



Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, SDG BSI05

*Marine Corps Ballistics Base Barstow
Barstow, California*

November 2019

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

Soil Samples

Collected on 10/30/18

SDG# BSI05

GROUP

2005356

SAMPLE NUMBERS

9881902-9881904, 9881907-9881912,

9881915-9881918

A2LA (DoD) Cert. # 0001.01

PA Cert. # 36-00037

NY Cert. # 10670

NJ Cert. # PA011

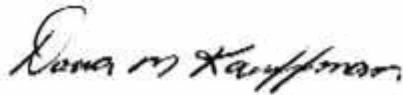
NC Cert. # 521

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:



Date: 01/24/2019

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.

Table of Contents for SDG# BSI05

1. Sample Reference List	3
2. Methodology Summary/Reference	4
3. Analysis Reports / Field Chain of Custody	5
4. PFAS by LC/MS/MS Data	40
a. Case Narrative/Conformance Summary	41
b. Quality Control and Calibration Summary Forms	45
c. Sample Data	85
d. Standards Data	303
e. Raw QC Data	1387
f. Preparation Logs	1588
5. Moisture Data	1593

**Sample Reference List for SDG Number BSI05
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
9881902	OU1-BLDG573-S-02-03	10/30/2018 12:03	11/02/2018 10:10
9881903	OU1-BLDG573-S-02-05	10/30/2018 12:07	11/02/2018 10:10
9881904	OU1-BLDG573-S-02-08	10/30/2018 12:15	11/02/2018 10:10
9881907	OU1-CAOC21-S-02-01	10/30/2018 13:10	11/02/2018 10:10
9881908	OU1-CAOC21-S-02-01 MS	10/30/2018 13:10	11/02/2018 10:10
9881909	OU1-CAOC21-S-02-01 MSD	10/30/2018 13:10	11/02/2018 10:10
9881910	OU1-CAOC21-S-02-03	10/30/2018 13:20	11/02/2018 10:10
9881911	OU1-CAOC21-S-02-06	10/30/2018 13:28	11/02/2018 10:10
9881912	OU1-CAOC21-S-02-08	10/30/2018 13:33	11/02/2018 10:10
9881915	OU1-CAOC21-S-06-01	10/30/2018 14:10	11/02/2018 10:10
9881916	OU1-CAOC21-S-06-03	10/30/2018 14:18	11/02/2018 10:10
9881917	OU1-CAOC21-S-06-05	10/30/2018 14:35	11/02/2018 10:10
9881918	OU1-CAOC21-S-06-08	10/30/2018 14:38	11/02/2018 10:10

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

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



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: January 18, 2019 14:08

Project: Barstow Site Inspection

Account #: 43806
Group Number: 2005356
SDG: BSI05
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 <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
OU1-BLDG573-S-02-03 Grab Soil	10/30/2018 12:03	9881902
OU1-BLDG573-S-02-05 Grab Soil	10/30/2018 12:07	9881903
OU1-BLDG573-S-02-08 Grab Soil	10/30/2018 12:15	9881904
OU1-BLDG573-S-02-10 Grab Soil	10/30/2018 12:23	9881905
OU1-BLDG573-S-02-12 Grab Soil	10/30/2018 12:33	9881906
OU1-CAOC21-S-02-01 Grab Soil	10/30/2018 13:10	9881907
OU1-CAOC21-S-02-01 MS Grab Soil	10/30/2018 13:10	9881908
OU1-CAOC21-S-02-01 MSD Grab Soil	10/30/2018 13:10	9881909
OU1-CAOC21-S-02-03 Grab Soil	10/30/2018 13:20	9881910
OU1-CAOC21-S-02-06 Grab Soil	10/30/2018 13:28	9881911
OU1-CAOC21-S-02-08 Grab Soil	10/30/2018 13:33	9881912
OU1-CAOC21-S-02-10 Grab Soil	10/30/2018 13:40	9881913
OU1-CAOC21-S-02-12 Grab Soil	10/30/2018 13:45	9881914
OU1-CAOC21-S-06-01 Grab Soil	10/30/2018 14:10	9881915
OU1-CAOC21-S-06-03 Grab Soil	10/30/2018 14:18	9881916
OU1-CAOC21-S-06-05 Grab Soil	10/30/2018 14:35	9881917
OU1-CAOC21-S-06-08 Grab Soil	10/30/2018 14:38	9881918
OU1-CAOC21-S-06-10 Grab Soil	10/30/2018 14:45	9881919
OU1-CAOC21-S-06-12 Grab Soil	10/30/2018 14:50	9881920

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 #: 2005356

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: 9881902, 9881904

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanesulfonate

Sample #s: 9881903

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

Sample #s: 9881915

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid

Sample #s: 9881908

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

Sample #s: 9881916

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

Batch #: 18316012 (Sample number(s): 9881902-9881904, 9881907-9881912, 9881915-9881918 UNSPK:
9881907)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9881916

Analysis Report

Sample Description: OU1-BLDG573-S-02-03 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881902
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 12:03
SDG#: BSI05-01

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							
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	0.64 J	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00111	Moisture	n.a.	2.5	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	18316012	11/13/2018 10:20	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-BLDG573-S-02-05 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881903
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 12:07
SDG#: BSI05-02

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							
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	N.D.	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	N.D.	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	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.34 J	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00111	Moisture	n.a.	2.1	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	18316012	11/13/2018 10:29	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-BLDG573-S-02-08 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881904
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 12:15
SDG#: BSI05-03

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 NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	N.D.	0.49	2.0	2.9	1
14478	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	N.D.	0.49	2.0	2.9	1
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.78	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.78	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.78	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.63	0.78	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.78	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.78	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.78	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.78	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.78	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.78	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.78	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc			%	%	%	%	
00111	Moisture 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.	n.a.	1.8	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	18316012	11/13/2018 10:38	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Sample Description: OU1-BLDG573-S-02-10 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881905
ELLE Group #: 2005356

Project Name: Barstow Site Inspection

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 12:23
SDG#: BSI05-04

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: OU1-BLDG573-S-02-12 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881906
ELLE Group #: 2005356

Project Name: Barstow Site Inspection

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 12:33
SDG#: BSI05-05

Sample Comments

CA ELAP Lab Certification No. 2792

Analysis Report

Sample Description: OU1-CAOC21-S-02-01 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881907
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 13:10
SDG#: BSI05-06BKG

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							
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	0.78	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.78	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.78	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.63	0.78	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.78	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.78	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.78	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.78	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.78	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.78	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.78	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00111	Moisture	n.a.	N.D.	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	18316012	11/13/2018 10:47	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Sample Description: OU1-CAOC21-S-02-01 MS Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881908
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 13:10
SDG#: BSI05-06MS

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							
14478	NEtFOSAA	2991-50-6	1.7 J	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.6 J	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.2	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	1.4	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	1.4	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	1.6	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	1.3	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	1.5	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	1.5	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.2	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	1.5	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	1.4	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	1.4	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	1.4	0.20	0.67	0.79	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00118	Moisture	n.a.	N.D.	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	18316012	11/13/2018 10:56	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-CAOC21-S-02-01 MSD Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881909
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 13:10
SDG#: BSI05-06MSD

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							
14478	NEtFOSAA	2991-50-6	1.5 J	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.5 J	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.2	0.19	0.56	0.75	1
14478	Perfluorodecanoic acid	335-76-2	1.4	0.28	0.64	0.93	1
14478	Perfluorododecanoic acid	307-55-1	1.4	0.19	0.64	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	1.5	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	1.1	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	1.5	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	1.4	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.2	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	1.4	0.19	0.64	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	1.5	0.19	0.64	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	1.3	0.19	0.64	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	1.5	0.19	0.64	0.75	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00118	Moisture	n.a.	N.D.	0.50	0.50	0.50	1
00121	Moisture Duplicate	n.a.	N.D.	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	18316012	11/13/2018 11:05	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1
00121	Moisture Duplicate	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-CAOC21-S-02-03 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881910
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 13:20
SDG#: BSI05-07

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							
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.58	0.77	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.66	0.97	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.66	0.77	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.66	0.77	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.62	0.77	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.66	0.77	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.66	0.77	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.63	0.77	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.66	0.77	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.66	0.77	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.66	0.77	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.66	0.77	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00111	Moisture	n.a.	0.52	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	18316012	11/13/2018 11:14	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-CAOC21-S-02-06 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881911
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 13:28
SDG#: BSI05-08

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							
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.76	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.96	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.65	0.76	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.61	0.76	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.65	0.76	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.62	0.76	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.65	0.76	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.76	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.76	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.76	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00111	Moisture	n.a.	1.3	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	18316012	11/13/2018 11:23	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Sample Description: OU1-CAOC21-S-02-08 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881912
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 13:33
SDG#: BSI05-09

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							
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	N.D.	0.18	0.63	0.74	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.18	0.59	0.74	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.18	0.63	0.74	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.18	0.63	0.74	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.18	0.60	0.74	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	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.	1.3	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	18316012	11/13/2018 11:41	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Sample Description: OU1-CAOC21-S-02-10 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881913
ELLE Group #: 2005356

Project Name: Barstow Site Inspection

Submittal Date/Time: 11/02/2018 10:10

Collection Date/Time: 10/30/2018 13:40

SDG#: BSI05-10

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: OU1-CAOC21-S-02-12 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881914
ELLE Group #: 2005356

Project Name: Barstow Site Inspection

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 13:45
SDG#: BSI05-11

Sample Comments

CA ELAP Lab Certification No. 2792

Analysis Report

Sample Description: OU1-CAOC21-S-06-01 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881915
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 14:10
SDG#: BSI05-12

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							
14478	NEtFOSAA	2991-50-6	N.D.	0.51	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.51	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.61	0.81	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.69	0.81	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.65	0.81	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.69	0.81	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.66	0.81	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.69	0.81	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.69	0.81	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.69	0.81	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.69	0.81	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00111	Moisture	n.a.	2.0	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	18316012	11/13/2018 11:50	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-CAOC21-S-06-03 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881916
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 14:18
SDG#: BSI05-13

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							
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	0.56	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	N.D.	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	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

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

Wet Chemistry		SM 2540 G-1997	%	%	%	%	
		%Moisture Calc					
00111	Moisture	n.a.	1.6	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	18316012	11/13/2018 11:59	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharp	1

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

Sample Description: OU1-CAOC21-S-06-03 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881916
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 14:18
SDG#: BSI05-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-CAOC21-S-06-05 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881917
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 14:35
SDG#: BSI05-14

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							
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	N.D.	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	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.	0.93	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	18316012	11/13/2018 12:08	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Analysis Report

Sample Description: OU1-CAOC21-S-06-08 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881918
ELLE Group #: 2005356
Matrix: Soil

Project Name: Barstow Site Inspection

Submission Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 14:38
SDG#: BSI05-15

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							
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	0.56	0.75	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.63	0.93	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.63	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.63	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.63	0.75	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.63	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.63	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.63	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.63	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.63	0.75	1
Wet Chemistry SM 2540 G-1997 %Moisture Calc							
00111	Moisture	n.a.	0.69	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	18316012	11/13/2018 12:17	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316012	11/12/2018 09:30	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820002B	11/08/2018 09:07	Larry E Bevins	1

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

Sample Description: OU1-CAOC21-S-06-10 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881919
ELLE Group #: 2005356

Project Name: Barstow Site Inspection

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 14:45
SDG#: BSI05-16

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: OU1-CAOC21-S-06-12 Grab Soil
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: SW 9881920
ELLE Group #: 2005356

Project Name: Barstow Site Inspection

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/30/2018 14:50
SDG#: BSI05-17

Sample Comments

CA ELAP Lab Certification No. 2792

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:08

Group Number: 2005356

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 ng/g	DL** ng/g	LOD ng/g	LOQ ng/g
Batch number: 18316012	Sample number(s): 9881902-9881904,9881907-9881912,9881915-9881918			
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

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: 18316012	Sample number(s): 9881902-9881904,9881907-9881912,9881915-9881918								
NEtFOSAA	1.36	1.46			107		70-130		
NMeFOSAA	1.36	1.10			81		70-130		
Perfluorobutanesulfonate	1.20	1.31			109		70-130		
Perfluorodecanoic acid	1.36	1.35			99		70-130		
Perfluorododecanoic acid	1.36	1.33			98		70-130		
Perfluoroheptanoic acid	1.36	1.67			123		70-130		
Perfluorohexanesulfonate	1.29	1.28			100		70-130		
Perfluorohexanoic acid	1.36	1.57			115		70-130		
Perfluorononanoic acid	1.36	1.52			112		70-130		
Perfluoro-octanesulfonate	1.30	1.12			86		70-130		
Perfluorooctanoic acid	1.36	1.50			111		70-130		
Perfluorotetradecanoic acid	1.36	1.43			105		70-130		
Perfluorotridecanoic acid	1.36	1.39			103		70-130		
Perfluoroundecanoic acid	1.36	1.45			106		70-130		

*- 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: 01/18/2019 14:08

Group Number: 2005356

LCS/LCSD (continued)

Analysis Name	LCS Spike Added %	LCS Conc %	LCSD Spike Added %	LCSD Conc %	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18312820002B	Sample number(s): 9881902-9881904,9881907-9881912,9881915-9881918								
Moisture	89.5	89.38			100		99-101		
Moisture	89.5	89.38			100		99-101		
Moisture Duplicate	89.5	89.38			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: 18316012	Sample number(s): 9881902-9881904,9881907-9881912,9881915-9881918 UNSPK: 9881907									
NETFOSAA	N.D.	1.35	1.66	1.27	1.52	124	120	70-130	9	30
NMeFOSAA	N.D.	1.35	1.65	1.27	1.45	122	114	70-130	13	30
Perfluorobutanesulfonate	N.D.	1.19	1.25	1.13	1.22	105	109	70-130	2	30
Perfluorodecanoic acid	N.D.	1.35	1.43	1.27	1.35	106	106	70-130	5	30
Perfluorododecanoic acid	N.D.	1.35	1.37	1.27	1.37	102	108	70-130	0	30
Perfluoroheptanoic acid	N.D.	1.35	1.61	1.27	1.51	119	118	70-130	6	30
Perfluorohexanesulfonate	N.D.	1.27	1.29	1.20	1.15	101	96	70-130	12	30
Perfluorohexanoic acid	N.D.	1.35	1.54	1.27	1.50	114	118	70-130	3	30
Perfluorononanoic acid	N.D.	1.35	1.49	1.27	1.38	111	109	70-130	8	30
Perfluoro-octanesulfonate	N.D.	1.29	1.19	1.22	1.22	93	101	70-130	2	30
Perfluorooctanoic acid	N.D.	1.35	1.46	1.27	1.40	108	110	70-130	4	30
Perfluorotetradecanoic acid	N.D.	1.35	1.45	1.27	1.45	107	114	70-130	0	30
Perfluorotridecanoic acid	N.D.	1.35	1.42	1.27	1.34	105	105	70-130	6	30
Perfluoroundecanoic acid	N.D.	1.35	1.40	1.27	1.49	104	117	70-130	7	30

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: 18312820002B	Sample number(s): 9881902-9881904,9881907-9881912,9881915-9881918 BKG: 9881907			
Moisture	N.D.	N.D.	0 (1)	5
Moisture	N.D.	N.D.	0 (1)	5
Moisture Duplicate	N.D.	N.D.	0 (1)	5

*- 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: 01/18/2019 14:08

Group Number: 2005356

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: 18316012

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD
	(ng/g)		(ng/g)		(ng/g)		(ng/g)		(ng/g)		(ng/g)	
9881902	82	0.59	87	0.39	84	0.59	83	0.59	88	0.59	81	0.88
9881903	79	0.58	80	0.38	80	0.58	80	0.58	87	0.58	85	0.87
9881904	82	0.58	83	0.38	79	0.58	83	0.58	83	0.58	85	0.87
9881907	83	0.59	83	0.39	80	0.59	81	0.59	87	0.59	81	0.88
9881908	78	0.59	82	0.40	79	0.59	87	0.59	90	0.59	84	0.89
9881909	76	0.56	79	0.37	79	0.56	80	0.56	84	0.56	83	0.84
9881910	75	0.58	79	0.38	76	0.58	80	0.58	82	0.58	78	0.87
9881911	78	0.57	79	0.38	78	0.57	82	0.57	88	0.57	78	0.85
9881912	76	0.55	80	0.36	74	0.55	77	0.55	84	0.55	79	0.82
9881915	78	0.59	85	0.40	78	0.59	83	0.59	88	0.59	84	0.89
9881916	80	0.56	84	0.37	77	0.56	79	0.56	84	0.56	83	0.83
9881917	83	0.56	88	0.37	81	0.56	86	0.56	91	0.56	83	0.84
9881918	75	0.56	73	0.37	69	0.56	74	0.56	78	0.56	85	0.83
Blank	78	1.2	85	0.80	82	1.2	82	1.2	87	1.2	86	1.8
LCS	76	1.2	81	0.80	79	1.2	78	1.2	87	1.2	83	1.8
MS	78	0.59	82	0.40	79	0.59	87	0.59	90	0.59	84	0.89
MSD	76	0.56	79	0.37	79	0.56	80	0.56	84	0.56	83	0.84
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	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD
	(ng/g)		(ng/g)		(ng/g)		(ng/g)		(ng/g)		(ng/g)	
9881902	84	0.39	86	0.59	77	0.88	80	0.59	63	0.88	79	0.59
9881903	87	0.38	83	0.58	68	0.87	84	0.58	64	0.87	77	0.58
9881904	88	0.38	75	0.58	78	0.87	79	0.58	69	0.87	81	0.58
9881907	86	0.39	81	0.59	61	0.88	83	0.59	61	0.88	81	0.59
9881908	90	0.40	84	0.59	70	0.89	86	0.59	64	0.89	82	0.59
9881909	90	0.37	82	0.56	60	0.84	79	0.56	55	0.84	80	0.56
9881910	83	0.38	82	0.58	64	0.87	107	0.58	63	0.87	77	0.58
9881911	83	0.38	84	0.57	79	0.85	87	0.57	66	0.85	81	0.57
9881912	78	0.36	77	0.55	85	0.82	82	0.55	75	0.82	78	0.55
9881915	86	0.40	70	0.59	59	0.89	77	0.59	53	0.89	77	0.59
9881916	87	0.37	81	0.56	48*	0.83	84	0.56	52	0.83	81	0.56
9881917	87	0.37	83	0.56	65	0.84	85	0.56	55	0.84	81	0.56
9881918	84	0.37	76	0.56	54	0.83	78	0.56	57	0.83	75	0.56
Blank	88	0.80	81	1.2	82	1.8	82	1.2	72	1.8	78	1.2

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:08

Group Number: 2005356

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: 18316012

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD
	(ng/g)		(ng/g)		(ng/g)		(ng/g)		(ng/g)		(ng/g)	
LCS	83	0.80	79	1.2	81	1.8	80	1.2	72	1.8	76	1.2
MS	90	0.40	84	0.59	70	0.89	86	0.59	64	0.89	82	0.59
MSD	90	0.37	82	0.56	60	0.84	79	0.56	55	0.84	80	0.56
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD
	(ng/g)	
9881902	81	0.59
9881903	73	0.58
9881904	75	0.58
9881907	77	0.59
9881908	80	0.59
9881909	73	0.56
9881910	75	0.58
9881911	81	0.57
9881912	73	0.55
9881915	73	0.59
9881916	79	0.56
9881917	78	0.56
9881918	72	0.56
Blank	74	1.2
LCS	76	1.2
MS	80	0.59
MSD	73	0.56

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



Lancaster Laboratories
Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 43806 Group # 205356 Sample # 9881 902-20

COC # 568815

Client Information				Matrix				Analysis Requested												For Lab Use Only	
Client: <u>GCE</u>		Acct. #:		☐ Tissue ☐ Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Water		Other:		Preservation and Filtration Codes												FSC: <u>033294</u>	
Project Name/ID: <u>Barstow Site Inspection</u>		PWSID #:																		SCR#: <u>033294</u>	
Project Manager: <u>Eric Rider</u>		P.O. #:																		Preservation Codes	
Sampler: <u>Jesse MacNeill</u>		Quote #:																		H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other	
State where samples were collected: <u>CA</u>		For Compliance: Yes ☐ No ☒																		Remarks	
Sample Identification		Collected		Grab	Composite	Soil ☒	Water	Total # of Containers													
		Date	Time																		
OU1-BLDG573-S-02-03		10/30/18	1203	✓		✓		2	✓												
OU1-BLDG573-S-02-05		10/30/18	1207	✓		✓		2	✓												
OU1-BLDG573-S-02-08		10/30/18	1215	✓		✓		1	✓												
OU1-BLDG573-S-02-10		10/30/18	1223	✓		✓		1	✓												
OU1-BLDG573-S-02-12		10/30/18	1233	✓		✓		1	✓												
OU1-CAOC21-S-02-01		10/30/18	1310	✓		✓		6	✓												
OU1-CAOC21-S-02-03		10/30/18	1320	✓		✓		1	✓												
OU1-CAOC21-S-02-06		10/30/18	1328	✓		✓		1	✓												
OU1-CAOC21-S-02-08		10/30/18	1333	✓		✓		1	✓												
OU1-CAOC21-S-02-10		10/30/18	1340	✓		✓		1	✓												

Turnaround Time (TAT) Requested (please circle)		Relinquished by		Date	Time	Received by		Date	Time
Standard	Rush	<u>[Signature]</u>	<u>10-19-18</u>	<u>10:15</u>					
(Rush TAT is subject to laboratory approval and surcharge.)		<u>Jesse MacNeill</u>	<u>10/31/18</u>	<u>1300</u>					
Requested TAT in business days: _____									
E-mail address: _____									

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		

EDD Required? <u>Yes</u> No		Relinquished by Commercial Carrier:	
If yes, format: <u>NEDD, EDF</u>		UPS _____ FedEx _____ Other _____	
Site-Specific QC (MS/MSD/Dup)? <u>Yes</u> No		Temperature upon receipt <u>0.5-7.6°C</u>	
(If yes, indicate QC sample and submit triplicate sample volume.)			

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 43806 Group # 2005356 Sample # 9881902-20

COC # 568809

Client Information				Matrix		Analysis Requested												For Lab Use Only			
Client: <u>GCE</u>		Acct. #:		☐ Tissue ☐ Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Water	Other:	Preservation and Filtration Codes												FSC: _____			
Project Name/ID: <u>Barnston Site Inspection</u>		PWSID #:																SCR#: _____			
Project Manager: <u>Eric Rider</u>		P.O. #:														Preservation Codes					
Sampler: <u>Jesse MacNeill</u>		Quote #:														H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other					
State where samples were collected: <u>CA</u>		For Compliance: Yes ☐ No ☒		Grab	Composite													Remarks			
Sample Identification		Collected		Soil ☒ <th rowspan="2">Sediment ☐ <th rowspan="2">Water <th rowspan="2">Total # of Containers</th> <th colspan="12"></th> <th rowspan="2"></th> </th></th>	Sediment ☐ <th rowspan="2">Water <th rowspan="2">Total # of Containers</th> <th colspan="12"></th> <th rowspan="2"></th> </th>	Water <th rowspan="2">Total # of Containers</th> <th colspan="12"></th> <th rowspan="2"></th>	Total # of Containers														
		Date	Time																		
<u>OUI-CA0021-S-02-12</u>	<u>10/30/18</u>	<u>1345</u>	☒	☒	☐	<u>1</u>	<u>2</u>	☒													<u>Hold</u>
<u>OUI-CA0021-S-06-01</u>	<u>10/30/18</u>	<u>1410</u>	☒	☒	☐	<u>2</u>	<u>2</u>	☒													
<u>OUI-CA0021-S-06-03</u>	<u>10/30/18</u>	<u>1418</u>	☒	☒	☐	<u>2</u>	<u>2</u>	☒													
<u>OUI-CA0021-S-06-05</u>	<u>10/30/18</u>	<u>1435</u>	☒	☒	☐	<u>1</u>	<u>2</u>	☒													
<u>OUI-CA0021-S-06-08</u>	<u>10/30/18</u>	<u>1438</u>	☒	☒	☐	<u>1</u>	<u>2</u>	☒													
<u>OUI-CA0021-S-06-10</u>	<u>10/30/18</u>	<u>1445</u>	☒	☒	☐	<u>1</u>	<u>2</u>	☒													<u>Hold</u>
<u>OUI-CA0021-S-06-12</u>	<u>10/30/18</u>	<u>1450</u>	☒	☒	☐	<u>1</u>	<u>2</u>	☒													<u>Hold</u>
<u>Hold</u>																					

Turnaround Time (TAT) Requested (please circle) Standard <u>Standard</u> Rush (Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by <u>Jesse MacNeill</u> Date <u>10/31/18</u> Time <u>1300</u>		Received by _____ Date _____ Time _____	
Requested TAT in business days: _____				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____	
E-mail address: _____				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____	
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				EDD Required? Yes ☒ No ☐ If yes, format: <u>NEPS</u>		Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____	
				Site-Specific QC (MS/MSD/Dup)? Yes ☐ No ☒ (If yes, indicate QC sample and submit triplicate sample volume.)		Temperature upon receipt <u>0.576°C</u>	

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:	No
Custody Seal Intact:	Yes	VOA Vial Headspace $\geq$ 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.	

Client: GCE**Samples In Elevated-Temperature Coolers**

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

Sample Date/Time Discrepancy Details

<u>Sample ID on COC</u>	<u>Date/Time on Label</u>	<u>Comments</u>
OU1-Bldg573-S-01-12	10/30/2018 10:35	

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.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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 $\geq$ 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

Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI05

PFAS Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
9881902	OU1-BLDG573-S-02-03		X	1	
9881903	OU1-BLDG573-S-02-05		X	1	
9881904	OU1-BLDG573-S-02-08		X	1	
9881907	OU1-CAOC21-S-02-01		X	1	Unspiked
9881908	OU1-CAOC21-S-02-01 MS		X	1	Matrix Spike
9881909	OU1-CAOC21-S-02-01 MSD		X	1	Matrix Spike Duplicate
9881910	OU1-CAOC21-S-02-03		X	1	
9881911	OU1-CAOC21-S-02-06		X	1	
9881912	OU1-CAOC21-S-02-08		X	1	
9881915	OU1-CAOC21-S-06-01		X	1	
9881916	OU1-CAOC21-S-06-03		X	1	
9881917	OU1-CAOC21-S-06-05		X	1	
9881918	OU1-CAOC21-S-06-08		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.

Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI05

PFAS Group

Fraction: PFAS by LC/MS/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

Batch#: 18310012

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Perfluoroheptanoic acid, Perfluorononanoic acid, Perfluorooctanesulfonate

MS/MSD

Batch#: 18310012

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluorononanoic acid

The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias: Perfluoroheptanoic acid

Surrogate

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

Batch#: 18316012 (Sample number(s): 9881902-9881904, 9881907-9881912, 9881915-9881918, UNSPK: 9881907)

The recovery(ies) for the following surrogate(s) were below the acceptance window: d3-NMeFOSSA (9881916)

(Sample number(s): 9881916: Analysis: 14478)

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

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI05

PFAS Group

Fraction: PFAS by LC/MS/MS

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

Quality Control Reference List PFAS Group

CLIENT: Gutierrez Canales Engineering
SDG: BSI05

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFAS in Soil by LC/MS/MS-DoD	18310012	BLK310012B	11/08/2018 22:01
		LCS310012Q	11/08/2018 22:10
		9881907 UNSPK	11/08/2018 22:47
		9881908 MS	11/08/2018 23:14
		9881909 MSD	11/08/2018 23:23
		9881916	11/09/2018 00:08
PFAS in Soil by LC/MS/MS-DoD	18316012	BLK316012B	11/13/2018 10:02
		LCS316012Q	11/13/2018 10:11
		9881902	11/13/2018 10:20
		9881903	11/13/2018 10:29
		9881904	11/13/2018 10:38
		9881907 UNSPK	11/13/2018 10:47
		9881908 MS	11/13/2018 10:56
		9881909 MSD	11/13/2018 11:05
		9881910	11/13/2018 11:14
		9881911	11/13/2018 11:23
		9881912	11/13/2018 11:41
		9881915	11/13/2018 11:50
		9881916	11/13/2018 11:59
		9881917	11/13/2018 12:08
		9881918	11/13/2018 12:17

Fraction: PFAS by LC/MS/MS

18310012 / BLK310012B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/08/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/08/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/08/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/08/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/08/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/08/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/08/18	N.D.	ng/g	0.50	2.0	3.0

18316012 / BLK316012B 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

SDG No.: BSI05
Matrix: SOIL

18310012		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
BLK310012	11/08/18 22:01	70	63	66	73	82
LCS310012	11/08/18 22:10	63	60	61	69	63
9881907RE	11/08/18 22:47	72	71	69	75	73
9881908MSRE	11/08/18 23:14	71	64	63	66	66
9881909MSDRE	11/08/18 23:23	70	65	64	71	69
9881916RE	11/09/18 00:08	77	66	67	76	71

* Outside QC Limits

SDG No.: BSI05
Matrix: SOIL

18310012		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
BLK310012	11/08/18 22:01	72	71	77	71	70
LCS310012	11/08/18 22:10	66	63	70	70	65
9881907RE	11/08/18 22:47	77	77	78	77	74
9881908MSRE	11/08/18 23:14	68	69	72	68	69
9881909MSDRE	11/08/18 23:23	70	70	71	74	71
9881916RE	11/09/18 00:08	73	77	76	78	72

* Outside QC Limits

SDG No.: BSI05
Matrix: SOIL

18310012			13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
		Limits	50-150	50-150	50-150
LAB SAMPLE ID	DATE/TIME		% Recovery	% Recovery	% Recovery
BLK310012	11/08/18 22:01		70	73	64
LCS310012	11/08/18 22:10		68	69	61
9881907RE	11/08/18 22:47		75	58	61
9881908MSRE	11/08/18 23:14		65	61	61
9881909MSDRE	11/08/18 23:23		71	59	59
9881916RE	11/09/18 00:08		70	49 *	44 *

* Outside QC Limits

SDG No.: BSI05
Matrix: SOIL

18316012		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
BLK316012	11/13/18 10:02	78	74	78	82	82
LCS316012	11/13/18 10:11	76	76	76	79	78
9881902	11/13/18 10:20	79	81	82	84	83
9881903	11/13/18 10:29	77	73	79	80	80
9881904	11/13/18 10:38	81	75	82	79	83
9881907	11/13/18 10:47	81	77	83	80	81
9881908MS	11/13/18 10:56	82	80	78	79	87
9881909MSD	11/13/18 11:05	80	73	76	79	80
9881910	11/13/18 11:14	77	75	75	76	80
9881911	11/13/18 11:23	81	81	78	78	82
9881912	11/13/18 11:41	78	73	76	74	77
9881915	11/13/18 11:50	77	73	78	78	83
9881916	11/13/18 11:59	81	79	80	77	79
9881917	11/13/18 12:08	81	78	83	81	86
9881918	11/13/18 12:17	75	72	75	69	74

* Outside QC Limits

SDG No.: BSI05
Matrix: SOIL

18316012		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
BLK316012	11/13/18 10:02	85	81	82	87	86
LCS316012	11/13/18 10:11	81	79	80	87	83
9881902	11/13/18 10:20	87	86	80	88	81
9881903	11/13/18 10:29	80	83	84	87	85
9881904	11/13/18 10:38	83	75	79	83	85
9881907	11/13/18 10:47	83	81	83	87	81
9881908MS	11/13/18 10:56	82	84	86	90	84
9881909MSD	11/13/18 11:05	79	82	79	84	83
9881910	11/13/18 11:14	79	82	107	82	78
9881911	11/13/18 11:23	79	84	87	88	78
9881912	11/13/18 11:41	80	77	82	84	79
9881915	11/13/18 11:50	85	70	77	88	84
9881916	11/13/18 11:59	84	81	84	84	83
9881917	11/13/18 12:08	88	83	85	91	83
9881918	11/13/18 12:17	73	76	78	78	85

* Outside QC Limits

SDG No.: BSI05
Matrix: SOIL

18316012			13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
		Limits	50-150	50-150	50-150
LAB SAMPLE ID	DATE/TIME		% Recovery	% Recovery	% Recovery
BLK316012	11/13/18 10:02		88	82	72
LCS316012	11/13/18 10:11		83	81	72
9881902	11/13/18 10:20		84	77	63
9881903	11/13/18 10:29		87	68	64
9881904	11/13/18 10:38		88	78	69
9881907	11/13/18 10:47		86	61	61
9881908MS	11/13/18 10:56		90	70	64
9881909MSD	11/13/18 11:05		90	60	55
9881910	11/13/18 11:14		83	64	63
9881911	11/13/18 11:23		83	79	66
9881912	11/13/18 11:41		78	85	75
9881915	11/13/18 11:50		86	59	53
9881916	11/13/18 11:59		87	48 *	52
9881917	11/13/18 12:08		87	65	55
9881918	11/13/18 12:17		84	54	57

* Outside QC Limits

PFAS Group

Fraction: PFAS by LC/MS/MS

UNSPK: 9881907 MS: 9881908 MSD: 9881909 Analyte	Batch: 18310012 (Sample number(s): 9881907-9881909, 9881916)								
	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	1.27 / 1.32	N.D.	1.60	1.71	126	130	70-130	7	30
Perfluorononanoic acid	1.27 / 1.32	N.D.	1.68	1.69	132 *	128	70-130	1	30
Perfluorodecanoic acid	1.27 / 1.32	N.D.	1.56	1.68	123	127	70-130	8	30
Perfluoroundecanoic acid	1.27 / 1.32	N.D.	1.48	1.55	117	117	70-130	4	30
Perfluorododecanoic acid	1.27 / 1.32	N.D.	1.49	1.59	117	120	70-130	6	30
Perfluorotridecanoic acid	1.27 / 1.32	N.D.	1.39	1.43	109	108	70-130	3	30
Perfluorotetradecanoic acid	1.27 / 1.32	N.D.	1.55	1.57	122	119	70-130	1	30
Perfluorohexanoic acid	1.27 / 1.32	N.D.	1.54	1.70	121	129	70-130	10	30
Perfluoroheptanoic acid	1.27 / 1.32	N.D.	1.66	1.74	130	132 *	70-130	5	30
Perfluorobutanesulfonate	1.12 / 1.17	N.D.	1.38	1.43	123	122	70-130	3	30
Perfluorohexanesulfonate	1.20 / 1.25	N.D.	1.48	1.48	123	119	70-130	0	30
Perfluoro-octanesulfonate	1.22 / 1.26	N.D.	1.48	1.58	122	125	70-130	7	30
NEtFOSAA	1.27 / 1.32	N.D.	1.33 J	1.18 J	105	89	70-130	12	30
NMeFOSAA	1.27 / 1.32	N.D.	1.08 J	1.32 J	85	100	70-130	20	30

UNSPK: 9881907 MS: 9881908 MSD: 9881909 Analyte	Batch: 18316012 (Sample number(s): 9881902-9881904, 9881907-9881912, 9881915-9881918)								
	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	1.35 / 1.27	N.D.	1.46	1.40	108	110	70-130	4	30
Perfluorononanoic acid	1.35 / 1.27	N.D.	1.49	1.38	111	109	70-130	8	30
Perfluorodecanoic acid	1.35 / 1.27	N.D.	1.43	1.35	106	106	70-130	5	30
Perfluoroundecanoic acid	1.35 / 1.27	N.D.	1.40	1.49	104	117	70-130	7	30
Perfluorododecanoic acid	1.35 / 1.27	N.D.	1.37	1.37	102	108	70-130	0	30
Perfluorotridecanoic acid	1.35 / 1.27	N.D.	1.42	1.34	105	105	70-130	6	30
Perfluorotetradecanoic acid	1.35 / 1.27	N.D.	1.45	1.45	107	114	70-130	0	30
Perfluorohexanoic acid	1.35 / 1.27	N.D.	1.54	1.50	114	118	70-130	3	30
Perfluoroheptanoic acid	1.35 / 1.27	N.D.	1.61	1.51	119	118	70-130	6	30
Perfluorobutanesulfonate	1.19 / 1.13	N.D.	1.25	1.22	105	109	70-130	2	30
Perfluorohexanesulfonate	1.27 / 1.20	N.D.	1.29	1.15	101	96	70-130	12	30
Perfluoro-octanesulfonate	1.29 / 1.22	N.D.	1.19	1.22	93	101	70-130	2	30
NEtFOSAA	1.35 / 1.27	N.D.	1.66 J	1.52 J	124	120	70-130	9	30
NMeFOSAA	1.35 / 1.27	N.D.	1.65 J	1.45 J	122	114	70-130	13	30

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.

SDG: BSI05
Matrix: SOLID

PFAS Group

Fraction: PFAS by LC/MS/MS

LCS: LCS310012Q		Batch: 18310012 (Sample number(s): 9881907-9881909, 9881916)						
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	1.72	NA	127	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.84	NA	135 *	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.65	NA	121	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.65	NA	121	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.69	NA	124	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.60	NA	117	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.70	NA	125	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.72	NA	126	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.90	NA	140 *	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.43	NA	119	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.41	NA	109	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.72	NA	132 *	NA	70-130	NA	NA
NEtFOSAA	1.36	1.70 J	NA	125	NA	70-130	NA	NA
NMeFOSAA	1.36	1.15 J	NA	85	NA	70-130	NA	NA

LCS: LCS316012Q		Batch: 18316012 (Sample number(s): 9881902-9881904, 9881907-9881912, 9881915-9881918)						
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	1.50	NA	111	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.52	NA	112	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.35	NA	99	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.45	NA	106	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.33	NA	98	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.39	NA	103	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.43	NA	105	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.57	NA	115	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.67	NA	123	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.31	NA	109	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.28	NA	100	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.12	NA	86	NA	70-130	NA	NA
NEtFOSAA	1.36	1.46 J	NA	107	NA	70-130	NA	NA
NMeFOSAA	1.36	1.10 J	NA	81	NA	70-130	NA	NA

Fraction: PFAS by LC/MS/MS

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

SDG No.: BSI05

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

SDG No.: BSI05

Instrument ID: 27631

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

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

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

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

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

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

SDG No.: BSI05

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= ;

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

SDG No.: BSI05

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= ;

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

Perfluoronananesulfonate	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

SDG No.: BSI05

Instrument ID: 27631

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

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

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

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

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

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

SDG No.: BSI05

Instrument ID: 27631

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

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

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

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

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

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

SDG No.: BSI05

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= ;

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

SDG No.: BSI05

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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3=
18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6=
18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

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

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

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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
 CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
 CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

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

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

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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
 CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
 CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

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

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

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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
 CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
 CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

Perfluoronananesulfonate	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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
 CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
 CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

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

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

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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
 CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
 CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

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

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

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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
 CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
 CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

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

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

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

SDG No.: BSI05

Instrument ID: 27631

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

Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
 CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
 CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

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

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

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

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

SDG No.: BSI05

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

SDG No.: BSI05

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

SDG No.: BSI05

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

SDG No.: BSI05

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

SDG No.: BSI05

Instrument ID: 27631

Lab File ID: 18NOV08D-62.WIFF

Date/Time Analyzed: 11/08/2018 20:58

Lab Sample ID: CCV6_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	8.64	8.05	±30
Perfluoropentanoic acid	8.00	8.47	5.87	±30
Perfluorobutanesulfonate	7.08	7.66	8.18	±30
4:2 fluorotelomersulfonate	7.47	7.69	2.93	±30
Perfluorohexanoic acid	8.00	8.39	4.85	±30
Perfluoropentanesulfonate	7.50	7.66	2.17	±30
Perfluorohexanesulfonate	7.56	7.78	2.95	±30
Perfluoroheptanoic acid	8.00	8.45	5.66	±30
6:2 fluorotelomersulfonate	7.58	7.85	3.54	±30
Perfluoroheptanesulfonate	7.61	7.86	3.26	±30
Perfluorooctanoic acid	8.00	8.64	8.00	±30
Perfluoro-octanesulfonate	7.65	7.92	3.58	±30
Perfluorononanoic acid	8.00	8.76	9.54	±30
Perfluorononanesulfonate	7.68	7.71	0.41	±30
Perfluorodecanoic acid	8.00	8.39	4.82	±30
8:2 fluorotelomersulfonate	7.66	8.01	4.55	±30
Perfluorooctanesulfonamide	8.00	8.35	4.32	±30
NMeFOSAA	8.00	8.42	5.27	±30
Perfluorodecanesulfonate	7.70	7.76	0.82	±30
Perfluoroundecanoic acid	8.00	8.16	1.94	±30
NEtFOSAA	8.00	7.57	-5.37	±30
Perfluorododecanoic acid	8.00	8.62	7.76	±30
10:2-fluorotelomersulfonate	7.71	8.47	9.89	±30
NMePFOSAE	8.00	8.26	3.20	±30
NMePFOSA	8.00	8.67	8.39	±30
Perfluorododecanesulfonate	7.74	7.65	-1.12	±30
NEtPFOSAE	8.00	8.95	11.86	±30
NEtPFOSA	8.00	7.29	-8.82	±30
Perfluorotridecanoic acid	8.00	7.82	-2.26	±30
Perfluorotetradecanoic acid	8.00	8.57	7.08	±30
Perfluorohexadecanoic acid	8.00	8.57	7.18	±30
Perfluorooctadecanoic acid	8.00	8.48	5.98	±30

SDG No.: BSI05

Instrument ID: 27631

Lab File ID: 18NOV08D-75.WIFF

Date/Time Analyzed: 11/08/2018 22:56

Lab Sample ID: CCV7_ISC_CAL2

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

11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.50	0.55	9.48	±30
Perfluoropentanoic acid	0.50	0.54	7.30	±30
Perfluorobutanesulfonate	0.44	0.46	3.71	±30
4:2 fluorotelomersulfonate	0.47	0.54	15.60	±30
Perfluorohexanoic acid	0.50	0.53	5.26	±30
Perfluoropentanesulfonate	0.47	0.47	0.64	±30
Perfluorohexanesulfonate	0.47	0.49	2.98	±30
Perfluoroheptanoic acid	0.50	0.60	19.66	±30
6:2 fluorotelomersulfonate	0.47	0.51	6.93	±30
Perfluoroheptanesulfonate	0.48	0.45	-5.20	±30
Perfluorooctanoic acid	0.50	0.53	6.87	±30
Perfluoro-octanesulfonate	0.48	0.50	4.08	±30
Perfluorononanoic acid	0.50	0.54	7.55	±30
Perfluorononanesulfonate	0.48	0.49	2.31	±30
Perfluorodecanoic acid	0.50	0.54	8.10	±30
8:2 fluorotelomersulfonate	0.48	0.55	14.45	±30
Perfluorooctanesulfonamide	0.50	0.54	7.32	±30
NMeFOSAA	0.50	0.49	-1.60	±30
Perfluorodecanesulfonate	0.48	0.50	4.63	±30
Perfluoroundecanoic acid	0.50	0.42	-15.24	±30
NEtFOSAA	0.50	0.47	-5.71	±30
Perfluorododecanoic acid	0.50	0.52	3.09	±30
10:2-fluorotelomersulfonate	0.48	0.41	-15.49	±30
NMePFOSAE	0.50	0.53	6.20	±30
NMePFOSA	0.50	0.64	27.50	±30
Perfluorododecanesulfonate	0.48	0.45	-7.90	±30
NEtPFOSAE	0.50	0.56	11.85	±30
NEtPFOSA	0.50	0.47	-5.55	±30
Perfluorotridecanoic acid	0.50	0.54	8.87	±30
Perfluorotetradecanoic acid	0.50	0.51	1.74	±30
Perfluorohexadecanoic acid	0.50	0.53	5.95	±30
Perfluorooctadecanoic acid	0.50	0.50	0.57	±30

SDG No.: BSI05

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

SDG No.: BSI05

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

SDG No.: BSI05

Instrument ID: 27631

Lab File ID: 18NOV13D-05.WIFF

Date/Time Analyzed: 11/13/2018 09:44

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	0.58	-3.65	±30
Perfluoropentanoic acid	0.60	0.59	-1.76	±30
Perfluorobutanesulfonate	0.53	0.47	-11.94	±30
4:2 fluorotelomersulfonate	0.56	0.48	-14.95	±30
Perfluorohexanoic acid	0.60	0.57	-4.93	±30
Perfluoropentanesulfonate	0.56	0.51	-9.98	±30
Perfluoroheptanoic acid	0.60	0.57	-5.10	±30
Perfluorohexanesulfonate	0.55	0.52	-4.07	±30
6:2 fluorotelomersulfonate	0.57	0.61	7.89	±30
Perfluoroheptanesulfonate	0.57	0.51	-9.92	±30
Perfluorooctanoic acid	0.60	0.59	-1.97	±30
Perfluoro-octanesulfonate	0.56	0.53	-3.87	±30
Perfluorononanoic acid	0.60	0.55	-8.00	±30
Perfluorononanesulfonate	0.58	0.43	-24.60	±30
Perfluorodecanoic acid	0.60	0.57	-4.55	±30
8:2 fluorotelomersulfonate	0.58	0.46	-20.29	±30
Perfluorooctanesulfonamide	0.60	0.59	-1.95	±30
NMeFOSAA	0.60	0.54	-9.90	±30
Perfluorodecanesulfonate	0.58	0.47	-18.38	±30
Perfluoroundecanoic acid	0.60	0.55	-8.64	±30
NEtFOSAA	0.60	0.65	8.80	±30
Perfluorododecanoic acid	0.60	0.57	-4.64	±30
10:2-fluorotelomersulfonate	0.58	0.51	-11.94	±30
NMePFOSAE	0.60	0.61	1.33	±30
NMePFOSA	0.60	0.46	-23.31	±30
Perfluorododecanesulfonate	0.58	0.49	-15.84	±30
NEtPFOSAE	0.60	0.57	-5.79	±30
NEtPFOSA	0.60	0.60	-0.38	±30
Perfluorotridecanoic acid	0.60	0.59	-1.21	±30
Perfluorotetradecanoic acid	0.60	0.53	-12.31	±30
Perfluorohexadecanoic acid	0.60	0.54	-10.36	±30
Perfluorooctadecanoic acid	0.60	0.54	-10.25	±30

SDG No.: BSI05

Instrument ID: 27631

Lab File ID: 18NOV13D-17.WIFF

Date/Time Analyzed: 11/13/2018 11:32

Lab Sample ID: CCV2_CAL3

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

11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.32	16.17	±30
Perfluoropentanoic acid	2.00	2.32	16.09	±30
Perfluorobutanesulfonate	1.77	1.89	6.57	±30
4:2 fluorotelomersulfonate	1.87	2.02	8.18	±30
Perfluorohexanoic acid	2.00	2.36	17.88	±30
Perfluoropentanesulfonate	1.88	2.00	6.56	±30
Perfluoroheptanoic acid	2.00	2.39	19.49	±30
Perfluorohexanesulfonate	1.82	2.06	13.05	±30
6:2 fluorotelomersulfonate	1.90	2.19	15.37	±30
Perfluoroheptanesulfonate	1.90	2.12	11.83	±30
Perfluorooctanoic acid	2.00	2.20	10.06	±30
Perfluoro-octanesulfonate	1.85	1.98	6.99	±30
Perfluorononanoic acid	2.00	2.36	18.22	±30
Perfluorononanesulfonate	1.92	2.00	4.02	±30
Perfluorodecanoic acid	2.00	2.28	14.13	±30
8:2 fluorotelomersulfonate	1.92	2.14	11.20	±30
Perfluorooctanesulfonamide	2.00	2.17	8.60	±30
NMeFOSAA	2.00	2.19	9.74	±30
Perfluorodecanesulfonate	1.93	2.15	11.36	±30
Perfluoroundecanoic acid	2.00	2.22	11.01	±30
NEtFOSAA	2.00	1.91	-4.67	±30
Perfluorododecanoic acid	2.00	2.18	9.02	±30
10:2-fluorotelomersulfonate	1.93	1.99	3.34	±30
NMePFOSAE	2.00	2.27	13.30	±30
NMePFOSA	2.00	2.13	6.70	±30
Perfluorododecanesulfonate	1.94	2.15	10.61	±30
NEtPFOSAE	2.00	2.19	9.44	±30
NEtPFOSA	2.00	2.04	2.20	±30
Perfluorotridecanoic acid	2.00	2.34	17.09	±30
Perfluorotetradecanoic acid	2.00	2.24	12.00	±30
Perfluorohexadecanoic acid	2.00	2.26	13.15	±30
Perfluorooctadecanoic acid	2.00	2.23	11.58	±30

SDG No.: BSI05

Instrument ID: 27631

Lab File ID: 18NOV13D-23.WIFF

Date/Time Analyzed: 11/13/2018 12:26

Lab Sample ID: CCV3_CAL4

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

11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.21	2.68	±30
Perfluoropentanoic acid	8.00	8.45	5.61	±30
Perfluorobutanesulfonate	7.08	6.87	-2.94	±30
4:2 fluorotelomersulfonate	7.47	7.60	1.73	±30
Perfluorohexanoic acid	8.00	8.06	0.73	±30
Perfluoropentanesulfonate	7.50	7.04	-6.17	±30
Perfluoroheptanoic acid	8.00	8.67	8.43	±30
Perfluorohexanesulfonate	7.30	7.05	-3.47	±30
6:2 fluorotelomersulfonate	7.58	7.52	-0.74	±30
Perfluoroheptanesulfonate	7.61	7.45	-2.08	±30
Perfluorooctanoic acid	8.00	8.19	2.43	±30
Perfluoro-octanesulfonate	7.40	6.78	-8.41	±30
Perfluorononanoic acid	8.00	9.21	15.15	±30
Perfluorononanesulfonate	7.68	7.21	-6.18	±30
Perfluorodecanoic acid	8.00	7.48	-6.46	±30
8:2 fluorotelomersulfonate	7.66	7.37	-3.84	±30
Perfluorooctanesulfonamide	8.00	7.46	-6.80	±30
NMeFOSAA	8.00	8.44	5.54	±30
Perfluorodecanesulfonate	7.70	7.43	-3.47	±30
Perfluoroundecanoic acid	8.00	8.58	7.22	±30
NEtFOSAA	8.00	6.98	-12.70	±30
Perfluorododecanoic acid	8.00	7.86	-1.73	±30
10:2-fluorotelomersulfonate	7.71	7.31	-5.21	±30
NMePFOSAE	8.00	7.97	-0.34	±30
NMePFOSA	8.00	7.73	-3.35	±30
Perfluorododecanesulfonate	7.74	6.24	-19.42	±30
NEtPFOSAE	8.00	7.89	-1.36	±30
NEtPFOSA	8.00	7.45	-6.82	±30
Perfluorotridecanoic acid	8.00	8.15	1.91	±30
Perfluorotetradecanoic acid	8.00	7.77	-2.92	±30
Perfluorohexadecanoic acid	8.00	7.65	-4.37	±30
Perfluorooctadecanoic acid	8.00	8.02	0.23	±30

SDG No.: BSI05

Matrix: SOIL

Batch: 18310012		13C2-PFDA	13C2-PFOA	13C3-PFBA	13C4-PFOS
File Name:18NOV08D-05.WIFF		Area	Area	Area	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				
BLK310012	11/08/18 22:01	382291	609933	881210	328453
LCS310012	11/08/18 22:10	373109	593529	856114	314431
9881907RE	11/08/18 22:47	352670	592243	869210	322028
9881908MSRE	11/08/18 23:14	365120	628848	868823	335547
9881909MSDRE	11/08/18 23:23	371717	603919	864158	323493
9881916RE	11/09/18 00:08	363454	585247	858121	333691

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
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881902		Data File:	18NOV13D-09.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-BLDG573-S-02-03 Grab Soil		Acquis Date:	2018-11-13T10:20:11
Sample Type:	Unknown		Instrument:	LM27631
Vial Position:	15		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18316012
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	18316012		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: 18NOV13D-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	689092.7	661126.9	4	50	
13C2-PFOA	5.0	486460.0	466902.6	4	50	
13C4-PFOS	4.8	265843.2	247446.9	7	50	
13C2-PFDA	5.0	300699.6	295381.6	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	372654.7	13C3-PFBA	689092.7	0.541	9.118	7.485	82	50-150	
E13C5-PFHxA	588144.4	13C2-PFOA	486460.0	1.209	9.804	8.564	87	50-150	
E13C3-PFHxS	281287.5	13C2-PFOA	486460.0	0.578	9.275	7.780	84	50-150	
E13C4-PFHpA	446620.6	13C2-PFOA	486460.0	0.918	9.804	8.110	83	50-150	
E13C8-PFOA	779000.9	13C2-PFOA	486460.0	1.601	9.804	8.651	88	50-150	
E13C8-PFOS	231459.0	13C4-PFOS	265843.2	0.871	9.373	7.564	81	50-150	
E13C9-PFNA	398592.0	13C4-PFOS	265843.2	1.499	9.804	8.197	84	50-150	
E13C6-PFDA	554884.3	13C2-PFDA	300699.6	1.845	9.804	8.444	86	50-150	
Ed3-NMeFOSAA	64169.4	13C2-PFDA	300699.6	0.213	9.804	7.553	77	50-150	
E13C7-PFUnDA	207569.0	13C2-PFDA	300699.6	0.690	9.804	7.858	80	50-150	
Ed5-NEtFOSAA	45070.0	13C2-PFDA	300699.6	0.150	9.804	6.218	63	50-150	
E13C2-PFDODA	456435.2	13C2-PFDA	300699.6	1.518	9.804	7.728	79	50-150	
E13C2-PFTeDA	348965.5	13C2-PFDA	300699.6	1.161	9.804	7.989	81	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881902

Instrument Name: LM27631

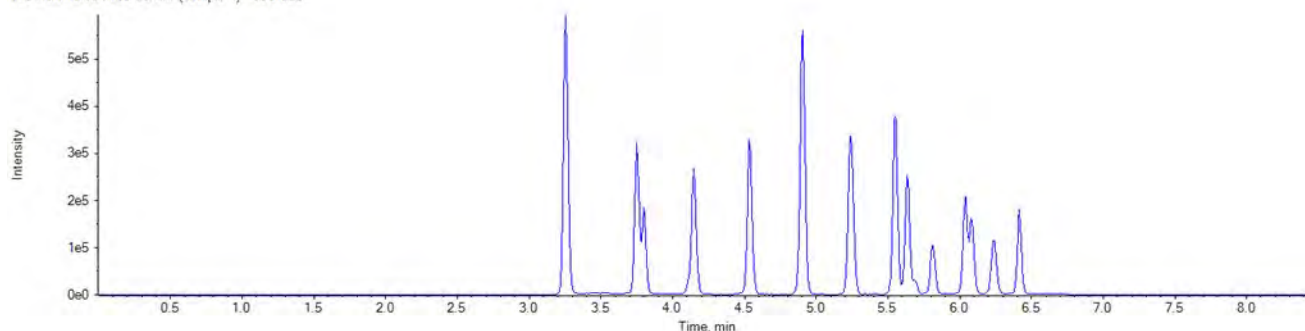
File Name: 18NOV13D-09.wiff

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	3.80	372654.7	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	588144.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	446620.6	N/A	
PFHxS	4.54	1.000	18408.4		M	13C3-PFHxS	4.54	281287.5	0.065	0.622
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	779000.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	231459.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	398592.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	554884.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	64169.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	207569.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	45070.0	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	456435.2	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	456435.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	348965.5	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-09.wiff (sample 1) - 9881902



APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

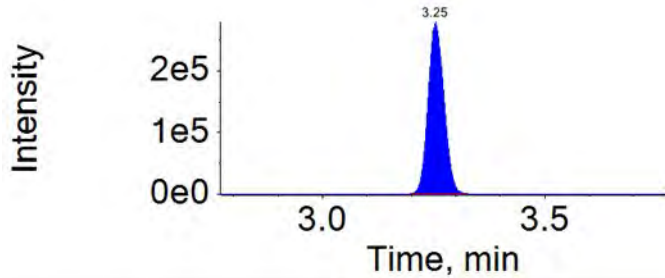
By HMK at 2:11 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

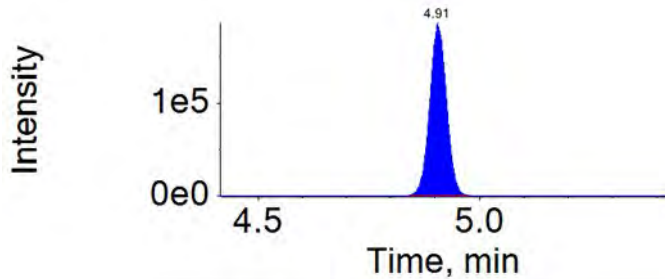
Injection Standard: 13C3-PFBA

216.0 / 172.0



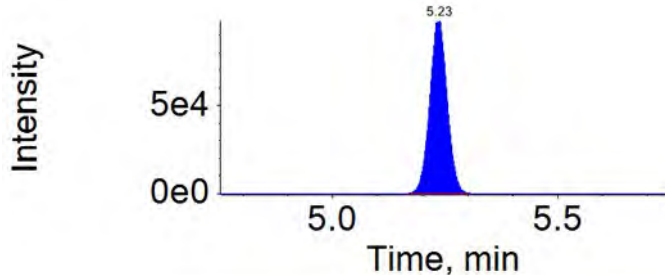
Injection Standard: 13C2-PFOA

415.0 / 370.0



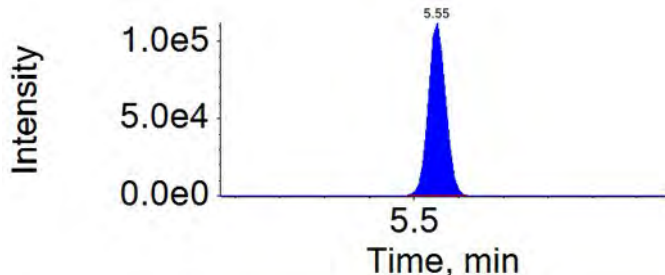
Injection Standard: 13C4-PFOS

503.0 / 80.0



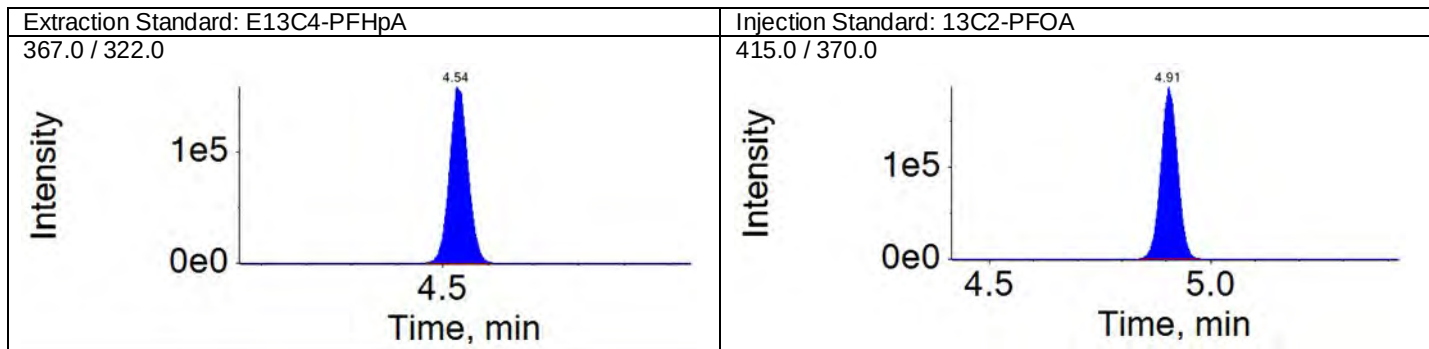
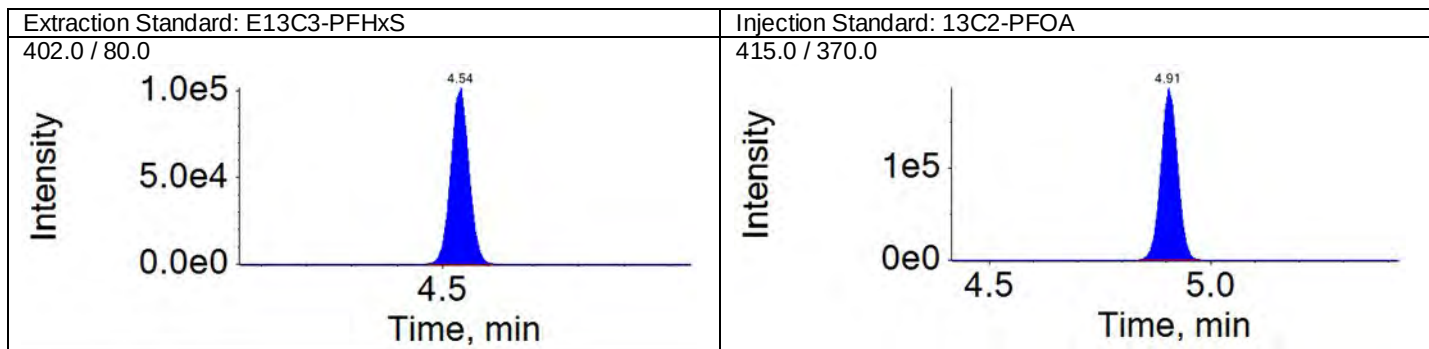
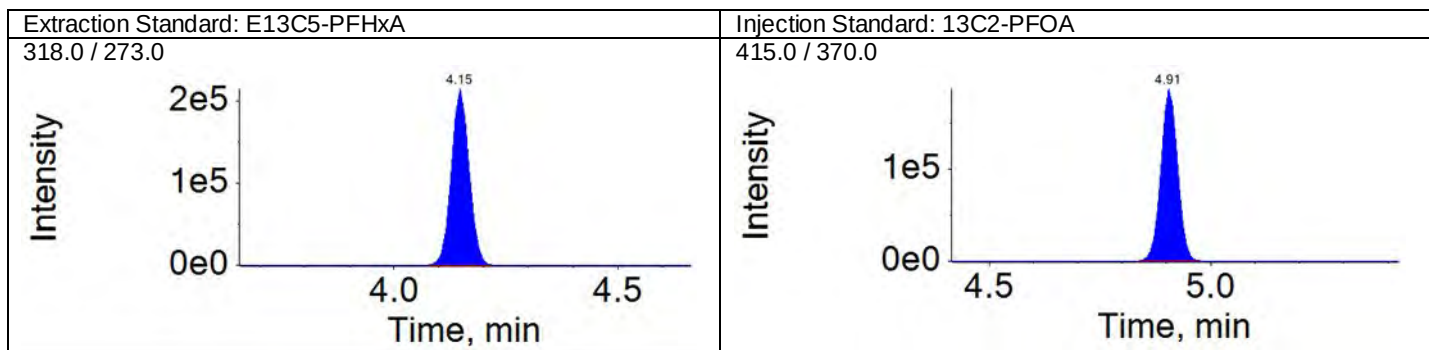
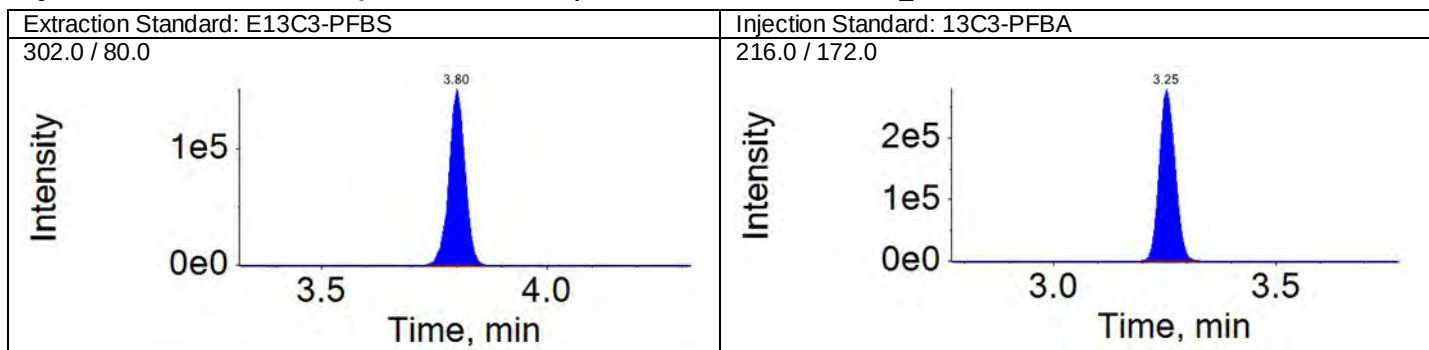
Injection Standard: 13C2-PFDA

515.0 / 470.0



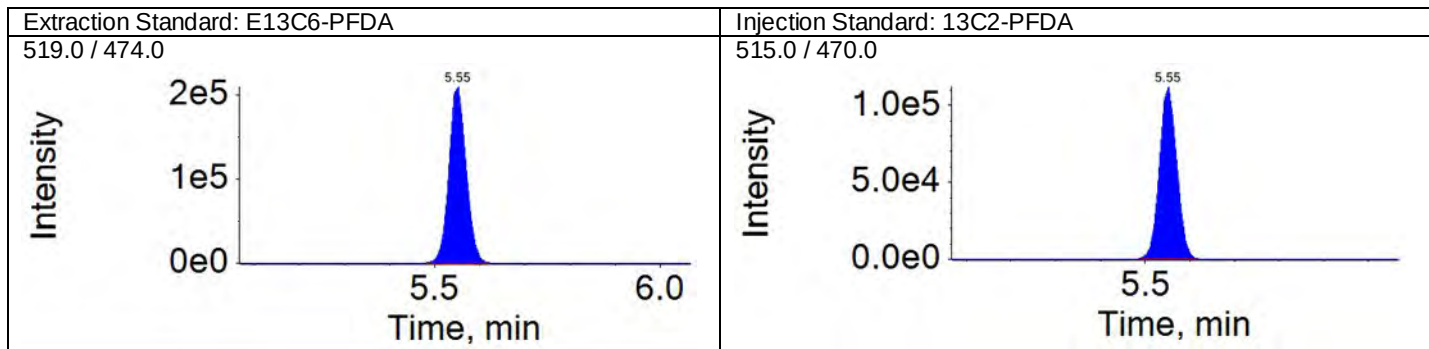
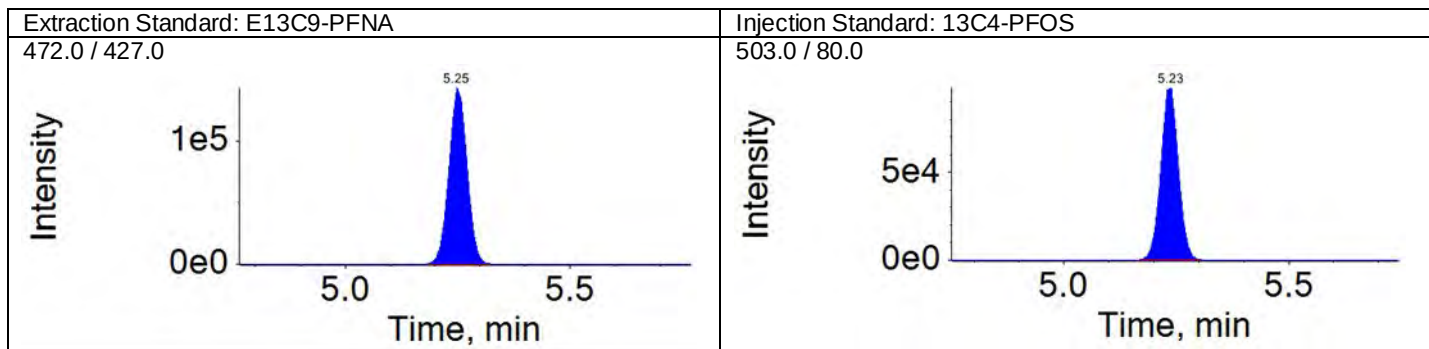
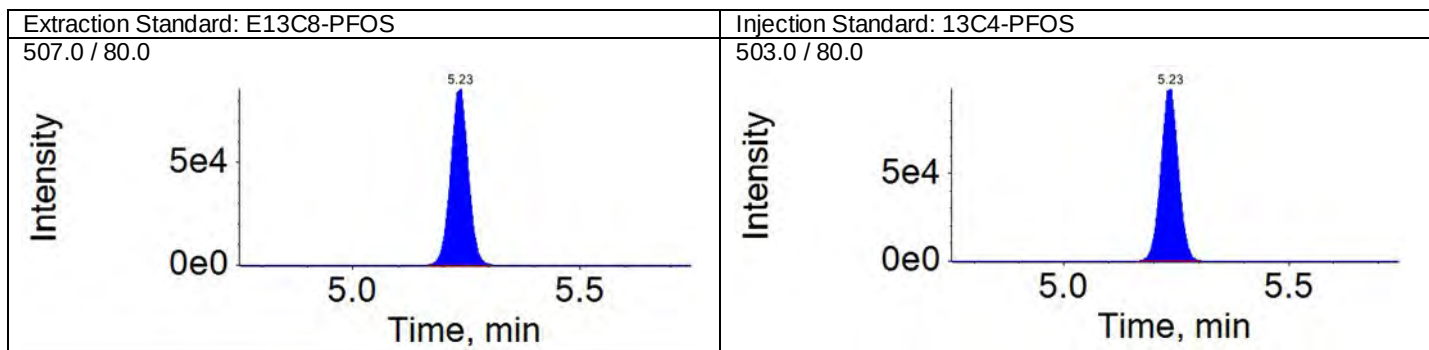
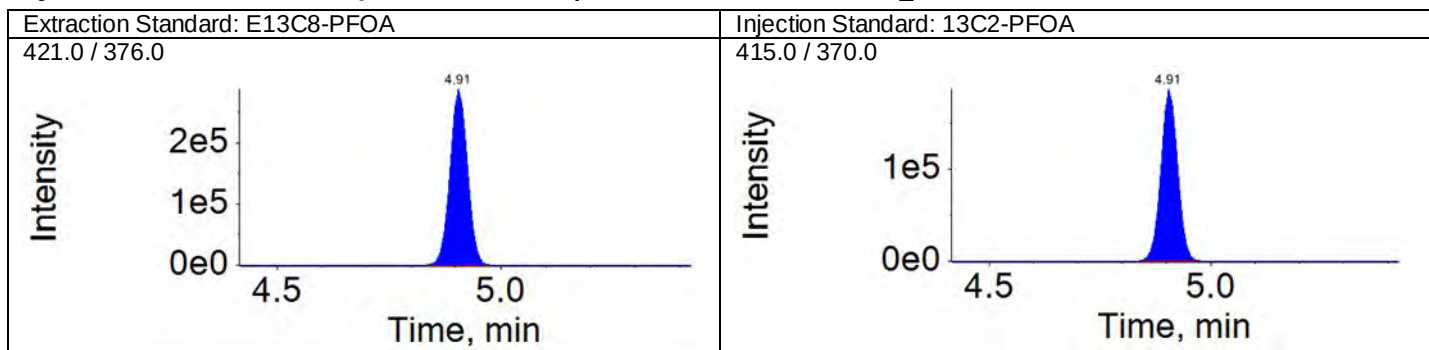
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



