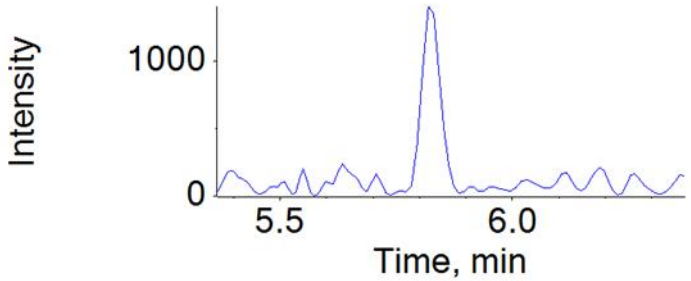
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



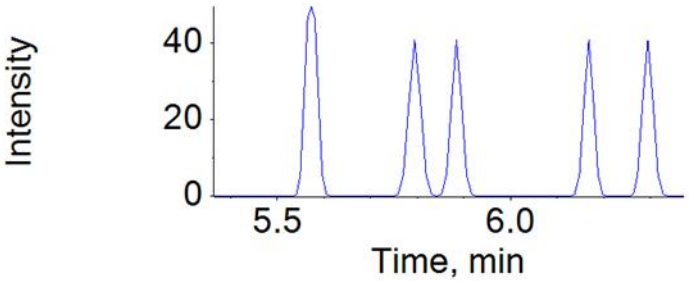
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



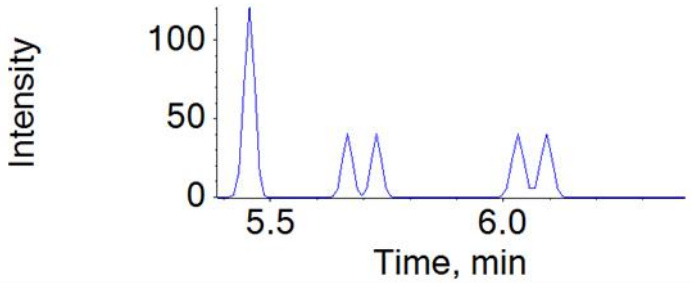
Component: PFUnDA
Primary Mass: 563.0 / 519.0



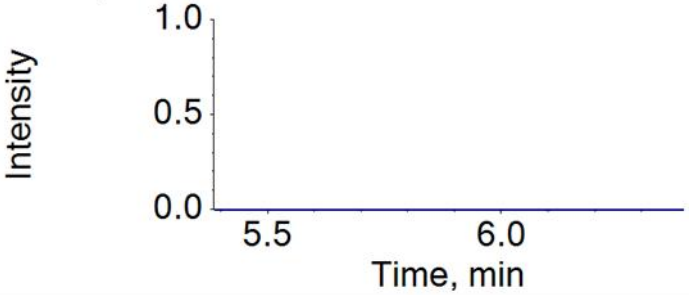
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



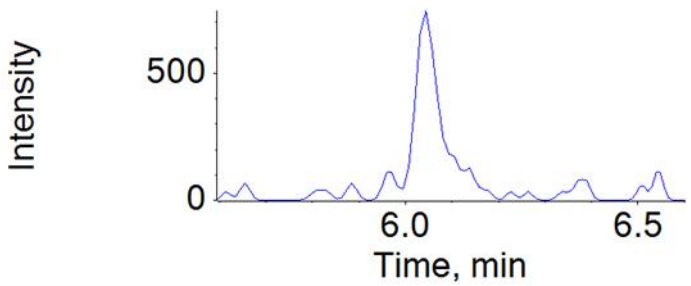
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



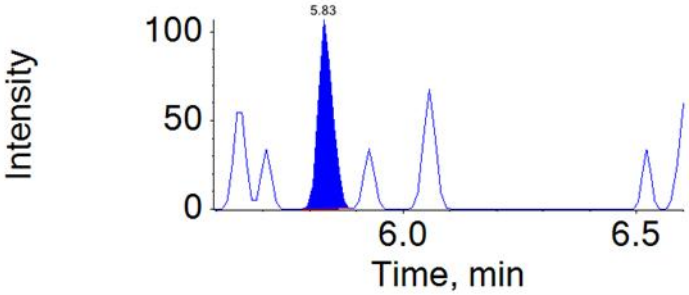
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



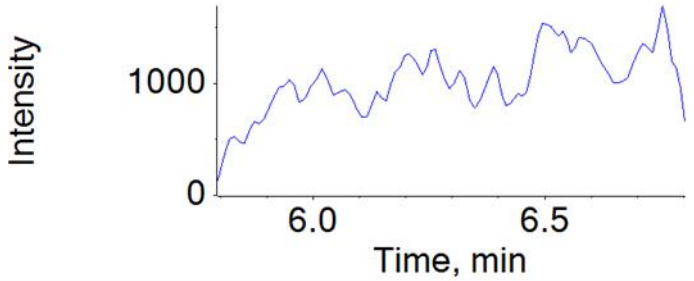
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



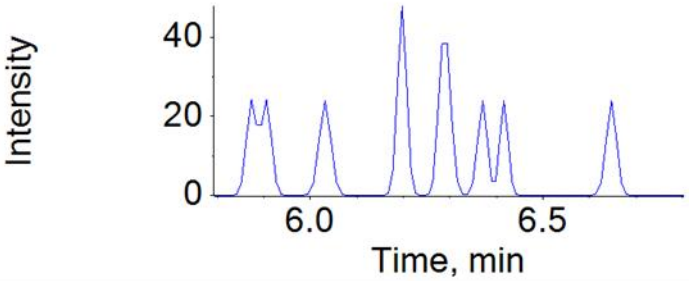
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

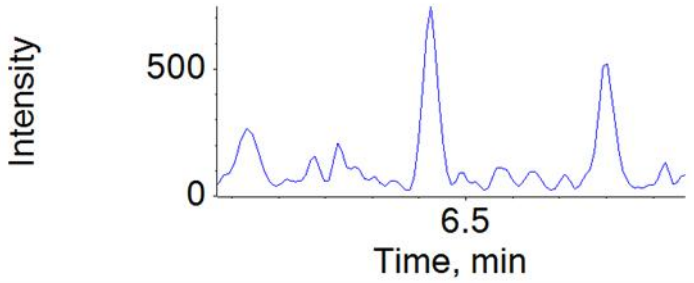
Component: PFTrDA
Primary Mass: 663.0 / 619.0



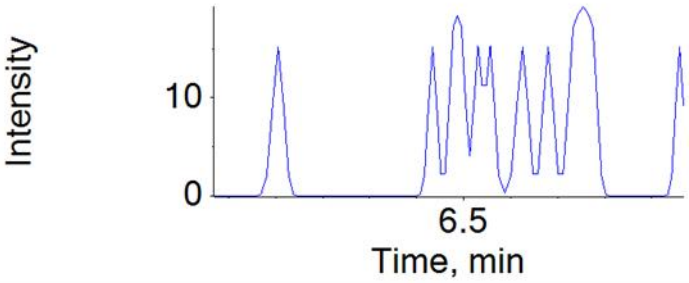
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

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

Result Table: 18311004 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881537BKG			**Data File:**		18NOV08D-91.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-01-03 Grab Soil			**Acquis Date:**		2018-11-09T01:20:35
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	32			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
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: 18NOV08D-05

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	873490.6	728839.7	20	50	
13C2-PFOA	5.0	623017.9	491983.1	27	50	
13C4-PFOS	4.8	317807.3	255568.1	24	50	
13C2-PFDA	5.0	377444.0	315407.5	20	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	368068.6	13C3-PFBA	873490.6	0.421	8.942	5.947	67	50-150	
E13C5-PFHxA	586478.6	13C2-PFOA	623017.9	0.941	9.615	6.659	69	50-150	
E13C3-PFHxS	283397.1	13C2-PFOA	623017.9	0.455	9.096	6.280	69	50-150	
E13C4-PFHpA	449618.5	13C2-PFOA	623017.9	0.722	9.615	6.313	66	50-150	
E13C8-PFOA	824262.4	13C2-PFOA	623017.9	1.323	9.615	7.095	74	50-150	
E13C8-PFOS	250473.6	13C4-PFOS	317807.3	0.788	9.192	6.702	73	50-150	
E13C9-PFNA	417691.0	13C4-PFOS	317807.3	1.314	9.615	6.904	72	50-150	
E13C6-PFDA	548807.7	13C2-PFDA	377444.0	1.454	9.615	7.032	73	50-150	
Ed3-NMeFOSAA	62026.7	13C2-PFDA	377444.0	0.164	9.615	5.877	61	50-150	
E13C7-PFUnDA	232589.9	13C2-PFDA	377444.0	0.616	9.615	6.836	71	50-150	
Ed5-NEtFOSAA	46754.7	13C2-PFDA	377444.0	0.124	9.615	5.513	57	50-150	
E13C2-PFDoDA	478592.4	13C2-PFDA	377444.0	1.268	9.615	6.574	68	50-150	
E13C2-PFTeDA	339935.3	13C2-PFDA	377444.0	0.901	9.615	6.235	65	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

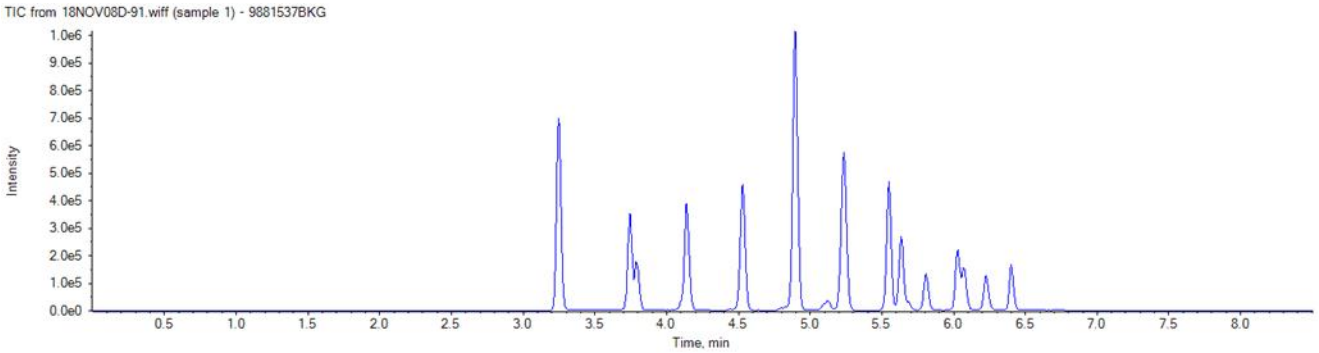
Analyte Quantitation Peak Table

Sample Name: 9881537BKG **Instrument Name:** LM27631 **File Name:** 18NOV08D-91.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	3.79	368068.6	N/A	
PFHxA	4.14	1.000	275991.9		A	13C5-PFHxA	4.14	586478.6	0.471	3.881
PFHxS	4.53	1.000	102896.8		M	13C3-PFHxS	4.53	283397.1	0.363	3.539
PFHpA	4.53	1.000	224028.3		A	13C4-PFHpA	4.53	449618.5	0.498	3.223
PFOA	4.90	1.000	783391.6		A	13C8-PFOA	4.90	824262.4	0.950	10.291
PFOS	5.22	1.000	254653.5		M	13C8-PFOS	5.23	250473.6	1.017	10.138
PFNA	5.24	1.000	340933.5		A	13C9-PFNA	5.24	417691.0	0.816	5.866
PFDA	5.55	1.000	79728.6		A	13C6-PFDA	5.55	548807.7	0.145	1.537
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	62026.7	N/A	
PFUnDA	5.81	1.000	22909.1		A	13C7-PFUnDA	5.81	232589.9	0.098	0.543
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	46754.7	N/A	
PFDoDA	6.03	1.000	12556.0		A	13C2-PFDoDA	6.03	478592.4	0.026	0.273
PFTrDA	6.22	1.030	5431.6		A	13C2-PFDoDA	6.03	478592.4	0.011	0.138
PFTeDA	6.41	1.000	2963.1		M	13C2-PFTeDA	6.40	339935.3	0.009	0.098

Total Ion Chromatogram

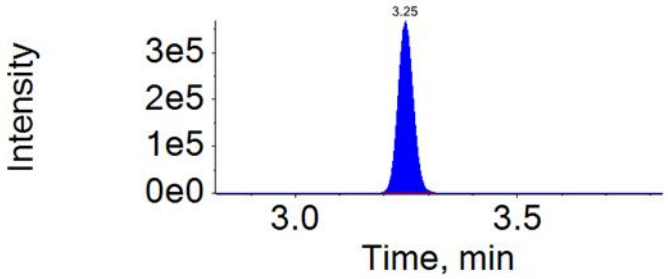


APPROVED
By JPT at 5:18 pm, 11/9/18

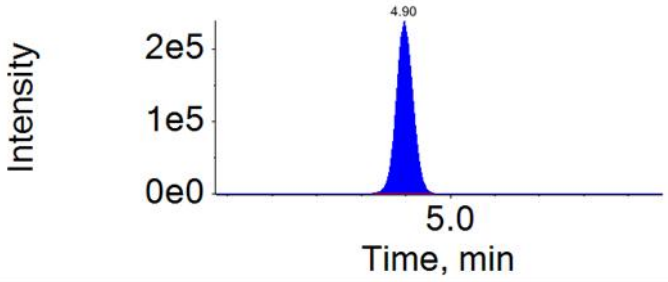
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

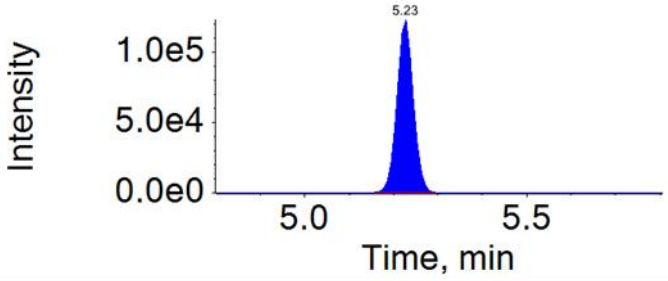
Injection Standard: 13C3-PFBA
216.0 / 172.0



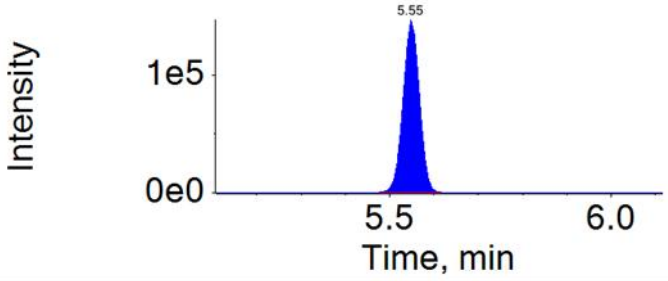
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



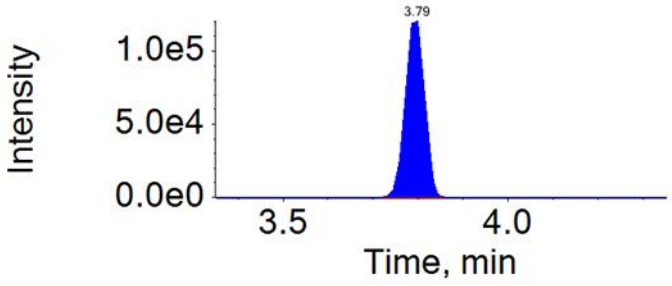
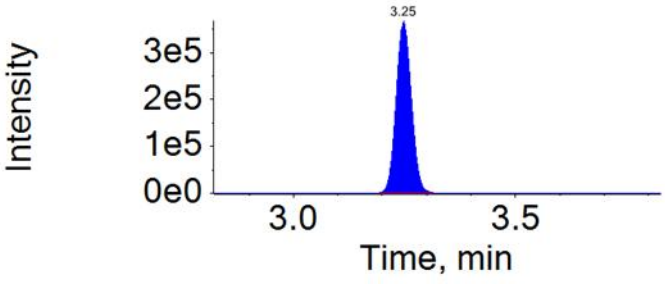
Injection Standard: 13C2-PFDA
515.0 / 470.0

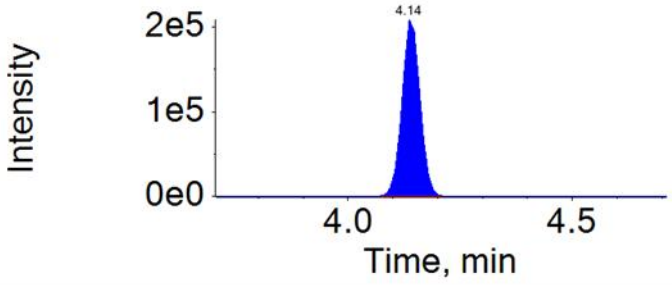
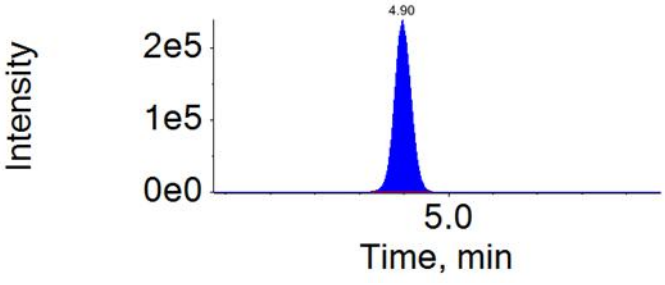


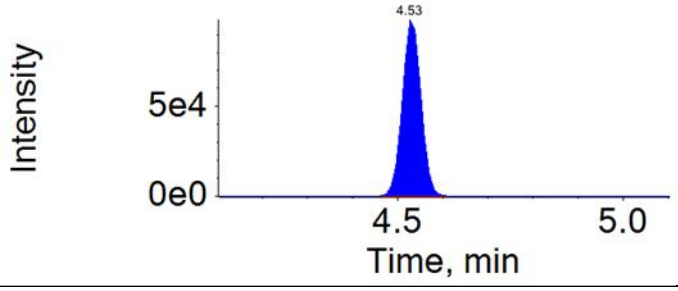
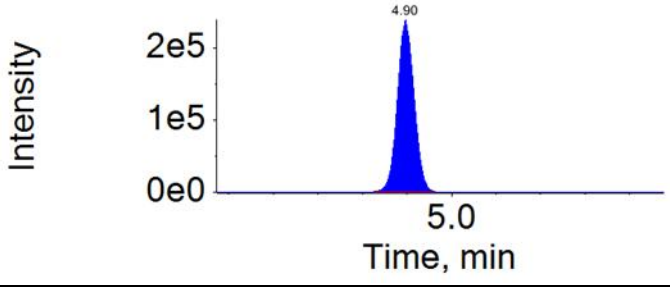
APPROVED
By JPT at 5:18 pm, 11/9/18

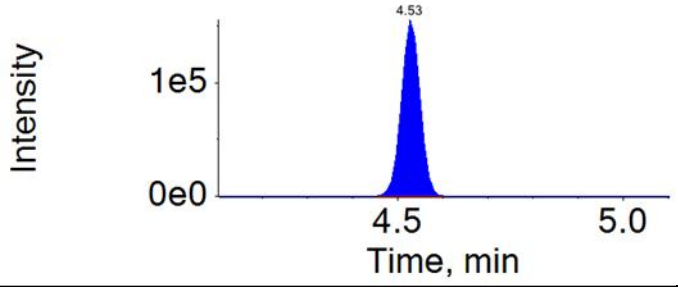
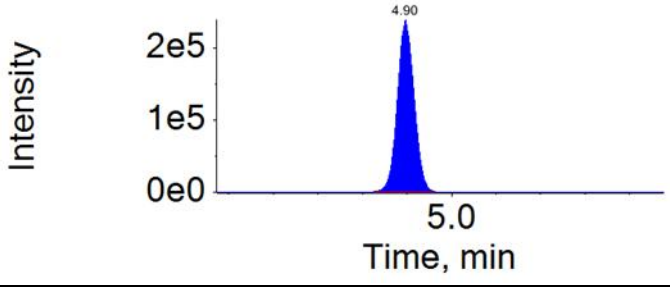
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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
	

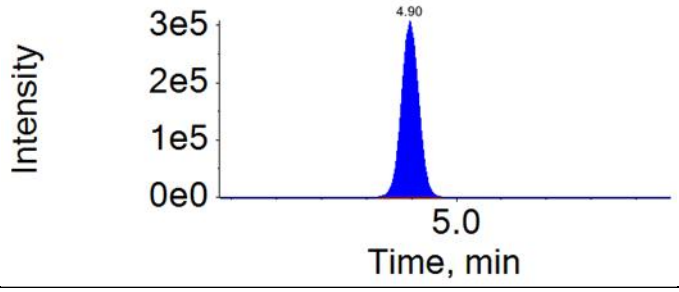
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

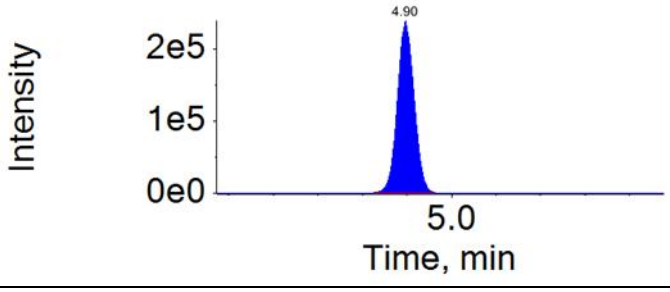
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

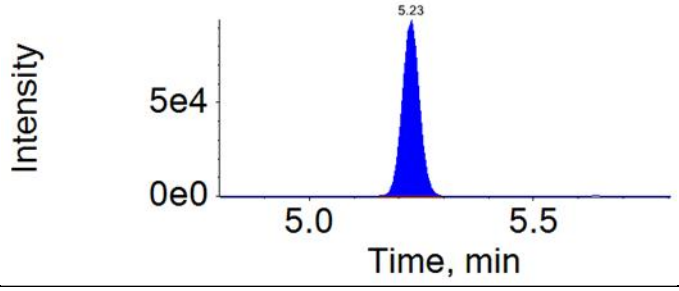
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

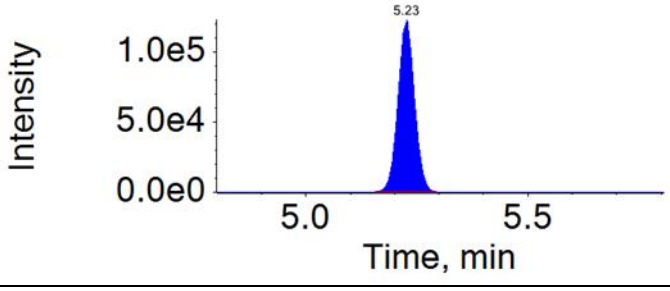
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



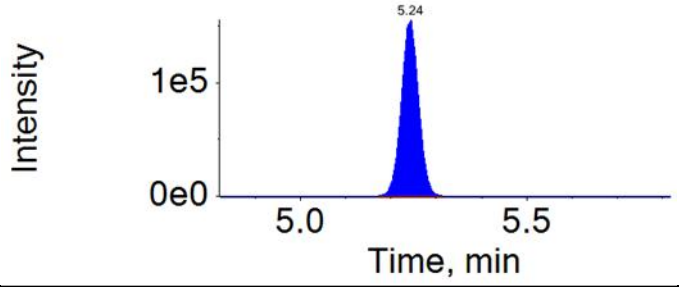


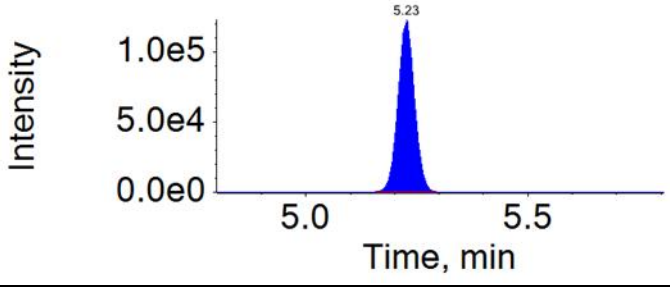
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



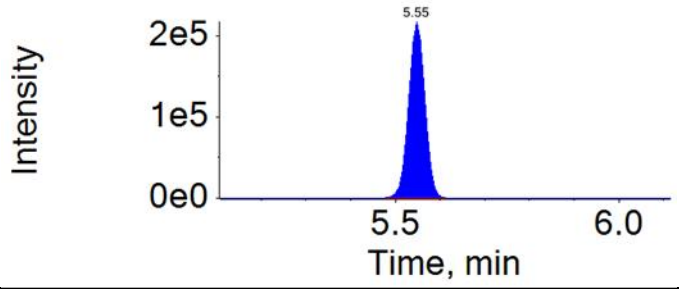


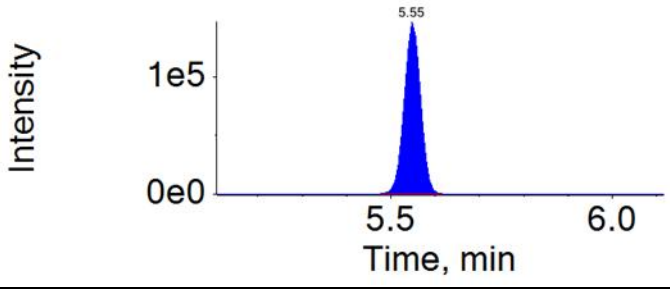
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

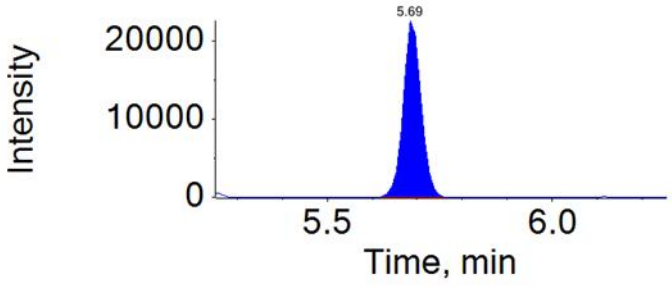
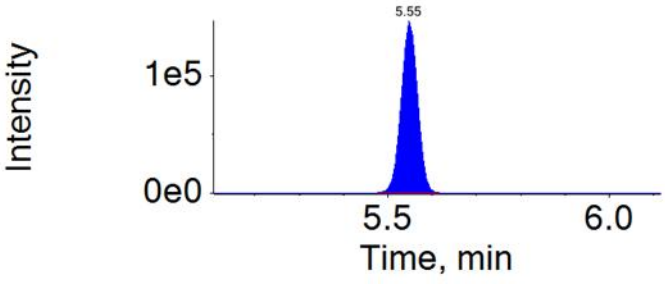


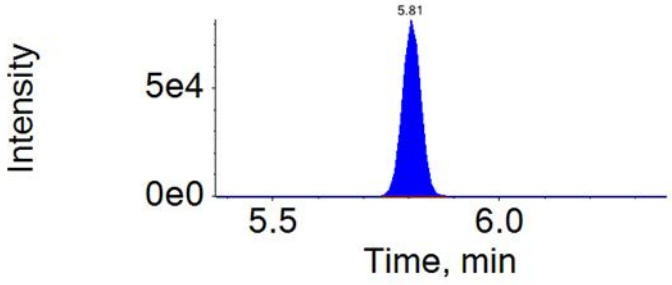
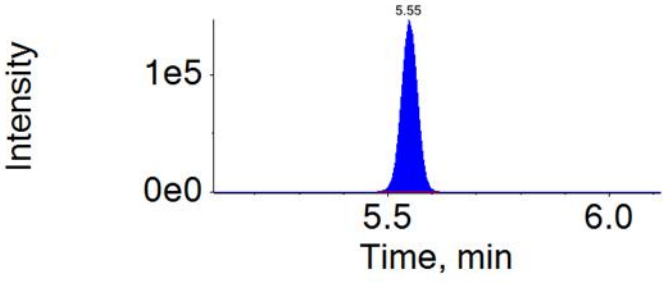


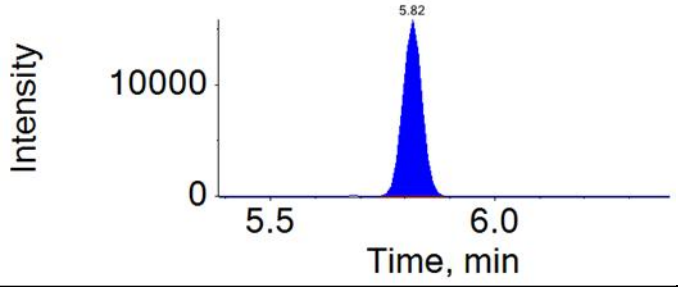
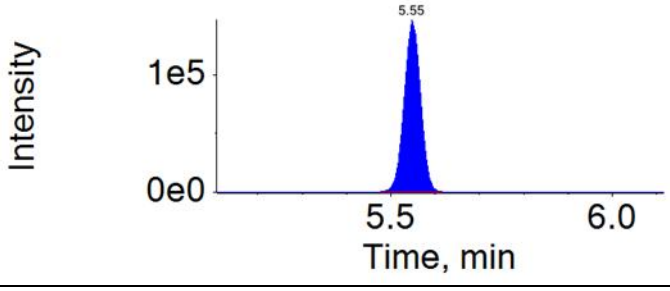
APPROVED
By JPT at 5:18 pm, 11/9/18

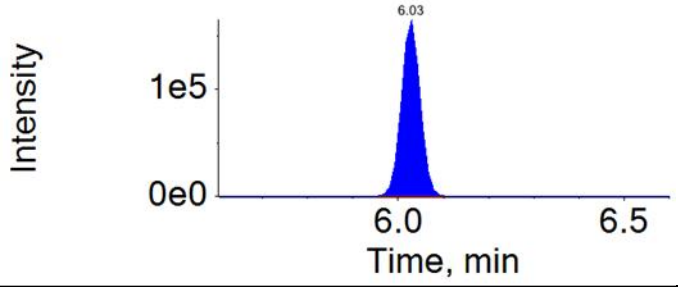
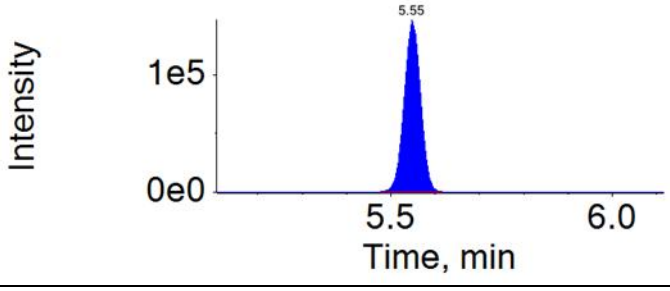
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

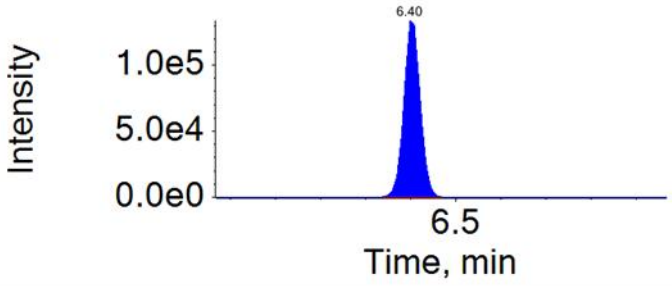
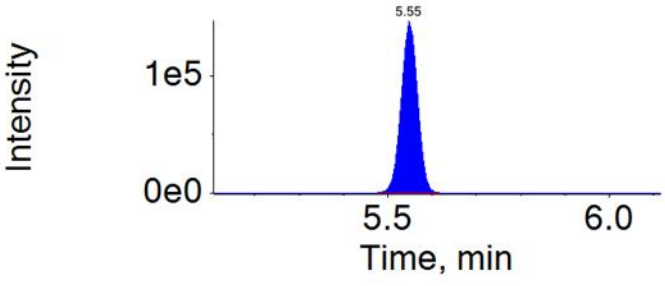
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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
	

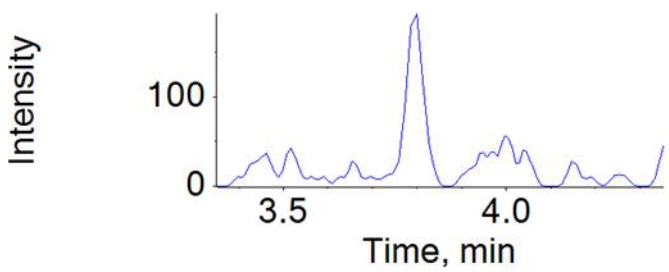
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

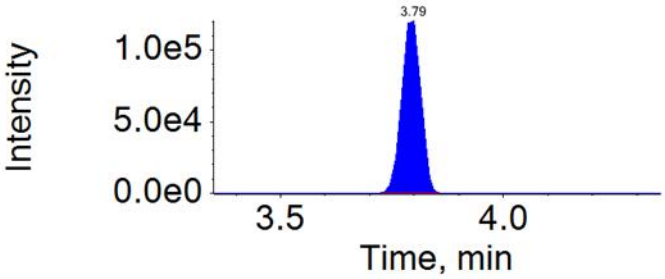
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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

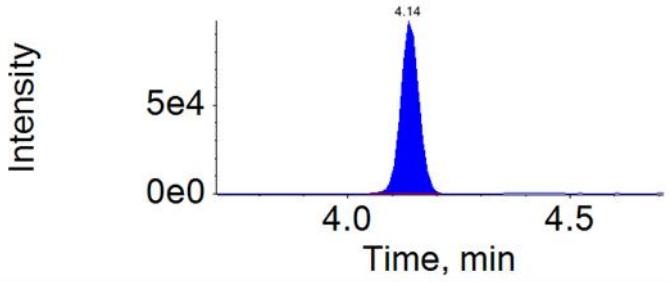
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

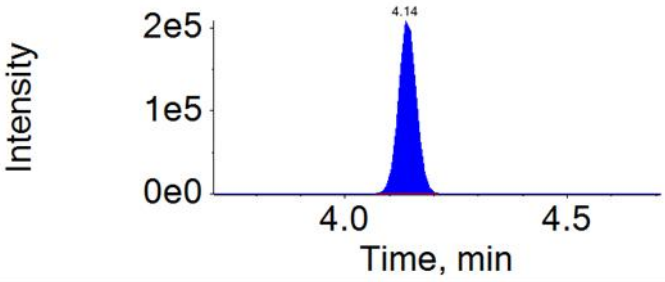
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



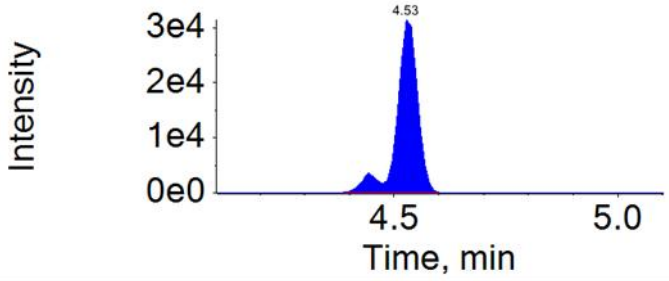


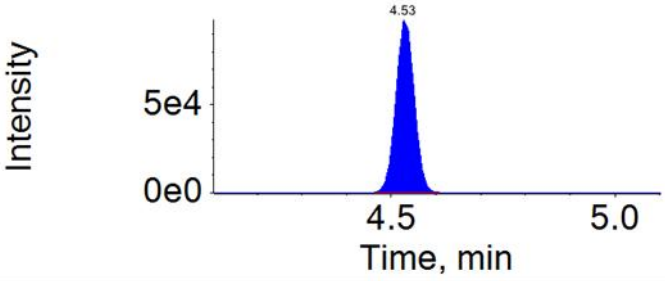
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



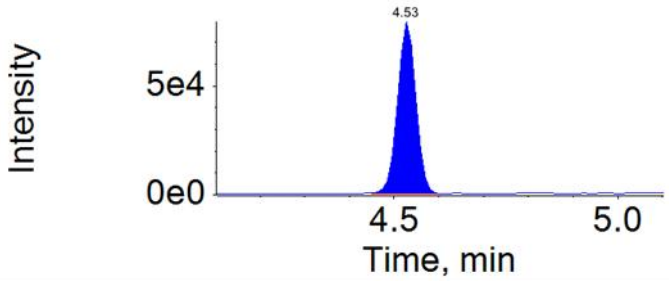


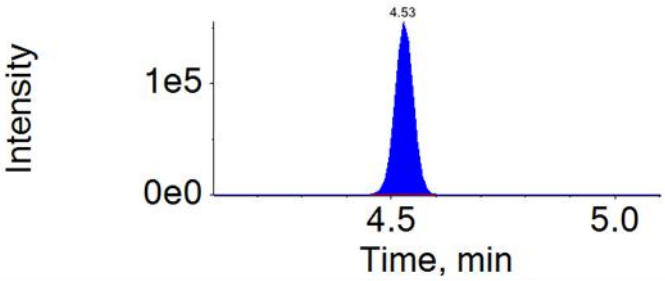
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

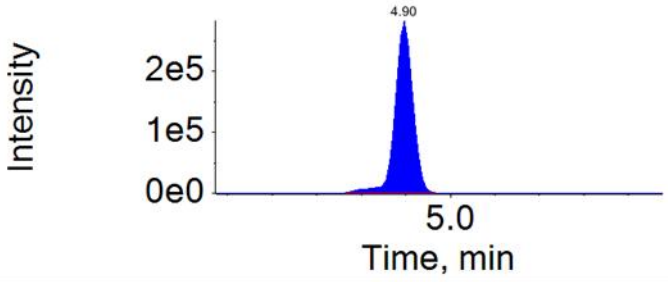
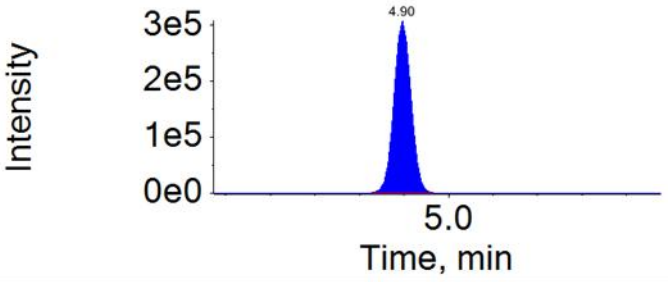


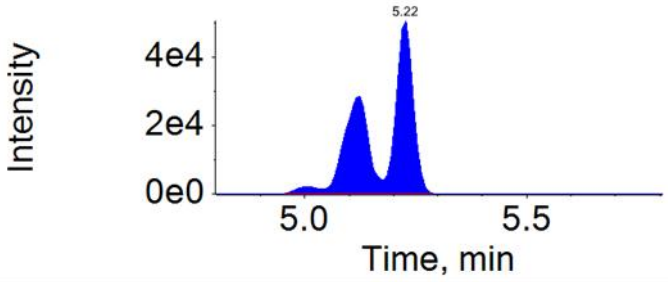
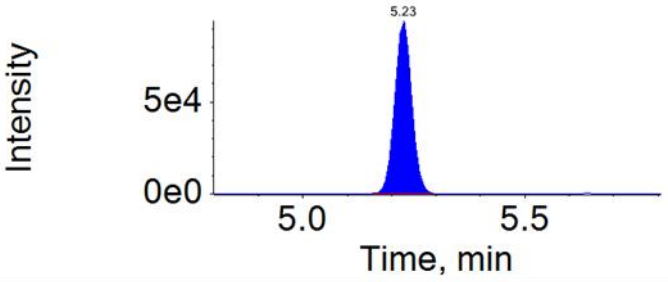


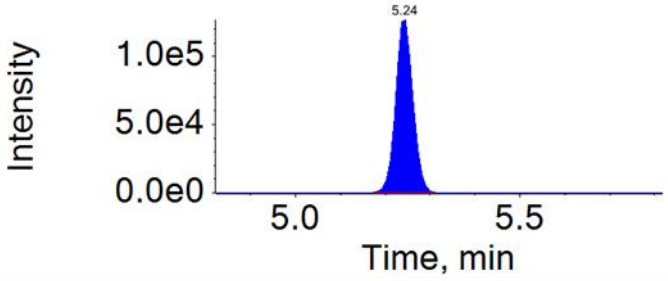
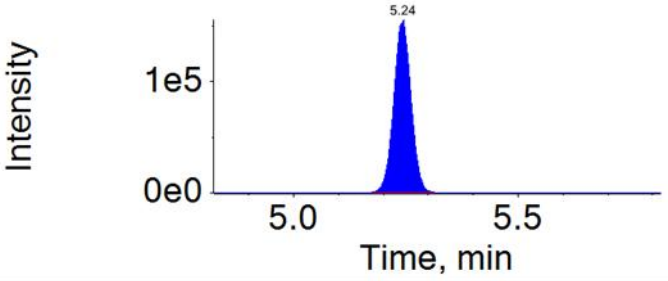
APPROVED
By JPT at 5:18 pm, 11/9/18

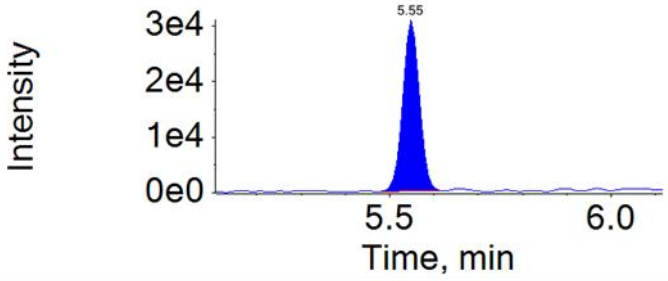
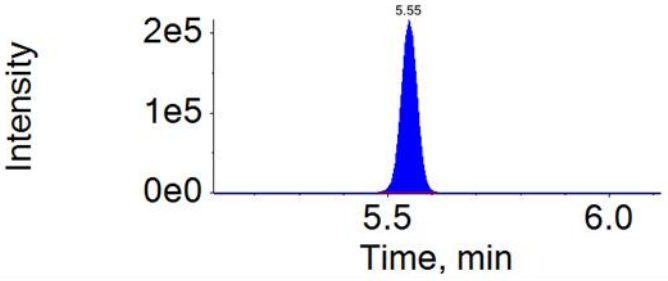
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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
	

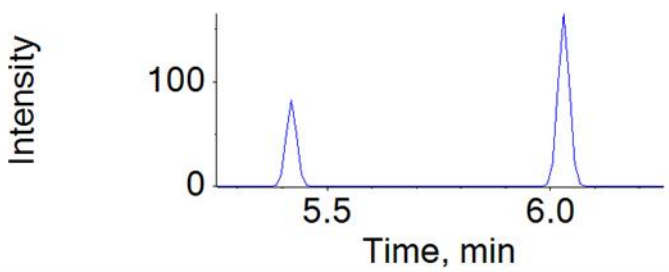
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

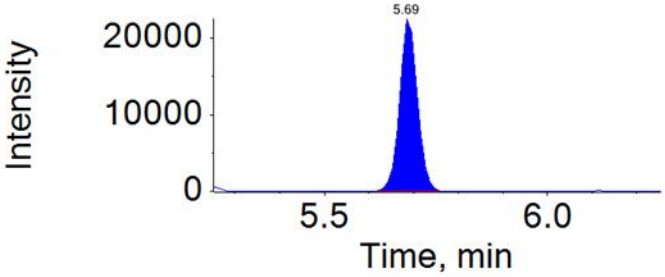
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

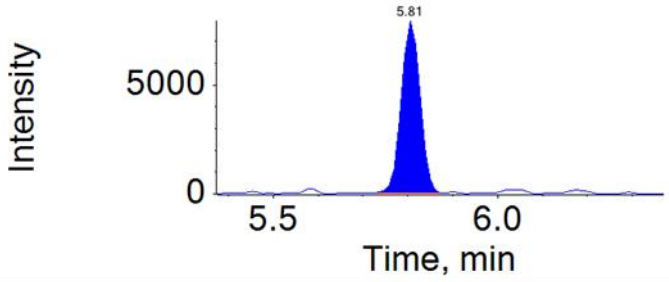
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

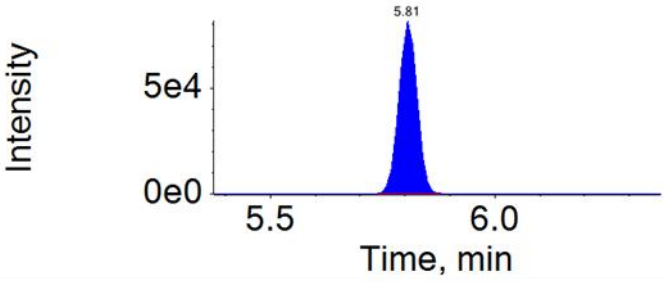
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



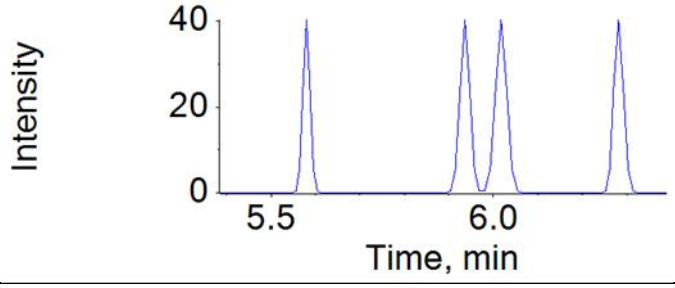


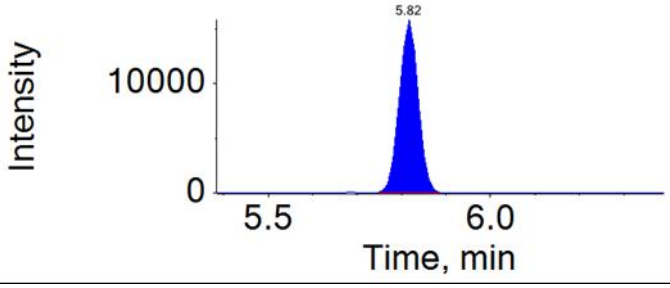
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



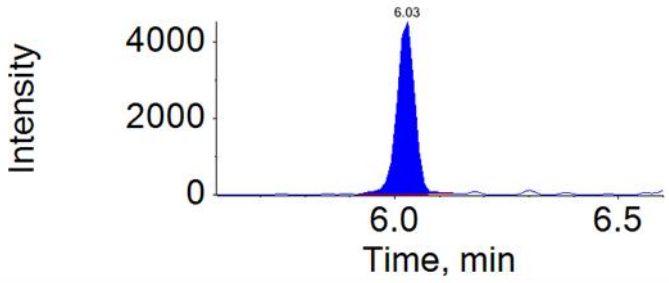


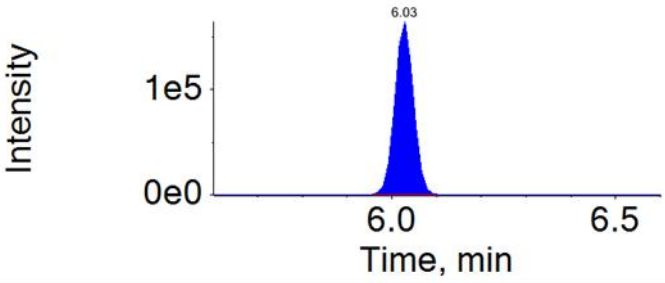
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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

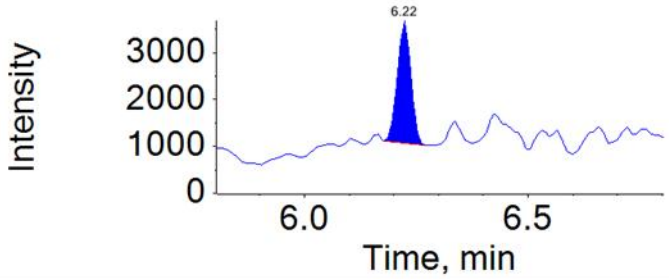
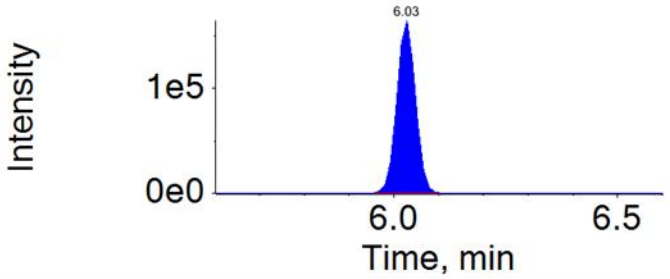


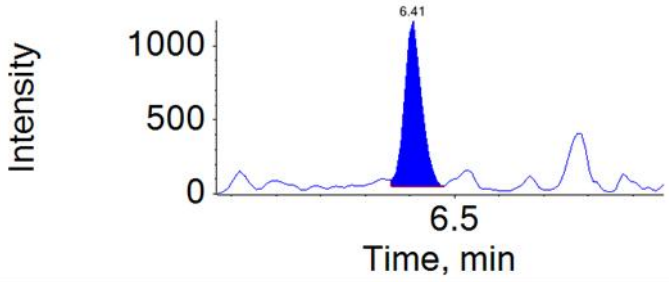
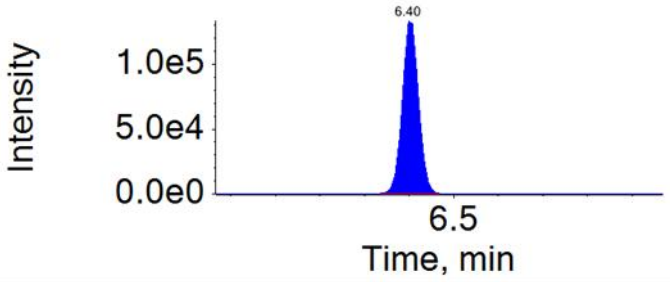


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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

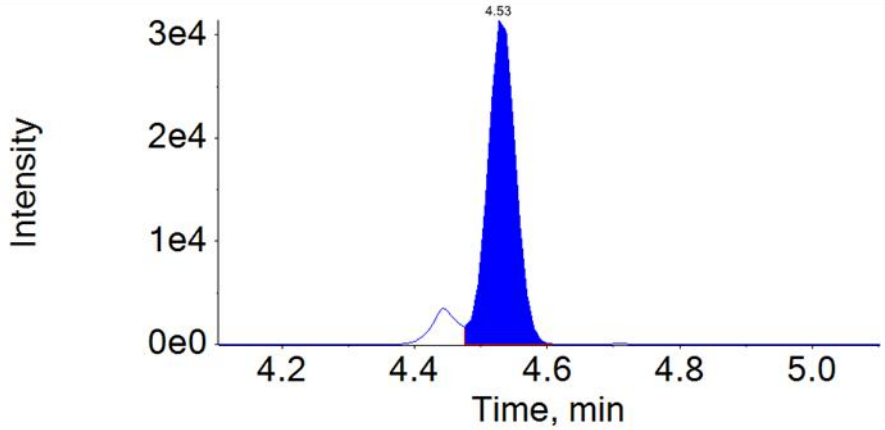
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

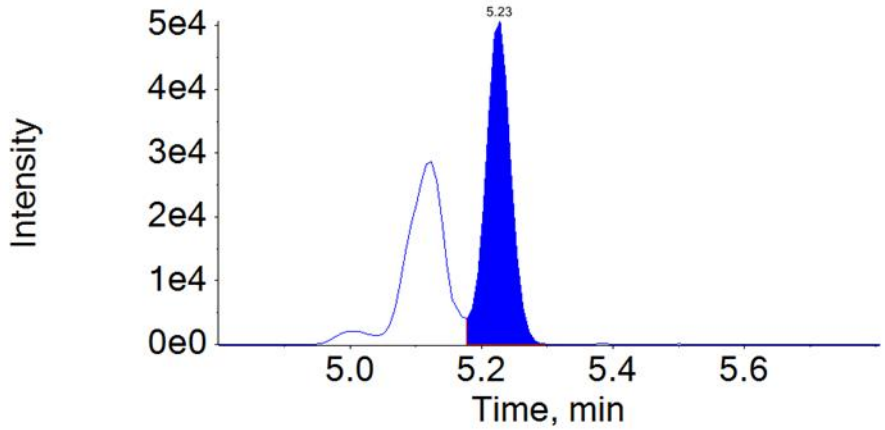
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.53
Peak Area:
93435.7
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-91.wiff
Sample Name:
9881537BKG



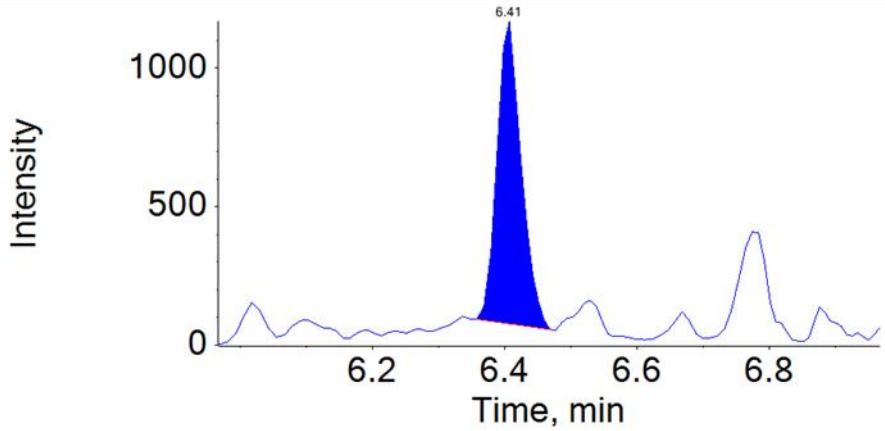
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
135545.8
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-91.wiff
Sample Name:
9881537BKG



Integration Comment: incorrect integration

Component Name:
PFTeDA
RT (min.):
6.41
Peak Area:
2778.1
Mass Range:
713.0 / 669.0
File Name:
18NOV08D-91.wiff
Sample Name:
9881537BKG



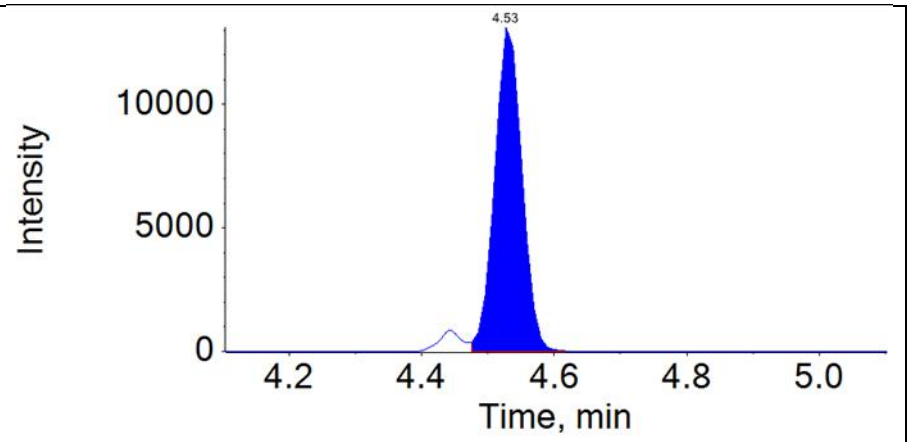
Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

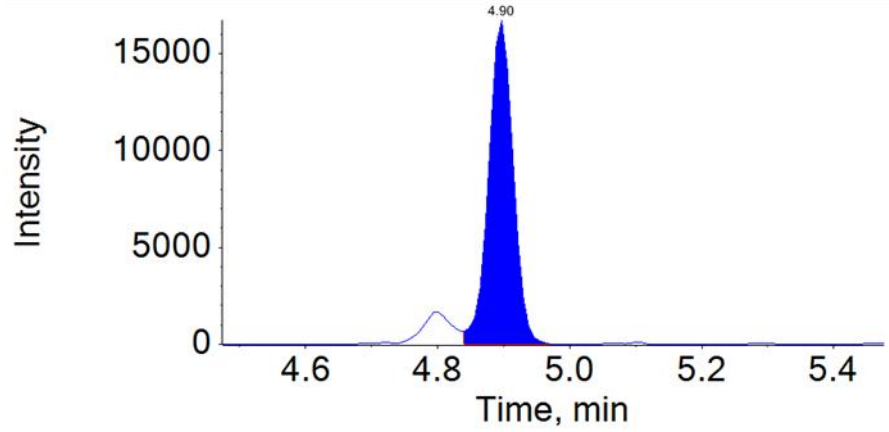
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS_2
RT (min.):
4.53
Peak Area:
37636.6
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-91.wiff
Sample Name:
9881537BKG



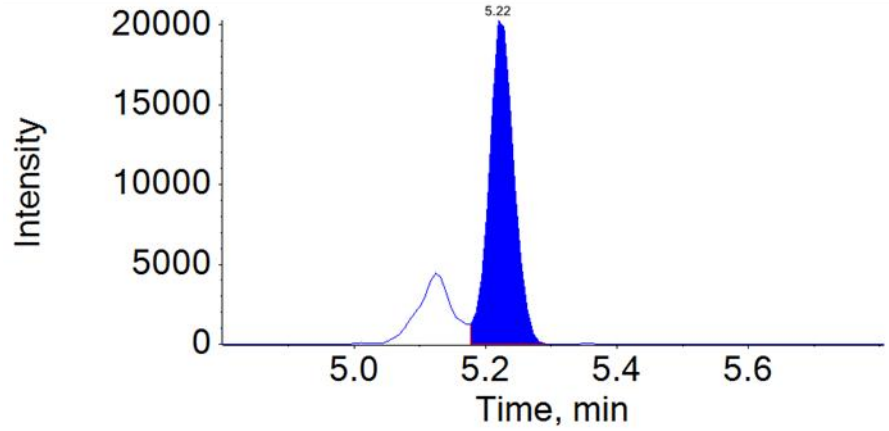
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.90
Peak Area:
43270.6
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-91.wiff
Sample Name:
9881537BKG



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.22
Peak Area:
53160.3
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-91.wiff
Sample Name:
9881537BKG



Integration Comment: incorrect integration

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By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

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

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

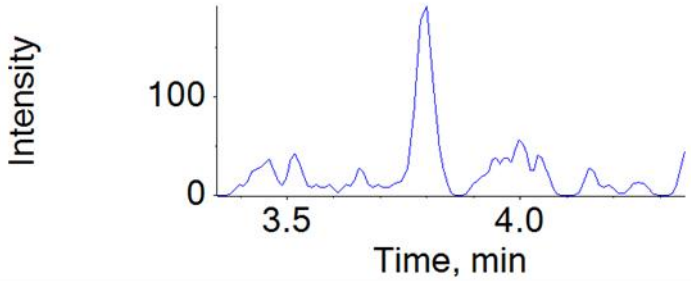
Sample Name: 9881537BKG **Instrument Name:** LM27631 **File Name:** 18NOV08D-91.wiff

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	275991.9	A	N/A	1.0000			
PFHxA_2	4.14	1.00	2895.2	A	N/A	0.0105	-9	50	
PFHxS	4.53	1.00	102896.8	M	N/A	1.0000			
PFHxS_2	4.53	1.00	39680.6	M	N/A	0.3856	8	50	
PFHpA	4.53	1.00	224028.3	A	N/A	1.0000			
PFHpA_2	4.53	1.00	11845.5	A	N/A	0.0529	-8	50	
PFOA	4.90	1.00	783391.6	A	N/A	1.0000			
PFOA_2	4.90	1.00	48535.7	M	N/A	0.0620	-2	50	
PFOS	5.22	1.00	254653.5	M	N/A	1.0000			
PFOS_2	5.22	1.00	69525.4	M	N/A	0.2730	-22	50	
PFNA	5.24	1.00	340933.5	A	N/A	1.0000			
PFNA_2	5.24	1.00	6480.9	A	N/A	0.0190	-8	50	
PFDA	5.55	1.00	79728.6	A	N/A	1.0000			
PFDA_2	5.55	1.00	370.4	A	N/A	0.0046	-18	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	5.81	1.00	22909.1	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	71.4	A	N/A	0.0031	-1	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	6.03	1.00	12556.0	A	N/A	1.0000			
PFDoDA_2	6.39	1.06	142.5	A	N/A	0.0113	4	50	
PFTrDA	6.22	1.03	5431.6	A	N/A	1.0000			
PFTrDA_2	6.21	1.03	69.0	A	N/A	0.0127	32	50	
PFTeDA	6.41	1.00	2963.1	M	N/A	1.0000			
PFTeDA_2	6.42	1.00	60.5	A	N/A	0.0204	268	50	OOS

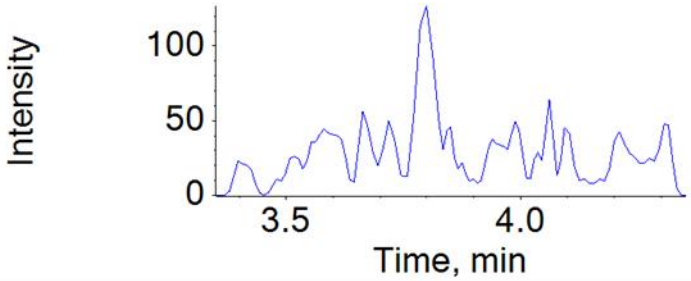
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

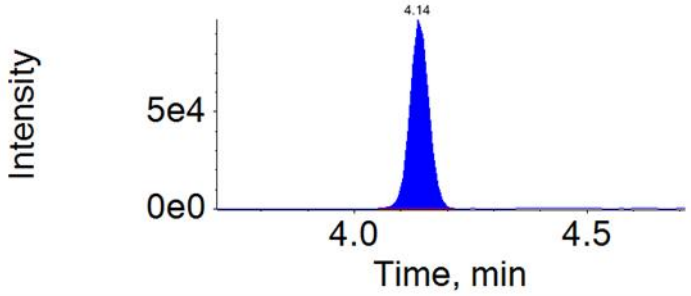
Component: PFBS
Primary Mass: 299.0 / 80.0



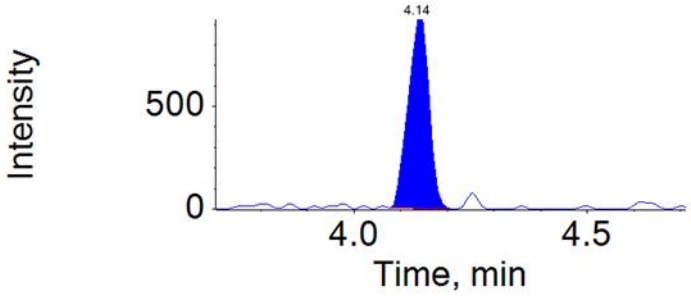
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



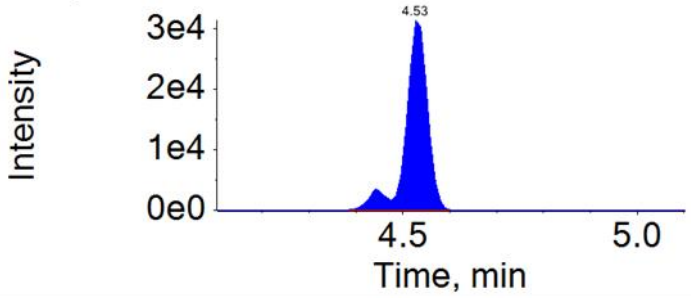
Component: PFHxA
Primary Mass: 313.0 / 269.0



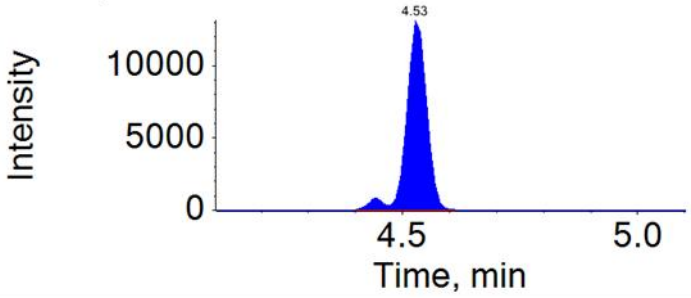
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



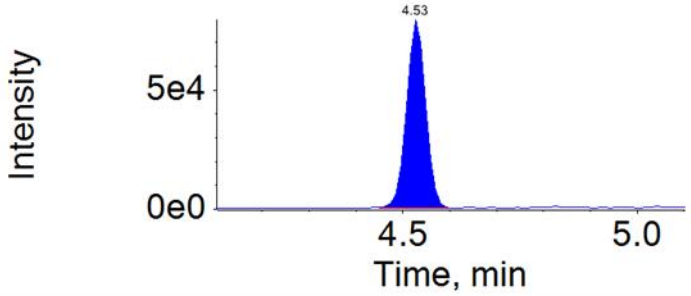
Component: PFHxS
Primary Mass: 399.0 / 80.0



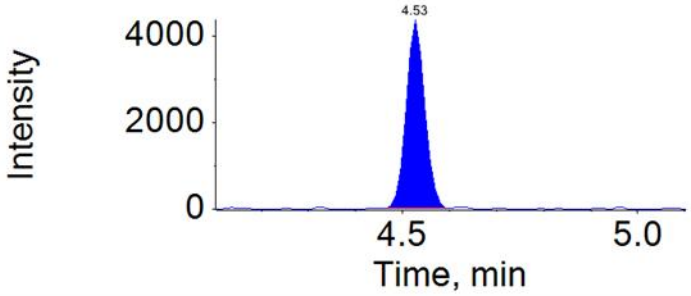
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



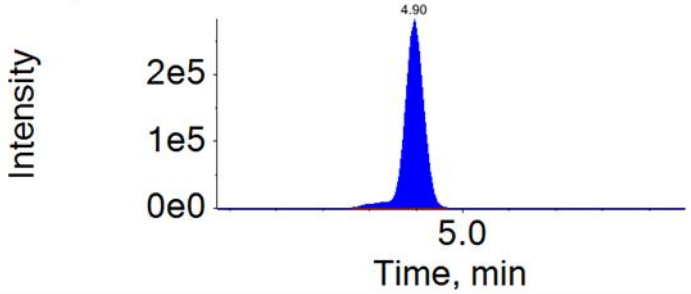
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



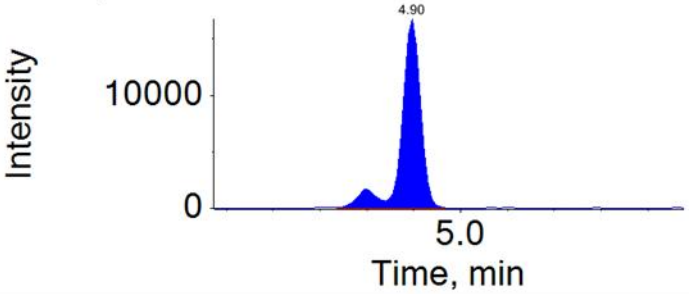
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

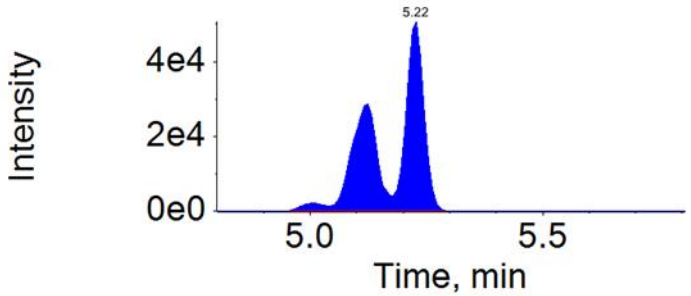
Component: PFOA
Primary Mass: 413.0 / 369.0



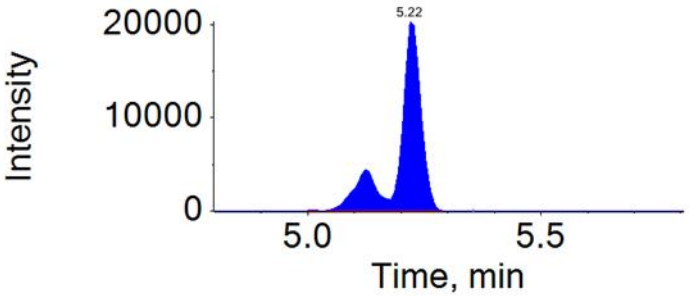
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



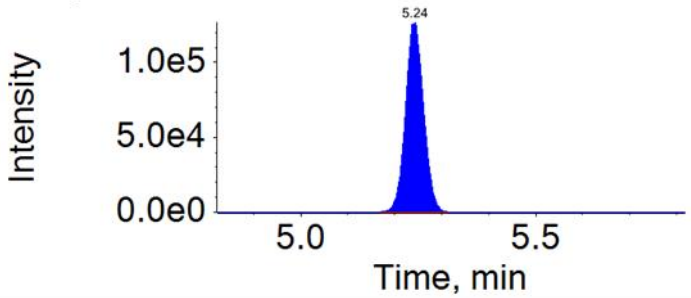
Component: PFOS
Primary Mass: 499.0 / 80.0



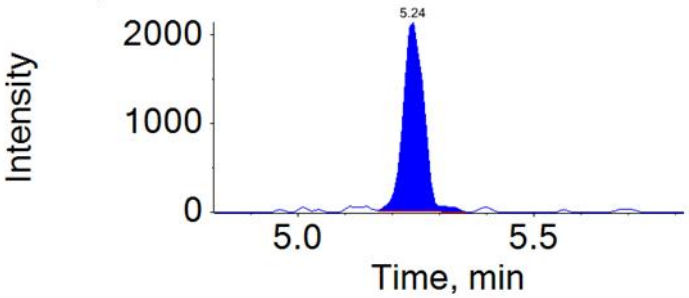
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



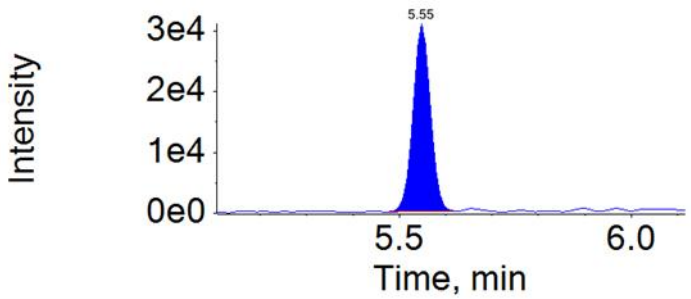
Component: PFNA
Primary Mass: 463.0 / 419.0



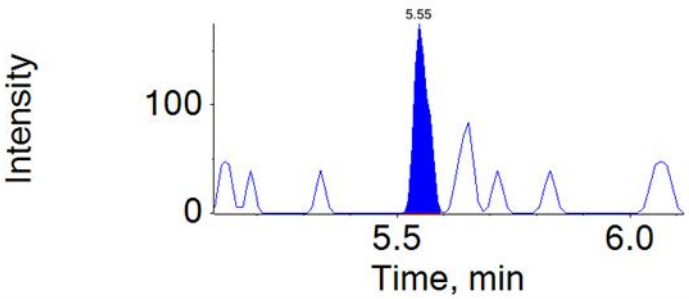
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



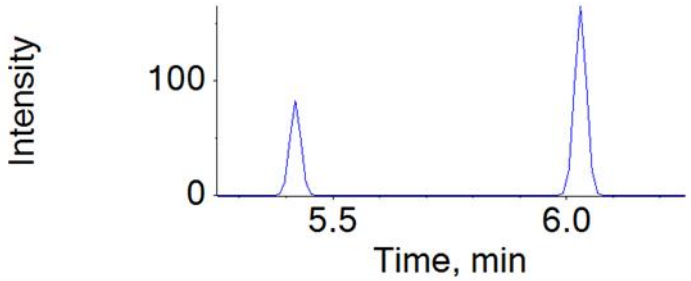
Component: PFDA
Primary Mass: 513.0 / 469.0



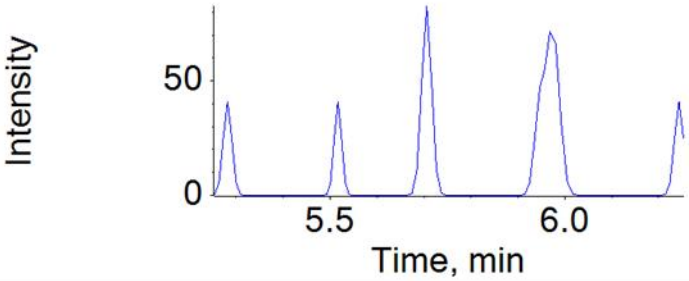
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



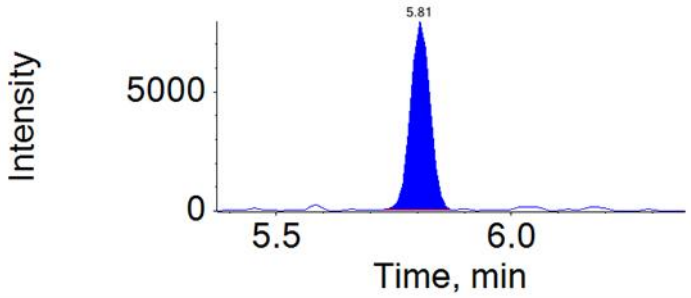
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



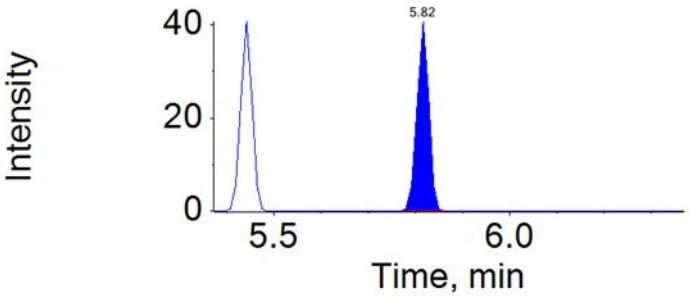
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



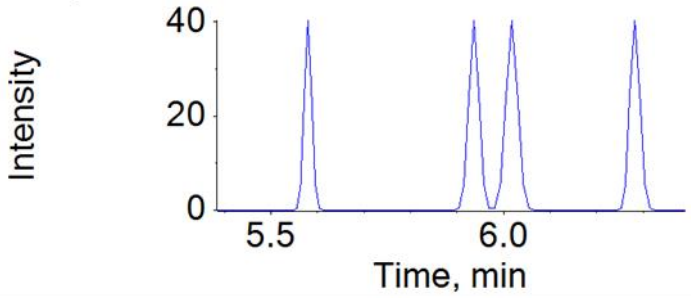
Component: PFUnDA
Primary Mass: 563.0 / 519.0



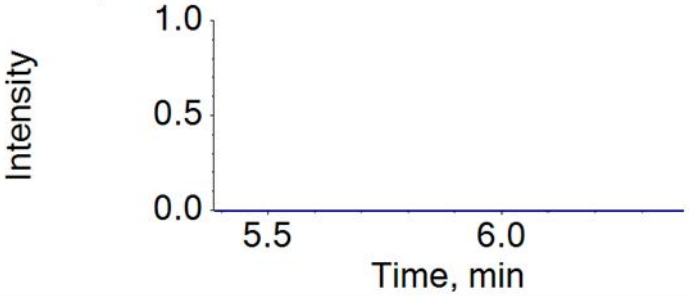
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



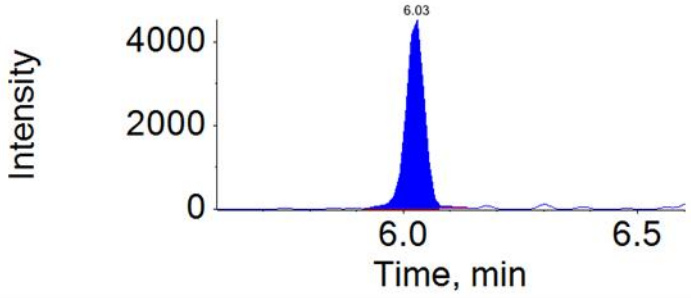
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



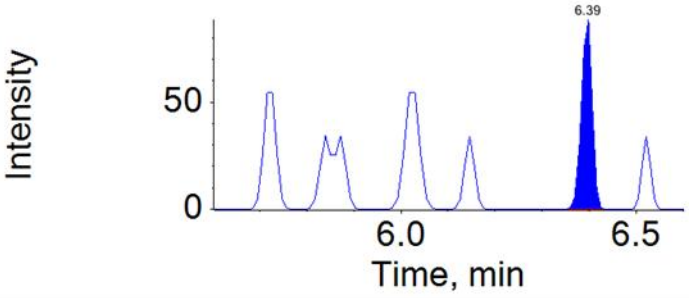
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



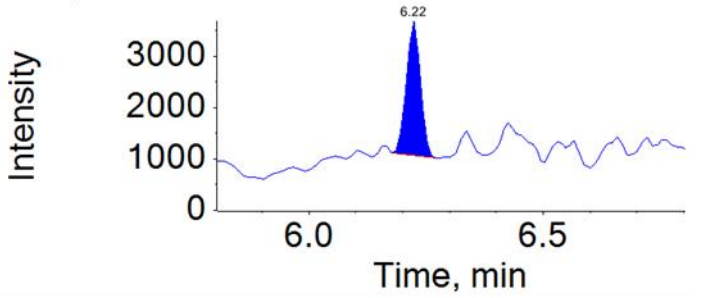
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



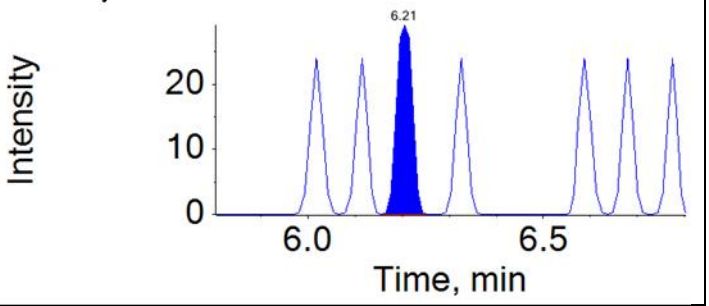
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

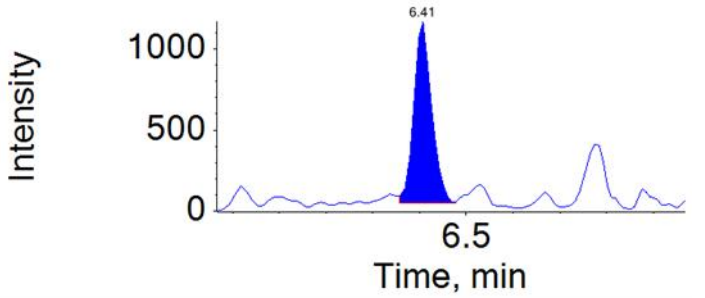
Component: PFTrDA
Primary Mass: 663.0 / 619.0



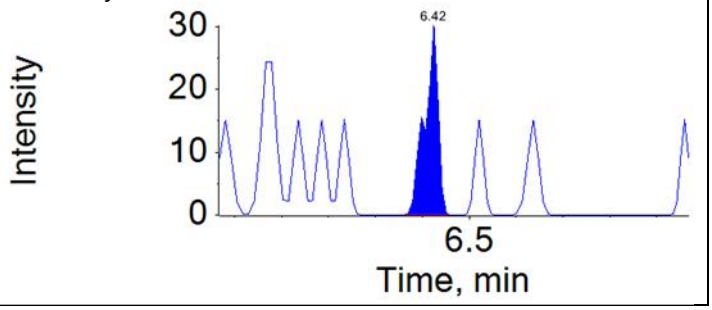
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881540BKG			**Data File:**		18NOV12D-64.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18314009 OU1-Bldg371-S-01-05 Grab Soil			**Acquis Date:**		2018-11-13T02:14:21
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	90			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18314009
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18314009			**Operator:**		JPT12262
Sample Wt.:	1.07000			**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	678232.7	659926.2	3	50	
13C2-PFOA	5.0	498278.9	450219.7	11	50	
13C4-PFOS	4.8	258653.2	249205.8	4	50	
13C2-PFDA	5.0	324880.3	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	445892.6	13C3-PFBA	678232.7	0.657	8.692	8.675	100	50-150	
E13C5-PFHxA	700368.5	13C2-PFOA	498278.9	1.406	9.346	9.490	102	50-150	
E13C3-PFHxS	336371.3	13C2-PFOA	498278.9	0.675	8.841	8.658	98	50-150	
E13C4-PFHpA	544436.1	13C2-PFOA	498278.9	1.093	9.346	9.201	98	50-150	
E13C8-PFOA	936135.2	13C2-PFOA	498278.9	1.879	9.346	9.675	104	50-150	
E13C8-PFOS	305600.8	13C4-PFOS	258653.2	1.182	8.935	9.785	110	50-150	
E13C9-PFNA	469875.8	13C4-PFOS	258653.2	1.817	9.346	9.467	101	50-150	
E13C6-PFDA	662521.9	13C2-PFDA	324880.3	2.039	9.346	8.895	95	50-150	
Ed3-NMeFOSAA	49610.9	13C2-PFDA	324880.3	0.153	9.346	5.152	55	50-150	
E13C7-PFUnDA	276231.0	13C2-PFDA	324880.3	0.850	9.346	9.227	99	50-150	
Ed5-NEtFOSAA	48499.4	13C2-PFDA	324880.3	0.149	9.346	5.903	63	50-150	
E13C2-PFDoDA	562730.0	13C2-PFDA	324880.3	1.732	9.346	8.406	90	50-150	
E13C2-PFTeDA	402501.2	13C2-PFDA	324880.3	1.239	9.346	8.130	87	50-150	

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

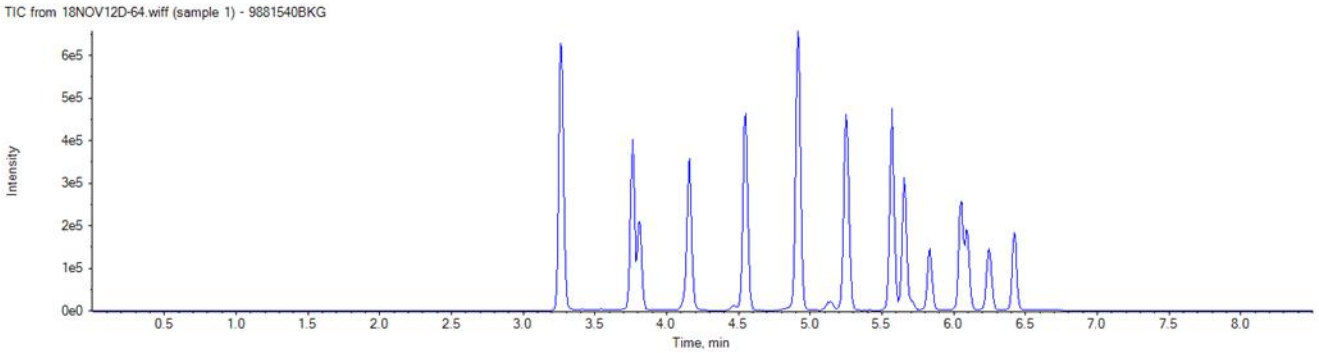
Analyte Quantitation Peak Table

Sample Name: 9881540BKG **Instrument Name:** LM27631 **File Name:** 18NOV12D-64.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.07000	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	445892.6	N/A	
PFHxA	4.16	1.000	71323.0		A	13C5-PFHxA	4.16	700368.5	0.102	0.795
PFHpA	4.55	1.000	72965.3		A	13C4-PFHpA	4.55	544436.1	0.134	0.830
PFHxS	4.55	1.000	126801.7		M	13C3-PFHxS	4.55	336371.3	0.377	3.416
PFOA	4.91	1.000	91815.9		M	13C8-PFOA	4.92	936135.2	0.098	0.979
PFOS	5.24	1.000	187202.1		M	13C8-PFOS	5.24	305600.8	0.613	5.007
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	469875.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	662521.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	49610.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	276231.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	48499.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	562730.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	562730.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	402501.2	N/A	

Total Ion Chromatogram

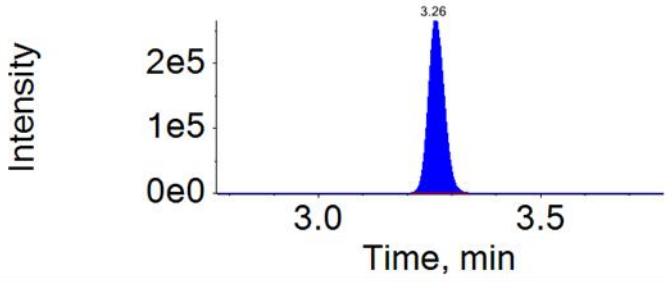


APPROVED
By JPT at 4:11 pm, 11/13/18

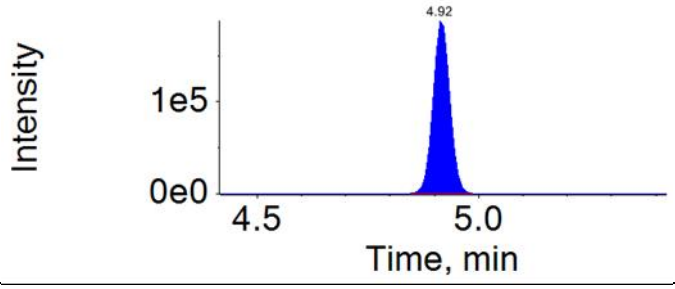
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

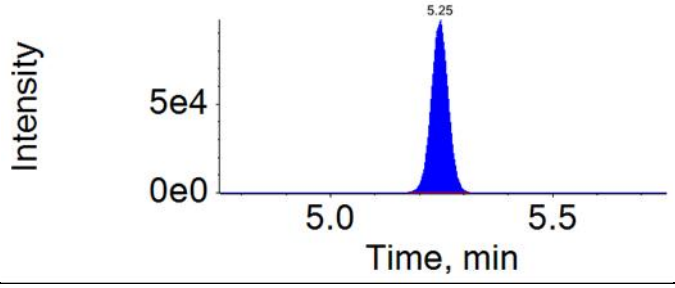
Injection Standard: 13C3-PFBA
216.0 / 172.0



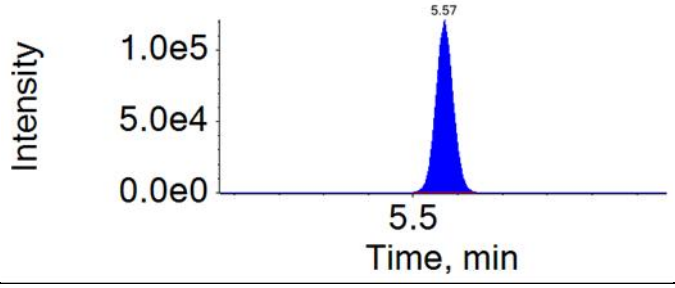
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

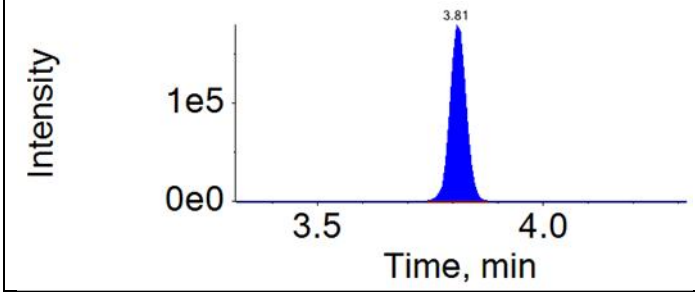


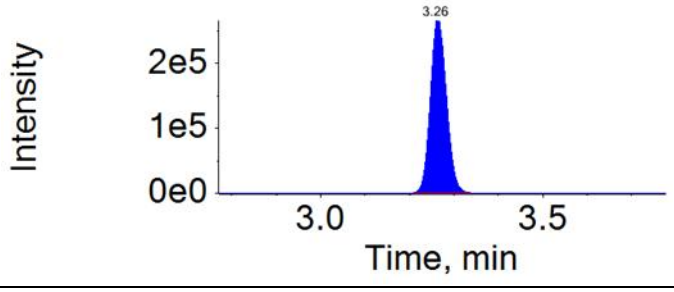
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

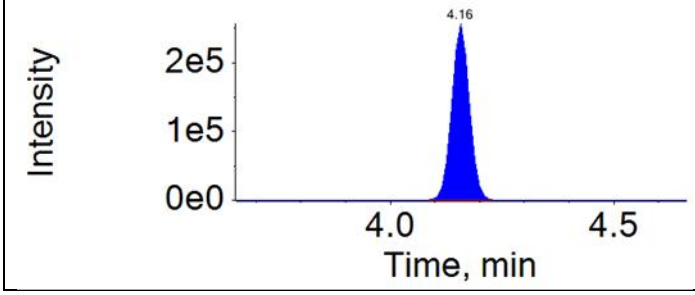
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

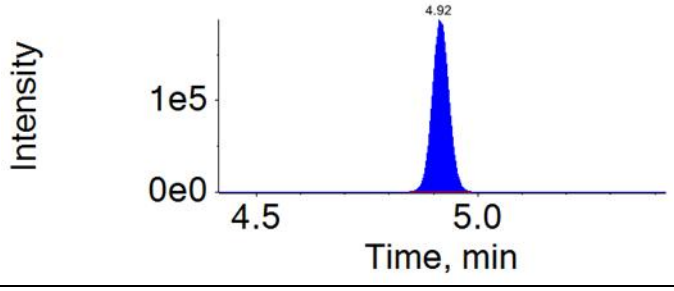
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



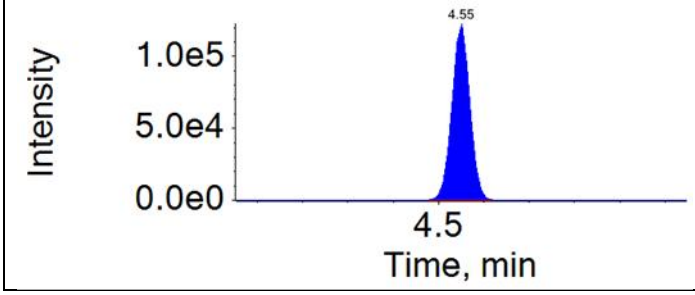


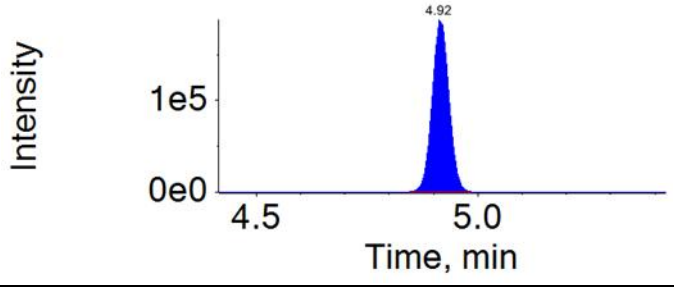
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



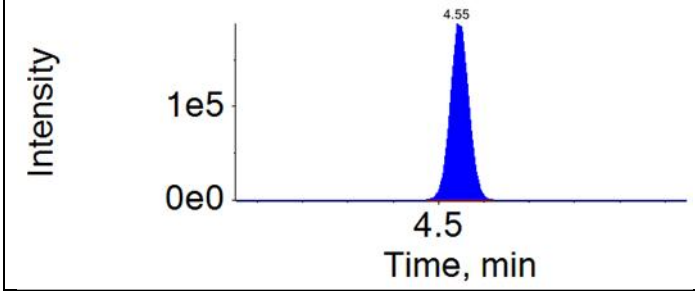


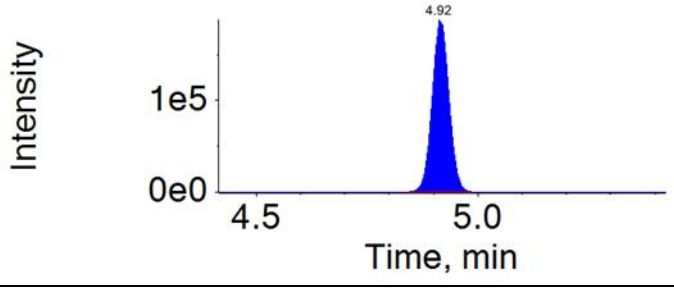
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





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

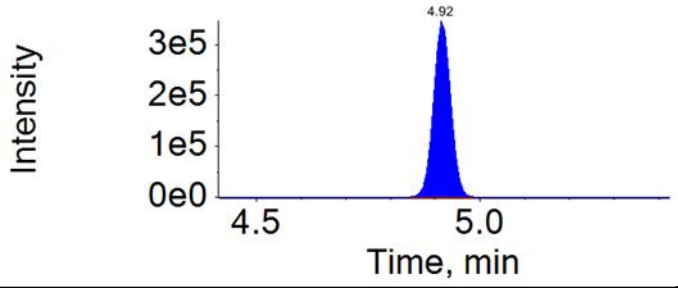
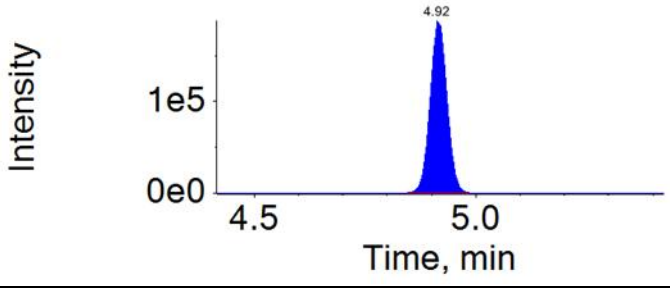


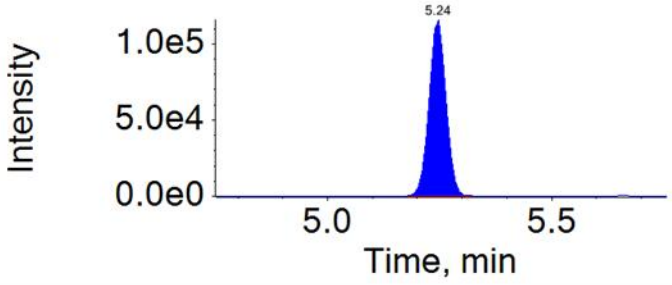
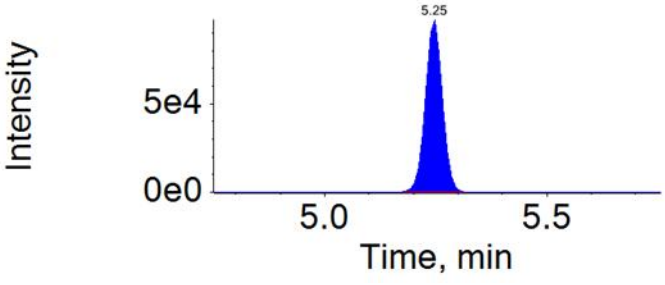


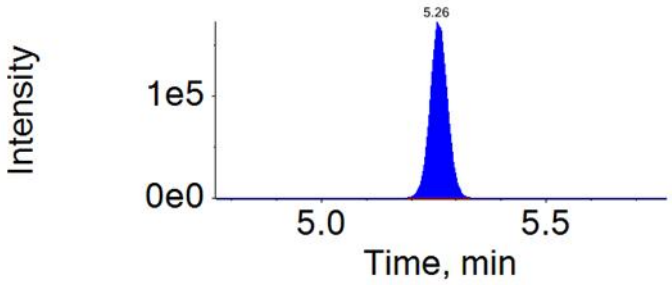
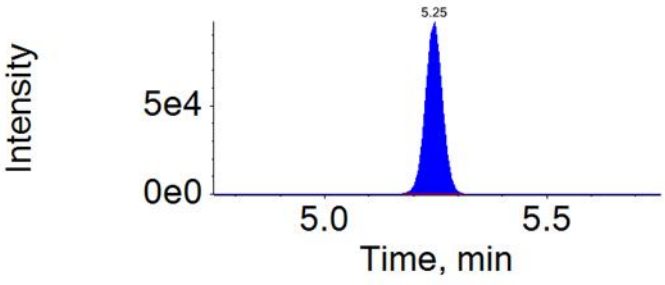
APPROVED
By JPT at 4:11 pm, 11/13/18

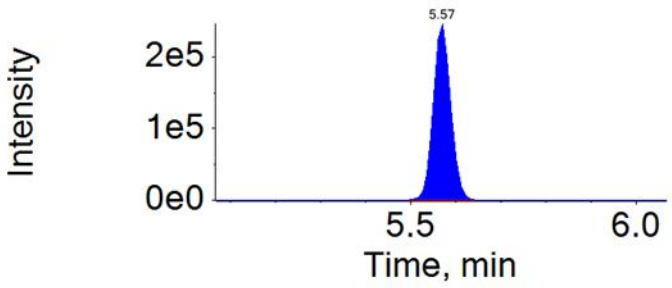
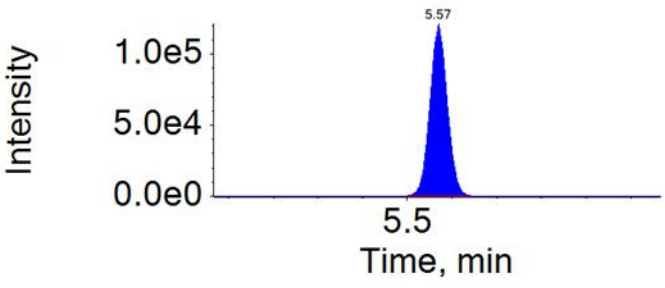
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 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
	

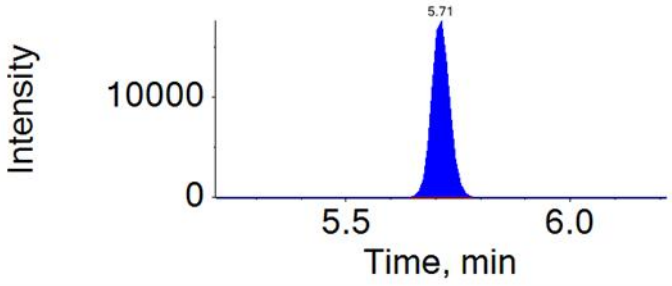
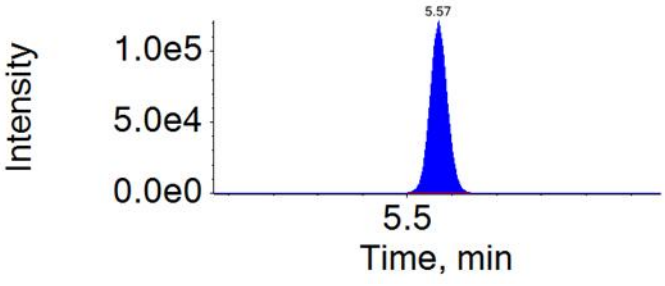
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

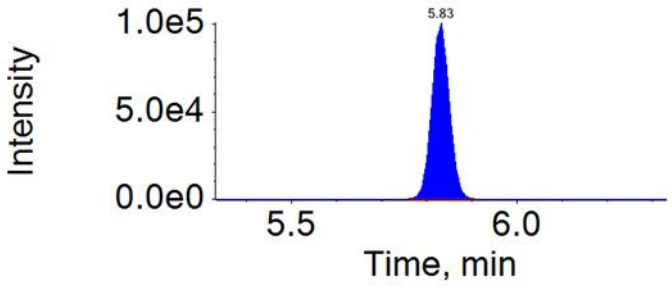
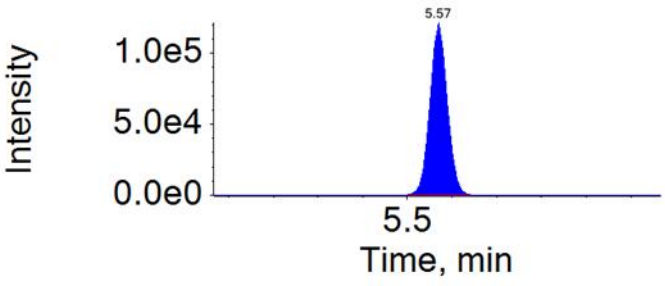
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

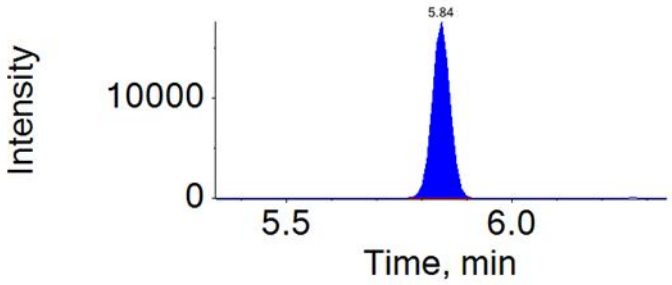
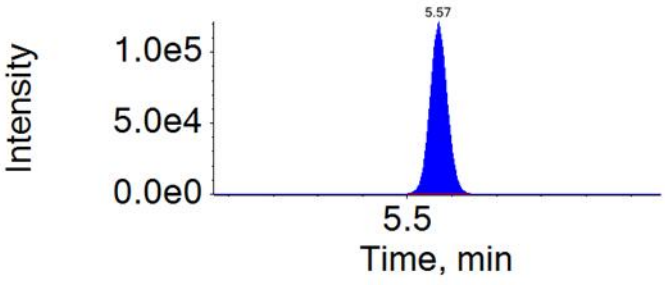
APPROVED
By JPT at 4:11 pm, 11/13/18

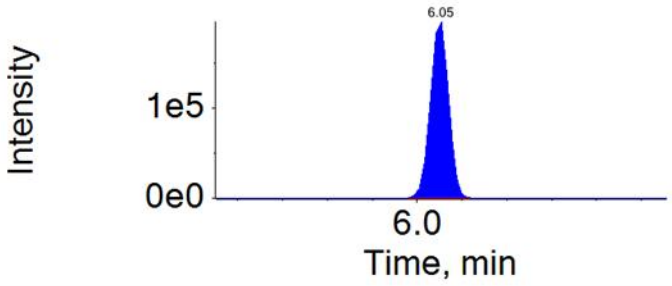
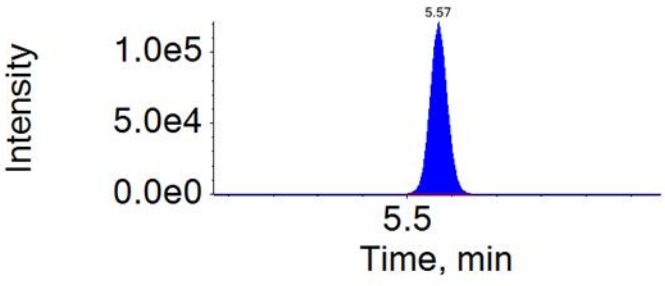
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 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
	

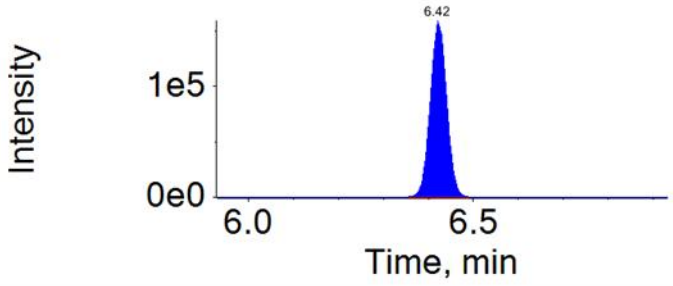
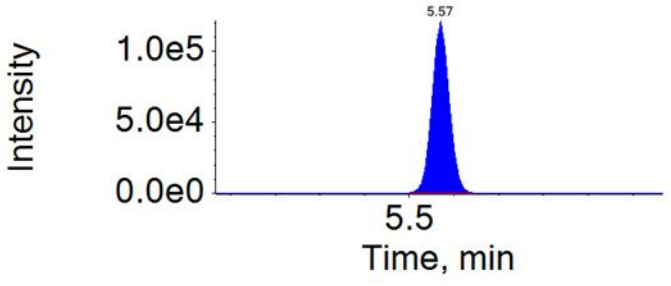
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

APPROVED
By JPT at 4:11 pm, 11/13/18

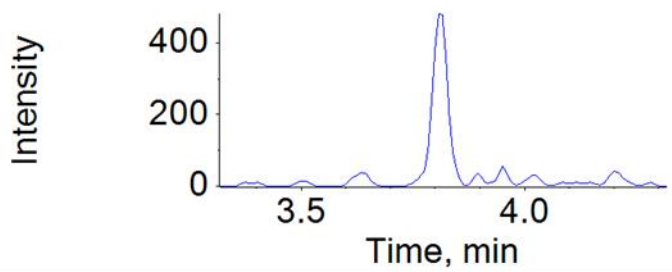
REVIEWED
By umar at 5:37 pm, 11/13/18

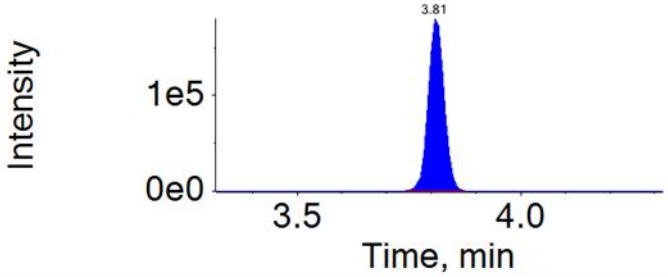
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

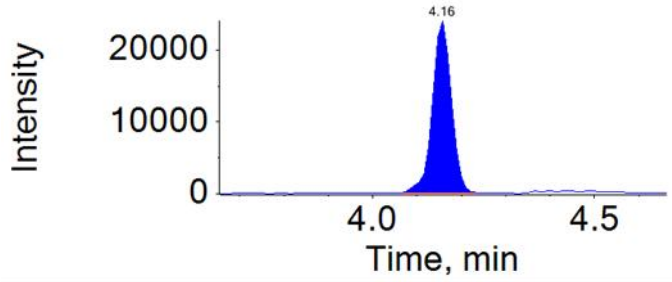
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

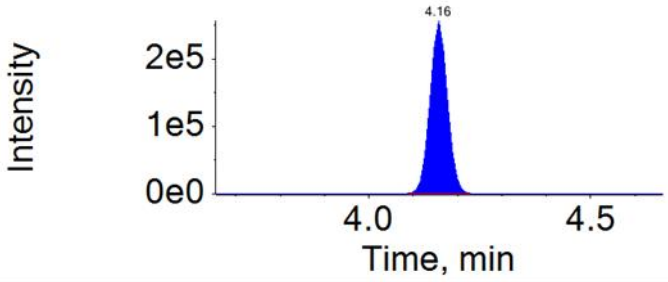
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



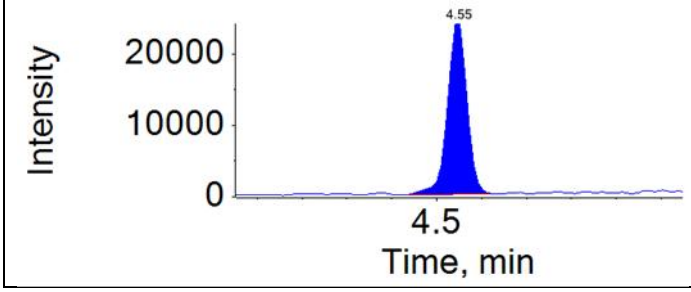


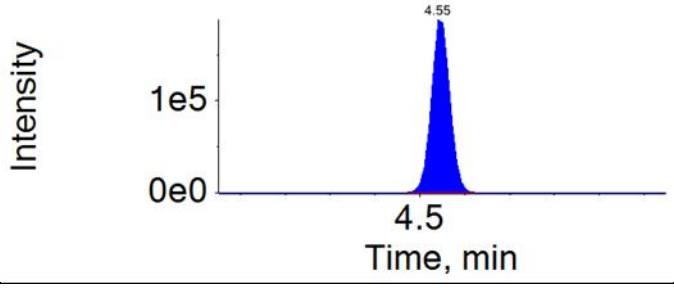
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



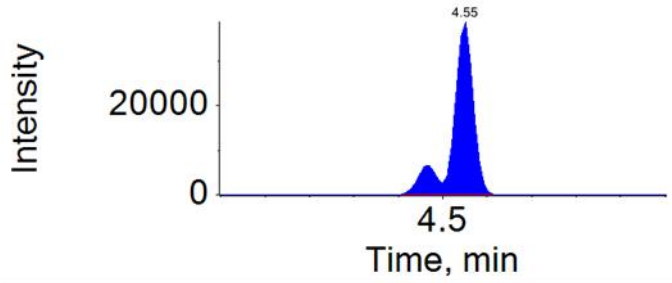


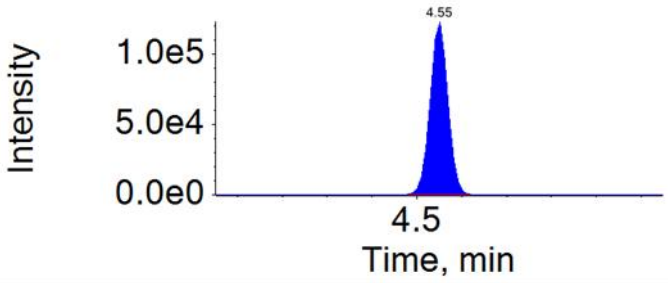
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





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

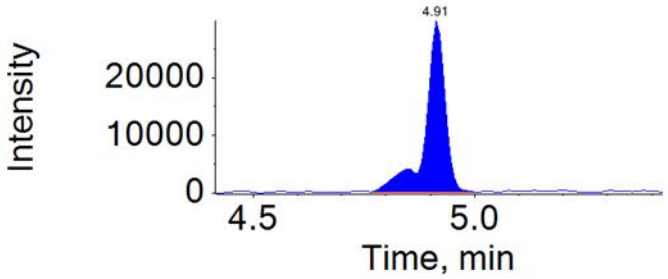
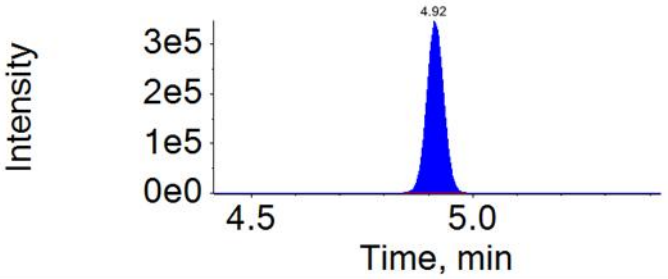


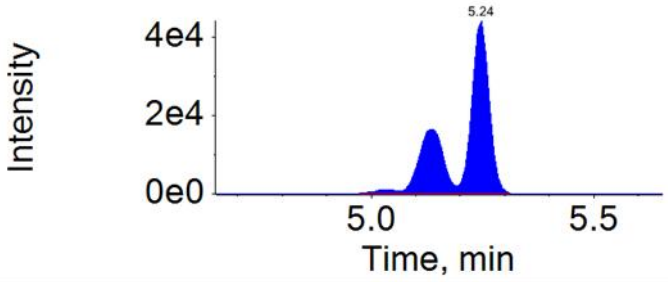
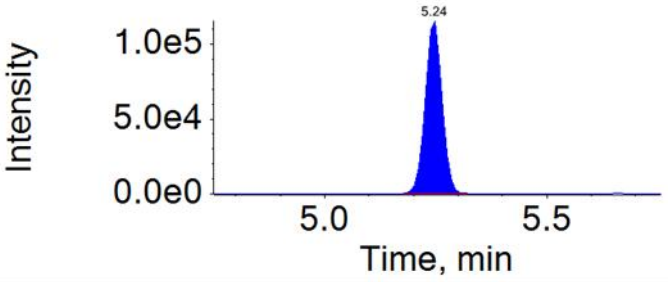


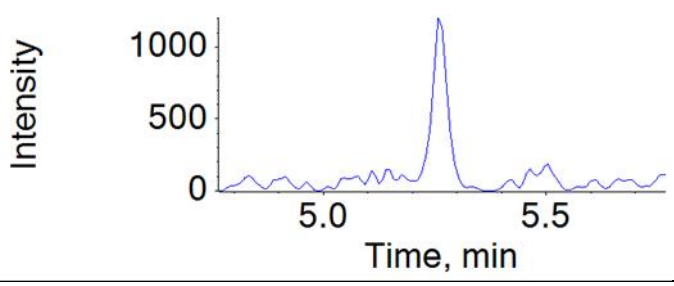
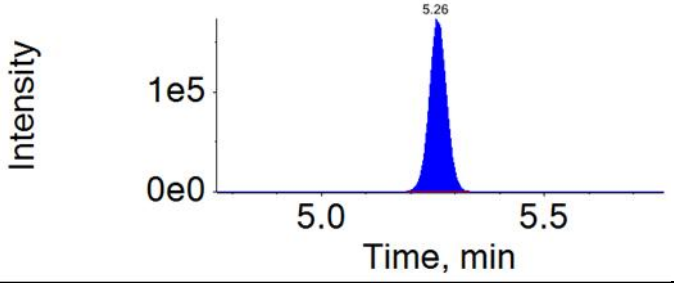
APPROVED
By JPT at 4:11 pm, 11/13/18

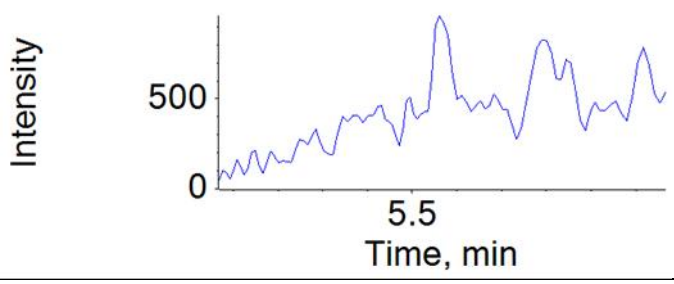
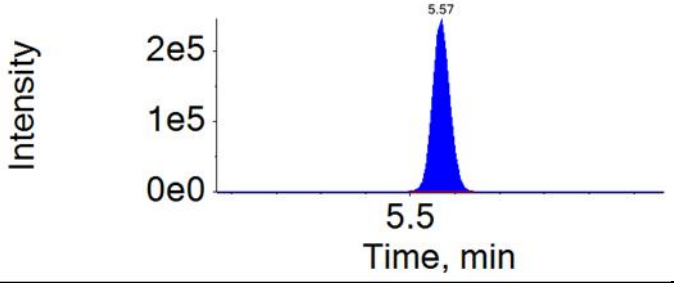
REVIEWED
By umar at 5:37 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 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
	

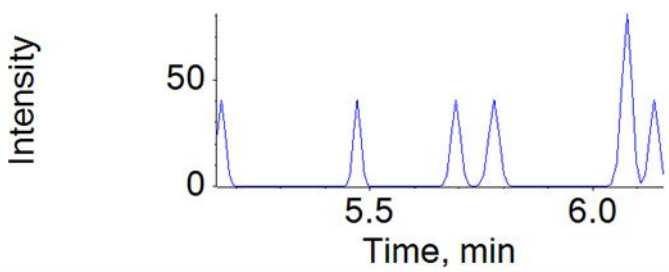
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

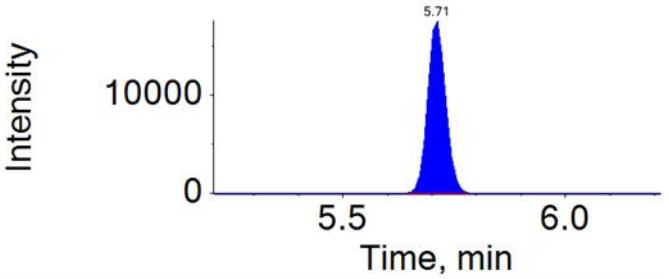
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

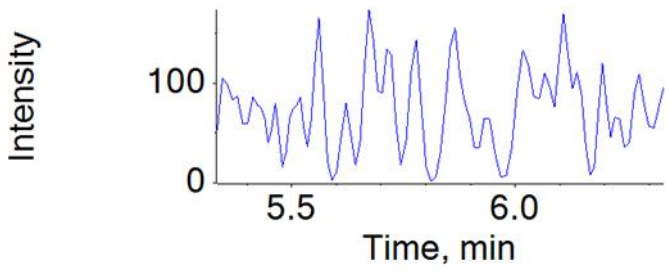
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

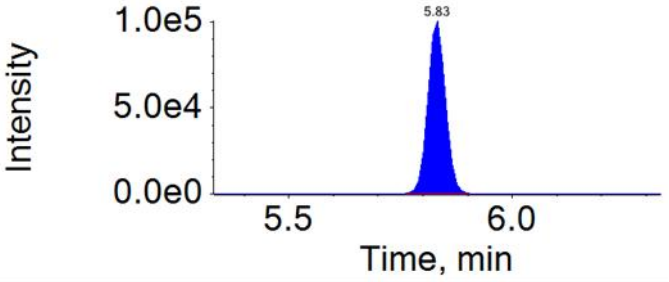
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



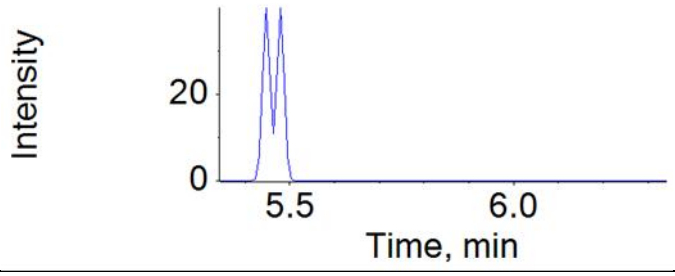


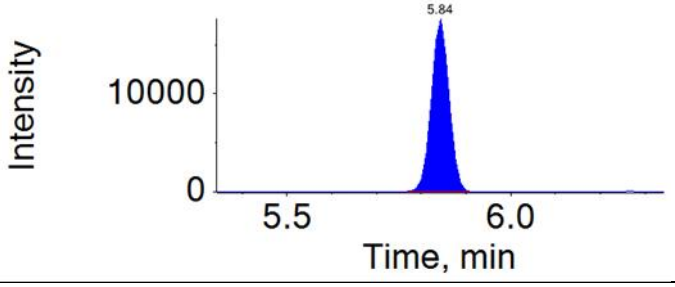
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



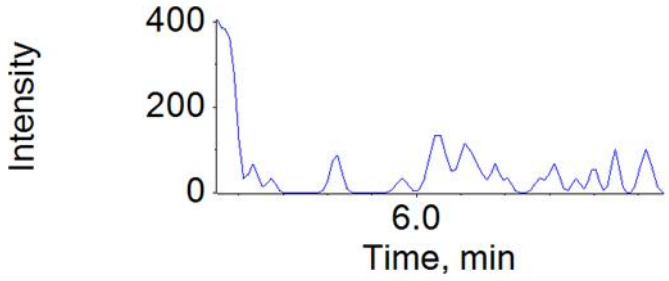


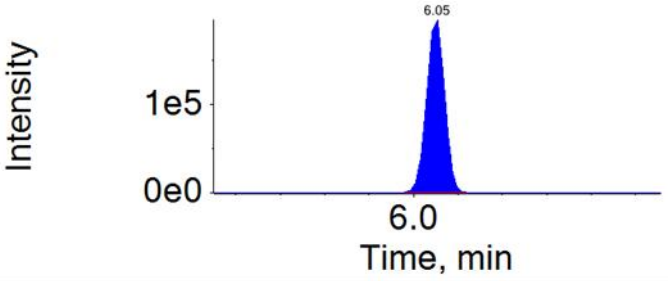
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



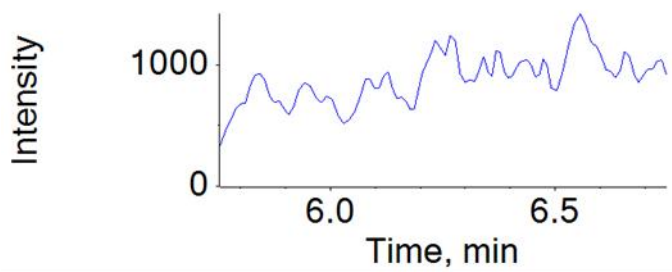


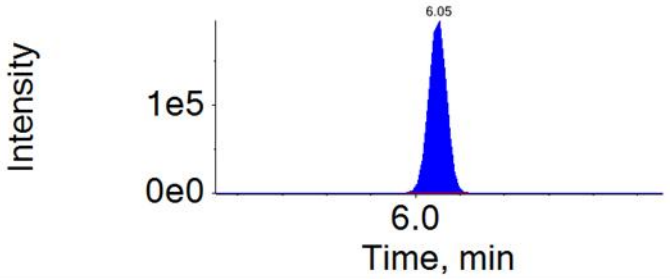
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

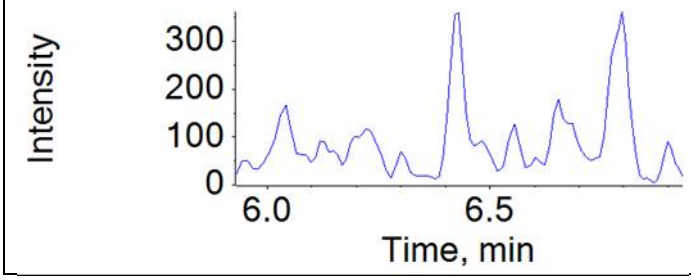
ICAL Name: 18NOV12DCAL **Result Table:** 18314009 11/13/2018 3:55:38 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

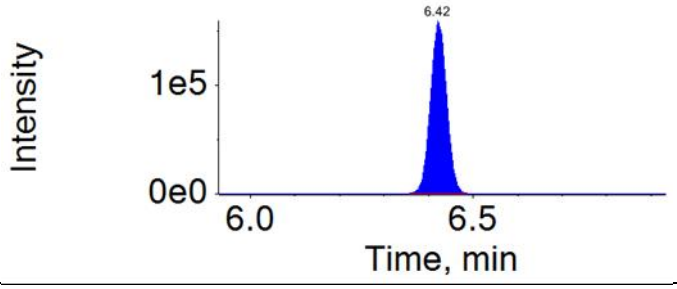
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



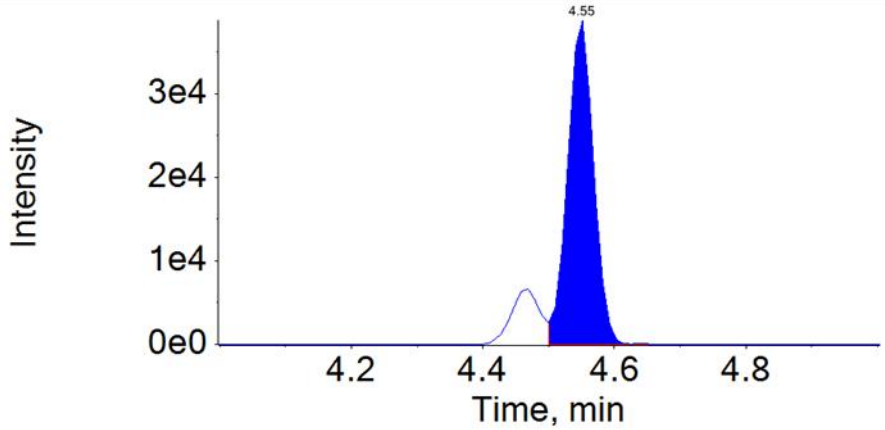


APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

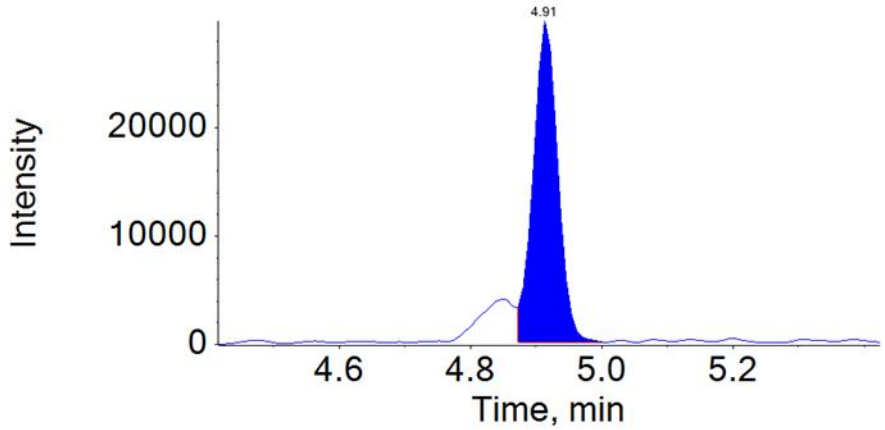
Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
106967.5
Mass Range:
399.0 / 80.0
File Name:
18NOV12D-64.wiff
Sample Name:
9881540BKG



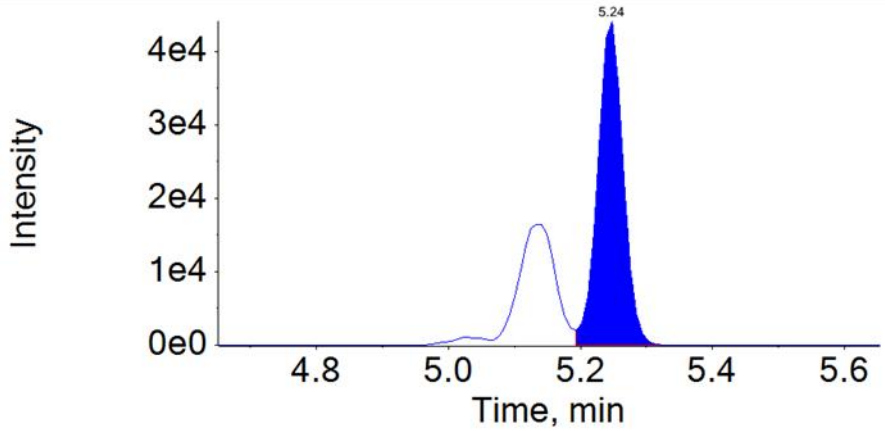
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
76851.0
Mass Range:
413.0 / 369.0
File Name:
18NOV12D-64.wiff
Sample Name:
9881540BKG



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
119209.4
Mass Range:
499.0 / 80.0
File Name:
18NOV12D-64.wiff
Sample Name:
9881540BKG

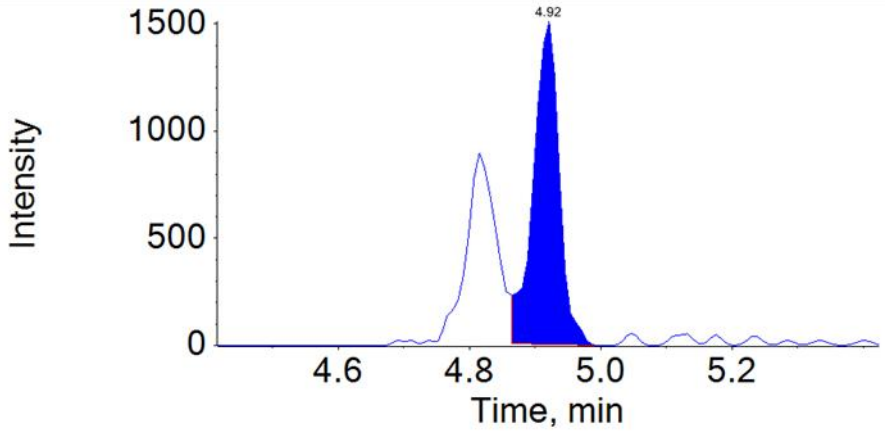


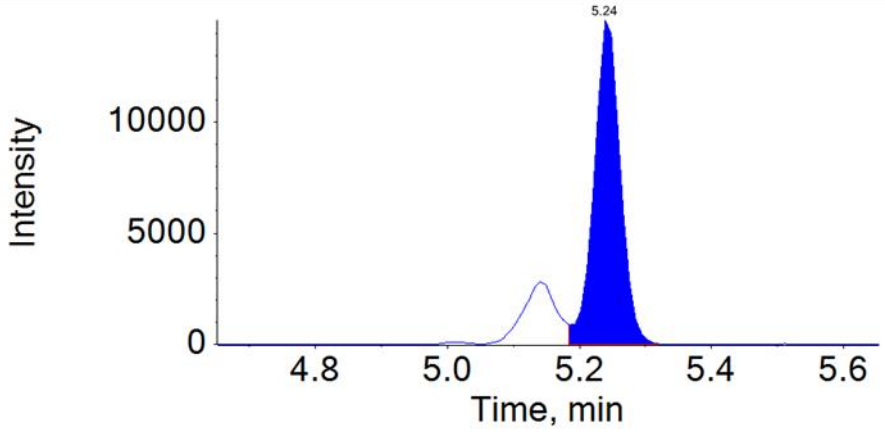
Integration Comment: incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOA_2 **RT (min.):** 4.92 **Peak Area:** 4168.7 **Mass Range:** 413.0 / 169.0 **File Name:** 18NOV12D-64.wiff **Sample Name:** 9881540BKG	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 40502.1 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12D-64.wiff **Sample Name:** 9881540BKG	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Results Table Name: 18314009
Results Table Date: 11/13/2018 3:55:38 PM

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

APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

Ion Ratio Report

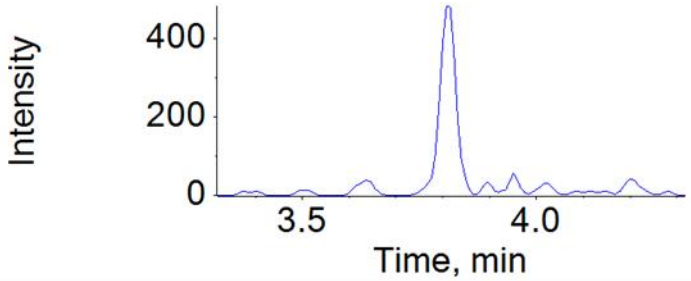
Sample Name: 9881540BKG **Instrument Name:** LM27631 **File Name:** 18NOV12D-64.wiff

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	4.16	1.00	71323.0	A	N/A	1.0000			
PFHxA_2	4.16	1.00	965.2	A	N/A	0.0135	15	50	
PFHpA	4.55	1.00	72965.3	A	N/A	1.0000			
PFHpA_2	4.55	1.00	4625.6	A	N/A	0.0634	13	50	
PFHxS	4.55	1.00	126801.7	M	N/A	1.0000			
PFHxS_2	4.55	1.00	44803.9	A	N/A	0.3533	16	50	
PFOA	4.91	1.00	91815.9	M	N/A	1.0000			
PFOA_2	4.91	1.00	7114.1	M	N/A	0.0775	36	50	
PFOS	5.24	1.00	187202.1	M	N/A	1.0000			
PFOS_2	5.24	1.00	50644.5	M	N/A	0.2705	5	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	

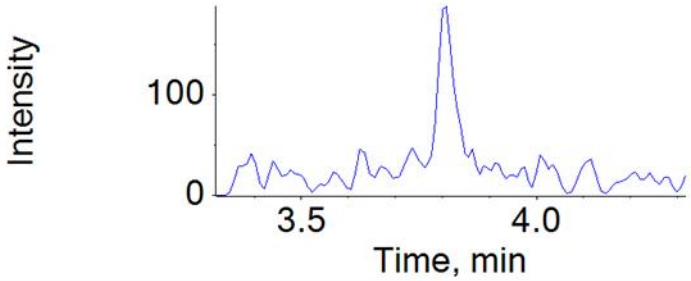
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

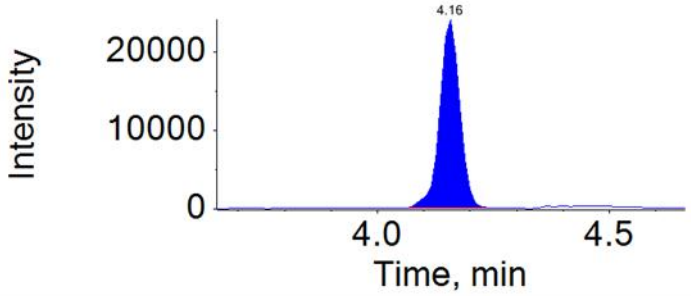
Component: PFBS
Primary Mass: 299.0 / 80.0



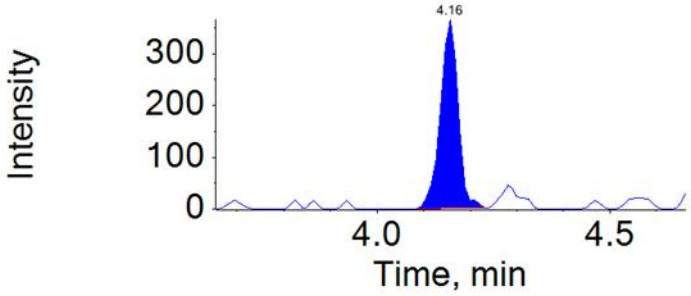
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



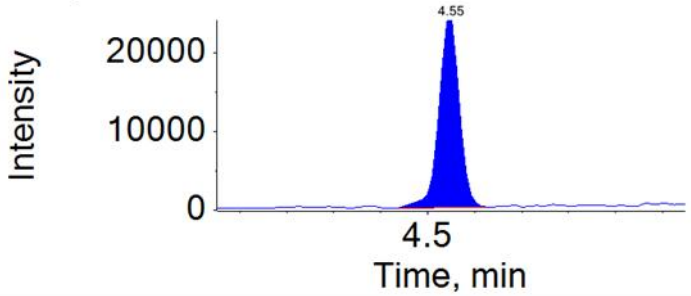
Component: PFHxA
Primary Mass: 313.0 / 269.0



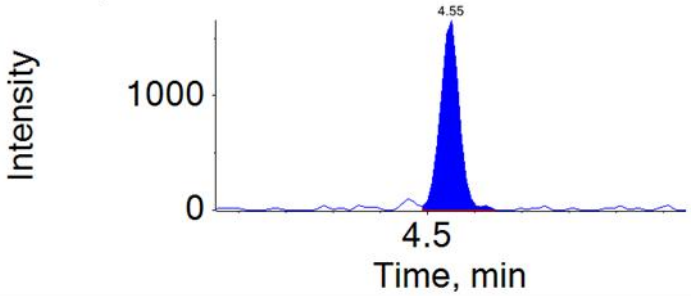
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



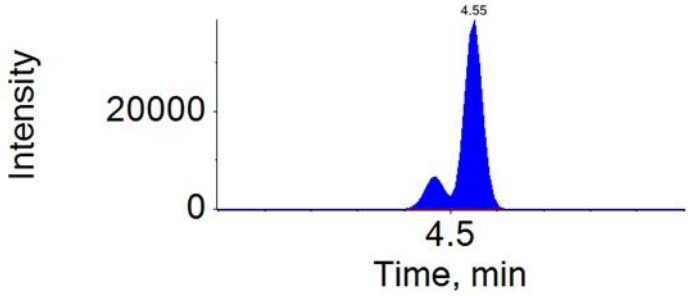
Component: PFHpA
Primary Mass: 363.0 / 319.0



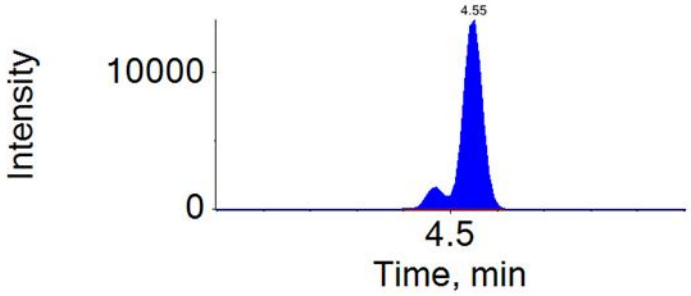
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



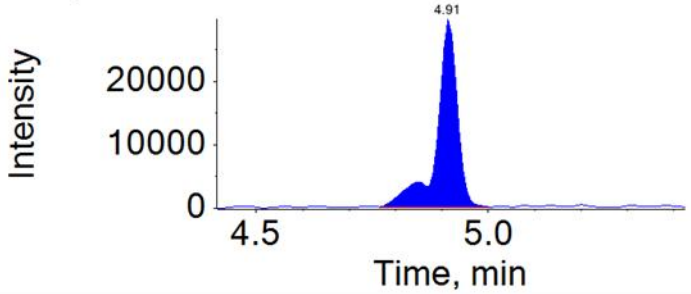
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



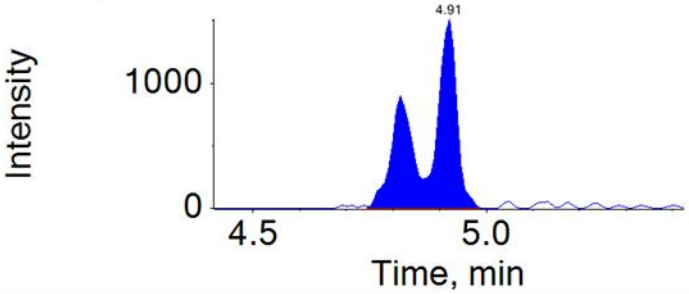
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

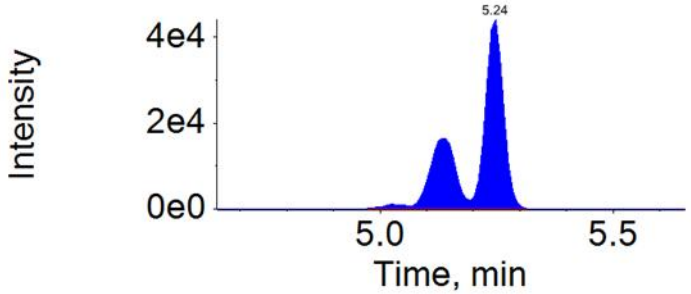
Component: PFOA
Primary Mass: 413.0 / 369.0



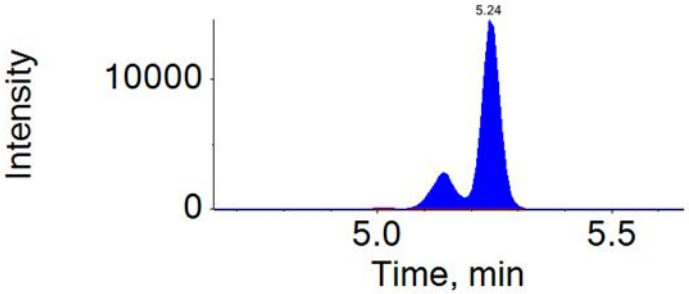
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



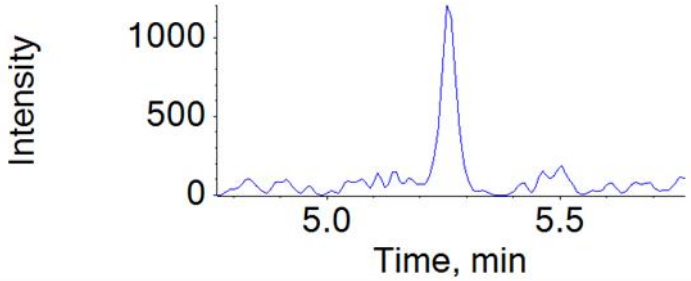
Component: PFOS
Primary Mass: 499.0 / 80.0



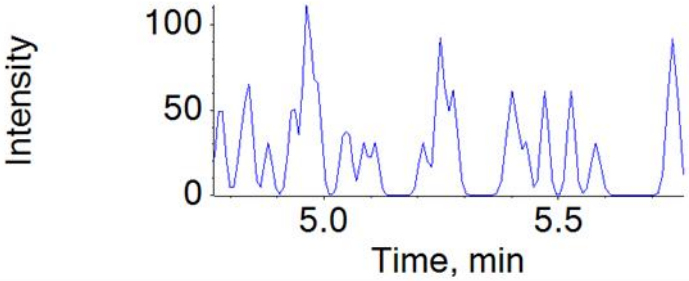
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



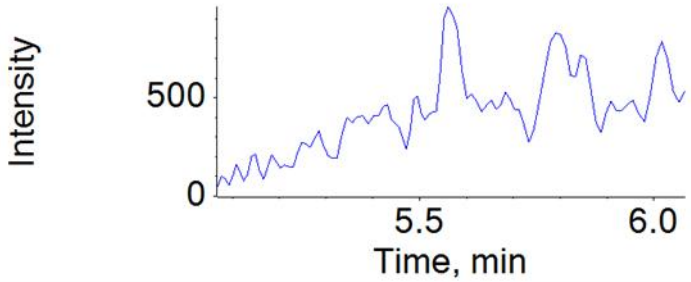
Component: PFNA
Primary Mass: 463.0 / 419.0



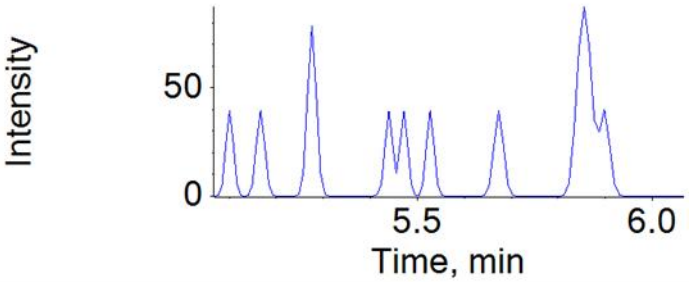
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



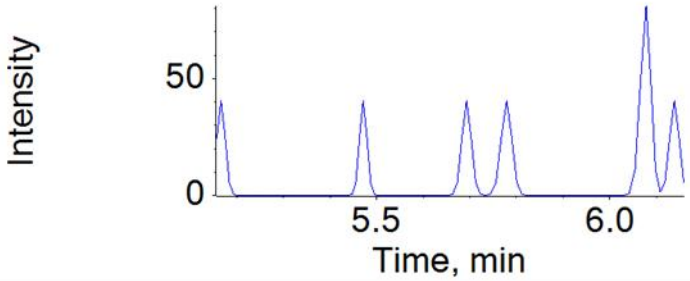
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



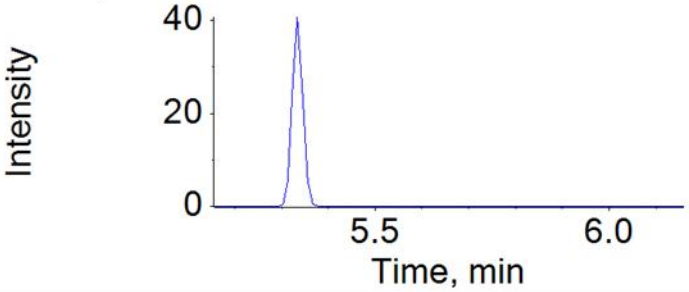
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

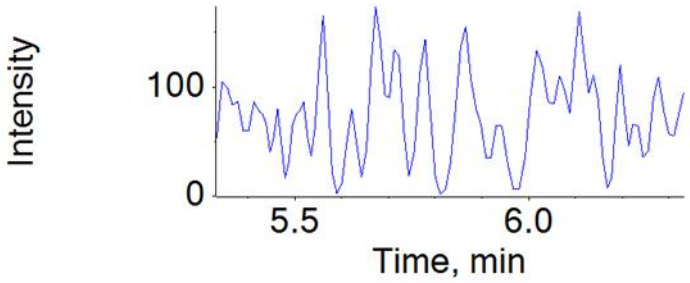
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



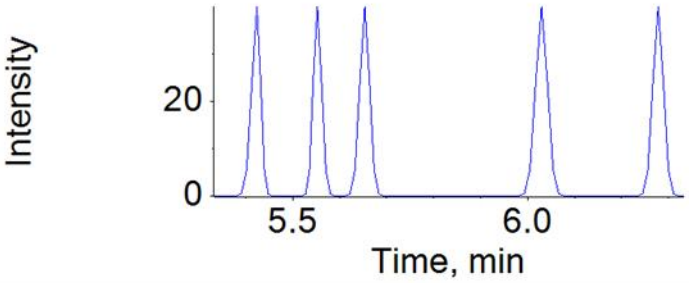
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



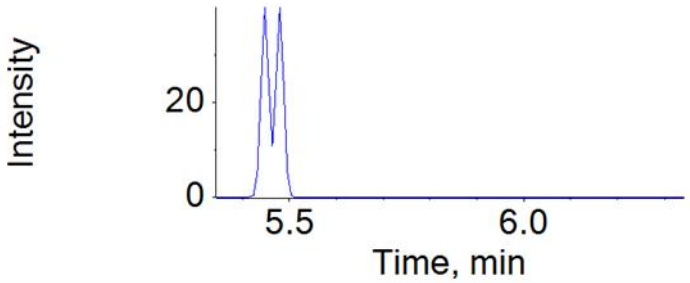
Component: PFUnDA
Primary Mass: 563.0 / 519.0



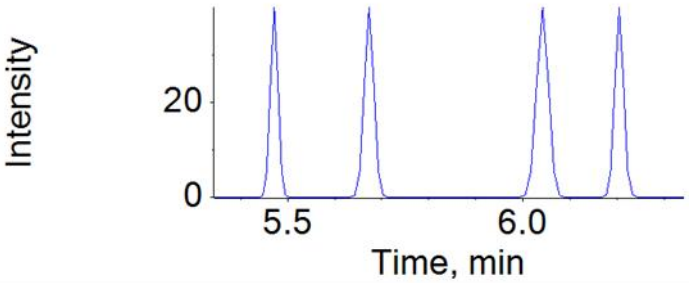
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



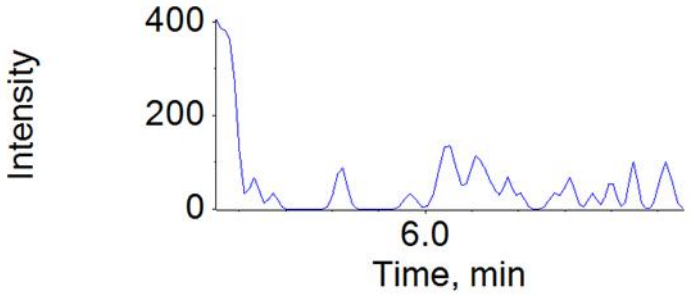
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



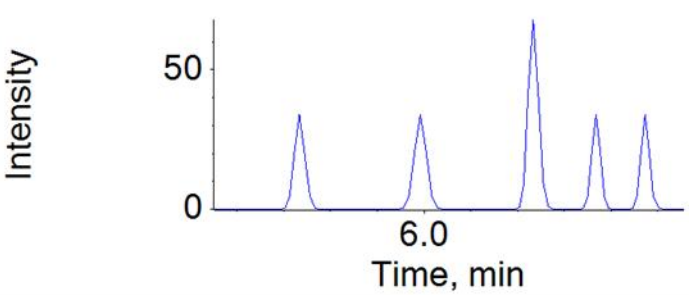
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



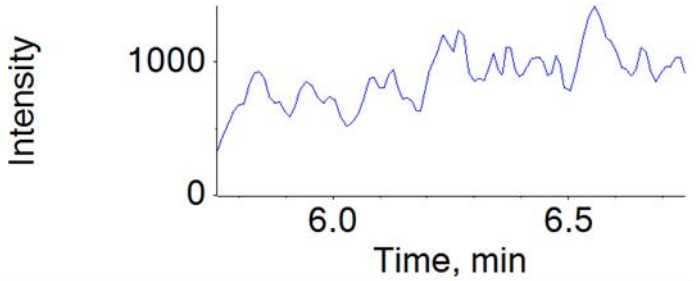
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Secondary Mass: 613.0 / 169.0



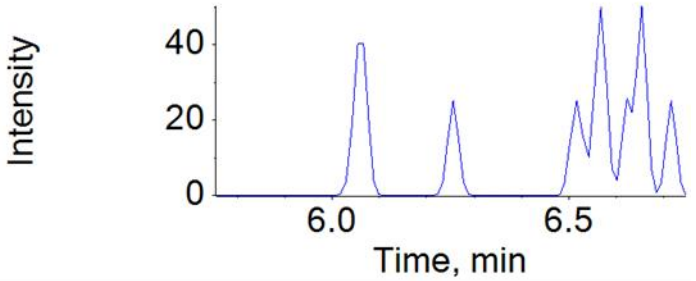
APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

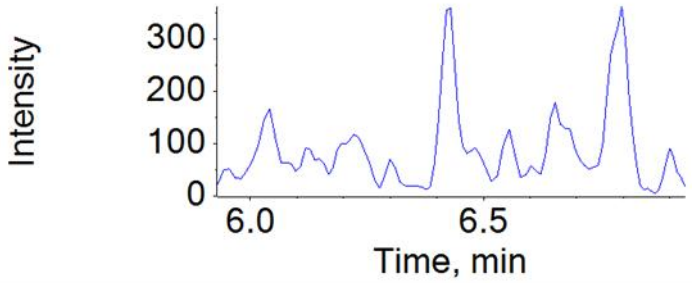
Component: PFTrDA
Primary Mass: 663.0 / 619.0



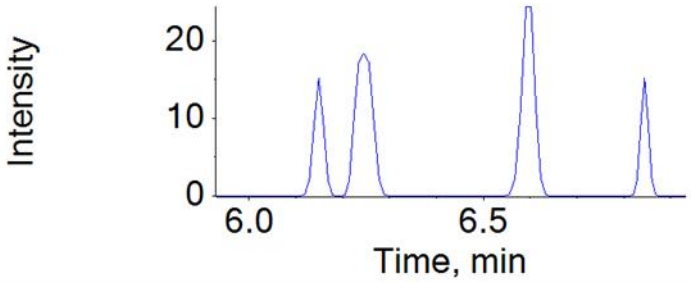
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 4:11 pm, 11/13/18

REVIEWED
By umar at 5:37 pm, 11/13/18

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

Result Table: 18311004 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881541			**Data File:**		18NOV08D-95.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-01-08 Grab Soil			**Acquis Date:**		2018-11-09T01:56:35
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	36			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.01000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

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	851609.5	728839.7	17	50	
13C2-PFOA	5.0	604212.3	491983.1	23	50	
13C4-PFOS	4.8	314811.2	255568.1	23	50	
13C2-PFDA	5.0	367445.0	315407.5	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
E13C3-PFBS	381927.6	13C3-PFBA	851609.5	0.448	9.208	6.518	71	50-150	
E13C5-PFHxA	588765.5	13C2-PFOA	604212.3	0.974	9.901	7.098	72	50-150	
E13C3-PFHxS	292344.0	13C2-PFOA	604212.3	0.484	9.366	6.878	73	50-150	
E13C4-PFHpA	488894.4	13C2-PFOA	604212.3	0.809	9.901	7.289	74	50-150	
E13C8-PFOA	853608.7	13C2-PFOA	604212.3	1.413	9.901	7.801	79	50-150	
E13C8-PFOS	258646.4	13C4-PFOS	314811.2	0.822	9.465	7.194	76	50-150	
E13C9-PFNA	425348.9	13C4-PFOS	314811.2	1.351	9.901	7.308	74	50-150	
E13C6-PFDA	548760.6	13C2-PFDA	367445.0	1.493	9.901	7.437	75	50-150	
Ed3-NMeFOSAA	57724.1	13C2-PFDA	367445.0	0.157	9.901	5.785	58	50-150	
E13C7-PFUnDA	244630.5	13C2-PFDA	367445.0	0.666	9.901	7.605	77	50-150	
Ed5-NEtFOSAA	51434.9	13C2-PFDA	367445.0	0.140	9.901	6.415	65	50-150	
E13C2-PFDoDA	495805.3	13C2-PFDA	367445.0	1.349	9.901	7.203	73	50-150	
E13C2-PFTeDA	347446.0	13C2-PFDA	367445.0	0.946	9.901	6.741	68	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

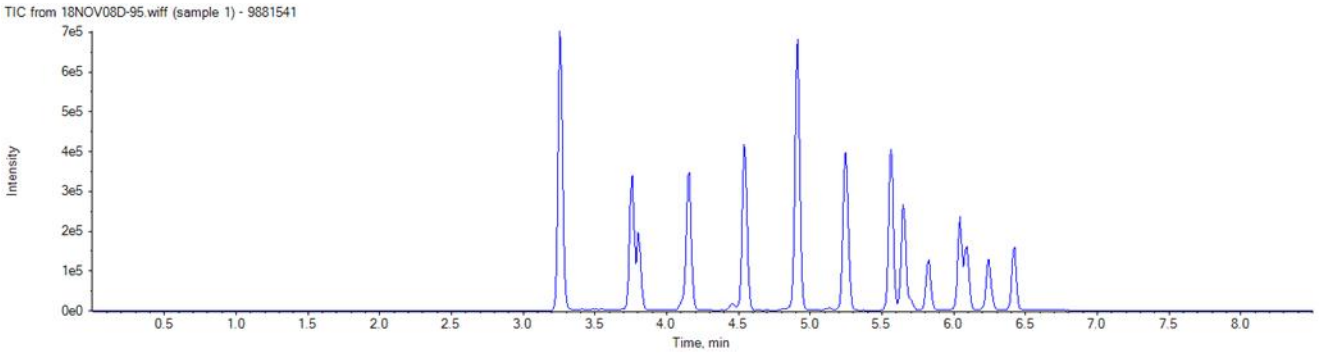
Analyte Quantitation Peak Table

Sample Name: 9881541 **Instrument Name:** LM27631 **File Name:** 18NOV08D-95.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.01000	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	3.81	1.000	4701.4		A	13C3-PFBS	3.81	381927.6	0.012	0.123
PFHxA	4.15	1.000	220509.5		A	13C5-PFHxA	4.15	588765.5	0.375	3.181
PFHxS	4.54	1.000	138663.5		M	13C3-PFHxS	4.54	292344.0	0.474	4.761
PFHpA	4.54	1.000	65862.4		A	13C4-PFHpA	4.54	488894.4	0.135	0.897
PFOA	4.91	1.000	64538.2		A	13C8-PFOA	4.91	853608.7	0.076	0.843
PFOS	5.23	1.000	43136.3		M	13C8-PFOS	5.24	258646.4	0.167	1.712
PFNA	5.26	1.000	12155.2		A	13C9-PFNA	5.26	425348.9	0.029	0.211
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	548760.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	57724.1	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	244630.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	51434.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	495805.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	495805.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	347446.0	N/A	

Total Ion Chromatogram

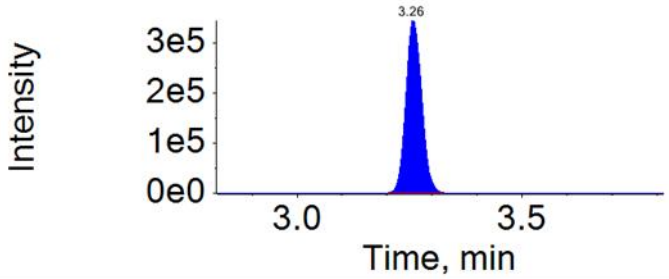


APPROVED
By JPT at 5:18 pm, 11/9/18

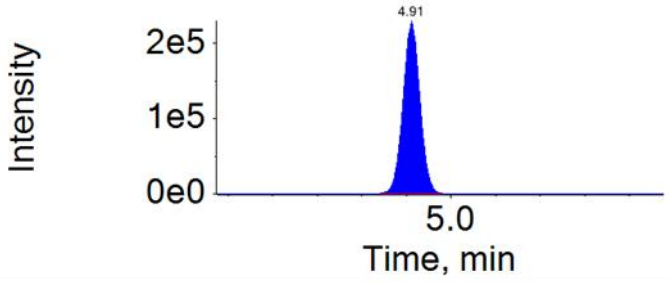
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

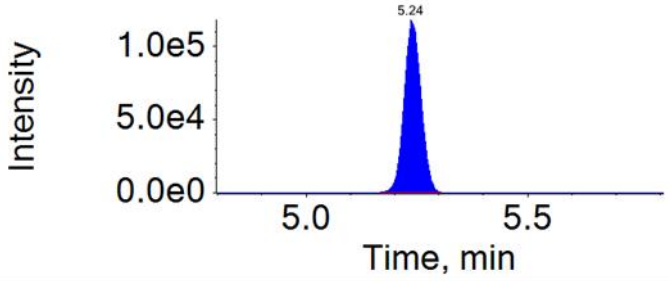
Injection Standard: 13C3-PFBA
216.0 / 172.0



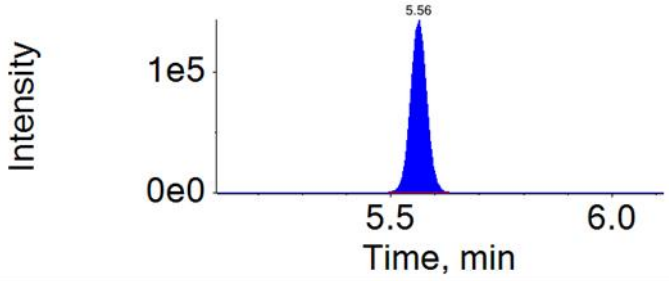
Injection Standard: 13C2-PFOA
415.0 / 370.0



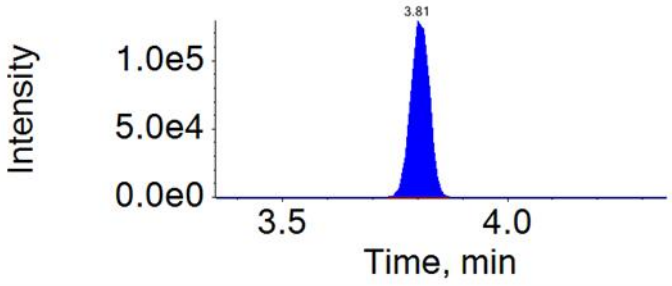
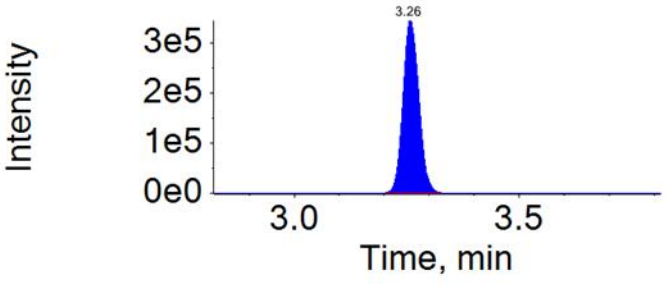
Injection Standard: 13C4-PFOS
503.0 / 80.0

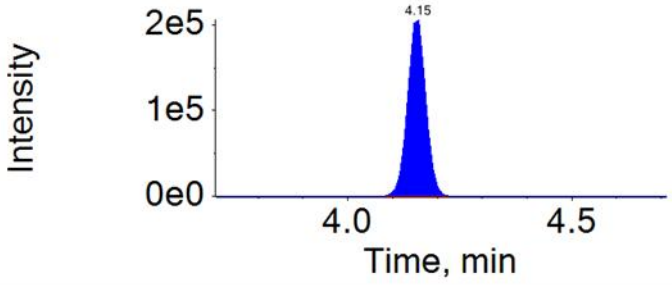
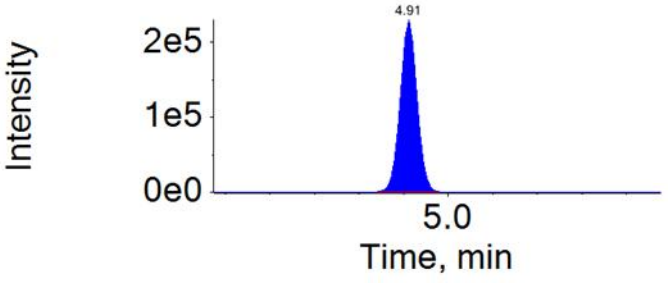


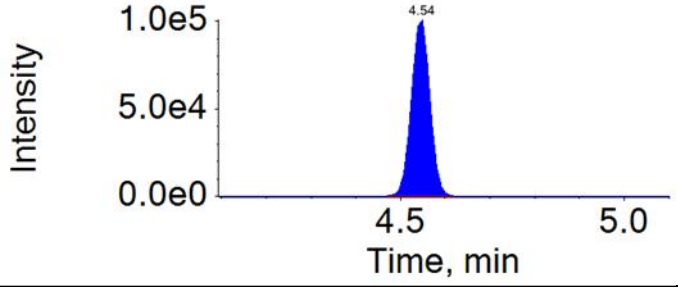
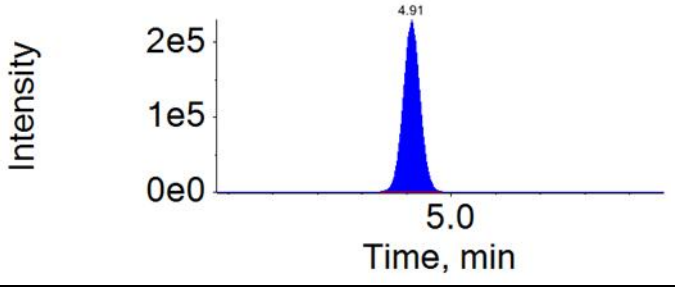
Injection Standard: 13C2-PFDA
515.0 / 470.0

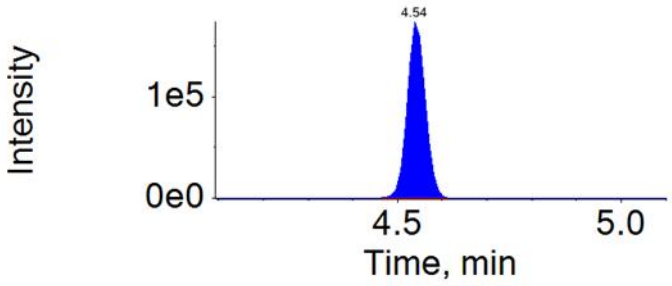
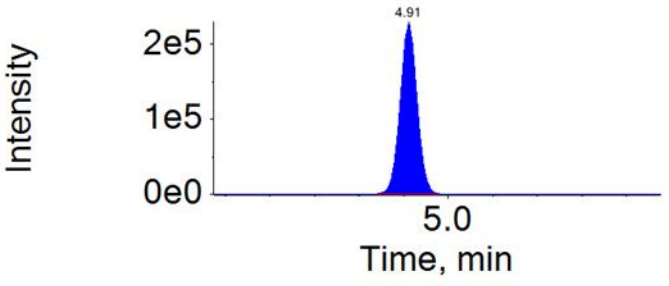


ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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
	

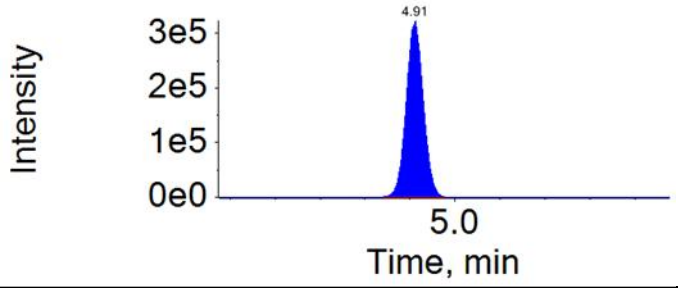
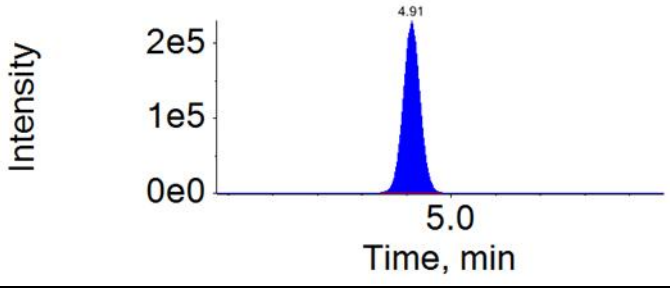
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

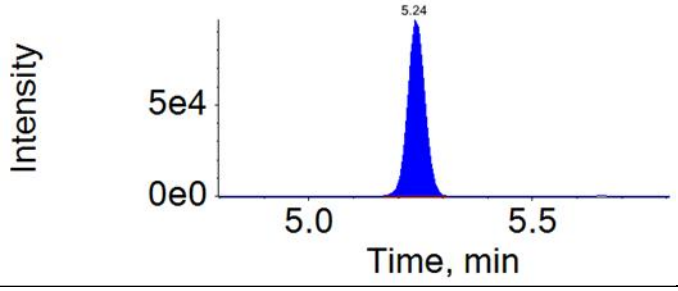
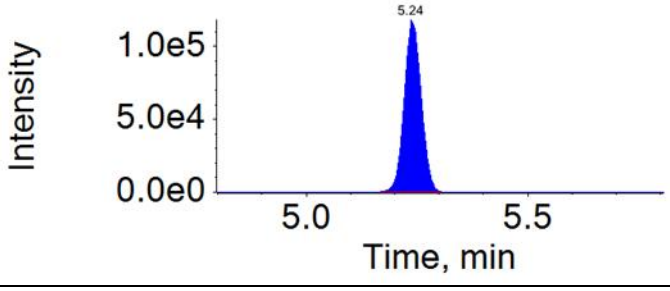
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

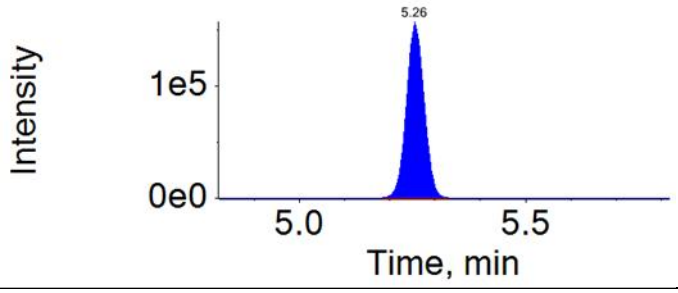
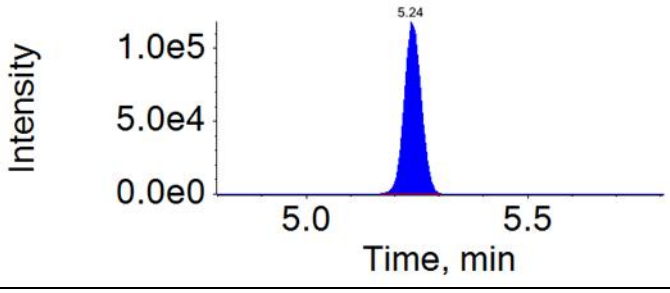
APPROVED
By JPT at 5:18 pm, 11/9/18

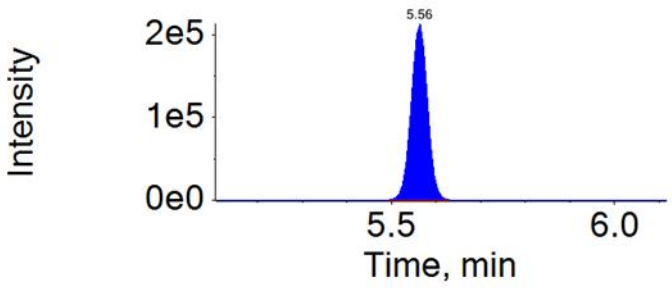
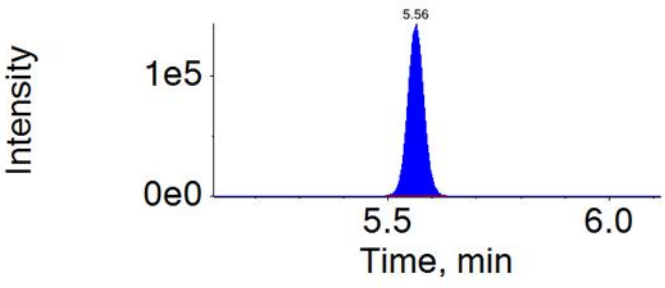
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

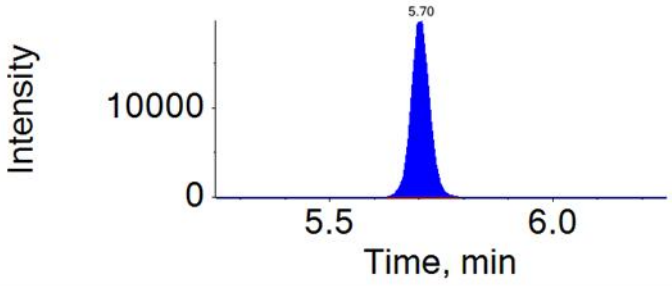
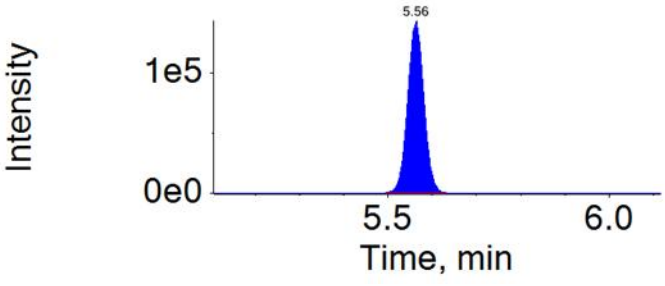
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

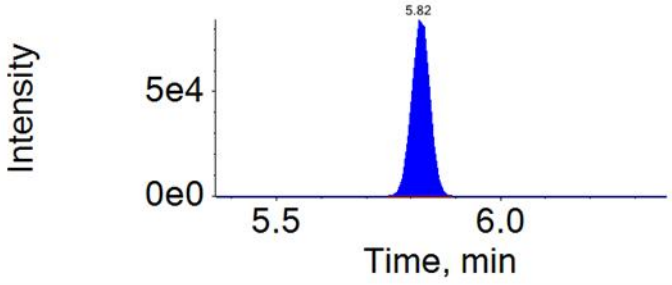
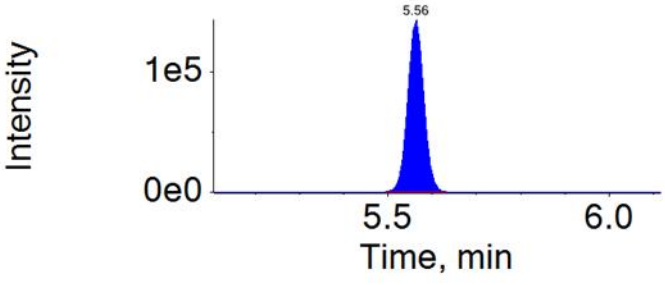
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

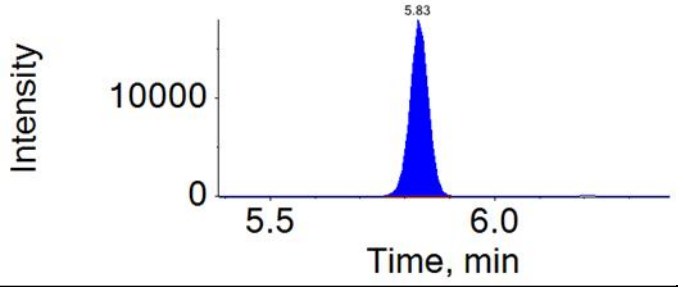
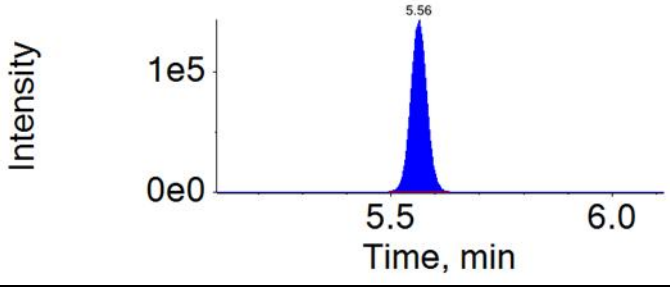
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

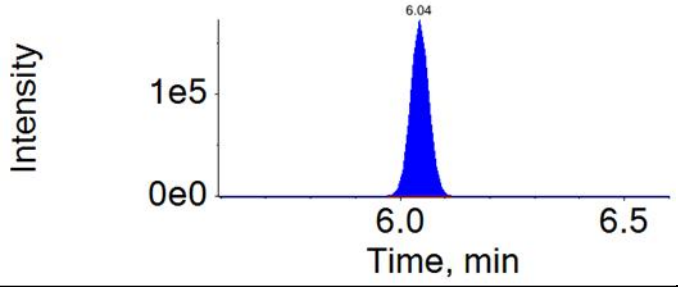
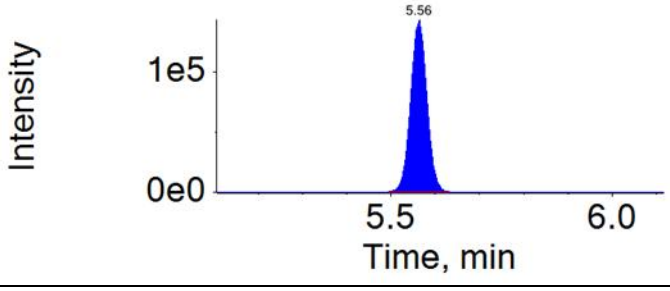
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

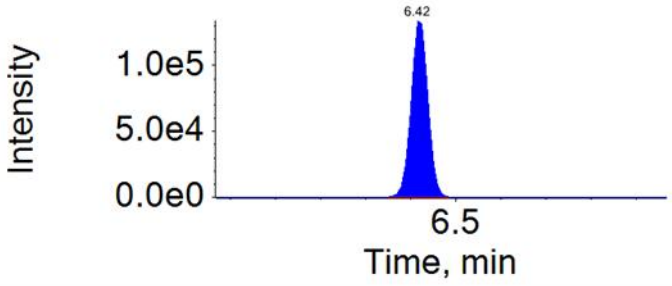
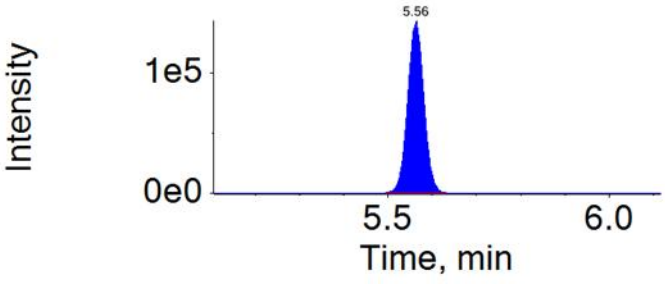
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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
	

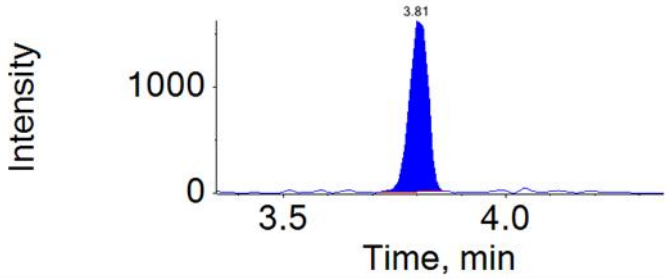
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

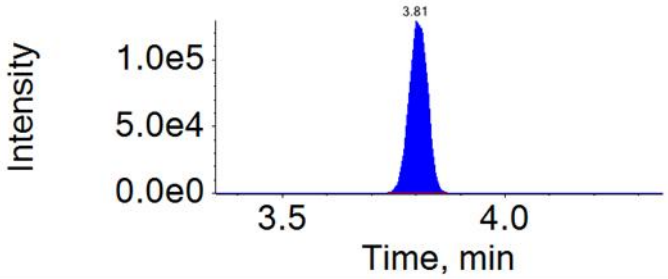
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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

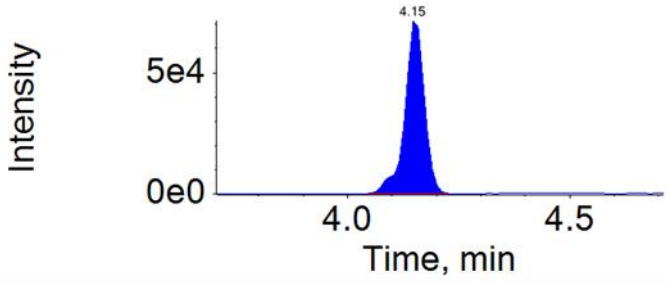
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

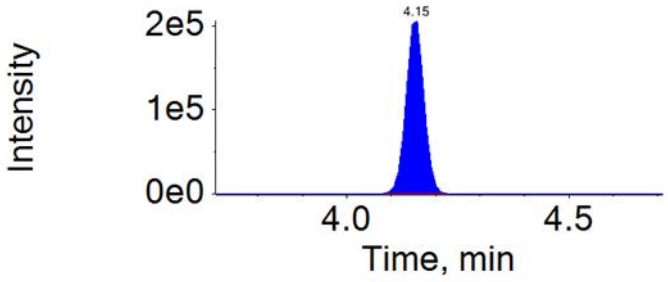
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



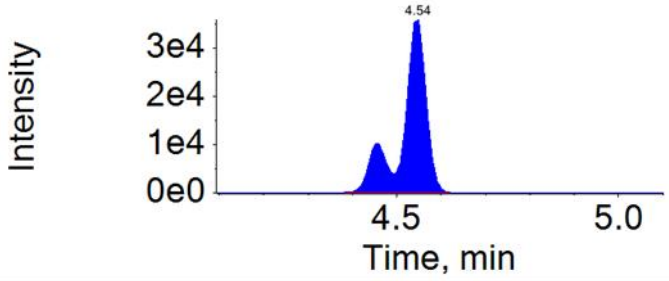


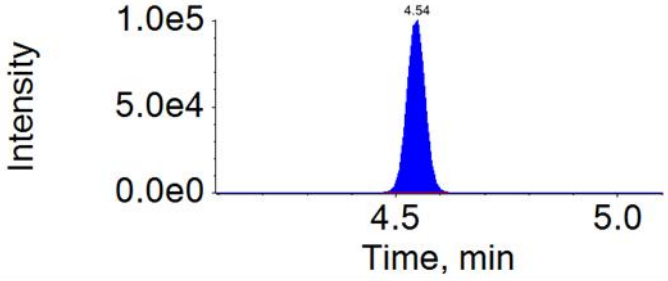
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



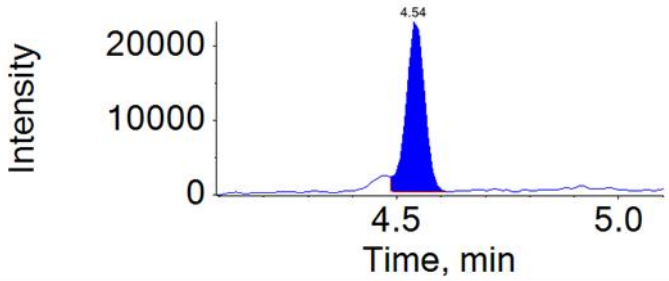


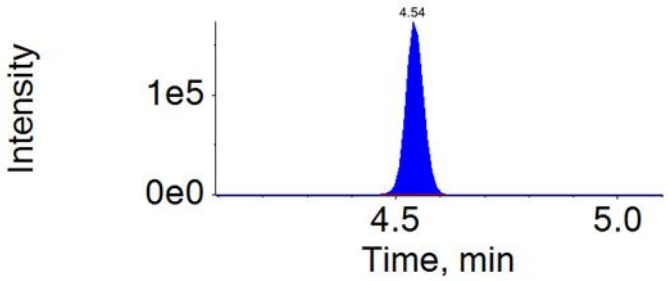
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

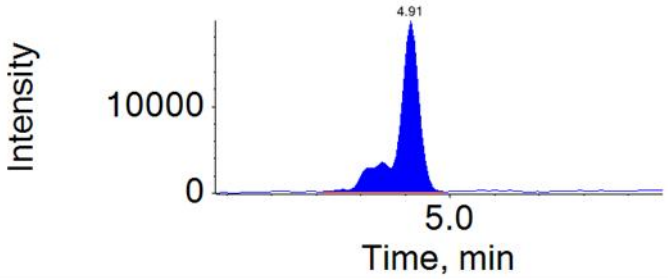
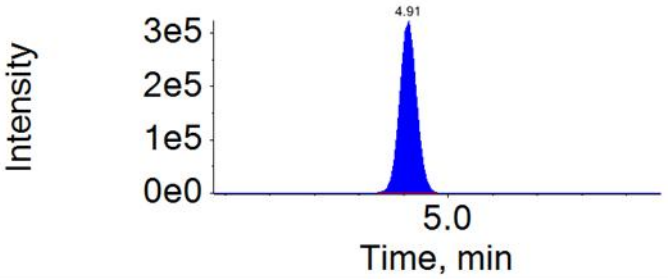


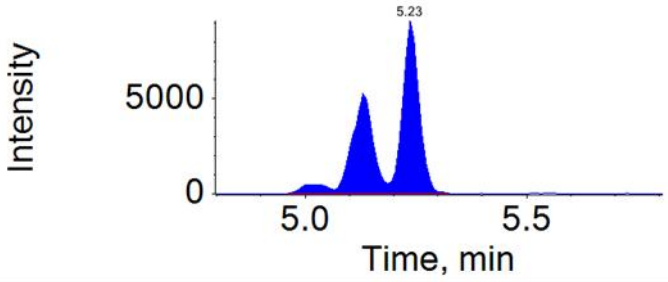
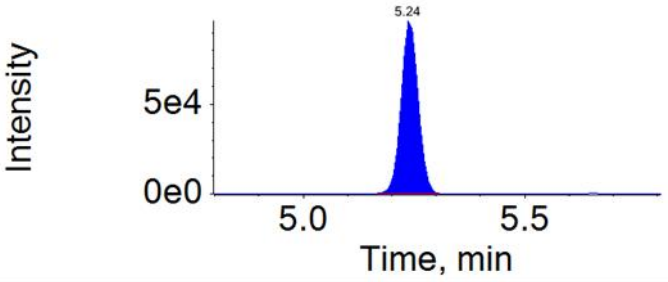


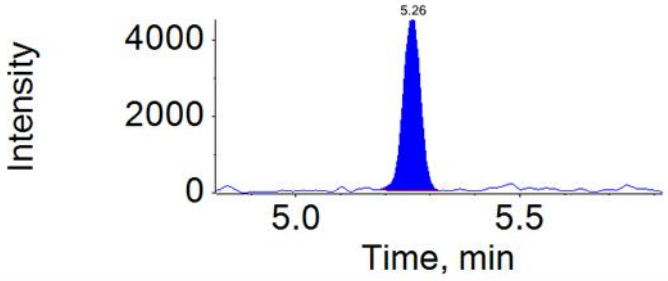
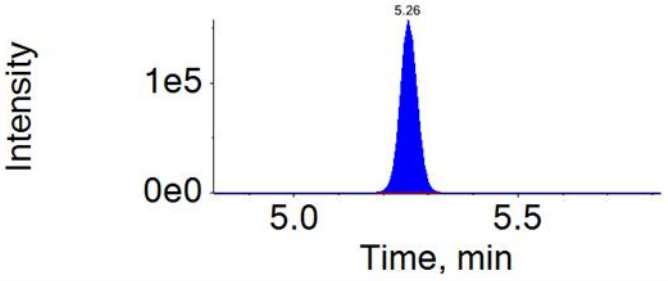
APPROVED
By JPT at 5:18 pm, 11/9/18

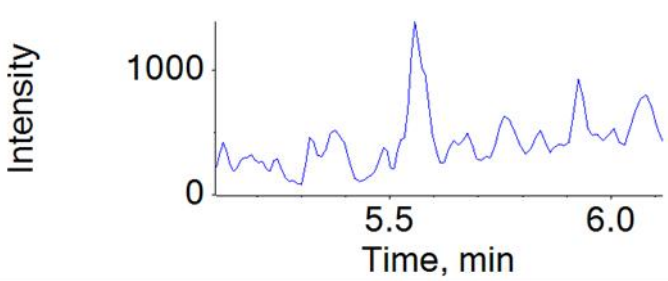
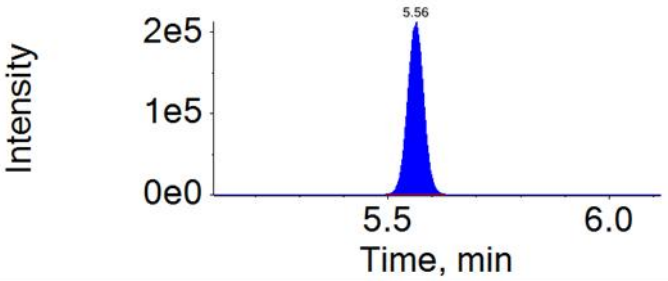
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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
	

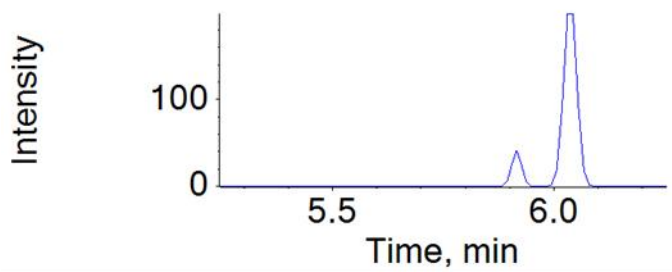
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

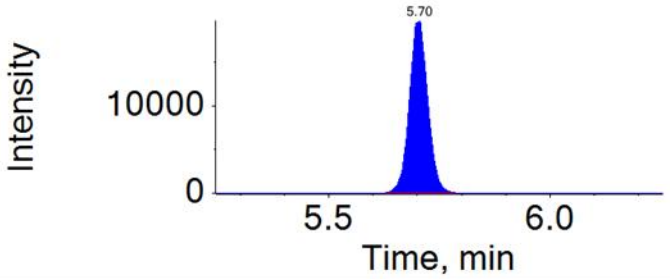
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

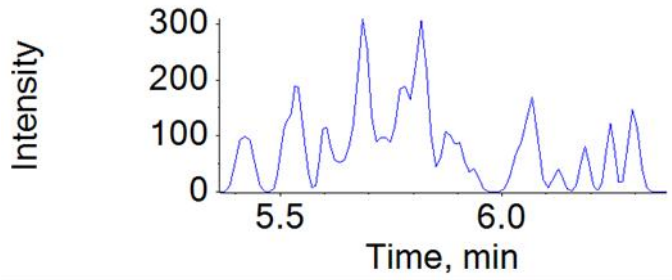
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

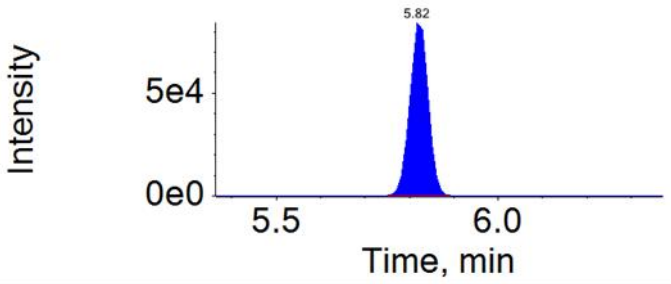
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



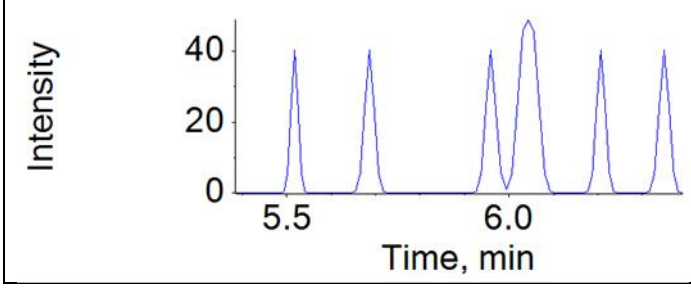


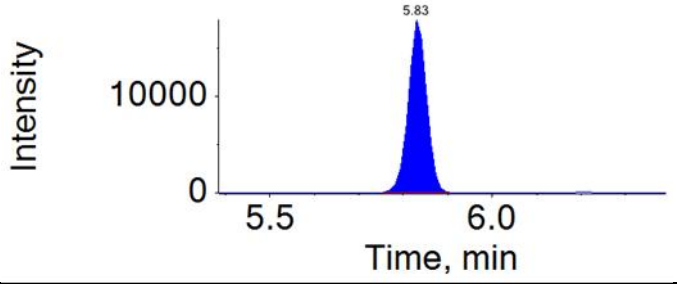
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



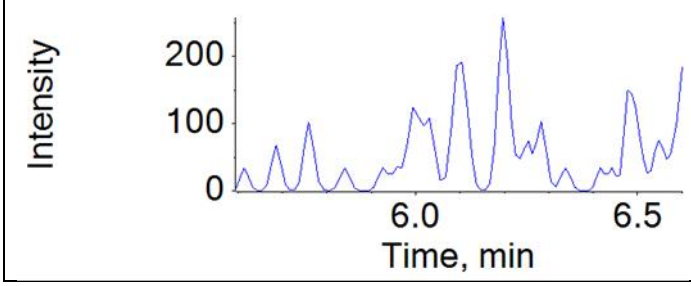


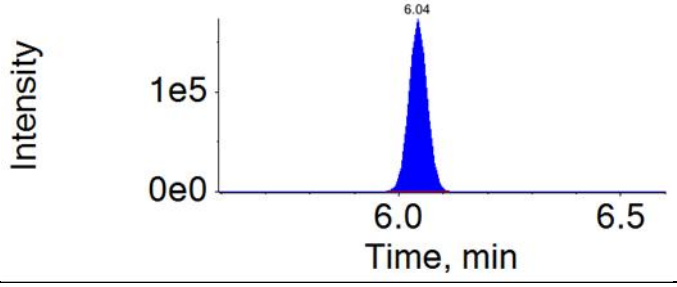
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



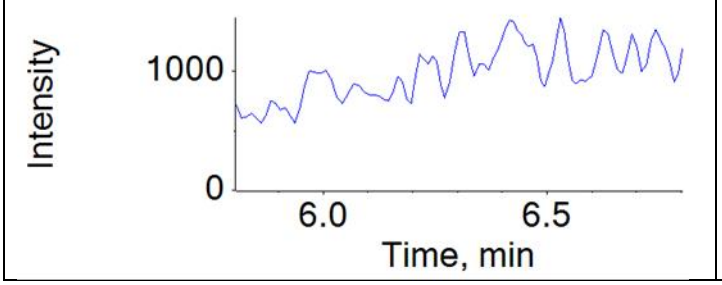


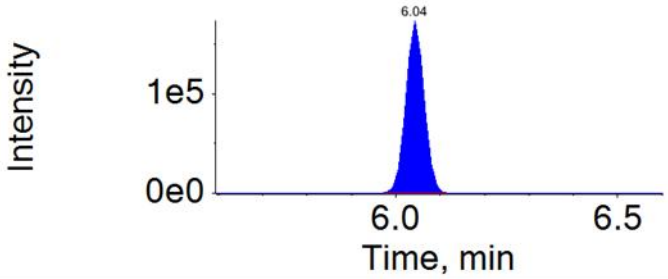
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

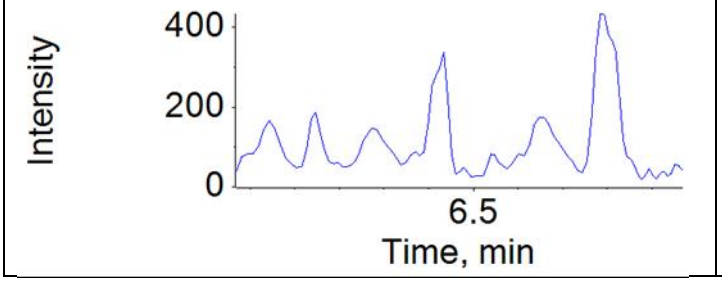
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

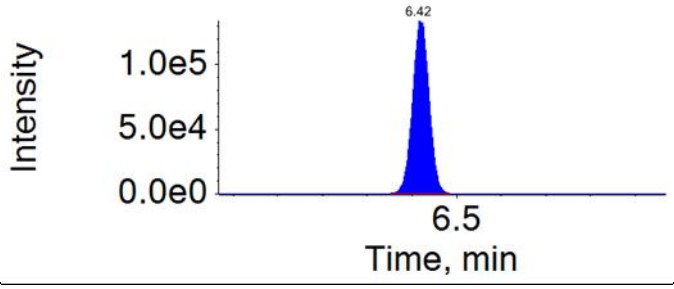
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



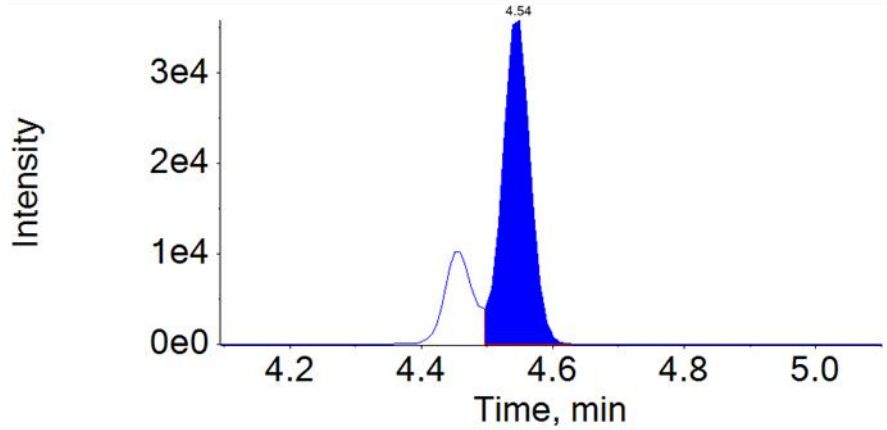


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

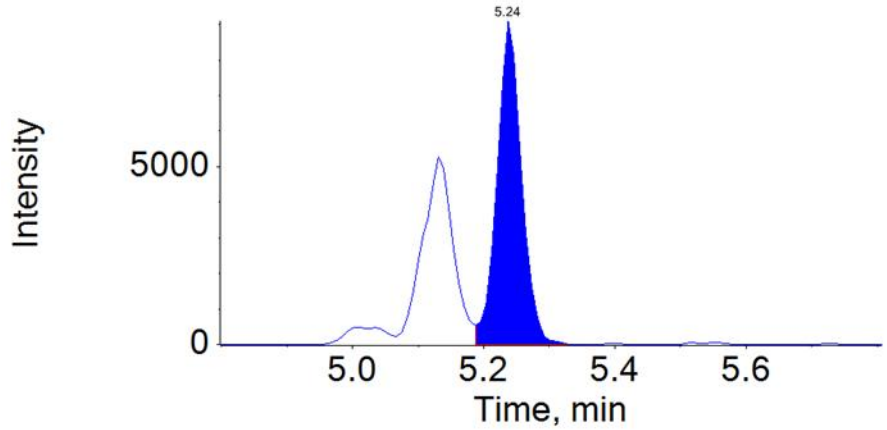
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
107244.9
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-95.wiff
Sample Name:
9881541



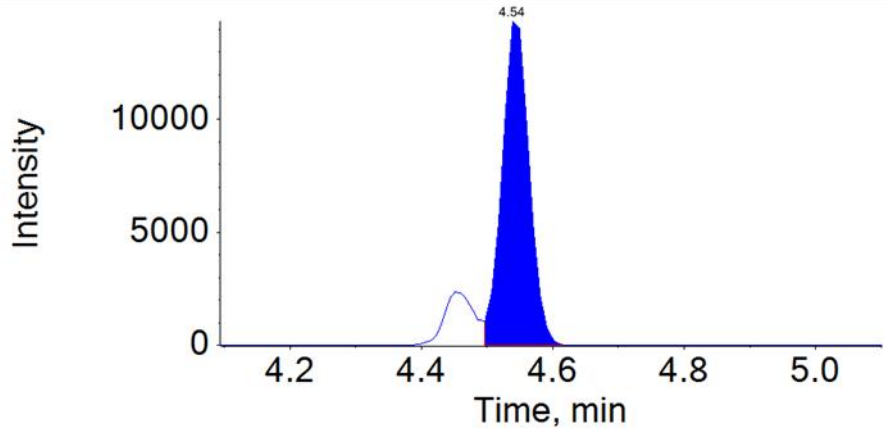
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
23712.1
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-95.wiff
Sample Name:
9881541



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
41257.5
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-95.wiff
Sample Name:
9881541



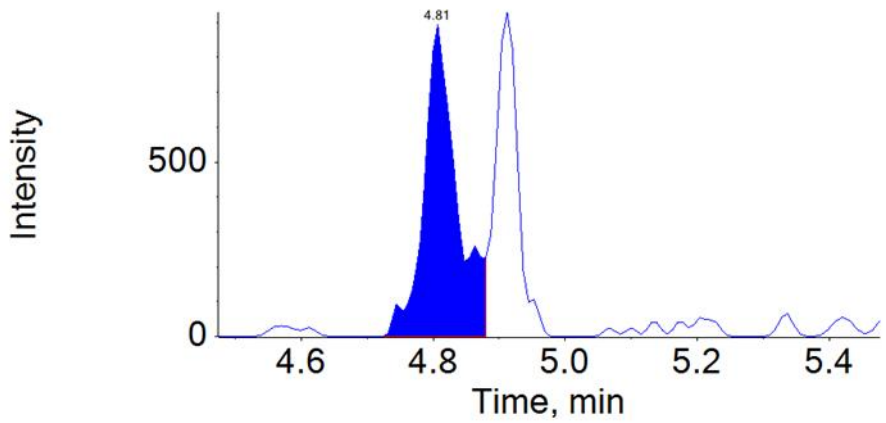
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APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

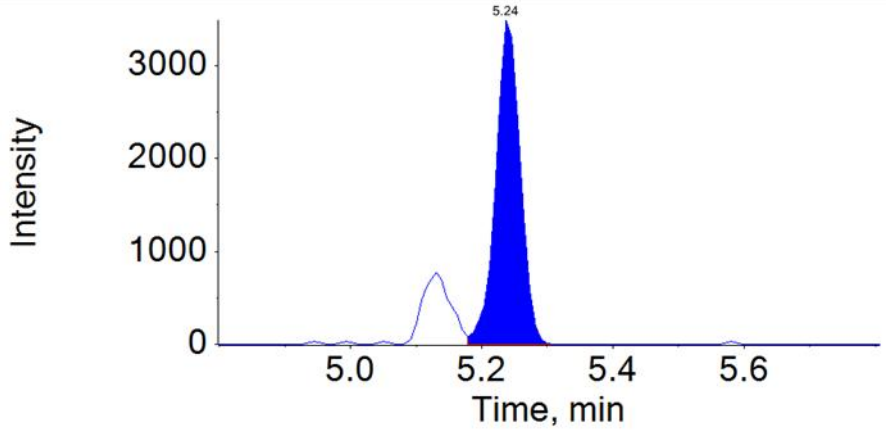
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOA_2
RT (min.):
4.81
Peak Area:
3108.2
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-95.wiff
Sample Name:
9881541



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
9104.4
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-95.wiff
Sample Name:
9881541



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

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

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

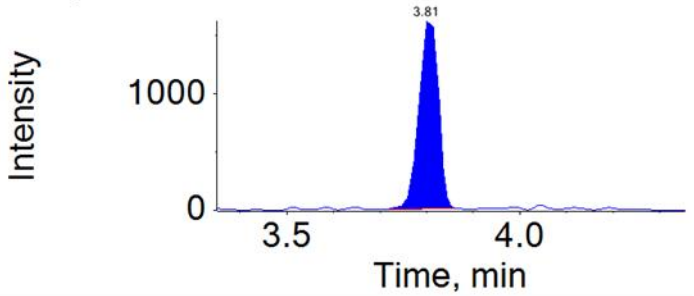
Sample Name: 9881541 **Instrument Name:** LM27631 **File Name:** 18NOV08D-95.wiff

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	4701.4	A	N/A	1.0000			
PFBS_2	3.80	1.00	2032.5	A	N/A	0.4323	21	50	
PFHxA	4.15	1.00	220509.5	A	N/A	1.0000			
PFHxA_2	4.15	1.00	2418.0	A	N/A	0.0110	-4	50	
PFHxS	4.54	1.00	138663.5	M	N/A	1.0000			
PFHxS_2	4.54	1.00	48824.6	M	N/A	0.3521	-1	50	
PFHpA	4.54	1.00	65862.4	A	N/A	1.0000			
PFHpA_2	4.54	1.00	3465.3	A	N/A	0.0526	-9	50	
PFOA	4.91	1.00	64538.2	A	N/A	1.0000			
PFOA_2	4.86	0.99	5312.9	M	N/A	0.0823	30	50	
PFOS	5.23	1.00	43136.3	M	N/A	1.0000			
PFOS_2	5.24	1.00	11461.9	M	N/A	0.2657	-24	50	
PFNA	5.26	1.00	12155.2	A	N/A	1.0000			
PFNA_2	5.25	1.00	199.7	A	N/A	0.0164	-21	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	6.26	1.04	129.2	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	

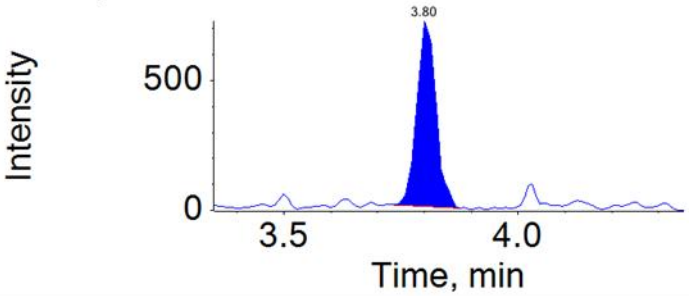
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

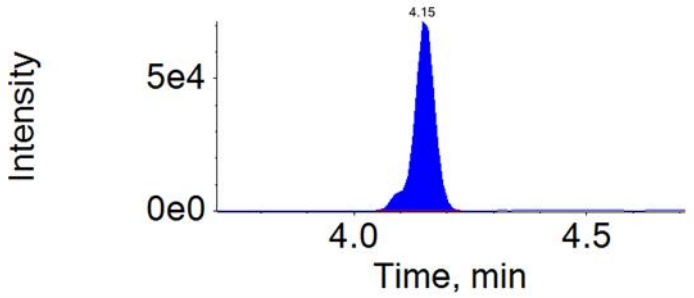
Component: PFBS
Primary Mass: 299.0 / 80.0



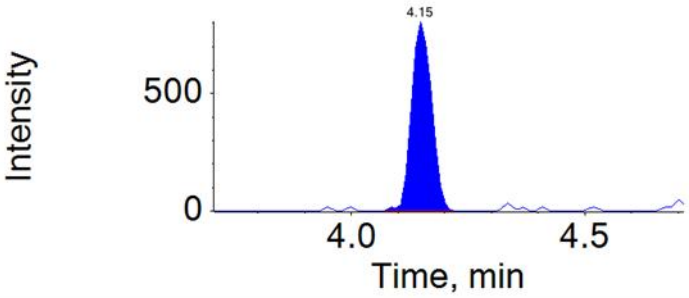
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



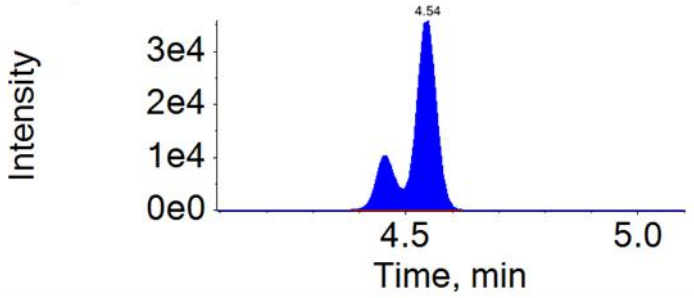
Component: PFHxA
Primary Mass: 313.0 / 269.0



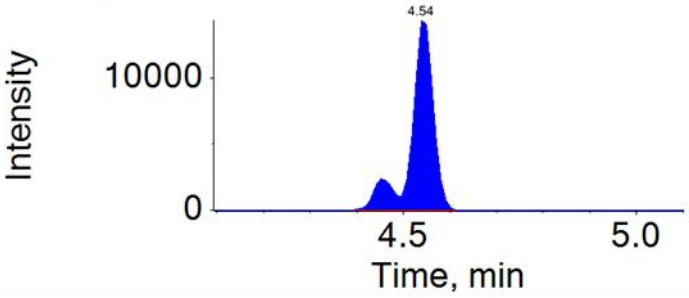
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



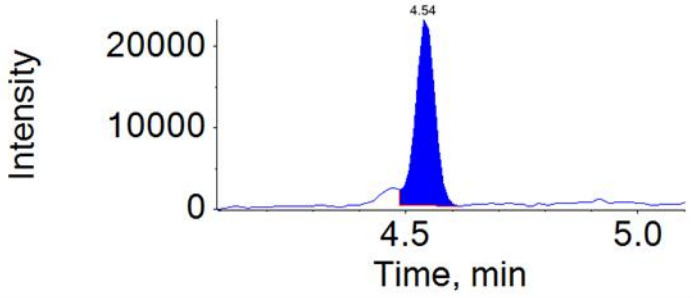
Component: PFHxS
Primary Mass: 399.0 / 80.0



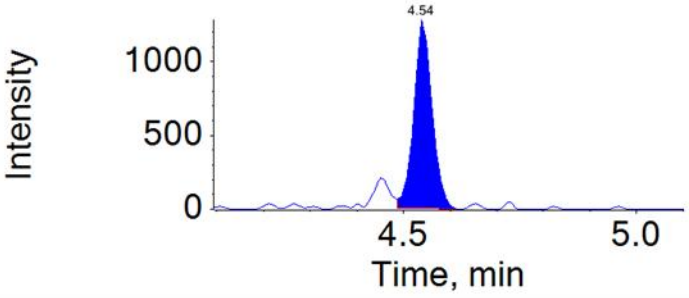
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



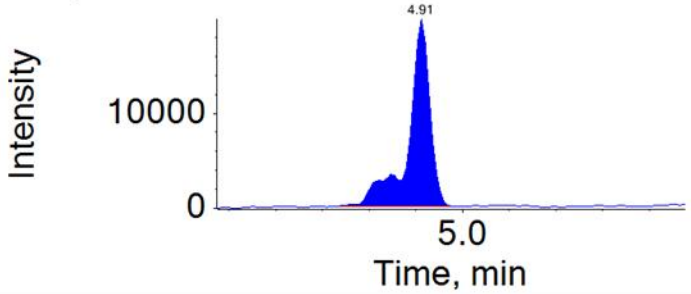
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



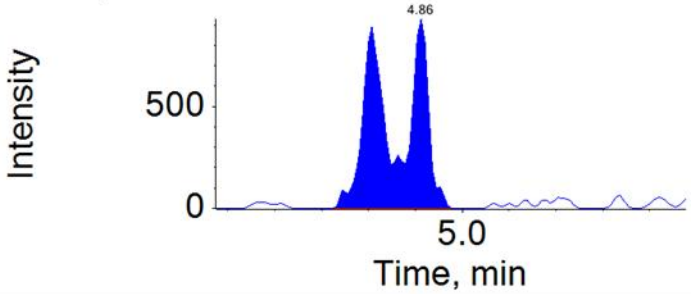
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

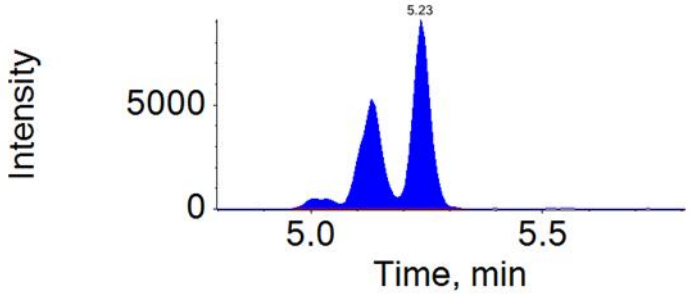
Component: PFOA
Primary Mass: 413.0 / 369.0



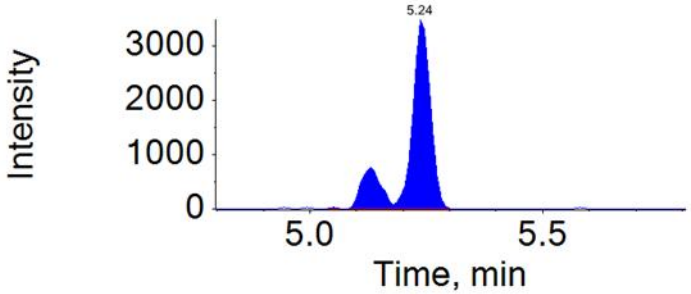
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Secondary Mass: 413.0 / 169.0



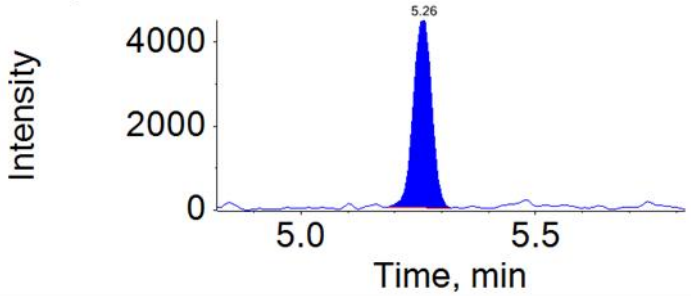
Component: PFOS
Primary Mass: 499.0 / 80.0



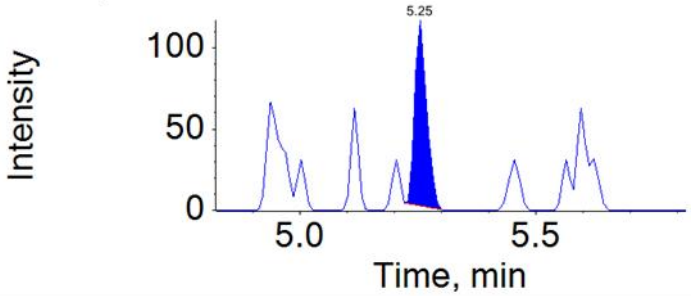
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



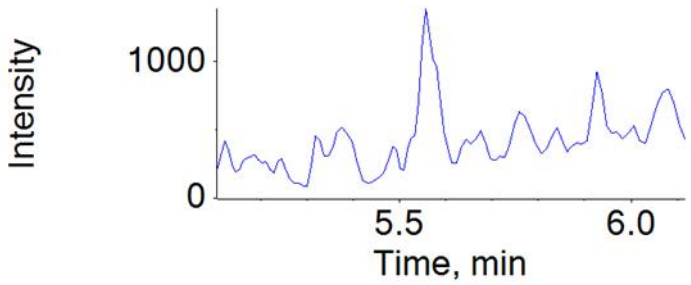
Component: PFNA
Primary Mass: 463.0 / 419.0



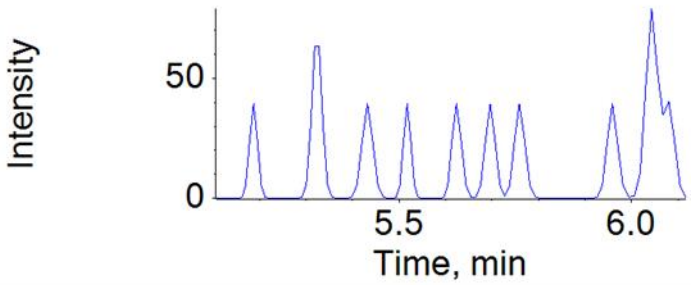
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



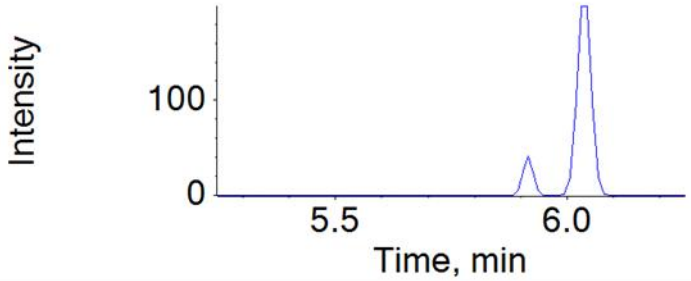
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Secondary Mass: 513.0 / 169.0



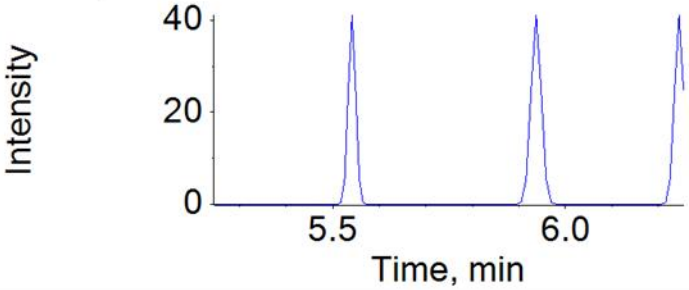
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By umar at 4:40 pm, 11/12/18

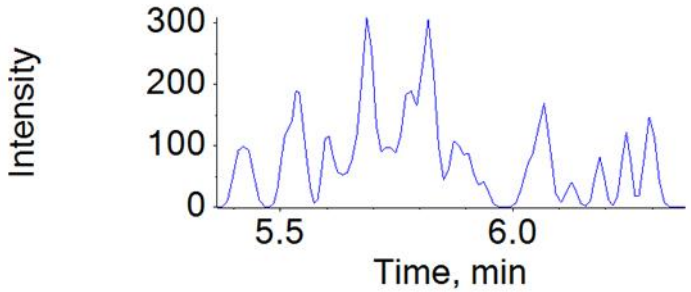
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



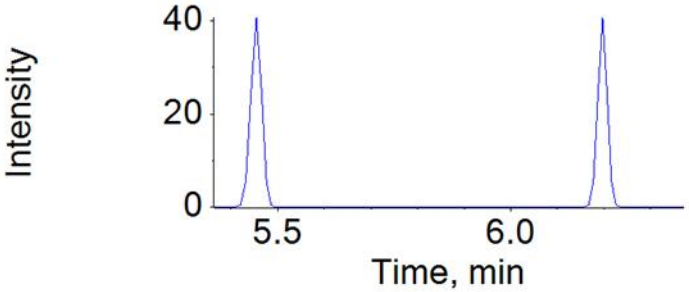
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Secondary Mass: 570.0 / 483.0



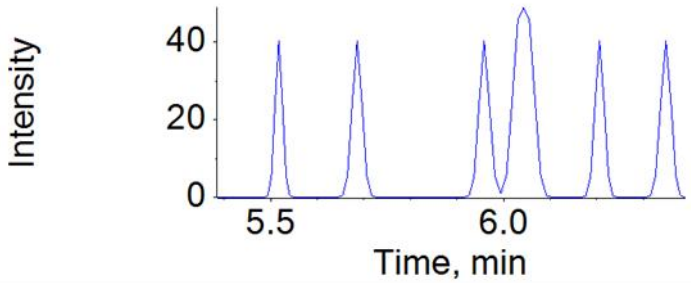
Component: PFUnDA
Primary Mass: 563.0 / 519.0



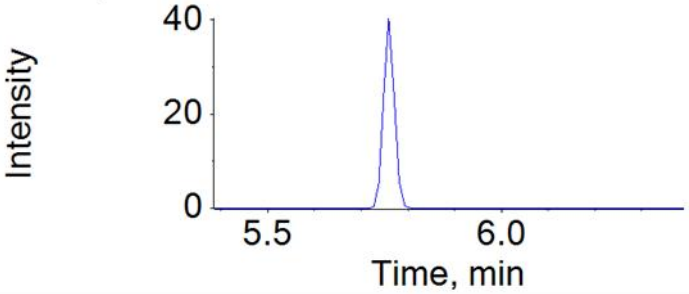
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Secondary Mass: 563.0 / 169.0



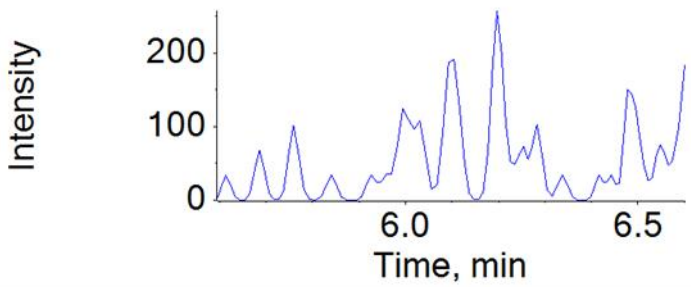
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



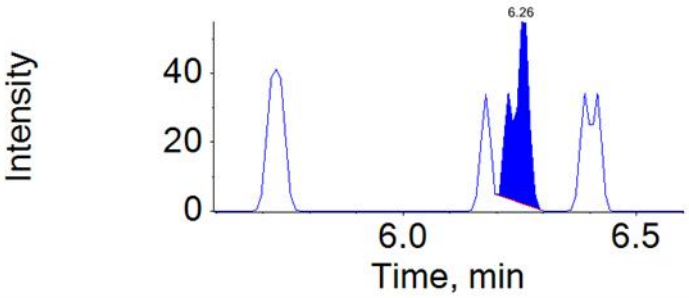
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



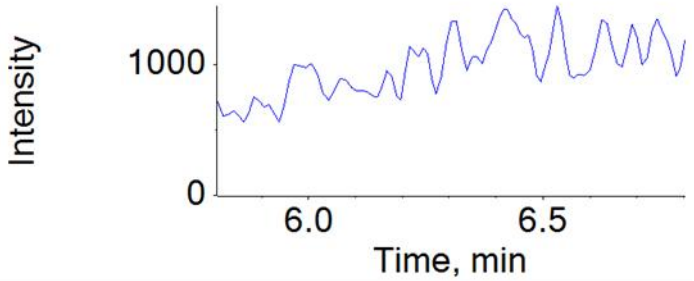
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Secondary Mass: 613.0 / 169.0



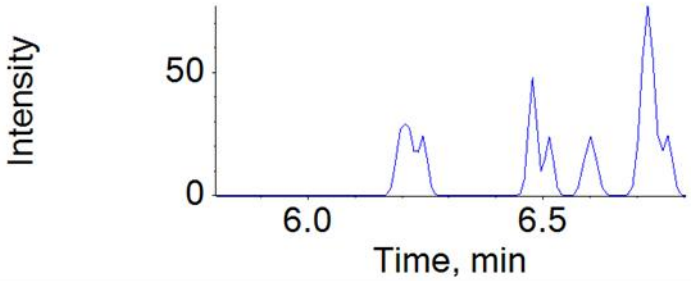
APPROVED
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REVIEWED
By umar at 4:40 pm, 11/12/18

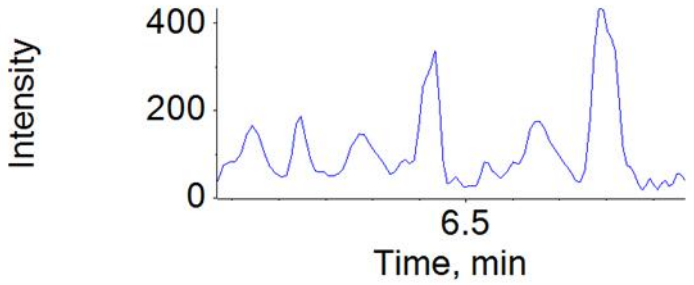
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Primary Mass: 663.0 / 619.0



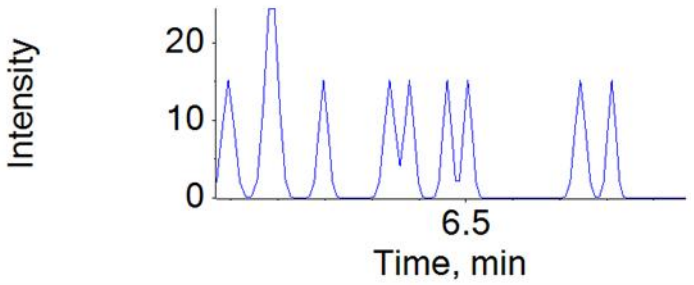
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881542			**Data File:**		18NOV29D-57.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003 OU1-Bldg371-S-01-10 Grab Soil			**Acquis Date:**		2018-11-29T18:22:39
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	37			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**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: 18NOV29D-05

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	1057894.4	906425.4	17	50	
13C2-PFOA	5.0	580539.1	495984.0	17	50	
13C4-PFOS	4.8	369268.3	296261.8	25	50	
13C2-PFDA	5.0	586790.3	451203.0	30	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	414311.8	13C3-PFBA	1057894.4	0.392	9.118	7.326	80	50-150	
E13C5-PFHxA	696759.1	13C2-PFOA	580539.1	1.200	9.804	8.644	88	50-150	
E13C3-PFHxS	330762.0	13C2-PFOA	580539.1	0.570	9.275	8.756	94	50-150	
E13C4-PFHpA	551910.5	13C2-PFOA	580539.1	0.951	9.804	8.565	87	50-150	
E13C8-PFOA	998368.1	13C2-PFOA	580539.1	1.720	9.804	9.281	95	50-150	
E13C8-PFOS	325398.1	13C4-PFOS	369268.3	0.881	9.373	7.800	83	50-150	
E13C9-PFNA	622418.7	13C4-PFOS	369268.3	1.686	9.804	7.259	74	50-150	
E13C6-PFDA	904919.5	13C2-PFDA	586790.3	1.542	9.804	8.526	87	50-150	
Ed3-NMeFOSAA	191339.3	13C2-PFDA	586790.3	0.326	9.804	8.118	83	50-150	
E13C7-PFUnDA	583362.5	13C2-PFDA	586790.3	0.994	9.804	8.239	84	50-150	
Ed5-NEtFOSAA	133655.4	13C2-PFDA	586790.3	0.228	9.804	7.957	81	50-150	
E13C2-PFDoDA	1113434.5	13C2-PFDA	586790.3	1.898	9.804	7.817	80	50-150	
E13C2-PFTeDA	839982.9	13C2-PFDA	586790.3	1.431	9.804	7.767	79	50-150	

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

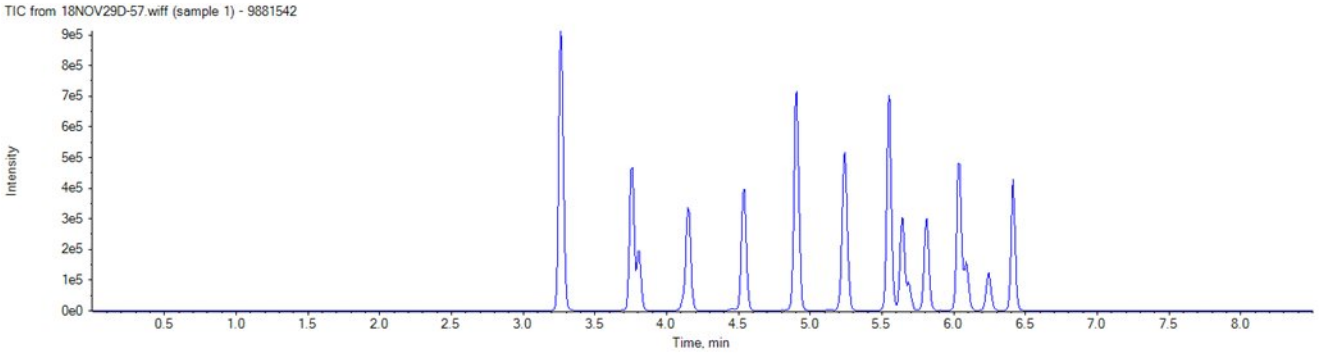
Analyte Quantitation Peak Table

Sample Name: 9881542 **Instrument Name:** LM27631 **File Name:** 18NOV29D-57.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	414311.8	N/A	
PFHxA	4.15	1.000	99219.3		A	13C5-PFHxA	4.15	696759.1	0.142	1.121
PFHpA	4.54	1.000	23535.9		A	13C4-PFHpA	4.54	551910.5	0.043	0.258
PFHxS	4.54	1.000	52423.9		M	13C3-PFHxS	4.54	330762.0	0.158	1.455
PFOA	4.90	1.000	23427.4		M	13C8-PFOA	4.90	998368.1	0.023	0.238
PFOS	5.19	0.990	12154.3		M	13C8-PFOS	5.23	325398.1	0.037	0.307
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	622418.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	904919.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	191339.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	583362.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	133655.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1113434.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1113434.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	839982.9	N/A	

Total Ion Chromatogram

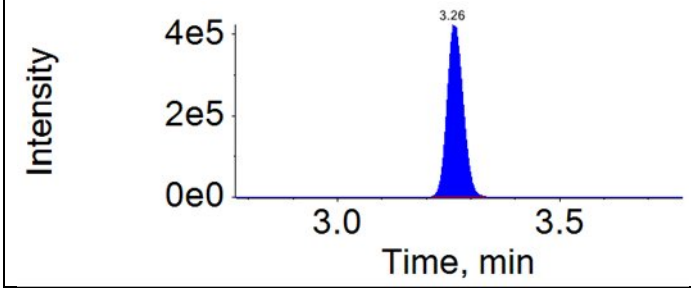


APPROVED
By MCD at 10:12 pm, 11/30/18

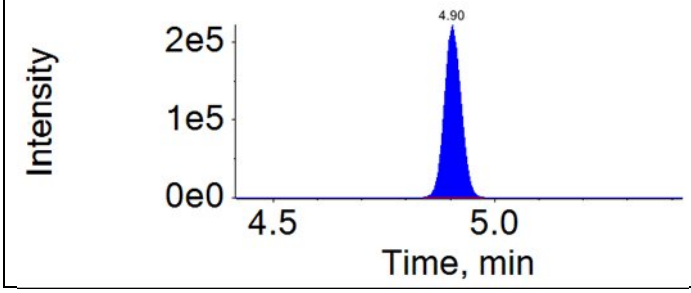
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

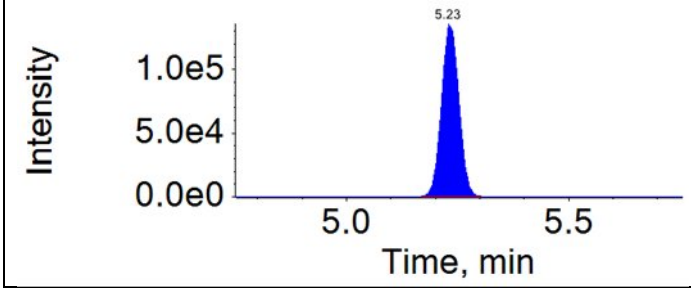
Injection Standard: 13C3-PFBA
216.0 / 172.0



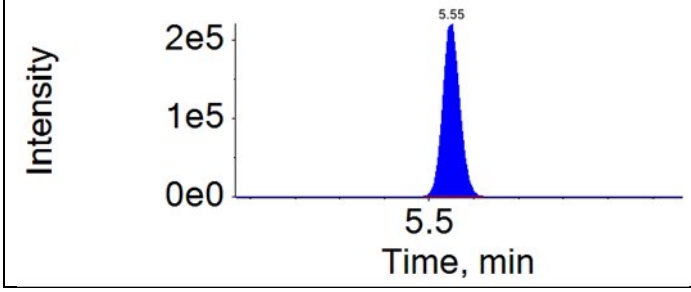
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



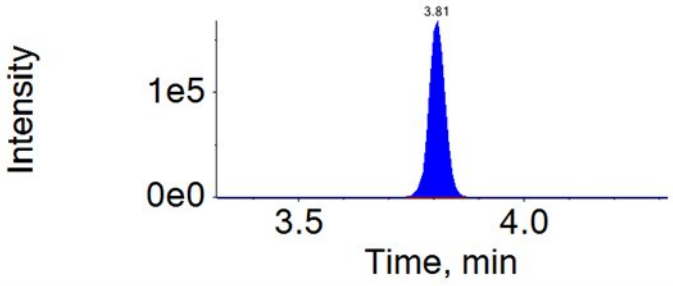
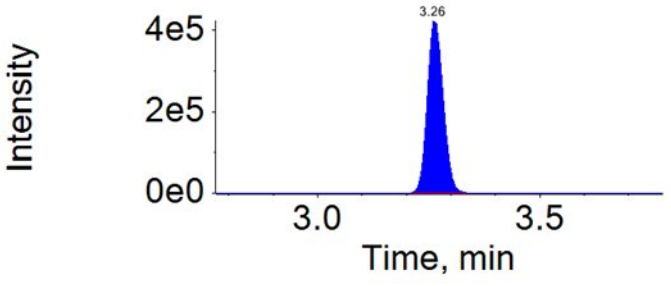
Injection Standard: 13C2-PFDA
515.0 / 470.0

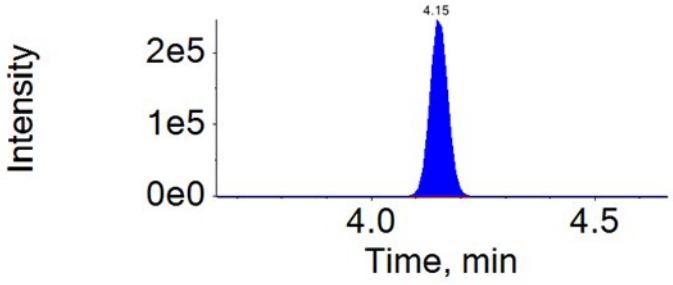
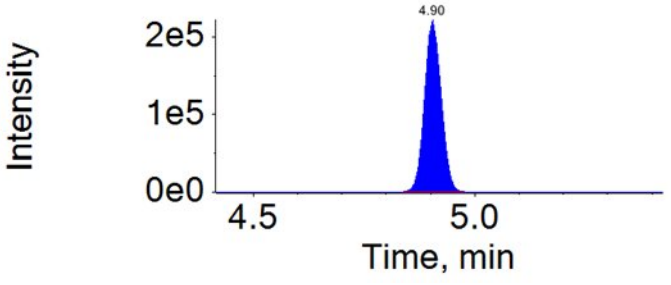


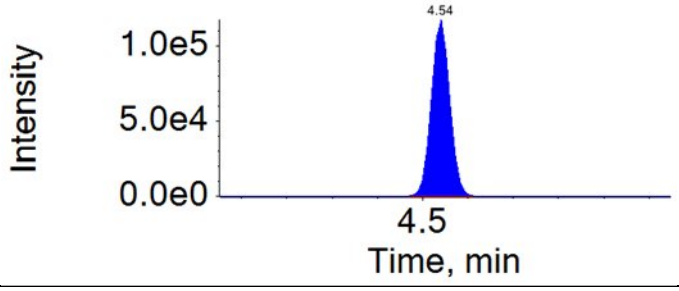
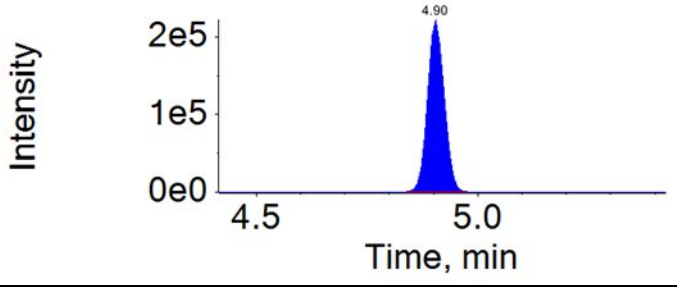
APPROVED
By MCD at 10:12 pm, 11/30/18

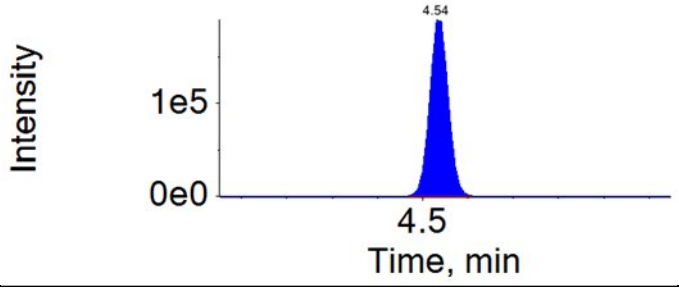
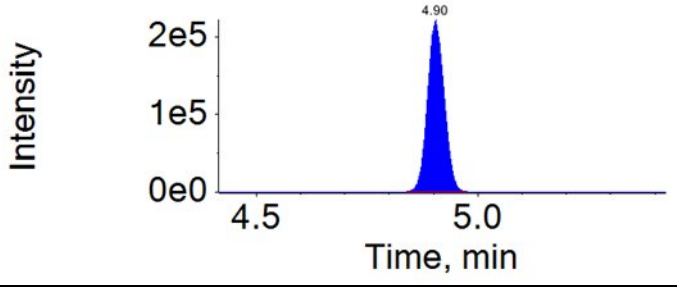
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 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
	

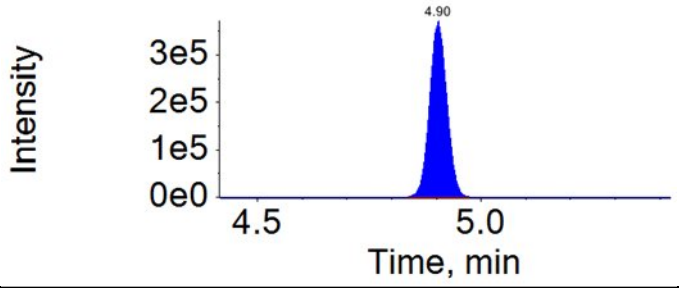
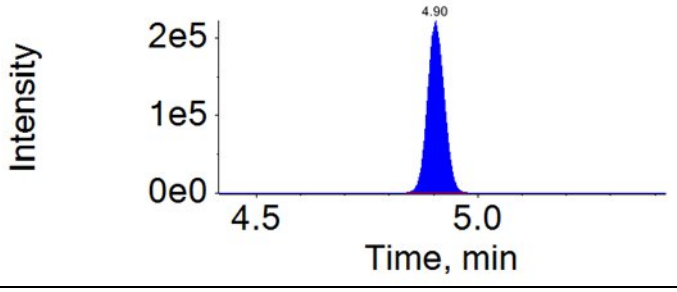
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

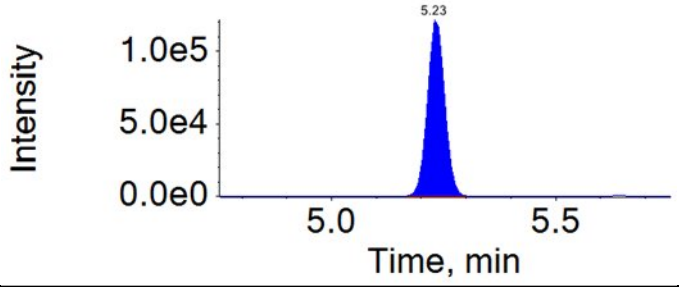
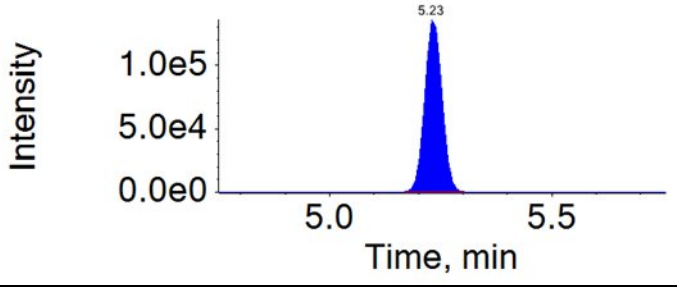
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

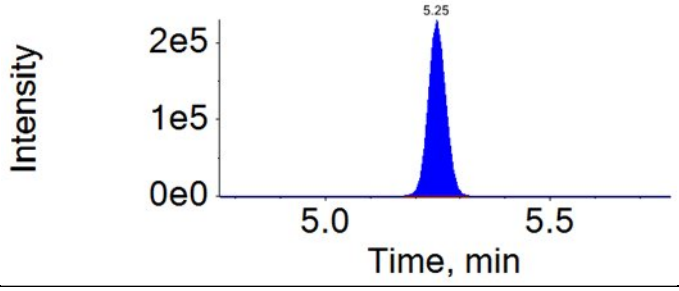
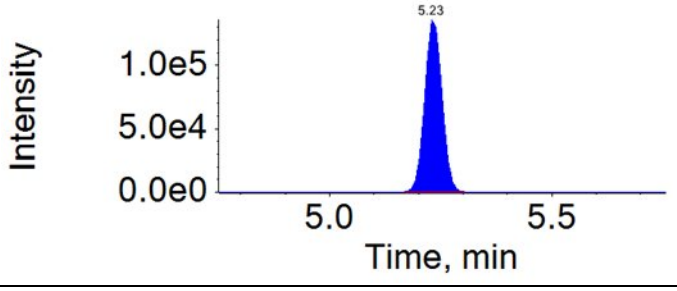
APPROVED
By MCD at 10:12 pm, 11/30/18

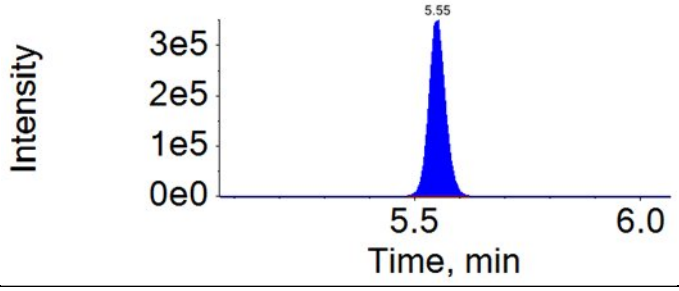
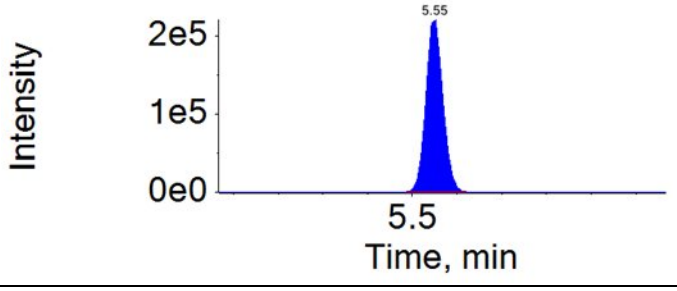
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

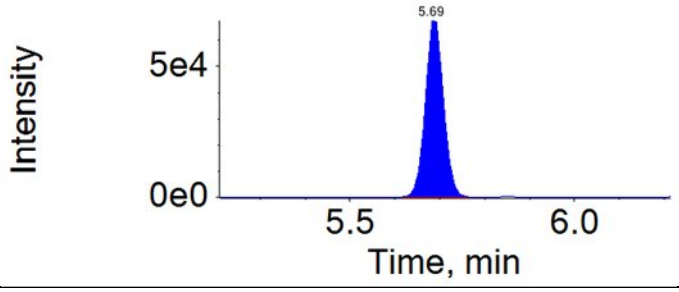
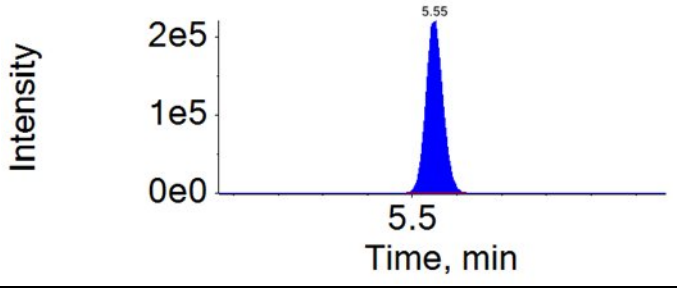
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

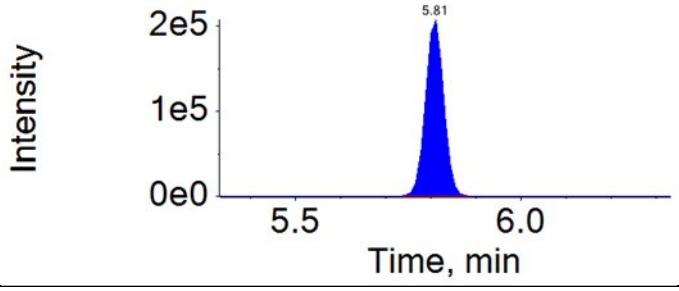
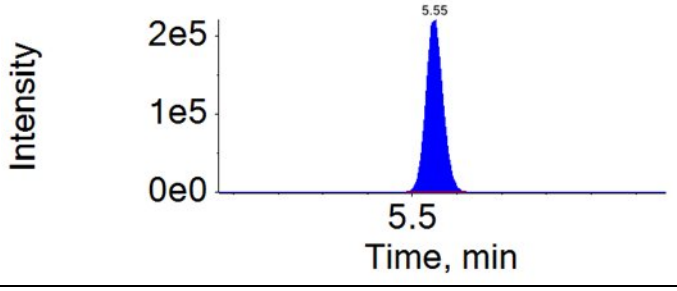
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

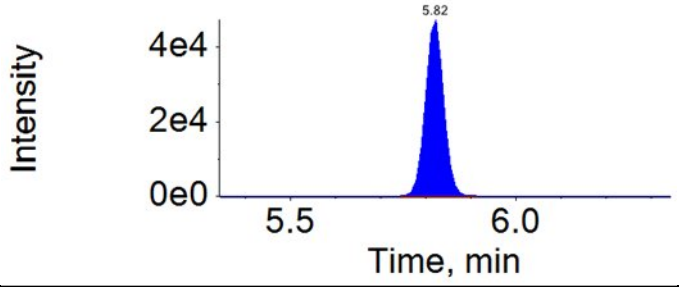
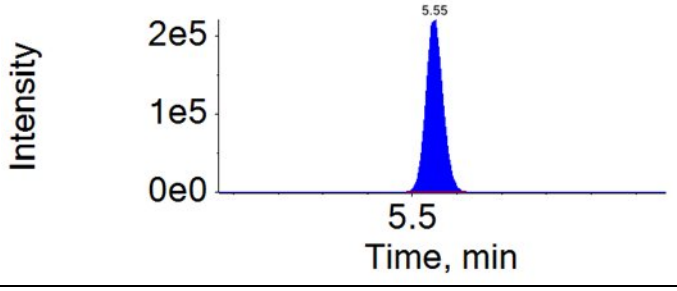
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

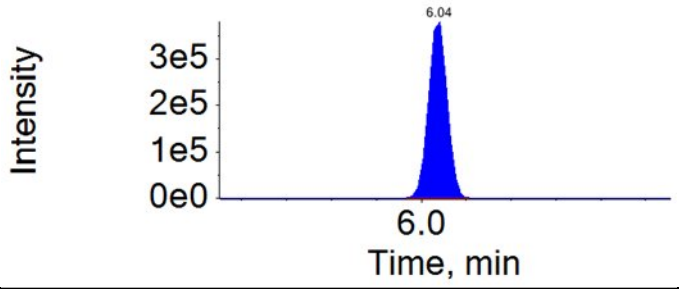
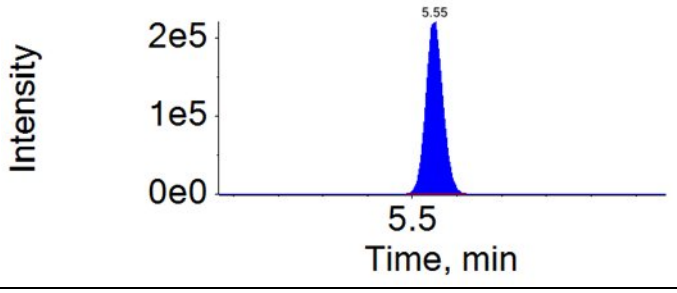
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 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
	

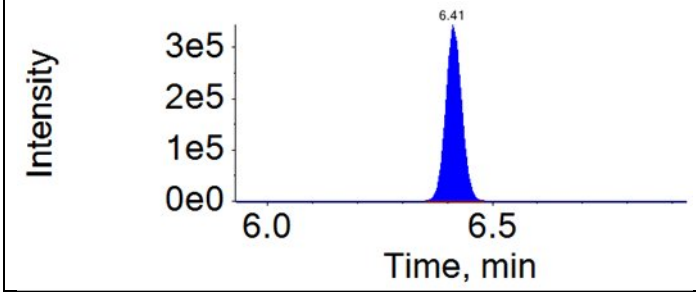
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

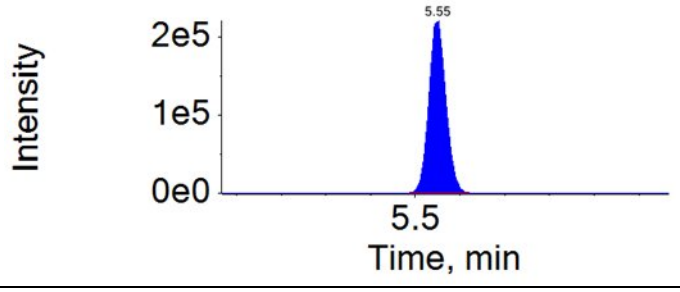
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 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



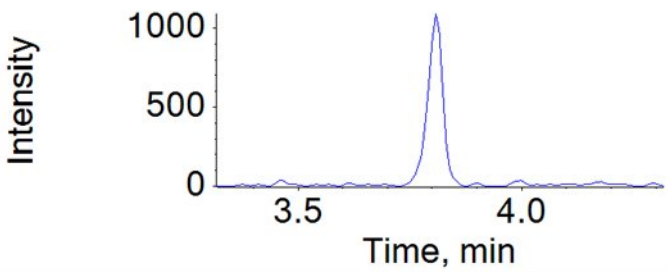


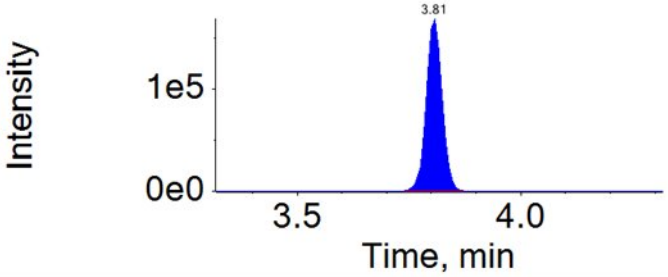
APPROVED
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REVIEWED
By HMK at 2:26 pm, 12/6/18

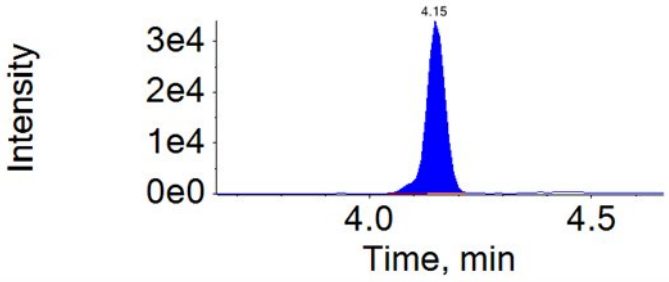
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

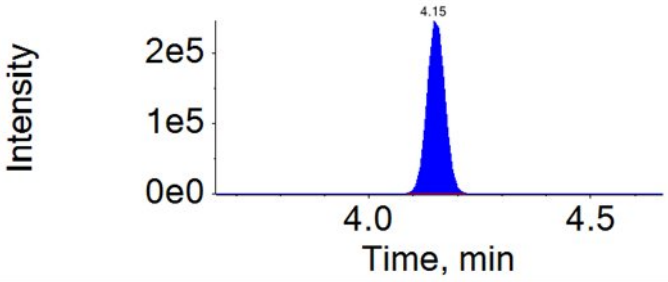
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



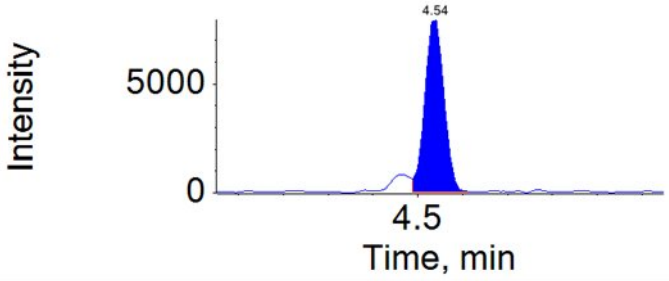


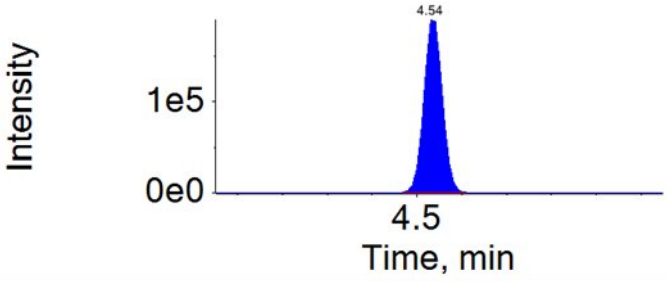
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



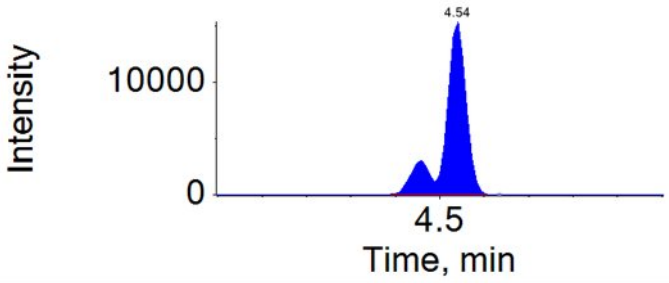


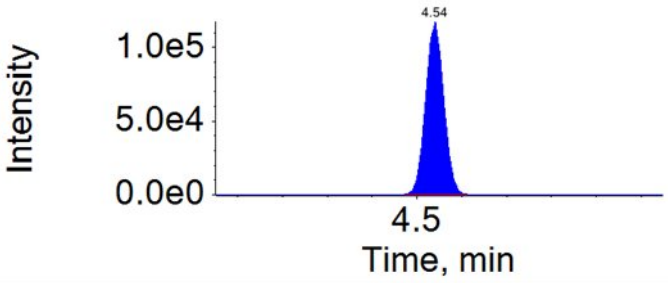
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





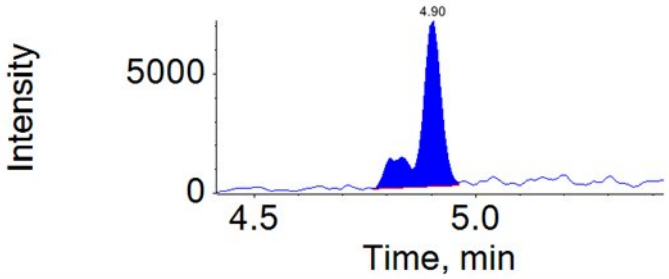
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

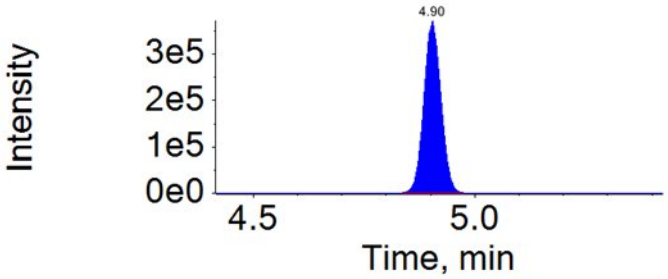




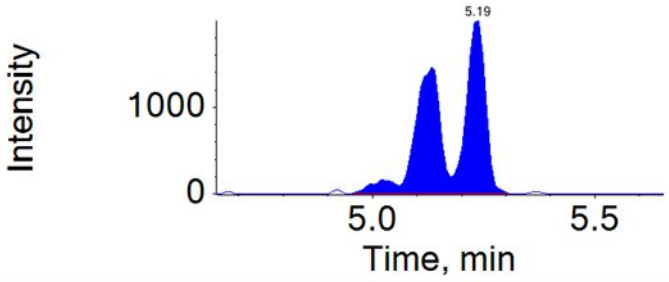
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

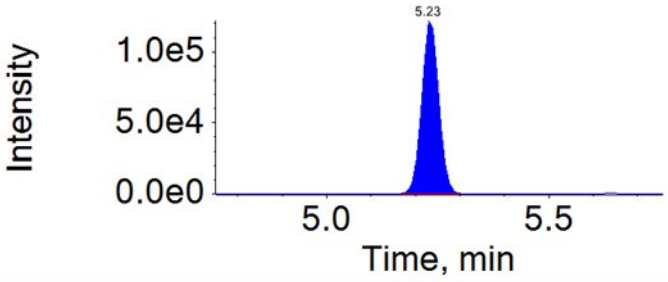
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



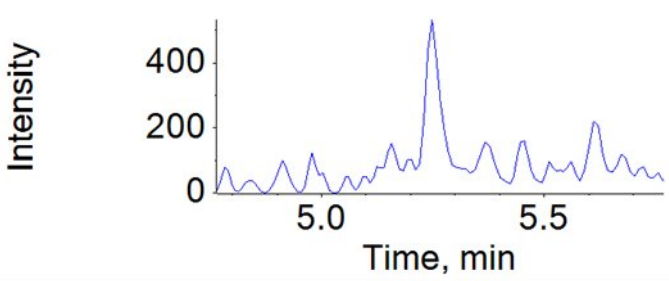


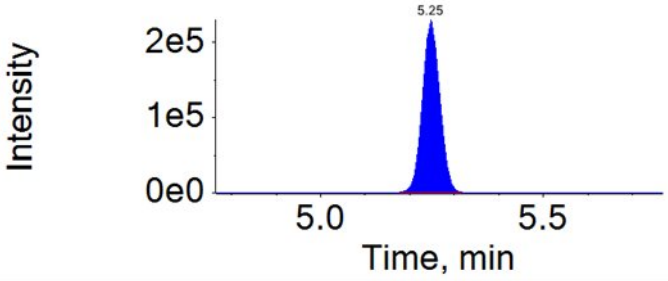
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



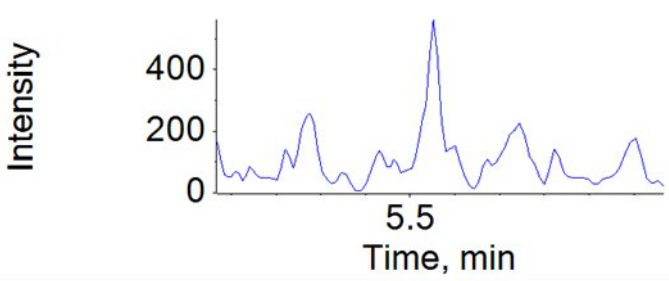


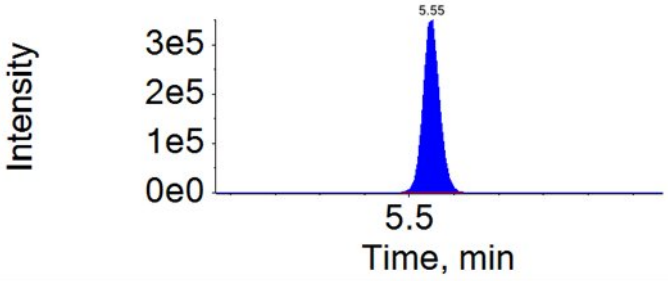
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





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



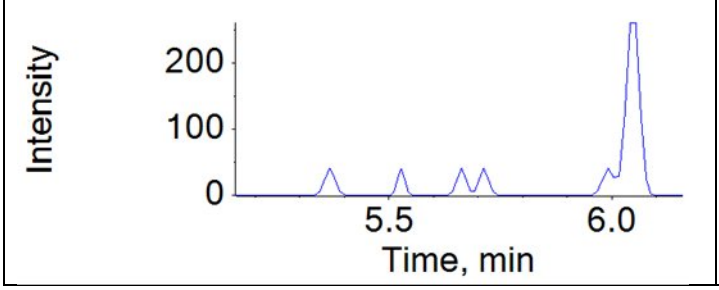


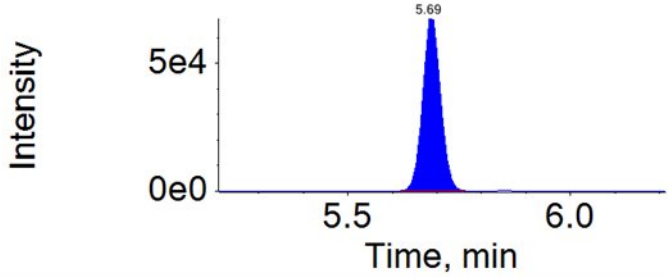
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

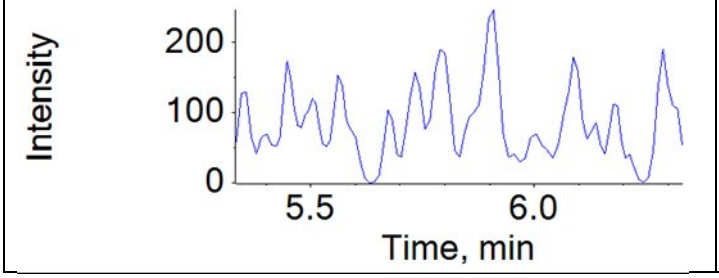
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

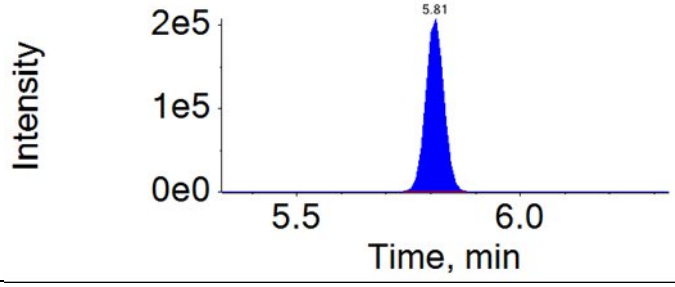
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



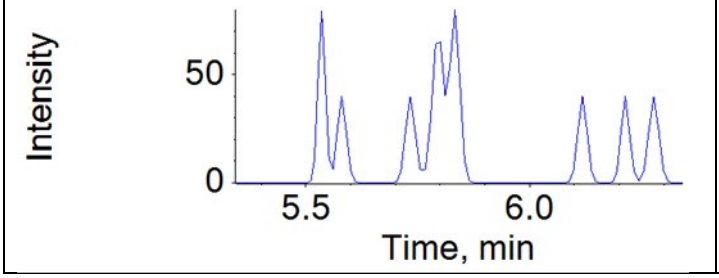


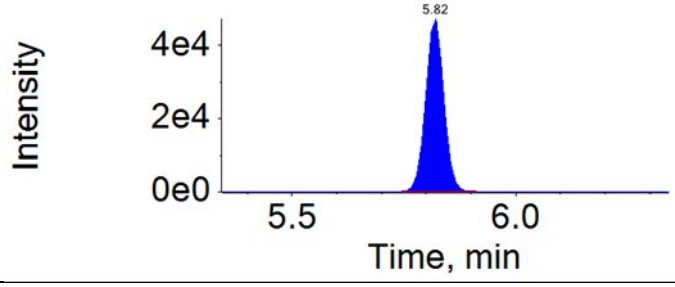
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



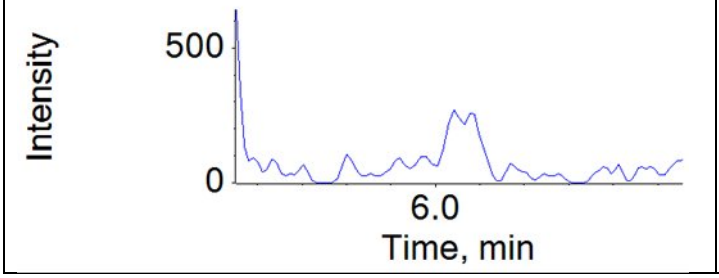


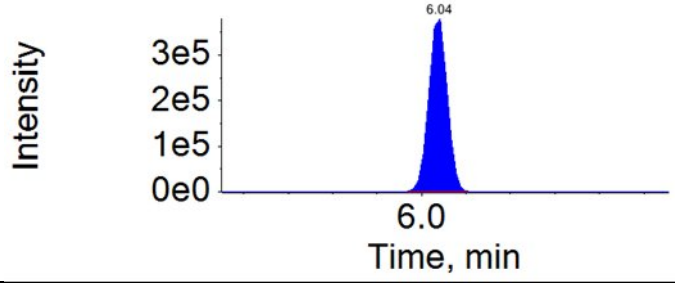
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



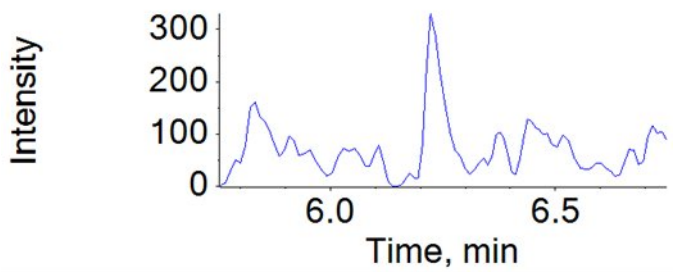


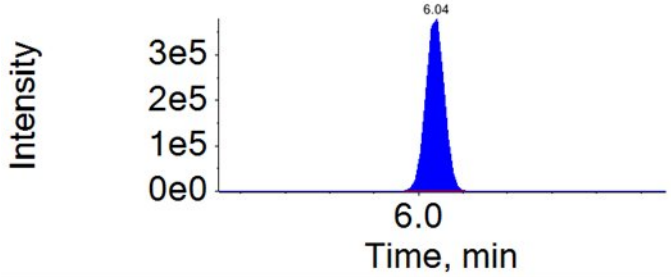
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

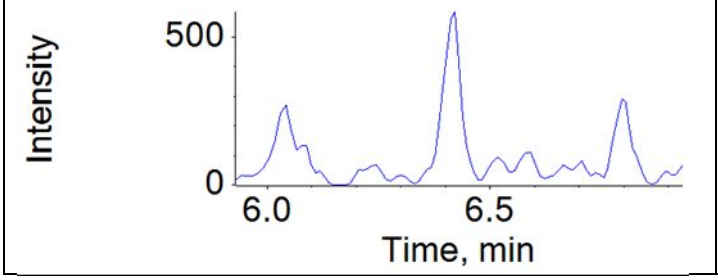
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

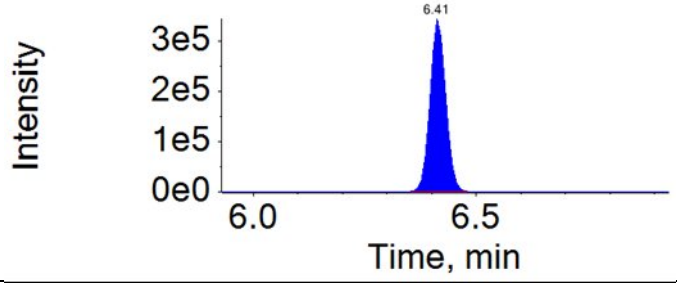
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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





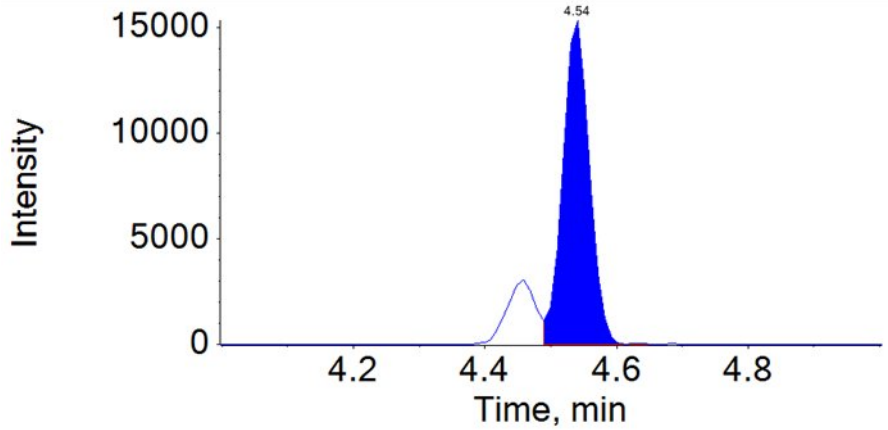
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

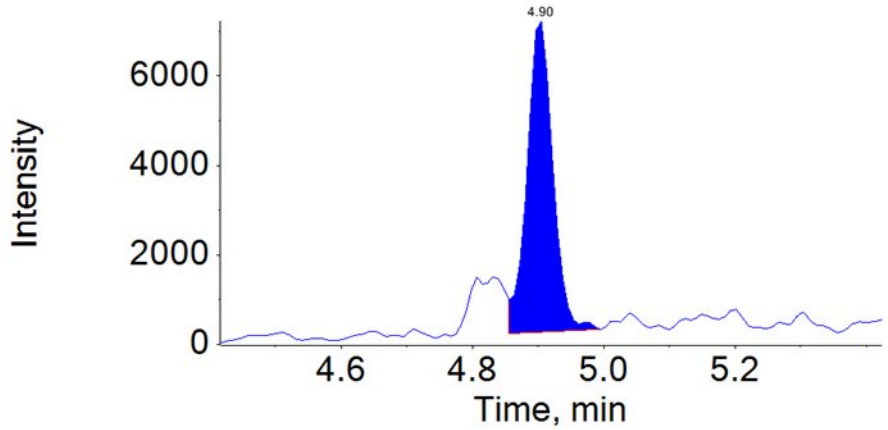
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
43295.0
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-57.wiff
Sample Name:
9881542



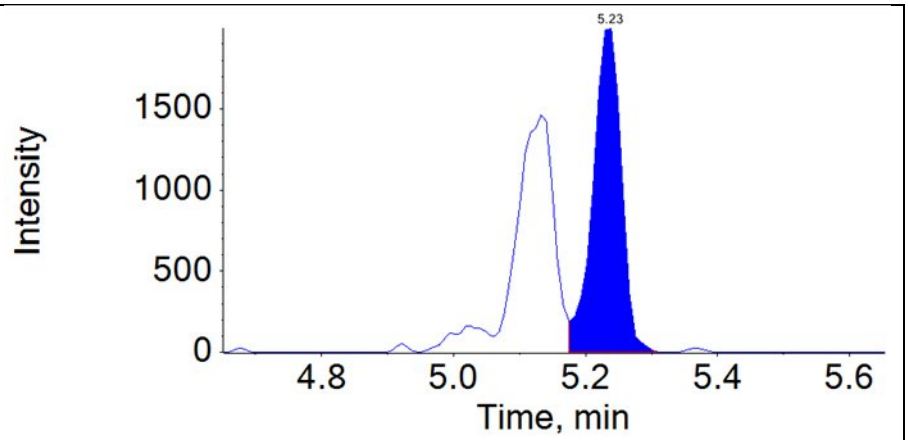
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.90
Peak Area:
19057.8
Mass Range:
413.0 / 369.0
File Name:
18NOV29D-57.wiff
Sample Name:
9881542



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
6023.3
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-57.wiff
Sample Name:
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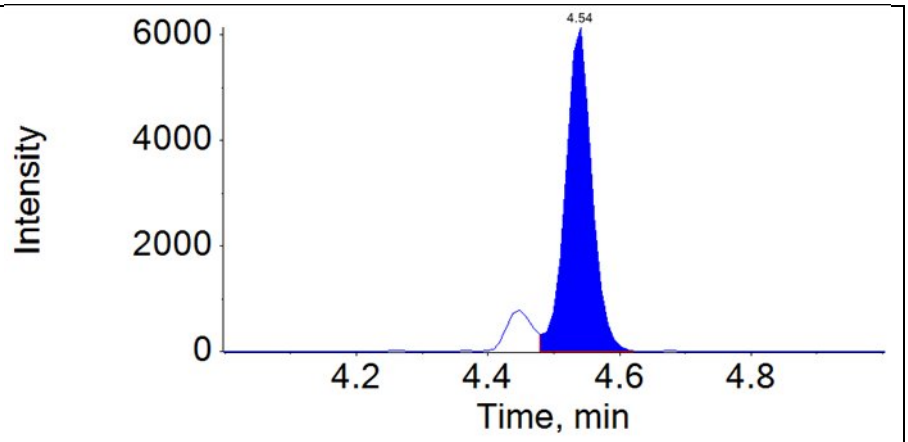
Integration Comment: incorrect integration

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

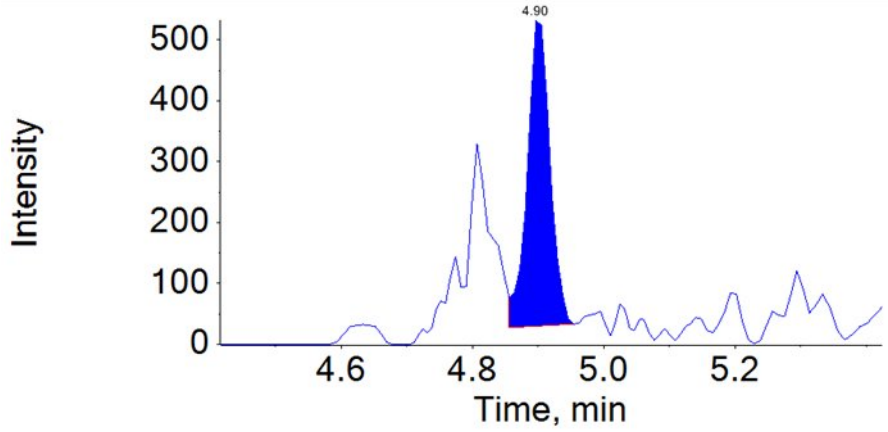
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
17085.0
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-57.wiff
Sample Name:
9881542



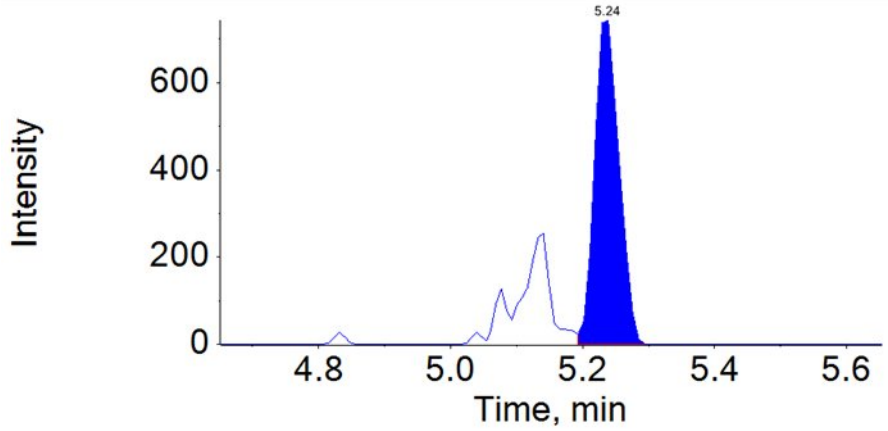
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.90
Peak Area:
1212.2
Mass Range:
413.0 / 169.0
File Name:
18NOV29D-57.wiff
Sample Name:
9881542



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
1938.2
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-57.wiff
Sample Name:
9881542



Integration Comment: incorrect integration

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

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

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Ion Ratio Report

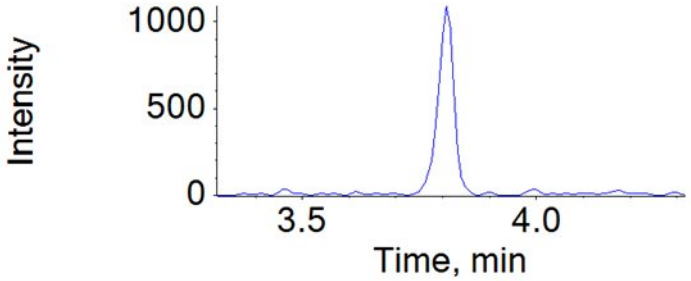
Sample Name: 9881542 **Instrument Name:** LM27631 **File Name:** 18NOV29D-57.wiff

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	4.15	1.00	99219.3	A	N/A	0.0112			
PFHxA_2	4.15	1.00	1107.8	A	N/A	0.0112	8	50	
PFHpA	4.54	1.00	23535.9	A	N/A	0.0453			
PFHpA_2	4.54	1.00	1067.2	A	N/A	0.0453	-19	50	
PFHxS	4.54	1.00	52423.9	M	N/A	0.3663			
PFHxS_2	4.54	1.00	19203.5	M	N/A	0.3663	-1	50	
PFOA	4.90	1.00	23427.4	M	N/A	0.0891			
PFOA_2	4.89	1.00	2086.8	M	N/A	0.0891	56	50	OOS
PFOS	5.19	0.99	12154.3	M	N/A	0.2304			
PFOS_2	5.24	1.00	2800.8	M	N/A	0.2304	-22	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	

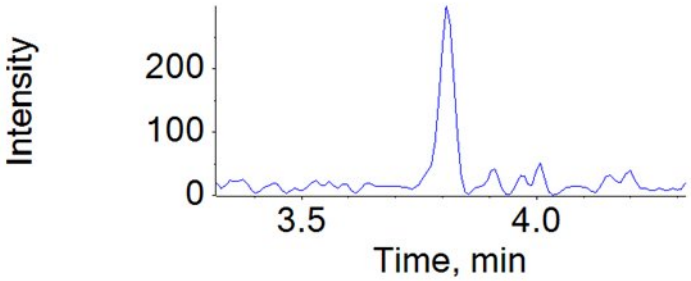
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REVIEWED
By HMK at 2:26 pm, 12/6/18

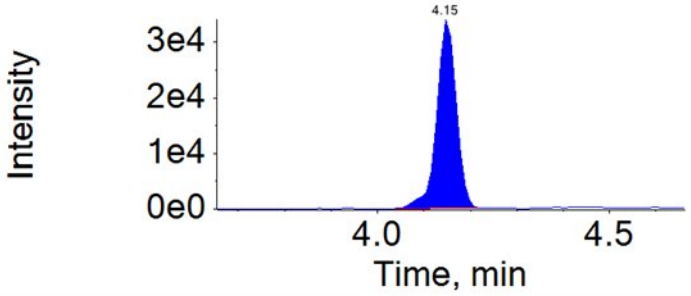
Component: PFBS
Primary Mass: 299.0 / 80.0



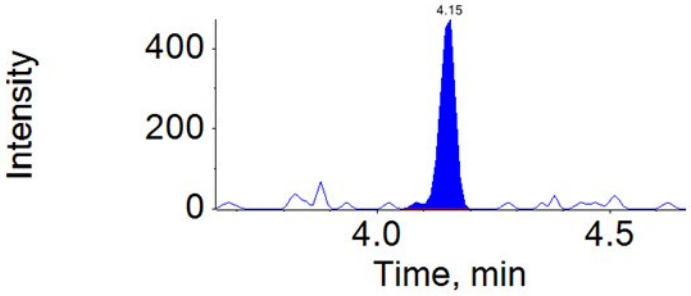
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



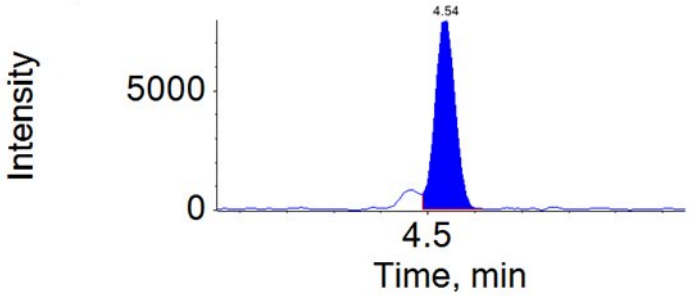
Component: PFHxA
Primary Mass: 313.0 / 269.0



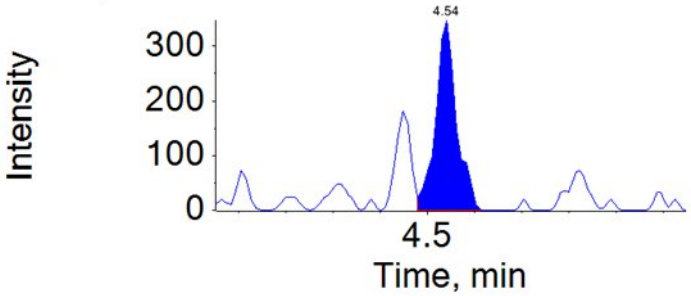
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



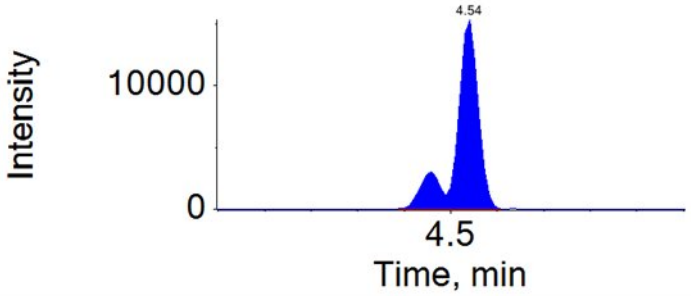
Component: PFHpA
Primary Mass: 363.0 / 319.0



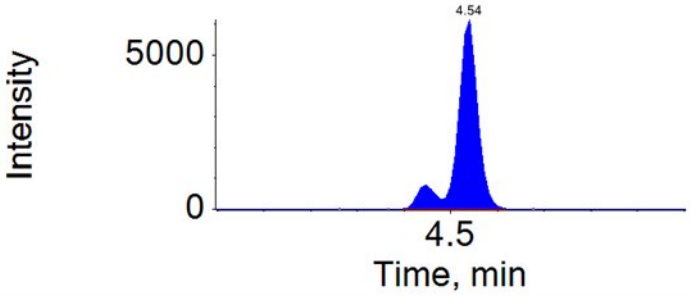
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



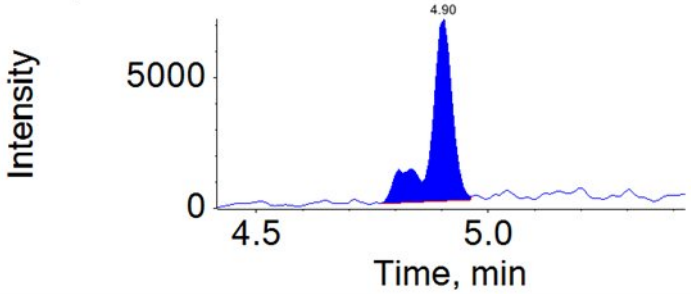
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



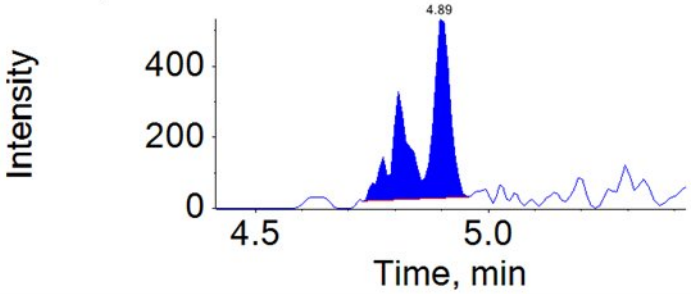
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

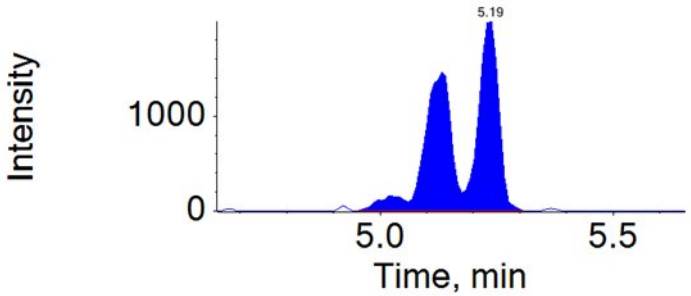
Component: PFOA
Primary Mass: 413.0 / 369.0



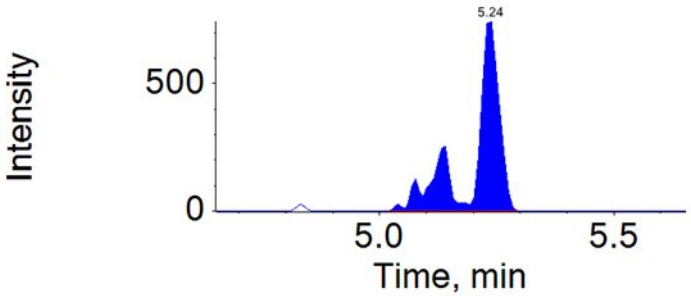
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



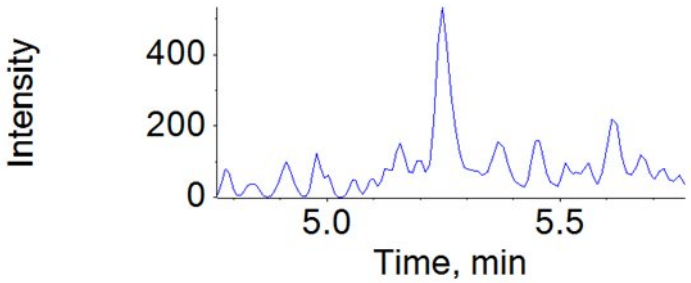
Component: PFOS
Primary Mass: 499.0 / 80.0



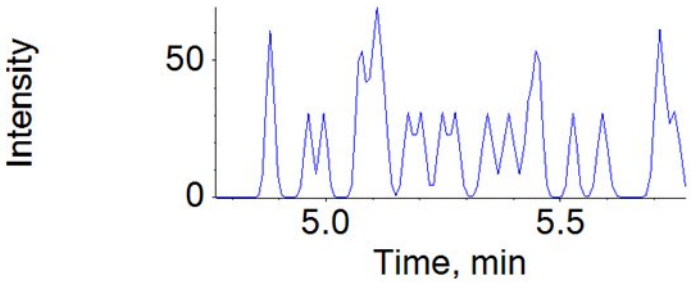
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



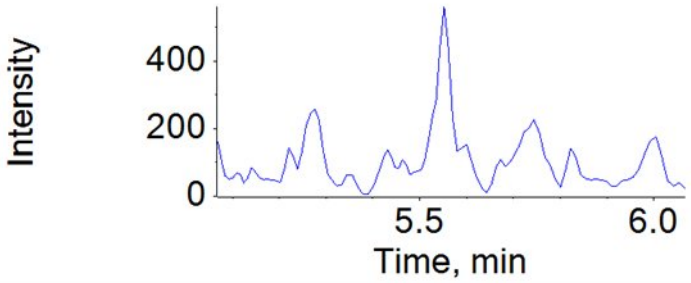
Component: PFNA
Primary Mass: 463.0 / 419.0



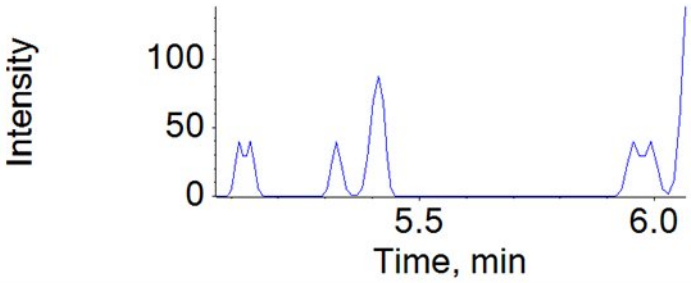
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



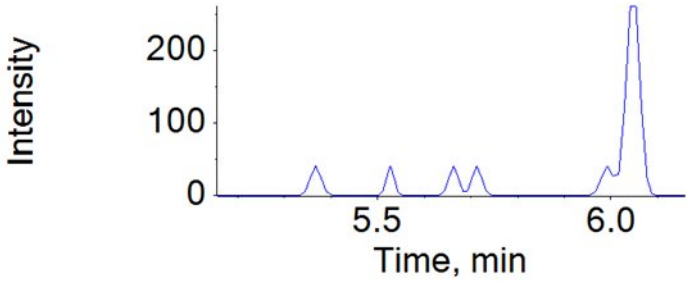
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



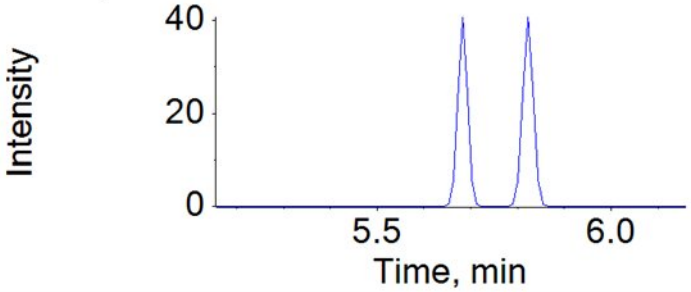
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

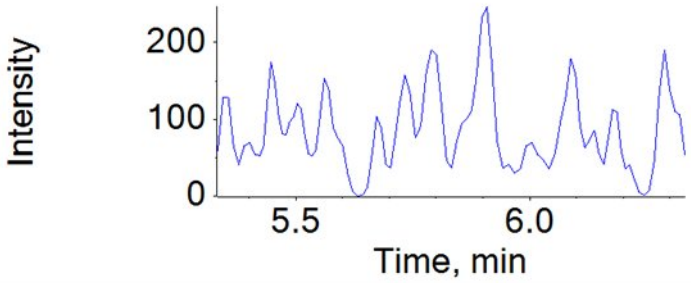
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



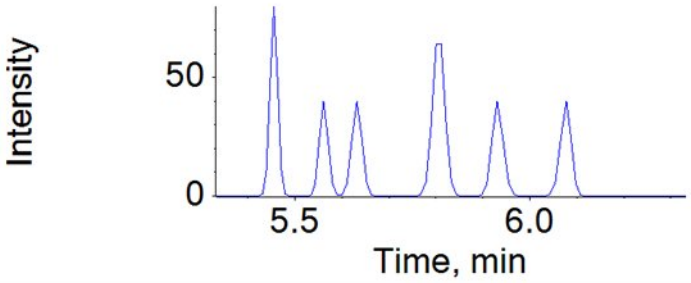
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



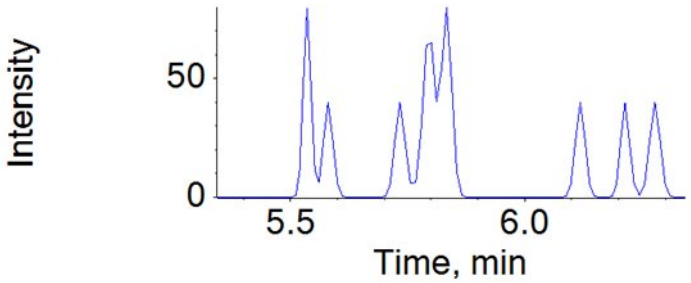
Component: PFUnDA
Primary Mass: 563.0 / 519.0



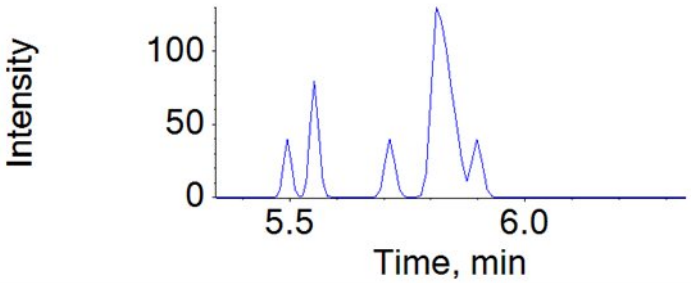
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



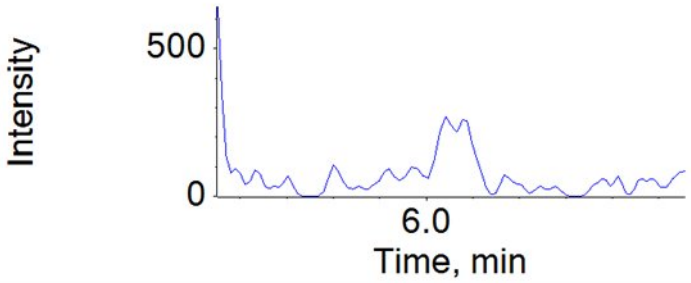
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



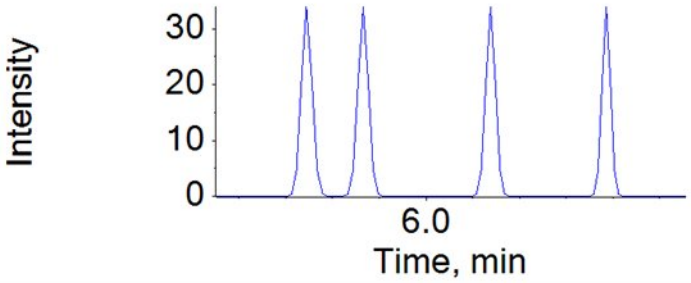
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Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



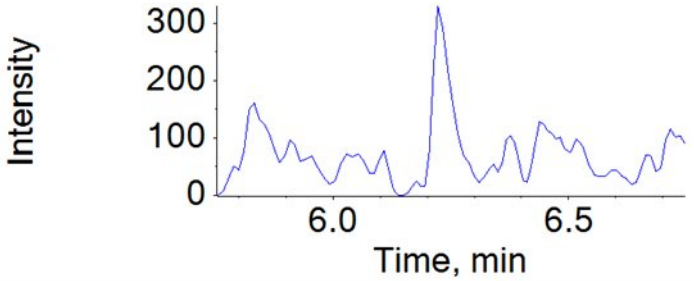
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



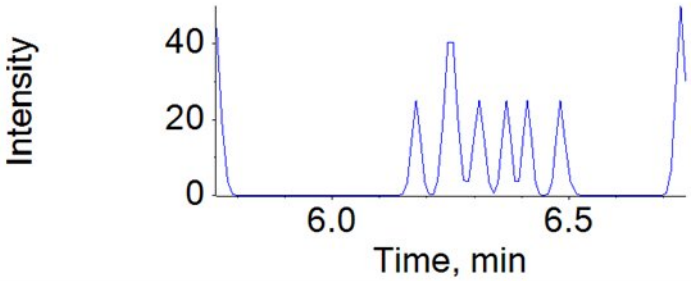
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

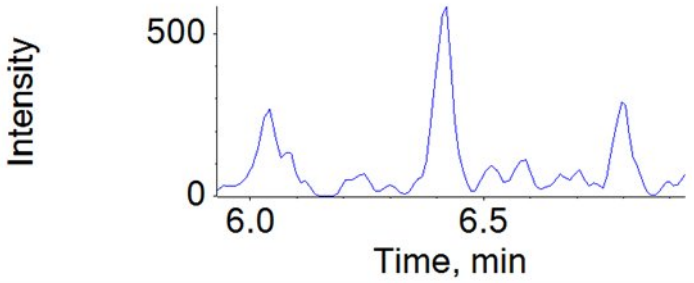
Component: PFTrDA
Primary Mass: 663.0 / 619.0



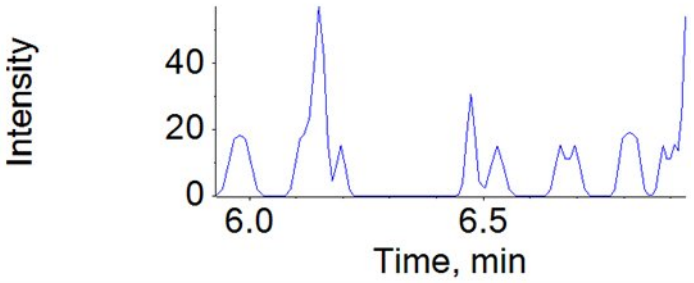
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881543			**Data File:**		18NOV29D-58.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003 OU1-Bldg371-S-01-12 Grab Soil			**Acquis Date:**		2018-11-29T18:31:39
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	38			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**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: 18NOV29D-05

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	1078296.2	906425.4	19	50	
13C2-PFOA	5.0	600444.5	495984.0	21	50	
13C4-PFOS	4.8	354135.6	296261.8	20	50	
13C2-PFDA	5.0	538956.5	451203.0	19	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	431044.8	13C3-PFBA	1078296.2	0.400	8.942	7.334	82	50-150	
E13C5-PFHxA	657173.4	13C2-PFOA	600444.5	1.094	9.615	7.731	80	50-150	
E13C3-PFHxS	326868.1	13C2-PFOA	600444.5	0.544	9.096	8.205	90	50-150	
E13C4-PFHpA	548562.6	13C2-PFOA	600444.5	0.914	9.615	8.073	84	50-150	
E13C8-PFOA	985640.3	13C2-PFOA	600444.5	1.642	9.615	8.689	90	50-150	
E13C8-PFOS	323364.0	13C4-PFOS	354135.6	0.913	9.192	7.927	86	50-150	
E13C9-PFNA	639615.3	13C4-PFOS	354135.6	1.806	9.615	7.629	79	50-150	
E13C6-PFDA	897526.2	13C2-PFDA	538956.5	1.665	9.615	9.029	94	50-150	
Ed3-NMeFOSAA	220466.6	13C2-PFDA	538956.5	0.409	9.615	9.988	104	50-150	
E13C7-PFUnDA	568714.2	13C2-PFDA	538956.5	1.055	9.615	8.576	89	50-150	
Ed5-NEtFOSAA	140679.9	13C2-PFDA	538956.5	0.261	9.615	8.943	93	50-150	
E13C2-PFDoDA	1151987.1	13C2-PFDA	538956.5	2.137	9.615	8.636	90	50-150	
E13C2-PFTeDA	814007.6	13C2-PFDA	538956.5	1.510	9.615	8.037	84	50-150	

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

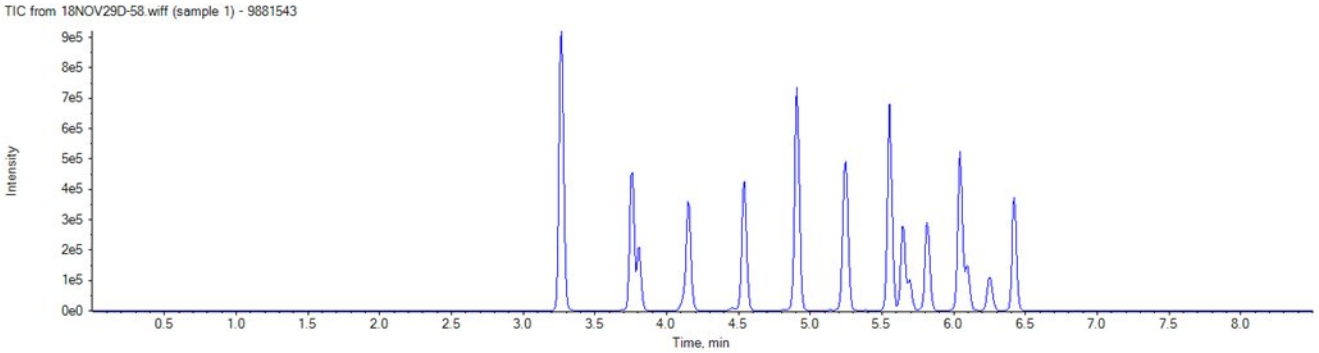
Analyte Quantitation Peak Table

Sample Name: 9881543 **Instrument Name:** LM27631 **File Name:** 18NOV29D-58.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	3.81	431044.8	N/A	
PFHxA	4.15	1.000	152380.7		A	13C5-PFHxA	4.15	657173.4	0.232	1.790
PFHpA	4.54	1.000	36017.6		A	13C4-PFHpA	4.54	548562.6	0.066	0.390
PFHxS	4.54	1.000	84209.3		M	13C3-PFHxS	4.54	326868.1	0.258	2.320
PFOA	4.91	1.000	28535.2		M	13C8-PFOA	4.91	985640.3	0.029	0.288
PFOS	5.22	1.000	7696.7		M	13C8-PFOS	5.24	323364.0	0.024	0.192
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	639615.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	897526.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	220466.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	568714.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	140679.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1151987.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1151987.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	814007.6	N/A	

Total Ion Chromatogram

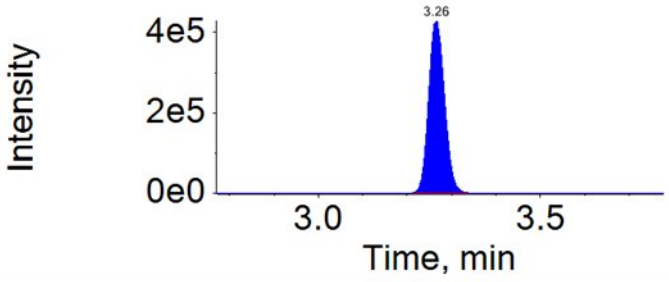


APPROVED
By MCD at 10:12 pm, 11/30/18

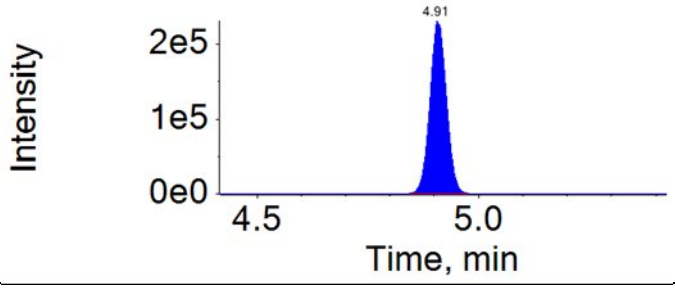
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

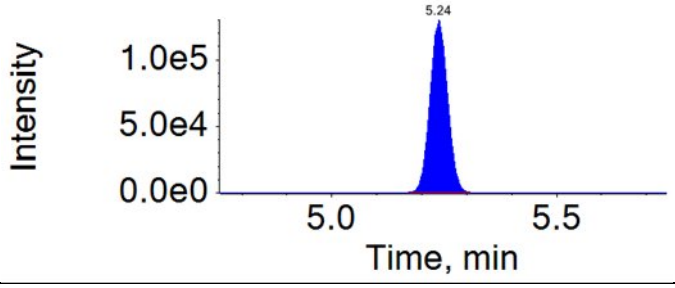
Injection Standard: 13C3-PFBA
216.0 / 172.0



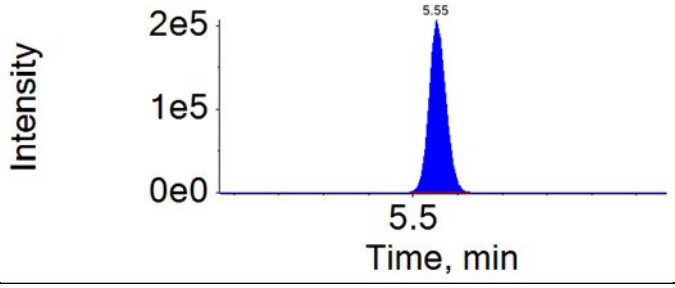
Injection Standard: 13C2-PFOA
415.0 / 370.0



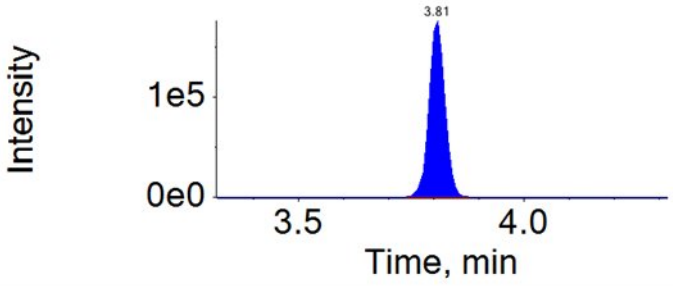
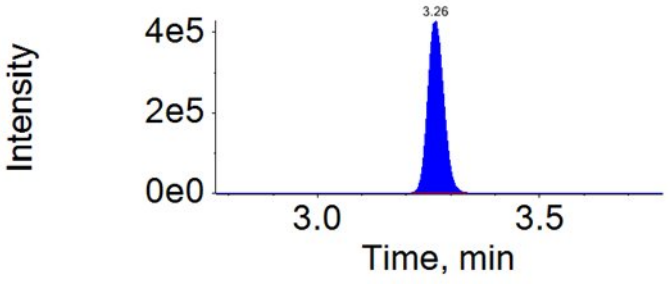
Injection Standard: 13C4-PFOS
503.0 / 80.0

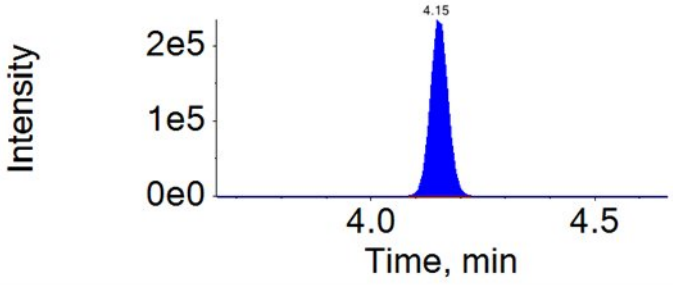
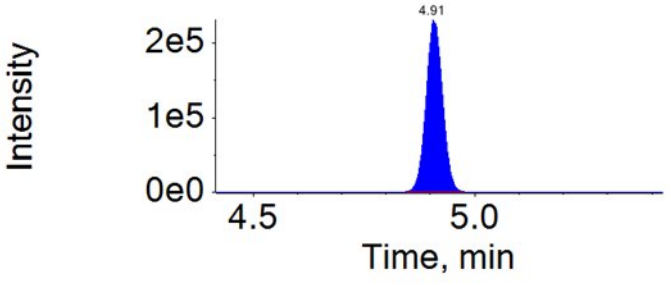


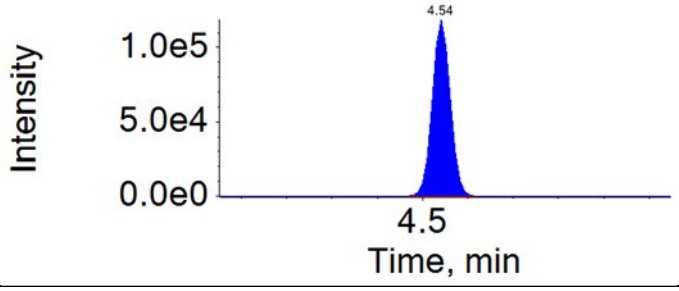
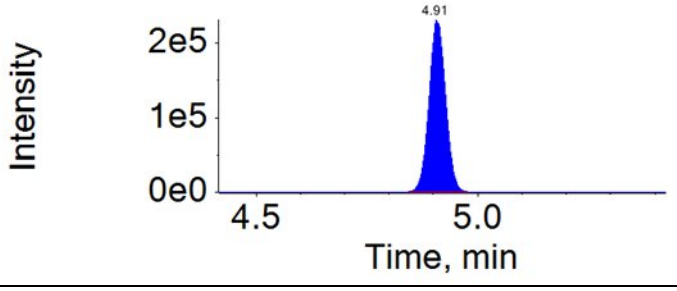
Injection Standard: 13C2-PFDA
515.0 / 470.0

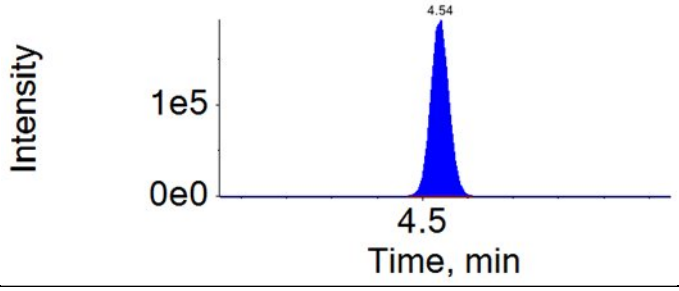
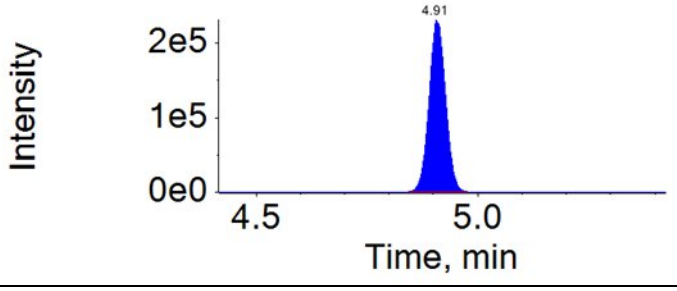


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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
	

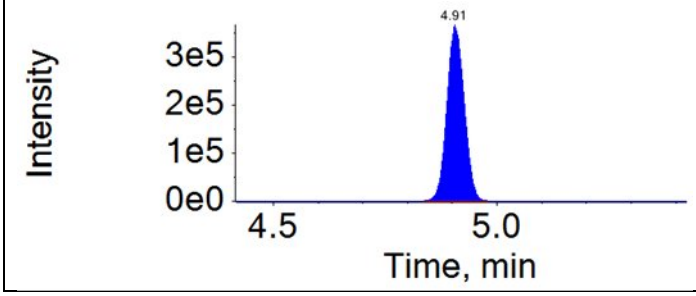
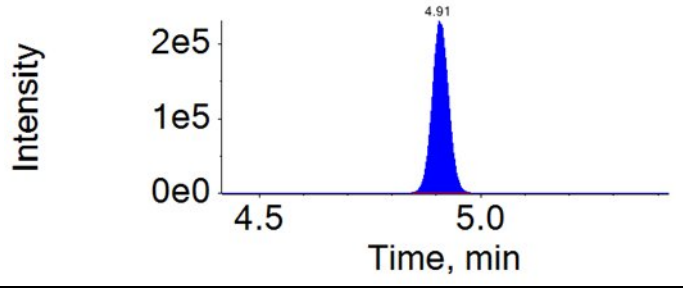
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

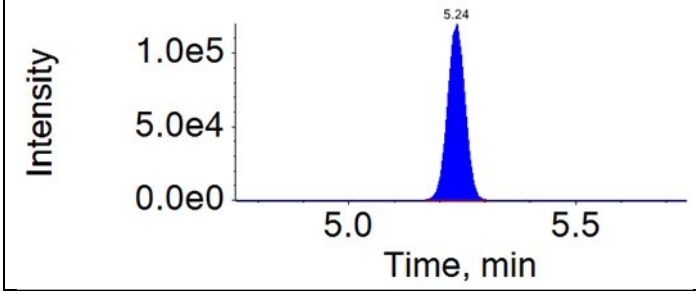
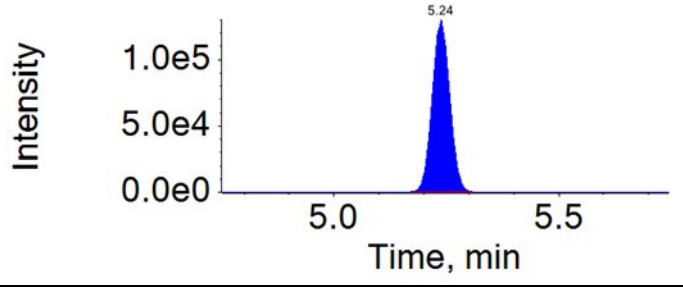
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

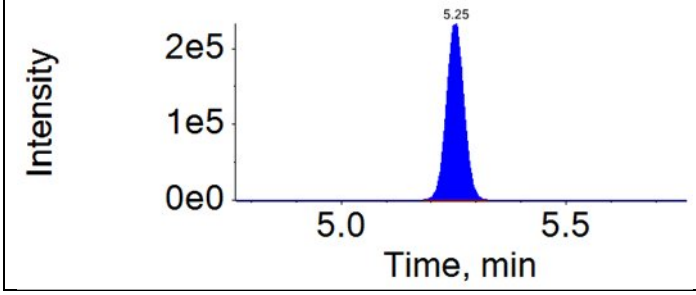
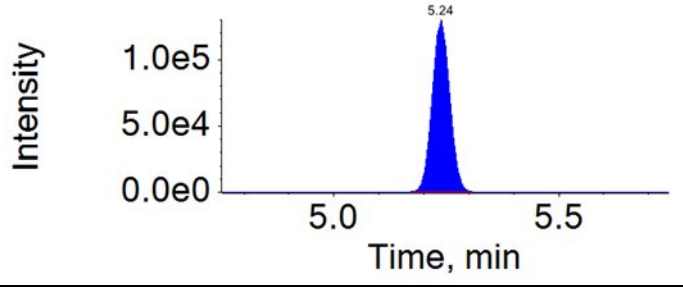
APPROVED
By MCD at 10:12 pm, 11/30/18

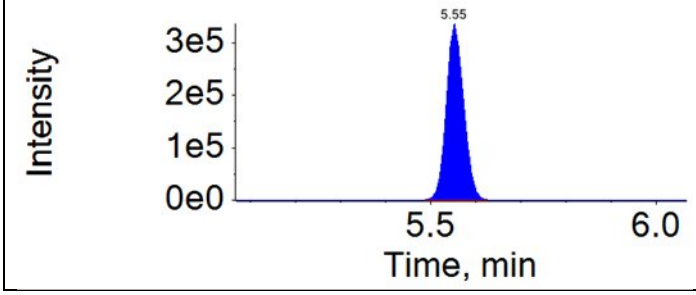
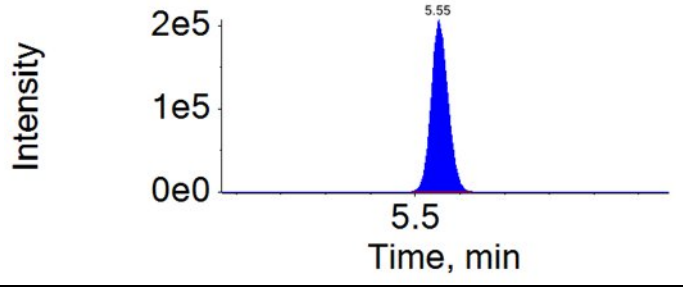
REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

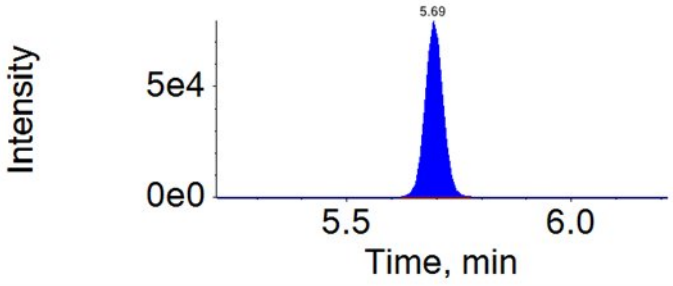
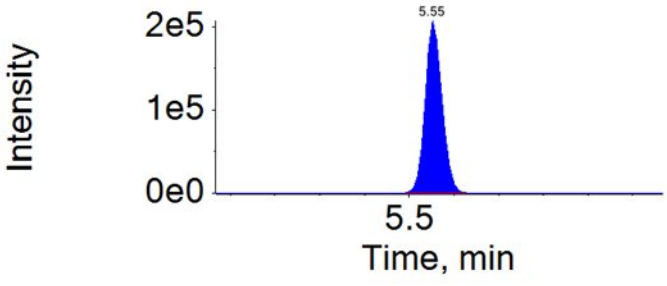
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

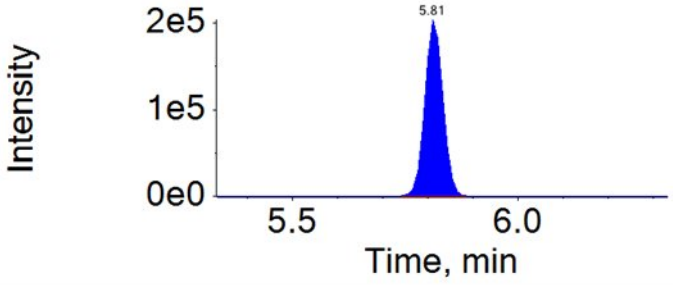
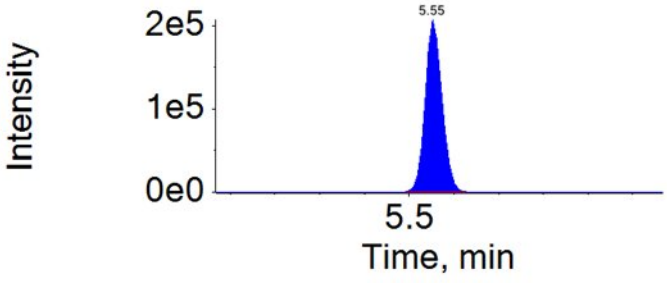
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

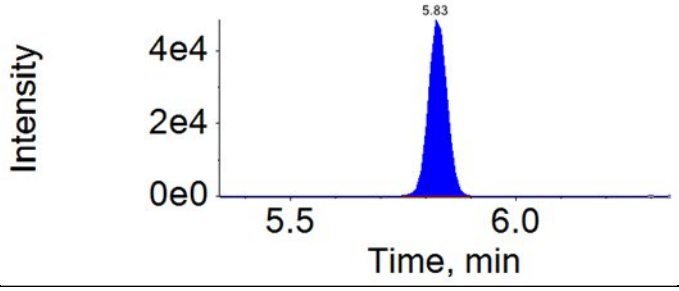
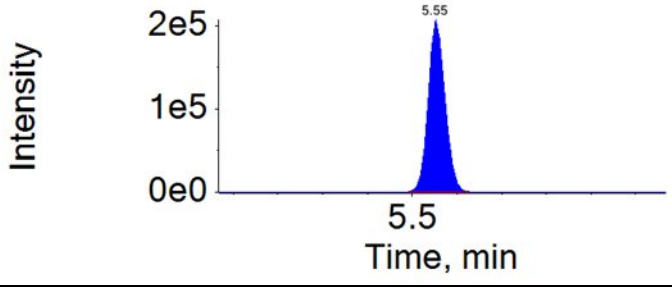
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

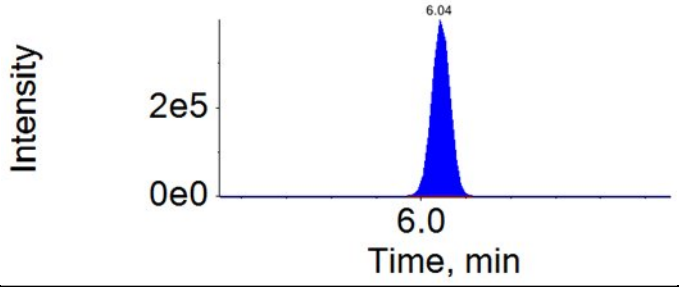
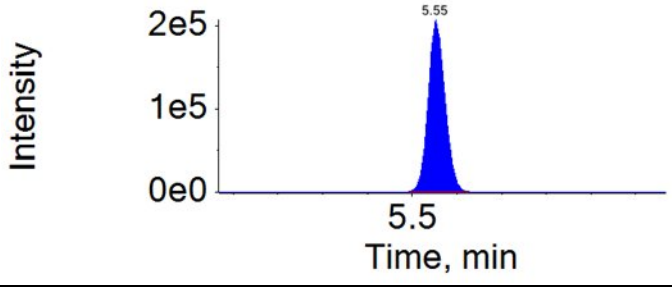
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

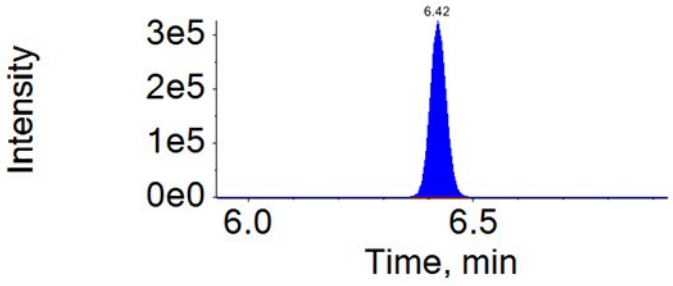
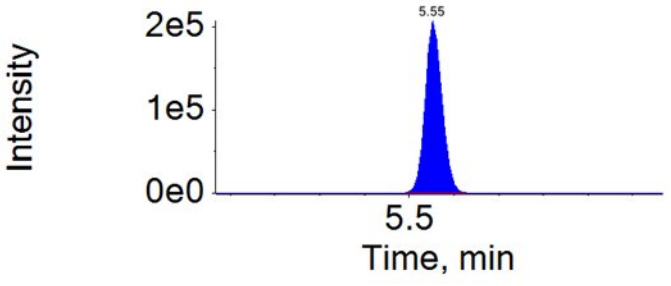
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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
	

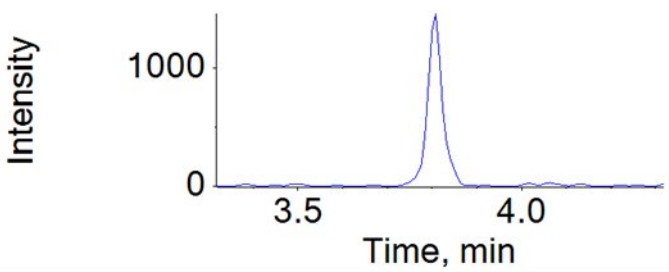
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

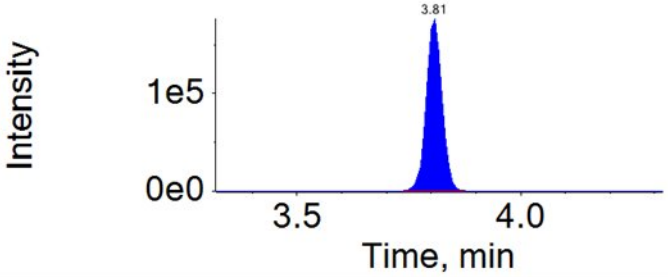
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

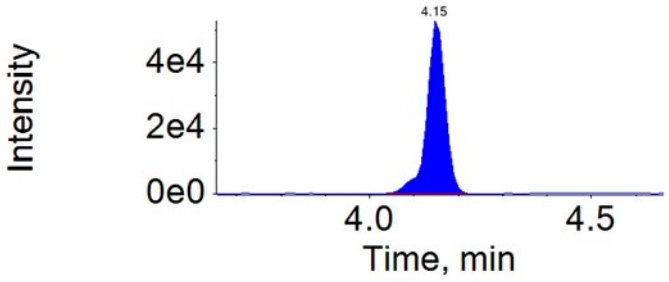
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

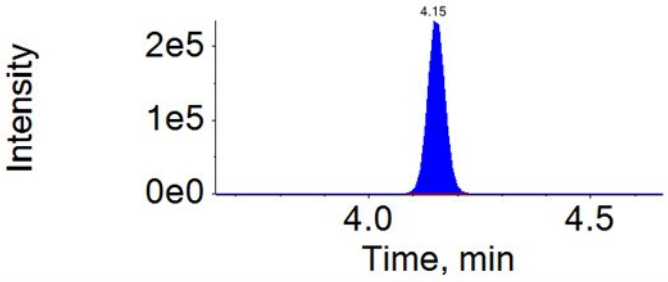
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



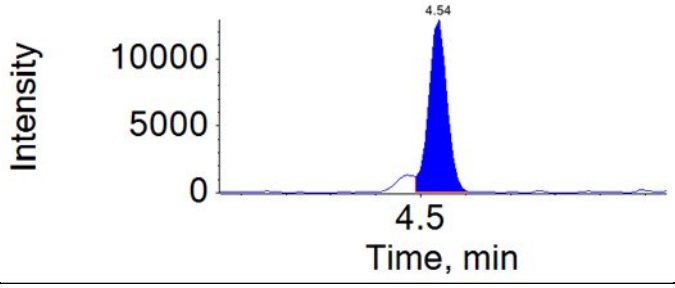


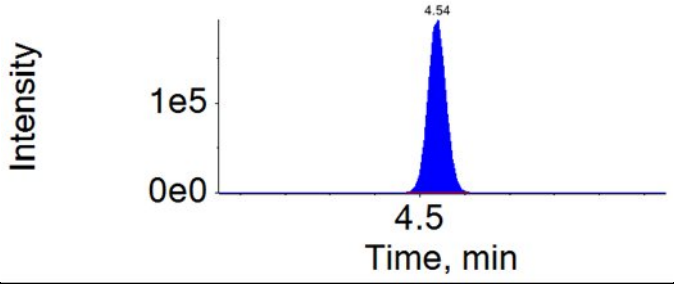
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



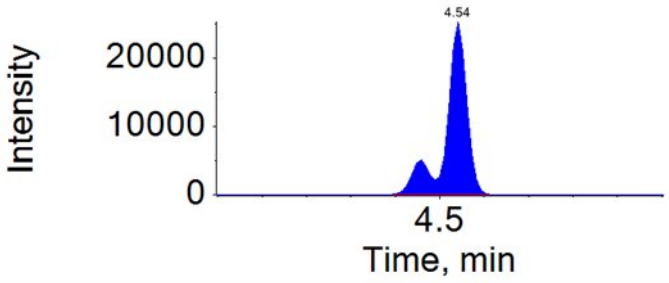


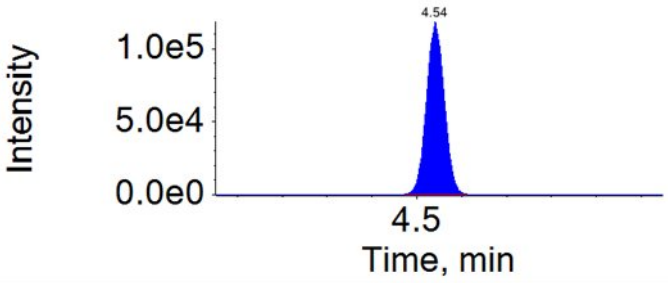
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





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



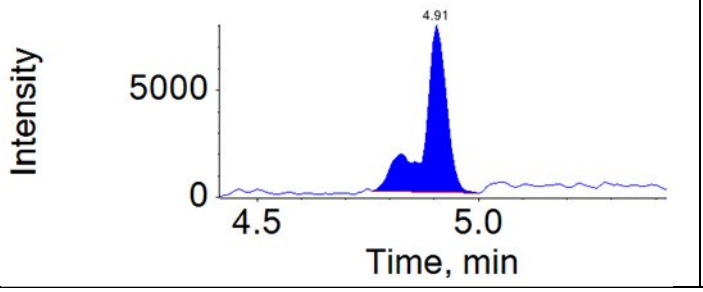


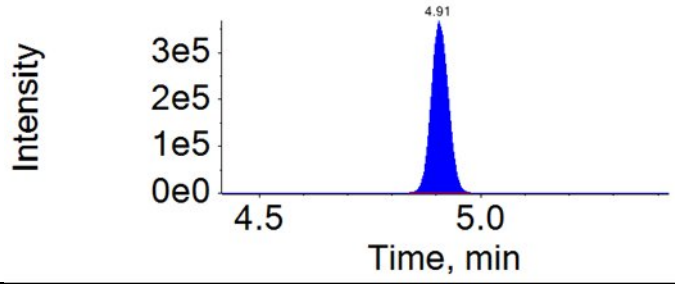
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

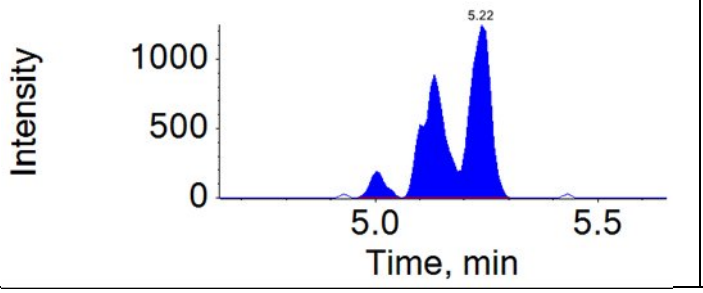
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

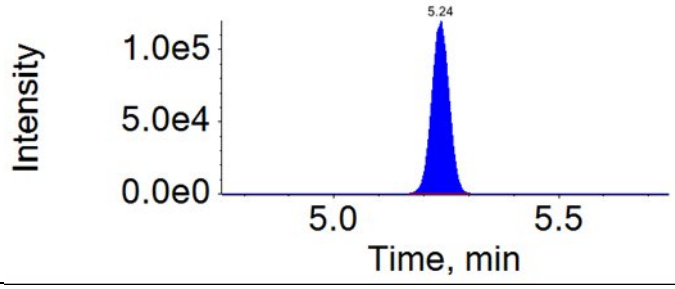
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



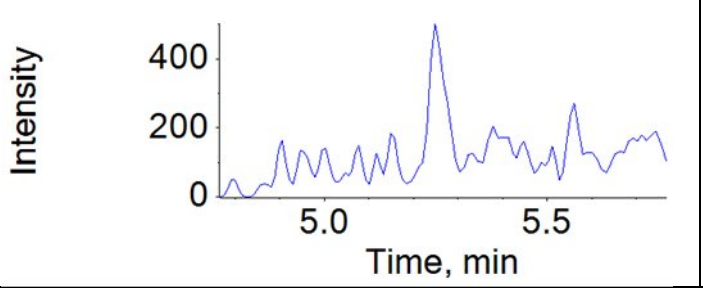


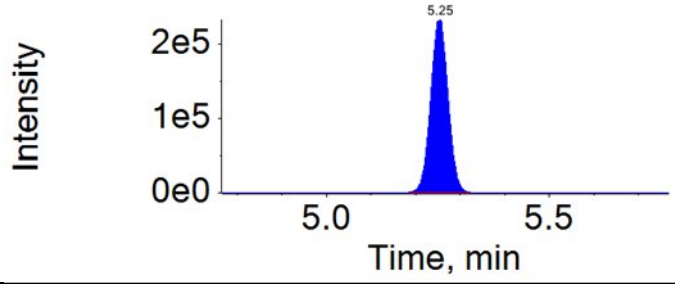
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



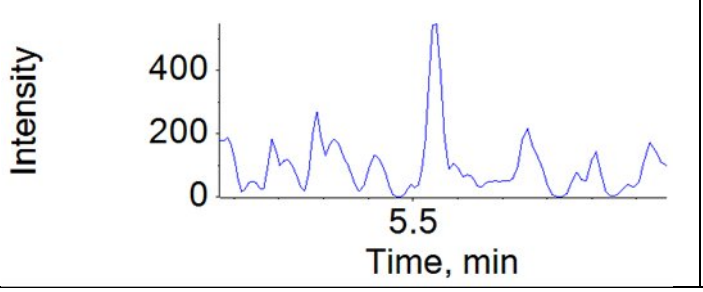


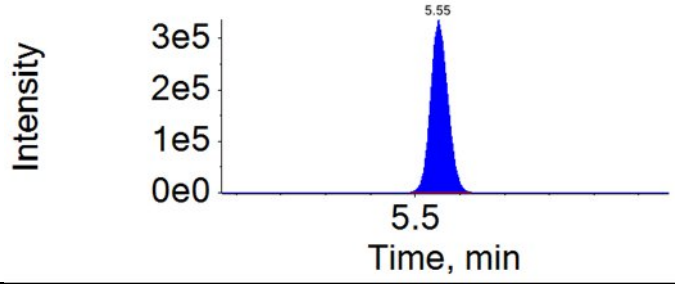
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





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



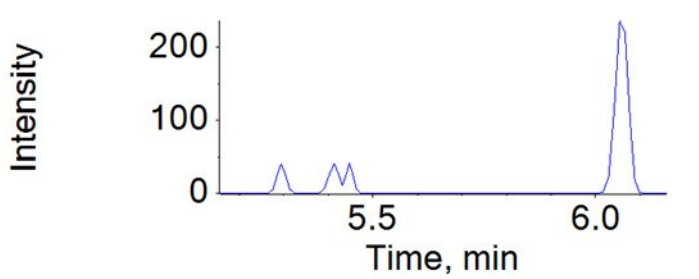


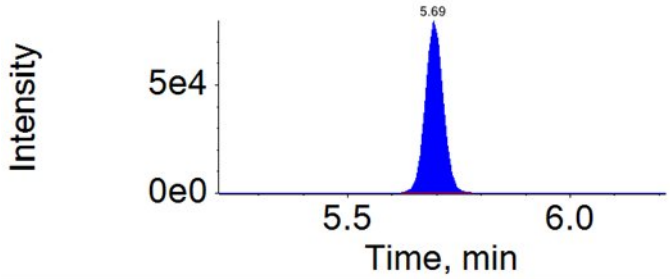
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

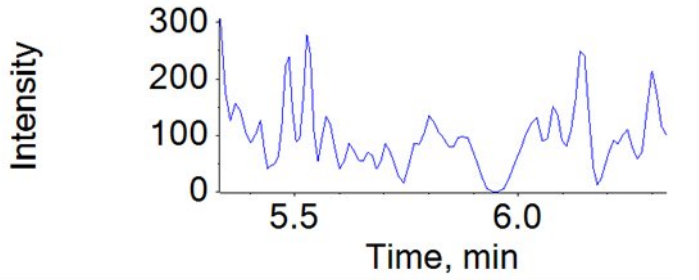
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

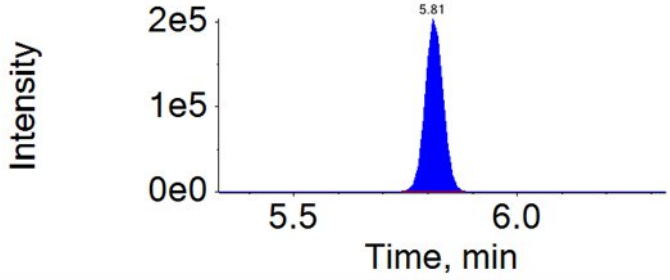
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



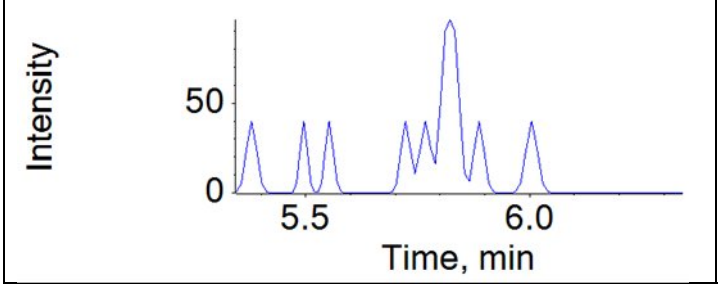


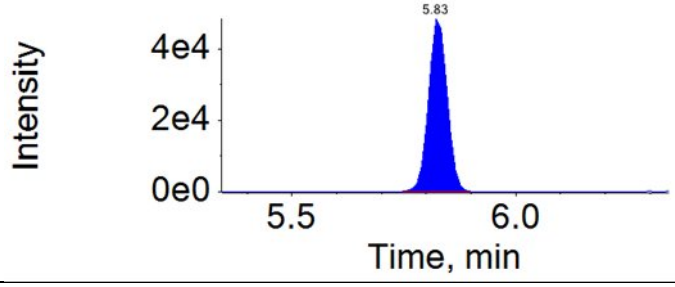
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



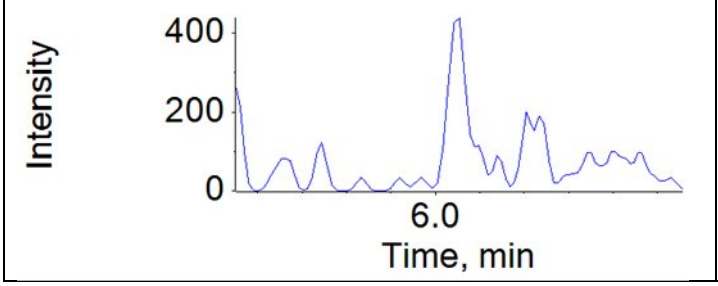


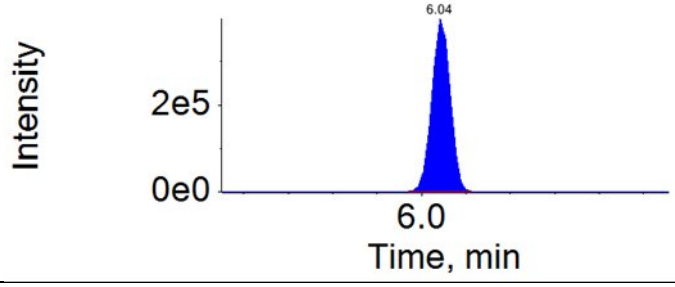
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



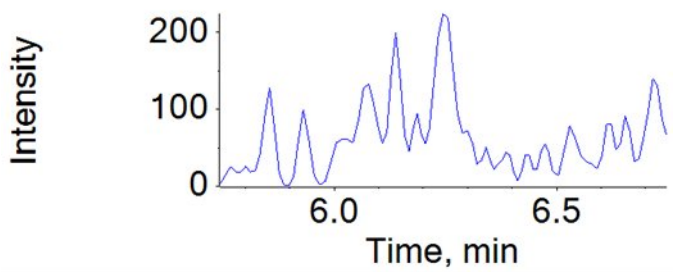


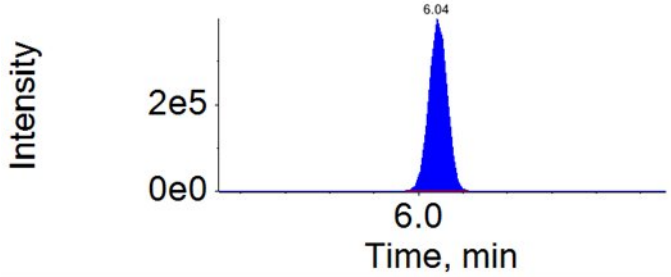
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

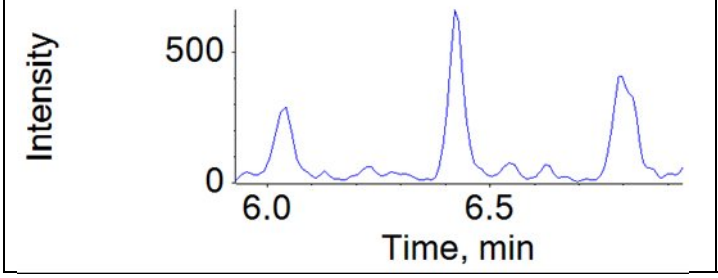
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

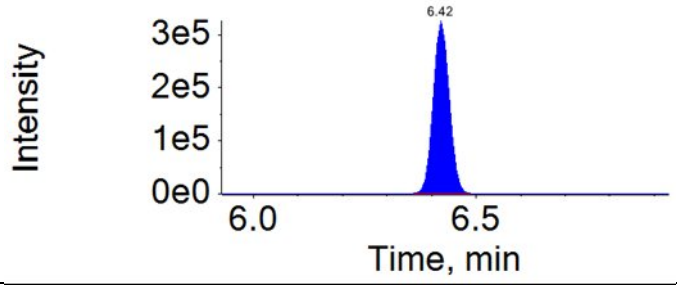
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



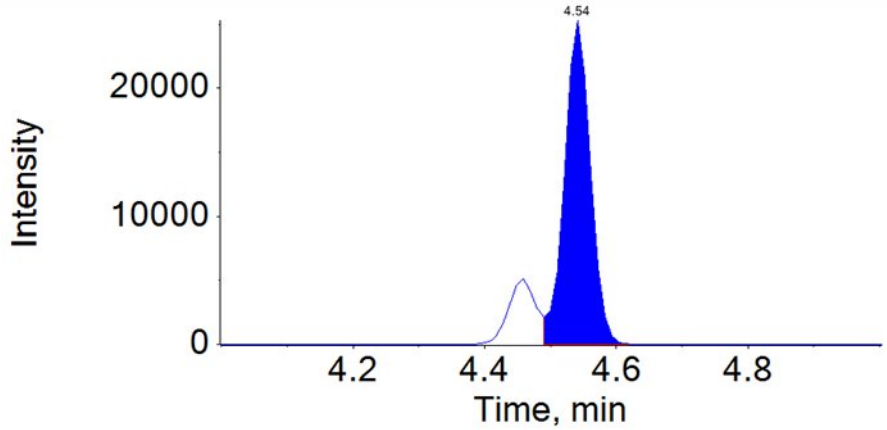


APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

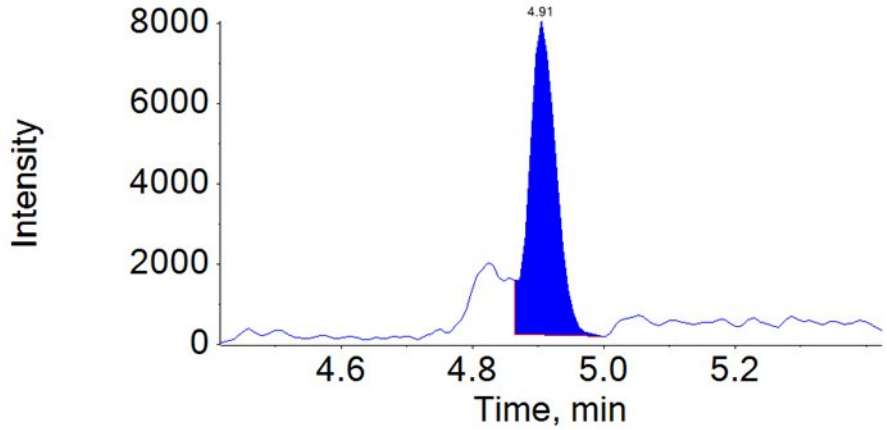
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
69594.1
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-58.wiff
Sample Name:
9881543



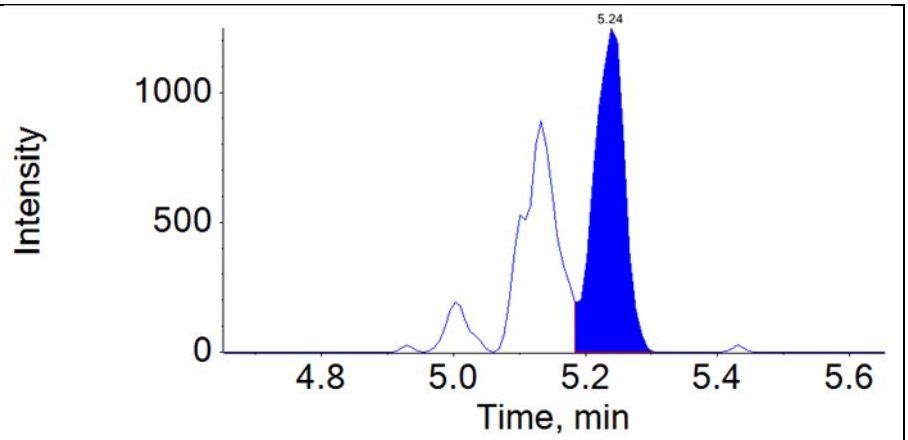
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
21851.7
Mass Range:
413.0 / 369.0
File Name:
18NOV29D-58.wiff
Sample Name:
9881543



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
4007.4
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-58.wiff
Sample Name:
9881543



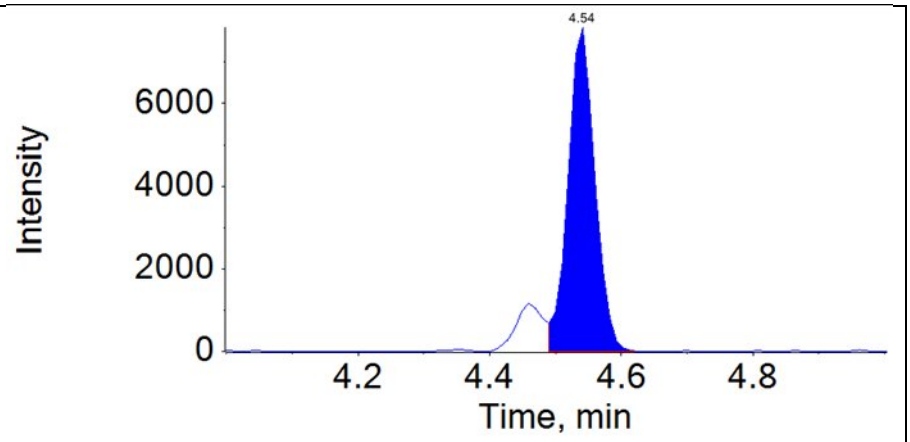
Integration Comment: incorrect integration

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

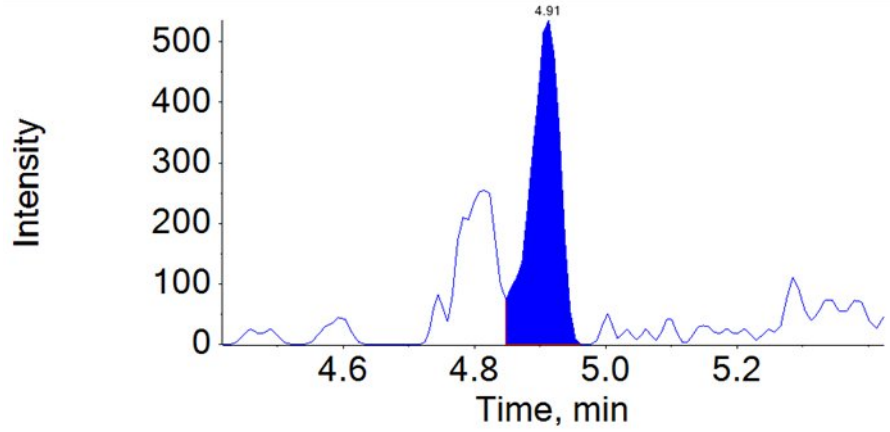
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
22255.7
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-58.wiff
Sample Name:
9881543



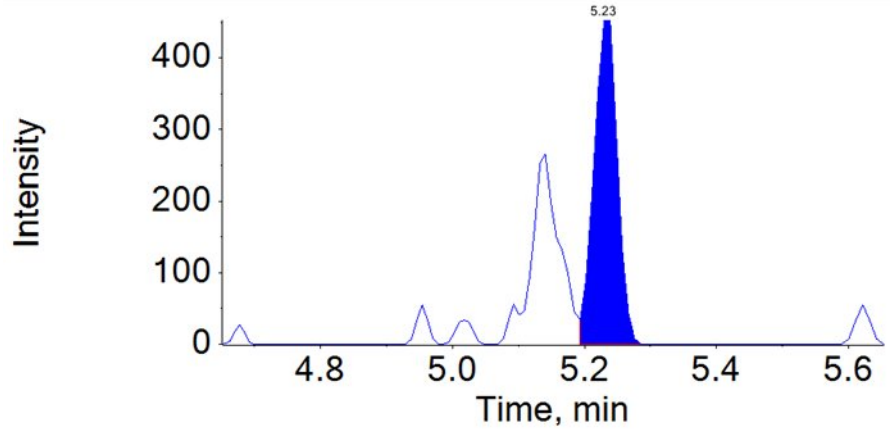
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
1685.1
Mass Range:
413.0 / 169.0
File Name:
18NOV29D-58.wiff
Sample Name:
9881543



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
1129.9
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-58.wiff
Sample Name:
9881543



Integration Comment: incorrect integration

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

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

APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

Ion Ratio Report

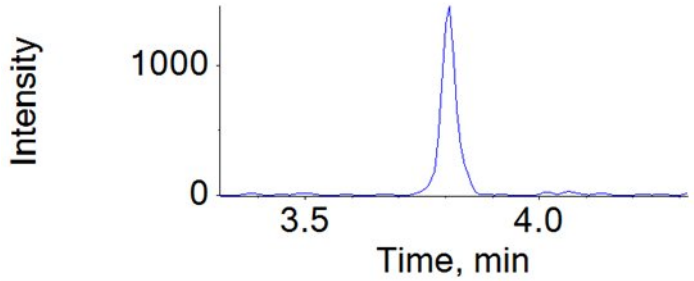
Sample Name: 9881543 **Instrument Name:** LM27631 **File Name:** 18NOV29D-58.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	4.15	1.00	152380.7	A	N/A	0.0107			
PFHxA_2	4.15	1.00	1633.9	A	N/A	0.0107	4	50	
PFHpA	4.54	1.00	36017.6	A	N/A	0.0553			
PFHpA_2	4.54	1.00	1993.0	A	N/A	0.0553	-1	50	
PFHxS	4.54	1.00	84209.3	M	N/A	0.3038			
PFHxS_2	4.54	1.00	25579.7	M	N/A	0.3038	-18	50	
PFOA	4.91	1.00	28535.2	M	N/A	0.0935			
PFOA_2	4.91	1.00	2666.9	M	N/A	0.0935	63	50	OOS
PFOS	5.22	1.00	7696.7	M	N/A	0.2583			
PFOS_2	5.22	1.00	1988.2	M	N/A	0.2583	-13	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	

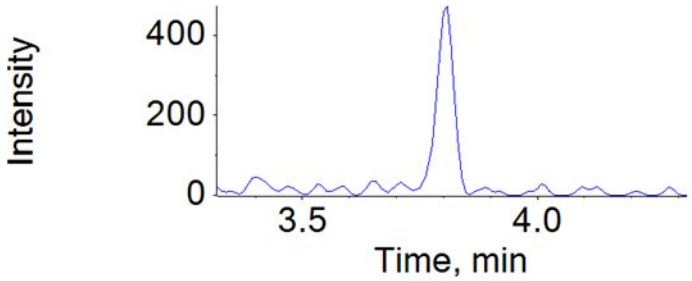
APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

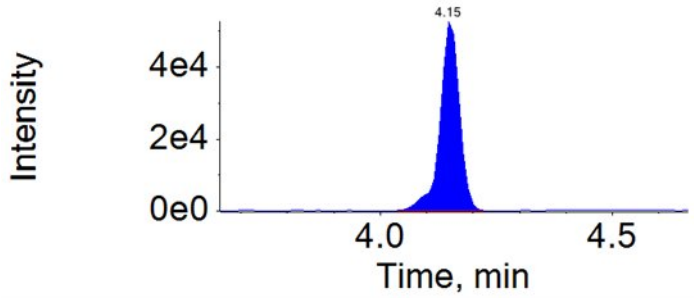
Component: PFBS
Primary Mass: 299.0 / 80.0



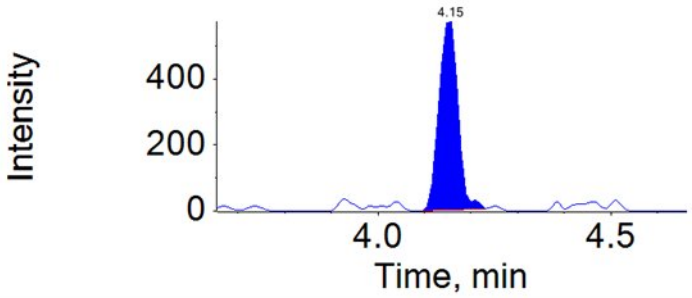
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



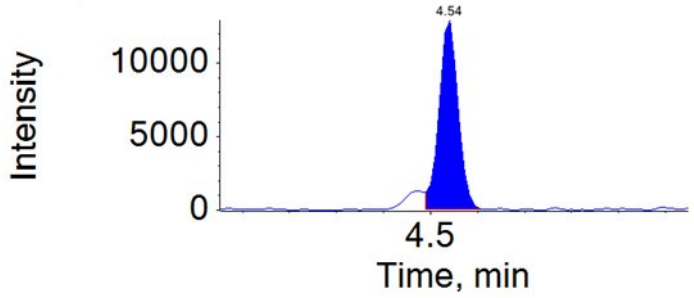
Component: PFHxA
Primary Mass: 313.0 / 269.0



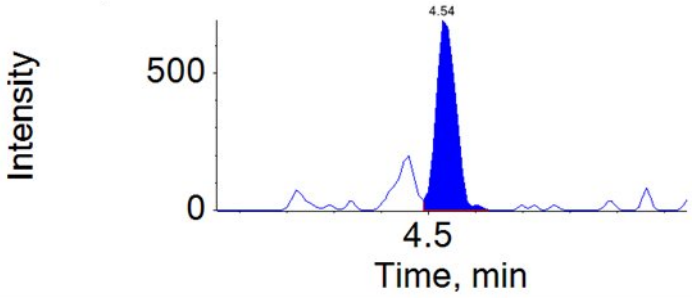
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



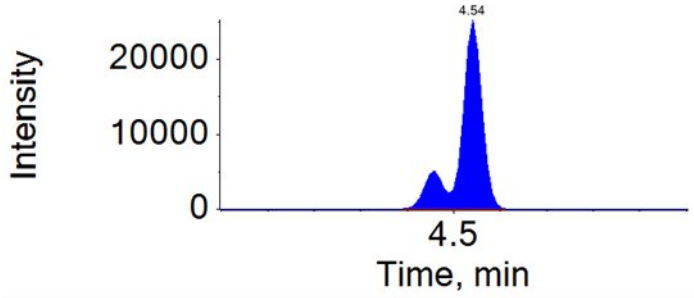
Component: PFHpA
Primary Mass: 363.0 / 319.0



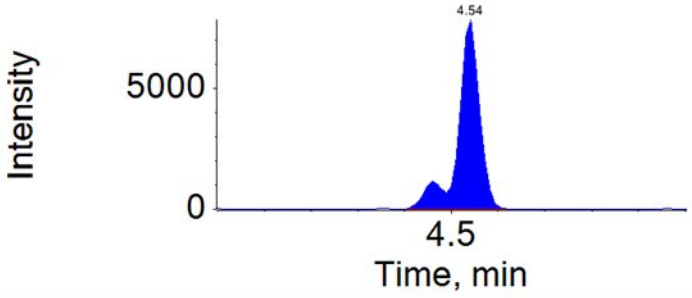
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



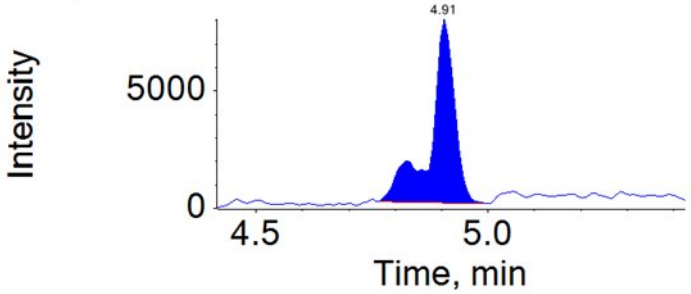
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



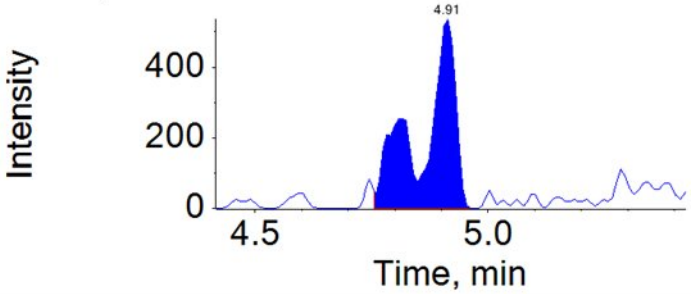
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By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

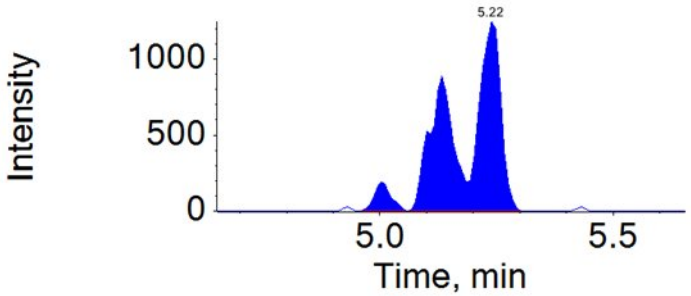
Component: PFOA
Primary Mass: 413.0 / 369.0



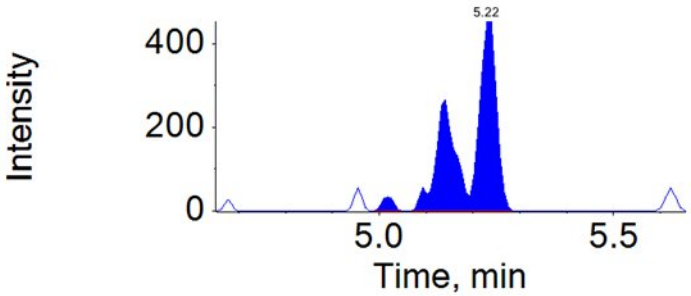
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



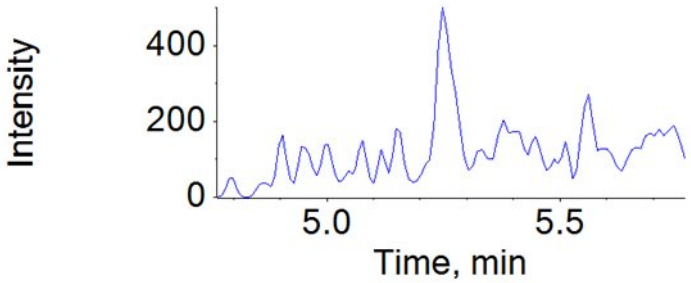
Component: PFOS
Primary Mass: 499.0 / 80.0



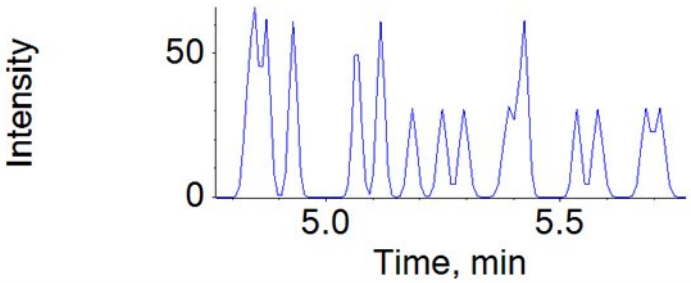
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Secondary Mass: 499.0 / 99.0



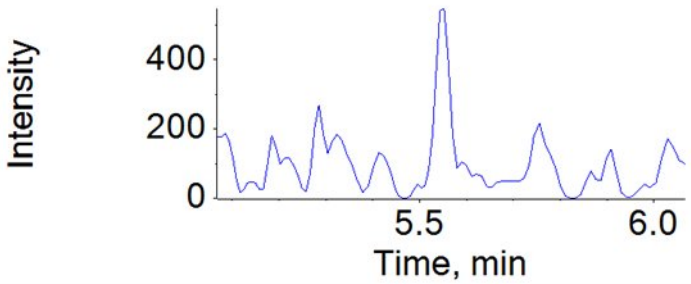
Component: PFNA
Primary Mass: 463.0 / 419.0



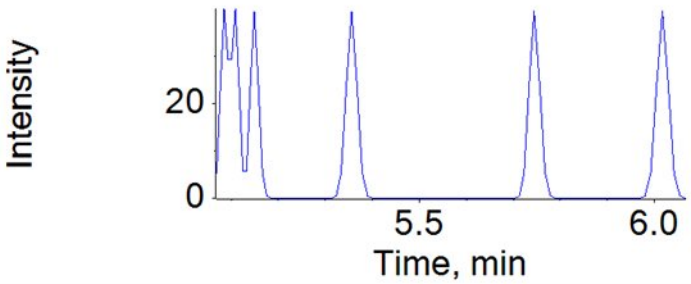
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



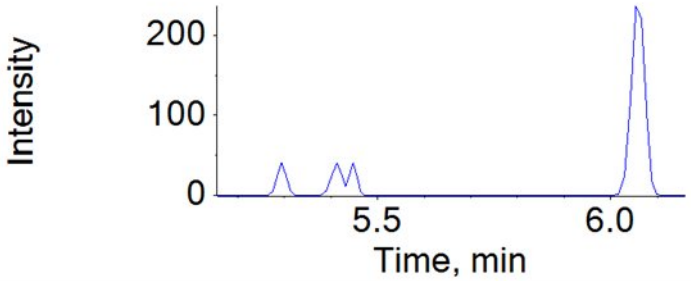
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



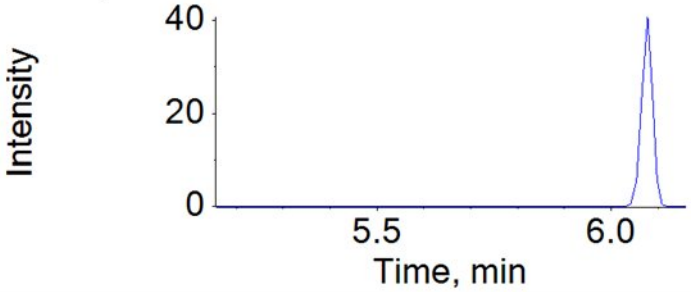
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REVIEWED
By HMK at 2:26 pm, 12/6/18

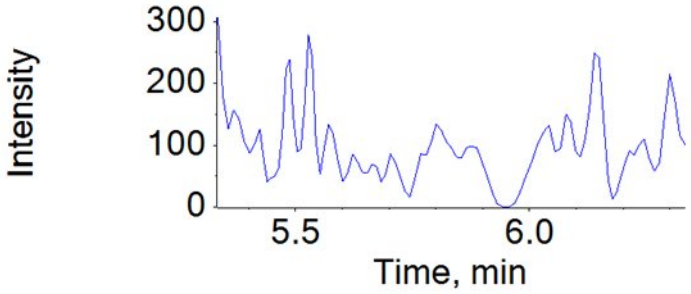
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



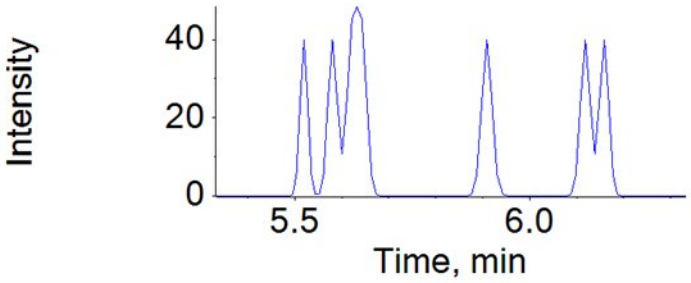
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



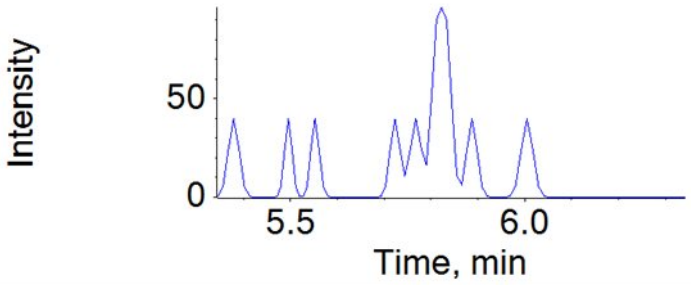
Component: PFUnDA
Primary Mass: 563.0 / 519.0



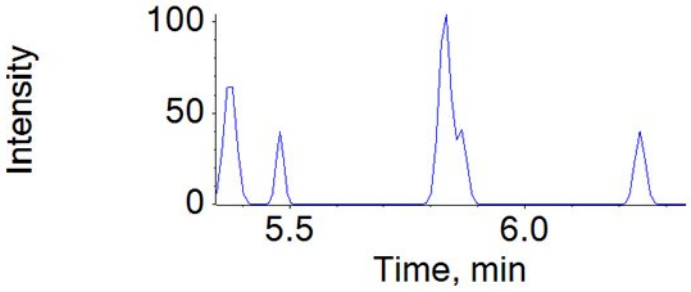
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



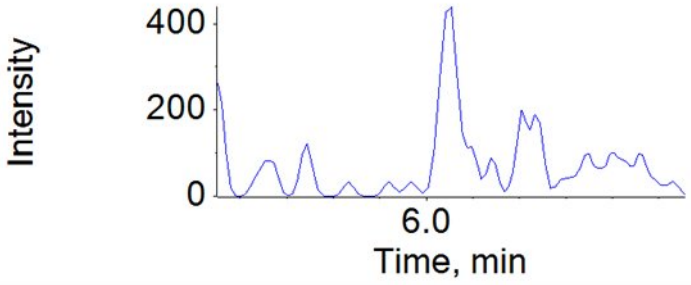
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



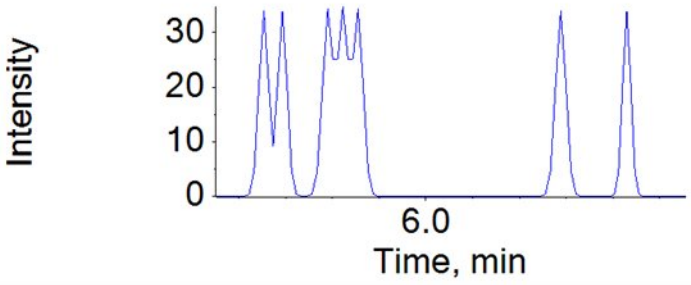
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



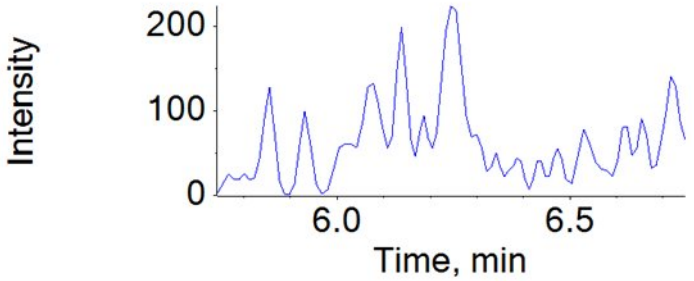
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



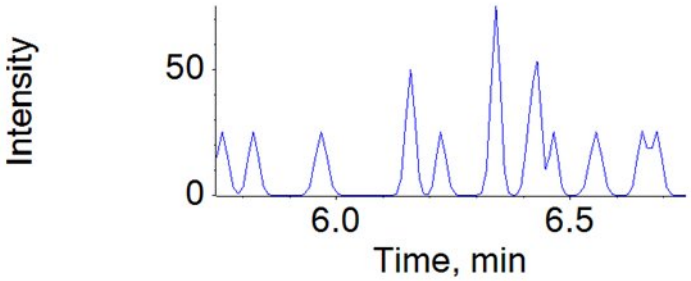
APPROVED
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REVIEWED
By HMK at 2:26 pm, 12/6/18

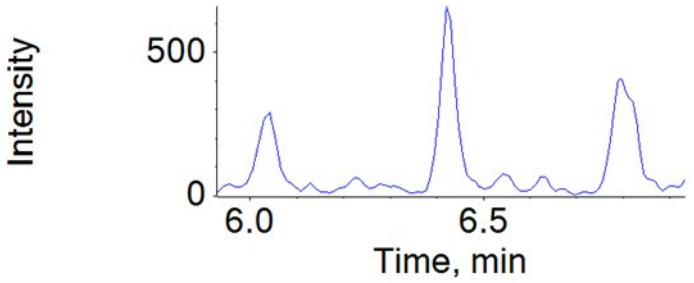
Component: PFTrDA
Primary Mass: 663.0 / 619.0



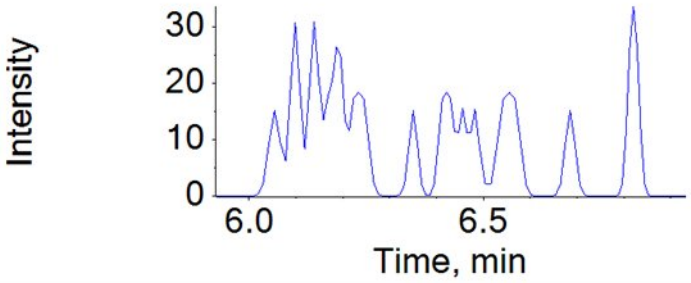
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 10:12 pm, 11/30/18

REVIEWED
By HMK at 2:26 pm, 12/6/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881544			**Data File:**		18NOV08D-96.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-02-01 Grab Soil			**Acquis Date:**		2018-11-09T02:05:35
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	37			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
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: 18NOV08D-05

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	841117.6	728839.7	15	50	
13C2-PFOA	5.0	596324.6	491983.1	21	50	
13C4-PFOS	4.8	307730.9	255568.1	20	50	
13C2-PFDA	5.0	429467.2	315407.5	36	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	339365.5	13C3-PFBA	841117.6	0.403	9.029	5.750	64	50-150	
E13C5-PFHxA	563842.6	13C2-PFOA	596324.6	0.946	9.709	6.754	70	50-150	
E13C3-PFHxS	283593.1	13C2-PFOA	596324.6	0.476	9.184	6.629	72	50-150	
E13C4-PFHpA	443742.2	13C2-PFOA	596324.6	0.744	9.709	6.573	68	50-150	
E13C8-PFOA	801525.8	13C2-PFOA	596324.6	1.344	9.709	7.278	75	50-150	
E13C8-PFOS	229690.5	13C4-PFOS	307730.9	0.746	9.282	6.409	69	50-150	
E13C9-PFNA	394545.1	13C4-PFOS	307730.9	1.282	9.709	6.800	70	50-150	
E13C6-PFDA	514366.3	13C2-PFDA	429467.2	1.198	9.709	5.848	60	50-150	
Ed3-NMeFOSAA	68331.1	13C2-PFDA	429467.2	0.159	9.709	5.745	59	50-150	
E13C7-PFUnDA	227744.7	13C2-PFDA	429467.2	0.530	9.709	5.940	61	50-150	
Ed5-NEtFOSAA	50979.2	13C2-PFDA	429467.2	0.119	9.709	5.334	55	50-150	
E13C2-PFDoDA	468671.7	13C2-PFDA	429467.2	1.091	9.709	5.712	59	50-150	
E13C2-PFTeDA	328512.1	13C2-PFDA	429467.2	0.765	9.709	5.347	55	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

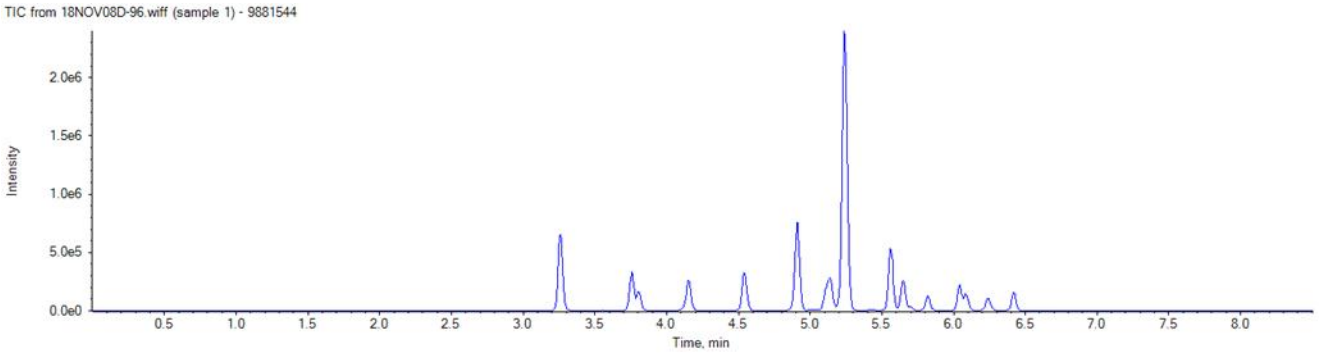
Analyte Quantitation Peak Table

Sample Name: 9881544 **Instrument Name:** LM27631 **File Name:** 18NOV08D-96.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	3.81	339365.5	N/A	
PFHxA	4.15	1.000	29673.8		A	13C5-PFHxA	4.15	563842.6	0.053	0.438
PFHxS	4.54	1.000	19307.6		A	13C3-PFHxS	4.54	283593.1	0.068	0.670
PFHpA	4.54	1.000	28481.0		A	13C4-PFHpA	4.54	443742.2	0.064	0.419
PFOA	4.91	1.000	278176.9		A	13C8-PFOA	4.91	801525.8	0.347	3.794
PFOS	5.24	1.000	4517071.1	E	M	13C8-PFOS	5.24	229690.5	19.666	198.011
PFNA	5.26	1.000	227484.0		A	13C9-PFNA	5.26	394545.1	0.577	4.184
PFDA	5.56	1.000	34774.7		A	13C6-PFDA	5.56	514366.3	0.068	0.722
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	68331.1	N/A	
PFUnDA	5.82	1.000	5550.7		M	13C7-PFUnDA	5.82	227744.7	0.024	0.136
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	50979.2	N/A	
PFDoDA	6.04	1.000	6580.9		M	13C2-PFDoDA	6.04	468671.7	0.014	0.148
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	468671.7	N/A	
PFTeDA	6.42	1.000	3440.5		M	13C2-PFTeDA	6.42	328512.1	0.010	0.119

Total Ion Chromatogram

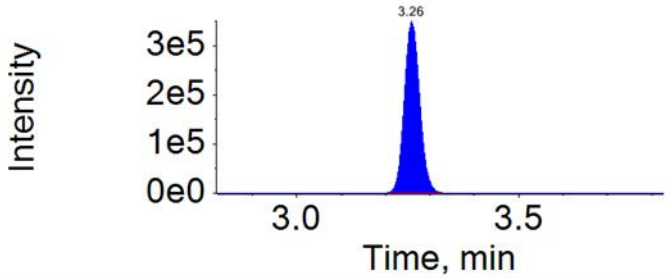


APPROVED
By JPT at 5:18 pm, 11/9/18

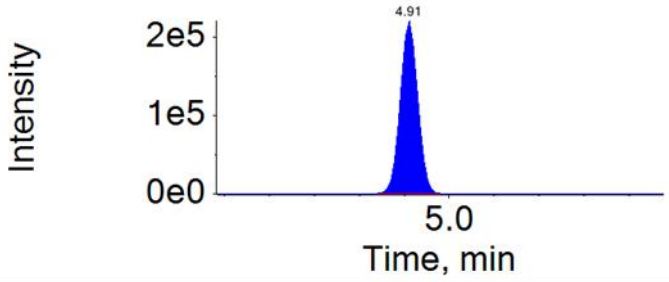
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

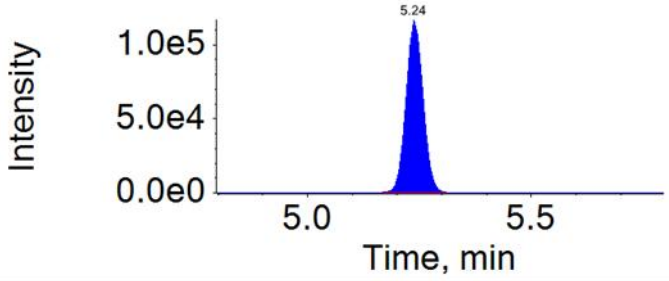
Injection Standard: 13C3-PFBA
216.0 / 172.0



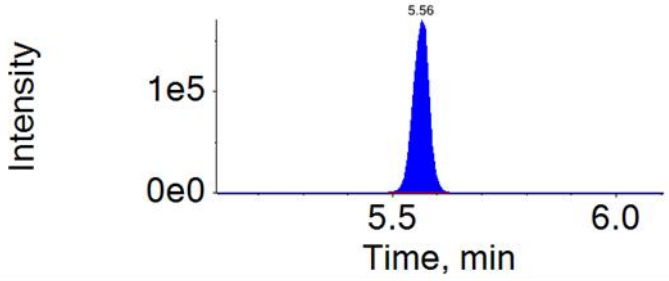
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

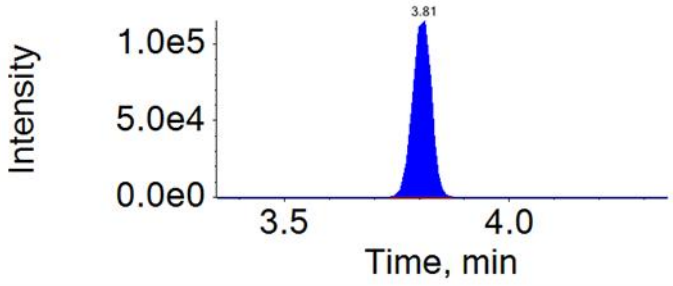


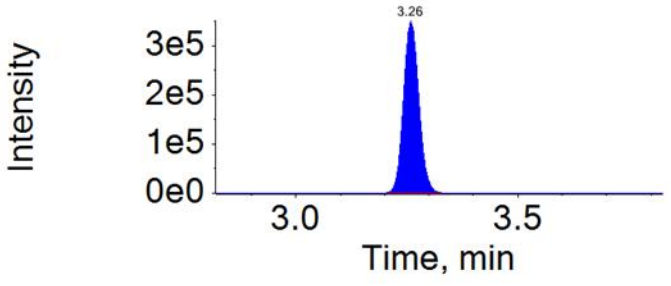
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

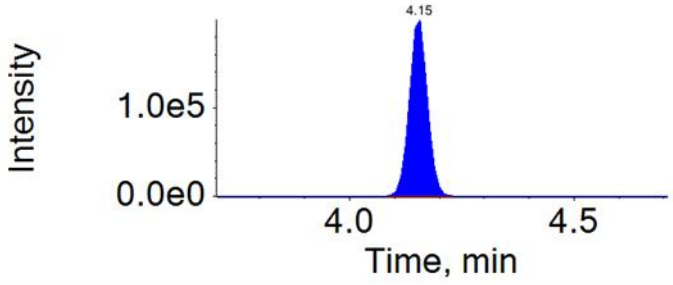
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

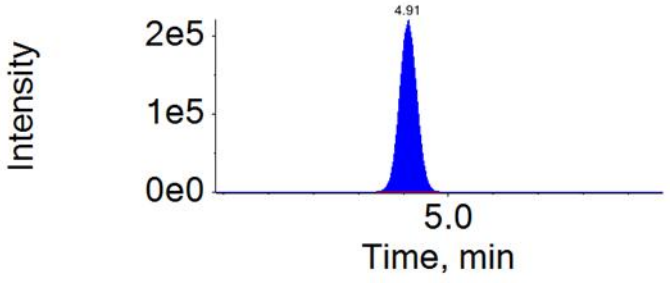
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



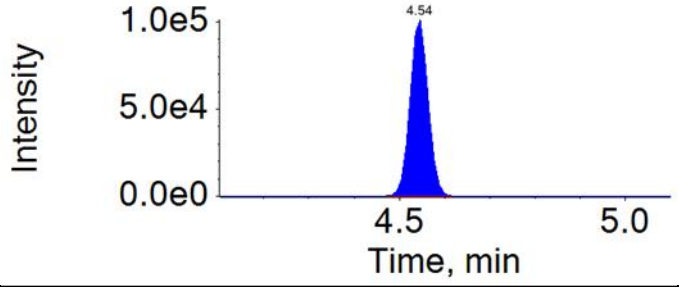


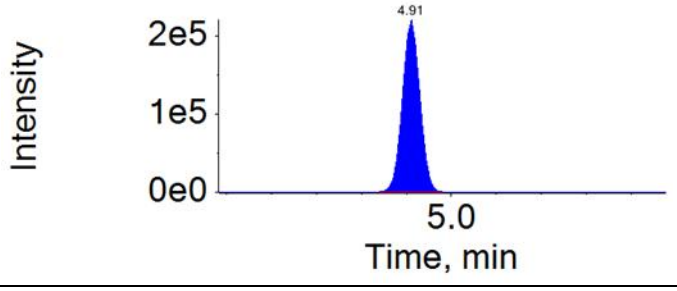
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



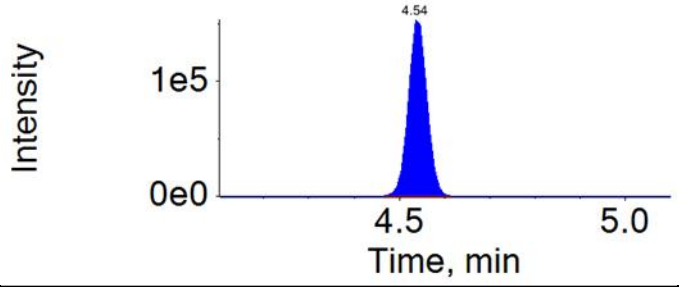


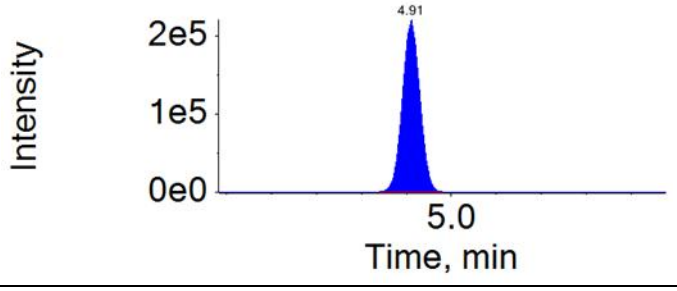
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





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

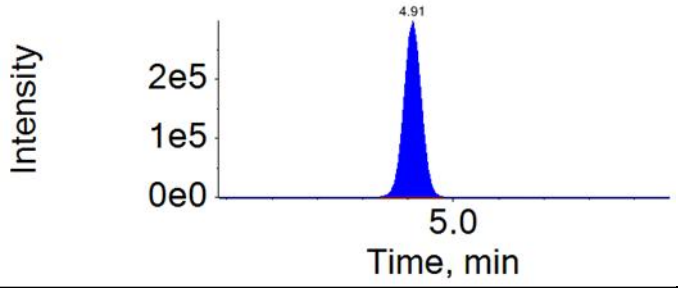
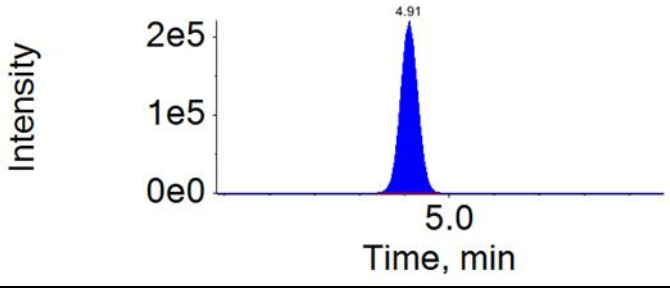


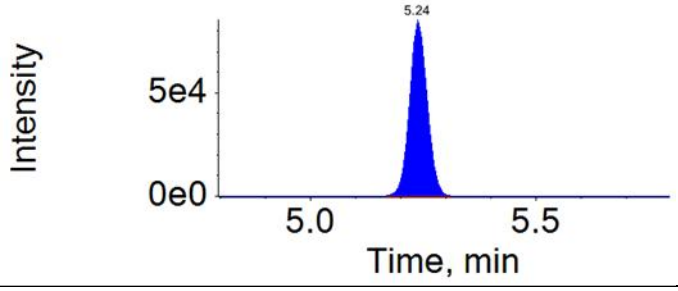
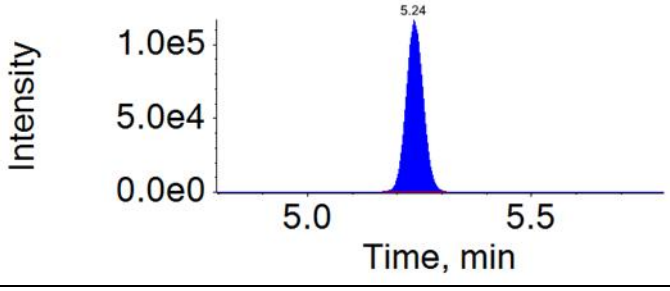


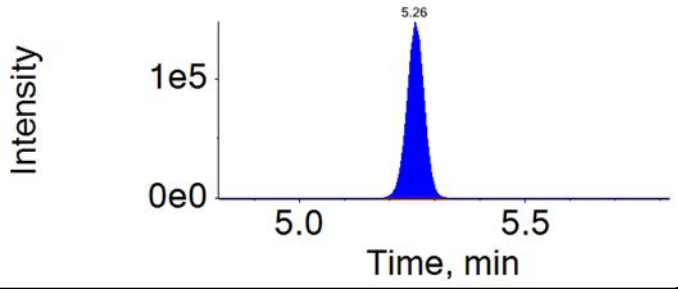
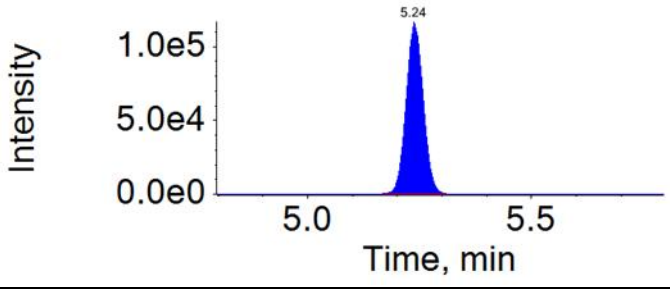
APPROVED
By JPT at 5:18 pm, 11/9/18