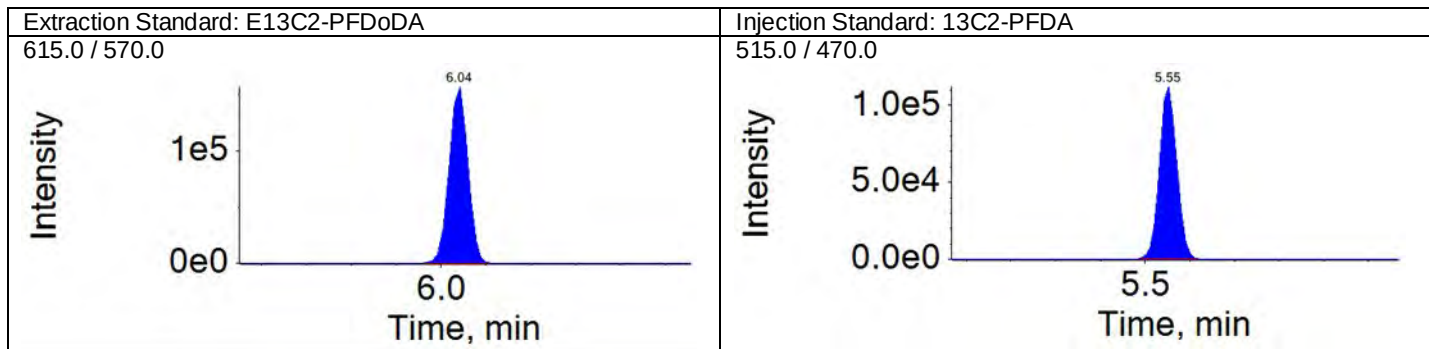
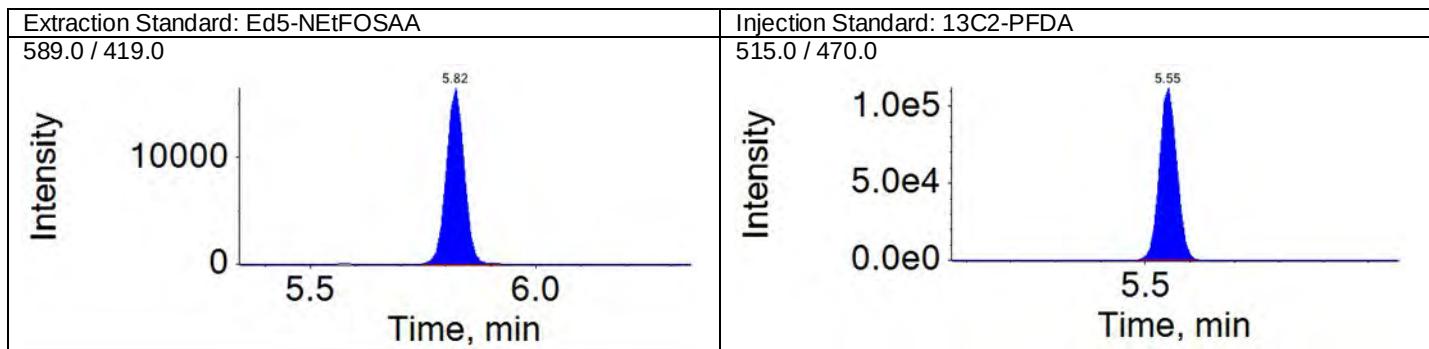
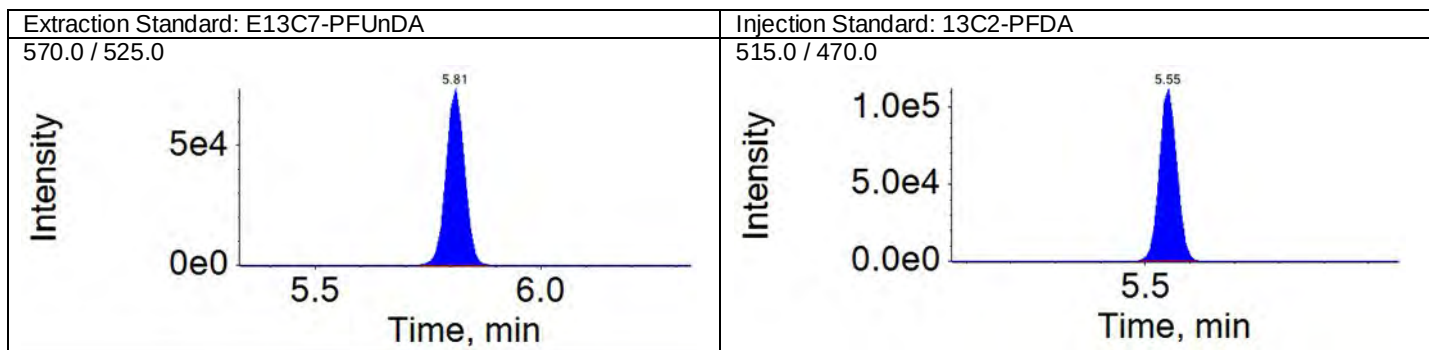
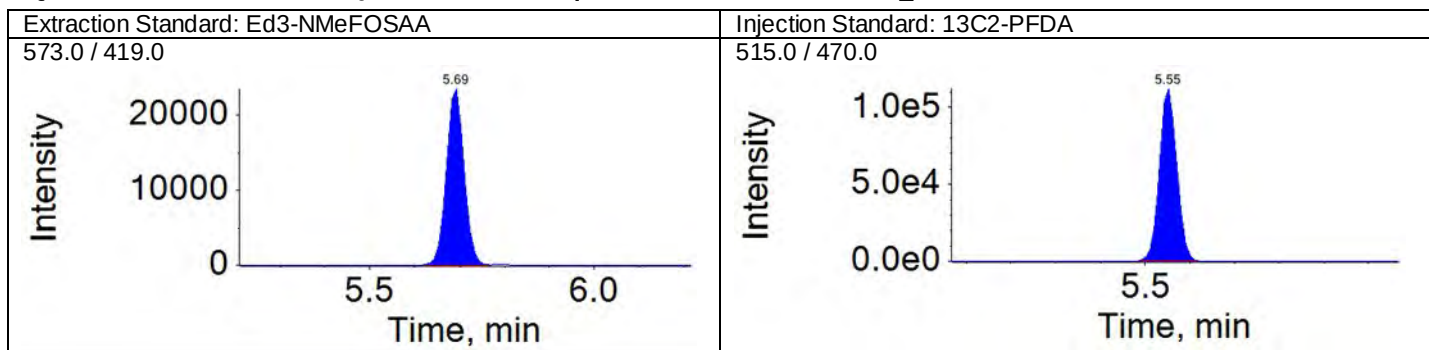
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



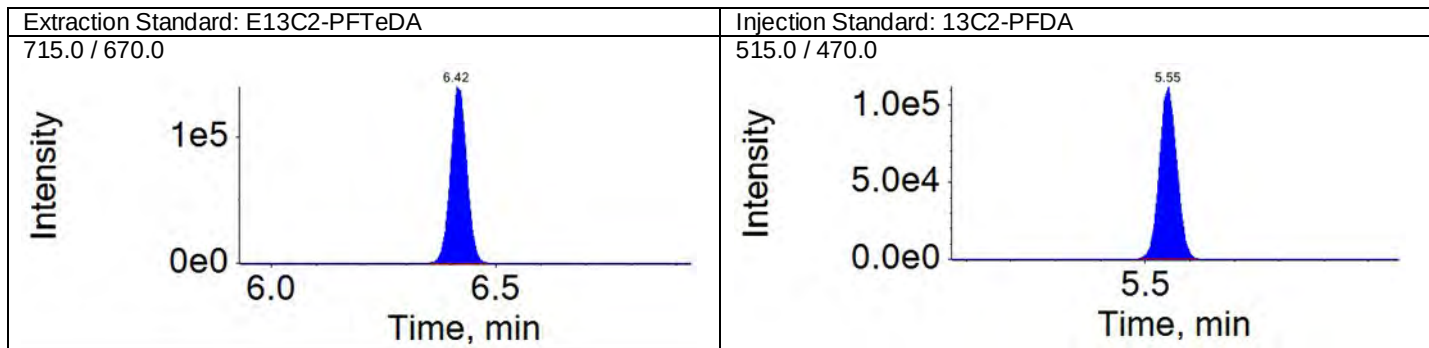
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

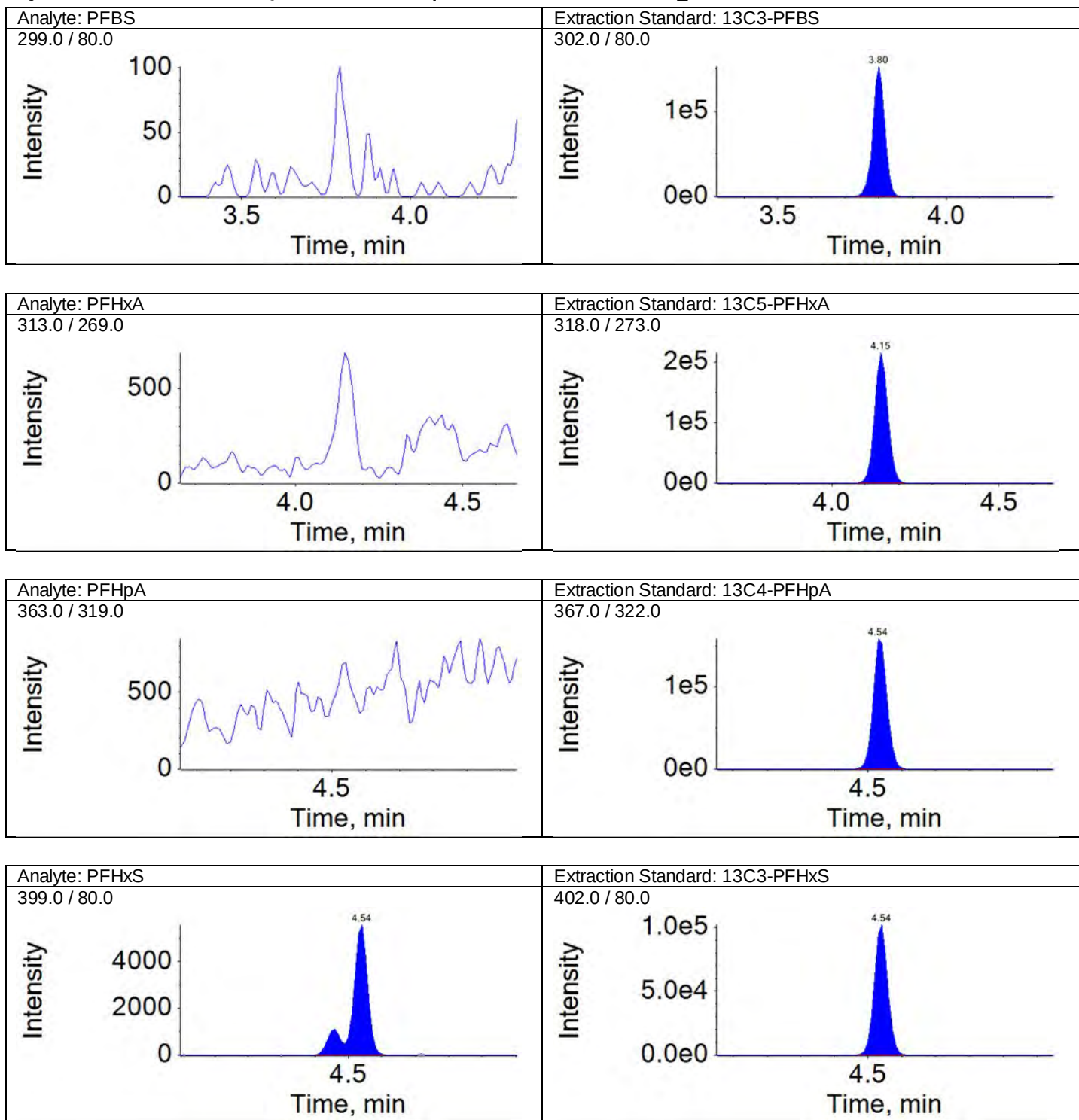
By MCD at 10:39 pm, 11/13/18

REVIEWED

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

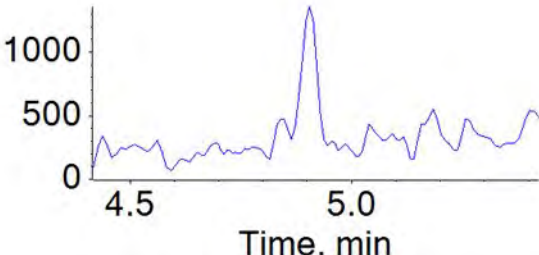
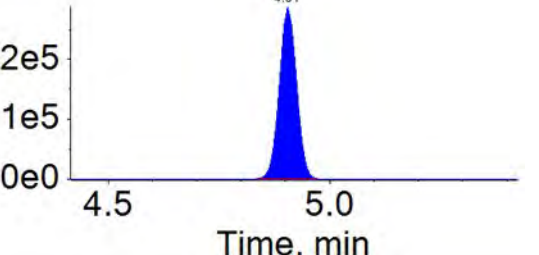
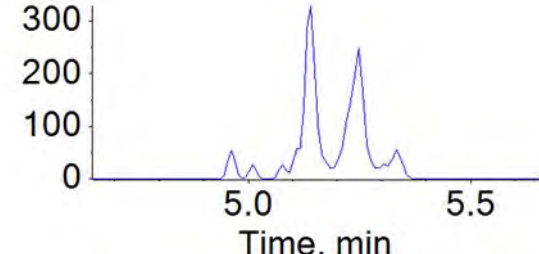
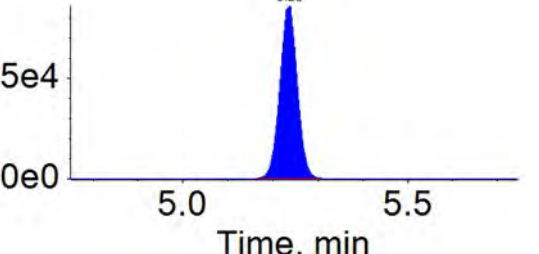
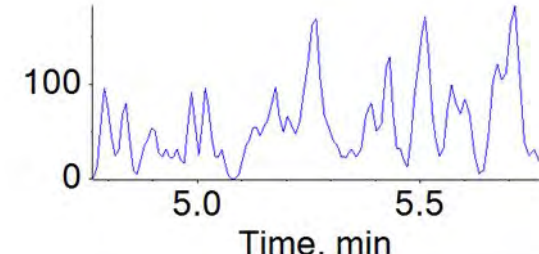
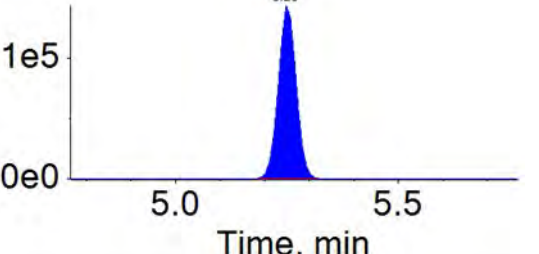
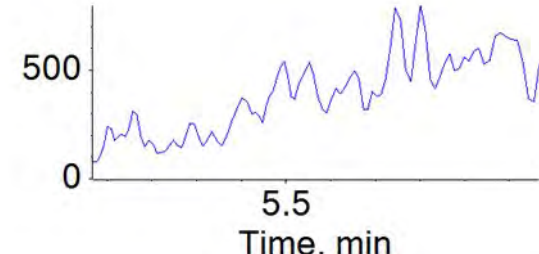
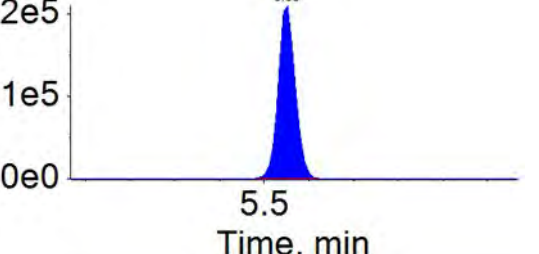
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



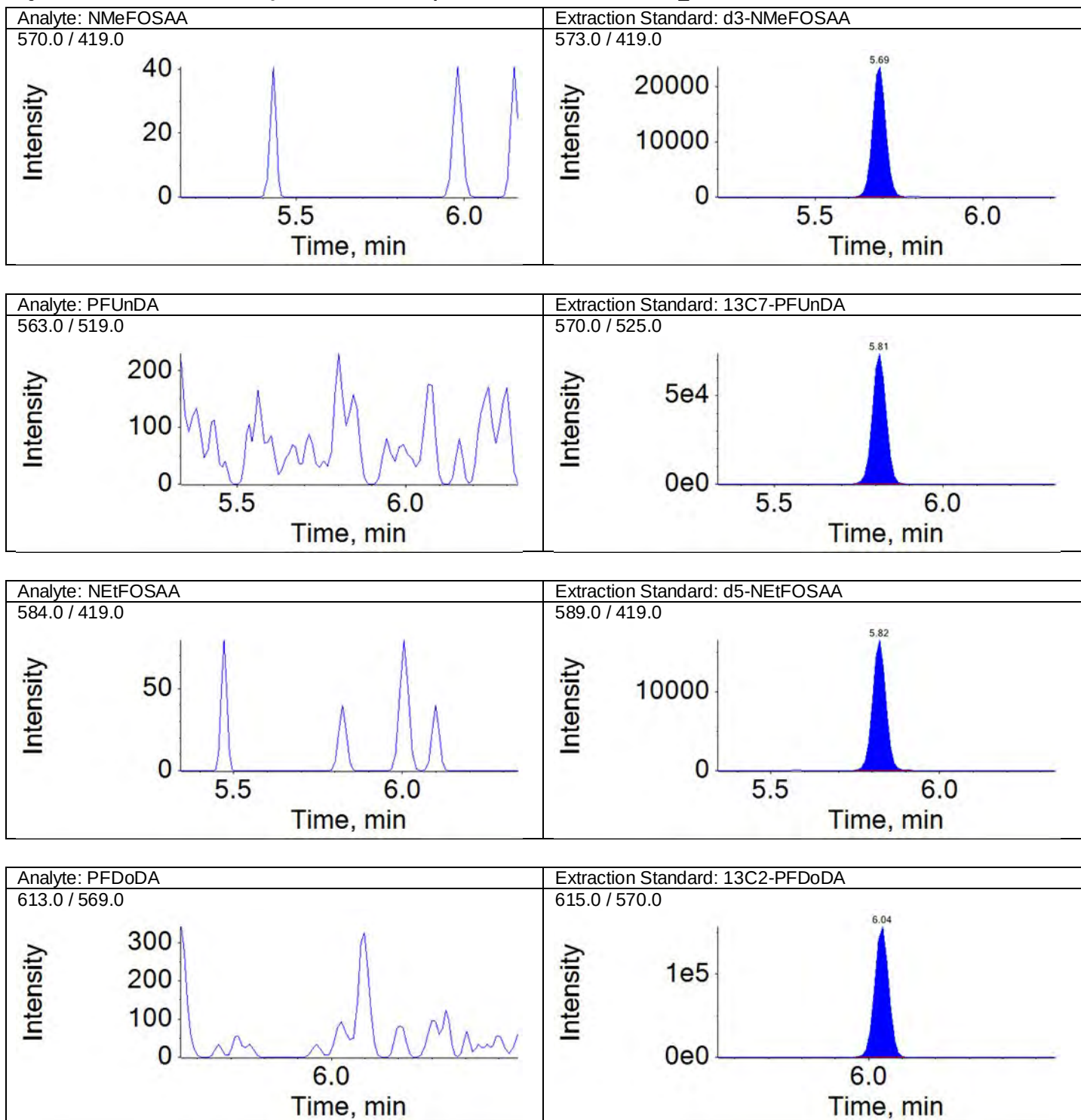
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

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 
Analyte: PFNA 463.0 / 419.0 	Extraction Standard: 13C9-PFNA 472.0 / 427.0 
Analyte: PFDA 513.0 / 469.0 	Extraction Standard: 13C6-PFDA 519.0 / 474.0 

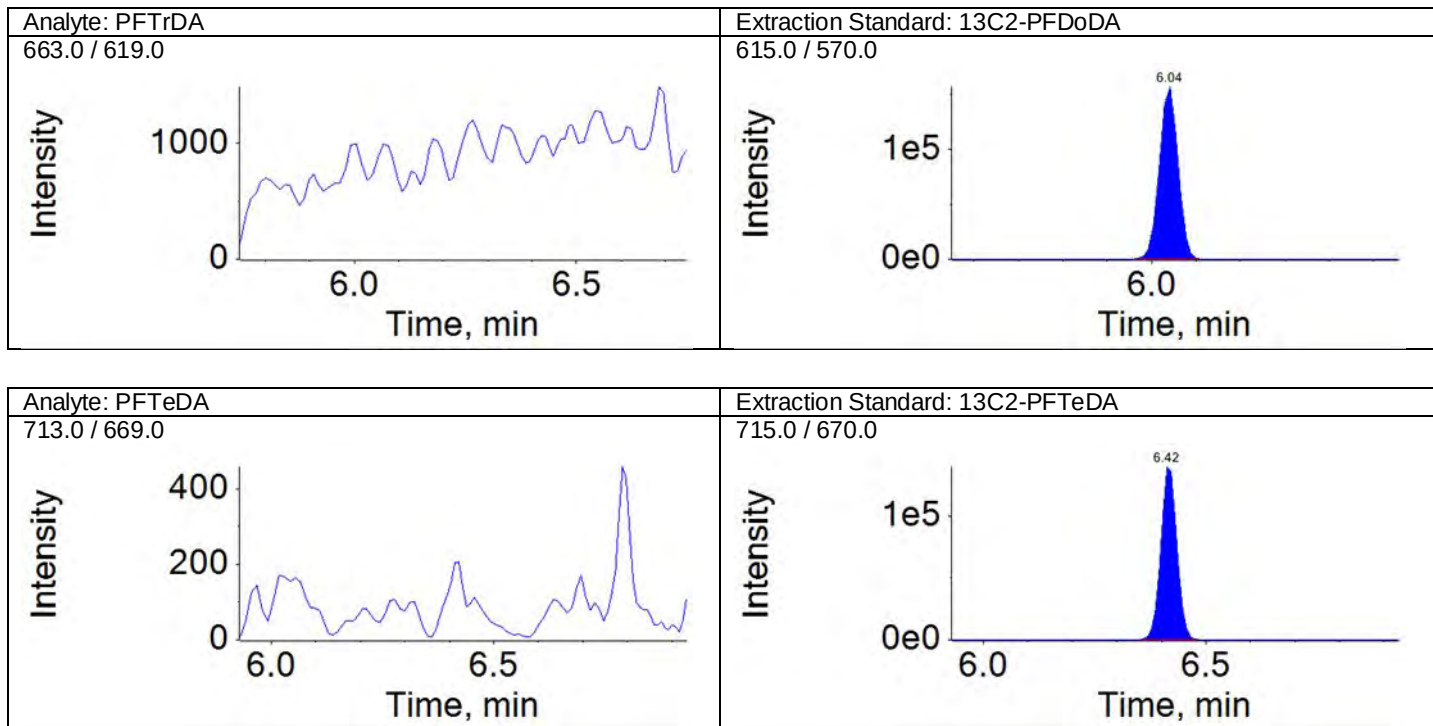
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

Component Name:

PFHxS

RT (min.):

4.54

Peak Area:

15288.7

Mass Range:

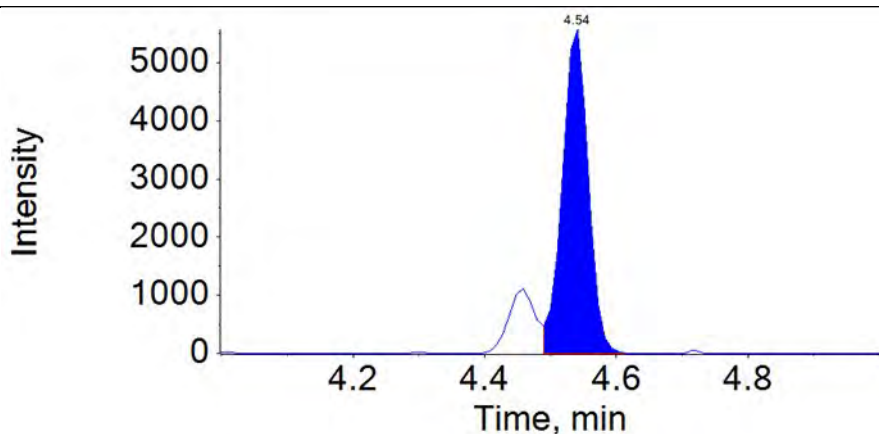
399.0 / 80.0

File Name:

18NOV13D-09.wiff

Sample Name:

9881902



Integration Comment: incorrect integration

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

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

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

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

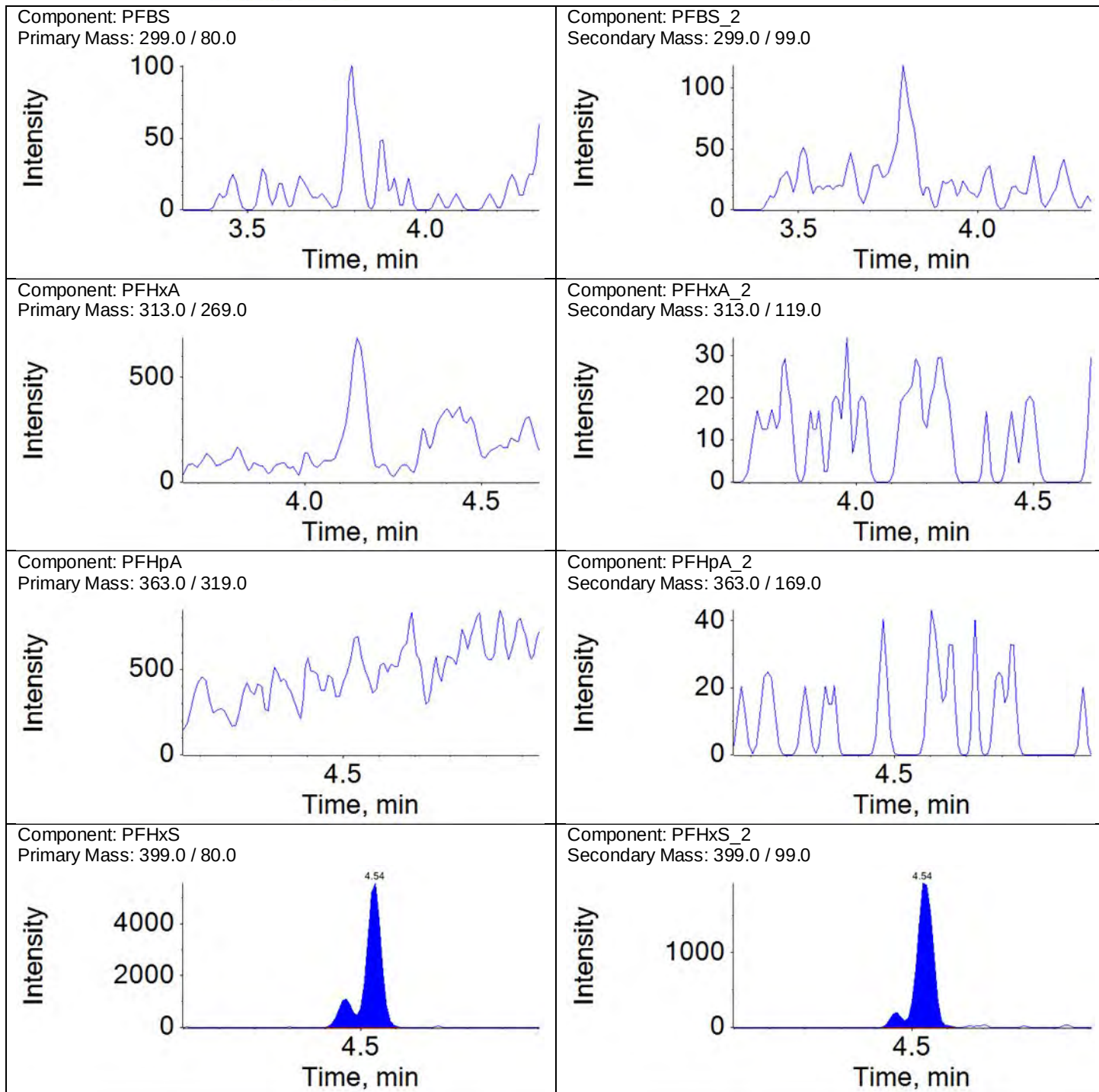
Ion Ratio Report

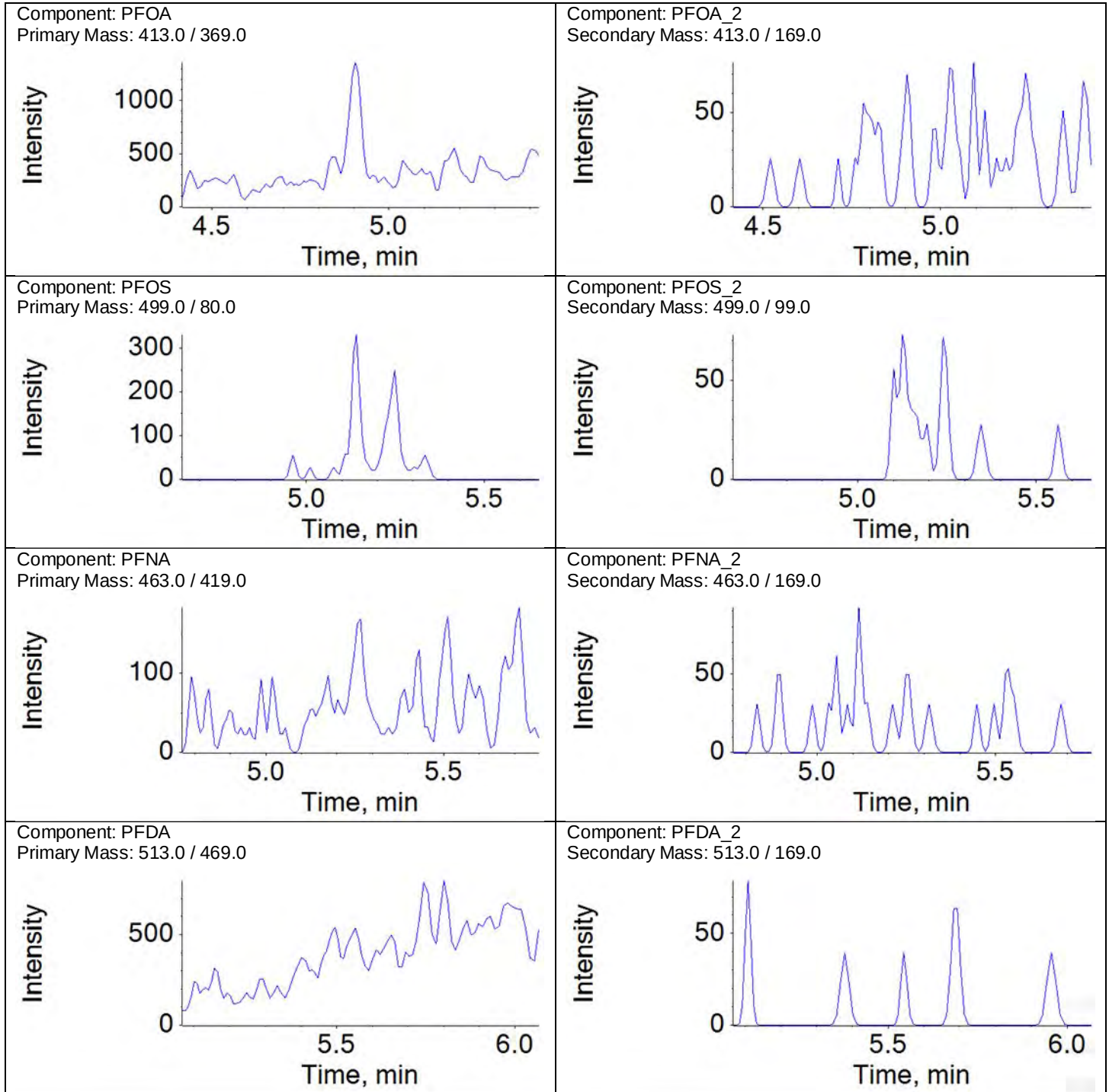
Sample Name: 9881902

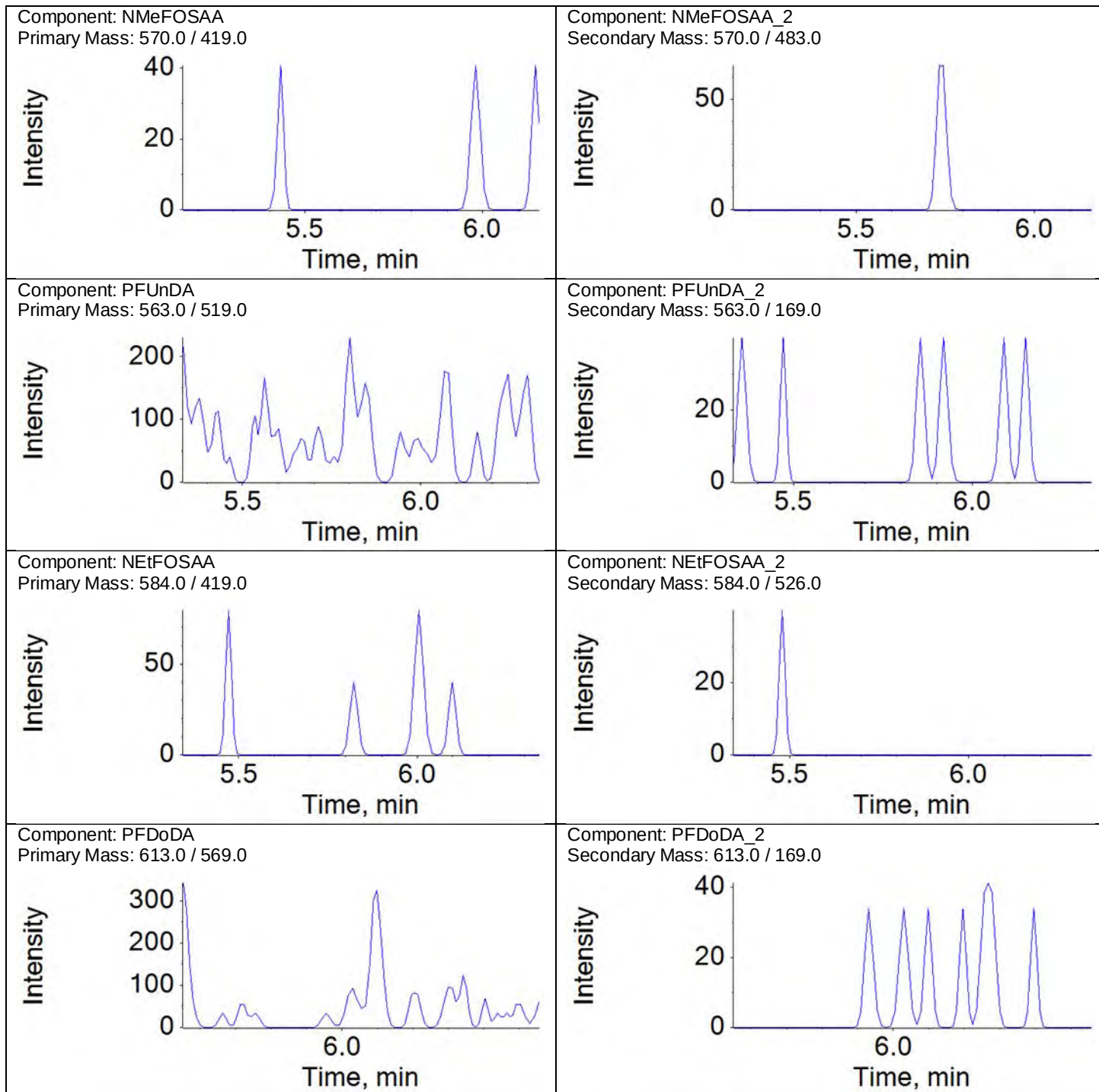
Instrument Name: LM27631

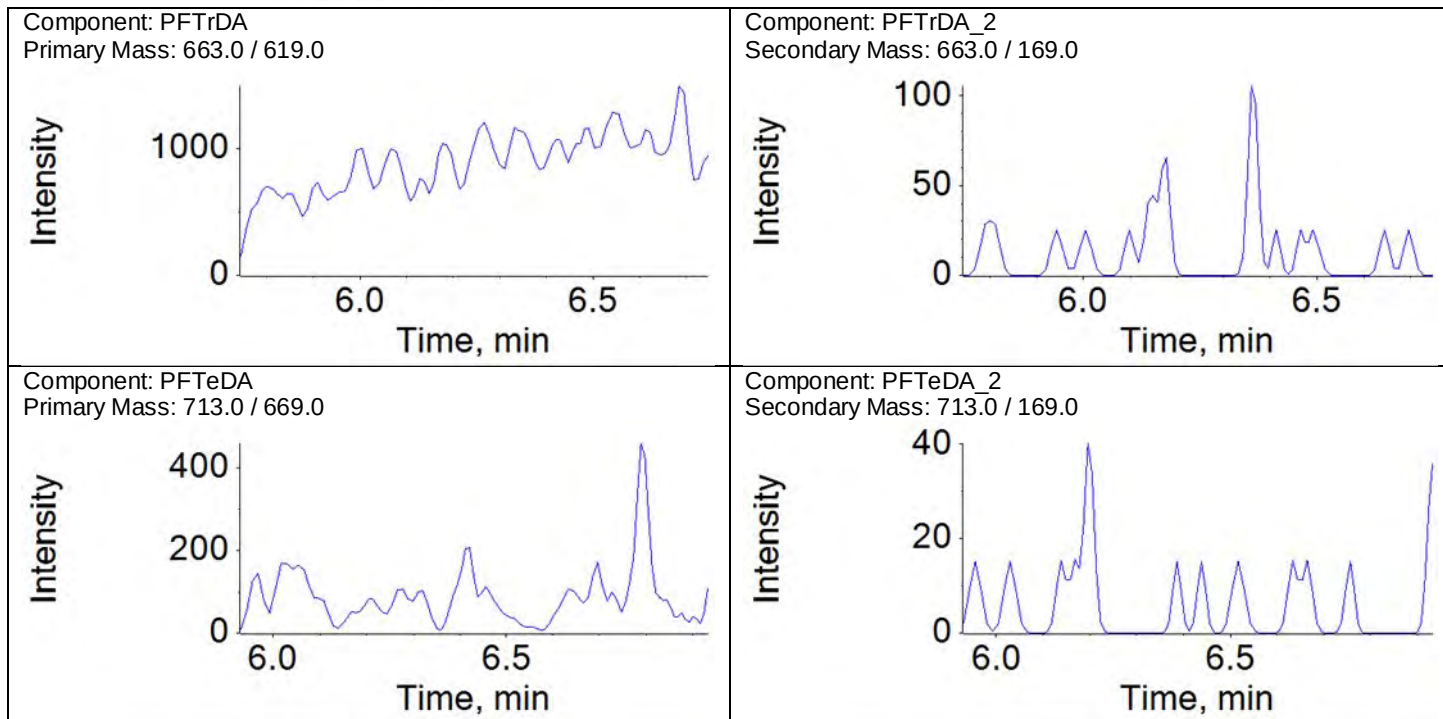
File Name: 18NOV13D-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.54	1.00	18408.4	M	N/A	0.3459			
PFHxS_2	4.54	1.00	6367.4	A	N/A	0.3459	14	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881903			Data File:		18NOV13D-10.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-BLDG573-S-02-05 Grab Soil			Acquis Date:		2018-11-13T10:29:14
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	16			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			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: 18NOV13D-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	720385.1	661126.9	9	50	
13C2-PFOA	5.0	499099.5	466902.6	7	50	
13C4-PFOS	4.8	269240.7	247446.9	9	50	
13C2-PFDA	5.0	318785.8	295381.6	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
E13C3-PFBS	373296.0	13C3-PFBA	720385.1	0.518	8.942	7.035	79	50-150	
E13C5-PFHxA	554310.2	13C2-PFOA	499099.5	1.111	9.615	7.715	80	50-150	
E13C3-PFHxS	273837.1	13C2-PFOA	499099.5	0.549	9.096	7.240	80	50-150	
E13C4-PFHpA	442046.0	13C2-PFOA	499099.5	0.886	9.615	7.673	80	50-150	
E13C8-PFOA	785503.5	13C2-PFOA	499099.5	1.574	9.615	8.339	87	50-150	
E13C8-PFOS	247990.5	13C4-PFOS	269240.7	0.921	9.192	7.848	85	50-150	
E13C9-PFNA	418936.5	13C4-PFOS	269240.7	1.556	9.615	8.343	87	50-150	
E13C6-PFDA	565105.9	13C2-PFDA	318785.8	1.773	9.615	7.955	83	50-150	
Ed3-NMeFOSAA	59871.9	13C2-PFDA	318785.8	0.188	9.615	6.519	68	50-150	
E13C7-PFUnDA	229840.8	13C2-PFDA	318785.8	0.721	9.615	8.050	84	50-150	
Ed5-NEtFOSAA	48516.4	13C2-PFDA	318785.8	0.152	9.615	6.192	64	50-150	
E13C2-PFDODA	471404.5	13C2-PFDA	318785.8	1.479	9.615	7.383	77	50-150	
E13C2-PFTeDA	329890.2	13C2-PFDA	318785.8	1.035	9.615	6.987	73	50-150	

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

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

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881903

Instrument Name: LM27631

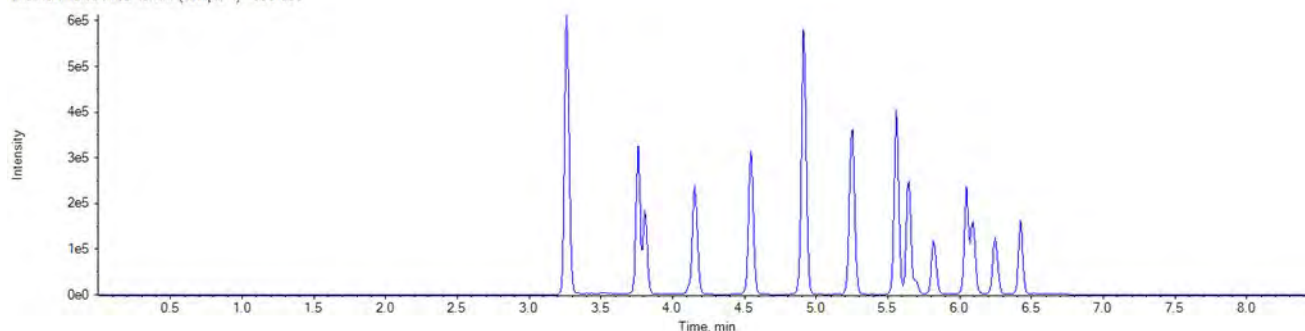
File Name: 18NOV13D-10.wiff

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	373296.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	554310.2	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	442046.0	N/A	
PFHxS	4.55	1.000	19576.1		M	13C3-PFHxS	4.55	273837.1	0.071	0.667
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	785503.5	N/A	
PFOS	5.24	1.000	9905.5		M	13C8-PFOS	5.24	247990.5	0.040	0.336
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	418936.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	565105.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	59871.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	229840.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	48516.4	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	471404.5	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	471404.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	329890.2	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-10.wiff (sample 1) - 9881903



APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

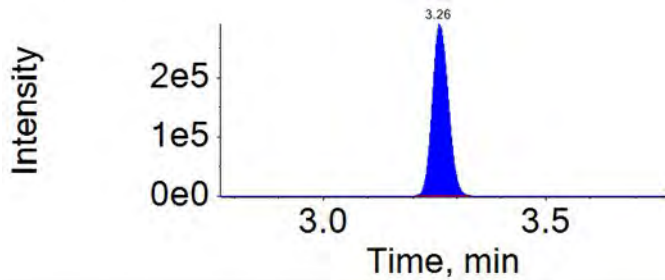
By HMK at 2:11 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

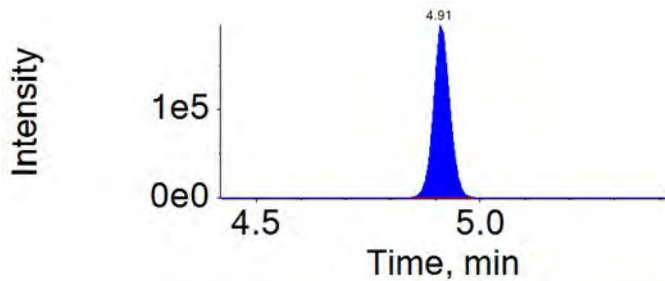
Injection Standard: 13C3-PFBA

216.0 / 172.0



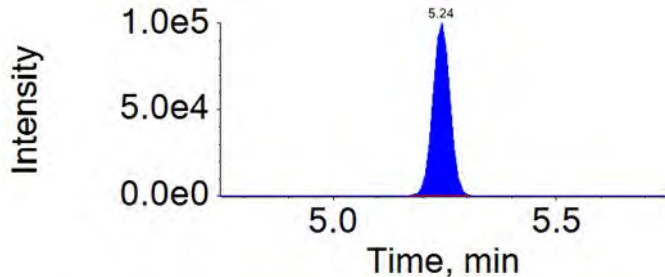
Injection Standard: 13C2-PFOA

415.0 / 370.0



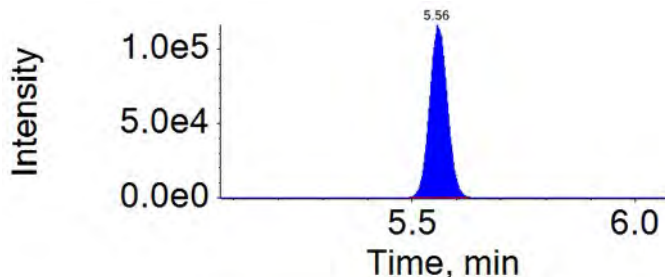
Injection Standard: 13C4-PFOS

503.0 / 80.0



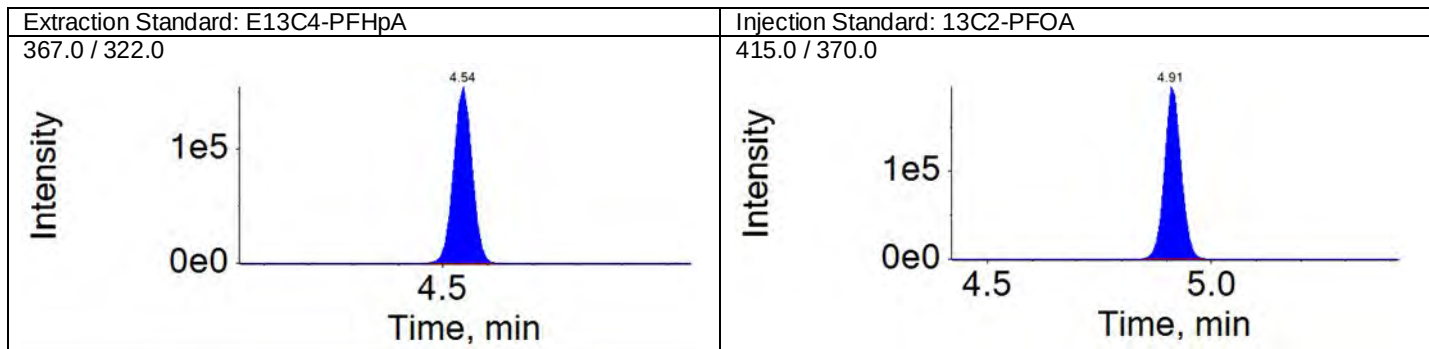
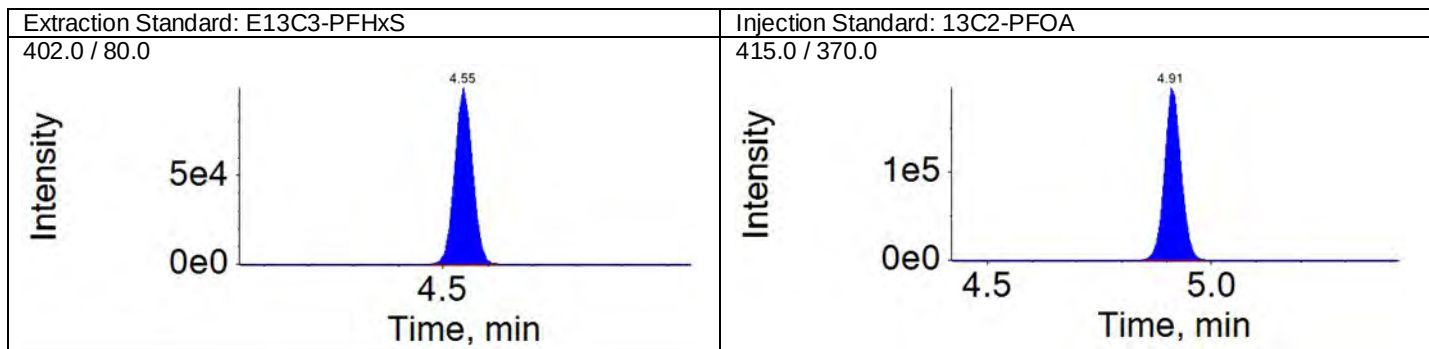
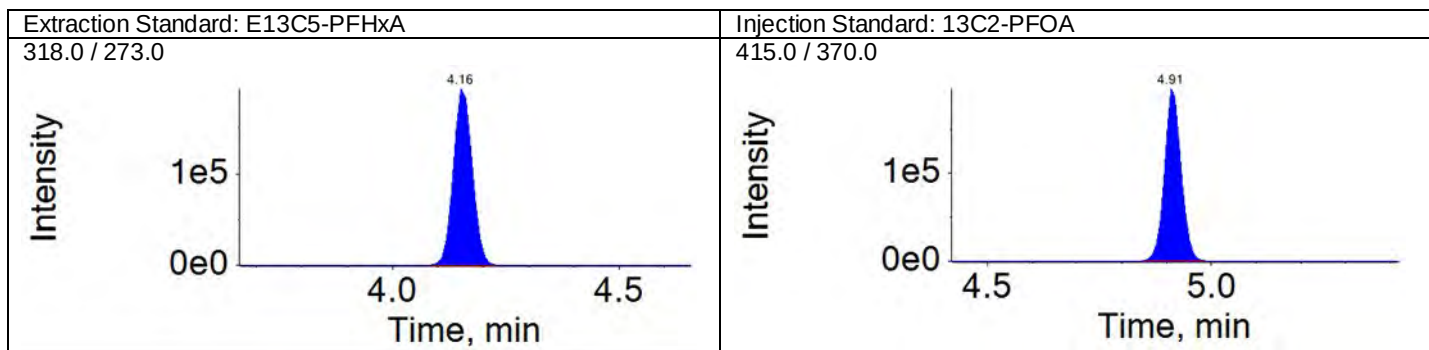
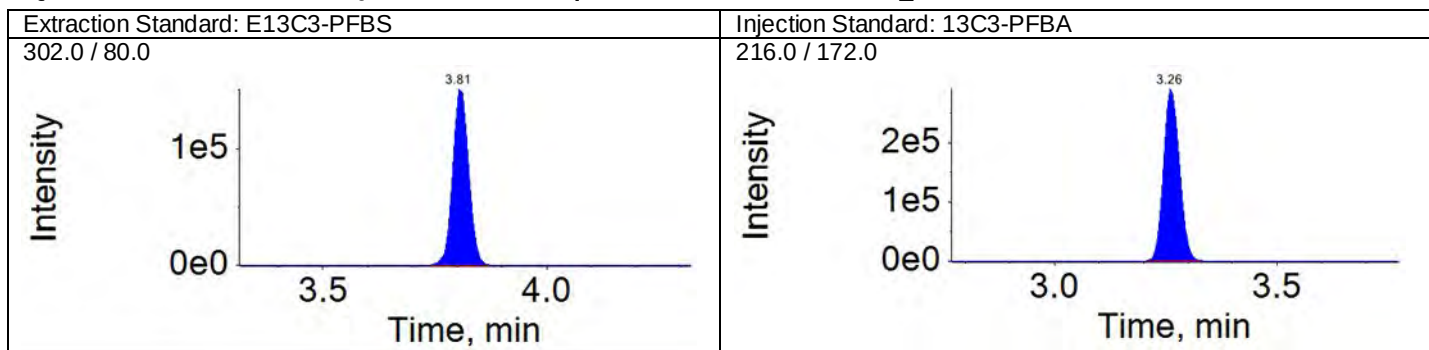
Injection Standard: 13C2-PFDA

515.0 / 470.0



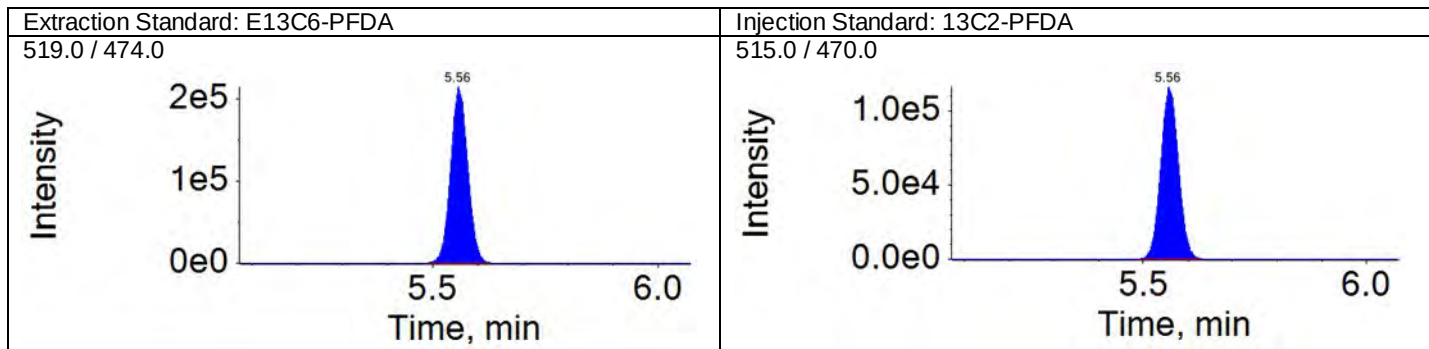
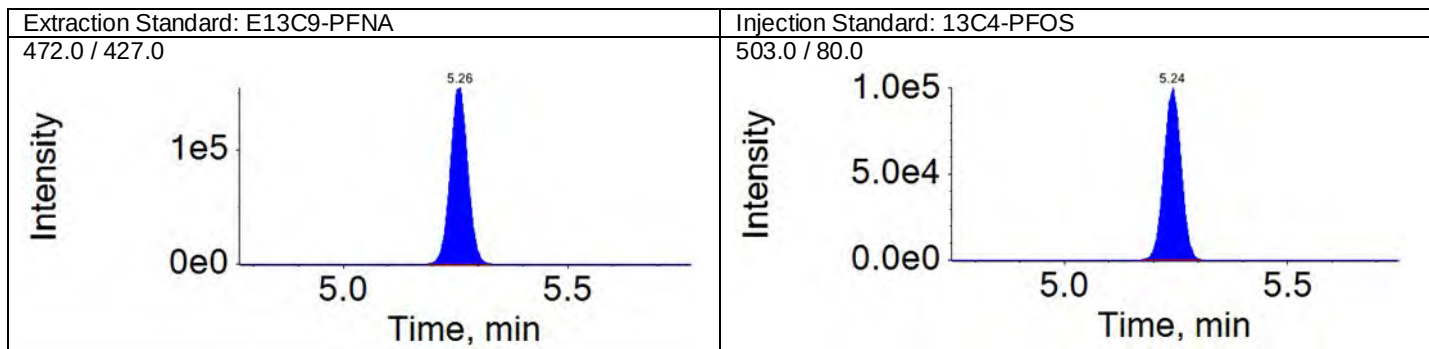
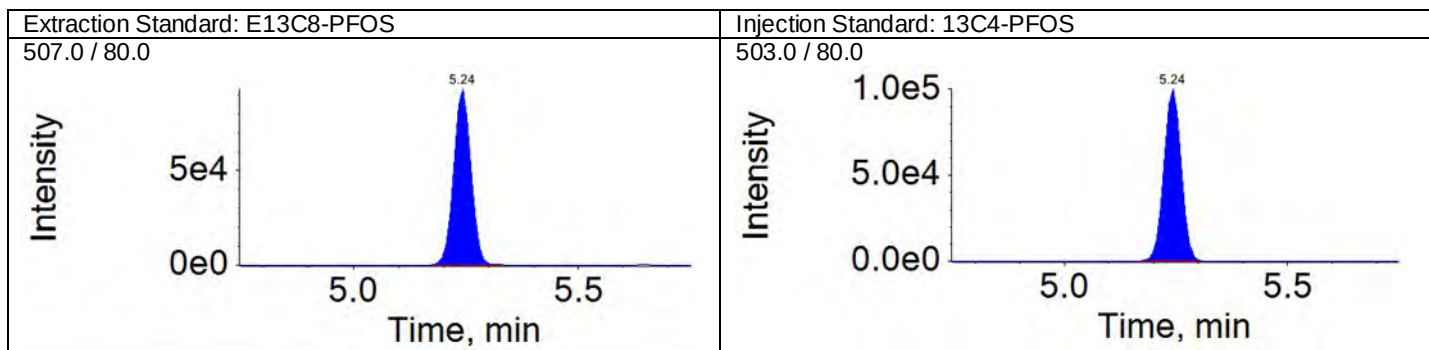
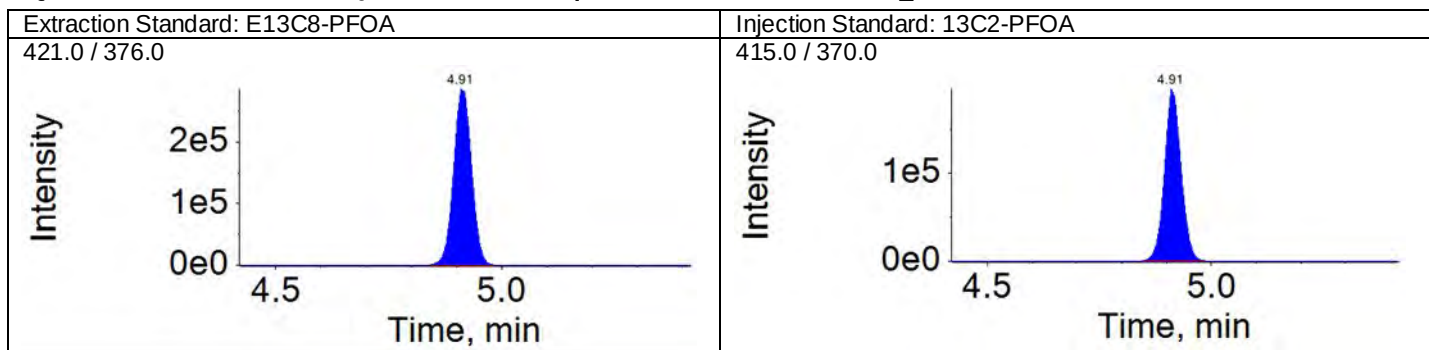
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



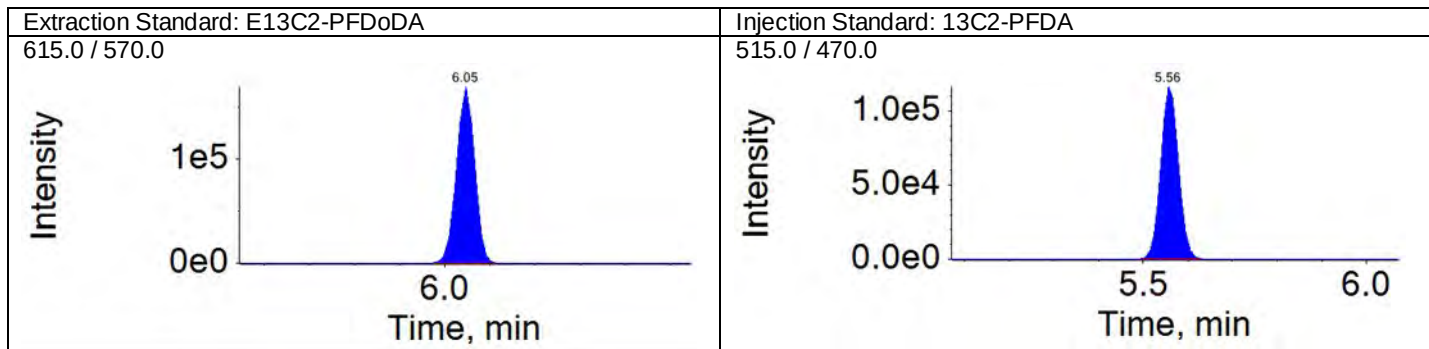
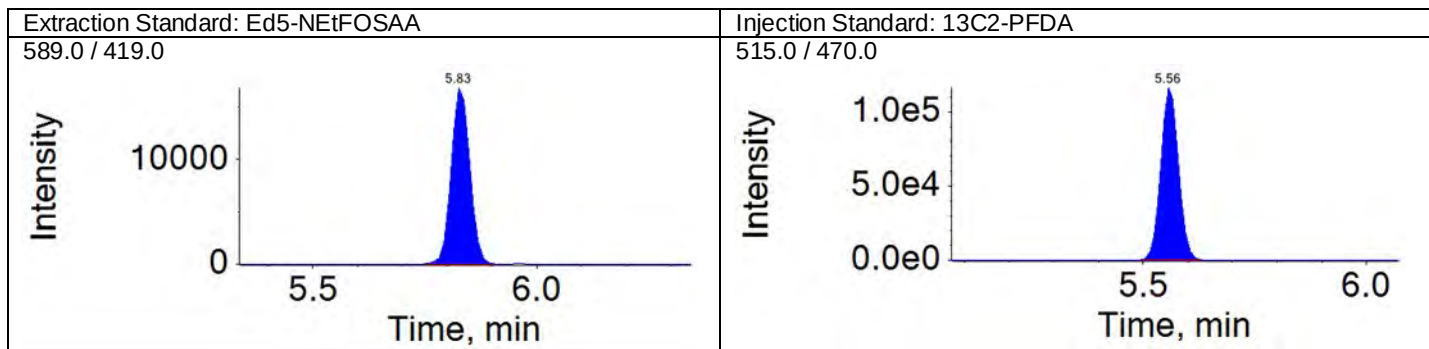
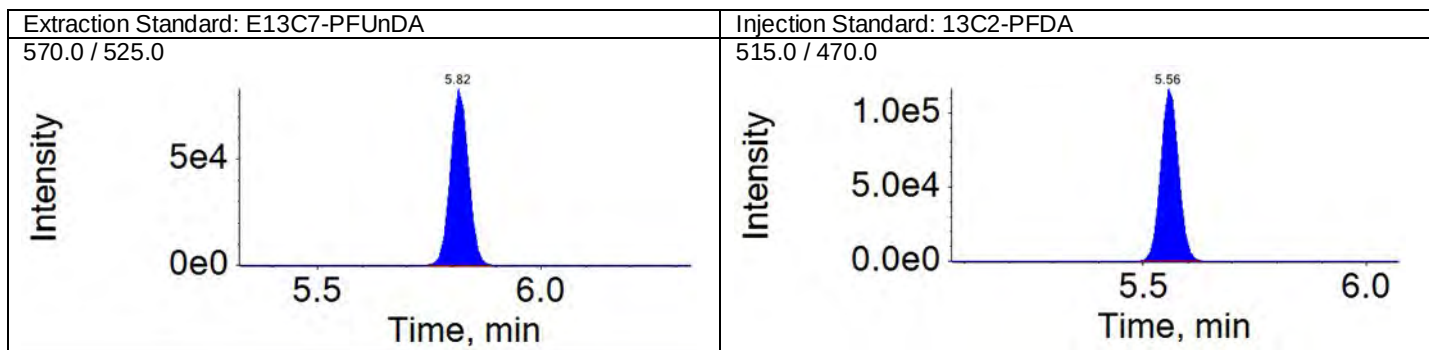
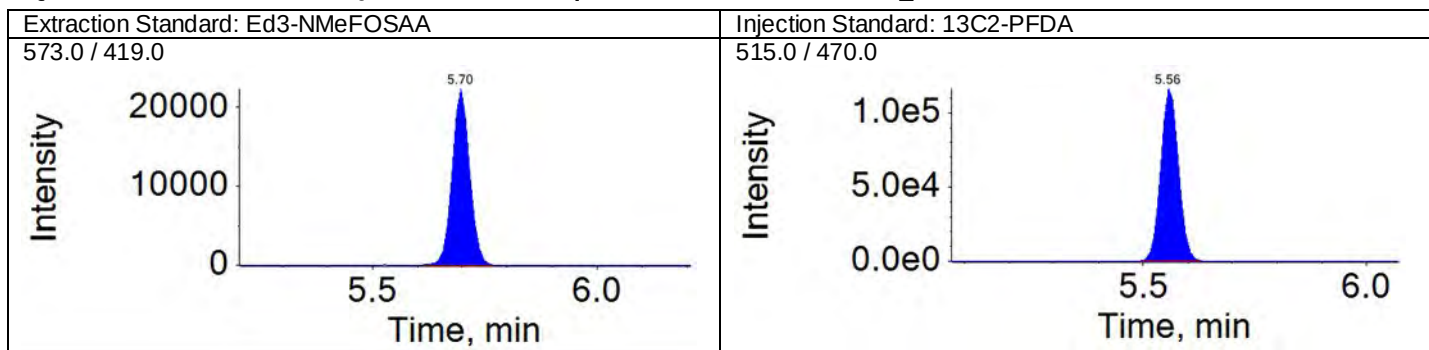
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



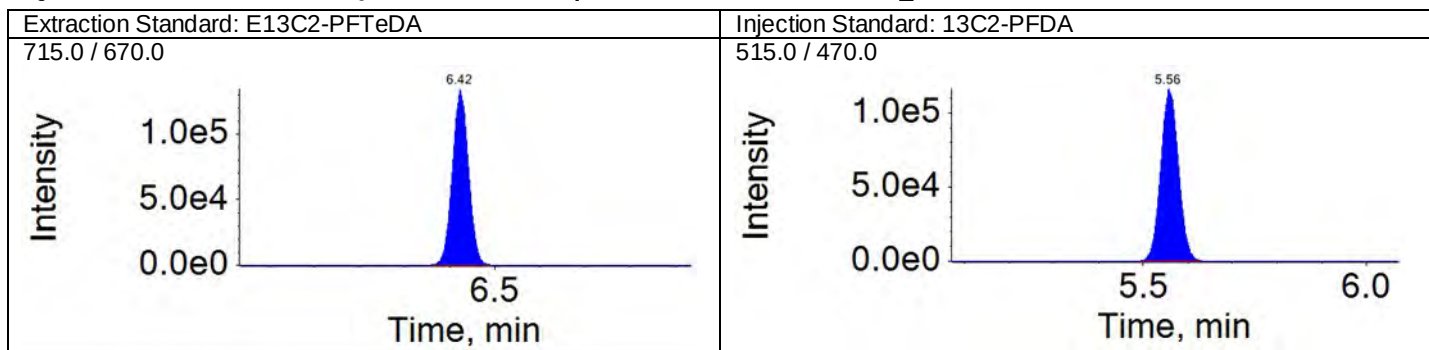
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

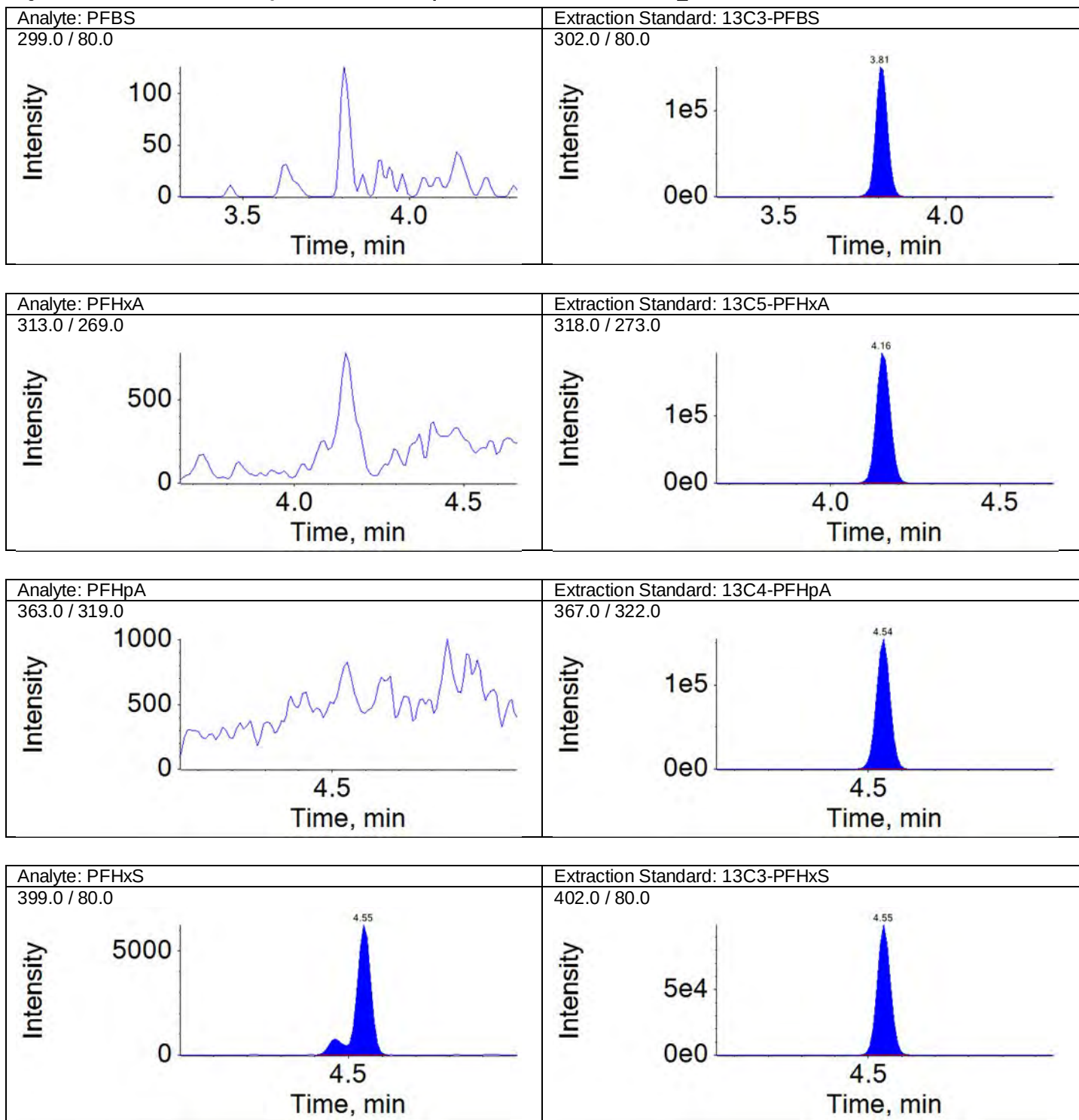
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

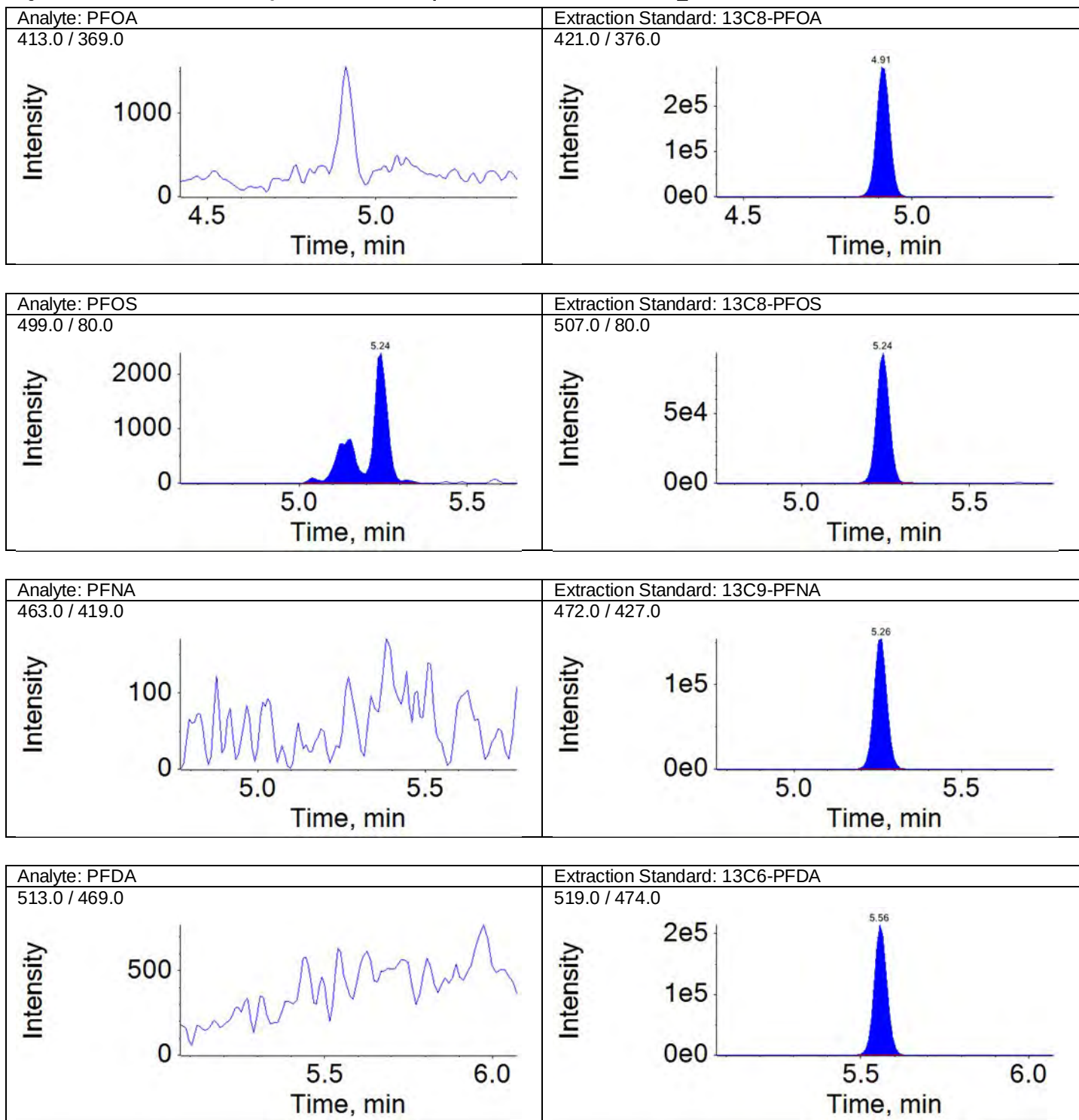
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



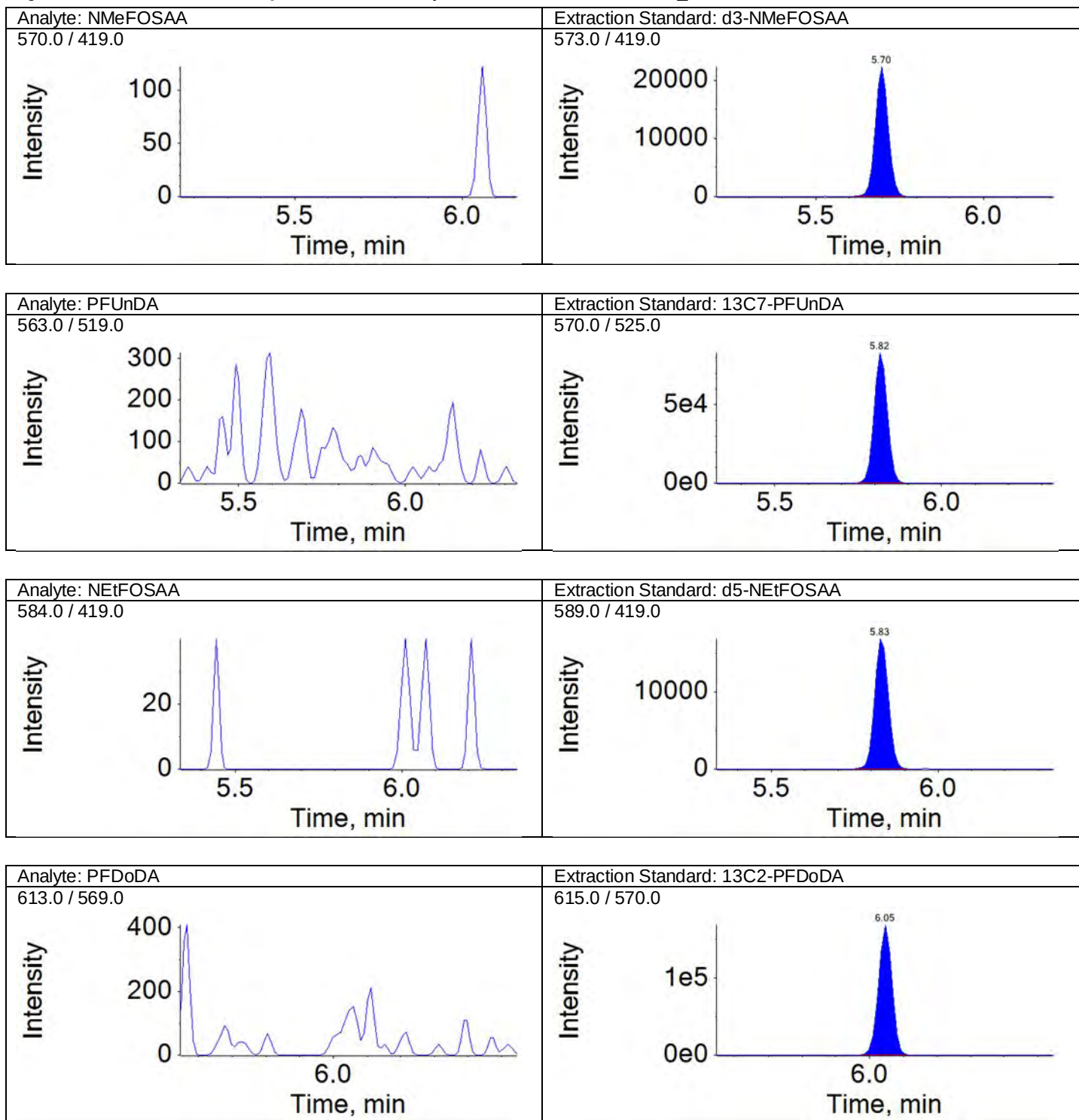
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



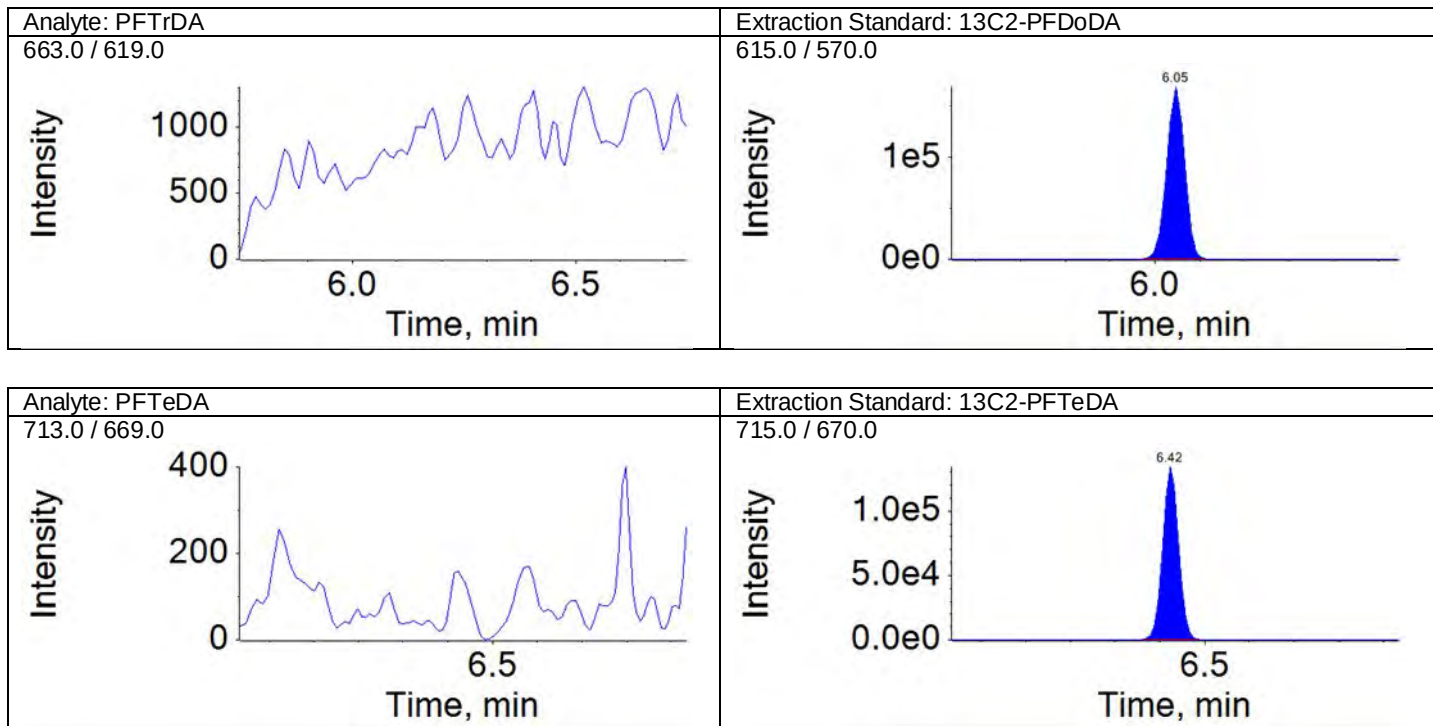
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



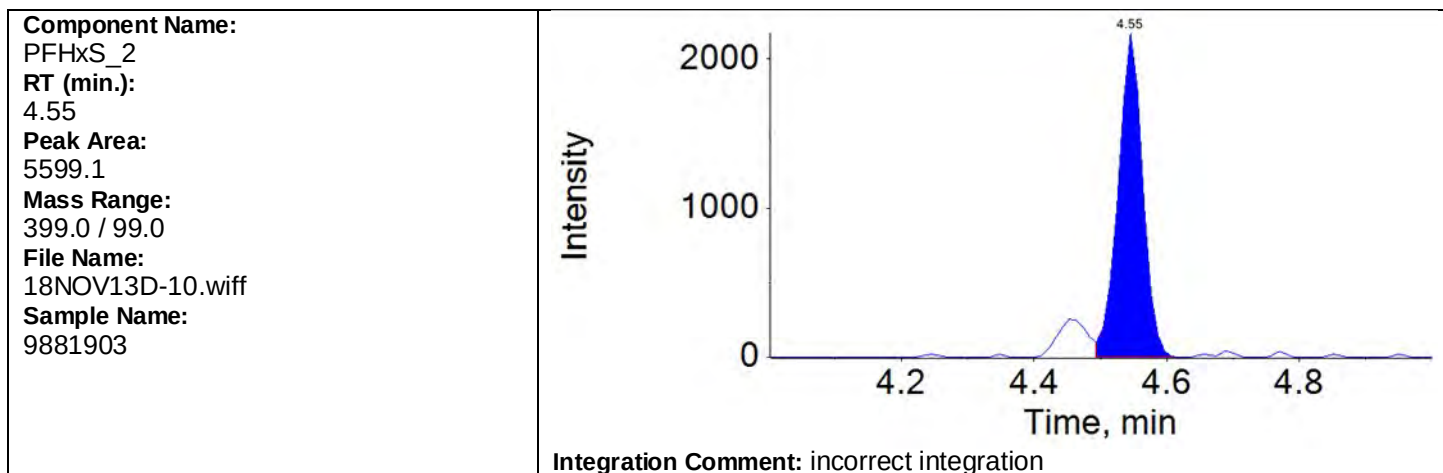
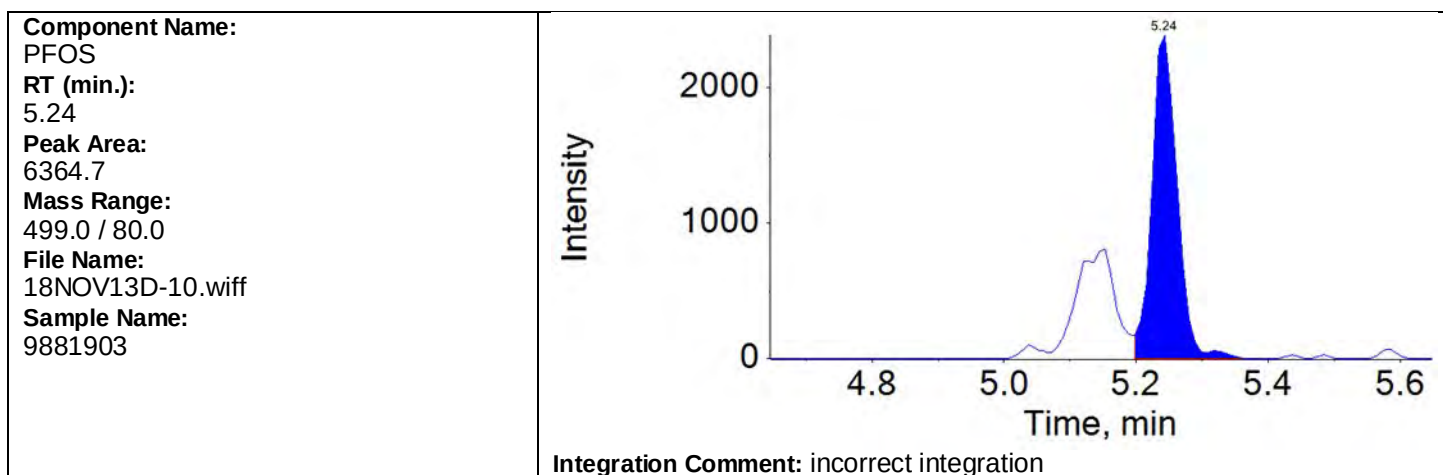
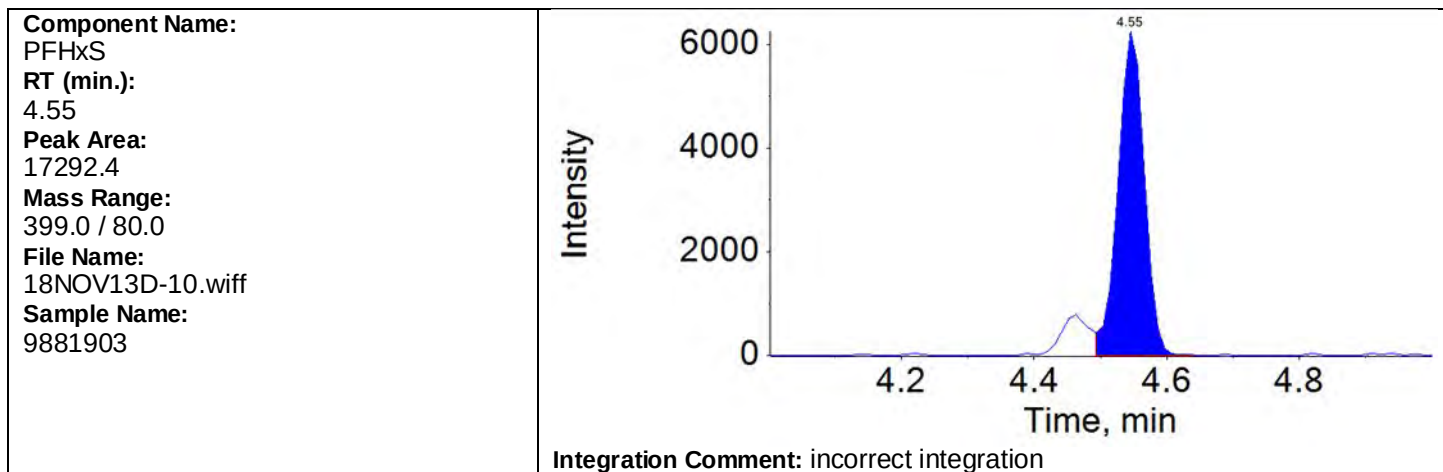
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

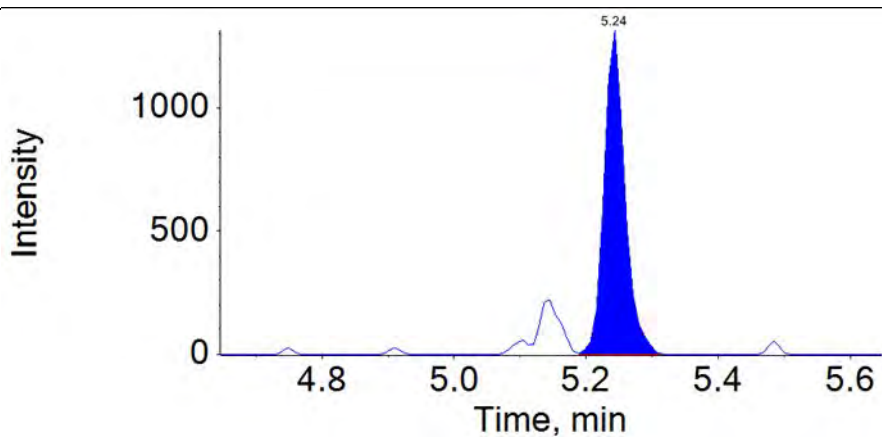
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
2881.4
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-10.wiff
Sample Name:
9881903



Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

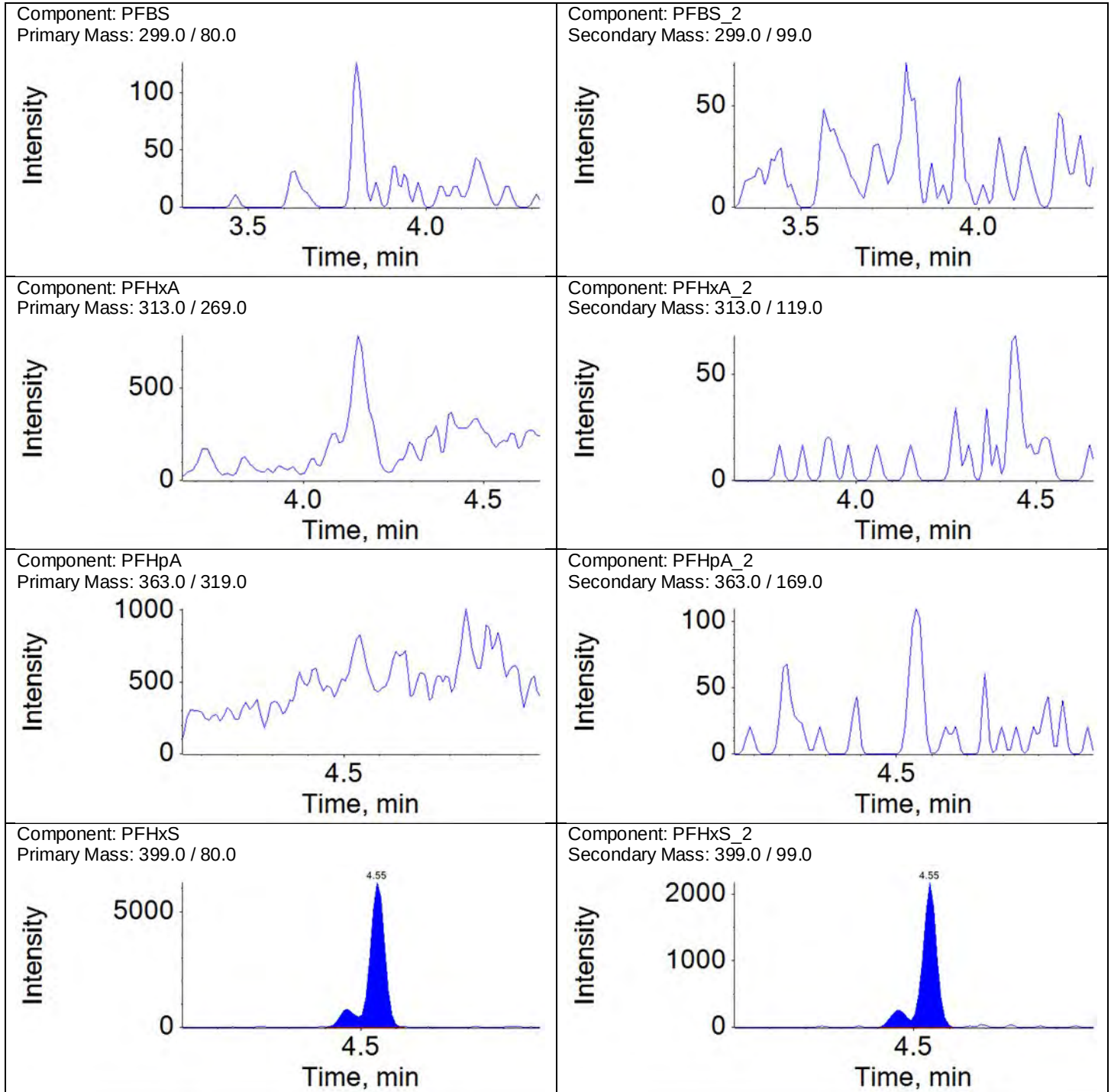
Ion Ratio Report

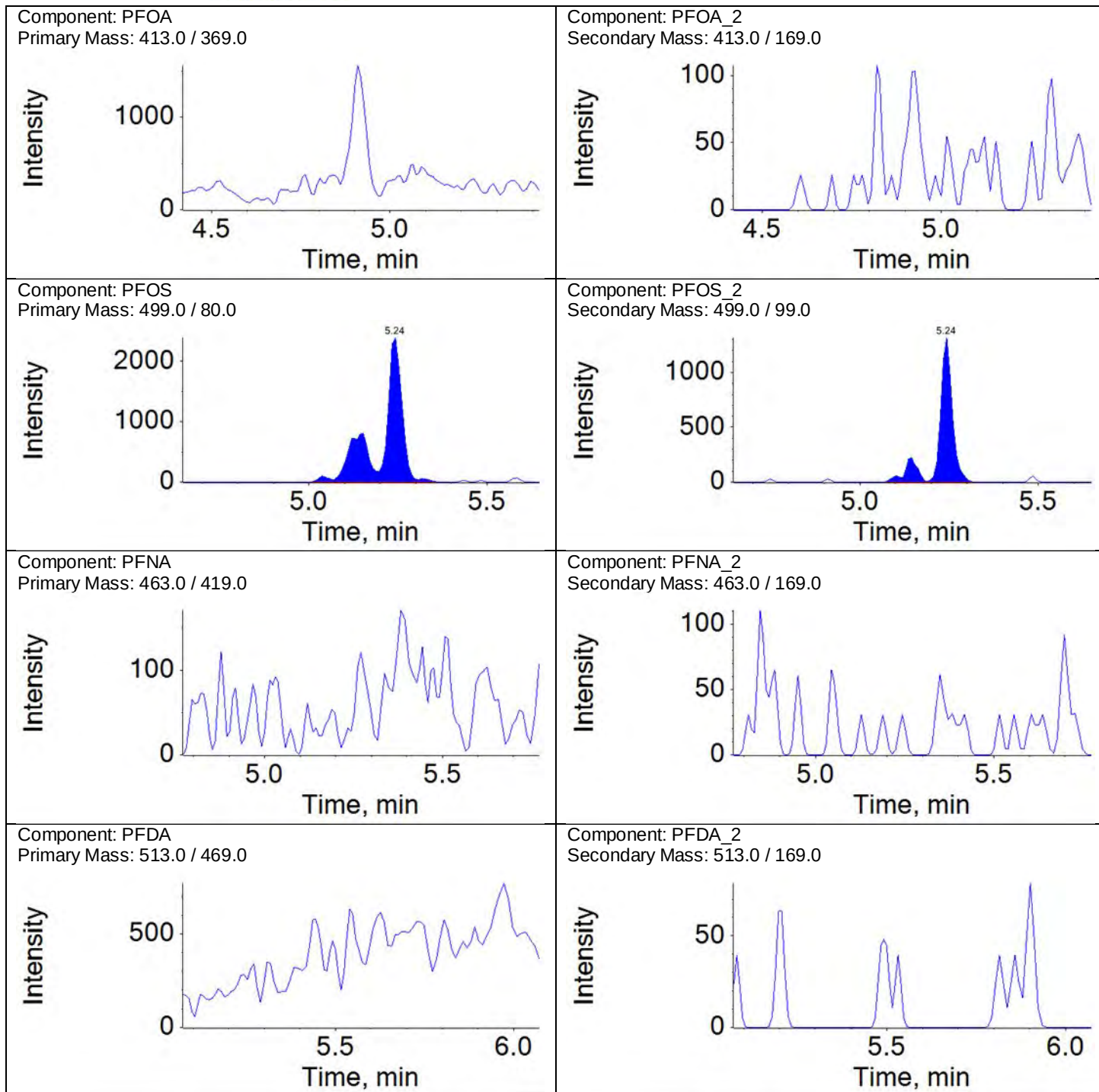
Sample Name: 9881903

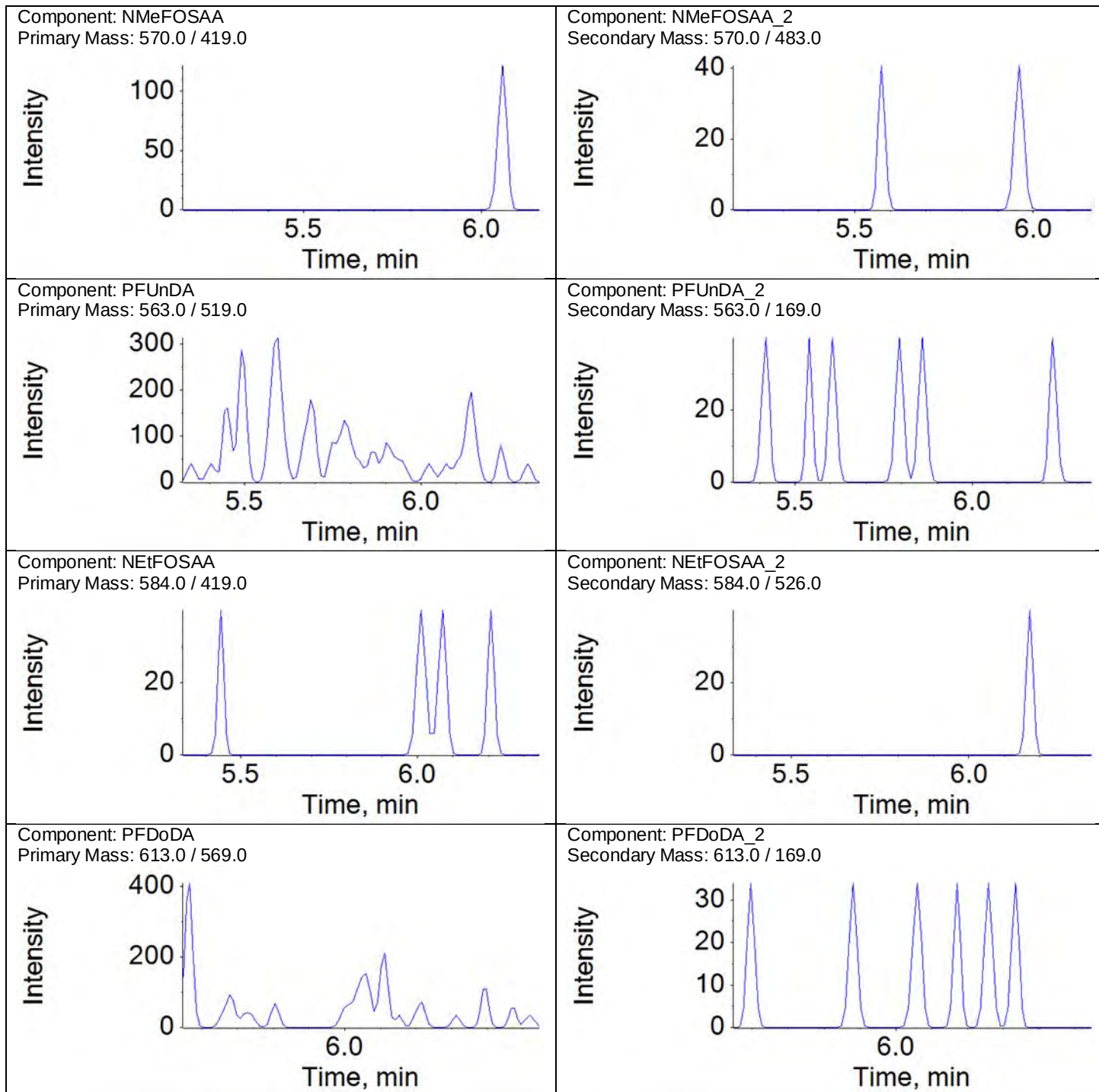
Instrument Name: LM27631

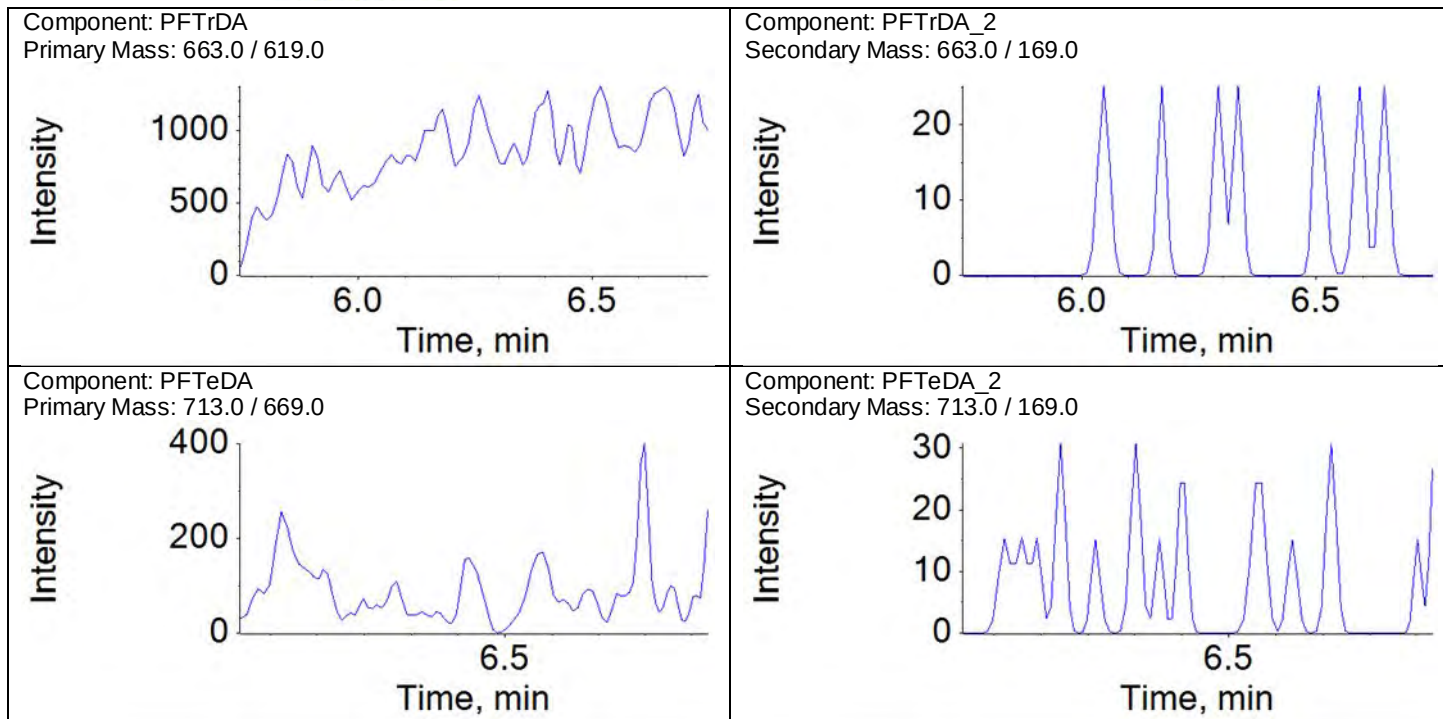
File Name: 18NOV13D-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.55	1.00	19576.1	M	N/A	0.3268			
PFHxS_2	4.55	1.00	6397.5	M	N/A	0.3268	8	50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.24	1.00	9905.5	M	N/A	0.3497			
PFOS_2	5.24	1.00	3464.0	M	N/A	0.3497	35	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881904			Data File:		18NOV13D-11.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-BLDG573-S-02-08 Grab Soil			Acquis Date:		2018-11-13T10:38:14
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	17			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			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: 18NOV13D-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	725859.0	661126.9	10	50	
13C2-PFOA	5.0	506641.8	466902.6	9	50	
13C4-PFOS	4.8	261877.6	247446.9	6	50	
13C2-PFDA	5.0	327220.9	295381.6	11	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	393563.0	13C3-PFBA	725859.0	0.542	8.942	7.361	82	50-150	
E13C5-PFHxA	585424.3	13C2-PFOA	506641.8	1.155	9.615	8.027	83	50-150	
E13C3-PFHxS	275810.8	13C2-PFOA	506641.8	0.544	9.096	7.184	79	50-150	
E13C4-PFHpA	465627.6	13C2-PFOA	506641.8	0.919	9.615	7.962	83	50-150	
E13C8-PFOA	764691.8	13C2-PFOA	506641.8	1.509	9.615	7.997	83	50-150	
E13C8-PFOS	240983.4	13C4-PFOS	261877.6	0.920	9.192	7.841	85	50-150	
E13C9-PFNA	411875.3	13C4-PFOS	261877.6	1.573	9.615	8.433	88	50-150	
E13C6-PFDA	528240.8	13C2-PFDA	327220.9	1.614	9.615	7.245	75	50-150	
Ed3-NMeFOSAA	70619.4	13C2-PFDA	327220.9	0.216	9.615	7.492	78	50-150	
E13C7-PFUnDA	223842.4	13C2-PFDA	327220.9	0.684	9.615	7.638	79	50-150	
Ed5-NEtFOSAA	53498.5	13C2-PFDA	327220.9	0.163	9.615	6.652	69	50-150	
E13C2-PFDODA	507576.2	13C2-PFDA	327220.9	1.551	9.615	7.745	81	50-150	
E13C2-PFTeDA	349658.7	13C2-PFDA	327220.9	1.069	9.615	7.214	75	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881904

Instrument Name: LM27631

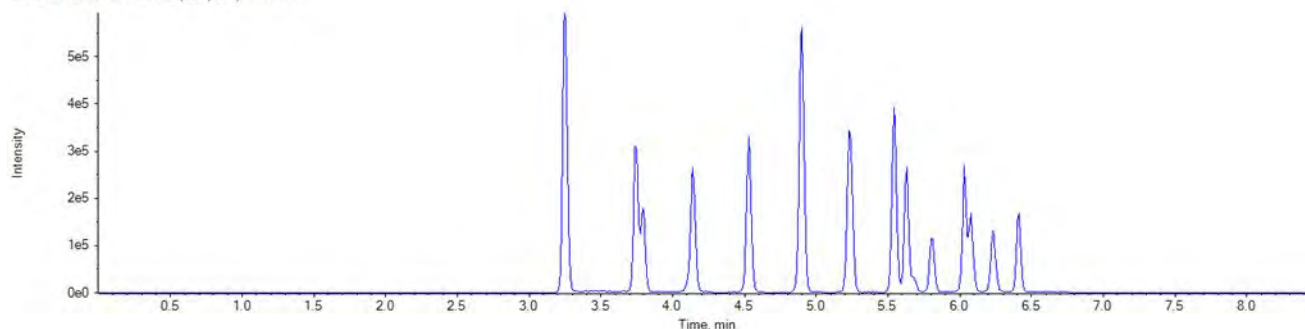
File Name: 18NOV13D-11.wiff

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	393563.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.14	585424.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.53	465627.6	N/A	
PFHxS	4.53	1.000	3745.8		M	13C3-PFHxS	4.53	275810.8	0.014	0.127
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.90	764691.8	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	240983.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.24	411875.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.54	528240.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.68	70619.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.80	223842.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	53498.5	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.03	507576.2	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.03	507576.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	349658.7	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-11.wiff (sample 1) - 9881904



APPROVED

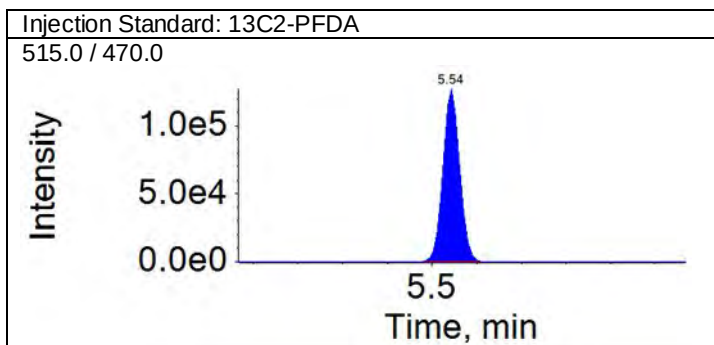
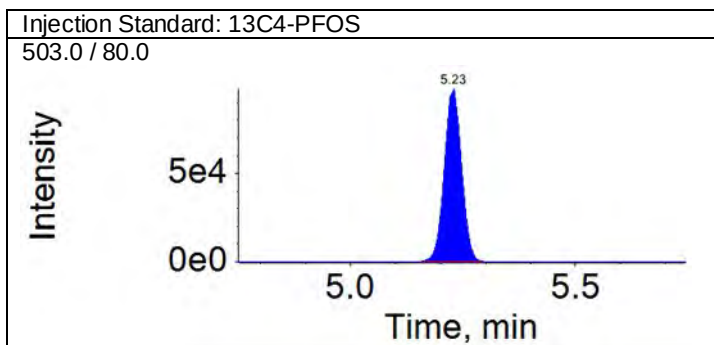
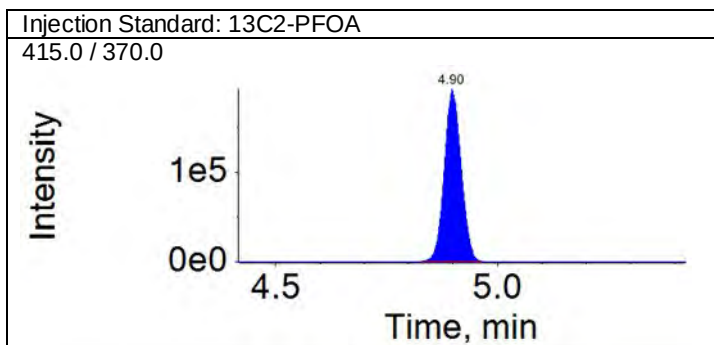
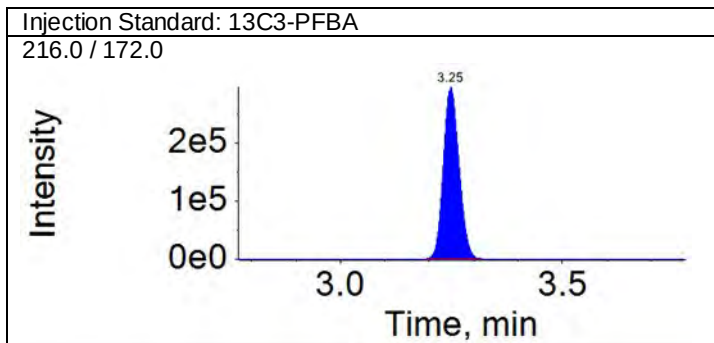
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

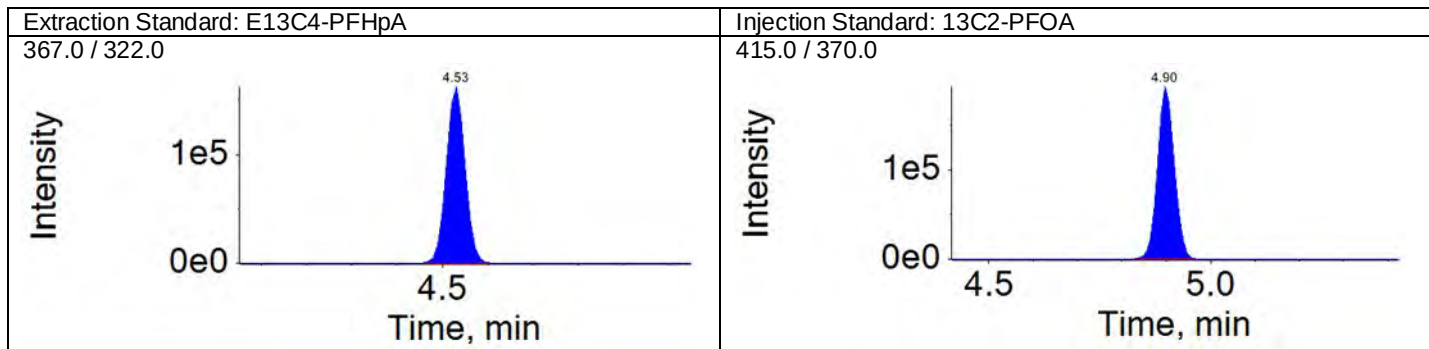
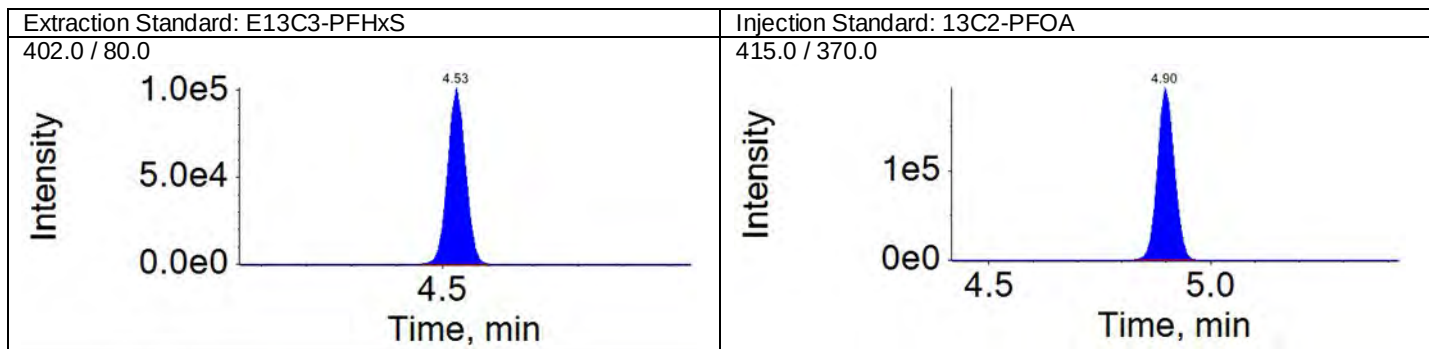
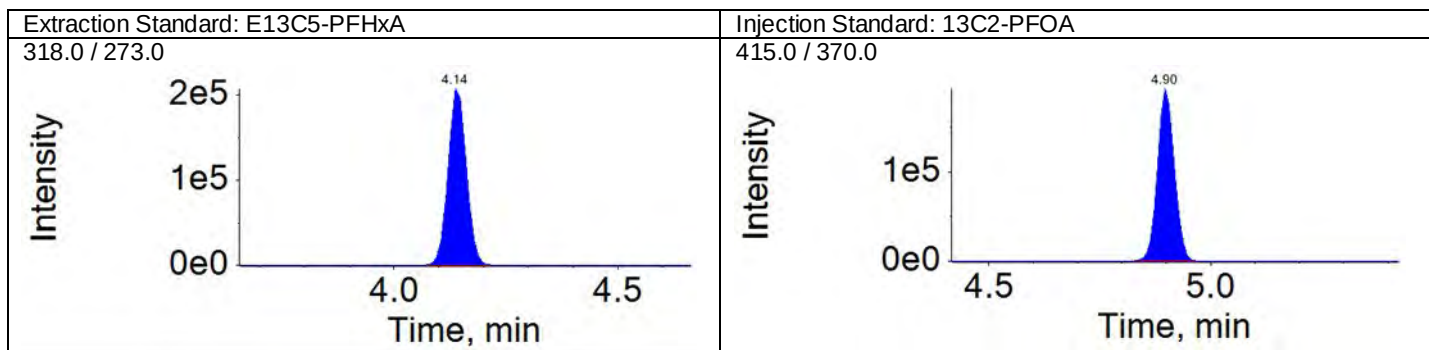
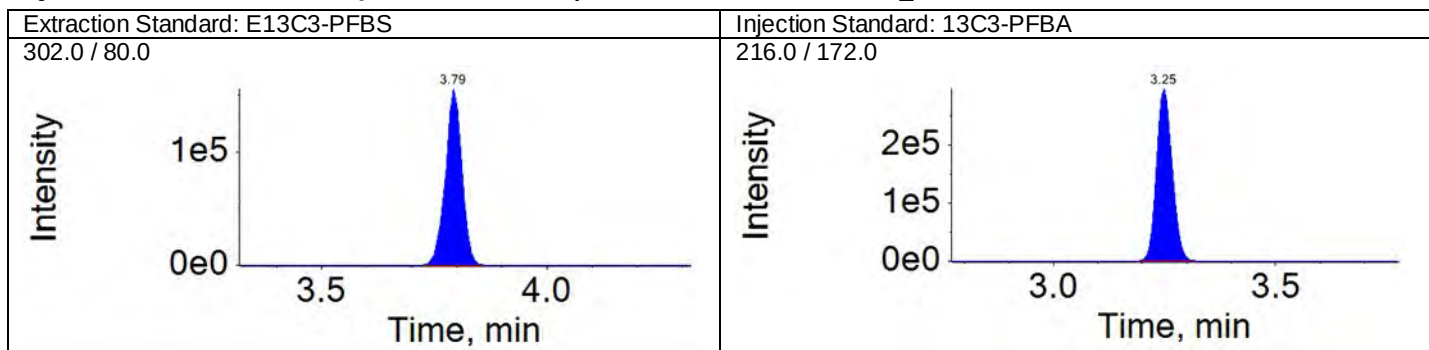
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



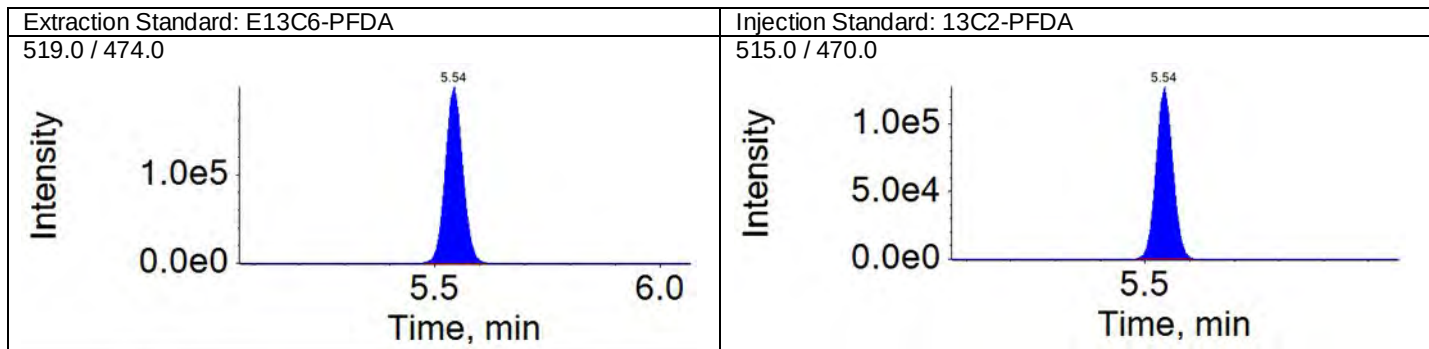
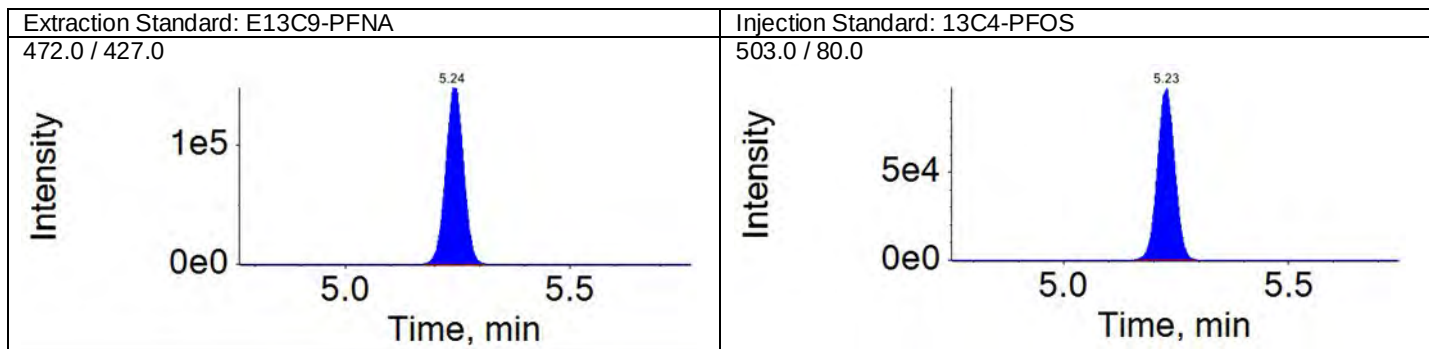
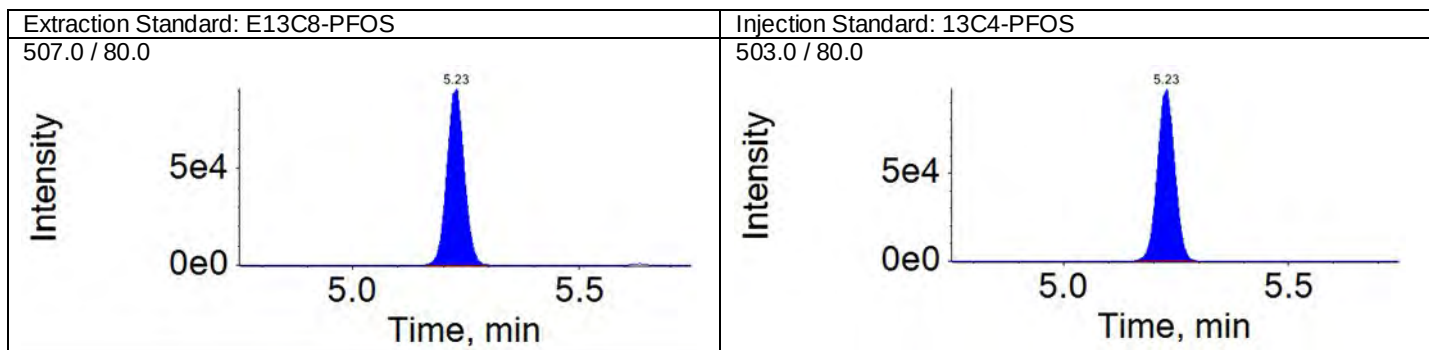
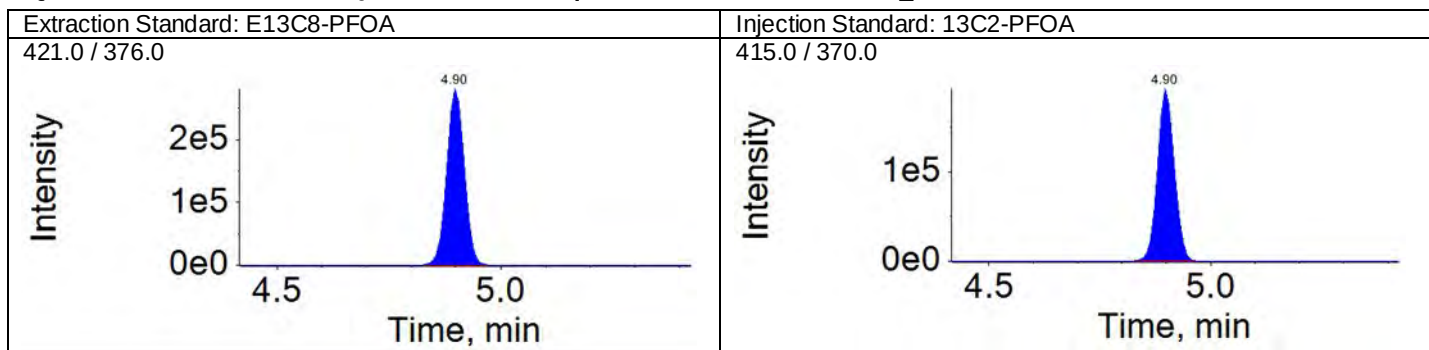
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



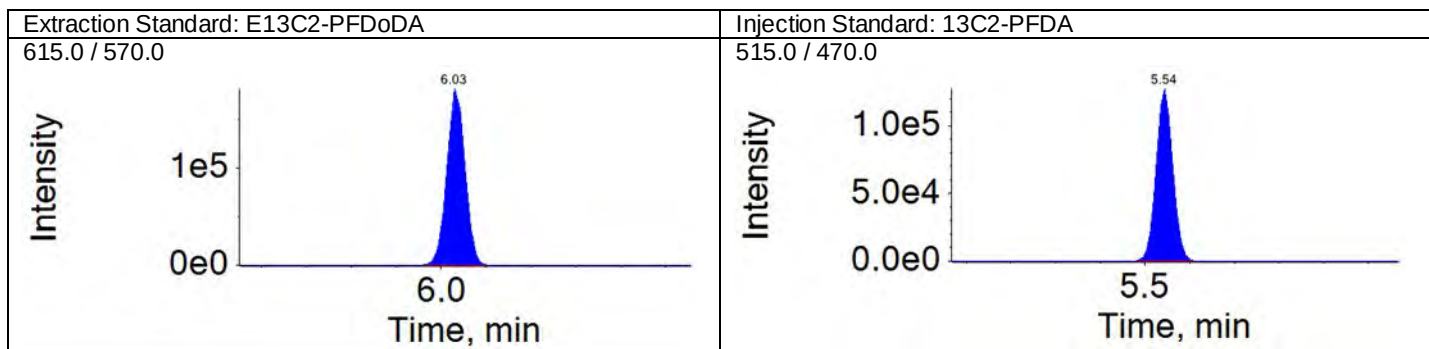
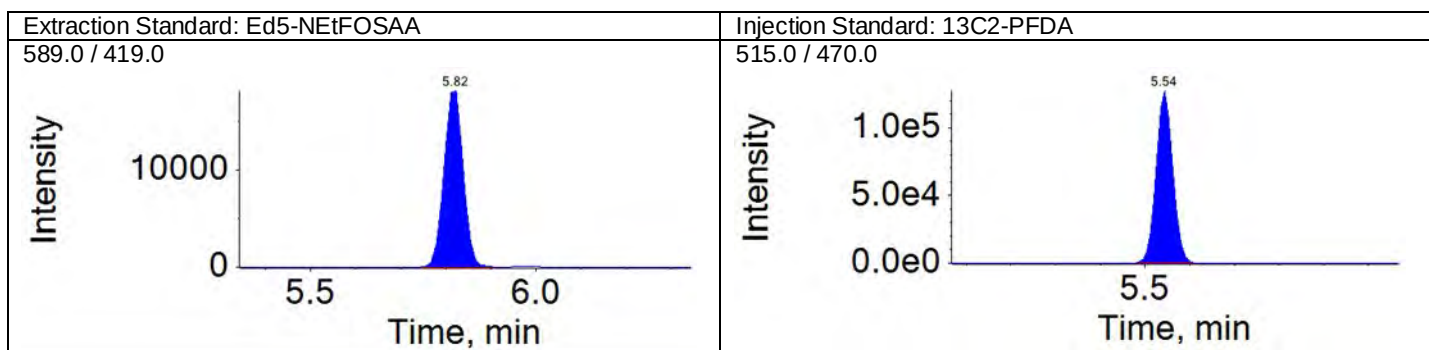
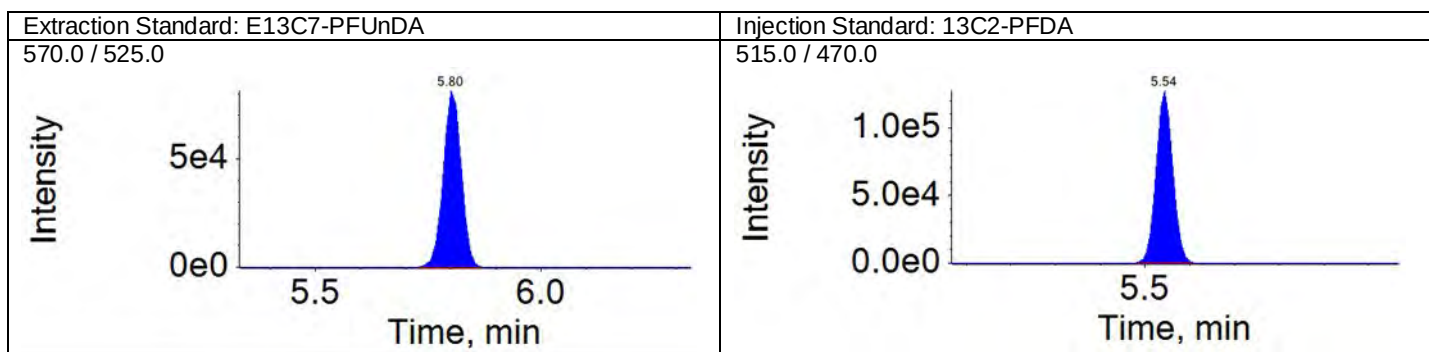
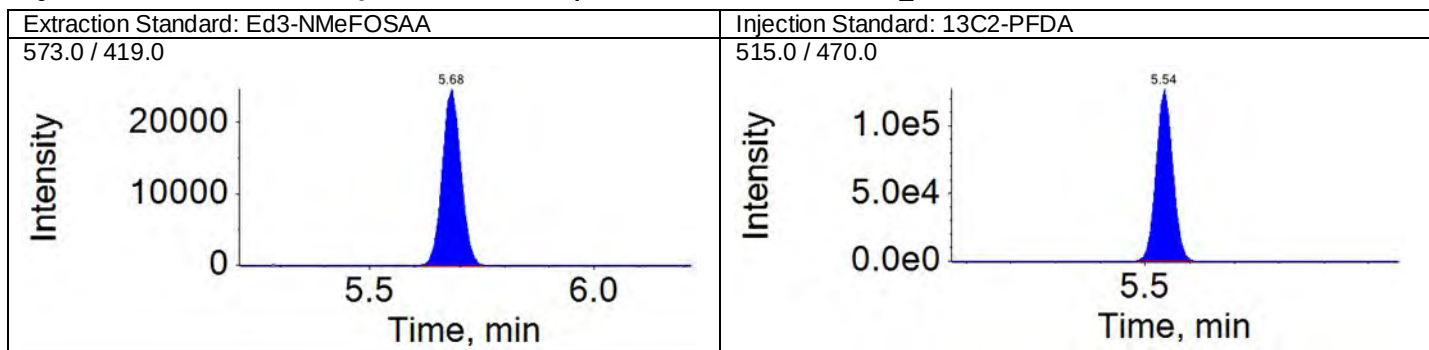
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



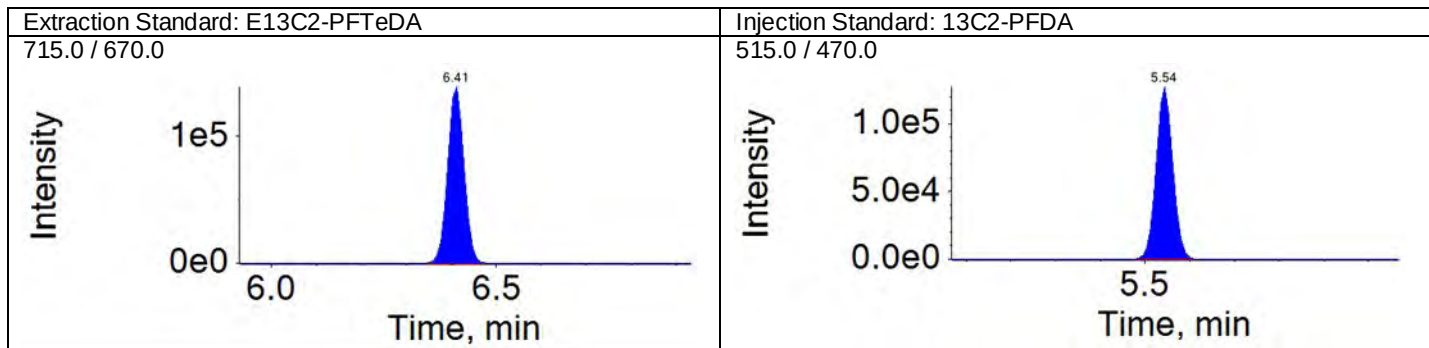
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



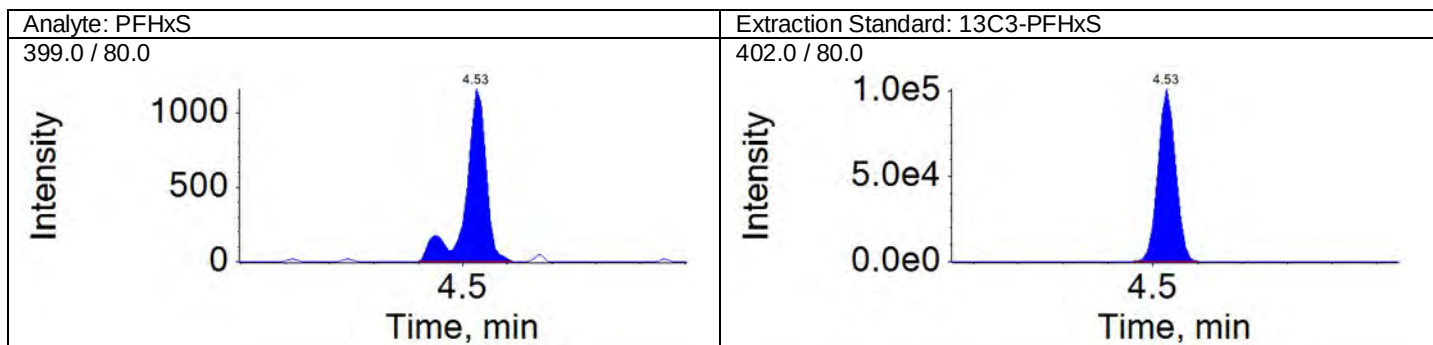
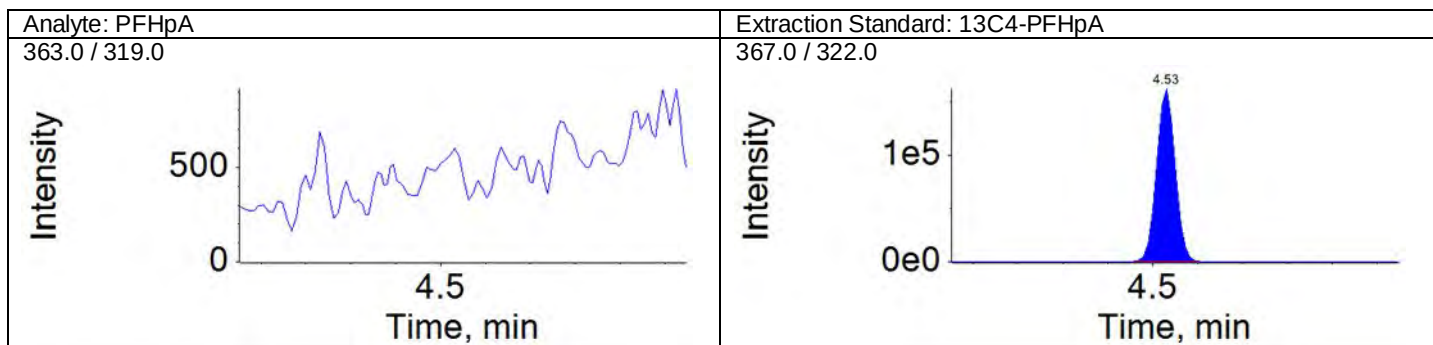
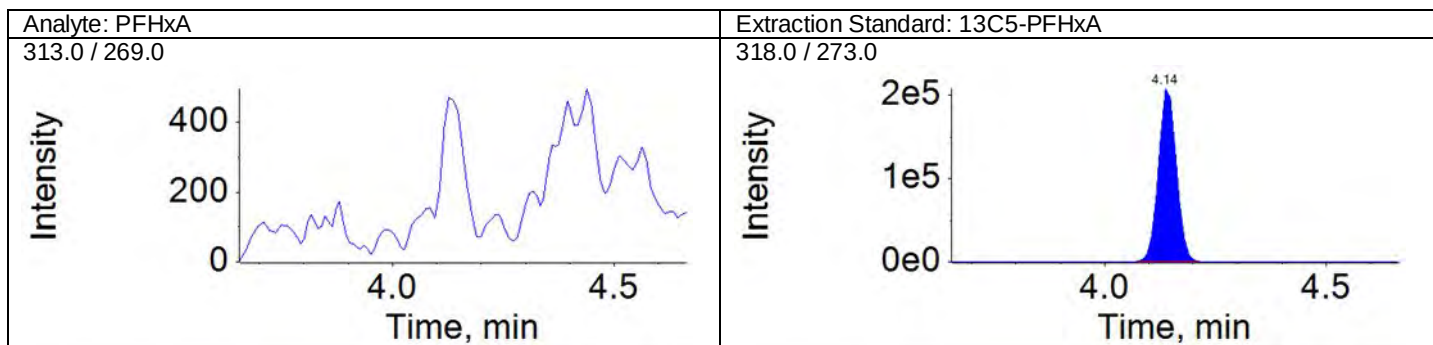
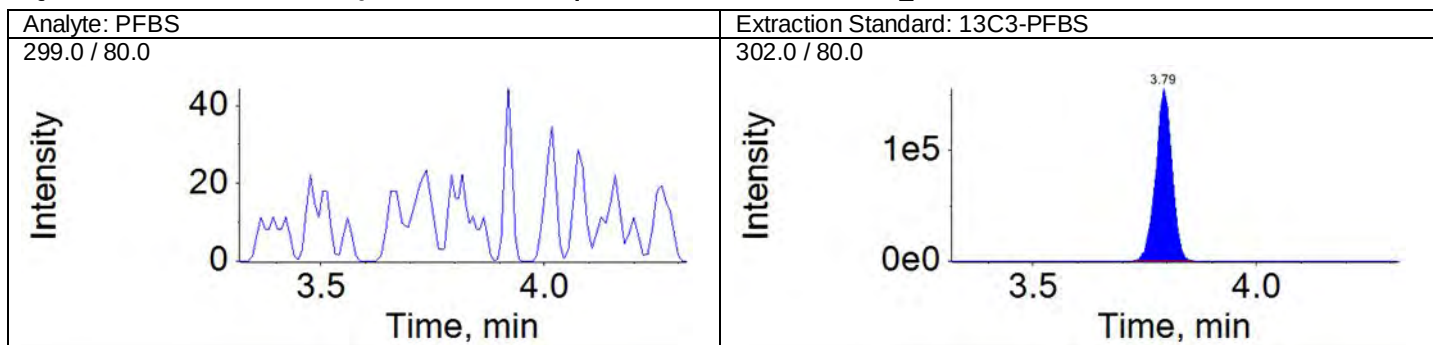
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