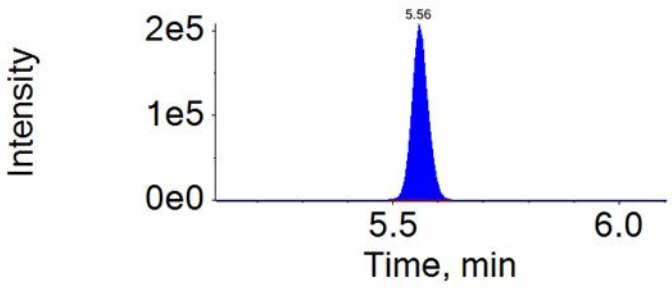
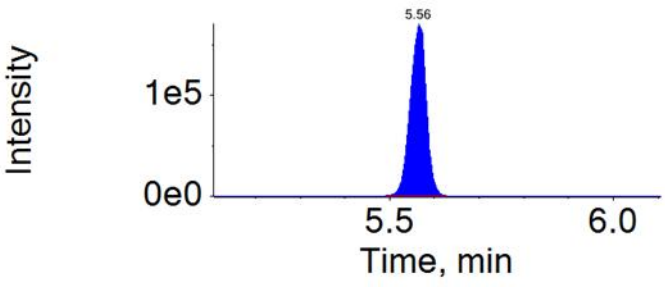
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

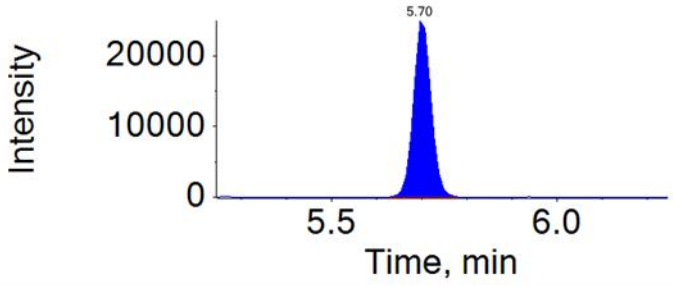
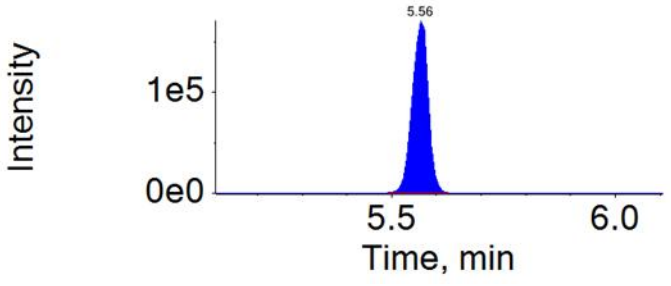
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

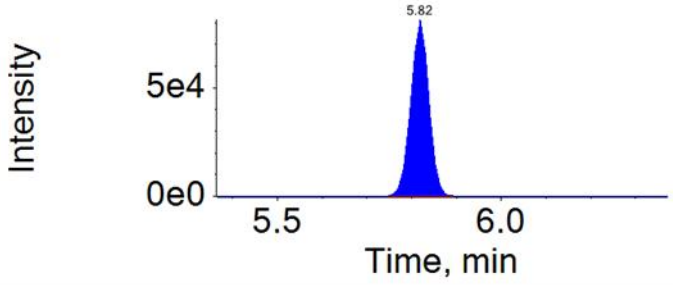
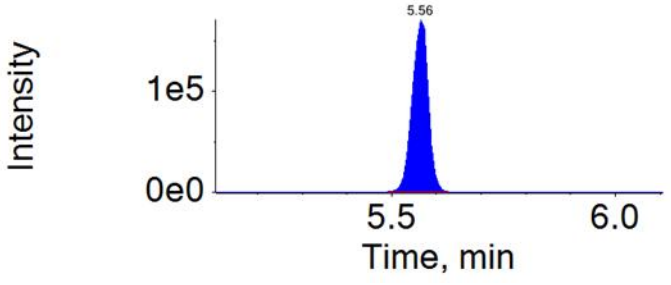
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

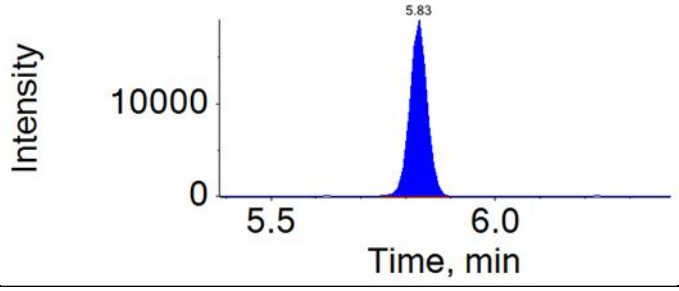
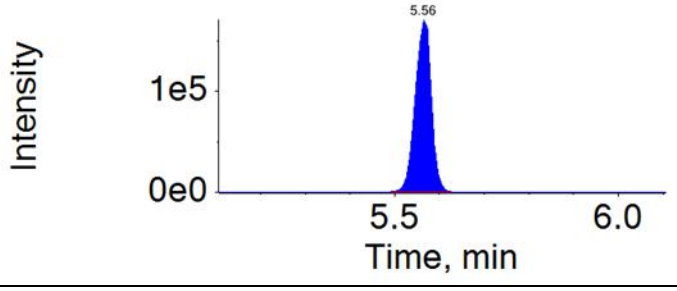
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

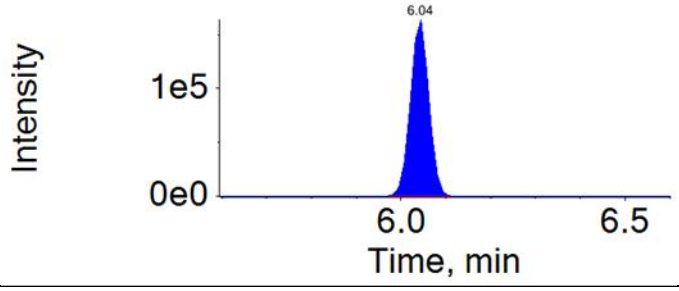
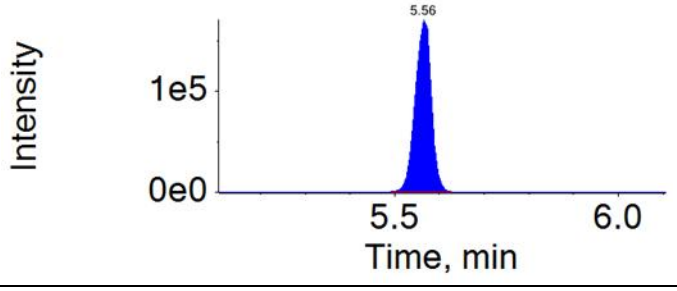
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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
	

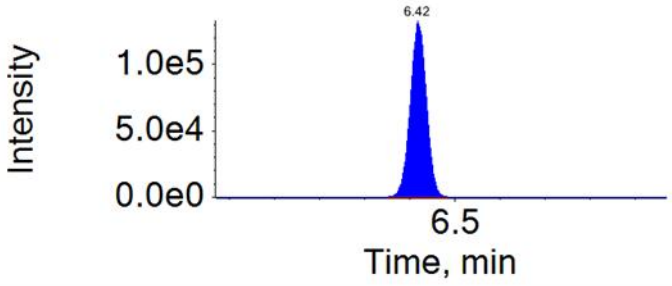
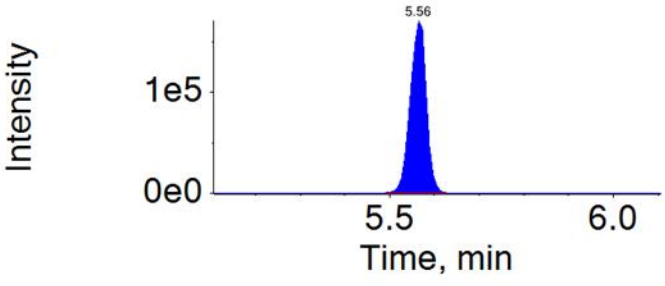
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

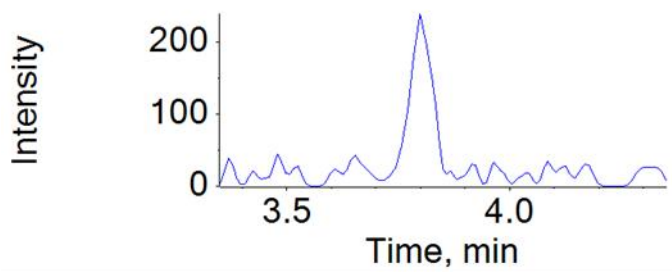
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

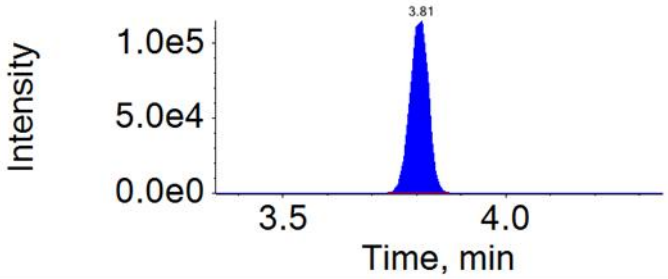
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REVIEWED
By umar at 4:40 pm, 11/12/18

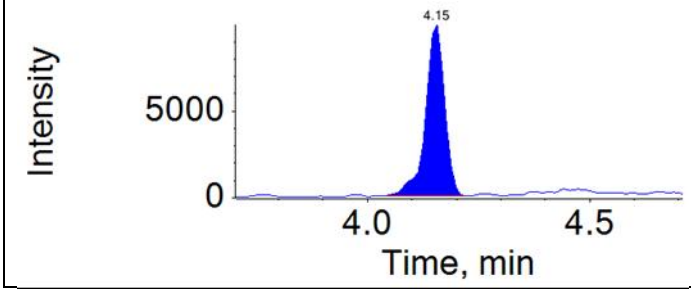
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

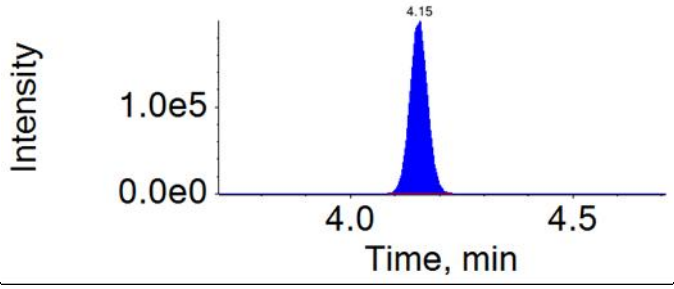
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



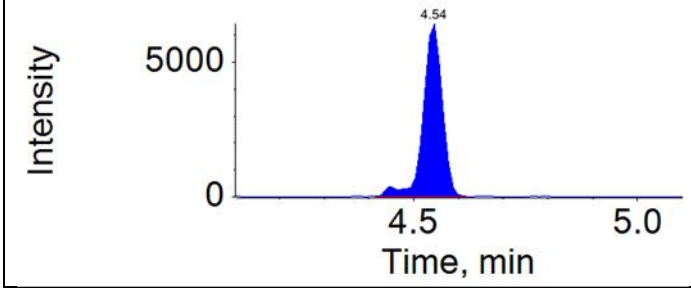


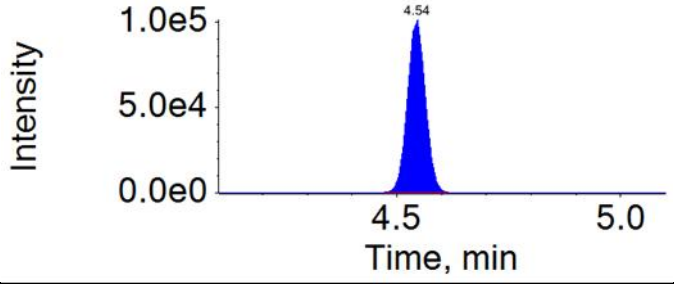
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



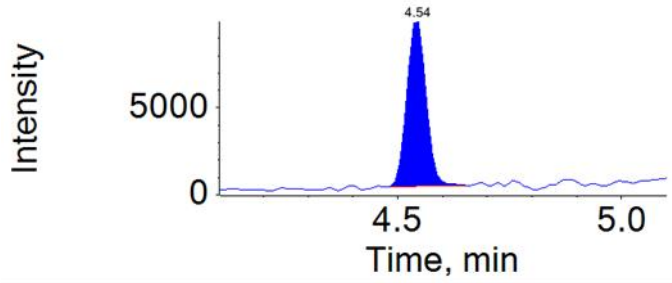


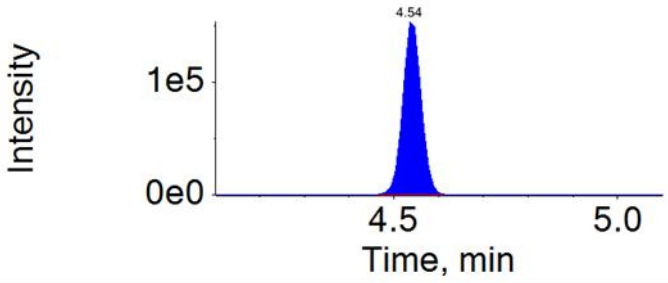
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



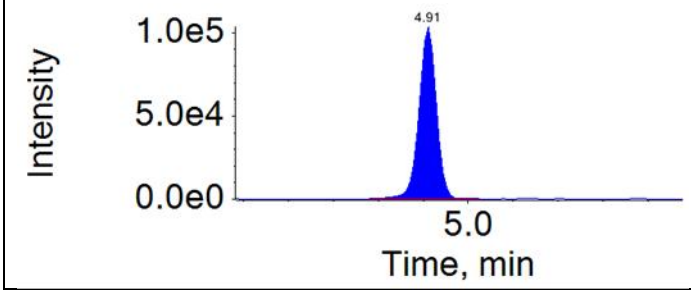


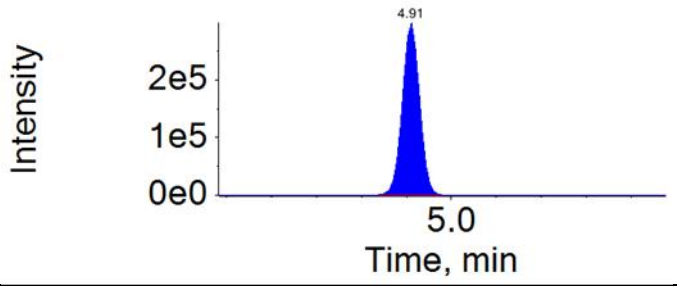
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

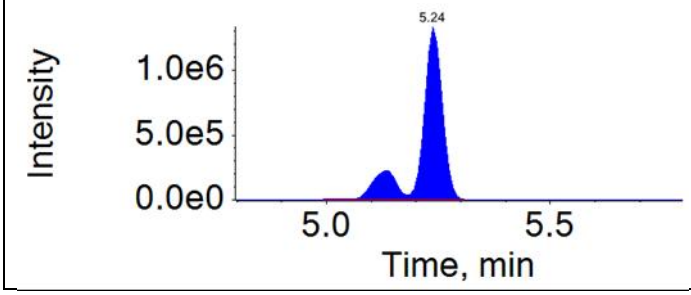
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

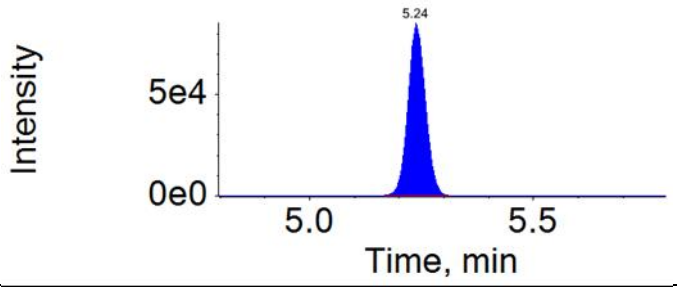
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



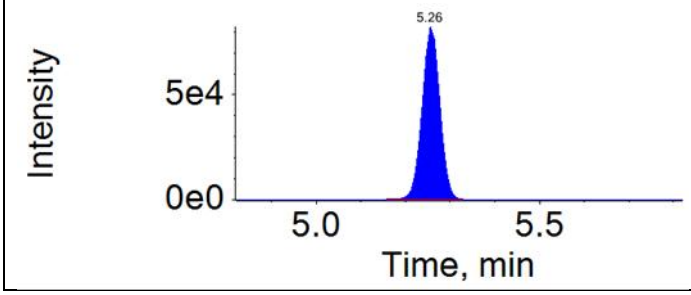


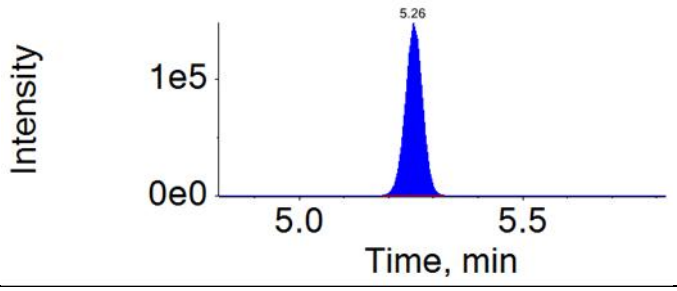
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



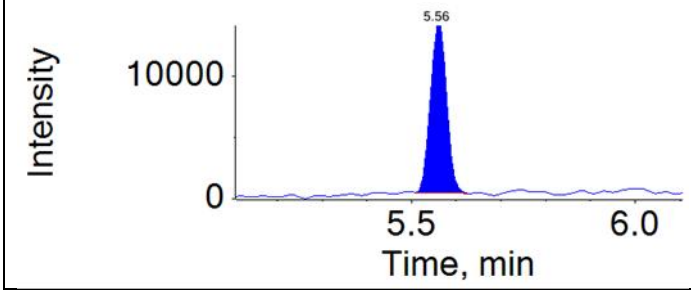


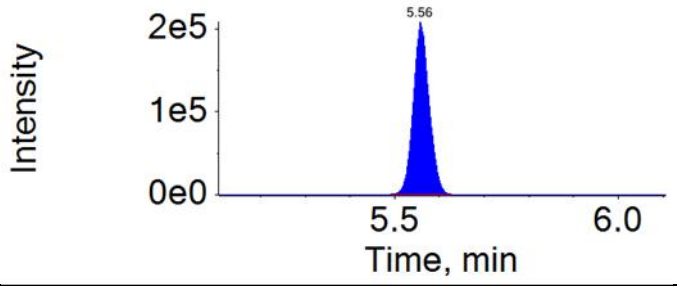
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





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



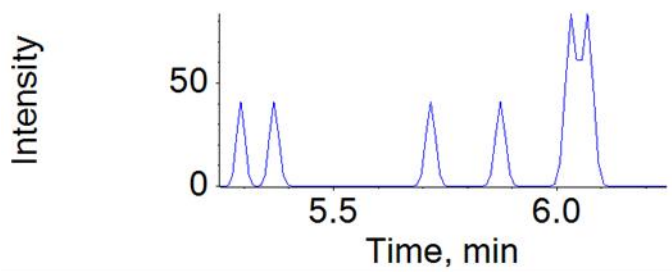


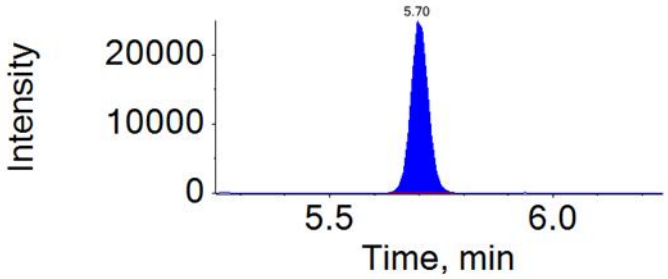
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

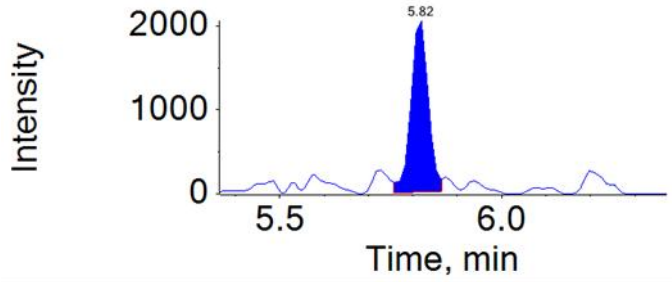
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

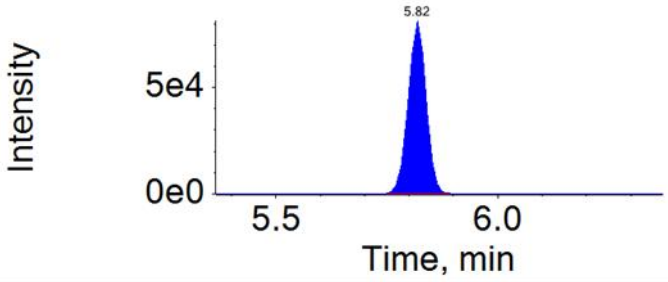
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



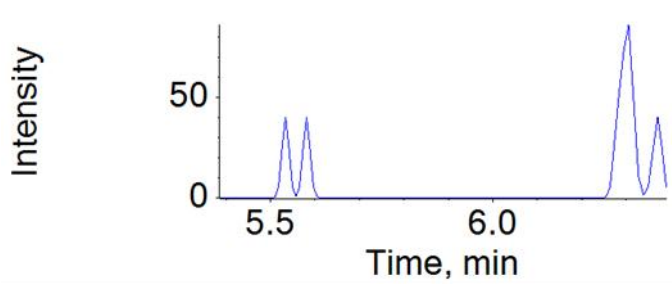


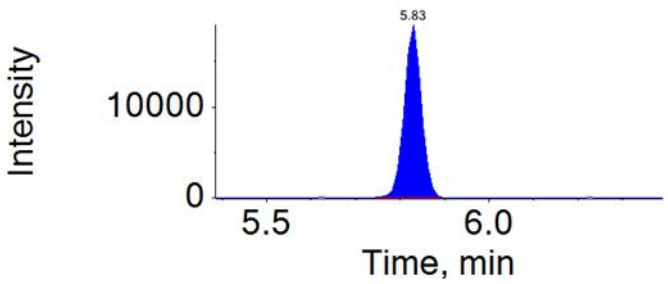
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



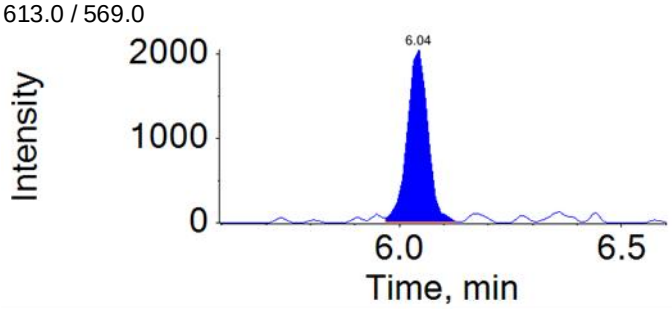


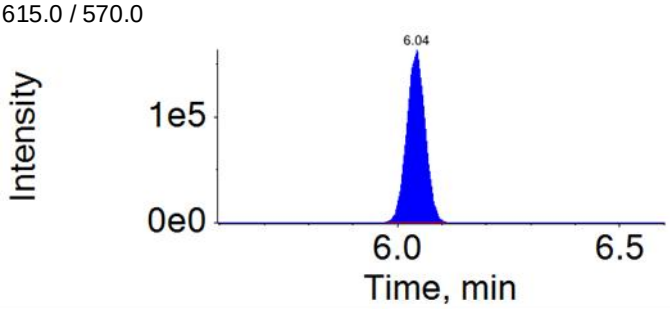
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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

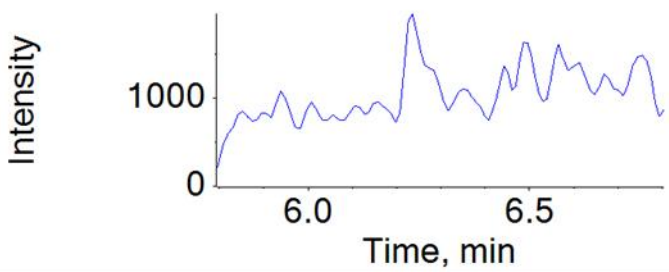
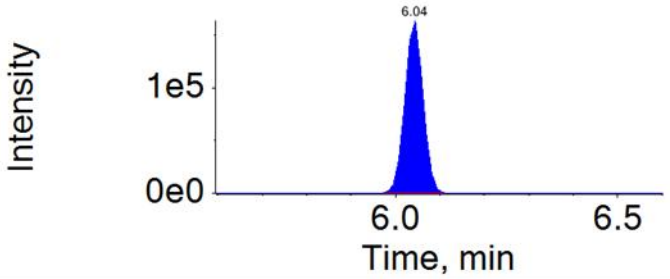


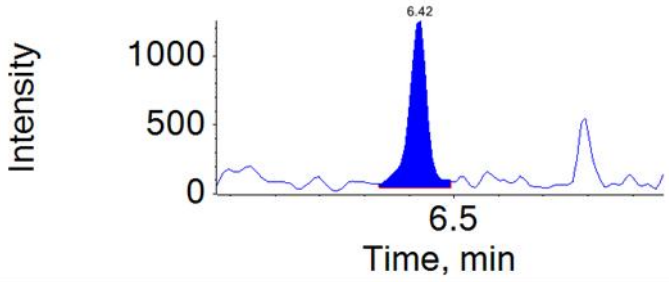
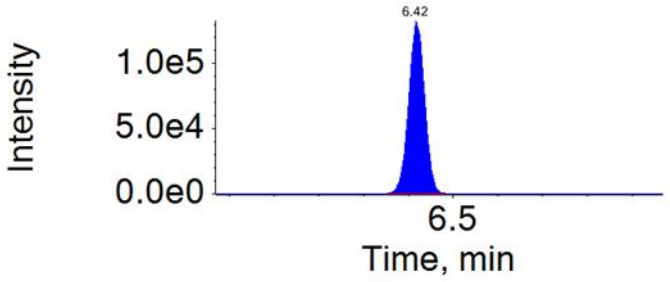


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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

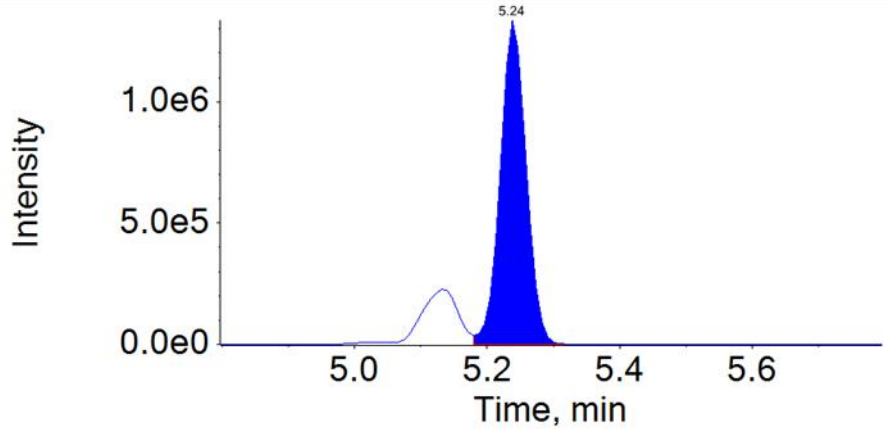
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

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By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

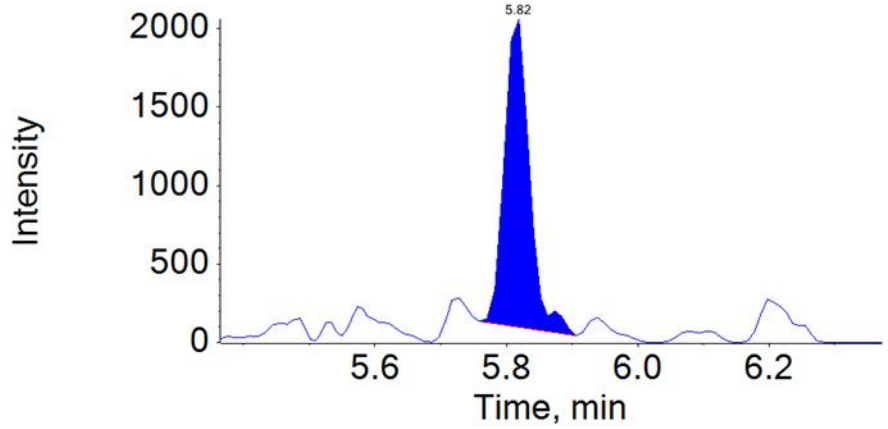
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
3635801.1
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-96.wiff
Sample Name:
9881544



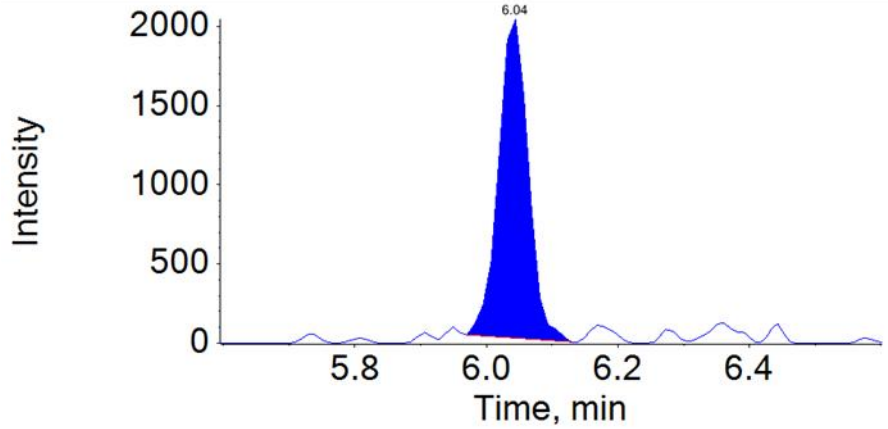
Integration Comment: incorrect integration

Component Name:
PFUnDA
RT (min.):
5.82
Peak Area:
5222.5
Mass Range:
563.0 / 519.0
File Name:
18NOV08D-96.wiff
Sample Name:
9881544



Integration Comment: incorrect integration

Component Name:
PFDoDA
RT (min.):
6.04
Peak Area:
6352.6
Mass Range:
613.0 / 569.0
File Name:
18NOV08D-96.wiff
Sample Name:
9881544



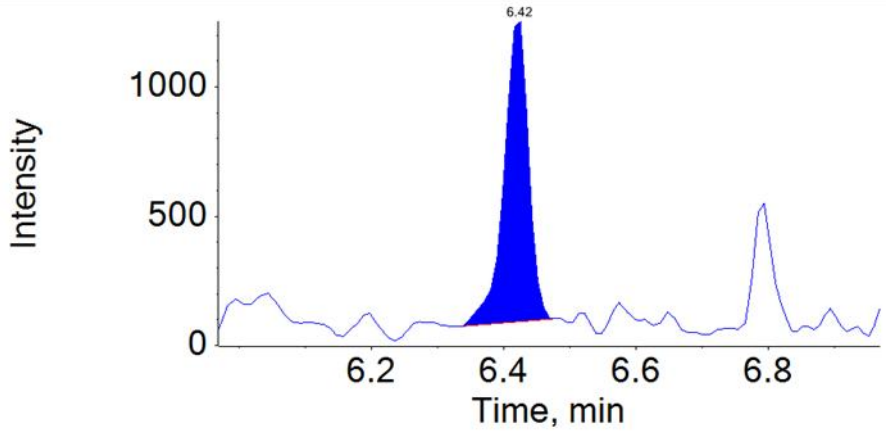
Integration Comment: incorrect integration

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REVIEWED
By umar at 4:40 pm, 11/12/18

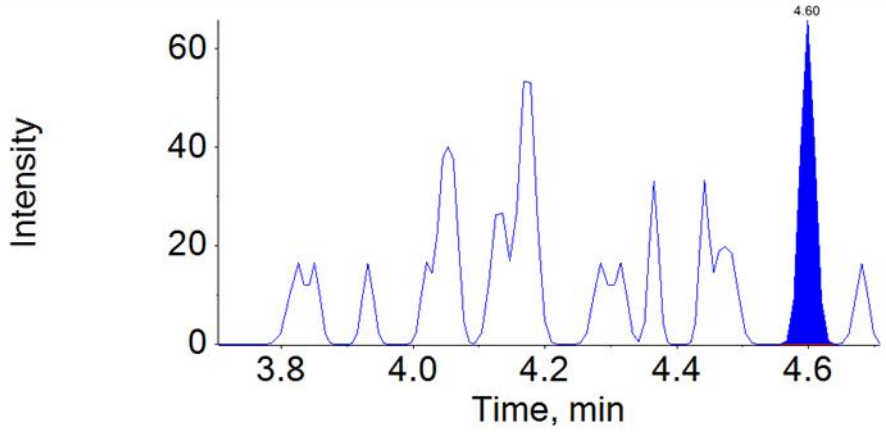
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFTeDA
RT (min.):
6.42
Peak Area:
3015.5
Mass Range:
713.0 / 669.0
File Name:
18NOV08D-96.wiff
Sample Name:
9881544



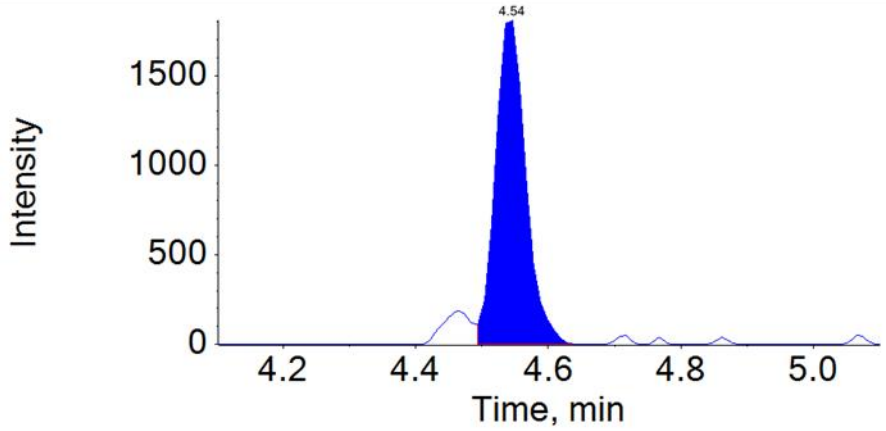
Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.60
Peak Area:
103.6
Mass Range:
313.0 / 119.0
File Name:
18NOV08D-96.wiff
Sample Name:
9881544



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
5775.3
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-96.wiff
Sample Name:
9881544



Integration Comment: incorrect integration

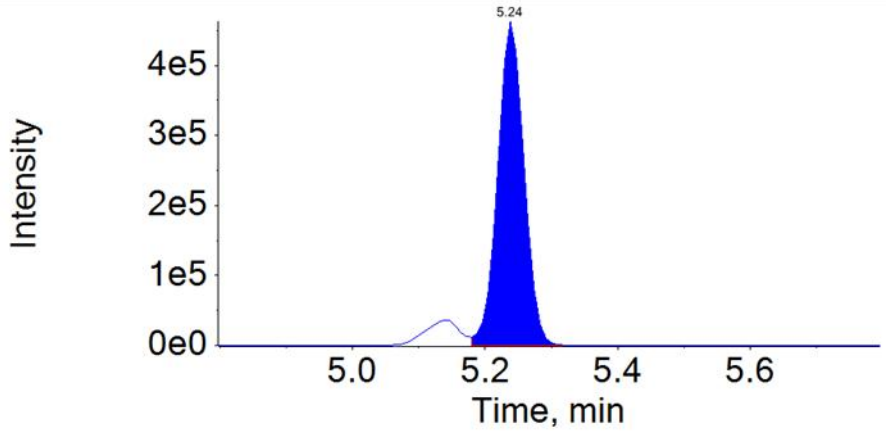
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

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

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
1278528.1
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-96.wiff
Sample Name:
9881544



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

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

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

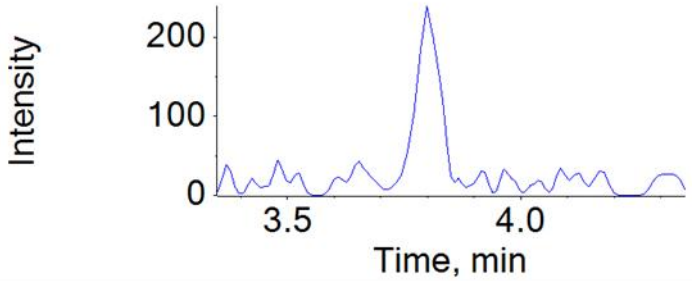
Sample Name: 9881544 **Instrument Name:** LM27631 **File Name:** 18NOV08D-96.wiff

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	4.15	1.00	29673.8	A	N/A	1.0000			
PFHxA_2	4.17	1.00	158.1	M	N/A	0.0053	-54	50	OOS
PFHxS	4.54	1.00	19307.6	A	N/A	1.0000			
PFHxS_2	4.54	1.00	6341.4	M	N/A	0.3284	-8	50	
PFHpA	4.54	1.00	28481.0	A	N/A	1.0000			
PFHpA_2	4.54	1.00	1305.2	A	N/A	0.0458	-21	50	
PFOA	4.91	1.00	278176.9	A	N/A	1.0000			
PFOA_2	4.91	1.00	14807.7	A	N/A	0.0532	-16	50	
PFOS	5.24	1.00	4517071.1	M	N/A	1.0000			
PFOS_2	5.24	1.00	1411952.3	M	N/A	0.3126	-11	50	
PFNA	5.26	1.00	227484.0	A	N/A	1.0000			
PFNA_2	5.26	1.00	3391.4	A	N/A	0.0149	-28	50	
PFDA	5.56	1.00	34774.7	A	N/A	1.0000			
PFDA_2	5.55	1.00	318.1	A	N/A	0.0091	62	50	OOS
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	5.82	1.00	5550.7	M	N/A	1.0000			
PFUnDA_2	5.82	1.00	142.7	A	N/A	0.0257	716	50	OOS
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	6.04	1.00	6580.9	M	N/A	1.0000			
PFDoDA_2	6.24	1.03	207.7	A	N/A	0.0316	189	50	OOS
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	6.42	1.00	3440.5	M	N/A	1.0000			
PFTeDA_2	6.43	1.00	39.5	A	N/A	0.0115	107	50	OOS

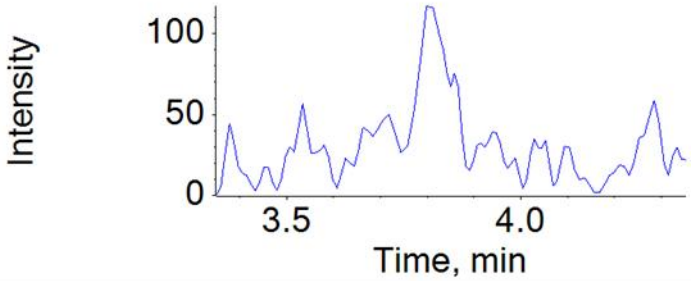
APPROVED
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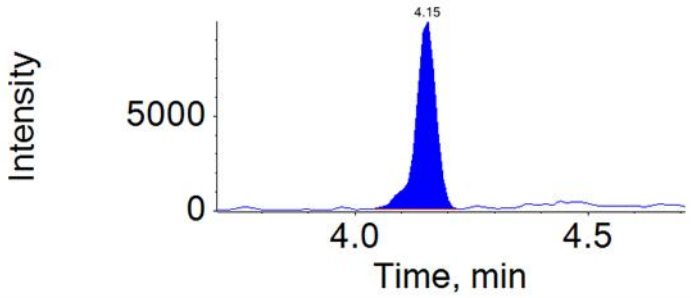
Component: PFBS
Primary Mass: 299.0 / 80.0



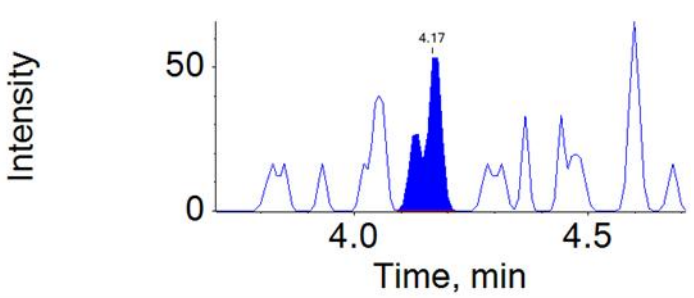
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



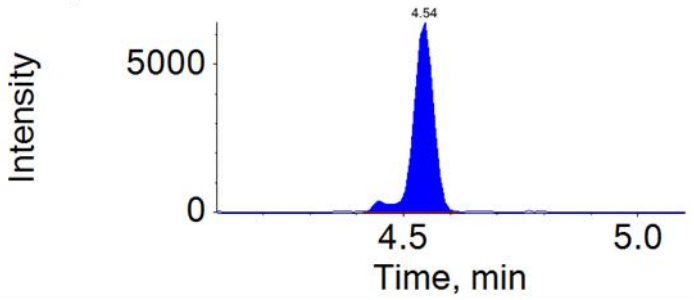
Component: PFHxA
Primary Mass: 313.0 / 269.0



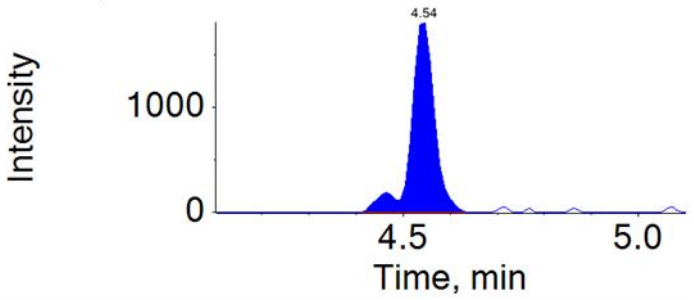
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



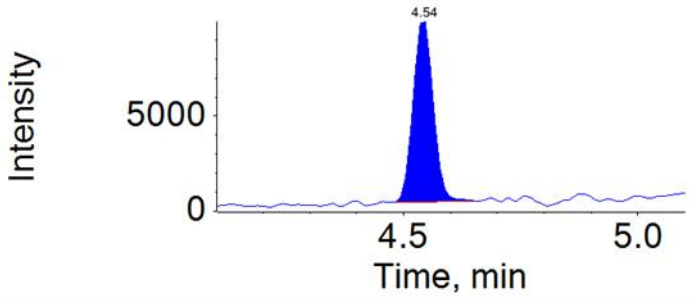
Component: PFHxS
Primary Mass: 399.0 / 80.0



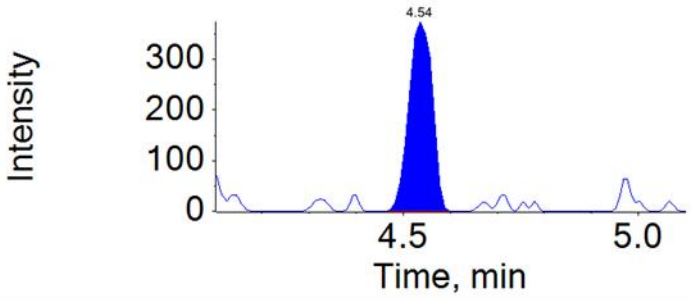
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



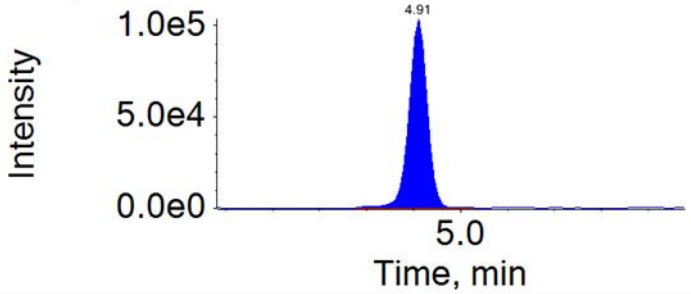
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



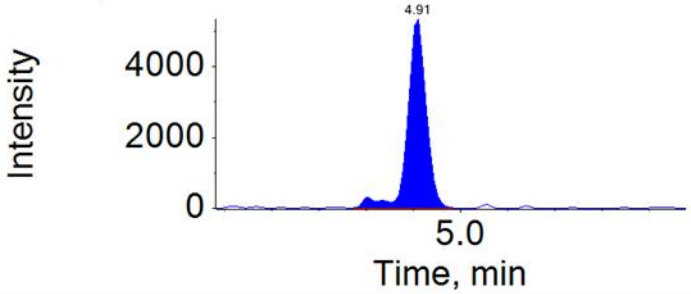
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By umar at 4:40 pm, 11/12/18

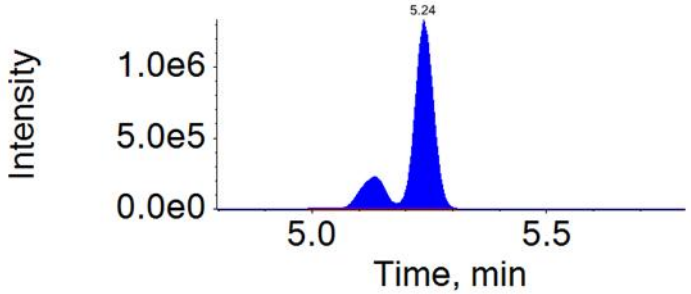
Component: PFOA
Primary Mass: 413.0 / 369.0



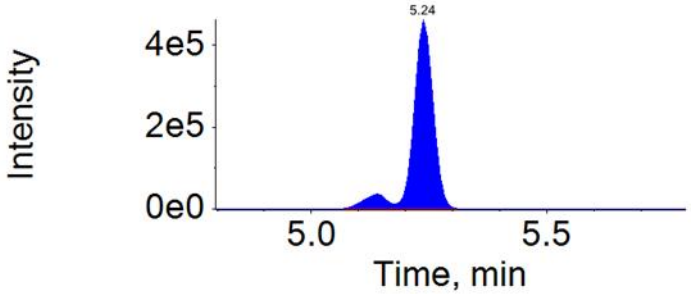
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



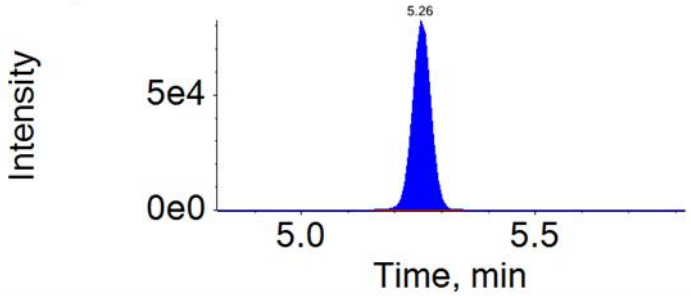
Component: PFOS
Primary Mass: 499.0 / 80.0



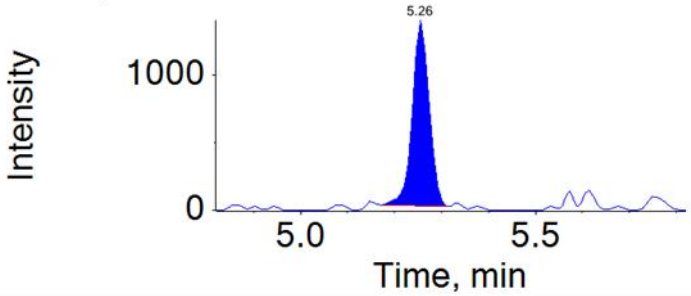
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



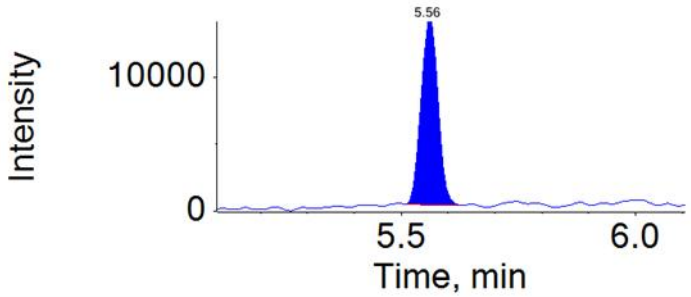
Component: PFNA
Primary Mass: 463.0 / 419.0



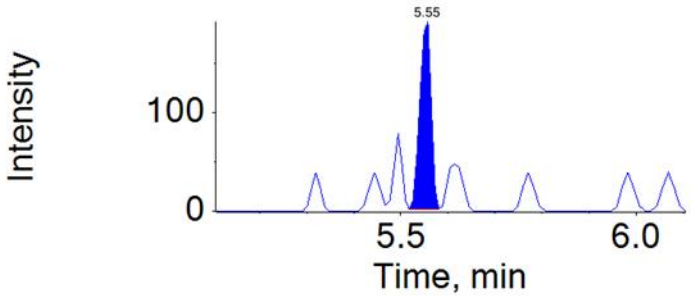
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



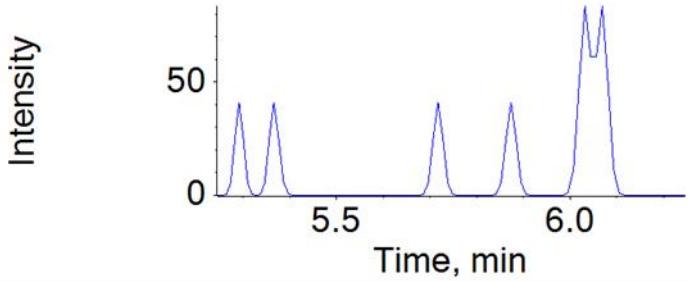
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



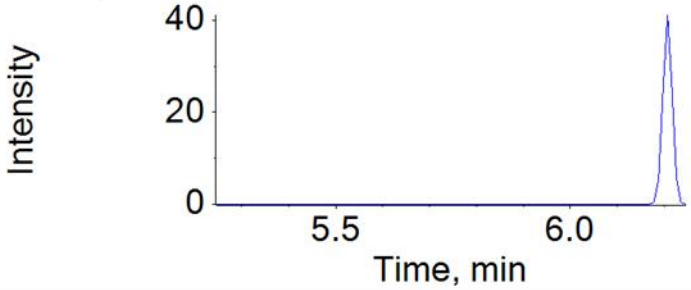
APPROVED
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REVIEWED
By umar at 4:40 pm, 11/12/18

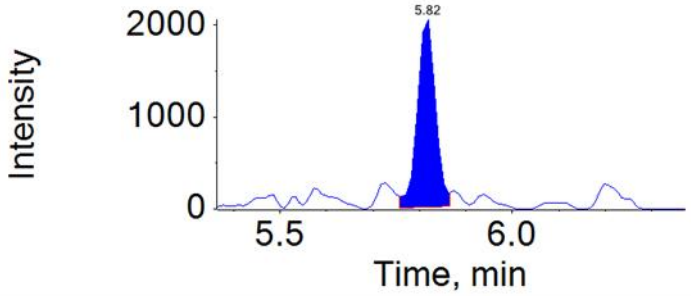
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



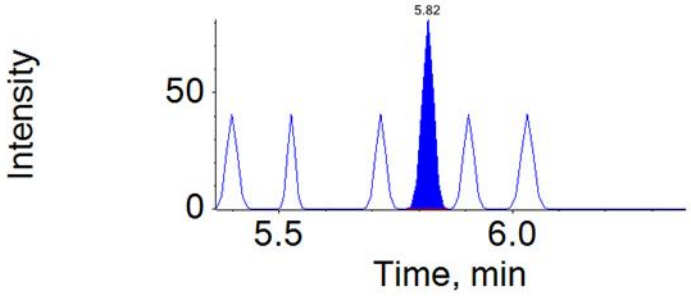
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



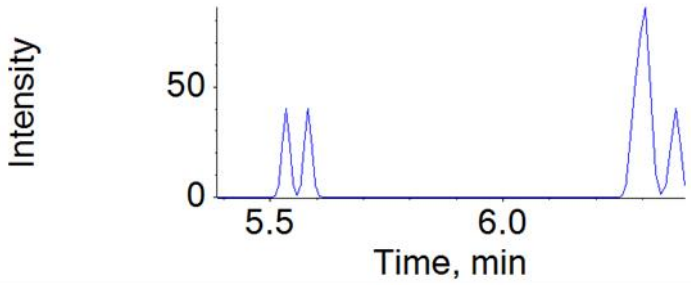
Component: PFUnDA
Primary Mass: 563.0 / 519.0



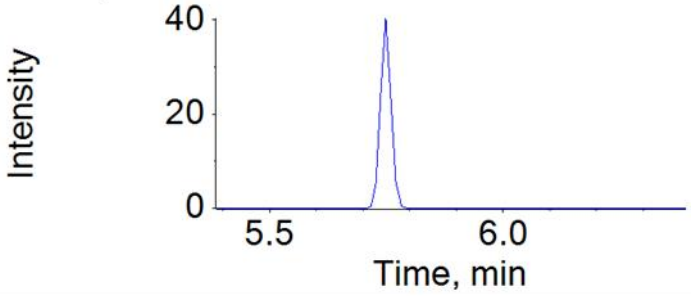
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



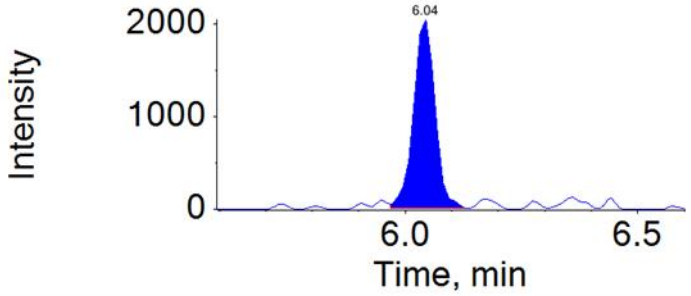
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



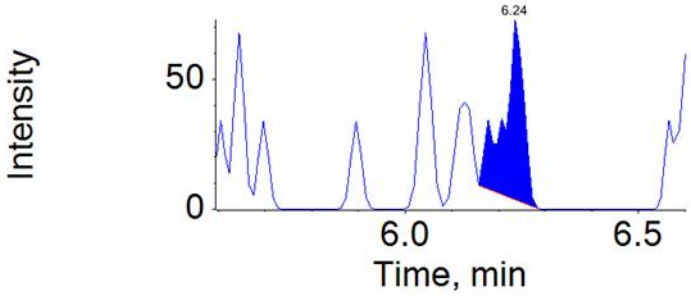
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



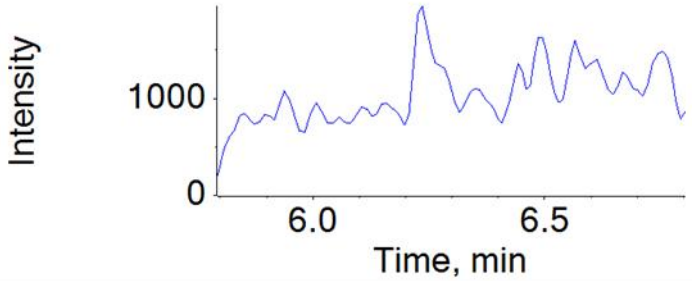
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



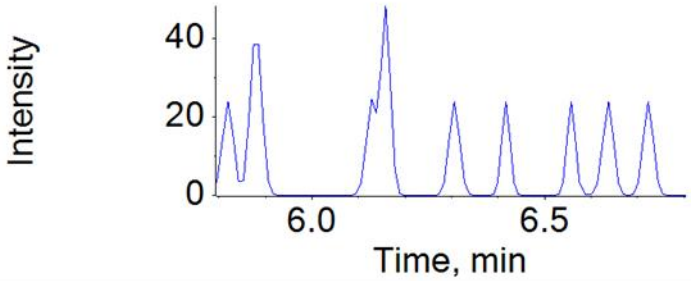
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

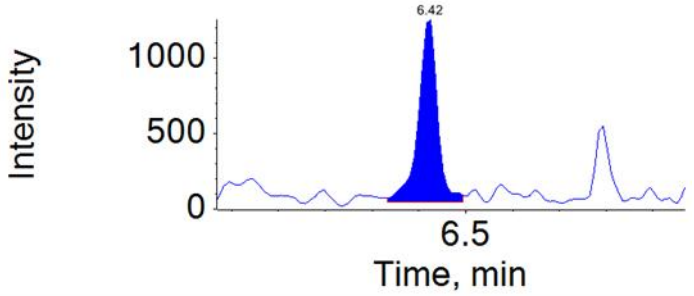
Component: PFTrDA
Primary Mass: 663.0 / 619.0



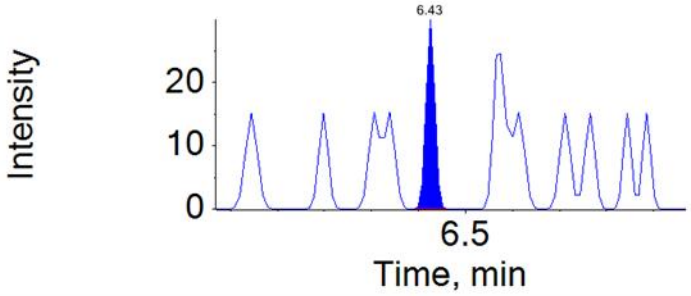
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881544DL			**Data File:**		18NOV09D-100.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-02-01 Grab Soil			**Acquis Date:**		2018-11-09T19:32:03
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	103			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004DL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		MCD7824
Sample Wt.:	1.03000			**Dilution Factor:**		10.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV09D-03

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	731666.7	725974.7	1	50	
13C2-PFOA	5.0	512945.8	506876.7	1	50	
13C4-PFOS	4.8	264069.0	274910.1	-4	50	
13C2-PFDA	5.0	300616.1	307276.7	-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
E13C3-PFBS	424696.6	13C3-PFBA	731666.7	0.580	9.029	8.272	92	50-150	
E13C5-PFHxA	706139.0	13C2-PFOA	512945.8	1.377	9.709	9.833	101	50-150	
E13C3-PFHxS	321048.8	13C2-PFOA	512945.8	0.626	9.184	8.725	95	50-150	
E13C4-PFHpA	535741.3	13C2-PFOA	512945.8	1.044	9.709	9.226	95	50-150	
E13C8-PFOA	941533.1	13C2-PFOA	512945.8	1.836	9.709	9.939	102	50-150	
E13C8-PFOS	283085.6	13C4-PFOS	264069.0	1.072	9.282	9.204	99	50-150	
E13C9-PFNA	475425.9	13C4-PFOS	264069.0	1.800	9.709	9.549	98	50-150	
E13C6-PFDA	609756.0	13C2-PFDA	300616.1	2.028	9.709	9.905	102	50-150	
Ed3-NMeFOSAA	86797.4	13C2-PFDA	300616.1	0.289	9.709	10.426	107	50-150	
E13C7-PFUnDA	261855.5	13C2-PFDA	300616.1	0.871	9.709	9.757	100	50-150	
Ed5-NEtFOSAA	68126.7	13C2-PFDA	300616.1	0.227	9.709	10.184	105	50-150	
E13C2-PFDoDA	586262.6	13C2-PFDA	300616.1	1.950	9.709	10.209	105	50-150	
E13C2-PFTeDA	404528.9	13C2-PFDA	300616.1	1.346	9.709	9.407	97	50-150	

APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

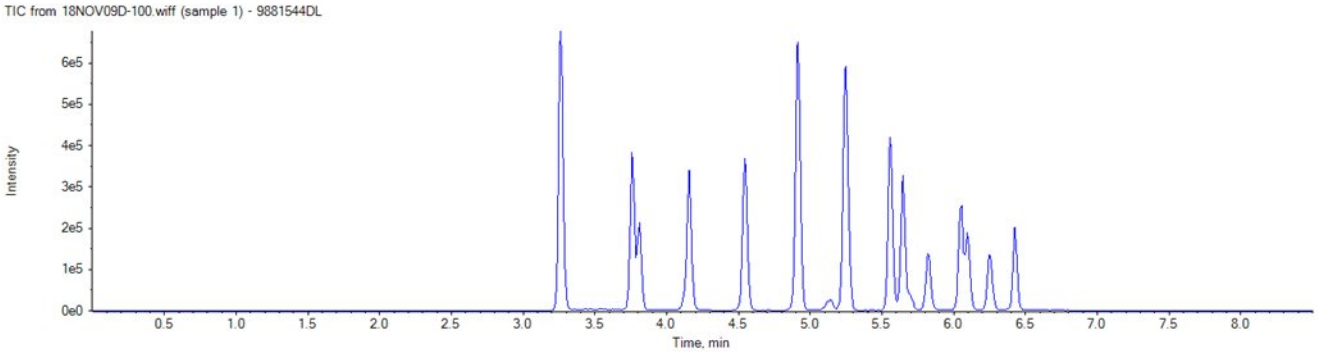
Analyte Quantitation Peak Table

Sample Name: 9881544DL **Instrument Name:** LM27631 **File Name:** 18NOV09D-100.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	10.00	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	424696.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	706139.0	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	321048.8	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	535741.3	N/A	
PFOA	4.92	1.000	26752.0		A	13C8-PFOA	4.91	941533.1	0.028	3.106
PFOS	5.24	1.000	416433.2		M	13C8-PFOS	5.24	283085.6	1.471	148.116
PFNA	5.26	1.000	22196.8		A	13C9-PFNA	5.26	475425.9	0.047	3.388
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	609756.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	86797.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	261855.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	68126.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	586262.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	586262.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	404528.9	N/A	

Total Ion Chromatogram

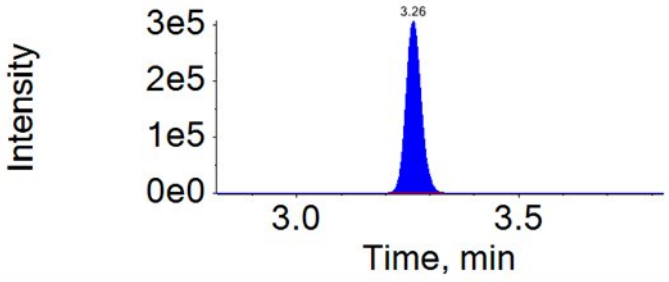


APPROVED
By MCD at 11:29 pm, 11/9/18

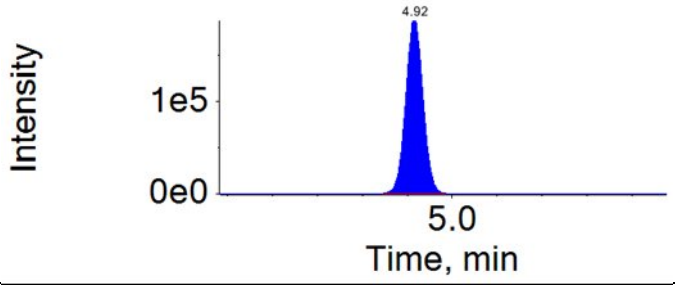
REVIEWED
By umar at 4:45 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

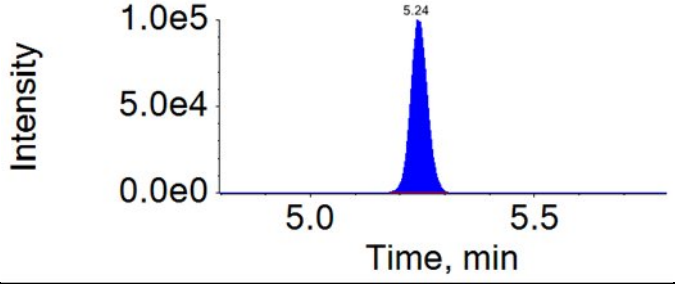
Injection Standard: 13C3-PFBA
216.0 / 172.0



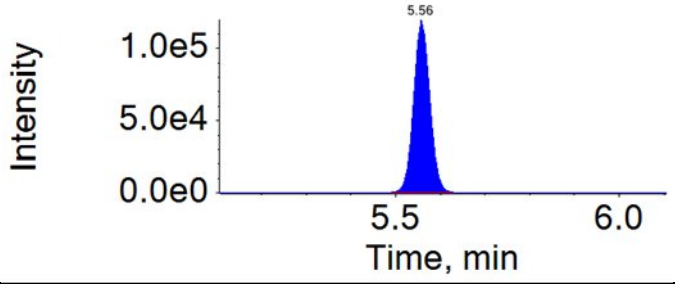
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



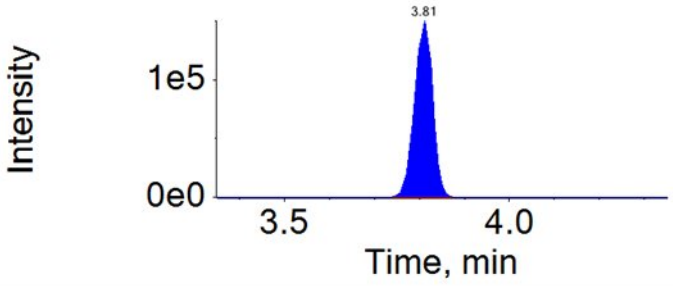
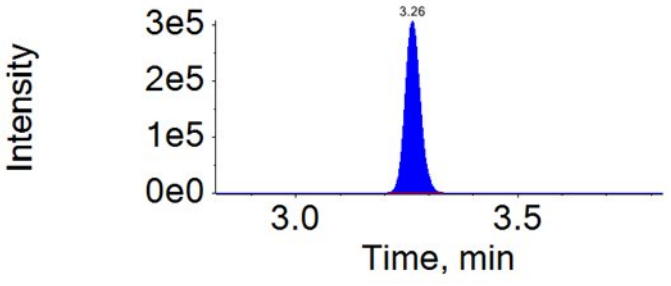
Injection Standard: 13C2-PFDA
515.0 / 470.0

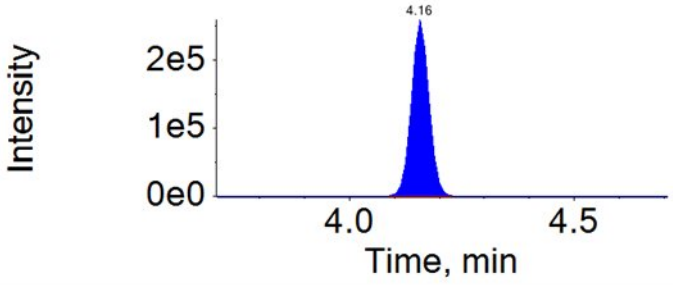
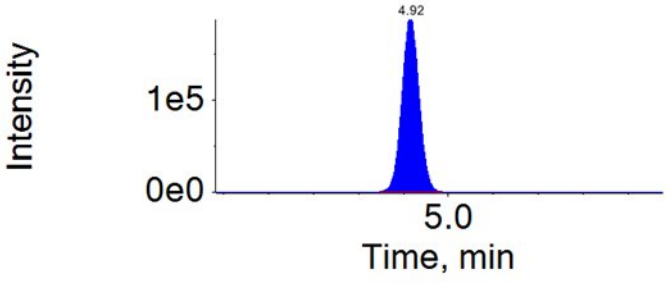


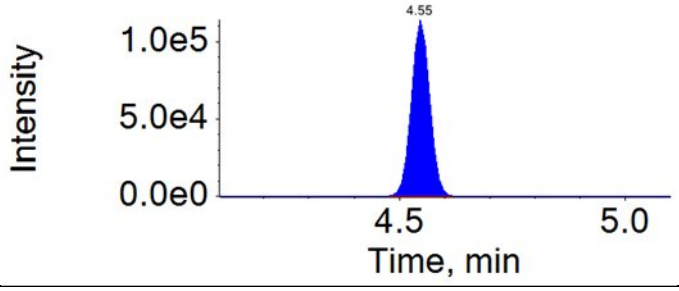
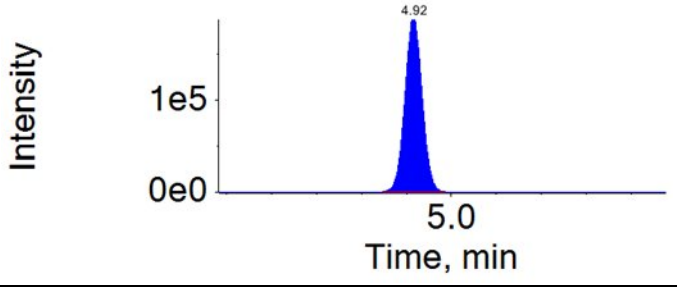
APPROVED
By MCD at 11:29 pm, 11/9/18

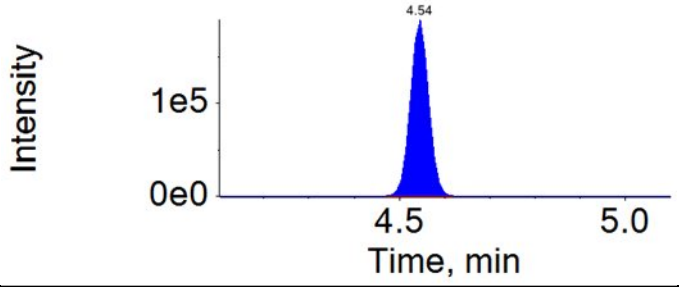
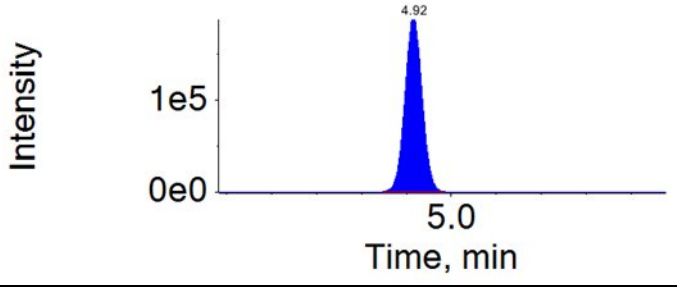
REVIEWED
By umar at 4:45 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 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
	

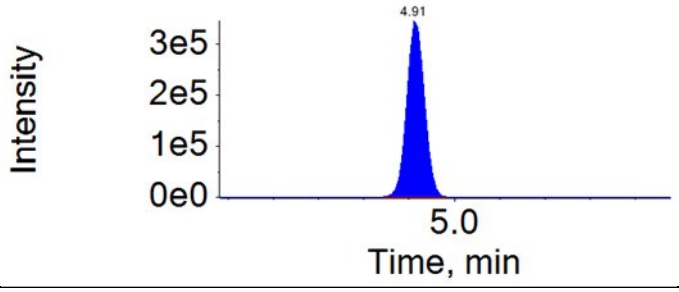
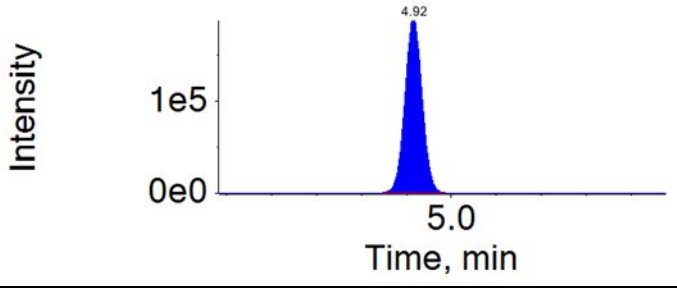
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

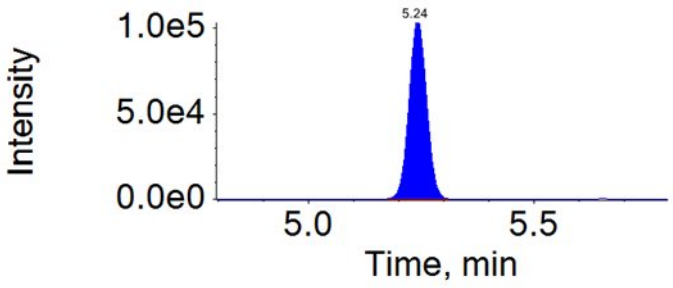
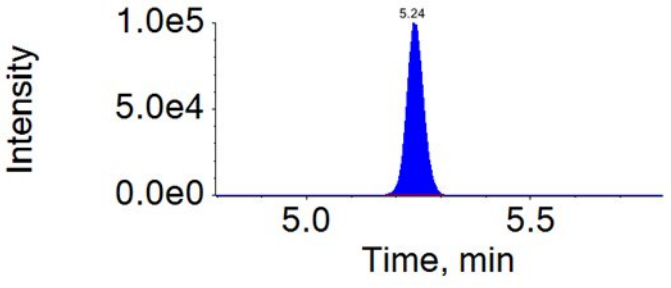
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

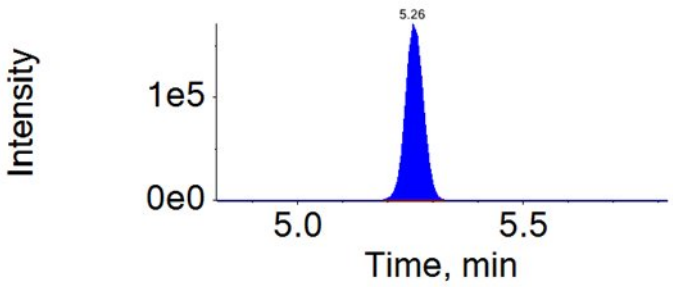
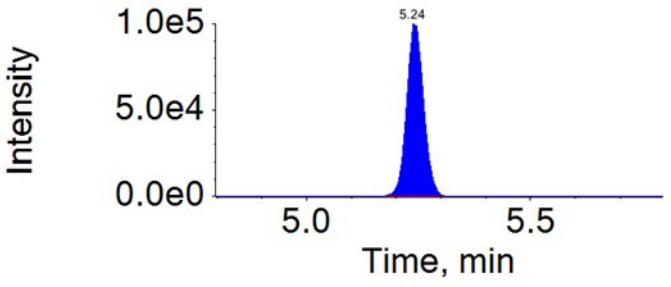
APPROVED
By MCD at 11:29 pm, 11/9/18

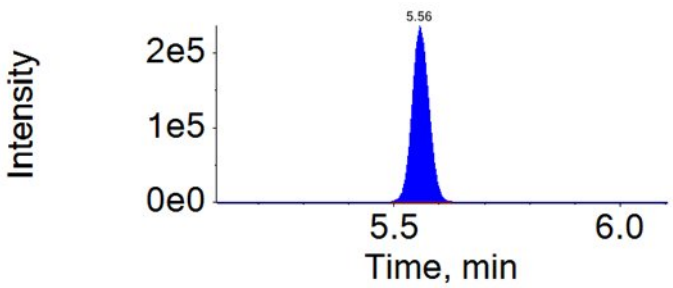
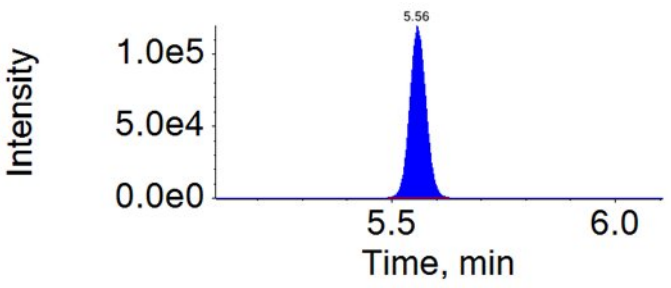
REVIEWED
By umar at 4:45 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 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
	

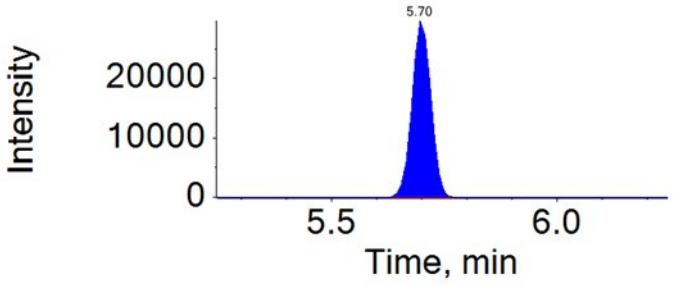
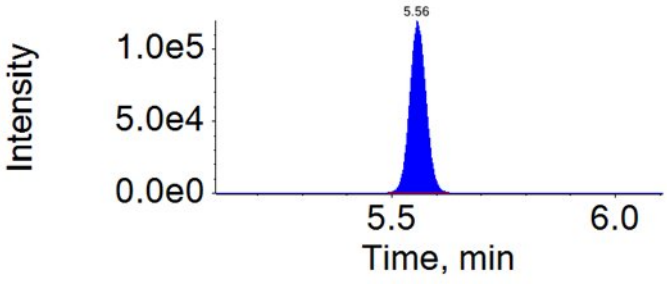
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

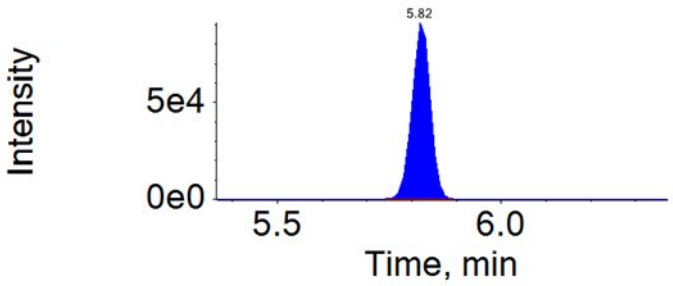
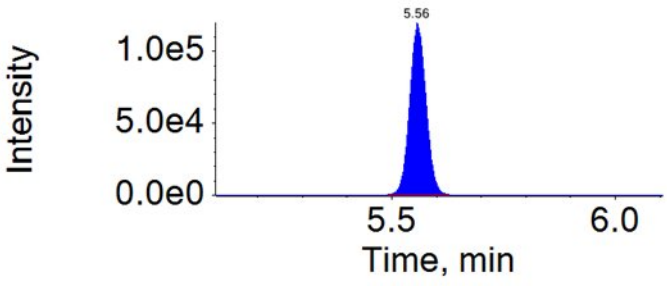
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

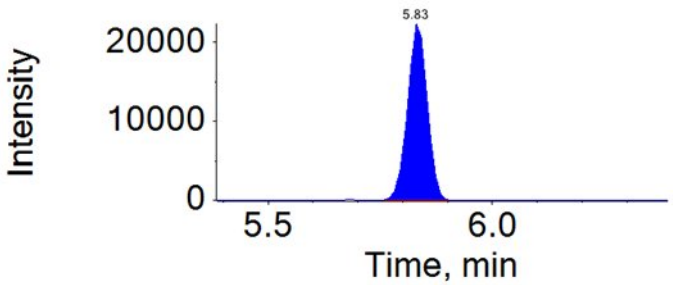
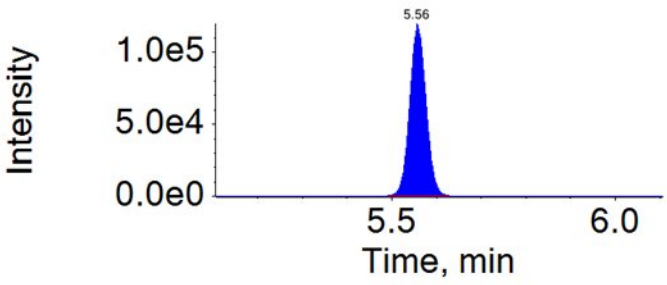
APPROVED
By MCD at 11:29 pm, 11/9/18

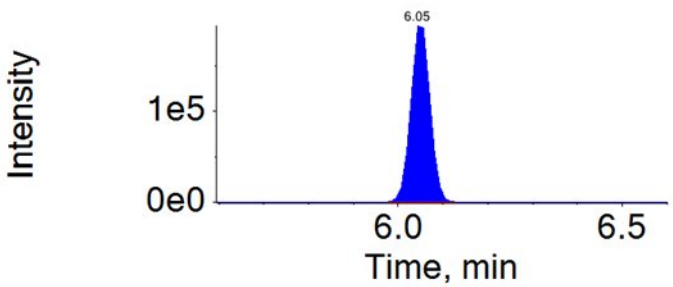
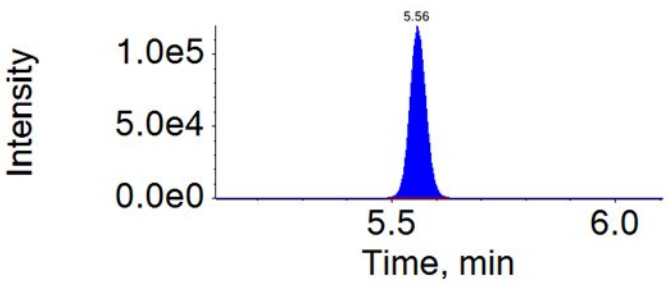
REVIEWED
By umar at 4:45 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 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
	

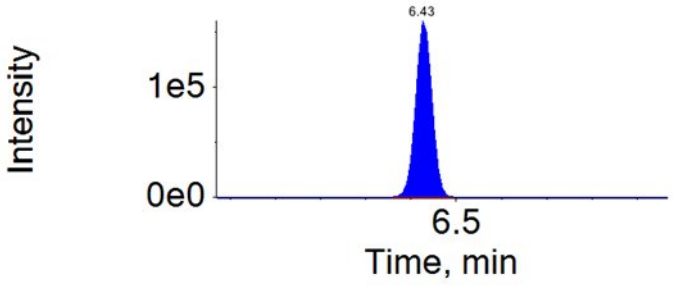
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

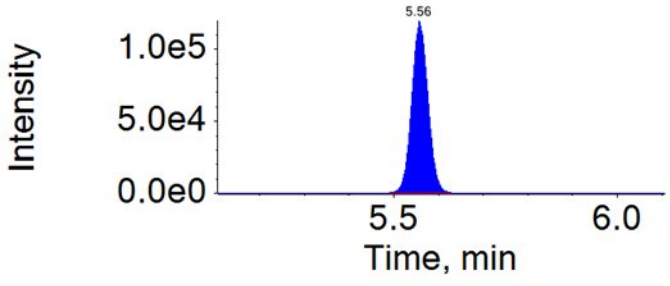
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 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



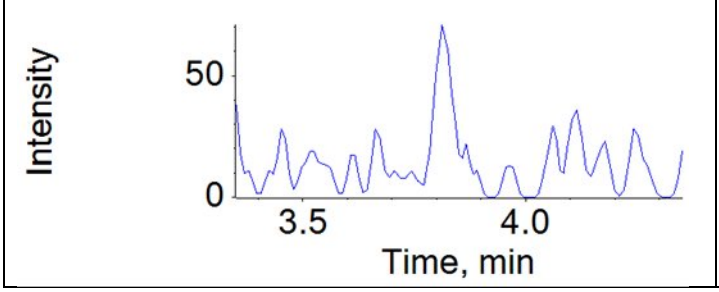


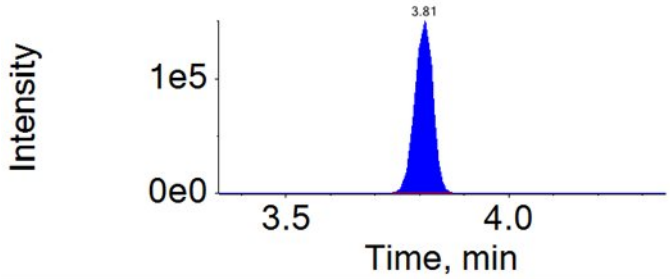
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

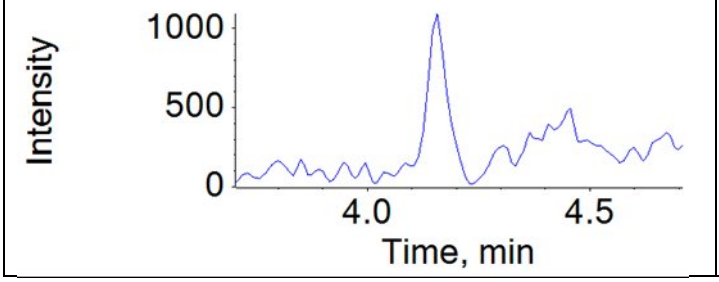
ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

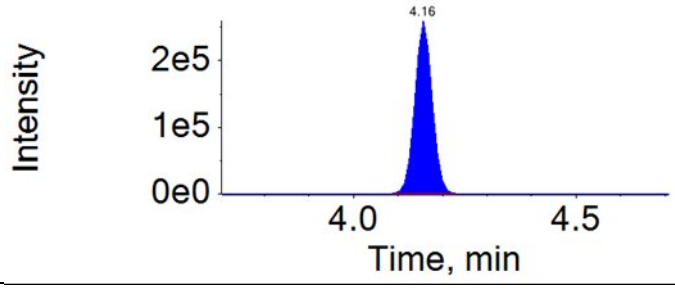
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



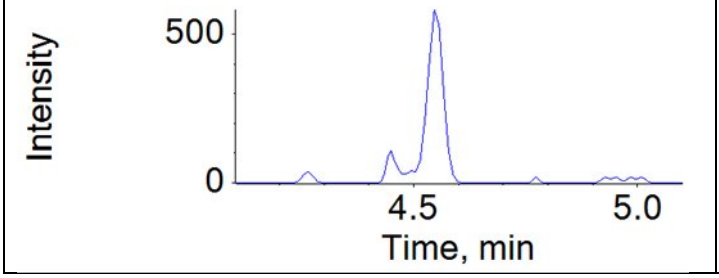


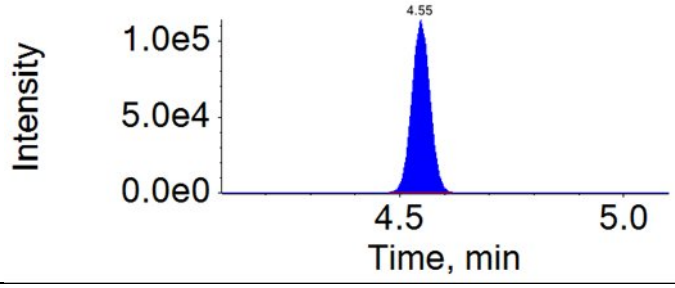
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



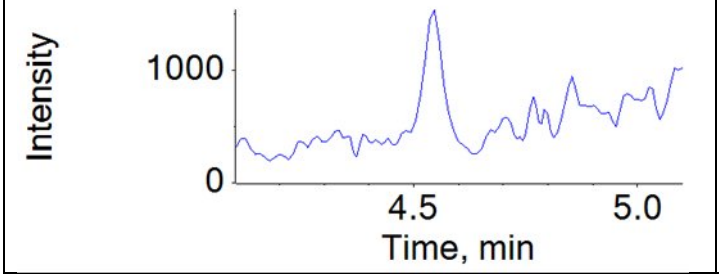


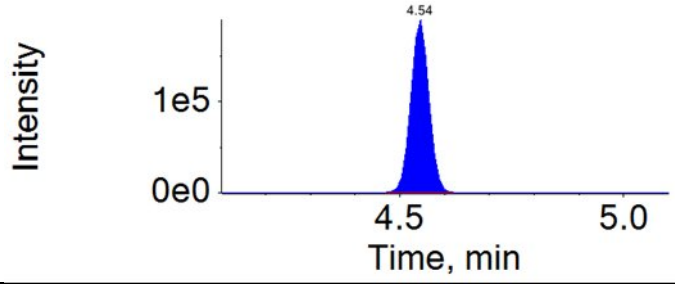
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



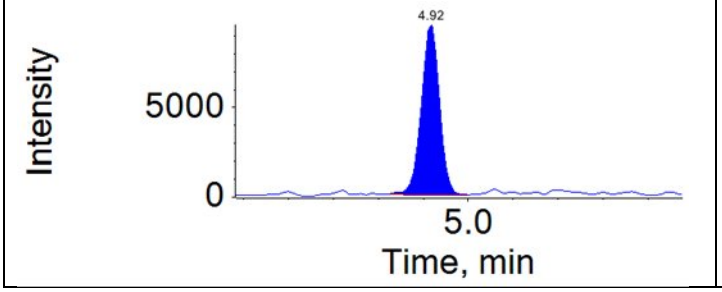


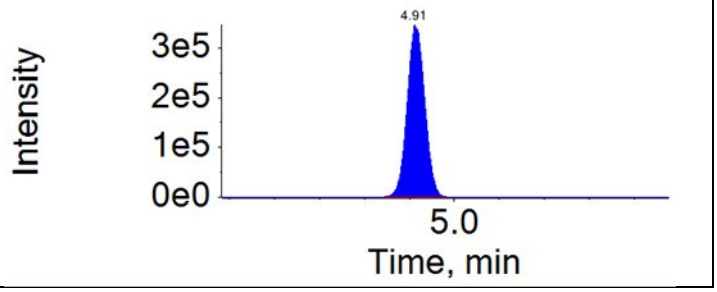
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

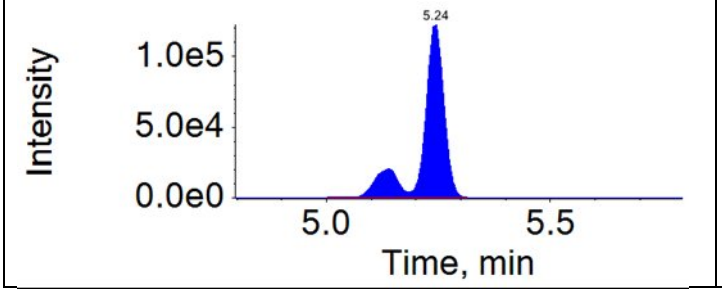
ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

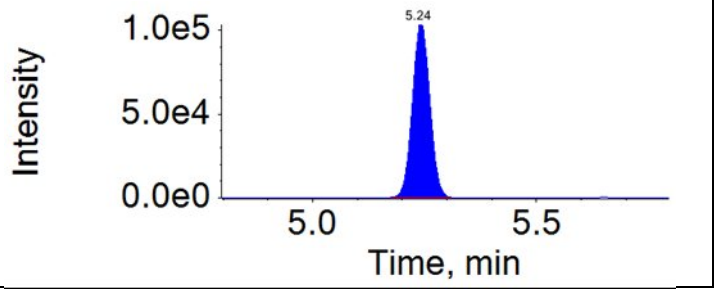
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



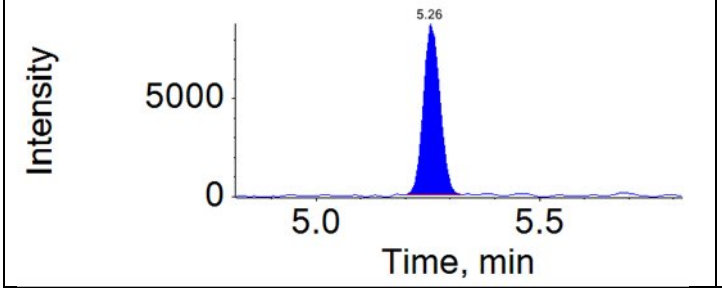


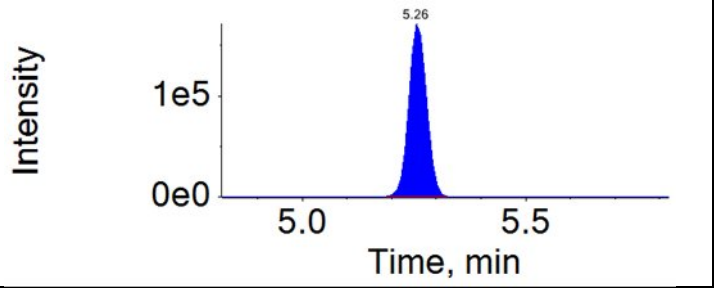
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



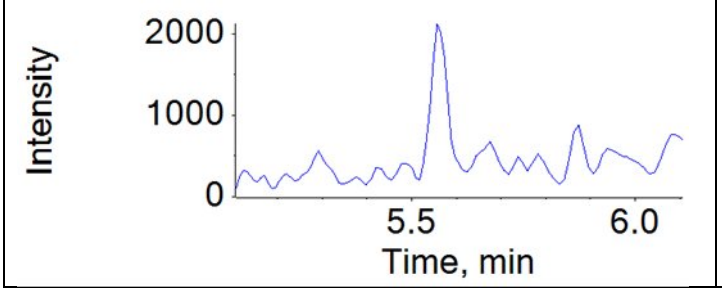


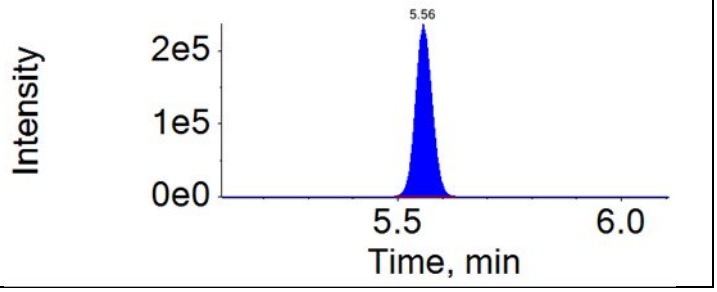
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





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



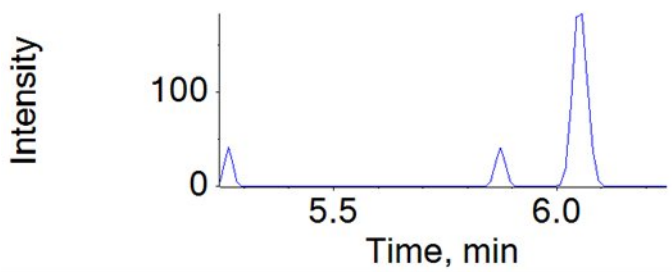


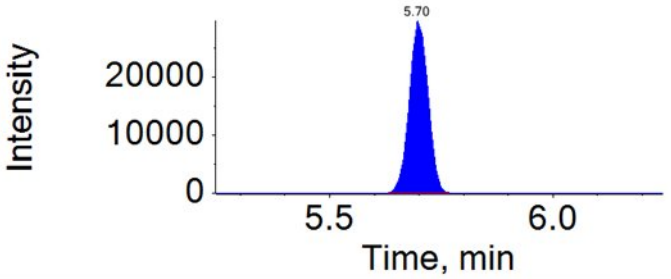
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

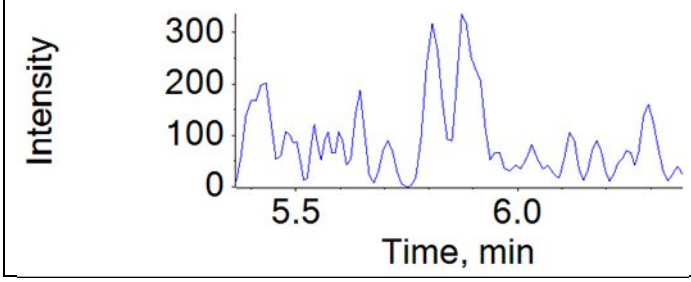
ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

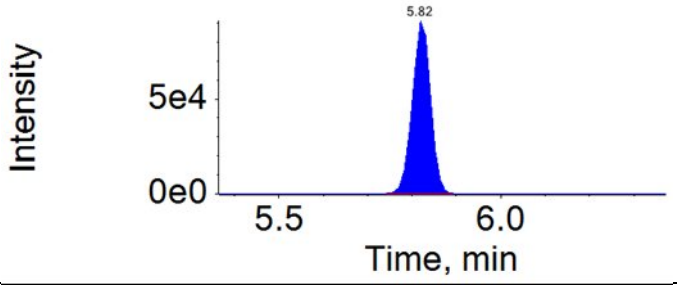
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



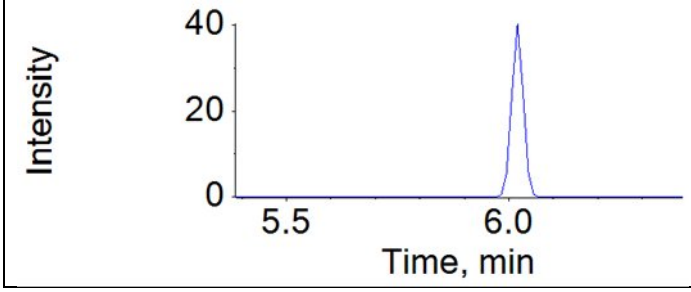


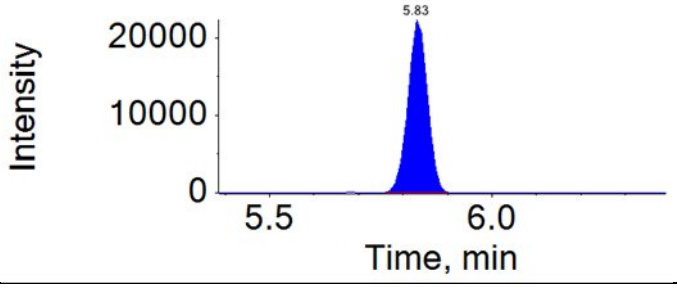
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



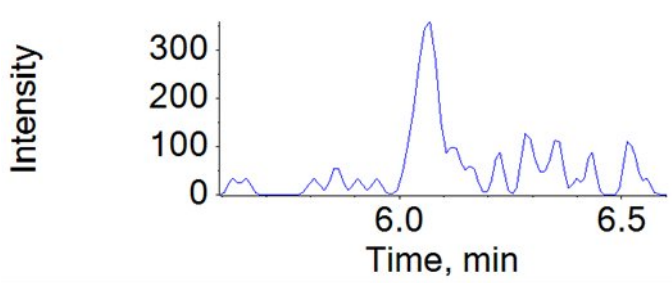


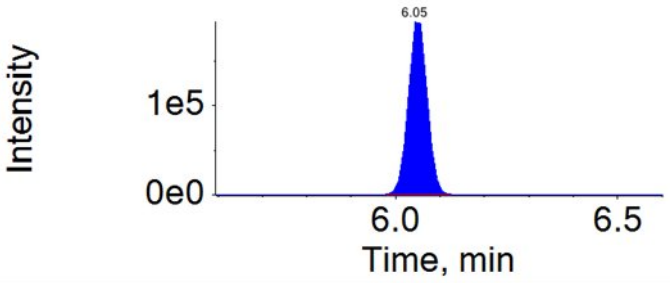
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



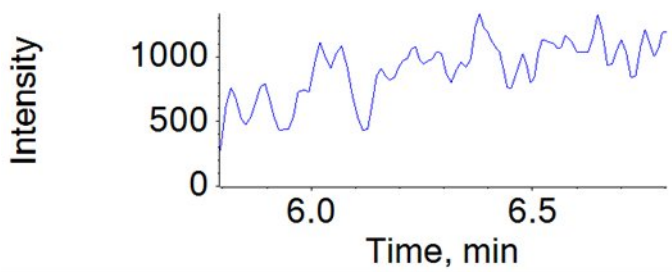


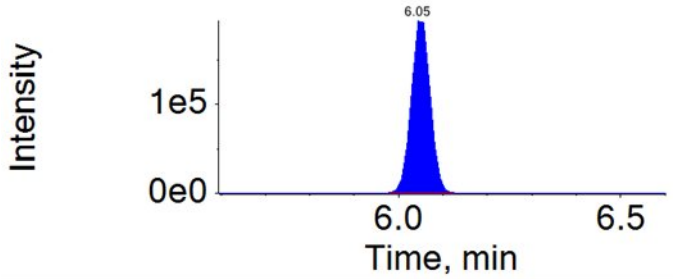
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

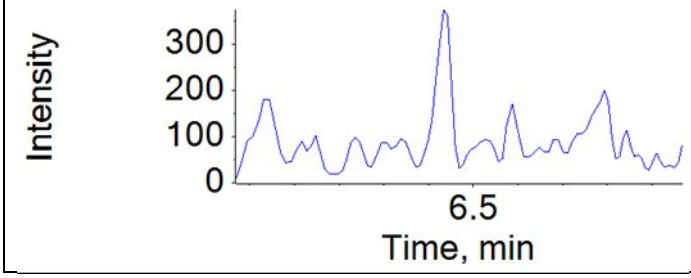
ICAL Name: 18NOV07DCAL **Result Table:** 18311004DL 11/9/2018 11:27:10 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

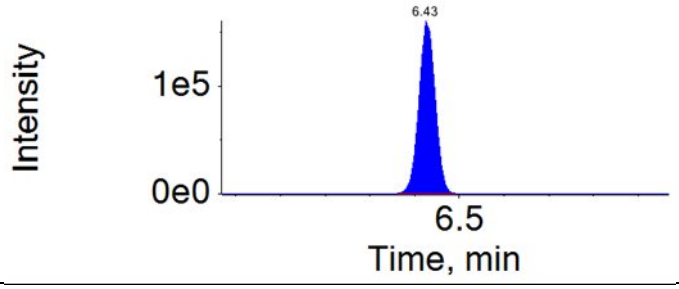
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



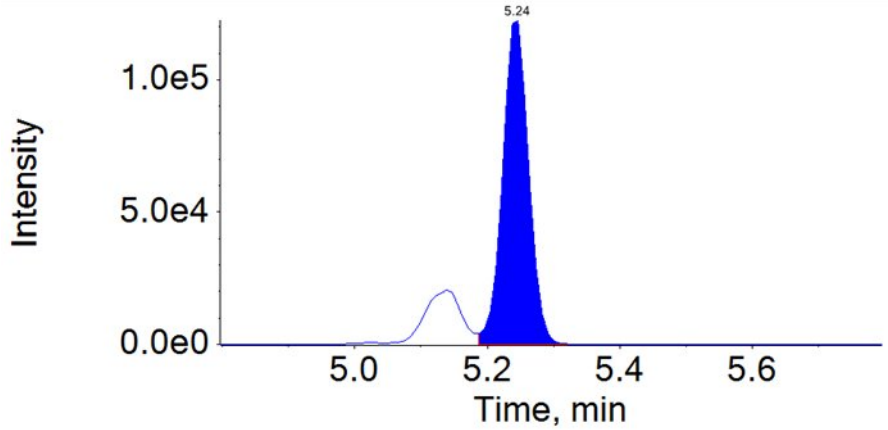


APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

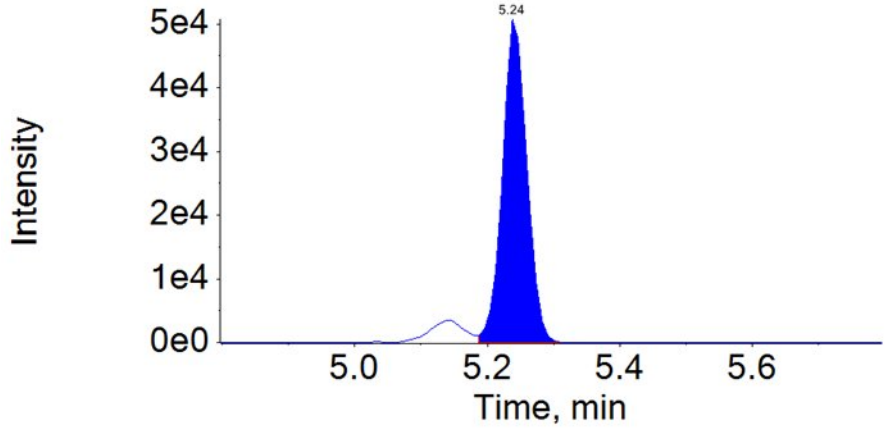
Results Table Name: 18311004DL
Results Table Date: 11/9/2018 11:27:10 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
335397.7
Mass Range:
499.0 / 80.0
File Name:
18NOV09D-100.wiff
Sample Name:
9881544DL



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
129738.6
Mass Range:
499.0 / 99.0
File Name:
18NOV09D-100.wiff
Sample Name:
9881544DL



Integration Comment: incorrect integration

APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

Results Table Name: 18311004DL
Results Table Date: 11/9/2018 11:27:10 PM

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

APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

Ion Ratio Report

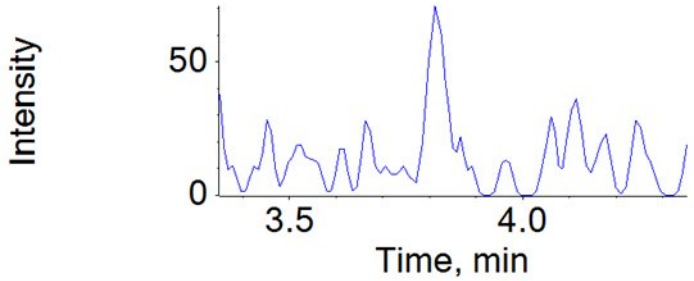
Sample Name: 9881544DL **Instrument Name:** LM27631 **File Name:** 18NOV09D-100.wiff

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	4.92	1.00	26752.0	A	N/A	0.0445			
PFOA_2	4.91	1.00	1190.4	A	N/A	0.0445	-30	50	
PFOS	5.24	1.00	416433.2	M	N/A	0.3429			
PFOS_2	5.24	1.00	142795.5	M	N/A	0.3429	-3	50	
PFNA	5.26	1.00	22196.8	A	N/A	0.0142			
PFNA_2	5.25	1.00	314.8	A	N/A	0.0142	-31	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	

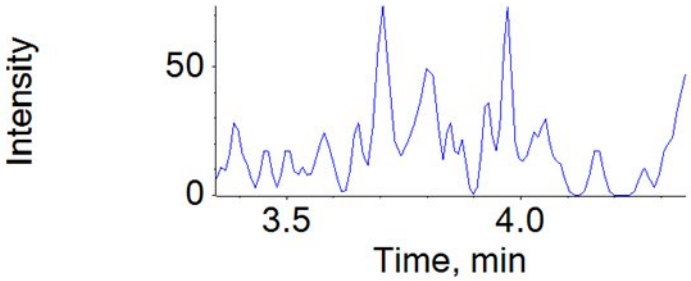
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

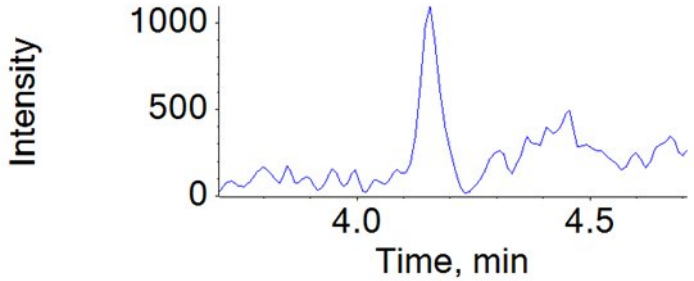
Component: PFBS
Primary Mass: 299.0 / 80.0



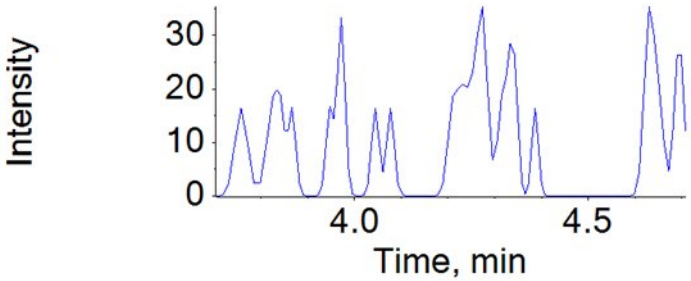
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



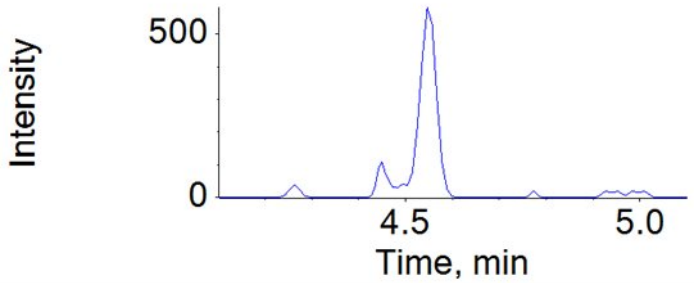
Component: PFHxA
Primary Mass: 313.0 / 269.0



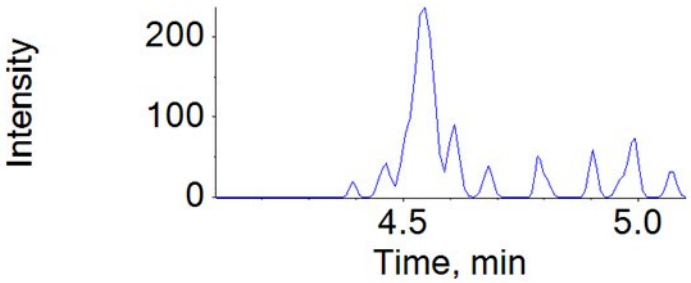
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



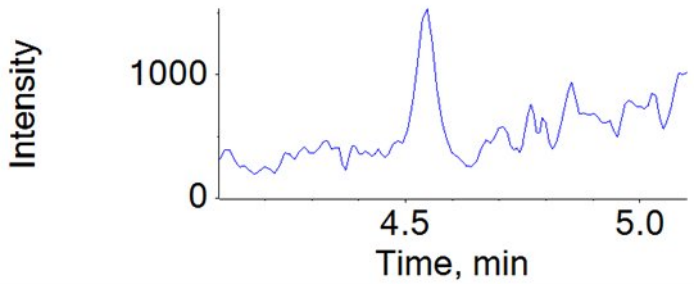
Component: PFHxS
Primary Mass: 399.0 / 80.0



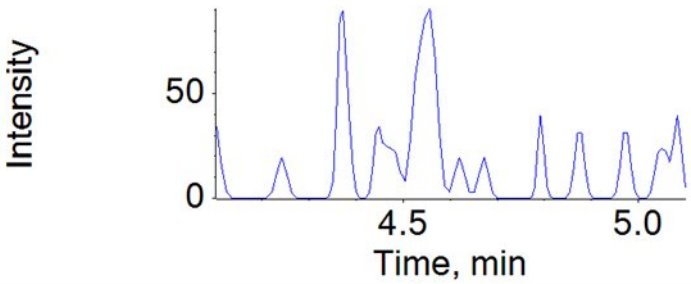
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



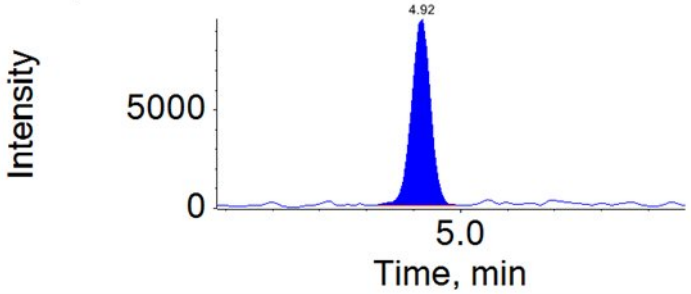
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



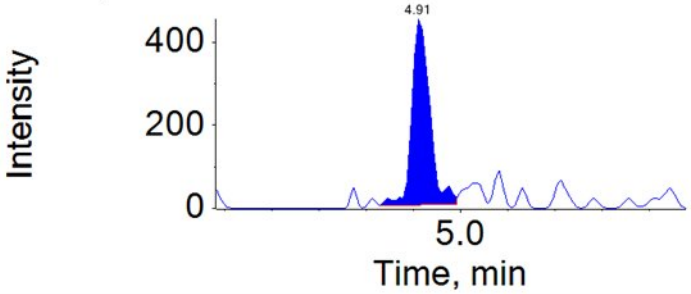
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

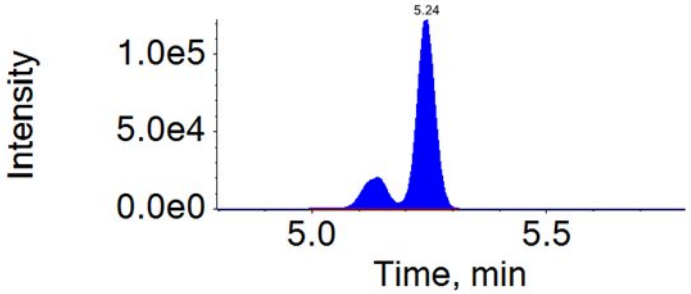
Component: PFOA
Primary Mass: 413.0 / 369.0



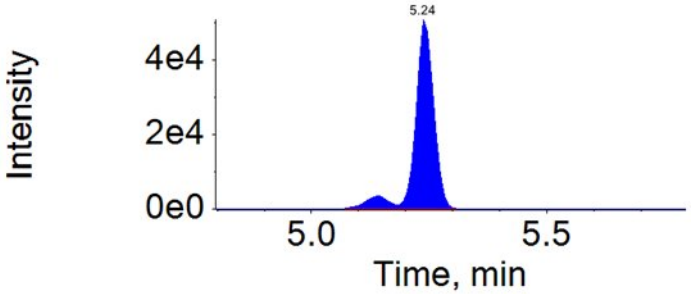
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



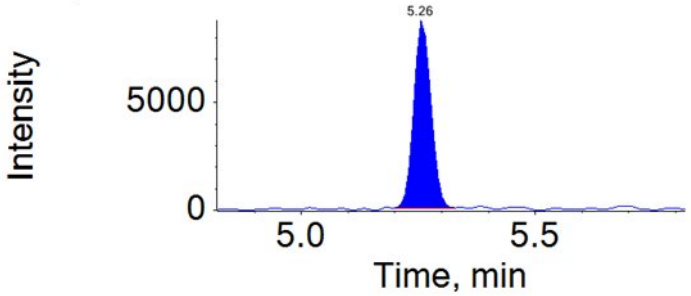
Component: PFOS
Primary Mass: 499.0 / 80.0



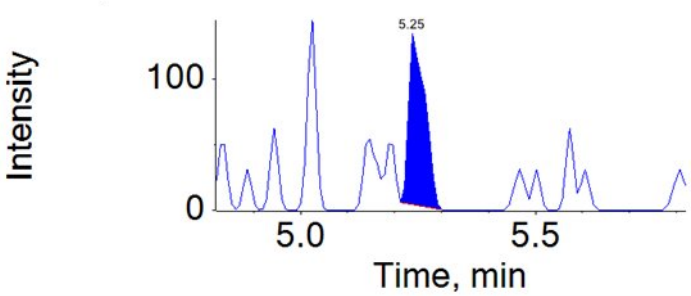
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



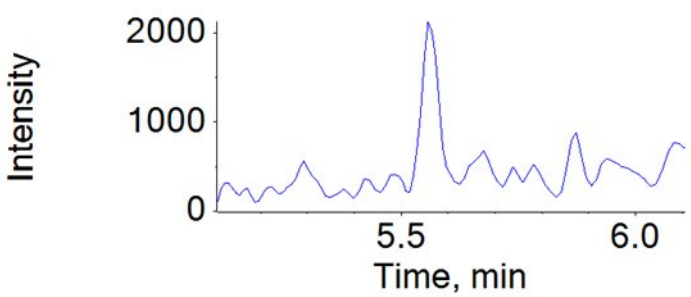
Component: PFNA
Primary Mass: 463.0 / 419.0



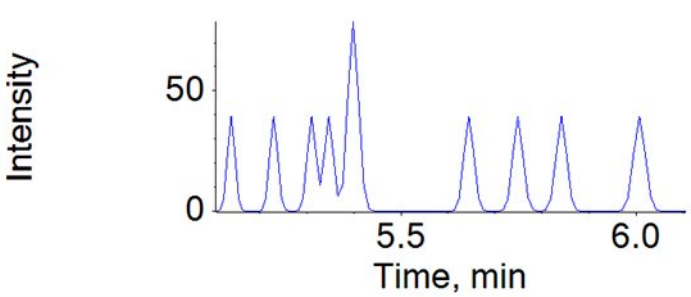
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



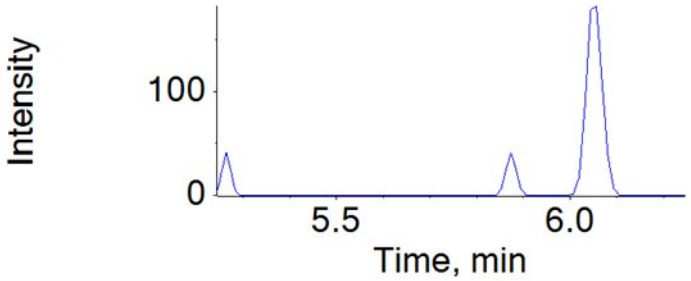
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



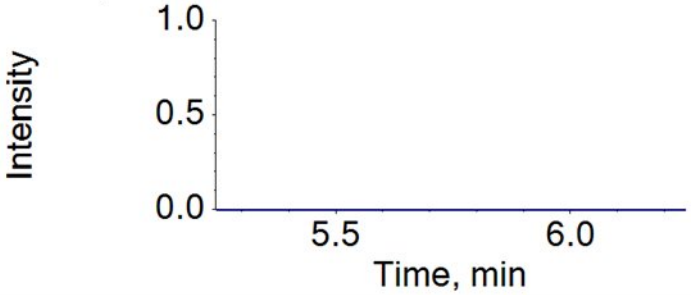
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

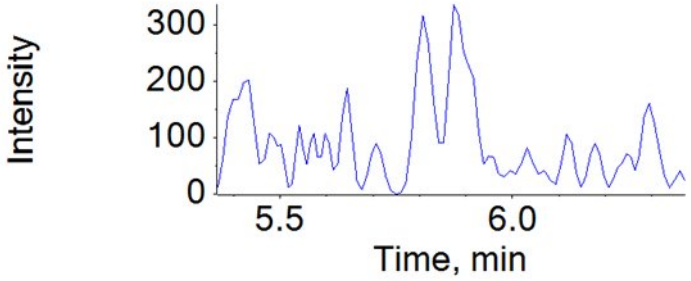
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



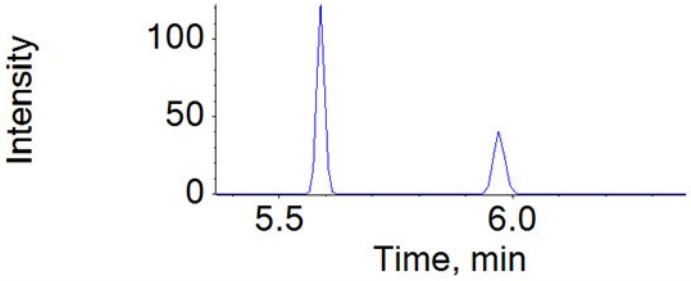
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



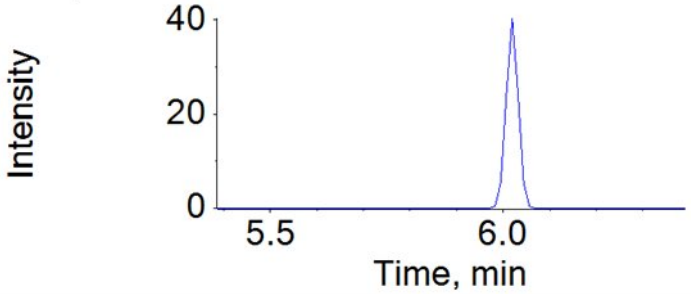
Component: PFUnDA
Primary Mass: 563.0 / 519.0



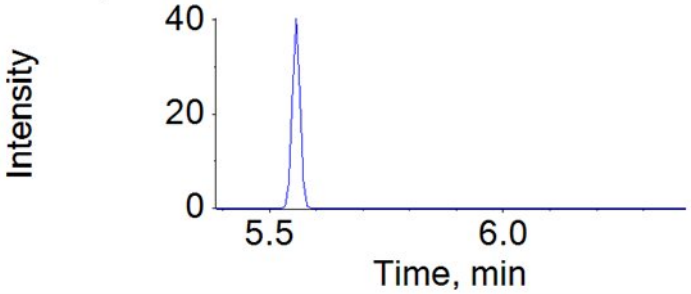
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Secondary Mass: 563.0 / 169.0



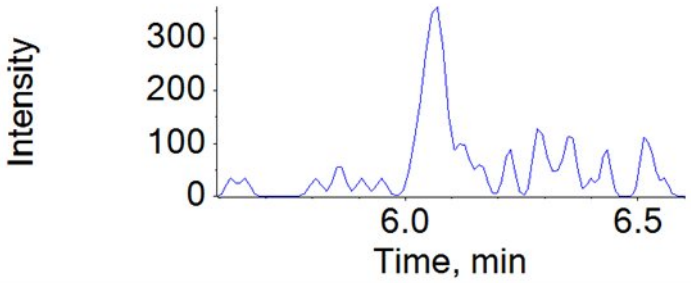
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



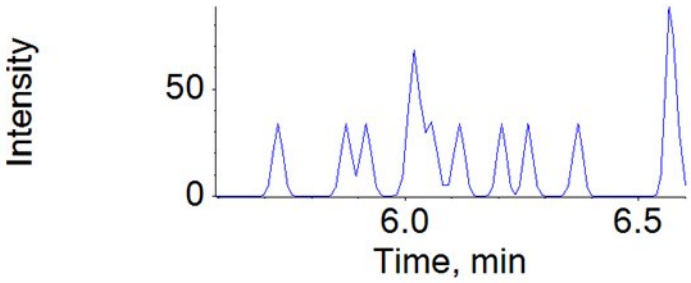
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



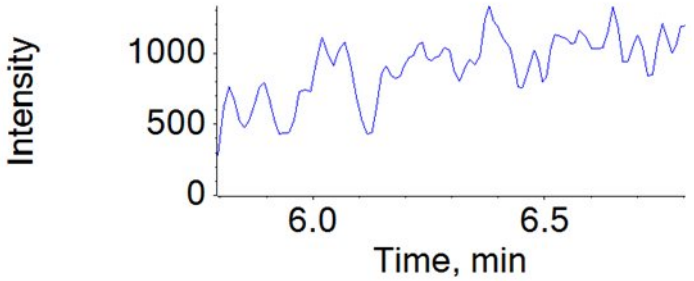
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



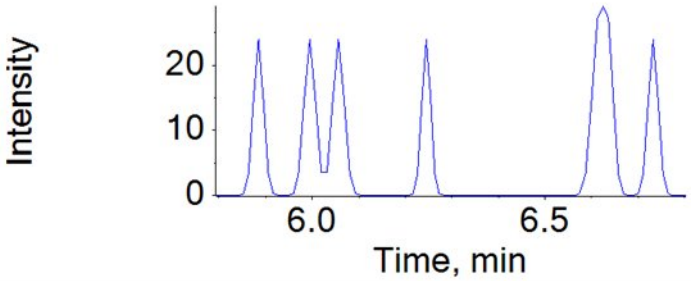
APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

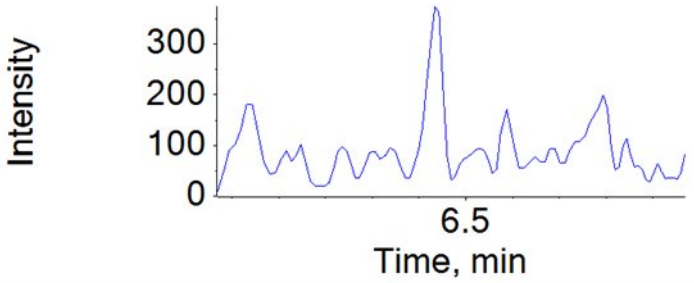
Component: PFTrDA
Primary Mass: 663.0 / 619.0



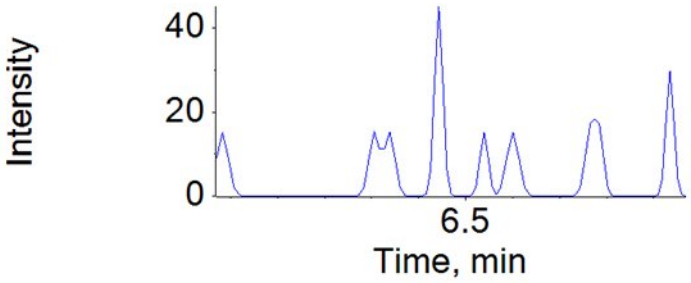
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 11:29 pm, 11/9/18

REVIEWED
By umar at 4:45 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881545			**Data File:**		18NOV08D-97.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311004 OU1-Bldg371-S-02-03 Grab Soil			**Acquis Date:**		2018-11-09T02:14:38
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	38			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311004
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18311004			**Operator:**		JPT12262
Sample Wt.:	1.10000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

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	901112.7	728839.7	24	50	
13C2-PFOA	5.0	627390.5	491983.1	28	50	
13C4-PFOS	4.8	339358.0	255568.1	33	50	
13C2-PFDA	5.0	379159.9	315407.5	20	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	364012.1	13C3-PFBA	901112.7	0.404	8.455	5.390	64	50-150	
E13C5-PFHxA	583799.2	13C2-PFOA	627390.5	0.931	9.091	6.223	68	50-150	
E13C3-PFHxS	292780.7	13C2-PFOA	627390.5	0.467	8.600	6.091	71	50-150	
E13C4-PFHpA	459830.2	13C2-PFOA	627390.5	0.733	9.091	6.062	67	50-150	
E13C8-PFOA	827734.5	13C2-PFOA	627390.5	1.319	9.091	6.689	74	50-150	
E13C8-PFOS	252477.5	13C4-PFOS	339358.0	0.744	8.691	5.981	69	50-150	
E13C9-PFNA	444782.4	13C4-PFOS	339358.0	1.311	9.091	6.509	72	50-150	
E13C6-PFDA	536653.5	13C2-PFDA	379159.9	1.415	9.091	6.472	71	50-150	
Ed3-NMeFOSAA	56318.4	13C2-PFDA	379159.9	0.149	9.091	5.022	55	50-150	
E13C7-PFUnDA	241105.8	13C2-PFDA	379159.9	0.636	9.091	6.670	73	50-150	
Ed5-NEtFOSAA	44221.7	13C2-PFDA	379159.9	0.117	9.091	4.907	54	50-150	
E13C2-PFDoDA	483659.1	13C2-PFDA	379159.9	1.276	9.091	6.252	69	50-150	
E13C2-PFTeDA	344221.1	13C2-PFDA	379159.9	0.908	9.091	5.942	65	50-150	

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

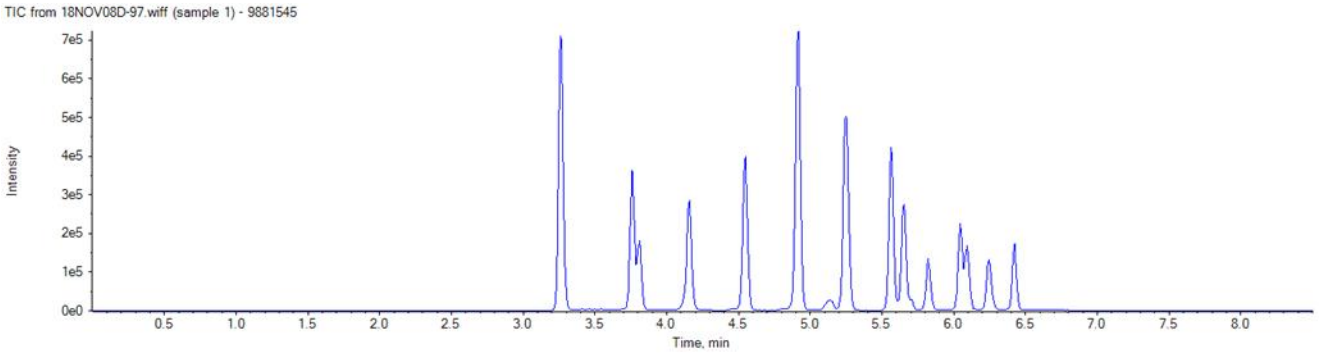
Analyte Quantitation Peak Table

Sample Name: 9881545 **Instrument Name:** LM27631 **File Name:** 18NOV08D-97.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.10000	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	364012.1	N/A	
PFHxA	4.15	1.000	67402.7		A	13C5-PFHxA	4.16	583799.2	0.115	0.900
PFHxS	4.55	1.000	101572.1		M	13C3-PFHxS	4.55	292780.7	0.347	3.197
PFHpA	4.55	1.000	47929.1		M	13C4-PFHpA	4.54	459830.2	0.104	0.637
PFOA	4.91	1.000	230152.2		A	13C8-PFOA	4.91	827734.5	0.278	2.847
PFOS	5.24	1.000	312098.4		M	13C8-PFOS	5.24	252477.5	1.236	11.654
PFNA	5.26	1.000	23357.8		A	13C9-PFNA	5.26	444782.4	0.053	0.357
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	536653.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	56318.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	241105.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	44221.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	483659.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	483659.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	344221.1	N/A	

Total Ion Chromatogram

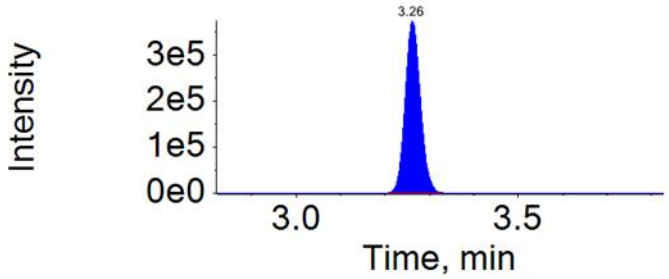


APPROVED
By JPT at 5:18 pm, 11/9/18

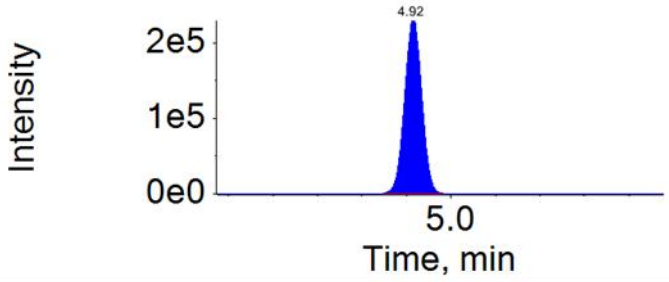
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

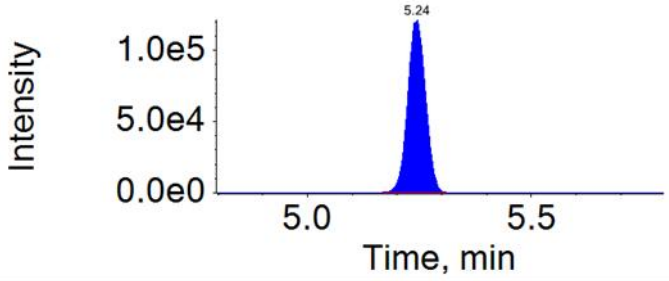
Injection Standard: 13C3-PFBA
216.0 / 172.0



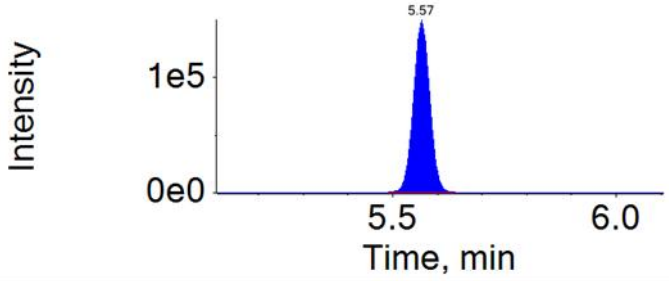
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

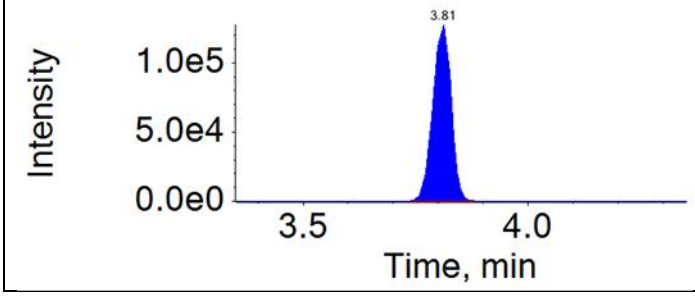


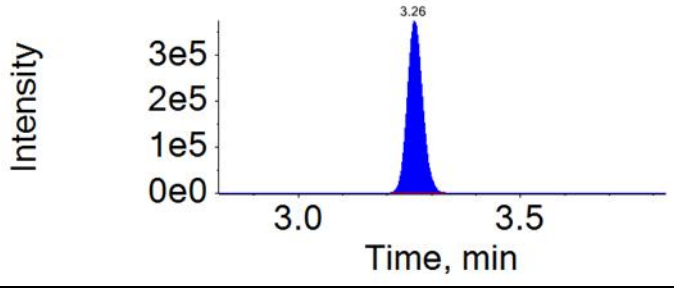
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

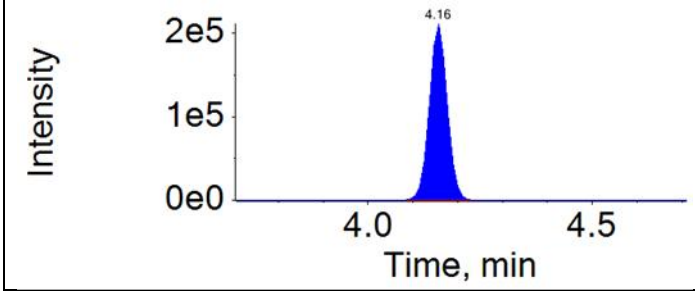
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

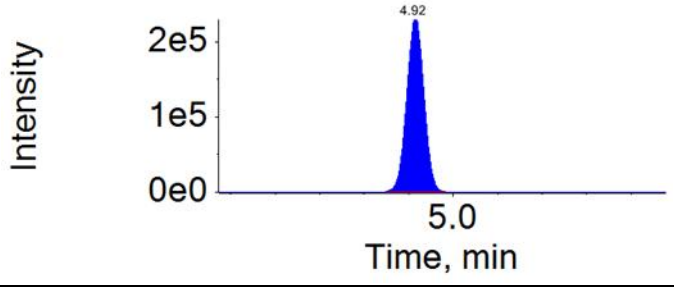
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



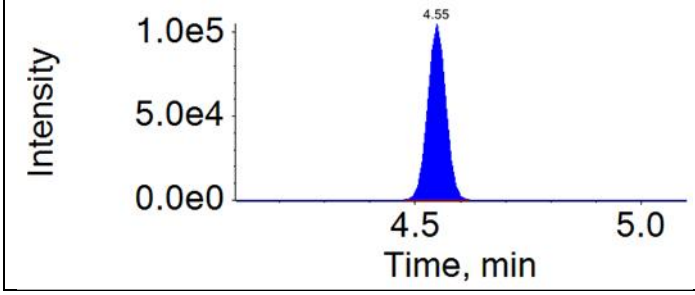


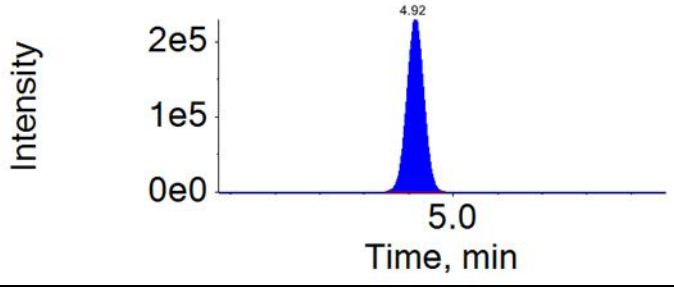
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



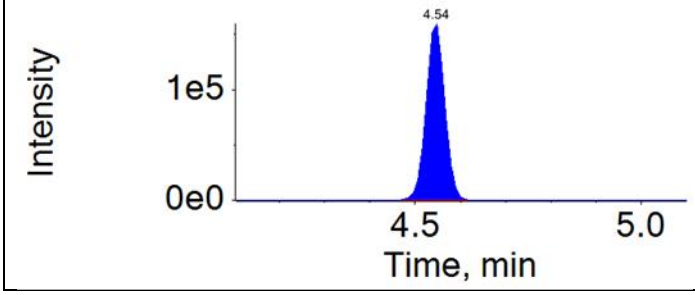


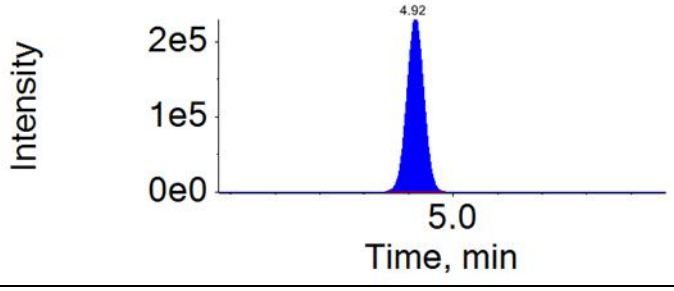
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





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

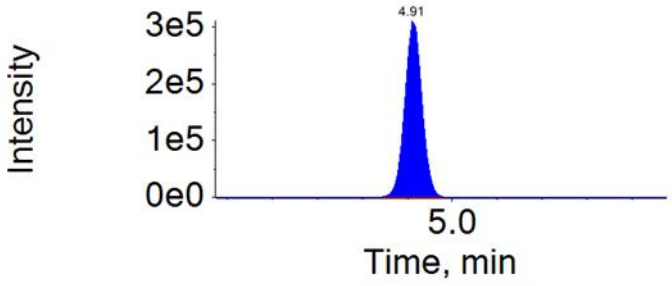
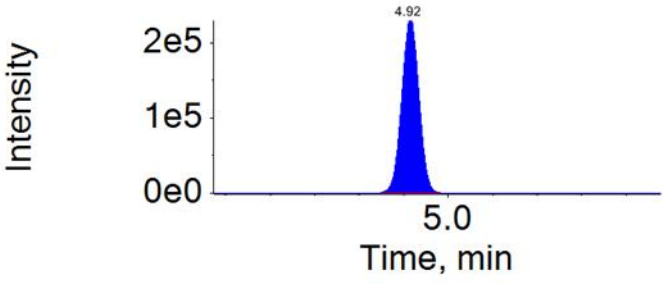


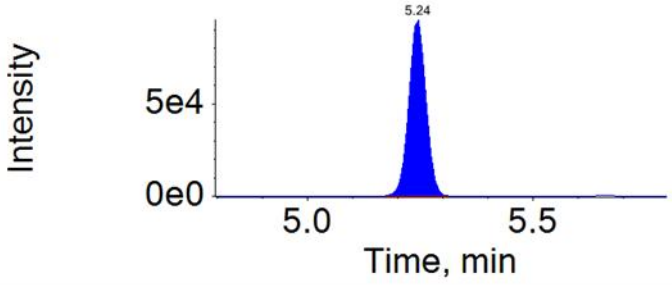
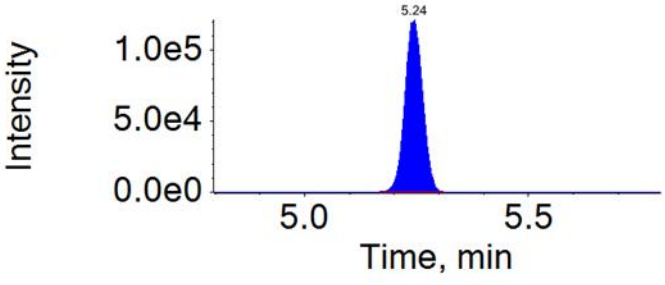


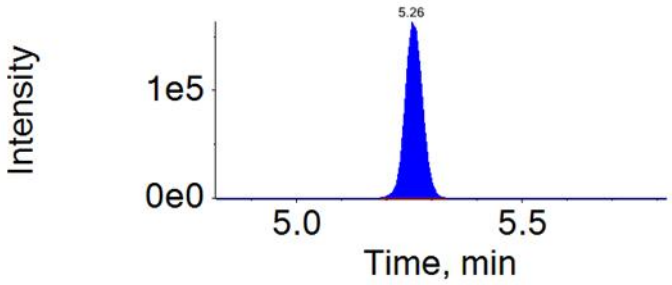
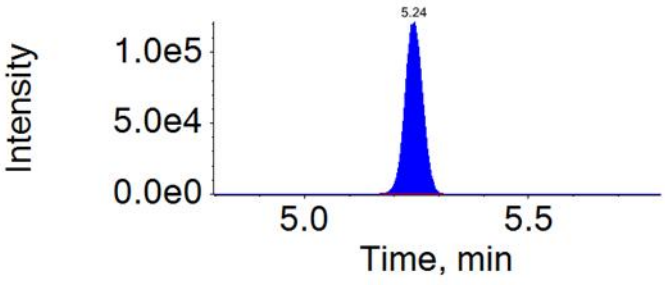
APPROVED
By JPT at 5:18 pm, 11/9/18

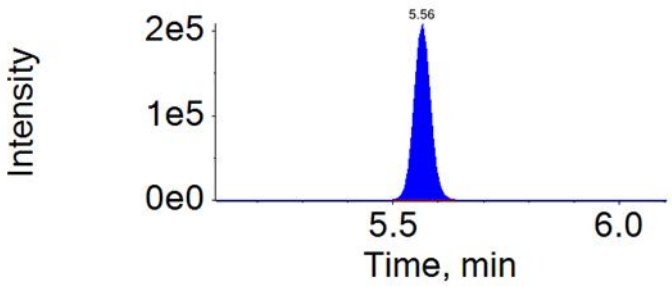
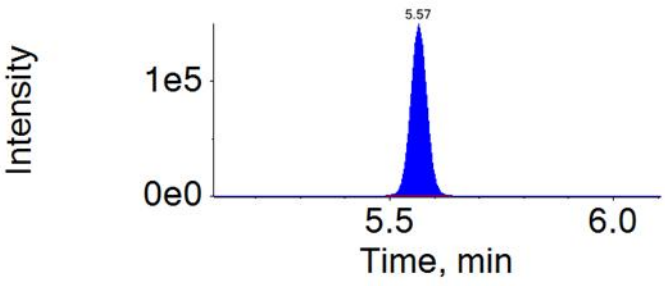
REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

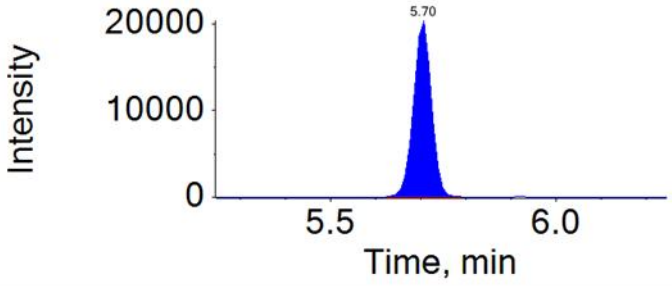
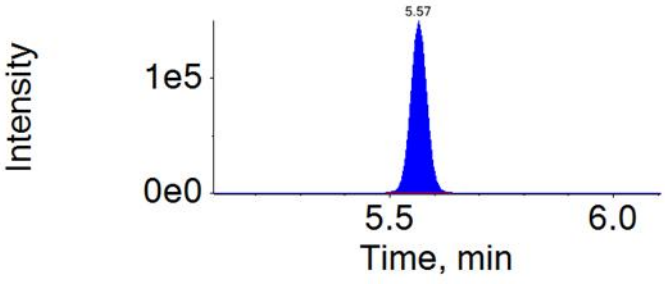
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

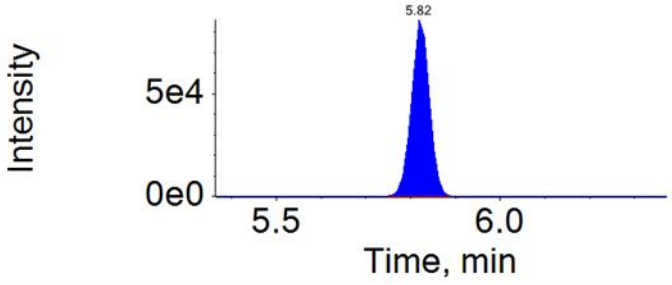
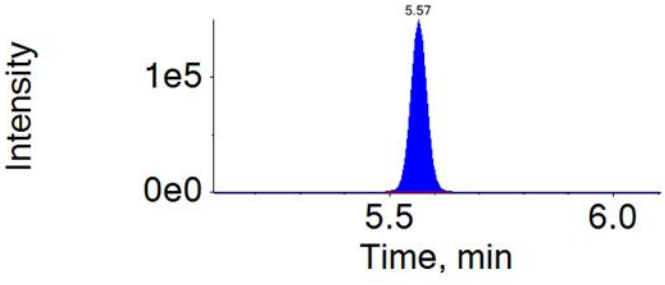
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

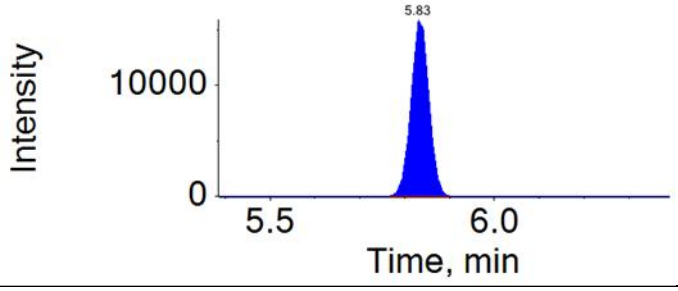
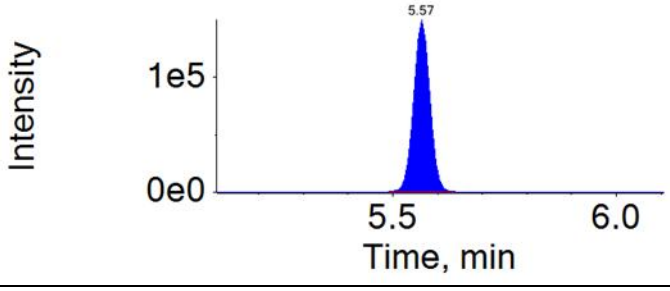
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

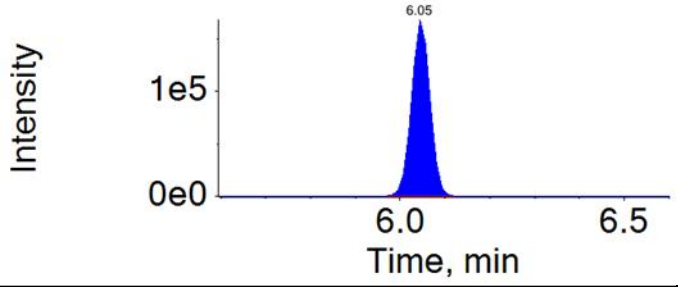
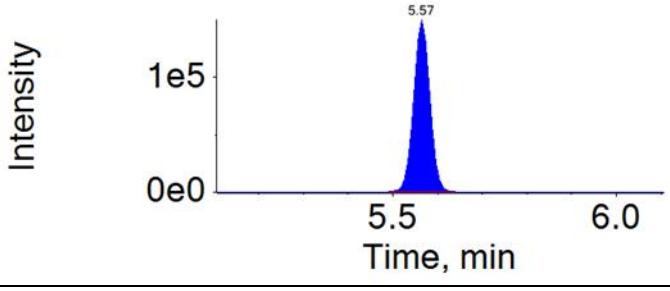
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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
	

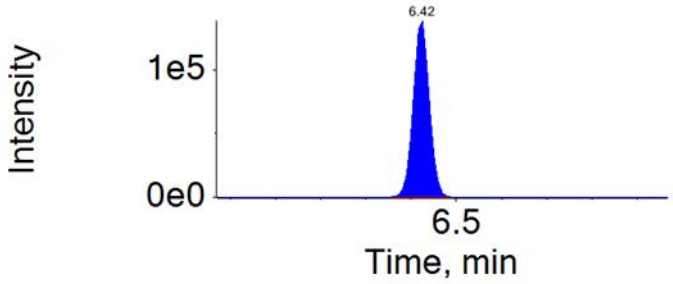
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

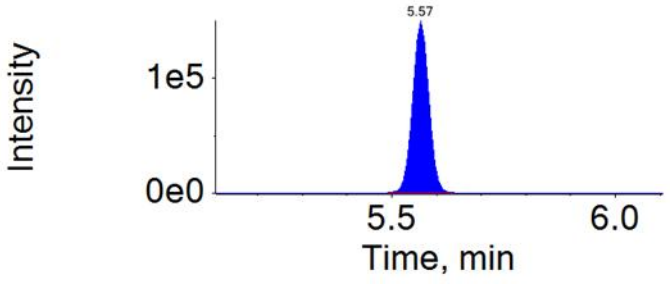
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 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



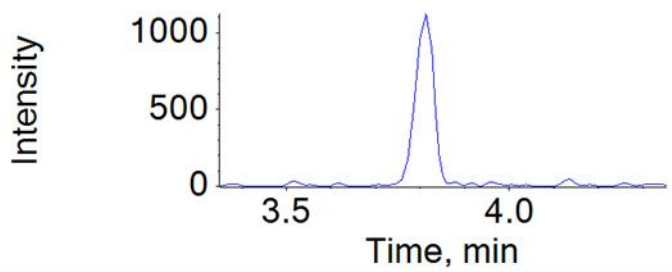


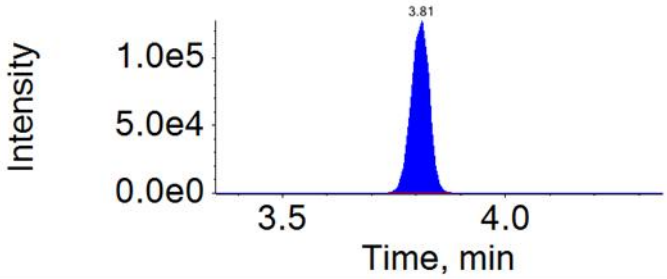
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

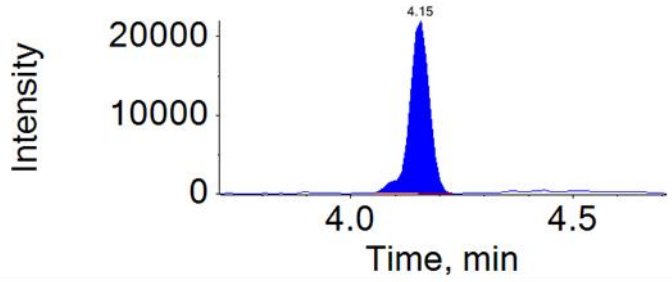
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

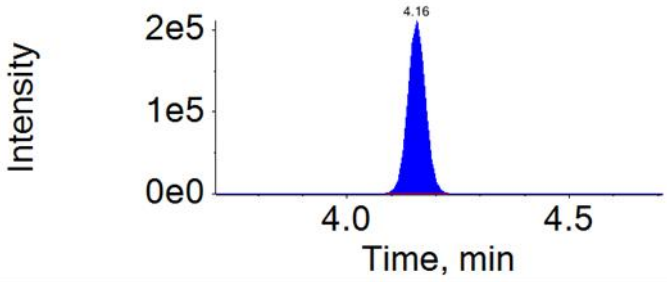
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



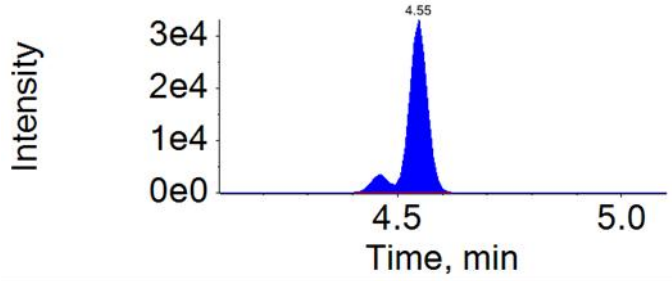


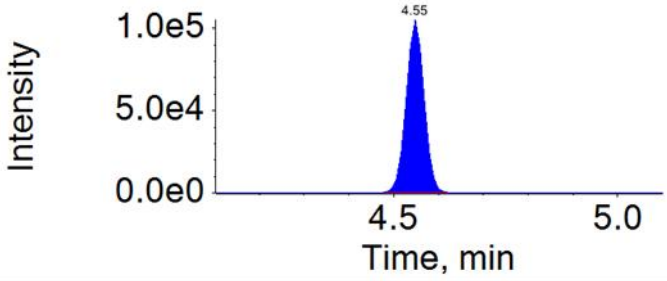
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



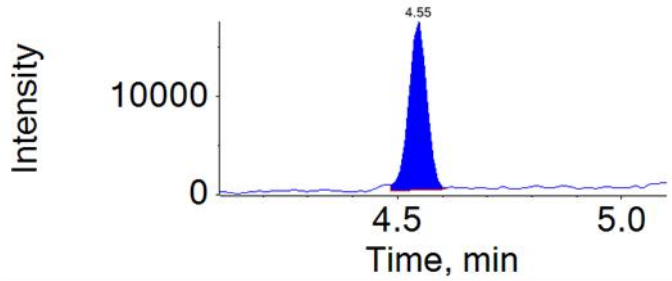


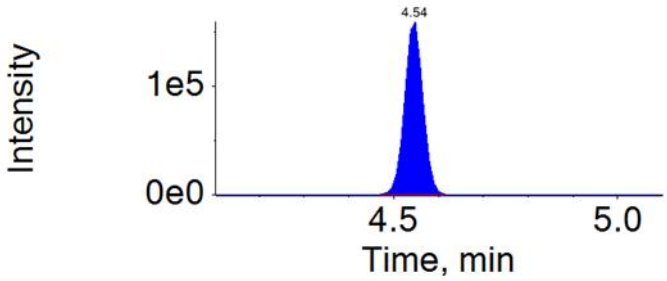
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





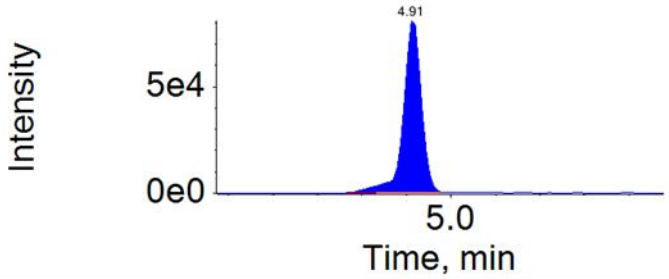
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

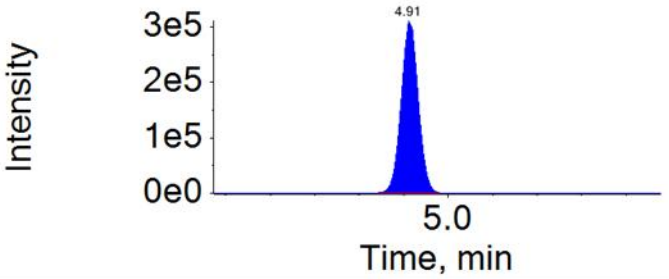




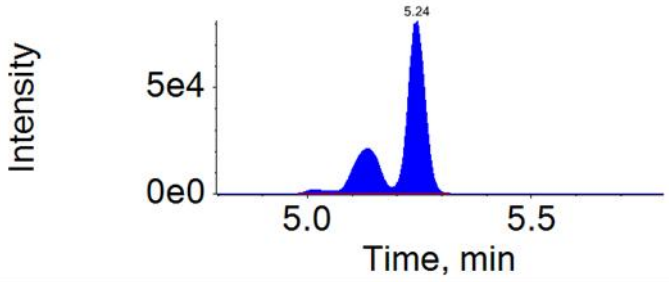
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

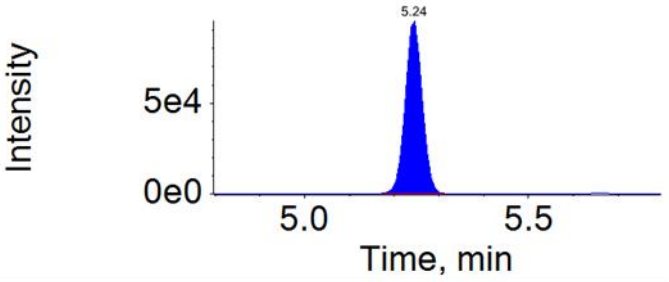
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



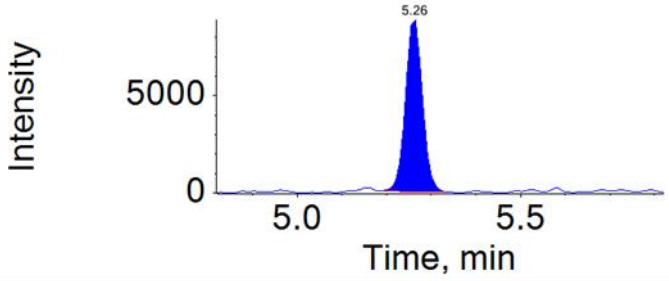


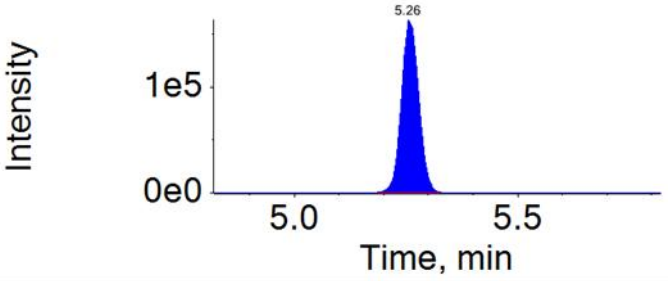
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



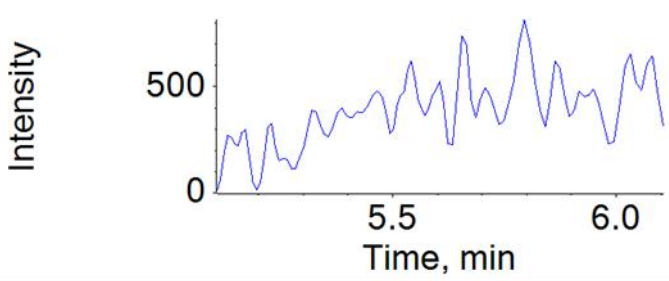


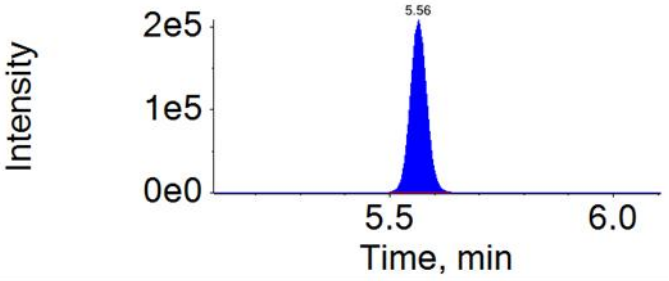
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





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



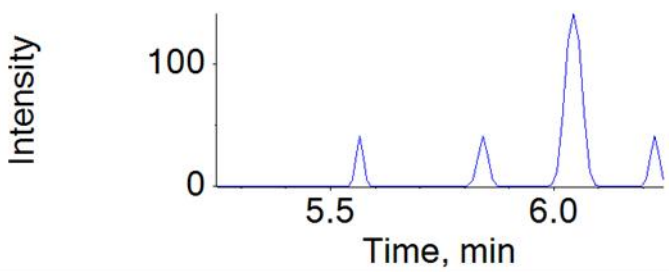


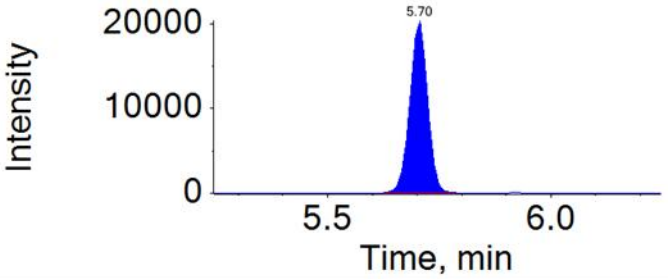
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

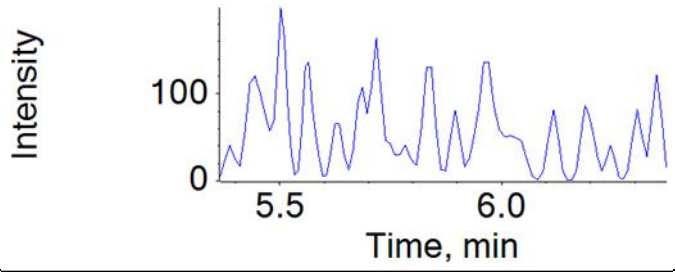
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

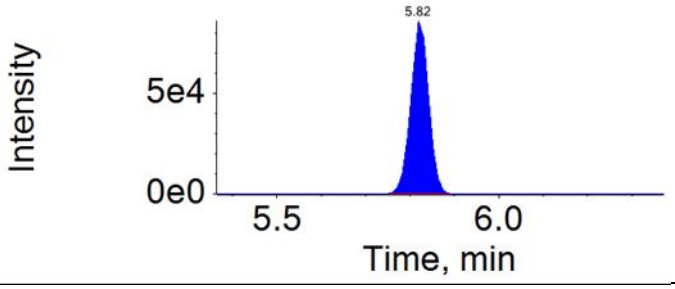
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



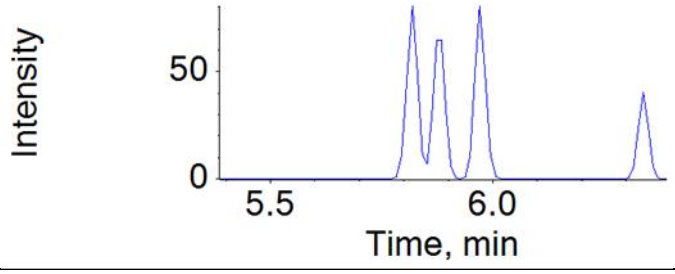


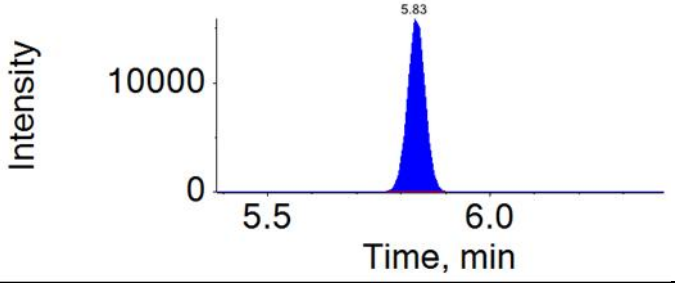
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



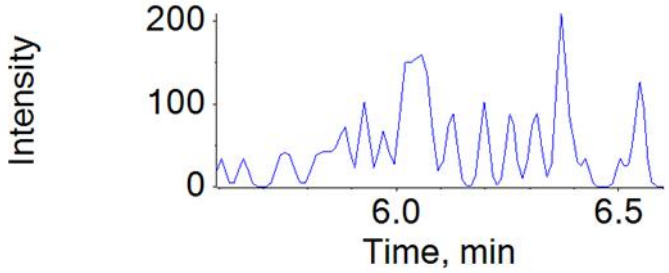


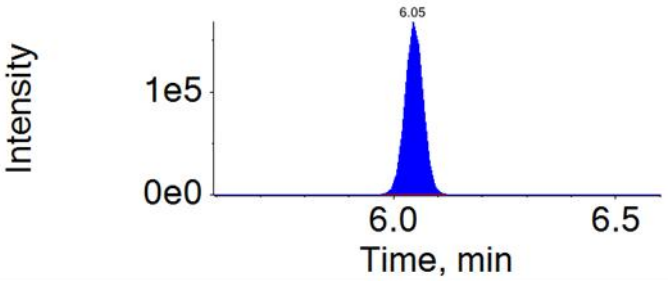
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



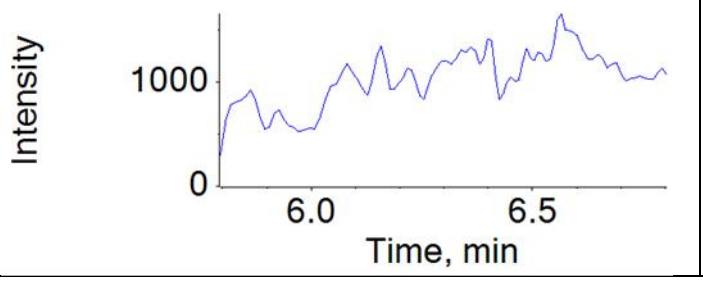


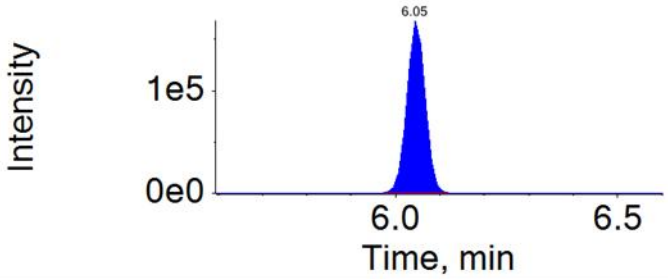
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

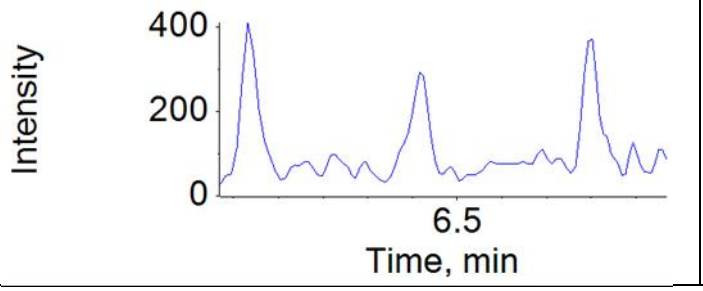
ICAL Name: 18NOV07DCAL **Result Table:** 18311004 11/9/2018 4:24:53 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

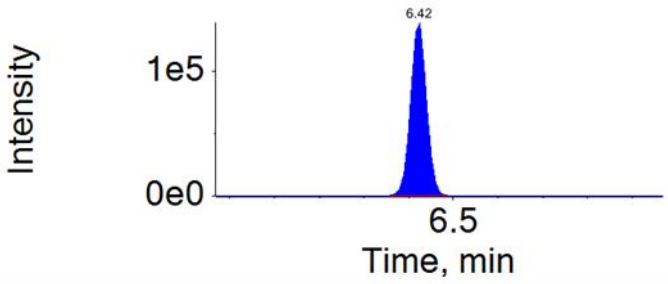
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



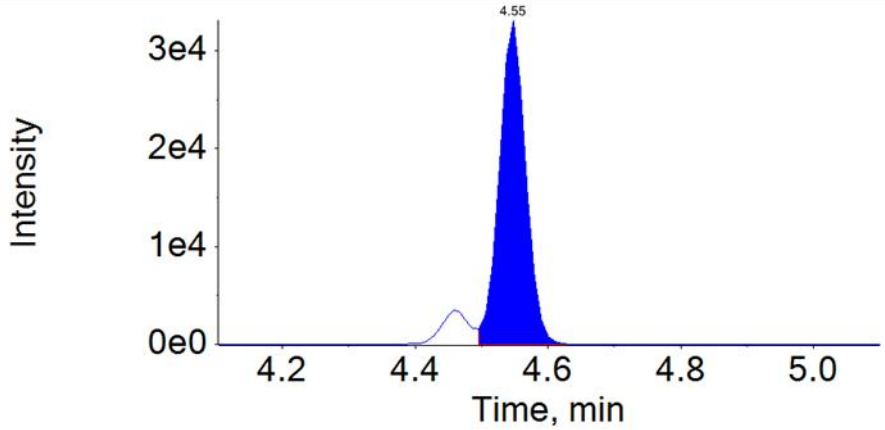


APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

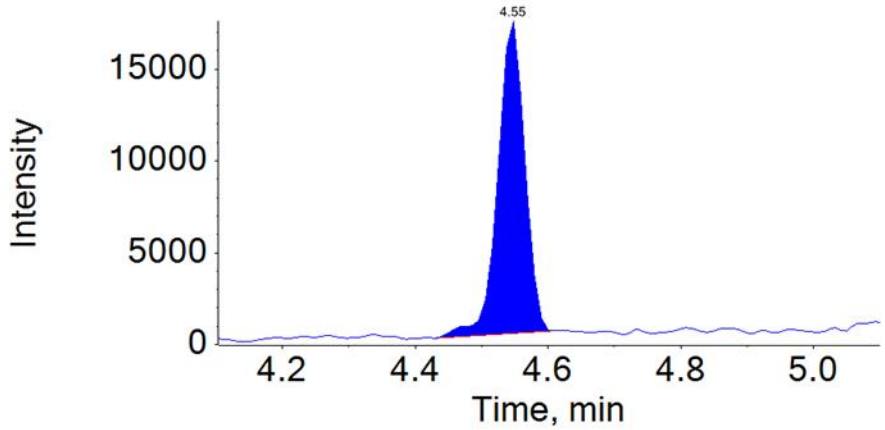
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
91300.8
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-97.wiff
Sample Name:
9881545



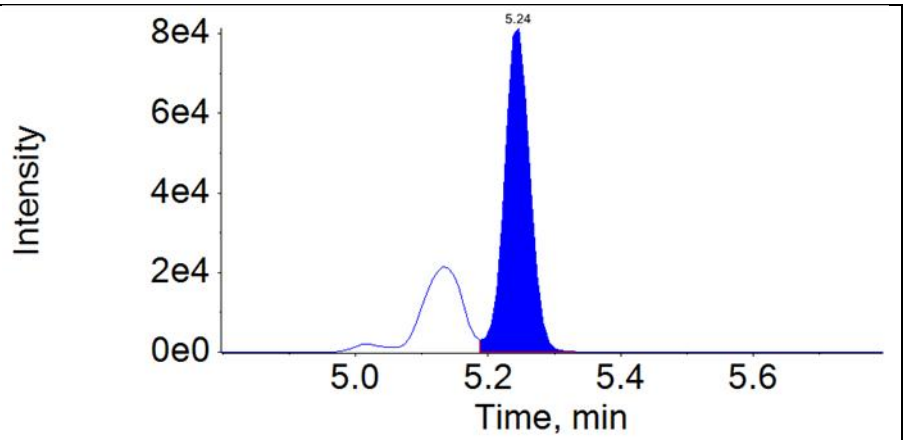
Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
48127.3
Mass Range:
363.0 / 319.0
File Name:
18NOV08D-97.wiff
Sample Name:
9881545



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
217526.5
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-97.wiff
Sample Name:
9881545



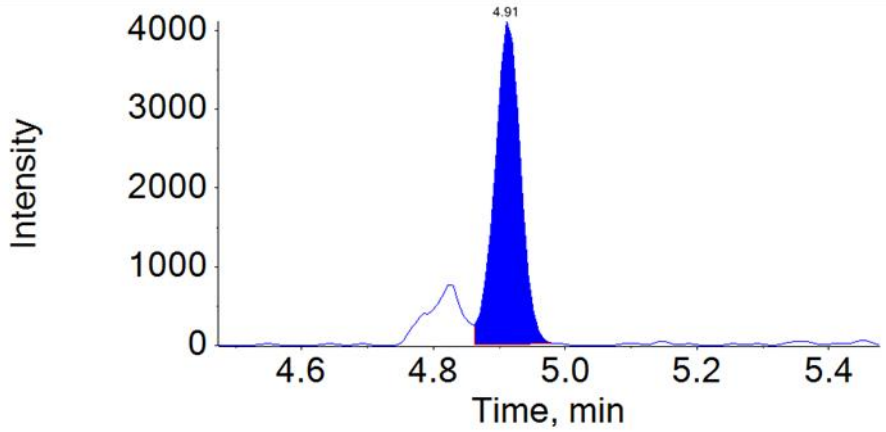
Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

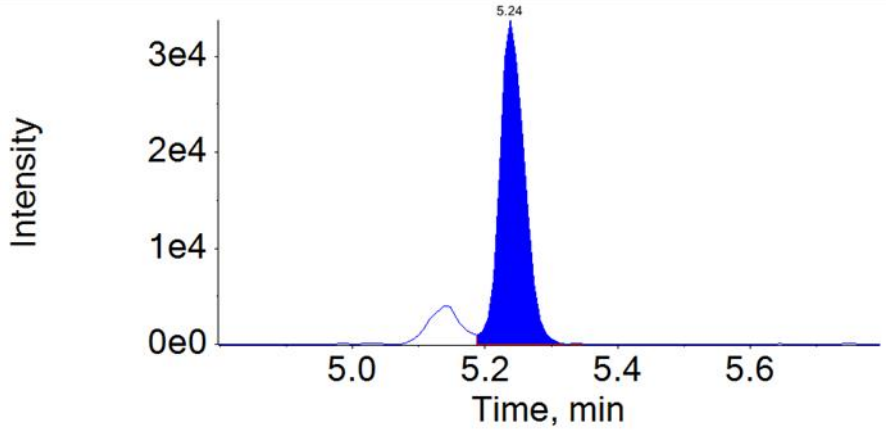
Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
11159.0
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-97.wiff
Sample Name:
9881545



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
87678.6
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-97.wiff
Sample Name:
9881545



Integration Comment: incorrect integration

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Results Table Name: 18311004
Results Table Date: 11/9/2018 4:24:53 PM

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

APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

Ion Ratio Report

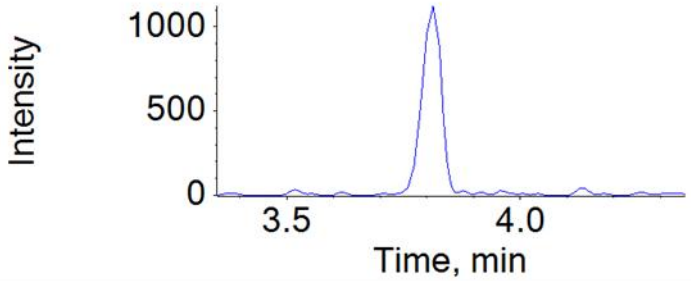
Sample Name: 9881545 **Instrument Name:** LM27631 **File Name:** 18NOV08D-97.wiff

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	4.15	1.00	67402.7	A	N/A	1.0000			
PFHxA_2	4.16	1.00	829.8	A	N/A	0.0123	7	50	
PFHxS	4.55	1.00	101572.1	M	N/A	1.0000			
PFHxS_2	4.55	1.00	33691.5	A	N/A	0.3317	-7	50	
PFHpA	4.55	1.00	47929.1	M	N/A	1.0000			
PFHpA_2	4.54	1.00	2883.3	A	N/A	0.0602	4	50	
PFOA	4.91	1.00	230152.2	A	N/A	1.0000			
PFOA_2	4.91	1.00	14105.2	M	N/A	0.0613	-3	50	
PFOS	5.24	1.00	312098.4	M	N/A	1.0000			
PFOS_2	5.24	1.00	101647.8	M	N/A	0.3257	-7	50	
PFNA	5.26	1.00	23357.8	A	N/A	1.0000			
PFNA_2	5.27	1.00	151.8	A	N/A	0.0065	-69	50	OOS
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	5.94	0.98	164.7	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	

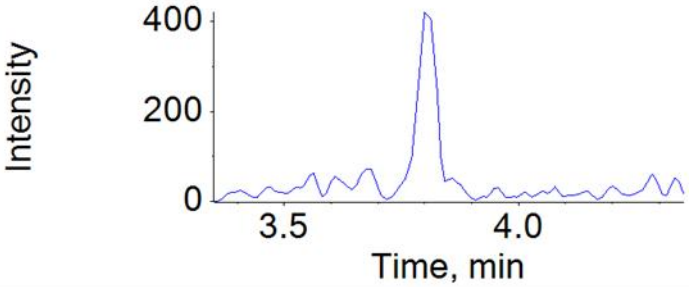
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

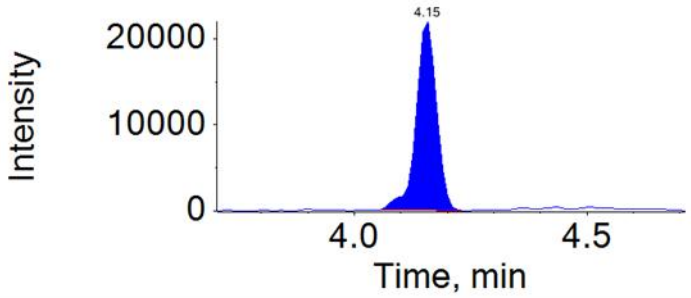
Component: PFBS
Primary Mass: 299.0 / 80.0



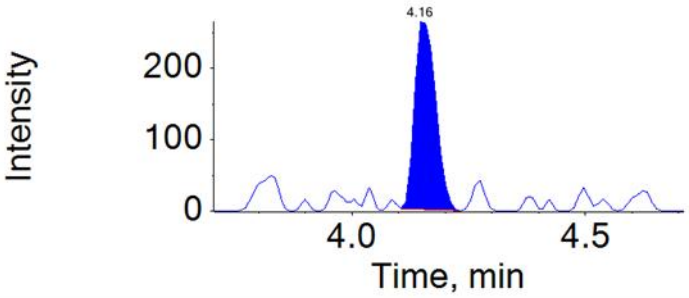
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Secondary Mass: 299.0 / 99.0



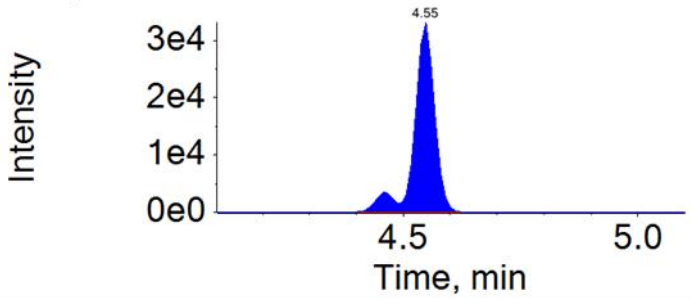
Component: PFHxA
Primary Mass: 313.0 / 269.0



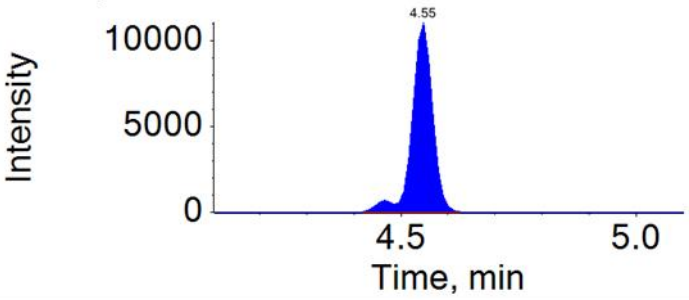
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



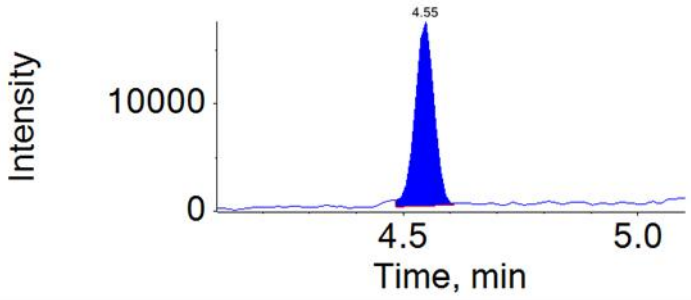
Component: PFHxS
Primary Mass: 399.0 / 80.0



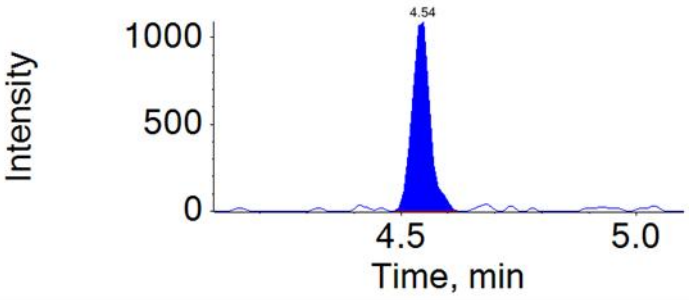
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



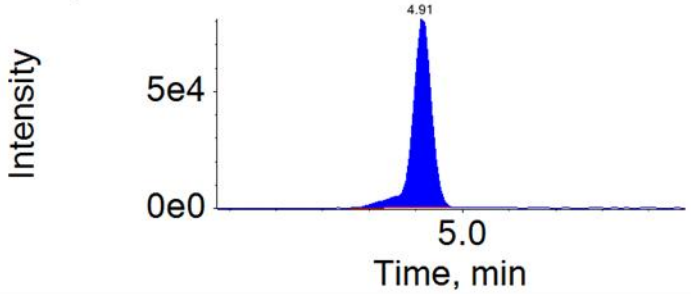
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



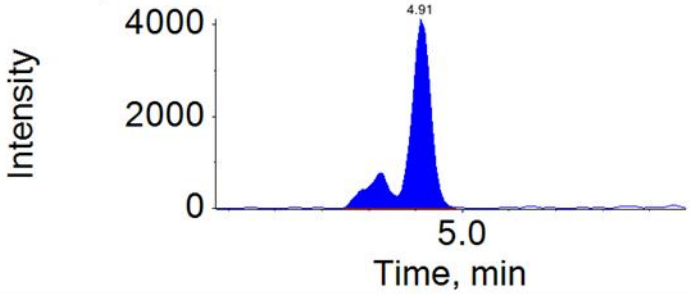
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

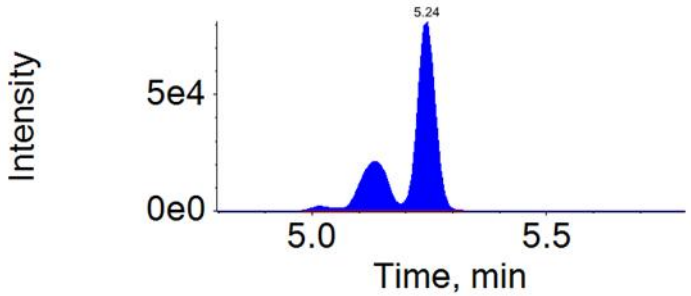
Component: PFOA
Primary Mass: 413.0 / 369.0



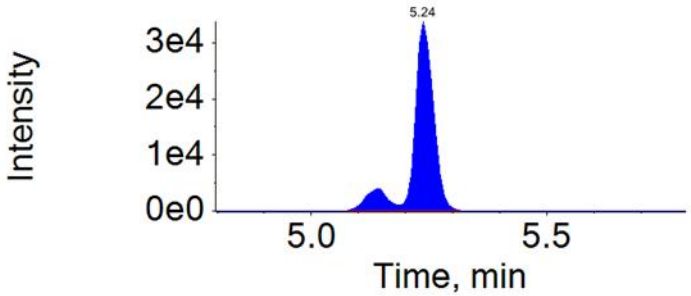
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Secondary Mass: 413.0 / 169.0



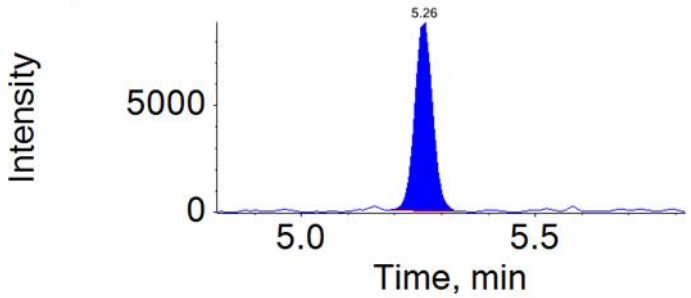
Component: PFOS
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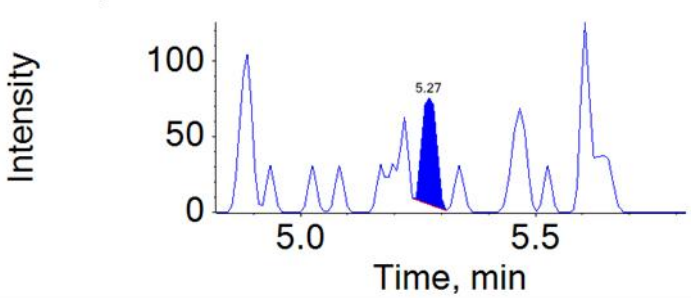
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Secondary Mass: 499.0 / 99.0



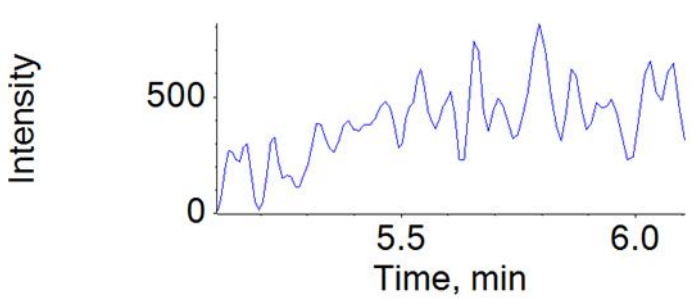
Component: PFNA
Primary Mass: 463.0 / 419.0



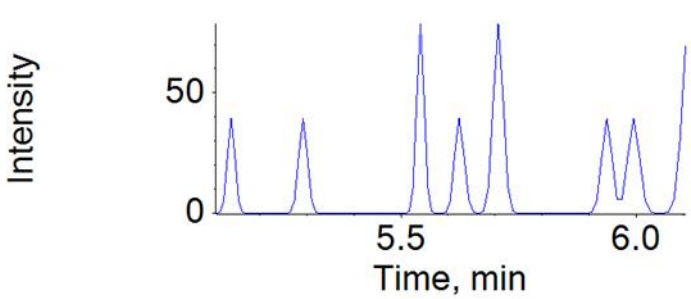
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



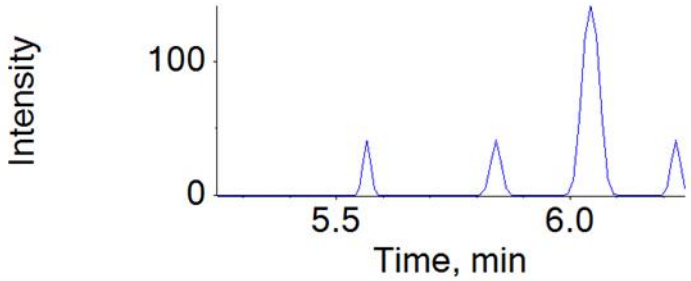
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



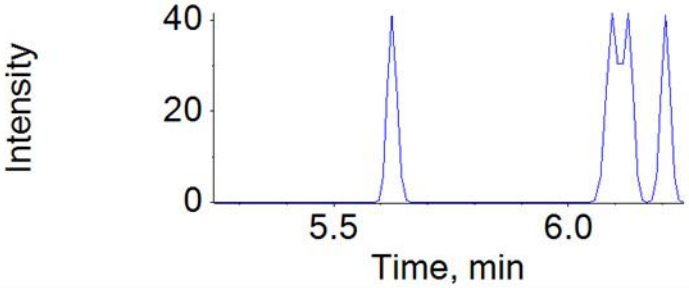
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

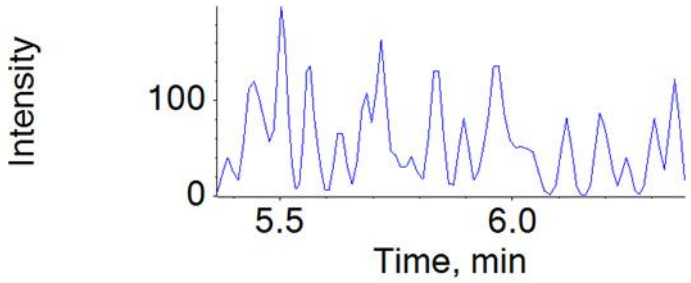
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



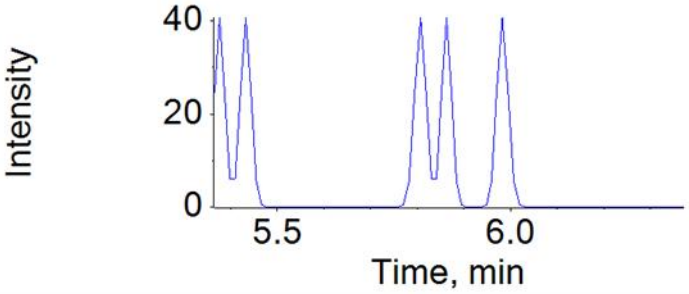
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



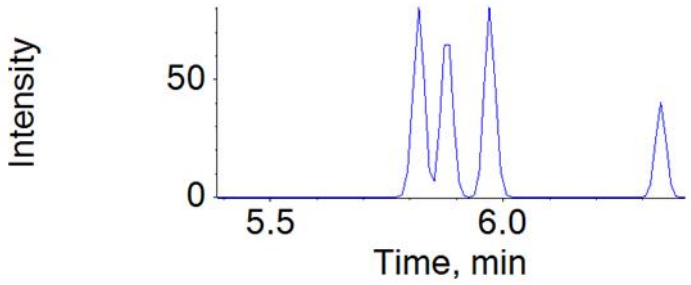
Component: PFUnDA
Primary Mass: 563.0 / 519.0



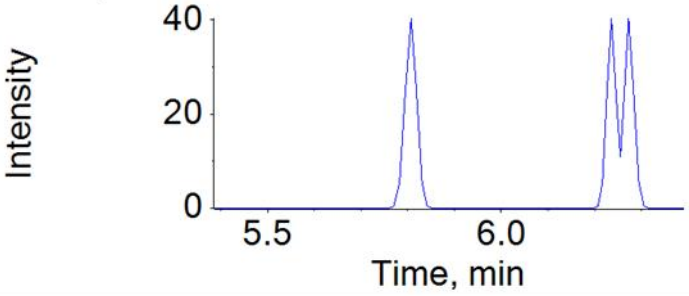
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Secondary Mass: 563.0 / 169.0



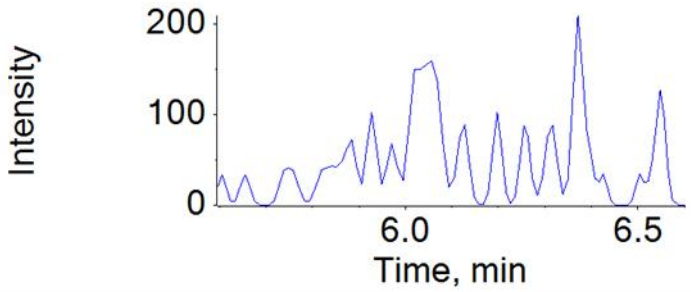
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



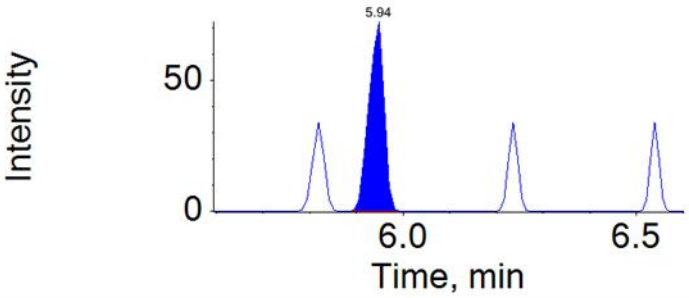
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



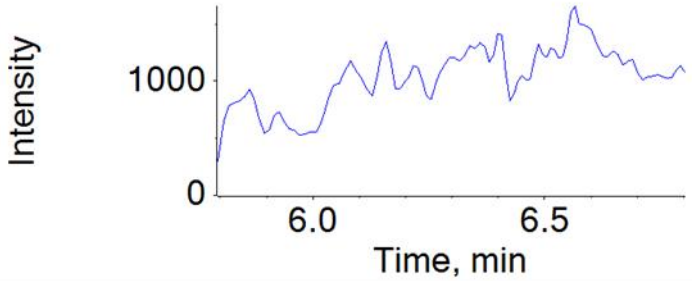
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Secondary Mass: 613.0 / 169.0



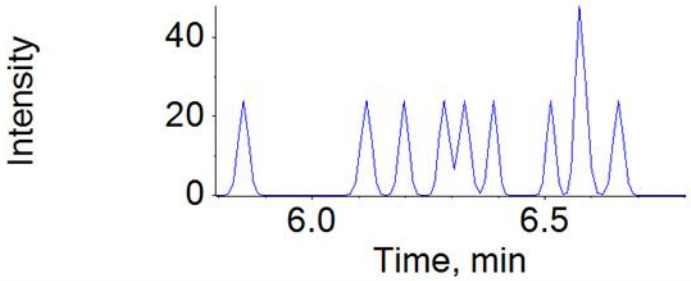
APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

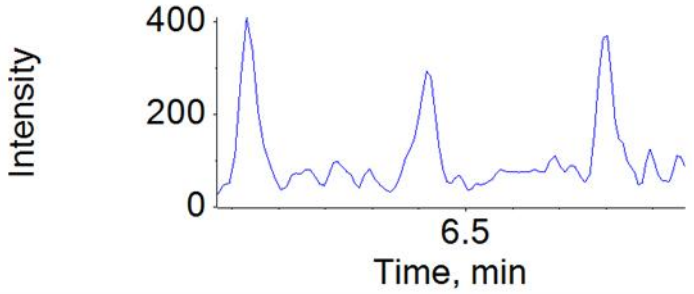
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Primary Mass: 663.0 / 619.0



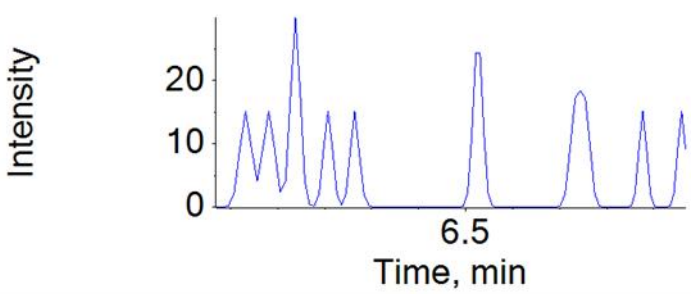
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:18 pm, 11/9/18

REVIEWED
By umar at 4:40 pm, 11/12/18

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
18NOV08D-01.wiff	solvent	N/A	11/8/2018 11:48:33 AM
18NOV08D-02.wiff	solvent	N/A	11/8/2018 11:57:34 AM
18NOV08D-03.wiff	solvent	N/A	11/8/2018 12:06:37 PM
18NOV08D-04.wiff	solvent	N/A	11/8/2018 12:15:40 PM
18NOV08D-05.wiff	CCV1_ISC_CAL2	N/A	11/8/2018 12:24:40 PM
18NOV08D-06.wiff	INBLK	N/A	11/8/2018 12:33:40 PM
18NOV08D-07.wiff	9881945	18309005	11/8/2018 12:42:43 PM
18NOV08D-08.wiff	9881946	18309005	11/8/2018 12:51:43 PM
18NOV08D-09.wiff	9881949	18309005	11/8/2018 1:00:46 PM
18NOV08D-10.wiff	9881950	18309005	11/8/2018 1:09:46 PM
18NOV08D-11.wiff	9881951	18309005	11/8/2018 1:18:46 PM
18NOV08D-12.wiff	9881952	18309005	11/8/2018 1:27:49 PM
18NOV08D-13.wiff	9881955	18309005	11/8/2018 1:36:52 PM
18NOV08D-14.wiff	9881956	18309005	11/8/2018 1:45:52 PM
18NOV08D-15.wiff	9881957	18309005	11/8/2018 1:54:52 PM
18NOV08D-16.wiff	9881958	18309005	11/8/2018 2:03:52 PM
18NOV08D-17.wiff	CCV2_CAL3	N/A	11/8/2018 2:12:52 PM
18NOV08D-18.wiff	9881931	18309011	11/8/2018 2:21:52 PM
18NOV08D-19.wiff	9881936	18309011	11/8/2018 2:30:55 PM
18NOV08D-20.wiff	9881937	18309011	11/8/2018 2:39:58 PM
18NOV08D-21.wiff	solvent	N/A	11/8/2018 2:48:58 PM
18NOV08D-22.wiff	BLK310003	18310003	11/8/2018 2:58:01 PM
18NOV08D-23.wiff	LCS310003	18310003	11/8/2018 3:07:01 PM
18NOV08D-24.wiff	9881926	18310003	11/8/2018 3:16:01 PM
18NOV08D-25.wiff	9881927	18310003	11/8/2018 3:25:01 PM
18NOV08D-26.wiff	9881928BKG	18310003	11/8/2018 3:34:01 PM
18NOV08D-27.wiff	9881929MS	18310003	11/8/2018 3:43:04 PM
18NOV08D-28.wiff	9881930MSD	18310003	11/8/2018 3:52:04 PM
18NOV08D-29.wiff	CCV3_CAL4	N/A	11/8/2018 4:01:07 PM
18NOV08D-30.wiff	9881963	18310003	11/8/2018 4:10:10 PM
18NOV08D-31.wiff	9881964	18310003	11/8/2018 4:19:13 PM
18NOV08D-32.wiff	9881967	18310003	11/8/2018 4:28:13 PM
18NOV08D-33.wiff	9881968	18310003	11/8/2018 4:37:16 PM
18NOV08D-34.wiff	9881969	18310003	11/8/2018 4:46:19 PM
18NOV08D-35.wiff	9881970	18310003	11/8/2018 4:55:19 PM
18NOV08D-36.wiff	9881973	18310003	11/8/2018 5:04:22 PM
18NOV08D-37.wiff	9881974	18310003	11/8/2018 5:13:22 PM
18NOV08D-38.wiff	9881975	18310003	11/8/2018 5:22:23 PM
18NOV08D-39.wiff	9881976	18310003	11/8/2018 5:31:22 PM
18NOV08D-40.wiff	CCV4_ISC_CAL2	N/A	11/8/2018 5:40:25 PM
18NOV08D-41.wiff	solvent	N/A	11/8/2018 5:49:25 PM
18NOV08D-42.wiff	BLK311003	18311003	11/8/2018 5:58:28 PM
18NOV08D-43.wiff	LCS311003	18311003	11/8/2018 6:07:28 PM
18NOV08D-44.wiff	9881573	18311003	11/8/2018 6:16:28 PM
18NOV08D-45.wiff	9881574	18311003	11/8/2018 6:25:28 PM

APPROVED
By MCD at 7:07 pm, 11/13/18

Instrument Name: LM27631

18NOV08D-46.wiff	9881575	18311003	11/8/2018 6:34:31 PM
18NOV08D-47.wiff	9881576	18311003	11/8/2018 6:43:31 PM
18NOV08D-48.wiff	9881581	18311003	11/8/2018 6:52:32 PM
18NOV08D-49.wiff	9881582	18311003	11/8/2018 7:01:34 PM
18NOV08D-50.wiff	9881583BKG	18311003	11/8/2018 7:10:34 PM
18NOV08D-51.wiff	9881584MS	18311003	11/8/2018 7:19:34 PM
18NOV08D-52.wiff	CCV5_CAL3	N/A	11/8/2018 7:28:37 PM
18NOV08D-53.wiff	9881585MSD	18311003	11/8/2018 7:37:37 PM
18NOV08D-54.wiff	9881586	18311003	11/8/2018 7:46:40 PM
18NOV08D-55.wiff	9881589	18311003	11/8/2018 7:55:43 PM
18NOV08D-56.wiff	9881590	18311003	11/8/2018 8:04:46 PM
18NOV08D-57.wiff	9881591	18311003	11/8/2018 8:13:46 PM
18NOV08D-58.wiff	9881592	18311003	11/8/2018 8:22:46 PM
18NOV08D-59.wiff	9881594	18311003	11/8/2018 8:31:46 PM
18NOV08D-60.wiff	9881595	18311003	11/8/2018 8:40:46 PM
18NOV08D-61.wiff	9881596	18311003	11/8/2018 8:49:46 PM
18NOV08D-62.wiff	CCV6_CAL4	N/A	11/8/2018 8:58:46 PM
18NOV08D-63.wiff	9885111	18311003	11/8/2018 9:07:46 PM
18NOV08D-64.wiff	9885112	18311003	11/8/2018 9:16:46 PM
18NOV08D-65.wiff	9885113	18311003	11/8/2018 9:25:49 PM
18NOV08D-66.wiff	solvent	N/A	11/8/2018 9:34:50 PM
18NOV08D-67.wiff	9878747DL	18308002	11/8/2018 9:43:53 PM
18NOV08D-68.wiff	solvent	N/A	11/8/2018 9:52:55 PM
18NOV08D-69.wiff	BLK310012	18310012	11/8/2018 10:01:55 PM
18NOV08D-70.wiff	LCS310012	18310012	11/8/2018 10:10:58 PM
18NOV08D-71.wiff	9881902	18310012	11/8/2018 10:20:02 PM
18NOV08D-72.wiff	9881903	18310012	11/8/2018 10:29:05 PM
18NOV08D-73.wiff	9881904	18310012	11/8/2018 10:38:07 PM
18NOV08D-74.wiff	9881907BKG	18310012	11/8/2018 10:47:07 PM
18NOV08D-75.wiff	CCV7_ISC_CAL2	N/A	11/8/2018 10:56:07 PM
18NOV08D-76.wiff	Instrument Blank	N/A	11/8/2018 11:05:11 PM
18NOV08D-77.wiff	9881908MS	18310012	11/8/2018 11:14:11 PM
18NOV08D-78.wiff	9881909MSD	18310012	11/8/2018 11:23:13 PM
18NOV08D-79.wiff	9881910	18310012	11/8/2018 11:32:16 PM
18NOV08D-80.wiff	9881911	18310012	11/8/2018 11:41:16 PM
18NOV08D-81.wiff	9881912	18310012	11/8/2018 11:50:20 PM
18NOV08D-82.wiff	9881915	18310012	11/8/2018 11:59:23 PM
18NOV08D-83.wiff	9881916	18310012	11/9/2018 12:08:25 AM
18NOV08D-84.wiff	9881917	18310012	11/9/2018 12:17:25 AM
18NOV08D-85.wiff	9881918	18310012	11/9/2018 12:26:28 AM
18NOV08D-86.wiff	CCV8_CAL3	N/A	11/9/2018 12:35:31 AM
18NOV08D-87.wiff	solvent	N/A	11/9/2018 12:44:31 AM
18NOV08D-88.wiff	BLK311004	18311004	11/9/2018 12:53:31 AM
18NOV08D-89.wiff	LCS311004	18311004	11/9/2018 1:02:32 AM
18NOV08D-90.wiff	9881536	18311004	11/9/2018 1:11:34 AM
18NOV08D-91.wiff	9881537BKG	18311004	11/9/2018 1:20:35 AM
18NOV08D-92.wiff	9881538MS	18311004	11/9/2018 1:29:35 AM
18NOV08D-93.wiff	9881539MSD	18311004	11/9/2018 1:38:35 AM
18NOV08D-94.wiff	9881540	18311004	11/9/2018 1:47:35 AM
18NOV08D-95.wiff	9881541	18311004	11/9/2018 1:56:35 AM
18NOV08D-96.wiff	9881544	18311004	11/9/2018 2:05:35 AM
18NOV08D-97.wiff	9881545	18311004	11/9/2018 2:14:38 AM
18NOV08D-98.wiff	CCV9_CAL4	N/A	11/9/2018 2:23:41 AM
18NOV08D-99.wiff	9883380	18311004	11/9/2018 2:32:44 AM
18NOV08D-100.wiff	9883381	18311004	11/9/2018 2:41:47 AM
18NOV08D-101.wiff	9883386	18311004	11/9/2018 2:50:50 AM
18NOV08D-102.wiff	9883387	18311004	11/9/2018 2:59:50 AM
18NOV08D-103.wiff	9883388	18311004	11/9/2018 3:08:53 AM



Instrument Name: LM27631

18NOV08D-104.wiff	9883389	18311004	11/9/2018 3:17:53 AM
18NOV08D-105.wiff	9883392	18311004	11/9/2018 3:26:56 AM
18NOV08D-106.wiff	9883393	18311004	11/9/2018 3:35:56 AM
18NOV08D-107.wiff	9883394	18311004	11/9/2018 3:44:56 AM
18NOV08D-108.wiff	9883395	18311004	11/9/2018 3:53:59 AM
18NOV08D-109.wiff	CCV10_ISC_CAL2	N/A	11/9/2018 4:02:59 AM
18NOV08D-110.wiff	9885114	18311004	11/9/2018 4:11:59 AM
18NOV08D-111.wiff	9885117	18311004	11/9/2018 4:20:59 AM
18NOV08D-112.wiff	CCV11_CAL3	N/A	11/9/2018 4:29:59 AM

20 mM Ammonium Acetate in H2O: 782411021833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411021833B

APPROVED
By MCD at 7:07 pm, 11/13/18

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
18NOV09D-01.wiff	solvent	N/A	11/9/2018 4:38:59 AM
18NOV09D-02.wiff	solvent	N/A	11/9/2018 4:47:59 AM
18NOV09D-03.wiff	CCV1_ISC_CAL2	N/A	11/9/2018 4:56:59 AM
18NOV09D-04.wiff	Instrument Blank	N/A	11/9/2018 5:05:59 AM
18NOV09D-05.wiff	BLK312003	18312003	11/9/2018 5:15:02 AM
18NOV09D-06.wiff	LCS312003	18312003	11/9/2018 5:24:02 AM
18NOV09D-07.wiff	9885120	18312003	11/9/2018 5:33:05 AM
18NOV09D-08.wiff	9885123	18312003	11/9/2018 5:42:08 AM
18NOV09D-09.wiff	9885124	18312003	11/9/2018 5:51:08 AM
18NOV09D-10.wiff	9885125	18312003	11/9/2018 6:00:08 AM
18NOV09D-11.wiff	9885126	18312003	11/9/2018 6:09:11 AM
18NOV09D-12.wiff	9885129	18312003	11/9/2018 6:18:14 AM
18NOV09D-13.wiff	9885130	18312003	11/9/2018 6:27:14 AM
18NOV09D-14.wiff	9885131	18312003	11/9/2018 6:36:17 AM
18NOV09D-15.wiff	CCV2_CAL3	N/A	11/9/2018 6:45:20 AM
18NOV09D-16.wiff	9885132	18312003	11/9/2018 6:54:20 AM
18NOV09D-17.wiff	9885135	18312003	11/9/2018 7:03:20 AM
18NOV09D-18.wiff	9885136	18312003	11/9/2018 7:12:23 AM
18NOV09D-19.wiff	9885137	18312003	11/9/2018 7:21:23 AM
18NOV09D-20.wiff	9885138	18312003	11/9/2018 7:30:26 AM
18NOV09D-21.wiff	9885168	18312003	11/9/2018 7:39:26 AM
18NOV09D-22.wiff	9885169BKG	18312003	11/9/2018 7:48:26 AM
18NOV09D-23.wiff	9885172	18312003	11/9/2018 7:57:26 AM
18NOV09D-24.wiff	9885170MS	18312003	11/9/2018 8:06:26 AM
18NOV09D-25.wiff	9885171MSD	18312003	11/9/2018 8:15:29 AM
18NOV09D-26.wiff	CCV3_CAL4	N/A	11/9/2018 8:24:29 AM
18NOV09D-27.wiff	BLK311021	18311021	11/9/2018 8:33:29 AM
18NOV09D-28.wiff	LCS311021	18311021	11/9/2018 8:42:32 AM
18NOV09D-29.wiff	9885056	18311021	11/9/2018 8:51:32 AM
18NOV09D-30.wiff	9885057	18311021	11/9/2018 9:00:35 AM
18NOV09D-31.wiff	9885058	18311021	11/9/2018 9:09:38 AM
18NOV09D-32.wiff	9885059	18311021	11/9/2018 9:18:38 AM
18NOV09D-33.wiff	9885062BKG	18311021	11/9/2018 9:27:38 AM
18NOV09D-34.wiff	CCV4_ISC_CAL2	N/A	11/9/2018 9:36:38 AM
18NOV09D-35.wiff	9885065	18311021	11/9/2018 9:45:38 AM
18NOV09D-36.wiff	9885118	18311021	11/9/2018 9:54:38 AM
18NOV09D-37.wiff	9885119	18311021	11/9/2018 10:03:41 AM
18NOV09D-38.wiff	9885063MS	18311021	11/9/2018 10:12:41 AM
18NOV09D-39.wiff	9885064MSD	18311021	11/9/2018 10:21:41 AM
18NOV09D-40.wiff	solvent	N/A	11/9/2018 10:30:41 AM
18NOV09D-41.wiff	BLK312011	18312011	11/9/2018 10:39:45 AM
18NOV09D-42.wiff	LCS312011	18312011	11/9/2018 10:48:48 AM
18NOV09D-43.wiff	9885066	18312011	11/9/2018 10:57:51 AM
18NOV09D-44.wiff	9885067	18312011	11/9/2018 11:06:54 AM
18NOV09D-45.wiff	9885070BKG	18312011	11/9/2018 11:15:53 AM

APPROVED
By MCD at 7:12 pm, 11/13/18

Instrument Name: LM27631

18NOV09D-46.wiff	CCV5_CAL3	N/A	11/9/2018 11:24:54 AM
18NOV09D-47.wiff	9885073	18312011	11/9/2018 11:33:57 AM
18NOV09D-48.wiff	9885074	18312011	11/9/2018 11:43:00 AM
18NOV09D-49.wiff	9885075	18312011	11/9/2018 11:51:59 AM
18NOV09D-50.wiff	9885071MS	18312011	11/9/2018 12:01:00 PM
18NOV09D-51.wiff	9885072MSD	18312011	11/9/2018 12:10:03 PM
18NOV09D-52.wiff	solvent	N/A	11/9/2018 12:19:03 PM
18NOV09D-53.wiff	BLK311019	18311019	11/9/2018 12:28:06 PM
18NOV09D-54.wiff	LCS311019	18311019	11/9/2018 12:37:05 PM
18NOV09D-55.wiff	9885160	18311019	11/9/2018 12:46:09 PM
18NOV09D-56.wiff	9885161BKG	18311019	11/9/2018 12:55:12 PM
18NOV09D-57.wiff	9885164	18311019	11/9/2018 1:04:14 PM
18NOV09D-58.wiff	CCV6_CAL4	N/A	11/9/2018 1:13:18 PM
18NOV09D-59.wiff	9885165	18311019	11/9/2018 1:22:21 PM
18NOV09D-60.wiff	9885162MS	18311019	11/9/2018 1:31:24 PM
18NOV09D-61.wiff	9885163MSD	18311019	11/9/2018 1:40:24 PM
18NOV09D-62.wiff	solvent	N/A	11/9/2018 1:49:24 PM
18NOV09D-63.wiff	BLK312004	18312004	11/9/2018 1:58:27 PM
18NOV09D-64.wiff	LCS312004	18312004	11/9/2018 2:07:27 PM
18NOV09D-65.wiff	9884891BKG	18312004	11/9/2018 2:16:30 PM
18NOV09D-66.wiff	9884892MS	18312004	11/9/2018 2:25:30 PM
18NOV09D-67.wiff	9884893MSD	18312004	11/9/2018 2:34:30 PM
18NOV09D-68.wiff	9885109	18312004	11/9/2018 2:43:30 PM
18NOV09D-69.wiff	9885110	18312004	11/9/2018 2:52:30 PM
18NOV09D-70.wiff	CCV7_ISC_CAL2	N/A	11/9/2018 3:01:29 PM
18NOV09D-71.wiff	9885139	18312004	11/9/2018 3:10:30 PM
18NOV09D-72.wiff	9885140	18312004	11/9/2018 3:19:30 PM
18NOV09D-73.wiff	solvent	N/A	11/9/2018 3:28:33 PM
18NOV09D-74.wiff	BLK311015	18311015	11/9/2018 3:37:36 PM
18NOV09D-75.wiff	LCS311015	18311015	11/9/2018 3:46:35 PM
18NOV09D-76.wiff	9885078	18311015	11/9/2018 3:55:39 PM
18NOV09D-77.wiff	9885080	18311015	11/9/2018 4:04:38 PM
18NOV09D-78.wiff	9885081	18311015	11/9/2018 4:13:41 PM
18NOV09D-79.wiff	9885082	18311015	11/9/2018 4:22:41 PM
18NOV09D-80.wiff	9885085	18311015	11/9/2018 4:31:45 PM
18NOV09D-81.wiff	9885086BKG	18311015	11/9/2018 4:40:45 PM
18NOV09D-82.wiff	CCV8_CAL3	N/A	11/9/2018 4:49:48 PM
18NOV09D-83.wiff	9885087MS	18311015	11/9/2018 4:58:48 PM
18NOV09D-84.wiff	9885088MSD	18311015	11/9/2018 5:07:47 PM
18NOV09D-85.wiff	9885089	18311015	11/9/2018 5:16:48 PM
18NOV09D-86.wiff	9885090	18311015	11/9/2018 5:25:48 PM
18NOV09D-87.wiff	9885092	18311015	11/9/2018 5:34:48 PM
18NOV09D-88.wiff	9885093	18311015	11/9/2018 5:43:47 PM
18NOV09D-89.wiff	9885094	18311015	11/9/2018 5:52:48 PM
18NOV09D-90.wiff	9885095	18311015	11/9/2018 6:01:48 PM
18NOV09D-91.wiff	9885098	18311015	11/9/2018 6:10:48 PM
18NOV09D-92.wiff	9885099	18311015	11/9/2018 6:19:47 PM
18NOV09D-93.wiff	CCV9_CAL4	N/A	11/9/2018 6:28:48 PM
18NOV09D-94.wiff	9885100	18311015	11/9/2018 6:37:47 PM
18NOV09D-95.wiff	9885101	18311015	11/9/2018 6:46:51 PM
18NOV09D-96.wiff	9885104	18311015	11/9/2018 6:55:54 PM
18NOV09D-97.wiff	9885105	18311015	11/9/2018 7:04:57 PM
18NOV09D-98.wiff	9885106	18311015	11/9/2018 7:14:00 PM
18NOV09D-99.wiff	solvent	N/A	11/9/2018 7:23:03 PM
18NOV09D-100.wiff	9881544DL	18311004	11/9/2018 7:32:03 PM
18NOV09D-101.wiff	CCV10_ISC_CAL2	N/A	11/9/2018 7:41:03 PM

20 mM Ammonium Acetate in H2O: 782411021833A

APPROVED
By MCD at 7:12 pm, 11/13/18

Instrument Name: LM27631

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

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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

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV28DCAL-05.wiff	MDL	N/A	11/28/2018 1:33:07 PM
18NOV28DCAL-06.wiff	CAL1	N/A	11/28/2018 1:42:10 PM
18NOV28DCAL-07.wiff	CAL2	N/A	11/28/2018 1:51:13 PM
18NOV28DCAL-08.wiff	CAL3	N/A	11/28/2018 2:00:13 PM
18NOV28DCAL-09.wiff	CAL4	N/A	11/28/2018 2:09:13 PM
18NOV28DCAL-10.wiff	CAL5	N/A	11/28/2018 2:18:16 PM
18NOV28DCAL-11.wiff	CAL6	N/A	11/28/2018 2:27:16 PM
18NOV28DCAL-12.wiff	CAL7	N/A	11/28/2018 2:36:16 PM
18NOV28DCAL-13.wiff	Instrument Blank	N/A	11/28/2018 2:45:19 PM
18NOV28DCAL-14.wiff	ICV	N/A	11/28/2018 2:54:22 PM
18NOV28DCAL-15.wiff	L+B CAL3	N/A	11/28/2018 3:03:22 PM
18NOV28DCAL-16.wiff	CCV1_CAL3	N/A	11/28/2018 3:12:25 PM
18NOV29D-01.wiff	solvent	N/A	11/29/2018 9:57:32 AM
18NOV29D-02.wiff	solvent	N/A	11/29/2018 10:06:32 AM
18NOV29D-03.wiff	solvent	N/A	11/29/2018 10:15:35 AM
18NOV29D-04.wiff	solvent	N/A	11/29/2018 10:24:35 AM
18NOV29D-05.wiff	CCV1_ISC_CAL2	N/A	11/29/2018 10:33:38 AM
18NOV29D-06.wiff	Instrument Blank	N/A	11/29/2018 10:42:38 AM
18NOV29D-07.wiff	BLK331005	18331005	11/29/2018 10:51:41 AM
18NOV29D-08.wiff	LCS331005	18331005	11/29/2018 11:00:41 AM
18NOV29D-09.wiff	9911369	18331005	11/29/2018 11:09:41 AM
18NOV29D-10.wiff	9911370	18331005	11/29/2018 11:18:41 AM
18NOV29D-11.wiff	9911371	18331005	11/29/2018 11:27:41 AM
18NOV29D-12.wiff	9911372	18331005	11/29/2018 11:36:41 AM
18NOV29D-13.wiff	9911373BKG	18331005	11/29/2018 11:45:44 AM
18NOV29D-14.wiff	9911376	18331005	11/29/2018 11:54:47 AM
18NOV29D-15.wiff	9911377	18331005	11/29/2018 12:03:47 PM
18NOV29D-16.wiff	9911378	18331005	11/29/2018 12:12:50 PM
18NOV29D-17.wiff	CCV2_CAL3	N/A	11/29/2018 12:21:50 PM
18NOV29D-18.wiff	solvent	N/A	11/29/2018 12:30:50 PM
18NOV29D-19.wiff	BLK331006	18331006	11/29/2018 12:39:54 PM
18NOV29D-20.wiff	LCS331006	18331006	11/29/2018 12:48:53 PM
18NOV29D-21.wiff	9911416	18331006	11/29/2018 12:57:56 PM
18NOV29D-22.wiff	9911417	18331006	11/29/2018 1:06:56 PM
18NOV29D-23.wiff	9911418	18331006	11/29/2018 1:15:56 PM
18NOV29D-24.wiff	9911419	18331006	11/29/2018 1:24:56 PM
18NOV29D-25.wiff	9911420BKG	18331006	11/29/2018 1:33:59 PM
18NOV29D-26.wiff	9911423	18331006	11/29/2018 1:42:59 PM
18NOV29D-27.wiff	9911424	18331006	11/29/2018 1:51:59 PM
18NOV29D-28.wiff	9911425	18331006	11/29/2018 2:01:02 PM
18NOV29D-29.wiff	CCV3_CAL4	N/A	11/29/2018 2:10:02 PM
18NOV29D-30.wiff	9911426	18331006	11/29/2018 2:19:02 PM
18NOV29D-31.wiff	9911427	18331006	11/29/2018 2:28:02 PM
18NOV29D-32.wiff	9911428	18331006	11/29/2018 2:37:02 PM
18NOV29D-33.wiff	9911429	18331006	11/29/2018 2:46:03 PM
18NOV29D-34.wiff	9911430	18331006	11/29/2018 2:55:03 PM
18NOV29D-35.wiff	9911431	18331006	11/29/2018 3:04:03 PM
18NOV29D-36.wiff	9911432	18331006	11/29/2018 3:13:03 PM
18NOV29D-37.wiff	9911433	18331006	11/29/2018 3:22:03 PM
18NOV29D-38.wiff	9911434	18331006	11/29/2018 3:31:06 PM
18NOV29D-39.wiff	9911421MS	18331006	11/29/2018 3:40:06 PM
18NOV29D-40.wiff	CCV4_ISC_CAL2	N/A	11/29/2018 3:49:06 PM
18NOV29D-41.wiff	9911422MSD	18331006	11/29/2018 3:58:06 PM
18NOV29D-42.wiff	solvent	N/A	11/29/2018 4:07:08 PM
18NOV29D-43.wiff	BLK331014	18331014	11/29/2018 4:16:09 PM
18NOV29D-44.wiff	LCS331014	18331014	11/29/2018 4:25:12 PM
18NOV29D-45.wiff	LCSDA	18331014	11/29/2018 4:34:15 PM

APPROVED
By MCD at 11:04 pm, 11/30/18

Instrument Name: LM27631

18NOV29D-46.wiff	9881899	18331014	11/29/2018 4:43:18 PM
18NOV29D-47.wiff	9881900	18331014	11/29/2018 4:52:21 PM
18NOV29D-48.wiff	9881932	18331014	11/29/2018 5:01:24 PM
18NOV29D-49.wiff	9881933BKG	18331014	11/29/2018 5:10:27 PM
18NOV29D-50.wiff	9881947	18331014	11/29/2018 5:19:30 PM
18NOV29D-51.wiff	9881948	18331014	11/29/2018 5:28:33 PM
18NOV29D-52.wiff	CCV5_CAL3	N/A	11/29/2018 5:37:36 PM
18NOV29D-53.wiff	9881899MS	18331014	11/29/2018 5:46:36 PM
18NOV29D-54.wiff	solvent	N/A	11/29/2018 5:55:39 PM
18NOV29D-55.wiff	BLK332003	18332003	11/29/2018 6:04:39 PM
18NOV29D-56.wiff	LCS332003	18332003	11/29/2018 6:13:39 PM
18NOV29D-57.wiff	9881542	18332003	11/29/2018 6:22:39 PM
18NOV29D-58.wiff	9881543	18332003	11/29/2018 6:31:39 PM
18NOV29D-59.wiff	9883382BKG	18332003	11/29/2018 6:40:42 PM
18NOV29D-60.wiff	9883385	18332003	11/29/2018 6:49:45 PM
18NOV29D-61.wiff	9883396	18332003	11/29/2018 6:58:45 PM
18NOV29D-62.wiff	9883397	18332003	11/29/2018 7:07:45 PM
18NOV29D-63.wiff	9885076	18332003	11/29/2018 7:16:48 PM
18NOV29D-64.wiff	CCV6_CAL4	N/A	11/29/2018 7:25:48 PM
18NOV29D-65.wiff	9885077	18332003	11/29/2018 7:34:51 PM
18NOV29D-66.wiff	9885091	18332003	11/29/2018 7:43:54 PM
18NOV29D-67.wiff	9885133	18332003	11/29/2018 7:52:57 PM
18NOV29D-68.wiff	9885134	18332003	11/29/2018 8:02:00 PM
18NOV29D-69.wiff	9885151	18332003	11/29/2018 8:11:03 PM
18NOV29D-70.wiff	9883383MS	18332003	11/29/2018 8:20:03 PM
18NOV29D-71.wiff	9883384MSD	18332003	11/29/2018 8:29:03 PM
18NOV29D-72.wiff	CCV7_ISC_CAL2	N/A	11/29/2018 8:38:03 PM
18NOV29D-73.wiff	Instrument Blank	N/A	11/29/2018 8:47:06 PM
18NOV29D-74.wiff	9911358	18330003	11/29/2018 8:56:09 PM
18NOV29D-75.wiff	9911366	18330003	11/29/2018 9:05:09 PM
18NOV29D-76.wiff	9911367	18330003	11/29/2018 9:14:09 PM
18NOV29D-77.wiff	9909757	18330013	11/29/2018 9:23:09 PM
18NOV29D-78.wiff	9909762	18330013	11/29/2018 9:32:09 PM
18NOV29D-79.wiff	CCV8_CAL3	N/A	11/29/2018 9:41:09 PM
18NOV29D-80.wiff	BLK332013	18332013	11/29/2018 9:50:12 PM
18NOV29D-81.wiff	LCS332013	18332013	11/29/2018 9:59:15 PM
18NOV29D-82.wiff	9909732	18332013	11/29/2018 10:08:18 PM
18NOV29D-83.wiff	9909733	18332013	11/29/2018 10:17:21 PM
18NOV29D-84.wiff	9909734BKG	18332013	11/29/2018 10:26:24 PM
18NOV29D-85.wiff	9909735	18332013	11/29/2018 10:35:27 PM
18NOV29D-86.wiff	9909736	18332013	11/29/2018 10:44:30 PM
18NOV29D-87.wiff	9909737	18332013	11/29/2018 10:53:33 PM
18NOV29D-88.wiff	9909738	18332013	11/29/2018 11:02:33 PM
18NOV29D-89.wiff	9909739	18332013	11/29/2018 11:11:36 PM
18NOV29D-90.wiff	CCV9_CAL4	N/A	11/29/2018 11:20:36 PM
18NOV29D-91.wiff	9909740	18332013	11/29/2018 11:29:36 PM
18NOV29D-92.wiff	9909741	18332013	11/29/2018 11:38:36 PM
18NOV29D-93.wiff	9909742	18332013	11/29/2018 11:47:36 PM
18NOV29D-94.wiff	9909743MS	18332013	11/29/2018 11:56:36 PM
18NOV29D-95.wiff	9909744MSD	18332013	11/30/2018 12:05:36 AM

20 mM Ammonium Acetate in H2O: 2615711261833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 2615711261833B

APPROVED
By MCD at 11:04 pm, 11/30/18

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 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

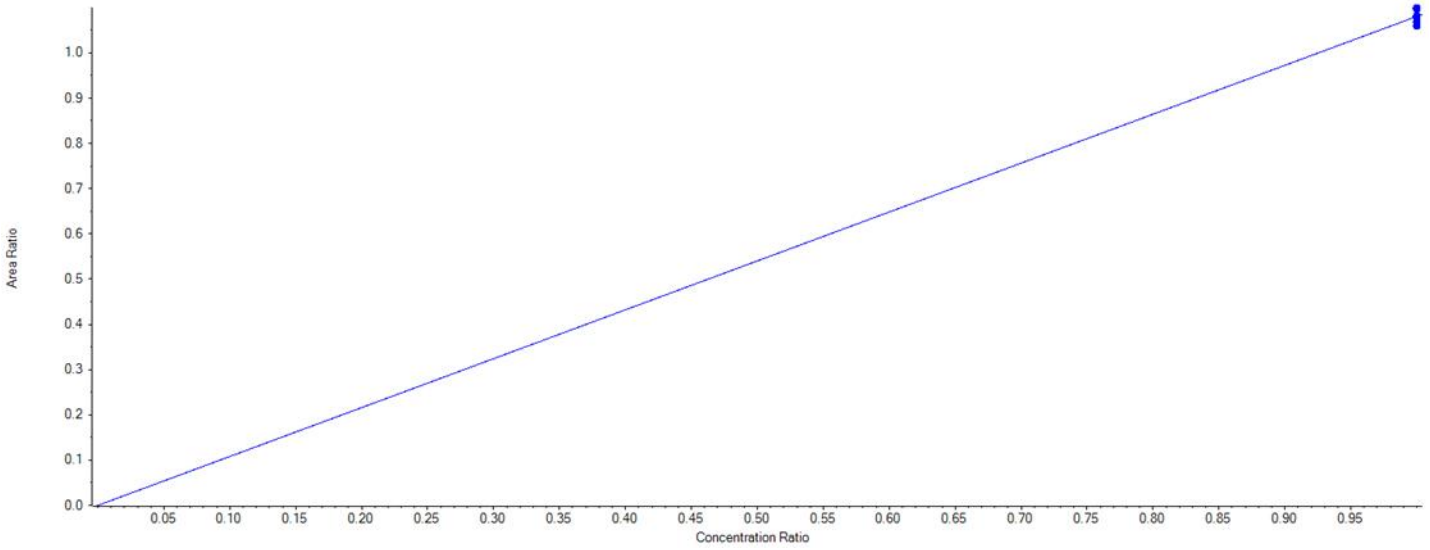
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.018	0.931	0.905	0.934	0.936	0.881	0.816	6	20		0.997	
PFPeA	0.983	0.897	0.863	0.883	0.914	0.858	0.814	6	20		0.998	
PFBS	1.158	0.984	0.907	0.979	0.951	0.960	0.893	8	20		0.999	
4:2-FTS	1.777	1.830	1.827	1.860	1.869	1.731	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

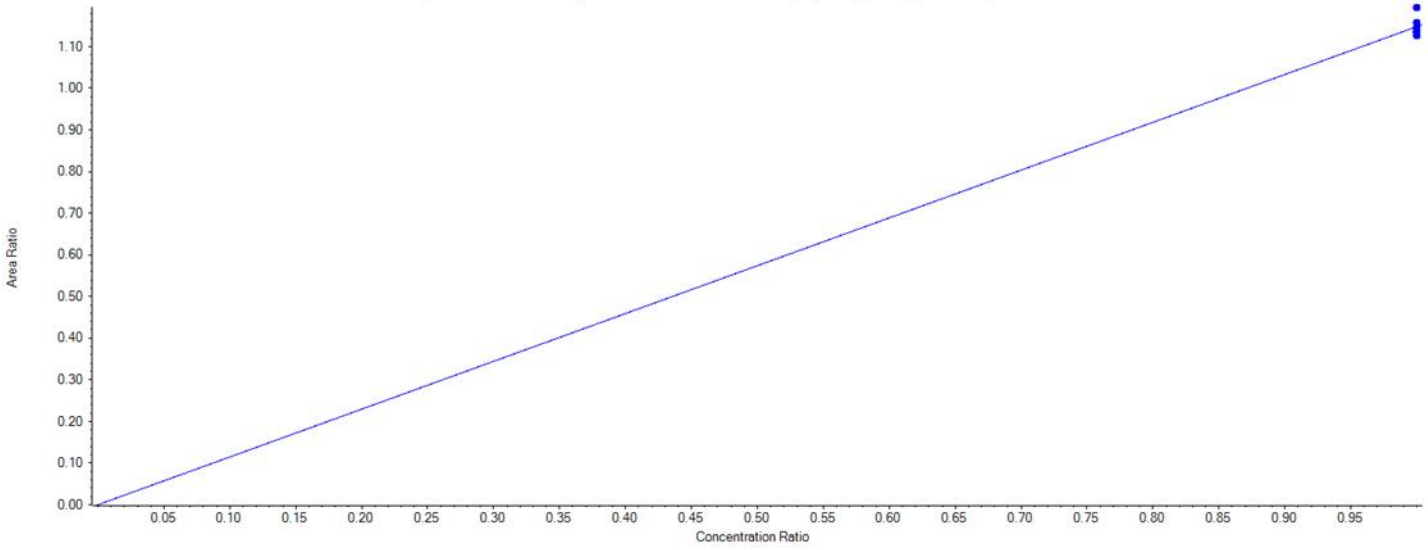
REVIEWED
By umar at 5:23 pm, 11/9/18

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

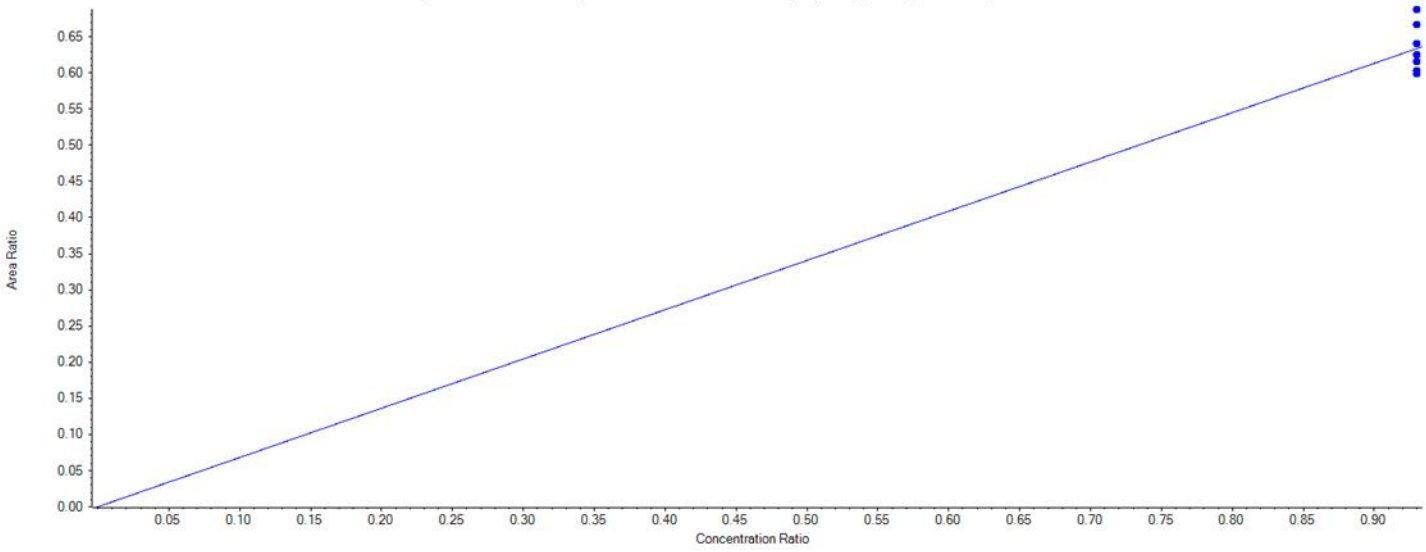
REVIEWED
By umar at 5:23 pm, 11/9/18

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

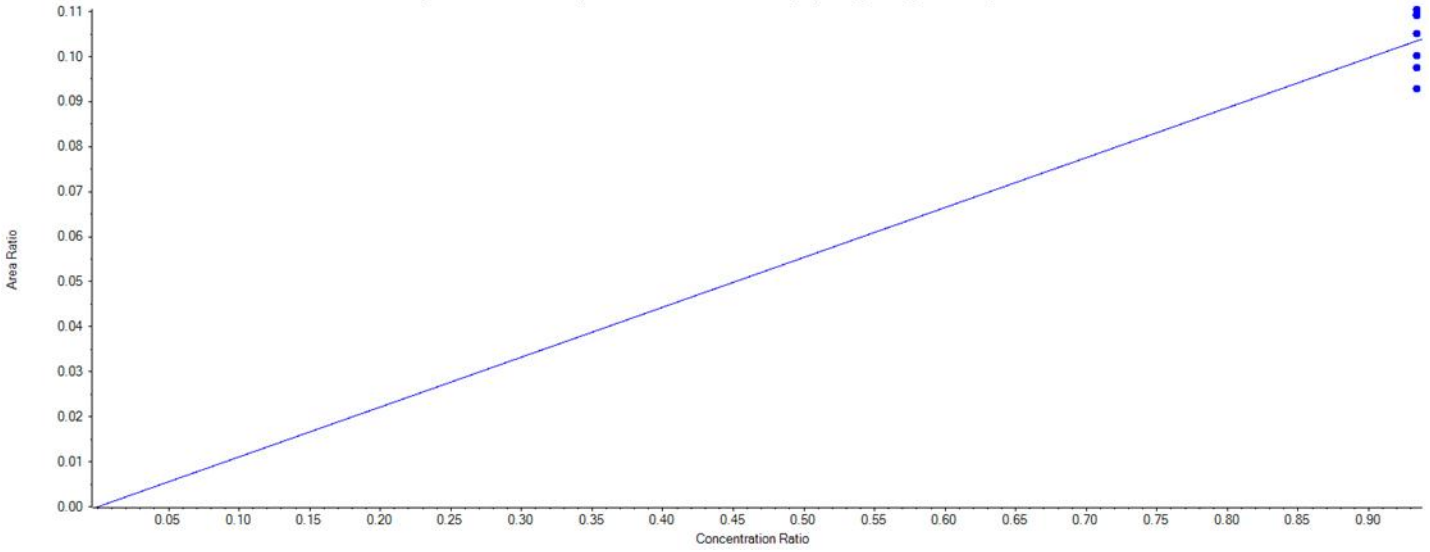
REVIEWED
By umar at 5:23 pm, 11/9/18

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

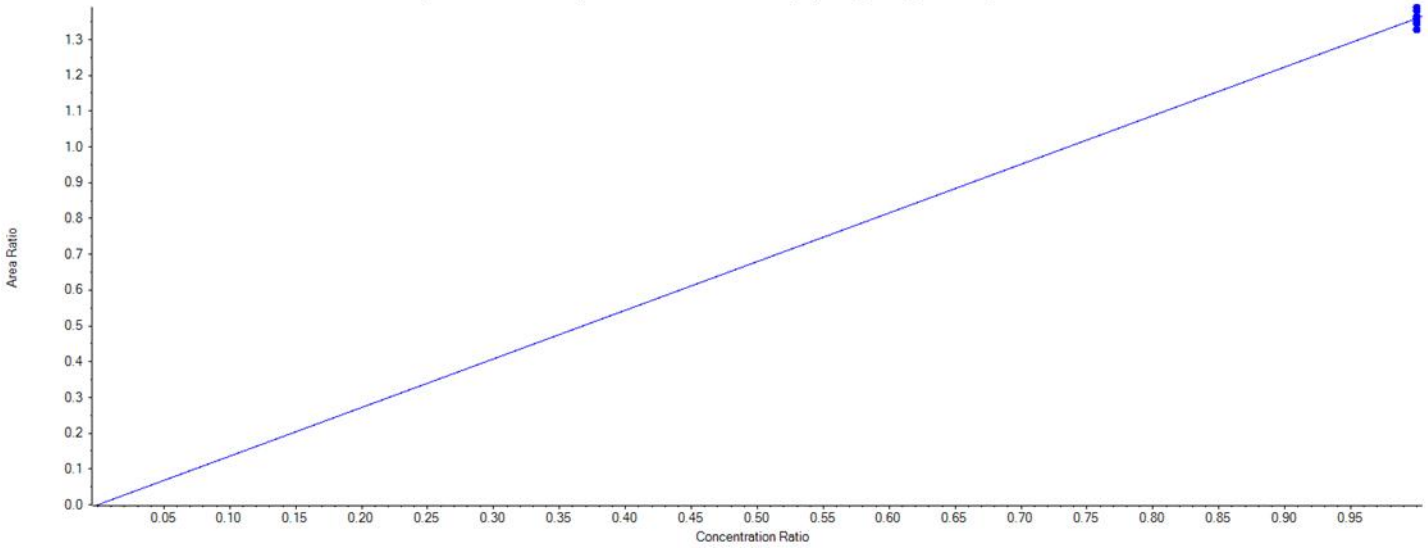
REVIEWED
By umar at 5:23 pm, 11/9/18

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

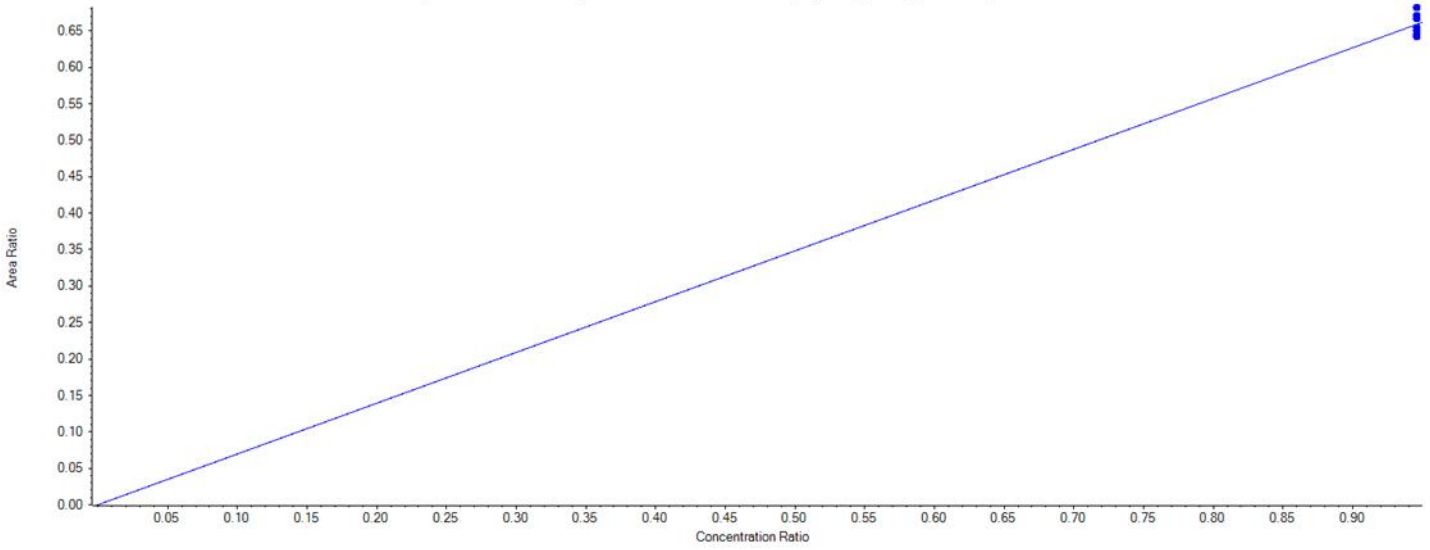
REVIEWED
By umar at 5:23 pm, 11/9/18

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

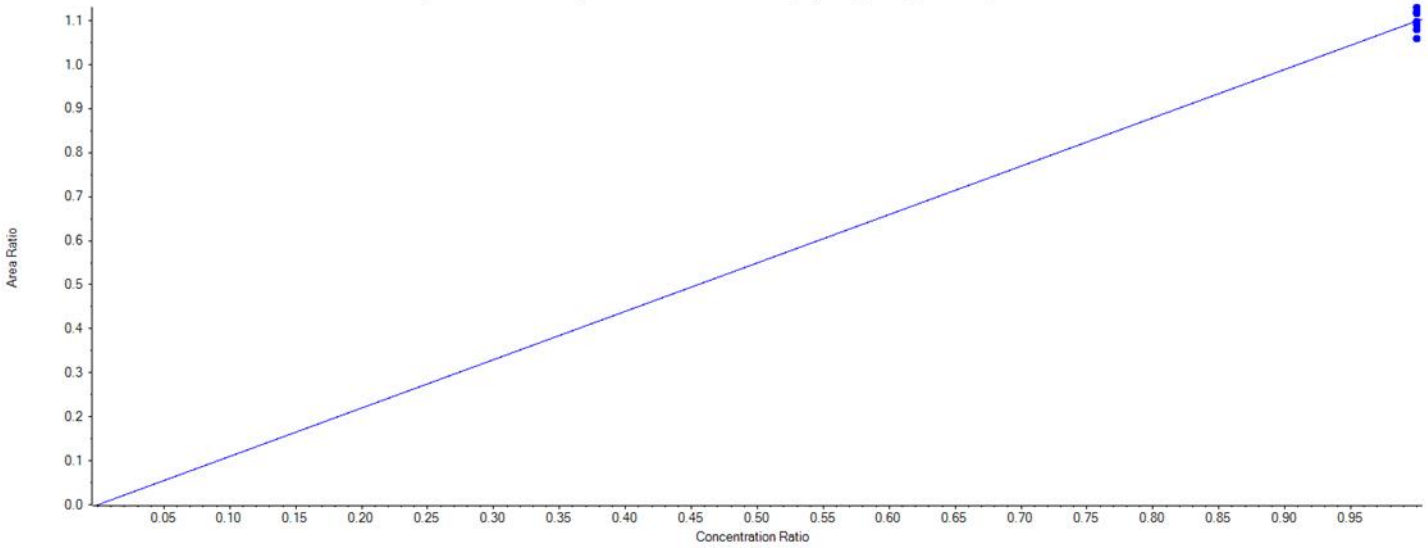
REVIEWED
By umar at 5:23 pm, 11/9/18

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

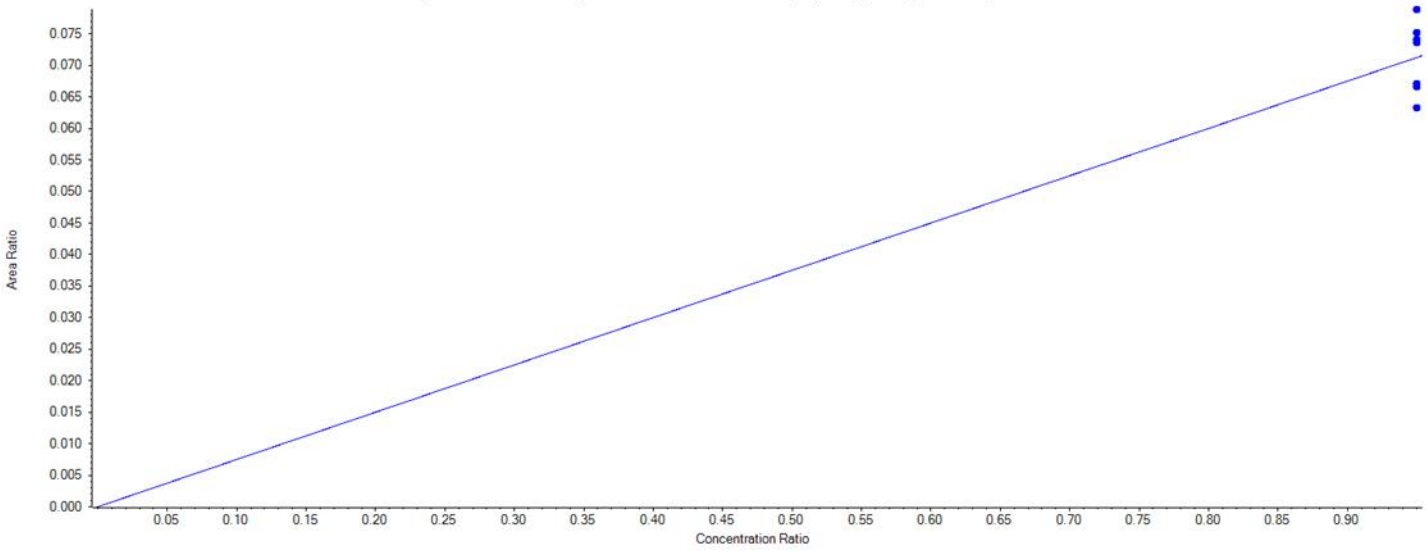
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By umar at 5:23 pm, 11/9/18

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

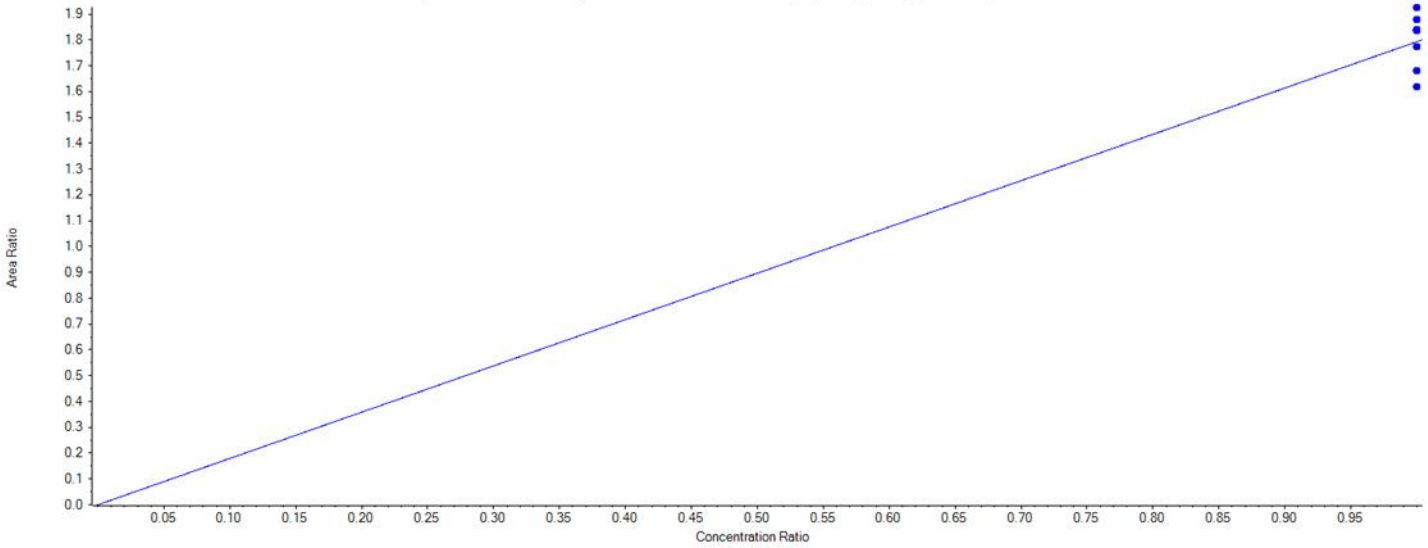
REVIEWED
By umar at 5:23 pm, 11/9/18

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

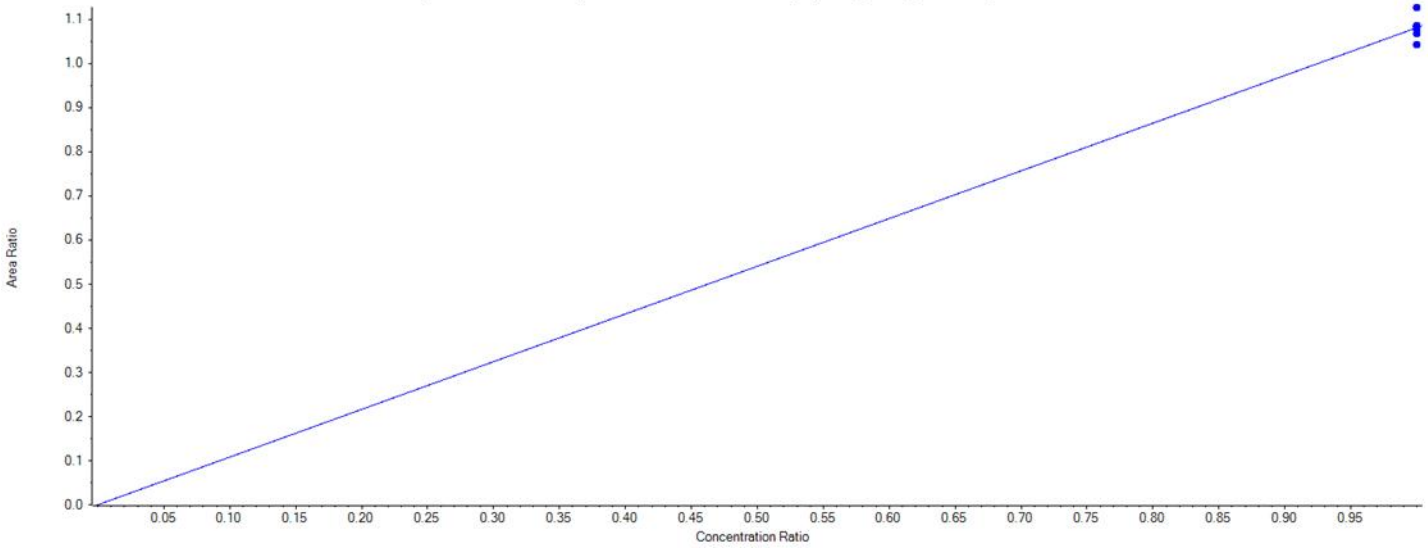
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By umar at 5:23 pm, 11/9/18

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

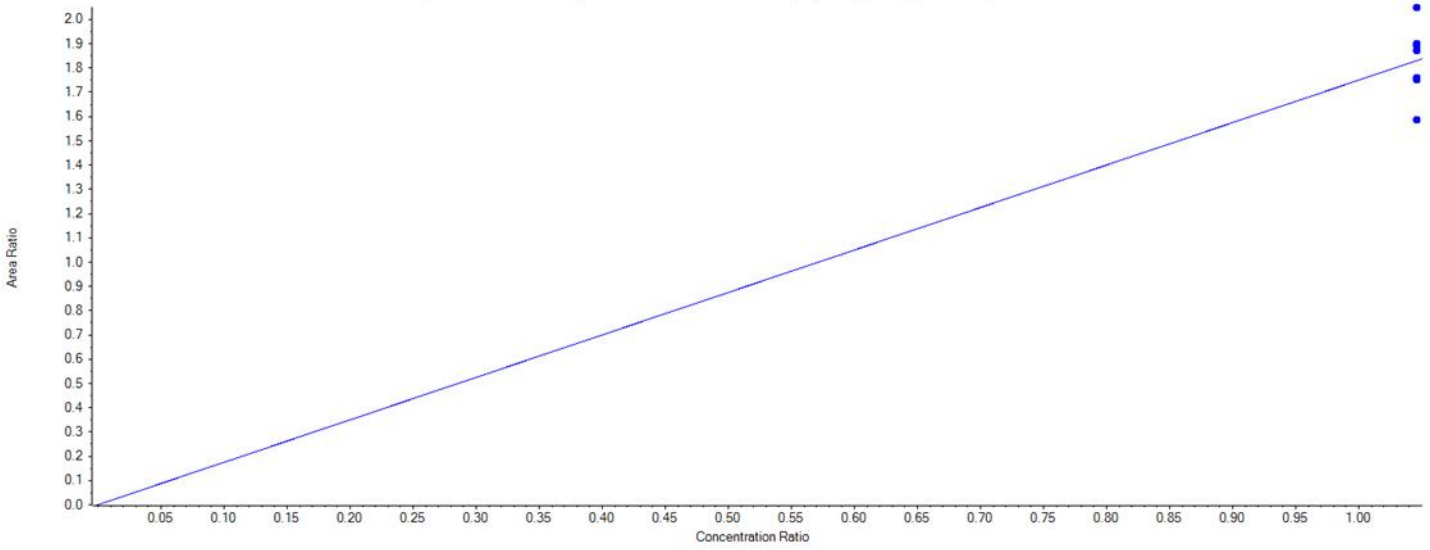
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By umar at 5:23 pm, 11/9/18

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

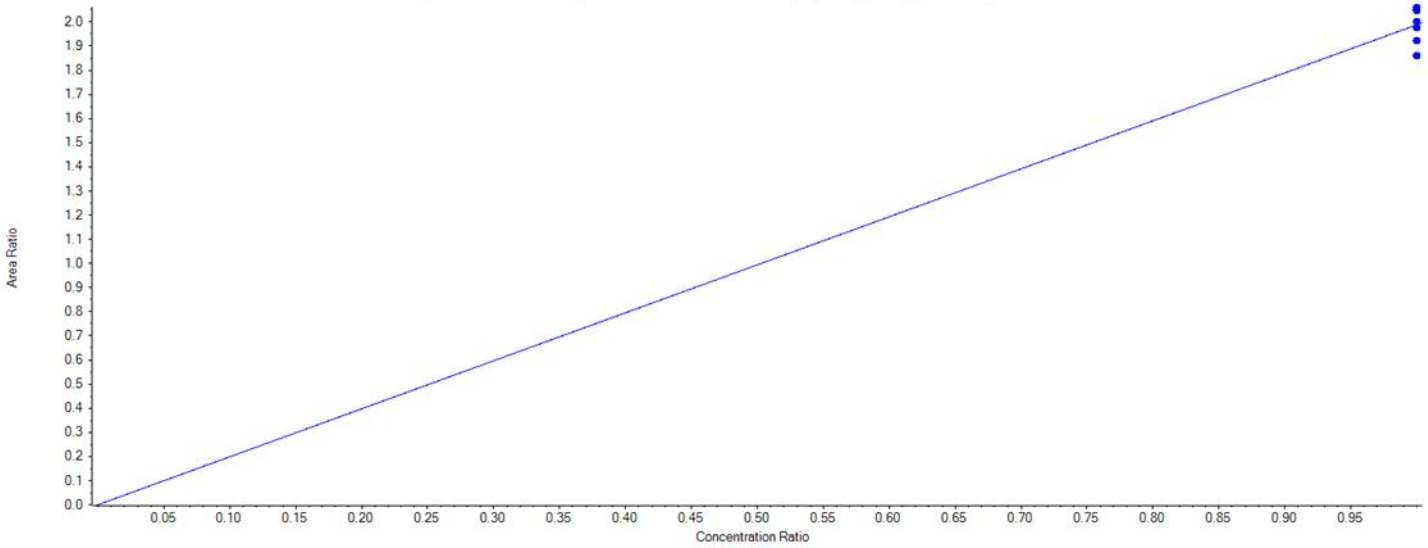
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By umar at 5:23 pm, 11/9/18

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	

APPROVED
By JPT at 2:53 pm, 11/7/18

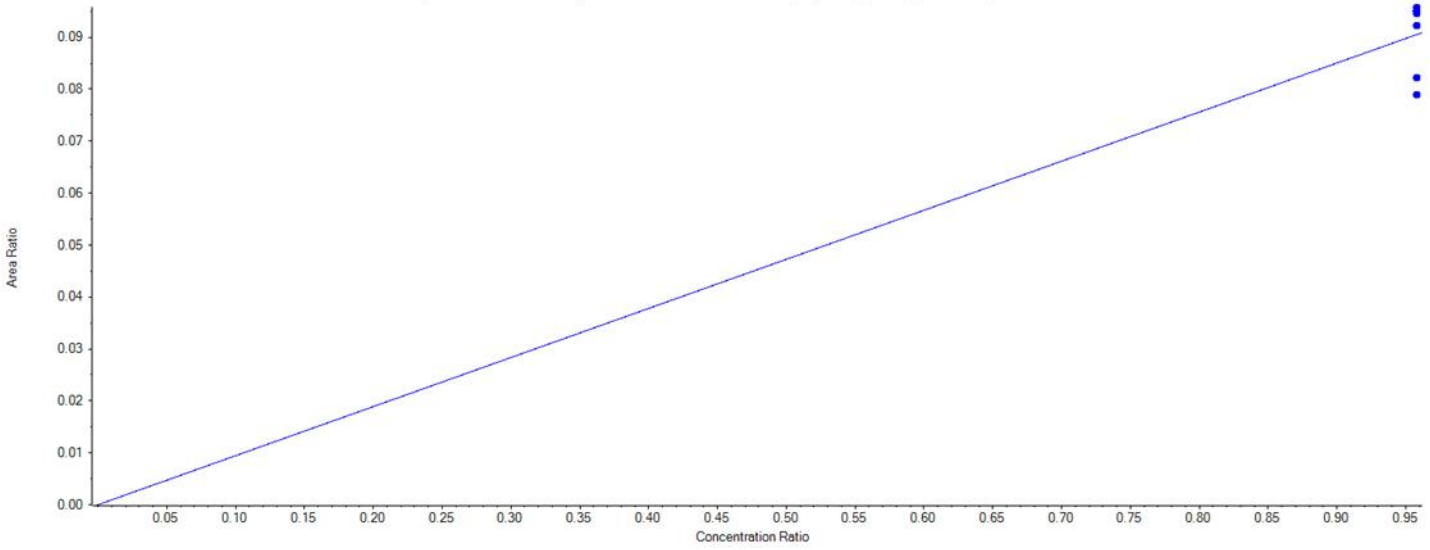
REVIEWED
By umar at 5:23 pm, 11/9/18

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

E13C2-8:2-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

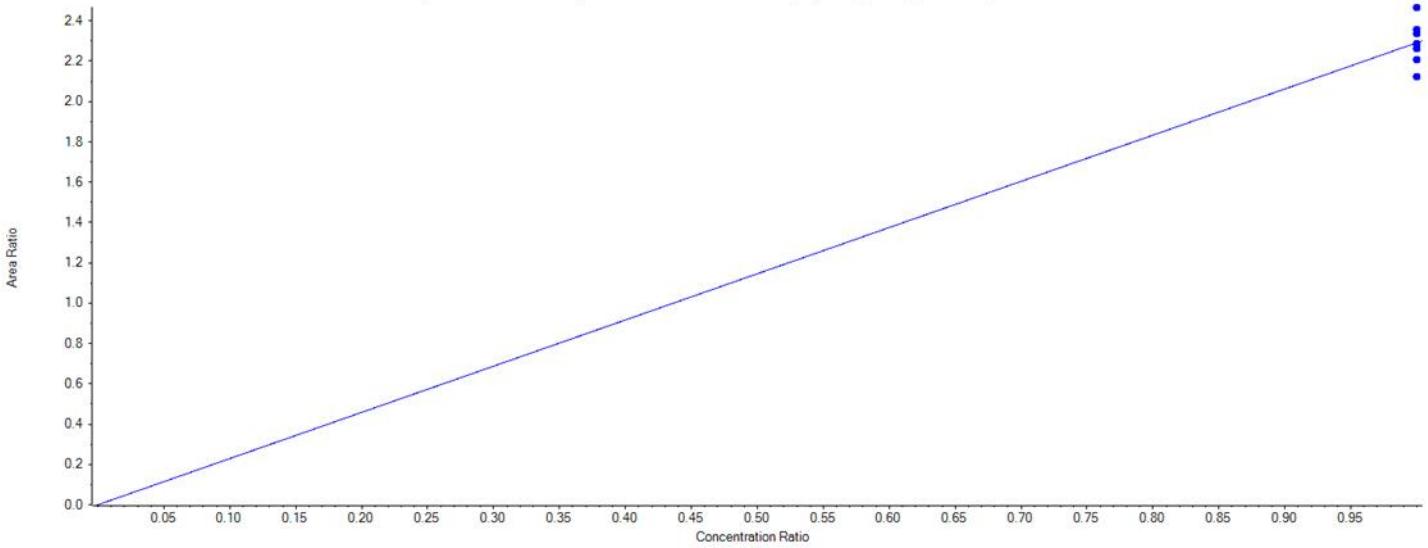
REVIEWED
By umar at 5:23 pm, 11/9/18

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

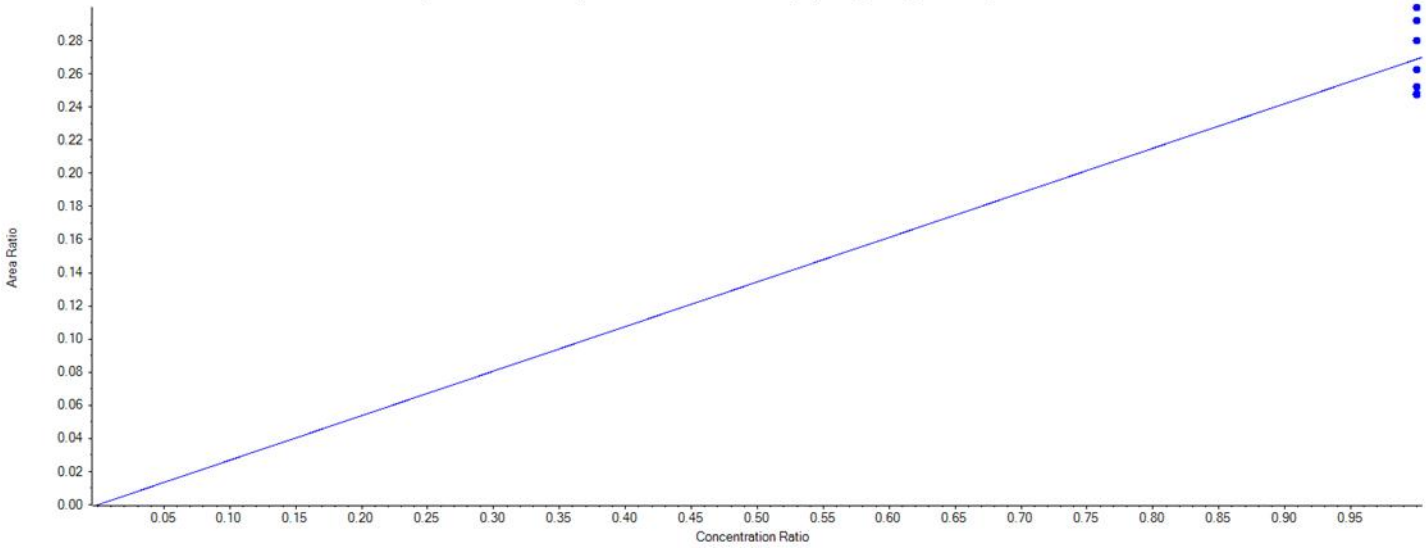
REVIEWED
By umar at 5:23 pm, 11/9/18

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

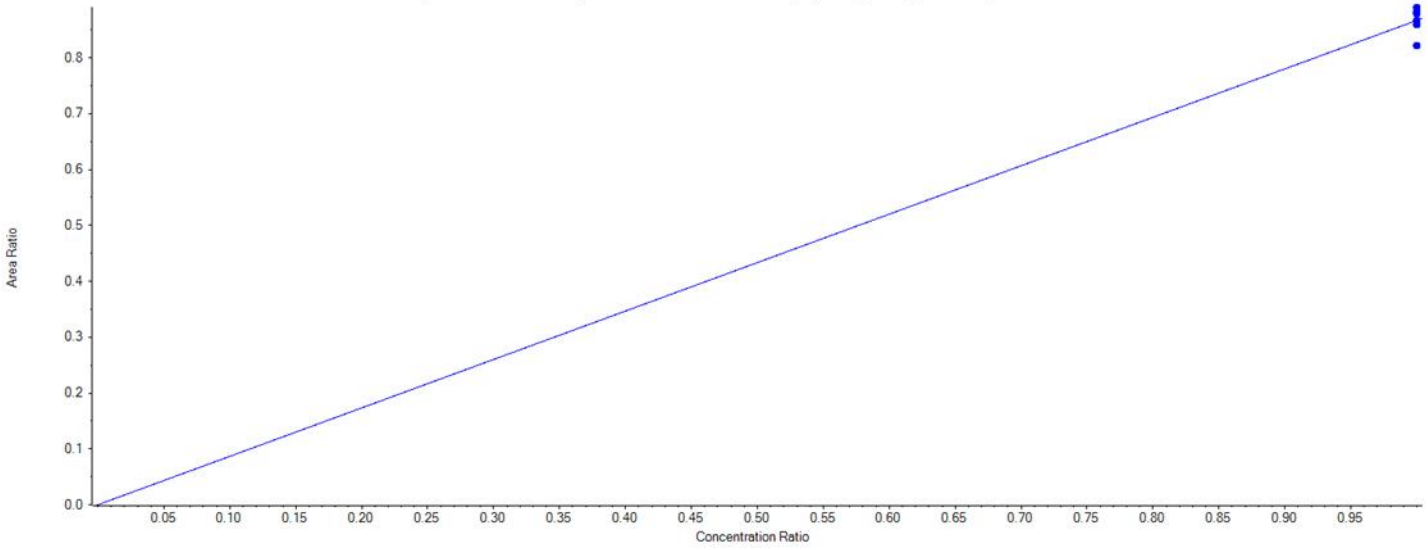
REVIEWED
By umar at 5:23 pm, 11/9/18

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

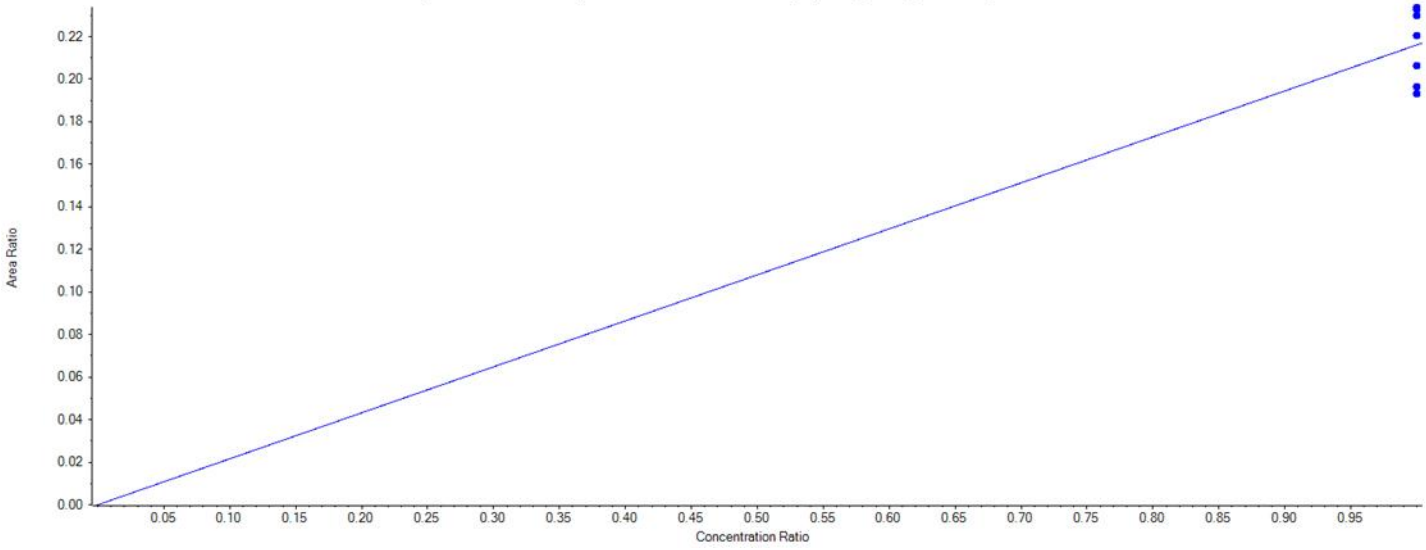
REVIEWED
By umar at 5:23 pm, 11/9/18

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

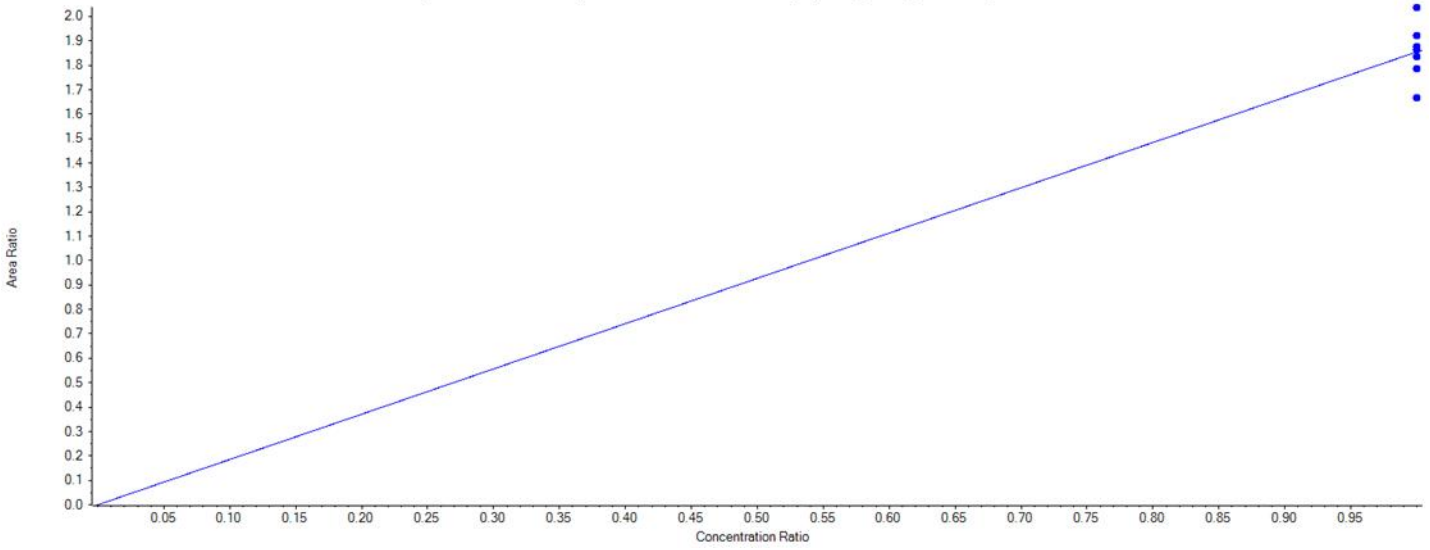
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By umar at 5:23 pm, 11/9/18

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

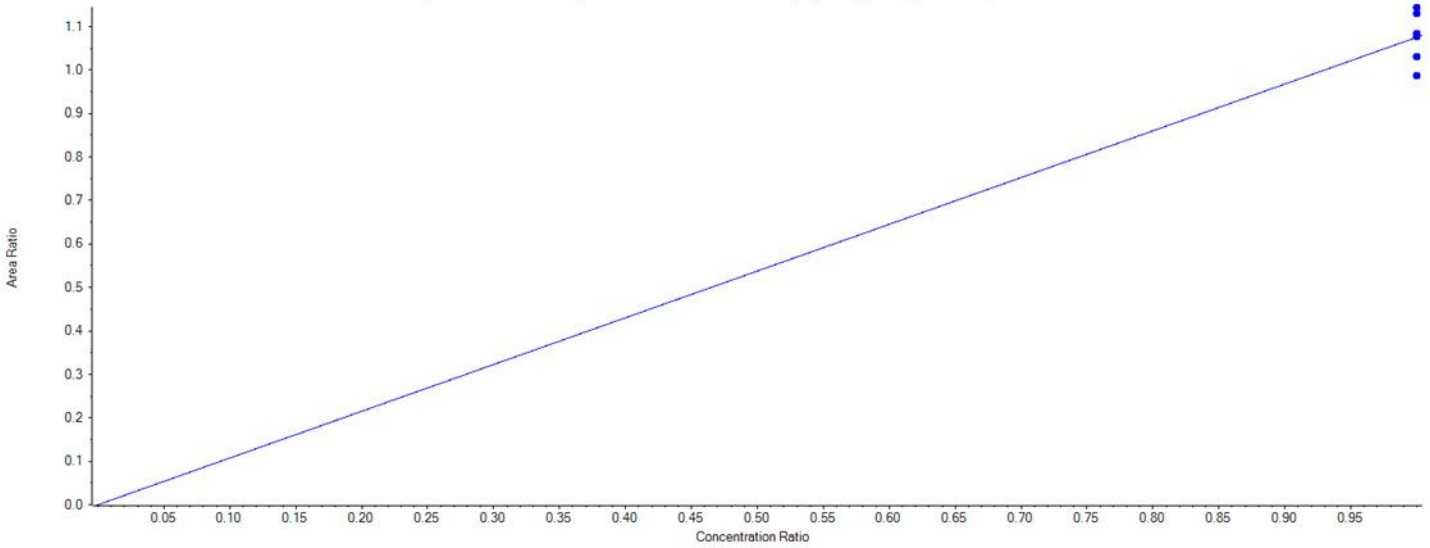
REVIEWED
By umar at 5:23 pm, 11/9/18

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	

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By JPT at 2:53 pm, 11/7/18

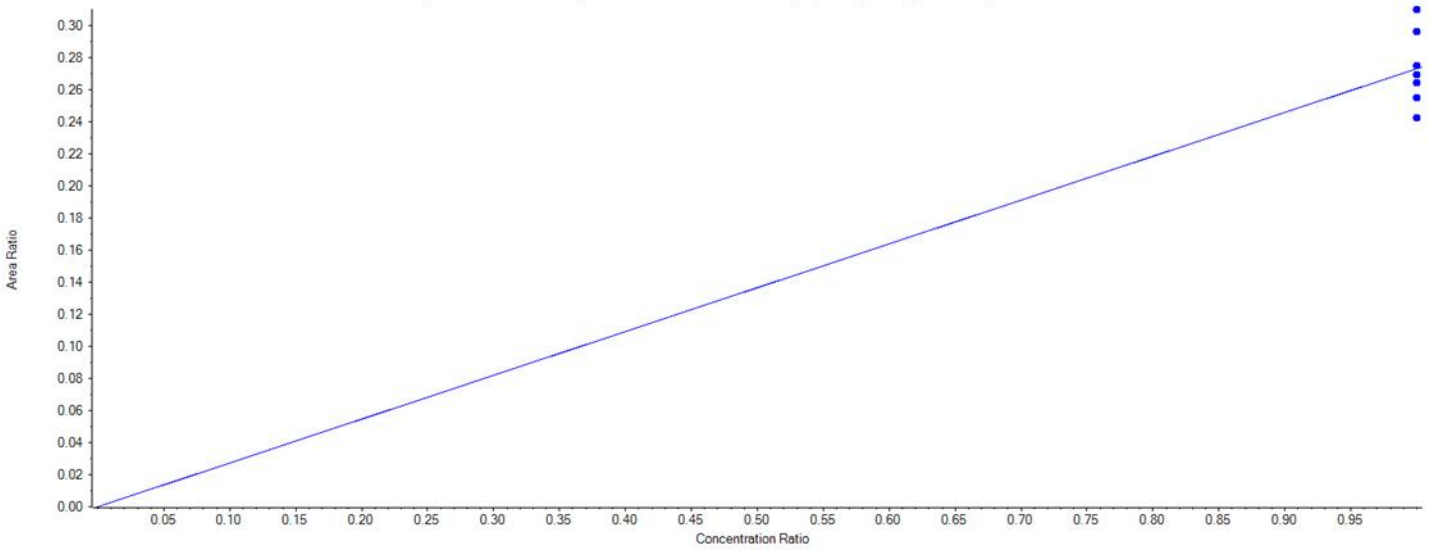
REVIEWED
By umar at 5:23 pm, 11/9/18

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

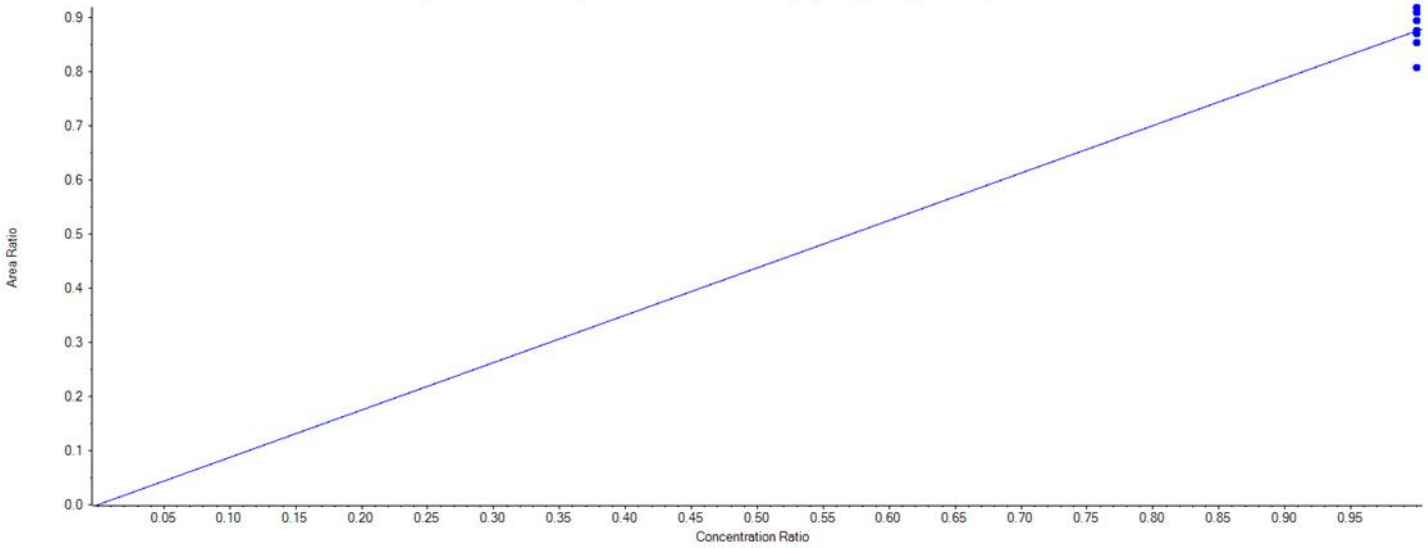
REVIEWED
By umar at 5:23 pm, 11/9/18

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	

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By JPT at 2:53 pm, 11/7/18

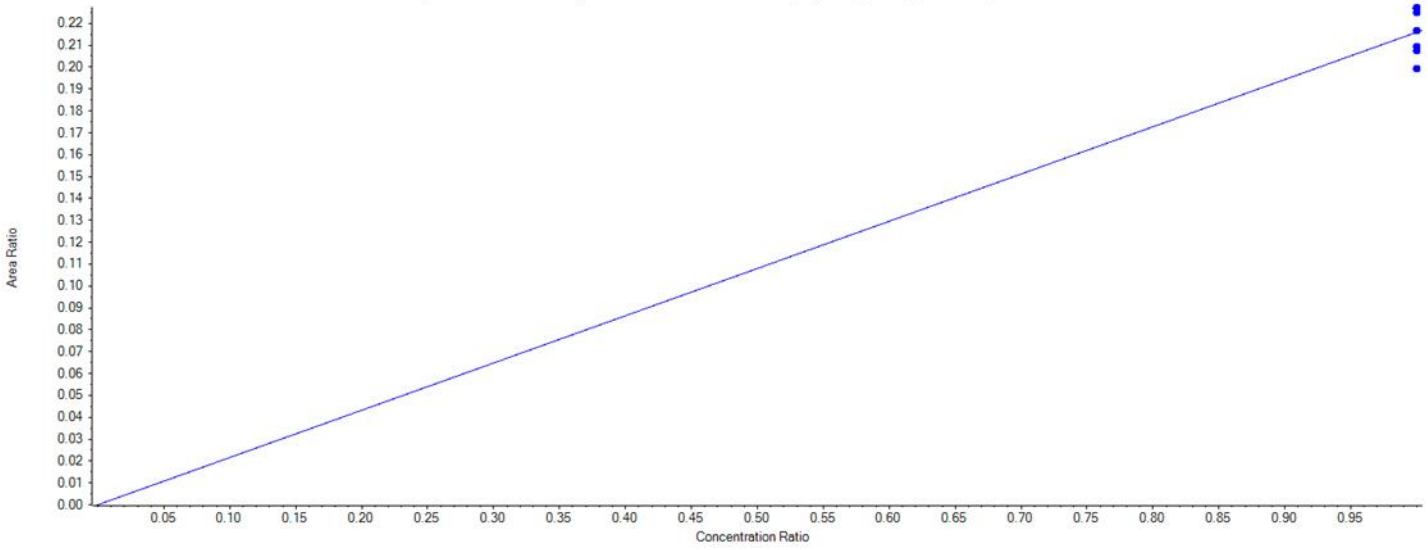
REVIEWED
By umar at 5:23 pm, 11/9/18

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

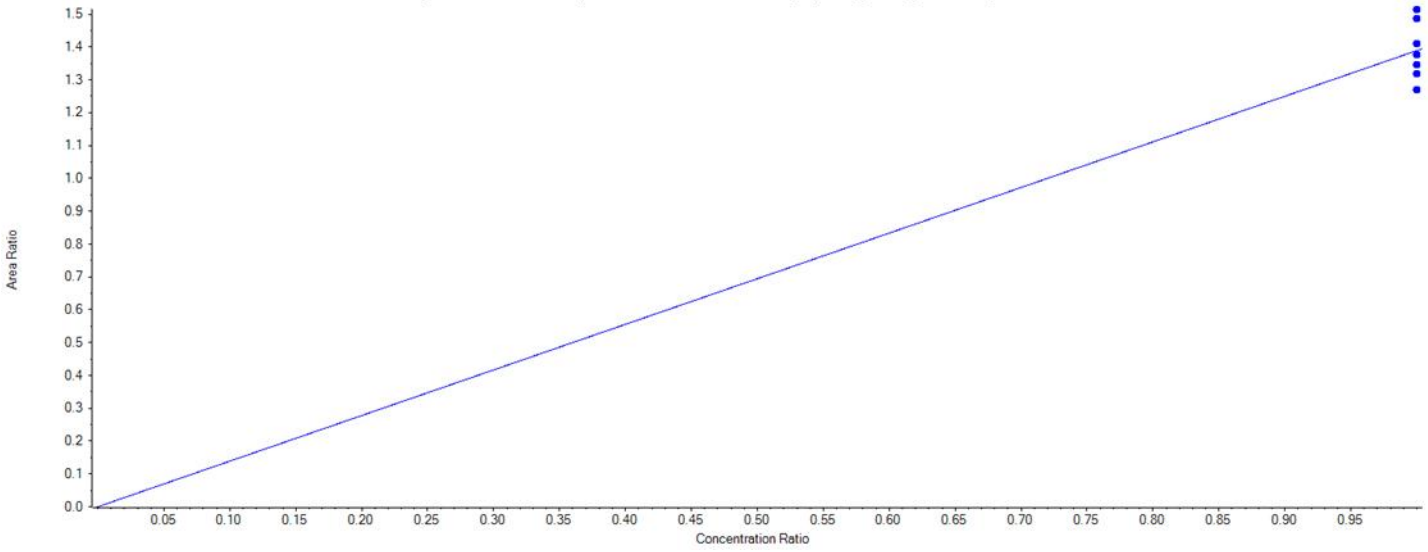
REVIEWED
By umar at 5:23 pm, 11/9/18

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

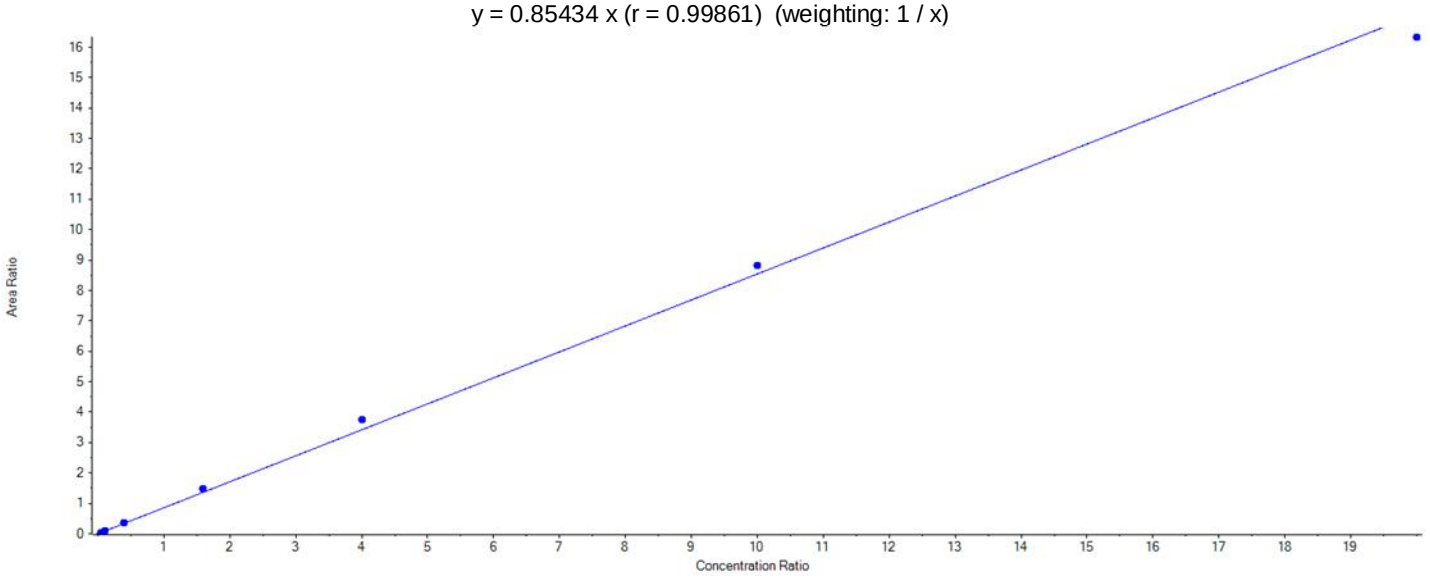
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By umar at 5:23 pm, 11/9/18

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

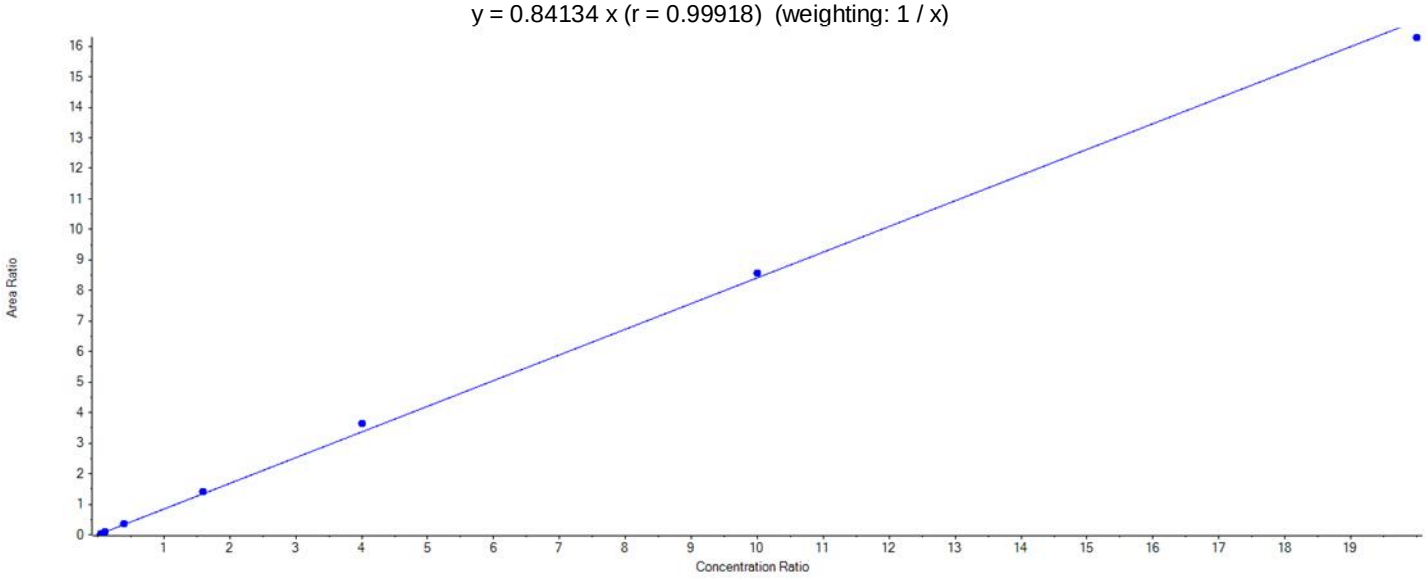
REVIEWED
By umar at 5:23 pm, 11/9/18

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

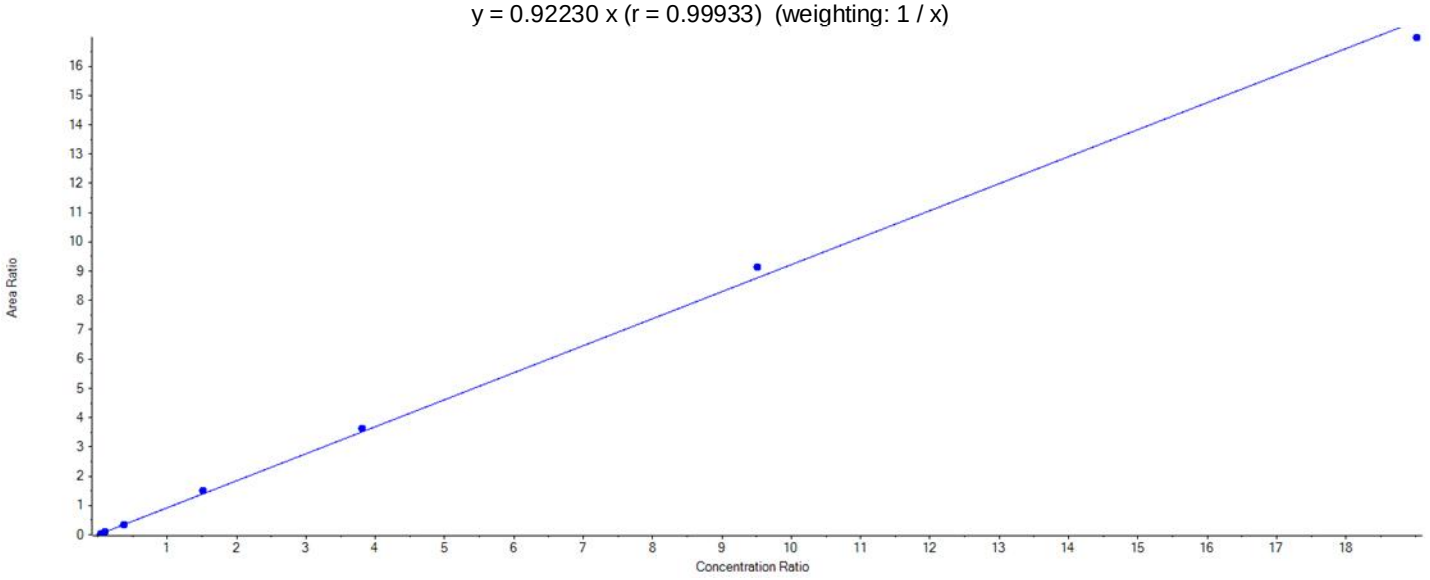
REVIEWED
By umar at 5:23 pm, 11/9/18

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

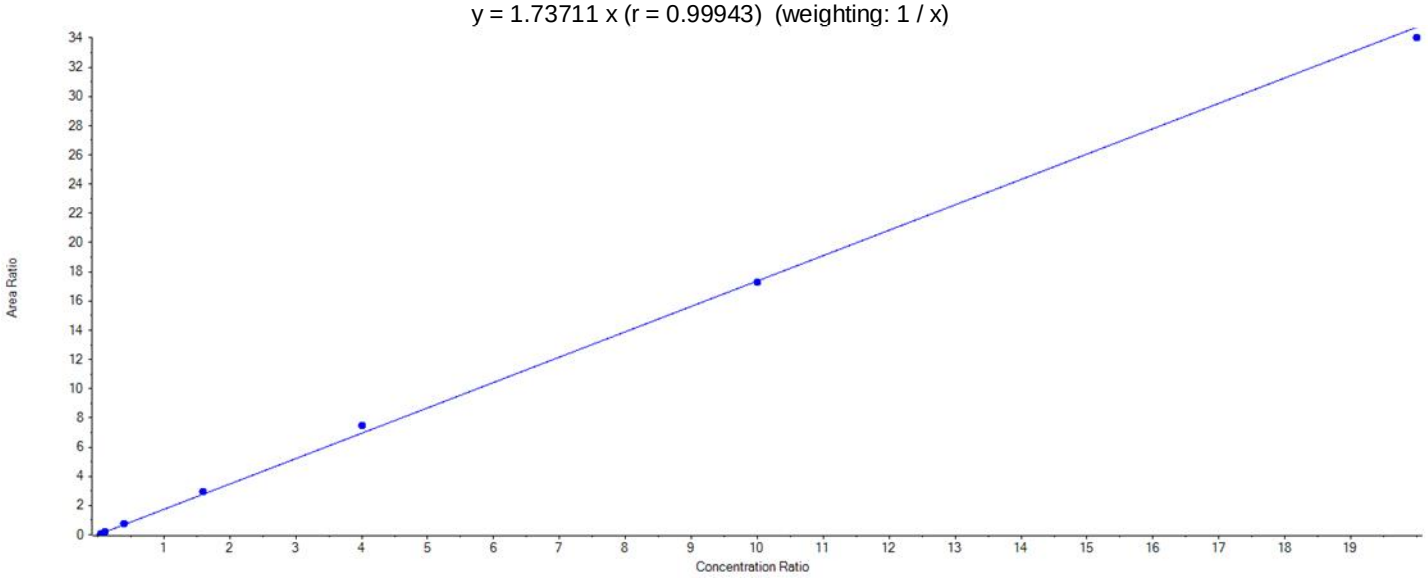
REVIEWED
By umar at 5:23 pm, 11/9/18

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

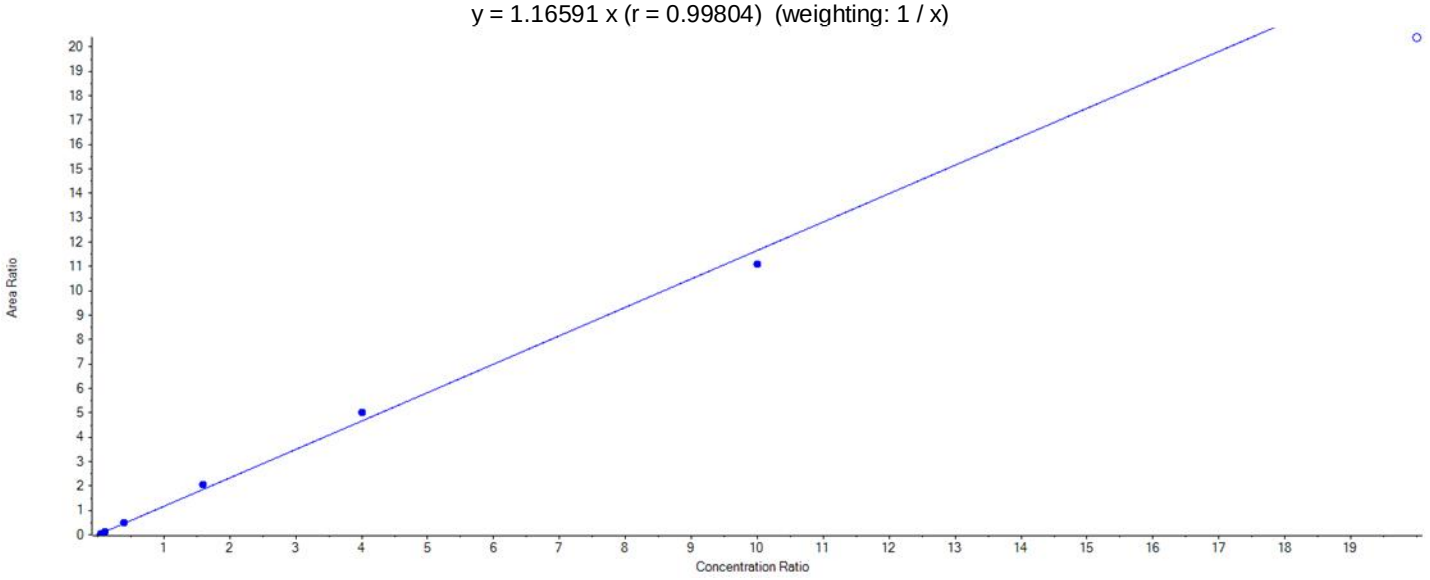
REVIEWED
By umar at 5:23 pm, 11/9/18

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

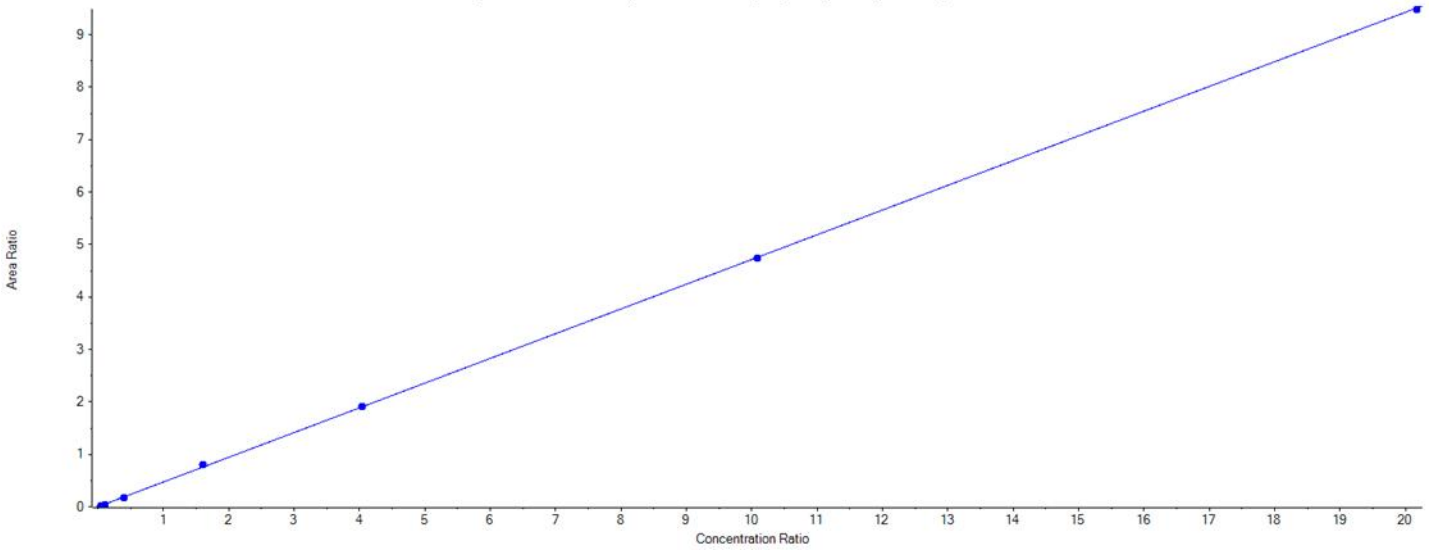
REVIEWED
By umar at 5:23 pm, 11/9/18

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

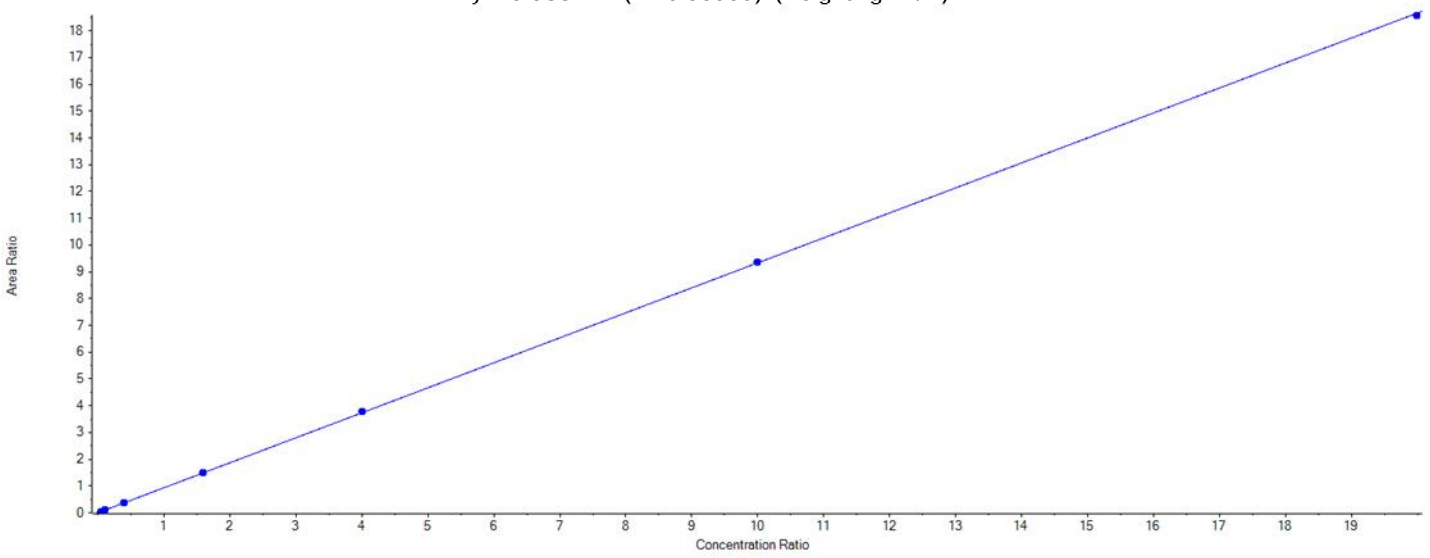
REVIEWED
By umar at 5:23 pm, 11/9/18

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

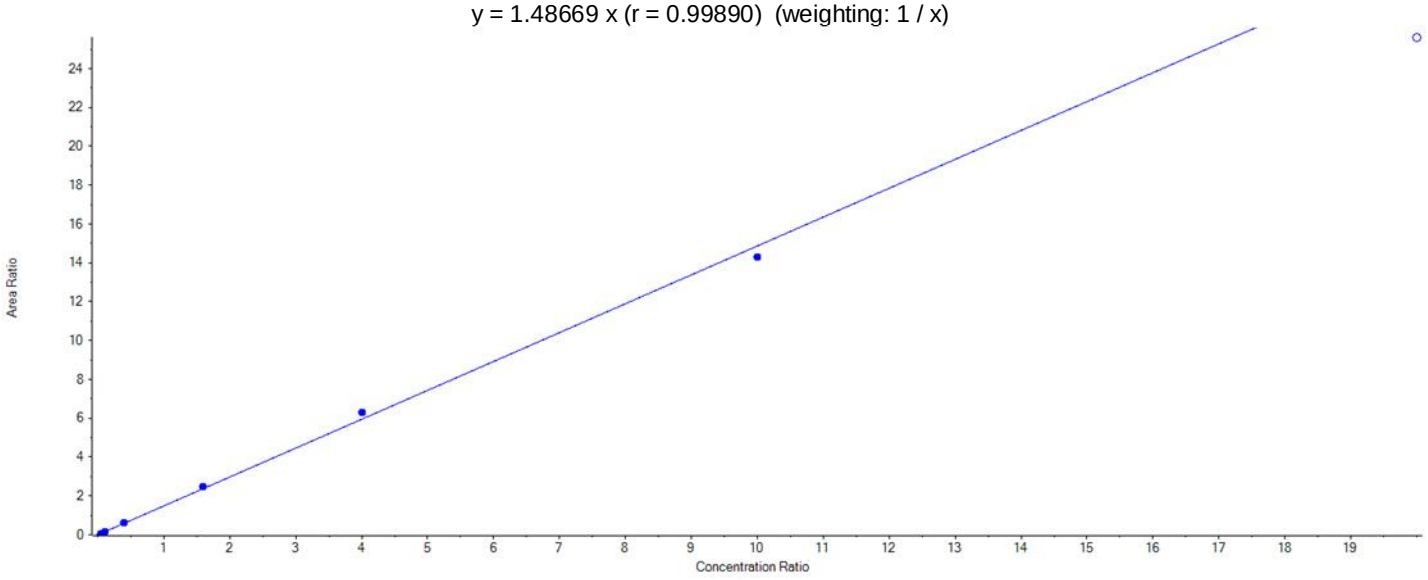
REVIEWED
By umar at 5:23 pm, 11/9/18

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

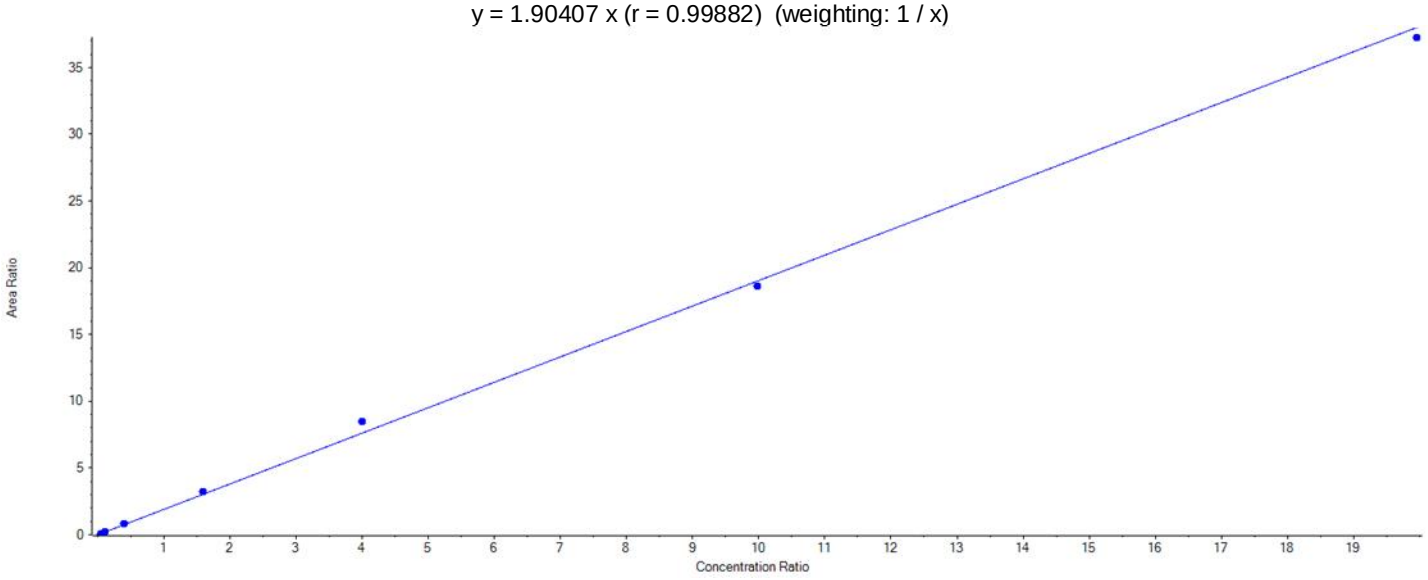
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By umar at 5:23 pm, 11/9/18

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

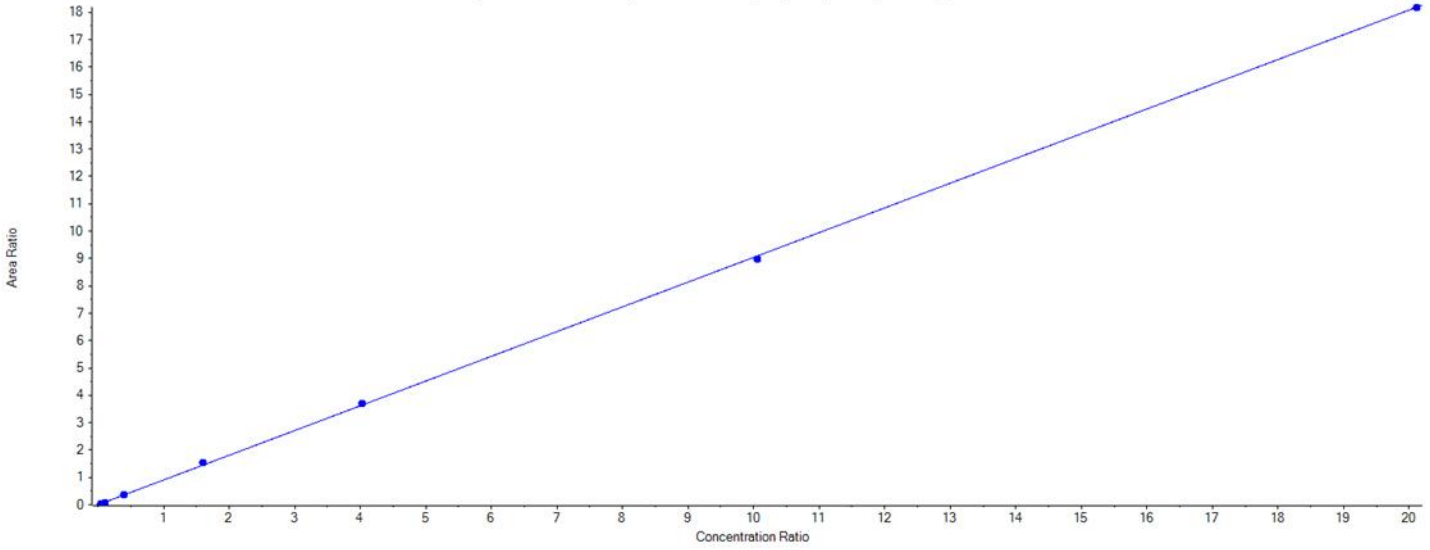
REVIEWED
By umar at 5:23 pm, 11/9/18

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

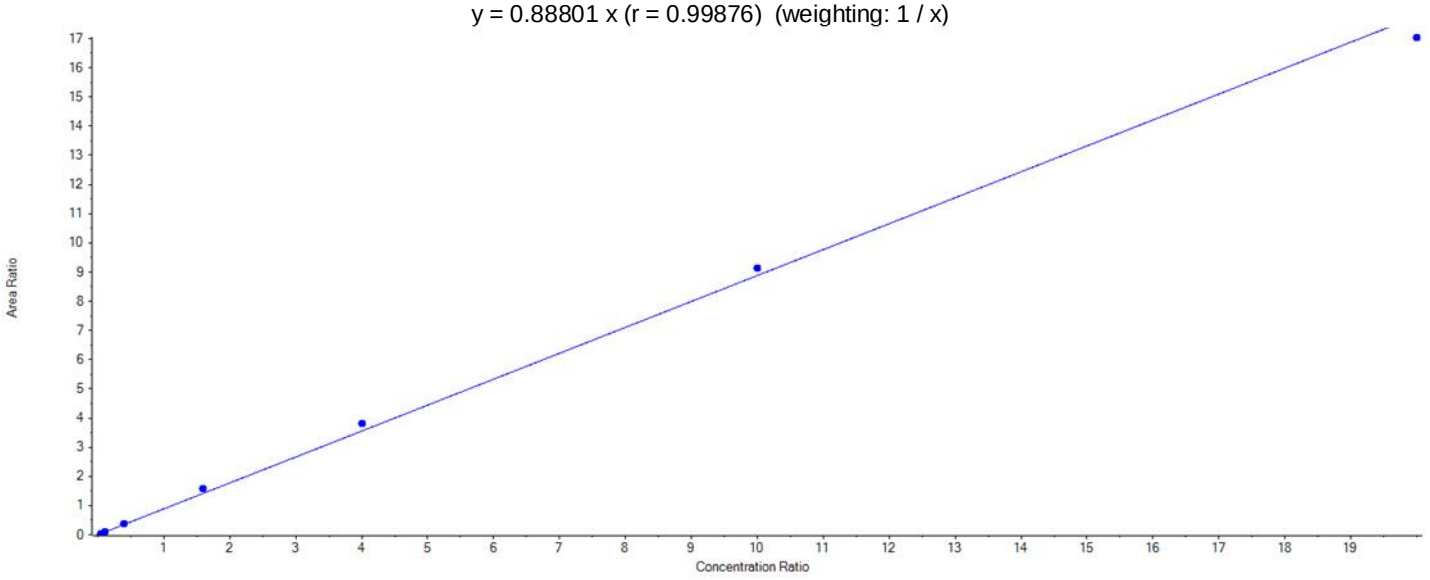
REVIEWED
By umar at 5:23 pm, 11/9/18

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

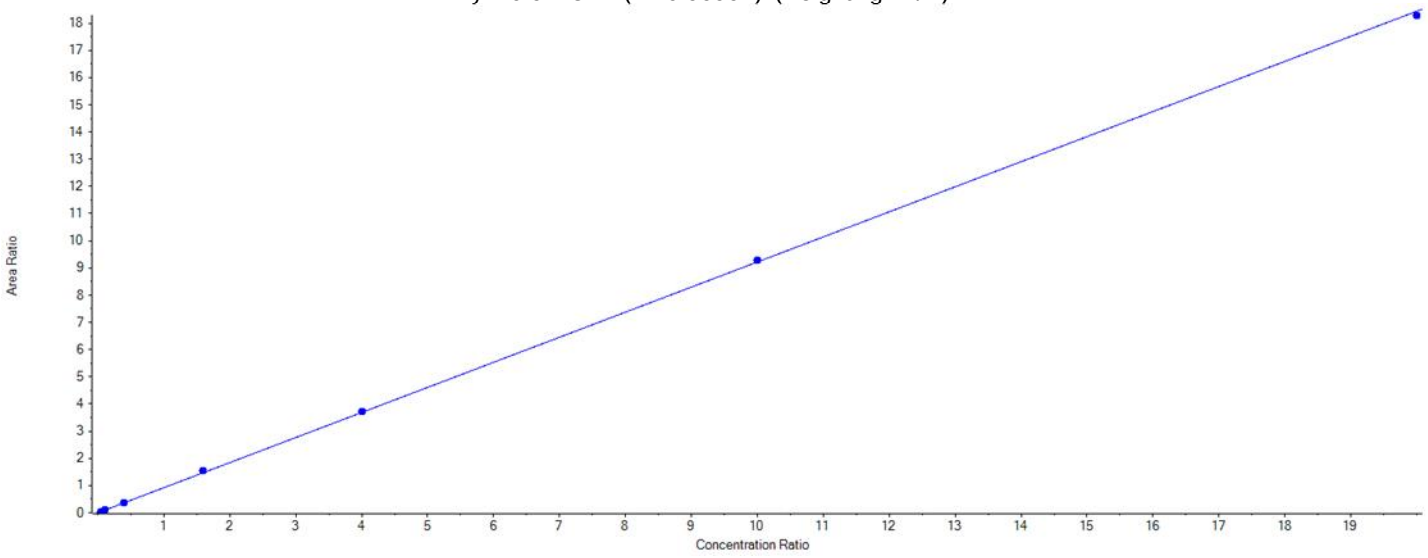
REVIEWED
By umar at 5:23 pm, 11/9/18

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

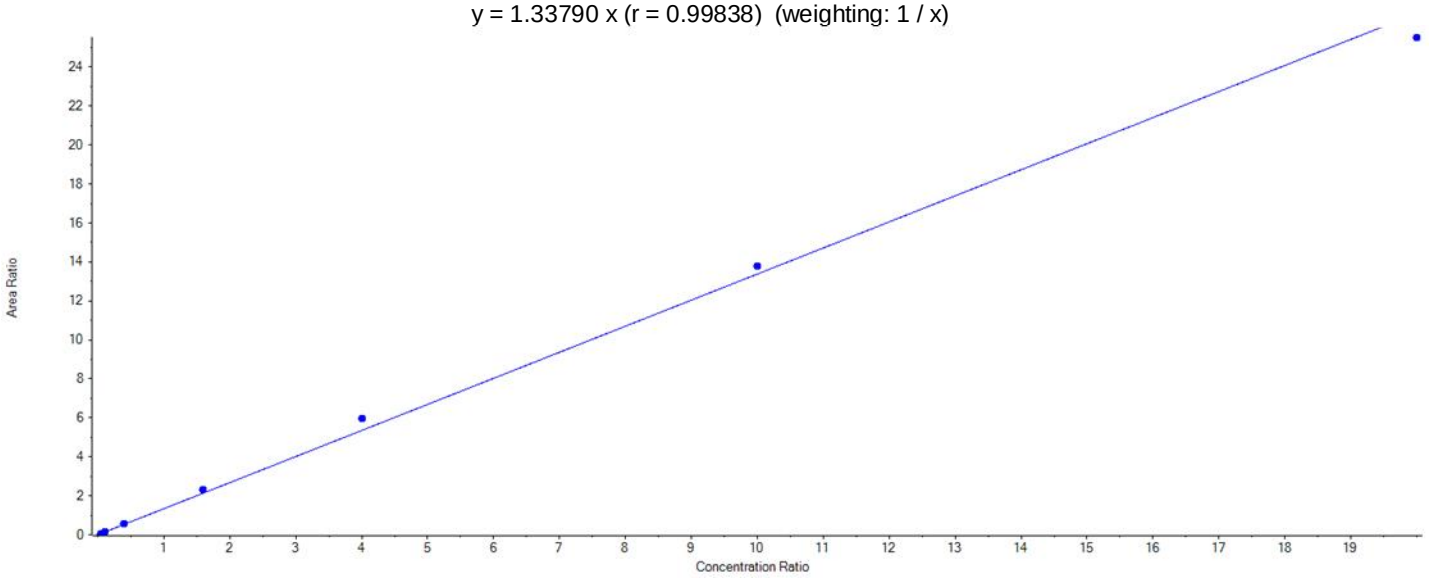
REVIEWED
By umar at 5:23 pm, 11/9/18

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

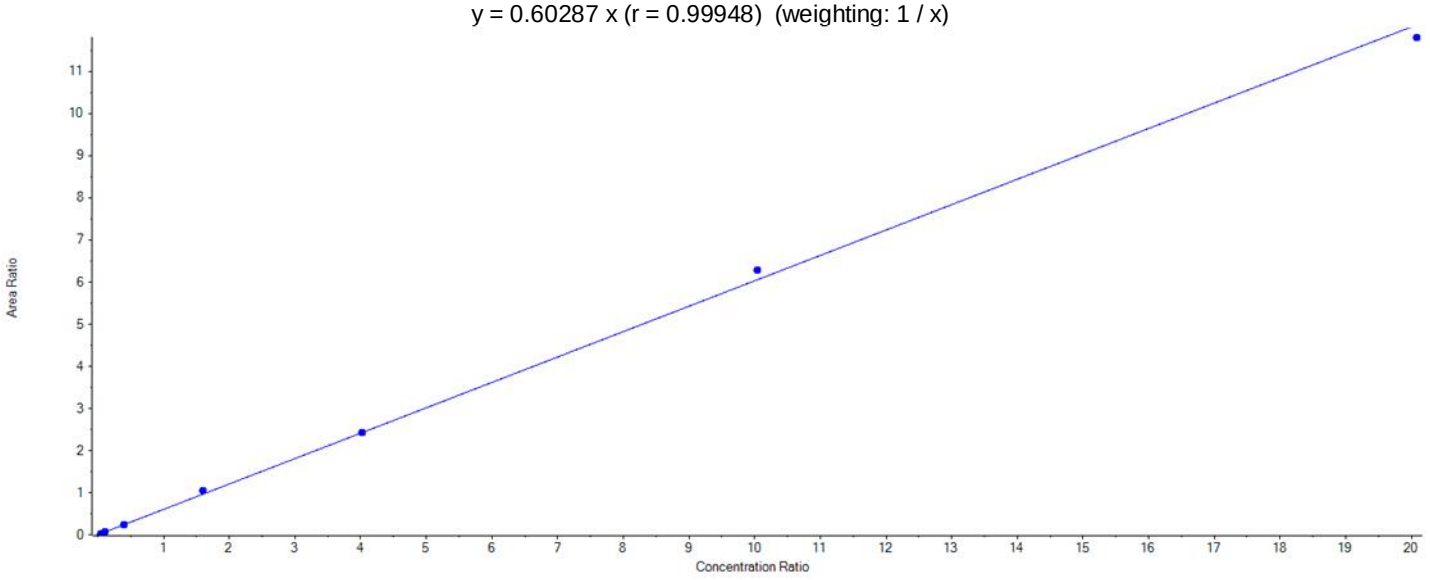
REVIEWED
By umar at 5:23 pm, 11/9/18

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	

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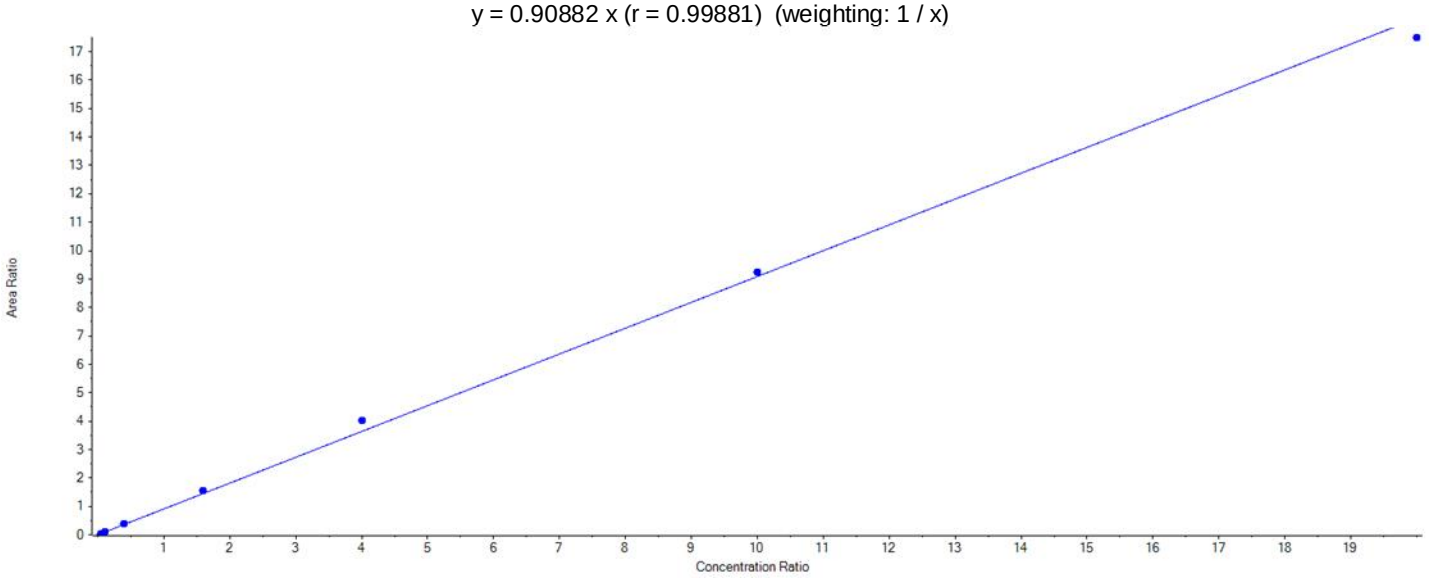
REVIEWED
By umar at 5:23 pm, 11/9/18

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	

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By JPT at 2:53 pm, 11/7/18

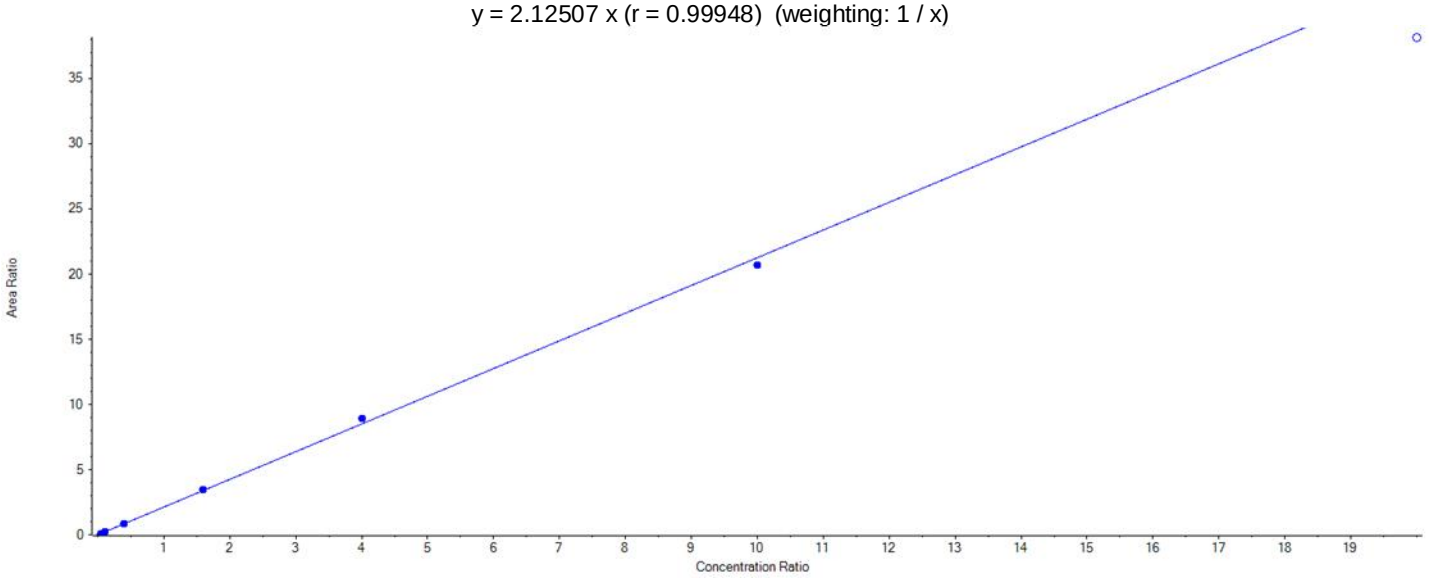
REVIEWED
By umar at 5:23 pm, 11/9/18

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

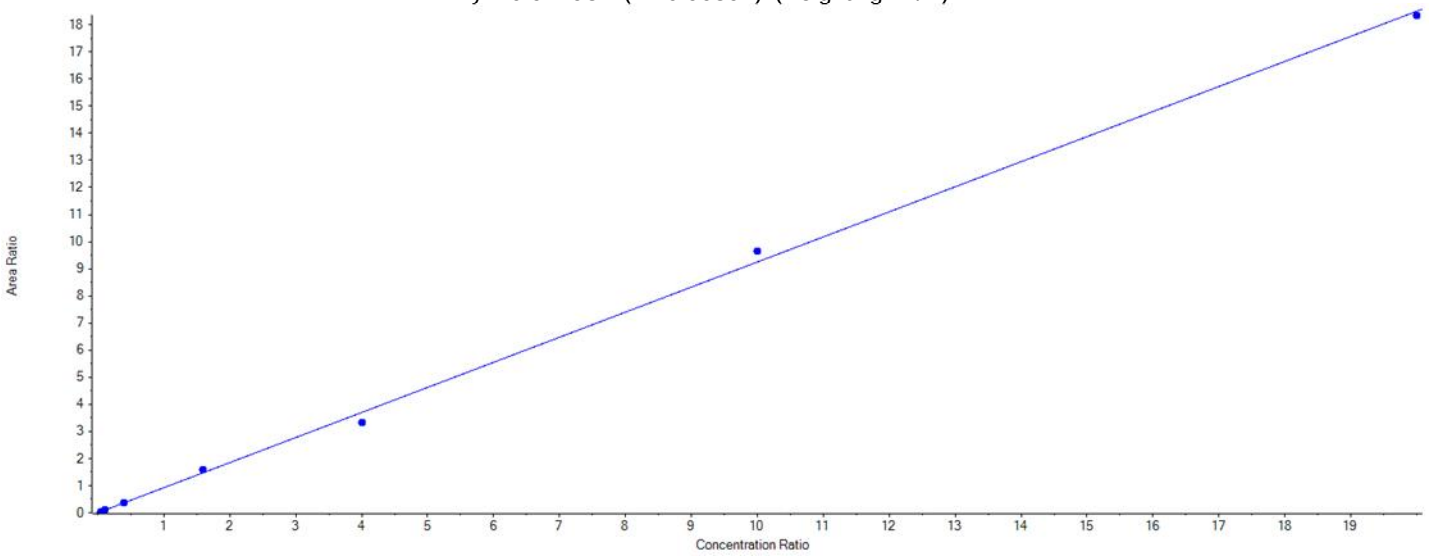
REVIEWED
By umar at 5:23 pm, 11/9/18

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

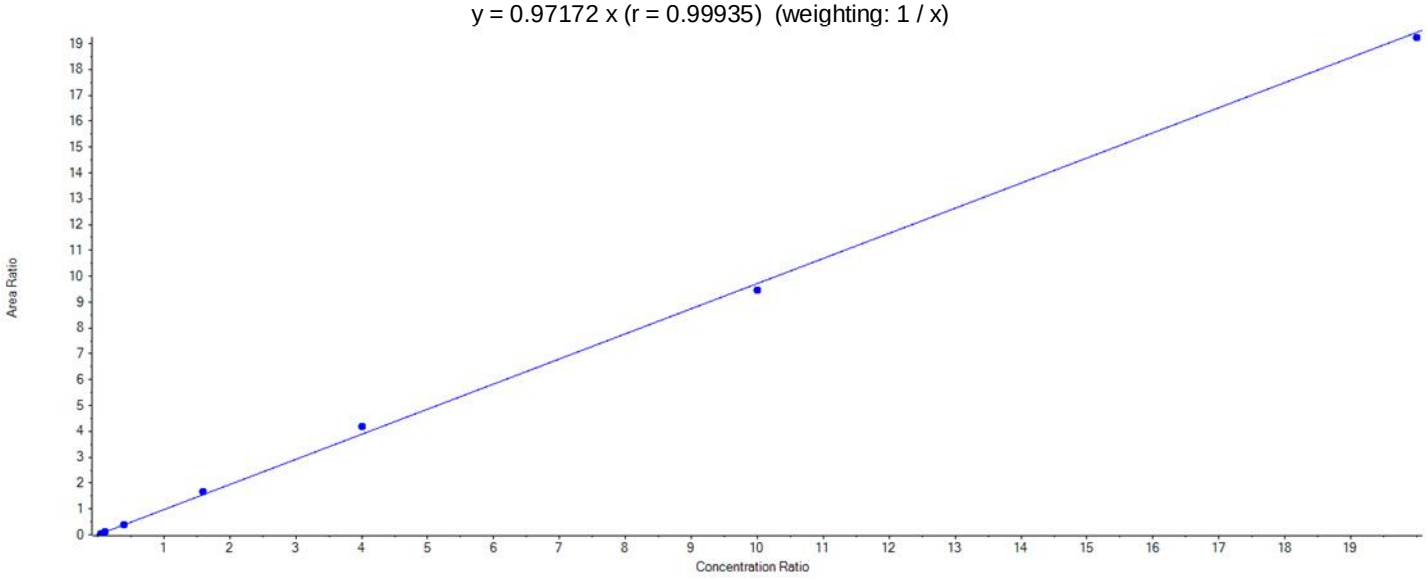
REVIEWED
By umar at 5:23 pm, 11/9/18

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	

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By JPT at 2:53 pm, 11/7/18

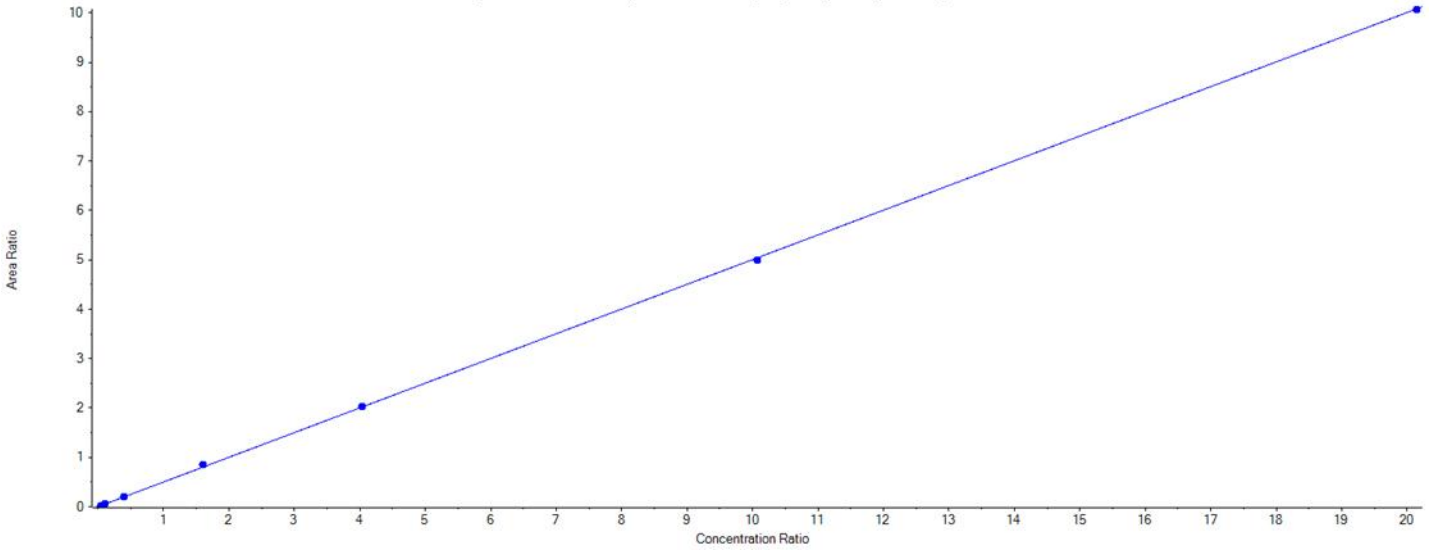
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By umar at 5:23 pm, 11/9/18

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

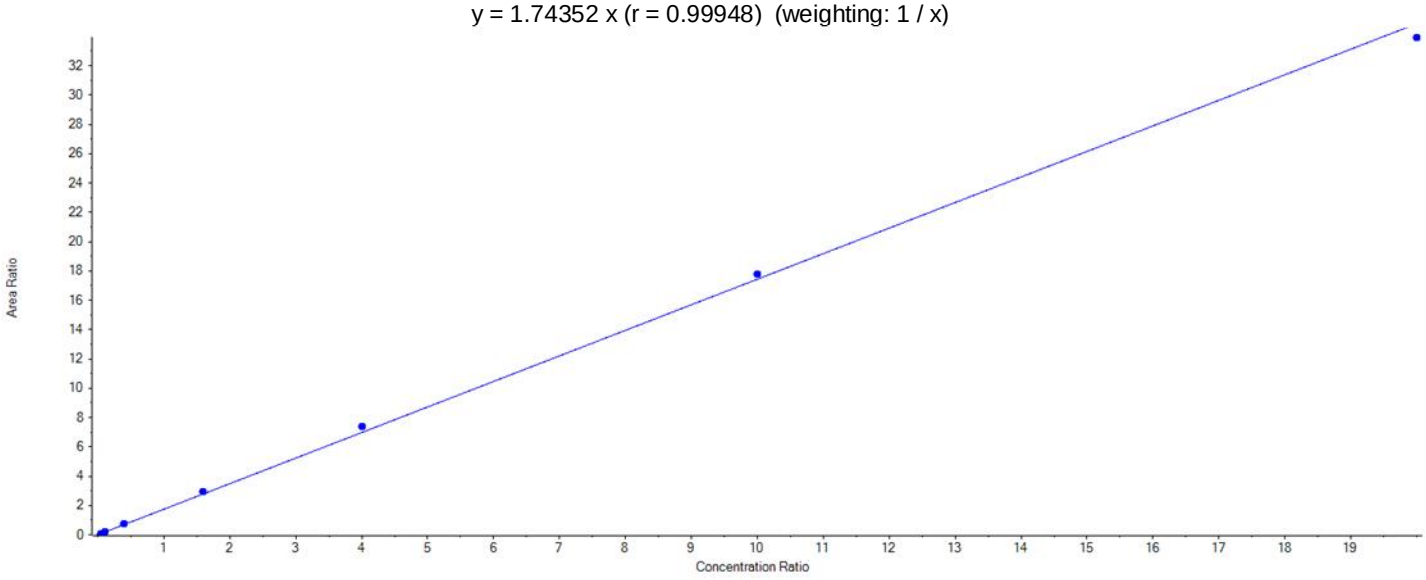
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By umar at 5:23 pm, 11/9/18

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

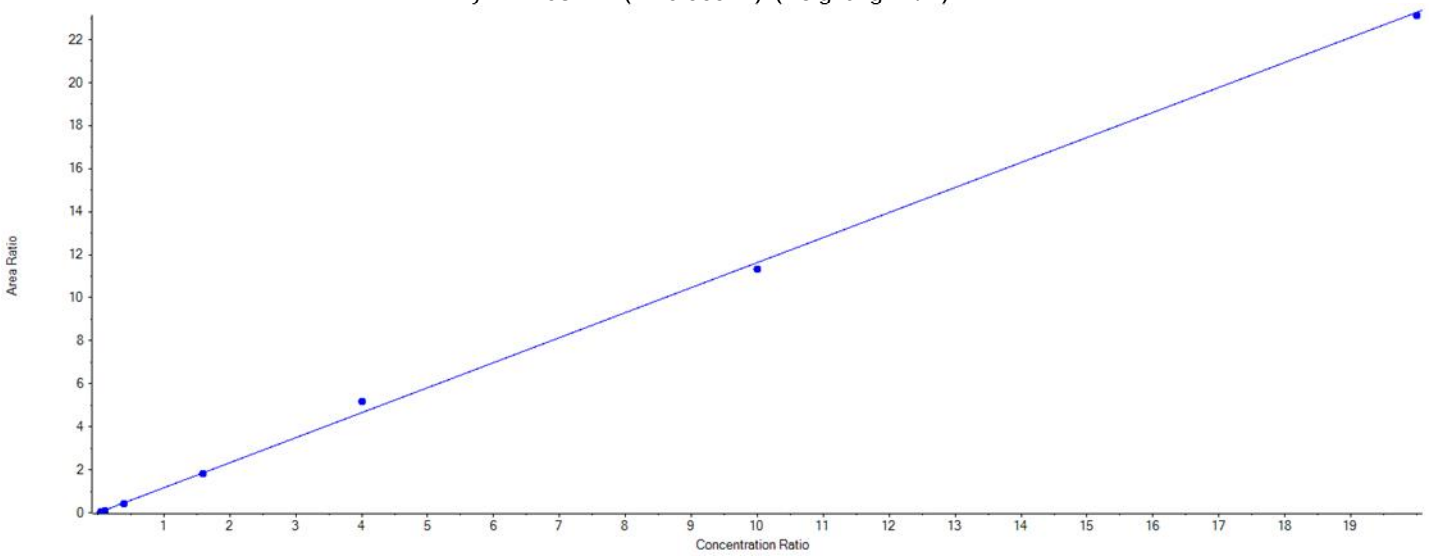
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By umar at 5:23 pm, 11/9/18

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	

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By JPT at 2:53 pm, 11/7/18

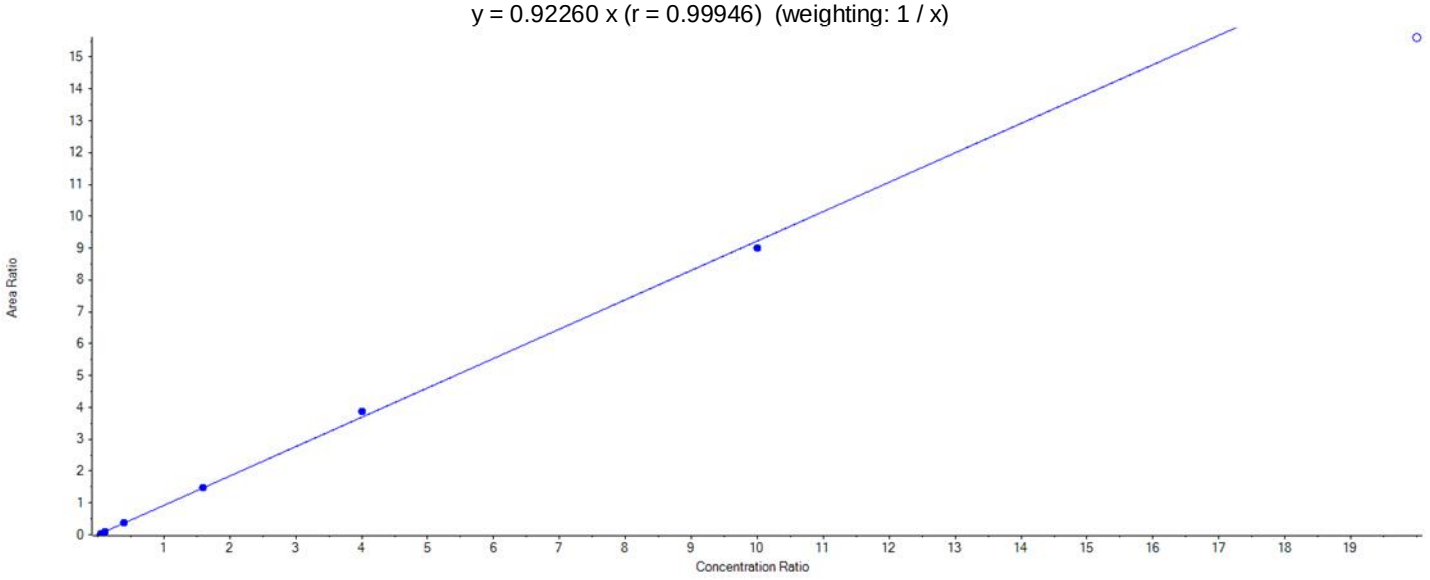
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By umar at 5:23 pm, 11/9/18

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

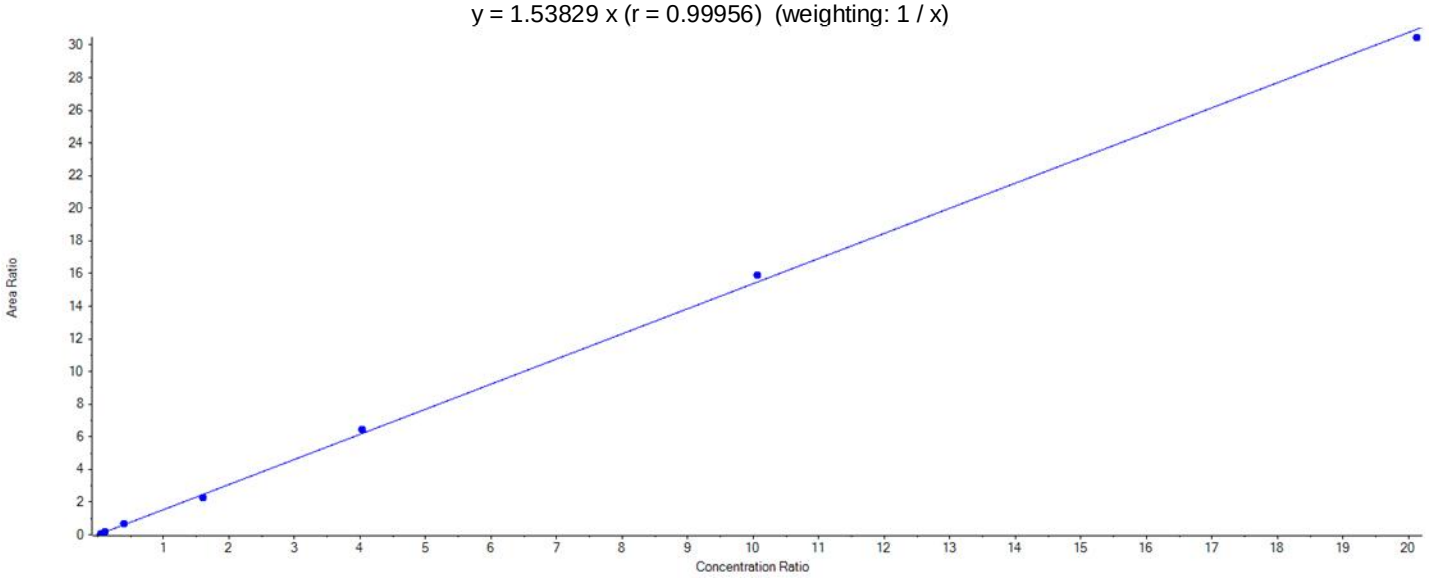
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By umar at 5:23 pm, 11/9/18

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

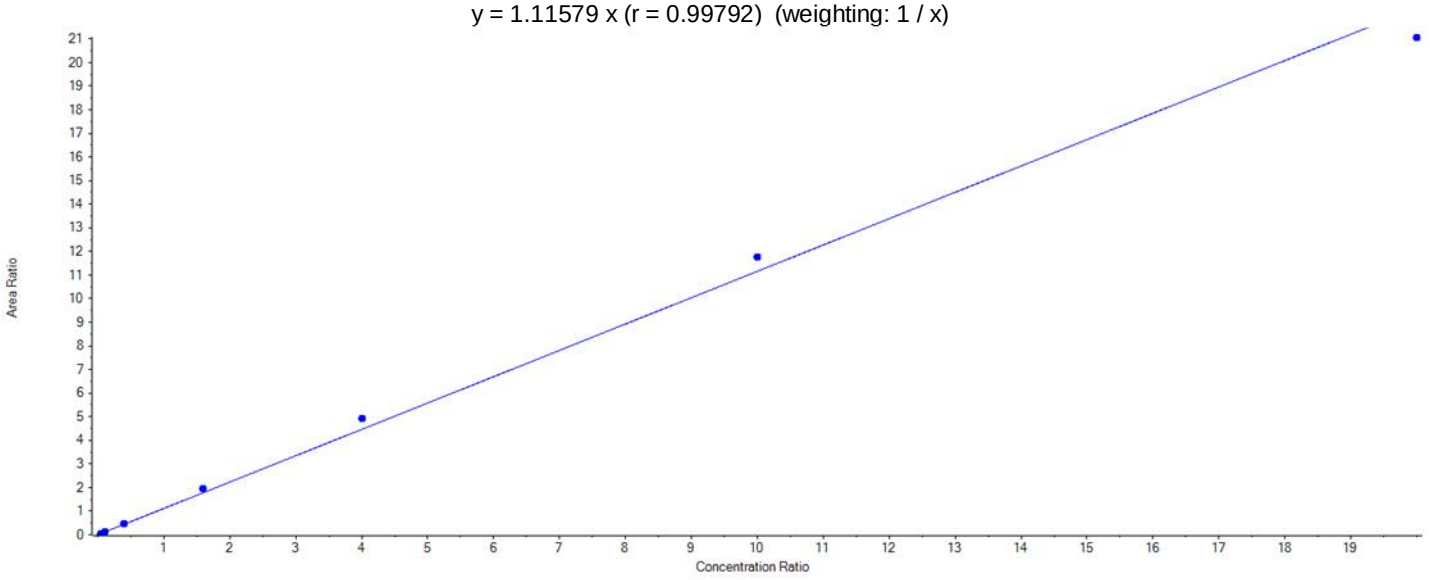
REVIEWED
By umar at 5:23 pm, 11/9/18

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

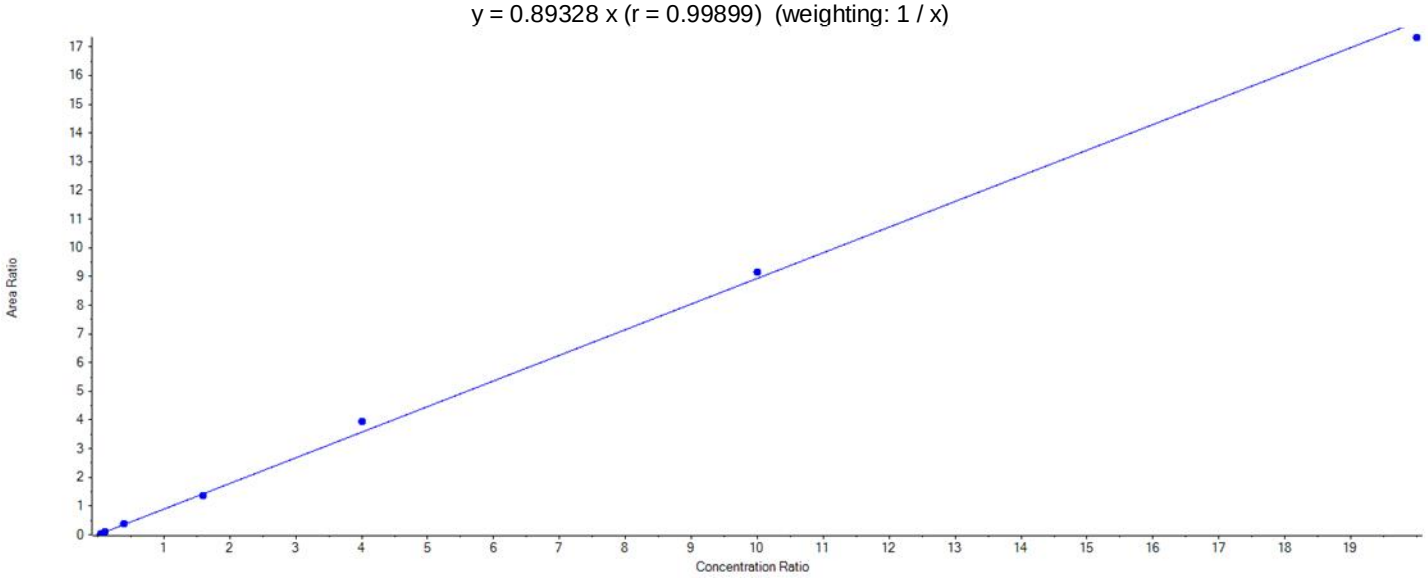
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DOD Initial Calibration Verification

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

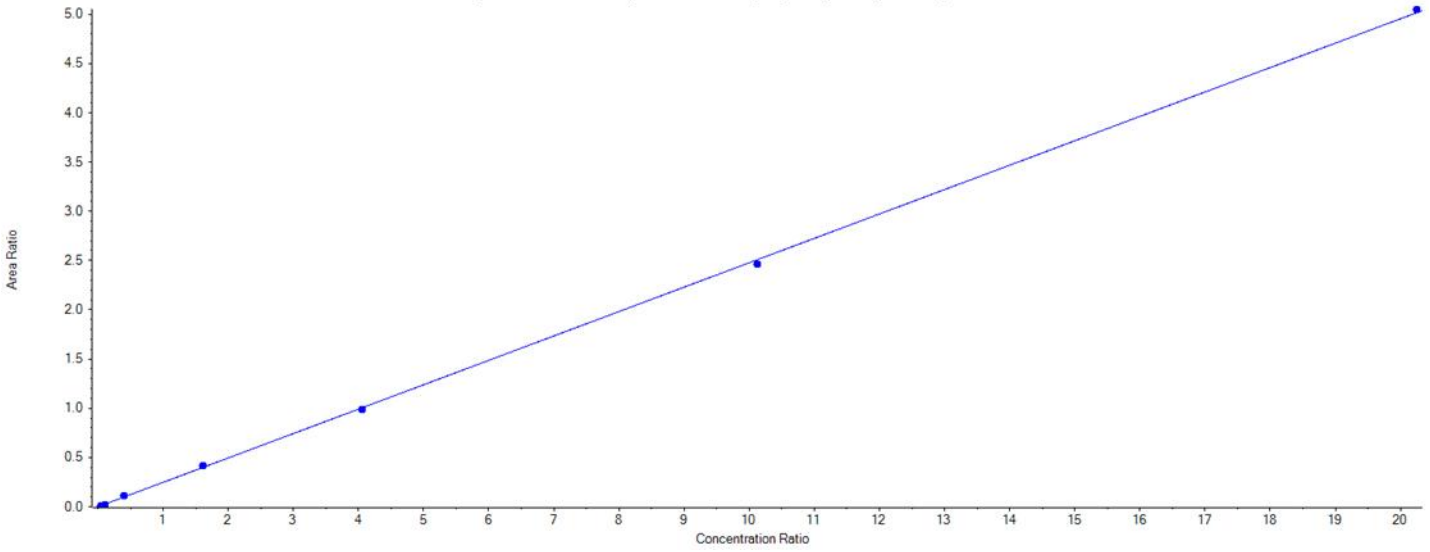
REVIEWED
By umar at 5:23 pm, 11/9/18

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

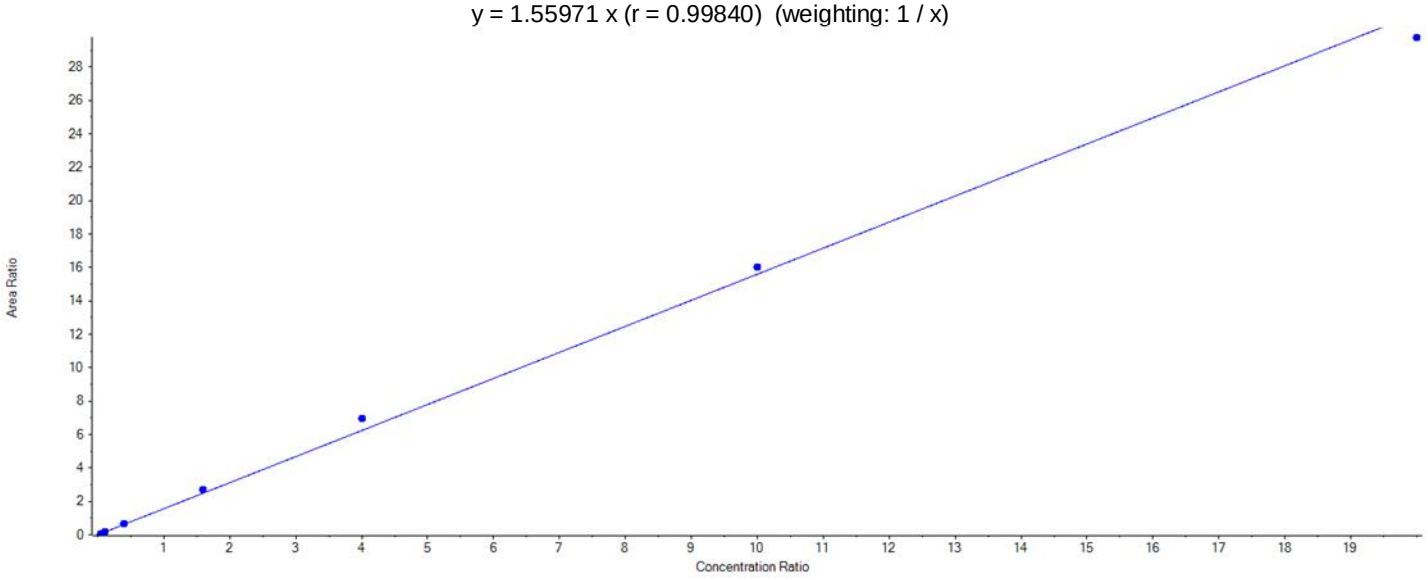
REVIEWED
By umar at 5:23 pm, 11/9/18

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

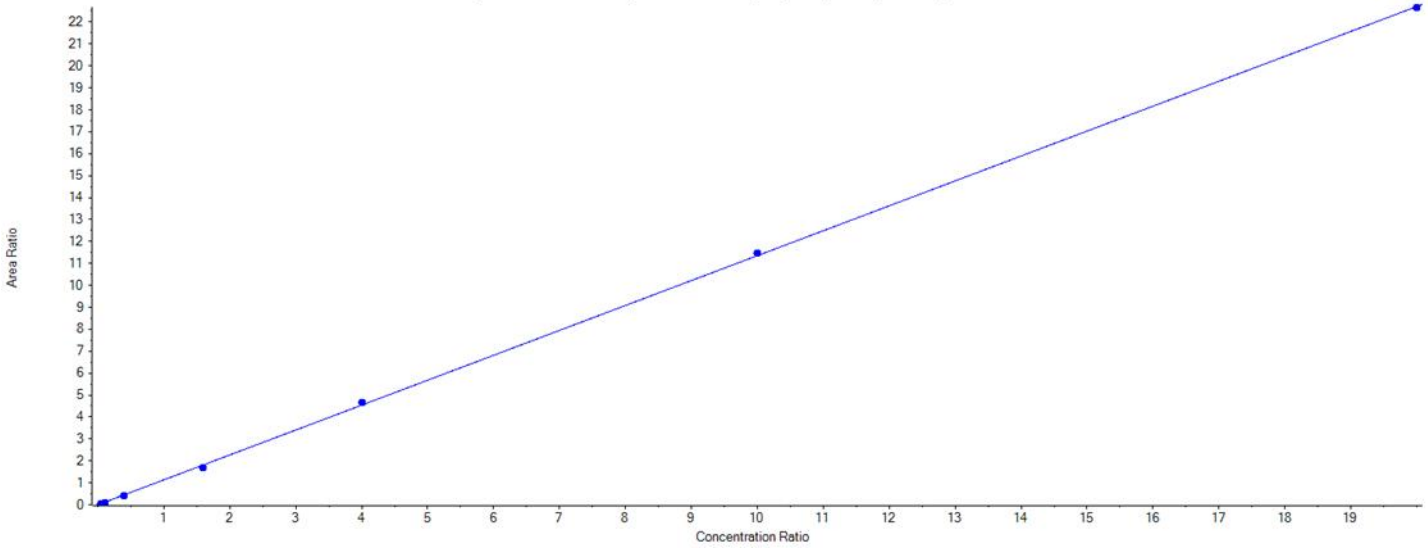
REVIEWED
By umar at 5:23 pm, 11/9/18

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

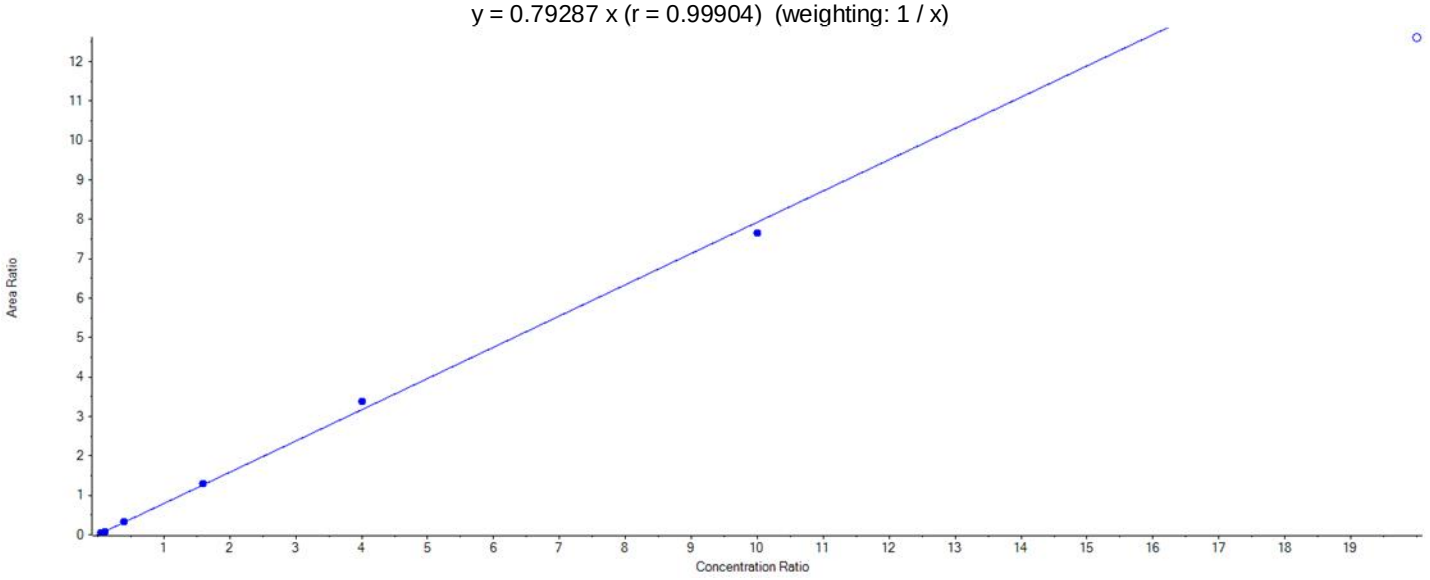
REVIEWED
By umar at 5:23 pm, 11/9/18

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

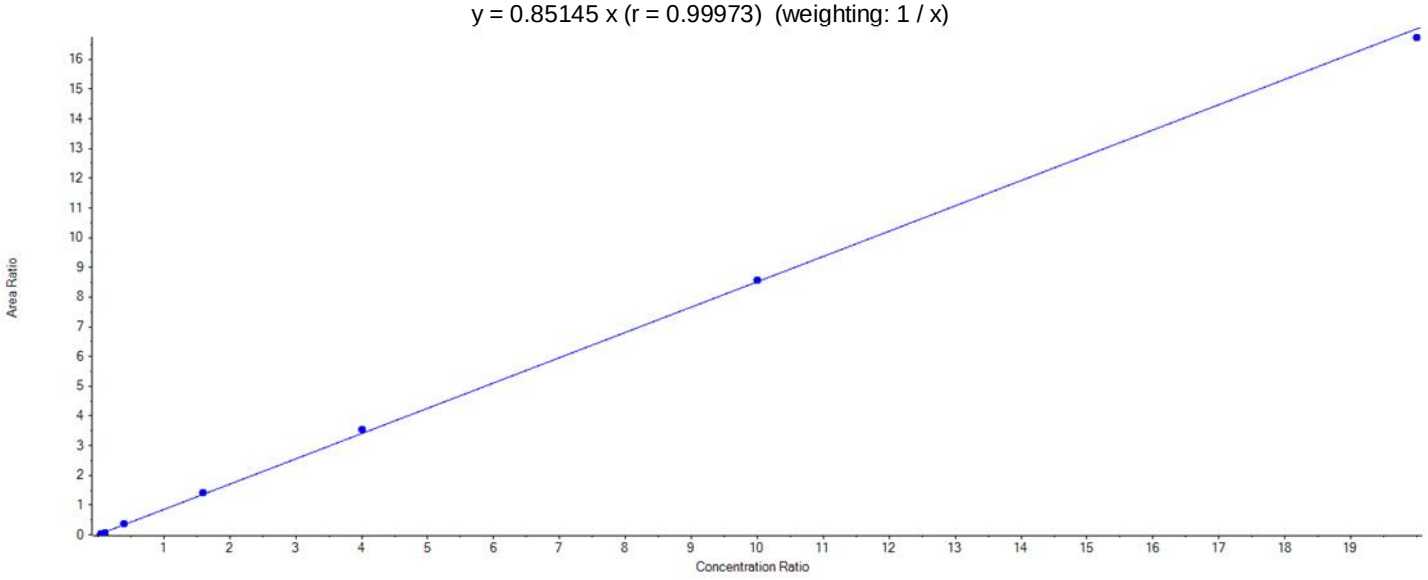
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By umar at 5:23 pm, 11/9/18

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	

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By JPT at 2:53 pm, 11/7/18

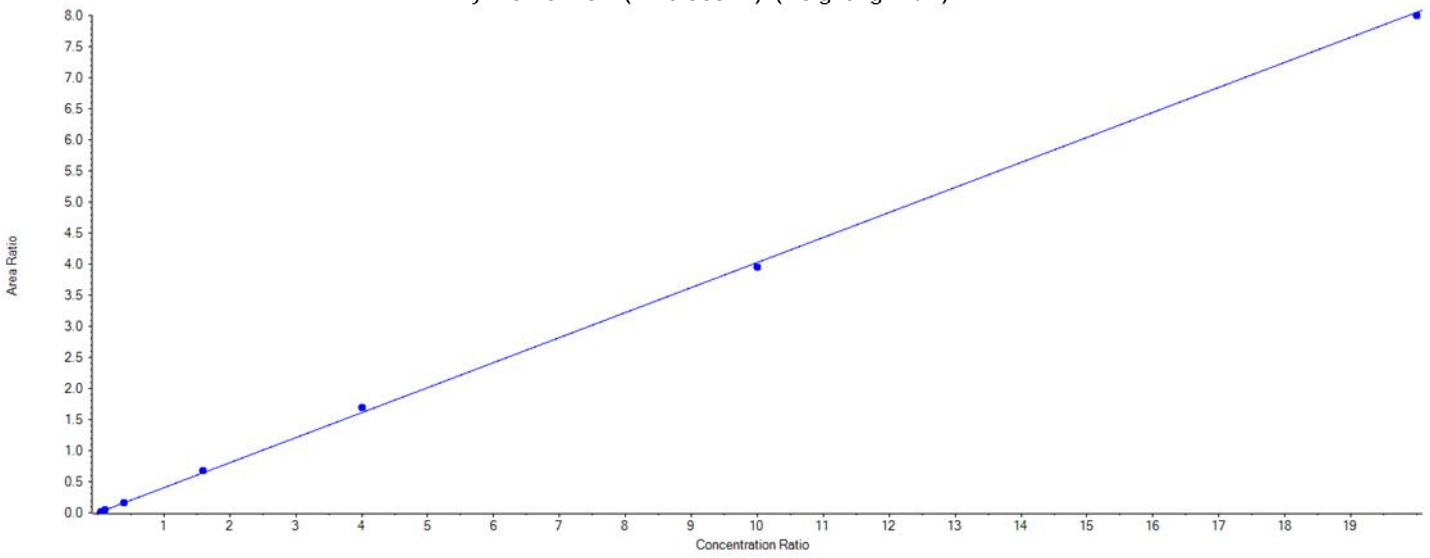
REVIEWED
By umar at 5:23 pm, 11/9/18

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	

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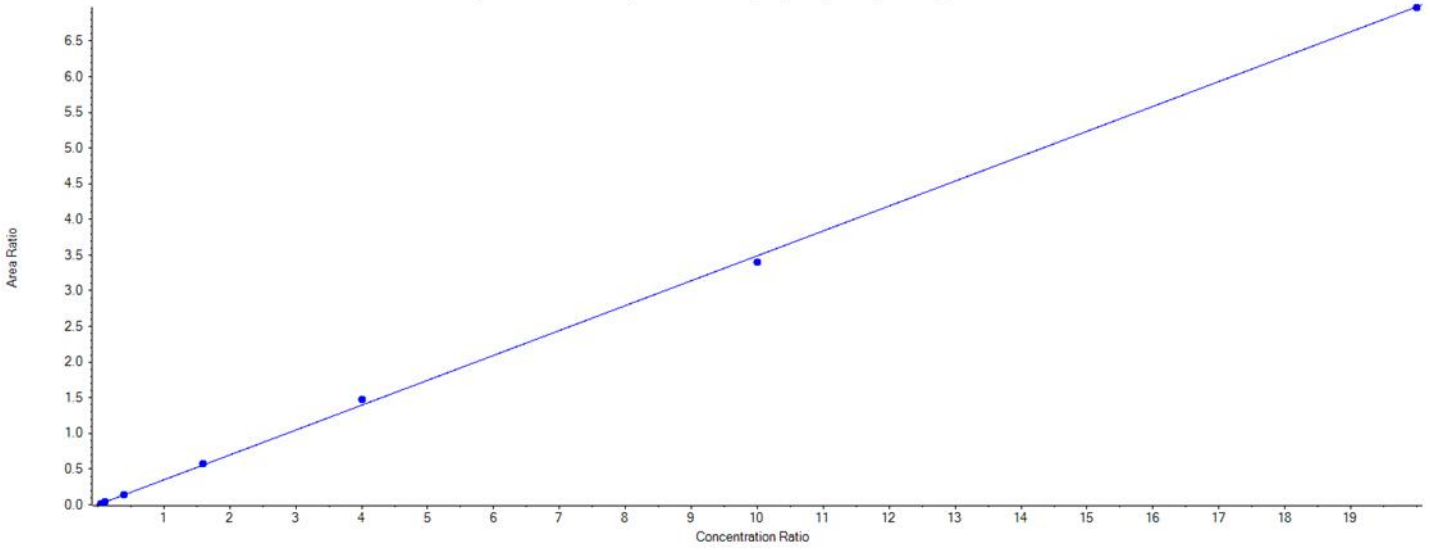
REVIEWED
By umar at 5:23 pm, 11/9/18

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	

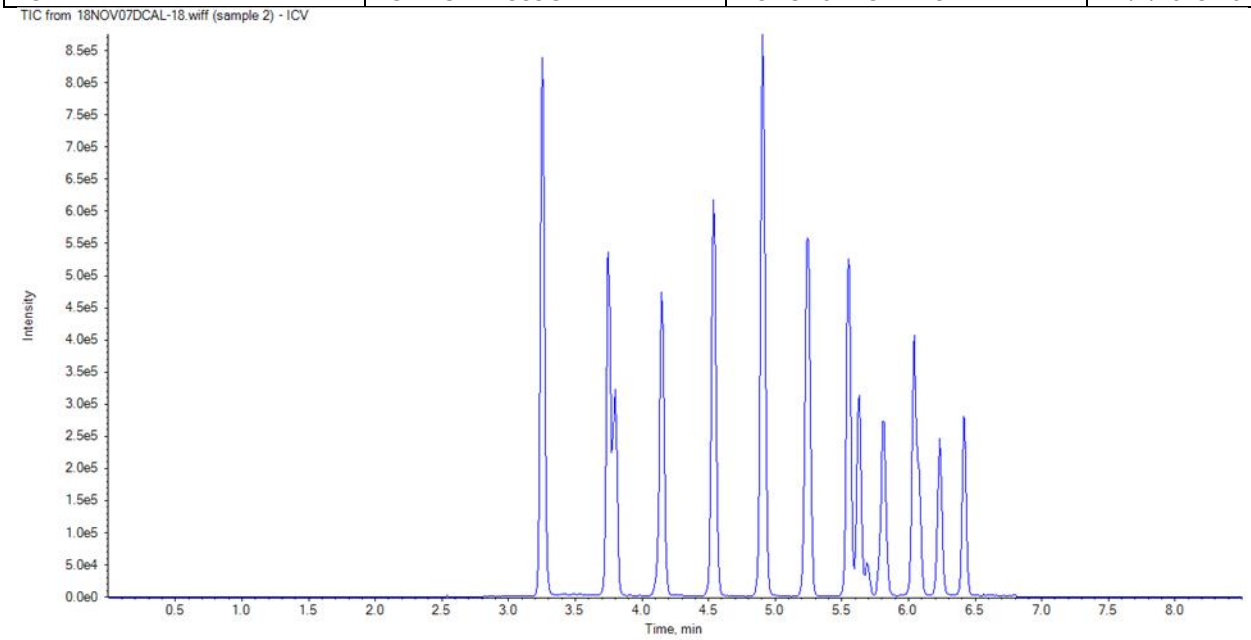
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By JPT at 2:53 pm, 11/7/18

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

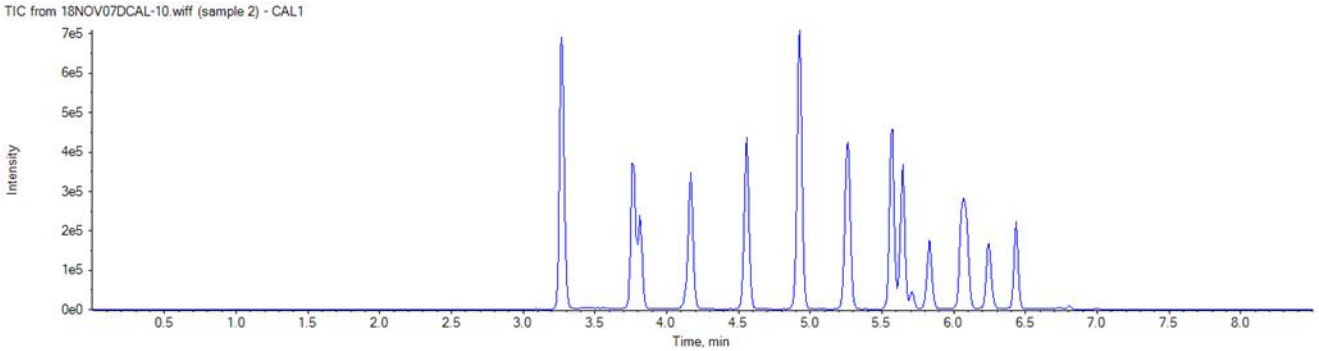
Analyte Quantitation Peak Table

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

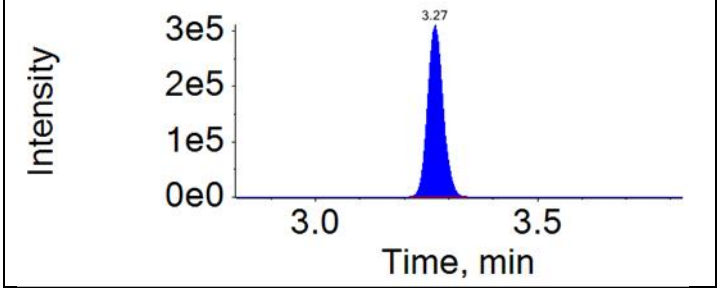


APPROVED
By JPT at 2:53 pm, 11/7/18

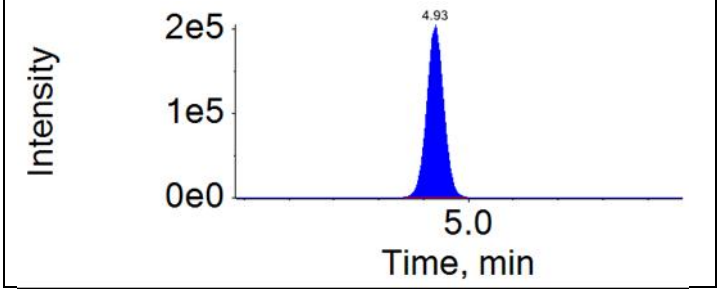
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

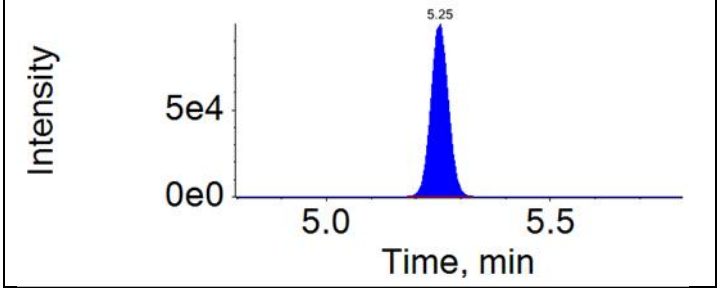
Injection Standard: 13C3-PFBA
216.0 / 172.0



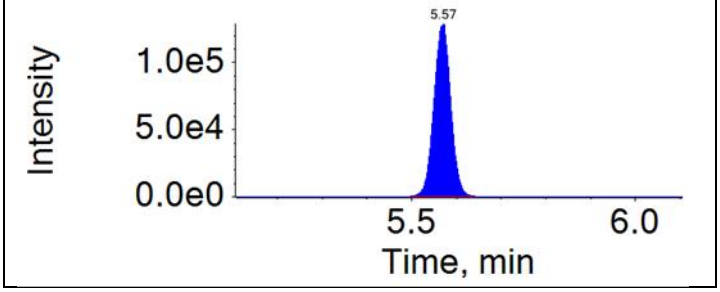
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

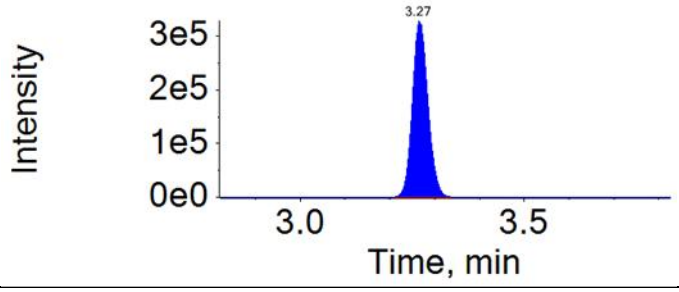


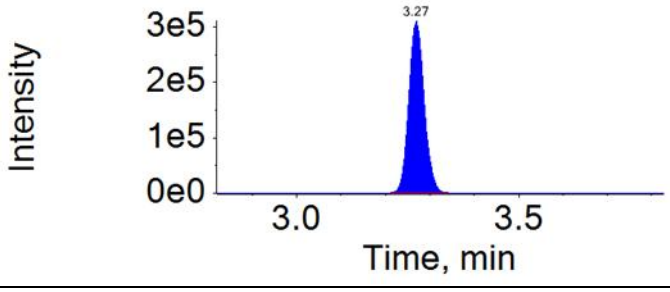
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

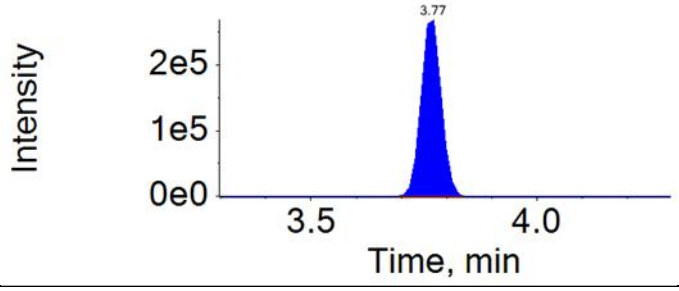
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

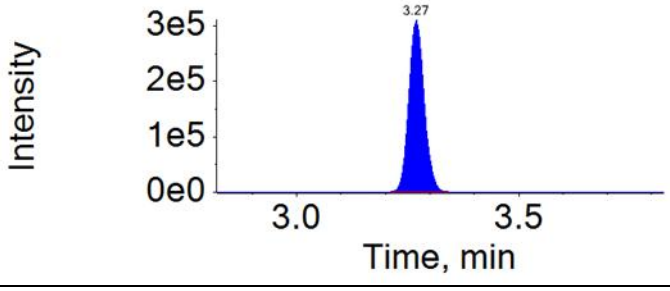
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217.0 / 172.0	216.0 / 172.0



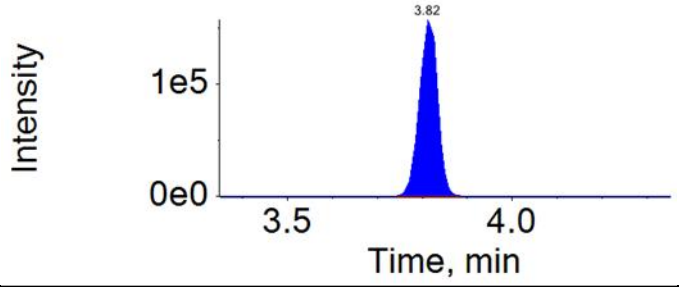


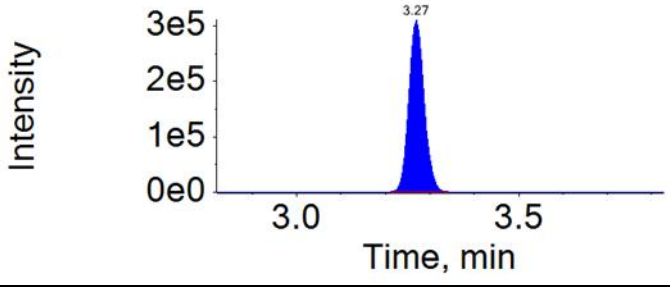
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



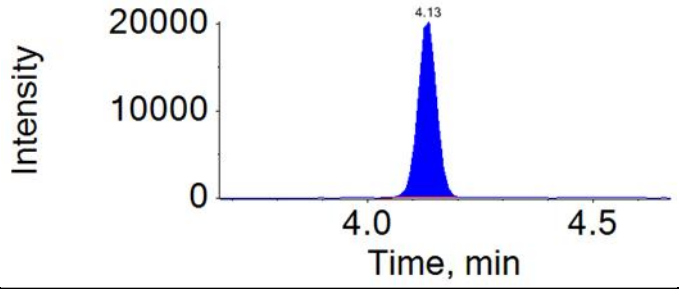


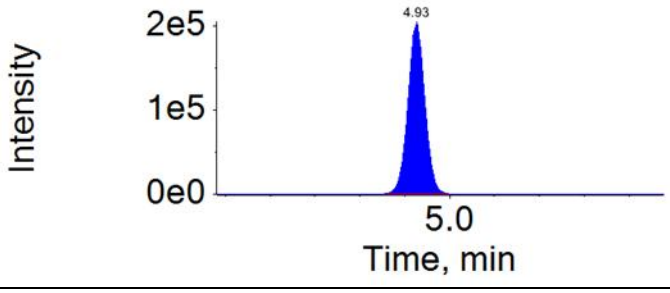
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





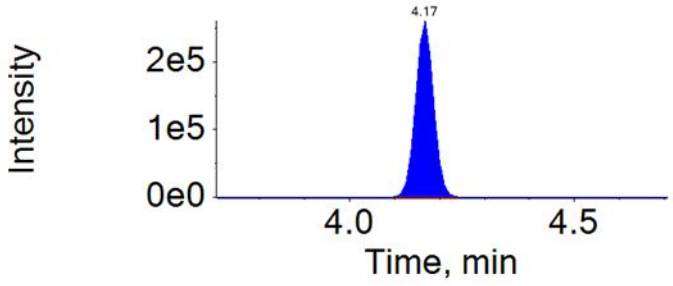
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

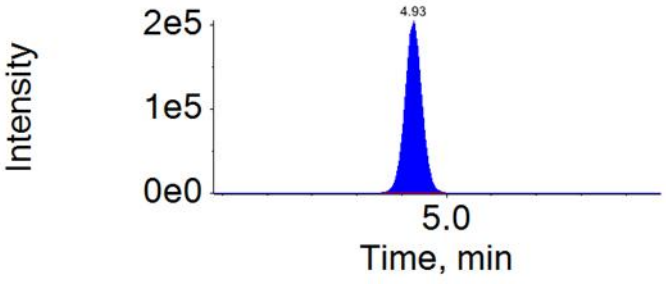




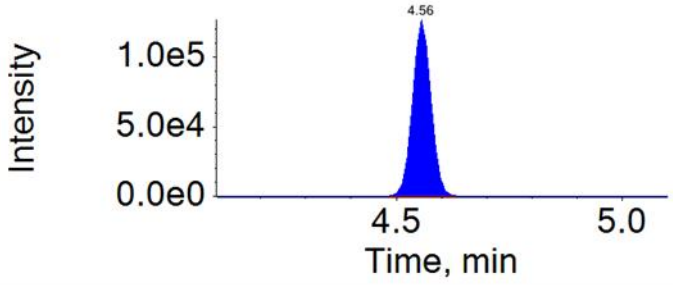
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

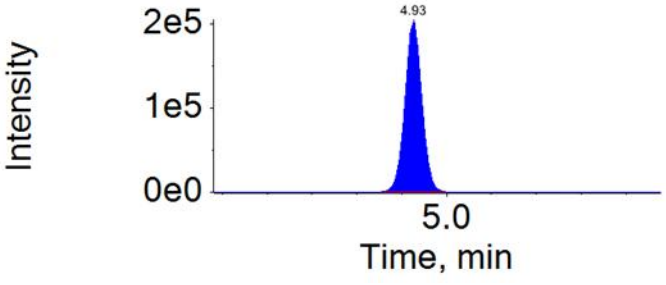
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318.0 / 273.0	415.0 / 370.0



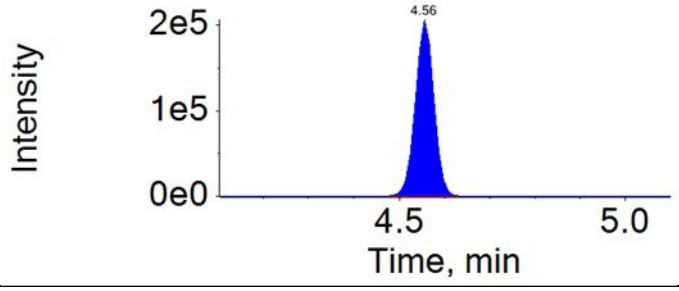


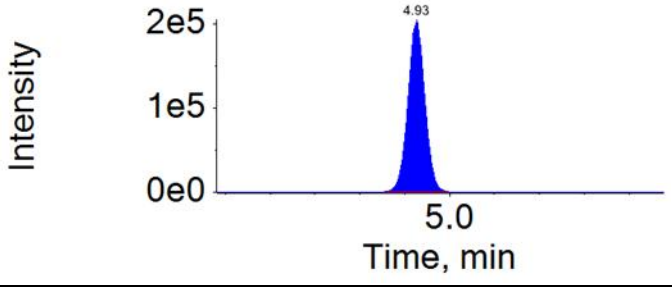
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



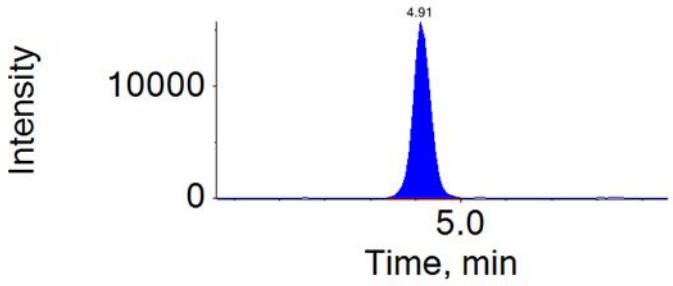


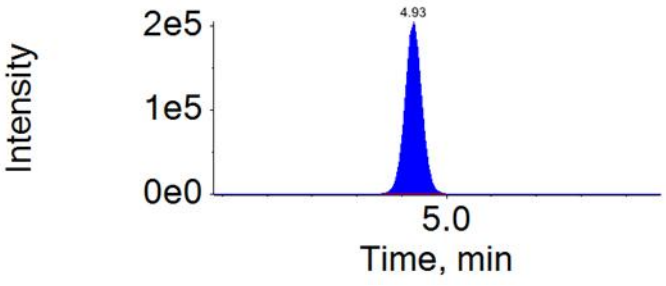
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

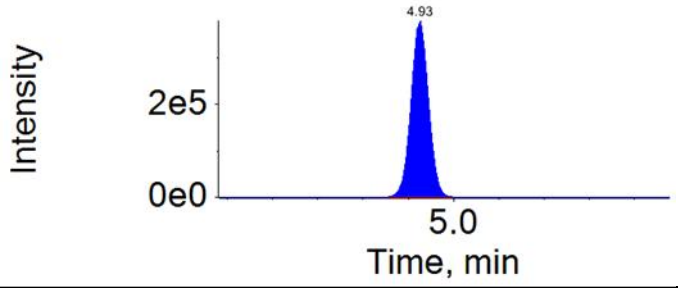
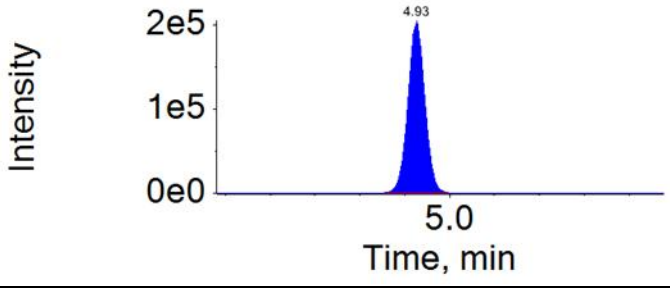


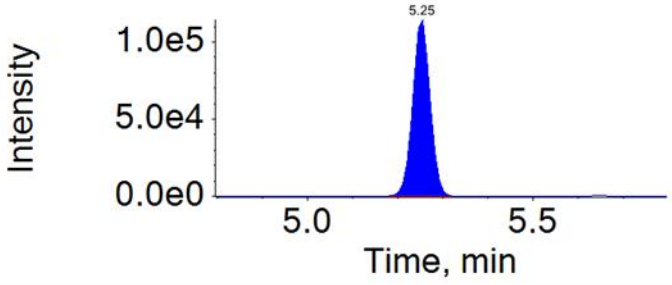
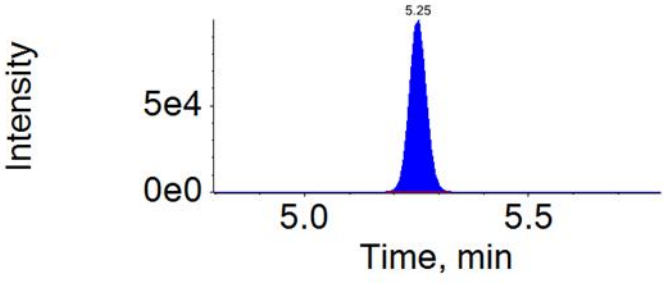


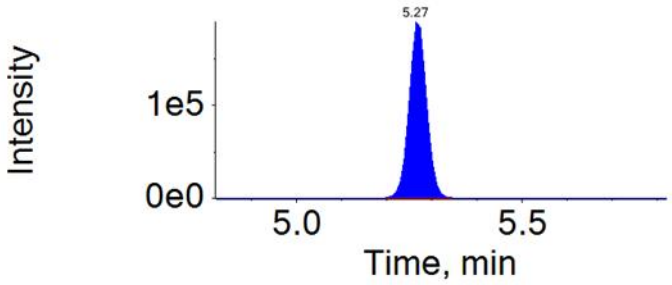
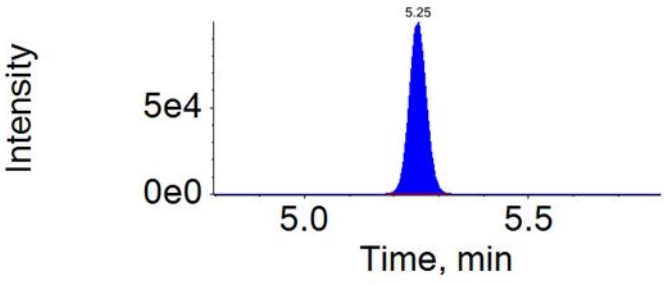
APPROVED
By JPT at 2:53 pm, 11/7/18

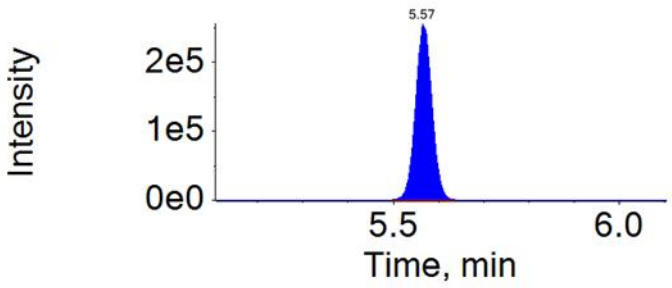
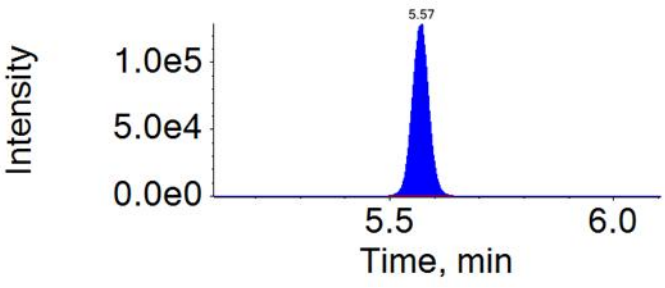
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

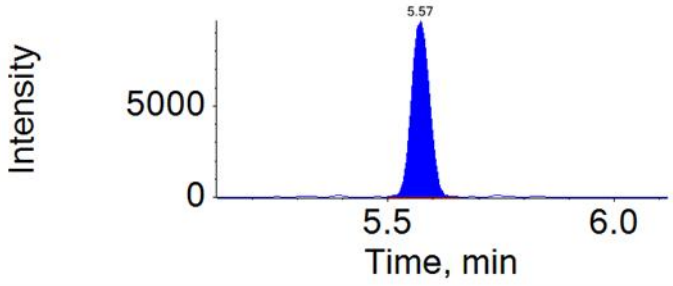
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

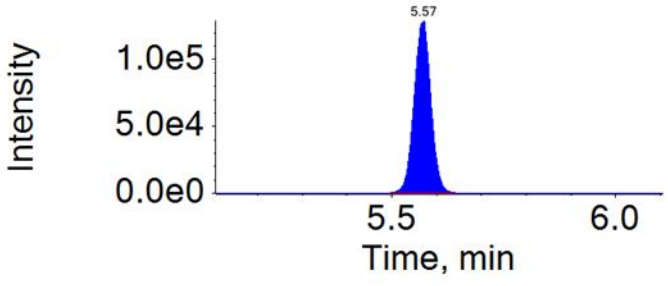
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

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

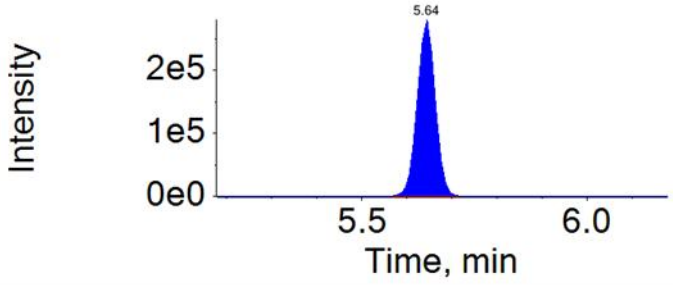
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

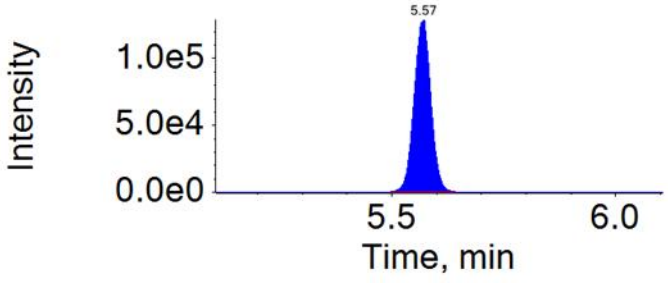
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



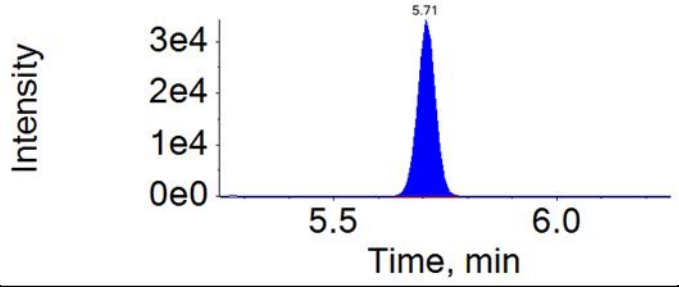


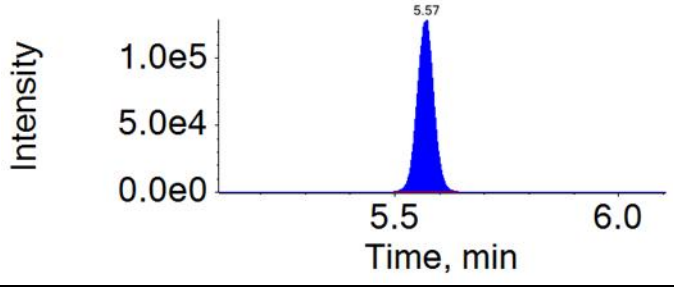
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



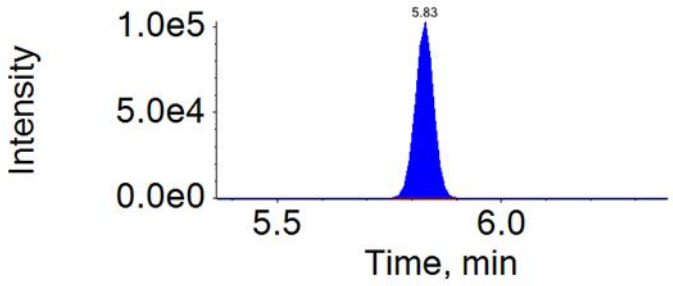


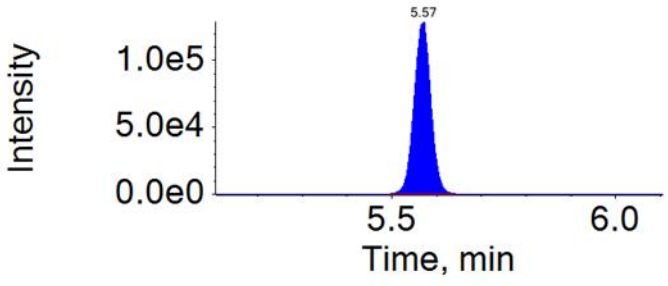
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

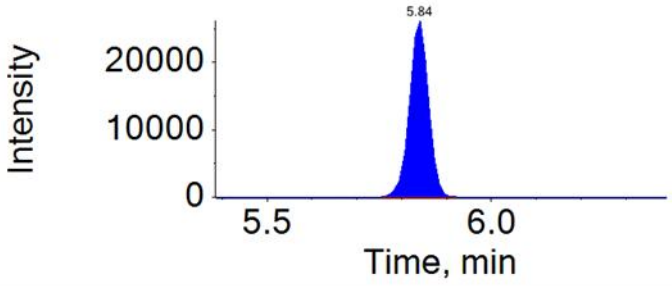
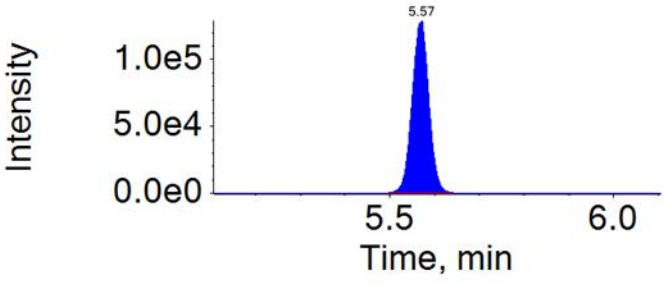


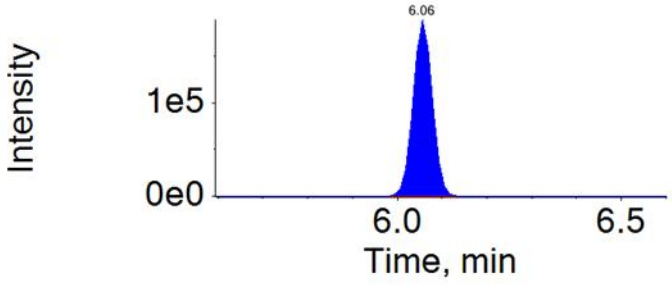
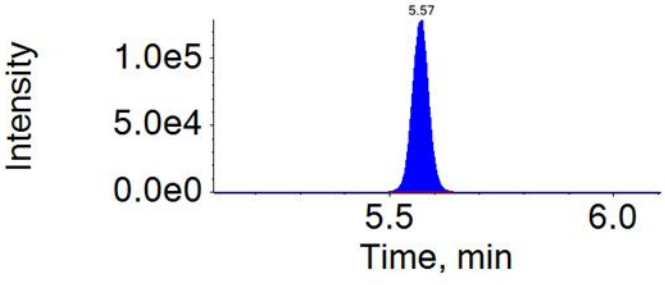


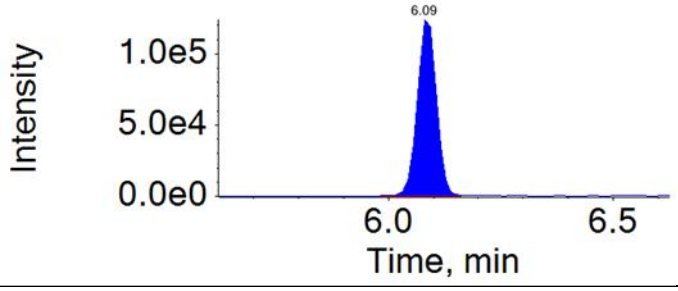
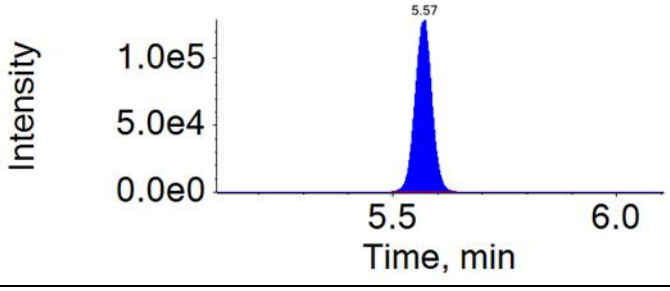
APPROVED
By JPT at 2:53 pm, 11/7/18

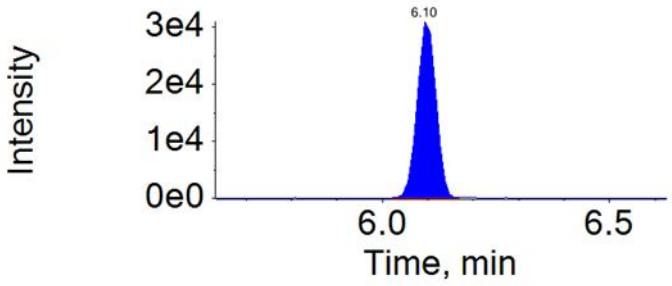
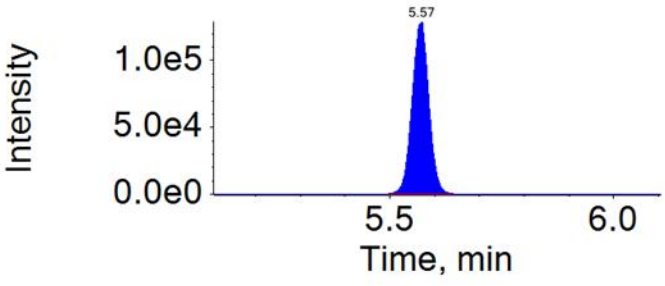
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

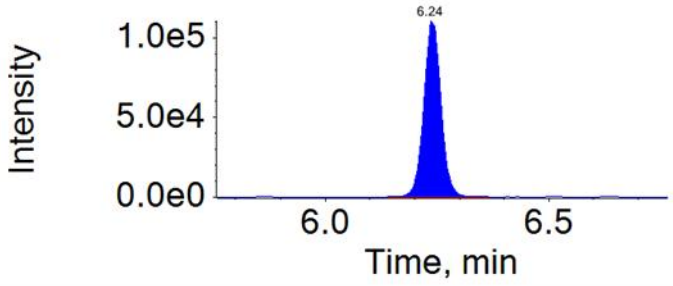
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

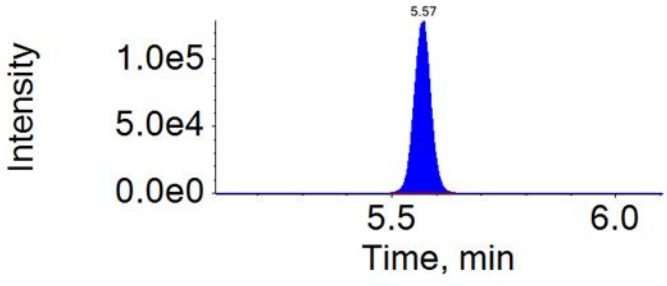
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

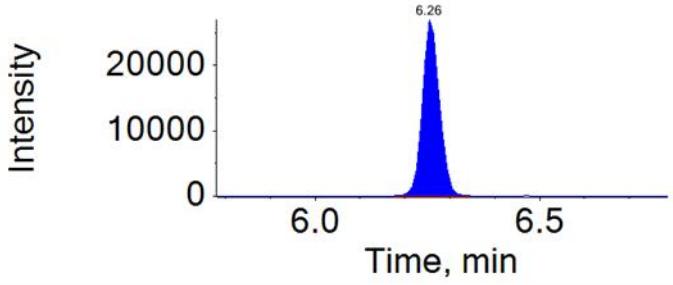
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

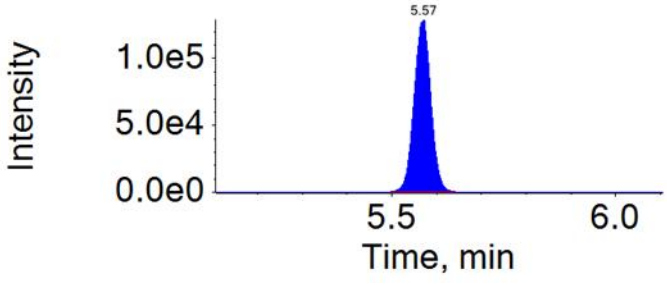
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



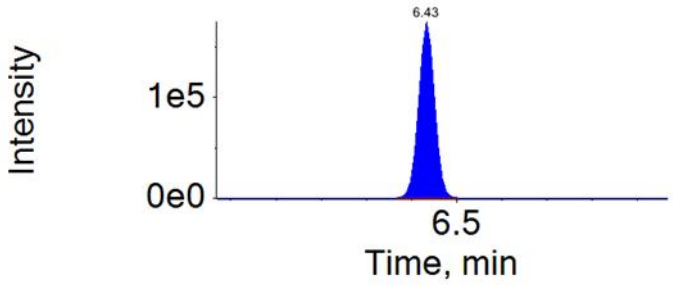


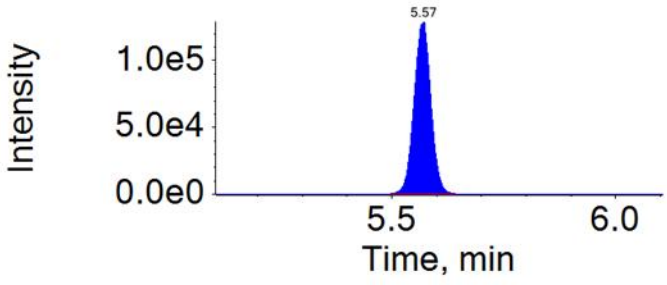
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



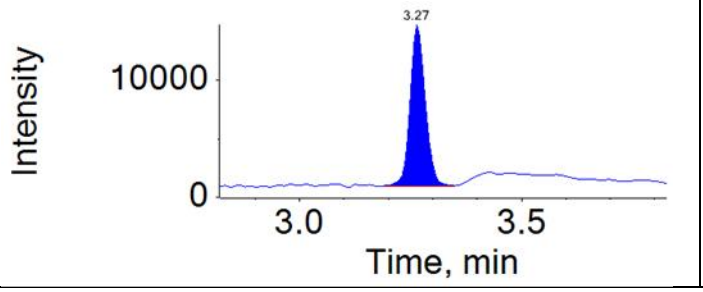


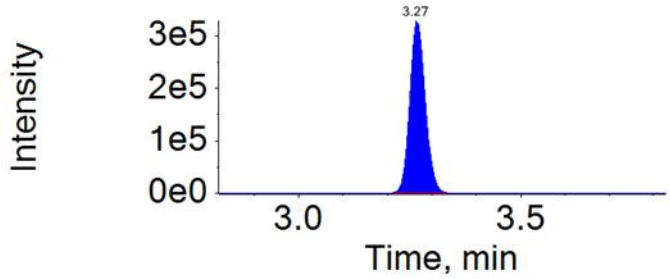
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

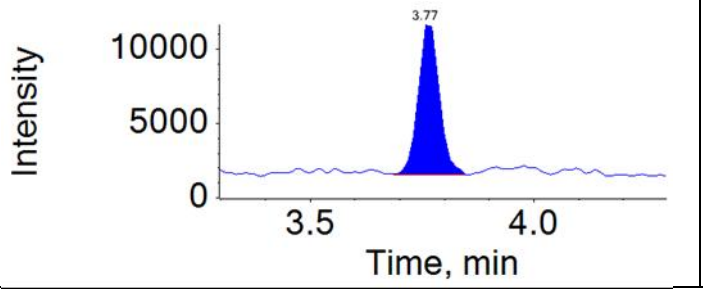
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

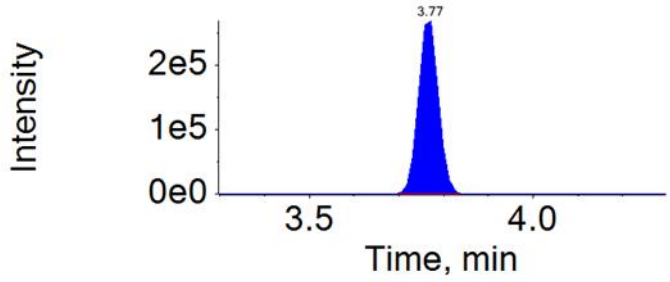
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



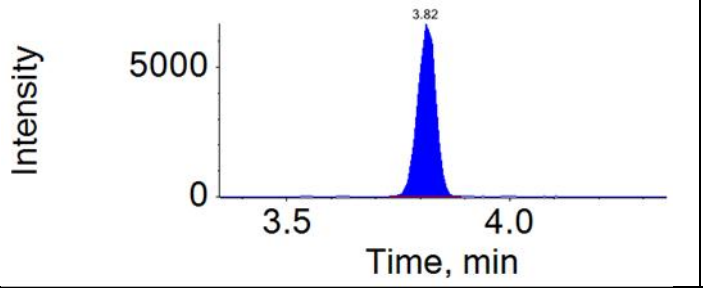


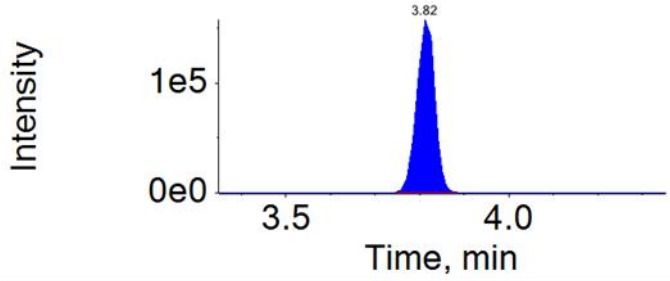
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



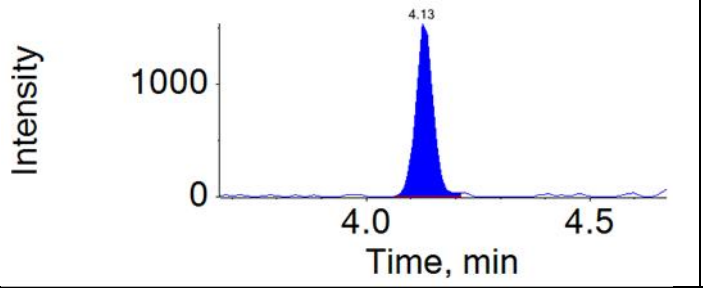


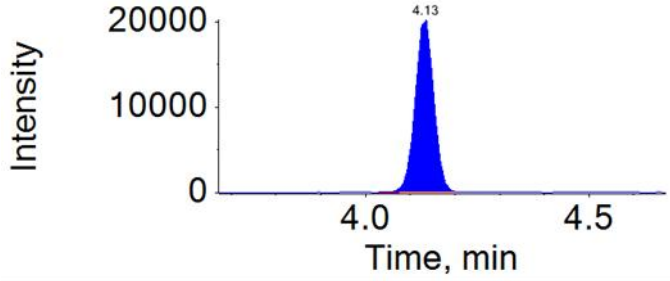
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

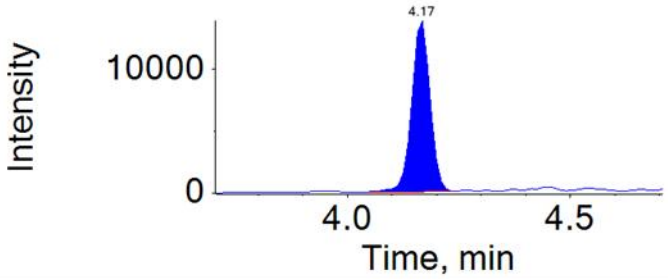
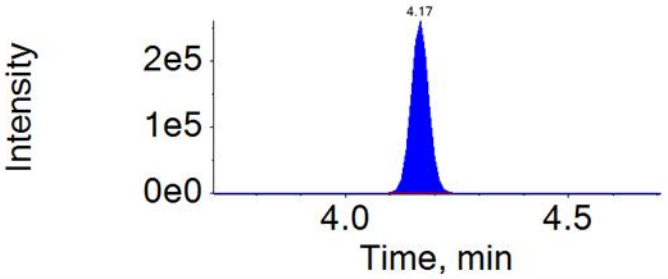


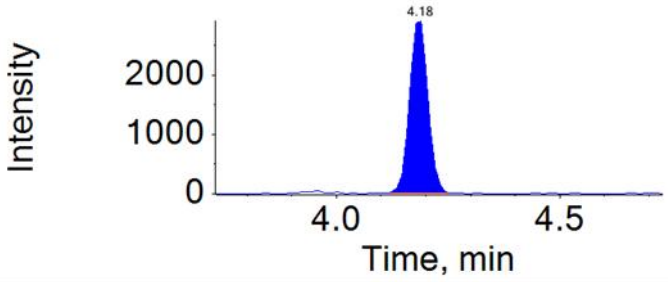
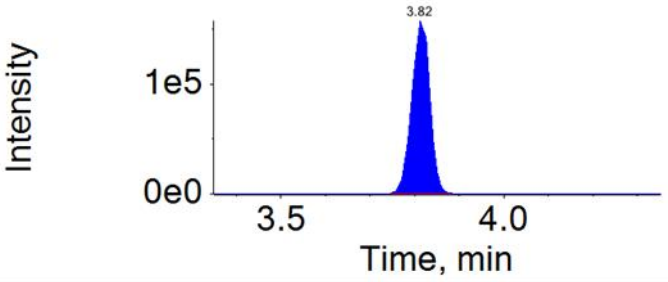


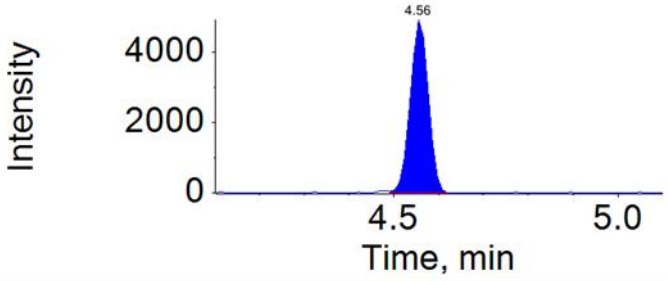
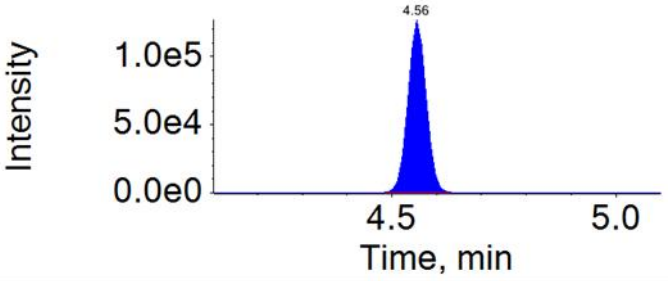
APPROVED
By JPT at 2:53 pm, 11/7/18

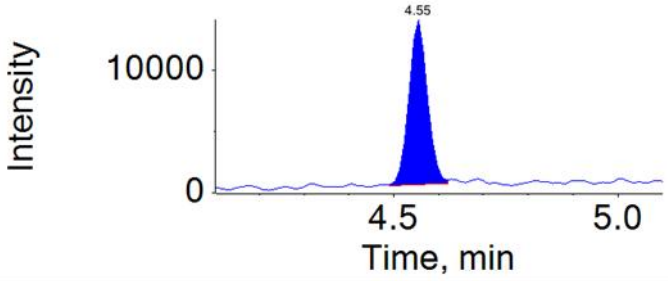
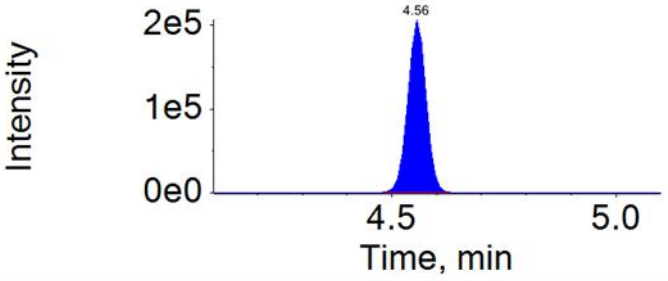
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

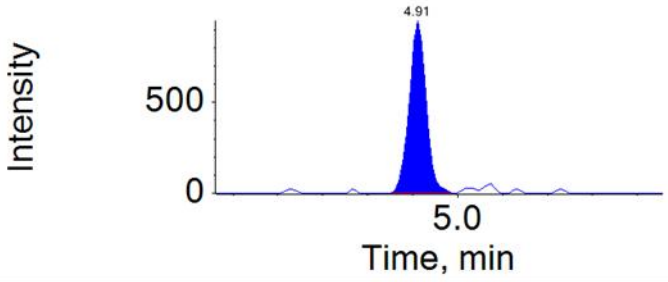
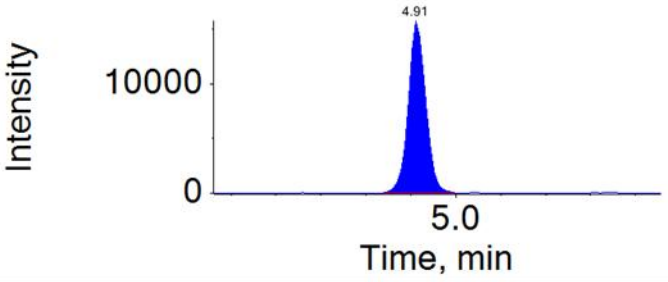
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

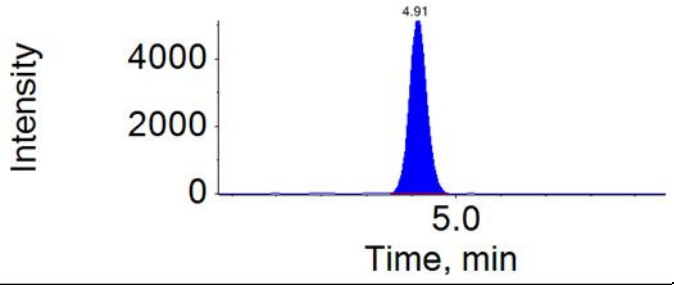
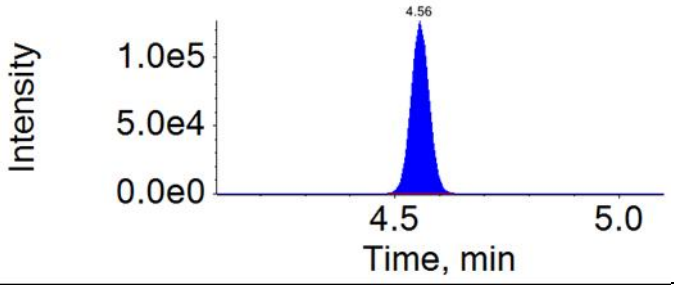
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

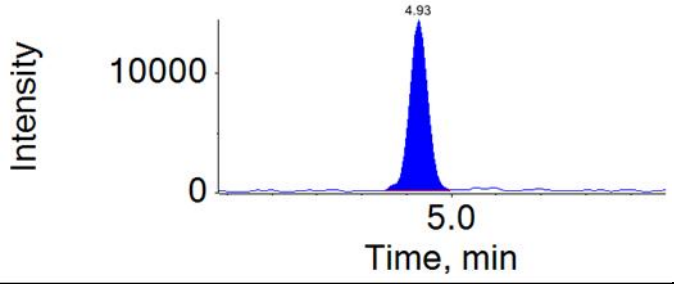
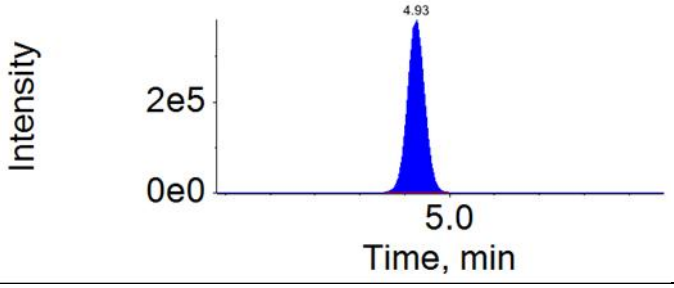
APPROVED
By JPT at 2:53 pm, 11/7/18

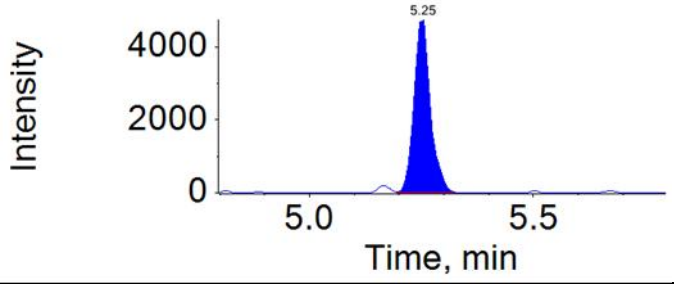
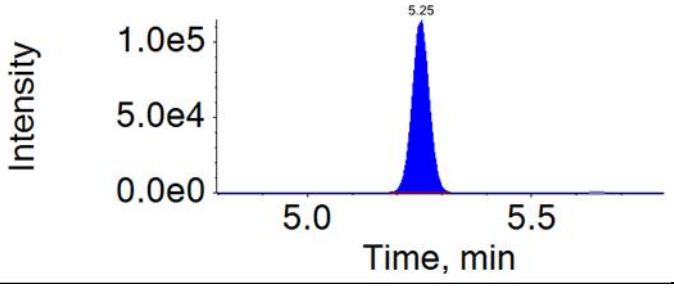
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

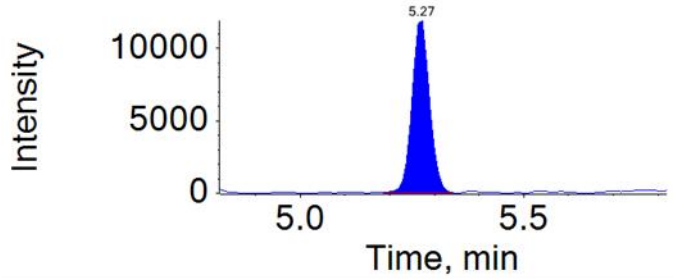
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

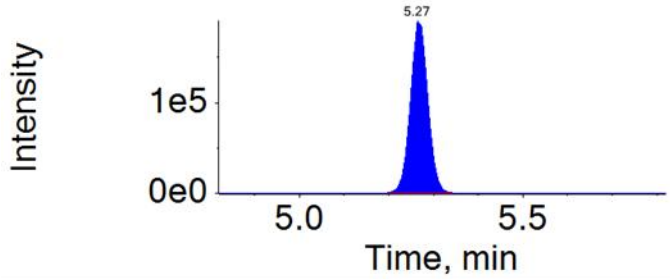
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

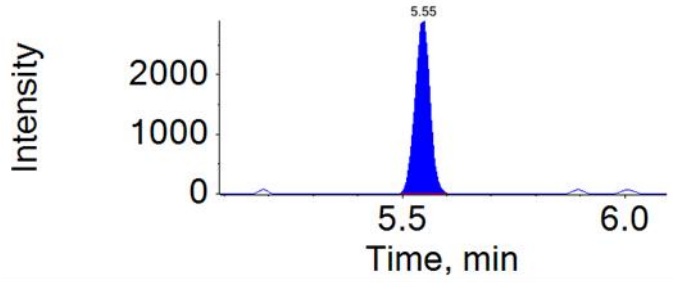
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

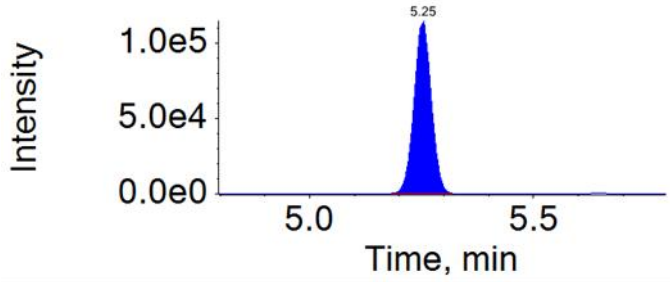
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



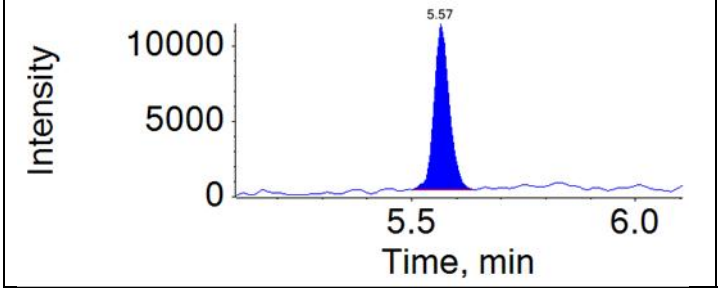


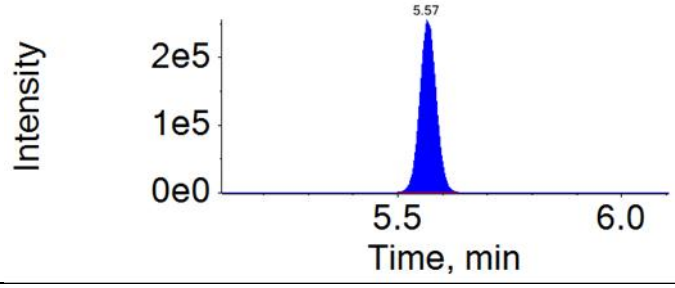
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



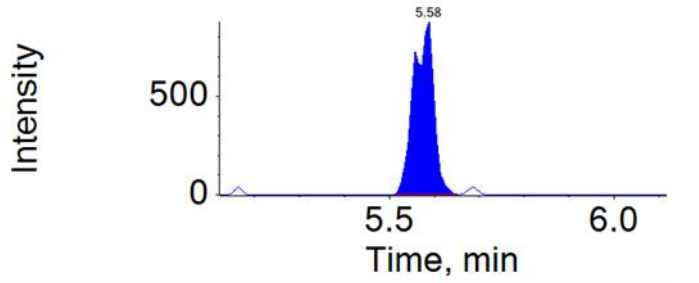


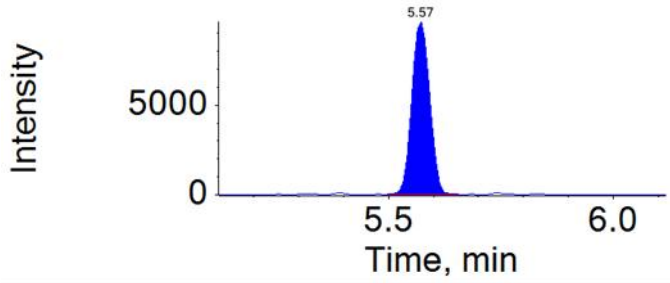
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

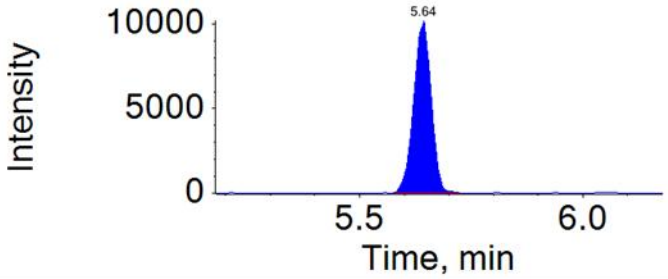
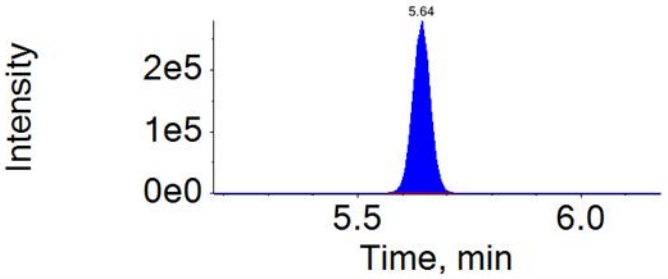


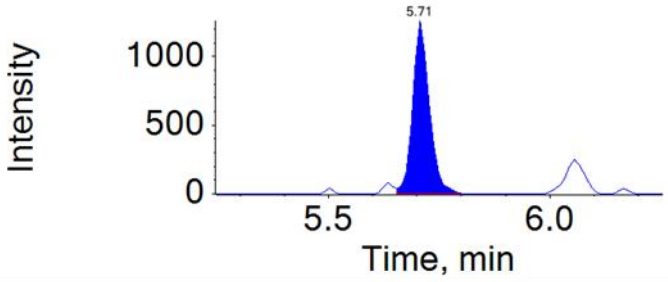
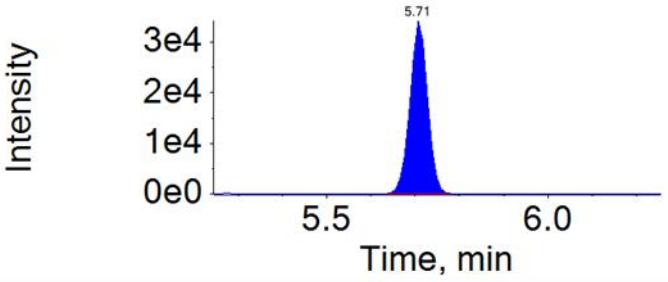


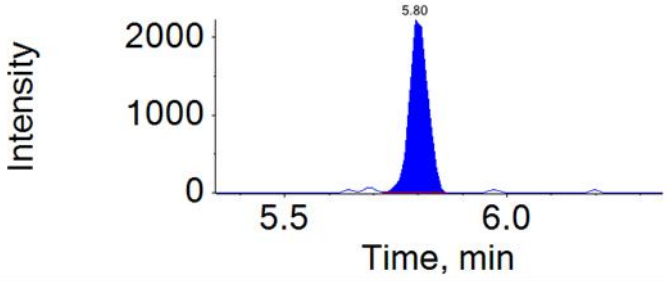
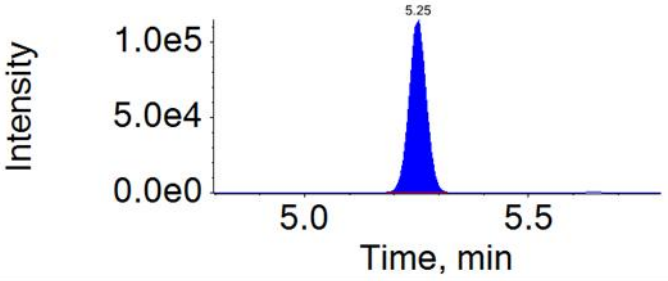
APPROVED
By JPT at 2:53 pm, 11/7/18

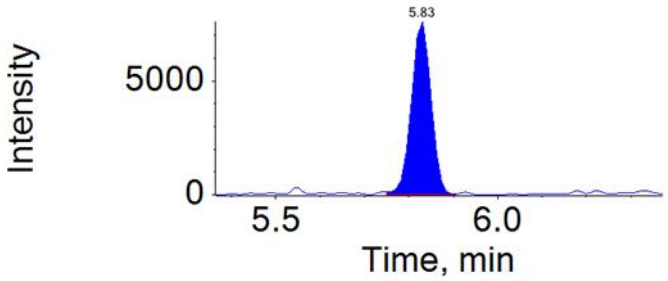
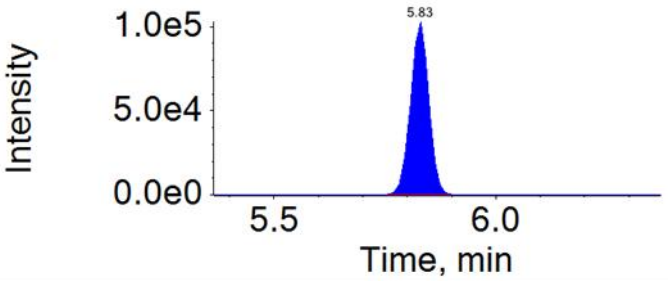
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

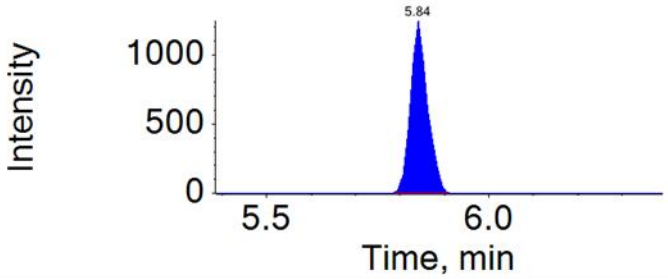
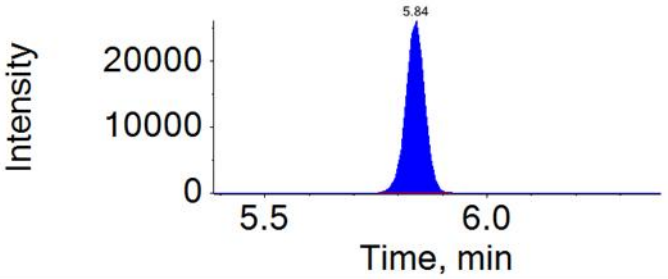
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

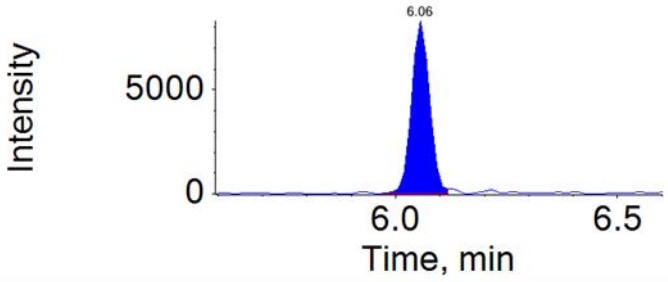
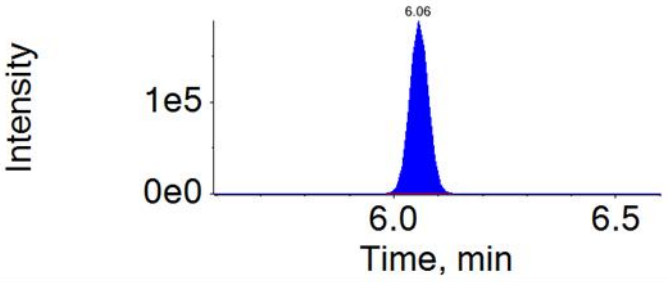
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

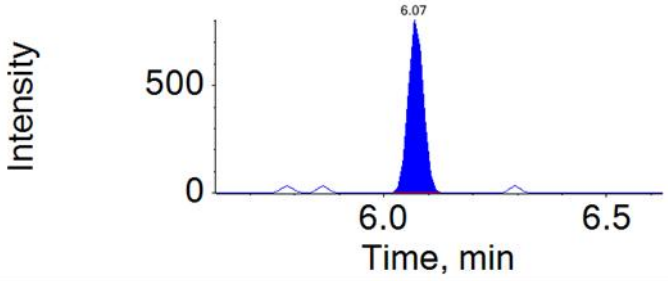
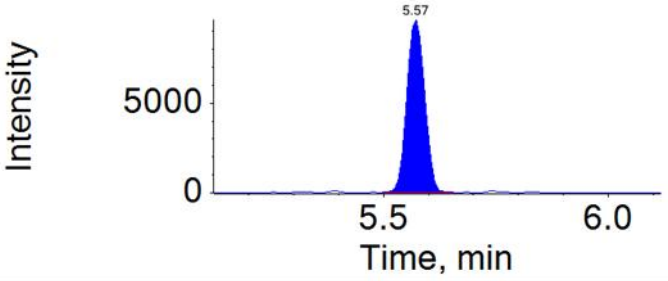
APPROVED
By JPT at 2:53 pm, 11/7/18

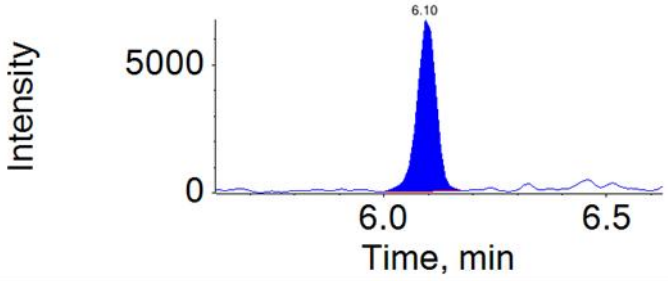
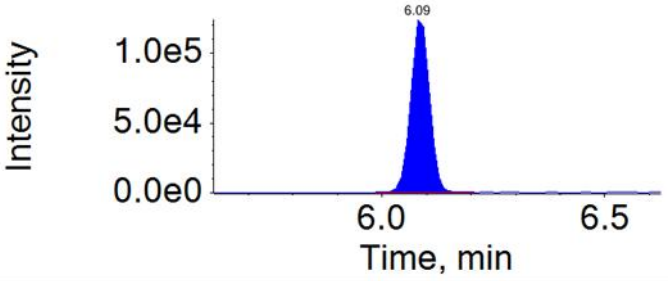
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

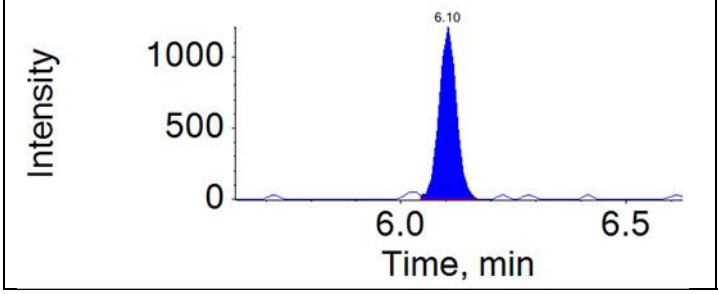
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

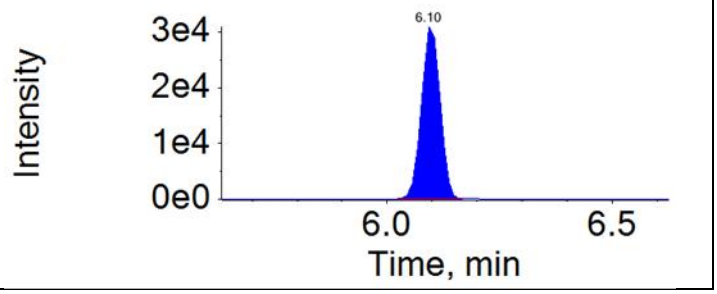
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

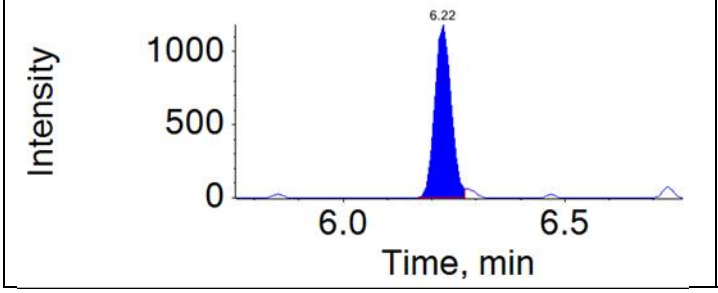
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

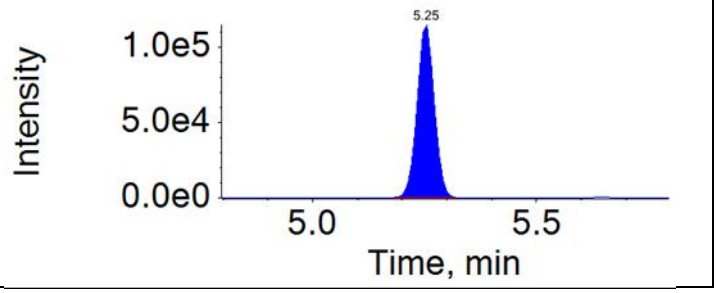
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



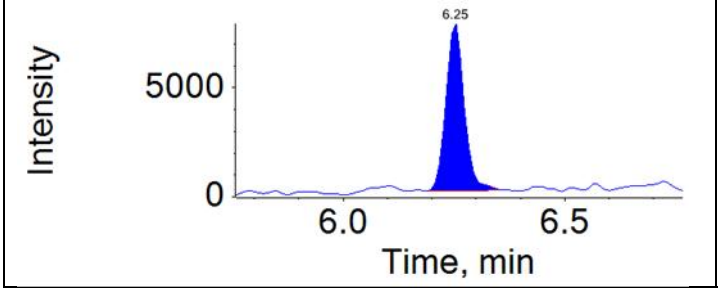


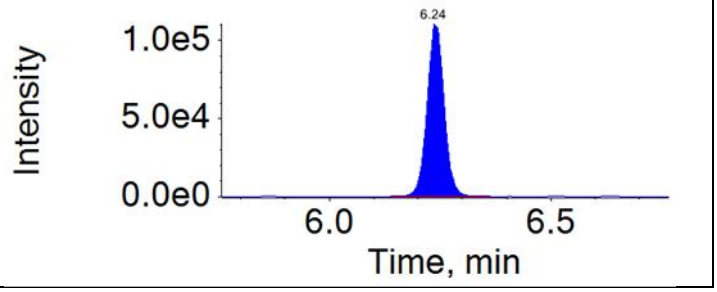
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



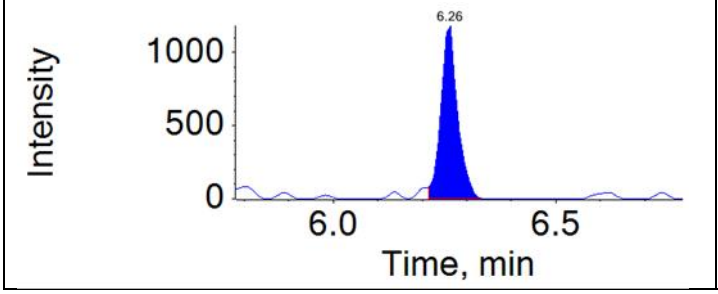


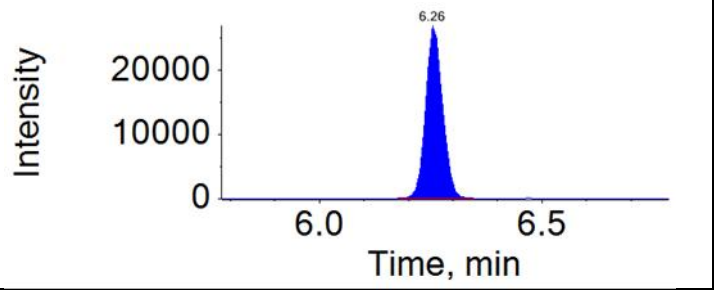
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

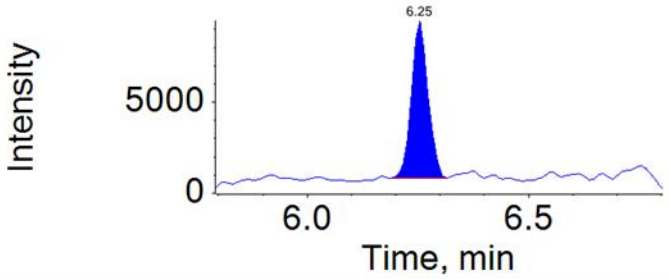
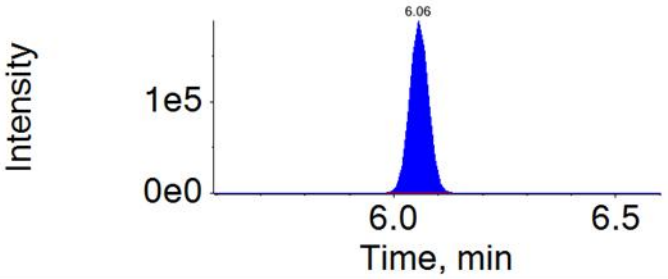


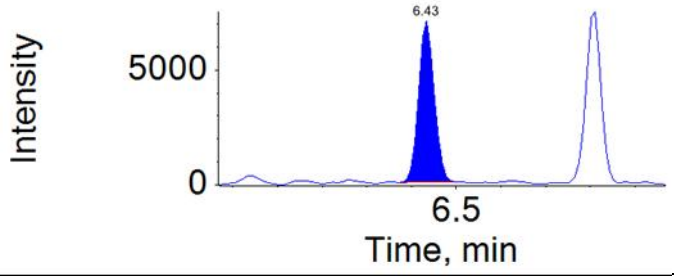
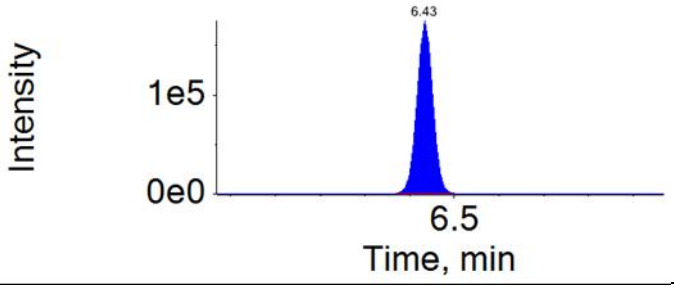


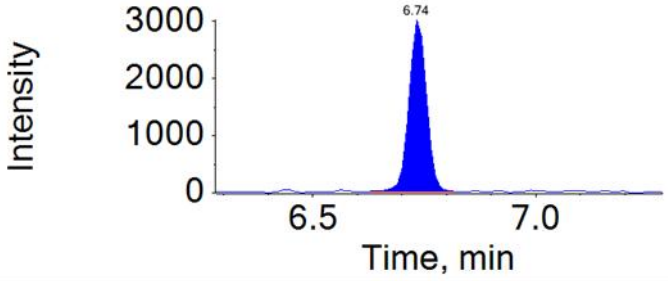
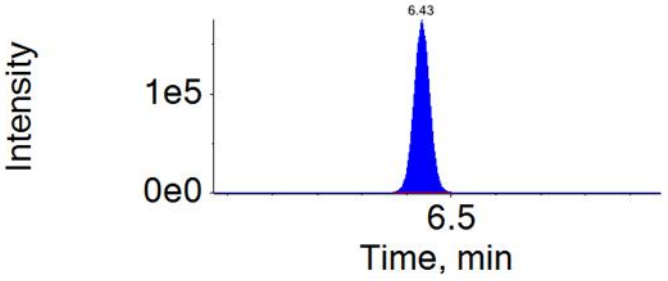
APPROVED
By JPT at 2:53 pm, 11/7/18

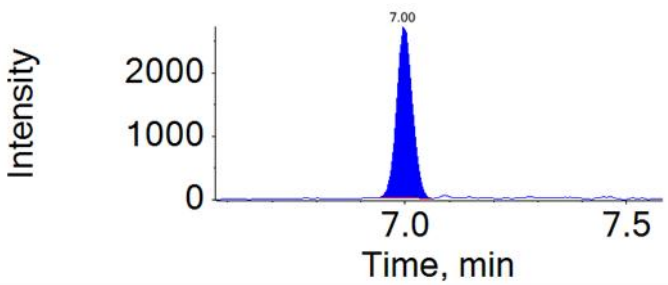
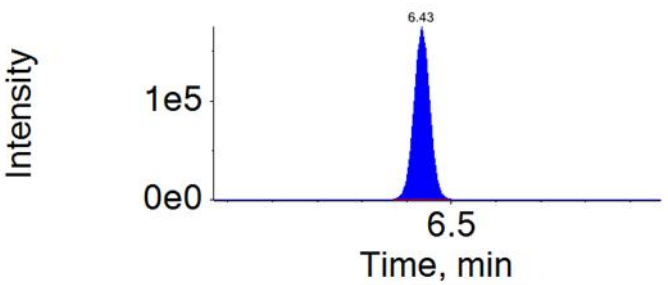
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

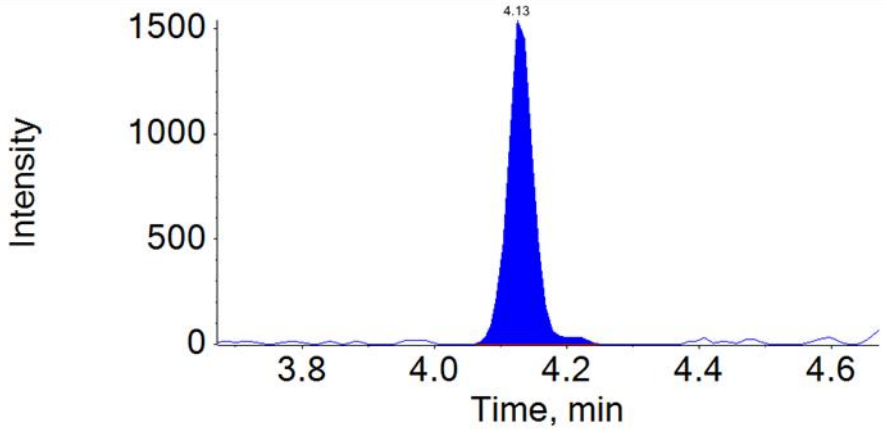
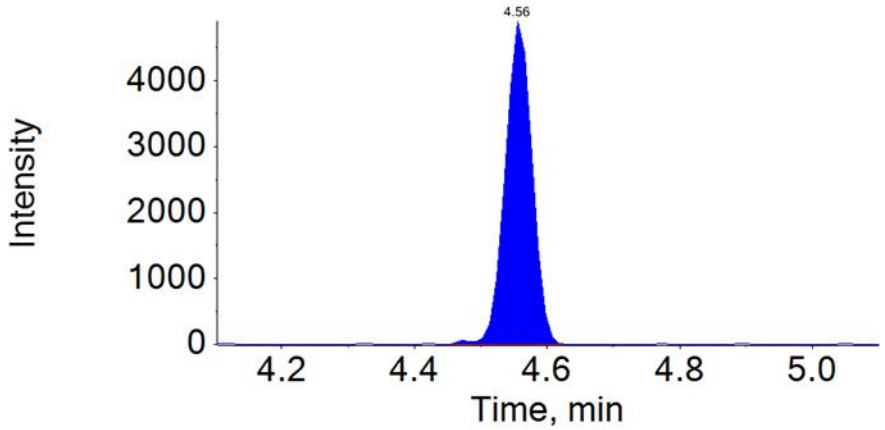
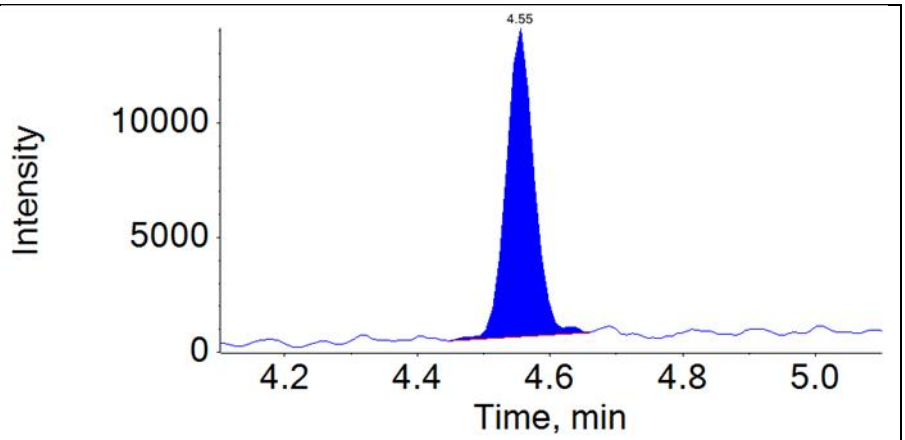
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

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

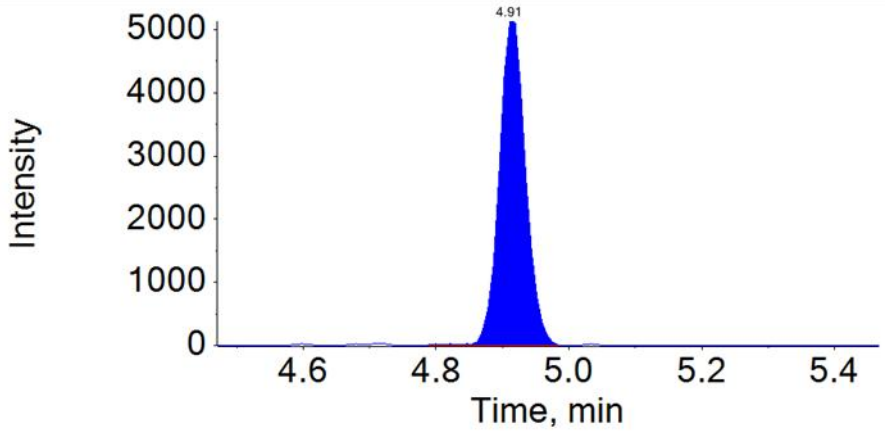
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

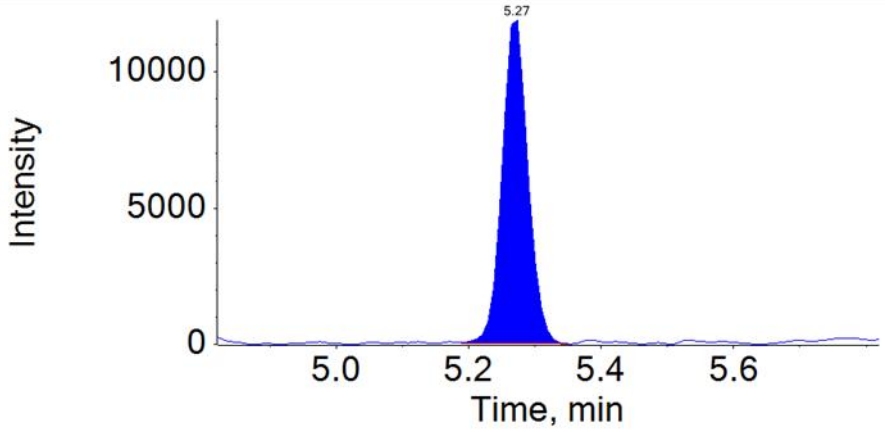
Component Name: 4:2-FTS **RT (min.):** 4.13 **Peak Area:** 4195.6 **Mass Range:** 327.0 / 307.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration
Component Name: PFHxS **RT (min.):** 4.56 **Peak Area:** 13860.4 **Mass Range:** 399.0 / 80.0 **File 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

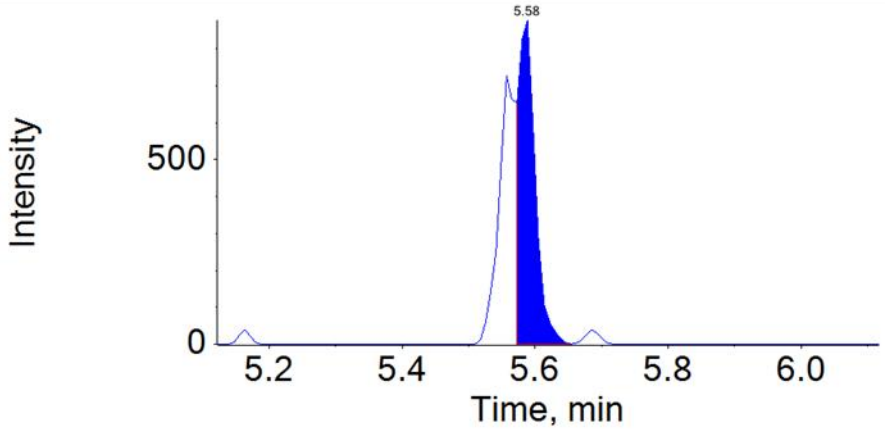
APPROVED
By JPT at 2:53 pm, 11/7/18

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

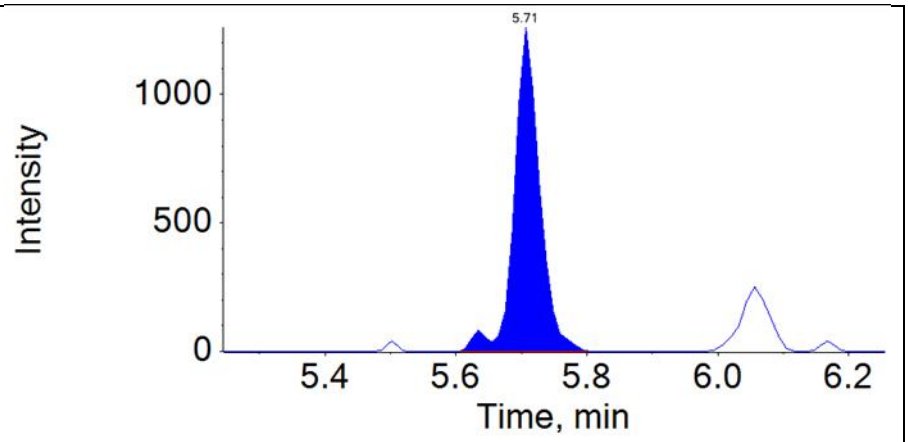
Component Name: 8:2-FTS **RT (min.):** 5.58 **Peak Area:** 1513.1 **Mass Range:** 527.0 / 507.0 **File Name:** 18NOV07DCAL-10.wiff **Sample Name:** CAL1	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

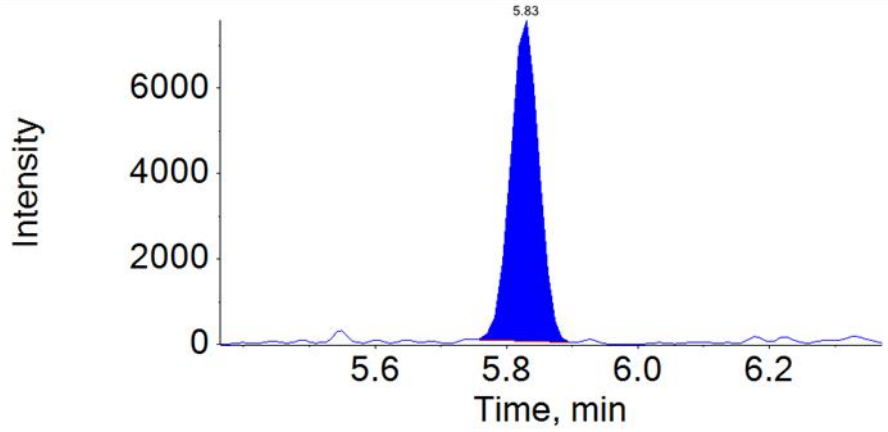
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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



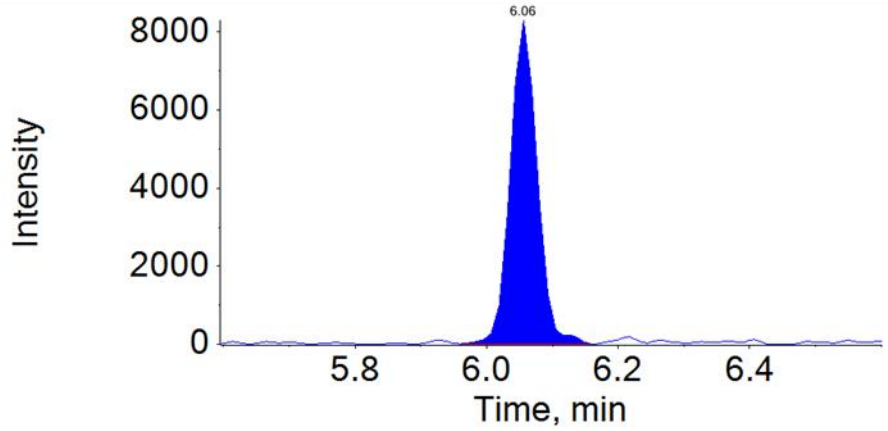
Integration Comment: incorrect integration

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

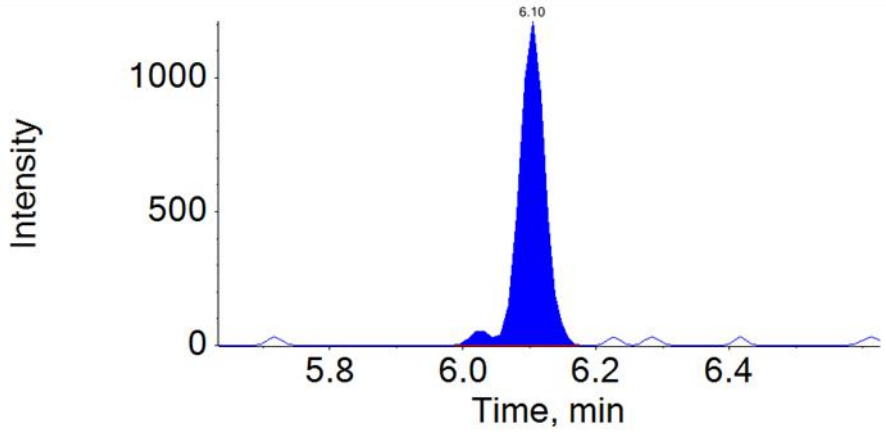


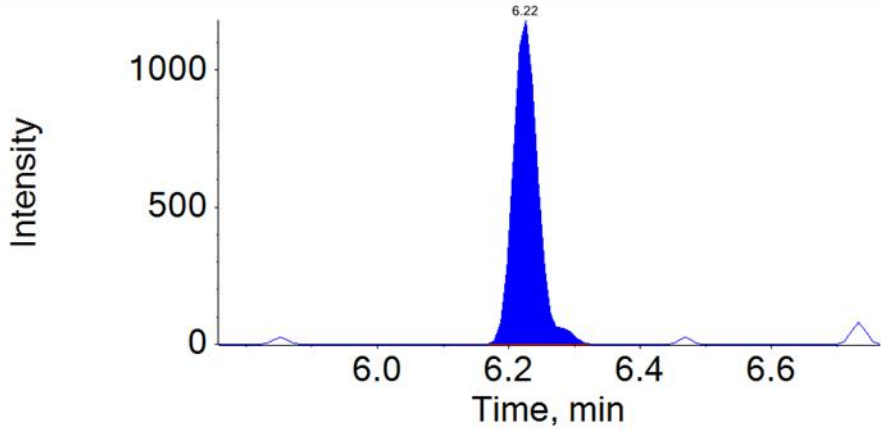
Integration Comment: incorrect integration

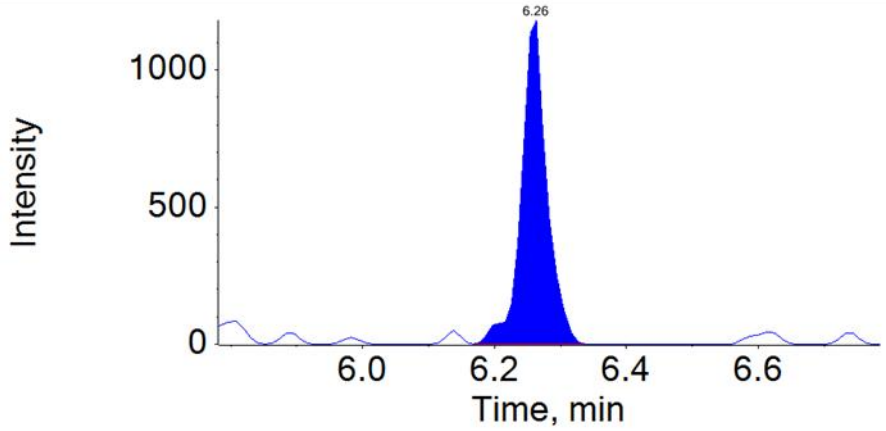
APPROVED
By JPT at 2:53 pm, 11/7/18

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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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

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By umar at 5:23 pm, 11/9/18

Ion Ratio Report

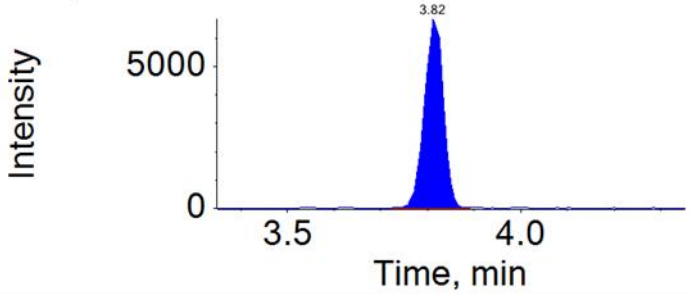
Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-10.wiff

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	

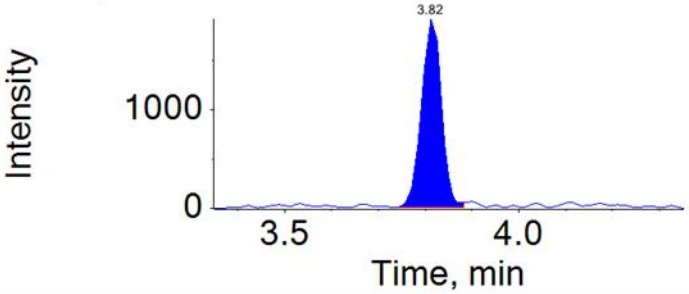
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By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

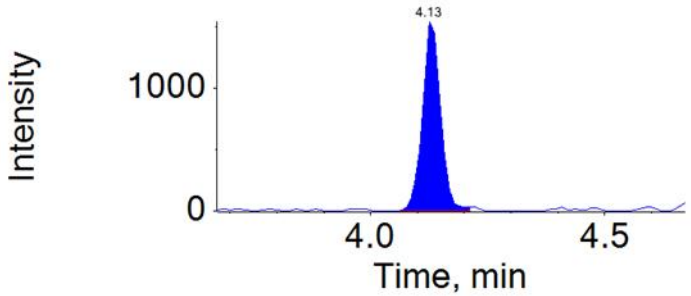
Component: PFBS
Primary Mass: 299.0 / 80.0



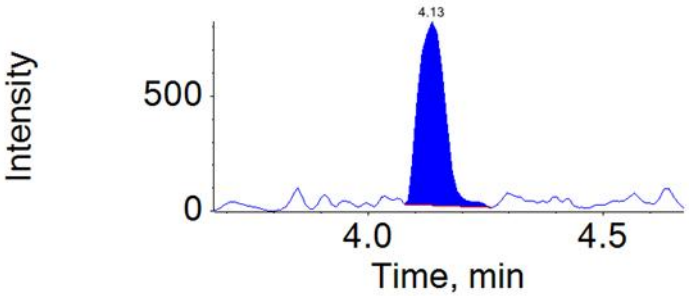
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



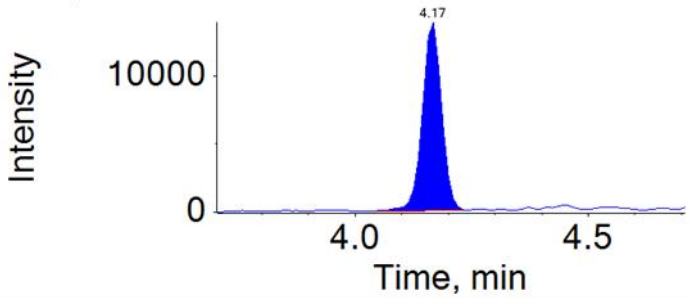
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



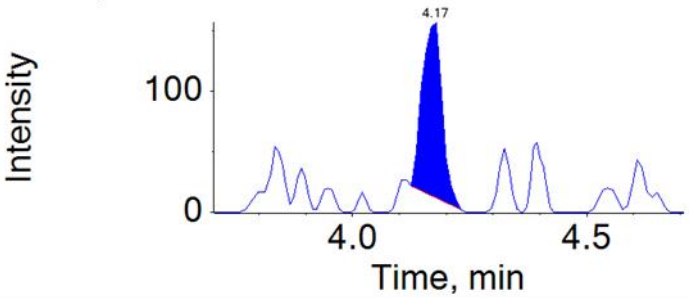
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



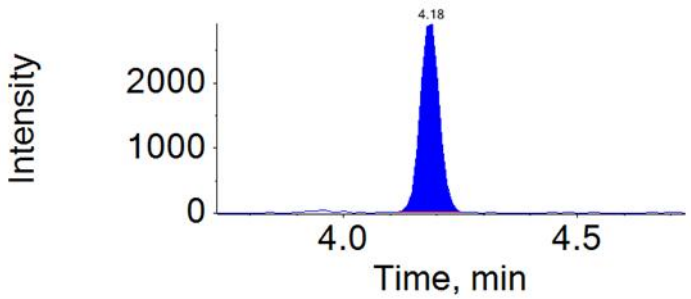
Component: PFHxA
Primary Mass: 313.0 / 269.0



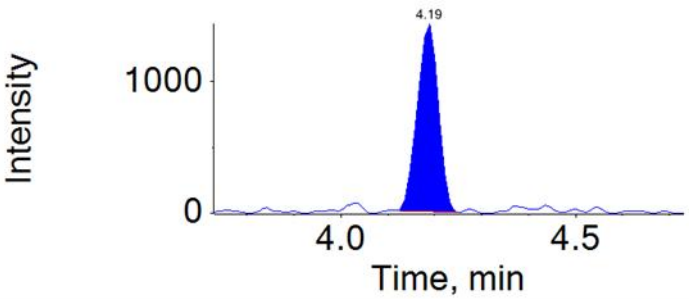
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



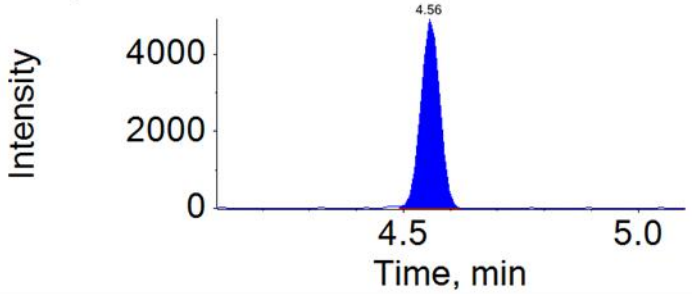
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



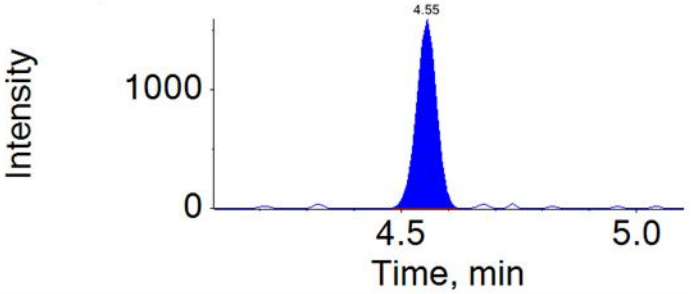
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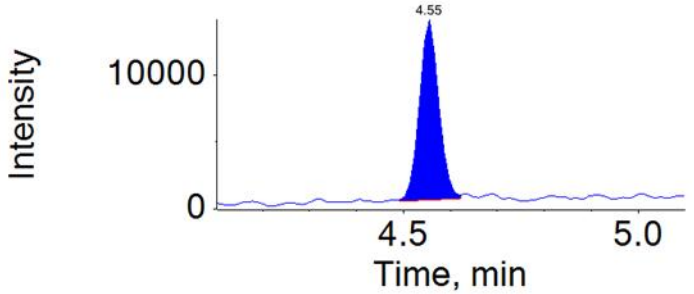
Component: PFHxS
Primary Mass: 399.0 / 80.0



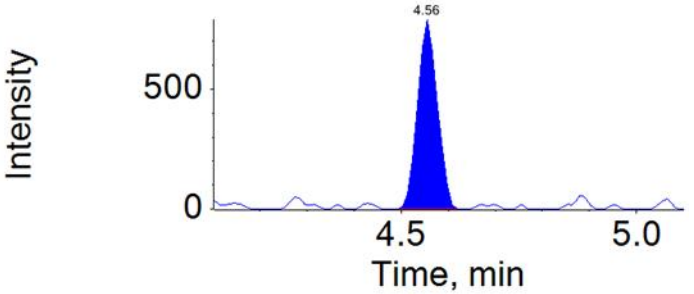
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Secondary Mass: 399.0 / 99.0



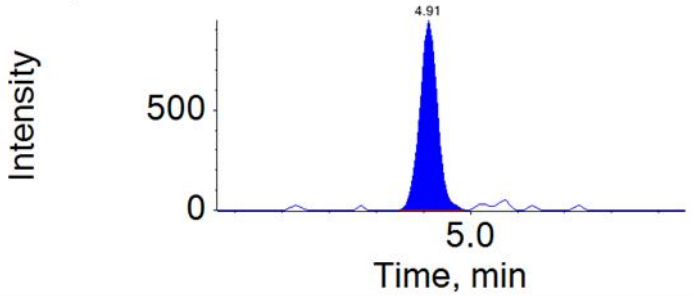
Component: PFHpA
Primary Mass: 363.0 / 319.0



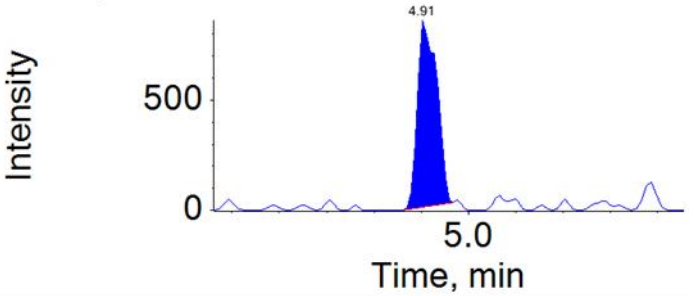
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



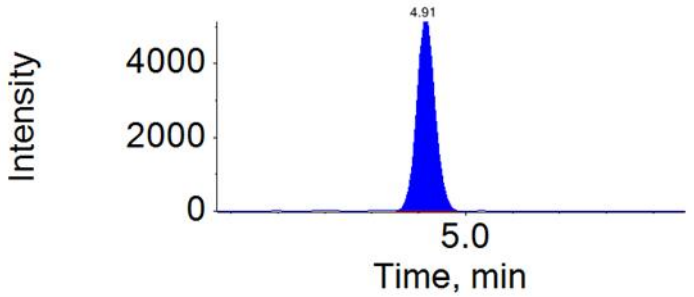
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



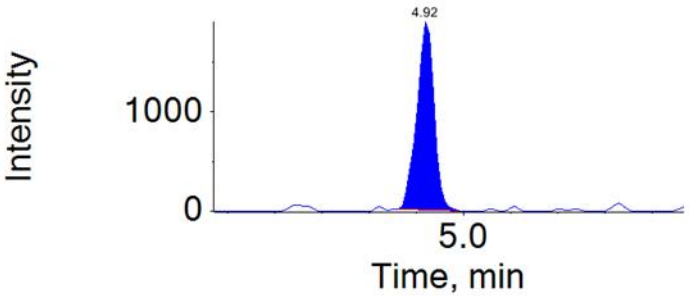
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



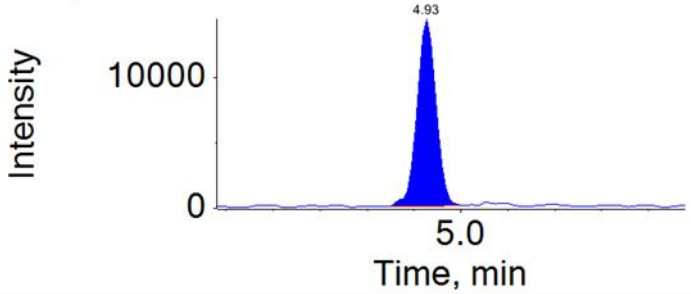
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



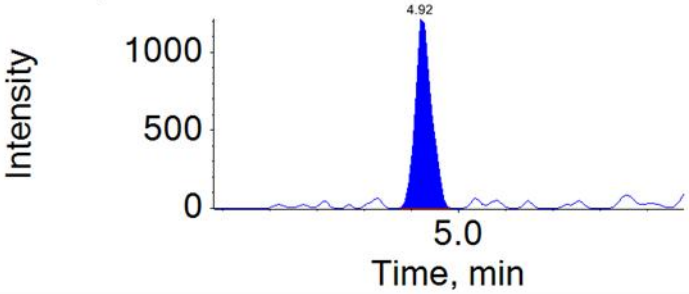
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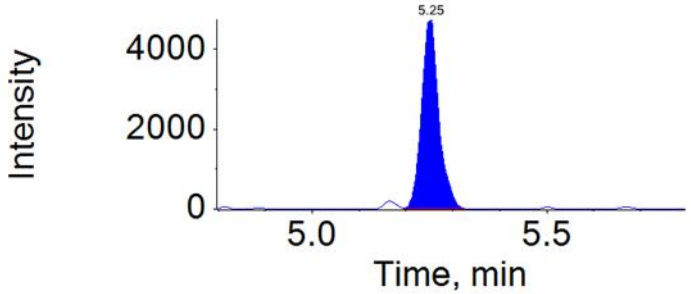
Component: PFOA
Primary Mass: 413.0 / 369.0



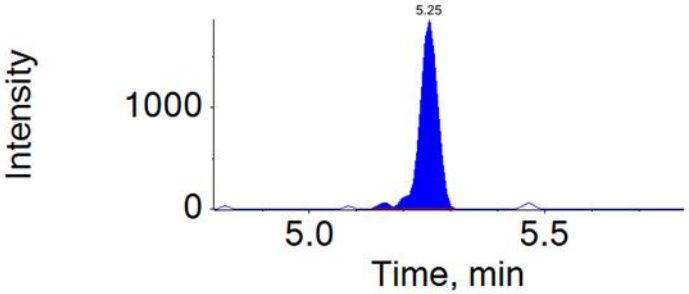
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Secondary Mass: 413.0 / 169.0



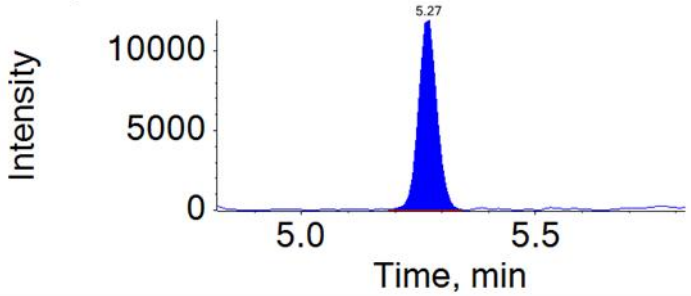
Component: PFOS
Primary Mass: 499.0 / 80.0



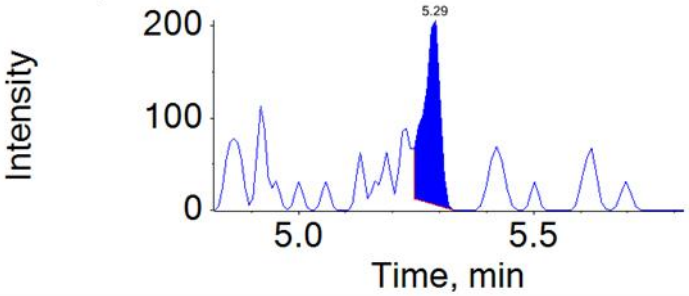
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



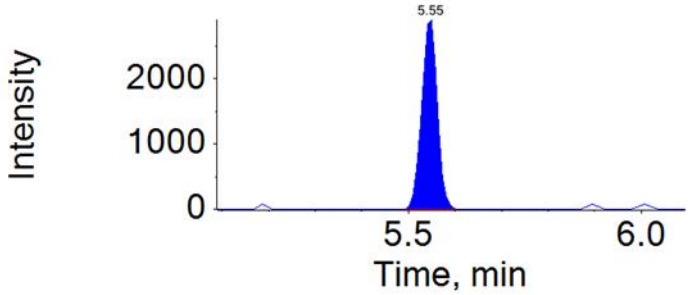
Component: PFNA
Primary Mass: 463.0 / 419.0



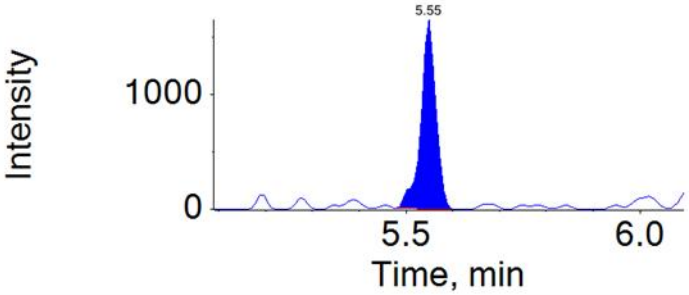
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



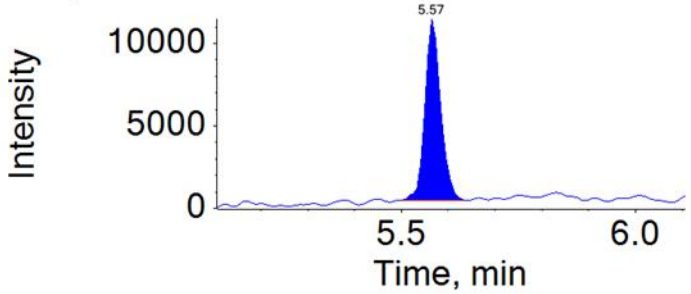
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



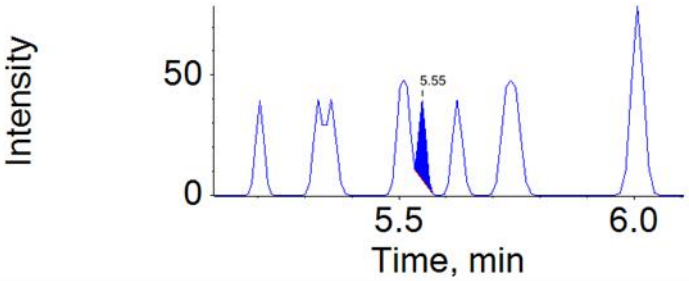
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By umar at 5:23 pm, 11/9/18

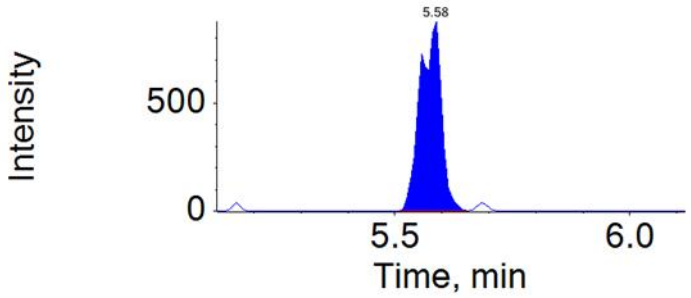
Component: PFDA
Primary Mass: 513.0 / 469.0



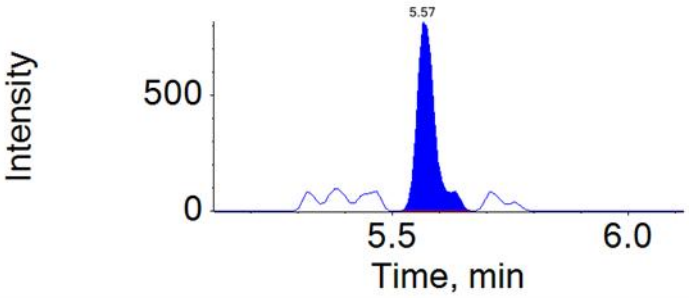
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Secondary Mass: 513.0 / 169.0



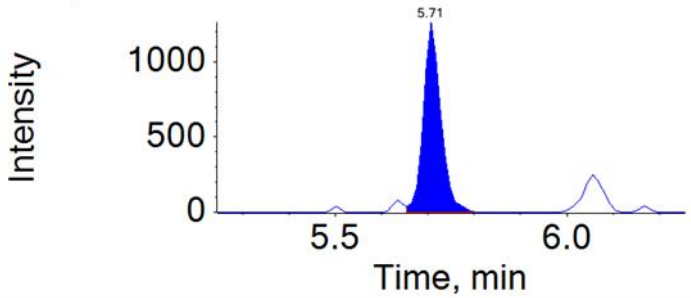
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



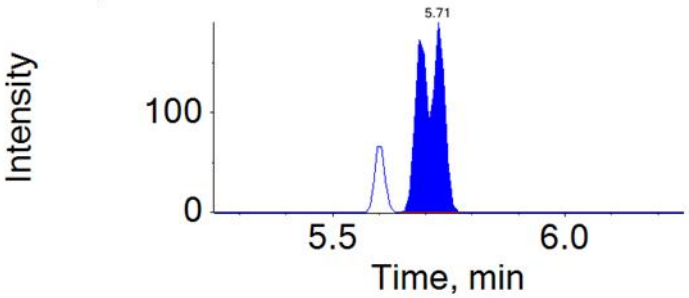
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



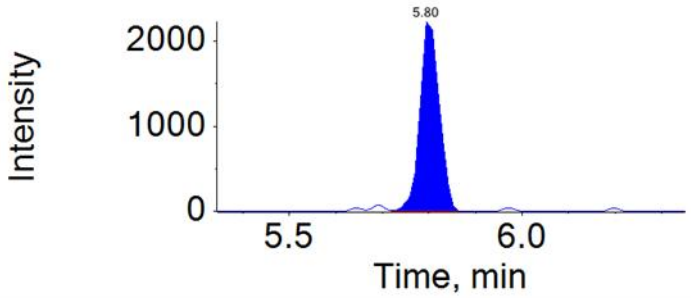
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



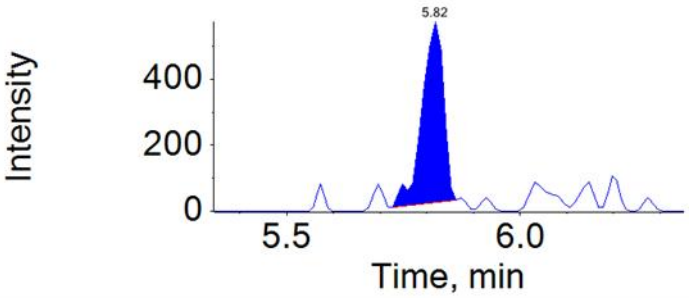
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



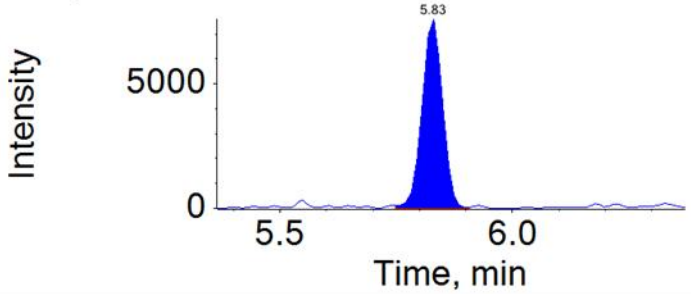
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



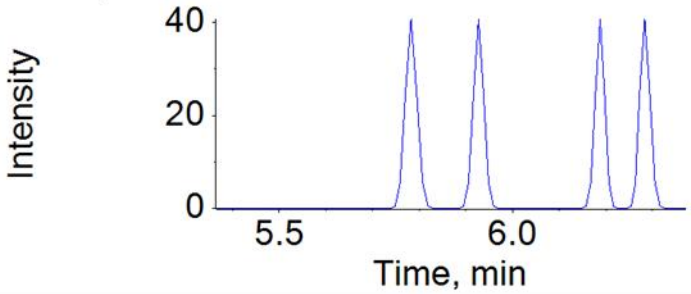
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

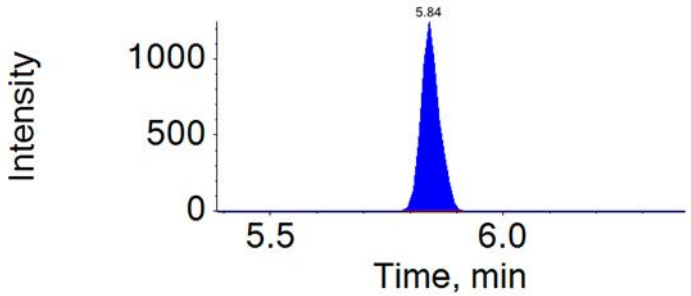
Component: PFUnDA
Primary Mass: 563.0 / 519.0



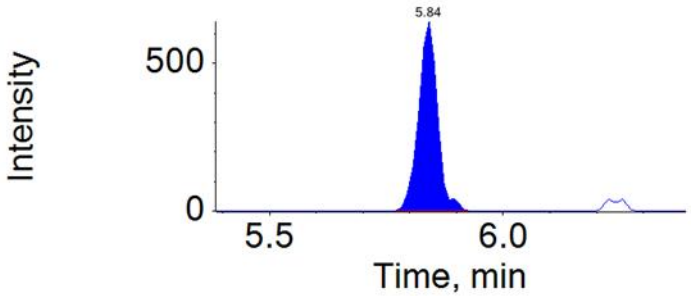
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



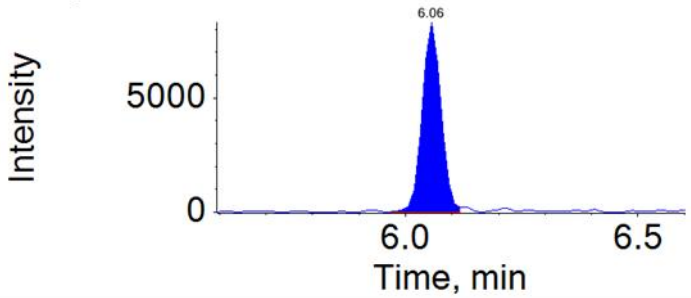
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



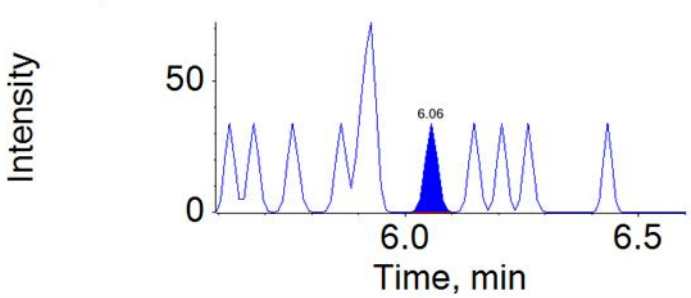
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Secondary Mass: 584.0 / 526.0



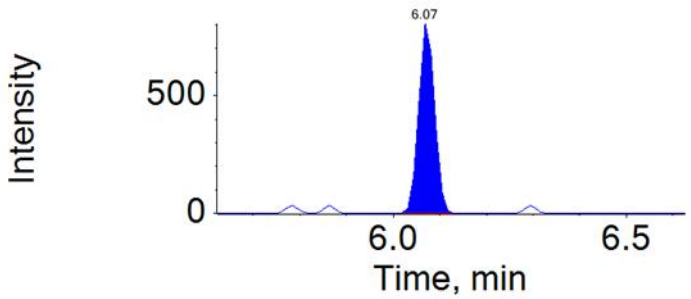
Component: PFDoDA
Primary Mass: 613.0 / 569.0



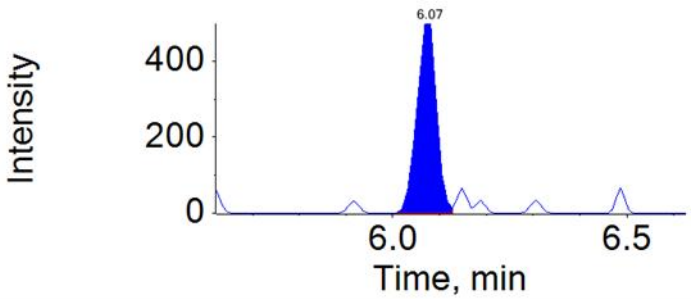
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



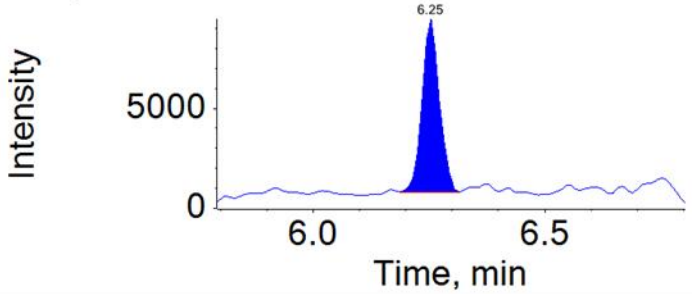
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



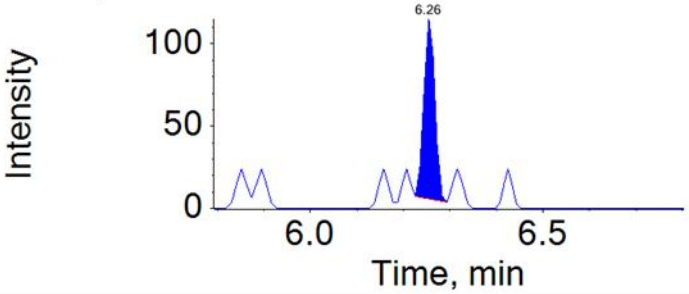
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

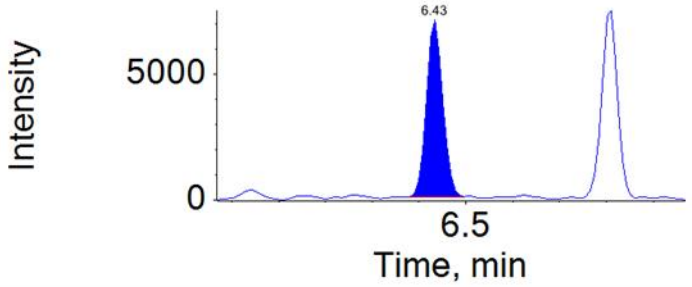
Component: PFTrDA
Primary Mass: 663.0 / 619.0



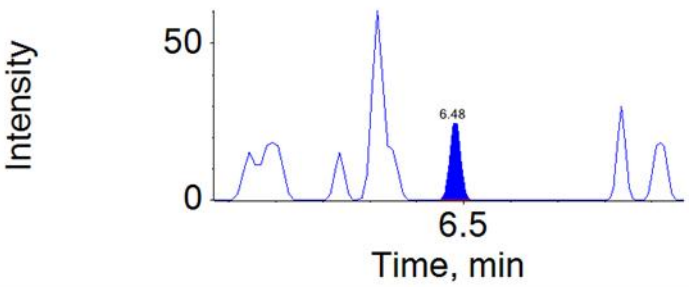
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



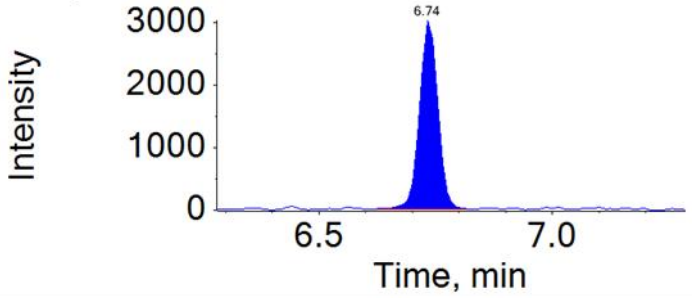
Component: PFTeDA
Primary Mass: 713.0 / 669.0



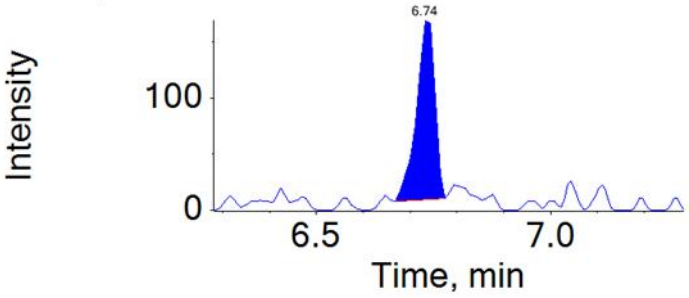
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



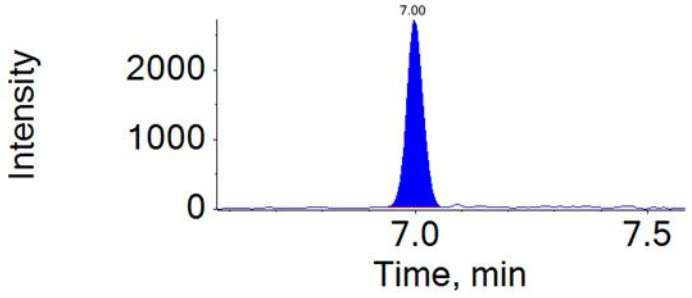
Component: PFHxDA
Primary Mass: 813.0 / 769.0



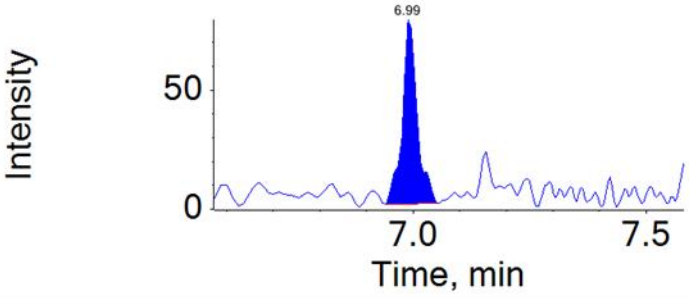
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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:	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

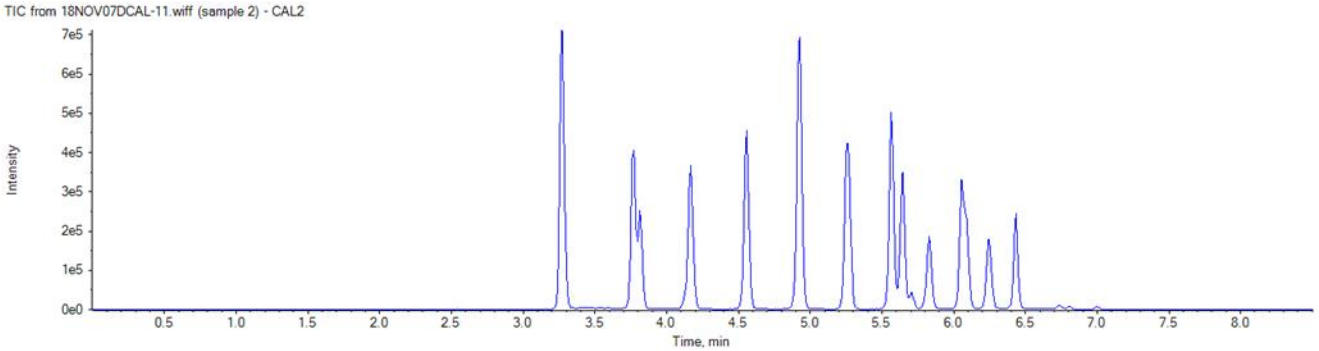
Analyte Quantitation Peak Table

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

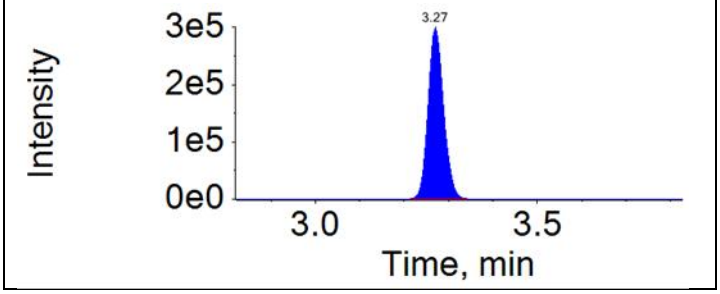


APPROVED
By JPT at 2:53 pm, 11/7/18

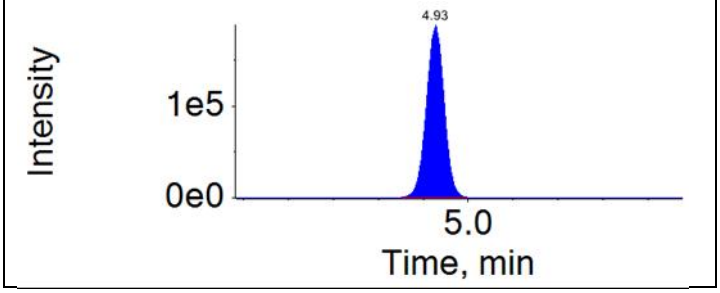
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

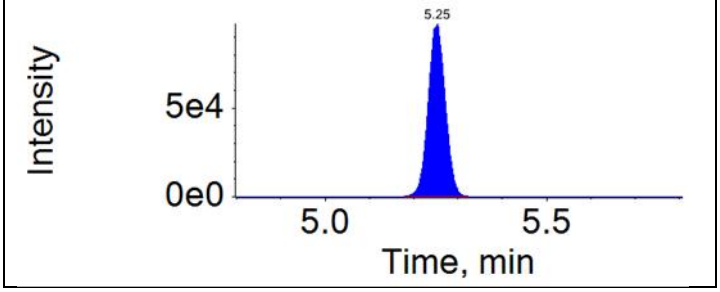
Injection Standard: 13C3-PFBA
216.0 / 172.0



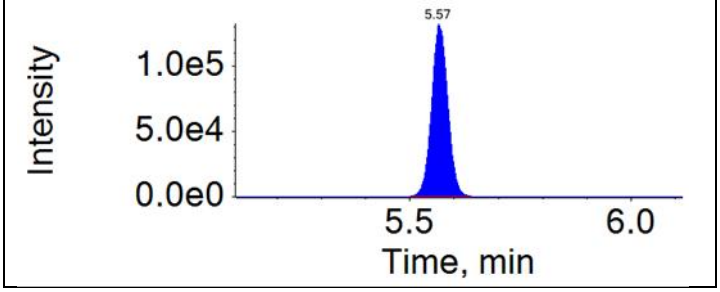
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



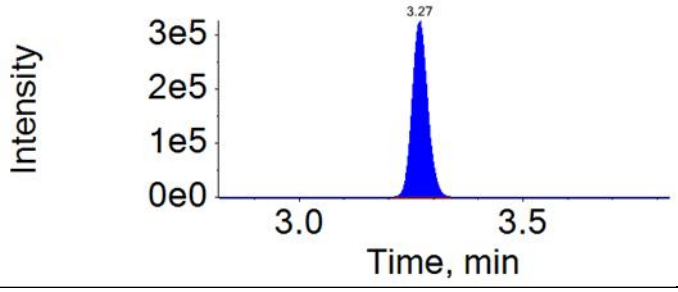
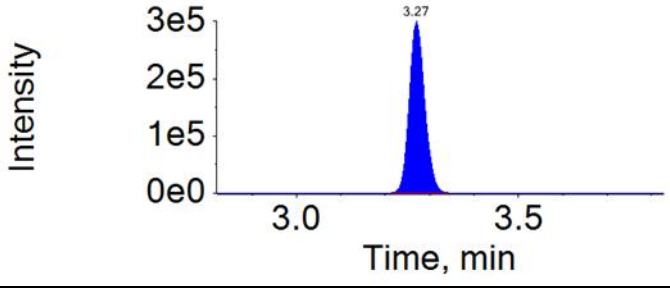
Injection Standard: 13C2-PFDA
515.0 / 470.0

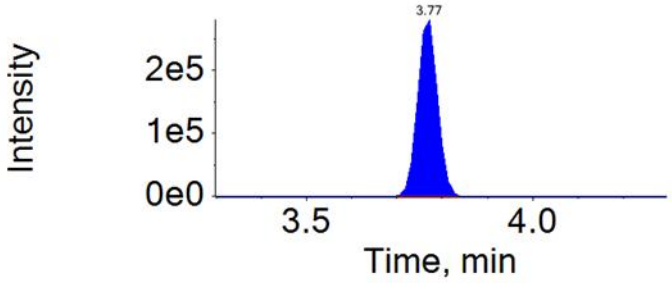
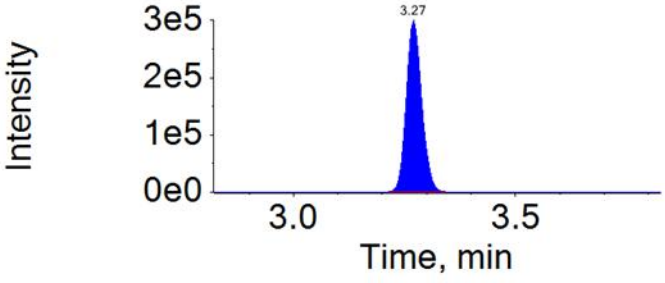


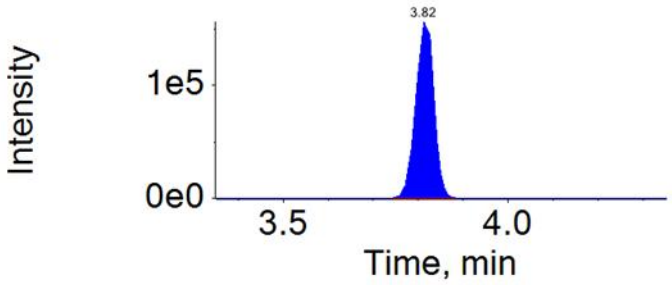
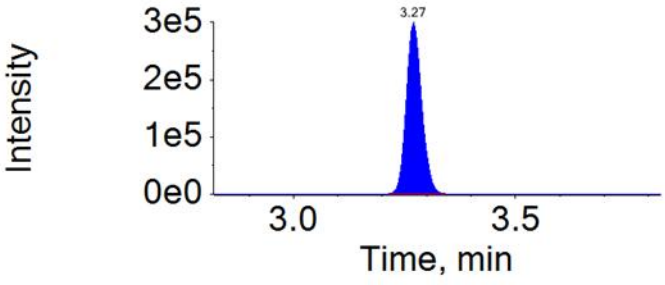
APPROVED
By JPT at 2:53 pm, 11/7/18

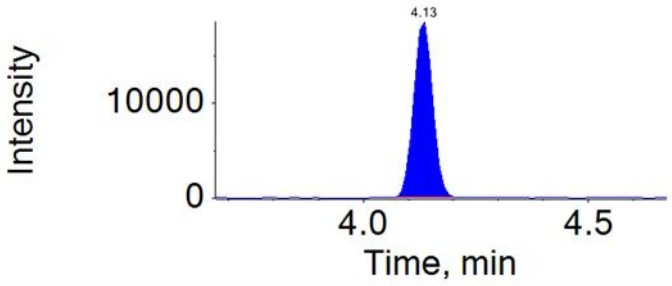
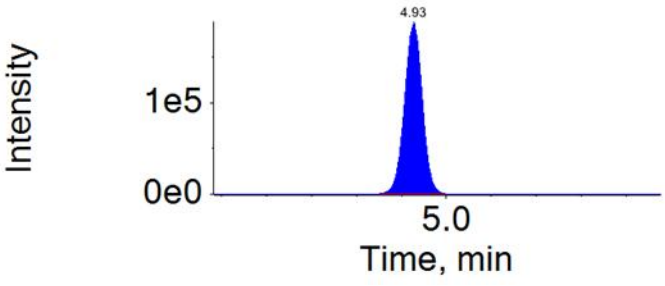
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

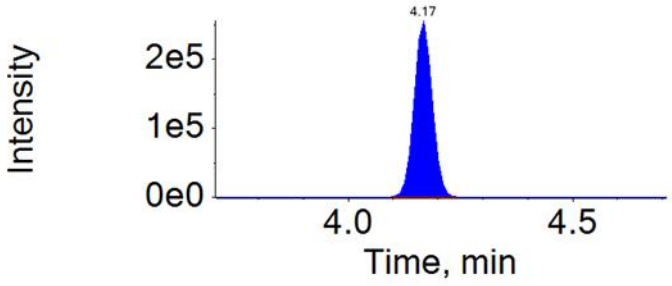
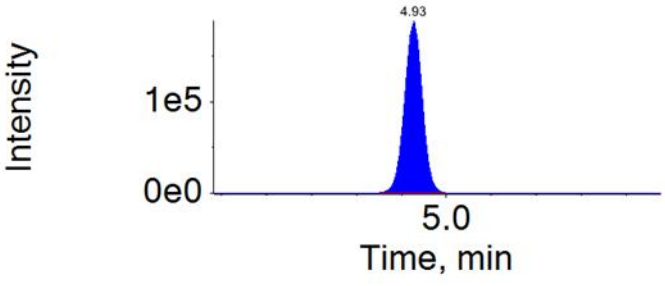
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

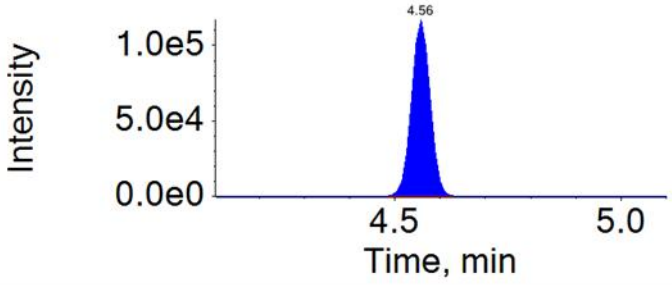
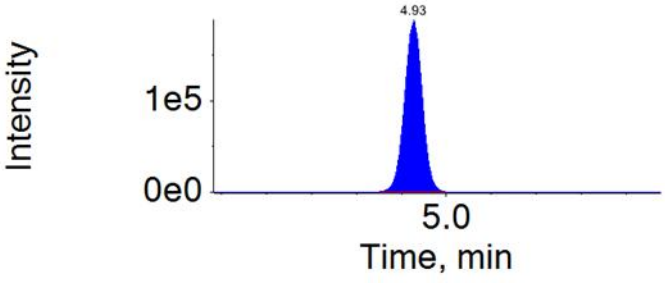
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

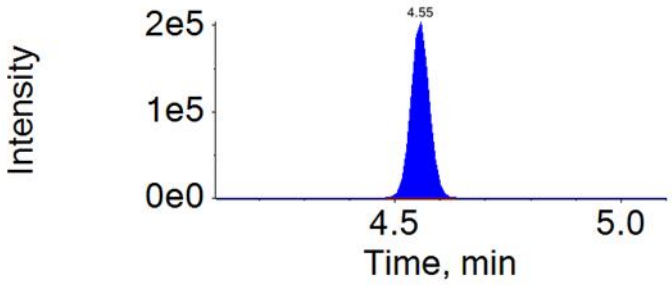
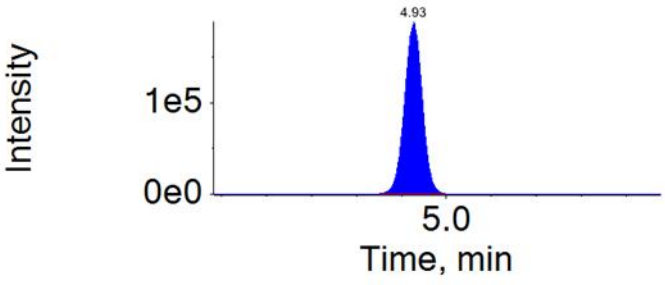
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

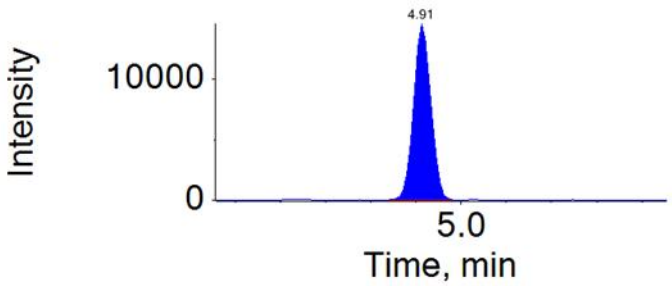
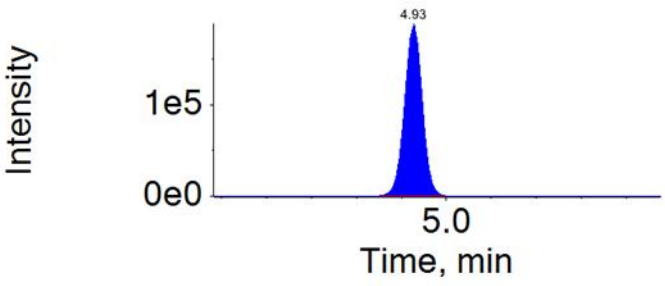
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

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
	

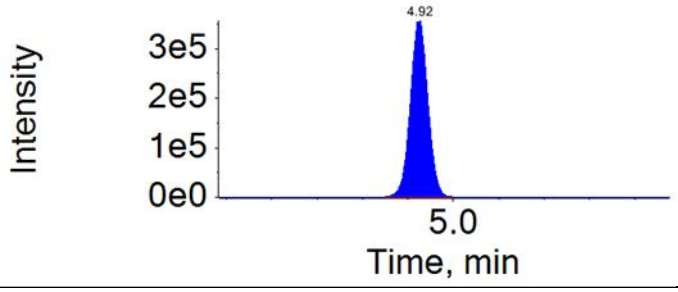
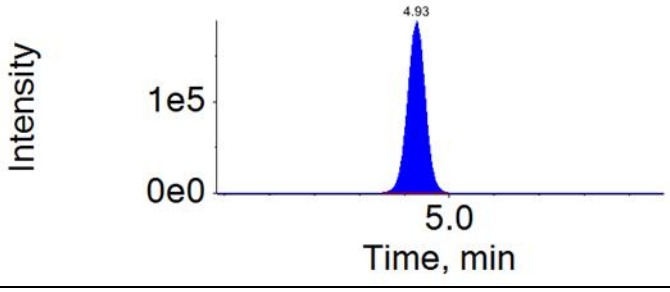
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

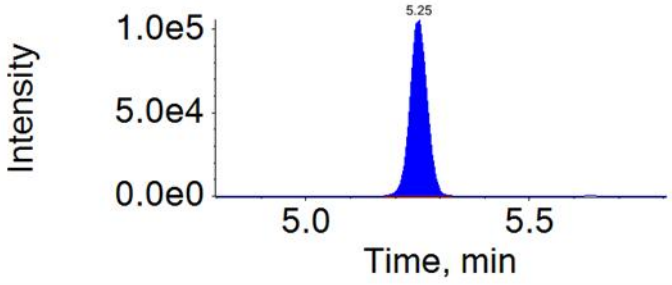
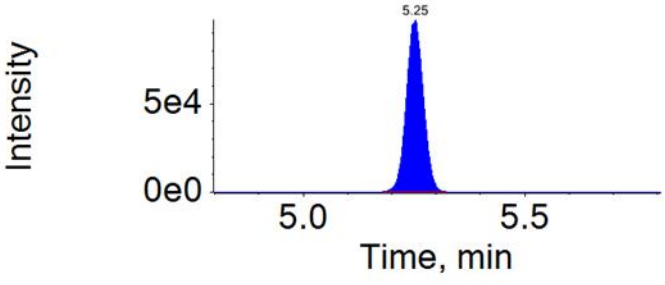
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

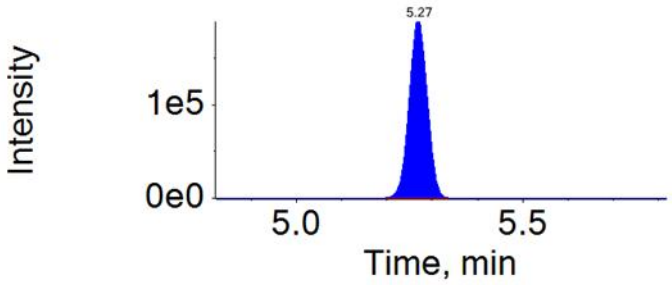
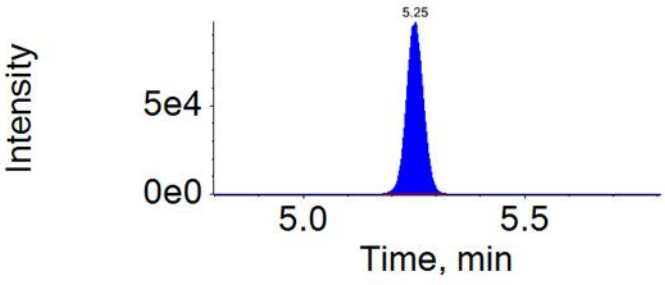
APPROVED
By JPT at 2:53 pm, 11/7/18

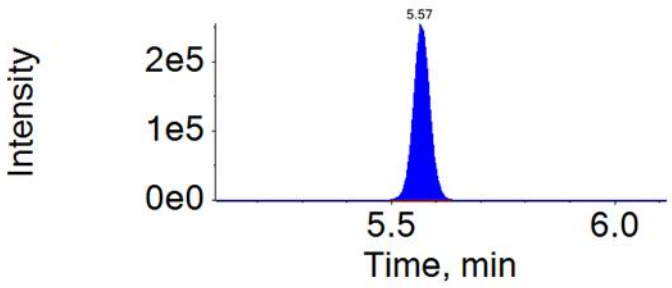
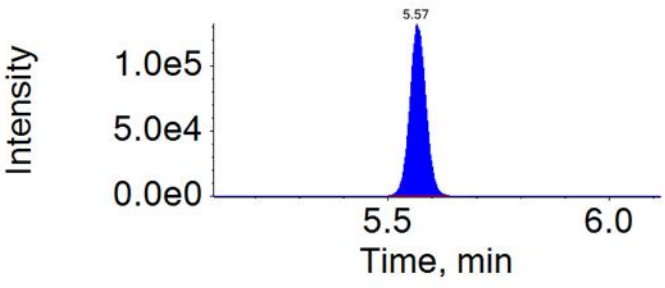
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

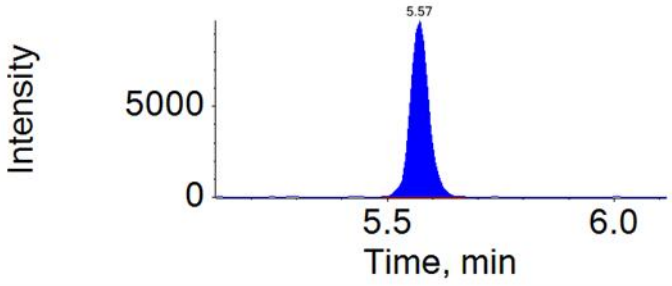
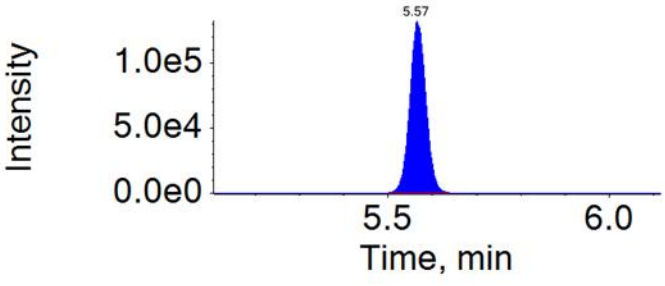
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

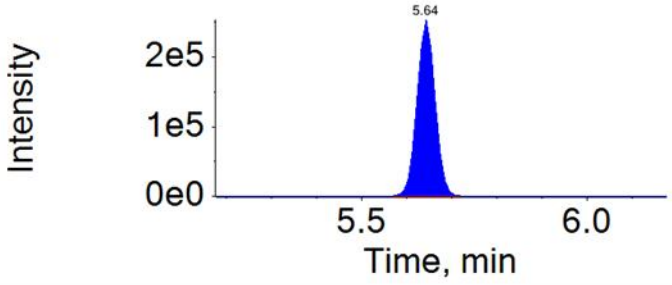
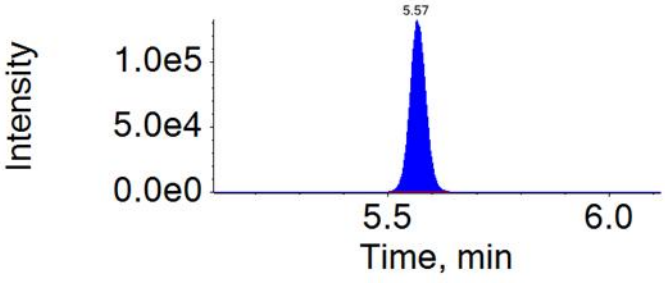
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

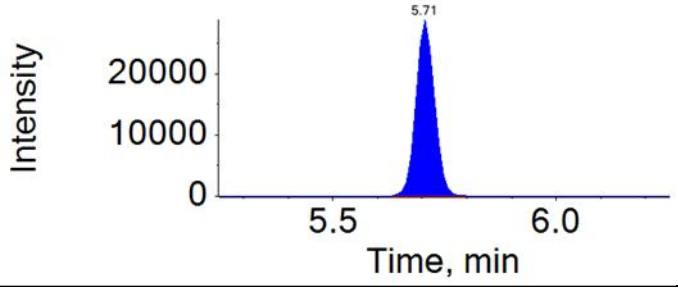
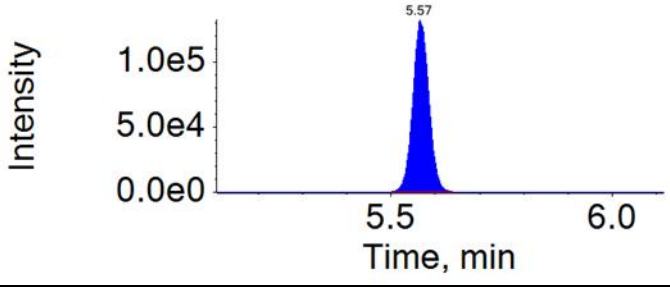
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

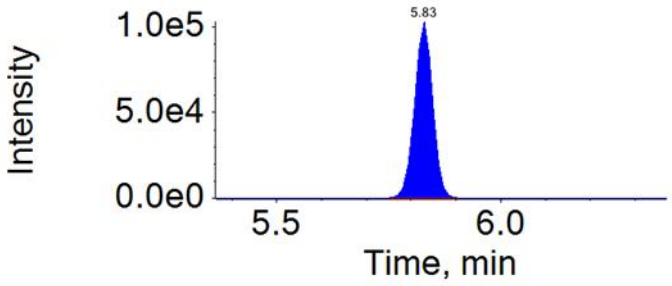
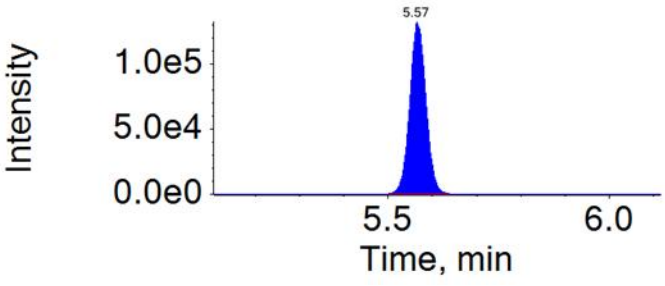
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

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
	

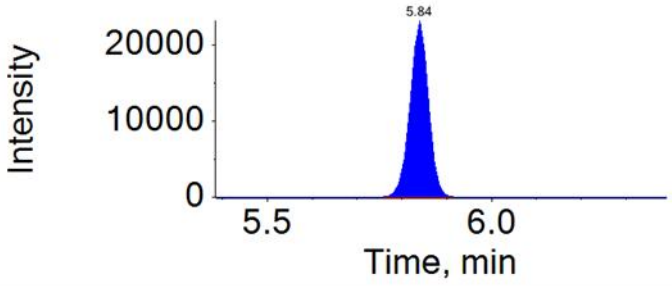
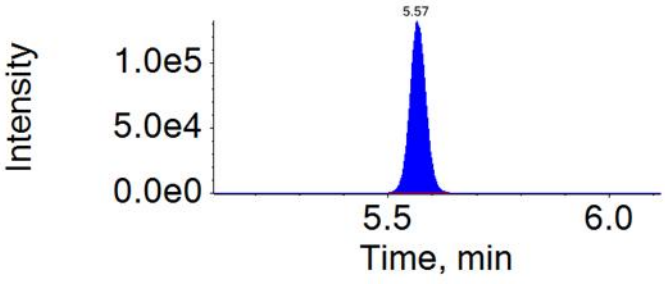
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

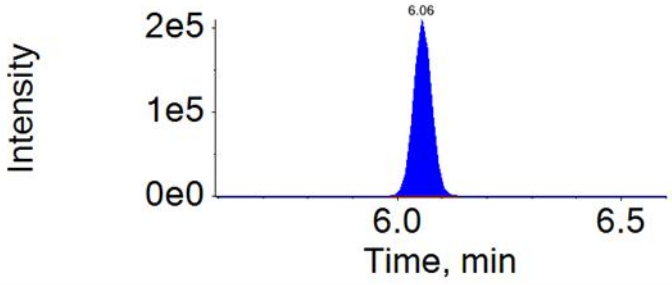
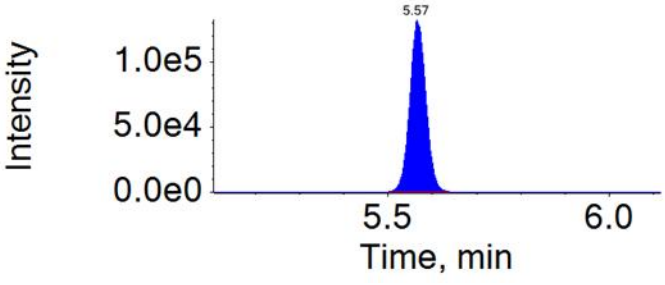
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

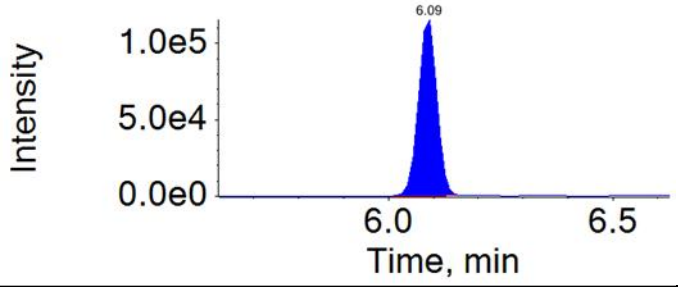
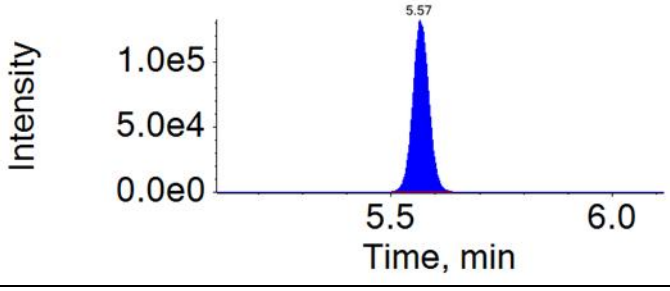
APPROVED
By JPT at 2:53 pm, 11/7/18

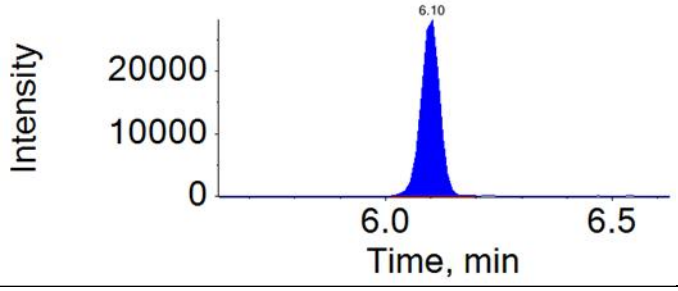
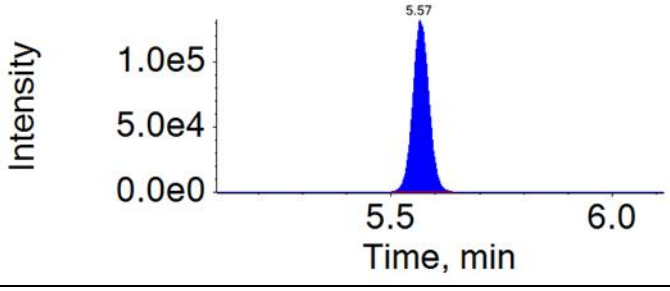
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

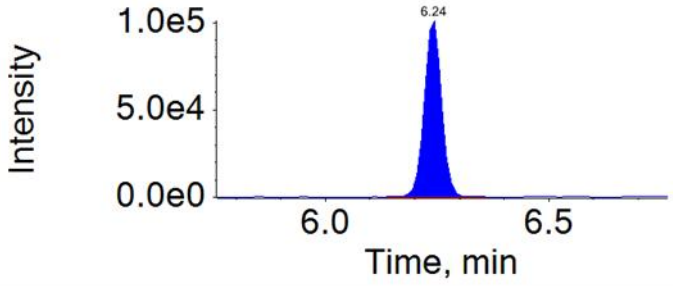
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

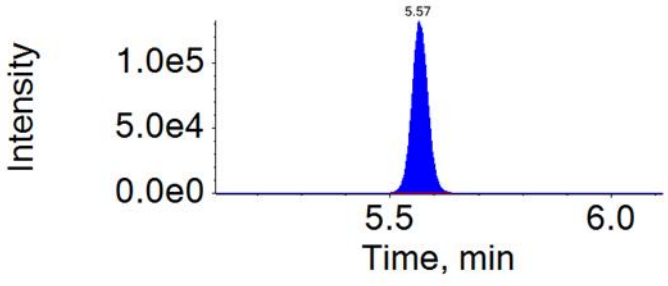
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

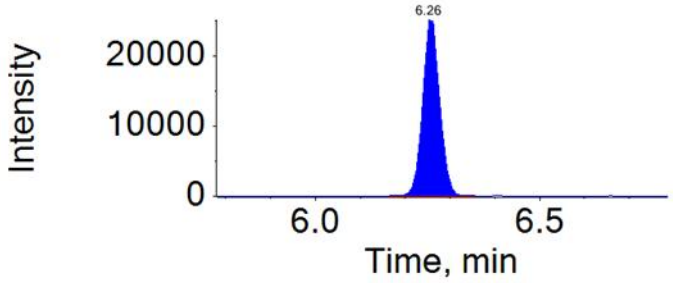
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

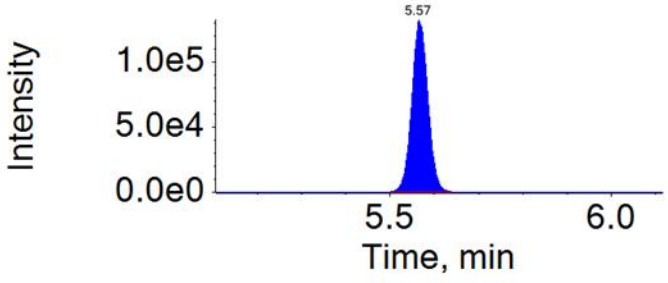
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



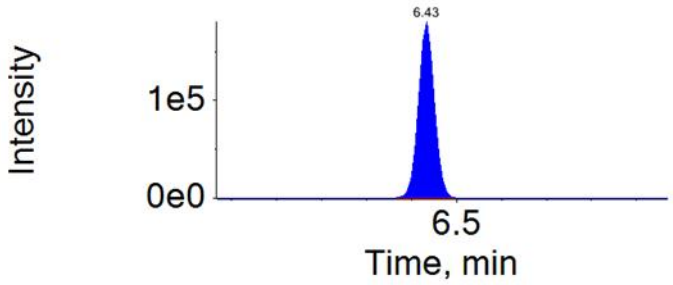


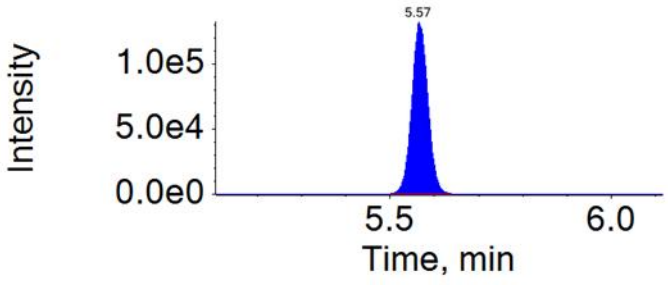
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



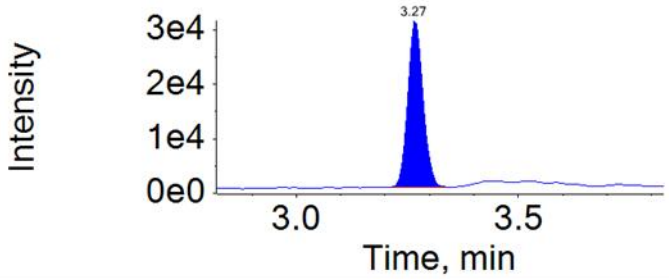


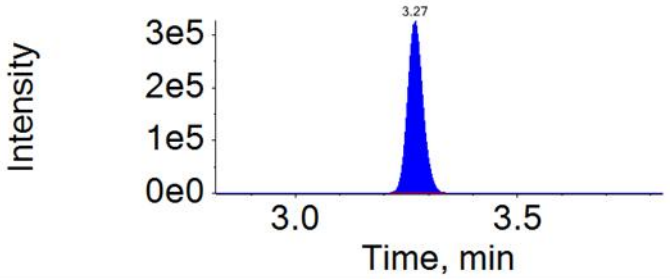
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

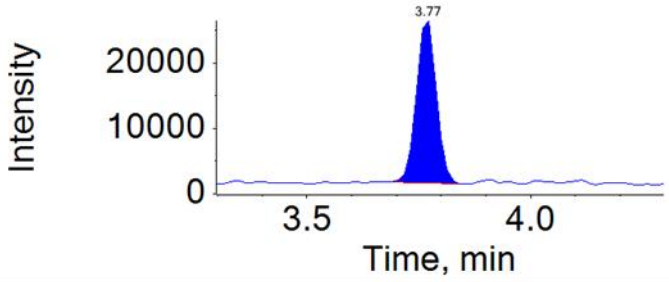
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

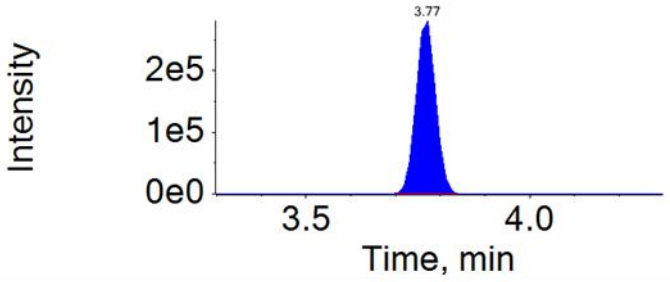
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



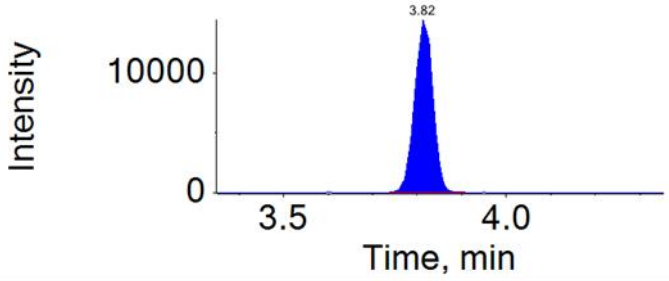


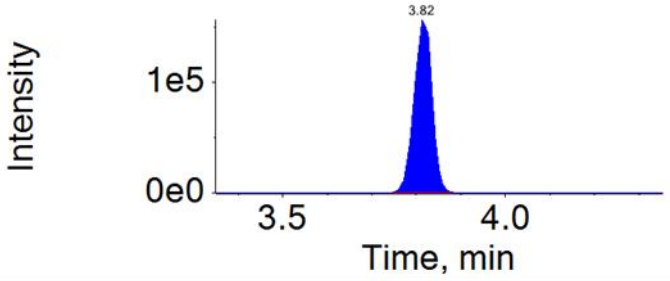
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



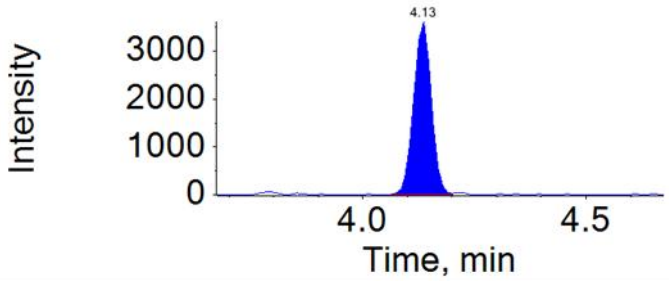


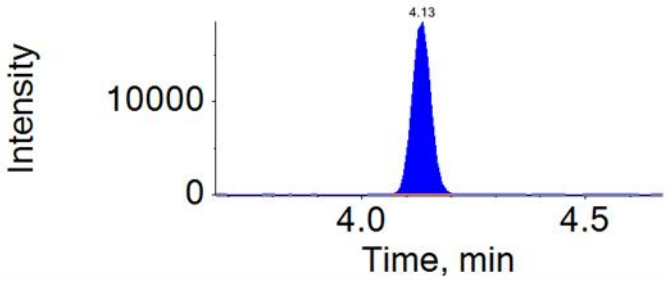
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



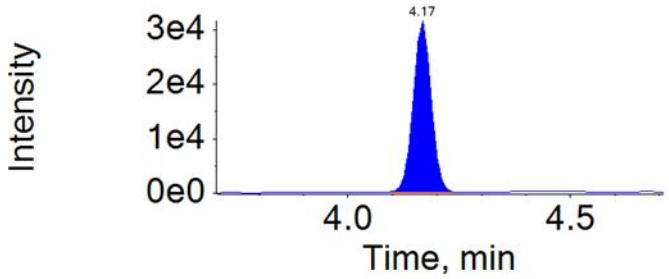


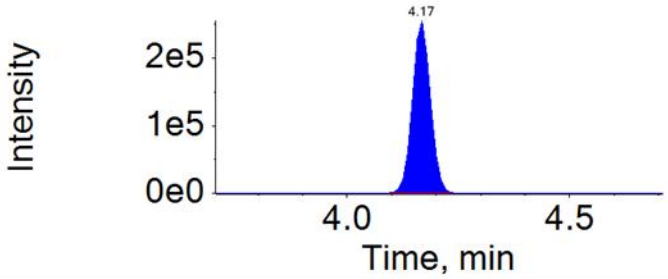
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

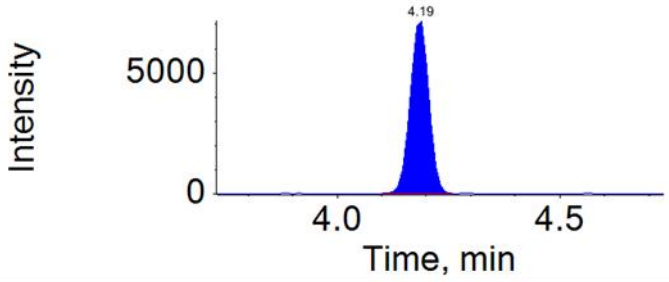
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

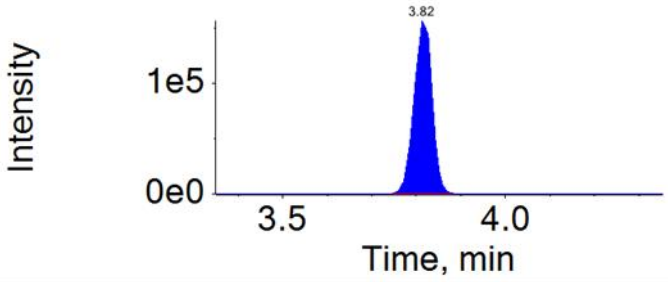
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



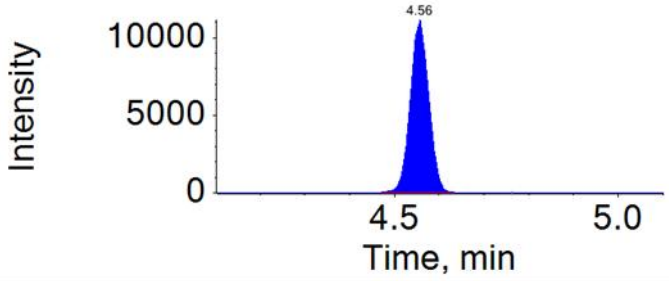


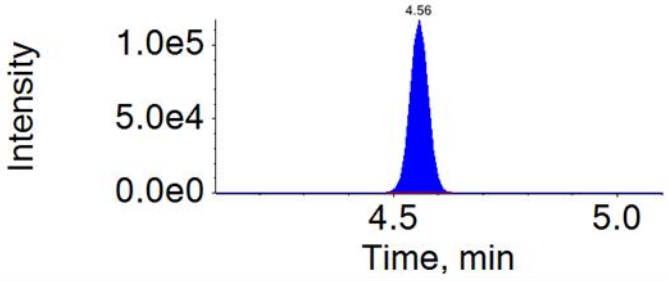
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



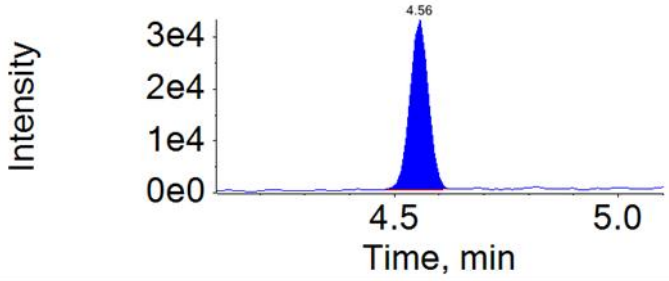


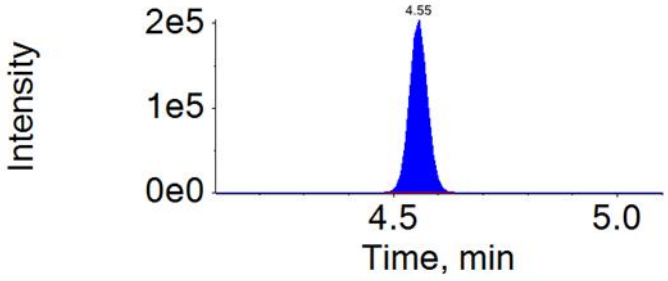
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

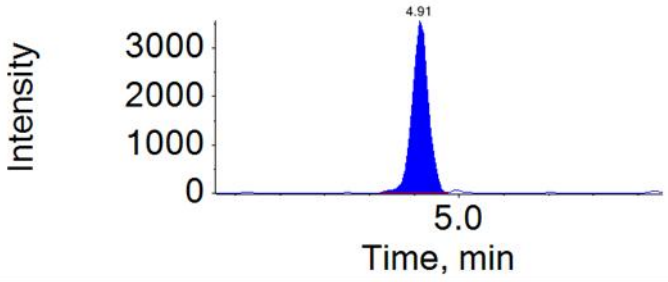
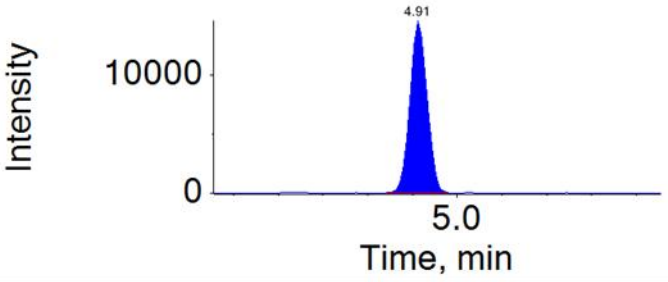


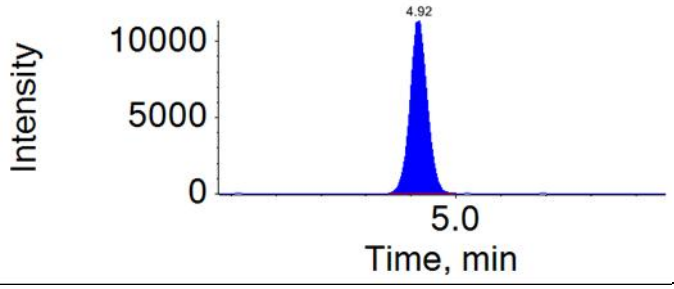
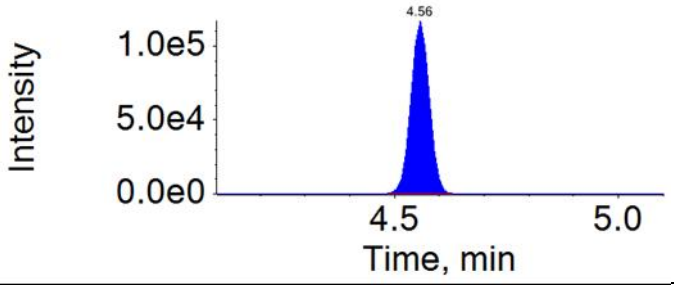


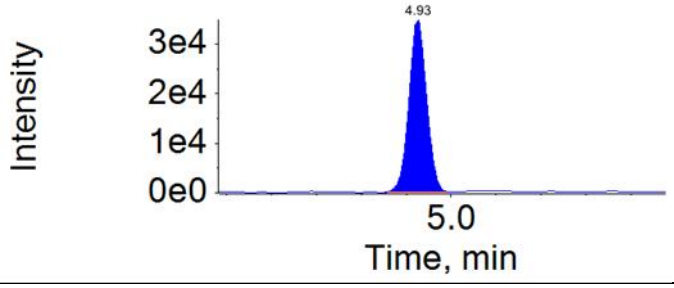
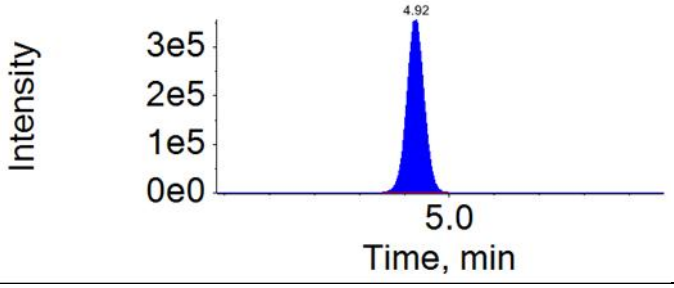
APPROVED
By JPT at 2:53 pm, 11/7/18

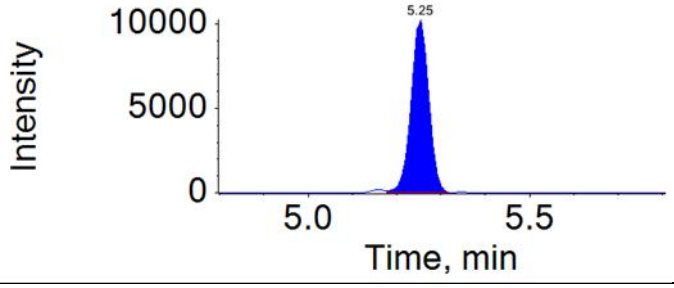
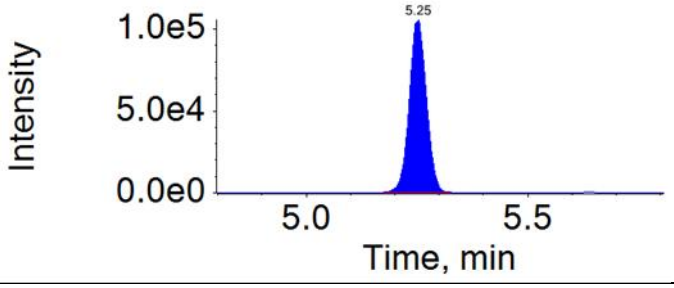
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

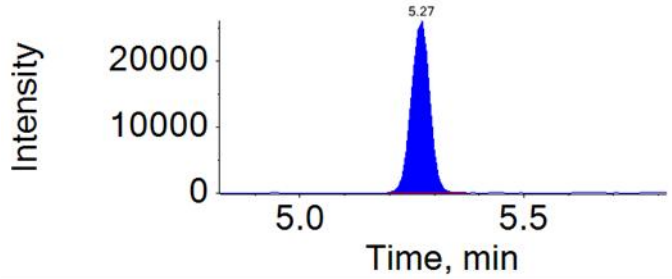
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

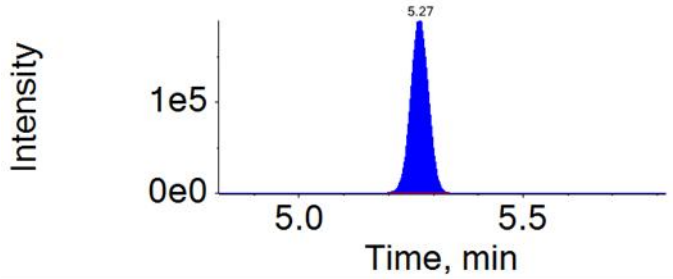
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

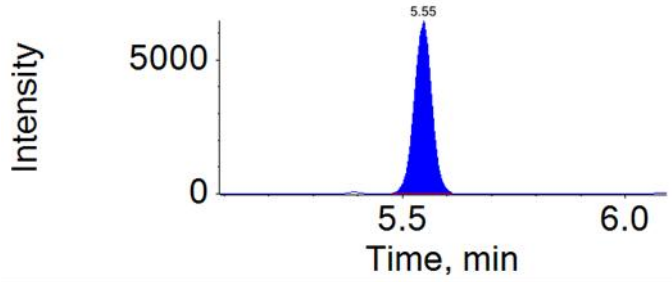
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

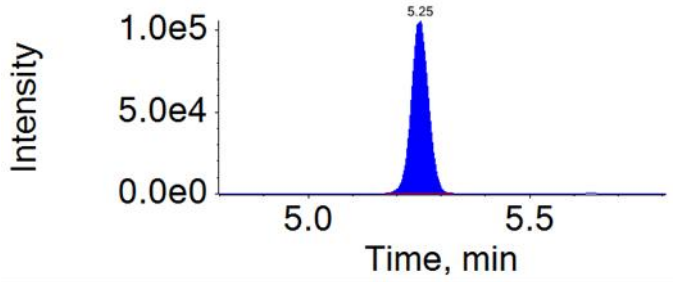
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



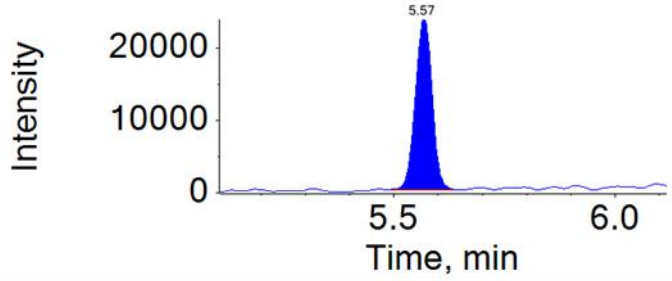


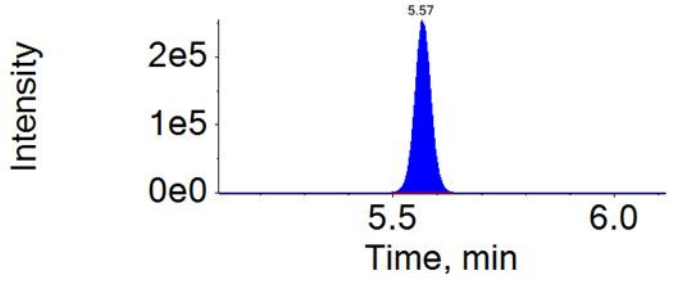
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



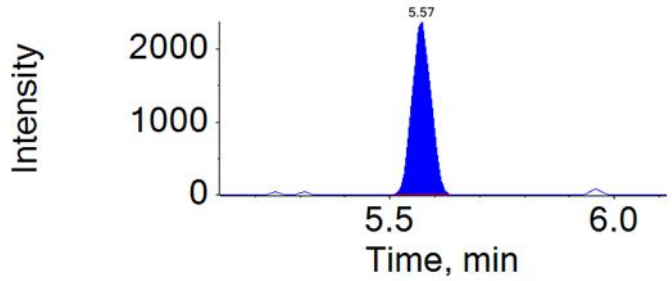


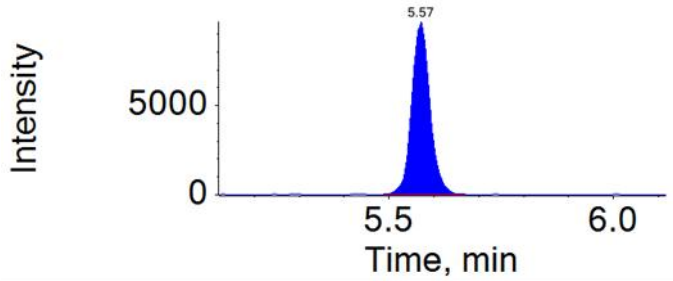
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

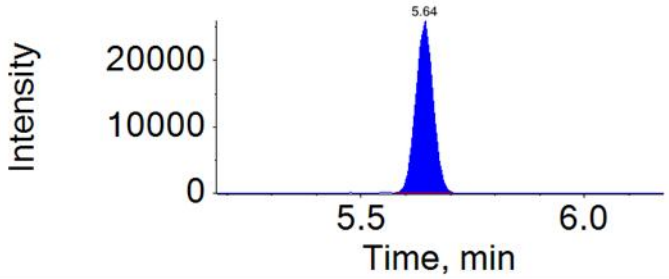
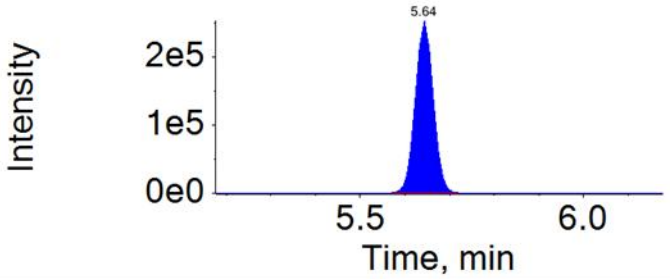


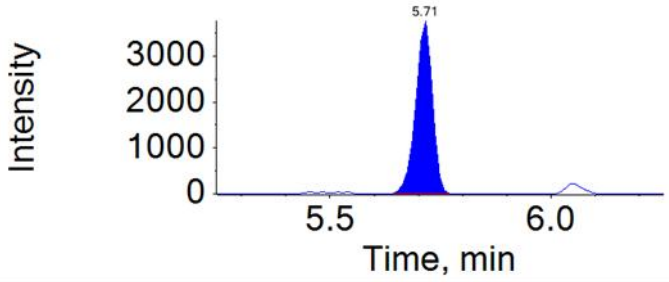
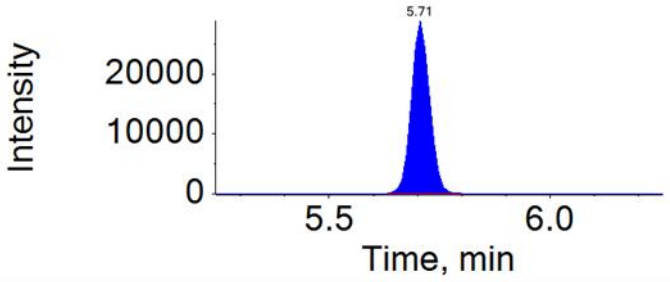


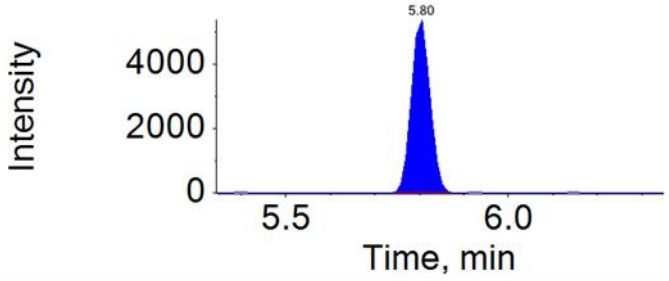
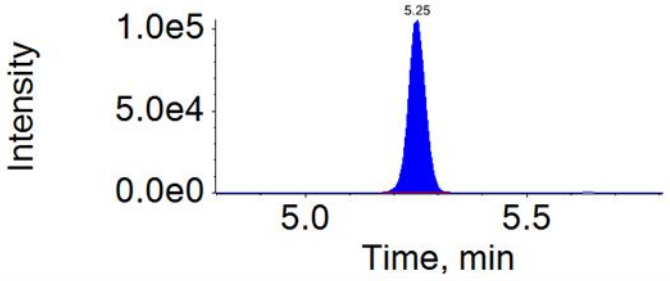
APPROVED
By JPT at 2:53 pm, 11/7/18

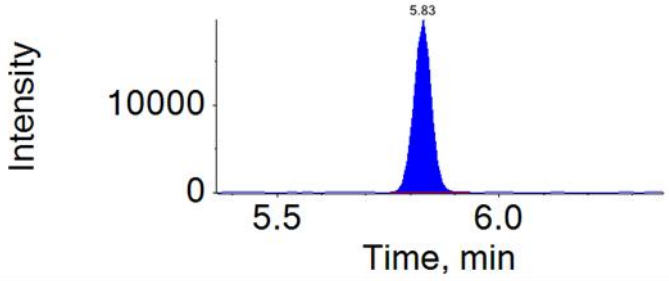
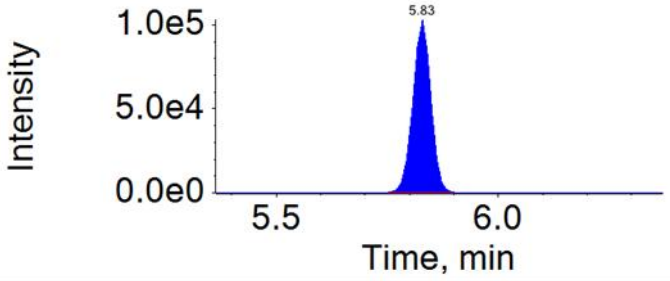
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

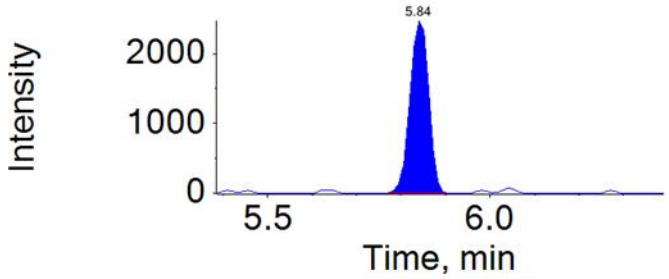
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

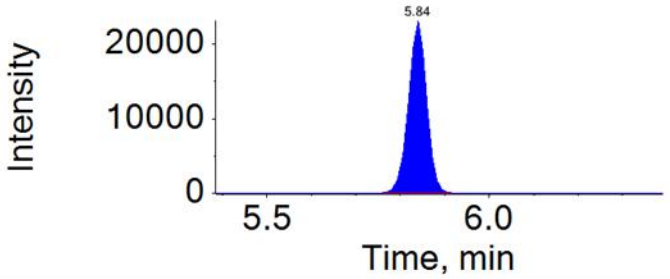
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

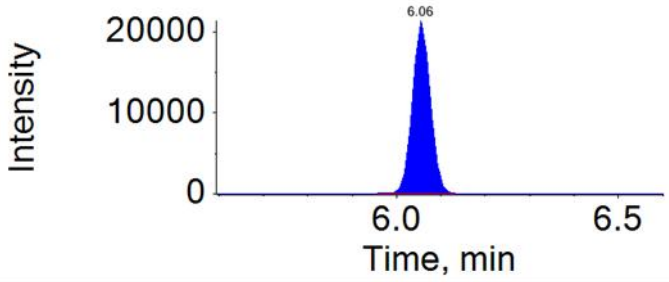
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

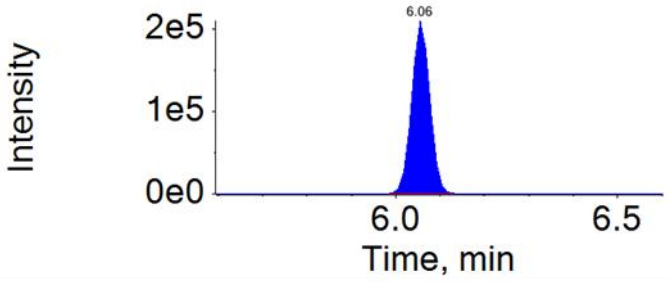
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



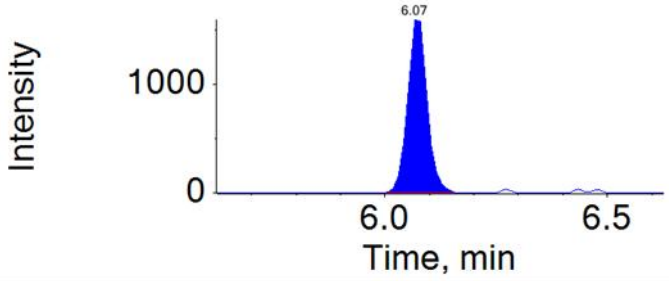


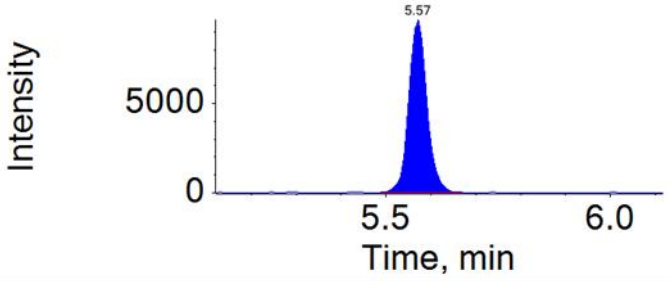
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



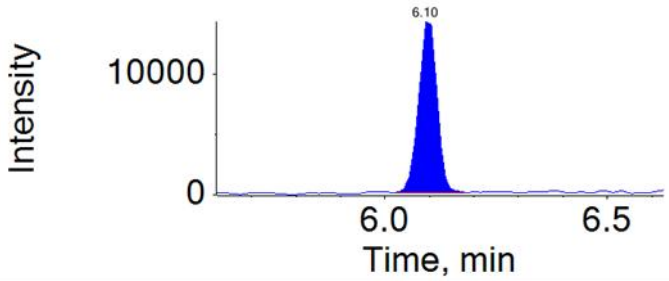


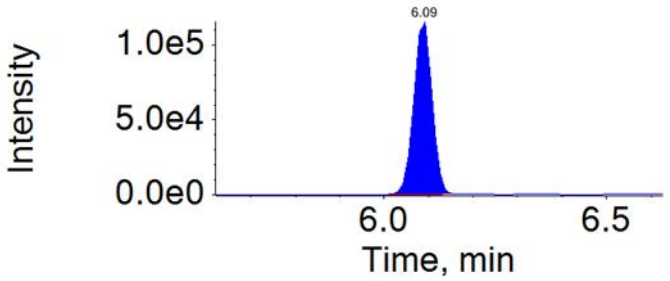
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



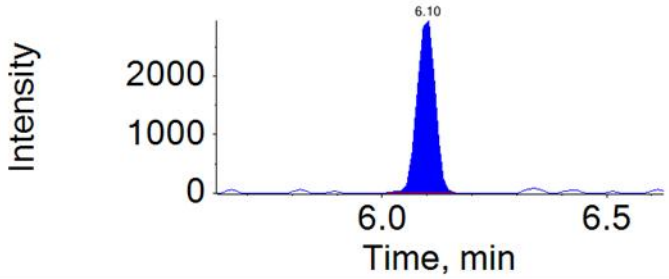


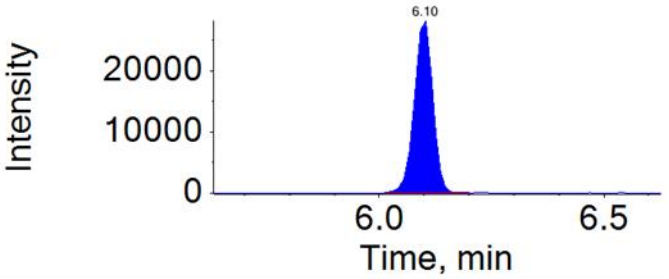
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

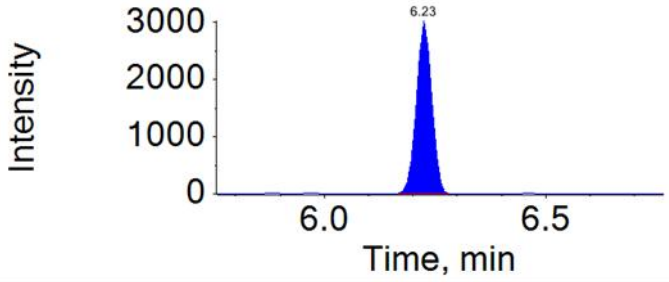
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

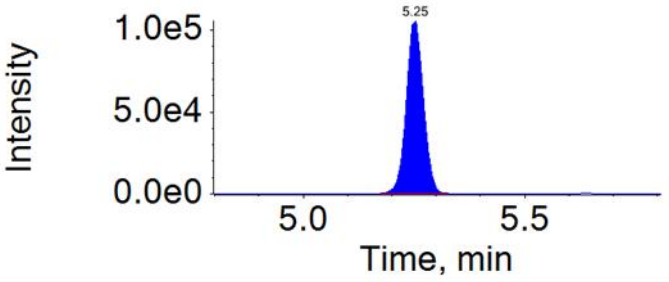
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



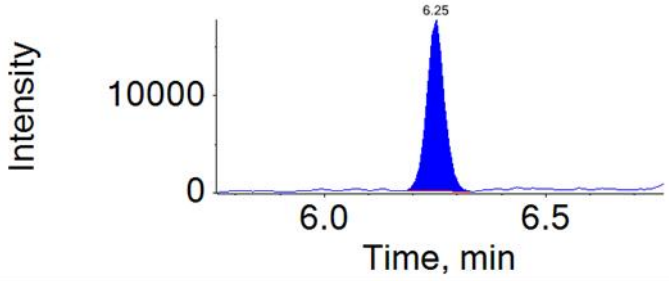


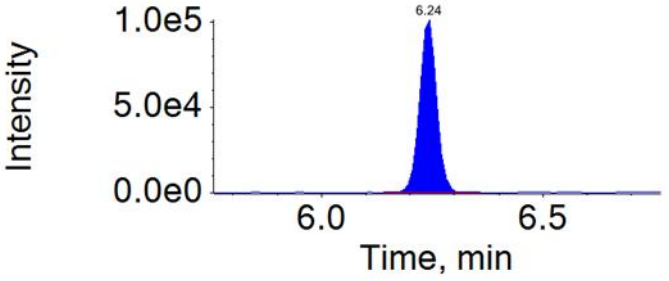
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



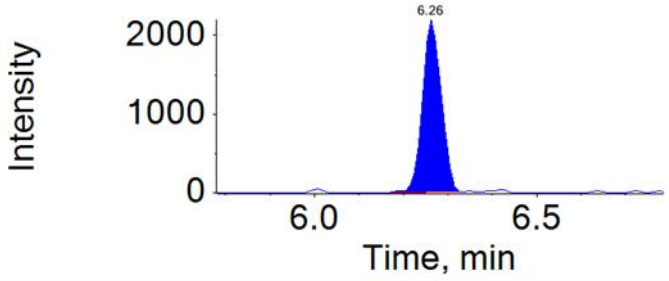


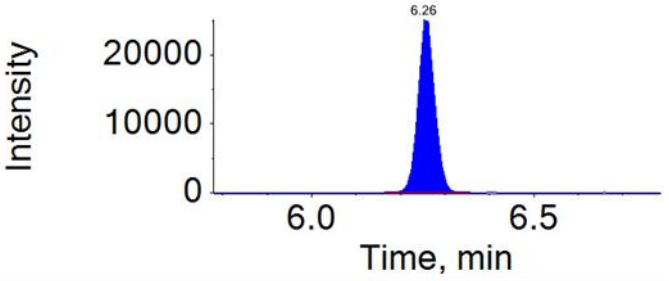
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



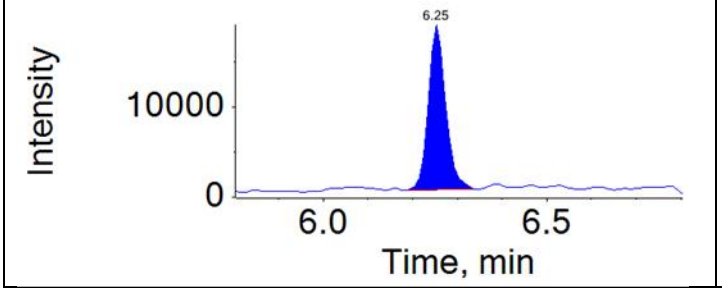


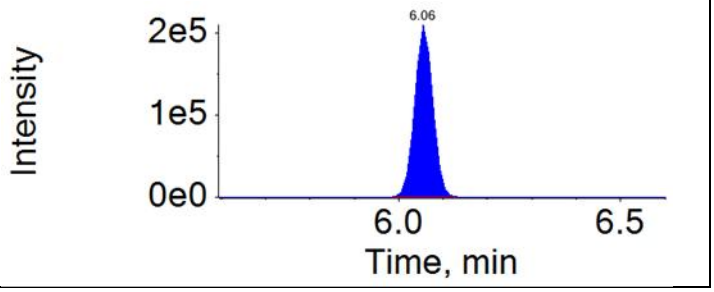
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

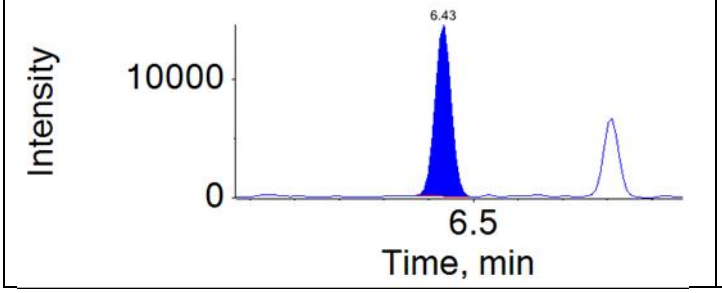
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

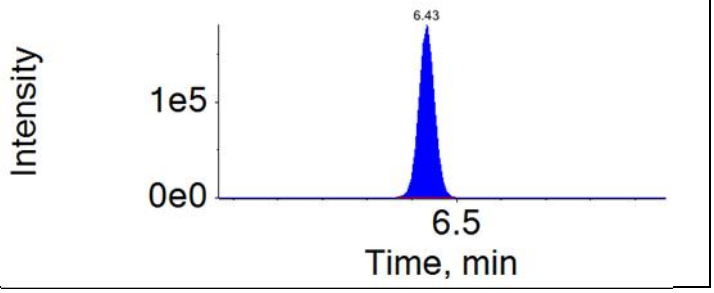
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



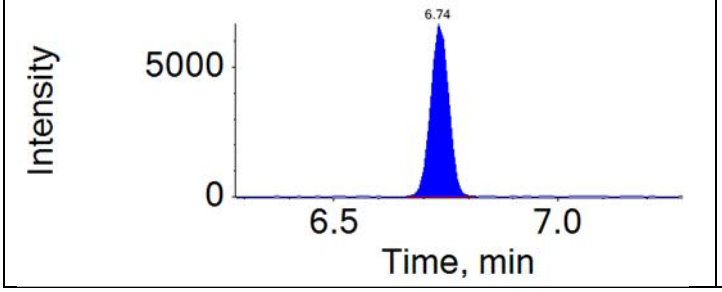


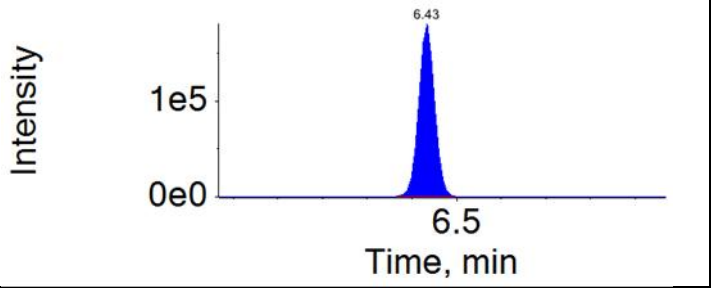
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



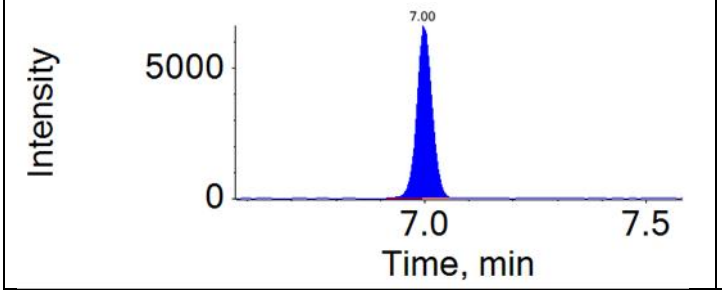


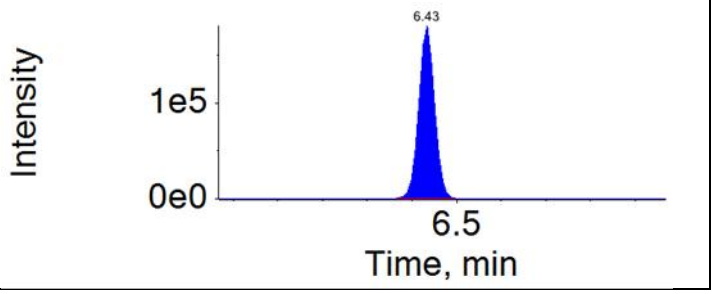
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



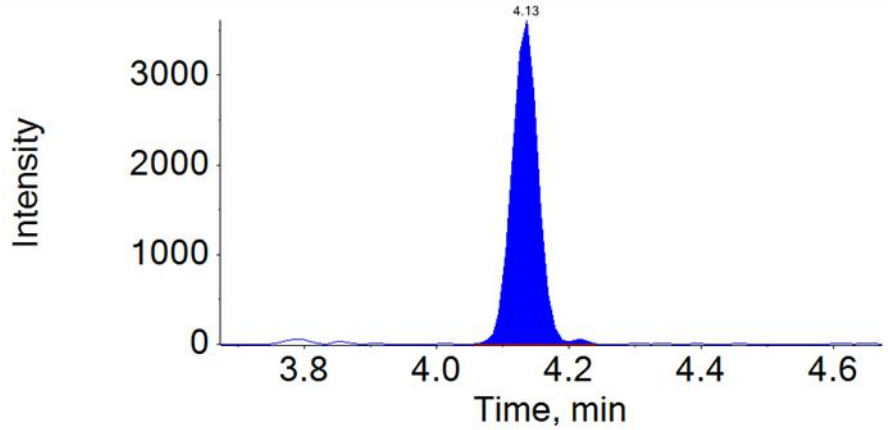


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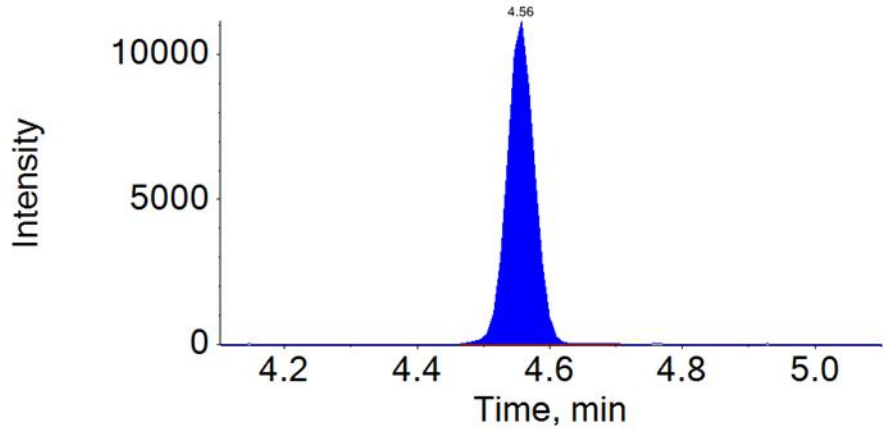
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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



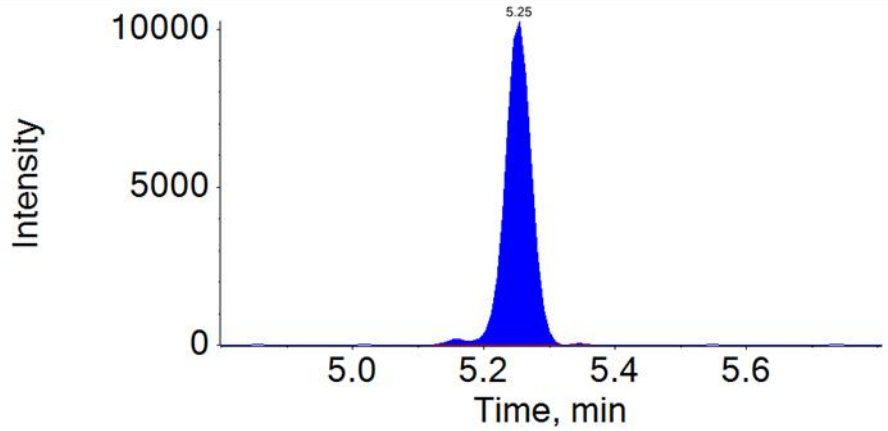
Integration Comment: incorrect integration

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

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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

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Ion Ratio Report

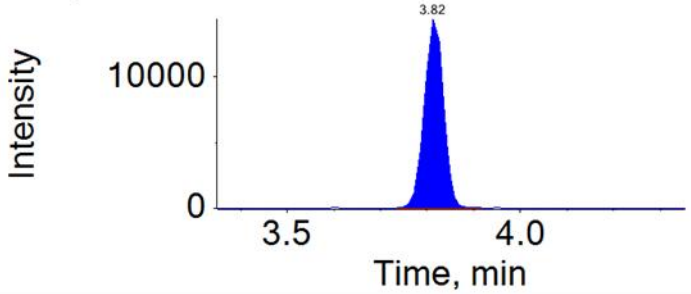
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-11.wiff

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	

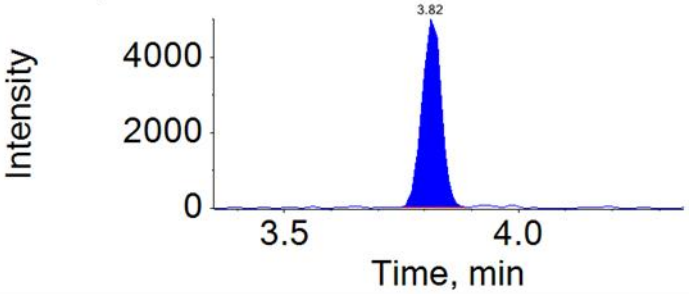
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

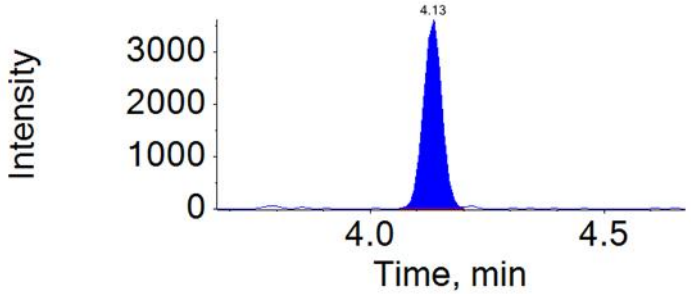
Component: PFBS
Primary Mass: 299.0 / 80.0



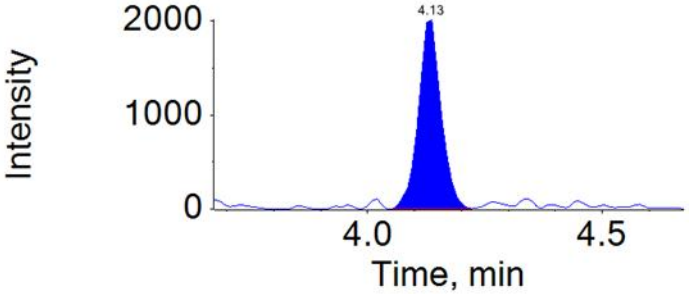
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



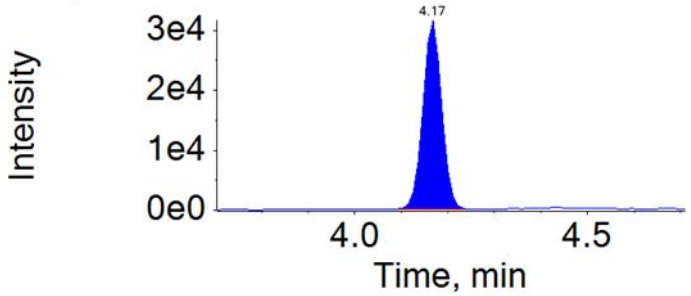
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



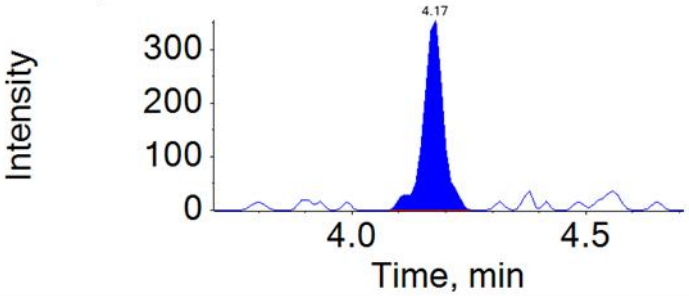
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



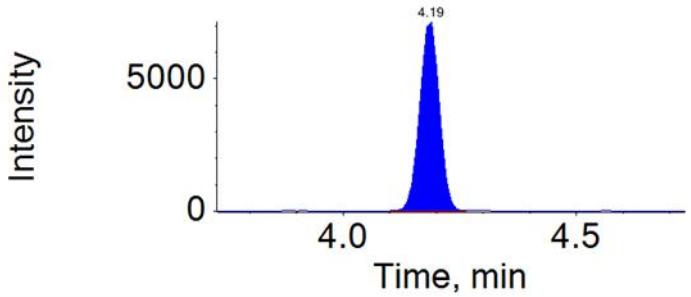
Component: PFHxA
Primary Mass: 313.0 / 269.0



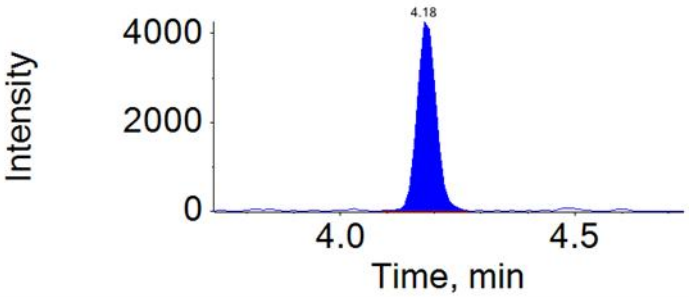
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



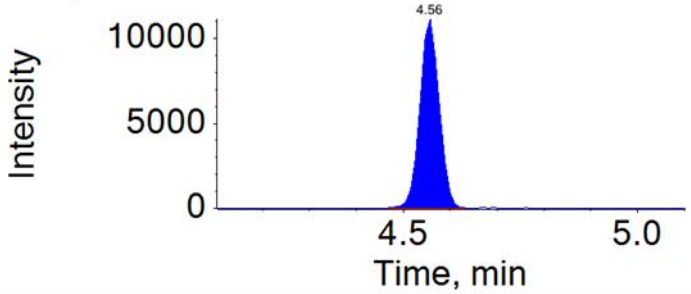
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



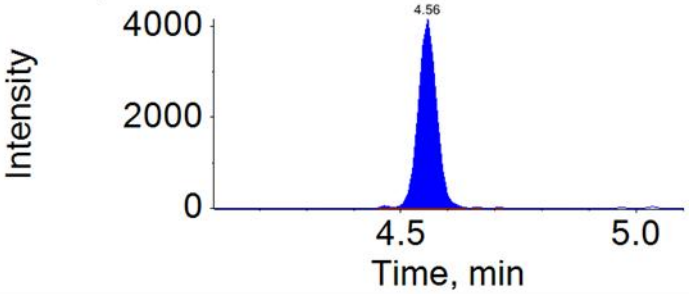
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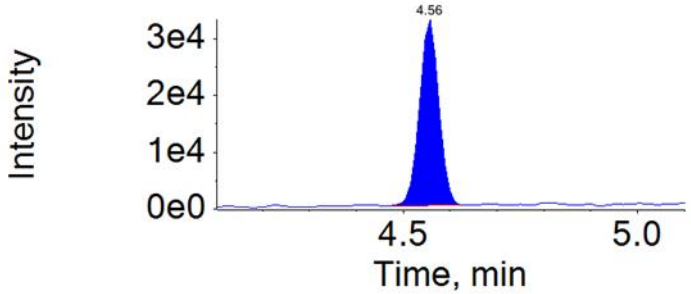
Component: PFHxS
Primary Mass: 399.0 / 80.0



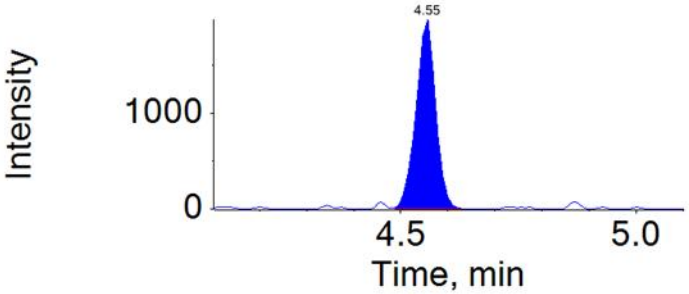
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



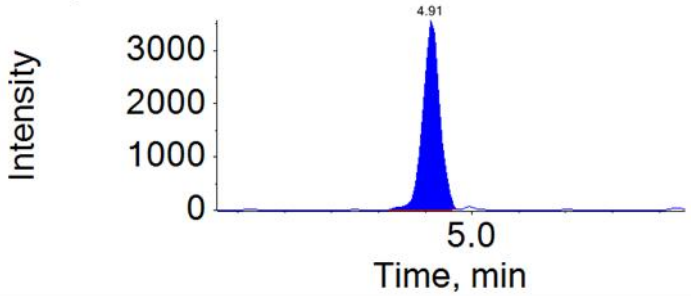
Component: PFHpA
Primary Mass: 363.0 / 319.0



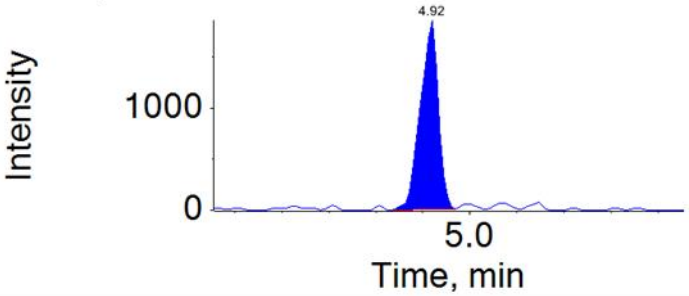
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



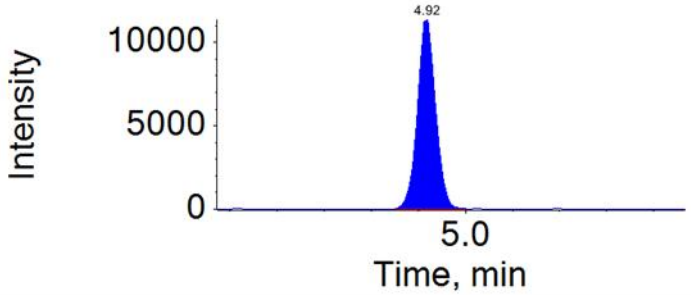
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



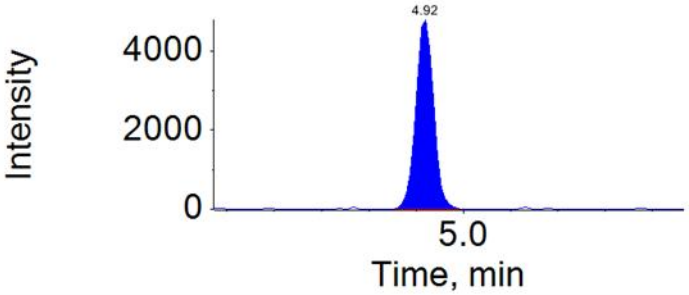
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



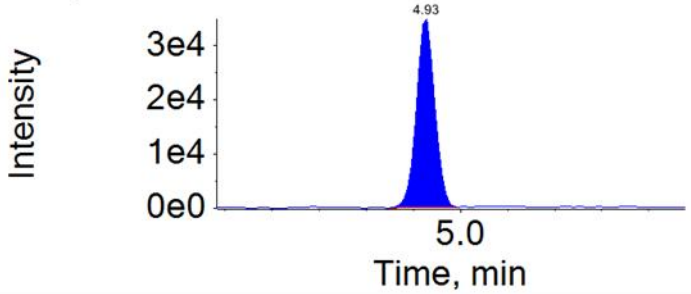
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



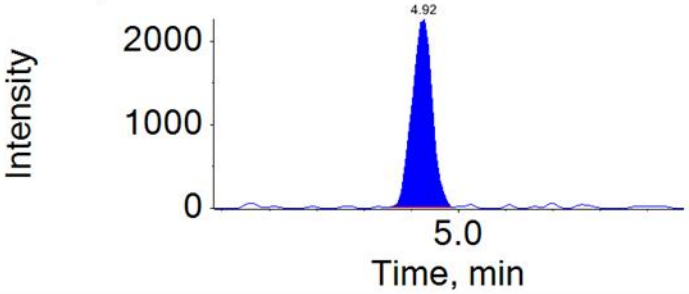
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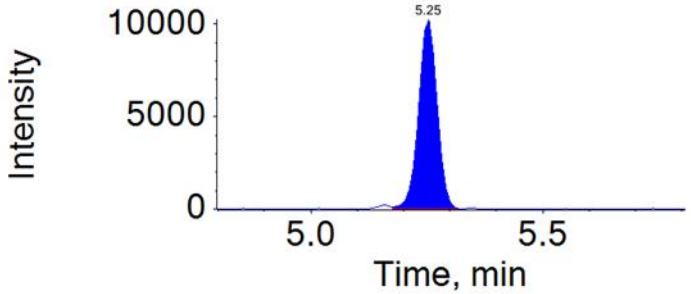
Component: PFOA
Primary Mass: 413.0 / 369.0



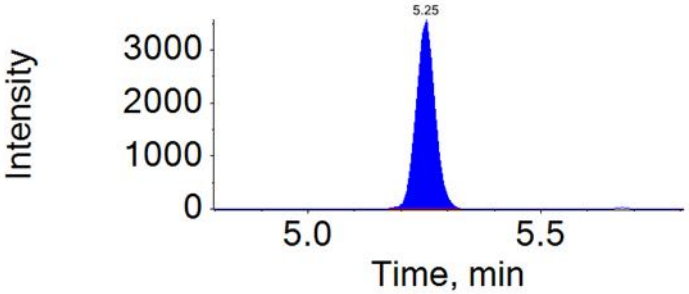
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



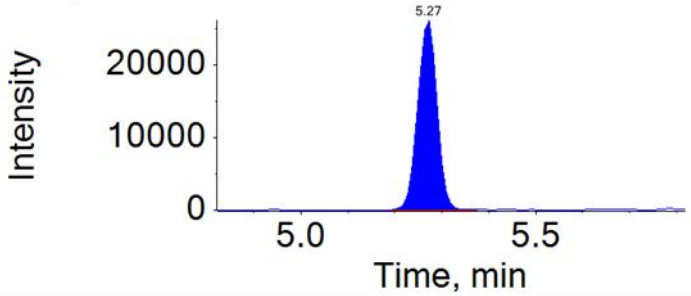
Component: PFOS
Primary Mass: 499.0 / 80.0



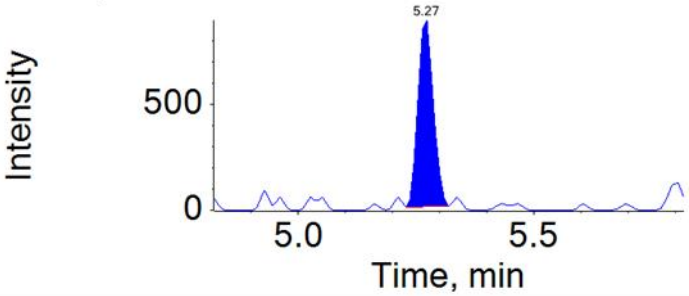
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



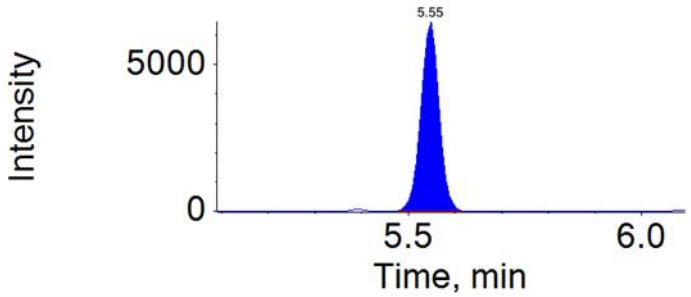
Component: PFNA
Primary Mass: 463.0 / 419.0



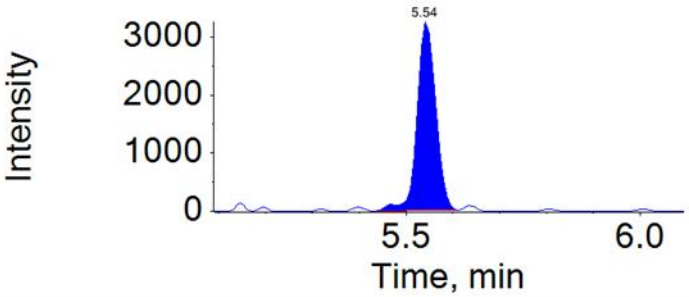
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



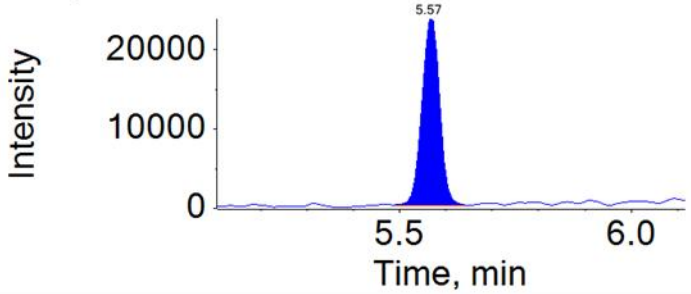
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



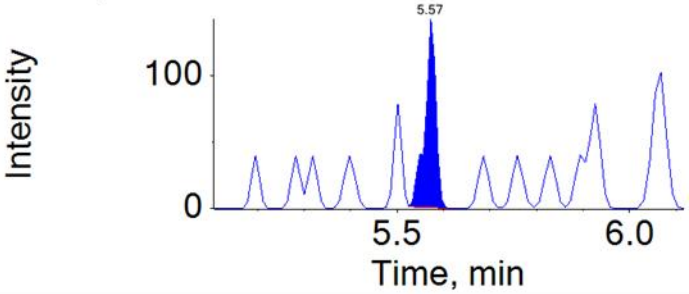
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

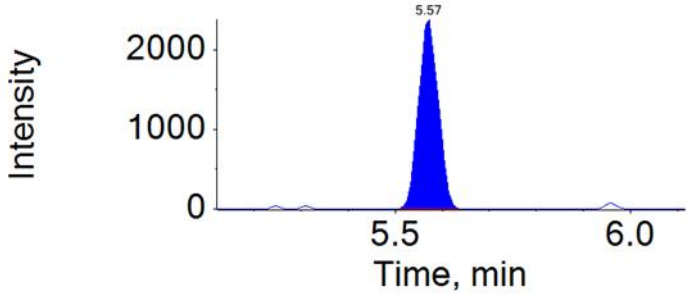
Component: PFDA
Primary Mass: 513.0 / 469.0



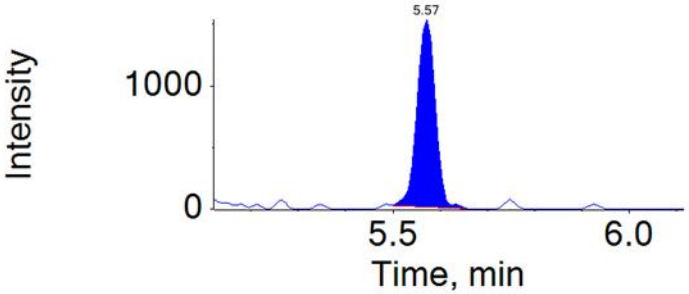
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



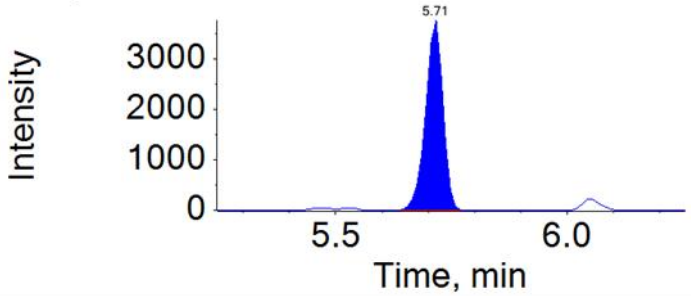
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



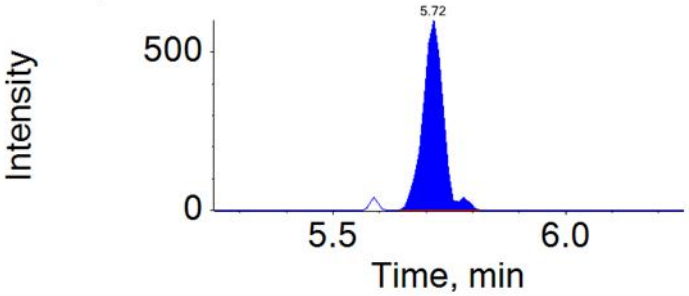
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



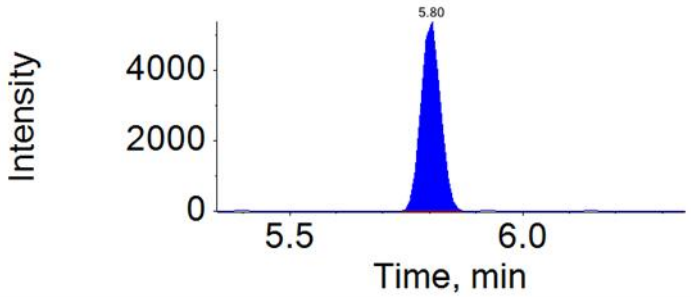
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



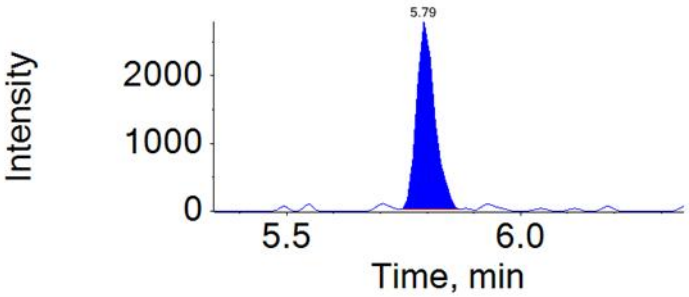
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



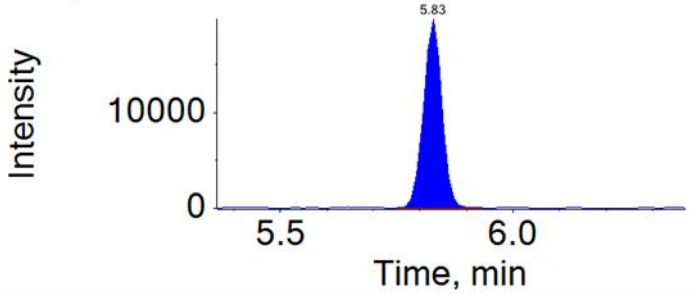
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



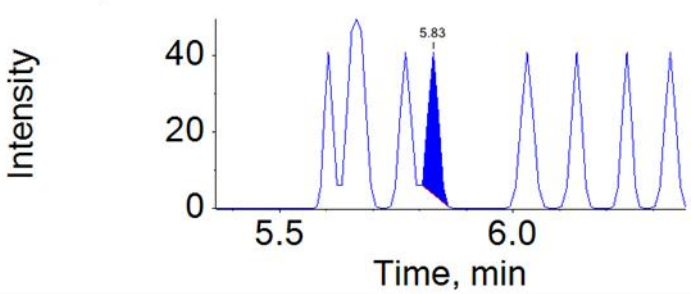
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

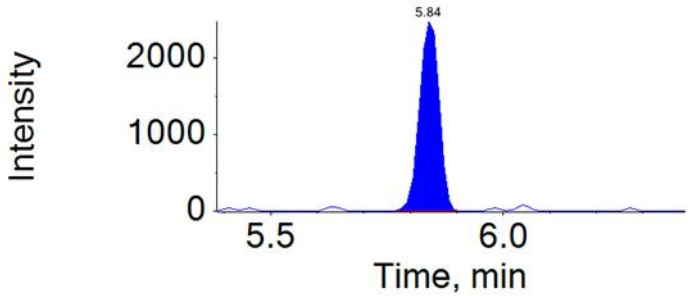
Component: PFUnDA
Primary Mass: 563.0 / 519.0



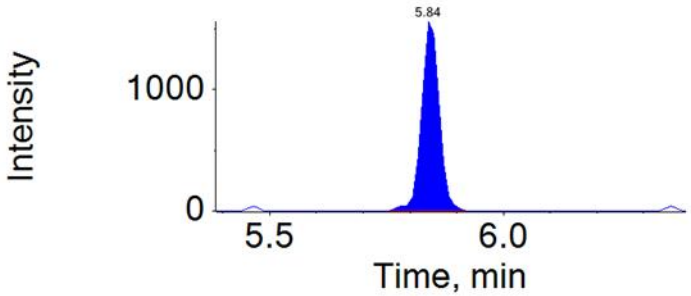
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



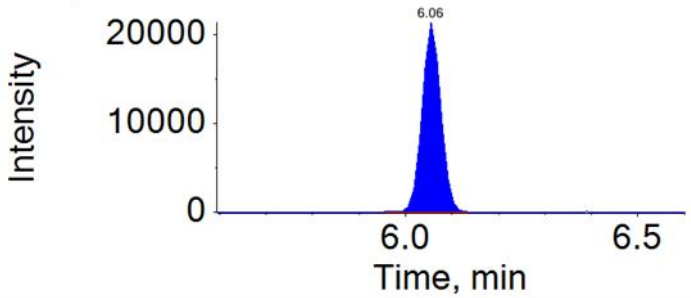
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



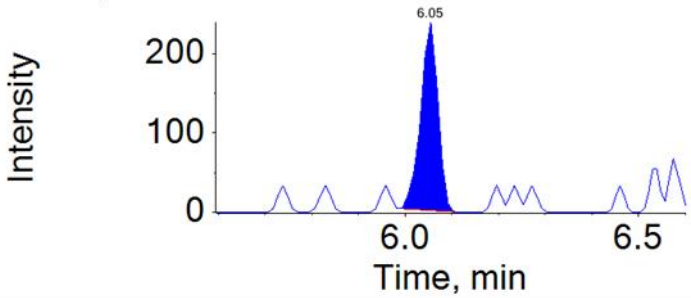
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



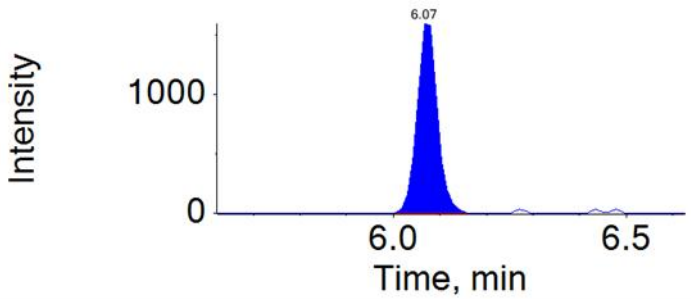
Component: PFDoDA
Primary Mass: 613.0 / 569.0



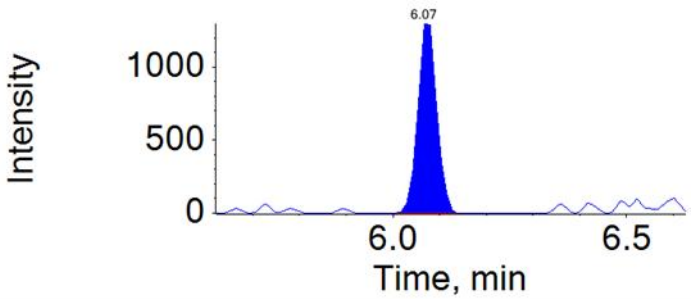
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



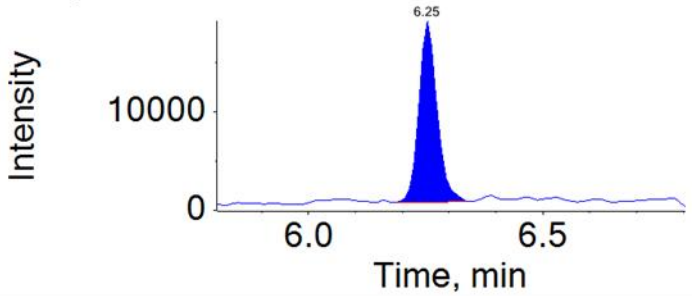
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



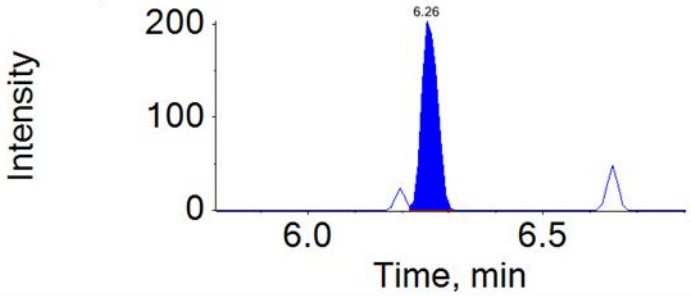
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

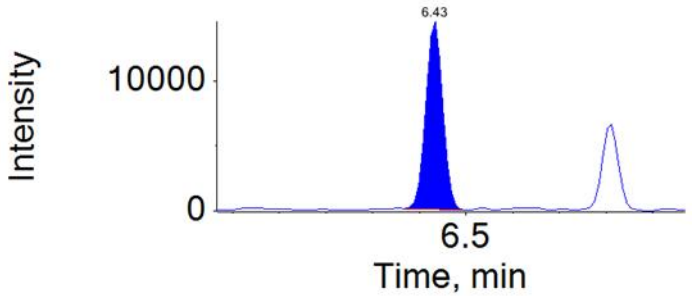
Component: PFTrDA
Primary Mass: 663.0 / 619.0



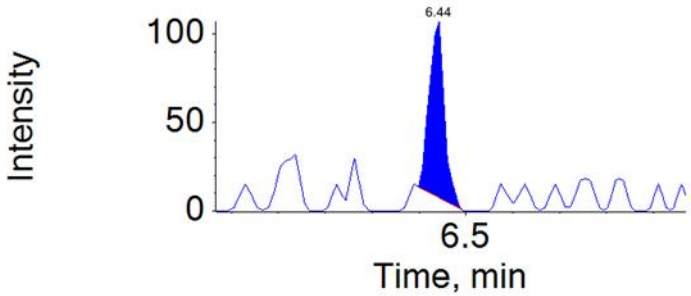
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



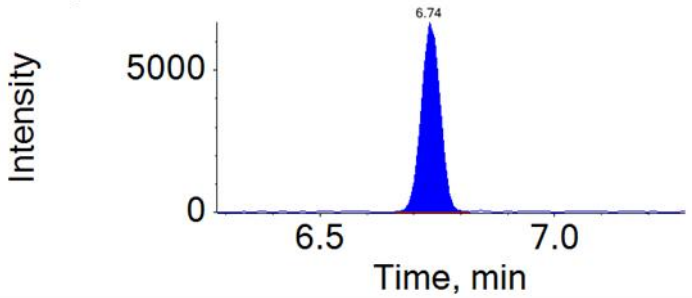
Component: PFTeDA
Primary Mass: 713.0 / 669.0



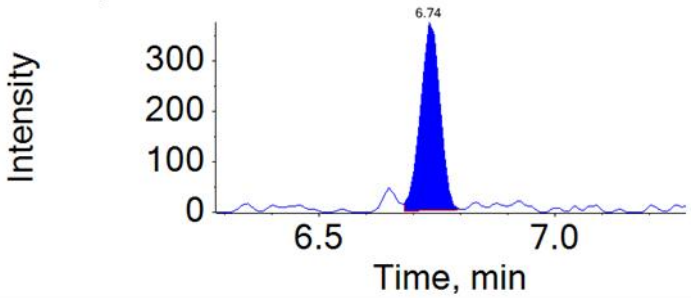
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



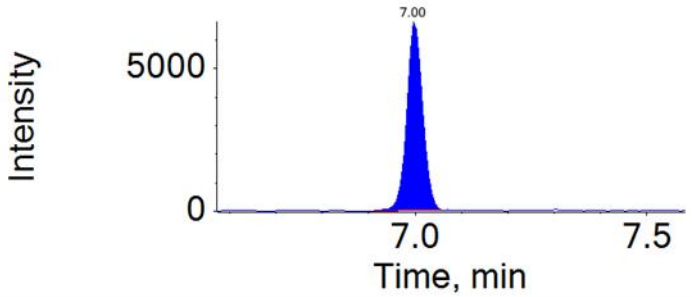
Component: PFHxDA
Primary Mass: 813.0 / 769.0



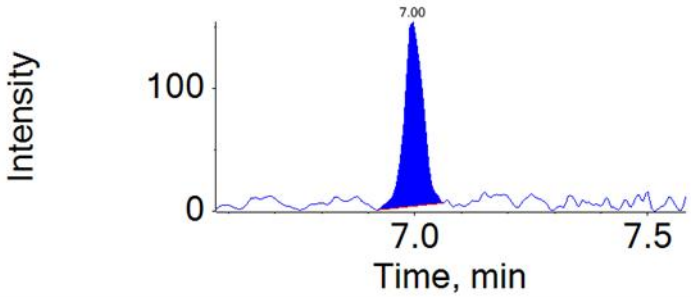
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

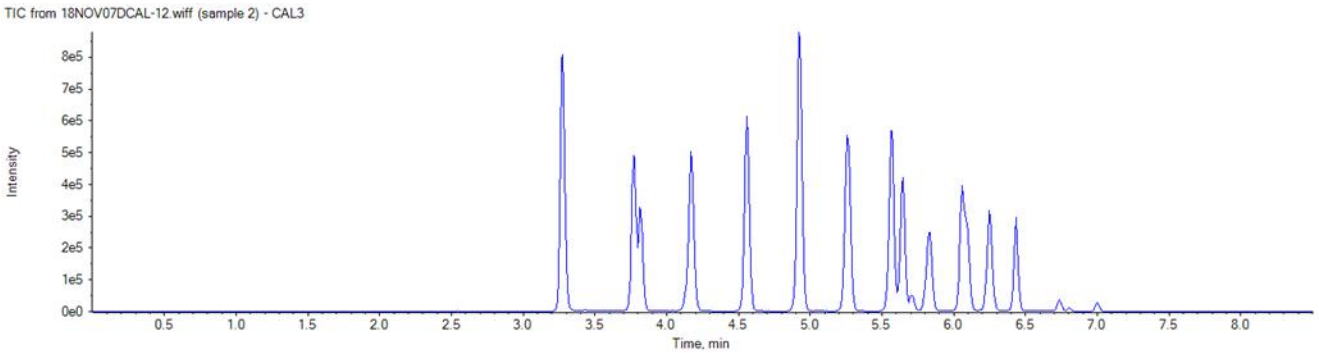
Analyte Quantitation Peak Table

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

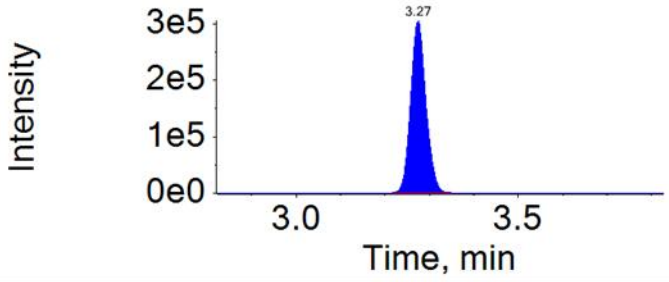


APPROVED
By JPT at 2:53 pm, 11/7/18

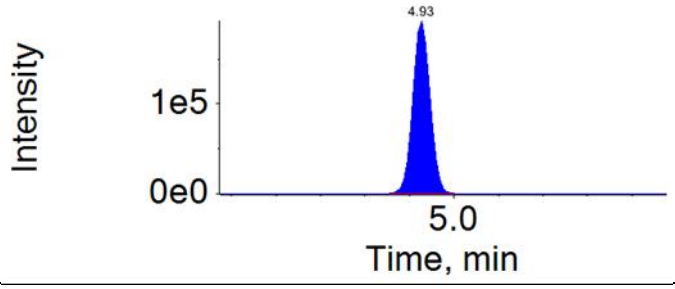
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

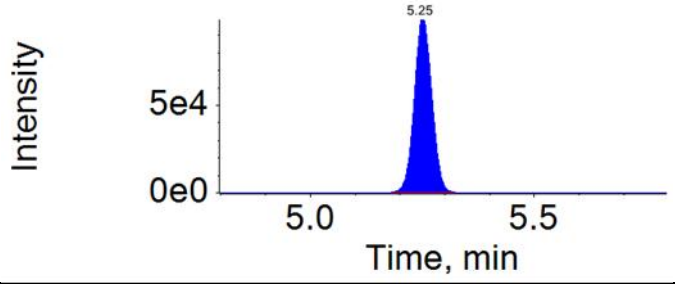
Injection Standard: 13C3-PFBA
216.0 / 172.0



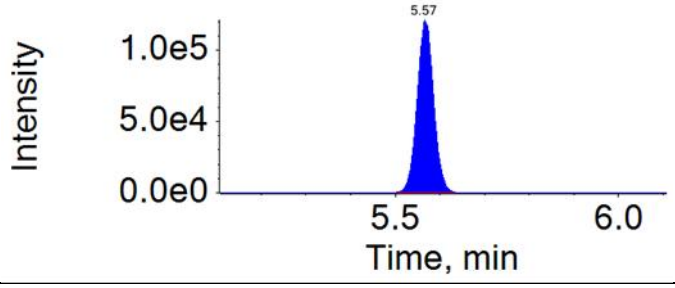
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



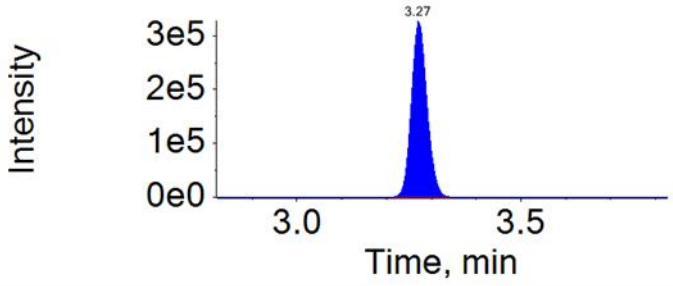
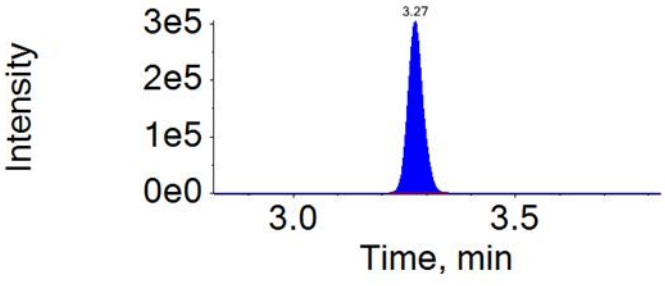
Injection Standard: 13C2-PFDA
515.0 / 470.0

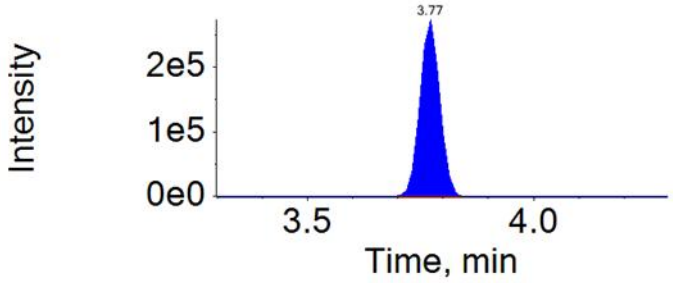
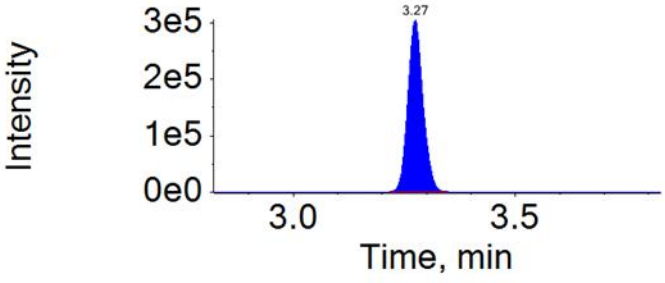


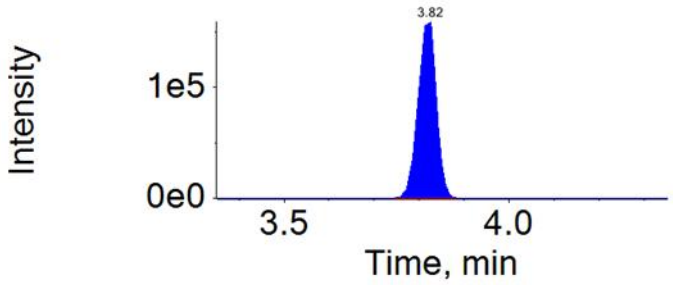
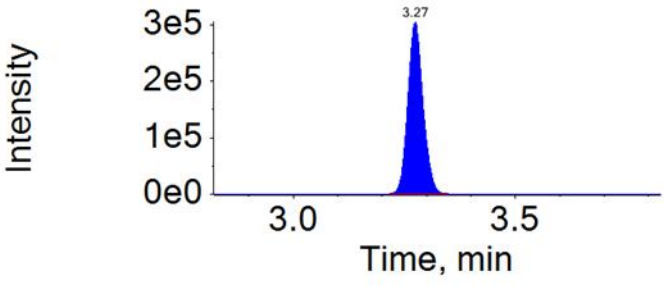
APPROVED
By JPT at 2:53 pm, 11/7/18

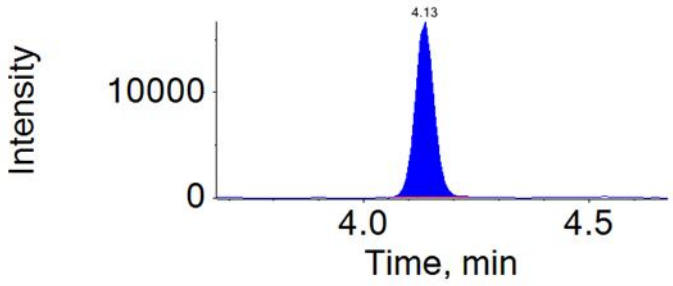
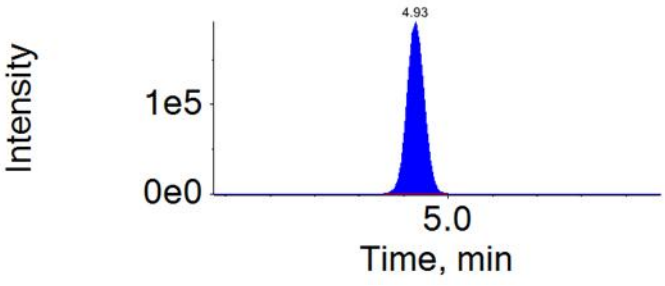
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

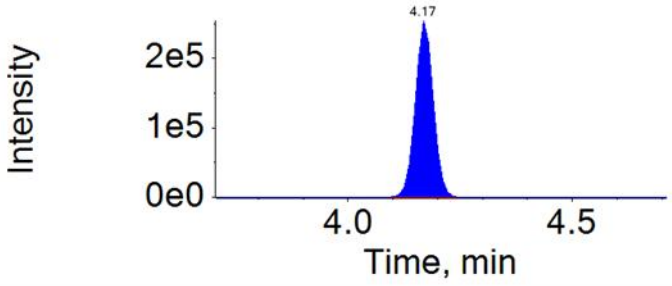
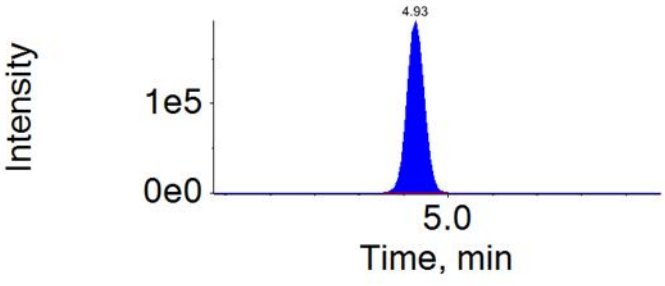
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

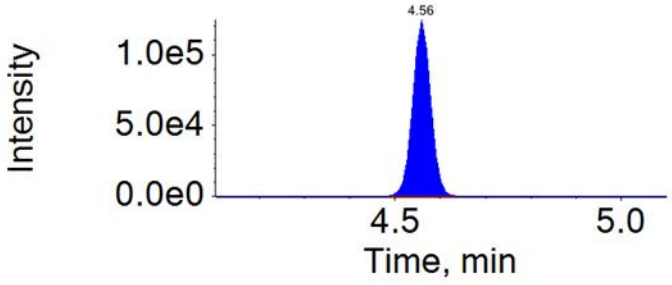
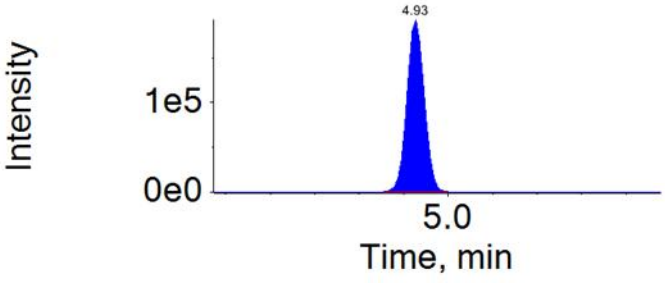
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

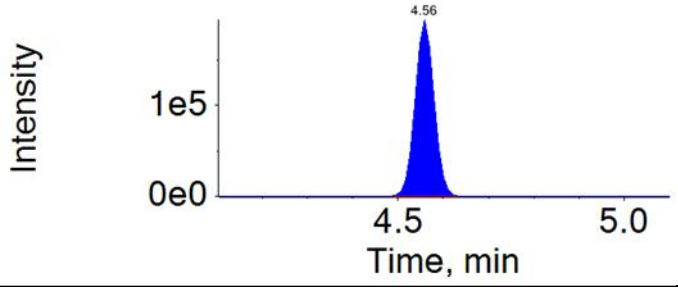
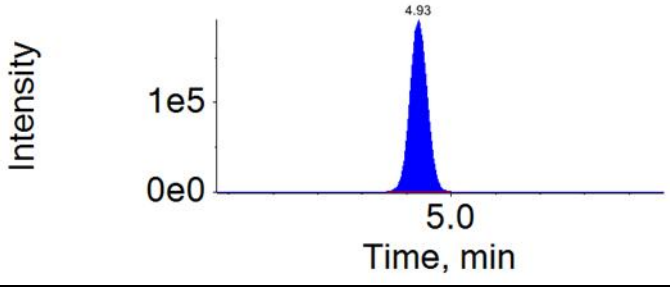
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

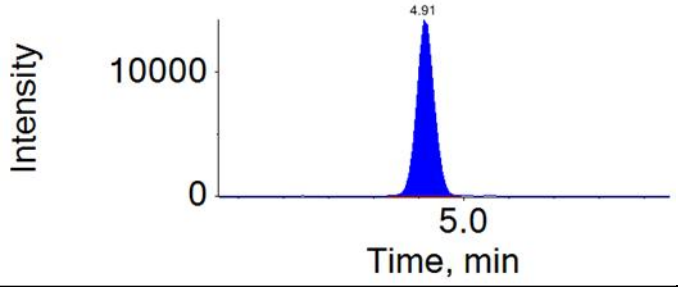
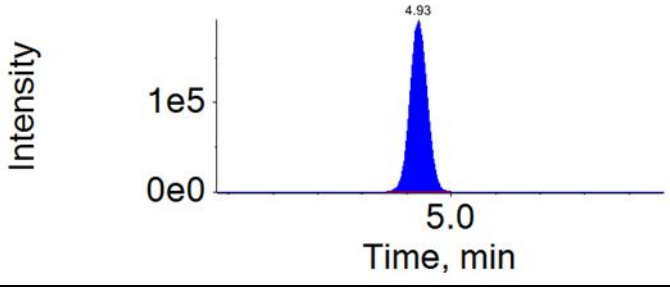
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

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
	

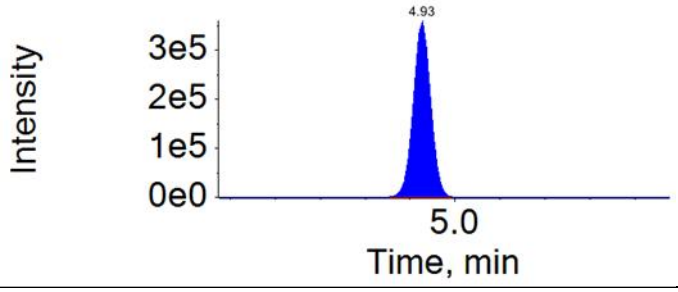
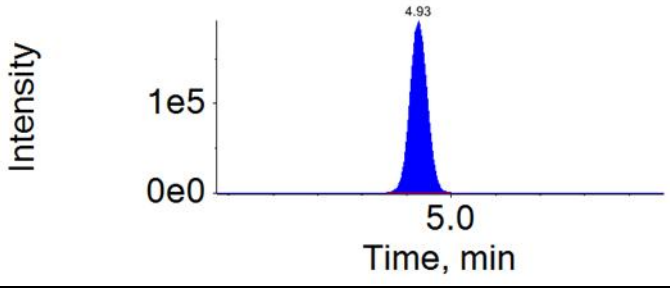
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

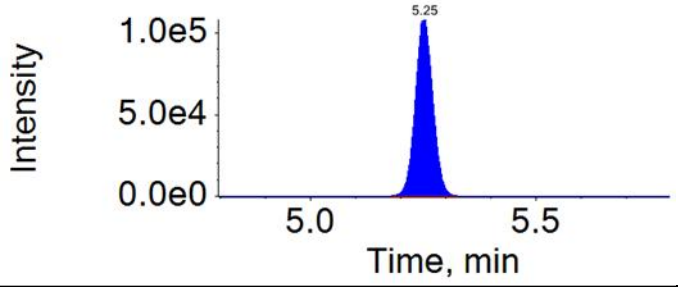
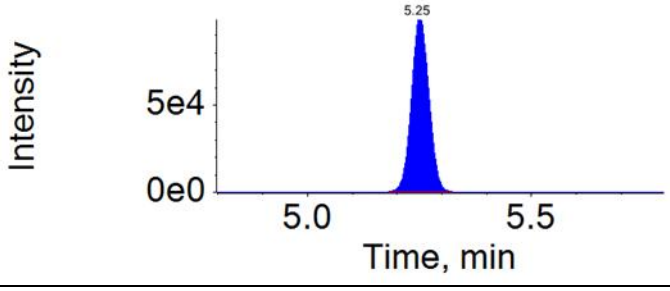
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

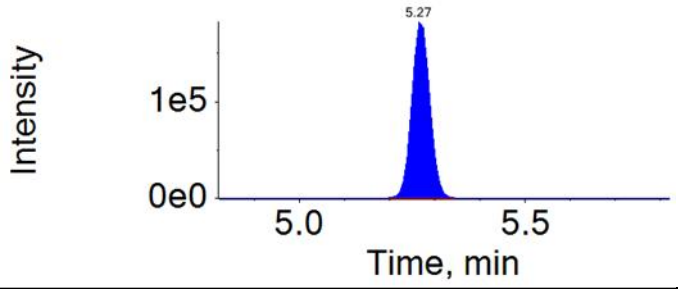
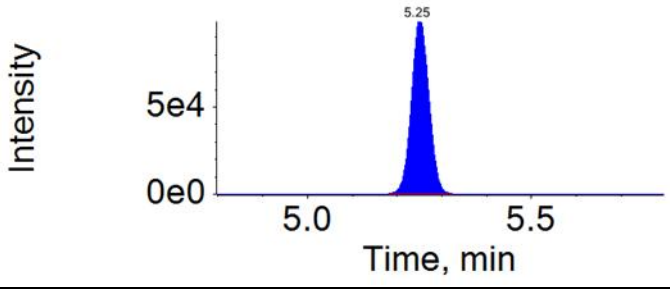
APPROVED
By JPT at 2:53 pm, 11/7/18

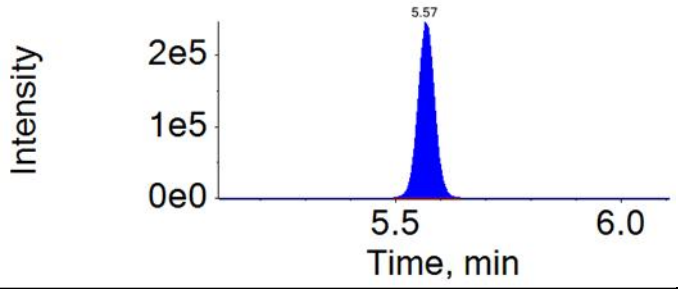
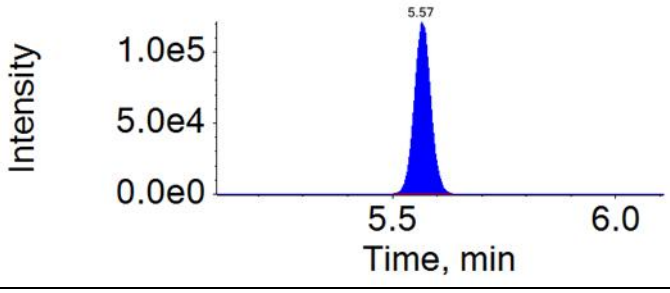
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

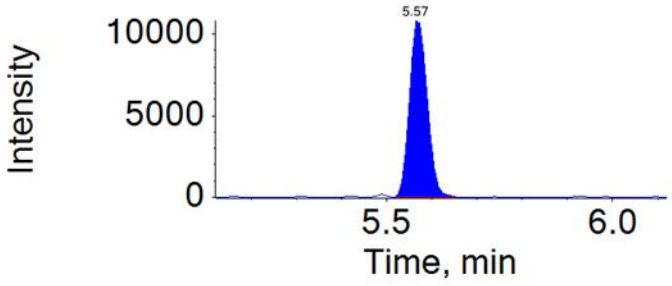
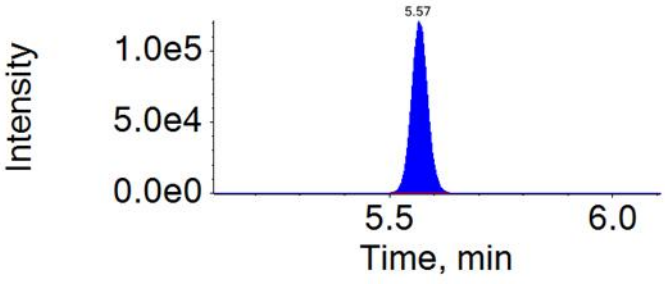
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

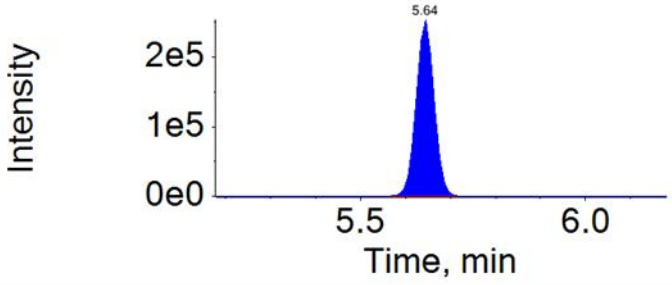
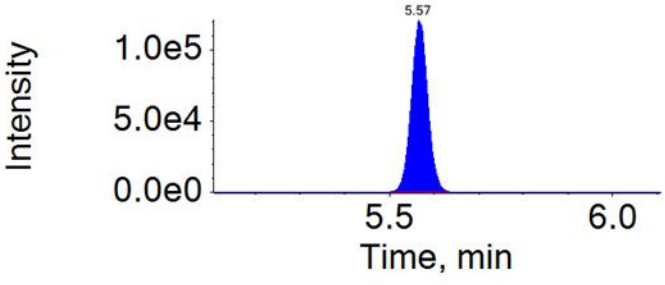
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

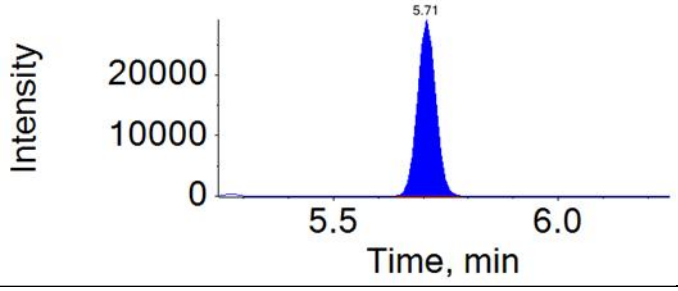
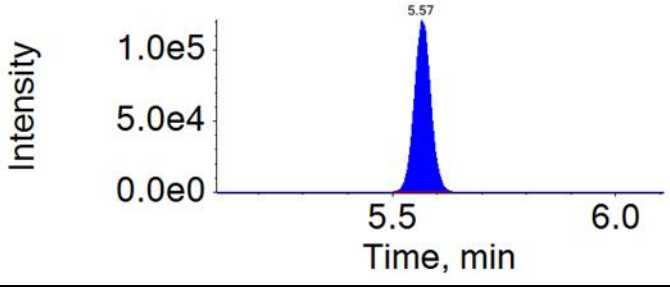
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

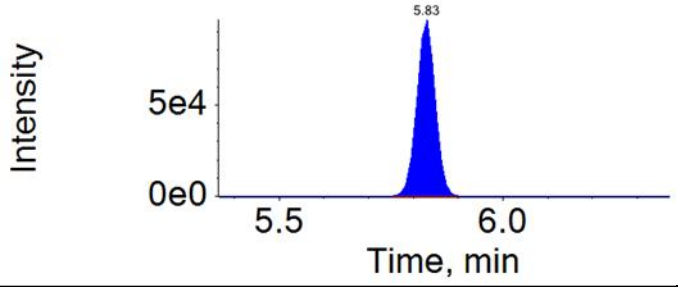
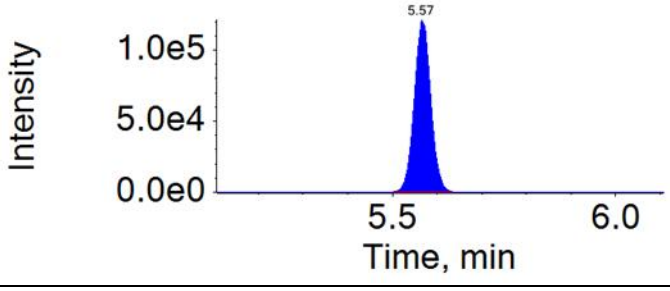
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

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
	

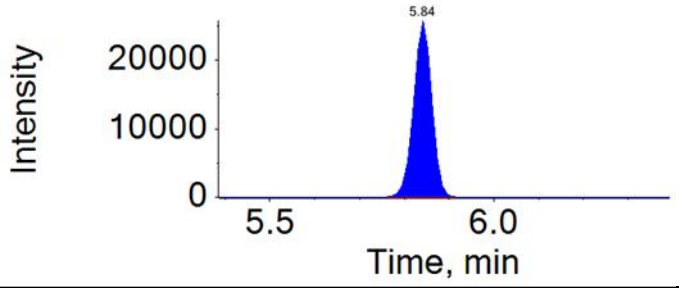
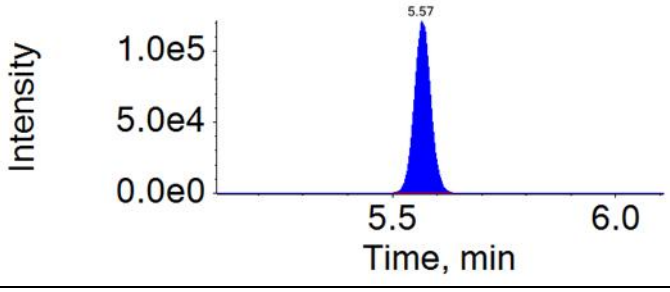
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

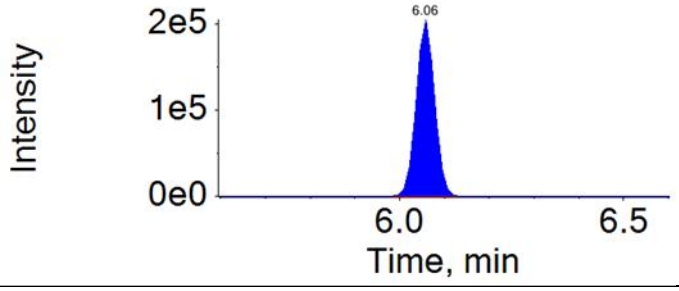
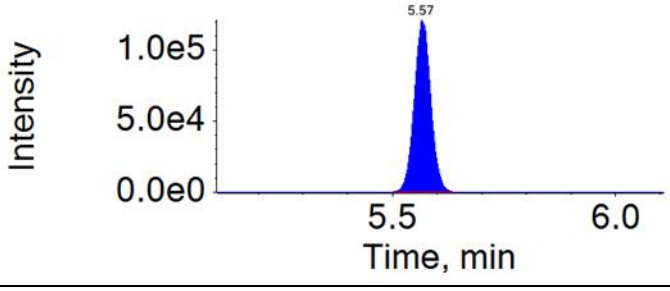
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570.0 / 525.0	515.0 / 470.0
	

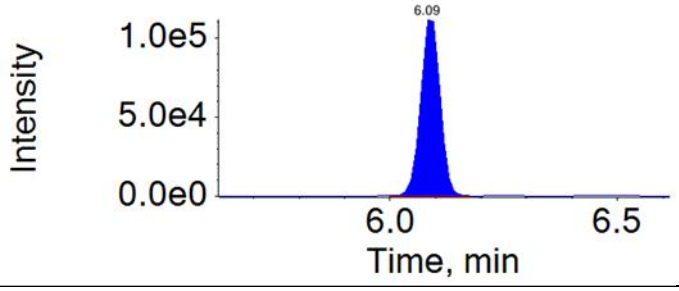
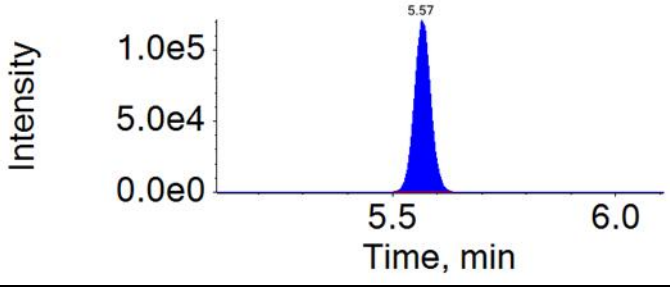
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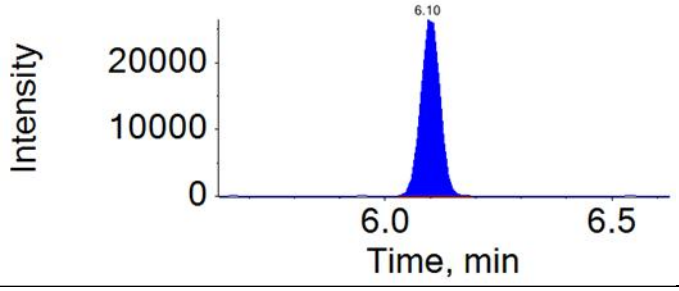
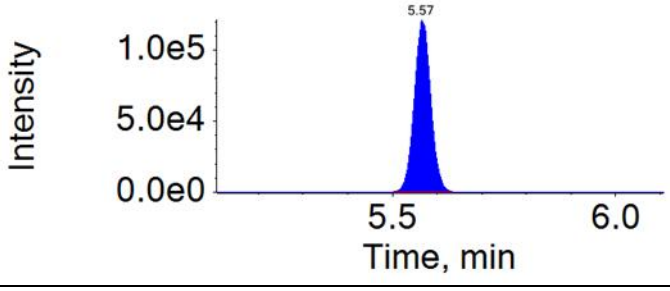
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

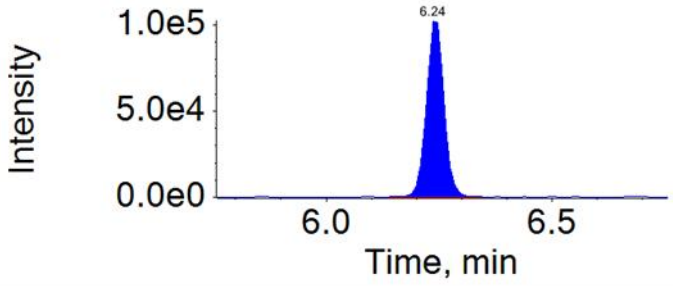
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

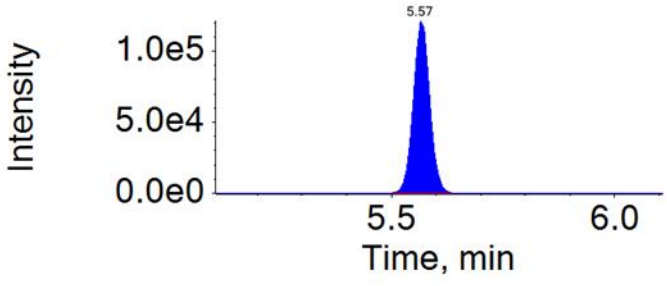
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

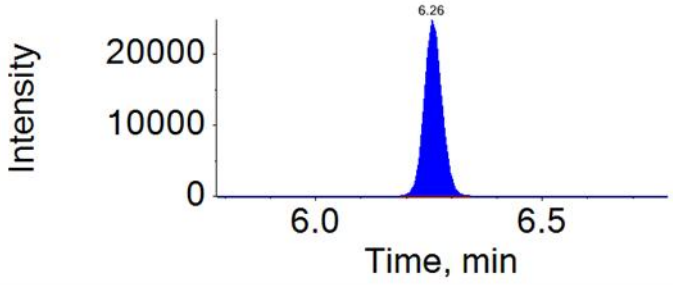
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

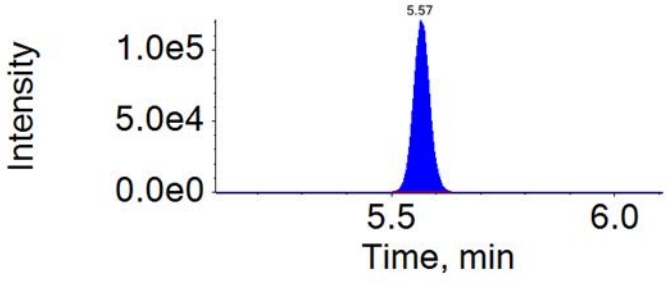
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



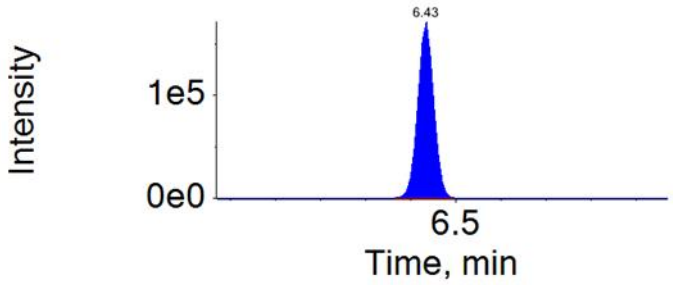


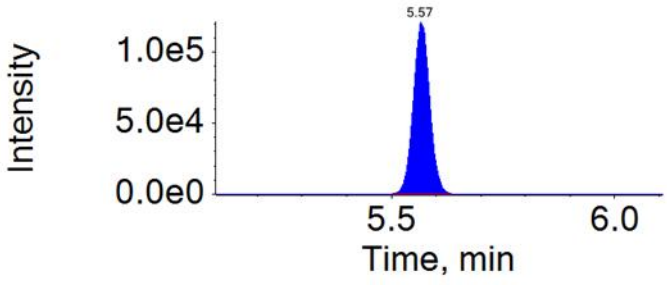
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





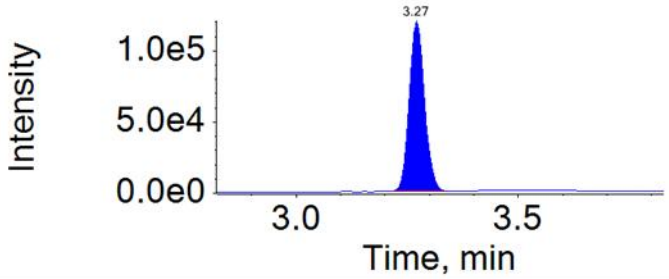
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

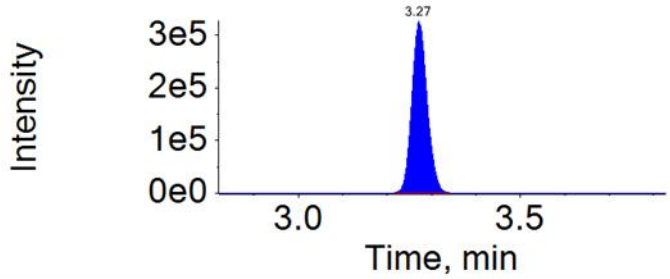




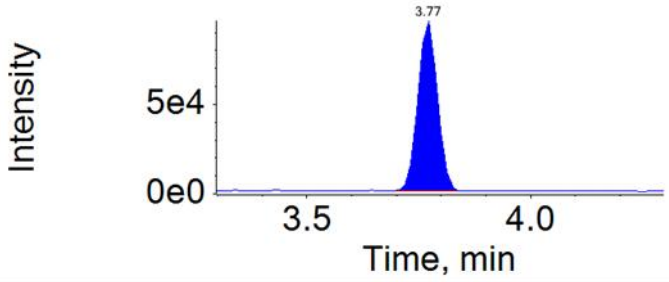
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

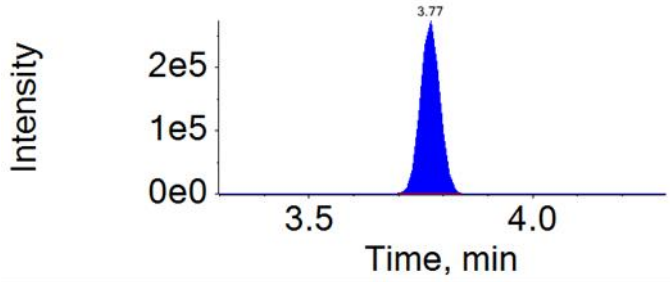
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



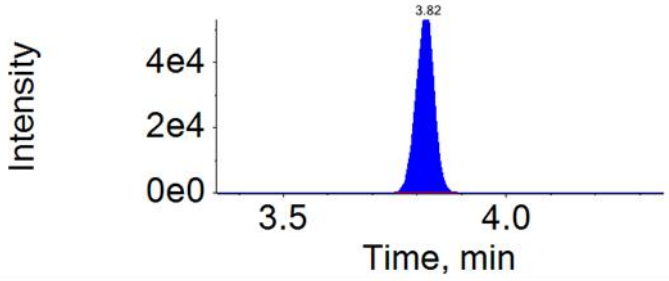


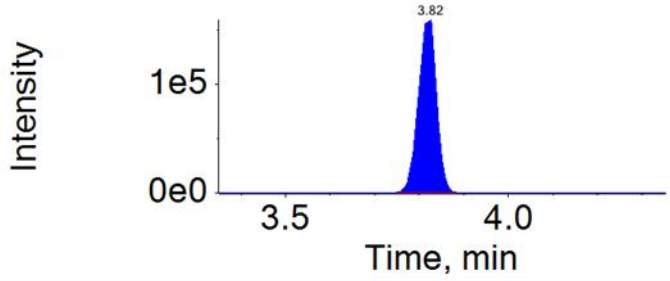
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



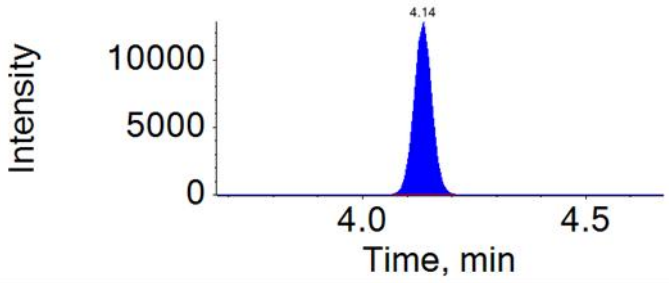


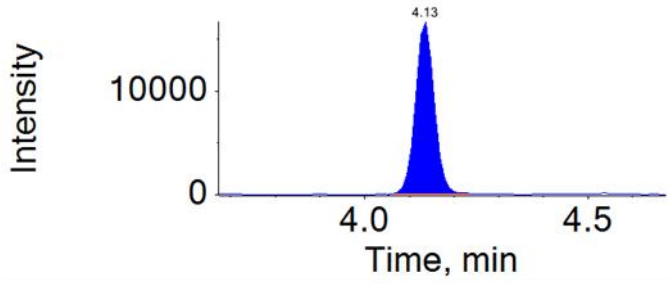
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

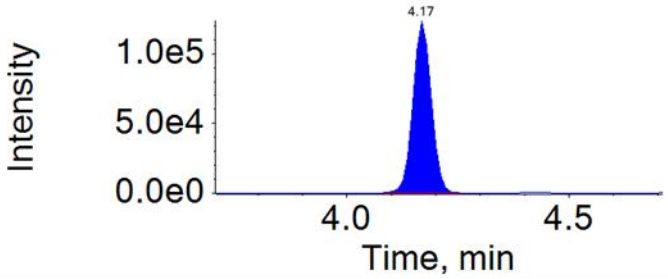
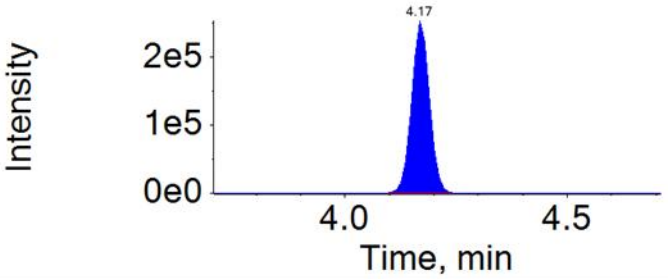


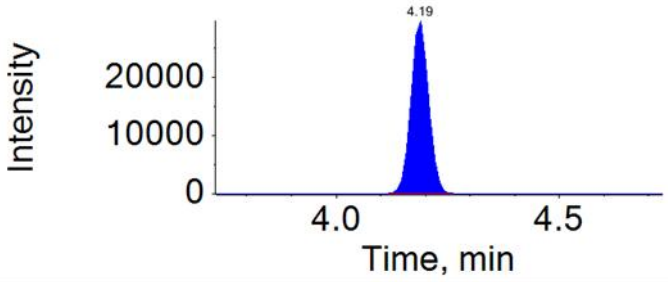
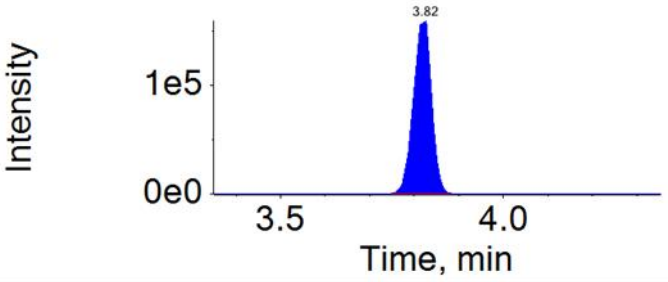


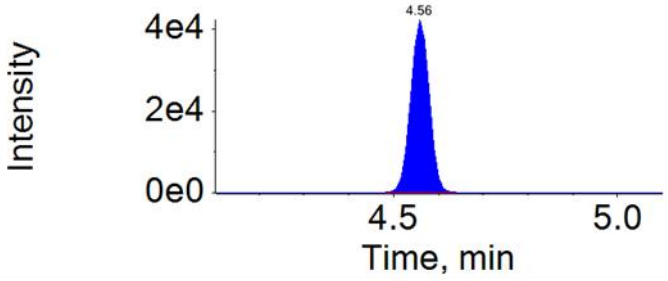
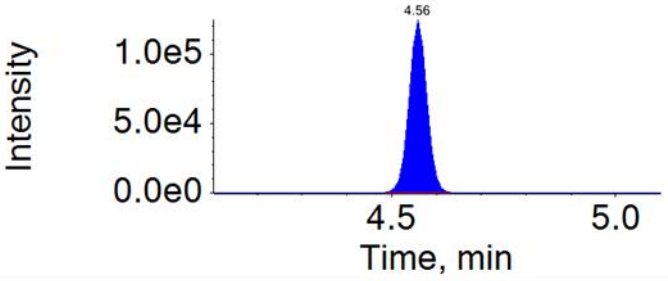
APPROVED
By JPT at 2:53 pm, 11/7/18

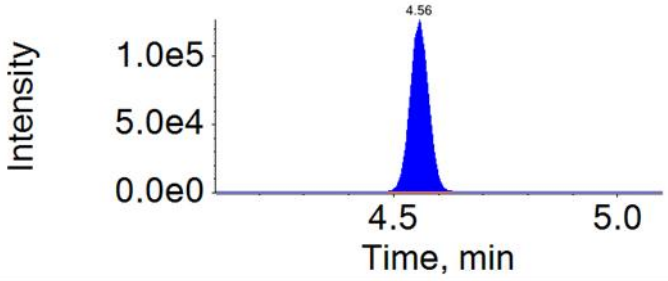
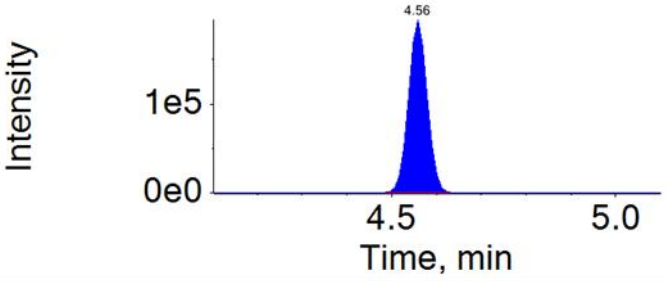
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

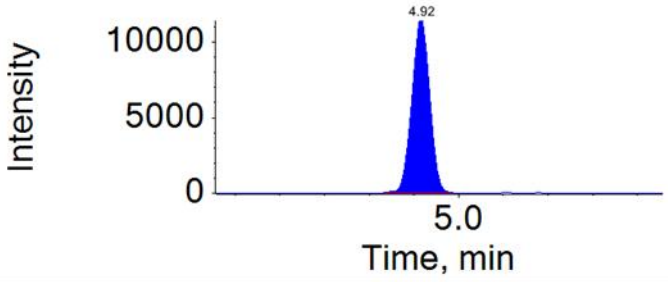
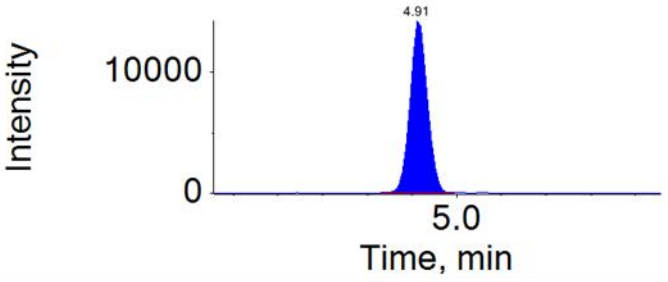
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

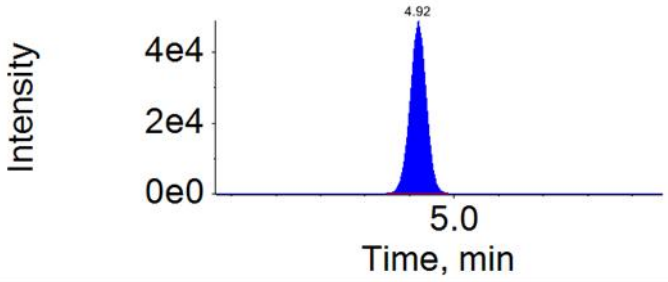
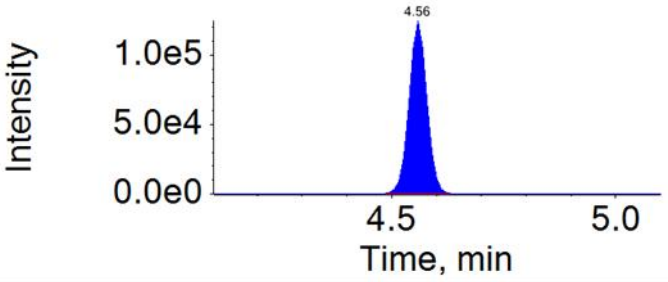
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

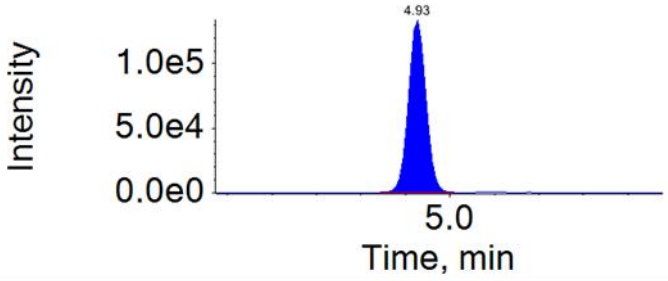
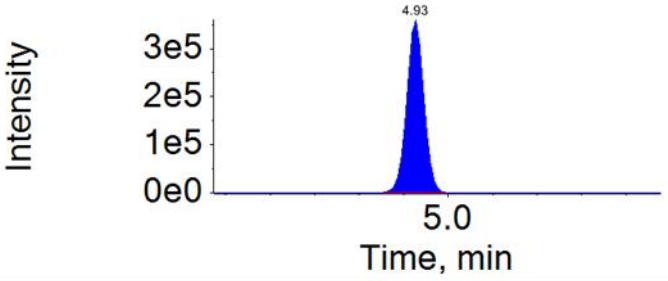
APPROVED
By JPT at 2:53 pm, 11/7/18

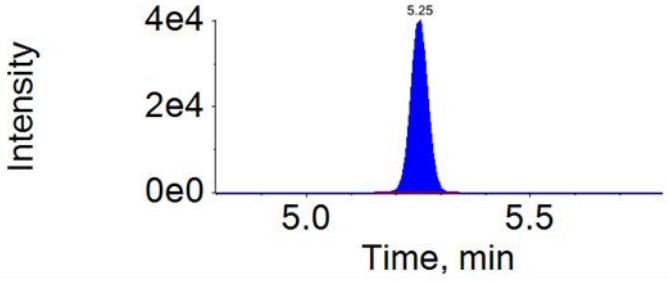
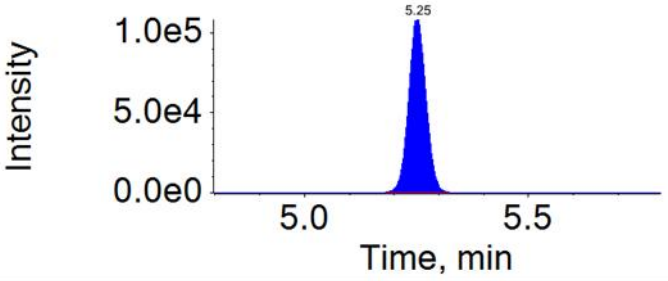
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

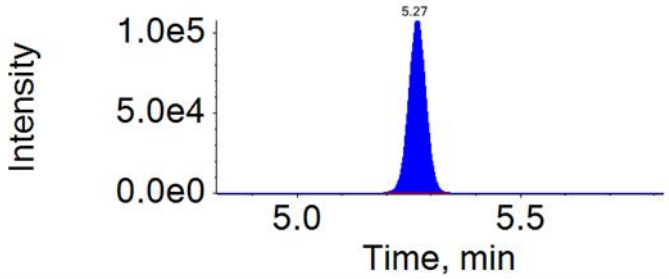
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

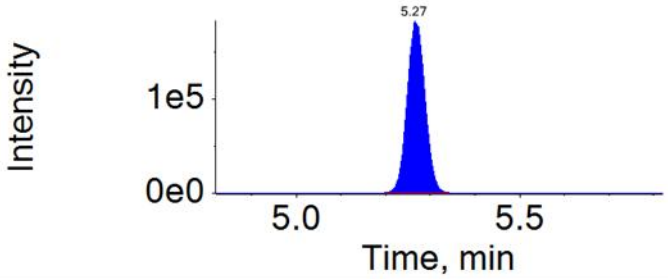
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

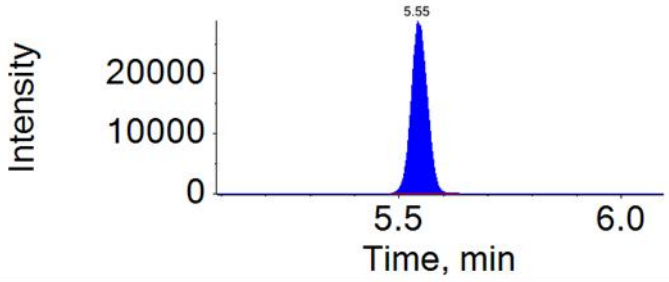
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

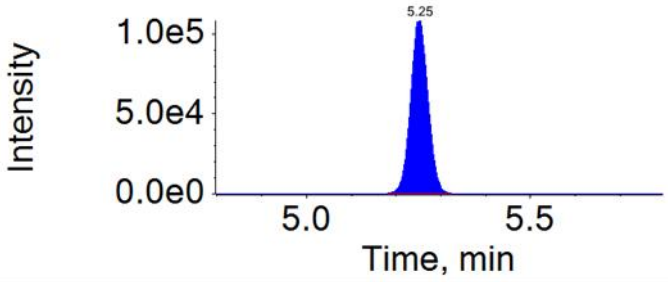
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



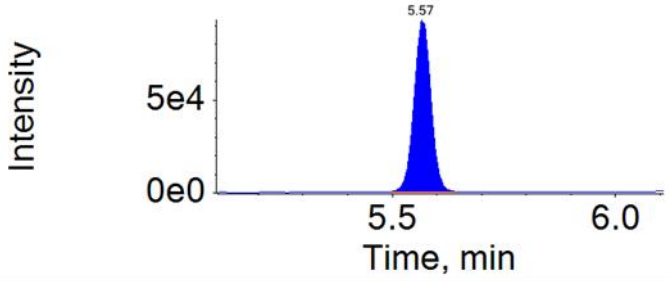


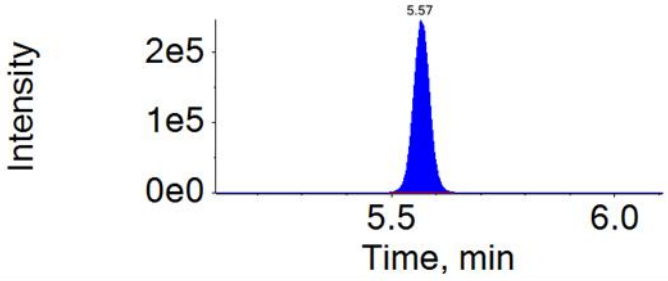
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



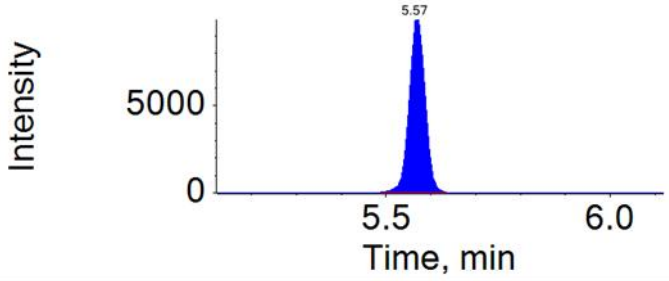


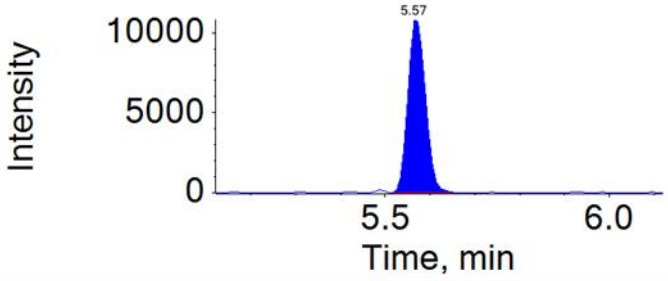
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

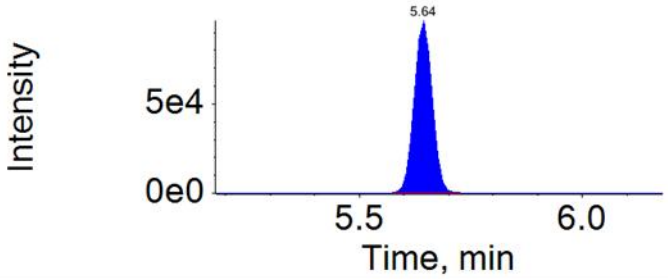
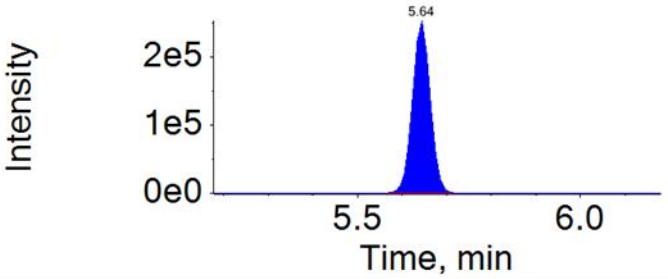


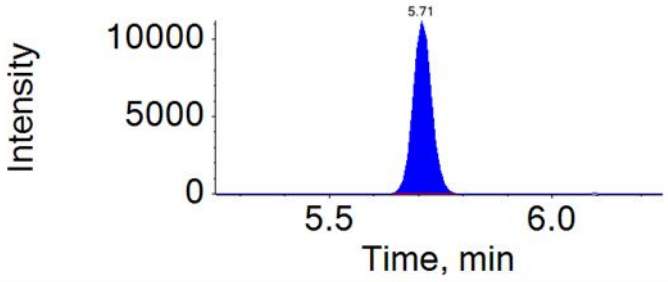
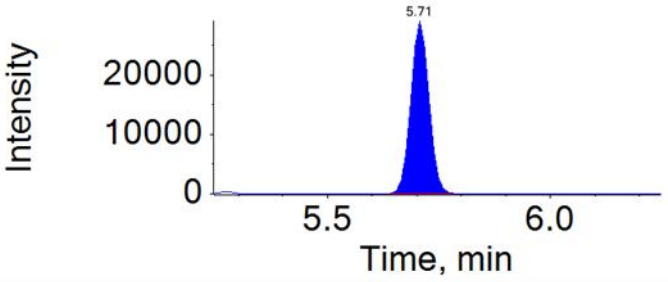


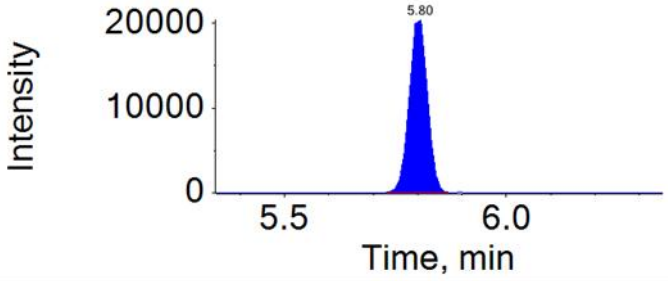
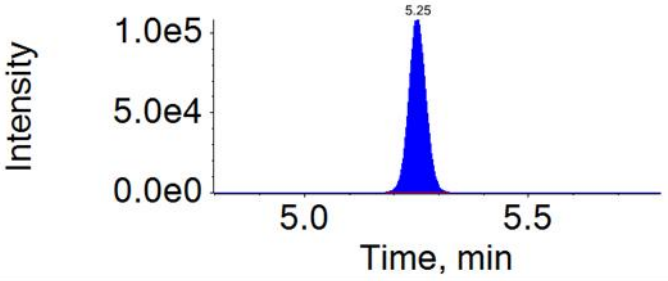
APPROVED
By JPT at 2:53 pm, 11/7/18

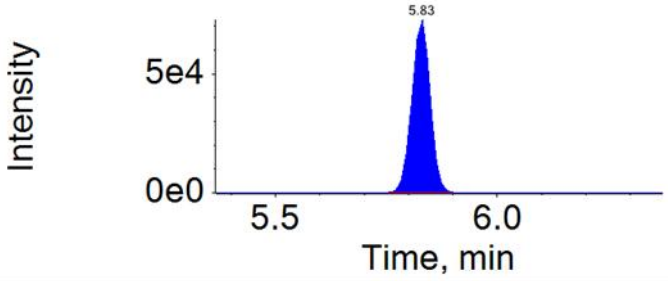
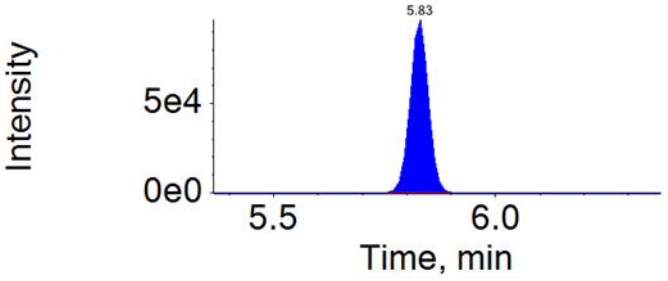
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

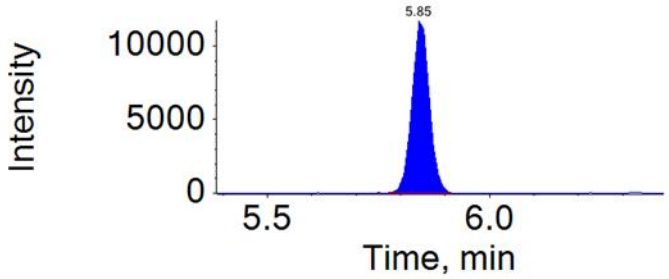
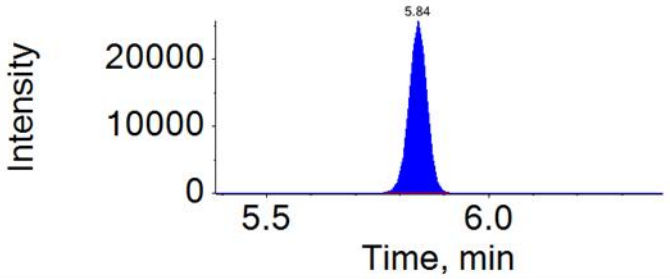
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

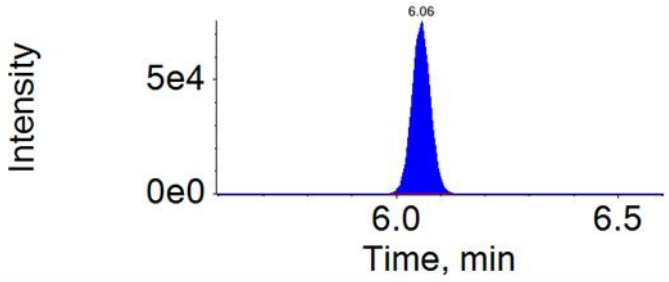
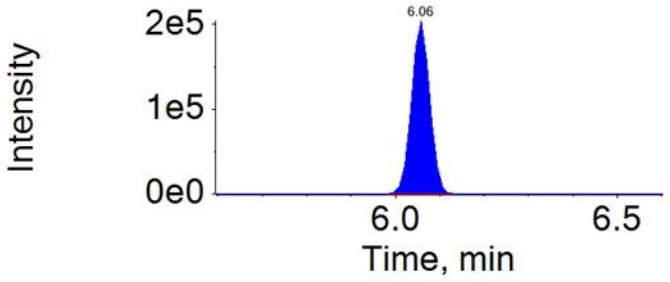
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

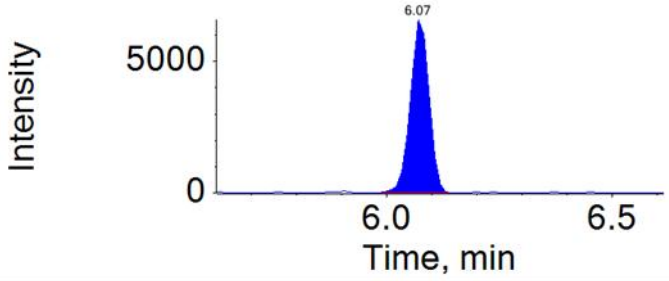
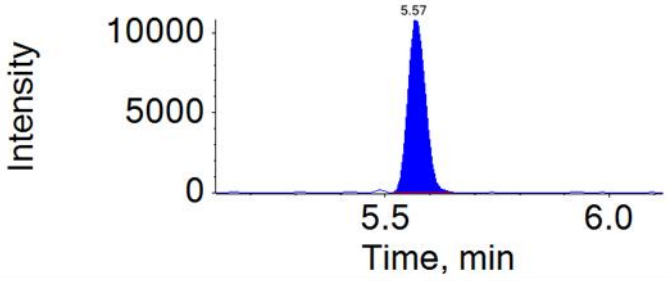
APPROVED
By JPT at 2:53 pm, 11/7/18

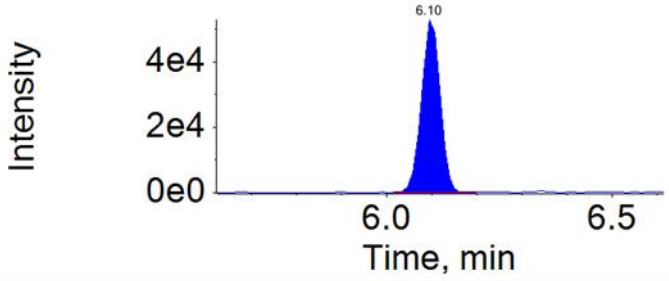
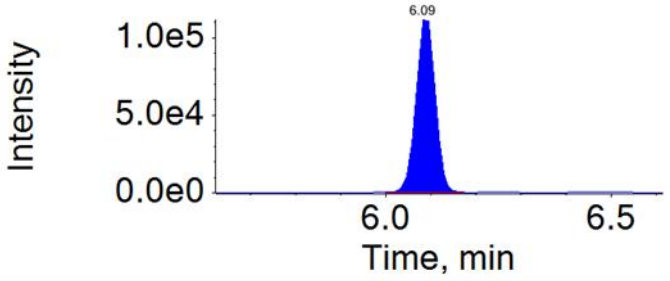
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

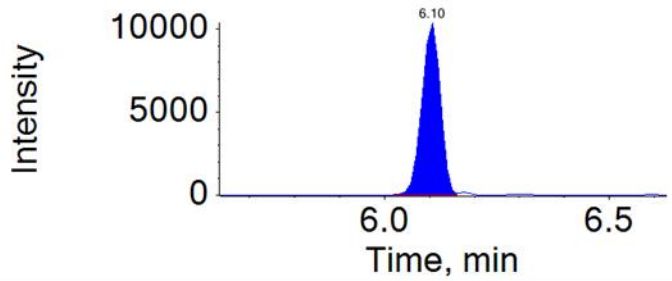
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

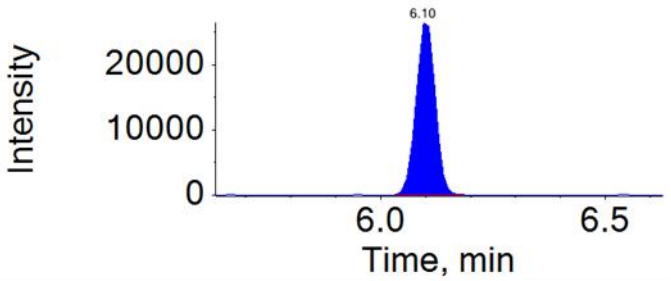
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

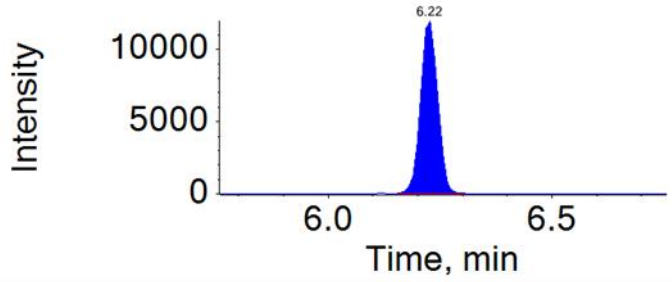
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

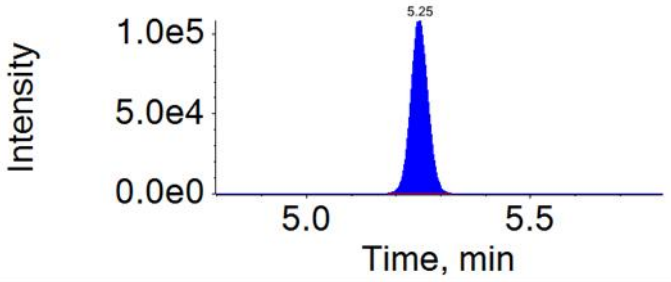
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



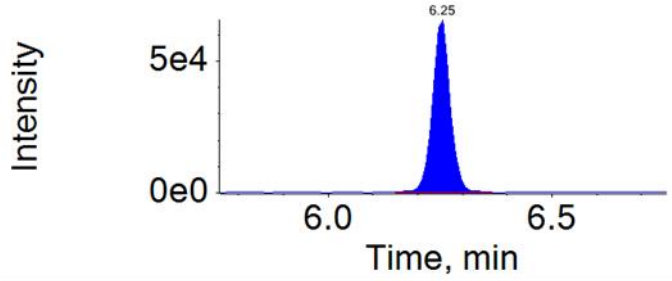


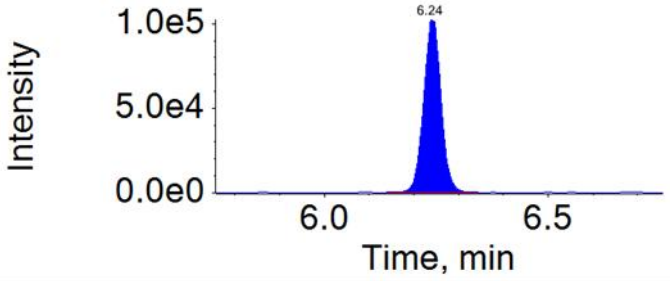
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



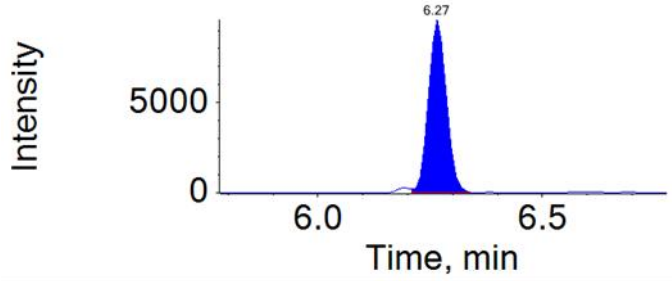


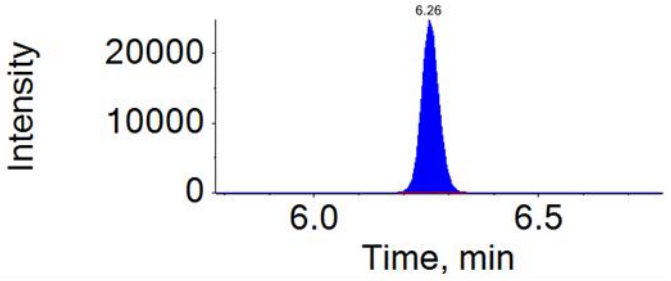
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



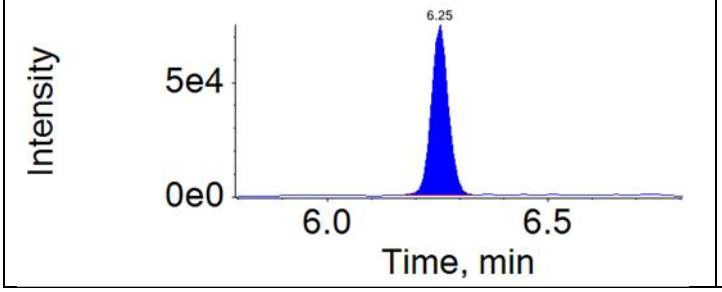


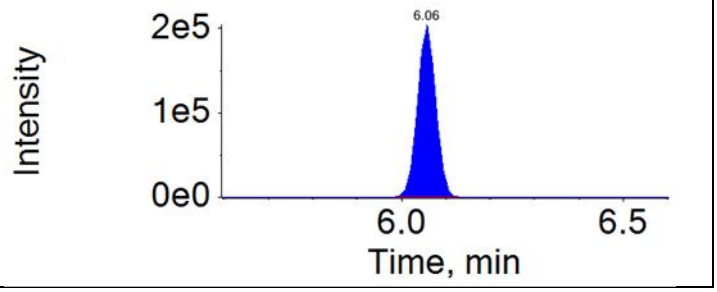
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By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

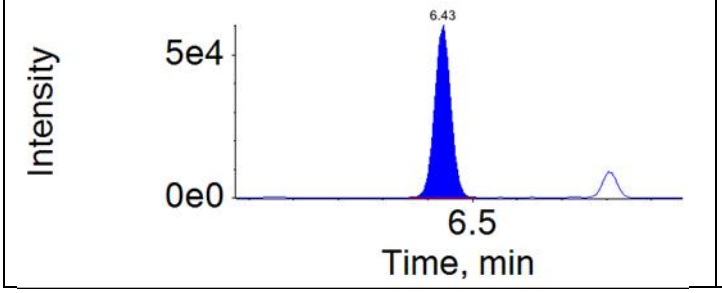
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

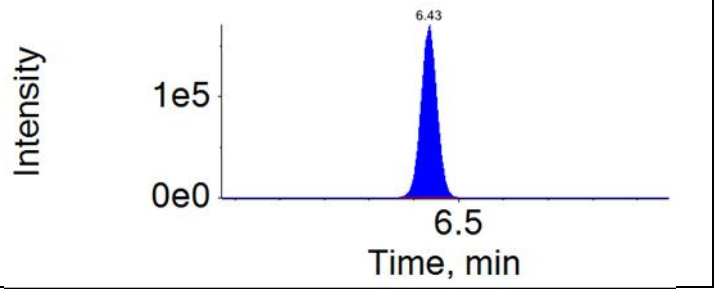
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



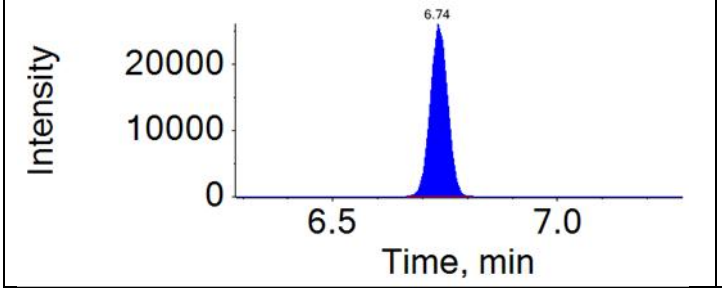


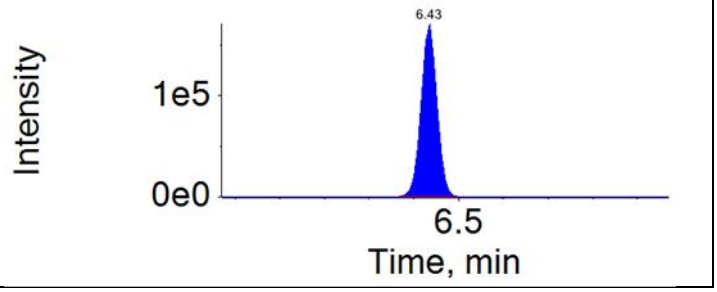
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



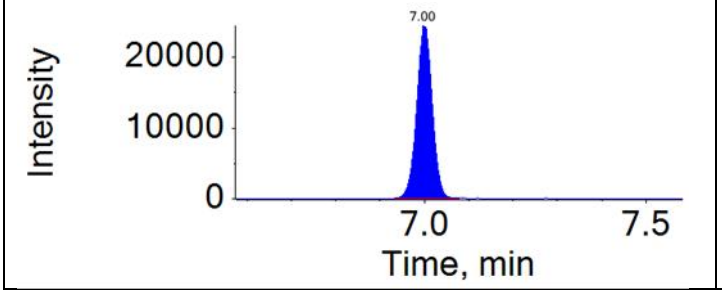


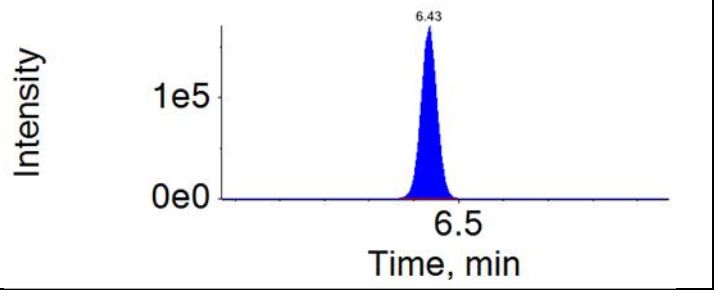
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





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Ion Ratio Report

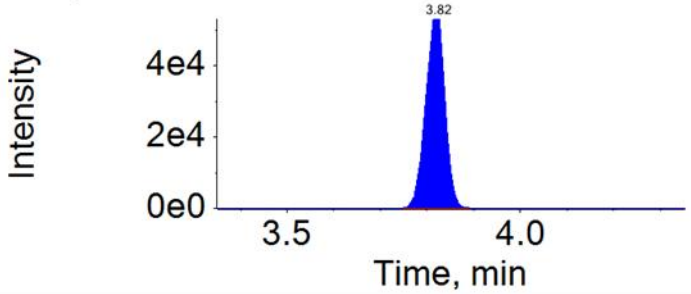
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-12.wiff

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	

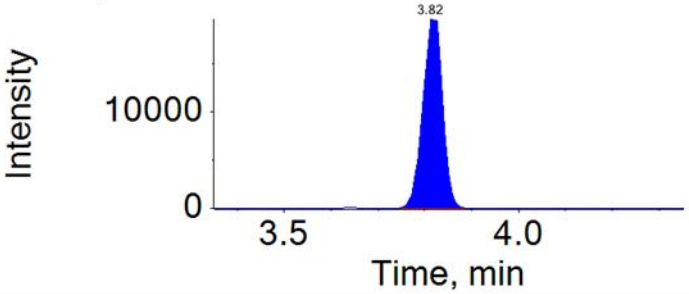
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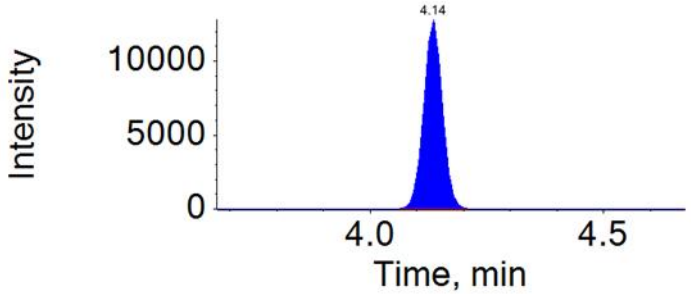
Component: PFBS
Primary Mass: 299.0 / 80.0



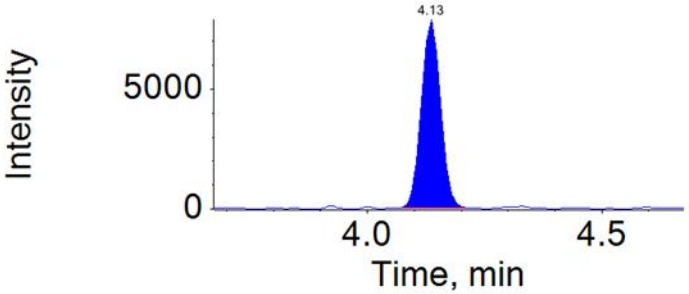
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



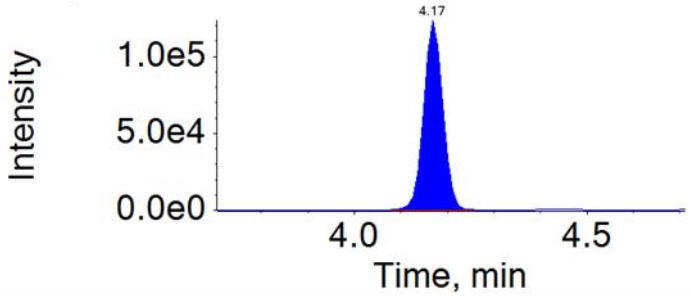
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



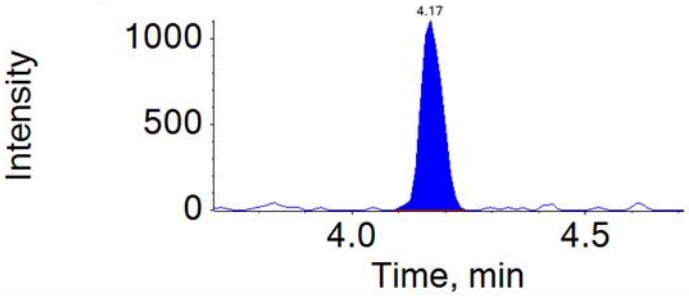
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



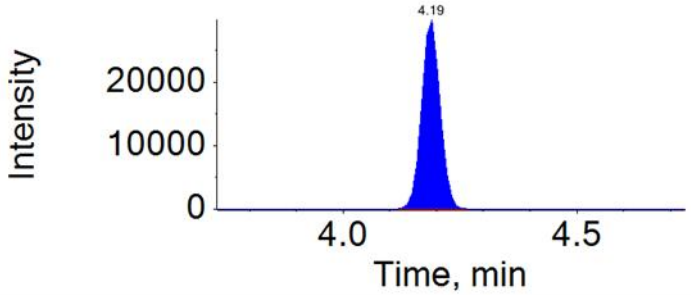
Component: PFHxA
Primary Mass: 313.0 / 269.0



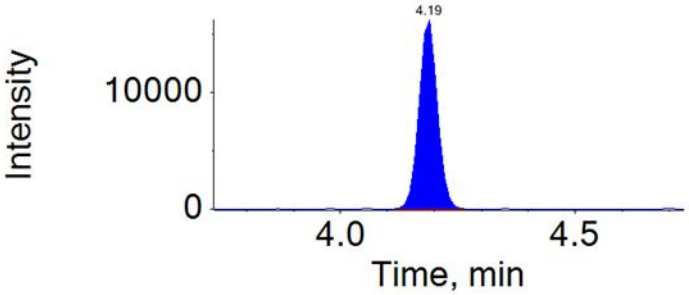
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



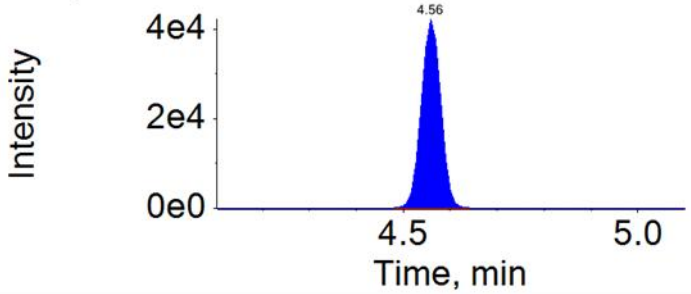
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



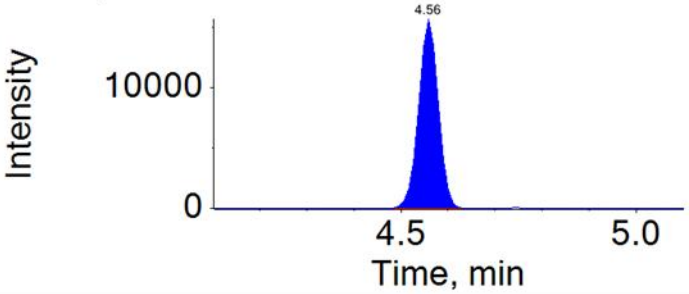
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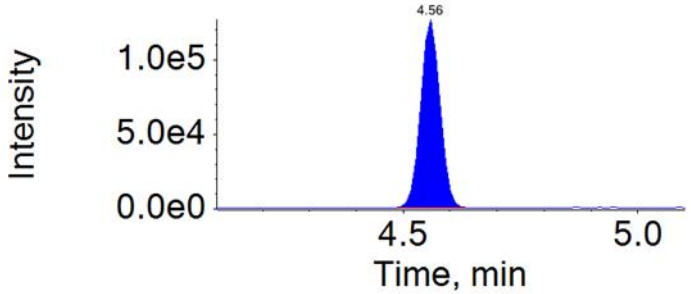
Component: PFHxS
Primary Mass: 399.0 / 80.0



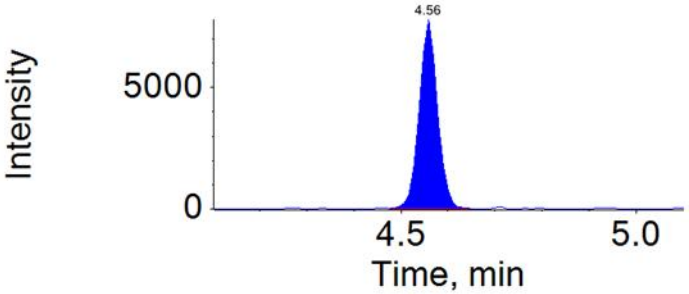
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



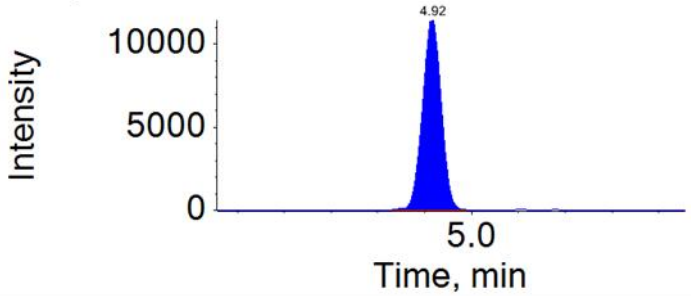
Component: PFHpA
Primary Mass: 363.0 / 319.0



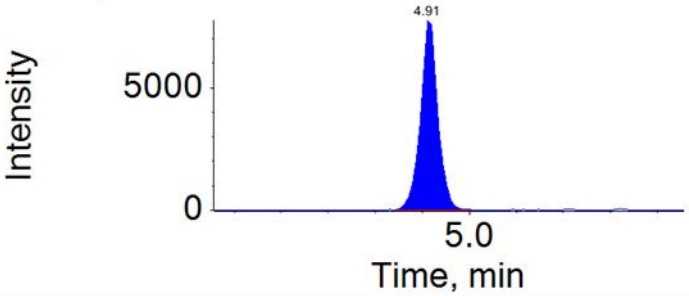
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



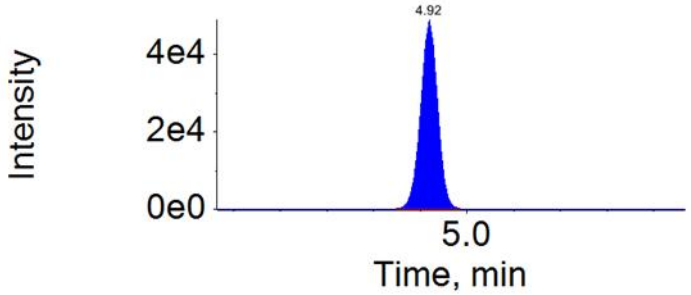
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



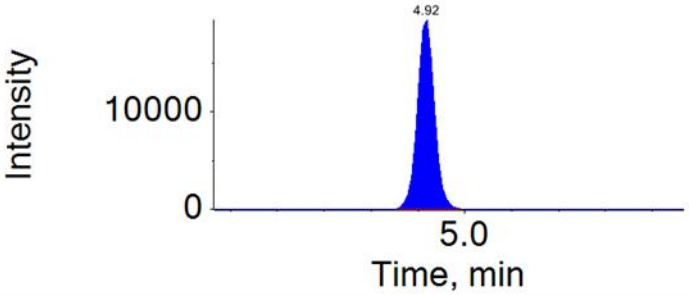
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



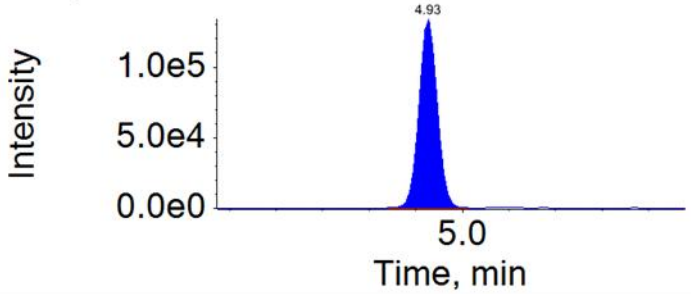
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



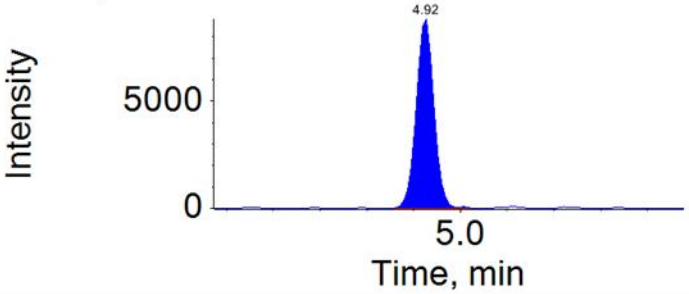
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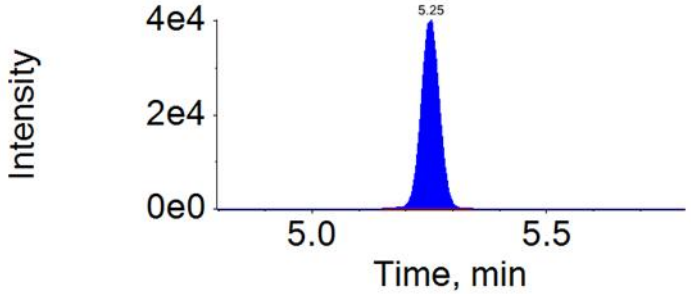
Component: PFOA
Primary Mass: 413.0 / 369.0



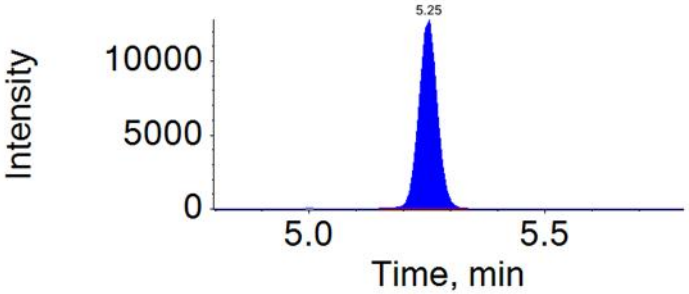
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



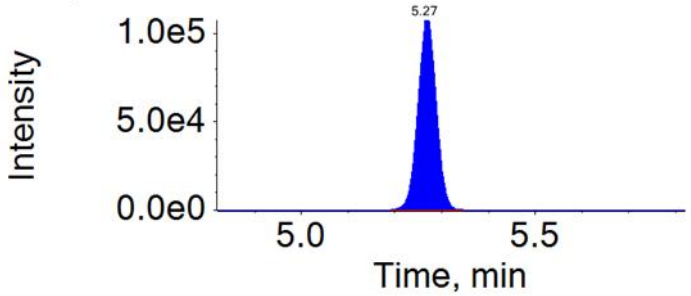
Component: PFOS
Primary Mass: 499.0 / 80.0



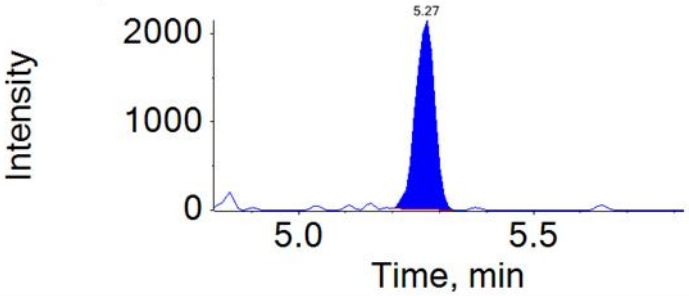
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



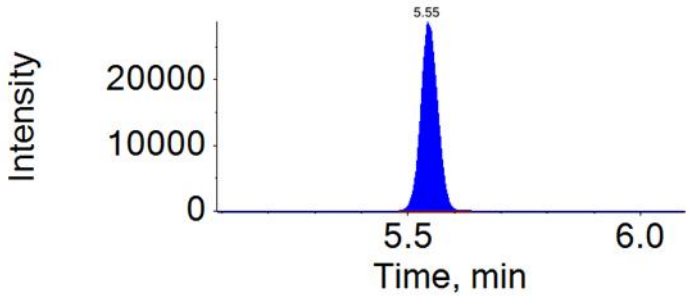
Component: PFNA
Primary Mass: 463.0 / 419.0



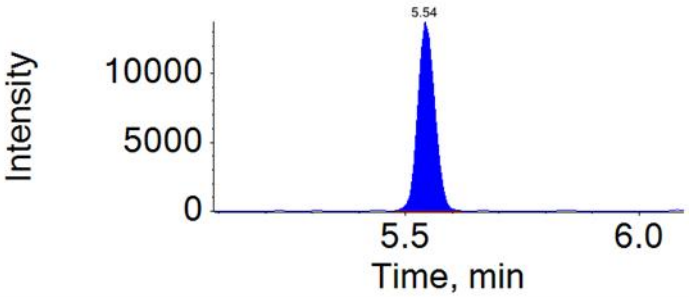
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



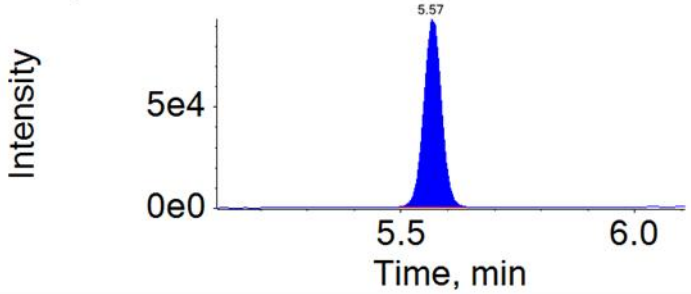
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



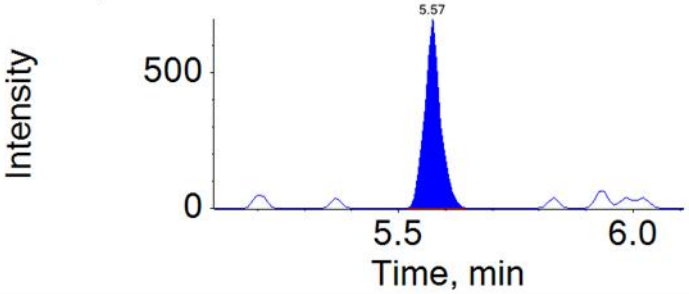
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

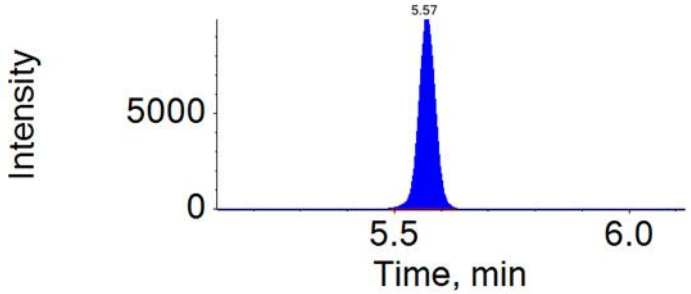
Component: PFDA
Primary Mass: 513.0 / 469.0



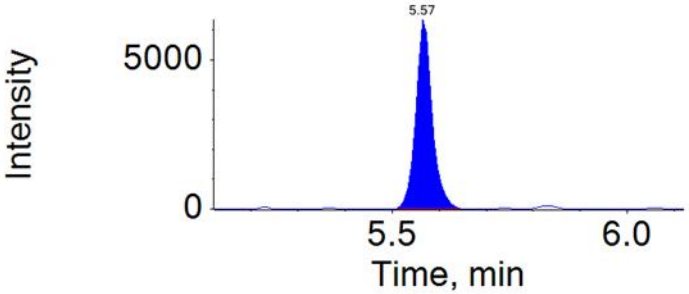
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



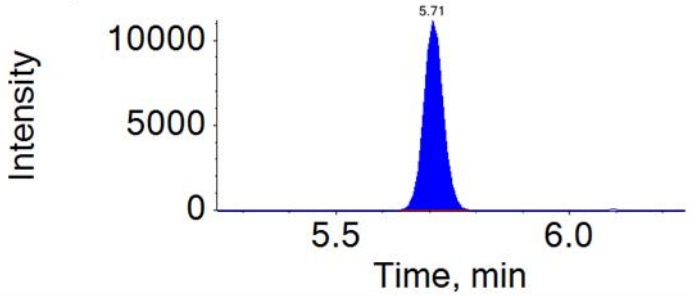
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



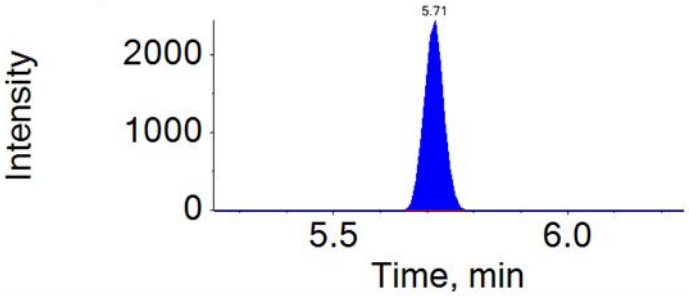
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



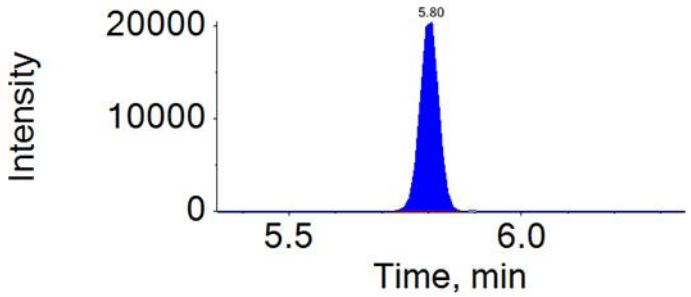
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



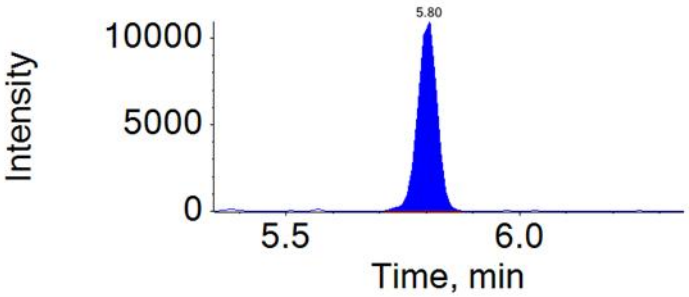
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



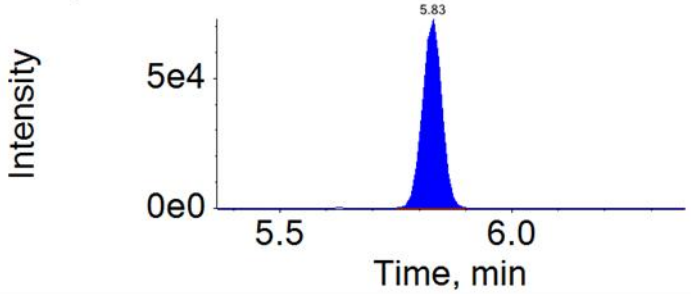
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



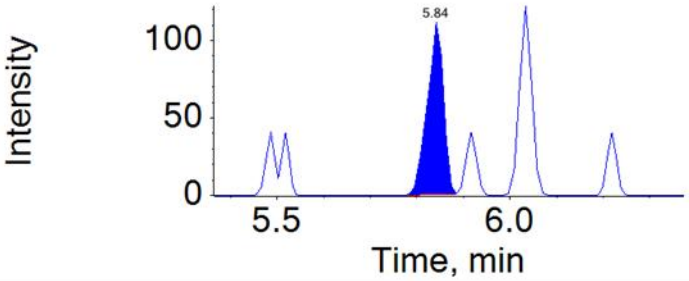
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

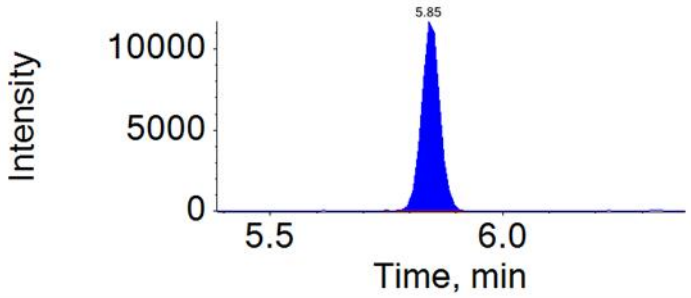
Component: PFUnDA
Primary Mass: 563.0 / 519.0



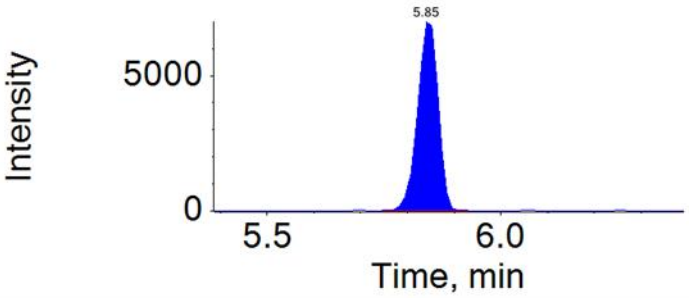
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



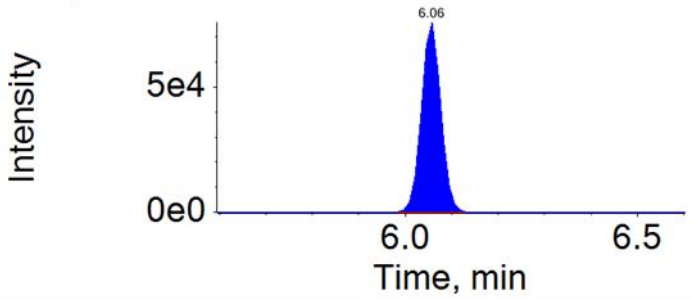
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



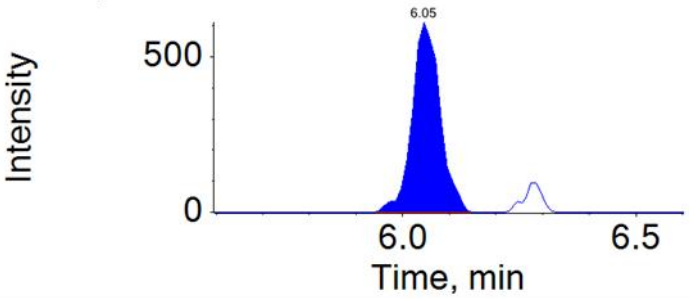
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



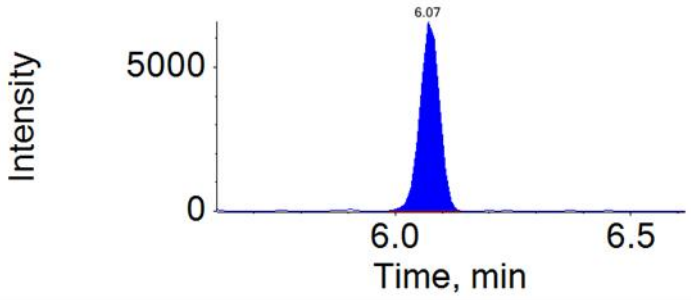
Component: PFDoDA
Primary Mass: 613.0 / 569.0



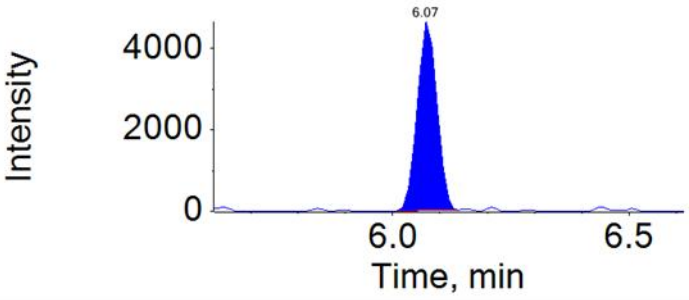
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



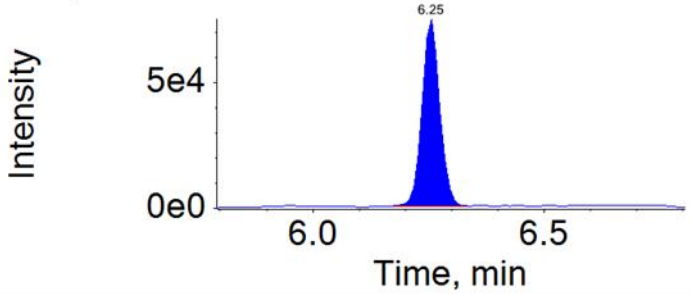
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



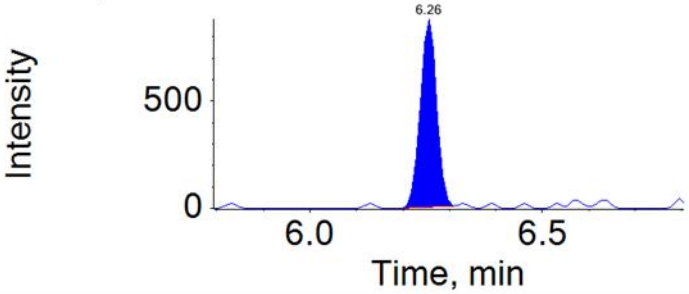
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

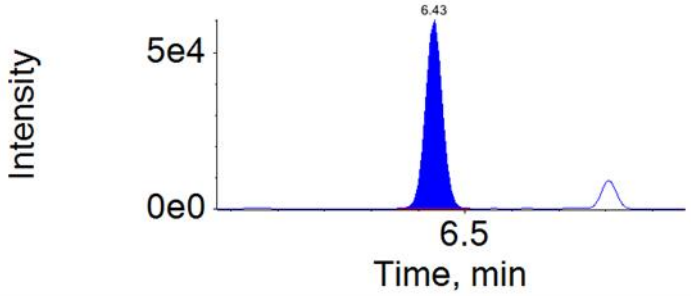
Component: PFTrDA
Primary Mass: 663.0 / 619.0



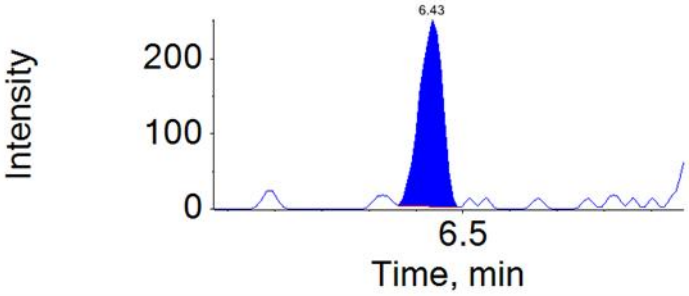
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



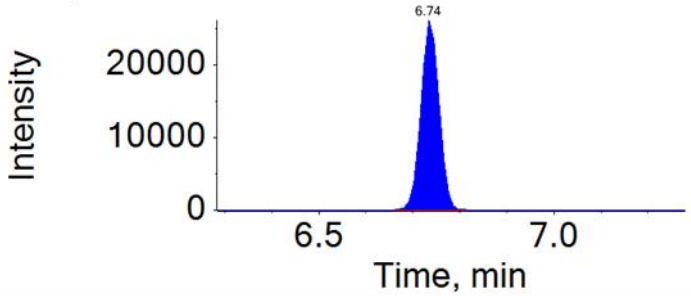
Component: PFTeDA
Primary Mass: 713.0 / 669.0



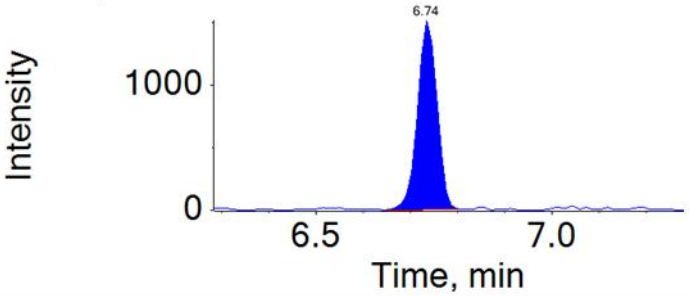
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



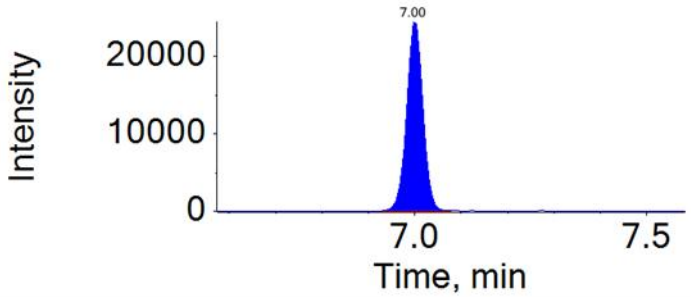
Component: PFHxDA
Primary Mass: 813.0 / 769.0



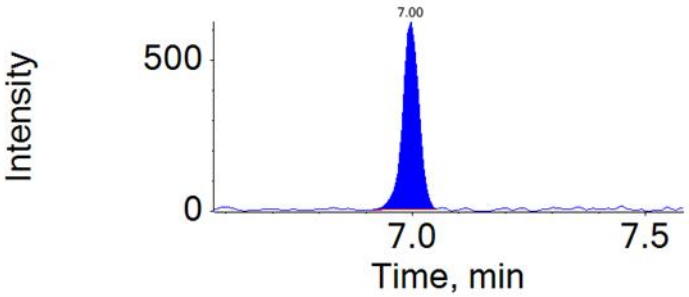
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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:	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

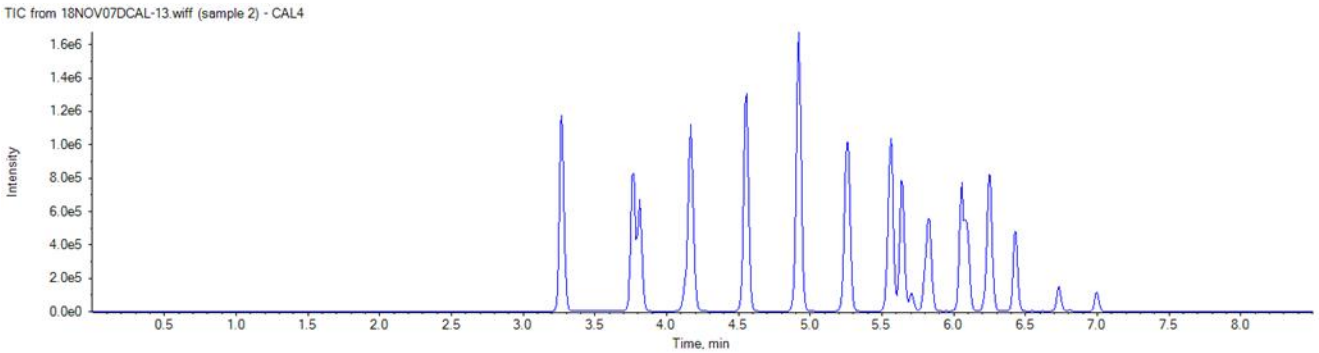
Analyte Quantitation Peak Table

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

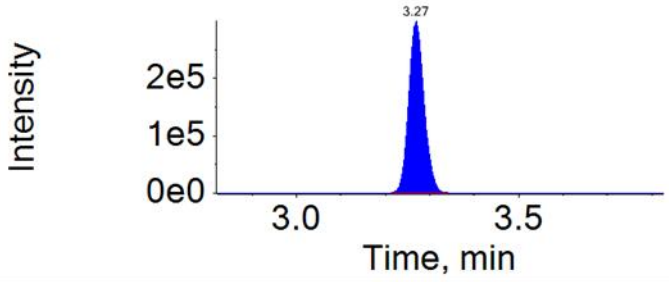


APPROVED
By JPT at 2:53 pm, 11/7/18

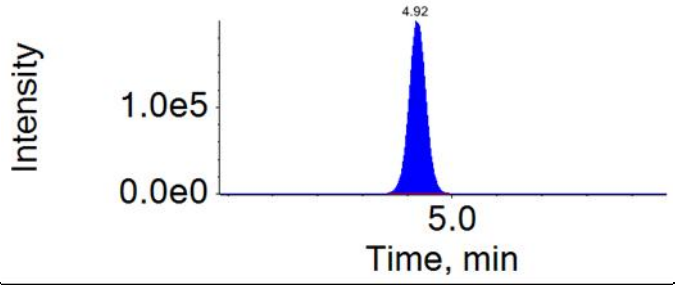
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

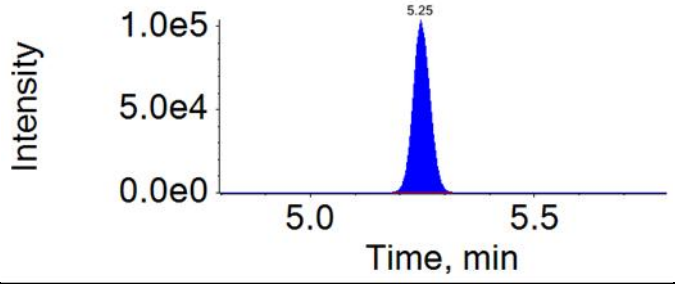
Injection Standard: 13C3-PFBA
216.0 / 172.0



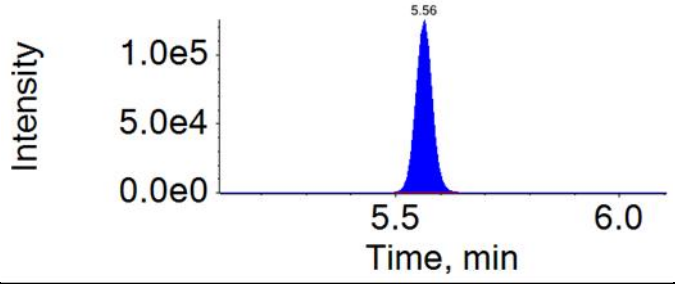
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



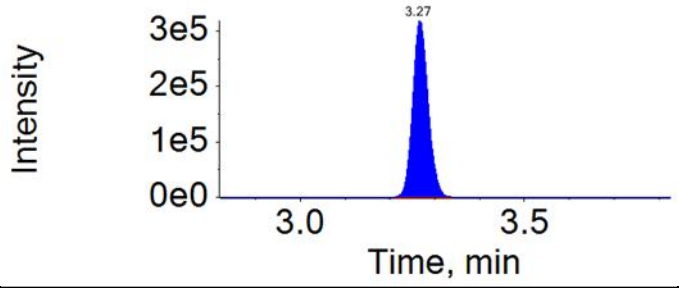
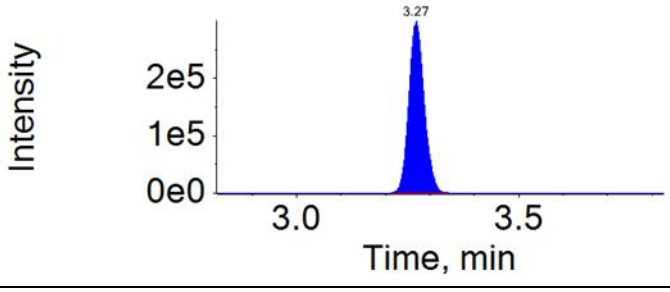
Injection Standard: 13C2-PFDA
515.0 / 470.0

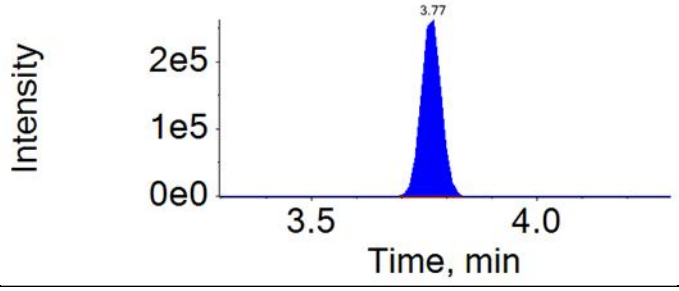
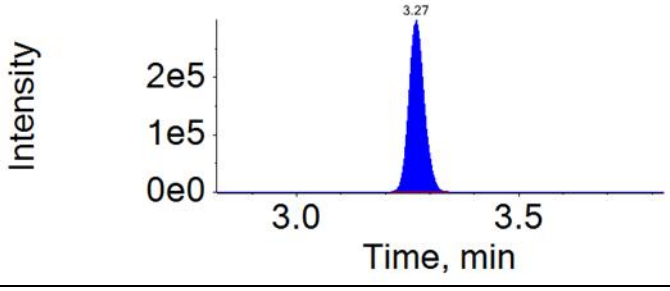


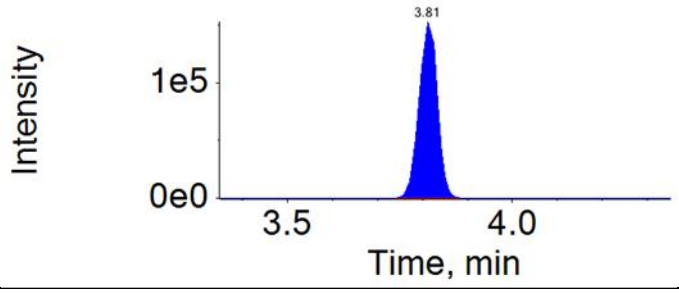
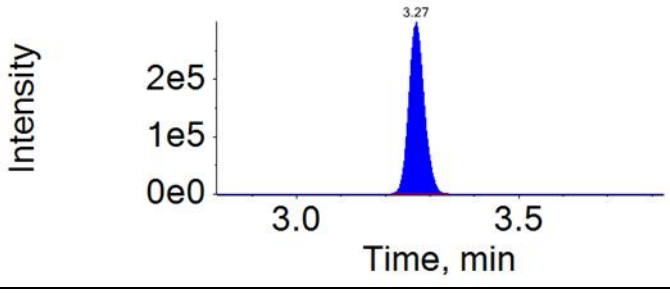
APPROVED
By JPT at 2:53 pm, 11/7/18

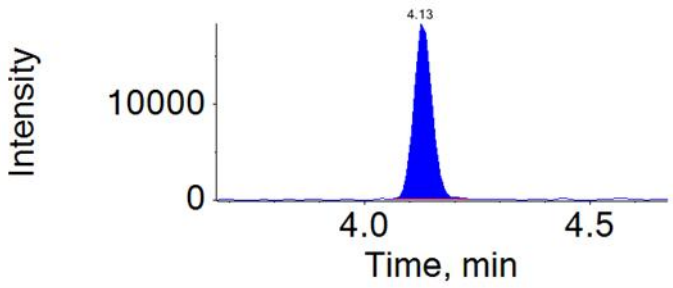
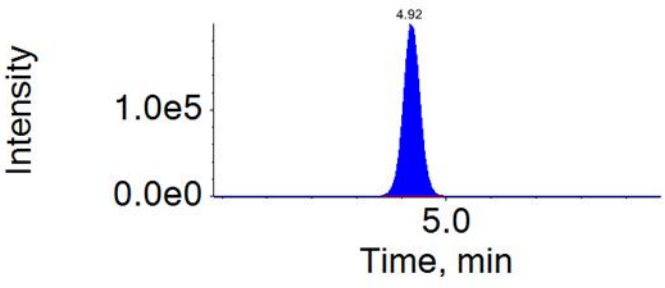
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

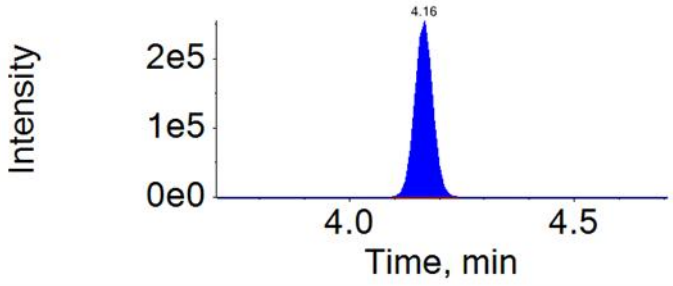
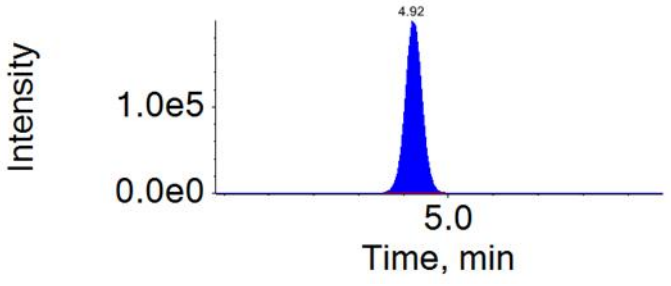
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

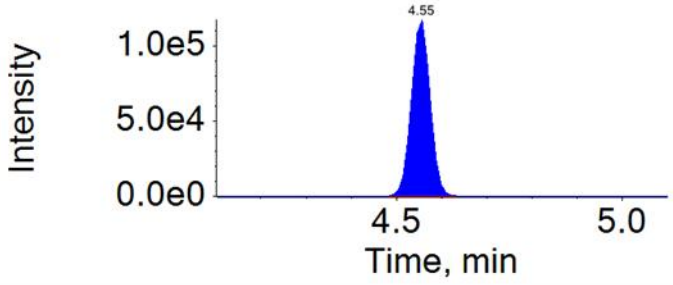
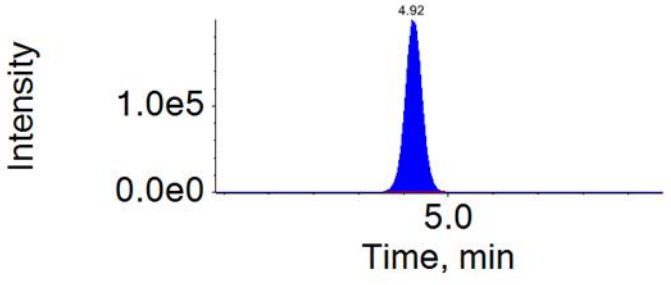
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

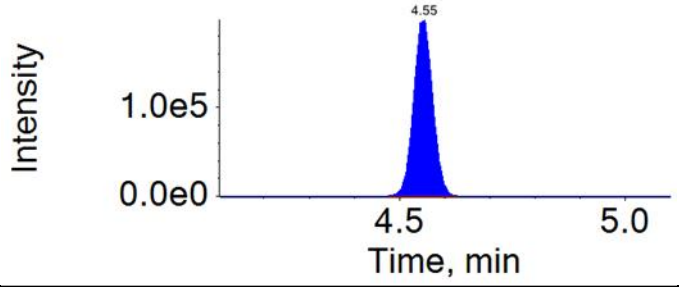
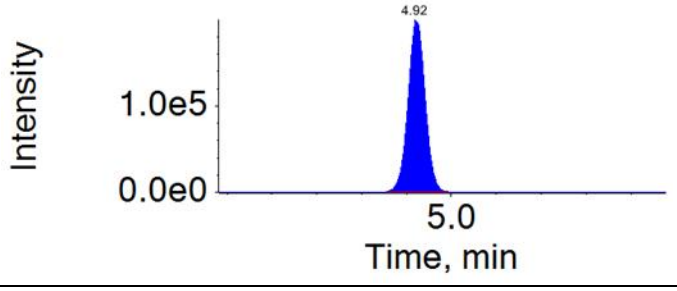
APPROVED
By JPT at 2:53 pm, 11/7/18

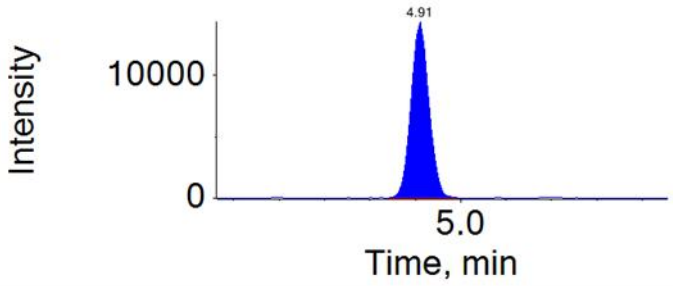
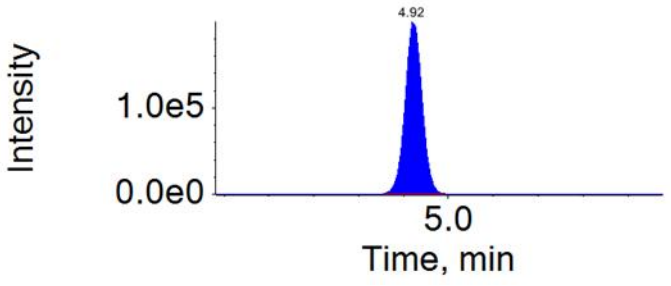
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

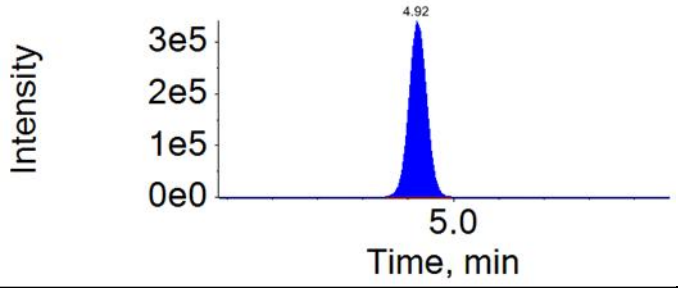
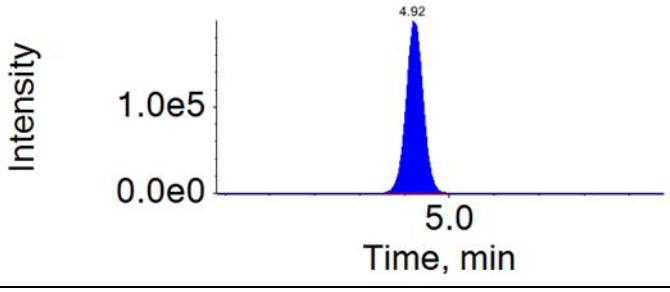
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

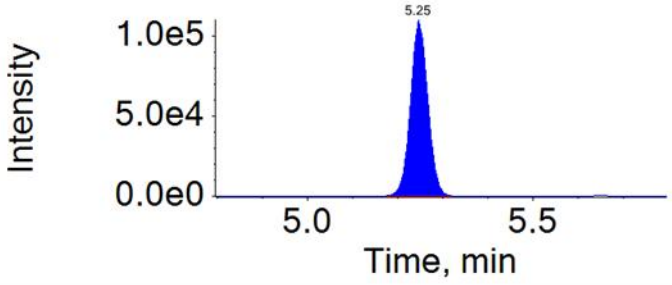
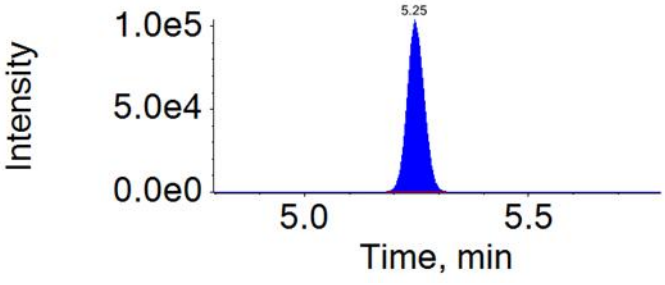
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

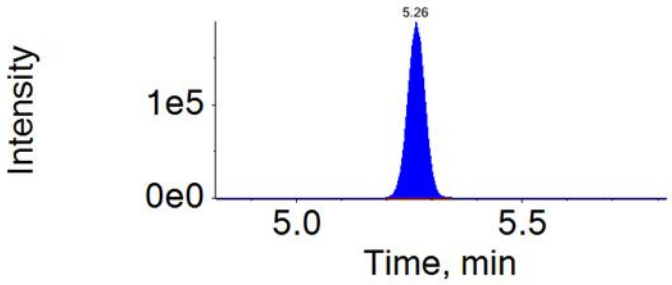
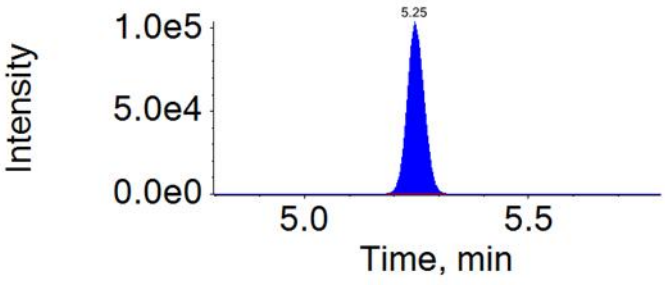
APPROVED
By JPT at 2:53 pm, 11/7/18

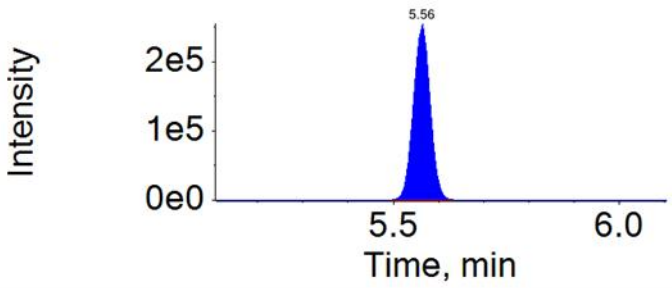
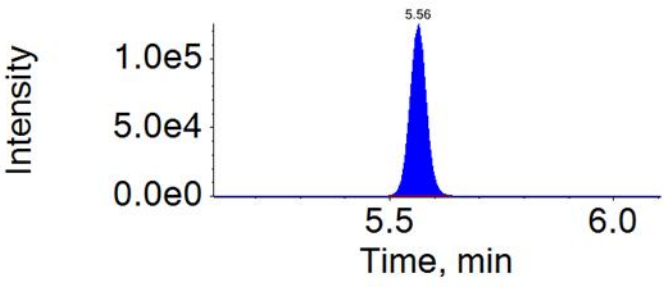
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

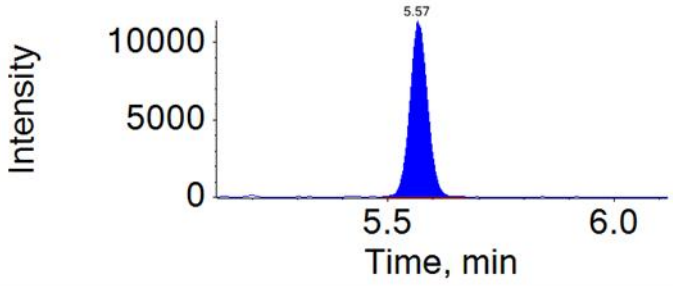
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

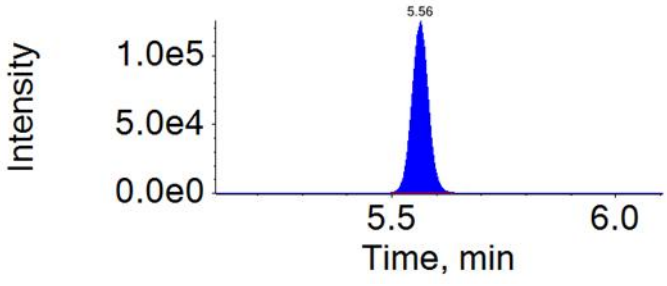
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

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

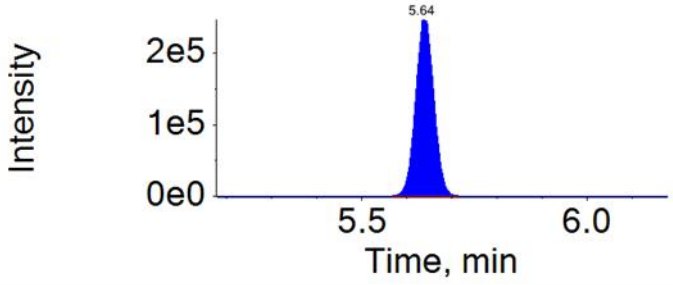
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

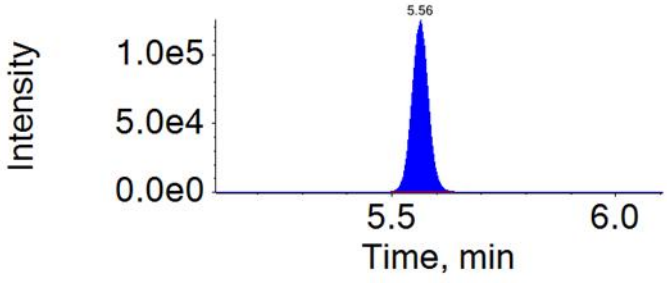
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



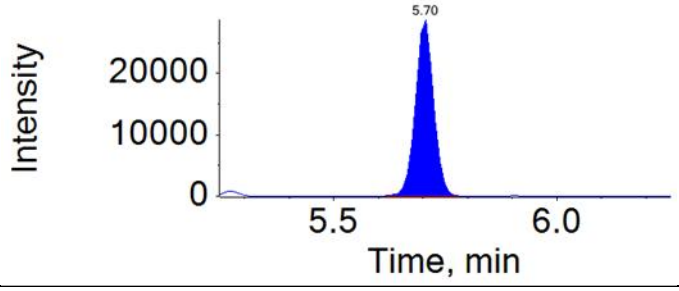


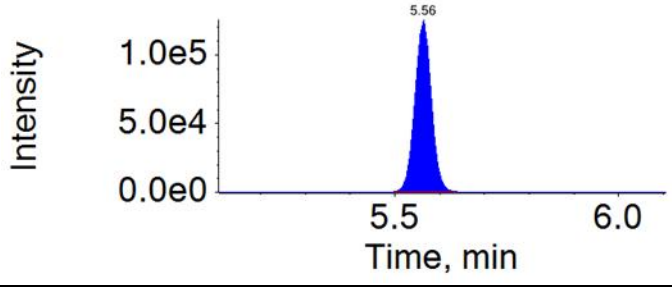
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



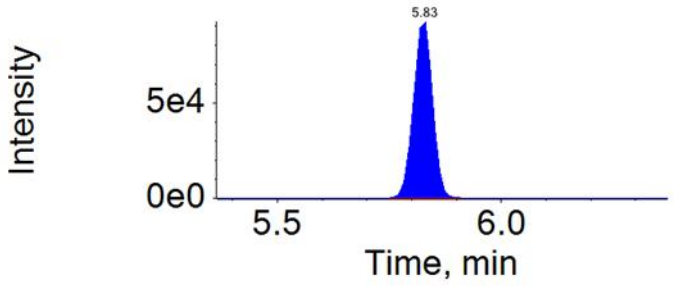


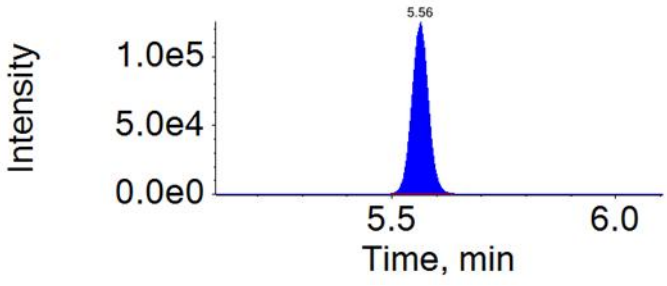
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

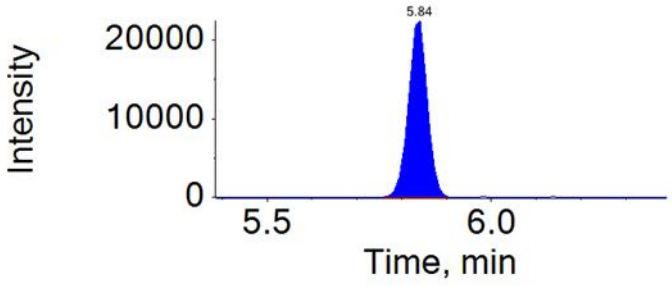
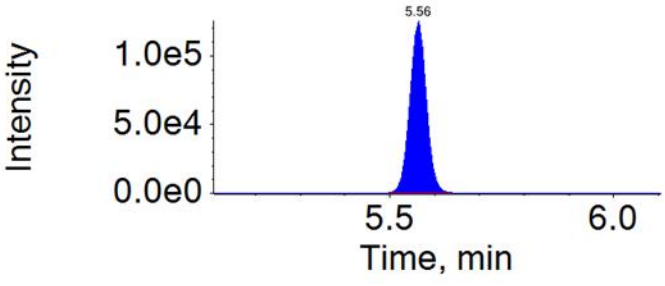


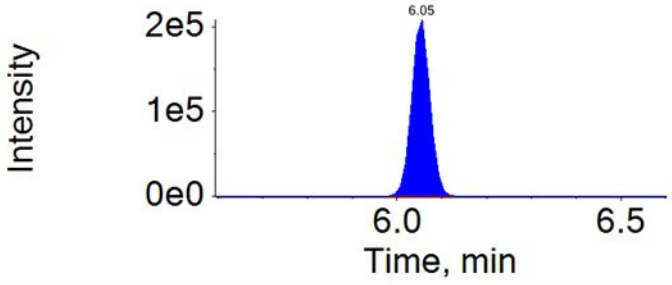
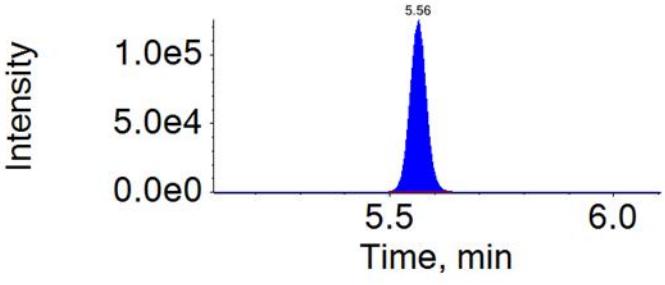


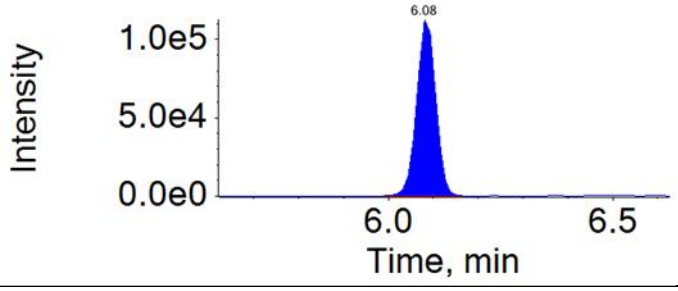
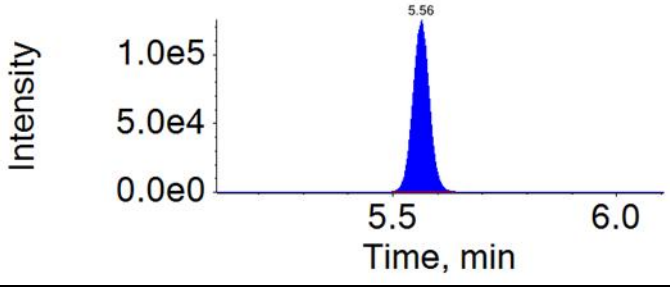
APPROVED
By JPT at 2:53 pm, 11/7/18

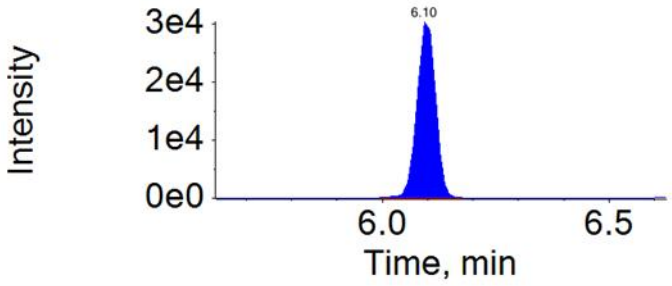
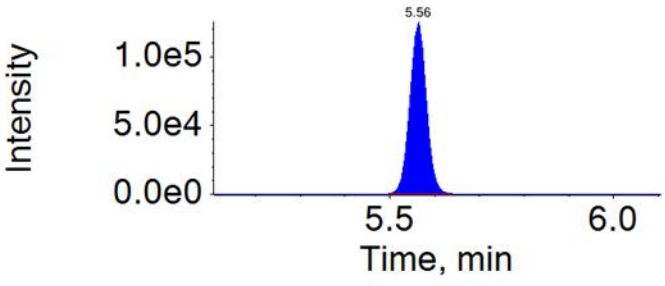
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

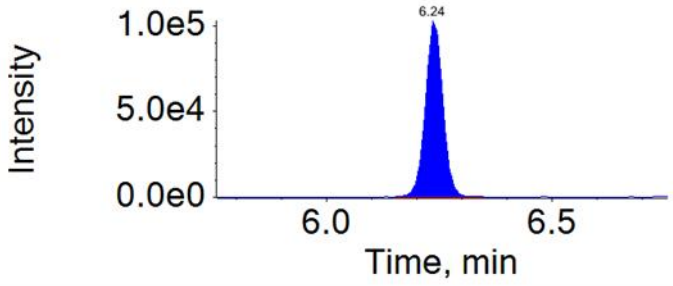
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

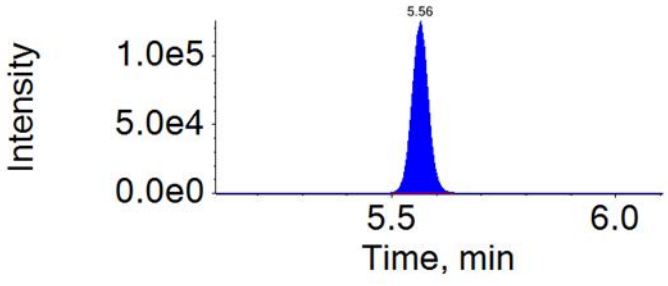
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

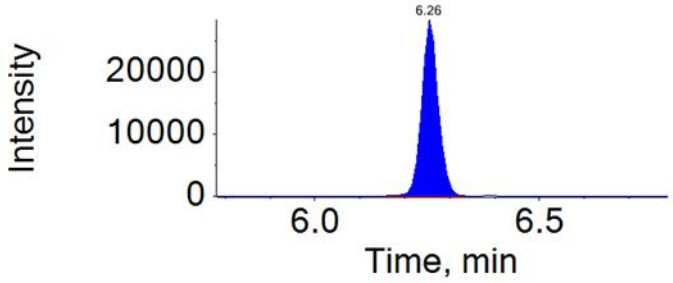
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

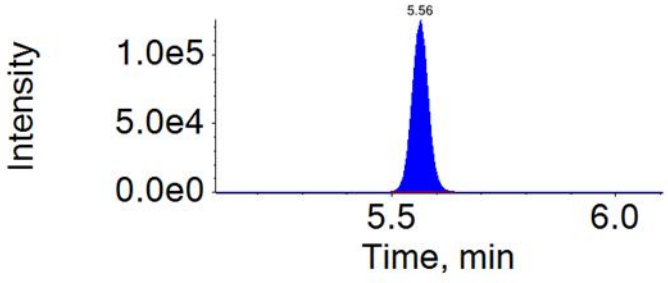
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



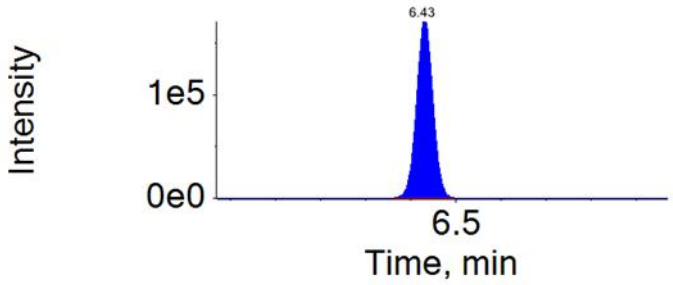


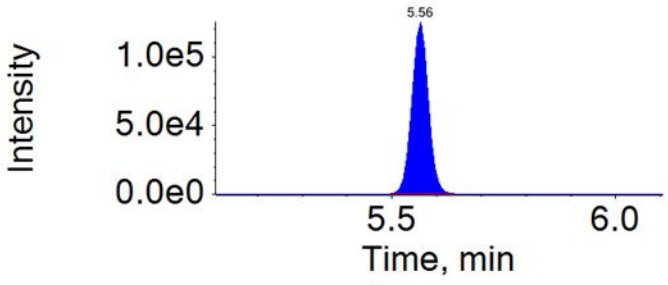
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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

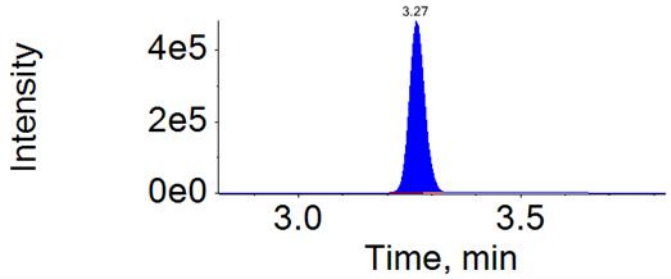
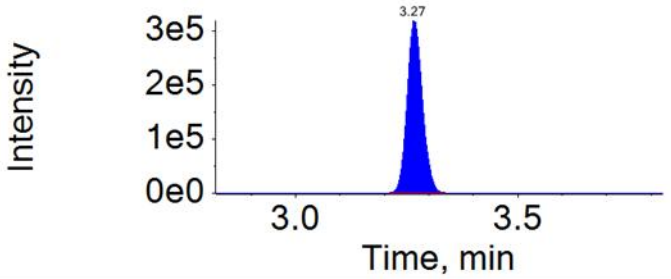


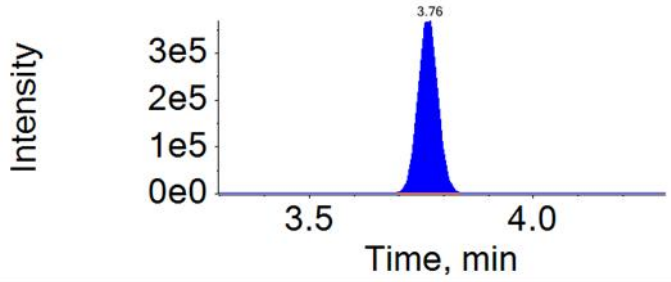
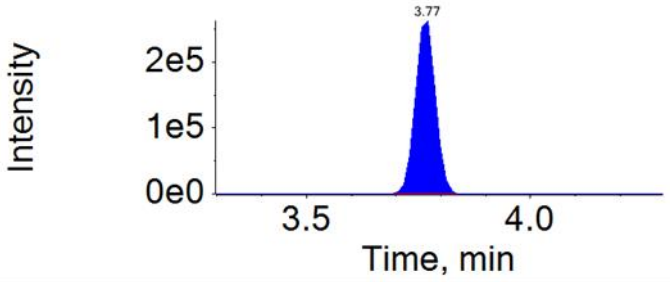


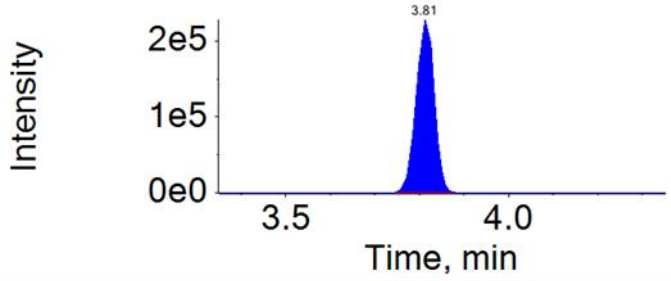
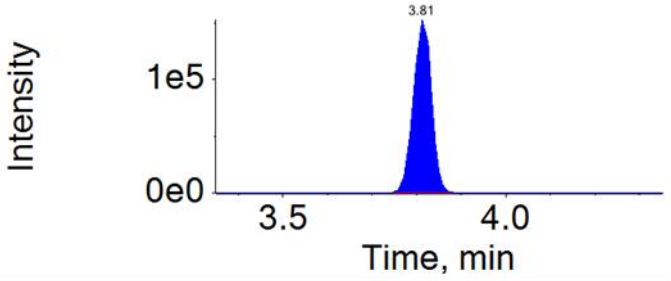
APPROVED
By JPT at 2:53 pm, 11/7/18

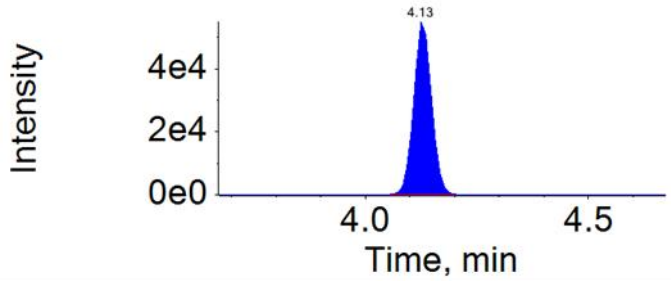
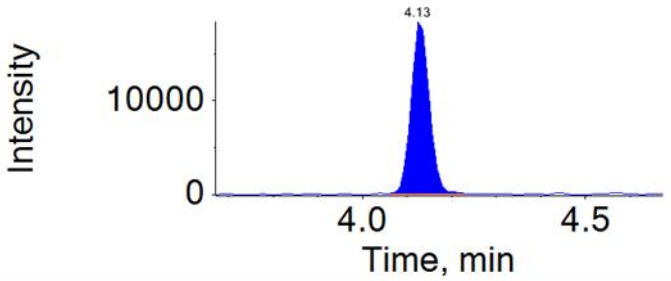
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By umar at 5:23 pm, 11/9/18

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
	

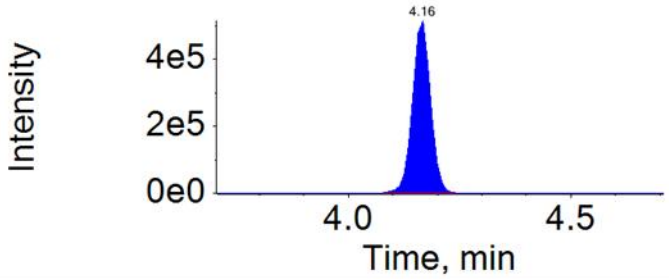
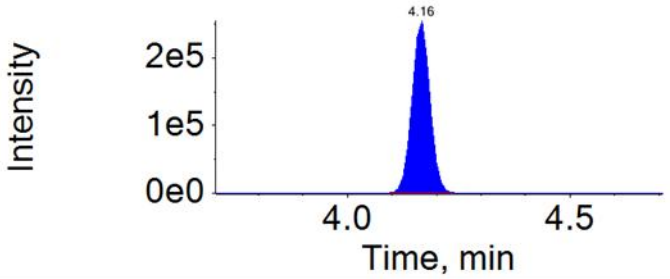
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