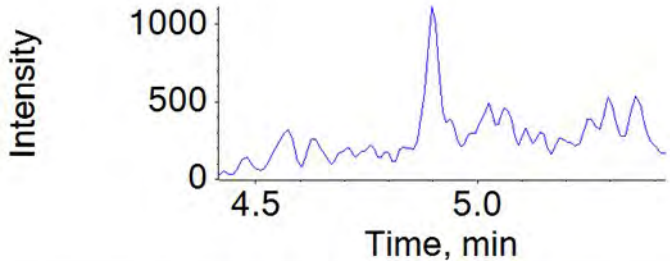
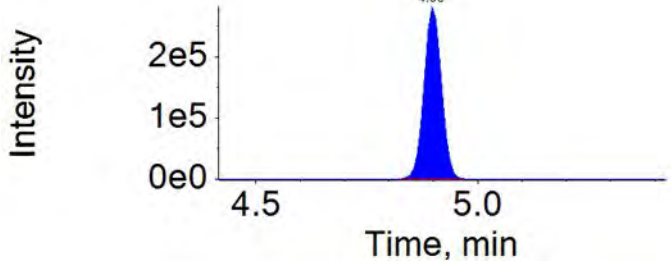
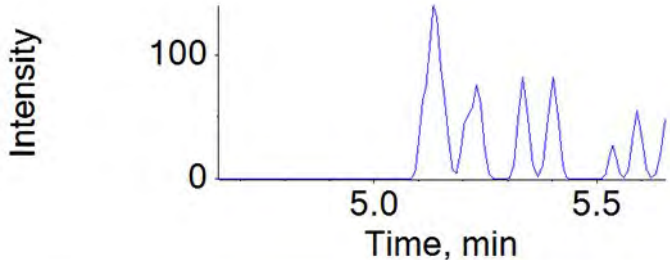
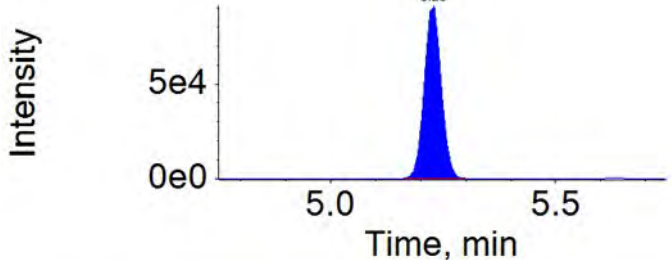
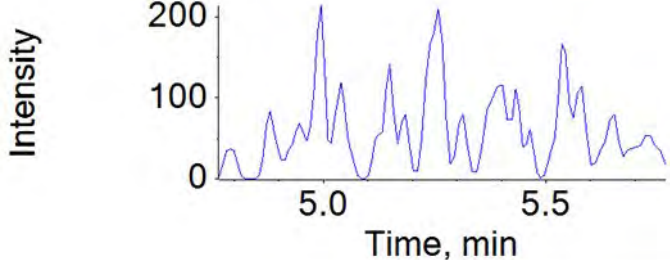
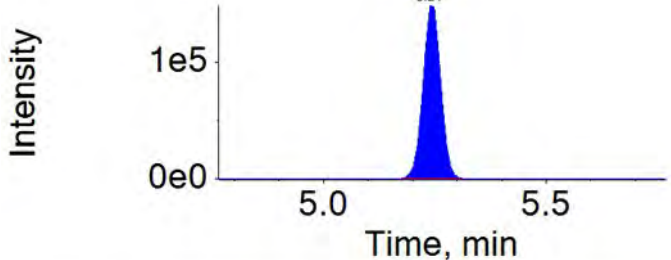
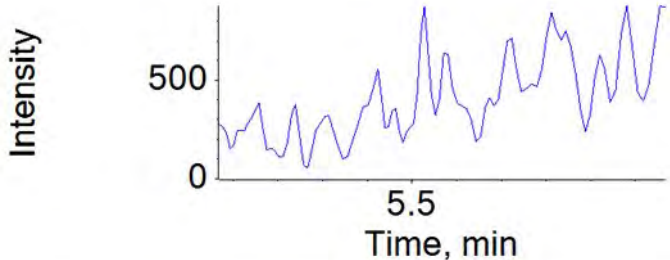
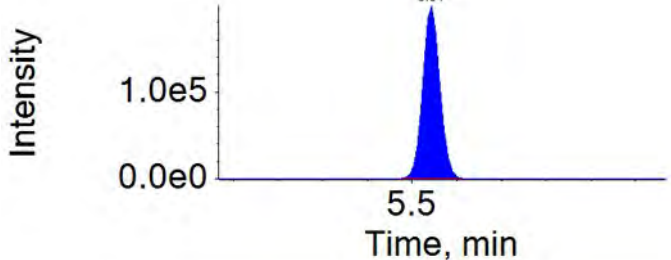
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



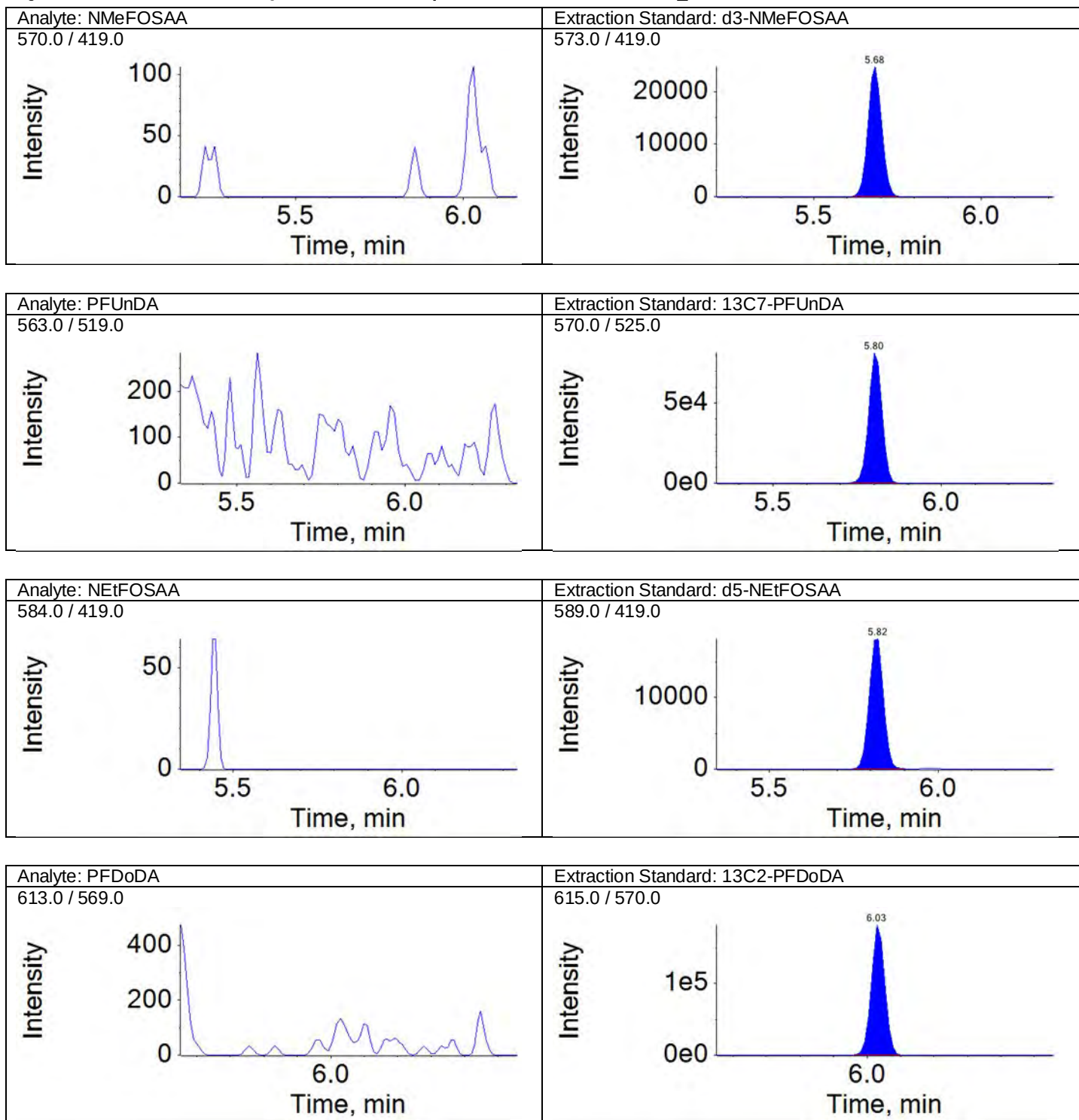
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

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 
Analyte: PFNA 463.0 / 419.0 	Extraction Standard: 13C9-PFNA 472.0 / 427.0 
Analyte: PFDA 513.0 / 469.0 	Extraction Standard: 13C6-PFDA 519.0 / 474.0 

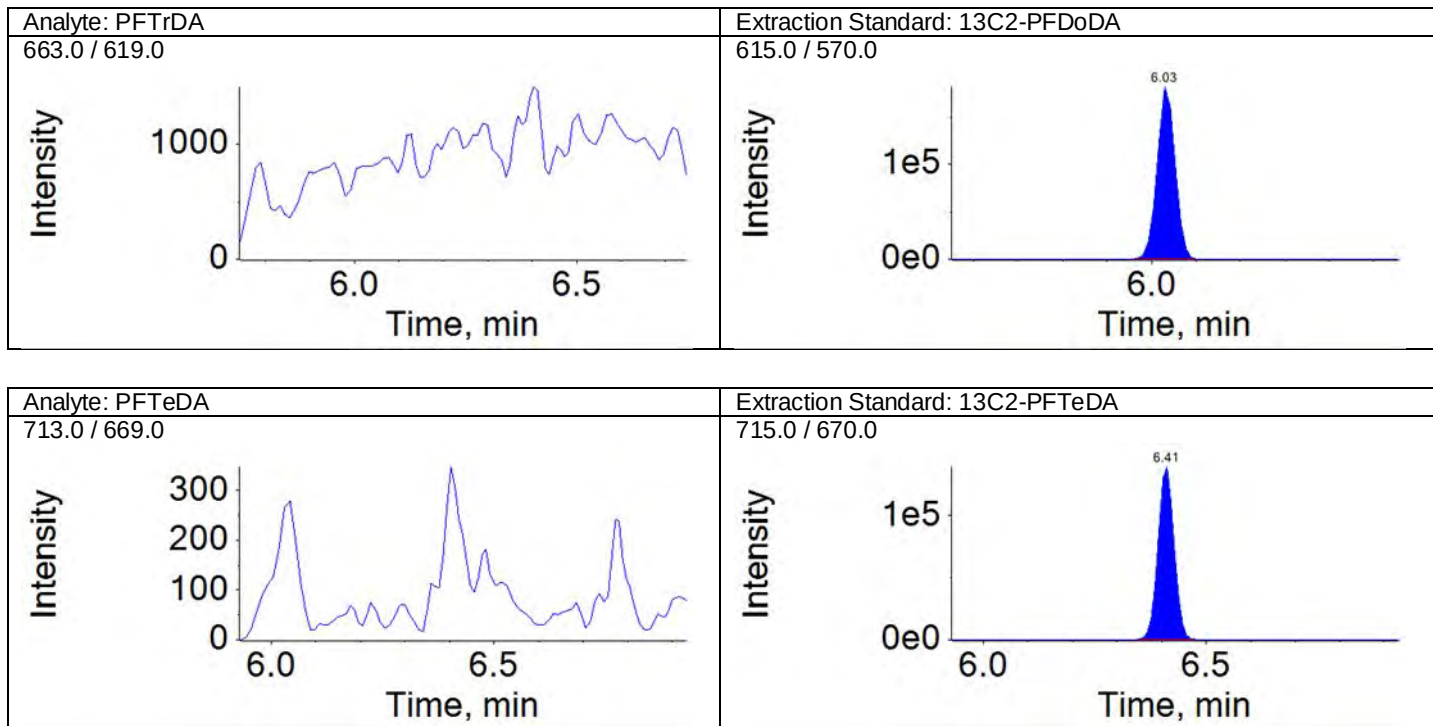
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



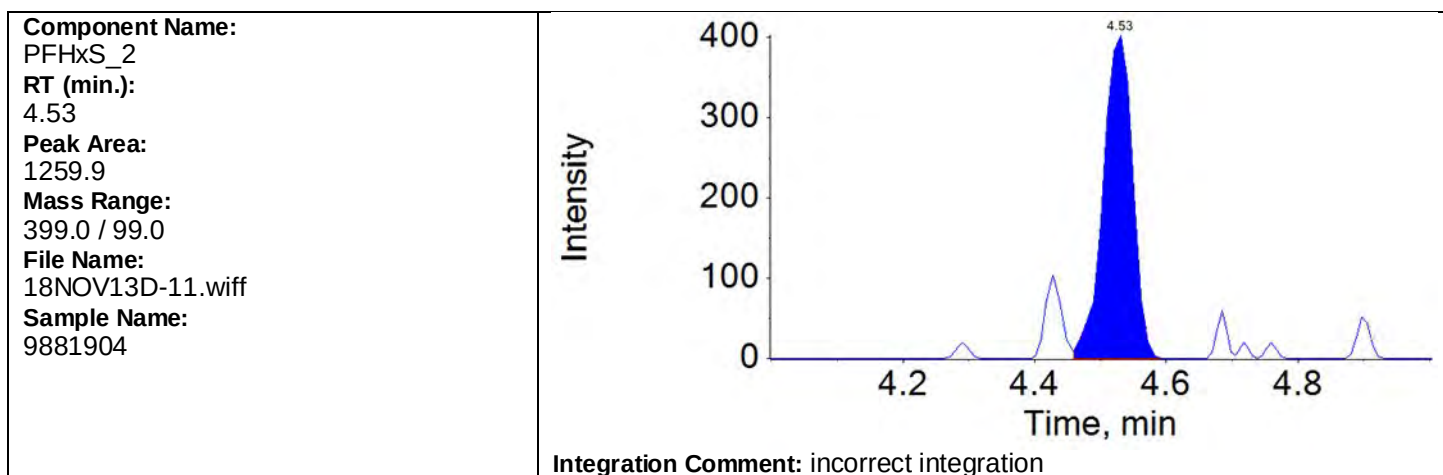
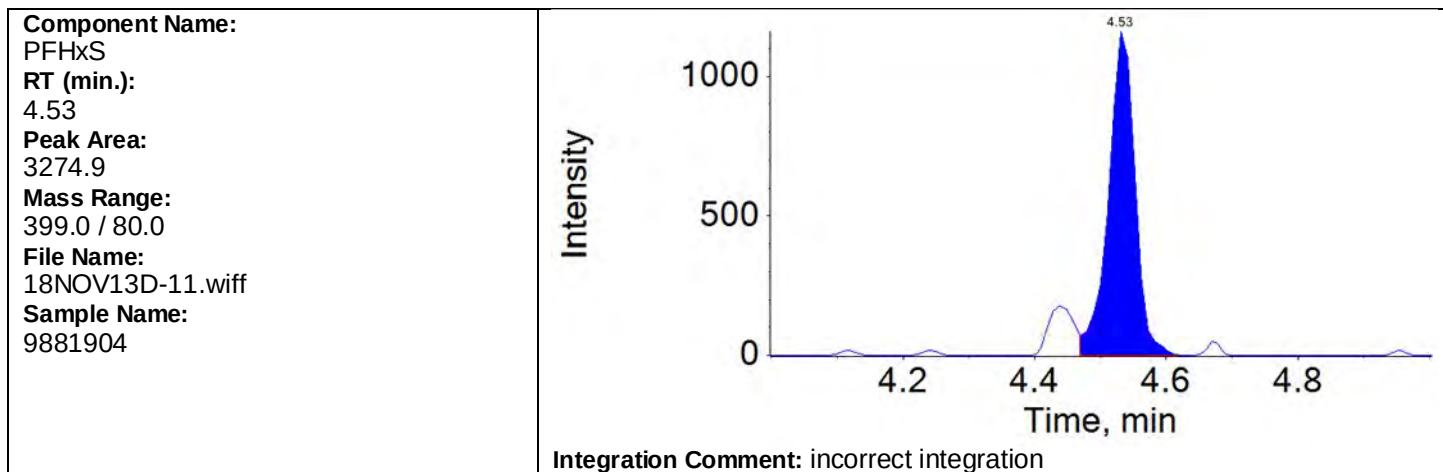
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

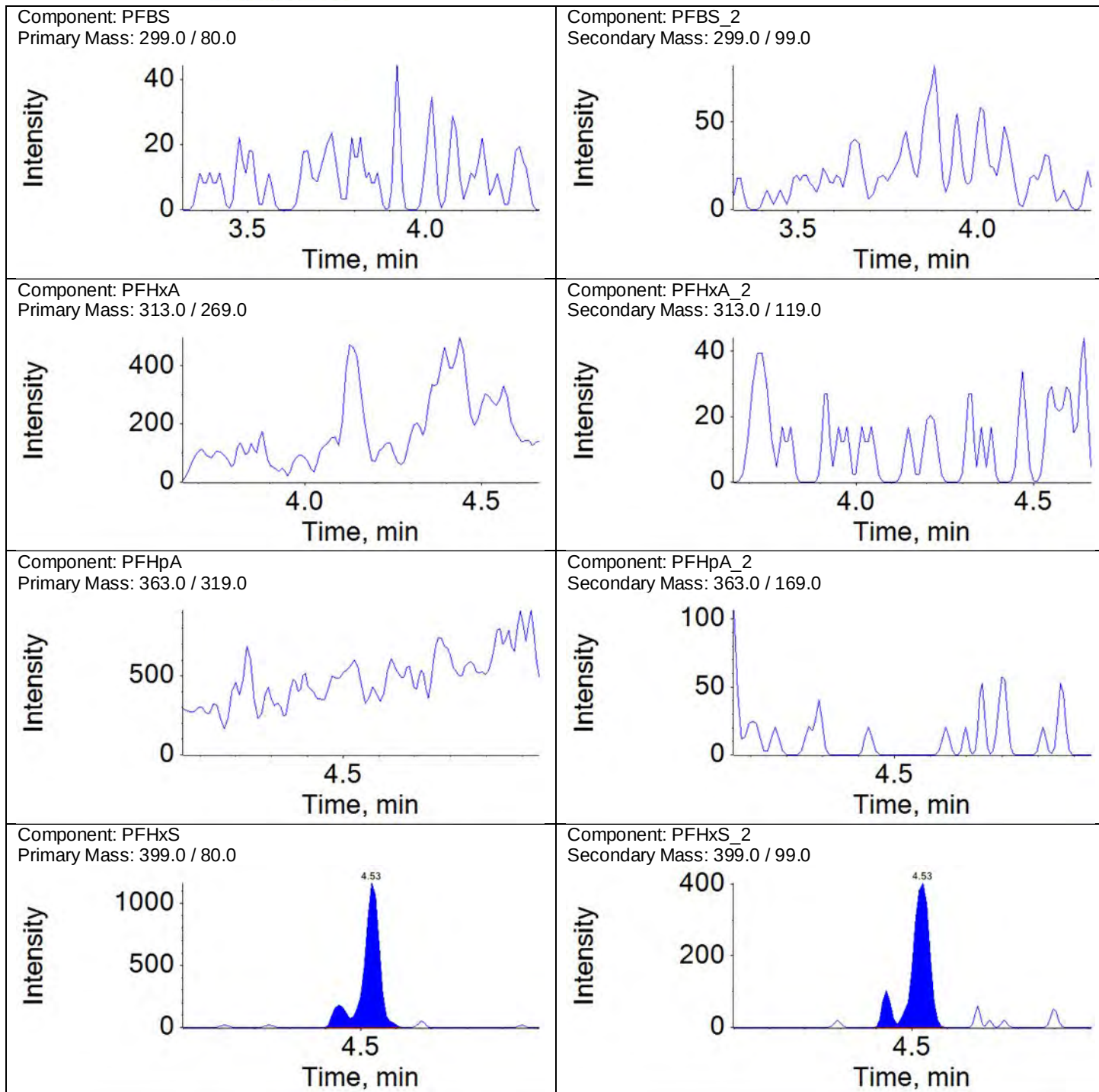
Ion Ratio Report

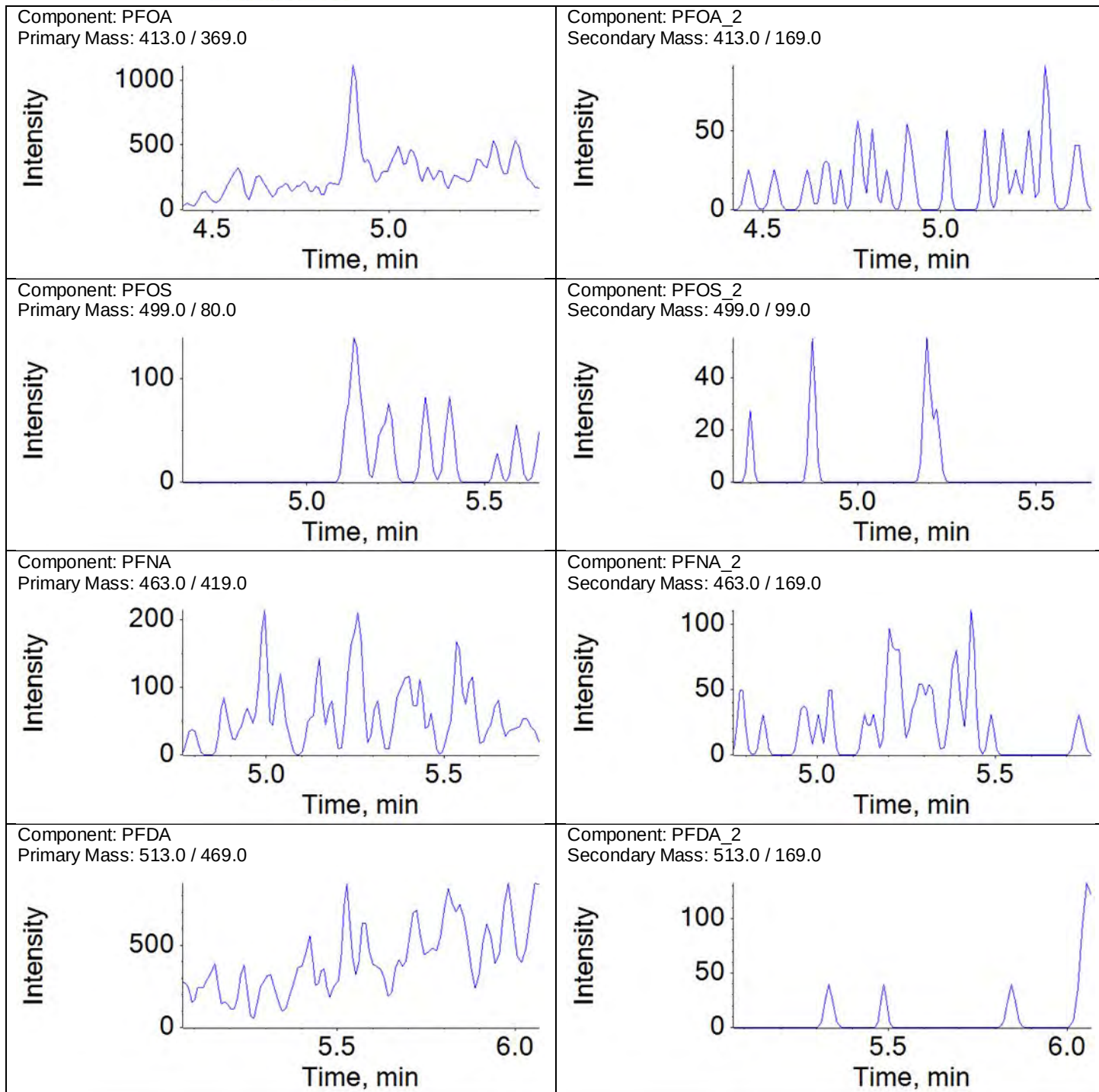
Sample Name: 9881904

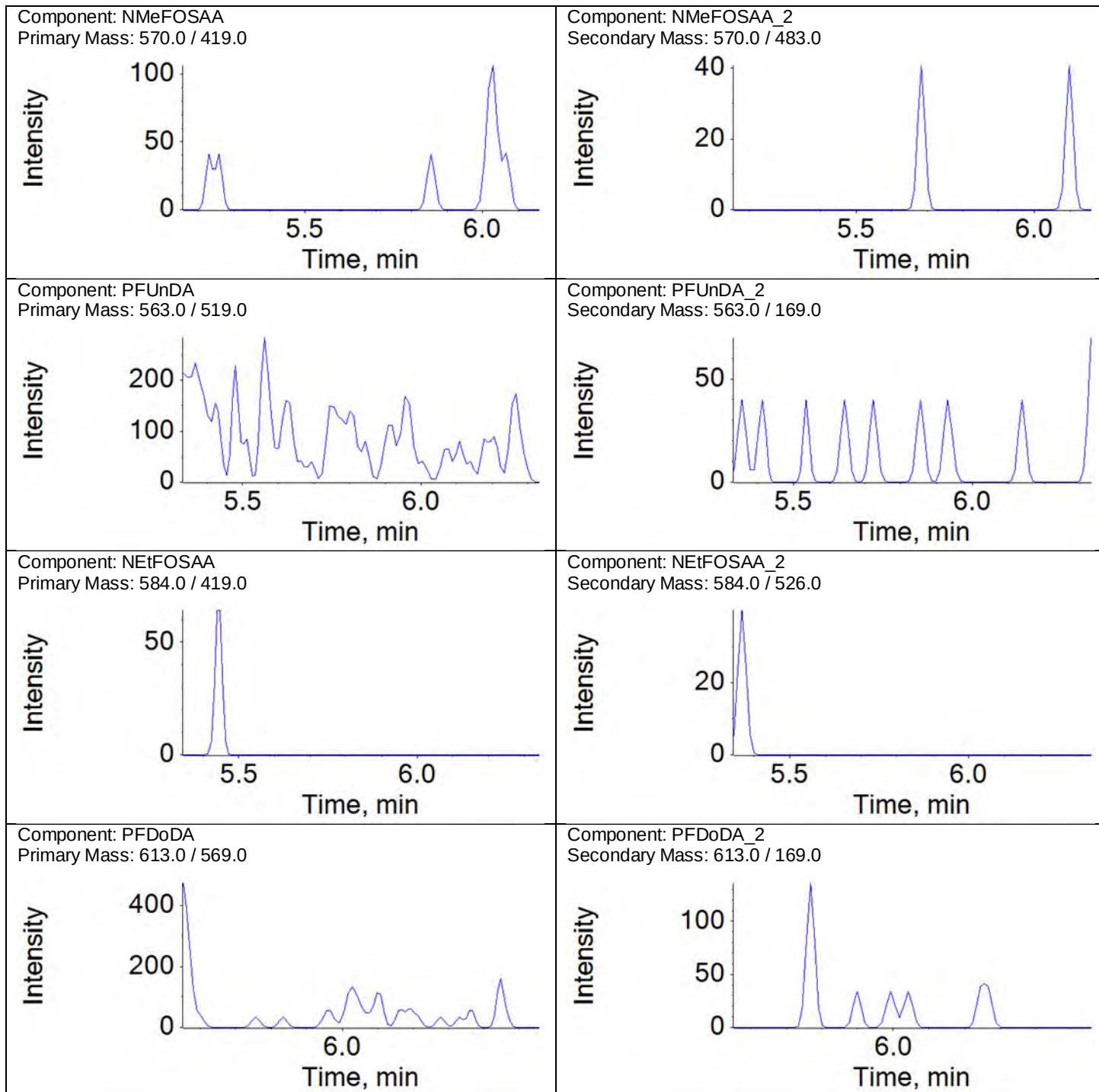
Instrument Name: LM27631

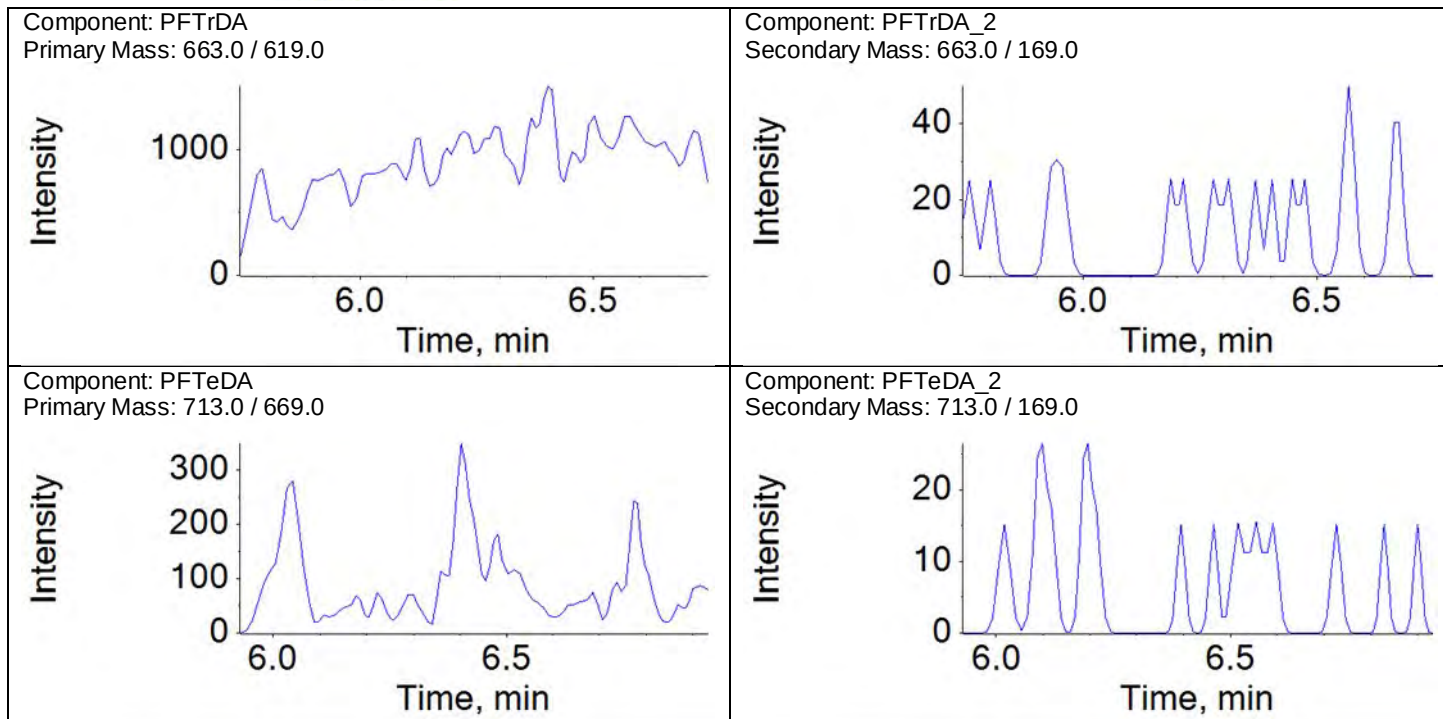
File Name: 18NOV13D-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.53	1.00	3745.8	M	N/A	0.3836			
PFHxS_2	4.53	1.00	1436.8	M	N/A	0.3836	26	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881907BKG		Data File:	18NOV13D-12.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-01 Grab Soil		Acquis Date:	2018-11-13T10:47:14
Sample Type:	Unknown		Instrument:	LM27631
Vial Position:	18		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18316012
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	18316012		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: 18NOV13D-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	724720.7	661126.9	10	50	
13C2-PFOA	5.0	509393.6	466902.6	9	50	
13C4-PFOS	4.8	277145.8	247446.9	12	50	
13C2-PFDA	5.0	320478.9	295381.6	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
E13C3-PFBS	395084.9	13C3-PFBA	724720.7	0.545	9.118	7.546	83	50-150	
E13C5-PFHxA	587552.5	13C2-PFOA	509393.6	1.153	9.804	8.170	83	50-150	
E13C3-PFHxS	279357.8	13C2-PFOA	509393.6	0.548	9.275	7.379	80	50-150	
E13C4-PFHpA	458695.9	13C2-PFOA	509393.6	0.900	9.804	7.954	81	50-150	
E13C8-PFOA	806583.4	13C2-PFOA	509393.6	1.583	9.804	8.554	87	50-150	
E13C8-PFOS	243117.6	13C4-PFOS	277145.8	0.877	9.373	7.621	81	50-150	
E13C9-PFNA	426142.2	13C4-PFOS	277145.8	1.538	9.804	8.406	86	50-150	
E13C6-PFDA	556566.3	13C2-PFDA	320478.9	1.737	9.804	7.946	81	50-150	
Ed3-NMeFOSAA	54343.6	13C2-PFDA	320478.9	0.170	9.804	6.002	61	50-150	
E13C7-PFUnDA	228176.0	13C2-PFDA	320478.9	0.712	9.804	8.105	83	50-150	
Ed5-NEtFOSAA	46199.8	13C2-PFDA	320478.9	0.144	9.804	5.980	61	50-150	
E13C2-PFDODA	498815.3	13C2-PFDA	320478.9	1.556	9.804	7.924	81	50-150	
E13C2-PFTeDA	353185.7	13C2-PFDA	320478.9	1.102	9.804	7.586	77	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

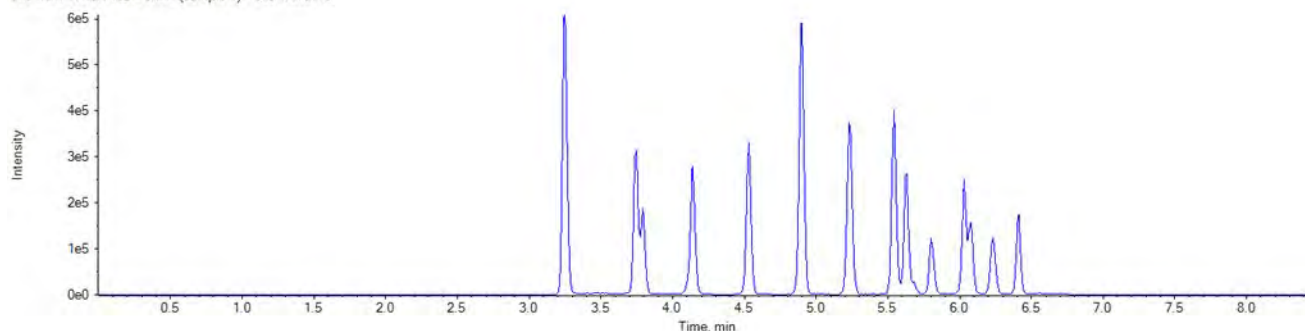
Sample Name: 9881907BKG Instrument Name: LM27631 File Name: 18NOV13D-12.wiff

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	3.79	395084.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.14	587552.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.53	458695.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.53	279357.8	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.90	806583.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	243117.6	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.24	426142.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.54	556566.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.68	54343.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.80	228176.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.81	46199.8	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.03	498815.3	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.03	498815.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	353185.7	N/A	

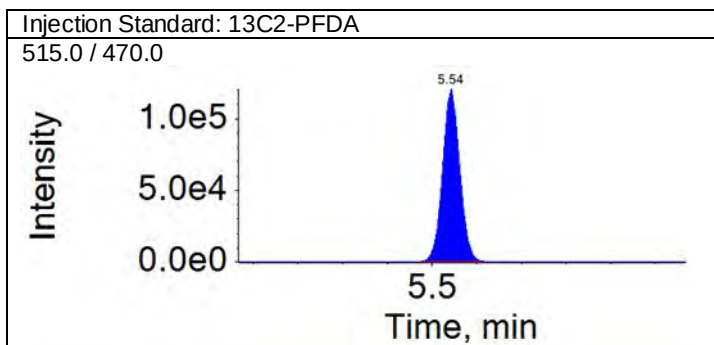
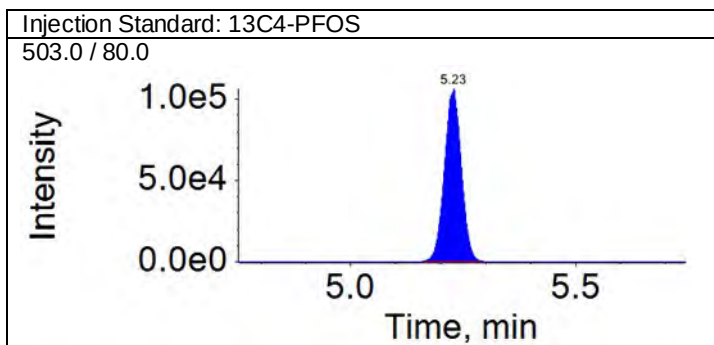
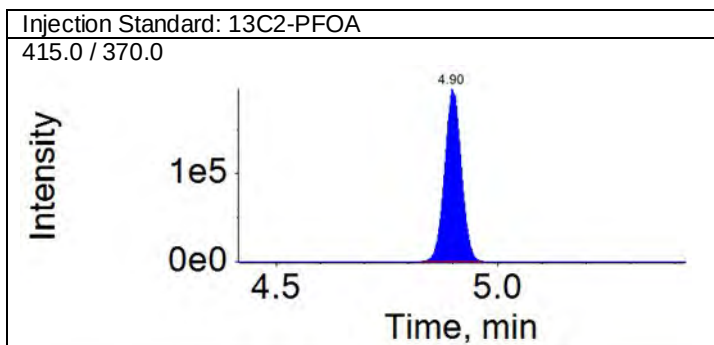
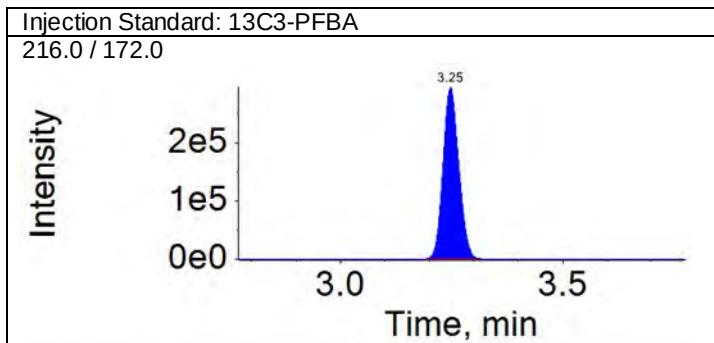
Total Ion Chromatogram

TIC from 18NOV13D-12.wiff (sample 1) - 9881907BKG



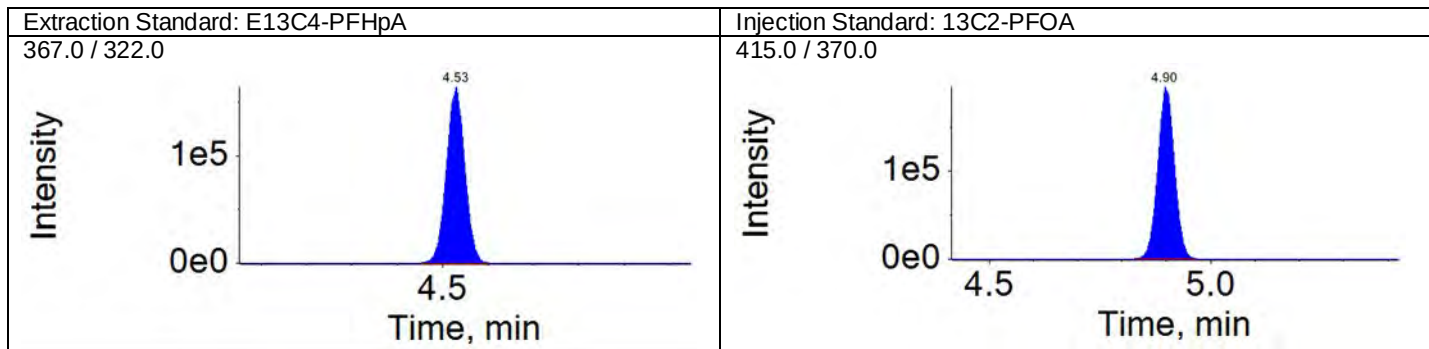
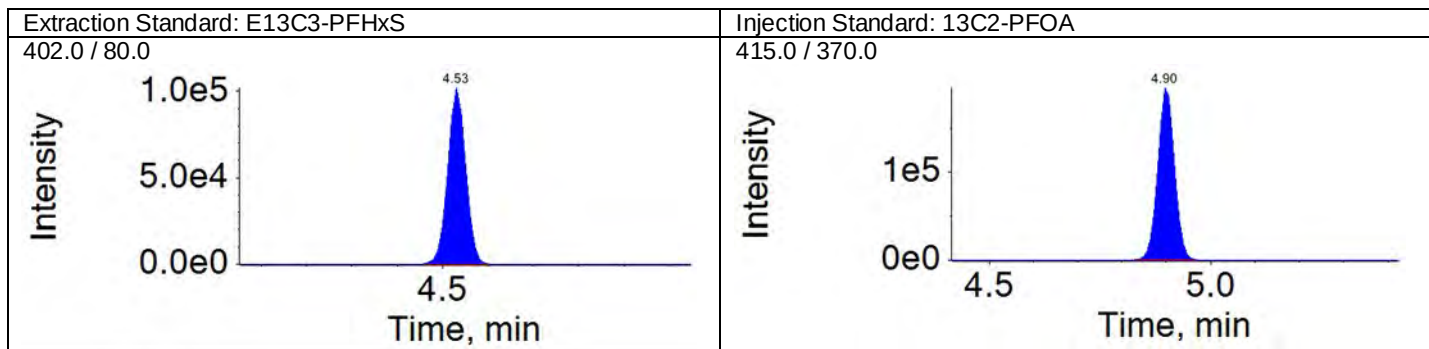
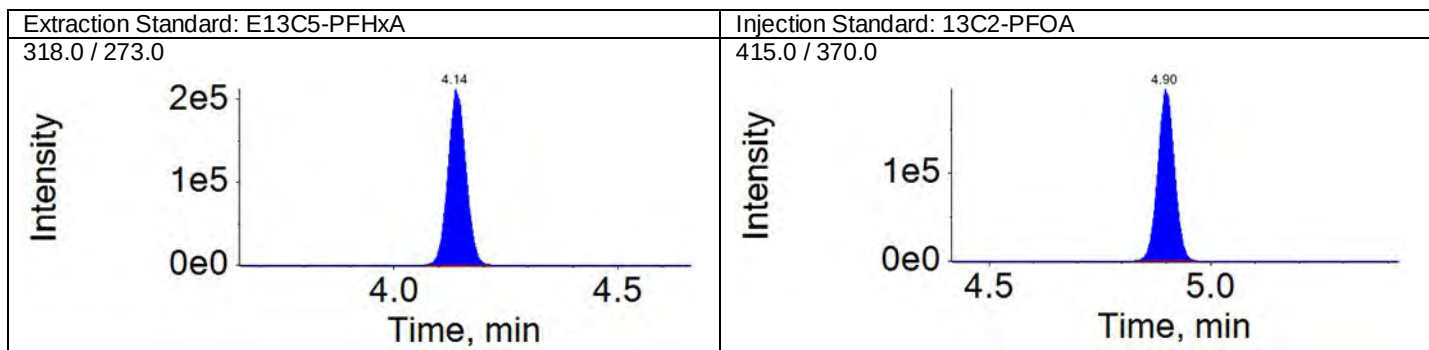
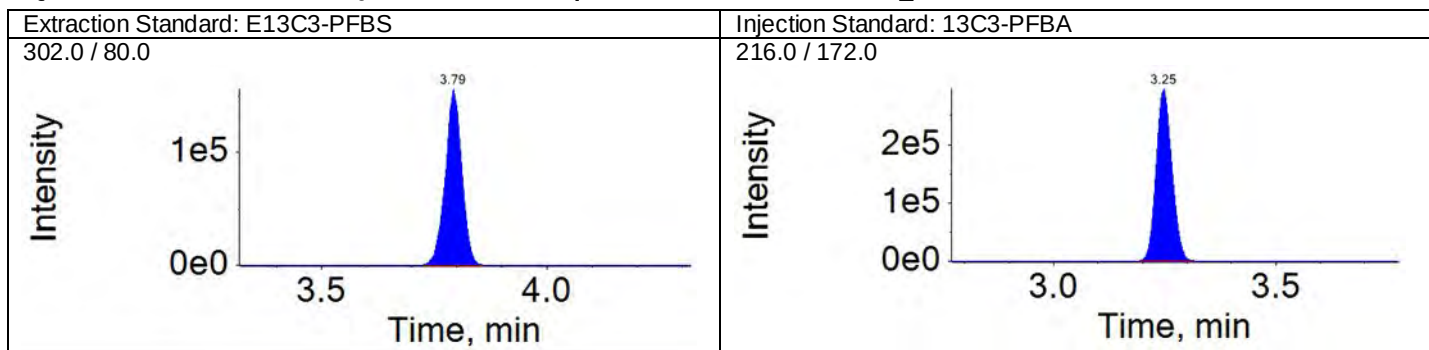
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



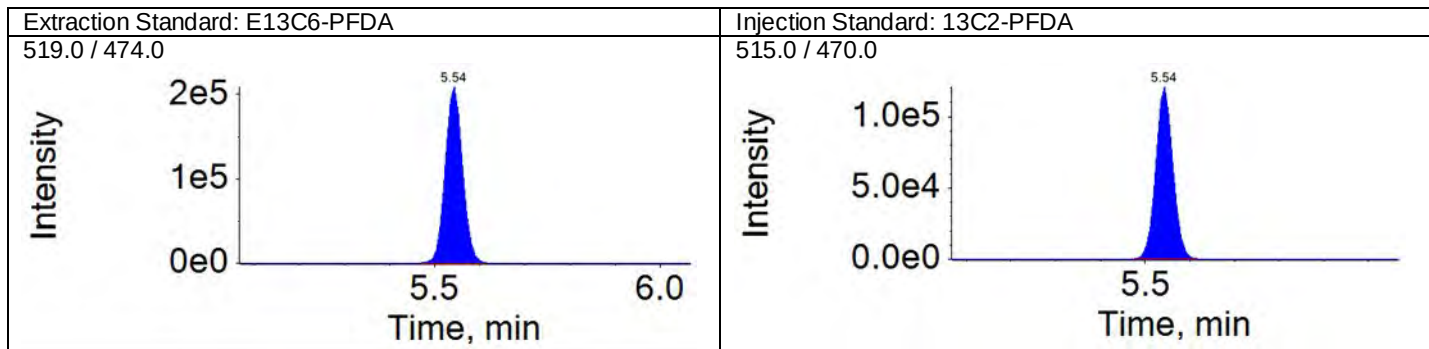
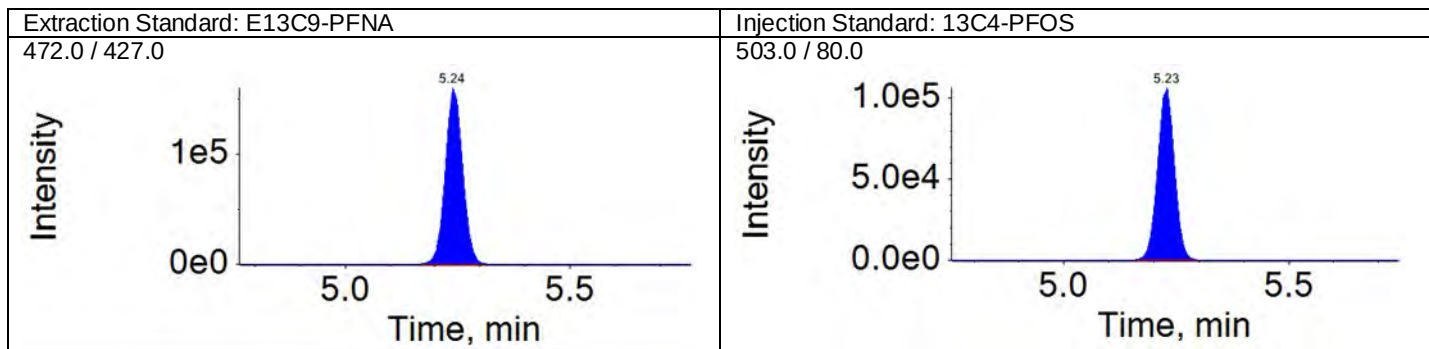
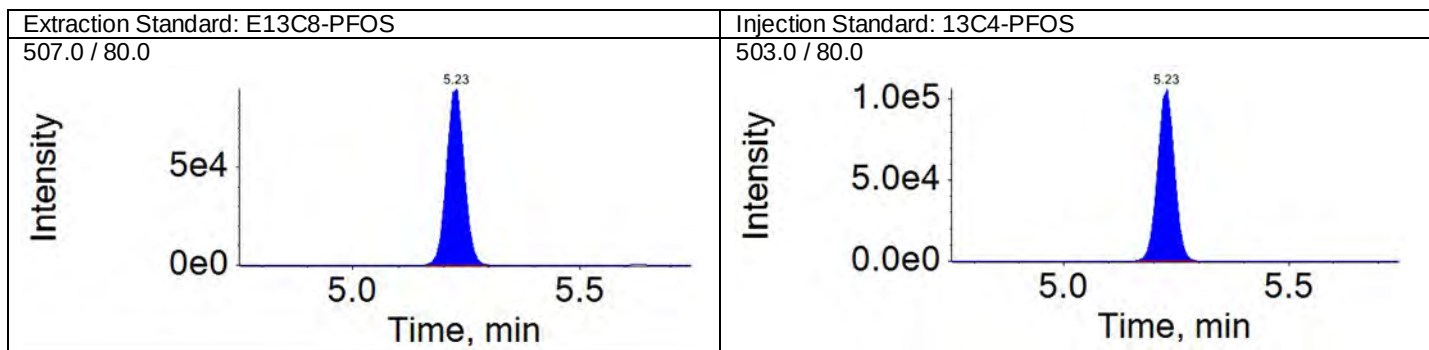
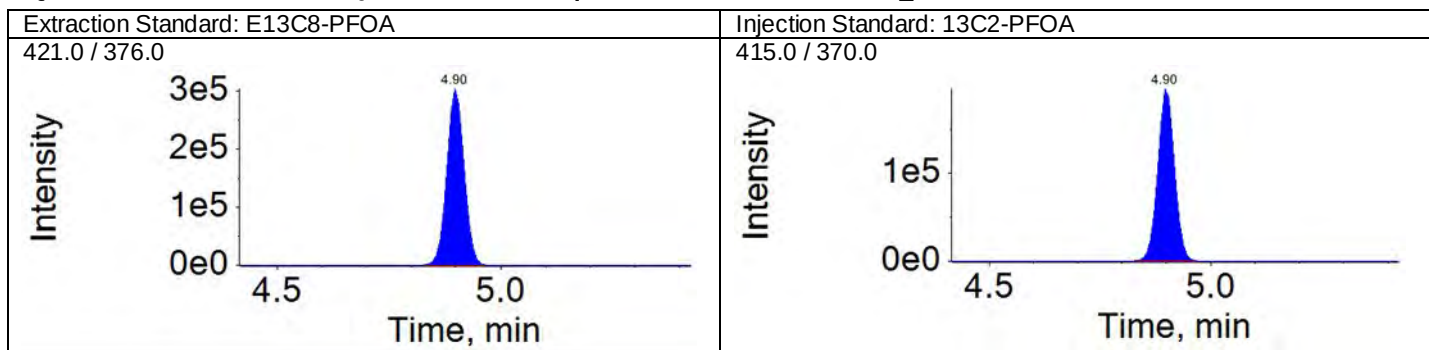
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



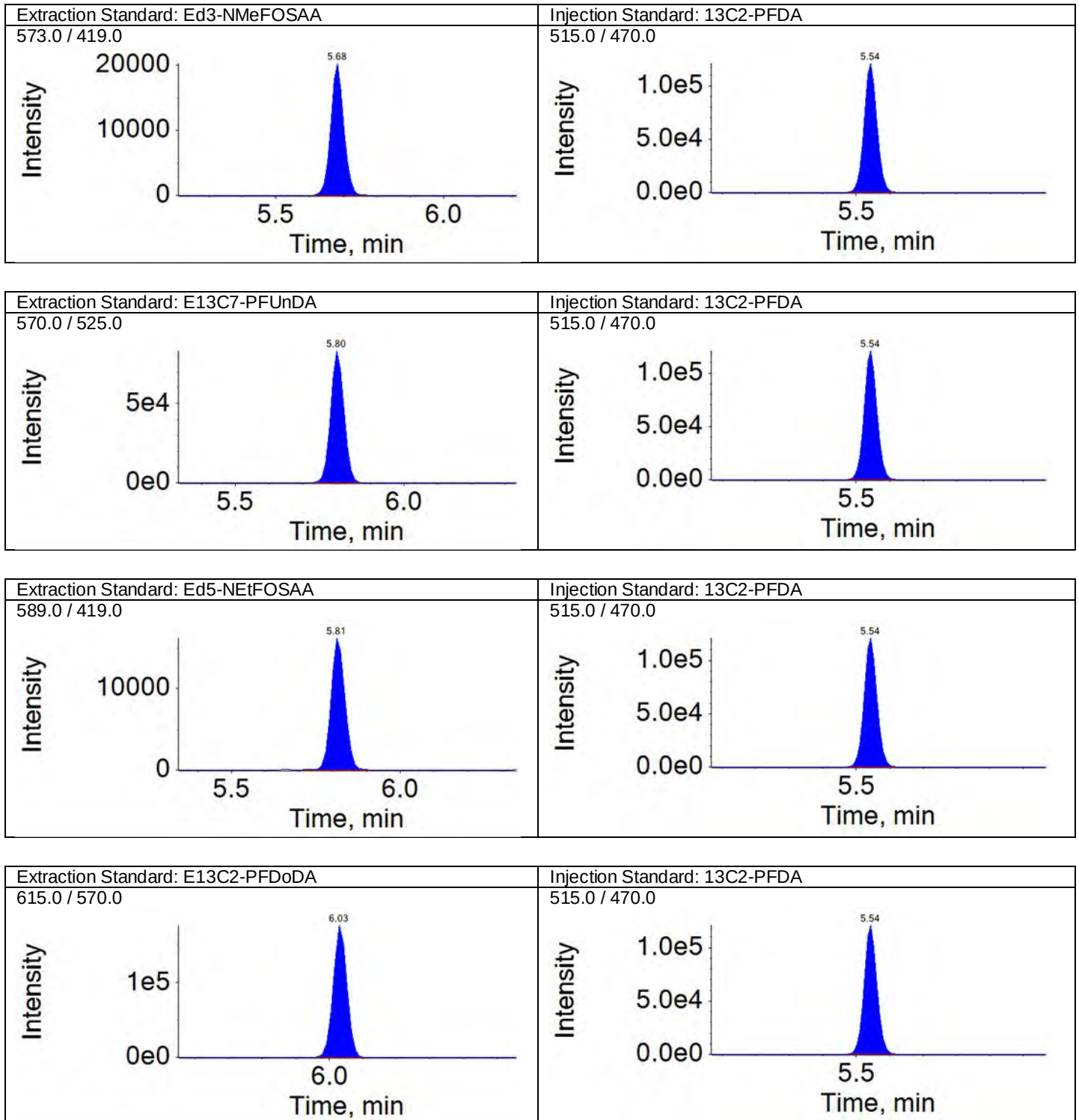
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



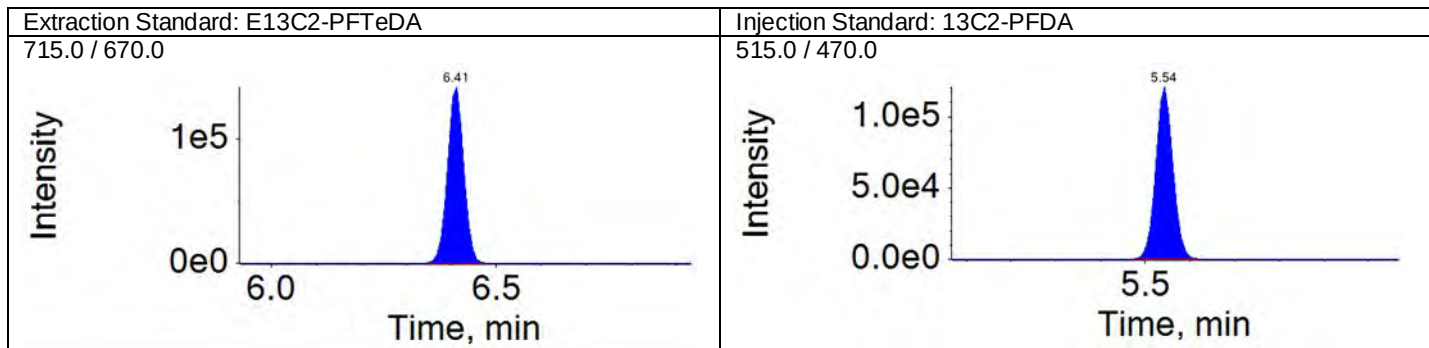
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

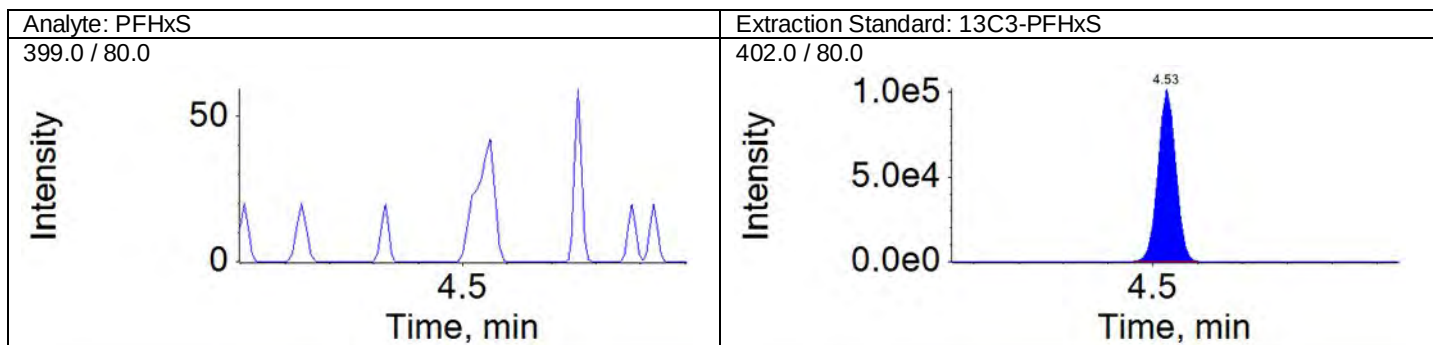
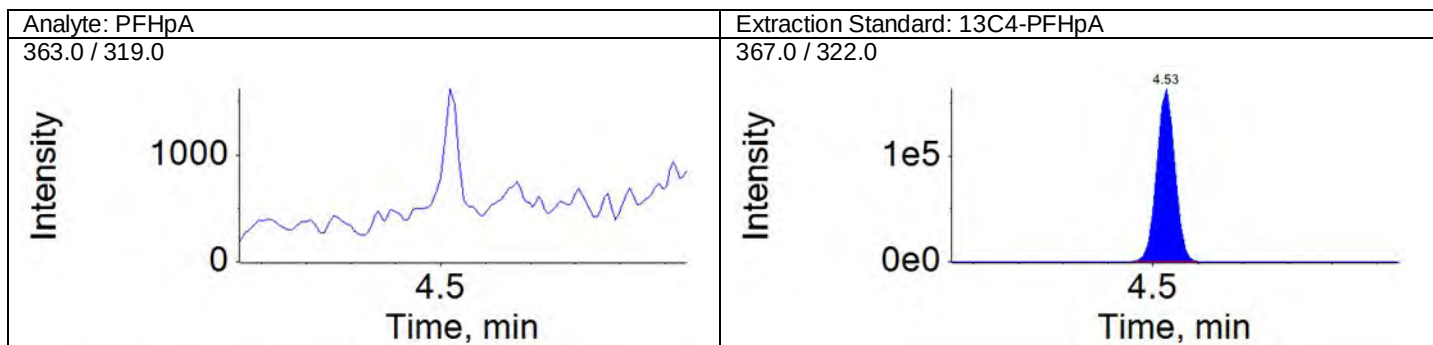
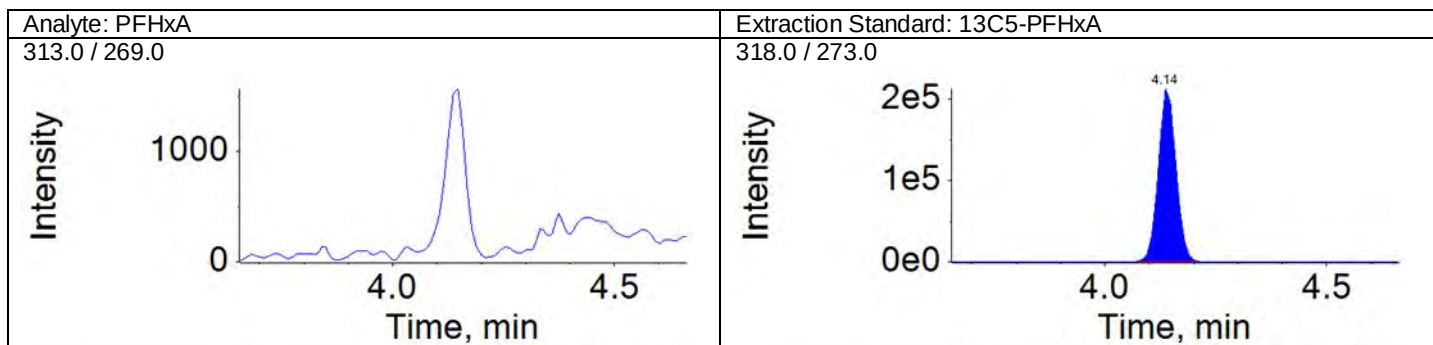
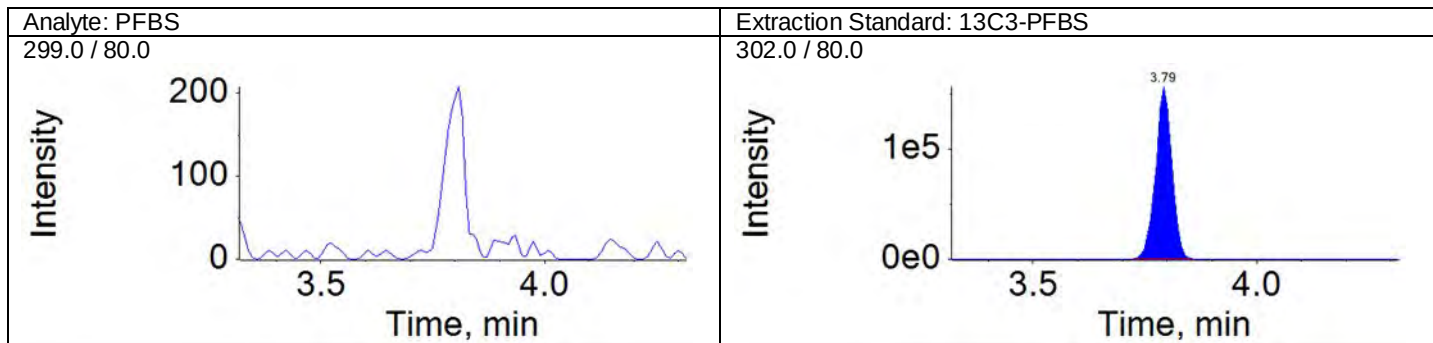
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

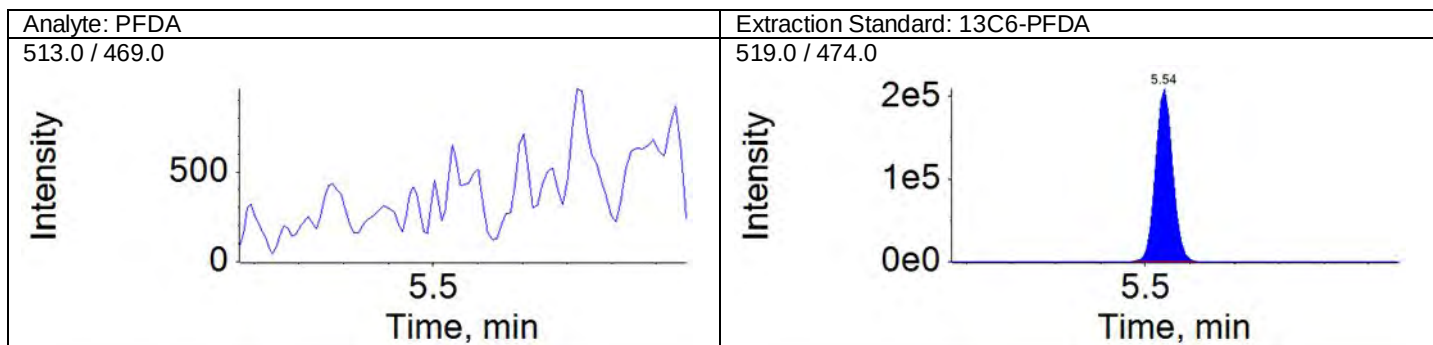
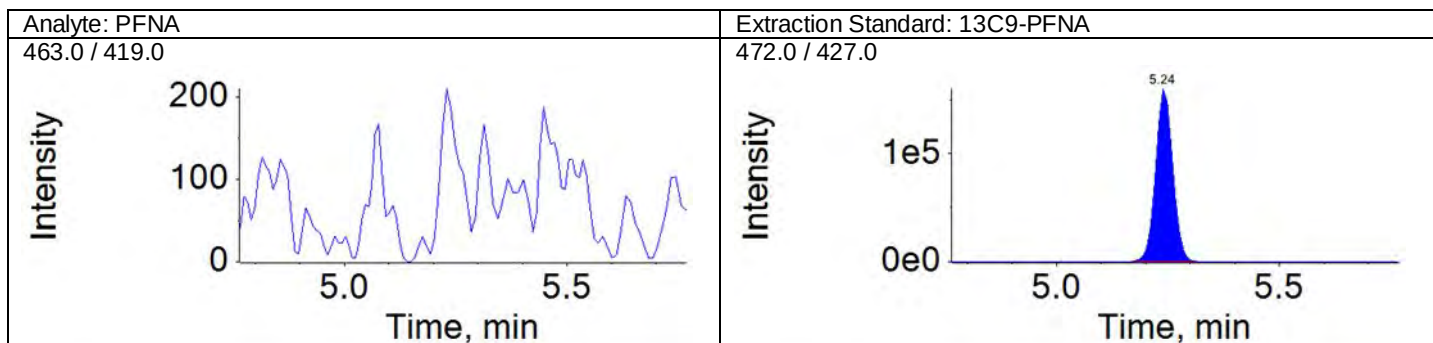
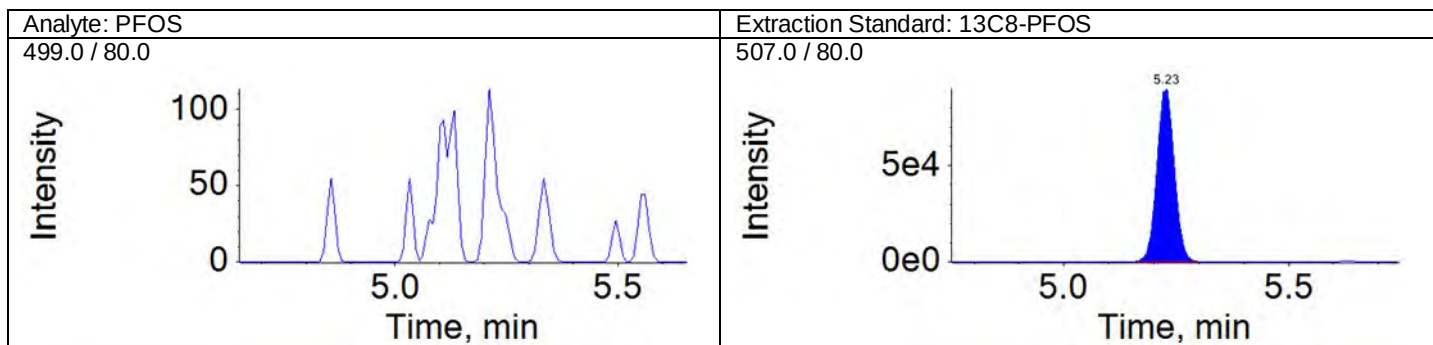
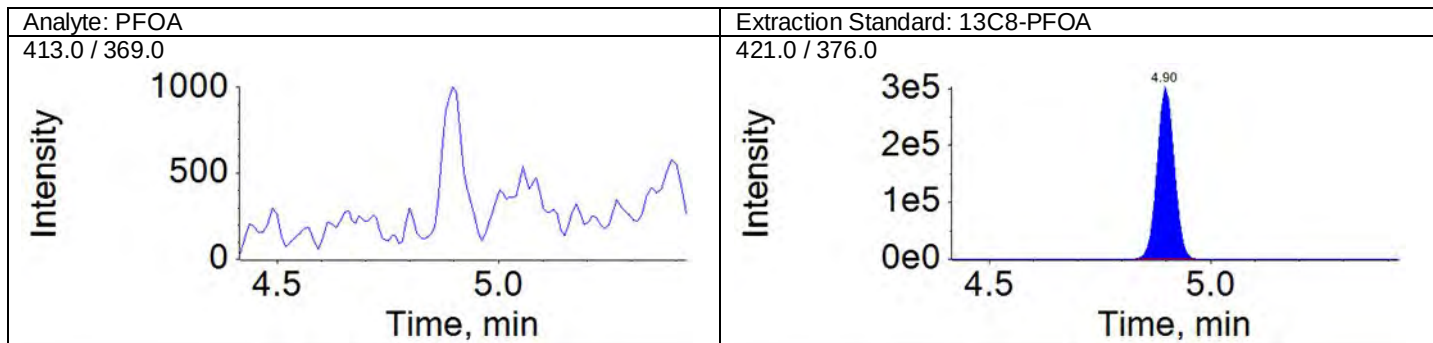
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



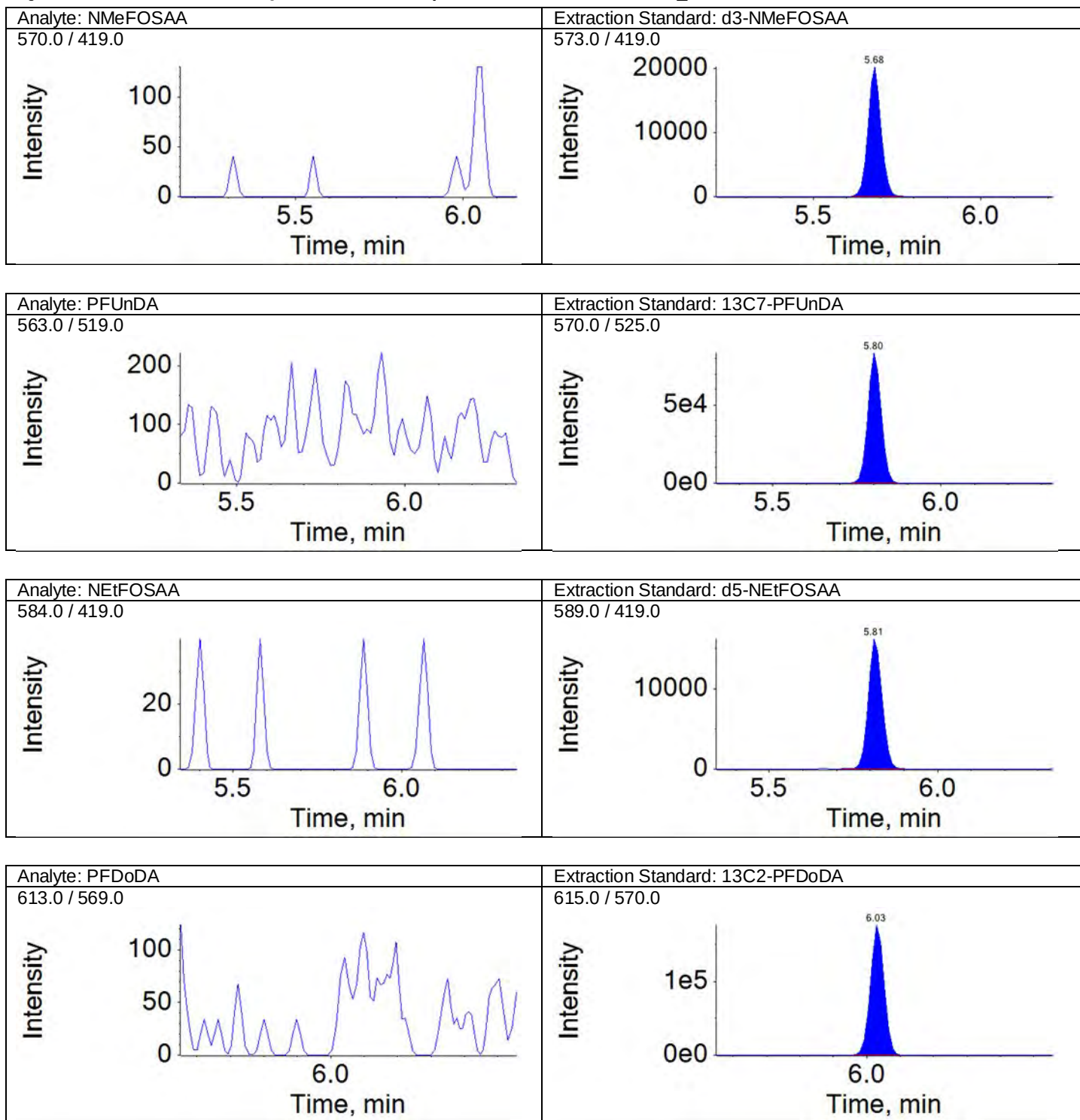
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



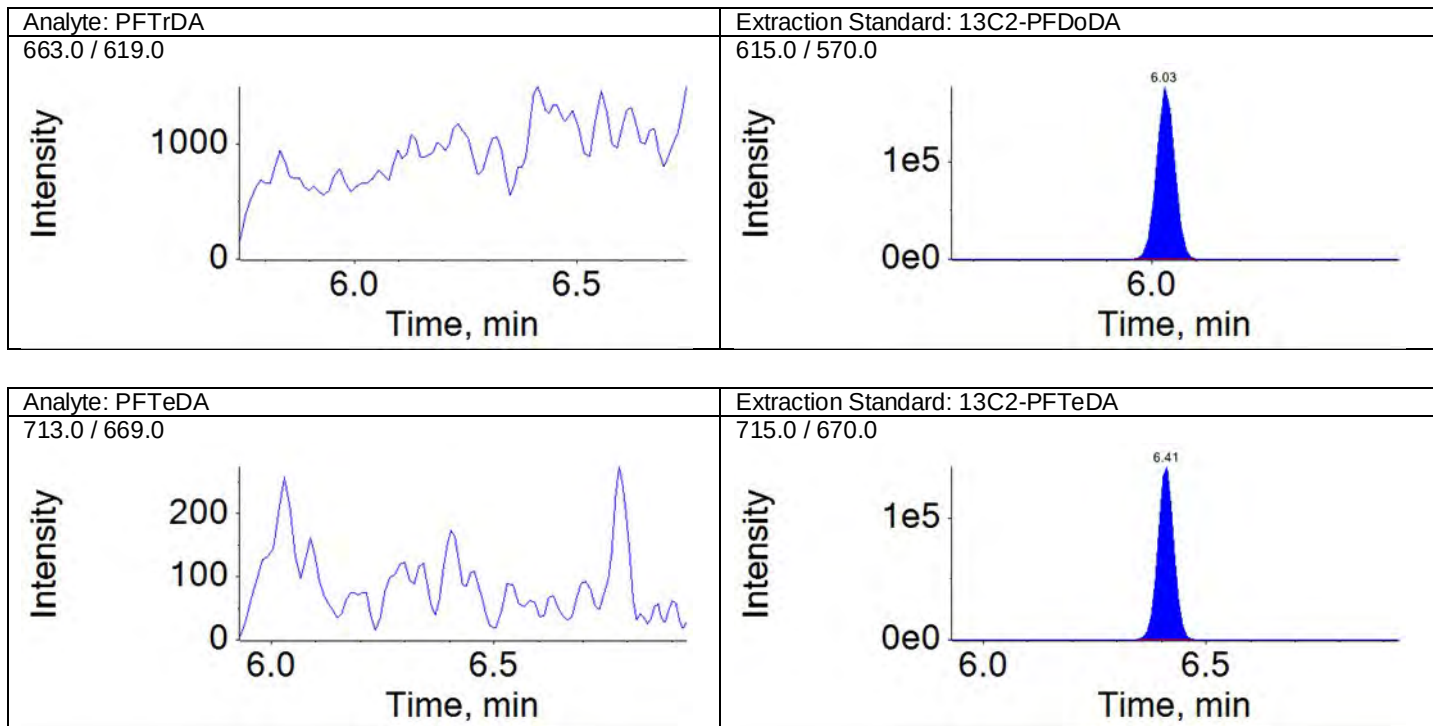
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



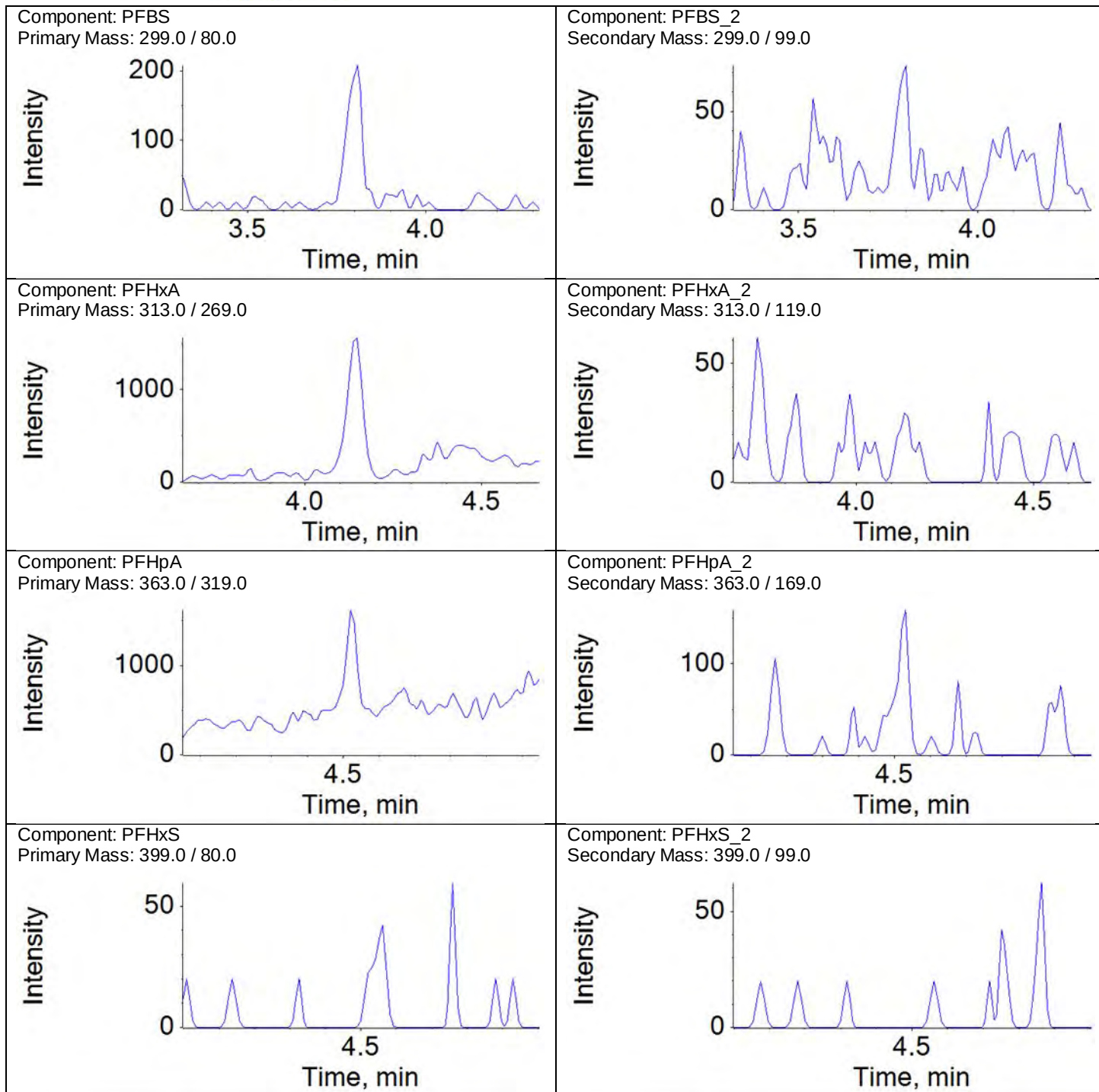
Ion Ratio Report

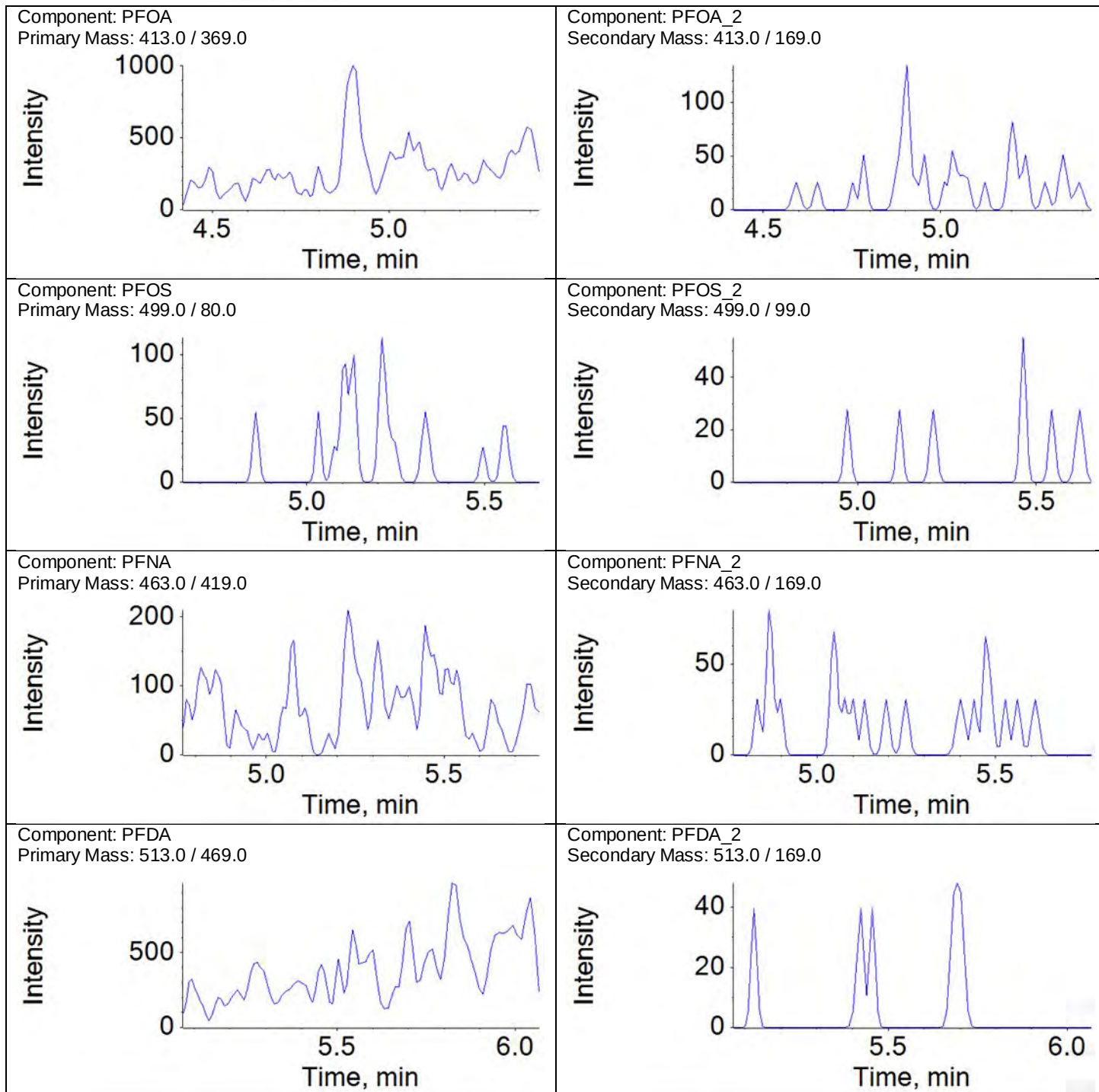
Sample Name: 9881907BKG

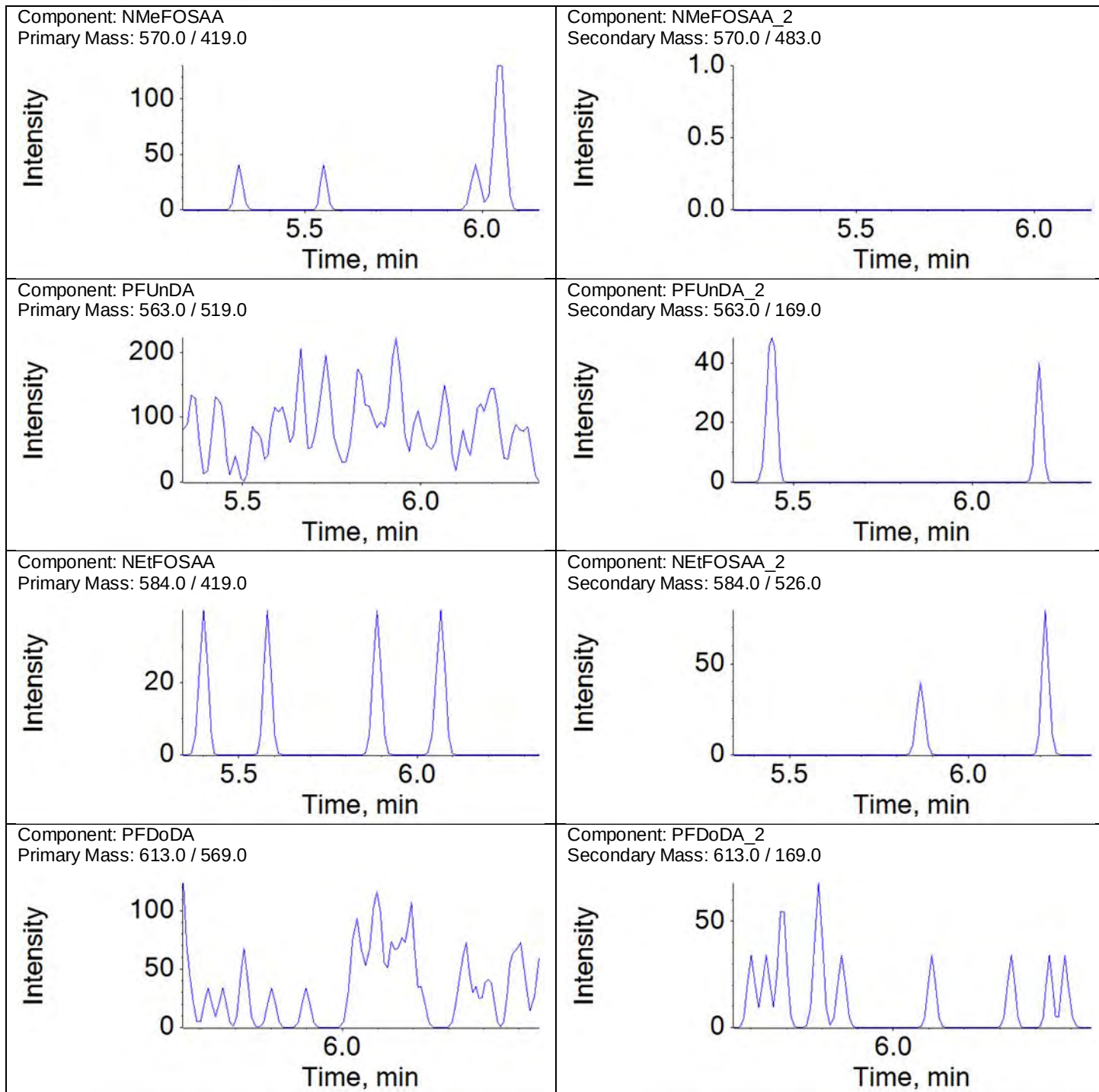
Instrument Name: LM27631

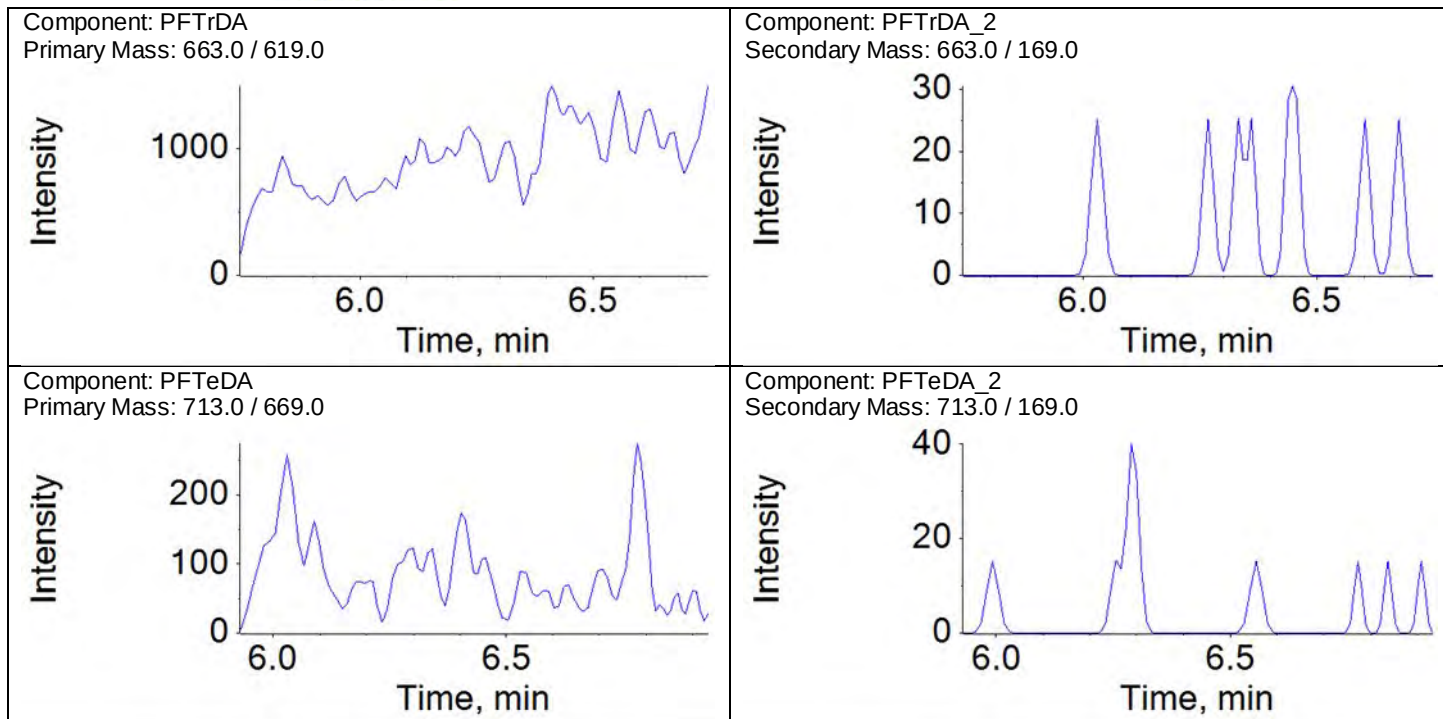
File Name: 18NOV13D-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881907BKGRE			Data File:		18NOV08D-74.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-02-01 Grab Soil			Acquis Date:		2018-11-08T22:47:07
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	18			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18310012_Batch QC+9881916
QMethod File:	18AUG20QM			ICAL Name:		18NOV07DCAL
Batch Number:	18310012			Operator:		MCD7824
Sample Wt.:	1.09000			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	869210.5	728839.7	19	50	
13C2-PFOA	5.0	592242.6	491983.1	20	50	
13C4-PFOS	4.8	322028.5	255568.1	26	50	
13C2-PFDA	5.0	352670.4	315407.5	12	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	382069.6	13C3-PFBA	869210.5	0.440	8.532	5.919	69	50-150	
E13C5-PFHxA	619995.4	13C2-PFOA	592242.6	1.047	9.174	7.066	77	50-150	
E13C3-PFHxS	291909.5	13C2-PFOA	592242.6	0.493	8.679	6.492	75	50-150	
E13C4-PFHpA	477743.7	13C2-PFOA	592242.6	0.807	9.174	6.733	73	50-150	
E13C8-PFOA	814125.6	13C2-PFOA	592242.6	1.375	9.174	7.034	77	50-150	
E13C8-PFOS	257155.2	13C4-PFOS	322028.5	0.799	8.771	6.479	74	50-150	
E13C9-PFNA	442073.9	13C4-PFOS	322028.5	1.373	9.174	6.880	75	50-150	
E13C6-PFDA	537431.7	13C2-PFDA	352670.4	1.524	9.174	7.032	77	50-150	
Ed3-NMeFOSAA	54941.7	13C2-PFDA	352670.4	0.156	9.174	5.316	58	50-150	
E13C7-PFUnDA	237629.7	13C2-PFDA	352670.4	0.674	9.174	7.132	78	50-150	
Ed5-NEtFOSAA	46818.1	13C2-PFDA	352670.4	0.133	9.174	5.637	61	50-150	
E13C2-PFDODA	470281.3	13C2-PFDA	352670.4	1.333	9.174	6.596	72	50-150	
E13C2-PFTeDA	347292.3	13C2-PFDA	352670.4	0.985	9.174	6.505	71	50-150	

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

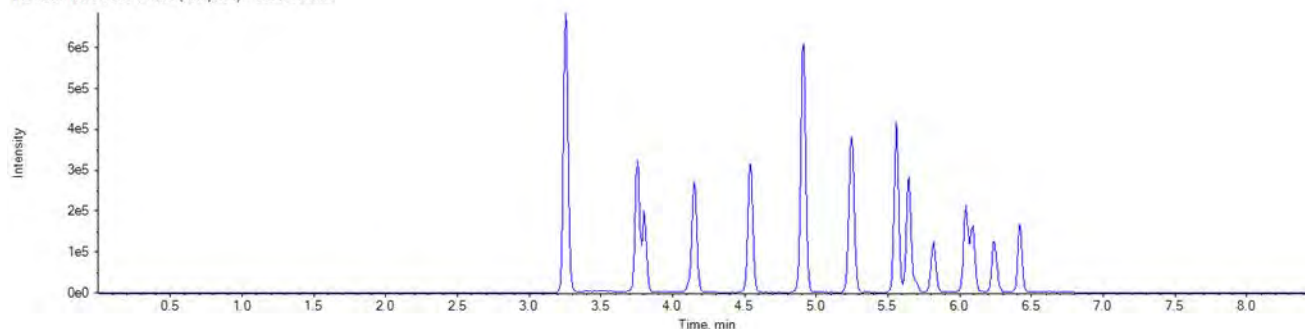
Sample Name: 9881907BKGRE Instrument Name: LM27631 File Name: 18NOV08D-74.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.09000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	382069.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	619995.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	291909.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	477743.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	814125.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257155.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	442073.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	537431.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	54941.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	237629.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	46818.1	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	470281.3	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	470281.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	347292.3	N/A	

Total Ion Chromatogram

TIC from 18NOV08D-74.wiff (sample 1) - 9881907BKG



APPROVED

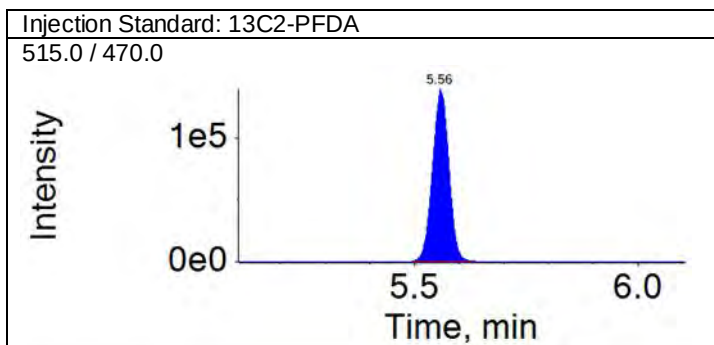
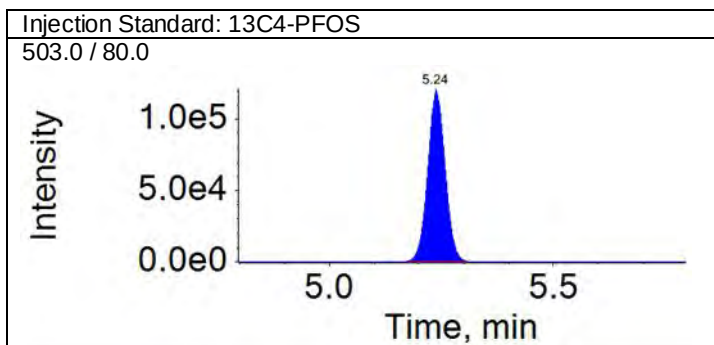
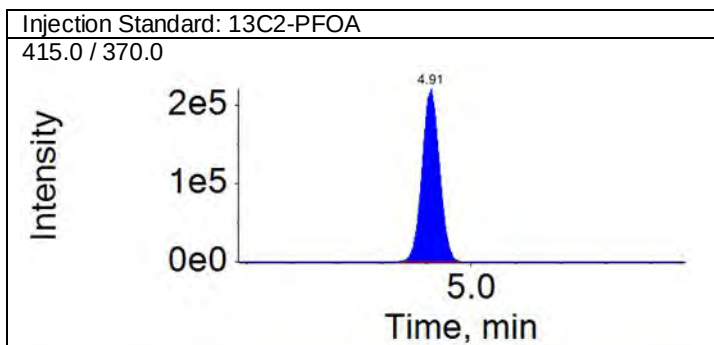
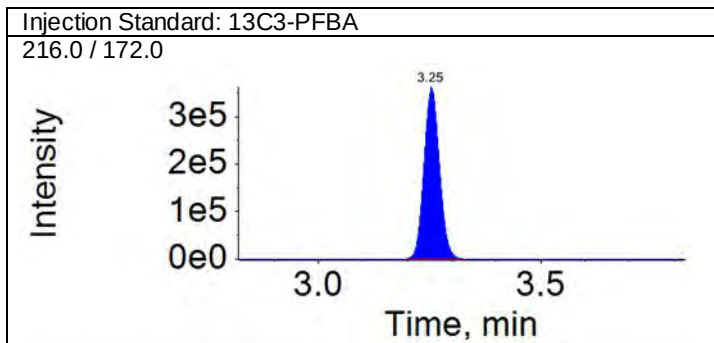
By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

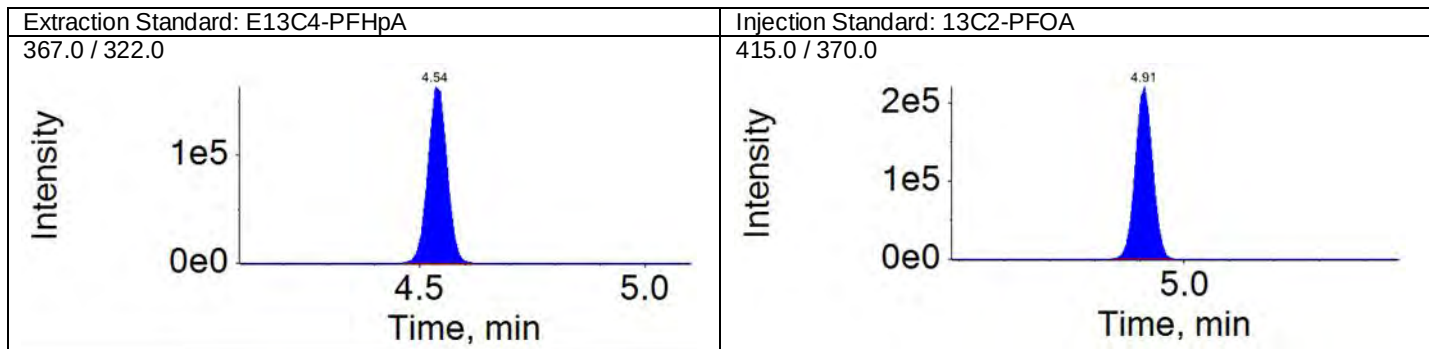
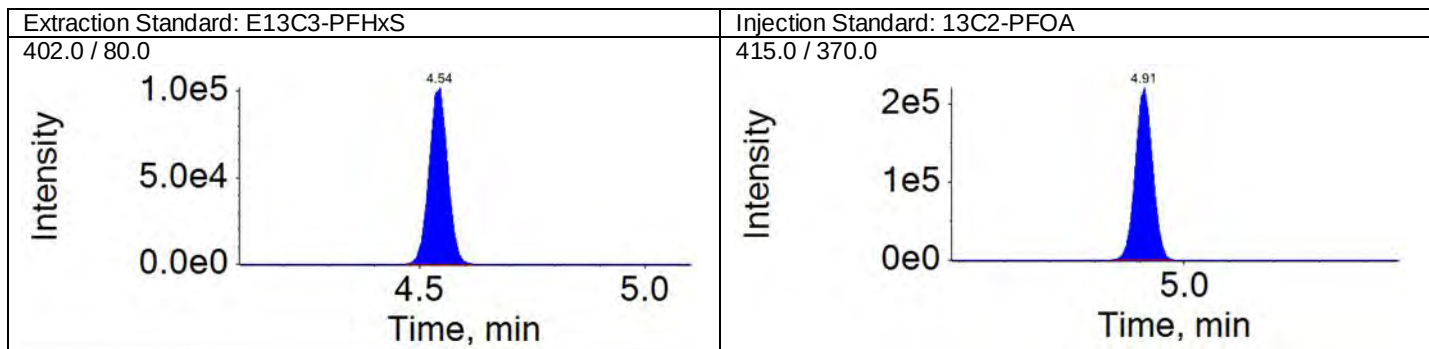
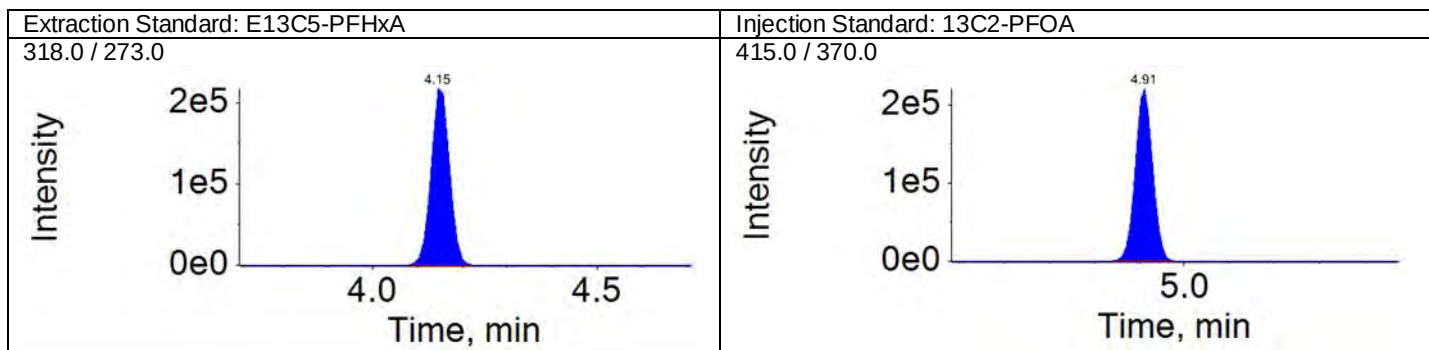
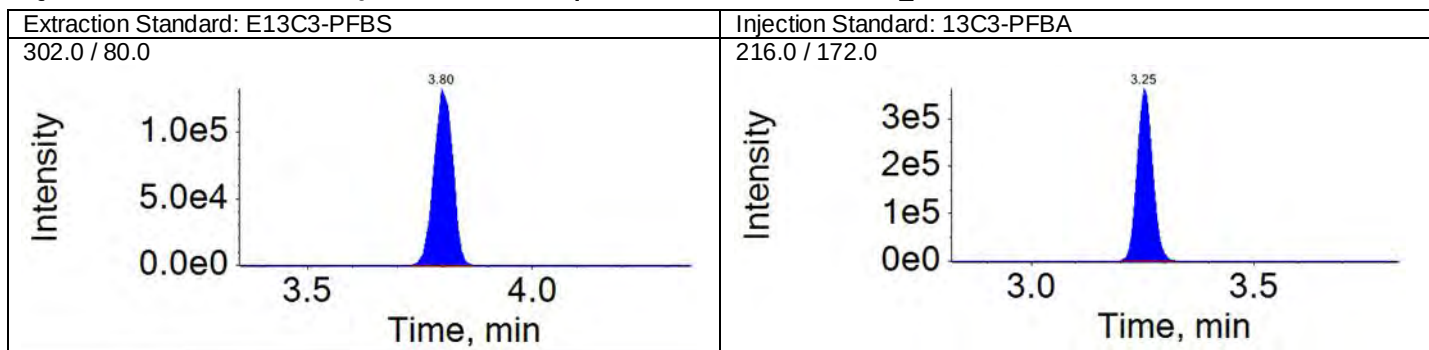
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



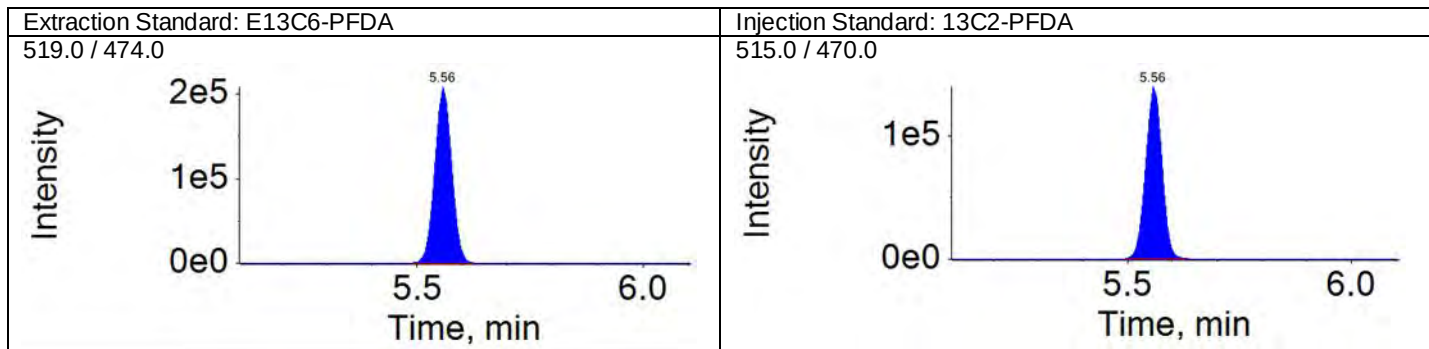
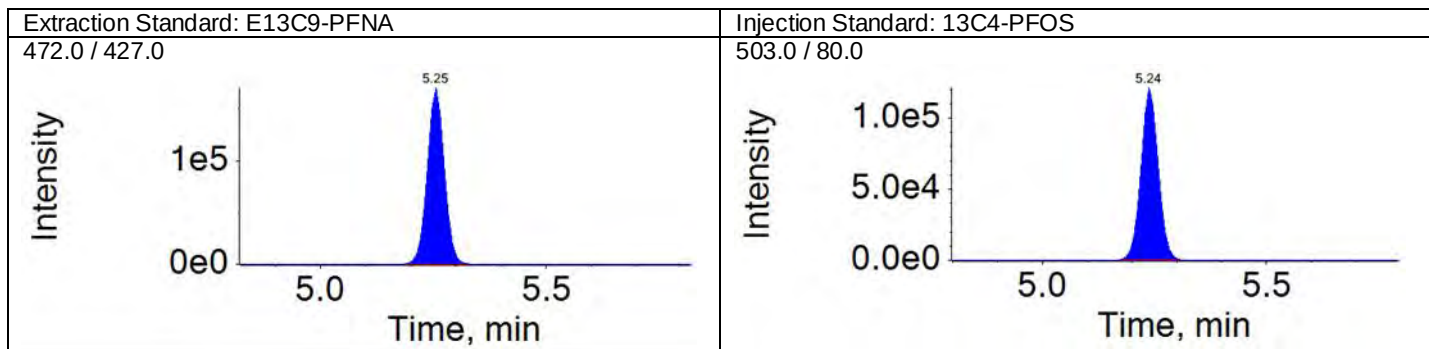
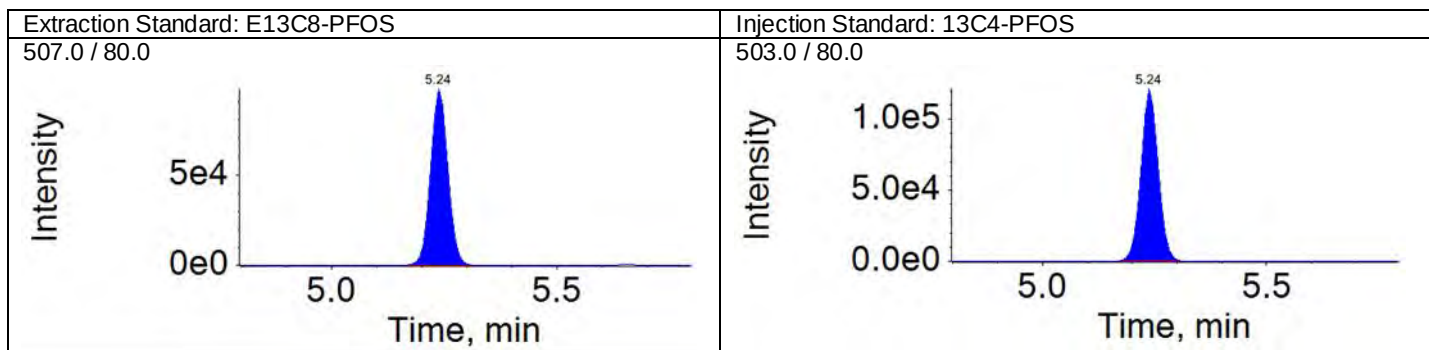
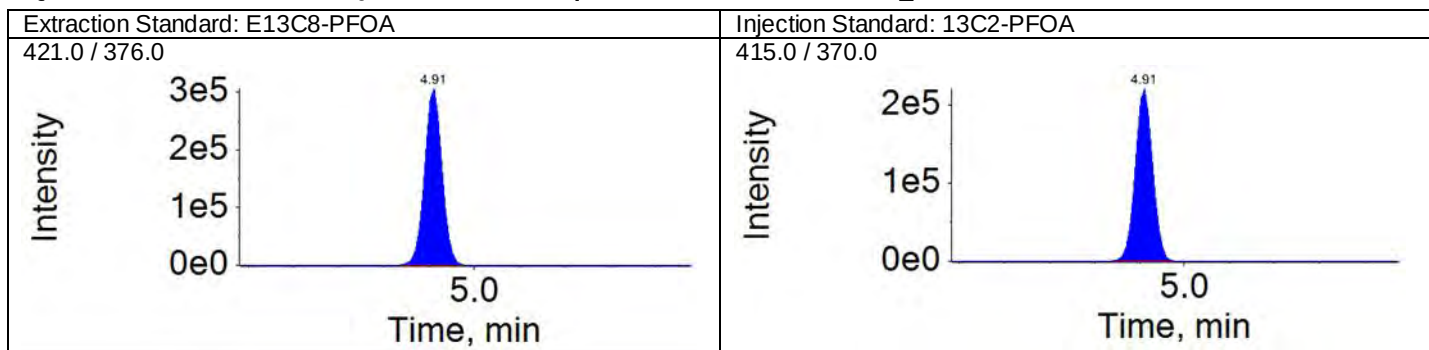
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



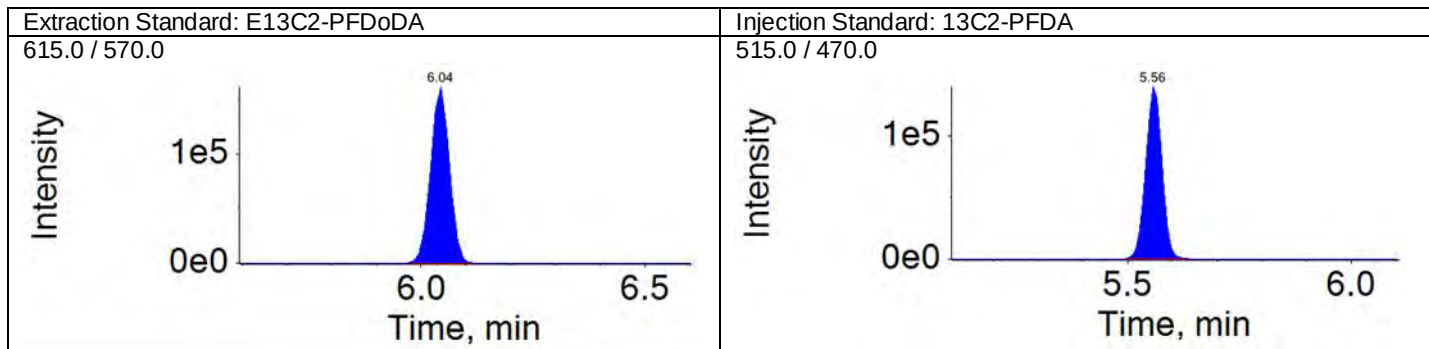
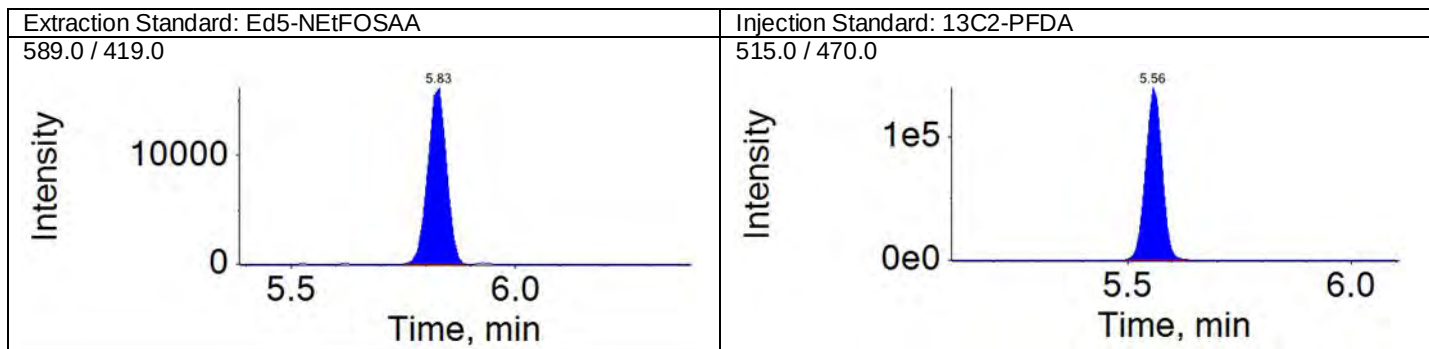
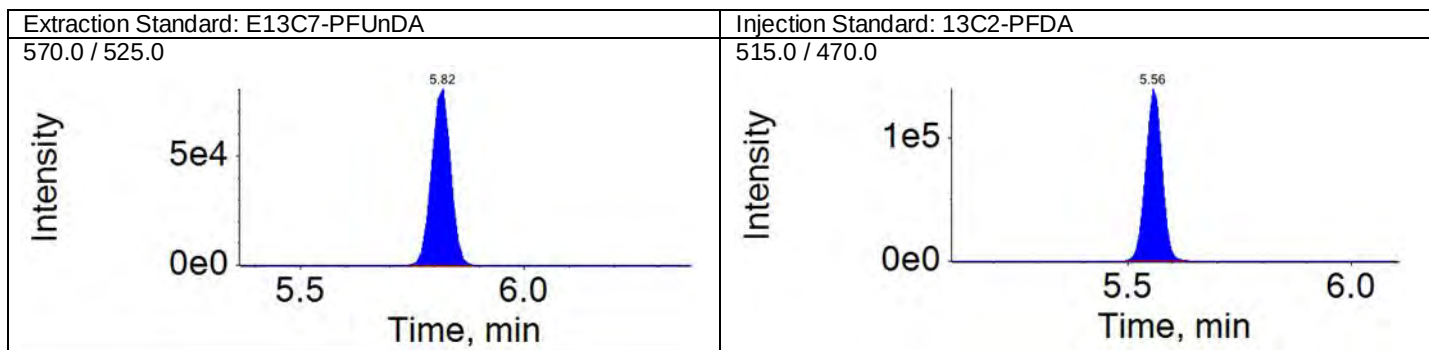
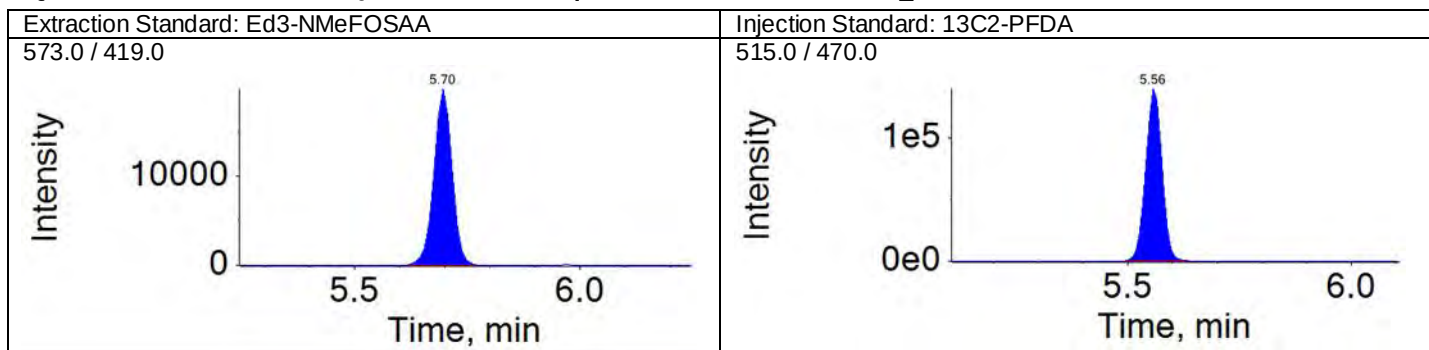
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

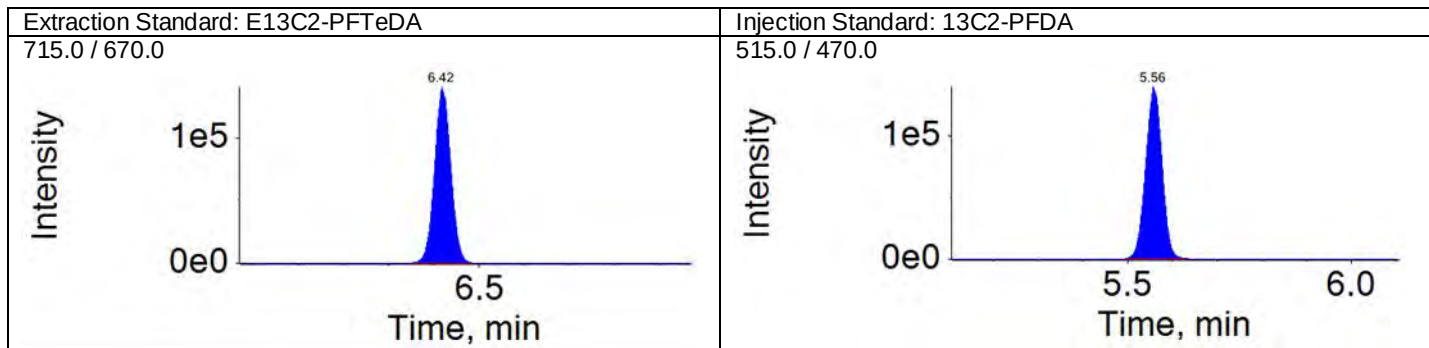
By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

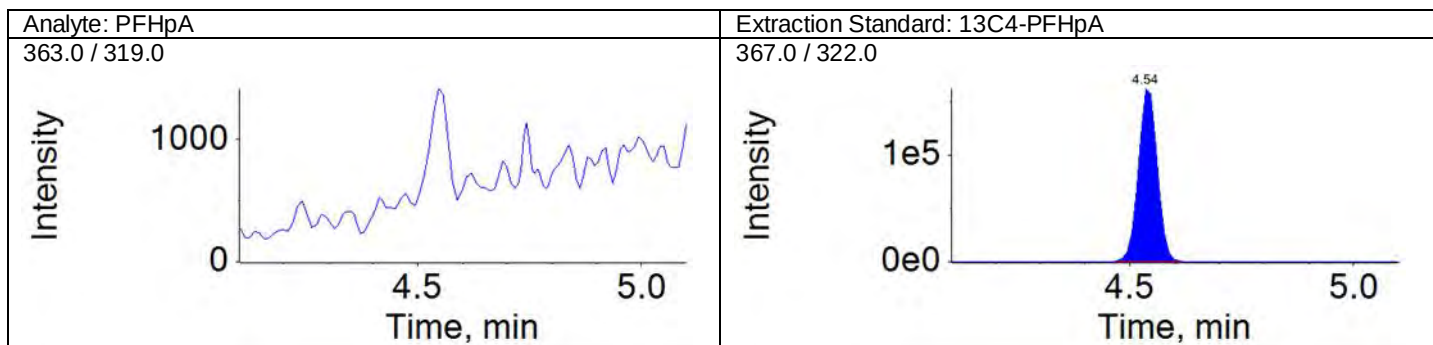
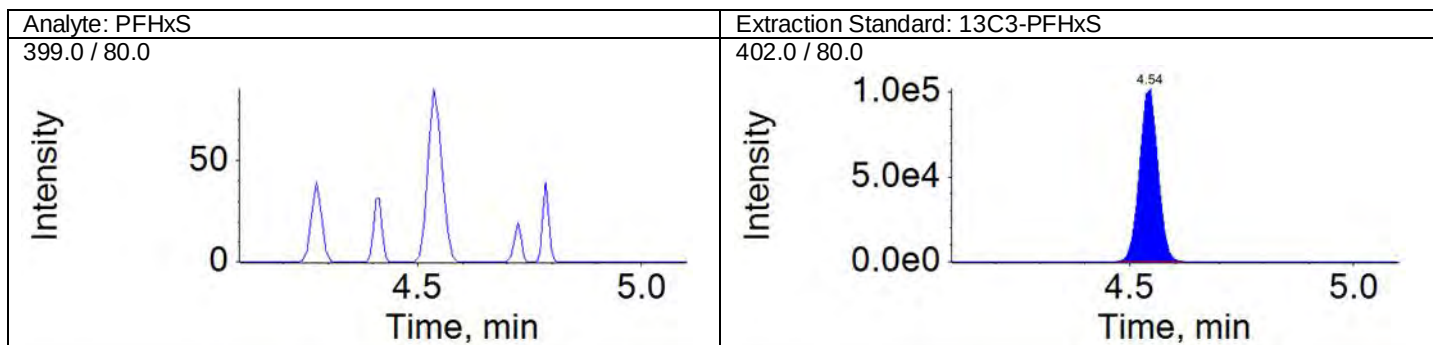
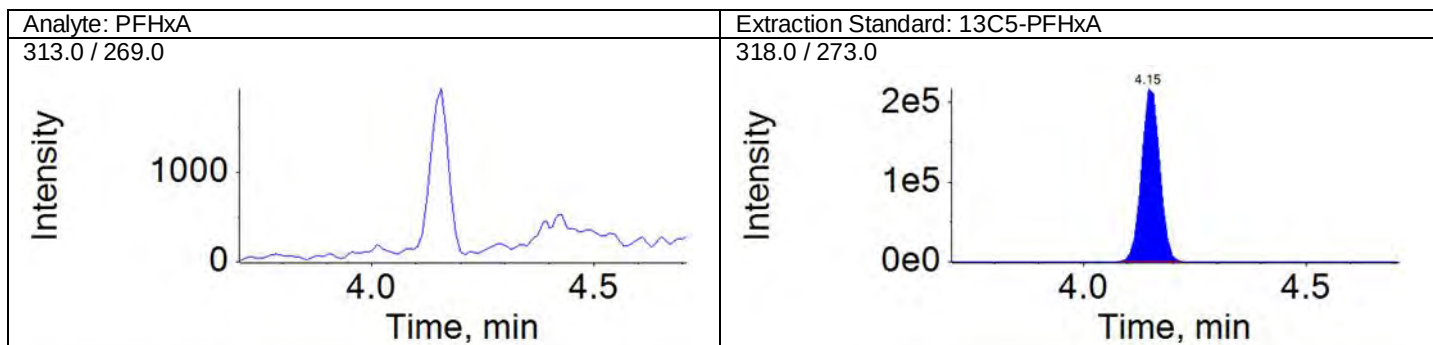
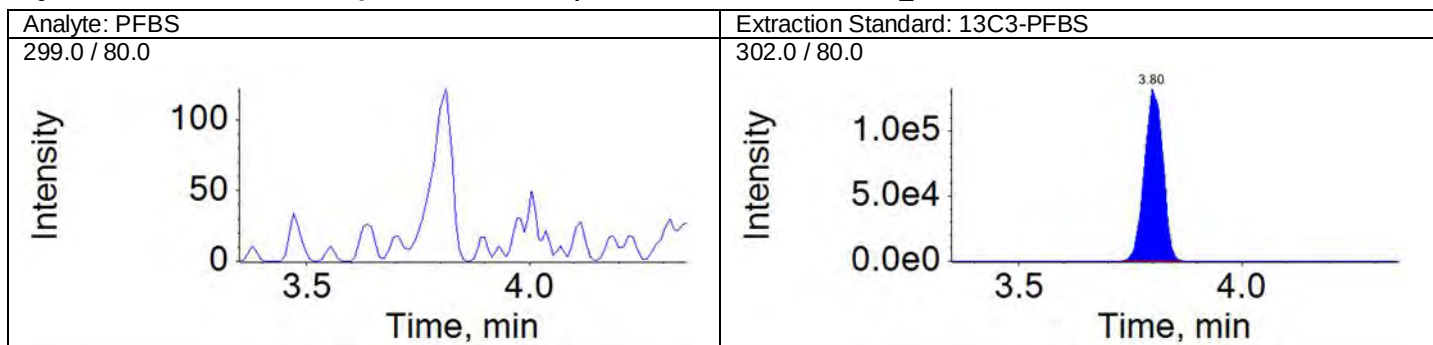
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



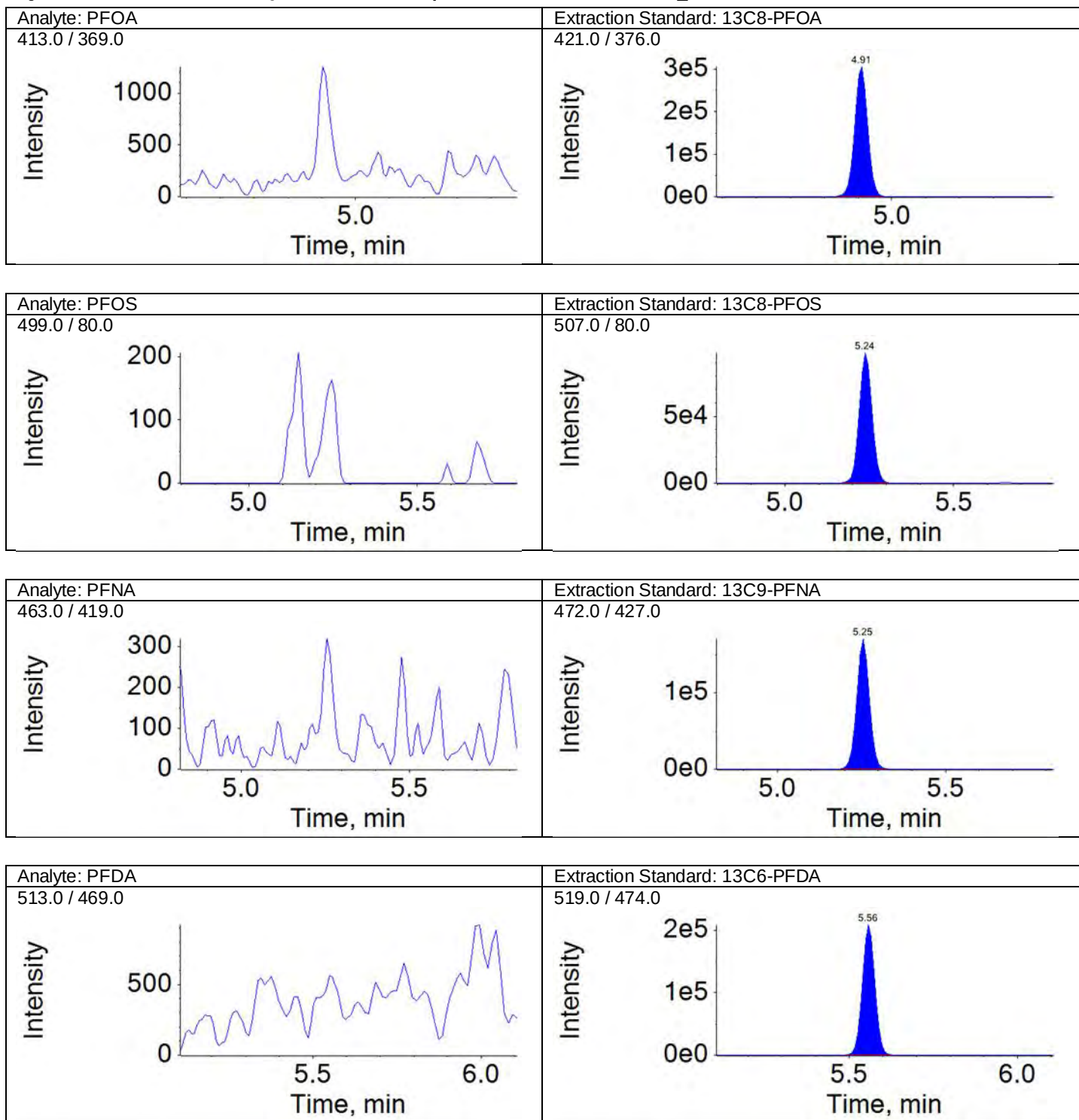
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



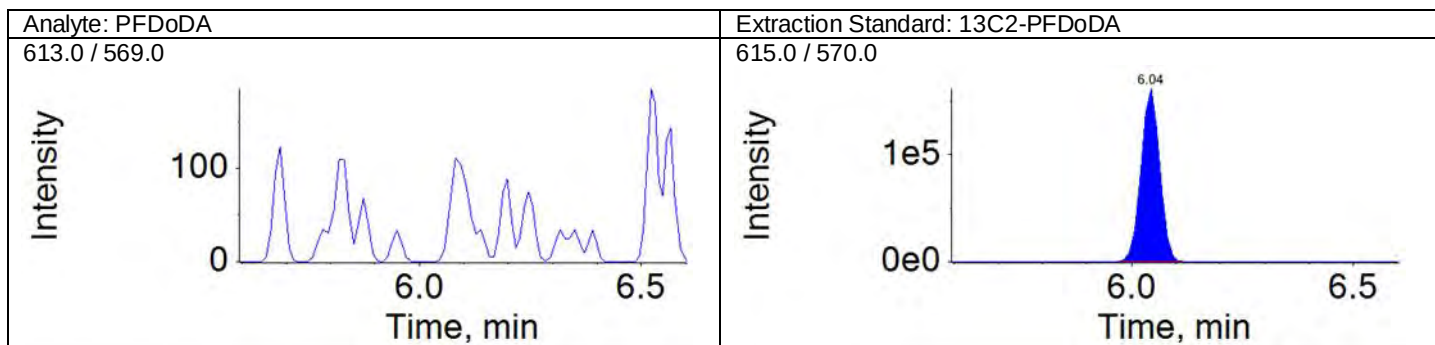
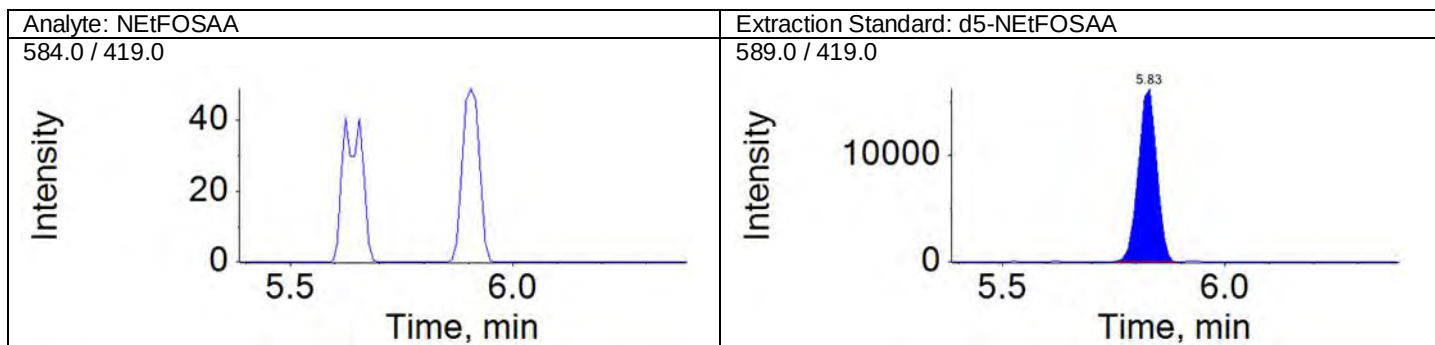
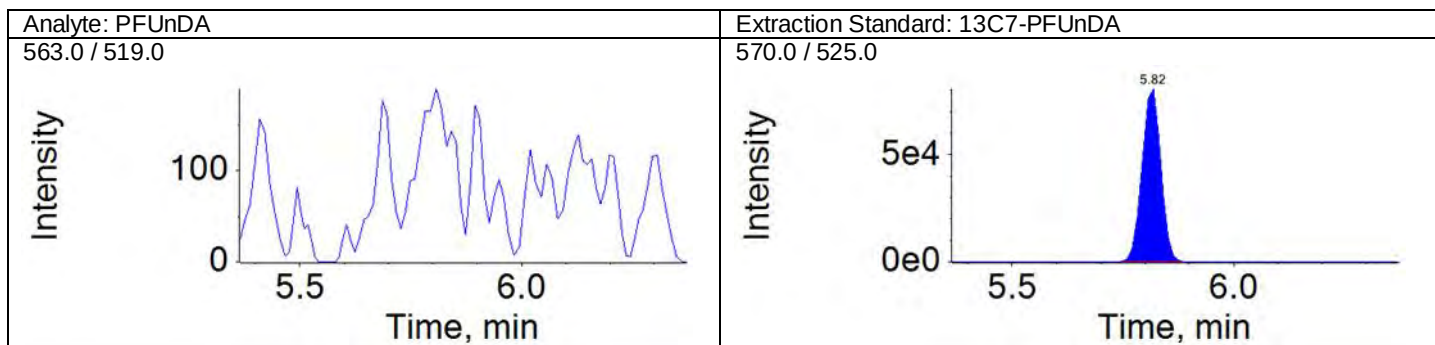
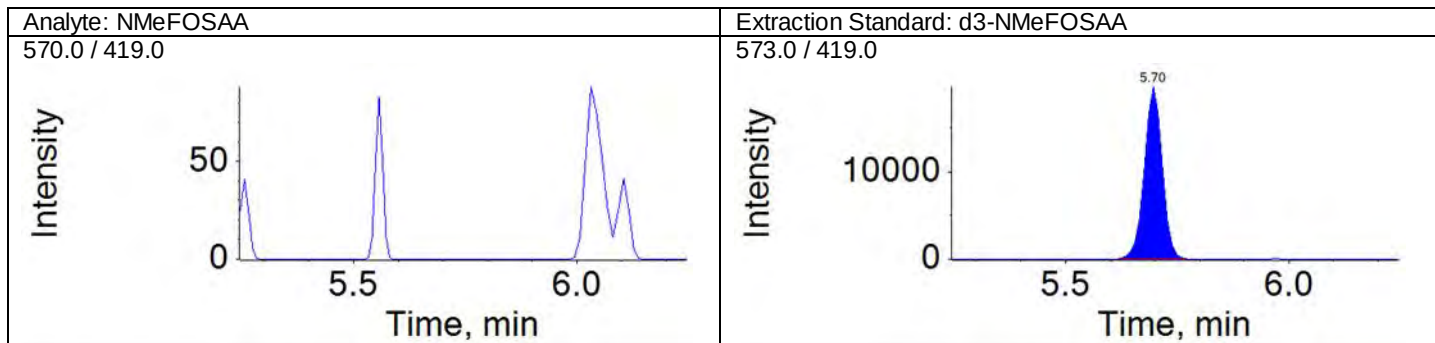
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