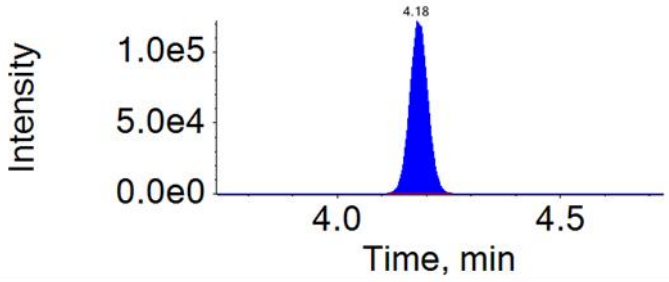
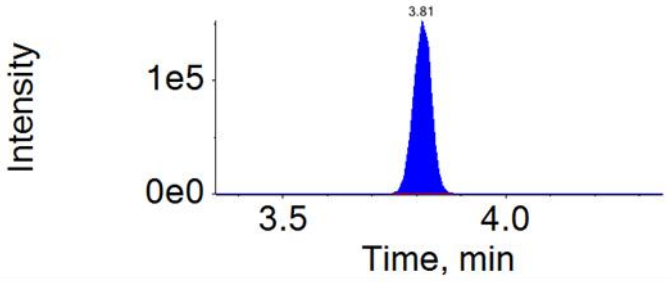
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

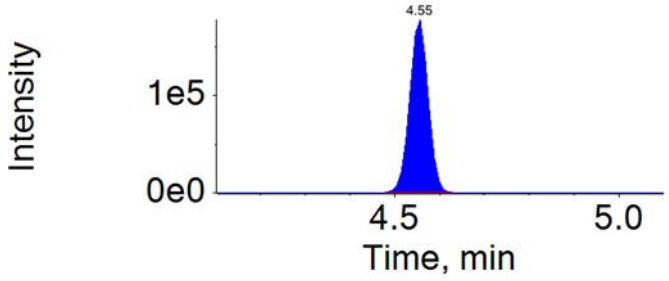
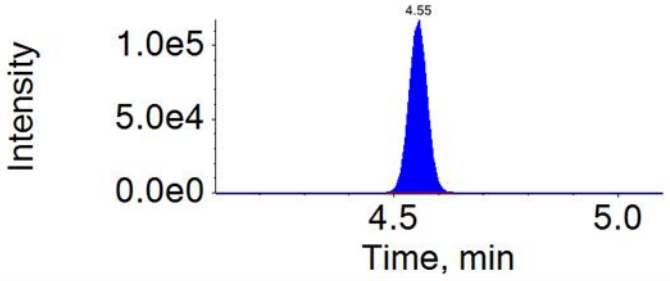
APPROVED
By JPT at 2:53 pm, 11/7/18

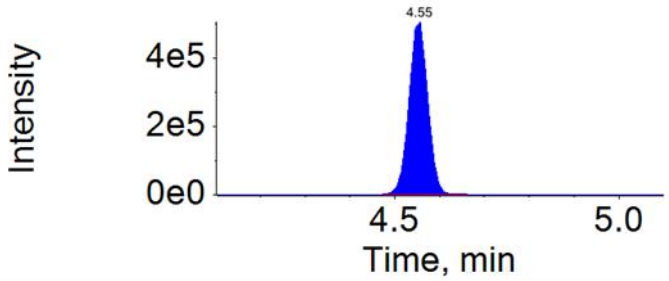
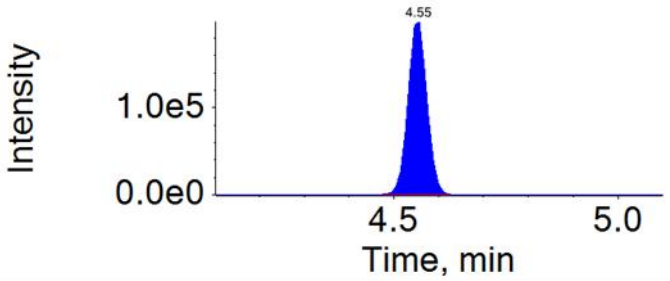
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

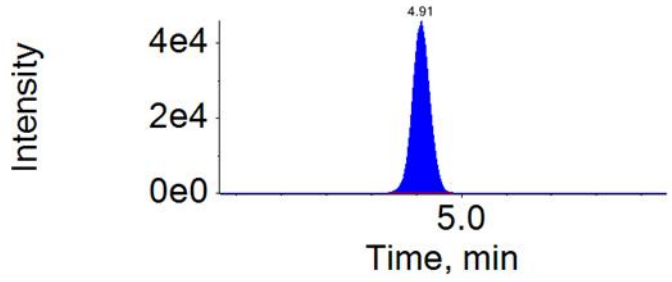
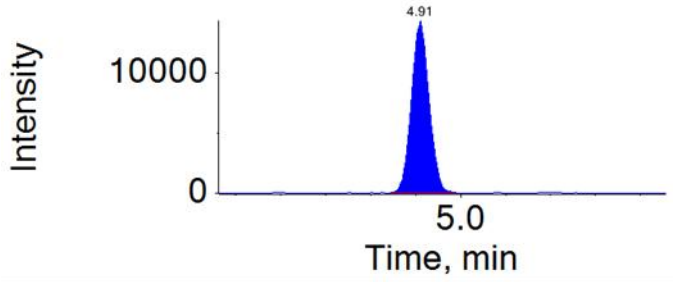
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

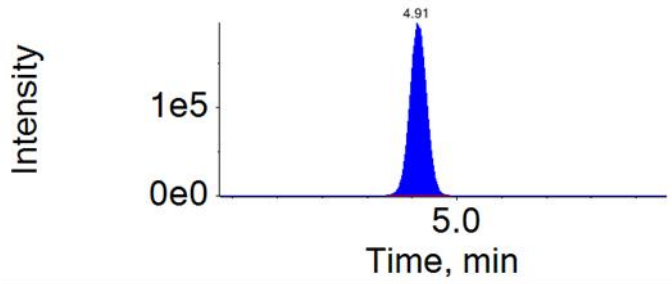
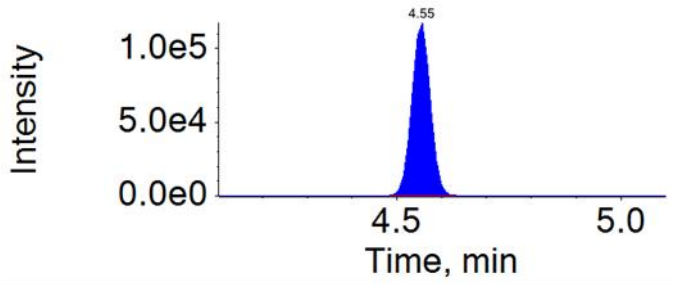
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

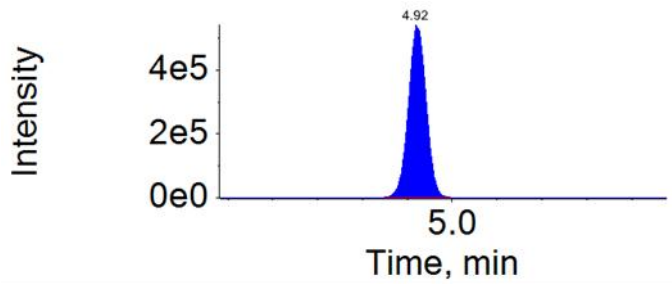
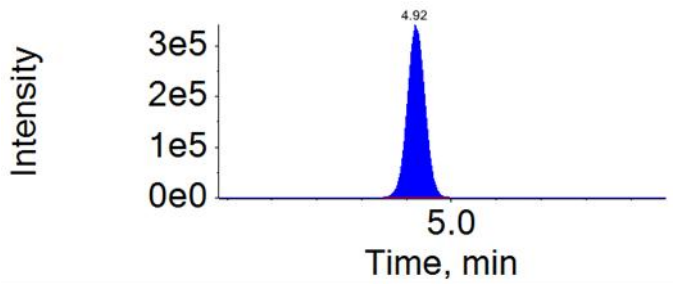
APPROVED
By JPT at 2:53 pm, 11/7/18

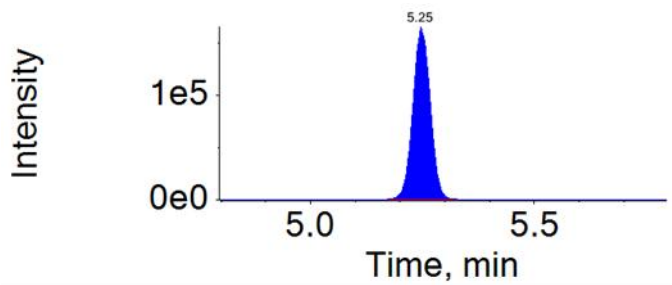
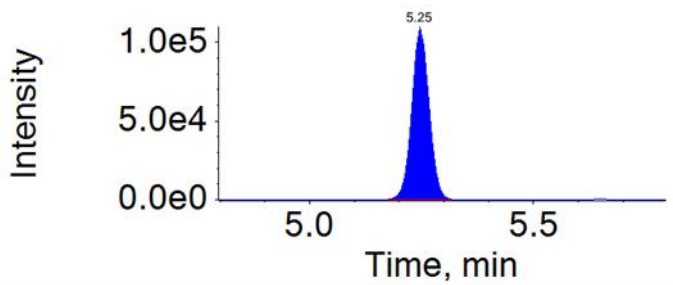
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

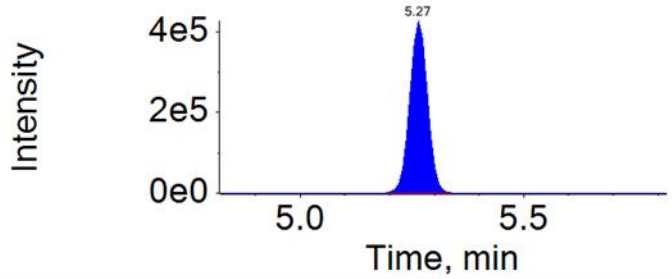
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

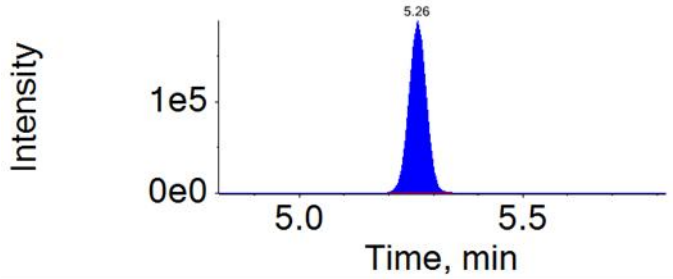
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

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

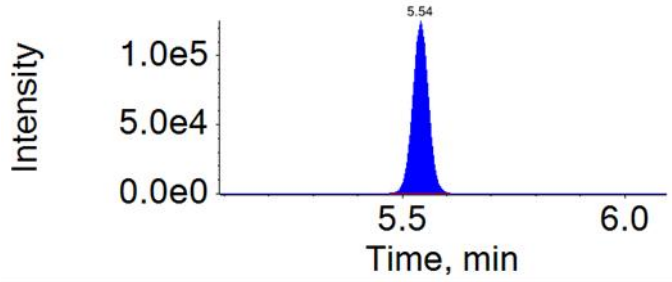
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

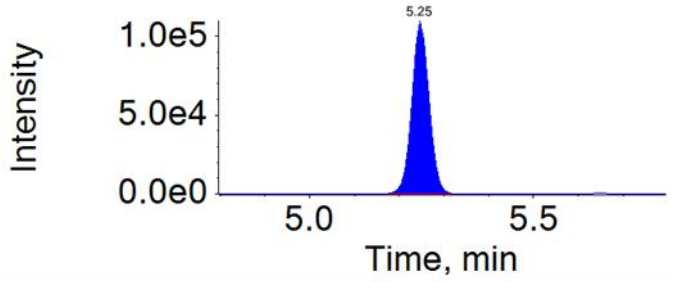
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



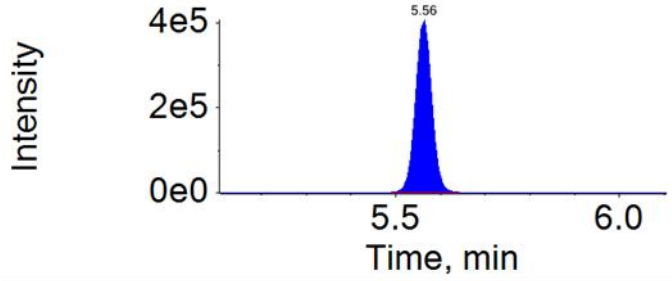


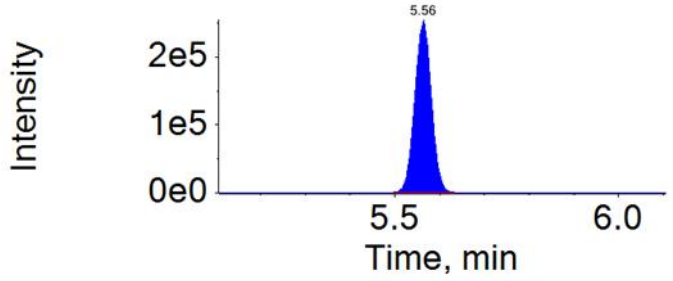
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



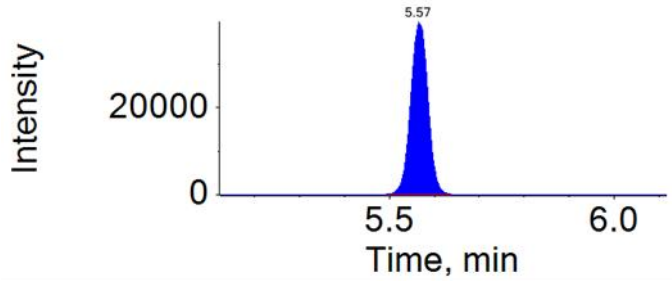


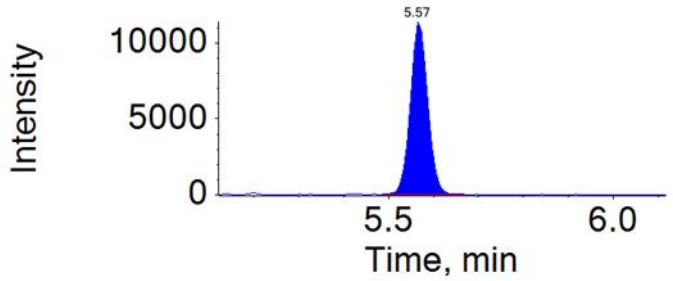
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

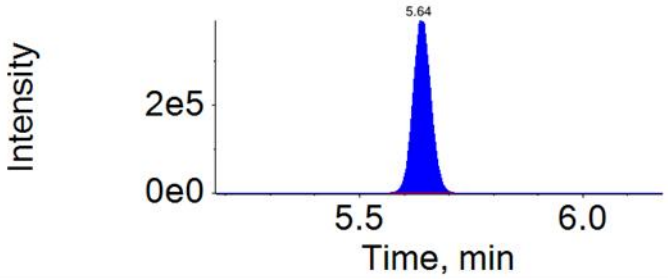
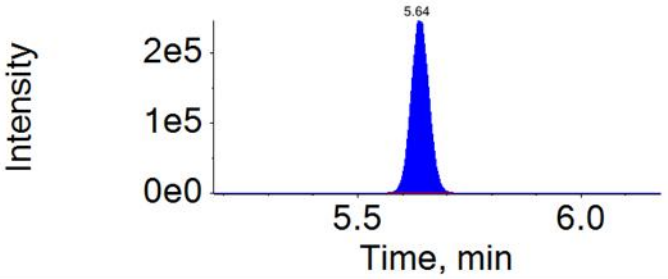


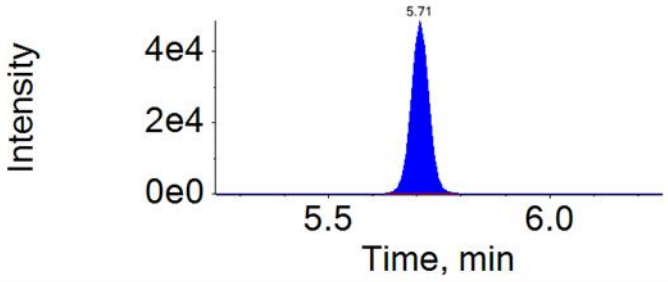
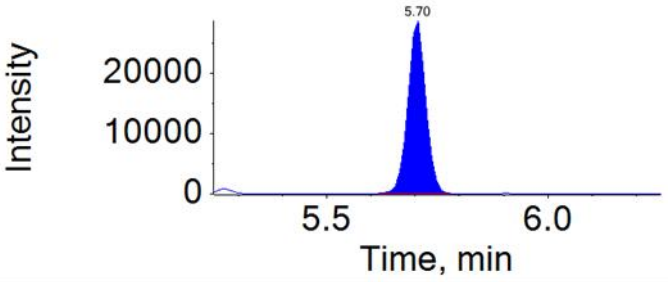


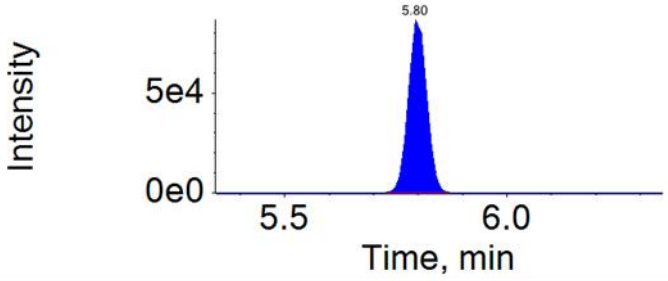
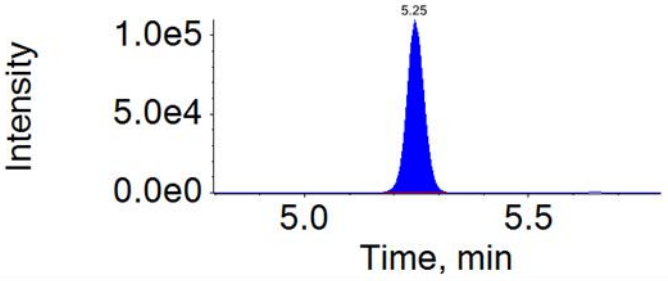
APPROVED
By JPT at 2:53 pm, 11/7/18

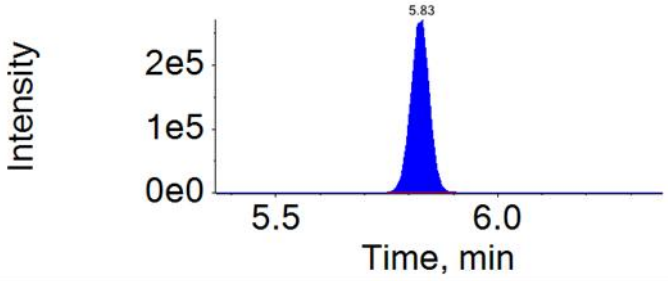
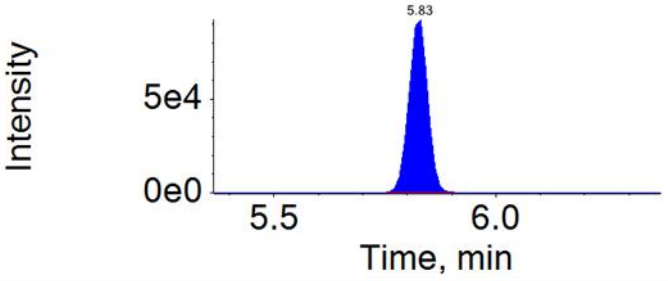
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

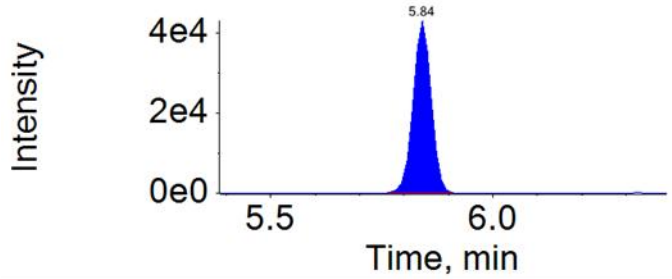
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

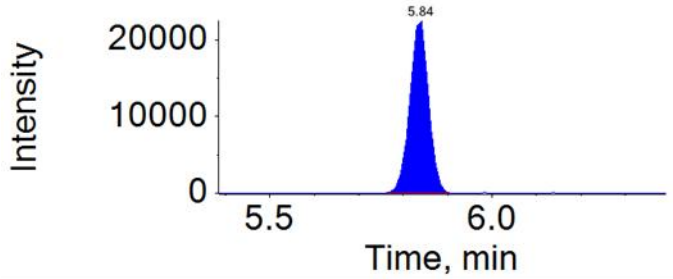
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

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

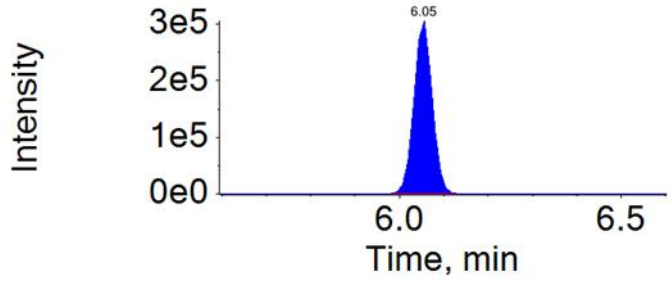
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

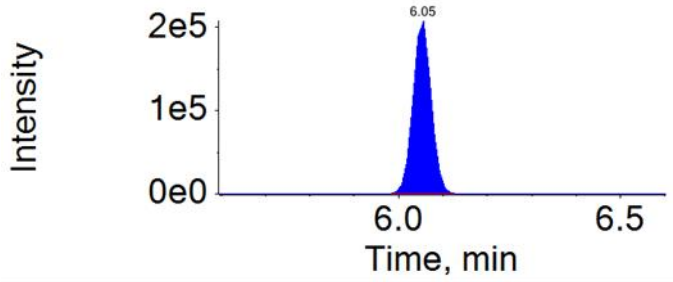
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



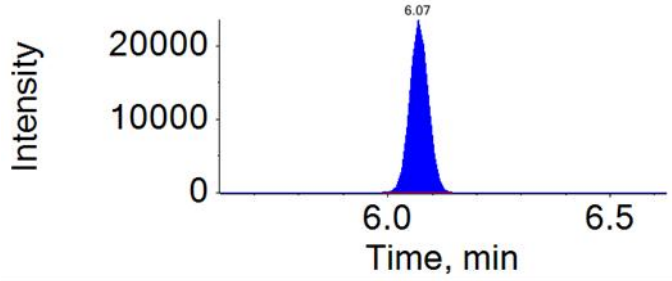


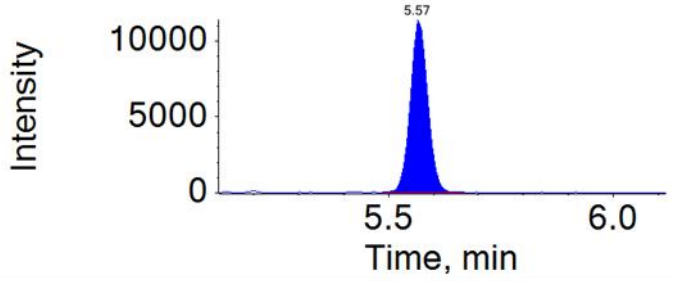
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



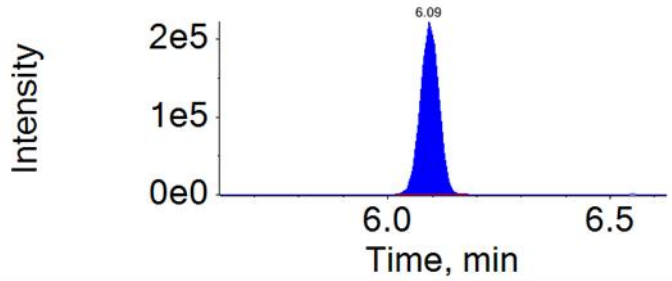


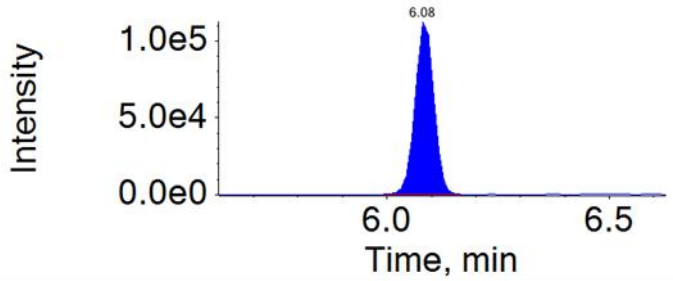
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



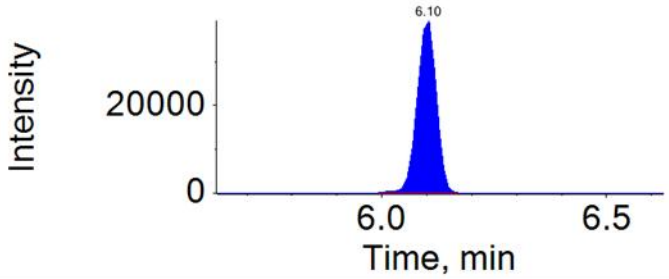


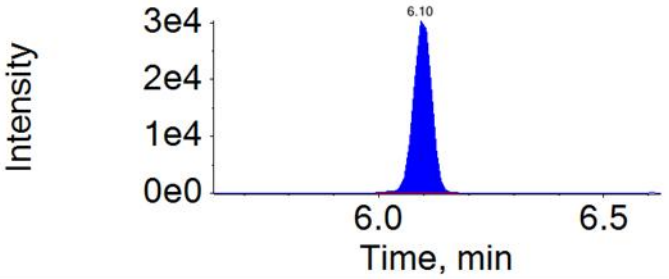
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

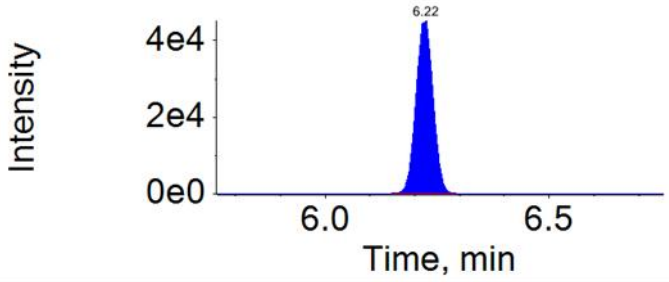
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

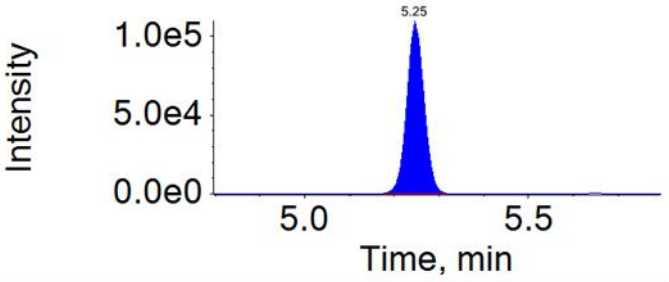
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



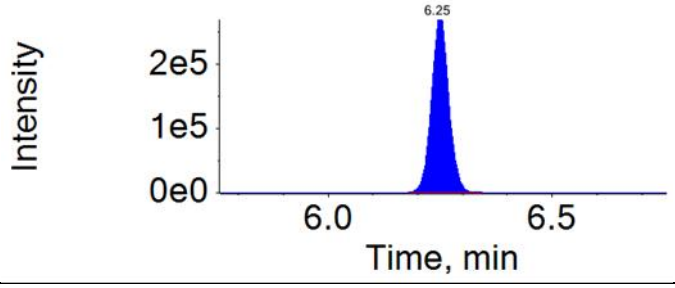


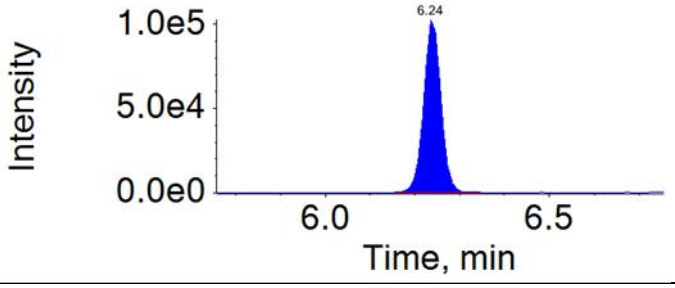
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



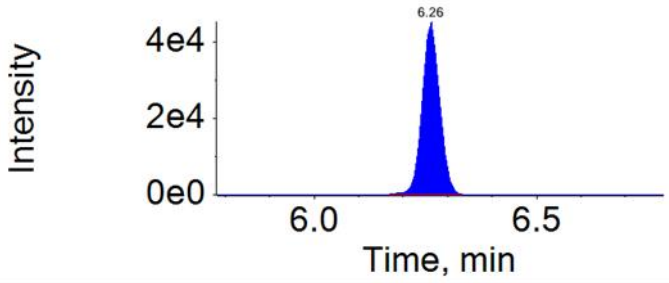


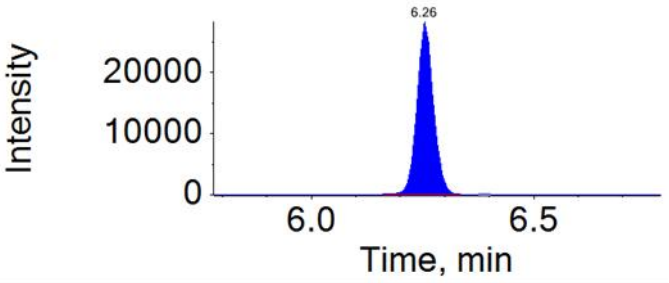
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



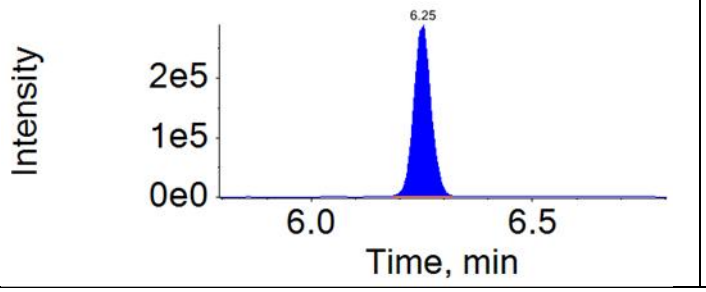


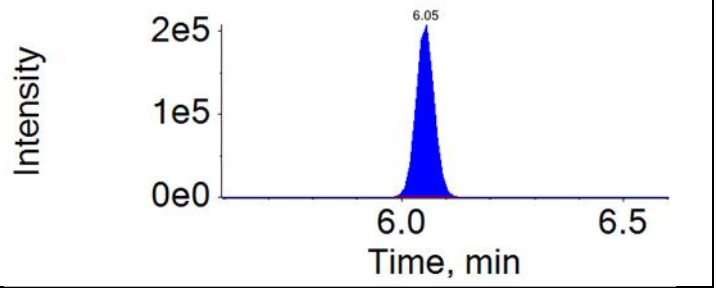
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

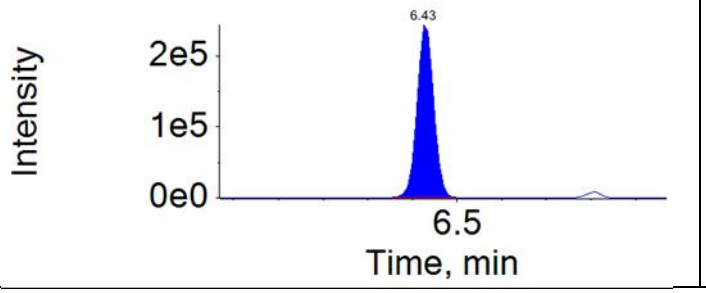
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

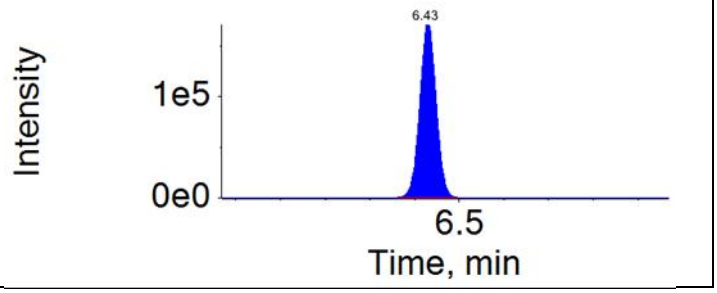
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



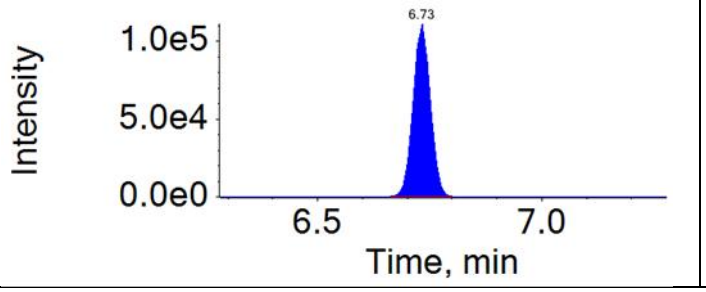


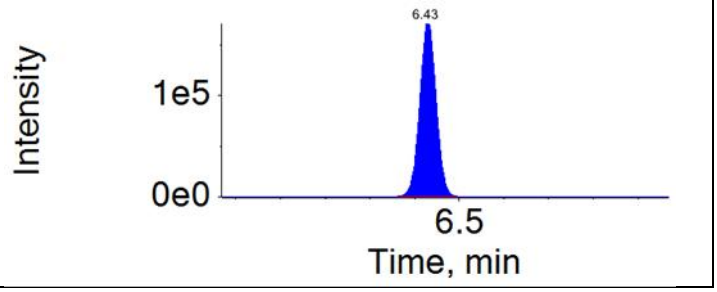
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



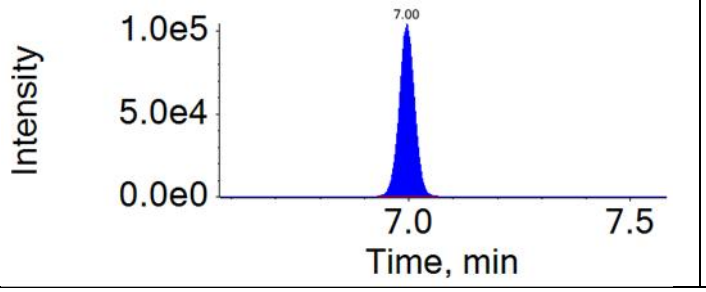


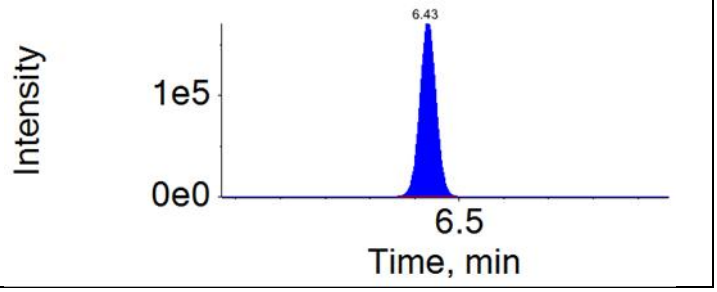
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





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By umar at 5:23 pm, 11/9/18

Ion Ratio Report

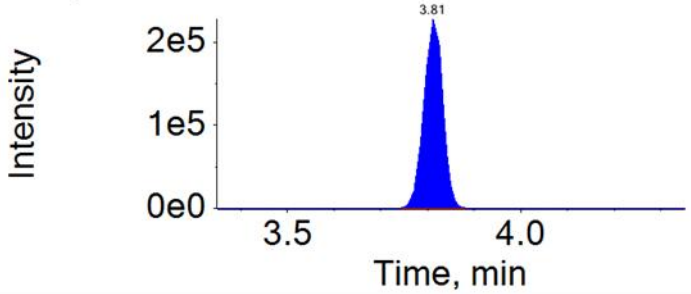
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-13.wiff

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	

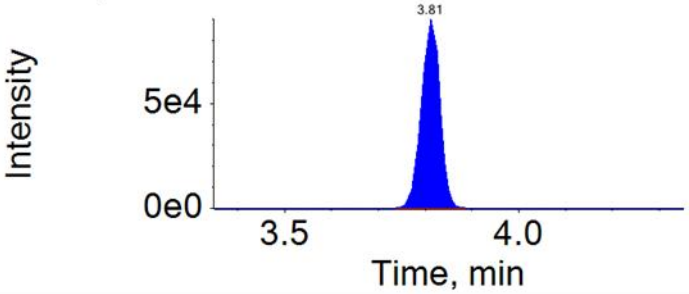
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

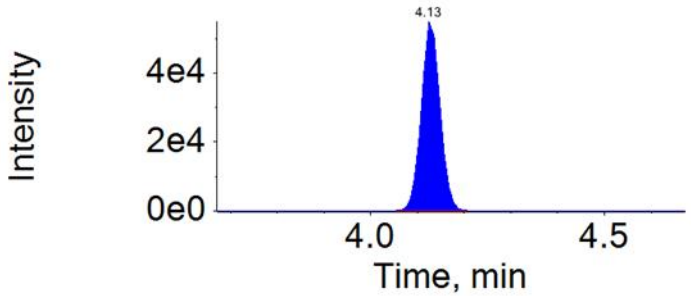
Component: PFBS
Primary Mass: 299.0 / 80.0



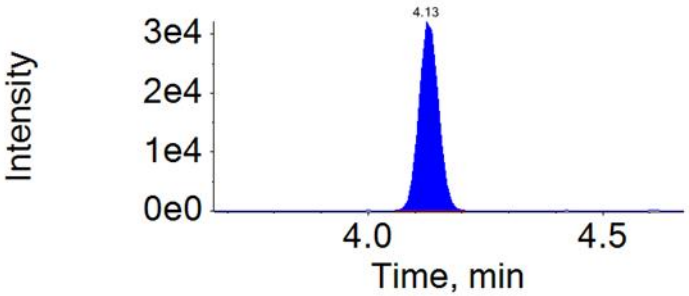
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



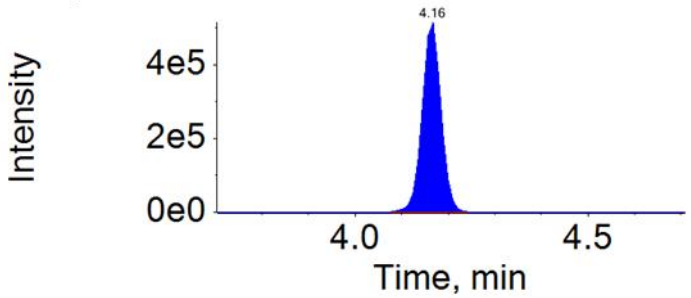
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



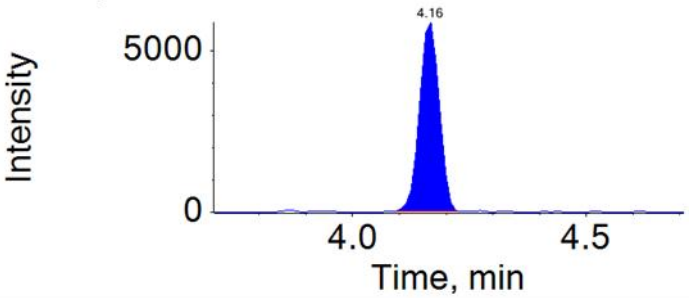
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



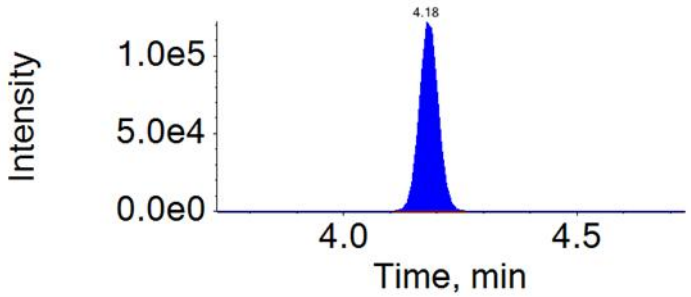
Component: PFHxA
Primary Mass: 313.0 / 269.0



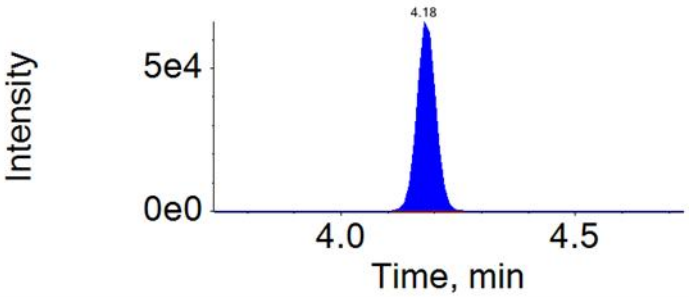
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



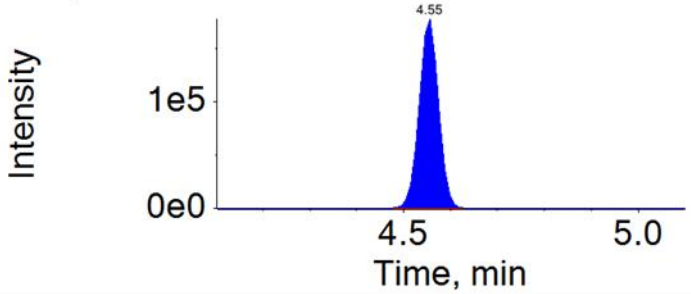
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



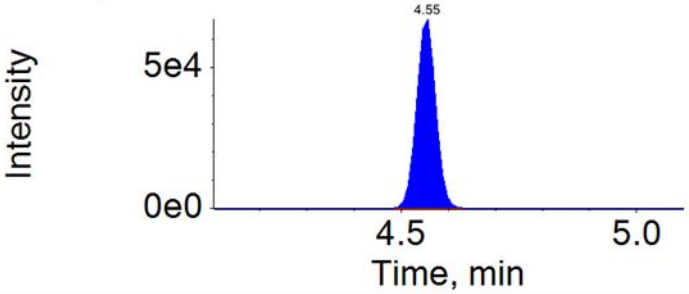
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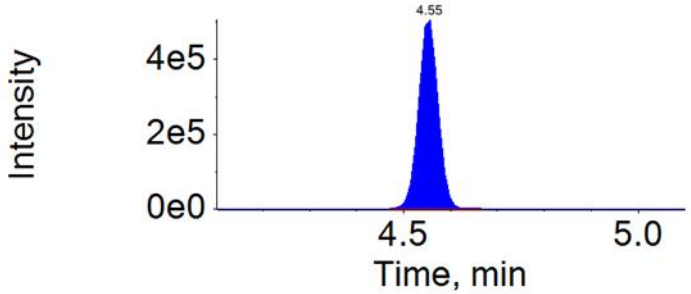
Component: PFHxS
Primary Mass: 399.0 / 80.0



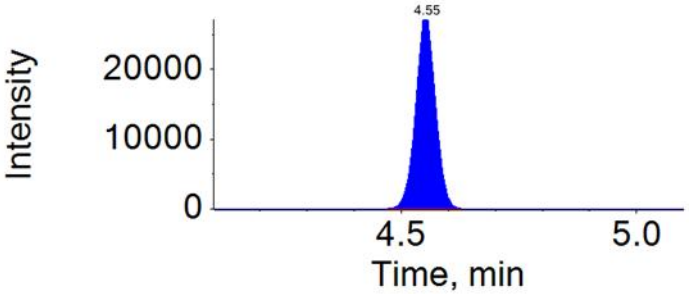
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



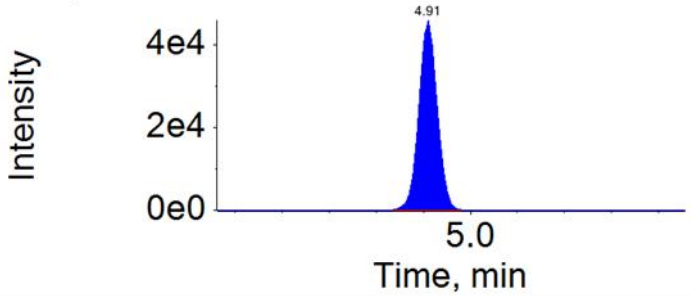
Component: PFHpA
Primary Mass: 363.0 / 319.0



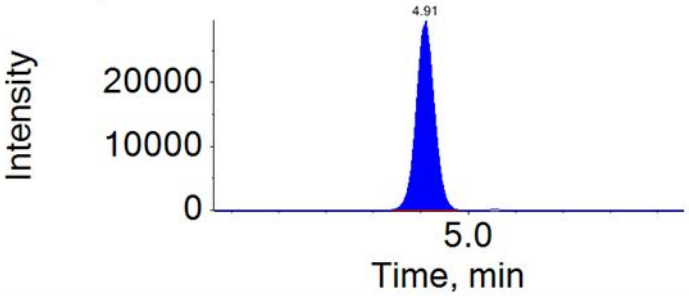
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



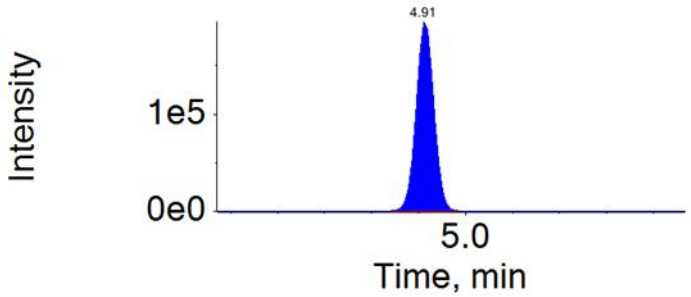
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



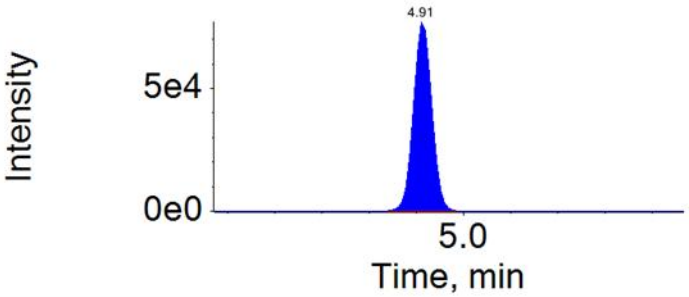
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



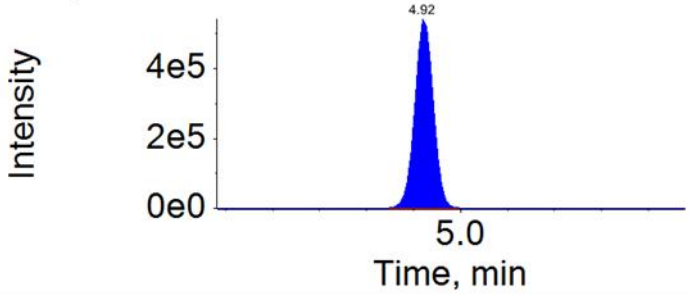
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



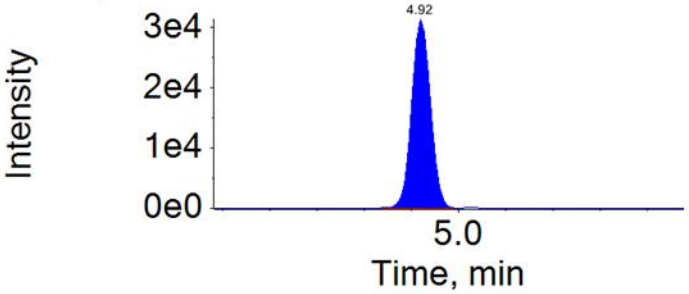
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REVIEWED
By umar at 5:23 pm, 11/9/18

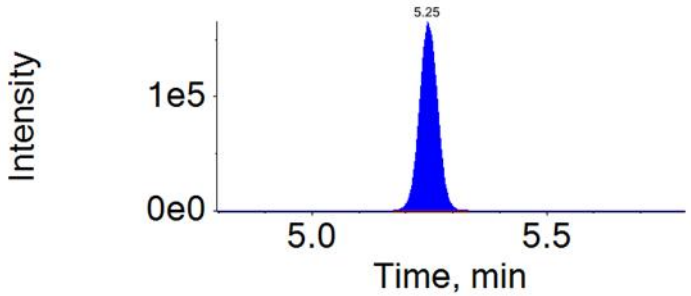
Component: PFOA
Primary Mass: 413.0 / 369.0



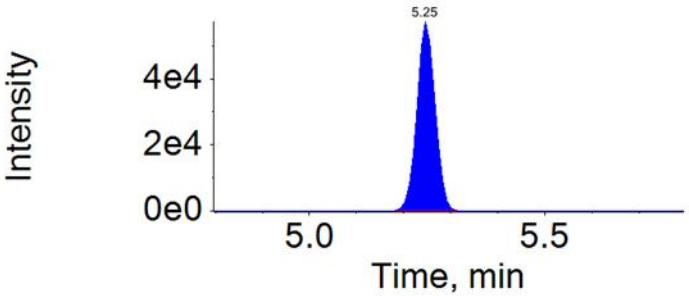
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



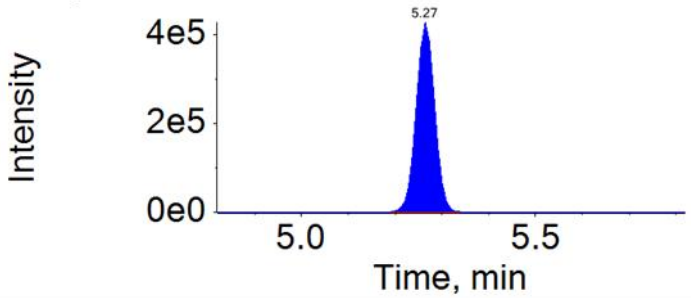
Component: PFOS
Primary Mass: 499.0 / 80.0



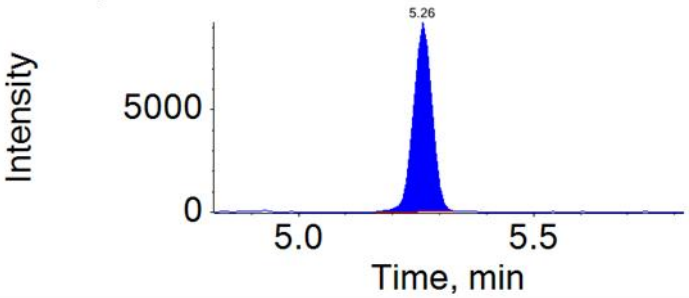
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



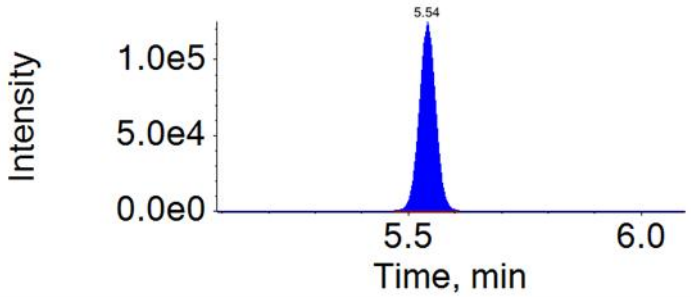
Component: PFNA
Primary Mass: 463.0 / 419.0



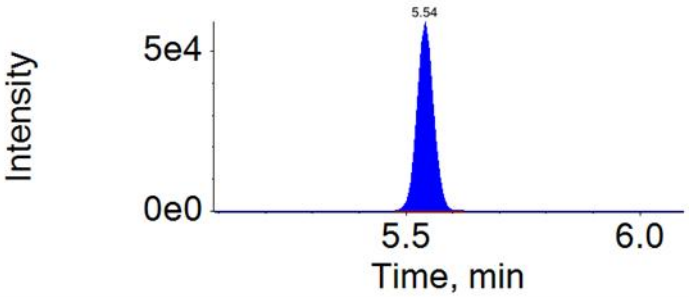
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



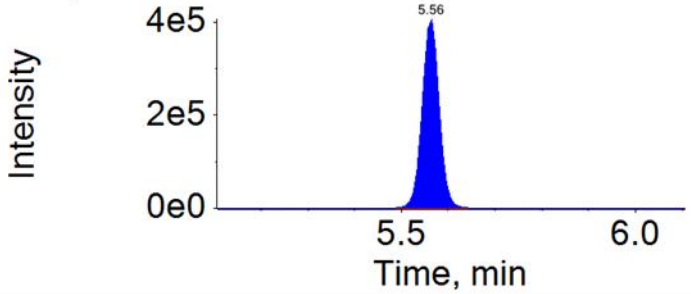
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



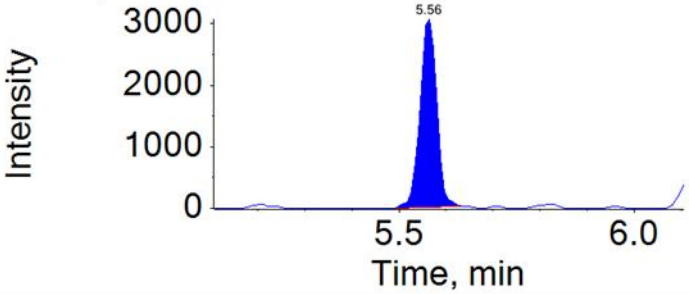
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

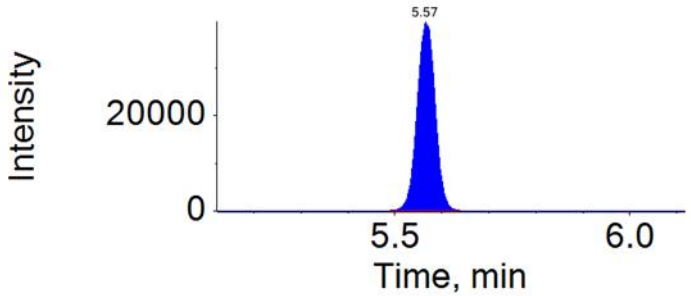
Component: PFDA
Primary Mass: 513.0 / 469.0



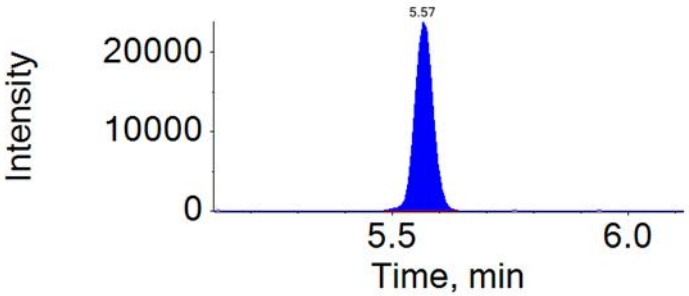
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



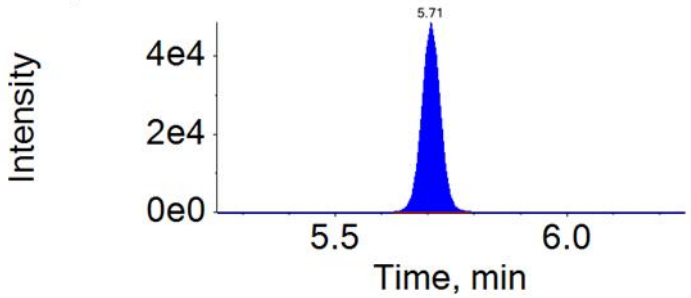
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



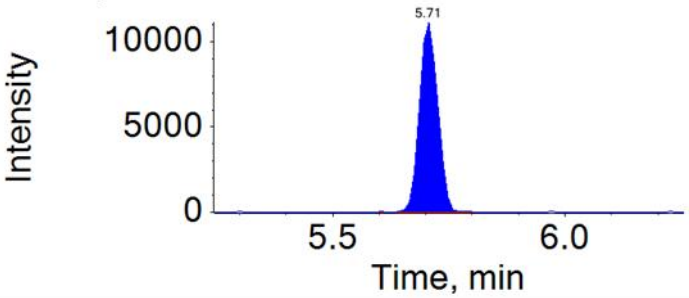
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



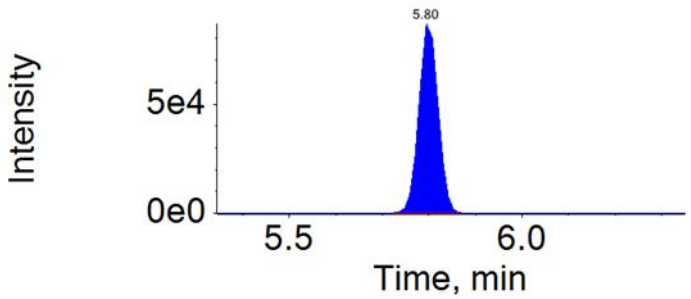
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



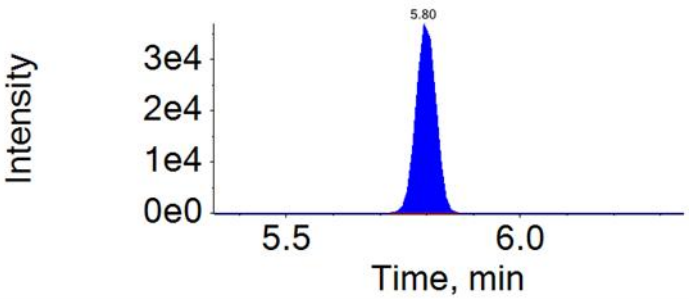
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



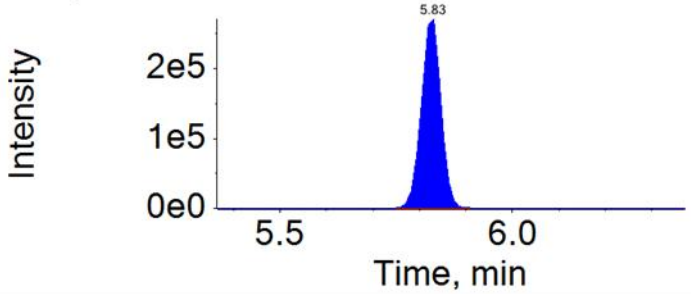
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



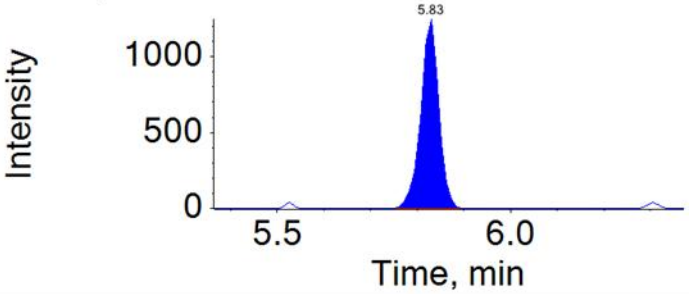
APPROVED
By JPT at 2:53 pm, 11/7/18

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By umar at 5:23 pm, 11/9/18

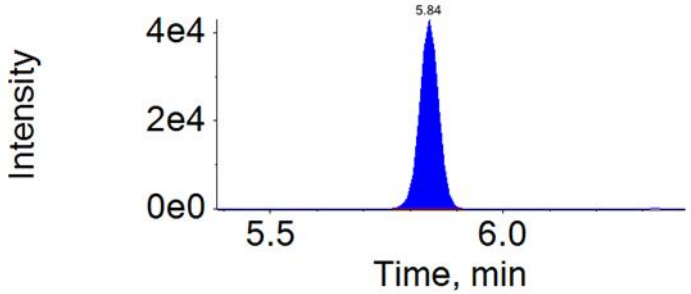
Component: PFUnDA
Primary Mass: 563.0 / 519.0



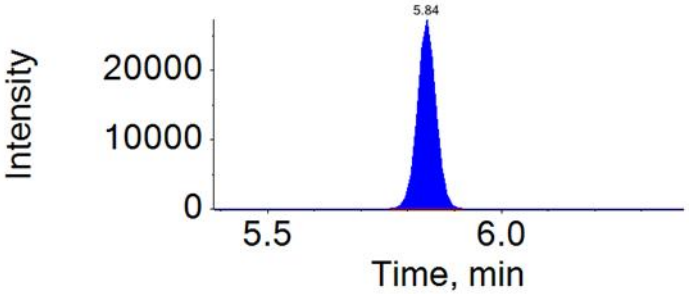
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



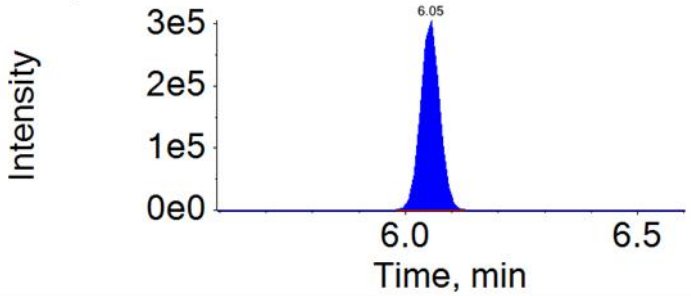
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



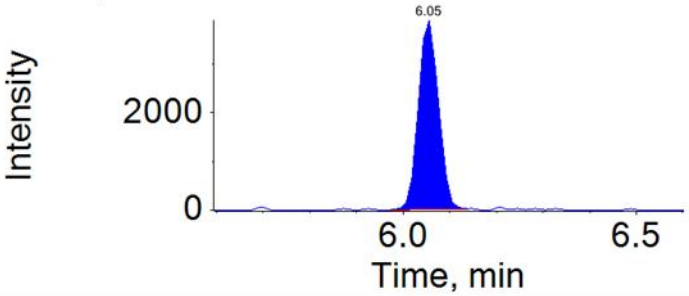
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



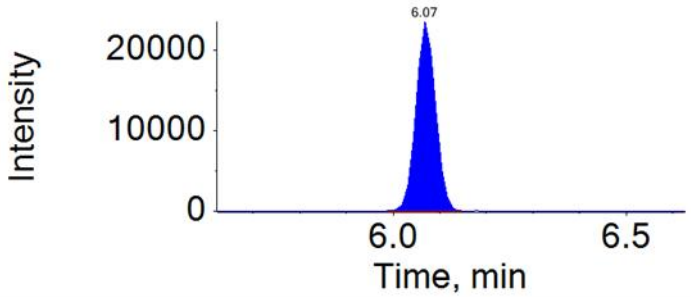
Component: PFDoDA
Primary Mass: 613.0 / 569.0



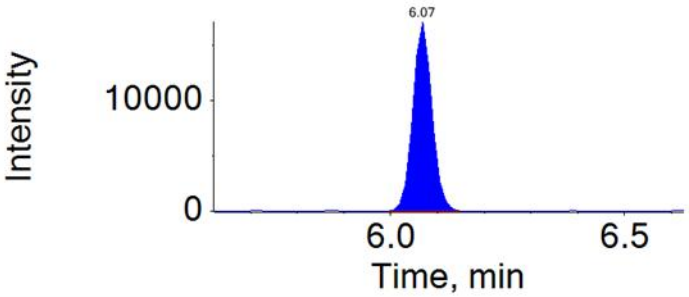
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



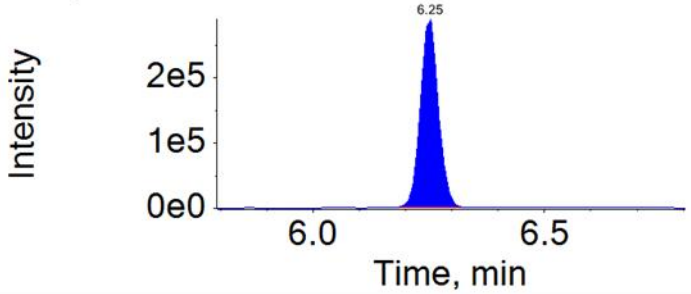
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



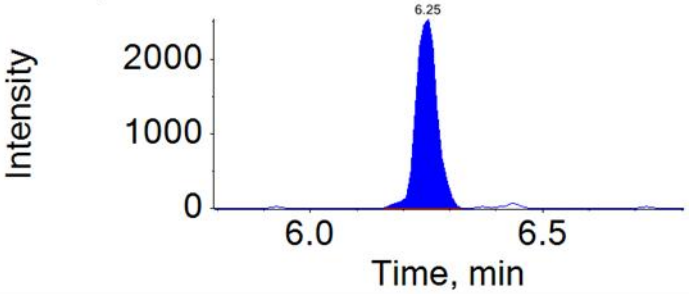
APPROVED
By JPT at 2:53 pm, 11/7/18

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By umar at 5:23 pm, 11/9/18

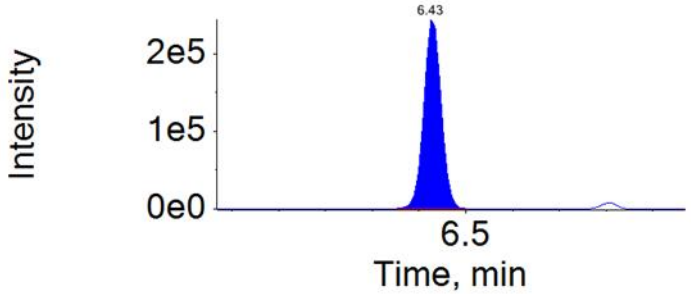
Component: PFTrDA
Primary Mass: 663.0 / 619.0



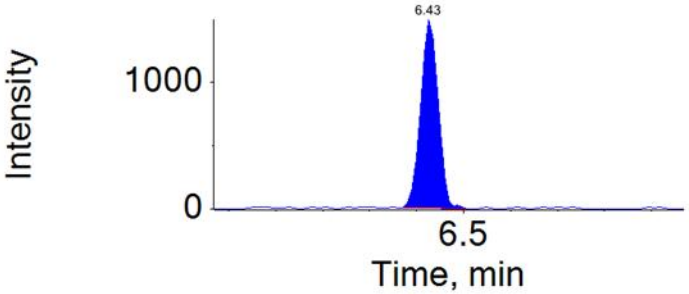
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



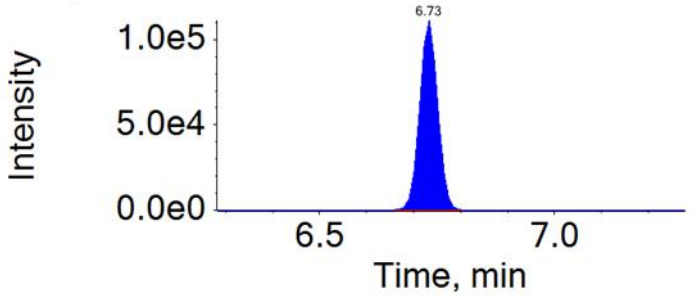
Component: PFTeDA
Primary Mass: 713.0 / 669.0



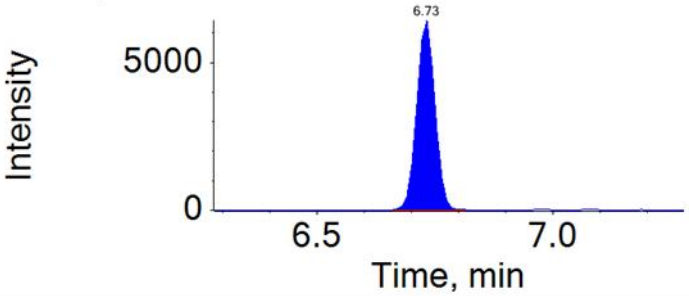
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



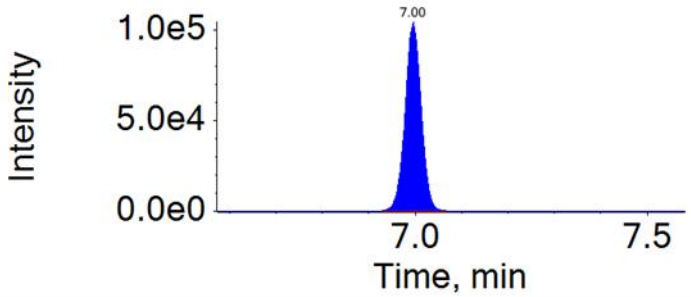
Component: PFHxDA
Primary Mass: 813.0 / 769.0



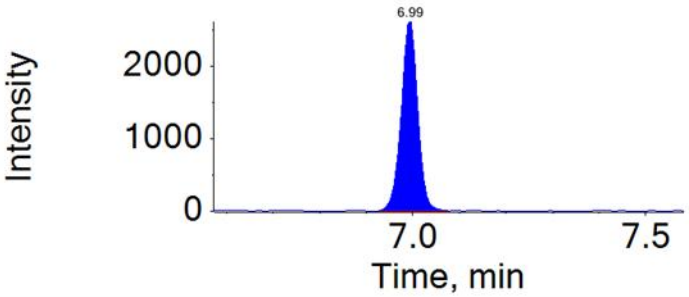
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

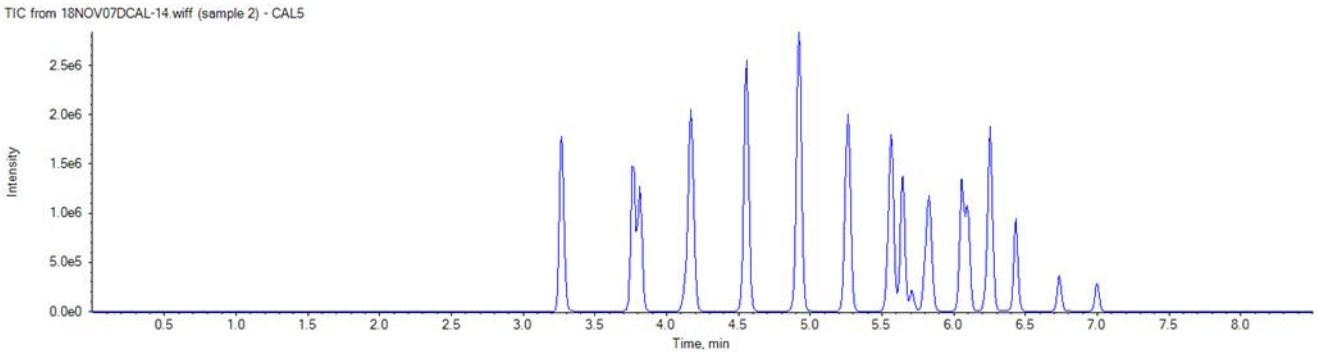
Analyte Quantitation Peak Table

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

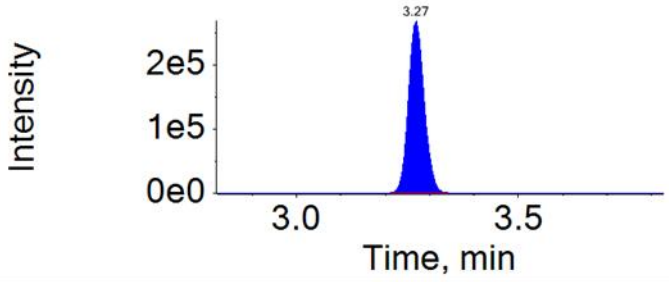


APPROVED
By JPT at 2:53 pm, 11/7/18

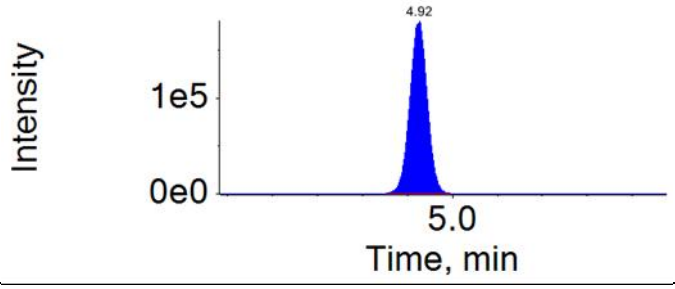
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

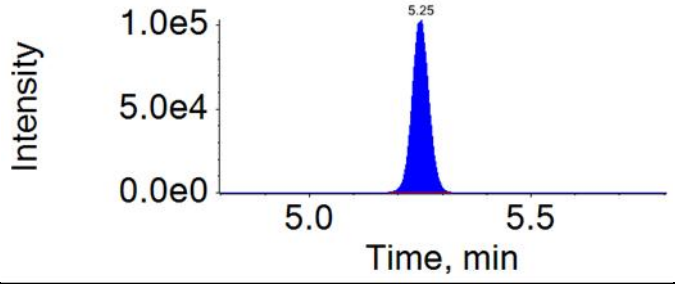
Injection Standard: 13C3-PFBA
216.0 / 172.0



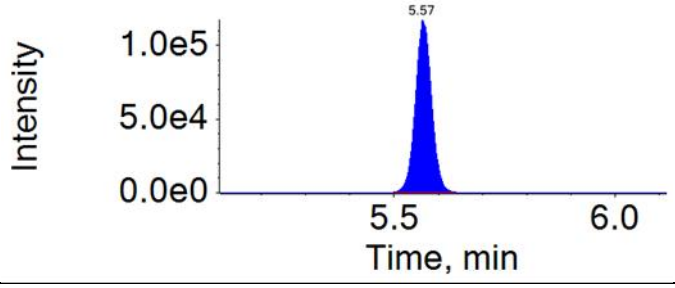
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

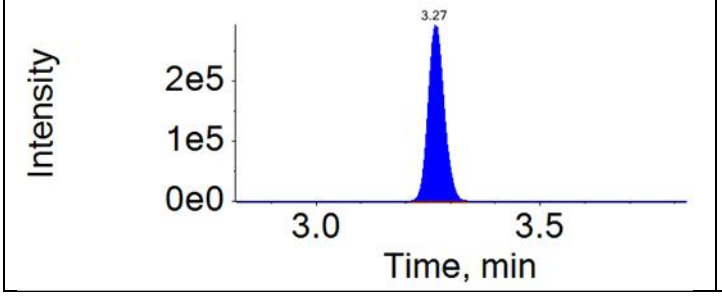


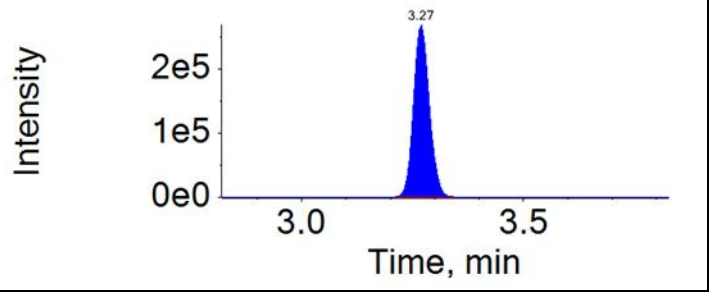
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

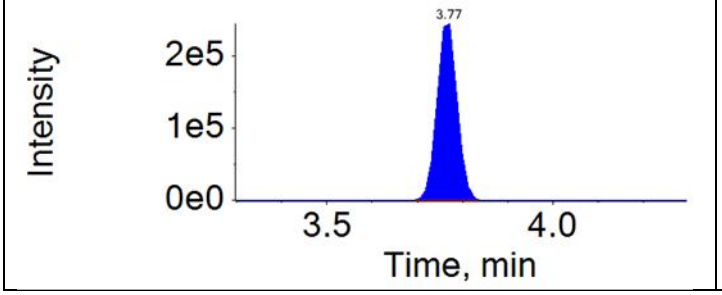
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

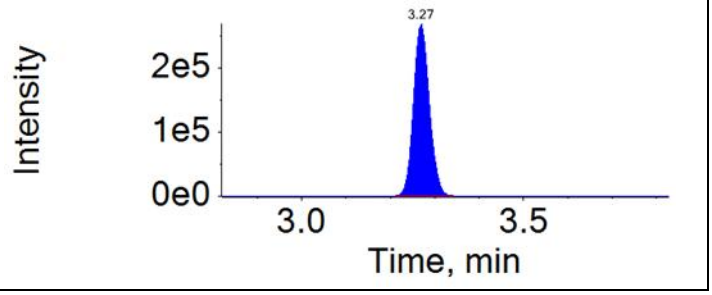
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



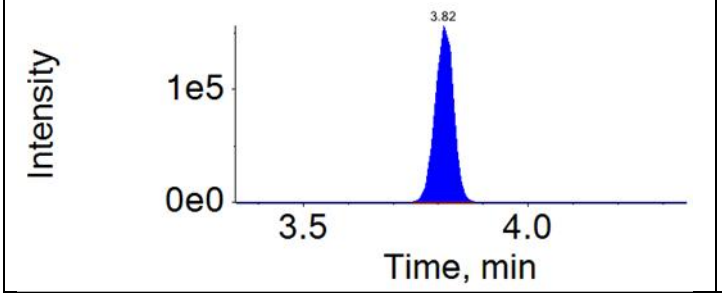


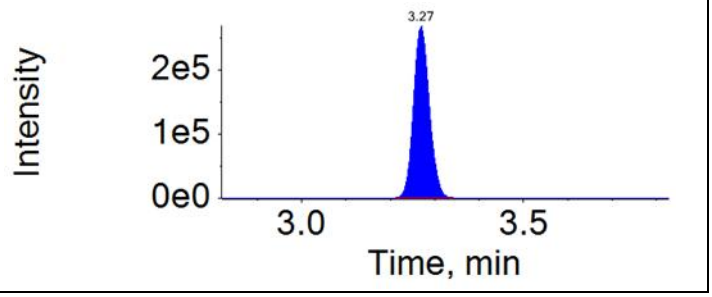
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



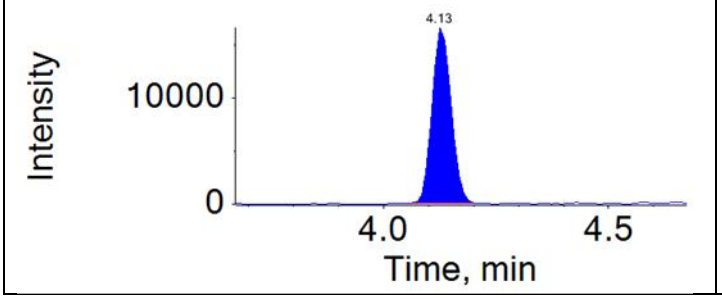


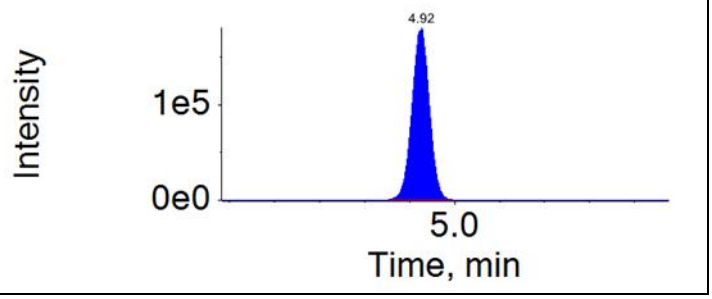
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



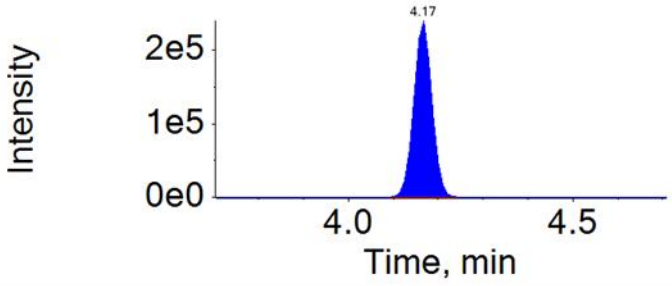
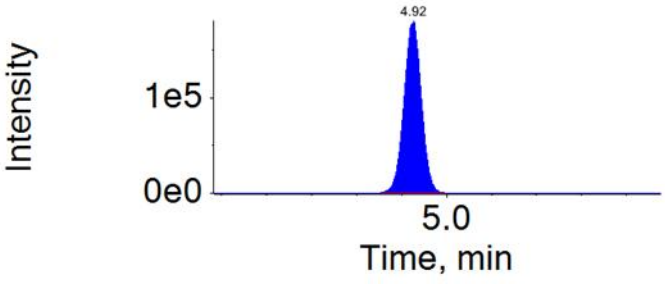


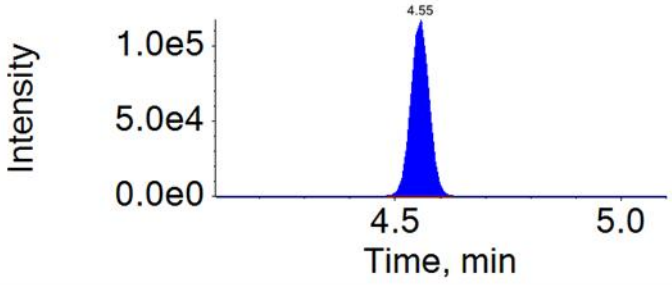
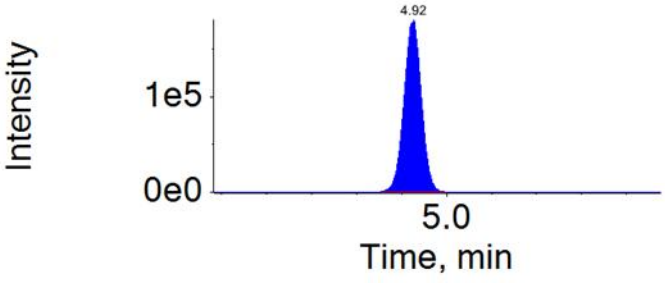
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

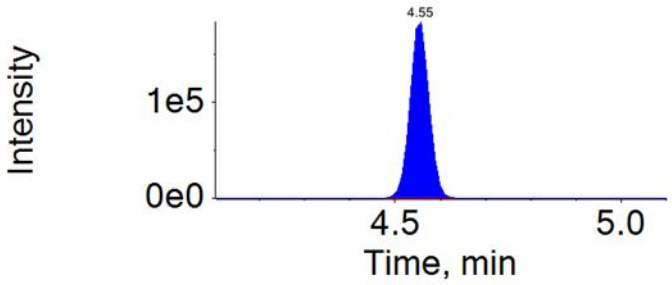
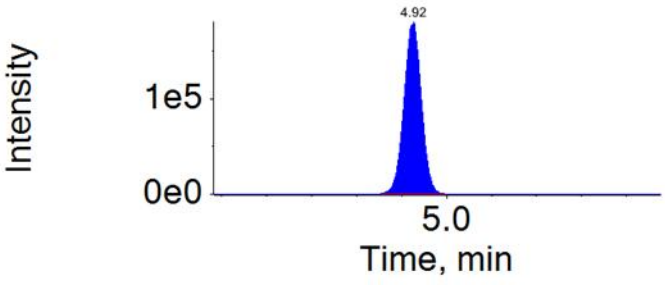


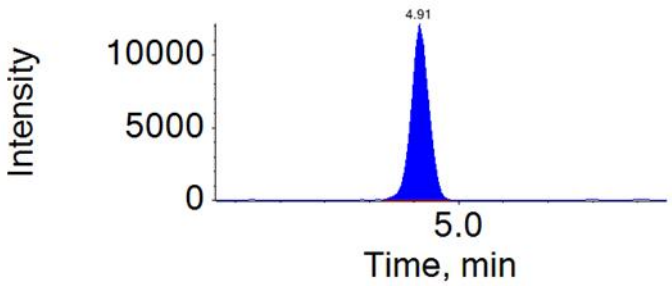
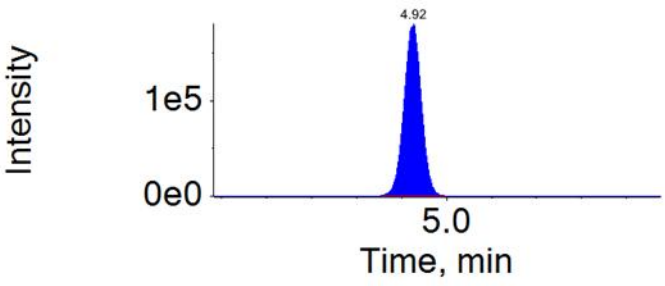


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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
	

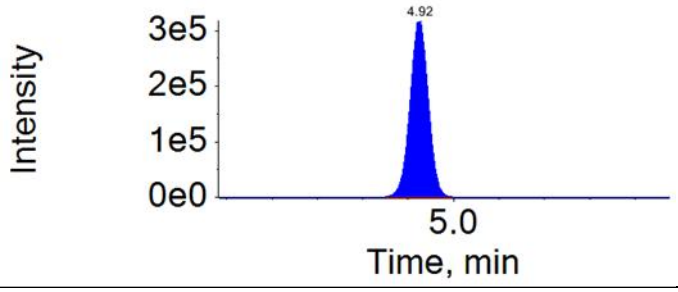
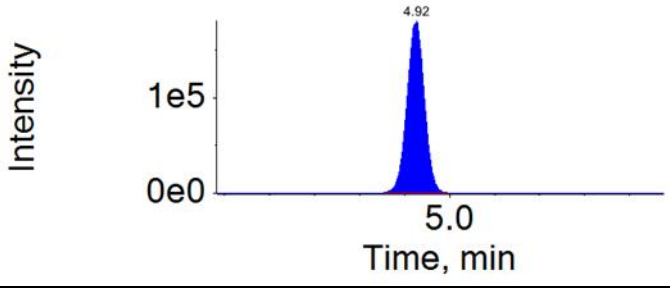
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

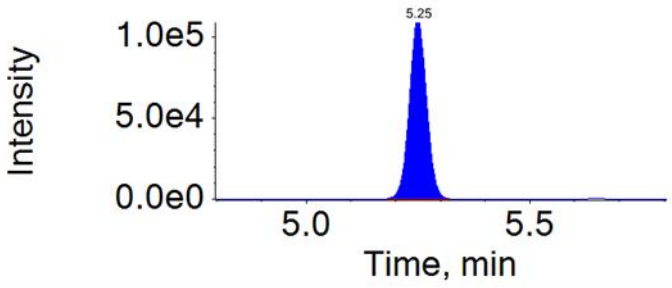
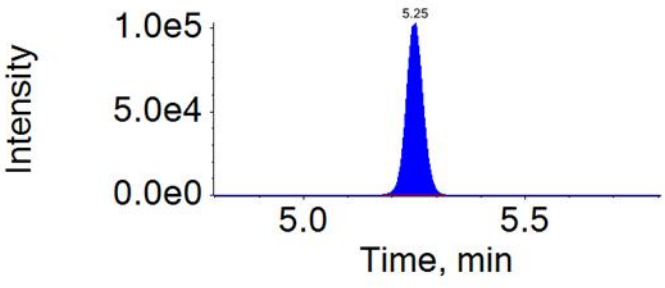
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

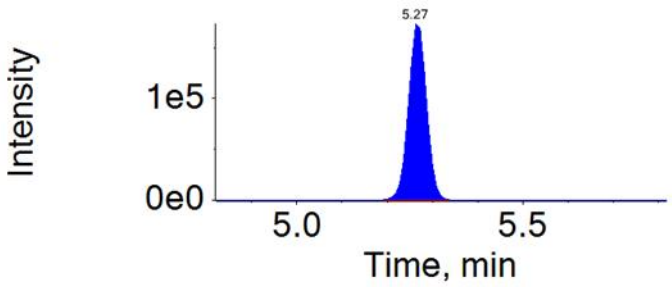
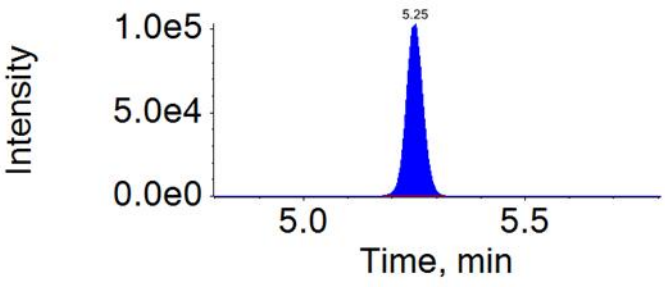
APPROVED
By JPT at 2:53 pm, 11/7/18

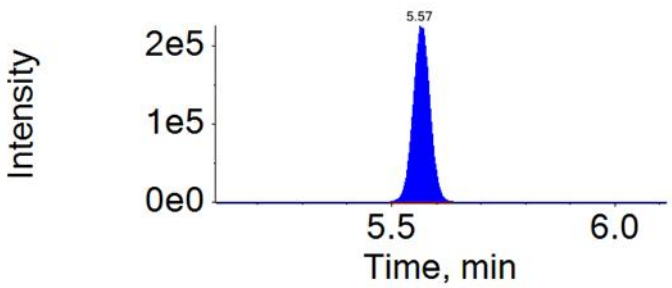
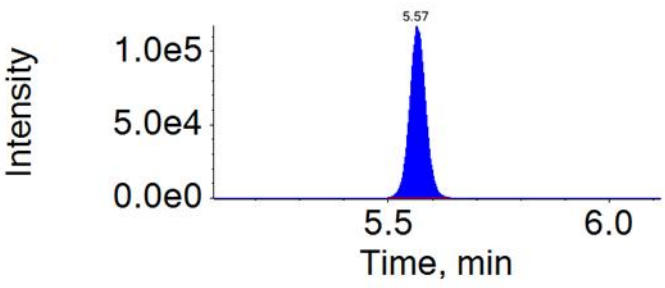
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

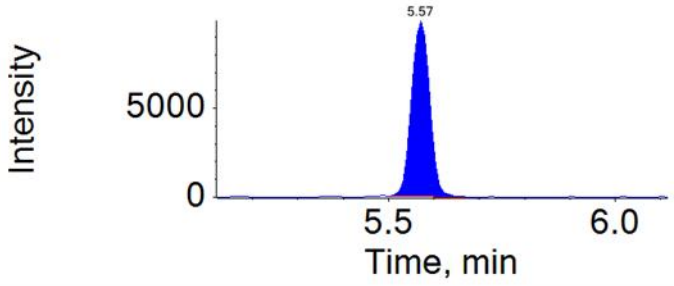
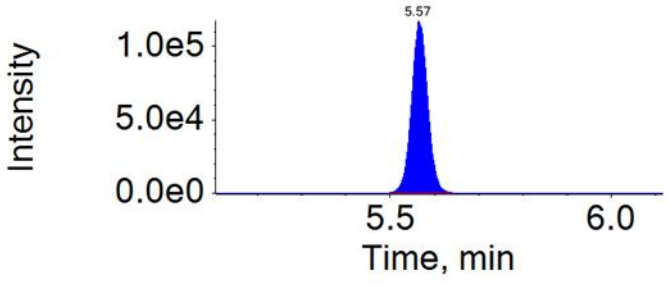
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

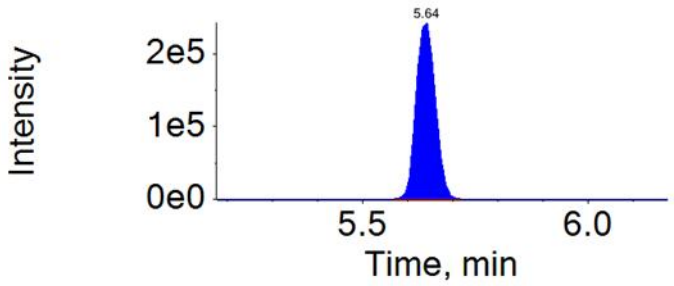
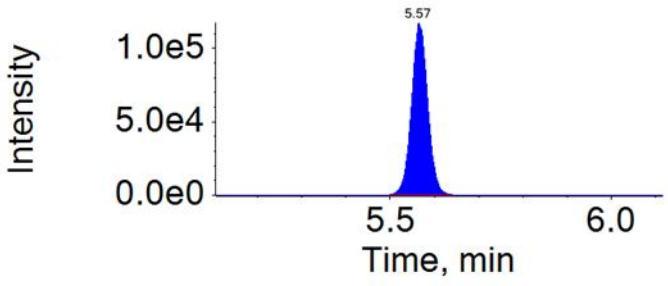
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

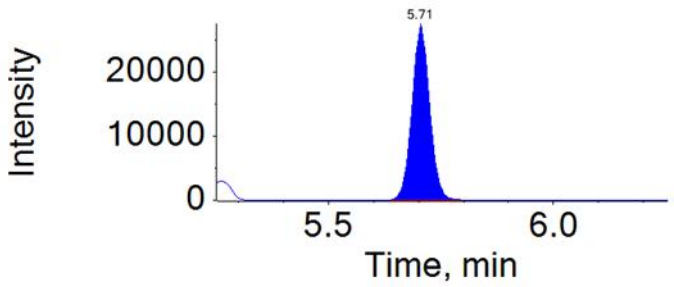
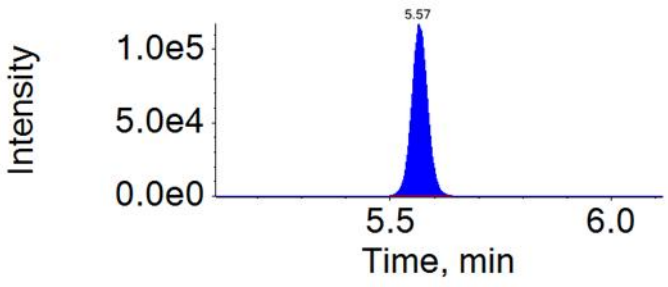
APPROVED
By JPT at 2:53 pm, 11/7/18

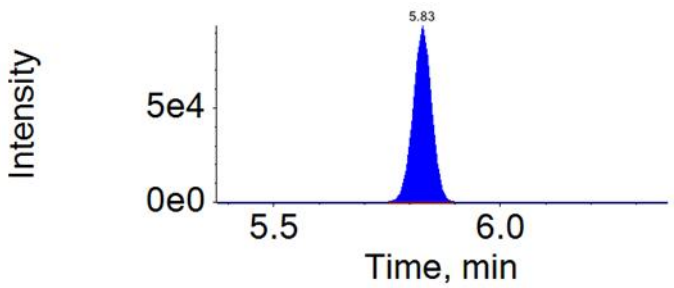
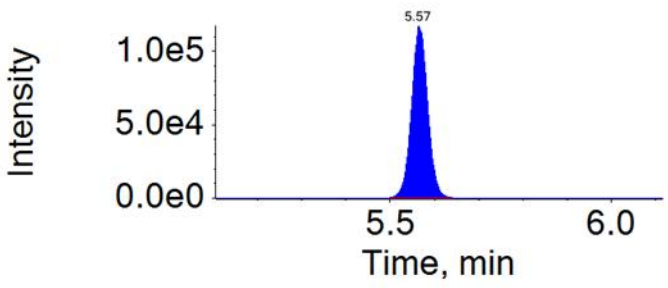
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

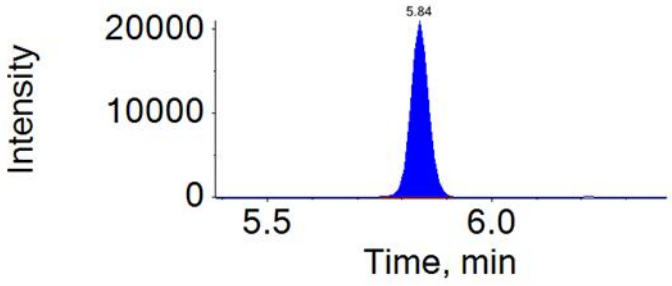
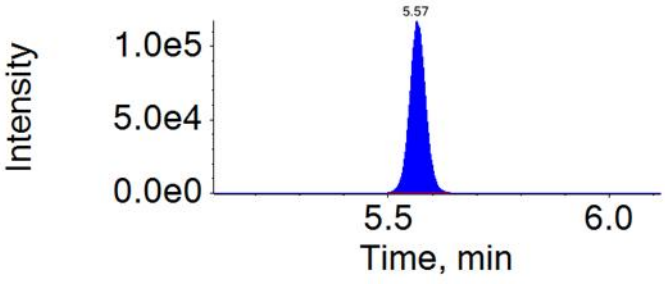
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

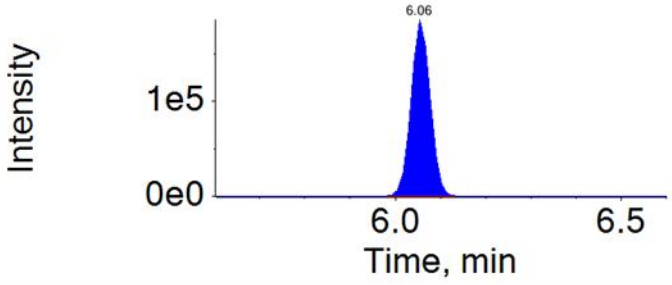
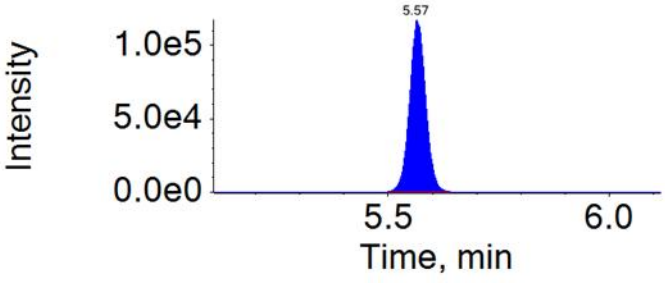
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

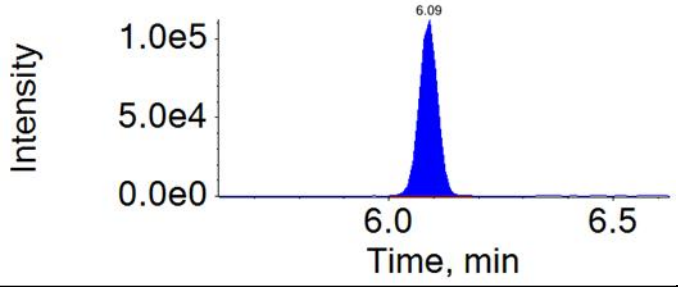
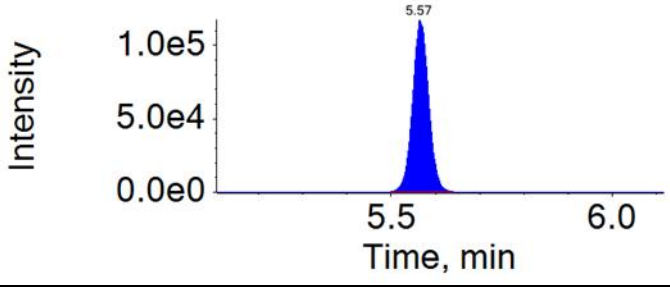
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

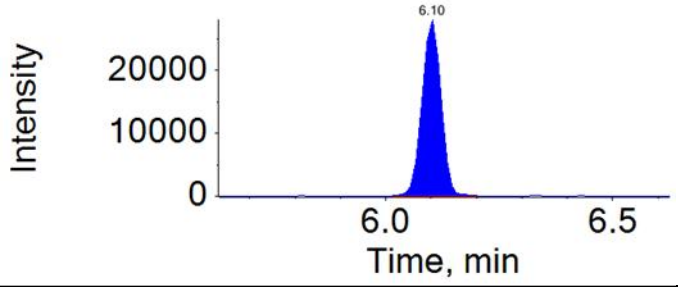
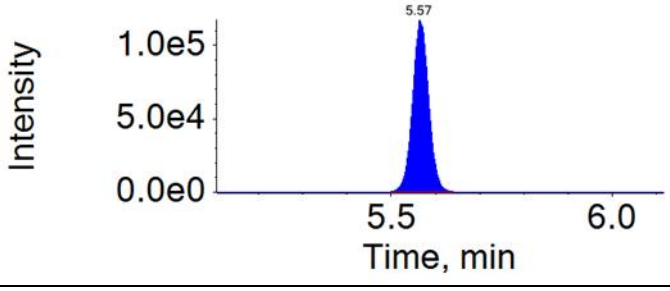
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

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
	

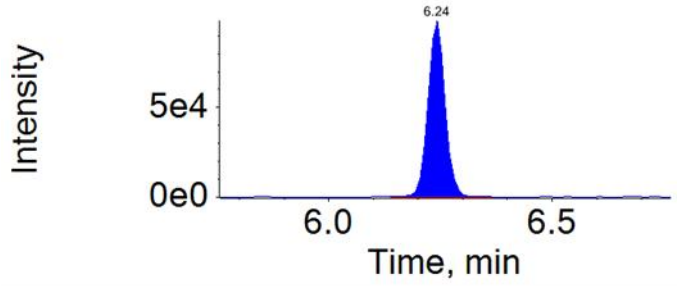
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

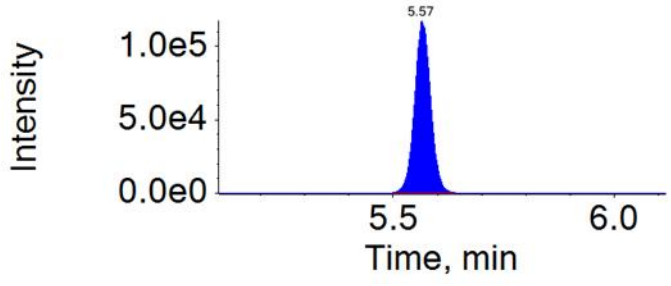
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

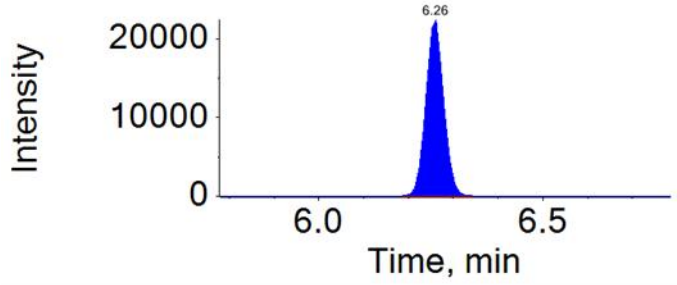
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

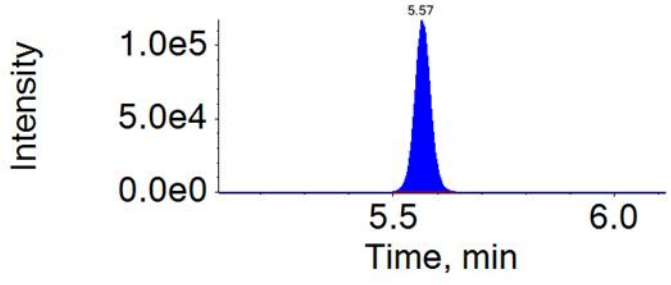
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



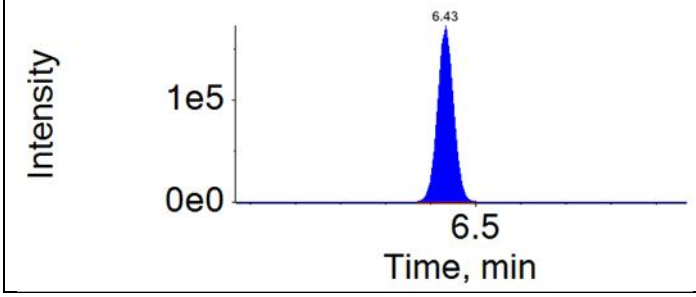


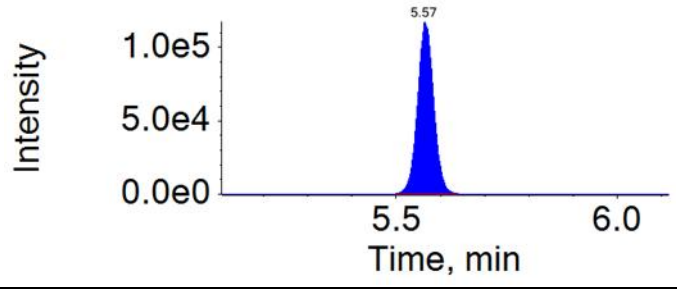
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



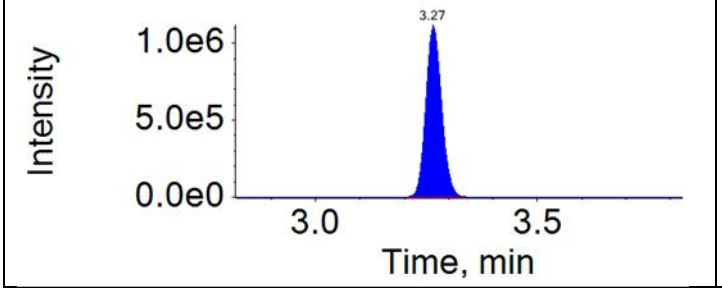


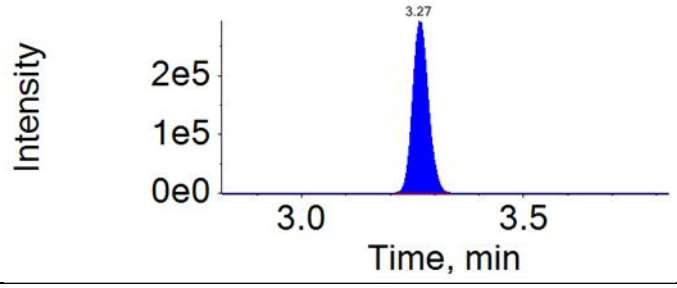
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

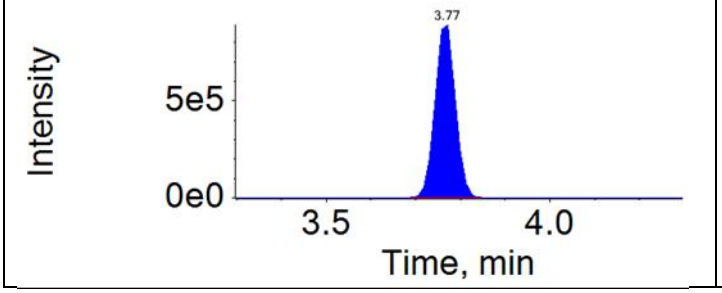
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

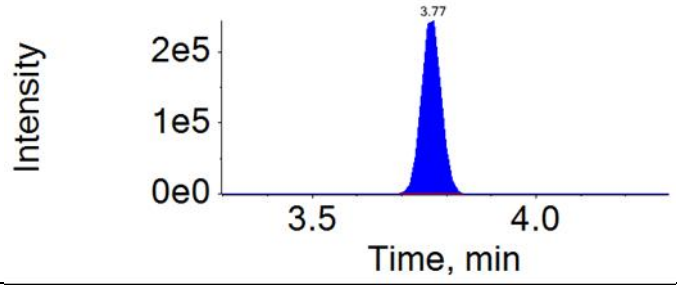
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



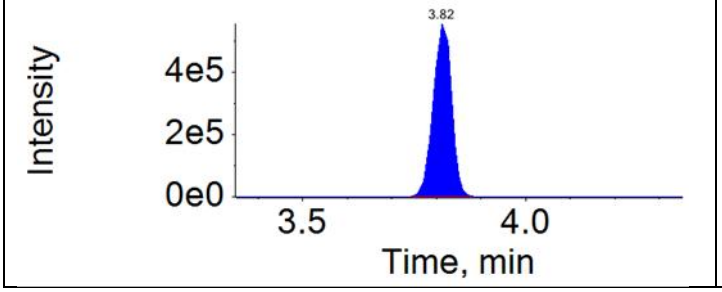


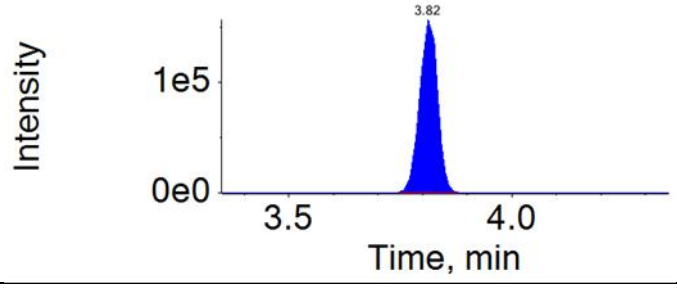
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



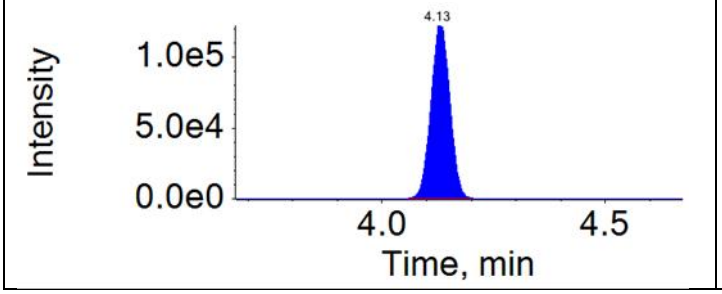


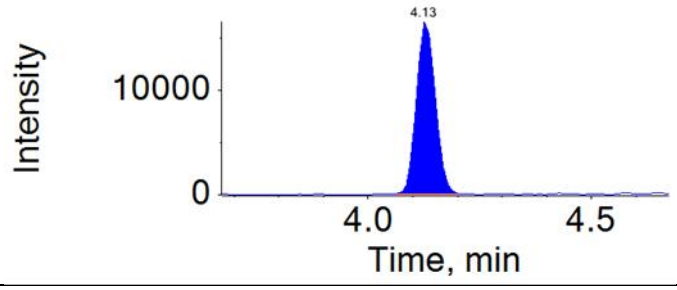
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



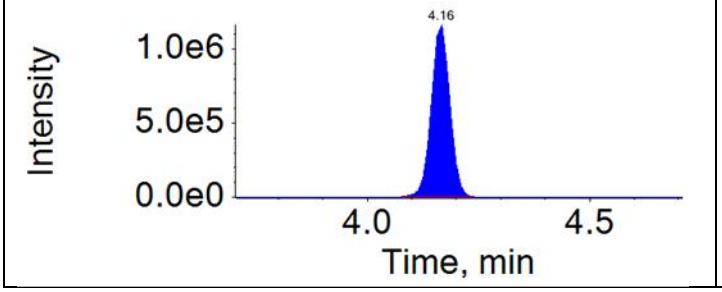


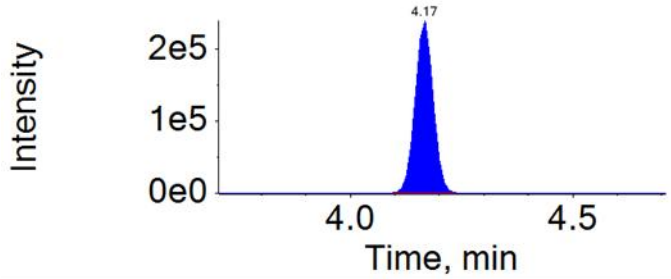
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

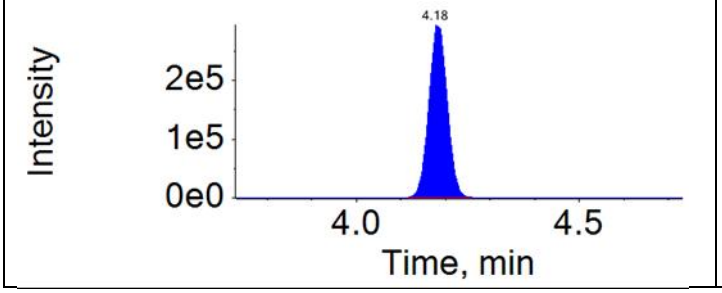
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

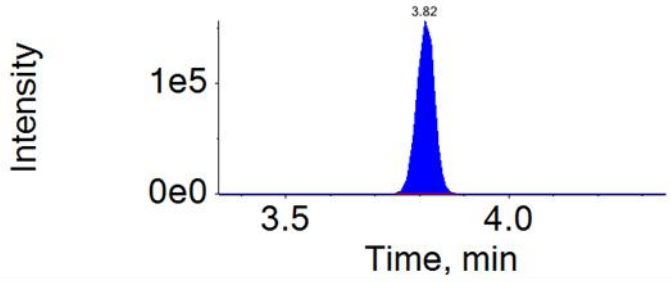
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



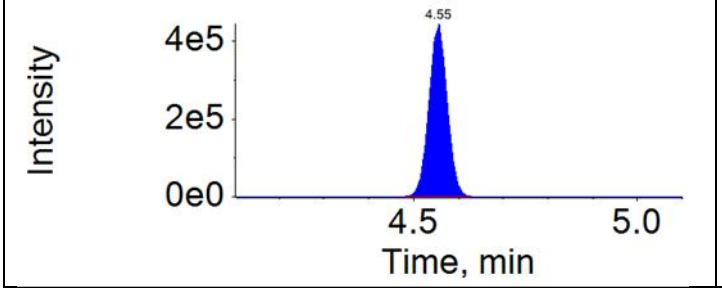


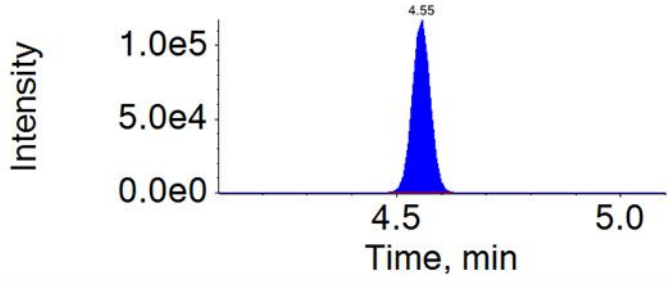
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



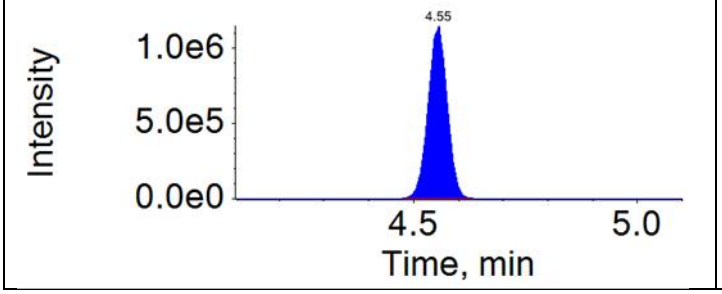


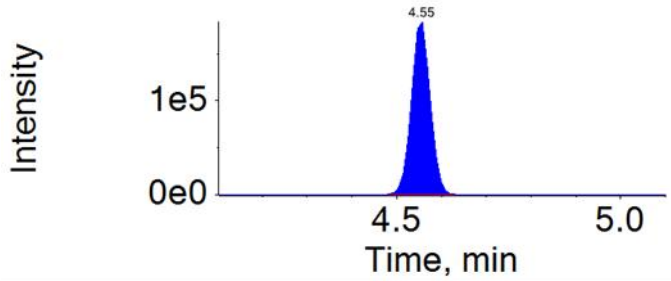
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



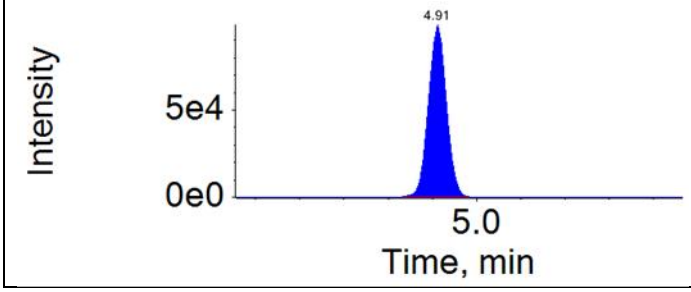


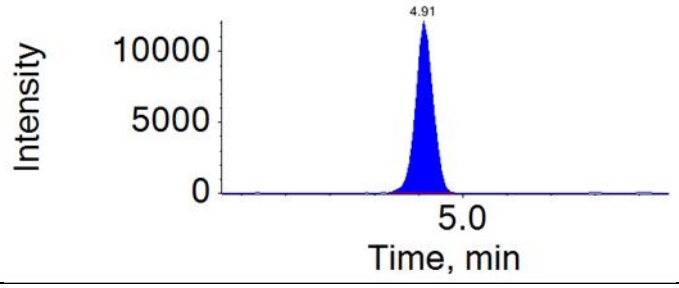
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

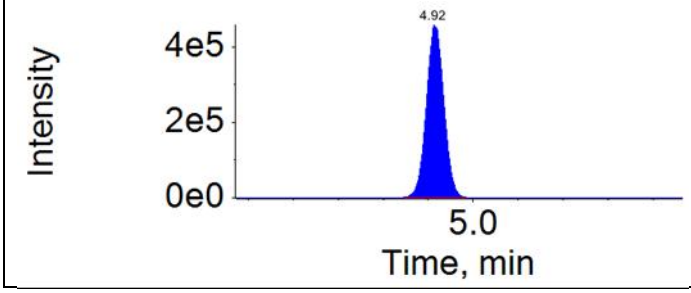
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

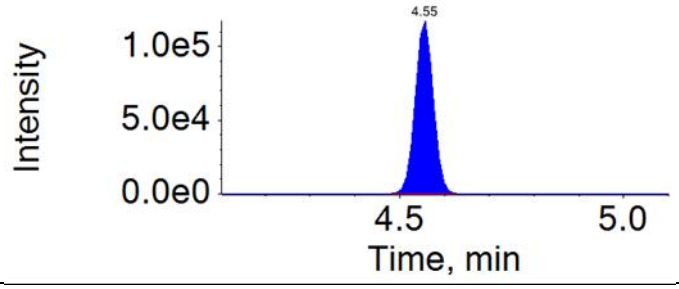
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



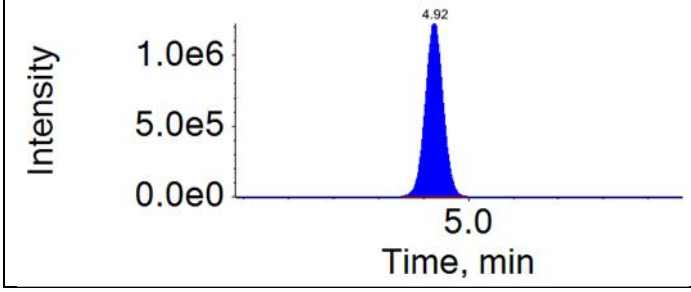


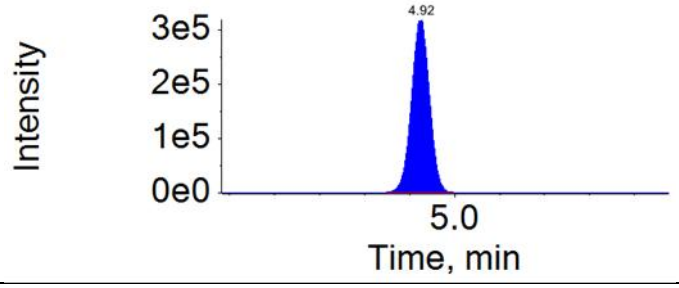
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



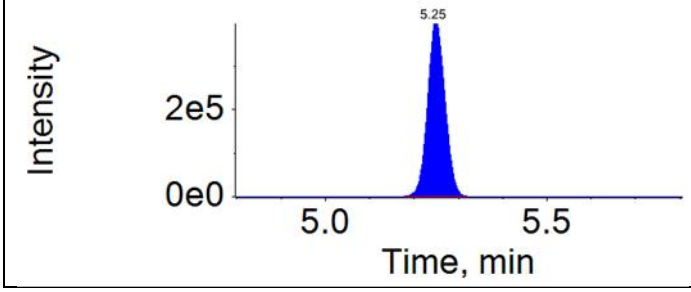


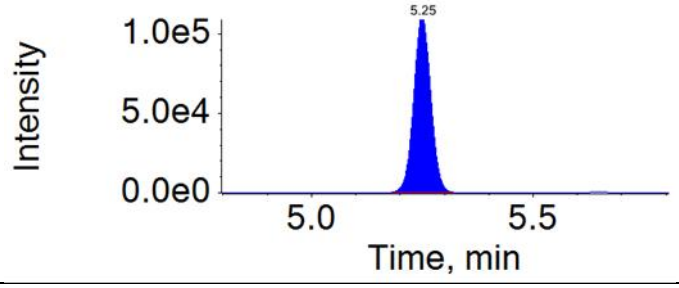
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



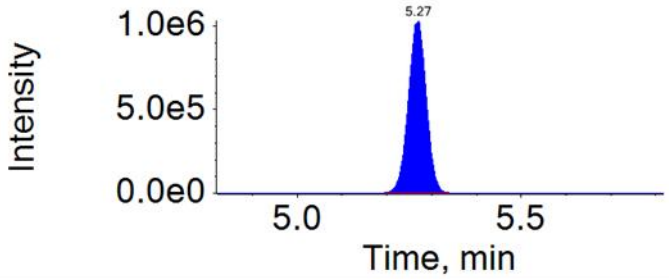


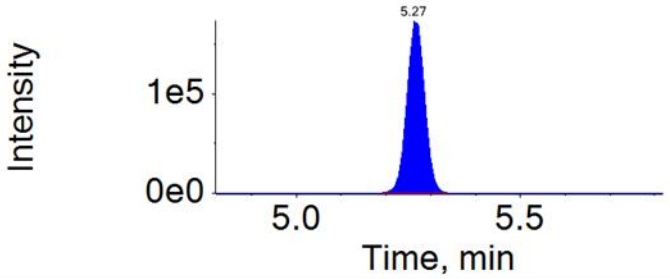
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

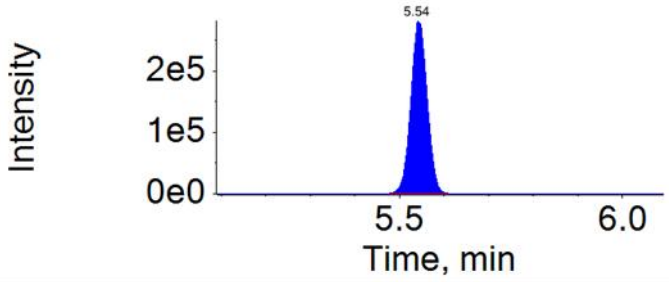
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

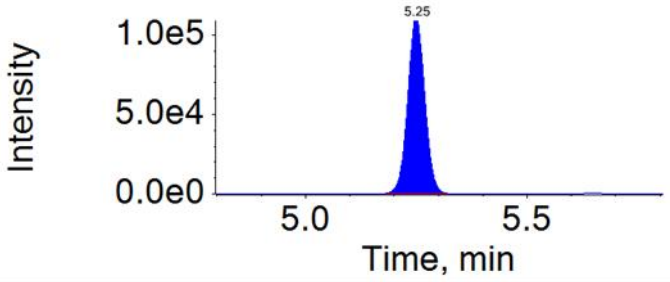
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



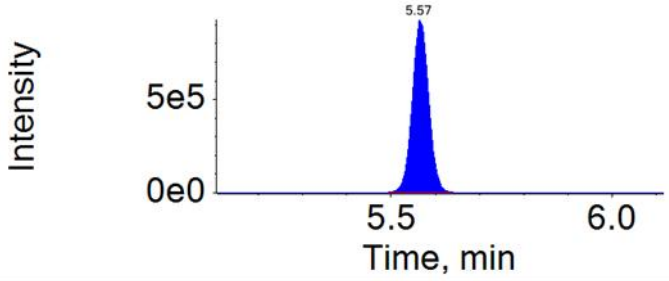


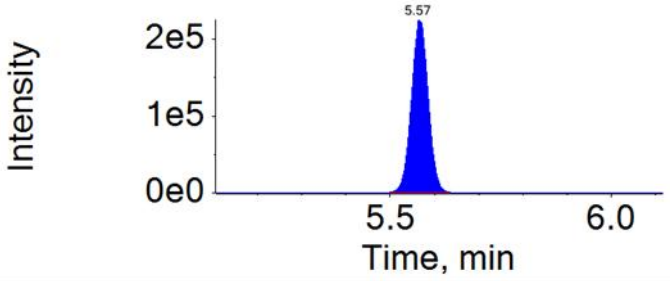
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



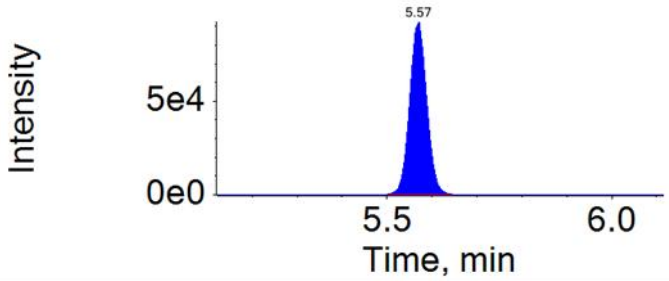


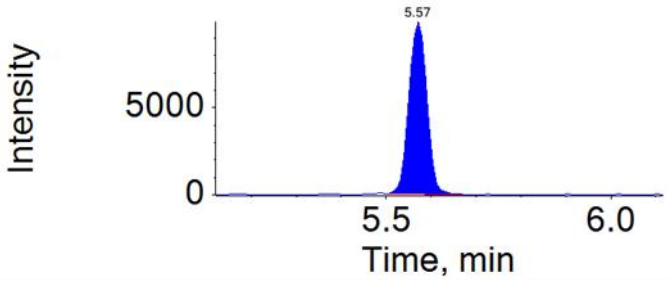
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

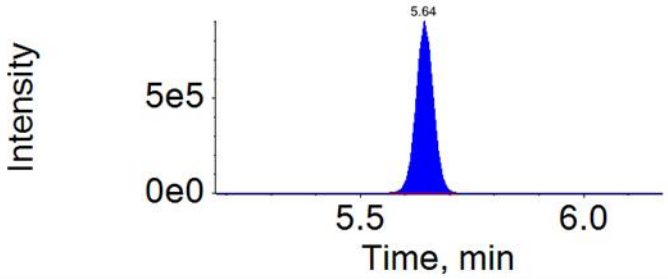
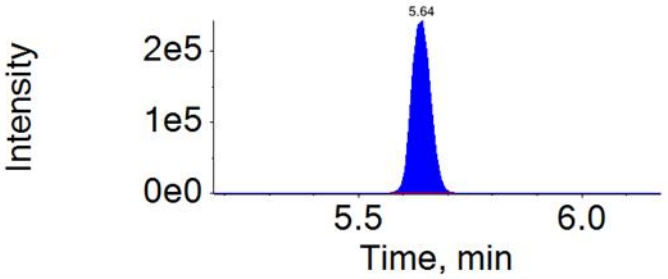


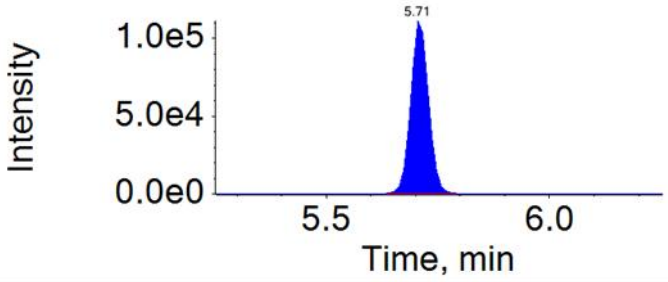
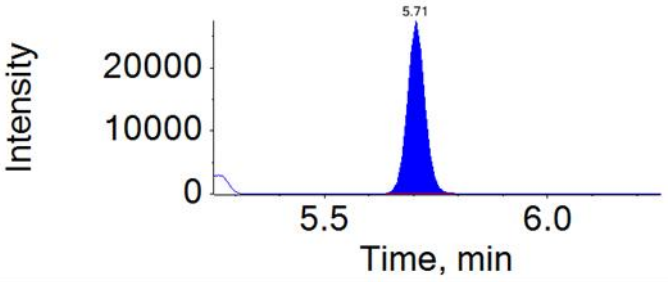


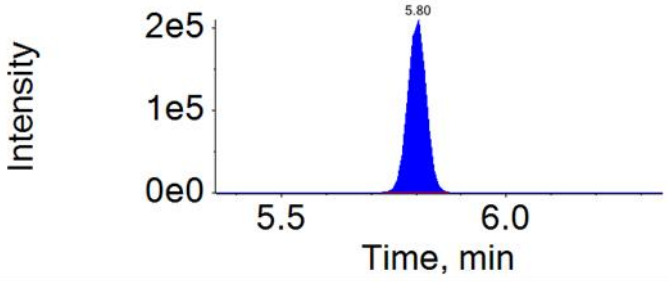
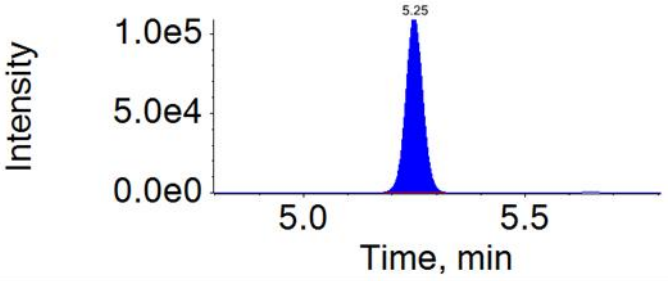
APPROVED
By JPT at 2:53 pm, 11/7/18

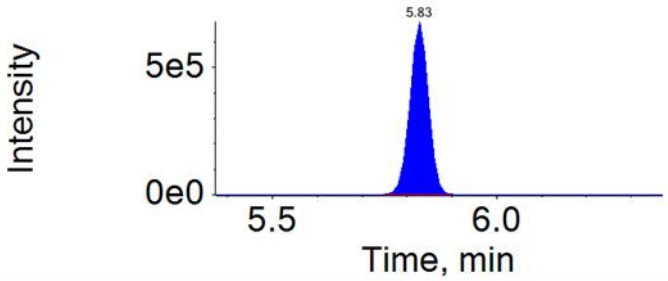
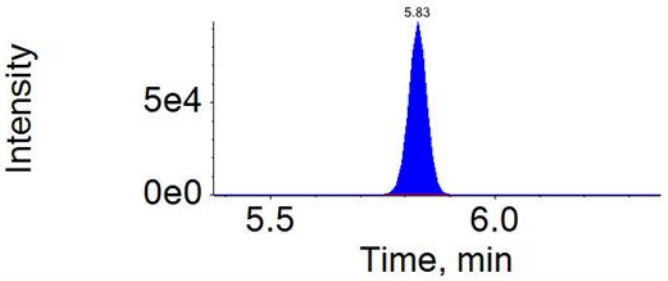
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

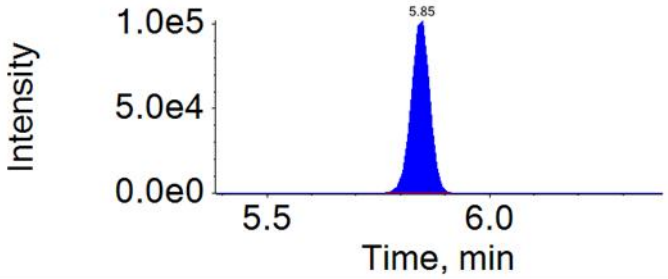
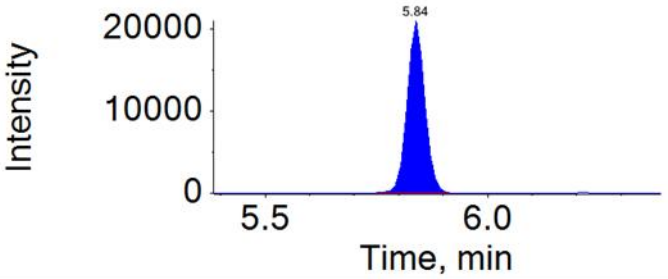
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

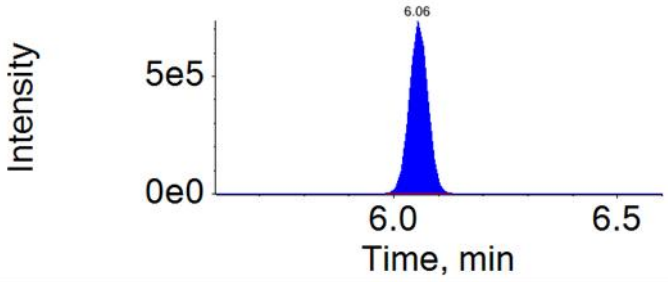
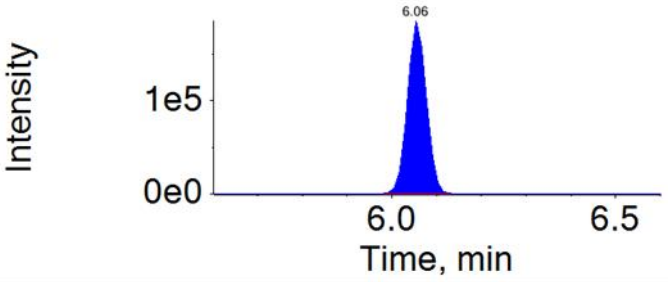
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

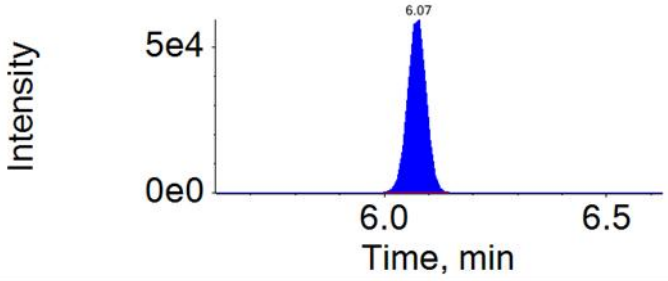
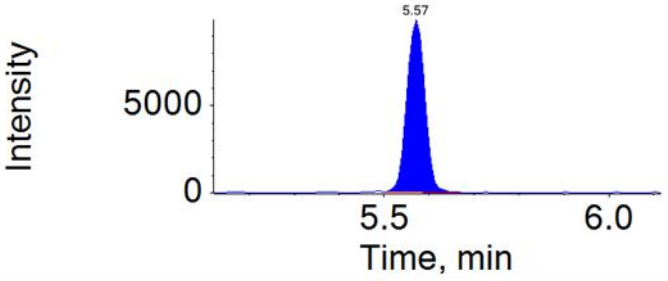
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

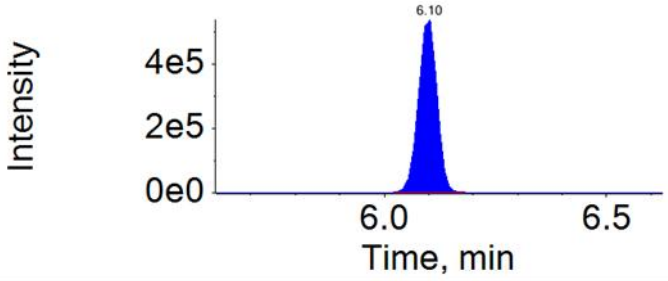
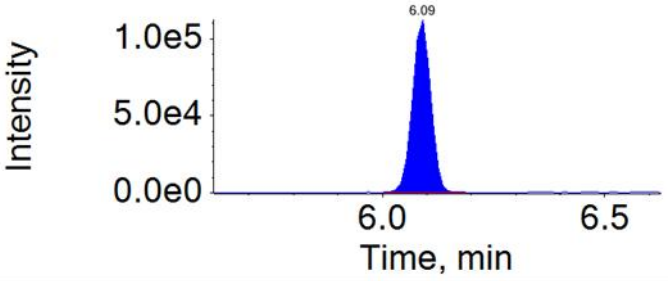
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

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
	

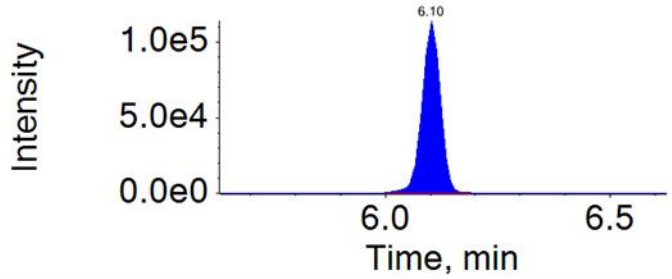
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

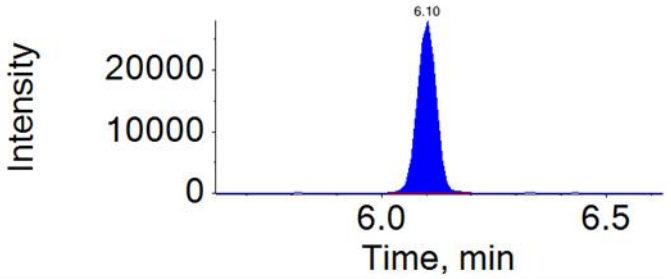
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

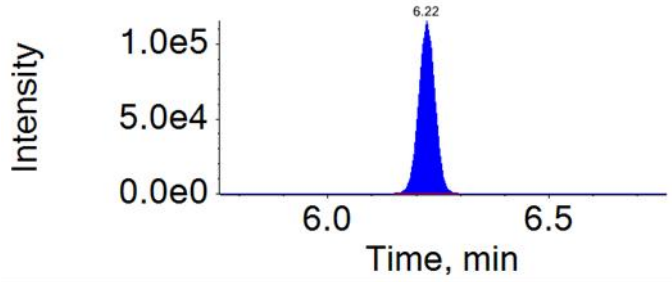
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

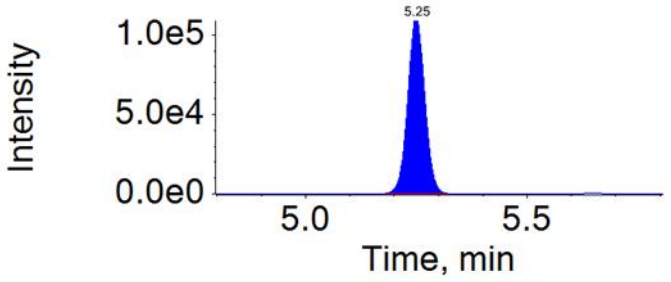
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



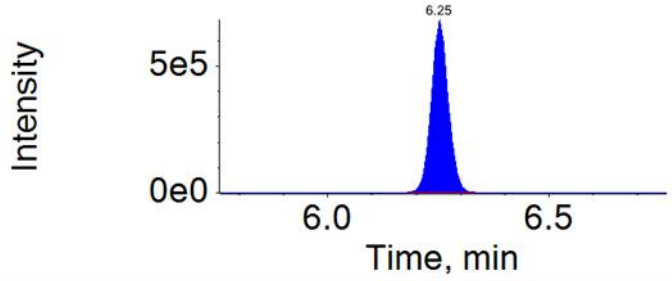


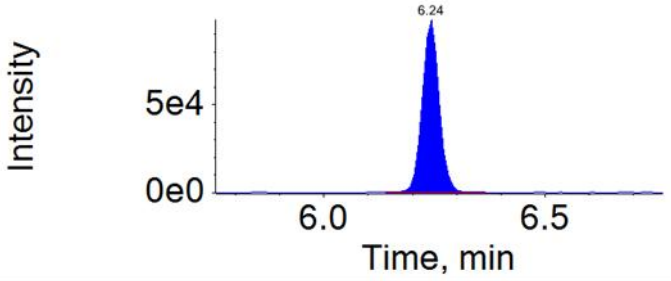
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



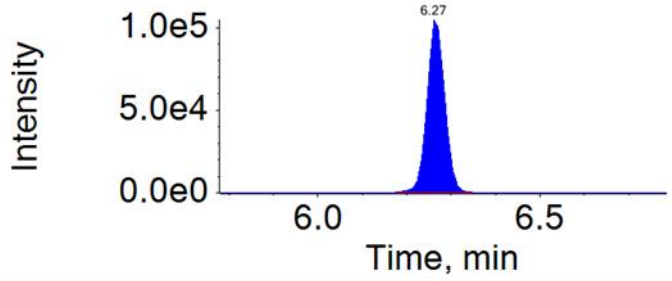


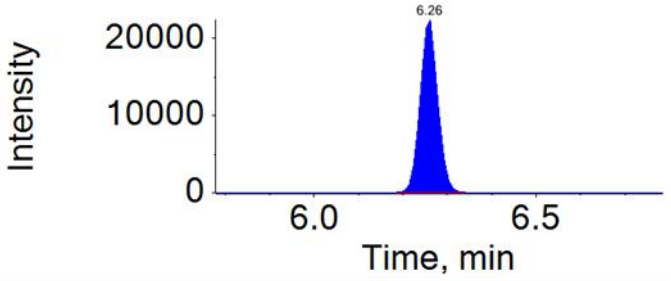
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





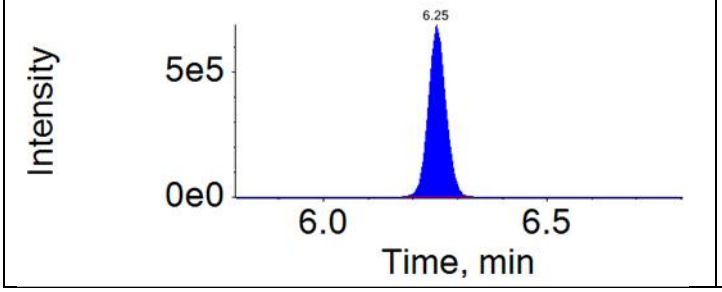
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

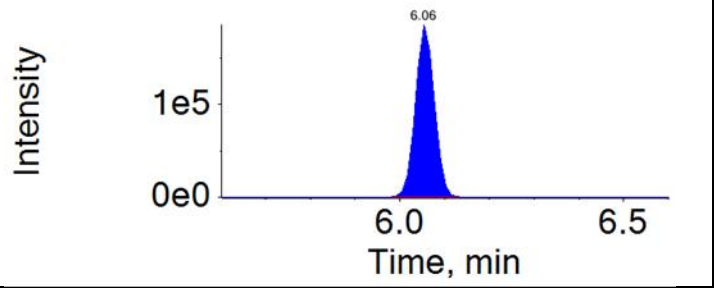




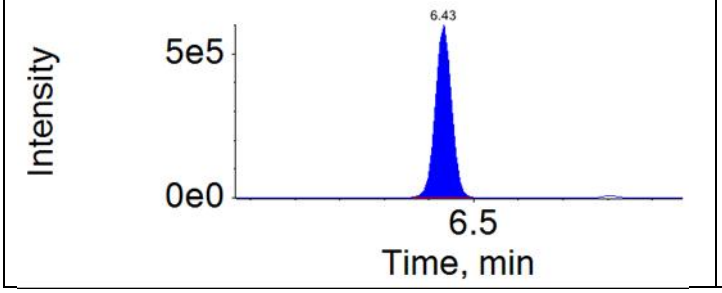
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

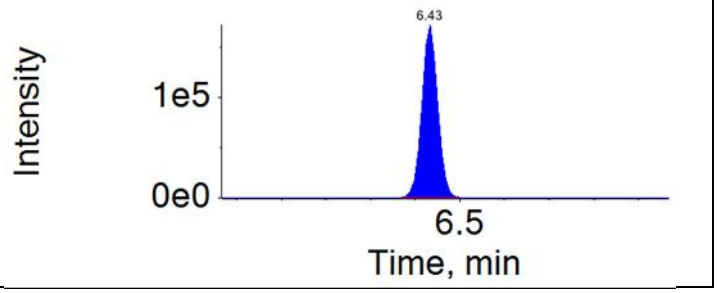
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



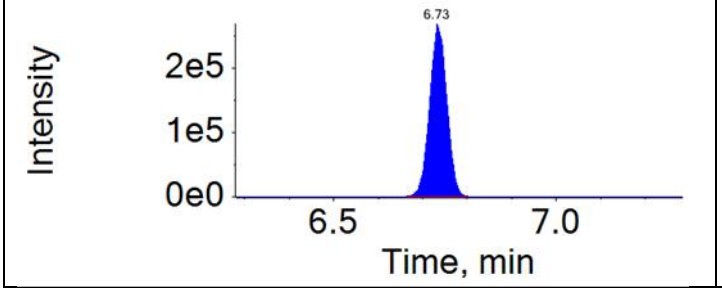


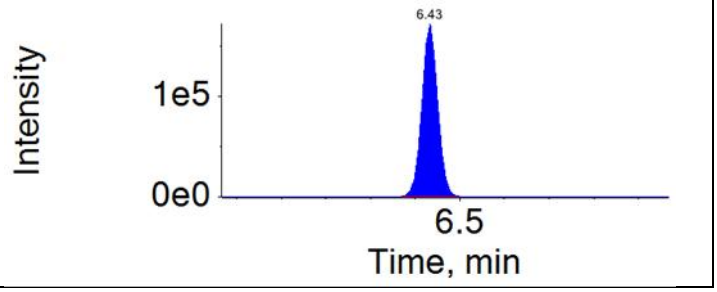
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



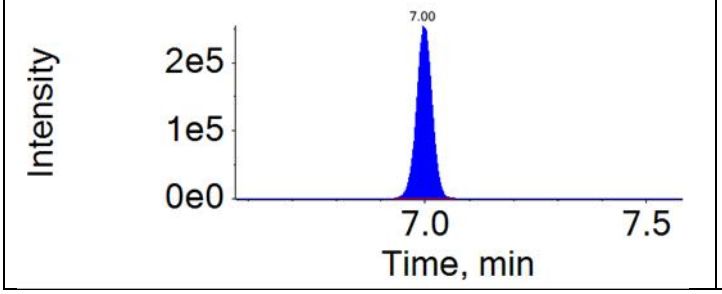


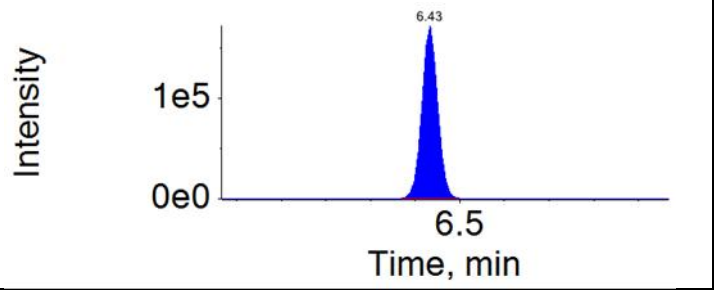
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





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

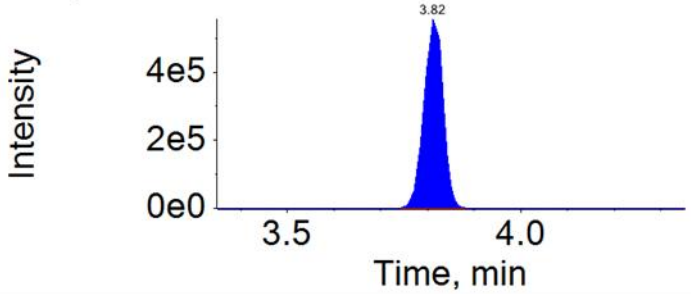
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-14.wiff

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	

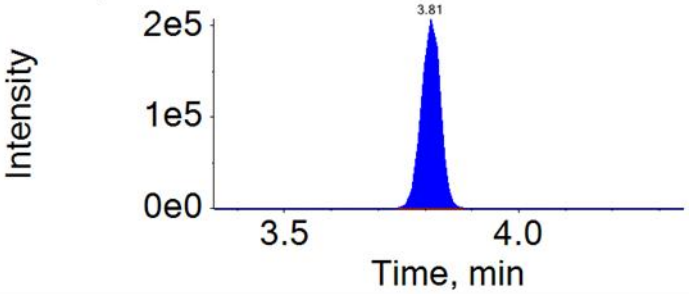
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

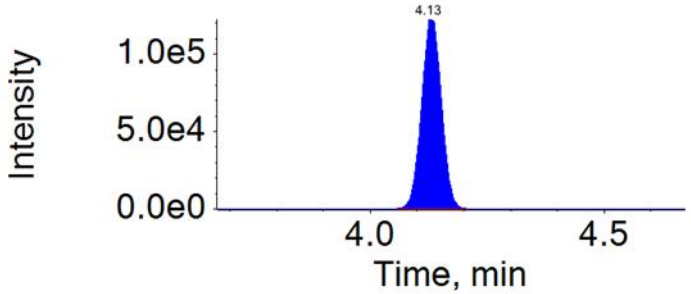
Component: PFBS
Primary Mass: 299.0 / 80.0



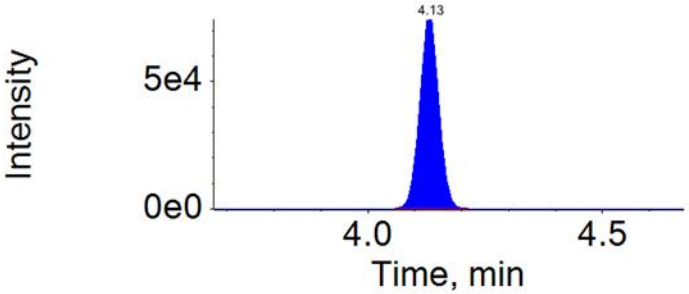
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



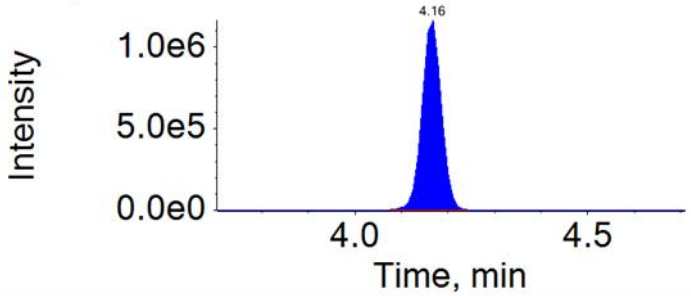
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



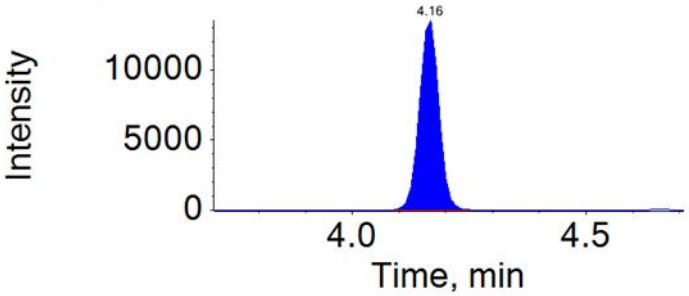
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



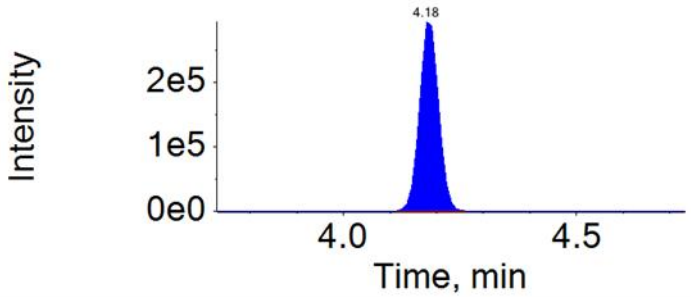
Component: PFHxA
Primary Mass: 313.0 / 269.0



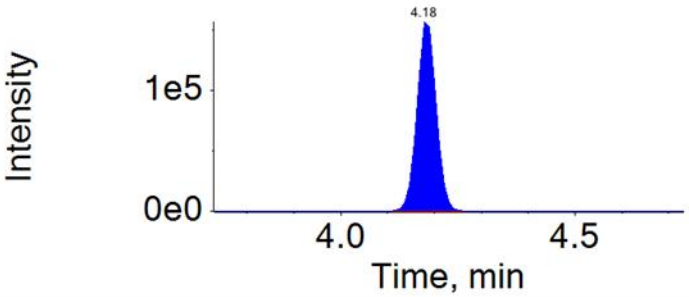
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



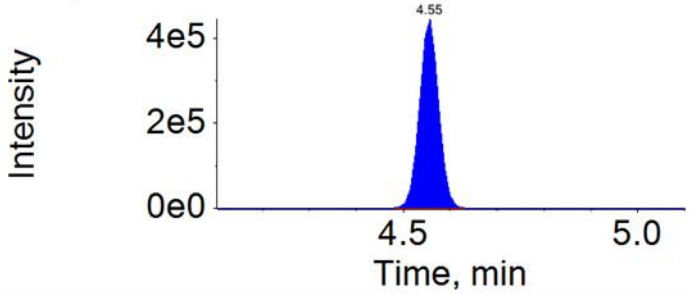
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



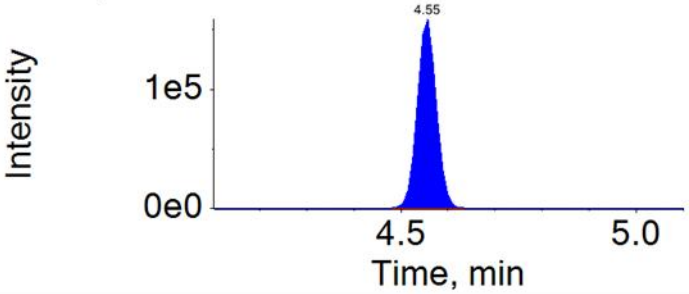
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

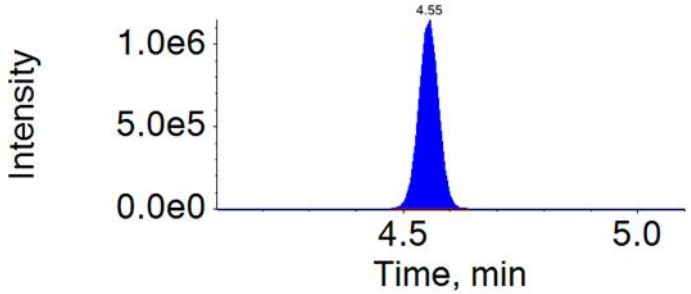
Component: PFHxS
Primary Mass: 399.0 / 80.0



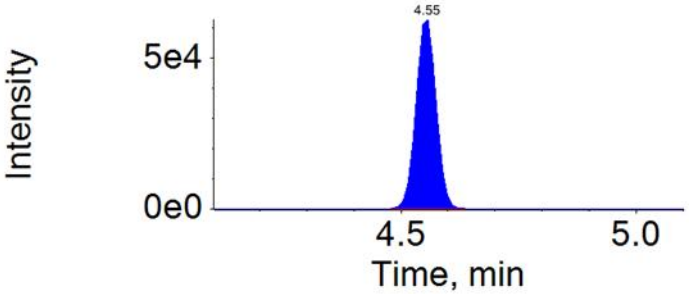
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



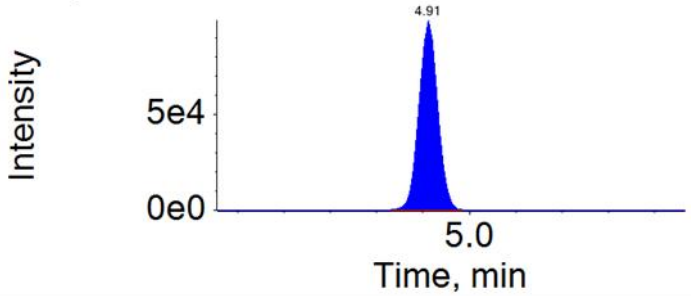
Component: PFHpA
Primary Mass: 363.0 / 319.0



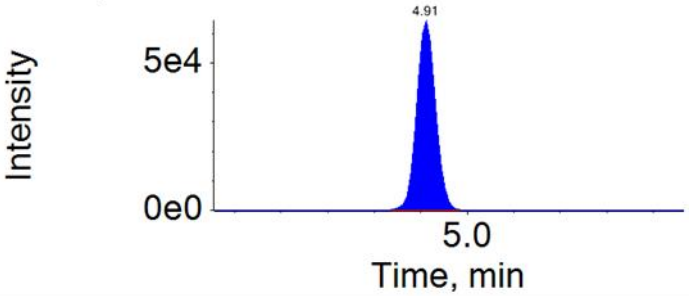
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



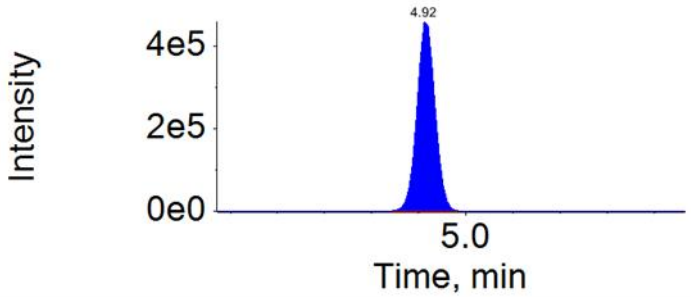
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



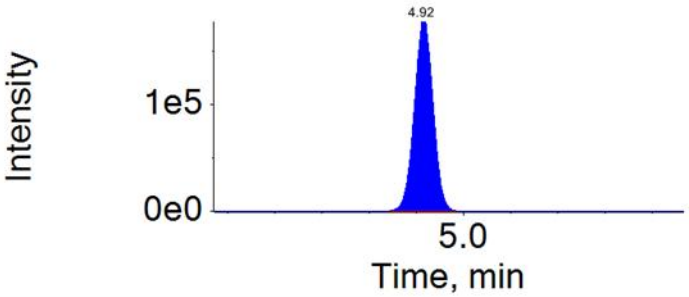
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



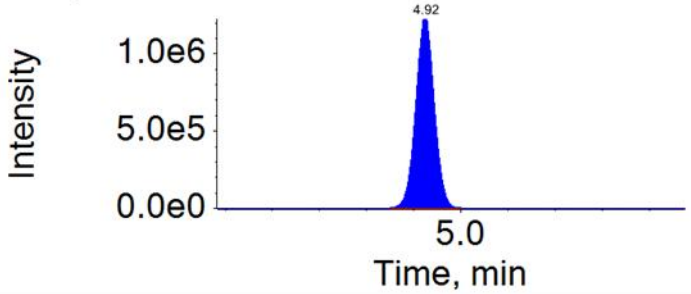
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



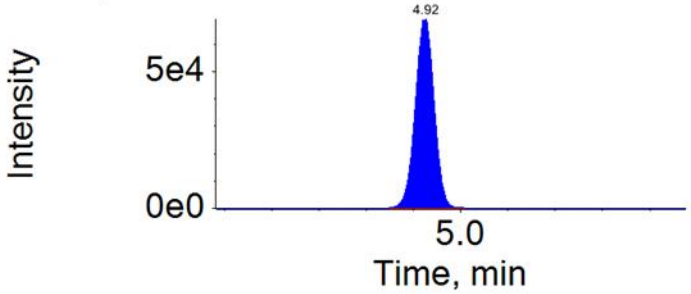
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

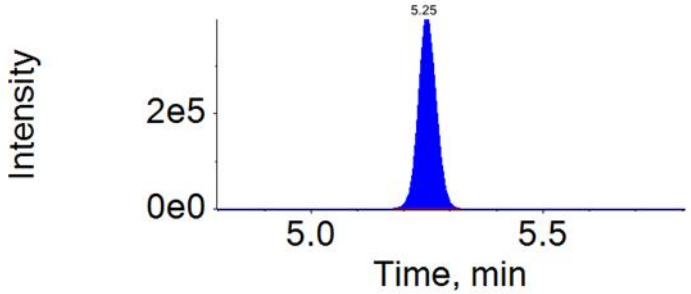
Component: PFOA
Primary Mass: 413.0 / 369.0



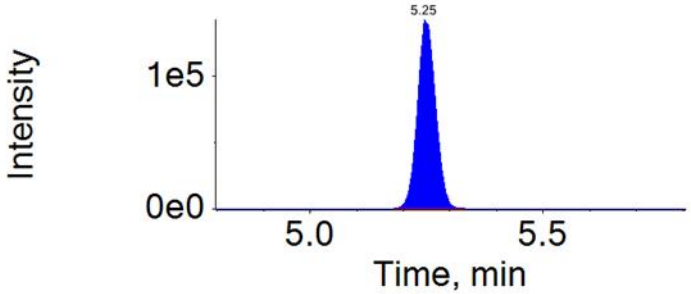
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



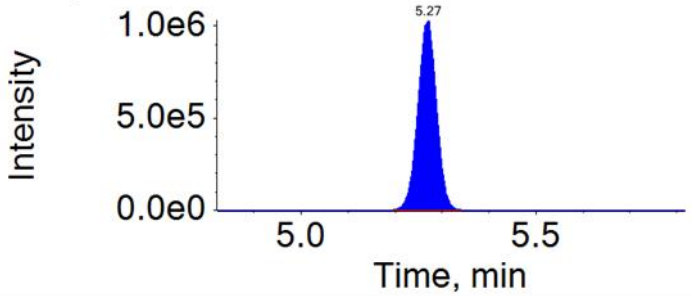
Component: PFOS
Primary Mass: 499.0 / 80.0



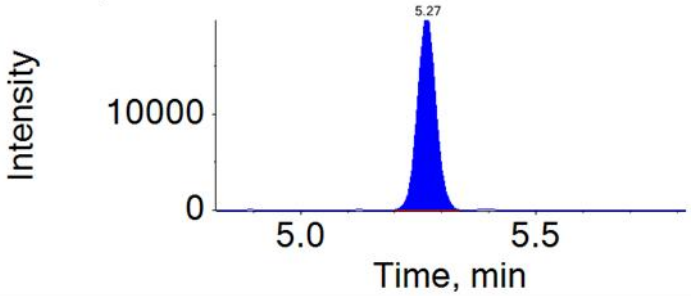
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



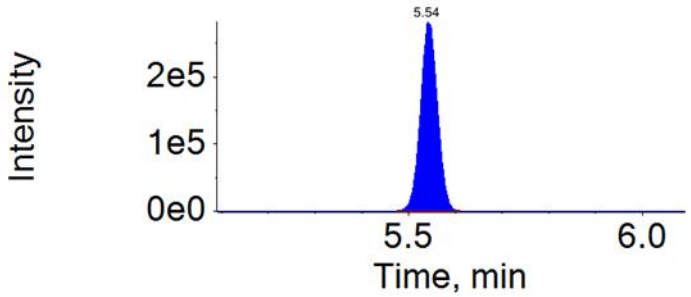
Component: PFNA
Primary Mass: 463.0 / 419.0



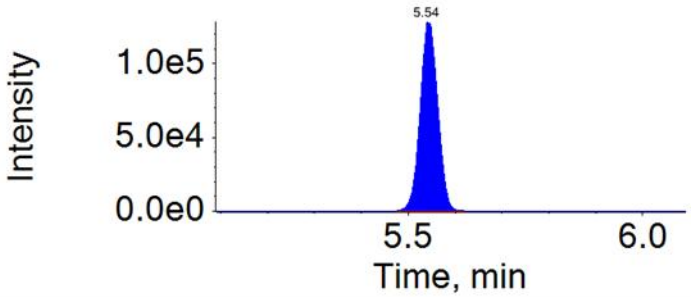
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



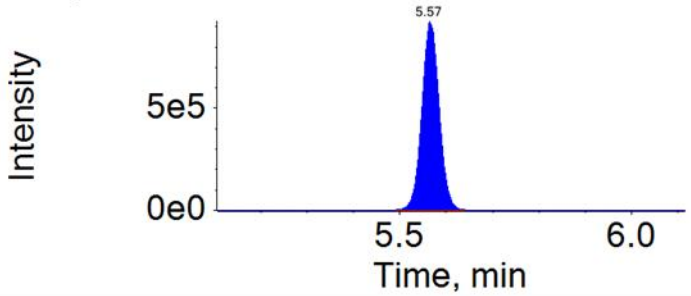
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Secondary Mass: 549.0 / 99.0



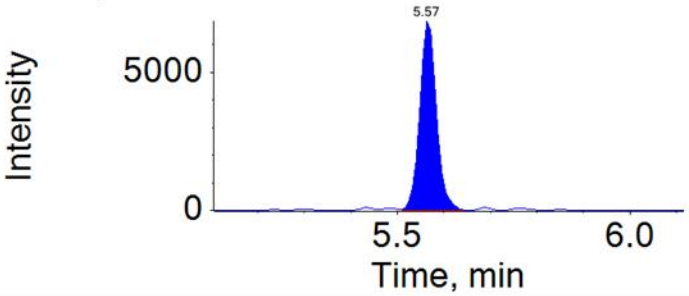
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

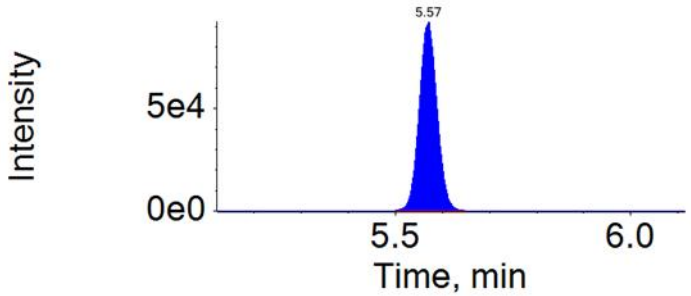
Component: PFDA
Primary Mass: 513.0 / 469.0



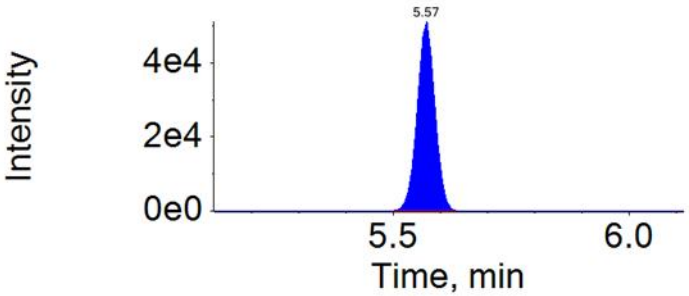
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



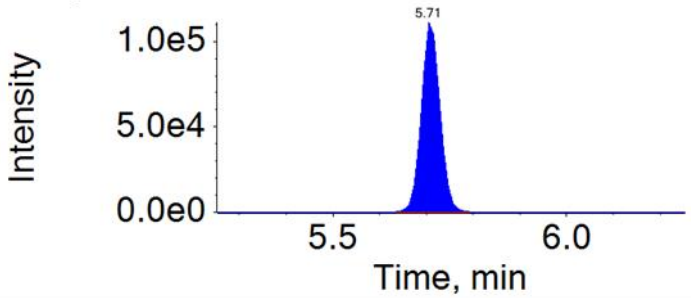
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



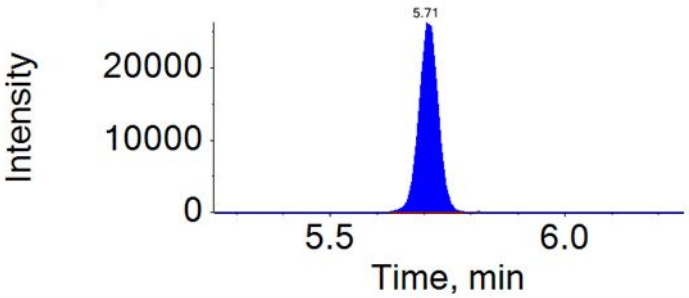
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



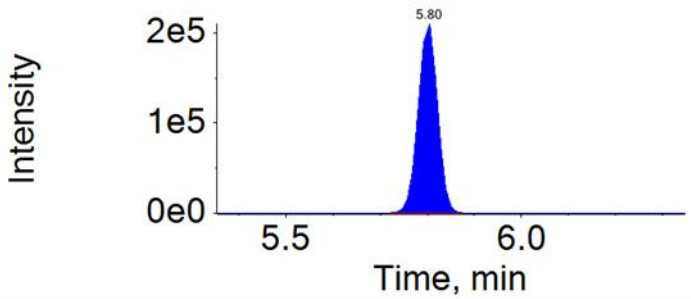
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



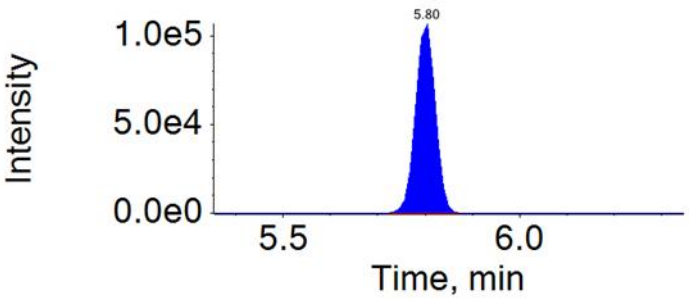
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



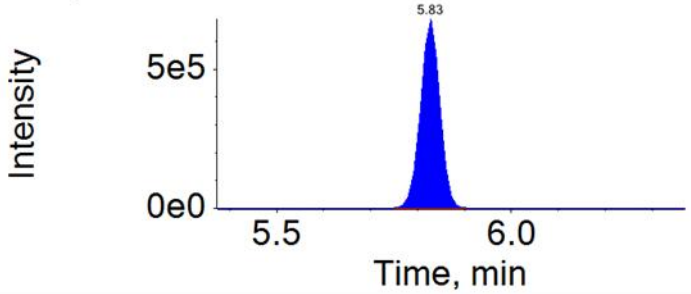
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



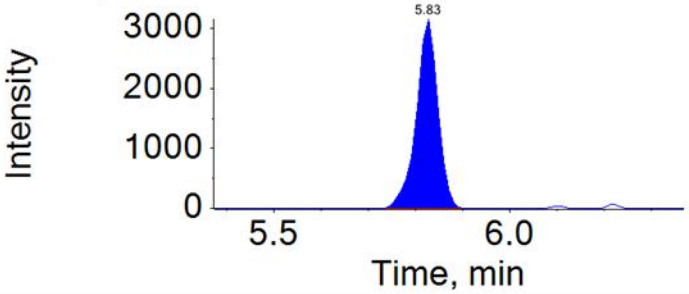
APPROVED
By JPT at 2:53 pm, 11/7/18

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By umar at 5:23 pm, 11/9/18

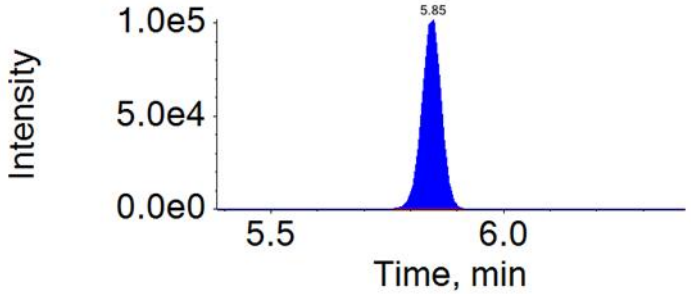
Component: PFUnDA
Primary Mass: 563.0 / 519.0



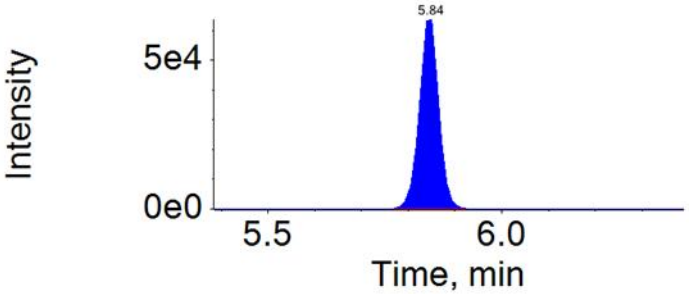
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



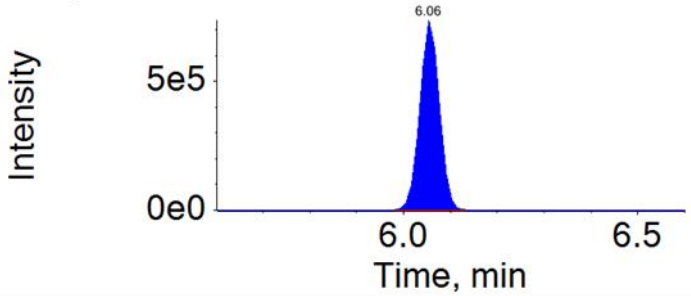
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



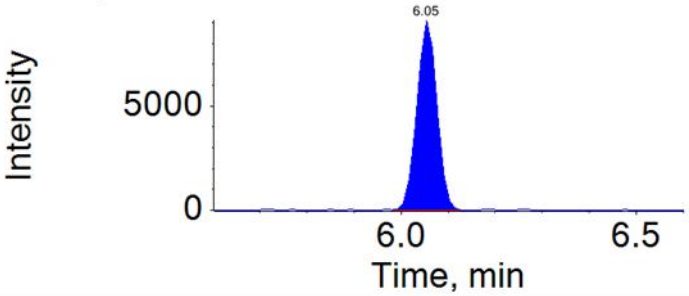
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



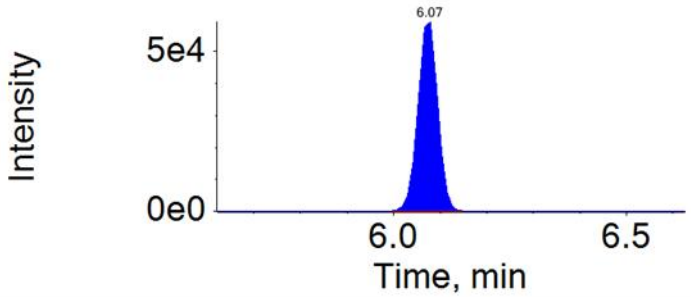
Component: PFDoDA
Primary Mass: 613.0 / 569.0



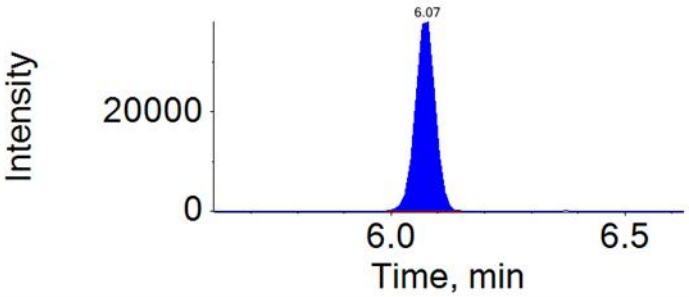
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



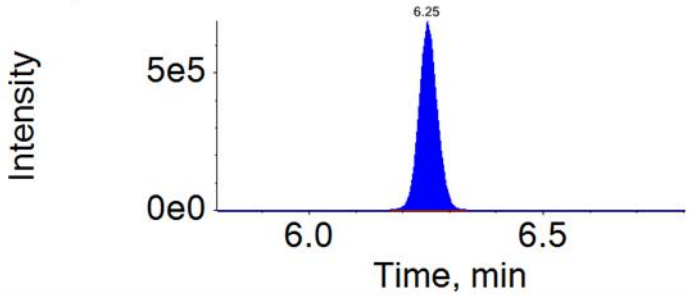
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



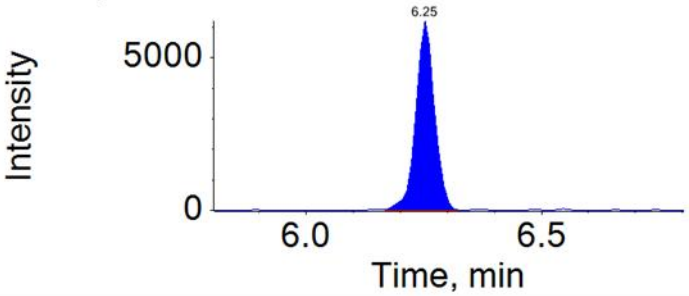
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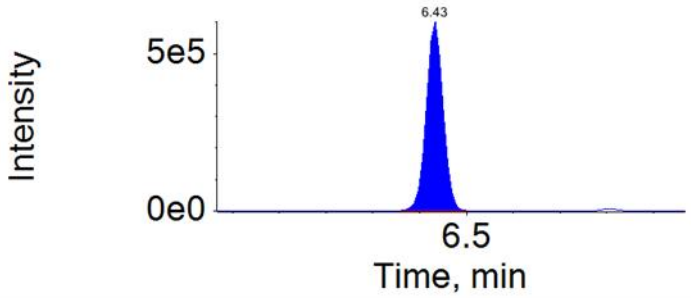
Component: PFTrDA
Primary Mass: 663.0 / 619.0



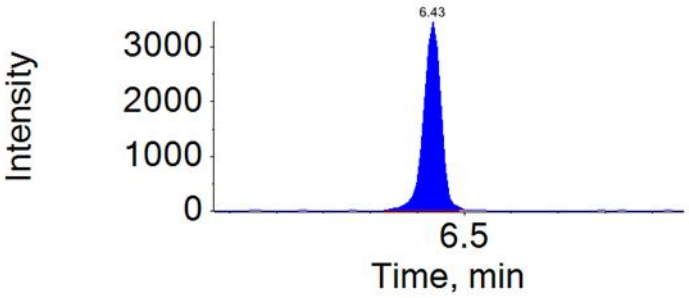
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



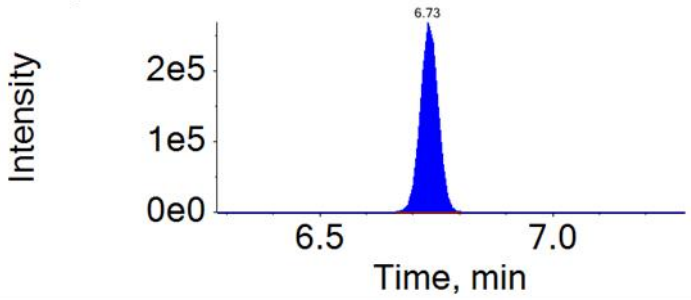
Component: PFTeDA
Primary Mass: 713.0 / 669.0



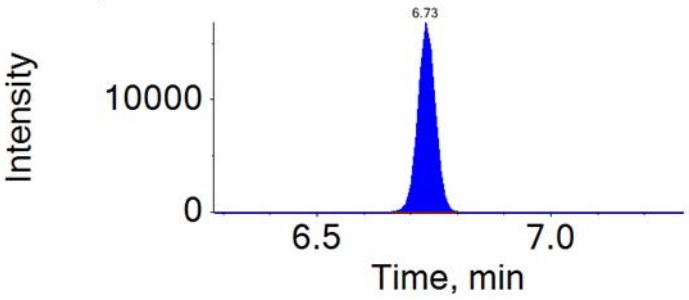
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



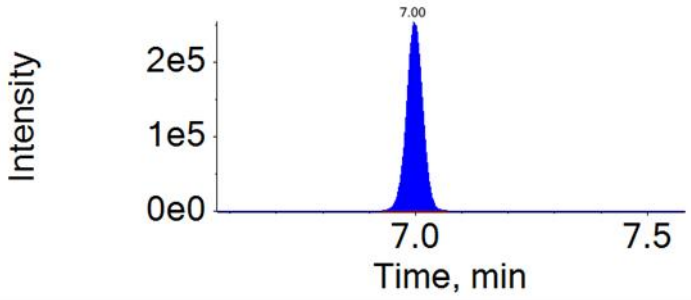
Component: PFHxDA
Primary Mass: 813.0 / 769.0



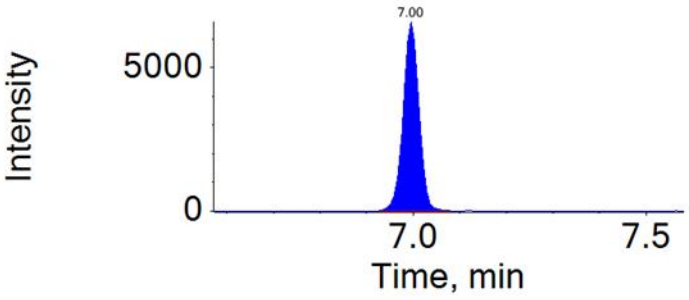
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



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

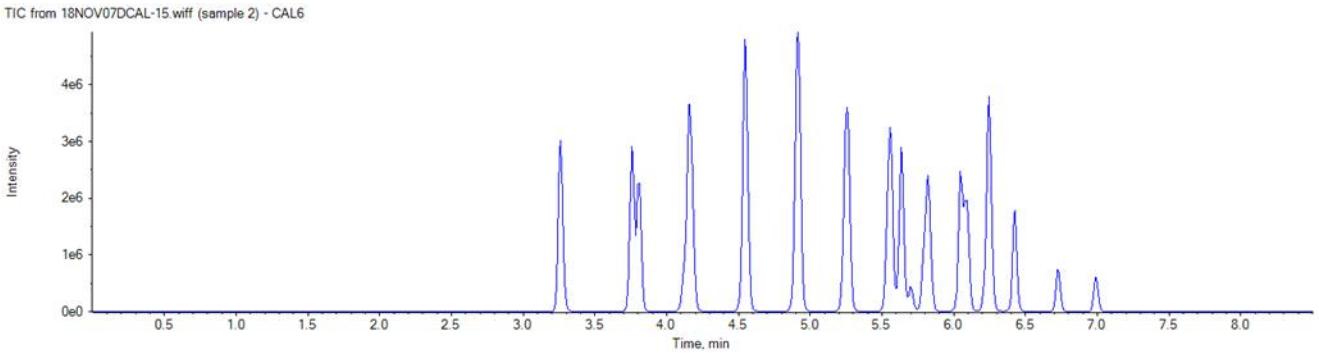
Analyte Quantitation Peak Table

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

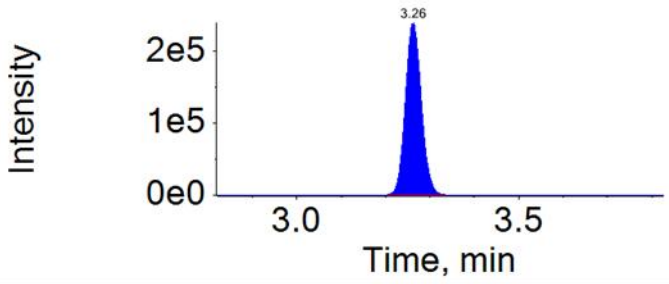


APPROVED
By JPT at 2:53 pm, 11/7/18

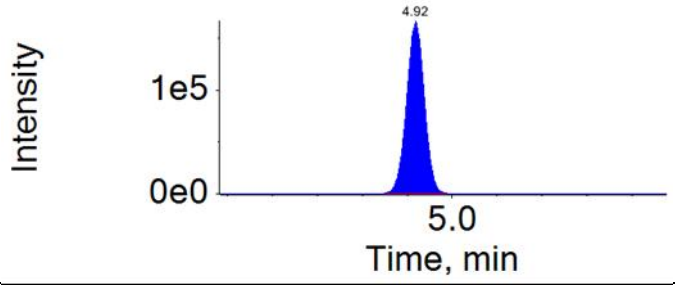
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

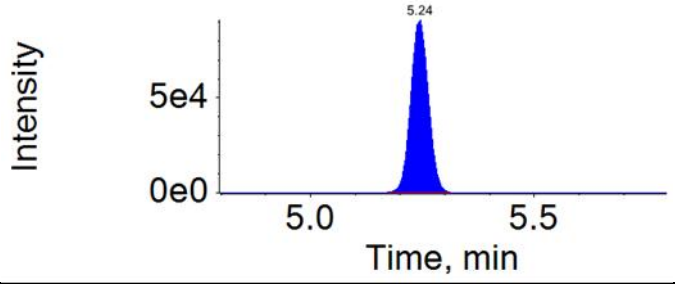
Injection Standard: 13C3-PFBA
216.0 / 172.0



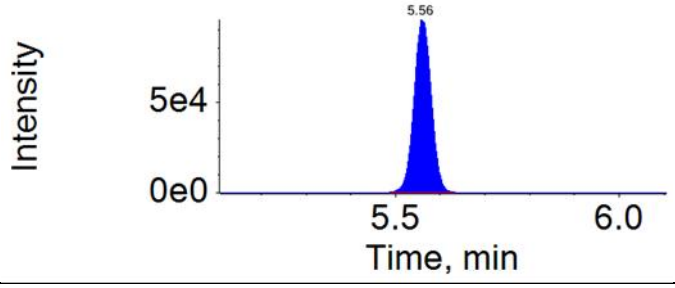
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



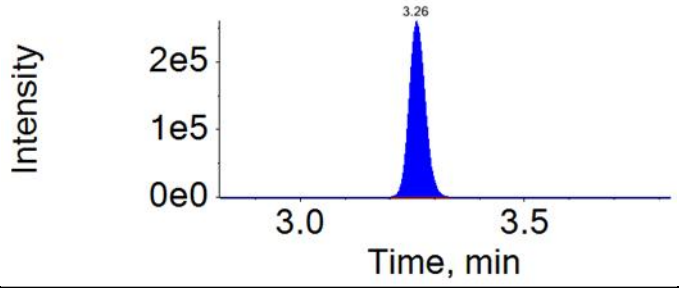
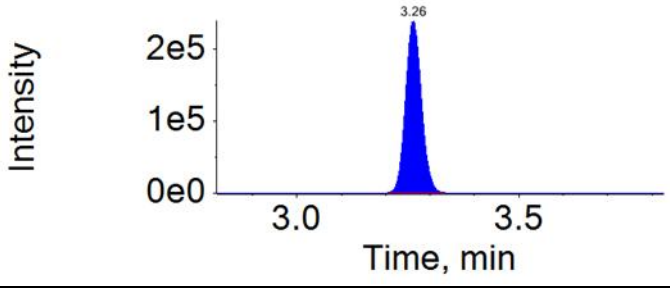
Injection Standard: 13C2-PFDA
515.0 / 470.0

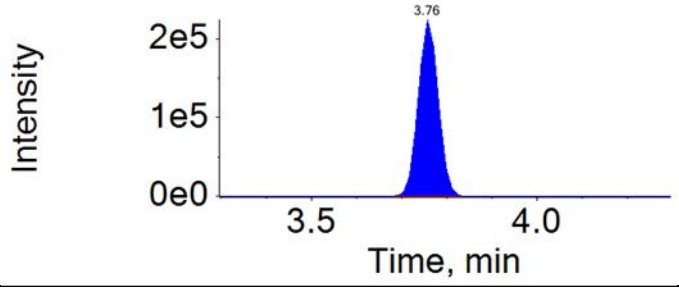
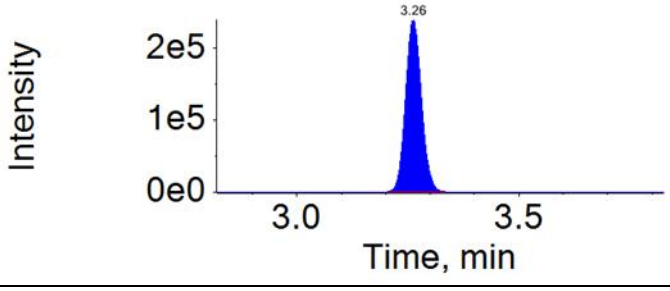


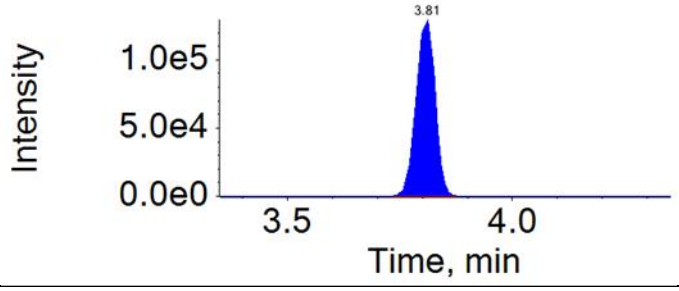
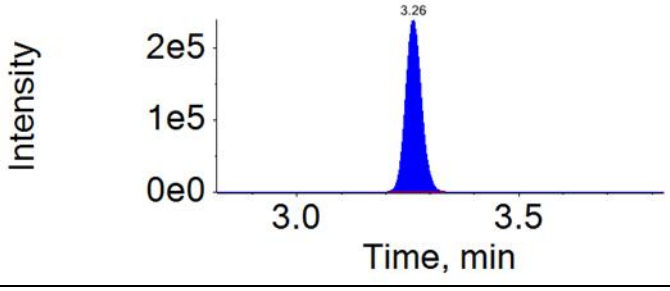
APPROVED
By JPT at 2:53 pm, 11/7/18

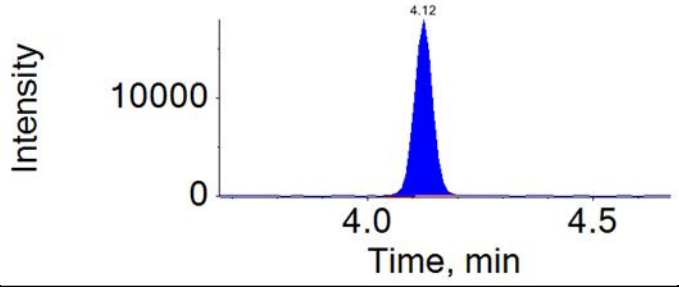
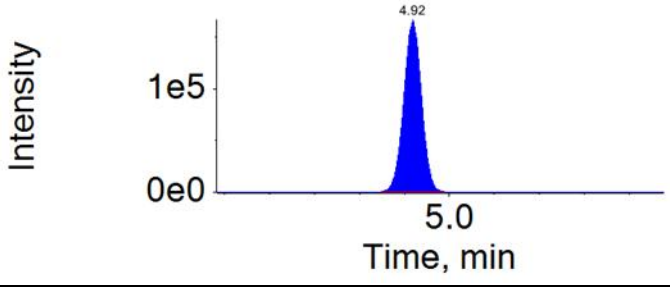
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

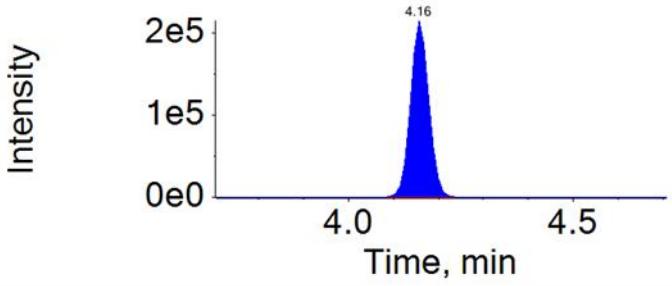
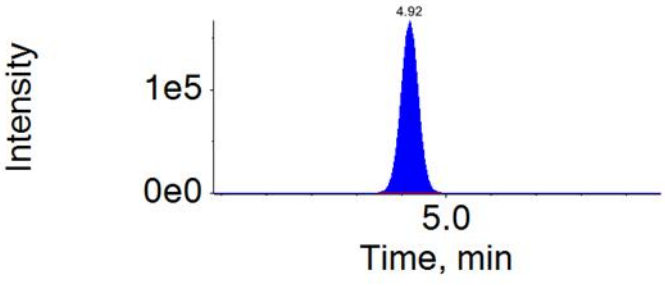
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

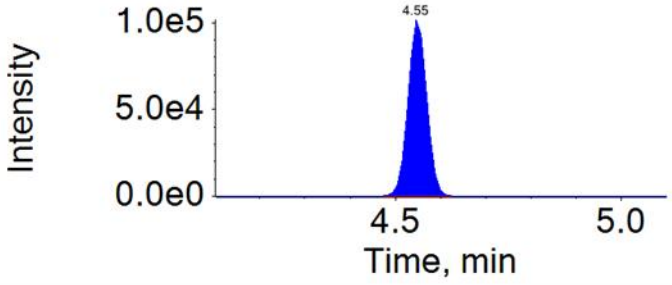
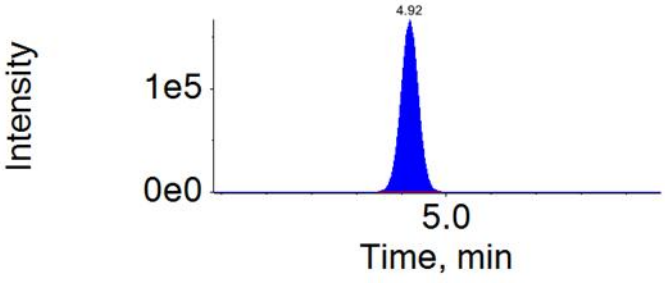
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

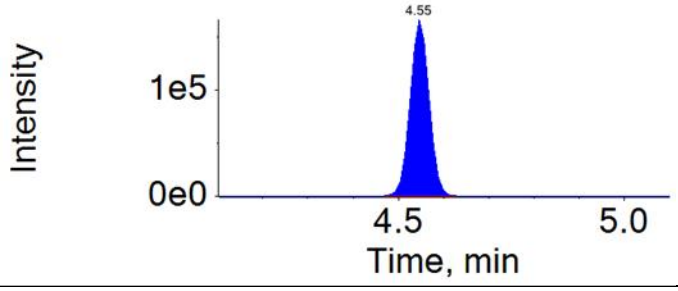
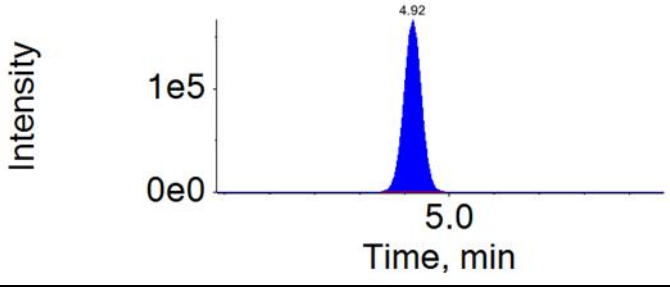
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

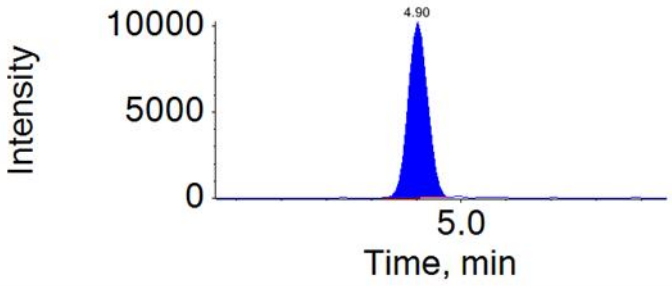
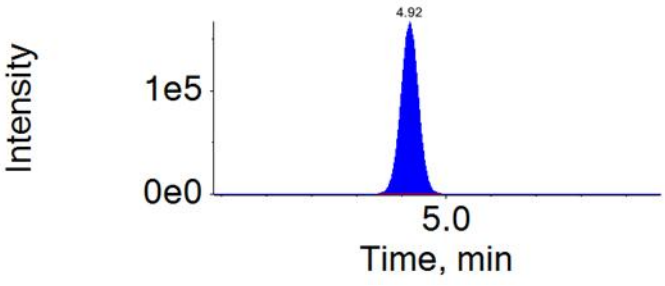
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

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
	

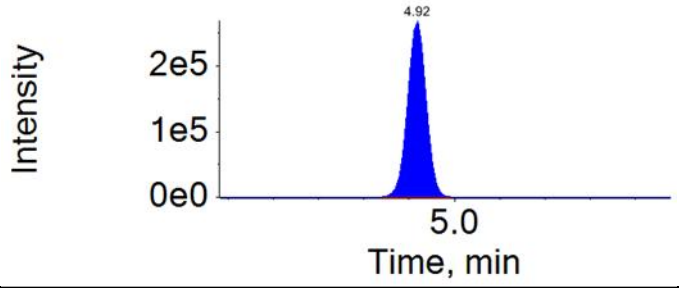
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

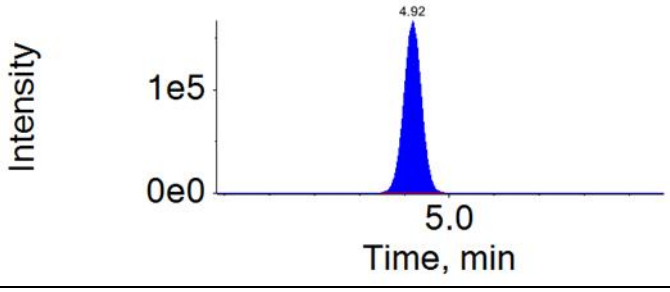
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

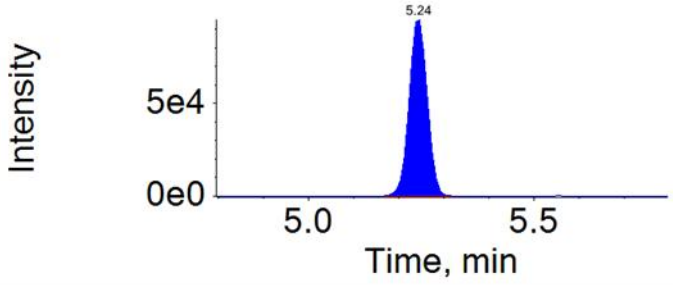
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

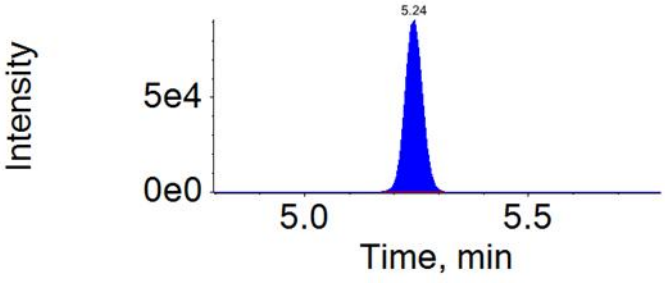
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



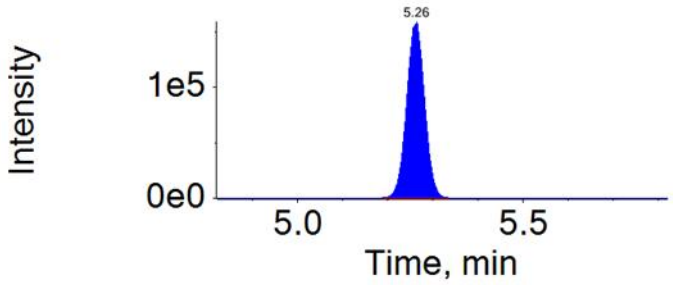


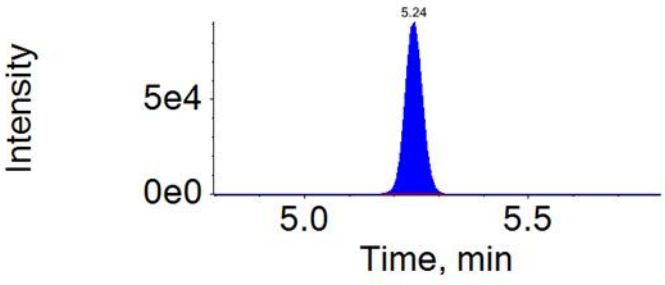
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



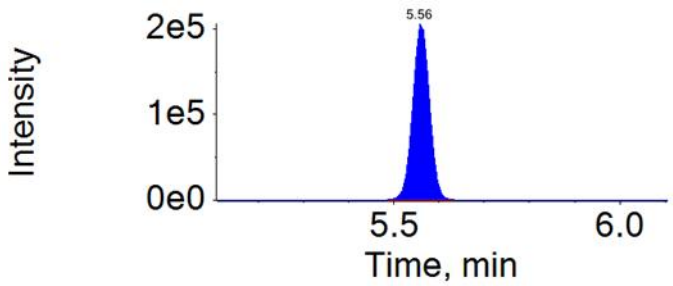


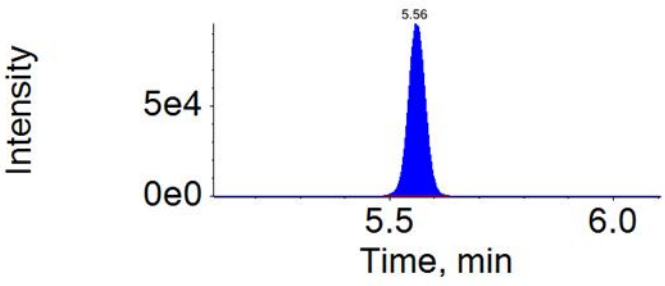
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

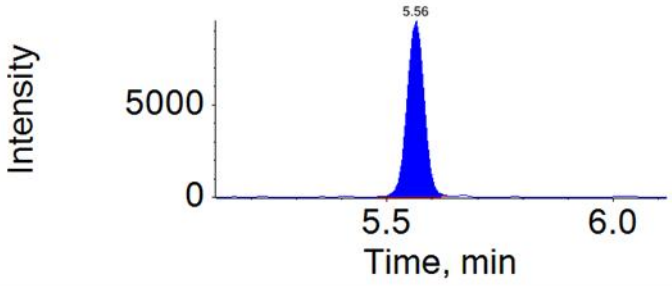
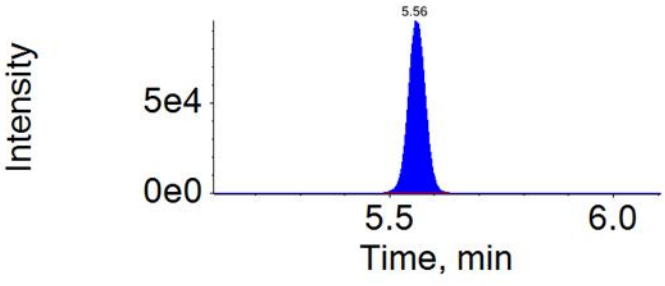


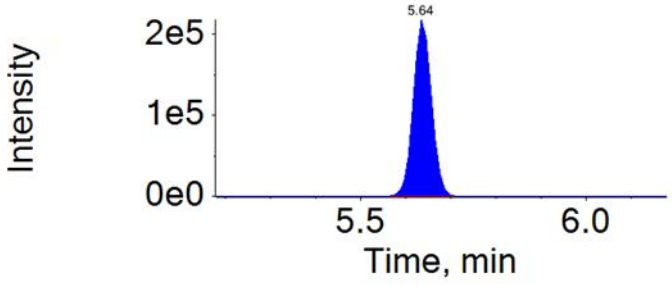
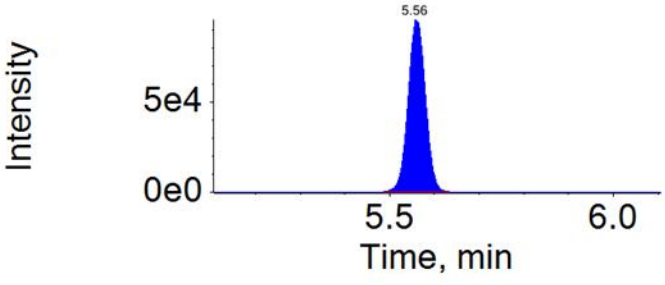


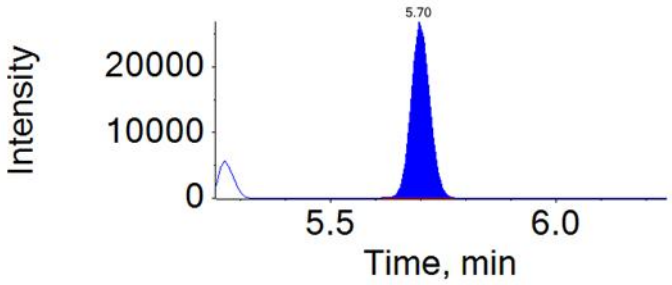
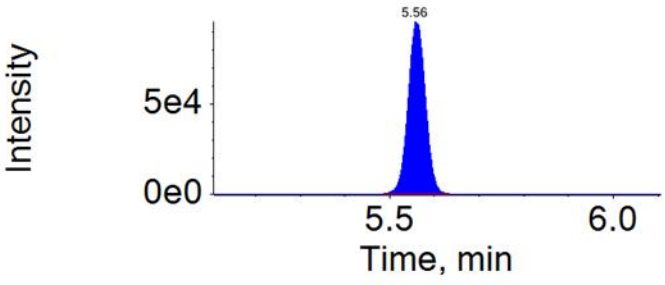
APPROVED
By JPT at 2:53 pm, 11/7/18

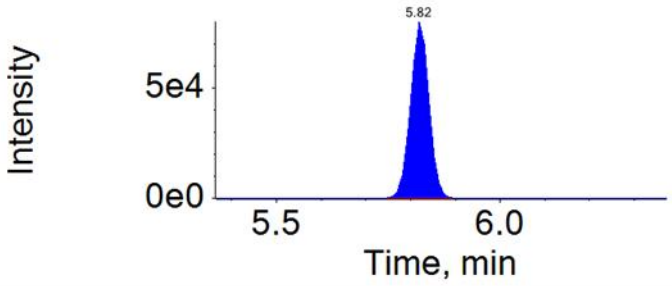
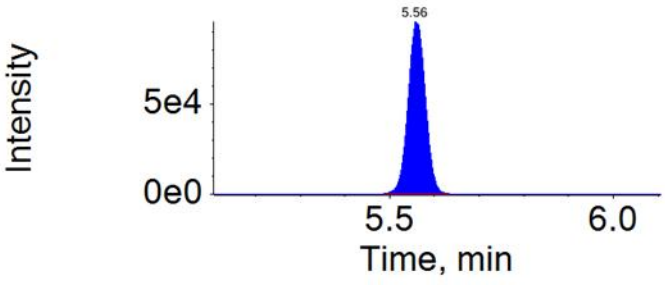
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

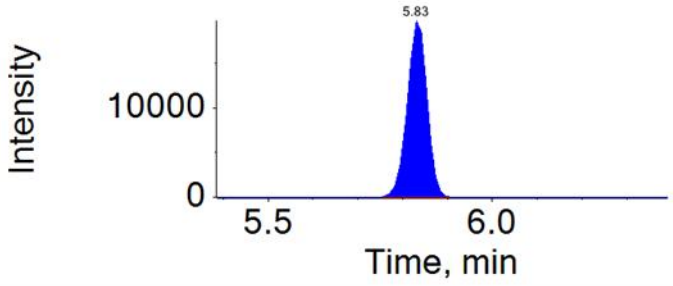
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

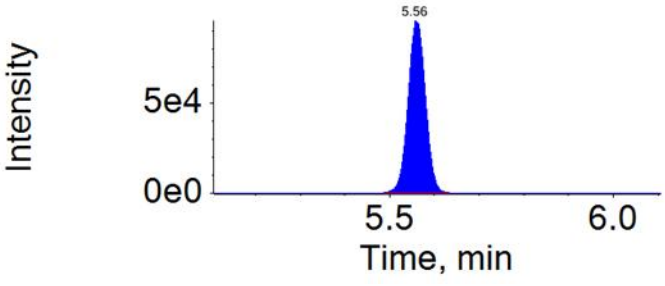
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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

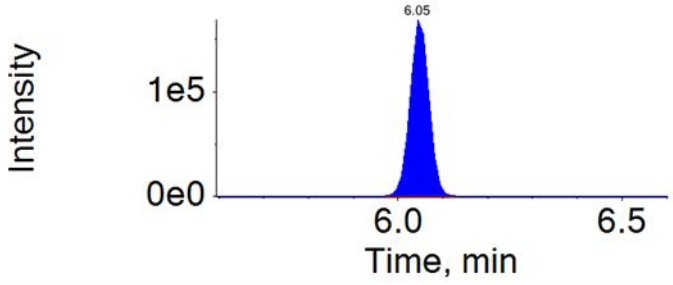
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

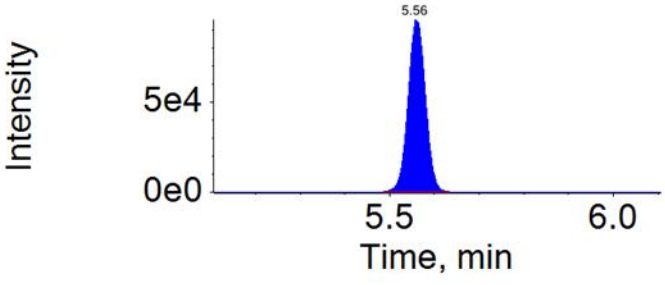
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



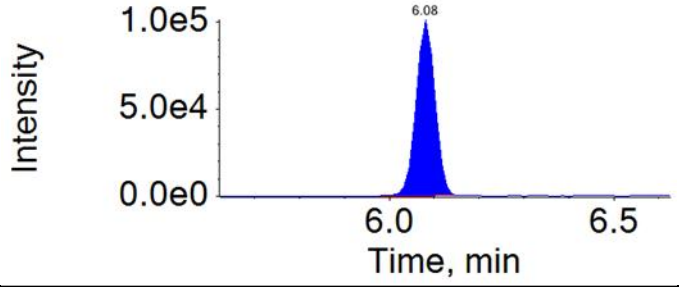


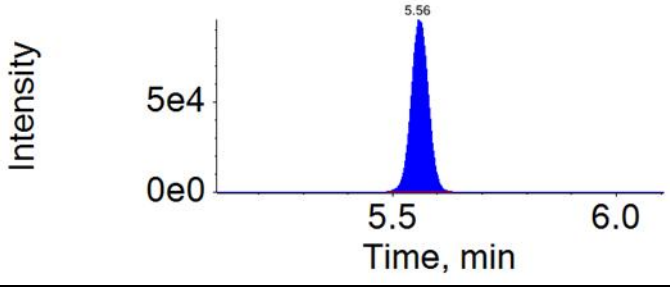
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



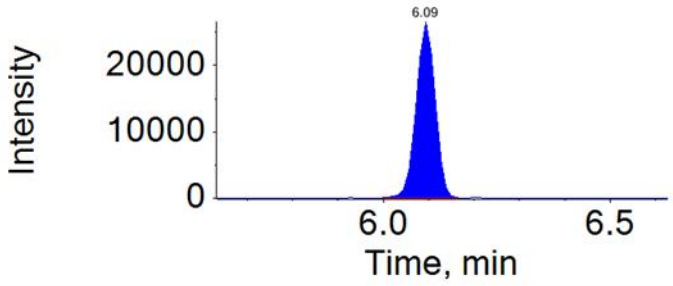


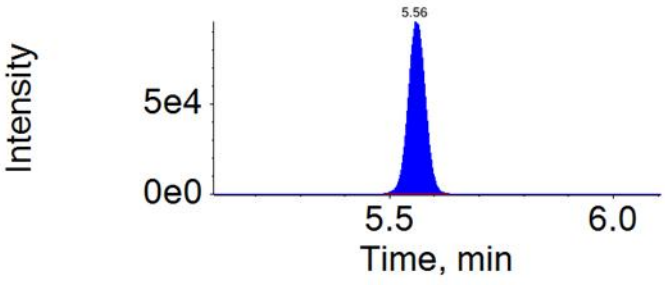
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

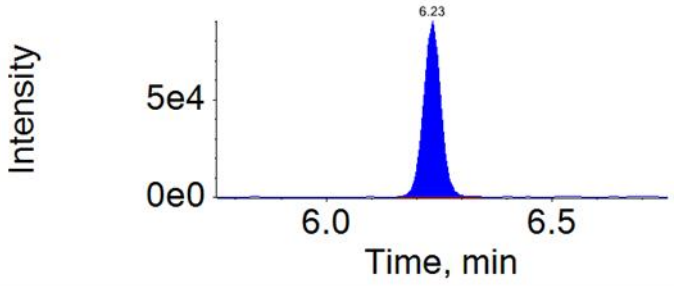
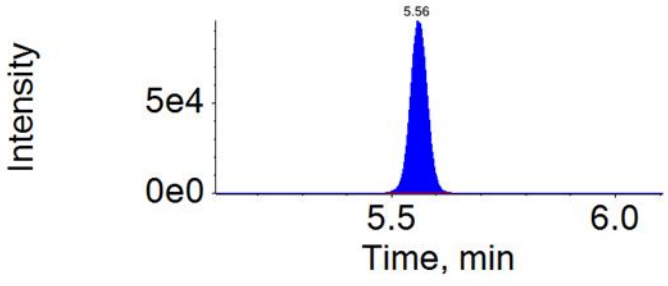


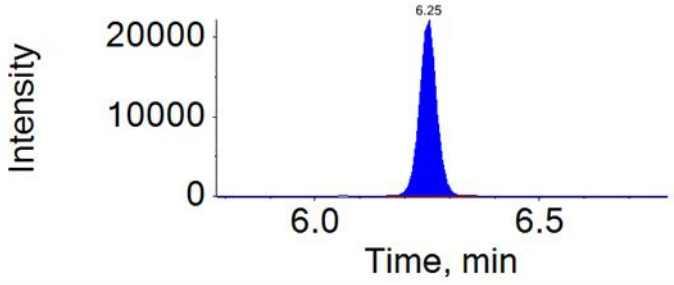
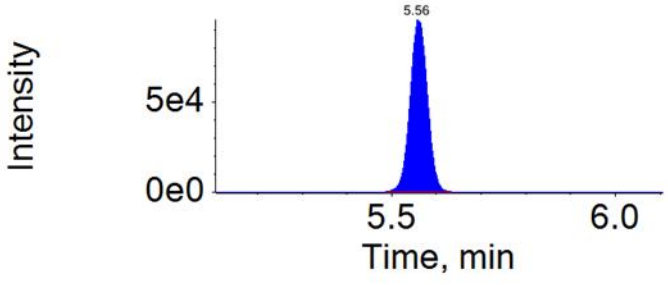


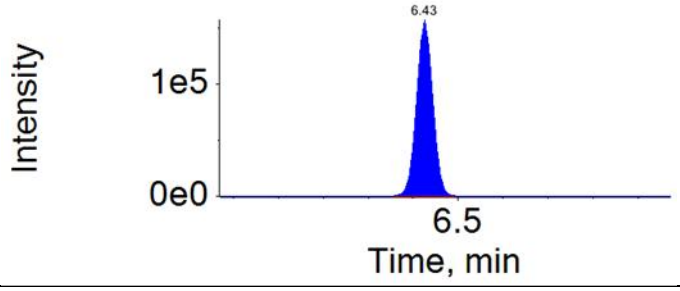
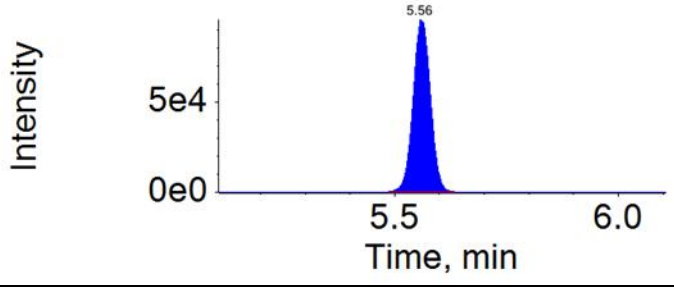
APPROVED
By JPT at 2:53 pm, 11/7/18

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
	

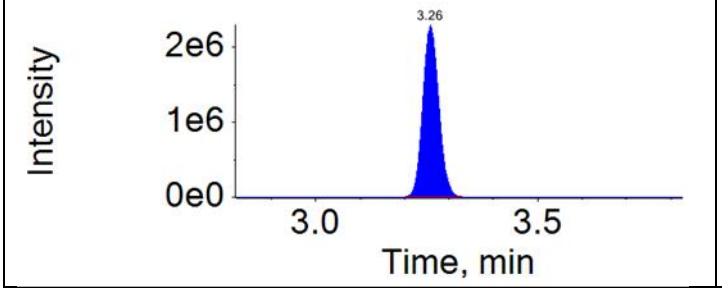
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

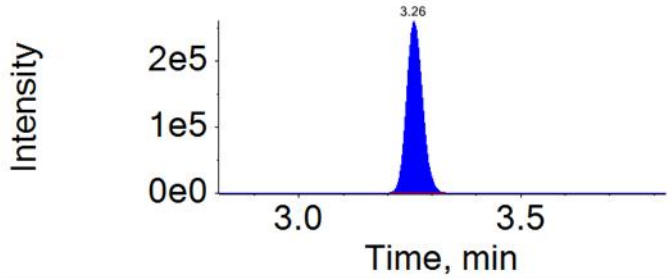
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

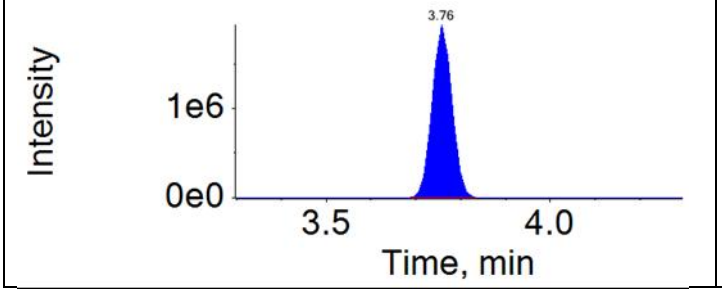
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

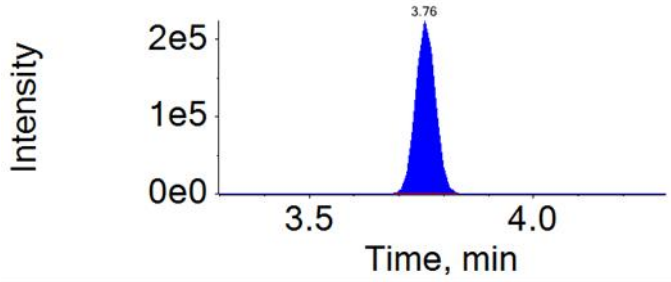
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



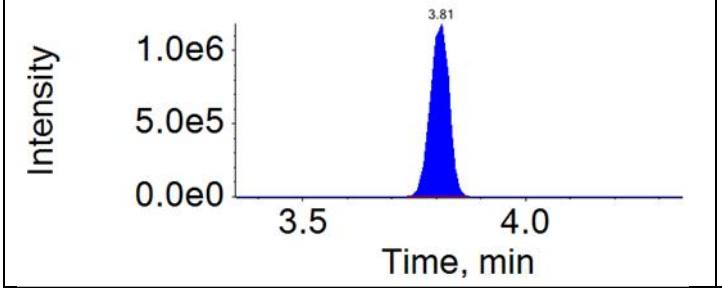


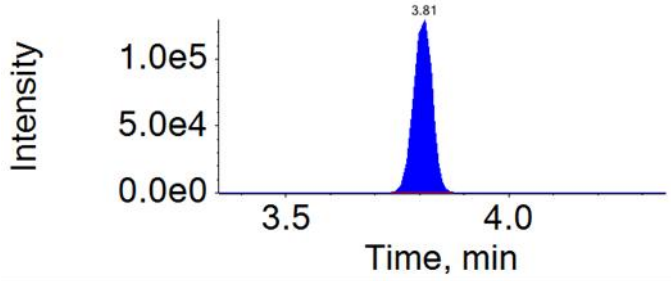
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



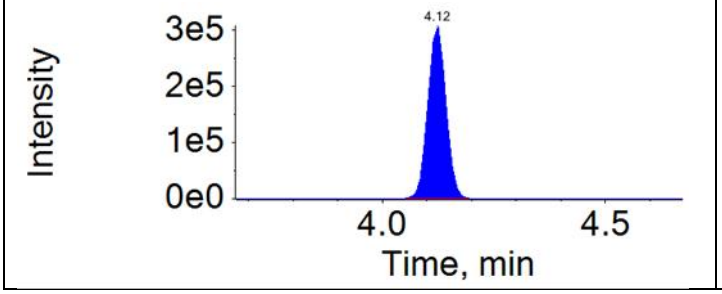


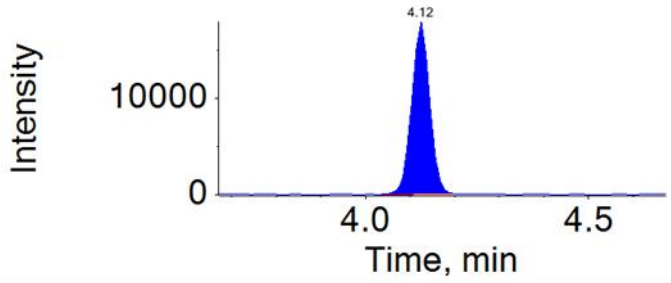
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



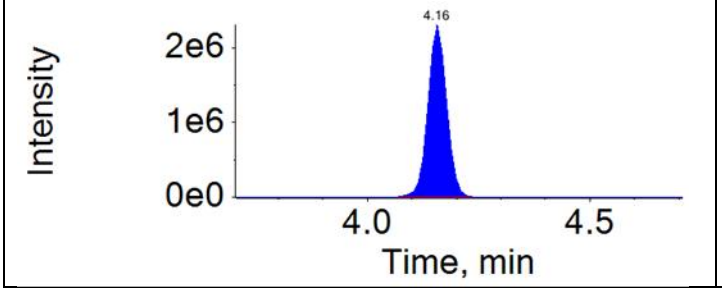


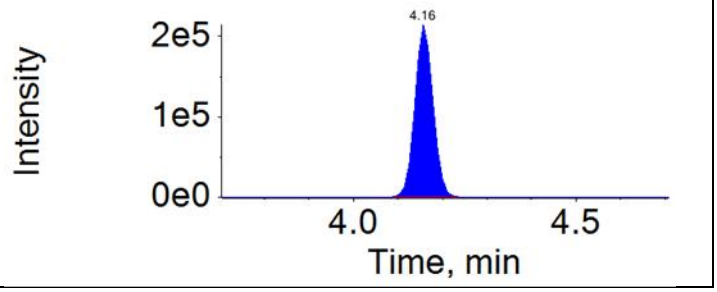
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

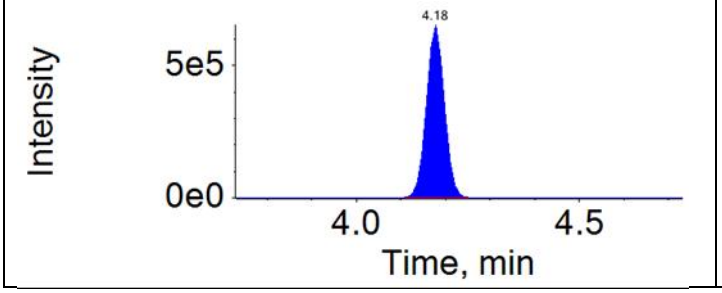
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

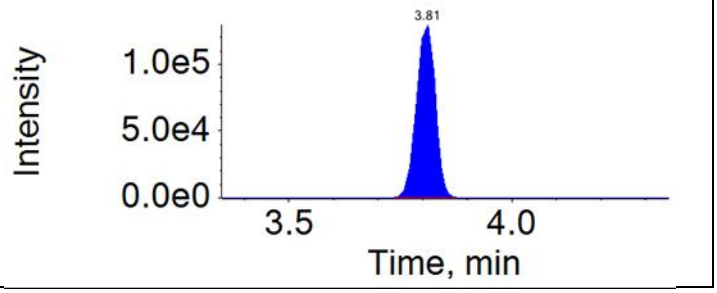
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



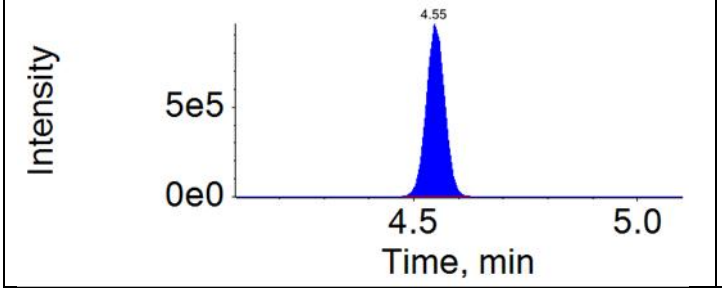


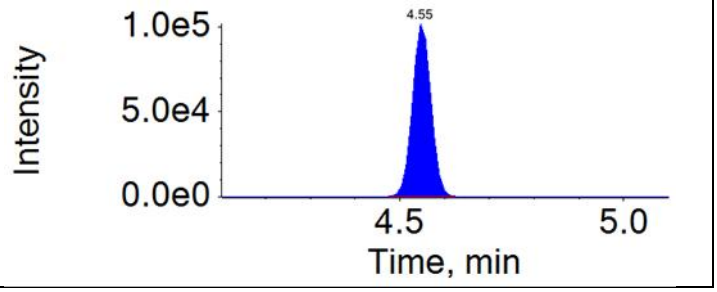
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



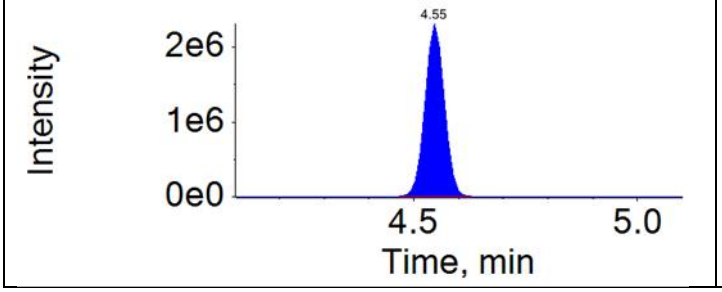


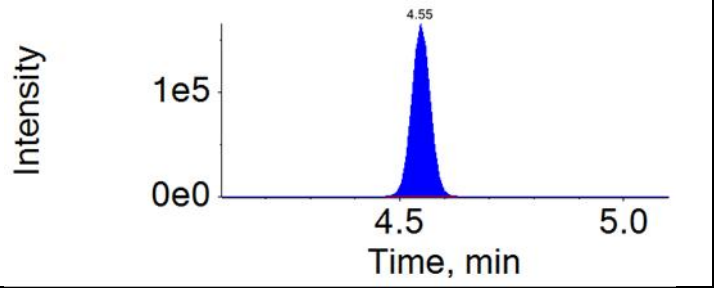
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

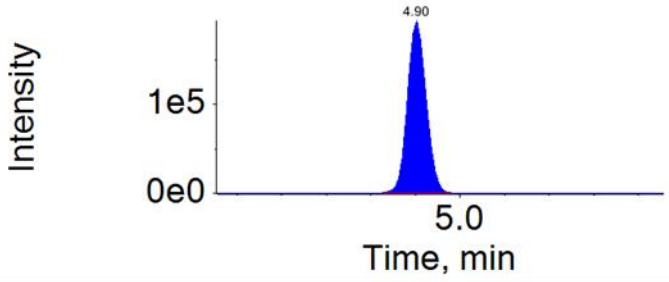
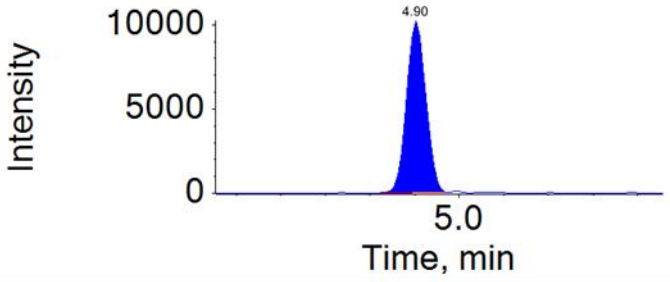


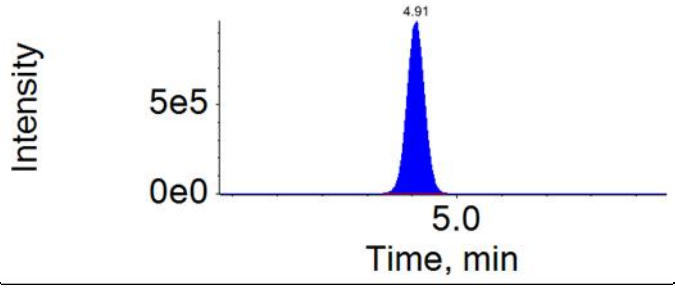
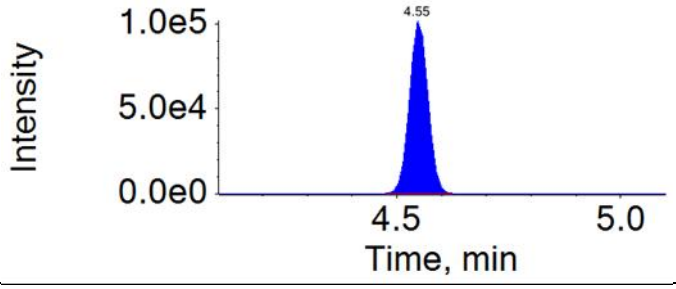


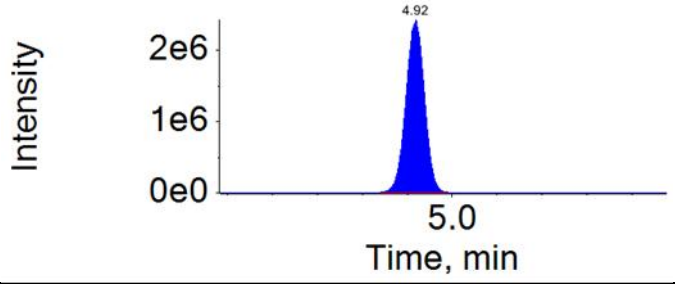
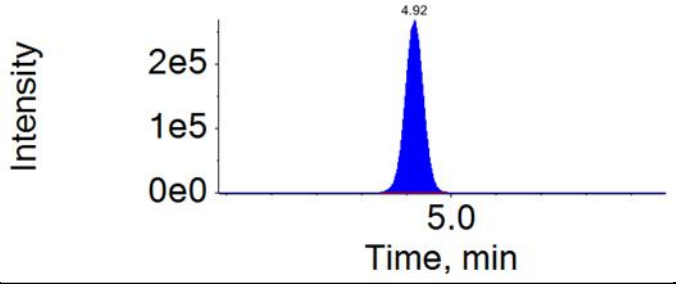
APPROVED
By JPT at 2:53 pm, 11/7/18

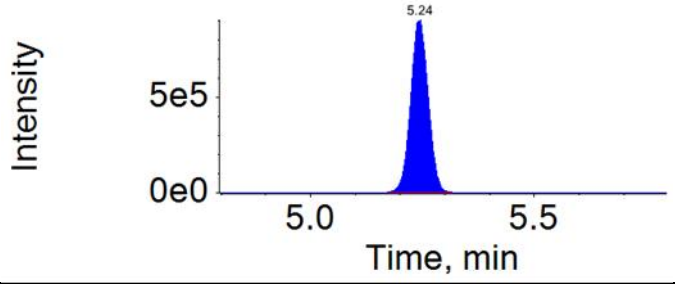
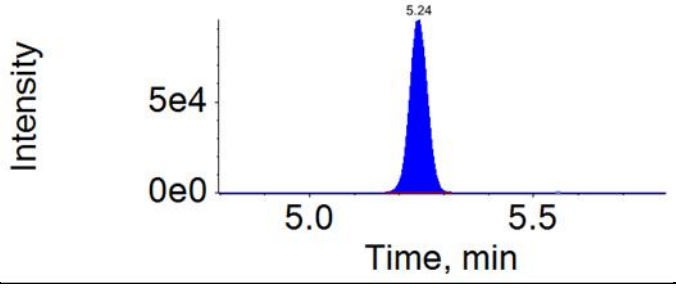
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

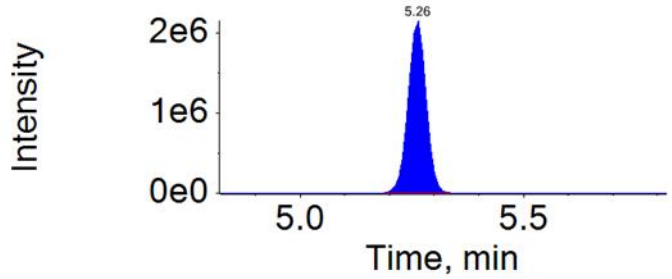
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

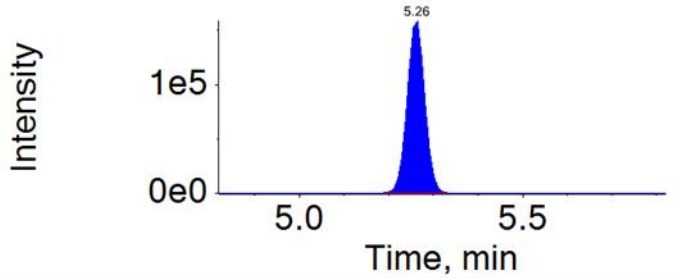
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

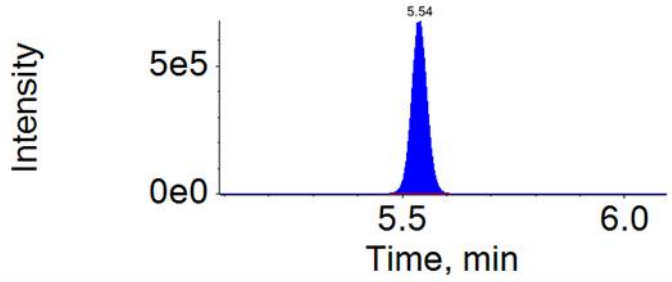
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

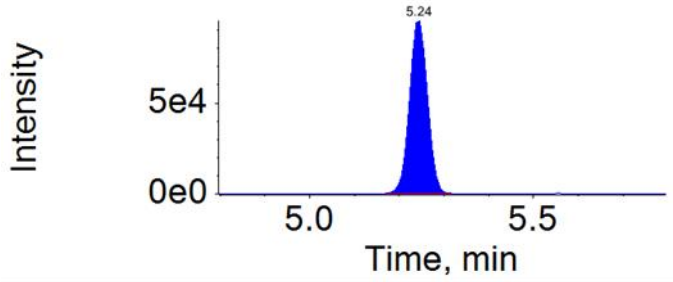
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



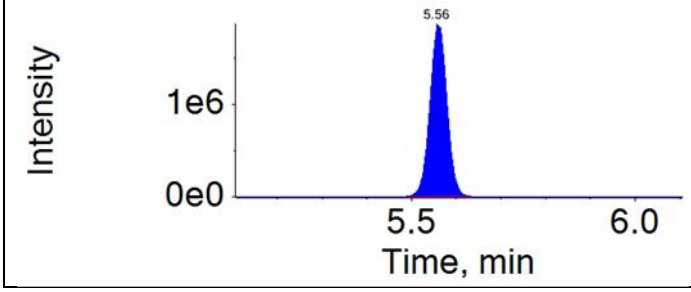


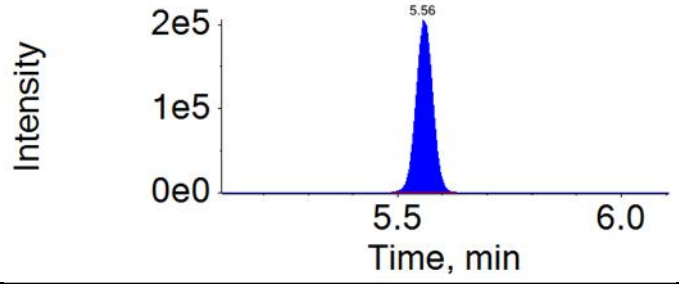
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



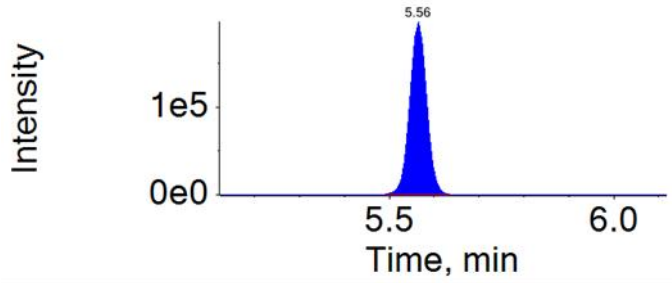


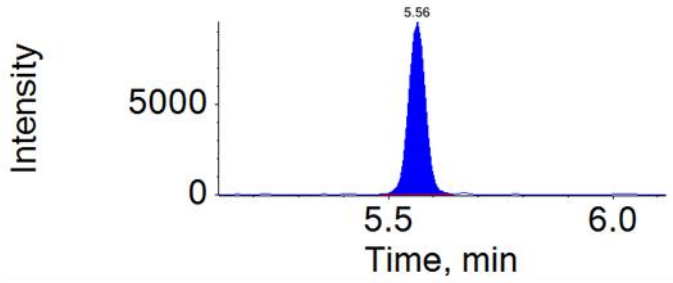
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

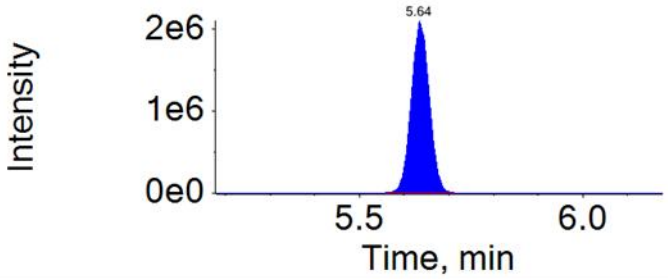
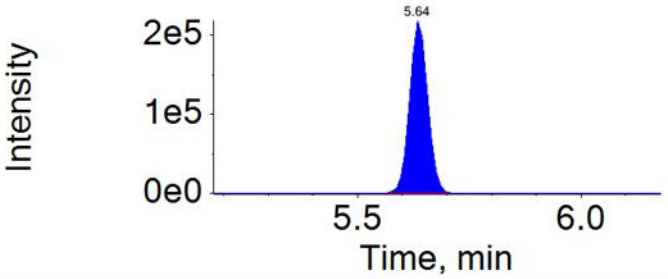


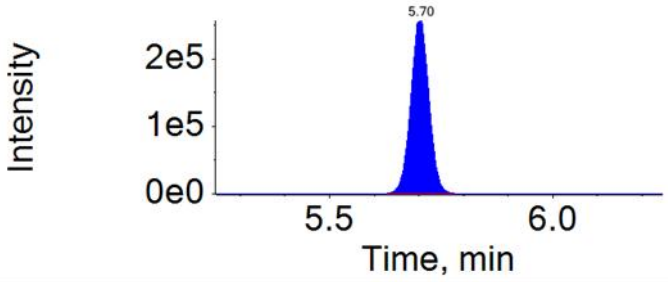
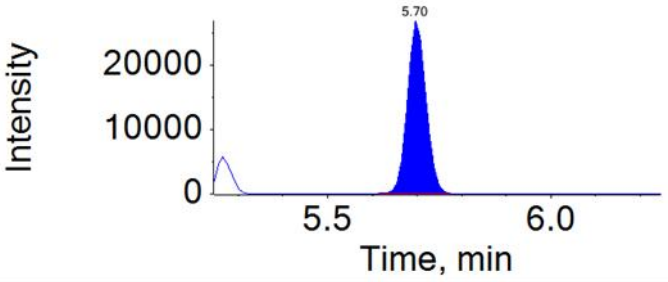


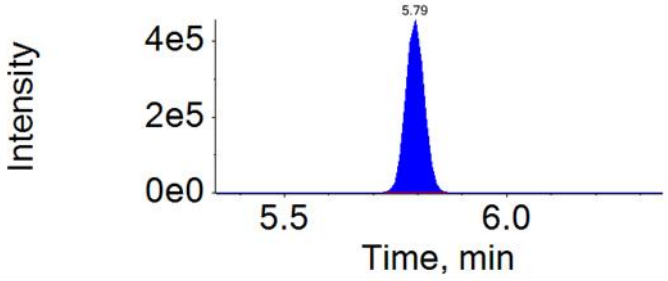
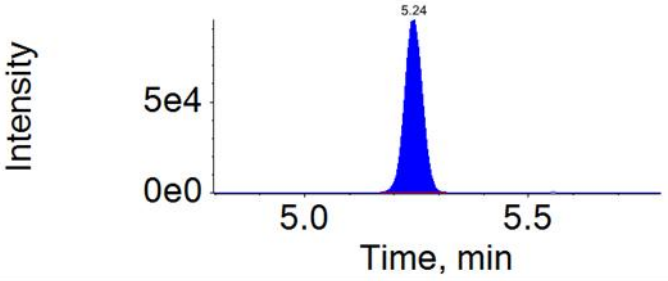
APPROVED
By JPT at 2:53 pm, 11/7/18

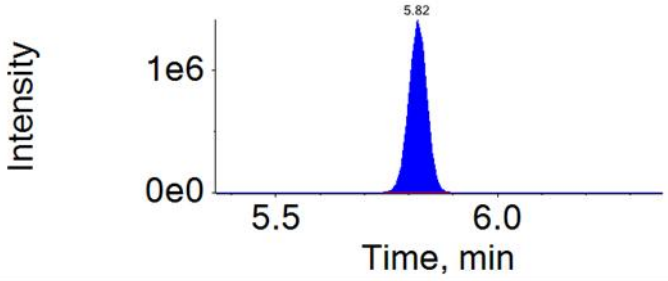
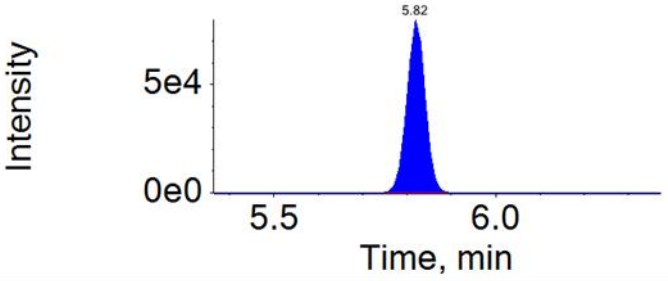
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

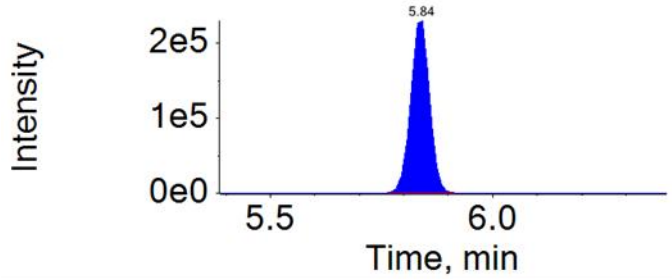
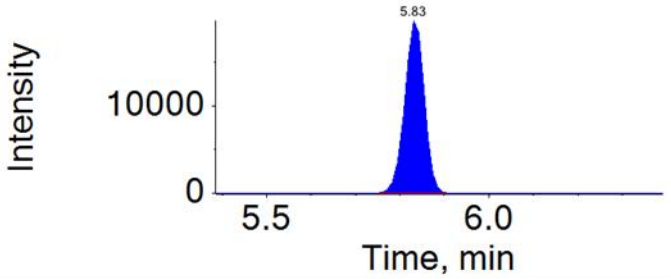
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

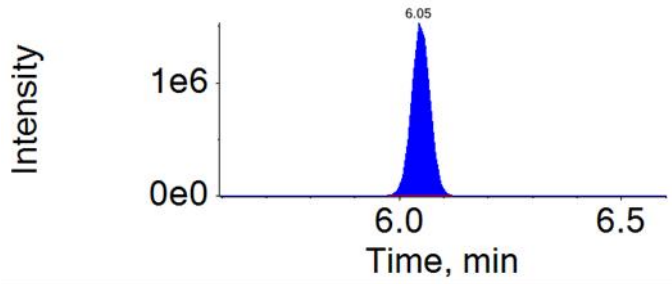
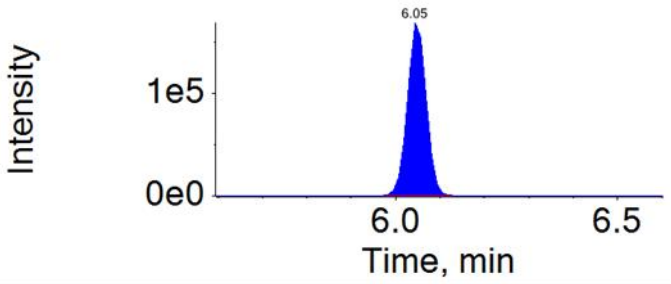
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

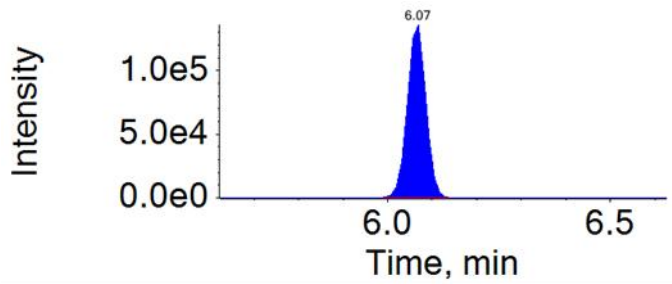
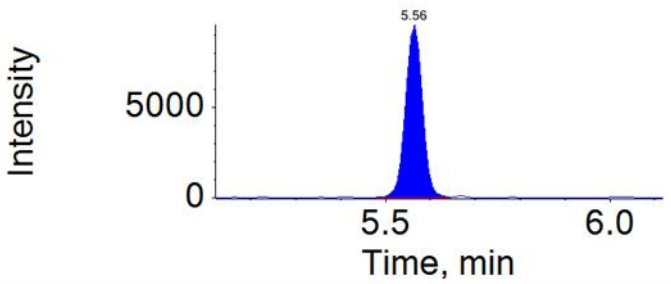
APPROVED
By JPT at 2:53 pm, 11/7/18

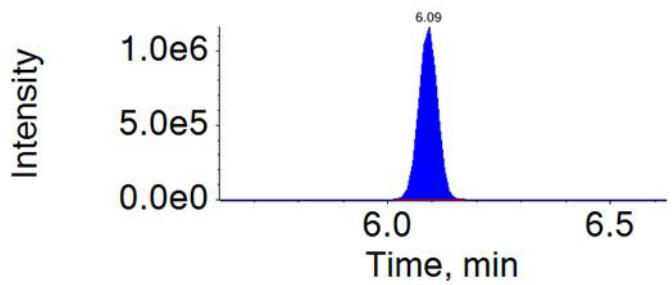
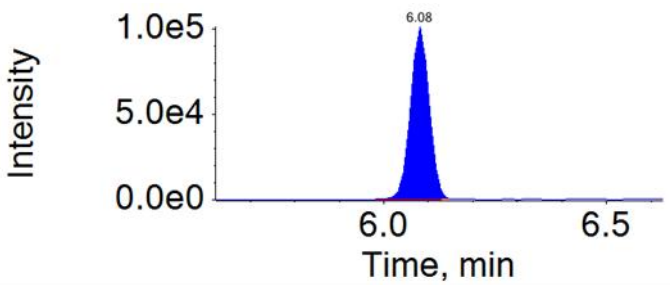
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

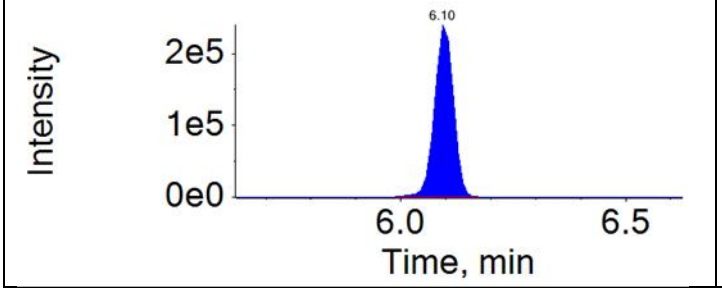
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

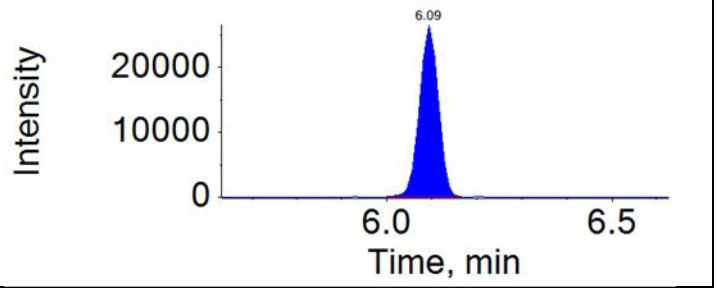
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

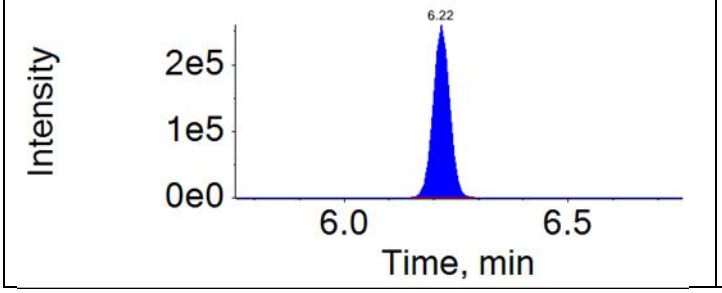
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

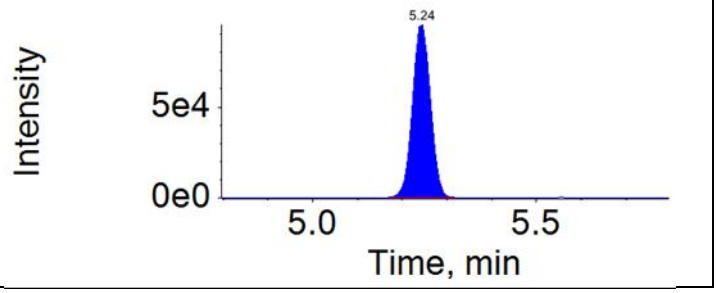
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



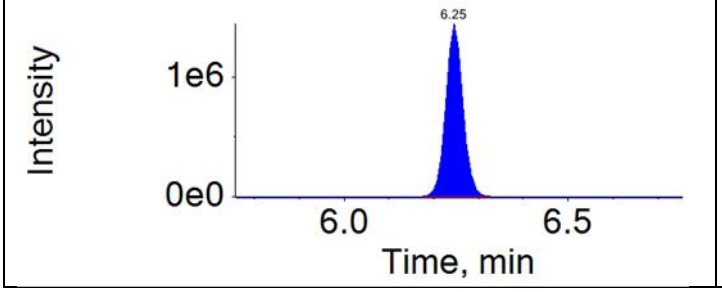


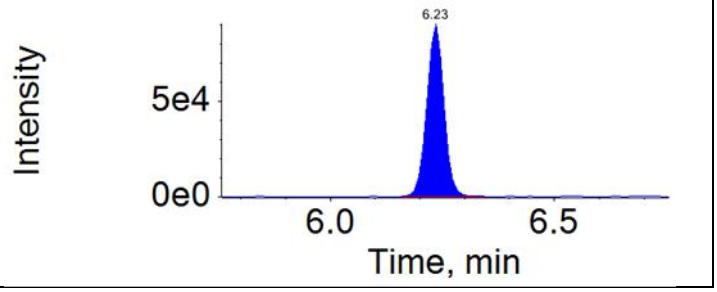
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



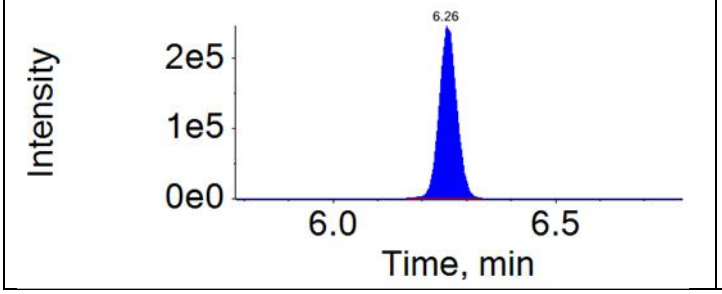


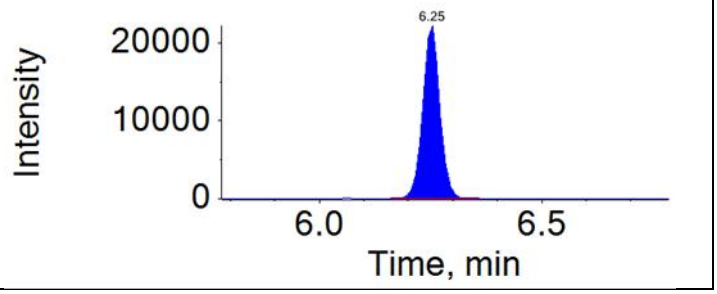
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



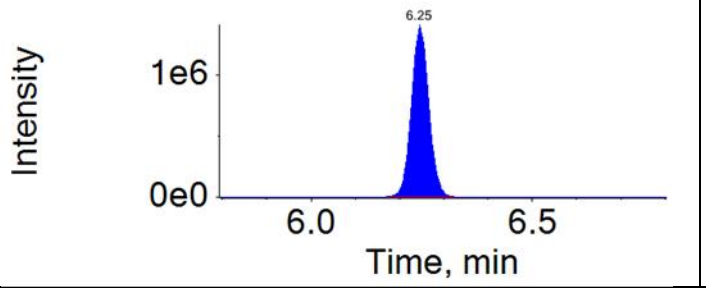


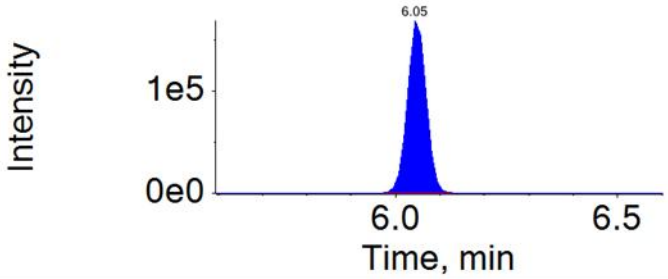
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

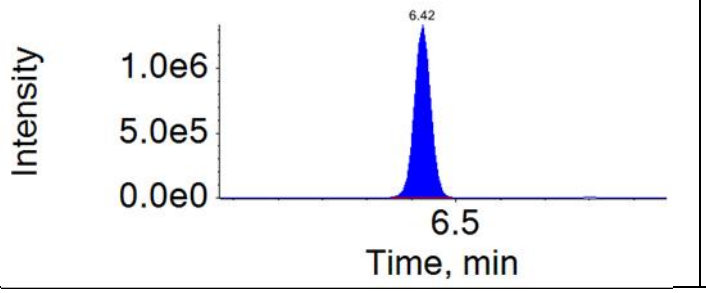
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

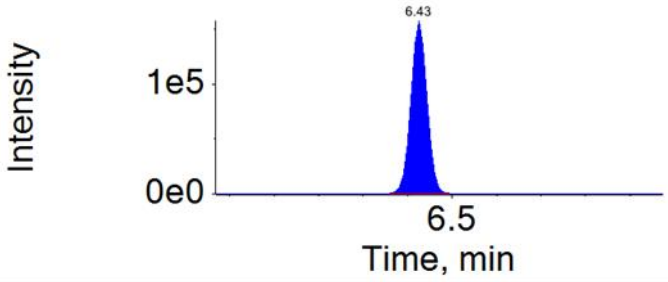
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



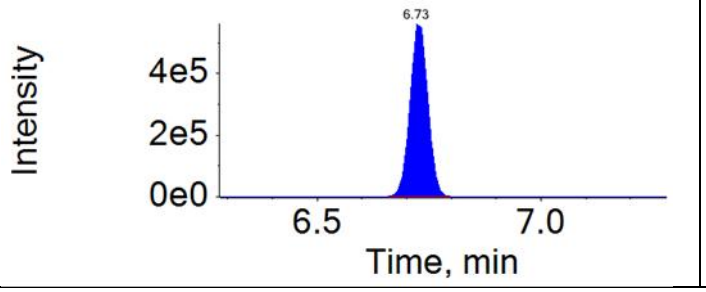


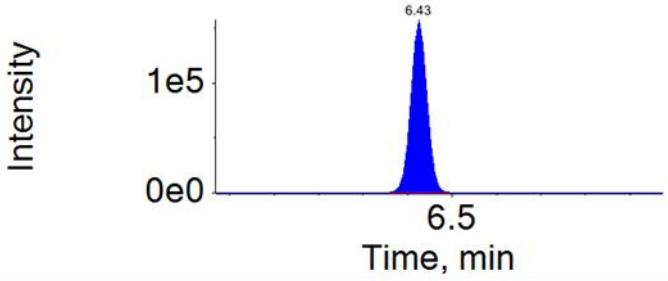
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



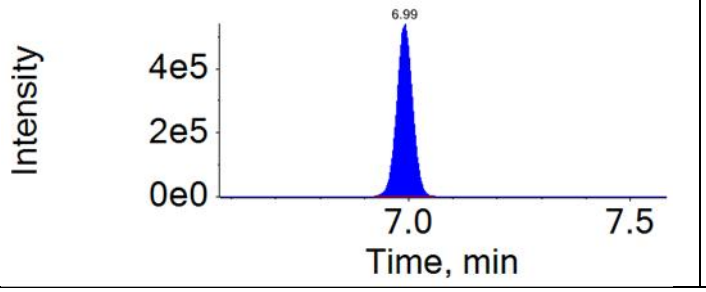


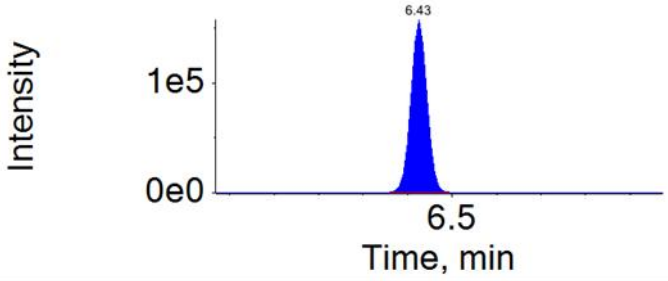
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

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Ion Ratio Report

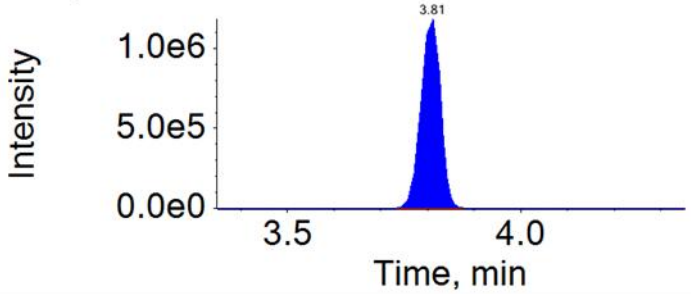
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-15.wiff

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	

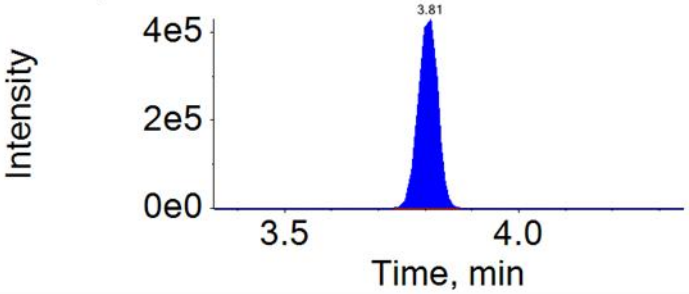
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

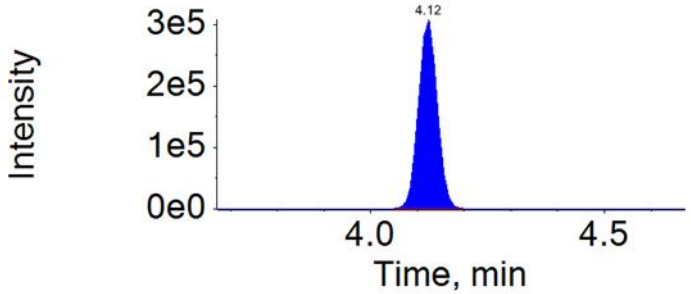
Component: PFBS
Primary Mass: 299.0 / 80.0



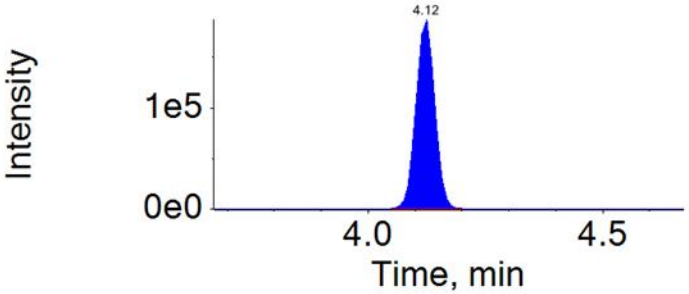
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



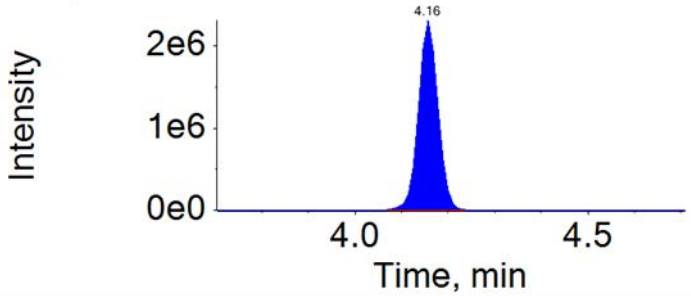
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



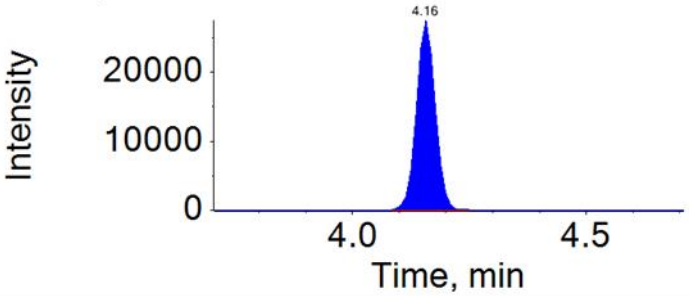
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



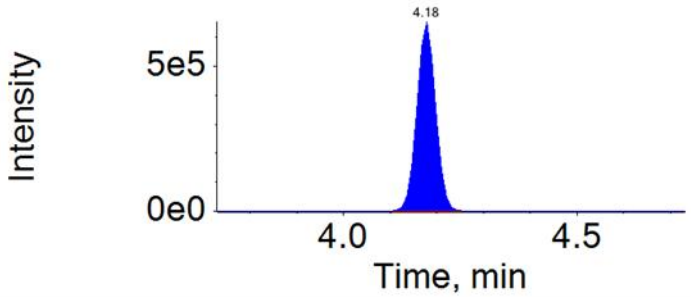
Component: PFHxA
Primary Mass: 313.0 / 269.0



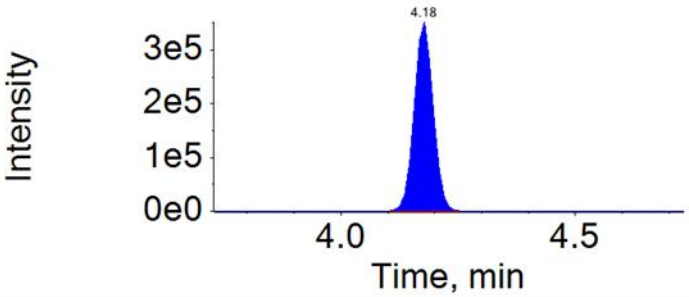
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



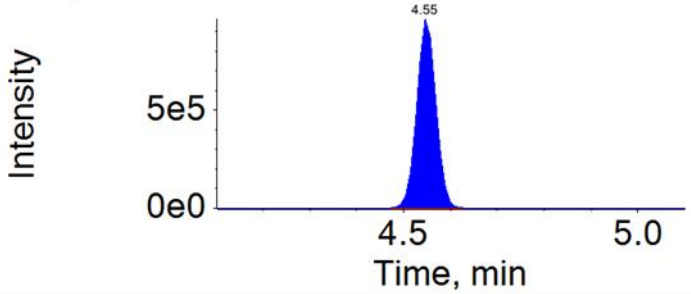
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



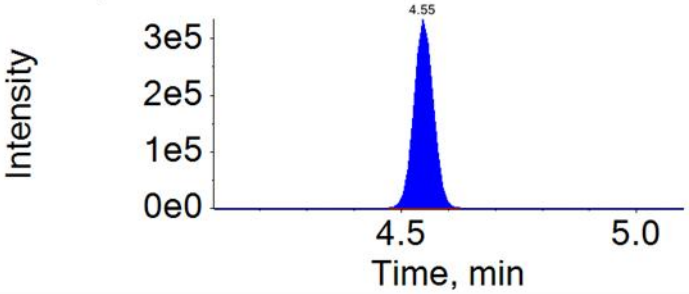
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

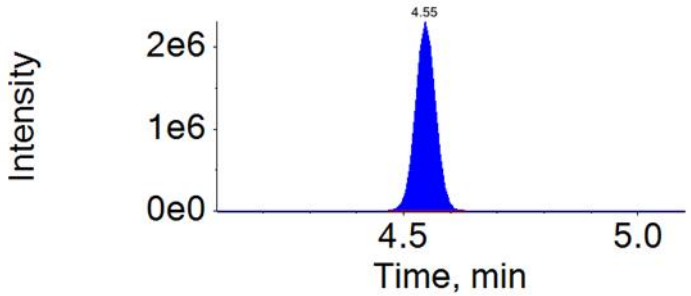
Component: PFHxS
Primary Mass: 399.0 / 80.0



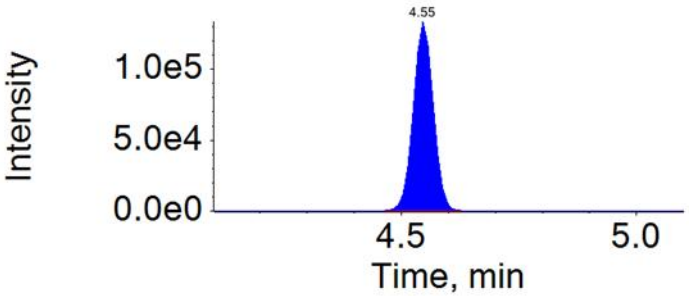
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



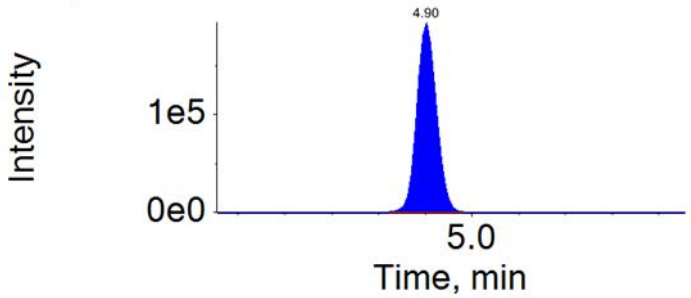
Component: PFHpA
Primary Mass: 363.0 / 319.0



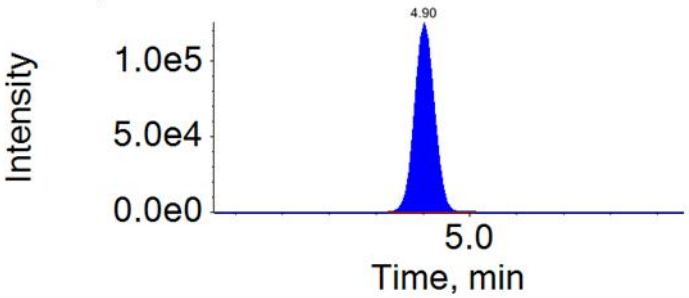
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



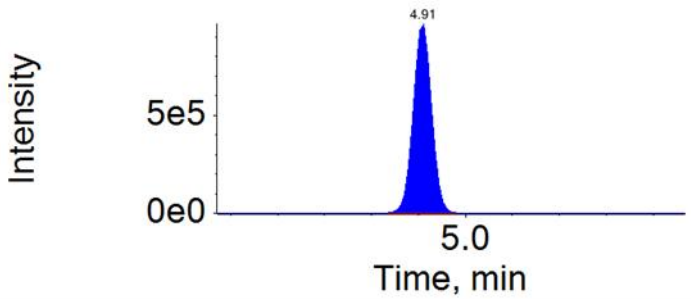
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



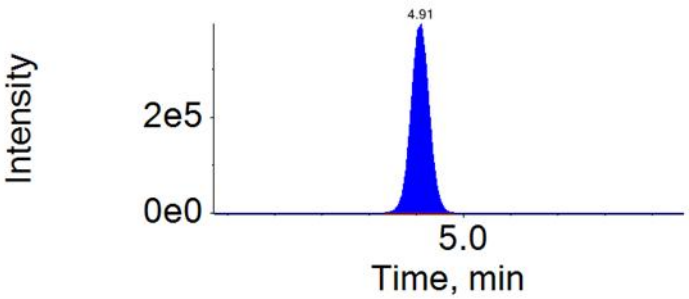
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



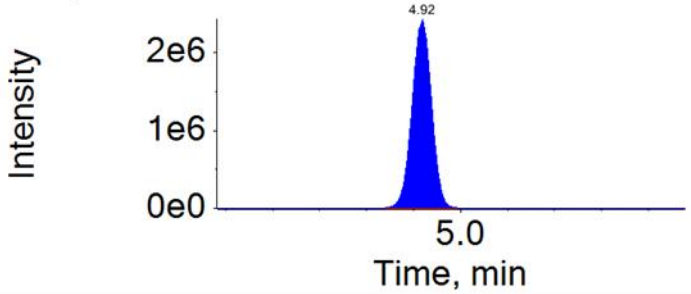
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



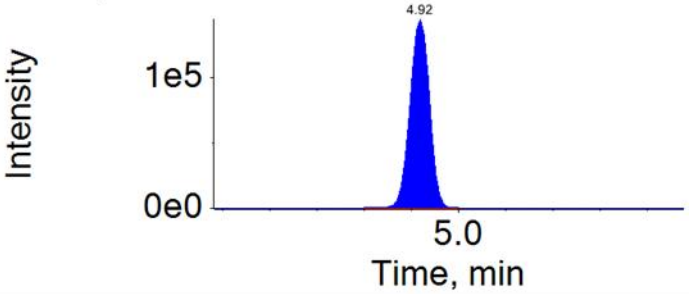
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

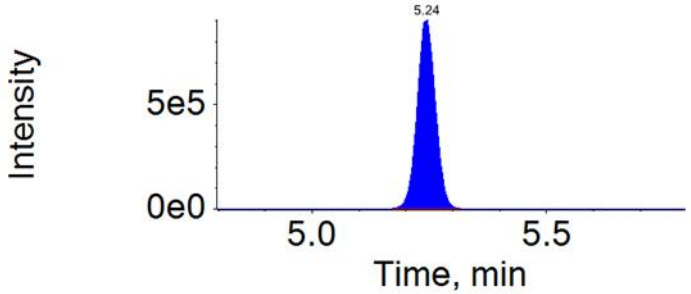
Component: PFOA
Primary Mass: 413.0 / 369.0



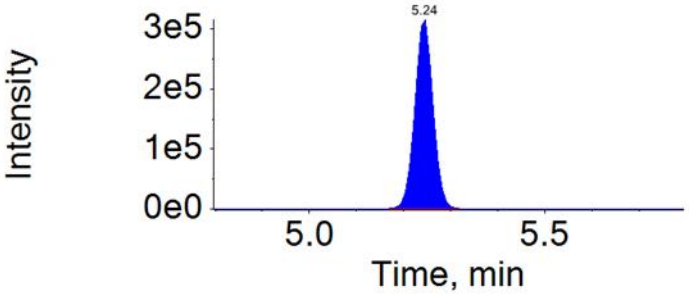
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



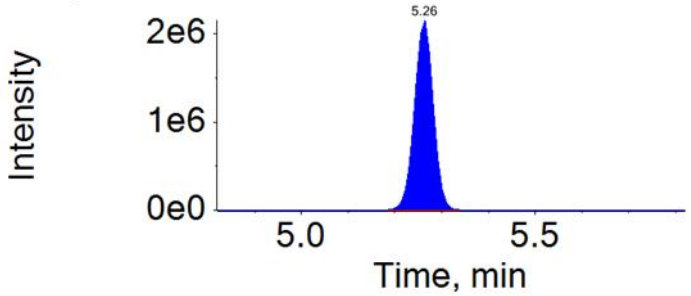
Component: PFOS
Primary Mass: 499.0 / 80.0



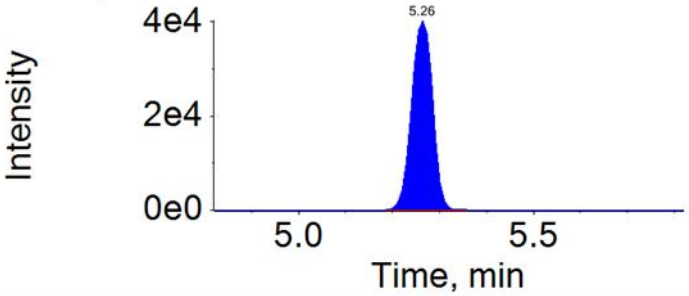
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



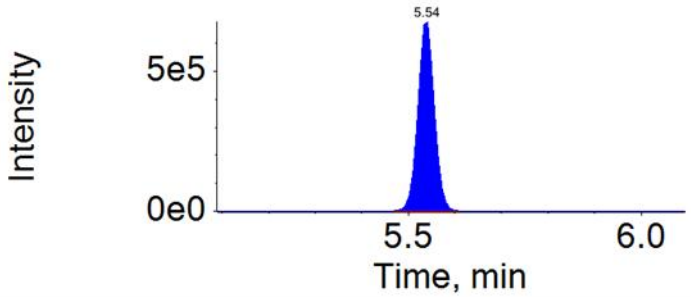
Component: PFNA
Primary Mass: 463.0 / 419.0



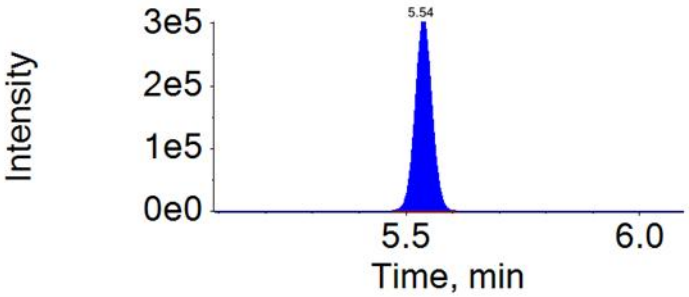
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



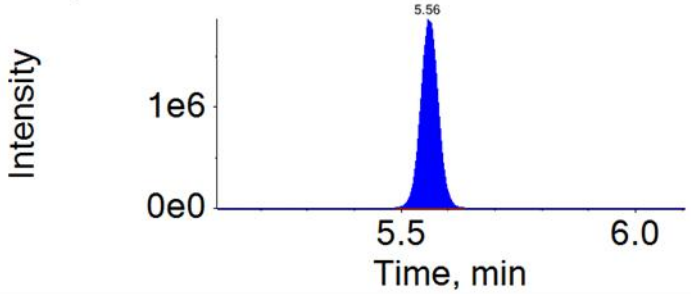
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



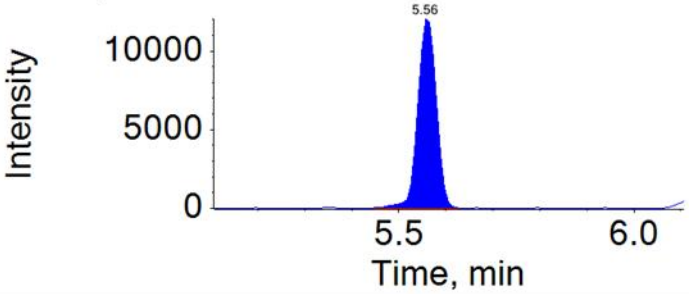
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

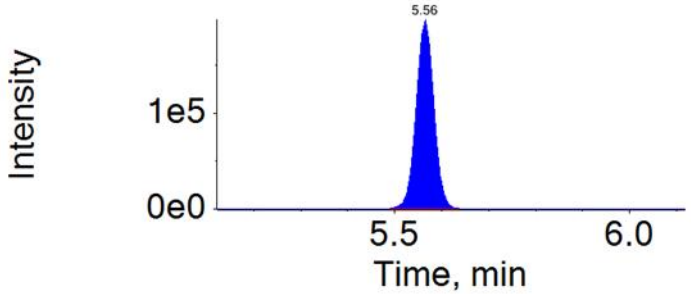
Component: PFDA
Primary Mass: 513.0 / 469.0



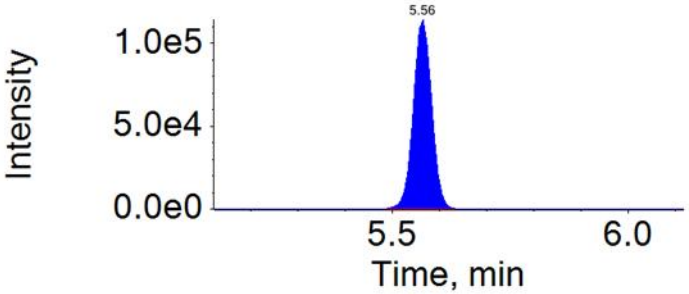
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



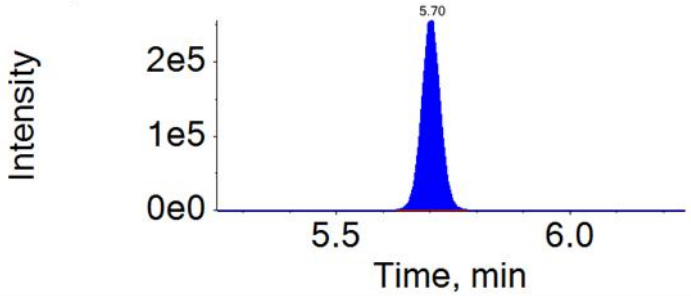
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



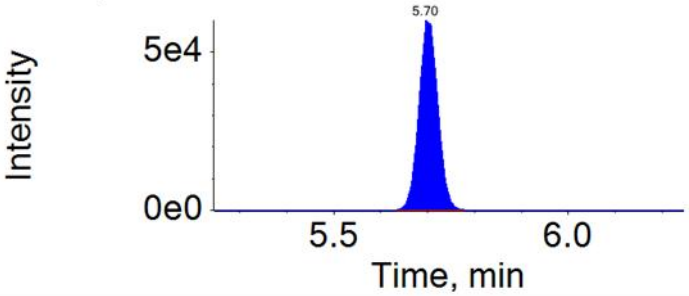
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



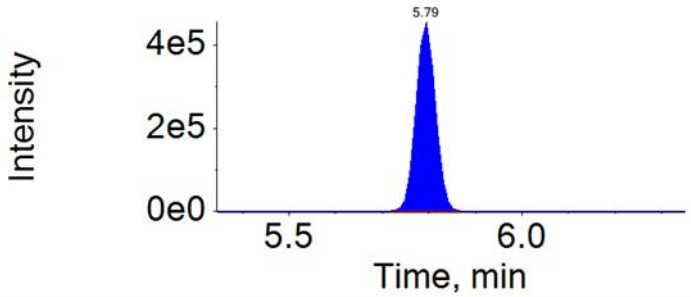
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



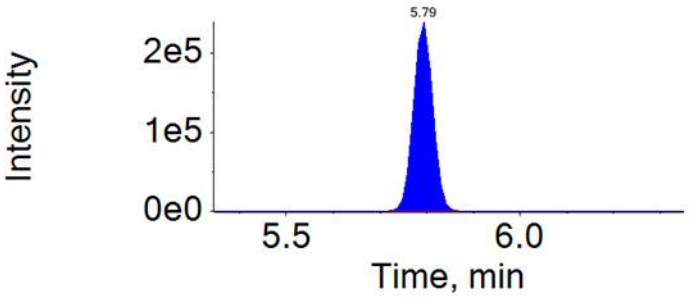
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



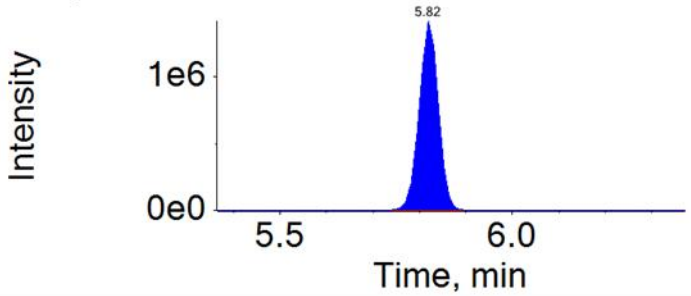
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Secondary Mass: 599.0 / 99.0



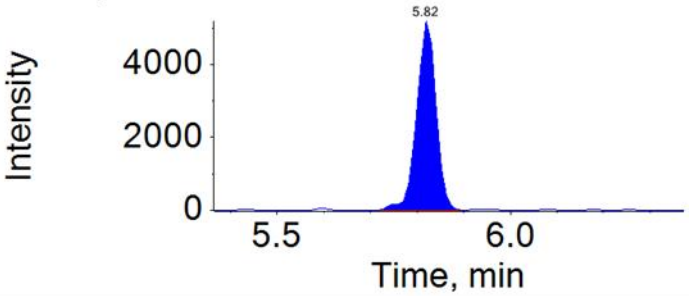
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

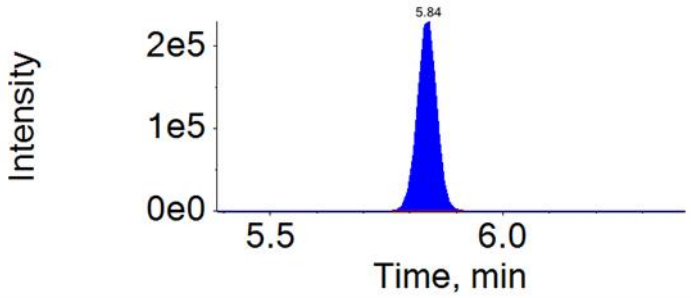
Component: PFUnDA
Primary Mass: 563.0 / 519.0



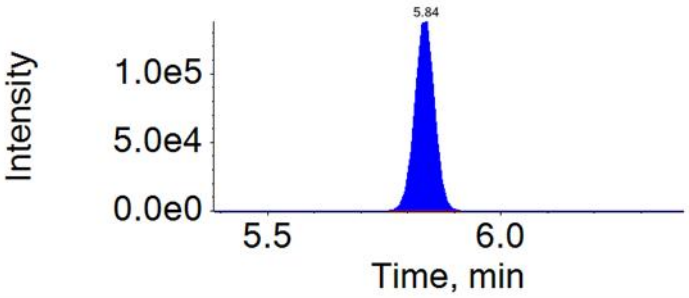
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



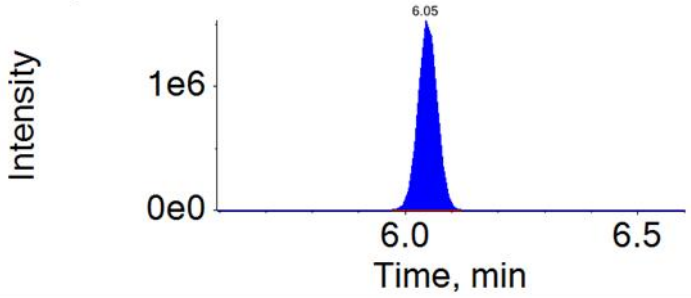
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



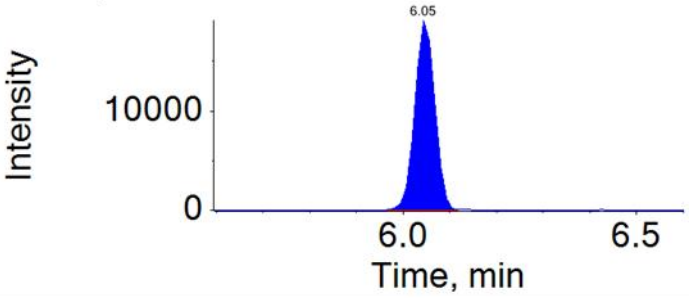
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



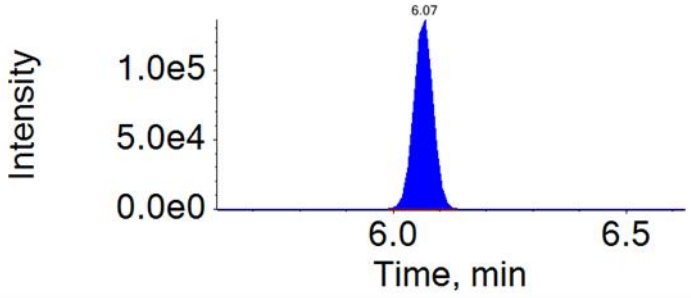
Component: PFDoDA
Primary Mass: 613.0 / 569.0



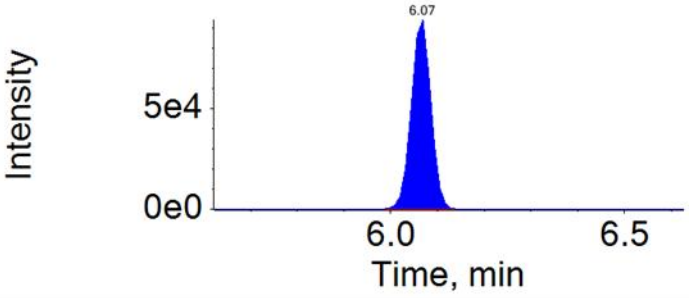
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



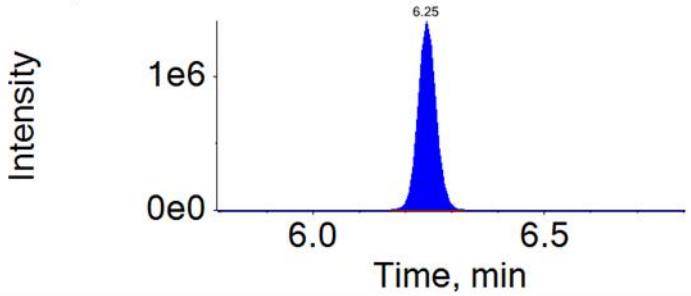
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



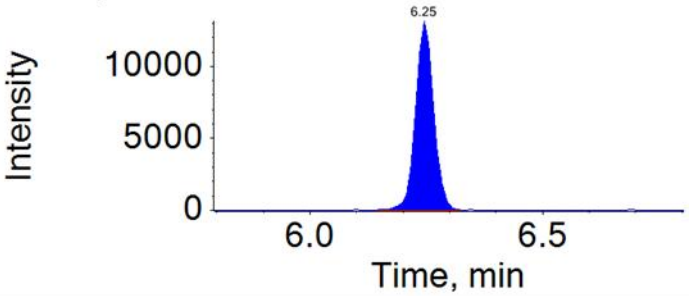
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

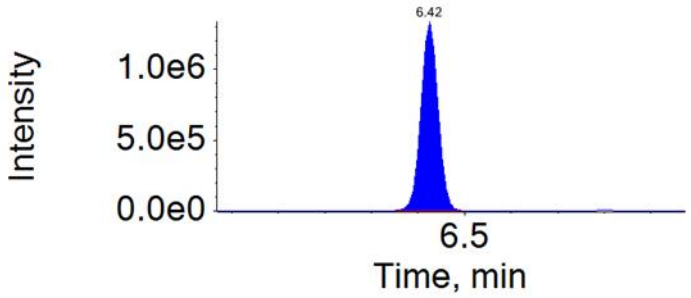
Component: PFTrDA
Primary Mass: 663.0 / 619.0



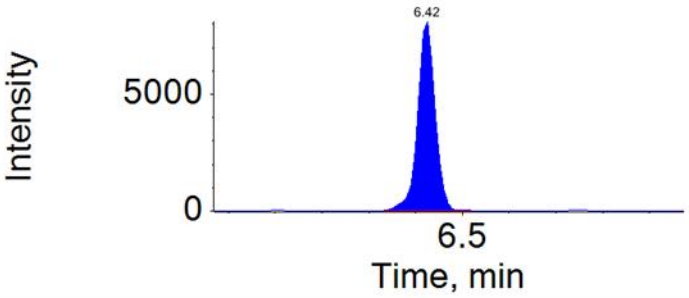
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



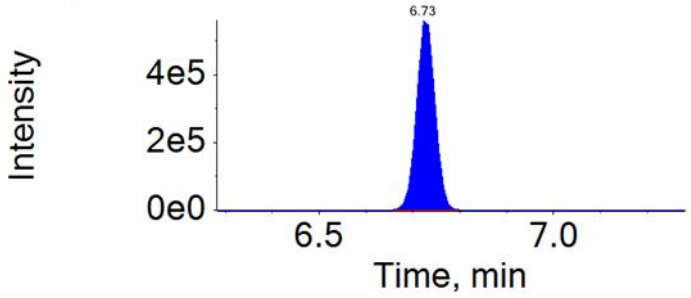
Component: PFTeDA
Primary Mass: 713.0 / 669.0



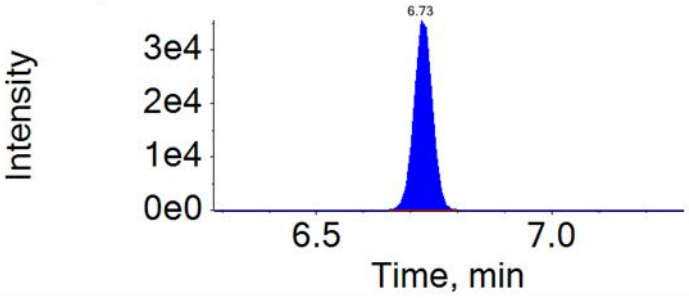
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



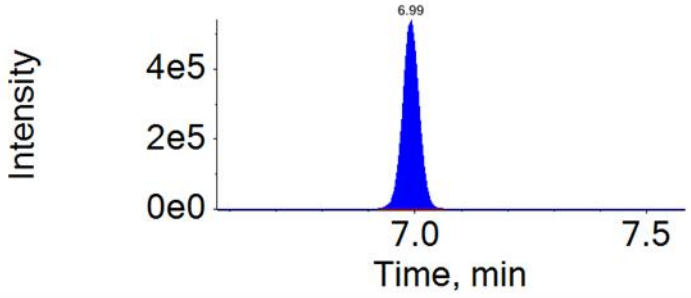
Component: PFHxDA
Primary Mass: 813.0 / 769.0



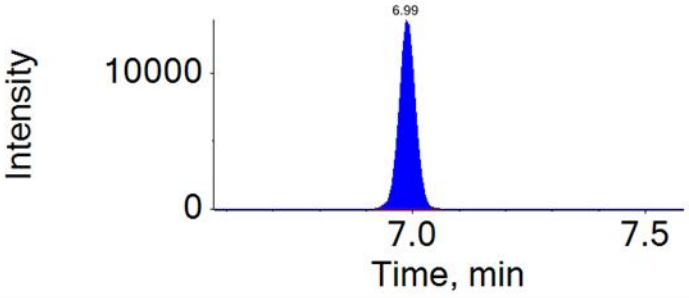
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

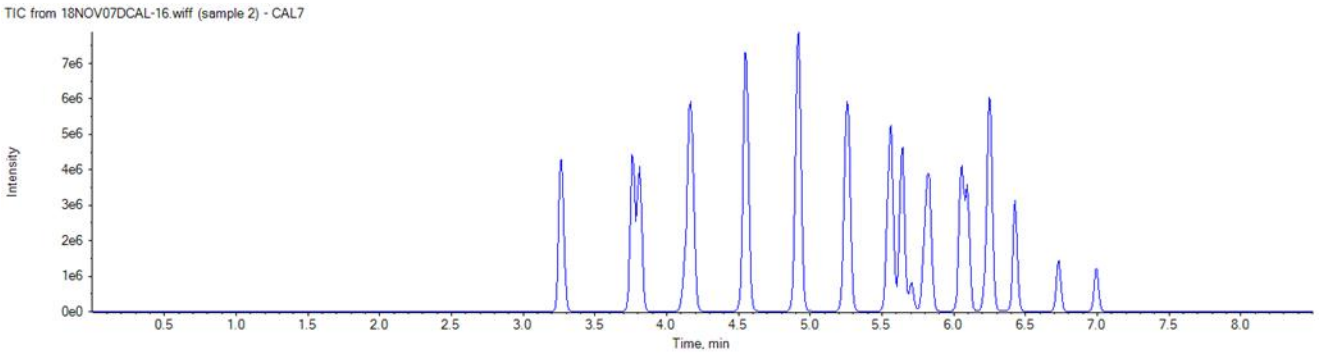
Analyte Quantitation Peak Table

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

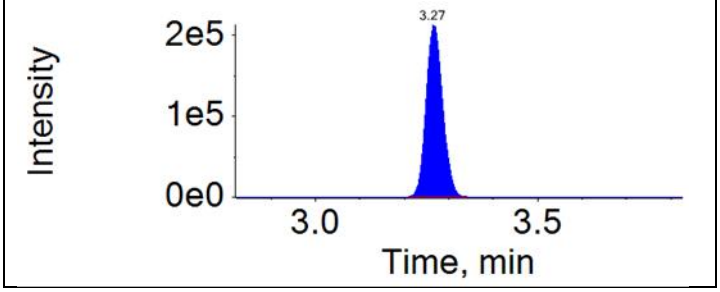


APPROVED
By JPT at 2:53 pm, 11/7/18

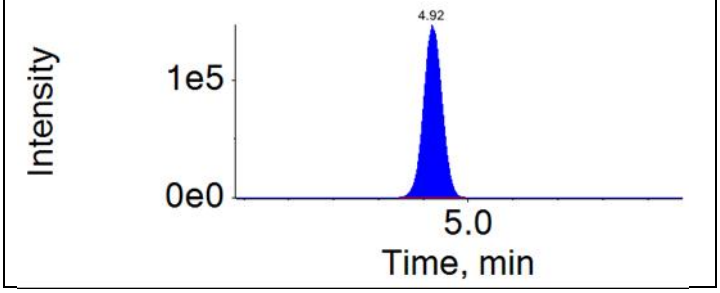
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

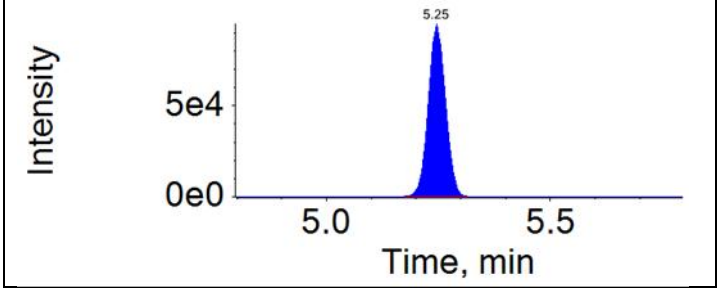
Injection Standard: 13C3-PFBA
216.0 / 172.0



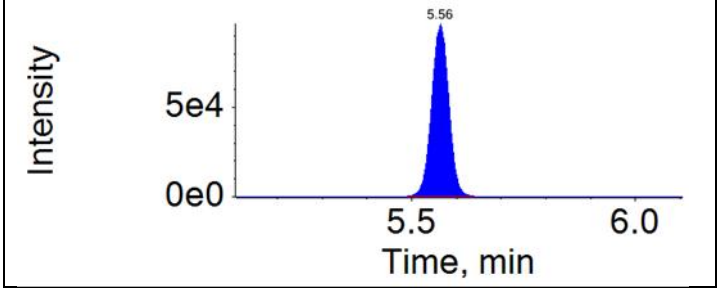
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

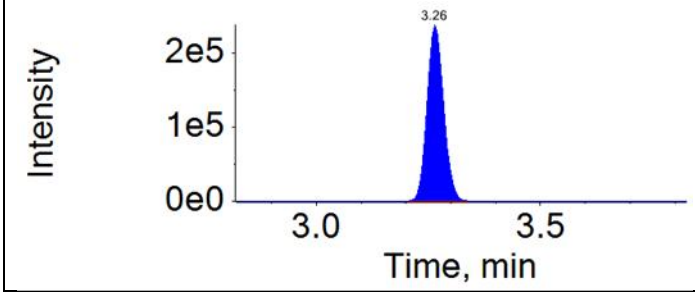


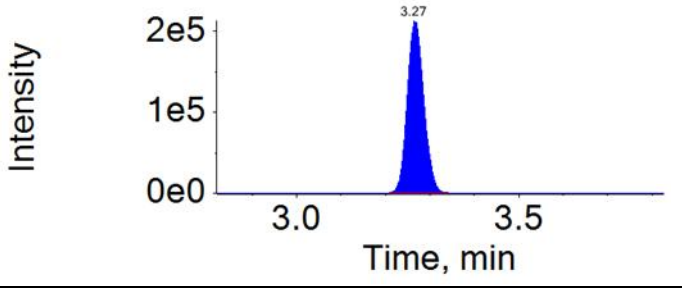
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

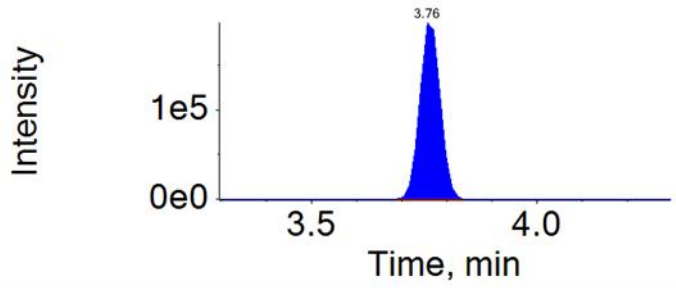
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

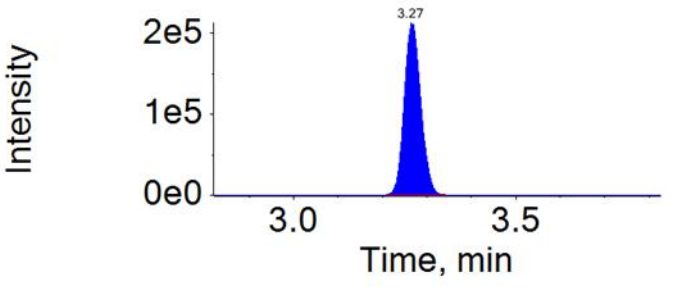
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



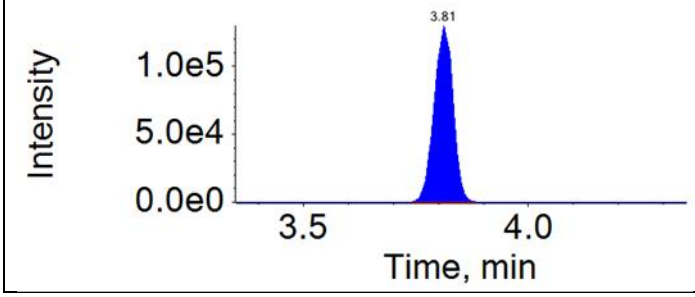


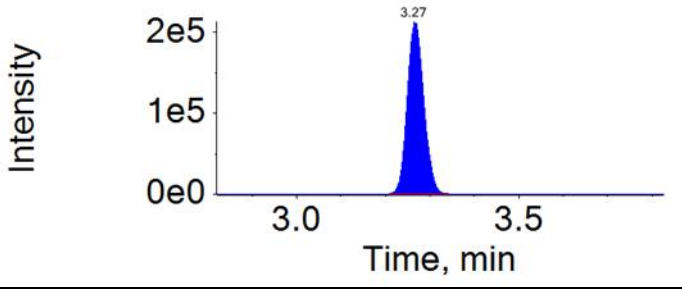
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



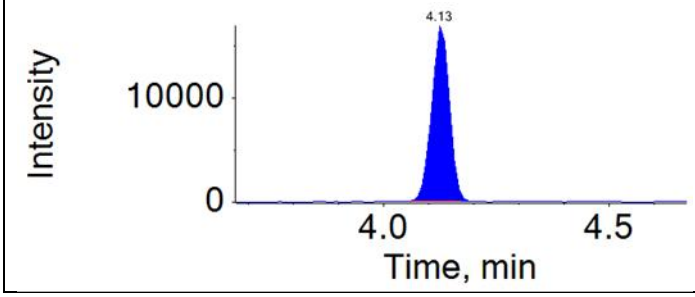


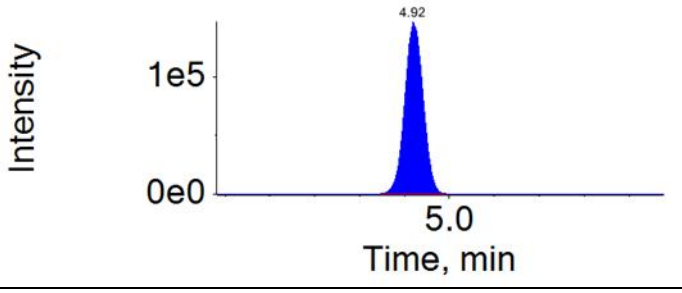
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

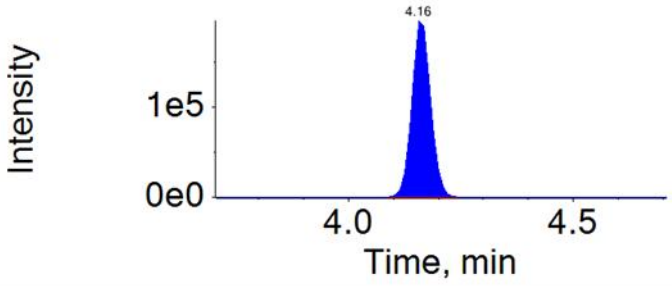
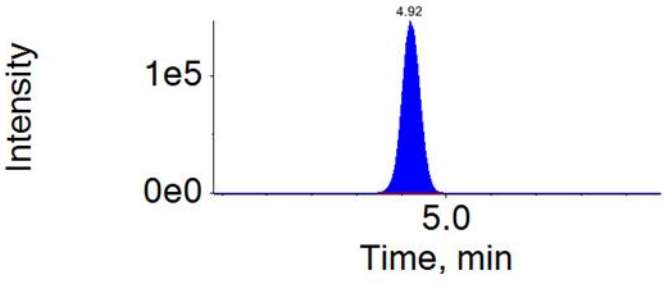


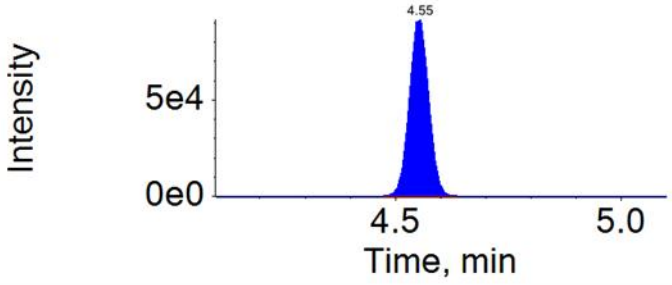
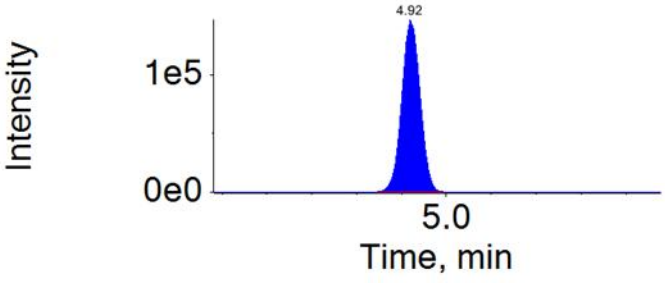


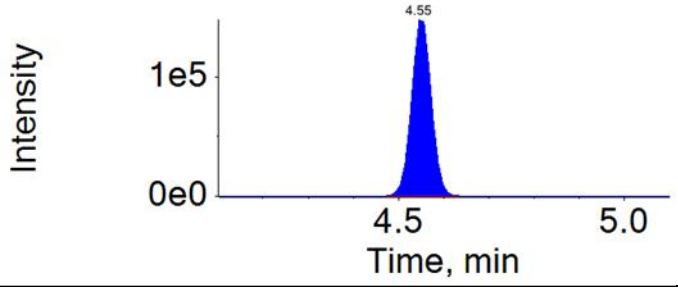
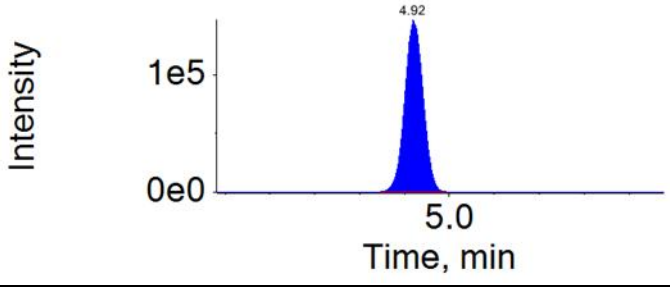
APPROVED
By JPT at 2:53 pm, 11/7/18

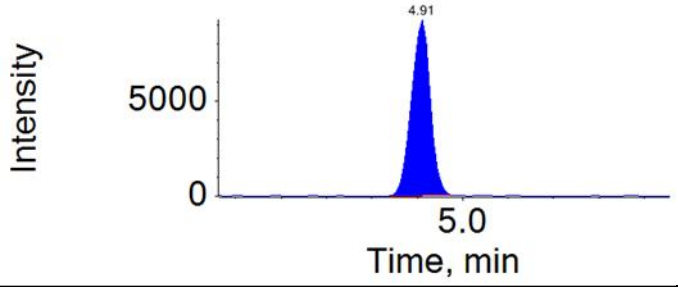
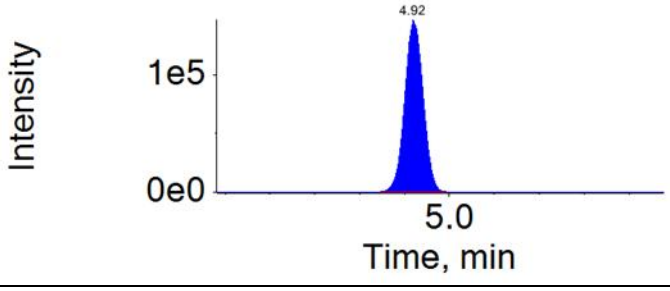
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

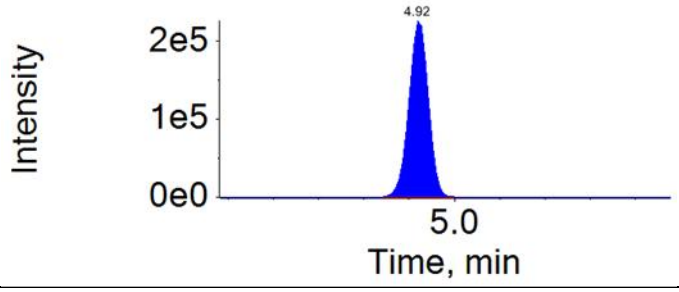
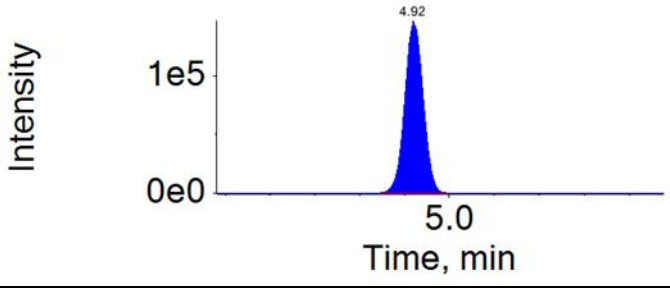
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

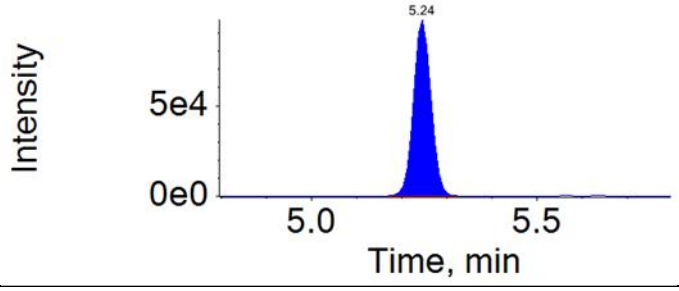
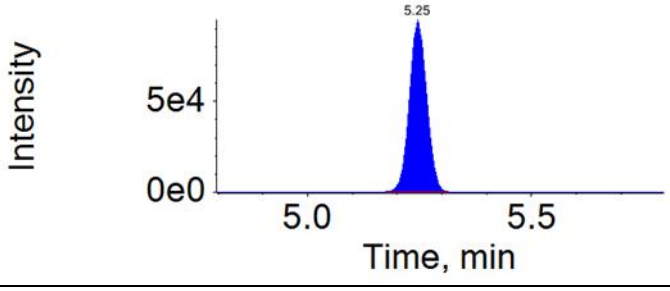
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

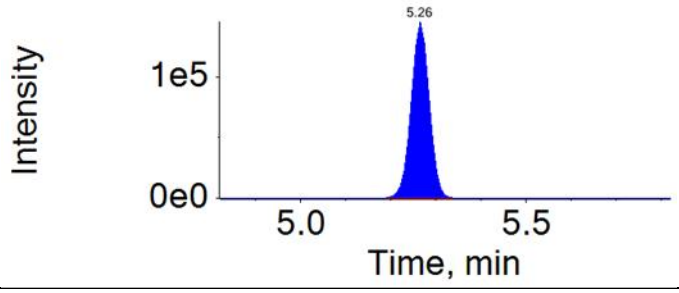
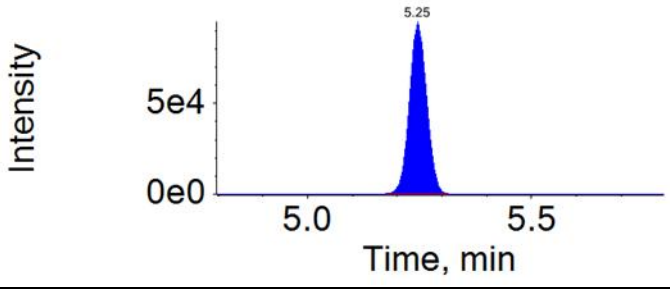
APPROVED
By JPT at 2:53 pm, 11/7/18

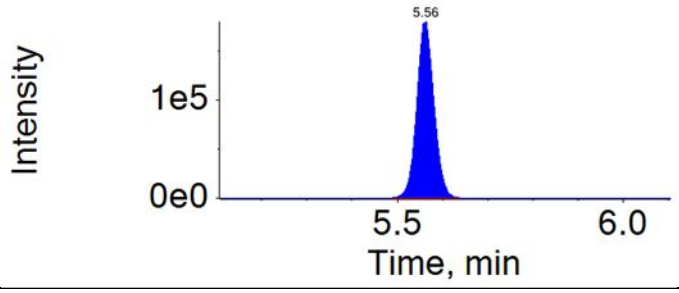
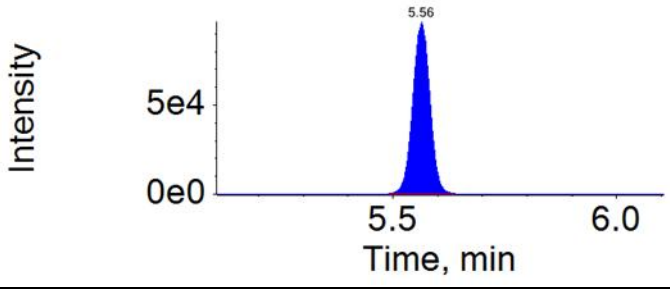
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

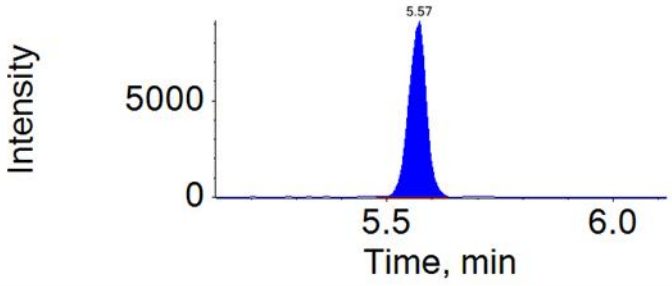
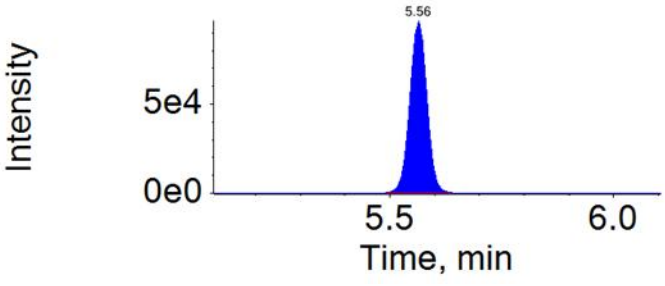
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

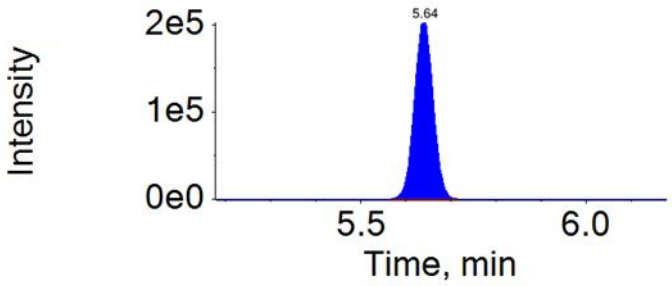
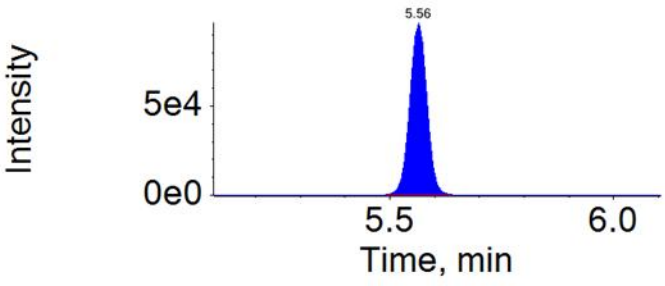
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

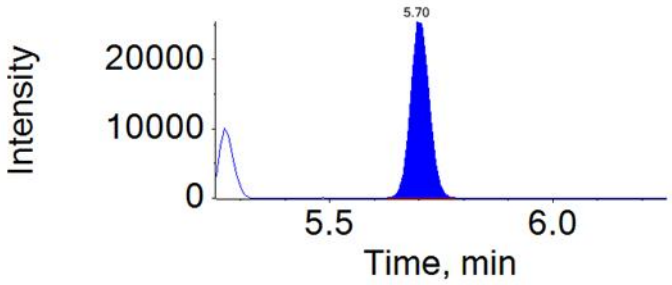
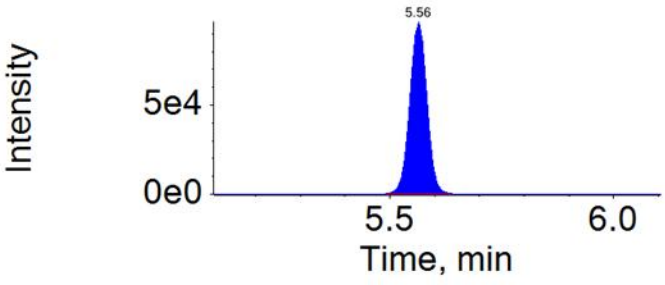
APPROVED
By JPT at 2:53 pm, 11/7/18

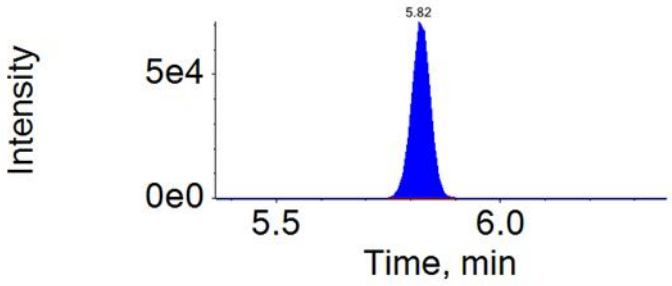
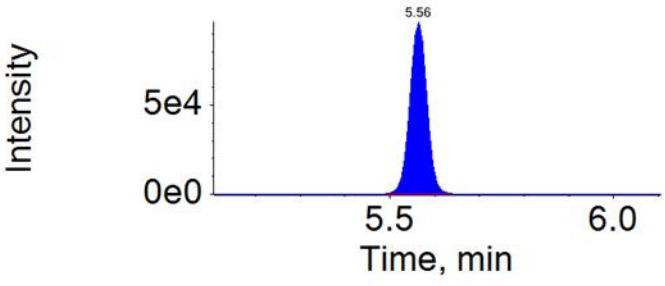
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

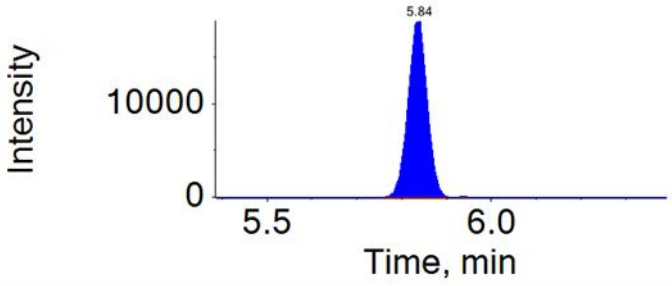
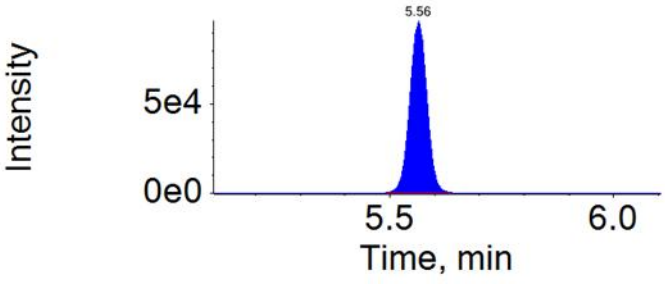
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

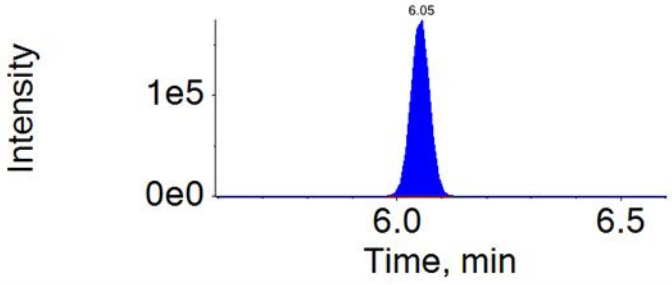
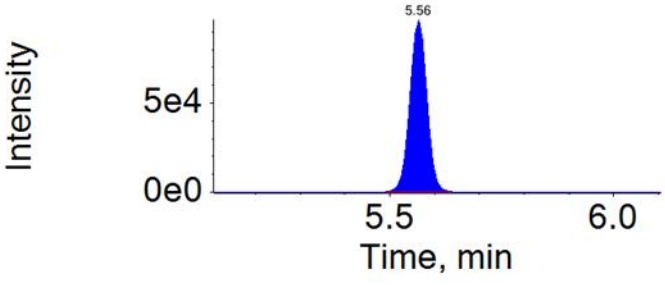
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

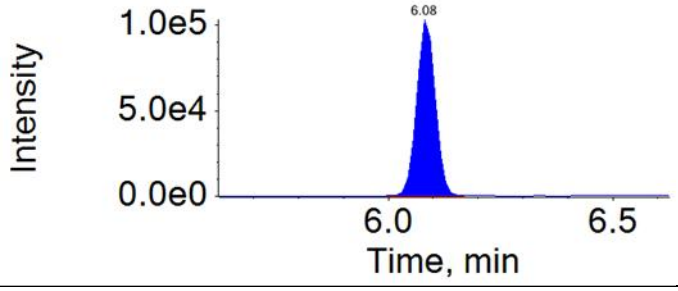
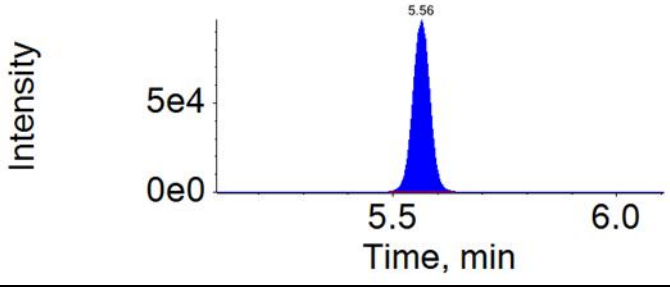
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

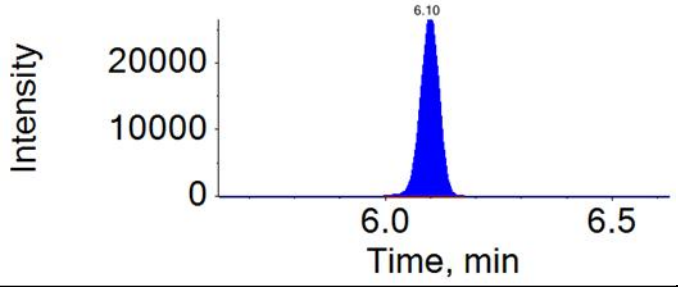
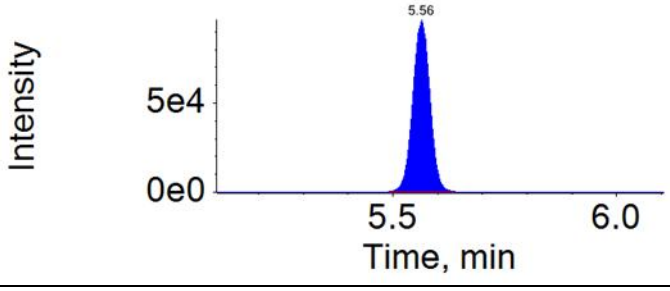
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

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
	

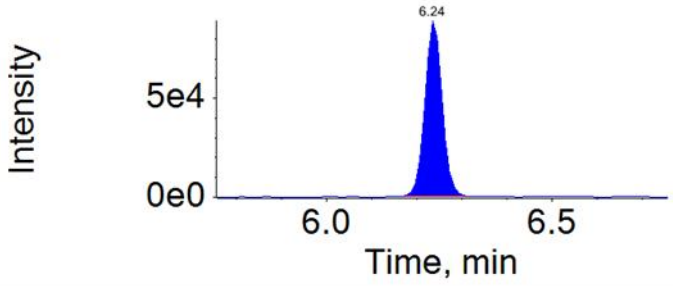
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

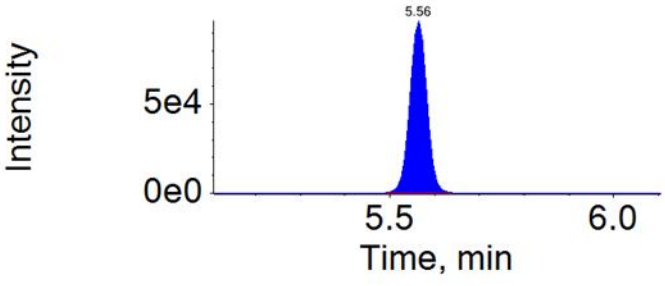
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

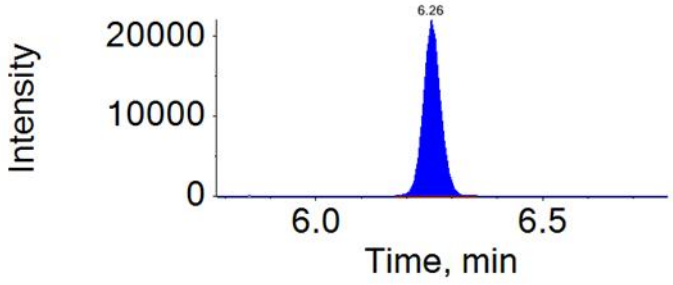
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

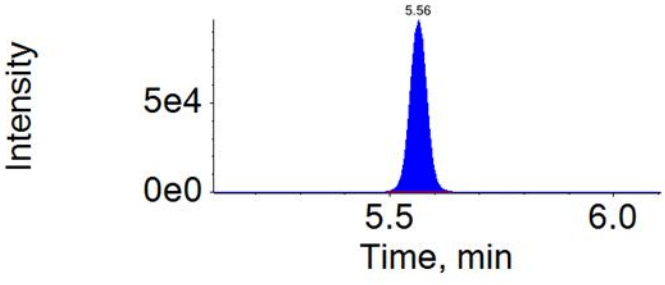
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



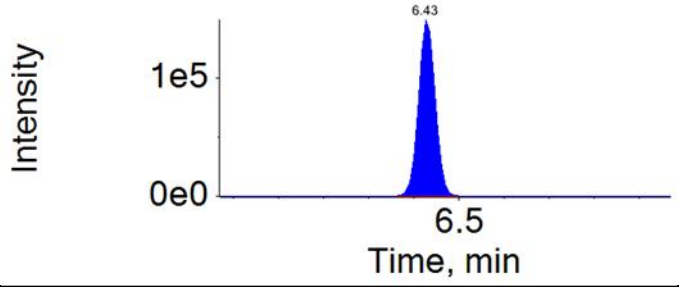


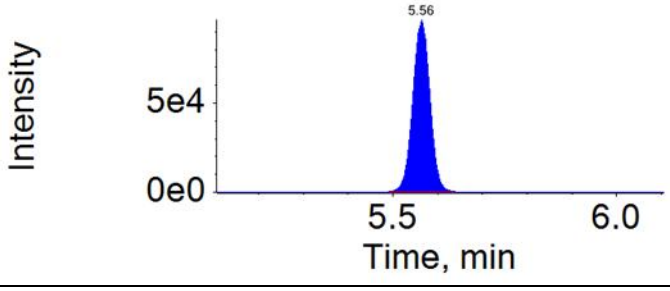
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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

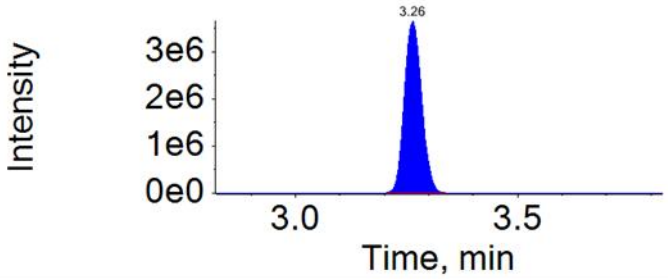
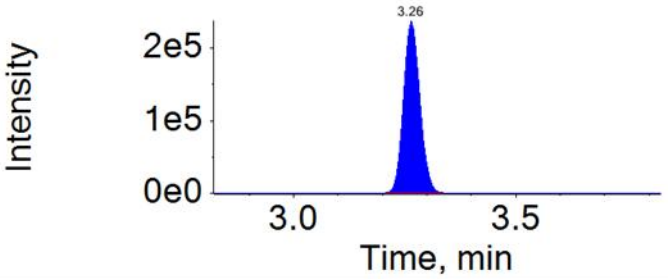


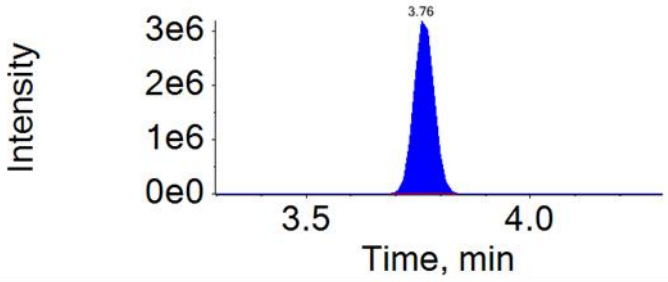
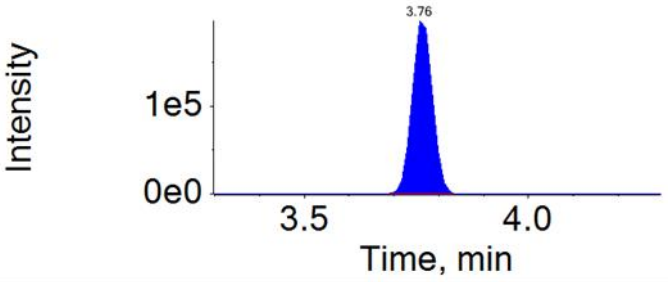


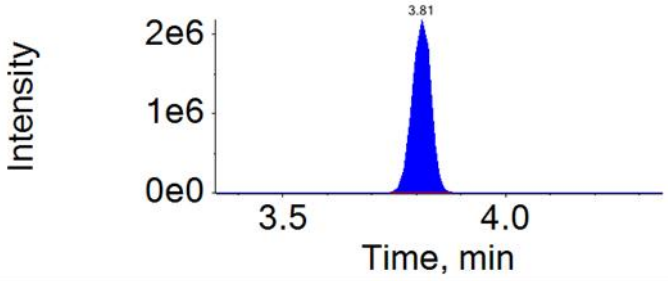
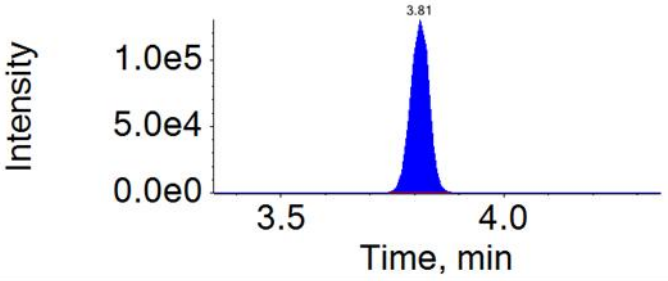
APPROVED
By JPT at 2:53 pm, 11/7/18

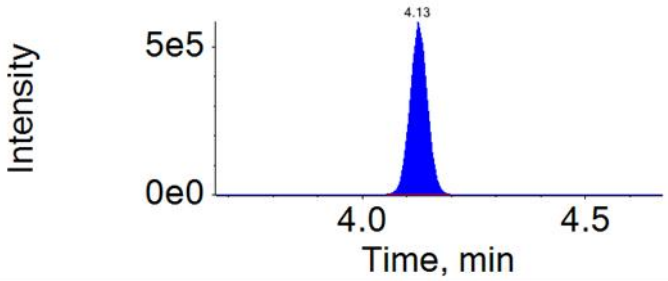
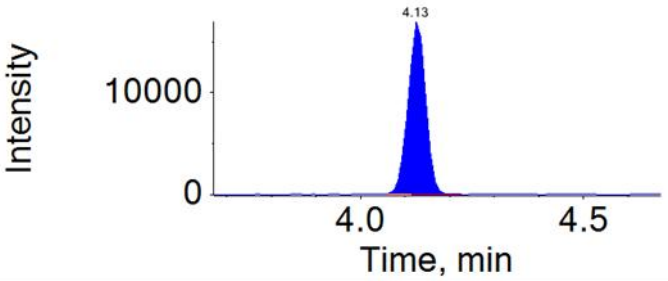
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

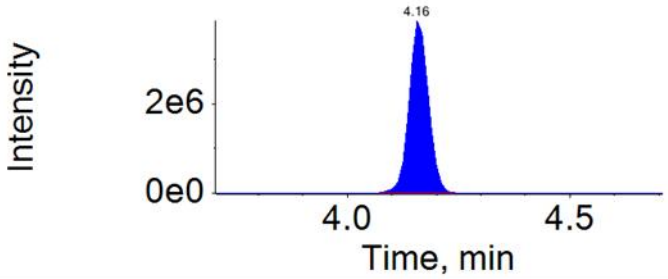
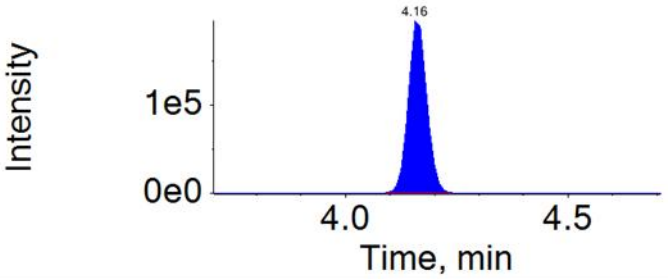
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

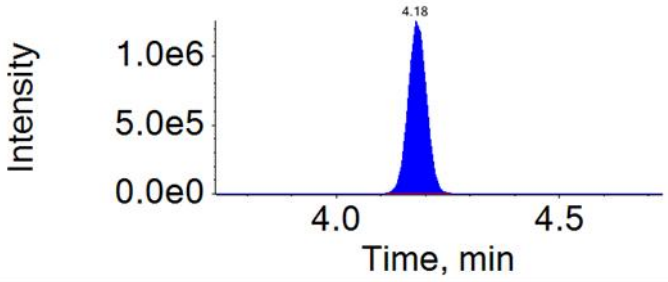
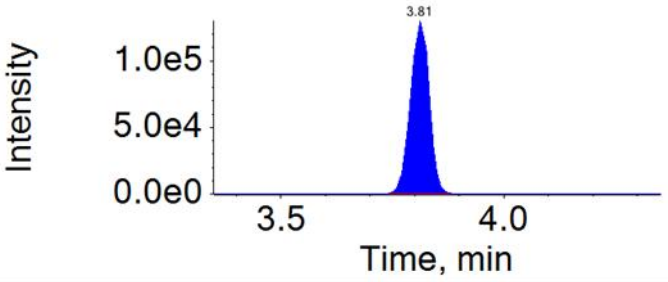
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

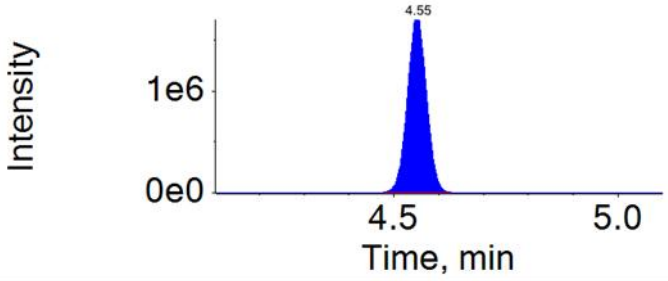
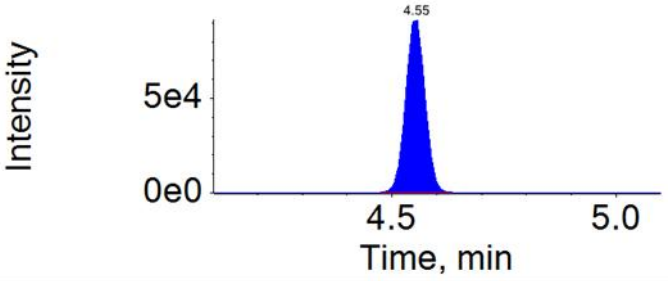
APPROVED
By JPT at 2:53 pm, 11/7/18

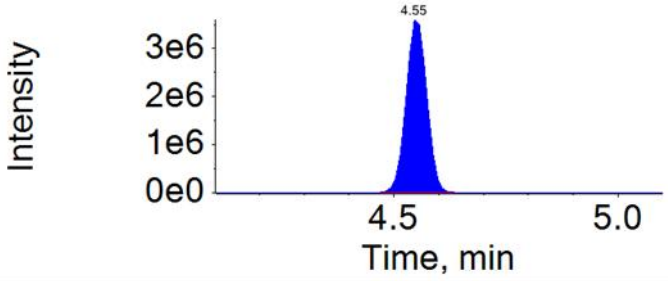
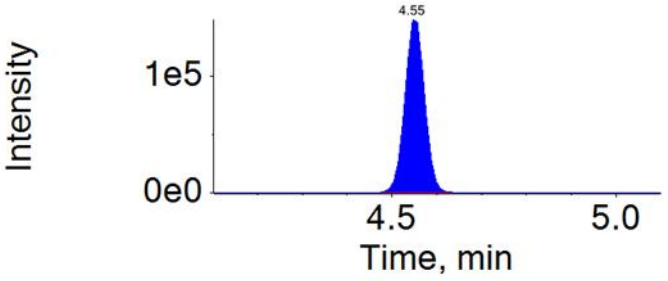
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

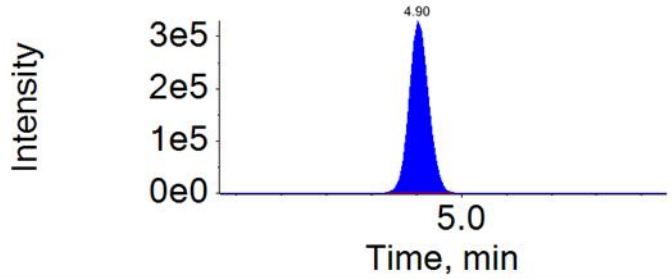
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

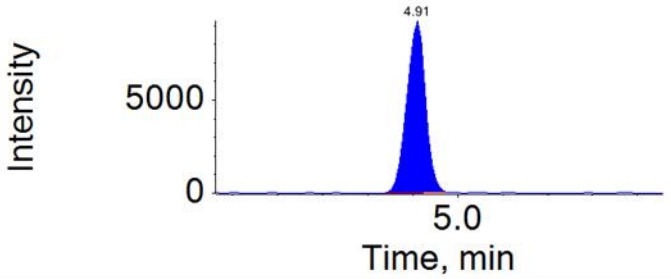
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

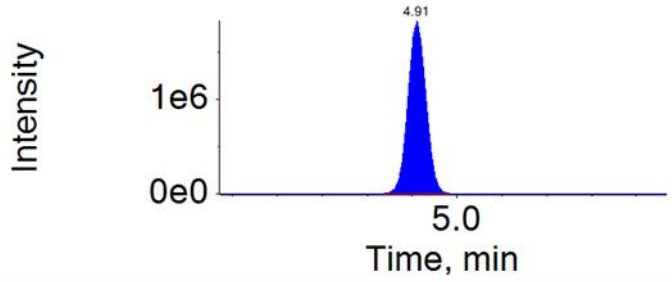
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

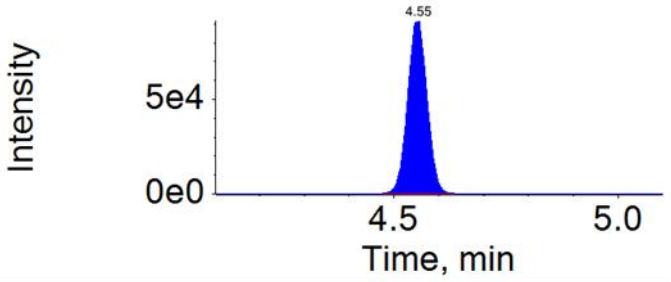
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



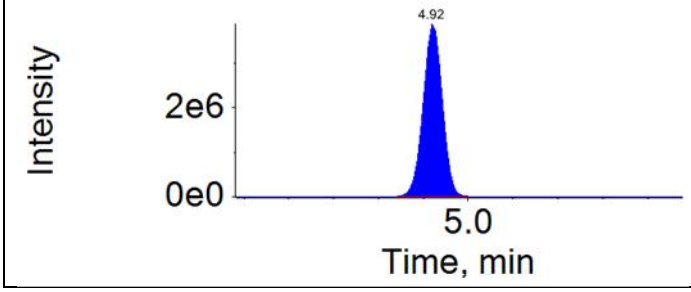


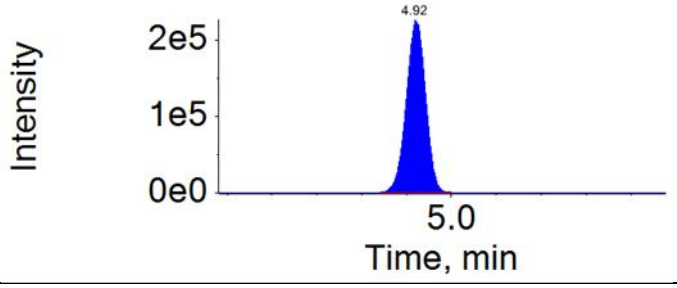
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



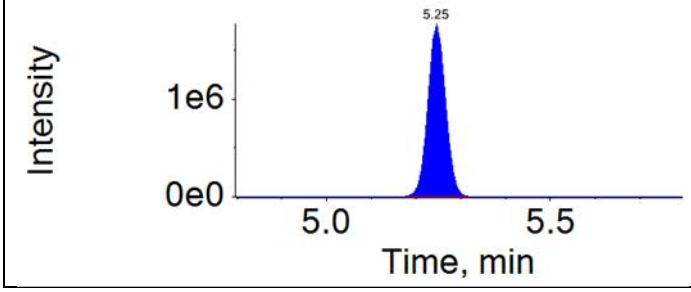


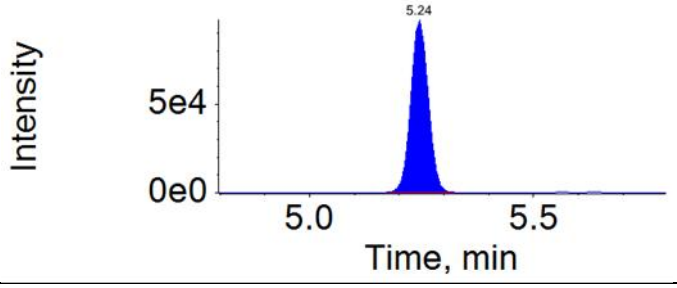
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



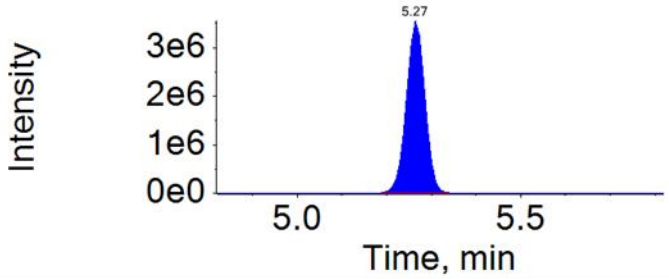


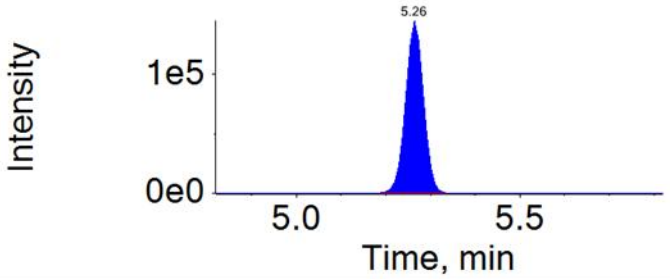
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

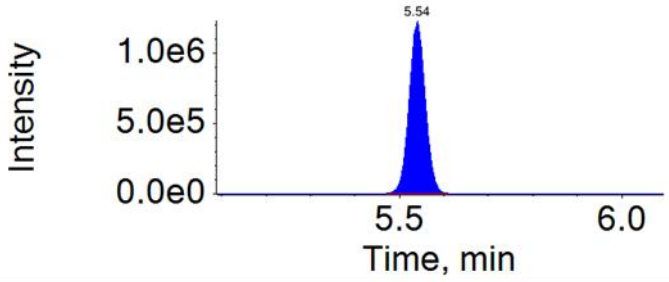
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

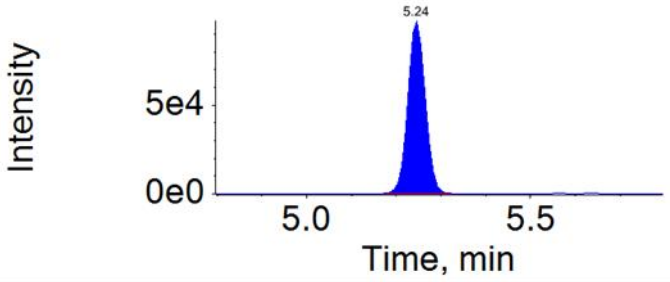
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



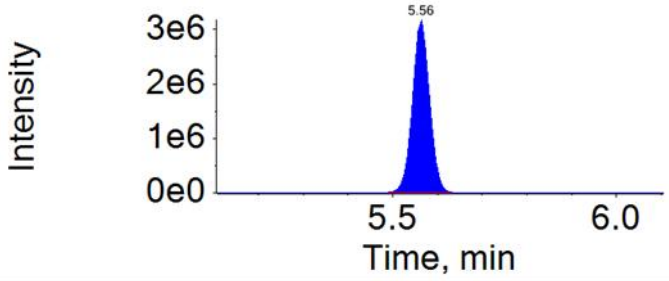


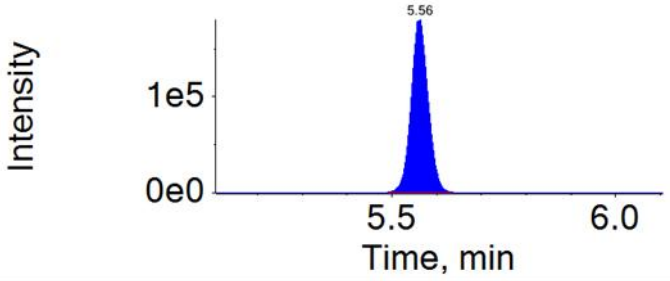
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



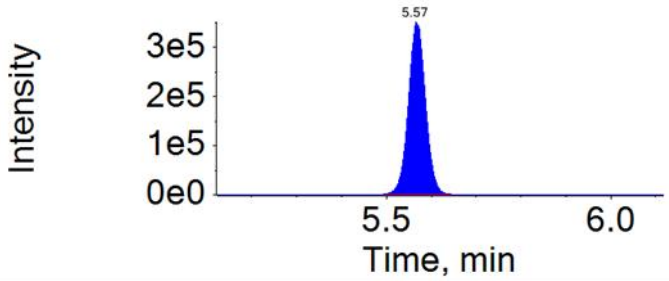


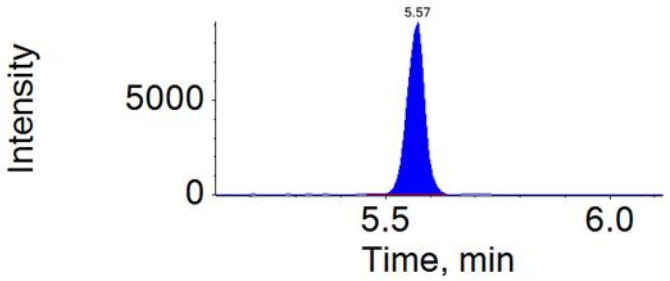
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

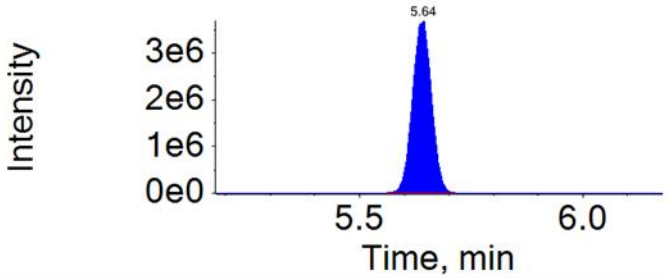
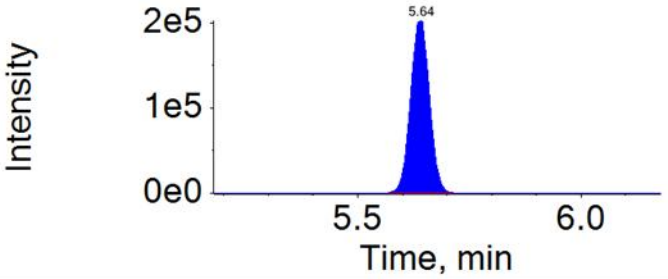


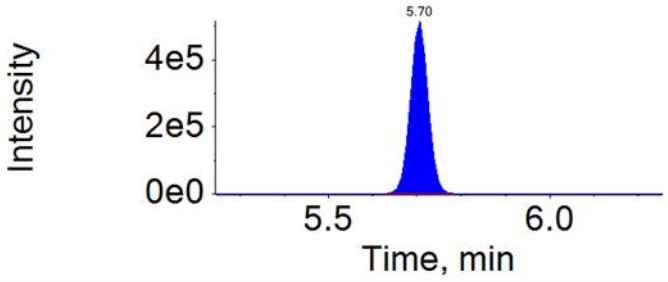
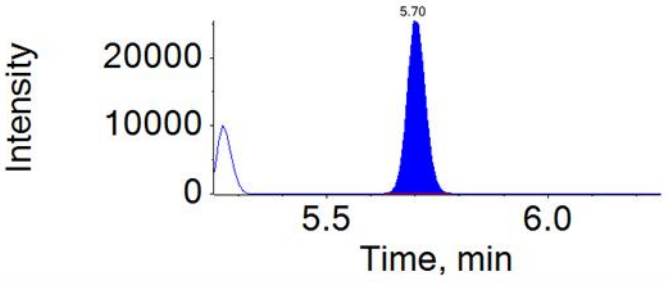


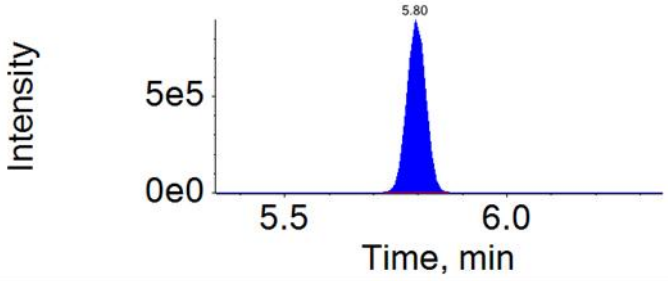
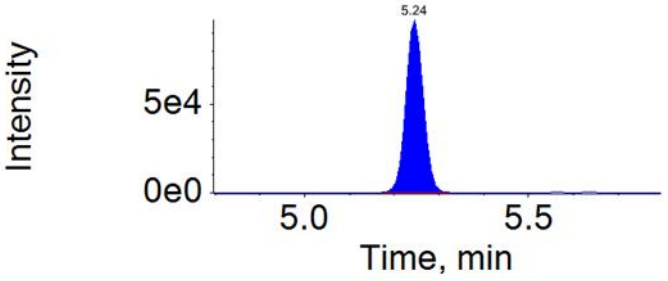
APPROVED
By JPT at 2:53 pm, 11/7/18

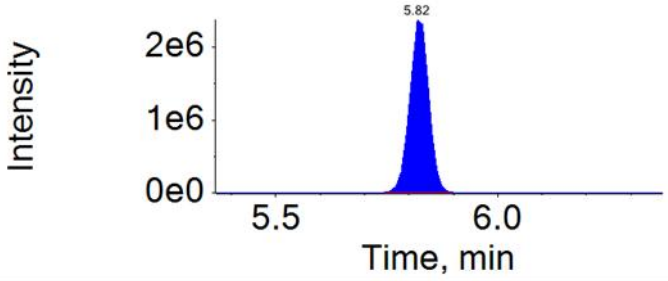
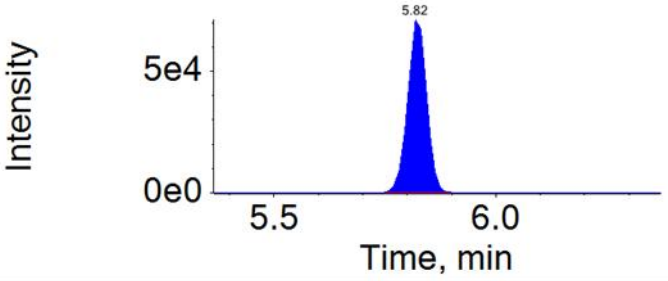
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

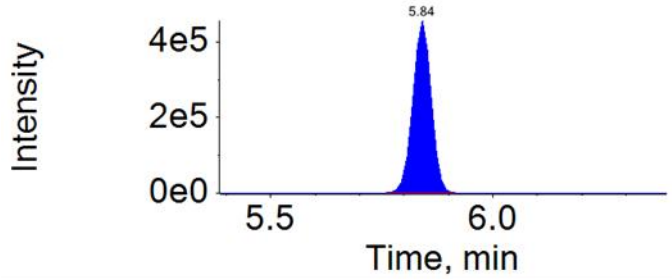
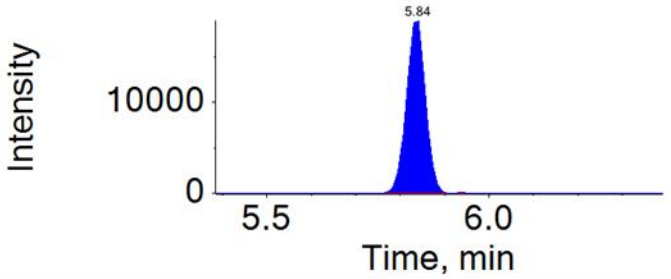
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

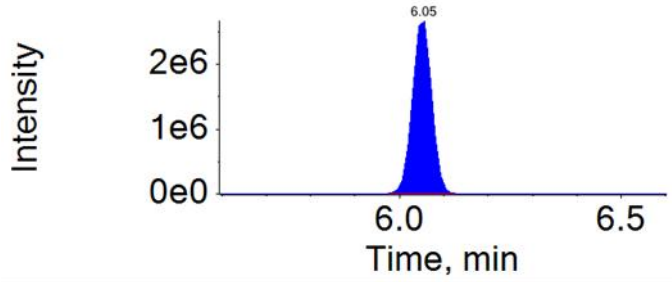
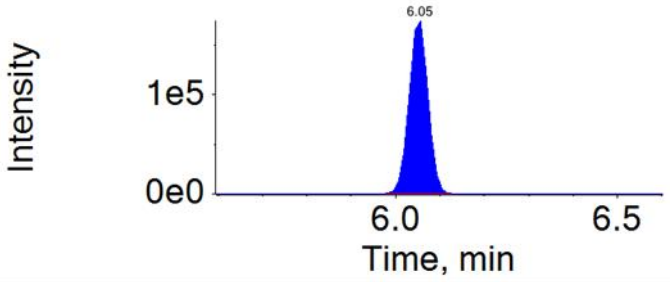
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

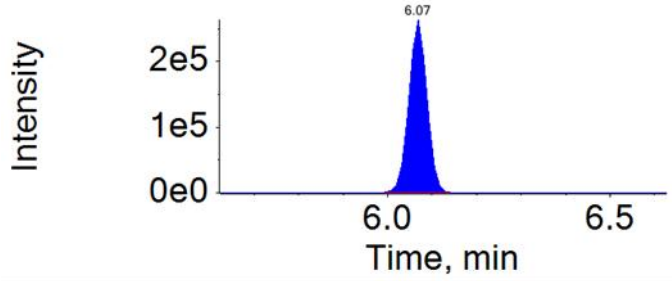
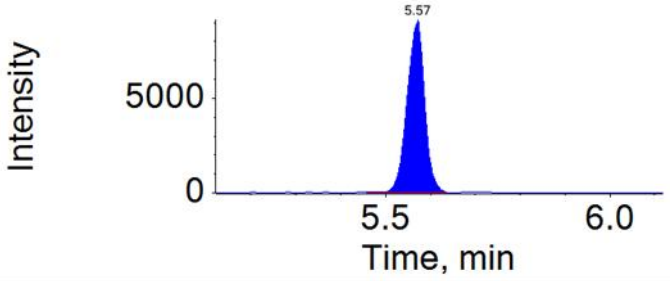
APPROVED
By JPT at 2:53 pm, 11/7/18

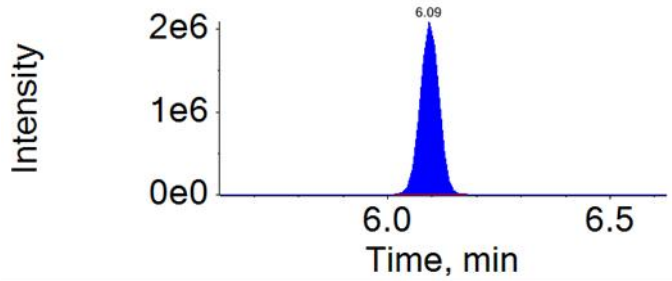
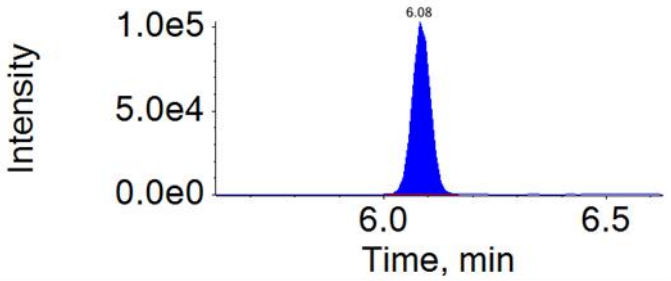
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

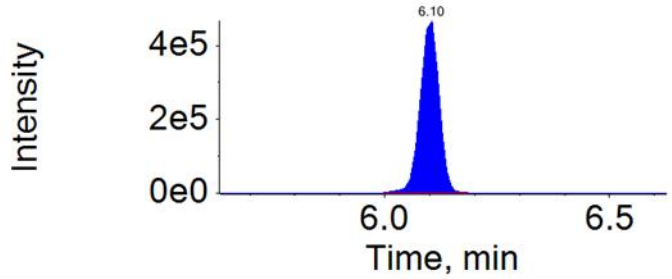
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

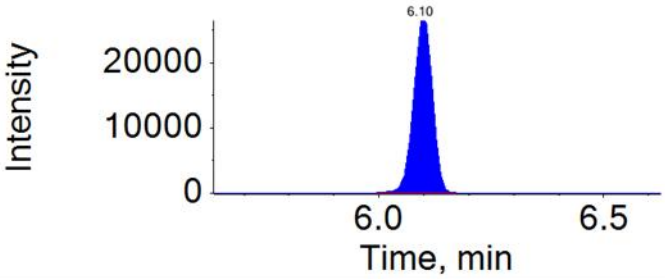
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

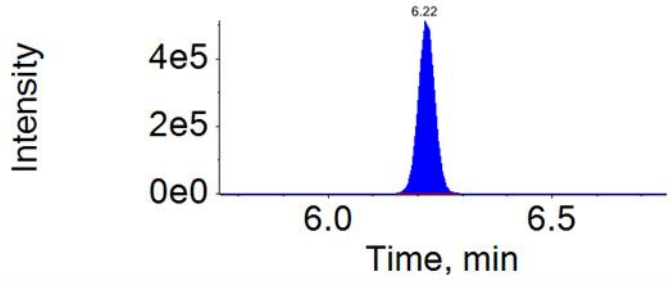
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

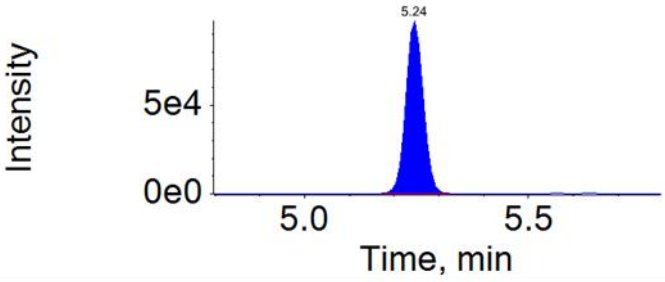
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



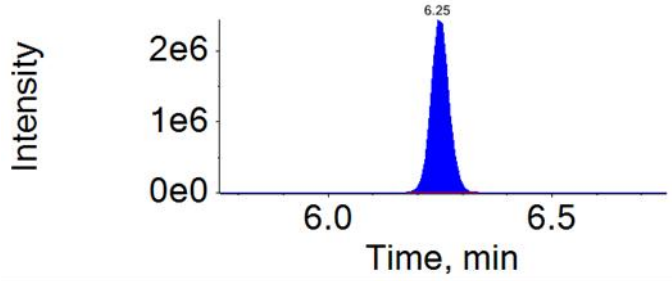


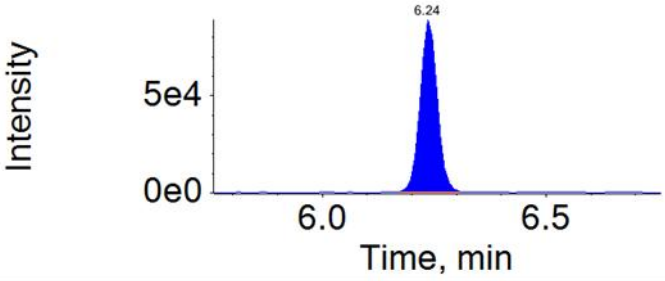
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



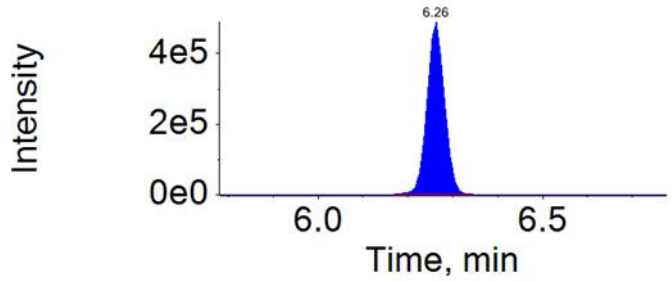


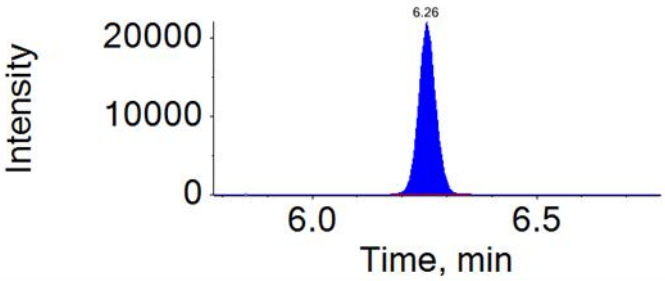
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



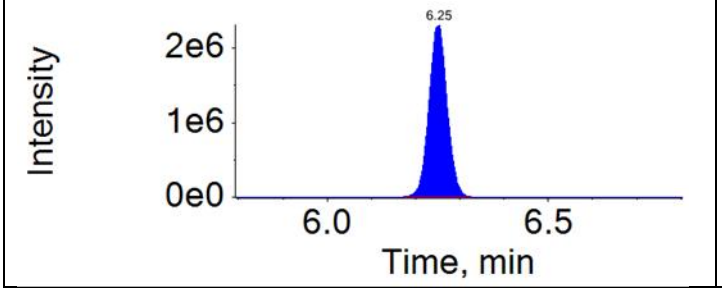


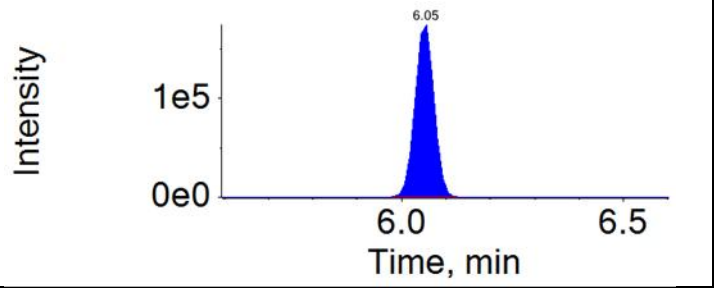
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

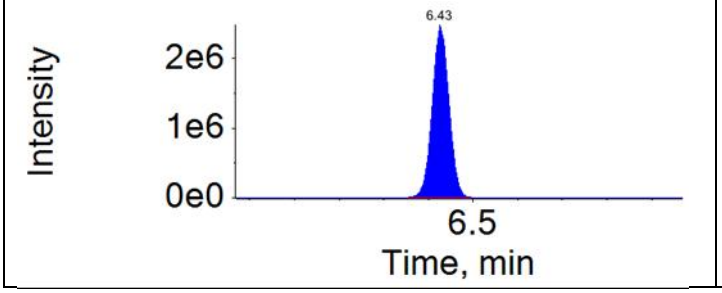
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

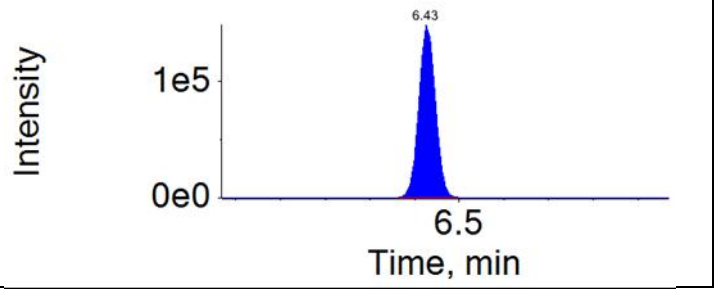
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



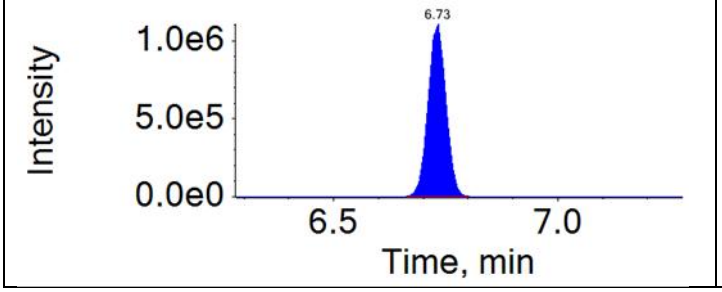


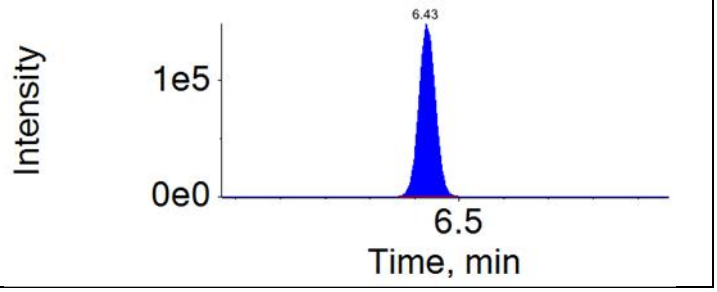
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



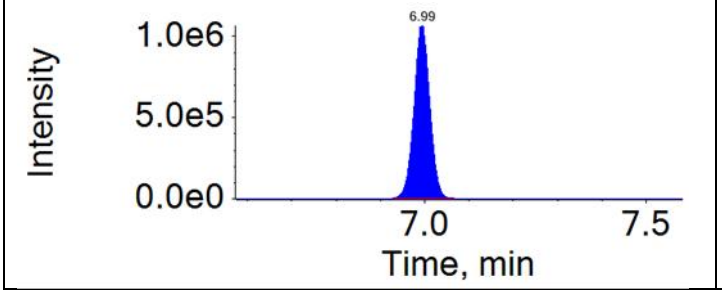


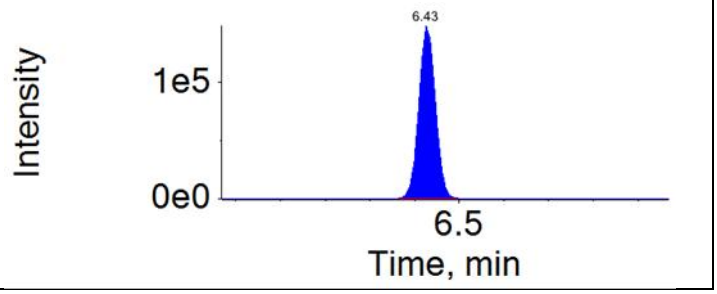
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





Ion Ratio Report

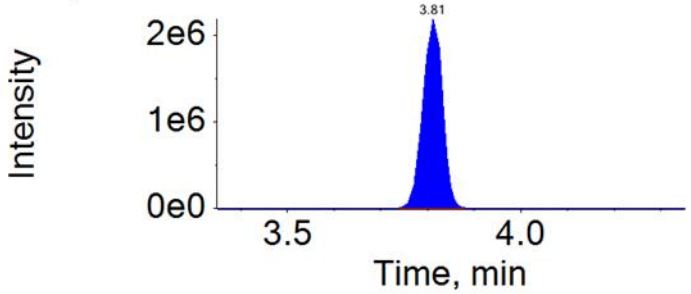
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-16.wiff

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	

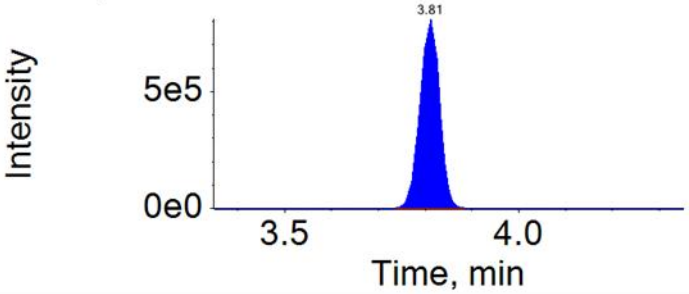
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

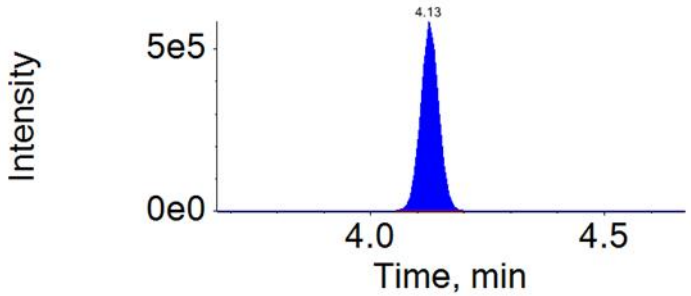
Component: PFBS
Primary Mass: 299.0 / 80.0



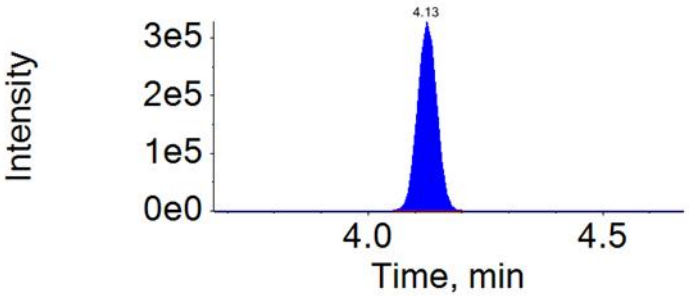
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



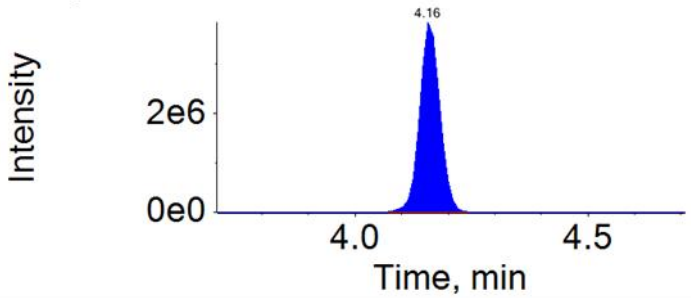
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



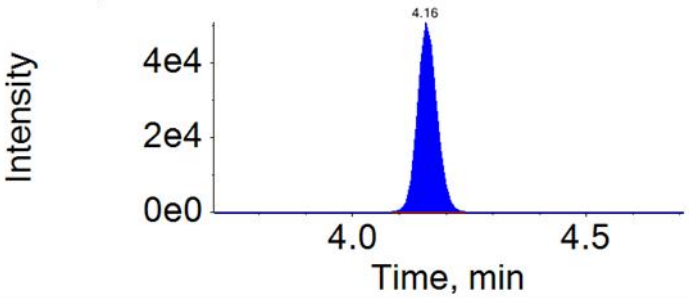
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



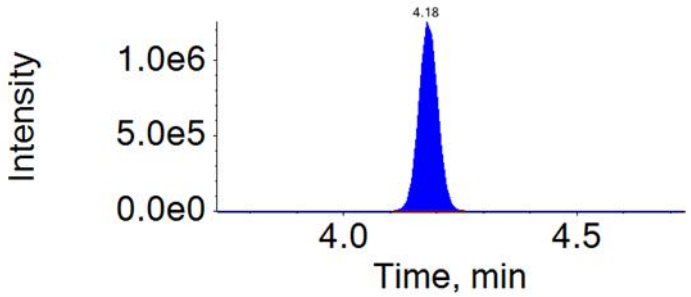
Component: PFHxA
Primary Mass: 313.0 / 269.0



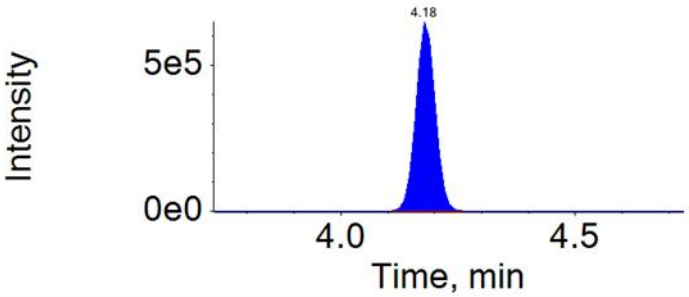
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



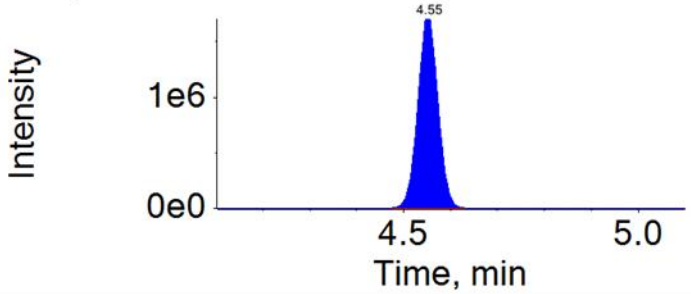
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



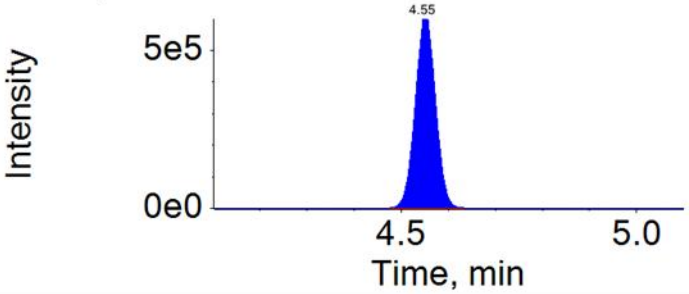
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

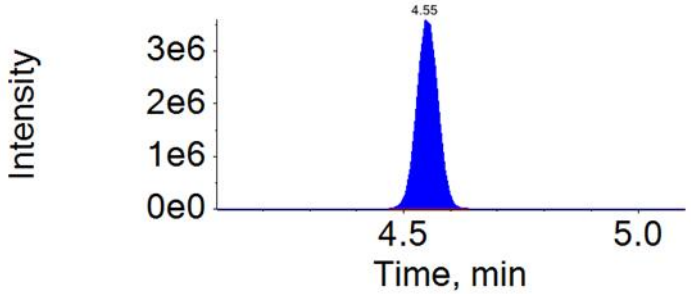
Component: PFHxS
Primary Mass: 399.0 / 80.0



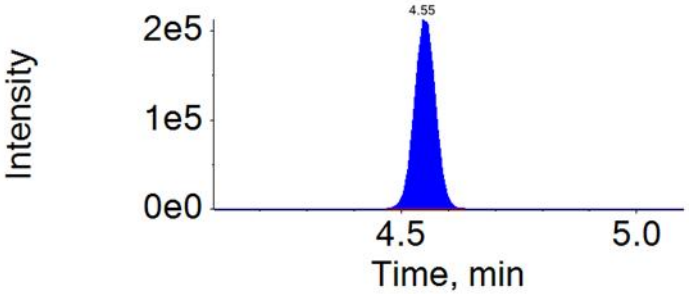
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



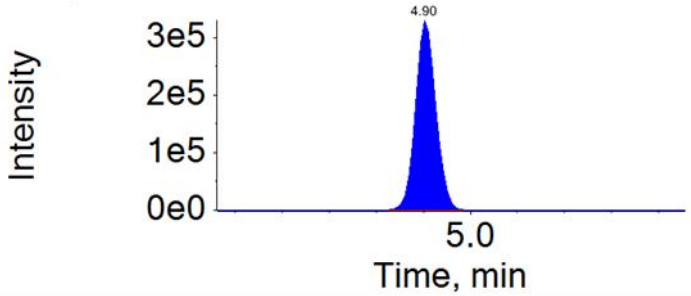
Component: PFHpA
Primary Mass: 363.0 / 319.0



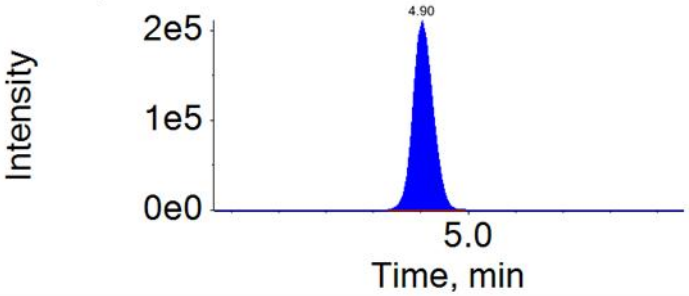
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



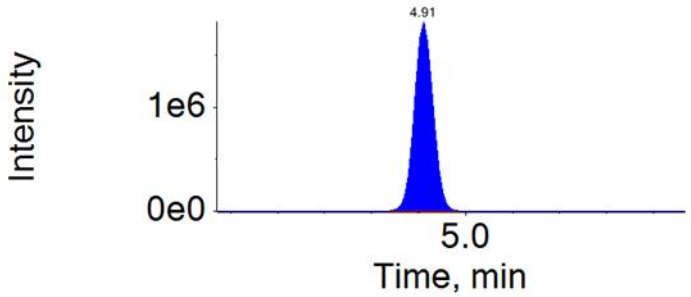
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



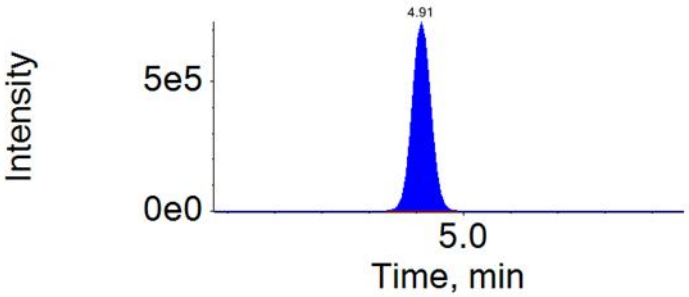
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



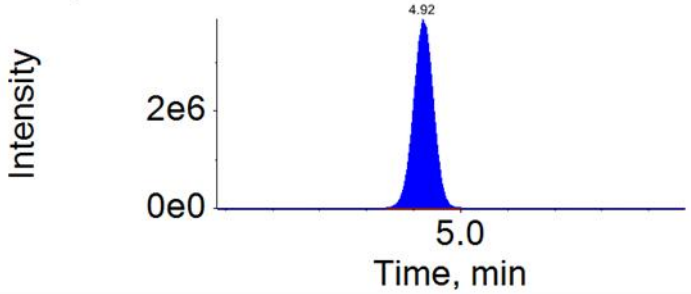
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



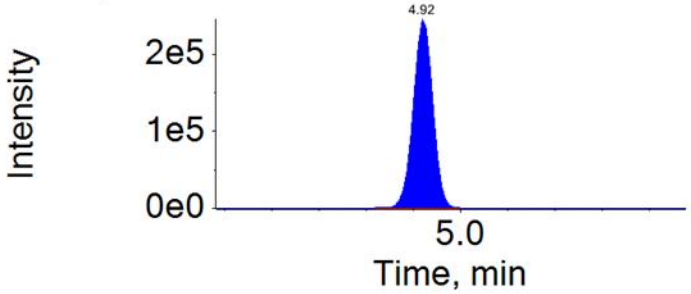
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

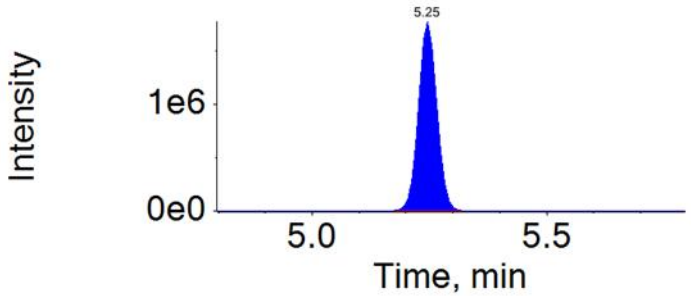
Component: PFOA
Primary Mass: 413.0 / 369.0