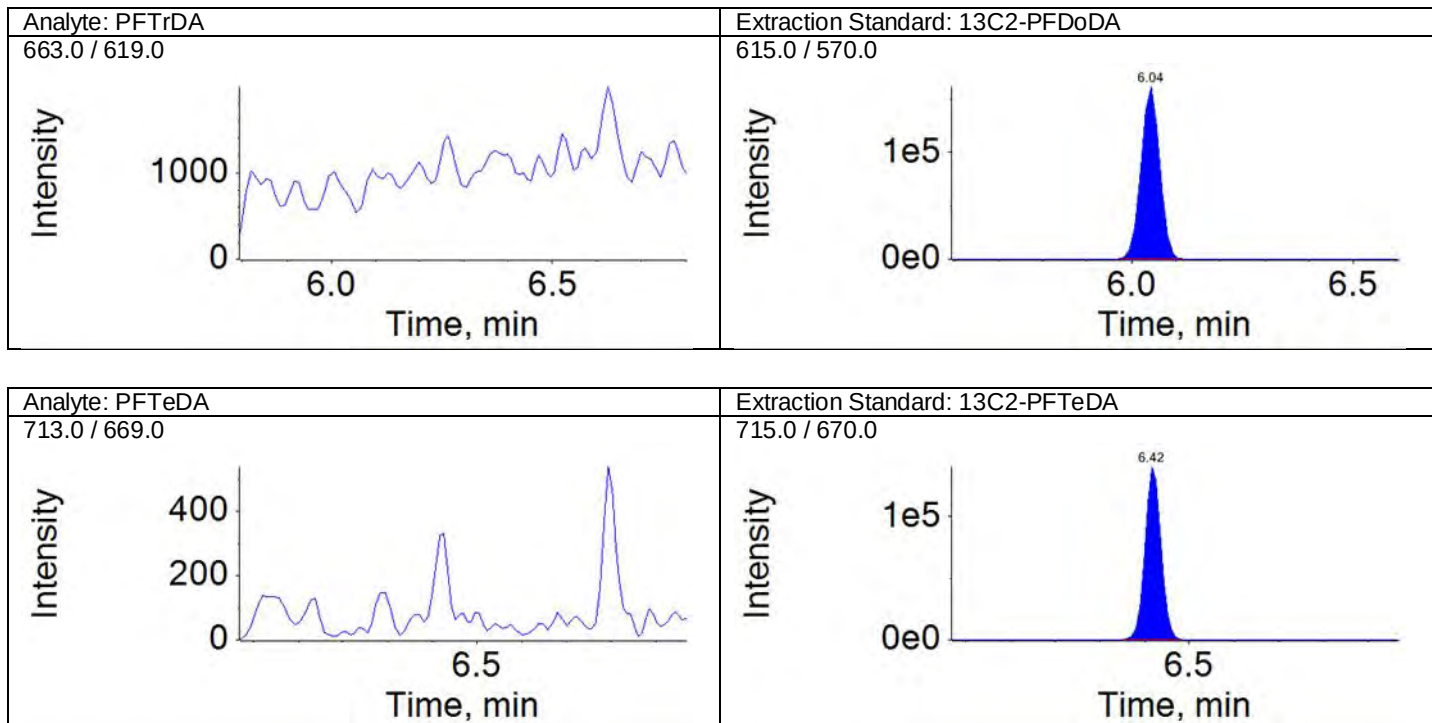
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



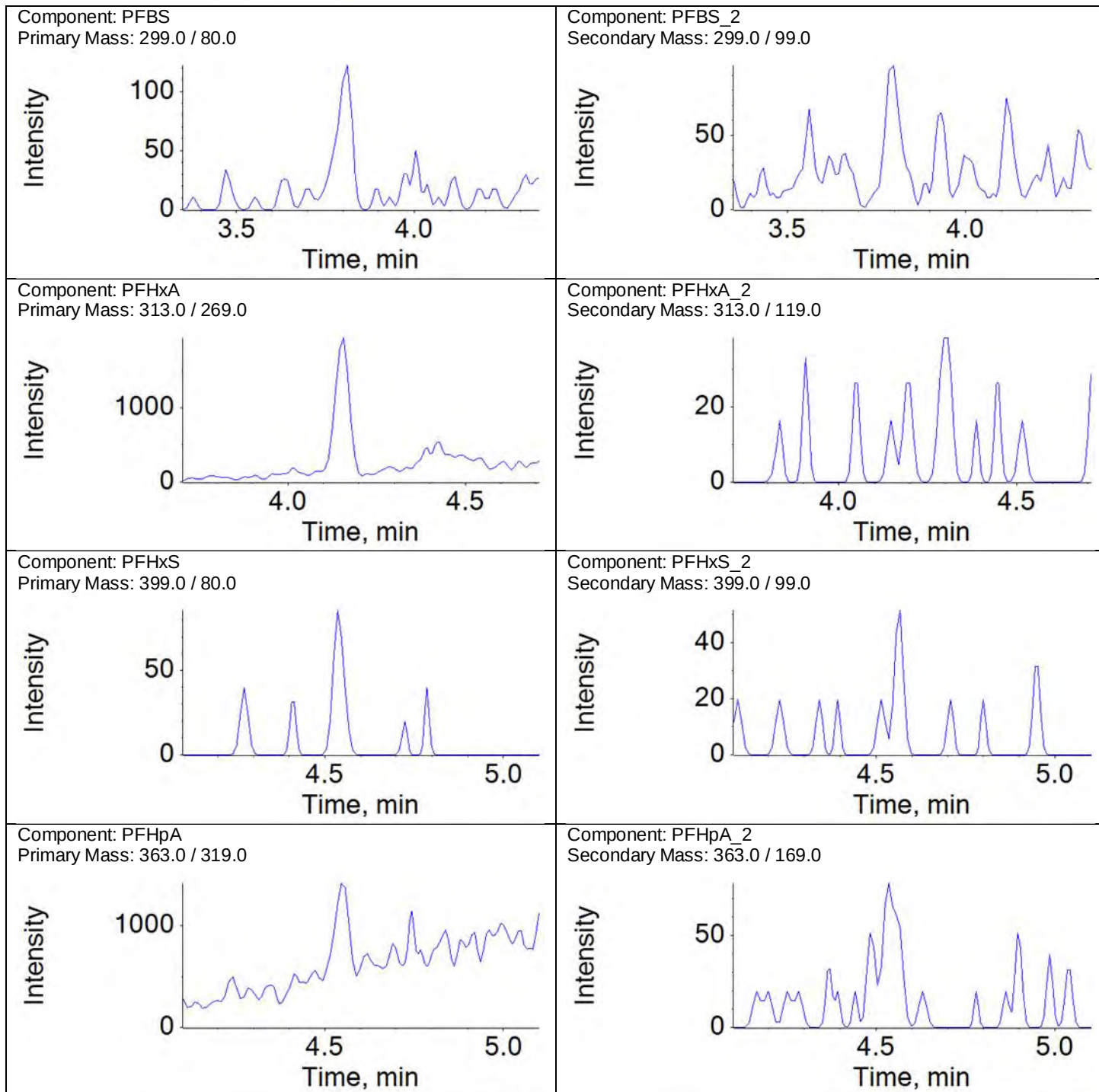
Ion Ratio Report

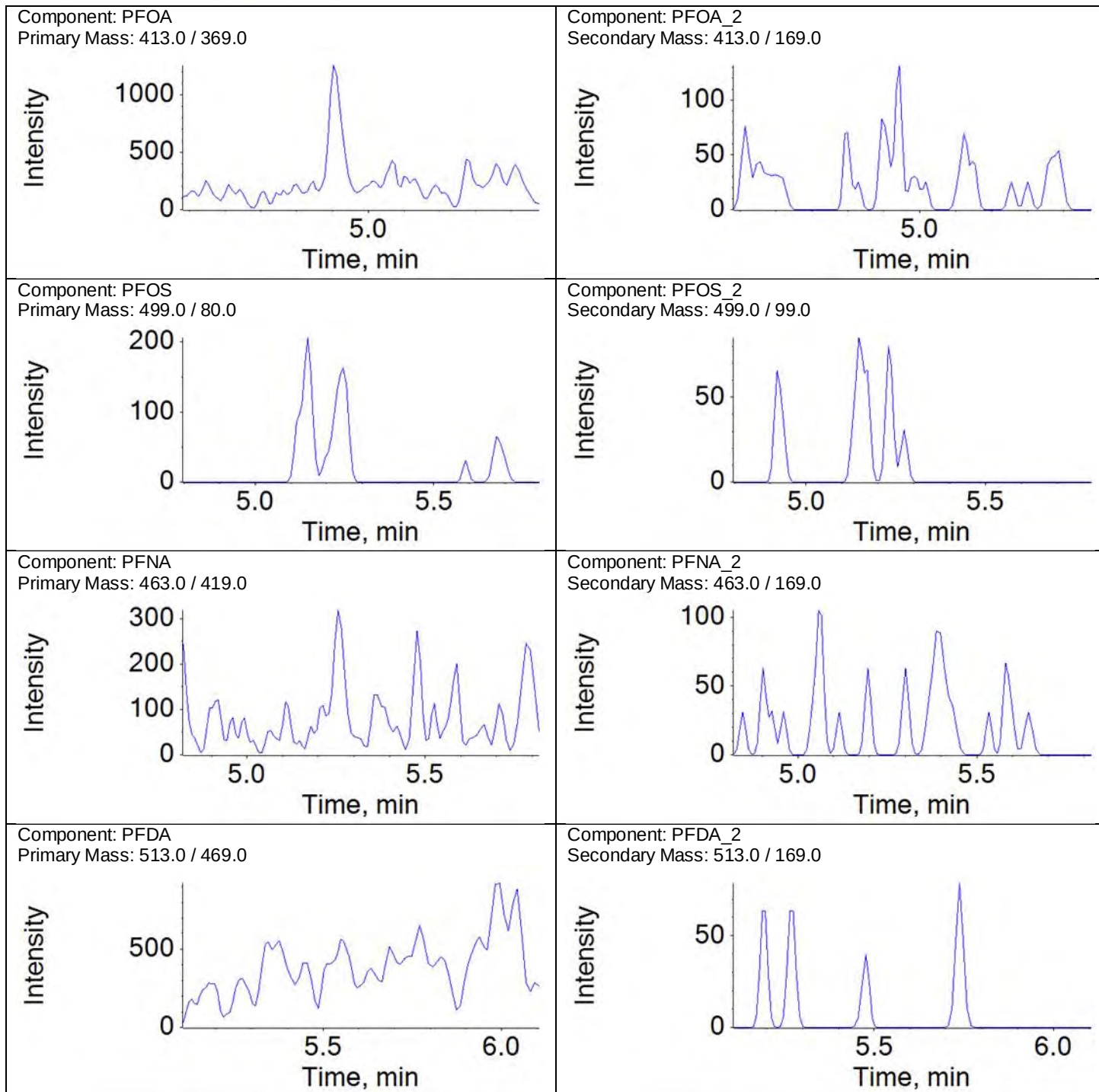
Sample Name: 9881907BKGRE

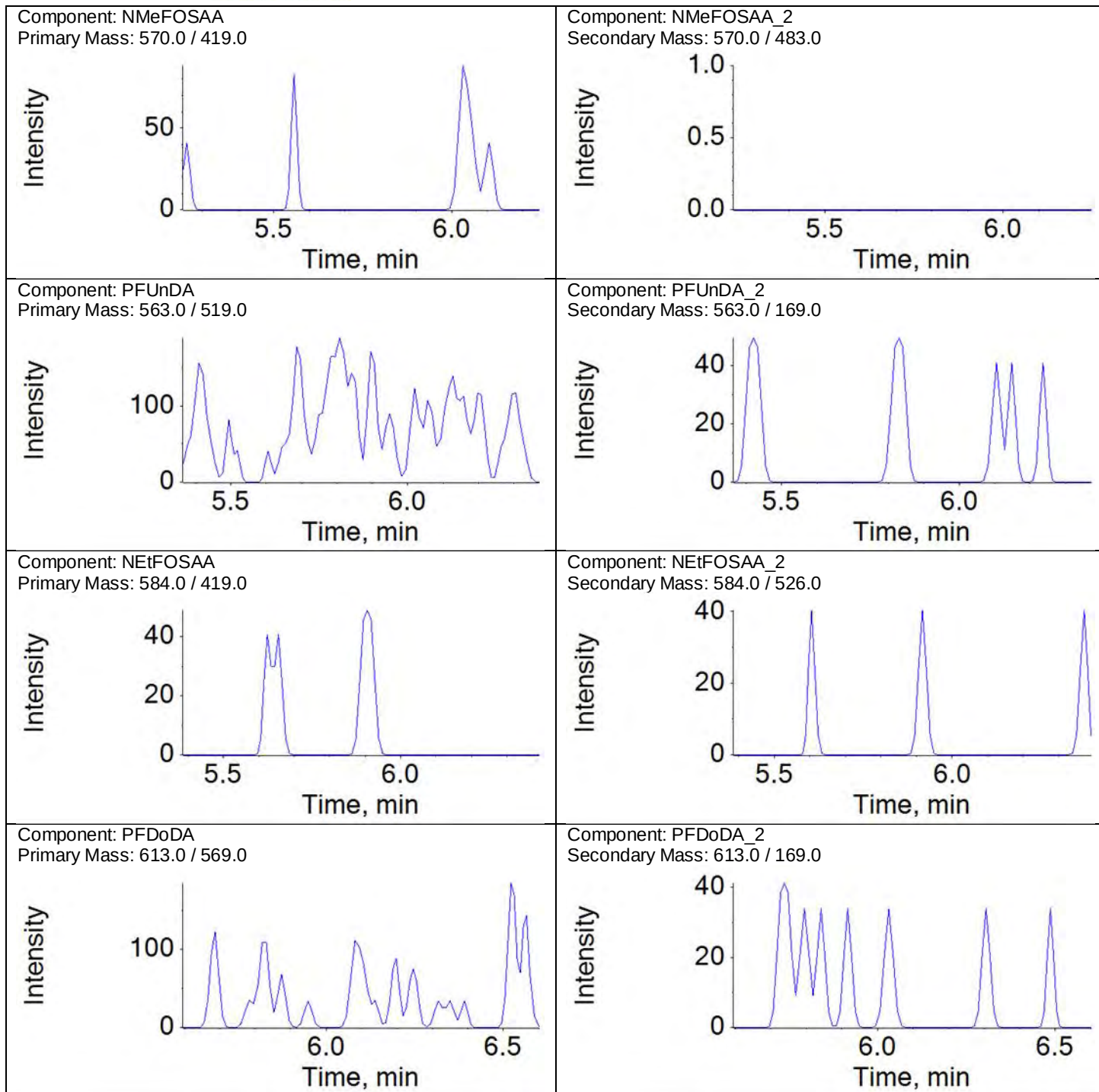
Instrument Name: LM27631

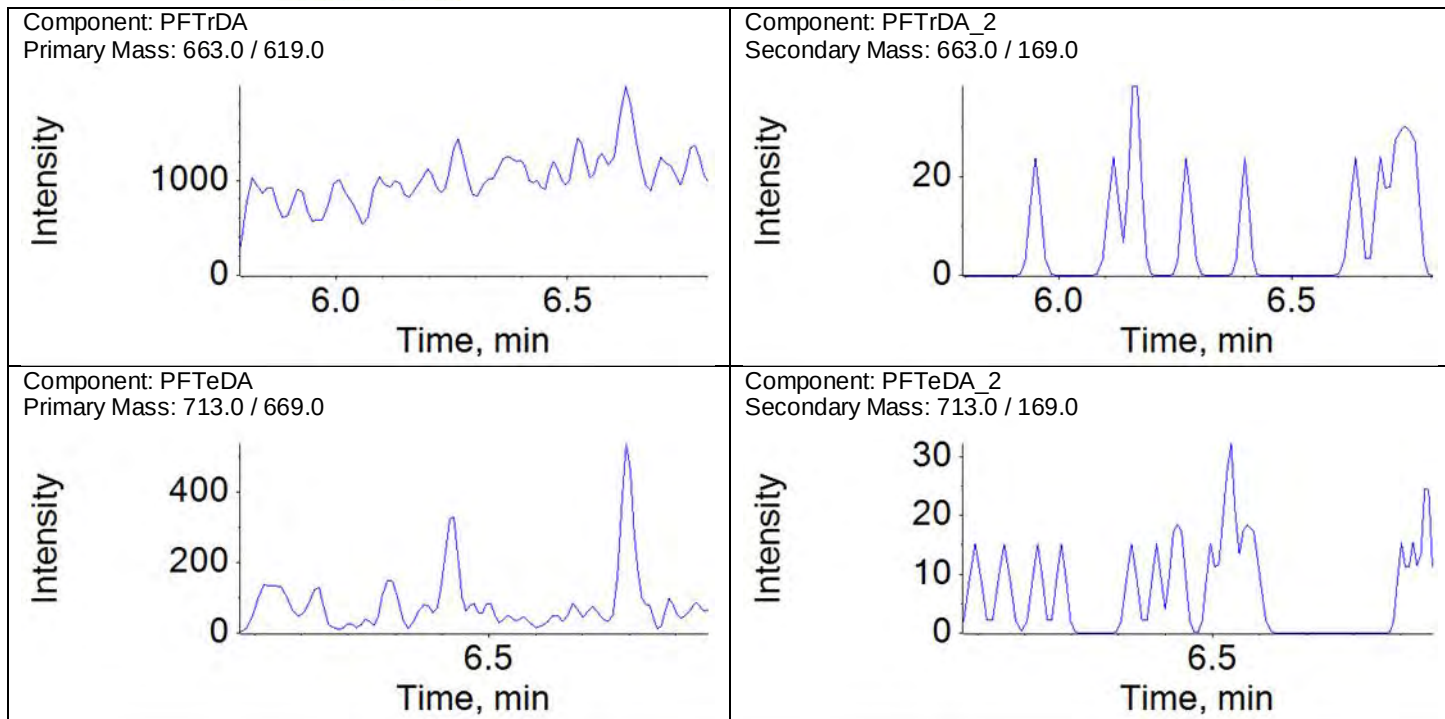
File Name: 18NOV08D-74.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881910		Data File:	18NOV13D-15.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-03 Grab Soil		Acquis Date:	2018-11-13T11:14:20
Sample Type:	Unknown		Instrument:	LM27631
Vial Position:	21		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18316012
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	18316012		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: 18NOV13D-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	708873.4	661126.9	7	50	
13C2-PFOA	5.0	494640.7	466902.6	6	50	
13C4-PFOS	4.8	265038.7	247446.9	7	50	
13C2-PFDA	5.0	295926.7	295381.6	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
E13C3-PFBS	349720.9	13C3-PFBA	708873.4	0.493	8.942	6.697	75	50-150	
E13C5-PFHxA	542439.0	13C2-PFOA	494640.7	1.097	9.615	7.618	79	50-150	
E13C3-PFHxS	258796.7	13C2-PFOA	494640.7	0.523	9.096	6.904	76	50-150	
E13C4-PFHpA	441909.5	13C2-PFOA	494640.7	0.893	9.615	7.740	80	50-150	
E13C8-PFOA	734455.4	13C2-PFOA	494640.7	1.485	9.615	7.867	82	50-150	
E13C8-PFOS	222371.1	13C4-PFOS	265038.7	0.839	9.192	7.149	78	50-150	
E13C9-PFNA	395962.2	13C4-PFOS	265038.7	1.494	9.615	8.010	83	50-150	
E13C6-PFDA	520573.5	13C2-PFDA	295926.7	1.759	9.615	7.894	82	50-150	
Ed3-NMeFOSAA	52577.5	13C2-PFDA	295926.7	0.178	9.615	6.167	64	50-150	
E13C7-PFUnDA	273158.2	13C2-PFDA	295926.7	0.923	9.615	10.306	107	50-150	
Ed5-NEtFOSAA	43849.0	13C2-PFDA	295926.7	0.148	9.615	6.029	63	50-150	
E13C2-PFDODA	440019.4	13C2-PFDA	295926.7	1.487	9.615	7.424	77	50-150	
E13C2-PFTeDA	317375.6	13C2-PFDA	295926.7	1.072	9.615	7.241	75	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881910

Instrument Name: LM27631

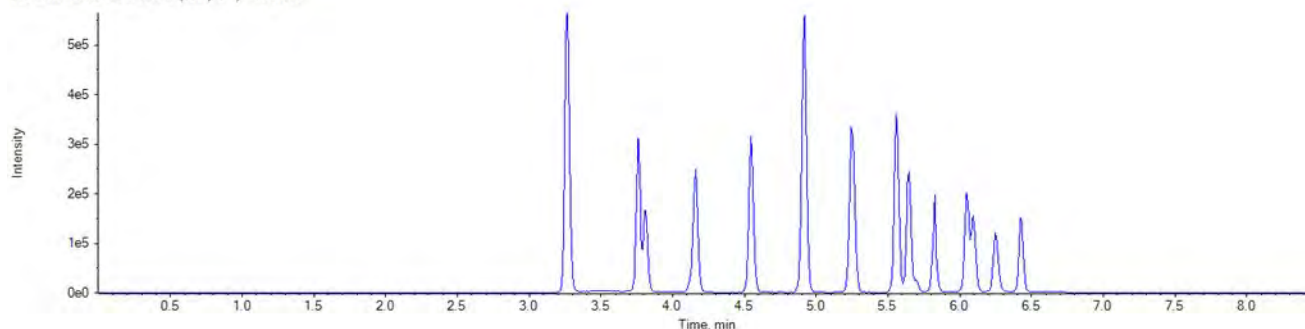
File Name: 18NOV13D-15.wiff

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	349720.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	542439.0	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	441909.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	258796.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	734455.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	222371.1	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	395962.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	520573.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	52577.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	273158.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	43849.0	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	440019.4	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	440019.4	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	317375.6	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-15.wiff (sample 1) - 9881910



APPROVED

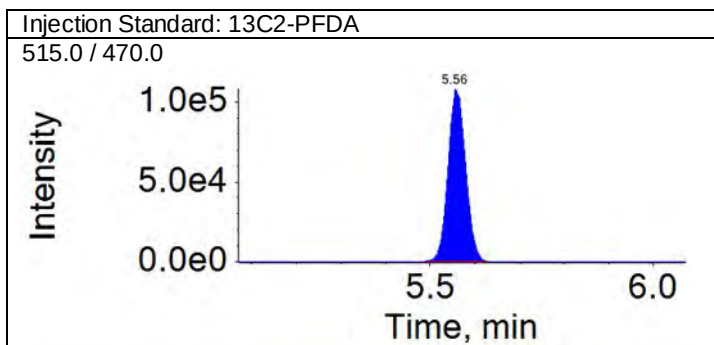
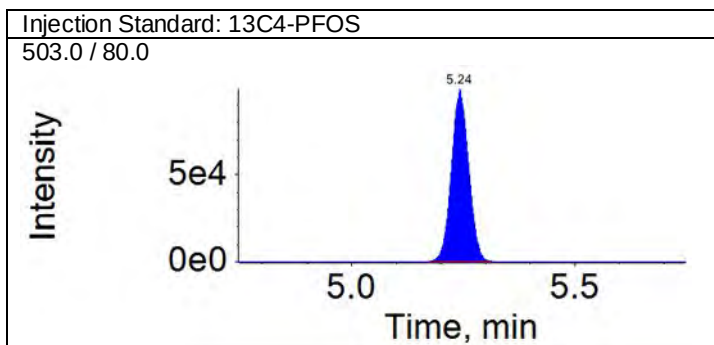
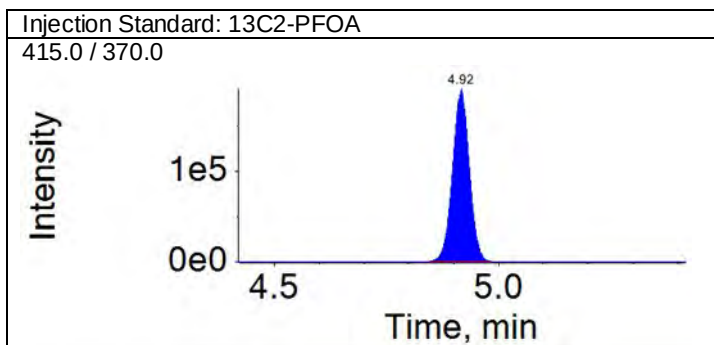
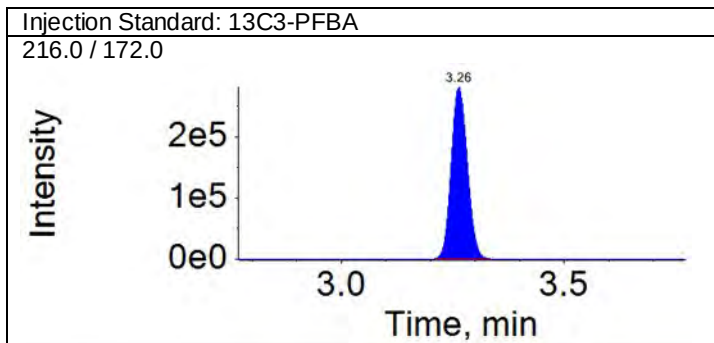
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

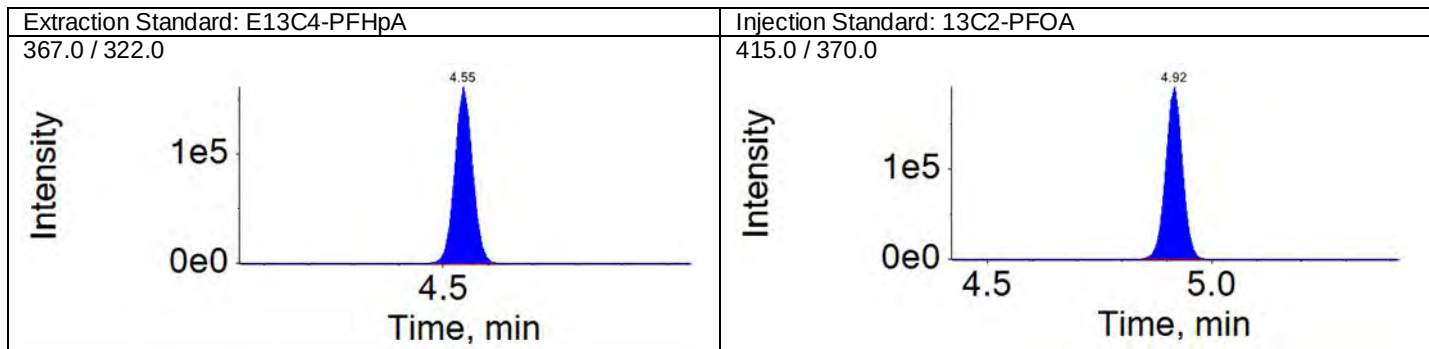
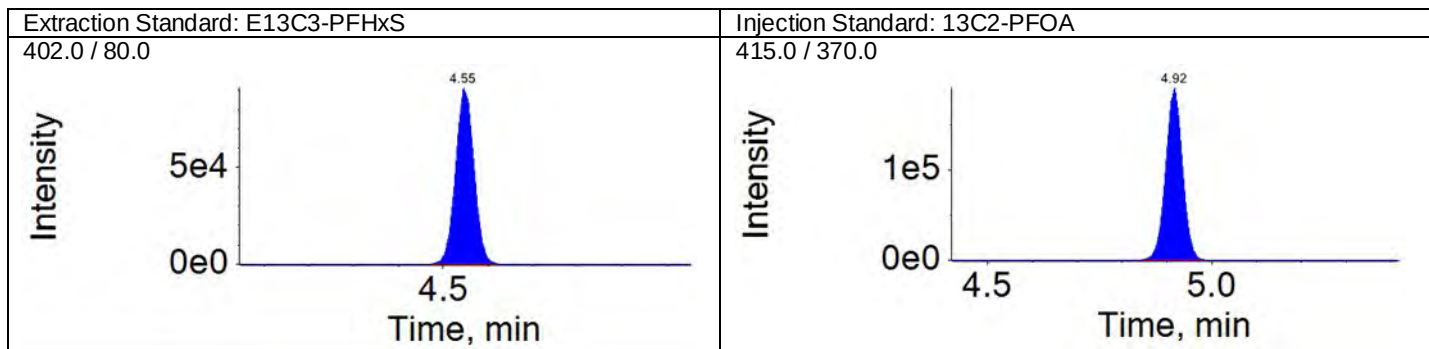
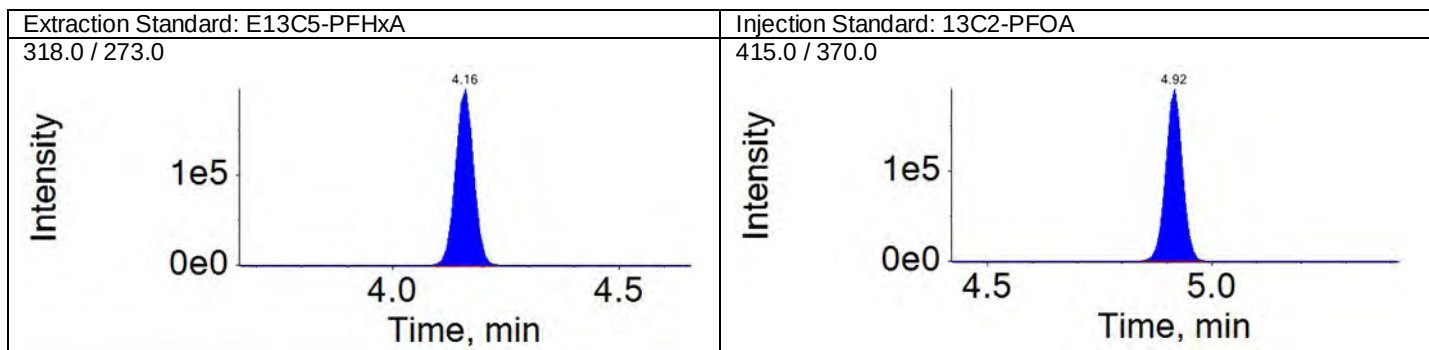
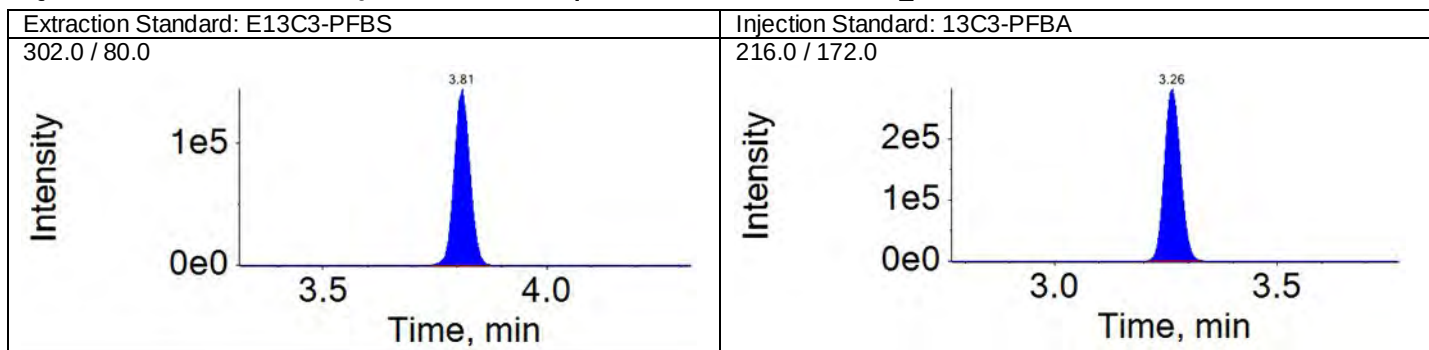
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



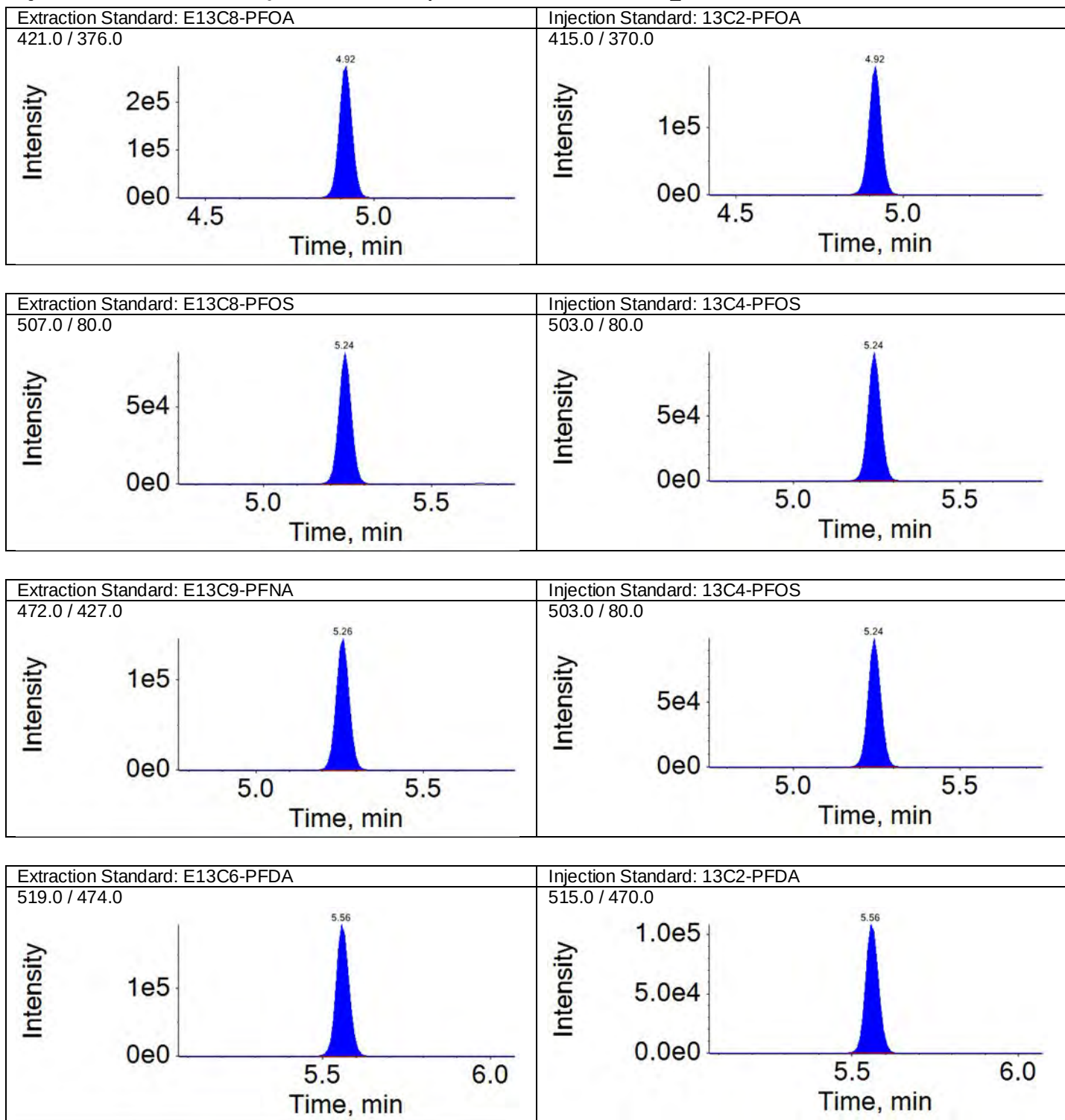
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



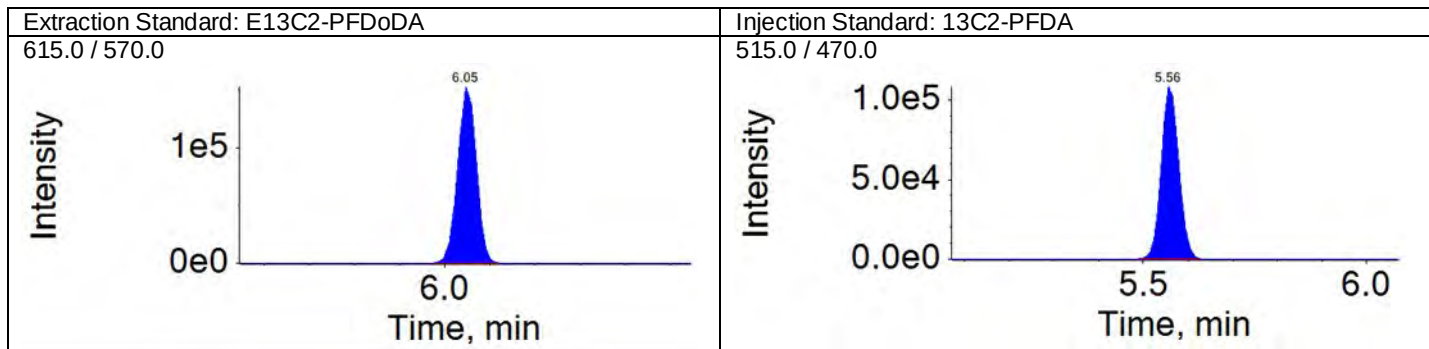
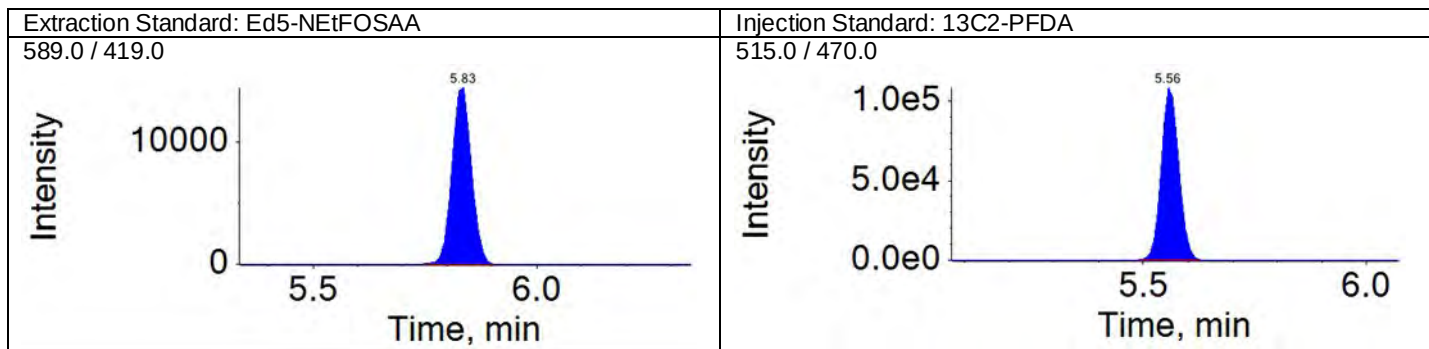
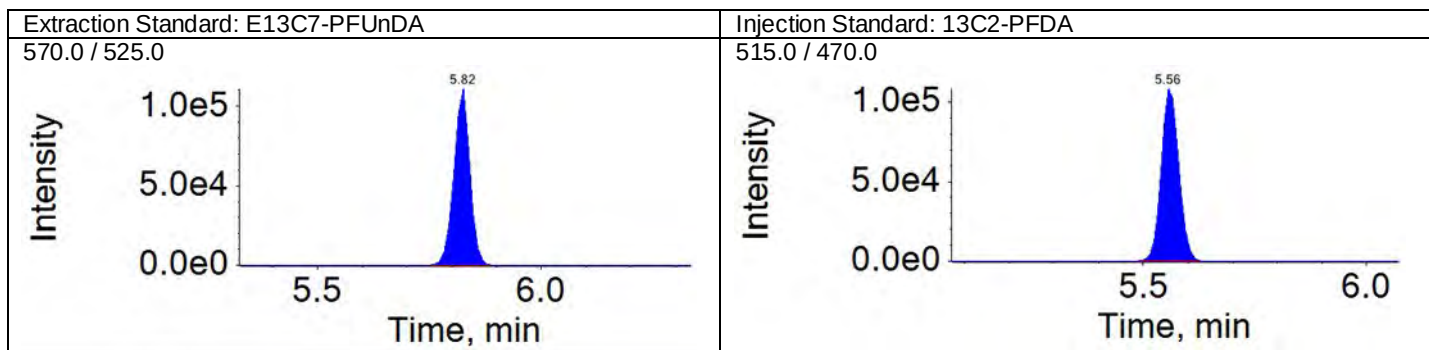
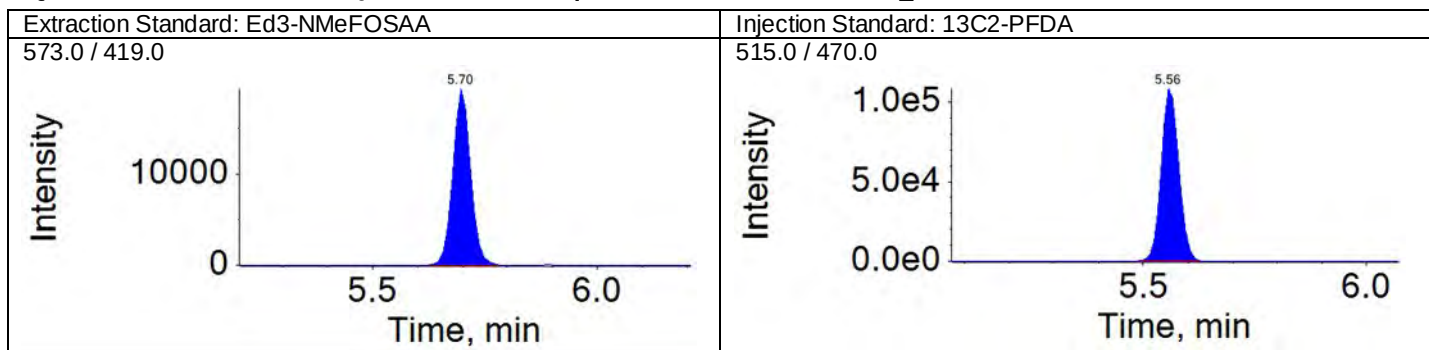
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



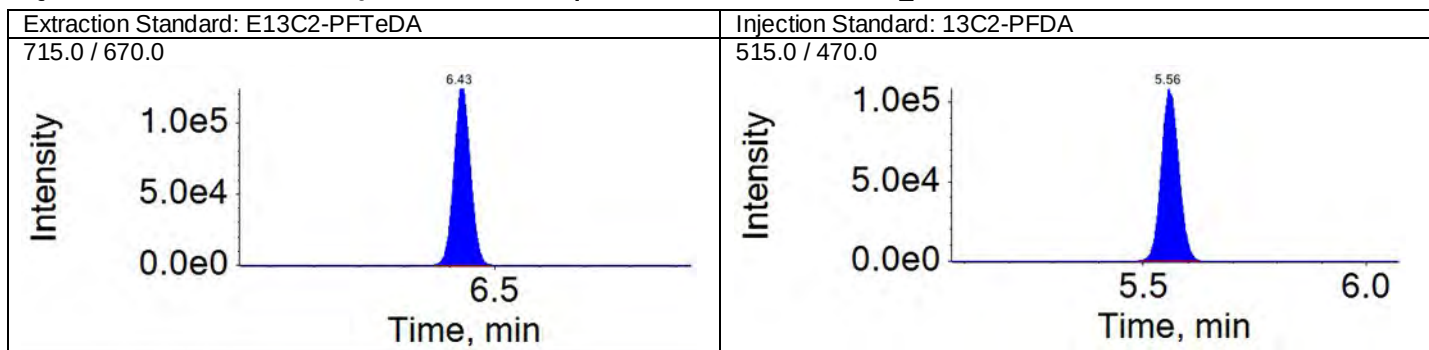
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

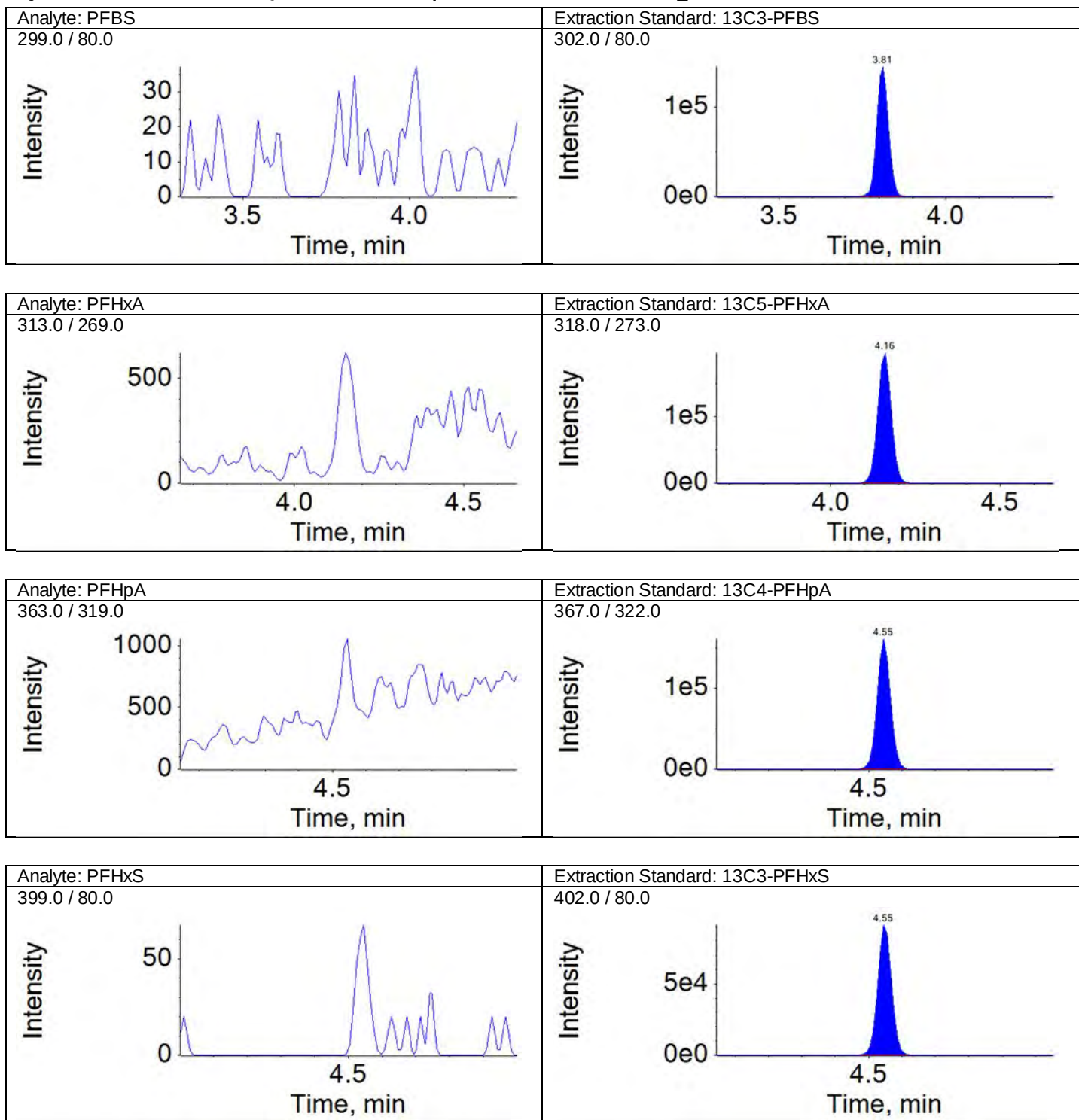
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

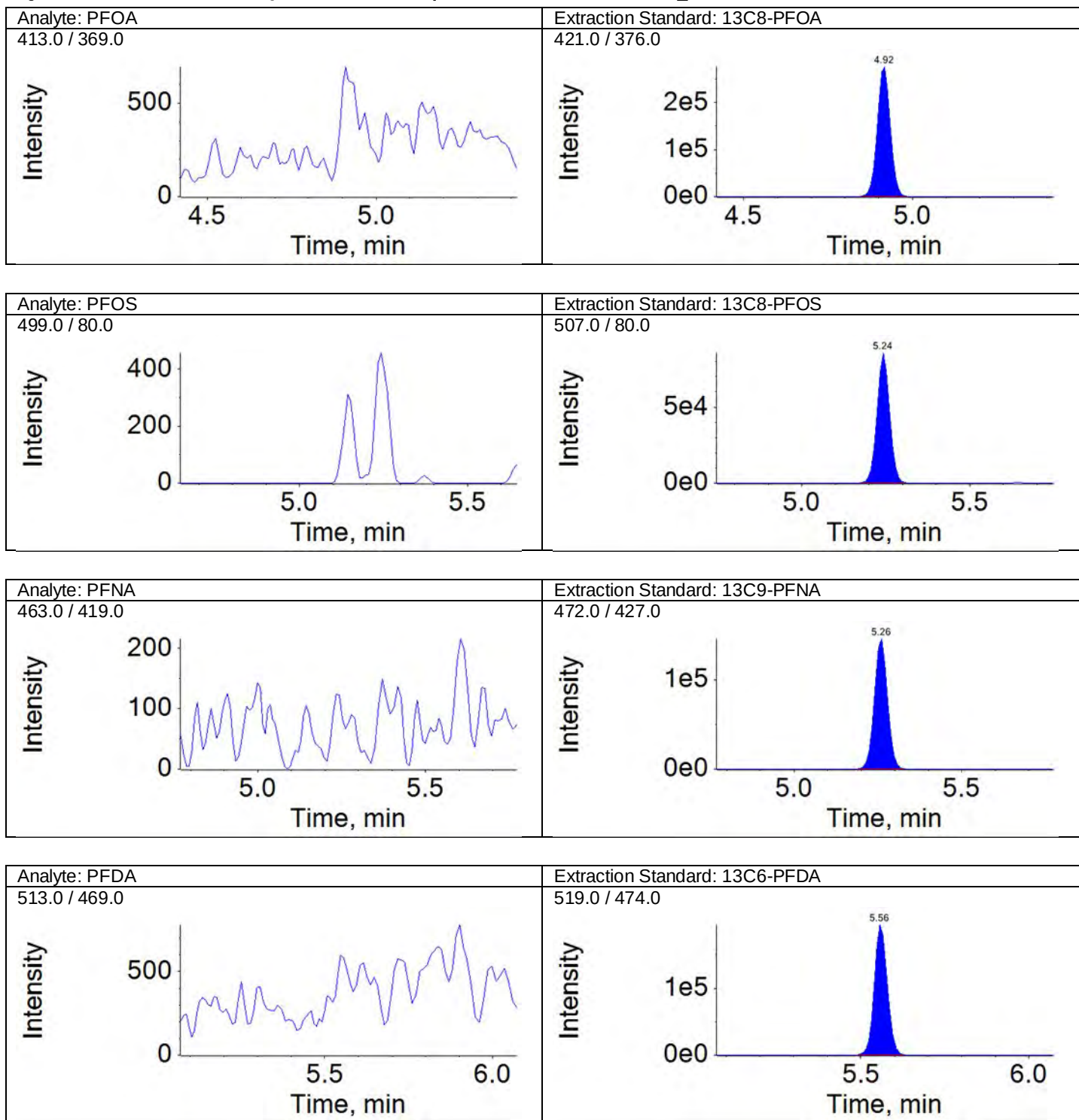
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



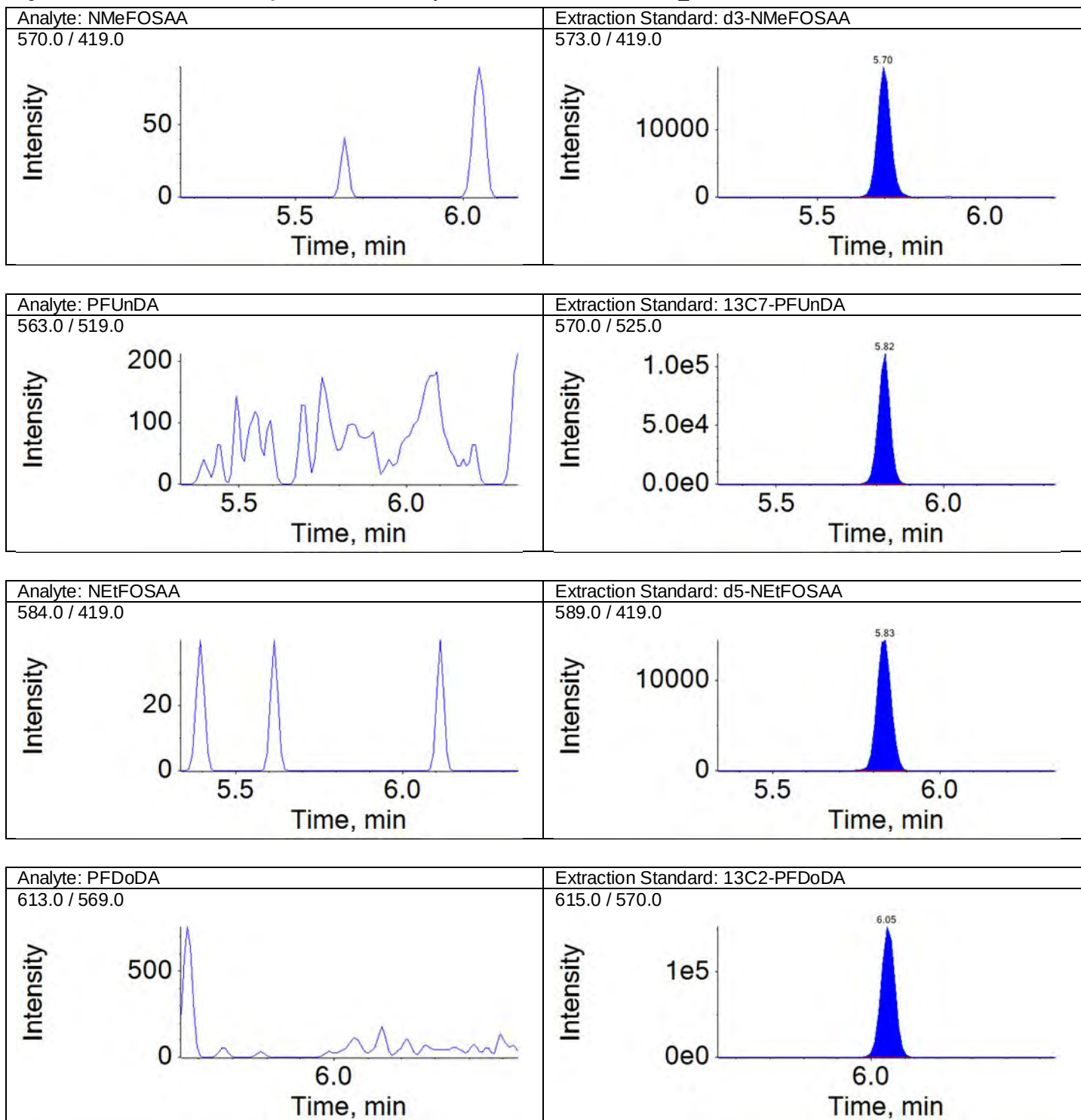
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



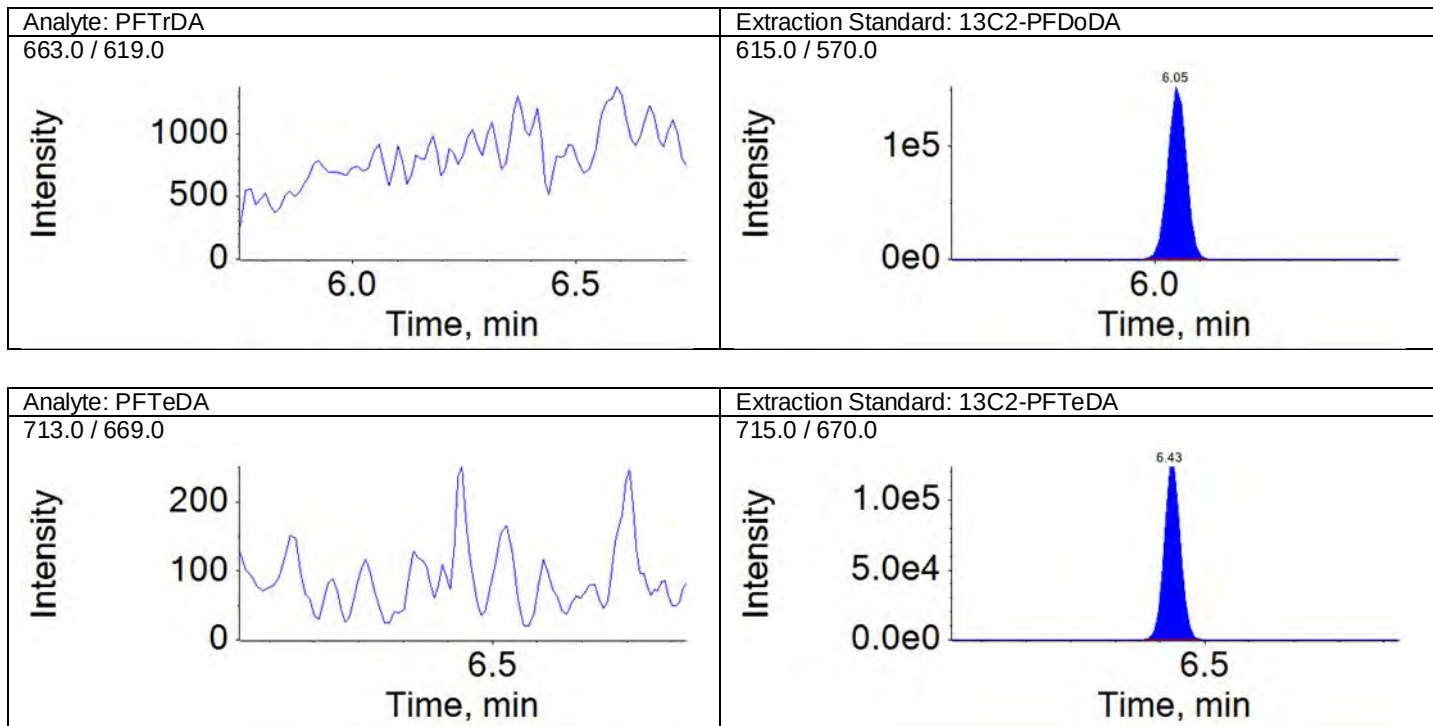
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



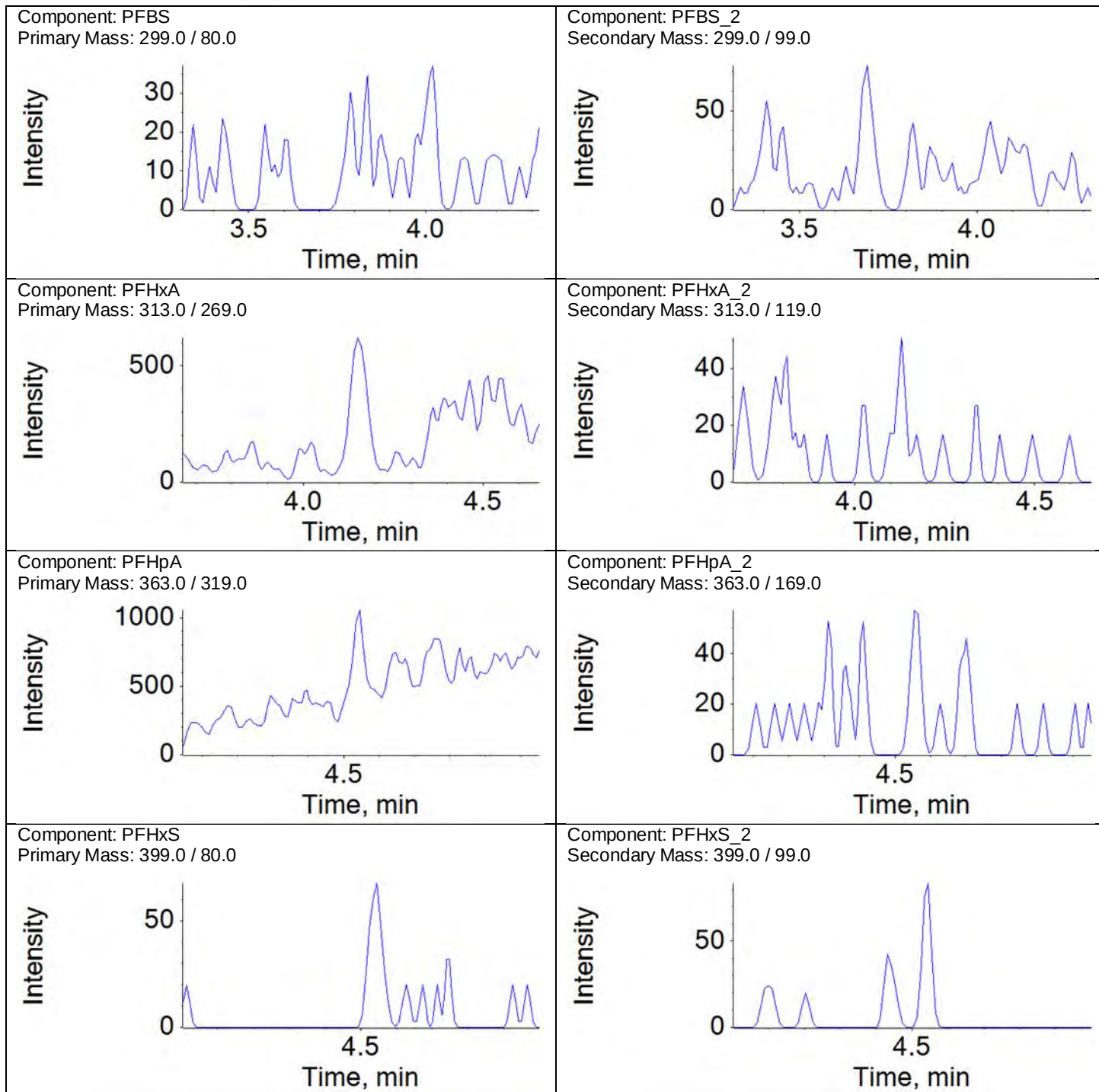
Ion Ratio Report

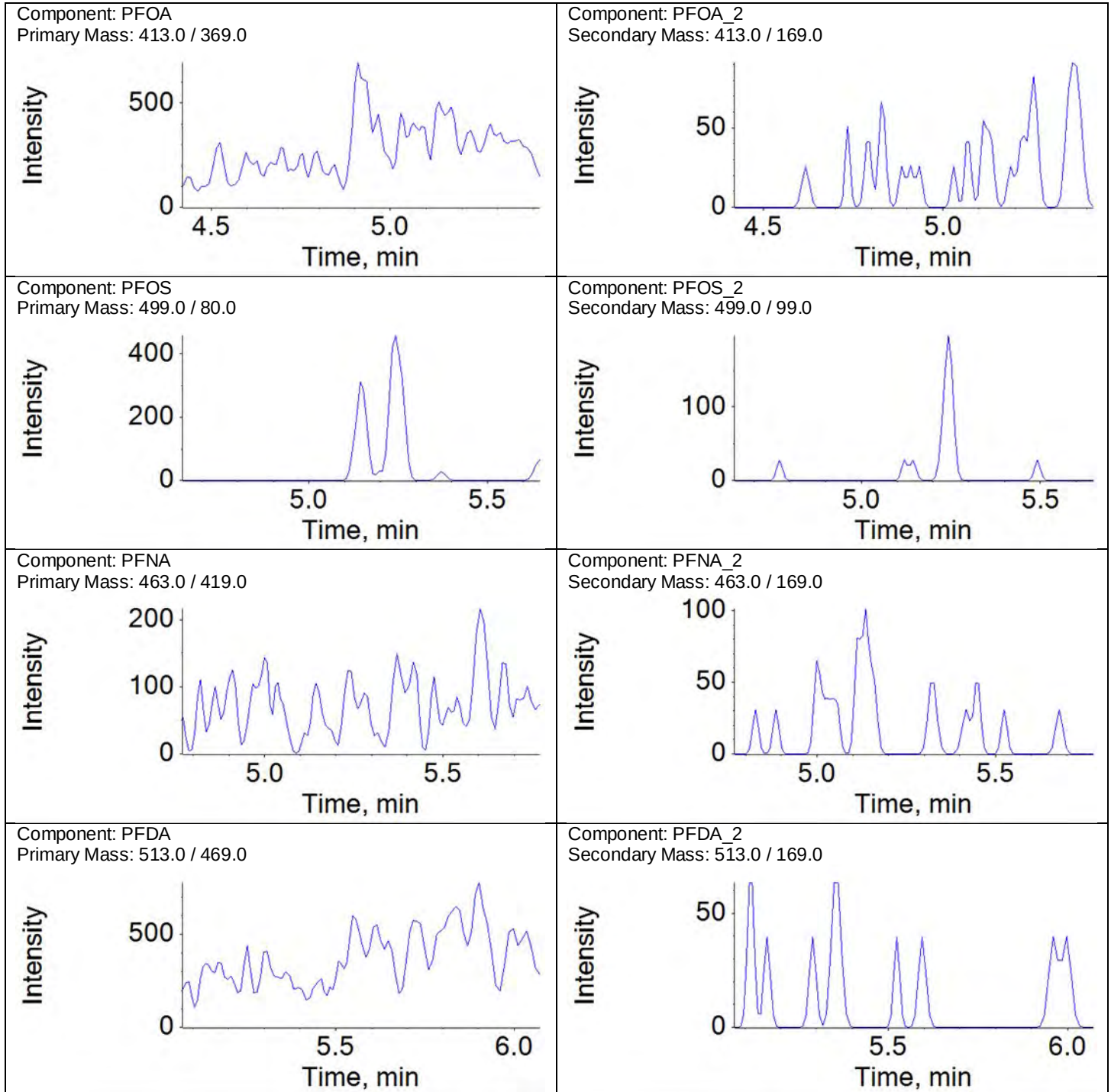
Sample Name: 9881910

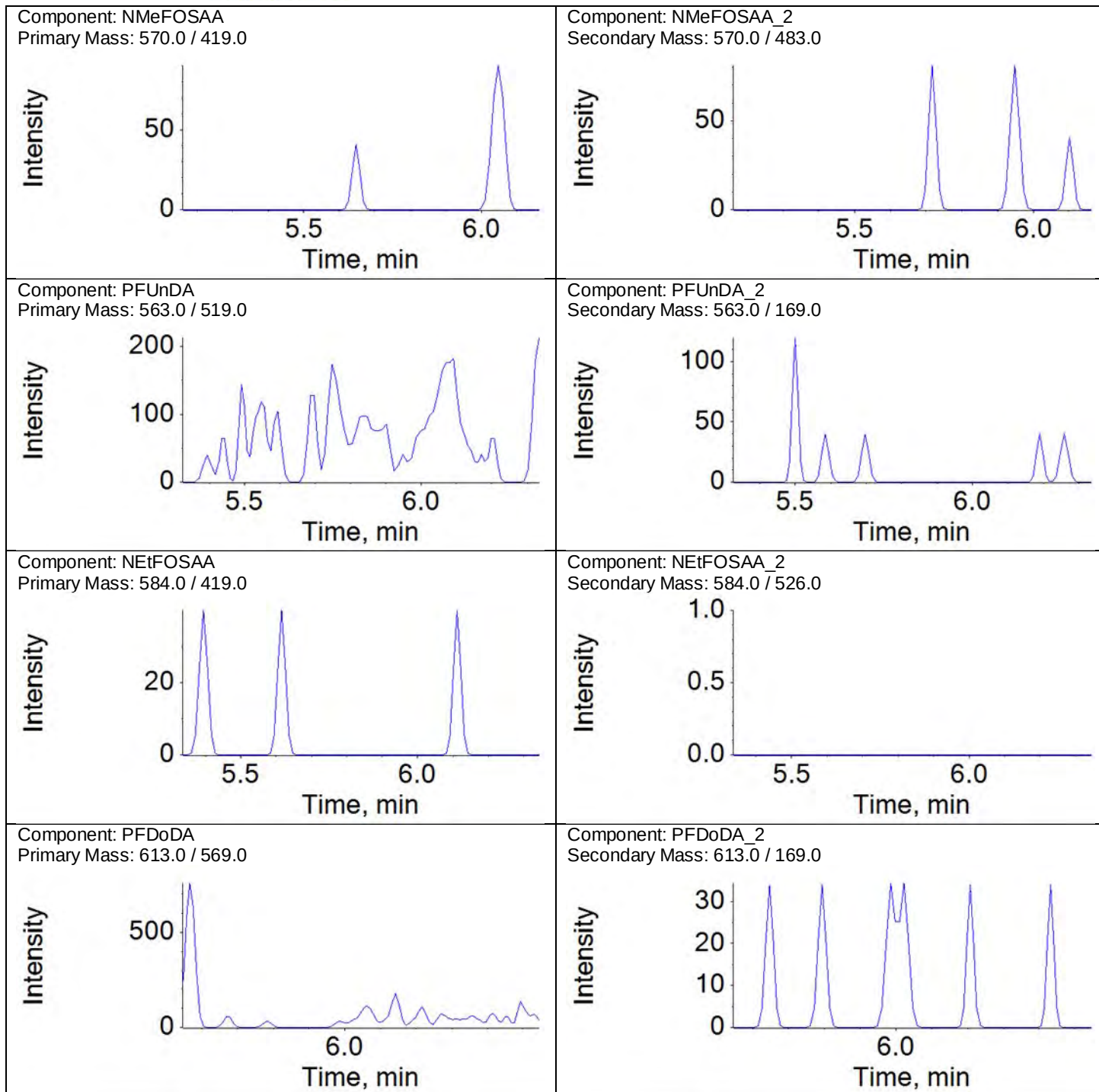
Instrument Name: LM27631

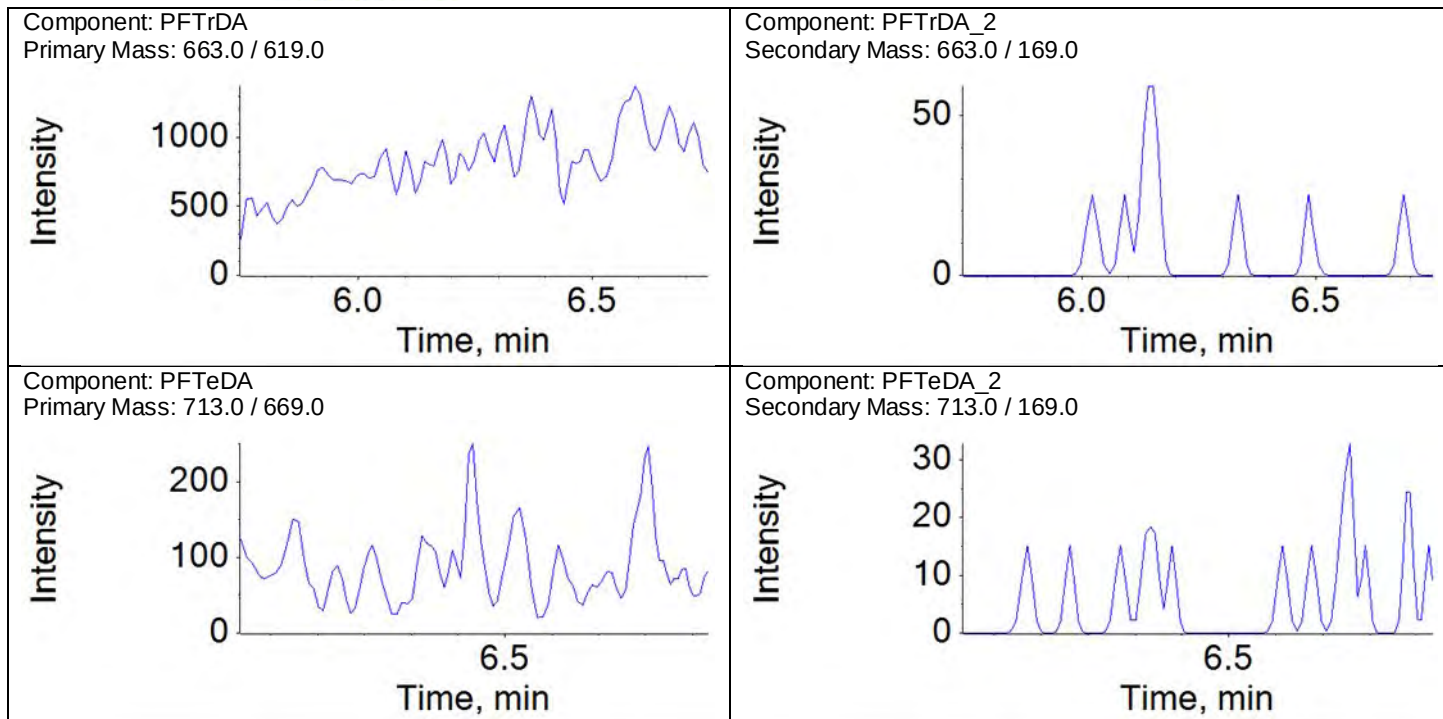
File Name: 18NOV13D-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881911			Data File:		18NOV13D-16.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-06 Grab Soil			Acquis Date:		2018-11-13T11:23:20
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	22			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			Operator:		MCD7824
Sample Wt.:	1.06000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-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	698350.4	661126.9	6	50	
13C2-PFOA	5.0	507084.6	466902.6	9	50	
13C4-PFOS	4.8	262606.9	247446.9	6	50	
13C2-PFDA	5.0	304239.6	295381.6	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
E13C3-PFBS	357315.7	13C3-PFBA	698350.4	0.512	8.774	6.815	78	50-150	
E13C5-PFHxA	552974.5	13C2-PFOA	507084.6	1.090	9.434	7.433	79	50-150	
E13C3-PFHxS	274371.5	13C2-PFOA	507084.6	0.541	8.925	7.005	78	50-150	
E13C4-PFHpA	459290.8	13C2-PFOA	507084.6	0.906	9.434	7.699	82	50-150	
E13C8-PFOA	807834.5	13C2-PFOA	507084.6	1.593	9.434	8.281	88	50-150	
E13C8-PFOS	221722.1	13C4-PFOS	262606.9	0.844	9.019	7.059	78	50-150	
E13C9-PFNA	390207.2	13C4-PFOS	262606.9	1.486	9.434	7.817	83	50-150	
E13C6-PFDA	545052.3	13C2-PFDA	304239.6	1.792	9.434	7.888	84	50-150	
Ed3-NMeFOSAA	66431.6	13C2-PFDA	304239.6	0.218	9.434	7.437	79	50-150	
E13C7-PFUnDA	228703.3	13C2-PFDA	304239.6	0.752	9.434	8.235	87	50-150	
Ed5-NEtFOSAA	47313.5	13C2-PFDA	304239.6	0.156	9.434	6.208	66	50-150	
E13C2-PFDODA	474924.9	13C2-PFDA	304239.6	1.561	9.434	7.647	81	50-150	
E13C2-PFTeDA	348964.7	13C2-PFDA	304239.6	1.147	9.434	7.598	81	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881911