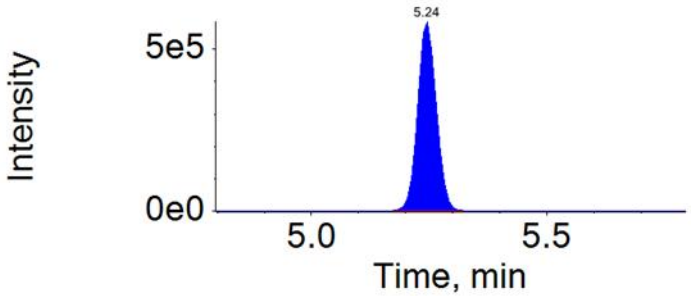
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



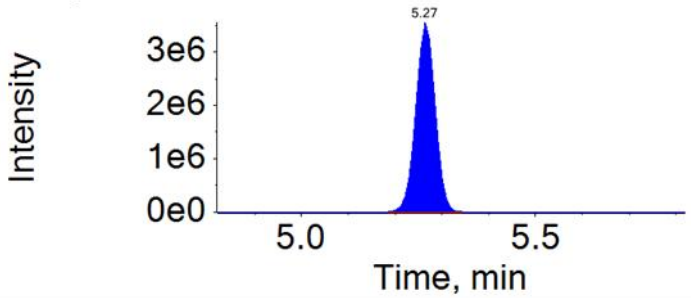
Component: PFOS
Primary Mass: 499.0 / 80.0



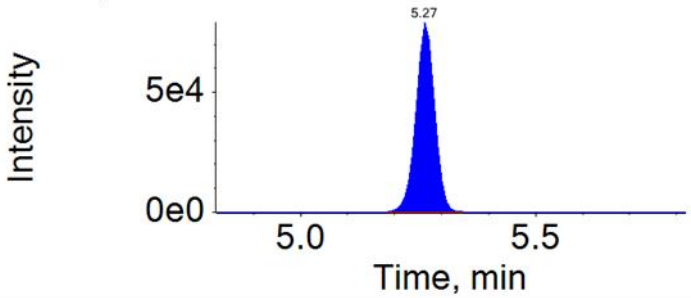
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



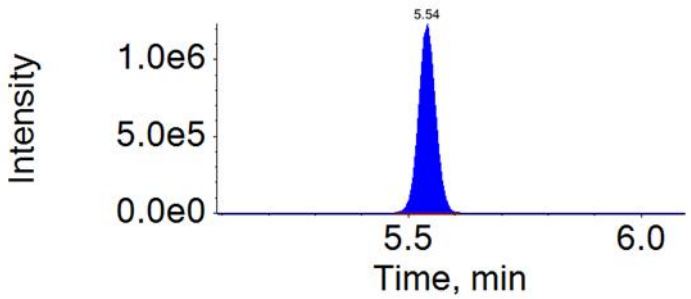
Component: PFNA
Primary Mass: 463.0 / 419.0



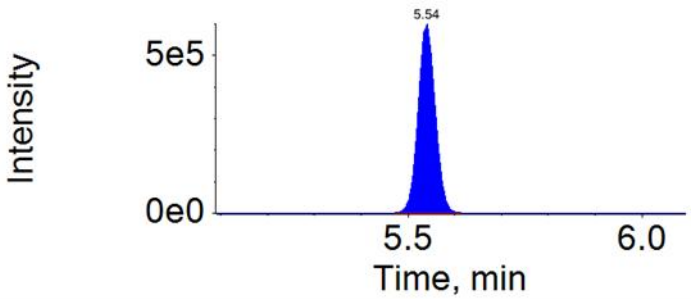
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



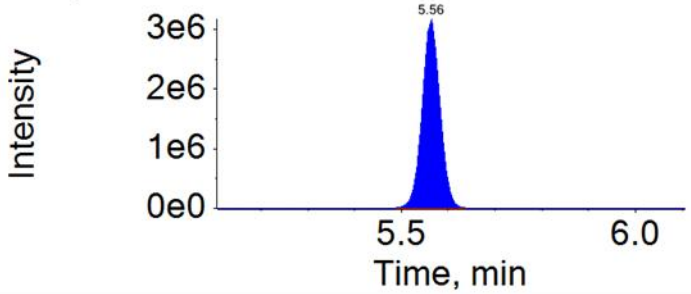
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



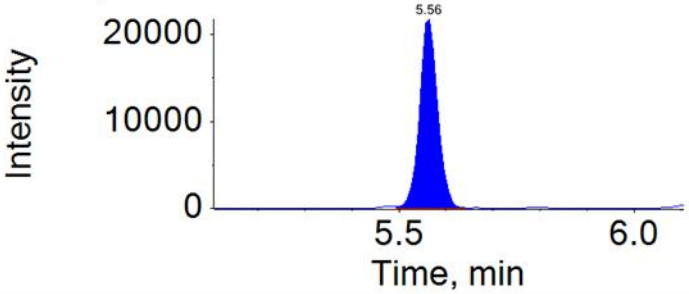
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

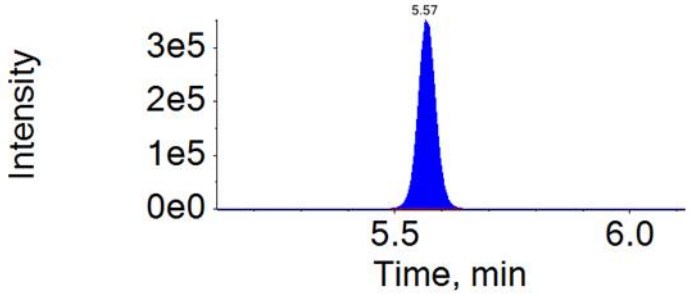
Component: PFDA
Primary Mass: 513.0 / 469.0



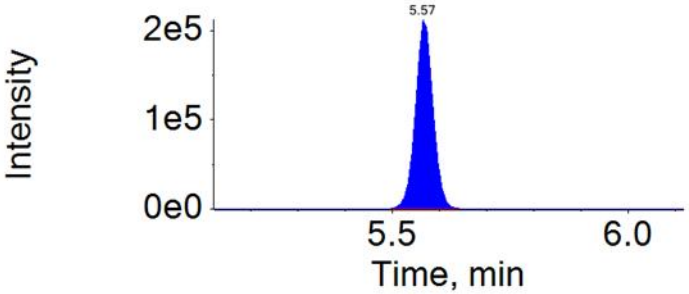
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



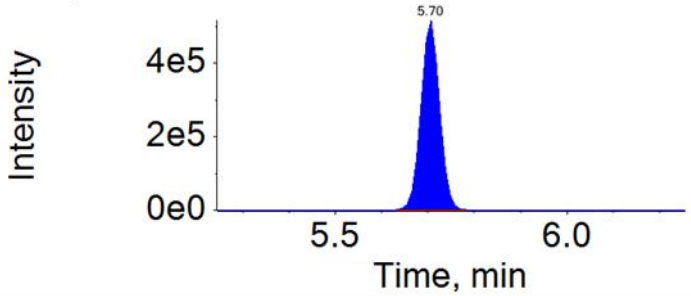
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



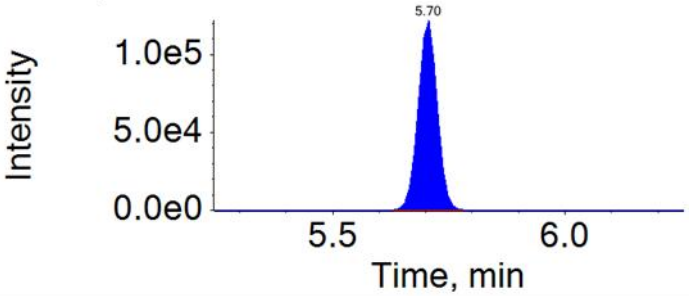
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



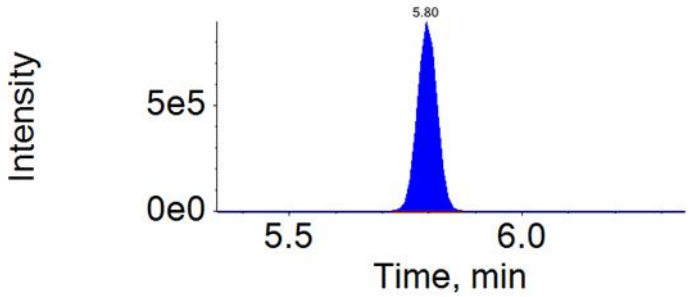
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



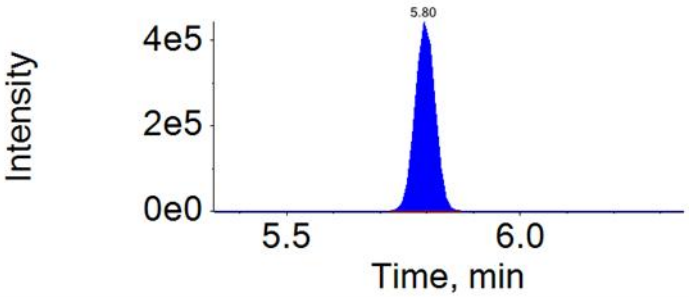
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



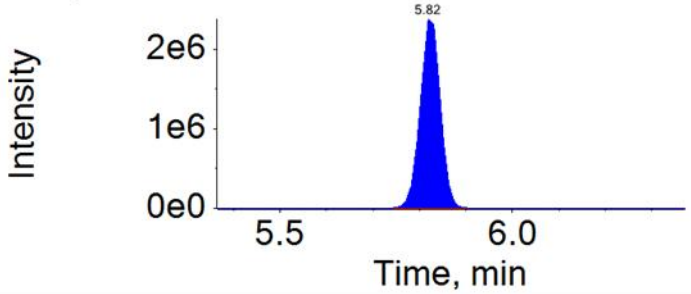
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



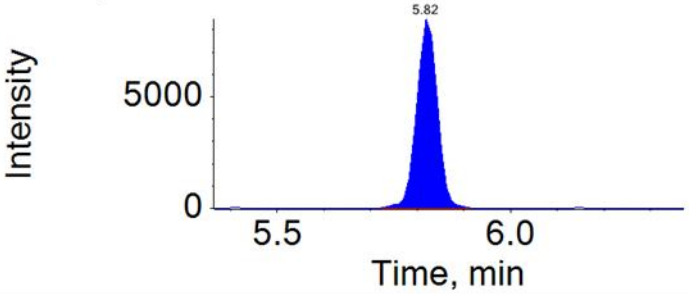
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

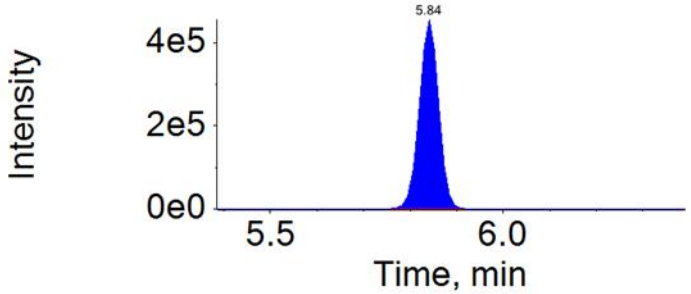
Component: PFUnDA
Primary Mass: 563.0 / 519.0



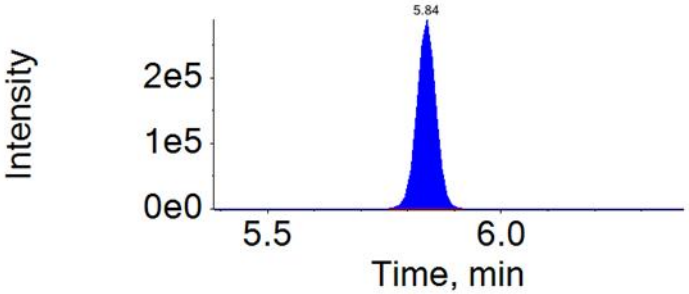
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



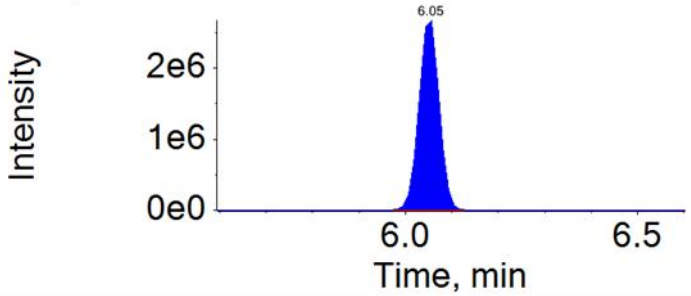
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



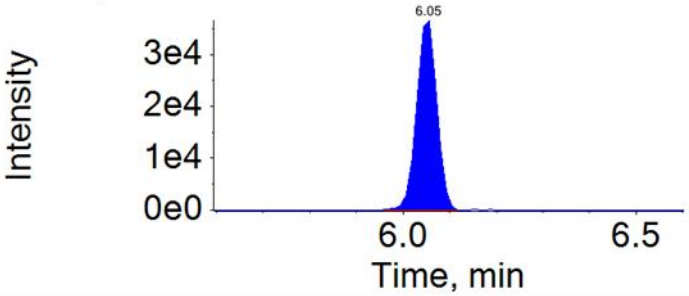
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



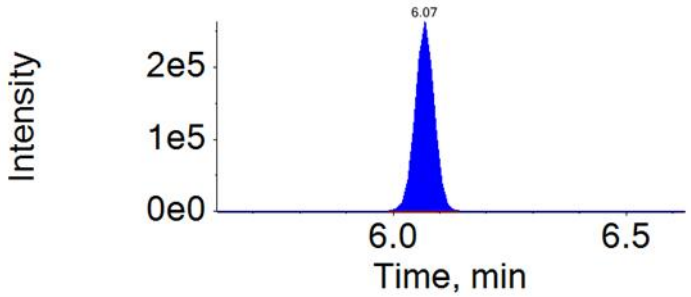
Component: PFDoDA
Primary Mass: 613.0 / 569.0



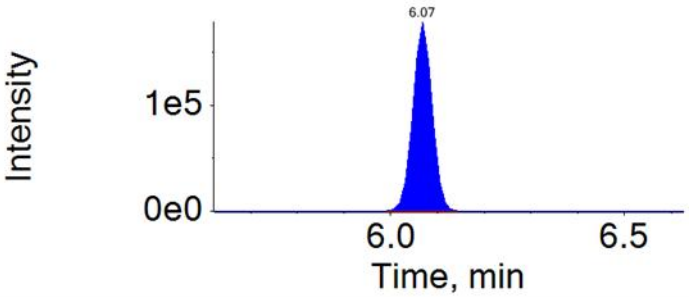
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



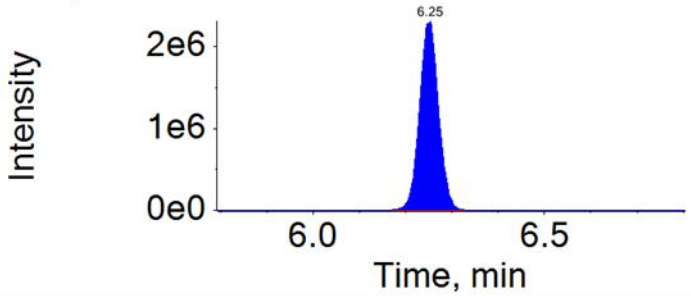
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



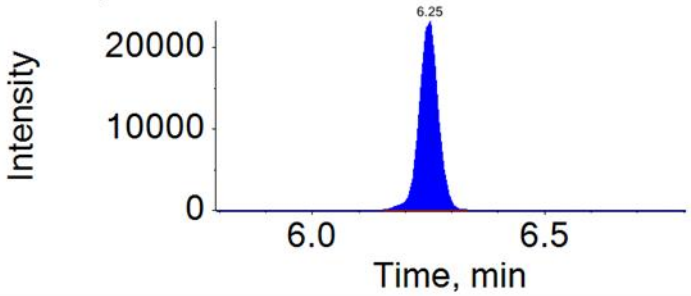
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

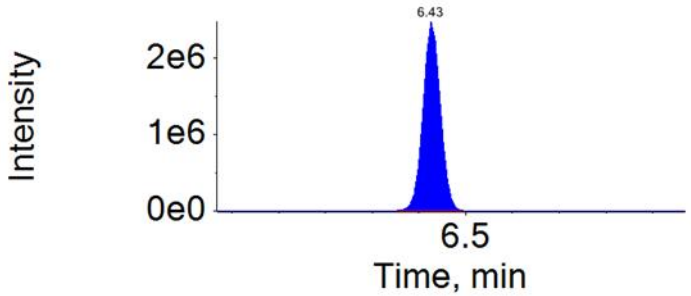
Component: PFTrDA
Primary Mass: 663.0 / 619.0



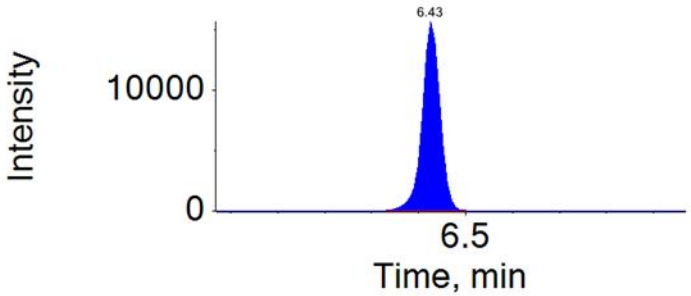
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



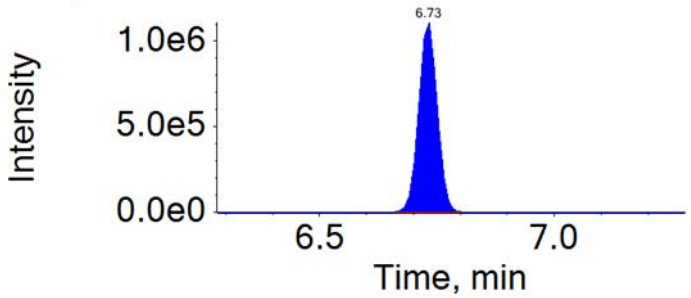
Component: PFTeDA
Primary Mass: 713.0 / 669.0



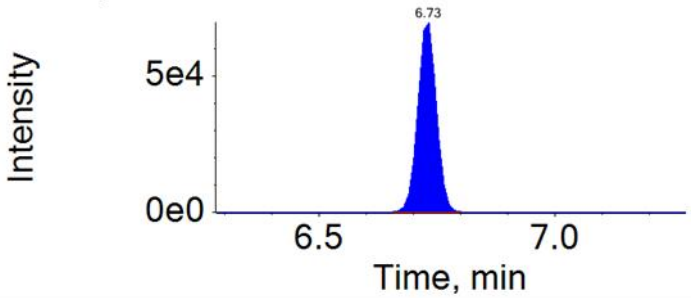
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



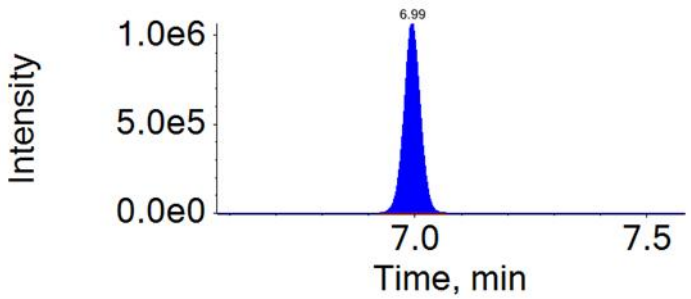
Component: PFHxDA
Primary Mass: 813.0 / 769.0



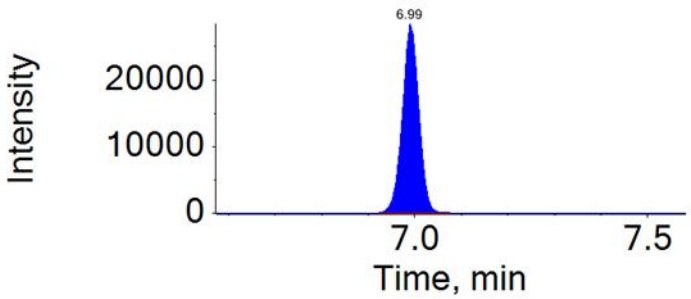
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

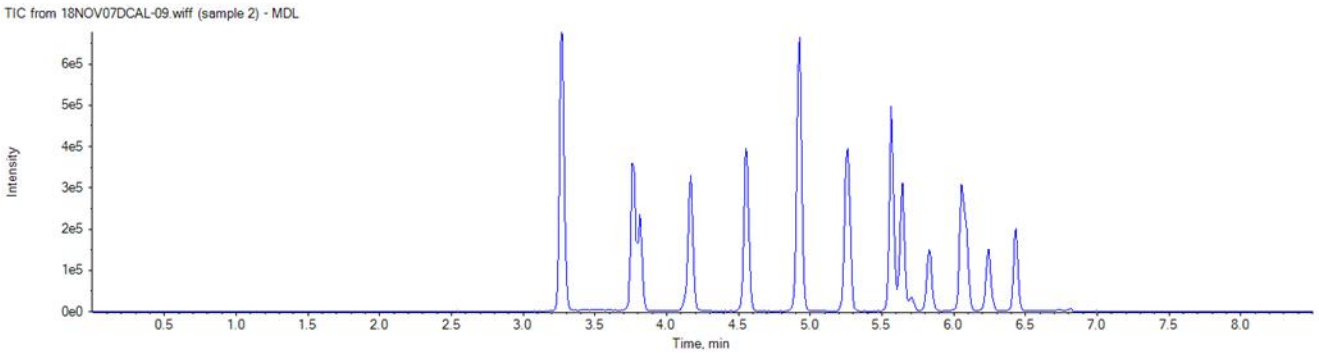
Analyte Quantitation Peak Table

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

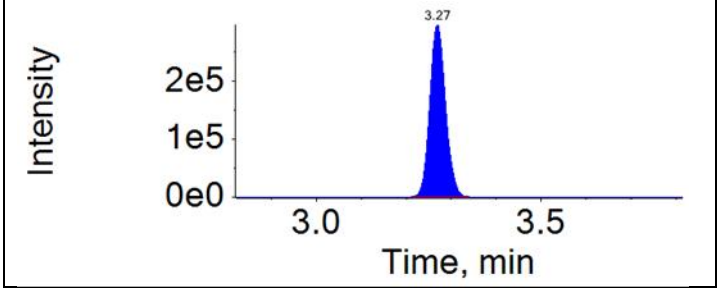


APPROVED
By JPT at 2:54 pm, 11/7/18

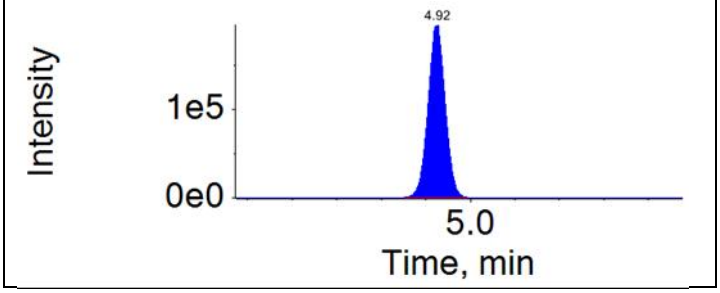
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

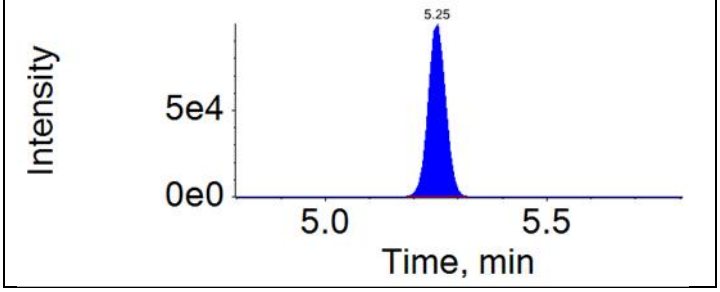
Injection Standard: 13C3-PFBA
216.0 / 172.0



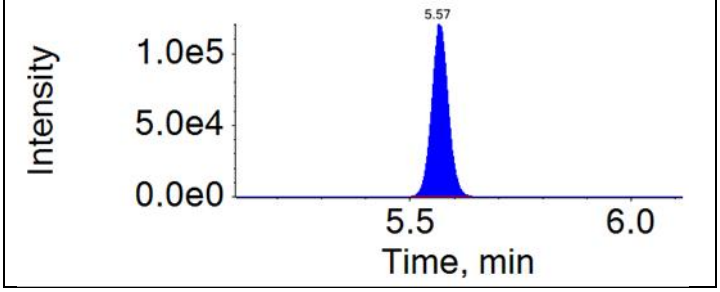
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



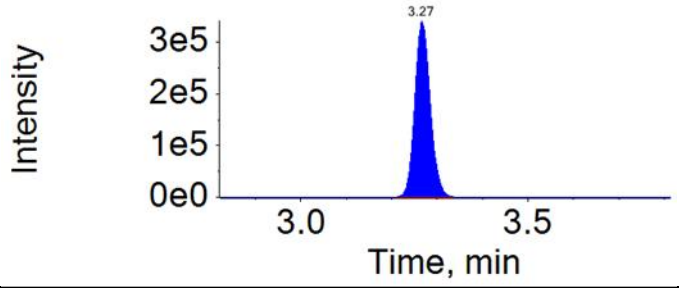
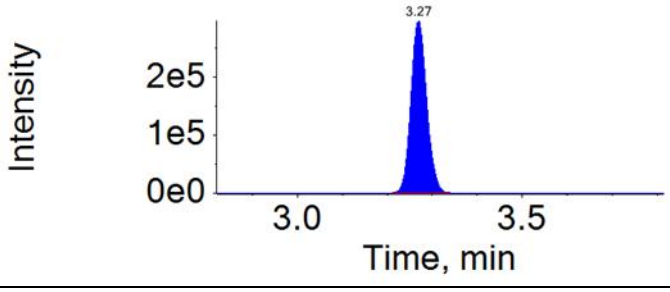
Injection Standard: 13C2-PFDA
515.0 / 470.0

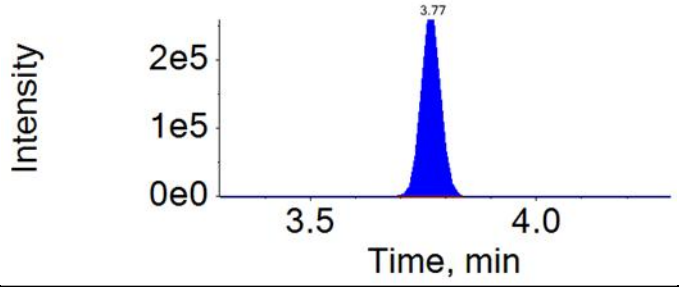
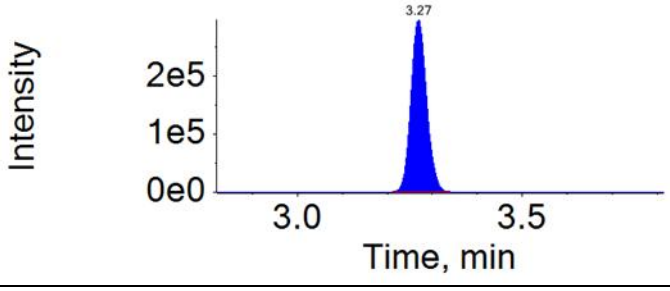


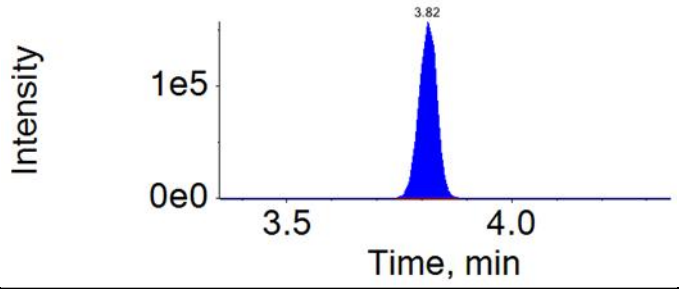
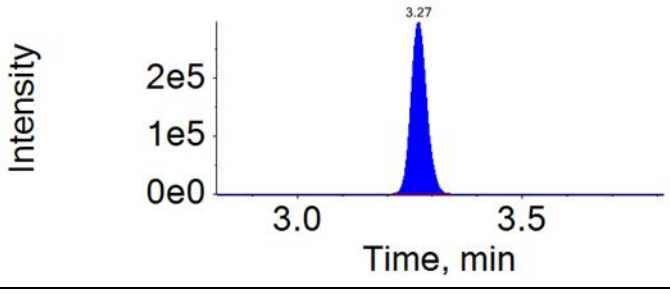
APPROVED
By JPT at 2:54 pm, 11/7/18

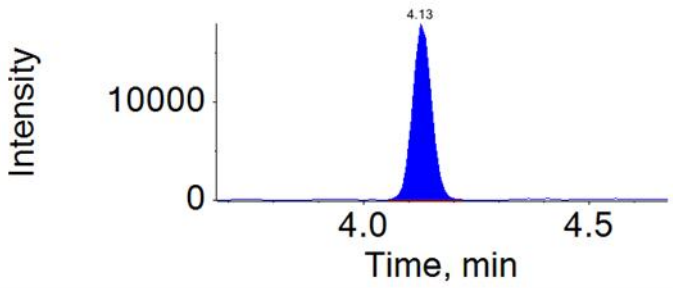
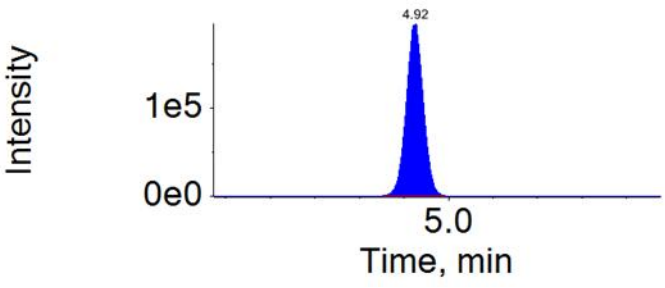
REVIEWED
By umar at 5:24 pm, 11/9/18

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
	

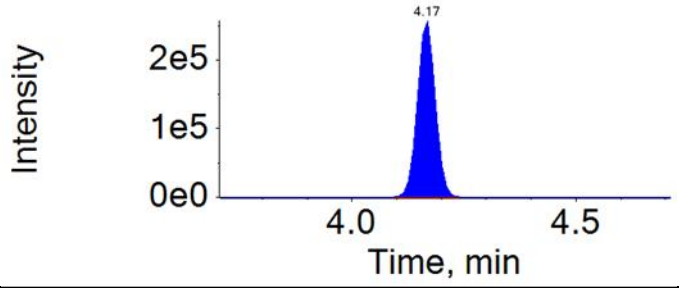
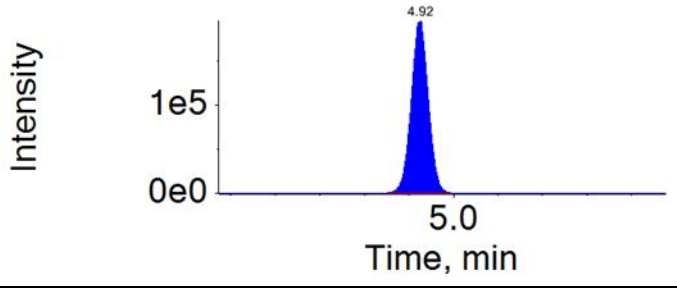
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

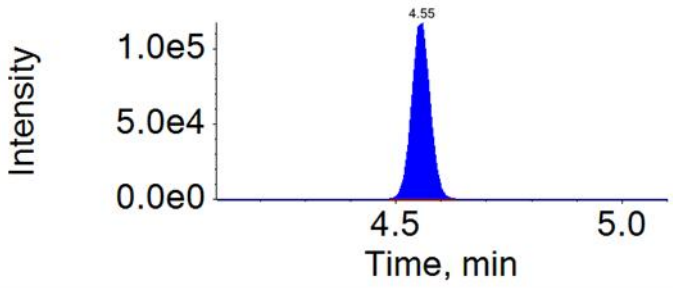
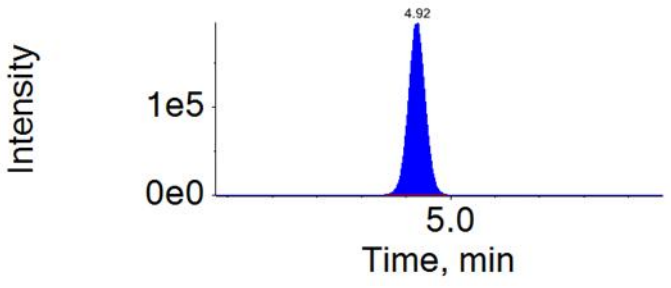
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

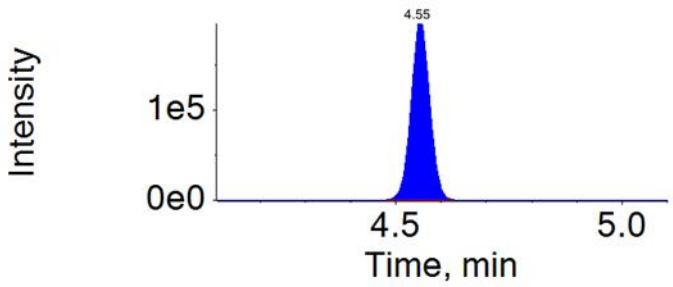
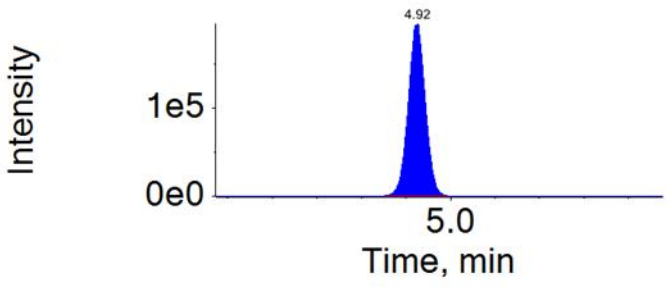
APPROVED
By JPT at 2:54 pm, 11/7/18

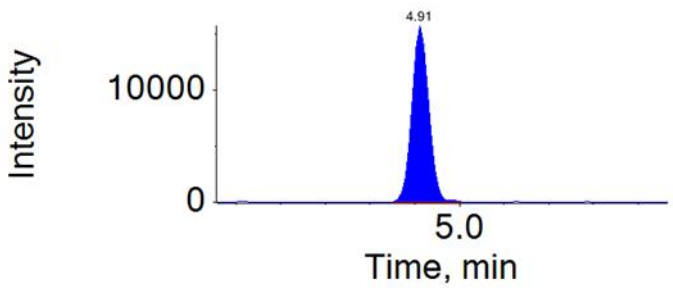
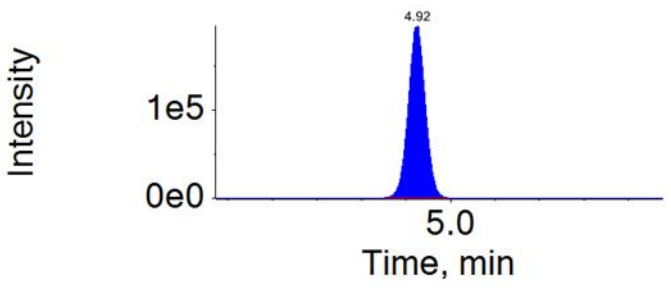
REVIEWED
By umar at 5:24 pm, 11/9/18

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
	

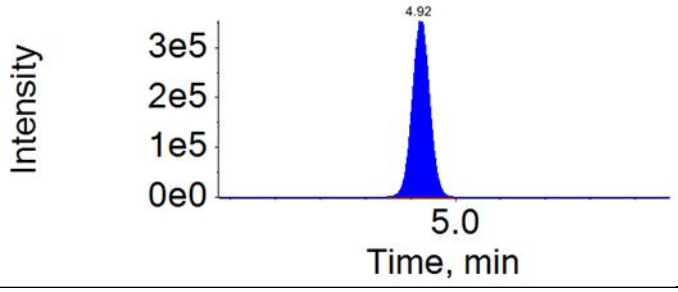
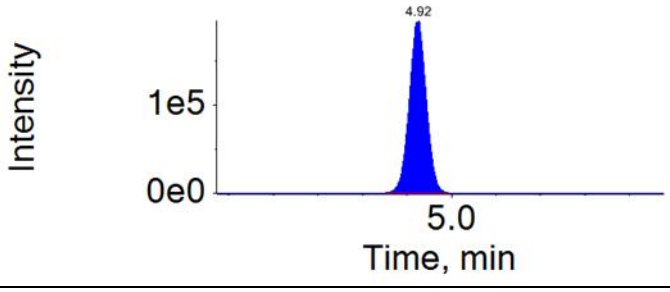
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

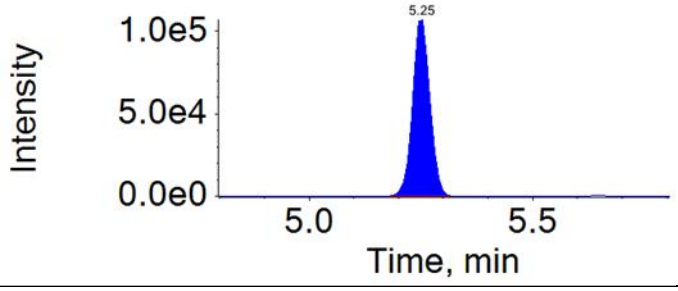
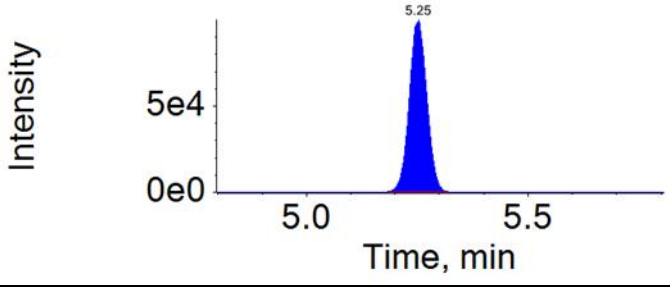
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

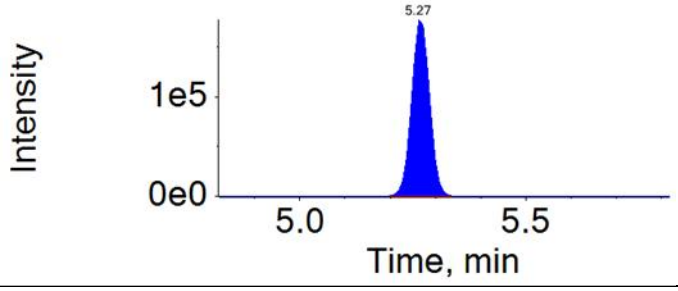
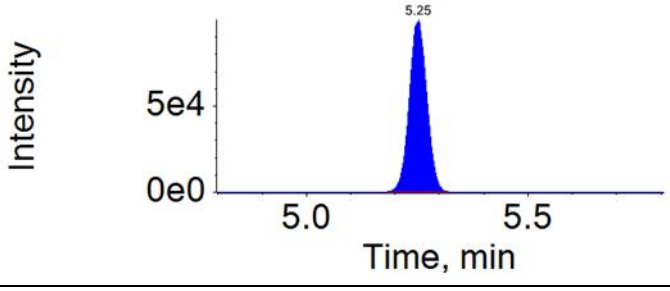
APPROVED
By JPT at 2:54 pm, 11/7/18

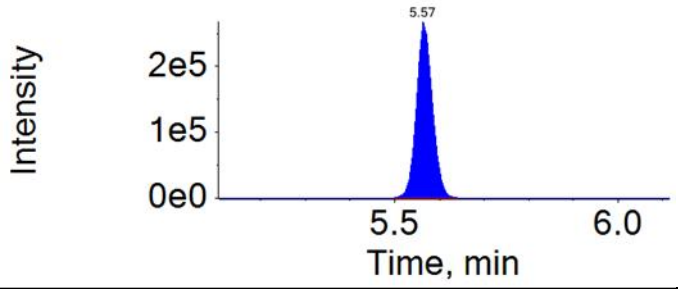
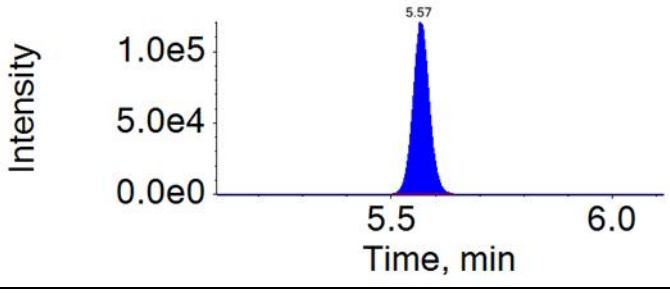
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

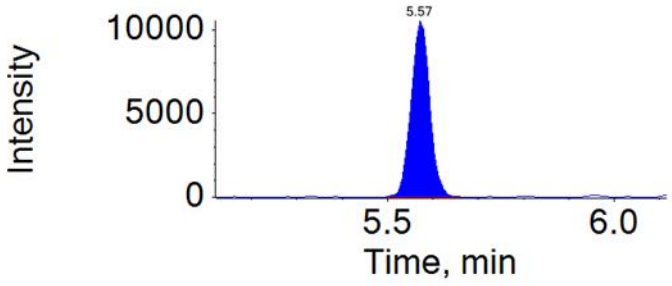
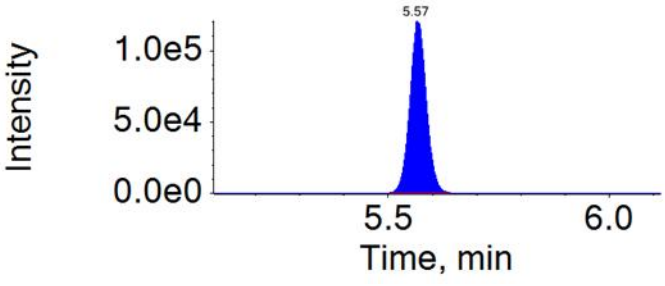
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

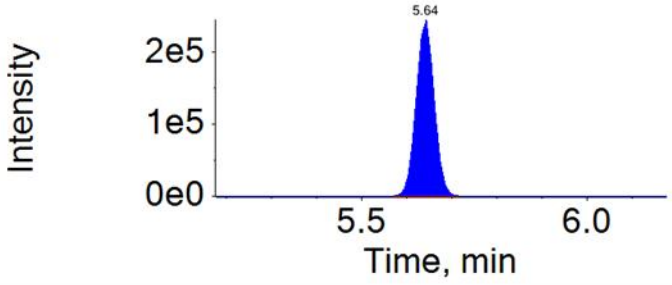
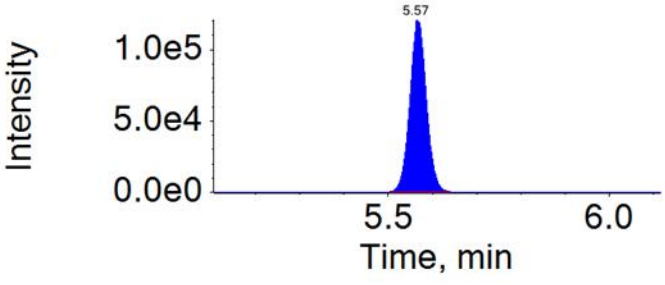
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

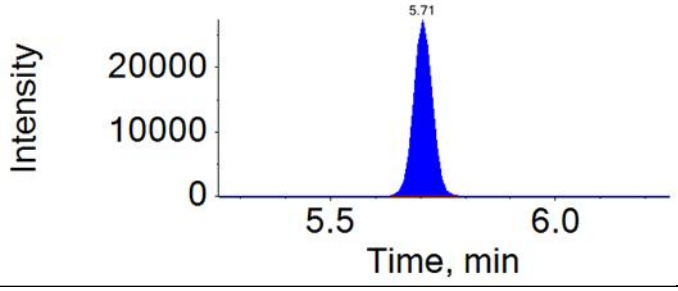
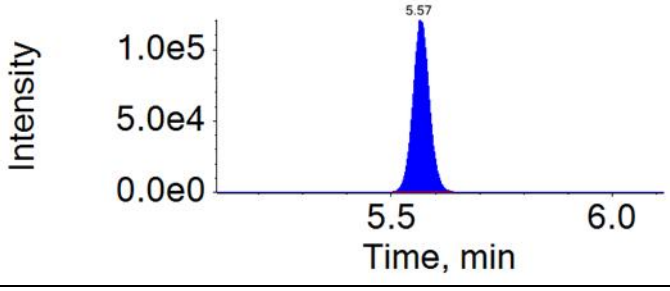
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

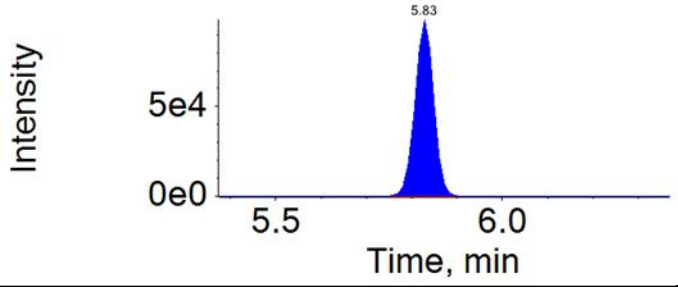
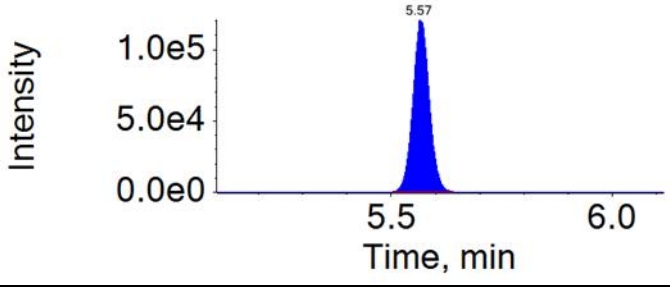
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

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
	

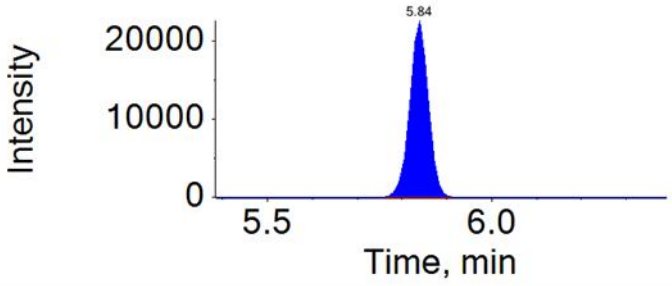
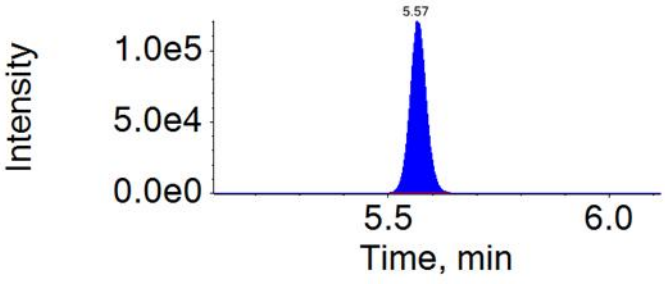
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

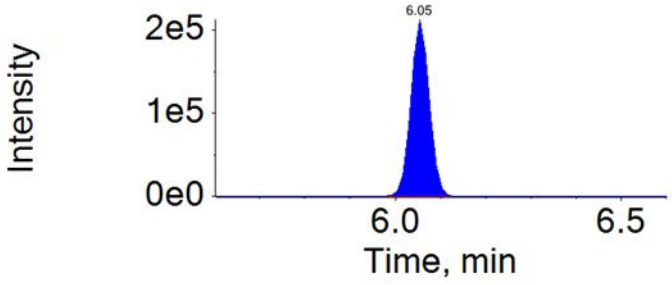
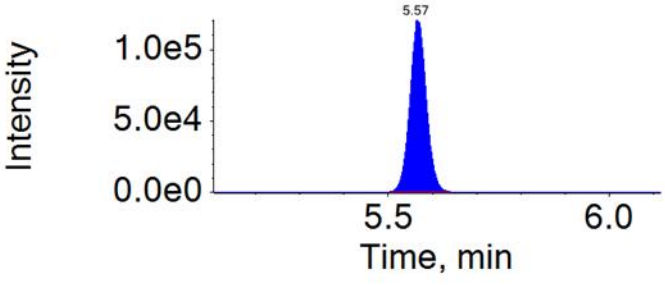
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

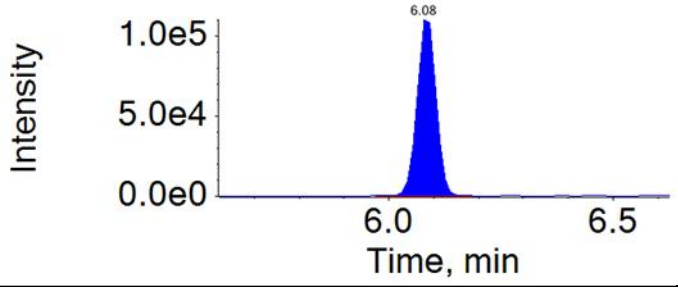
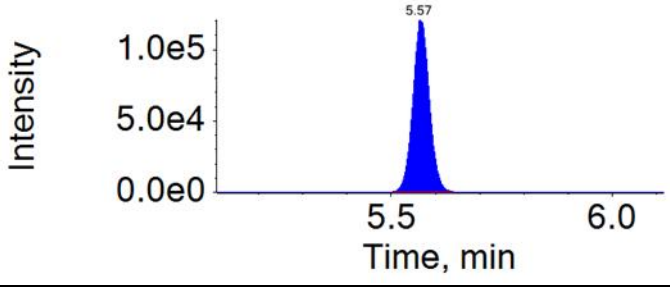
APPROVED
By JPT at 2:54 pm, 11/7/18

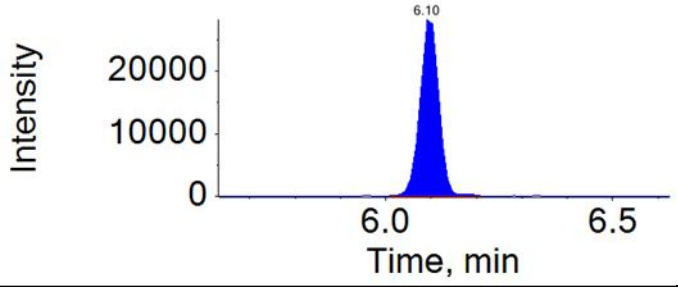
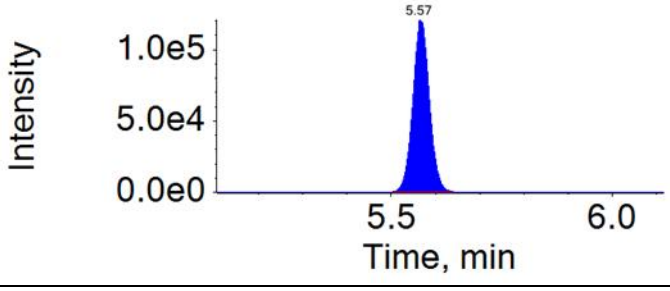
REVIEWED
By umar at 5:24 pm, 11/9/18

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
	

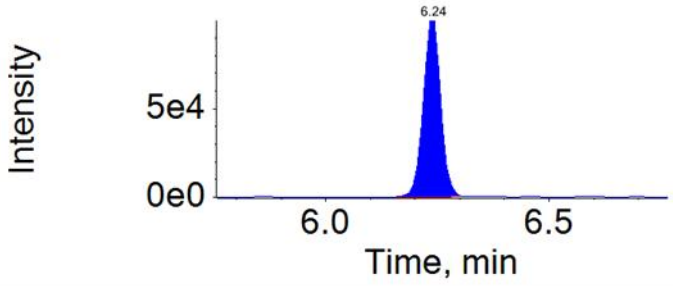
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

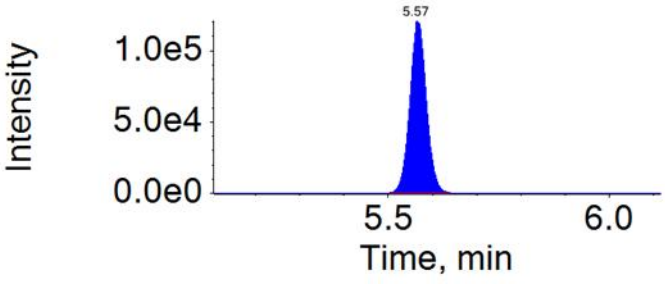
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

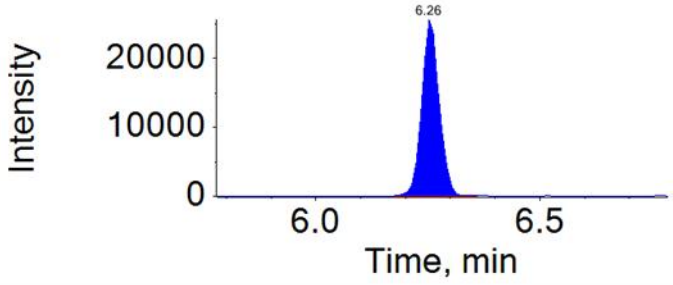
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

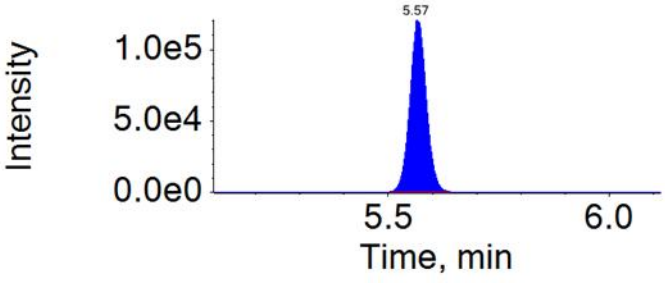
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



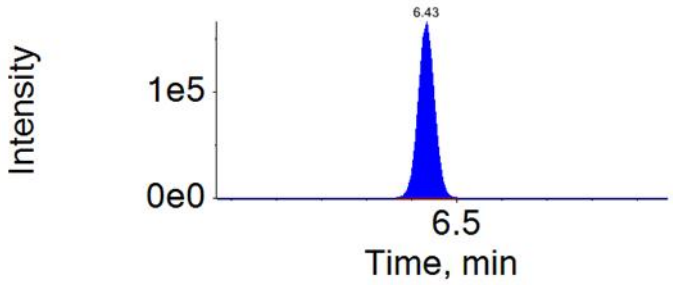


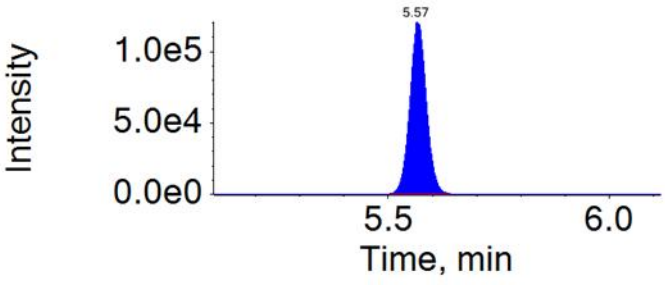
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



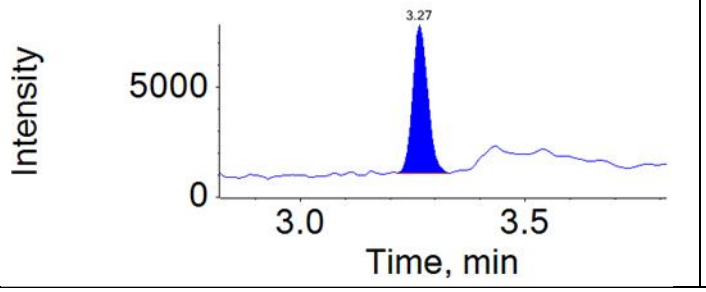


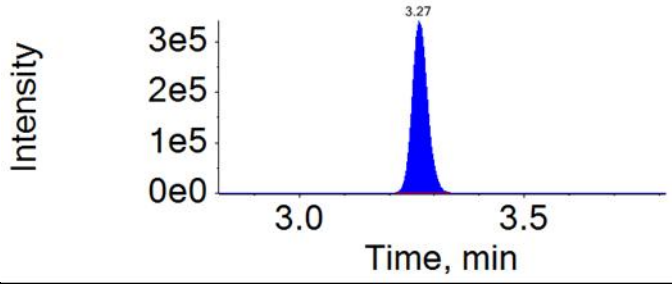
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

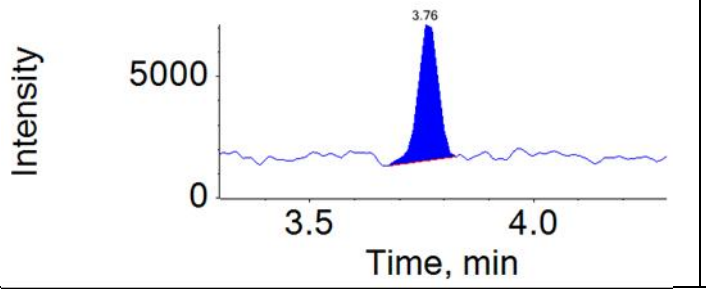
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

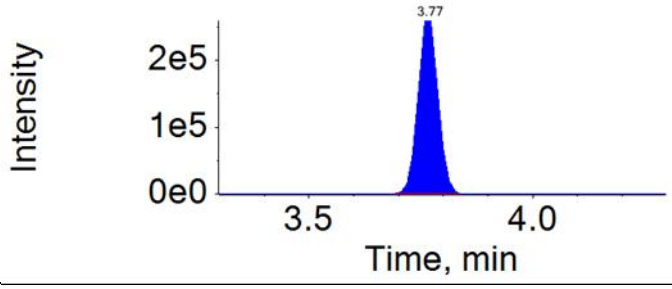
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



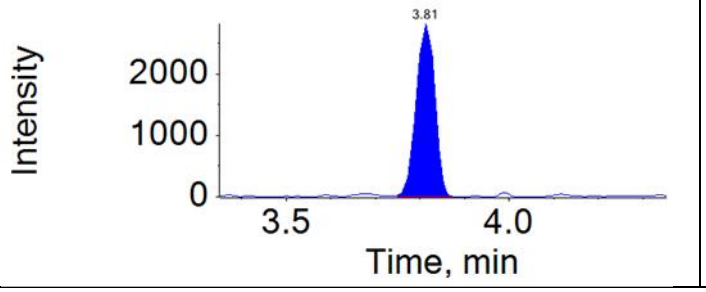


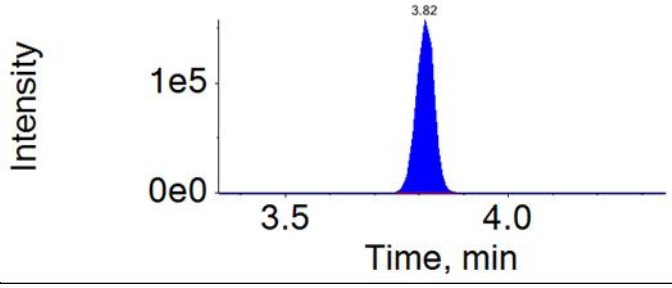
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



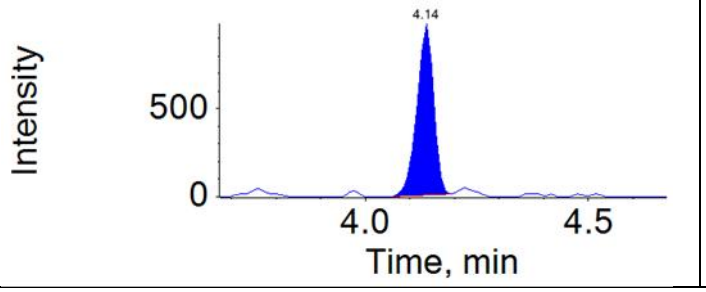


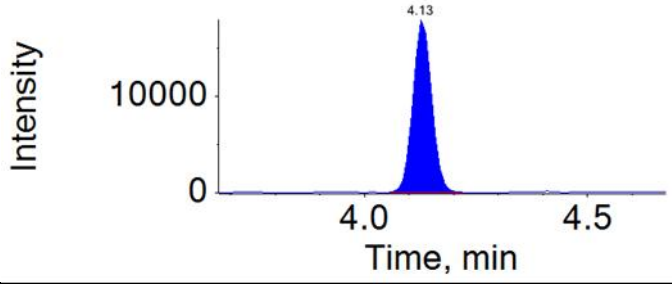
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

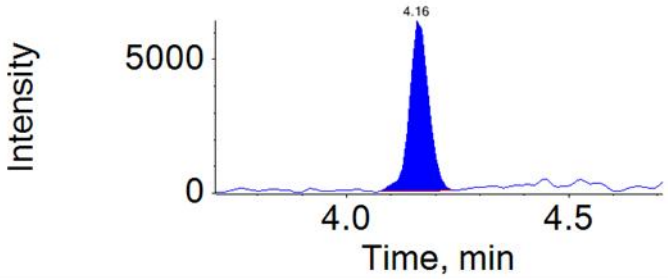
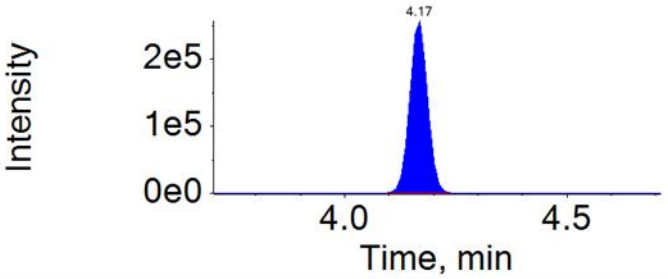


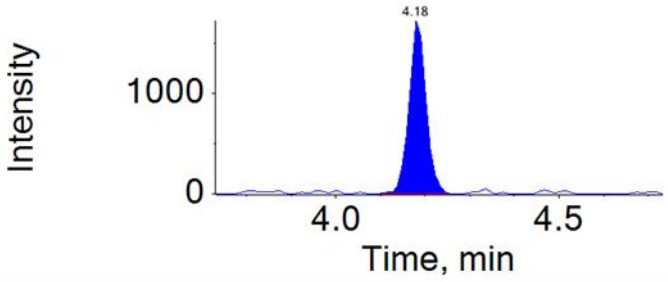
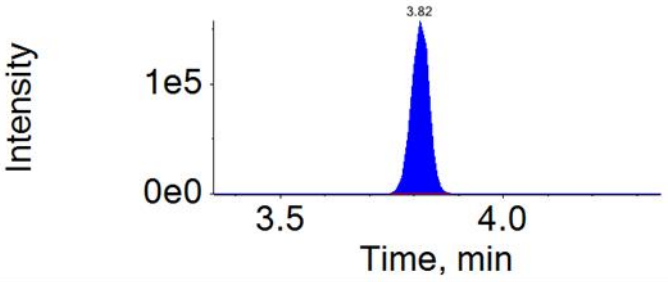


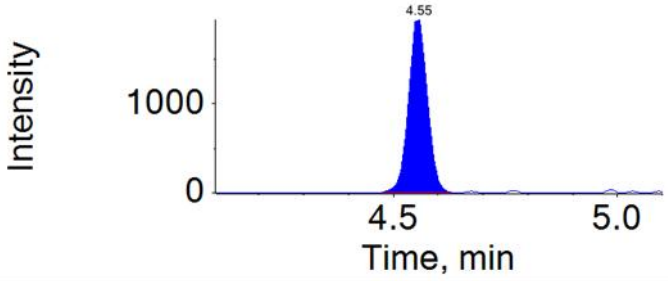
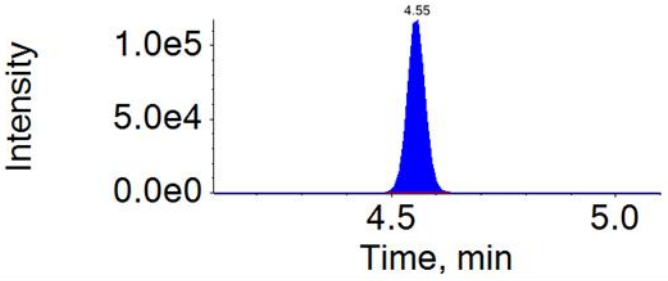
APPROVED
By JPT at 2:54 pm, 11/7/18

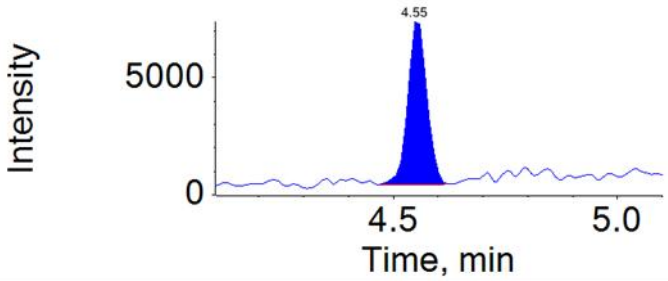
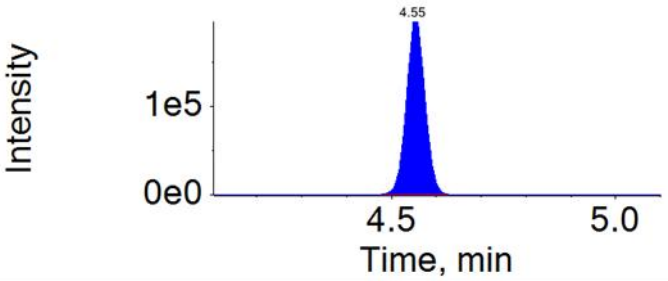
REVIEWED
By umar at 5:24 pm, 11/9/18

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
	

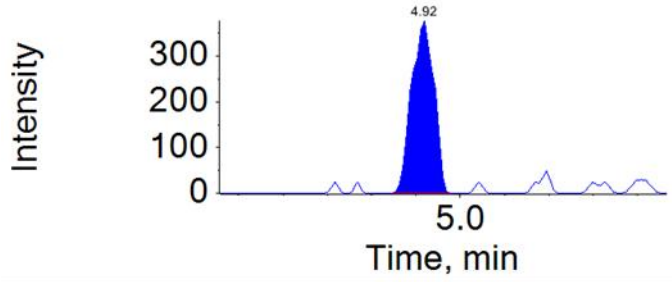
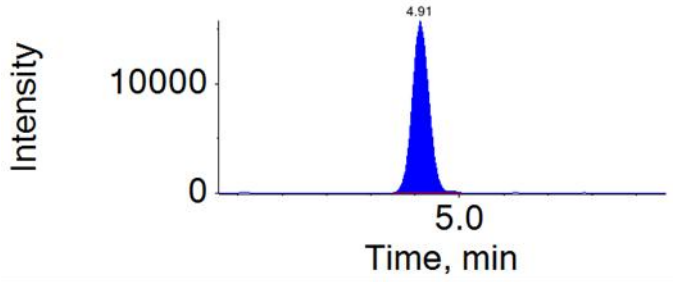
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

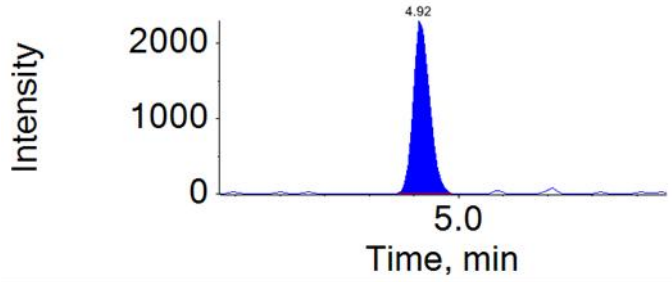
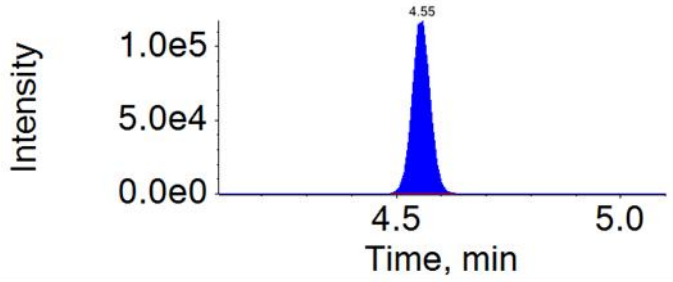
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

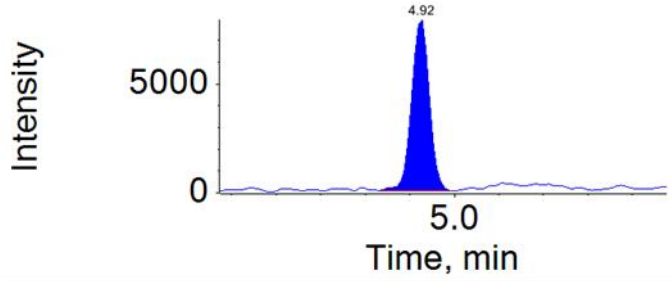
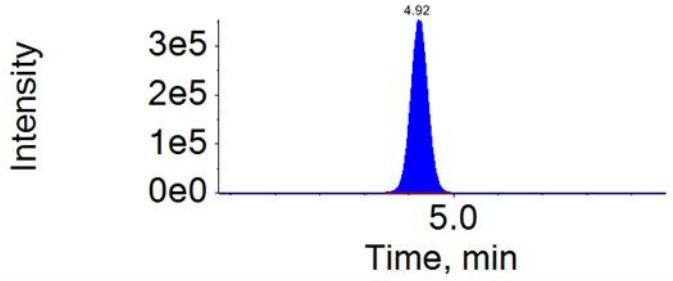
APPROVED
By JPT at 2:54 pm, 11/7/18

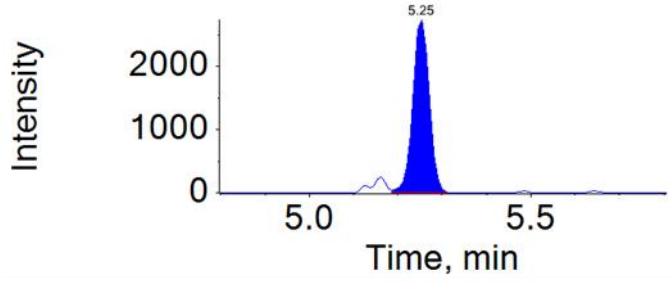
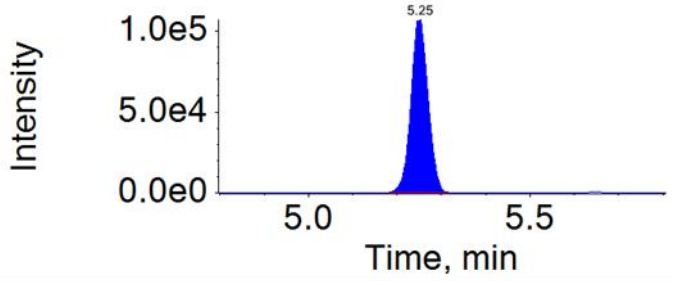
REVIEWED
By umar at 5:24 pm, 11/9/18

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
	

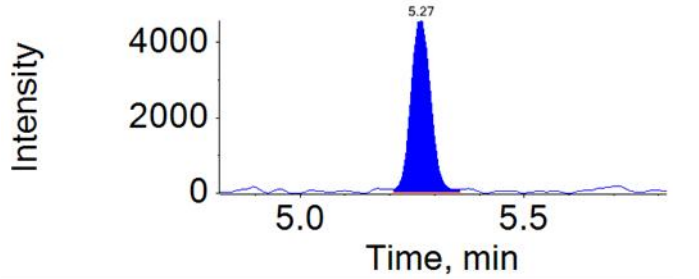
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

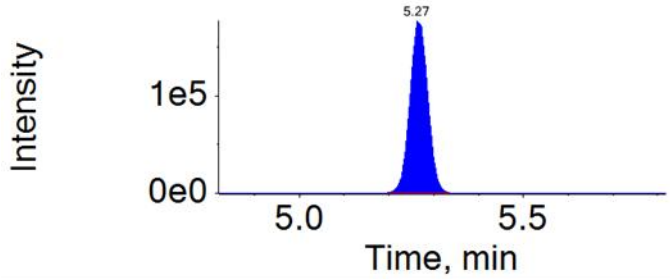
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

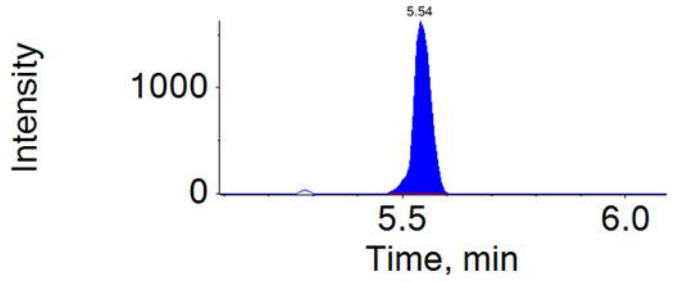
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

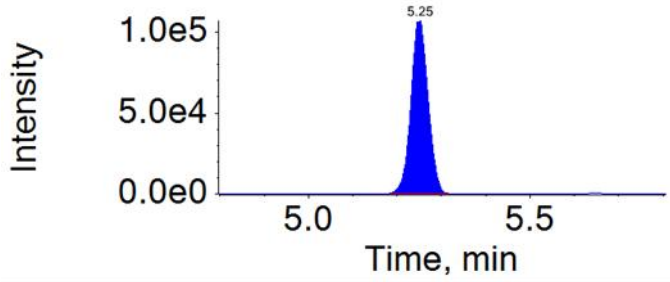
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



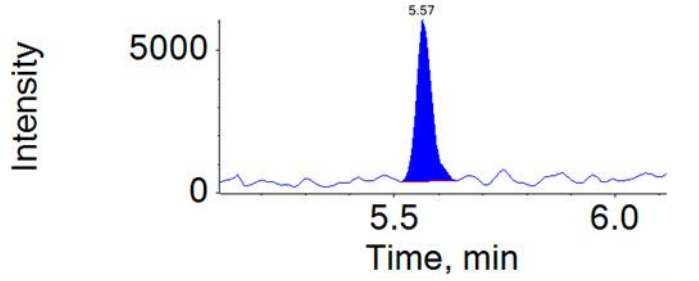


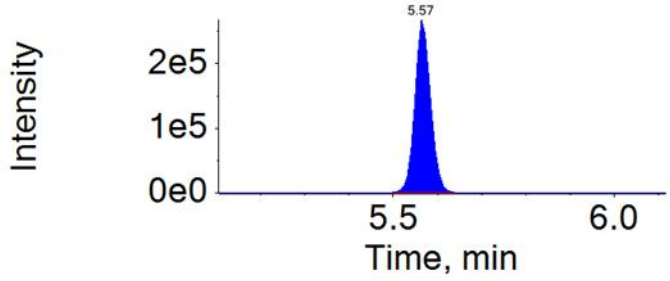
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



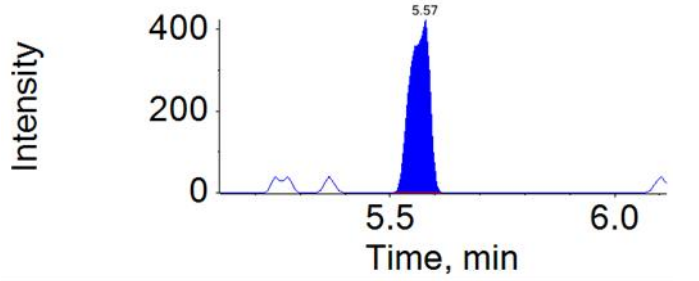


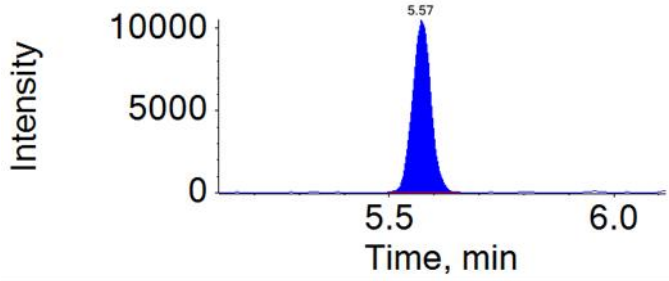
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

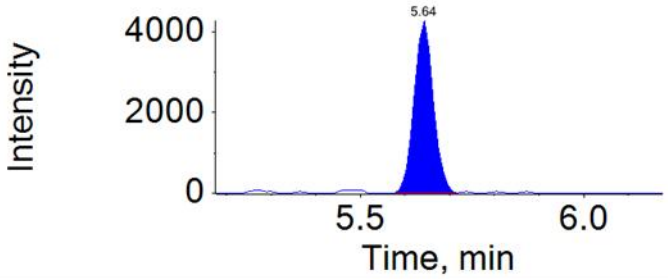
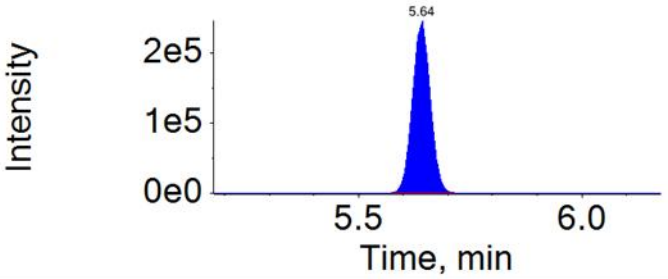


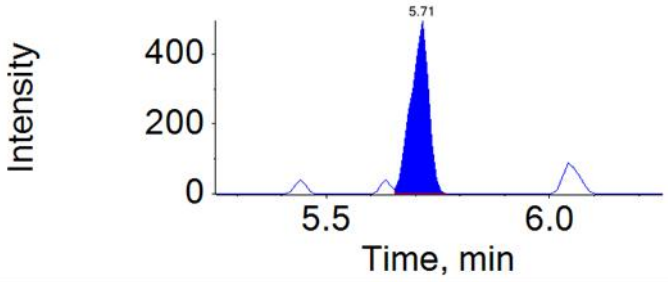
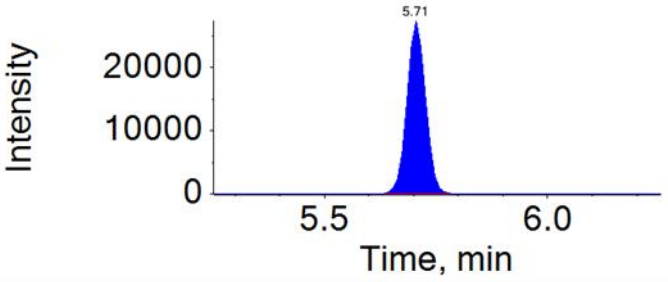


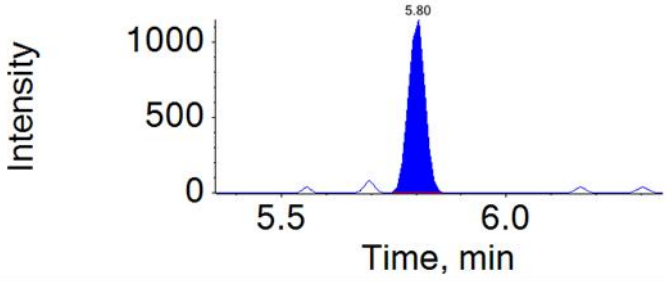
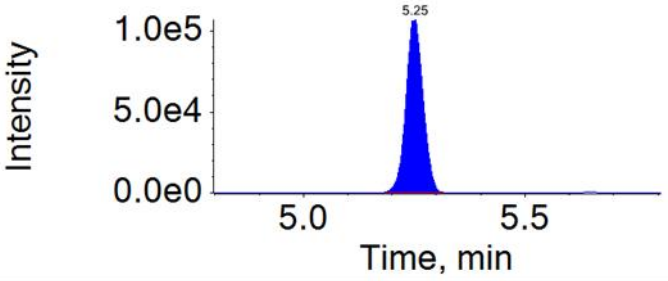
APPROVED
By JPT at 2:54 pm, 11/7/18

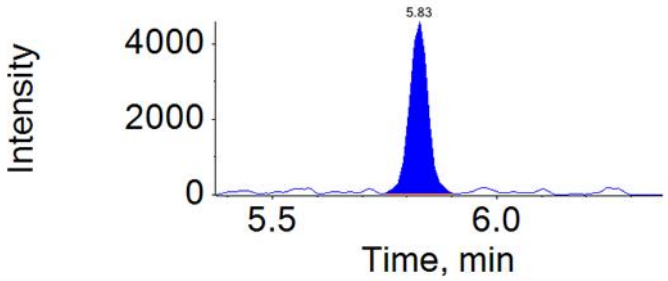
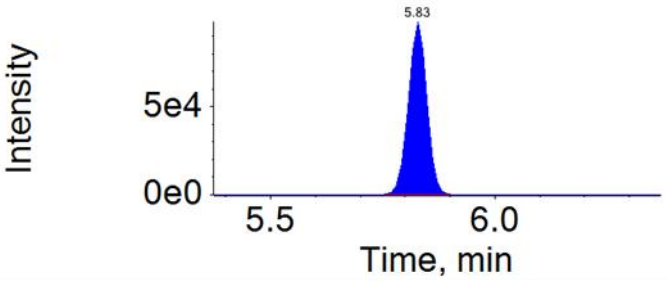
REVIEWED
By umar at 5:24 pm, 11/9/18

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
	

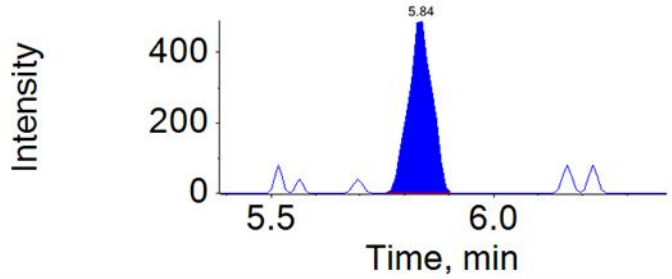
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

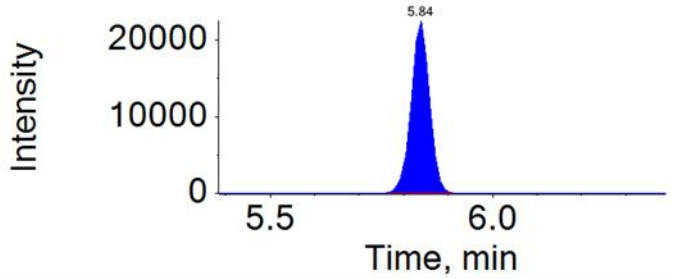
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

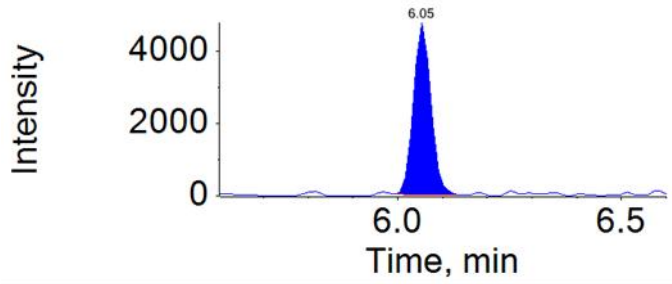
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

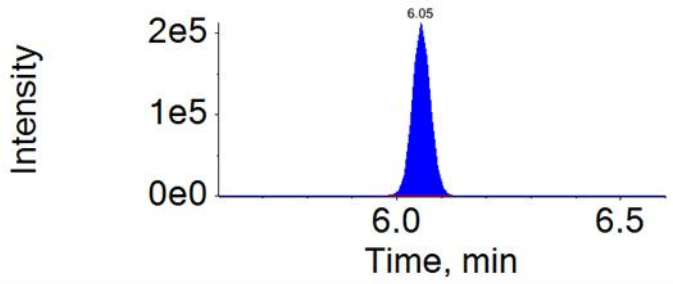
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



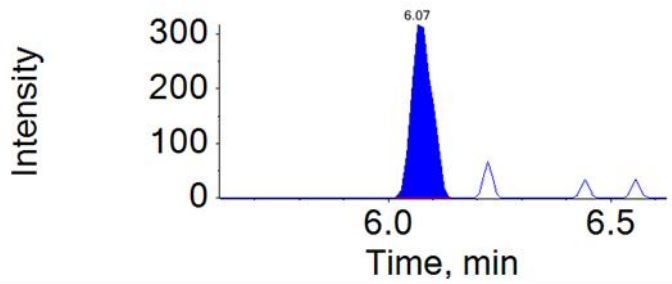


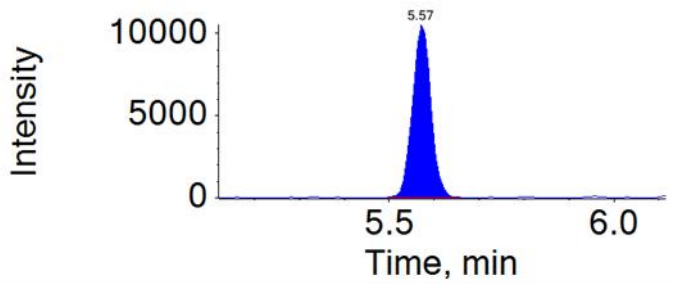
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



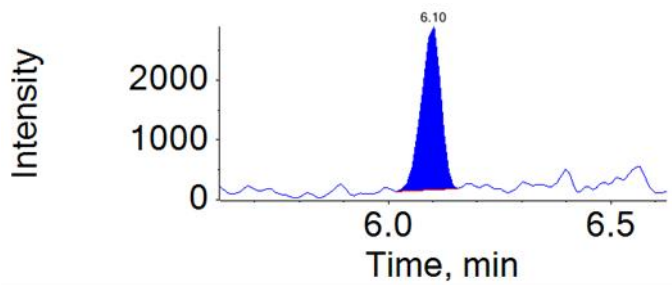


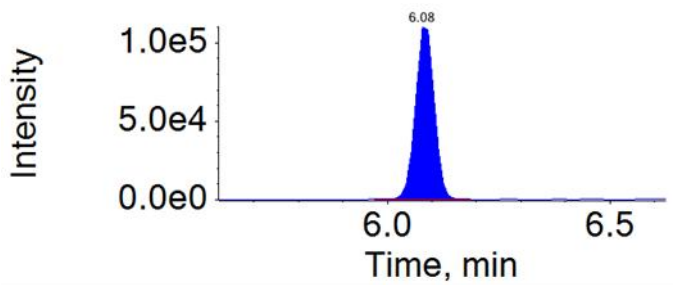
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



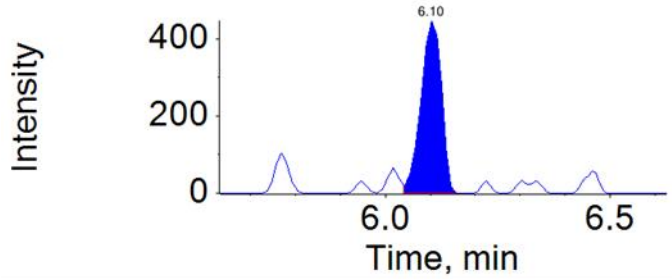


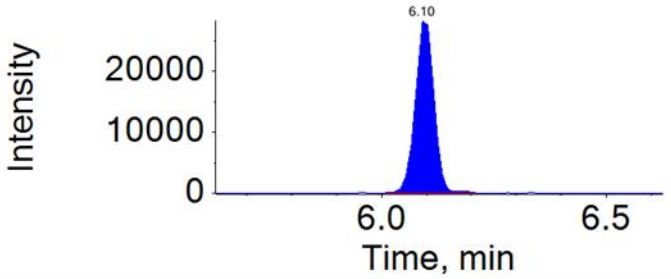
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

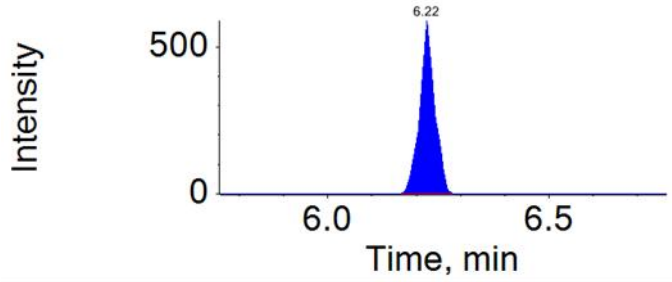
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

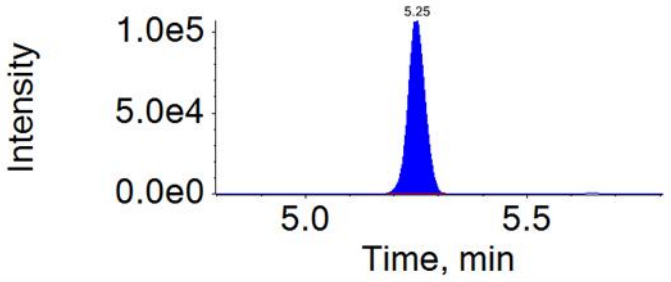
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



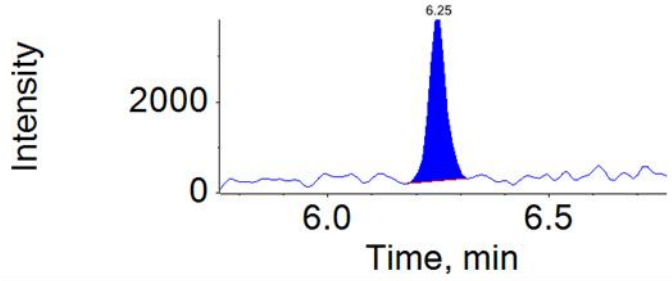


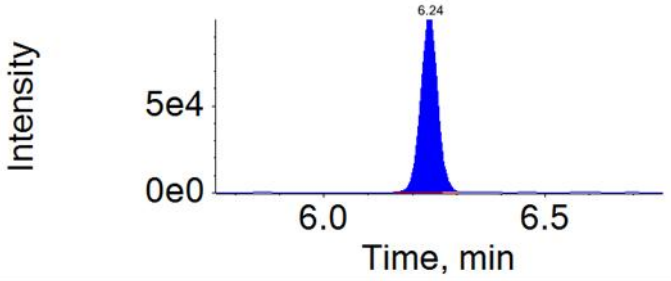
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



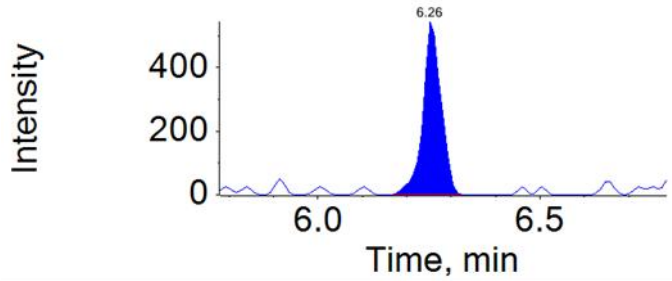


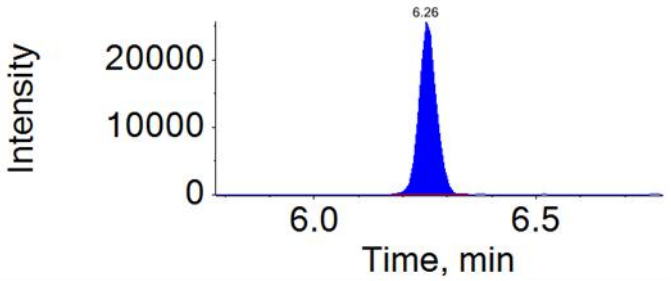
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

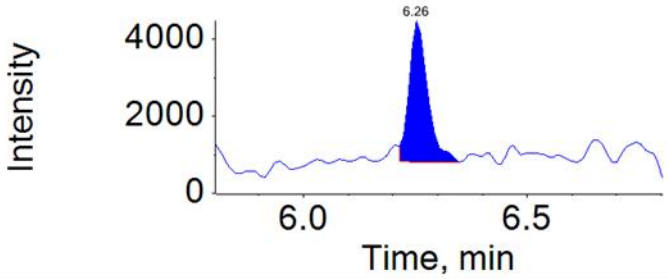
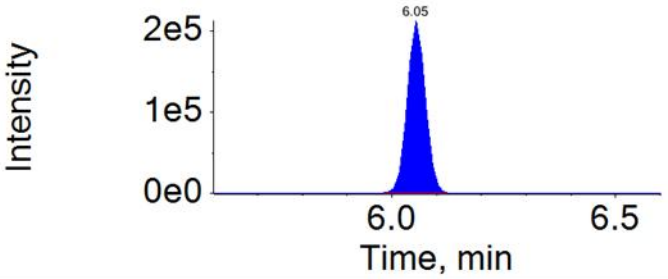


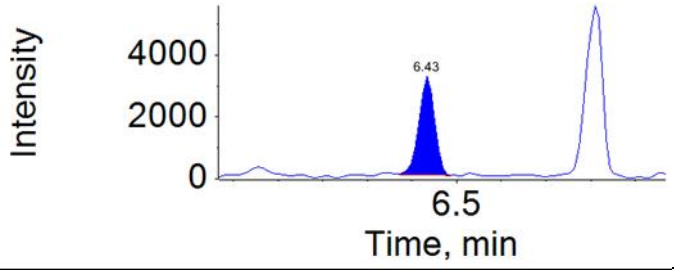
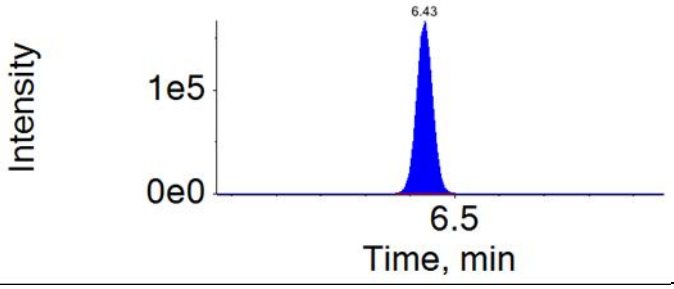


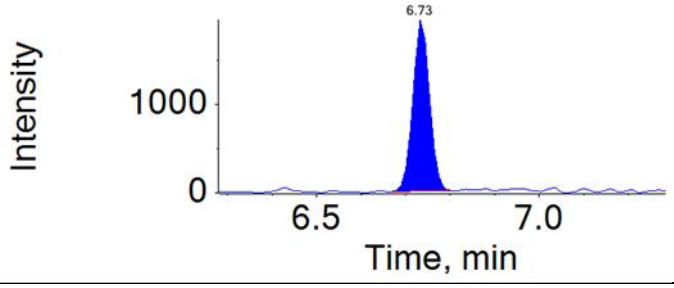
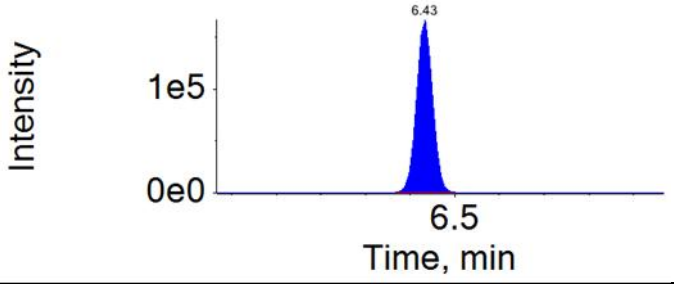
APPROVED
By JPT at 2:54 pm, 11/7/18

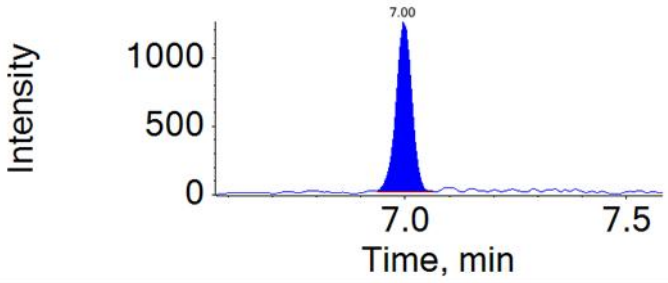
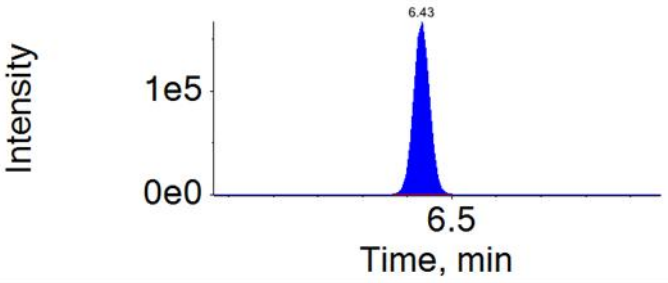
REVIEWED
By umar at 5:24 pm, 11/9/18

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
	

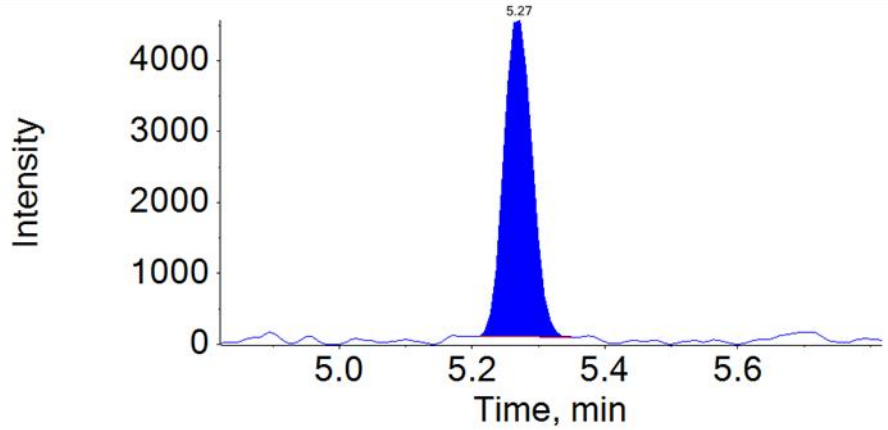
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

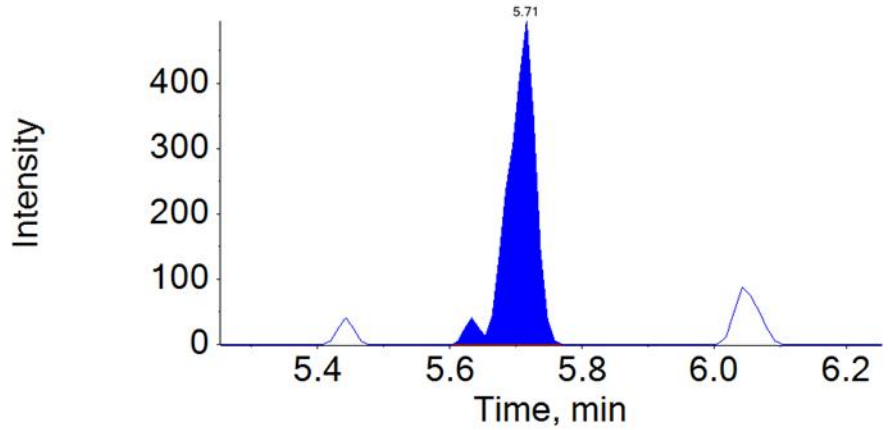
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
13308.8
Mass Range:
463.0 / 419.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



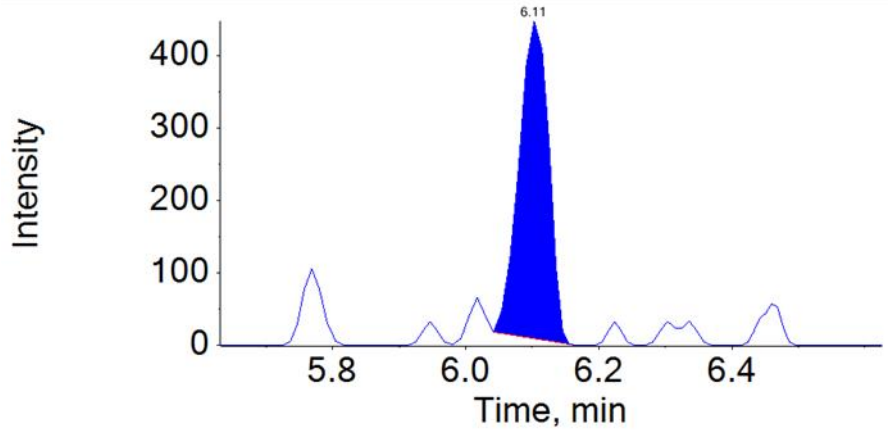
Integration Comment: incorrect integration

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

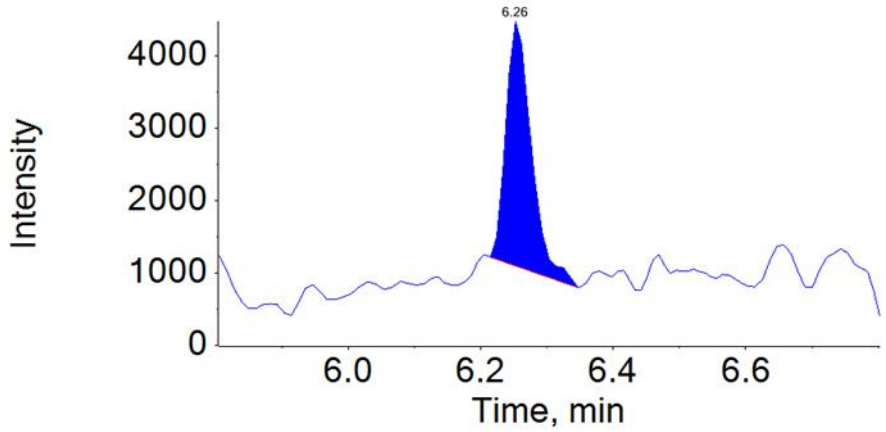
APPROVED
By JPT at 2:54 pm, 11/7/18

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

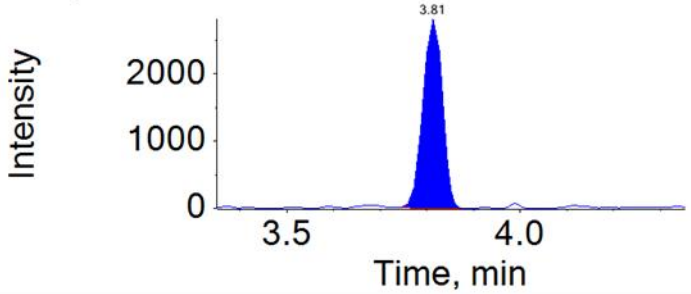
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-09.wiff

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	

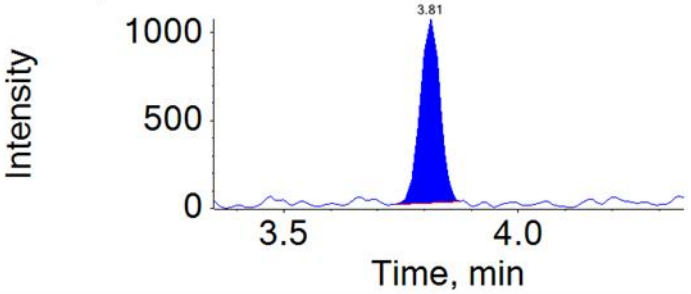
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

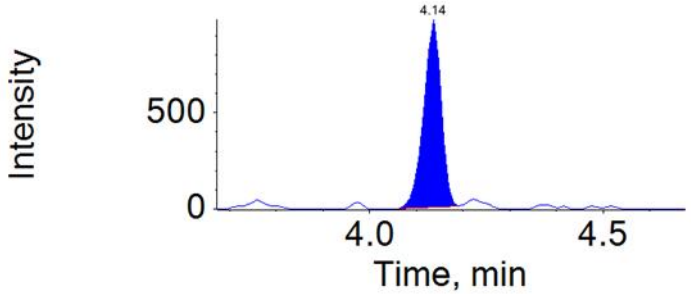
Component: PFBS
Primary Mass: 299.0 / 80.0



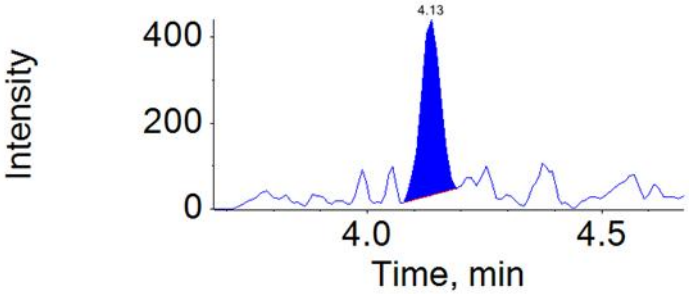
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



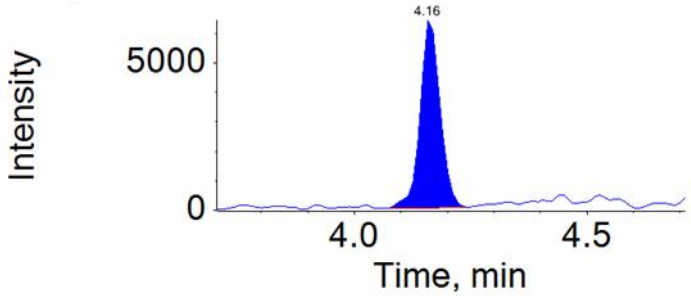
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



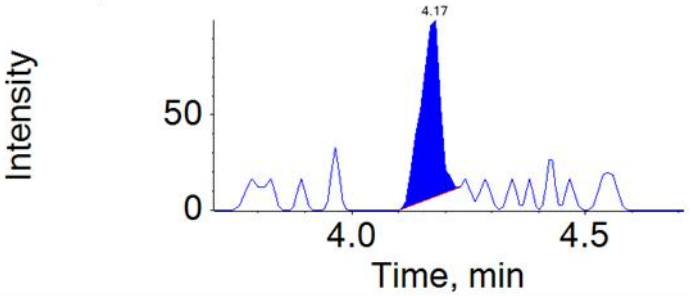
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



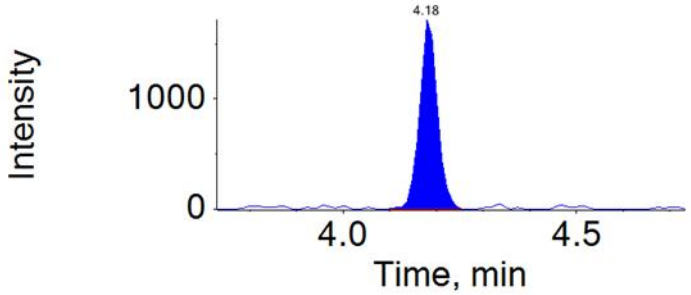
Component: PFHxA
Primary Mass: 313.0 / 269.0



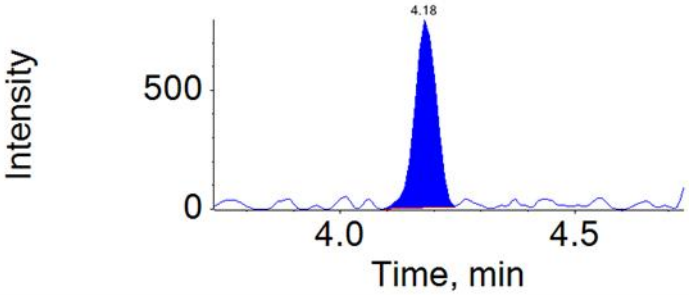
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



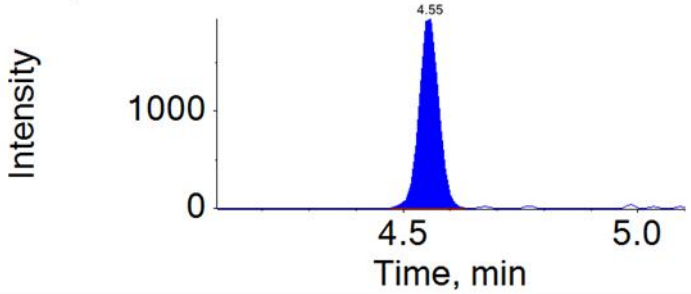
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



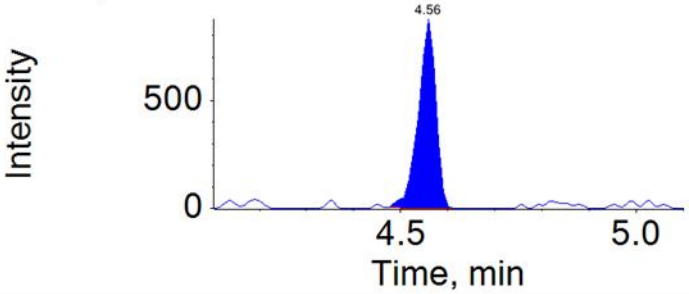
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

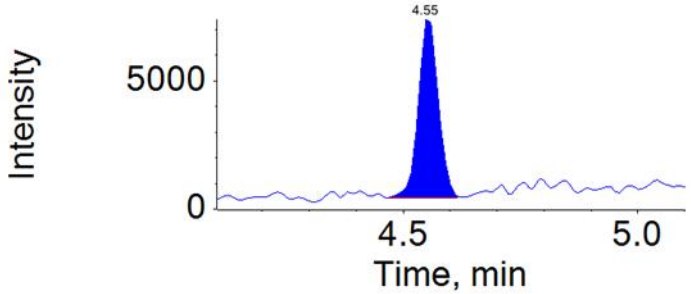
Component: PFHxS
Primary Mass: 399.0 / 80.0



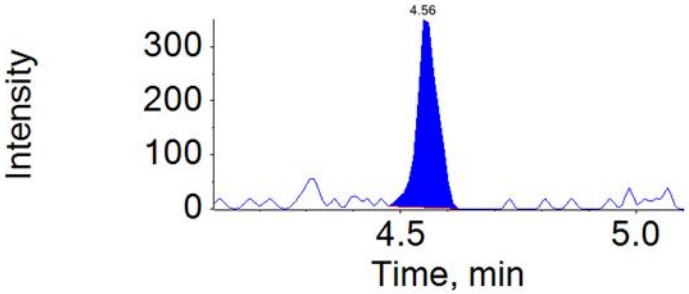
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



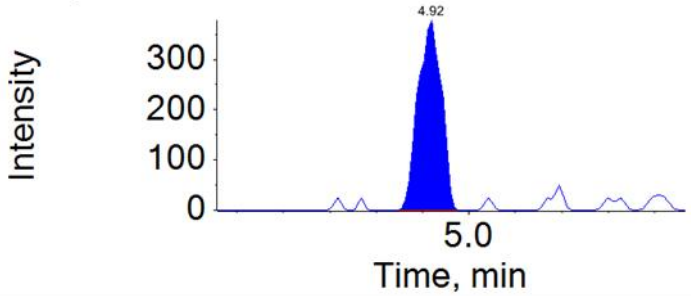
Component: PFHpA
Primary Mass: 363.0 / 319.0



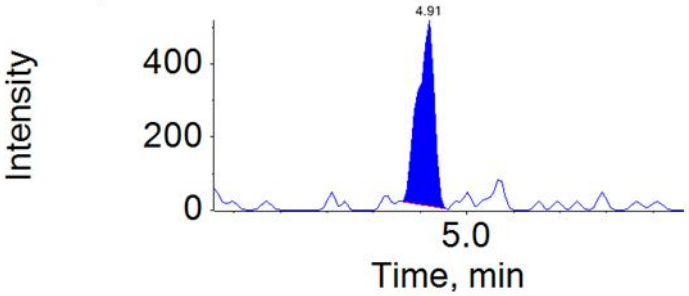
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



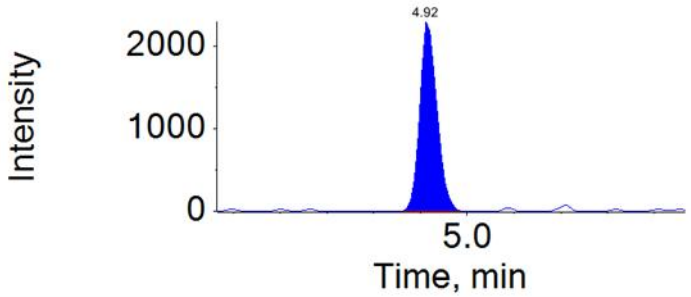
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



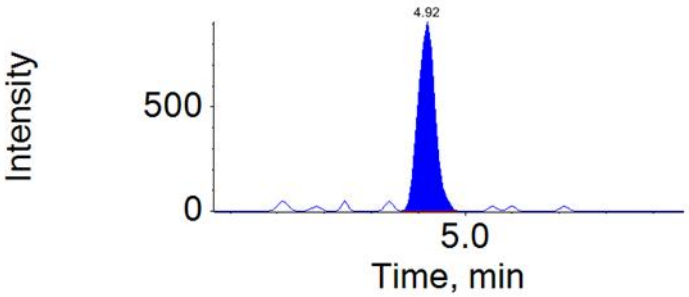
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



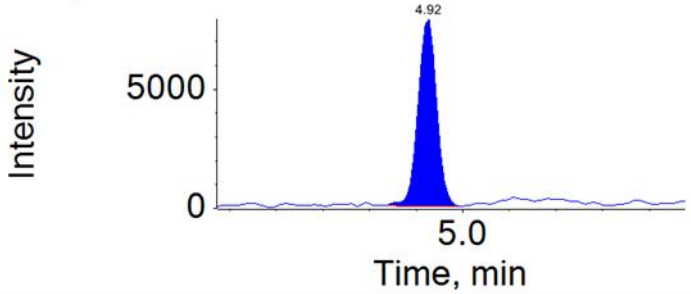
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



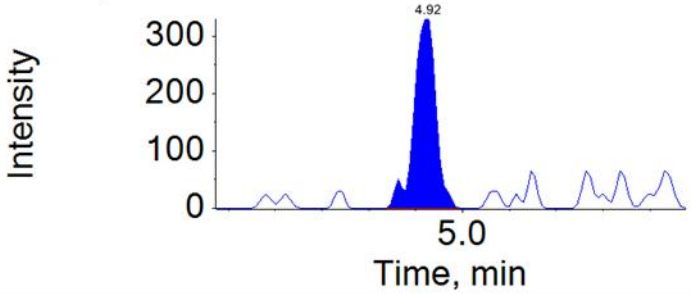
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

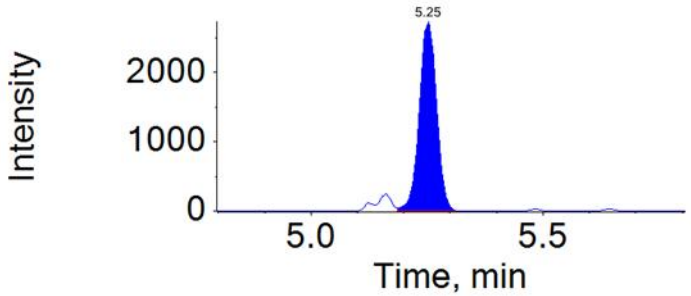
Component: PFOA
Primary Mass: 413.0 / 369.0



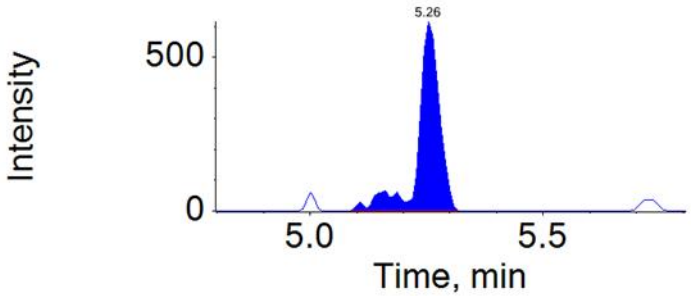
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



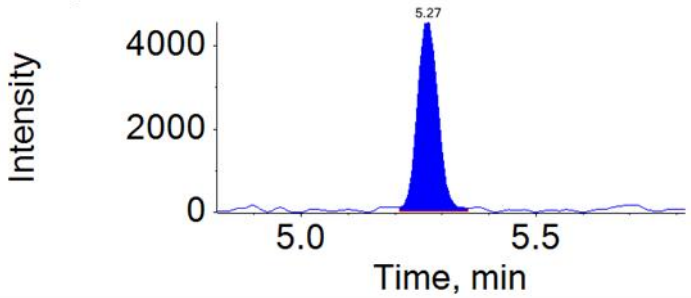
Component: PFOS
Primary Mass: 499.0 / 80.0



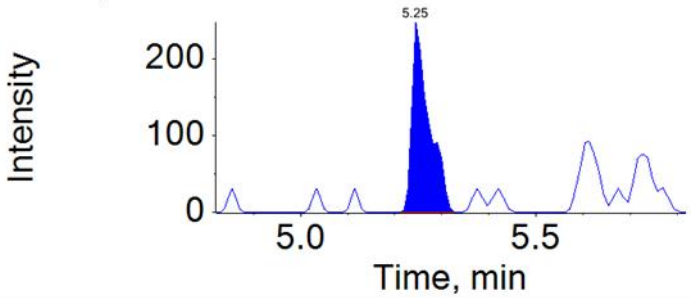
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



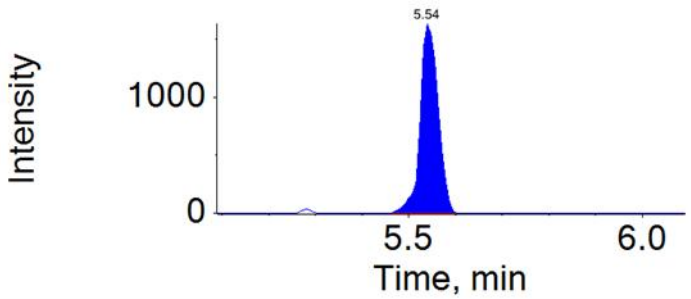
Component: PFNA
Primary Mass: 463.0 / 419.0



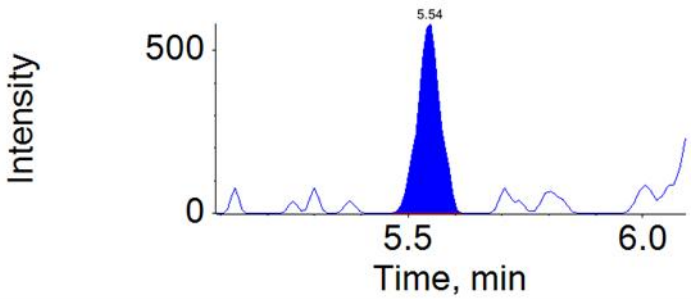
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



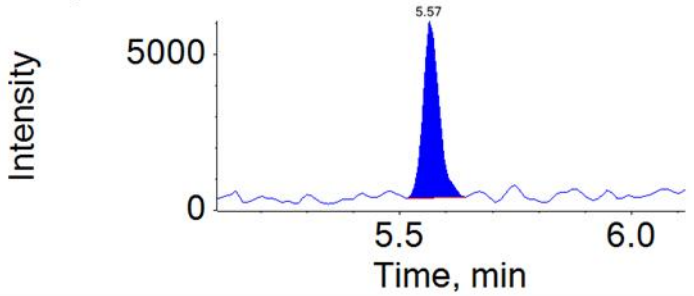
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



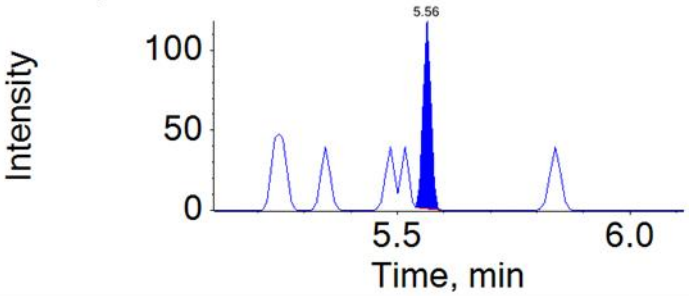
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

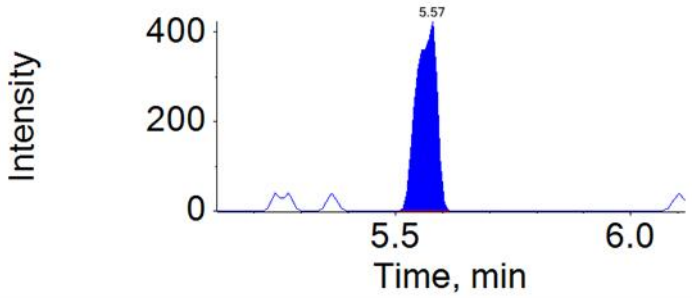
Component: PFDA
Primary Mass: 513.0 / 469.0



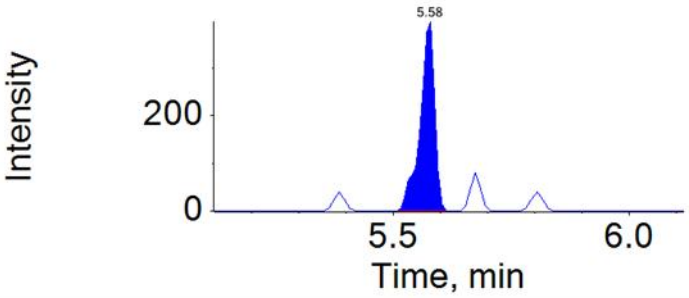
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Secondary Mass: 513.0 / 169.0



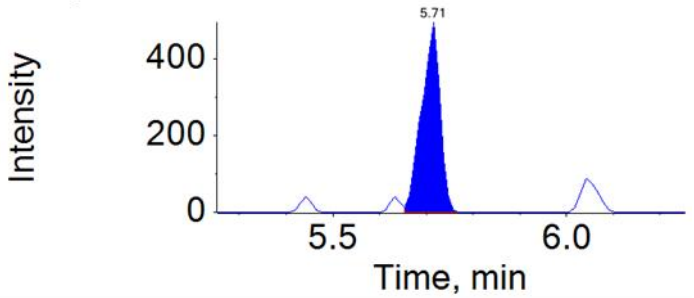
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



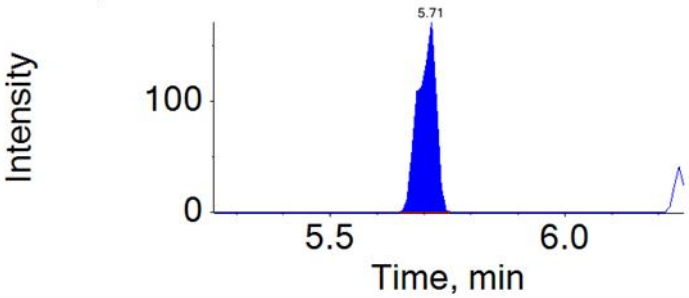
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



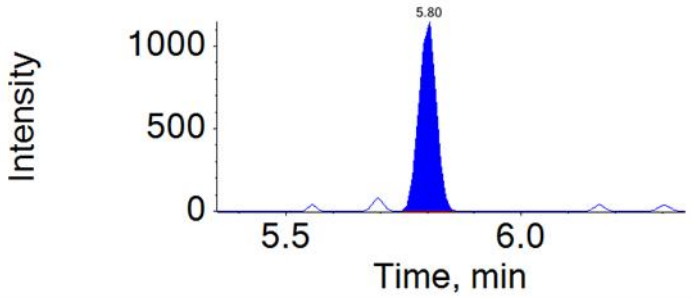
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



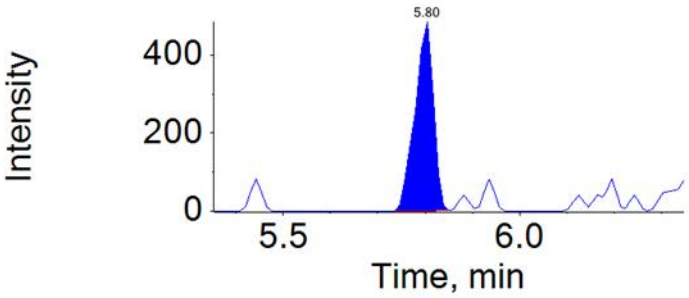
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



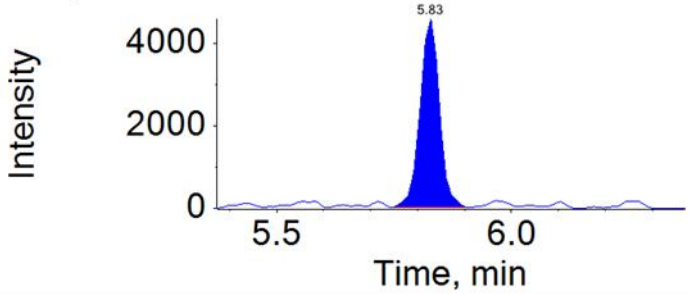
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



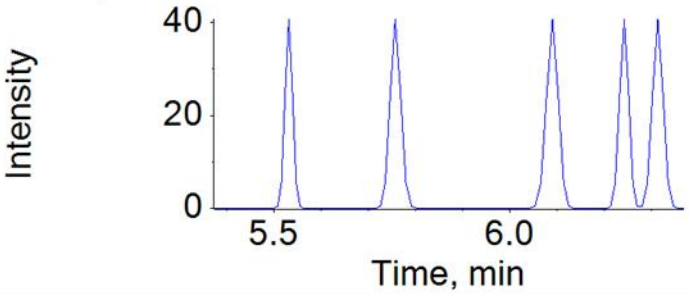
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

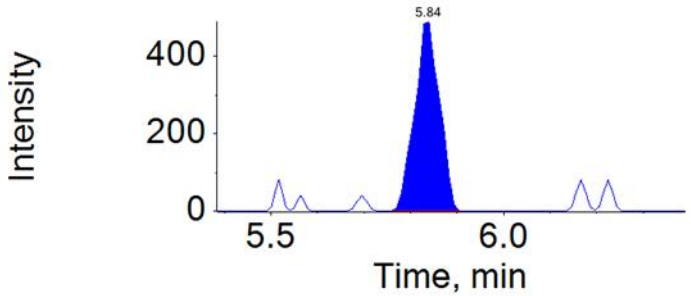
Component: PFUnDA
Primary Mass: 563.0 / 519.0



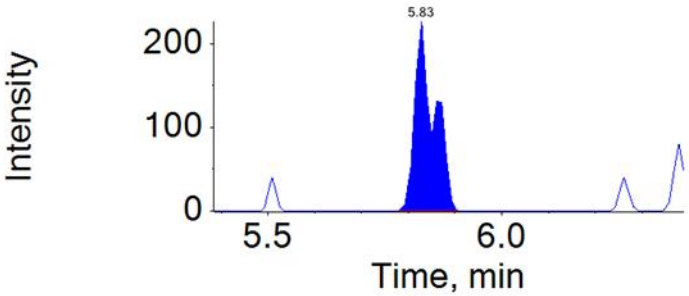
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Secondary Mass: 563.0 / 169.0



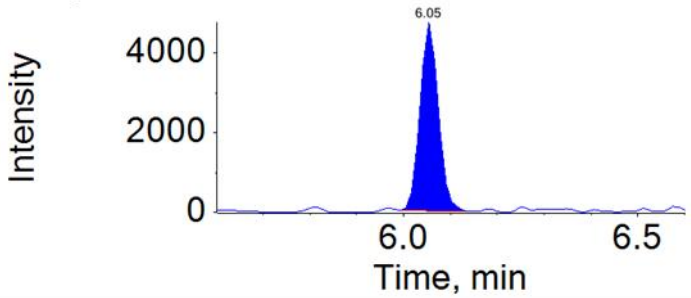
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



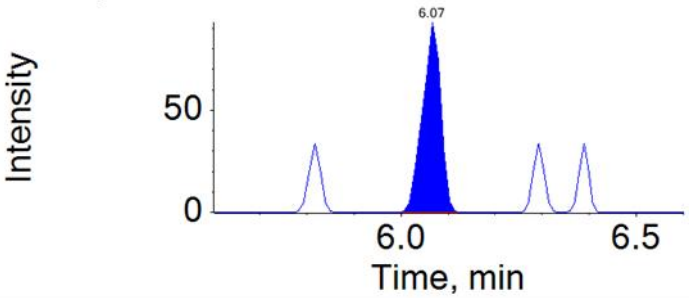
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



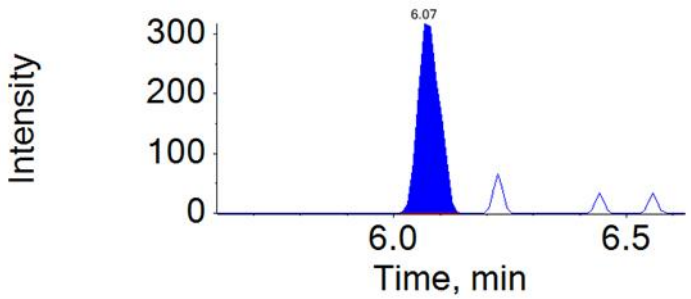
Component: PFDoDA
Primary Mass: 613.0 / 569.0



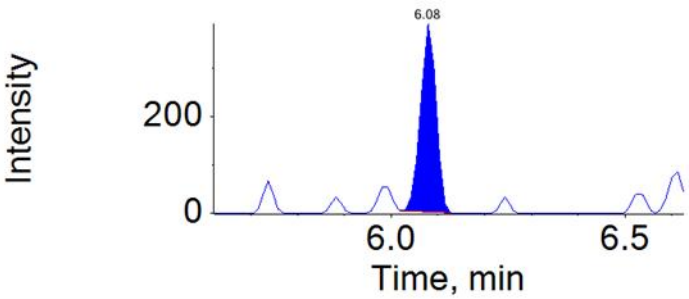
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



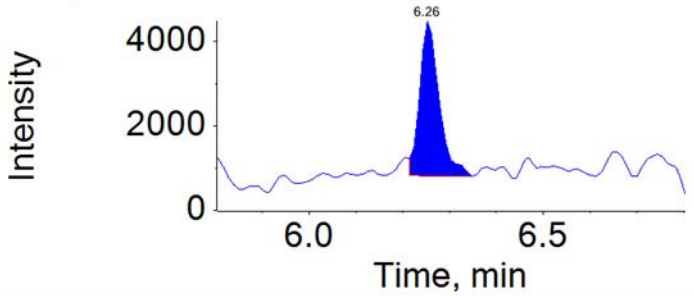
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



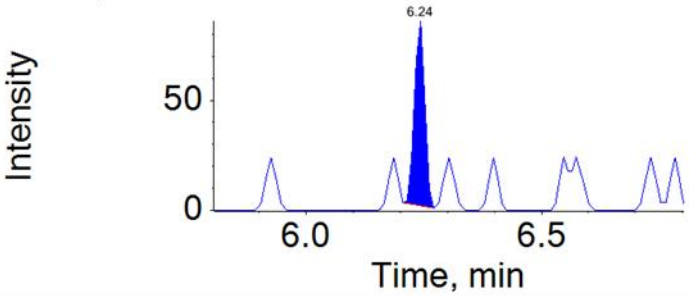
APPROVED
By JPT at 2:54 pm, 11/7/18

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By umar at 5:24 pm, 11/9/18

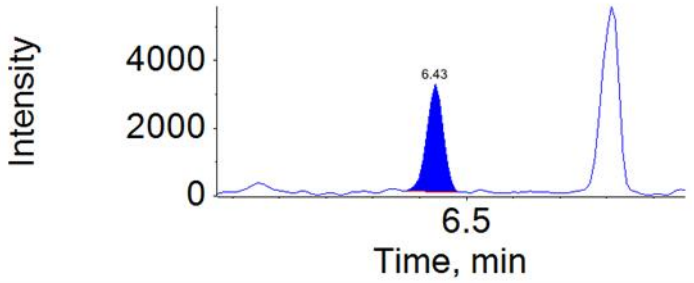
Component: PFTrDA
Primary Mass: 663.0 / 619.0



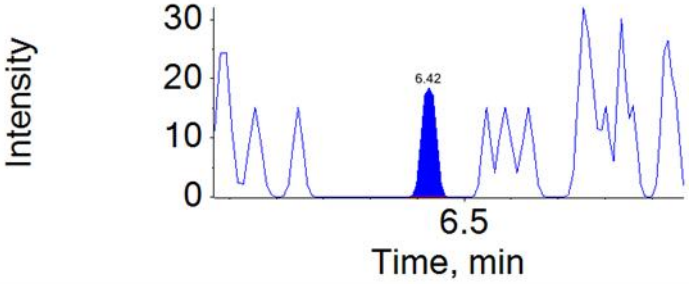
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



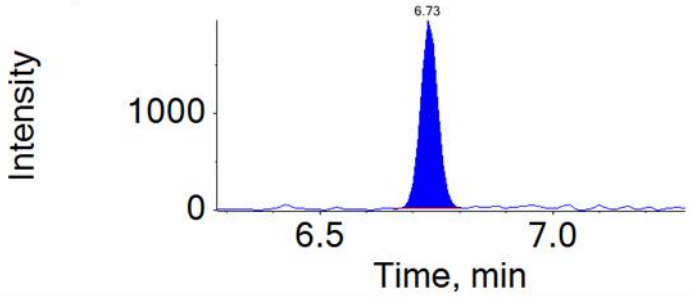
Component: PFTeDA
Primary Mass: 713.0 / 669.0



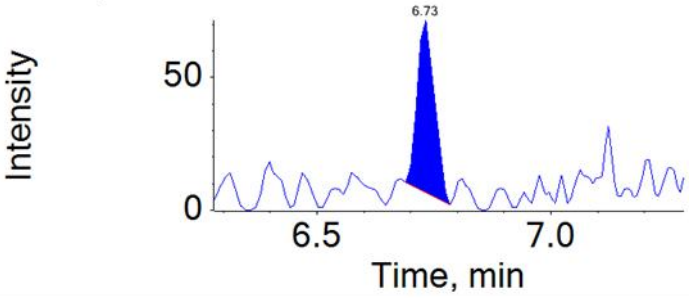
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



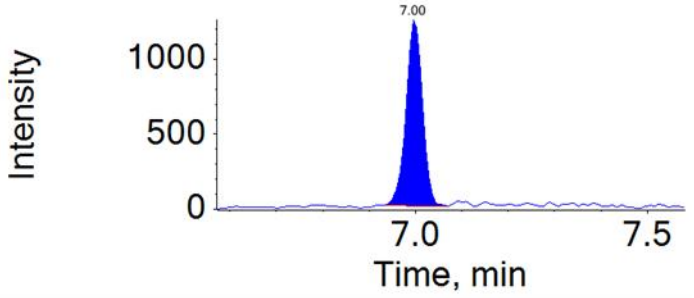
Component: PFHxDA
Primary Mass: 813.0 / 769.0



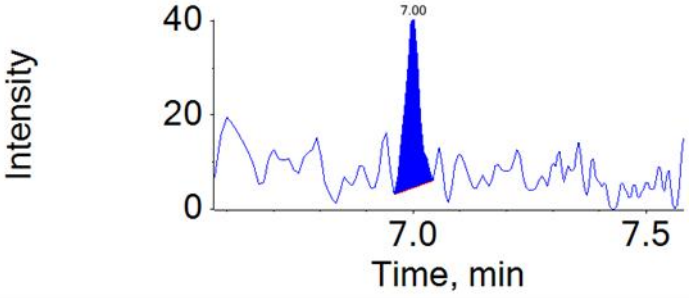
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

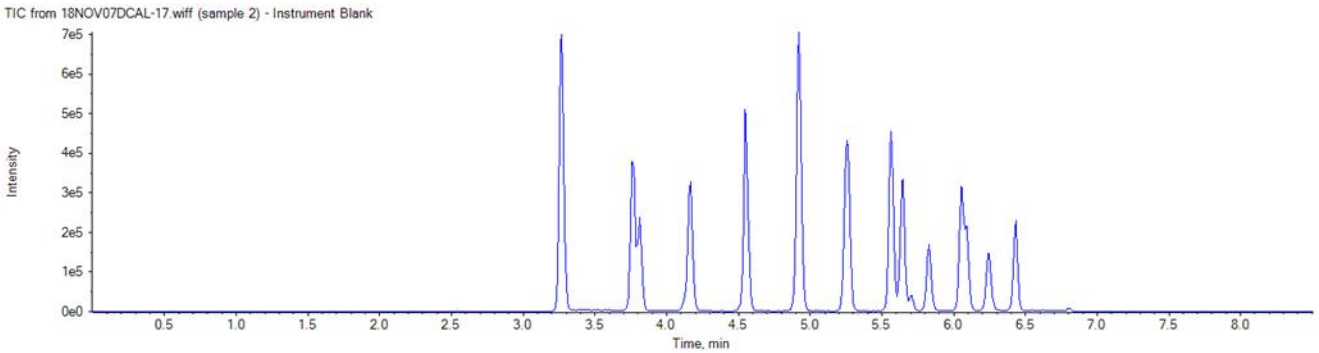
Analyte Quantitation Peak Table

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

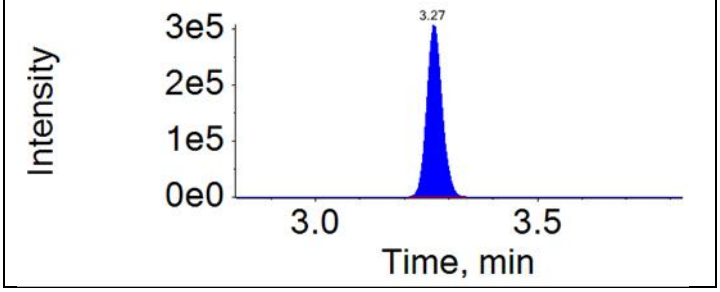


APPROVED
By JPT at 2:53 pm, 11/7/18

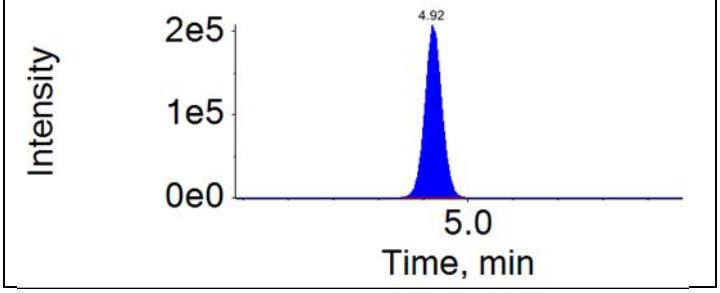
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

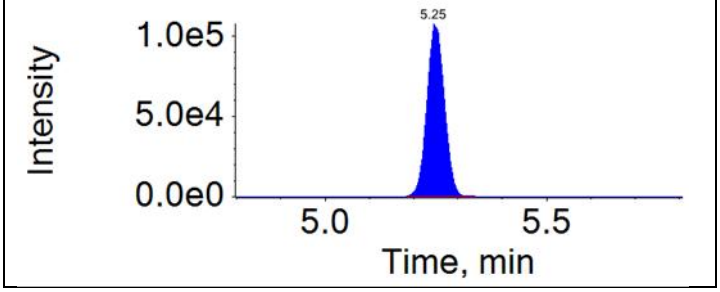
Injection Standard: 13C3-PFBA
216.0 / 172.0



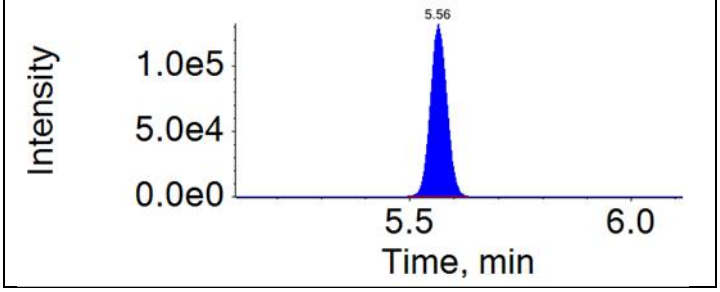
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

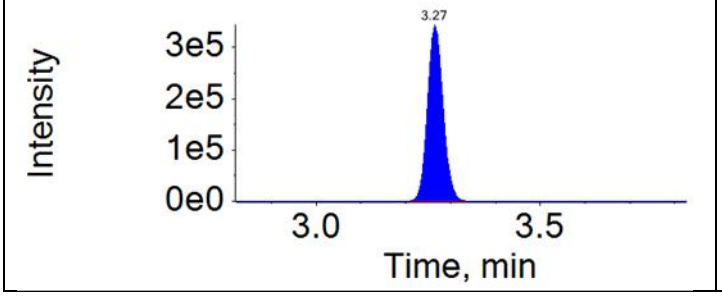


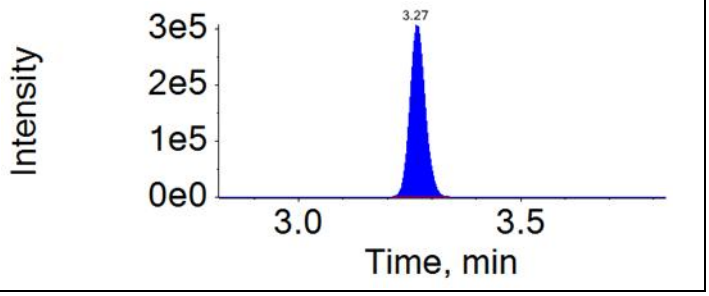
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

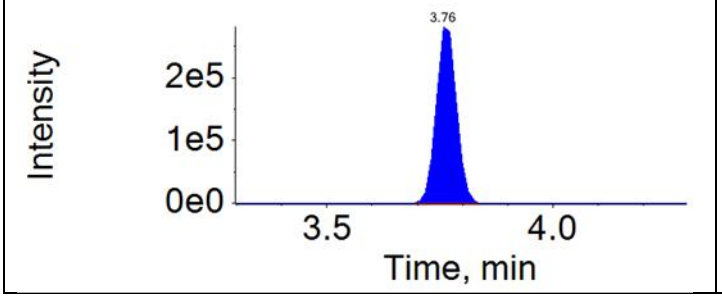
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

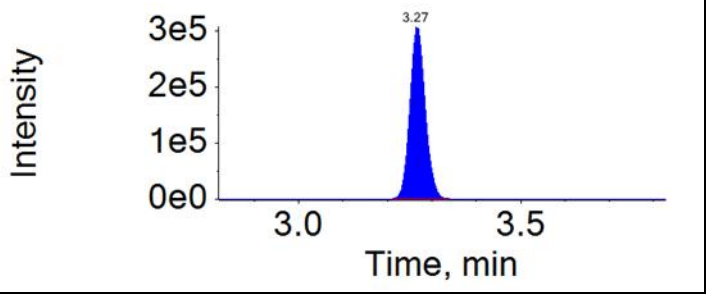
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



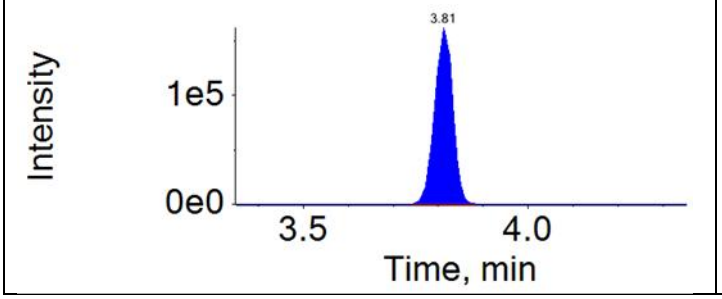


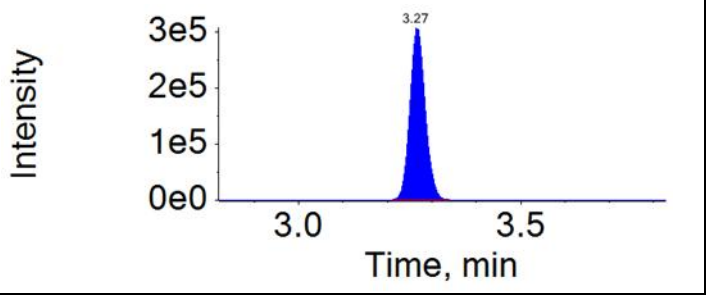
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



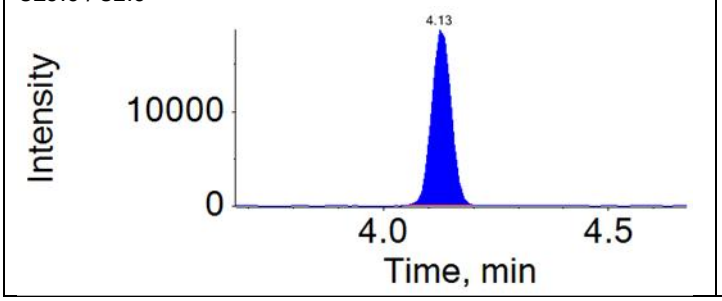


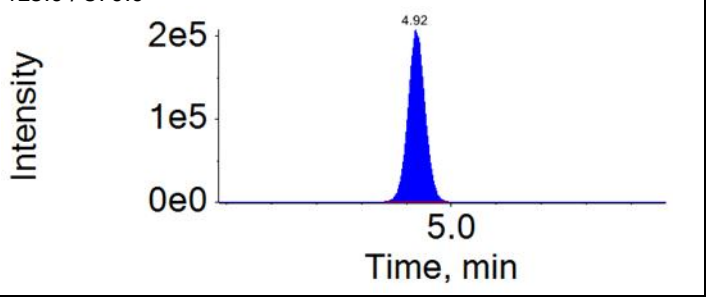
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





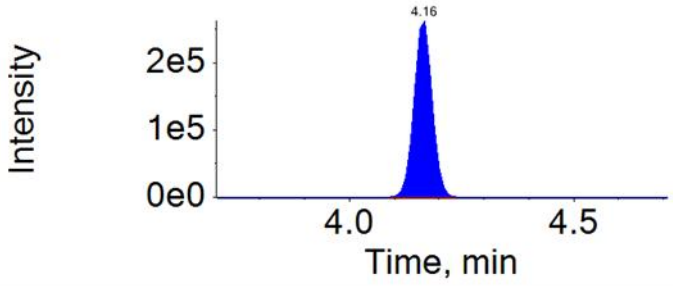
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

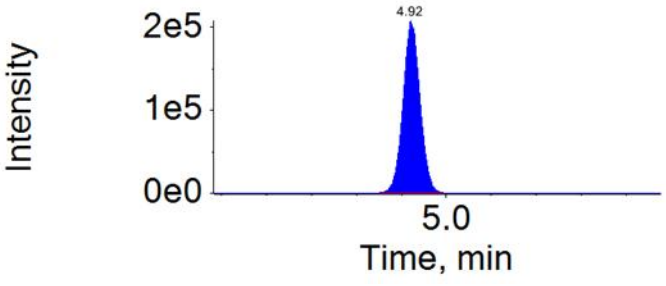




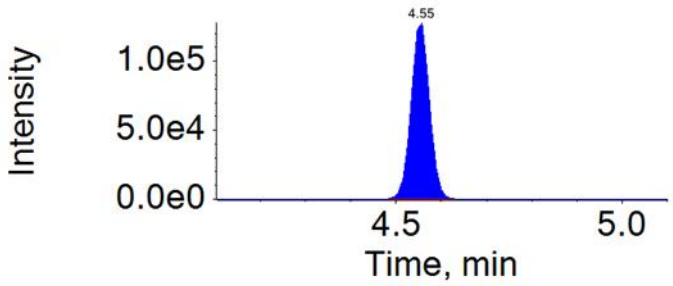
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

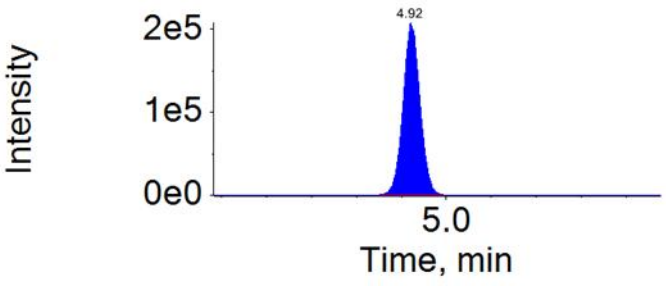
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



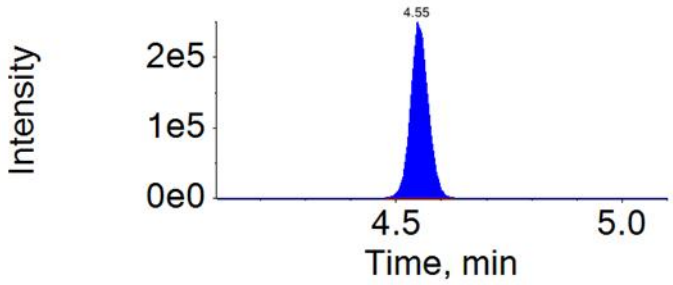


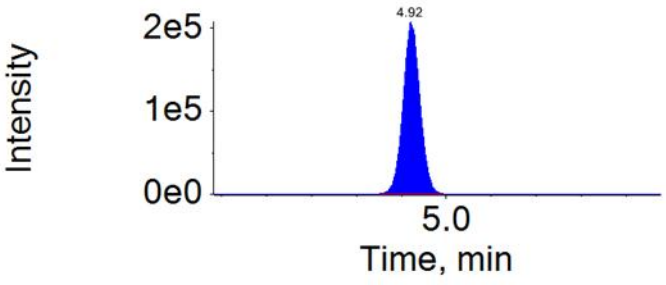
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



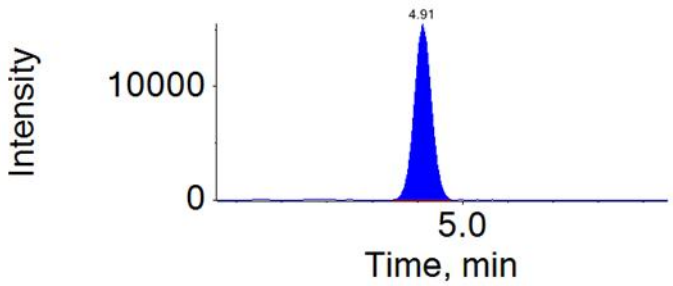


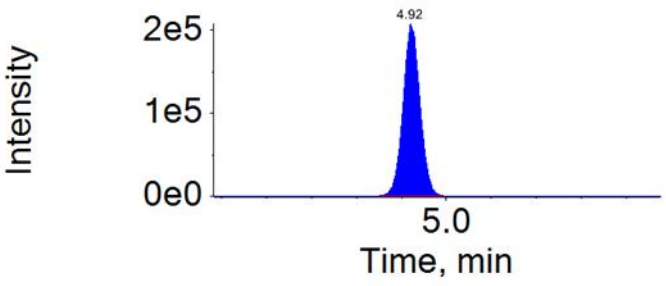
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



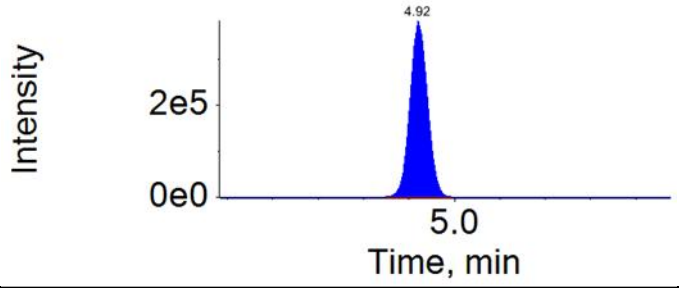


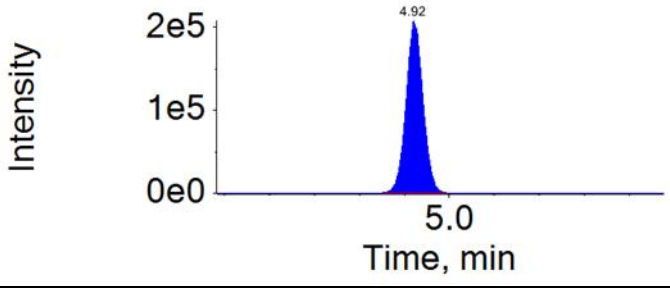
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

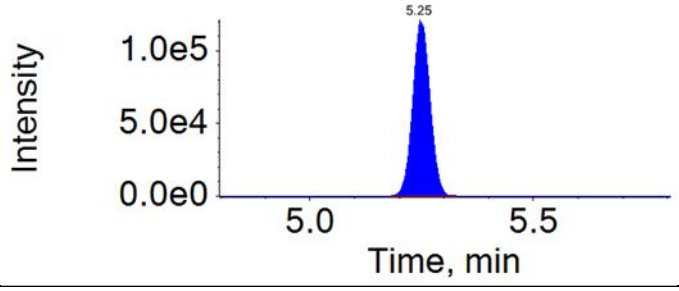
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

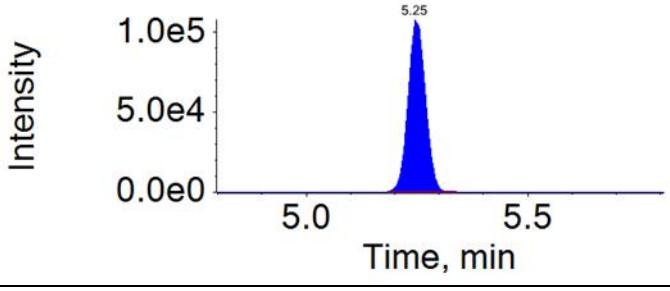
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



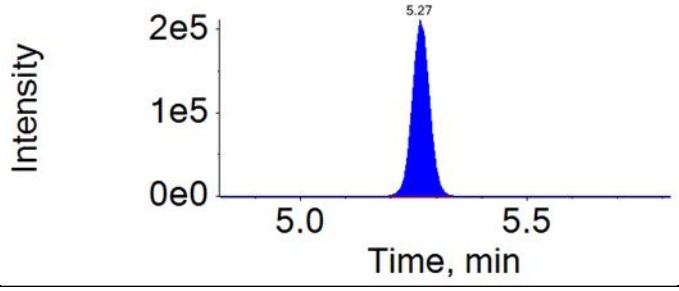


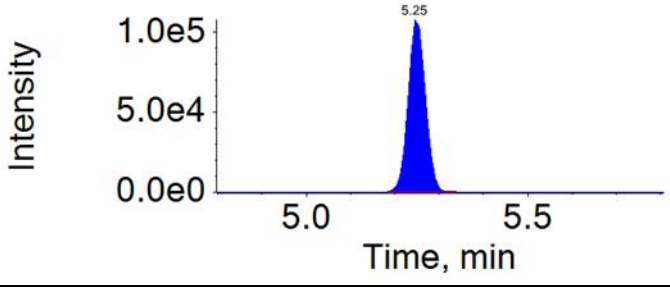
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



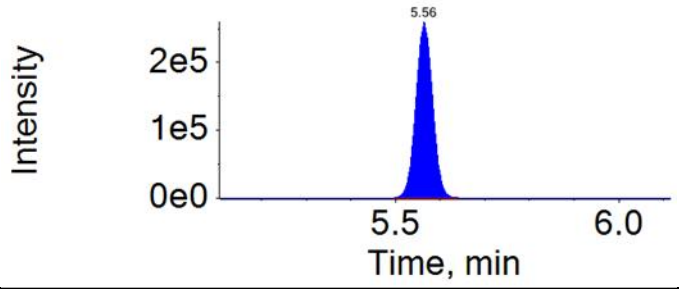


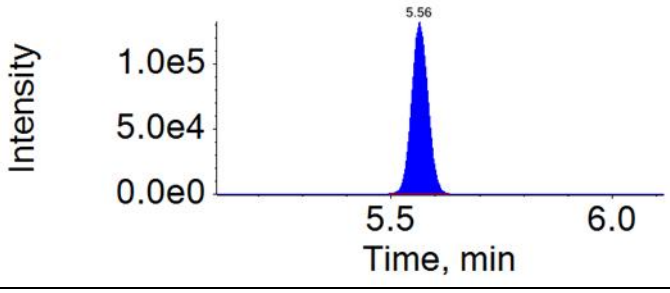
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



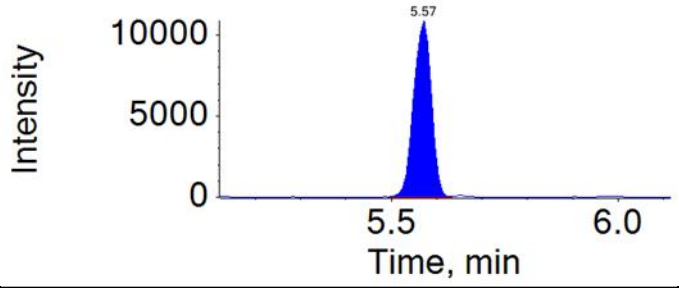


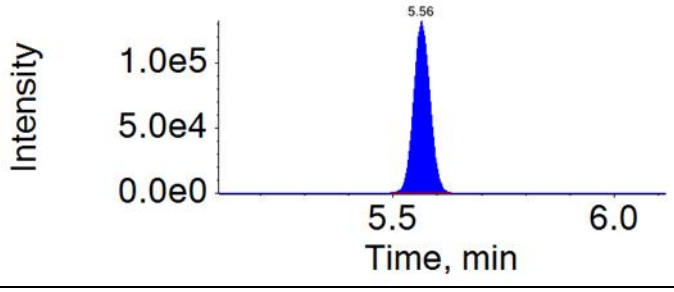
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

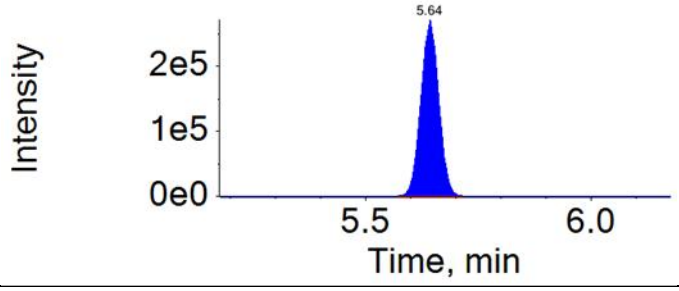
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

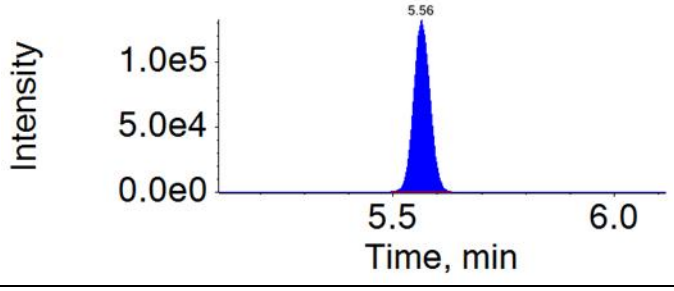
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



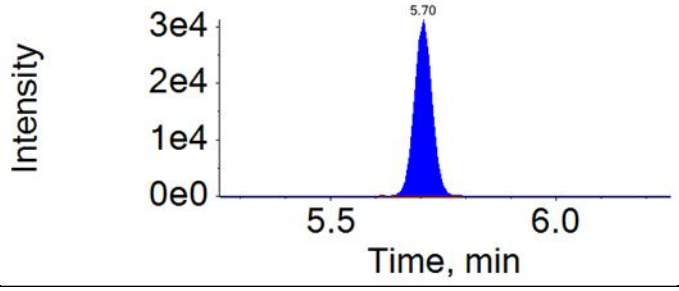


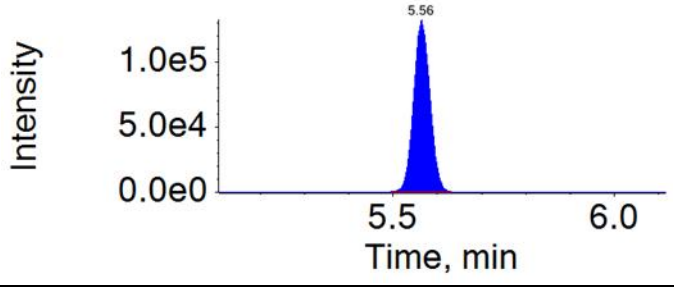
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



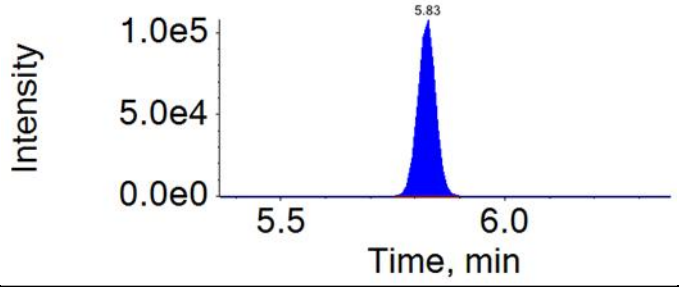


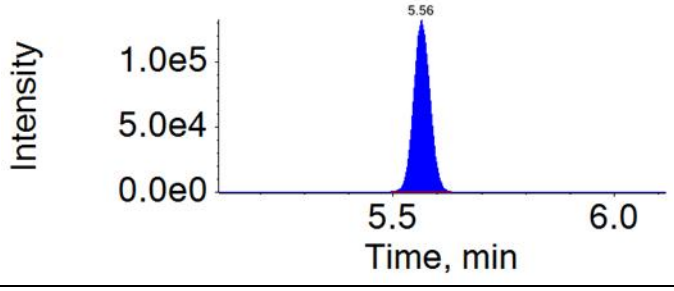
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

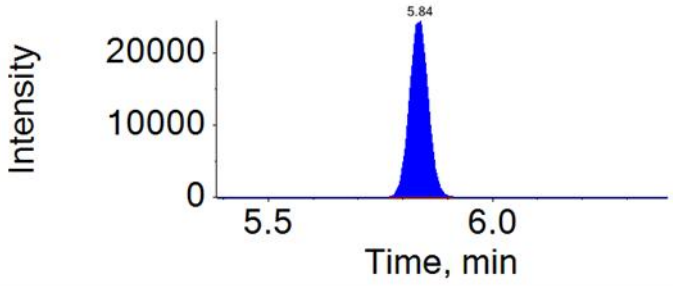
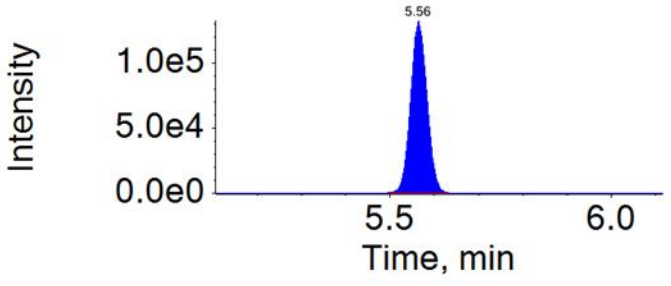


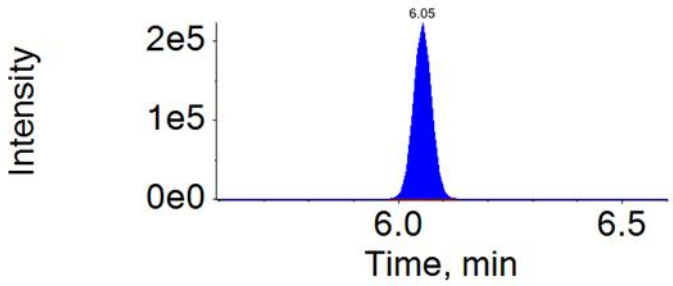
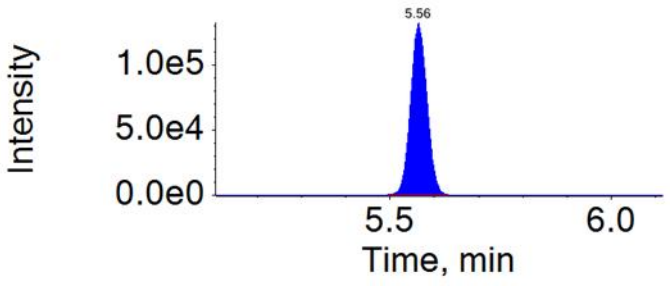


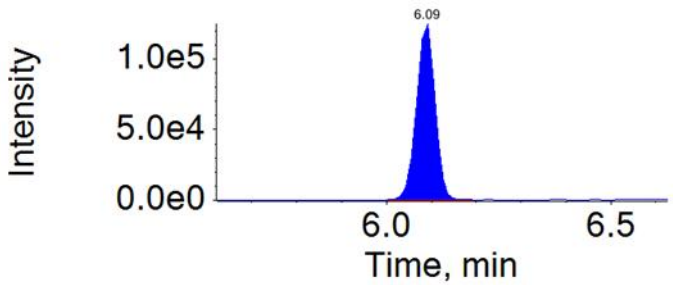
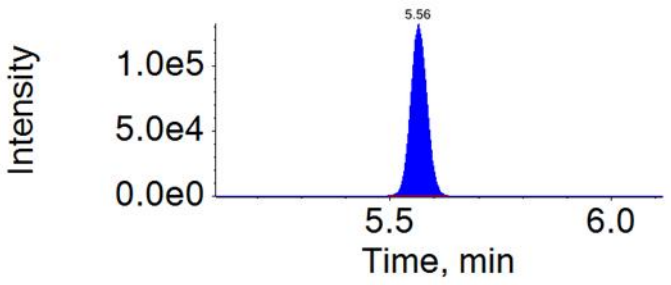
APPROVED
By JPT at 2:53 pm, 11/7/18

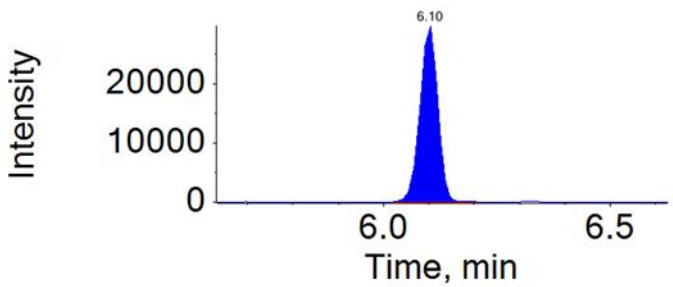
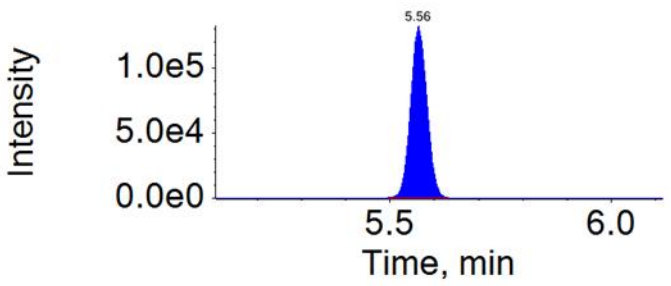
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

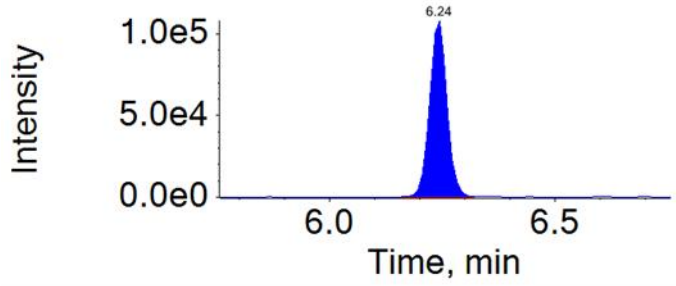
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

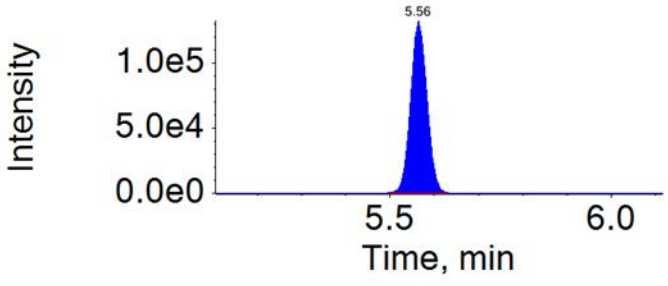
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

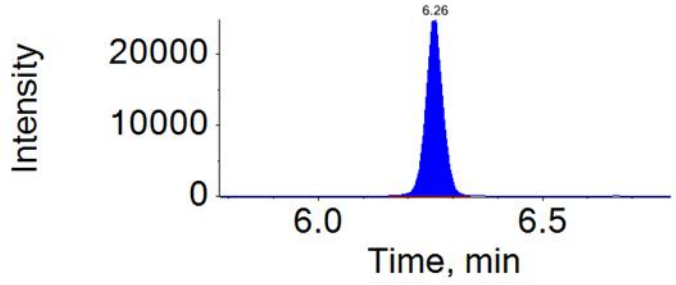
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

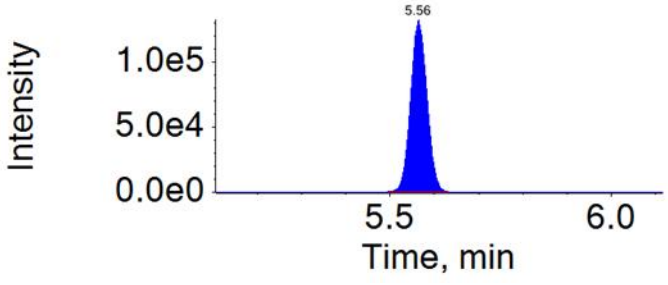
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



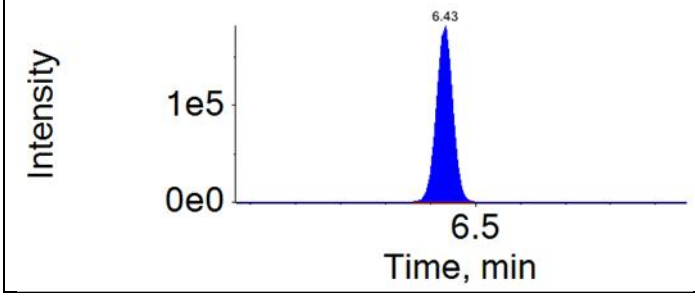


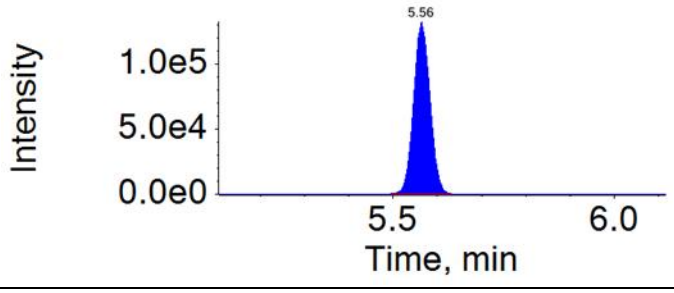
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



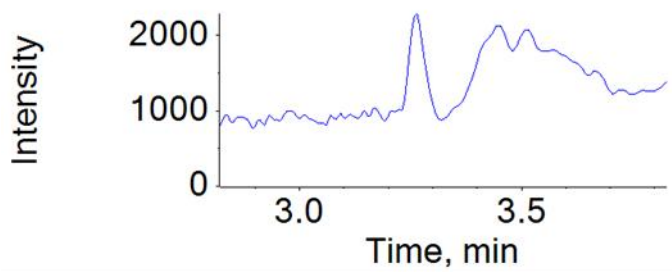


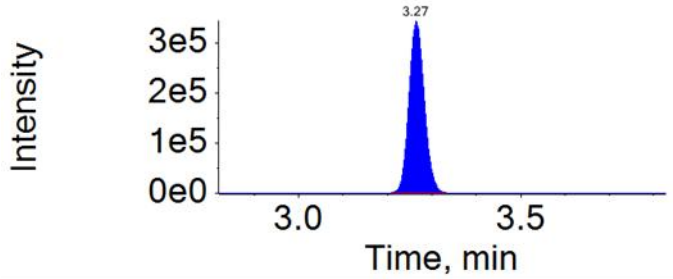
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

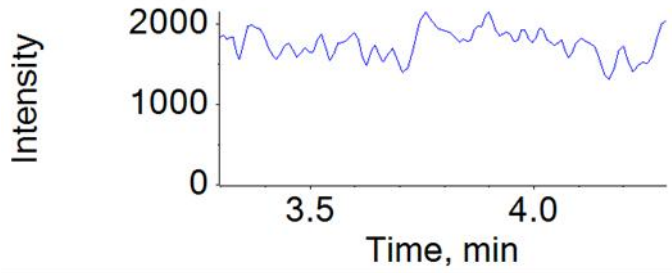
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

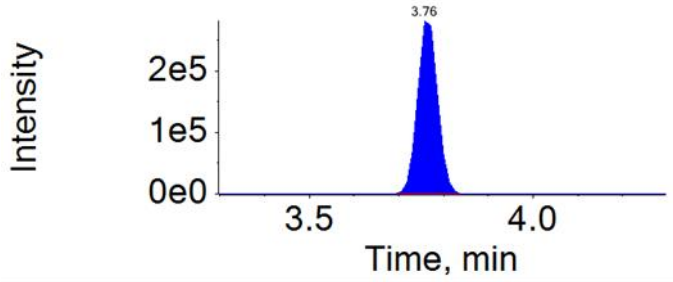
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



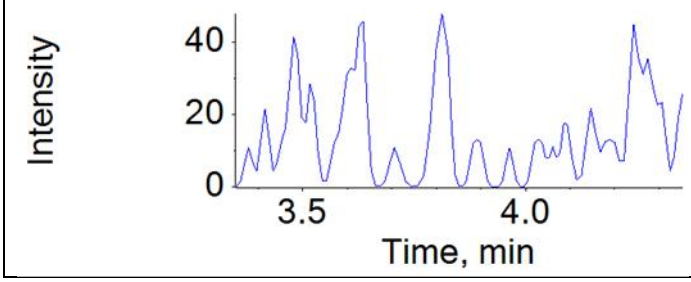


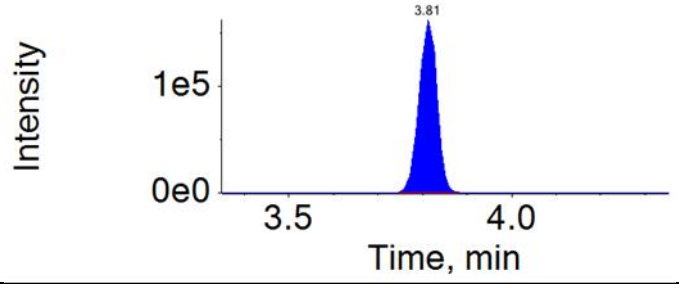
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



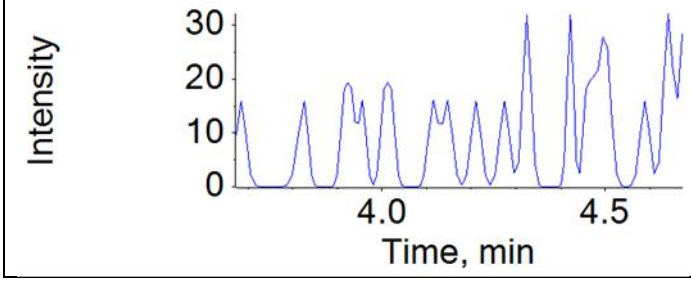


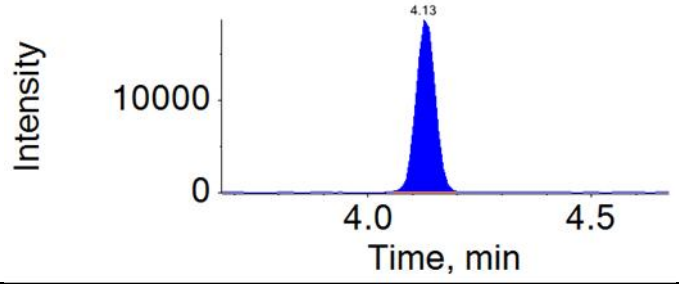
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



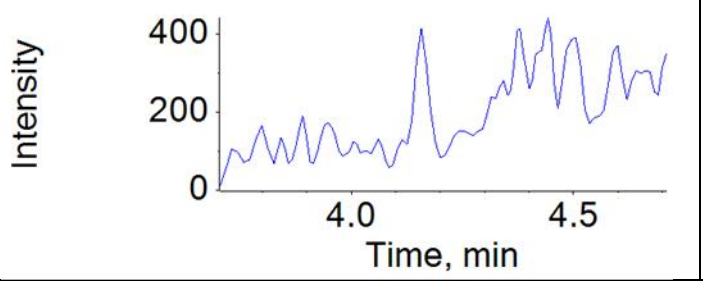


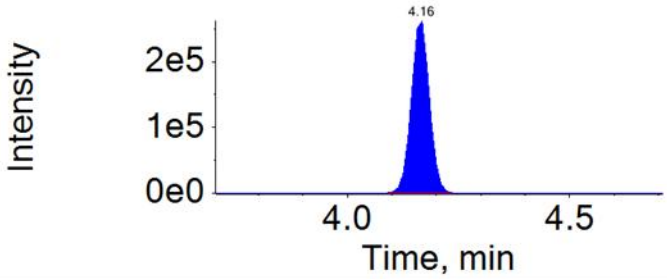
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

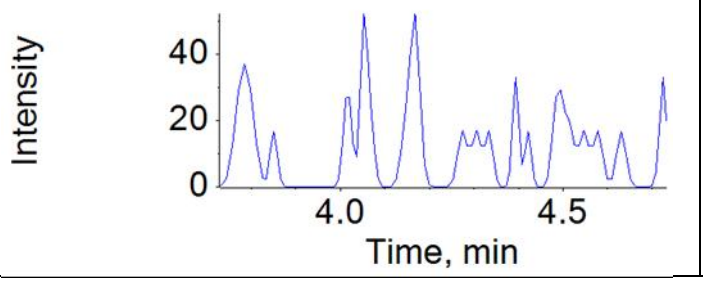
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

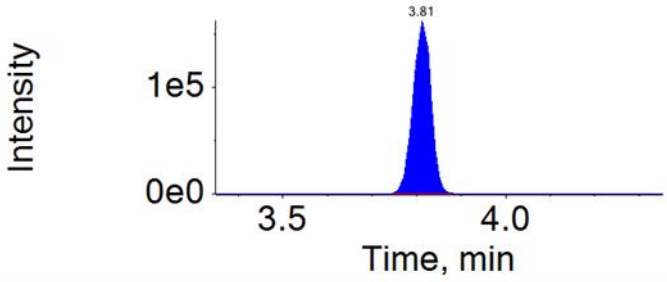
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



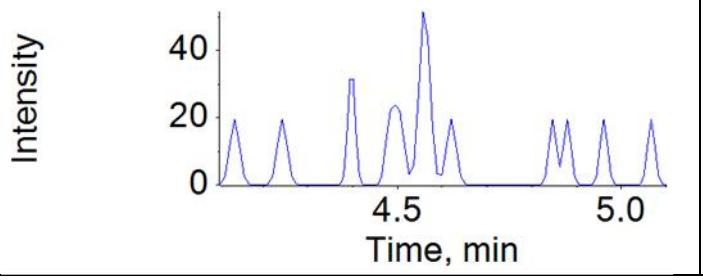


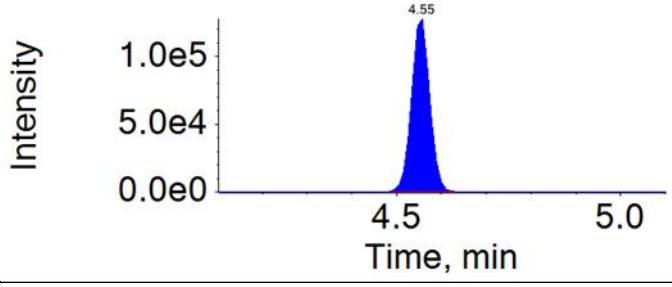
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



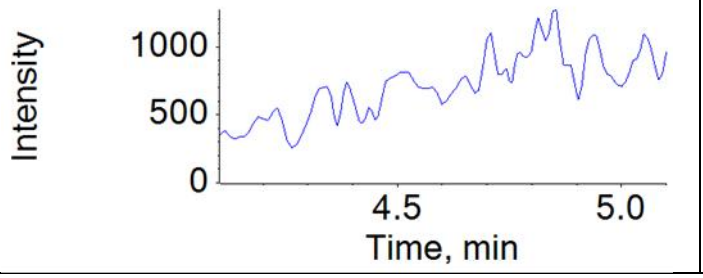


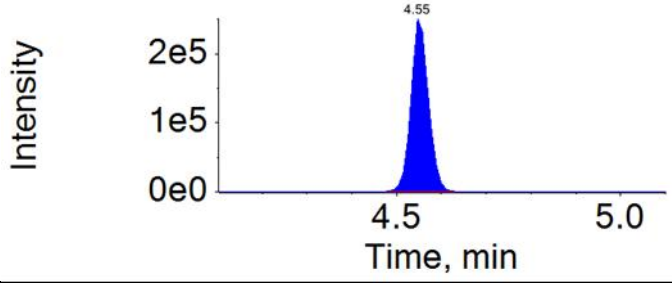
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



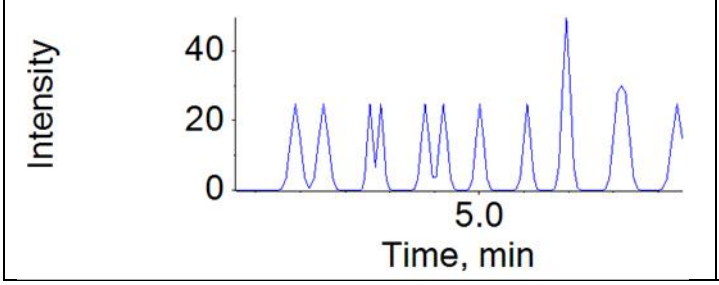


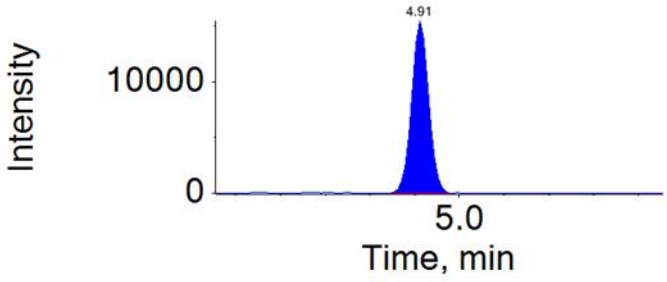
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

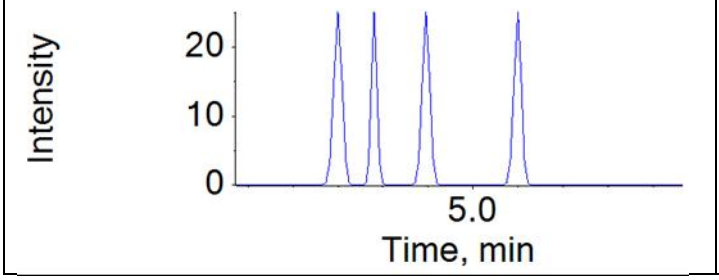
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

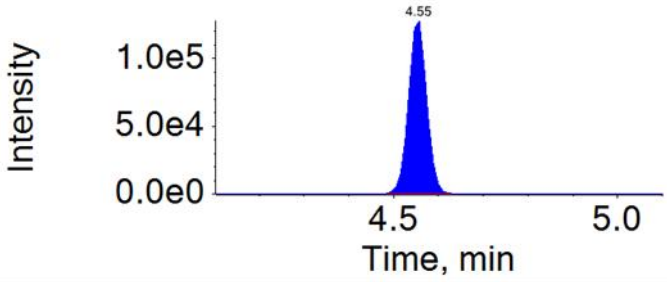
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



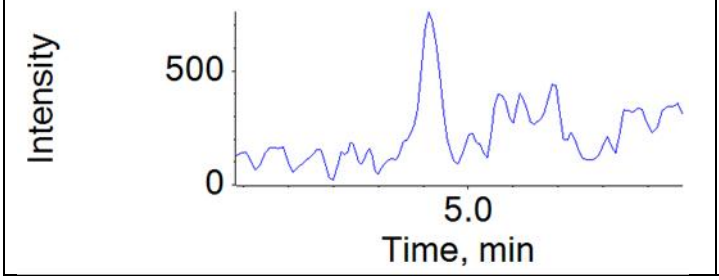


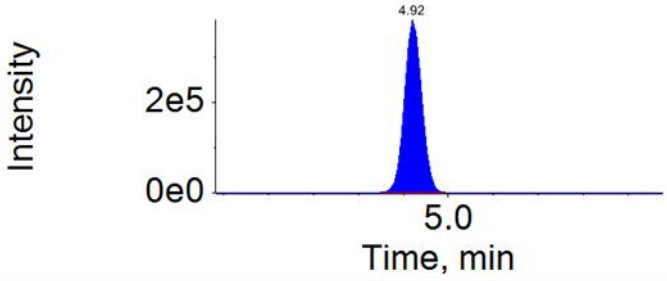
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



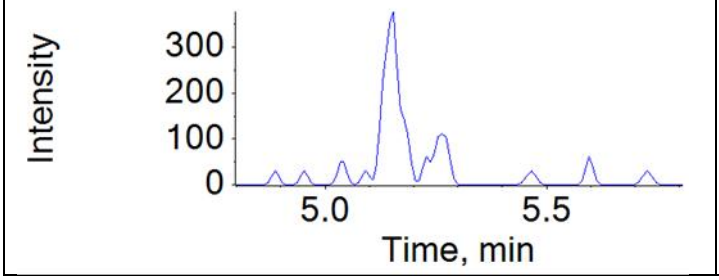


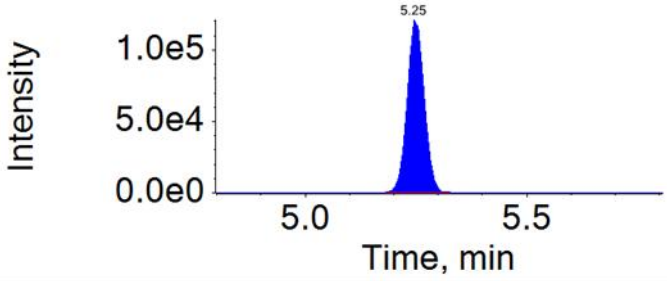
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



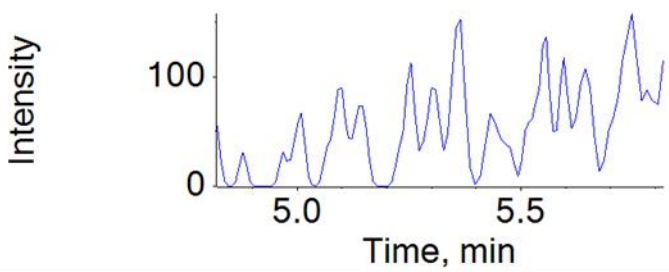


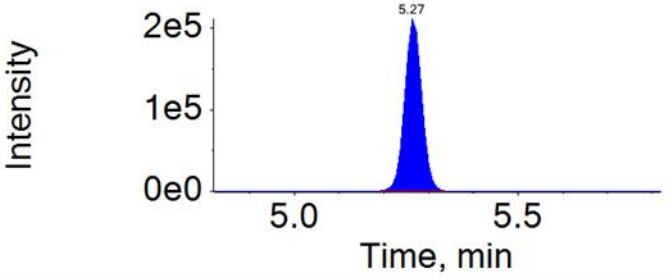
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

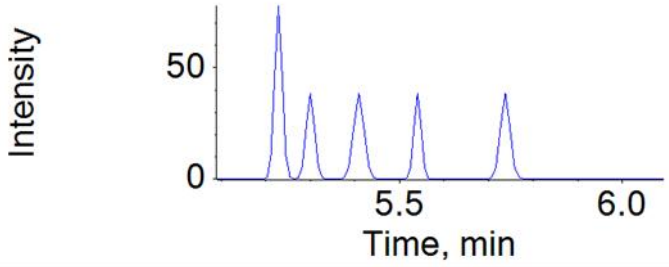
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

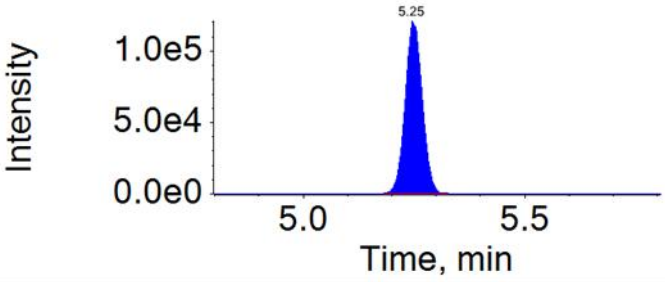
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



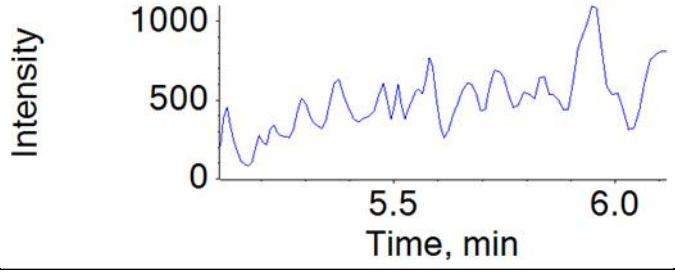


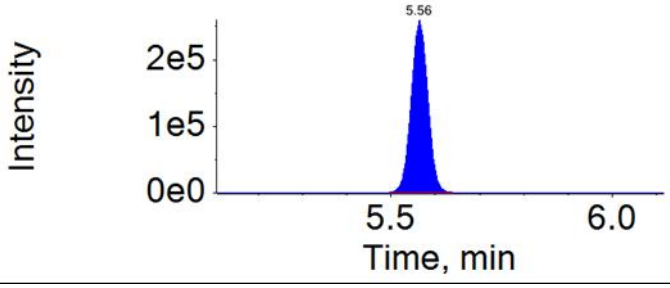
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



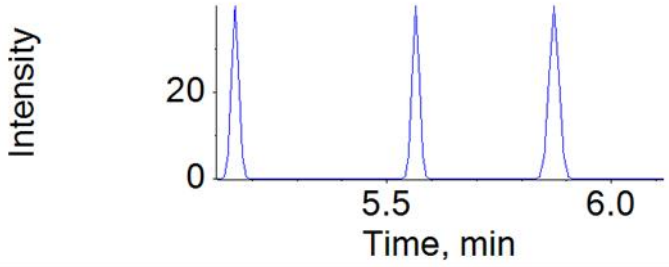


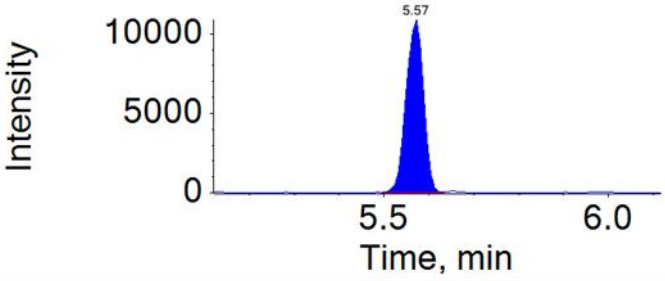
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



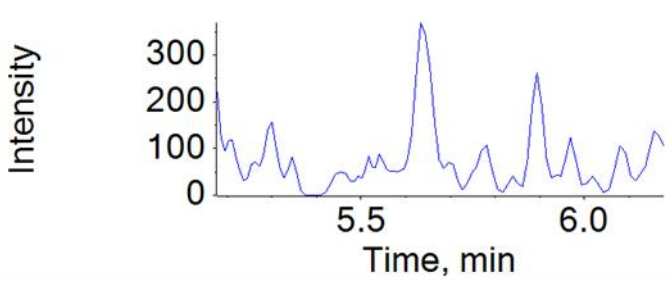


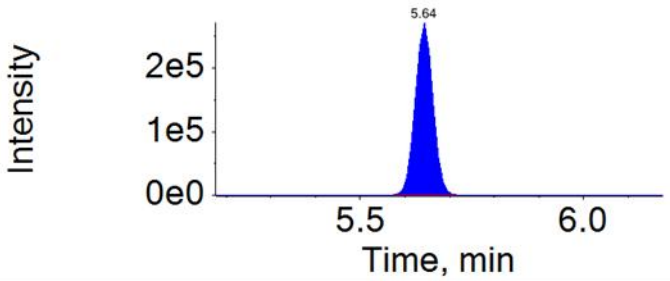
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

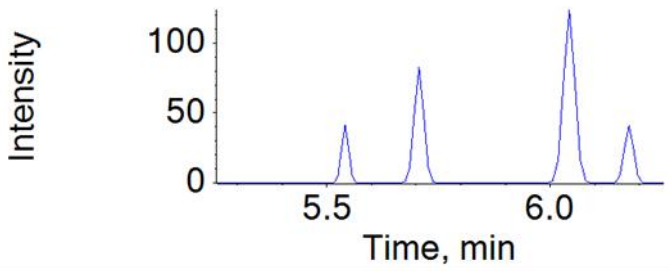
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

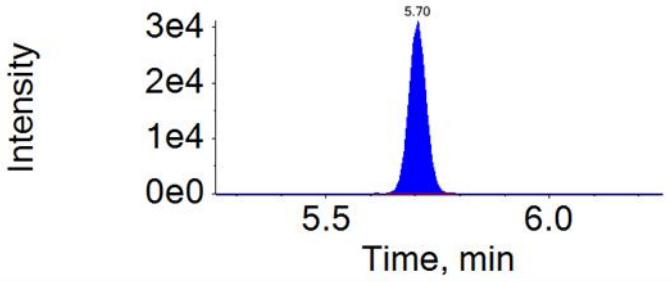
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



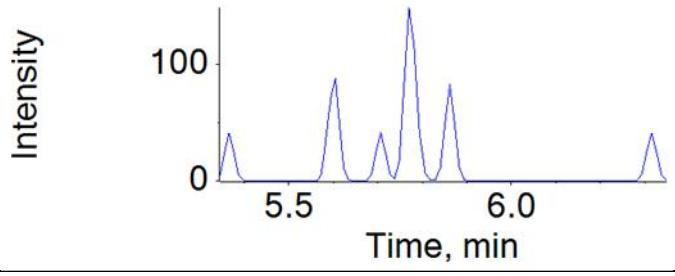


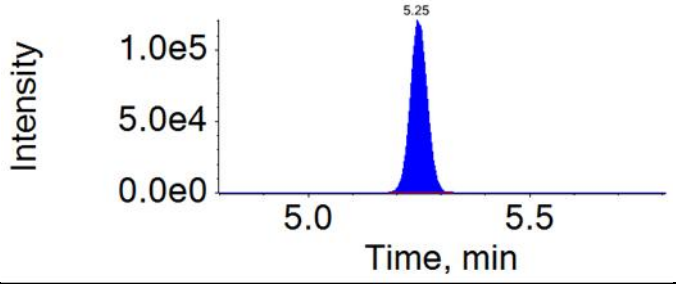
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



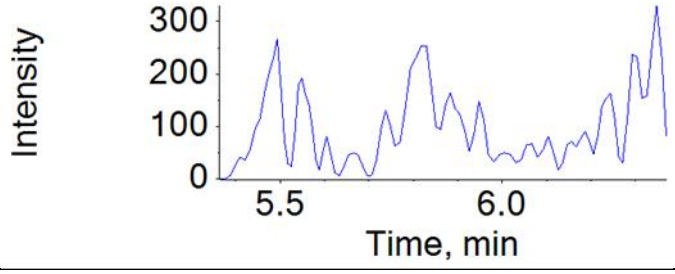


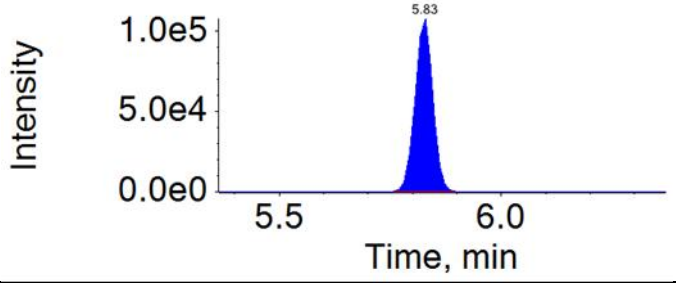
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



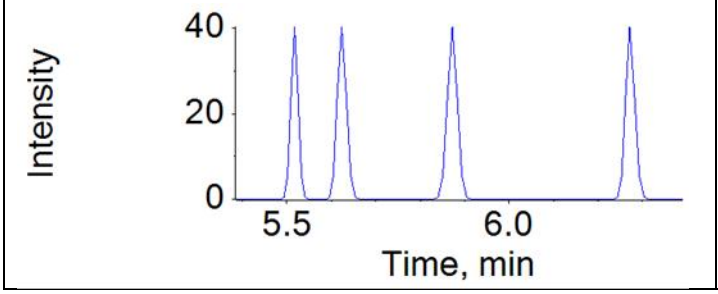


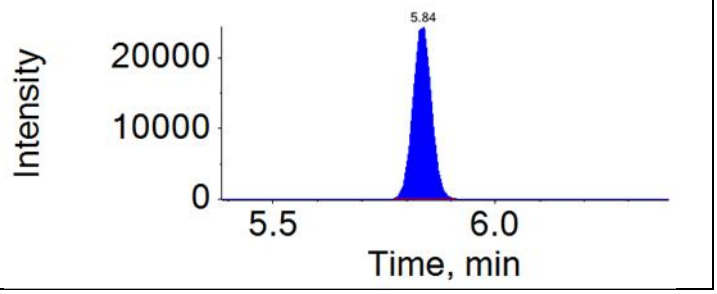
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

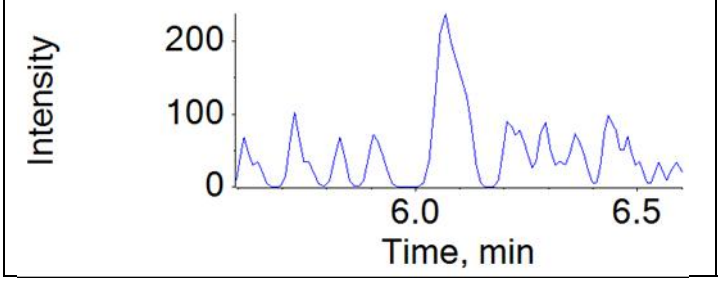
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

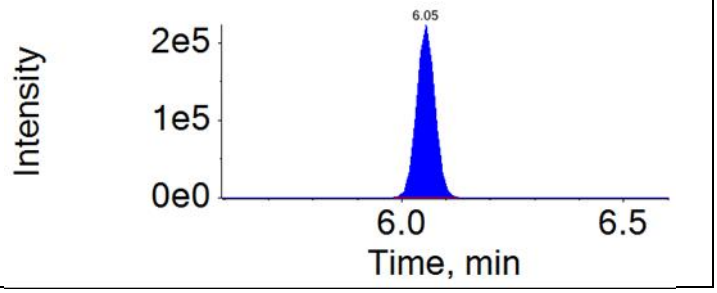
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



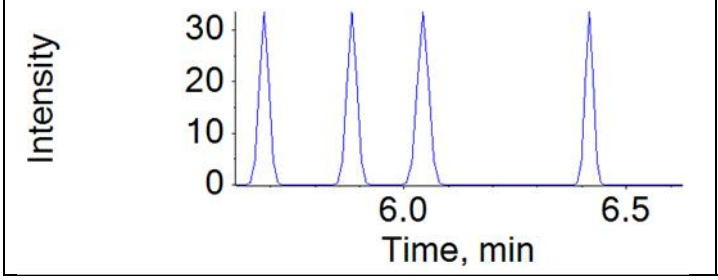


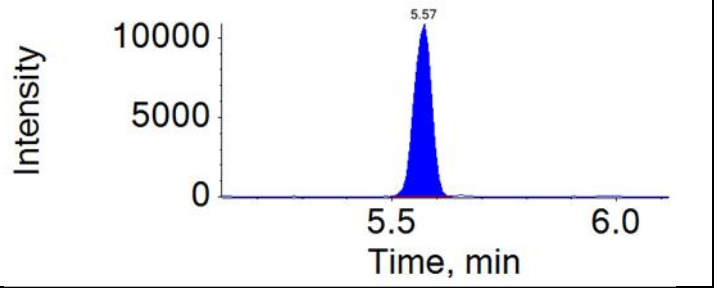
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



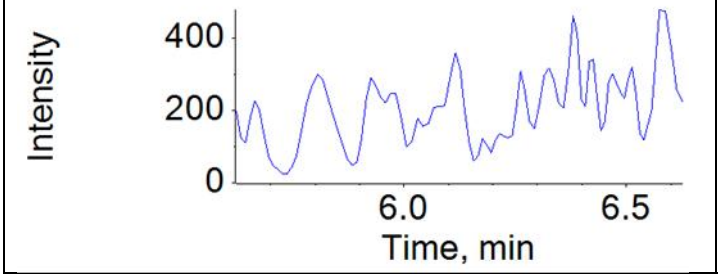


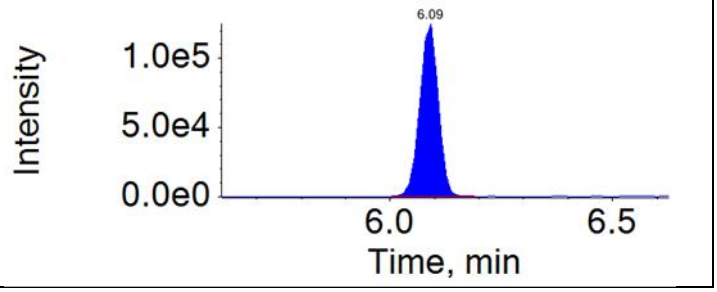
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



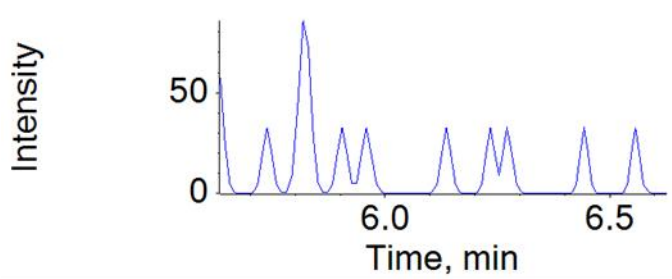


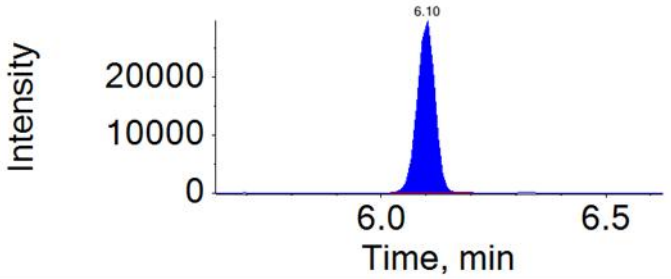
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

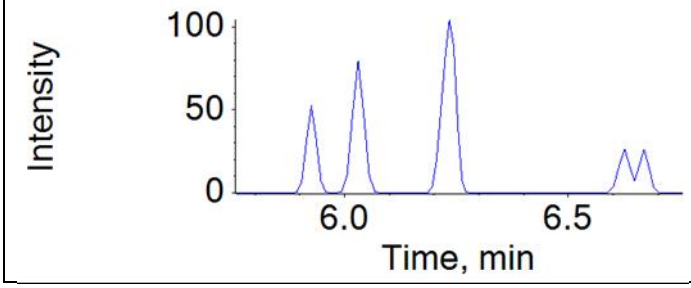
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

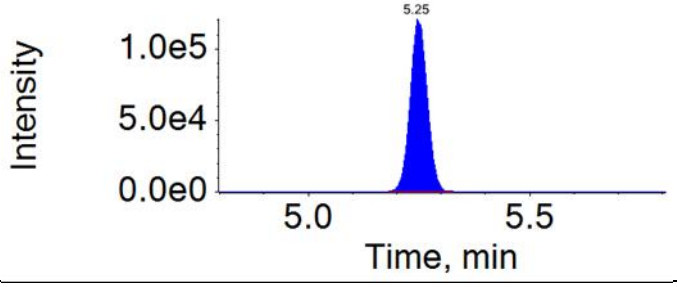
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



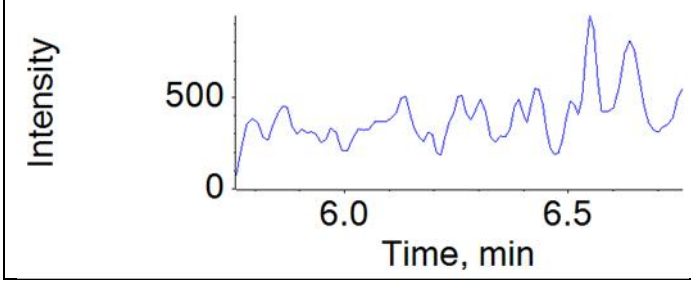


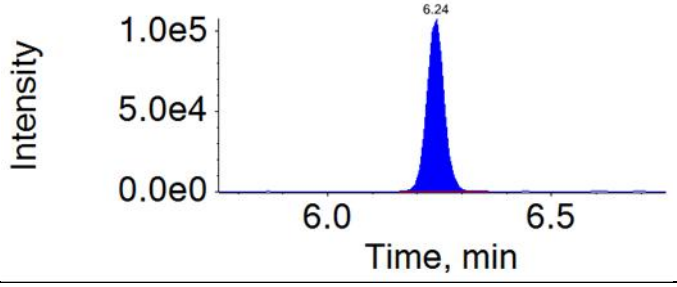
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



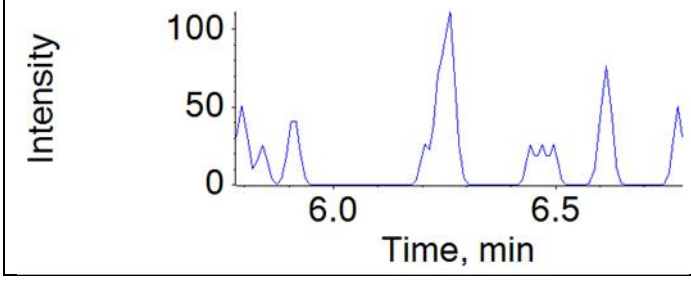


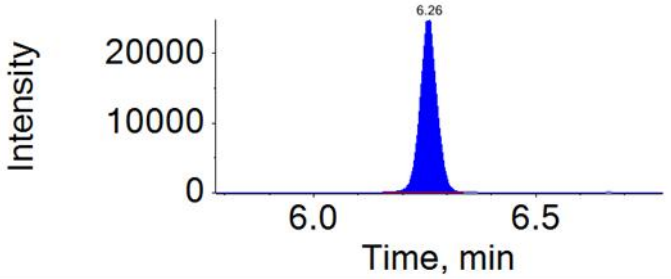
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

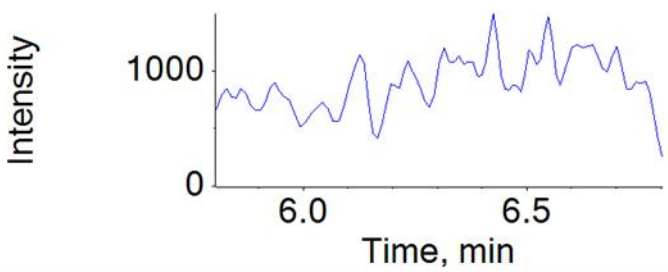
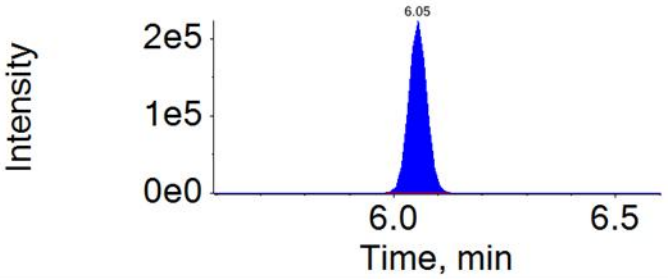


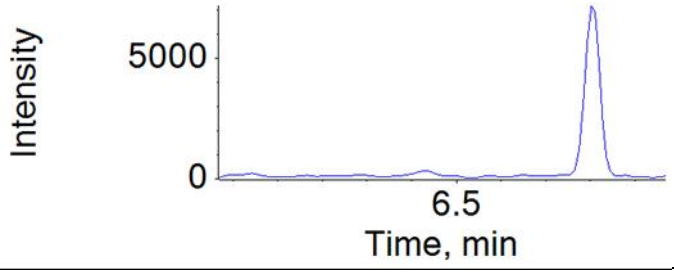
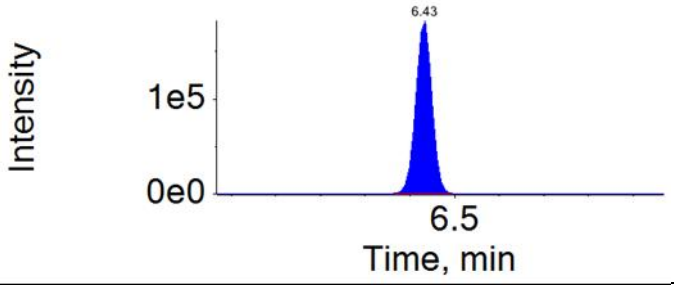


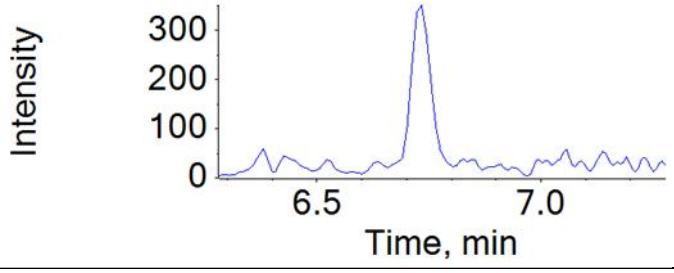
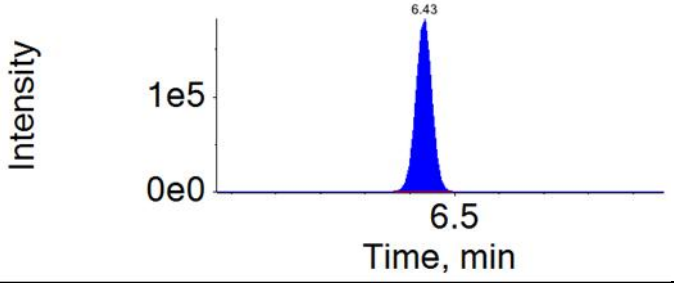
APPROVED
By JPT at 2:53 pm, 11/7/18

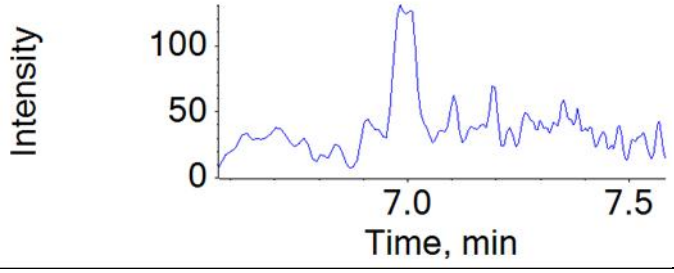
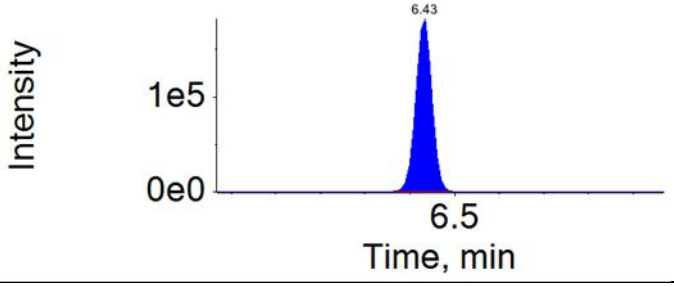
REVIEWED
By umar at 5:23 pm, 11/9/18

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

Ion Ratio Report

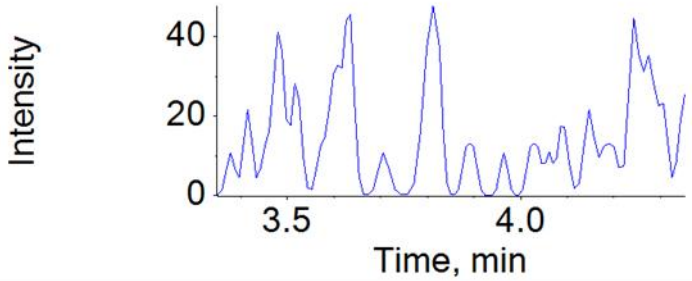
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-17.wiff

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	

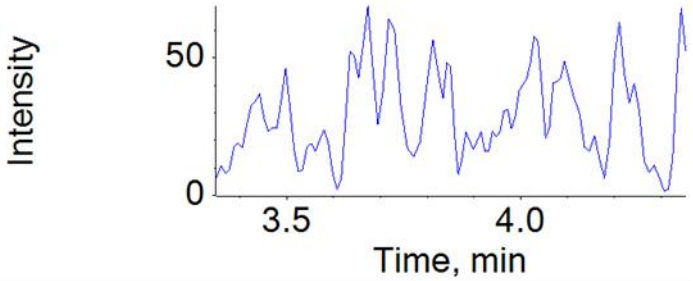
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

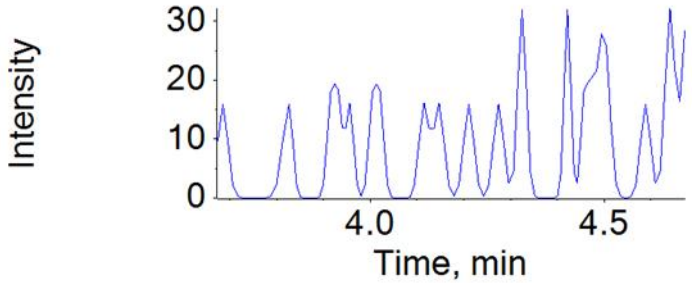
Component: PFBS
Primary Mass: 299.0 / 80.0



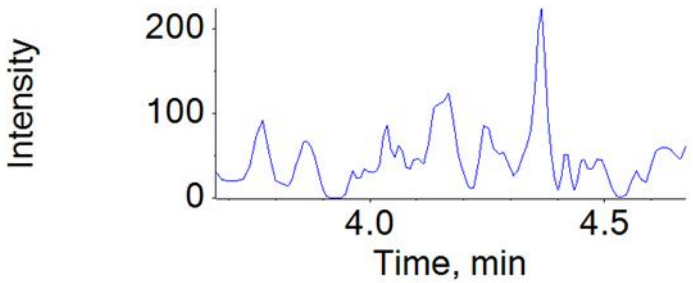
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



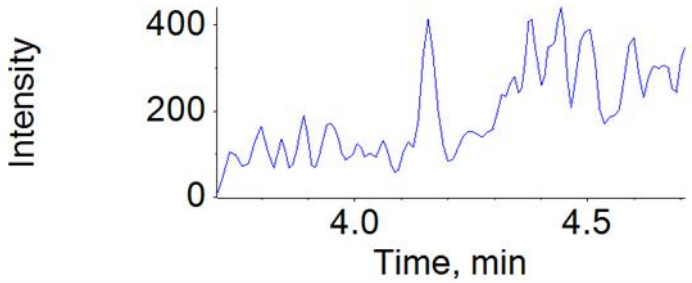
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



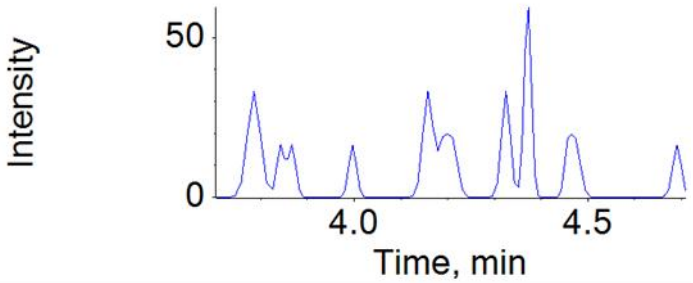
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



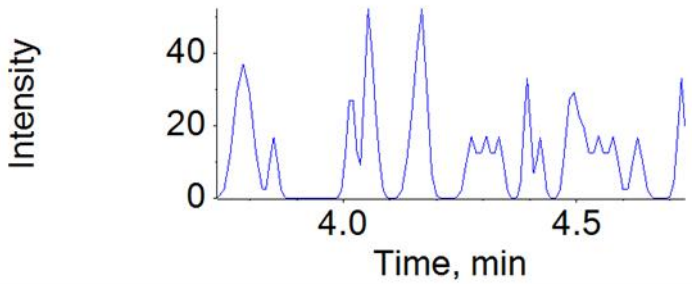
Component: PFHxA
Primary Mass: 313.0 / 269.0



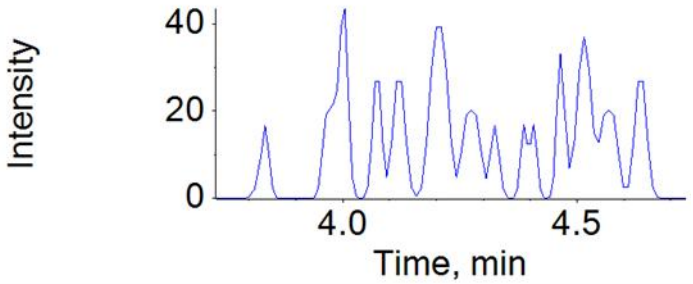
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



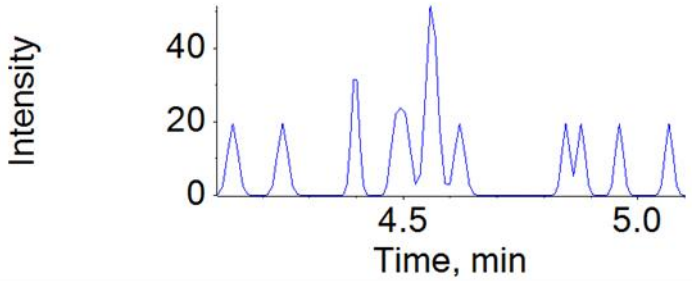
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



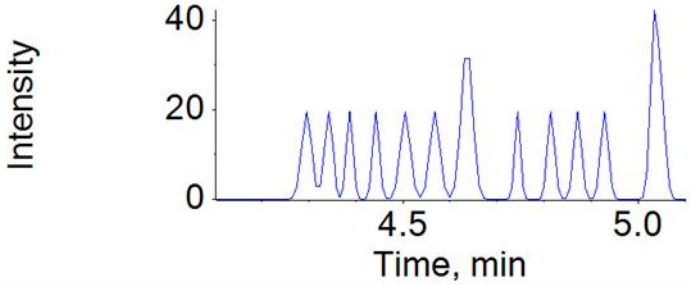
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

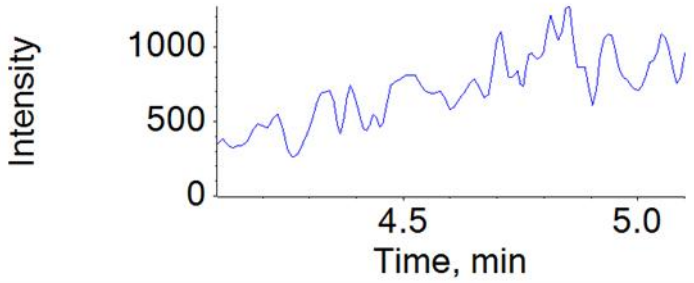
Component: PFHxS
Primary Mass: 399.0 / 80.0



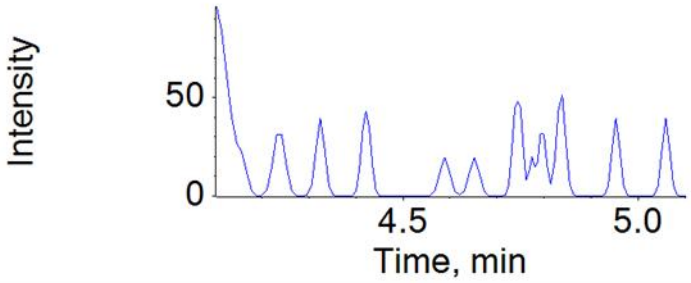
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



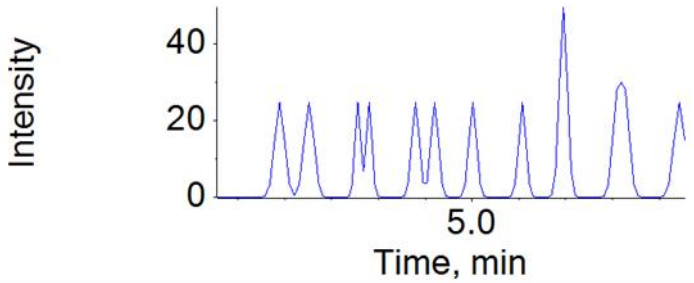
Component: PFHpA
Primary Mass: 363.0 / 319.0



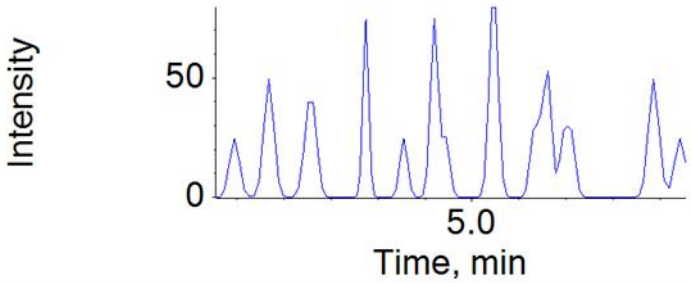
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



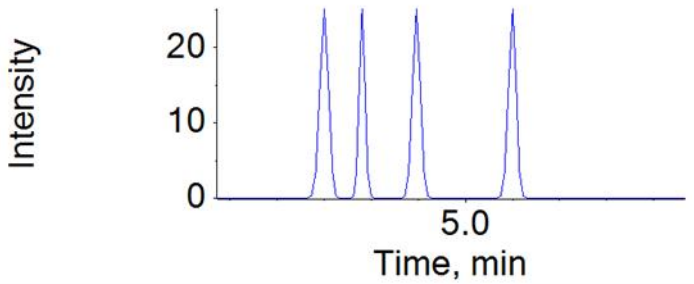
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



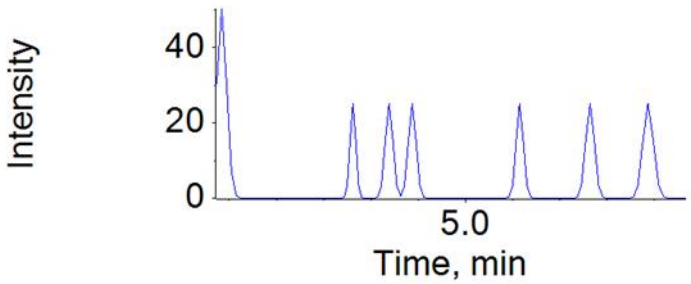
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



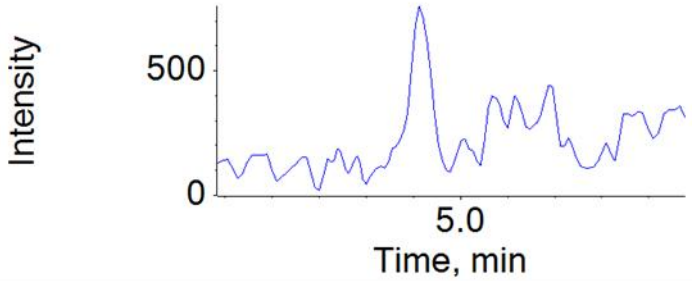
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



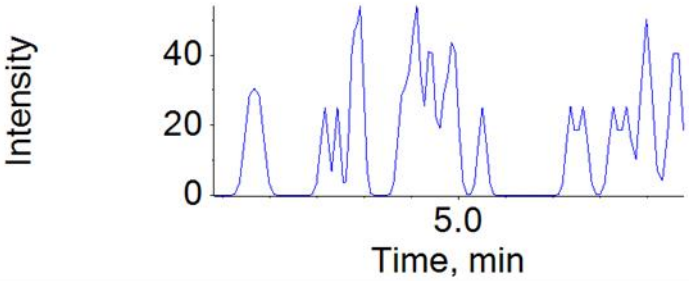
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

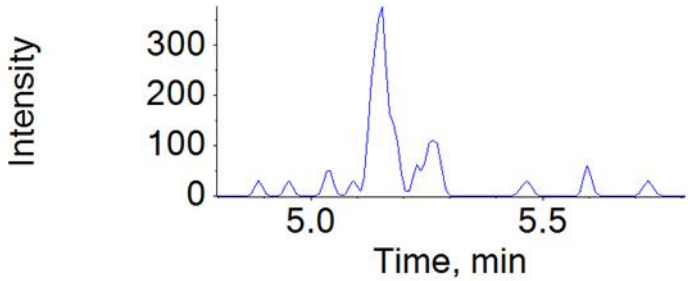
Component: PFOA
Primary Mass: 413.0 / 369.0



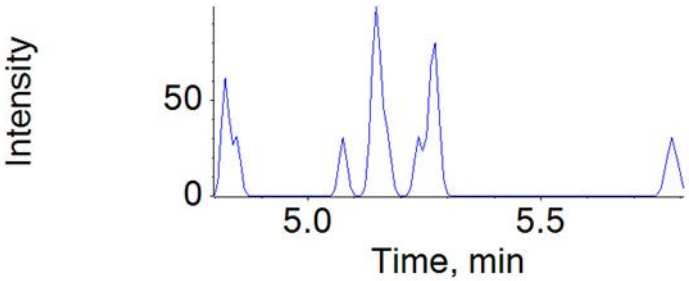
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



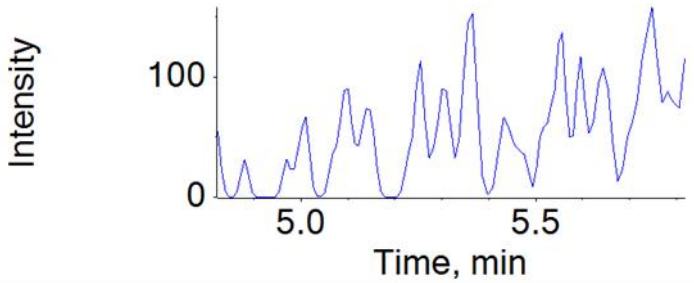
Component: PFOS
Primary Mass: 499.0 / 80.0



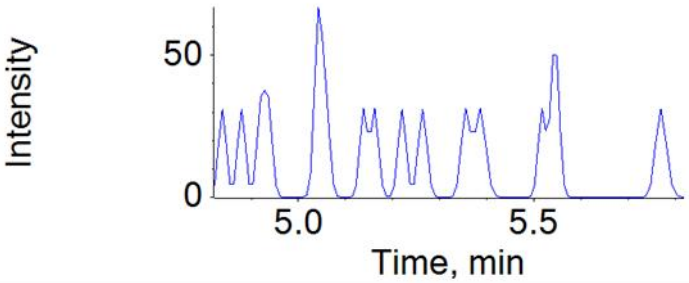
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



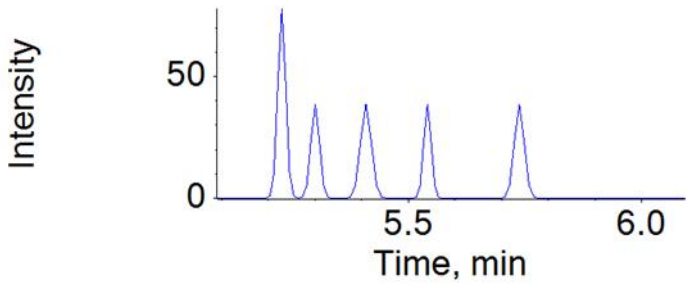
Component: PFNA
Primary Mass: 463.0 / 419.0



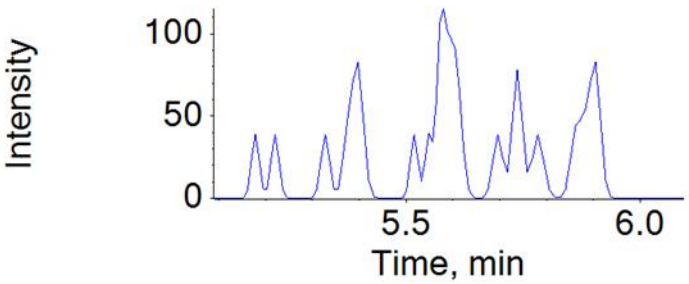
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



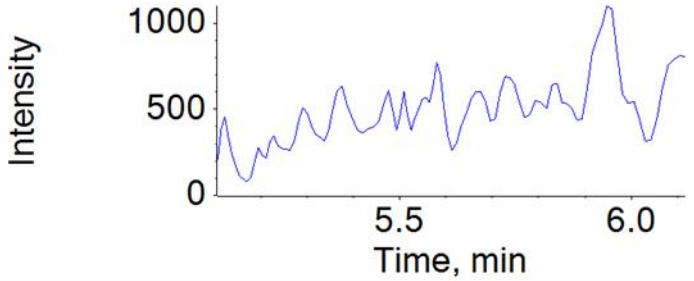
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



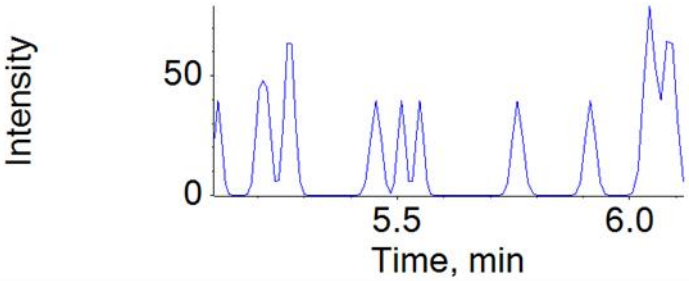
APPROVED
By JPT at 2:53 pm, 11/7/18

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By umar at 5:23 pm, 11/9/18

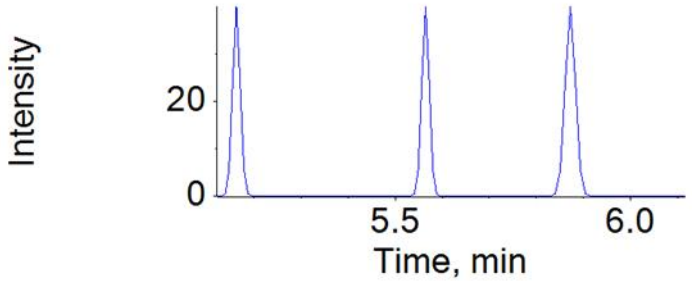
Component: PFDA
Primary Mass: 513.0 / 469.0



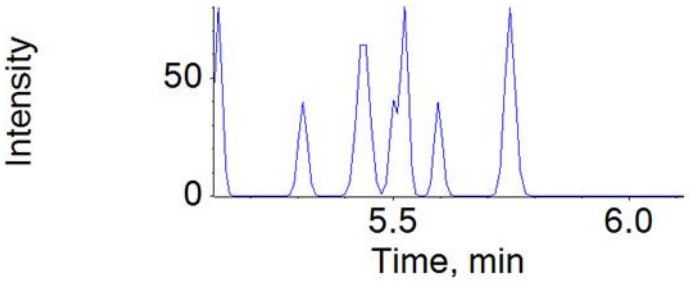
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



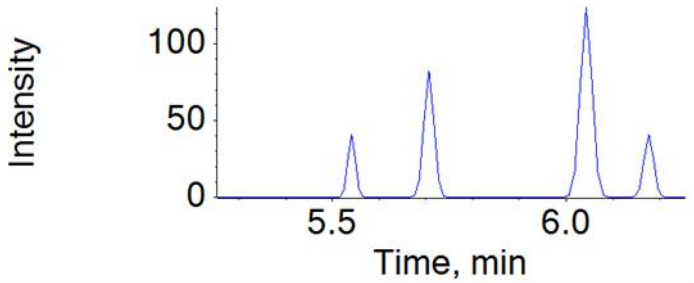
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



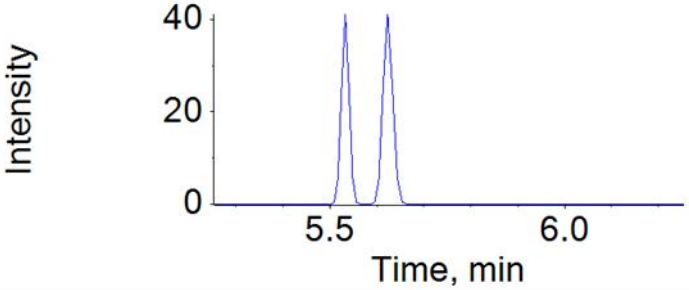
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



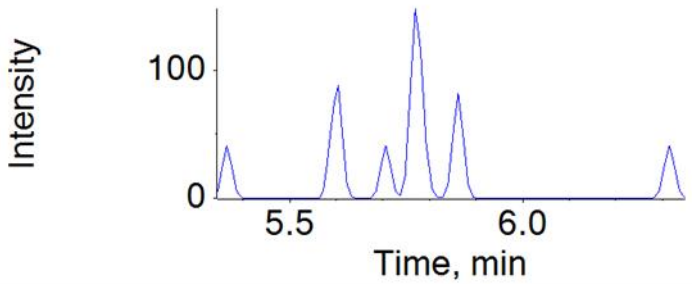
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



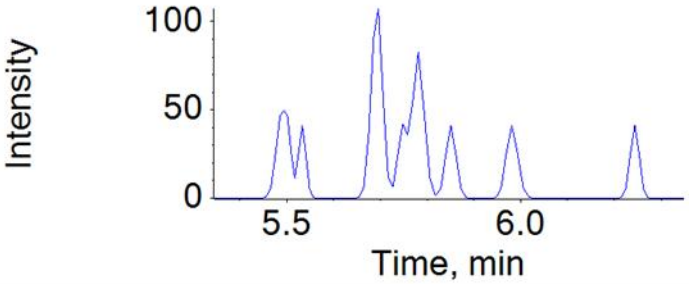
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



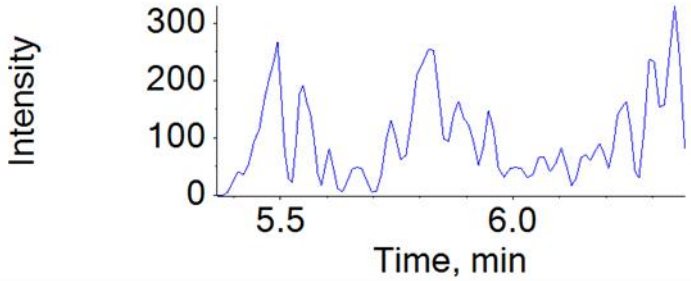
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Secondary Mass: 599.0 / 99.0



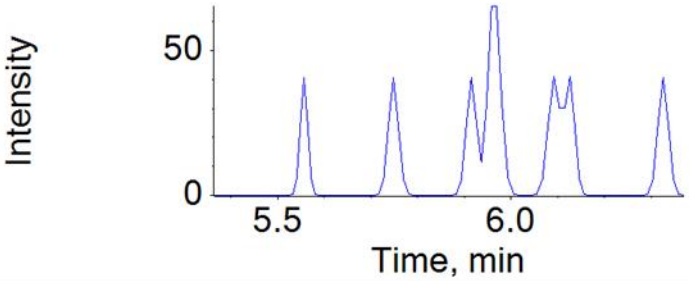
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

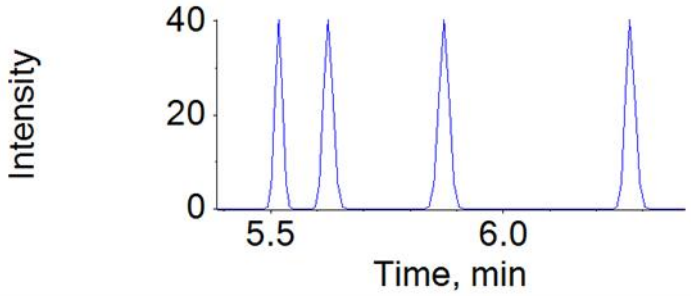
Component: PFUnDA
Primary Mass: 563.0 / 519.0



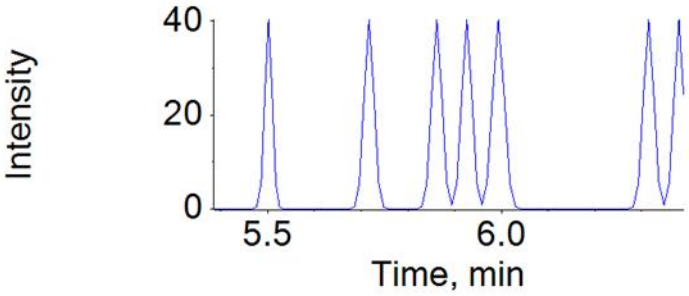
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Secondary Mass: 563.0 / 169.0



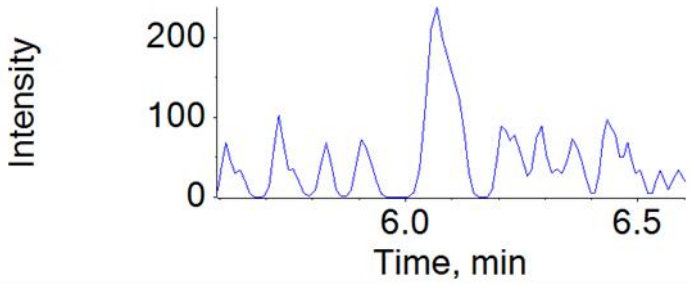
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



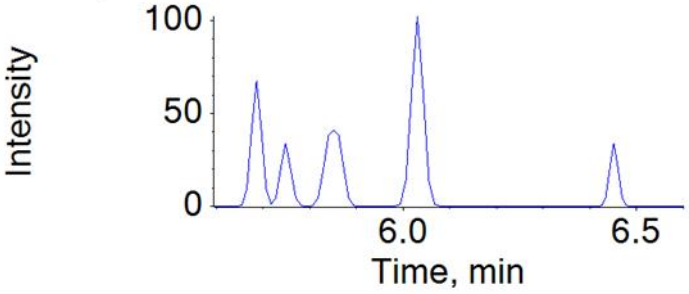
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



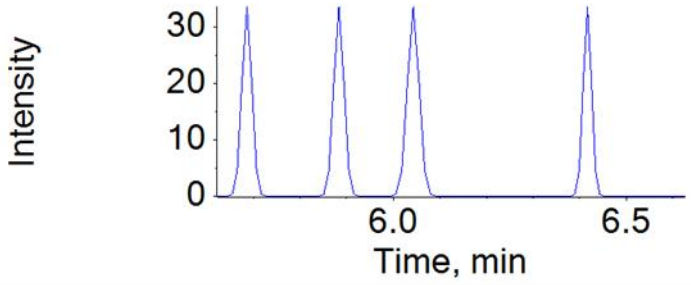
Component: PFDoDA
Primary Mass: 613.0 / 569.0



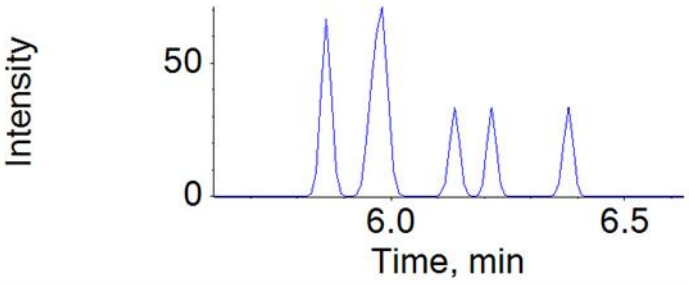
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



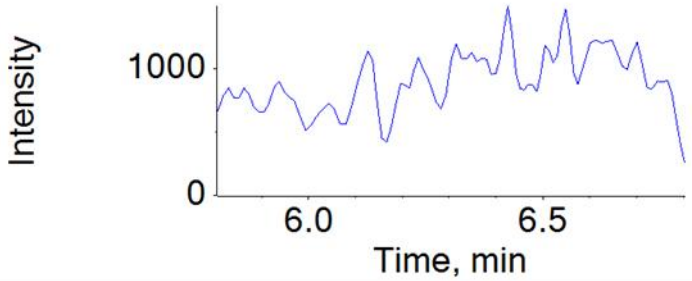
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



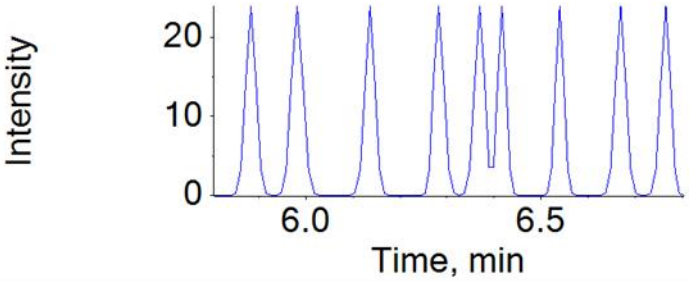
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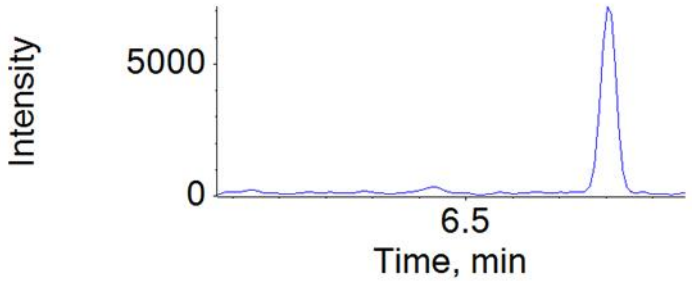
Component: PFTrDA
Primary Mass: 663.0 / 619.0



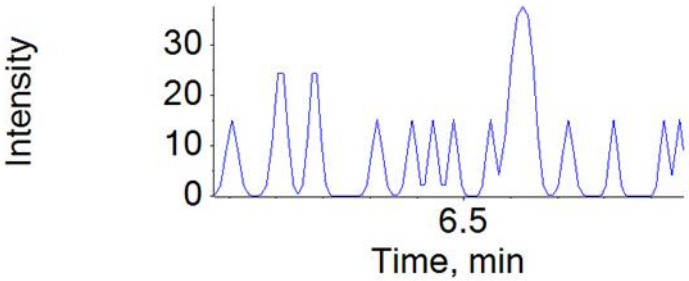
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



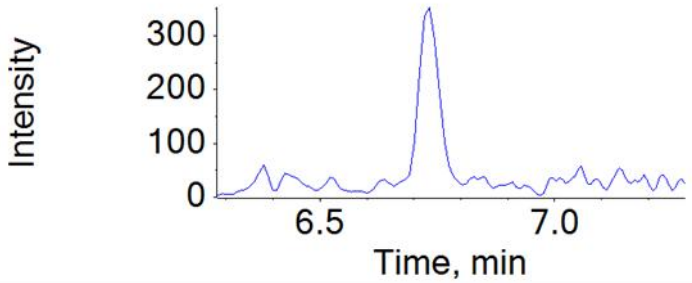
Component: PFTeDA
Primary Mass: 713.0 / 669.0



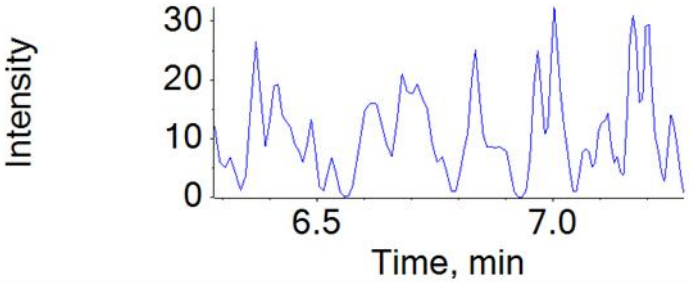
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



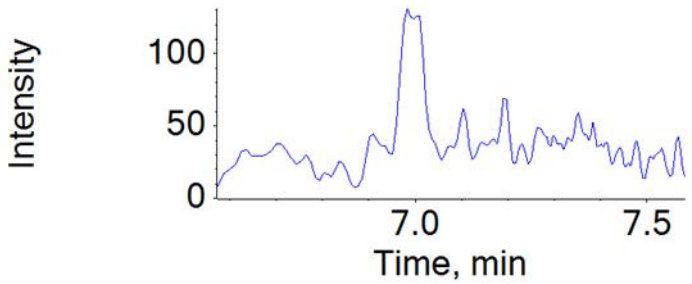
Component: PFHxDA
Primary Mass: 813.0 / 769.0



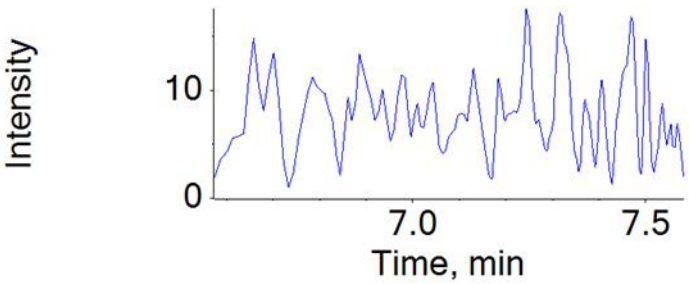
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



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

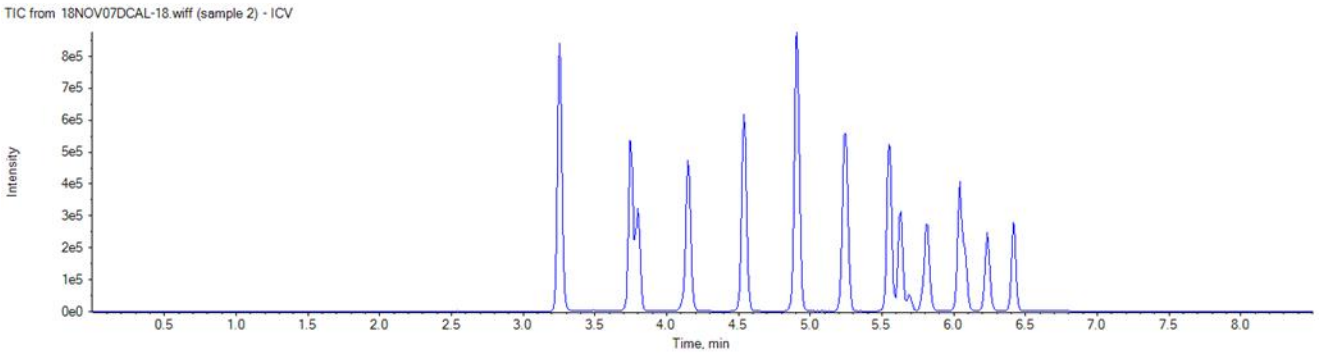
Analyte Quantitation Peak Table

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

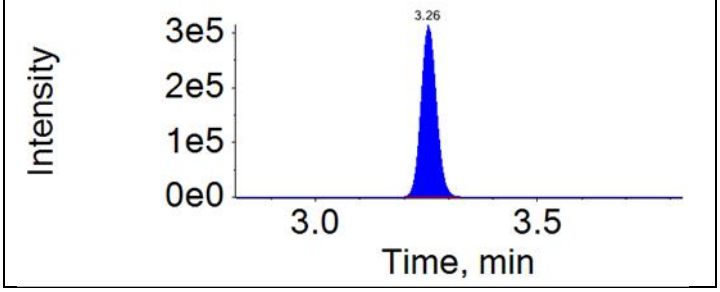


APPROVED
By JPT at 2:53 pm, 11/7/18

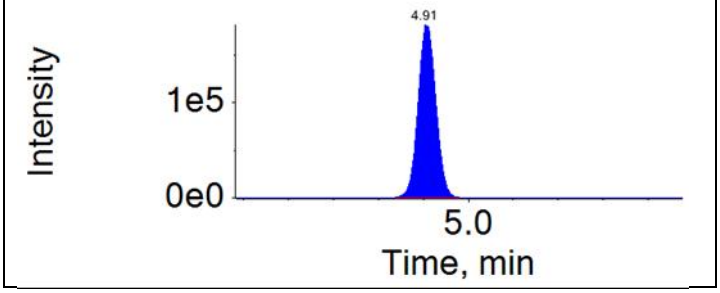
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

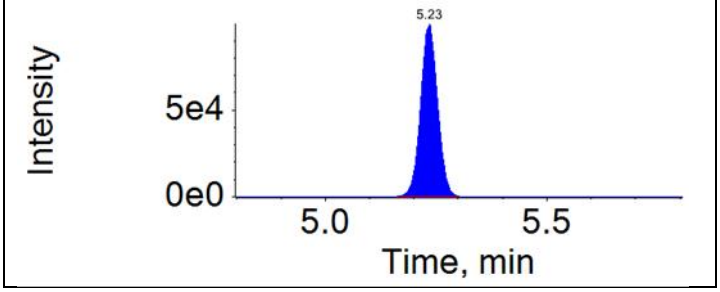
Injection Standard: 13C3-PFBA
216.0 / 172.0



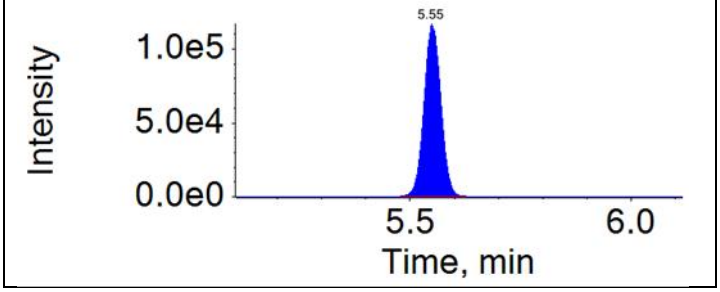
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



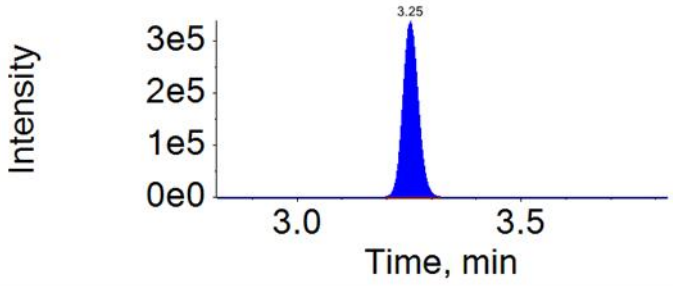
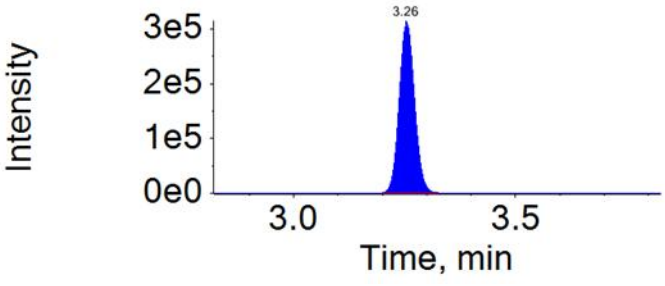
Injection Standard: 13C2-PFDA
515.0 / 470.0

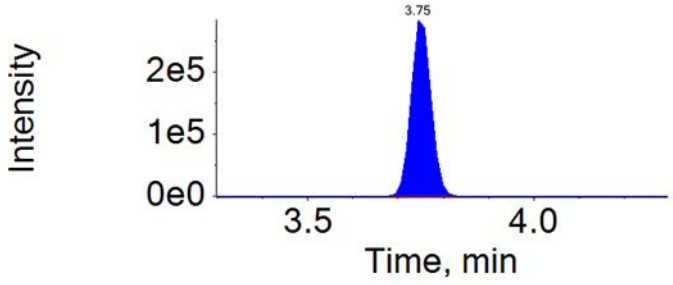
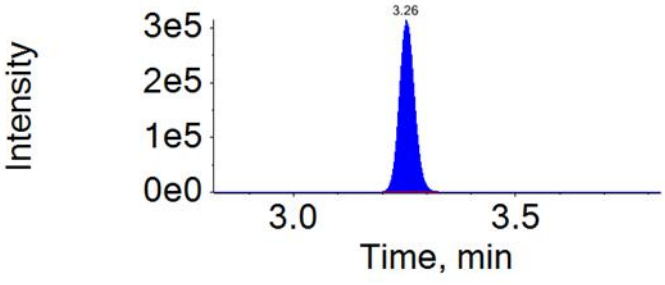


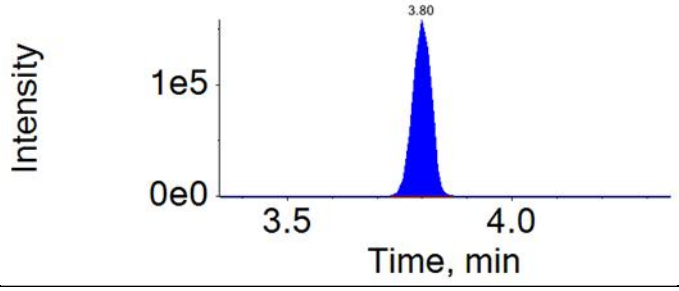
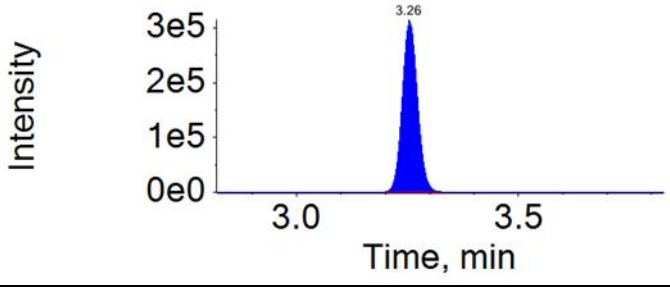
APPROVED
By JPT at 2:53 pm, 11/7/18

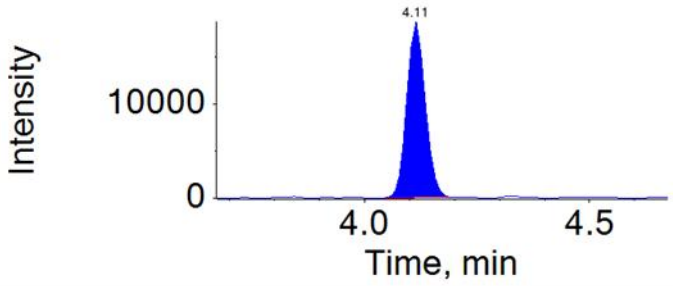
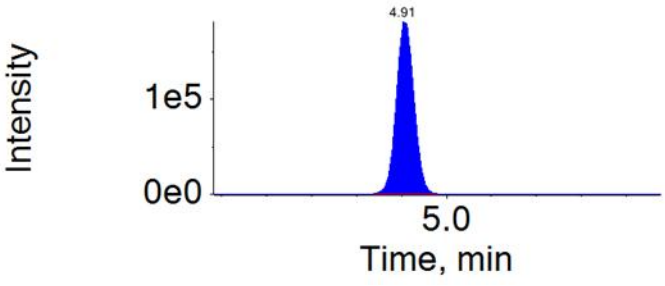
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

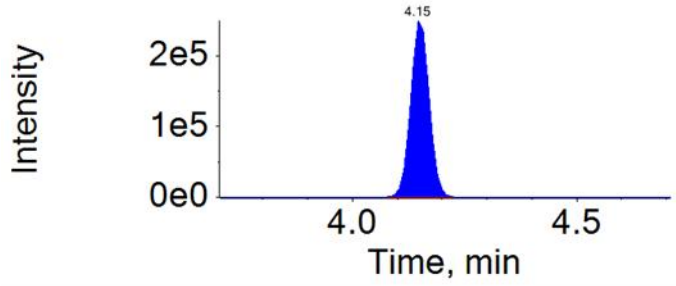
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

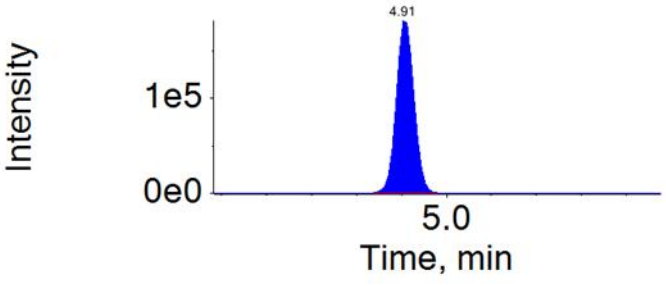
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

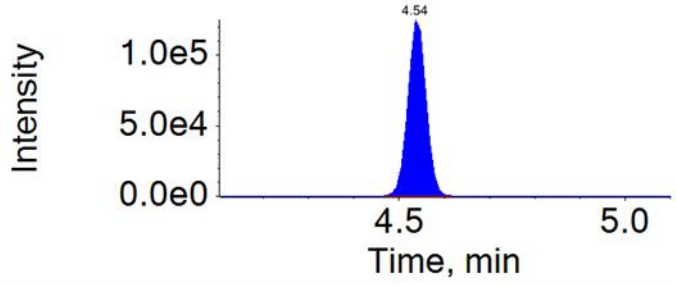
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

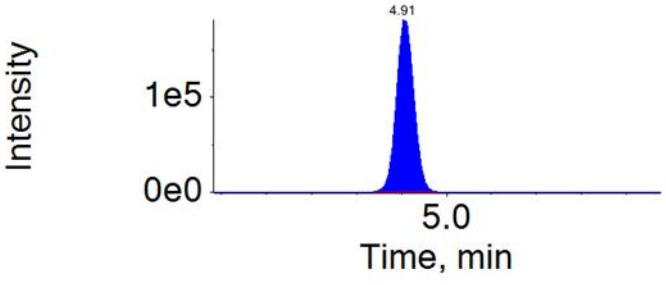
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



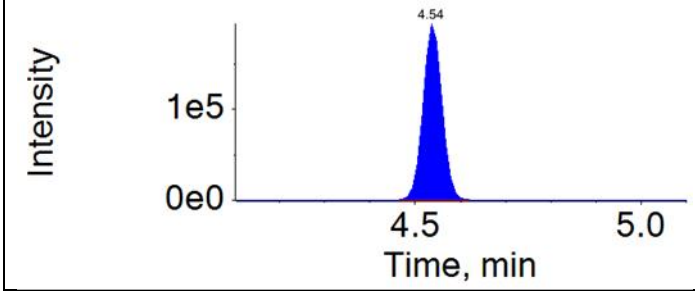


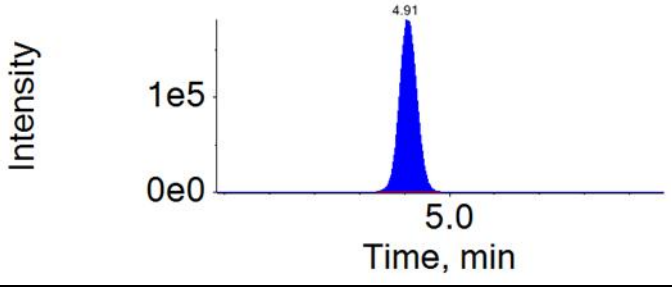
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



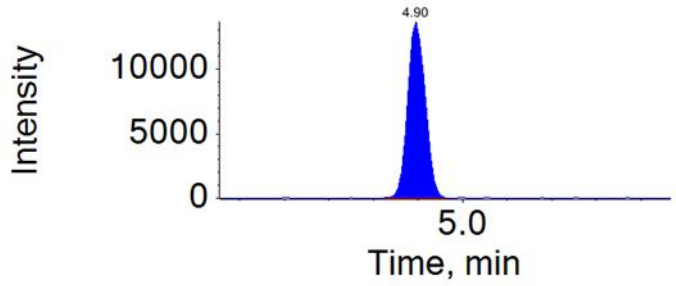


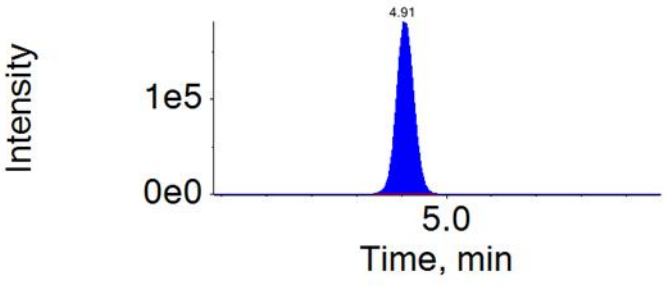
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

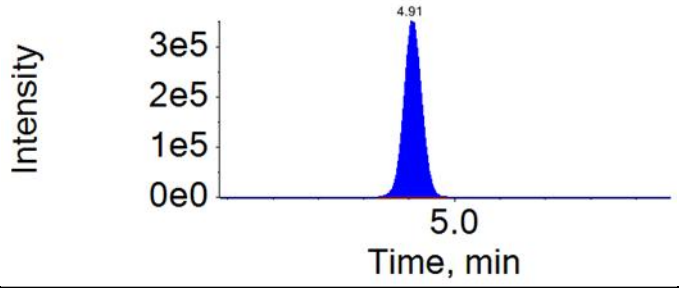
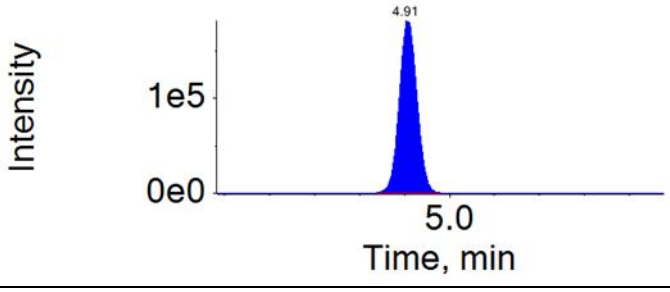


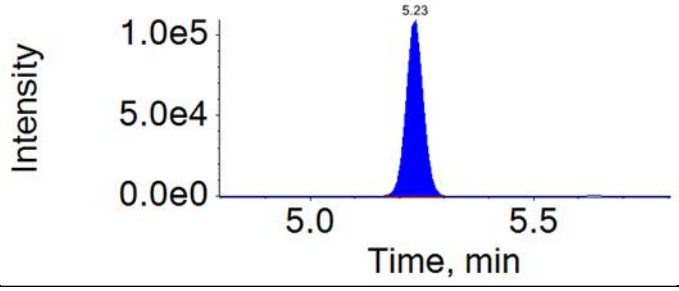
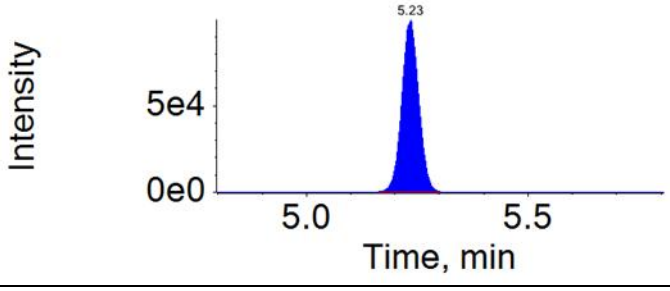


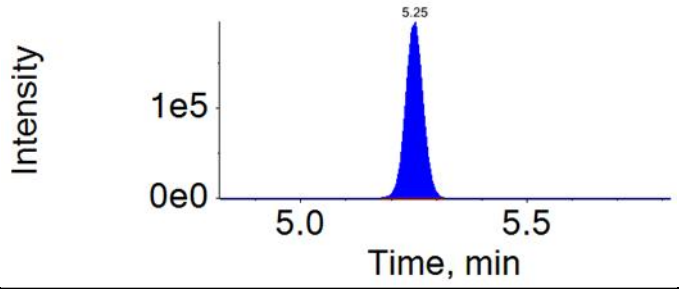
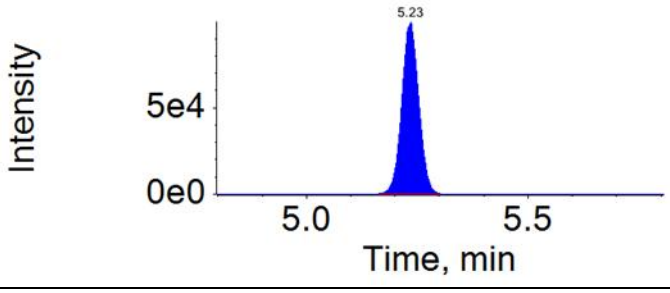
APPROVED
By JPT at 2:53 pm, 11/7/18

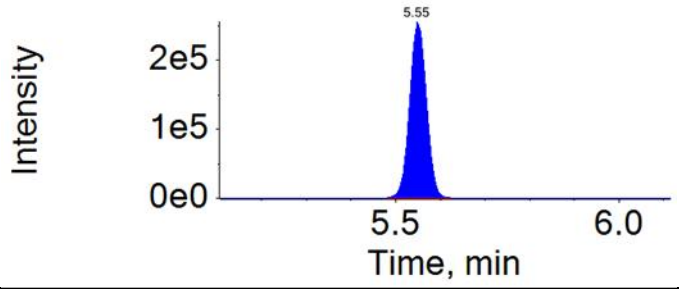
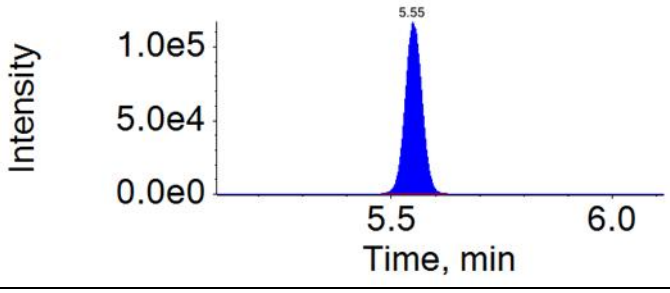
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

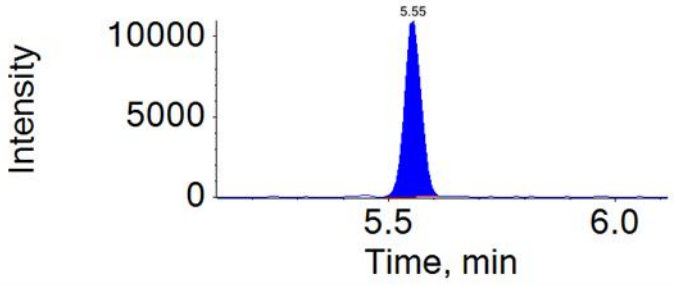
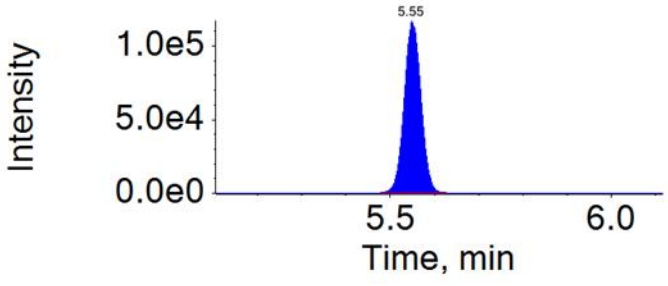
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

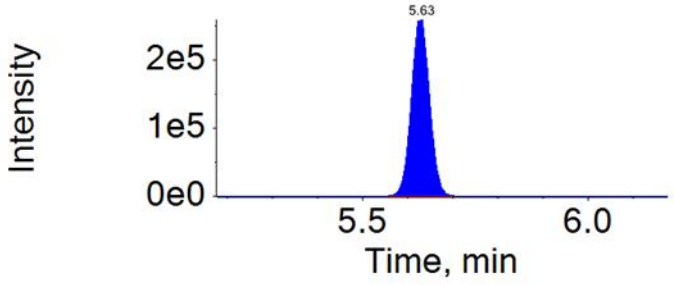
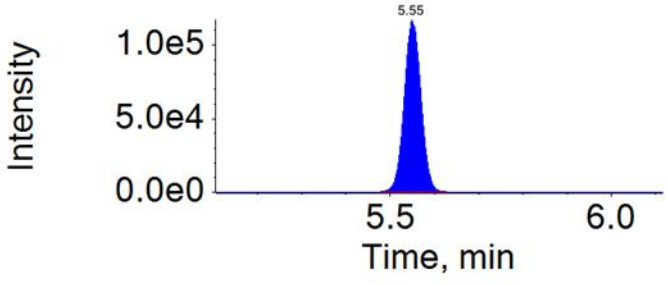
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

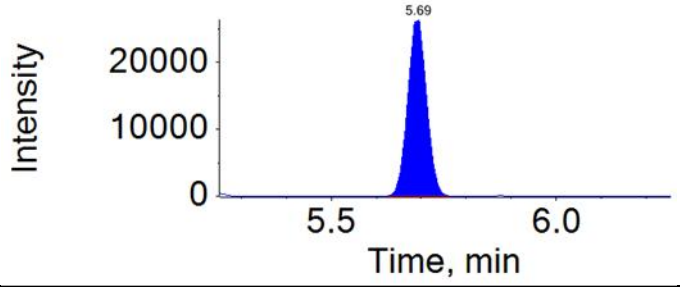
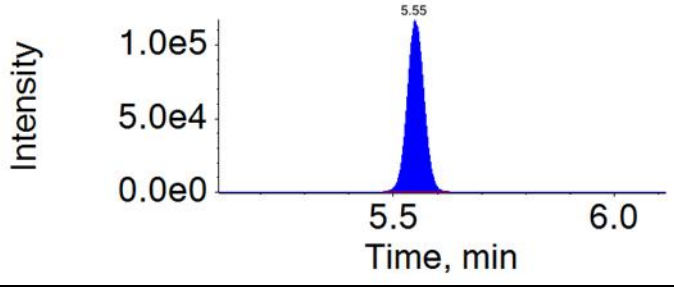
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

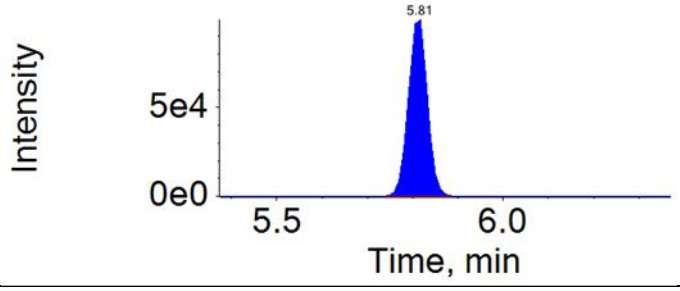
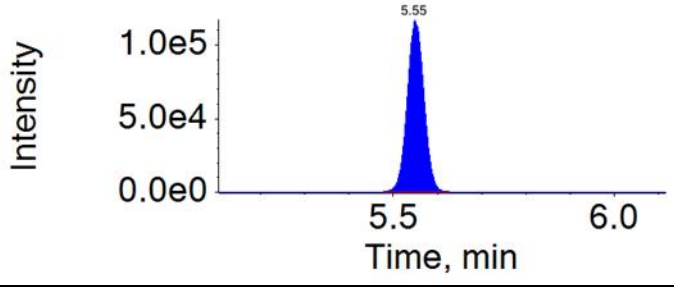
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

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
	

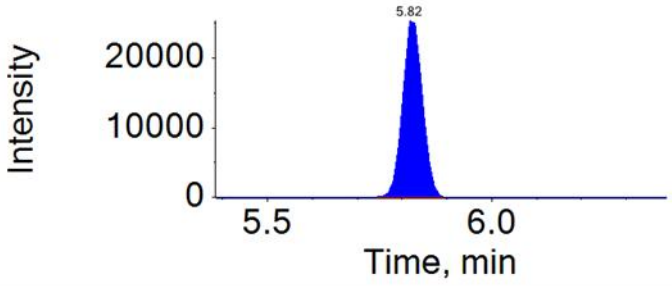
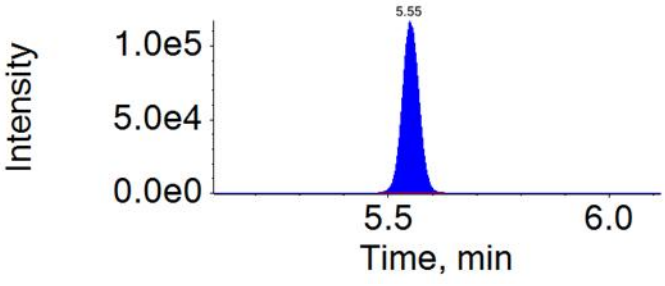
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

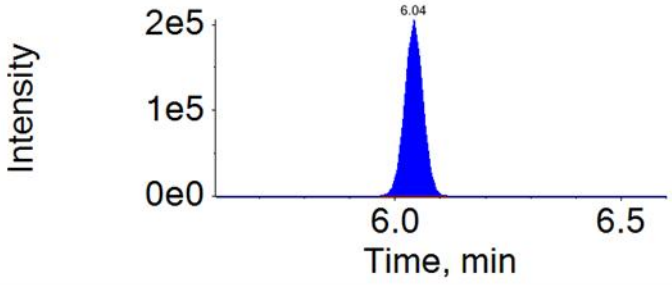
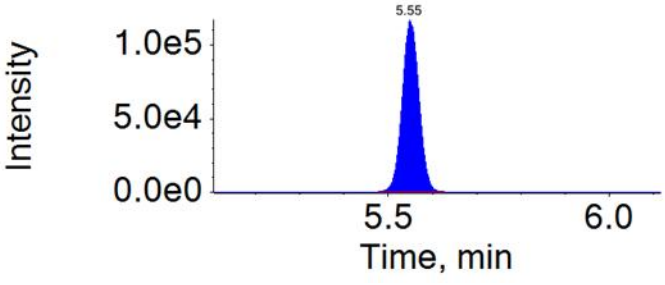
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

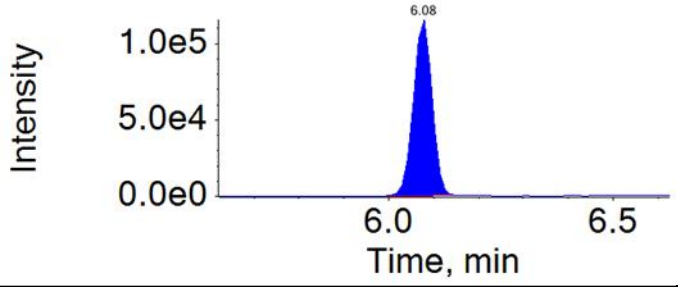
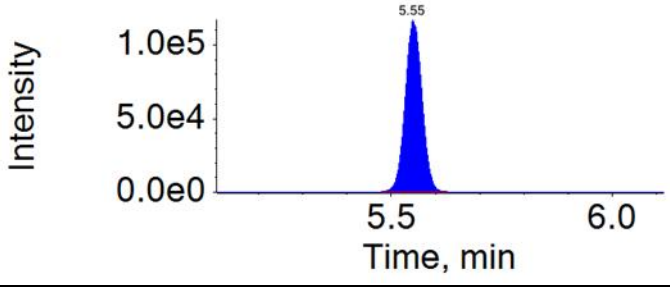
APPROVED
By JPT at 2:53 pm, 11/7/18

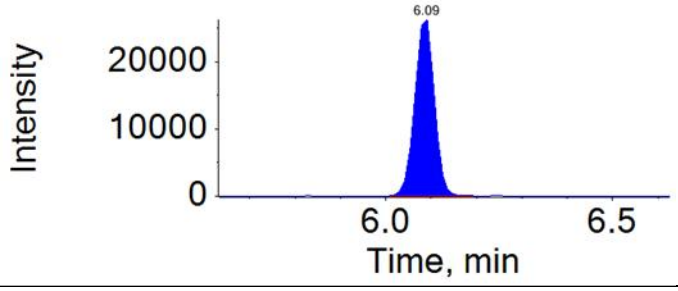
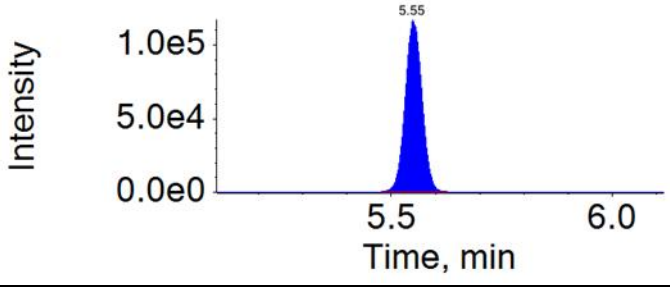
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

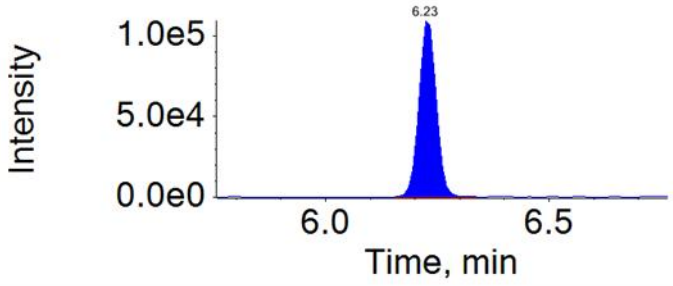
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

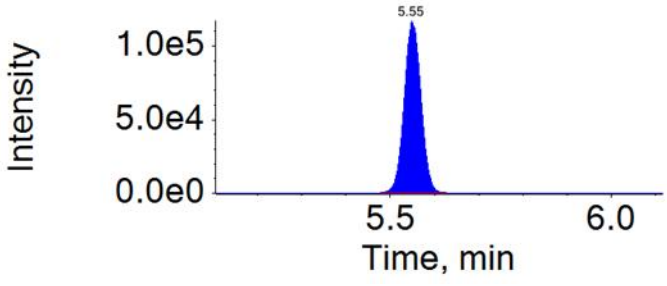
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

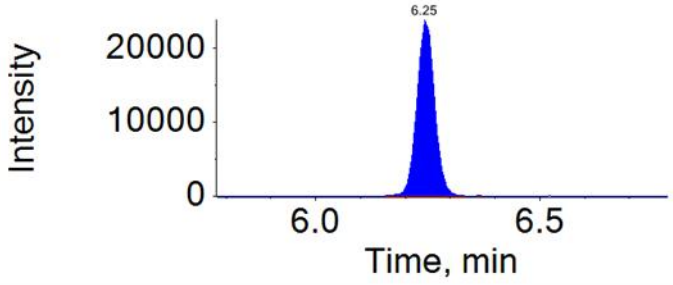
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

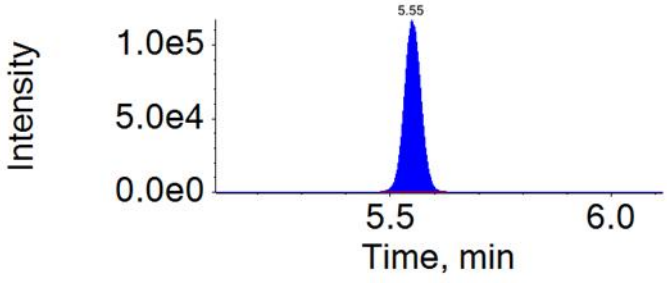
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



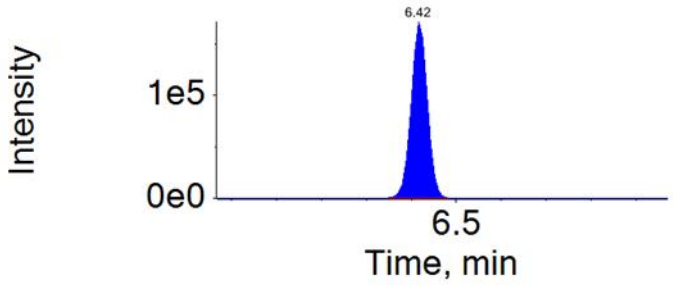


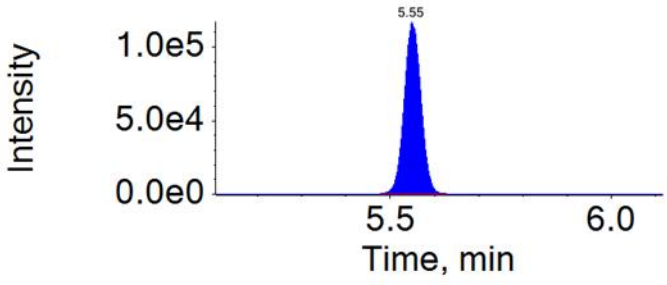
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



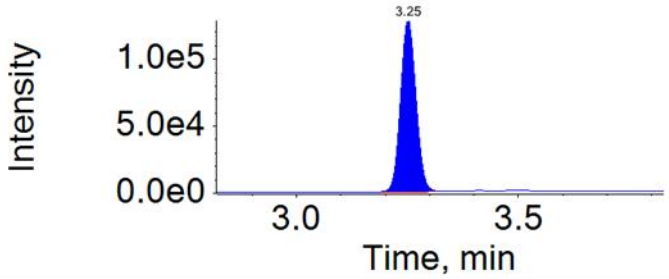


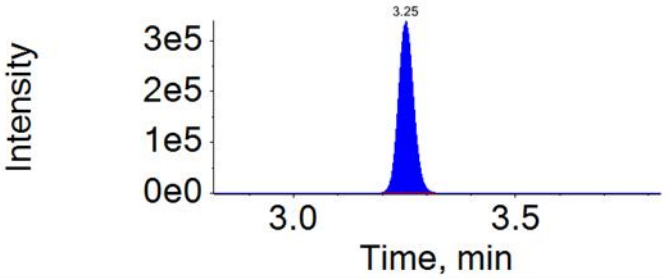
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

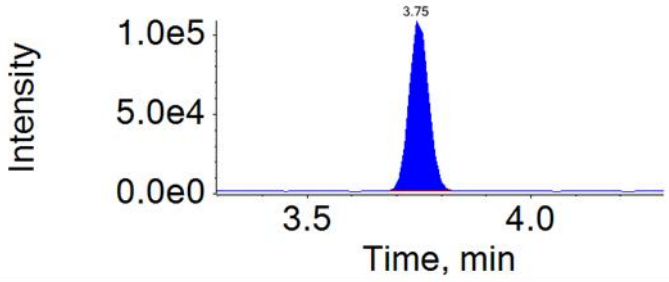
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

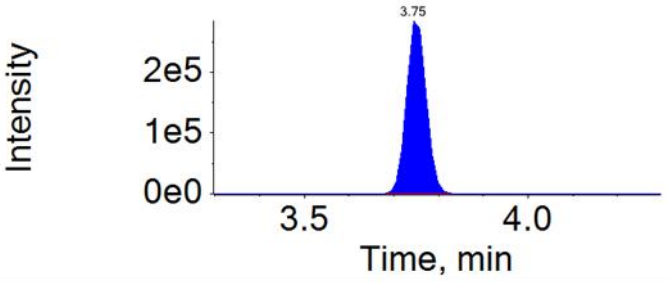
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



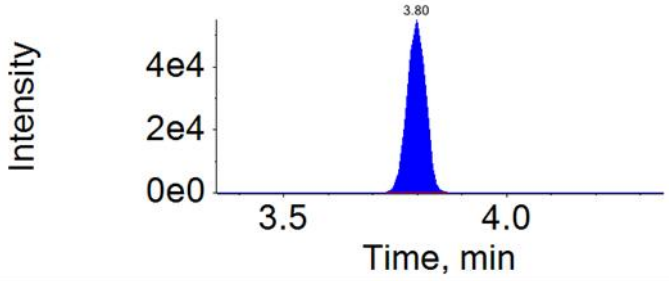


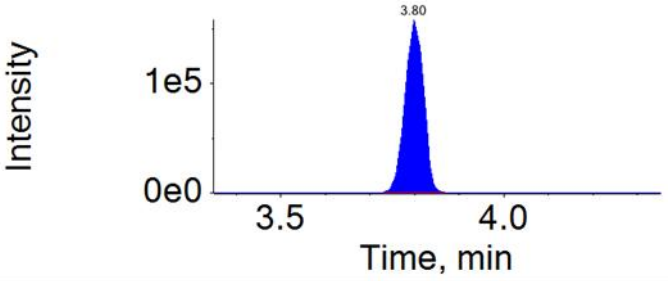
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



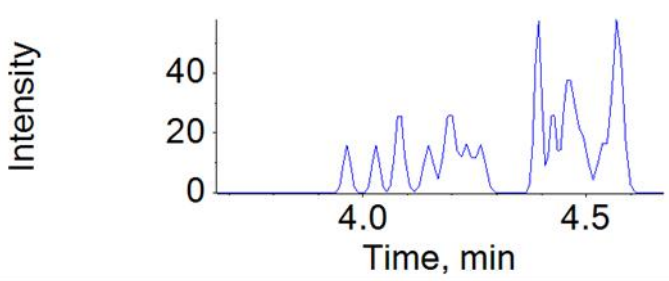


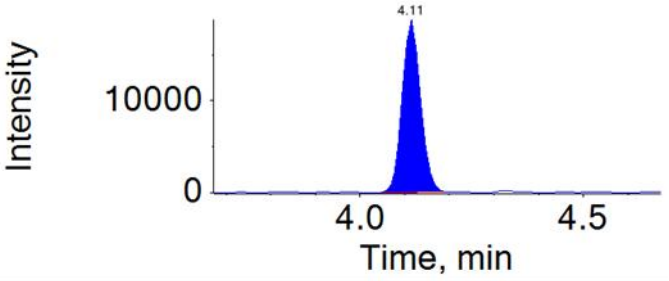
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



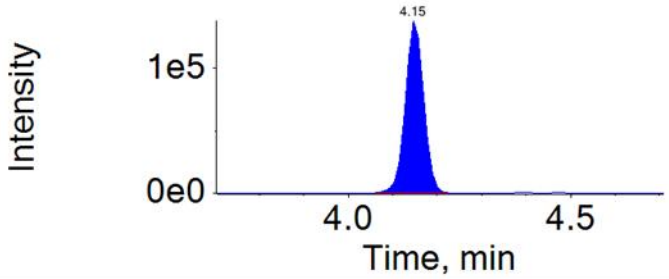


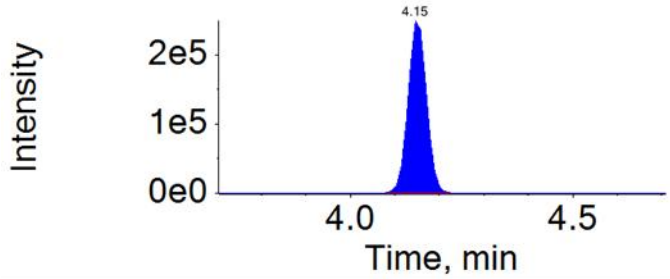
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

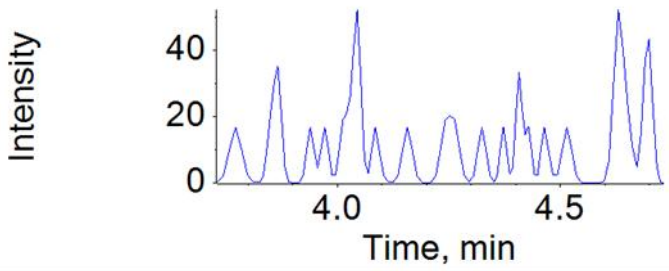
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

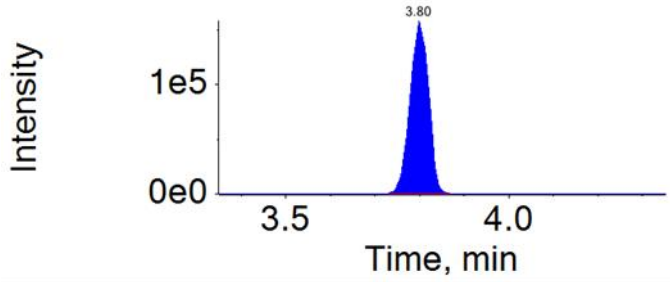
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



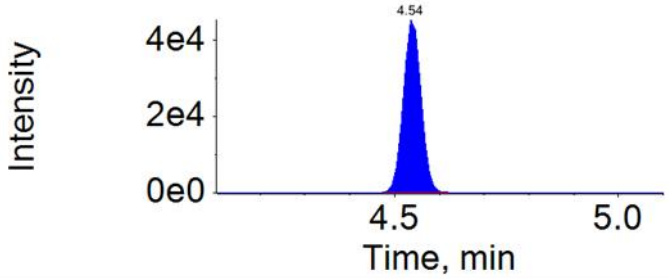


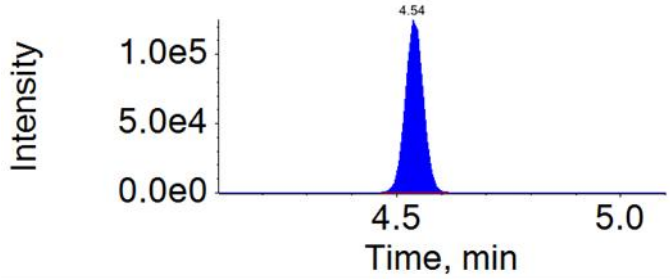
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



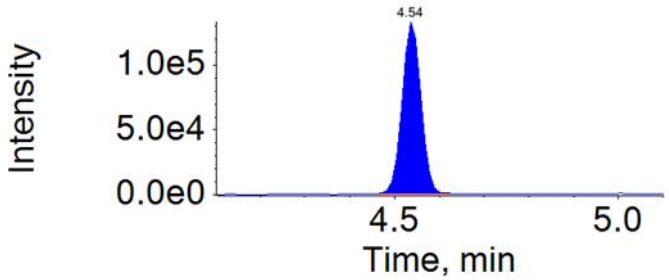


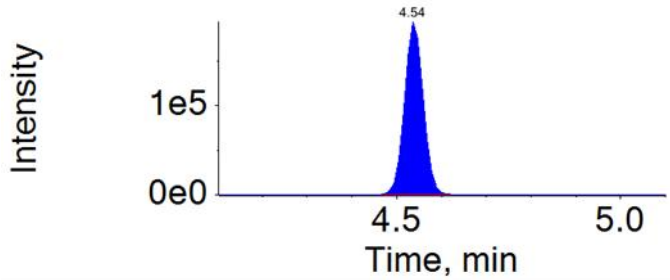
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



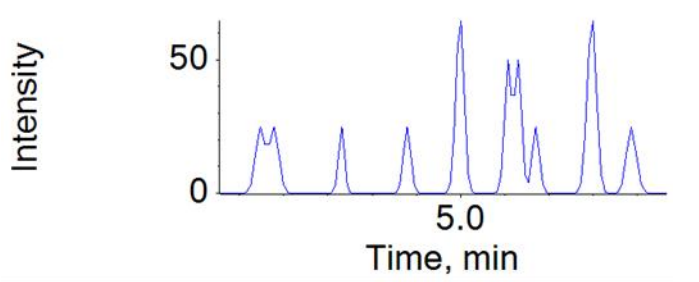


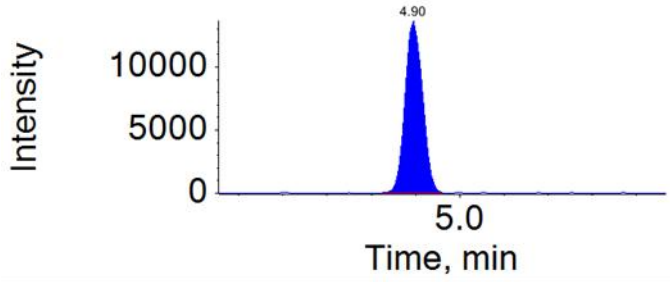
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

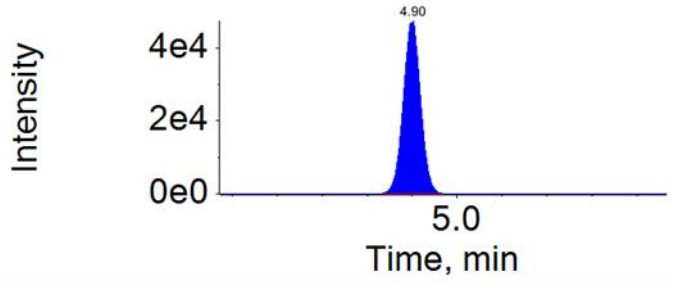
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

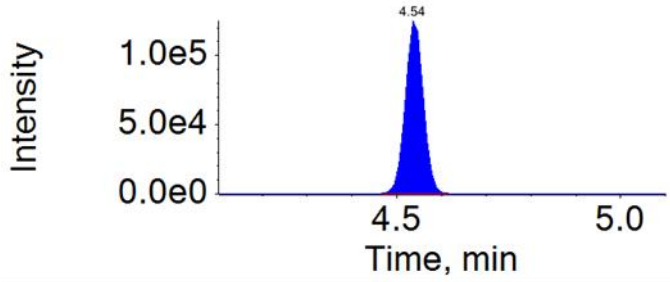
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



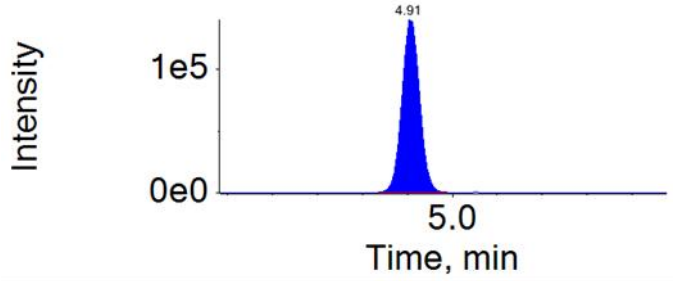


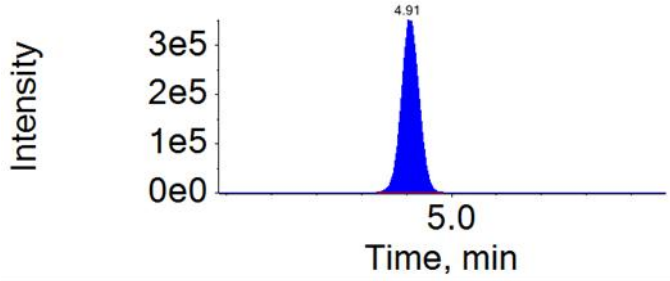
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



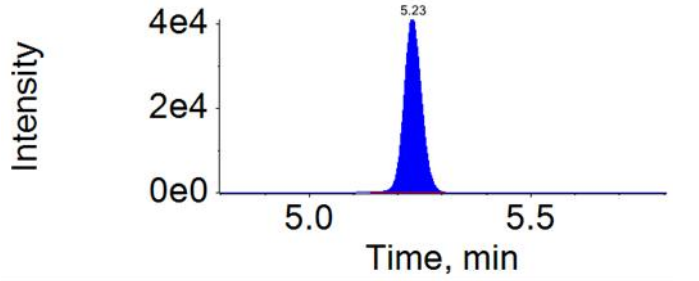


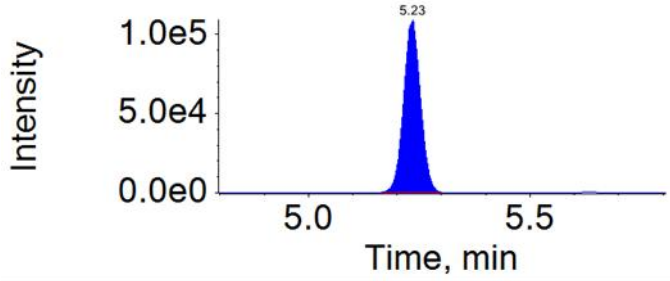
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



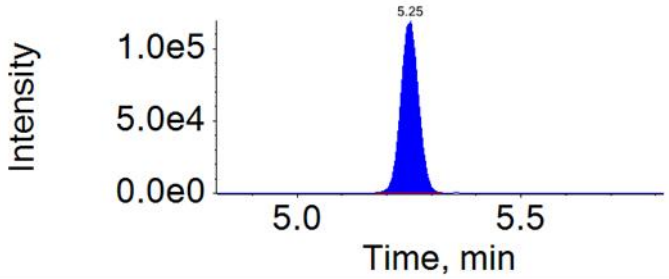


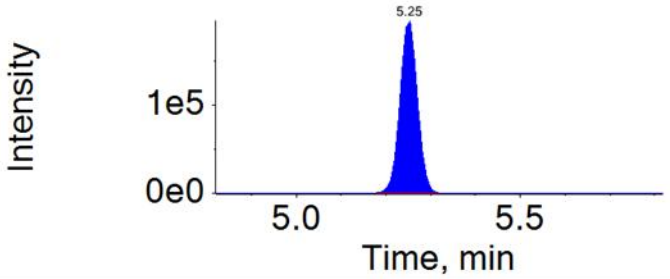
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

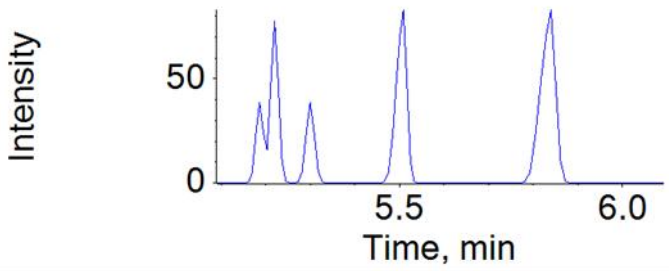
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

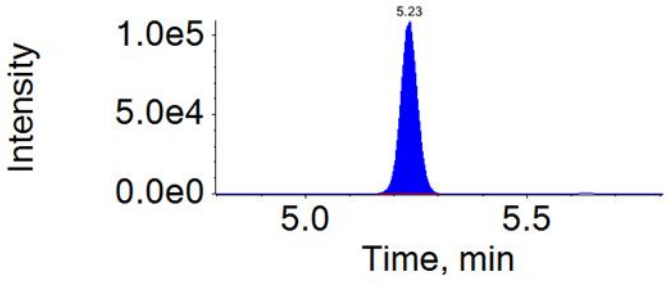
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



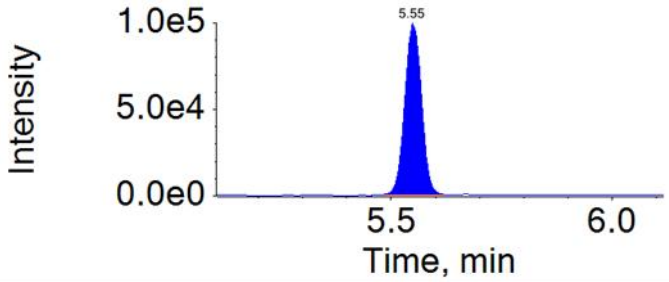


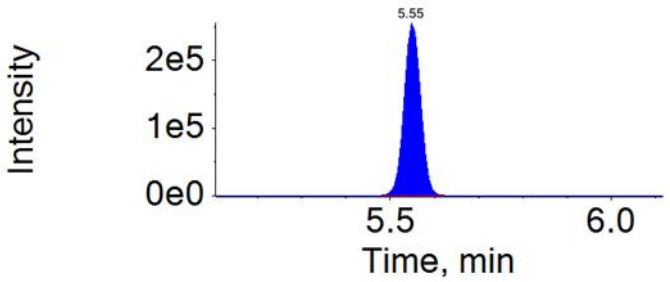
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



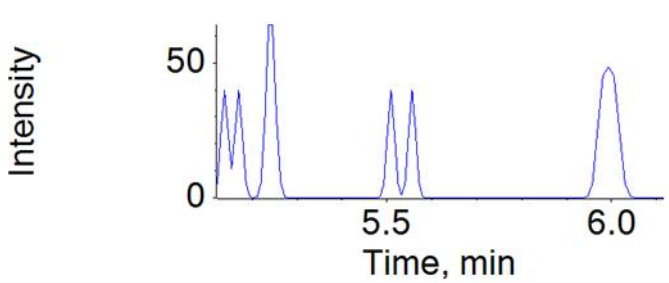


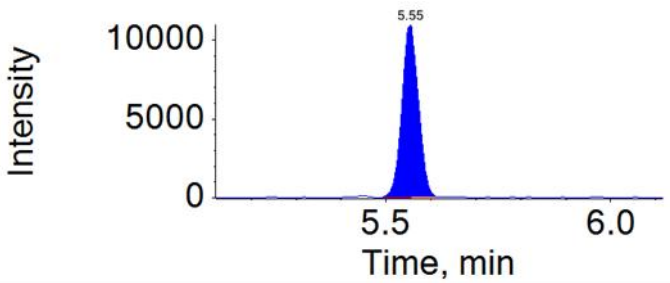
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



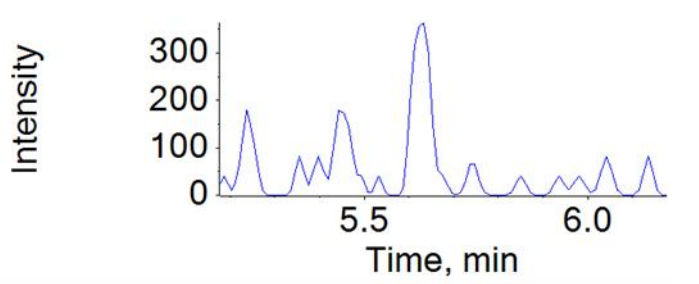


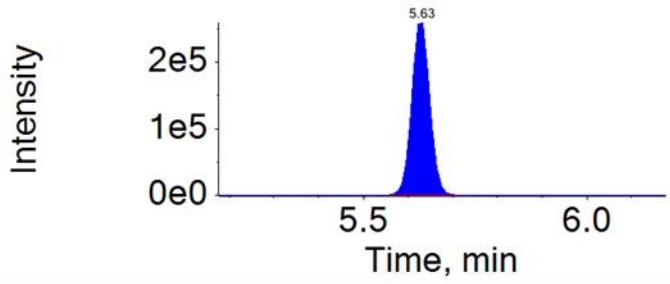
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

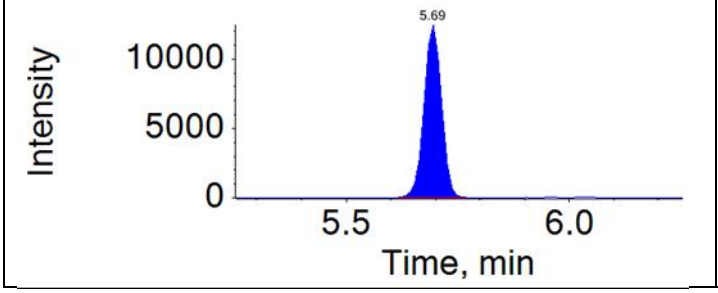
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

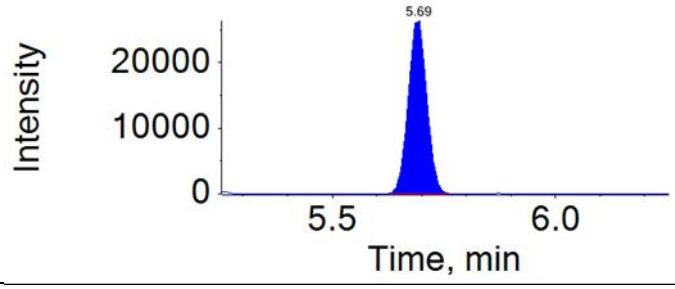
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



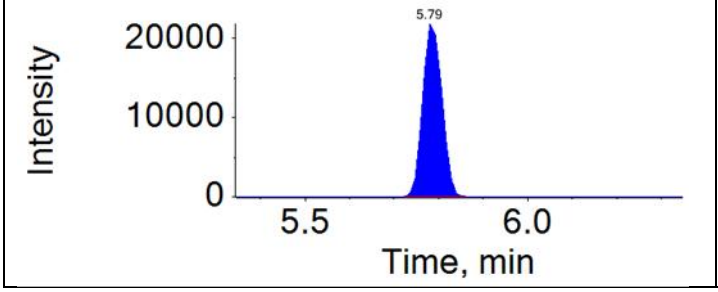


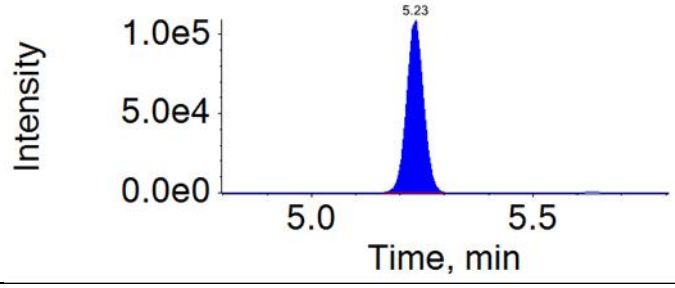
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



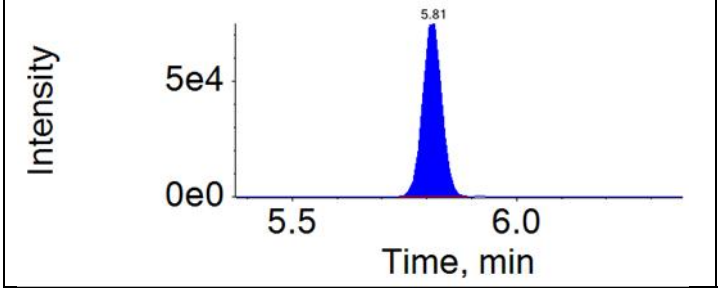


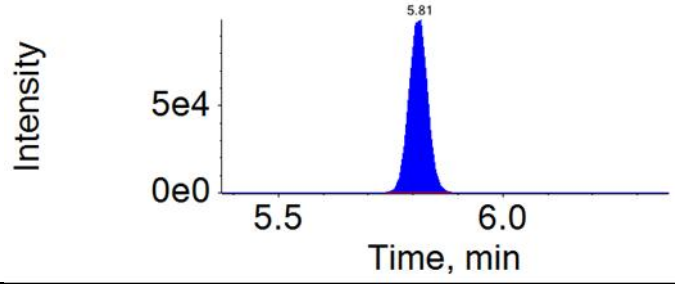
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



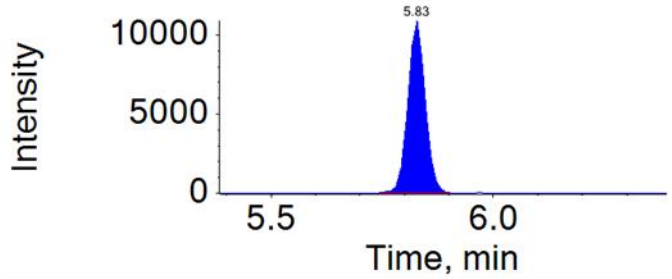


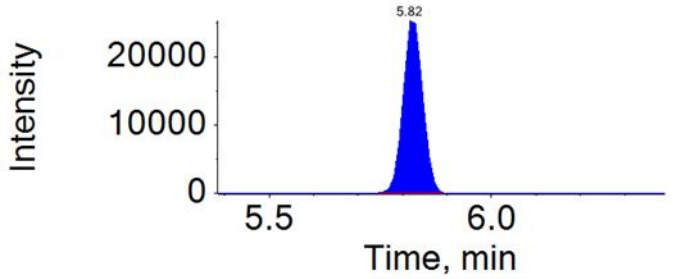
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

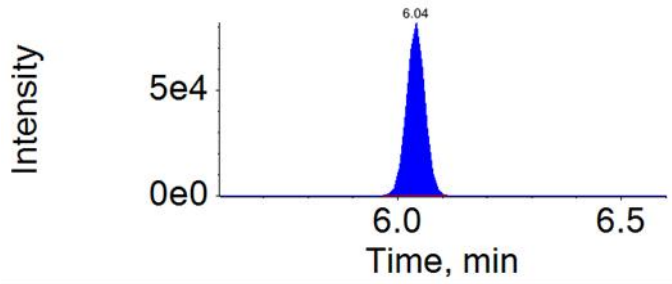
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

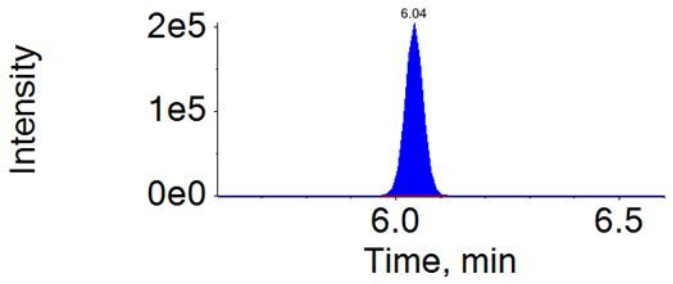
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



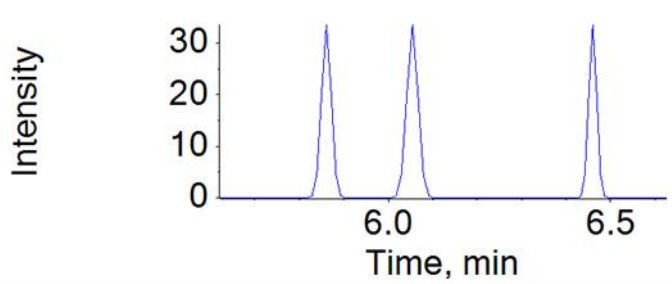


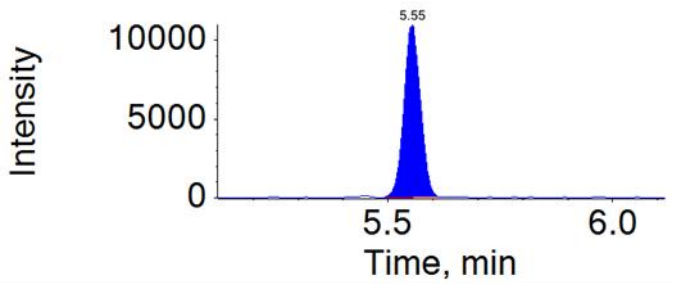
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



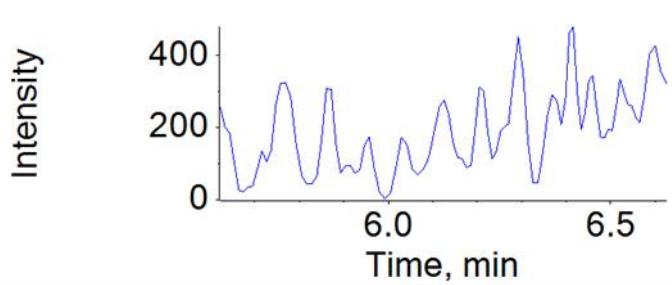


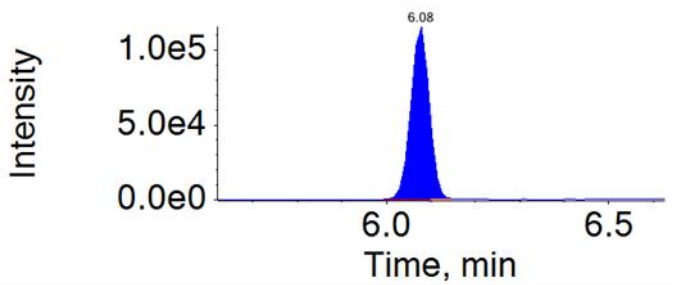
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



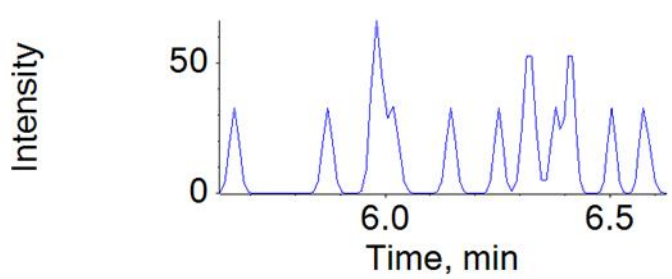


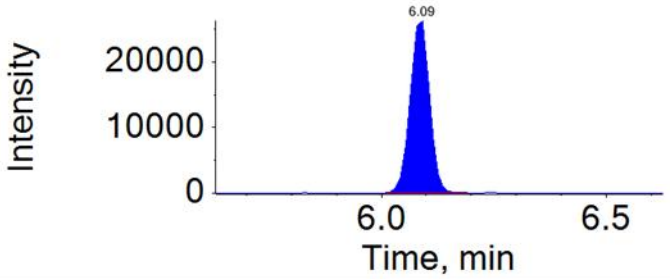
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

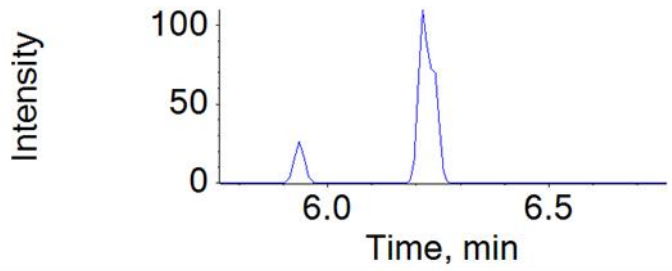
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

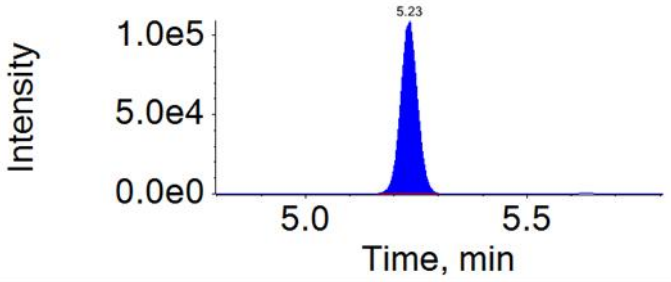
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



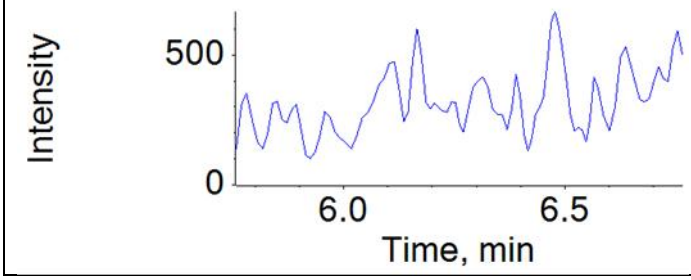


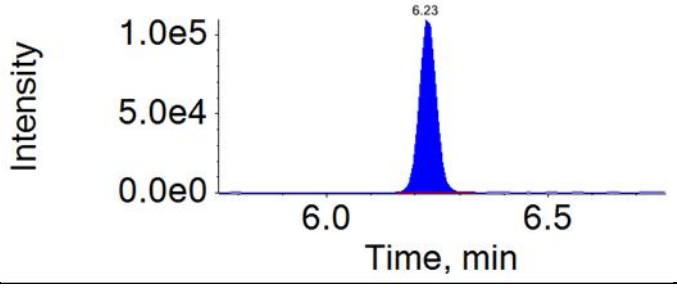
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



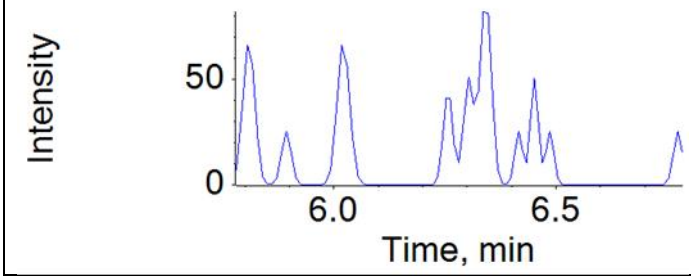


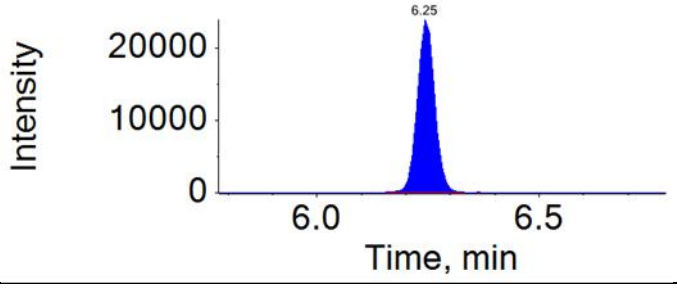
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

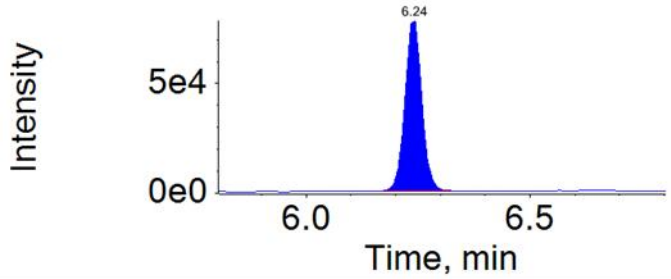
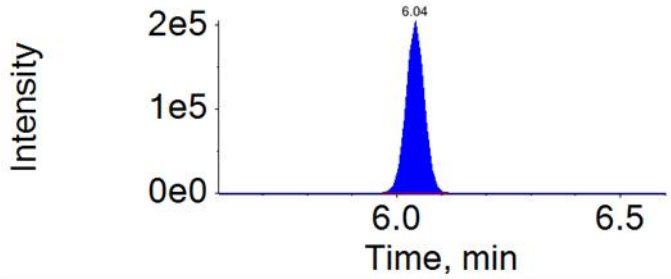


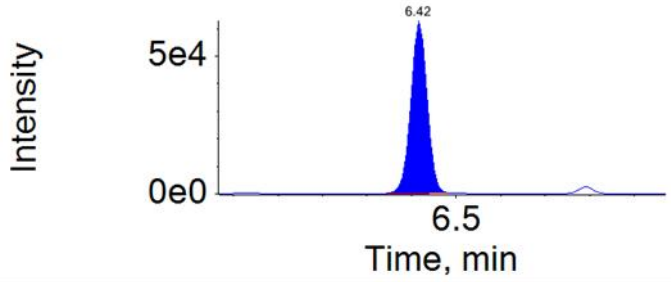
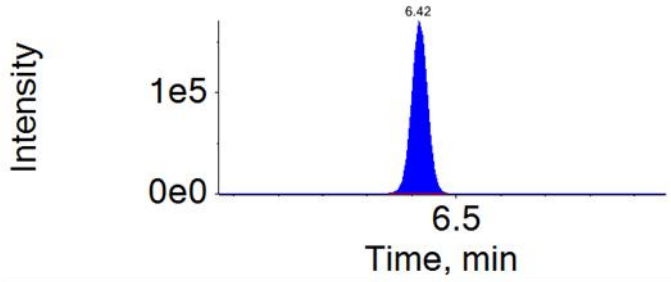


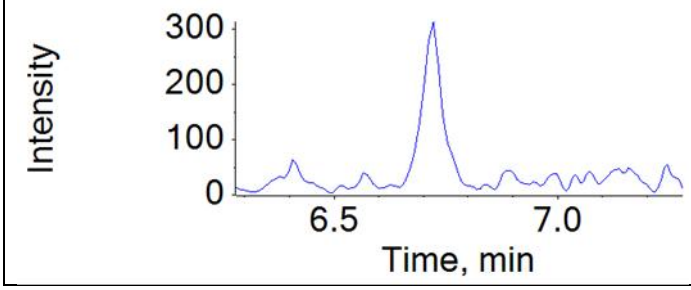
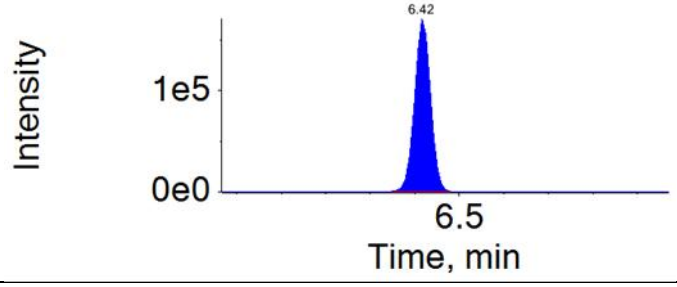
APPROVED
By JPT at 2:53 pm, 11/7/18

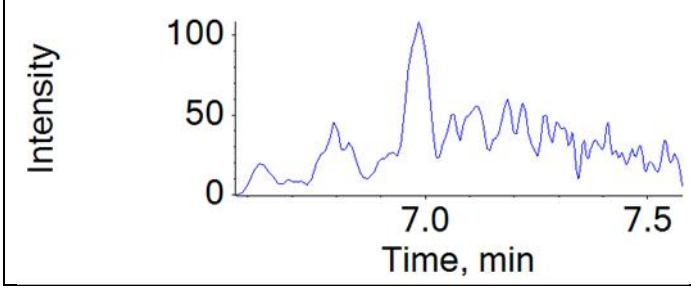
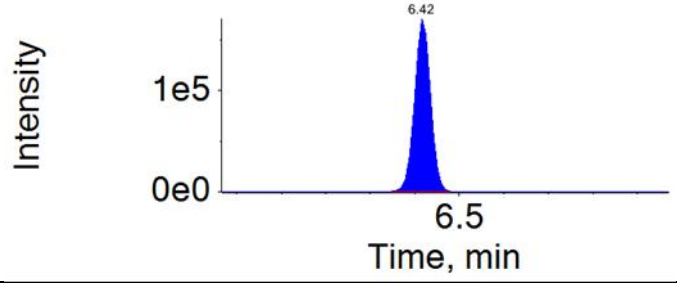
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

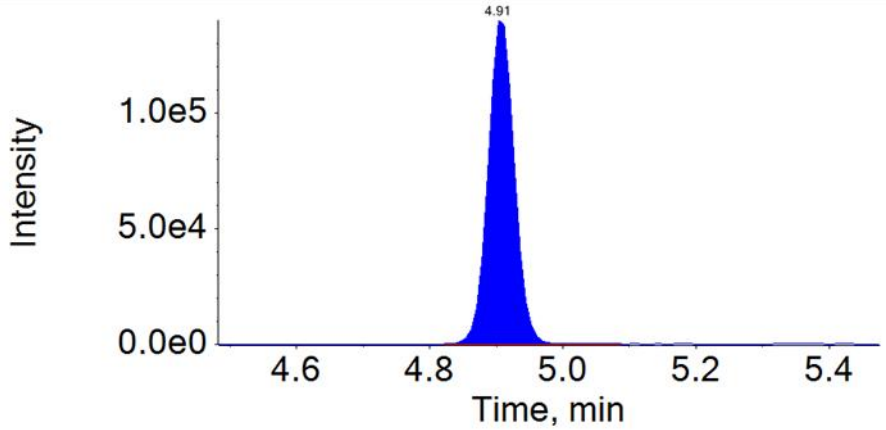
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

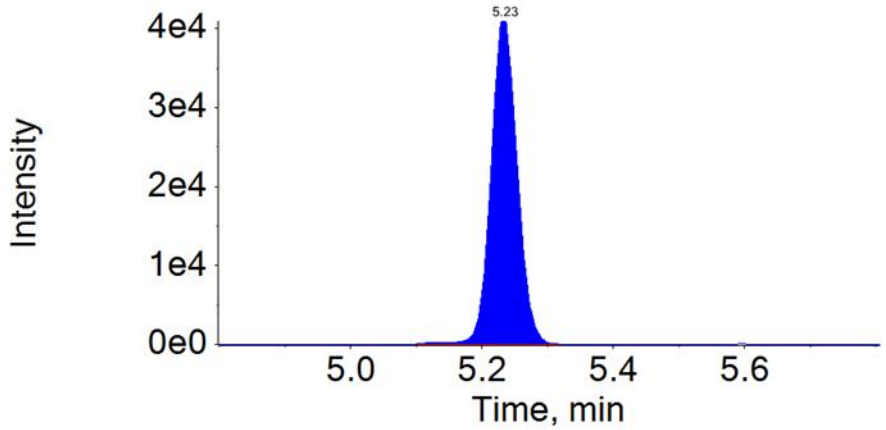
APPROVED
By JPT at 2:53 pm, 11/7/18

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

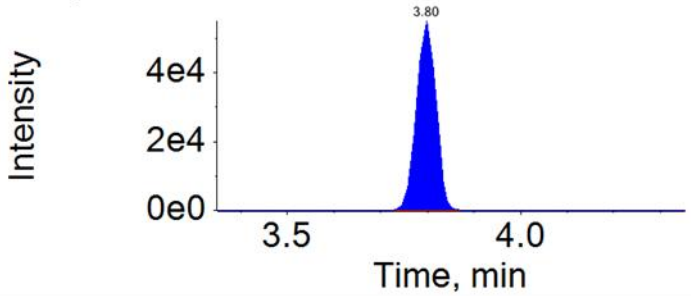
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-18.wiff

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	

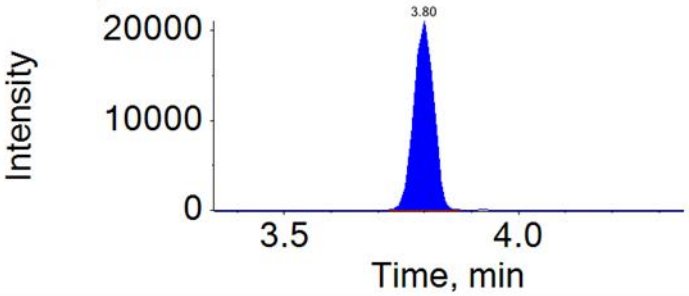
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

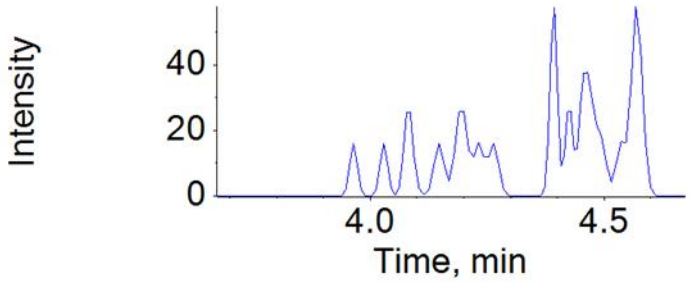
Component: PFBS
Primary Mass: 299.0 / 80.0



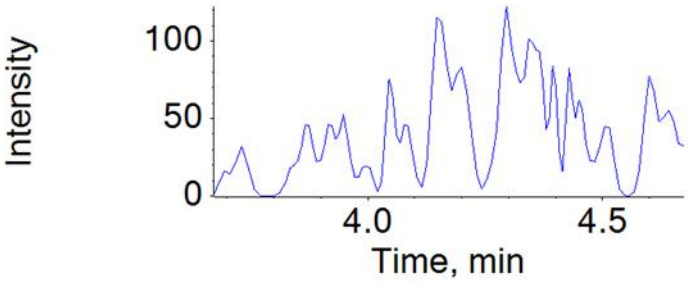
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



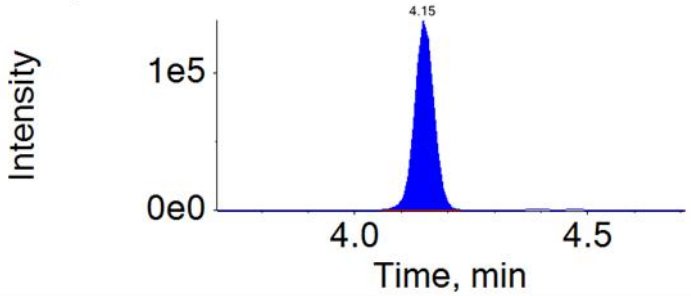
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



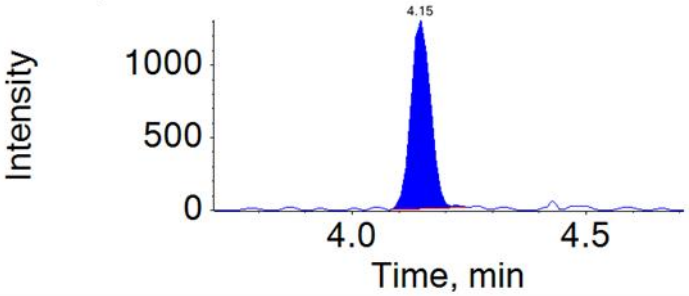
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



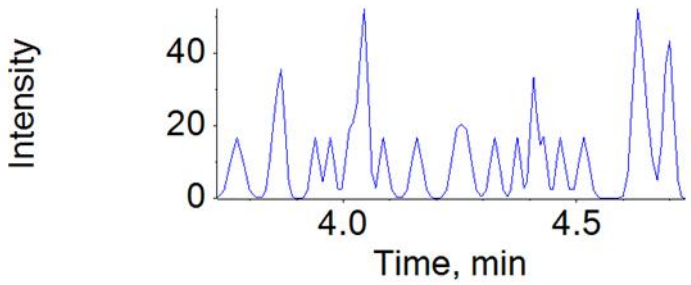
Component: PFHxA
Primary Mass: 313.0 / 269.0



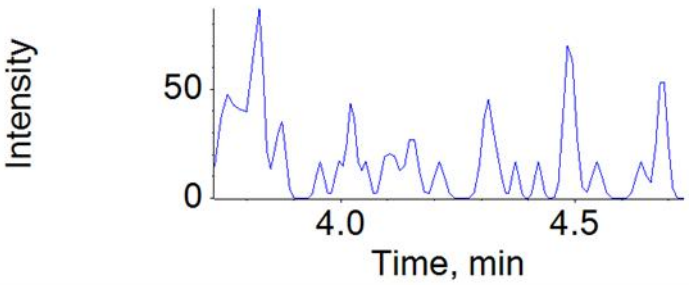
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



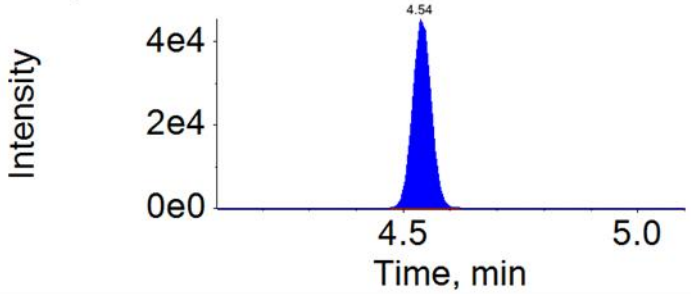
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



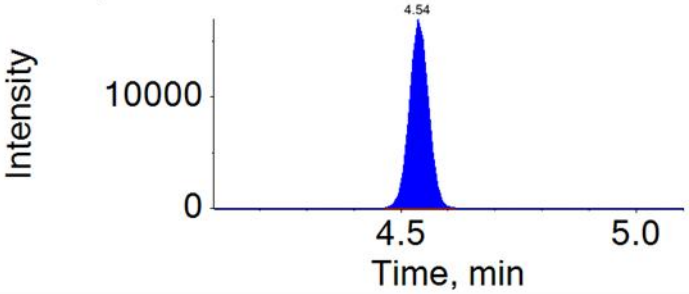
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By JPT at 2:53 pm, 11/7/18

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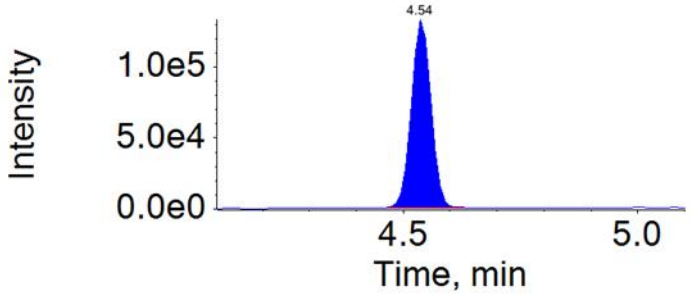
Component: PFHxS
Primary Mass: 399.0 / 80.0



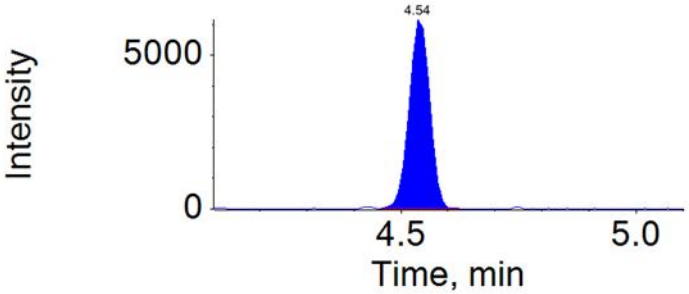
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



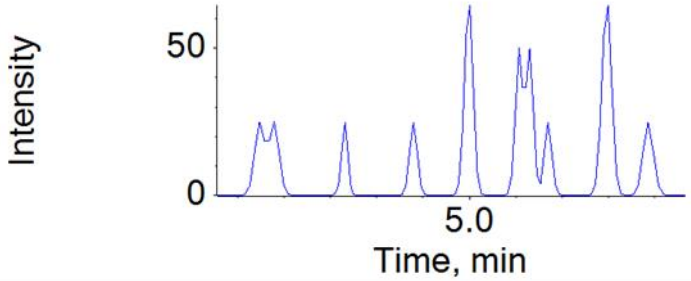
Component: PFHpA
Primary Mass: 363.0 / 319.0



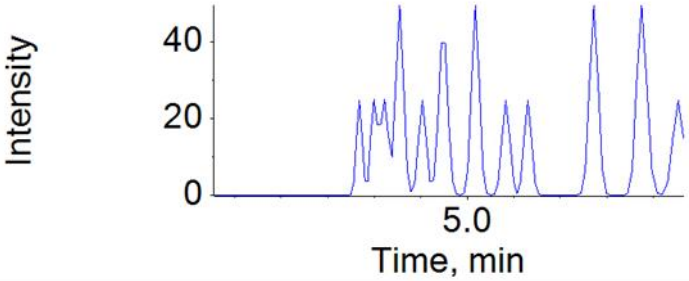
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



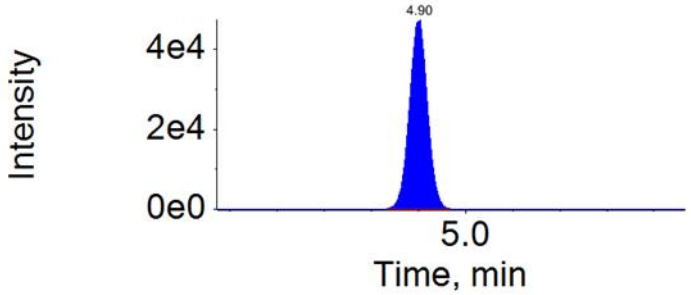
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



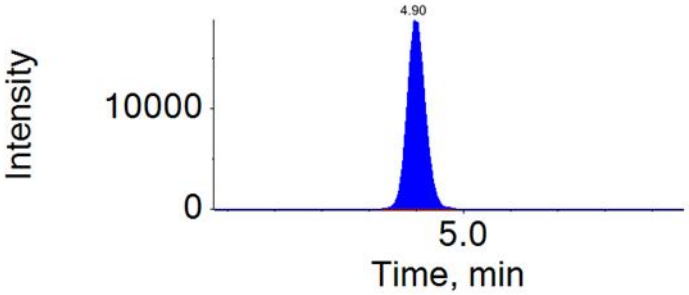
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



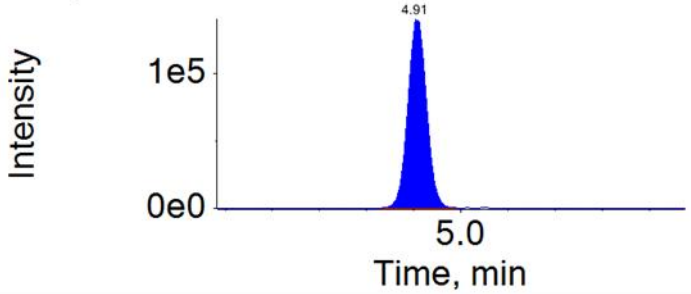
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



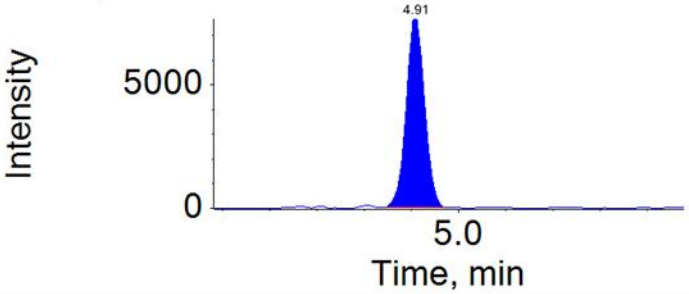
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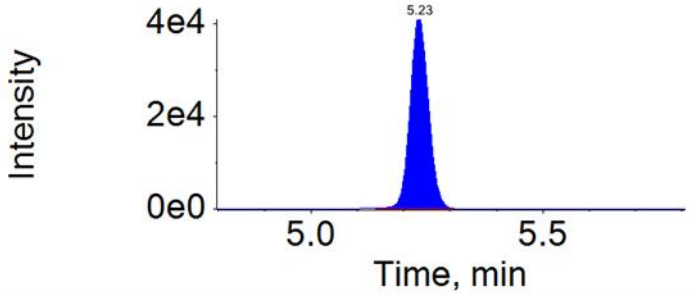
Component: PFOA
Primary Mass: 413.0 / 369.0



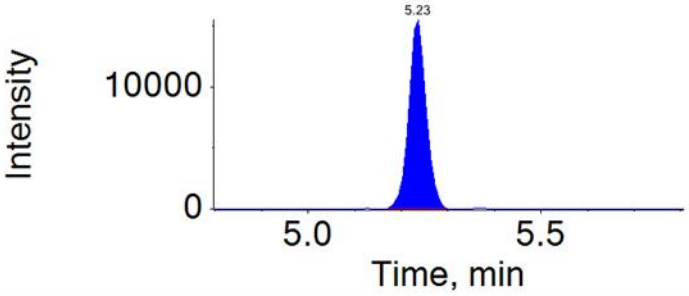
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



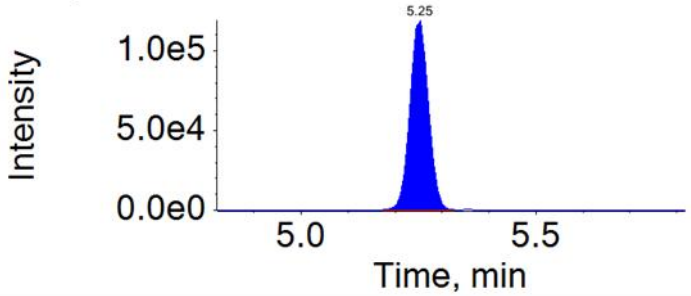
Component: PFOS
Primary Mass: 499.0 / 80.0



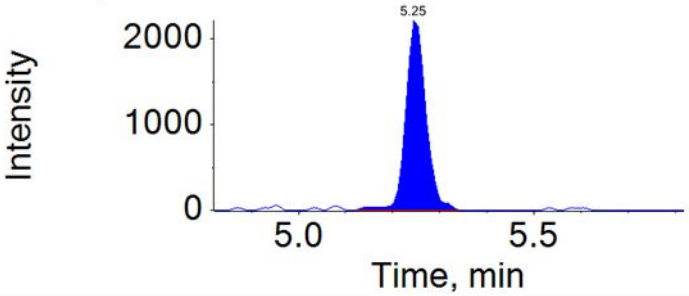
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



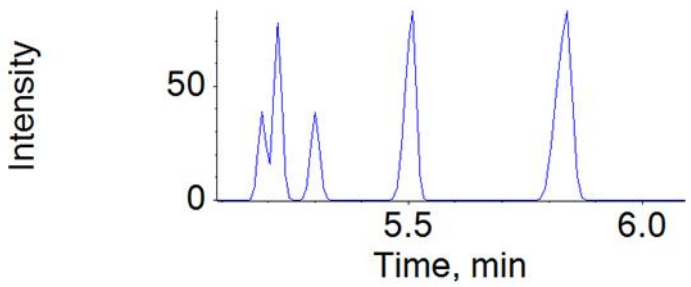
Component: PFNA
Primary Mass: 463.0 / 419.0



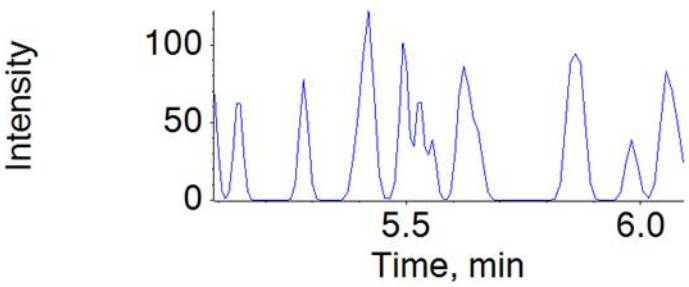
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



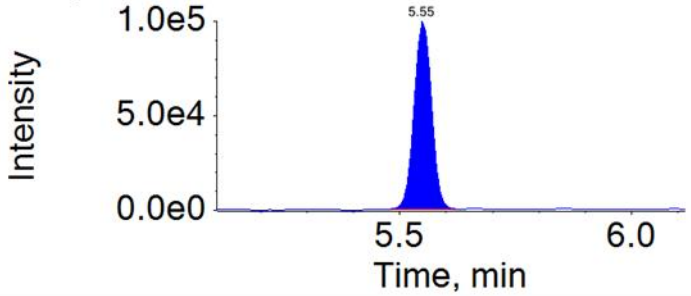
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



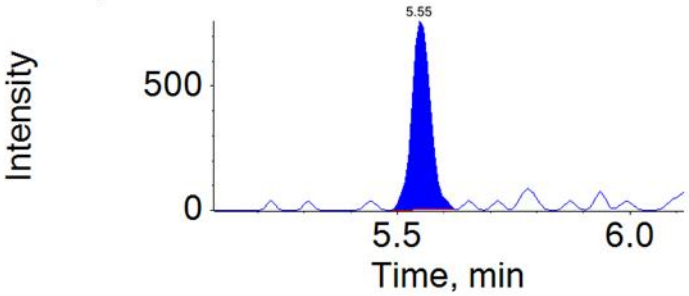
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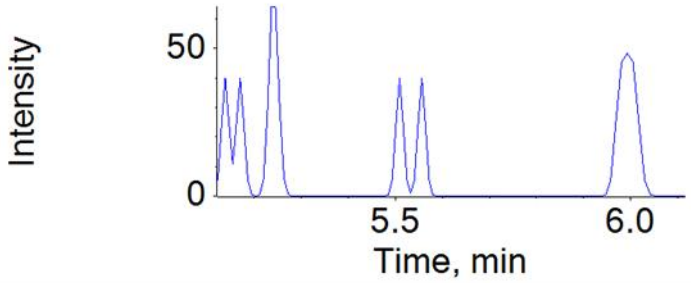
Component: PFDA
Primary Mass: 513.0 / 469.0



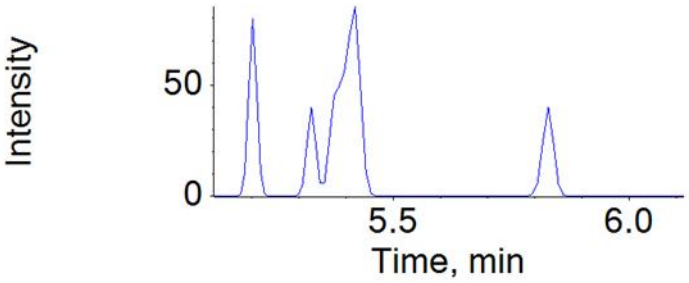
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



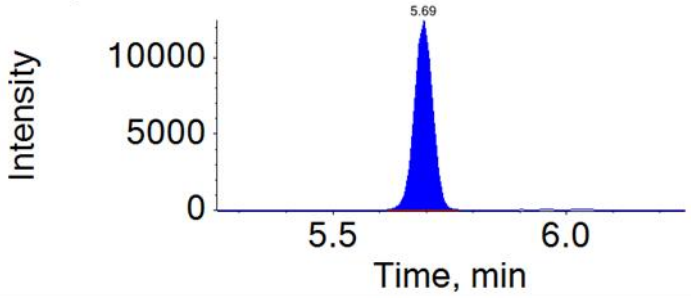
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



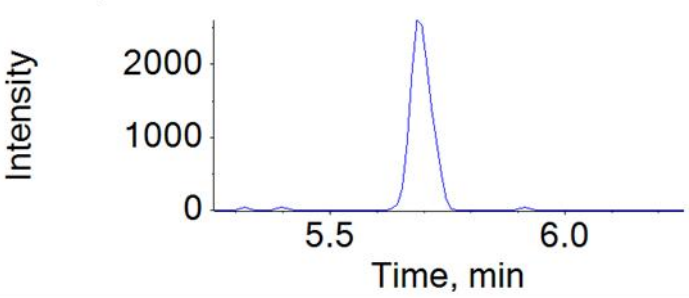
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



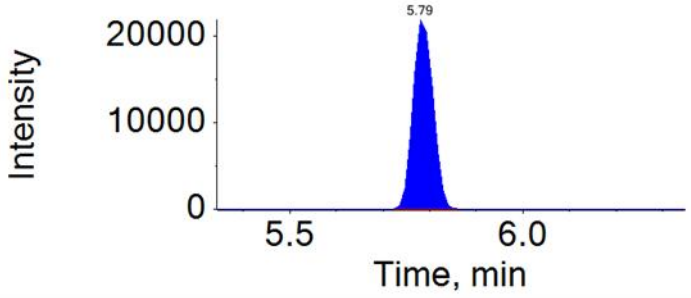
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



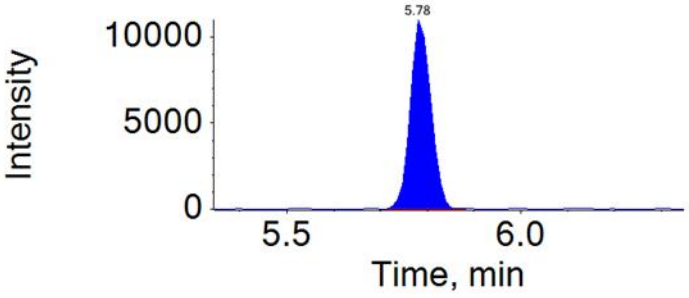
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



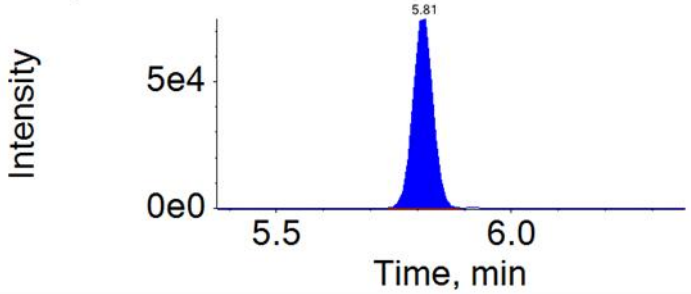
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Secondary Mass: 599.0 / 99.0



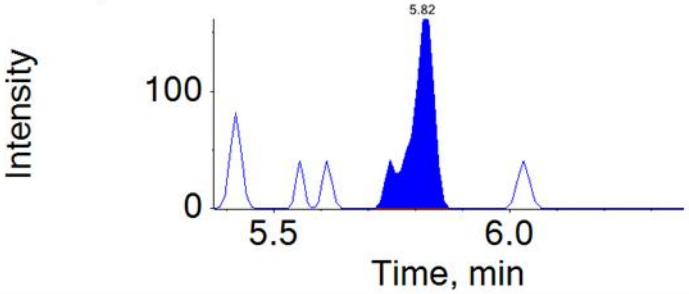
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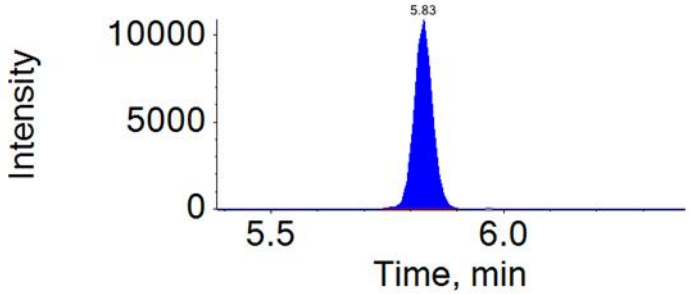
Component: PFUnDA
Primary Mass: 563.0 / 519.0



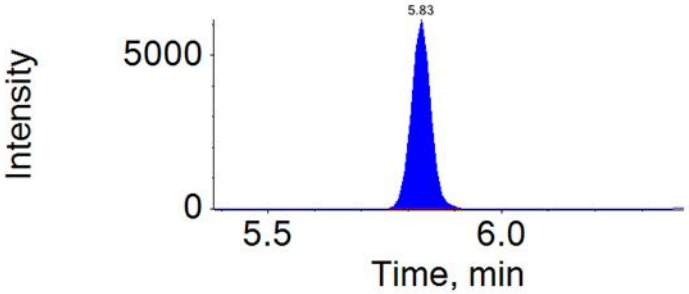
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



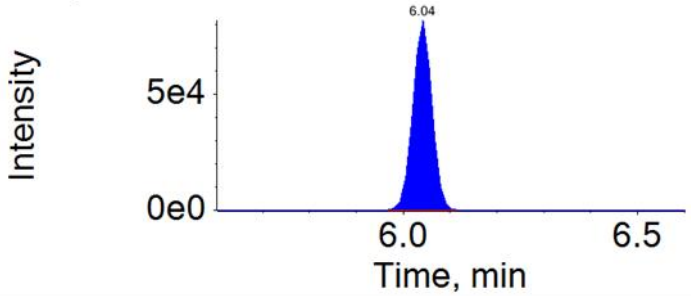
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



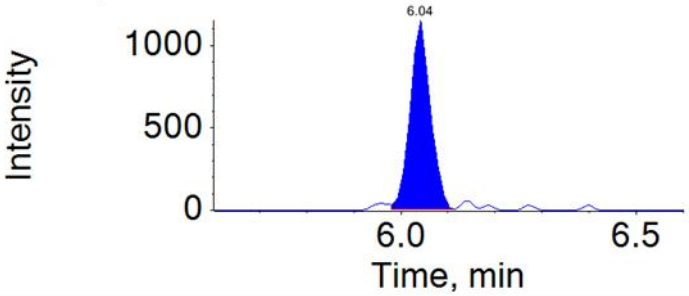
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



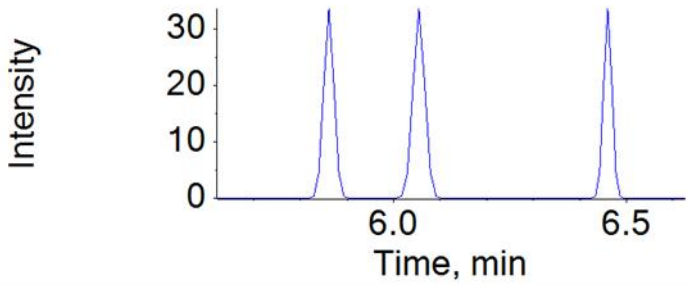
Component: PFDoDA
Primary Mass: 613.0 / 569.0



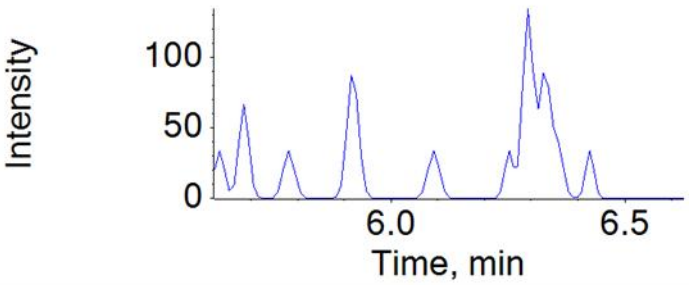
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



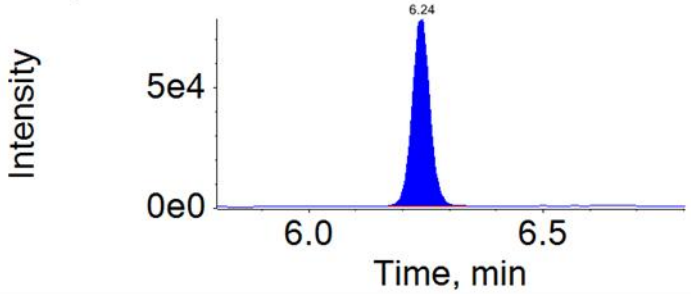
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



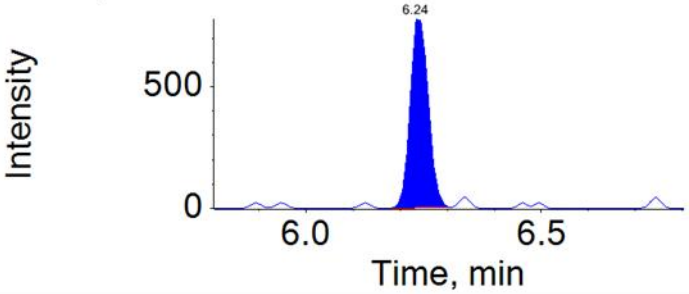
APPROVED
By JPT at 2:53 pm, 11/7/18

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By umar at 5:23 pm, 11/9/18

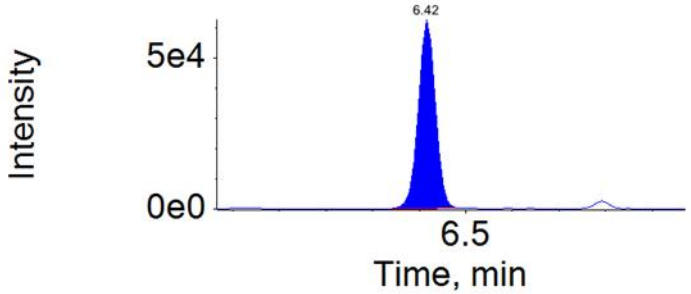
Component: PFTrDA
Primary Mass: 663.0 / 619.0



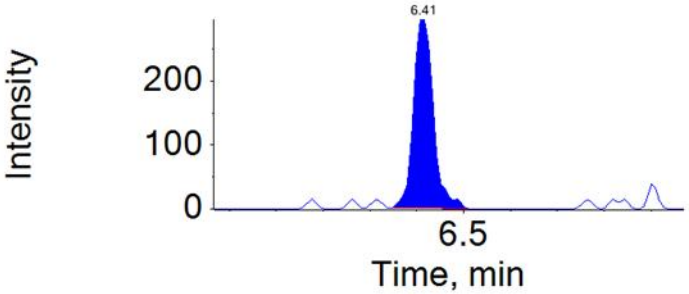
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



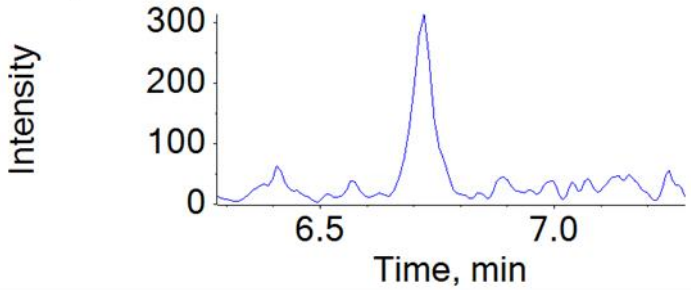
Component: PFTeDA
Primary Mass: 713.0 / 669.0



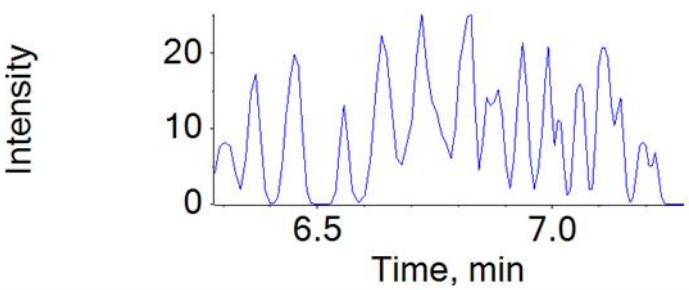
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



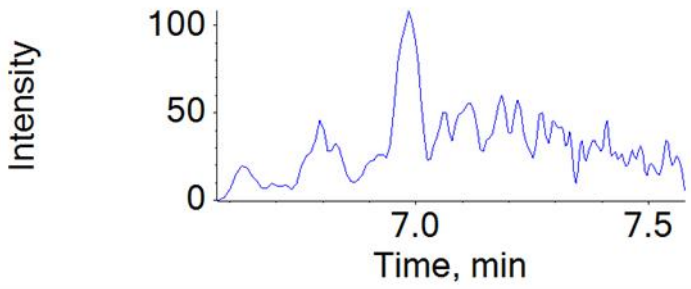
Component: PFHxDA
Primary Mass: 813.0 / 769.0



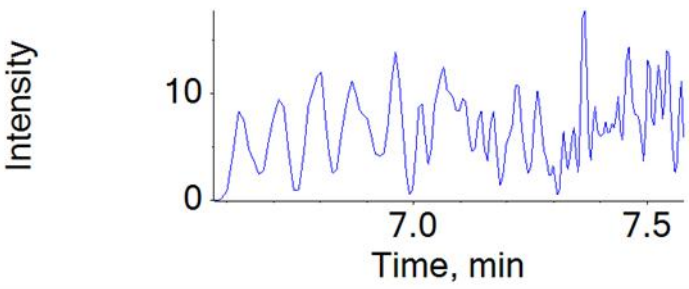
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

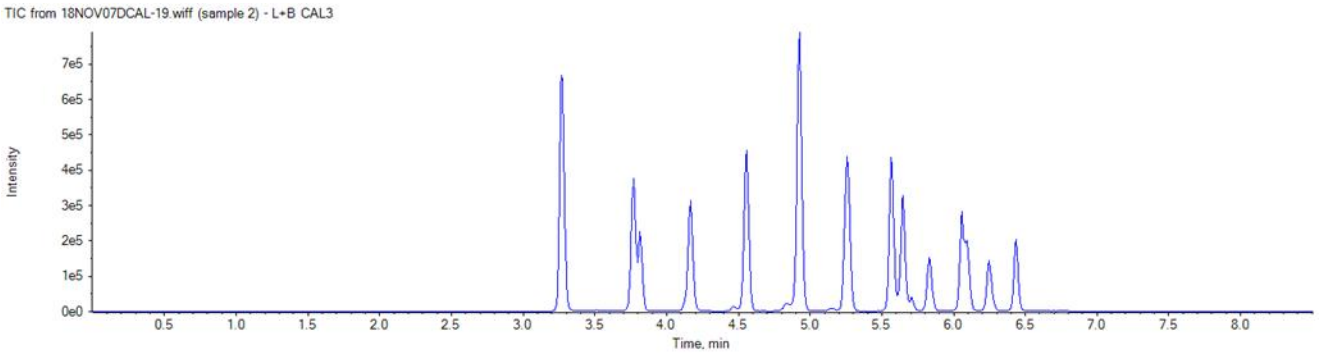
Analyte Quantitation Peak Table

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

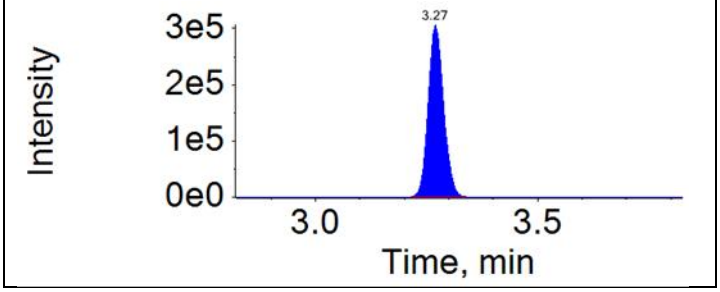


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By JPT at 2:53 pm, 11/7/18

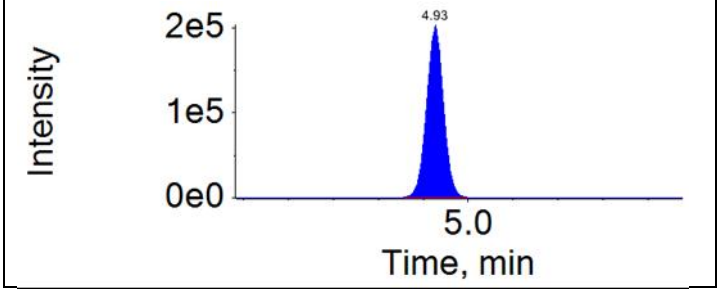
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

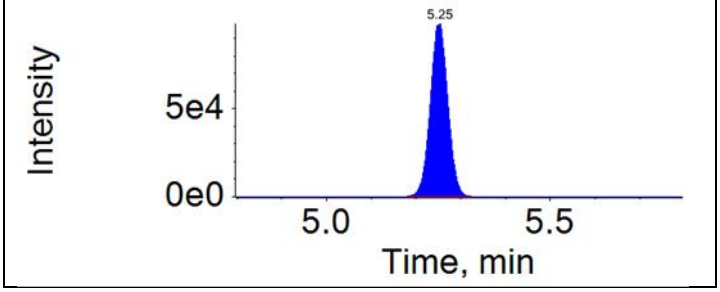
Injection Standard: 13C3-PFBA
216.0 / 172.0



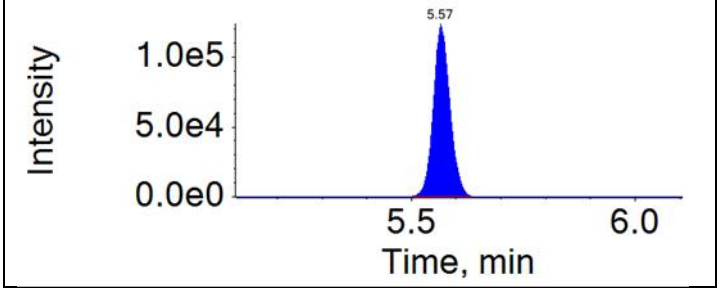
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

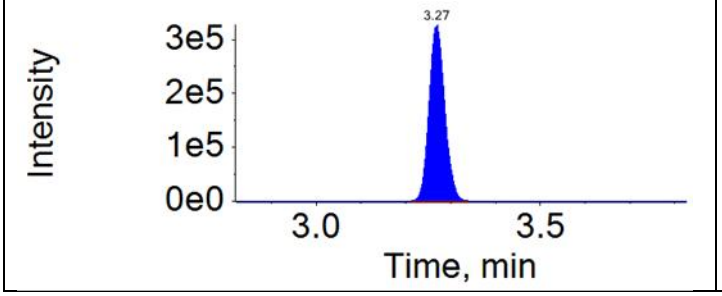


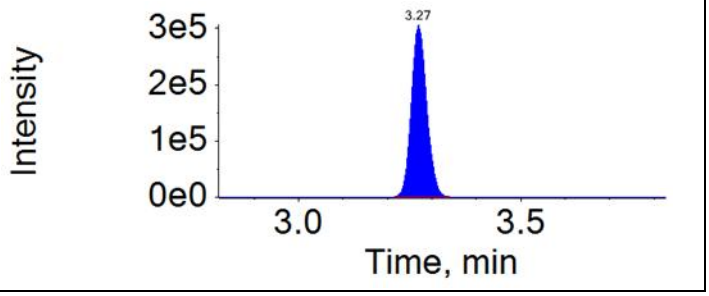
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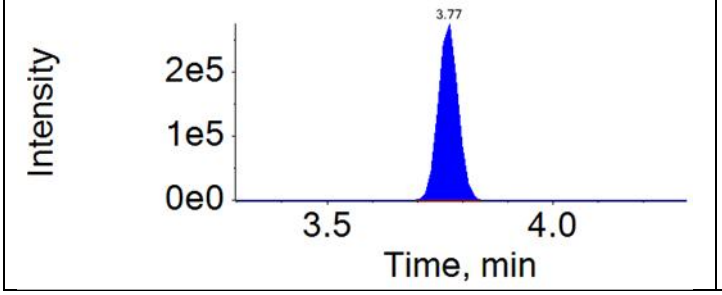
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QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

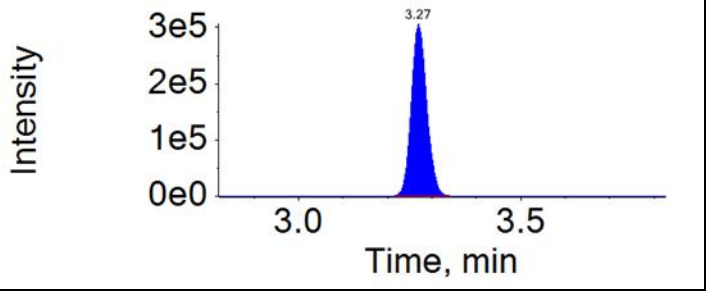
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



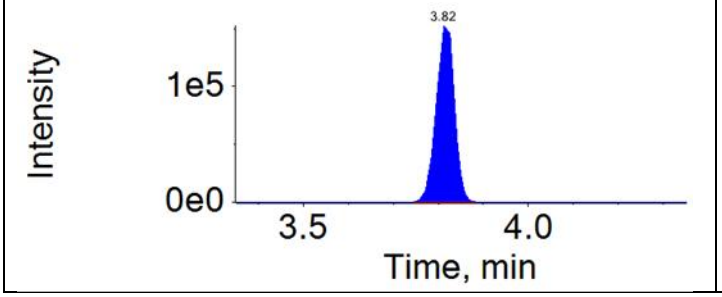


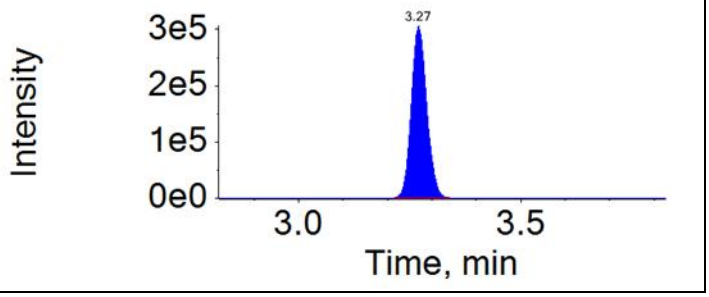
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



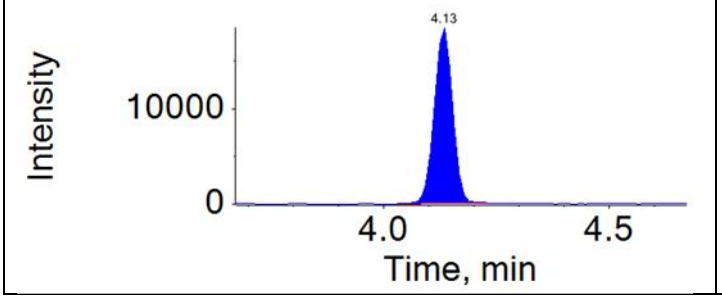


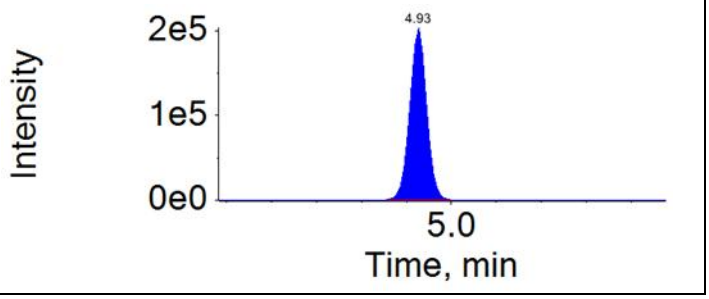
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





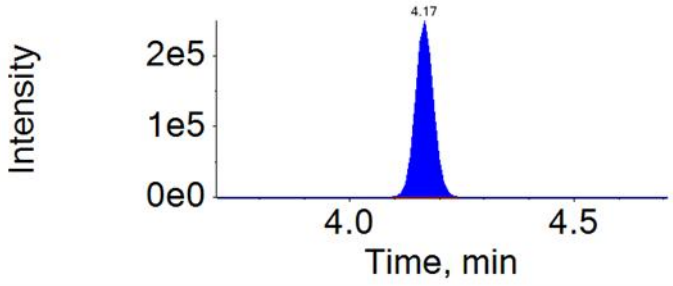
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

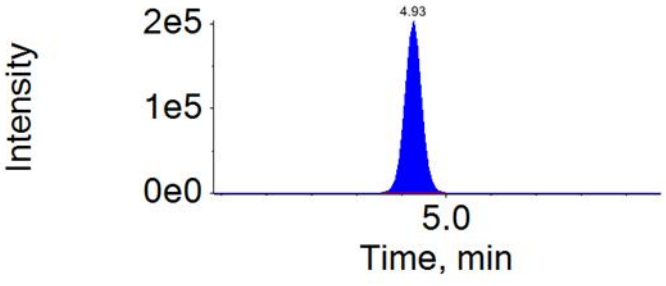




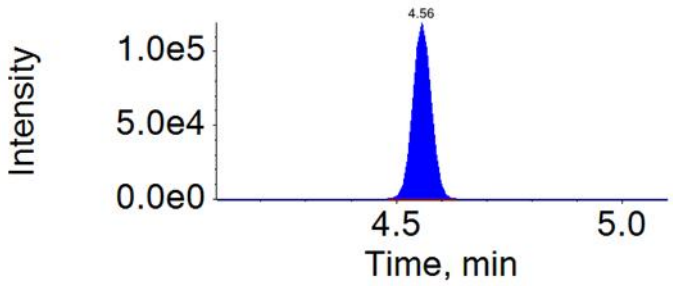
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

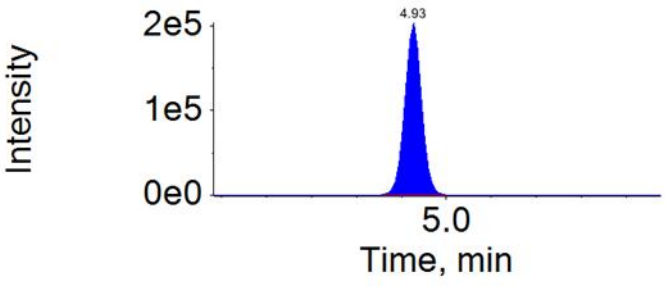
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



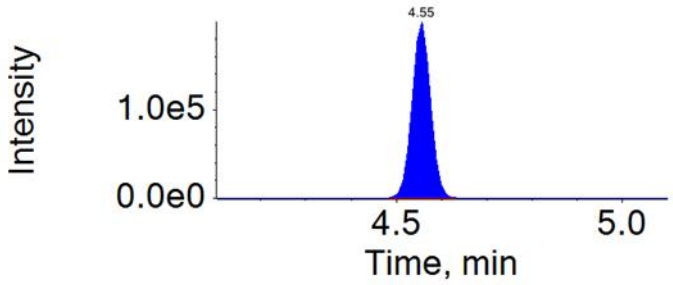


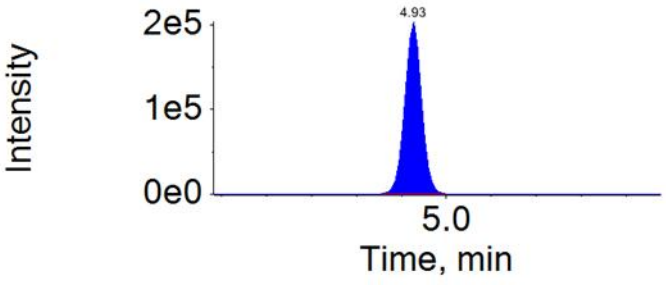
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



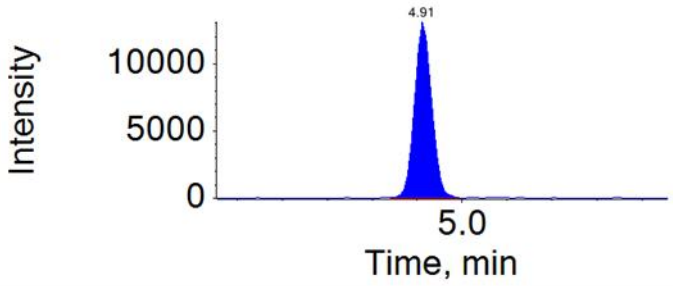


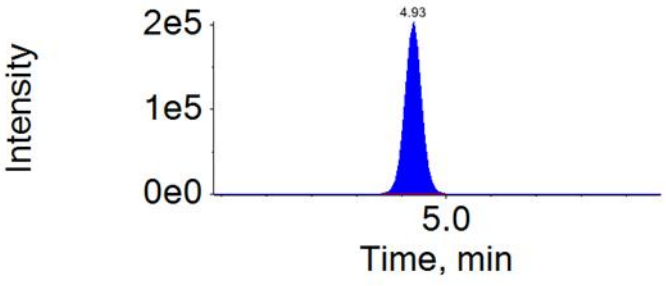
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

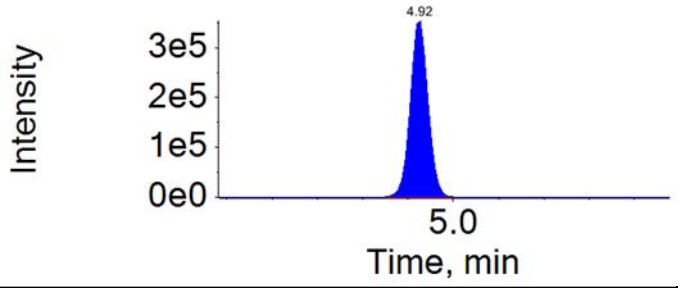
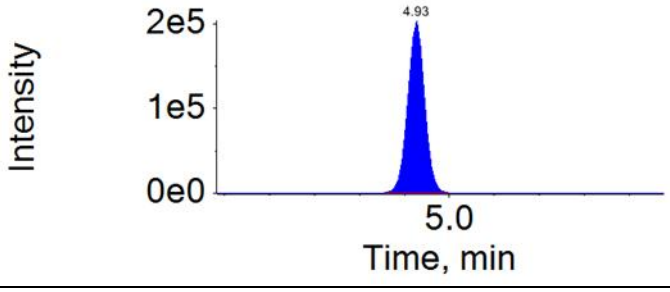


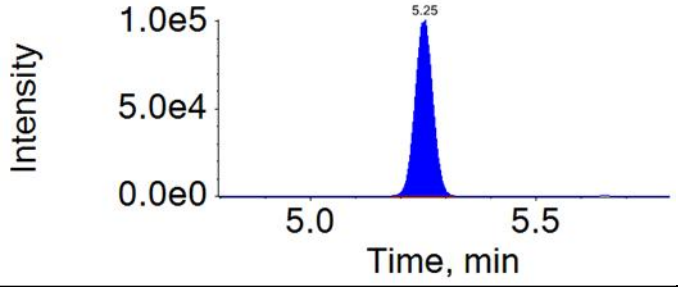
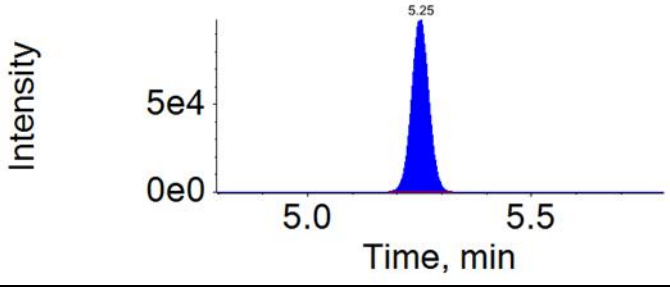


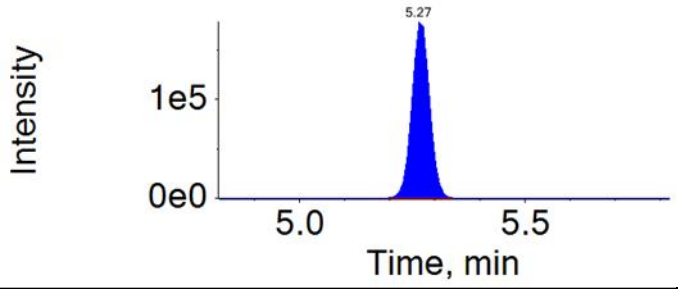
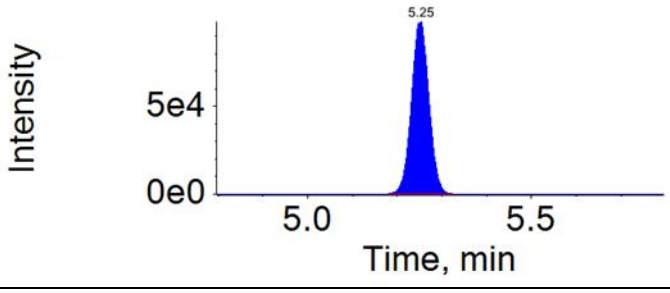
APPROVED
By JPT at 2:53 pm, 11/7/18

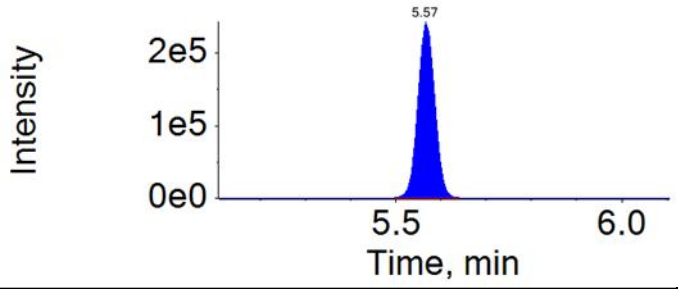
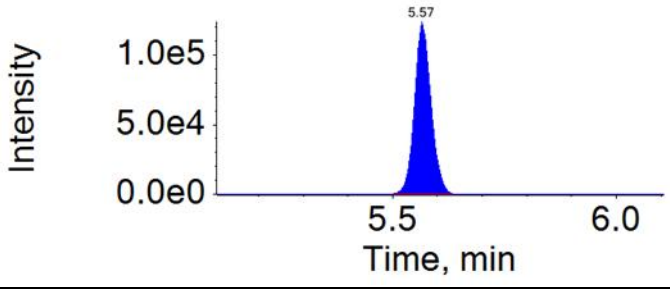
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ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

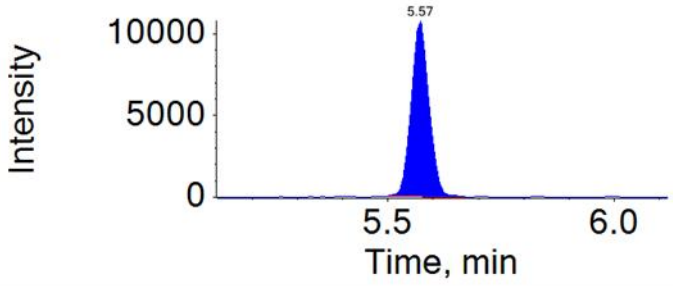
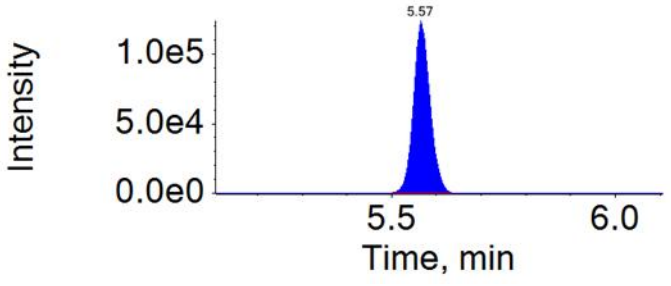
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

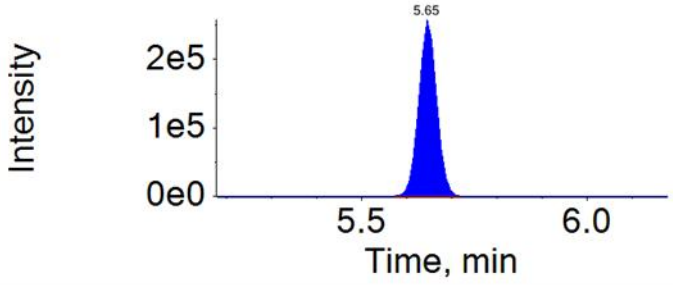
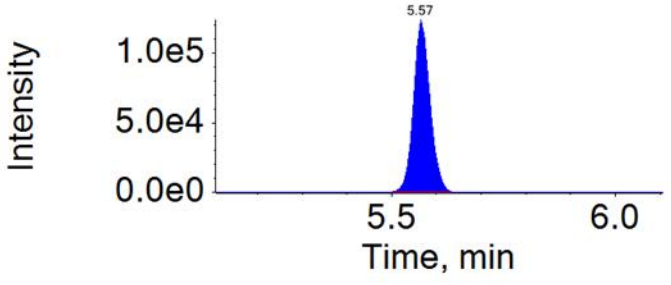
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

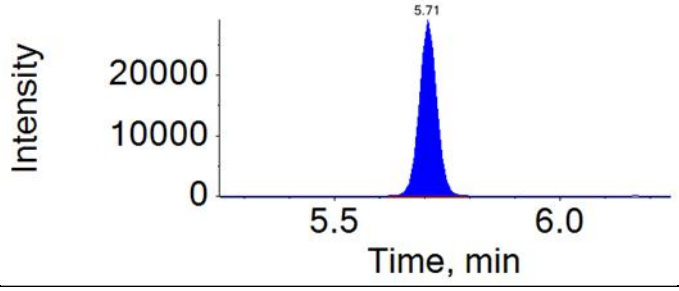
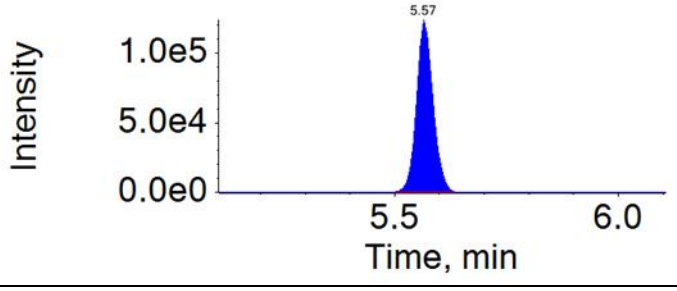
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

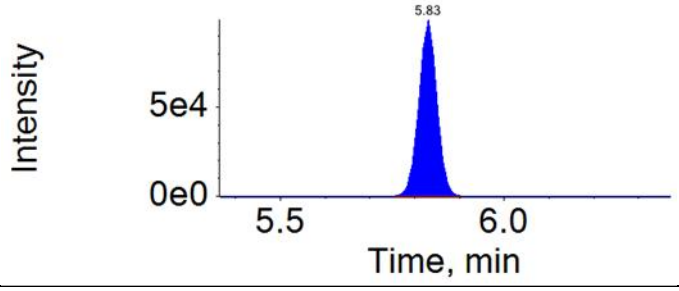
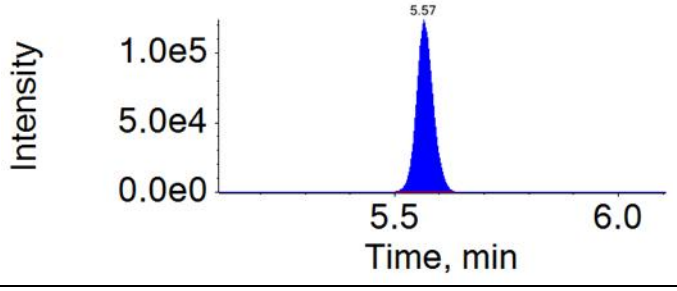
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

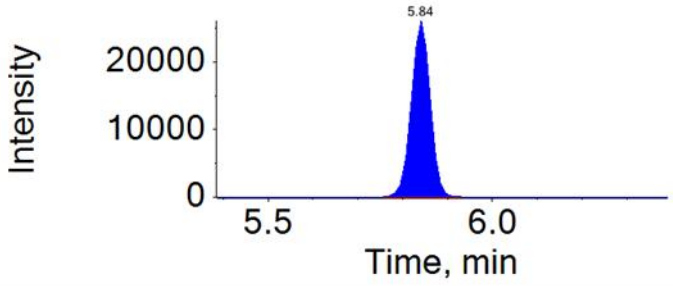
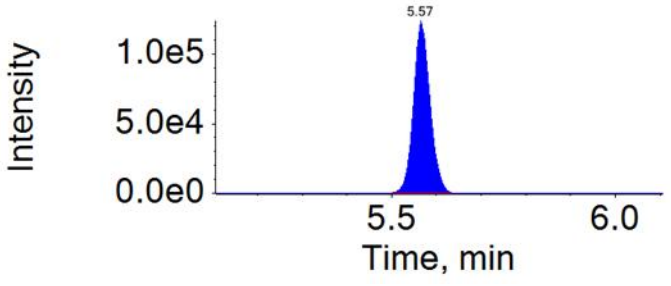
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

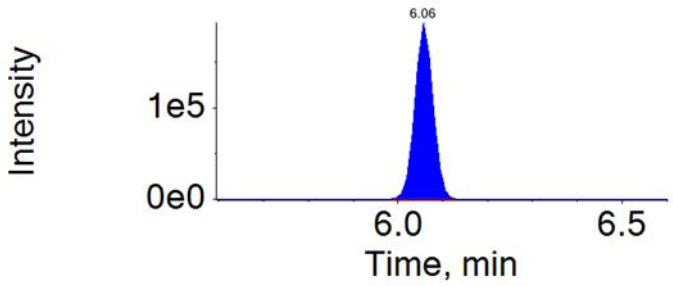
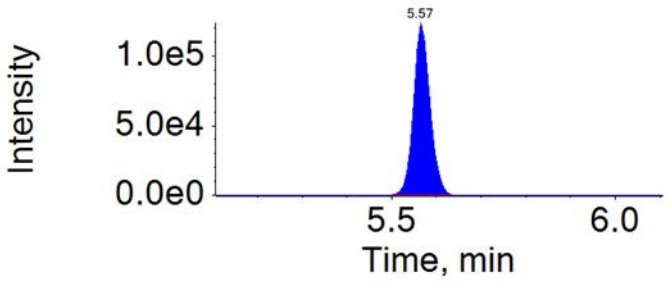
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

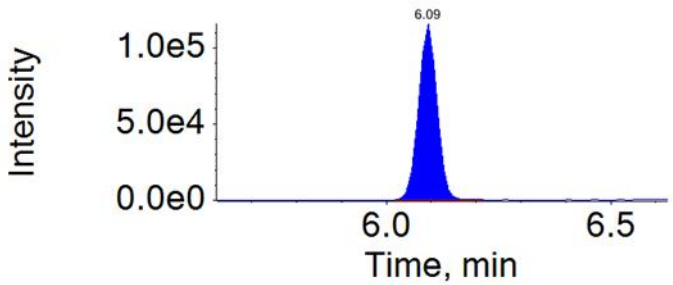
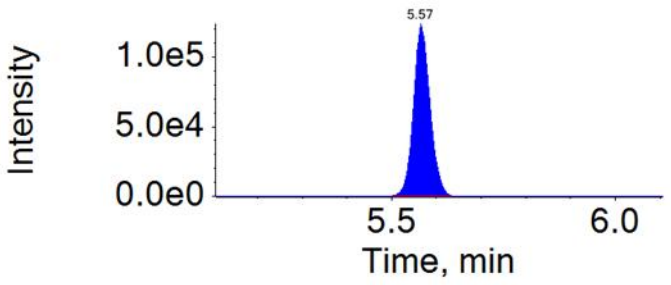
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

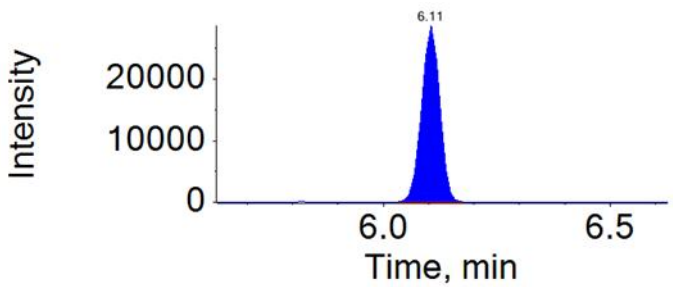
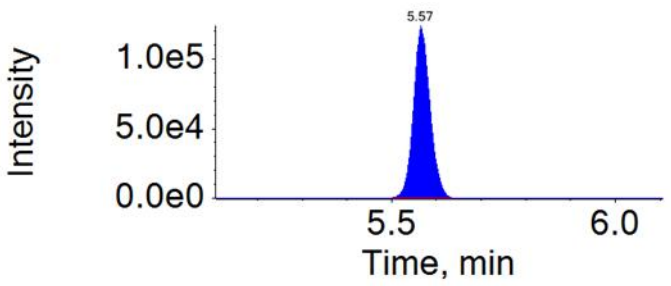
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

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
	

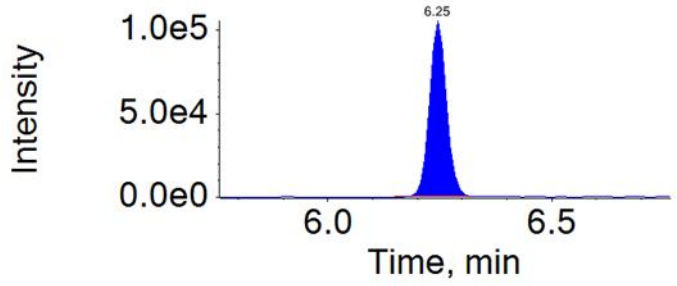
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

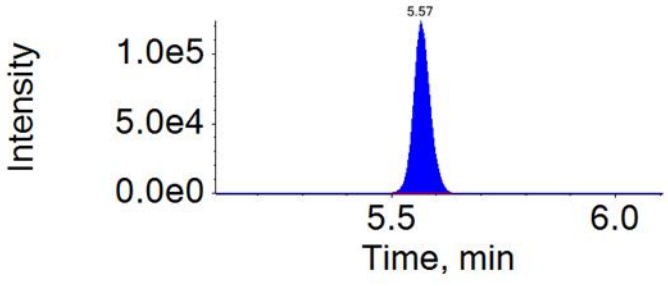
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

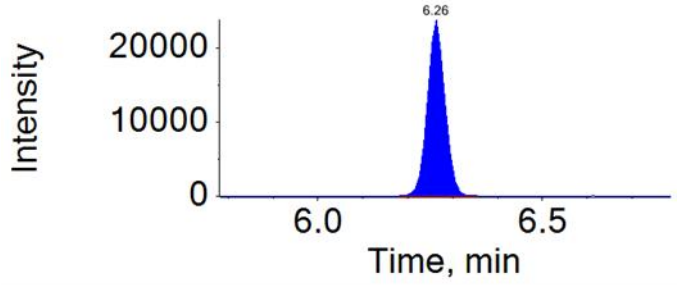
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

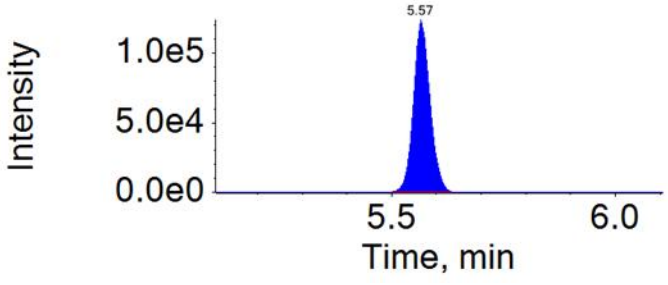
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



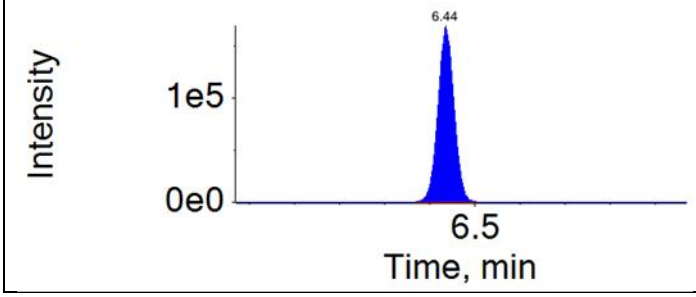


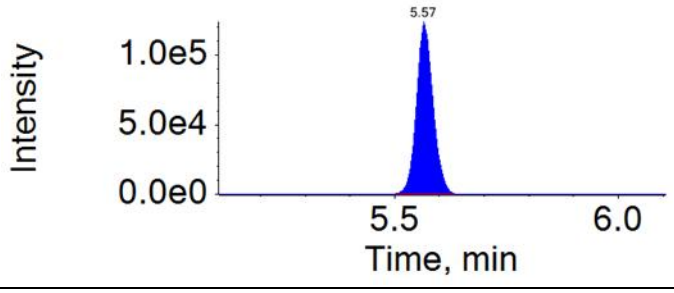
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



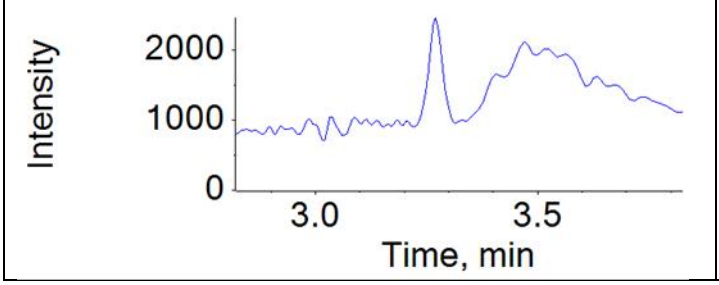


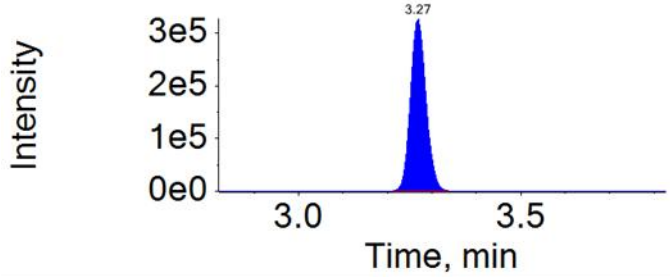
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

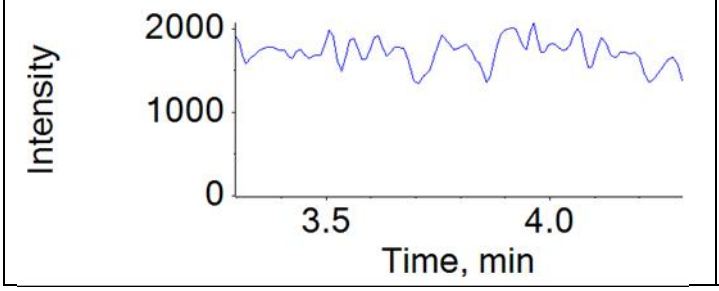
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

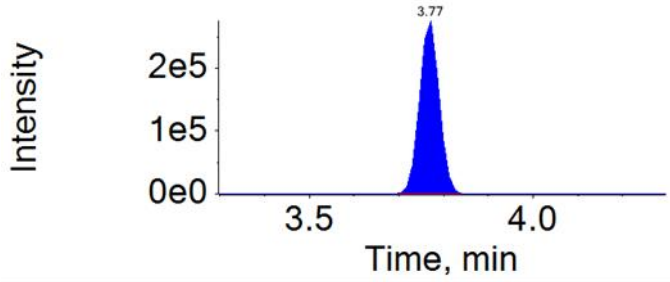
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



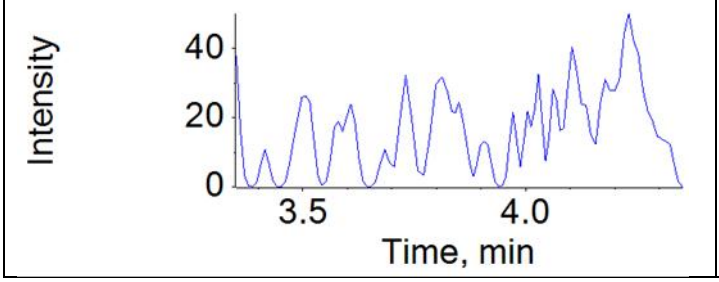


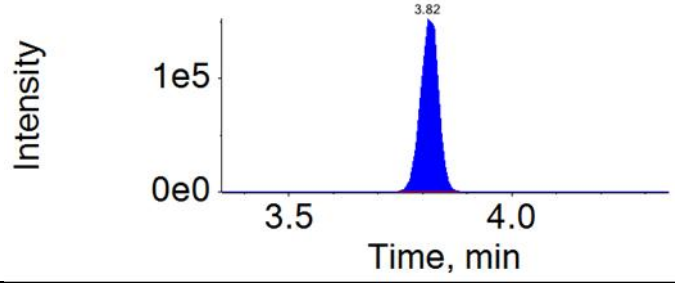
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



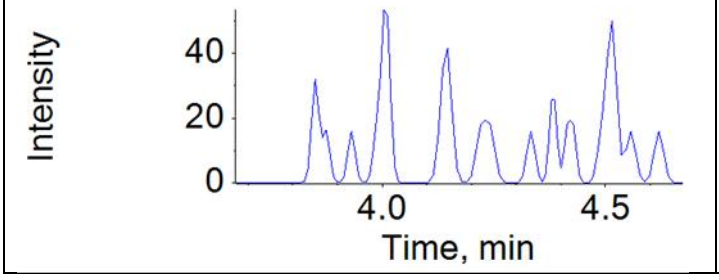


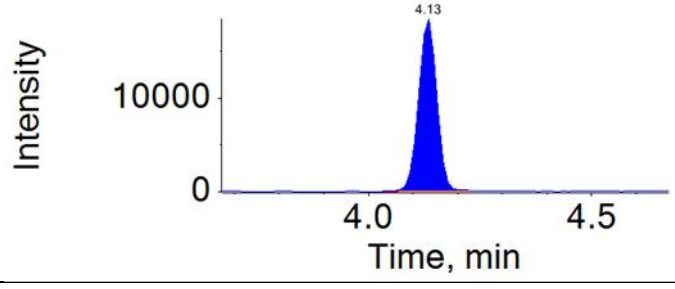
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



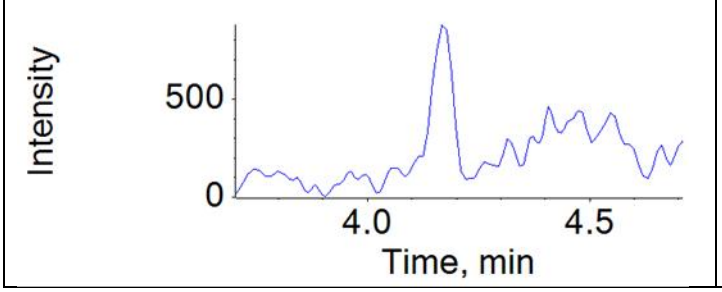


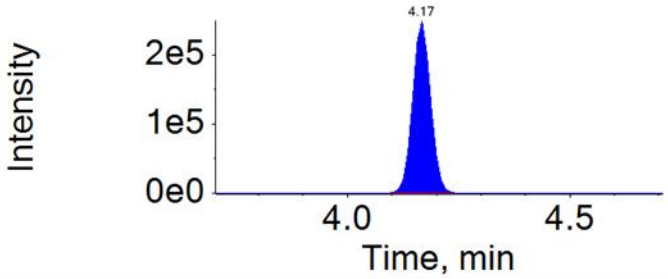
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

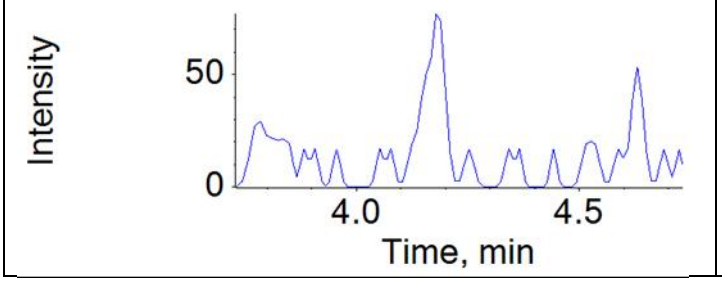
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

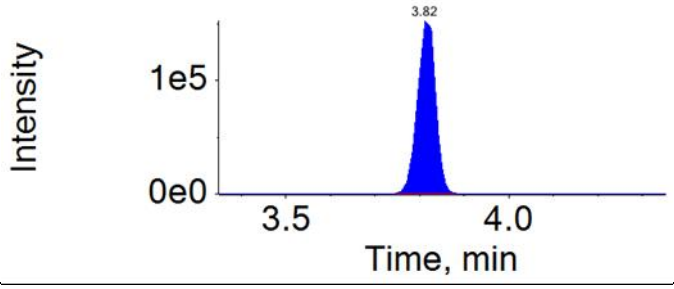
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



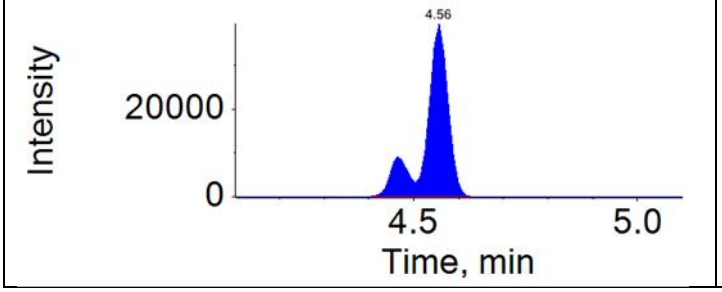


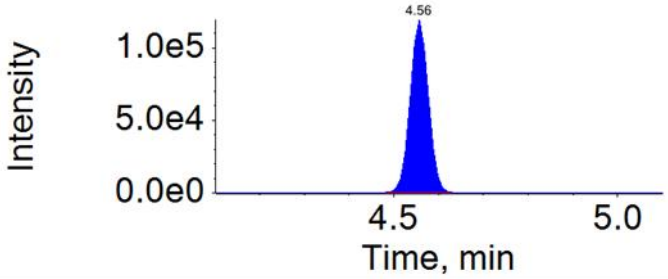
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



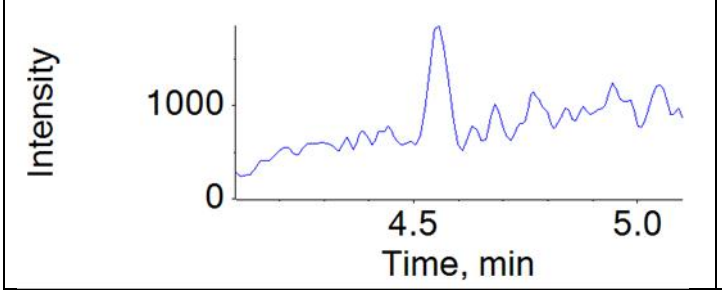


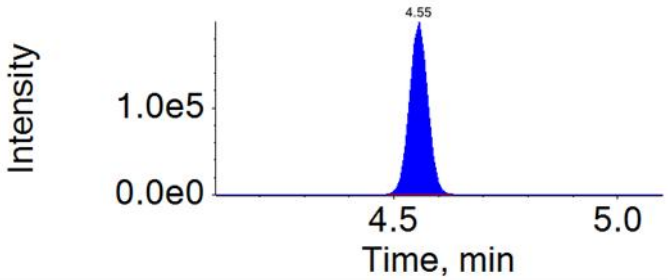
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



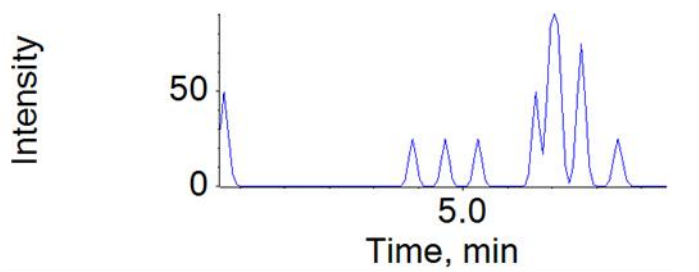


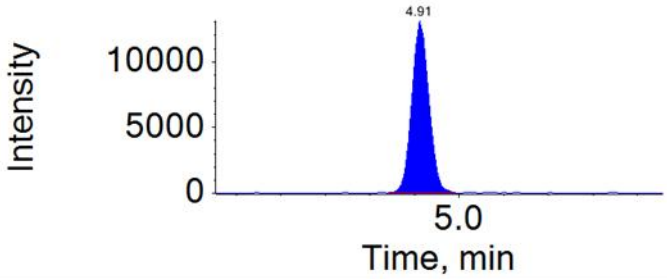
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

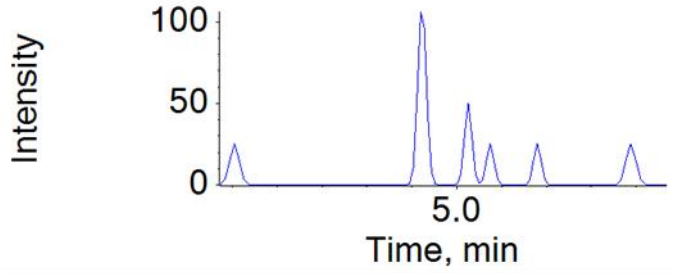
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

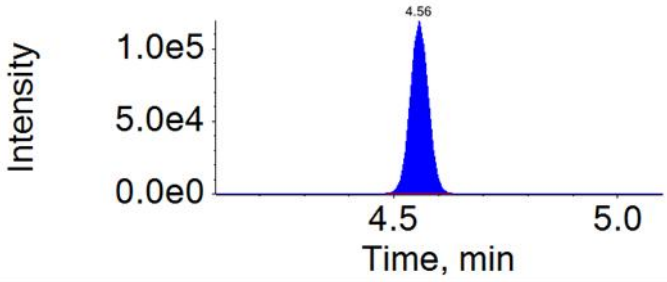
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



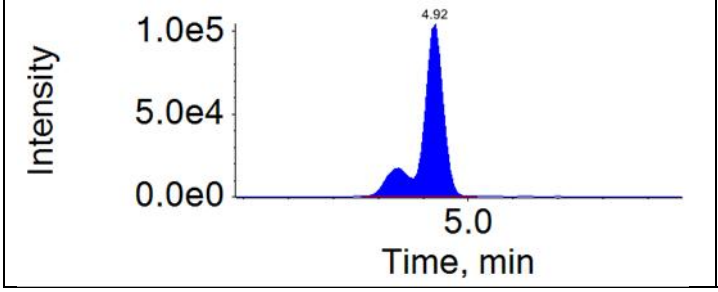


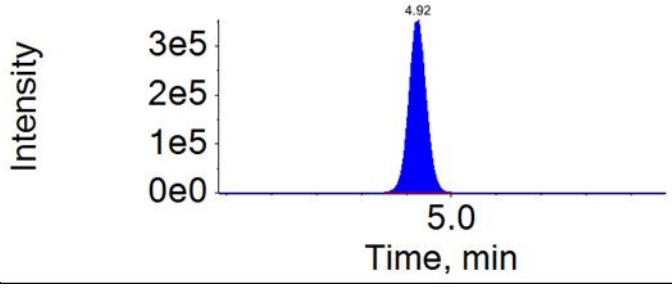
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



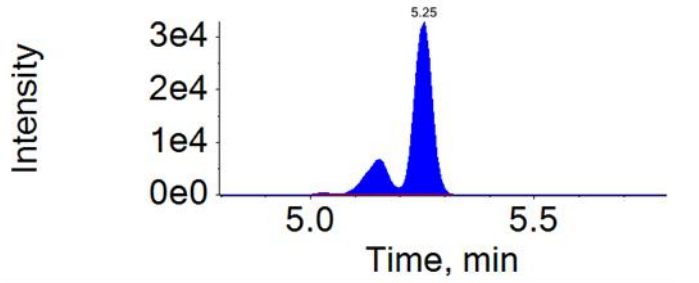


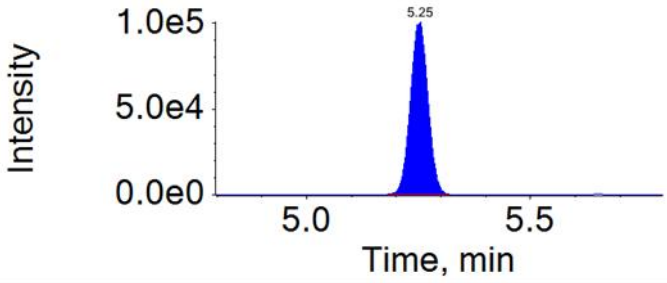
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



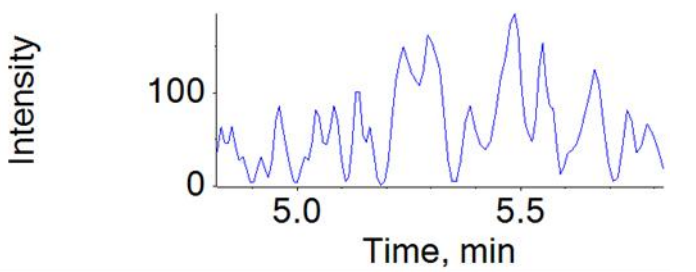


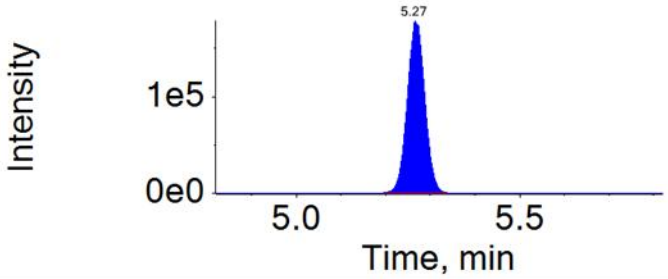
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

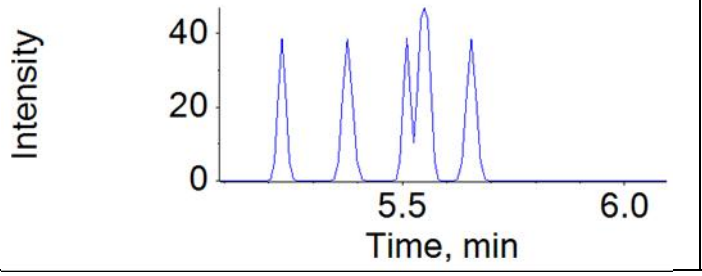
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

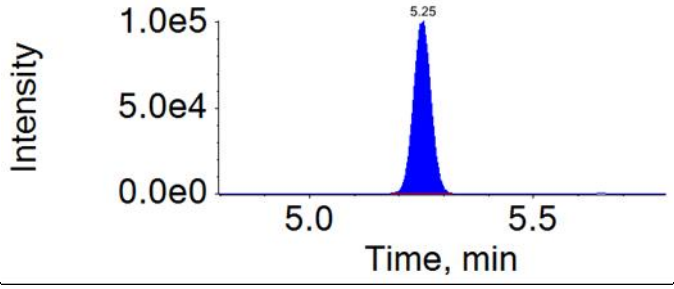
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



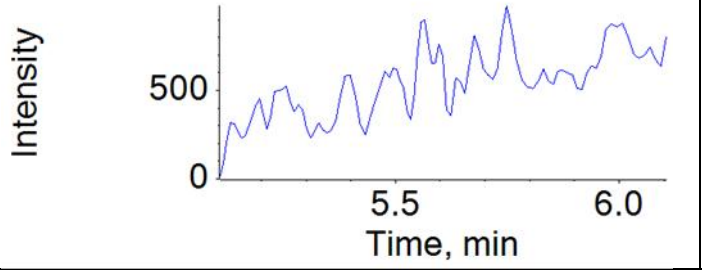


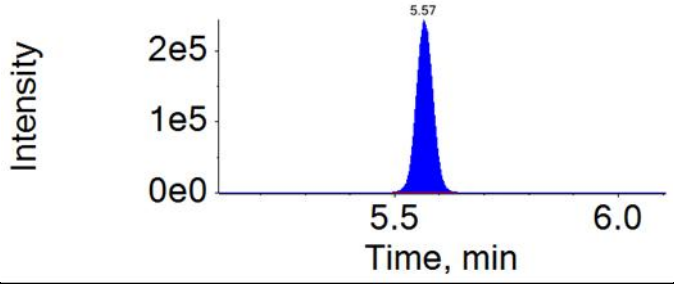
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



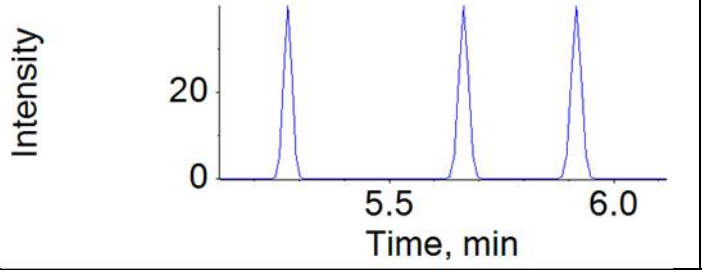


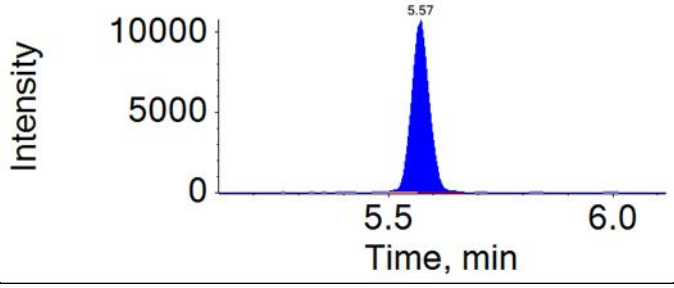
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



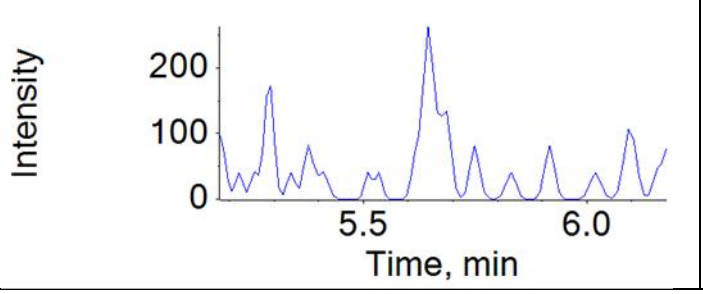


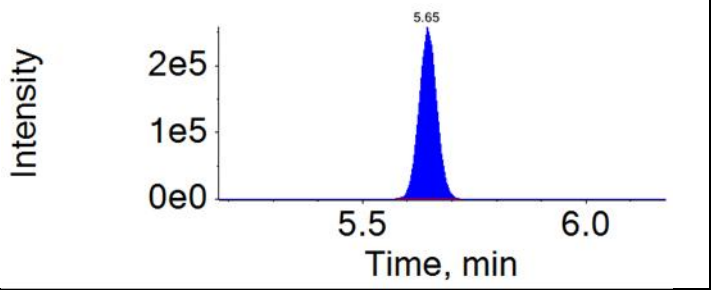
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

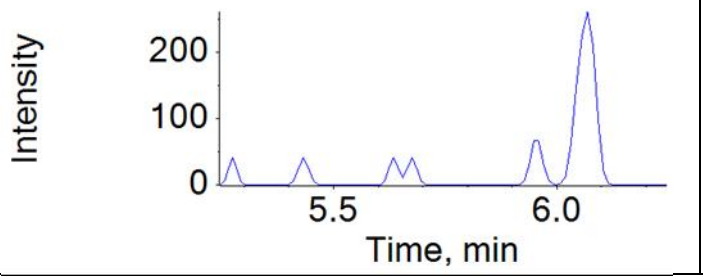
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

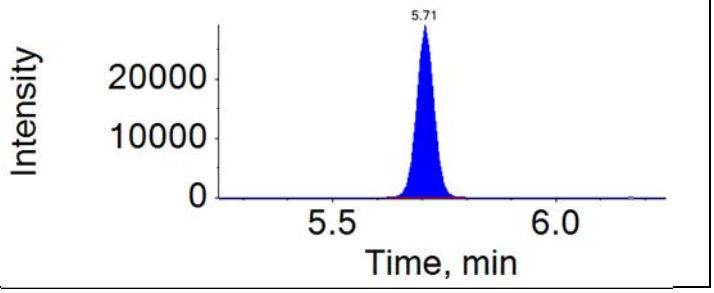
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



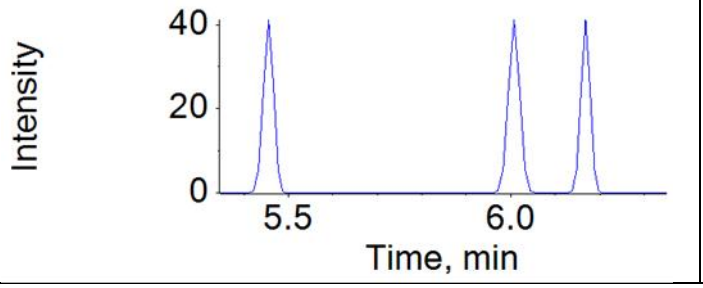


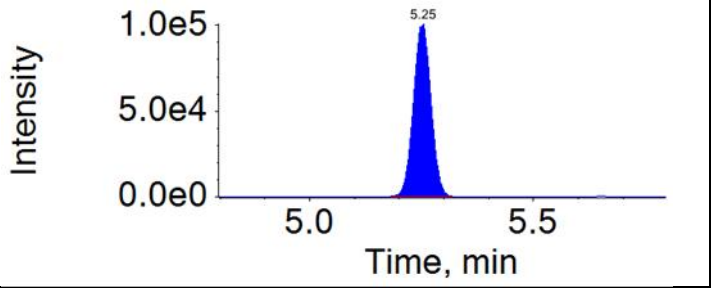
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



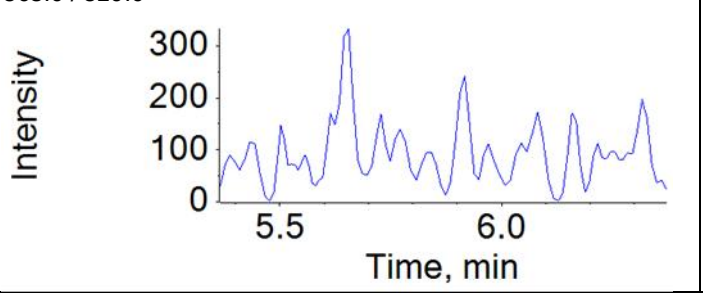


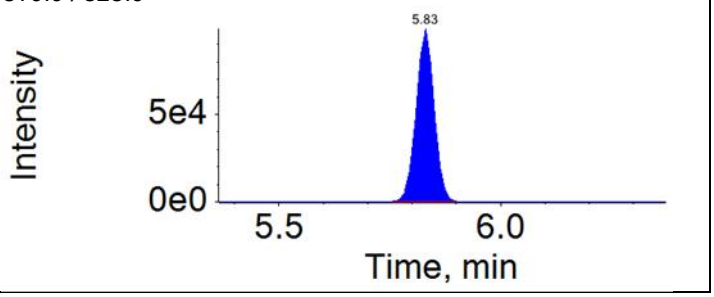
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



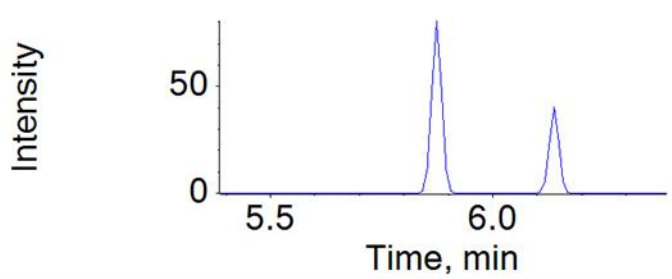


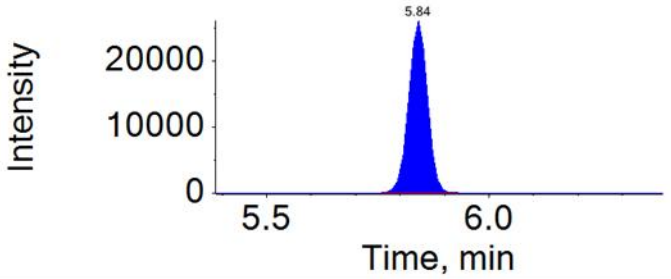
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

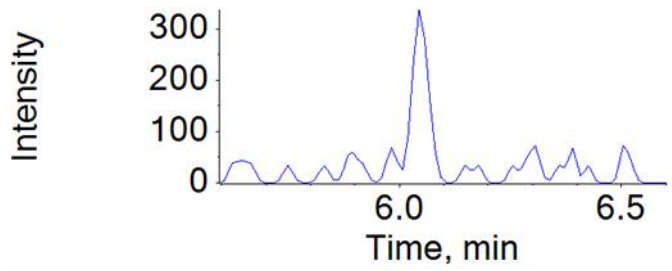
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

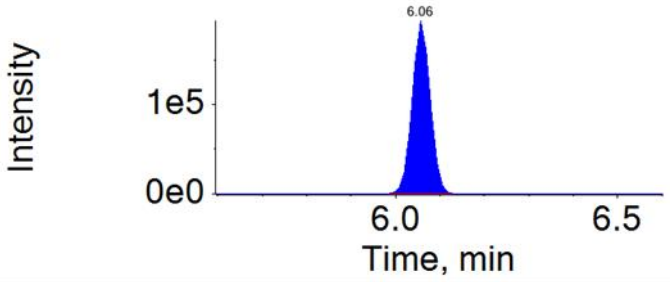
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



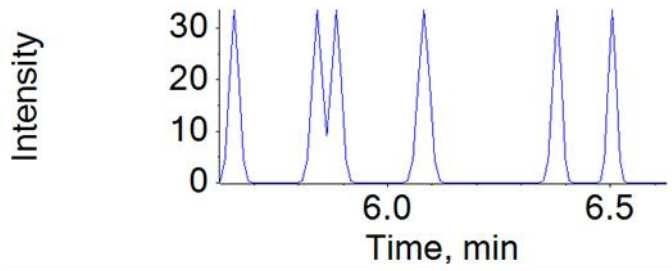


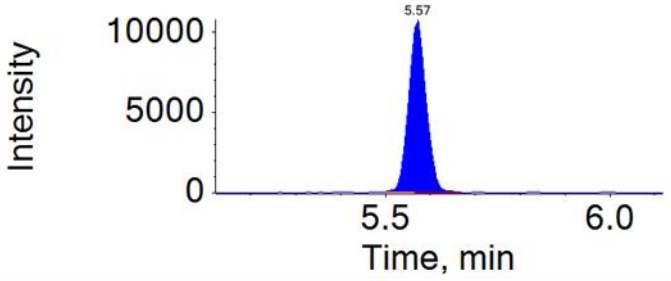
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



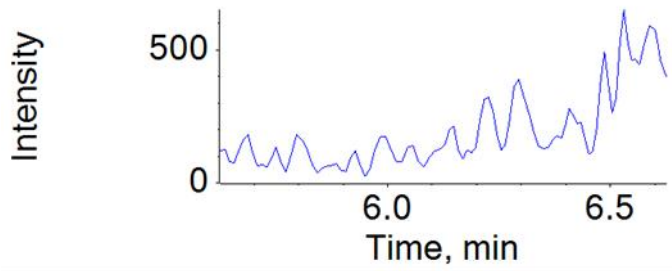


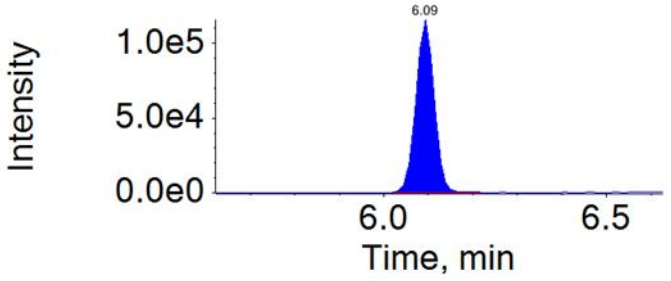
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



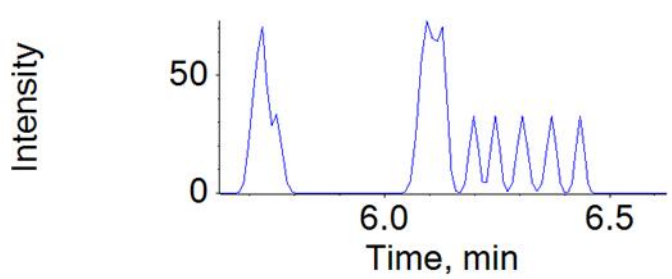


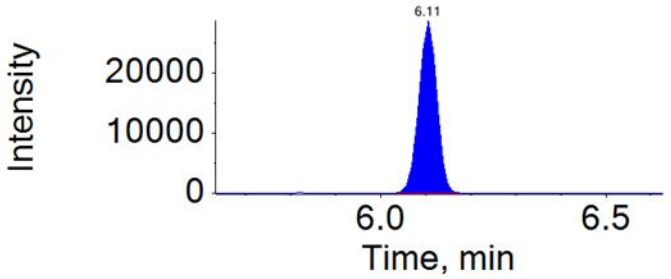
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

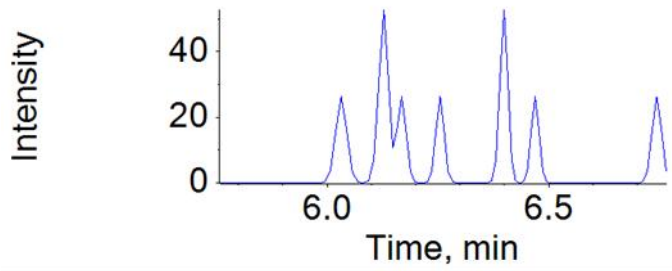
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

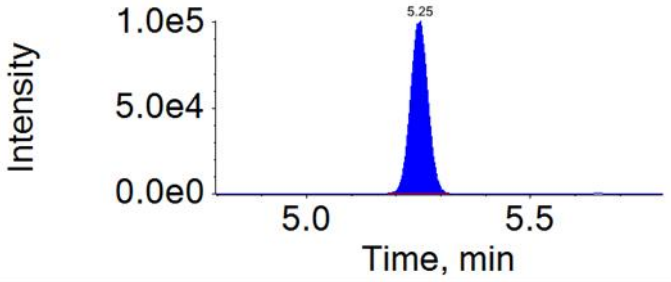
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



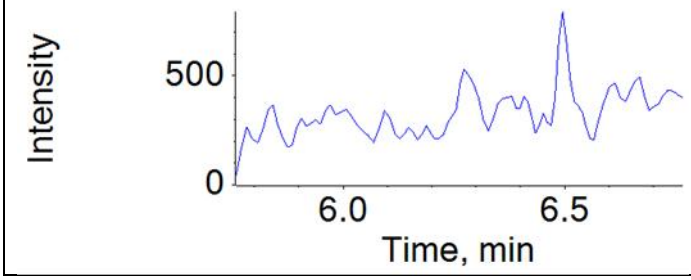


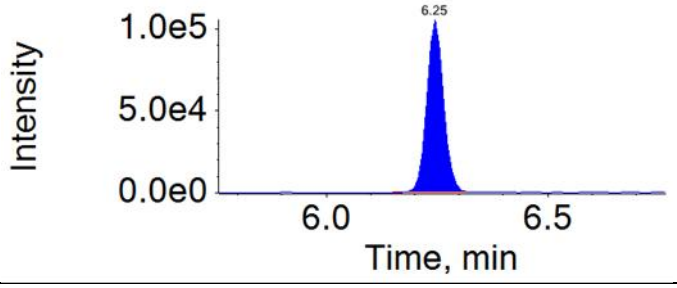
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



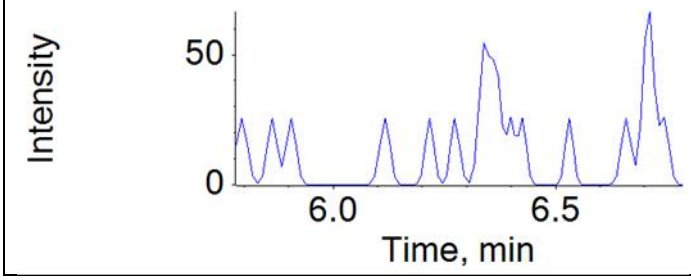


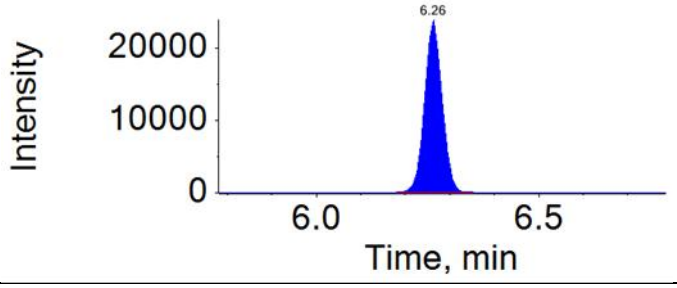
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0



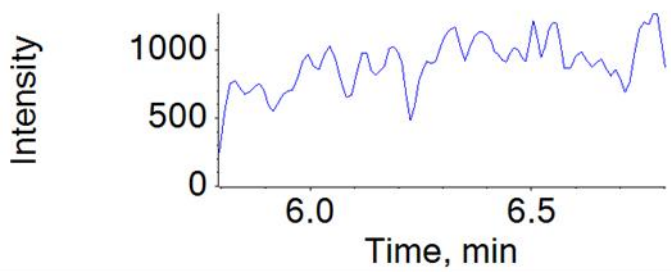
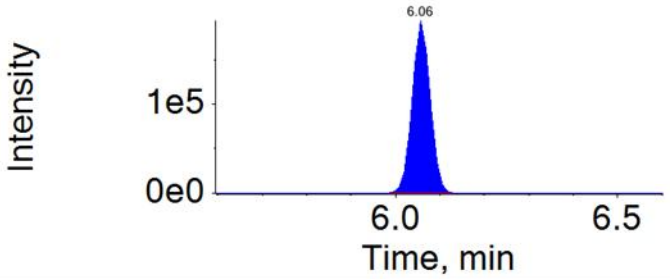


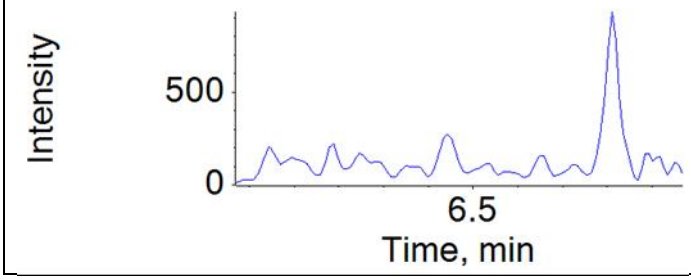
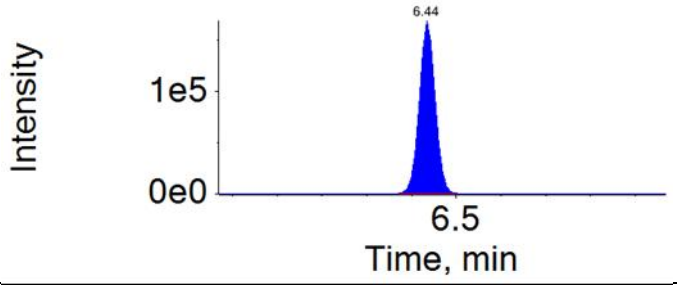
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

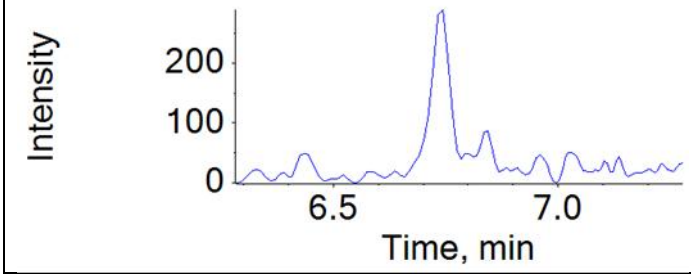
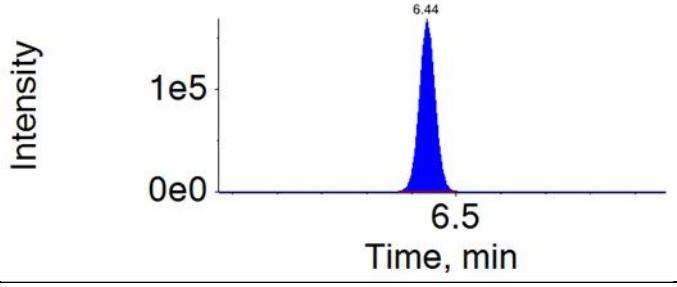


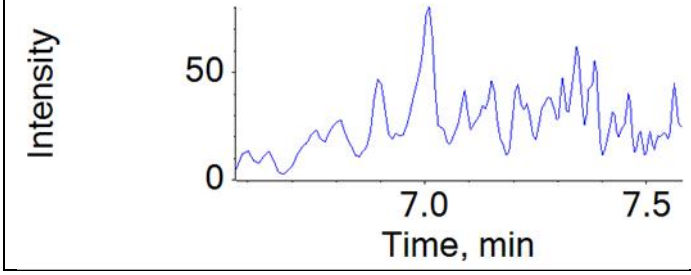
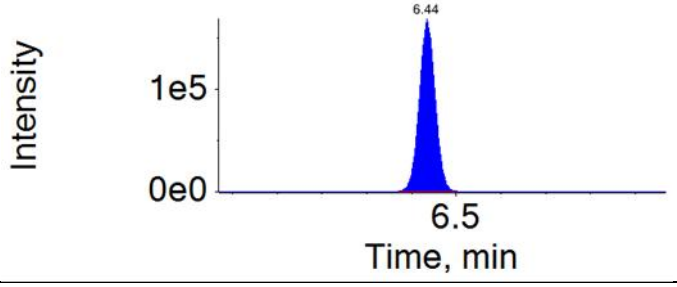


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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

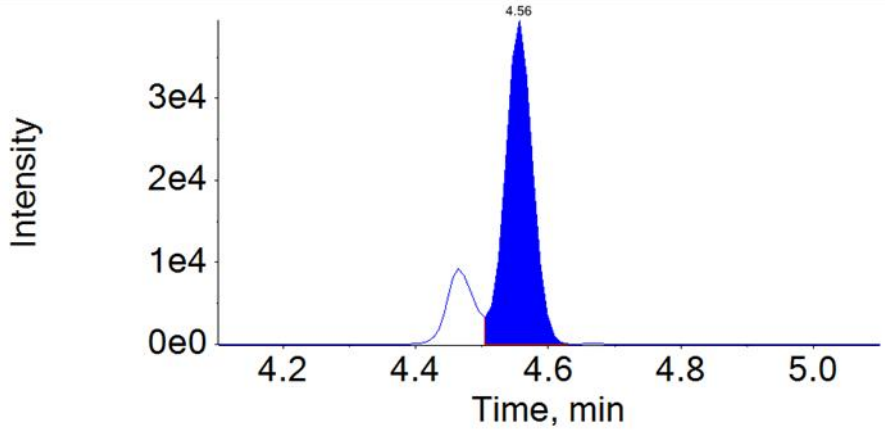
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

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
	

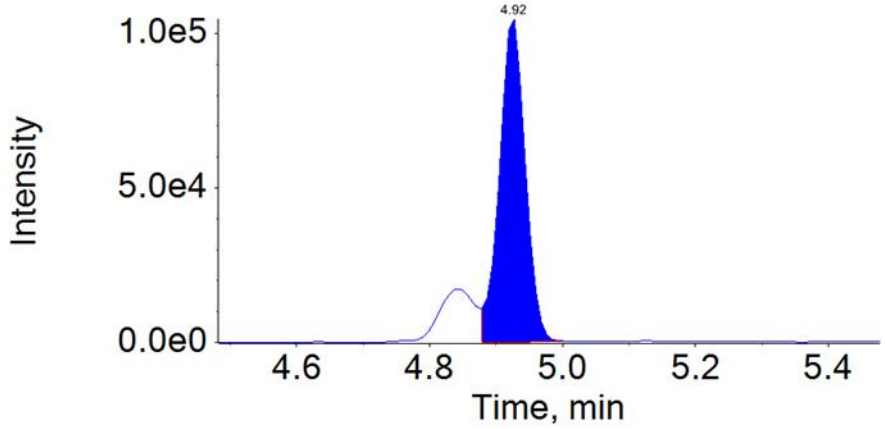
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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



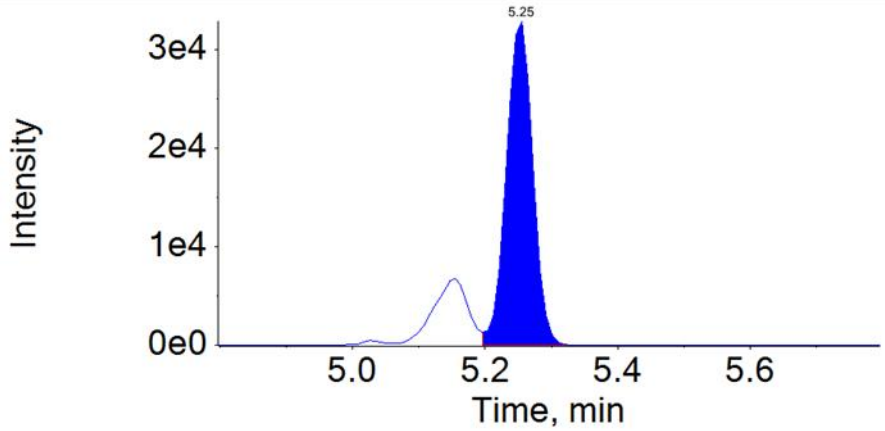
Integration Comment: incorrect integration

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



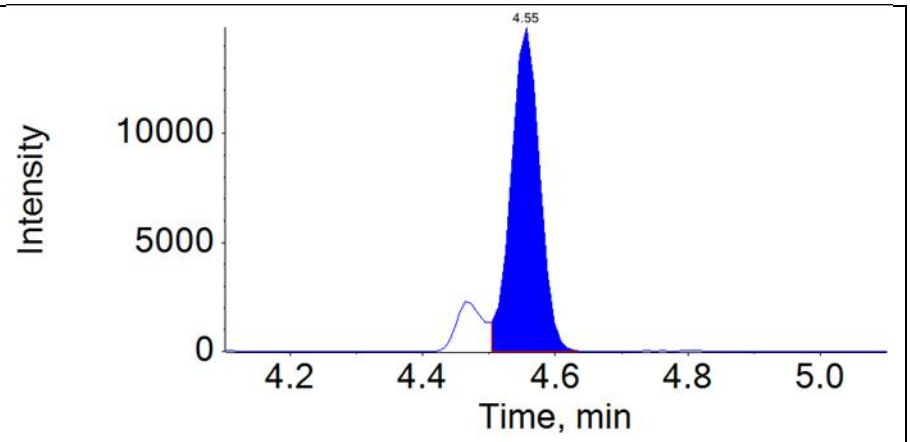
Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

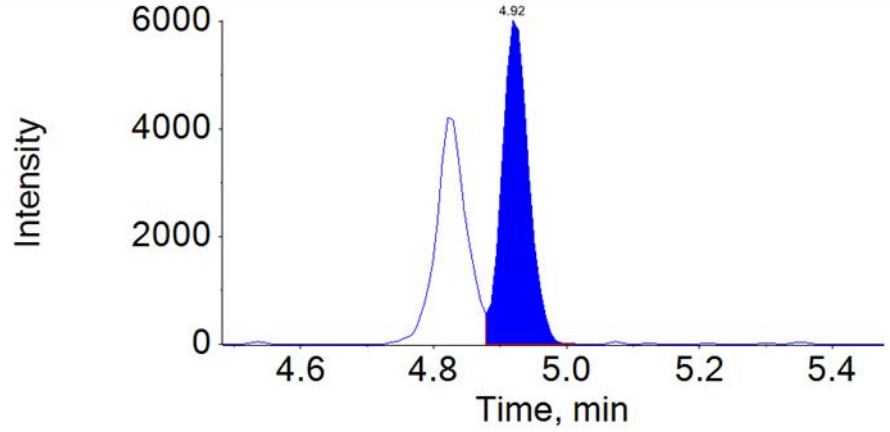
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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



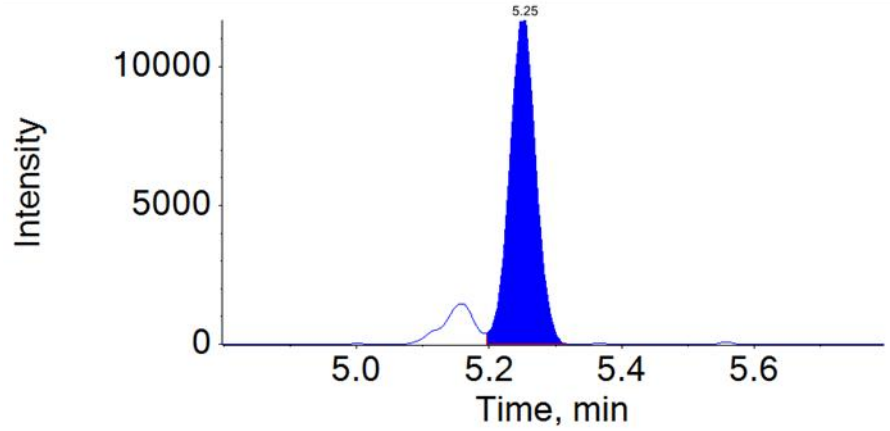
Integration Comment: incorrect integration

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

Ion Ratio Report

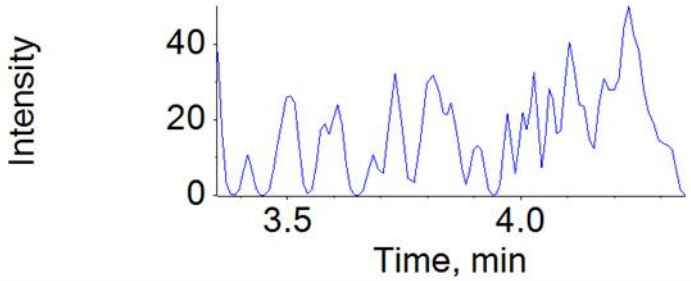
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-19.wiff

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	

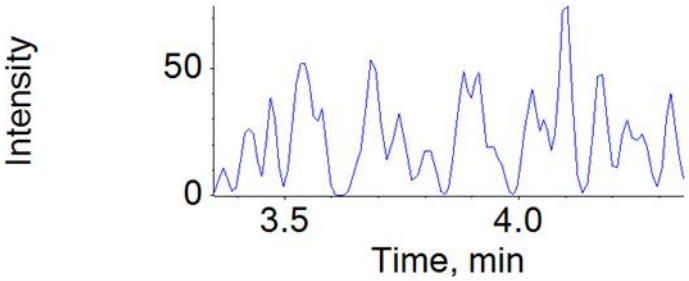
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

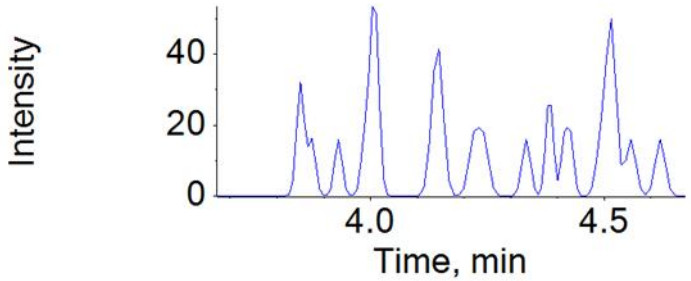
Component: PFBS
Primary Mass: 299.0 / 80.0



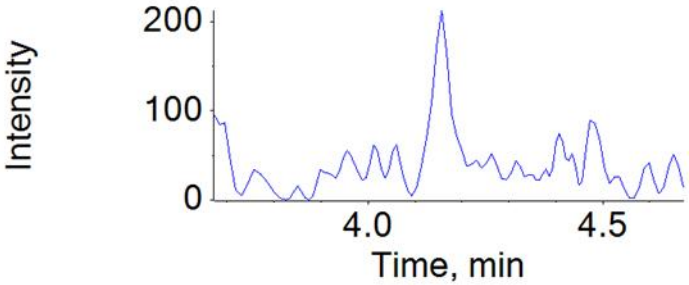
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



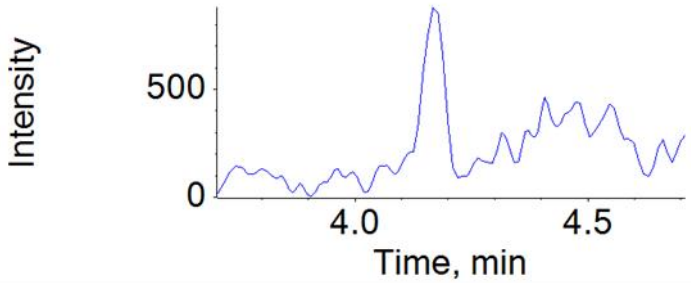
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



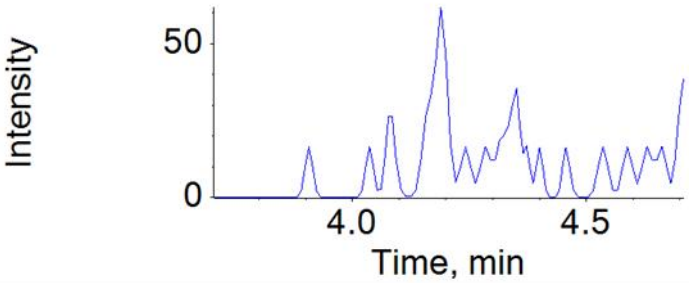
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



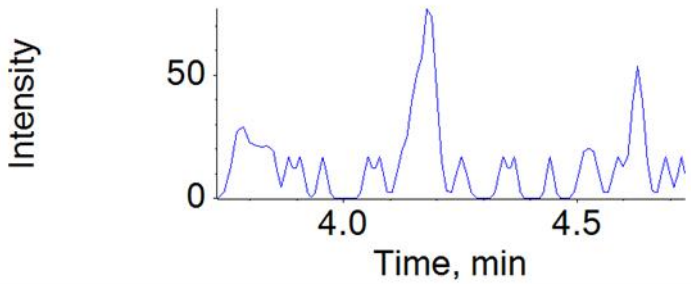
Component: PFHxA
Primary Mass: 313.0 / 269.0



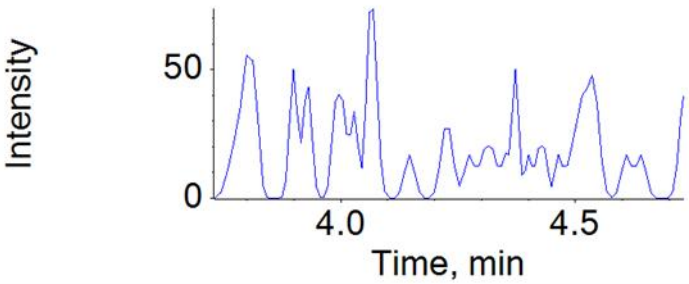
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



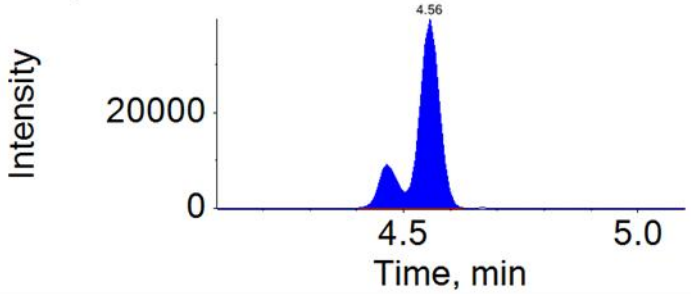
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



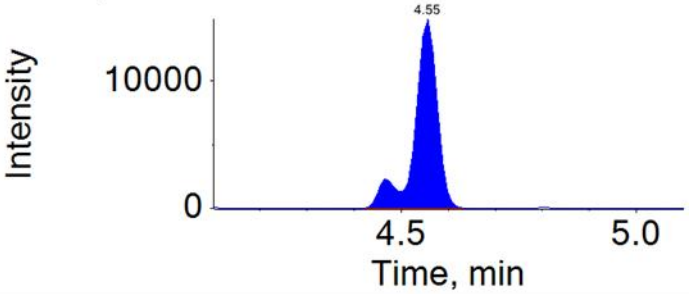
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

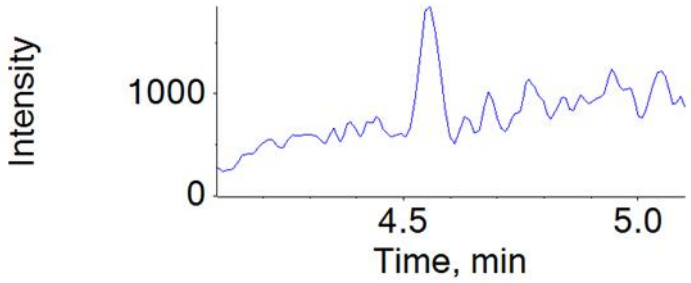
Component: PFHxS
Primary Mass: 399.0 / 80.0



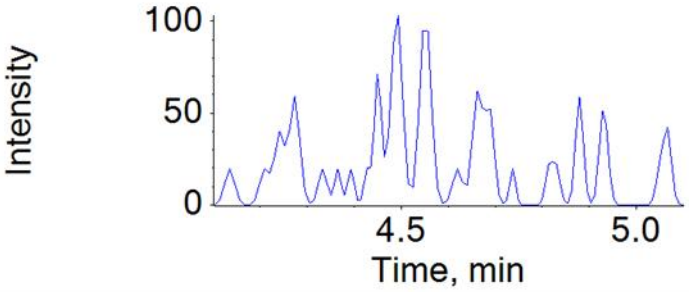
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



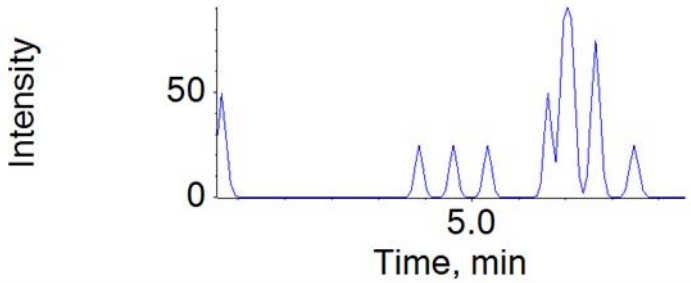
Component: PFHpA
Primary Mass: 363.0 / 319.0



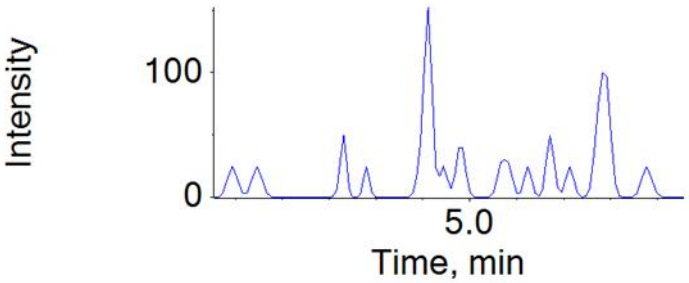
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



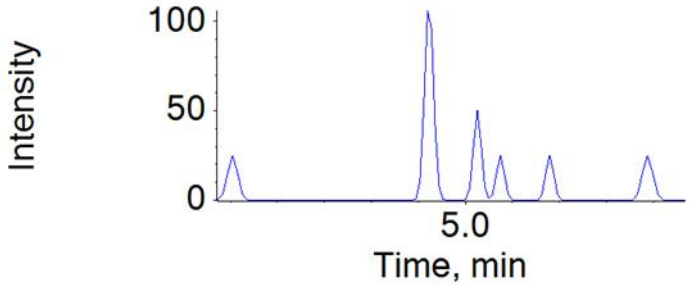
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



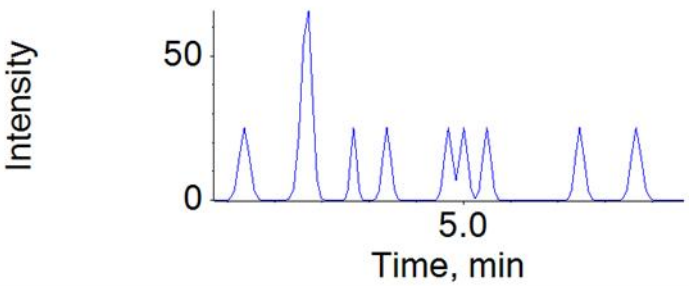
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



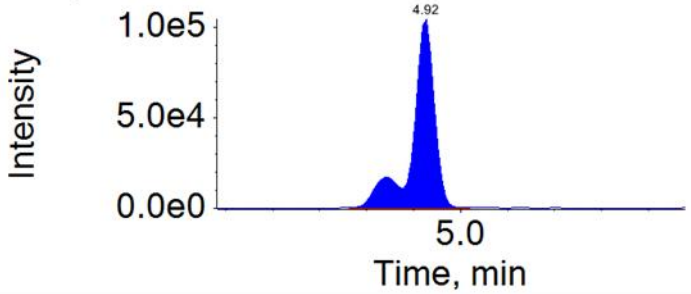
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



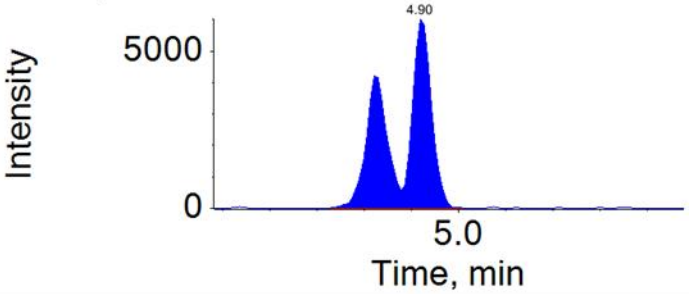
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

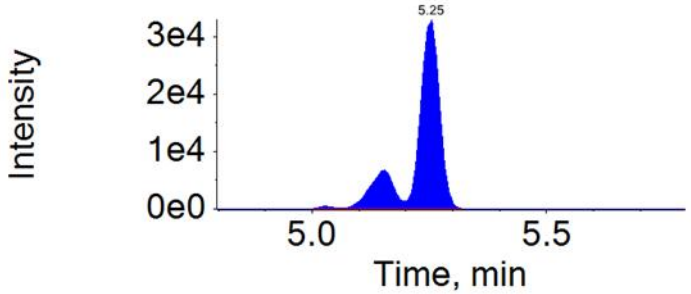
Component: PFOA
Primary Mass: 413.0 / 369.0



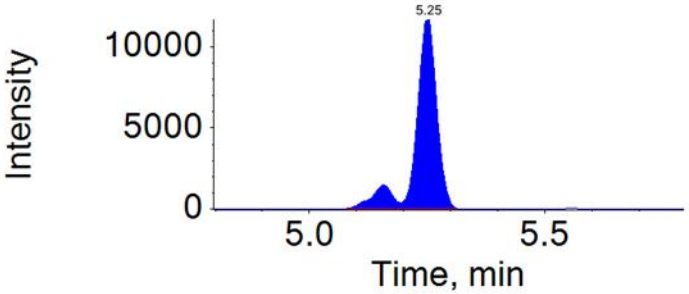
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



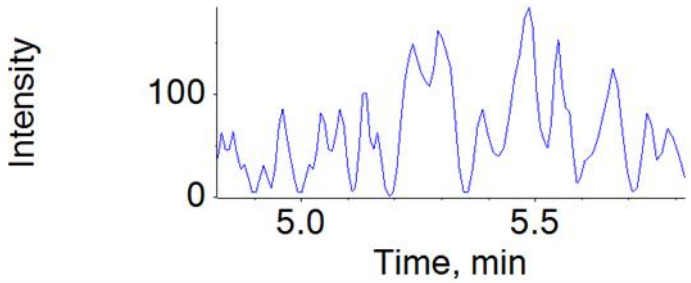
Component: PFOS
Primary Mass: 499.0 / 80.0



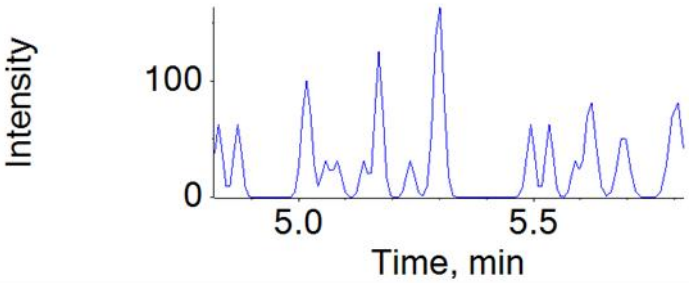
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Secondary Mass: 499.0 / 99.0



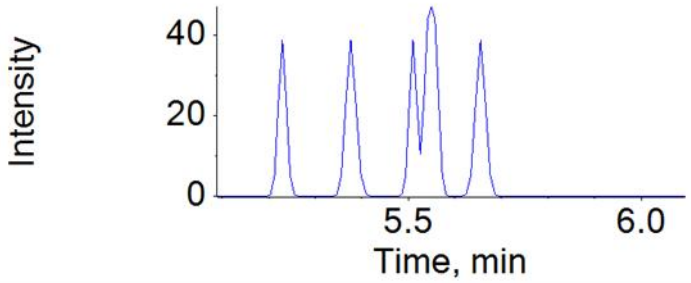
Component: PFNA
Primary Mass: 463.0 / 419.0



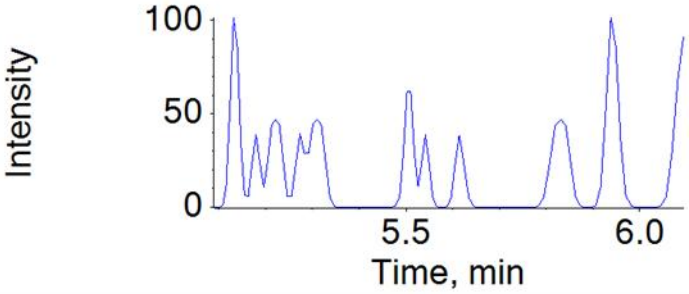
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



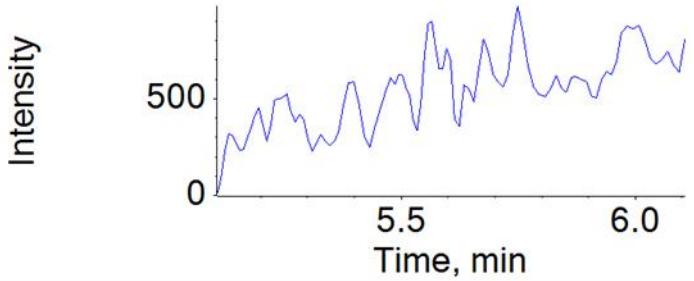
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



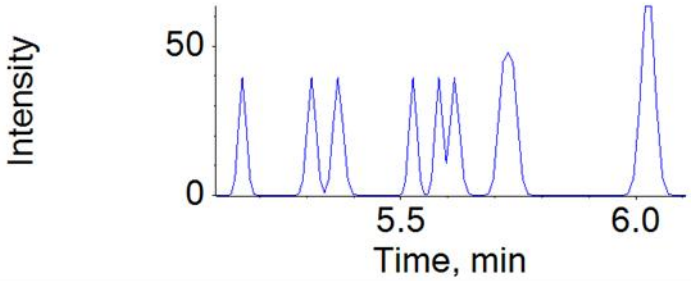
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

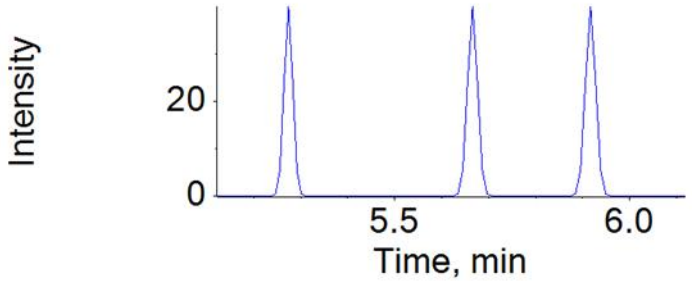
Component: PFDA
Primary Mass: 513.0 / 469.0



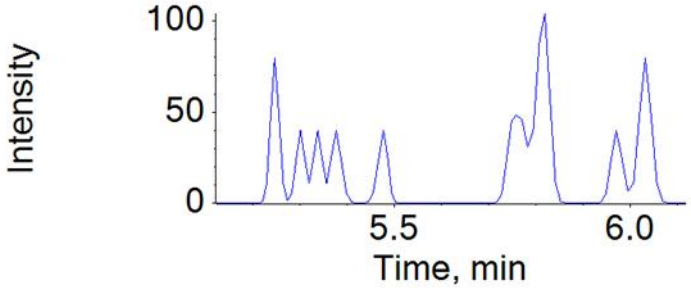
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



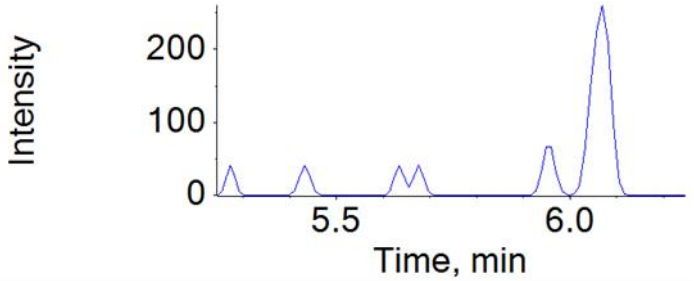
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



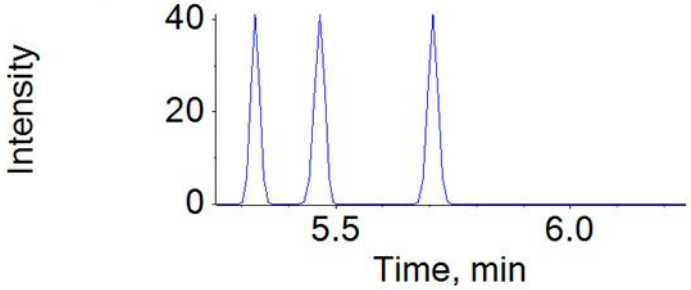
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



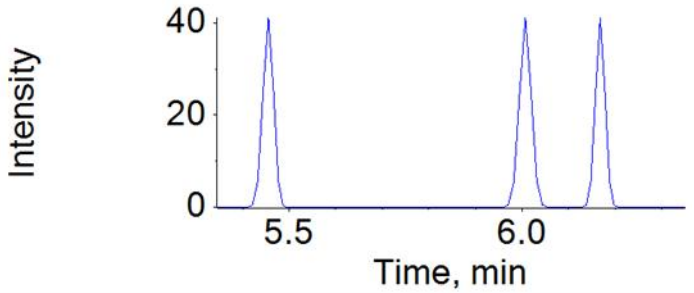
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



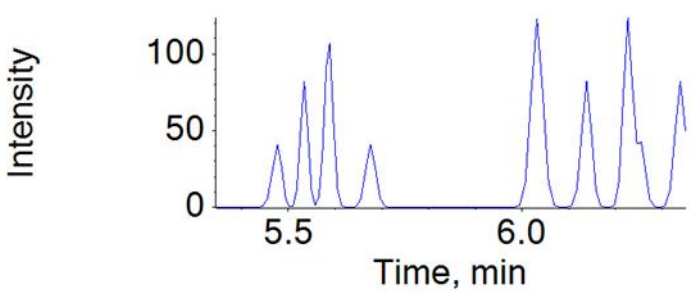
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



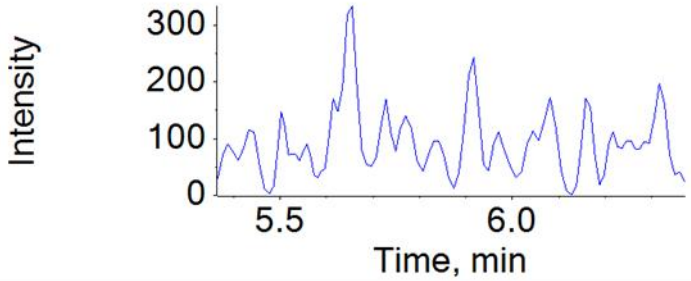
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Secondary Mass: 599.0 / 99.0



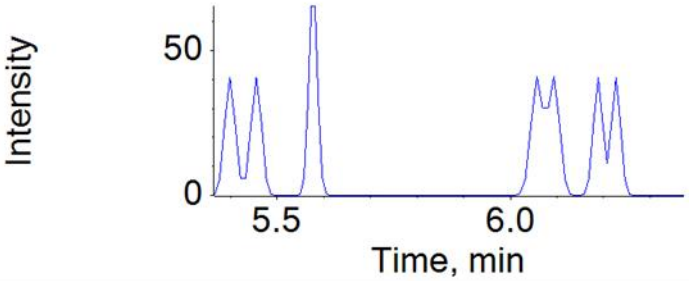
APPROVED
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REVIEWED
By umar at 5:24 pm, 11/9/18

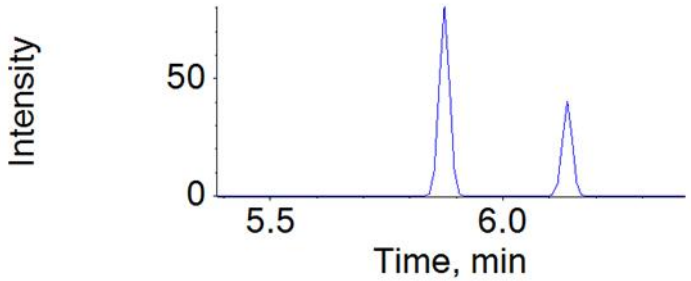
Component: PFUnDA
Primary Mass: 563.0 / 519.0



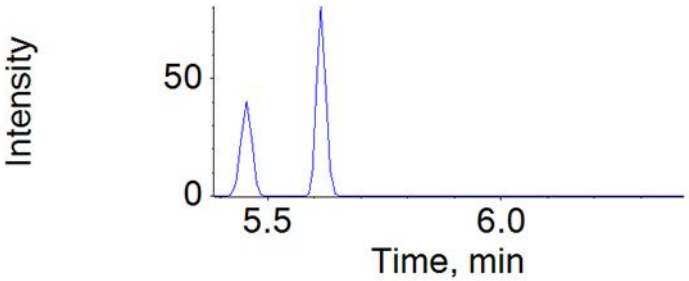
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



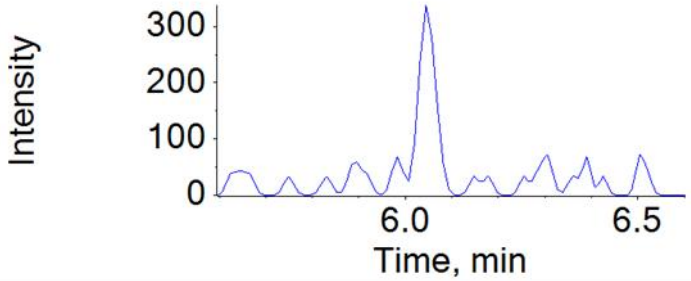
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



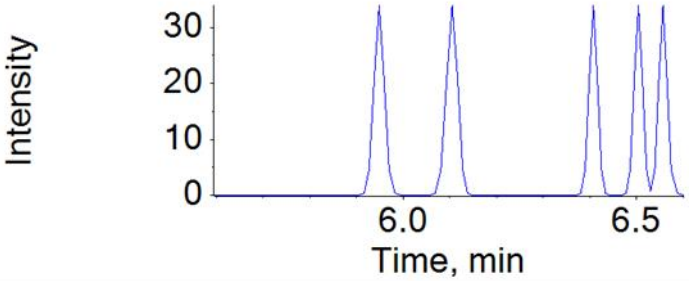
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Secondary Mass: 584.0 / 526.0



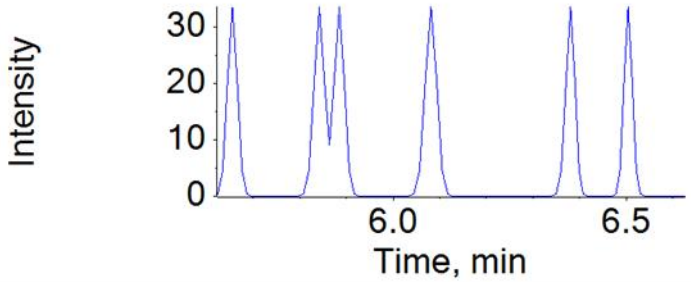
Component: PFDoDA
Primary Mass: 613.0 / 569.0



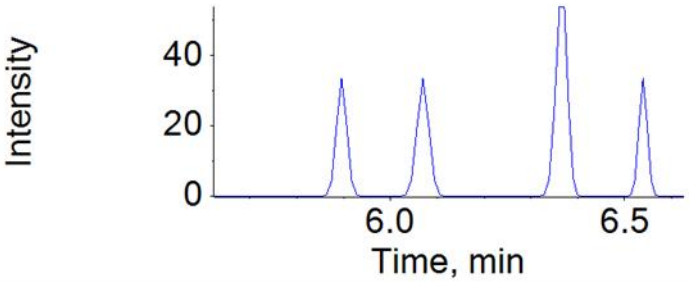
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



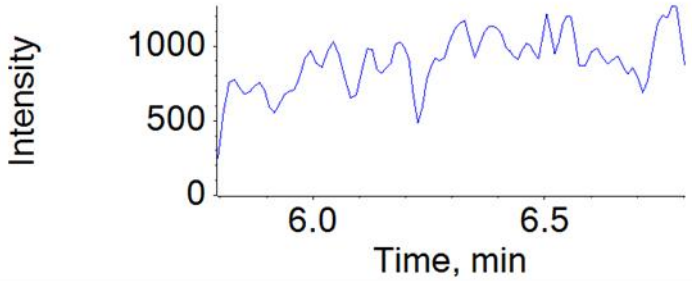
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Secondary Mass: 627.0 / 81.0



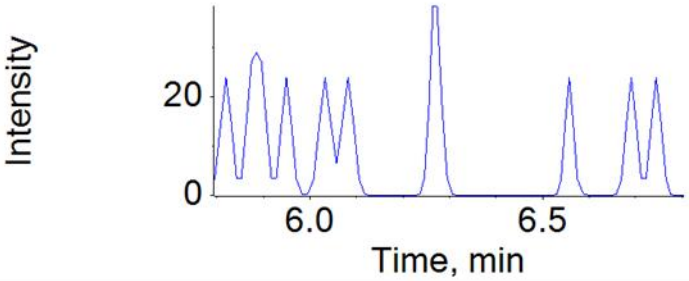
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

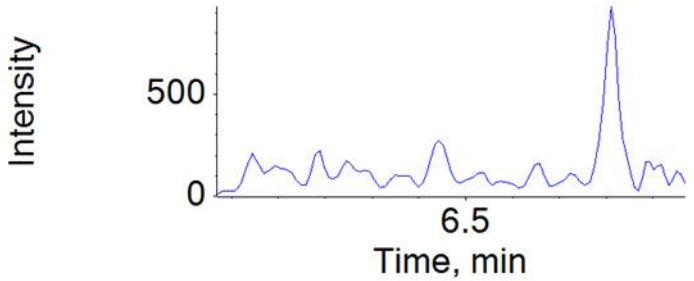
Component: PFTrDA
Primary Mass: 663.0 / 619.0



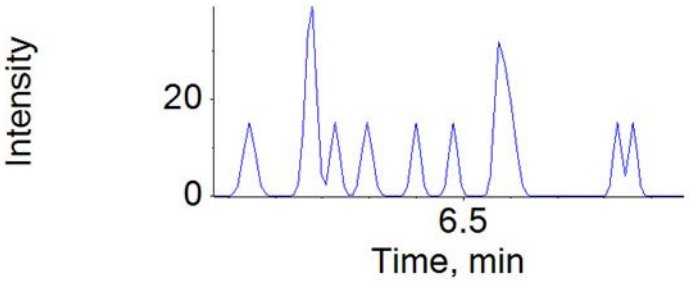
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



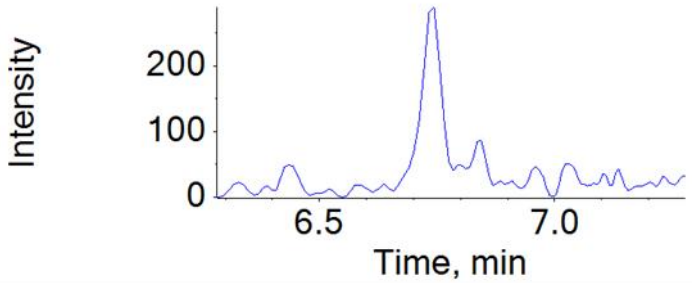
Component: PFTeDA
Primary Mass: 713.0 / 669.0



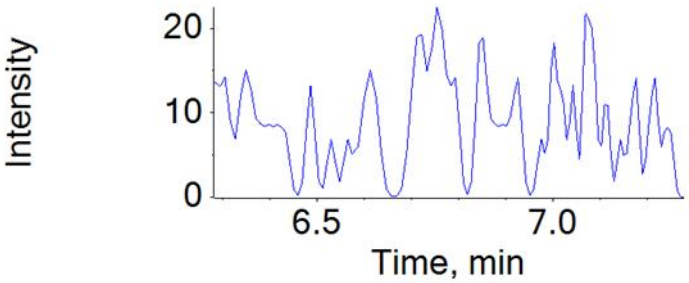
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



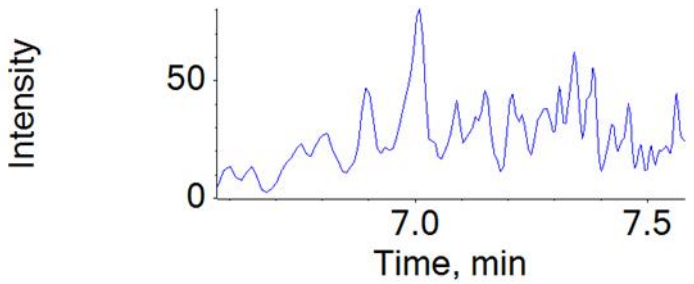
Component: PFHxDA
Primary Mass: 813.0 / 769.0



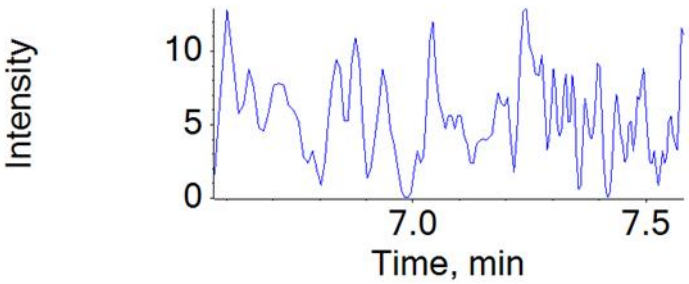
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



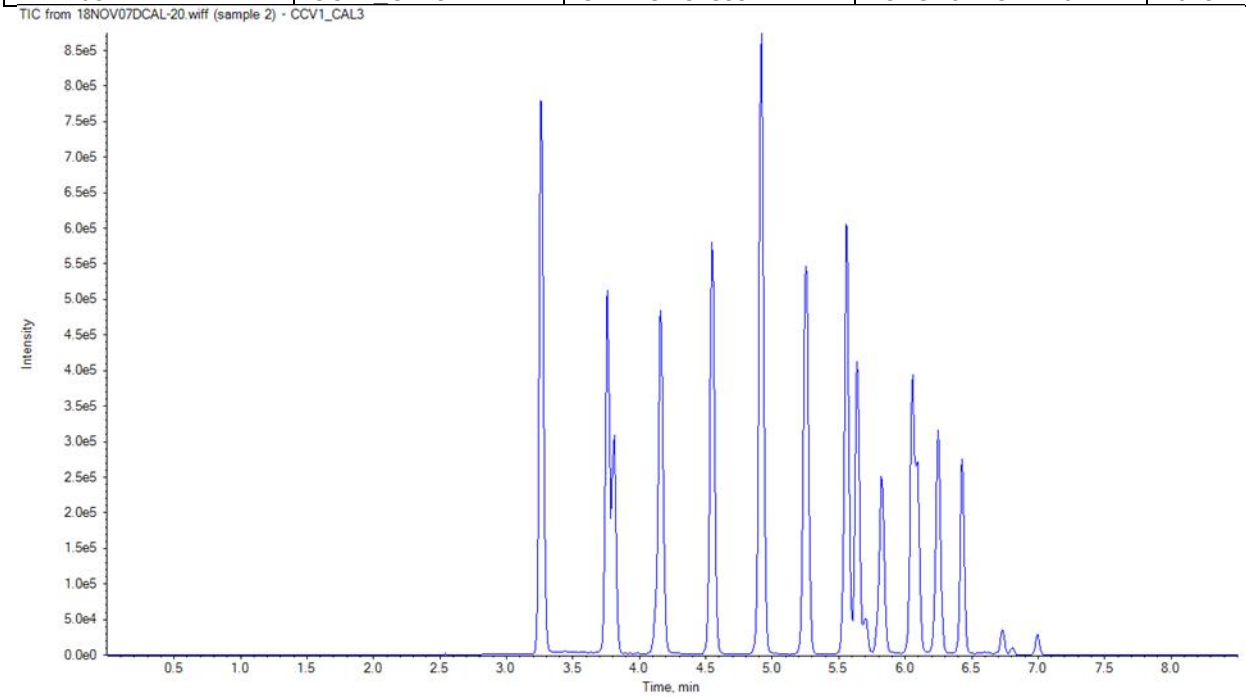
APPROVED
By JPT at 2:54 pm, 11/7/18

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

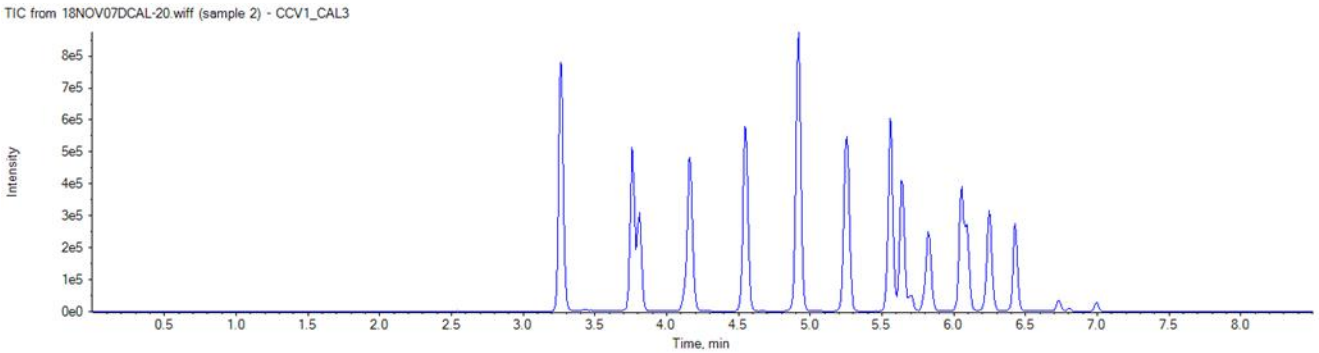
Analyte Quantitation Peak Table

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

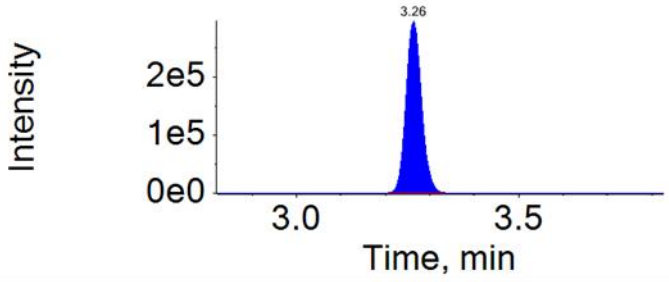


APPROVED
By JPT at 2:53 pm, 11/7/18

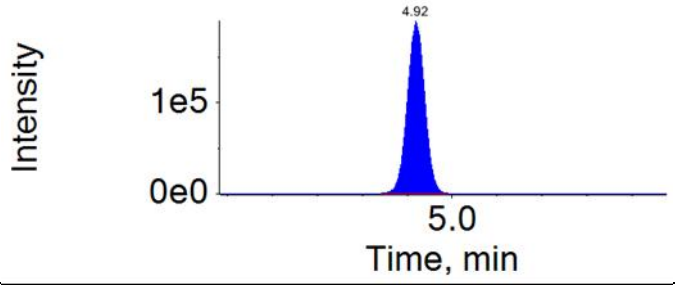
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

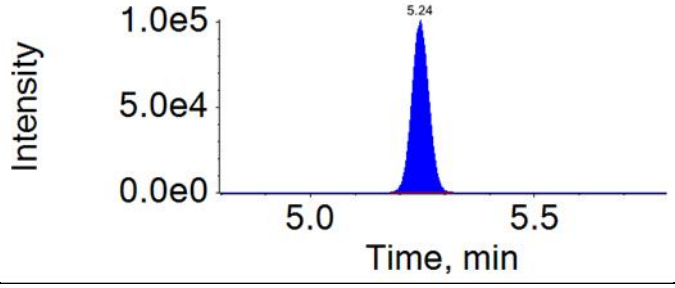
Injection Standard: 13C3-PFBA
216.0 / 172.0



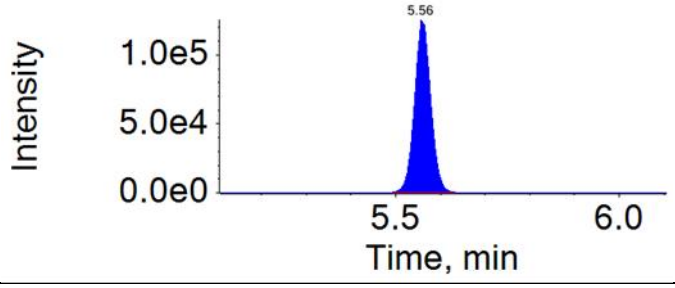
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



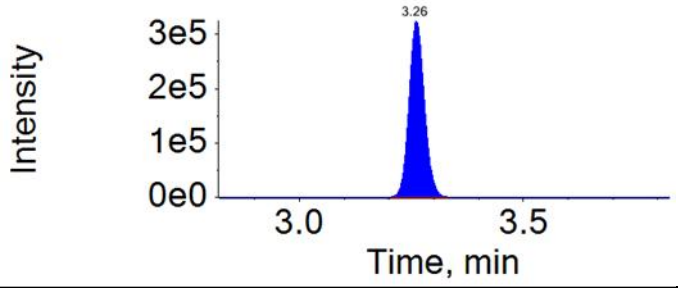
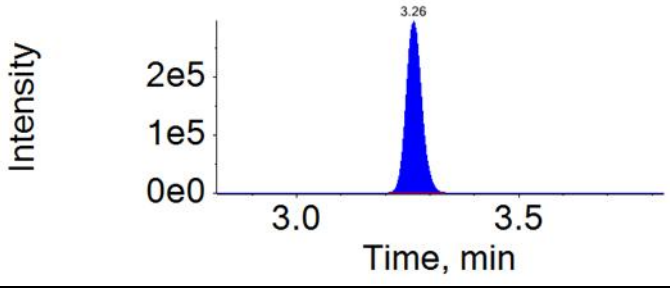
Injection Standard: 13C2-PFDA
515.0 / 470.0

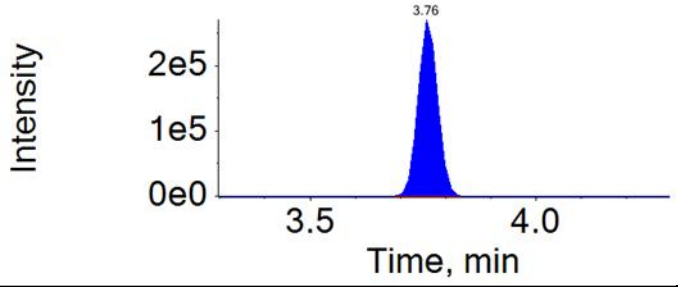
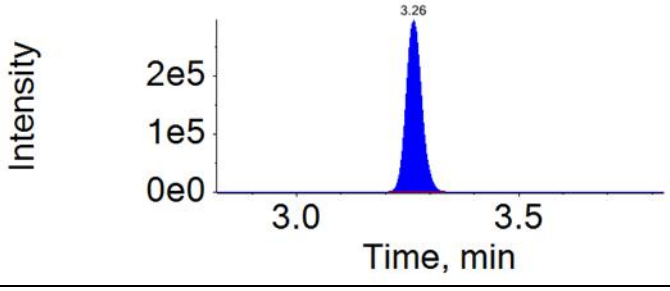


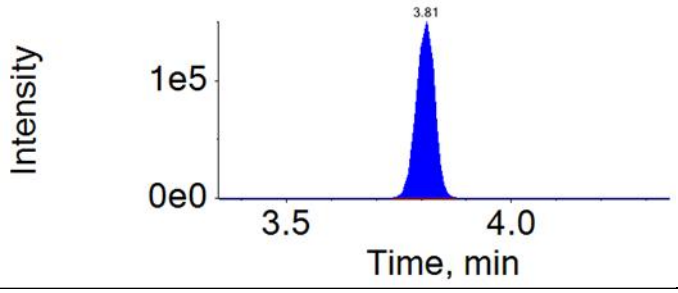
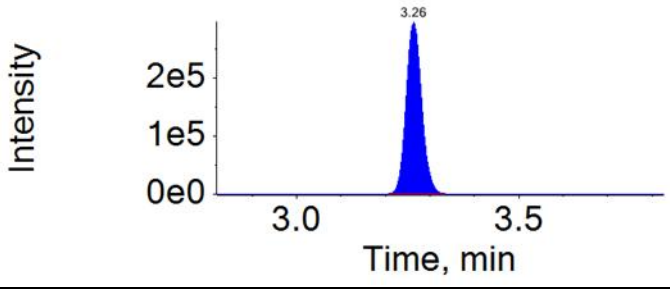
APPROVED
By JPT at 2:53 pm, 11/7/18

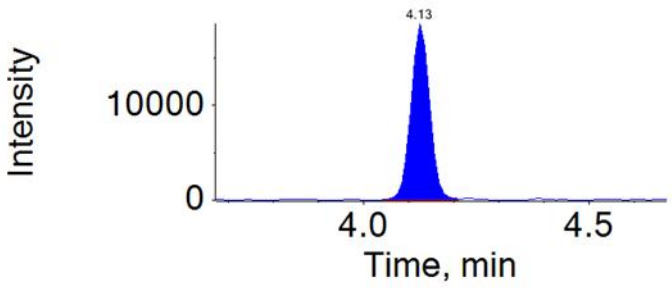
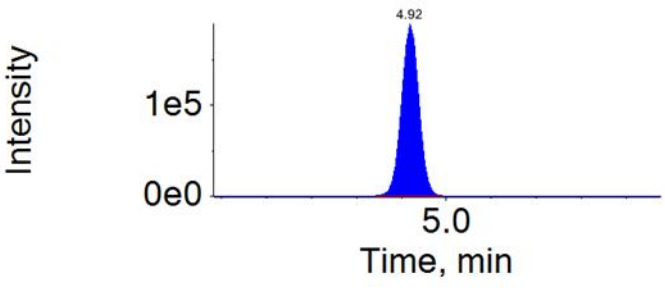
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

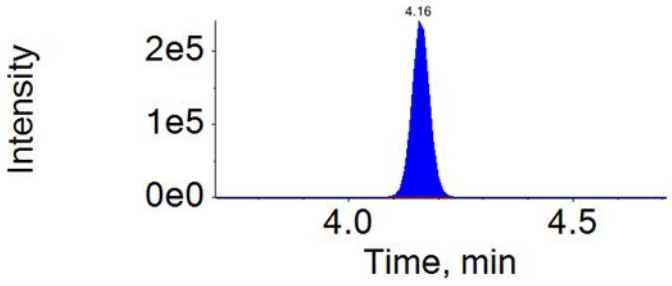
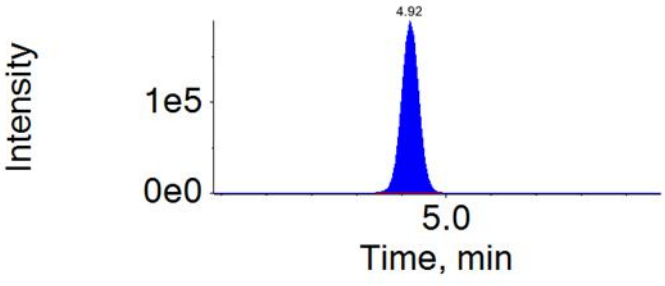
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

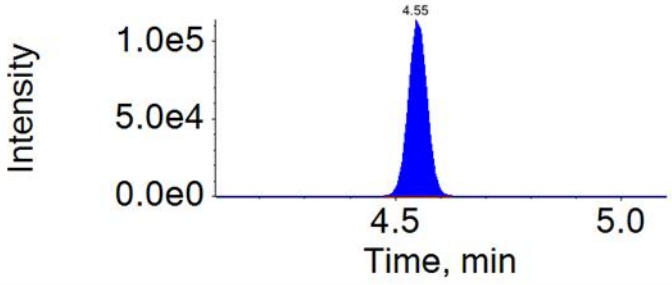
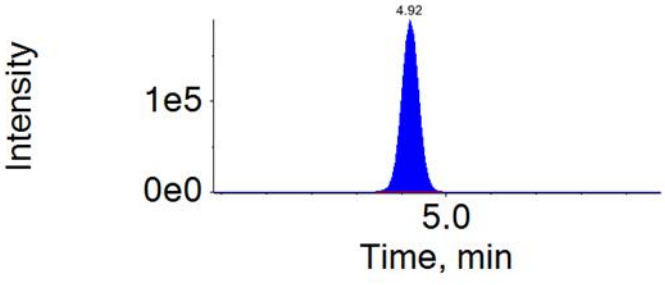
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

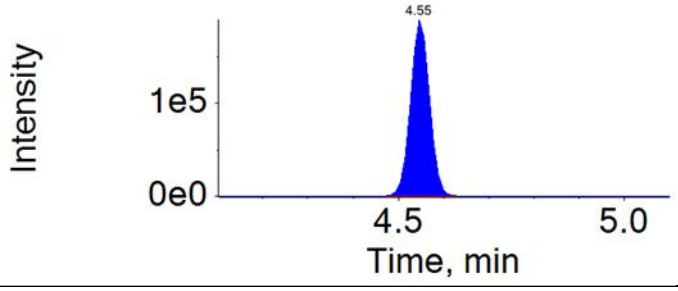
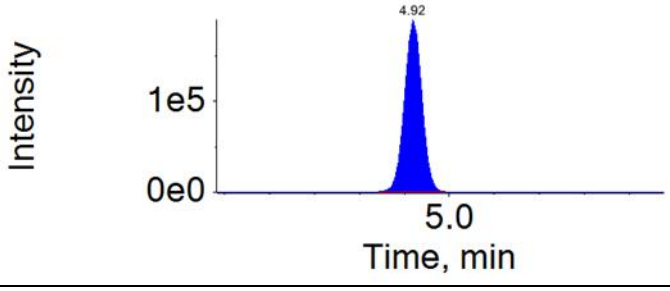
APPROVED
By JPT at 2:53 pm, 11/7/18

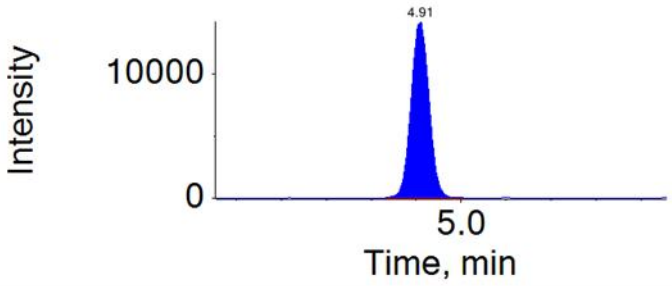
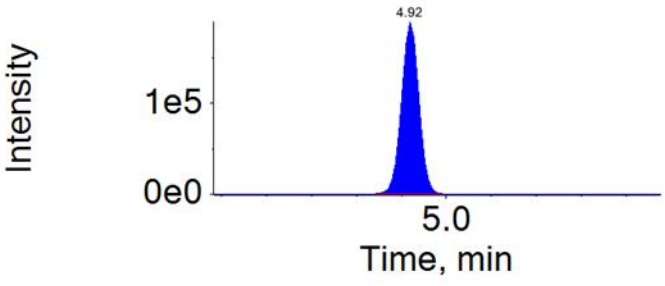
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

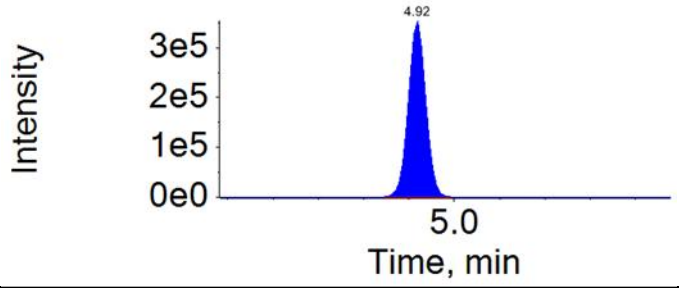
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

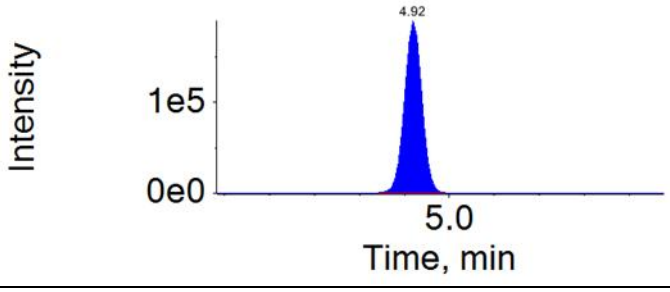
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

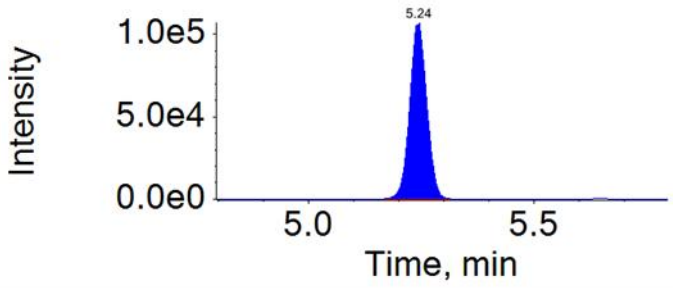
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

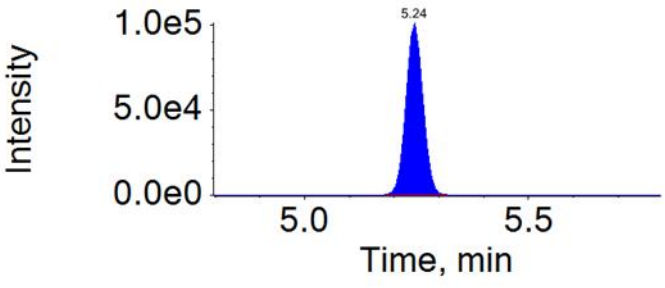
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



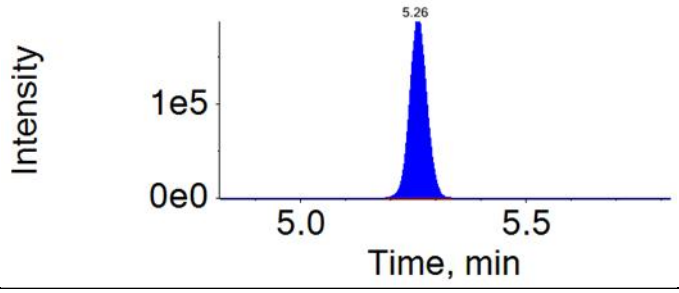


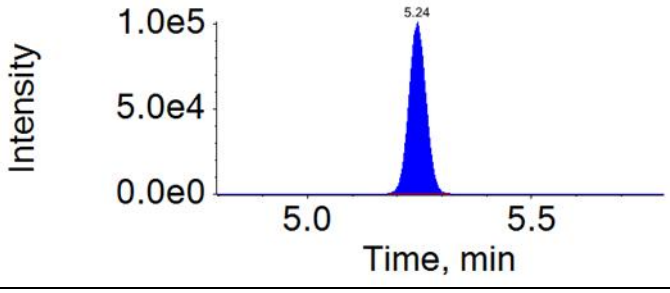
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



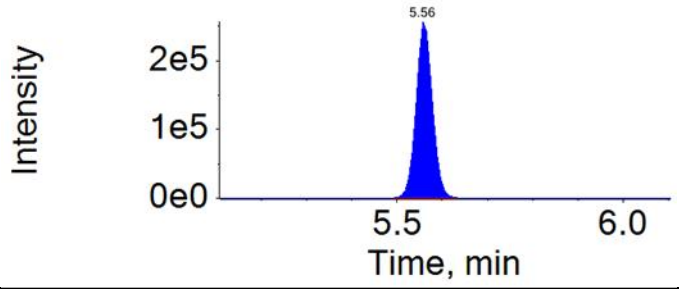


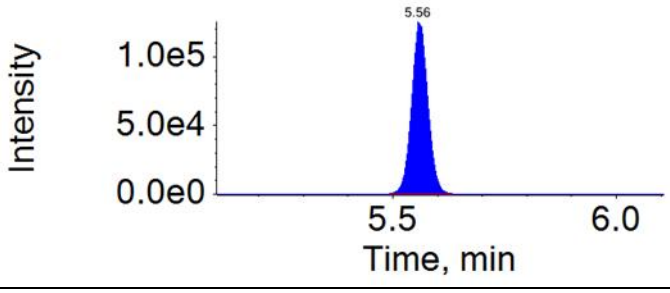
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0



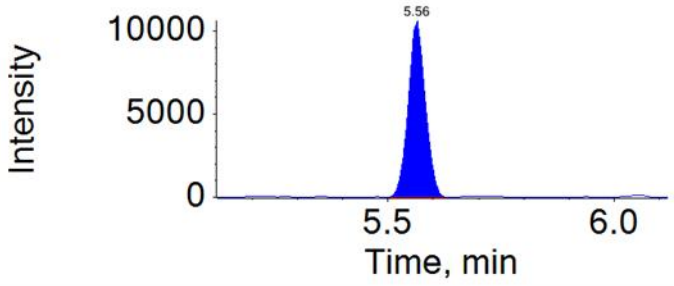
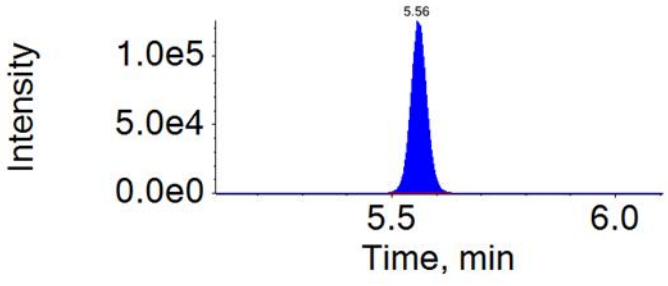


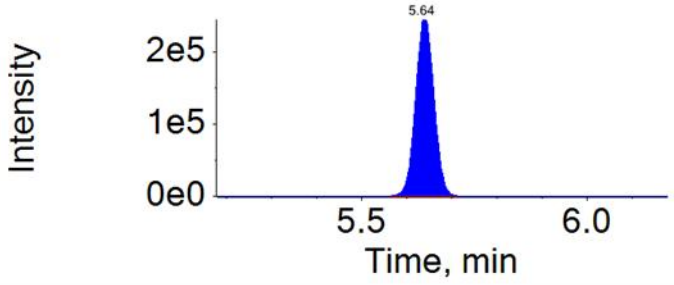
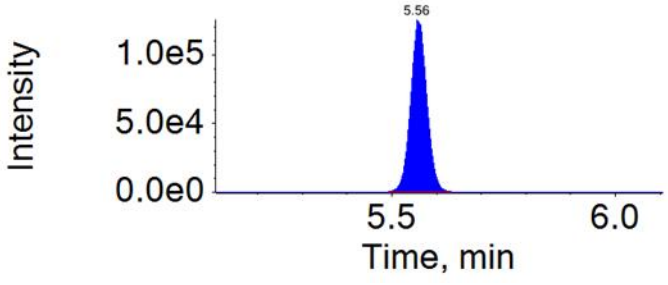
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

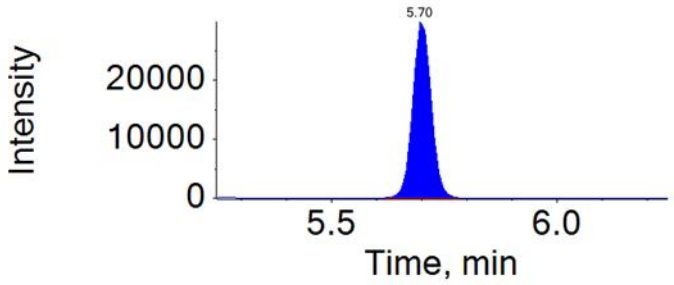
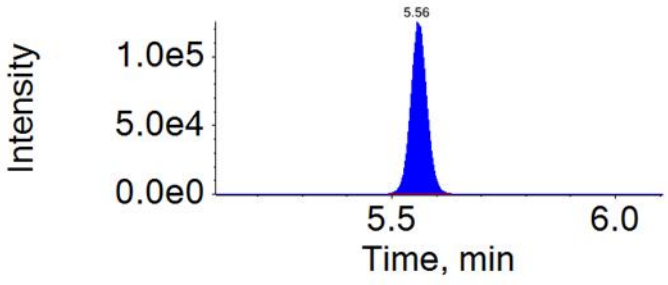


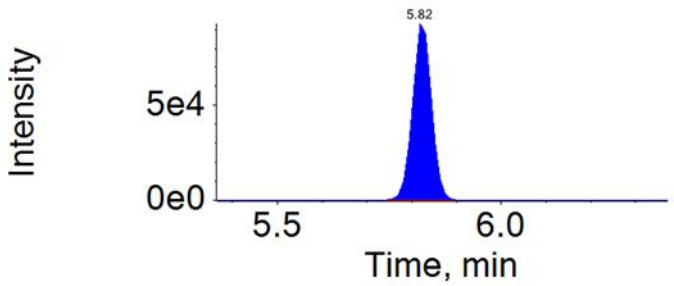
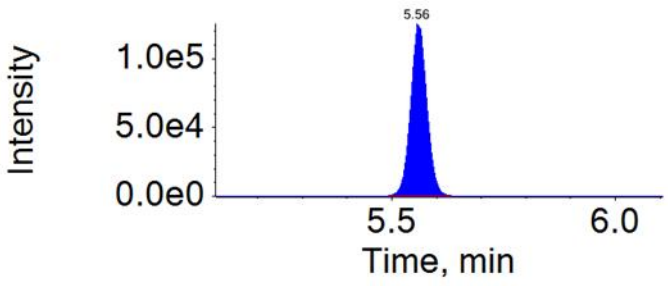


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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
	

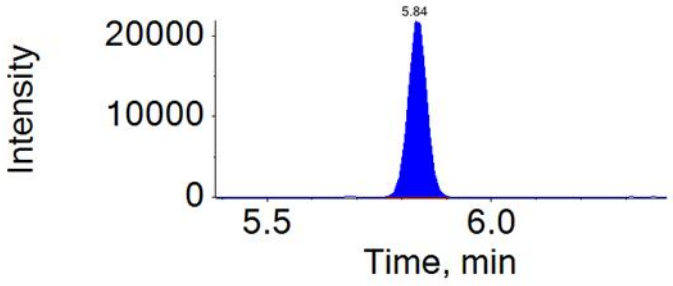
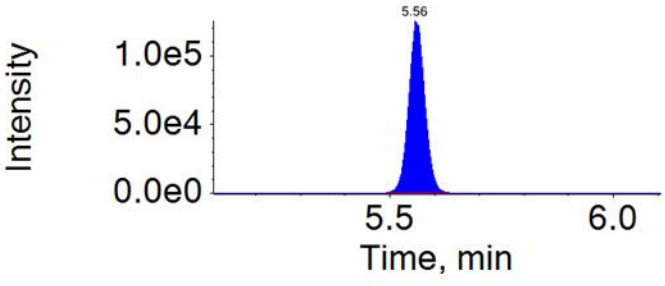
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

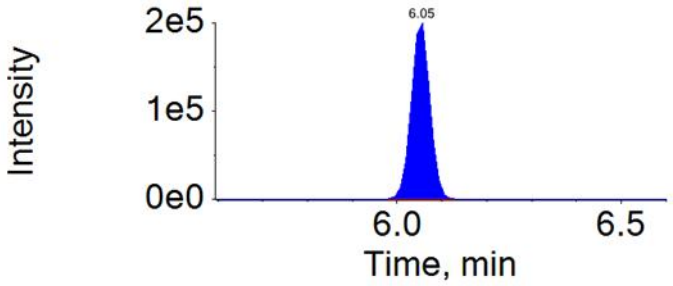
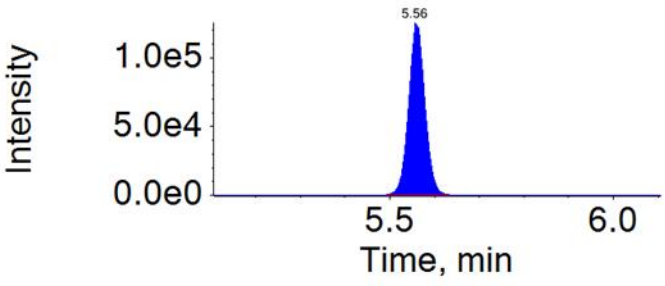
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

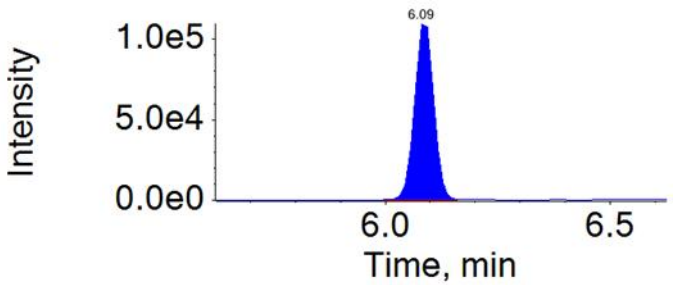
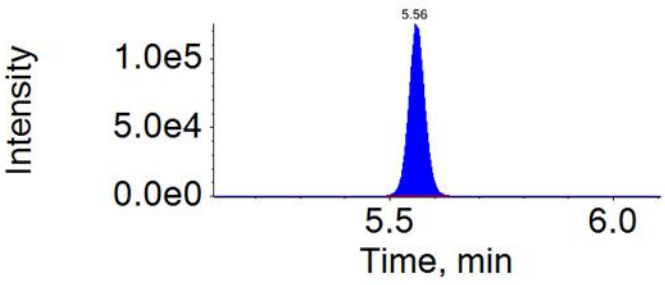
APPROVED
By JPT at 2:53 pm, 11/7/18

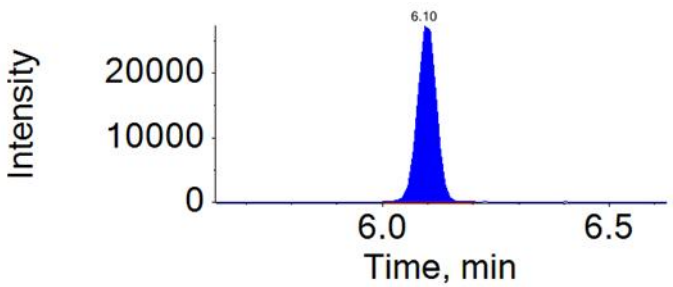
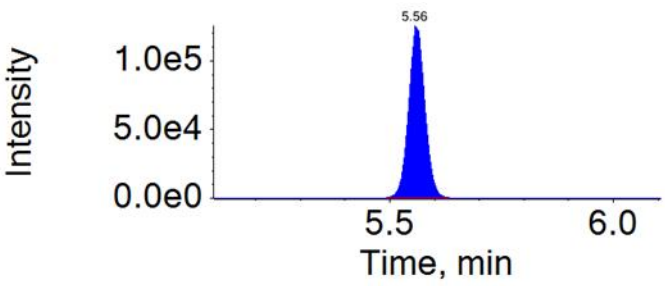
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

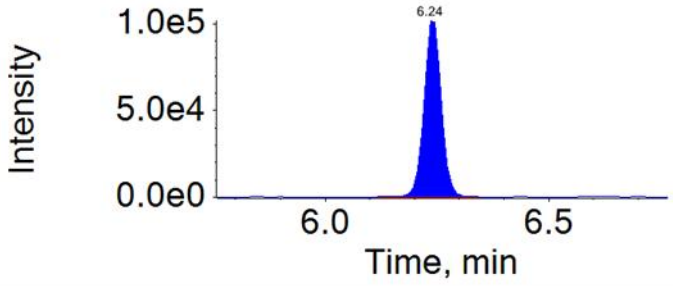
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

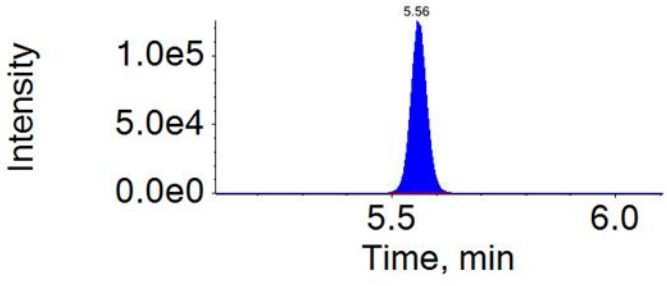
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

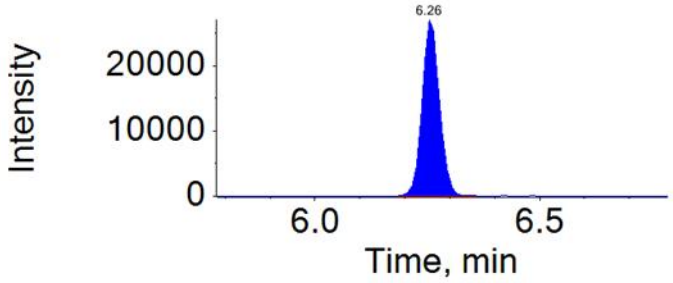
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

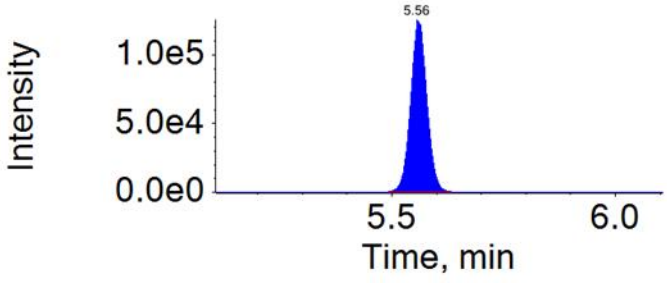
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



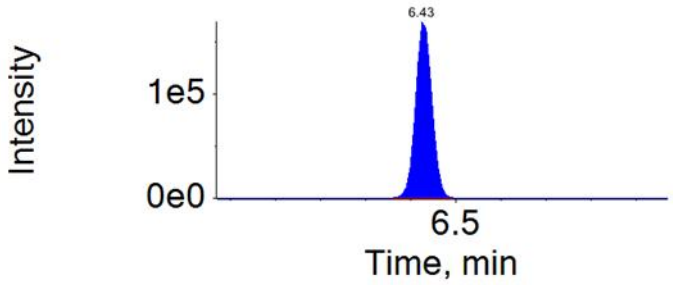


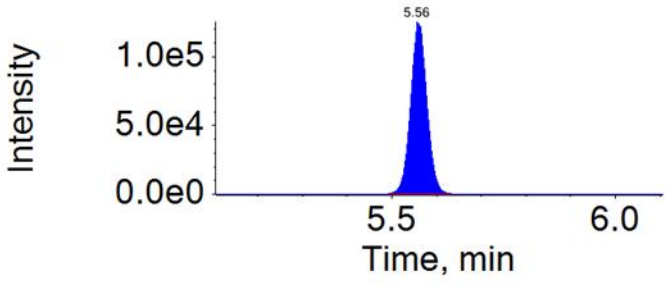
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



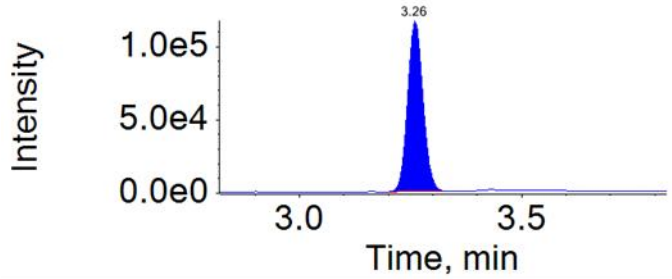


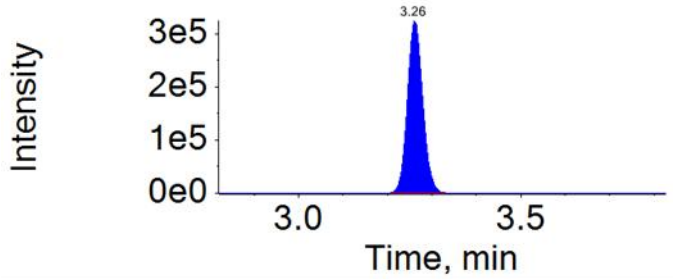
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

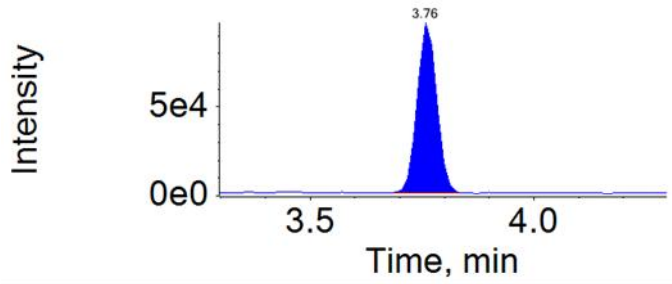
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

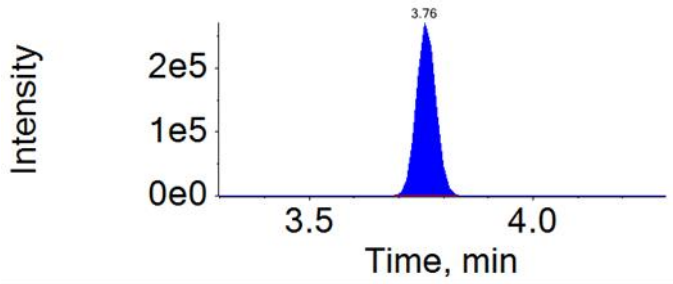
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



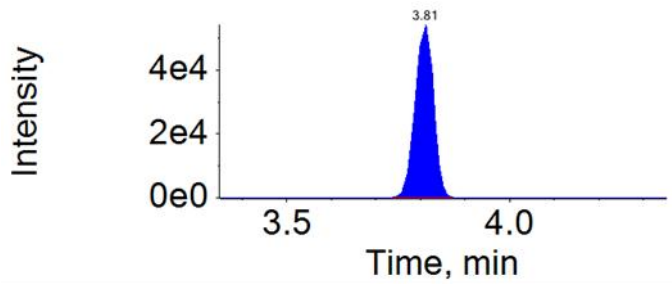


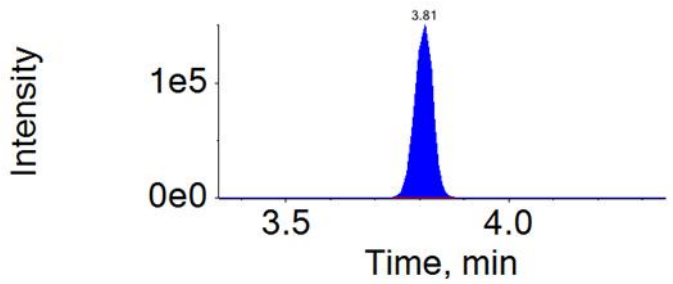
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



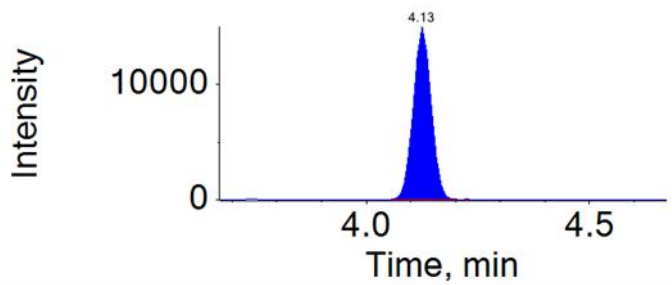


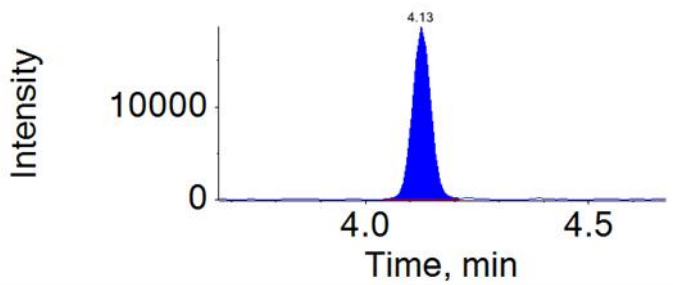
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



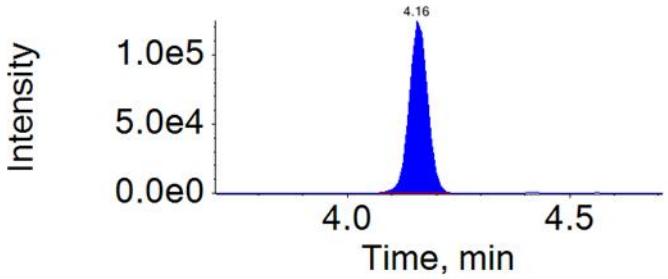
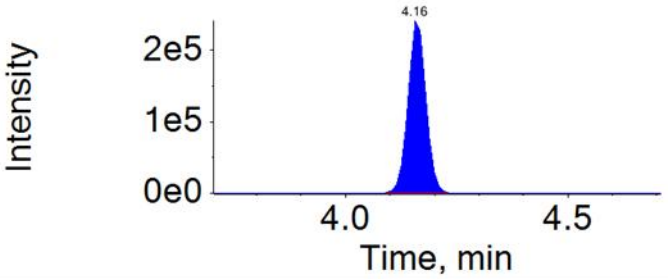


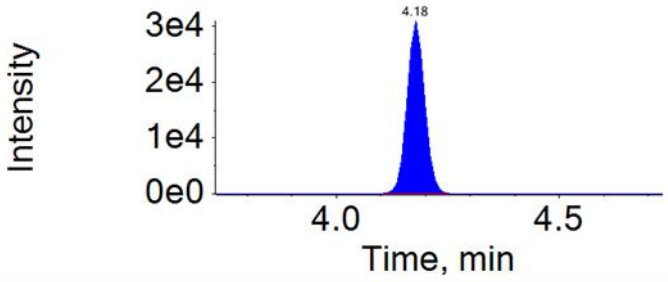
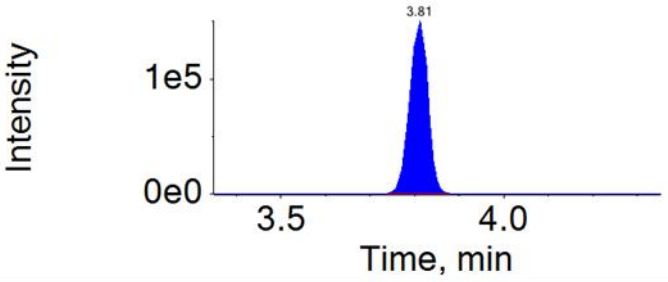
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

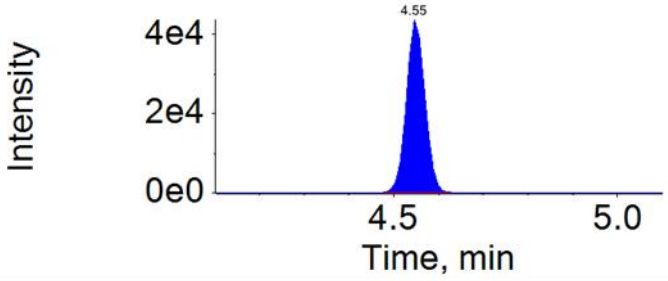
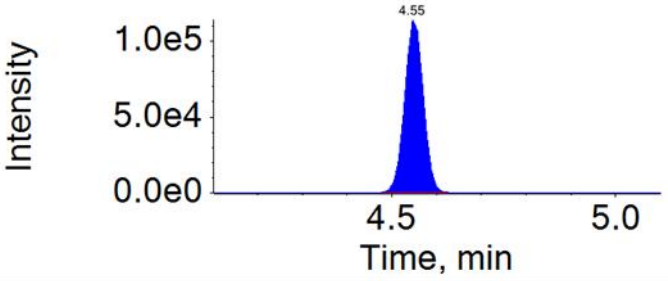


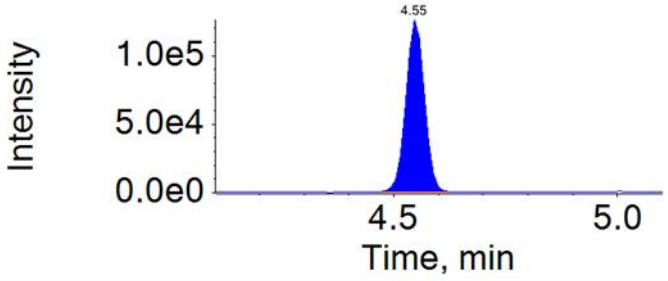
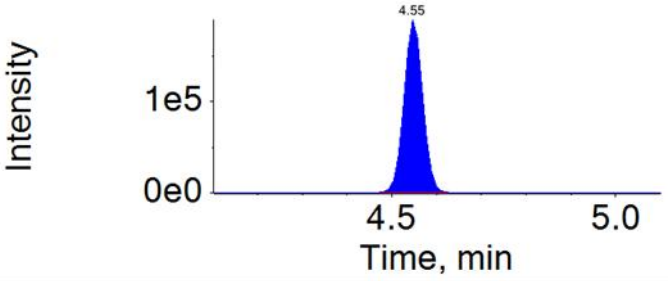


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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
	

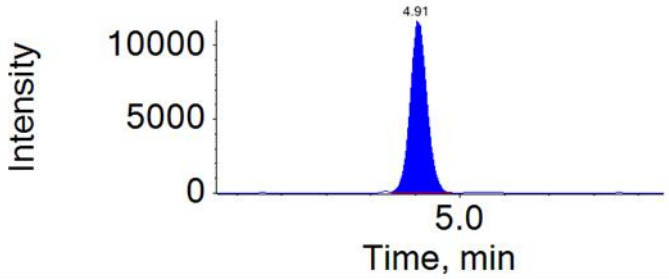
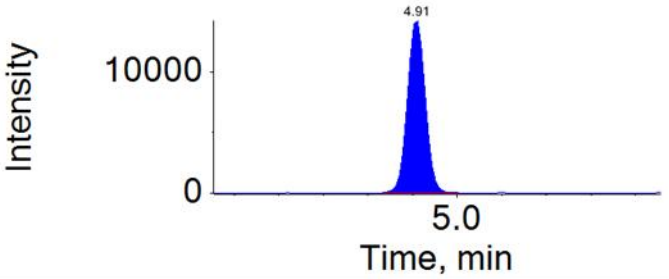
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

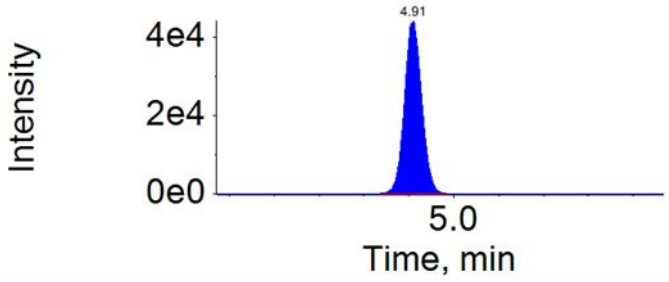
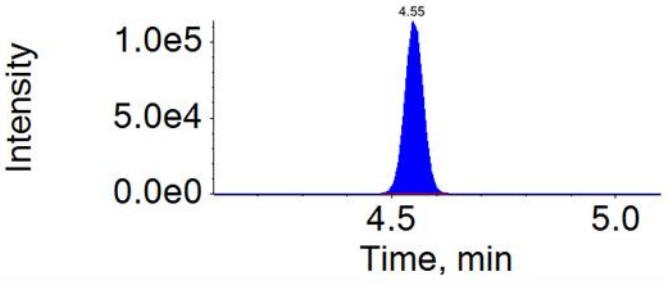
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

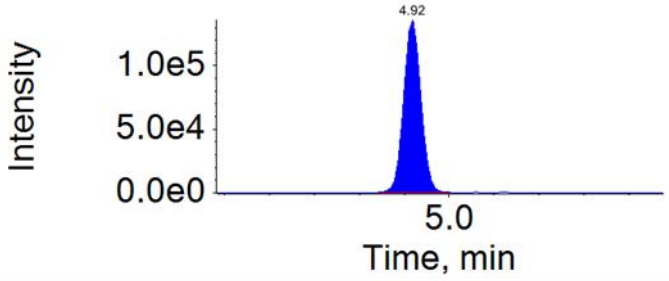
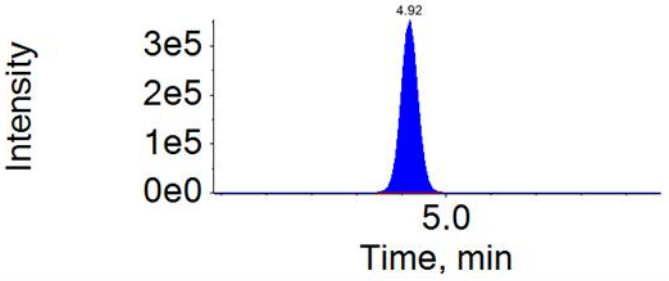
APPROVED
By JPT at 2:53 pm, 11/7/18

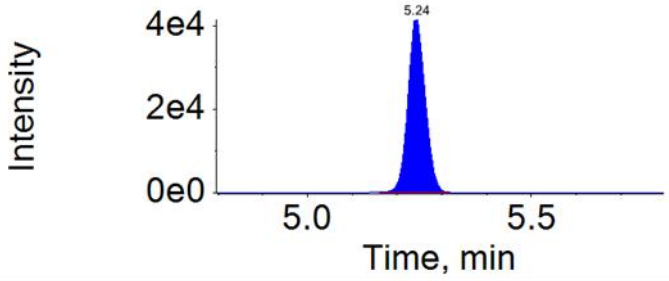
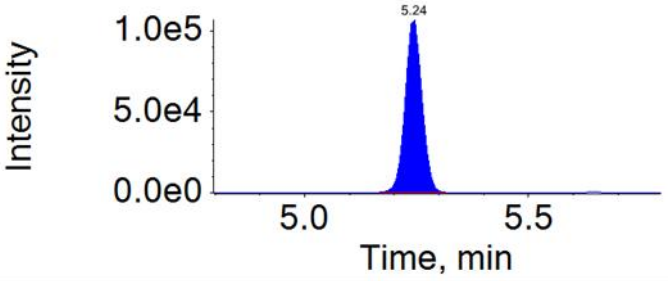
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

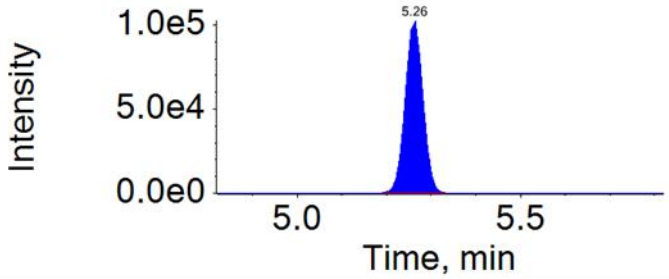
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

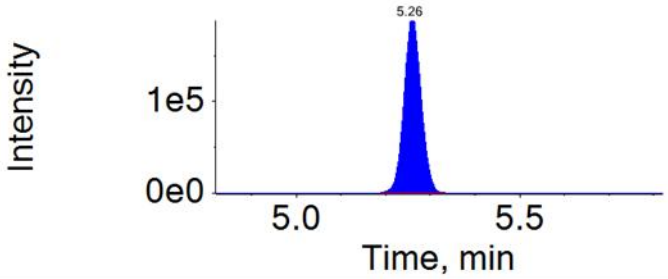
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

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

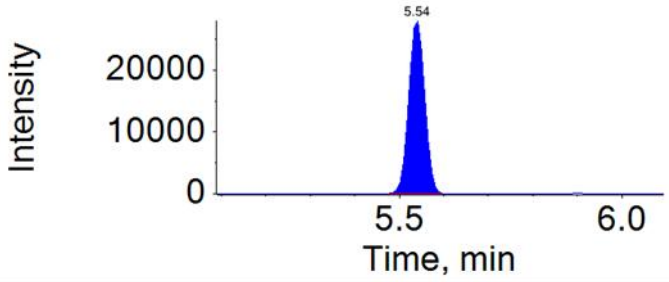
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

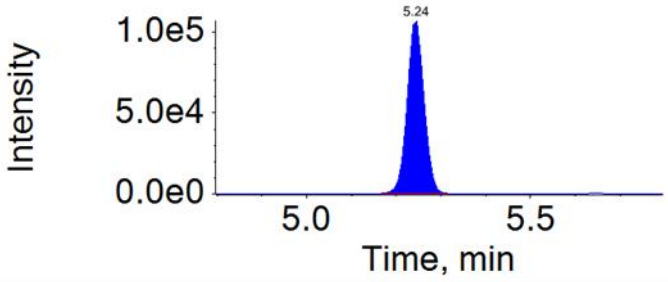
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



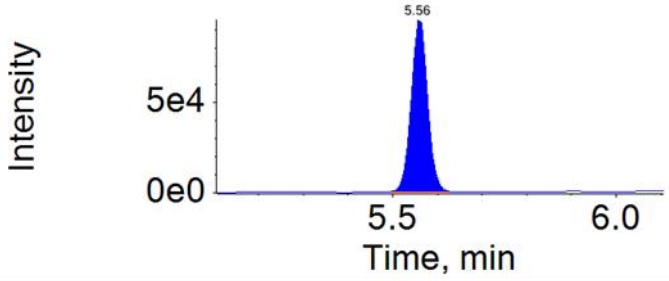


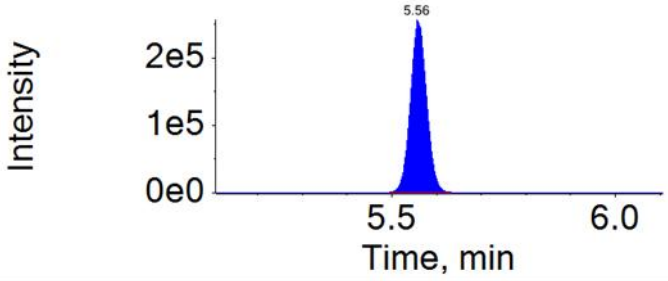
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



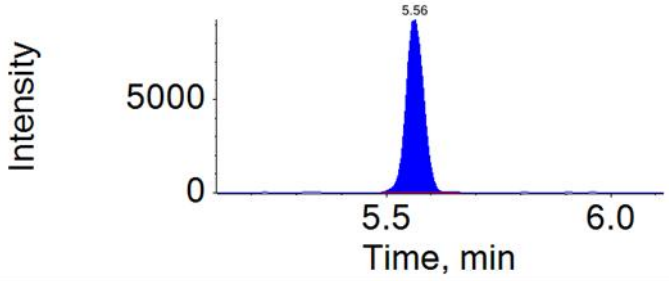


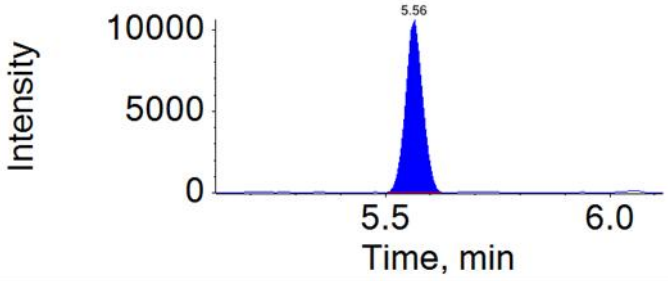
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

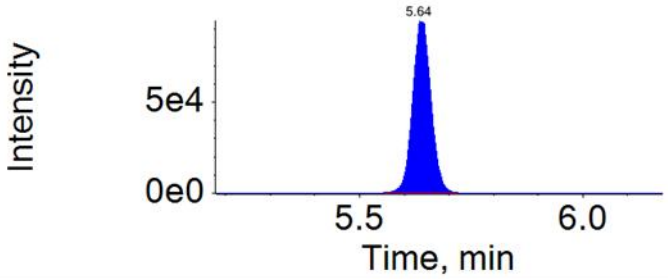
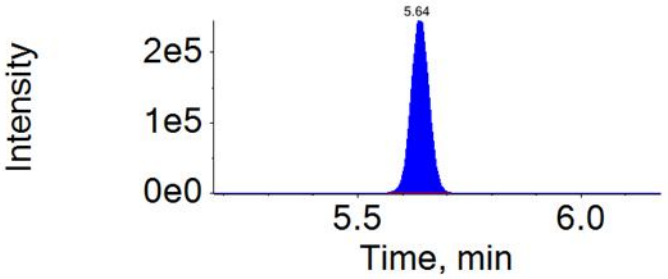


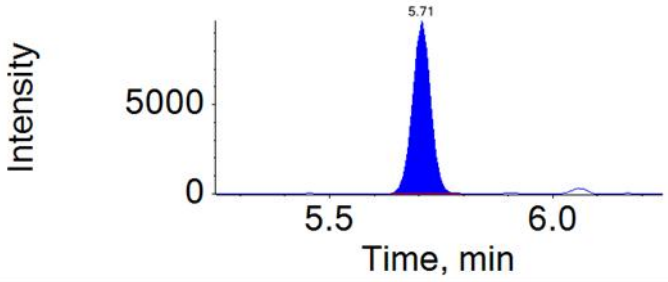
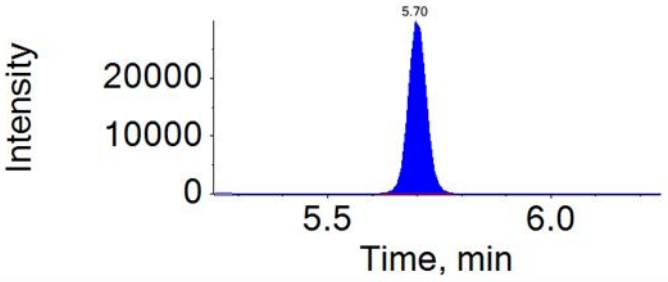


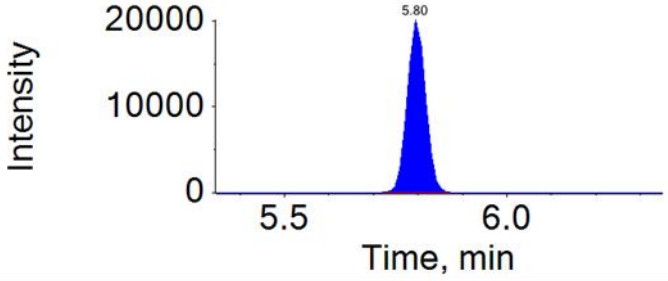
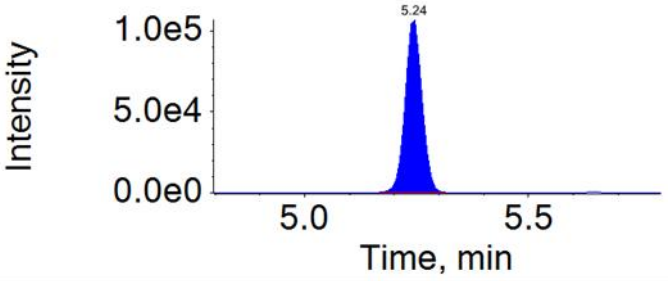
APPROVED
By JPT at 2:53 pm, 11/7/18

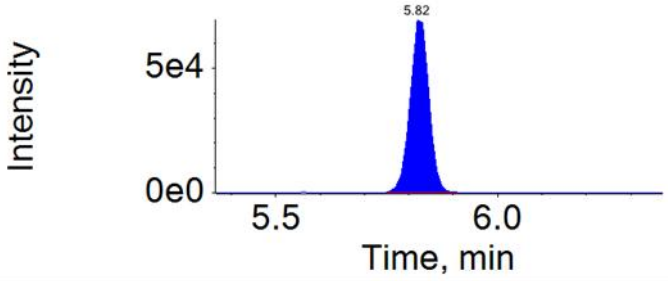
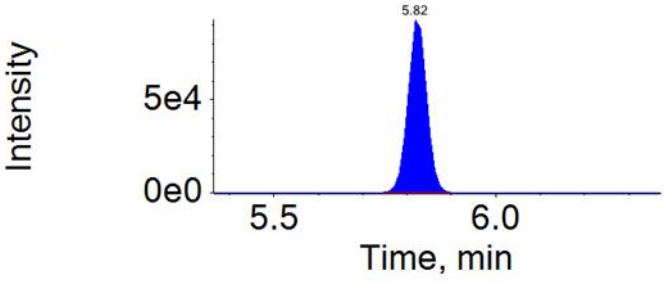
REVIEWED
By umar at 5:23 pm, 11/9/18

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
	

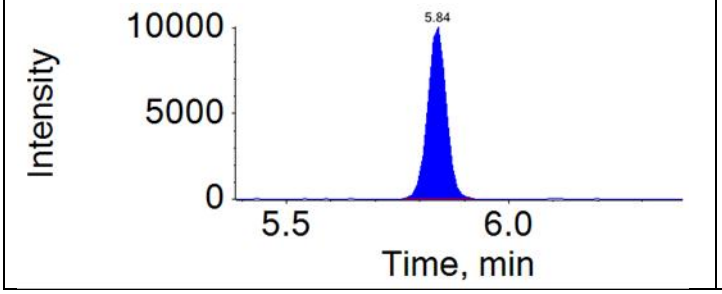
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

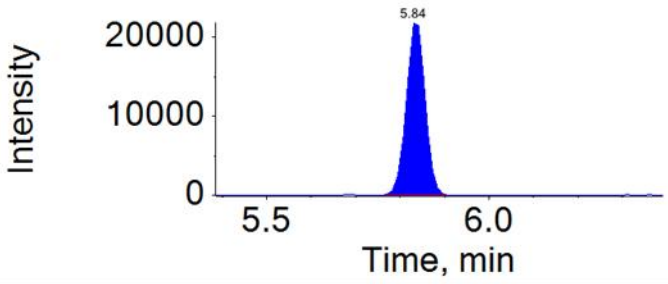
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

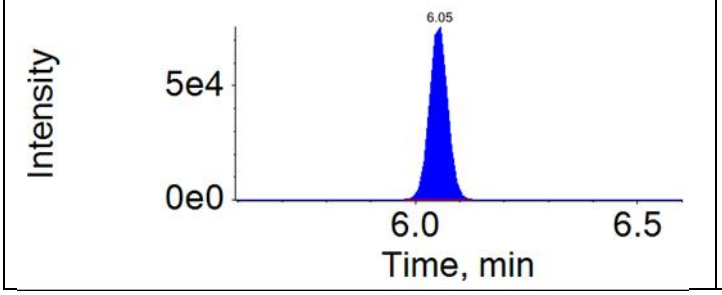
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

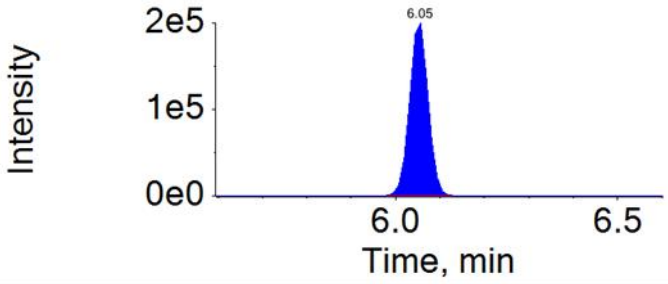
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



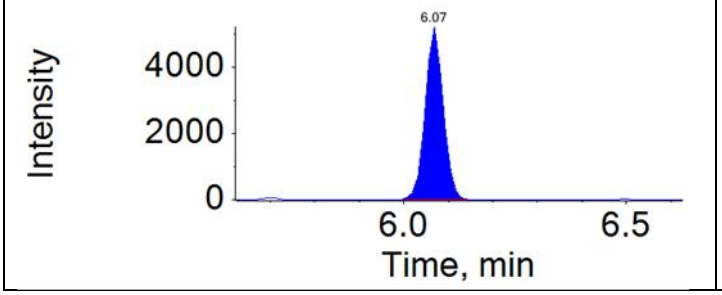


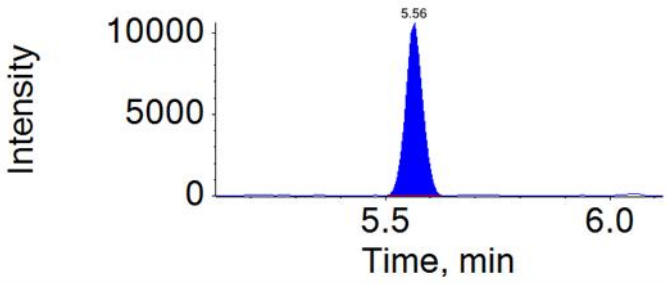
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



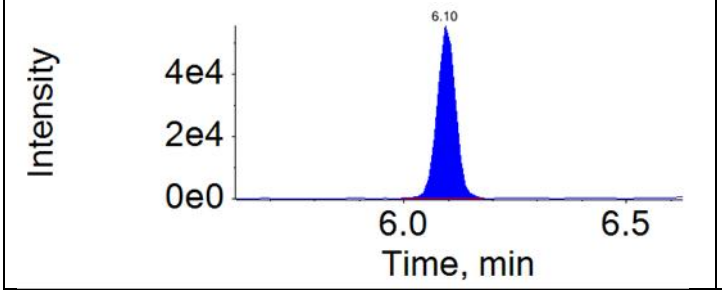


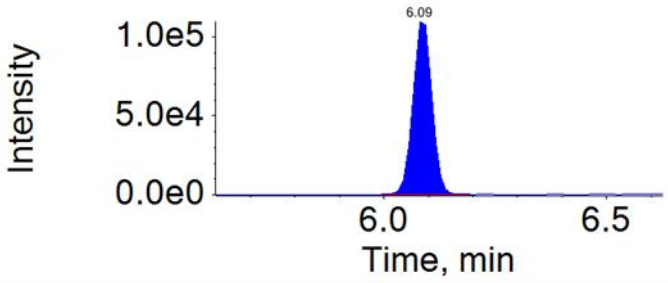
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



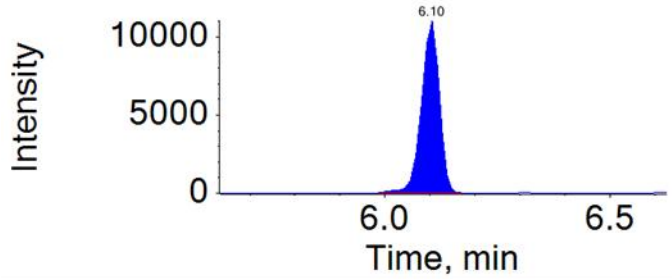


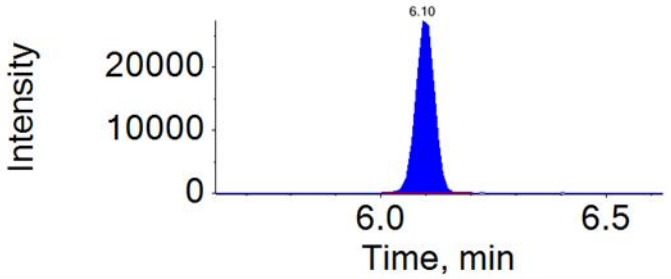
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

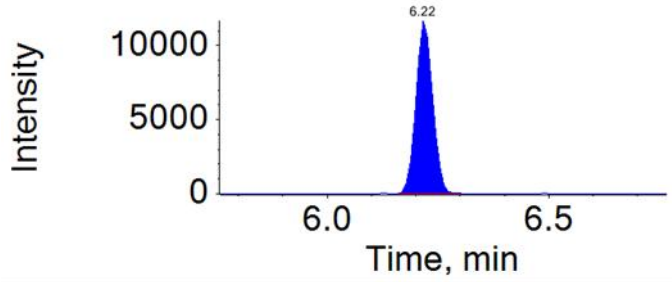
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

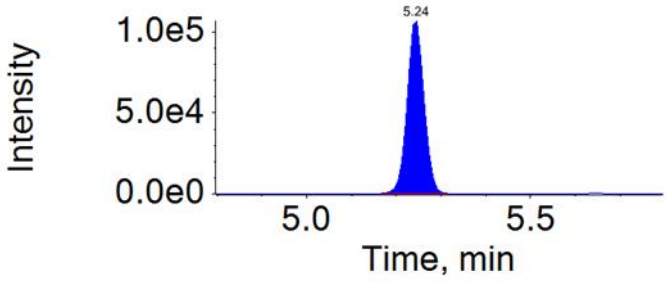
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



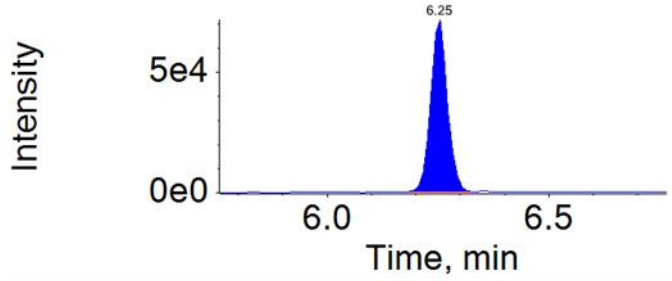


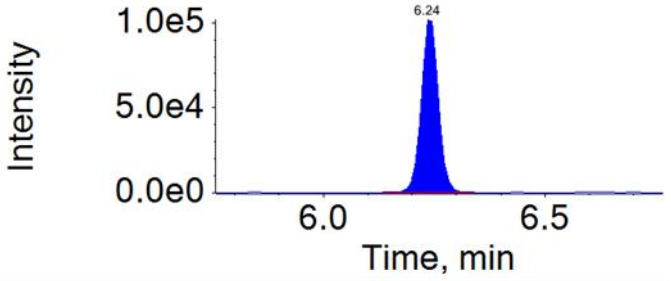
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



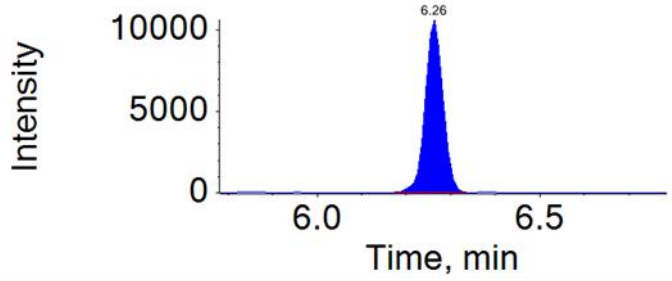


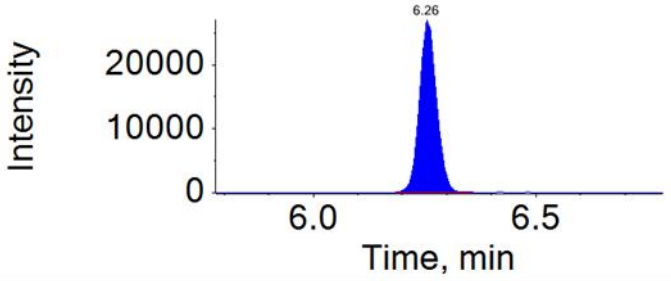
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



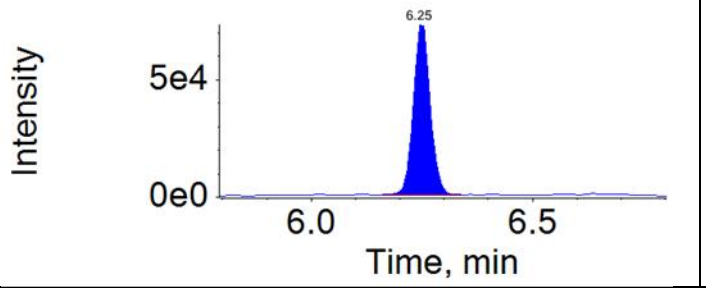


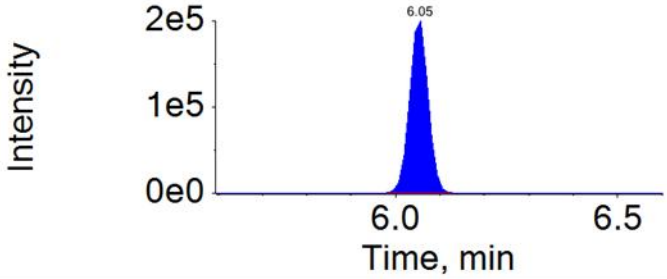
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

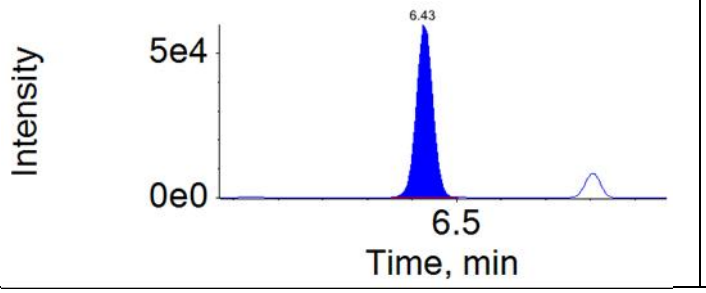
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

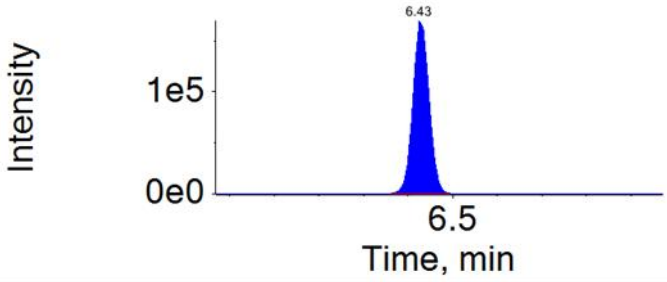
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



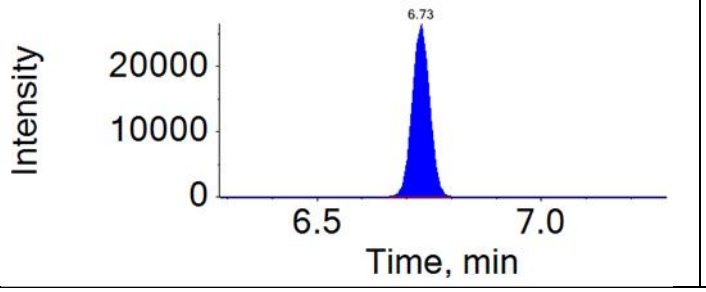


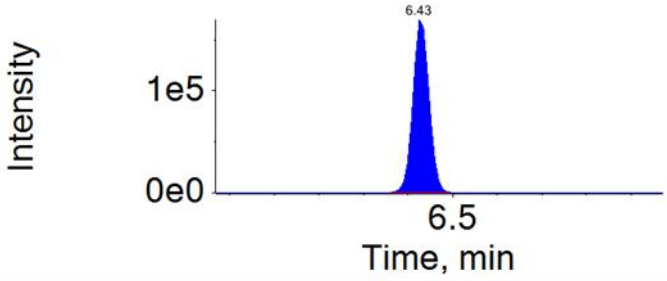
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



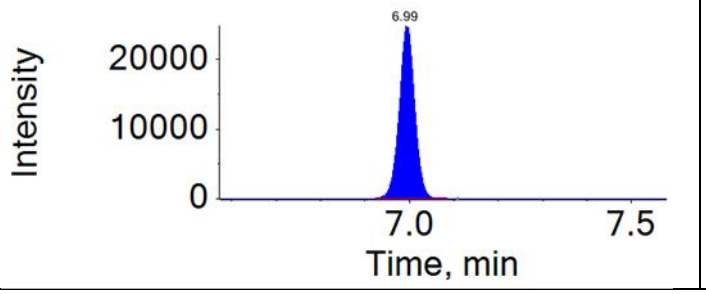


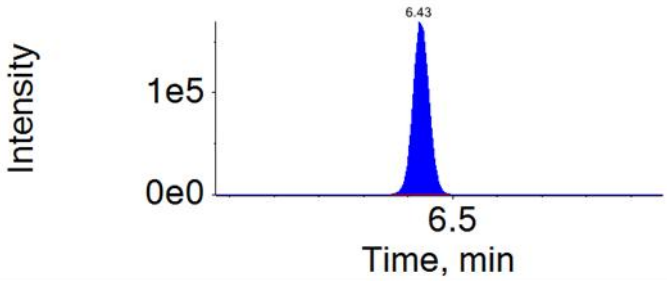
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





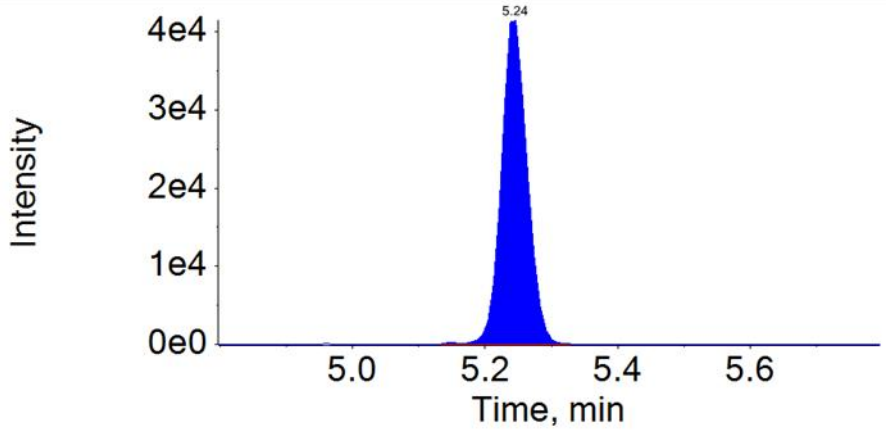
APPROVED
By JPT at 2:53 pm, 11/7/18

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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

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

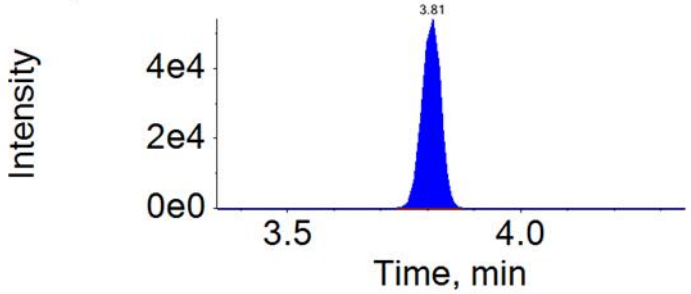
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-20.wiff

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	

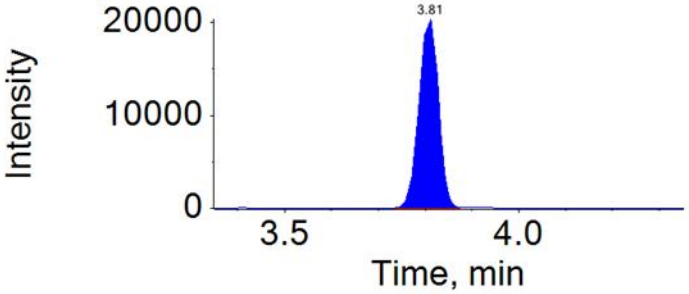
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

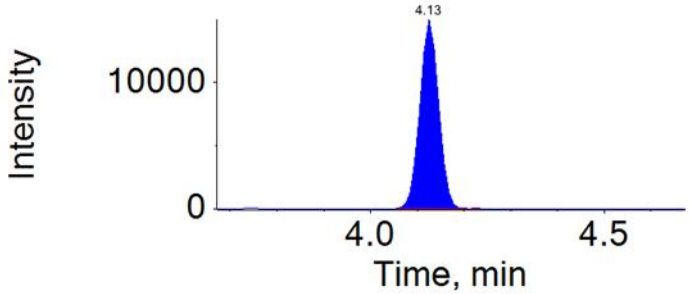
Component: PFBS
Primary Mass: 299.0 / 80.0



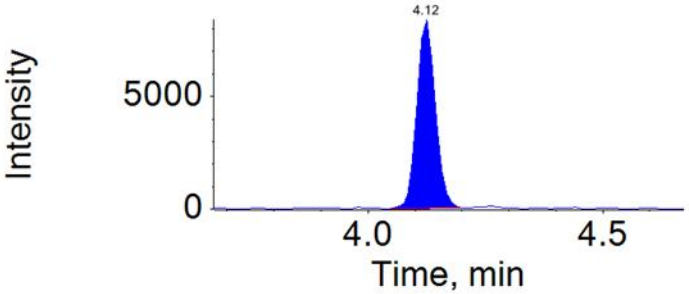
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



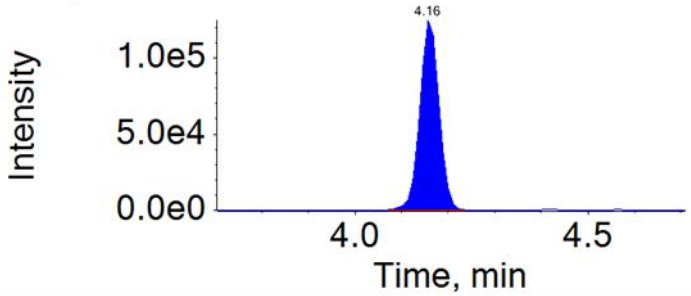
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



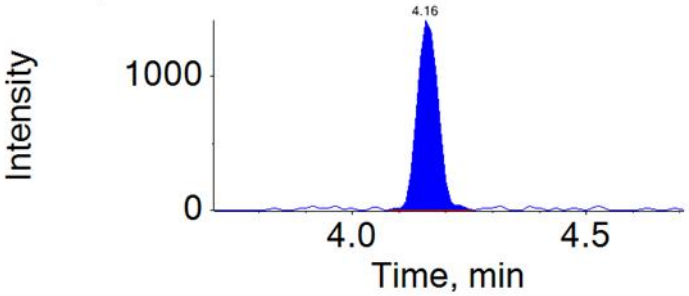
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



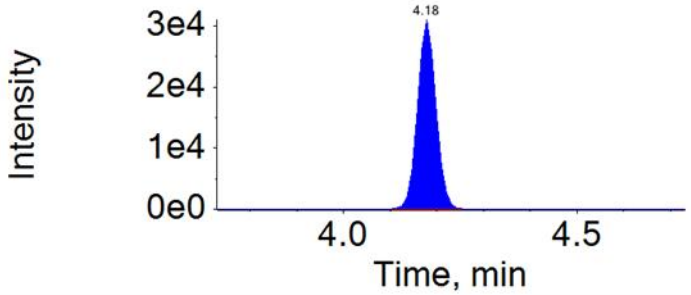
Component: PFHxA
Primary Mass: 313.0 / 269.0



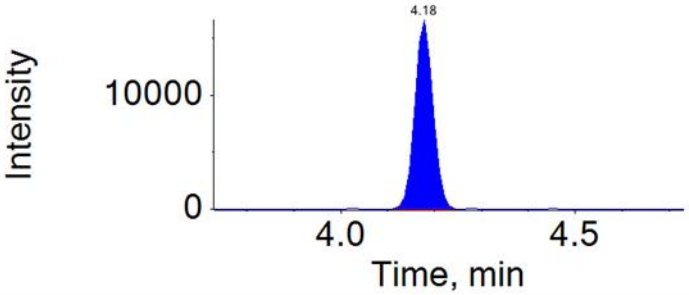
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



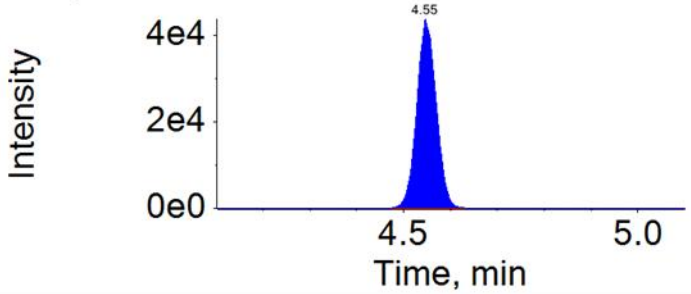
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



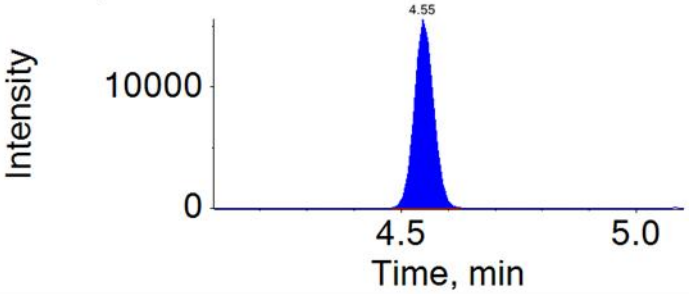
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

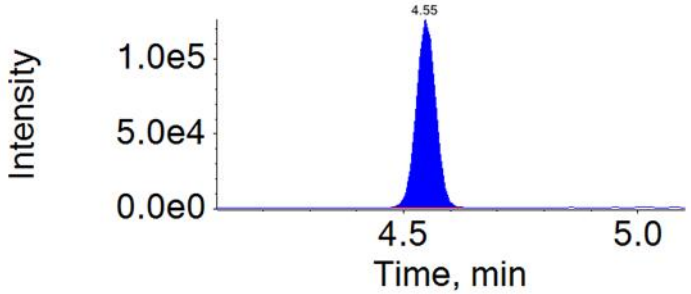
Component: PFHxS
Primary Mass: 399.0 / 80.0



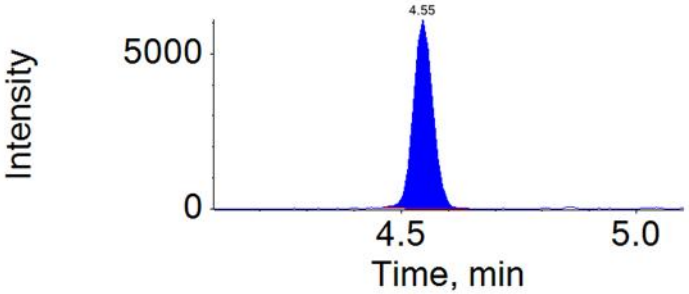
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



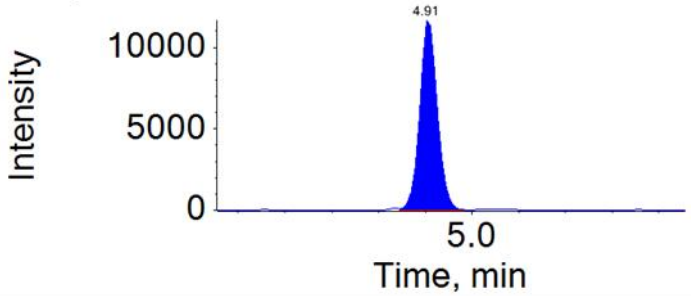
Component: PFHpA
Primary Mass: 363.0 / 319.0



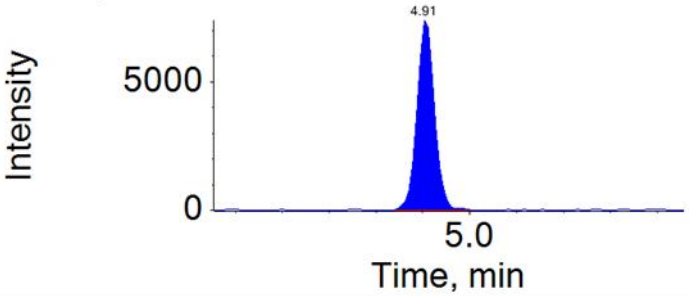
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



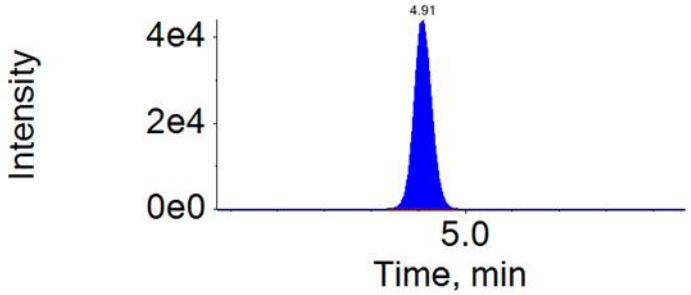
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



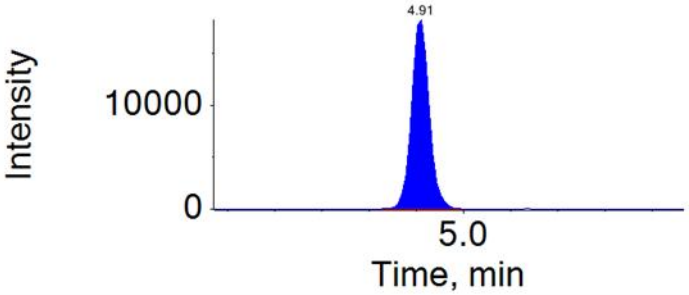
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



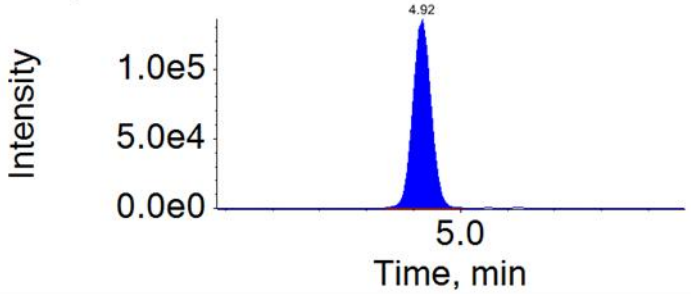
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



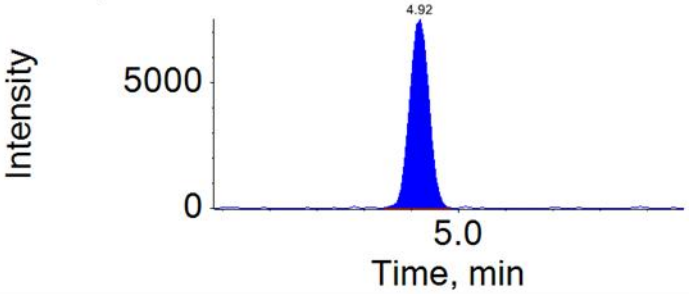
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

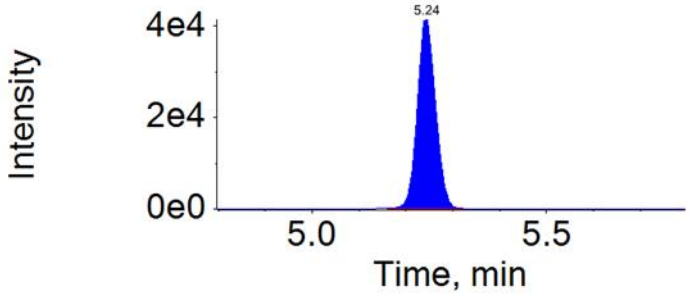
Component: PFOA
Primary Mass: 413.0 / 369.0



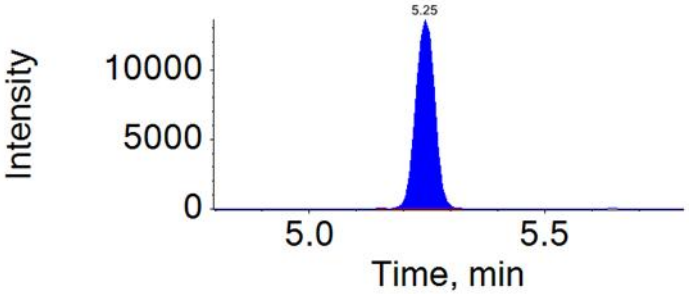
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



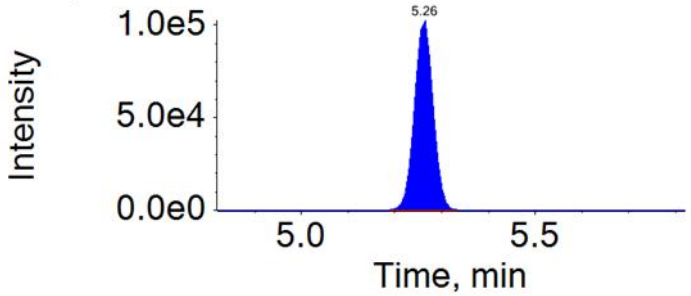
Component: PFOS
Primary Mass: 499.0 / 80.0



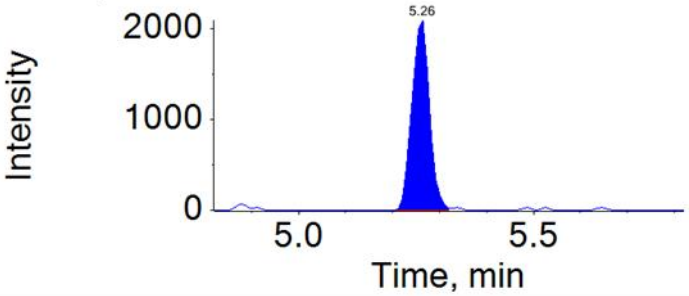
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



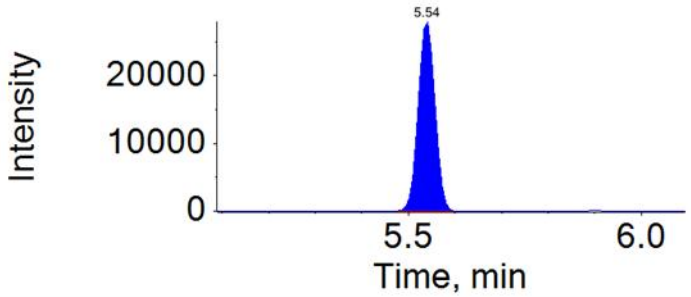
Component: PFNA
Primary Mass: 463.0 / 419.0



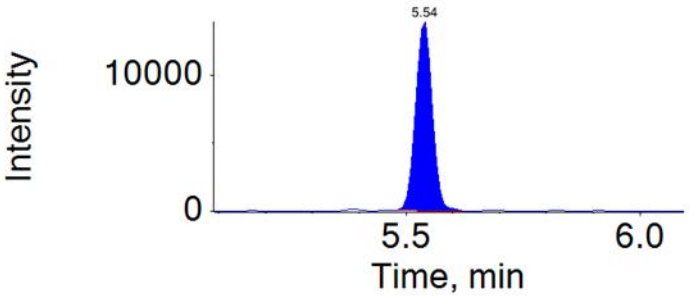
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



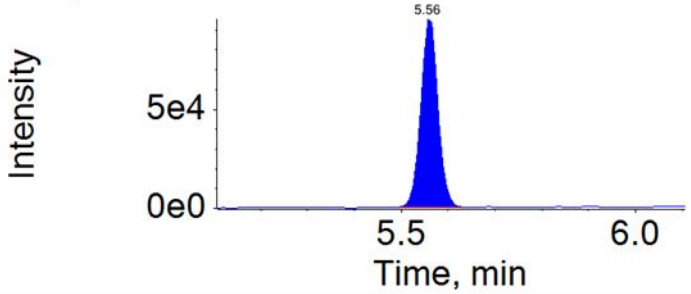
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



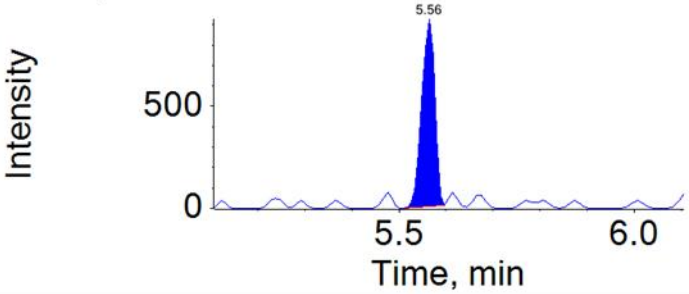
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

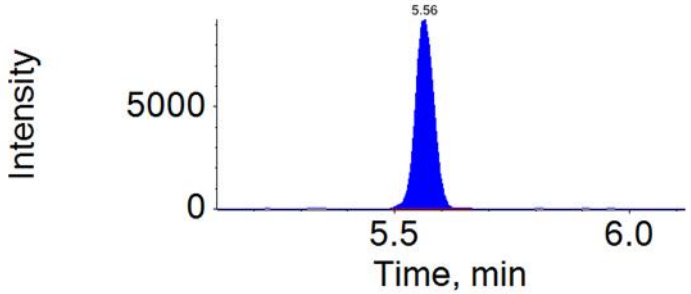
Component: PFDA
Primary Mass: 513.0 / 469.0



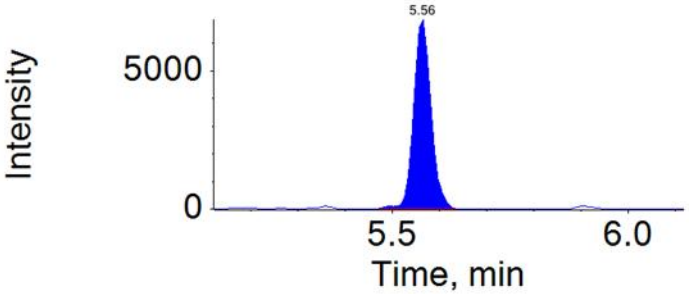
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



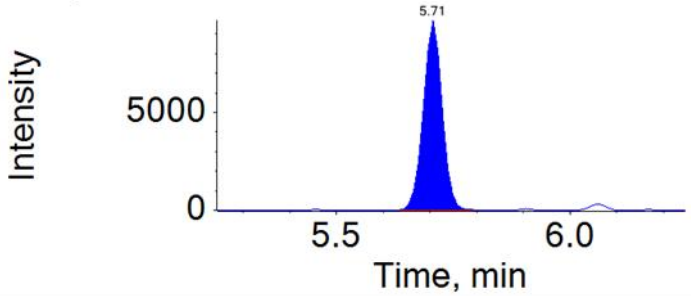
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



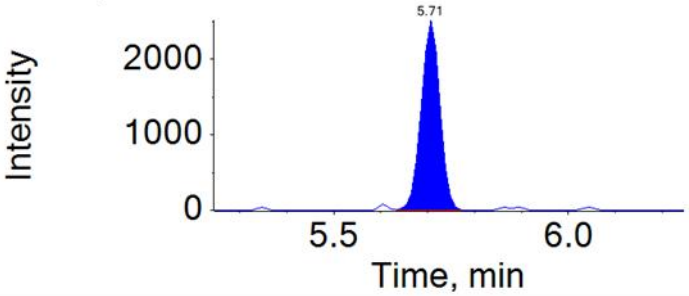
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



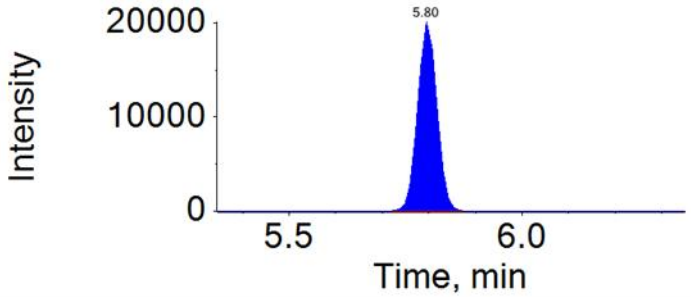
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



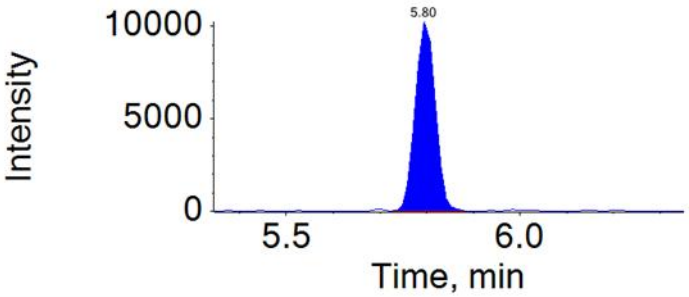
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



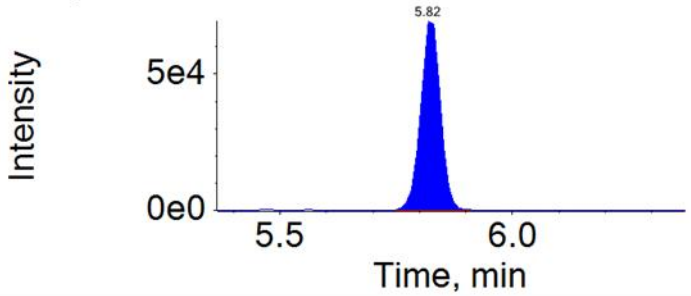
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



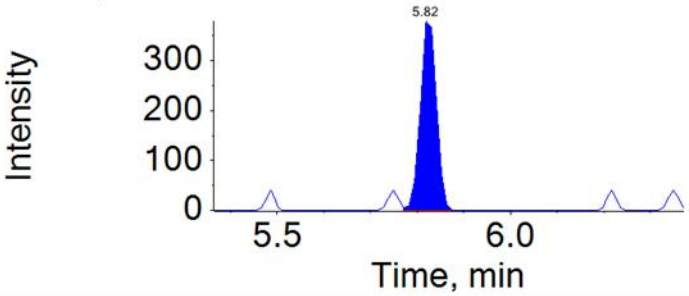
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

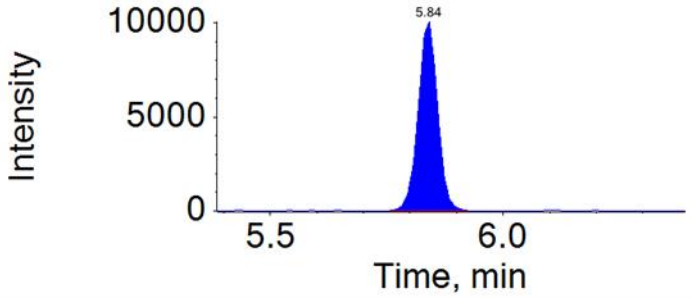
Component: PFUnDA
Primary Mass: 563.0 / 519.0



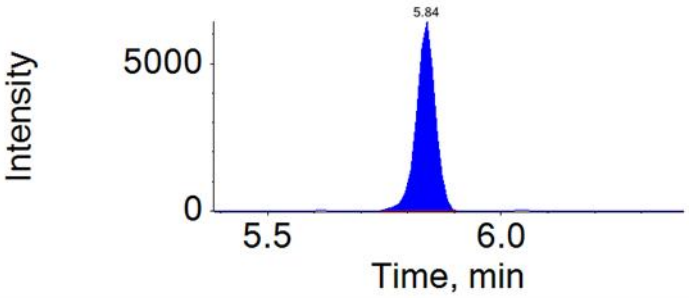
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



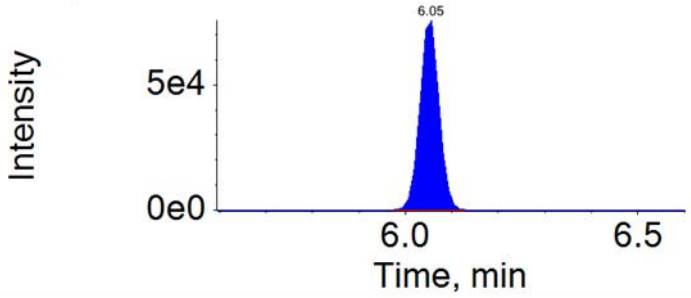
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



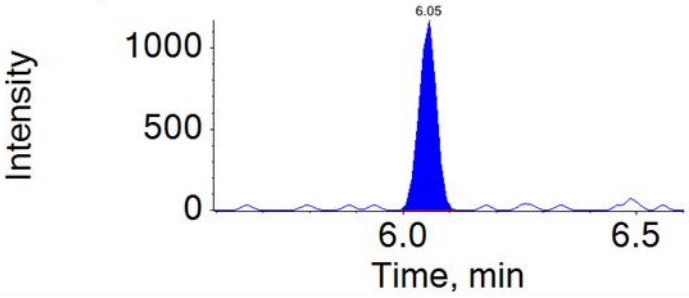
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



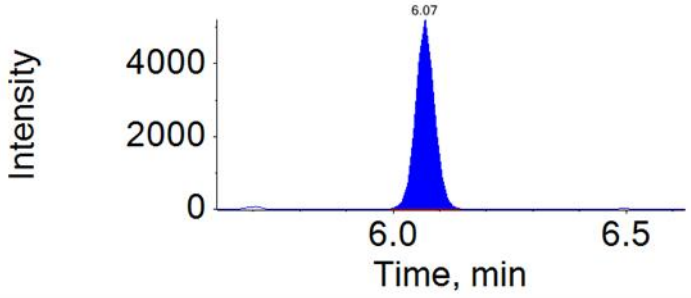
Component: PFDoDA
Primary Mass: 613.0 / 569.0



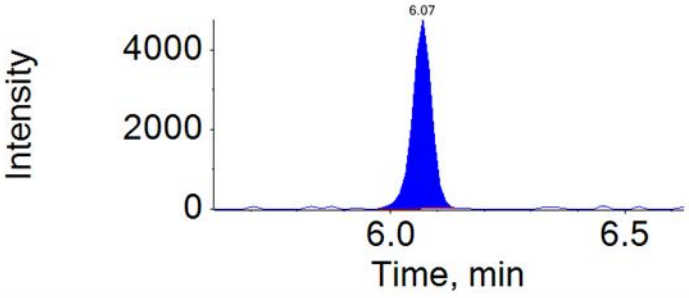
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



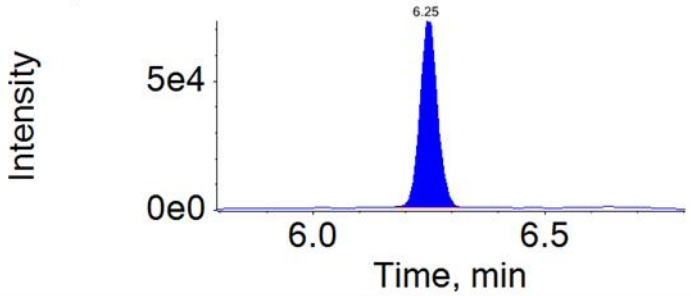
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



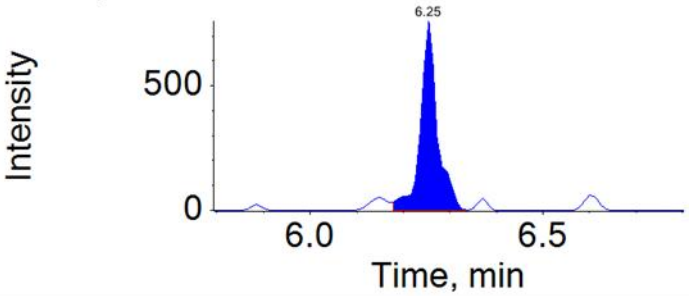
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

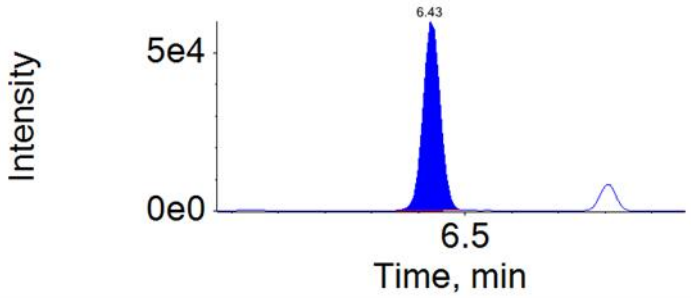
Component: PFTrDA
Primary Mass: 663.0 / 619.0



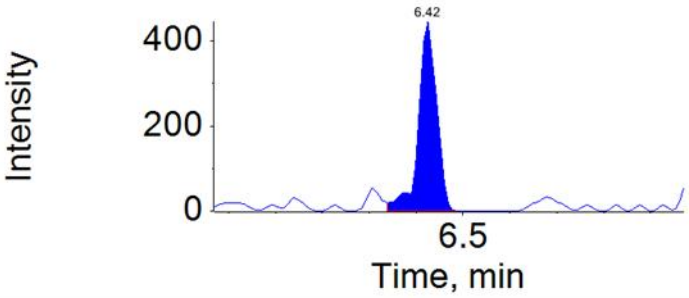
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



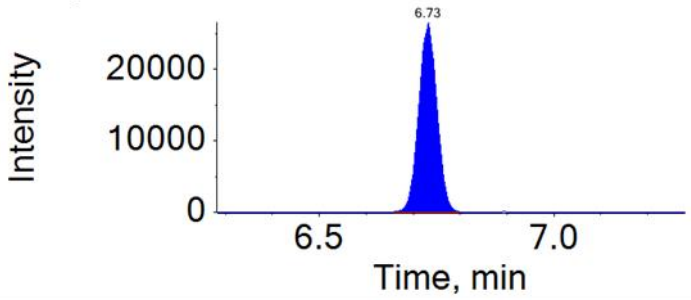
Component: PFTeDA
Primary Mass: 713.0 / 669.0



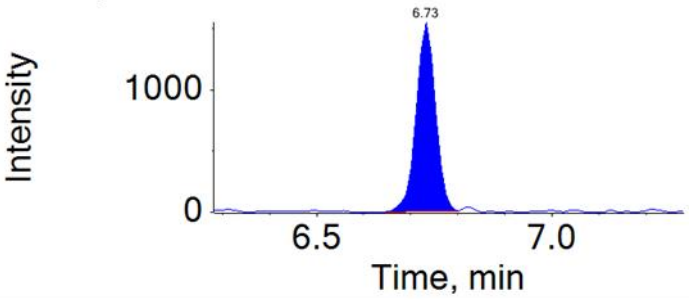
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



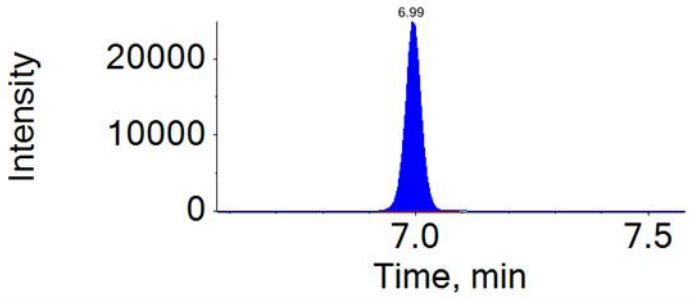
Component: PFHxDA
Primary Mass: 813.0 / 769.0



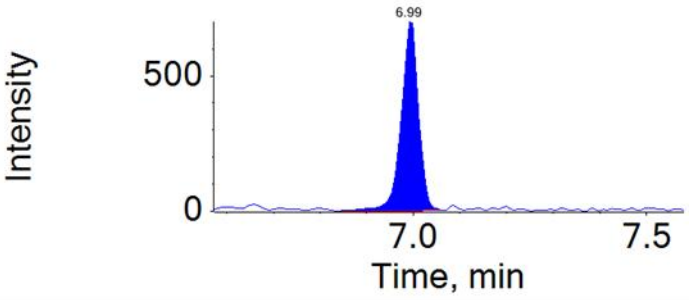
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



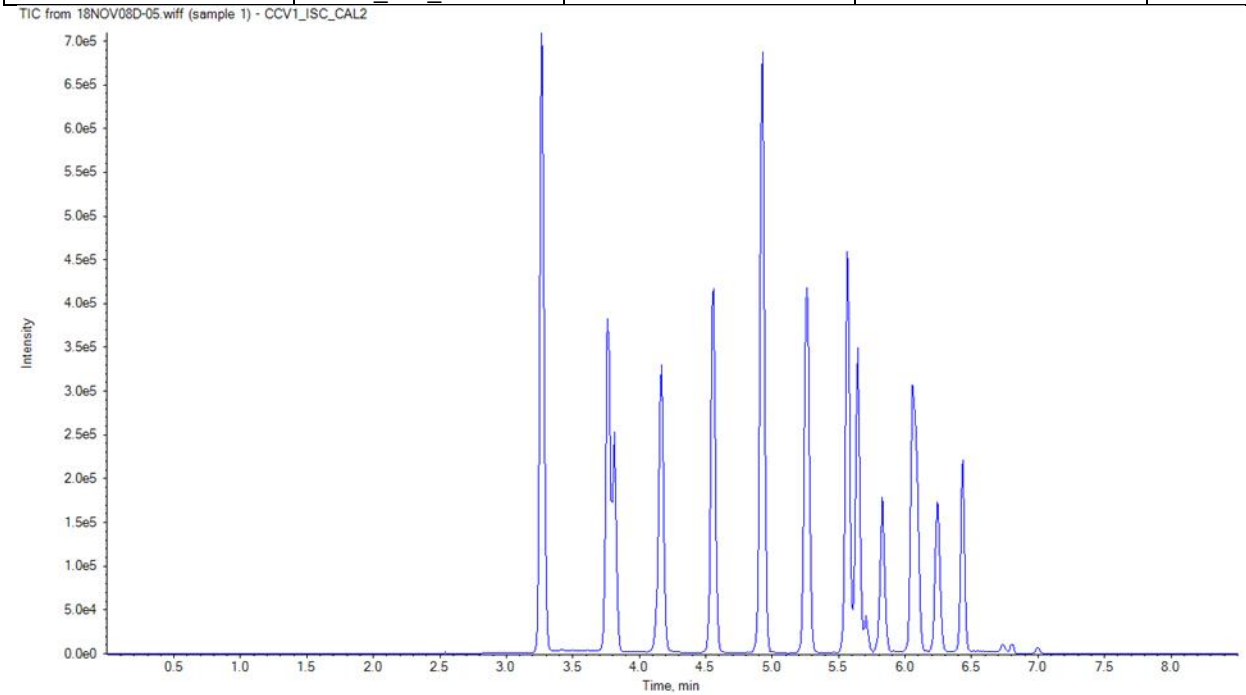
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 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	18NOV08D-05.wiff	11/8/2018 12:24:40 PM



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	728839.7	730410.6	0	50	
13C2-PFOA	5.0	491983.1	524423.6	-6	50	
13C4-PFOS	4.8	255568.1	274061.7	-7	50	
13C2-PFDA	5.0	315407.5	311442.1	1	50	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 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	18NOV08D-05.wiff	11/8/2018 12:24:40 PM

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	72084.0	10	13C4-PFBA	766928.2	5.0	0.094	3.26	1.000	0.500	0.550	10	30	
PFPeA	76376.3	13	13C5-PFPeA	809192.4	5.0	0.094	3.76	1.000	0.500	0.561	12	30	
PFBS	37650.0	11	13C3-PFBS	430491.1	4.7	0.087	3.81	1.000	0.440	0.441	0	30	
4:2-FTS	9377.7	11	13C2-4:2-FTS	51791.3	4.7	0.181	4.13	1.000	0.467	0.487	4	30	
PFHxA	85965.4	12	13C5-PFHxA	662030.6	5.0	0.130	4.16	1.000	0.500	0.557	11	30	
PFPeS	21837.5	11	13C3-PFBS	430491.1	4.7	0.051	4.18	1.100	0.469	0.500	7	30	
PFHxS	30165.5	12	13C3-PFHxS	325716.7	4.7	0.093	4.55	1.000	0.473	0.469	-1	30	
PFHpA	87232.0	12	13C4-PFHpA	548044.5	5.0	0.159	4.55	1.000	0.500	0.535	7	30	
6:2-FTS	7814.5	11	13C2-6:2-FTS	35283.6	4.8	0.221	4.91	1.000	0.474	0.553	17	30	
PFHpS	30009.2	11	13C3-PFHxS	325716.7	4.7	0.092	4.92	1.080	0.476	0.482	1	30	
PFOA	86207.9	11	13C8-PFOA	939368.6	5.0	0.092	4.93	1.000	0.500	0.517	3	30	
PFOS	28047.3	12	13C8-PFOS	285244.0	4.8	0.098	5.25	1.000	0.478	0.510	7	30	
PFNA	73414.7	11	13C9-PFNA	481998.0	5.0	0.152	5.27	1.000	0.500	0.569	14	30	
PFNS	17602.7	11	13C8-PFOS	285244.0	4.8	0.062	5.55	1.060	0.480	0.489	2	30	
PFDA	60165.4	11	13C6-PFDA	607904.1	5.0	0.099	5.57	1.000	0.500	0.545	9	30	
8:2-FTS	5527.1	12	13C2-8:2-FTS	25655.0	4.8	0.215	5.57	1.000	0.479	0.486	1	30	
PFOSA	68994.6	11	13C8-PFOSA	699314.0	5.0	0.099	5.64	1.000	0.500	0.533	7	30	
NMeFOSAA	8576.2	11	d3-NMeFOSAA	79412.4	5.0	0.108	5.71	1.000	0.500	0.556	11	30	
PFDS	13175.4	11	13C8-PFOS	285244.0	4.8	0.046	5.80	1.100	0.482	0.441	-8	30	
PFUnDA	48289.0	12	13C7-PFUnDA	263647.7	5.0	0.183	5.83	1.000	0.500	0.525	5	30	
NEtFOSAA	7263.0	11	d5-NEtFOSAA	64246.4	5.0	0.113	5.84	1.000	0.500	0.486	-3	30	
PFDoDA	58287.0	12	13C2-PFDoDA	556797.1	5.0	0.105	6.06	1.000	0.500	0.567	13	30	
10:2-FTS	5075.6	12	13C2-8:2-FTS	25655.0	4.8	0.198	6.07	1.090	0.482	0.616	28	30	
NMePFOSAE	41425.0	12	d7-NMePFOSAE	330937.5	5.0	0.125	6.09	1.000	0.500	0.561	12	30	
NMePFOSA	8417.2	11	d3-NMePFOSA	78208.3	5.0	0.108	6.10	1.000	0.500	0.602	20	30	
PFDoS	6665.7	10	13C8-PFOS	285244.0	4.8	0.023	6.22	1.190	0.484	0.451	-7	30	
NEtPFOSAE	43773.7	11	d9-NEtPFOSAE	266759.4	5.0	0.164	6.25	1.000	0.500	0.526	5	30	
NEtPFOSA	7022.0	11	d5-NEtPFOSA	69615.2	5.0	0.101	6.26	1.000	0.500	0.444	-11	30	
PFTrDA	46666.6	11	13C2-PFDoDA	556797.1	5.0	0.084	6.25	1.030	0.500	0.529	6	30	
PFTeDA	38675.5	11	13C2-PFTeDA	403281.7	5.0	0.096	6.43	1.000	0.500	0.563	13	30	
PFHxDA	17615.3	11	13C2-PFTeDA	403281.7	5.0	0.044	6.73	1.050	0.500	0.542	8	30	
PFODA	14725.2	10	13C2-PFTeDA	403281.7	5.0	0.037	7.00	1.090	0.500	0.523	5	30	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

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

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV08D-05.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-08T12:24:40
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV1-3
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	728839.7	730410.6	0	50	
13C2-PFOA	5.0	491983.1	524423.6	-6	50	
13C4-PFOS	4.8	255568.1	274061.7	-7	50	
13C2-PFDA	5.0	315407.5	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	766928.2	13C3-PFBA	728839.7	1.052	5.000	4.870	97	70-130	
E13C5-PFPeA	809192.4	13C3-PFBA	728839.7	1.110	5.000	4.837	97	70-130	
E13C3-PFBS	430491.1	13C3-PFBA	728839.7	0.591	4.650	4.335	93	70-130	
E13C2-4:2-FTS	51791.3	13C2-PFOA	491983.1	0.105	4.670	4.750	102	70-130	
E13C5-PFHxA	662030.6	13C2-PFOA	491983.1	1.346	5.000	4.950	99	70-130	
E13C3-PFHxS	325716.7	13C2-PFOA	491983.1	0.662	4.730	4.753	100	70-130	
E13C4-PFHpA	548044.5	13C2-PFOA	491983.1	1.114	5.000	5.068	101	70-130	
E13C2-6:2-FTS	35283.6	13C2-PFOA	491983.1	0.072	4.750	4.782	101	70-130	
E13C8-PFOA	939368.6	13C2-PFOA	491983.1	1.909	5.000	5.325	106	70-130	
E13C8-PFOS	285244.0	13C4-PFOS	255568.1	1.116	4.780	4.935	103	70-130	
E13C9-PFNA	481998.0	13C4-PFOS	255568.1	1.886	5.000	5.152	103	70-130	
E13C6-PFDA	607904.1	13C2-PFDA	315407.5	1.927	5.000	4.847	97	70-130	
E13C2-8:2-FTS	25655.0	13C2-PFDA	315407.5	0.081	4.790	4.304	90	70-130	
E13C8-PFOSA	699314.0	13C2-PFDA	315407.5	2.217	5.000	4.838	97	70-130	
Ed3-NMeFOSAA	79412.4	13C2-PFDA	315407.5	0.252	5.000	4.682	94	70-130	
E13C7-PFUnDA	263647.7	13C2-PFDA	315407.5	0.836	5.000	4.822	96	70-130	
Ed5-NEtFOSAA	64246.4	13C2-PFDA	315407.5	0.204	5.000	4.714	94	70-130	
E13C2-PFDoDA	556797.1	13C2-PFDA	315407.5	1.765	5.000	4.759	95	70-130	
Ed7-NMePFOSAE	330937.5	13C2-PFDA	315407.5	1.049	5.000	4.879	98	70-130	
Ed3-NMePFOSA	78208.3	13C2-PFDA	315407.5	0.248	5.000	4.540	91	70-130	
Ed9-NEtPFOSAE	266759.3	13C2-PFDA	315407.5	0.846	5.000	4.830	97	70-130	
Ed5-NEtPFOSA	69615.2	13C2-PFDA	315407.5	0.221	5.000	5.111	102	70-130	
E13C2-PFTeDA	403281.7	13C2-PFDA	315407.5	1.279	5.000	4.603	92	70-130	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

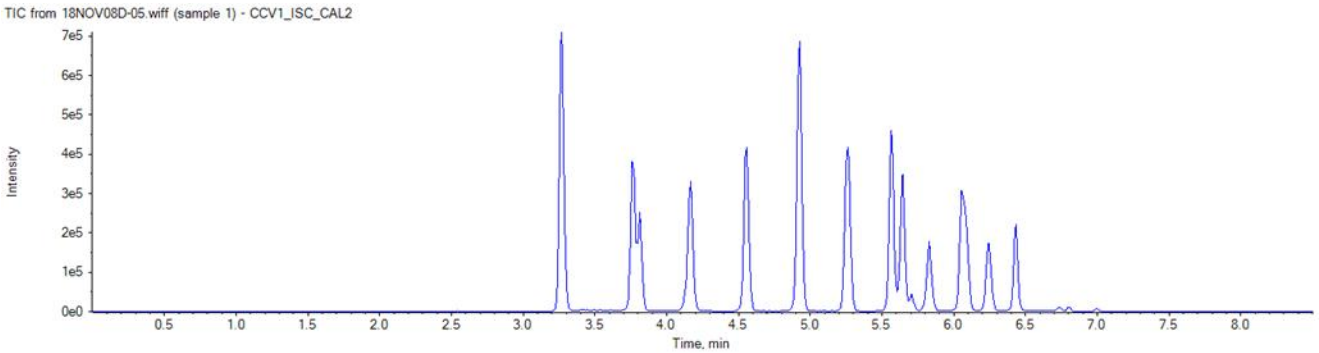
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-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	72084.0		A	13C4-PFBA	3.27	766928.2	0.094	0.550
PFPeA	3.76	1.000	76376.3		A	13C5-PFPeA	3.76	809192.4	0.094	0.561
PFBS	3.81	1.000	37650.0		A	13C3-PFBS	3.81	430491.1	0.087	0.441
4:2-FTS	4.13	1.000	9377.7		A	13C2-4:2-FTS	4.13	51791.3	0.181	0.487
PFHxA	4.16	1.000	85965.4		A	13C5-PFHxA	4.16	662030.6	0.130	0.557
PFPeS	4.18	1.100	21837.5		A	13C3-PFBS	3.81	430491.1	0.051	0.500
PFHxS	4.55	1.000	30165.5		A	13C3-PFHxS	4.56	325716.7	0.093	0.469
PFHpA	4.55	1.000	87232.0		A	13C4-PFHpA	4.55	548044.5	0.159	0.535
6:2-FTS	4.91	1.000	7814.5		A	13C2-6:2-FTS	4.91	35283.6	0.221	0.553
PFHpS	4.92	1.080	30009.2		A	13C3-PFHxS	4.56	325716.7	0.092	0.482
PFOA	4.93	1.000	86207.9		M	13C8-PFOA	4.92	939368.6	0.092	0.517
PFOS	5.25	1.000	28047.3		A	13C8-PFOS	5.25	285244.0	0.098	0.510
PFNA	5.27	1.000	73414.7		A	13C9-PFNA	5.27	481998.0	0.152	0.569
PFNS	5.55	1.060	17602.7		A	13C8-PFOS	5.25	285244.0	0.062	0.489
PFDA	5.57	1.000	60165.4		A	13C6-PFDA	5.57	607904.1	0.099	0.545
8:2-FTS	5.57	1.000	5527.1		A	13C2-8:2-FTS	5.57	25655.0	0.215	0.486
PFOSA	5.64	1.000	68994.6		A	13C8-PFOSA	5.64	699314.0	0.099	0.533
NMeFOSAA	5.71	1.000	8576.2		A	d3-NMeFOSAA	5.71	79412.4	0.108	0.556
PFDS	5.80	1.100	13175.4		A	13C8-PFOS	5.25	285244.0	0.046	0.441
PFUnDA	5.83	1.000	48289.0		A	13C7-PFUnDA	5.83	263647.7	0.183	0.525
NEtFOSAA	5.84	1.000	7263.0		A	d5-NEtFOSAA	5.84	64246.4	0.113	0.486
PFDoDA	6.06	1.000	58287.0		A	13C2-PFDoDA	6.06	556797.1	0.105	0.567
10:2-FTS	6.07	1.090	5075.6		A	13C2-8:2-FTS	5.57	25655.0	0.198	0.616
NMePFOSAE	6.09	1.000	41425.0		A	d7-NMePFOSAE	6.08	330937.5	0.125	0.561
NMePFOSA	6.10	1.000	8417.2		A	d3-NMePFOSA	6.10	78208.3	0.108	0.602
PFDoS	6.22	1.190	6665.7		A	13C8-PFOS	5.25	285244.0	0.023	0.451
NEtPFOSAE	6.25	1.000	43773.7		A	d9-NEtPFOSAE	6.24	266759.4	0.164	0.526
NEtPFOSA	6.26	1.000	7022.0		A	d5-NEtPFOSA	6.26	69615.2	0.101	0.444
PFTrDA	6.25	1.030	46666.6		A	13C2-PFDoDA	6.06	556797.1	0.084	0.529
PFTeDA	6.43	1.000	38675.5		A	13C2-PFTeDA	6.43	403281.7	0.096	0.563
PFHxDA	6.73	1.050	17615.3		A	13C2-PFTeDA	6.43	403281.7	0.044	0.542
PFODA	7.00	1.090	14725.2		A	13C2-PFTeDA	6.43	403281.7	0.037	0.523

Total Ion Chromatogram

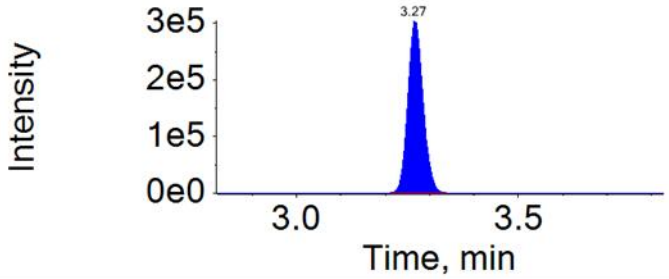


APPROVED
By JPT at 5:07 pm, 11/8/18

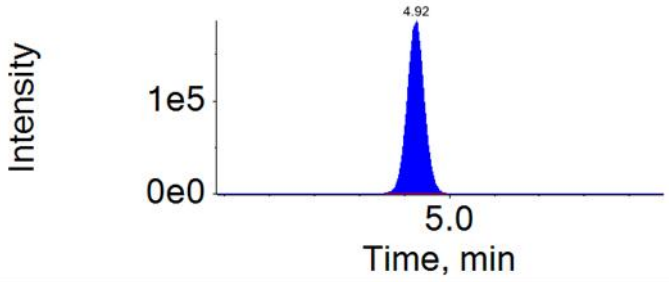
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

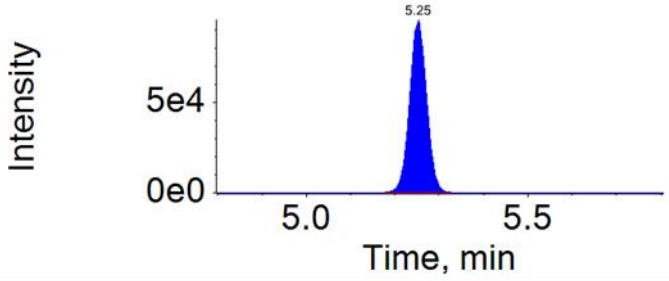
Injection Standard: 13C3-PFBA
216.0 / 172.0



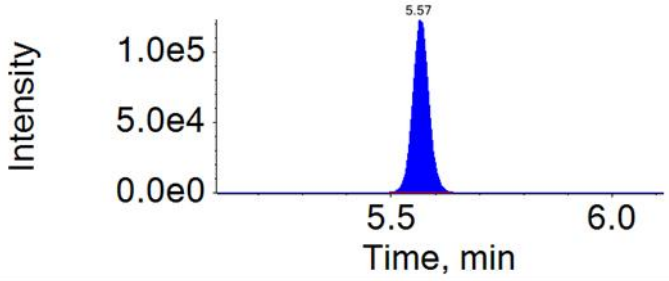
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

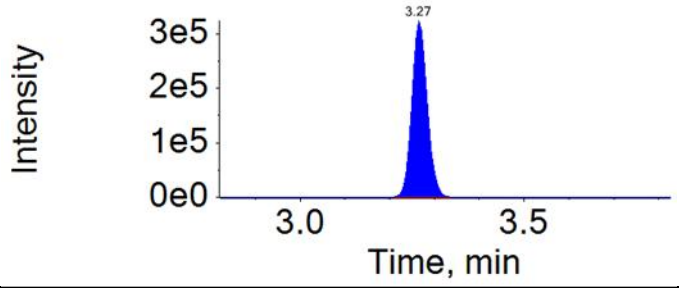


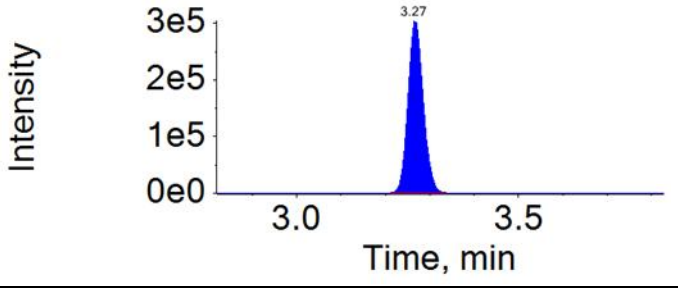
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

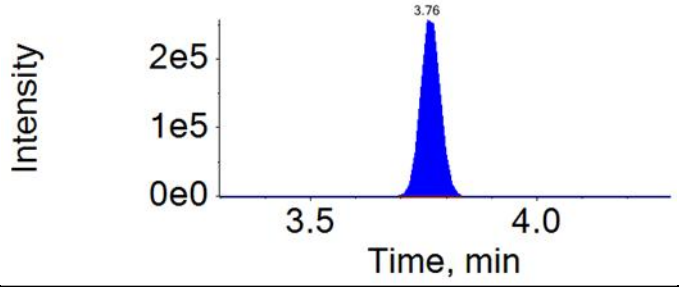
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

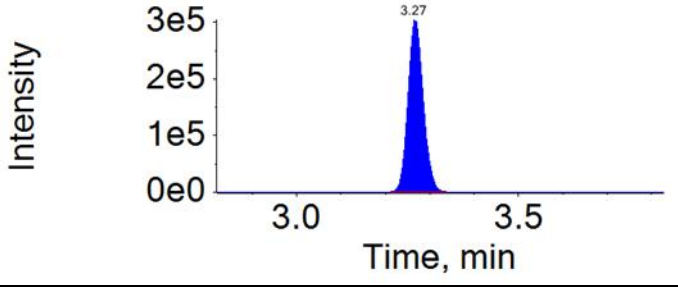
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



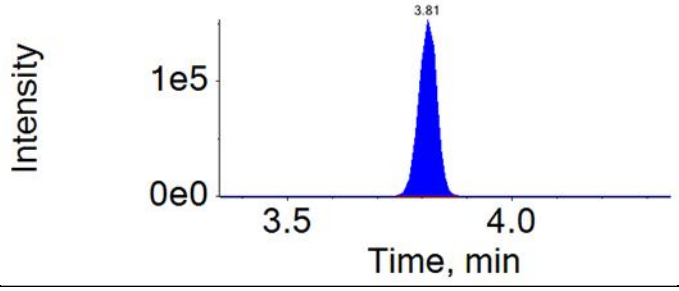


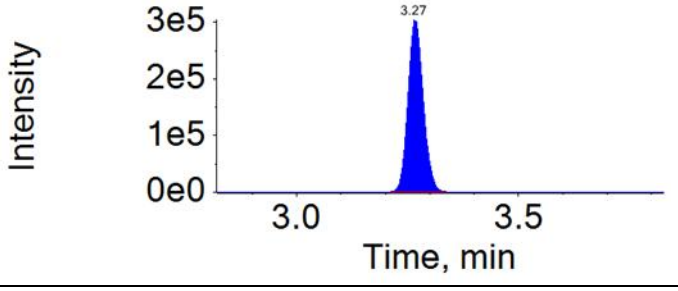
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



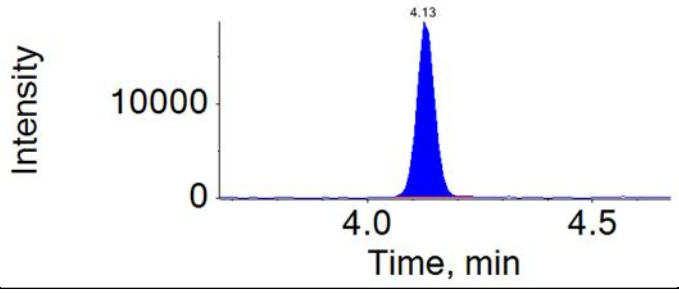


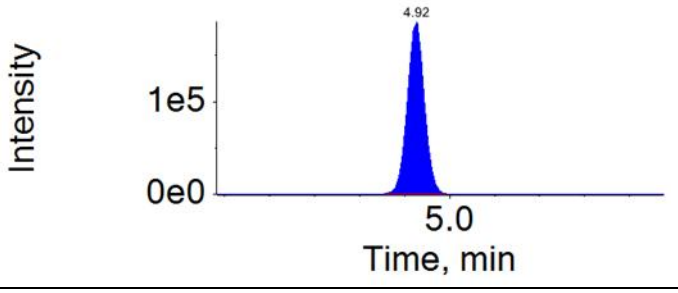
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





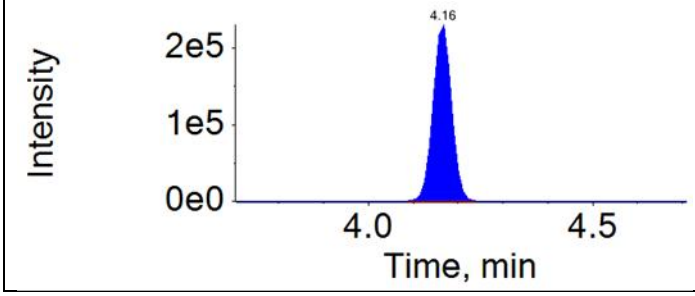
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

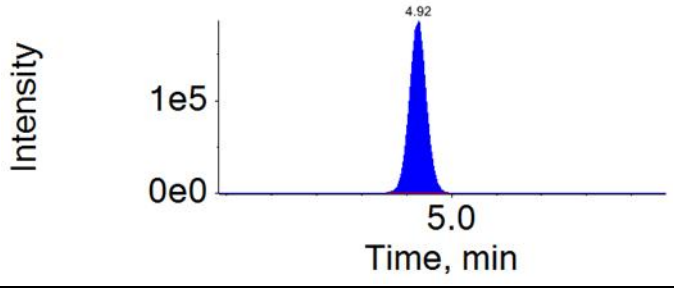




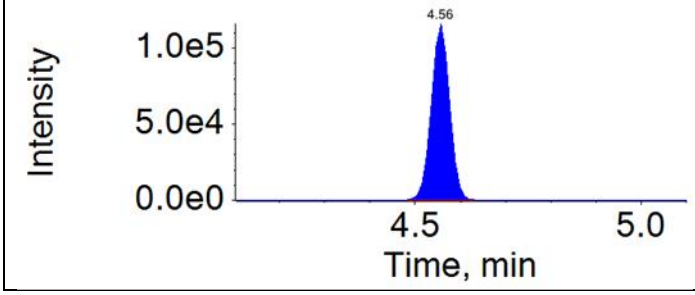
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

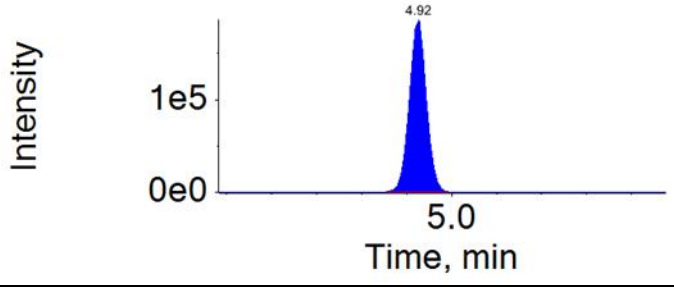
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



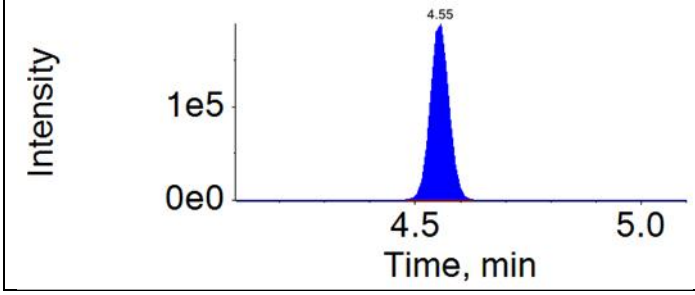


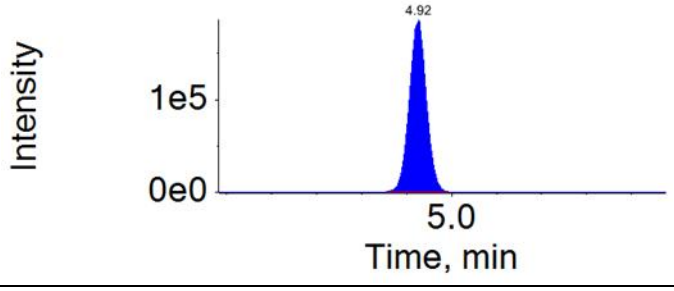
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



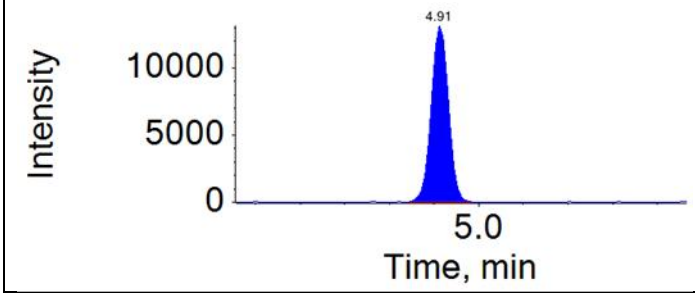


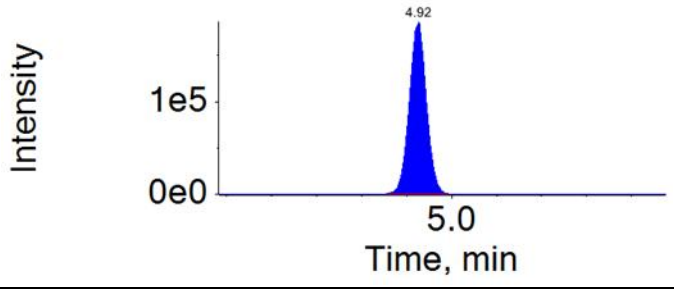
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



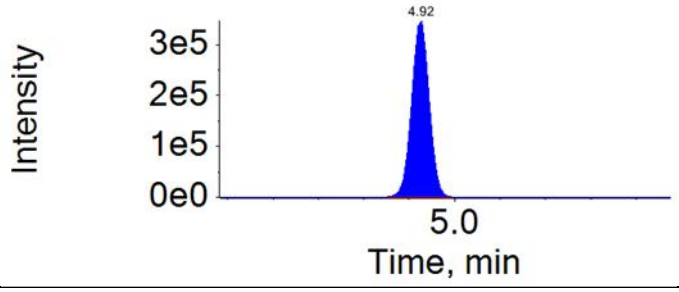


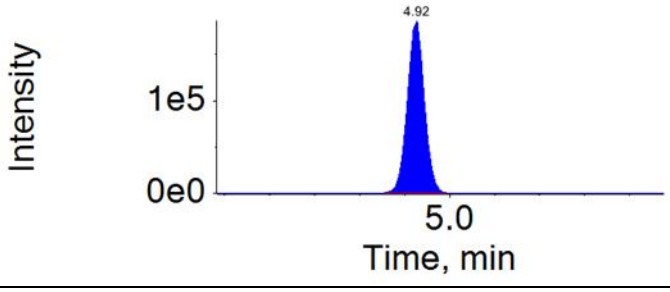
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

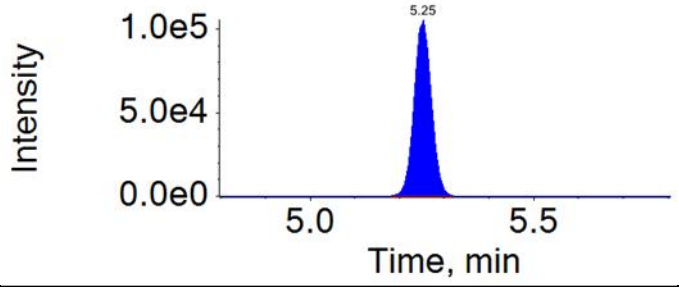
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

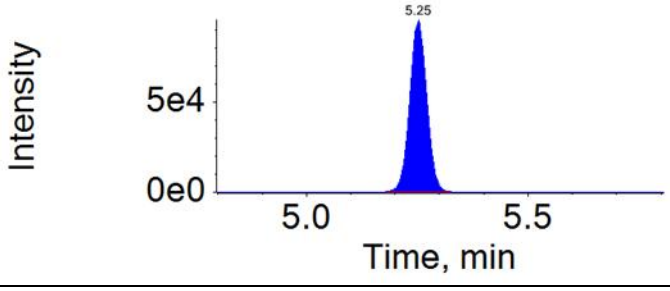
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



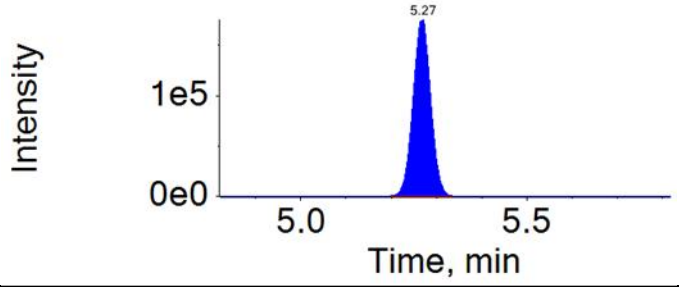


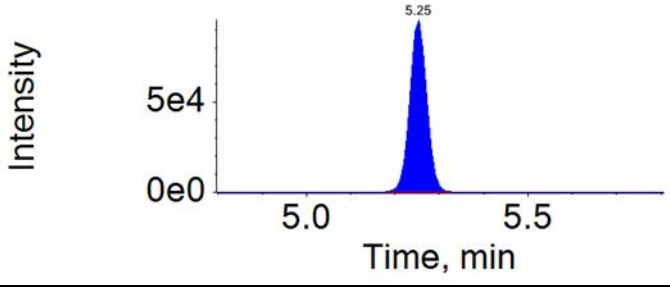
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



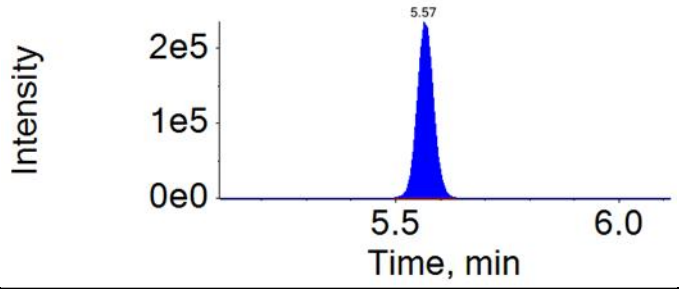


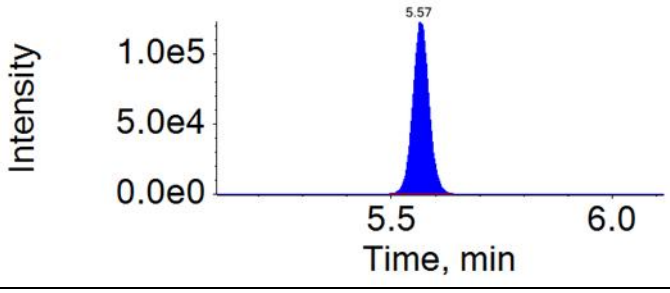
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



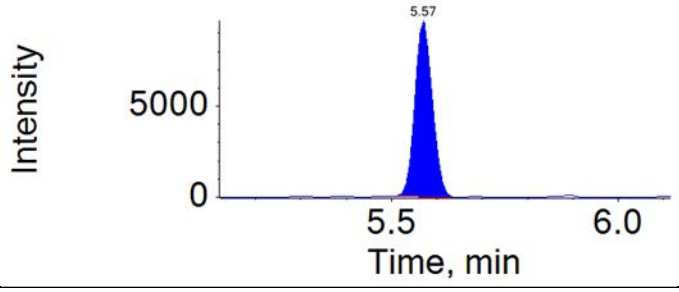


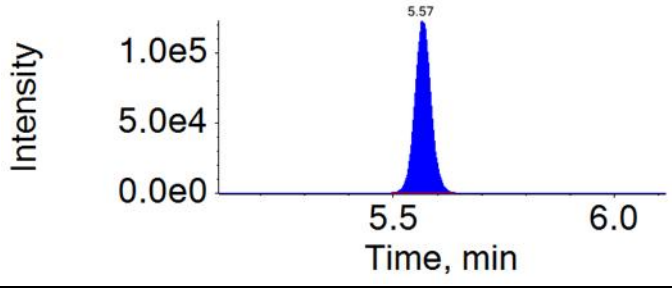
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

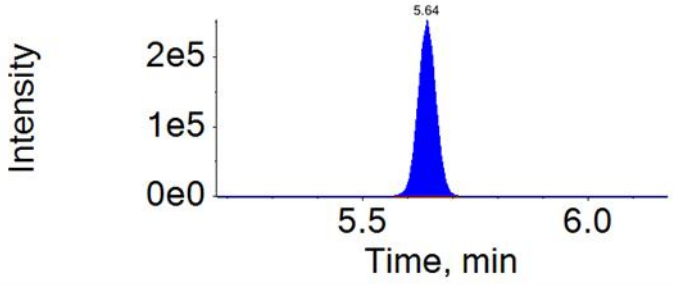
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

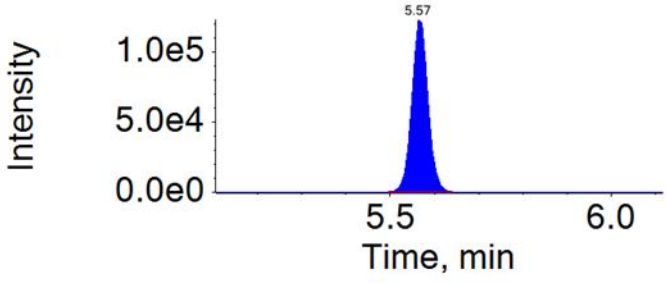
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



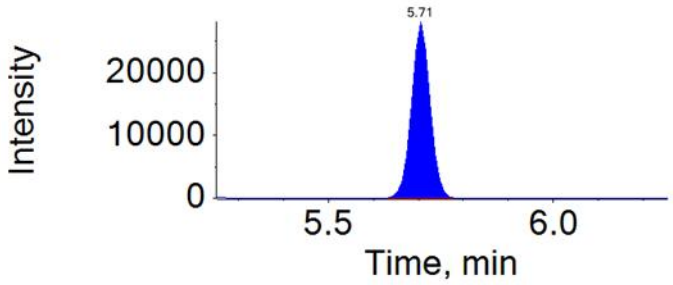


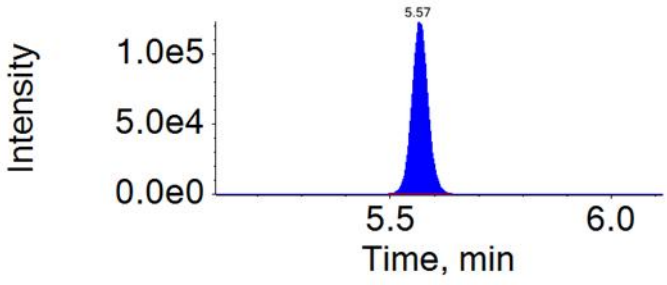
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



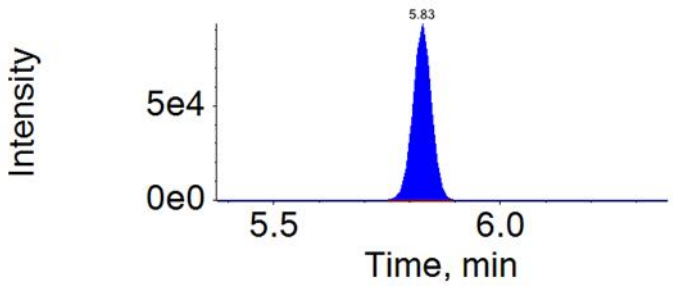


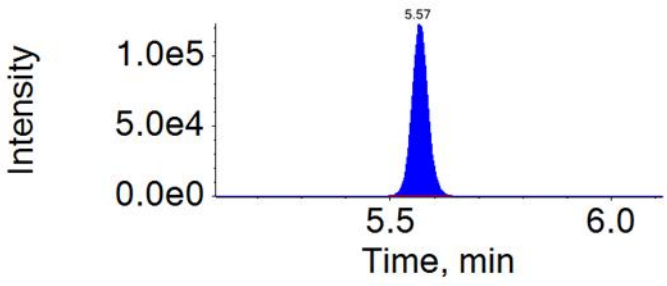
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



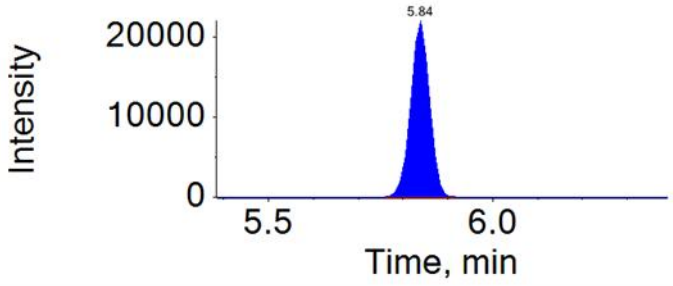


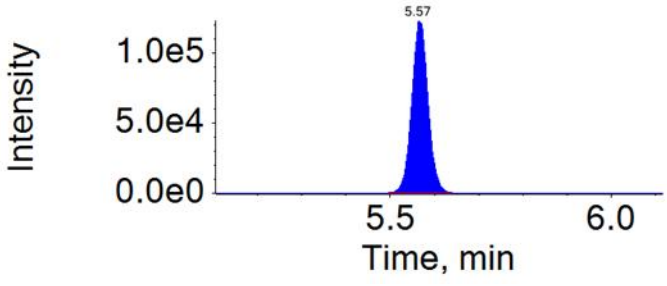
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

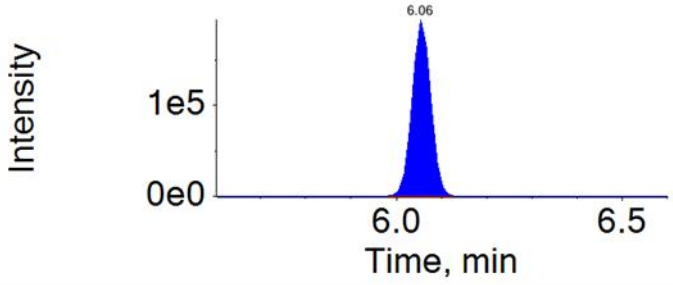
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

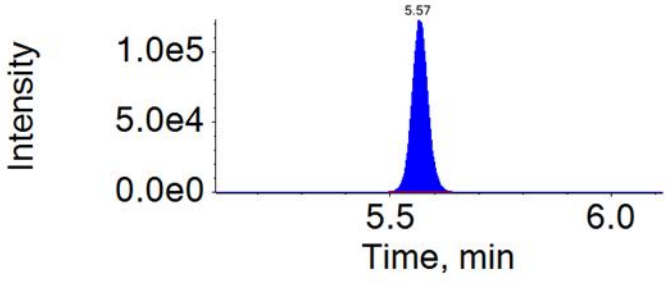
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



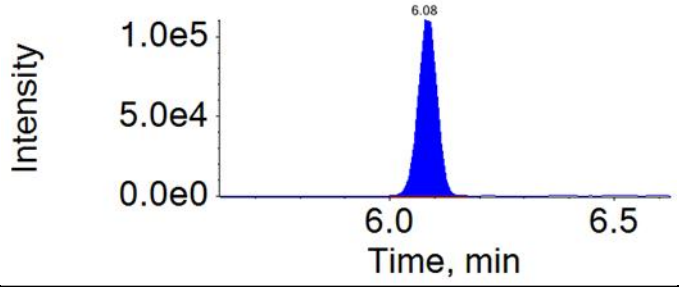


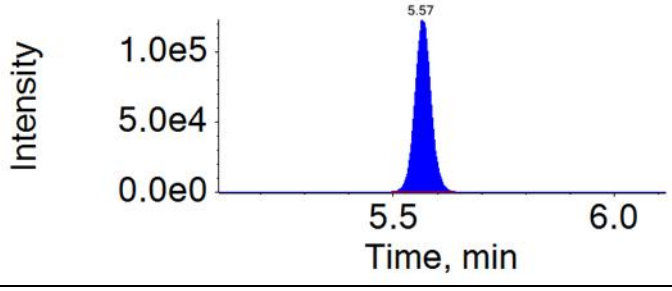
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



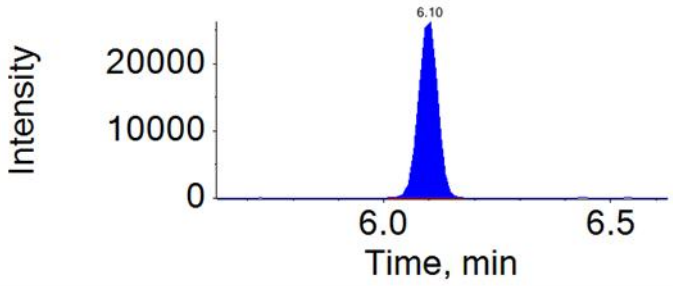


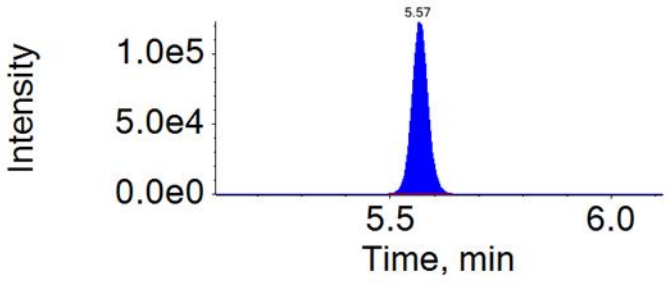
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



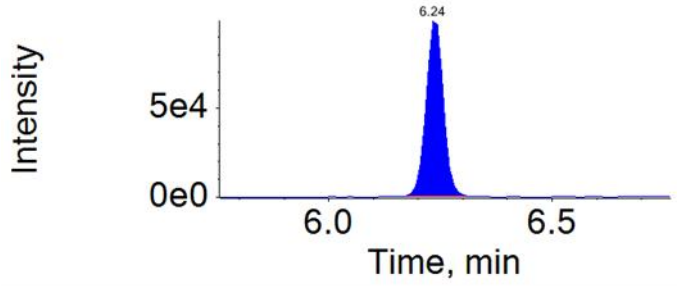


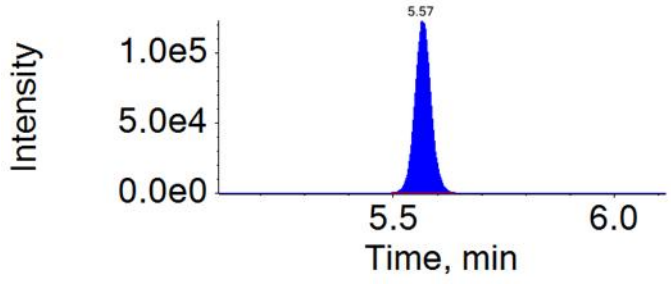
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

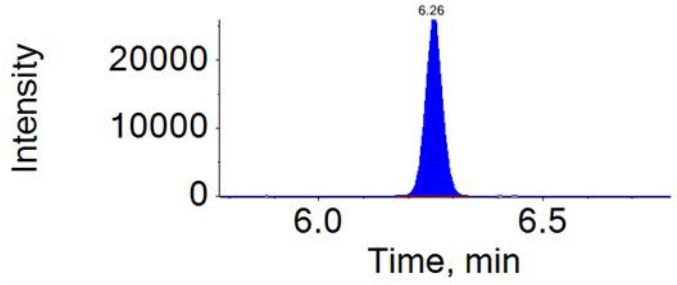
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

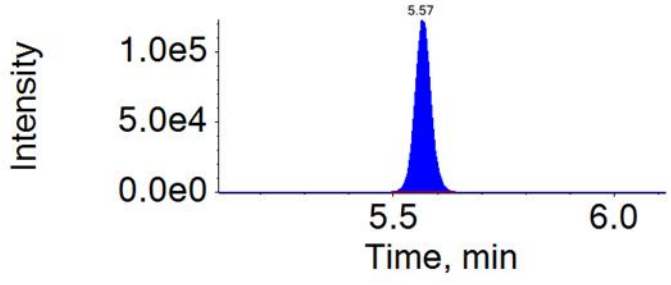
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



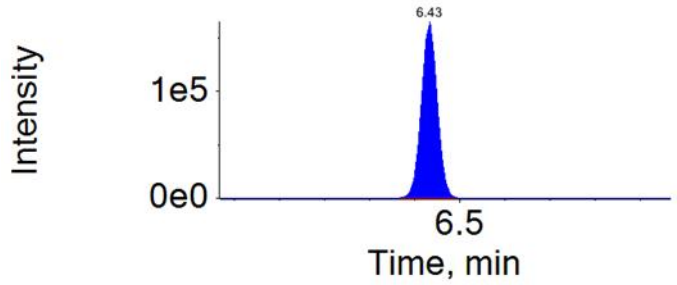


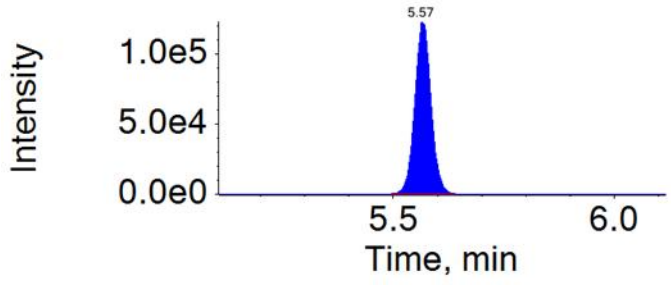
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



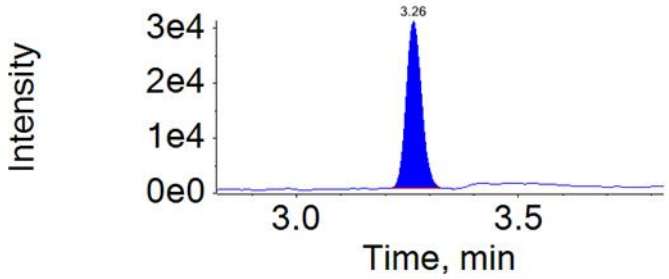


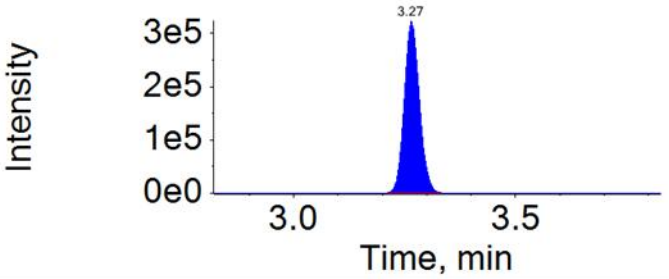
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

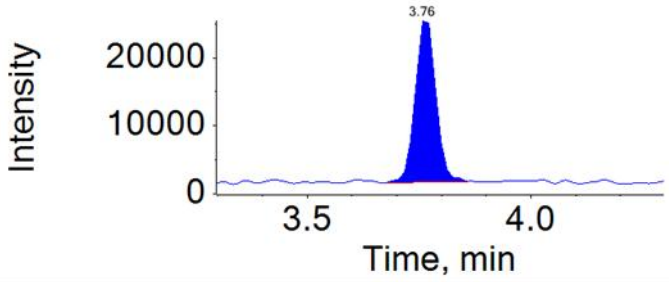
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

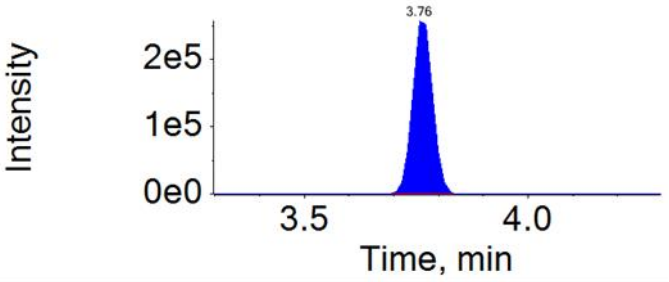
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



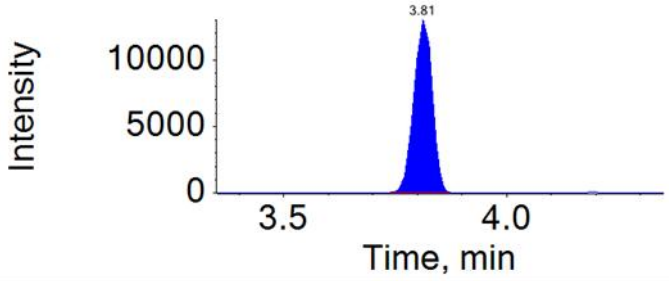


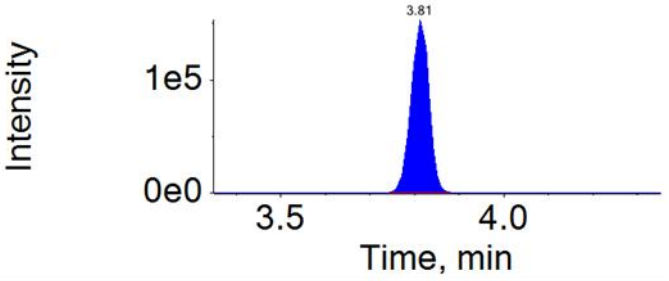
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



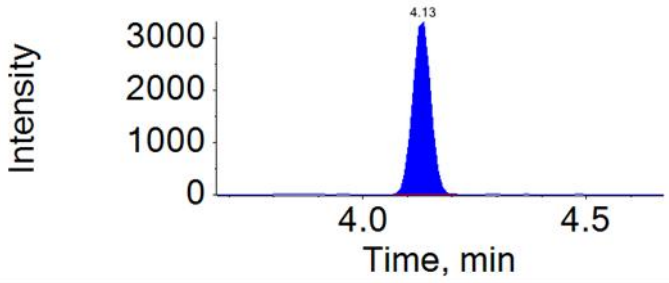


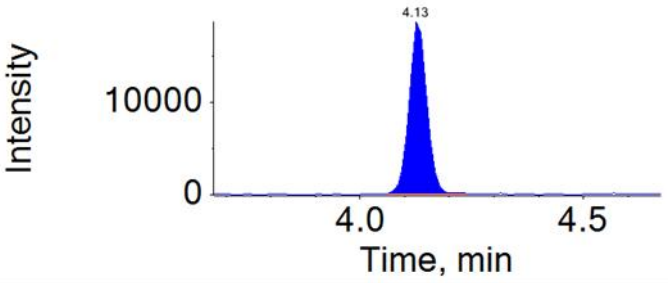
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



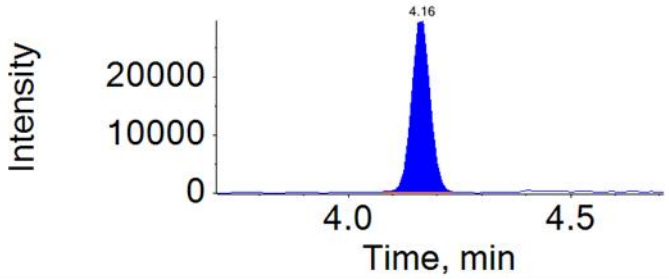


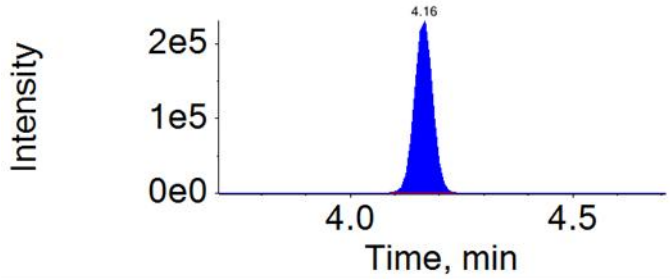
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

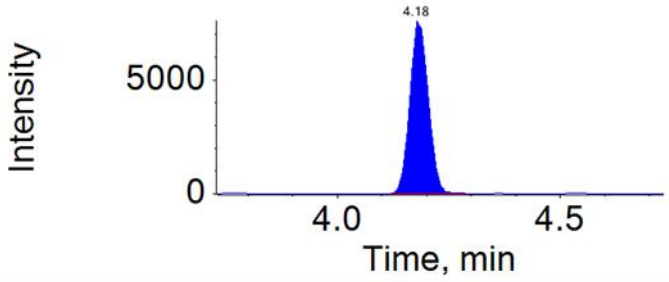
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

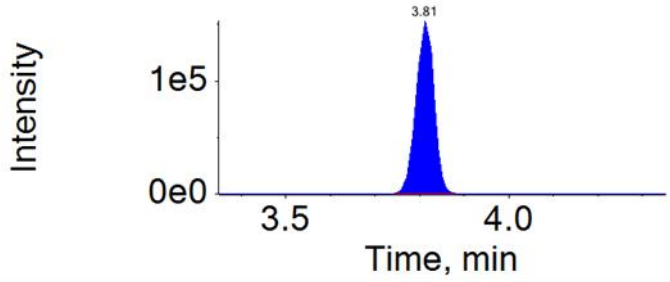
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



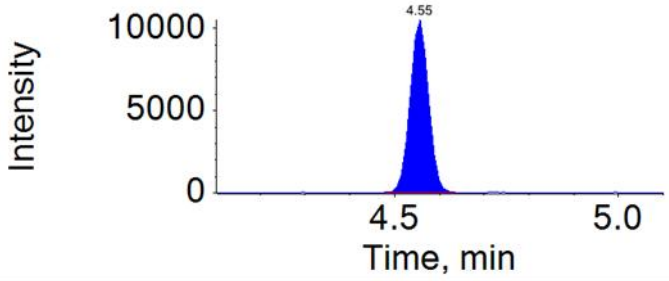


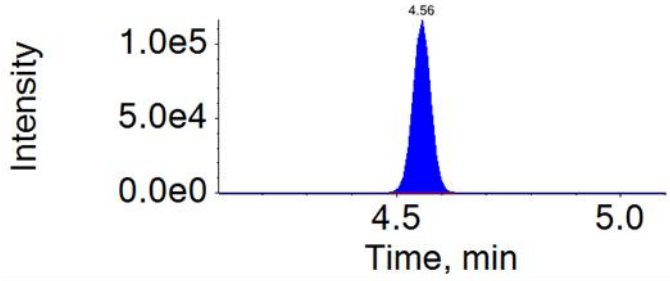
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



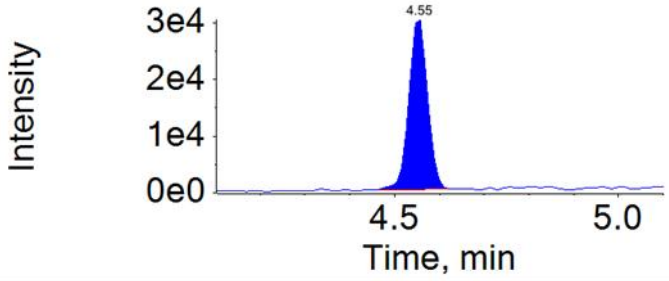


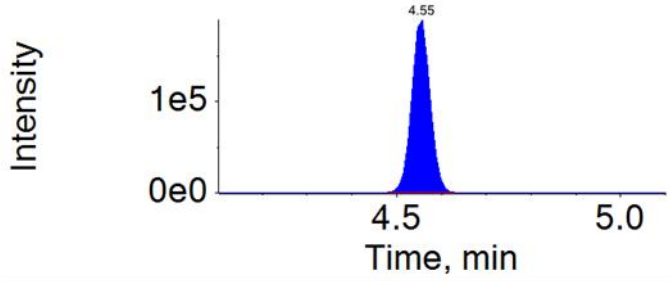
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

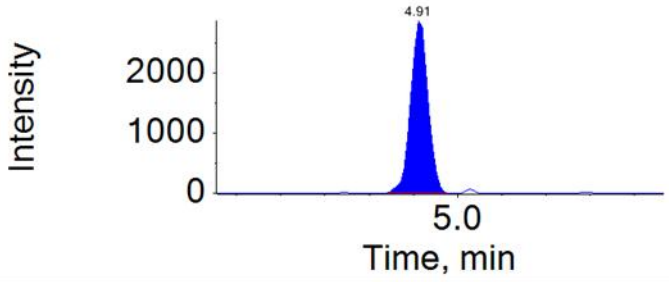
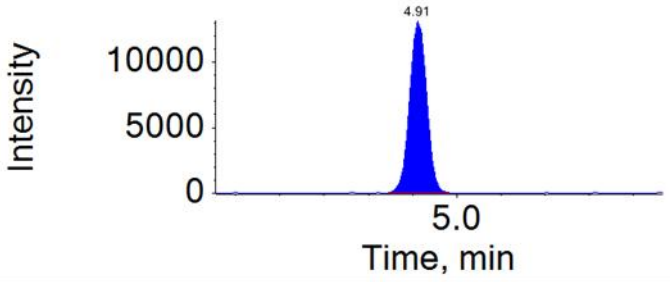


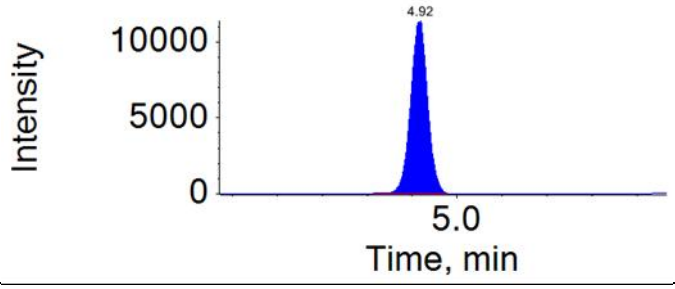
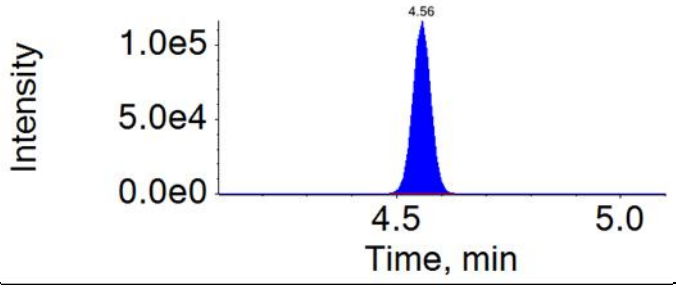


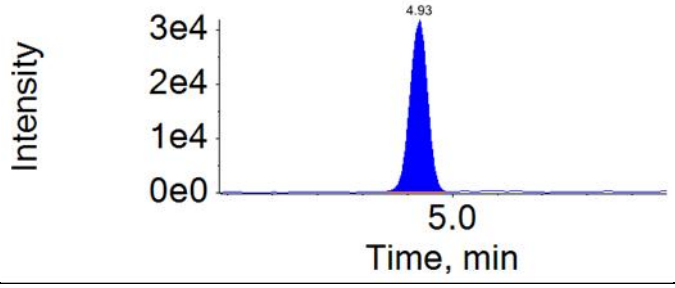
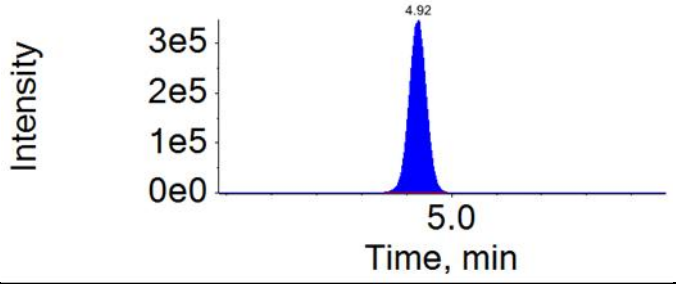
APPROVED
By JPT at 5:07 pm, 11/8/18

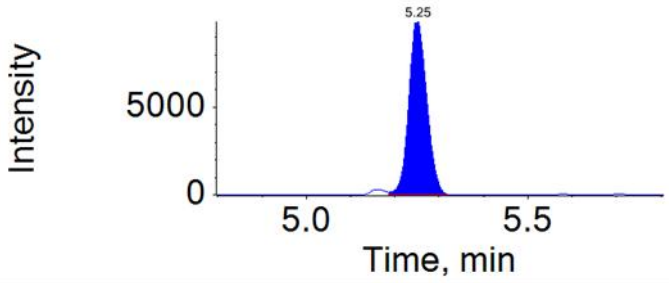
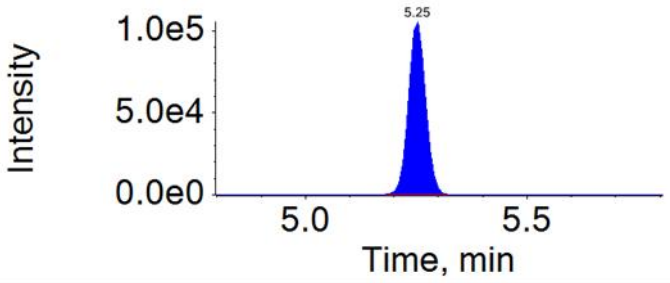
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 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
	

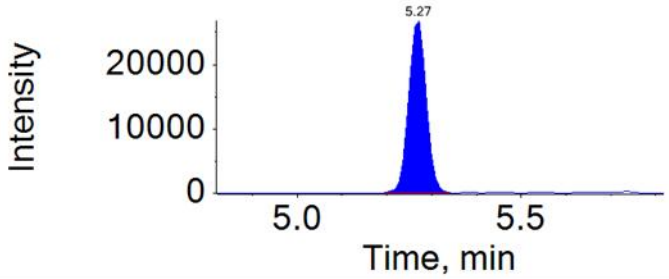
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

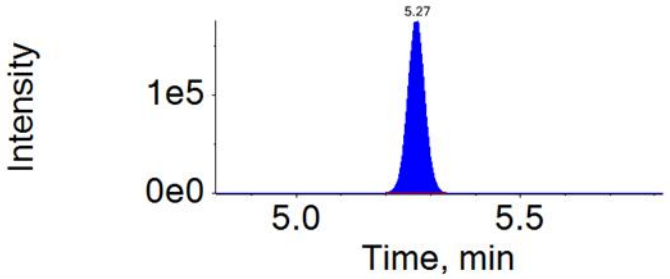
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

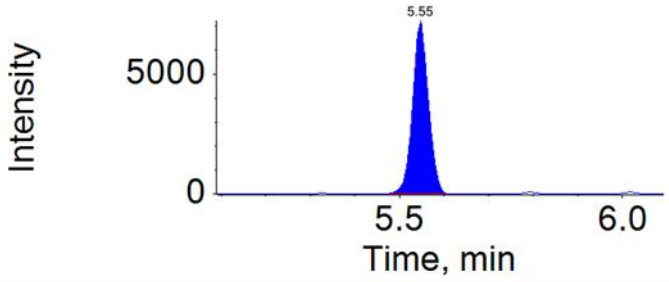
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

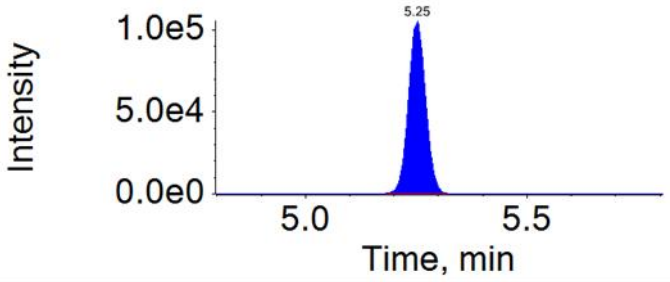
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



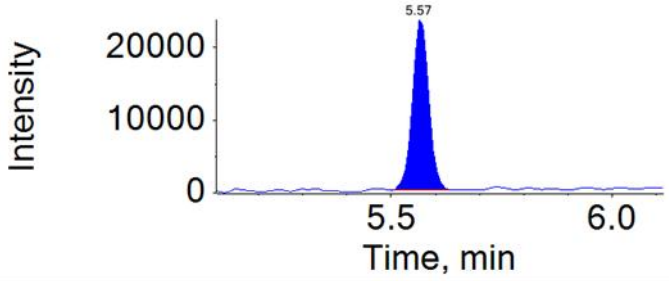


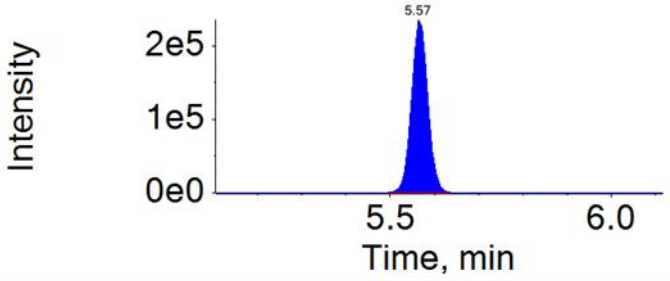
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



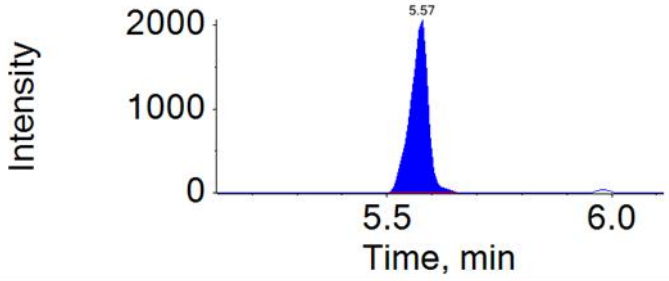


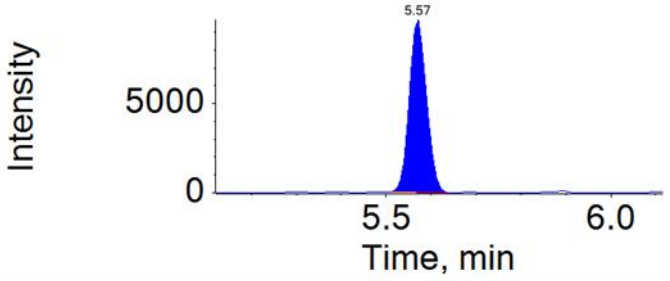
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



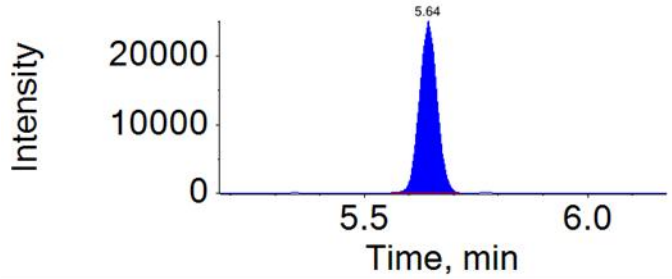


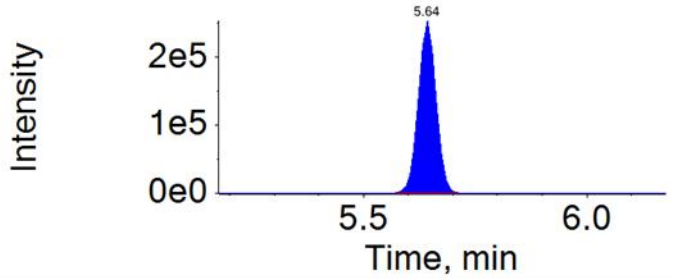
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

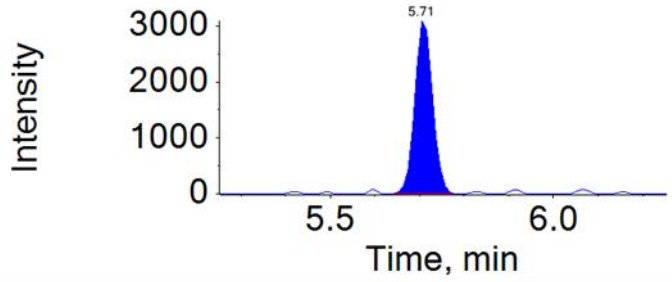
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

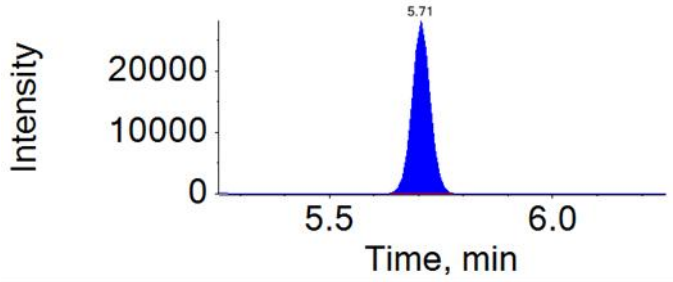
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



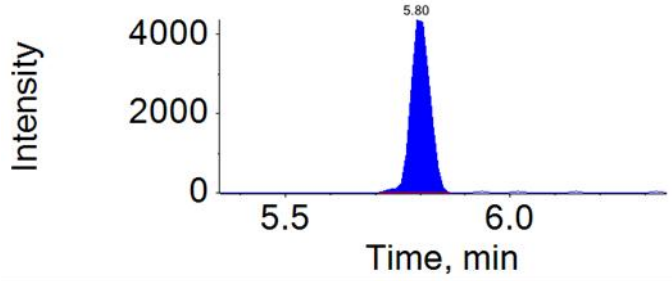


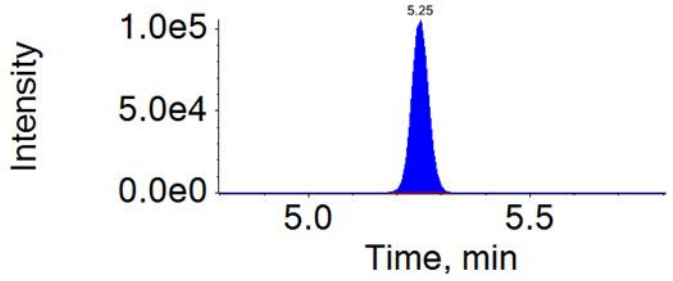
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



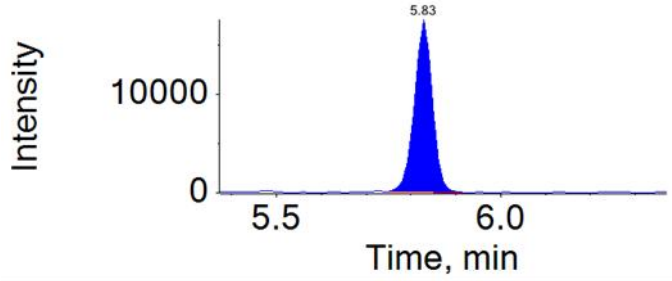


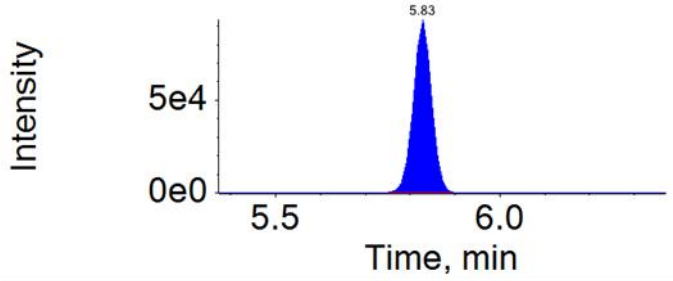
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



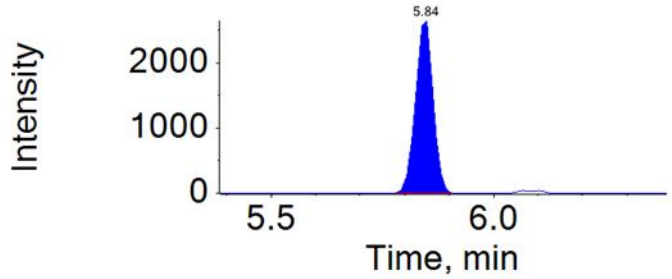


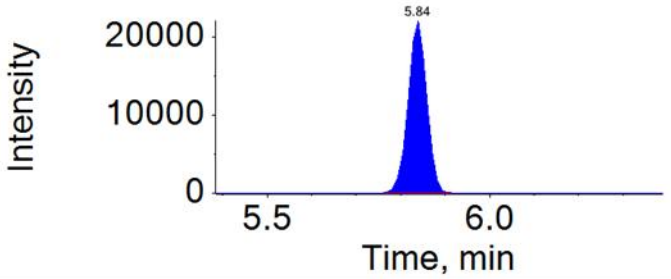
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

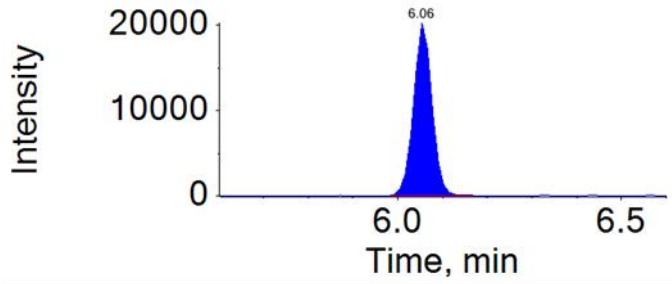
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

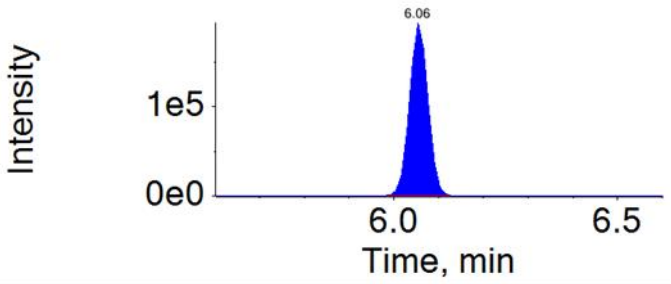
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



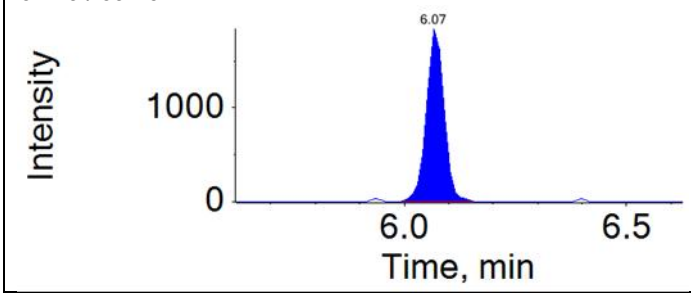


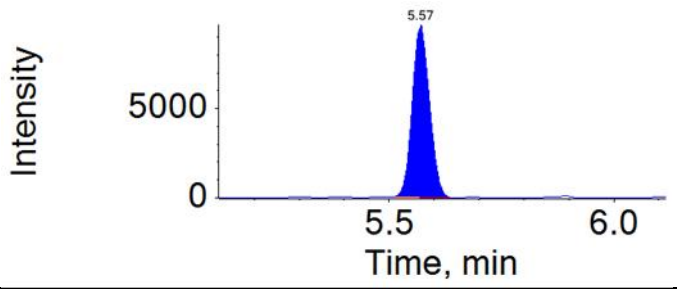
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



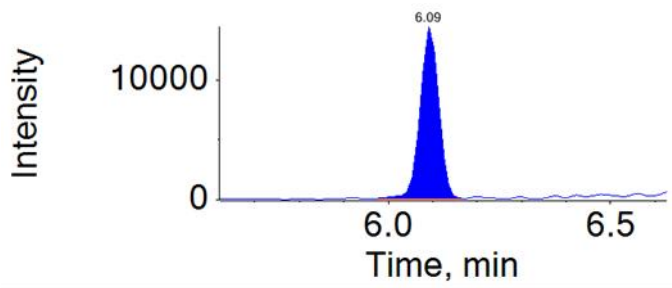


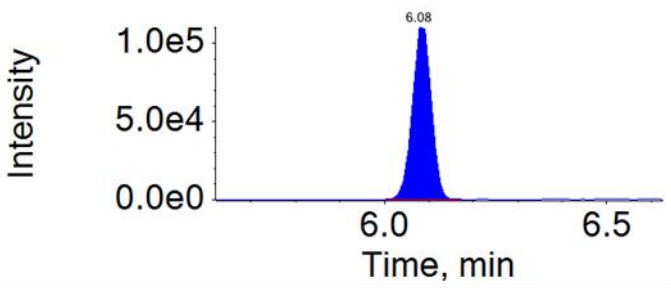
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



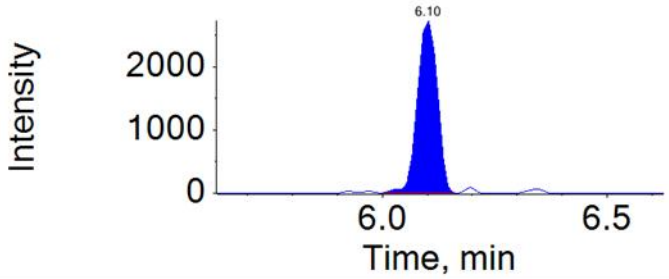


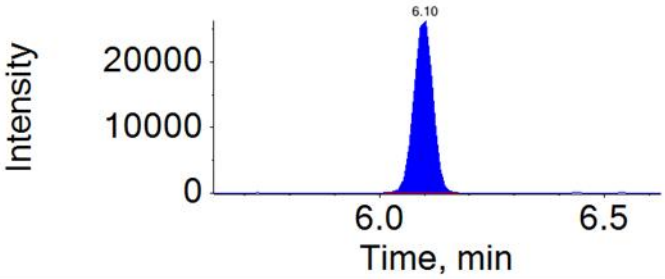
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

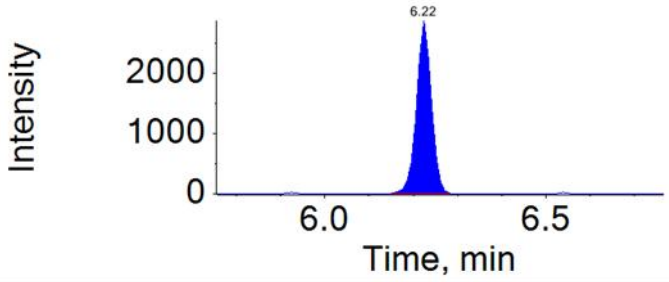
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

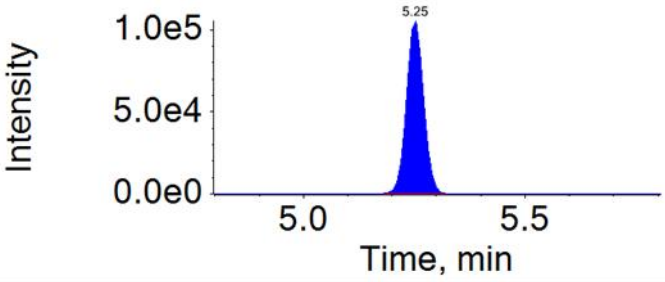
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



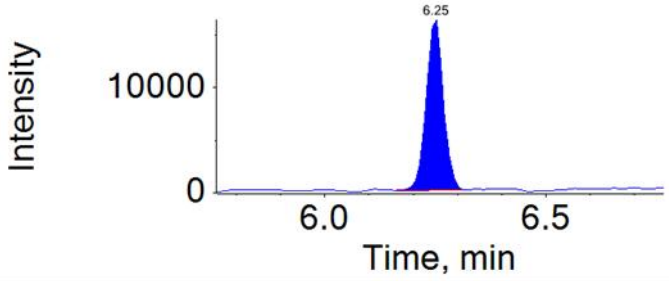


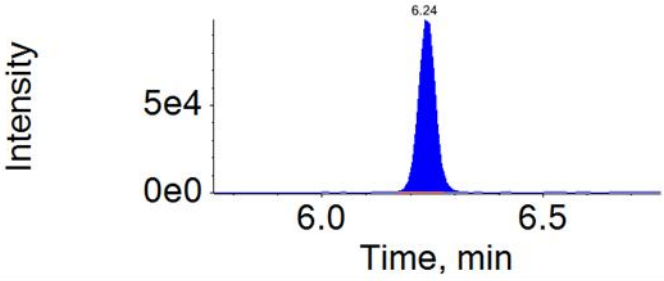
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



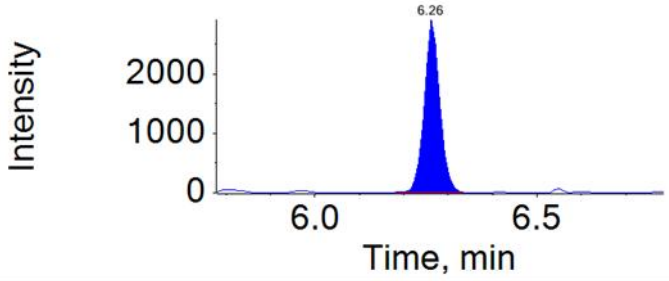


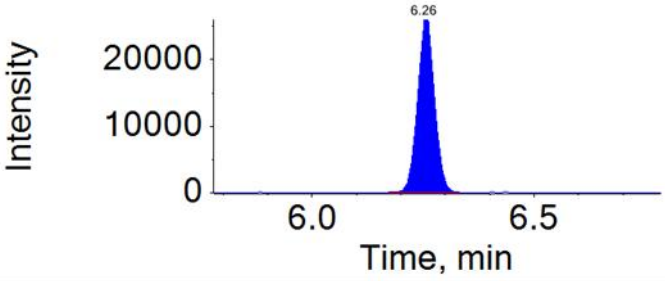
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



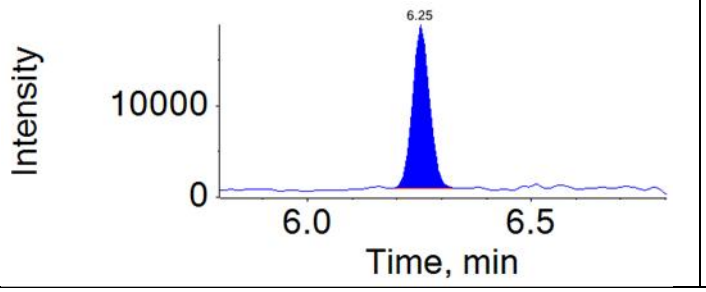


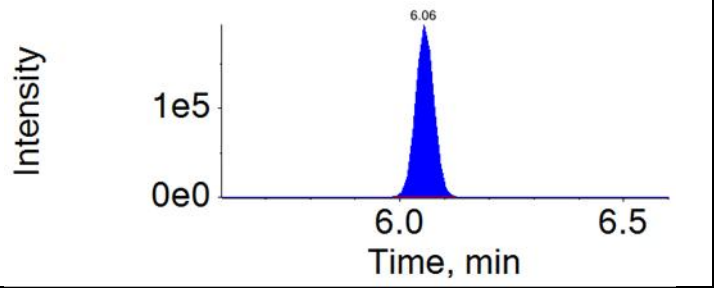
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By JPT at 5:07 pm, 11/8/18

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By HMK at 2:58 pm, 11/11/18

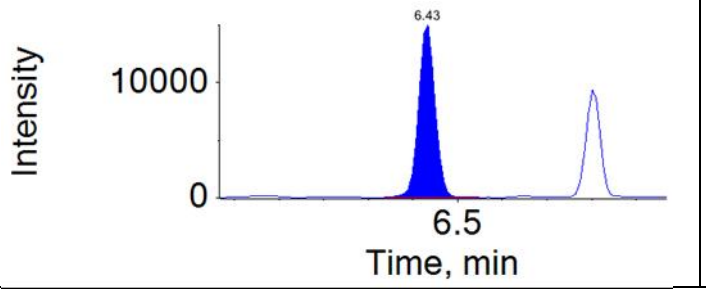
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

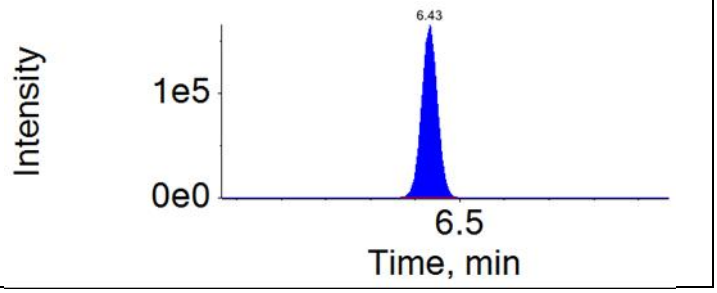
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



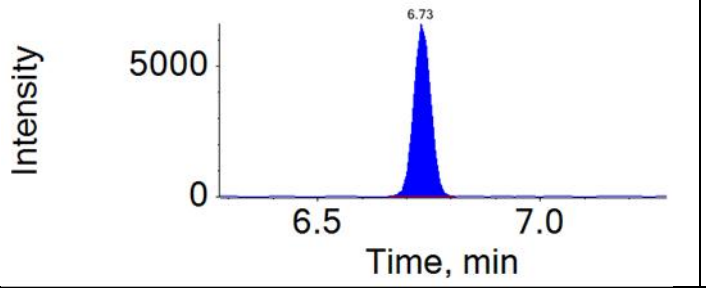


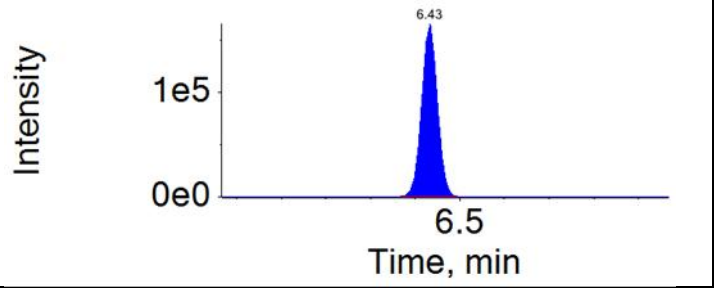
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



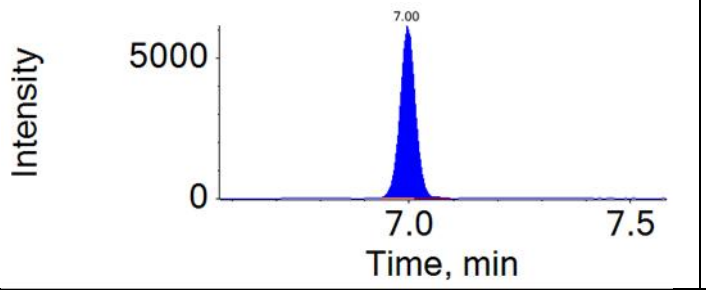


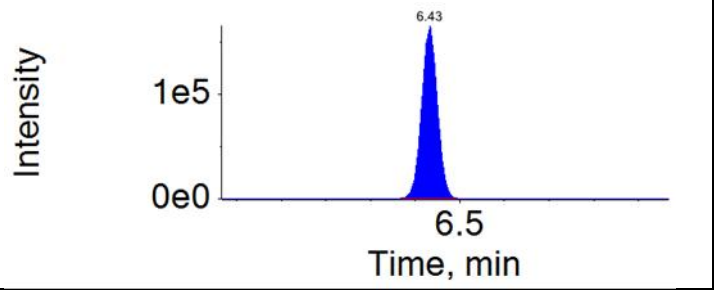
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

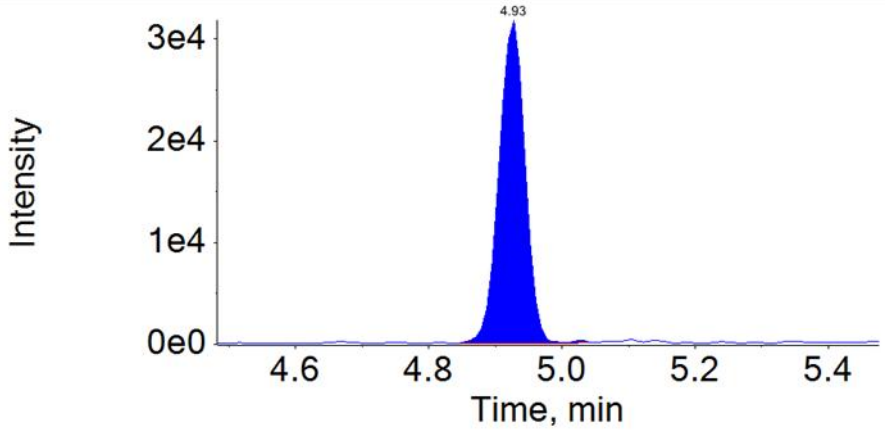


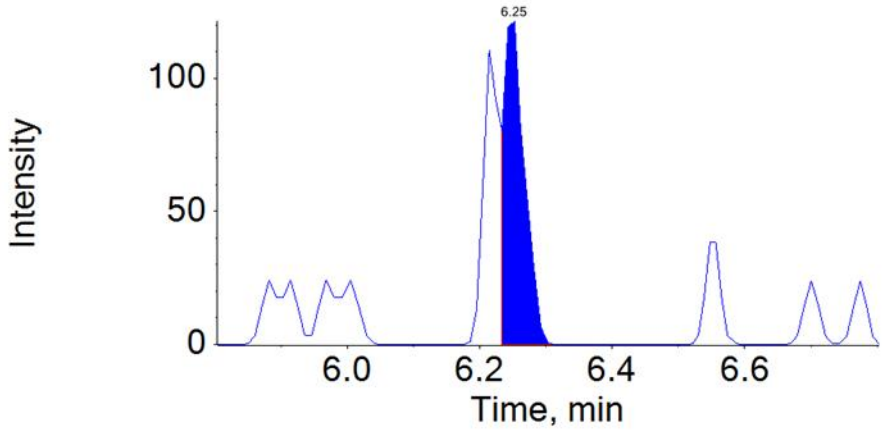


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By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFOA **RT (min.):** 4.93 **Peak Area:** 86492.1 **Mass Range:** 413.0 / 369.0 **File Name:** 18NOV08D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: PFTrDA_2 **RT (min.):** 6.25 **Peak Area:** 260.9 **Mass Range:** 663.0 / 169.0 **File Name:** 18NOV08D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM

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

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Ion Ratio Report

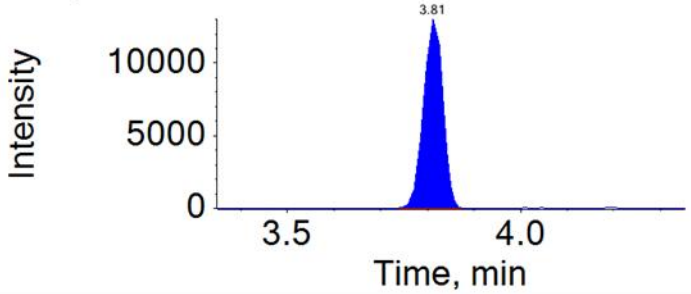
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-05.wiff

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	37650.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	13251.9	A	N/A	0.3520	-2	50	
4:2-FTS	4.13	1.00	9377.7	A	N/A	1.0000			
4:2-FTS_2	4.13	1.00	5342.6	A	N/A	0.5697	-10	50	
PFHxA	4.16	1.00	85965.4	A	N/A	1.0000			
PFHxA_2	4.17	1.00	972.8	A	N/A	0.0113	-1	50	
PFPeS	4.18	1.10	21837.5	A	N/A	1.0000			
PFPeS_2	4.18	1.10	10586.9	A	N/A	0.4848	-10	50	
PFHxS	4.55	1.00	30165.5	A	N/A	1.0000			
PFHxS_2	4.56	1.00	10382.1	A	N/A	0.3442	-4	50	
PFHpA	4.55	1.00	87232.0	A	N/A	1.0000			
PFHpA_2	4.56	1.00	4952.8	A	N/A	0.0568	-2	50	
6:2-FTS	4.91	1.00	7814.5	A	N/A	1.0000			
6:2-FTS_2	4.91	1.00	4814.5	A	N/A	0.6161	-9	50	
PFHpS	4.92	1.08	30009.2	A	N/A	1.0000			
PFHpS_2	4.92	1.08	13233.1	A	N/A	0.4410	12	50	
PFOA	4.93	1.00	86207.9	M	N/A	1.0000			
PFOA_2	4.92	1.00	4733.1	A	N/A	0.0549	-14	50	
PFOS	5.25	1.00	28047.3	A	N/A	1.0000			
PFOS_2	5.25	1.00	9799.5	A	N/A	0.3494	0	50	
PFNA	5.27	1.00	73414.7	A	N/A	1.0000			
PFNA_2	5.26	1.00	1253.8	A	N/A	0.0171	-17	50	
PFNS	5.55	1.06	17602.7	A	N/A	1.0000			
PFNS_2	5.55	1.06	8114.4	A	N/A	0.4610	-6	50	
PFDA	5.57	1.00	60165.4	A	N/A	1.0000			
PFDA_2	5.56	1.00	427.9	A	N/A	0.0071	26	50	
8:2-FTS	5.57	1.00	5527.1	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	4227.8	A	N/A	0.7649	24	50	
NMeFOSAA	5.71	1.00	8576.2	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	1355.2	A	N/A	0.1580	-28	50	
PFDS	5.80	1.10	13175.4	A	N/A	1.0000			
PFDS_2	5.80	1.11	8331.4	A	N/A	0.6323	36	50	
PFUnDA	5.83	1.00	48289.0	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	182.7	A	N/A	0.0038	20	50	
NEtFOSAA	5.84	1.00	7263.0	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	4239.9	A	N/A	0.5838	-4	50	
PFDoDA	6.06	1.00	58287.0	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	1258.3	A	N/A	0.0216	97	50	OOS
10:2-FTS	6.07	1.09	5075.6	A	N/A	1.0000			
10:2-FTS_2	6.07	1.09	2705.8	A	N/A	0.5331	-25	50	
PFTrDA	6.25	1.03	46666.6	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	443.3	M	N/A	0.0095	-1	50	
PFTeDA	6.43	1.00	38675.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	32.8	A	N/A	0.0008	-85	50	OOS
PFHxDA	6.73	1.05	17615.3	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	985.7	A	N/A	0.0560	-6	50	
PFODA	7.00	1.09	14725.2	A	N/A	1.0000			
PFODA_2	7.00	1.09	380.8	A	N/A	0.0259	1	50	

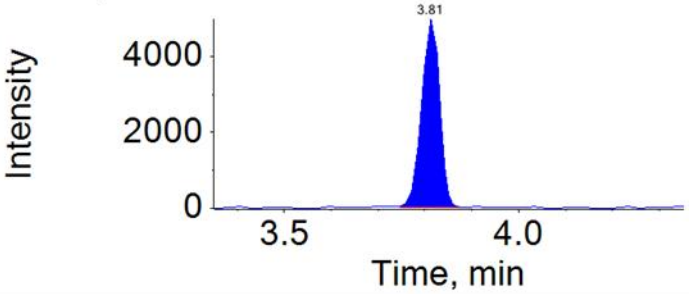
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

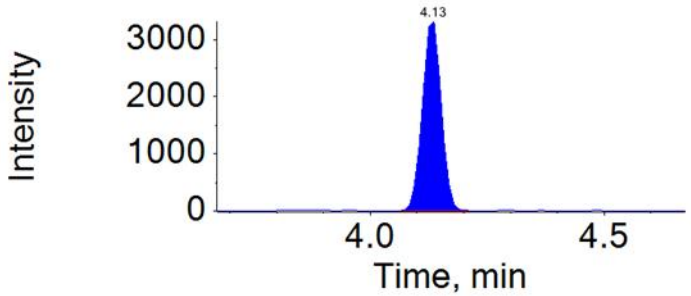
Component: PFBS
Primary Mass: 299.0 / 80.0



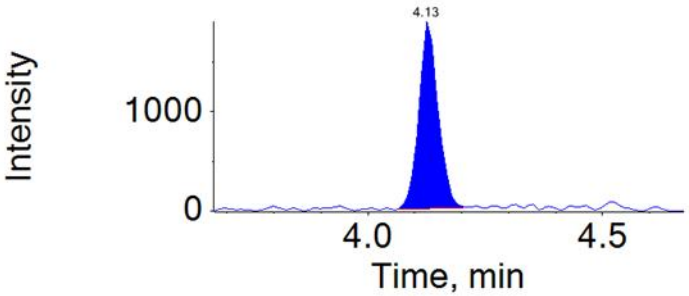
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



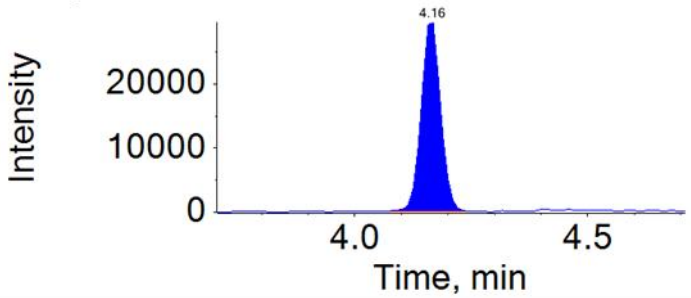
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



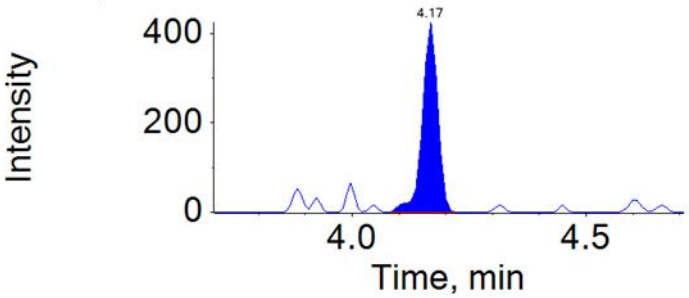
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



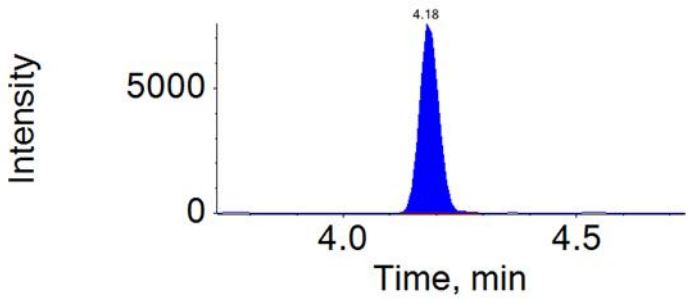
Component: PFHxA
Primary Mass: 313.0 / 269.0



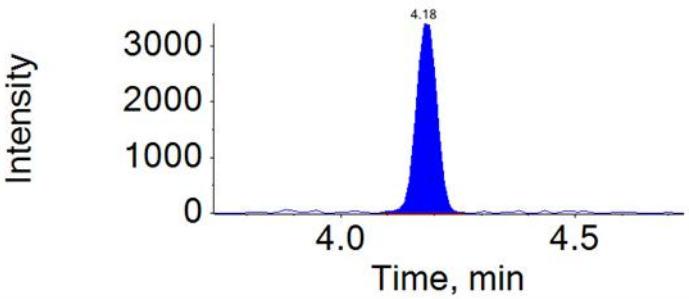
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



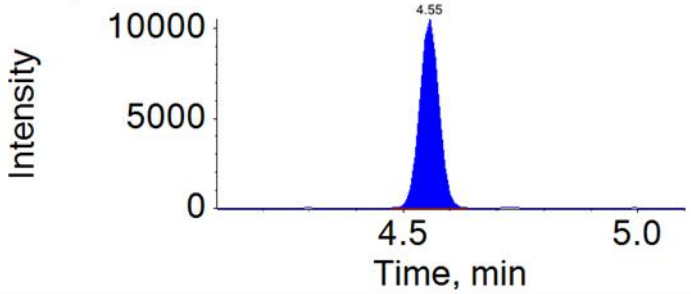
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



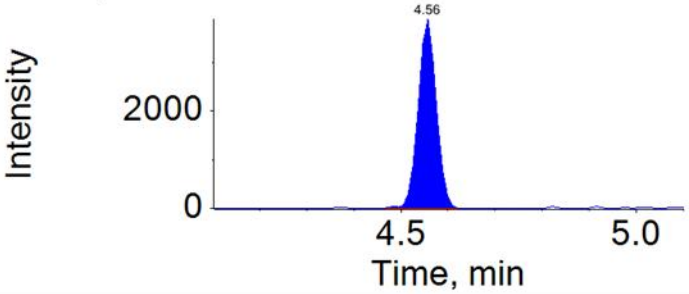
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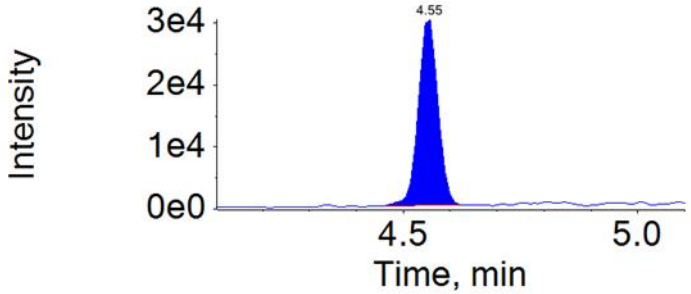
Component: PFHxS
Primary Mass: 399.0 / 80.0



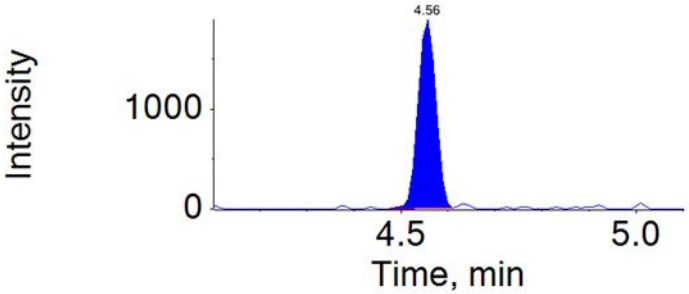
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



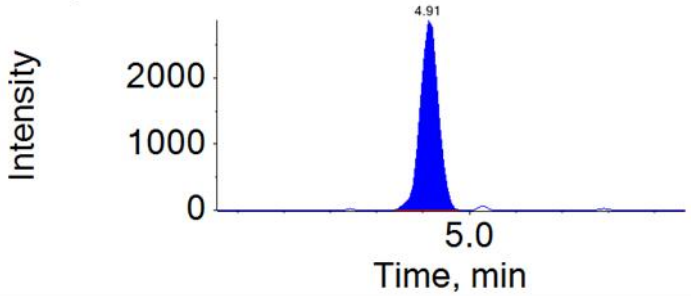
Component: PFHpA
Primary Mass: 363.0 / 319.0



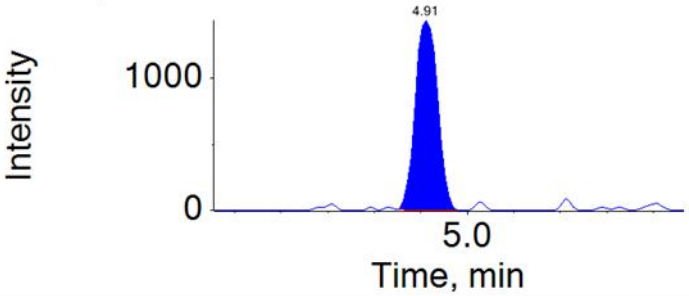
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



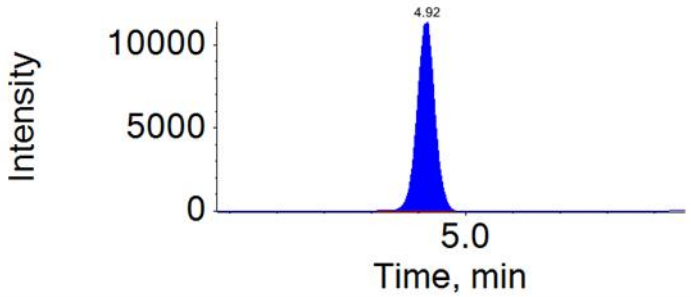
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



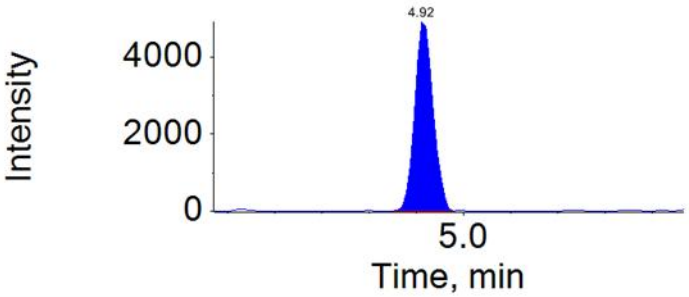
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



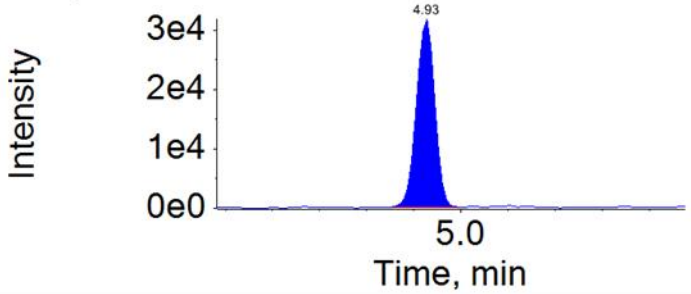
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



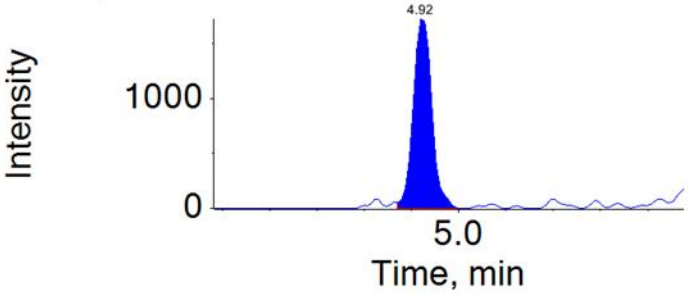
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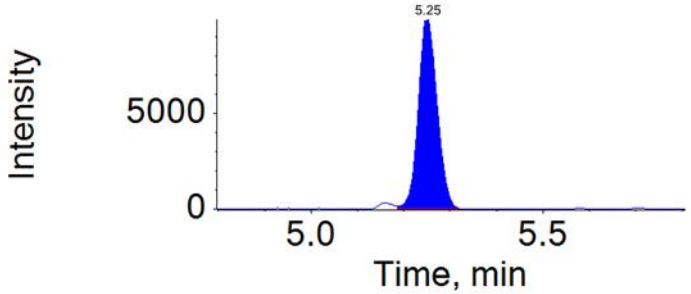
Component: PFOA
Primary Mass: 413.0 / 369.0



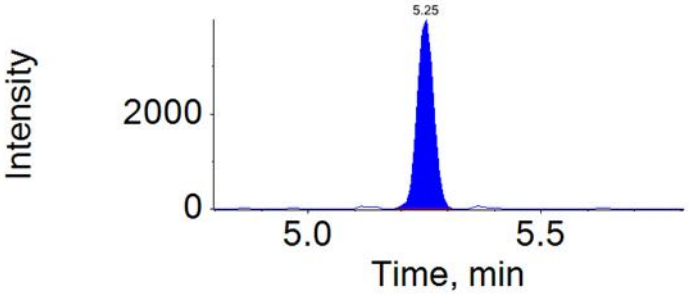
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



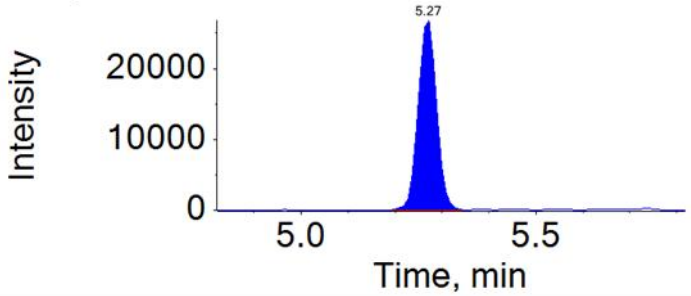
Component: PFOS
Primary Mass: 499.0 / 80.0



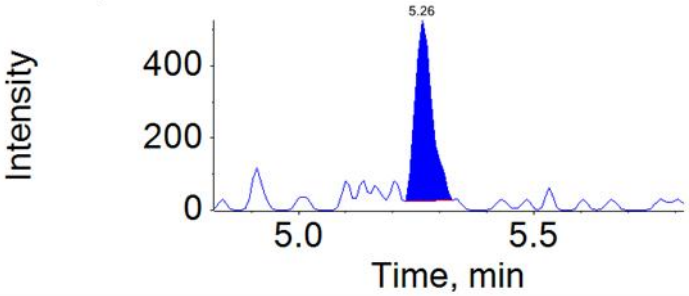
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



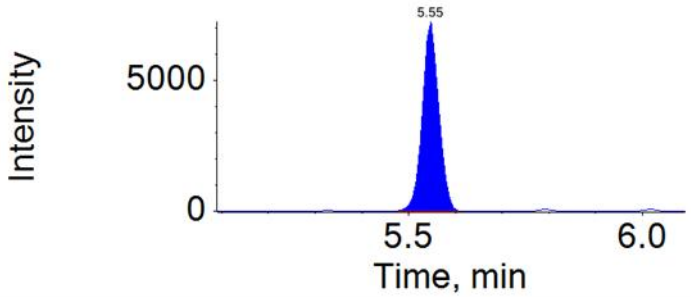
Component: PFNA
Primary Mass: 463.0 / 419.0



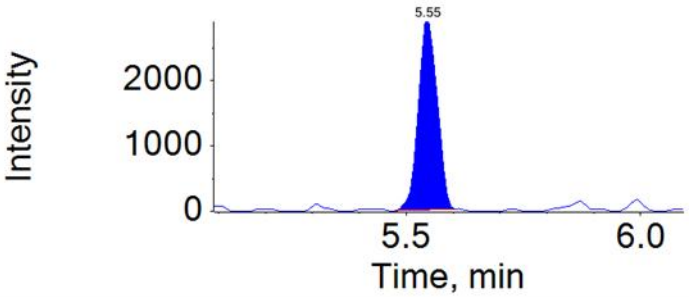
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



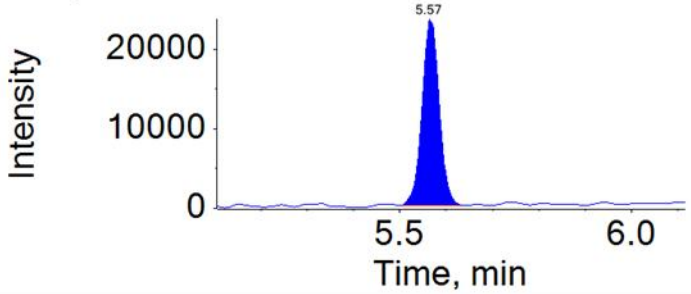
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



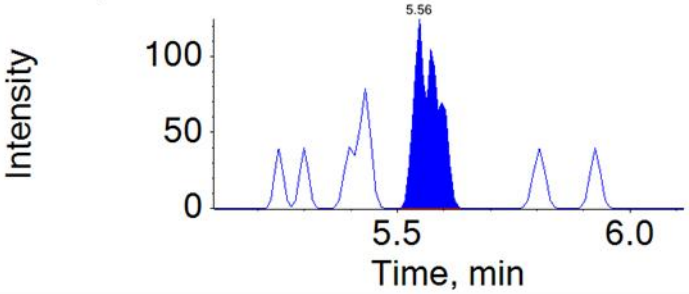
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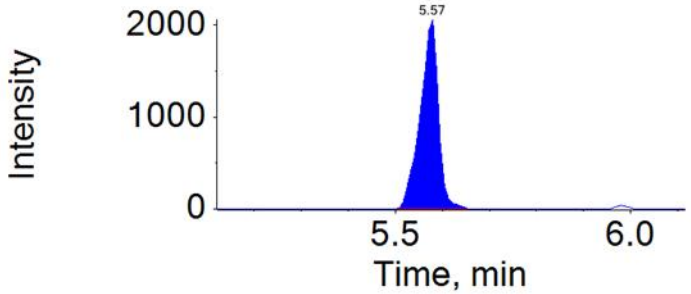
Component: PFDA
Primary Mass: 513.0 / 469.0



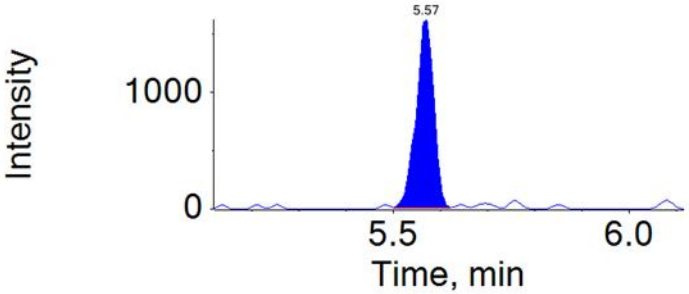
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



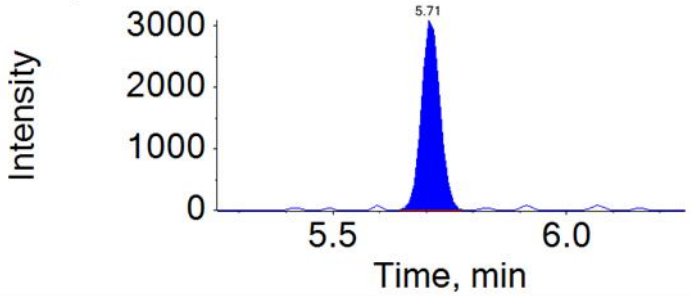
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



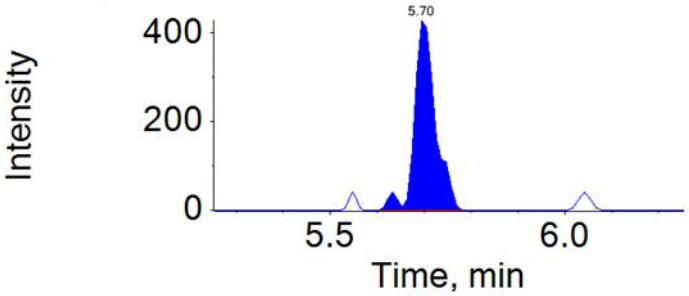
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



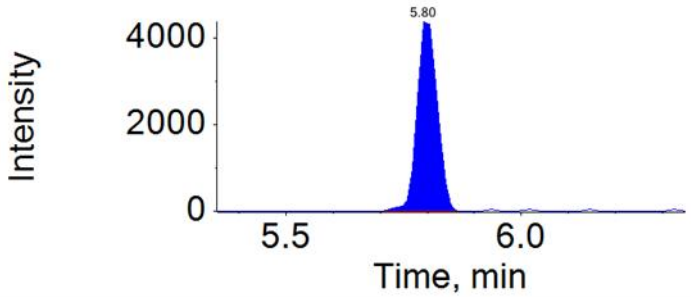
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



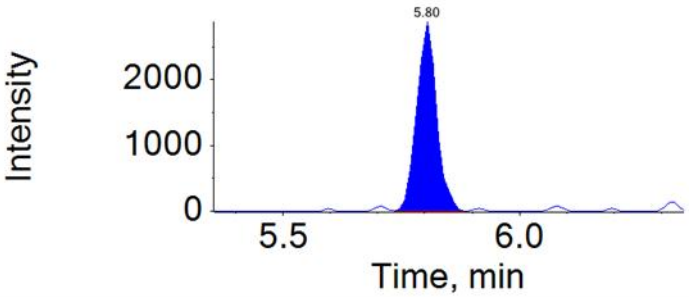
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



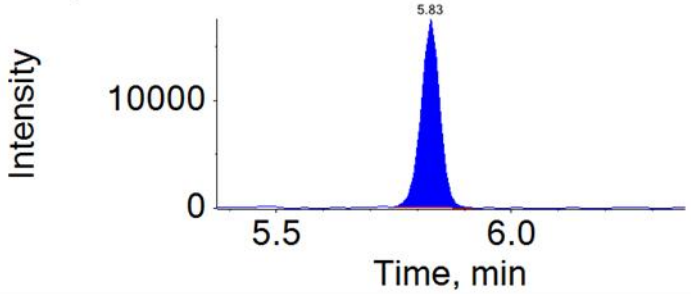
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



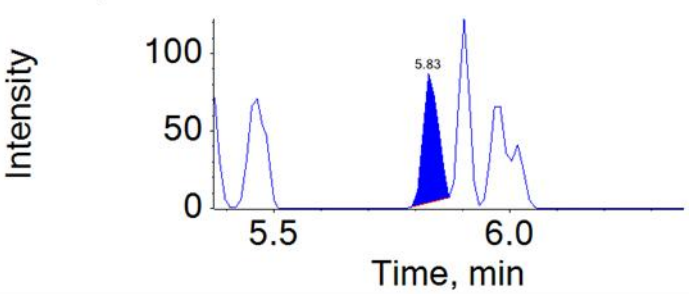
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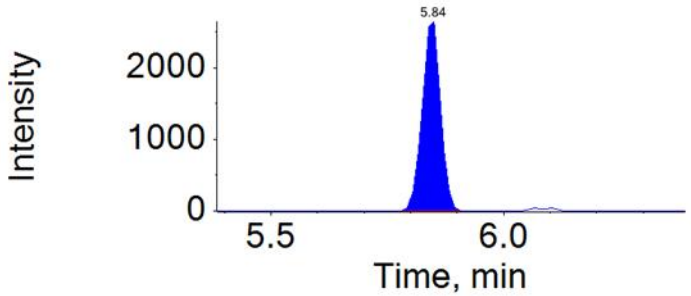
Component: PFUnDA
Primary Mass: 563.0 / 519.0



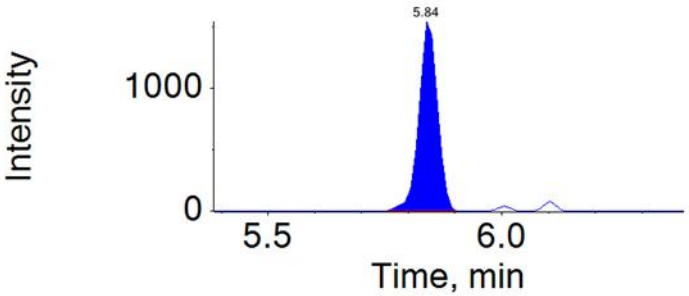
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



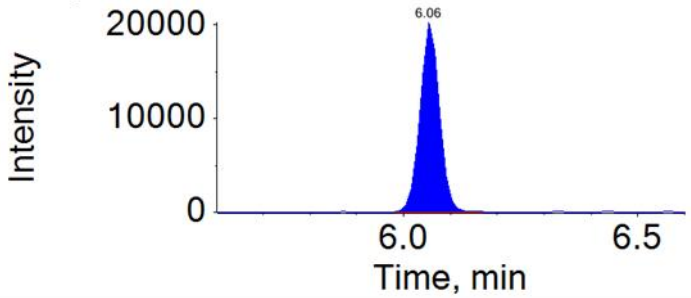
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



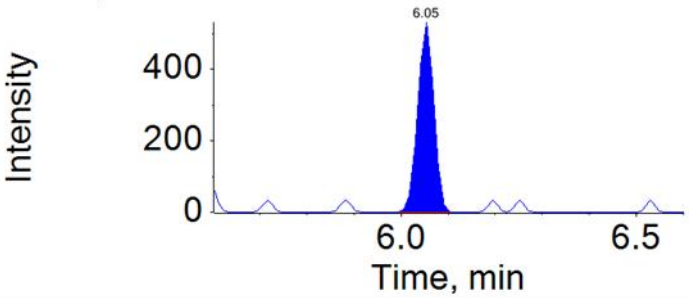
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



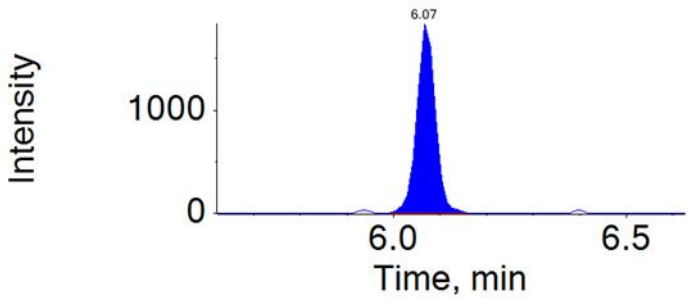
Component: PFDoDA
Primary Mass: 613.0 / 569.0



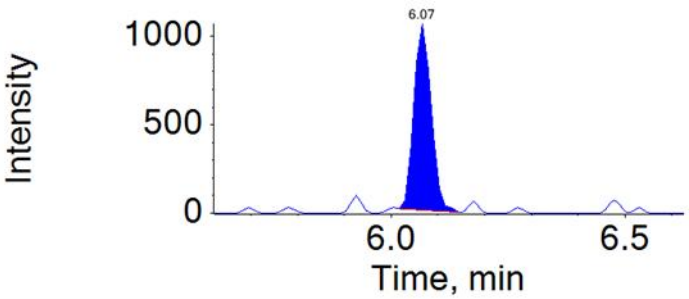
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



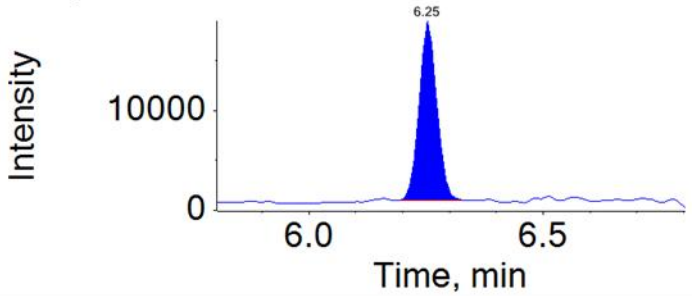
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



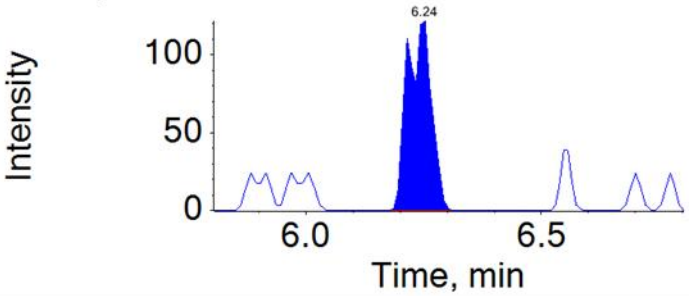
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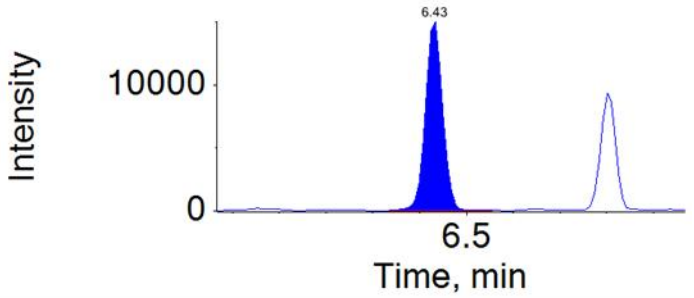
Component: PFTrDA
Primary Mass: 663.0 / 619.0



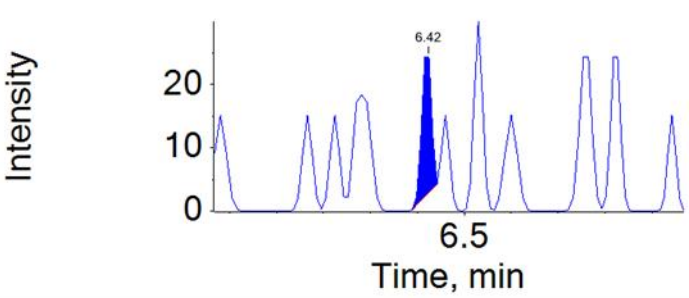
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



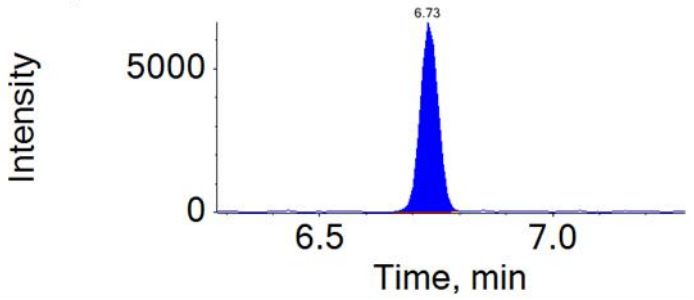
Component: PFTeDA
Primary Mass: 713.0 / 669.0



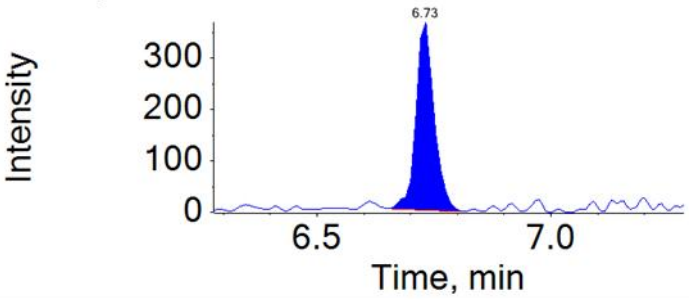
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



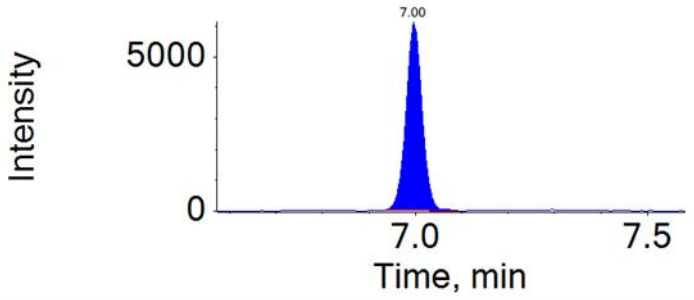
Component: PFHxDA
Primary Mass: 813.0 / 769.0



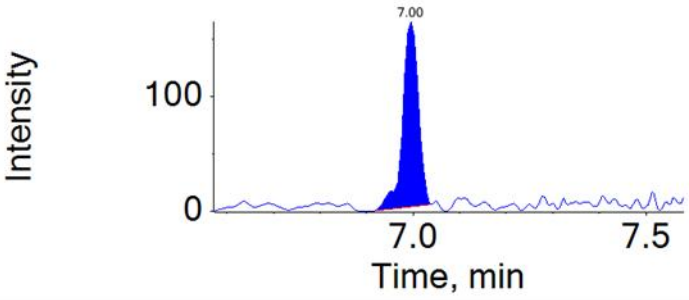
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

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

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV08D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-08T12:33:40
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV1-3
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: 18NOV08D-05

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	762381.1	728839.7	5	50	
13C2-PFOA	5.0	518497.3	491983.1	5	50	
13C4-PFOS	4.8	299698.4	255568.1	17	50	
13C2-PFDA	5.0	319995.1	315407.5	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	833101.6	13C3-PFBA	762381.1	1.093	5.000	5.057	101	70-130	
E13C5-PFPeA	855177.9	13C3-PFBA	762381.1	1.122	5.000	4.887	98	70-130	
E13C3-PFBS	470351.2	13C3-PFBA	762381.1	0.617	4.650	4.528	97	70-130	
E13C2-4:2-FTS	60069.6	13C2-PFOA	518497.3	0.116	4.670	5.228	112	70-130	
E13C5-PFHxA	733289.5	13C2-PFOA	518497.3	1.414	5.000	5.202	104	70-130	
E13C3-PFHxS	361564.7	13C2-PFOA	518497.3	0.697	4.730	5.006	106	70-130	
E13C4-PFHpA	576861.3	13C2-PFOA	518497.3	1.113	5.000	5.061	101	70-130	
E13C2-6:2-FTS	42684.4	13C2-PFOA	518497.3	0.082	4.750	5.490	116	70-130	
E13C8-PFOA	1008040.9	13C2-PFOA	518497.3	1.944	5.000	5.422	108	70-130	
E13C8-PFOS	315952.3	13C4-PFOS	299698.4	1.054	4.780	4.662	98	70-130	
E13C9-PFNA	515145.7	13C4-PFOS	299698.4	1.719	5.000	4.695	94	70-130	
E13C6-PFDA	695304.3	13C2-PFDA	319995.1	2.173	5.000	5.464	109	70-130	
E13C2-8:2-FTS	28113.9	13C2-PFDA	319995.1	0.088	4.790	4.649	97	70-130	
E13C8-PFOSA	721168.7	13C2-PFDA	319995.1	2.254	5.000	4.918	98	70-130	
Ed3-NMeFOSAA	88068.2	13C2-PFDA	319995.1	0.275	5.000	5.118	102	70-130	
E13C7-PFUnDA	312553.5	13C2-PFDA	319995.1	0.977	5.000	5.635	113	70-130	
Ed5-NEtFOSAA	70219.9	13C2-PFDA	319995.1	0.219	5.000	5.078	102	70-130	
E13C2-PFDoDA	613302.5	13C2-PFDA	319995.1	1.917	5.000	5.167	103	70-130	
Ed7-NMePFOSAE	356044.2	13C2-PFDA	319995.1	1.113	5.000	5.174	103	70-130	
Ed3-NMePFOSA	81885.6	13C2-PFDA	319995.1	0.256	5.000	4.685	94	70-130	
Ed9-NEtPFOSAE	290570.6	13C2-PFDA	319995.1	0.908	5.000	5.186	104	70-130	
Ed5-NEtPFOSA	68097.6	13C2-PFDA	319995.1	0.213	5.000	4.927	99	70-130	
E13C2-PFTeDA	436421.1	13C2-PFDA	319995.1	1.364	5.000	4.910	98	70-130	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

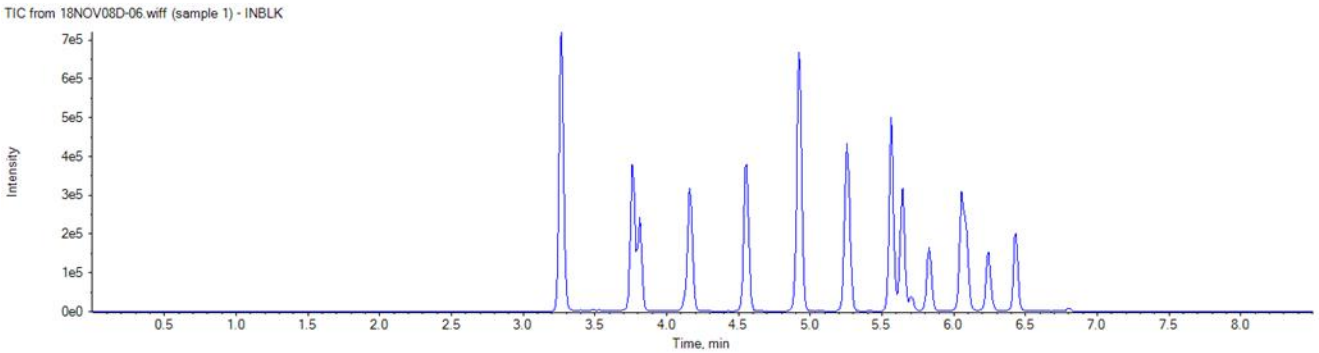
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV08D-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	833101.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	855177.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	470351.2	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	60069.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	733289.5	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	470351.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	361564.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	576861.3	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	42684.4	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	361564.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1008040.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	515145.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	695304.3	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	28113.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	721168.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	88068.2	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	312553.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	70219.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	613302.5	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	28113.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	356044.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81885.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	290570.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	68097.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	613302.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	

Total Ion Chromatogram

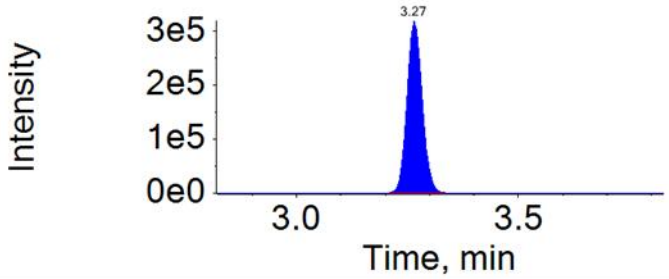


APPROVED
By JPT at 5:07 pm, 11/8/18

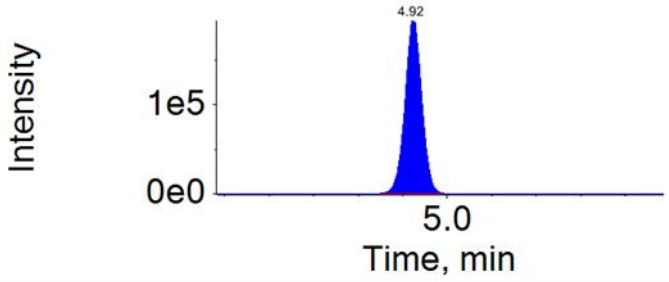
REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

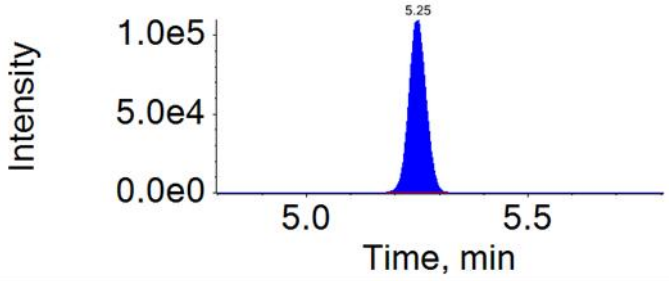
Injection Standard: 13C3-PFBA
216.0 / 172.0



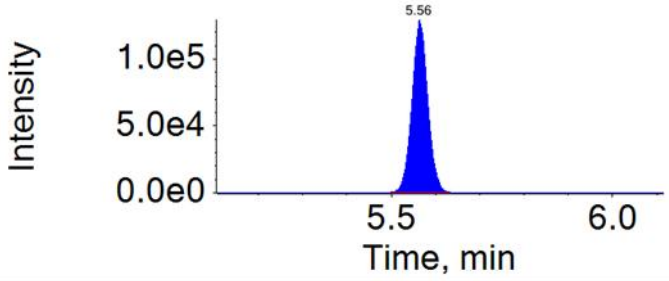
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

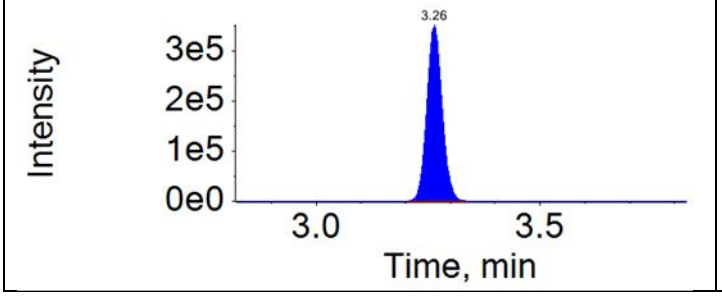


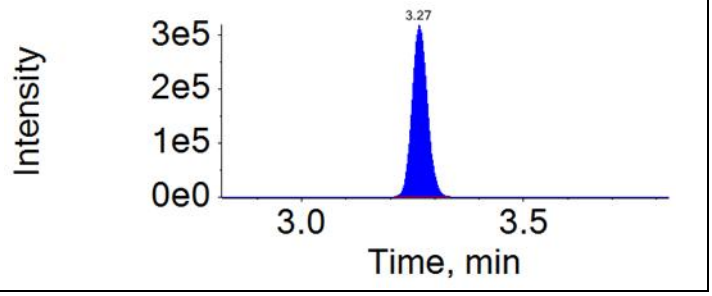
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

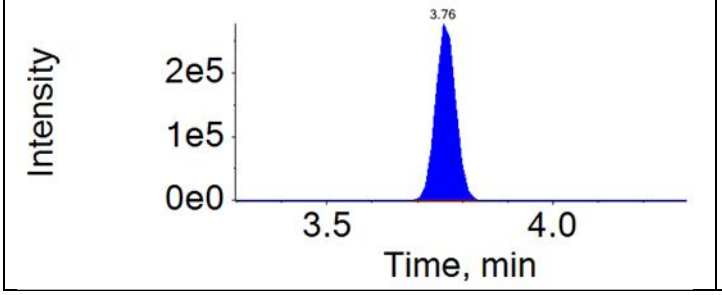
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

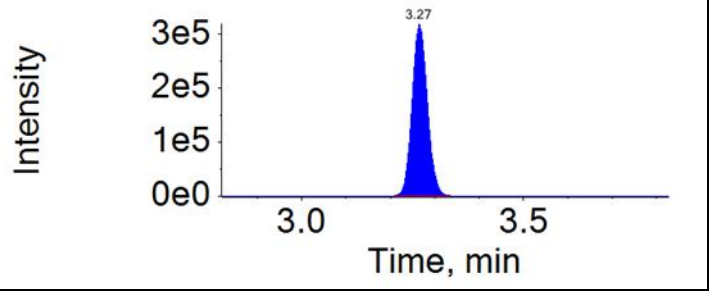
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



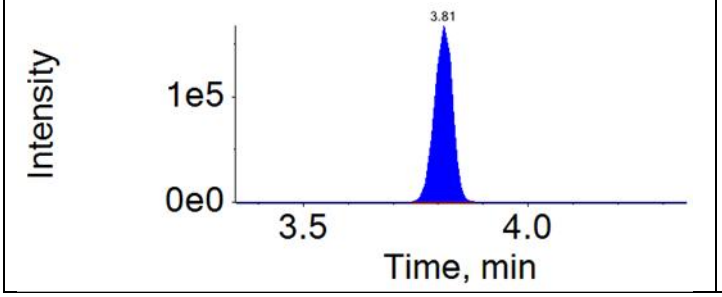


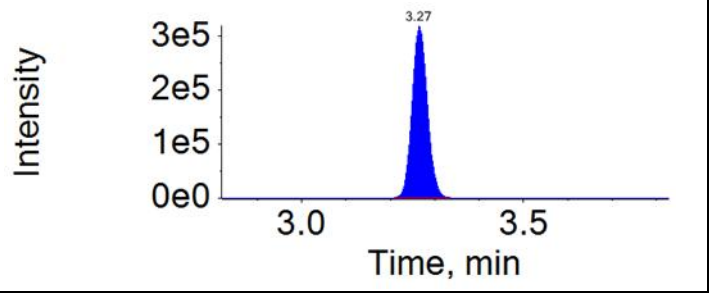
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



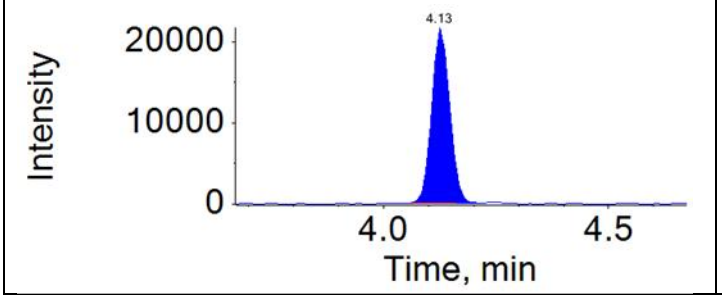


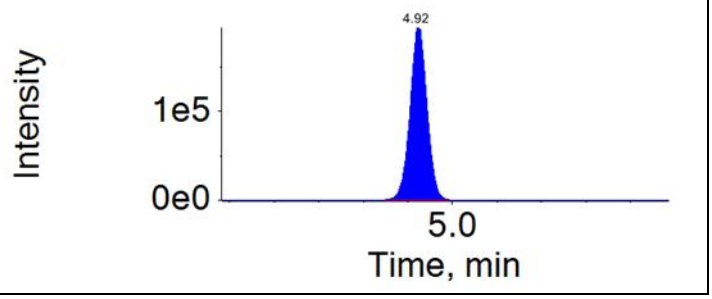
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



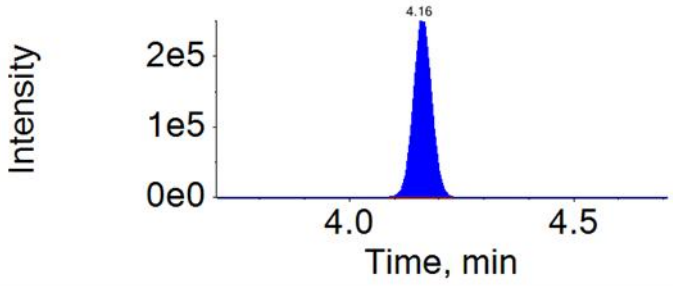


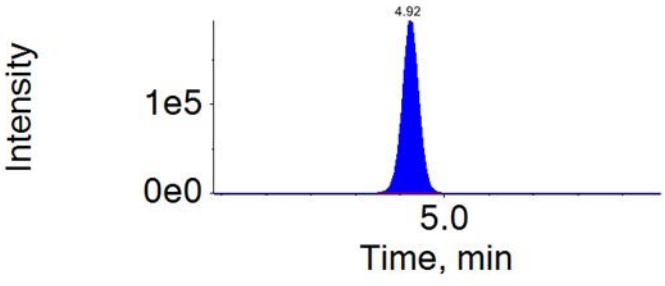
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

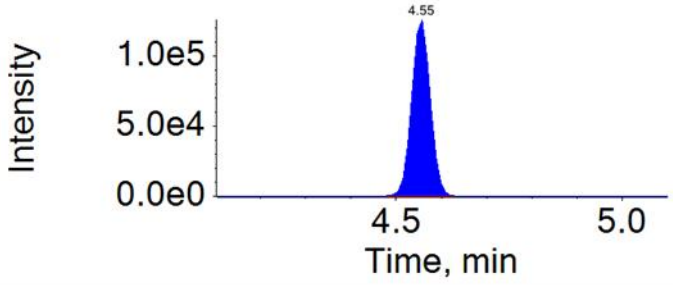
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

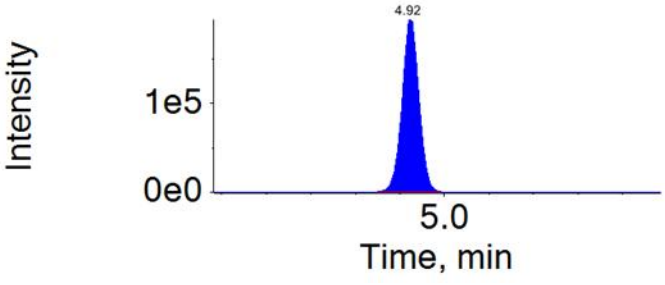
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



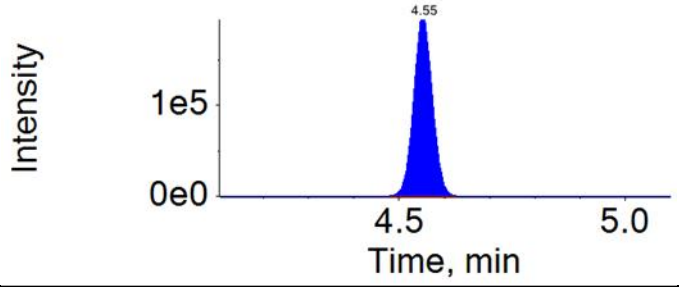


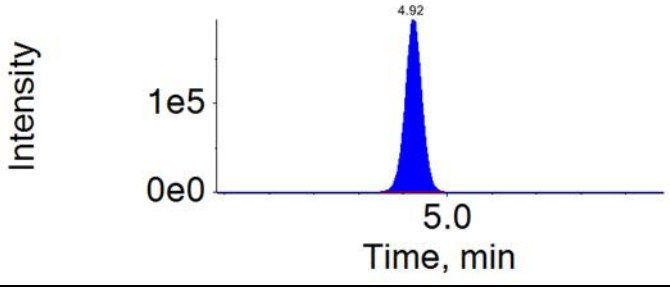
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



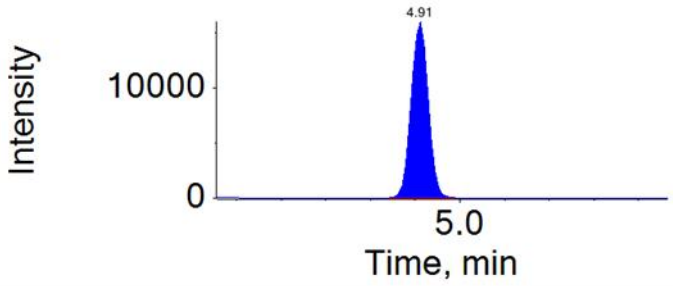


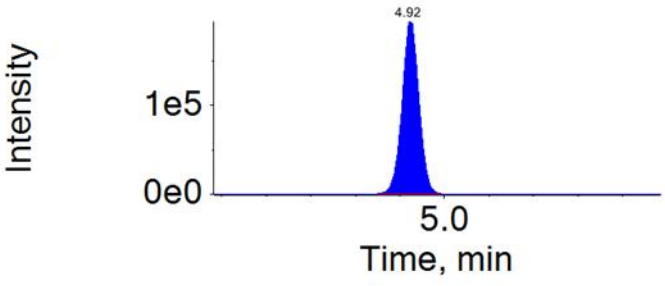
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





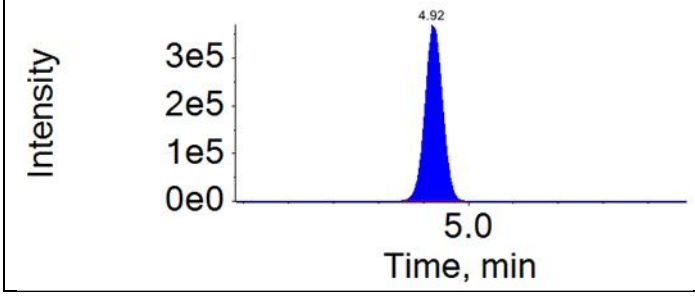
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

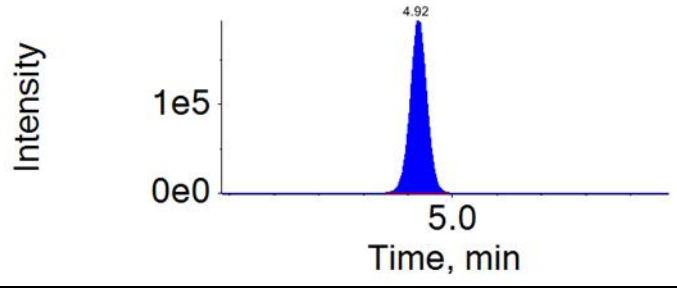




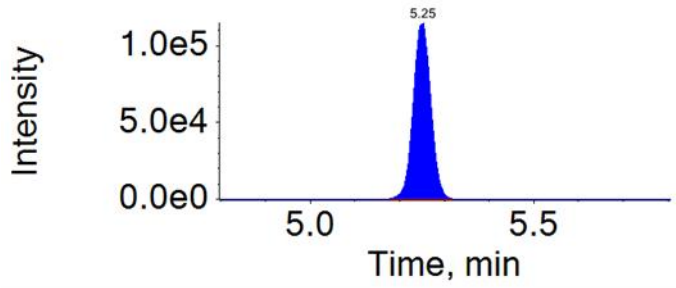
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

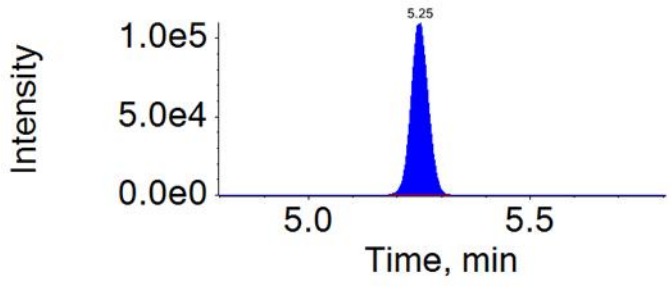
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



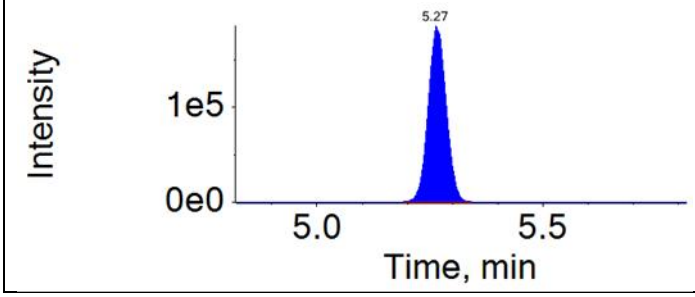


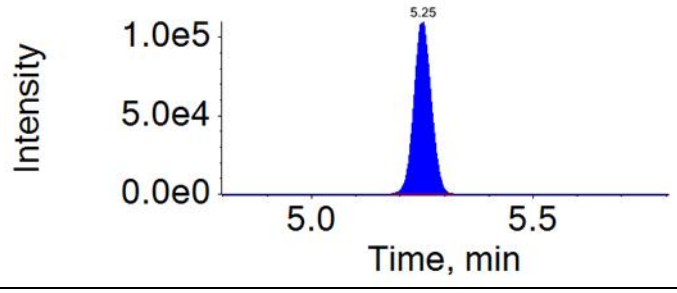
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



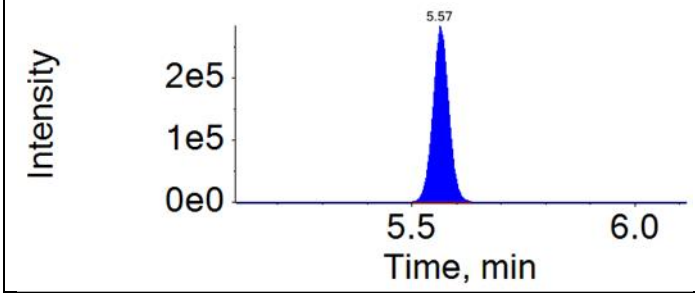


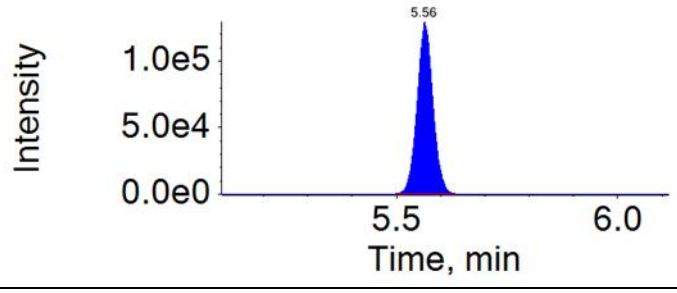
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



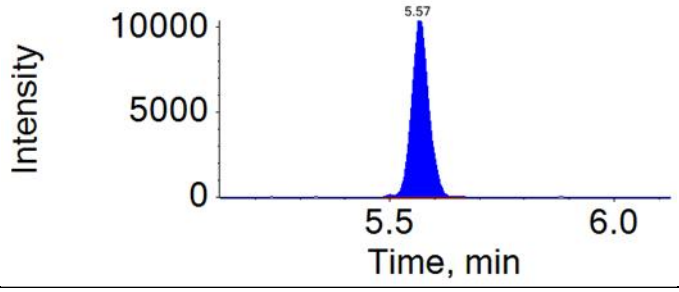


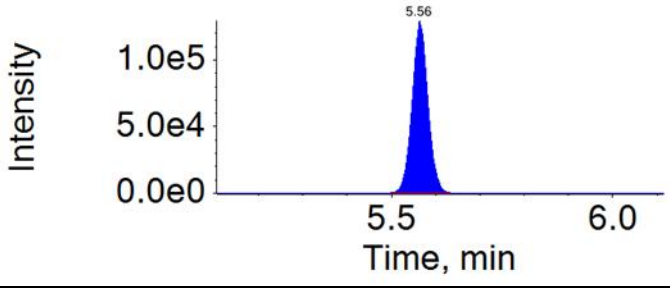
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

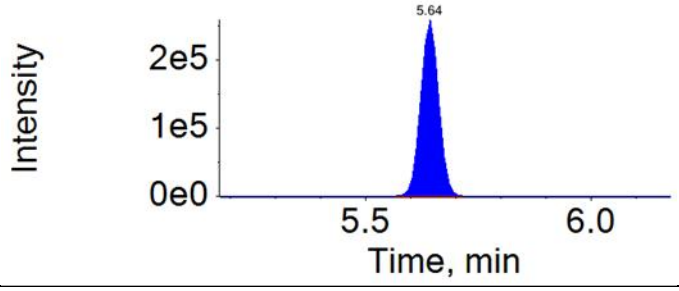
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

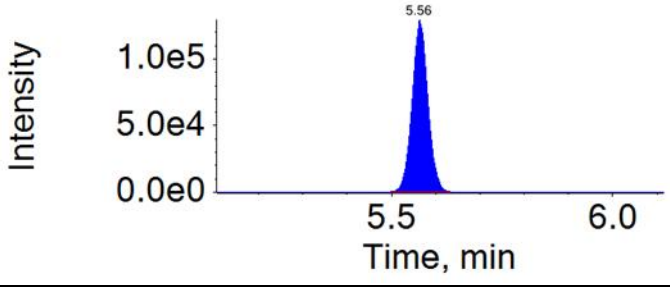
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



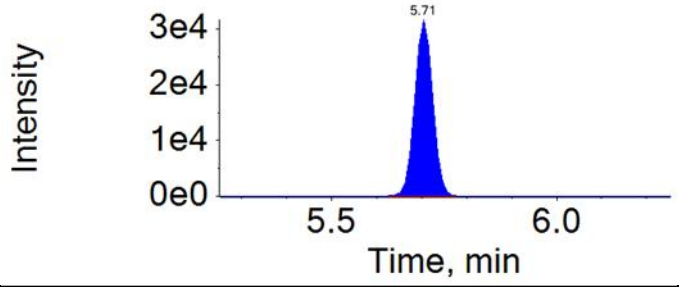


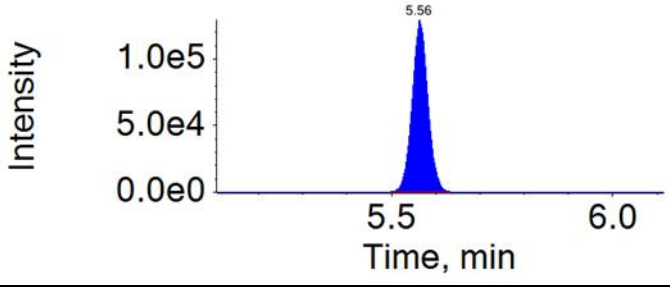
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



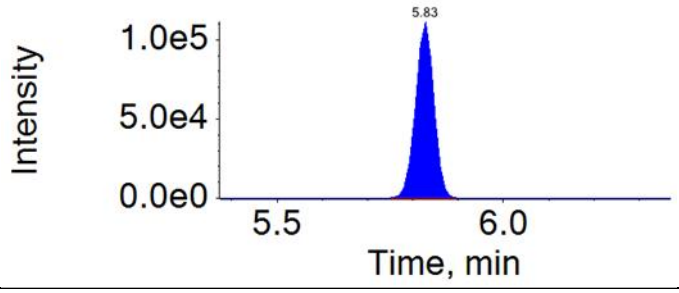


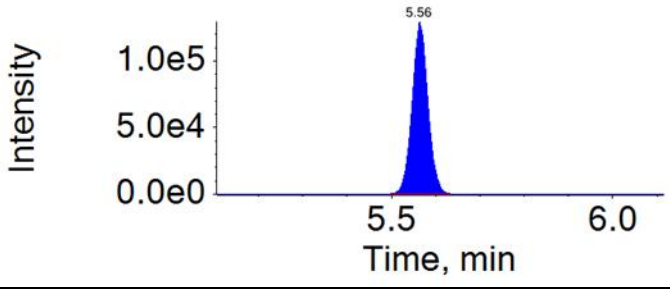
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



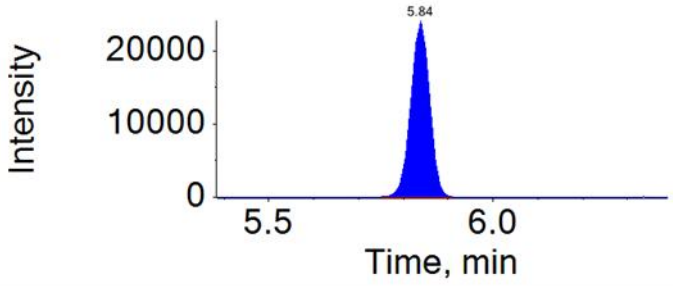


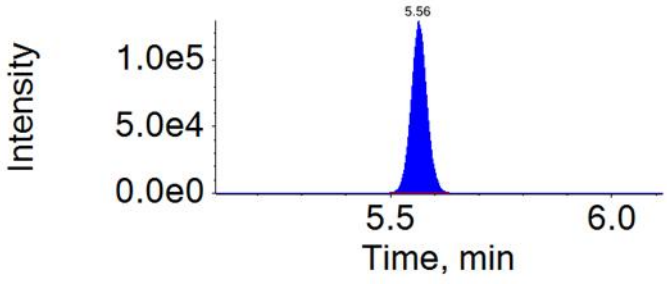
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

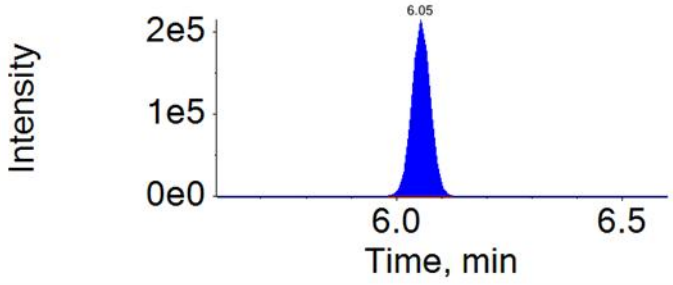
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

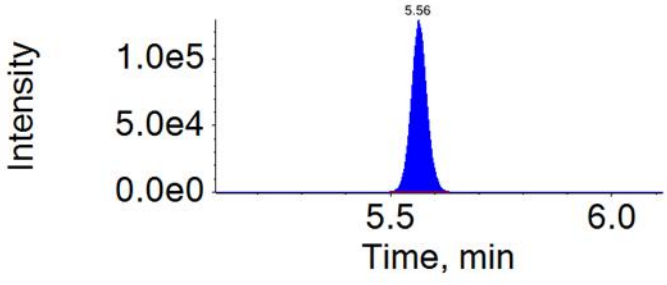
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



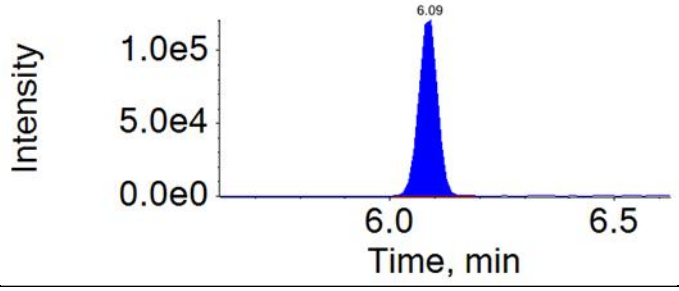


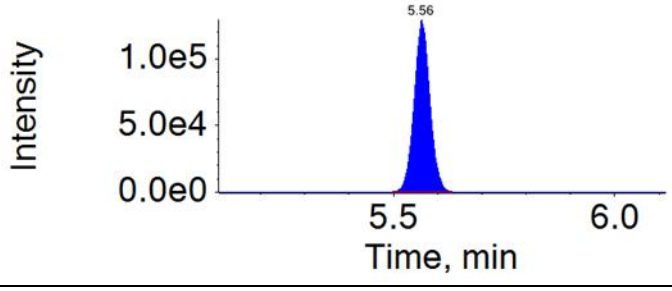
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



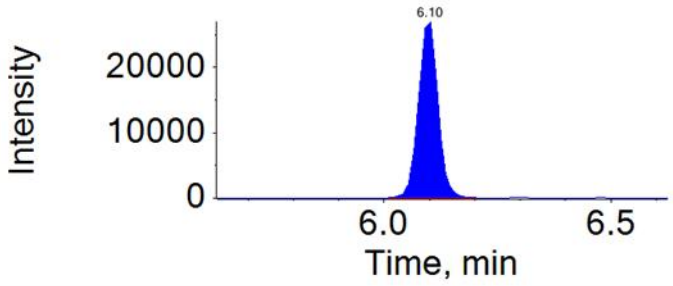


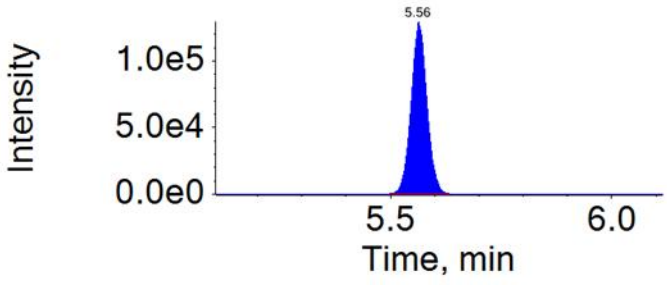
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



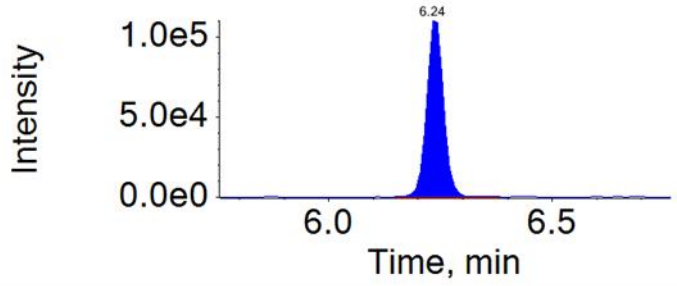


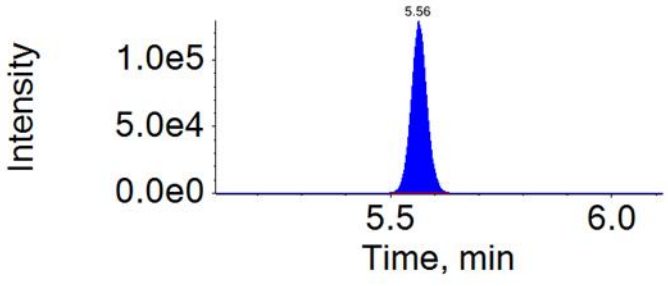
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

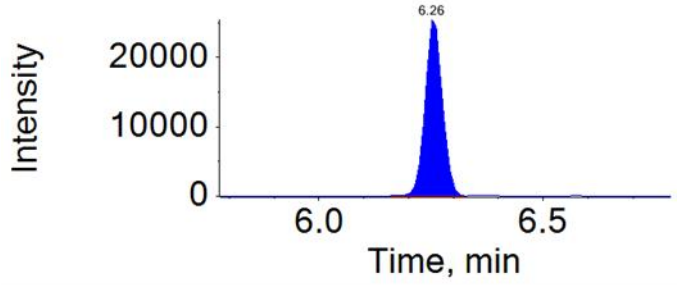
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

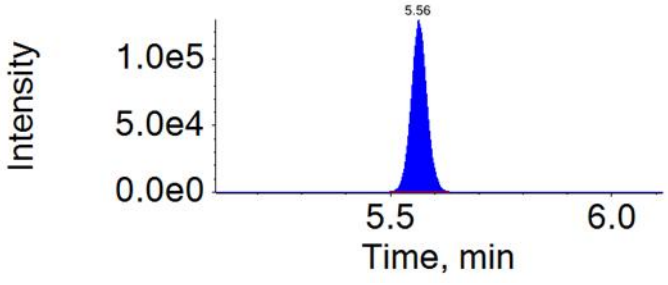
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



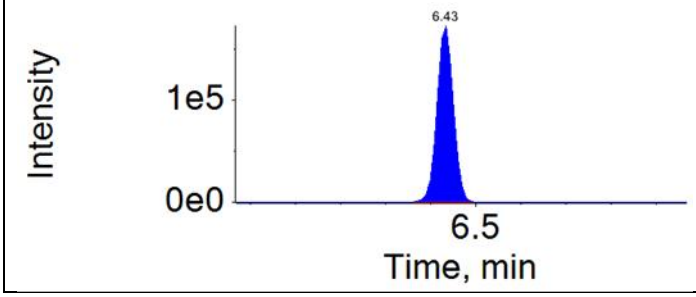


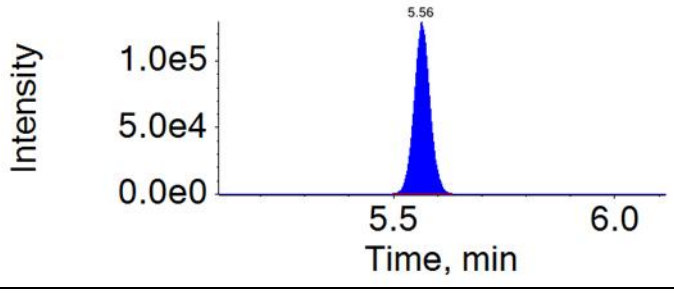
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



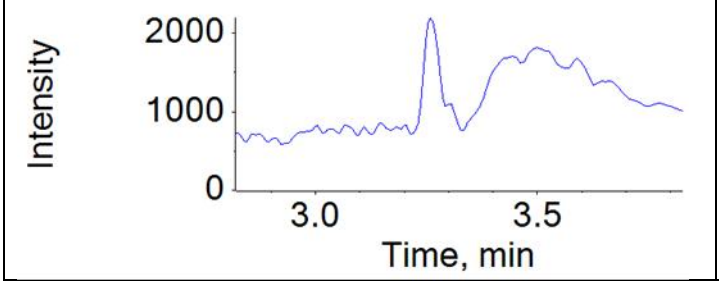


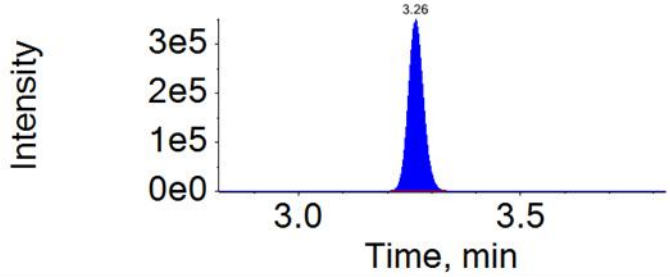
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