Instrument Name: LM27631

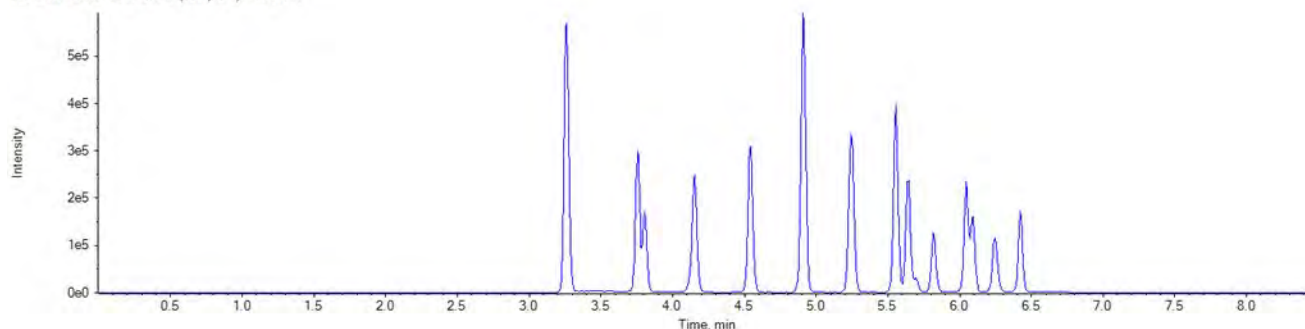
File Name: 18NOV13D-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	357315.7	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	552974.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	459290.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	274371.5	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	807834.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	221722.1	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	390207.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	545052.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	66431.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	228703.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	47313.5	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	474924.9	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	474924.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	348964.7	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-16.wiff (sample 1) - 9881911



APPROVED

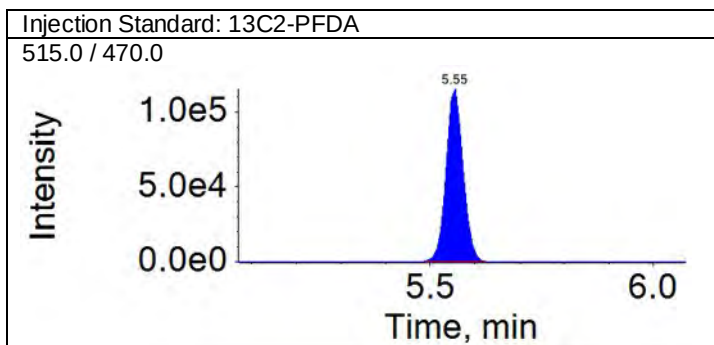
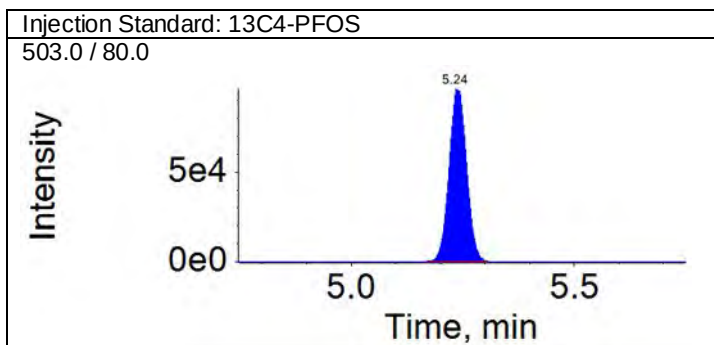
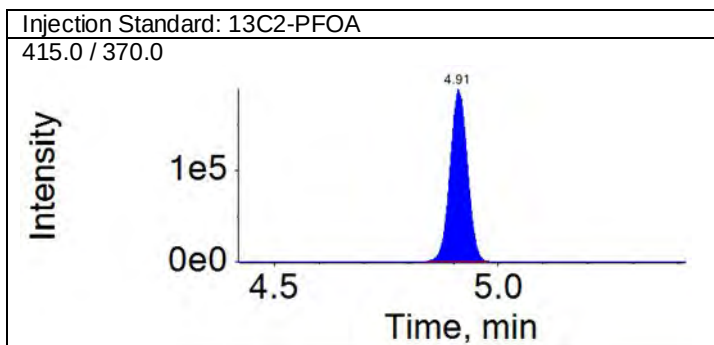
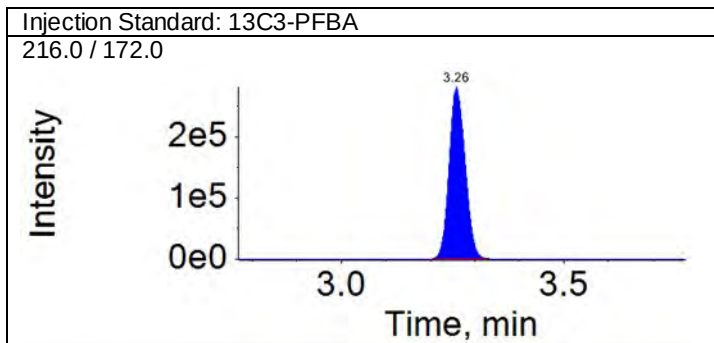
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

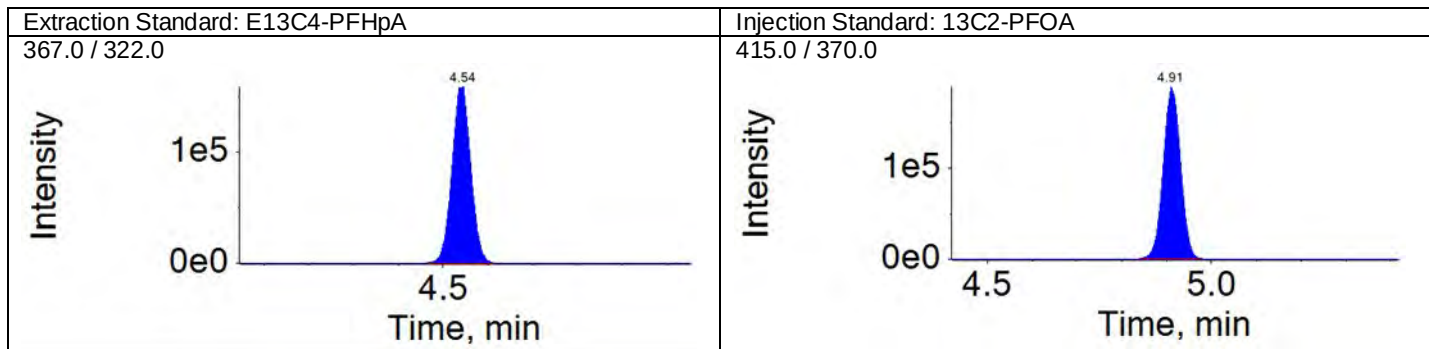
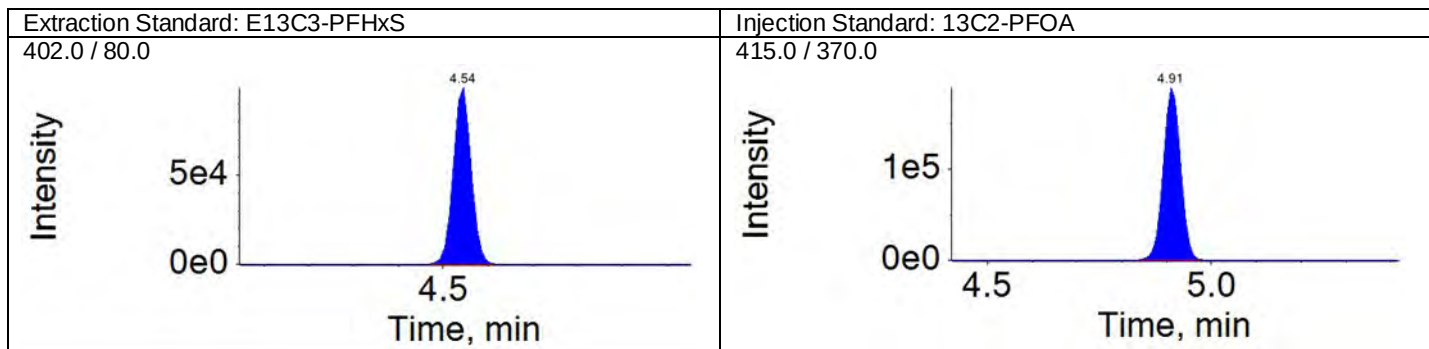
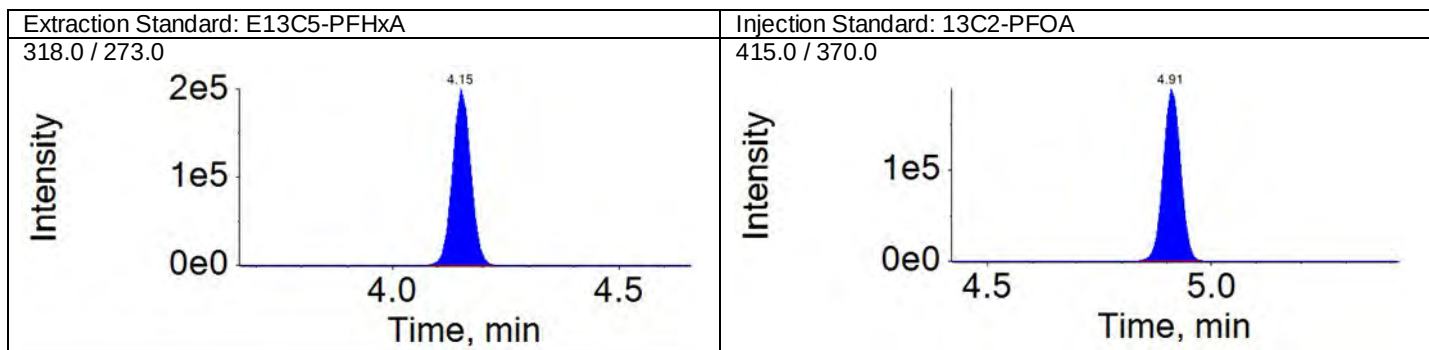
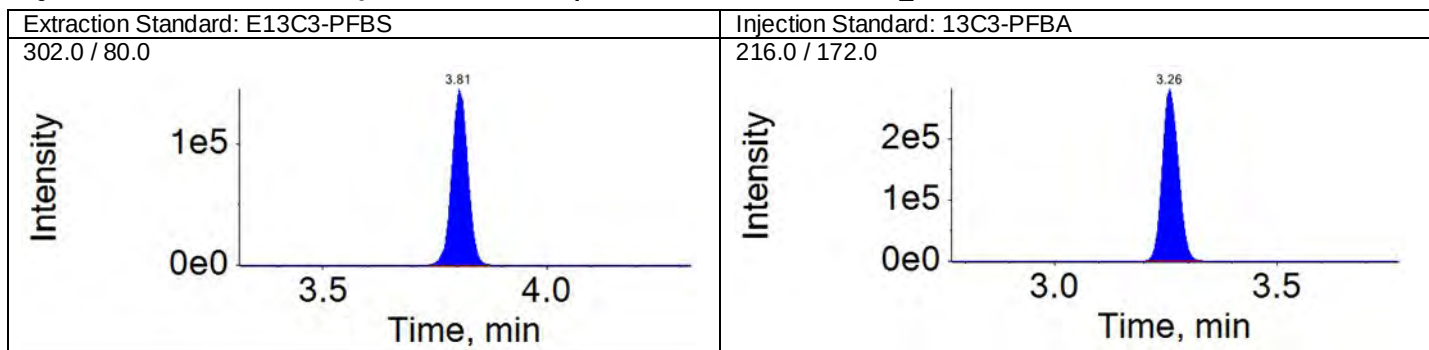
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



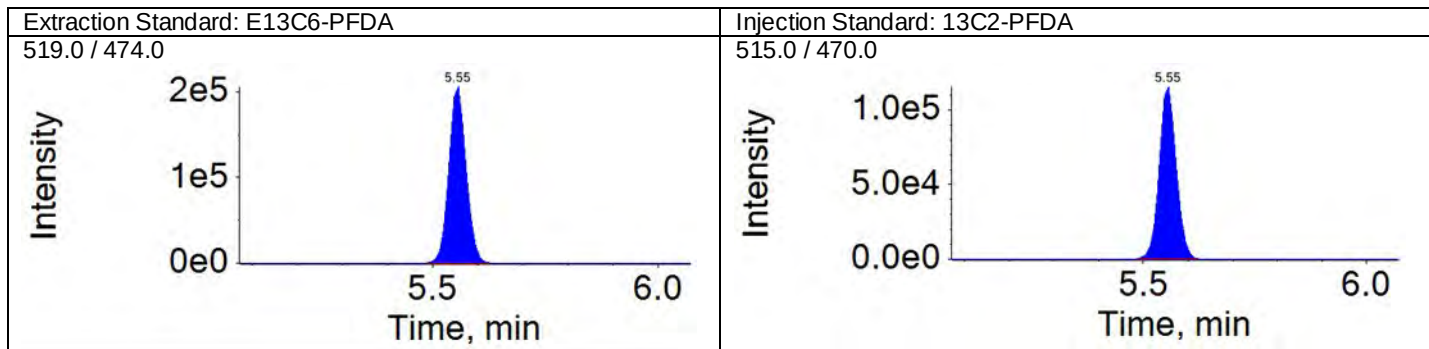
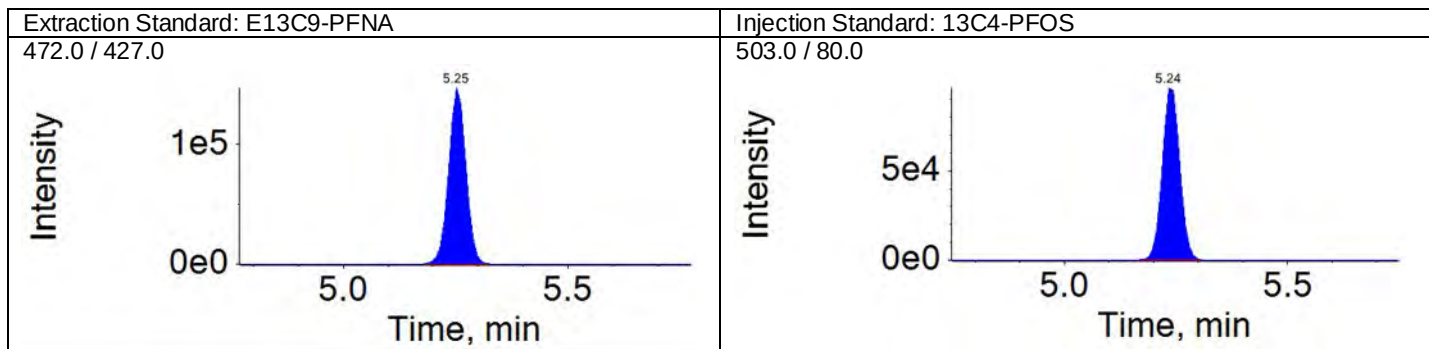
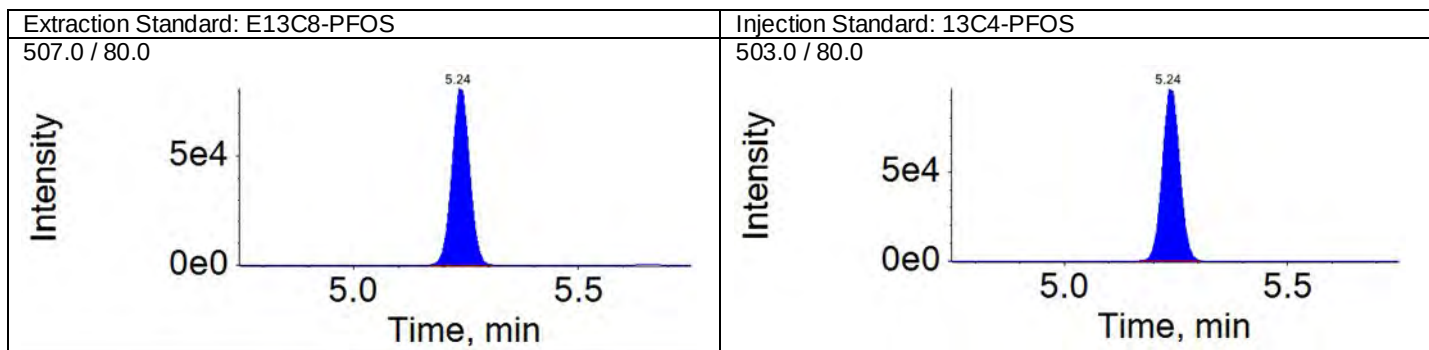
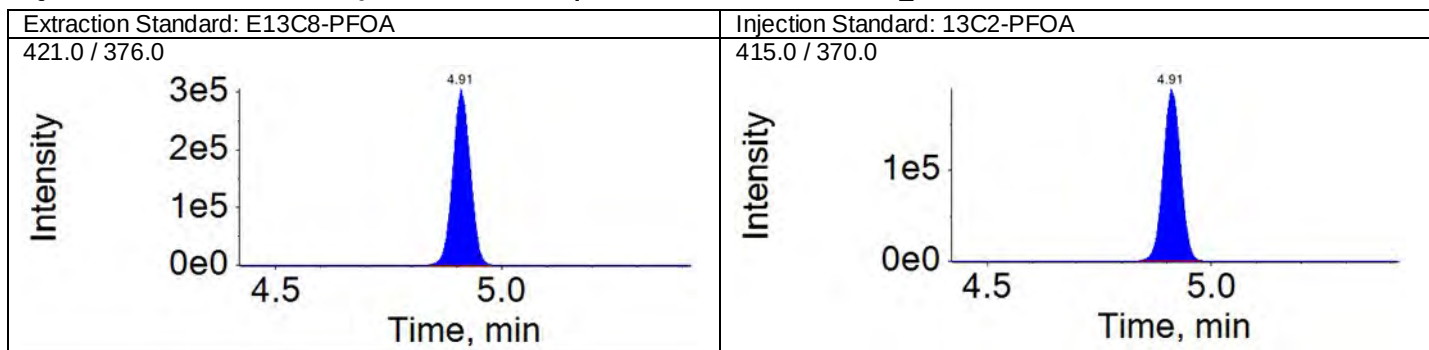
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



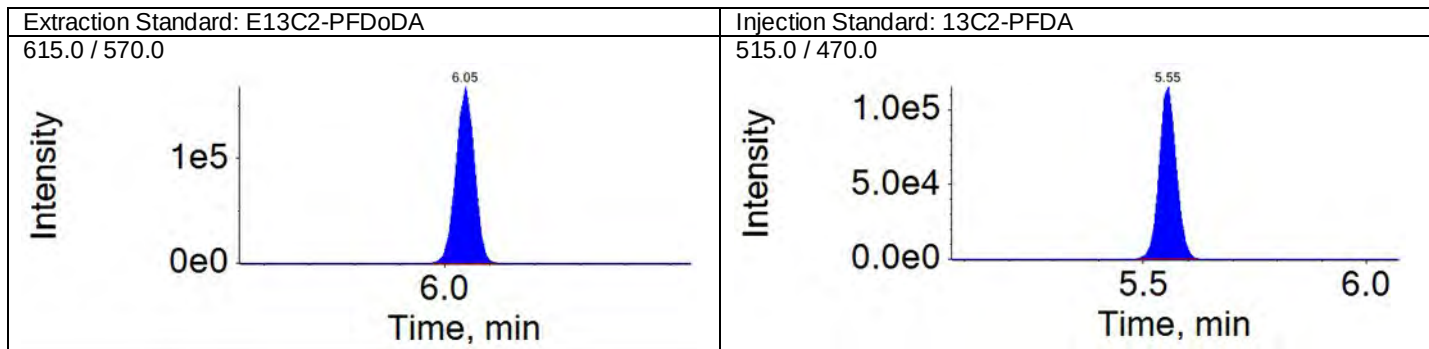
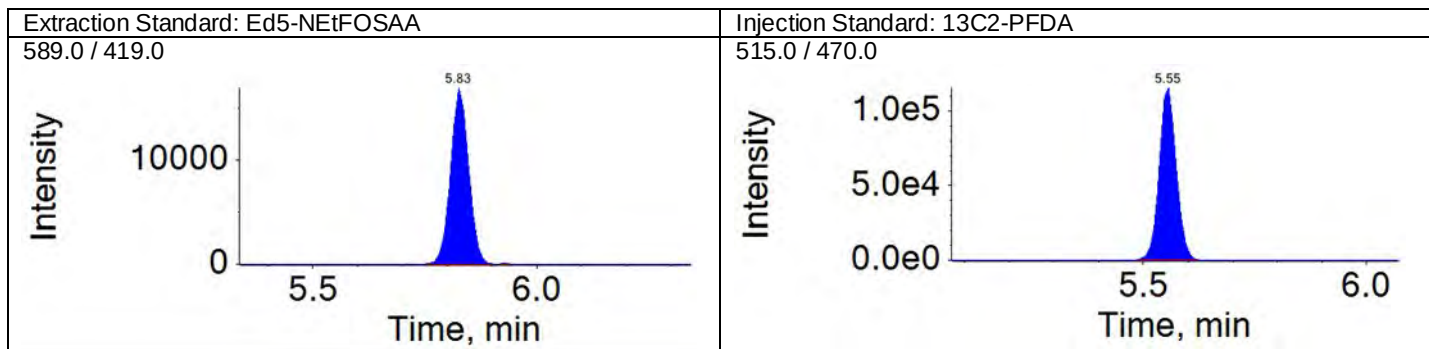
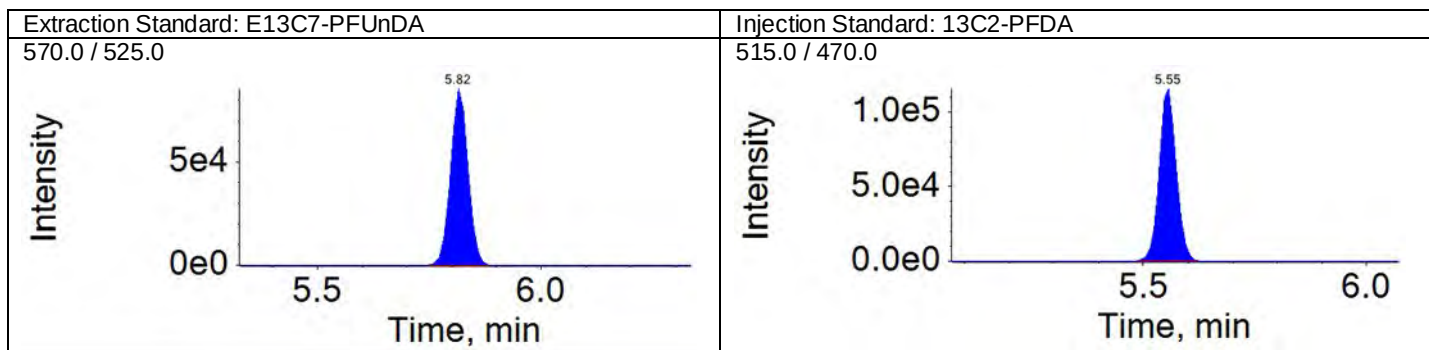
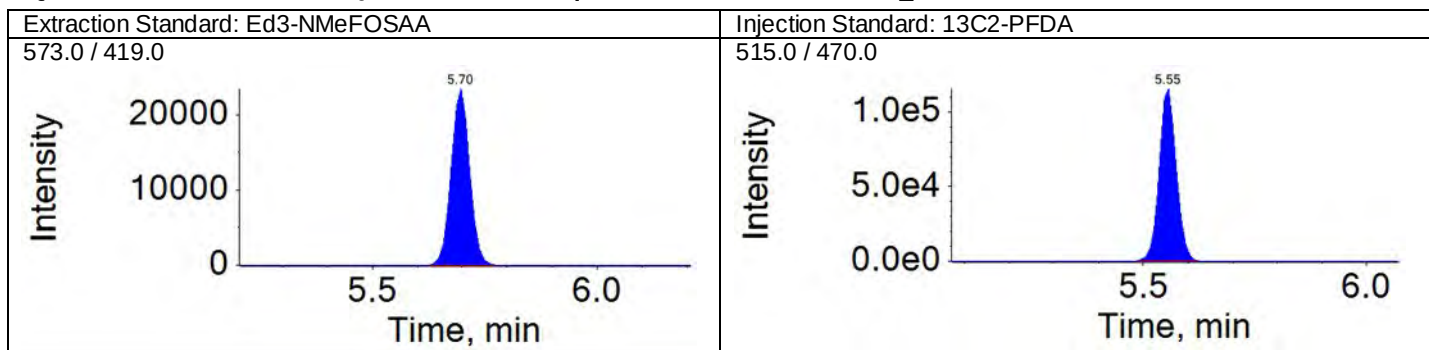
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



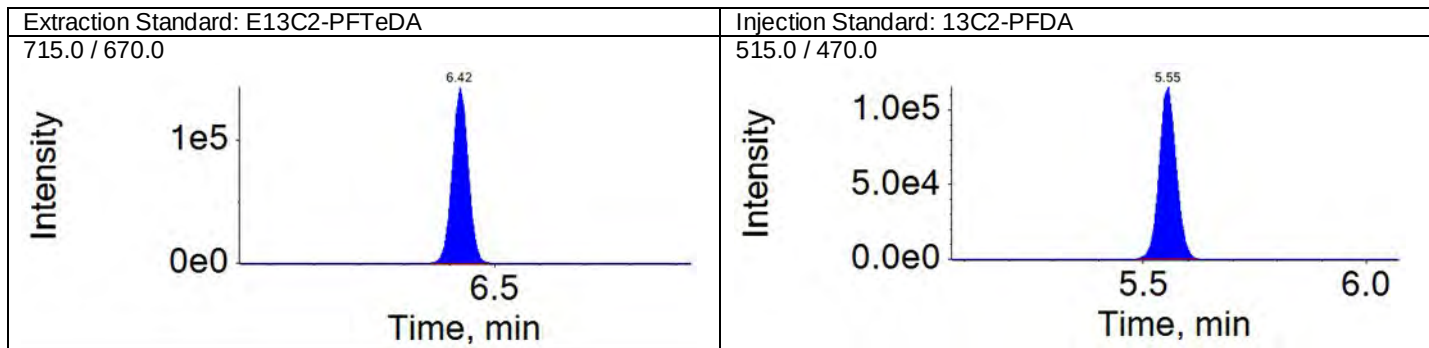
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

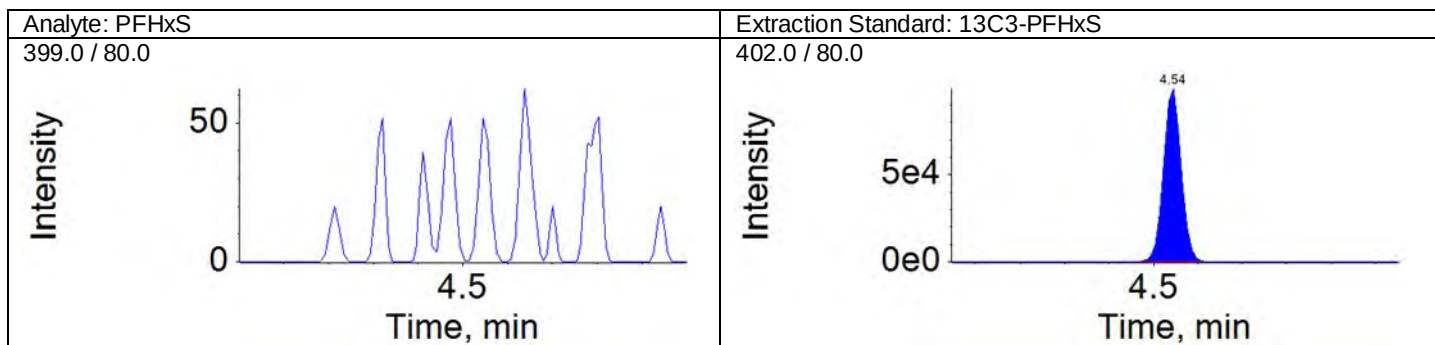
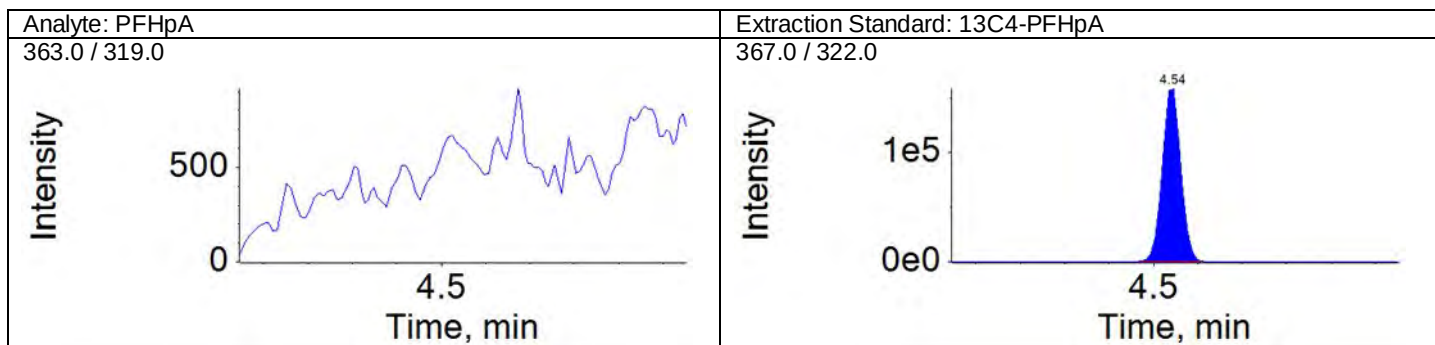
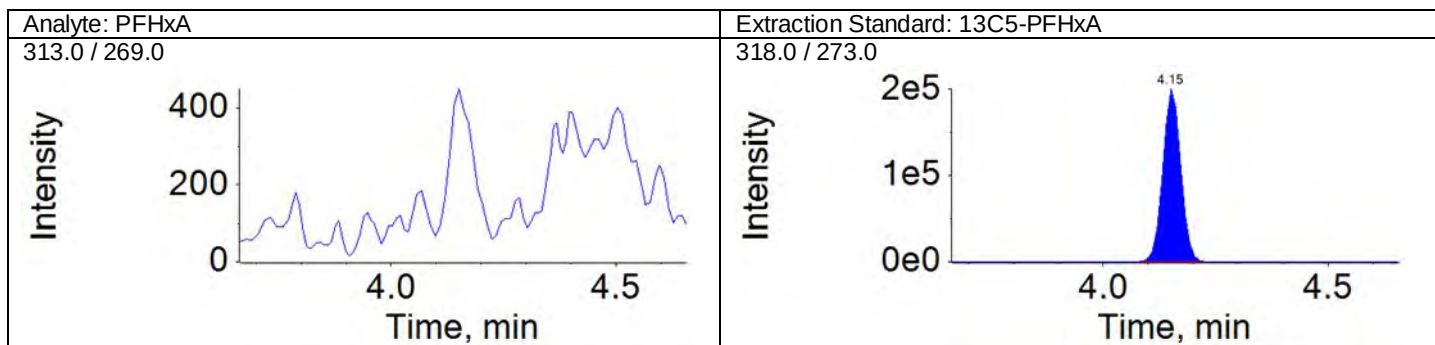
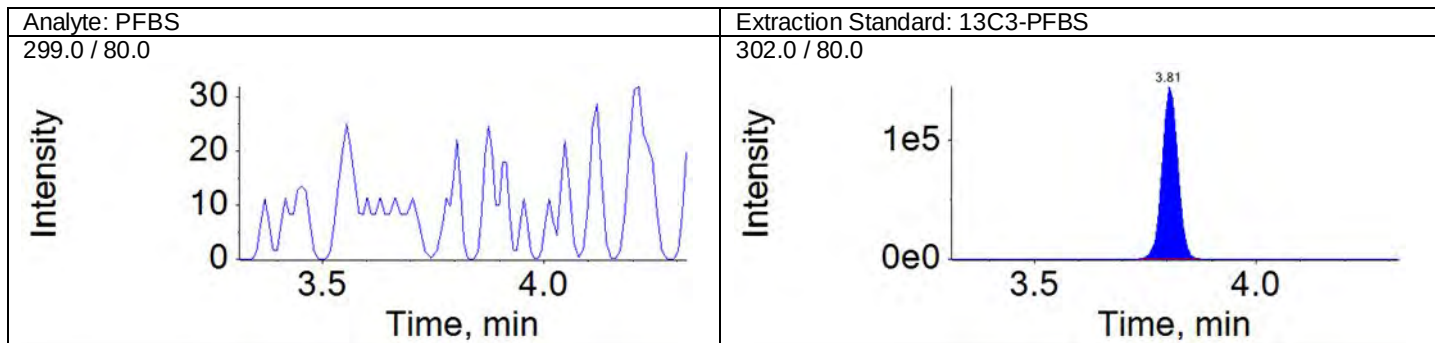
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

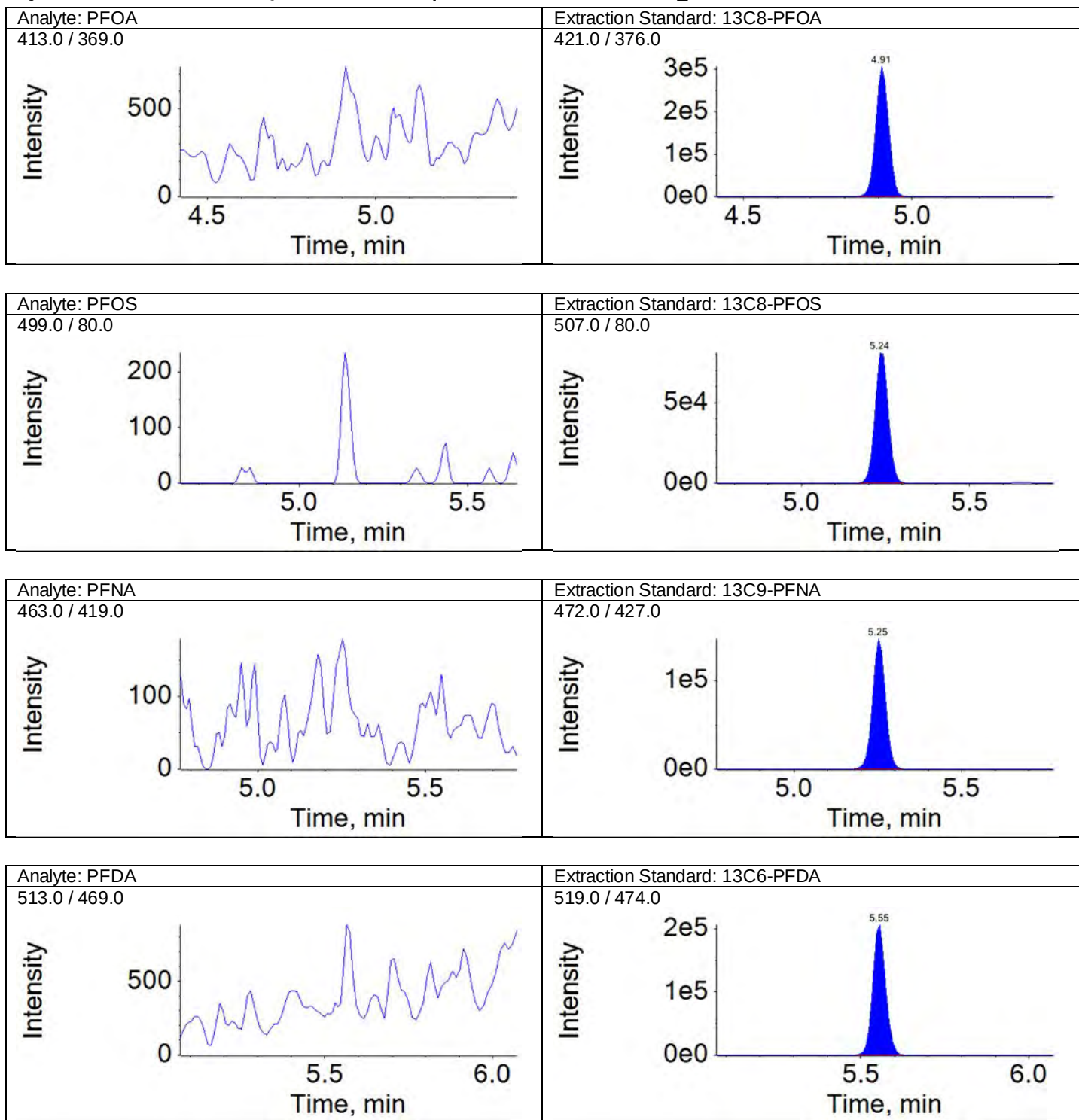
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



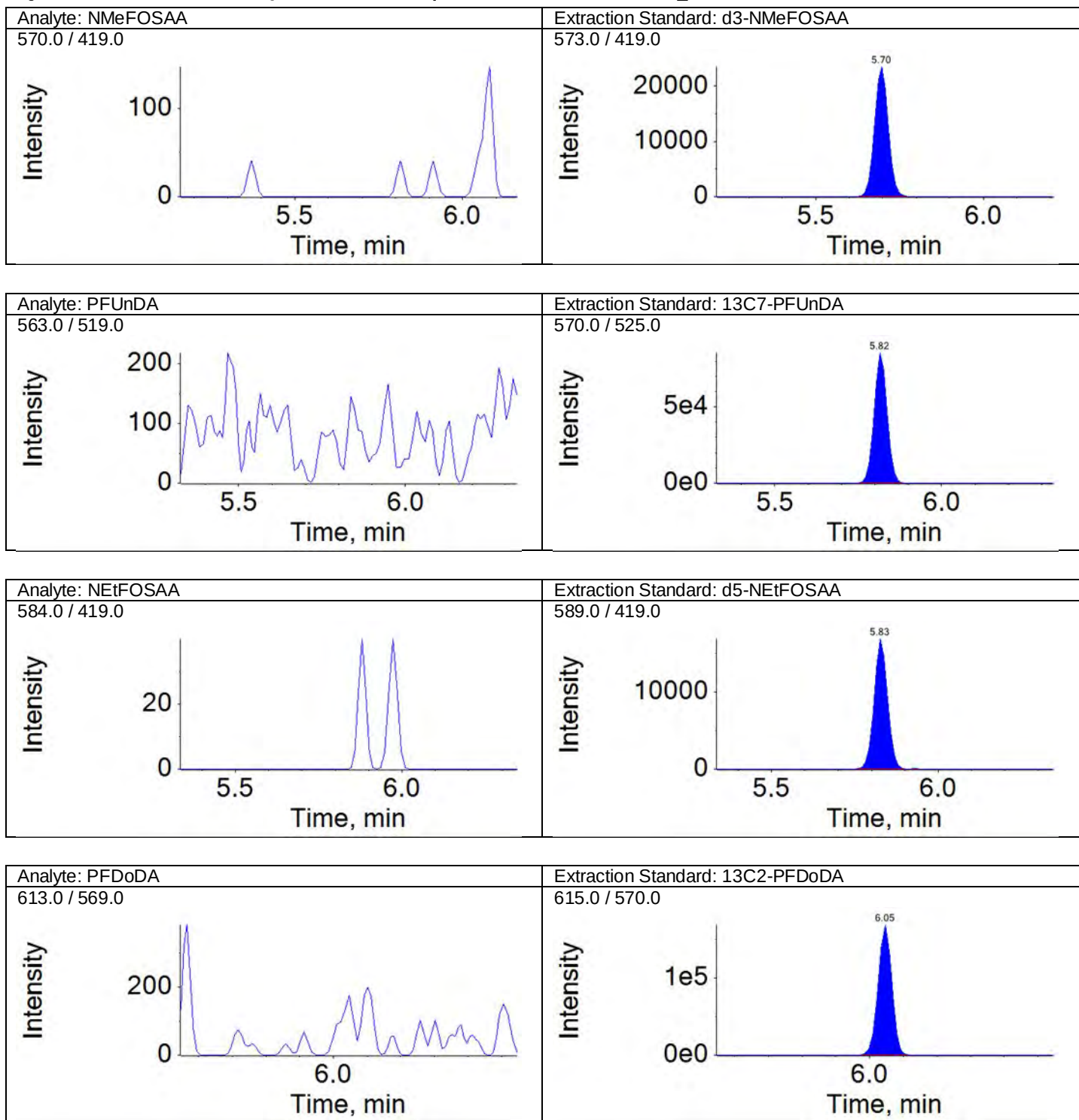
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



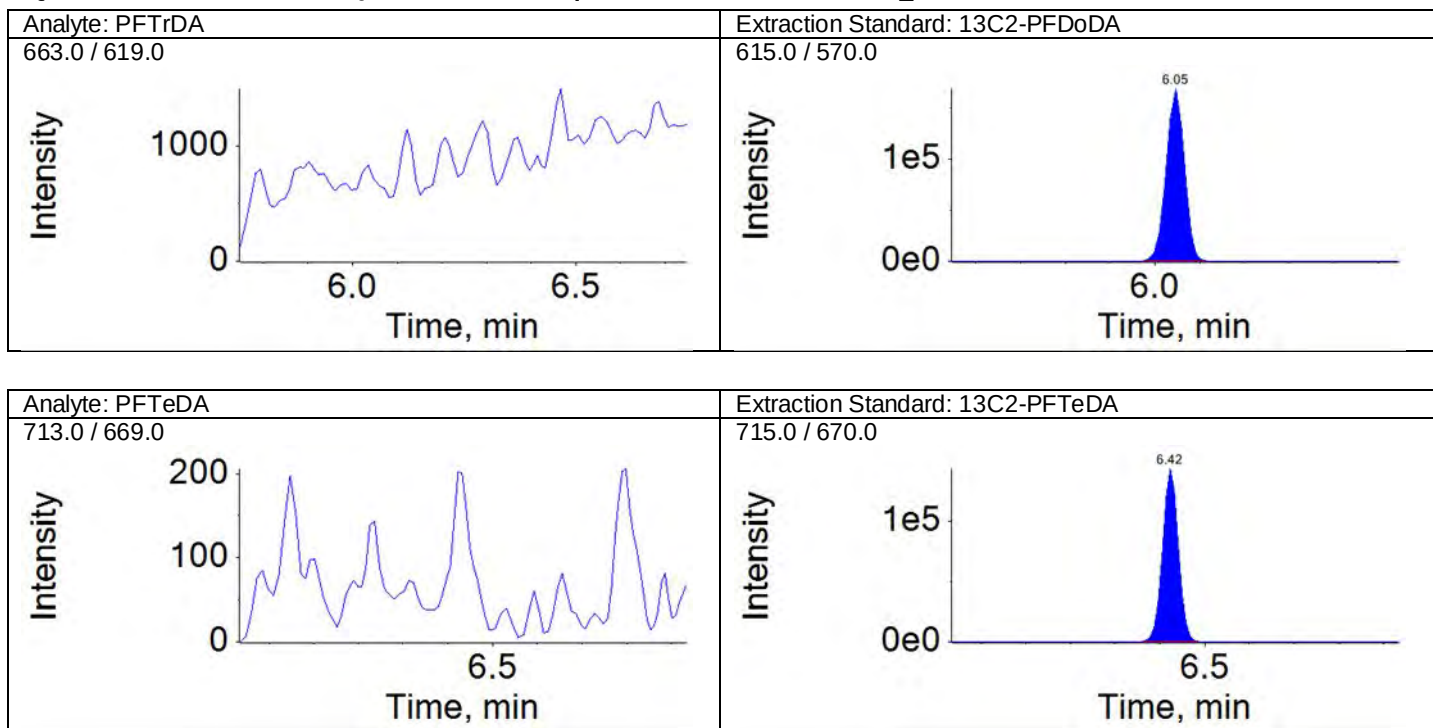
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



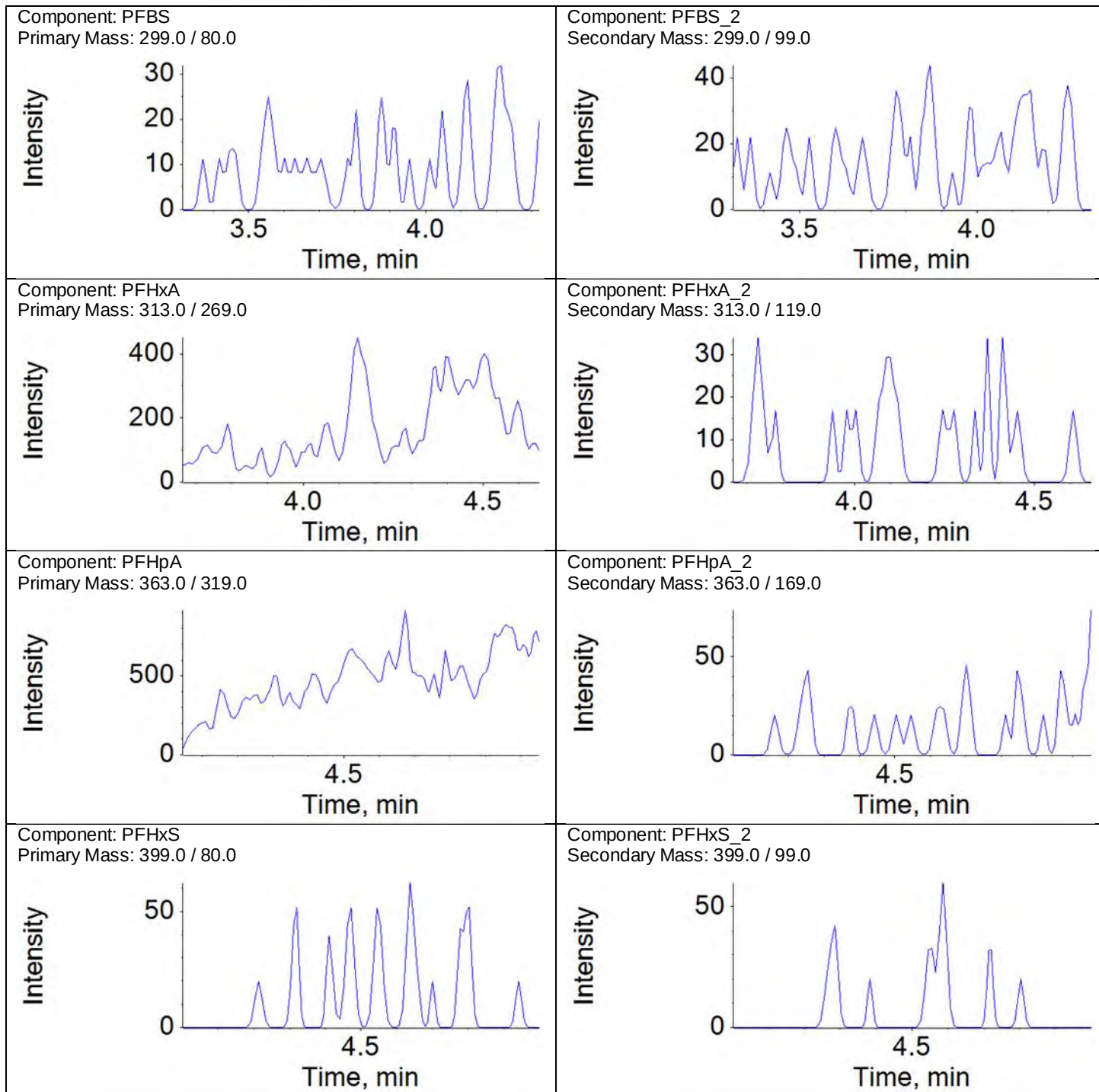
Ion Ratio Report

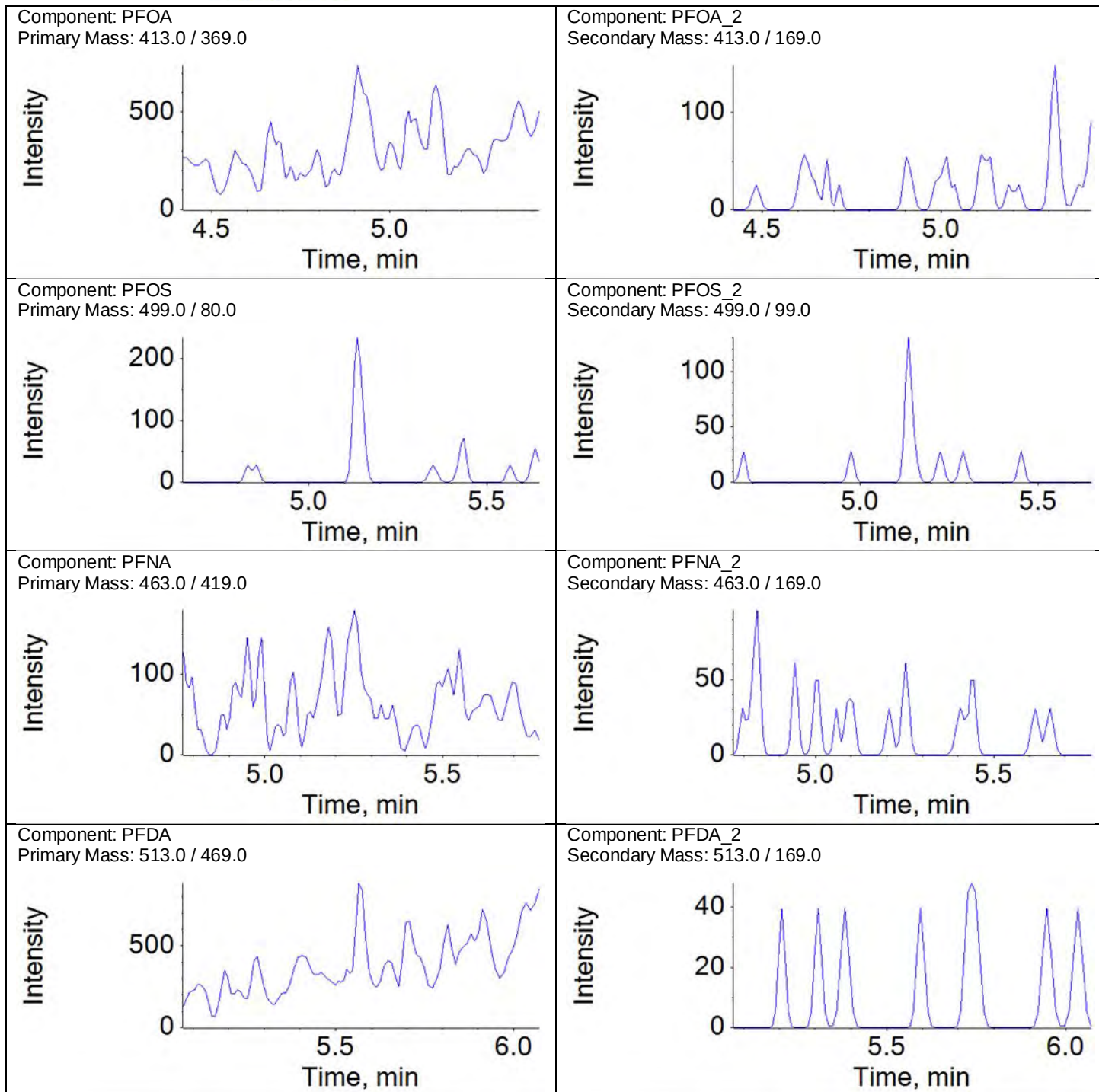
Sample Name: 9881911

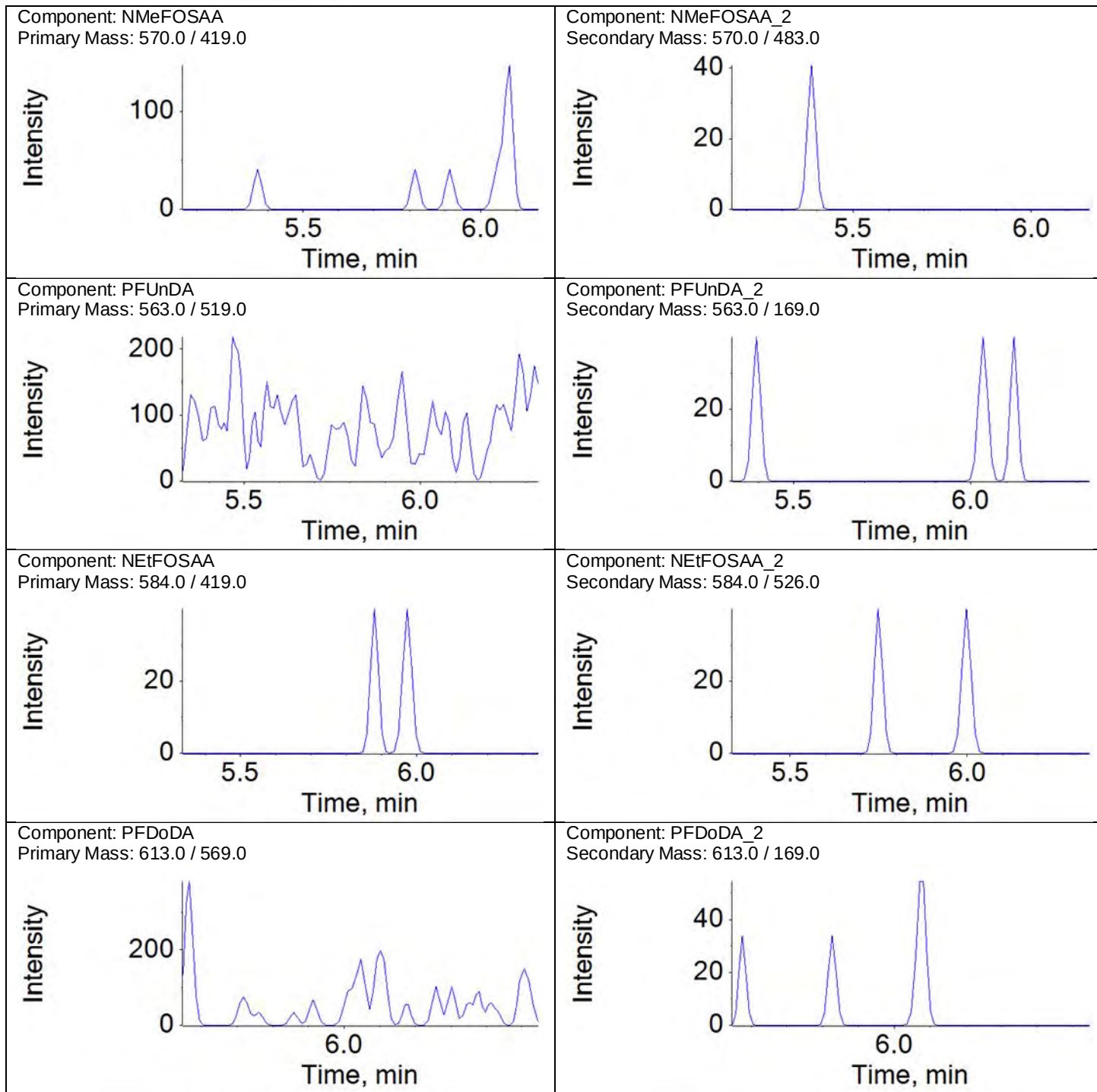
Instrument Name: LM27631

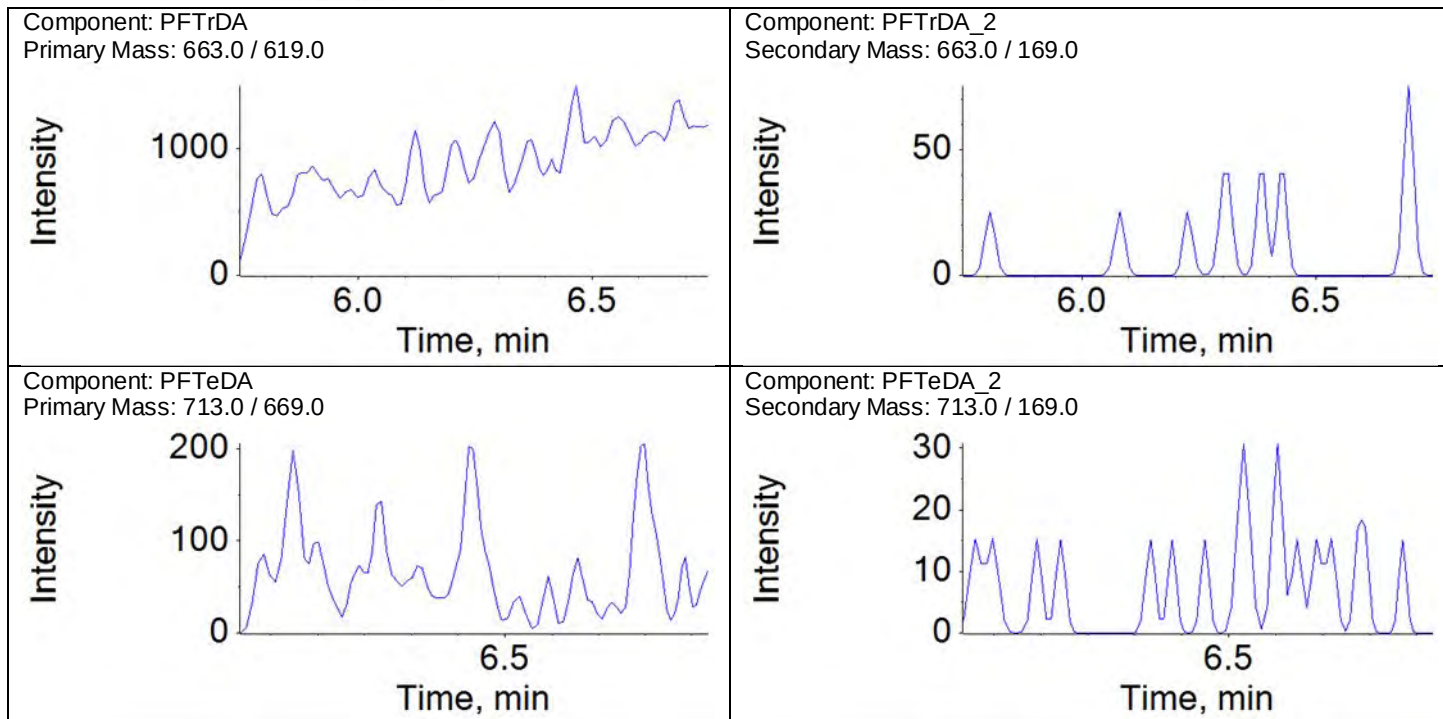
File Name: 18NOV13D-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881912			Data File:		18NOV13D-18.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-08 Grab Soil			Acquis Date:		2018-11-13T11:41:23
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	23			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			Operator:		MCD7824
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: 18NOV13D-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	707947.2	661126.9	7	50	
13C2-PFOA	5.0	498482.7	466902.6	7	50	
13C4-PFOS	4.8	263934.8	247446.9	7	50	
13C2-PFDA	5.0	313500.1	295381.6	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	353783.2	13C3-PFBA	707947.2	0.500	8.455	6.414	76	50-150	
E13C5-PFHxA	554038.5	13C2-PFOA	498482.7	1.111	9.091	7.300	80	50-150	
E13C3-PFHxS	253280.1	13C2-PFOA	498482.7	0.508	8.600	6.339	74	50-150	
E13C4-PFHpA	424860.2	13C2-PFOA	498482.7	0.852	9.091	6.981	77	50-150	
E13C8-PFOA	759108.4	13C2-PFOA	498482.7	1.523	9.091	7.628	84	50-150	
E13C8-PFOS	224328.3	13C4-PFOS	263934.8	0.850	8.691	6.847	79	50-150	
E13C9-PFNA	368704.6	13C4-PFOS	263934.8	1.397	9.091	7.082	78	50-150	
E13C6-PFDA	519984.3	13C2-PFDA	313500.1	1.659	9.091	7.037	77	50-150	
Ed3-NMeFOSAA	73651.1	13C2-PFDA	313500.1	0.235	9.091	7.710	85	50-150	
E13C7-PFUnDA	222231.6	13C2-PFDA	313500.1	0.709	9.091	7.483	82	50-150	
Ed5-NEtFOSAA	55794.4	13C2-PFDA	313500.1	0.178	9.091	6.846	75	50-150	
E13C2-PFDODA	473587.0	13C2-PFDA	313500.1	1.511	9.091	7.131	78	50-150	
E13C2-PFTeDA	324761.7	13C2-PFDA	313500.1	1.036	9.091	6.612	73	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881912

Instrument Name: LM27631

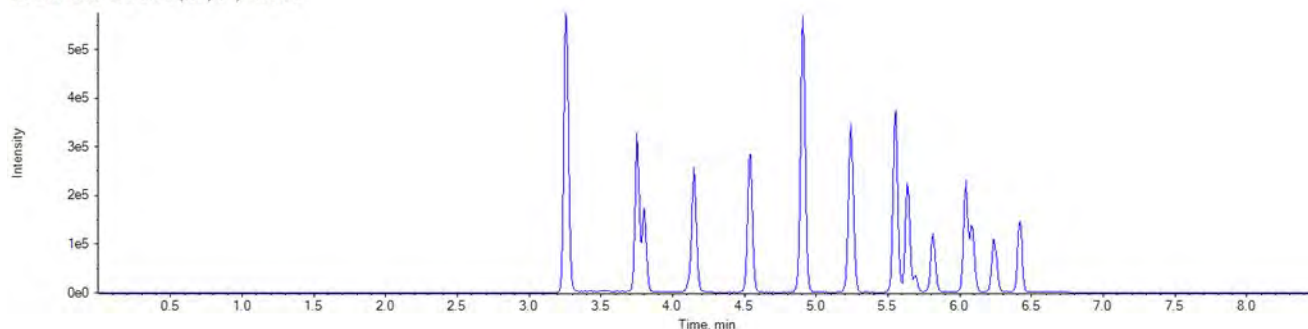
File Name: 18NOV13D-18.wiff

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	3.80	353783.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	554038.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	424860.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	253280.1	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	759108.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	224328.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	368704.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	519984.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	73651.1	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	222231.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	55794.4	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	473587.0	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	473587.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	324761.7	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-18.wiff (sample 1) - 9881912