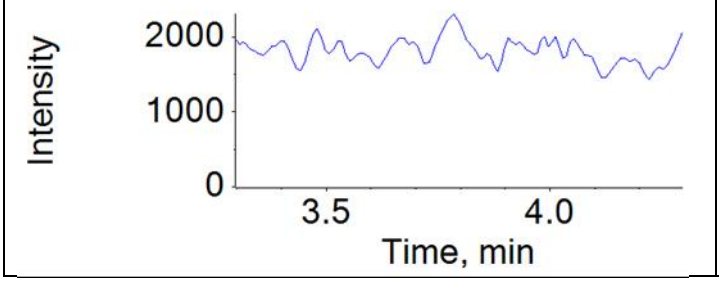
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

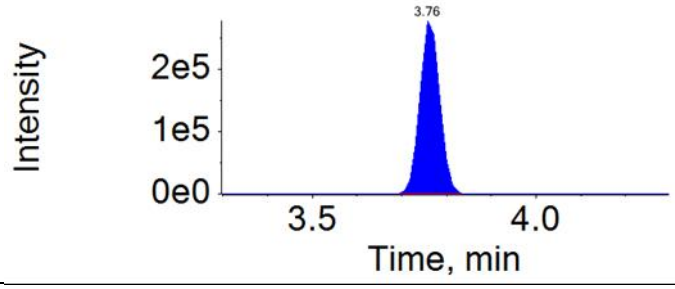
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



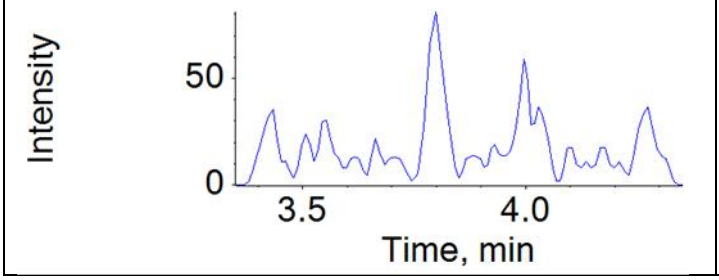


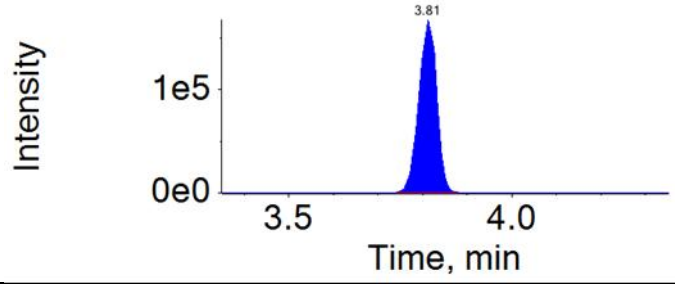
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



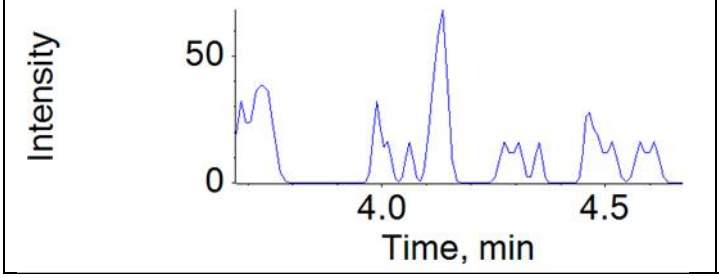


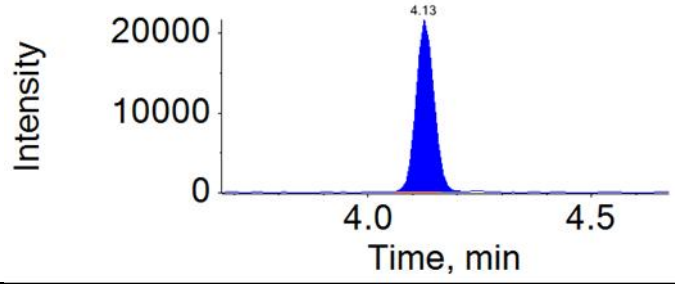
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



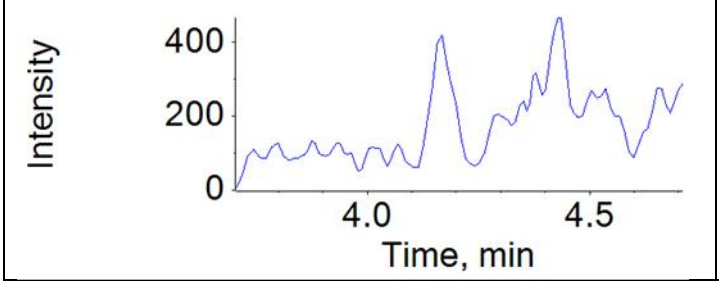


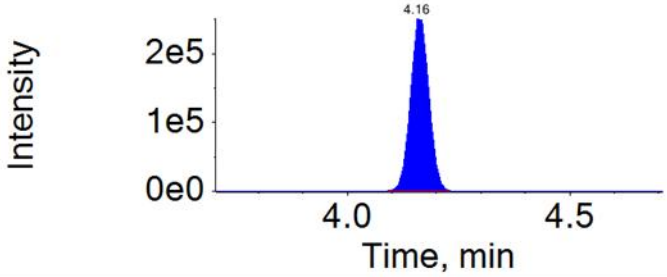
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

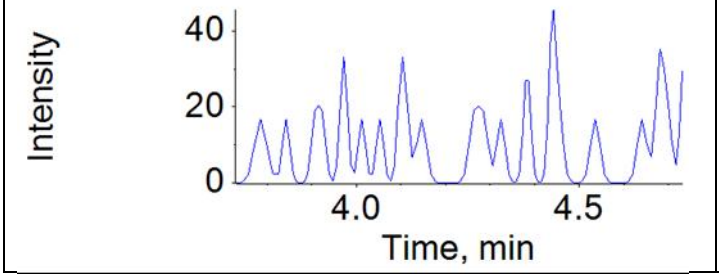
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

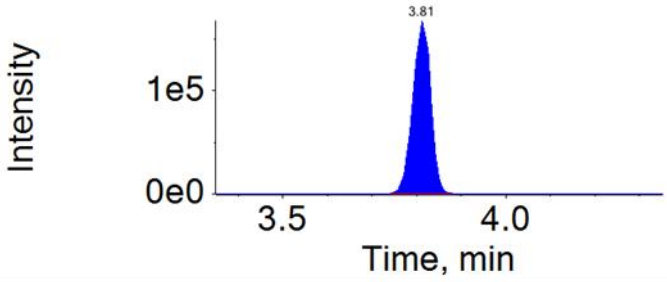
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



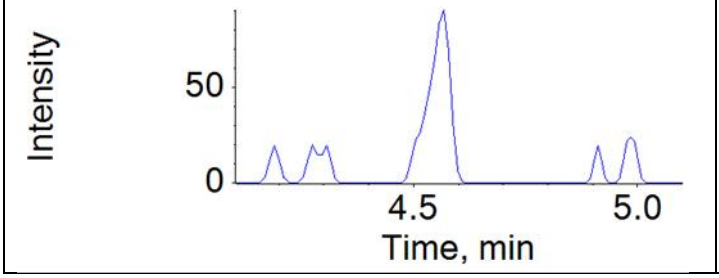


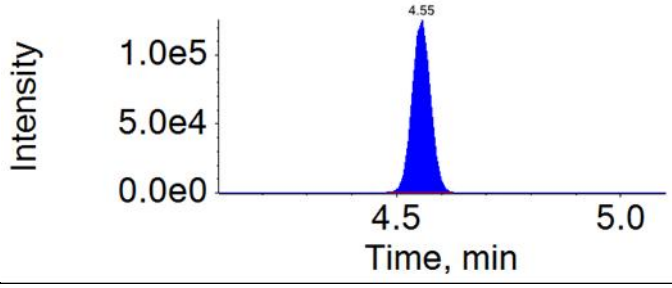
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



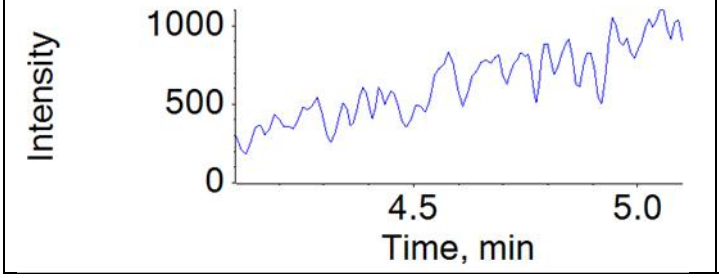


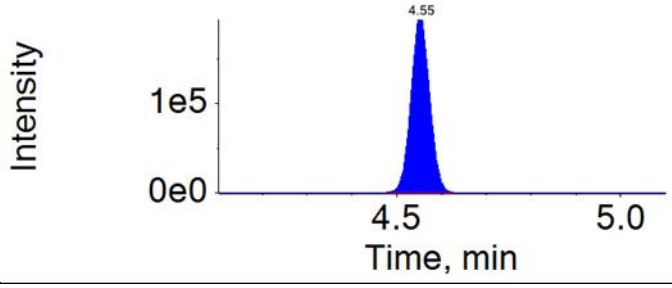
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



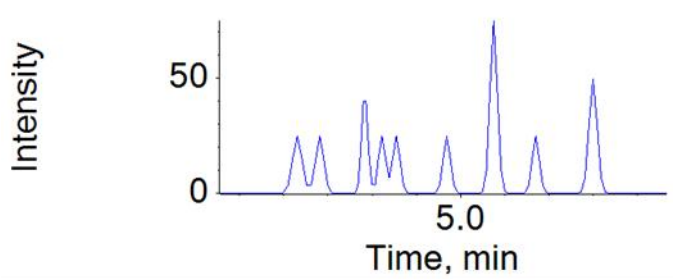


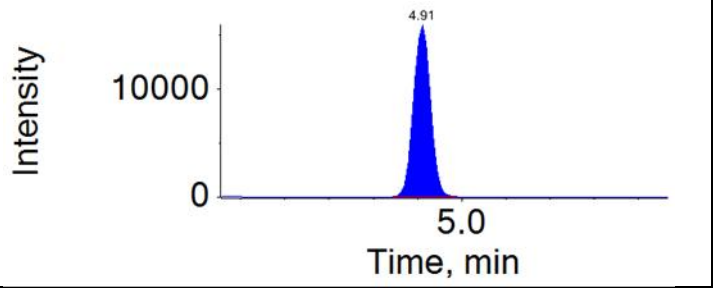
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

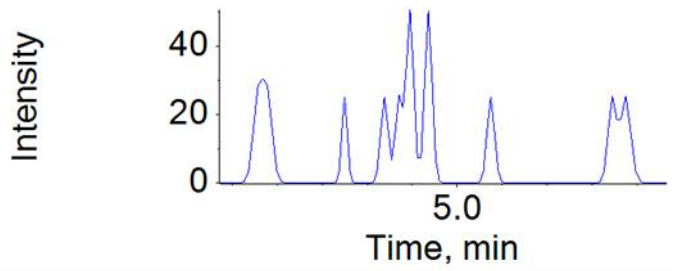
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

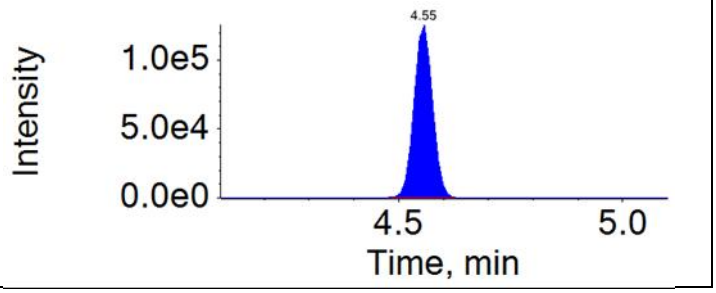
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



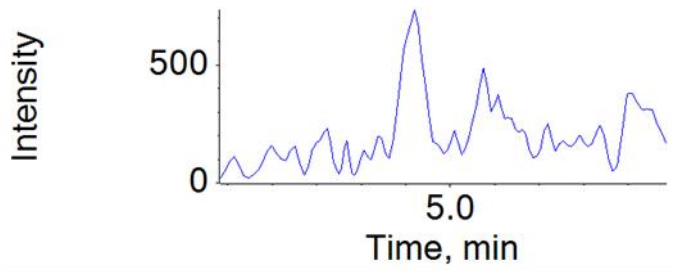


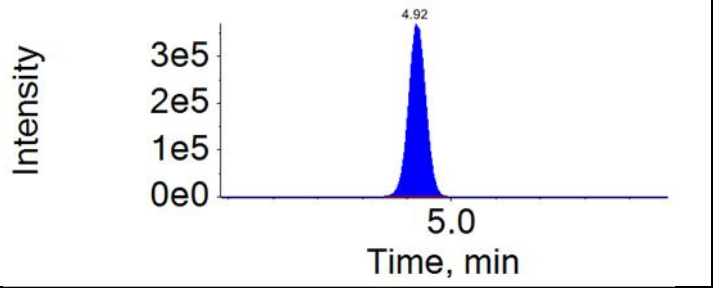
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



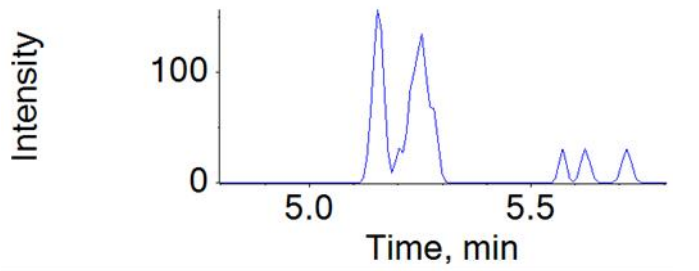


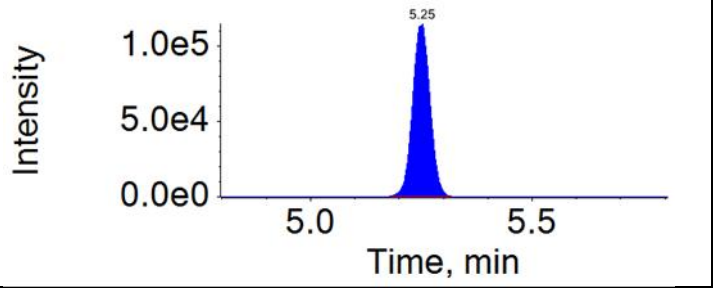
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



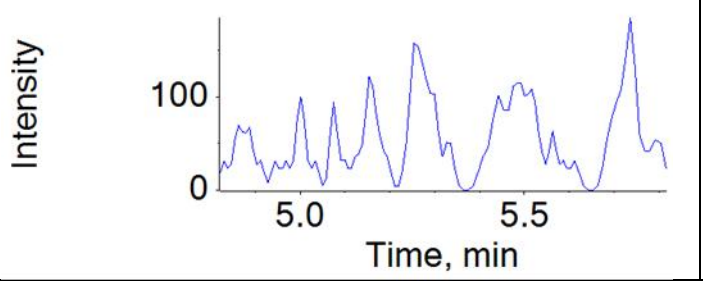


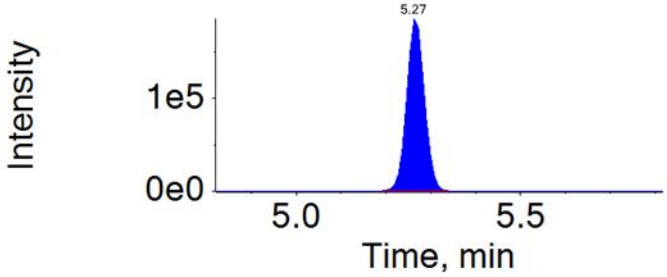
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

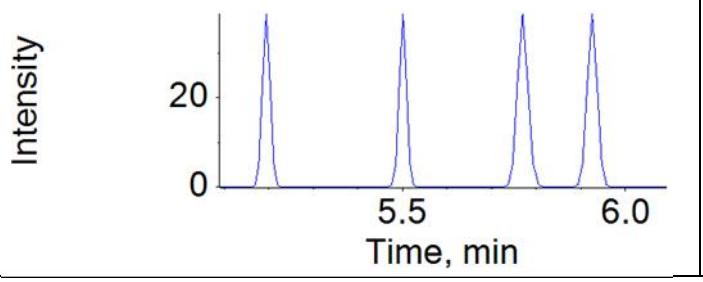
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

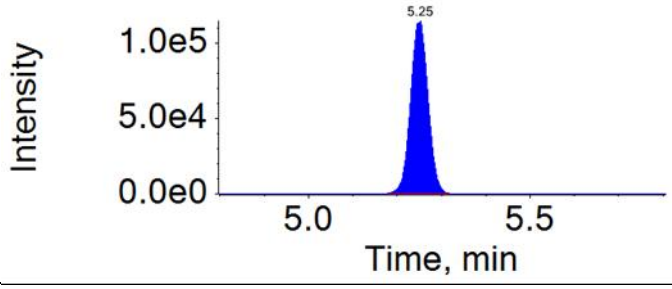
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



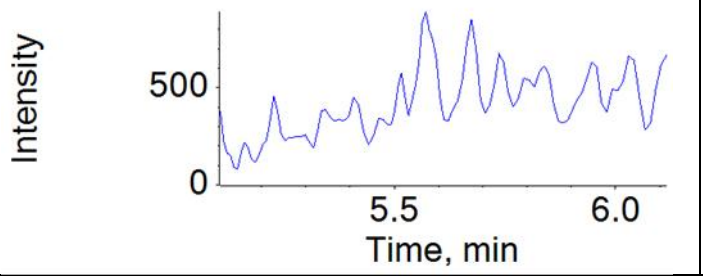


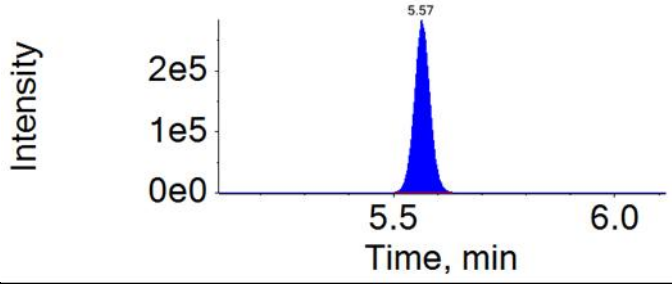
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



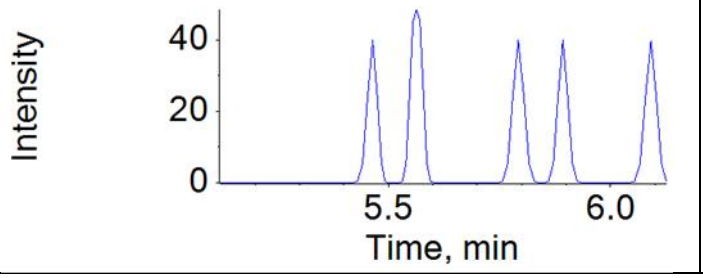


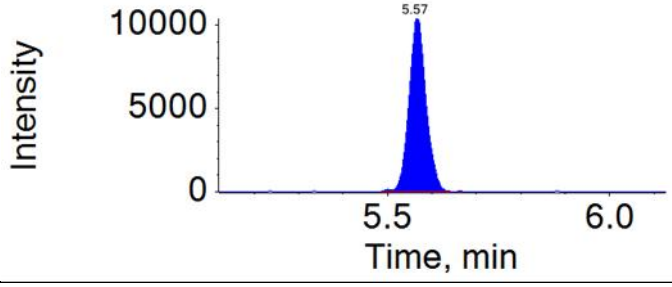
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



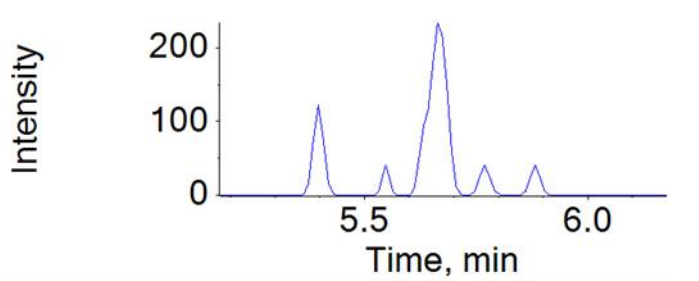


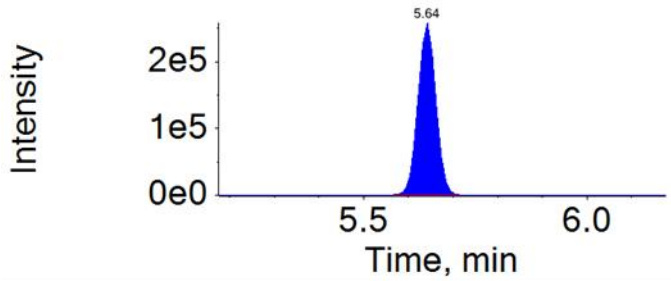
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

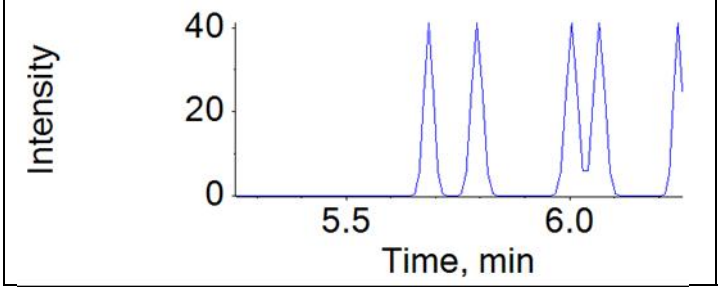
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

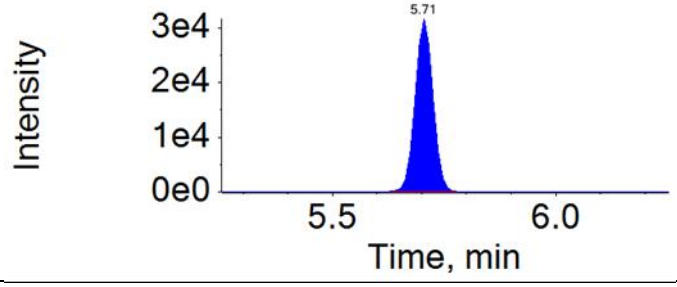
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



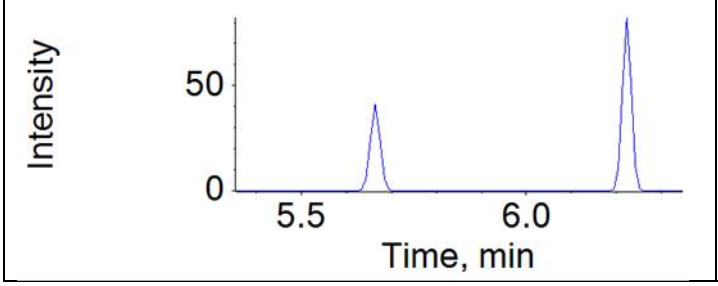


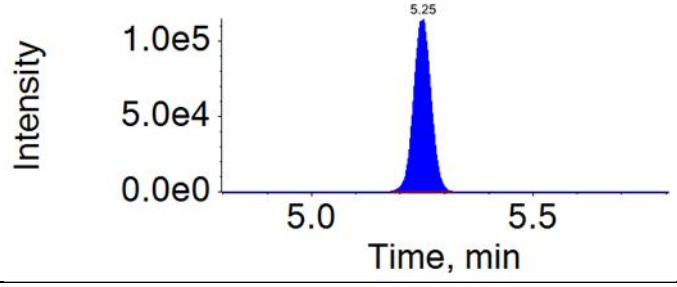
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



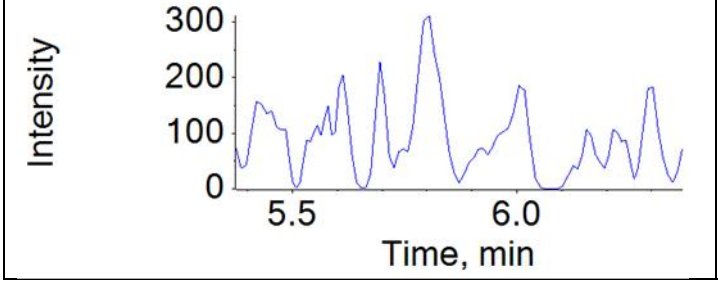


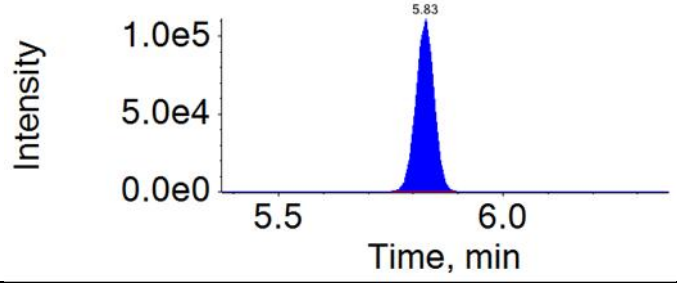
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



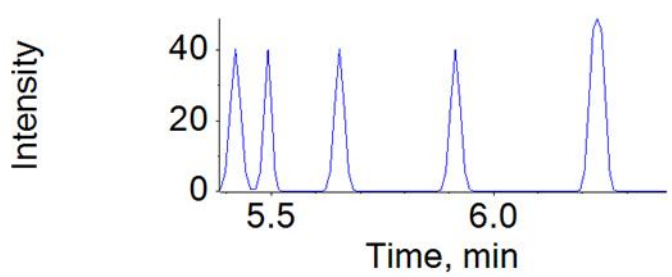


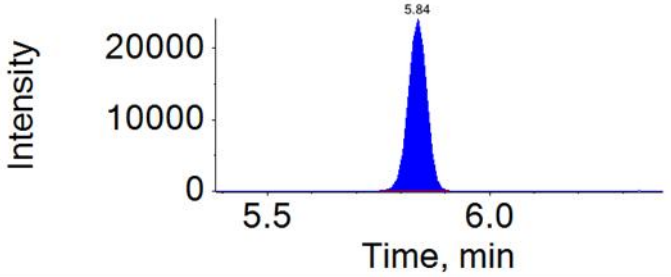
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

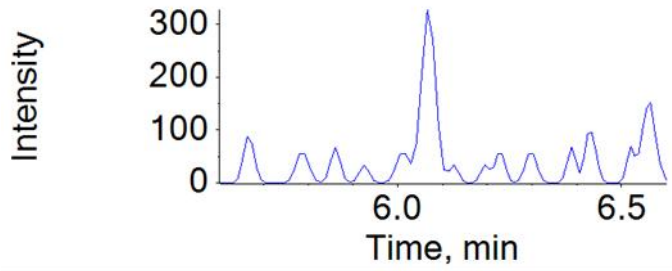
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

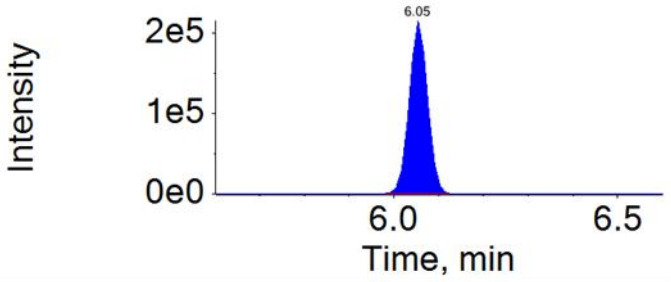
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



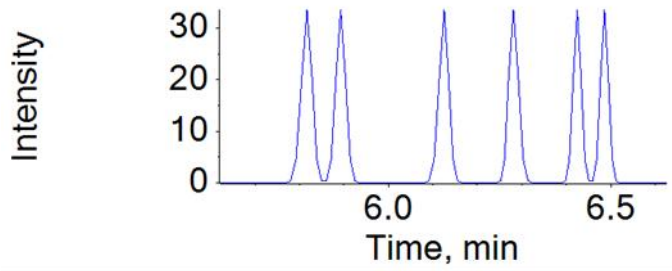


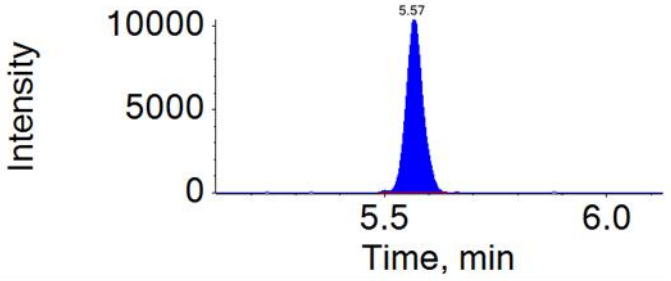
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



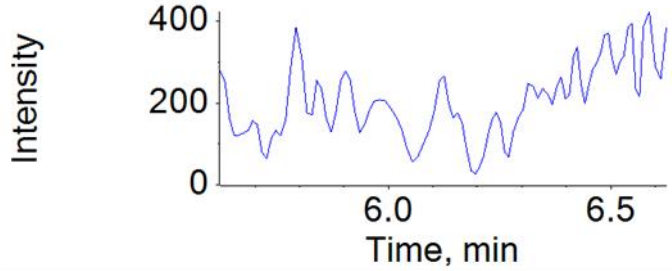


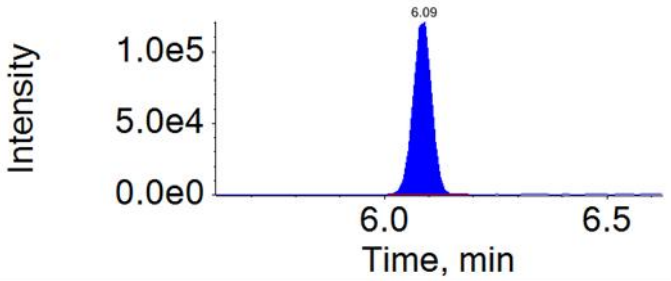
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





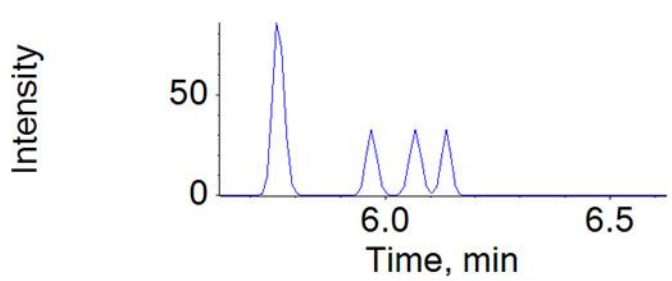
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

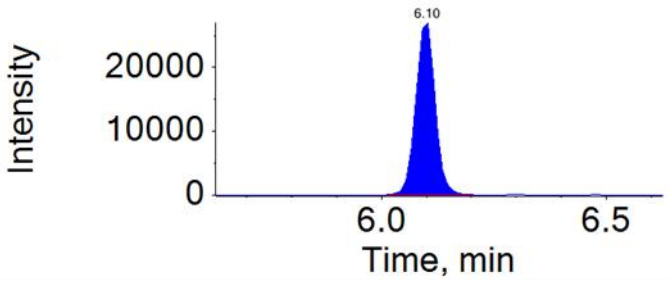




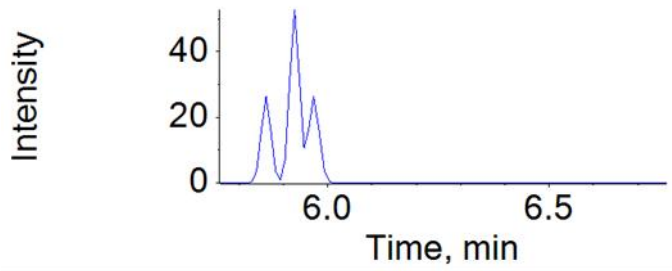
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

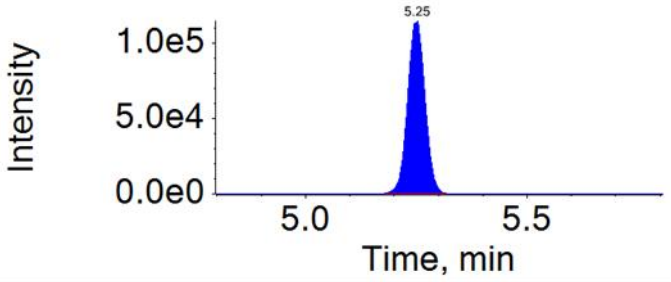
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



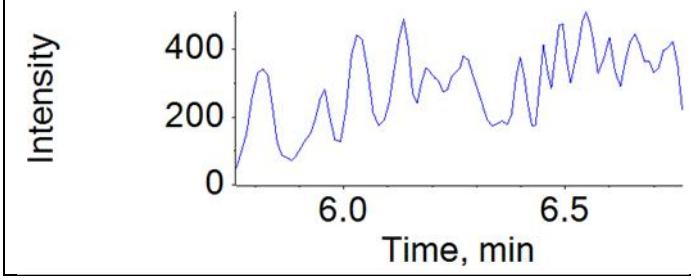


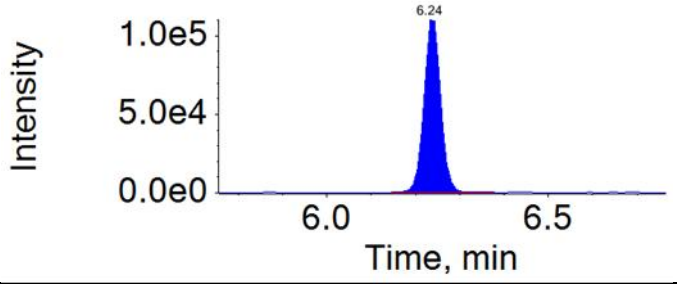
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



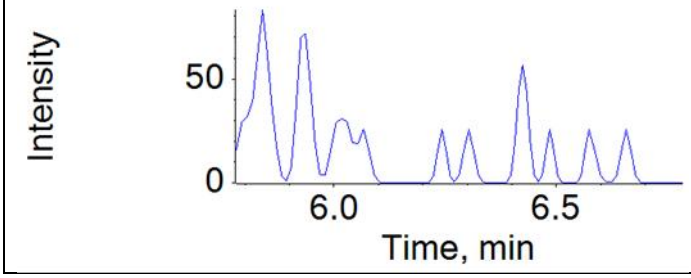


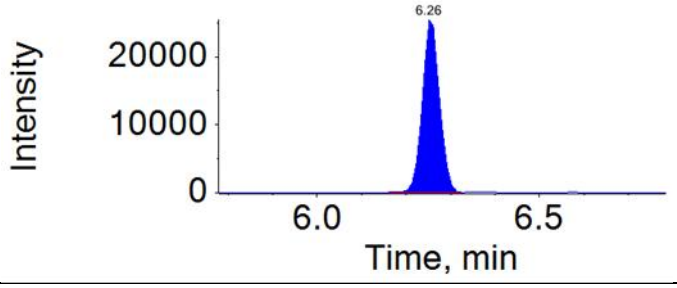
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





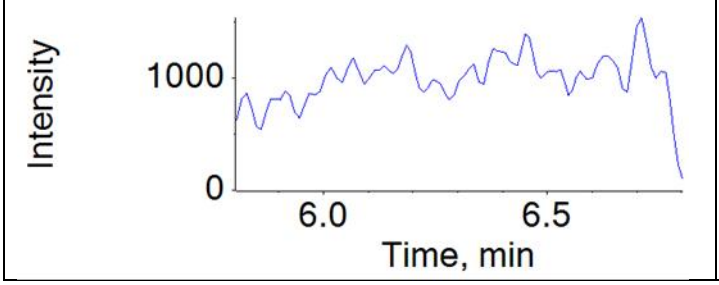
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

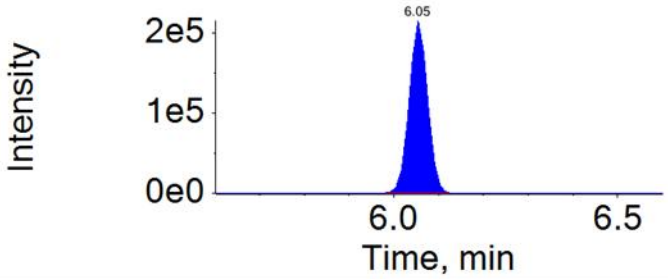




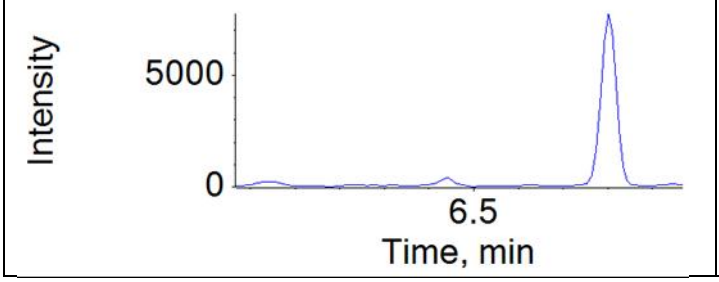
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

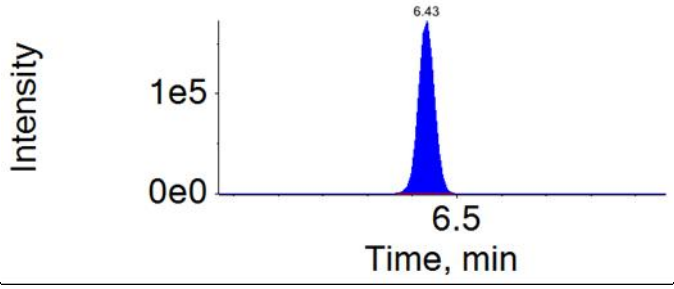
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



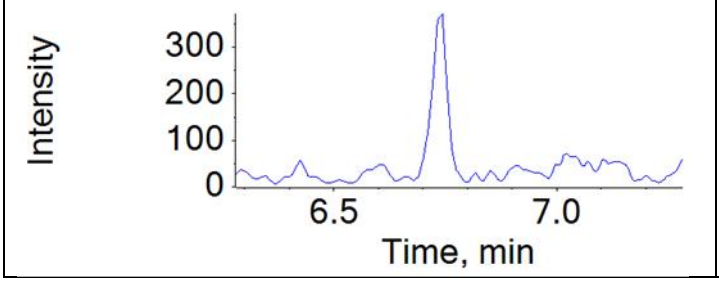


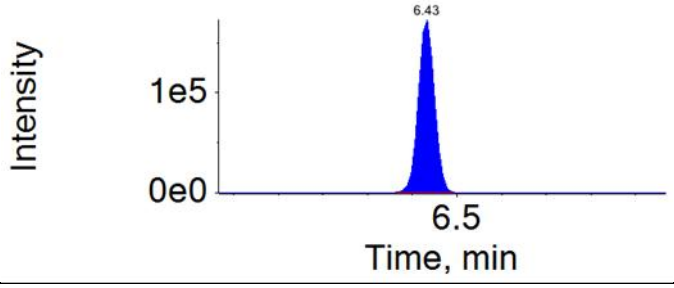
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



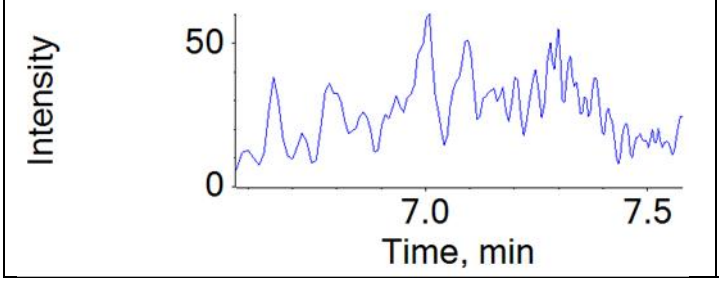


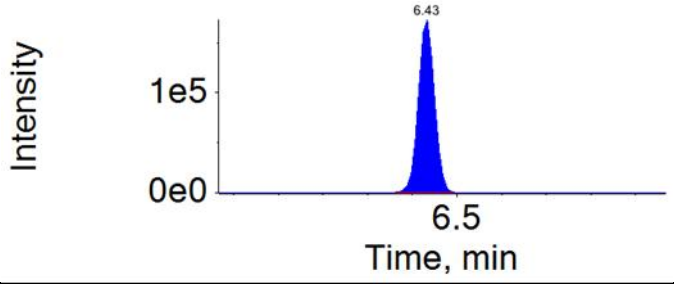
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Ion Ratio Report

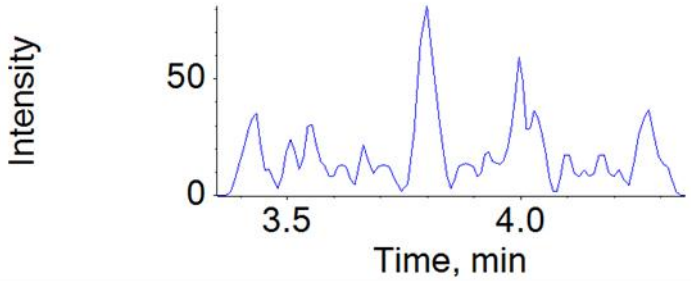
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV08D-06.wiff

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	

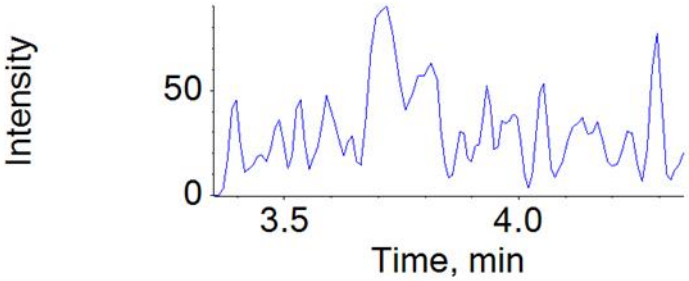
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

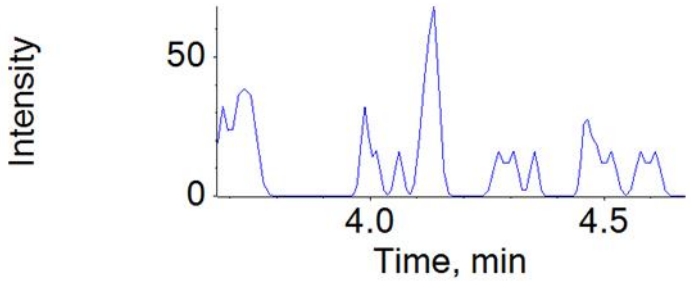
Component: PFBS
Primary Mass: 299.0 / 80.0



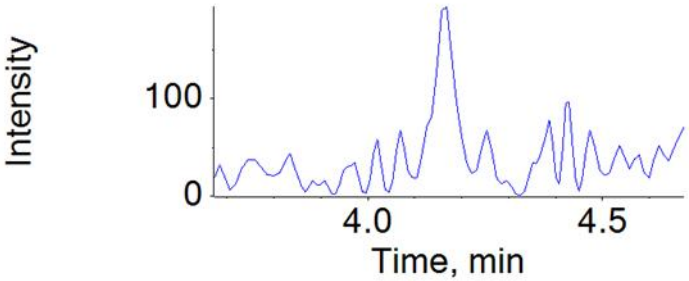
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



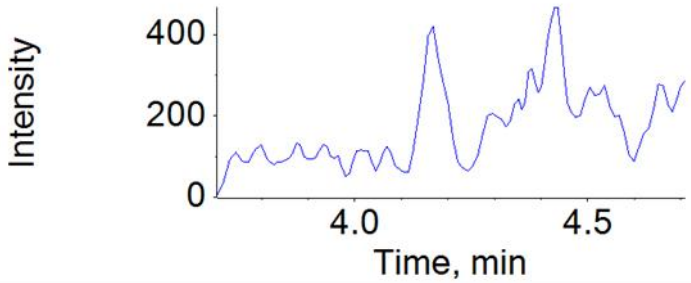
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



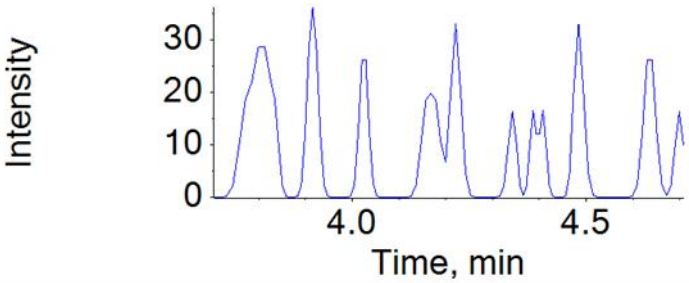
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



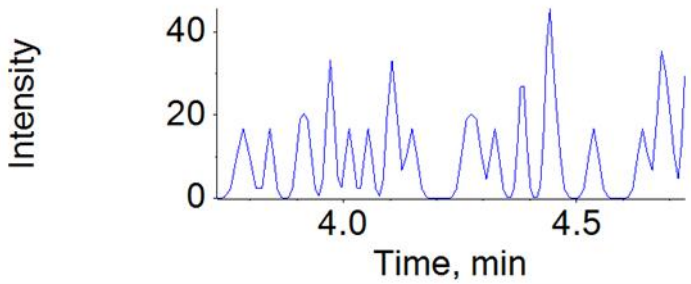
Component: PFHxA
Primary Mass: 313.0 / 269.0



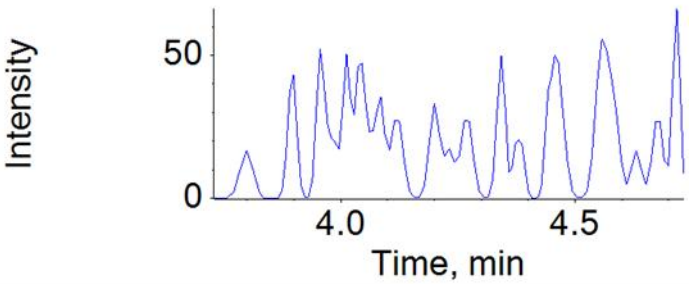
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



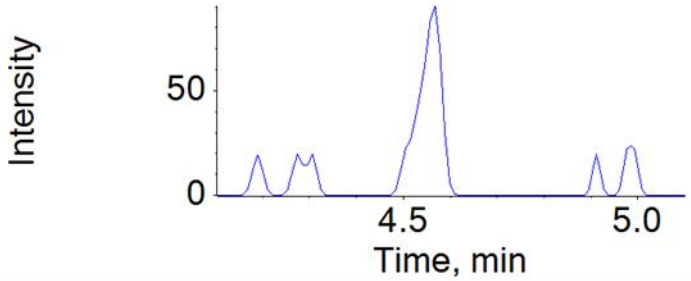
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



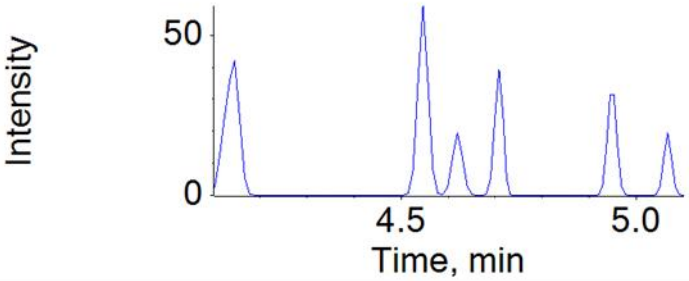
APPROVED
By JPT at 5:07 pm, 11/8/18

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By umar at 12:13 pm, 11/12/18

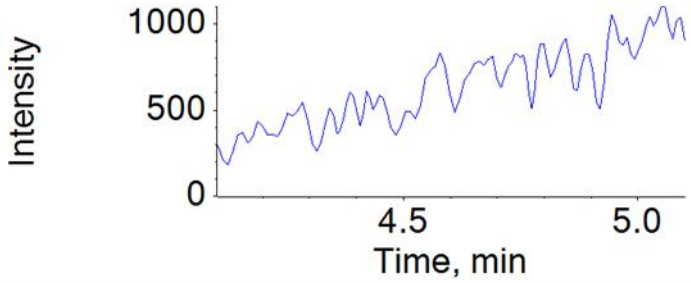
Component: PFHxS
Primary Mass: 399.0 / 80.0



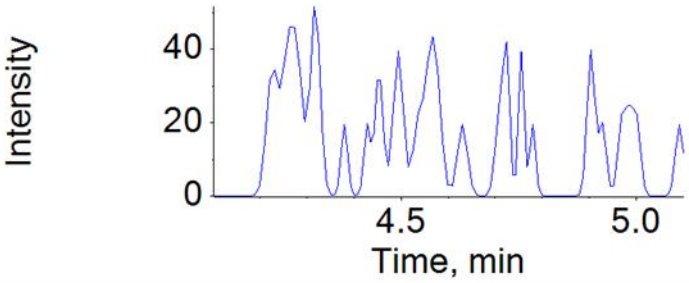
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



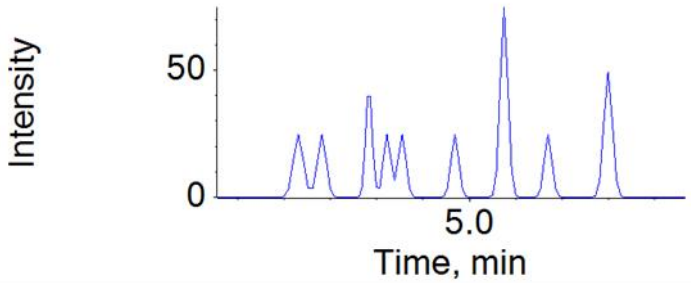
Component: PFHpA
Primary Mass: 363.0 / 319.0



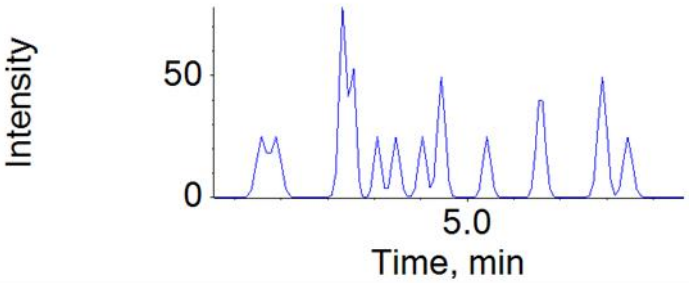
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



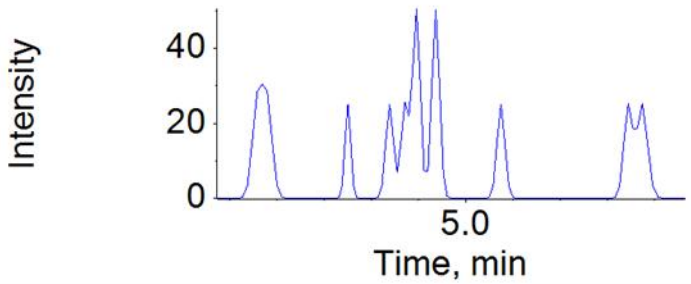
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



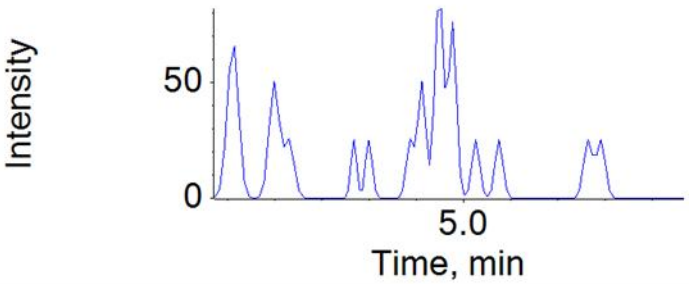
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



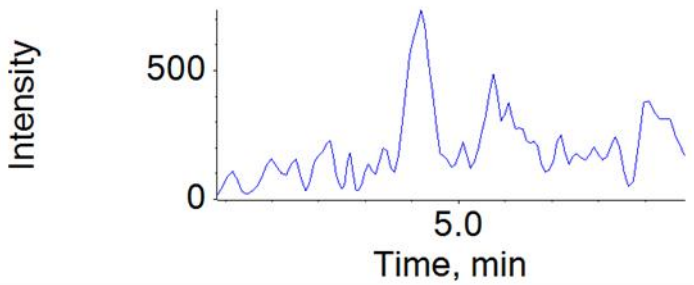
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



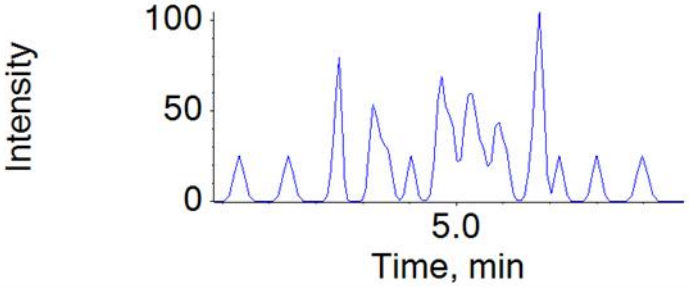
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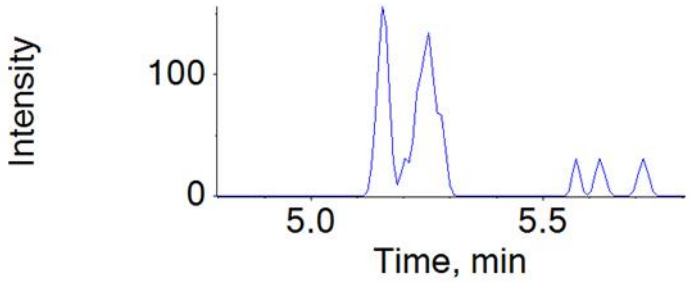
Component: PFOA
Primary Mass: 413.0 / 369.0



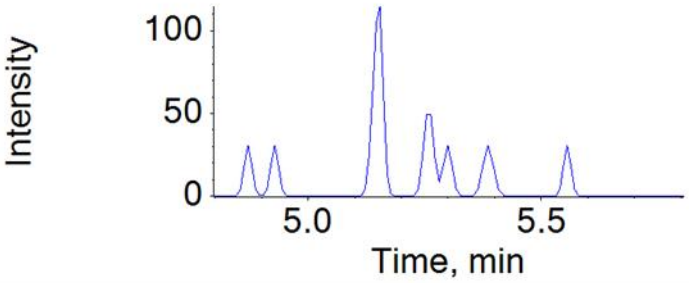
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



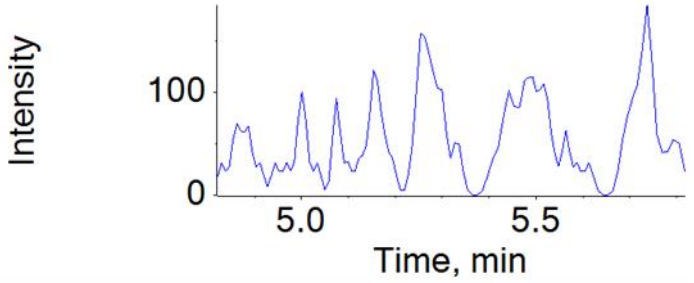
Component: PFOS
Primary Mass: 499.0 / 80.0



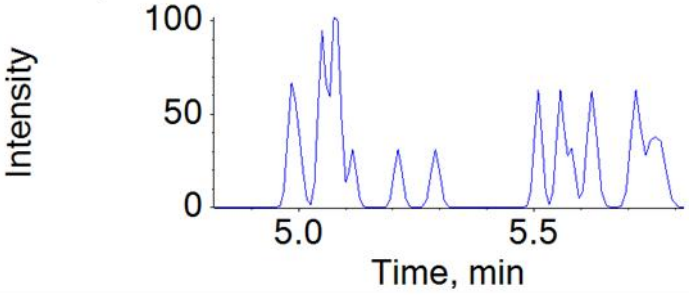
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



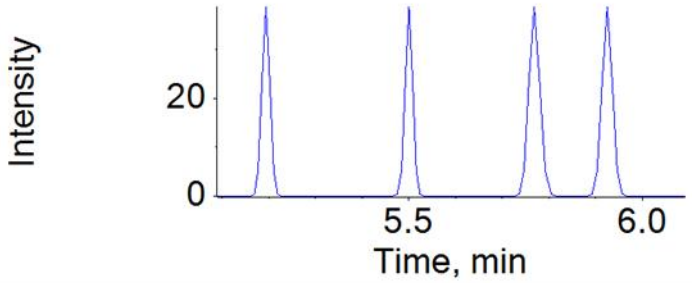
Component: PFNA
Primary Mass: 463.0 / 419.0



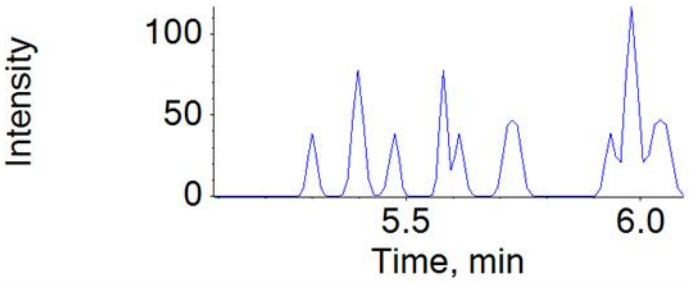
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



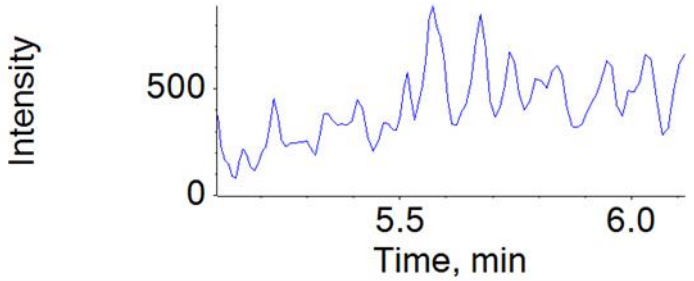
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



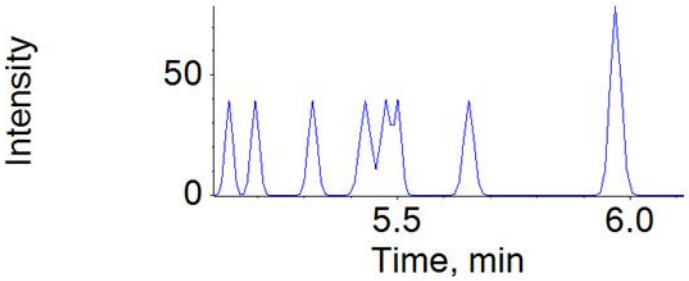
APPROVED
By JPT at 5:07 pm, 11/8/18

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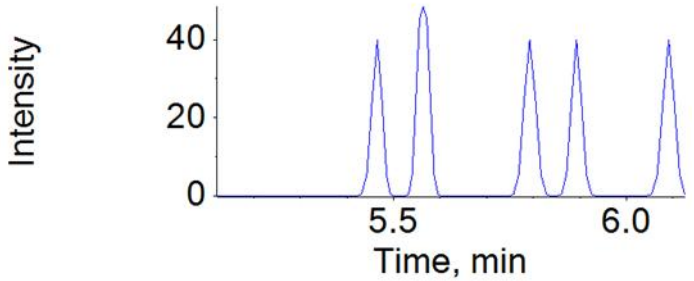
Component: PFDA
Primary Mass: 513.0 / 469.0



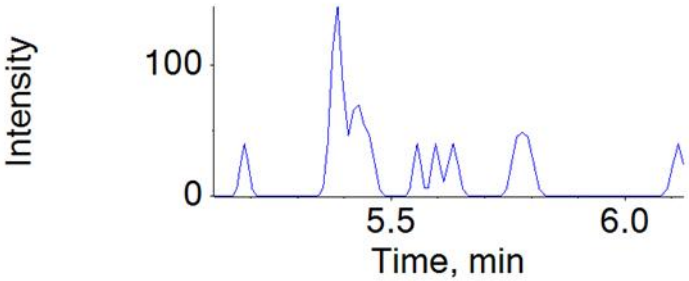
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



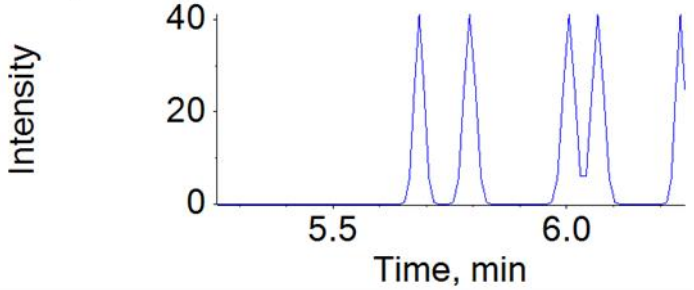
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



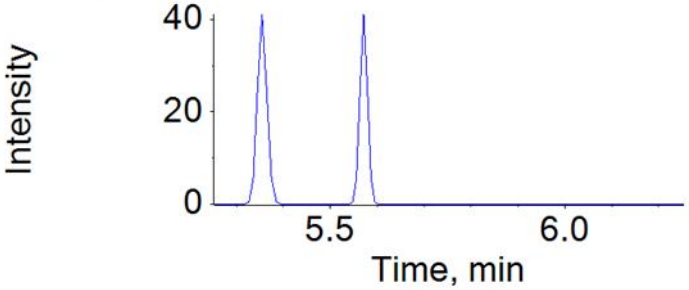
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



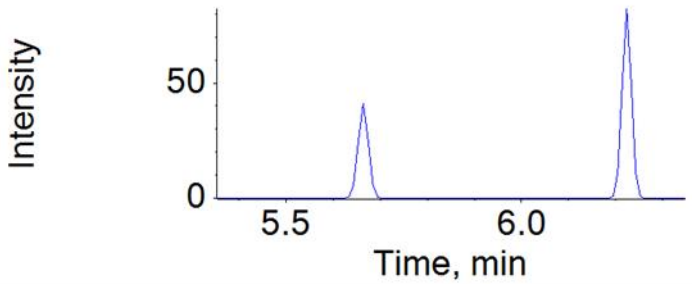
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



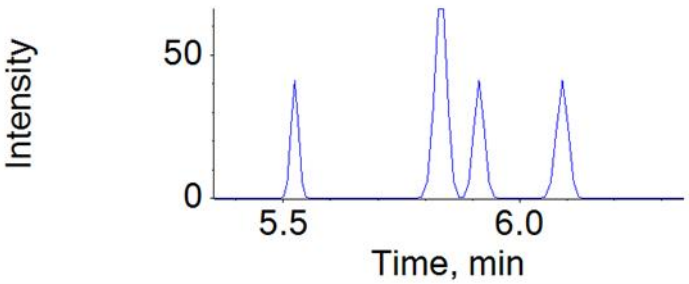
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



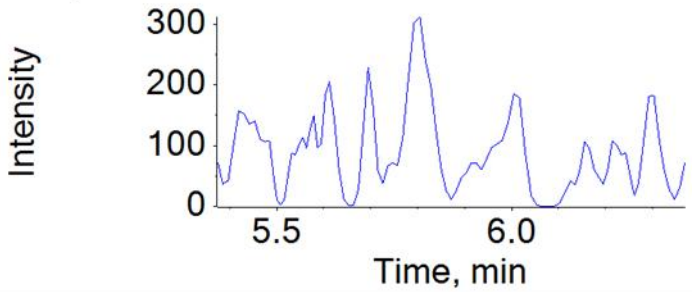
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



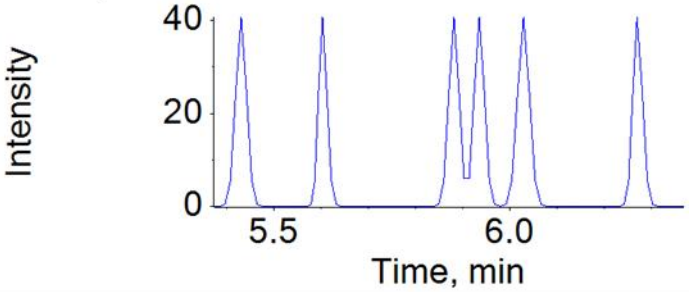
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By JPT at 5:07 pm, 11/8/18

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By umar at 12:13 pm, 11/12/18

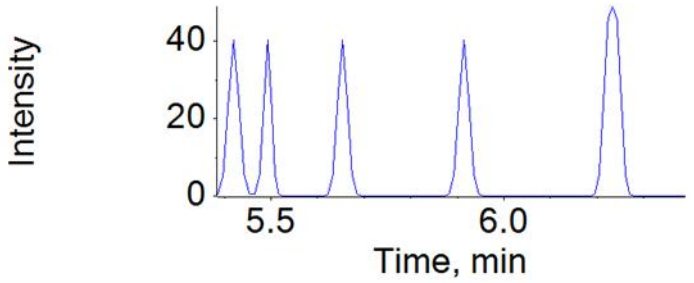
Component: PFUnDA
Primary Mass: 563.0 / 519.0



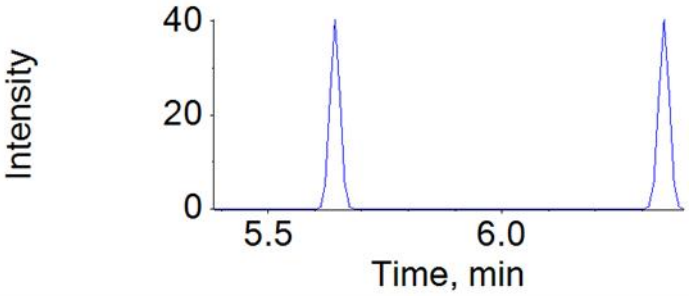
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



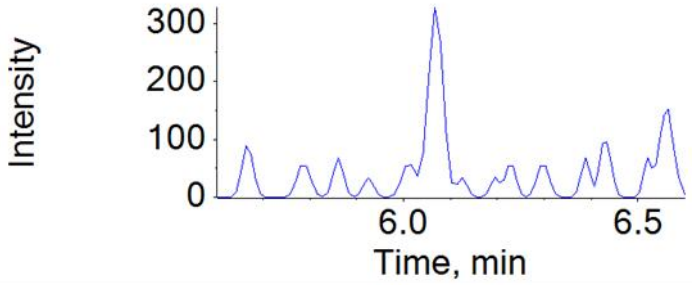
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



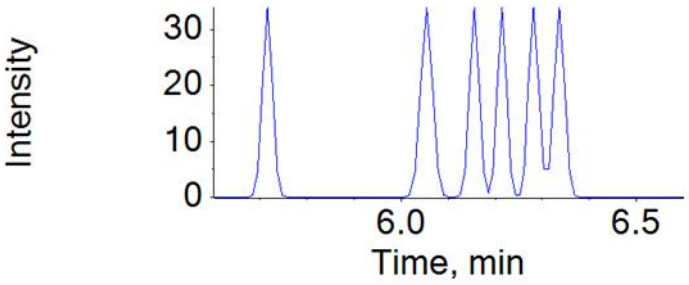
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



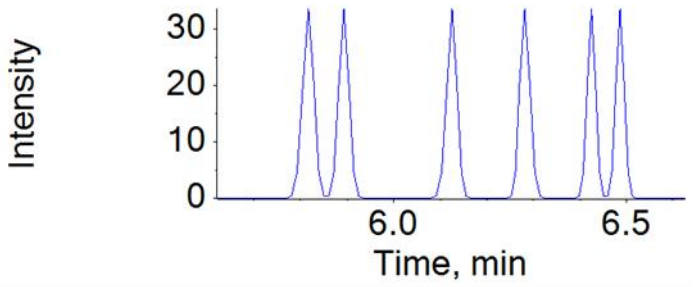
Component: PFDoDA
Primary Mass: 613.0 / 569.0



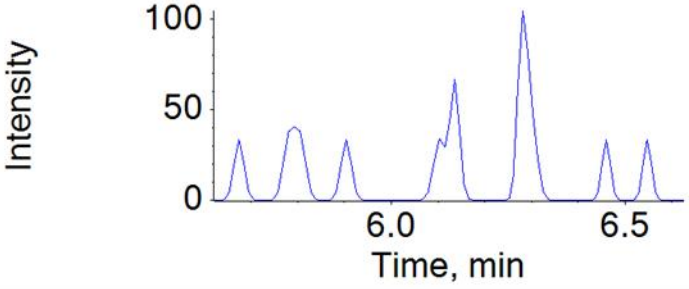
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



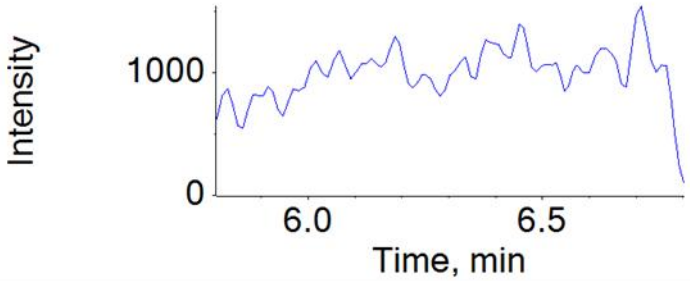
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



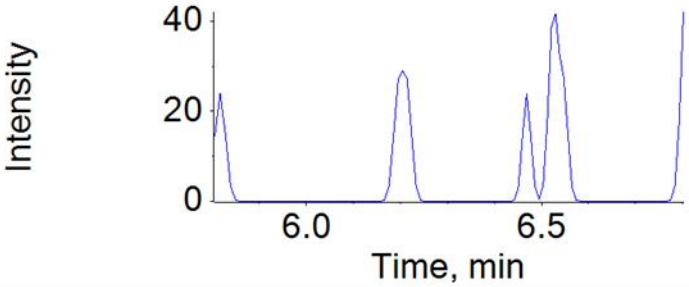
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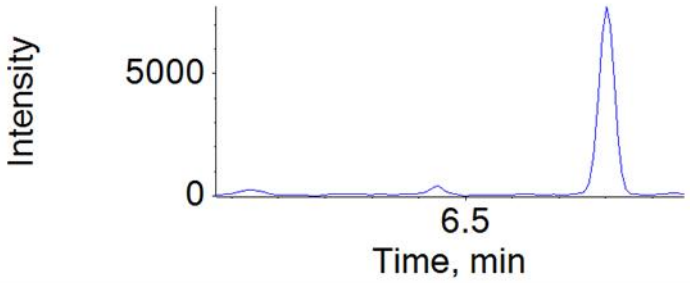
Component: PFTrDA
Primary Mass: 663.0 / 619.0



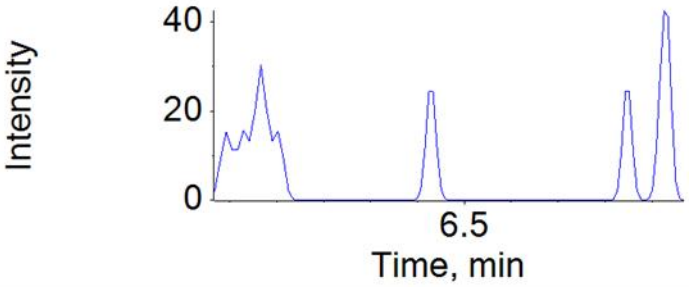
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



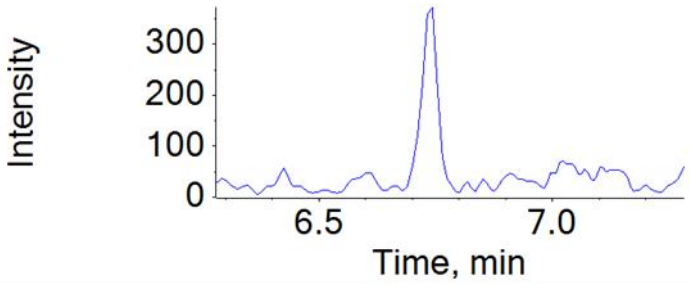
Component: PFTeDA
Primary Mass: 713.0 / 669.0



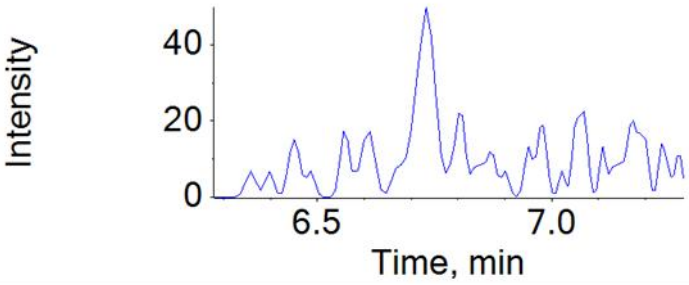
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



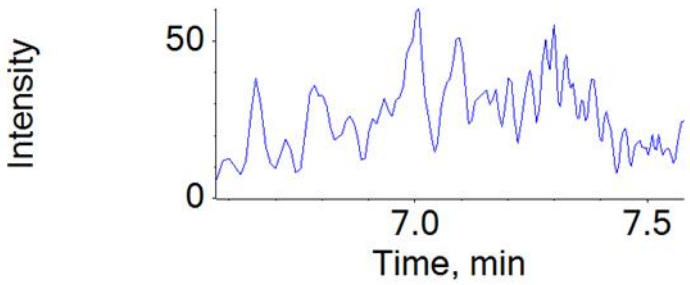
Component: PFHxDA
Primary Mass: 813.0 / 769.0



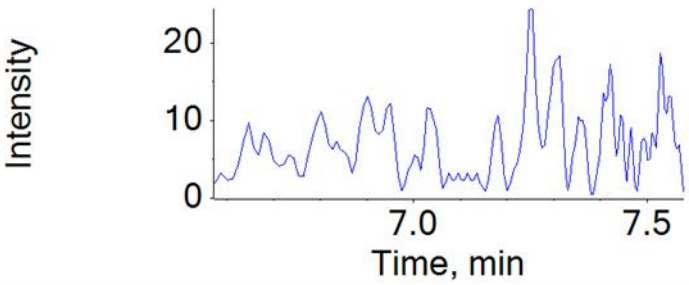
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



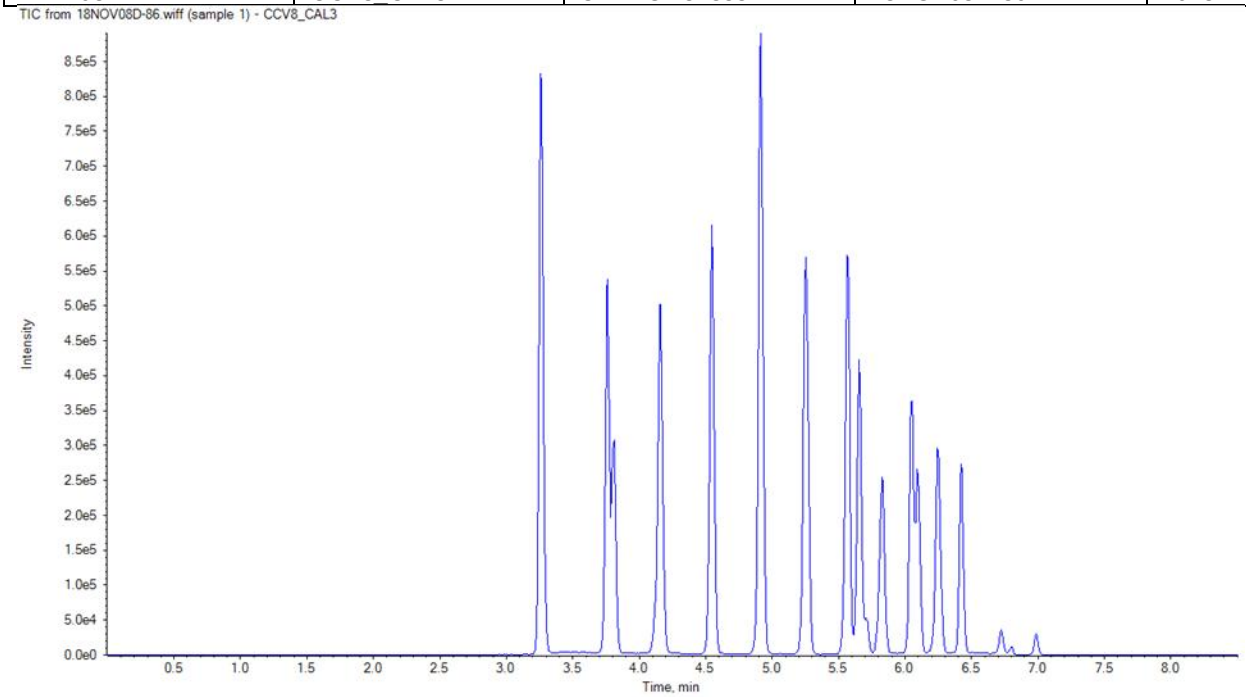
APPROVED
By JPT at 5:08 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALMOD31833F	18NOV08D-86.wiff	2018-11-09T00:35:31



Injection Standard Area Reference File: 18NOV08D-05

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	751206.1	728839.7	3	50	
13C2-PFOA	5.0	508106.7	491983.1	3	50	
13C4-PFOS	4.8	287472.1	255568.1	12	50	
13C2-PFDA	5.0	314412.8	315407.5	0	50	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALMOD31833F	18NOV08D-86.wiff	2018-11-09T00:35:31

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	298572.4	10	13C4-PFBA	813706.7	5.0	0.367	3.26	1.000	2.000	2.147	7	30	
PFPeA	288388.1	12	13C5-PFPeA	841505.1	5.0	0.343	3.76	1.000	2.000	2.037	2	30	
PFBS	159879.7	11	13C3-PFBS	443220.4	4.7	0.361	3.81	1.000	1.770	1.819	3	30	
4:2-FTS	34586.7	11	13C2-4:2-FTS	52920.0	4.7	0.654	4.12	1.000	1.868	1.757	-6	30	
PFHxA	348142.4	12	13C5-PFHxA	707751.9	5.0	0.492	4.16	1.000	2.000	2.110	5	30	
PFPeS	87376.5	11	13C3-PFBS	443220.4	4.7	0.197	4.18	1.100	1.880	1.944	3	30	
PFHxS	127903.2	12	13C3-PFHxS	346520.9	4.7	0.369	4.55	1.000	1.890	1.871	-1	30	
PFHpA	347897.1	12	13C4-PFHpA	546876.4	5.0	0.636	4.55	1.000	2.000	2.139	7	30	
6:2-FTS	34236.6	11	13C2-6:2-FTS	38229.6	4.8	0.896	4.90	1.000	1.896	2.234	18	30	
PFHpS	124721.2	11	13C3-PFHxS	346520.9	4.7	0.360	4.91	1.080	1.900	1.883	-1	30	
PFOA	353117.0	11	13C8-PFOA	942505.5	5.0	0.375	4.91	1.000	2.000	2.110	5	30	
PFOS	117262.9	11	13C8-PFOS	305093.3	4.8	0.384	5.25	1.000	1.910	1.993	4	30	
PFNA	289246.3	11	13C9-PFNA	512619.2	5.0	0.564	5.26	1.000	2.000	2.109	5	30	
PFNS	73898.6	11	13C8-PFOS	305093.3	4.8	0.242	5.55	1.060	1.920	1.920	0	30	
PFDA	227693.9	11	13C6-PFDA	673033.2	5.0	0.338	5.57	1.000	2.000	1.861	-7	30	
8:2-FTS	24122.7	11	13C2-8:2-FTS	30874.6	4.8	0.781	5.57	1.000	1.916	1.761	-8	30	
PFOSA	270238.8	11	13C8-PFOSA	698750.6	5.0	0.387	5.66	1.000	2.000	2.091	5	30	
NMeFOSAA	32027.6	12	d3-NMeFOSAA	78995.7	5.0	0.405	5.71	1.000	2.000	2.086	4	30	
PFDS	61957.5	12	13C8-PFOS	305093.3	4.8	0.203	5.80	1.110	1.930	1.940	1	30	
PFUnDA	194783.4	11	13C7-PFUnDA	279486.4	5.0	0.697	5.83	1.000	2.000	1.999	0	30	
NEtFOSAA	27638.0	12	d5-NEtFOSAA	65484.9	5.0	0.422	5.84	1.000	2.000	1.814	-9	30	
PFDoDA	219631.8	12	13C2-PFDoDA	585802.0	5.0	0.375	6.05	1.000	2.000	2.032	2	30	
10:2-FTS	16888.7	11	13C2-8:2-FTS	30874.6	4.8	0.547	6.07	1.090	1.928	1.703	-12	30	
NMePFOSAE	162327.5	11	d7-NMePFOSAE	353934.1	5.0	0.459	6.10	1.000	2.000	2.055	3	30	
NMePFOSA	30602.5	12	d3-NMePFOSA	78061.1	5.0	0.392	6.11	1.000	2.000	2.194	10	30	
PFDoS	28862.1	11	13C8-PFOS	305093.3	4.8	0.095	6.21	1.190	1.940	1.826	-6	30	
NEtPFOSAE	185331.3	11	d9-NEtPFOSAE	279379.9	5.0	0.663	6.25	1.000	2.000	2.127	6	30	
NEtPFOSA	27529.0	12	d5-NEtPFOSA	71581.8	5.0	0.385	6.27	1.000	2.000	1.694	-15	30	
PFTrDA	182645.5	11	13C2-PFDoDA	585802.0	5.0	0.312	6.24	1.030	2.000	1.966	-2	30	
PFTeDA	155169.1	10	13C2-PFTeDA	416875.0	5.0	0.372	6.42	1.000	2.000	2.186	9	30	
PFHxDA	68909.8	11	13C2-PFTeDA	416875.0	5.0	0.165	6.72	1.050	2.000	2.052	3	30	
PFODA	63043.0	10	13C2-PFTeDA	416875.0	5.0	0.151	6.99	1.090	2.000	2.167	8	30	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV8_CAL3			**Data File:**		18NOV08D-86.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-09T00:35:31
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV6-12
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: 18NOV08D-05

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	751206.1	728839.7	3	50	
13C2-PFOA	5.0	508106.7	491983.1	3	50	
13C4-PFOS	4.8	287472.1	255568.1	12	50	
13C2-PFDA	5.0	314412.8	315407.5	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	813706.7	13C3-PFBA	751206.1	1.083	5.000	5.013	100	70-130	
E13C5-PFPeA	841505.1	13C3-PFBA	751206.1	1.120	5.000	4.880	98	70-130	
E13C3-PFBS	443220.4	13C3-PFBA	751206.1	0.590	4.650	4.330	93	70-130	
E13C2-4:2-FTS	52920.0	13C2-PFOA	508106.7	0.104	4.670	4.700	101	70-130	
E13C5-PFHxA	707751.9	13C2-PFOA	508106.7	1.393	5.000	5.124	102	70-130	
E13C3-PFHxS	346520.9	13C2-PFOA	508106.7	0.682	4.730	4.896	104	70-130	
E13C4-PFHpA	546876.4	13C2-PFOA	508106.7	1.076	5.000	4.896	98	70-130	
E13C2-6:2-FTS	38229.6	13C2-PFOA	508106.7	0.075	4.750	5.017	106	70-130	
E13C8-PFOA	942505.5	13C2-PFOA	508106.7	1.855	5.000	5.173	103	70-130	
E13C8-PFOS	305093.3	13C4-PFOS	287472.1	1.061	4.780	4.693	98	70-130	
E13C9-PFNA	512619.2	13C4-PFOS	287472.1	1.783	5.000	4.871	97	70-130	
E13C6-PFDA	673033.2	13C2-PFDA	314412.8	2.141	5.000	5.383	108	70-130	
E13C2-8:2-FTS	30874.6	13C2-PFDA	314412.8	0.098	4.790	5.196	108	70-130	
E13C8-PFOSA	698750.6	13C2-PFDA	314412.8	2.222	5.000	4.850	97	70-130	
Ed3-NMeFOSAA	78995.7	13C2-PFDA	314412.8	0.251	5.000	4.672	93	70-130	
E13C7-PFUnDA	279486.4	13C2-PFDA	314412.8	0.889	5.000	5.128	103	70-130	
Ed5-NEtFOSAA	65484.9	13C2-PFDA	314412.8	0.208	5.000	4.820	96	70-130	
E13C2-PFDoDA	585802.0	13C2-PFDA	314412.8	1.863	5.000	5.023	100	70-130	
Ed7-NMePFOSAE	353934.1	13C2-PFDA	314412.8	1.126	5.000	5.235	105	70-130	
Ed3-NMePFOSA	78061.1	13C2-PFDA	314412.8	0.248	5.000	4.545	91	70-130	
Ed9-NEtPFOSAE	279379.9	13C2-PFDA	314412.8	0.889	5.000	5.075	101	70-130	
Ed5-NEtPFOSA	71581.8	13C2-PFDA	314412.8	0.228	5.000	5.272	105	70-130	
E13C2-PFTeDA	416875.0	13C2-PFDA	314412.8	1.326	5.000	4.773	95	70-130	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

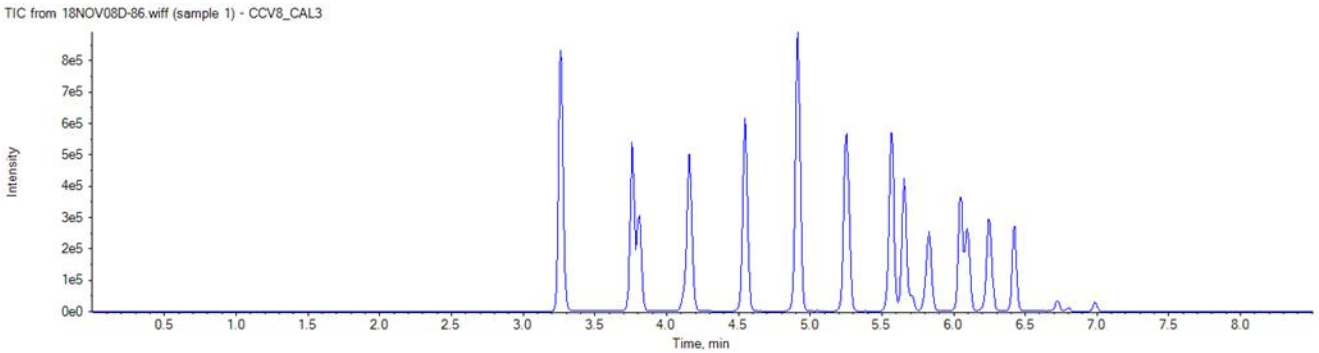
Analyte Quantitation Peak Table

Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV08D-86.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	298572.4		A	13C4-PFBA	3.26	813706.7	0.367	2.147
PFPeA	3.76	1.000	288388.1		A	13C5-PFPeA	3.76	841505.1	0.343	2.037
PFBS	3.81	1.000	159879.7		A	13C3-PFBS	3.81	443220.4	0.361	1.819
4:2-FTS	4.12	1.000	34586.7		A	13C2-4:2-FTS	4.12	52920.0	0.654	1.757
PFHxA	4.16	1.000	348142.4		A	13C5-PFHxA	4.16	707751.9	0.492	2.110
PFPeS	4.18	1.100	87376.5		A	13C3-PFBS	3.81	443220.4	0.197	1.944
PFHxS	4.55	1.000	127903.2		A	13C3-PFHxS	4.55	346520.9	0.369	1.871
PFHpA	4.55	1.000	347897.1		A	13C4-PFHpA	4.55	546876.4	0.636	2.139
6:2-FTS	4.90	1.000	34236.6		A	13C2-6:2-FTS	4.91	38229.6	0.896	2.234
PFHpS	4.91	1.080	124721.2		A	13C3-PFHxS	4.55	346520.9	0.360	1.883
PFOA	4.91	1.000	353117.0		A	13C8-PFOA	4.92	942505.5	0.375	2.110
PFOS	5.25	1.000	117262.9		A	13C8-PFOS	5.24	305093.3	0.384	1.993
PFNA	5.26	1.000	289246.3		A	13C9-PFNA	5.26	512619.2	0.564	2.109
PFNS	5.55	1.060	73898.6		A	13C8-PFOS	5.24	305093.3	0.242	1.920
PFDA	5.57	1.000	227693.9		A	13C6-PFDA	5.57	673033.2	0.338	1.861
8:2-FTS	5.57	1.000	24122.7		A	13C2-8:2-FTS	5.57	30874.6	0.781	1.761
PFOSA	5.66	1.000	270238.8		A	13C8-PFOSA	5.66	698750.6	0.387	2.091
NMeFOSAA	5.71	1.000	32027.6		A	d3-NMeFOSAA	5.71	78995.7	0.405	2.086
PFDS	5.80	1.110	61957.5		A	13C8-PFOS	5.24	305093.3	0.203	1.940
PFUnDA	5.83	1.000	194783.4		A	13C7-PFUnDA	5.83	279486.4	0.697	1.999
NEtFOSAA	5.84	1.000	27638.0		A	d5-NEtFOSAA	5.84	65484.9	0.422	1.814
PFDoDA	6.05	1.000	219631.8		A	13C2-PFDoDA	6.05	585802.0	0.375	2.032
10:2-FTS	6.07	1.090	16888.7		A	13C2-8:2-FTS	5.57	30874.6	0.547	1.703
NMePFOSAE	6.10	1.000	162327.5		A	d7-NMePFOSAE	6.09	353934.1	0.459	2.055
NMePFOSA	6.11	1.000	30602.5		A	d3-NMePFOSA	6.10	78061.1	0.392	2.194
PFDoS	6.21	1.190	28862.1		A	13C8-PFOS	5.24	305093.3	0.095	1.826
NEtPFOSAE	6.25	1.000	185331.3		A	d9-NEtPFOSAE	6.24	279379.9	0.663	2.127
NEtPFOSA	6.27	1.000	27529.0		A	d5-NEtPFOSA	6.26	71581.8	0.385	1.694
PFTrDA	6.24	1.030	182645.5		A	13C2-PFDoDA	6.05	585802.0	0.312	1.966
PFTeDA	6.42	1.000	155169.1		A	13C2-PFTeDA	6.42	416875.0	0.372	2.186
PFHxDA	6.72	1.050	68909.8		A	13C2-PFTeDA	6.42	416875.0	0.165	2.052
PFODA	6.99	1.090	63043.0		A	13C2-PFTeDA	6.42	416875.0	0.151	2.167

Total Ion Chromatogram

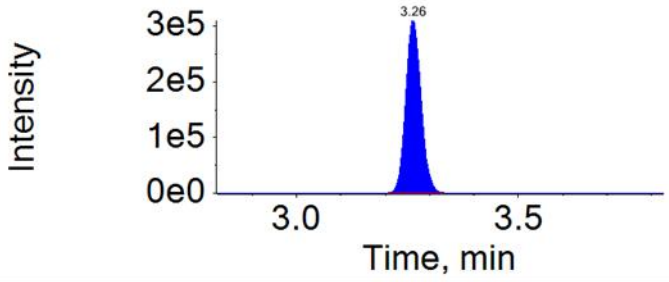


APPROVED
By JPT at 10:55 am, 11/9/18

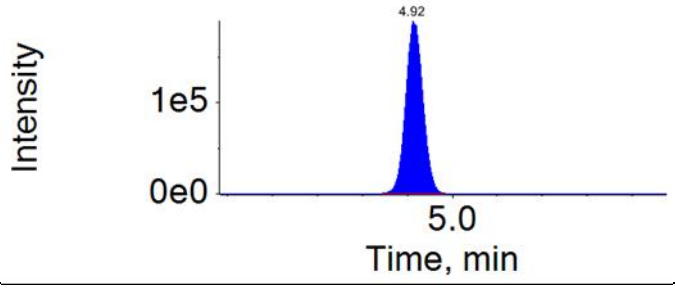
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

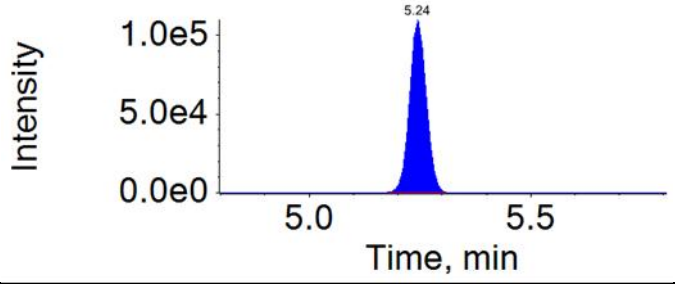
Injection Standard: 13C3-PFBA
216.0 / 172.0



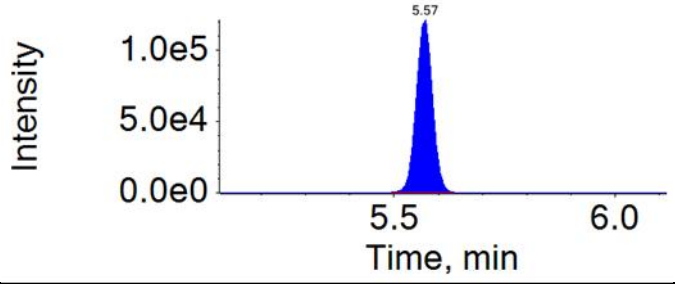
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



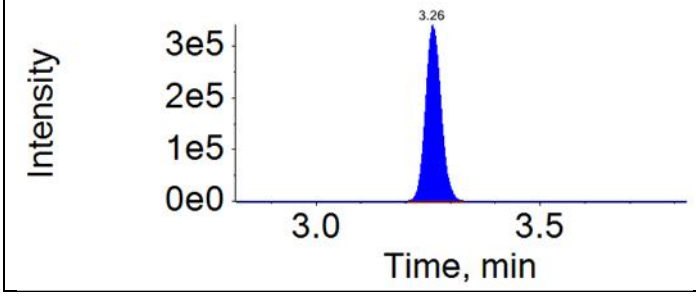
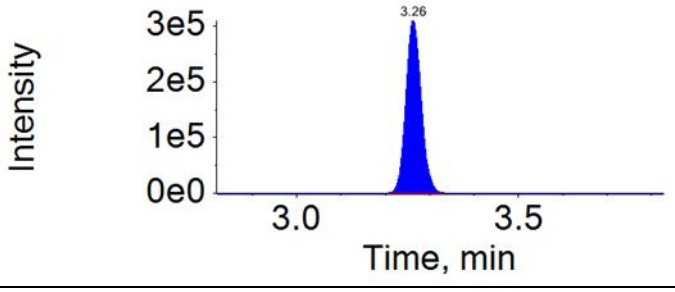
Injection Standard: 13C2-PFDA
515.0 / 470.0

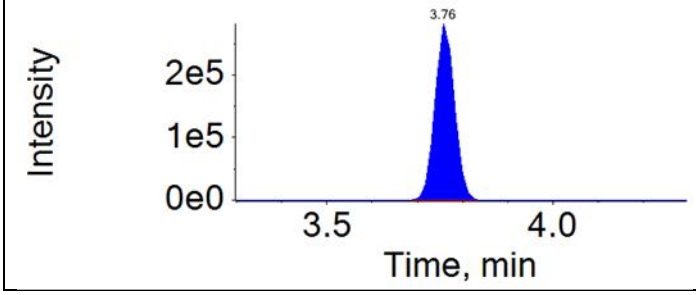
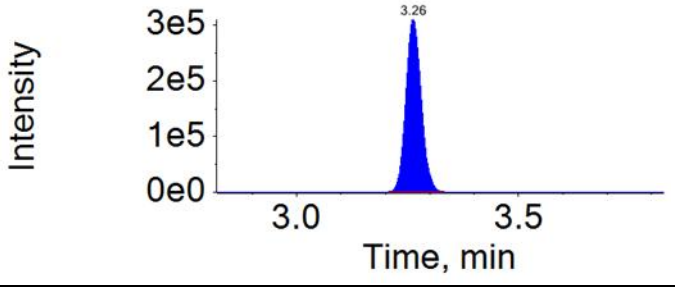


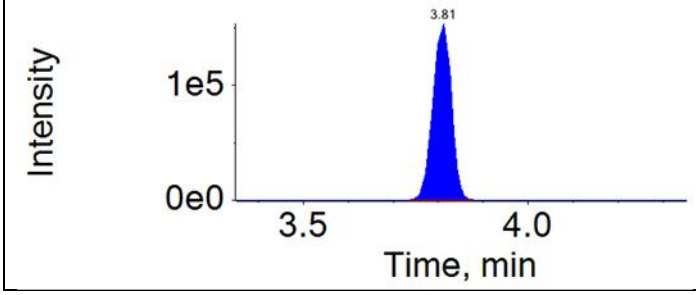
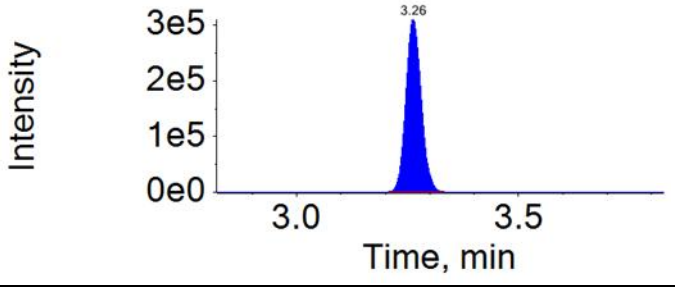
APPROVED
By JPT at 10:55 am, 11/9/18

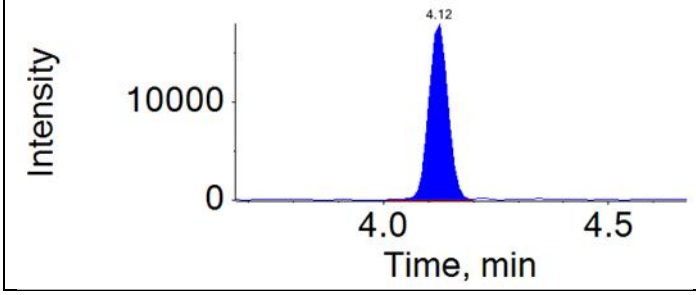
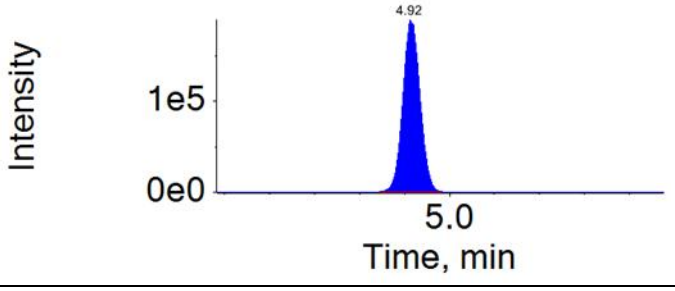
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
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
	

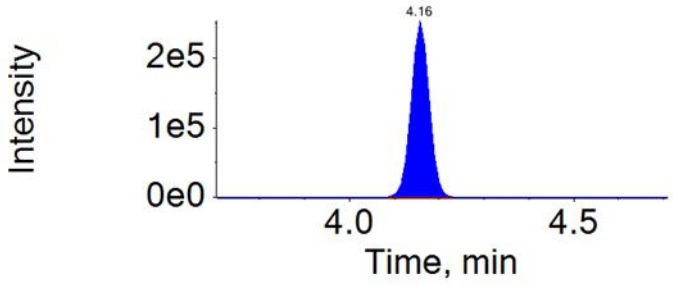
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

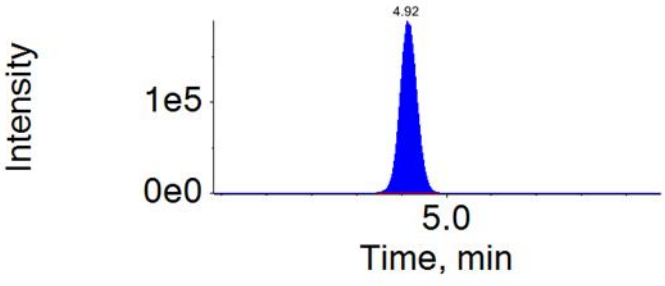
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

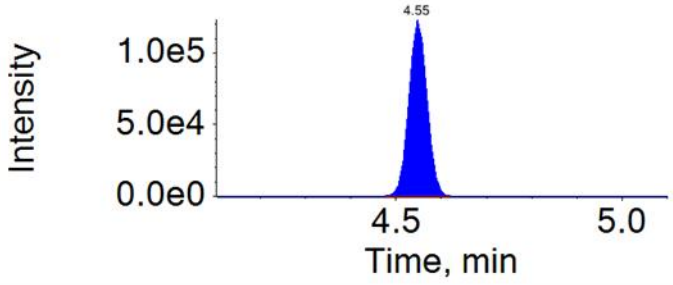
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

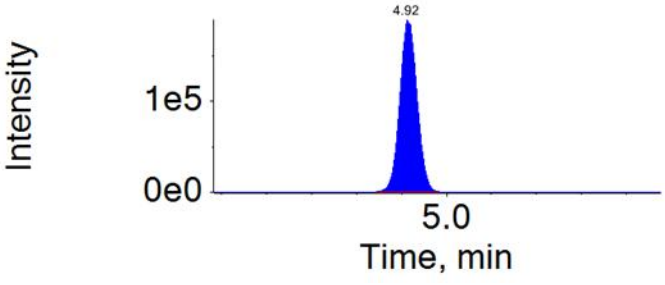
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



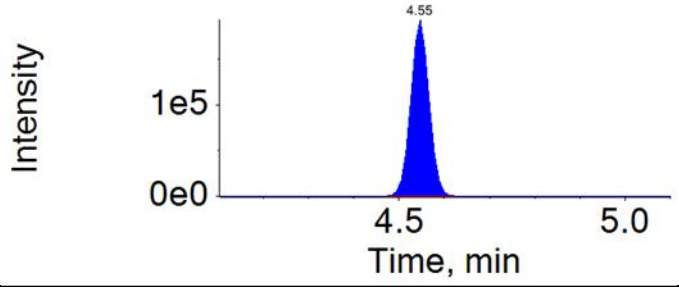


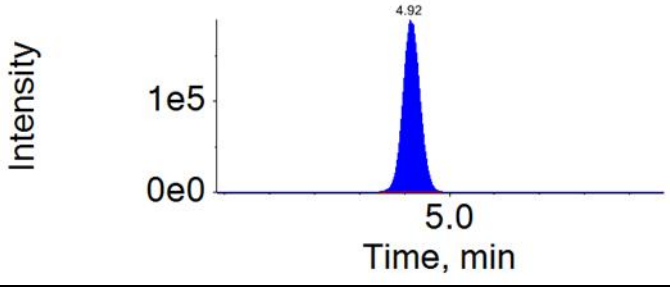
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



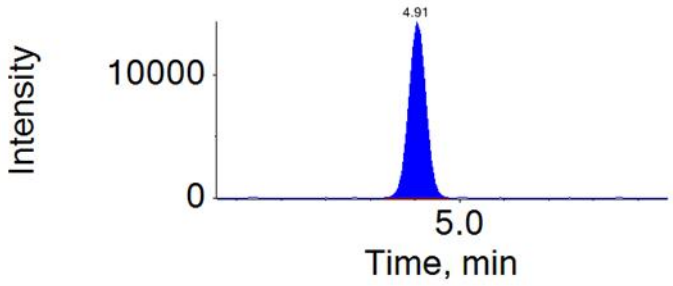


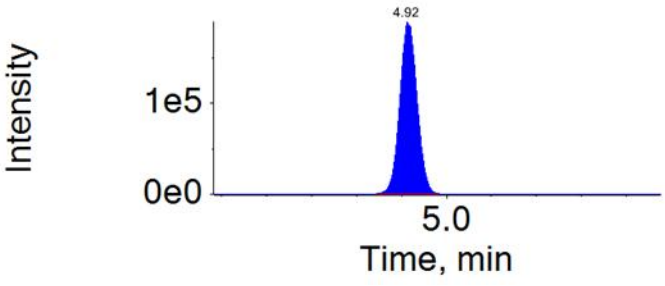
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





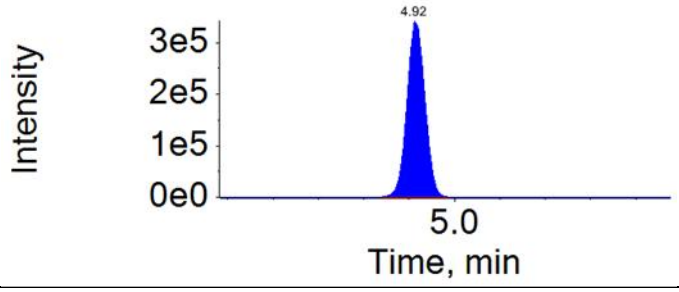
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

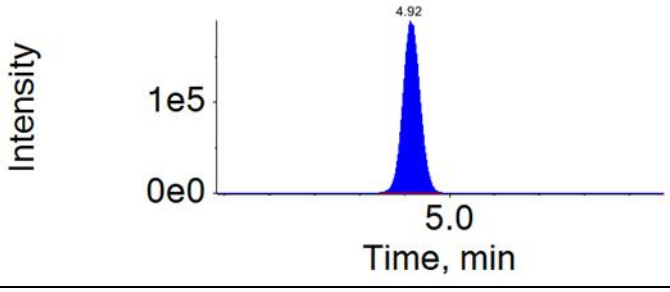




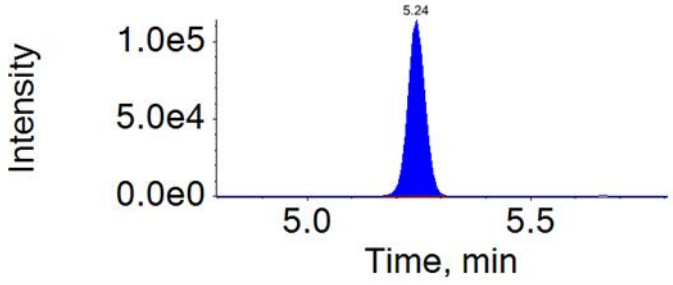
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

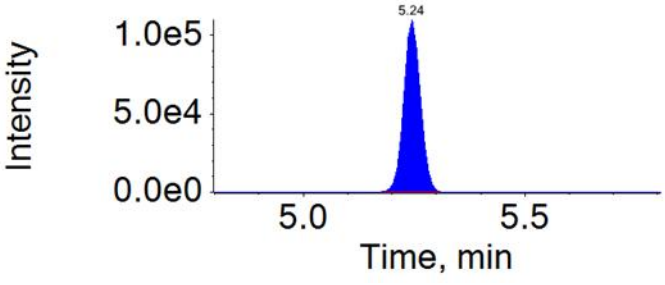
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



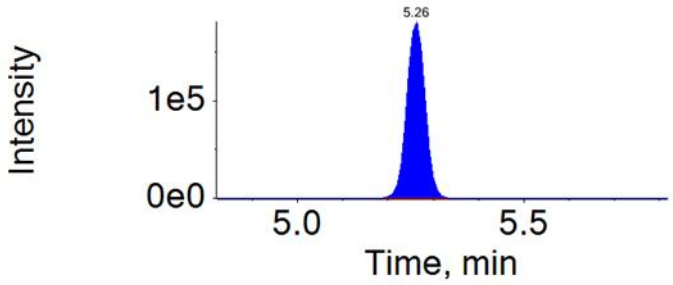


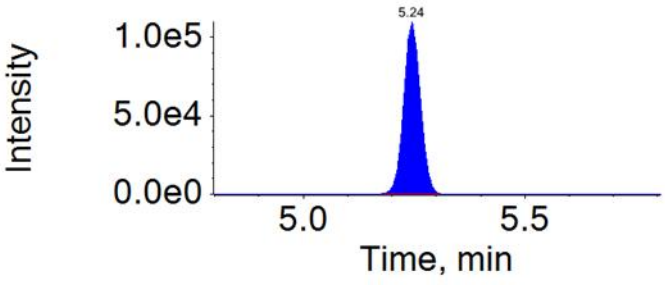
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



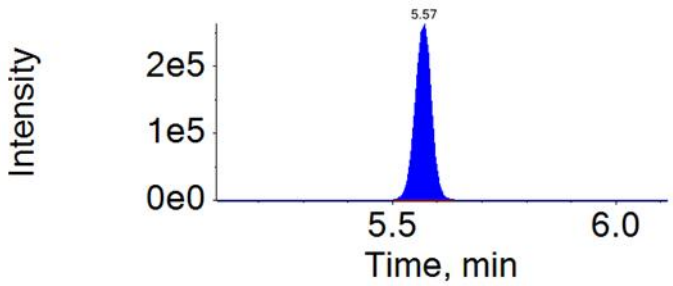


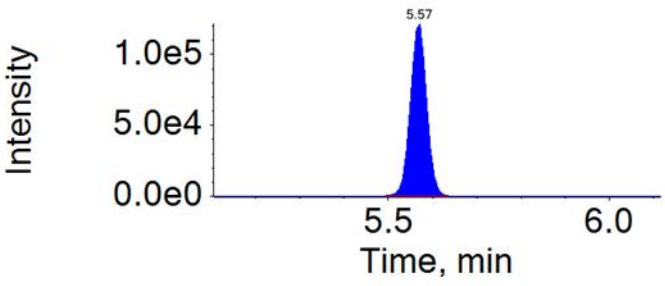
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



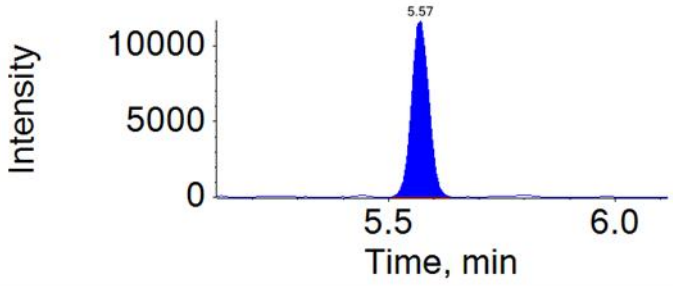


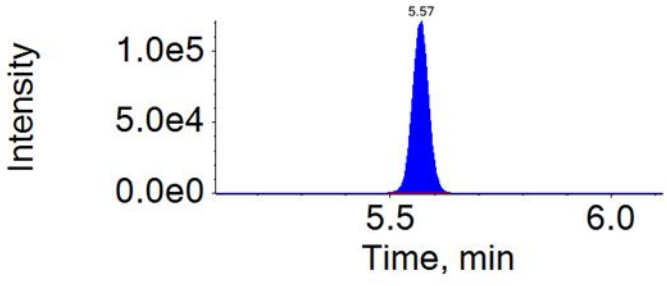
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

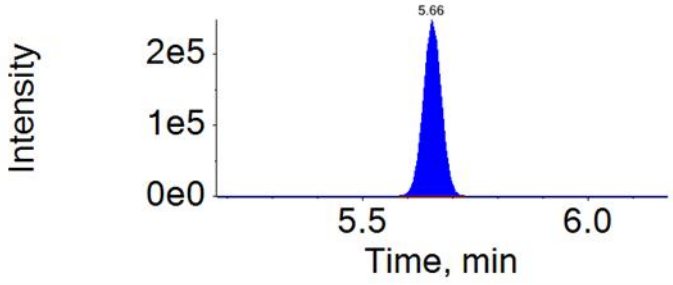
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

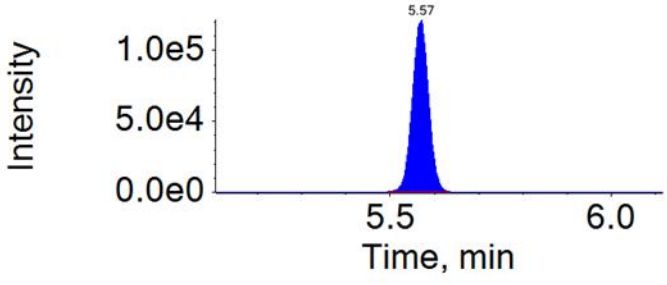
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



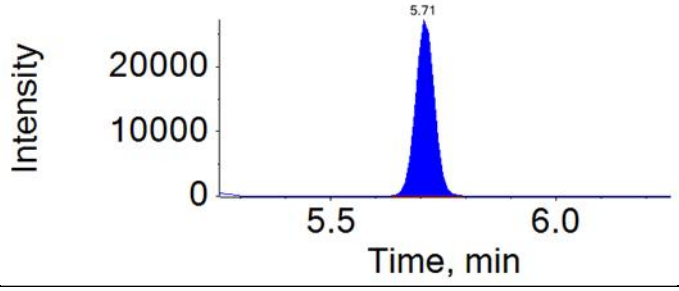


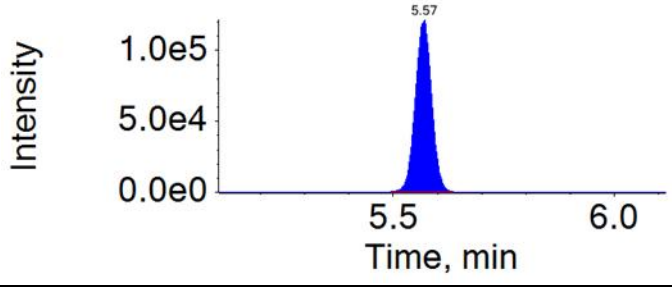
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



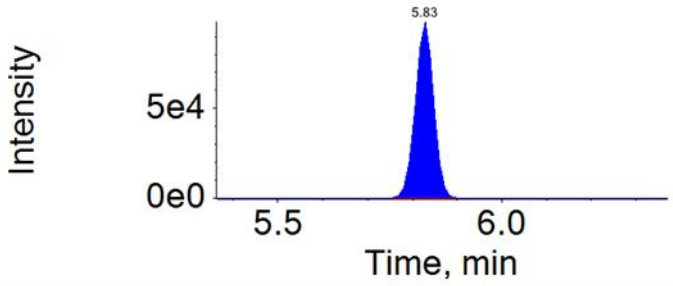


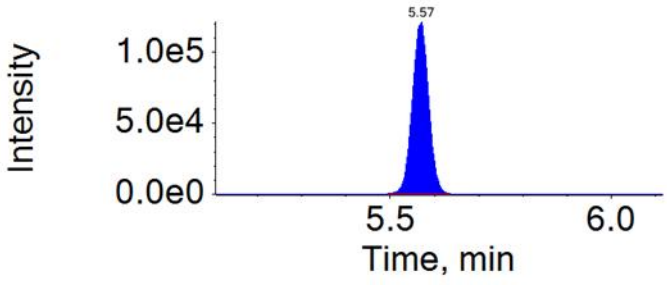
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

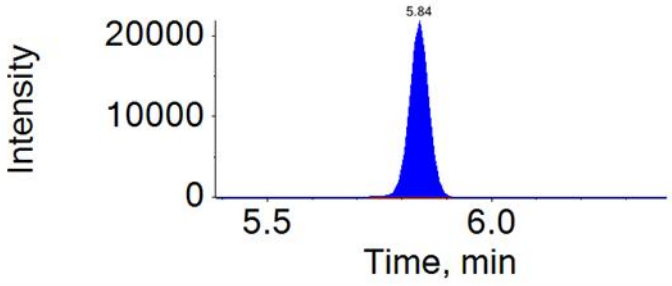
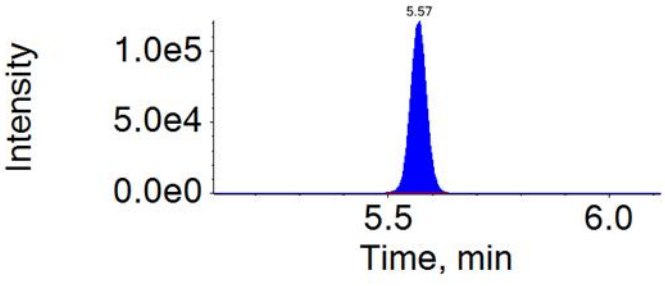


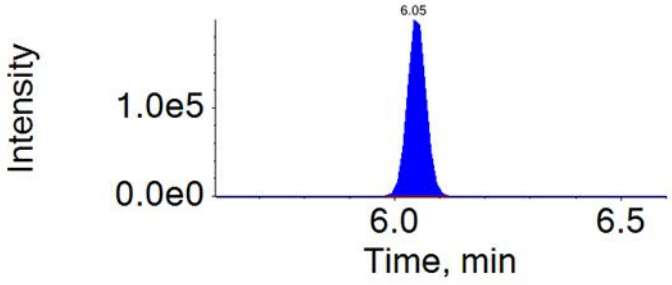
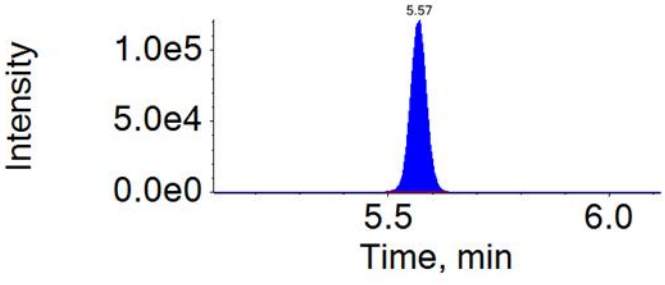


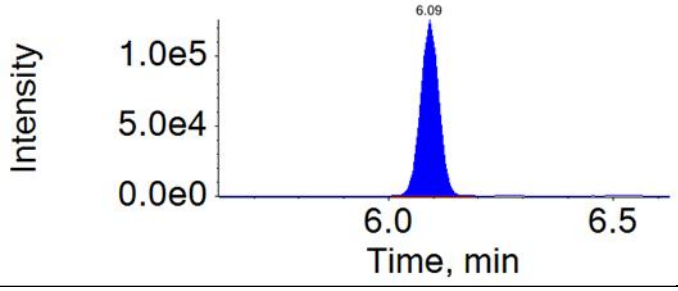
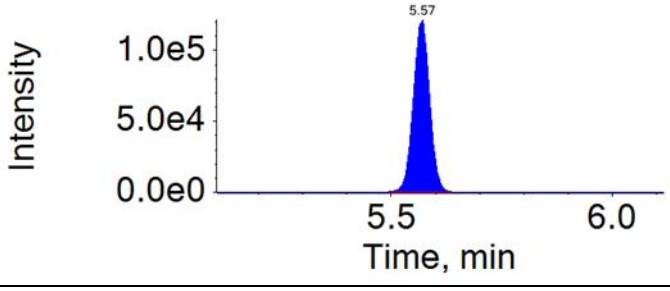
APPROVED
By JPT at 10:55 am, 11/9/18

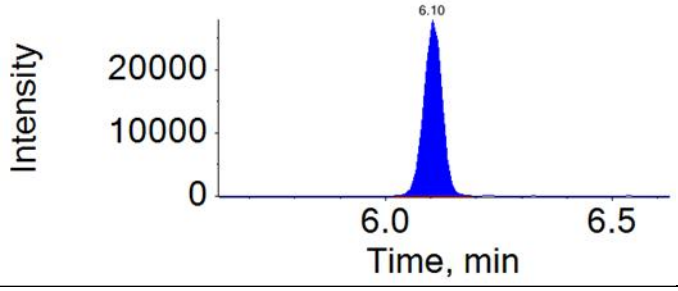
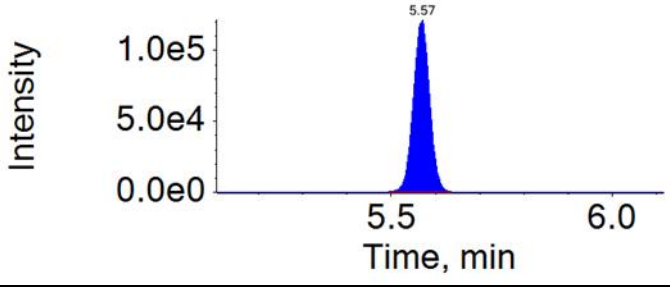
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
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
	

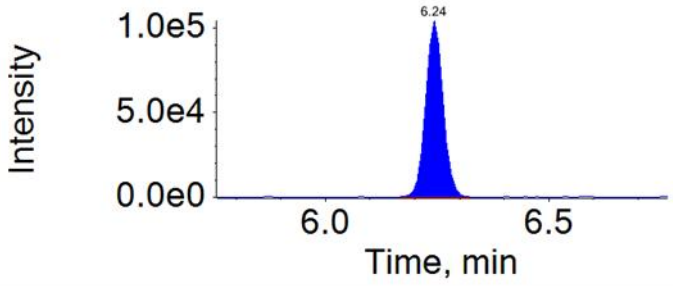
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

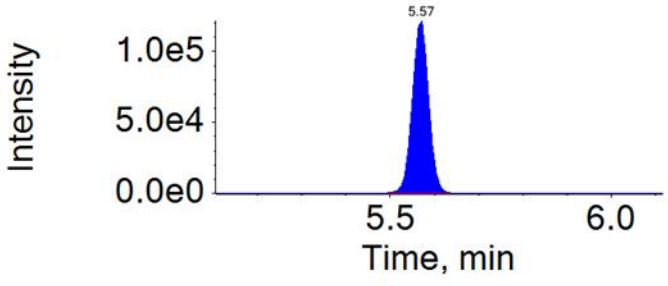
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

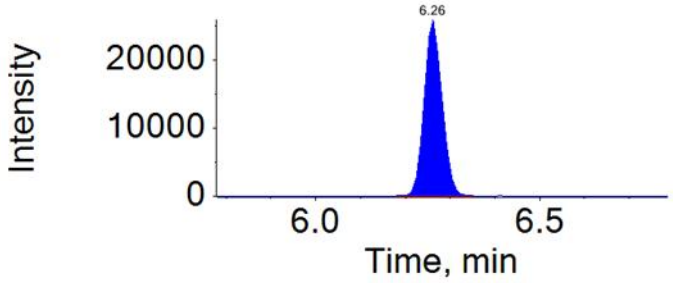
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

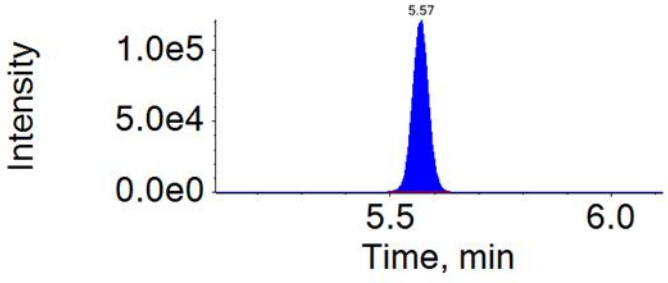
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



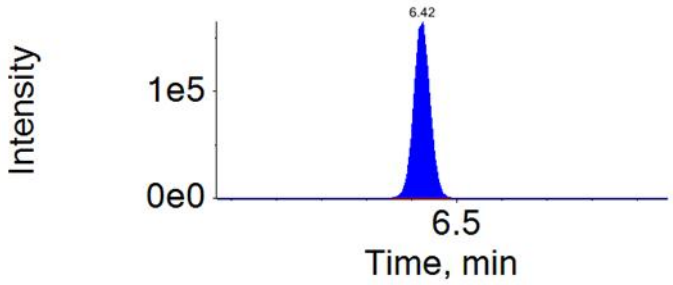


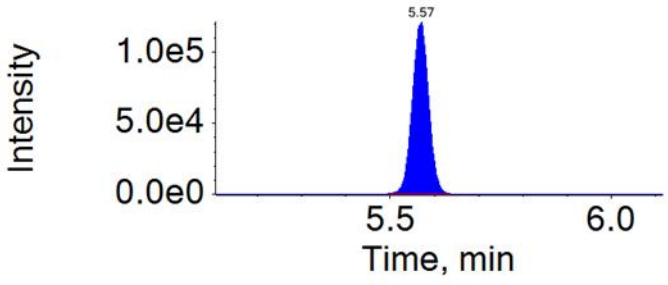
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



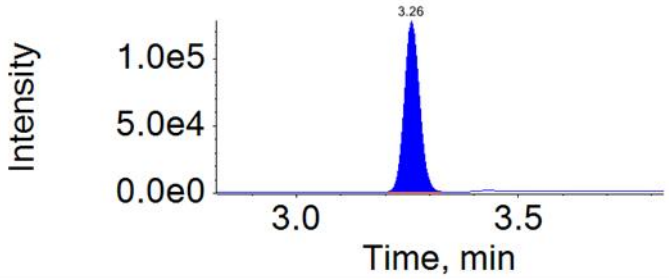


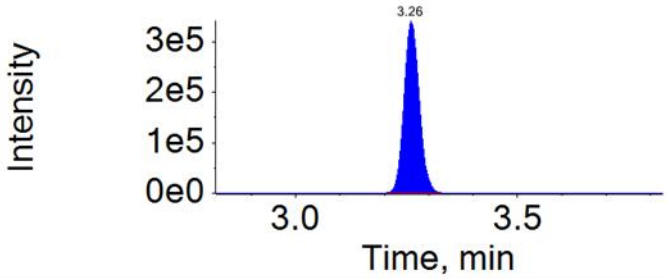
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

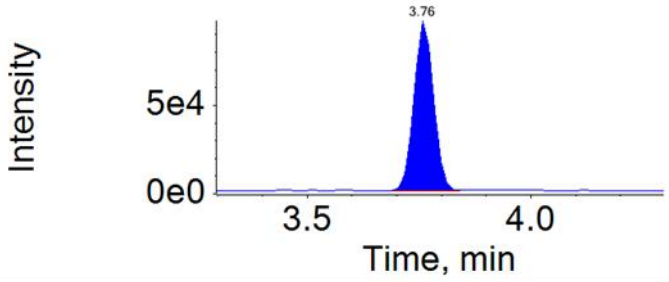
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

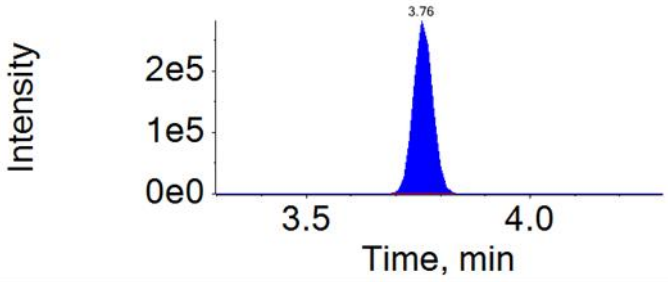
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



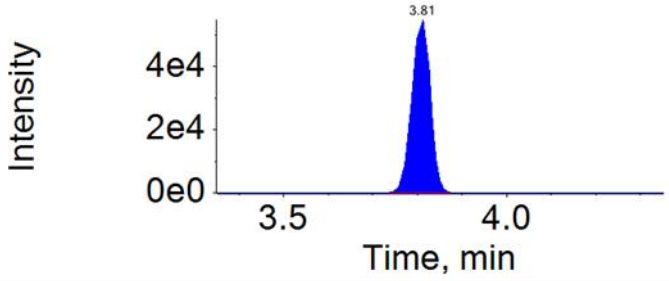


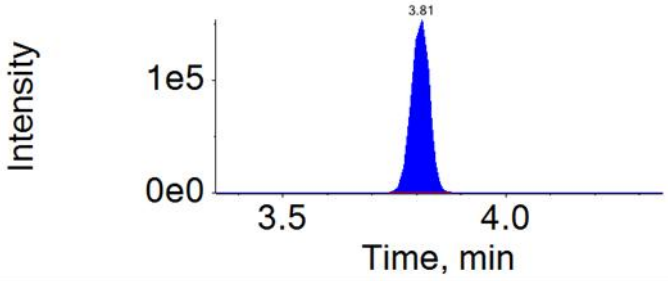
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



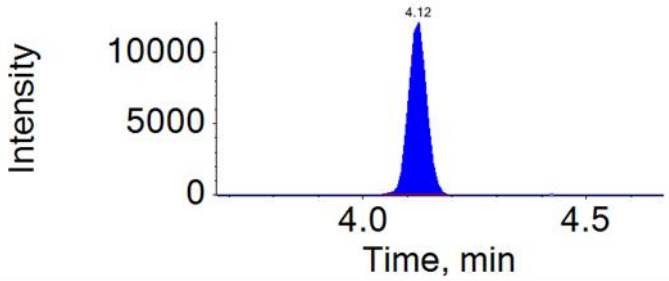


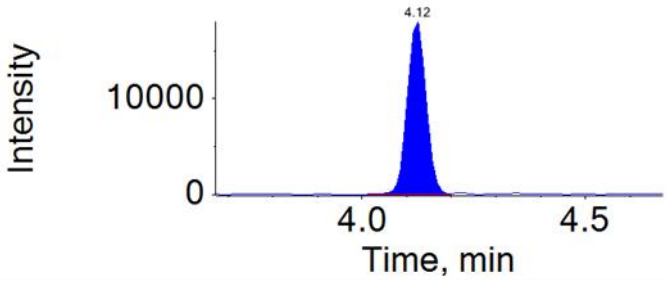
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



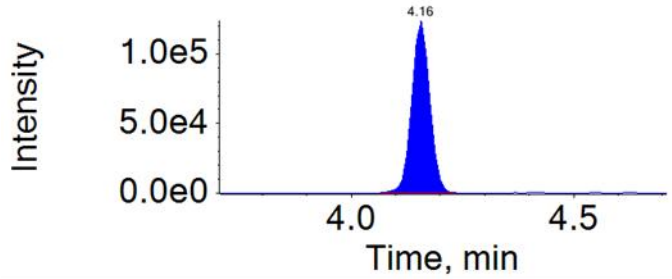


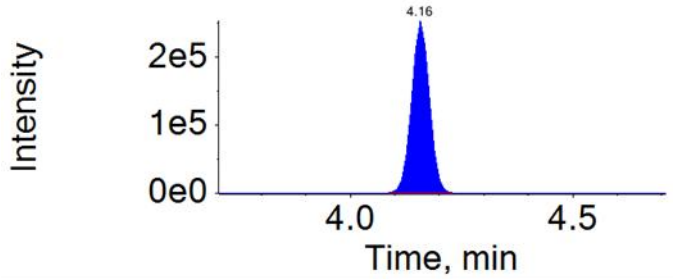
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

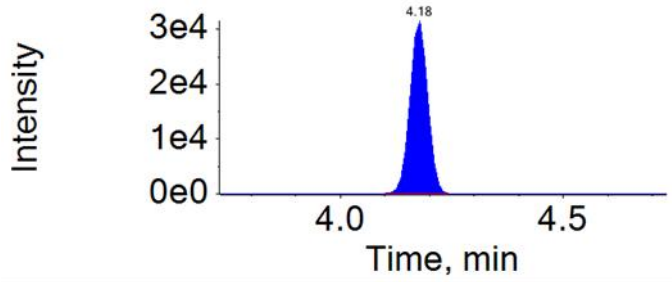
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

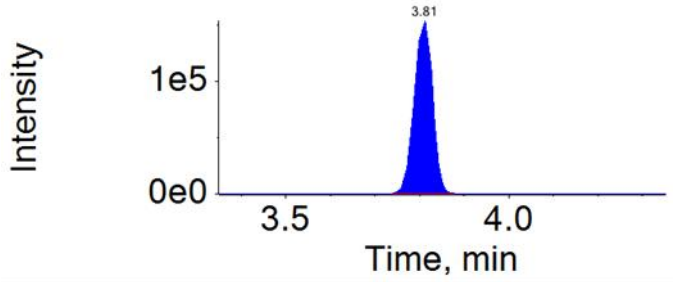
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



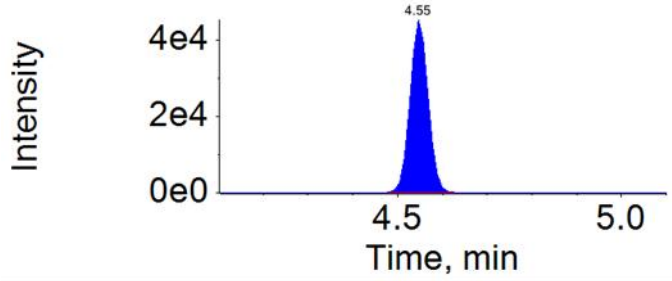


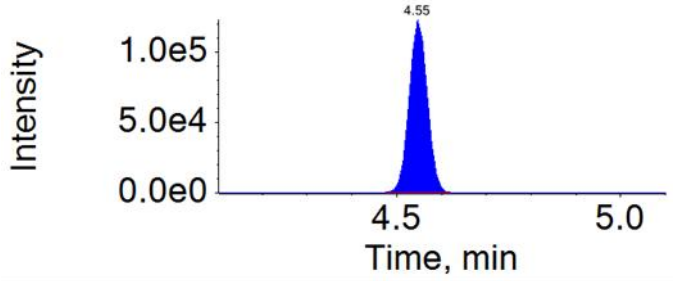
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



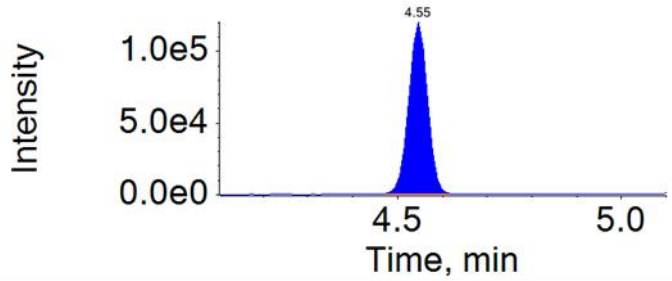


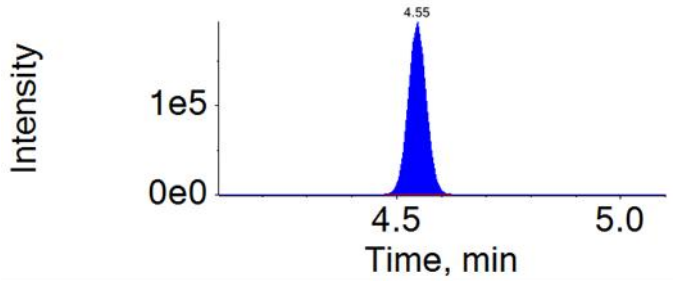
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





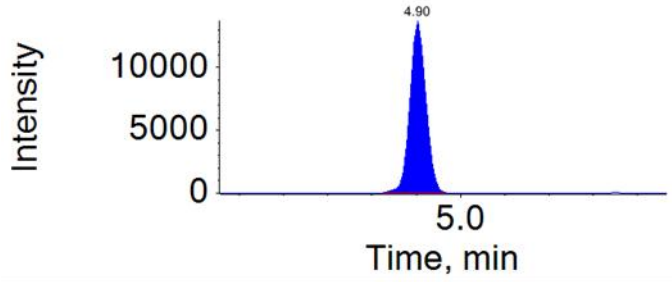
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

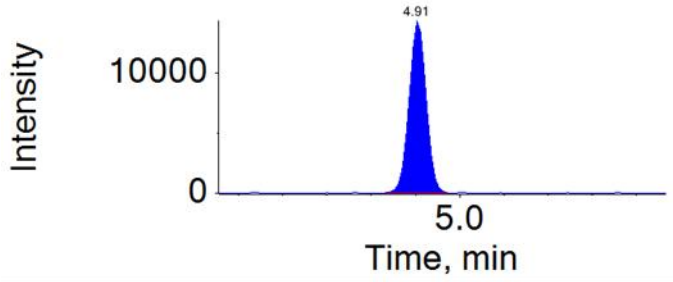




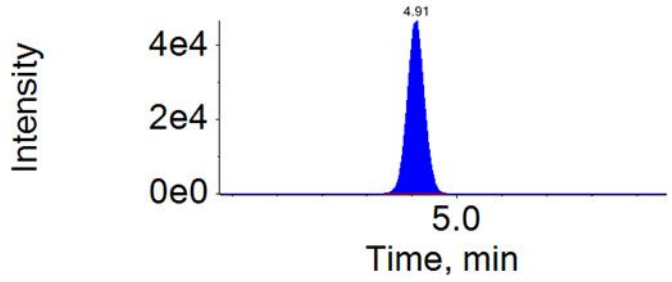
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

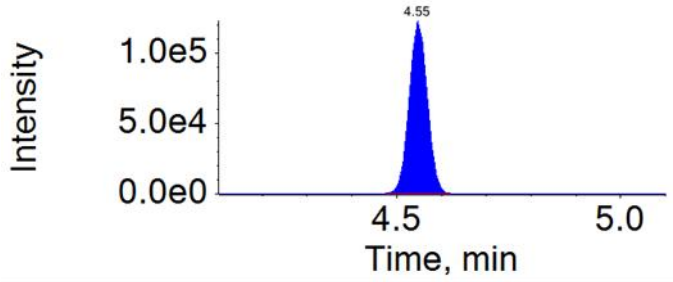
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



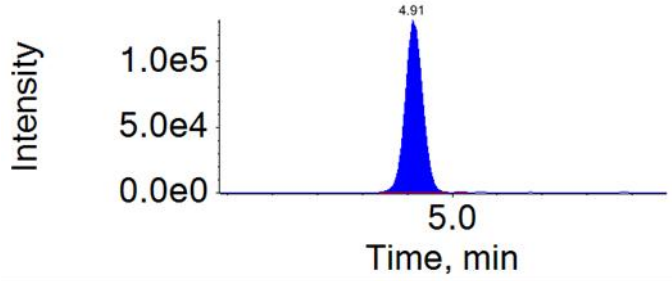


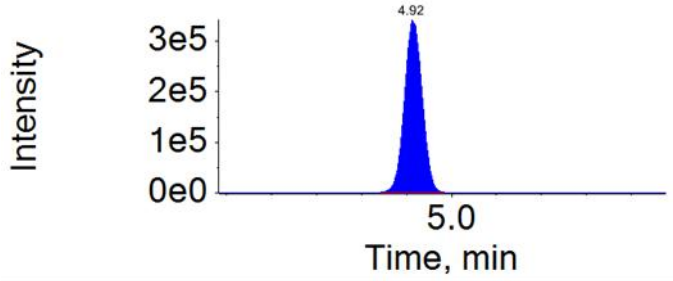
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



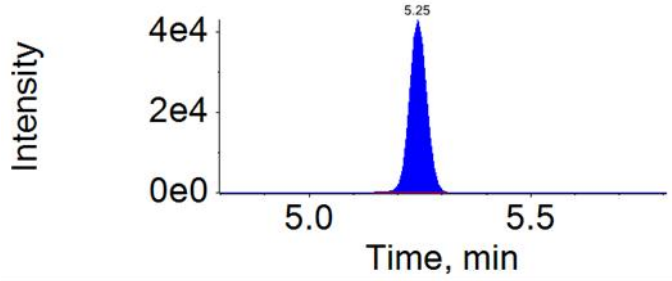


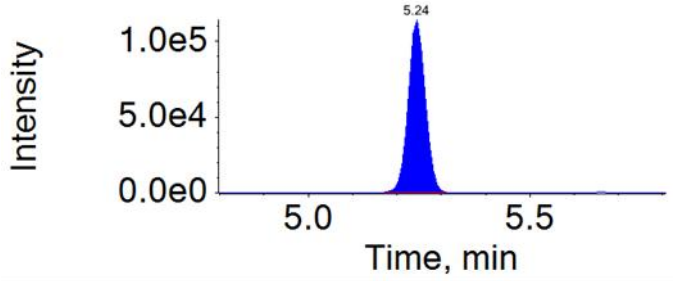
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



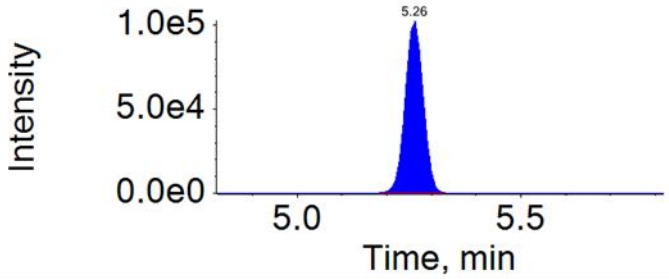


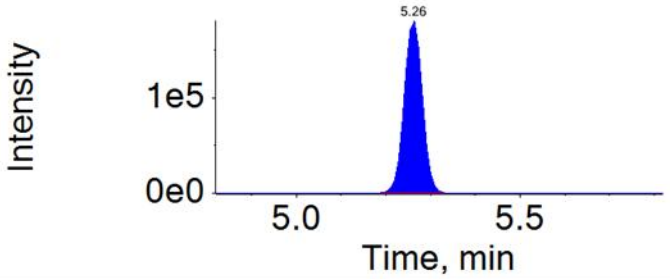
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

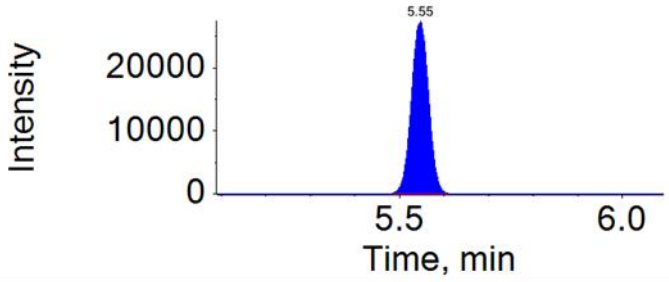
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

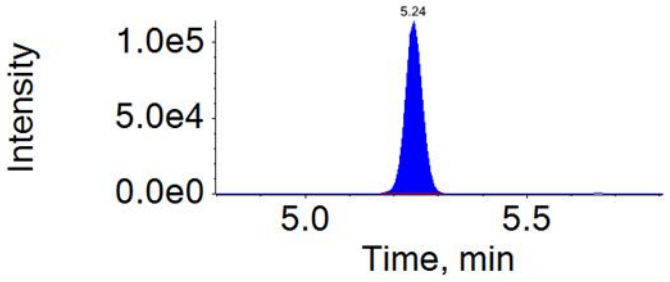
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



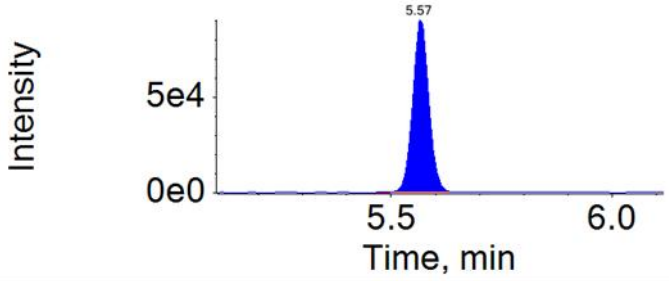


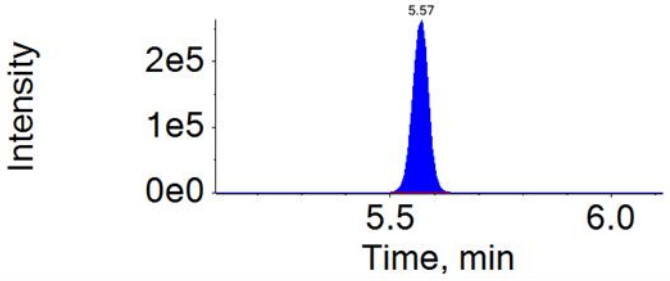
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



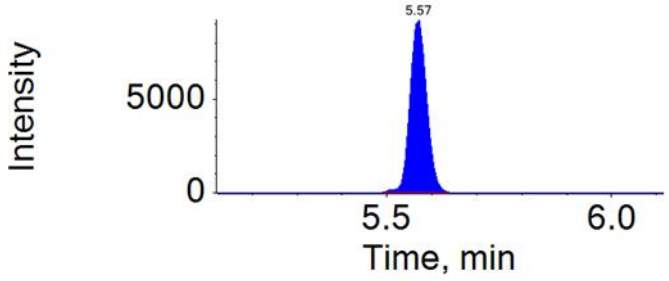


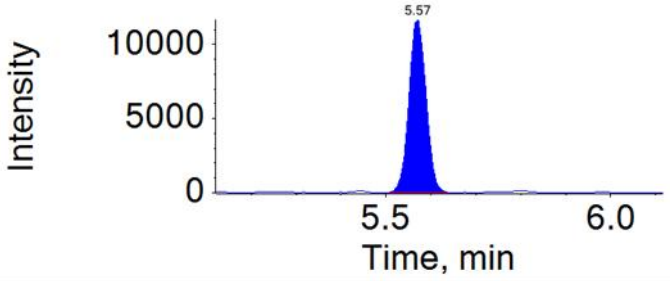
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

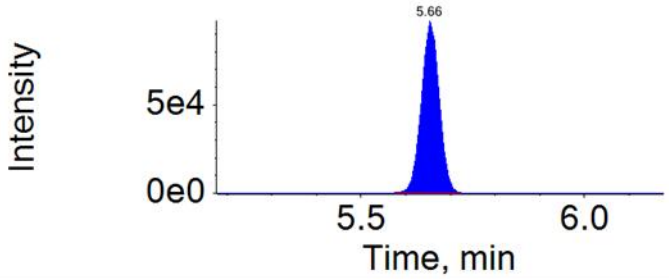
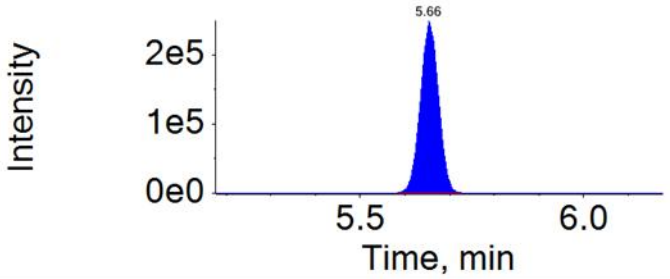


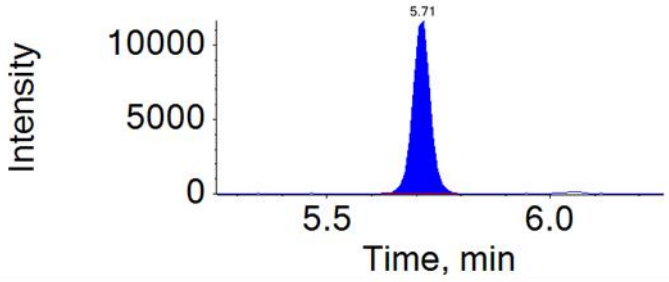
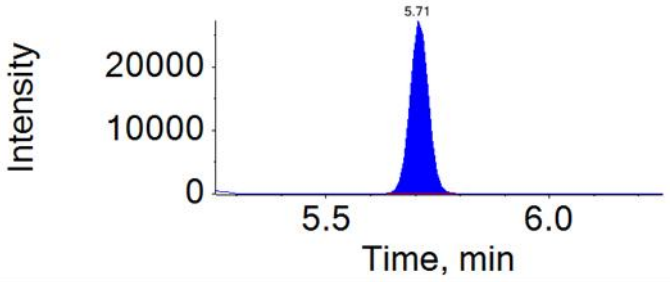


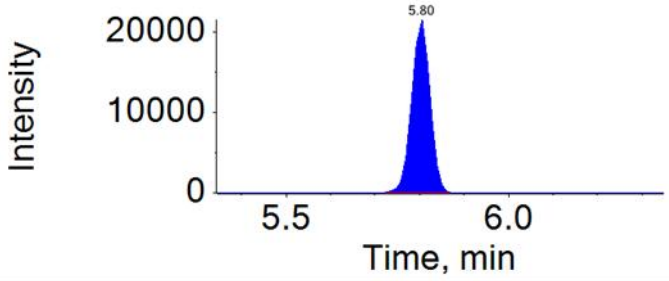
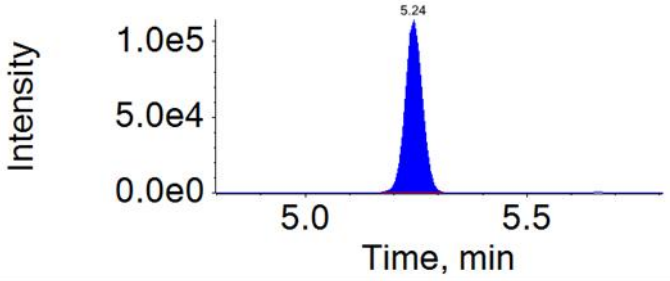
APPROVED
By JPT at 10:55 am, 11/9/18

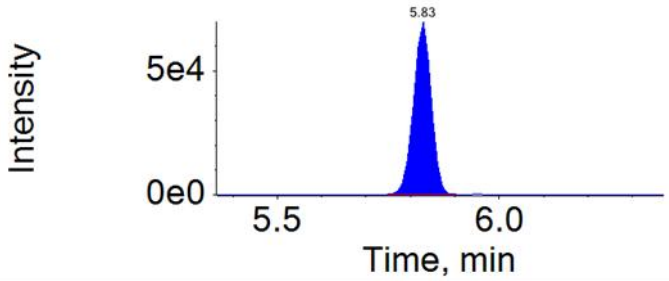
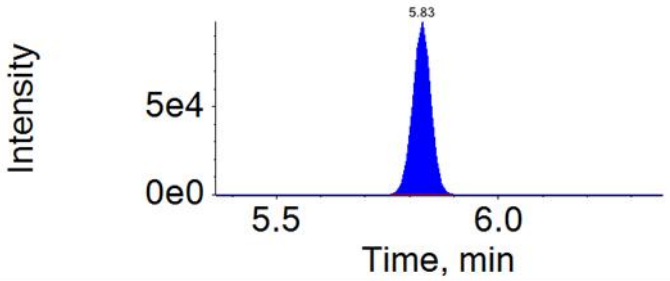
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
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
	

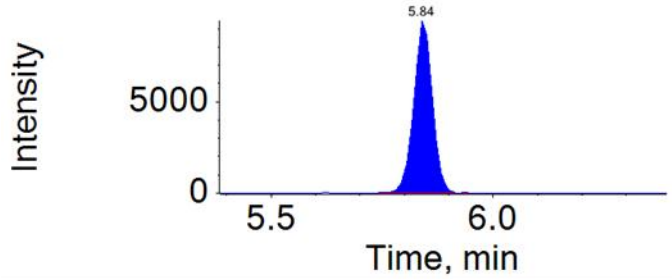
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

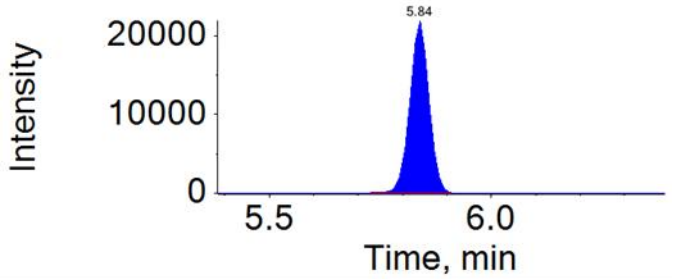
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

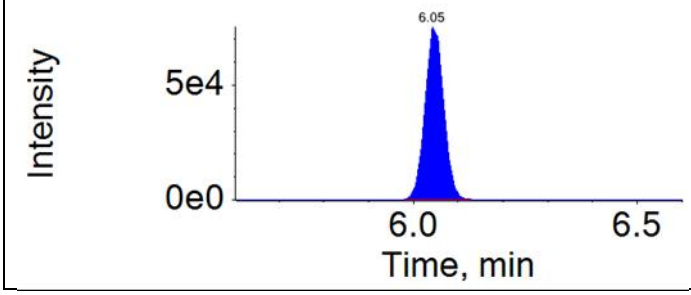
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

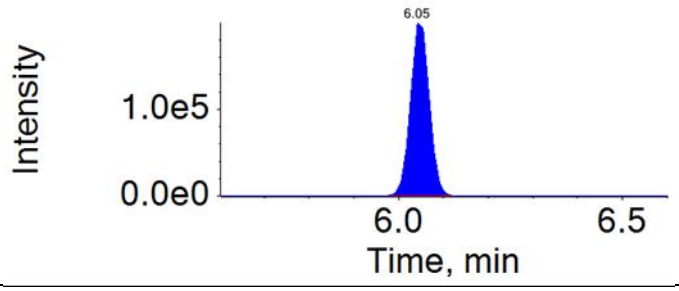
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



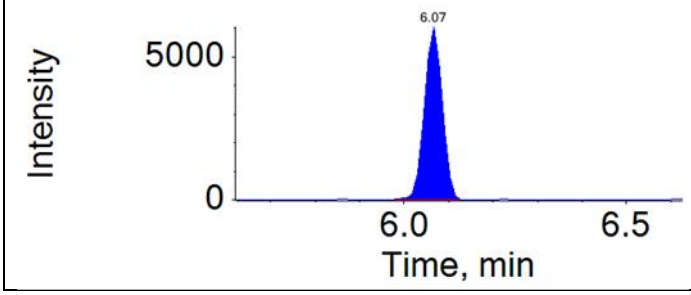


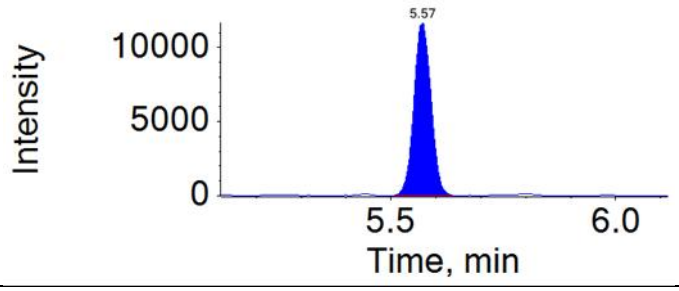
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



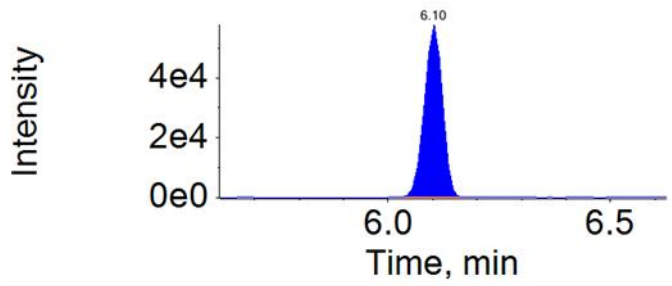


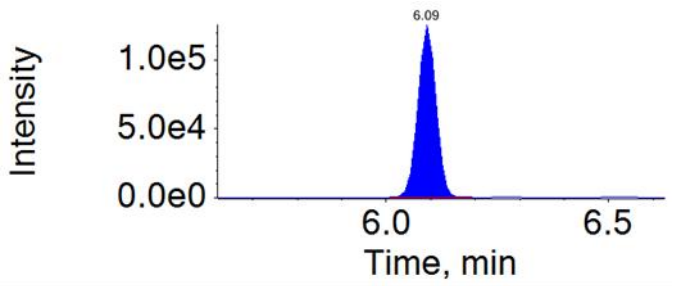
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



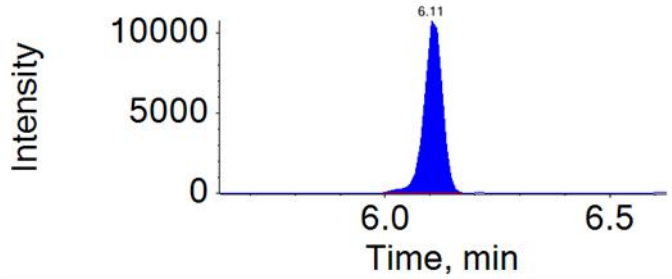


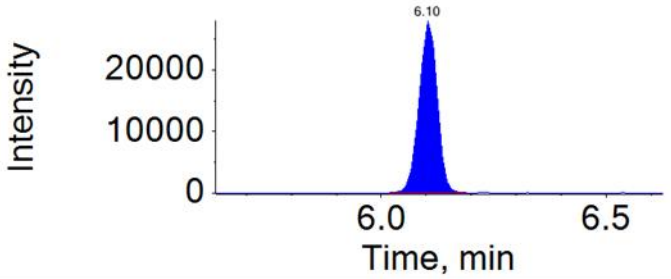
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

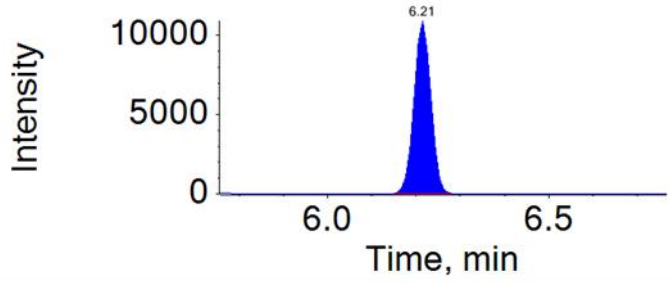
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

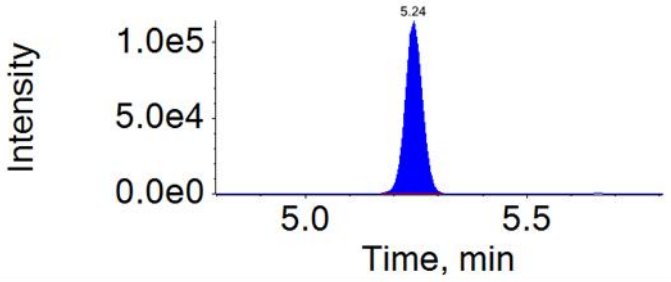
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



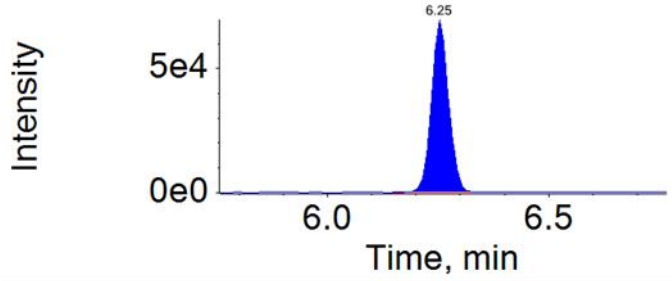


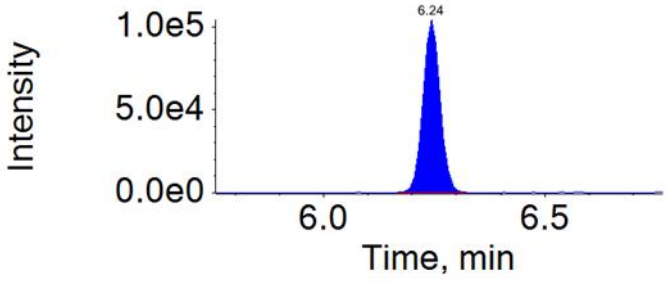
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



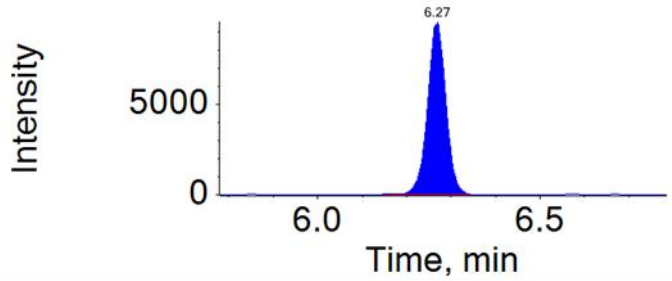


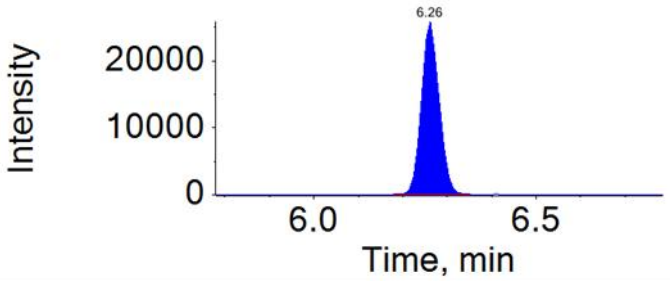
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



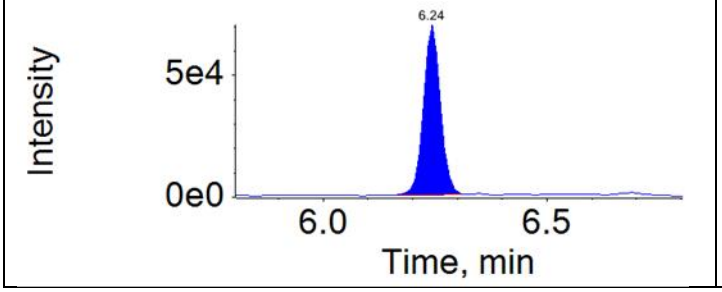


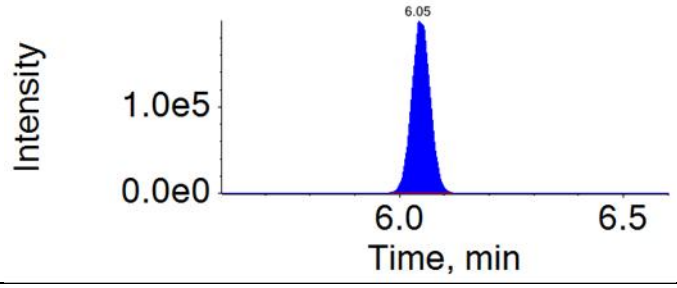
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

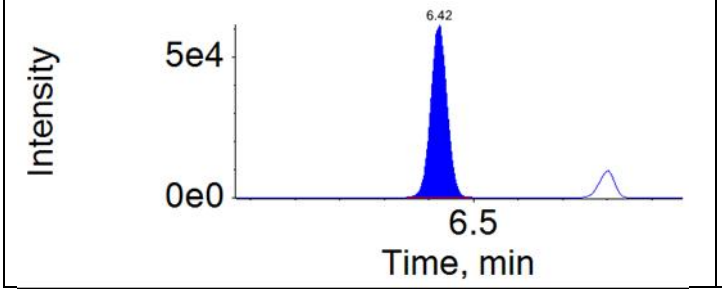
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

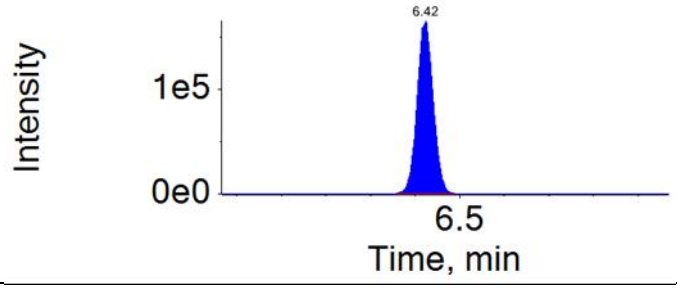
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



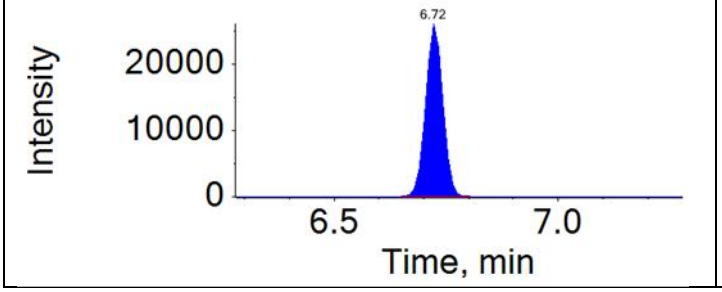


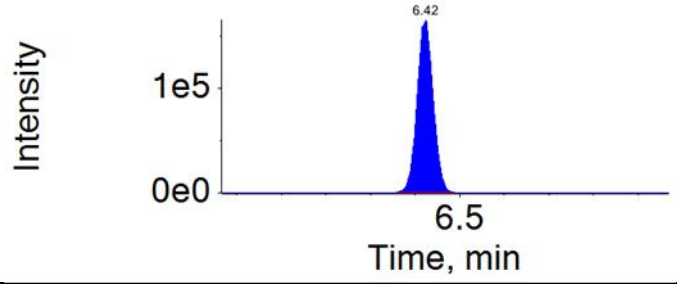
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



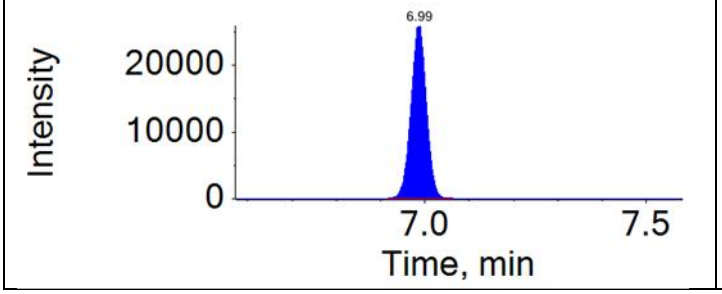


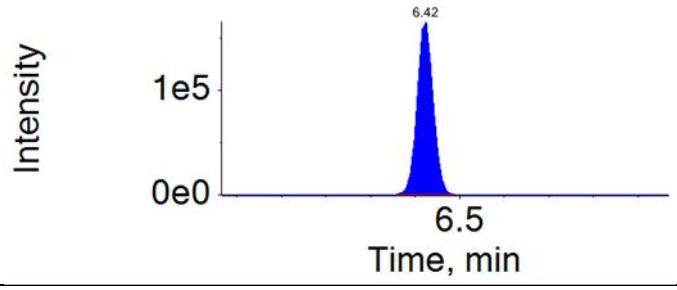
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Ion Ratio Report

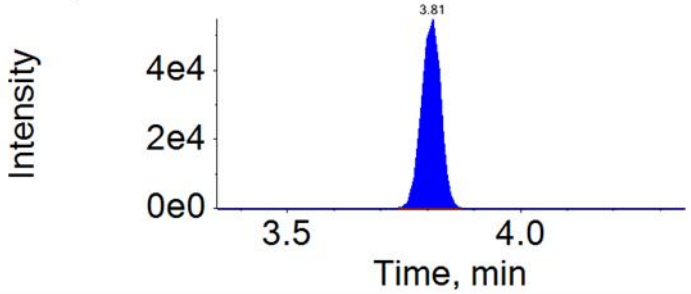
Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV08D-86.wiff

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	159879.7	A	N/A	1.0000			
PFBS_2	3.81	1.00	59535.3	A	N/A	0.3724	4	50	
4:2-FTS	4.12	1.00	34586.7	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	24784.2	A	N/A	0.7166	13	50	
PFHxA	4.16	1.00	348142.4	A	N/A	1.0000			
PFHxA_2	4.16	1.00	3920.7	A	N/A	0.0113	-2	50	
PFPeS	4.18	1.10	87376.5	A	N/A	1.0000			
PFPeS_2	4.18	1.10	45455.6	A	N/A	0.5202	-3	50	
PFHxS	4.55	1.00	127903.2	A	N/A	1.0000			
PFHxS_2	4.55	1.00	47229.7	A	N/A	0.3693	3	50	
PFHpA	4.55	1.00	347897.1	A	N/A	1.0000			
PFHpA_2	4.55	1.00	16467.9	A	N/A	0.0473	-18	50	
6:2-FTS	4.90	1.00	34236.6	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	19800.2	A	N/A	0.5783	-14	50	
PFHpS	4.91	1.08	124721.2	A	N/A	1.0000			
PFHpS_2	4.91	1.08	50643.4	A	N/A	0.4061	3	50	
PFOA	4.91	1.00	353117.0	A	N/A	1.0000			
PFOA_2	4.91	1.00	21107.6	A	N/A	0.0598	-6	50	
PFOS	5.25	1.00	117262.9	A	N/A	1.0000			
PFOS_2	5.24	1.00	40359.8	A	N/A	0.3442	-1	50	
PFNA	5.26	1.00	289246.3	A	N/A	1.0000			
PFNA_2	5.26	1.00	5770.2	A	N/A	0.0199	-4	50	
PFNS	5.55	1.06	73898.6	A	N/A	1.0000			
PFNS_2	5.54	1.06	33943.4	A	N/A	0.4593	-6	50	
PFDA	5.57	1.00	227693.9	A	N/A	1.0000			
PFDA_2	5.57	1.00	1567.7	A	N/A	0.0069	22	50	
8:2-FTS	5.57	1.00	24122.7	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	15132.4	A	N/A	0.6273	2	50	
NMeFOSAA	5.71	1.00	32027.6	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	6127.0	A	N/A	0.1913	-13	50	
PFDS	5.80	1.11	61957.5	A	N/A	1.0000			
PFDS_2	5.80	1.11	33673.2	A	N/A	0.5435	17	50	
PFUnDA	5.83	1.00	194783.4	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	698.0	A	N/A	0.0036	14	50	
NEtFOSAA	5.84	1.00	27638.0	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	18561.3	A	N/A	0.6716	10	50	
PFDoDA	6.05	1.00	219631.8	A	N/A	1.0000			
PFDoDA_2	6.04	1.00	3482.0	A	N/A	0.0159	45	50	
10:2-FTS	6.07	1.09	16888.7	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	12656.7	A	N/A	0.7494	6	50	
PFTrDA	6.24	1.03	182645.5	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	1461.5	A	N/A	0.0080	-17	50	
PFTeDA	6.42	1.00	155169.1	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	1132.9	A	N/A	0.0073	32	50	
PFHxDA	6.72	1.05	68909.8	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	4318.5	A	N/A	0.0627	5	50	
PFODA	6.99	1.09	63043.0	A	N/A	1.0000			
PFODA_2	6.99	1.09	1467.7	A	N/A	0.0233	-9	50	

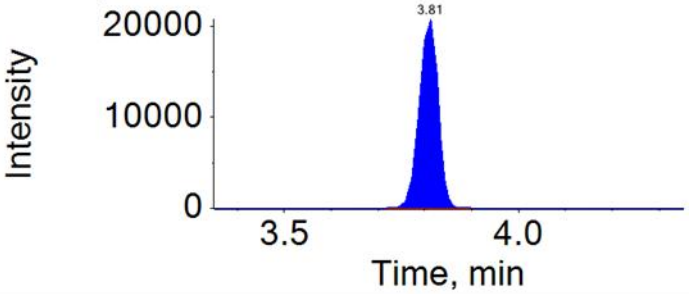
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

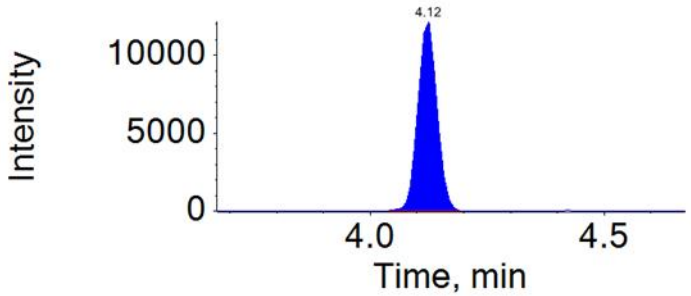
Component: PFBS
Primary Mass: 299.0 / 80.0



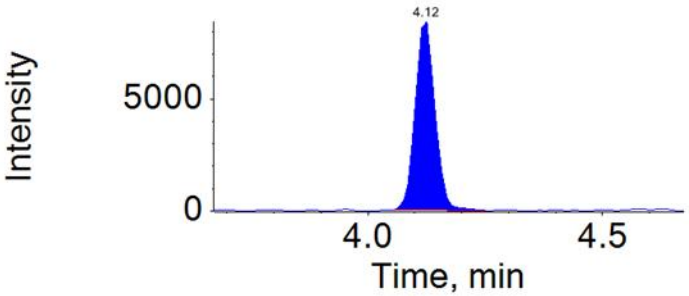
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



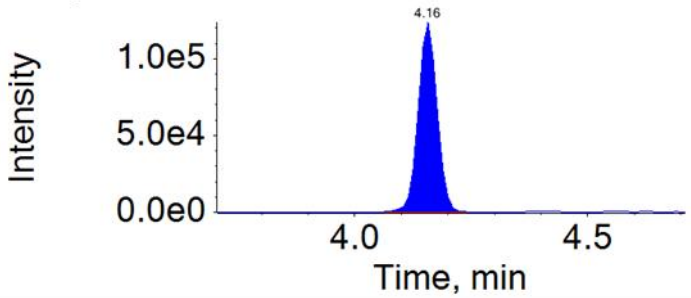
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



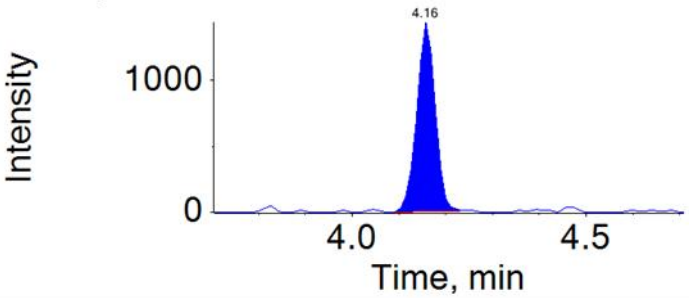
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



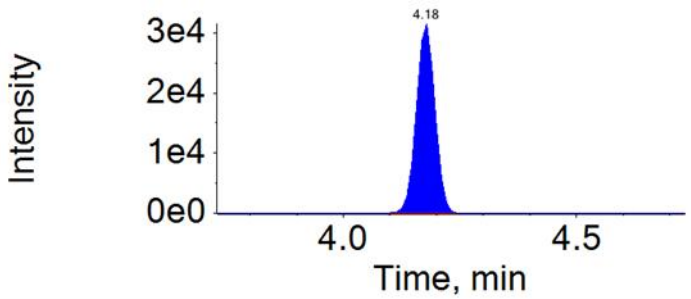
Component: PFHxA
Primary Mass: 313.0 / 269.0



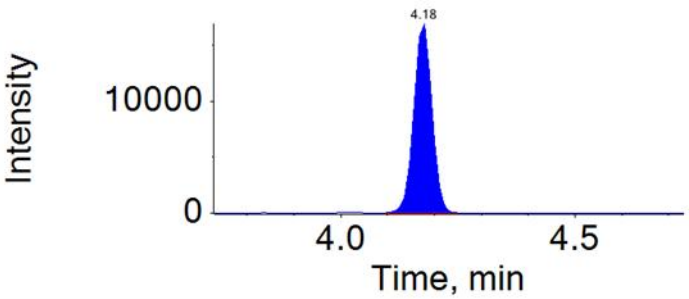
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



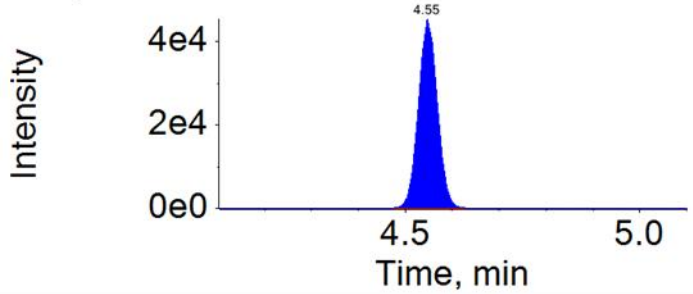
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



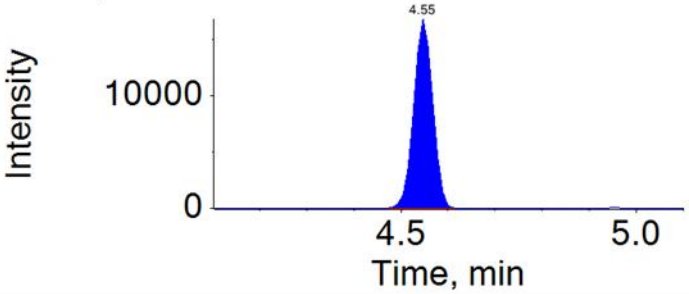
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By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

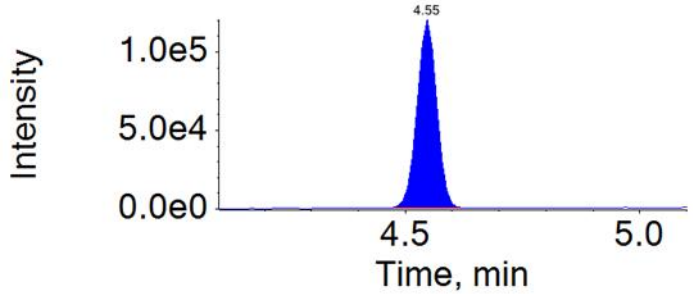
Component: PFHxS
Primary Mass: 399.0 / 80.0



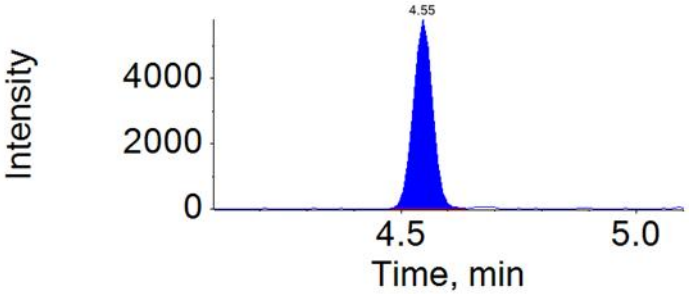
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



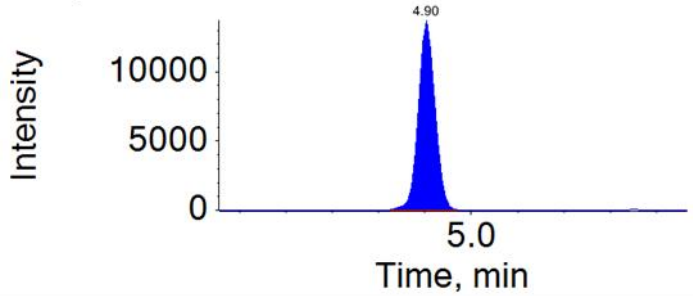
Component: PFHpA
Primary Mass: 363.0 / 319.0



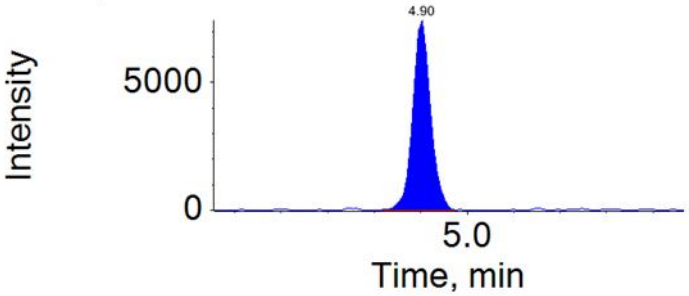
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



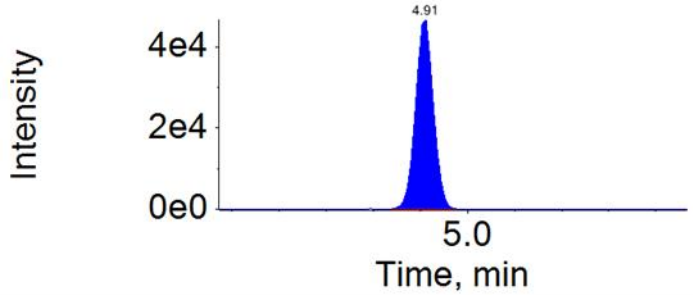
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



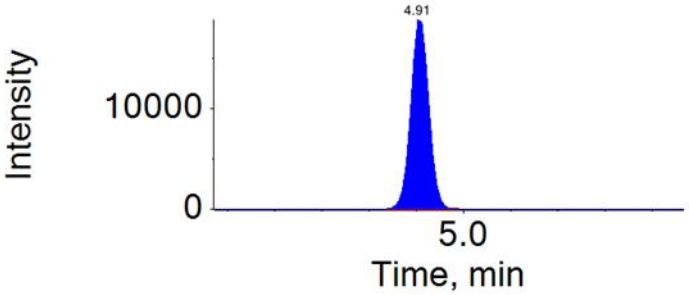
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



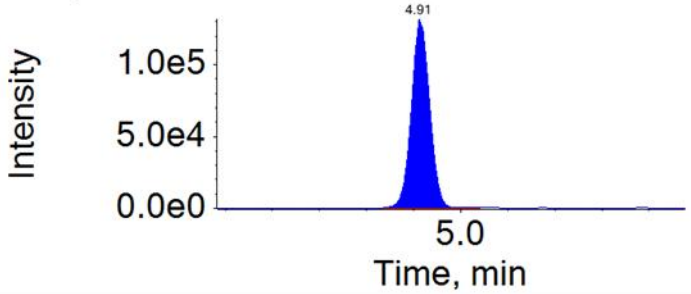
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



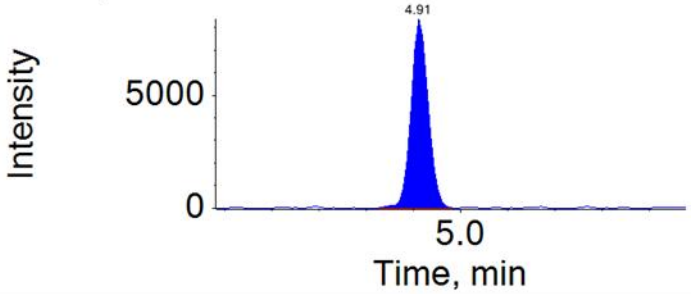
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By umar at 3:41 pm, 11/12/18

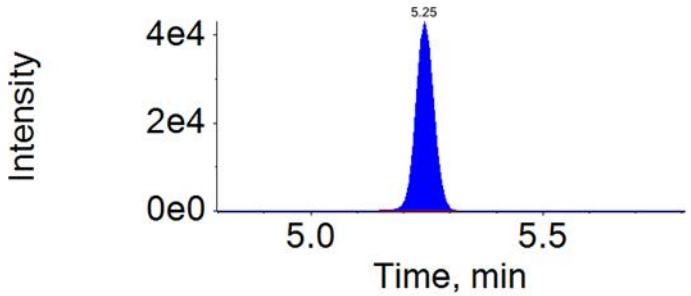
Component: PFOA
Primary Mass: 413.0 / 369.0



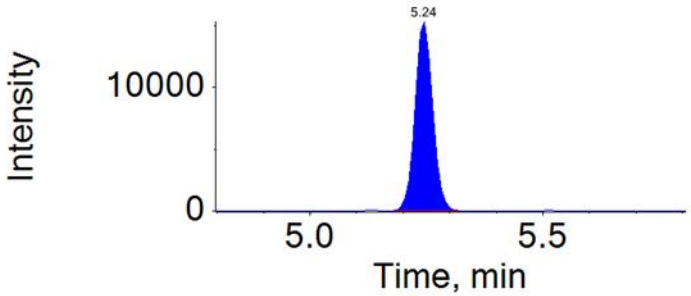
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



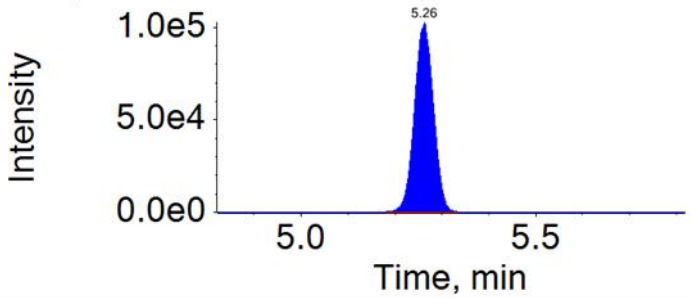
Component: PFOS
Primary Mass: 499.0 / 80.0



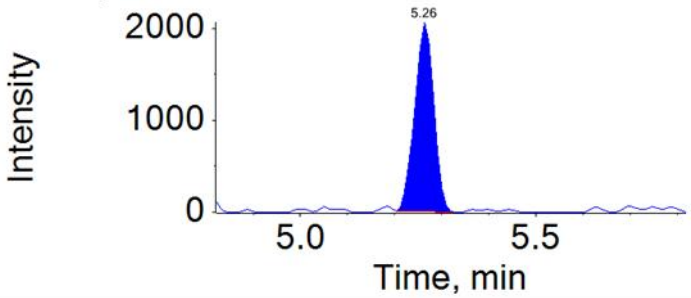
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



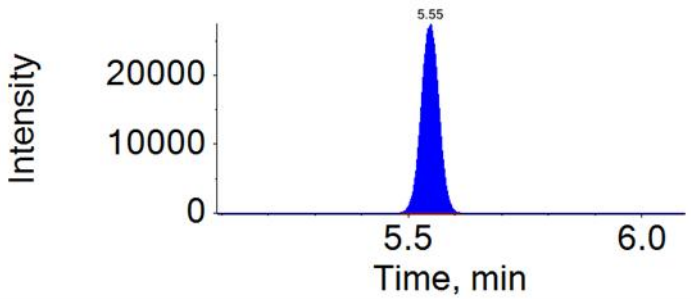
Component: PFNA
Primary Mass: 463.0 / 419.0



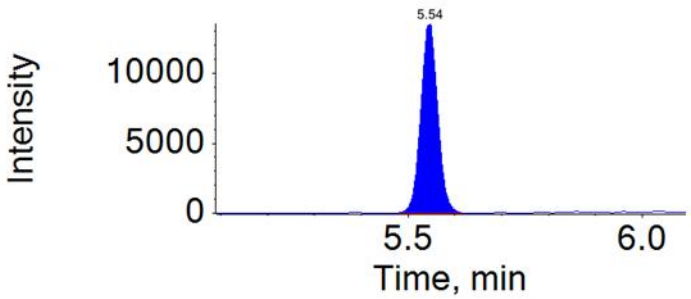
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



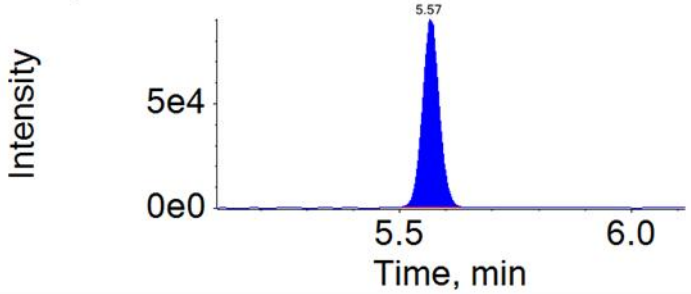
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



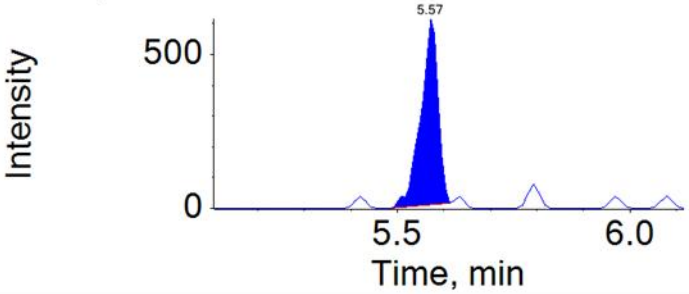
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

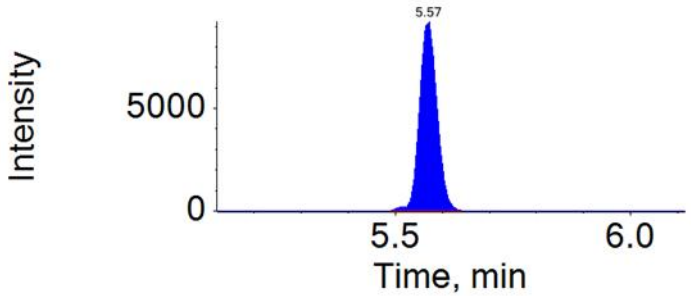
Component: PFDA
Primary Mass: 513.0 / 469.0



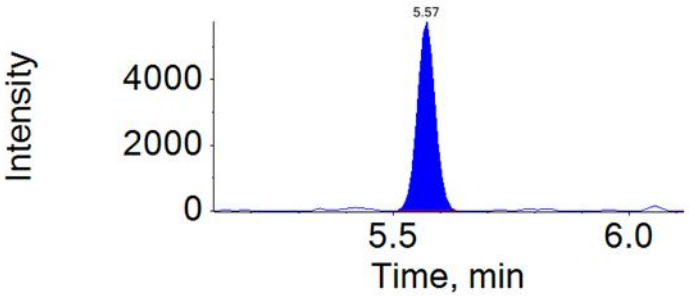
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



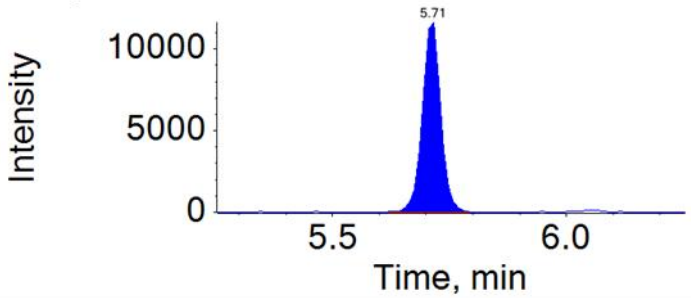
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



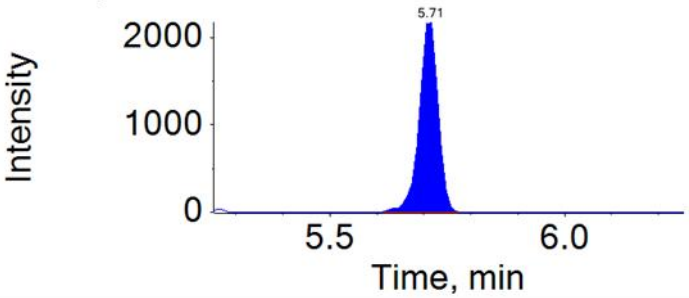
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



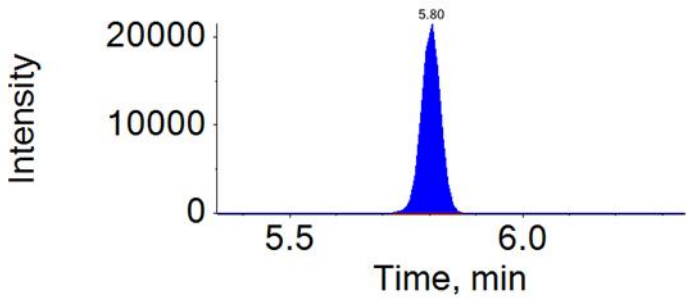
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



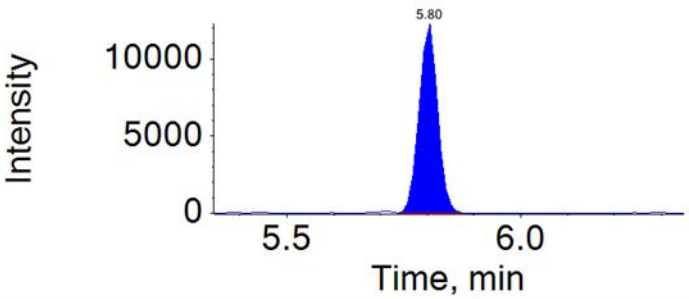
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



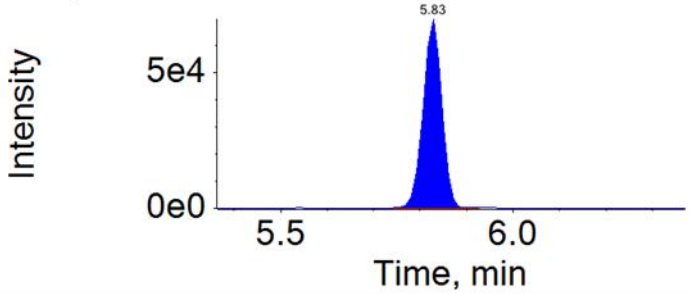
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



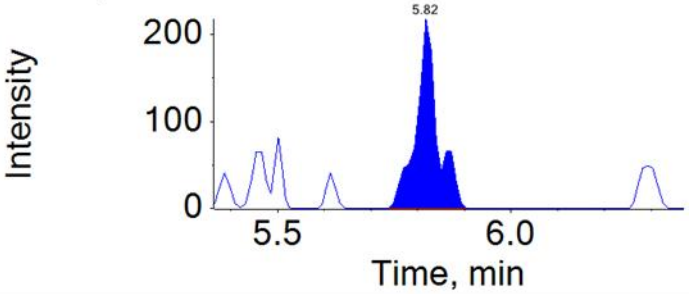
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

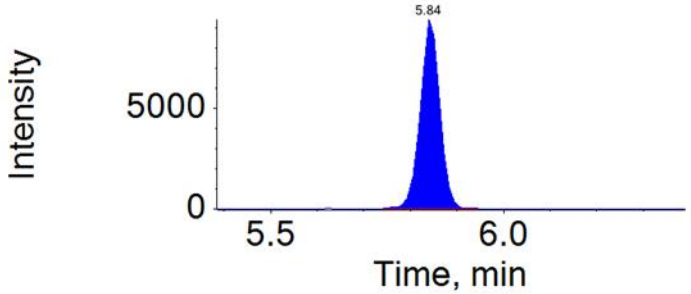
Component: PFUnDA
Primary Mass: 563.0 / 519.0



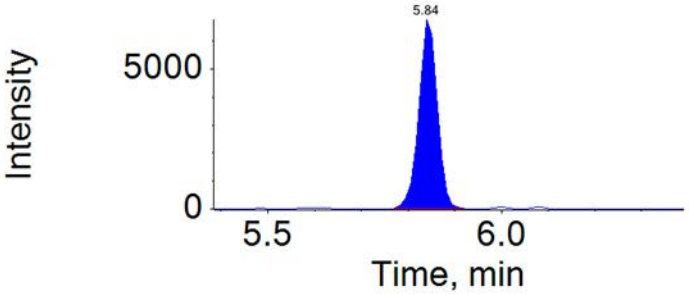
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



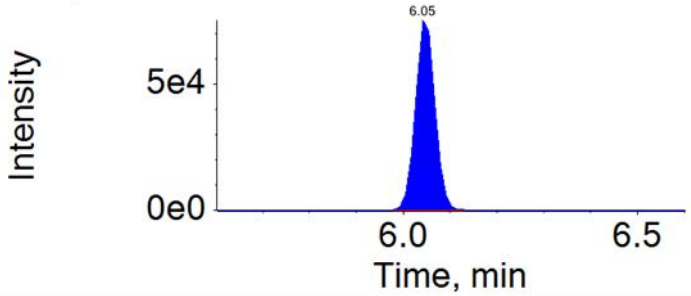
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



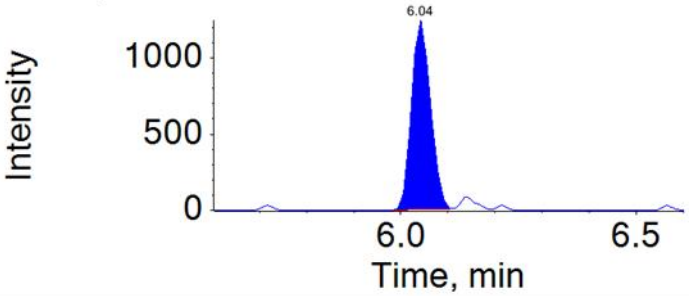
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



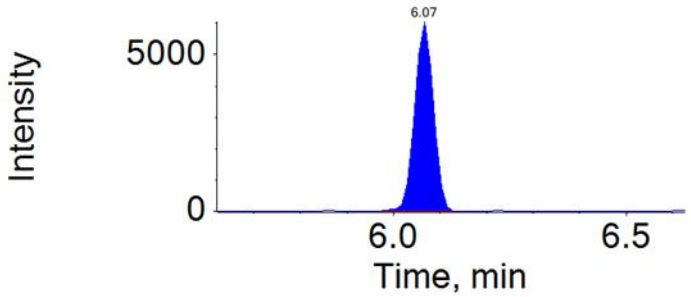
Component: PFDoDA
Primary Mass: 613.0 / 569.0



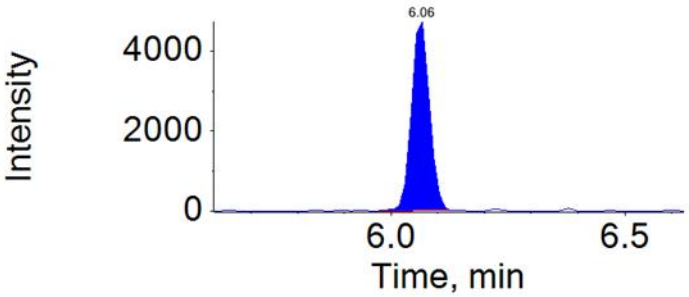
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



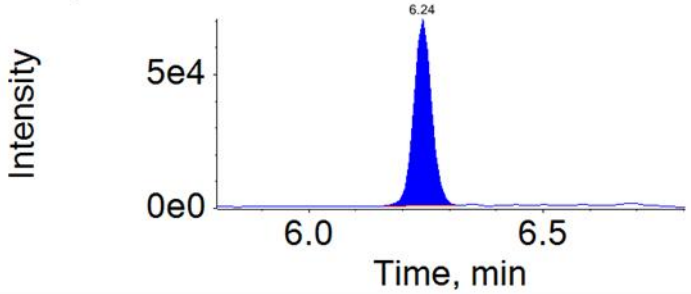
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



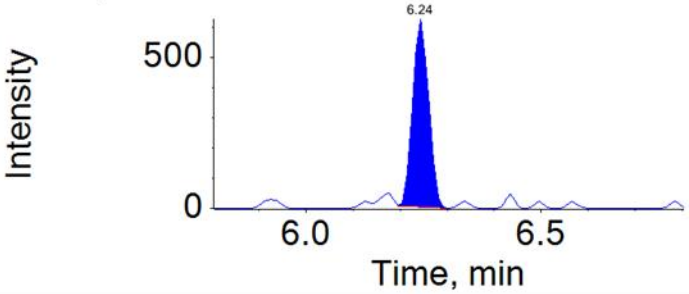
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

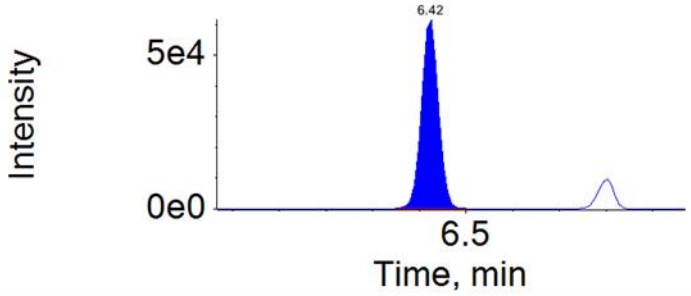
Component: PFTrDA
Primary Mass: 663.0 / 619.0



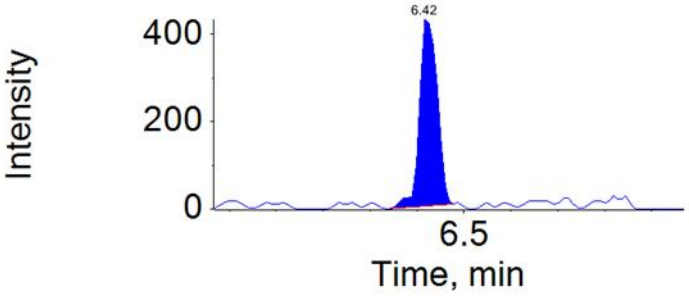
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



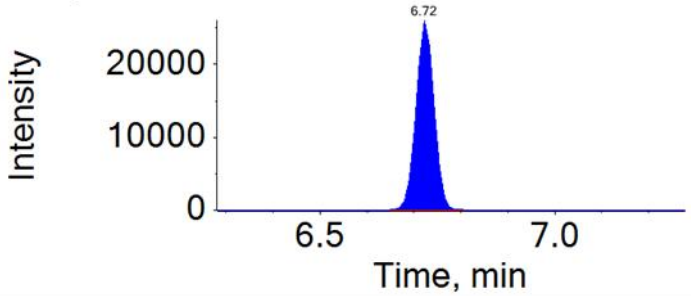
Component: PFTeDA
Primary Mass: 713.0 / 669.0



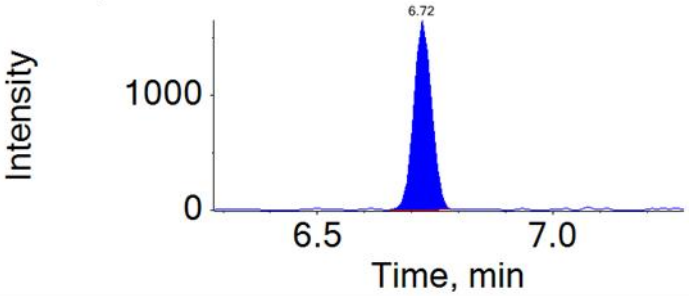
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



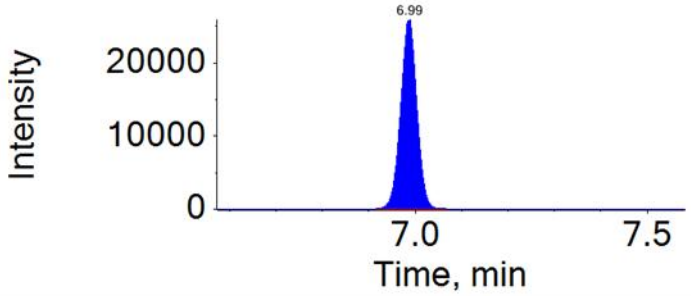
Component: PFHxDA
Primary Mass: 813.0 / 769.0



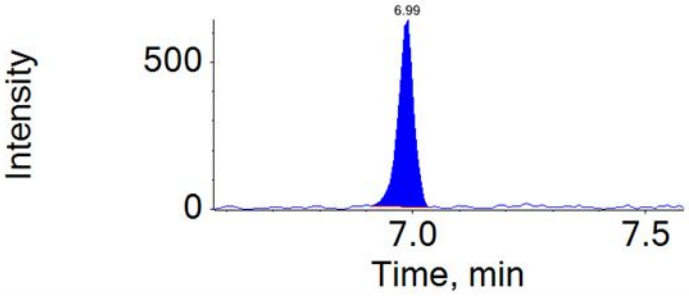
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



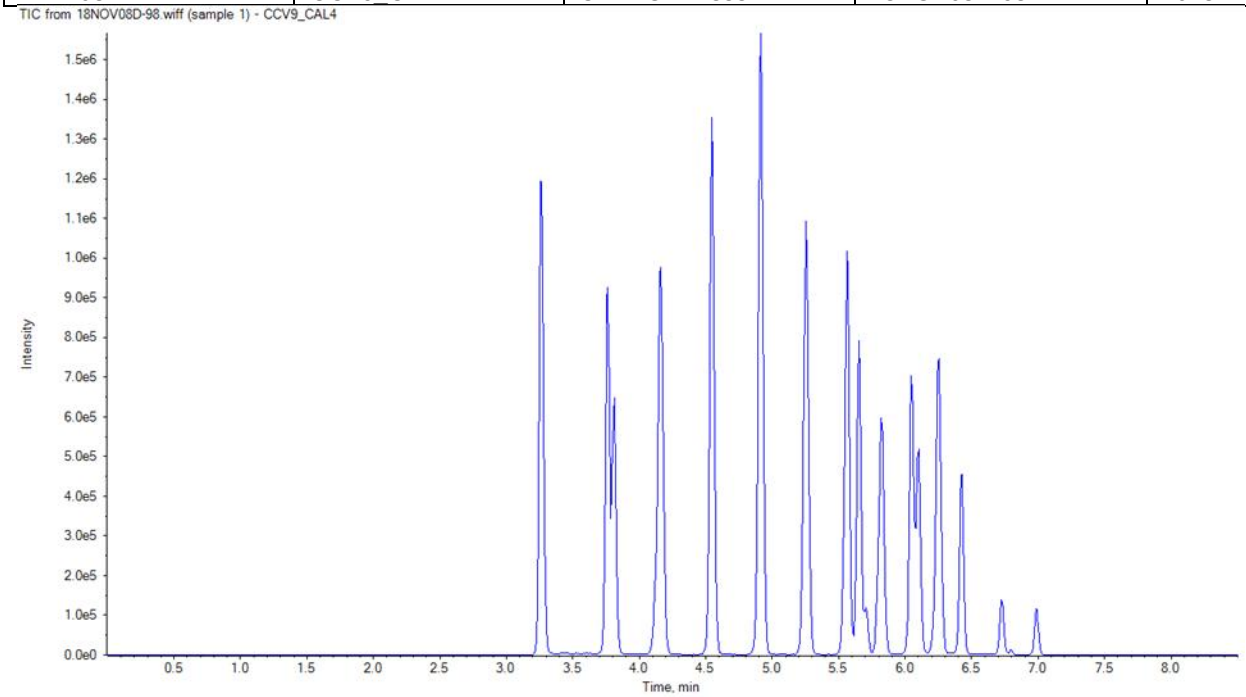
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALMOD41833F	18NOV08D-98.wiff	2018-11-09T02:23:41



Injection Standard Area Reference File: 18NOV08D-05

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	741455.5	728839.7	2	50	
13C2-PFOA	5.0	497621.3	491983.1	1	50	
13C4-PFOS	4.8	277463.4	255568.1	9	50	
13C2-PFDA	5.0	310374.5	315407.5	-2	50	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALMOD41833F	18NOV08D-98.wiff	2018-11-09T02:23:41

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	1177367.2	10	13C4-PFBA	805036.9	5.0	1.463	3.26	1.000	8.000	8.559	7	30	
PFPeA	1199606.7	12	13C5-PFPeA	816254.5	5.0	1.470	3.76	1.000	8.000	8.734	9	30	
PFBS	655034.7	11	13C3-PFBS	436095.9	4.7	1.502	3.81	1.000	7.080	7.573	7	30	
4:2-FTS	163905.4	11	13C2-4:2-FTS	56112.6	4.7	2.921	4.12	1.000	7.472	7.853	5	30	
PFHxA	1345026.8	12	13C5-PFHxA	698833.5	5.0	1.925	4.16	1.000	8.000	8.254	3	30	
PFPeS	340112.7	11	13C3-PFBS	436095.9	4.7	0.780	4.18	1.100	7.500	7.692	3	30	
PFHxS	509899.0	12	13C3-PFHxS	344016.0	4.7	1.482	4.55	1.000	7.560	7.513	-1	30	
PFHpA	1445409.9	12	13C4-PFHpA	558538.5	5.0	2.588	4.55	1.000	8.000	8.703	9	30	
6:2-FTS	127621.2	11	13C2-6:2-FTS	34576.4	4.8	3.691	4.90	1.000	7.584	9.208	21	30	
PFHpS	497691.3	11	13C3-PFHxS	344016.0	4.7	1.447	4.91	1.080	7.610	7.569	-1	30	
PFOA	1388094.5	11	13C8-PFOA	917664.7	5.0	1.513	4.92	1.000	8.000	8.517	6	30	
PFOS	470028.6	11	13C8-PFOS	297760.9	4.8	1.579	5.24	1.000	7.650	8.185	7	30	
PFNA	1129680.1	11	13C9-PFNA	514586.5	5.0	2.195	5.26	1.000	8.000	8.204	3	30	
PFNS	309702.8	10	13C8-PFOS	297760.9	4.8	1.040	5.54	1.060	7.680	8.247	7	30	
PFDA	941307.1	11	13C6-PFDA	626037.4	5.0	1.504	5.57	1.000	8.000	8.272	3	30	
8:2-FTS	103270.8	11	13C2-8:2-FTS	30324.3	4.8	3.406	5.57	1.000	7.664	7.676	0	30	
PFOSA	1111869.6	11	13C8-PFOSA	678033.1	5.0	1.640	5.65	1.000	8.000	8.864	11	30	
NMeFOSAA	134156.5	11	d3-NMeFOSAA	82369.0	5.0	1.629	5.71	1.000	8.000	8.381	5	30	
PFDS	241813.5	12	13C8-PFOS	297760.9	4.8	0.812	5.80	1.110	7.700	7.758	1	30	
PFUnDA	803352.1	12	13C7-PFUnDA	275136.7	5.0	2.920	5.82	1.000	8.000	8.373	5	30	
NEtFOSAA	123087.8	12	d5-NEtFOSAA	63104.8	5.0	1.951	5.84	1.000	8.000	8.383	5	30	
PFDoDA	882612.8	12	13C2-PFDoDA	591800.0	5.0	1.491	6.05	1.000	8.000	8.083	1	30	
10:2-FTS	74557.5	12	13C2-8:2-FTS	30324.3	4.8	2.459	6.06	1.090	7.712	7.656	-1	30	
NMePFOSAE	663960.0	11	d7-NMePFOSAE	346078.5	5.0	1.919	6.10	1.000	8.000	8.597	7	30	
NMePFOSA	133693.8	12	d3-NMePFOSA	82571.1	5.0	1.619	6.11	1.000	8.000	9.063	13	30	
PFDoS	115072.4	11	13C8-PFOS	297760.9	4.8	0.386	6.22	1.190	7.740	7.459	-4	30	
NEtPFOSAE	771582.3	11	d9-NEtPFOSAE	277641.9	5.0	2.779	6.26	1.000	8.000	8.909	11	30	
NEtPFOSA	120921.0	11	d5-NEtPFOSA	71632.1	5.0	1.688	6.27	1.000	8.000	7.435	-7	30	
PFTrDA	702504.0	11	13C2-PFDoDA	591800.0	5.0	1.187	6.25	1.030	8.000	7.486	-6	30	
PFTeDA	585138.5	11	13C2-PFTeDA	393961.7	5.0	1.485	6.42	1.000	8.000	8.722	9	30	
PFHxDA	280180.8	11	13C2-PFTeDA	393961.7	5.0	0.711	6.73	1.050	8.000	8.828	10	30	
PFODA	241980.2	10	13C2-PFTeDA	393961.7	5.0	0.614	6.99	1.090	8.000	8.800	10	30	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV9_CAL4			**Data File:**		18NOV08D-98.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-09T02:23:41
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV6-12
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: 18NOV08D-05

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	741455.5	728839.7	2	50	
13C2-PFOA	5.0	497621.3	491983.1	1	50	
13C4-PFOS	4.8	277463.4	255568.1	9	50	
13C2-PFDA	5.0	310374.5	315407.5	-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	805036.9	13C3-PFBA	741455.5	1.086	5.000	5.025	100	70-130	
E13C5-PFPeA	816254.5	13C3-PFBA	741455.5	1.101	5.000	4.796	96	70-130	
E13C3-PFBS	436095.9	13C3-PFBA	741455.5	0.588	4.650	4.317	93	70-130	
E13C2-4:2-FTS	56112.6	13C2-PFOA	497621.3	0.113	4.670	5.088	109	70-130	
E13C5-PFHxA	698833.5	13C2-PFOA	497621.3	1.404	5.000	5.166	103	70-130	
E13C3-PFHxS	344016.0	13C2-PFOA	497621.3	0.691	4.730	4.963	105	70-130	
E13C4-PFHpA	558538.5	13C2-PFOA	497621.3	1.122	5.000	5.106	102	70-130	
E13C2-6:2-FTS	34576.4	13C2-PFOA	497621.3	0.069	4.750	4.633	98	70-130	
E13C8-PFOA	917664.7	13C2-PFOA	497621.3	1.844	5.000	5.143	103	70-130	
E13C8-PFOS	297760.9	13C4-PFOS	277463.4	1.073	4.780	4.745	99	70-130	
E13C9-PFNA	514586.5	13C4-PFOS	277463.4	1.855	5.000	5.066	101	70-130	
E13C6-PFDA	626037.4	13C2-PFDA	310374.5	2.017	5.000	5.072	101	70-130	
E13C2-8:2-FTS	30324.3	13C2-PFDA	310374.5	0.098	4.790	5.170	108	70-130	
E13C8-PFOSA	678033.1	13C2-PFDA	310374.5	2.185	5.000	4.767	95	70-130	
Ed3-NMeFOSAA	82369.0	13C2-PFDA	310374.5	0.265	5.000	4.935	99	70-130	
E13C7-PFUnDA	275136.7	13C2-PFDA	310374.5	0.886	5.000	5.114	102	70-130	
Ed5-NEtFOSAA	63104.8	13C2-PFDA	310374.5	0.203	5.000	4.705	94	70-130	
E13C2-PFDoDA	591800.0	13C2-PFDA	310374.5	1.907	5.000	5.140	103	70-130	
Ed7-NMePFOSAE	346078.5	13C2-PFDA	310374.5	1.115	5.000	5.185	104	70-130	
Ed3-NMePFOSA	82571.1	13C2-PFDA	310374.5	0.266	5.000	4.870	97	70-130	
Ed9-NEtPFOSAE	277641.9	13C2-PFDA	310374.5	0.895	5.000	5.109	102	70-130	
Ed5-NEtPFOSA	71632.1	13C2-PFDA	310374.5	0.231	5.000	5.344	107	70-130	
E13C2-PFTeDA	393961.7	13C2-PFDA	310374.5	1.269	5.000	4.569	91	70-130	

APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

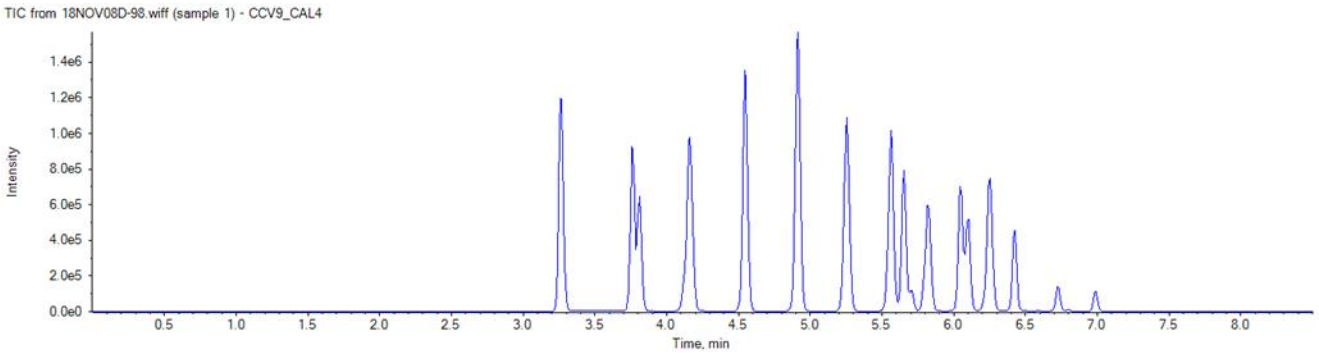
Analyte Quantitation Peak Table

Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV08D-98.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	1177367.2		A	13C4-PFBA	3.26	805036.9	1.463	8.559
PFPeA	3.76	1.000	1199606.7		A	13C5-PFPeA	3.76	816254.5	1.470	8.734
PFBS	3.81	1.000	655034.7		A	13C3-PFBS	3.81	436095.9	1.502	7.573
4:2-FTS	4.12	1.000	163905.4		A	13C2-4:2-FTS	4.12	56112.6	2.921	7.853
PFHxA	4.16	1.000	1345026.8		A	13C5-PFHxA	4.16	698833.5	1.925	8.254
PFPeS	4.18	1.100	340112.7		A	13C3-PFBS	3.81	436095.9	0.780	7.692
PFHxS	4.55	1.000	509899.0		A	13C3-PFHxS	4.55	344016.0	1.482	7.513
PFHpA	4.55	1.000	1445409.9		A	13C4-PFHpA	4.55	558538.5	2.588	8.703
6:2-FTS	4.90	1.000	127621.2		A	13C2-6:2-FTS	4.90	34576.4	3.691	9.208
PFHpS	4.91	1.080	497691.3		A	13C3-PFHxS	4.55	344016.0	1.447	7.569
PFOA	4.92	1.000	1388094.5		A	13C8-PFOA	4.91	917664.7	1.513	8.517
PFOS	5.24	1.000	470028.6		A	13C8-PFOS	5.24	297760.9	1.579	8.185
PFNA	5.26	1.000	1129680.1		A	13C9-PFNA	5.26	514586.5	2.195	8.204
PFNS	5.54	1.060	309702.8		A	13C8-PFOS	5.24	297760.9	1.040	8.247
PFDA	5.57	1.000	941307.1		A	13C6-PFDA	5.57	626037.4	1.504	8.272
8:2-FTS	5.57	1.000	103270.8		A	13C2-8:2-FTS	5.57	30324.3	3.406	7.676
PFOSA	5.65	1.000	1111869.6		A	13C8-PFOSA	5.65	678033.1	1.640	8.864
NMeFOSAA	5.71	1.000	134156.5		A	d3-NMeFOSAA	5.70	82369.0	1.629	8.381
PFDS	5.80	1.110	241813.5		A	13C8-PFOS	5.24	297760.9	0.812	7.758
PFUnDA	5.82	1.000	803352.1		A	13C7-PFUnDA	5.82	275136.7	2.920	8.373
NEtFOSAA	5.84	1.000	123087.8		A	d5-NEtFOSAA	5.83	63104.8	1.951	8.383
PFDoDA	6.05	1.000	882612.8		A	13C2-PFDoDA	6.05	591800.0	1.491	8.083
10:2-FTS	6.06	1.090	74557.5		A	13C2-8:2-FTS	5.57	30324.3	2.459	7.656
NMePFOSAE	6.10	1.000	663960.0		A	d7-NMePFOSAE	6.09	346078.5	1.919	8.597
NMePFOSA	6.11	1.000	133693.8		A	d3-NMePFOSA	6.10	82571.1	1.619	9.063
PFDoS	6.22	1.190	115072.4		A	13C8-PFOS	5.24	297760.9	0.386	7.459
NEtPFOSAE	6.26	1.000	771582.3		A	d9-NEtPFOSAE	6.24	277641.9	2.779	8.909
NEtPFOSA	6.27	1.000	120921.0		A	d5-NEtPFOSA	6.26	71632.1	1.688	7.435
PFTrDA	6.25	1.030	702504.0		A	13C2-PFDoDA	6.05	591800.0	1.187	7.486
PFTeDA	6.42	1.000	585138.5		A	13C2-PFTeDA	6.42	393961.7	1.485	8.722
PFHxDA	6.73	1.050	280180.8		A	13C2-PFTeDA	6.42	393961.7	0.711	8.828
PFODA	6.99	1.090	241980.2		A	13C2-PFTeDA	6.42	393961.7	0.614	8.800

Total Ion Chromatogram

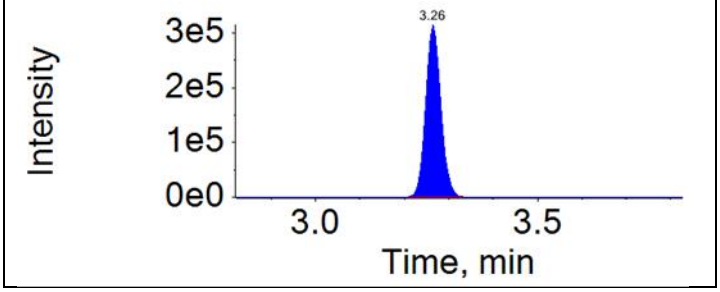


APPROVED
By JPT at 10:55 am, 11/9/18

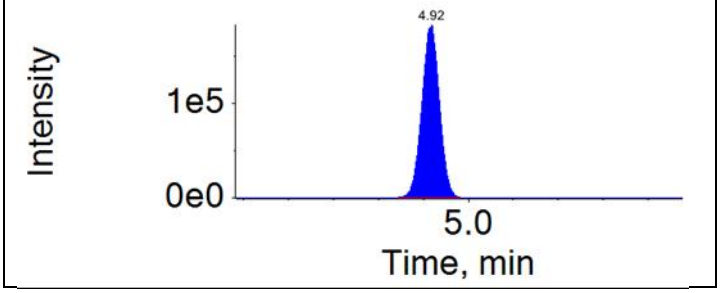
REVIEWED
By umar at 3:41 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

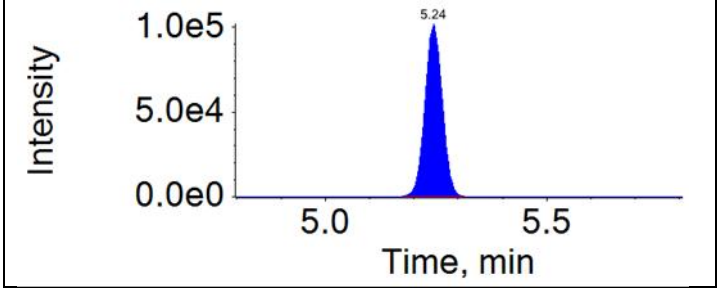
Injection Standard: 13C3-PFBA
216.0 / 172.0



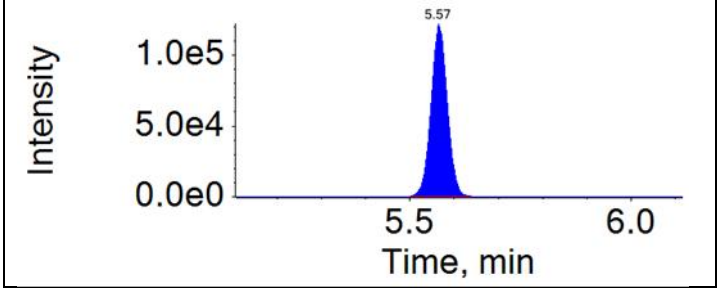
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

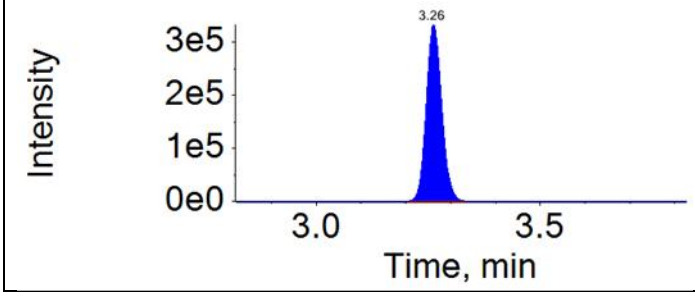


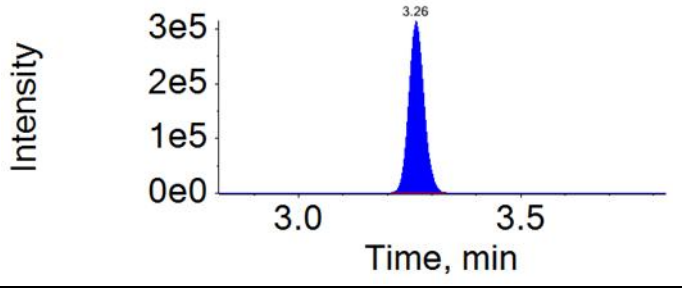
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

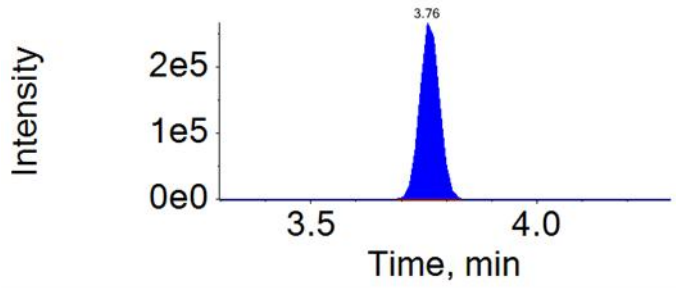
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

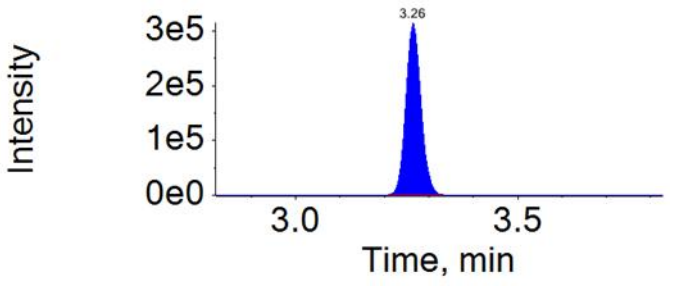
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



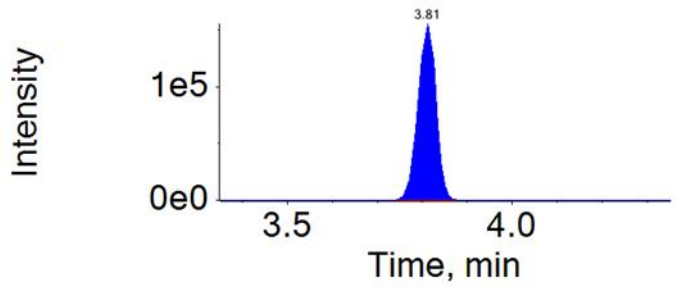


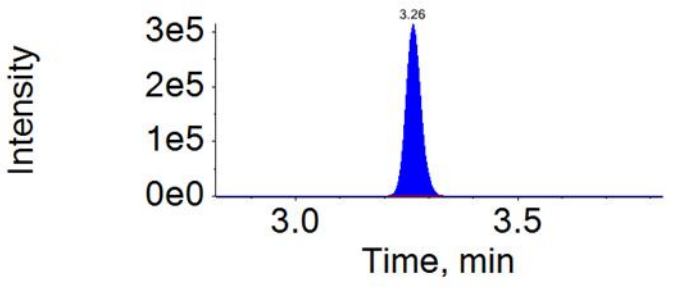
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



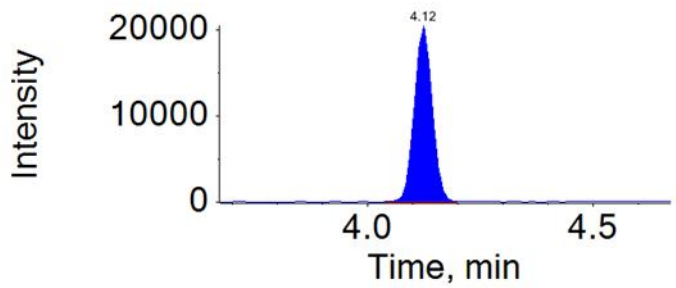


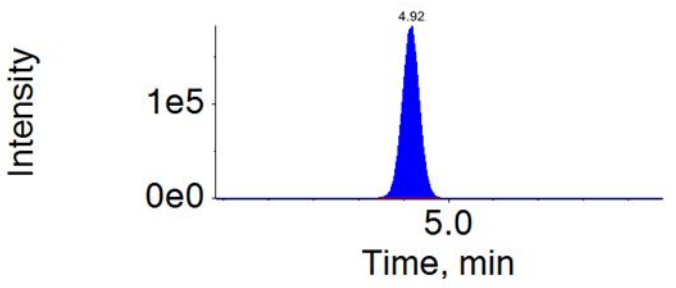
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



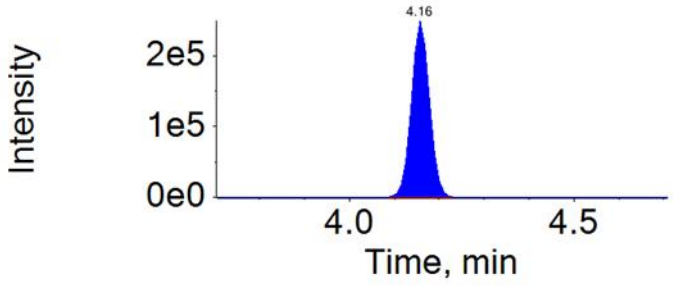


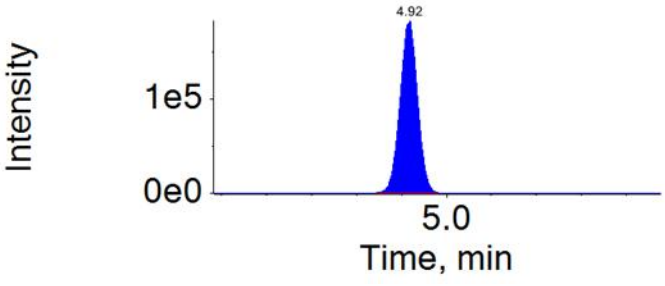
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

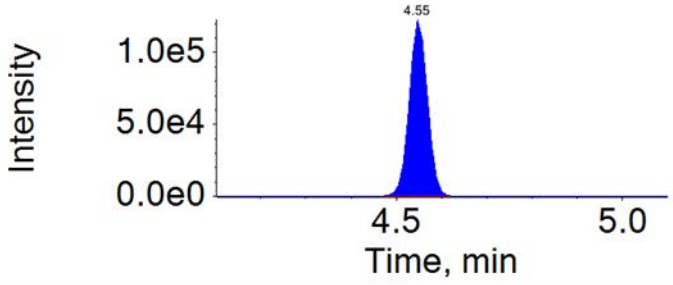
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

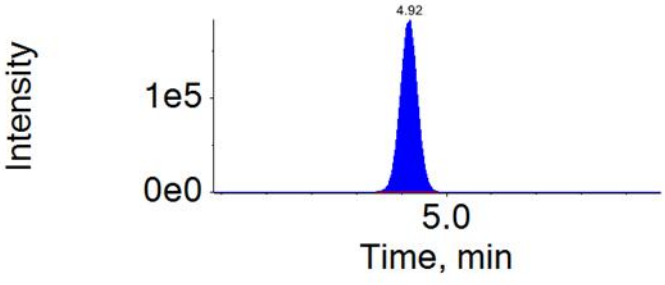
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



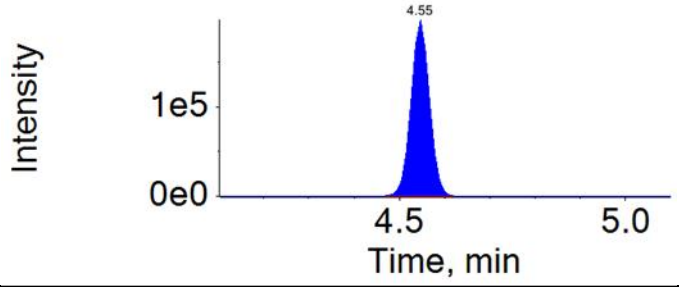


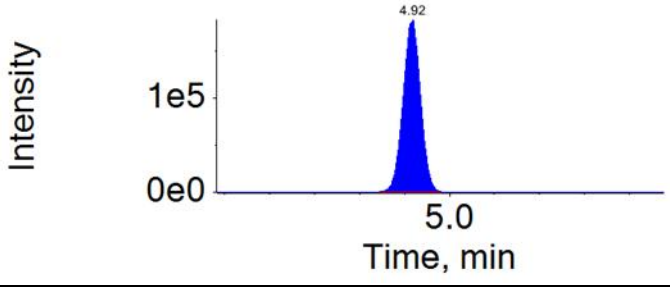
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



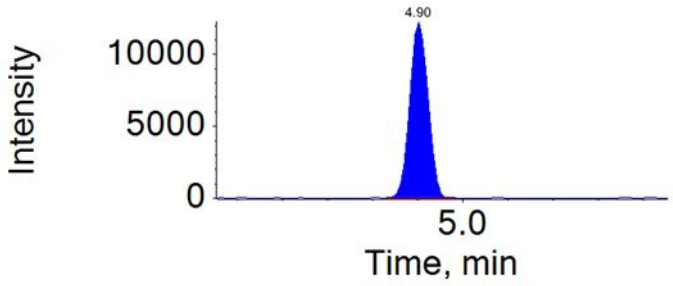


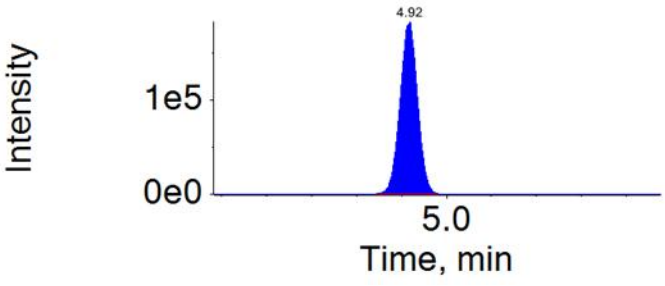
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



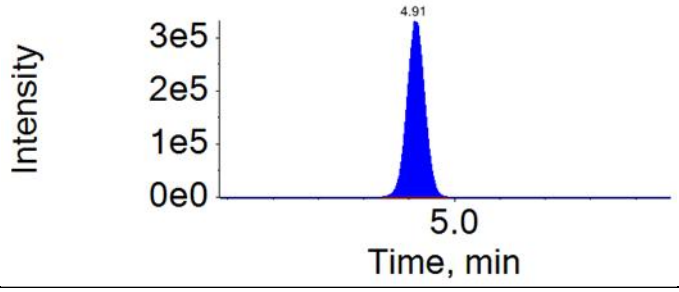


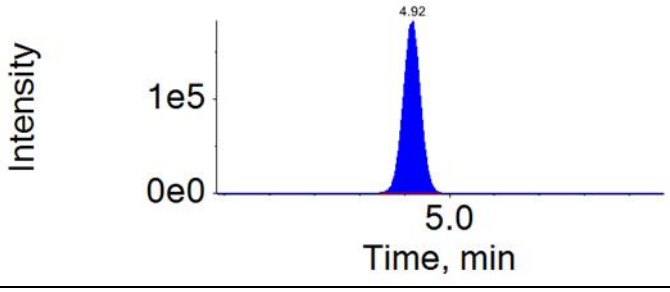
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

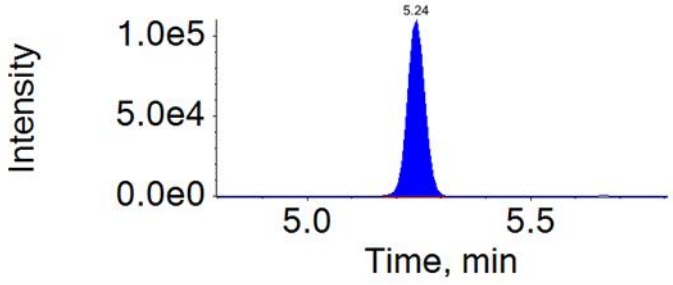
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

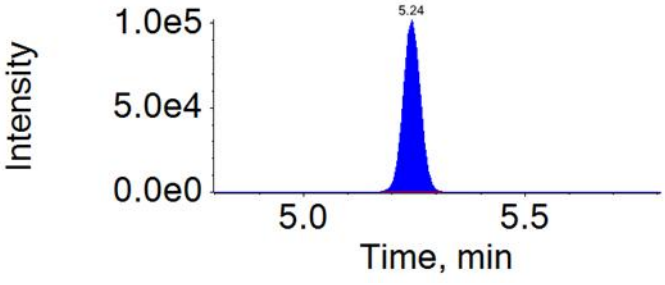
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



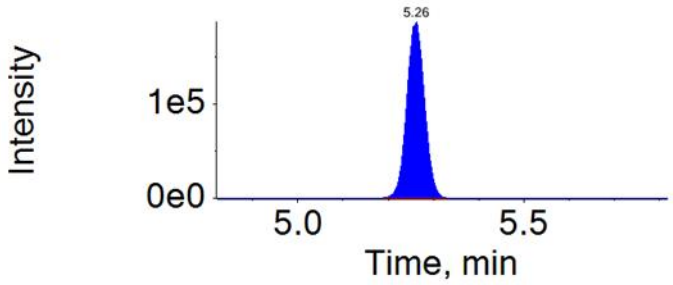


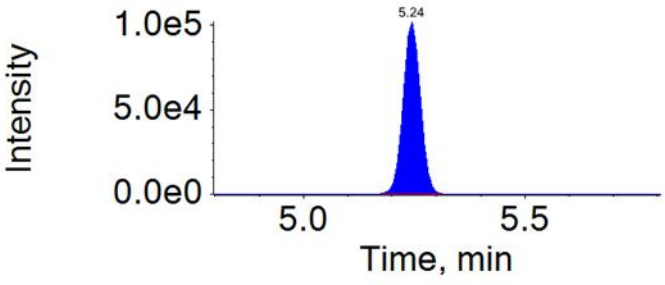
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



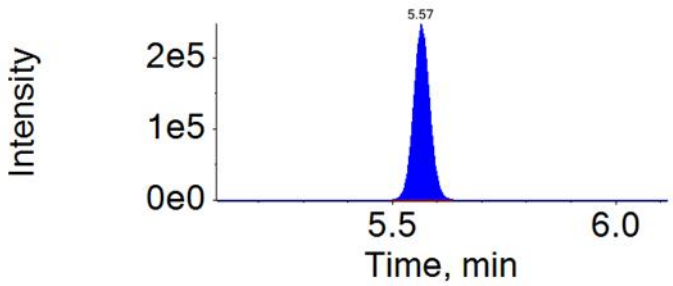


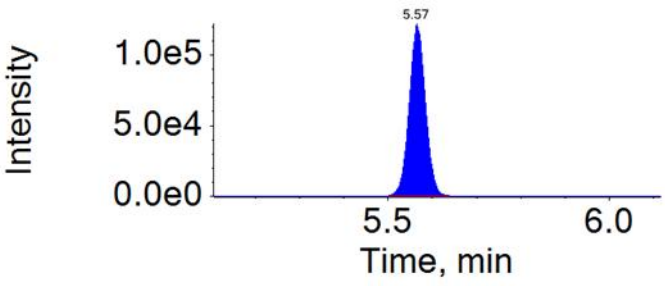
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



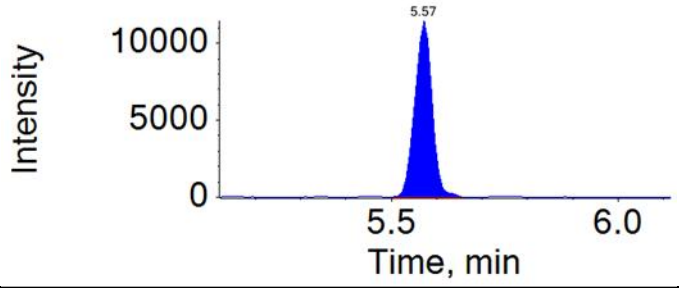


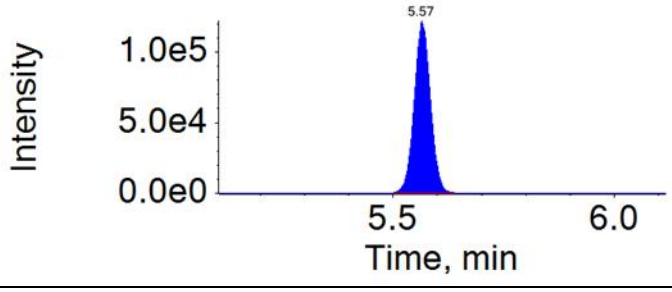
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By JPT at 10:55 am, 11/9/18

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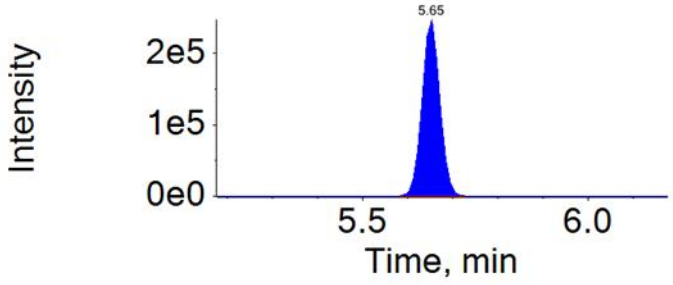
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

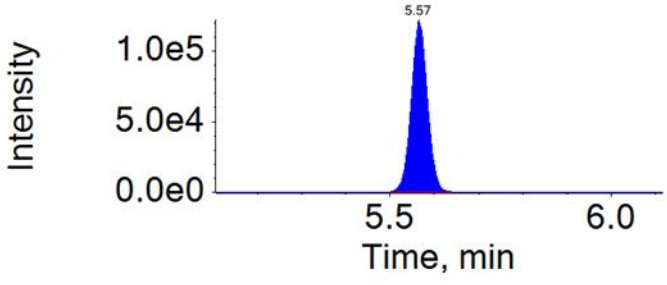
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



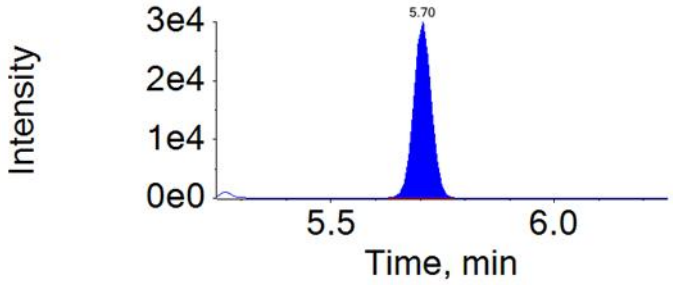


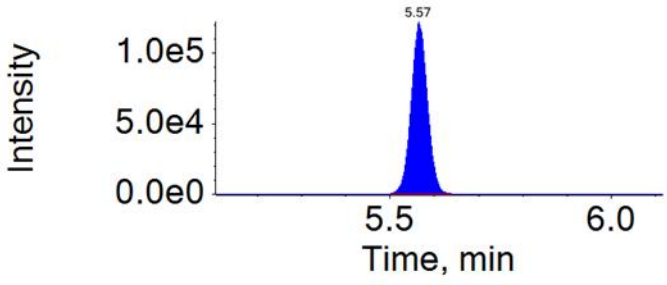
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506.0 / 78.0	515.0 / 470.0



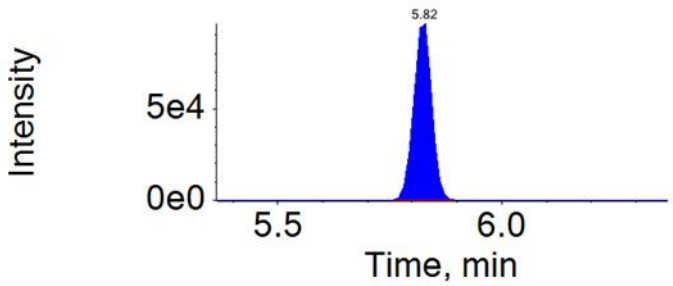


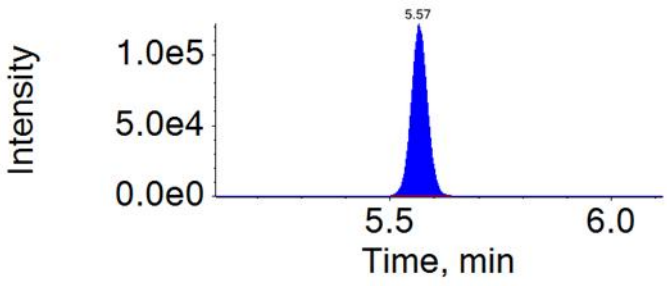
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



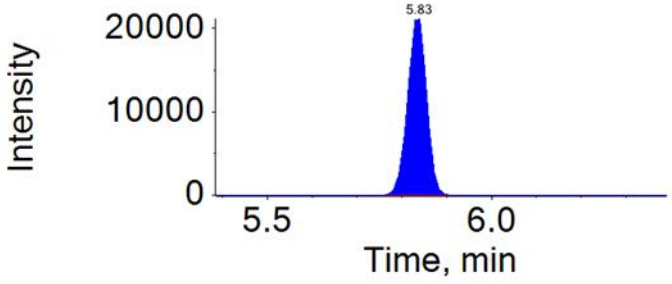
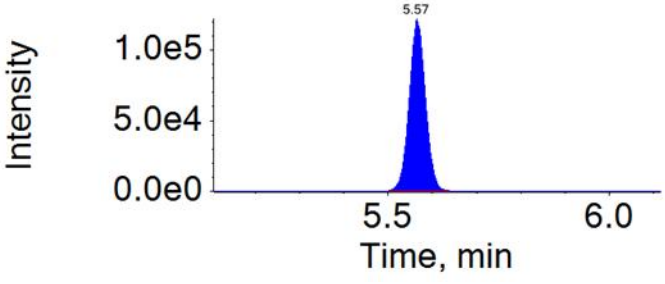


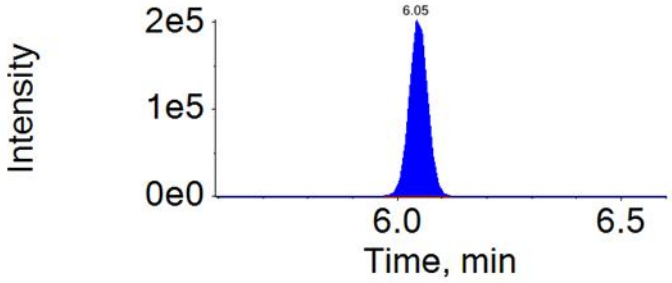
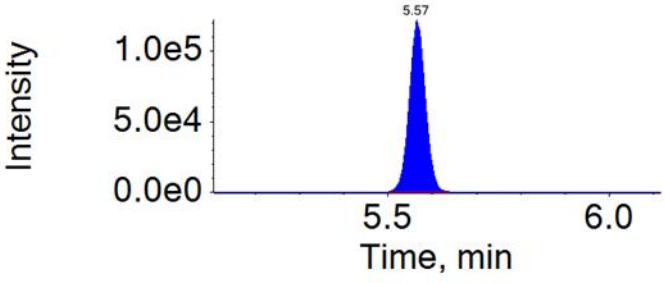
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

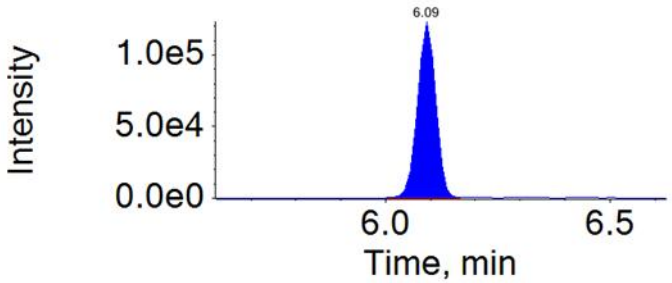
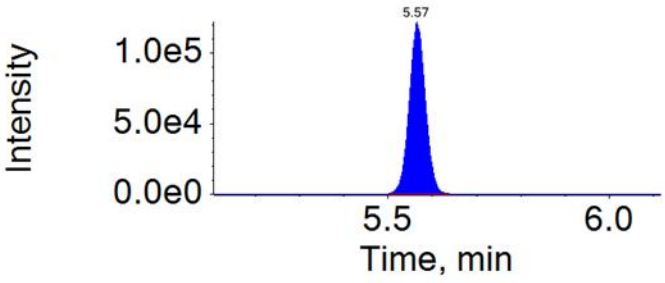


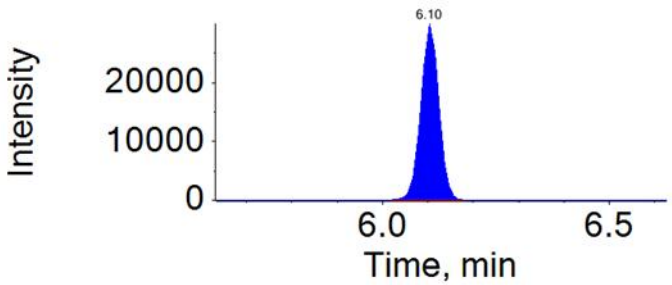
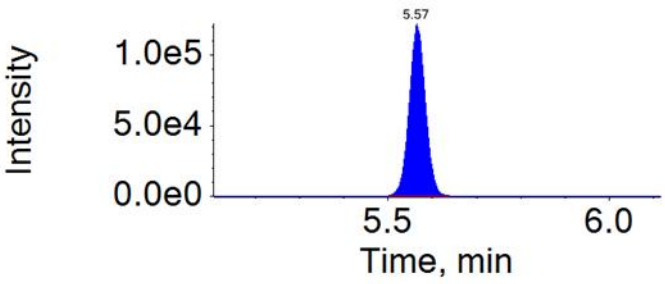


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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

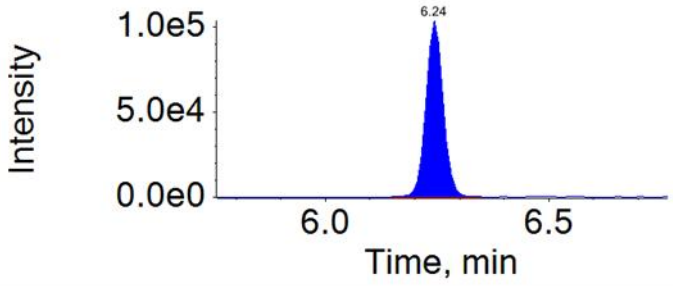
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

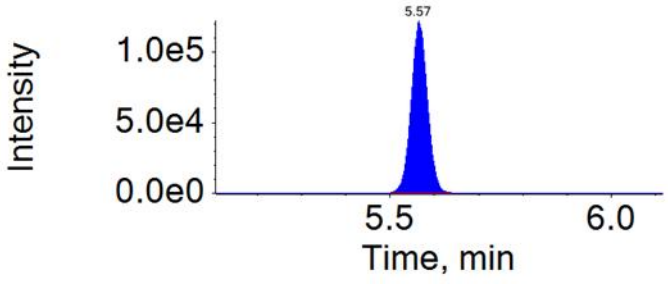
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

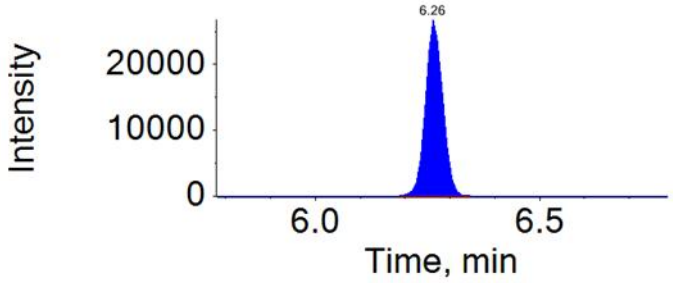
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

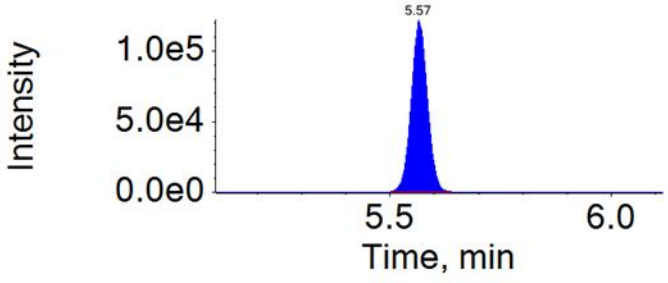
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



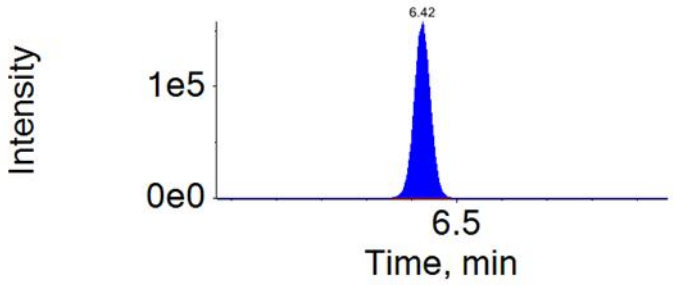


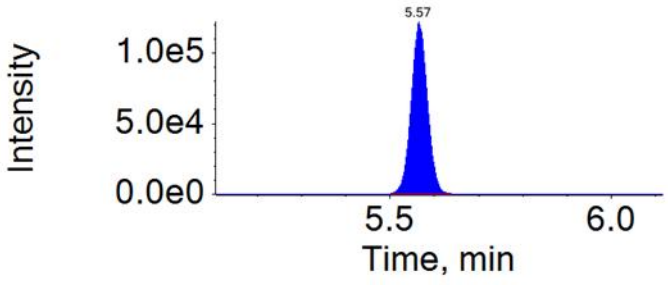
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



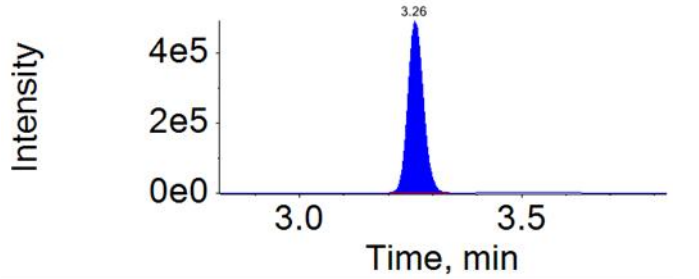


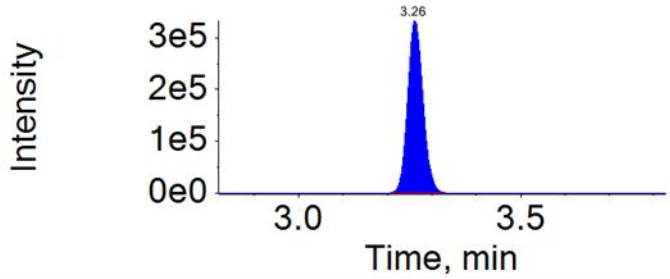
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

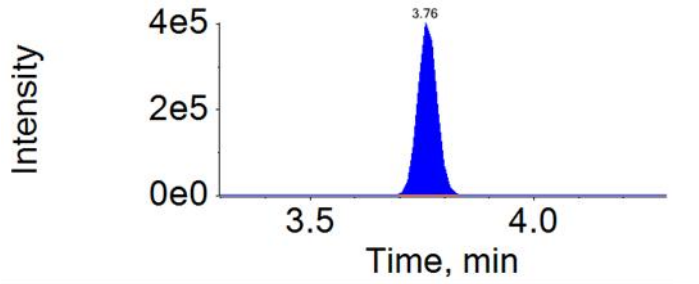
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

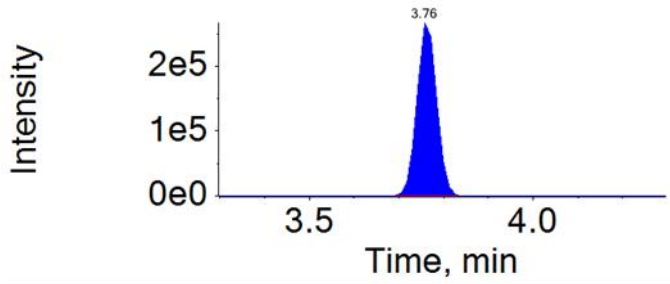
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



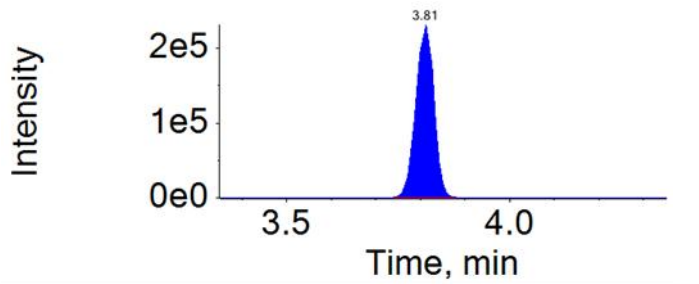


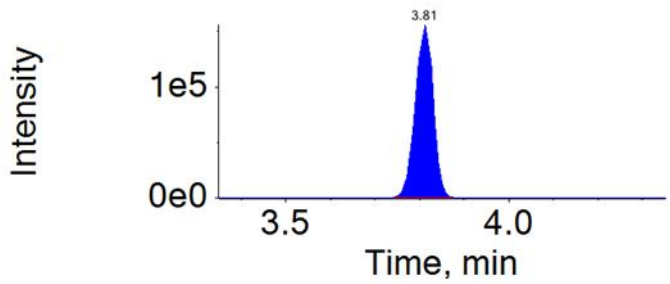
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



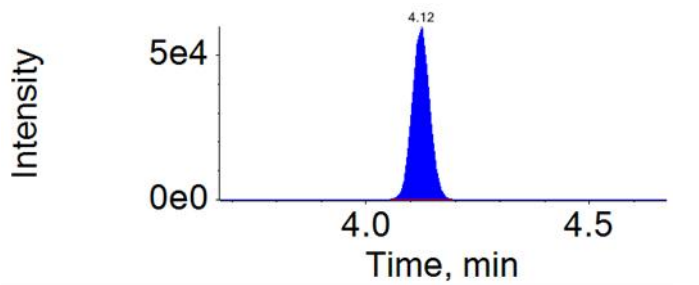


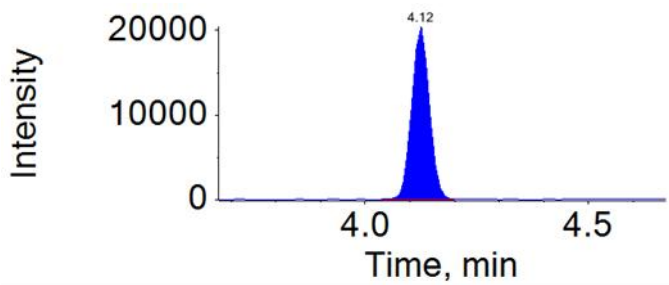
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



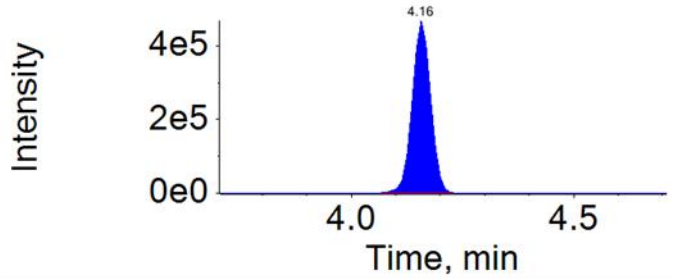


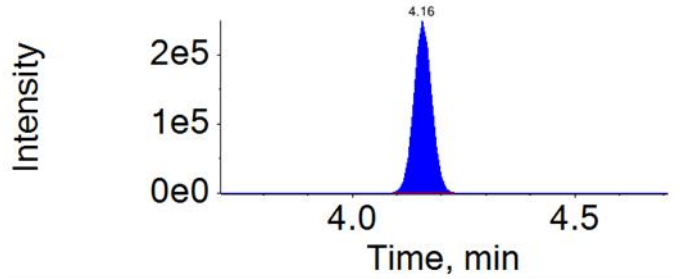
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

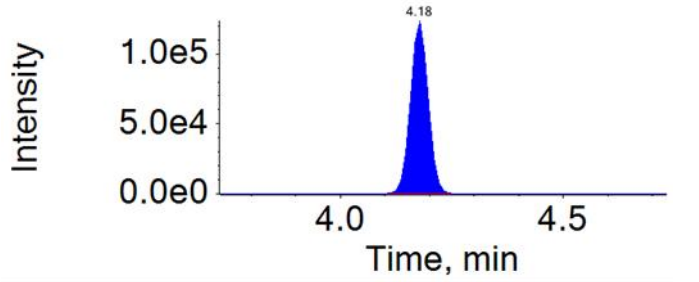
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

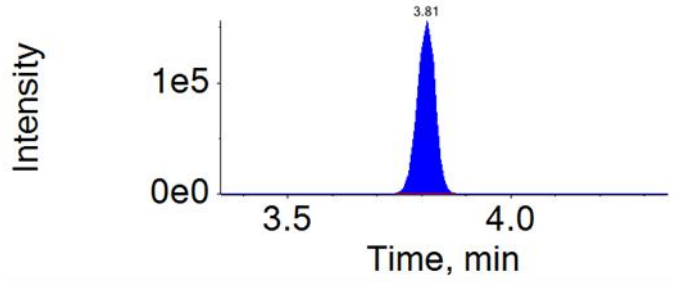
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



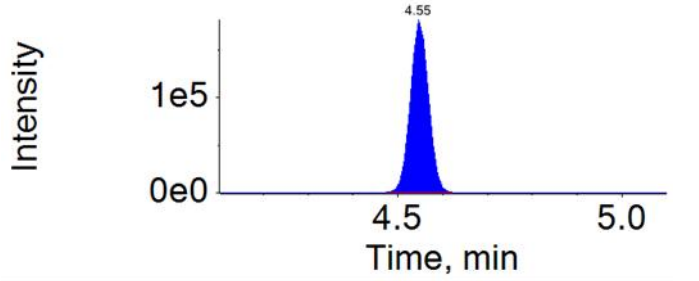


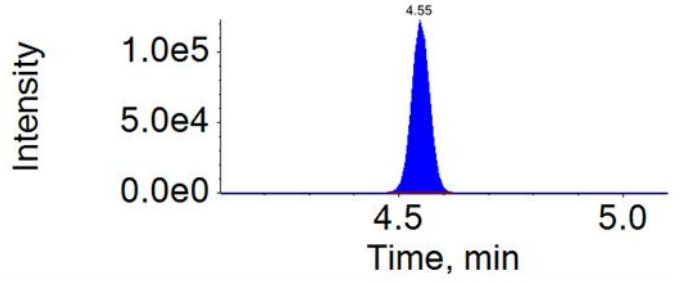
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



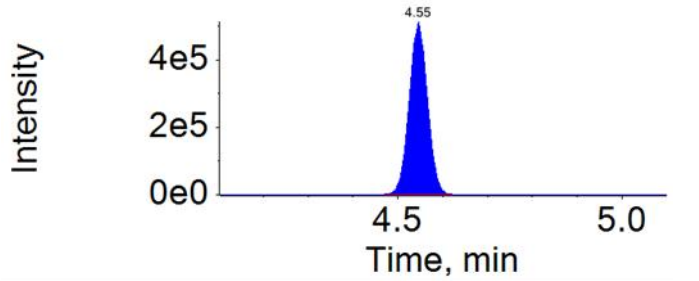


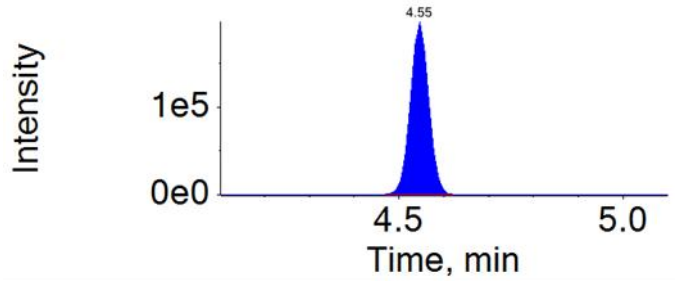
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



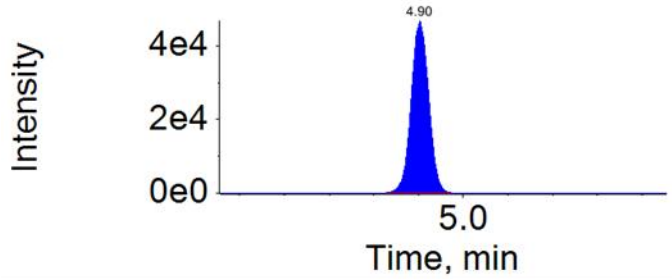


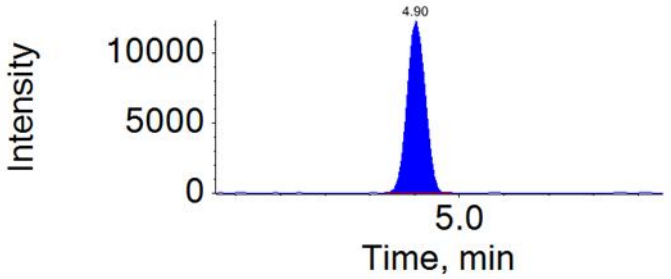
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

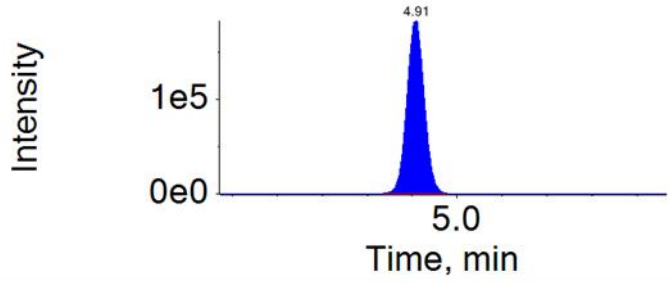
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

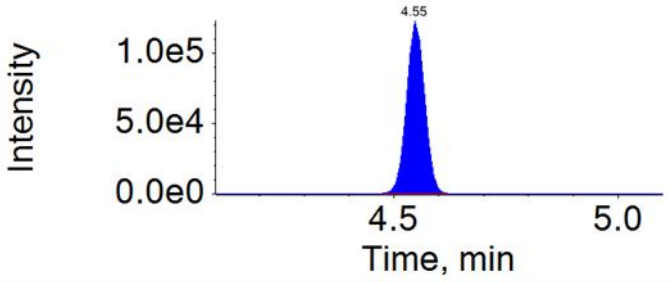
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



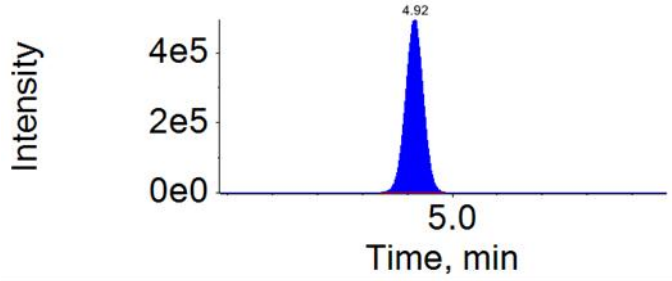


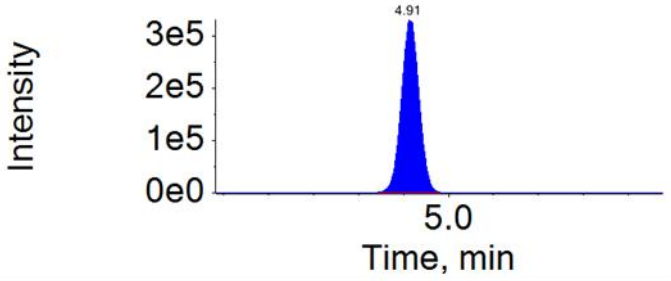
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



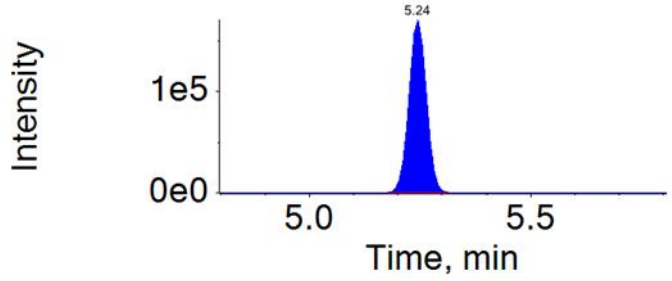


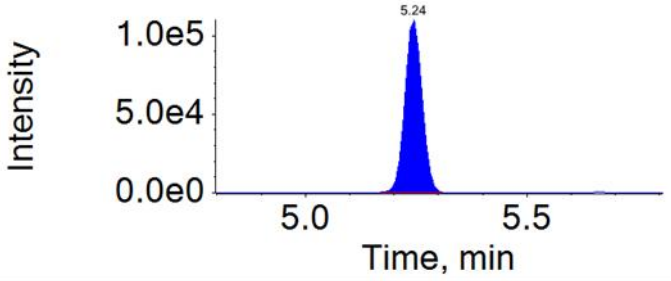
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





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



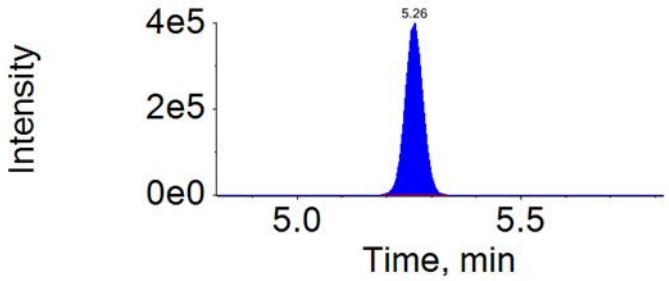


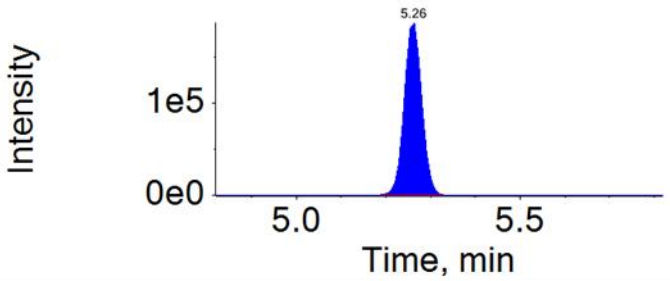
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

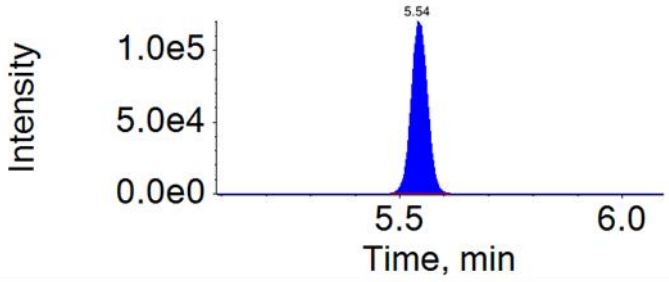
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

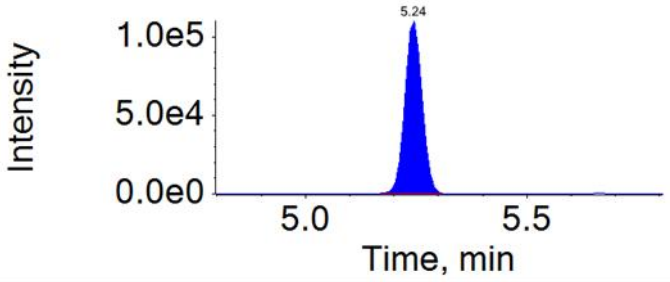
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



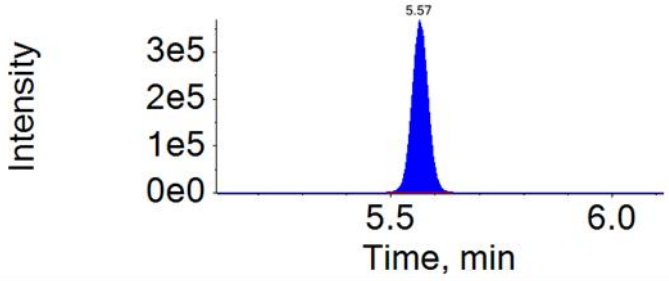


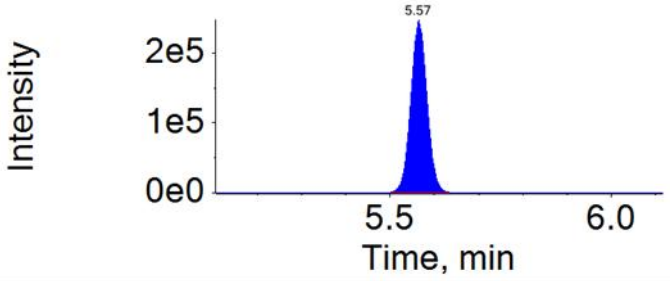
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



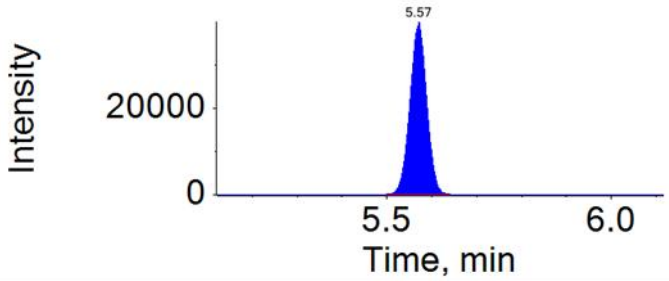


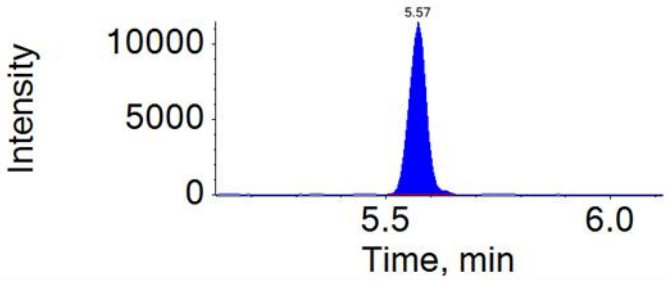
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



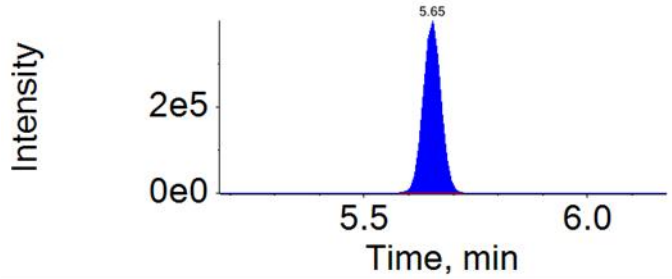


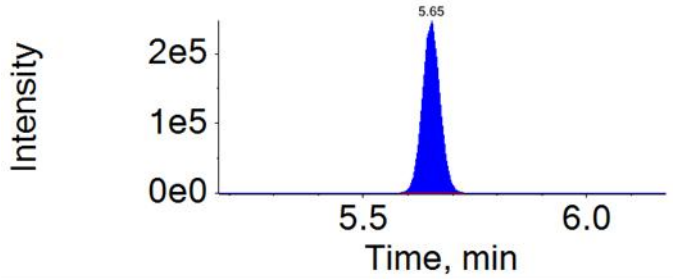
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

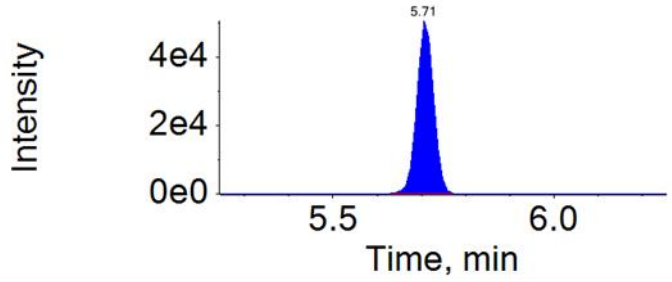
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

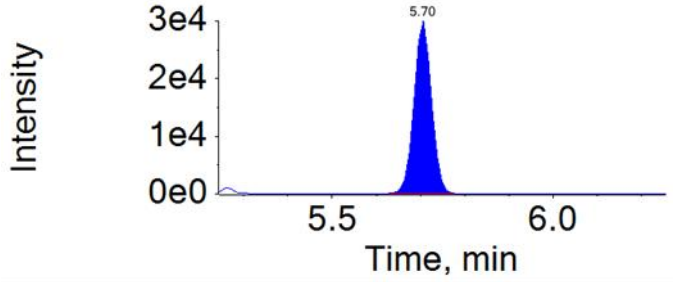
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



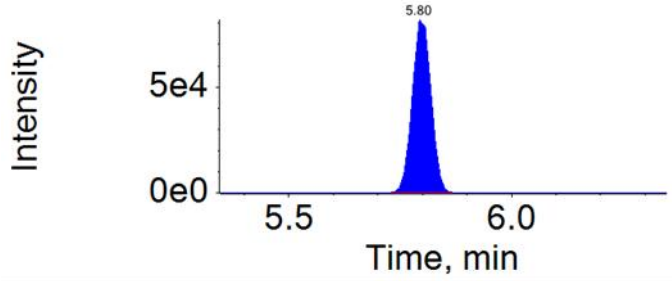


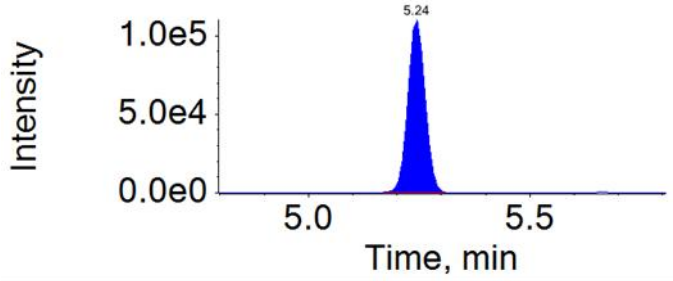
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



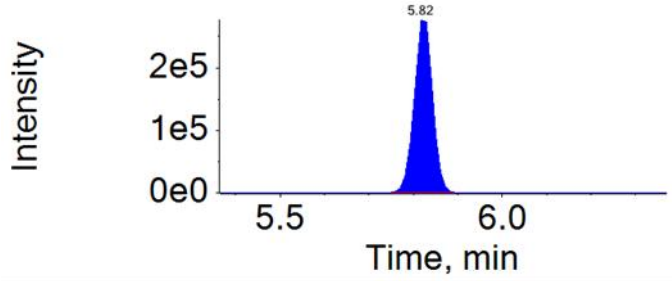


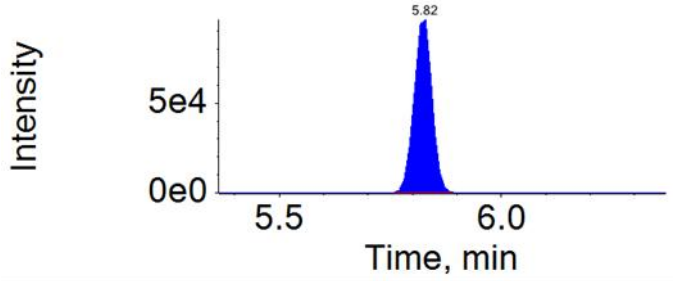
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



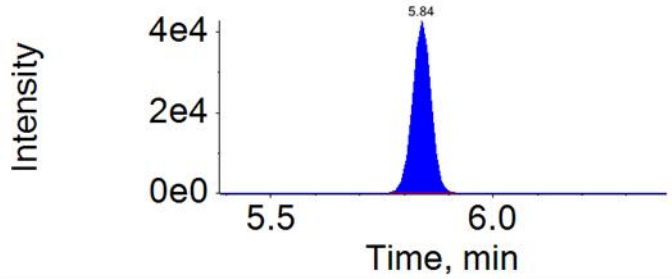


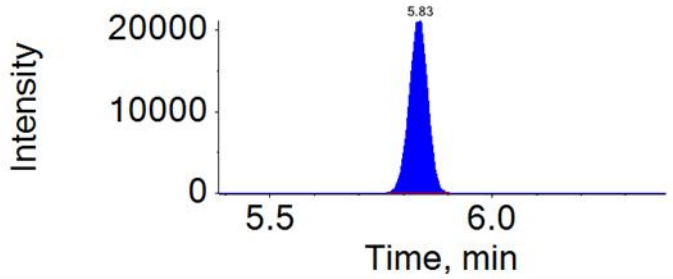
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

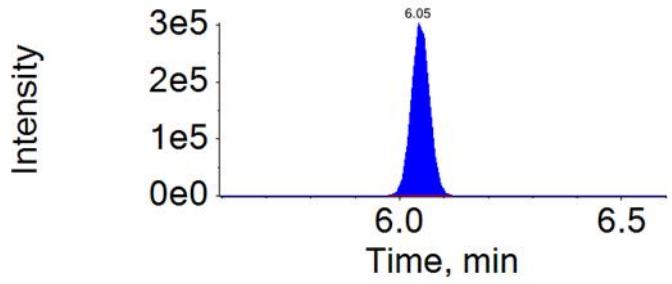
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

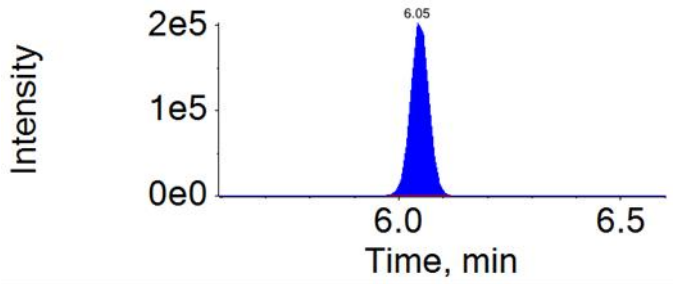
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



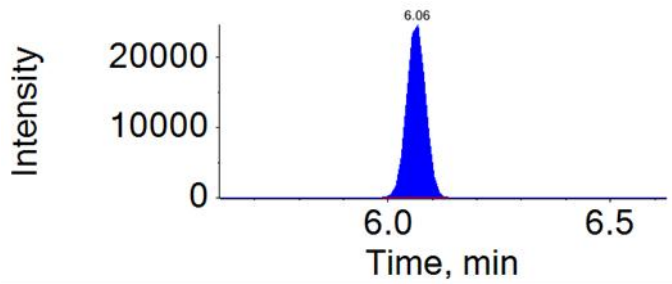


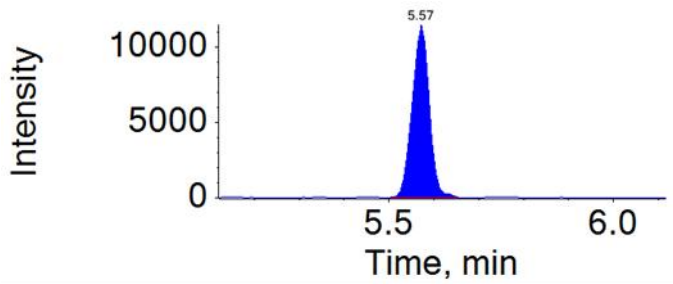
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



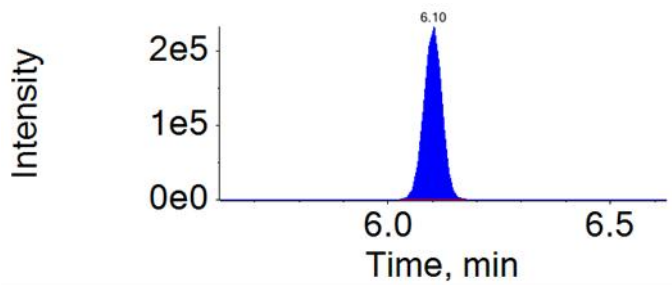


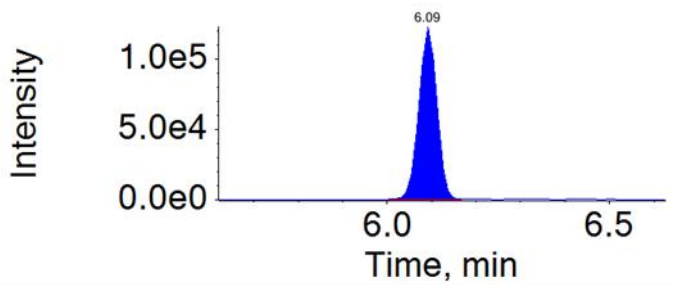
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



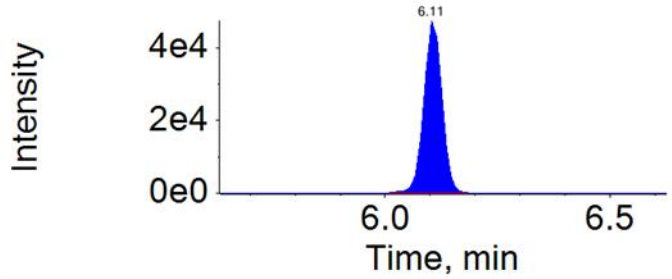


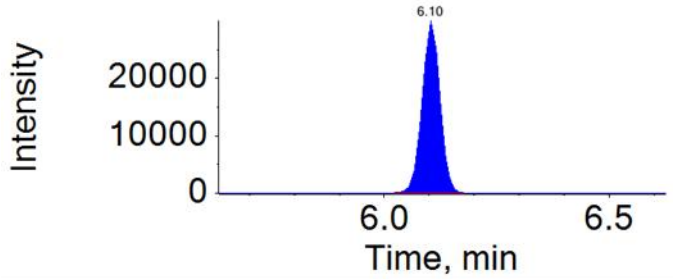
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

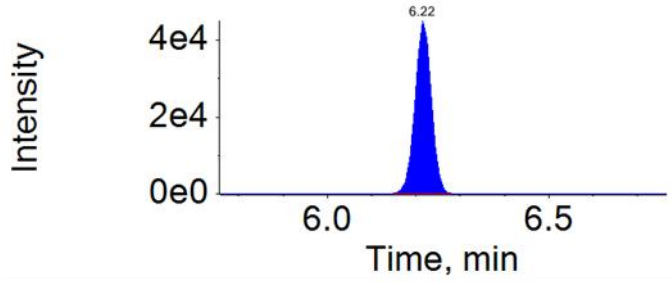
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

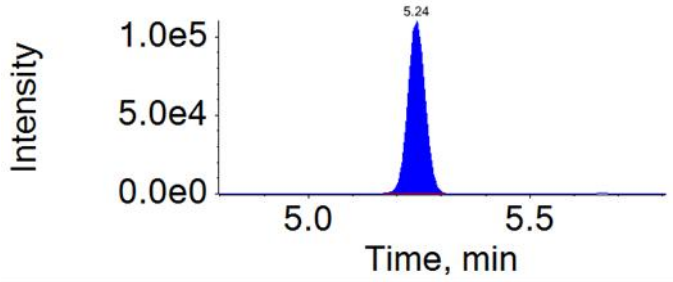
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



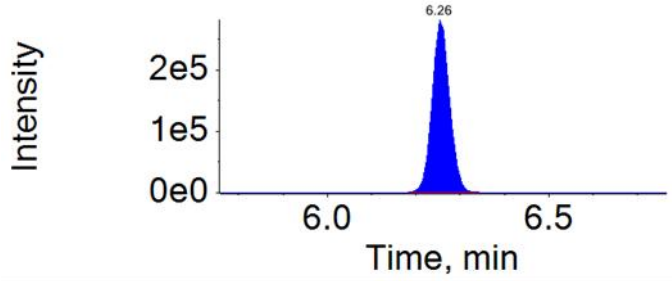


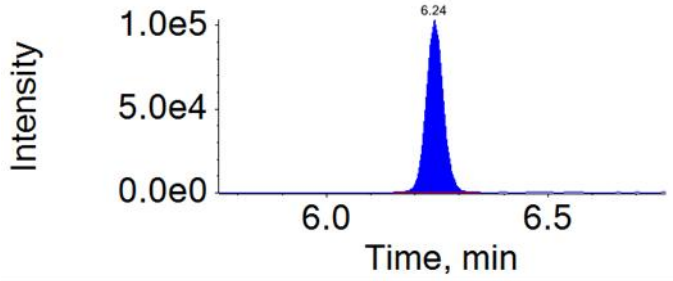
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



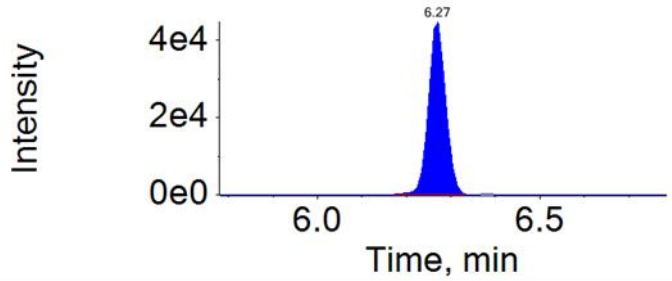


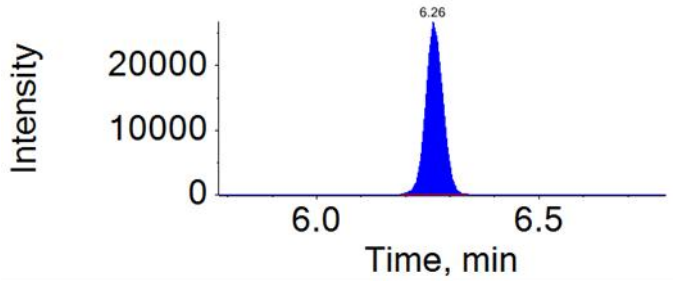
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



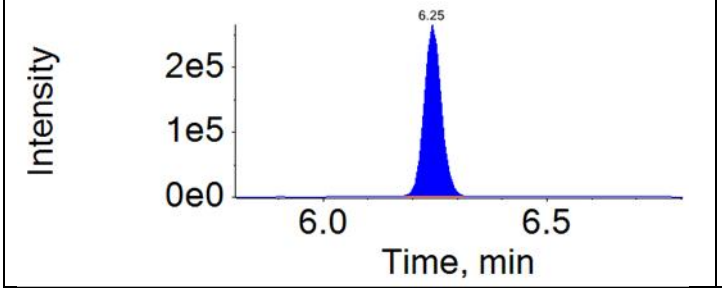


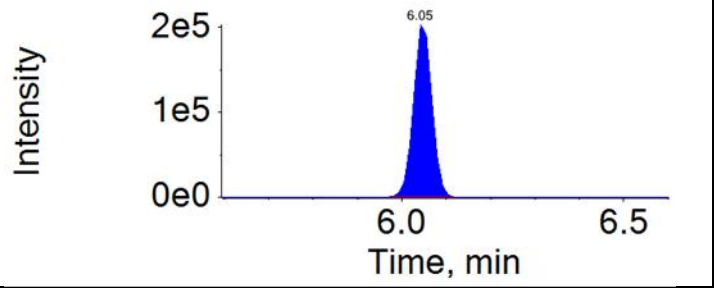
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

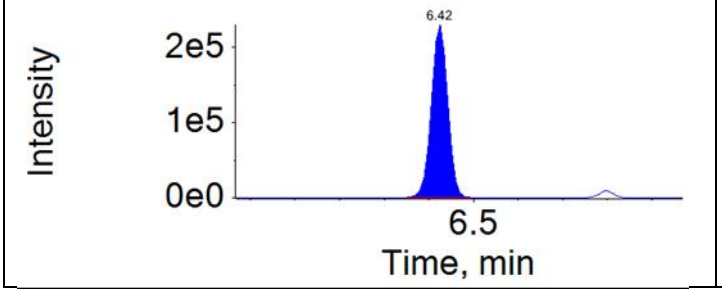
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

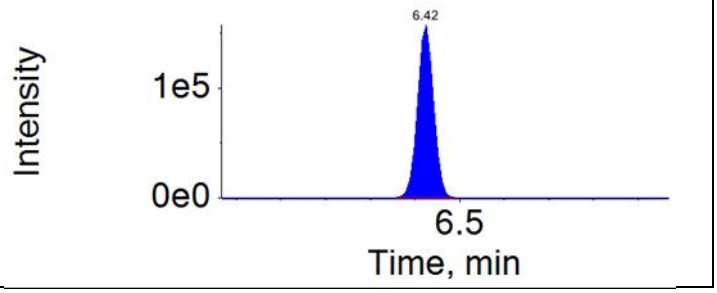
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



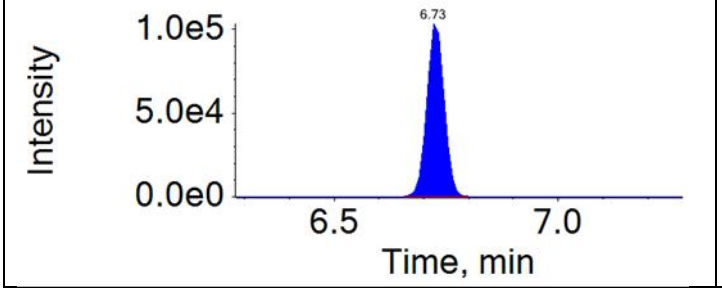


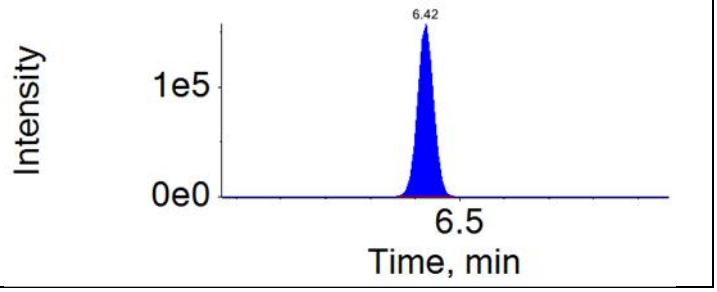
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



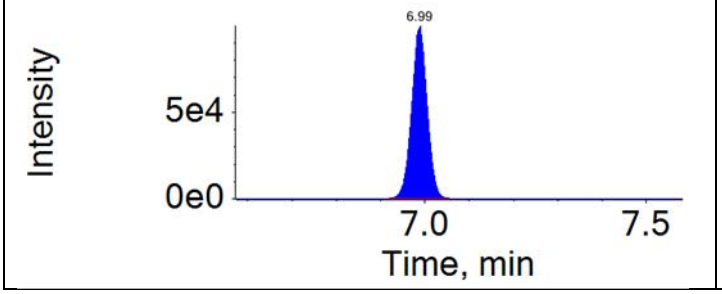


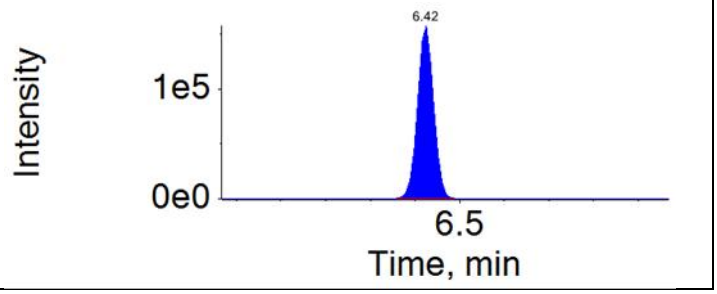
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Ion Ratio Report

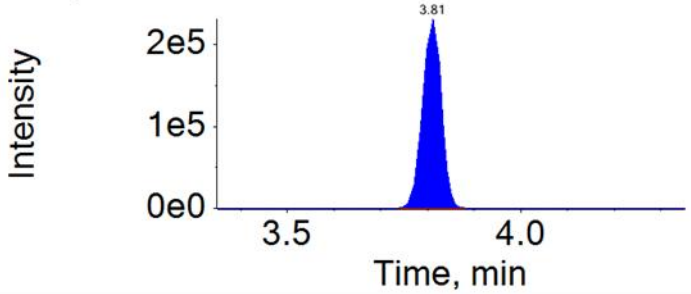
Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV08D-98.wiff

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	655034.7	A	N/A	1.0000			
PFBS_2	3.81	1.00	231149.3	A	N/A	0.3529	-1	50	
4:2-FTS	4.12	1.00	163905.4	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	102343.5	A	N/A	0.6244	-2	50	
PFHxA	4.16	1.00	1345026.8	A	N/A	1.0000			
PFHxA_2	4.16	1.00	14743.1	A	N/A	0.0110	-4	50	
PFPeS	4.18	1.10	340112.7	A	N/A	1.0000			
PFPeS_2	4.18	1.10	176556.3	A	N/A	0.5191	-4	50	
PFHxS	4.55	1.00	509899.0	A	N/A	1.0000			
PFHxS_2	4.55	1.00	176303.9	A	N/A	0.3458	-3	50	
PFHpA	4.55	1.00	1445409.9	A	N/A	1.0000			
PFHpA_2	4.55	1.00	79392.8	A	N/A	0.0549	-5	50	
6:2-FTS	4.90	1.00	127621.2	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	84468.6	A	N/A	0.6619	-2	50	
PFHpS	4.91	1.08	497691.3	A	N/A	1.0000			
PFHpS_2	4.91	1.08	198484.5	A	N/A	0.3988	1	50	
PFOA	4.92	1.00	1388094.5	A	N/A	1.0000			
PFOA_2	4.91	1.00	78095.2	A	N/A	0.0563	-11	50	
PFOS	5.24	1.00	470028.6	A	N/A	1.0000			
PFOS_2	5.24	1.00	147984.6	A	N/A	0.3148	-10	50	
PFNA	5.26	1.00	1129680.1	A	N/A	1.0000			
PFNA_2	5.26	1.00	20629.8	A	N/A	0.0183	-12	50	
PFNS	5.54	1.06	309702.8	A	N/A	1.0000			
PFNS_2	5.54	1.06	144613.1	A	N/A	0.4669	-5	50	
PFDA	5.57	1.00	941307.1	A	N/A	1.0000			
PFDA_2	5.57	1.00	7437.0	A	N/A	0.0079	40	50	
8:2-FTS	5.57	1.00	103270.8	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	59922.2	A	N/A	0.5802	-6	50	
NMeFOSAA	5.71	1.00	134156.5	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	30521.7	A	N/A	0.2275	3	50	
PFDS	5.80	1.11	241813.5	A	N/A	1.0000			
PFDS_2	5.80	1.11	118758.7	A	N/A	0.4911	6	50	
PFUnDA	5.82	1.00	803352.1	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	2580.7	A	N/A	0.0032	2	50	
NEtFOSAA	5.84	1.00	123087.8	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	74779.9	A	N/A	0.6075	0	50	
PFDoDA	6.05	1.00	882612.8	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	12360.0	A	N/A	0.0140	28	50	
10:2-FTS	6.06	1.09	74557.5	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	49497.1	A	N/A	0.6639	-6	50	
PFTrDA	6.25	1.03	702504.0	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	7191.3	A	N/A	0.0102	6	50	
PFTeDA	6.42	1.00	585138.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	3516.5	A	N/A	0.0060	8	50	
PFHxDA	6.73	1.05	280180.8	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	17791.9	A	N/A	0.0635	7	50	
PFODA	6.99	1.09	241980.2	A	N/A	1.0000			
PFODA_2	6.99	1.09	6103.4	A	N/A	0.0252	-2	50	

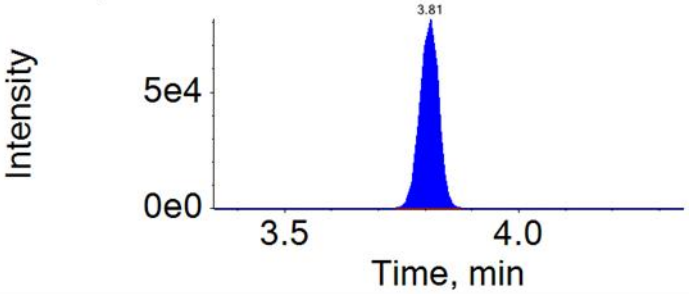
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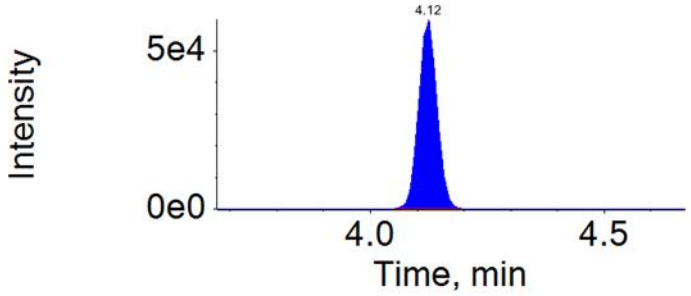
Component: PFBS
Primary Mass: 299.0 / 80.0



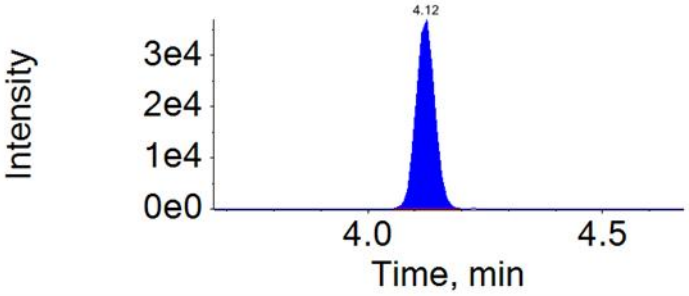
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



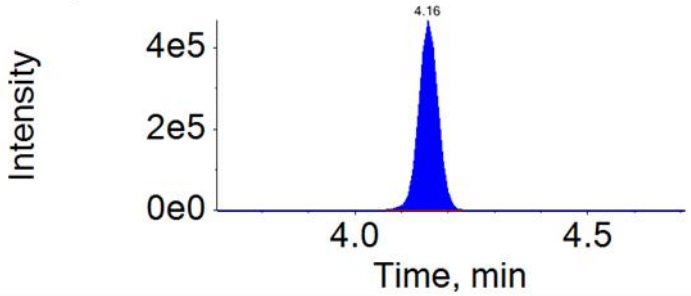
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



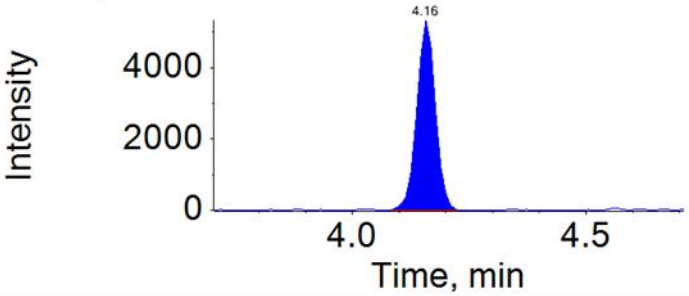
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



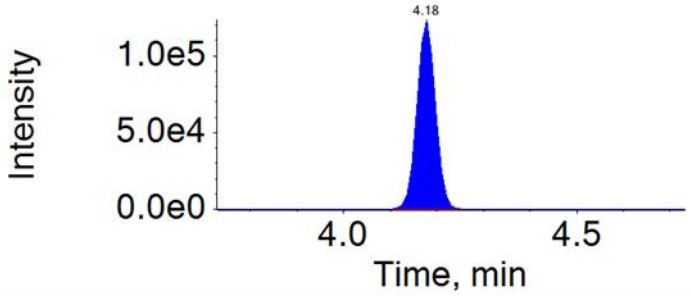
Component: PFHxA
Primary Mass: 313.0 / 269.0



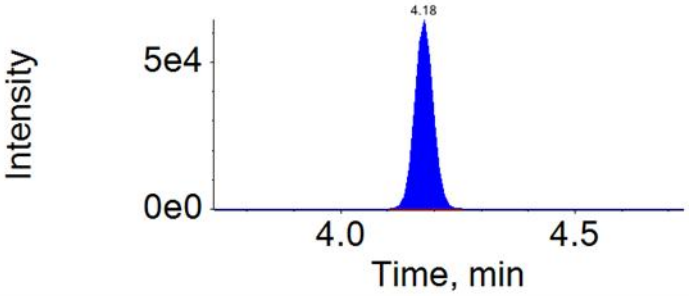
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



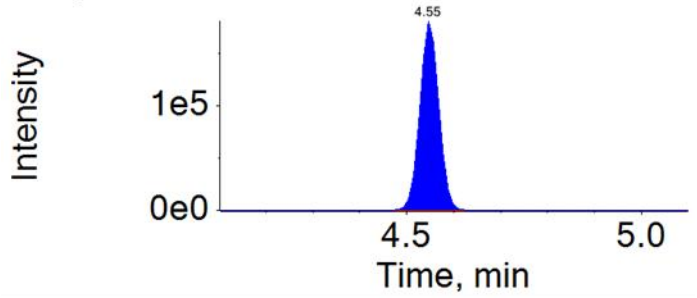
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



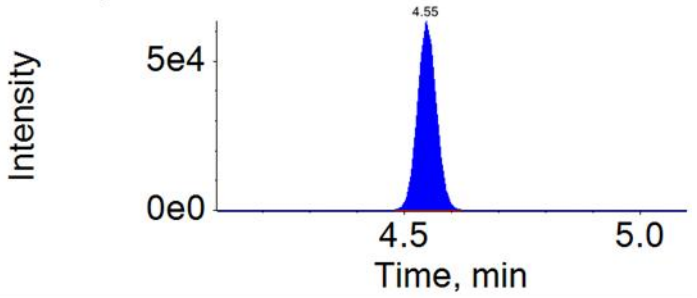
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

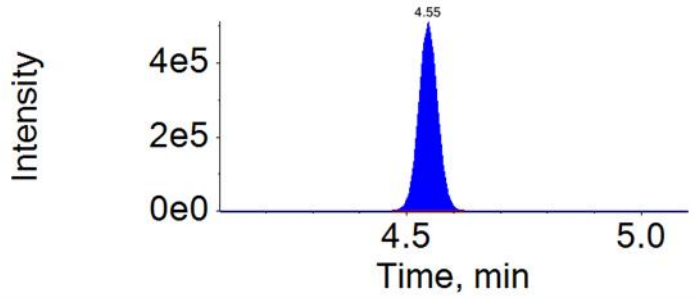
Component: PFHxS
Primary Mass: 399.0 / 80.0



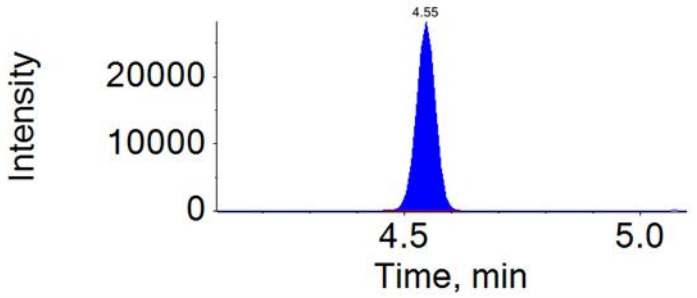
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



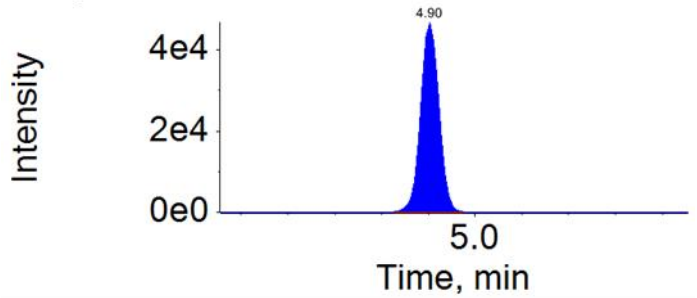
Component: PFHpA
Primary Mass: 363.0 / 319.0



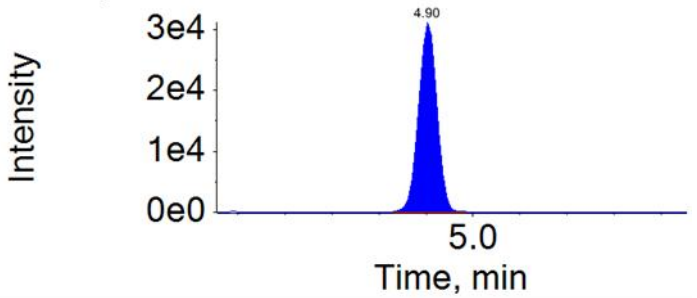
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



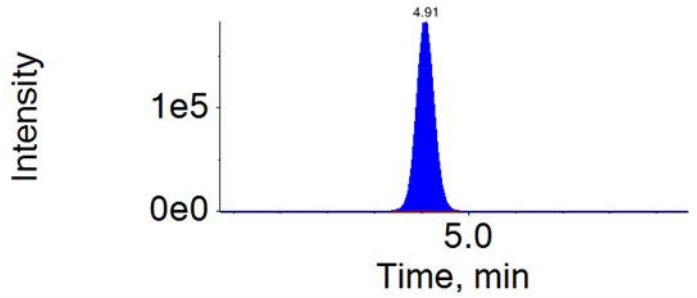
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



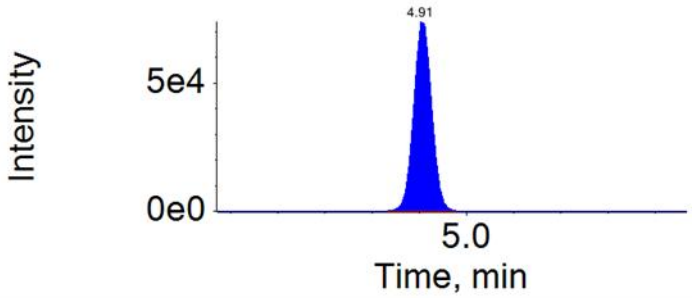
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



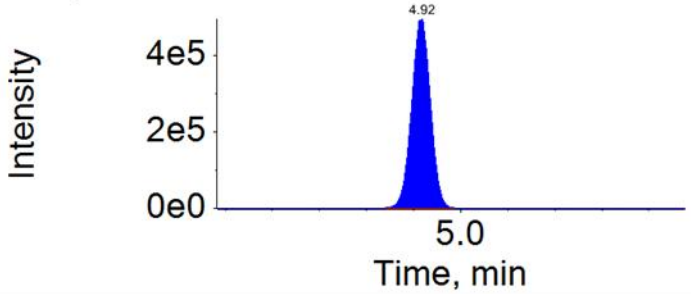
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



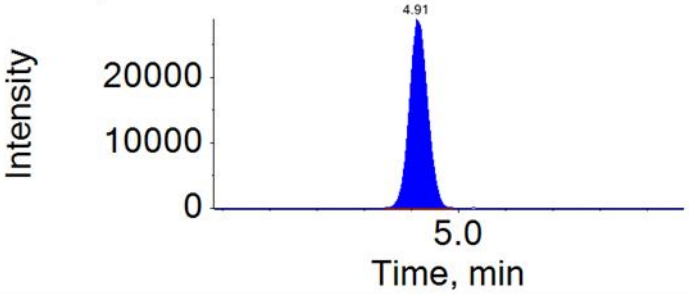
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

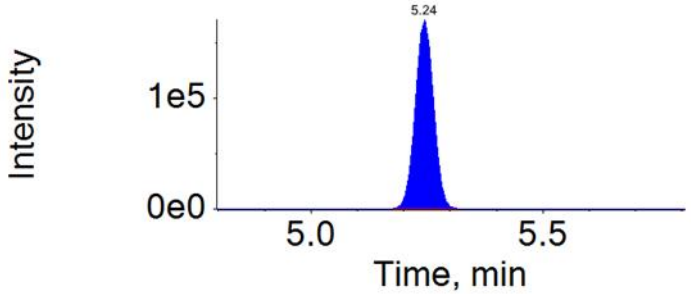
Component: PFOA
Primary Mass: 413.0 / 369.0



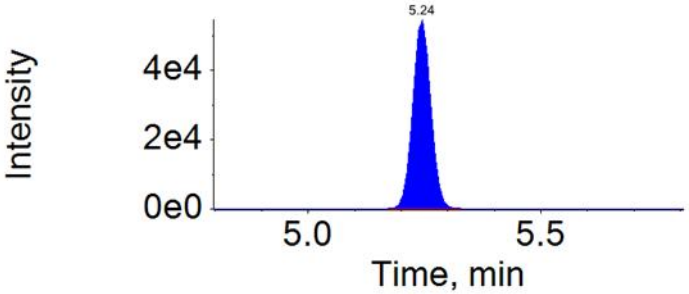
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



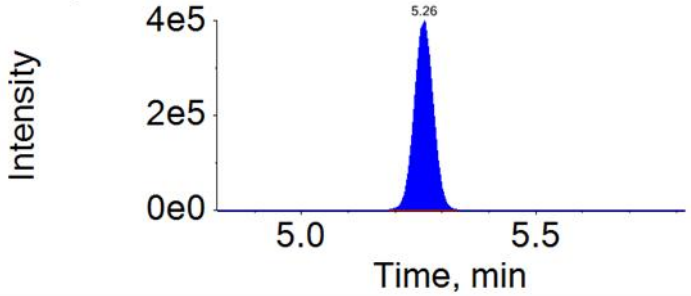
Component: PFOS
Primary Mass: 499.0 / 80.0



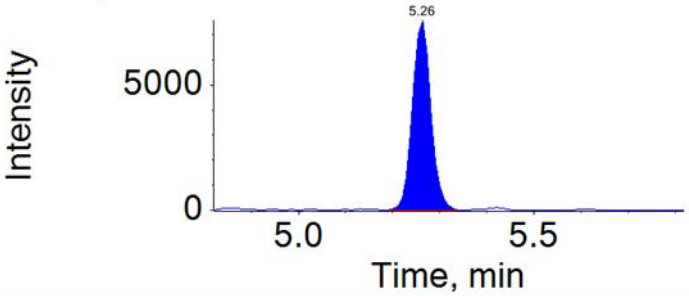
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



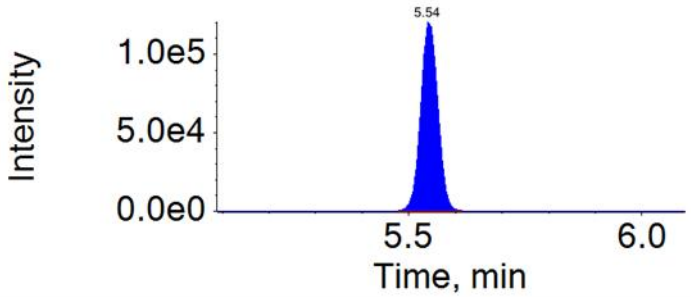
Component: PFNA
Primary Mass: 463.0 / 419.0



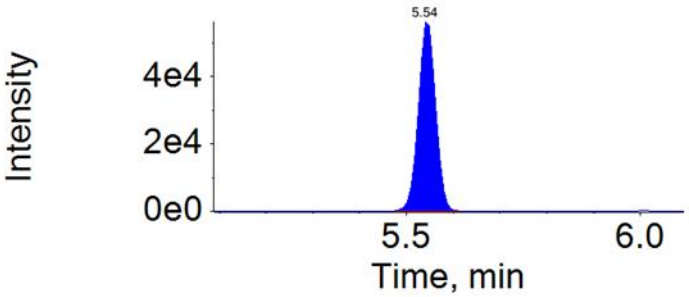
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



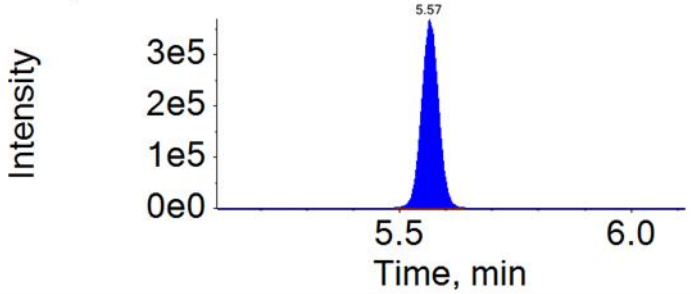
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



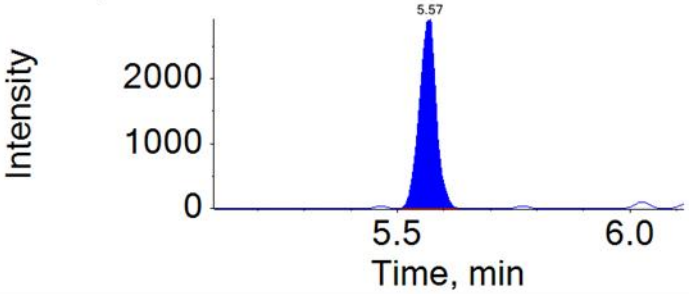
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

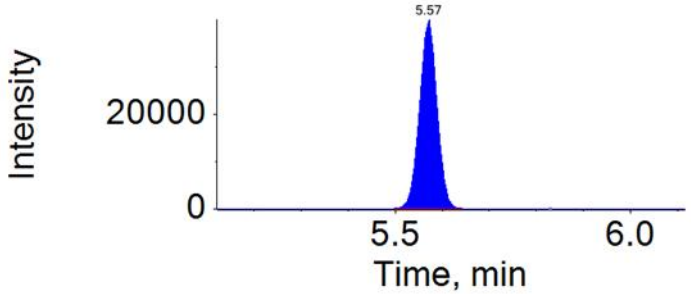
Component: PFDA
Primary Mass: 513.0 / 469.0



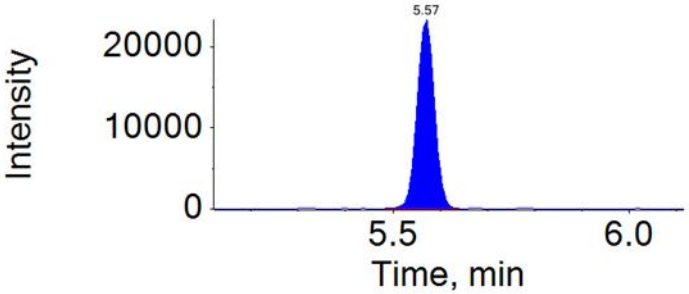
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



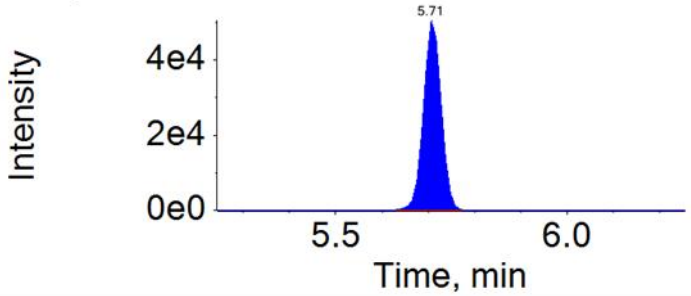
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



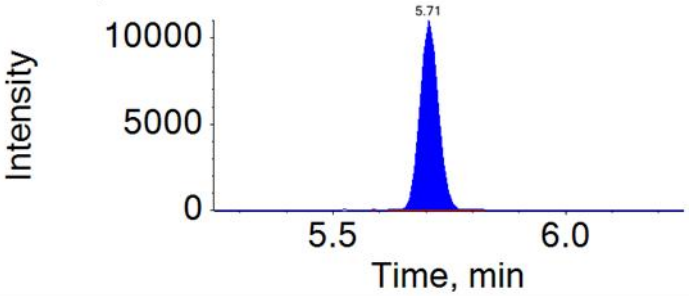
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



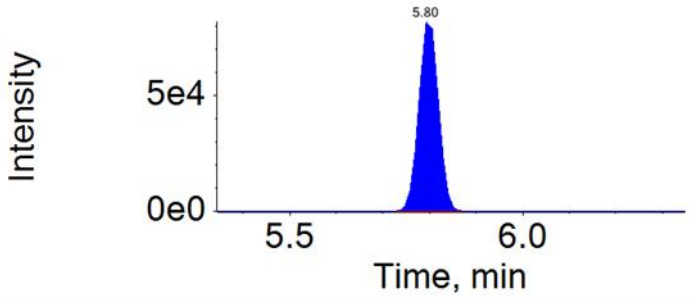
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



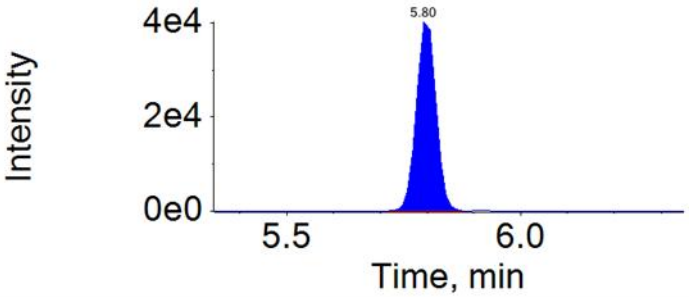
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



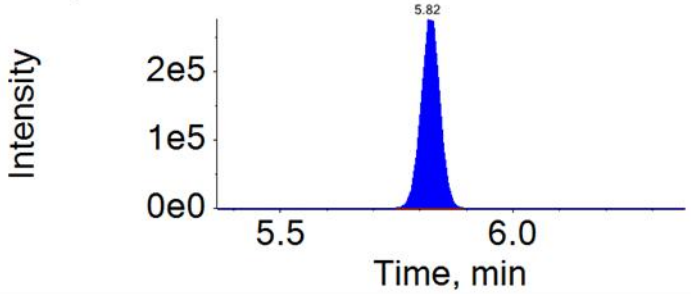
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



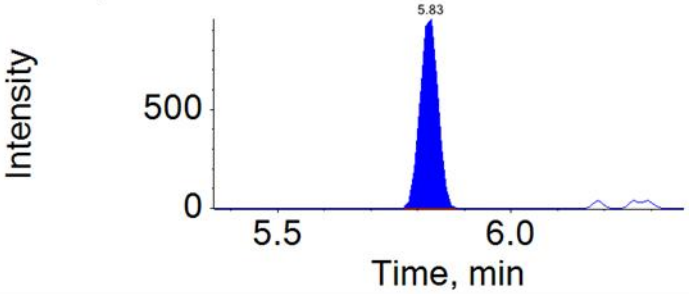
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

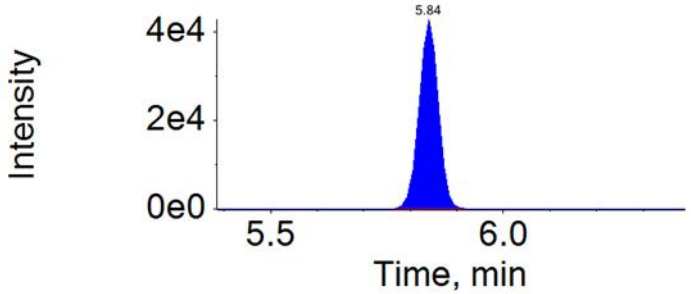
Component: PFUnDA
Primary Mass: 563.0 / 519.0



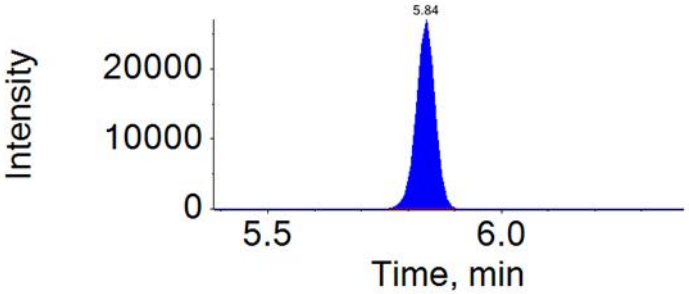
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



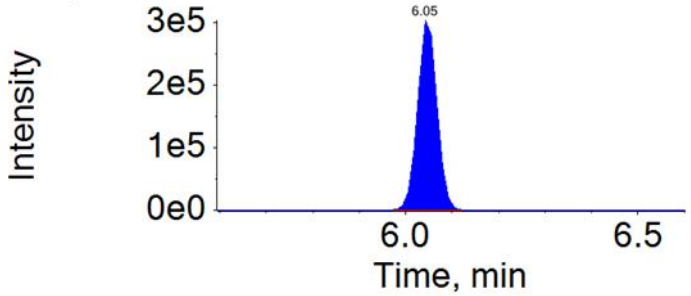
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



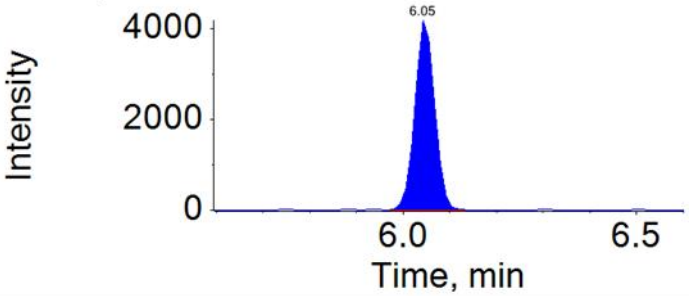
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



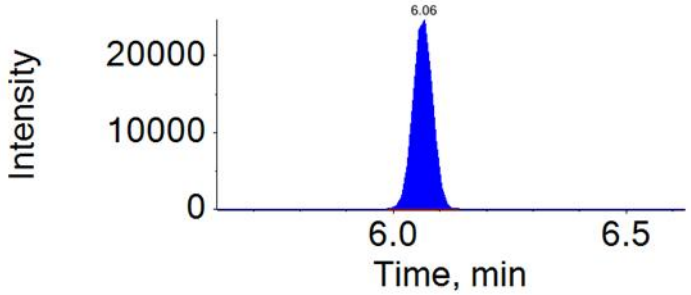
Component: PFDoDA
Primary Mass: 613.0 / 569.0



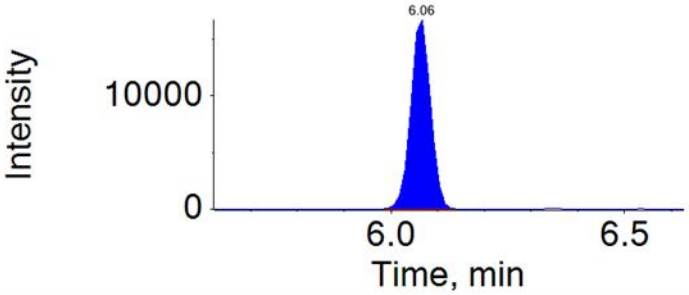
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



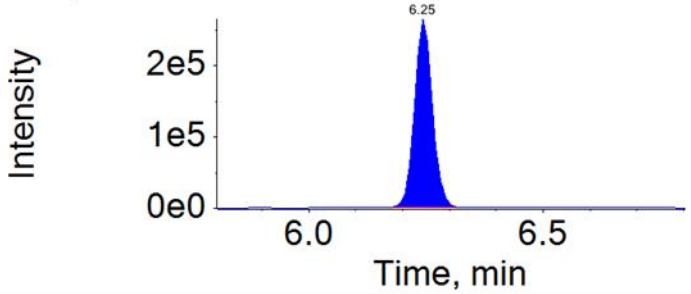
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



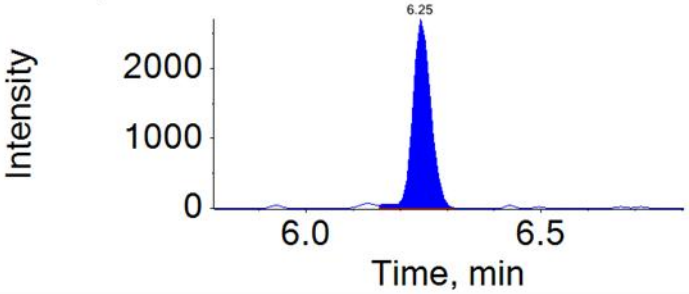
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

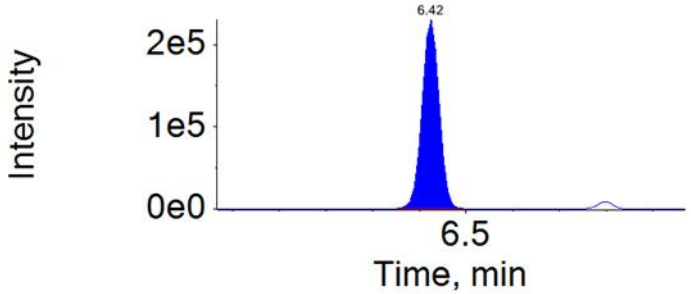
Component: PFTrDA
Primary Mass: 663.0 / 619.0



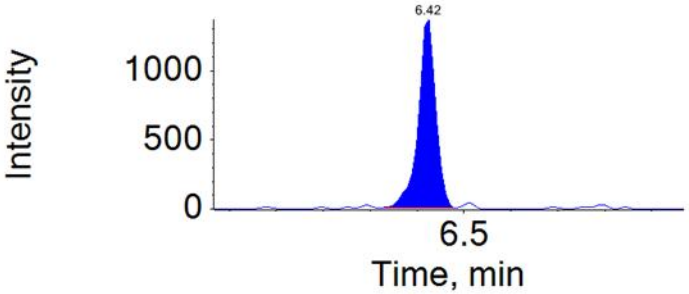
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



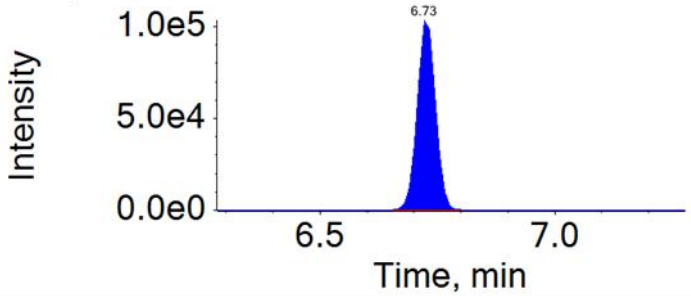
Component: PFTeDA
Primary Mass: 713.0 / 669.0



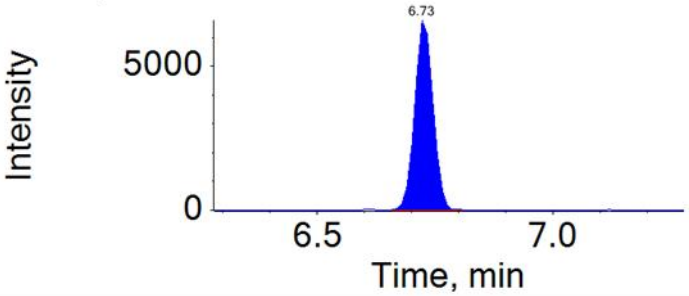
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



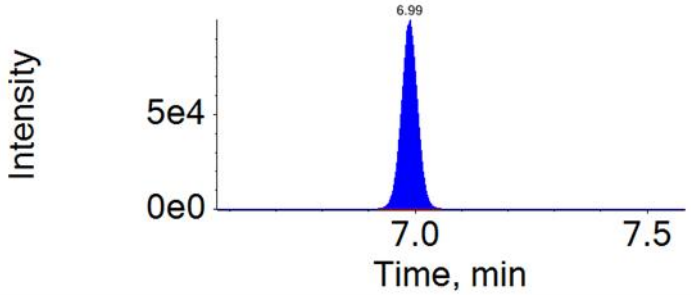
Component: PFHxDA
Primary Mass: 813.0 / 769.0



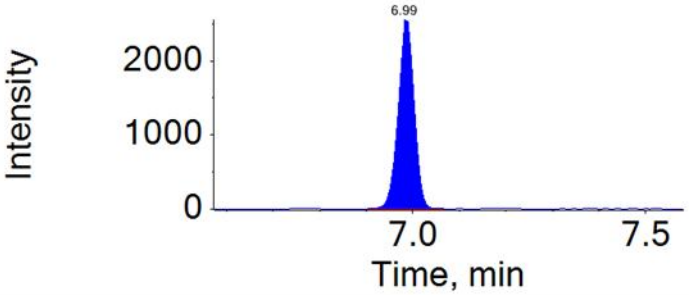
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



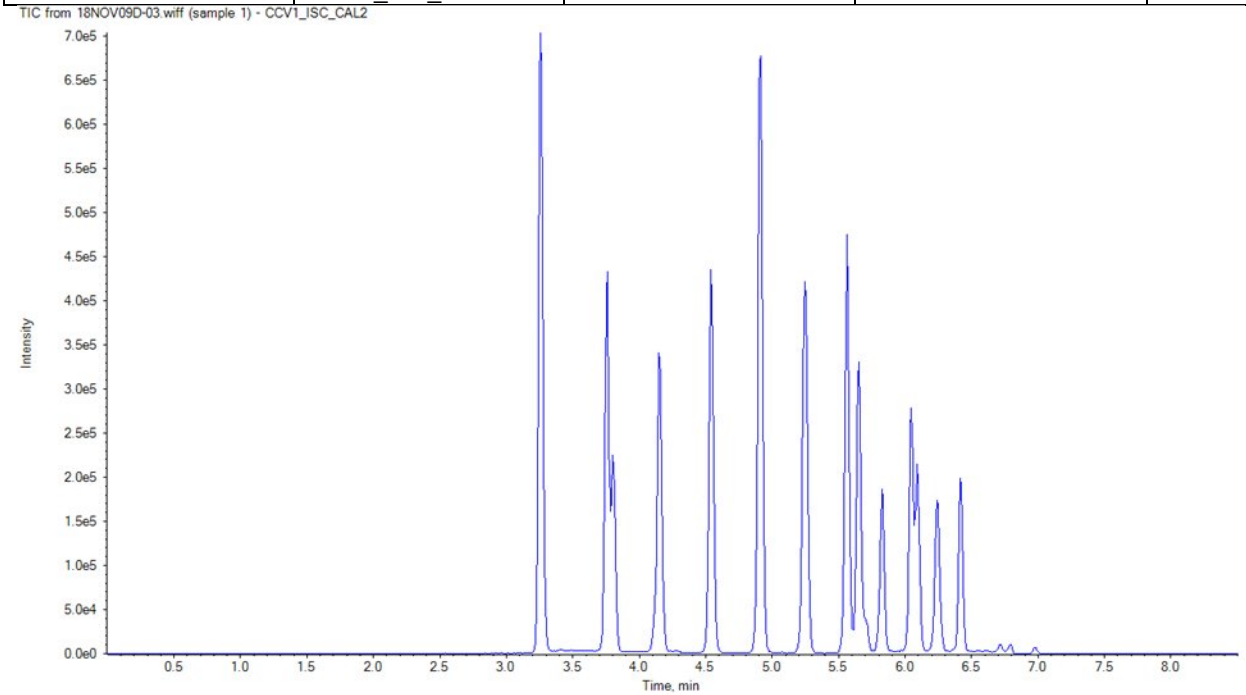
APPROVED
By JPT at 10:55 am, 11/9/18

REVIEWED
By umar at 3:41 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:07:16 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	18NOV09D-03.wiff	2018-11-09T04:56:59



Injection Standard Area Reference File: 18NOV08D-05

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	725974.7	728839.7	0	50	
13C2-PFOA	5.0	506876.7	491983.1	3	50	
13C4-PFOS	4.8	274910.1	255568.1	8	50	
13C2-PFDA	5.0	307276.7	315407.5	-3	50	

APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:07:16 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	18NOV09D-03.wiff	2018-11-09T04:56:59

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	73764.0	10	13C4-PFBA	800377.3	5.0	0.092	3.26	1.000	0.500	0.539	8	30	
PFPeA	77931.3	12	13C5-PFPeA	839674.3	5.0	0.093	3.76	1.000	0.500	0.552	10	30	
PFBS	38056.3	11	13C3-PFBS	423450.1	4.7	0.090	3.81	1.000	0.440	0.453	3	30	
4:2-FTS	10464.9	11	13C2-4:2-FTS	54500.3	4.7	0.192	4.12	1.000	0.467	0.516	11	30	
PFHxA	90851.7	12	13C5-PFHxA	669530.0	5.0	0.136	4.15	1.000	0.500	0.582	16	30	
PFPeS	19983.2	12	13C3-PFBS	423450.1	4.7	0.047	4.17	1.100	0.469	0.465	-1	30	
PFHxS	30875.8	12	13C3-PFHxS	331033.8	4.7	0.093	4.54	1.000	0.473	0.473	0	30	
PFHpA	88972.9	12	13C4-PFHpA	550877.2	5.0	0.162	4.54	1.000	0.500	0.543	9	30	
6:2-FTS	8270.7	11	13C2-6:2-FTS	38224.4	4.8	0.216	4.90	1.000	0.474	0.540	14	30	
PFHpS	29792.4	11	13C3-PFHxS	331033.8	4.7	0.090	4.90	1.080	0.476	0.471	-1	30	
PFOA	90972.8	11	13C8-PFOA	936961.2	5.0	0.097	4.91	1.000	0.500	0.547	9	30	
PFOS	30918.1	11	13C8-PFOS	292185.4	4.8	0.106	5.24	1.000	0.478	0.549	15	30	
PFNA	67838.6	12	13C9-PFNA	481186.0	5.0	0.141	5.26	1.000	0.500	0.527	5	30	
PFNS	18602.5	11	13C8-PFOS	292185.4	4.8	0.064	5.54	1.060	0.480	0.505	5	30	
PFDA	59070.3	11	13C6-PFDA	595472.3	5.0	0.099	5.56	1.000	0.500	0.546	9	30	
8:2-FTS	5888.6	11	13C2-8:2-FTS	28276.3	4.8	0.208	5.57	1.000	0.479	0.469	-2	30	
PFOSA	72507.1	11	13C8-PFOSA	705892.2	5.0	0.103	5.65	1.000	0.500	0.555	11	30	
NMeFOSAA	7292.3	12	d3-NMeFOSAA	80042.2	5.0	0.091	5.71	1.000	0.500	0.469	-6	30	
PFDS	15015.9	11	13C8-PFOS	292185.4	4.8	0.051	5.80	1.110	0.482	0.491	2	30	
PFUnDA	49727.2	11	13C7-PFUnDA	268743.7	5.0	0.185	5.83	1.000	0.500	0.531	6	30	
NEtFOSAA	8237.3	12	d5-NEtFOSAA	66145.9	5.0	0.125	5.84	1.000	0.500	0.535	7	30	
PFDoDA	50985.1	12	13C2-PFDoDA	553881.6	5.0	0.092	6.05	1.000	0.500	0.499	0	30	
10:2-FTS	4050.9	13	13C2-8:2-FTS	28276.3	4.8	0.143	6.06	1.090	0.482	0.446	-7	30	
NMePFOSAE	41657.7	12	d7-NMePFOSAE	336547.8	5.0	0.124	6.10	1.000	0.500	0.555	11	30	
NMePFOSA	8675.0	12	d3-NMePFOSA	86754.9	5.0	0.100	6.10	1.000	0.500	0.560	12	30	
PFDoS	8991.3	11	13C8-PFOS	292185.4	4.8	0.031	6.21	1.190	0.484	0.594	23	30	
NEtPFOSAE	46678.1	12	d9-NEtPFOSAE	266431.2	5.0	0.175	6.25	1.000	0.500	0.562	12	30	
NEtPFOSA	6621.6	13	d5-NEtPFOSA	70353.4	5.0	0.094	6.26	1.000	0.500	0.415	-17	30	
PFTrDA	43214.6	11	13C2-PFDoDA	553881.6	5.0	0.078	6.24	1.030	0.500	0.492	-2	30	
PFTeDA	34793.1	10	13C2-PFTeDA	390810.1	5.0	0.089	6.42	1.000	0.500	0.523	5	30	
PFHxDA	16891.1	11	13C2-PFTeDA	390810.1	5.0	0.043	6.72	1.050	0.500	0.537	7	30	
PFODA	15170.8	10	13C2-PFTeDA	390810.1	5.0	0.039	6.98	1.090	0.500	0.556	11	30	

APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:07:16 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

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

Result Table: 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV09D-03.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-09T04:56:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV09DCCV1-4
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: 18NOV08D-05

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	725974.7	728839.7	0	50	
13C2-PFOA	5.0	506876.7	491983.1	3	50	
13C4-PFOS	4.8	274910.1	255568.1	8	50	
13C2-PFDA	5.0	307276.7	315407.5	-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	800377.3	13C3-PFBA	725974.7	1.102	5.000	5.102	102	70-130	
E13C5-PFPeA	839674.3	13C3-PFBA	725974.7	1.157	5.000	5.039	101	70-130	
E13C3-PFBS	423450.1	13C3-PFBA	725974.7	0.583	4.650	4.281	92	70-130	
E13C2-4:2-FTS	54500.3	13C2-PFOA	506876.7	0.108	4.670	4.852	104	70-130	
E13C5-PFHxA	669530.0	13C2-PFOA	506876.7	1.321	5.000	4.859	97	70-130	
E13C3-PFHxS	331033.8	13C2-PFOA	506876.7	0.653	4.730	4.688	99	70-130	
E13C4-PFHpA	550877.2	13C2-PFOA	506876.7	1.087	5.000	4.944	99	70-130	
E13C2-6:2-FTS	38224.4	13C2-PFOA	506876.7	0.075	4.750	5.029	106	70-130	
E13C8-PFOA	936961.2	13C2-PFOA	506876.7	1.848	5.000	5.155	103	70-130	
E13C8-PFOS	292185.4	13C4-PFOS	274910.1	1.063	4.780	4.700	98	70-130	
E13C9-PFNA	481186.0	13C4-PFOS	274910.1	1.750	5.000	4.781	96	70-130	
E13C6-PFDA	595472.3	13C2-PFDA	307276.7	1.938	5.000	4.873	97	70-130	
E13C2-8:2-FTS	28276.3	13C2-PFDA	307276.7	0.092	4.790	4.869	102	70-130	
E13C8-PFOSA	705892.2	13C2-PFDA	307276.7	2.297	5.000	5.013	100	70-130	
Ed3-NMeFOSAA	80042.2	13C2-PFDA	307276.7	0.260	5.000	4.844	97	70-130	
E13C7-PFUnDA	268743.7	13C2-PFDA	307276.7	0.875	5.000	5.045	101	70-130	
Ed5-NEtFOSAA	66145.9	13C2-PFDA	307276.7	0.215	5.000	4.982	100	70-130	
E13C2-PFDoDA	553881.6	13C2-PFDA	307276.7	1.803	5.000	4.859	97	70-130	
Ed7-NMePFOSAE	336547.8	13C2-PFDA	307276.7	1.095	5.000	5.093	102	70-130	
Ed3-NMePFOSA	86754.9	13C2-PFDA	307276.7	0.282	5.000	5.169	103	70-130	
Ed9-NEtPFOSAE	266431.2	13C2-PFDA	307276.7	0.867	5.000	4.952	99	70-130	
Ed5-NEtPFOSA	70353.4	13C2-PFDA	307276.7	0.229	5.000	5.301	106	70-130	
E13C2-PFTeDA	390810.1	13C2-PFDA	307276.7	1.272	5.000	4.579	92	70-130	

APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

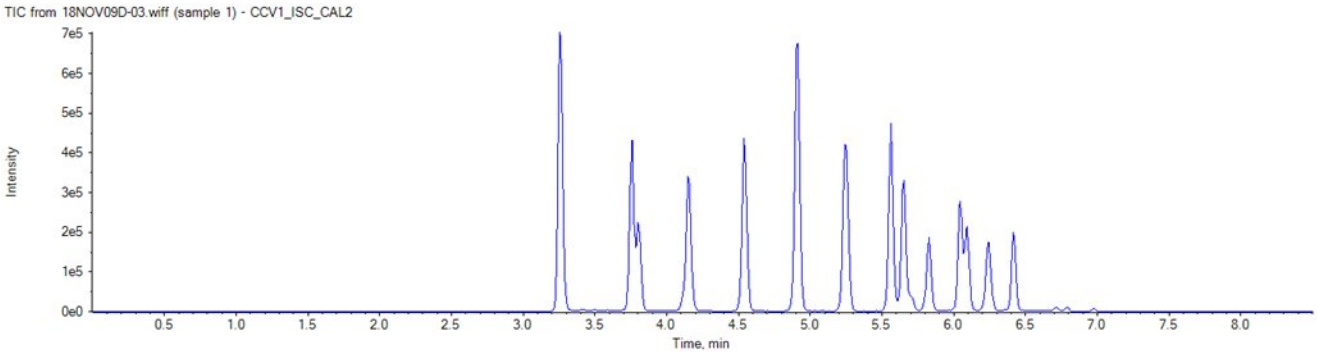
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV09D-03.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	73764.0		A	13C4-PFBA	3.26	800377.3	0.092	0.539
PFPeA	3.76	1.000	77931.3		A	13C5-PFPeA	3.76	839674.3	0.093	0.552
PFBS	3.81	1.000	38056.3		A	13C3-PFBS	3.81	423450.1	0.090	0.453
4:2-FTS	4.12	1.000	10464.9		A	13C2-4:2-FTS	4.12	54500.3	0.192	0.516
PFHxA	4.15	1.000	90851.7		A	13C5-PFHxA	4.15	669530.0	0.136	0.582
PFPeS	4.17	1.100	19983.2		A	13C3-PFBS	3.81	423450.1	0.047	0.465
PFHxS	4.54	1.000	30875.8		A	13C3-PFHxS	4.54	331033.8	0.093	0.473
PFHpA	4.54	1.000	88972.9		A	13C4-PFHpA	4.54	550877.2	0.162	0.543
6:2-FTS	4.90	1.000	8270.7		A	13C2-6:2-FTS	4.90	38224.4	0.216	0.540
PFHpS	4.90	1.080	29792.4		A	13C3-PFHxS	4.54	331033.8	0.090	0.471
PFOA	4.91	1.000	90972.8		A	13C8-PFOA	4.91	936961.2	0.097	0.547
PFOS	5.24	1.000	30918.1		A	13C8-PFOS	5.24	292185.4	0.106	0.549
PFNA	5.26	1.000	67838.6		A	13C9-PFNA	5.26	481186.0	0.141	0.527
PFNS	5.54	1.060	18602.5		A	13C8-PFOS	5.24	292185.4	0.064	0.505
PFDA	5.56	1.000	59070.3		A	13C6-PFDA	5.56	595472.3	0.099	0.546
8:2-FTS	5.57	1.000	5888.6		A	13C2-8:2-FTS	5.57	28276.3	0.208	0.469
PFOSA	5.65	1.000	72507.1		A	13C8-PFOSA	5.65	705892.2	0.103	0.555
NMeFOSAA	5.71	1.000	7292.3		A	d3-NMeFOSAA	5.71	80042.2	0.091	0.469
PFDS	5.80	1.110	15015.9		M	13C8-PFOS	5.24	292185.4	0.051	0.491
PFUnDA	5.83	1.000	49727.2		A	13C7-PFUnDA	5.83	268743.7	0.185	0.531
NEtFOSAA	5.84	1.000	8237.3		M	d5-NEtFOSAA	5.84	66145.9	0.125	0.535
PFDoDA	6.05	1.000	50985.1		A	13C2-PFDoDA	6.05	553881.6	0.092	0.499
10:2-FTS	6.06	1.090	4050.9		A	13C2-8:2-FTS	5.57	28276.3	0.143	0.446
NMePFOSAE	6.10	1.000	41657.7		A	d7-NMePFOSAE	6.09	336547.8	0.124	0.555
NMePFOSA	6.10	1.000	8675.0		A	d3-NMePFOSA	6.10	86754.9	0.100	0.560
PFDoS	6.21	1.190	8991.3		A	13C8-PFOS	5.24	292185.4	0.031	0.594
NEtPFOSAE	6.25	1.000	46678.1		A	d9-NEtPFOSAE	6.24	266431.2	0.175	0.562
NEtPFOSA	6.26	1.000	6621.6		A	d5-NEtPFOSA	6.26	70353.4	0.094	0.415
PFTrDA	6.24	1.030	43214.6		A	13C2-PFDoDA	6.05	553881.6	0.078	0.492
PFTeDA	6.42	1.000	34793.1		A	13C2-PFTeDA	6.42	390810.1	0.089	0.523
PFHxDA	6.72	1.050	16891.1		A	13C2-PFTeDA	6.42	390810.1	0.043	0.537
PFODA	6.98	1.090	15170.8		A	13C2-PFTeDA	6.42	390810.1	0.039	0.556

Total Ion Chromatogram

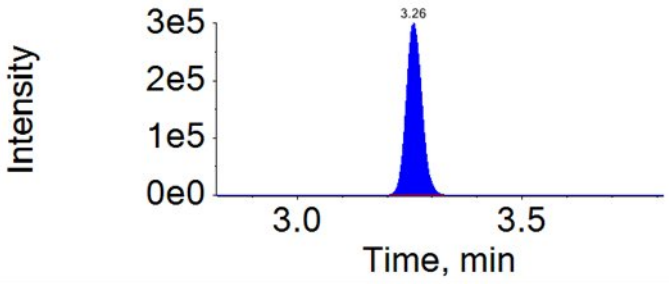


APPROVED
By MCD at 5:19 pm, 11/9/18

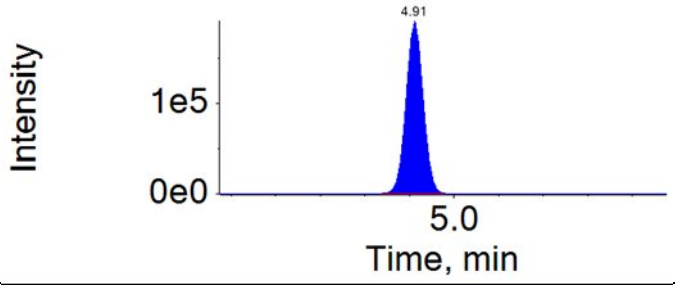
REVIEWED
By HMK at 7:21 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

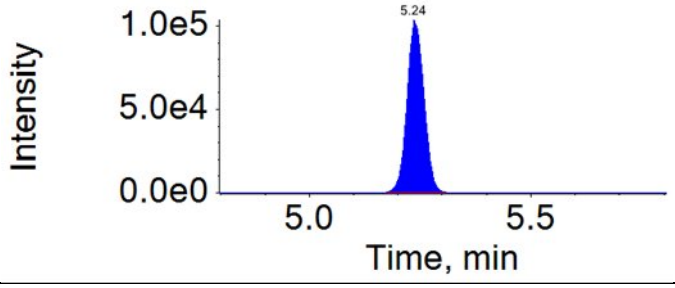
Injection Standard: 13C3-PFBA
216.0 / 172.0



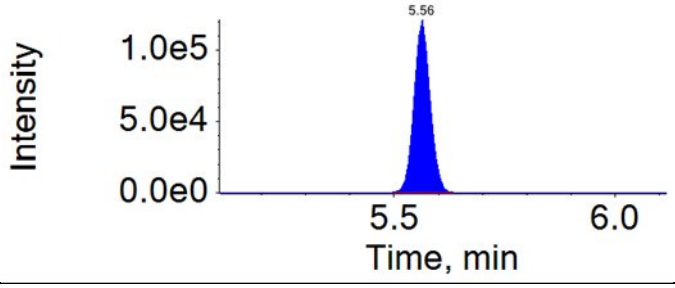
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



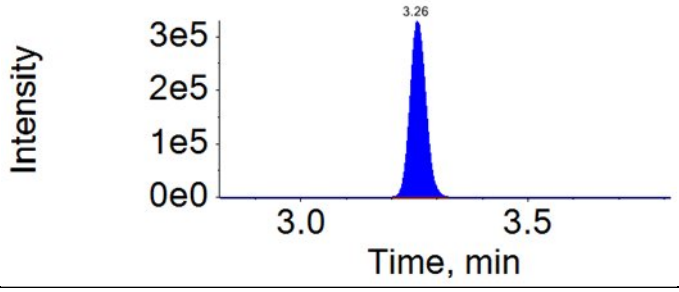
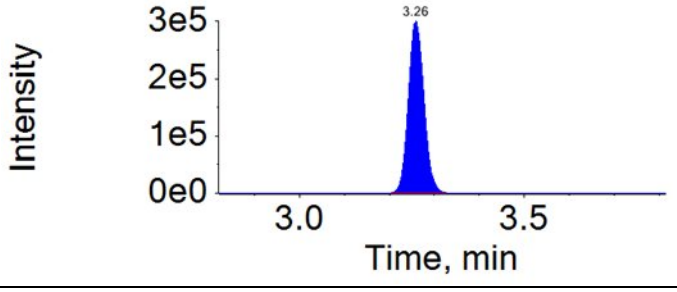
Injection Standard: 13C2-PFDA
515.0 / 470.0

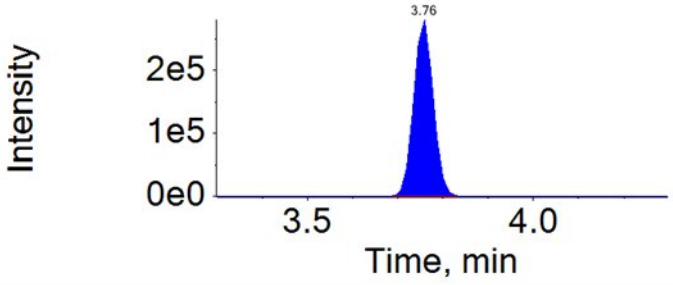
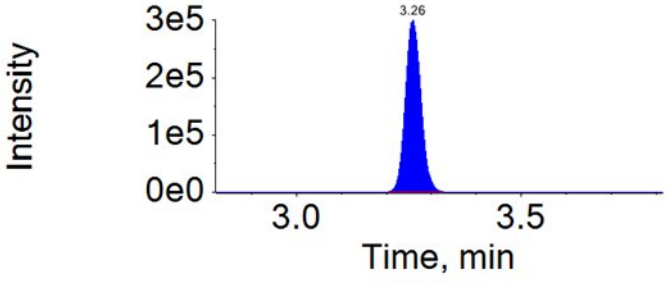


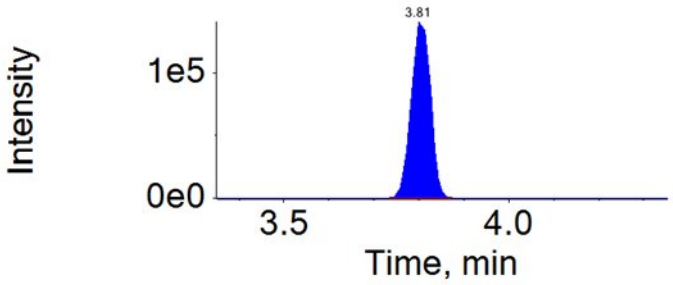
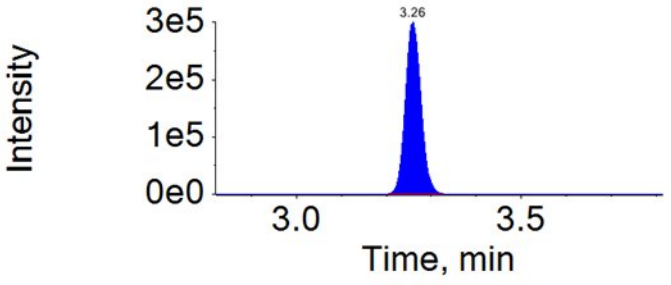
APPROVED
By MCD at 5:19 pm, 11/9/18

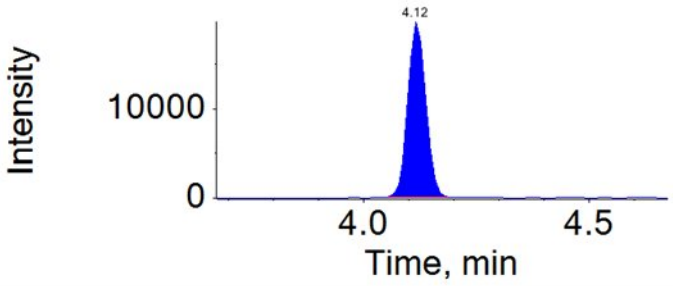
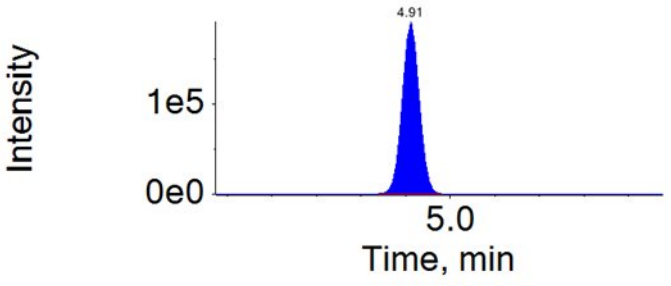
REVIEWED
By HMK at 7:21 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 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
	

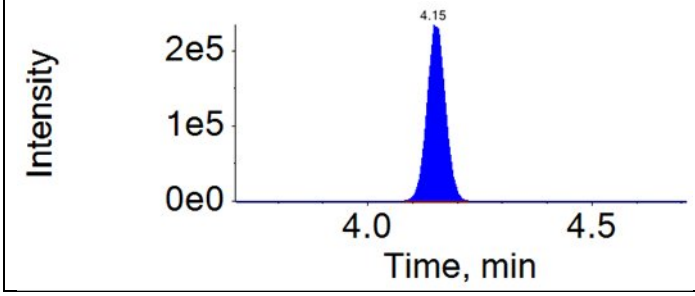
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

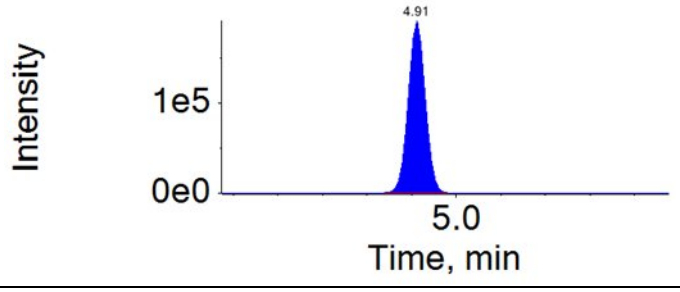
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

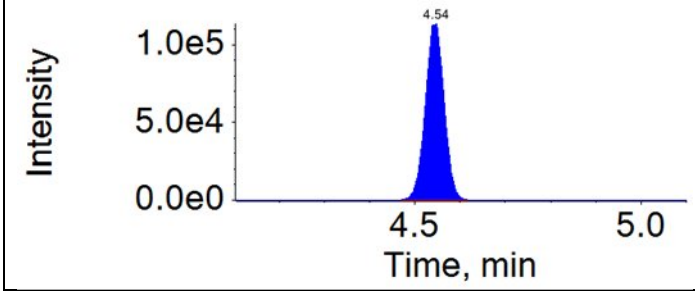
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

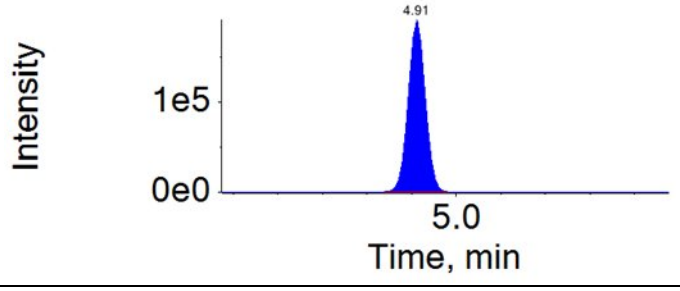
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



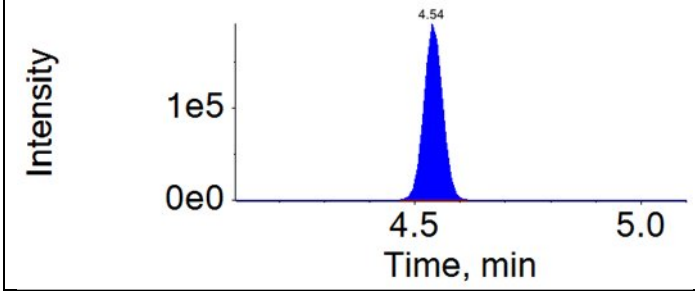


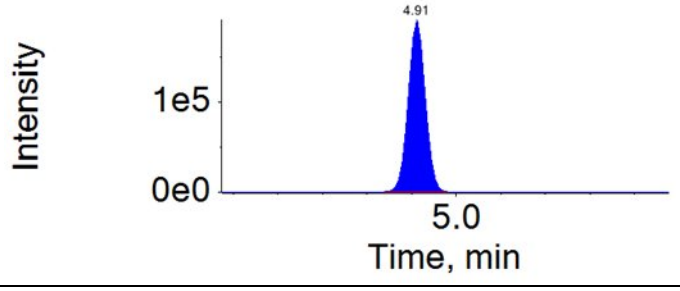
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



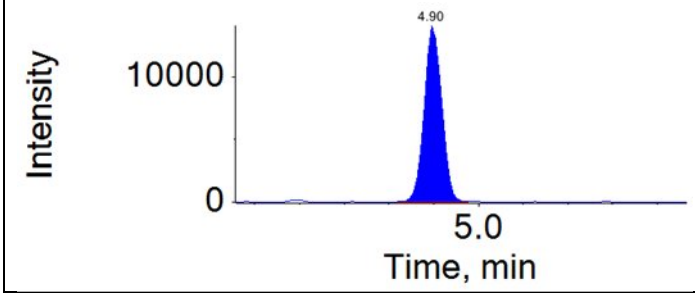


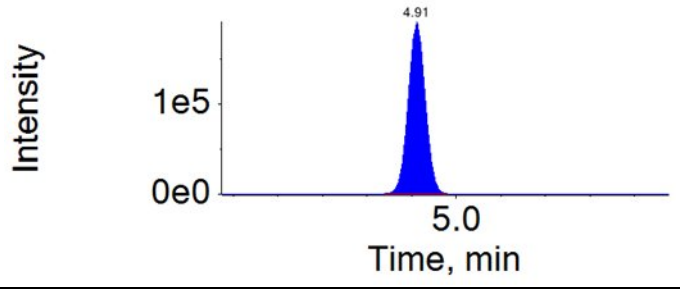
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



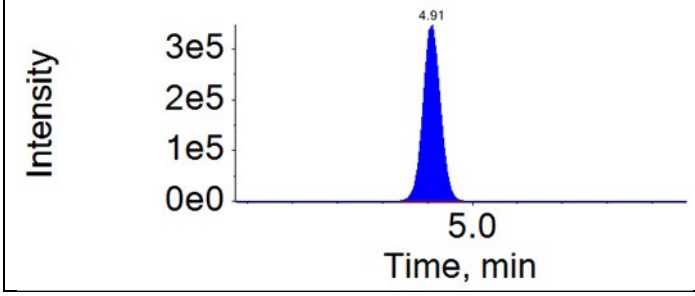


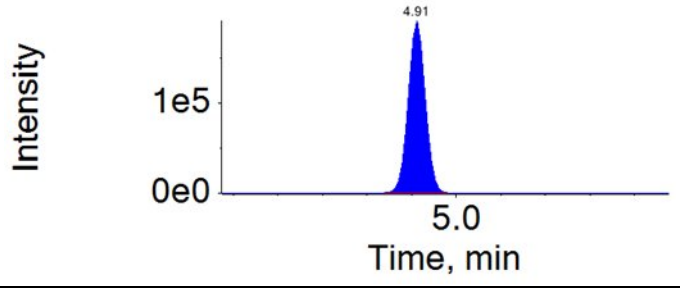
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

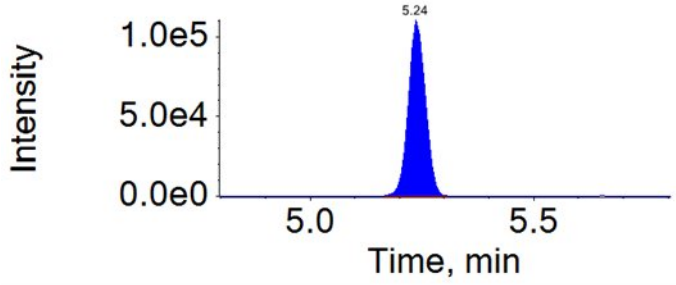
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

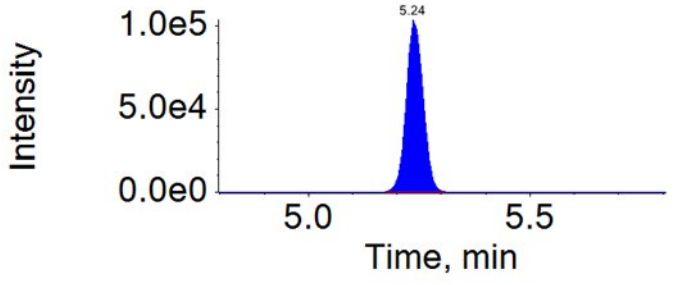
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



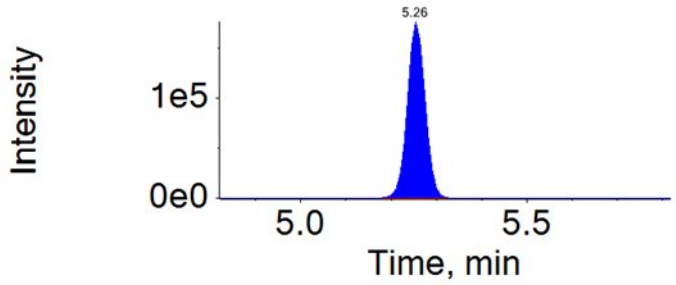


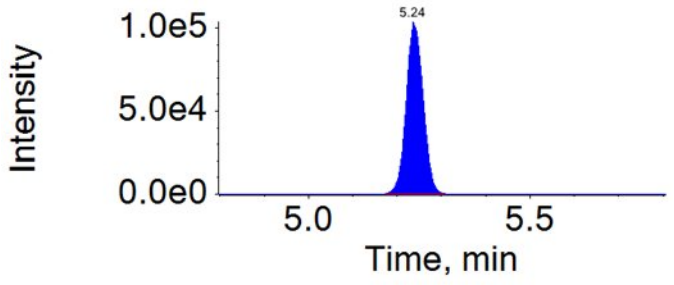
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



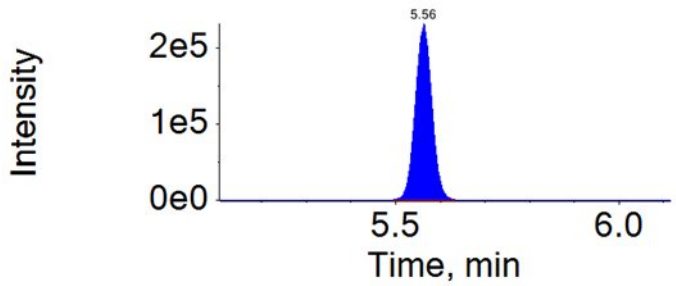


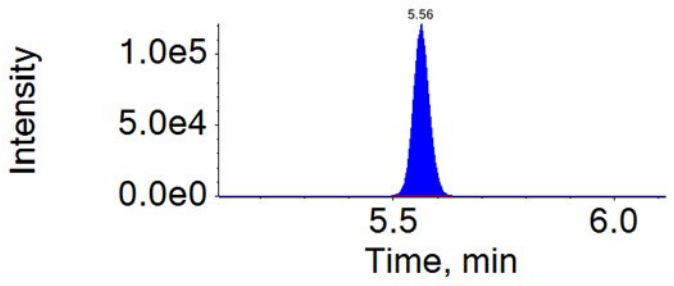
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

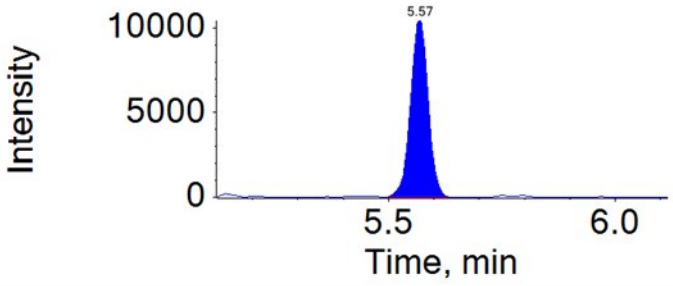
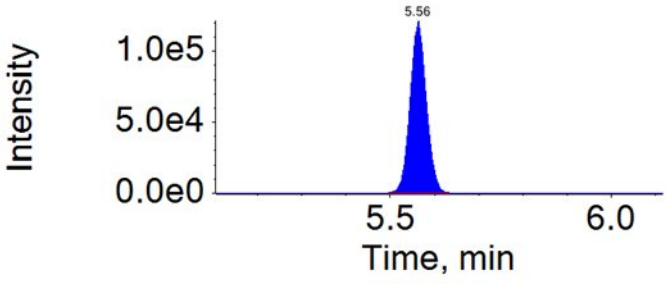


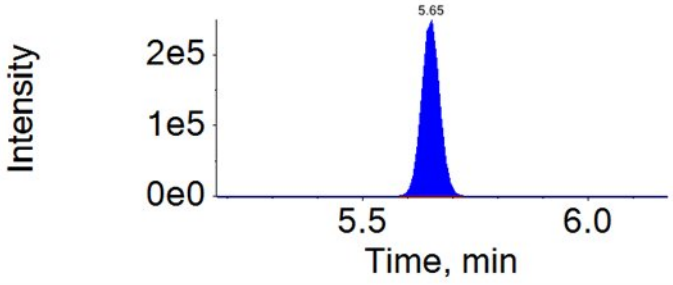
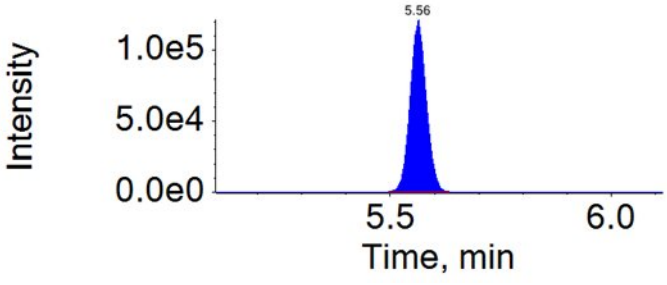


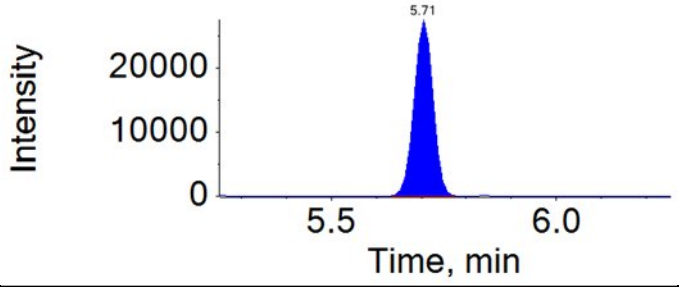
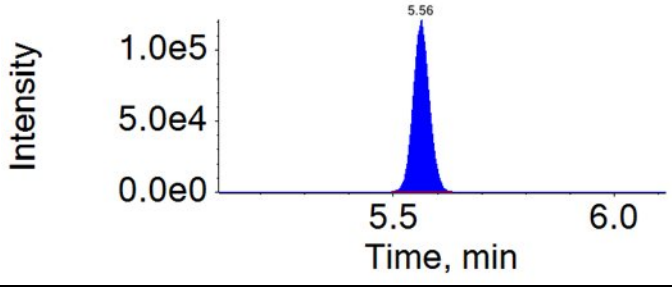
APPROVED
By MCD at 5:19 pm, 11/9/18

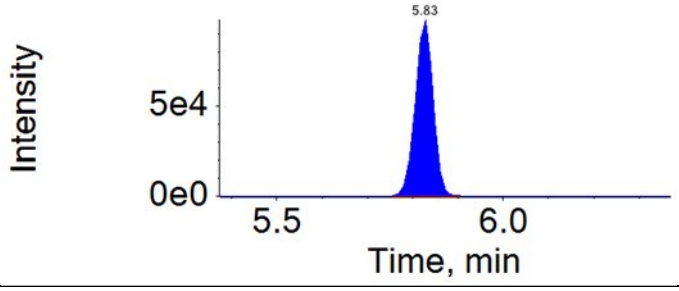
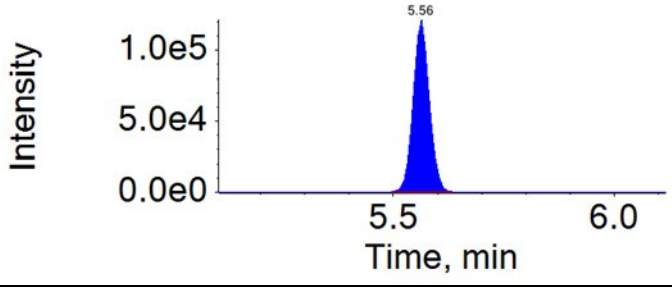
REVIEWED
By HMK at 7:21 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 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
	

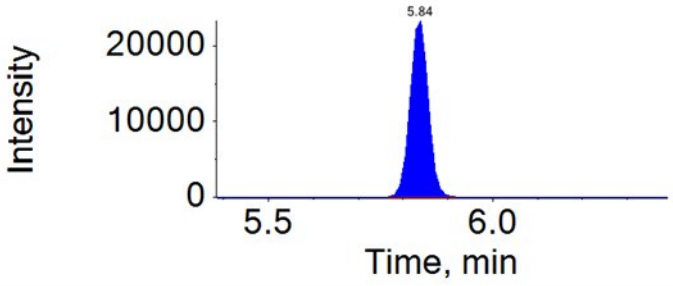
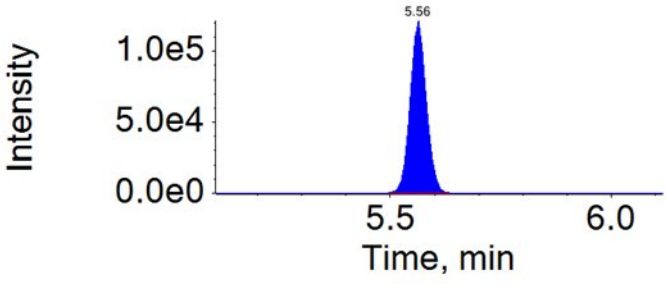
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

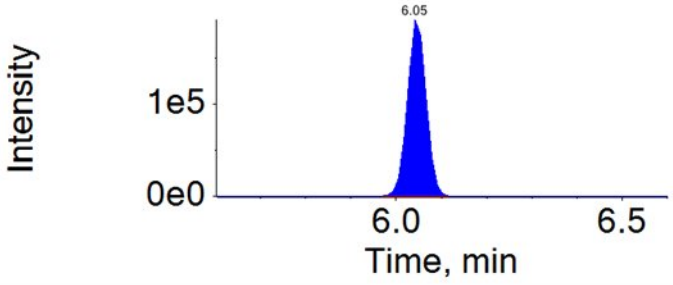
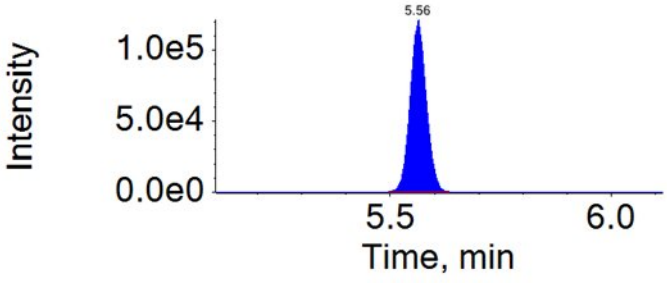
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

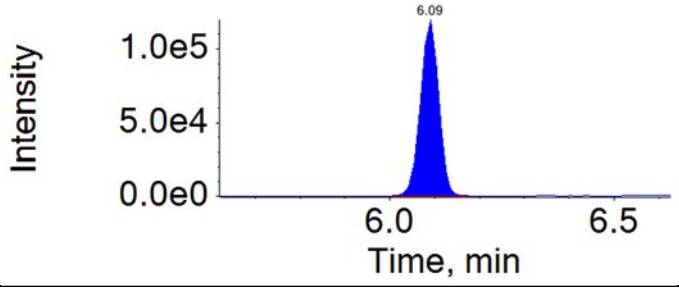
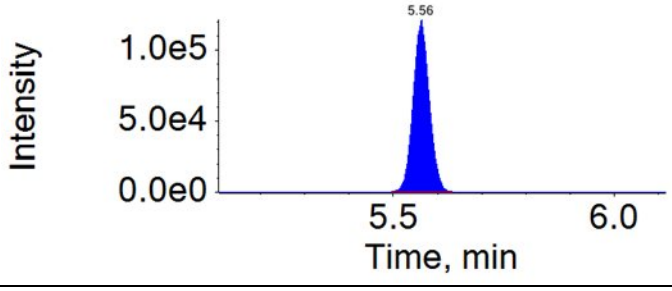
APPROVED
By MCD at 5:19 pm, 11/9/18

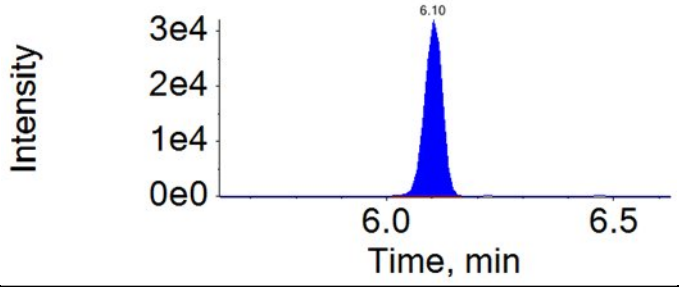
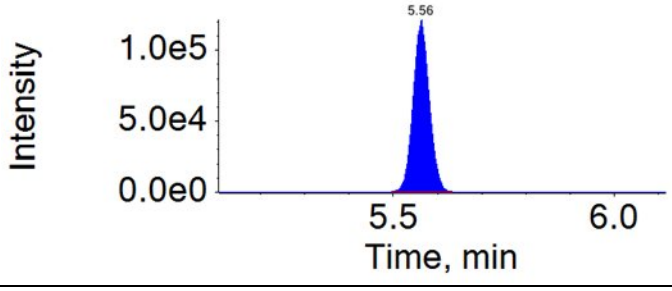
REVIEWED
By HMK at 7:21 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 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
	

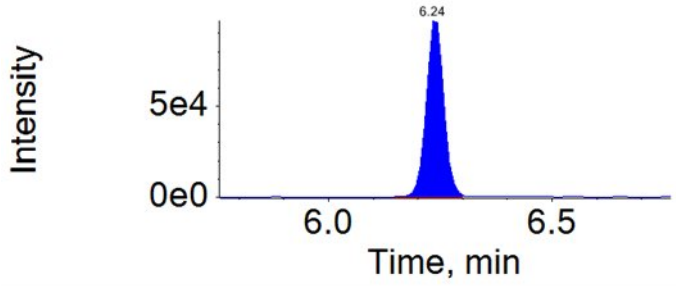
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

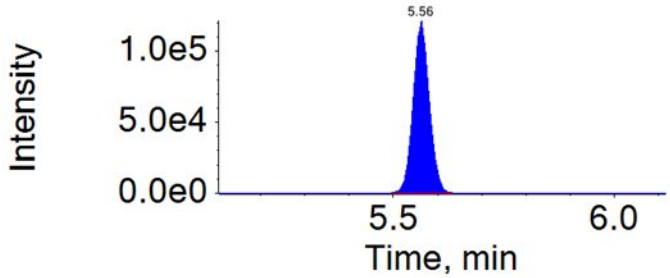
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

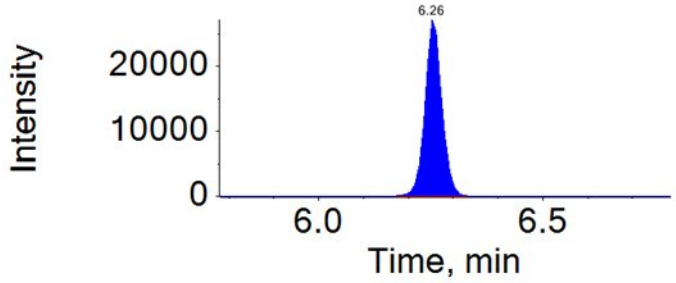
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

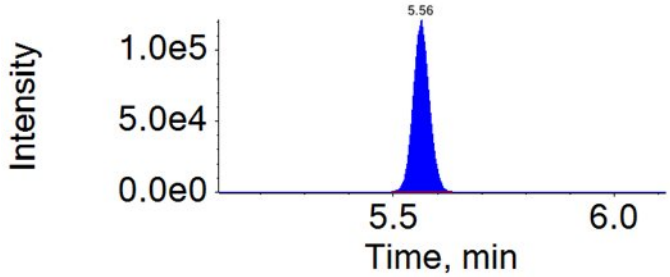
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



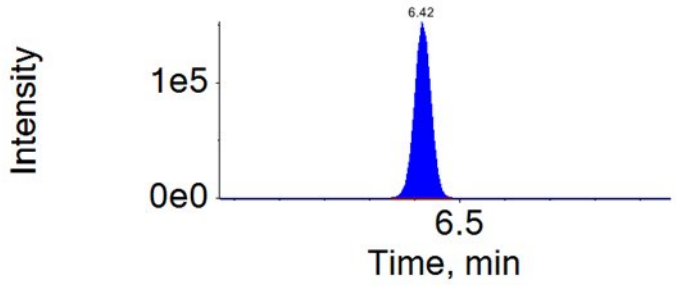


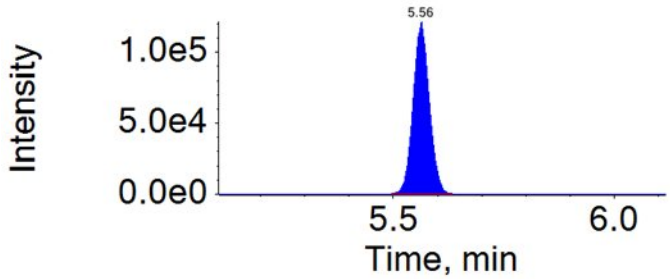
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



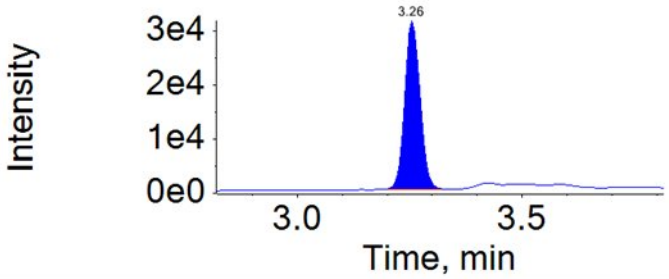


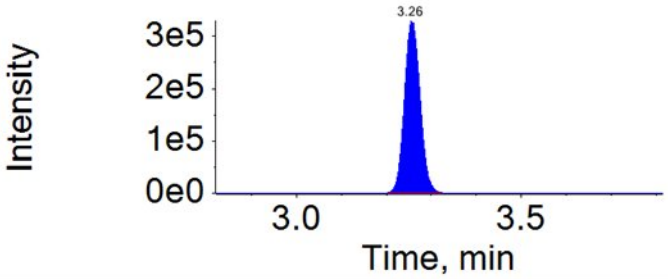
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

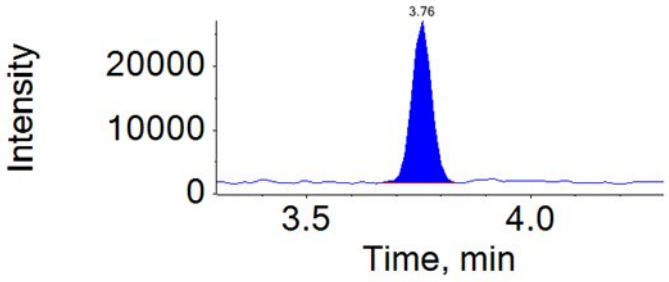
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

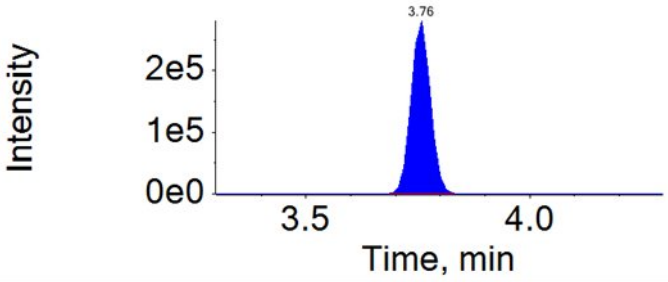
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



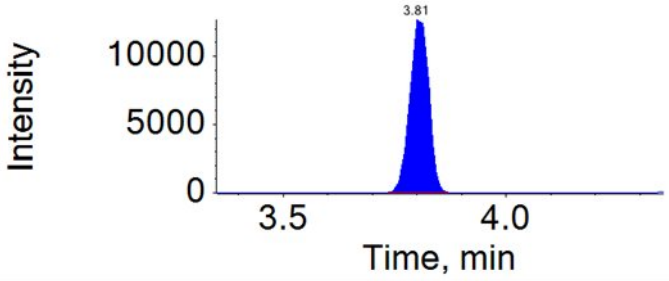


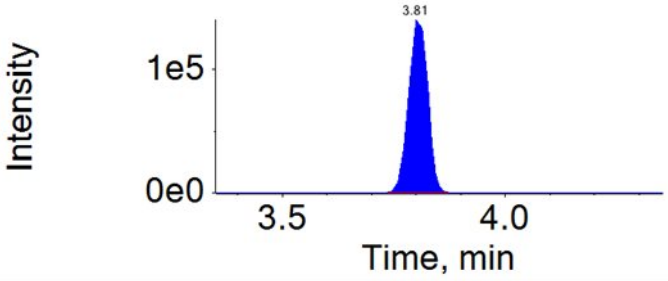
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



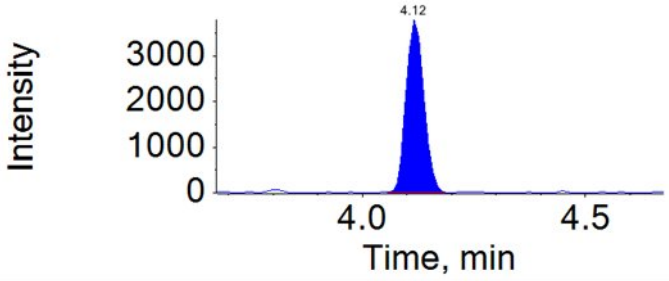


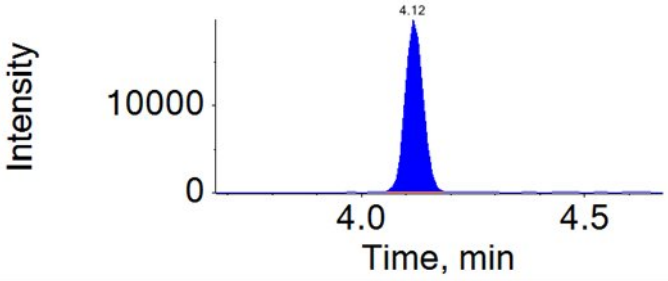
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



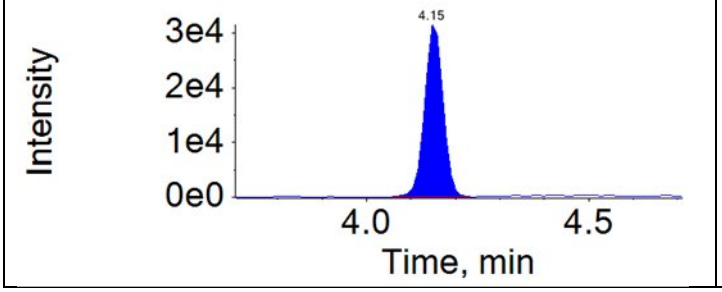


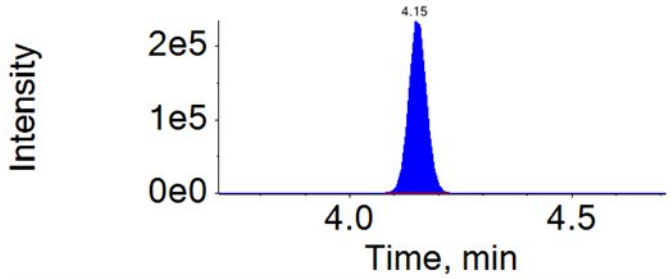
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

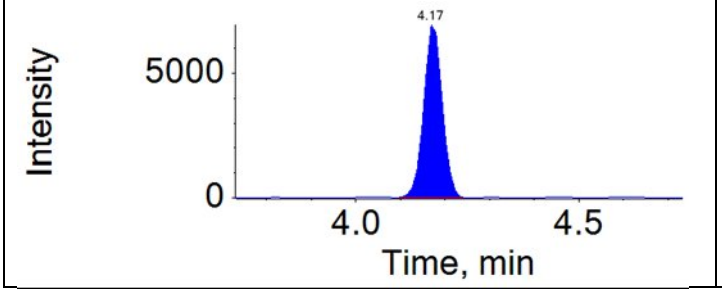
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

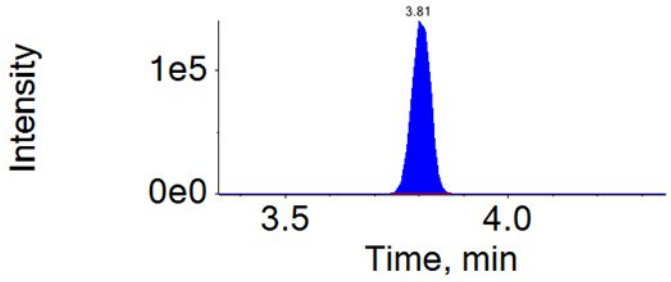
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



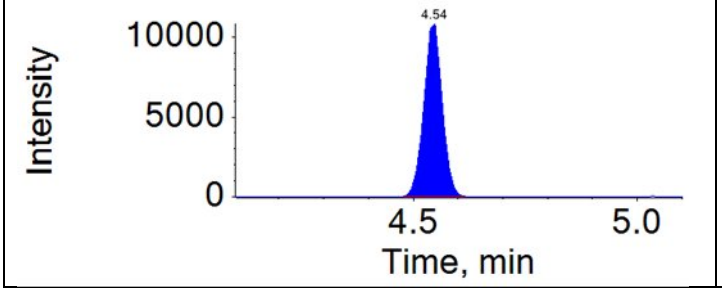


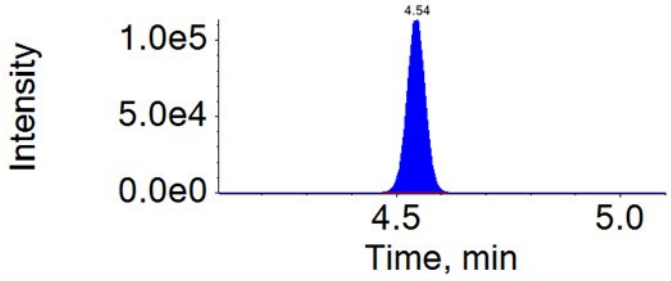
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



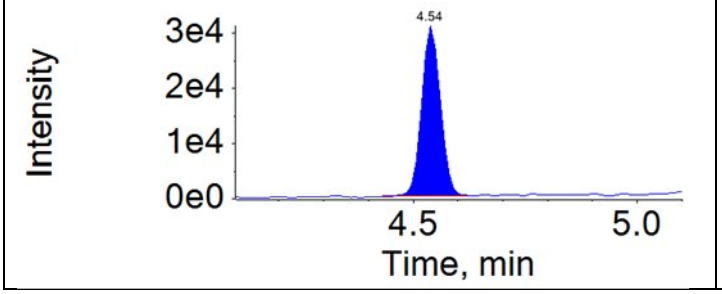


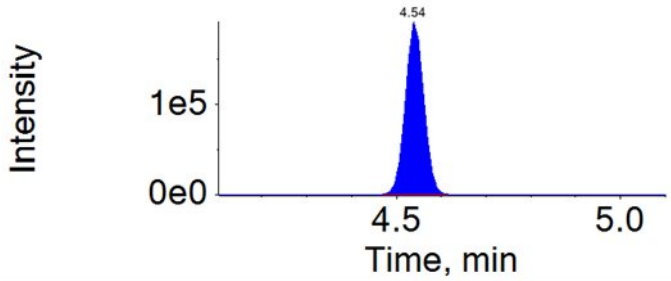
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

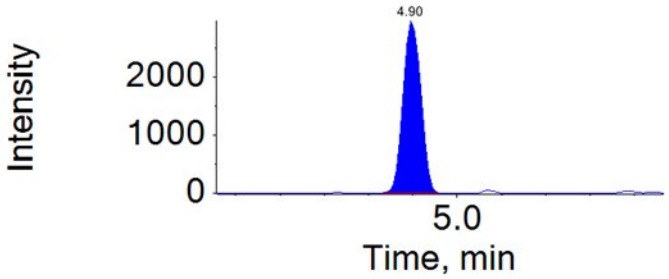
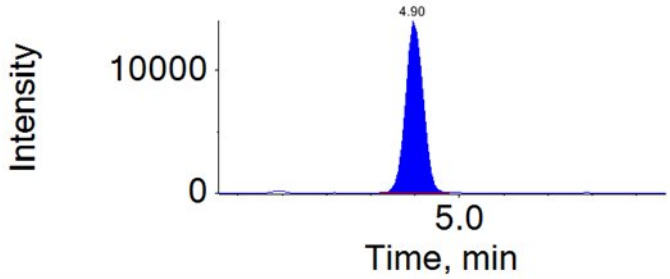


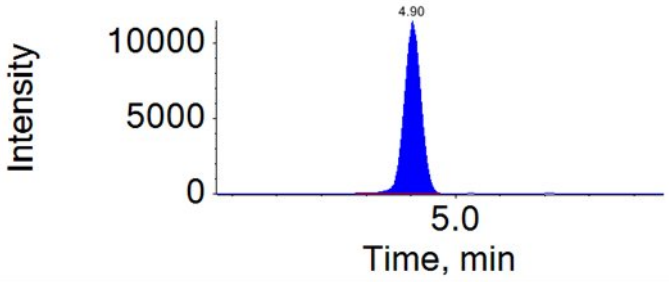
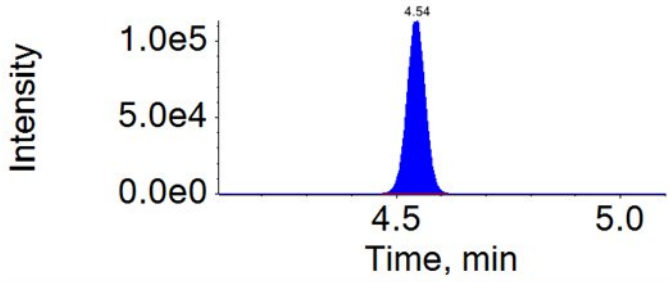


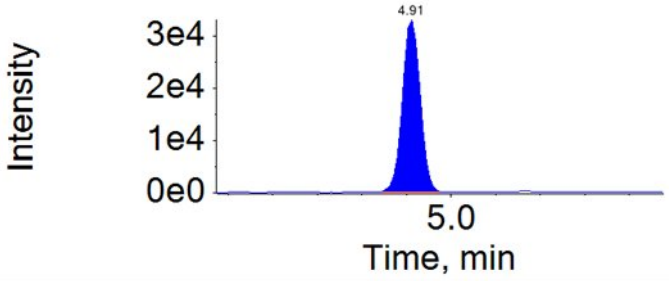
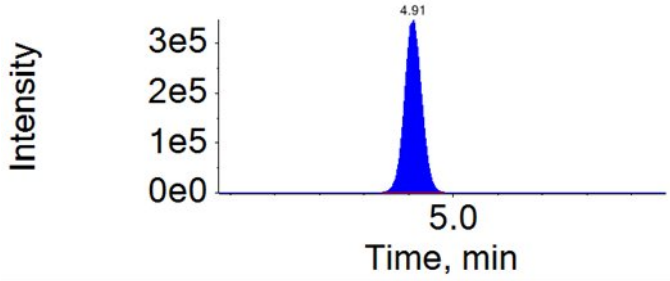
APPROVED
By MCD at 5:19 pm, 11/9/18

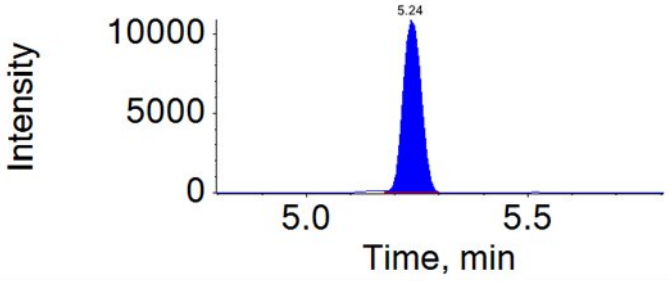
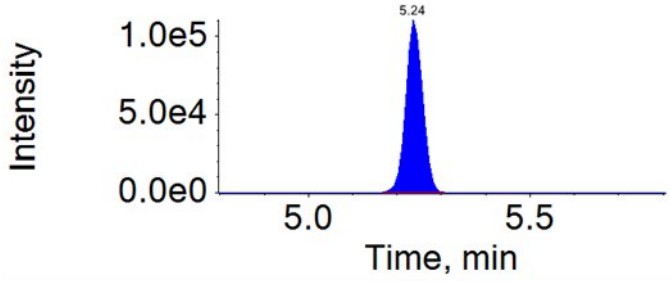
REVIEWED
By HMK at 7:21 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 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
	

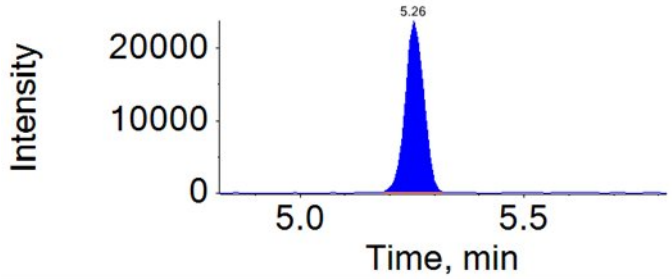
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

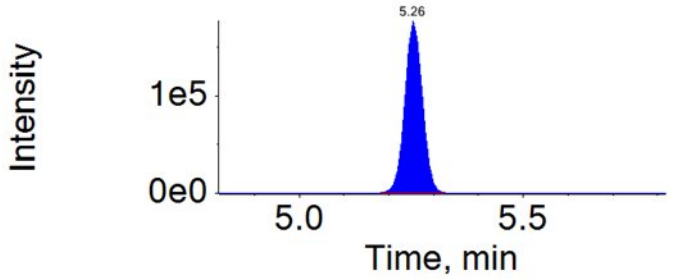
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

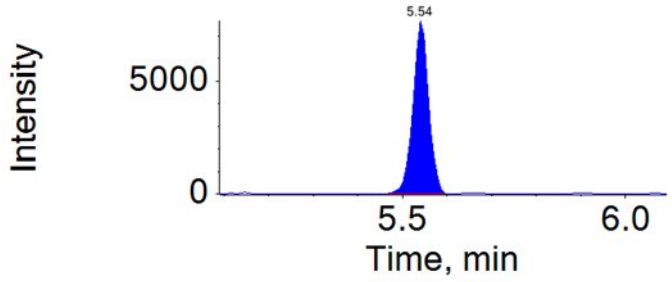
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

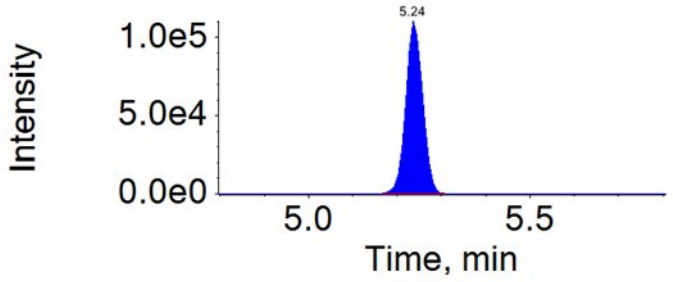
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



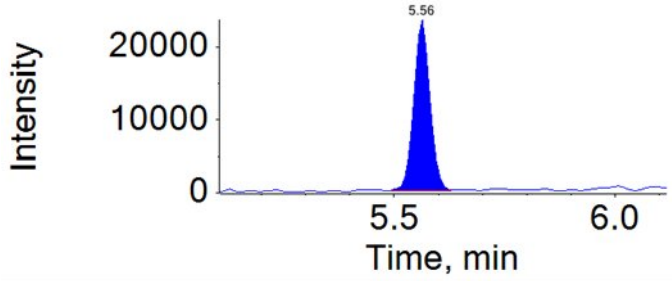


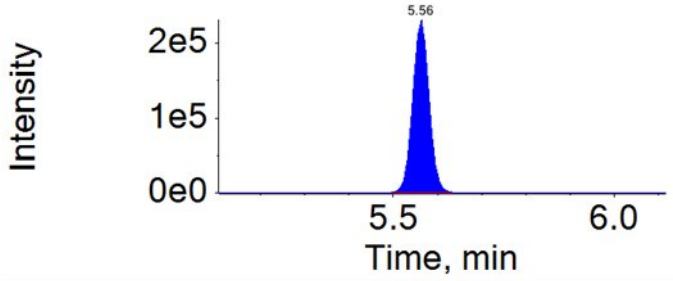
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



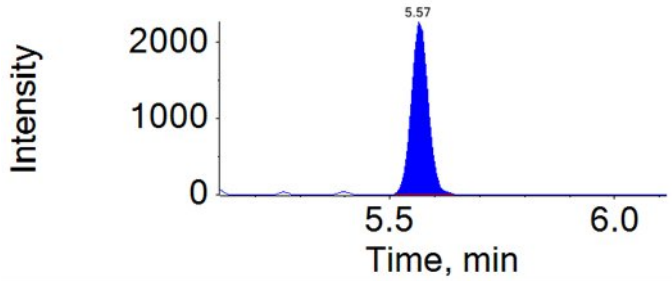


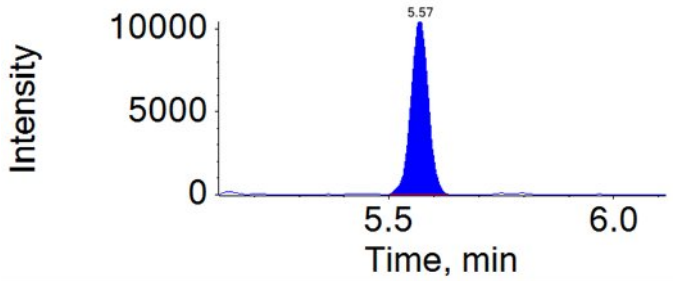
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



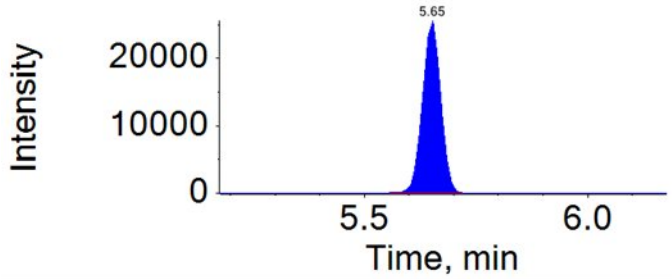


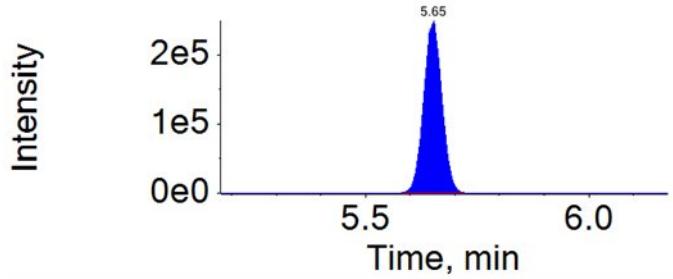
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

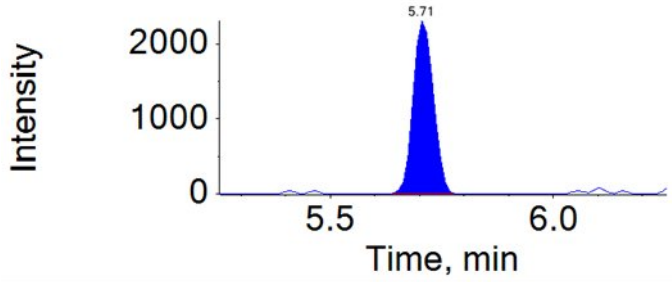
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

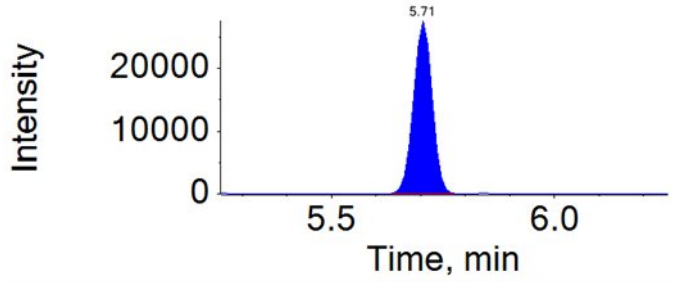
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



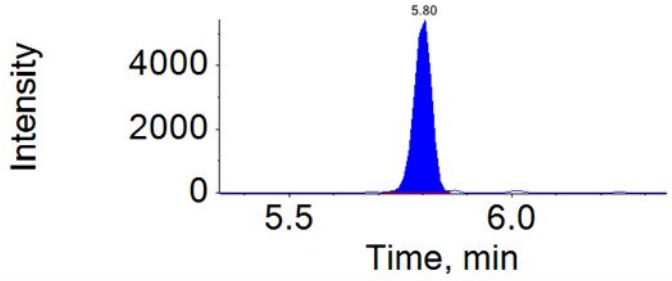


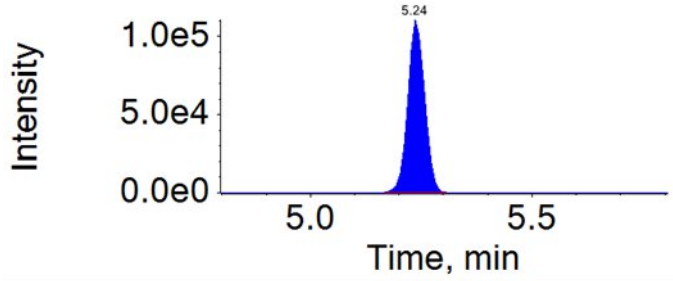
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



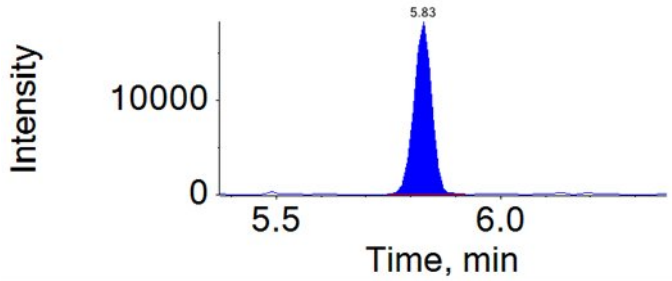


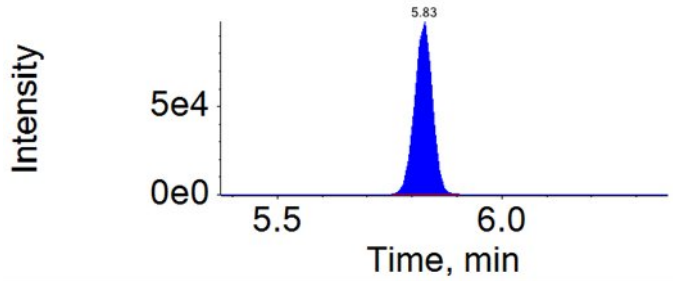
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



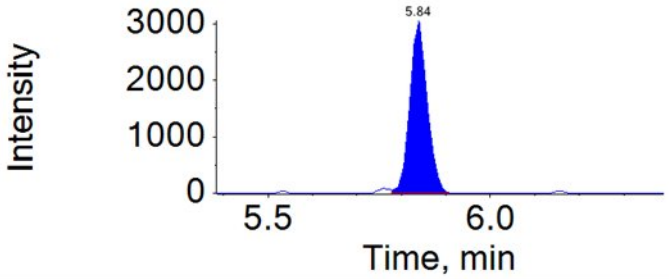


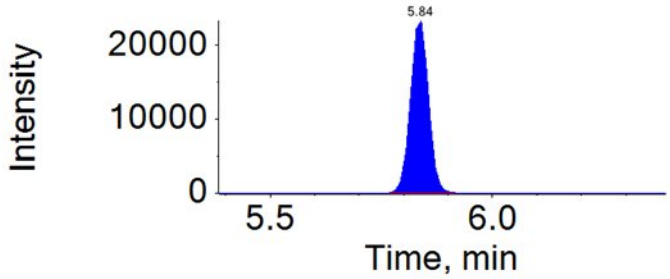
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

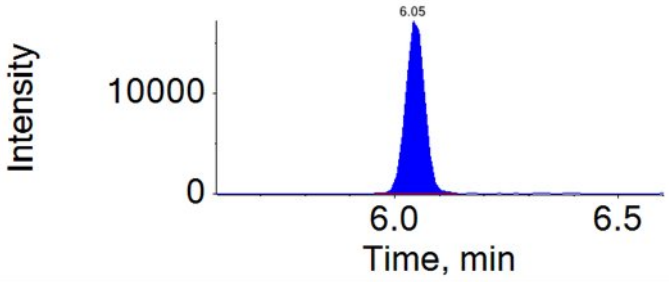
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

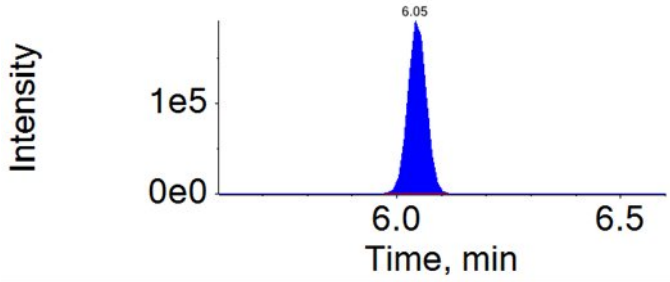
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



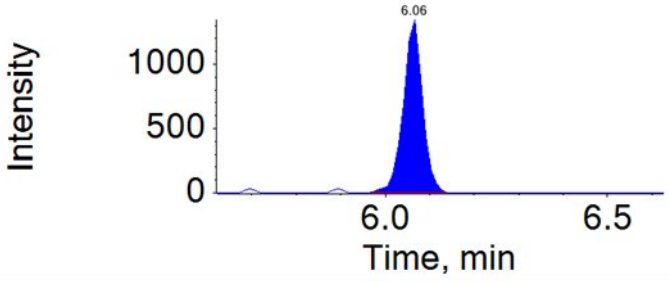


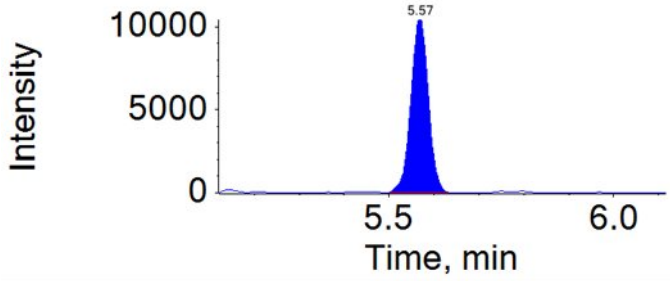
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



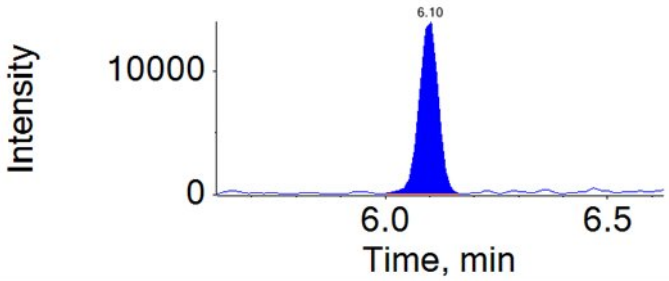


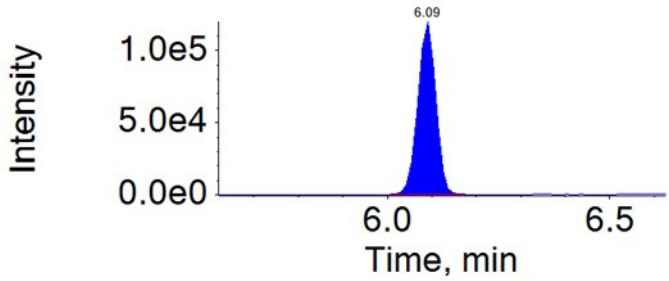
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



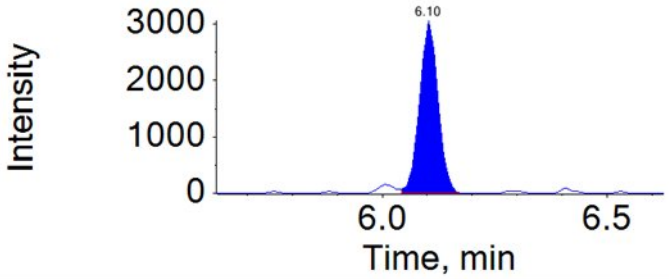


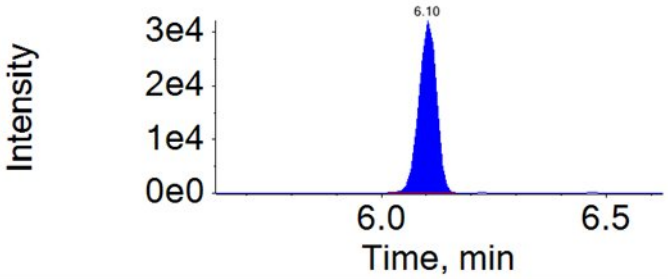
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

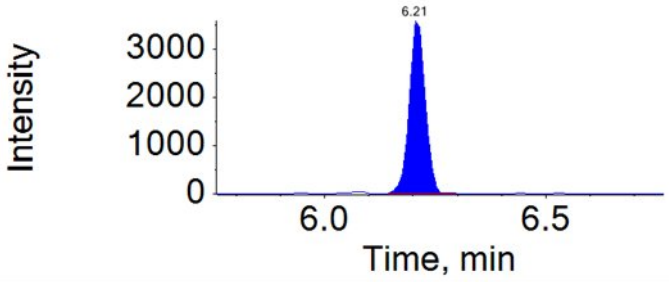
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

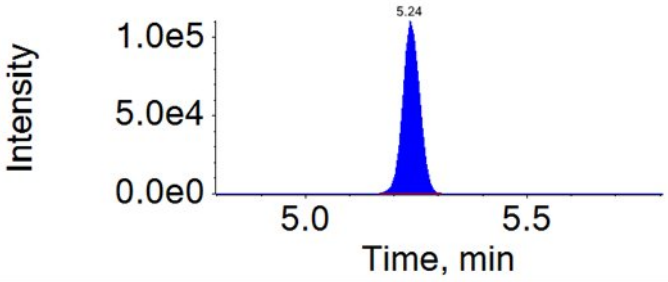
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



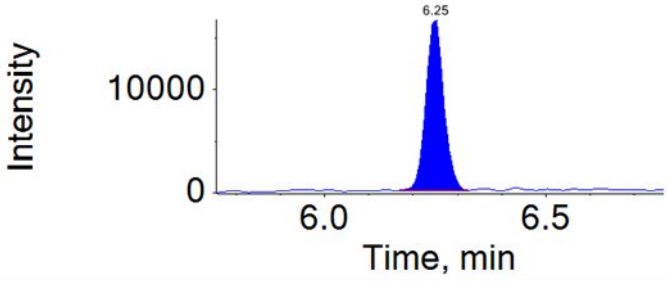


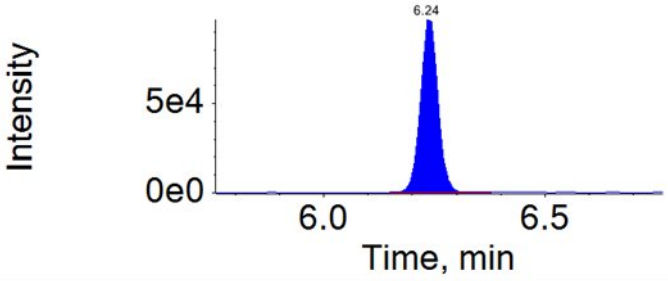
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



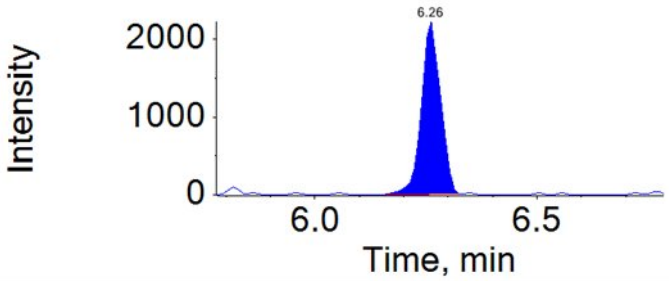


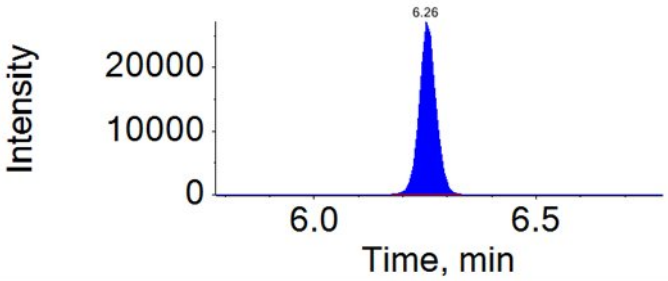
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



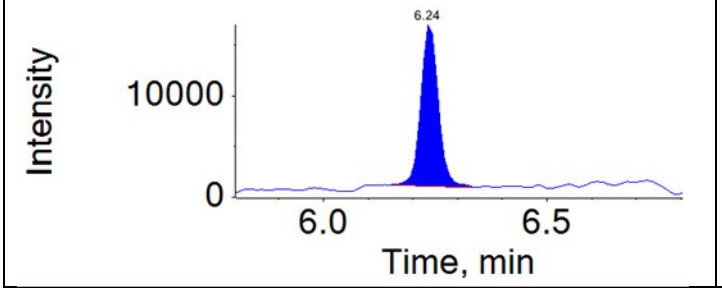


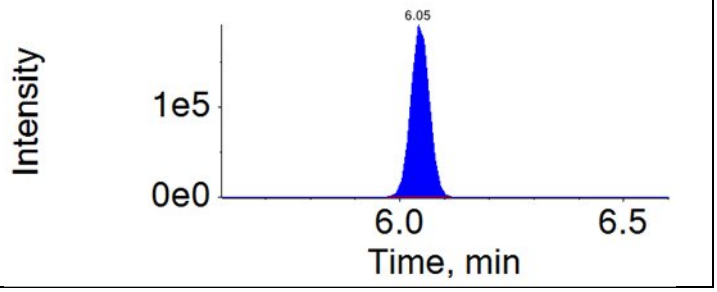
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

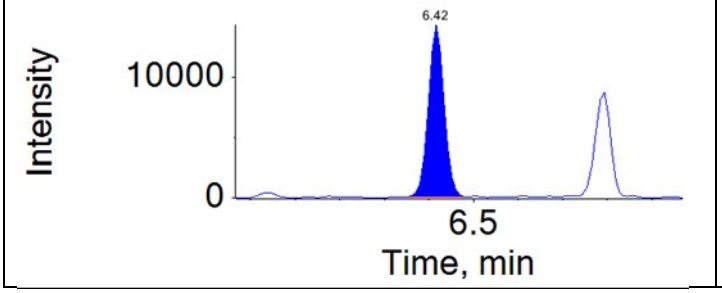
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

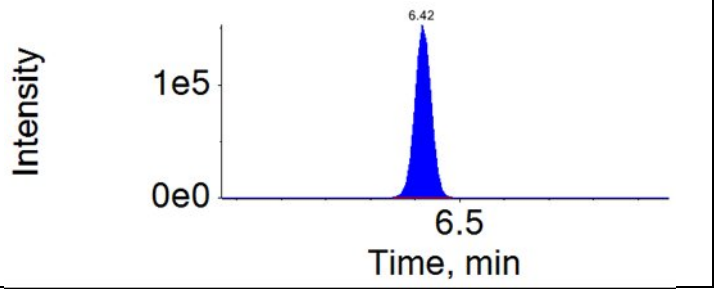
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



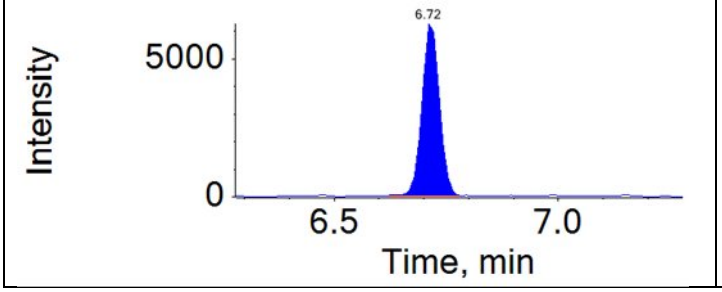


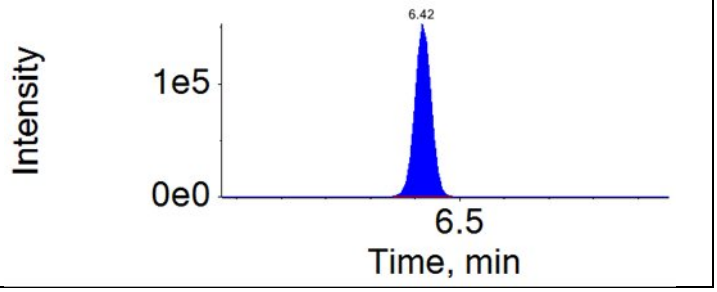
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



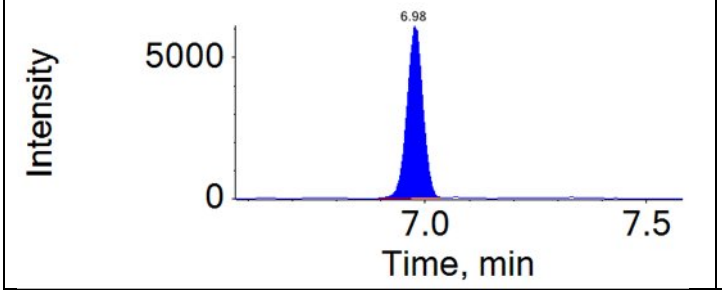


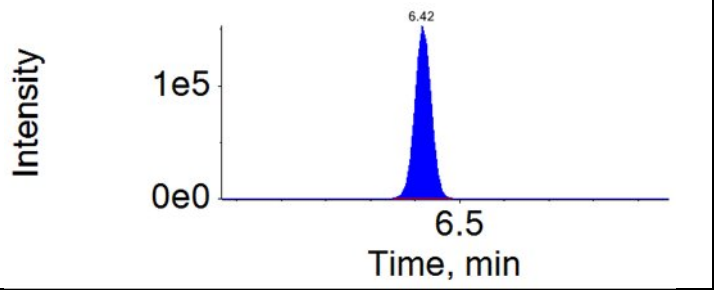
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





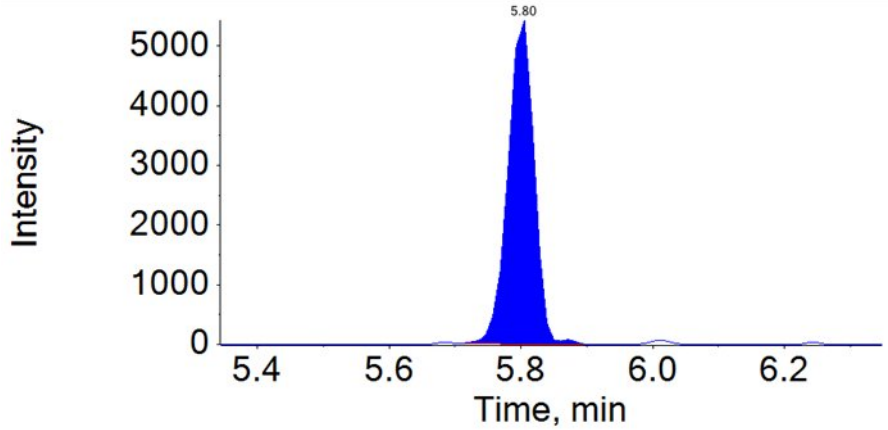
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

Results Table Name: 18NOV09DCCV1-4
Results Table Date: 11/9/2018 5:13:22 PM

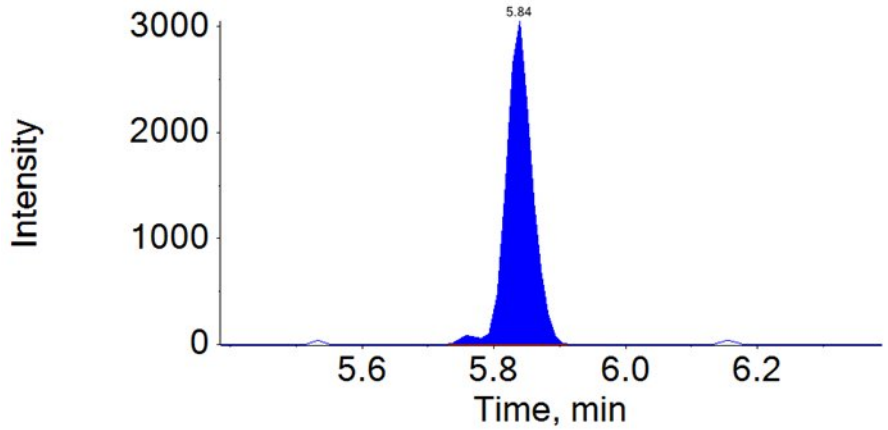
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFDS
RT (min.):
5.80
Peak Area:
15115.6
Mass Range:
599.0 / 80.0
File Name:
18NOV09D-03.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
8390.6
Mass Range:
584.0 / 419.0
File Name:
18NOV09D-03.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

Results Table Name: 18NOV09DCCV1-4
Results Table Date: 11/9/2018 5:13:22 PM

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

APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

Ion Ratio Report

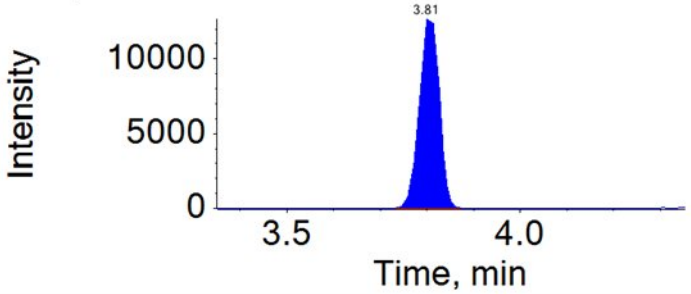
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV09D-03.wiff

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	38056.3	A	N/A	0.3416			
PFBS_2	3.80	1.00	12999.2	A	N/A	0.3416	-4	50	
4:2-FTS	4.12	1.00	10464.9	A	N/A	0.6139			
4:2-FTS_2	4.12	1.00	6424.2	A	N/A	0.6139	-4	50	
PFHxA	4.15	1.00	90851.7	A	N/A	0.0107			
PFHxA_2	4.15	1.00	973.9	A	N/A	0.0107	-5	50	
PFPeS	4.17	1.10	19983.2	A	N/A	0.5512			
PFPeS_2	4.17	1.10	11014.0	A	N/A	0.5512	2	50	
PFHxS	4.54	1.00	30875.8	A	N/A	0.3786			
PFHxS_2	4.54	1.00	11688.9	A	N/A	0.3786	6	50	
PFHpA	4.54	1.00	88972.9	A	N/A	0.0568			
PFHpA_2	4.54	1.00	5056.5	A	N/A	0.0568	-1	50	
6:2-FTS	4.90	1.00	8270.7	A	N/A	0.5178			
6:2-FTS_2	4.90	1.00	4282.7	A	N/A	0.5178	-24	50	
PFHpS	4.90	1.08	29792.4	A	N/A	0.4193			
PFHpS_2	4.90	1.08	12492.6	A	N/A	0.4193	6	50	
PFOA	4.91	1.00	90972.8	A	N/A	0.0624			
PFOA_2	4.91	1.00	5680.4	A	N/A	0.0624	-2	50	
PFOS	5.24	1.00	30918.1	A	N/A	0.2929			
PFOS_2	5.24	1.00	9056.8	A	N/A	0.2929	-17	50	
PFNA	5.26	1.00	67838.6	A	N/A	0.0232			
PFNA_2	5.25	1.00	1573.8	A	N/A	0.0232	13	50	
PFNS	5.54	1.06	18602.5	A	N/A	0.4748			
PFNS_2	5.54	1.06	8831.6	A	N/A	0.4748	-3	50	
PFDA	5.56	1.00	59070.3	A	N/A	0.0071			
PFDA_2	5.55	1.00	421.8	A	N/A	0.0071	31	50	
8:2-FTS	5.57	1.00	5888.6	A	N/A	0.6440			
8:2-FTS_2	5.57	1.00	3792.2	A	N/A	0.6440	3	50	
NMeFOSAA	5.71	1.00	7292.3	A	N/A	0.2035			
NMeFOSAA_2	5.70	1.00	1483.9	A	N/A	0.2035	-6	50	
PFDS	5.80	1.11	15015.9	M	N/A	0.5101			
PFDS_2	5.80	1.11	7659.0	A	N/A	0.5101	11	50	
PFUnDA	5.83	1.00	49727.2	A	N/A	0.0030			
PFUnDA_2	6.01	1.03	150.6	A	N/A	0.0030	-1	50	
NEtFOSAA	5.84	1.00	8237.3	M	N/A	0.6183			
NEtFOSAA_2	5.84	1.00	5093.5	A	N/A	0.6183	2	50	
PFDoDA	6.05	1.00	50985.1	A	N/A	0.0173			
PFDoDA_2	6.04	1.00	880.8	A	N/A	0.0173	65	50	OOS
10:2-FTS	6.06	1.09	4050.9	A	N/A	0.7139			
10:2-FTS_2	6.06	1.09	2891.8	A	N/A	0.7139	0	50	
PFTrDA	6.24	1.03	43214.6	A	N/A	0.0125			
PFTrDA_2	6.24	1.03	541.7	A	N/A	0.0125	31	50	
PFTeDA	6.42	1.00	34793.1	A	N/A	0.0070			
PFTeDA_2	6.41	1.00	242.9	A	N/A	0.0070	29	50	
PFHxDA	6.72	1.05	16891.1	A	N/A	0.0572			
PFHxDA_2	6.71	1.05	966.5	A	N/A	0.0572	-3	50	
PFODA	6.98	1.09	15170.8	A	N/A	0.0206			
PFODA_2	6.98	1.09	313.0	A	N/A	0.0206	-19	50	

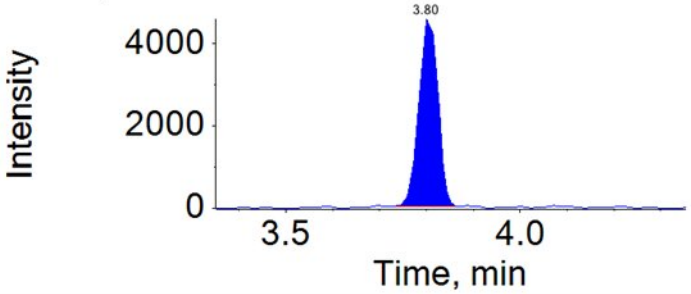
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

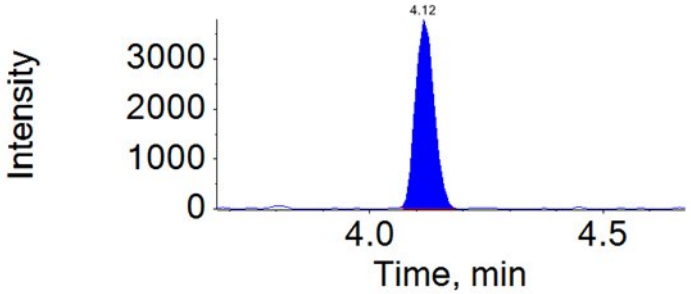
Component: PFBS
Primary Mass: 299.0 / 80.0



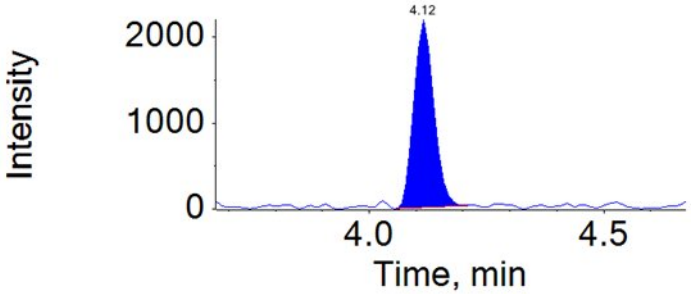
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



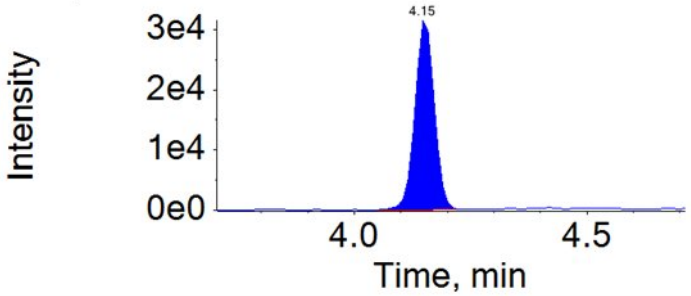
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



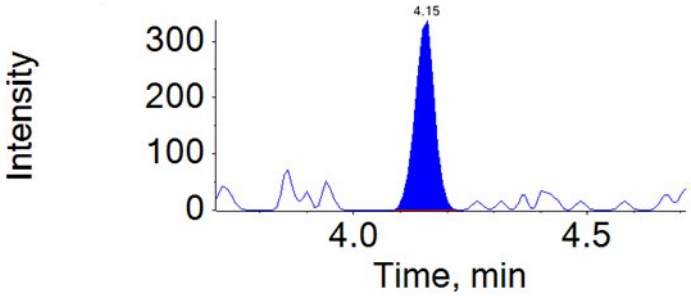
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



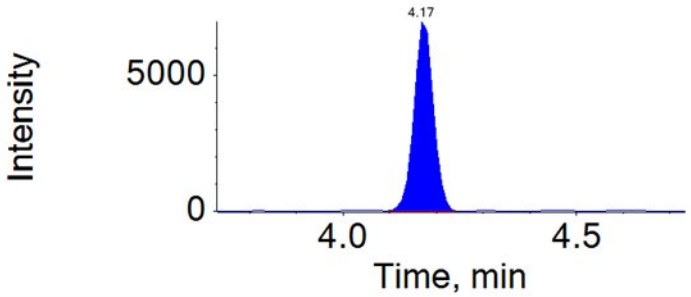
Component: PFHxA
Primary Mass: 313.0 / 269.0



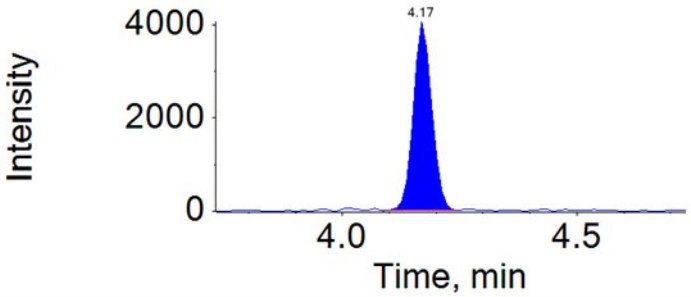
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



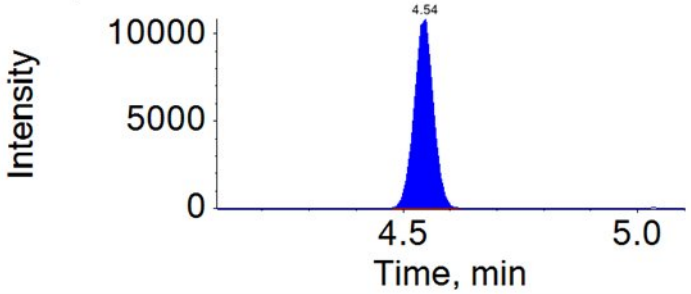
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



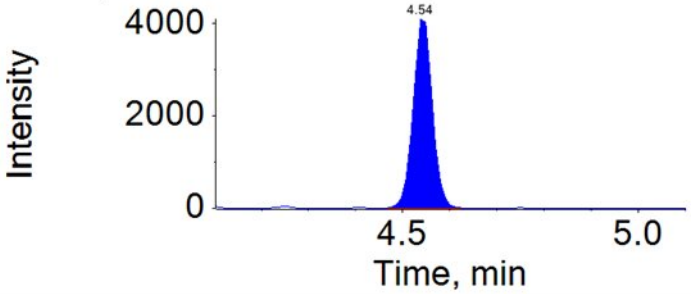
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

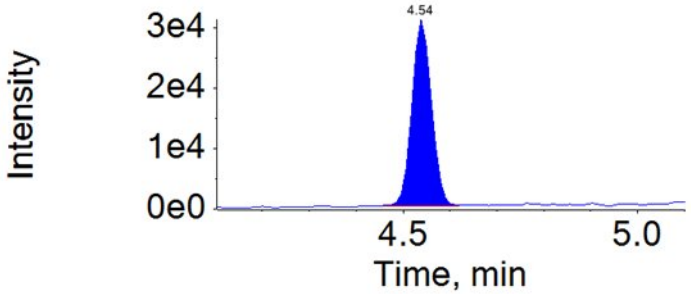
Component: PFHxS
Primary Mass: 399.0 / 80.0



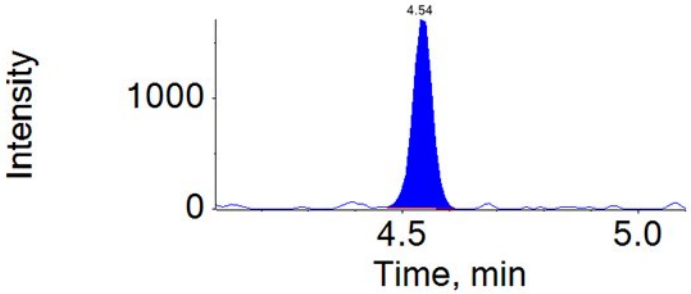
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Secondary Mass: 399.0 / 99.0



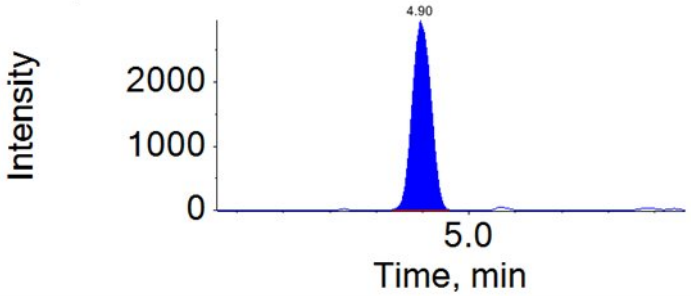
Component: PFHpA
Primary Mass: 363.0 / 319.0



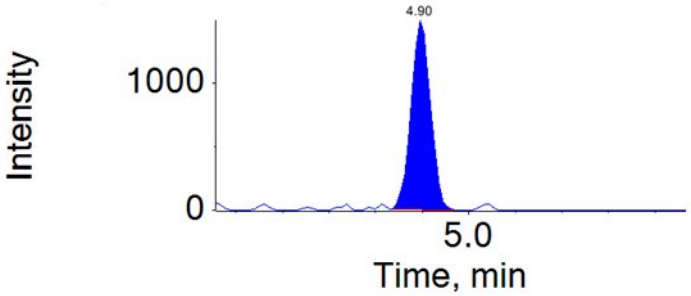
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



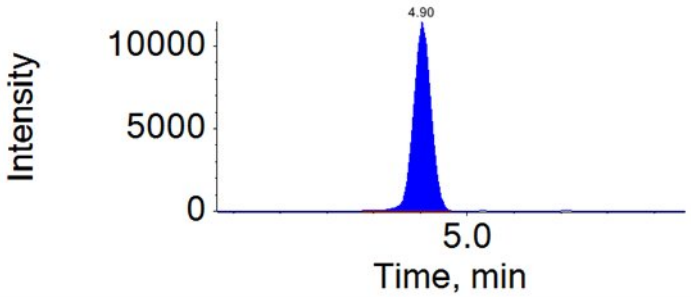
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



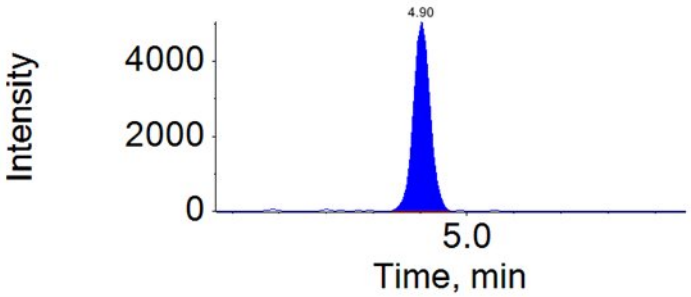
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



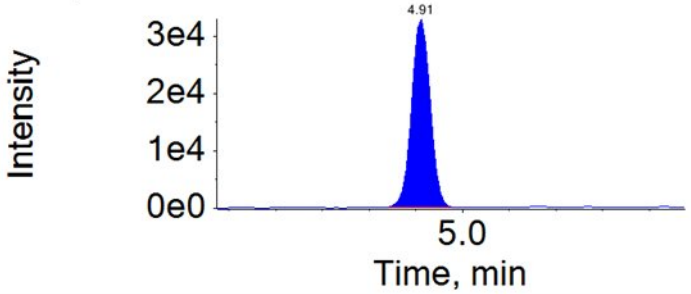
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Secondary Mass: 449.0 / 99.0



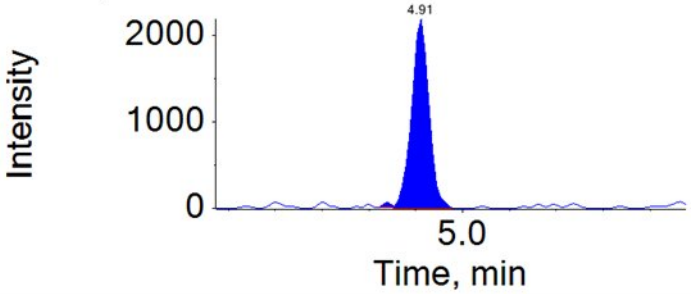
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By HMK at 7:21 am, 11/15/18

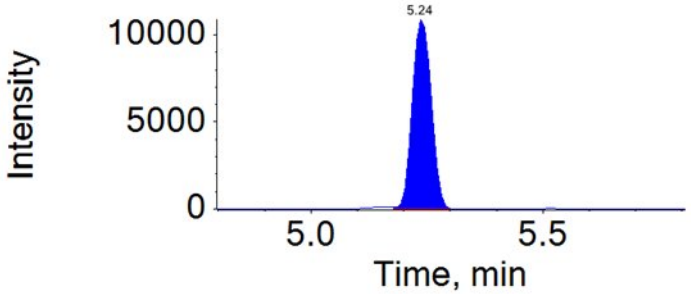
Component: PFOA
Primary Mass: 413.0 / 369.0



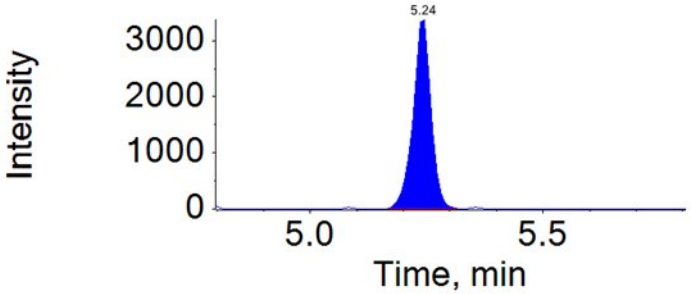
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Secondary Mass: 413.0 / 169.0



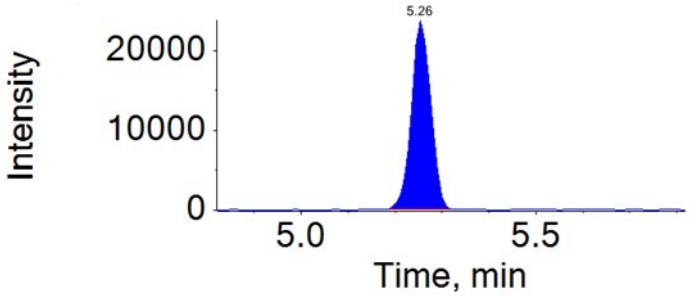
Component: PFOS
Primary Mass: 499.0 / 80.0



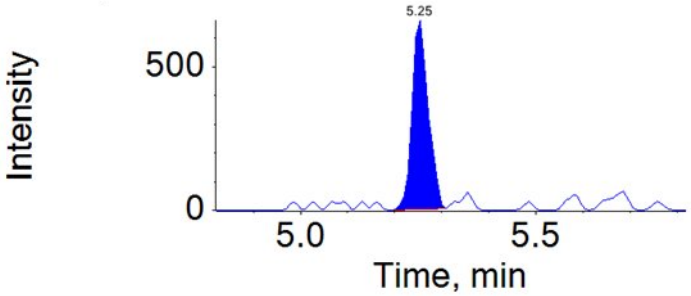
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



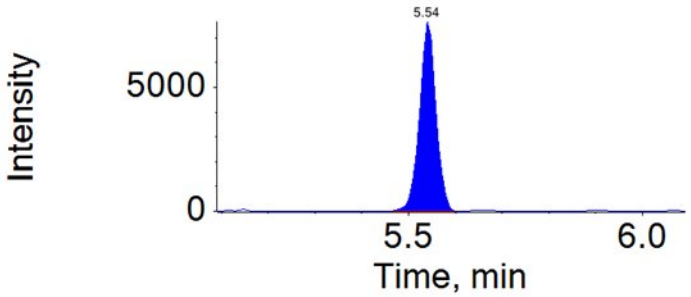
Component: PFNA
Primary Mass: 463.0 / 419.0



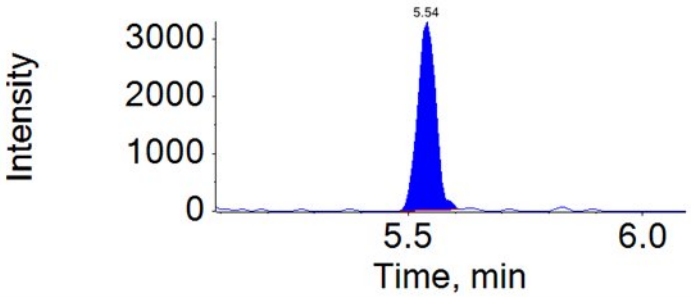
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



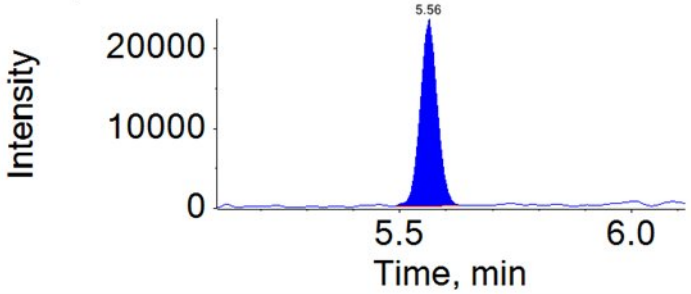
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



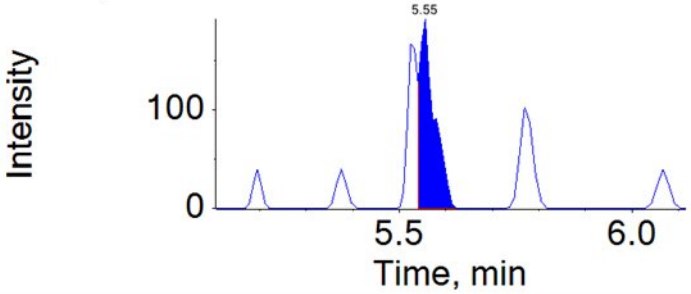
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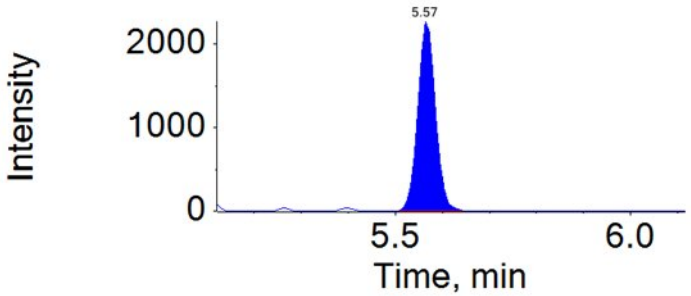
Component: PFDA
Primary Mass: 513.0 / 469.0



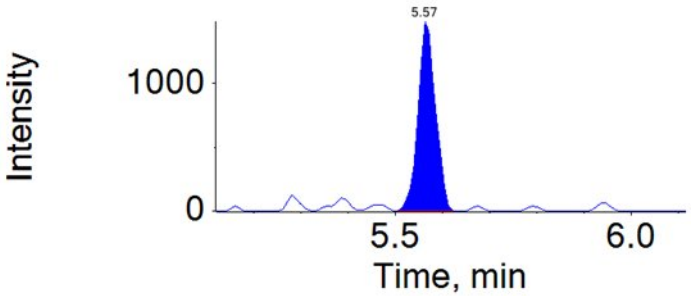
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



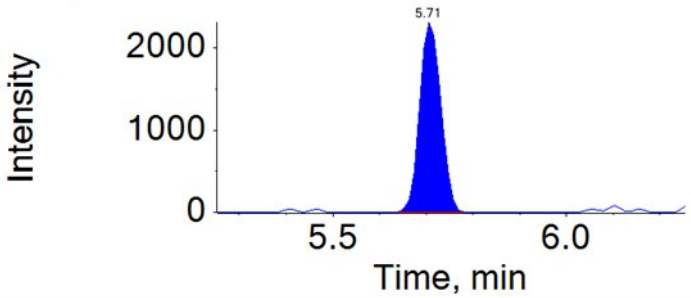
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



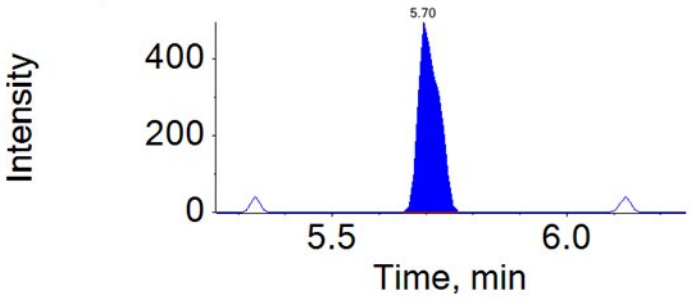
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



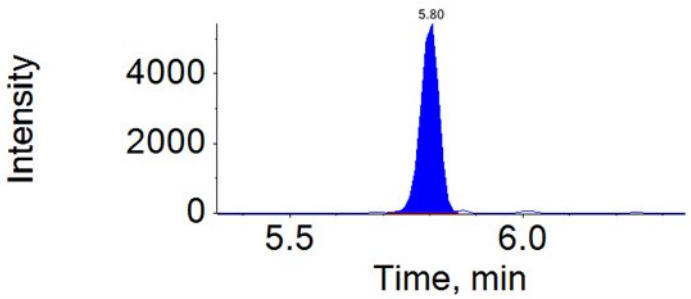
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



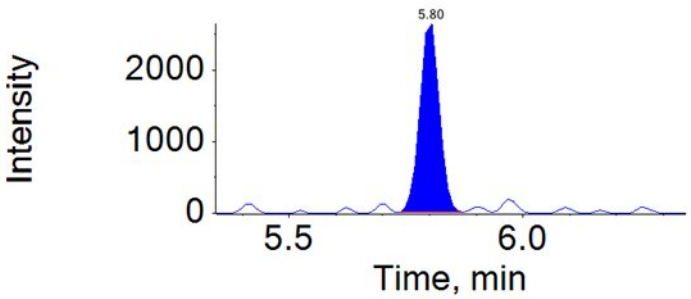
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Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



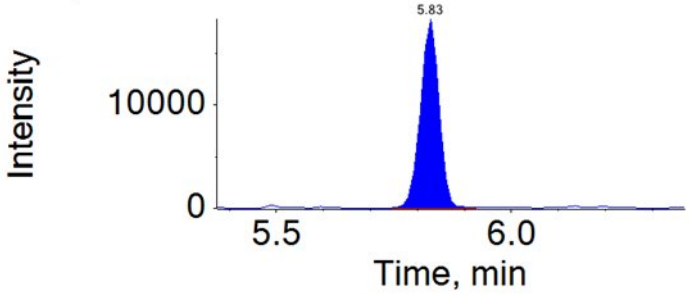
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



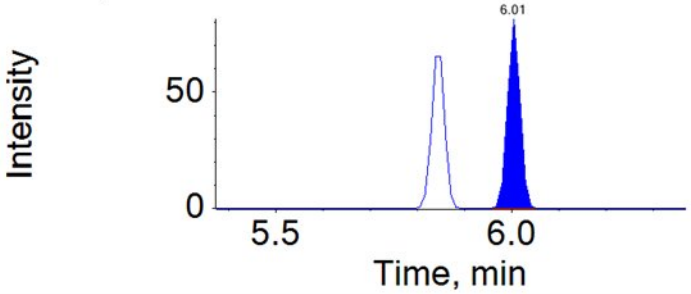
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

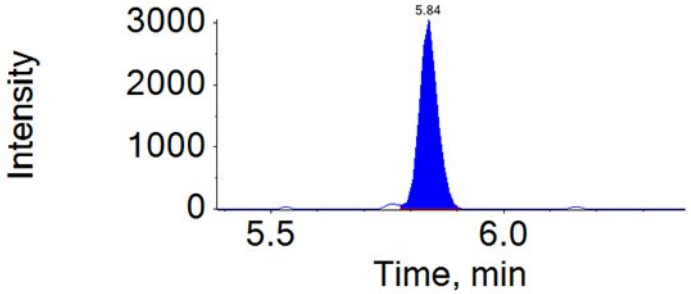
Component: PFUnDA
Primary Mass: 563.0 / 519.0



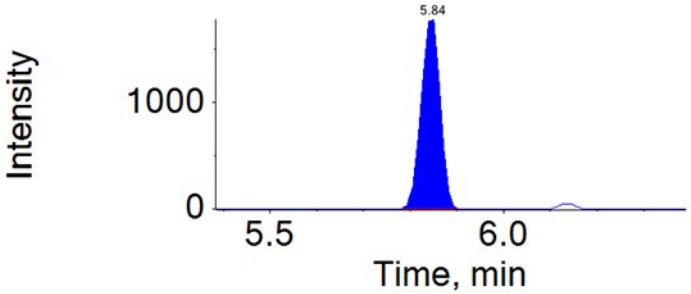
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



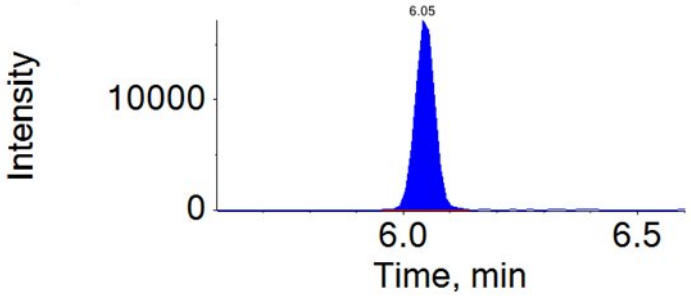
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



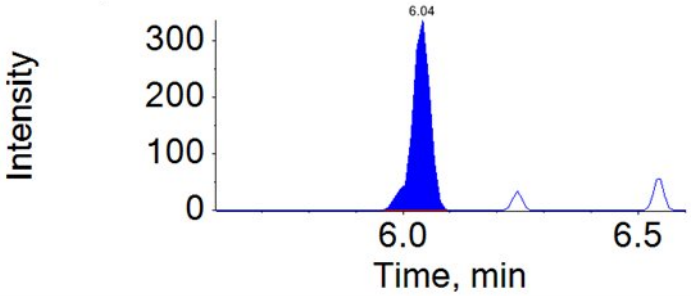
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



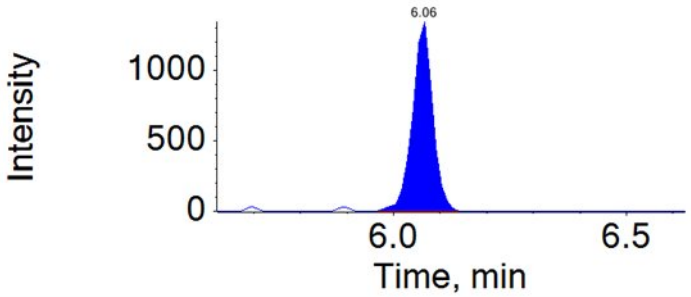
Component: PFDoDA
Primary Mass: 613.0 / 569.0



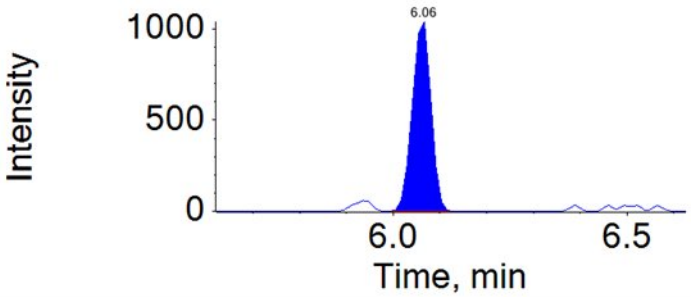
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



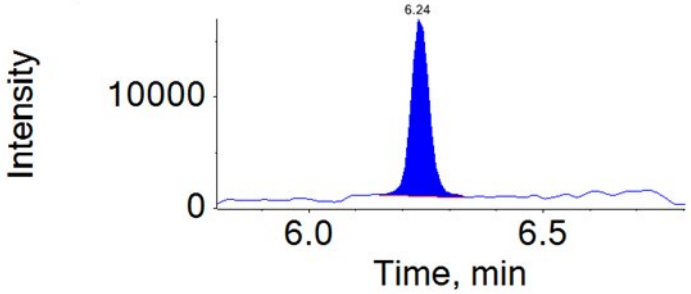
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



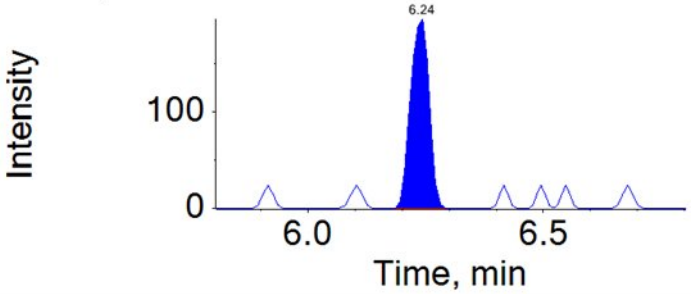
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

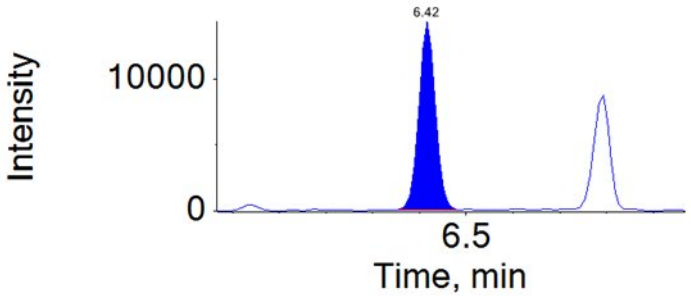
Component: PFTrDA
Primary Mass: 663.0 / 619.0



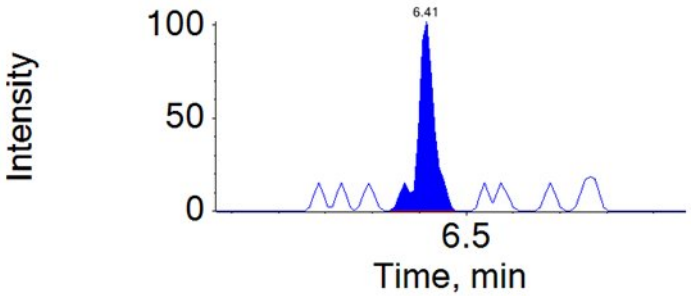
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



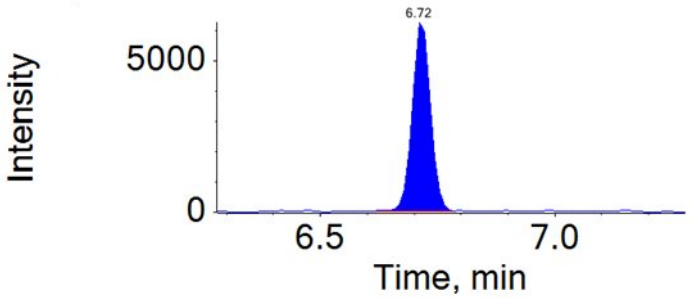
Component: PFTeDA
Primary Mass: 713.0 / 669.0



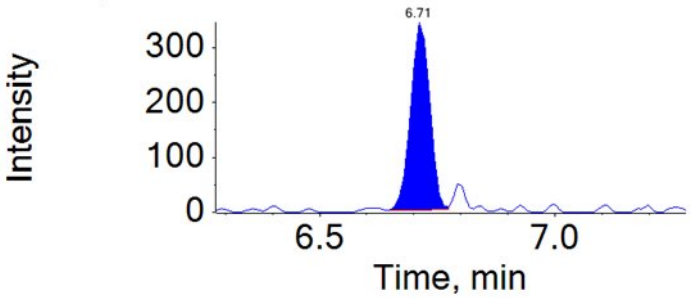
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



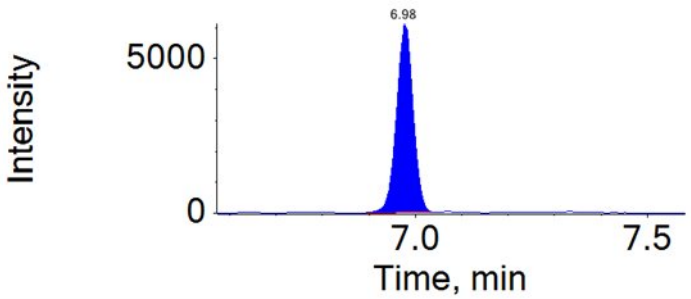
Component: PFHxDA
Primary Mass: 813.0 / 769.0



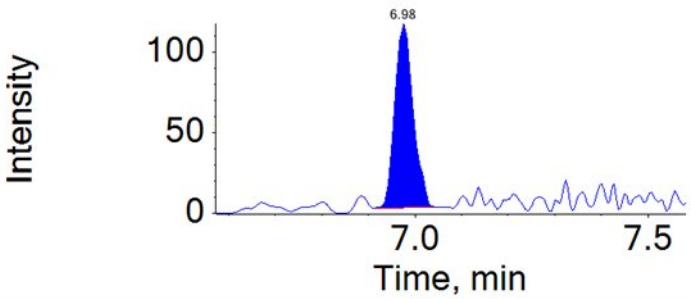
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 7:21 am, 11/15/18

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

Result Table: 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV09D-04.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-09T05:05:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV09DCCV1-4
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: 18NOV09D-03

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	743259.9	725974.7	2	50	
13C2-PFOA	5.0	542173.4	506876.7	7	50	
13C4-PFOS	4.8	295887.7	274910.1	8	50	
13C2-PFDA	5.0	314166.8	307276.7	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	832189.3	13C3-PFBA	743259.9	1.120	5.000	5.181	104	70-130	
E13C5-PFPeA	862825.7	13C3-PFBA	743259.9	1.161	5.000	5.057	101	70-130	
E13C3-PFBS	441161.9	13C3-PFBA	743259.9	0.594	4.650	4.356	94	70-130	
E13C2-4:2-FTS	59353.4	13C2-PFOA	542173.4	0.109	4.670	4.940	106	70-130	
E13C5-PFHxA	709747.5	13C2-PFOA	542173.4	1.309	5.000	4.815	96	70-130	
E13C3-PFHxS	362240.4	13C2-PFOA	542173.4	0.668	4.730	4.796	101	70-130	
E13C4-PFHpA	579992.5	13C2-PFOA	542173.4	1.070	5.000	4.866	97	70-130	
E13C2-6:2-FTS	42878.4	13C2-PFOA	542173.4	0.079	4.750	5.274	111	70-130	
E13C8-PFOA	994623.7	13C2-PFOA	542173.4	1.835	5.000	5.116	102	70-130	
E13C8-PFOS	319153.3	13C4-PFOS	295887.7	1.079	4.780	4.770	100	70-130	
E13C9-PFNA	532102.7	13C4-PFOS	295887.7	1.798	5.000	4.912	98	70-130	
E13C6-PFDA	600987.7	13C2-PFDA	314166.8	1.913	5.000	4.811	96	70-130	
E13C2-8:2-FTS	32034.9	13C2-PFDA	314166.8	0.102	4.790	5.396	113	70-130	
E13C8-PFOSA	737435.1	13C2-PFDA	314166.8	2.347	5.000	5.122	102	70-130	
Ed3-NMeFOSAA	82623.8	13C2-PFDA	314166.8	0.263	5.000	4.891	98	70-130	
E13C7-PFUnDA	294757.9	13C2-PFDA	314166.8	0.938	5.000	5.412	108	70-130	
Ed5-NEtFOSAA	67342.5	13C2-PFDA	314166.8	0.214	5.000	4.961	99	70-130	
E13C2-PFDoDA	592309.0	13C2-PFDA	314166.8	1.885	5.000	5.083	102	70-130	
Ed7-NMePFOSAE	351711.5	13C2-PFDA	314166.8	1.120	5.000	5.206	104	70-130	
Ed3-NMePFOSA	82414.6	13C2-PFDA	314166.8	0.262	5.000	4.803	96	70-130	
Ed9-NEtPFOSAE	295665.4	13C2-PFDA	314166.8	0.941	5.000	5.375	107	70-130	
Ed5-NEtPFOSA	63875.0	13C2-PFDA	314166.8	0.203	5.000	4.708	94	70-130	
E13C2-PFTeDA	422273.5	13C2-PFDA	314166.8	1.344	5.000	4.839	97	70-130	

APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

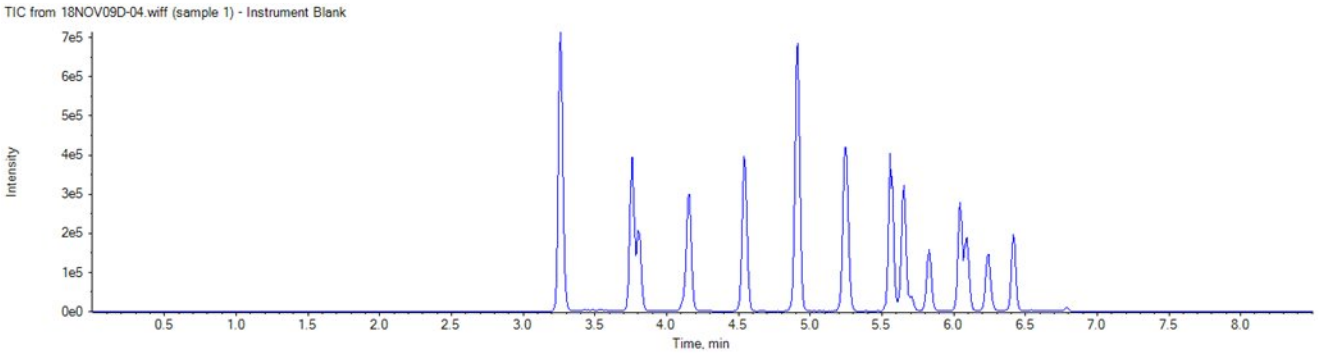
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV09D-04.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	832189.3	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	862825.7	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	441161.9	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	59353.4	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	709747.5	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	441161.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	362240.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	579992.5	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	42878.4	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	362240.4	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	994623.7	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	319153.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	532102.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	319153.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	600987.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	32034.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	737435.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	82623.8	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	319153.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	294757.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	67342.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	592309.0	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	32034.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	351711.5	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	82414.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	319153.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	295665.4	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	63875.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	592309.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	422273.5	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	422273.5	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	422273.5	N/A	

Total Ion Chromatogram

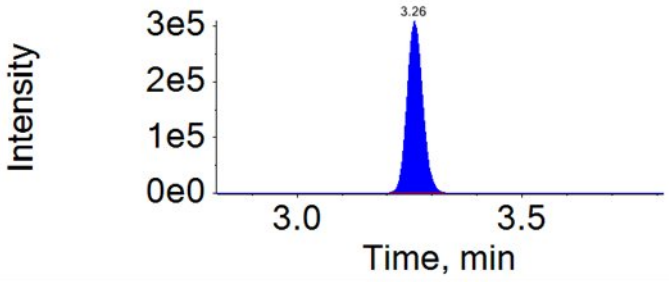


APPROVED
By MCD at 5:19 pm, 11/9/18

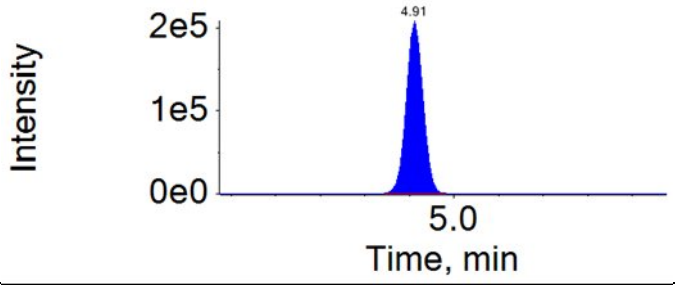
REVIEWED
By HMK at 8:09 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

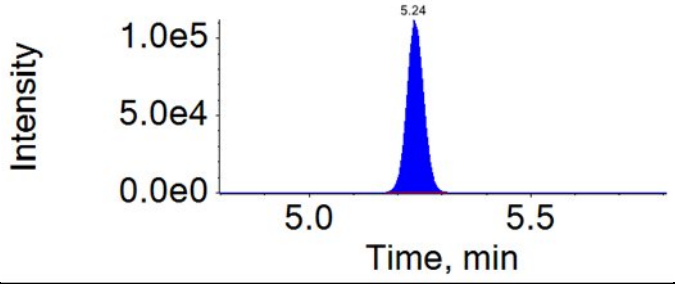
Injection Standard: 13C3-PFBA
216.0 / 172.0



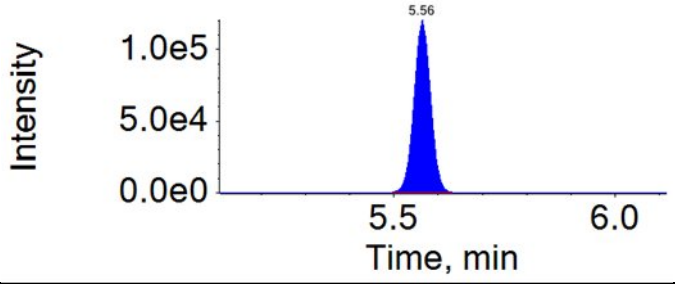
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

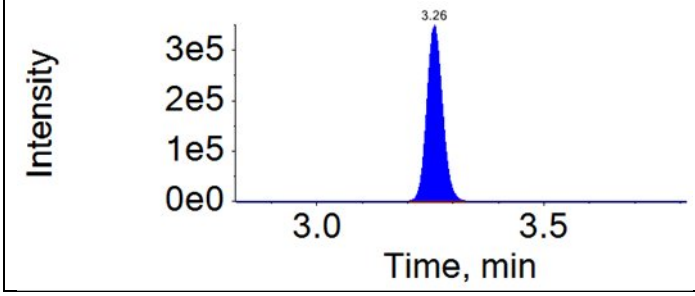


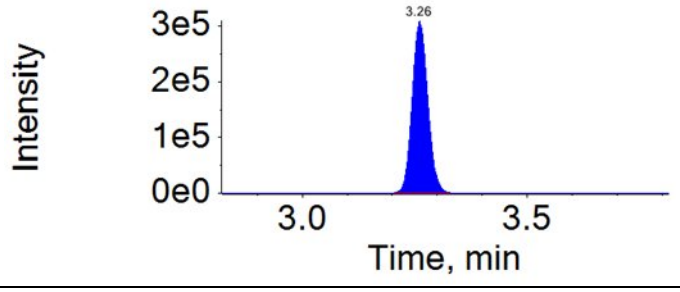
Injection Standard: 13C2-PFDA
515.0 / 470.0



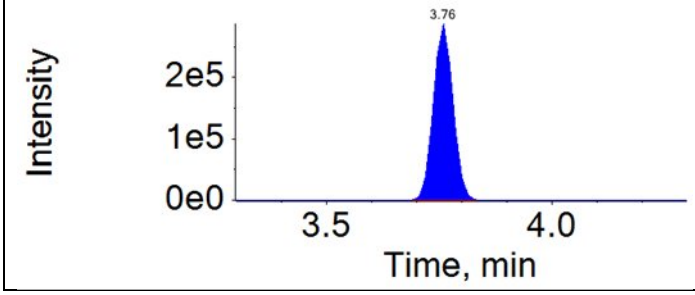
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

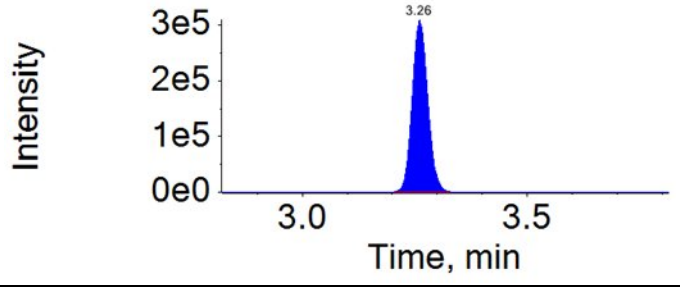
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



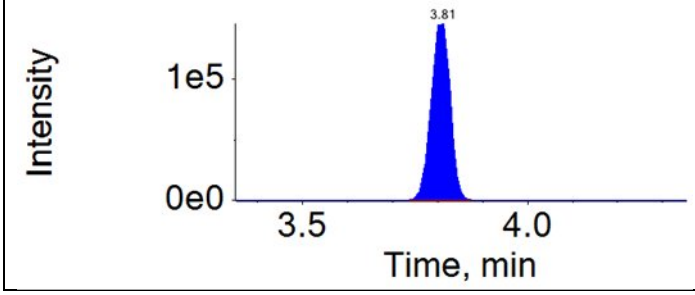


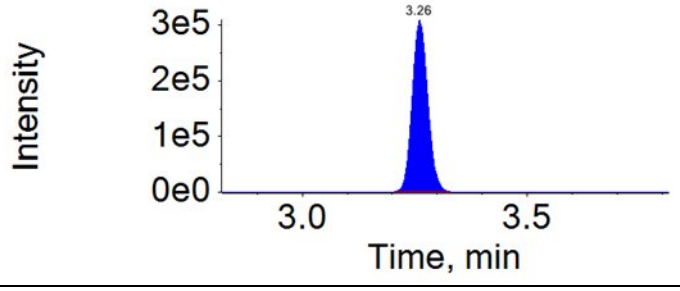
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



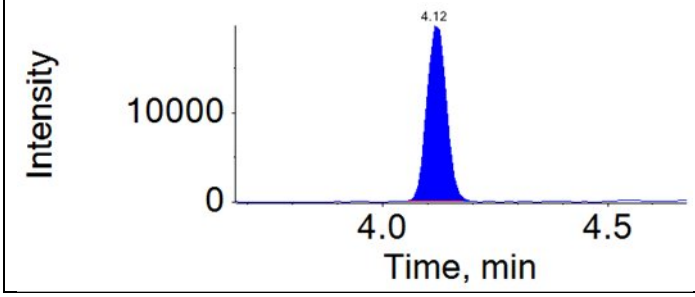


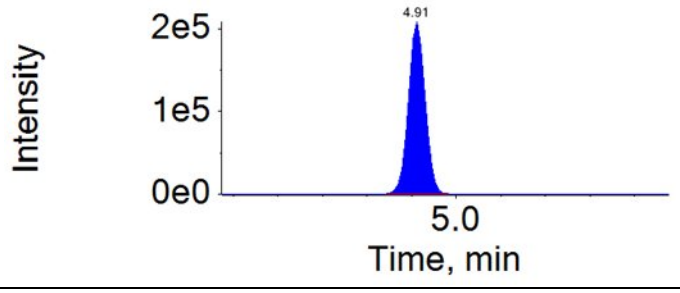
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





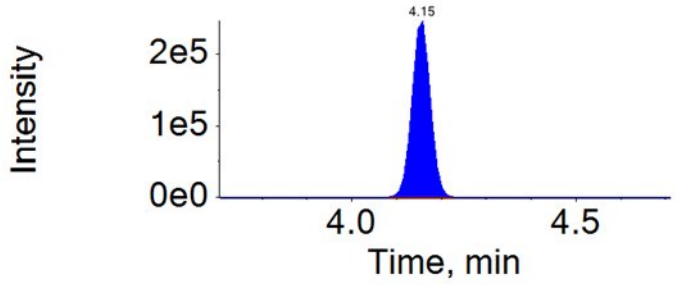
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

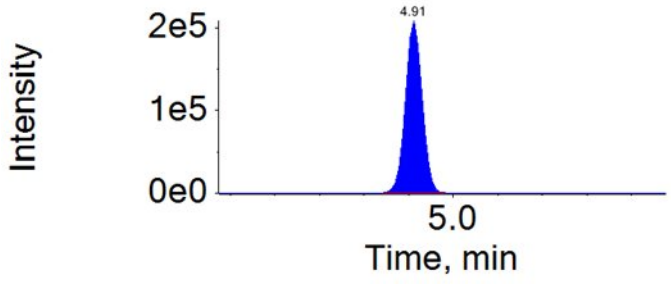




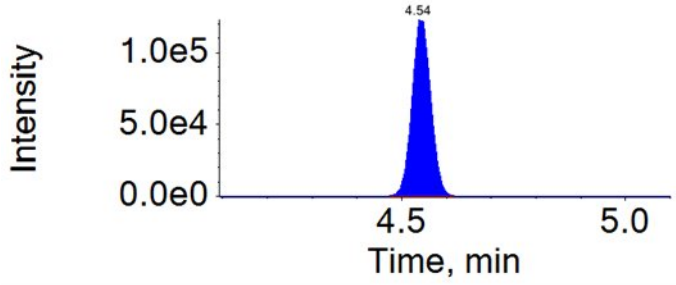
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

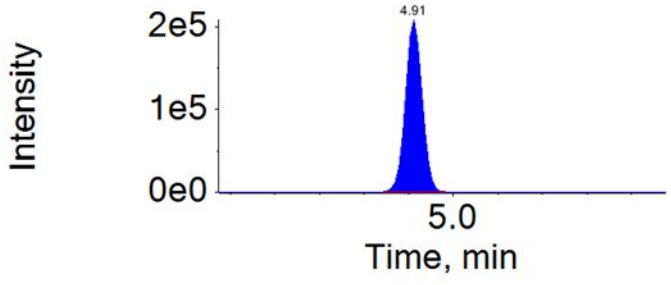
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



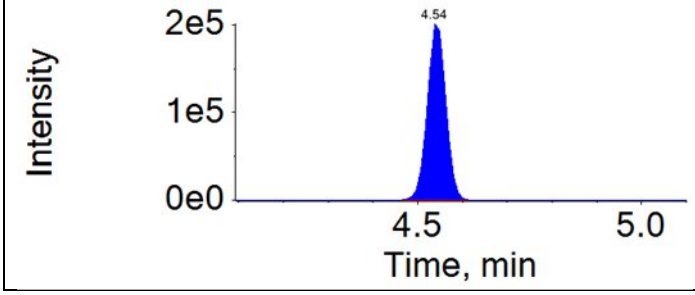


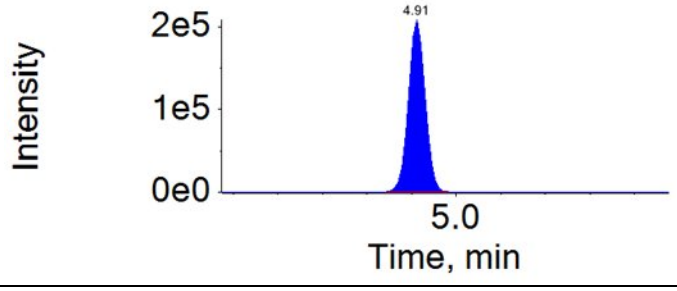
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



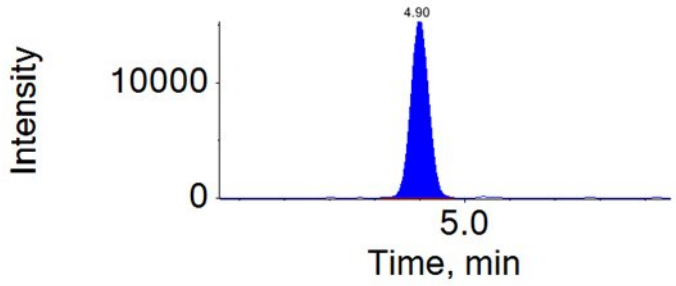


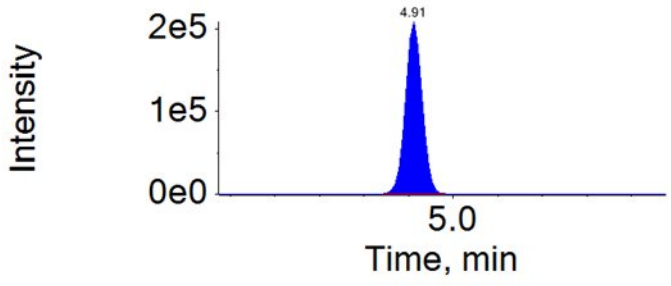
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

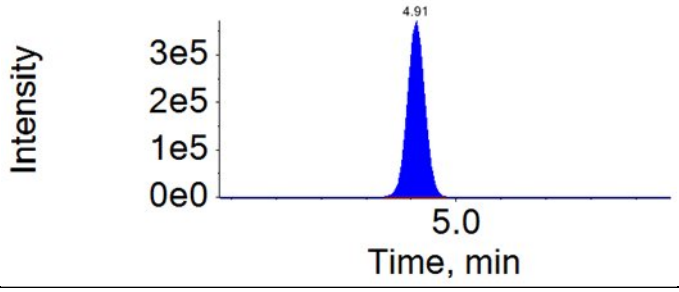
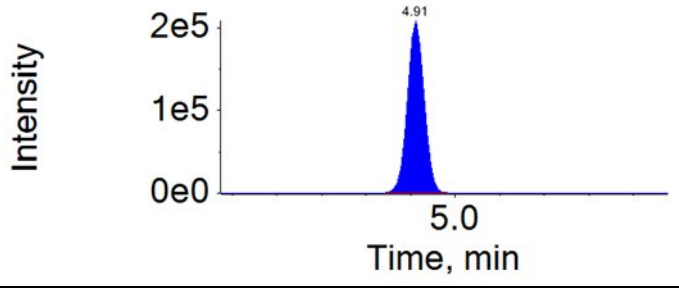


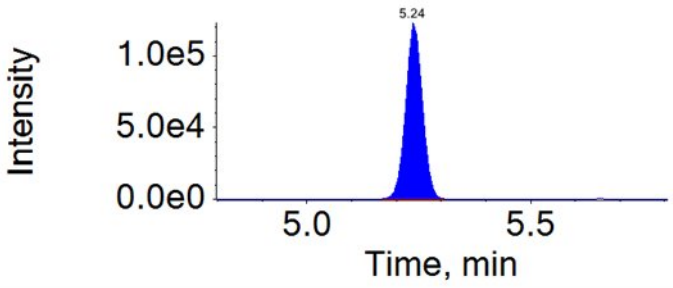
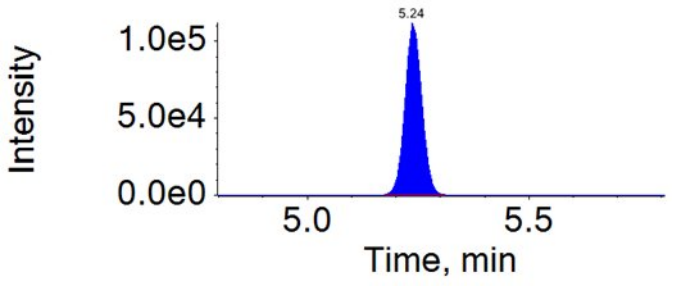


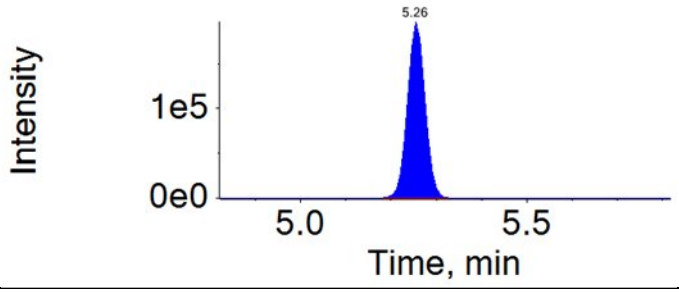
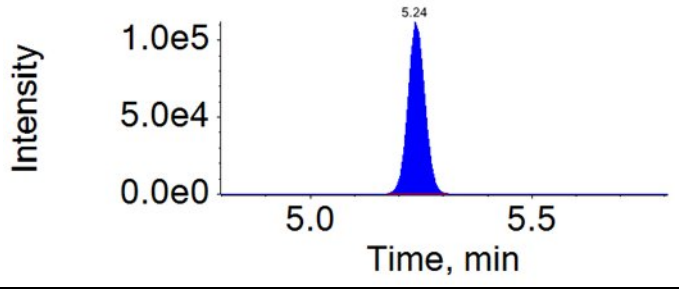
APPROVED
By MCD at 5:19 pm, 11/9/18

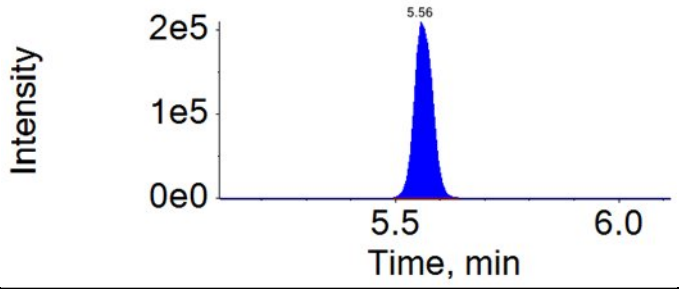
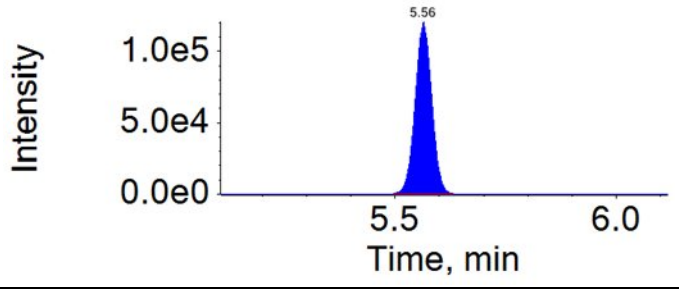
REVIEWED
By HMK at 8:09 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

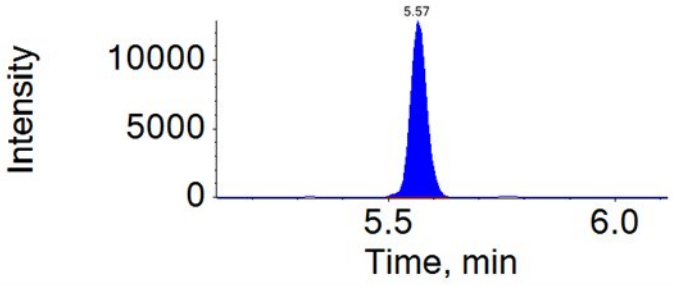
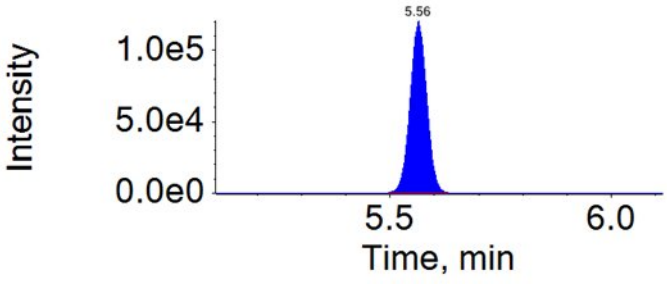
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

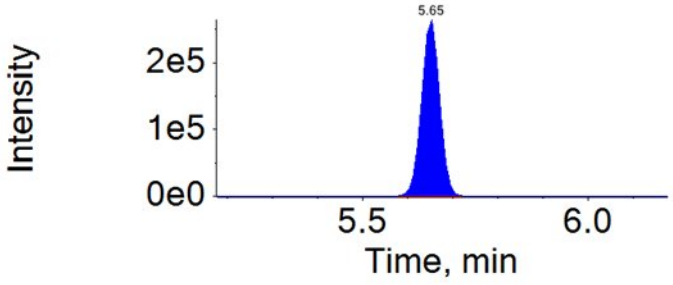
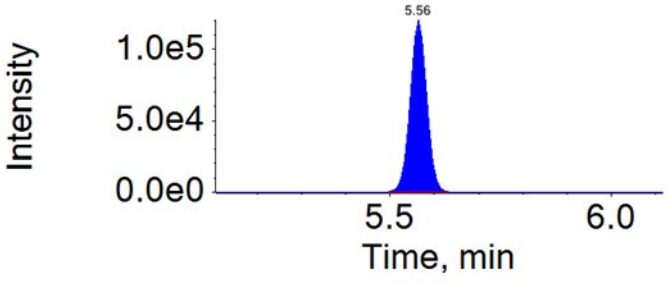
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

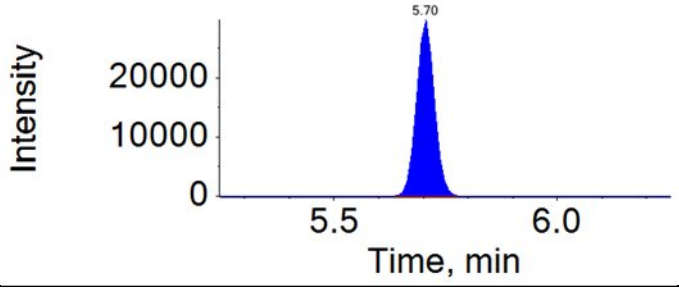
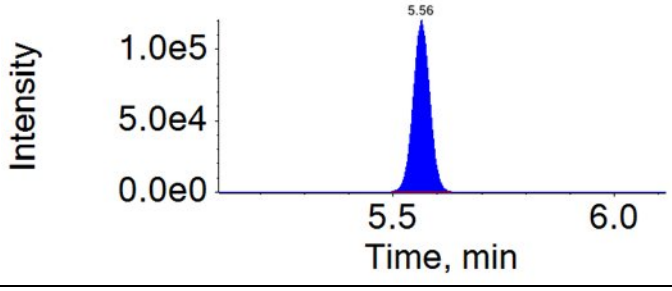
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

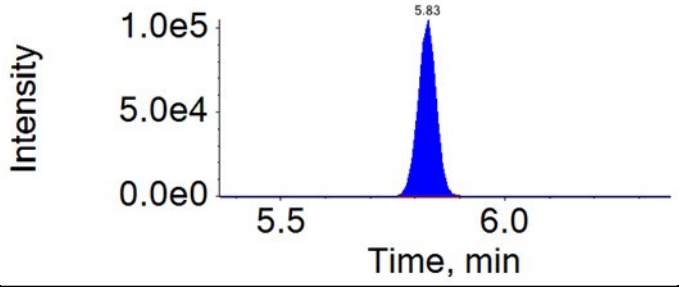
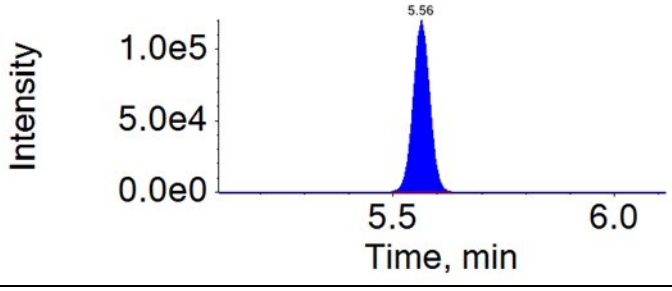
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

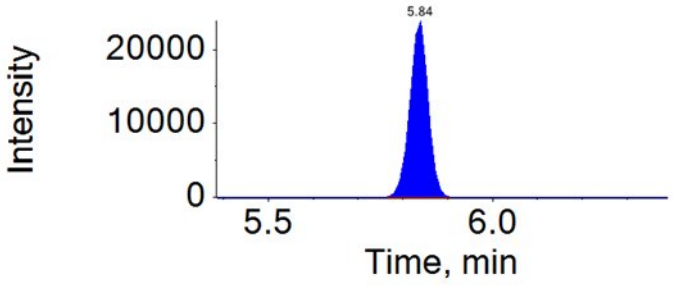
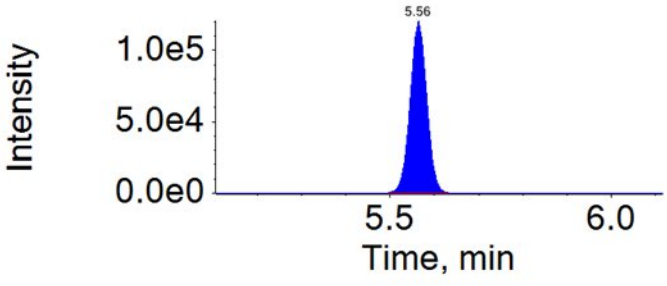
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

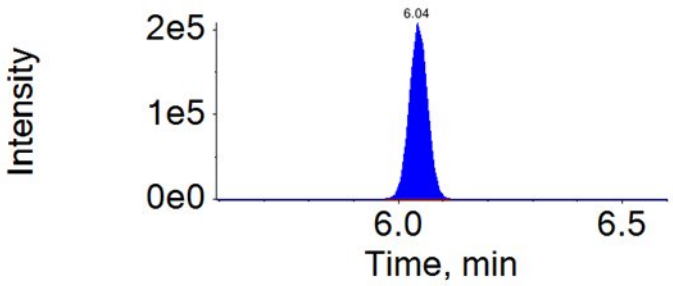
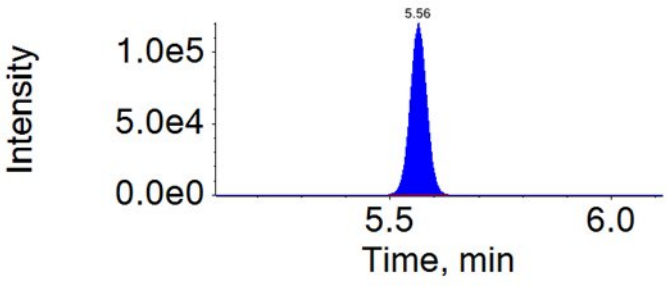
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

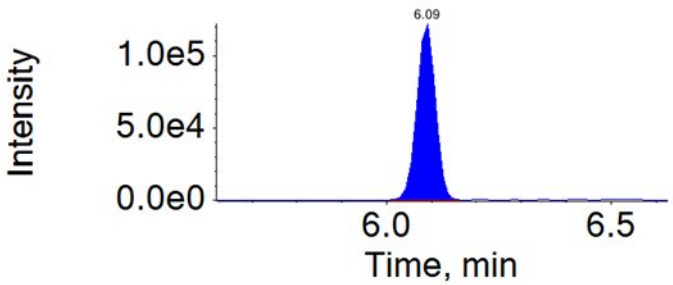
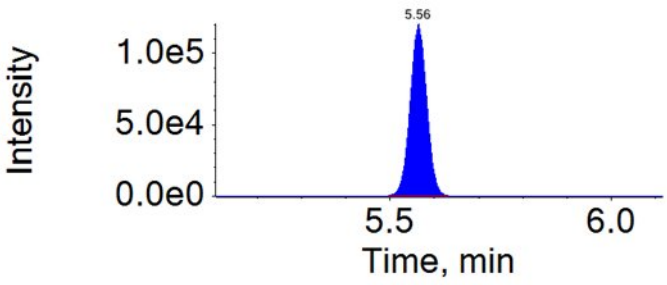
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

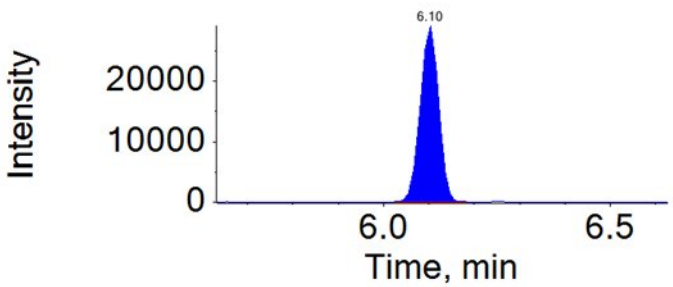
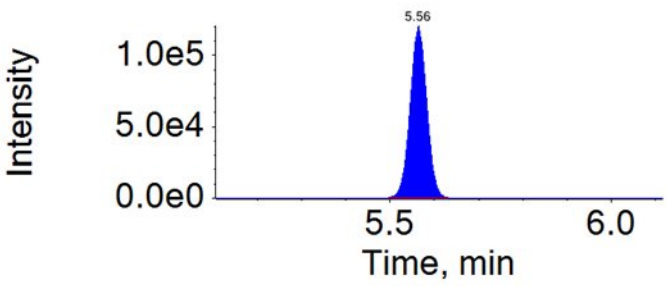
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 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
	

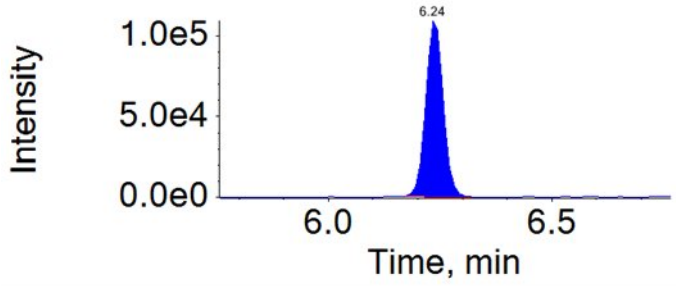
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

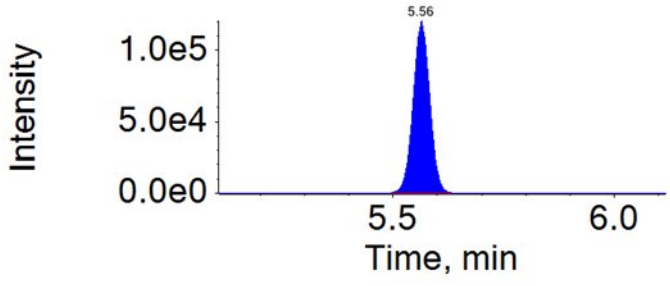
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

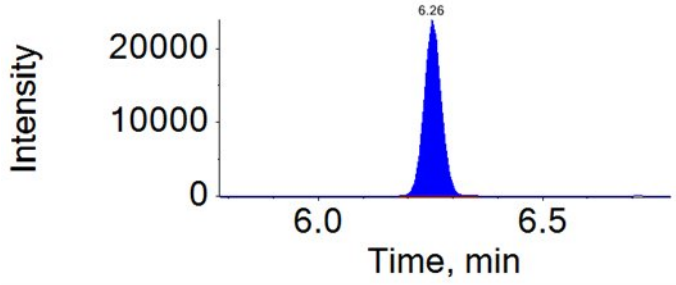
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

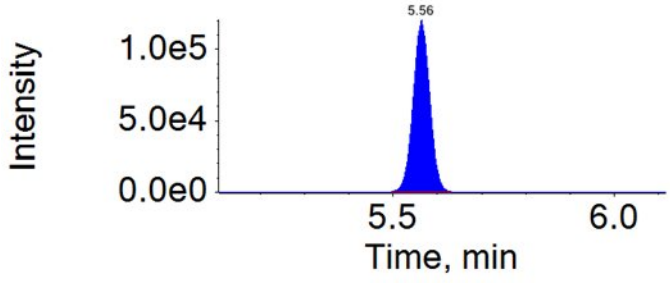
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



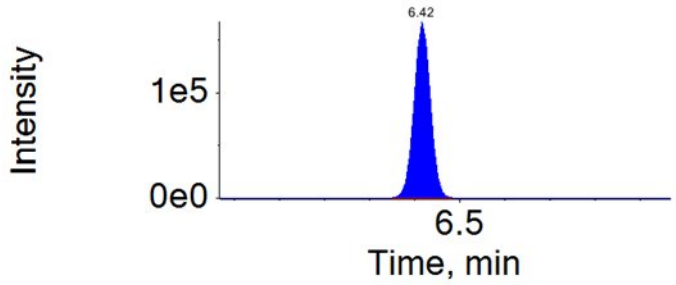


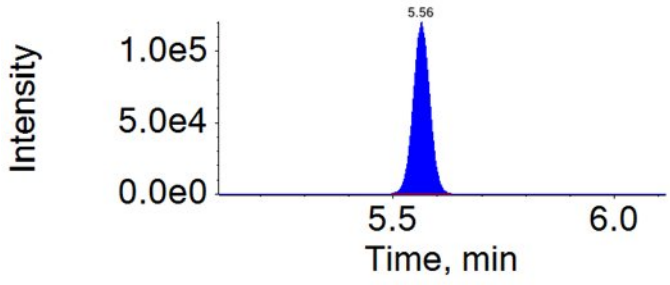
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



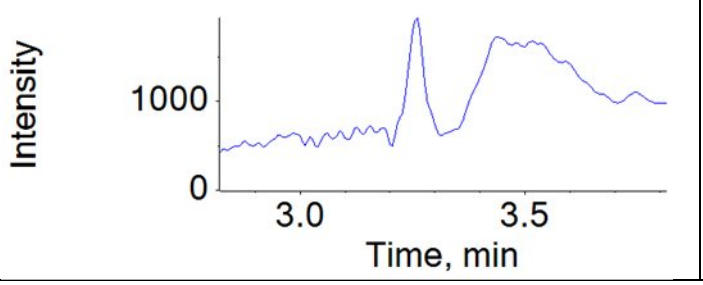


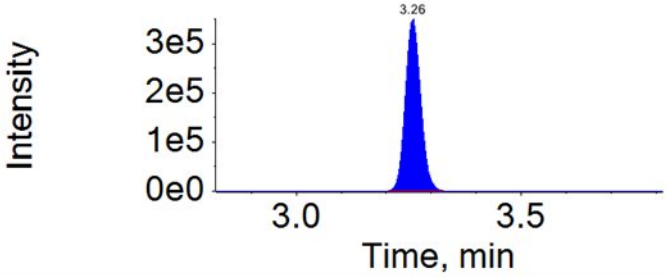
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

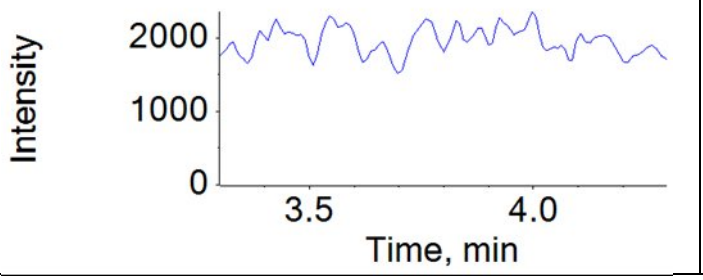
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

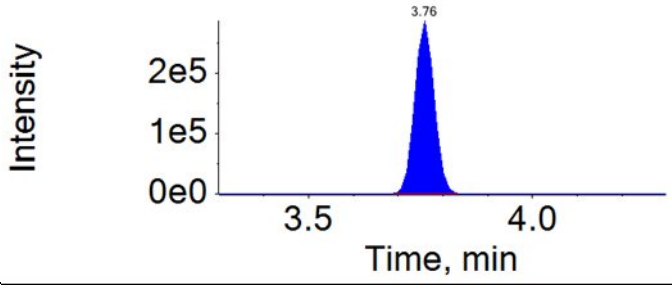
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



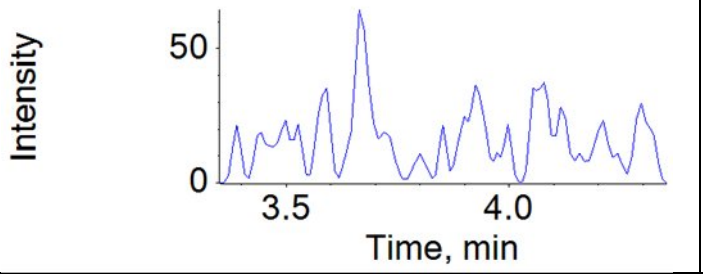


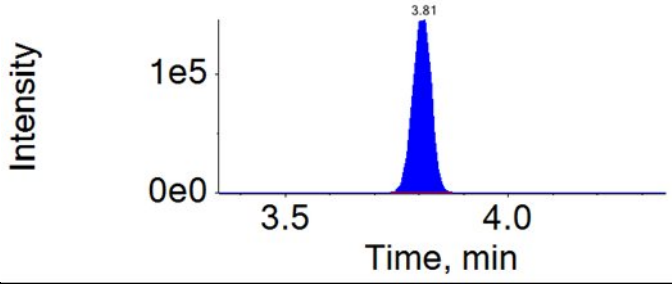
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



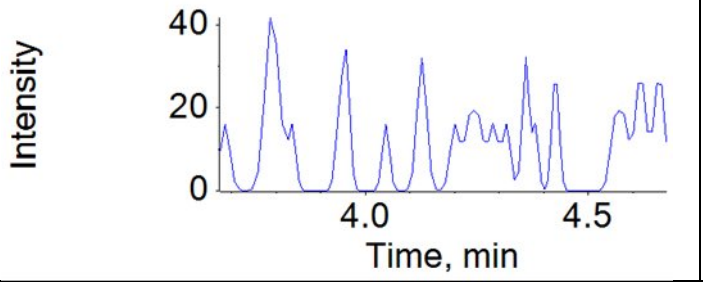


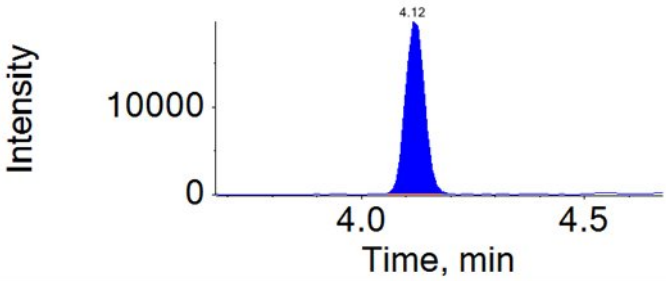
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



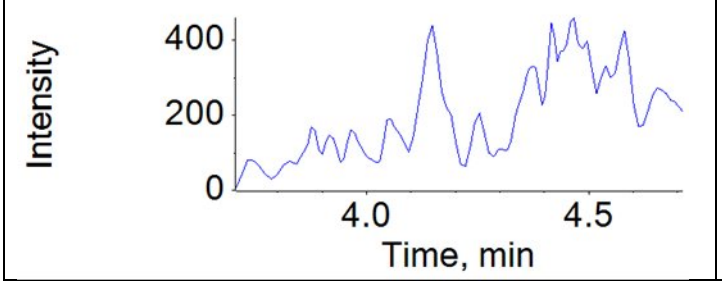


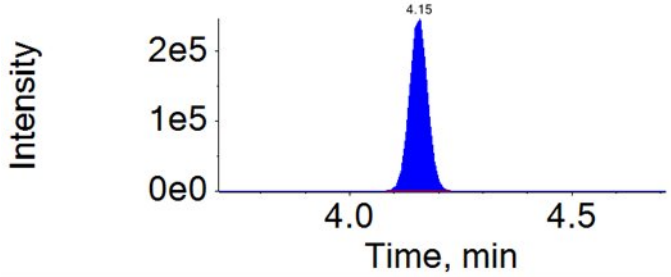
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

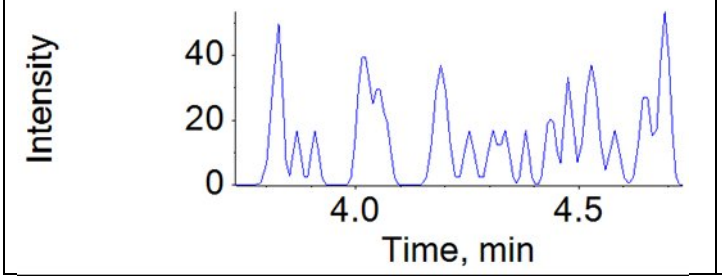
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

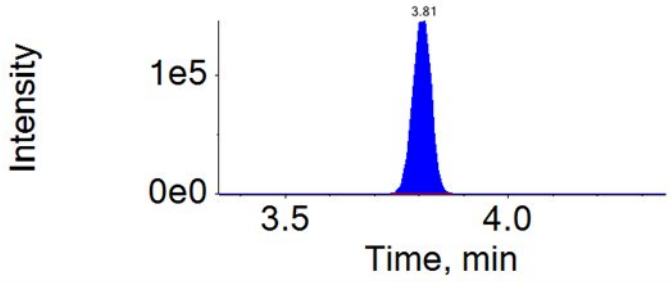
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



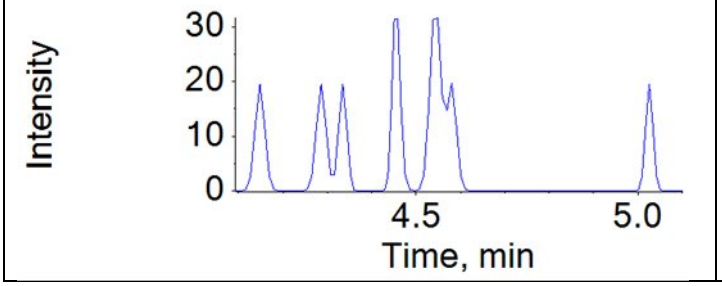


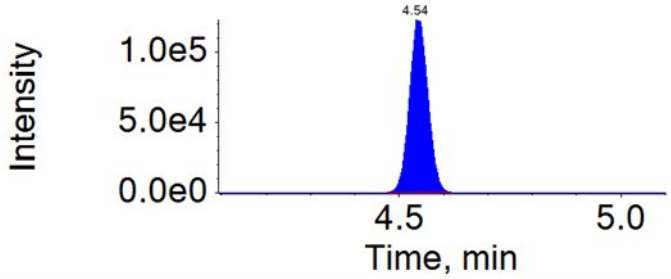
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



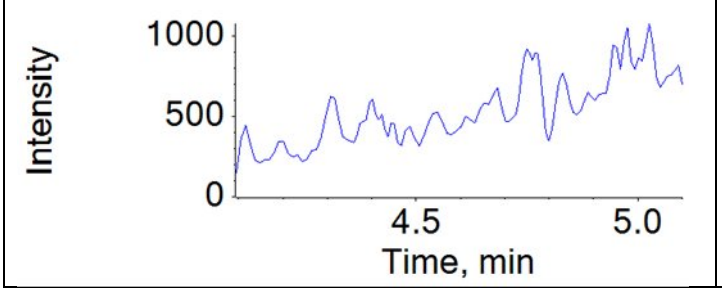


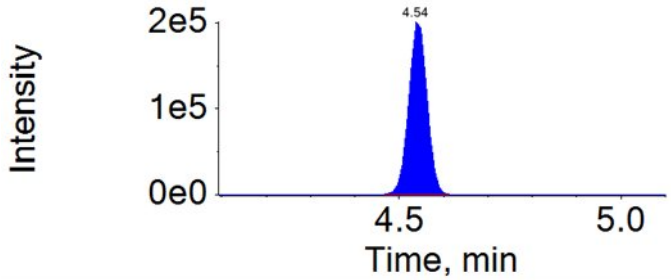
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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



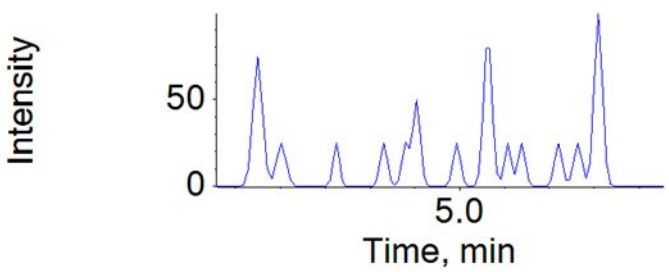


APPROVED
By MCD at 5:19 pm, 11/9/18

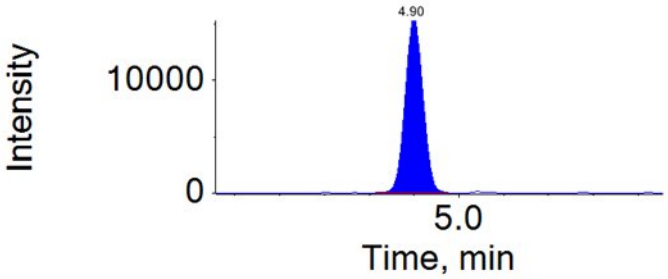
REVIEWED
By HMK at 8:09 am, 11/15/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

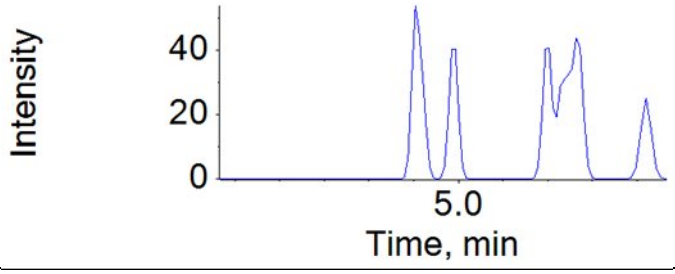
Analyte: 6:2-FTS
427.0 / 407.0



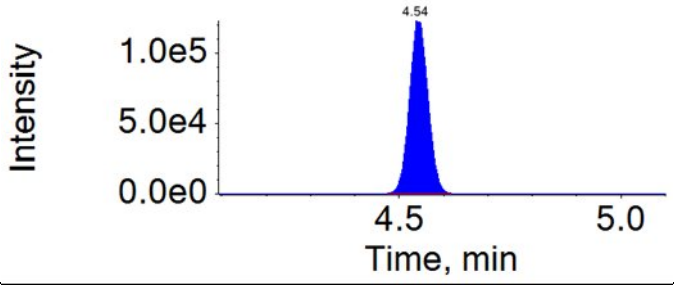
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



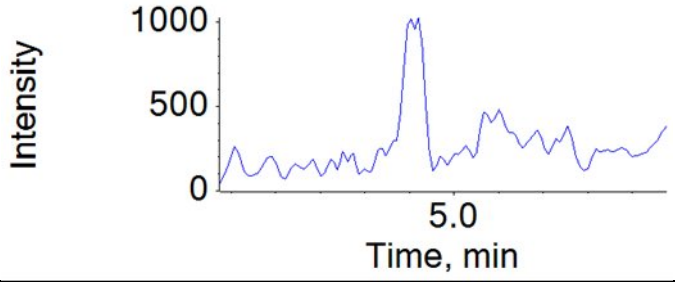
Analyte: PFHpS
449.0 / 80.0



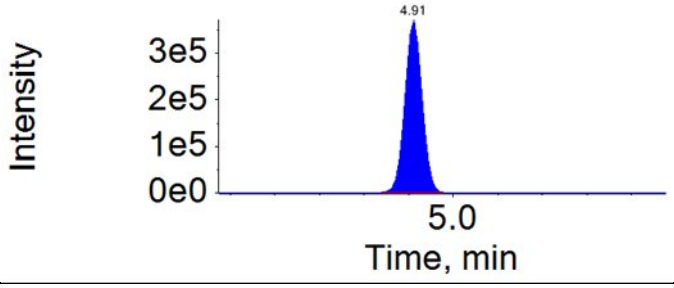
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



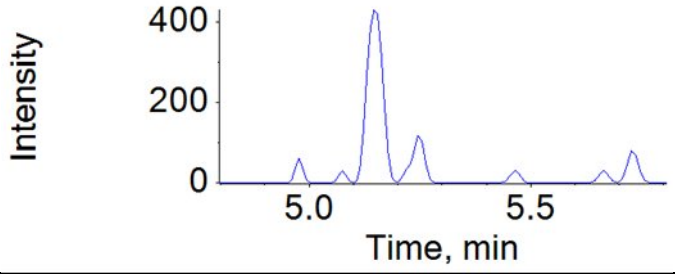
Analyte: PFOA
413.0 / 369.0



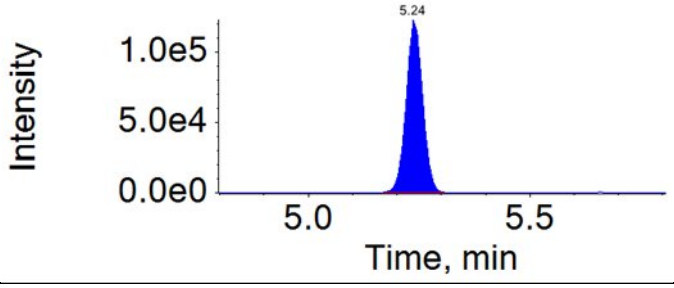
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

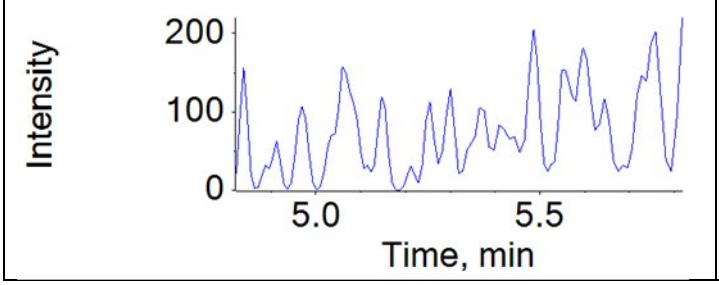


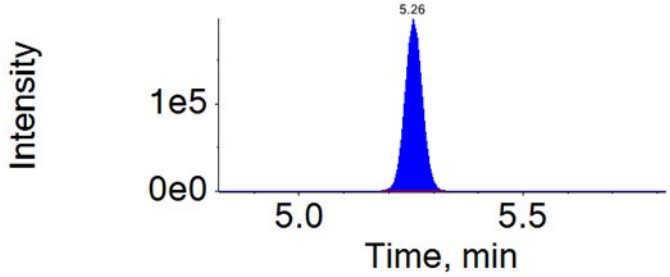
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

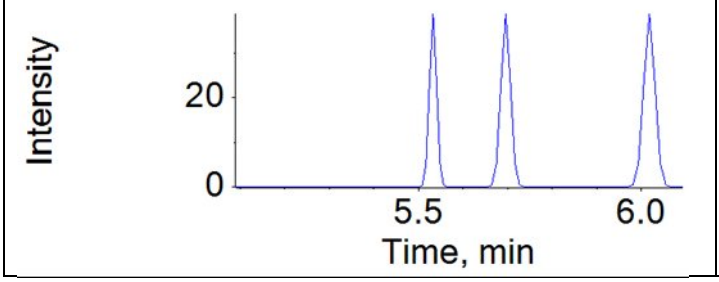
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

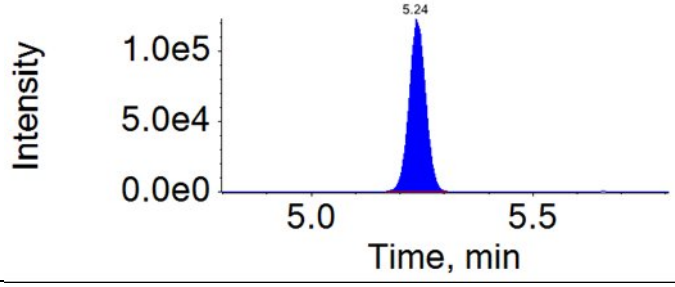
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



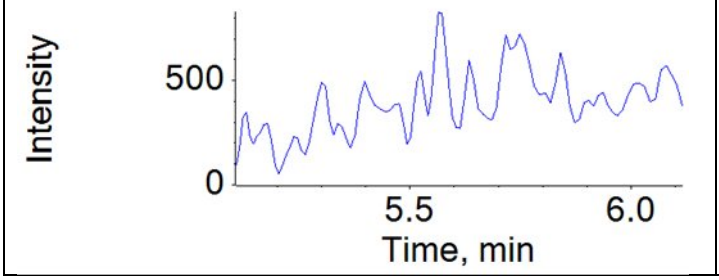


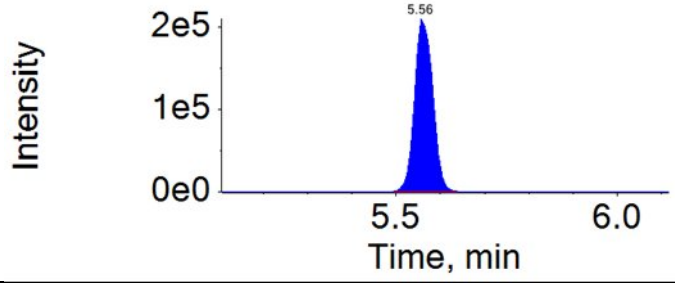
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



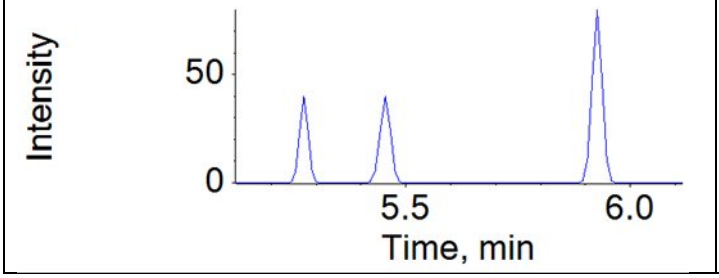


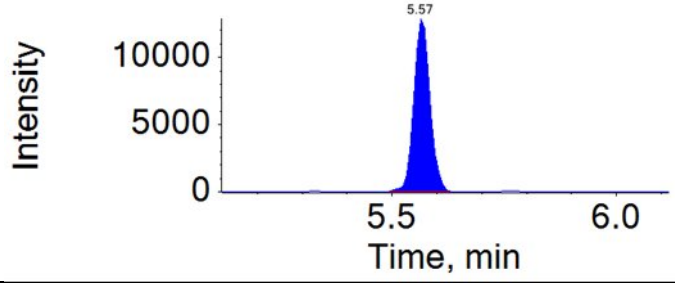
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



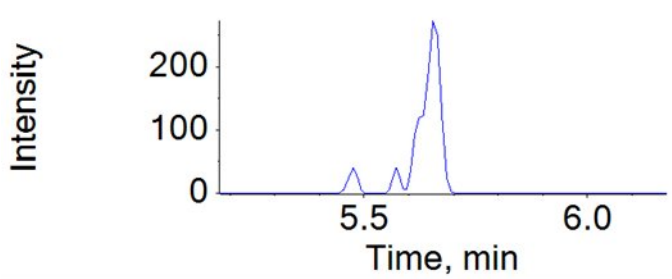


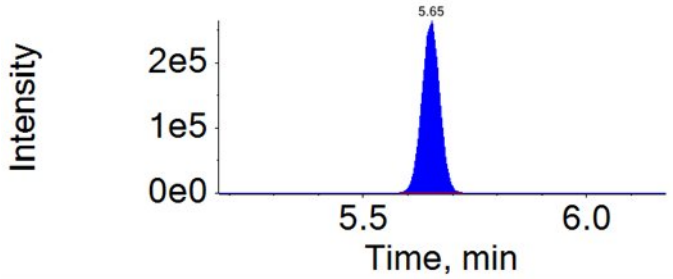
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

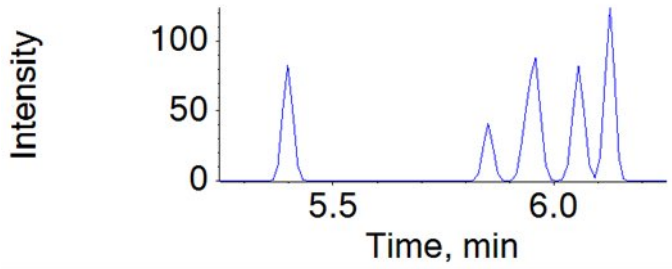
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

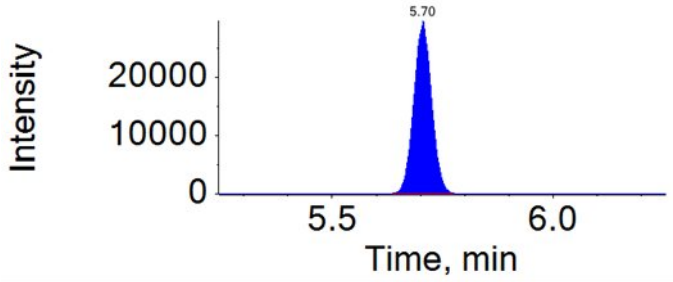
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



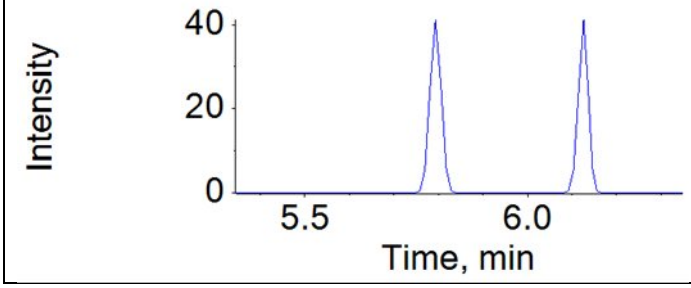


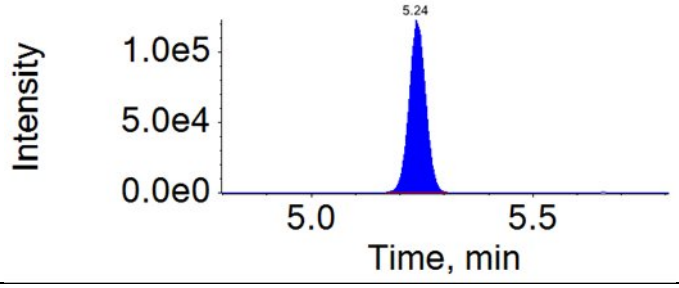
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



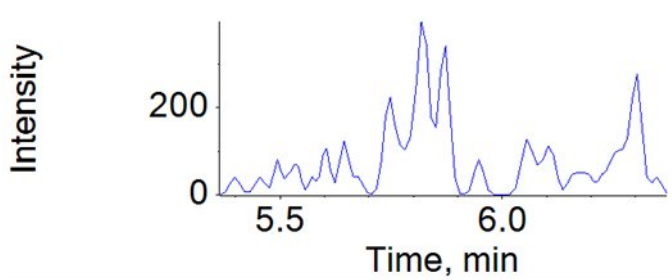


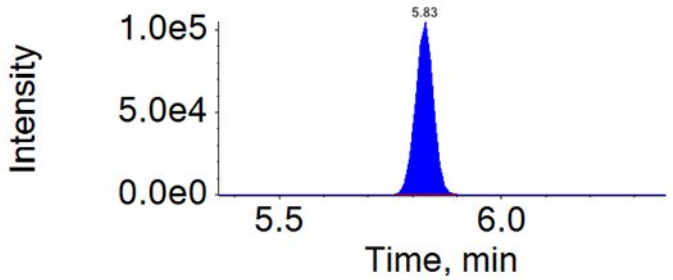
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



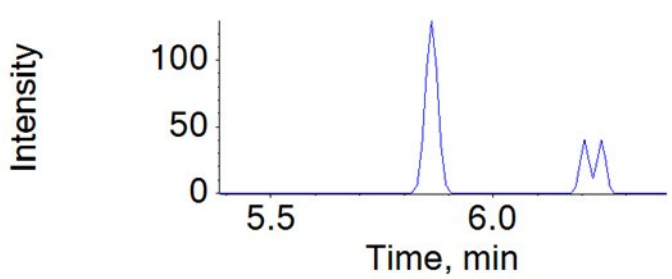


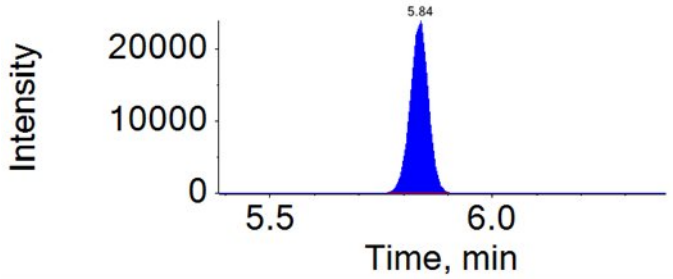
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

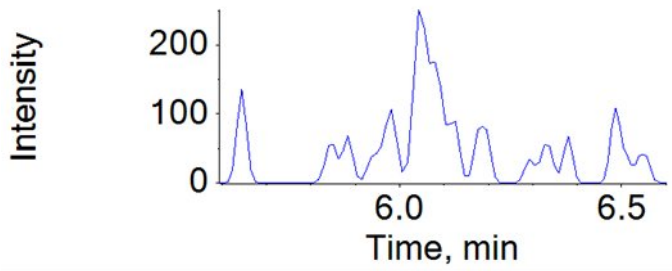
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

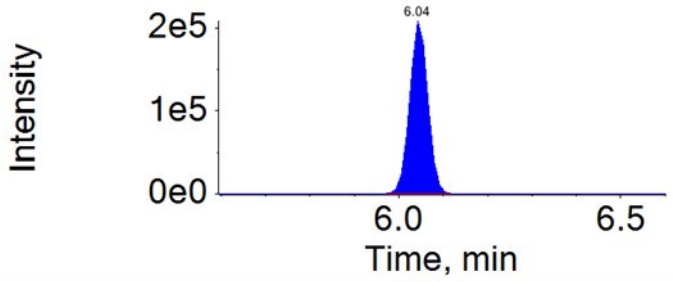
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



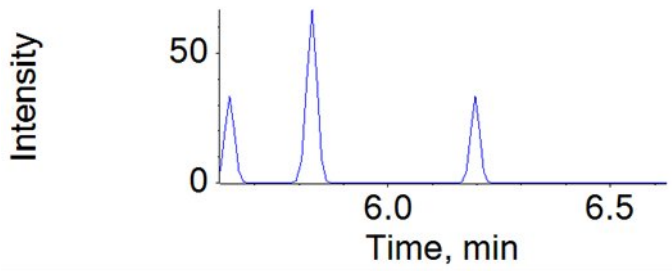


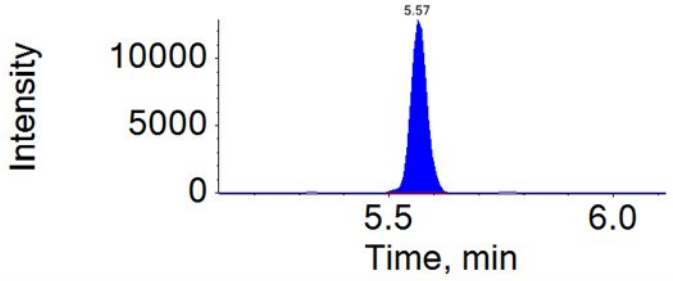
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



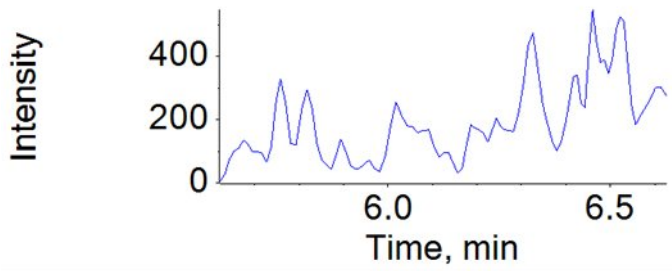


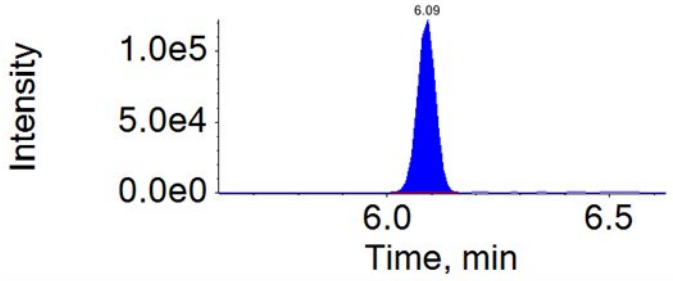
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



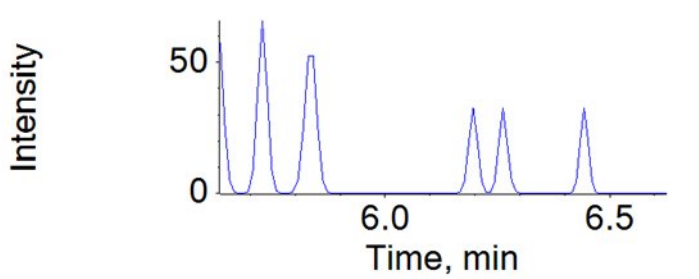


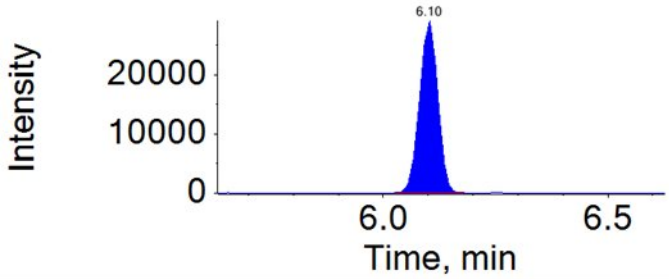
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

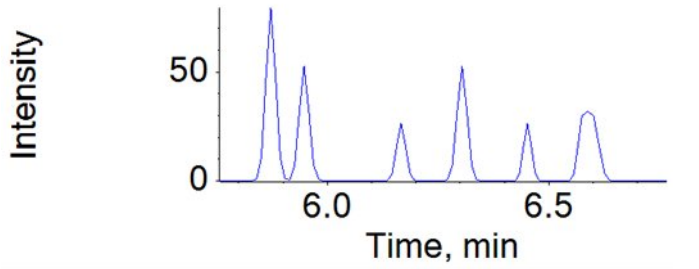
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

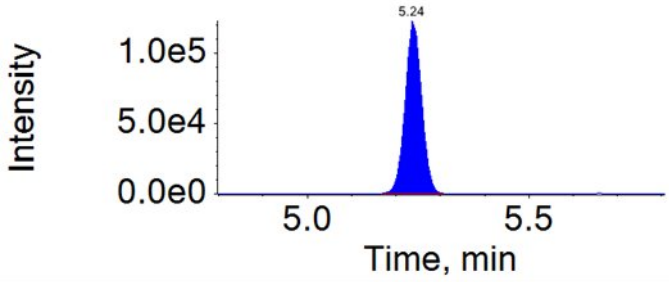
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



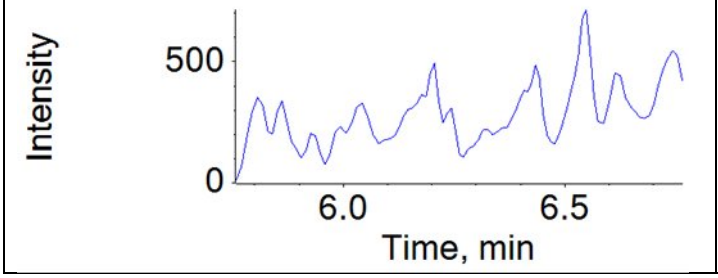


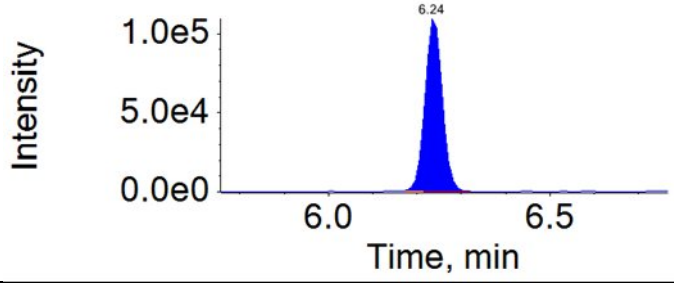
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



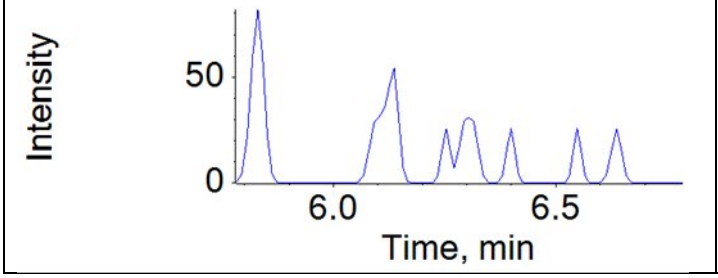


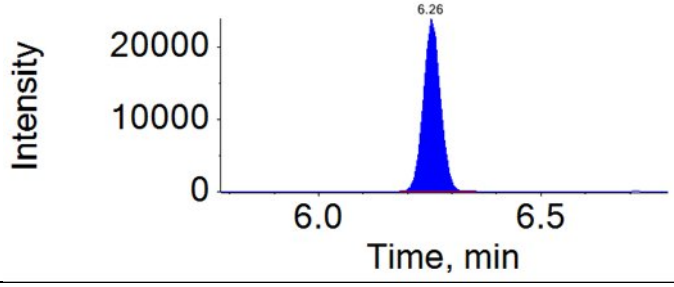
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



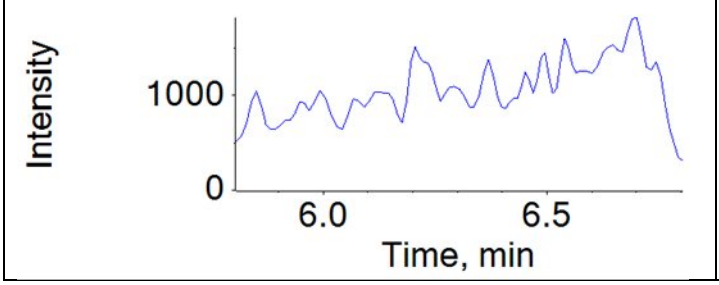


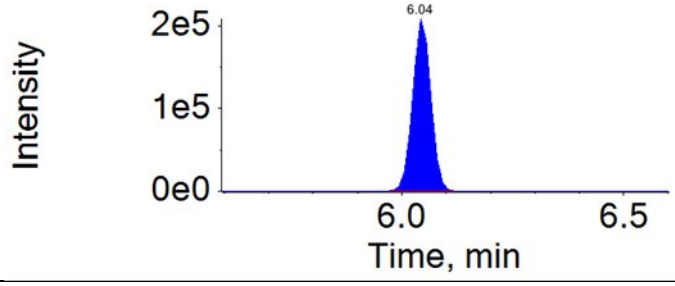
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

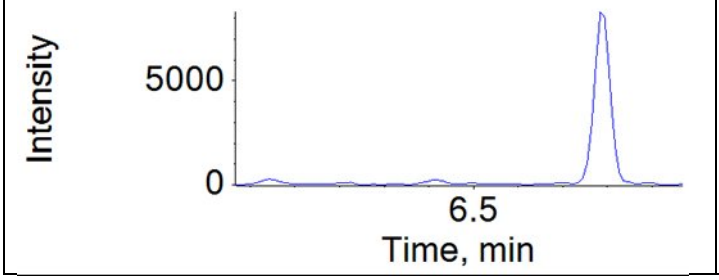
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV1-4 11/9/2018 5:13:22 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

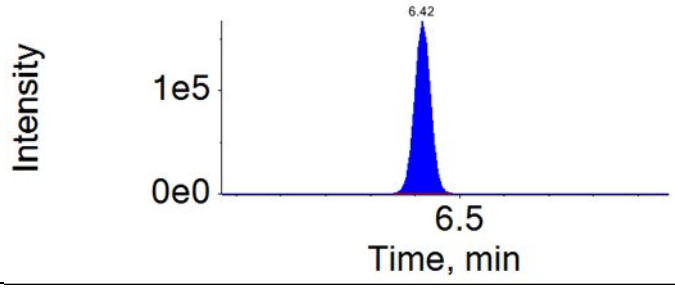
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



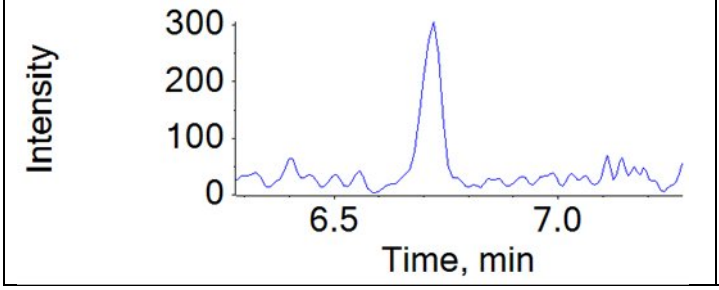


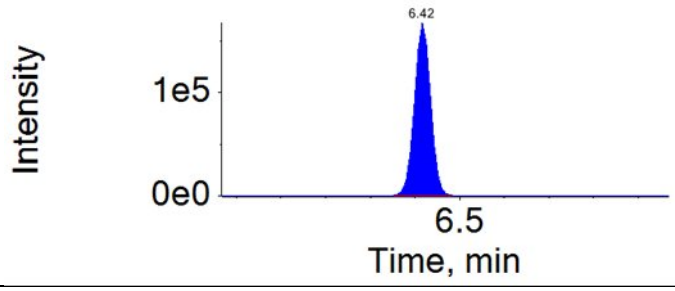
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



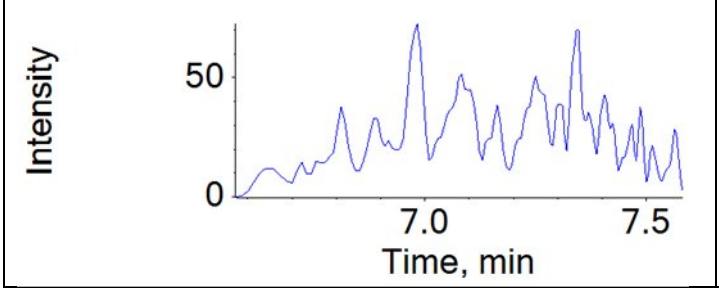


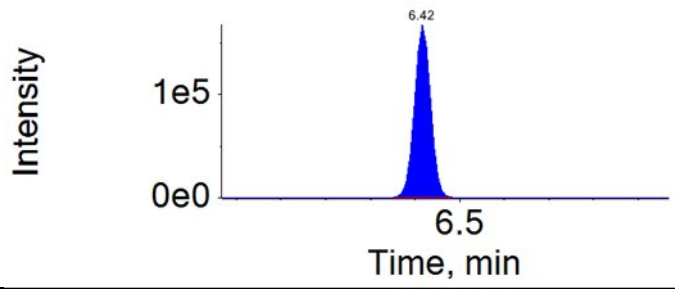
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





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Ion Ratio Report

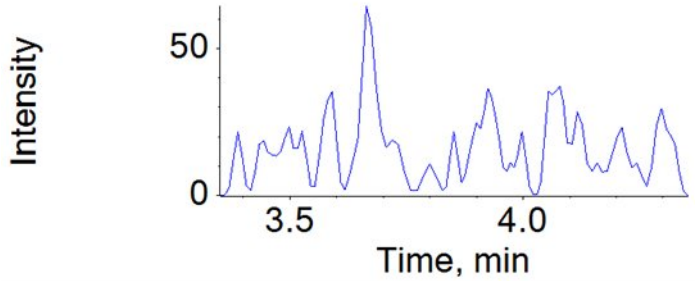
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV09D-04.wiff

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	

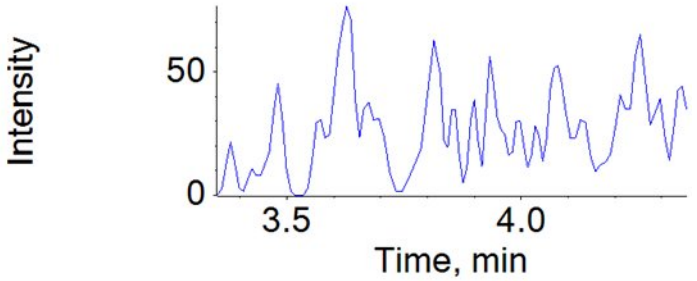
APPROVED
By MCD at 5:19 pm, 11/9/18

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By HMK at 8:09 am, 11/15/18

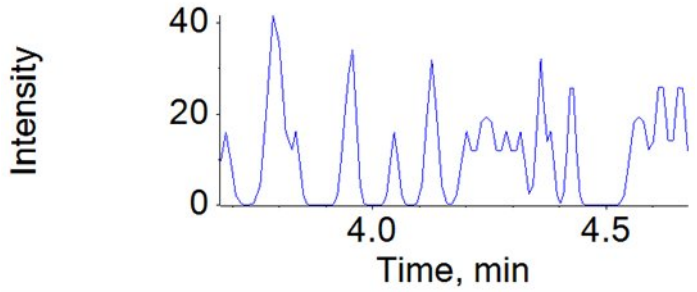
Component: PFBS
Primary Mass: 299.0 / 80.0



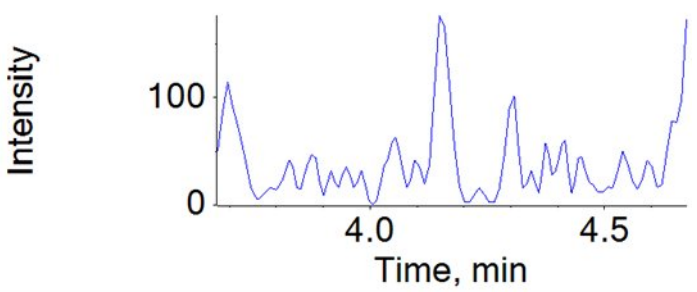
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



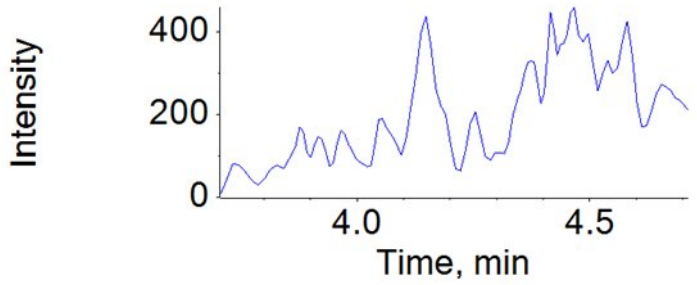
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



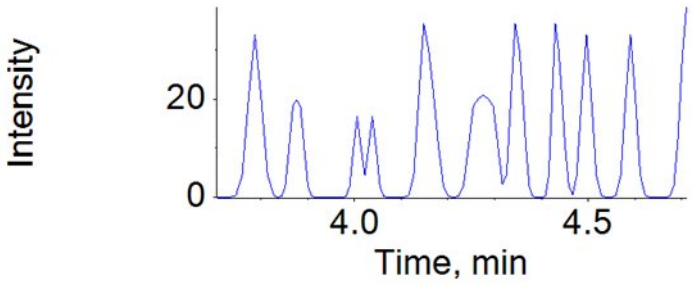
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



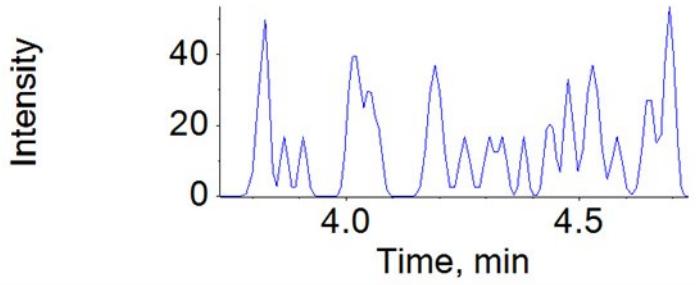
Component: PFHxA
Primary Mass: 313.0 / 269.0



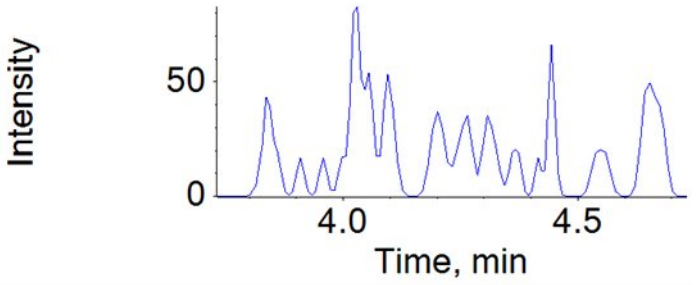
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



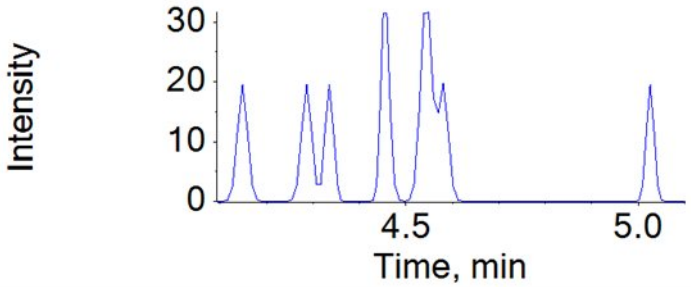
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



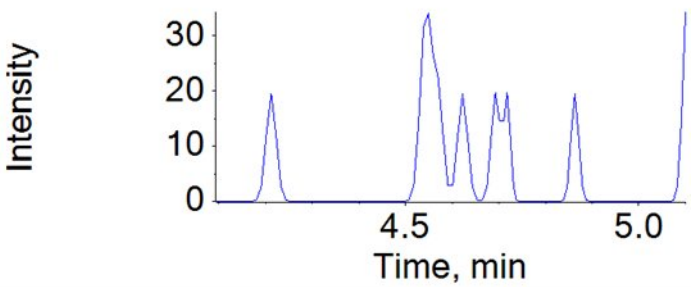
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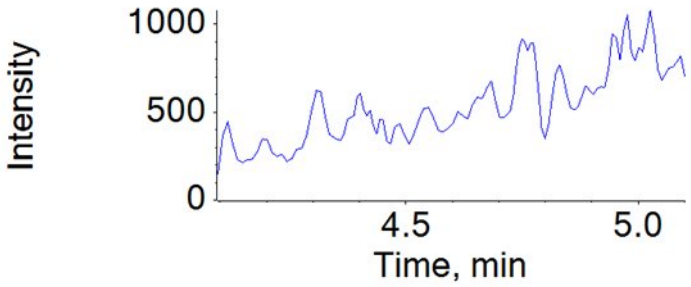
Component: PFHxS
Primary Mass: 399.0 / 80.0



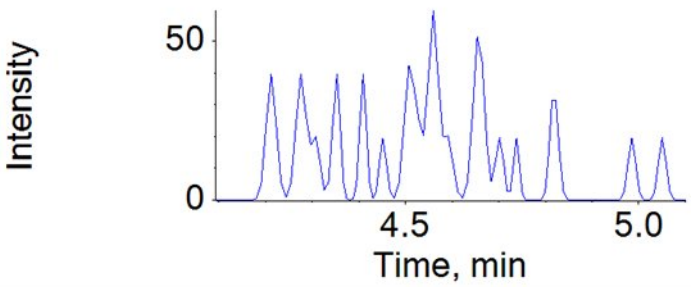
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



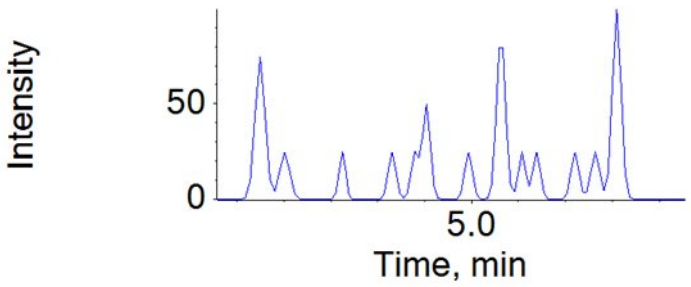
Component: PFHpA
Primary Mass: 363.0 / 319.0



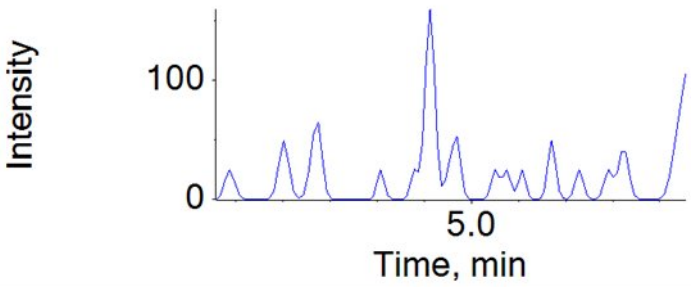
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



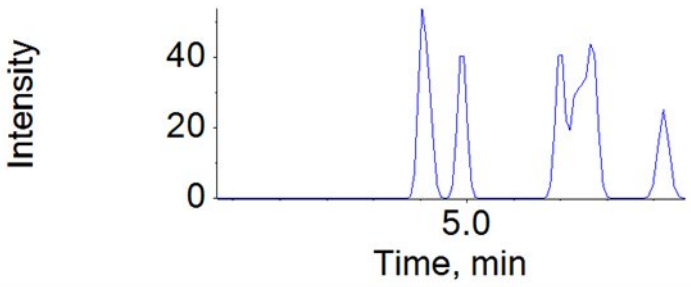
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



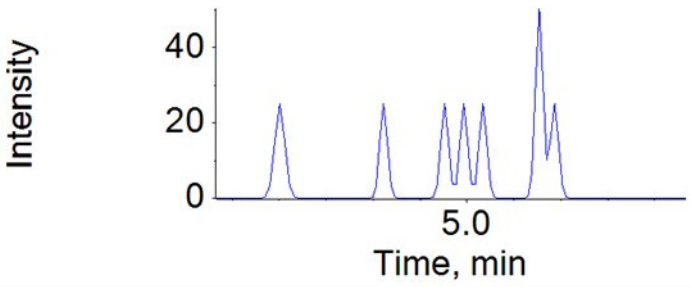
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



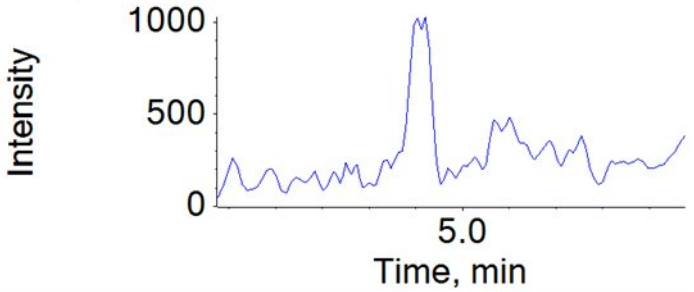
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



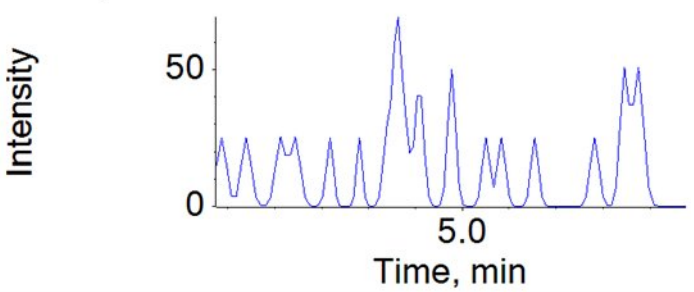
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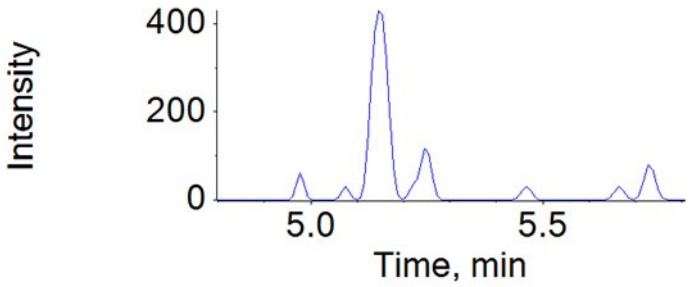
Component: PFOA
Primary Mass: 413.0 / 369.0



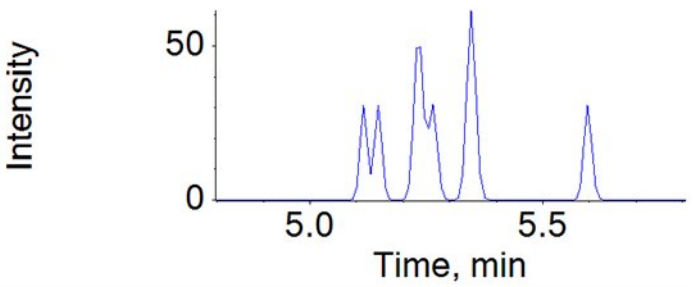
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



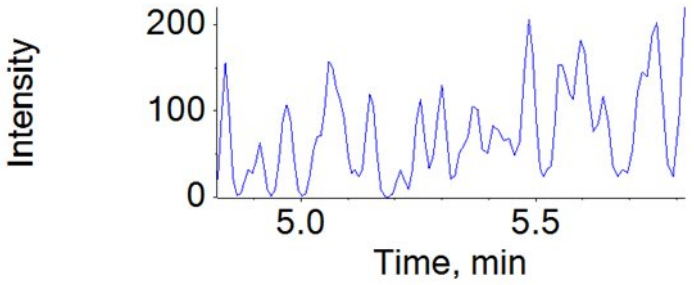
Component: PFOS
Primary Mass: 499.0 / 80.0



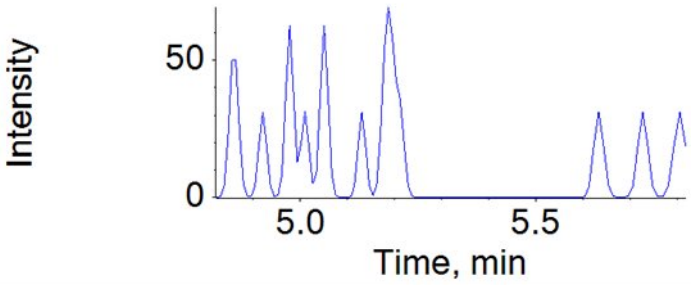
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



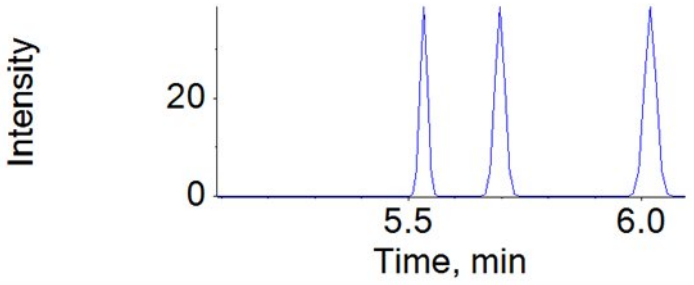
Component: PFNA
Primary Mass: 463.0 / 419.0



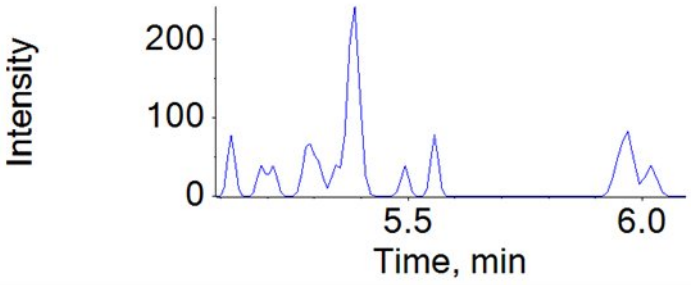
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



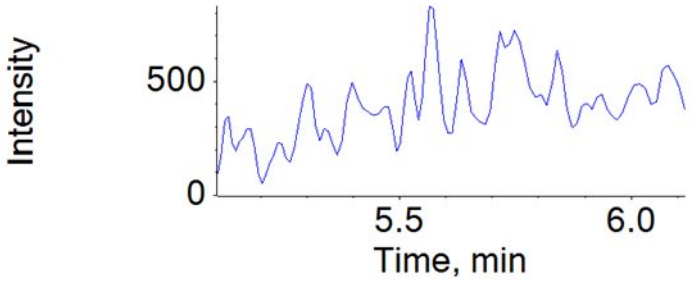
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



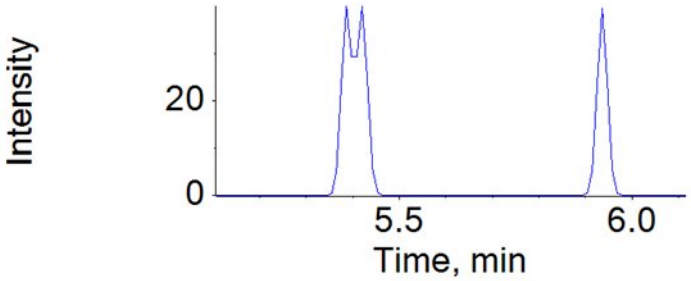
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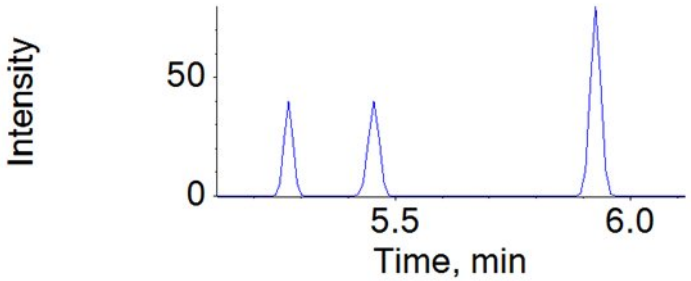
Component: PFDA
Primary Mass: 513.0 / 469.0



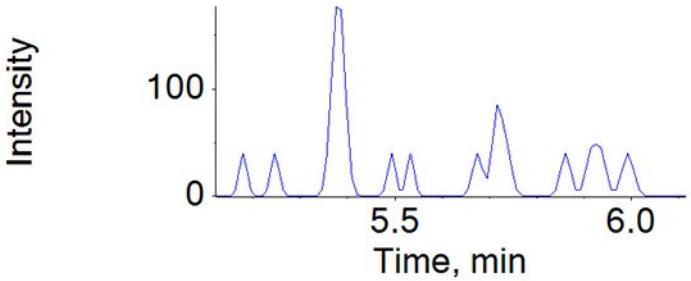
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



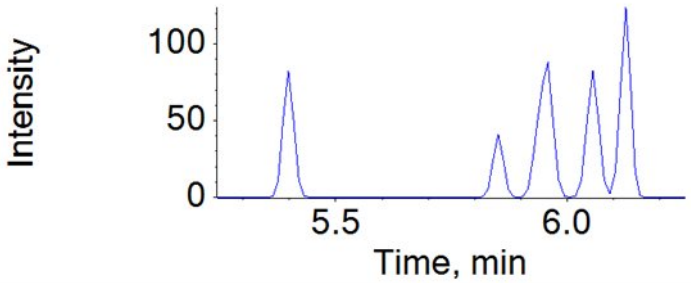
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



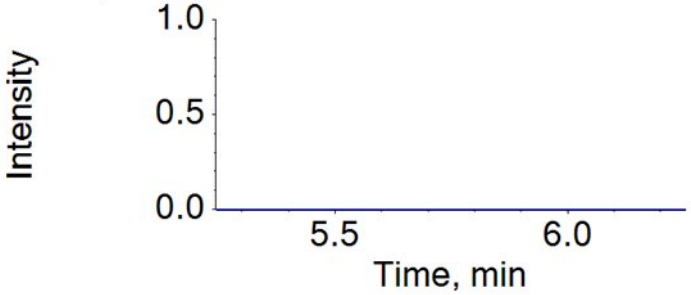
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



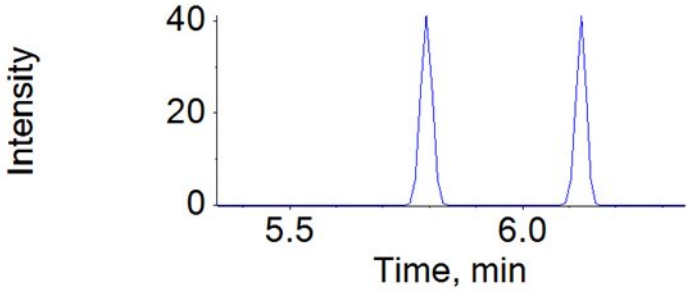
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



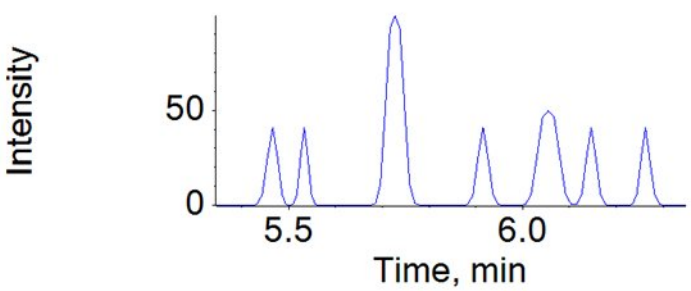
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



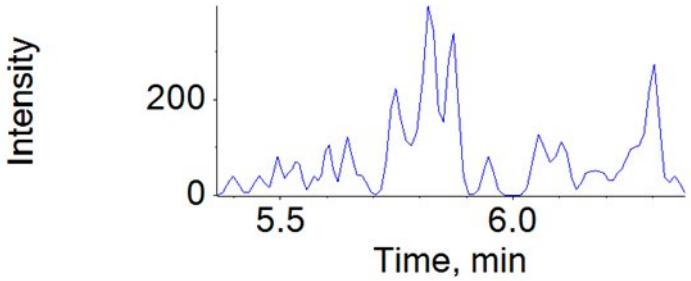
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



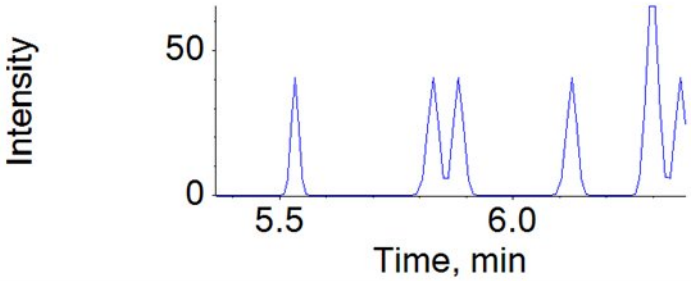
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

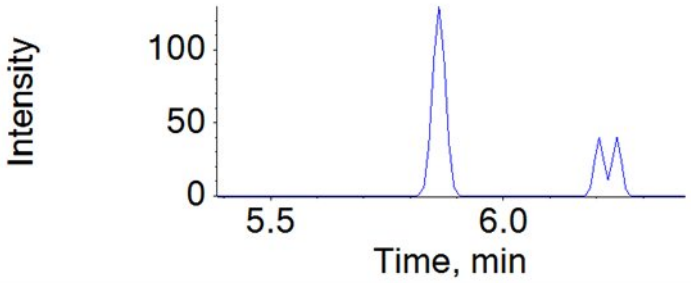
Component: PFUnDA
Primary Mass: 563.0 / 519.0



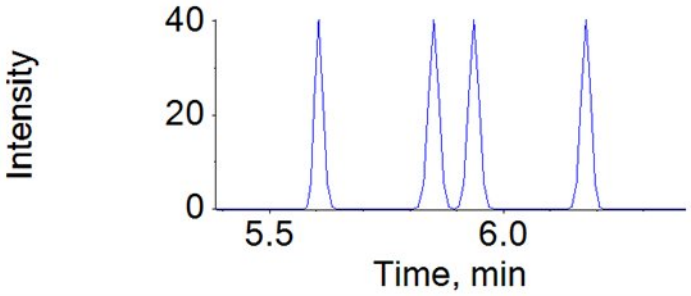
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



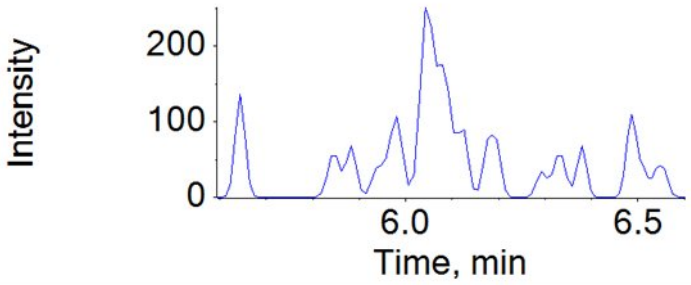
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



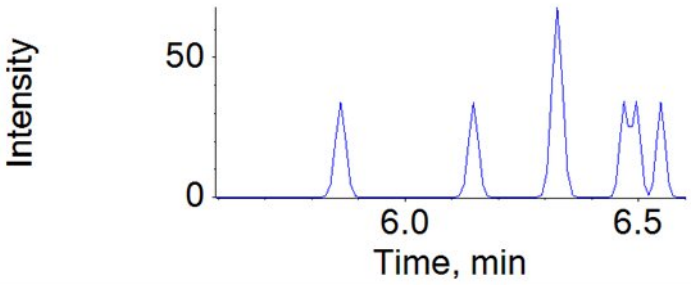
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



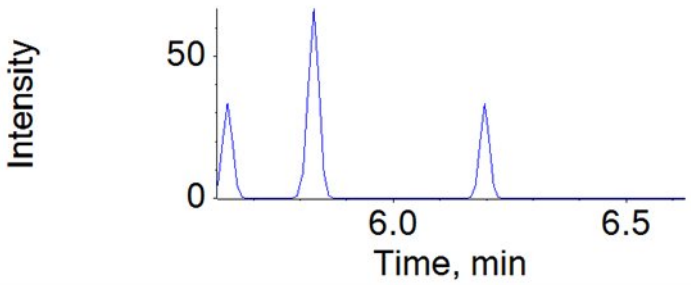
Component: PFDoDA
Primary Mass: 613.0 / 569.0



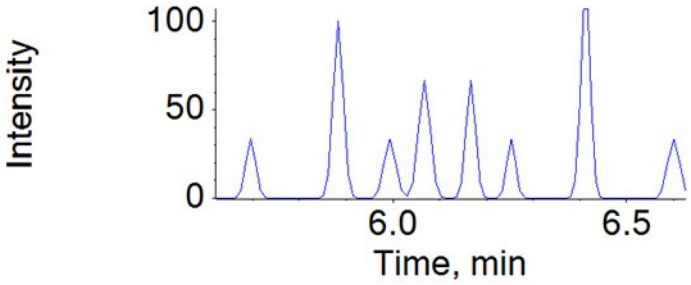
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



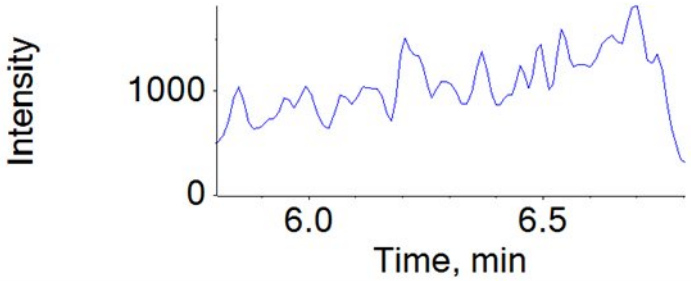
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



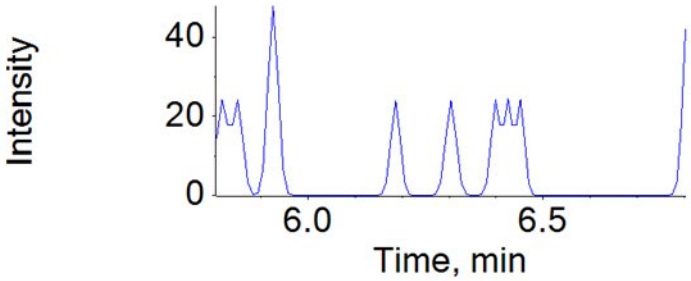
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

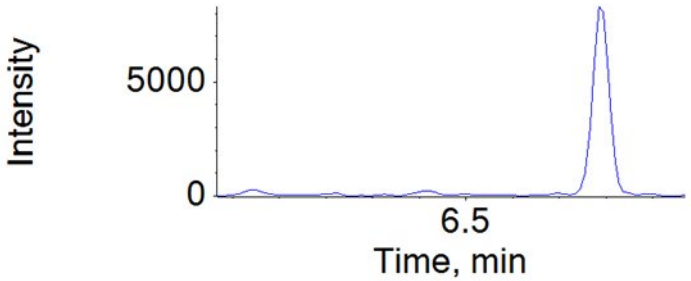
Component: PFTrDA
Primary Mass: 663.0 / 619.0



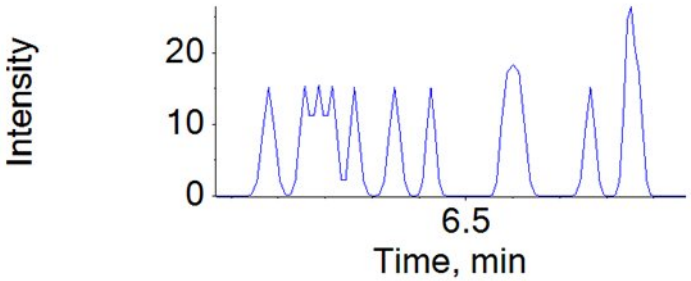
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



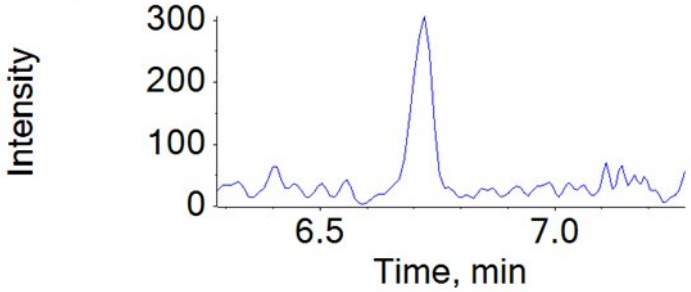
Component: PFTeDA
Primary Mass: 713.0 / 669.0



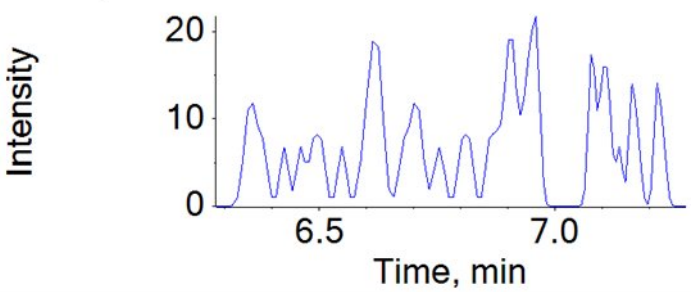
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



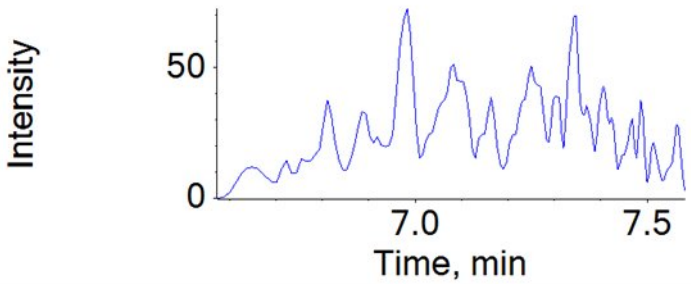
Component: PFHxDA
Primary Mass: 813.0 / 769.0



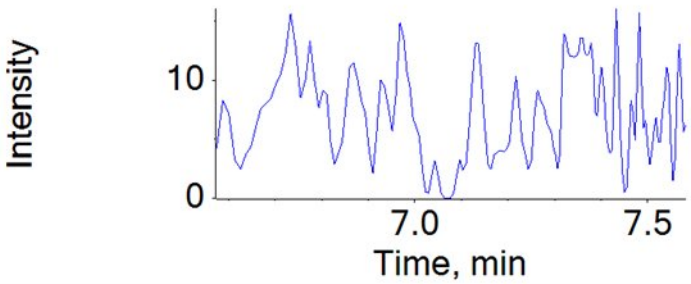
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



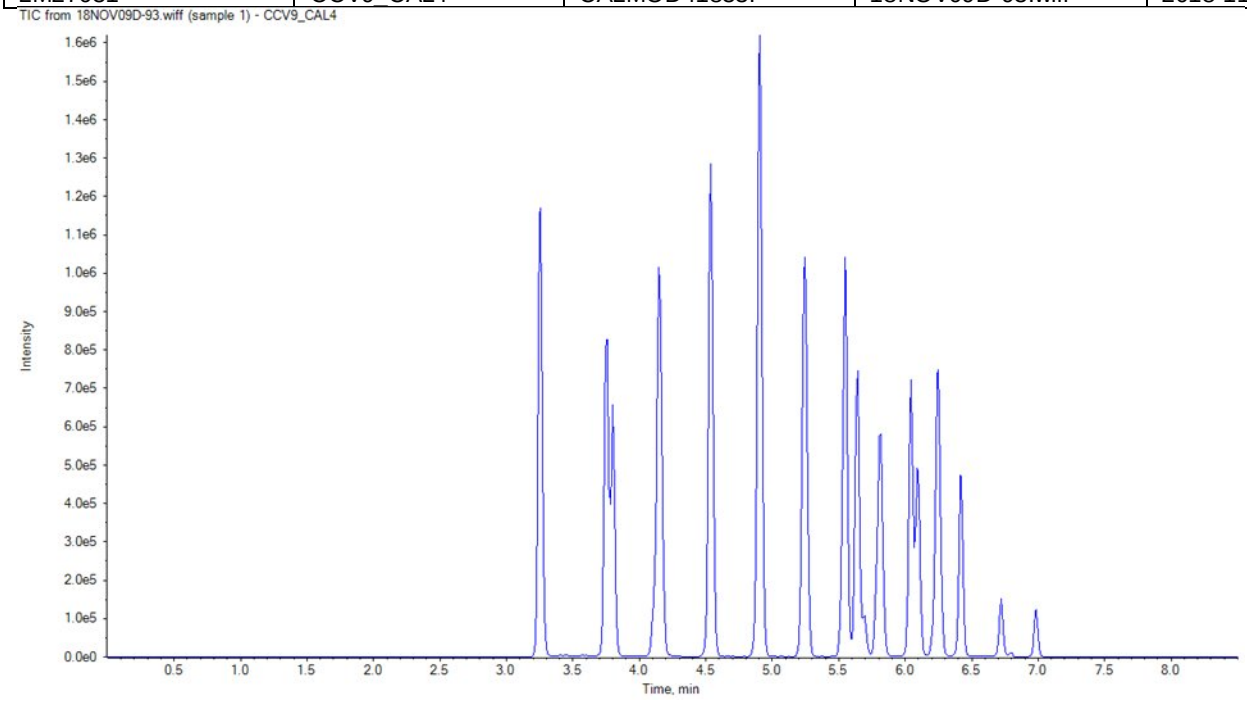
APPROVED
By MCD at 5:19 pm, 11/9/18

REVIEWED
By HMK at 8:09 am, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:20:28 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALMOD41833F	18NOV09D-93.wiff	2018-11-09T18:28:48



Injection Standard Area Reference File: 18NOV09D-03

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	712497.5	725974.7	-2	50	
13C2-PFOA	5.0	500570.4	506876.7	-1	50	
13C4-PFOS	4.8	275988.3	274910.1	0	50	
13C2-PFDA	5.0	308713.2	307276.7	0	50	

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:20:28 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALMOD41833F	18NOV09D-93.wiff	2018-11-09T18:28:48

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	1139098.7	10	13C4-PFBA	765657.0	5.0	1.488	3.25	1.000	8.000	8.707	9	30	
PFPeA	1174283.6	12	13C5-PFPeA	819999.8	5.0	1.432	3.75	1.000	8.000	8.511	6	30	
PFBS	618852.6	11	13C3-PFBS	436552.0	4.7	1.418	3.80	1.000	7.080	7.147	1	30	
4:2-FTS	149531.6	11	13C2-4:2-FTS	55505.9	4.7	2.694	4.11	1.000	7.472	7.242	-3	30	
PFHxA	1392556.0	12	13C5-PFHxA	708057.0	5.0	1.967	4.15	1.000	8.000	8.434	5	30	
PFPeS	330139.4	11	13C3-PFBS	436552.0	4.7	0.756	4.17	1.100	7.500	7.459	-1	30	
PFHxS	485682.2	11	13C3-PFHxS	331304.4	4.7	1.466	4.54	1.000	7.560	7.431	-2	30	
PFHpA	1400896.1	12	13C4-PFHpA	568110.9	5.0	2.466	4.54	1.000	8.000	8.293	4	30	
6:2-FTS	117709.6	11	13C2-6:2-FTS	35347.6	4.8	3.330	4.89	1.000	7.584	8.307	10	30	
PFHpS	490558.9	11	13C3-PFHxS	331304.4	4.7	1.481	4.90	1.080	7.610	7.747	2	30	
PFOA	1426706.1	11	13C8-PFOA	929102.1	5.0	1.536	4.91	1.000	8.000	8.646	8	30	
PFOS	423355.7	11	13C8-PFOS	288304.8	4.8	1.468	5.23	1.000	7.650	7.614	0	30	
PFNA	1132330.4	11	13C9-PFNA	510350.4	5.0	2.219	5.25	1.000	8.000	8.292	4	30	
PFNS	287257.9	10	13C8-PFOS	288304.8	4.8	0.996	5.53	1.060	7.680	7.900	3	30	
PFDA	965736.1	11	13C6-PFDA	603423.7	5.0	1.600	5.55	1.000	8.000	8.805	10	30	
8:2-FTS	95870.0	11	13C2-8:2-FTS	26543.2	4.8	3.612	5.55	1.000	7.664	8.141	6	30	
PFOSA	1068495.9	11	13C8-PFOSA	681613.5	5.0	1.568	5.64	1.000	8.000	8.474	6	30	
NMeFOSAA	125471.8	12	d3-NMeFOSAA	83112.8	5.0	1.510	5.69	1.000	8.000	7.768	-3	30	
PFDS	247881.4	12	13C8-PFOS	288304.8	4.8	0.860	5.79	1.110	7.700	8.213	7	30	
PFUnDA	822211.2	12	13C7-PFUnDA	255372.0	5.0	3.220	5.81	1.000	8.000	9.233	15	30	
NEtFOSAA	128271.0	12	d5-NEtFOSAA	71456.0	5.0	1.795	5.83	1.000	8.000	7.715	-4	30	
PFDoDA	863542.1	12	13C2-PFDoDA	597084.5	5.0	1.446	6.04	1.000	8.000	7.838	-2	30	
10:2-FTS	70934.4	12	13C2-8:2-FTS	26543.2	4.8	2.672	6.06	1.090	7.712	8.321	8	30	
NMePFOSAE	628276.9	12	d7-NMePFOSAE	316099.2	5.0	1.988	6.10	1.000	8.000	8.907	11	30	
NMePFOSA	119434.8	11	d3-NMePFOSA	82680.7	5.0	1.445	6.10	1.000	8.000	8.086	1	30	
PFDoS	109009.9	11	13C8-PFOS	288304.8	4.8	0.378	6.21	1.190	7.740	7.298	-6	30	
NEtPFOSAE	723827.4	11	d9-NEtPFOSAE	261894.1	5.0	2.764	6.25	1.000	8.000	8.860	11	30	
NEtPFOSA	121705.0	11	d5-NEtPFOSA	66327.9	5.0	1.835	6.26	1.000	8.000	8.081	1	30	
PFTrDA	710854.3	11	13C2-PFDoDA	597084.5	5.0	1.191	6.24	1.030	8.000	7.508	-6	30	
PFTeDA	594522.5	11	13C2-PFTeDA	402638.0	5.0	1.477	6.42	1.000	8.000	8.671	8	30	
PFHxDA	285582.4	11	13C2-PFTeDA	402638.0	5.0	0.709	6.72	1.050	8.000	8.805	10	30	
PFODA	254002.1	10	13C2-PFTeDA	402638.0	5.0	0.631	6.98	1.090	8.000	9.038	13	30	

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV09DCCV5-10 11/9/2018 9:20:28 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV9_CAL4			**Data File:**		18NOV09D-93.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-09T18:28:48
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV09DCCV5-10
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: 18NOV09D-03

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	712497.5	725974.7	-2	50	
13C2-PFOA	5.0	500570.4	506876.7	-1	50	
13C4-PFOS	4.8	275988.3	274910.1	0	50	
13C2-PFDA	5.0	308713.2	307276.7	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	765657.0	13C3-PFBA	712497.5	1.075	5.000	4.973	99	70-130	
E13C5-PFPeA	819999.8	13C3-PFBA	712497.5	1.151	5.000	5.014	100	70-130	
E13C3-PFBS	436552.0	13C3-PFBA	712497.5	0.613	4.650	4.497	97	70-130	
E13C2-4:2-FTS	55505.9	13C2-PFOA	500570.4	0.111	4.670	5.003	107	70-130	
E13C5-PFHxA	708057.0	13C2-PFOA	500570.4	1.415	5.000	5.203	104	70-130	
E13C3-PFHxS	331304.4	13C2-PFOA	500570.4	0.662	4.730	4.751	100	70-130	
E13C4-PFHpA	568110.9	13C2-PFOA	500570.4	1.135	5.000	5.163	103	70-130	
E13C2-6:2-FTS	35347.6	13C2-PFOA	500570.4	0.071	4.750	4.709	99	70-130	
E13C8-PFOA	929102.1	13C2-PFOA	500570.4	1.856	5.000	5.176	104	70-130	
E13C8-PFOS	288304.8	13C4-PFOS	275988.3	1.045	4.780	4.619	97	70-130	
E13C9-PFNA	510350.4	13C4-PFOS	275988.3	1.849	5.000	5.051	101	70-130	
E13C6-PFDA	603423.7	13C2-PFDA	308713.2	1.955	5.000	4.916	98	70-130	
E13C2-8:2-FTS	26543.2	13C2-PFDA	308713.2	0.086	4.790	4.550	95	70-130	
E13C8-PFOSA	681613.5	13C2-PFDA	308713.2	2.208	5.000	4.818	96	70-130	
Ed3-NMeFOSAA	83112.8	13C2-PFDA	308713.2	0.269	5.000	5.006	100	70-130	
E13C7-PFUnDA	255372.0	13C2-PFDA	308713.2	0.827	5.000	4.772	95	70-130	
Ed5-NEtFOSAA	71456.0	13C2-PFDA	308713.2	0.231	5.000	5.357	107	70-130	
E13C2-PFDoDA	597084.5	13C2-PFDA	308713.2	1.934	5.000	5.214	104	70-130	
Ed7-NMePFOSAE	316099.2	13C2-PFDA	308713.2	1.024	5.000	4.762	95	70-130	
Ed3-NMePFOSA	82680.7	13C2-PFDA	308713.2	0.268	5.000	4.903	98	70-130	
Ed9-NEtPFOSAE	261894.1	13C2-PFDA	308713.2	0.848	5.000	4.845	97	70-130	
Ed5-NEtPFOSA	66327.9	13C2-PFDA	308713.2	0.215	5.000	4.975	99	70-130	
E13C2-PFTeDA	402638.0	13C2-PFDA	308713.2	1.304	5.000	4.695	94	70-130	

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

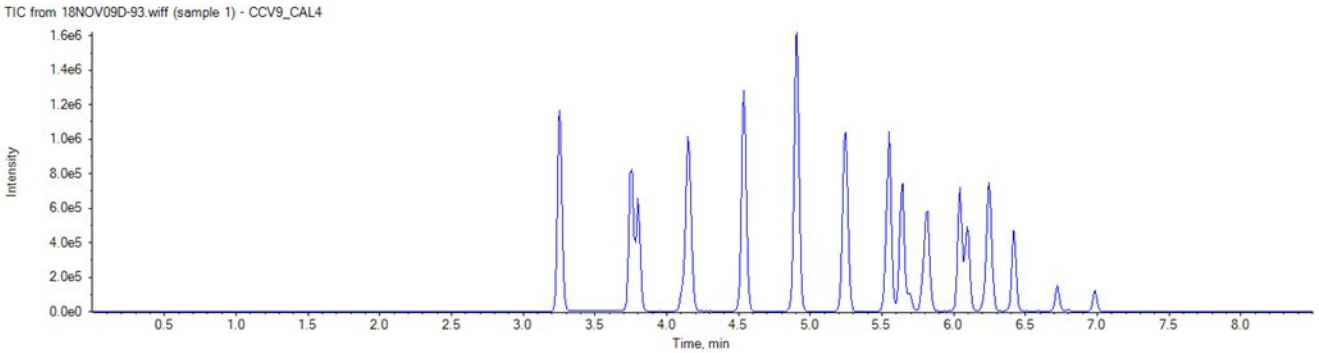
Analyte Quantitation Peak Table

Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV09D-93.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	1139098.7		A	13C4-PFBA	3.25	765657.0	1.488	8.707
PFPeA	3.75	1.000	1174283.6		A	13C5-PFPeA	3.75	819999.8	1.432	8.511
PFBS	3.80	1.000	618852.6		A	13C3-PFBS	3.80	436552.0	1.418	7.147
4:2-FTS	4.11	1.000	149531.6		A	13C2-4:2-FTS	4.11	55505.9	2.694	7.242
PFHxA	4.15	1.000	1392556.0		A	13C5-PFHxA	4.15	708057.0	1.967	8.434
PFPeS	4.17	1.100	330139.4		A	13C3-PFBS	3.80	436552.0	0.756	7.459
PFHxS	4.54	1.000	485682.2		A	13C3-PFHxS	4.54	331304.4	1.466	7.431
PFHpA	4.54	1.000	1400896.1		A	13C4-PFHpA	4.54	568110.9	2.466	8.293
6:2-FTS	4.89	1.000	117709.6		A	13C2-6:2-FTS	4.90	35347.6	3.330	8.307
PFHpS	4.90	1.080	490558.9		A	13C3-PFHxS	4.54	331304.4	1.481	7.747
PFOA	4.91	1.000	1426706.1		A	13C8-PFOA	4.91	929102.1	1.536	8.646
PFOS	5.23	1.000	423355.7		A	13C8-PFOS	5.23	288304.8	1.468	7.614
PFNA	5.25	1.000	1132330.4		A	13C9-PFNA	5.25	510350.4	2.219	8.292
PFNS	5.53	1.060	287257.9		A	13C8-PFOS	5.23	288304.8	0.996	7.900
PFDA	5.55	1.000	965736.1		A	13C6-PFDA	5.55	603423.7	1.600	8.805
8:2-FTS	5.55	1.000	95870.0		A	13C2-8:2-FTS	5.56	26543.2	3.612	8.141
PFOSA	5.64	1.000	1068495.9		A	13C8-PFOSA	5.64	681613.5	1.568	8.474
NMeFOSAA	5.69	1.000	125471.8		A	d3-NMeFOSAA	5.69	83112.8	1.510	7.768
PFDS	5.79	1.110	247881.4		A	13C8-PFOS	5.23	288304.8	0.860	8.213
PFUnDA	5.81	1.000	822211.2		A	13C7-PFUnDA	5.81	255372.0	3.220	9.233
NEtFOSAA	5.83	1.000	128271.0		A	d5-NEtFOSAA	5.82	71456.0	1.795	7.715
PFDoDA	6.04	1.000	863542.1		A	13C2-PFDoDA	6.04	597084.5	1.446	7.838
10:2-FTS	6.06	1.090	70934.4		A	13C2-8:2-FTS	5.56	26543.2	2.672	8.321
NMePFOSAE	6.10	1.000	628276.9		A	d7-NMePFOSAE	6.09	316099.2	1.988	8.907
NMePFOSA	6.10	1.000	119434.8		A	d3-NMePFOSA	6.10	82680.7	1.445	8.086
PFDoS	6.21	1.190	109009.9		A	13C8-PFOS	5.23	288304.8	0.378	7.298
NEtPFOSAE	6.25	1.000	723827.4		A	d9-NEtPFOSAE	6.24	261894.1	2.764	8.860
NEtPFOSA	6.26	1.000	121705.0		A	d5-NEtPFOSA	6.26	66327.9	1.835	8.081
PFTrDA	6.24	1.030	710854.3		A	13C2-PFDoDA	6.04	597084.5	1.191	7.508
PFTeDA	6.42	1.000	594522.5		A	13C2-PFTeDA	6.42	402638.0	1.477	8.671
PFHxDA	6.72	1.050	285582.4		A	13C2-PFTeDA	6.42	402638.0	0.709	8.805
PFODA	6.98	1.090	254002.1		A	13C2-PFTeDA	6.42	402638.0	0.631	9.038

Total Ion Chromatogram

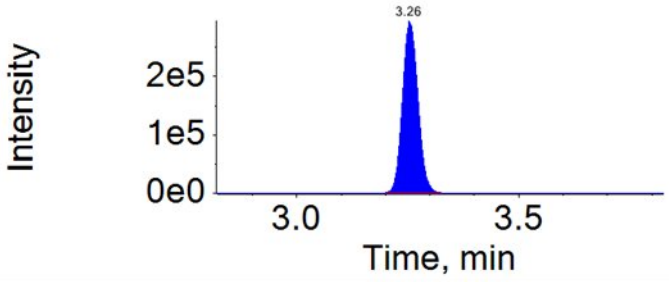


APPROVED
By MCD at 9:29 pm, 11/9/18

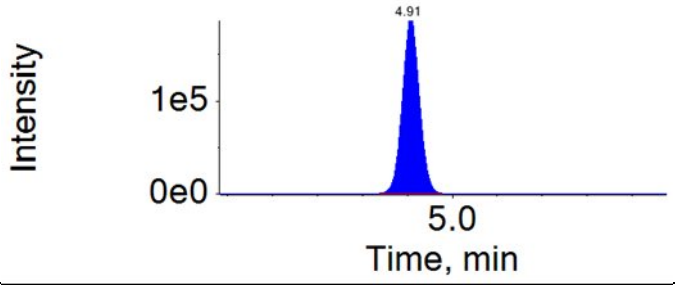
REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

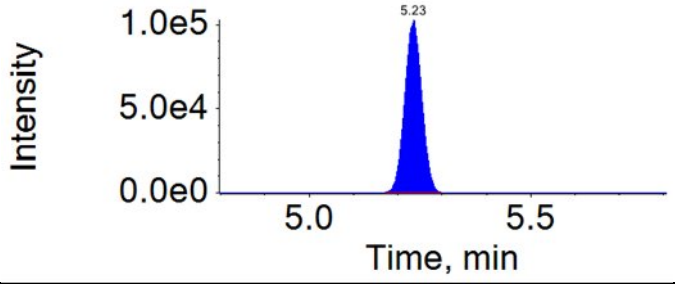
Injection Standard: 13C3-PFBA
216.0 / 172.0



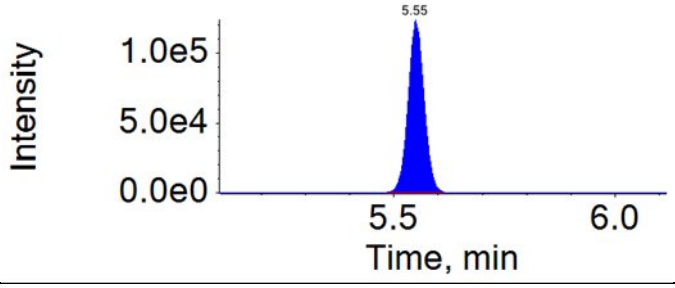
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

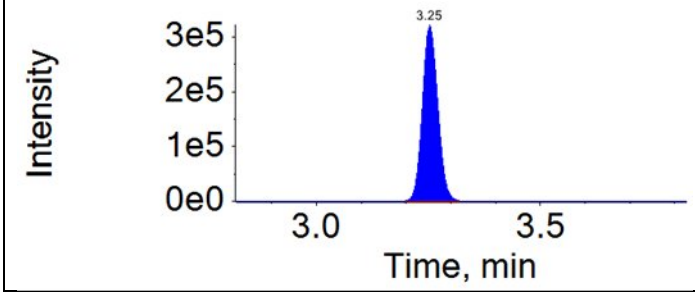


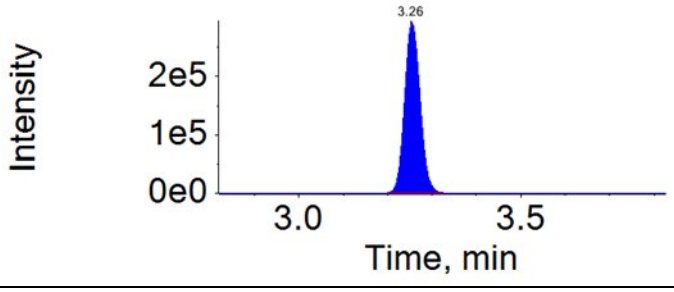
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

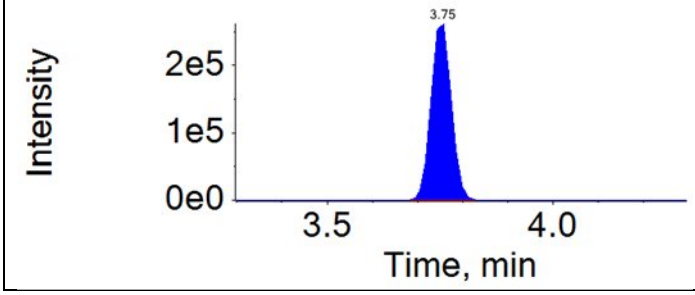
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

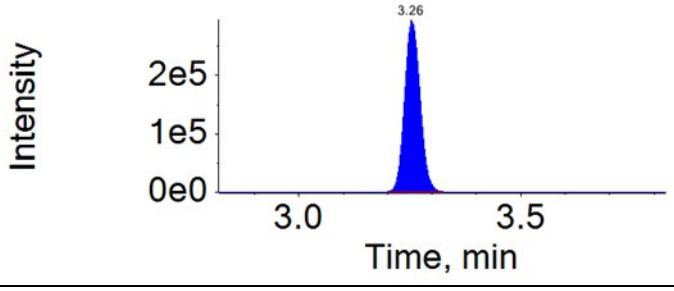
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



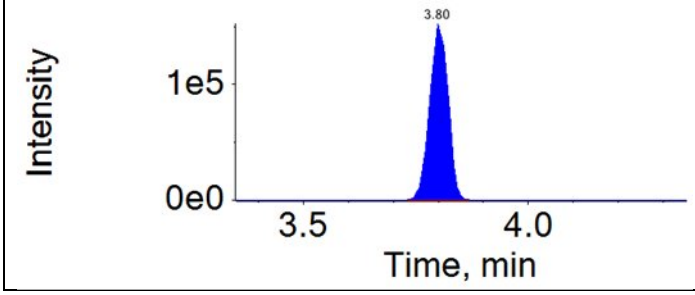


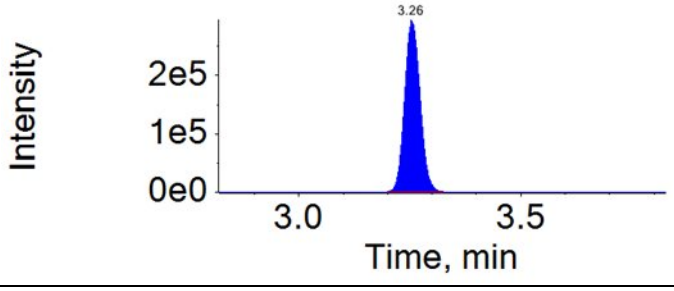
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



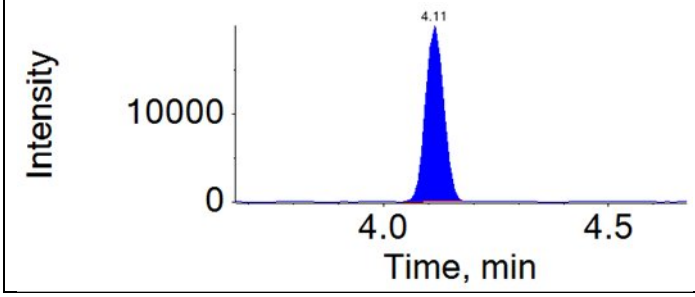


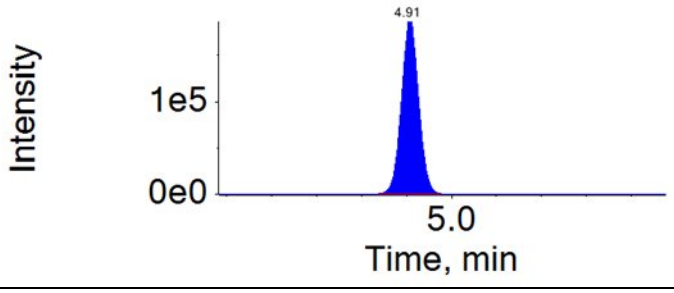
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



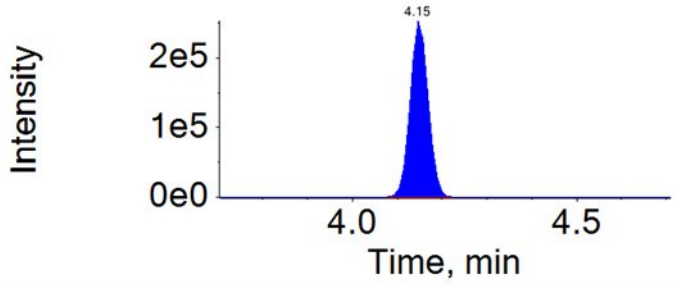


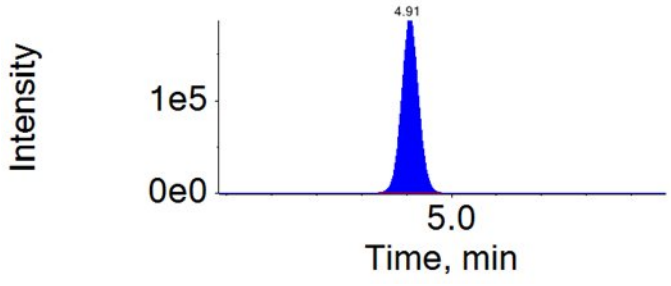
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

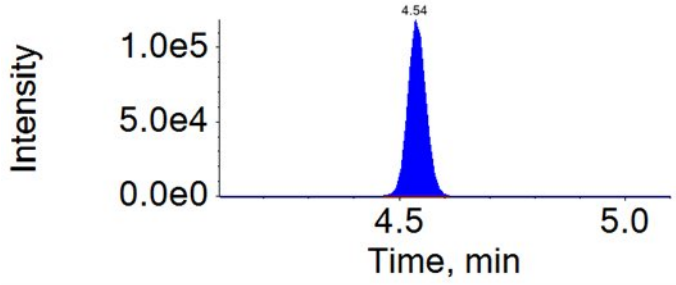
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

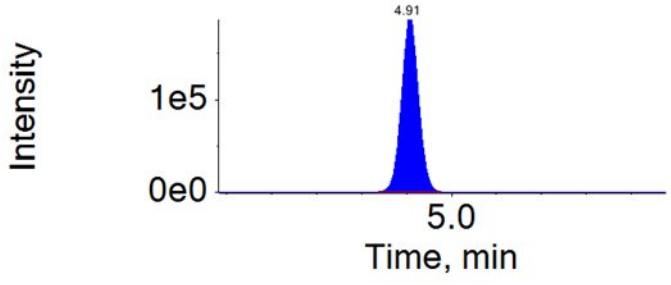
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



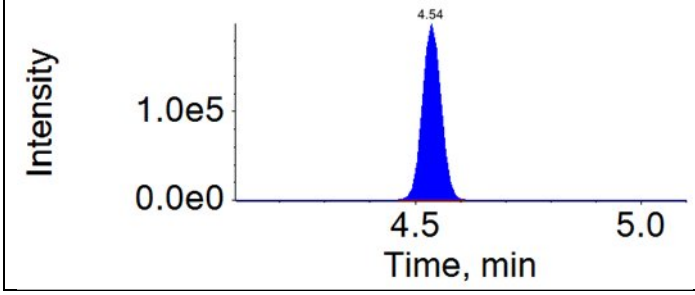


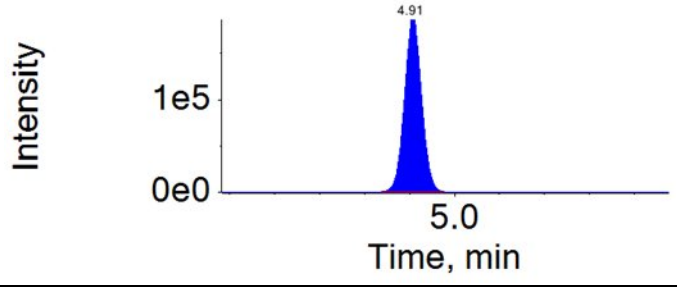
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



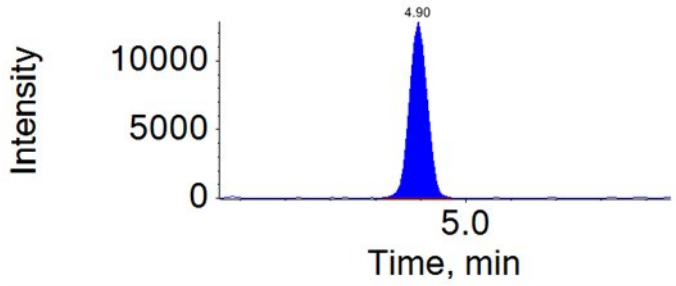


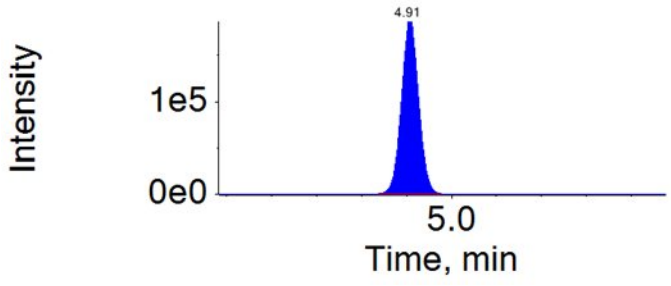
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



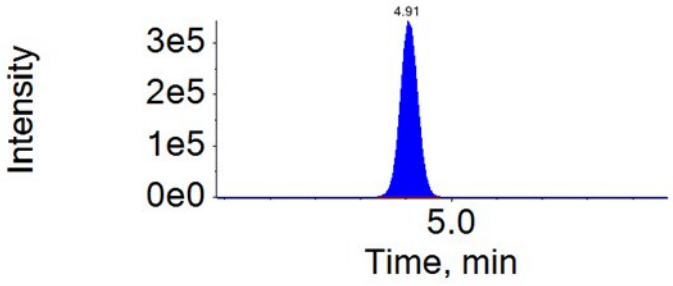


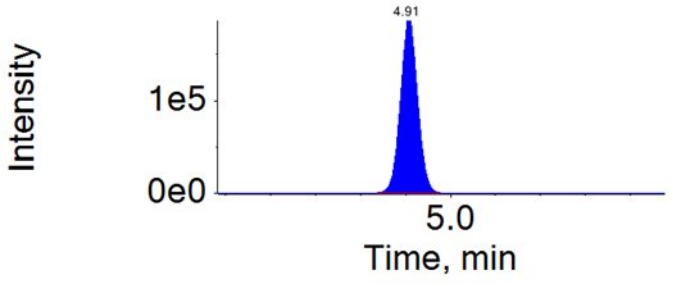
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

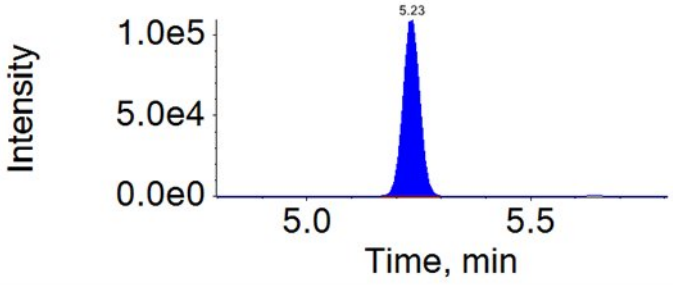
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

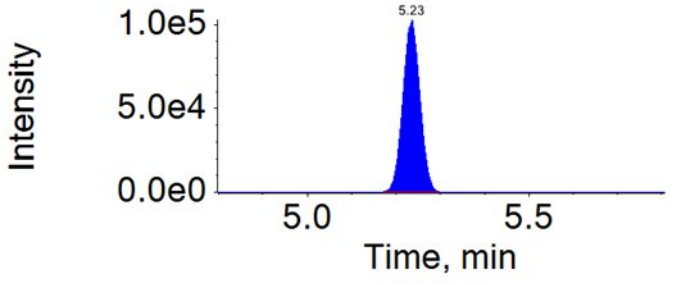
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



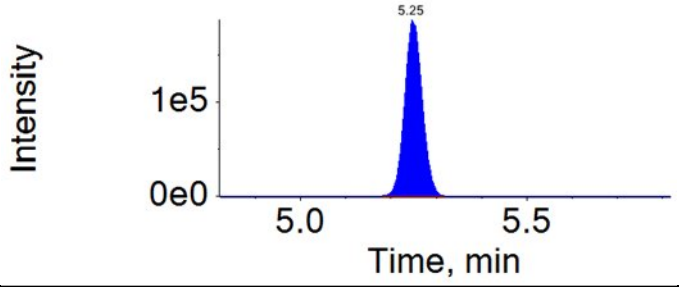


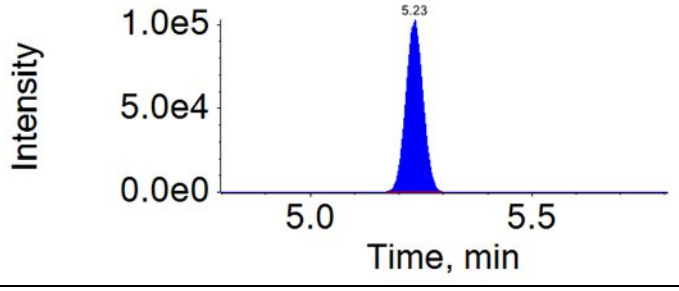
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



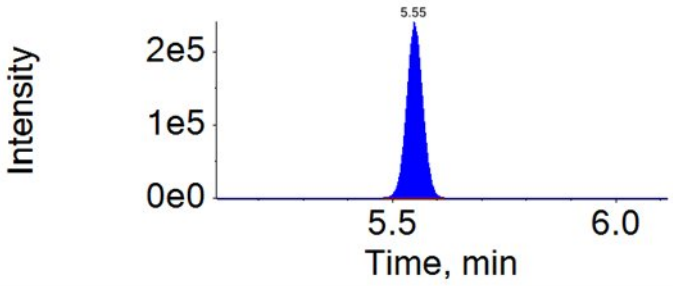


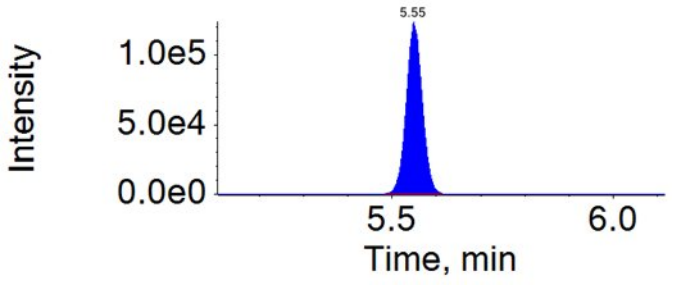
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

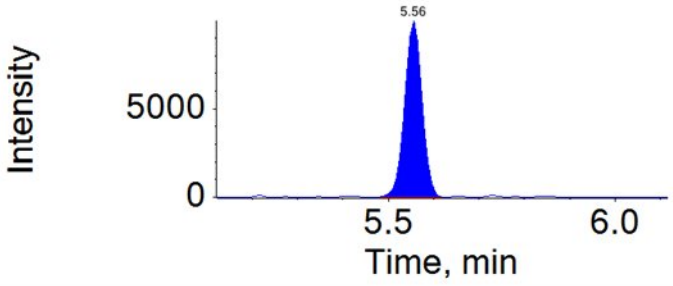
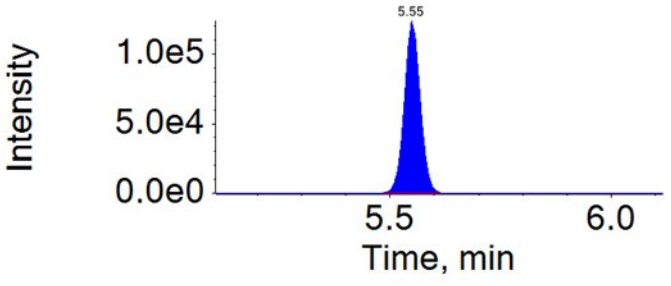


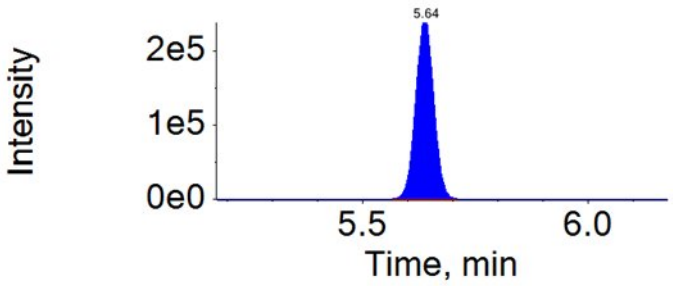
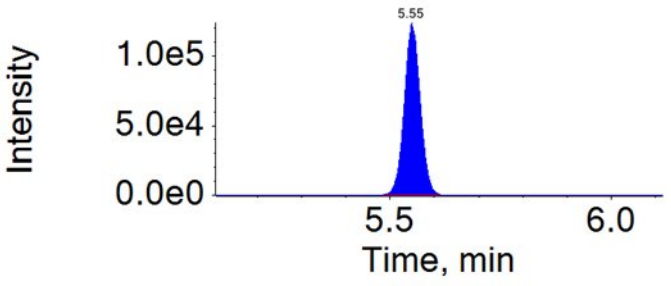


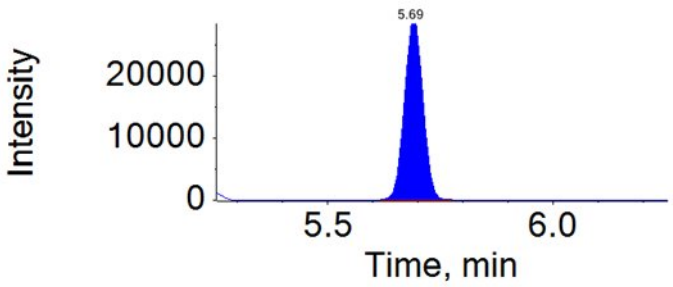
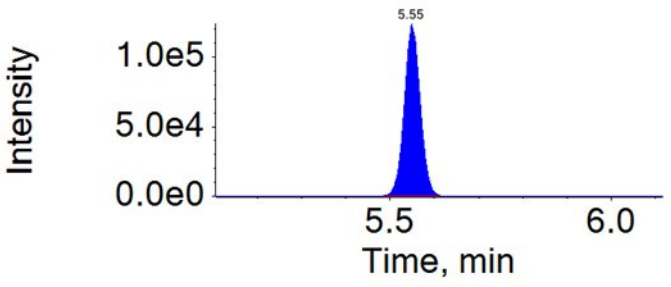
APPROVED
By MCD at 9:29 pm, 11/9/18

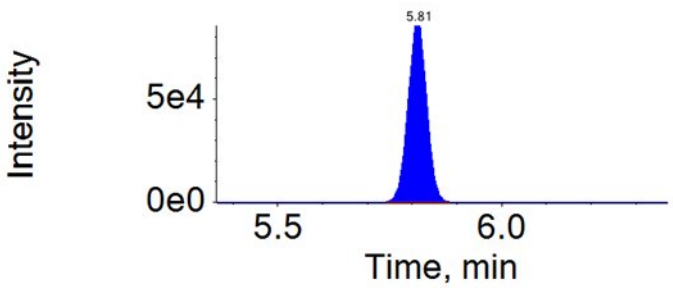
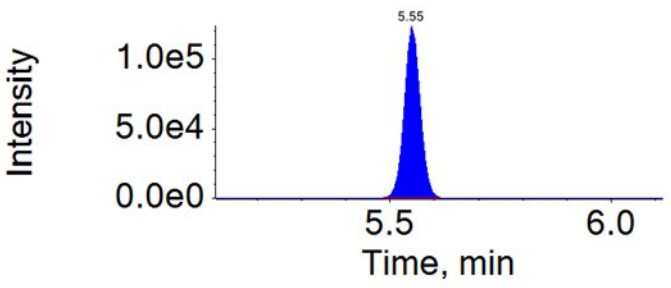
REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 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
	

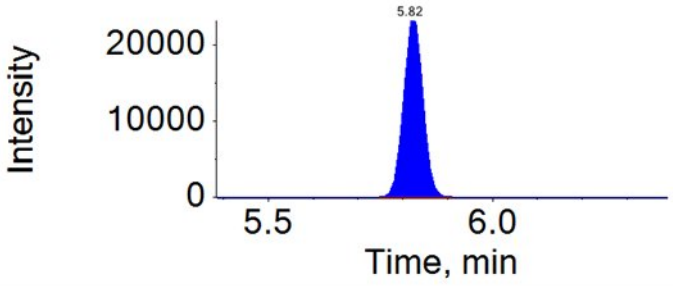
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

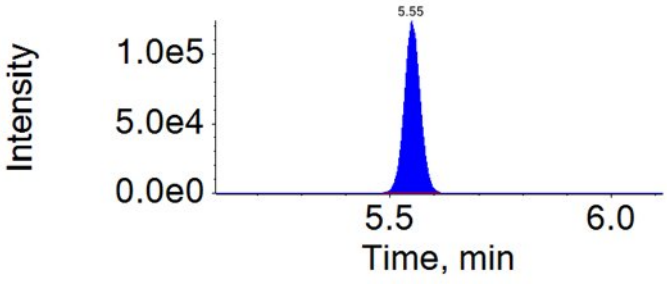
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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

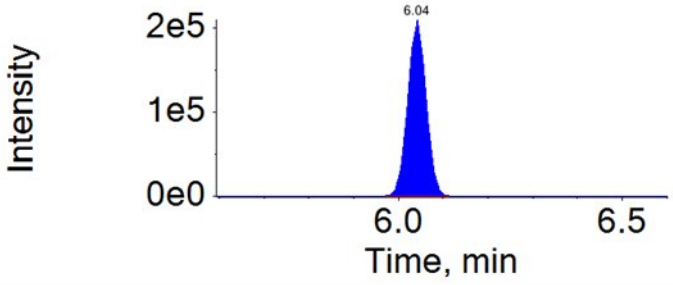
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

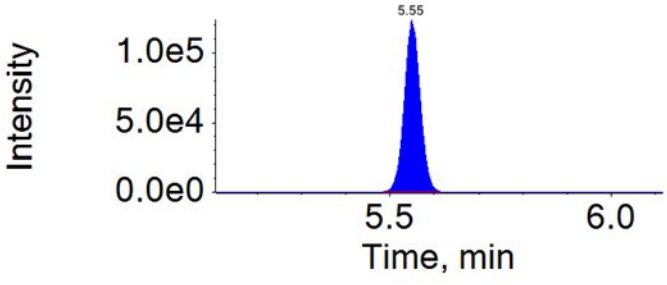
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



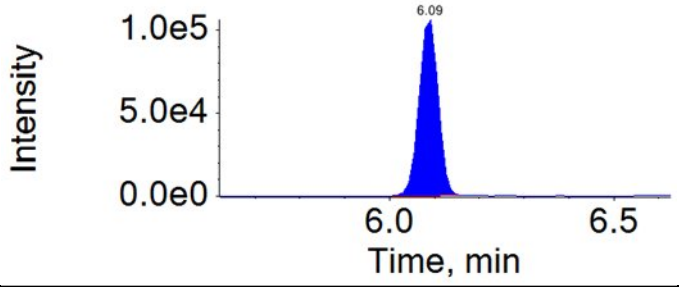


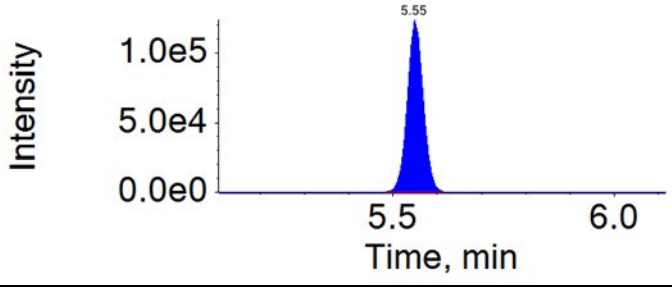
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



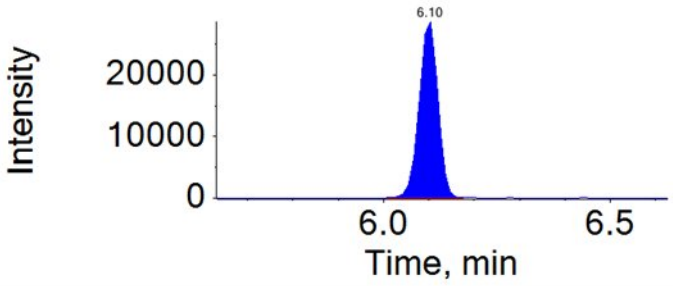


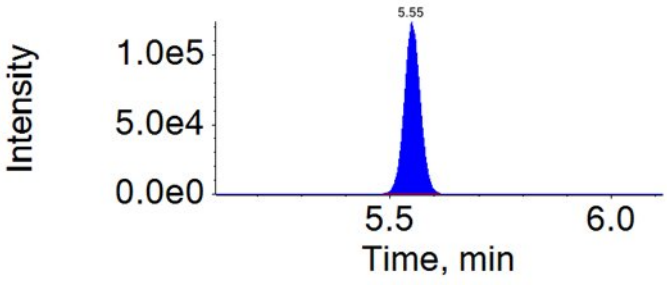
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



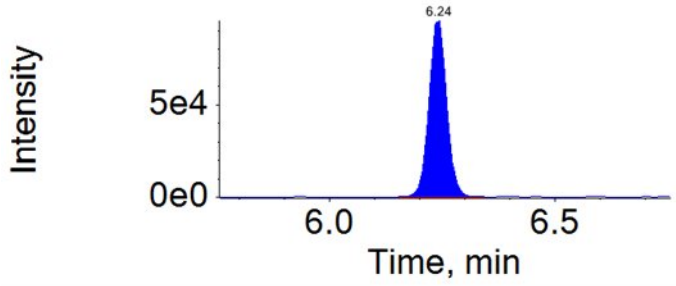


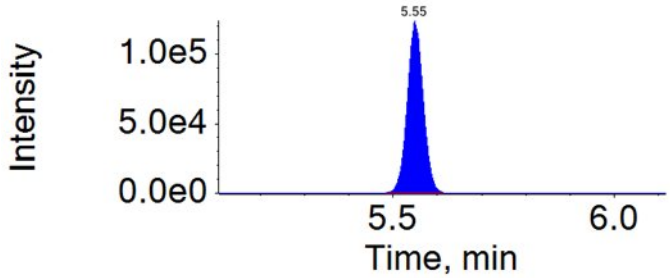
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

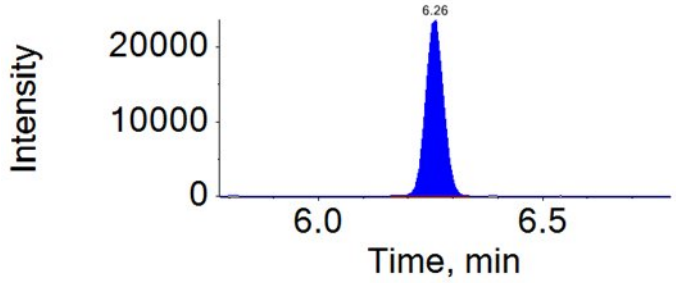
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

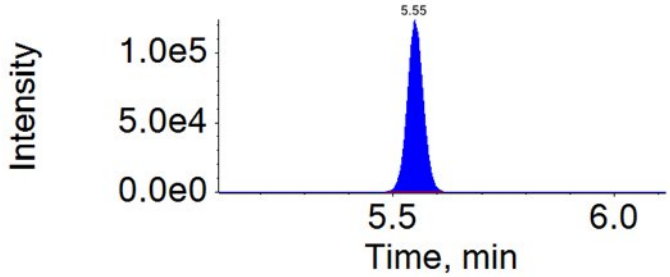
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



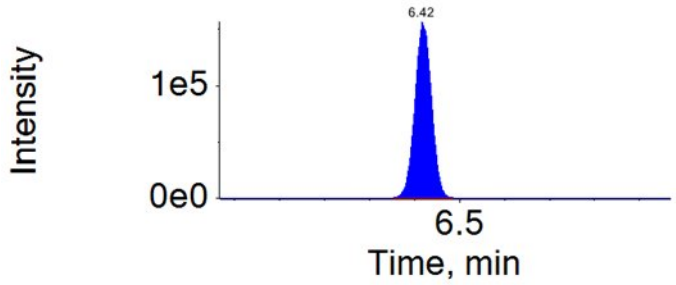


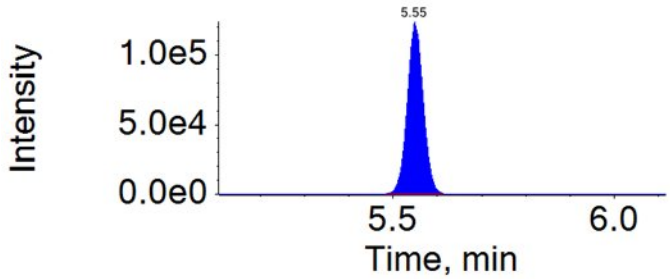
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



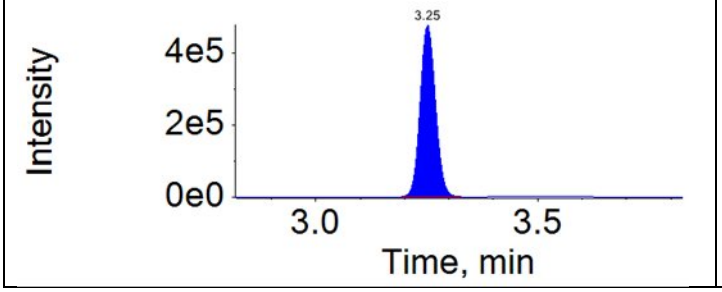


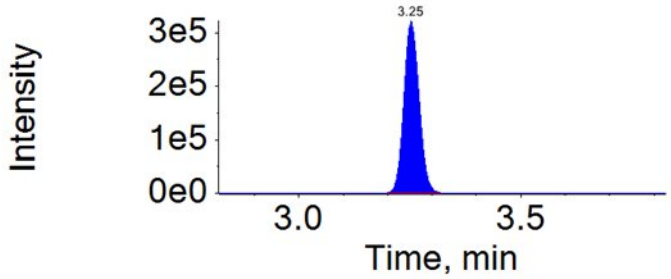
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

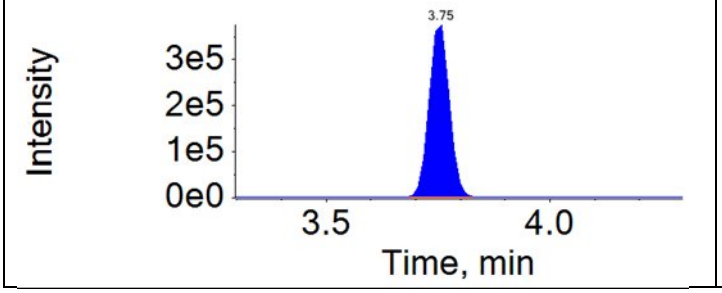
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

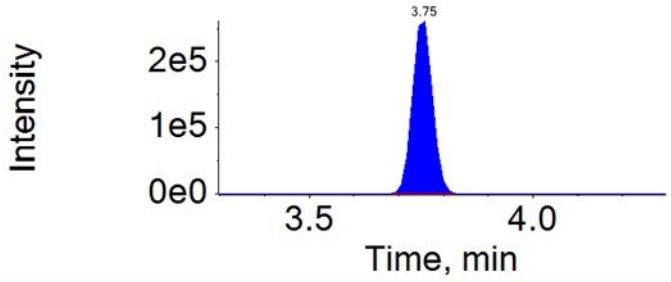
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



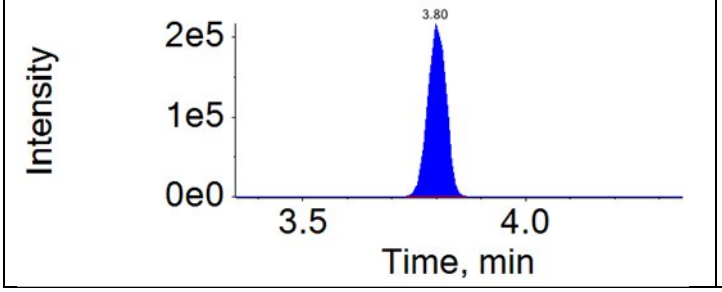


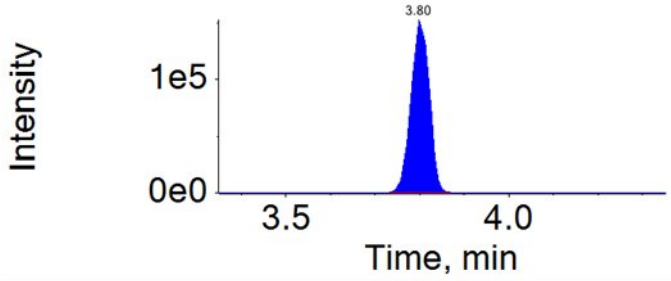
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



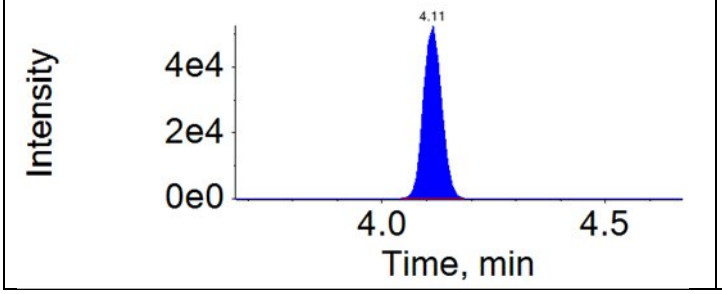


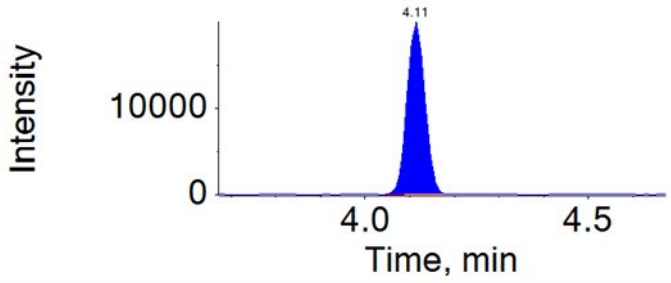
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



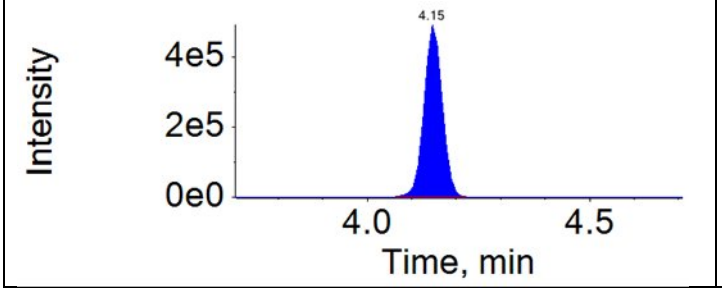


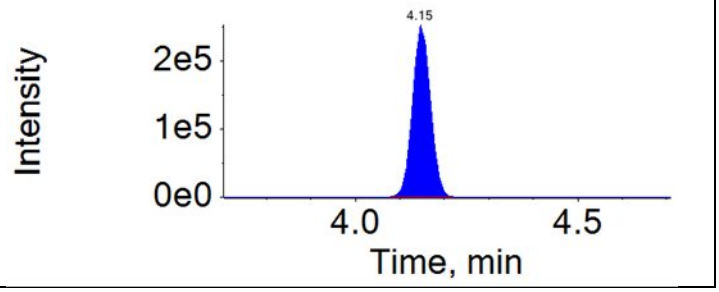
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

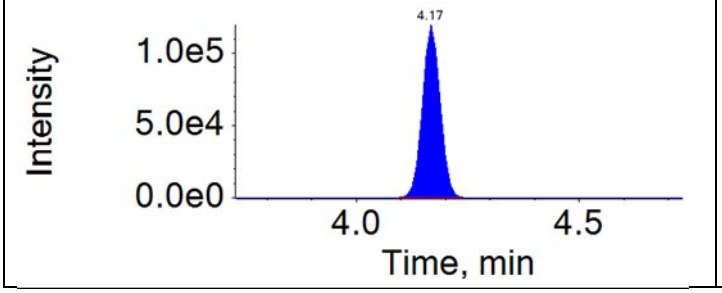
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

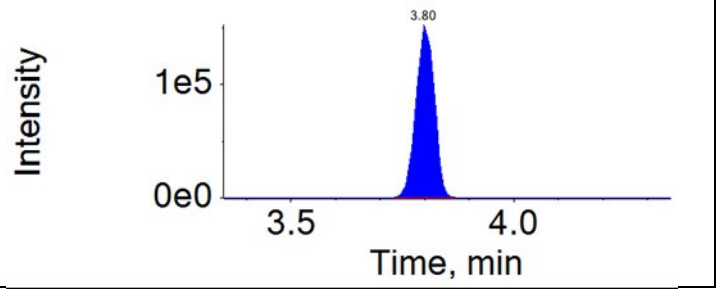
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



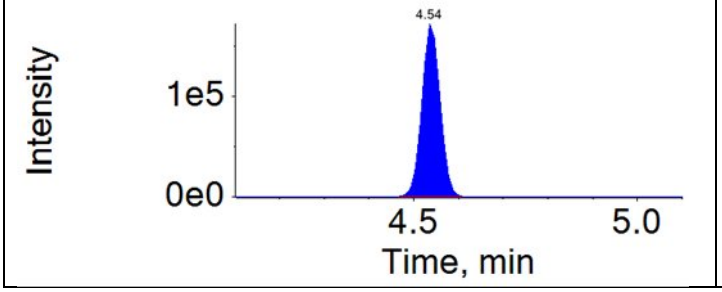


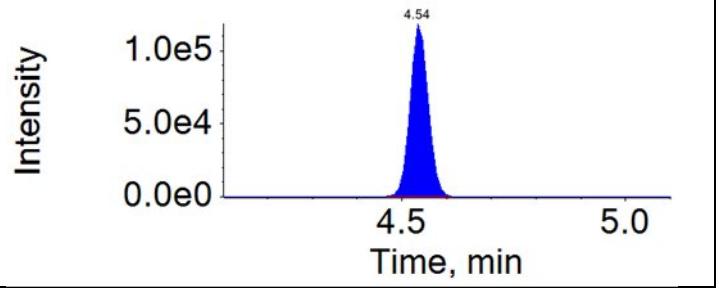
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



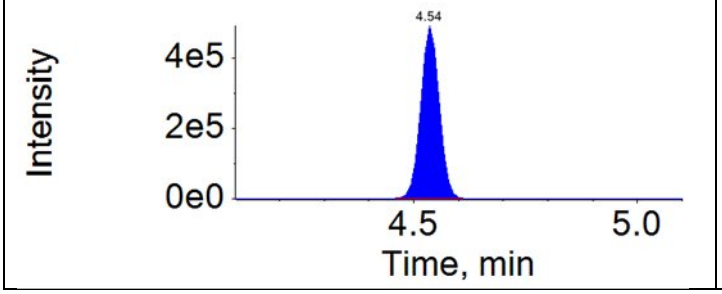


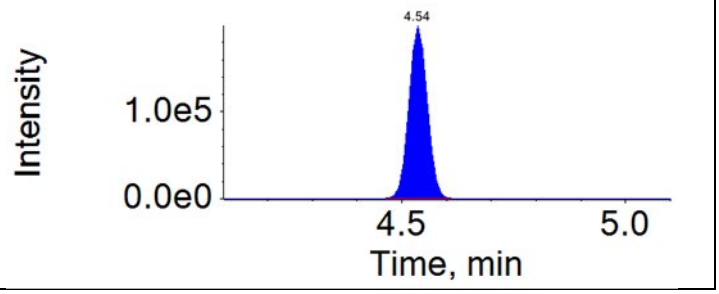
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





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

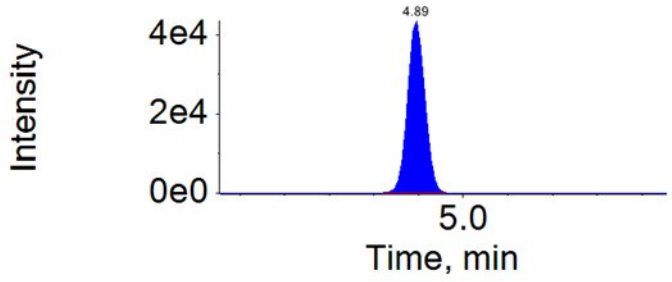
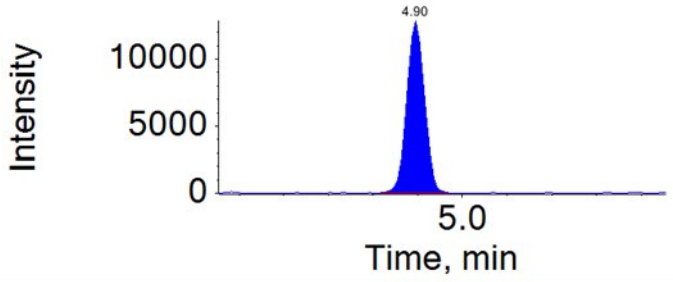


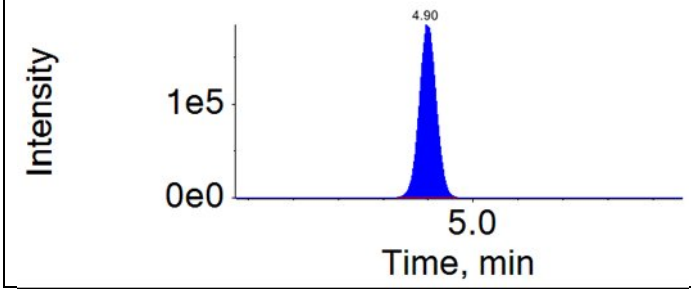
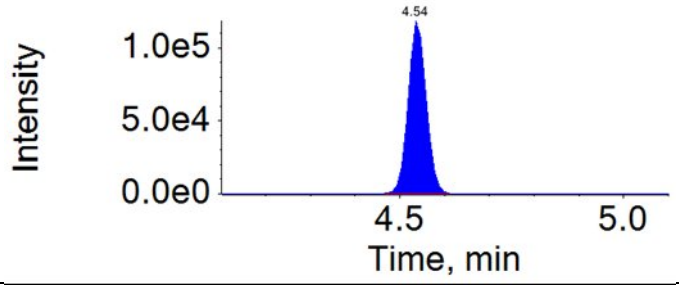


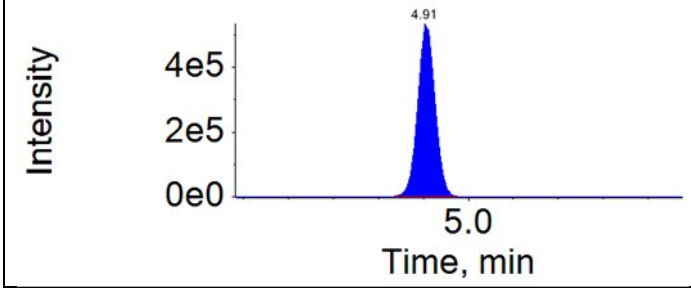
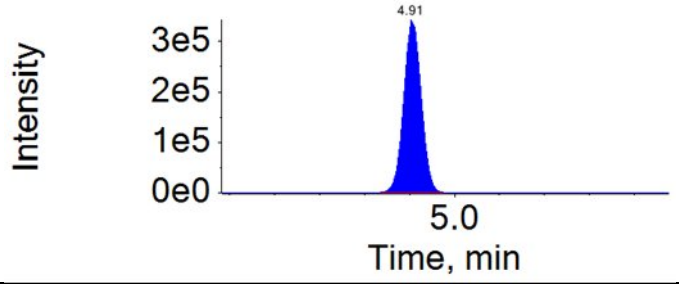
APPROVED
By MCD at 9:29 pm, 11/9/18

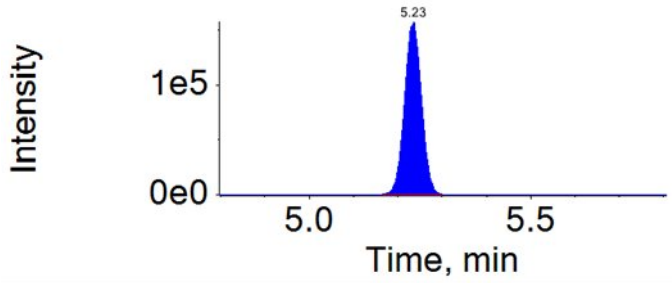
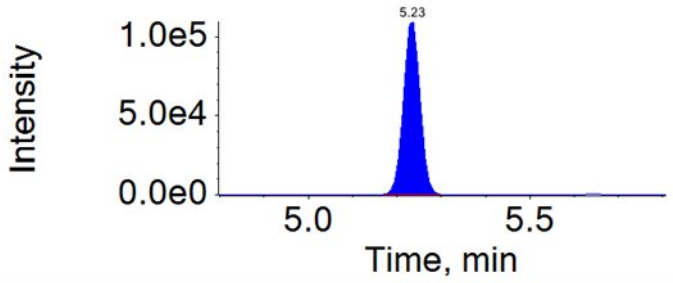
REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 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
	

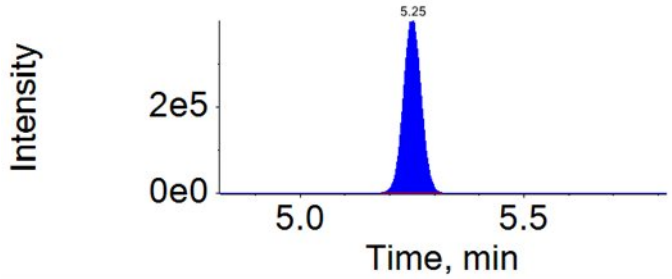
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

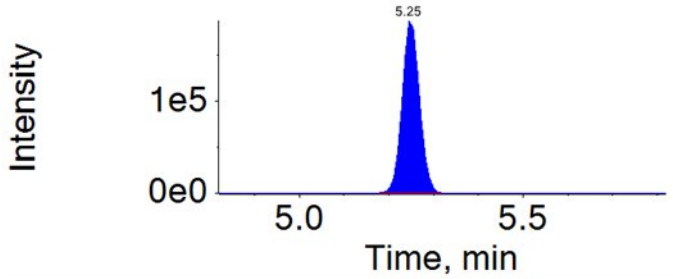
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

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

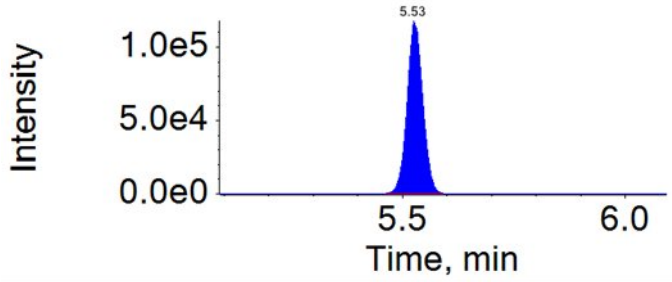
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

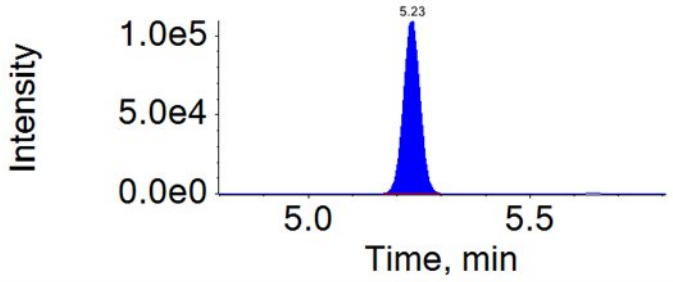
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



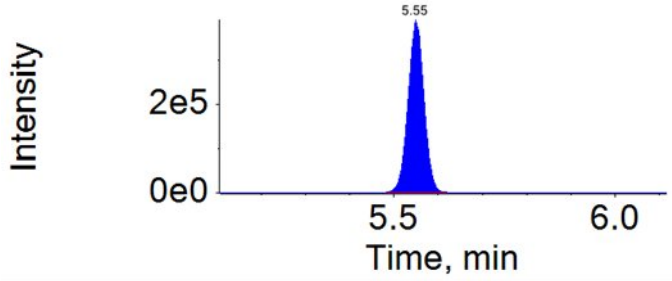


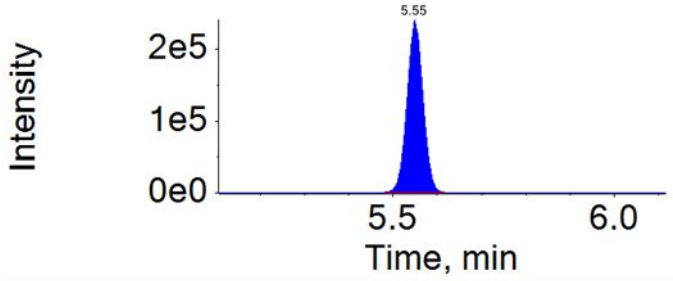
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



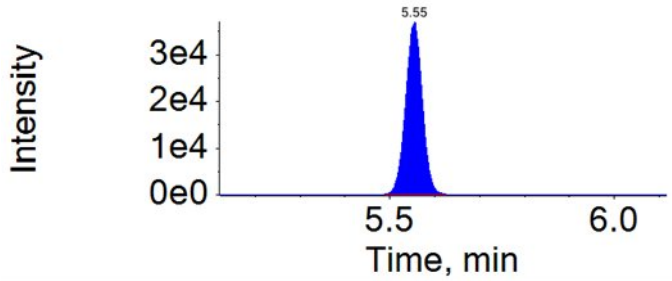


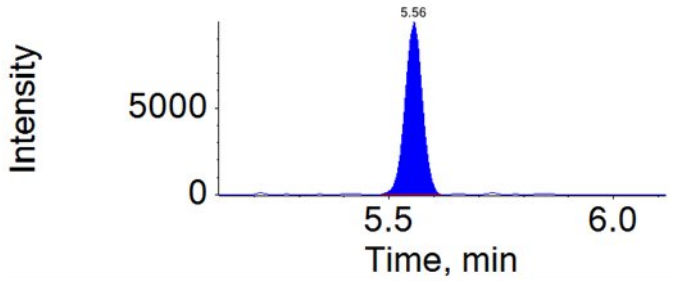
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



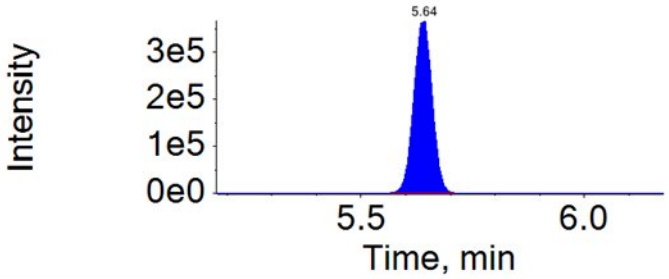
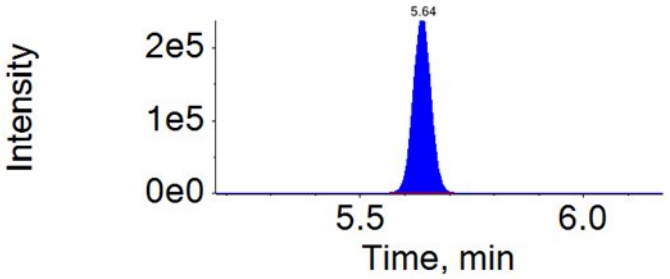


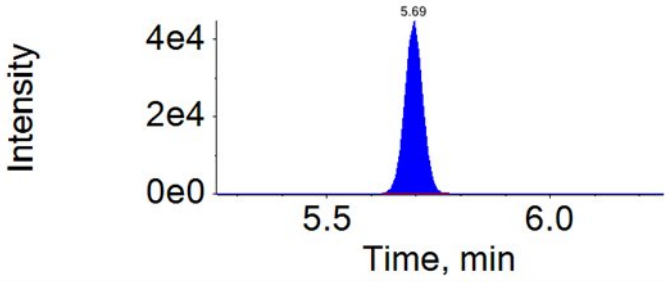
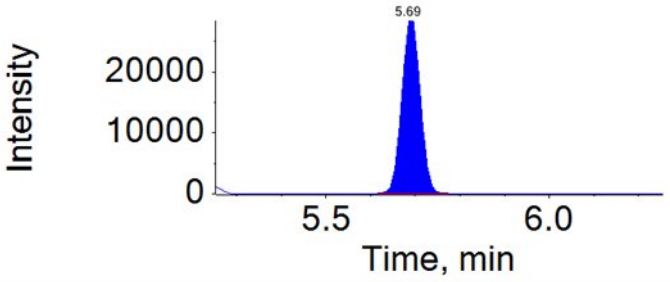
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

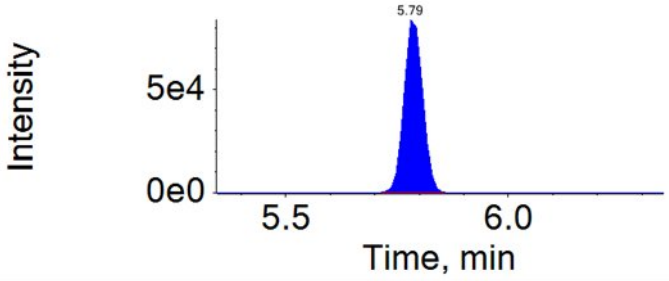
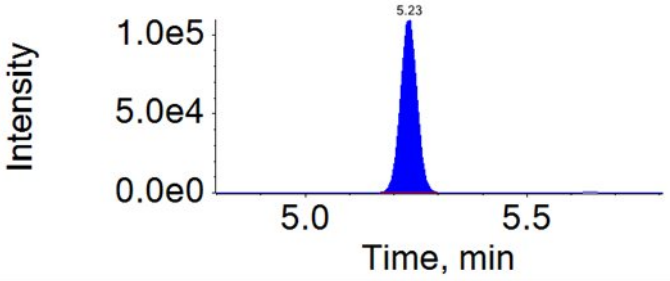


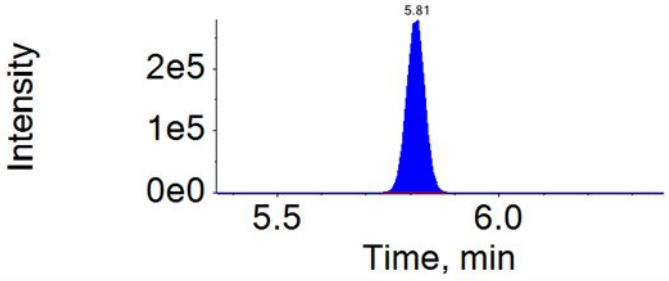
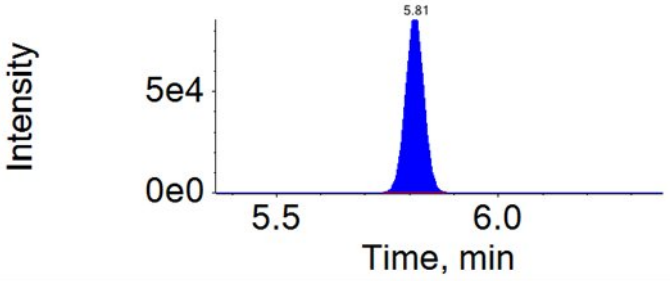


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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
	

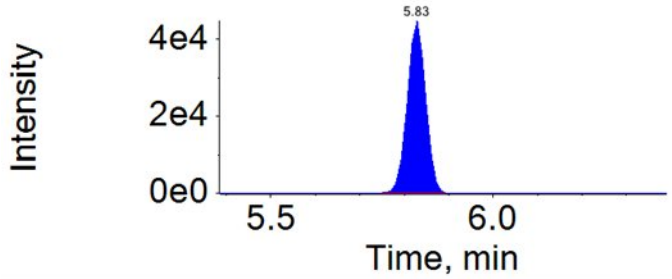
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

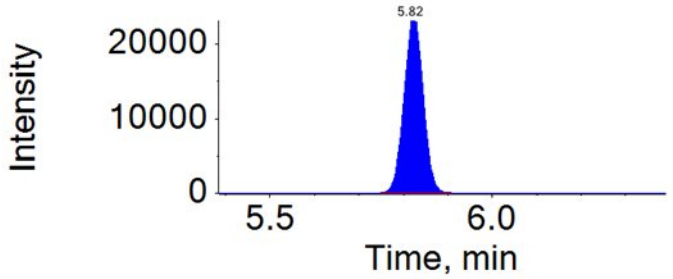
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

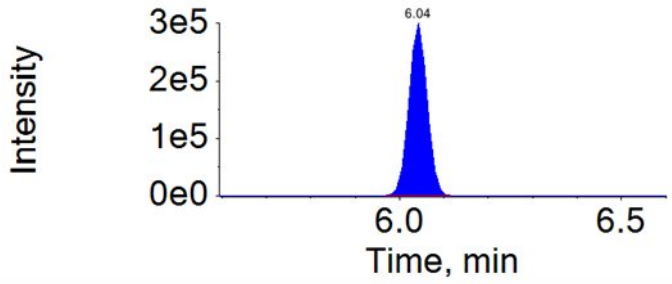
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

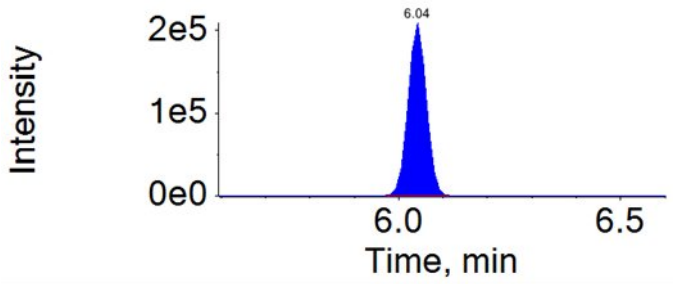
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



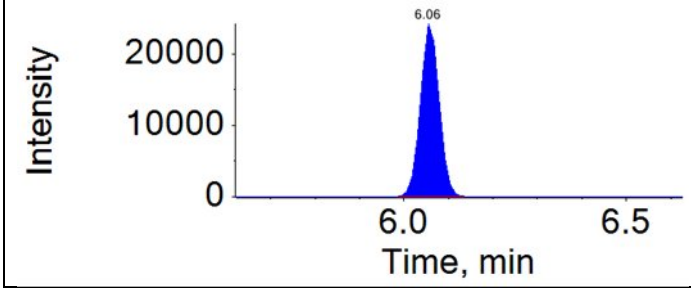


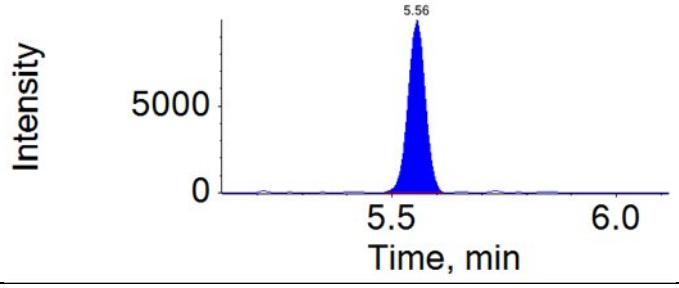
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



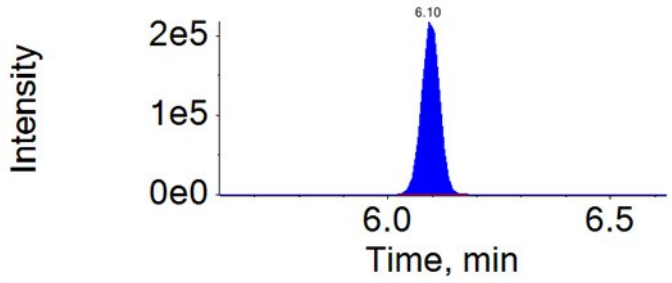


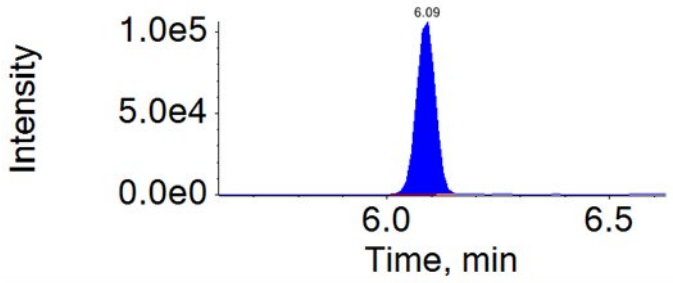
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



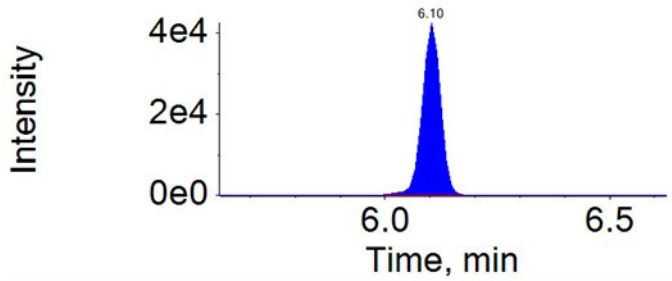


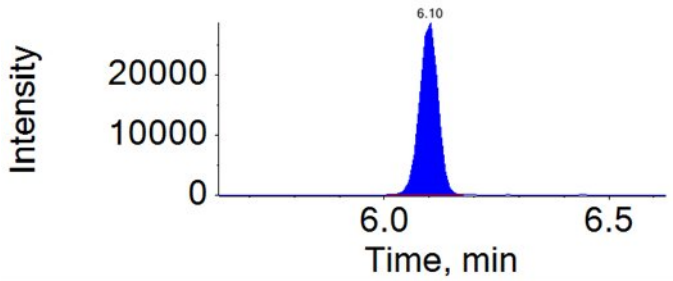
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

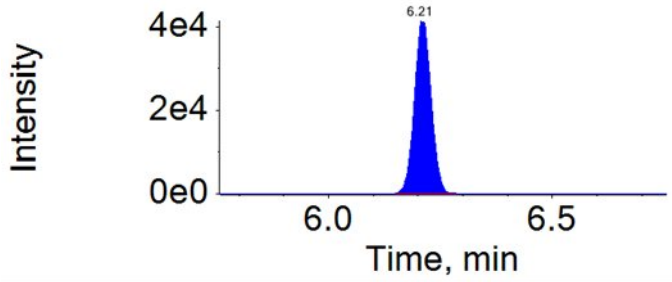
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

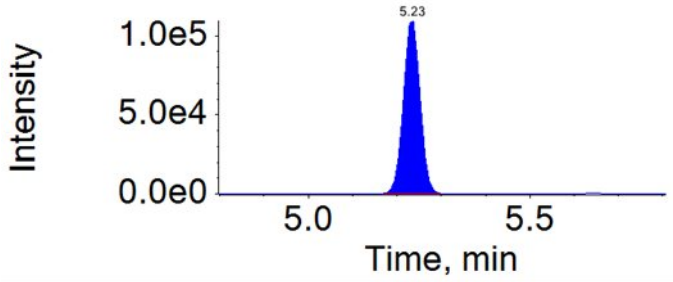
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



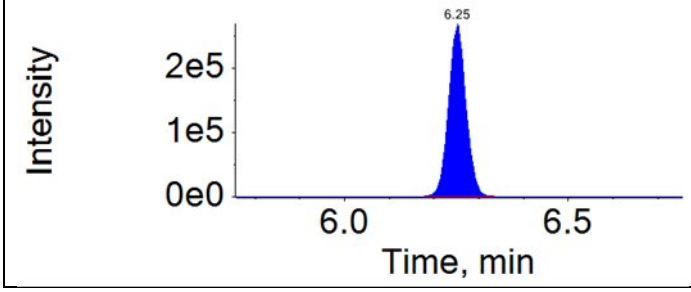


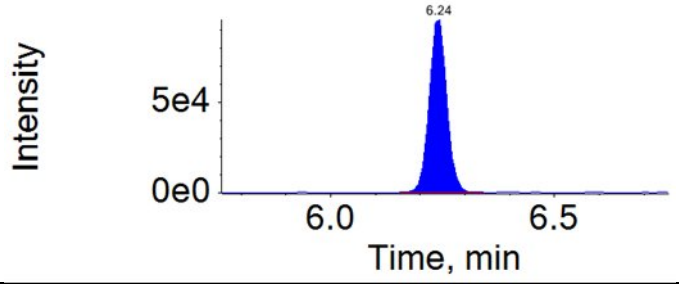
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



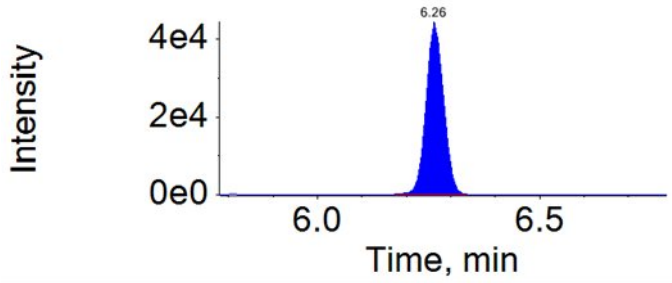


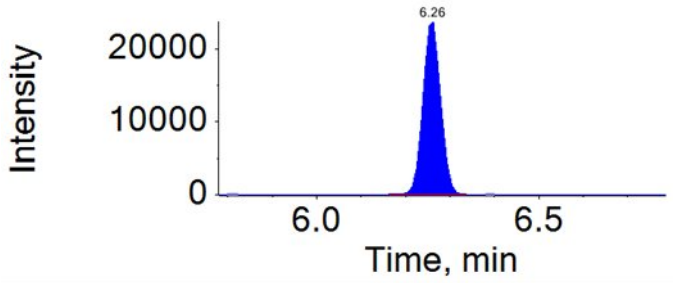
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

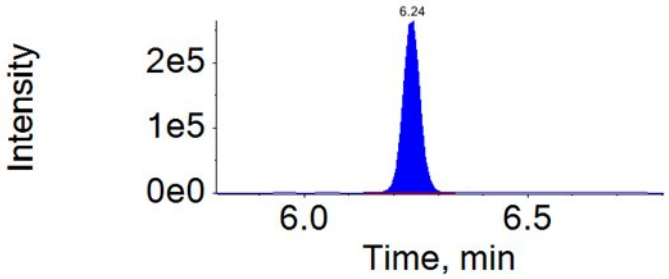
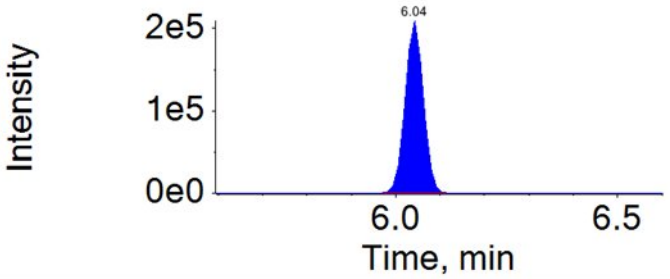


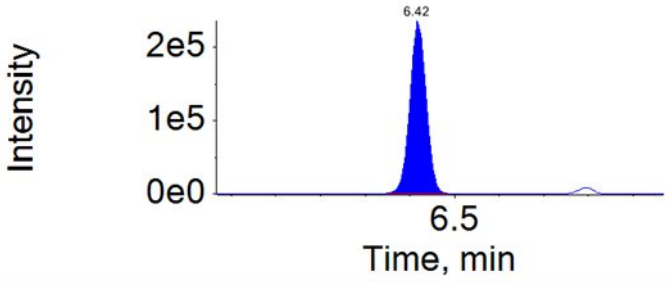
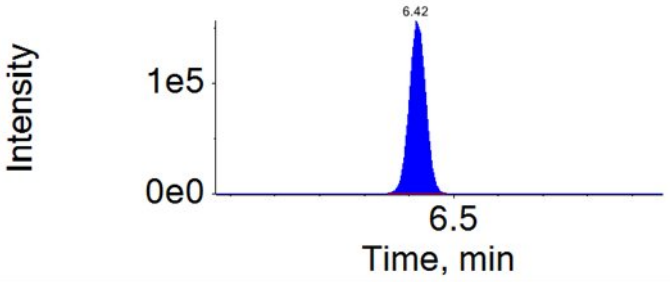


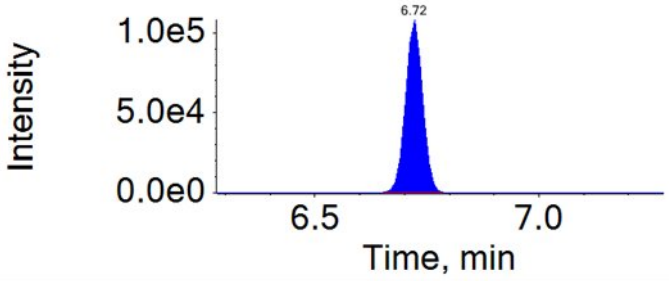
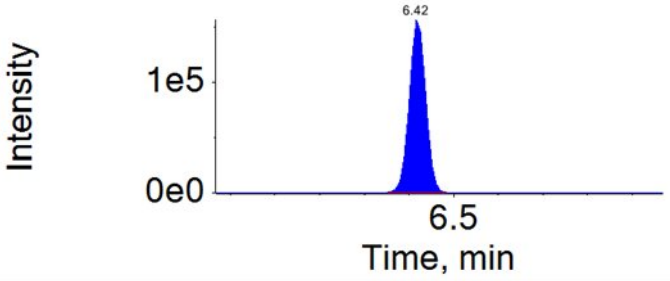
APPROVED
By MCD at 9:29 pm, 11/9/18

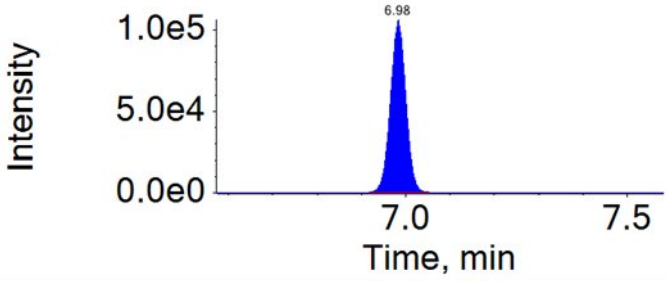
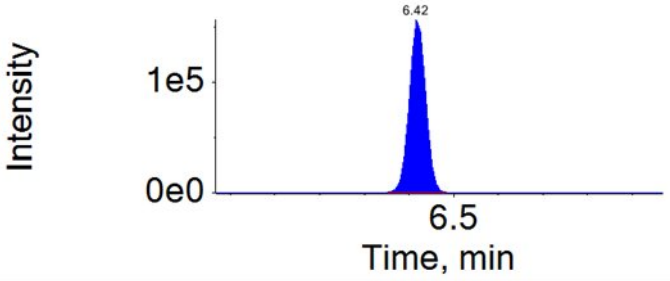
REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 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 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

Ion Ratio Report

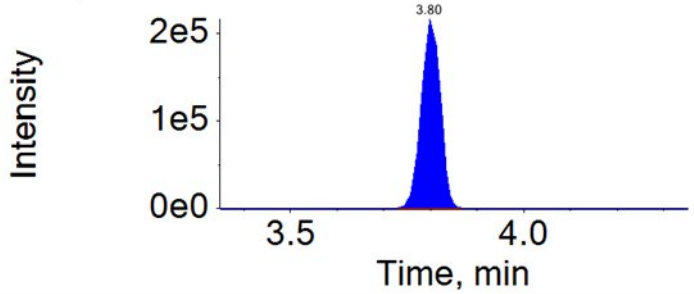
Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV09D-93.wiff

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	618852.6	A	N/A	0.3656			
PFBS_2	3.80	1.00	226231.2	A	N/A	0.3656	3	50	
4:2-FTS	4.11	1.00	149531.6	A	N/A	0.6525			
4:2-FTS_2	4.11	1.00	97564.0	A	N/A	0.6525	2	50	
PFHxA	4.15	1.00	1392556.0	A	N/A	0.0120			
PFHxA_2	4.15	1.00	16741.4	A	N/A	0.0120	6	50	
PFPeS	4.17	1.10	330139.4	A	N/A	0.5461			
PFPeS_2	4.17	1.10	180287.8	A	N/A	0.5461	1	50	
PFHxS	4.54	1.00	485682.2	A	N/A	0.3583			
PFHxS_2	4.54	1.00	174000.7	A	N/A	0.3583	0	50	
PFHpA	4.54	1.00	1400896.1	A	N/A	0.0545			
PFHpA_2	4.54	1.00	76296.8	A	N/A	0.0545	-6	50	
6:2-FTS	4.89	1.00	117709.6	A	N/A	0.6543			
6:2-FTS_2	4.89	1.00	77013.6	A	N/A	0.6543	-4	50	
PFHpS	4.90	1.08	490558.9	A	N/A	0.3881			
PFHpS_2	4.90	1.08	190399.0	A	N/A	0.3881	-2	50	
PFOA	4.91	1.00	1426706.1	A	N/A	0.0578			
PFOA_2	4.91	1.00	82521.7	A	N/A	0.0578	-9	50	
PFOS	5.23	1.00	423355.7	A	N/A	0.3613			
PFOS_2	5.23	1.00	152946.4	A	N/A	0.3613	3	50	
PFNA	5.25	1.00	1132330.4	A	N/A	0.0208			
PFNA_2	5.25	1.00	23564.3	A	N/A	0.0208	1	50	
PFNS	5.53	1.06	287257.9	A	N/A	0.4732			
PFNS_2	5.53	1.06	135923.0	A	N/A	0.4732	-3	50	
PFDA	5.55	1.00	965736.1	A	N/A	0.0067			
PFDA_2	5.55	1.00	6425.4	A	N/A	0.0067	22	50	
8:2-FTS	5.55	1.00	95870.0	A	N/A	0.6121			
8:2-FTS_2	5.55	1.00	58683.5	A	N/A	0.6121	-2	50	
NMeFOSAA	5.69	1.00	125471.8	A	N/A	0.2375			
NMeFOSAA_2	5.69	1.00	29795.7	A	N/A	0.2375	9	50	
PFDS	5.79	1.11	247881.4	A	N/A	0.4694			
PFDS_2	5.79	1.11	116359.0	A	N/A	0.4694	2	50	
PFUnDA	5.81	1.00	822211.2	A	N/A	0.0028			
PFUnDA_2	5.81	1.00	2306.0	A	N/A	0.0028	-8	50	
NEtFOSAA	5.83	1.00	128271.0	A	N/A	0.6089			
NEtFOSAA_2	5.83	1.00	78108.4	A	N/A	0.6089	1	50	
PFDoDA	6.04	1.00	863542.1	A	N/A	0.0121			
PFDoDA_2	6.04	1.00	10453.4	A	N/A	0.0121	15	50	
10:2-FTS	6.06	1.09	70934.4	A	N/A	0.7157			
10:2-FTS_2	6.06	1.09	50769.9	A	N/A	0.7157	0	50	
PFTrDA	6.24	1.03	710854.3	A	N/A	0.0098			
PFTrDA_2	6.24	1.03	6954.8	A	N/A	0.0098	2	50	
PFTeDA	6.42	1.00	594522.5	A	N/A	0.0069			
PFTeDA_2	6.42	1.00	4098.5	A	N/A	0.0069	28	50	
PFHxDA	6.72	1.05	285582.4	A	N/A	0.0644			
PFHxDA_2	6.72	1.05	18383.8	A	N/A	0.0644	9	50	
PFODA	6.98	1.09	254002.1	A	N/A	0.0251			
PFODA_2	6.98	1.09	6371.5	A	N/A	0.0251	-2	50	

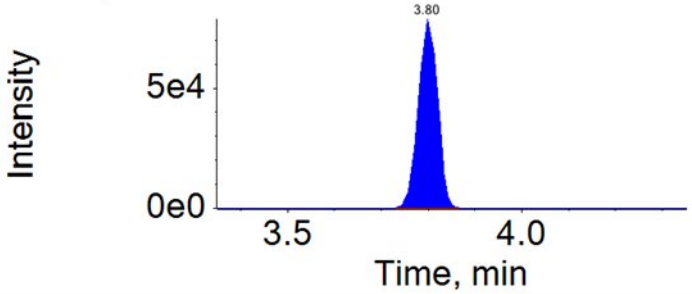
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

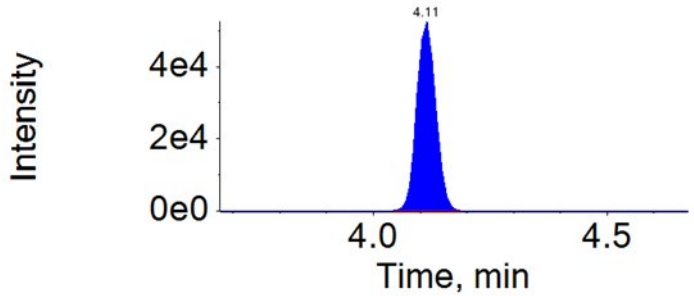
Component: PFBS
Primary Mass: 299.0 / 80.0



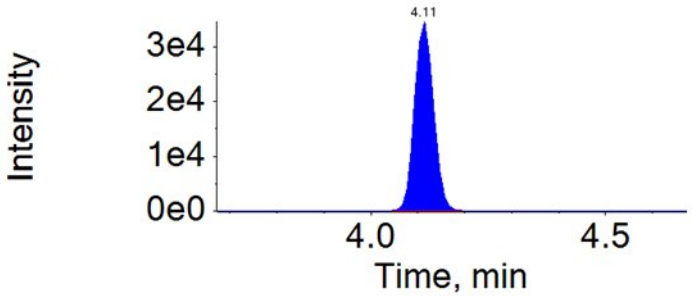
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



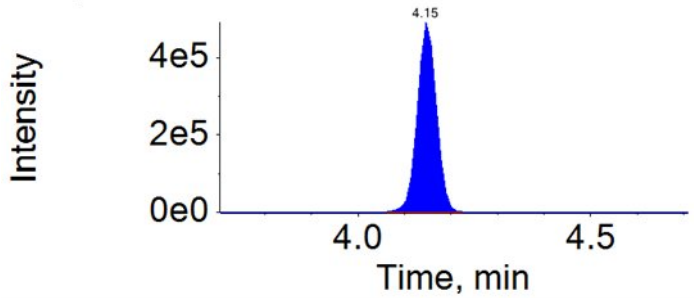
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



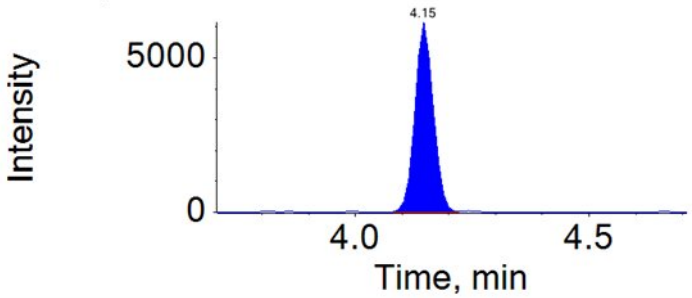
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



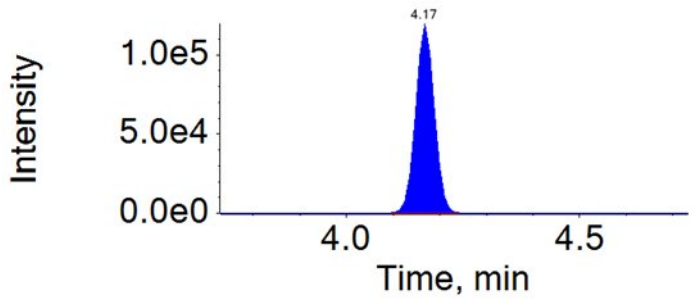
Component: PFHxA
Primary Mass: 313.0 / 269.0



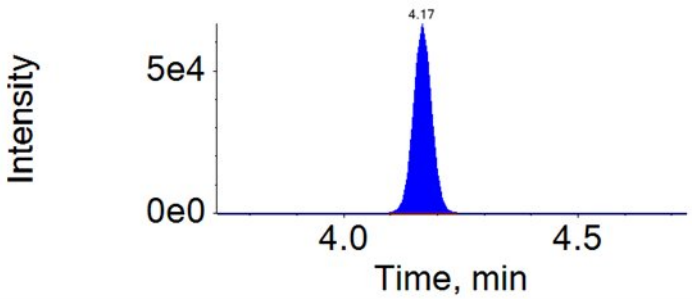
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



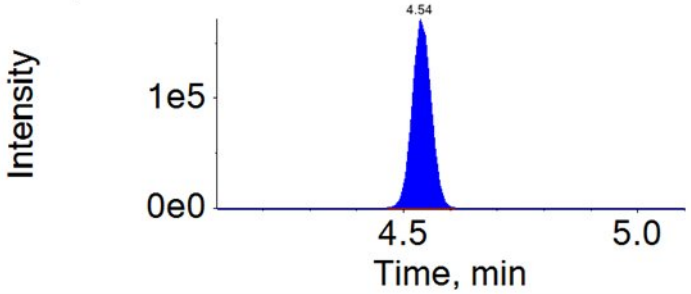
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



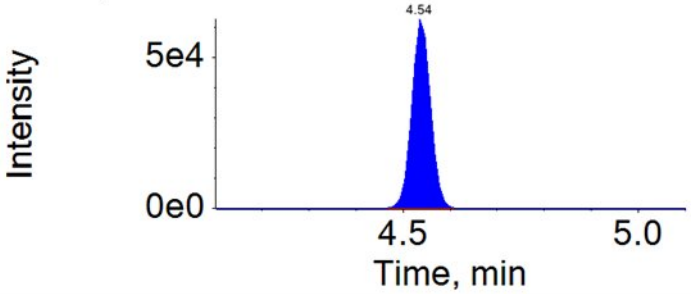
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
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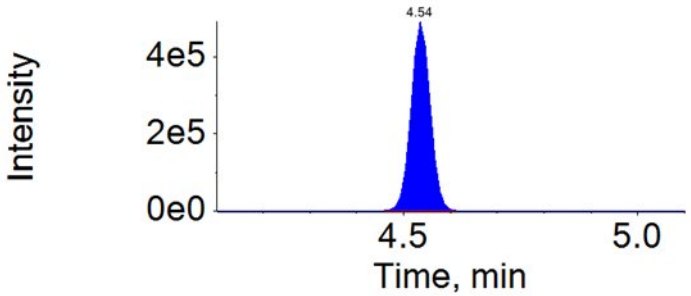
Component: PFHxS
Primary Mass: 399.0 / 80.0



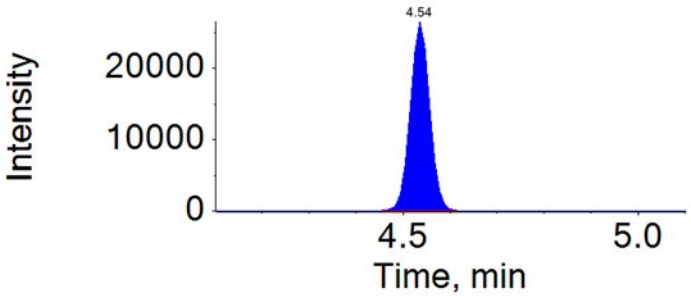
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



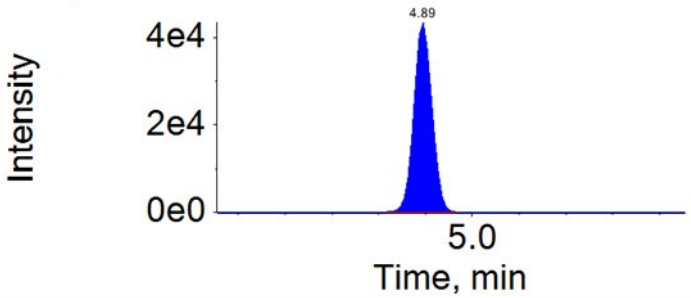
Component: PFHpA
Primary Mass: 363.0 / 319.0



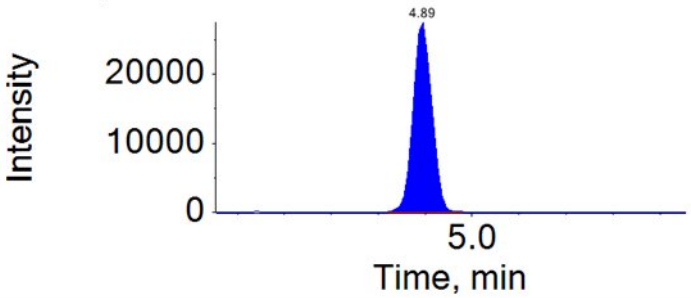
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



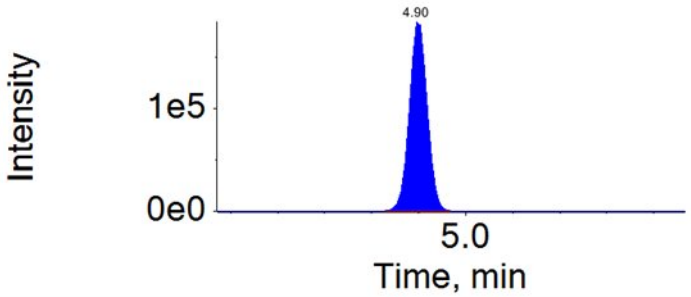
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



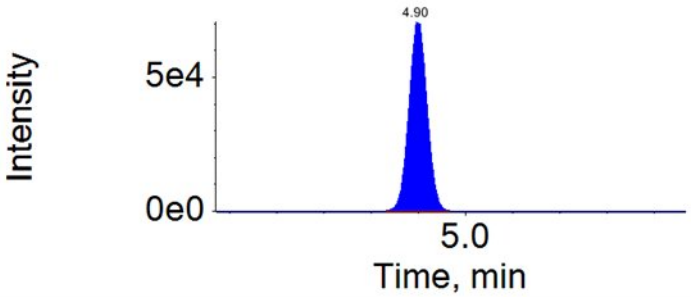
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



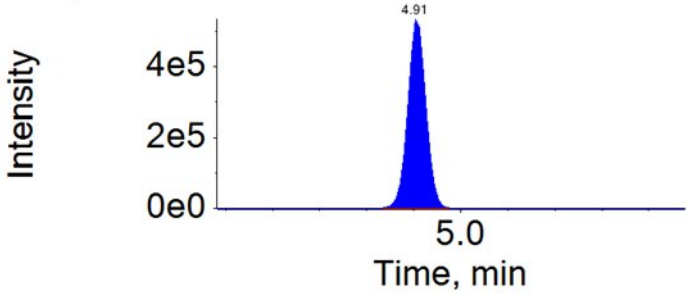
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



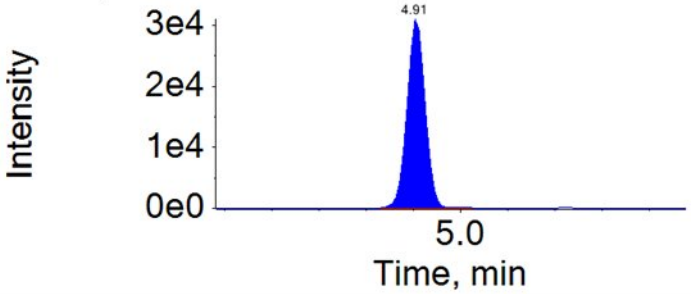
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

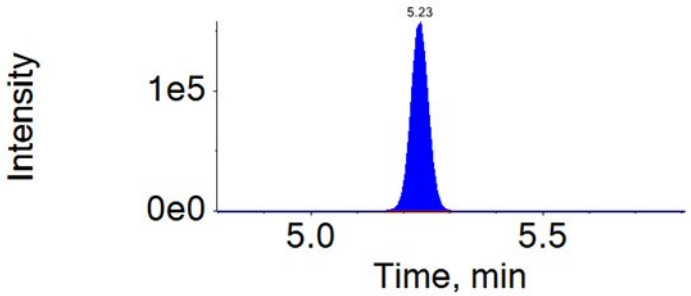
Component: PFOA
Primary Mass: 413.0 / 369.0



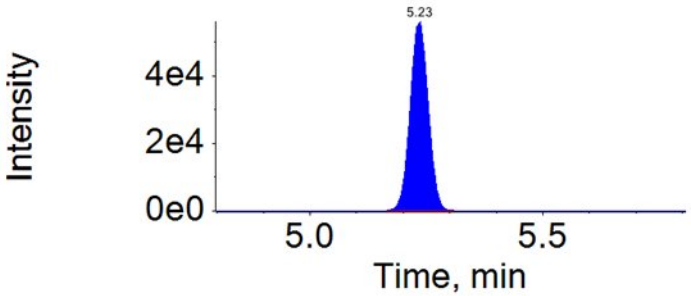
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



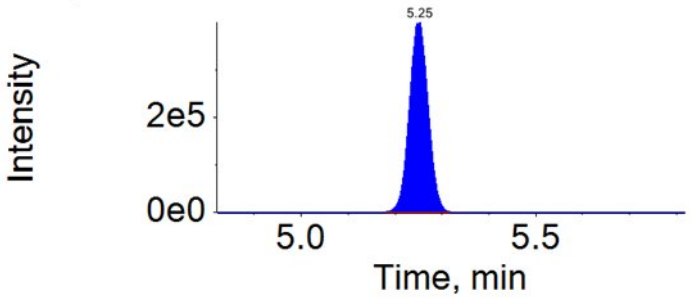
Component: PFOS
Primary Mass: 499.0 / 80.0



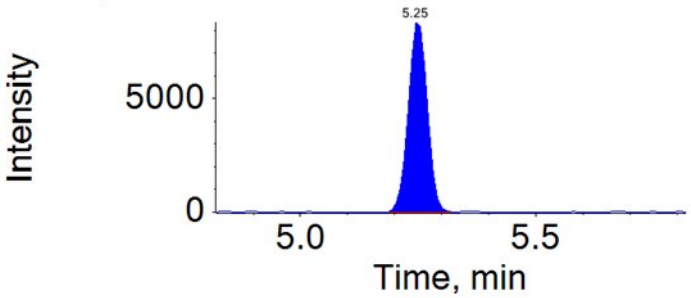
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



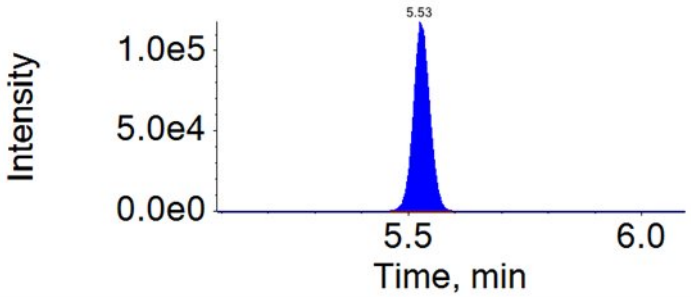
Component: PFNA
Primary Mass: 463.0 / 419.0



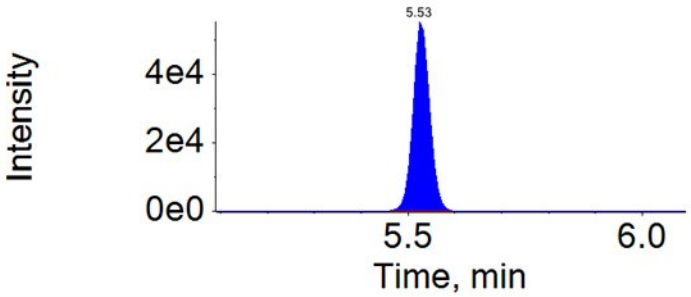
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



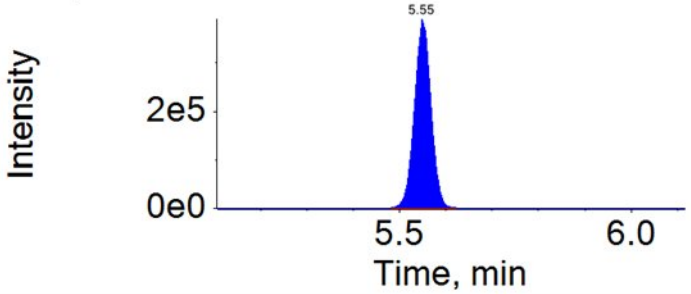
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



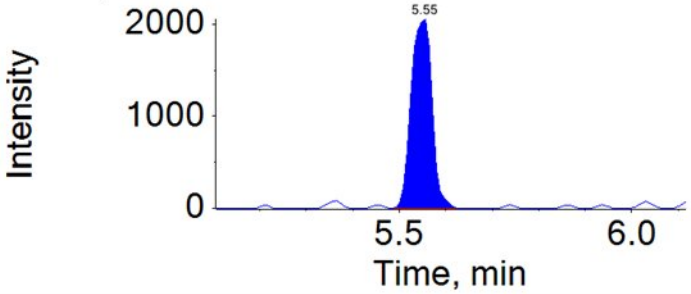
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

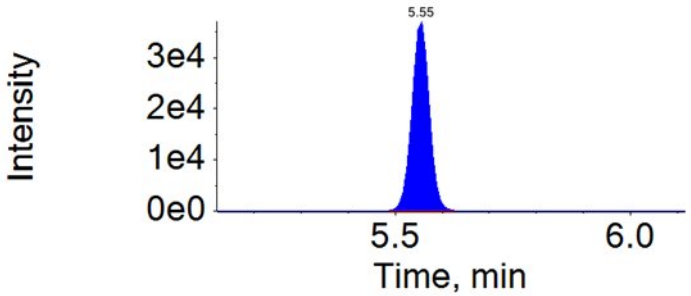
Component: PFDA
Primary Mass: 513.0 / 469.0



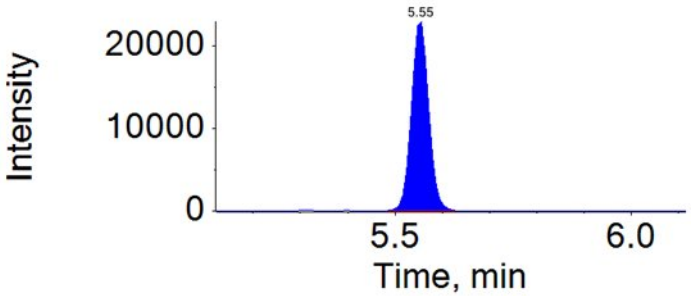
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



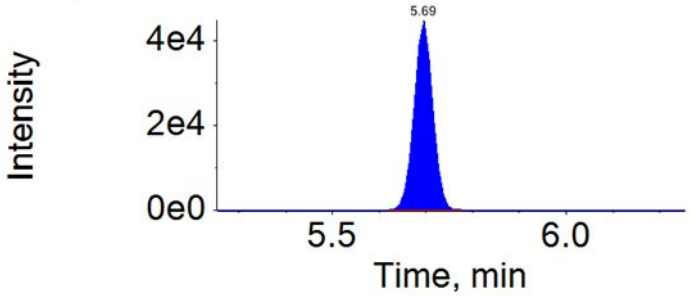
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



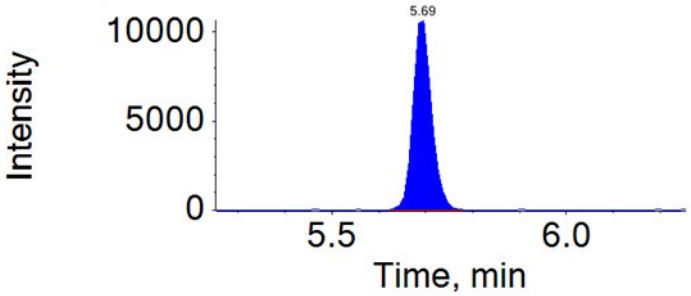
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



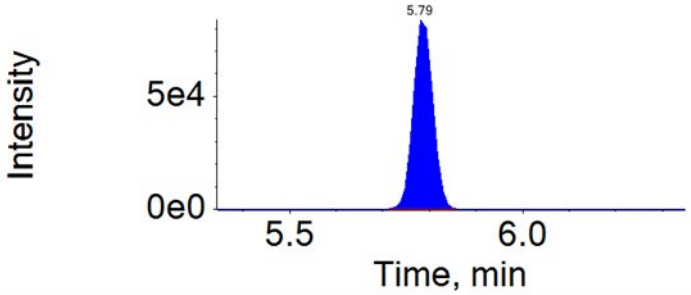
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



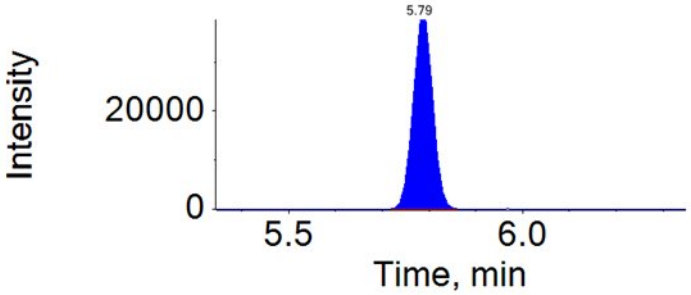
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



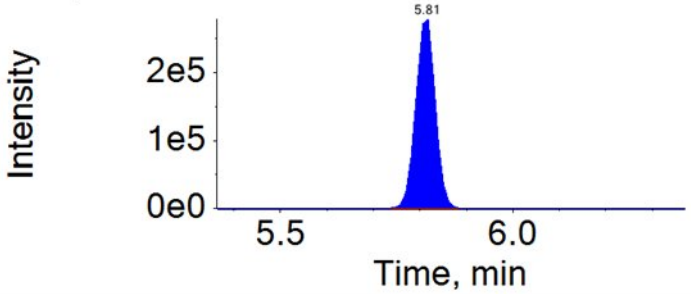
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



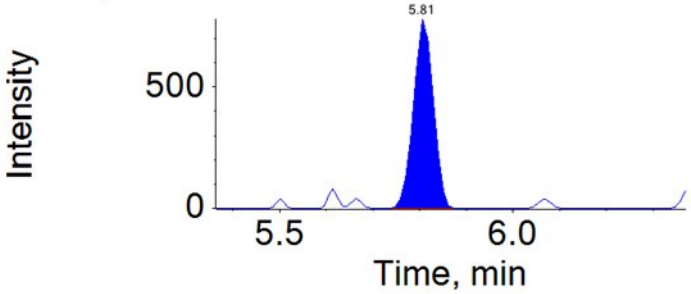
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

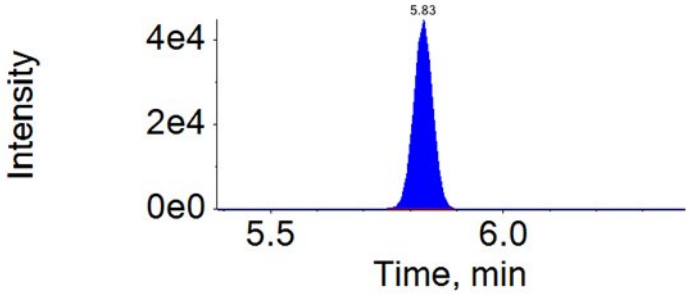
Component: PFUnDA
Primary Mass: 563.0 / 519.0



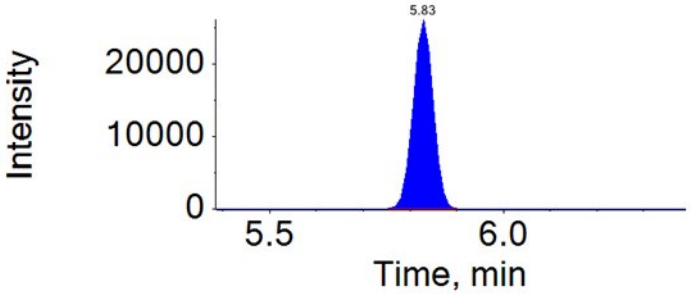
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



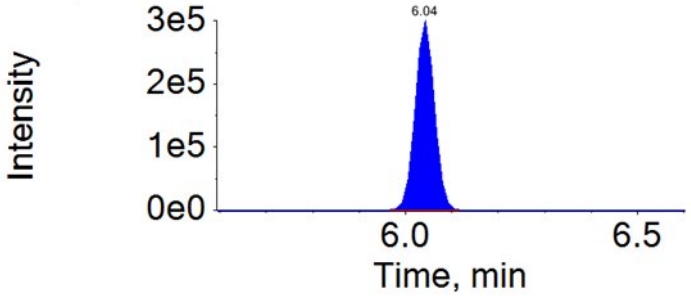
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



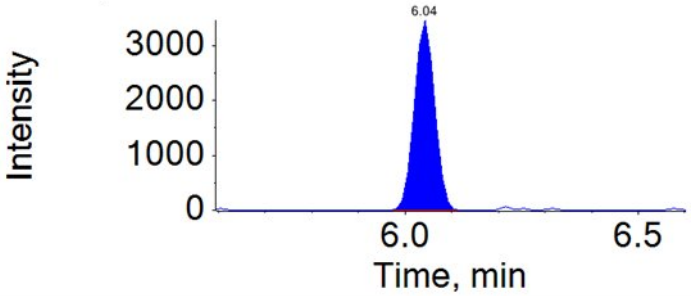
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



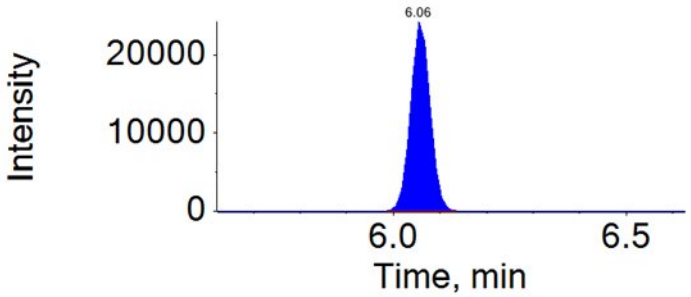
Component: PFDoDA
Primary Mass: 613.0 / 569.0



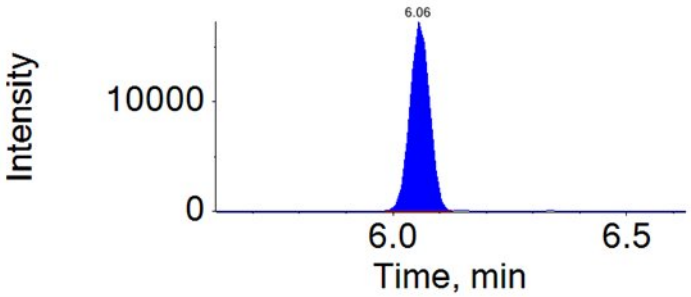
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



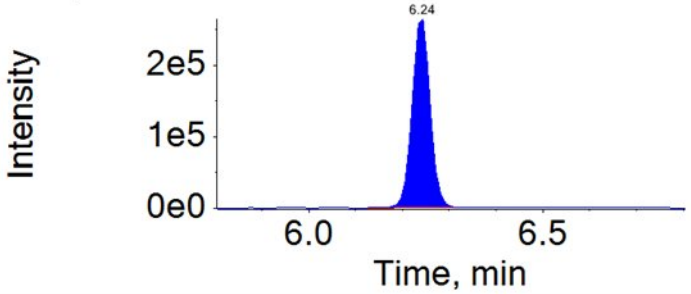
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



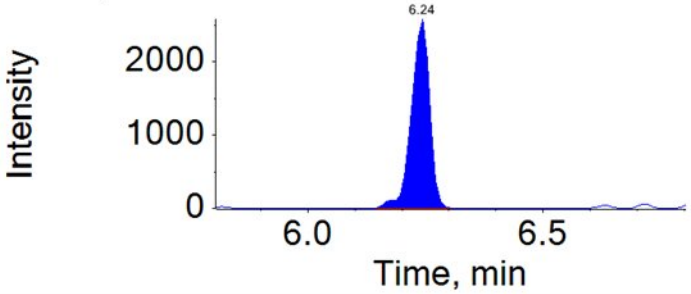
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

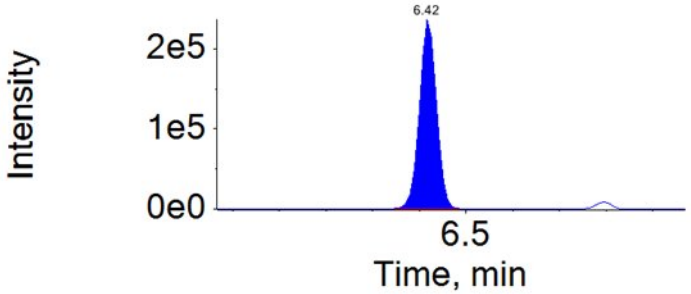
Component: PFTrDA
Primary Mass: 663.0 / 619.0



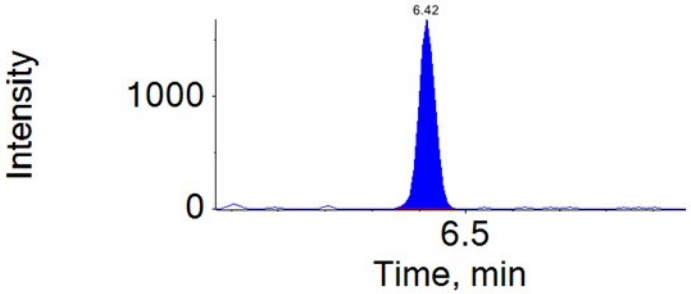
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



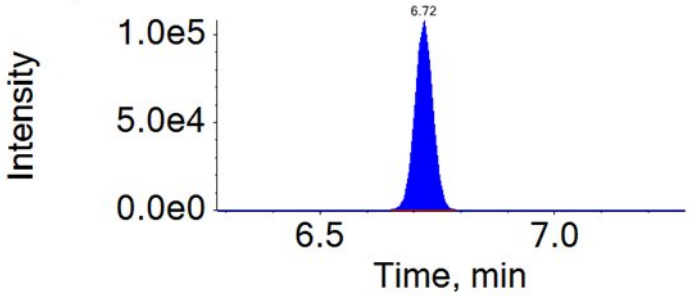
Component: PFTeDA
Primary Mass: 713.0 / 669.0



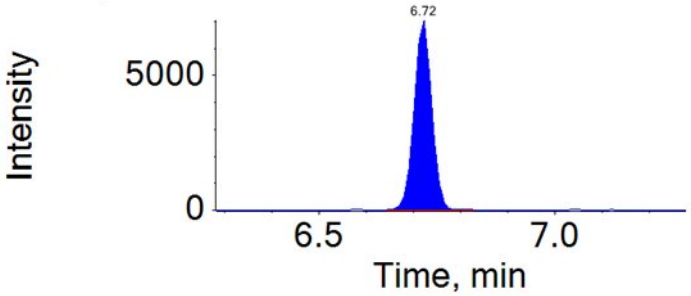
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



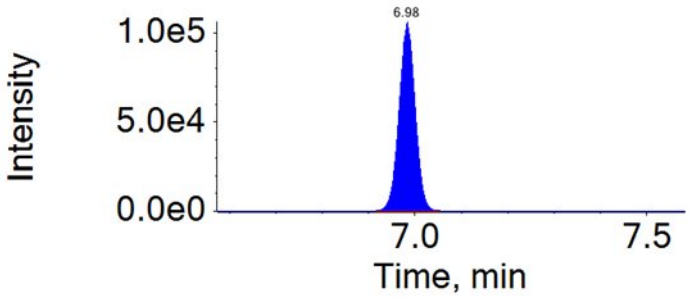
Component: PFHxDA
Primary Mass: 813.0 / 769.0



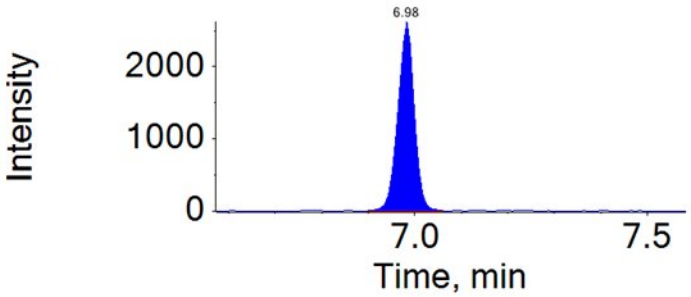
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



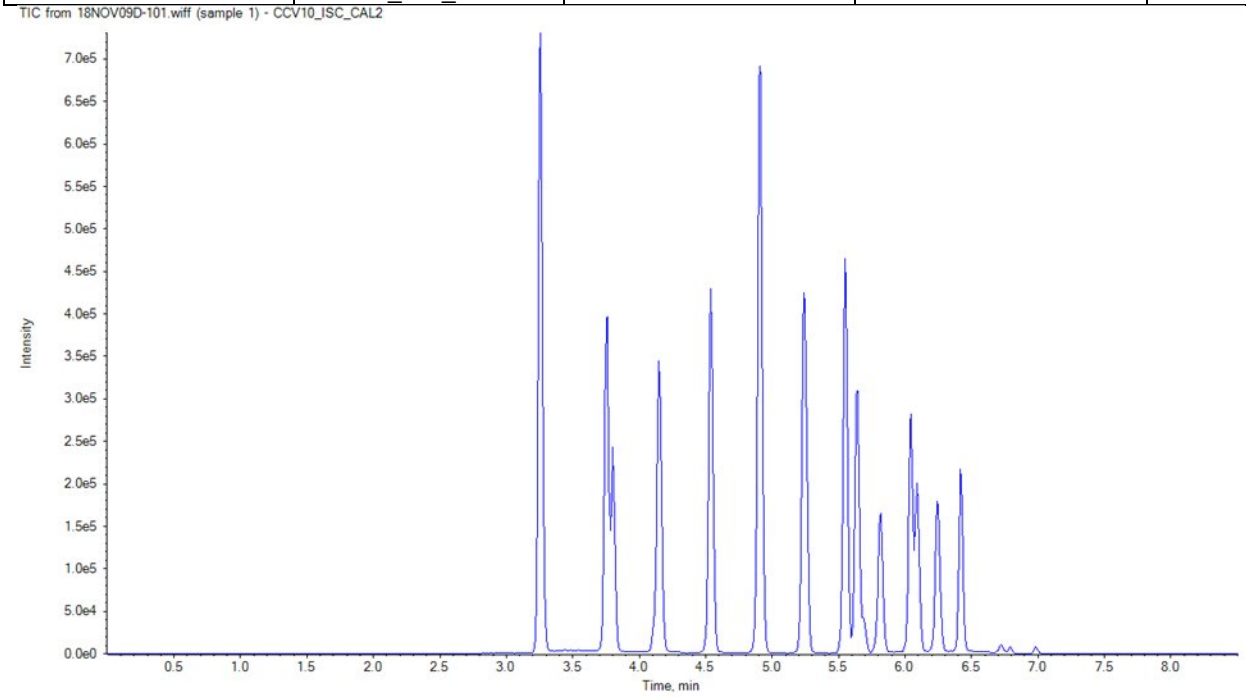
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:20:28 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV10_ISC_CAL2	CALMOD21833F	18NOV09D-101.wiff	2018-11-09T19:41:03



Injection Standard Area Reference File: 18NOV09D-03

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	723764.8	725974.7	0	50	
13C2-PFOA	5.0	503608.2	506876.7	-1	50	
13C4-PFOS	4.8	272710.9	274910.1	-1	50	
13C2-PFDA	5.0	313348.3	307276.7	2	50	

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:20:28 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV10_ISC_CAL2	CALMOD21833F	18NOV09D-101.wiff	2018-11-09T19:41:03

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	73980.1	10	13C4-PFBA	777827.6	5.0	0.095	3.25	1.000	0.500	0.557	11	30	
PFPeA	72595.1	12	13C5-PFPeA	817303.3	5.0	0.089	3.75	1.000	0.500	0.528	6	30	
PFBS	35054.4	12	13C3-PFBS	410828.6	4.7	0.085	3.80	1.000	0.440	0.430	-2	30	
4:2-FTS	9411.3	12	13C2-4:2-FTS	50829.4	4.7	0.185	4.12	1.000	0.467	0.498	7	30	
PFHxA	89458.9	12	13C5-PFHxA	694493.1	5.0	0.129	4.15	1.000	0.500	0.552	10	30	
PFPeS	18428.9	11	13C3-PFBS	410828.6	4.7	0.045	4.17	1.100	0.469	0.442	-6	30	
PFHxS	29707.8	11	13C3-PFHxS	315584.2	4.7	0.094	4.54	1.000	0.473	0.477	1	30	
PFHpA	93549.2	12	13C4-PFHpA	542581.0	5.0	0.172	4.54	1.000	0.500	0.580	16	30	
6:2-FTS	6656.7	11	13C2-6:2-FTS	38895.7	4.8	0.171	4.90	1.000	0.474	0.427	-10	30	
PFHpS	30290.9	11	13C3-PFHxS	315584.2	4.7	0.096	4.90	1.080	0.476	0.502	5	30	
PFOA	87797.3	11	13C8-PFOA	933350.1	5.0	0.094	4.91	1.000	0.500	0.530	6	30	
PFOS	27715.8	11	13C8-PFOS	277230.1	4.8	0.100	5.23	1.000	0.478	0.518	8	30	
PFNA	70844.3	11	13C9-PFNA	481639.6	5.0	0.147	5.25	1.000	0.500	0.550	10	30	
PFNS	16630.2	10	13C8-PFOS	277230.1	4.8	0.060	5.53	1.060	0.480	0.476	-1	30	
PFDA	59707.9	11	13C6-PFDA	613929.1	5.0	0.097	5.55	1.000	0.500	0.535	7	30	
8:2-FTS	6127.1	10	13C2-8:2-FTS	27389.9	4.8	0.224	5.55	1.000	0.479	0.504	5	30	
PFOSA	68386.5	11	13C8-PFOSA	684043.0	5.0	0.100	5.64	1.000	0.500	0.540	8	30	
NMeFOSAA	8128.0	12	d3-NMeFOSAA	74736.8	5.0	0.109	5.69	1.000	0.500	0.560	12	30	
PFDS	17156.6	12	13C8-PFOS	277230.1	4.8	0.062	5.79	1.110	0.482	0.591	23	30	
PFUnDA	51585.8	12	13C7-PFUnDA	268145.6	5.0	0.192	5.81	1.000	0.500	0.552	10	30	
NEtFOSAA	6182.7	12	d5-NEtFOSAA	68119.5	5.0	0.091	5.83	1.000	0.500	0.390	-22	30	
PFDoDA	55114.7	12	13C2-PFDoDA	552836.1	5.0	0.100	6.04	1.000	0.500	0.540	8	30	
10:2-FTS	4244.8	11	13C2-8:2-FTS	27389.9	4.8	0.155	6.06	1.090	0.482	0.483	0	30	
NMePFOSAE	38920.8	12	d7-NMePFOSAE	324366.8	5.0	0.120	6.10	1.000	0.500	0.538	8	30	
NMePFOSA	8828.7	12	d3-NMePFOSA	81655.1	5.0	0.108	6.10	1.000	0.500	0.605	21	30	
PFDoS	6774.7	11	13C8-PFOS	277230.1	4.8	0.024	6.21	1.190	0.484	0.472	-3	30	
NEtPFOSAE	44801.7	11	d9-NEtPFOSAE	274030.3	5.0	0.163	6.25	1.000	0.500	0.524	5	30	
NEtPFOSA	7102.7	11	d5-NEtPFOSA	66947.0	5.0	0.106	6.26	1.000	0.500	0.467	-7	30	
PFTrDA	46269.7	11	13C2-PFDoDA	552836.1	5.0	0.084	6.24	1.030	0.500	0.528	6	30	
PFTeDA	38281.5	11	13C2-PFTeDA	403466.7	5.0	0.095	6.42	1.000	0.500	0.557	11	30	
PFHxDA	19235.4	11	13C2-PFTeDA	403466.7	5.0	0.048	6.72	1.050	0.500	0.592	18	30	
PFODA	15797.7	10	13C2-PFTeDA	403466.7	5.0	0.039	6.98	1.090	0.500	0.561	12	30	

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV09DCCV5-10 11/9/2018 9:20:28 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV10_ISC_CAL2			**Data File:**		18NOV09D-101.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-09T19:41:03
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV09DCCV5-10
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: 18NOV09D-03

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	723764.8	725974.7	0	50	
13C2-PFOA	5.0	503608.2	506876.7	-1	50	
13C4-PFOS	4.8	272710.9	274910.1	-1	50	
13C2-PFDA	5.0	313348.3	307276.7	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	777827.6	13C3-PFBA	723764.8	1.075	5.000	4.973	99	70-130	
E13C5-PFPeA	817303.3	13C3-PFBA	723764.8	1.129	5.000	4.919	98	70-130	
E13C3-PFBS	410828.6	13C3-PFBA	723764.8	0.568	4.650	4.166	90	70-130	
E13C2-4:2-FTS	50829.4	13C2-PFOA	503608.2	0.101	4.670	4.554	98	70-130	
E13C5-PFHxA	694493.1	13C2-PFOA	503608.2	1.379	5.000	5.073	101	70-130	
E13C3-PFHxS	315584.2	13C2-PFOA	503608.2	0.627	4.730	4.499	95	70-130	
E13C4-PFHpA	542581.0	13C2-PFOA	503608.2	1.077	5.000	4.901	98	70-130	
E13C2-6:2-FTS	38895.7	13C2-PFOA	503608.2	0.077	4.750	5.150	108	70-130	
E13C8-PFOA	933350.1	13C2-PFOA	503608.2	1.853	5.000	5.168	103	70-130	
E13C8-PFOS	277230.1	13C4-PFOS	272710.9	1.017	4.780	4.495	94	70-130	
E13C9-PFNA	481639.6	13C4-PFOS	272710.9	1.766	5.000	4.824	96	70-130	
E13C6-PFDA	613929.1	13C2-PFDA	313348.3	1.959	5.000	4.927	99	70-130	
E13C2-8:2-FTS	27389.9	13C2-PFDA	313348.3	0.087	4.790	4.625	97	70-130	
E13C8-PFOSA	684043.0	13C2-PFDA	313348.3	2.183	5.000	4.764	95	70-130	
Ed3-NMeFOSAA	74736.8	13C2-PFDA	313348.3	0.239	5.000	4.435	89	70-130	
E13C7-PFUnDA	268145.6	13C2-PFDA	313348.3	0.856	5.000	4.937	99	70-130	
Ed5-NEtFOSAA	68119.5	13C2-PFDA	313348.3	0.217	5.000	5.031	101	70-130	
E13C2-PFDoDA	552836.1	13C2-PFDA	313348.3	1.764	5.000	4.756	95	70-130	
Ed7-NMePFOSAE	324366.8	13C2-PFDA	313348.3	1.035	5.000	4.814	96	70-130	
Ed3-NMePFOSA	81655.1	13C2-PFDA	313348.3	0.261	5.000	4.771	95	70-130	
Ed9-NEtPFOSAE	274030.3	13C2-PFDA	313348.3	0.875	5.000	4.994	100	70-130	
Ed5-NEtPFOSA	66947.0	13C2-PFDA	313348.3	0.214	5.000	4.947	99	70-130	
E13C2-PFTeDA	403466.7	13C2-PFDA	313348.3	1.288	5.000	4.635	93	70-130	

APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

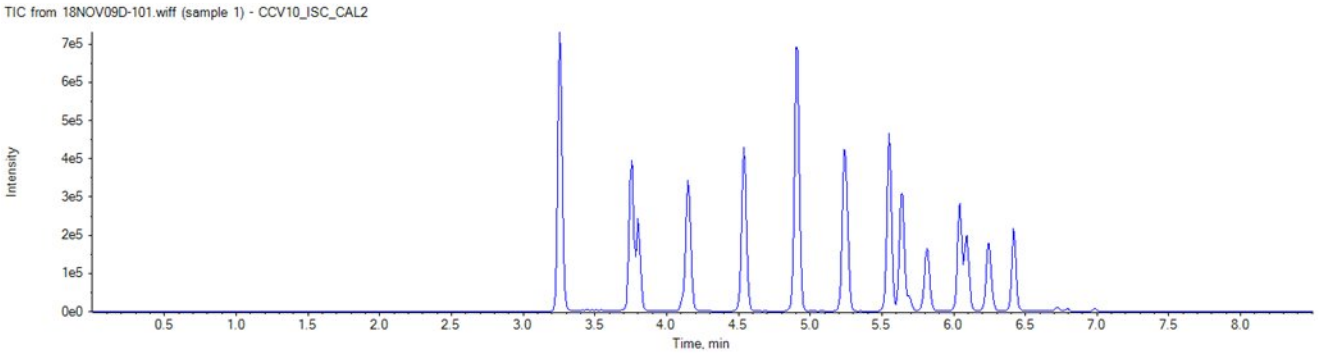
Analyte Quantitation Peak Table

Sample Name: CCV10_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV09D-101.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	73980.1		A	13C4-PFBA	3.25	777827.6	0.095	0.557
PFPeA	3.75	1.000	72595.1		A	13C5-PFPeA	3.75	817303.3	0.089	0.528
PFBS	3.80	1.000	35054.4		A	13C3-PFBS	3.80	410828.6	0.085	0.430
4:2-FTS	4.12	1.000	9411.3		A	13C2-4:2-FTS	4.12	50829.4	0.185	0.498
PFHxA	4.15	1.000	89458.9		A	13C5-PFHxA	4.15	694493.1	0.129	0.552
PFPeS	4.17	1.100	18428.9		A	13C3-PFBS	3.80	410828.6	0.045	0.442
PFHxS	4.54	1.000	29707.8		M	13C3-PFHxS	4.54	315584.2	0.094	0.477
PFHpA	4.54	1.000	93549.2		A	13C4-PFHpA	4.54	542581.0	0.172	0.580
6:2-FTS	4.90	1.000	6656.7		A	13C2-6:2-FTS	4.90	38895.7	0.171	0.427
PFHpS	4.90	1.080	30290.9		A	13C3-PFHxS	4.54	315584.2	0.096	0.502
PFOA	4.91	1.000	87797.3		A	13C8-PFOA	4.91	933350.1	0.094	0.530
PFOS	5.23	1.000	27715.8		M	13C8-PFOS	5.23	277230.1	0.100	0.518
PFNA	5.25	1.000	70844.3		A	13C9-PFNA	5.25	481639.6	0.147	0.550
PFNS	5.53	1.060	16630.2		A	13C8-PFOS	5.23	277230.1	0.060	0.476
PFDA	5.55	1.000	59707.9		A	13C6-PFDA	5.55	613929.1	0.097	0.535
8:2-FTS	5.55	1.000	6127.1		A	13C2-8:2-FTS	5.55	27389.9	0.224	0.504
PFOSA	5.64	1.000	68386.5		A	13C8-PFOSA	5.64	684043.0	0.100	0.540
NMeFOSAA	5.69	1.000	8128.0		A	d3-NMeFOSAA	5.69	74736.8	0.109	0.560
PFDS	5.79	1.110	17156.6		A	13C8-PFOS	5.23	277230.1	0.062	0.591
PFUnDA	5.81	1.000	51585.8		A	13C7-PFUnDA	5.81	268145.6	0.192	0.552
NEtFOSAA	5.83	1.000	6182.7		A	d5-NEtFOSAA	5.83	68119.5	0.091	0.390
PFDoDA	6.04	1.000	55114.7		A	13C2-PFDoDA	6.04	552836.1	0.100	0.540
10:2-FTS	6.06	1.090	4244.8		A	13C2-8:2-FTS	5.55	27389.9	0.155	0.483
NMePFOSAE	6.10	1.000	38920.8		A	d7-NMePFOSAE	6.09	324366.8	0.120	0.538
NMePFOSA	6.10	1.000	8828.7		A	d3-NMePFOSA	6.10	81655.1	0.108	0.605
PFDoS	6.21	1.190	6774.7		A	13C8-PFOS	5.23	277230.1	0.024	0.472
NEtPFOSAE	6.25	1.000	44801.7		A	d9-NEtPFOSAE	6.24	274030.3	0.163	0.524
NEtPFOSA	6.26	1.000	7102.7		A	d5-NEtPFOSA	6.26	66947.0	0.106	0.467
PFTrDA	6.24	1.030	46269.7		A	13C2-PFDoDA	6.04	552836.1	0.084	0.528
PFTeDA	6.42	1.000	38281.5		A	13C2-PFTeDA	6.42	403466.7	0.095	0.557
PFHxDA	6.72	1.050	19235.4		A	13C2-PFTeDA	6.42	403466.7	0.048	0.592
PFODA	6.98	1.090	15797.7		A	13C2-PFTeDA	6.42	403466.7	0.039	0.561

Total Ion Chromatogram

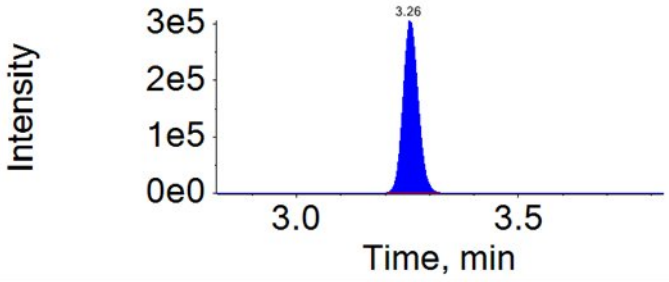


APPROVED
By MCD at 9:29 pm, 11/9/18

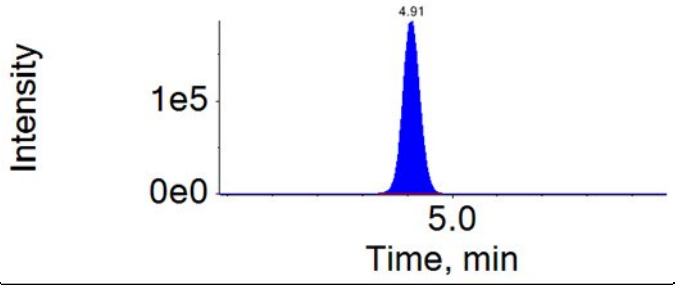
REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

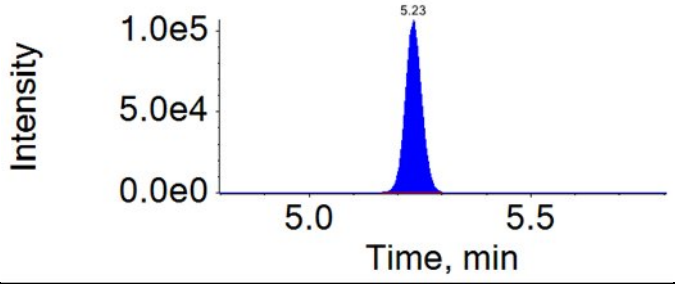
Injection Standard: 13C3-PFBA
216.0 / 172.0



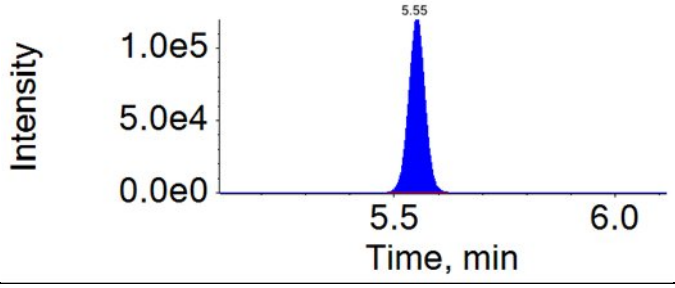
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

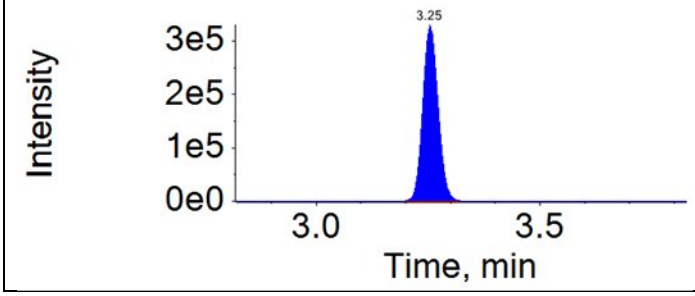


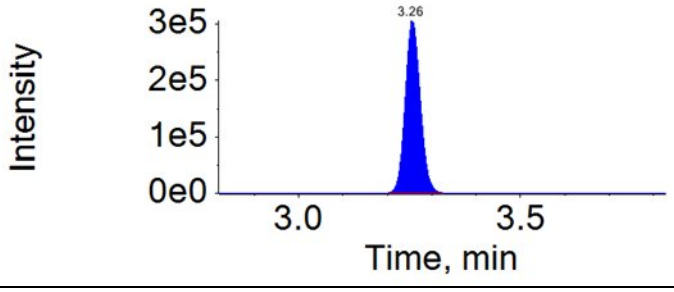
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

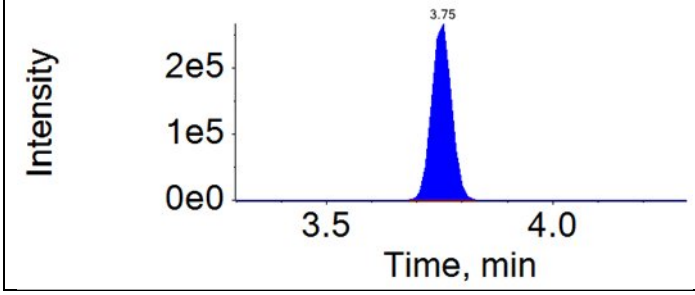
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

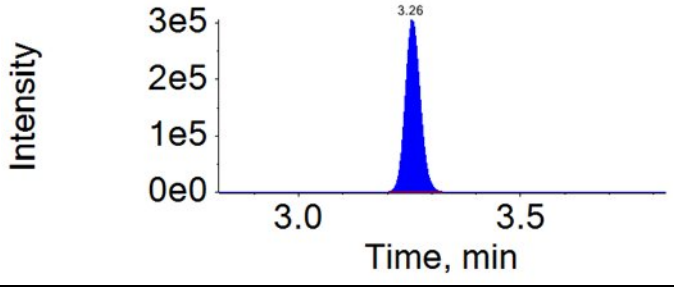
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



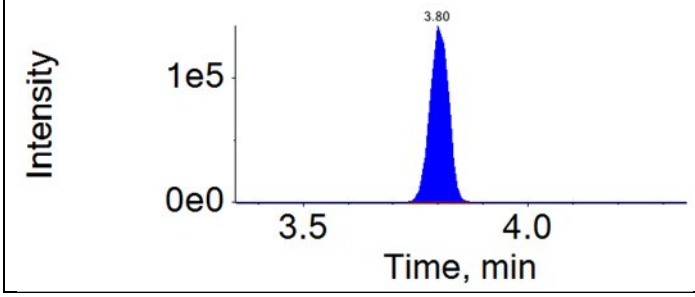


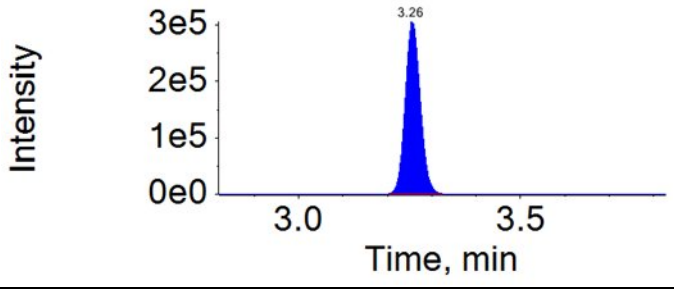
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



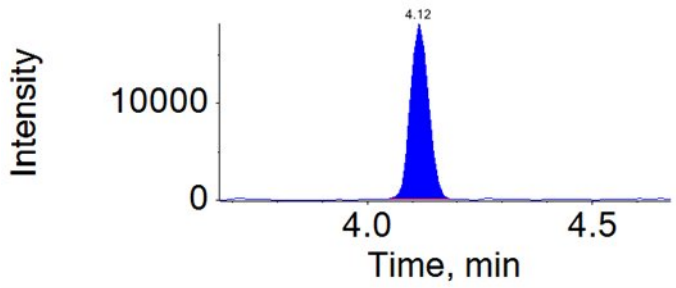


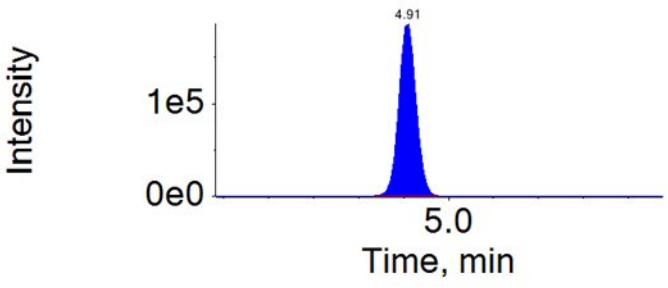
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





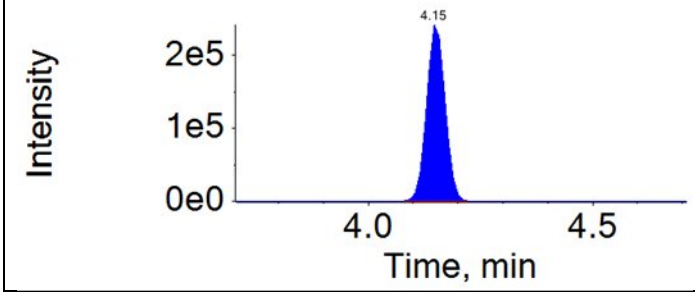
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

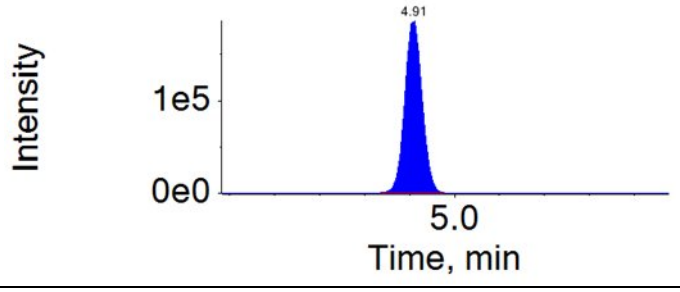




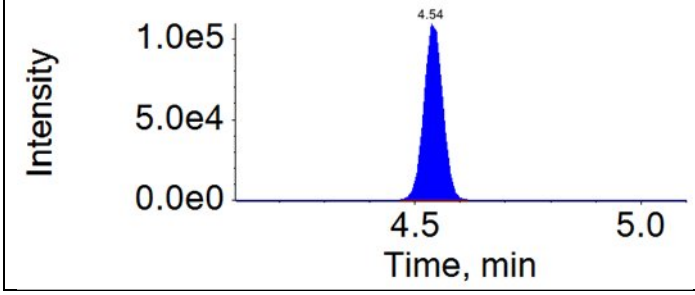
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

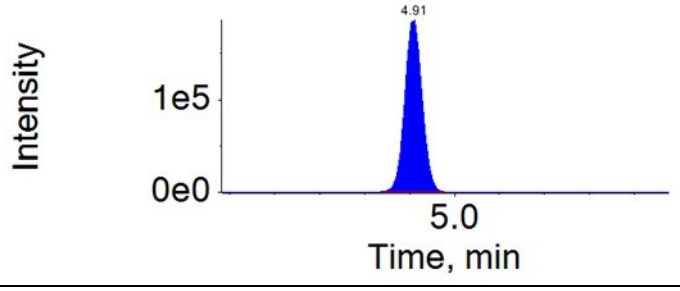
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



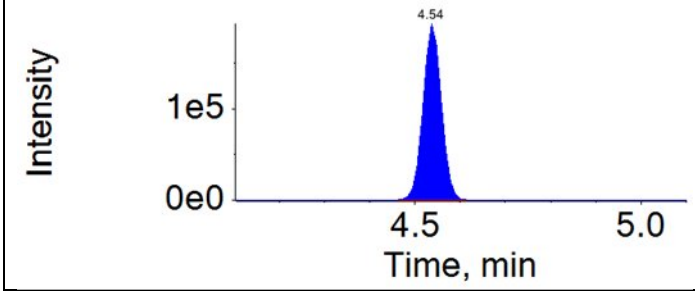


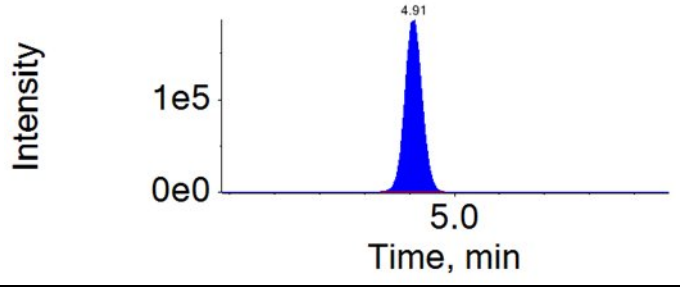
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



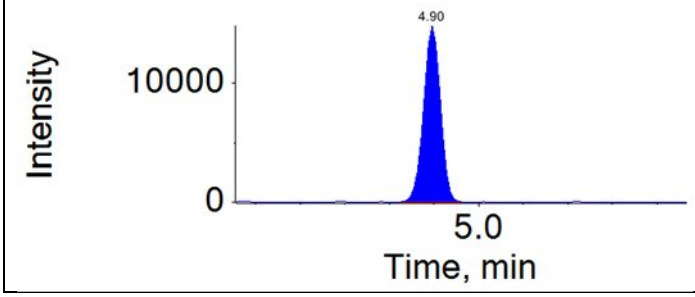


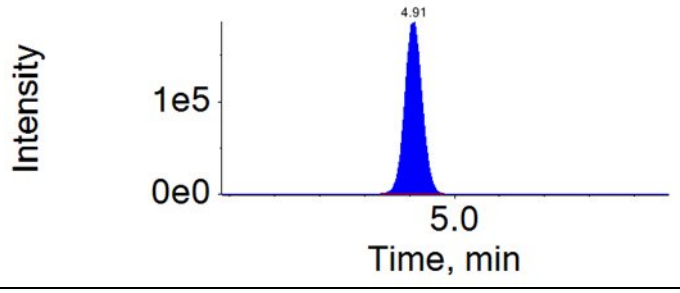
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

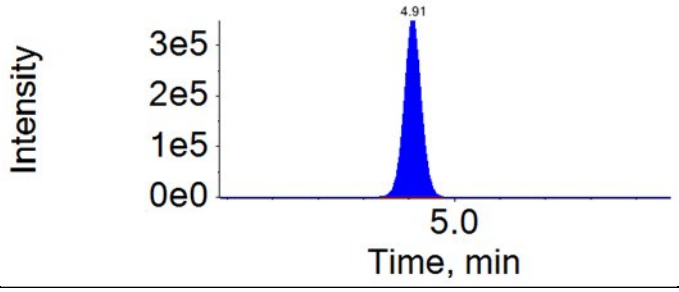
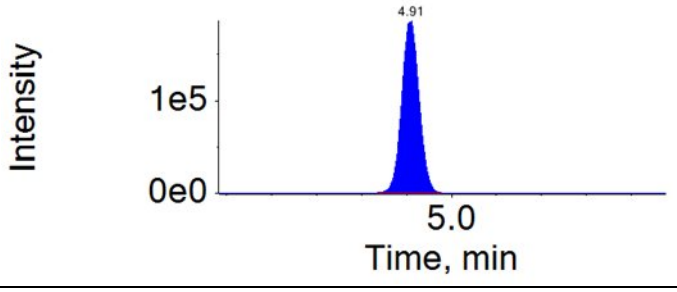


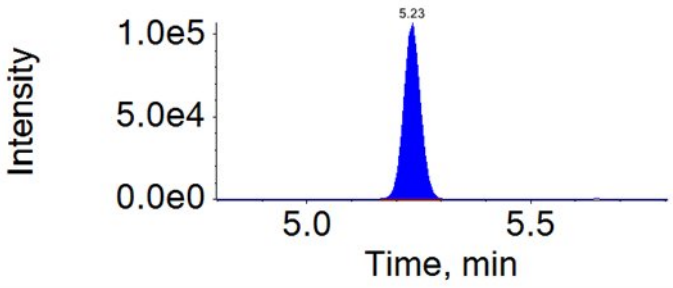
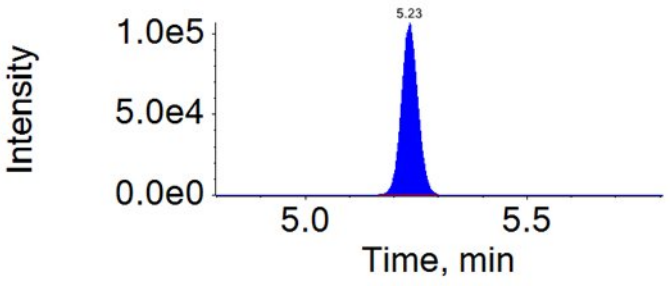


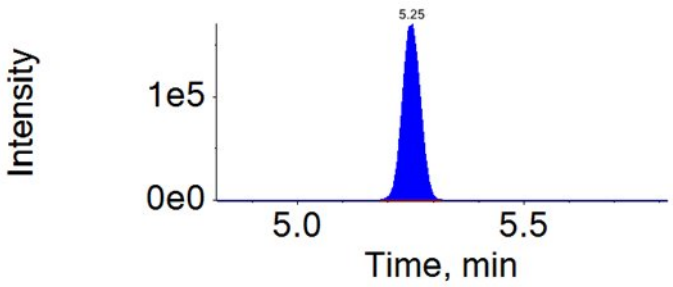
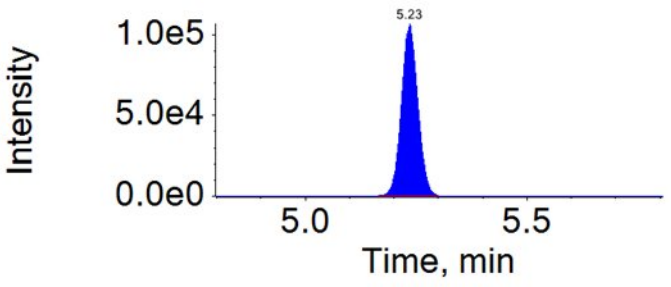
APPROVED
By MCD at 9:29 pm, 11/9/18

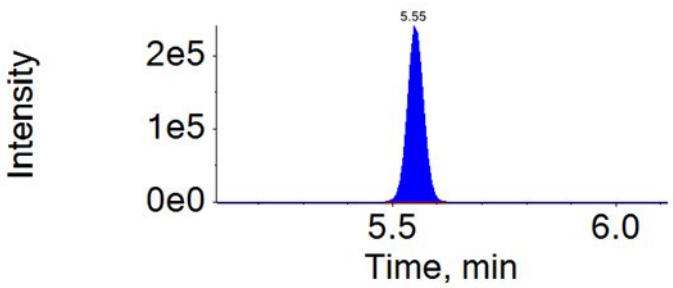
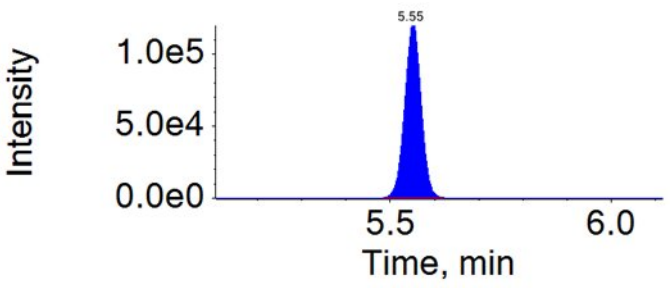
REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 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
	

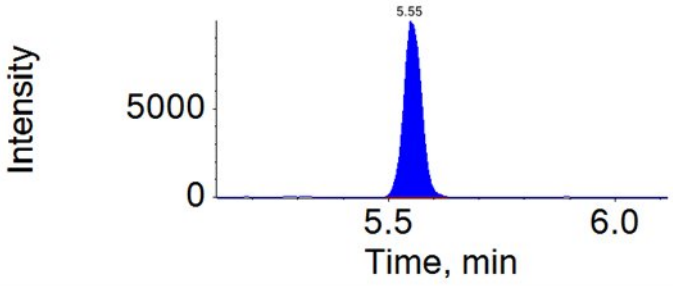
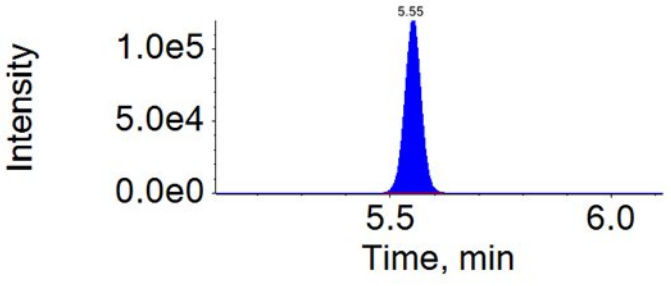
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472.0 / 427.0	503.0 / 80.0
	

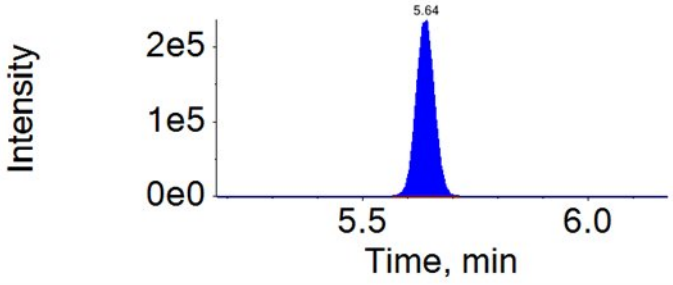
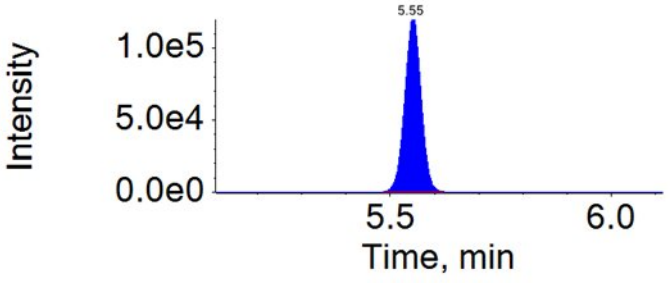
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

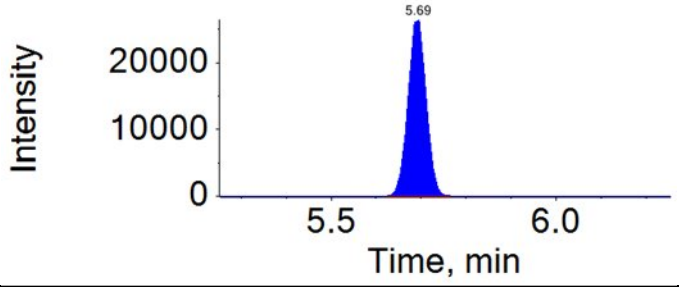
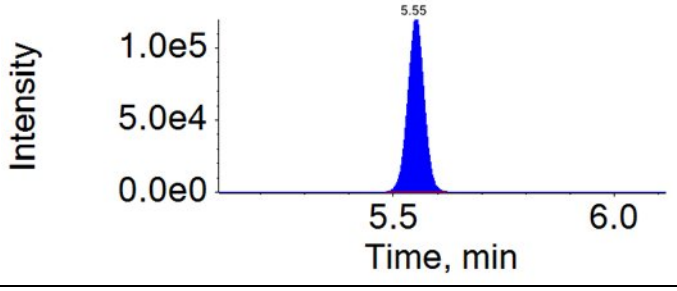
APPROVED
By MCD at 9:29 pm, 11/9/18

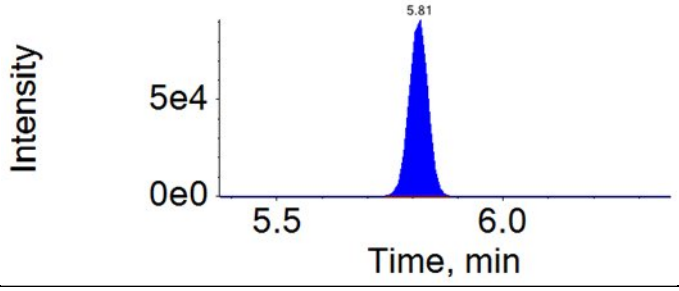
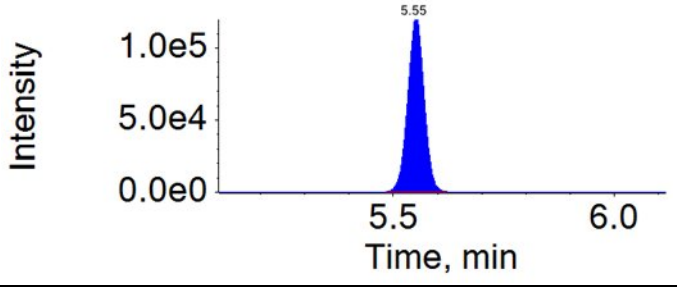
REVIEWED
By umar at 4:44 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

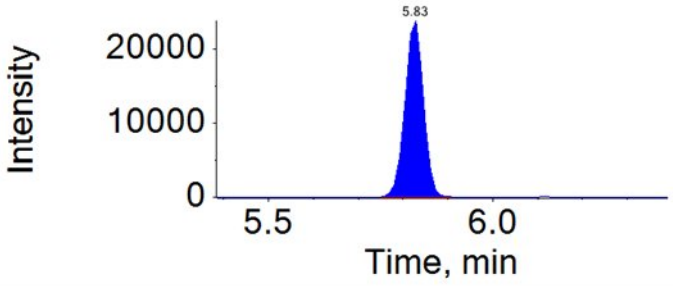
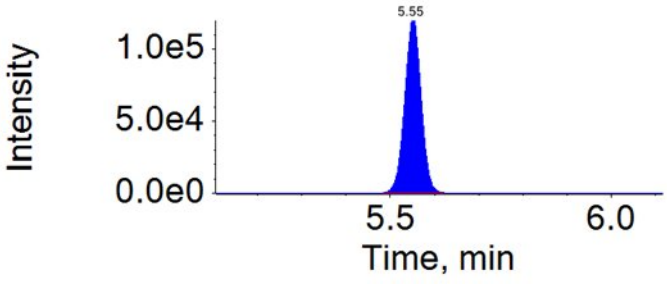
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

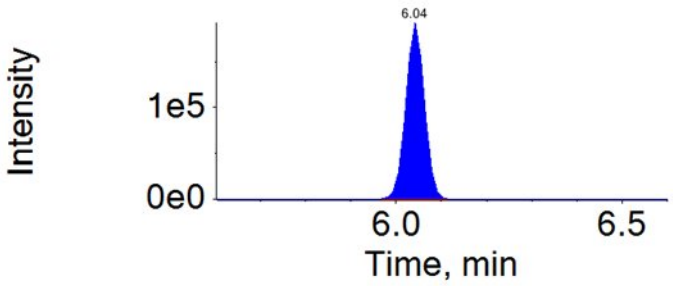
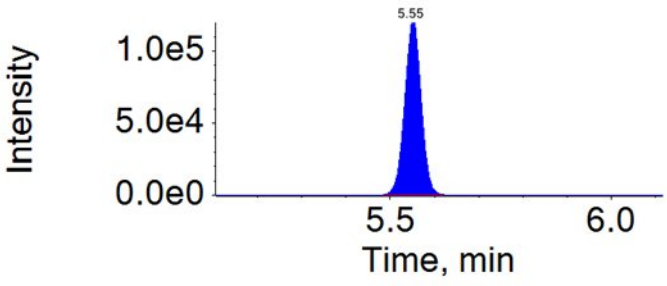
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

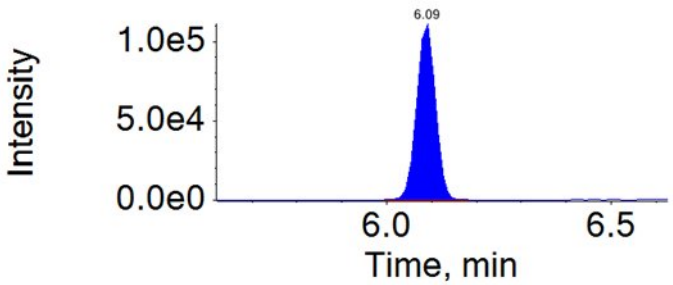
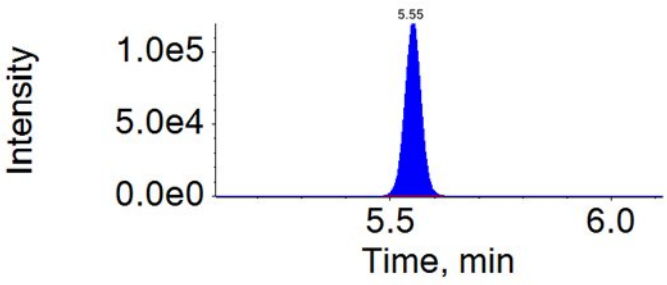
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

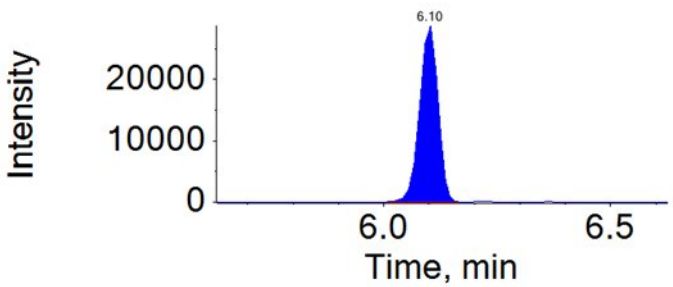
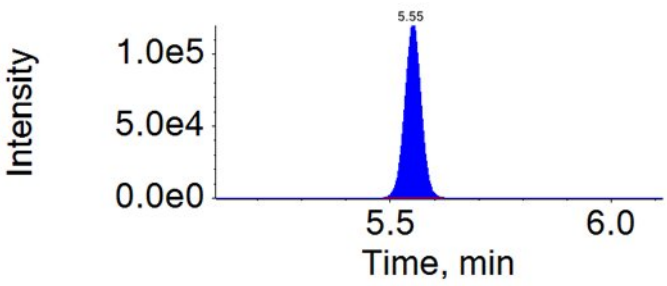
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 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
	

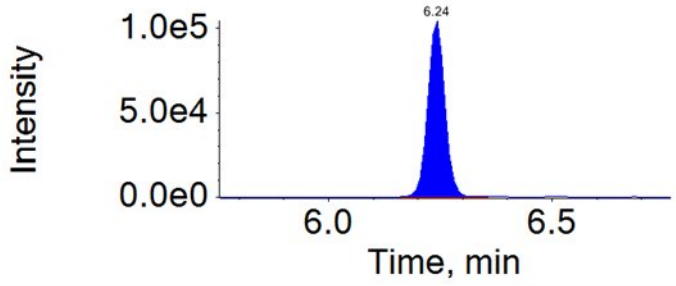
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

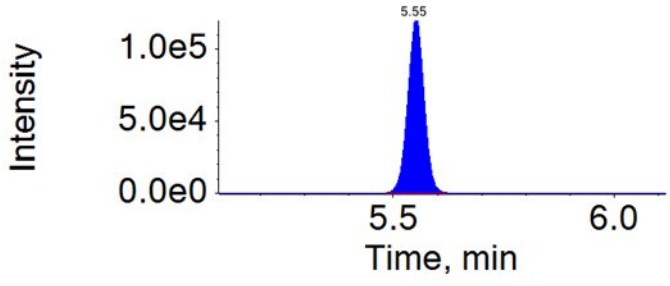
APPROVED
By MCD at 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18

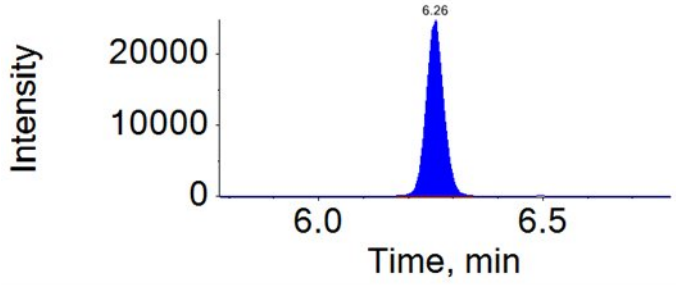
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

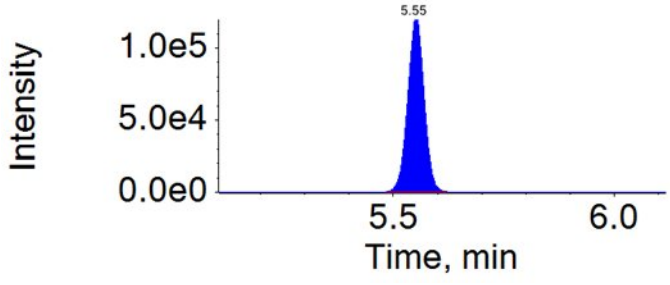
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



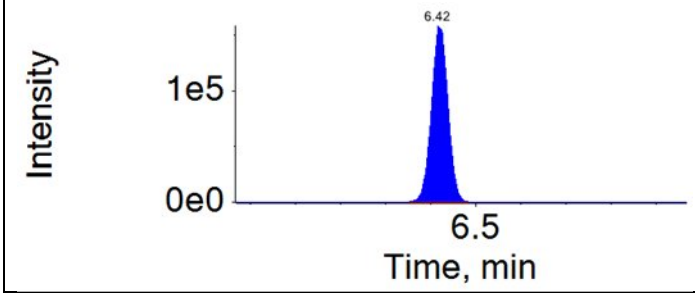


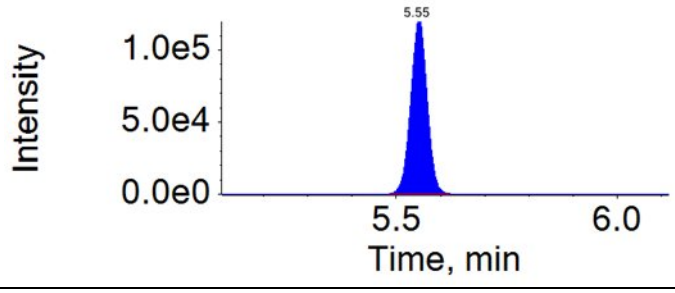
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0



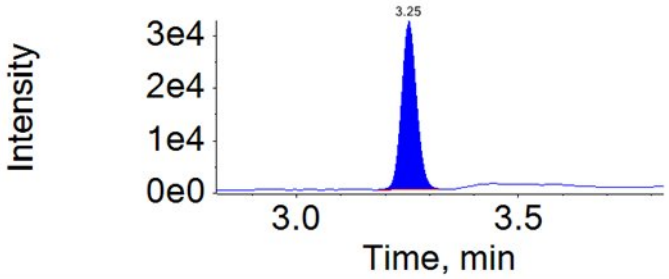
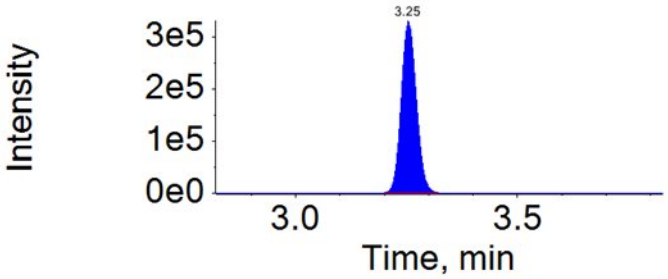


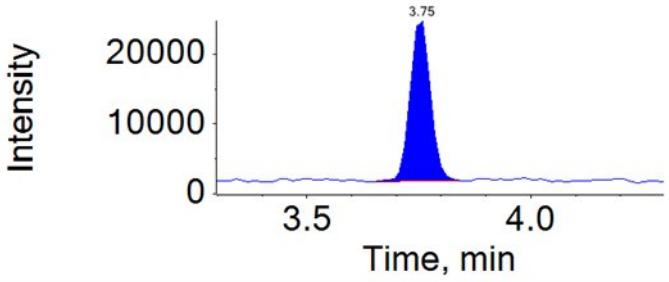
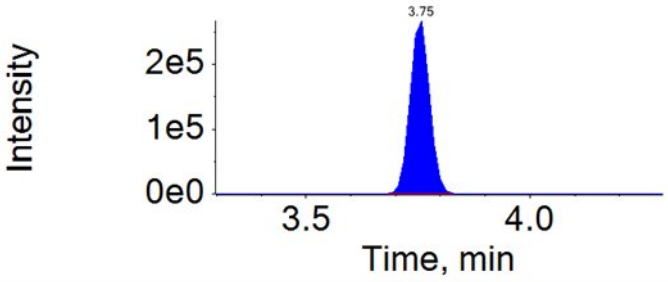
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

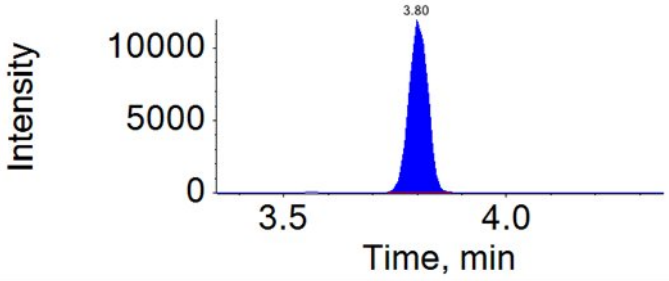
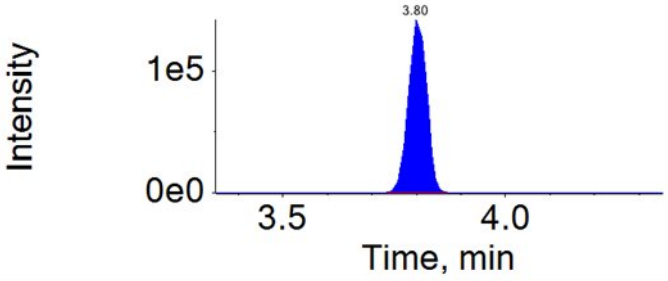


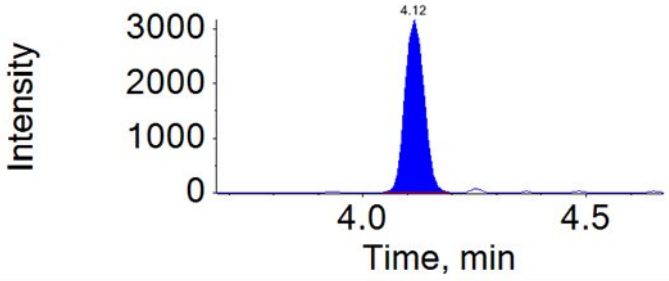
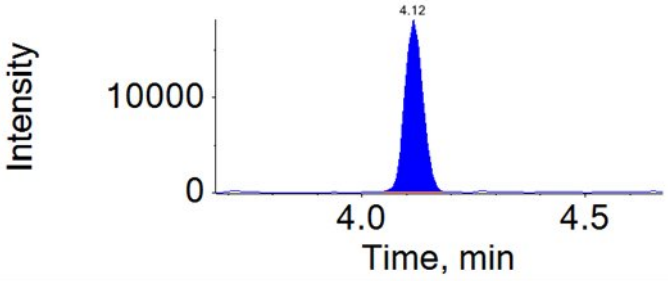


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV09DCCV5-10 11/9/2018 9:22:25 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

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 9:29 pm, 11/9/18

REVIEWED
By umar at 4:44 pm, 11/12/18