APPROVED

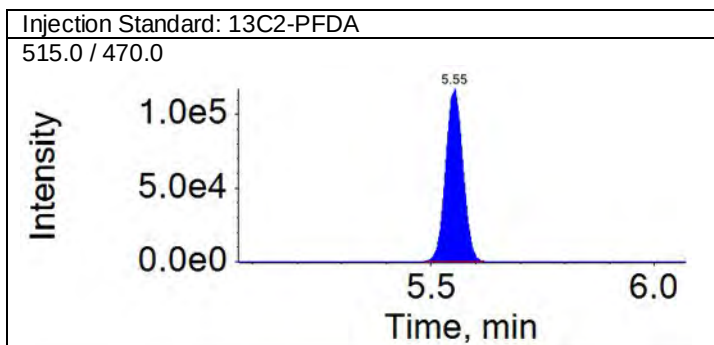
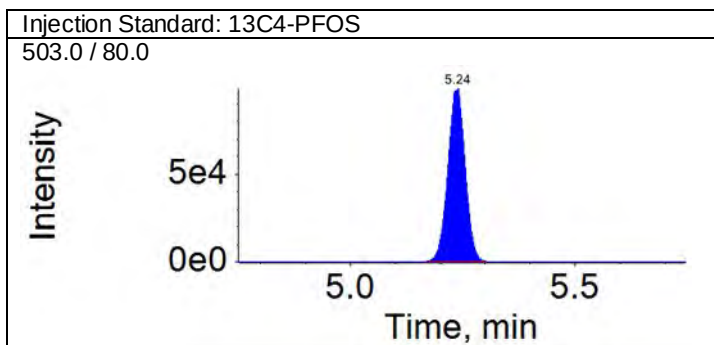
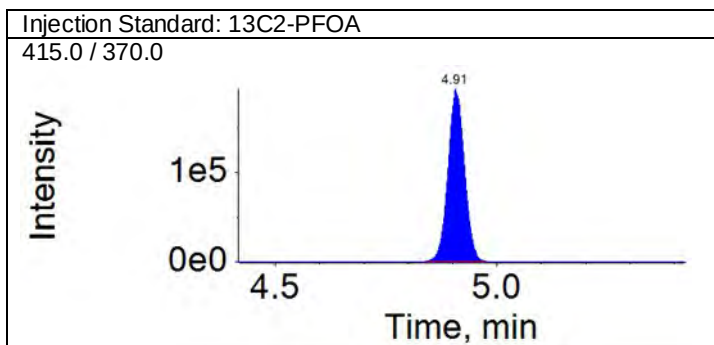
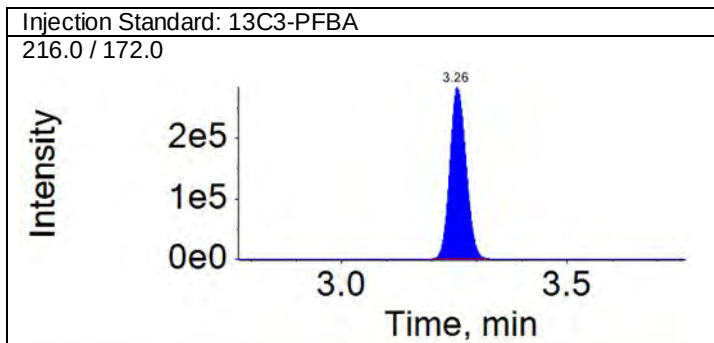
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

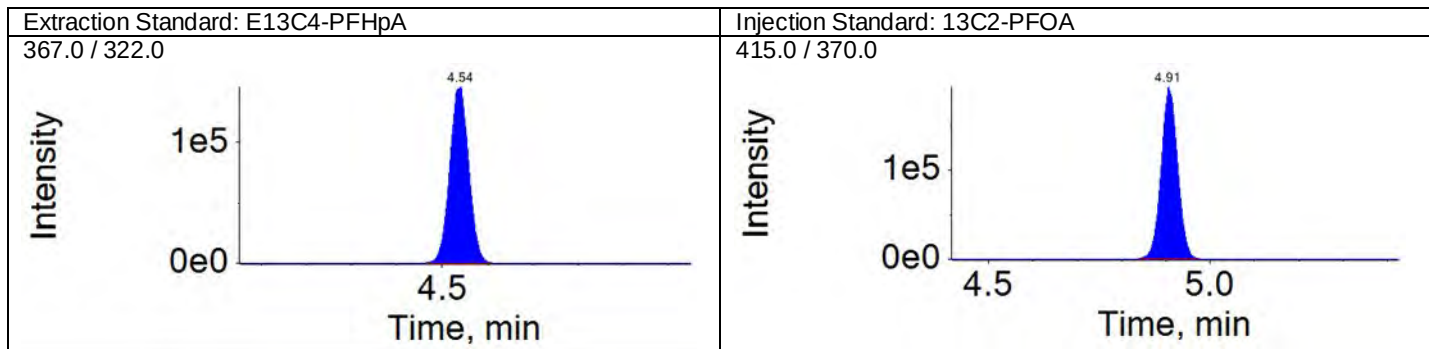
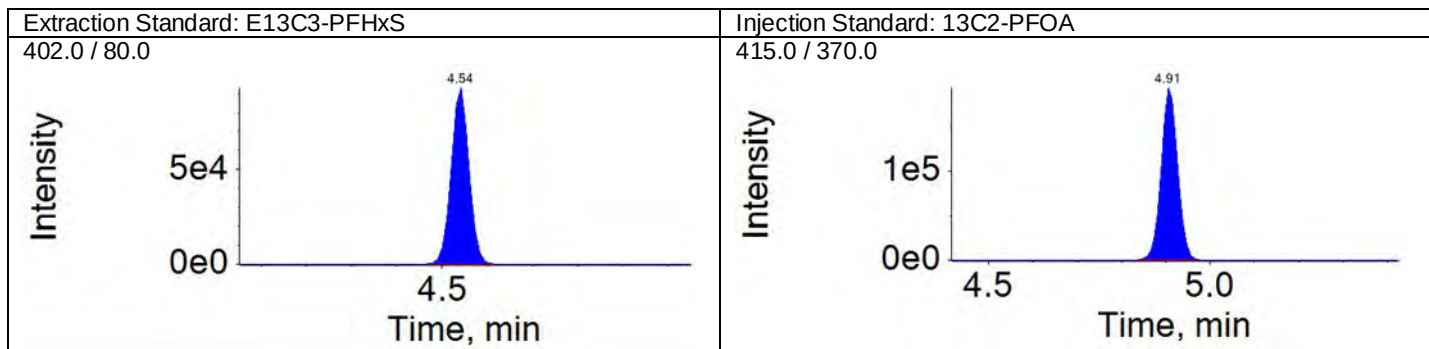
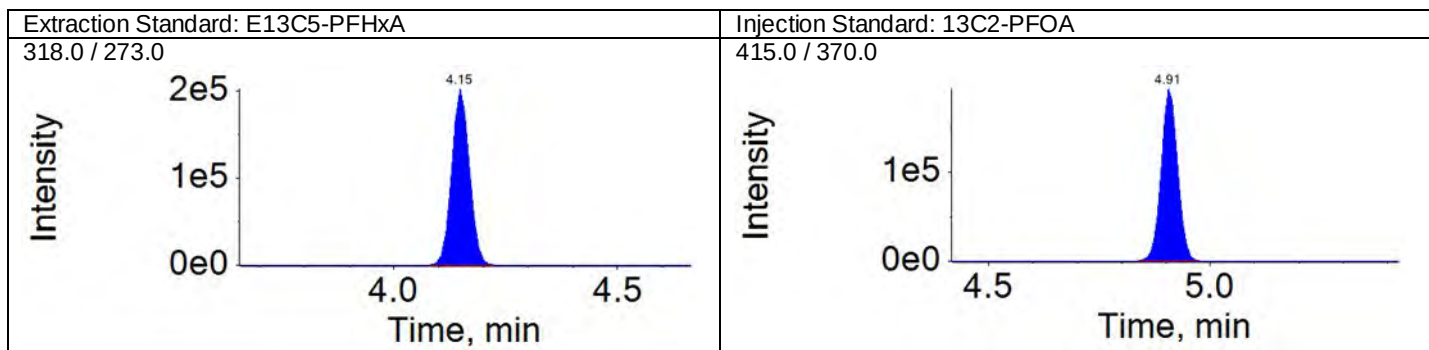
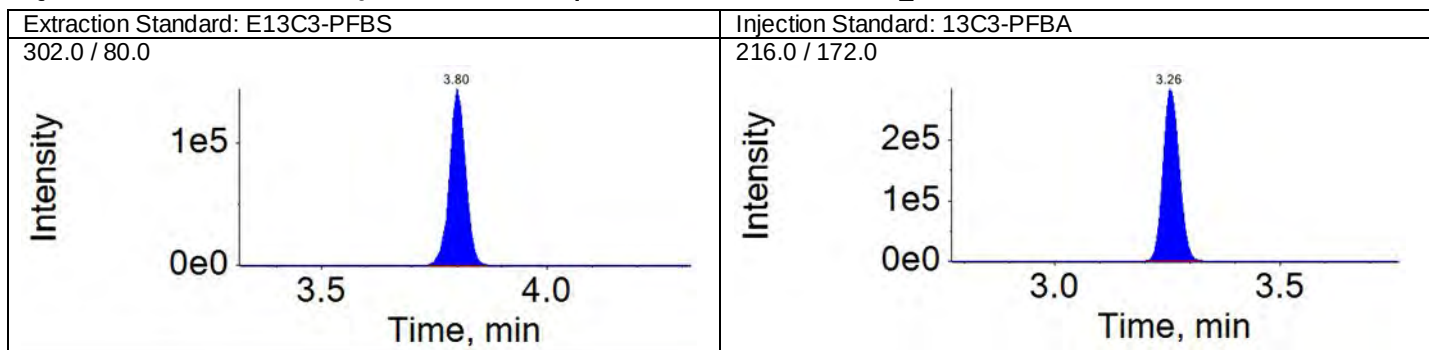
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



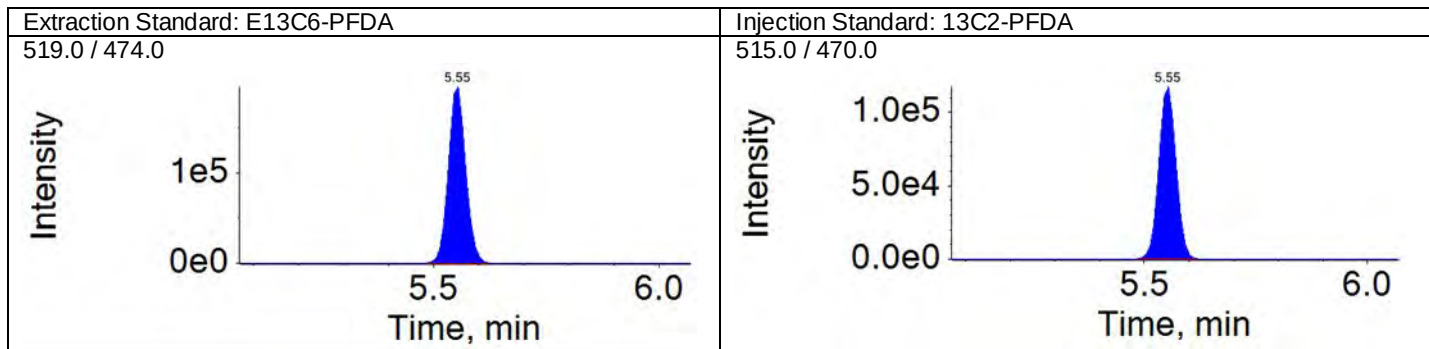
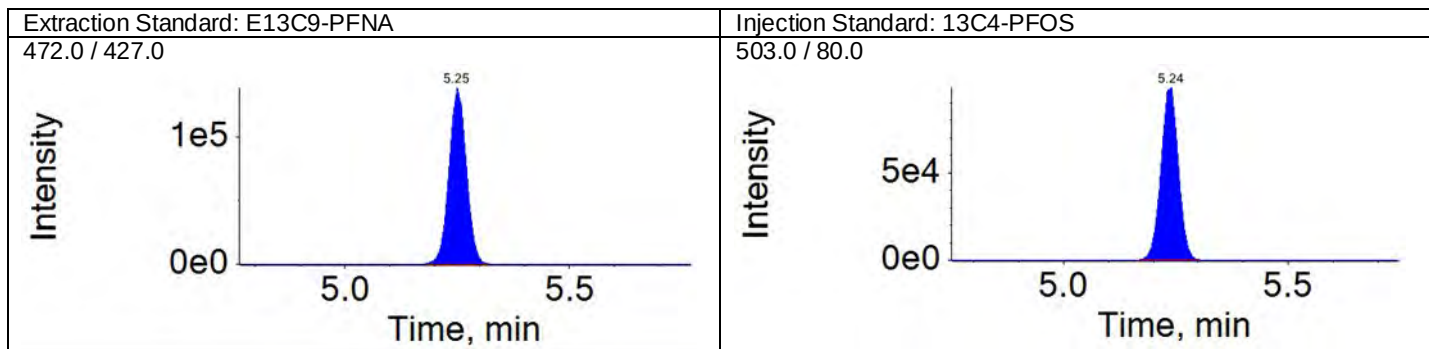
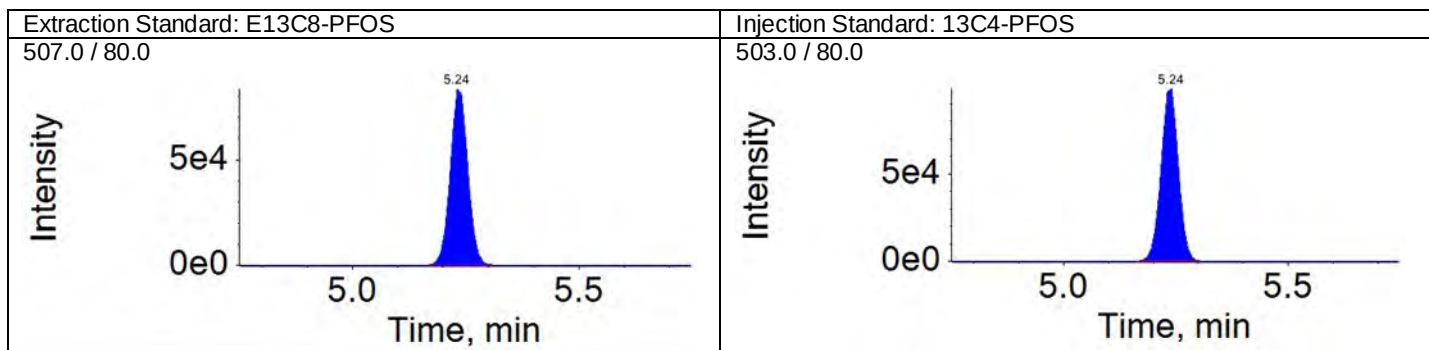
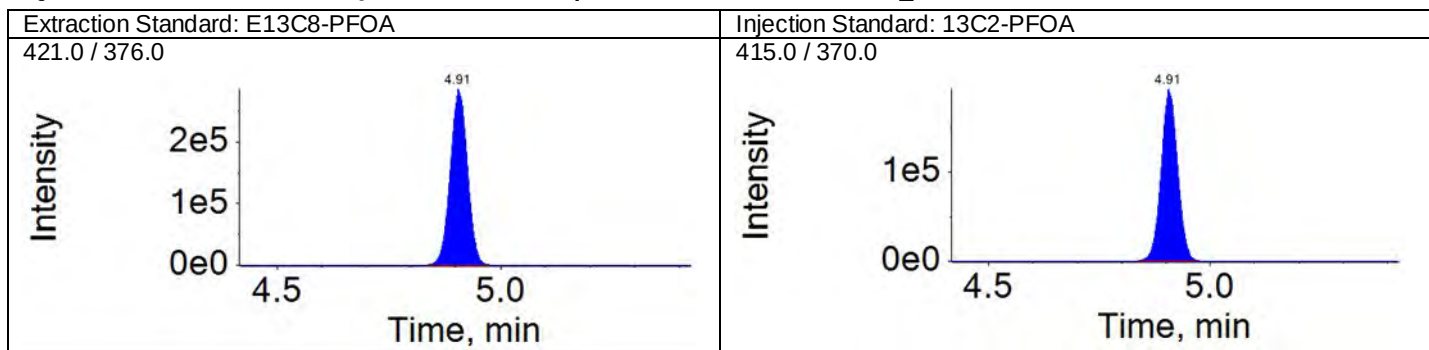
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

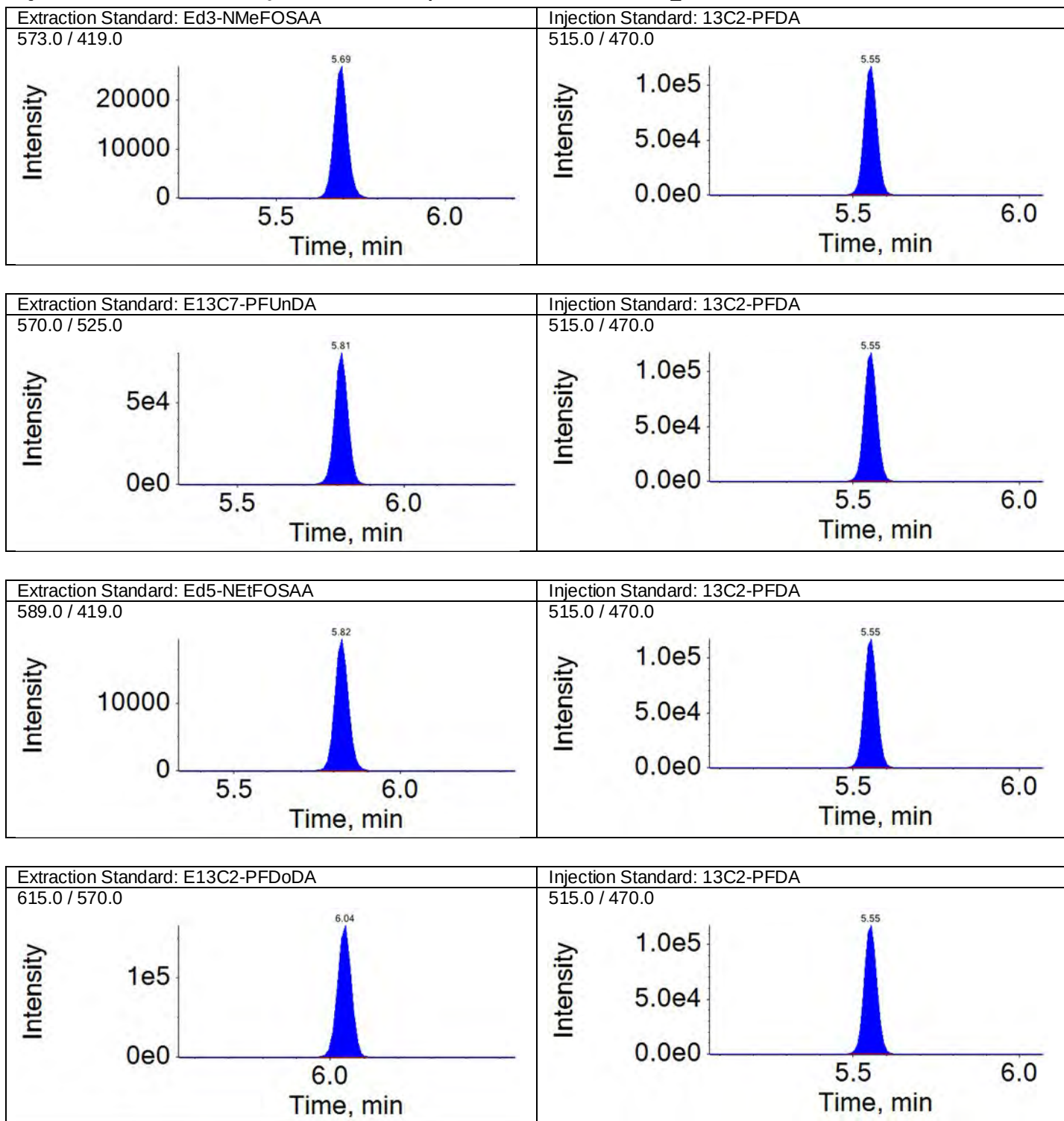
Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

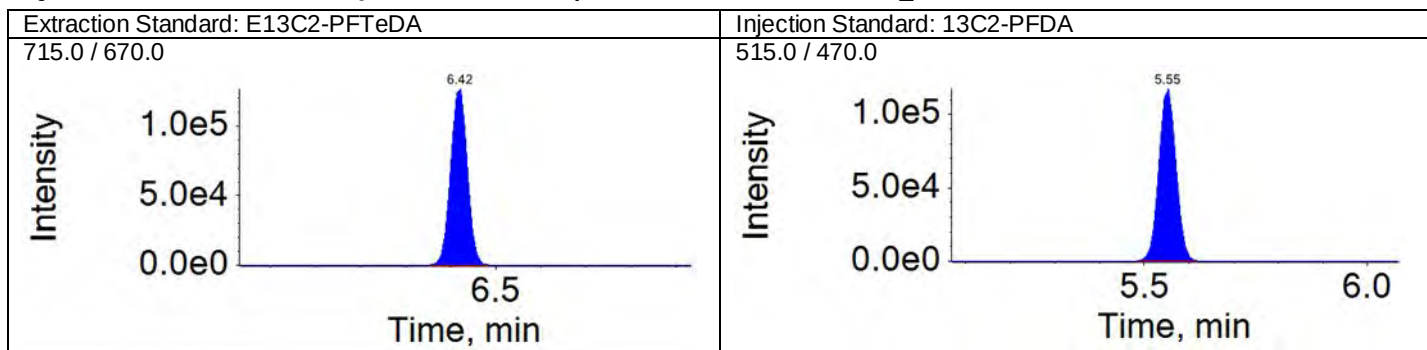
Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

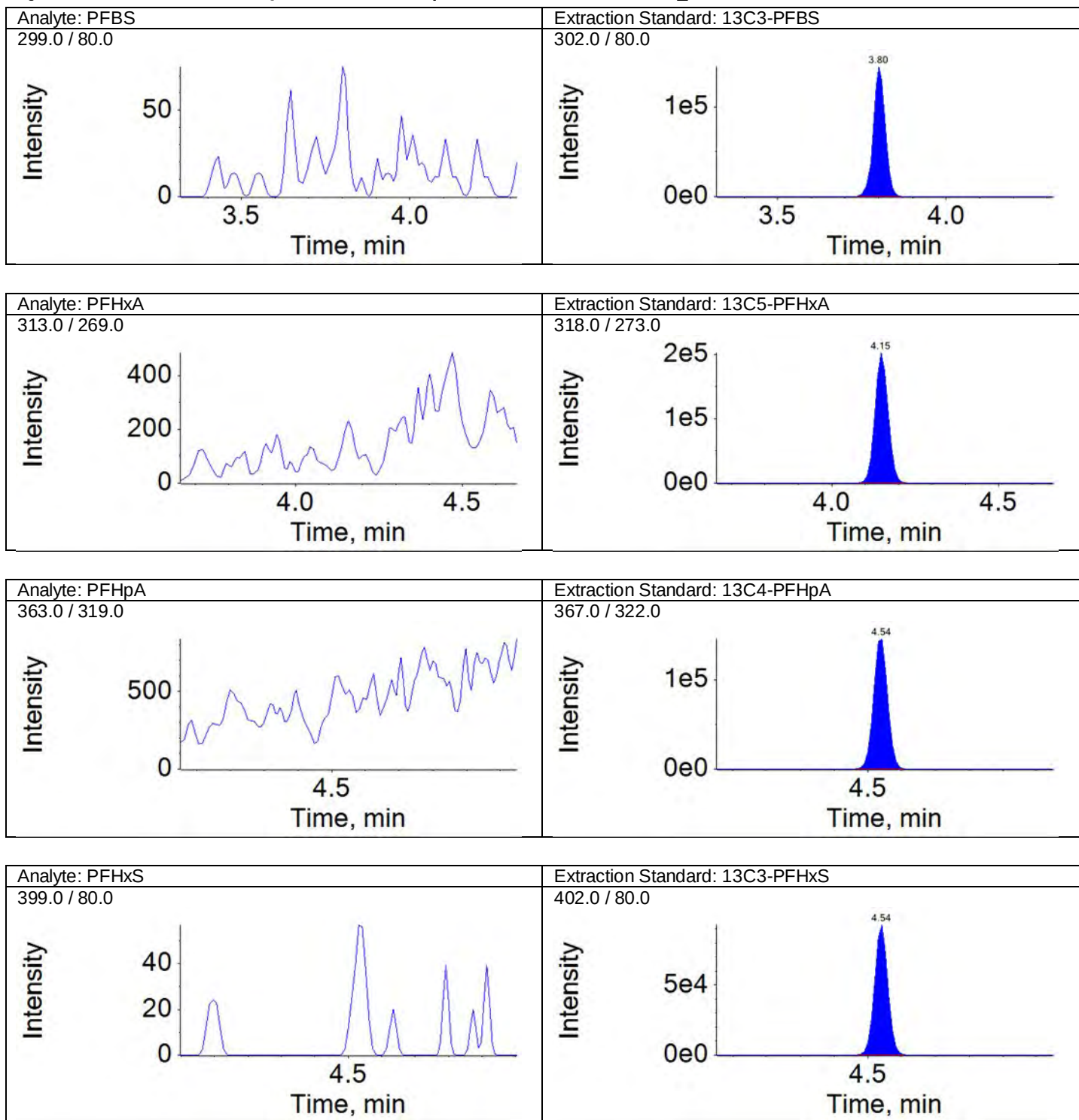
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

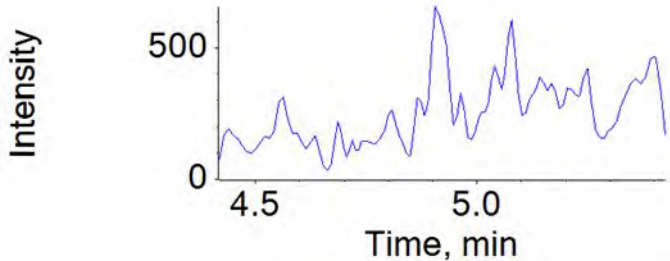
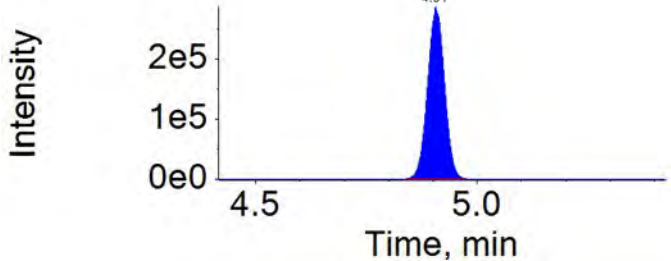
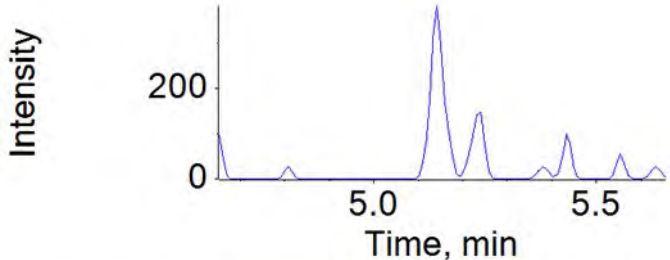
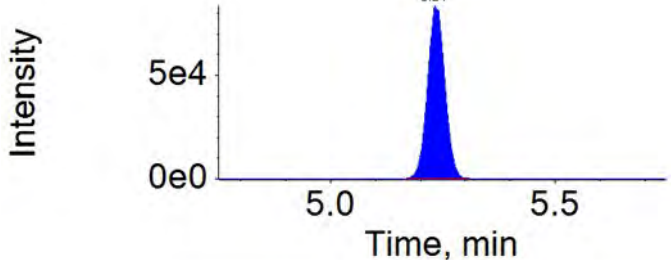
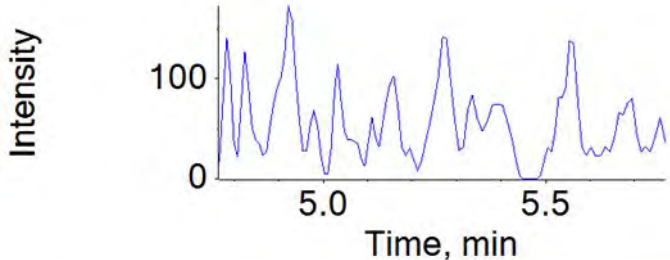
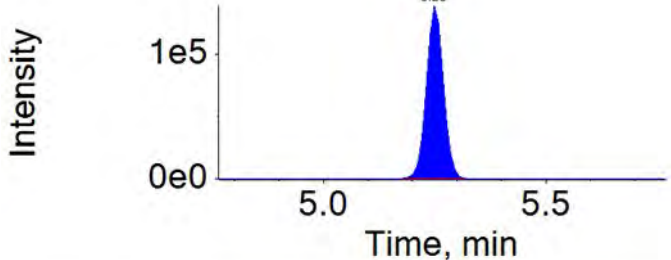
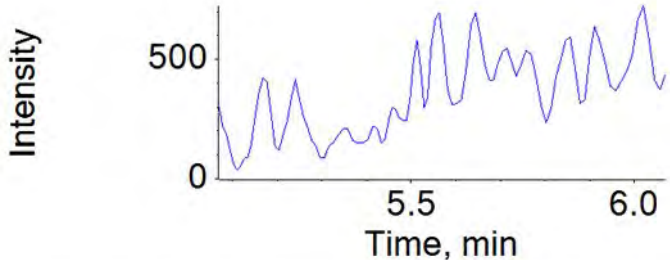
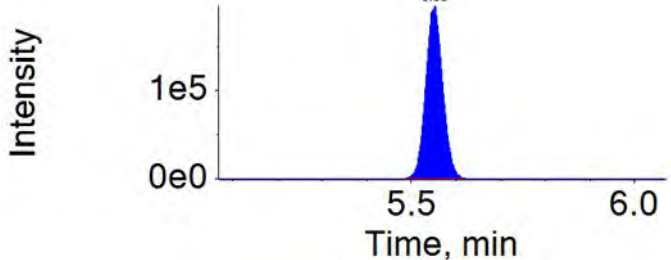
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



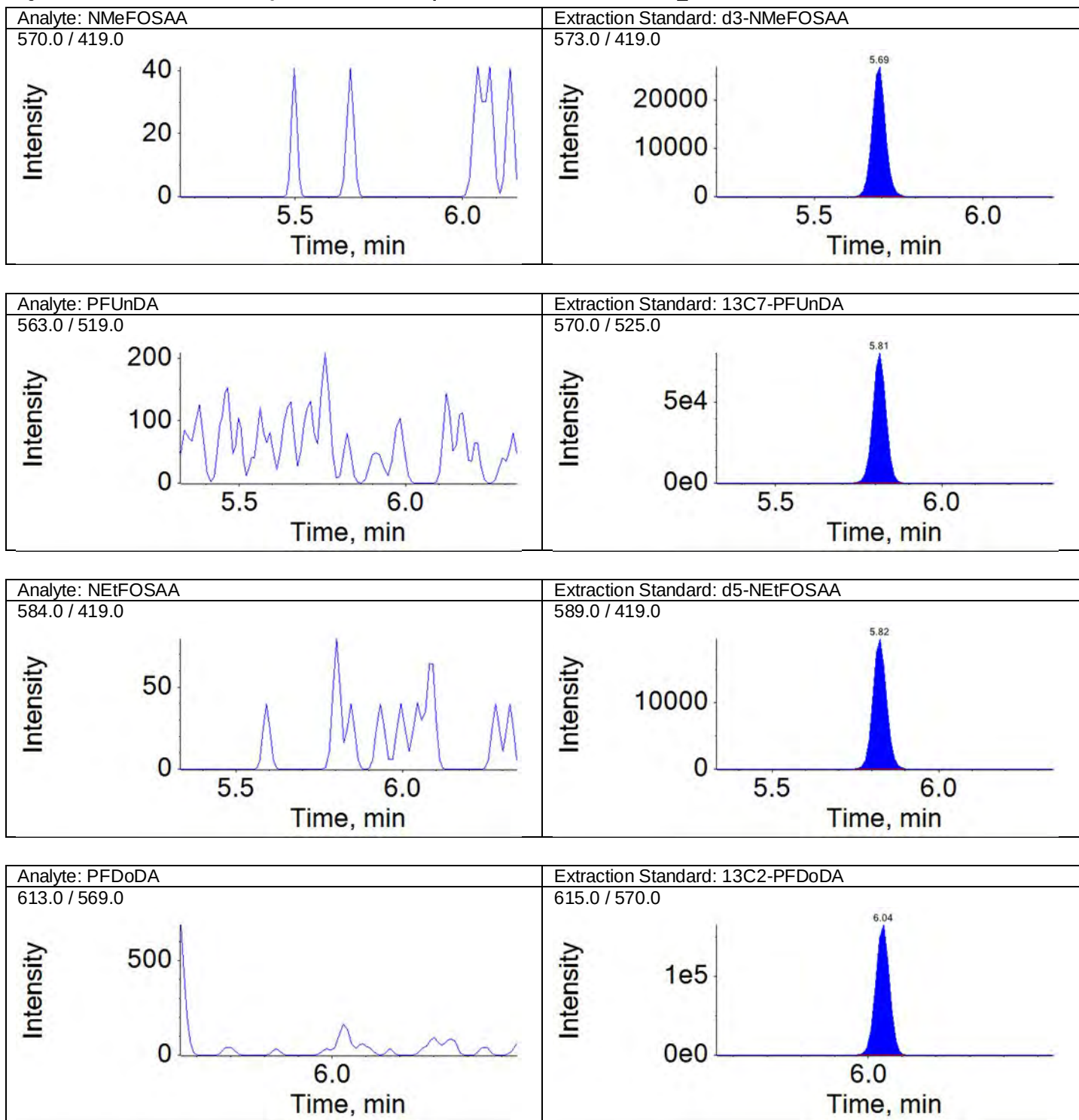
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

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 
Analyte: PFNA 463.0 / 419.0 	Extraction Standard: 13C9-PFNA 472.0 / 427.0 
Analyte: PFDA 513.0 / 469.0 	Extraction Standard: 13C6-PFDA 519.0 / 474.0 

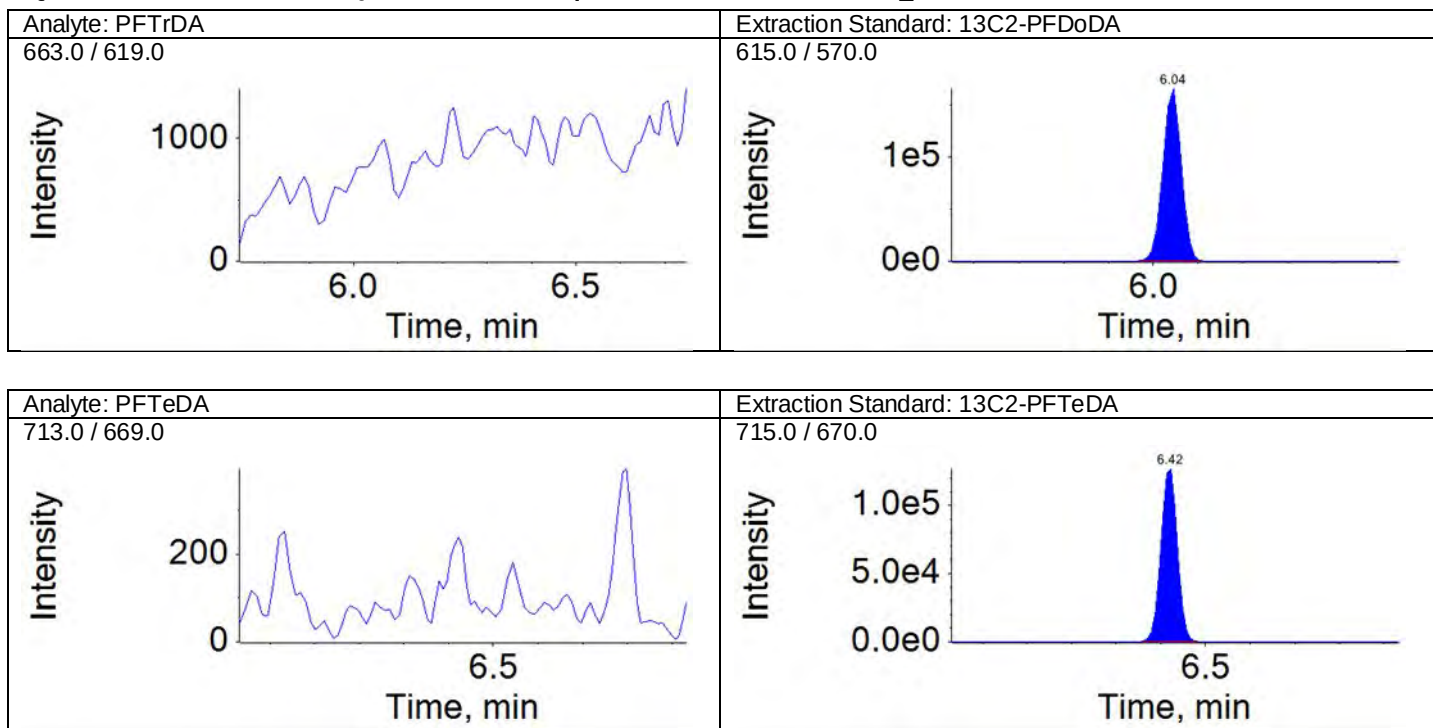
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



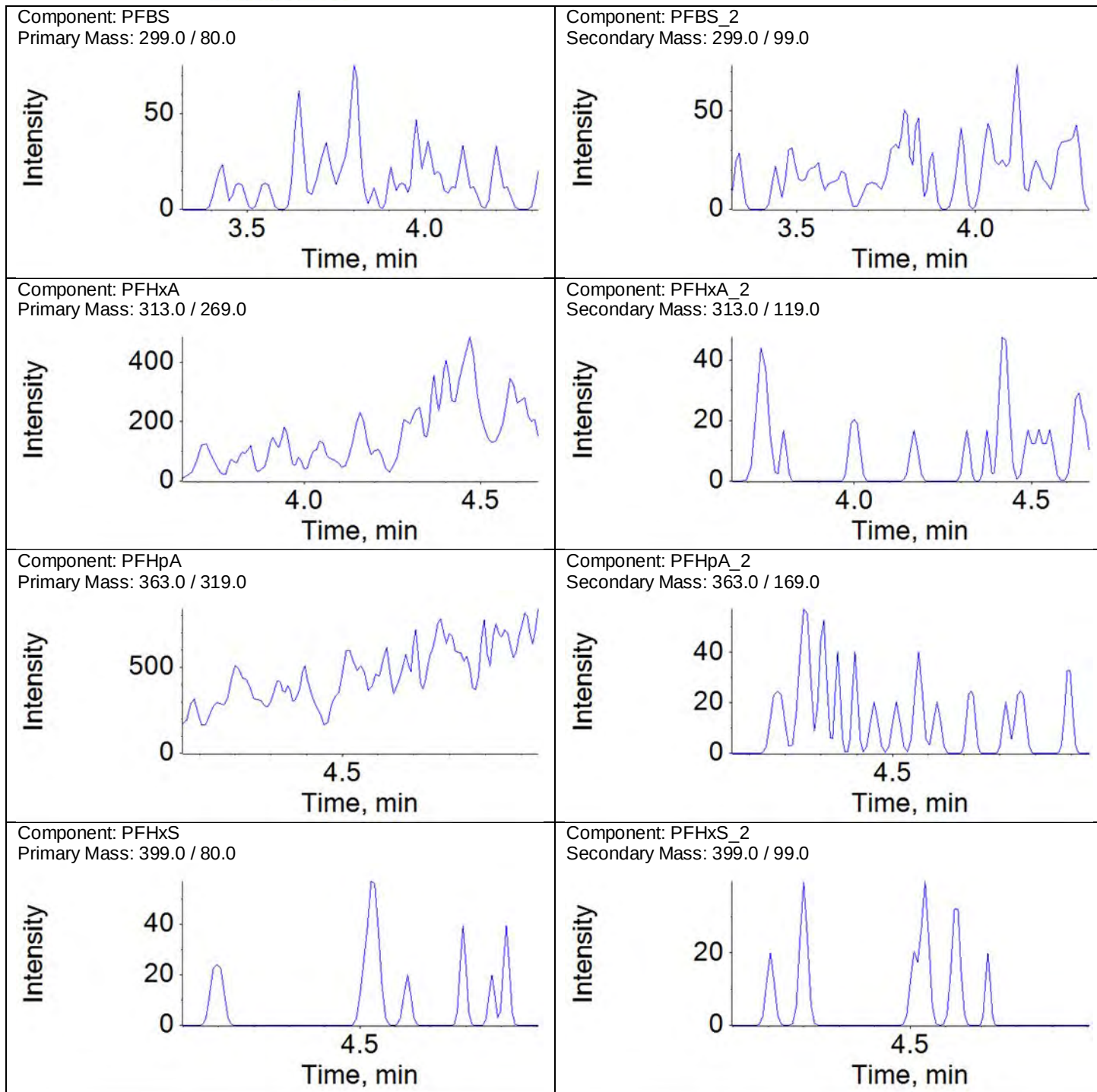
Ion Ratio Report

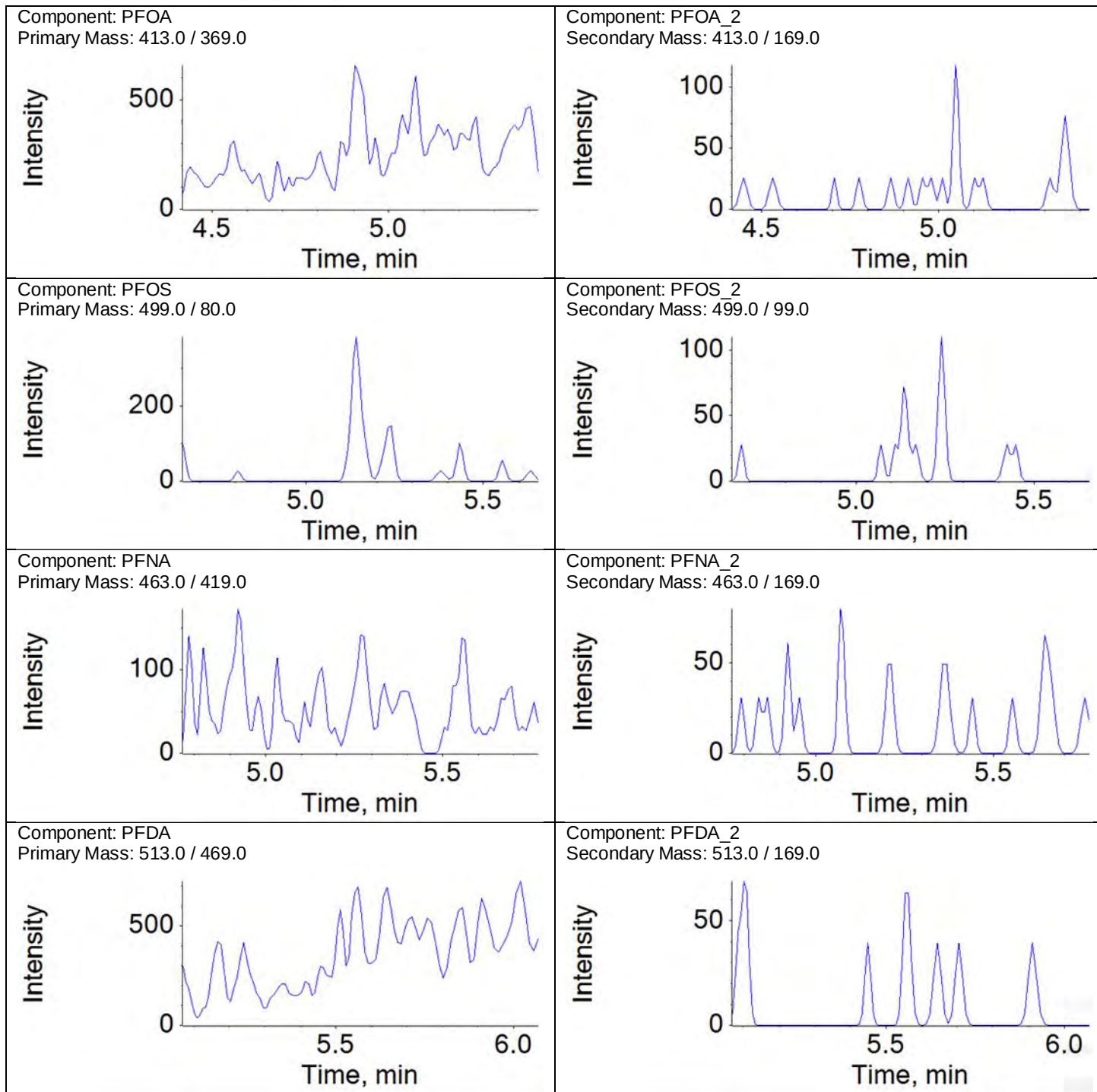
Sample Name: 9881912

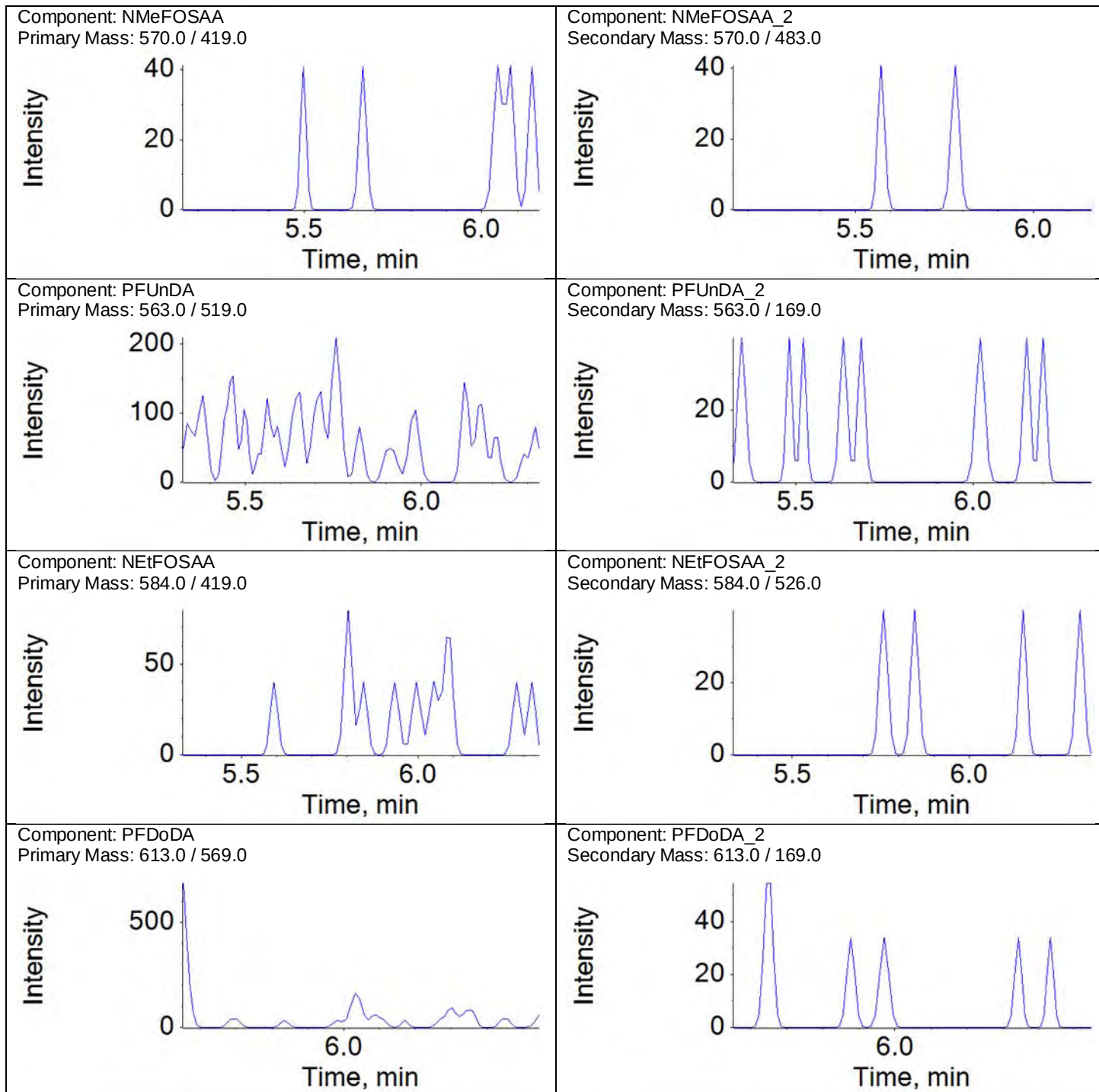
Instrument Name: LM27631

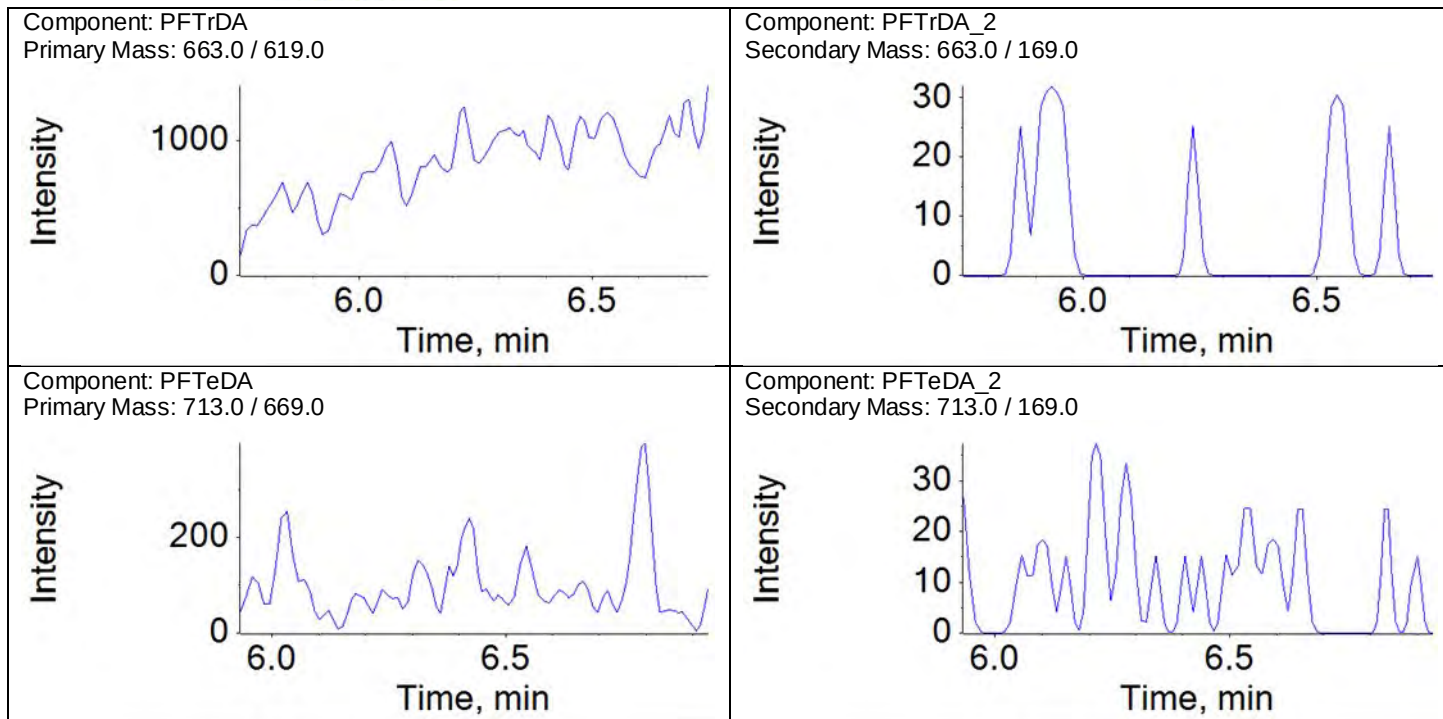
File Name: 18NOV13D-18.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881915			Data File:		18NOV13D-19.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-06-01 Grab Soil			Acquis Date:		2018-11-13T11:50:23
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	24			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			Operator:		MCD7824
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: 18NOV13D-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	705134.1	661126.9	7	50	
13C2-PFOA	5.0	487339.4	466902.6	4	50	
13C4-PFOS	4.8	258814.6	247446.9	5	50	
13C2-PFDA	5.0	321464.2	295381.6	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
E13C3-PFBS	364201.5	13C3-PFBA	705134.1	0.516	9.208	7.220	78	50-150	
E13C5-PFHxA	576239.5	13C2-PFOA	487339.4	1.182	9.901	8.458	85	50-150	
E13C3-PFHxS	262168.4	13C2-PFOA	487339.4	0.538	9.366	7.310	78	50-150	
E13C4-PFHpA	451546.5	13C2-PFOA	487339.4	0.927	9.901	8.266	83	50-150	
E13C8-PFOA	780767.3	13C2-PFOA	487339.4	1.602	9.901	8.741	88	50-150	
E13C8-PFOS	234274.5	13C4-PFOS	258814.6	0.905	9.465	7.942	84	50-150	
E13C9-PFNA	398758.3	13C4-PFOS	258814.6	1.541	9.901	8.506	86	50-150	
E13C6-PFDA	482741.6	13C2-PFDA	321464.2	1.502	9.901	6.939	70	50-150	
Ed3-NMeFOSAA	52959.0	13C2-PFDA	321464.2	0.165	9.901	5.889	59	50-150	
E13C7-PFUnDA	213620.5	13C2-PFDA	321464.2	0.665	9.901	7.640	77	50-150	
Ed5-NEtFOSAA	40255.0	13C2-PFDA	321464.2	0.125	9.901	5.246	53	50-150	
E13C2-PFDODA	475653.2	13C2-PFDA	321464.2	1.480	9.901	7.607	77	50-150	
E13C2-PFTeDA	335557.2	13C2-PFDA	321464.2	1.044	9.901	7.257	73	50-150	

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881915

Instrument Name: LM27631

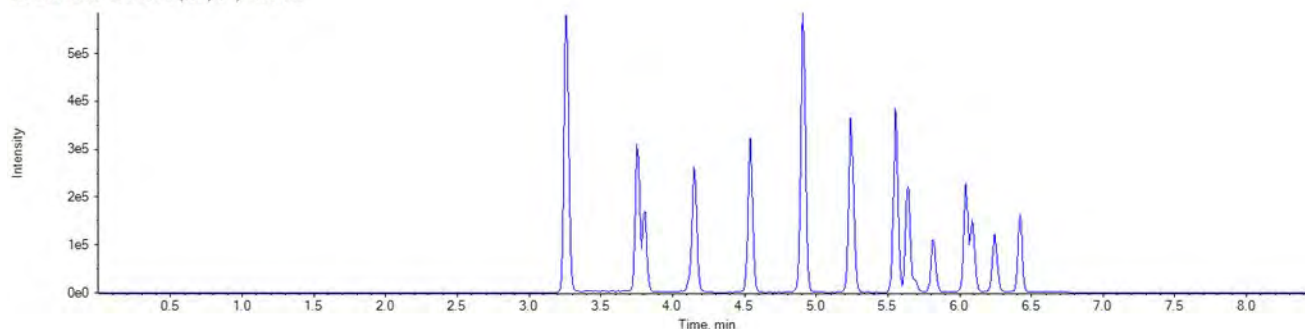
File Name: 18NOV13D-19.wiff

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	N/A	N/A	N/A		A	13C3-PFBS	3.80	364201.5	N/A	
PFHxA	4.15	1.000	10827.8		A	13C5-PFHxA	4.15	576239.5	0.019	0.155
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	451546.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	262168.4	N/A	
PFOA	4.91	1.000	14212.5		M	13C8-PFOA	4.91	780767.3	0.018	0.193
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	234274.5	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	398758.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	482741.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	52959.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	213620.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	40255.0	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	475653.2	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	475653.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	335557.2	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-19.wiff (sample 1) - 9881915



APPROVED

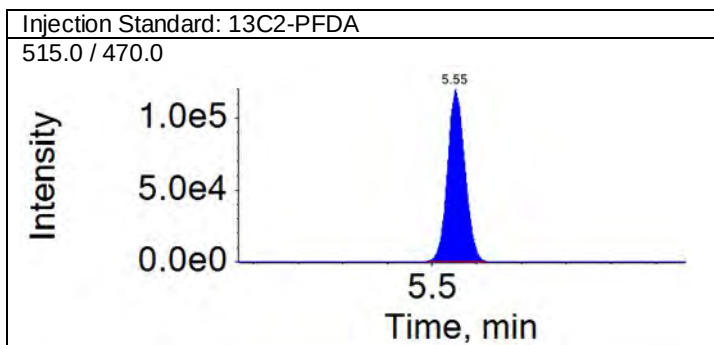
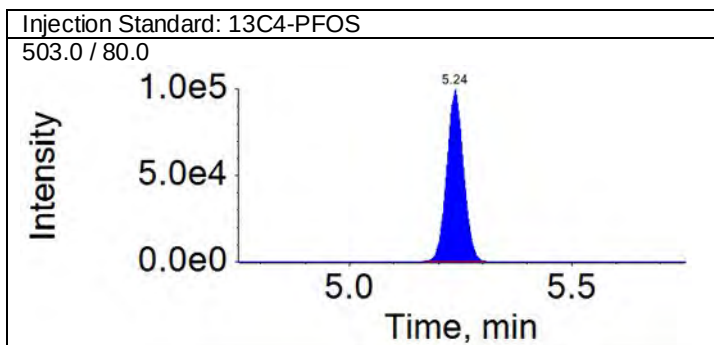
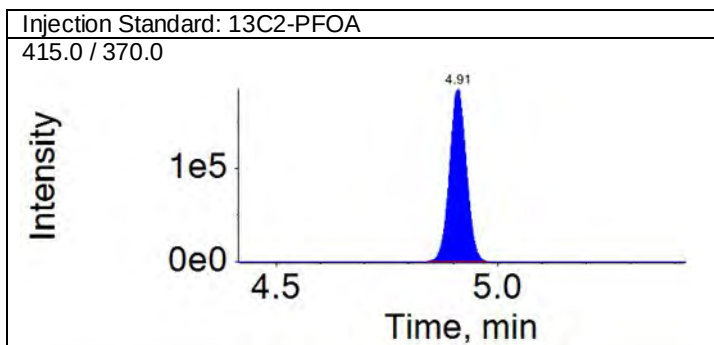
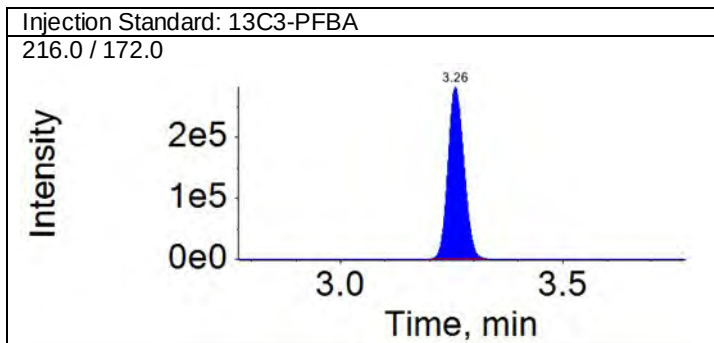
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

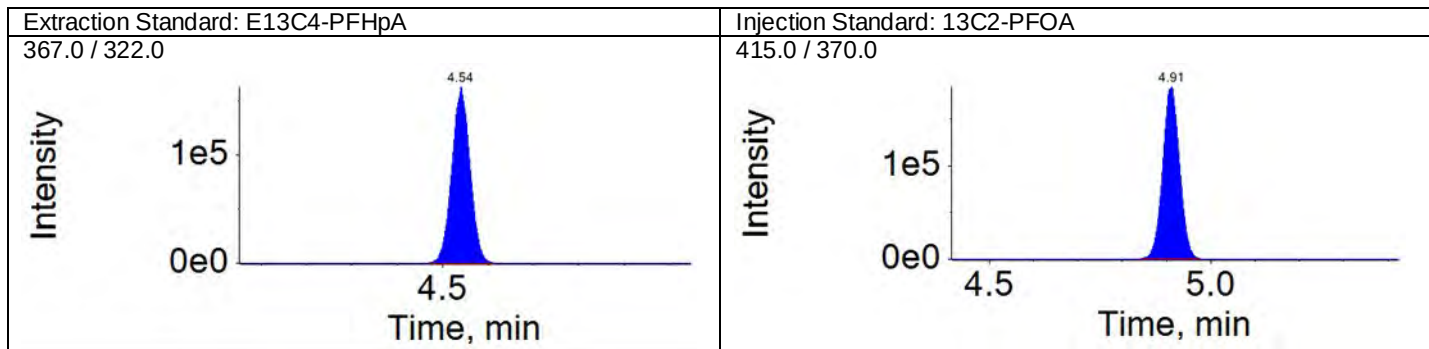
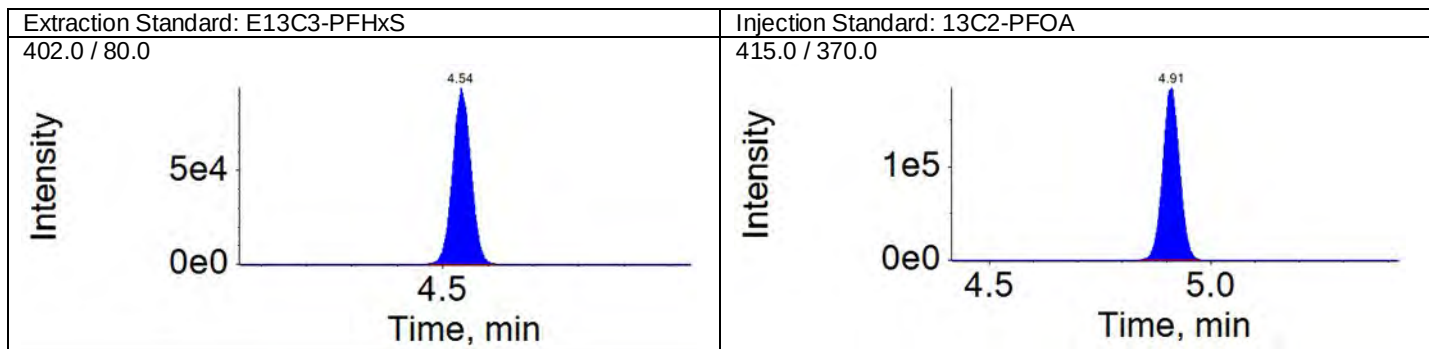
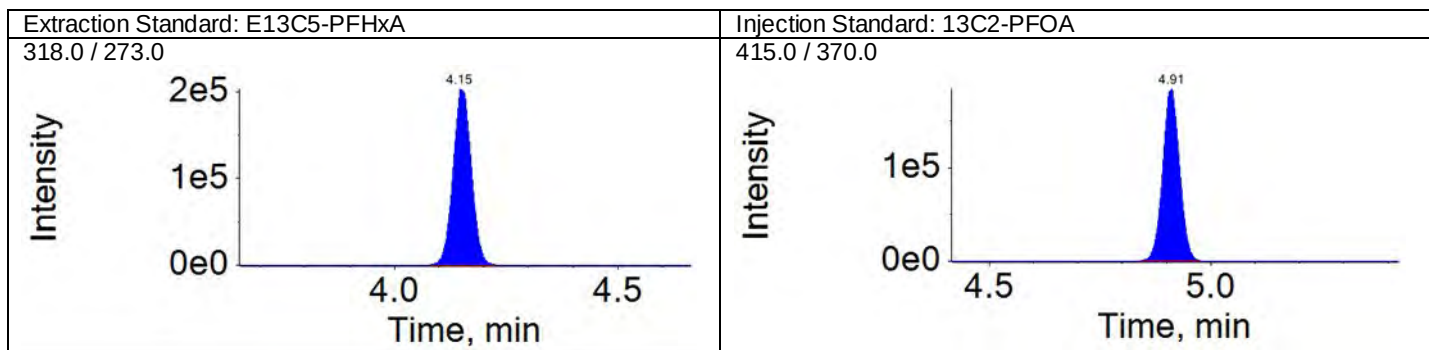
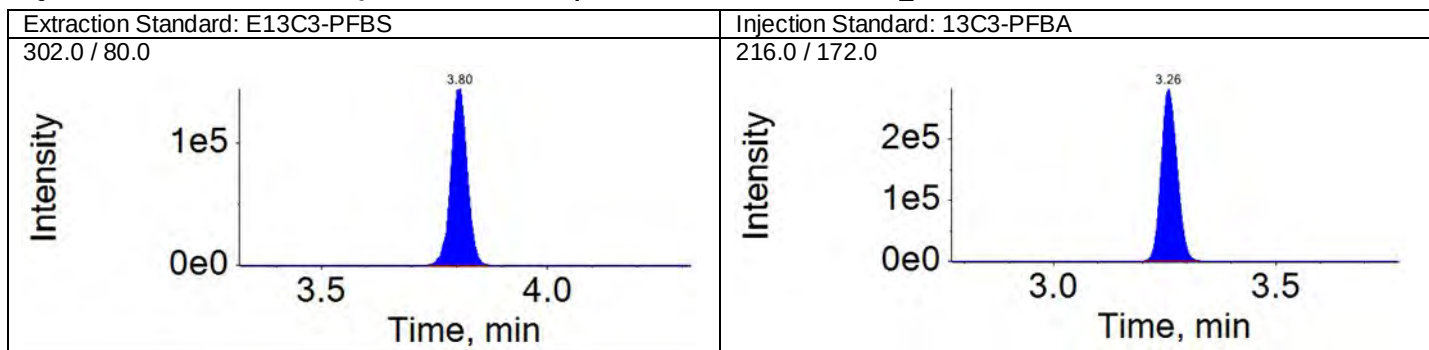
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



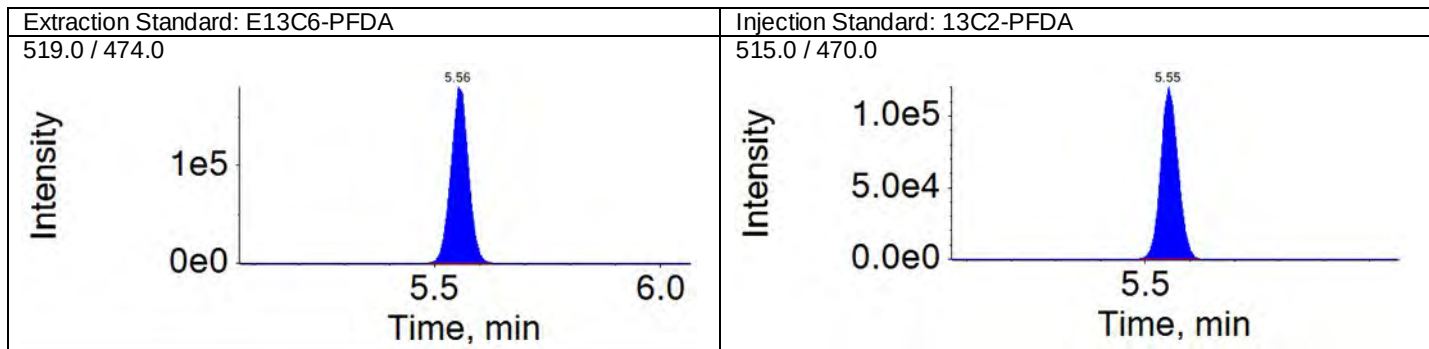
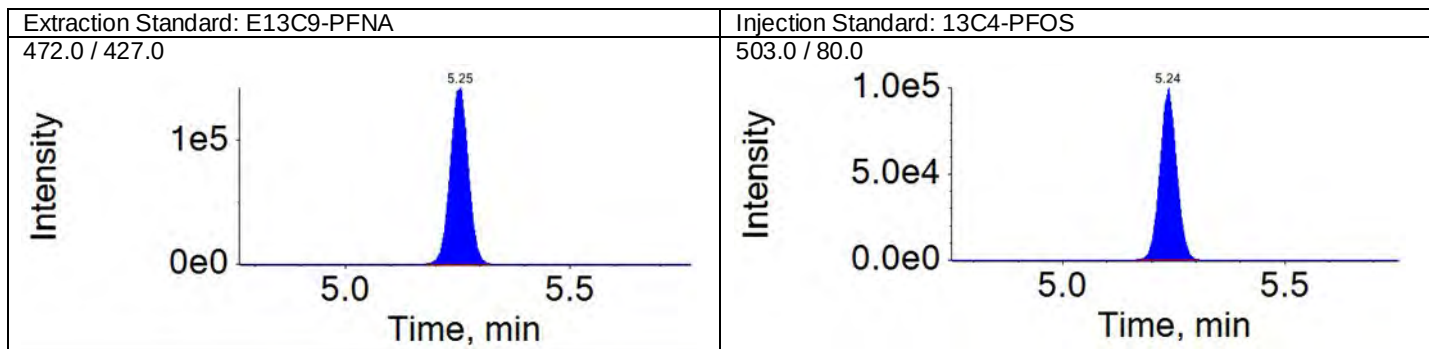
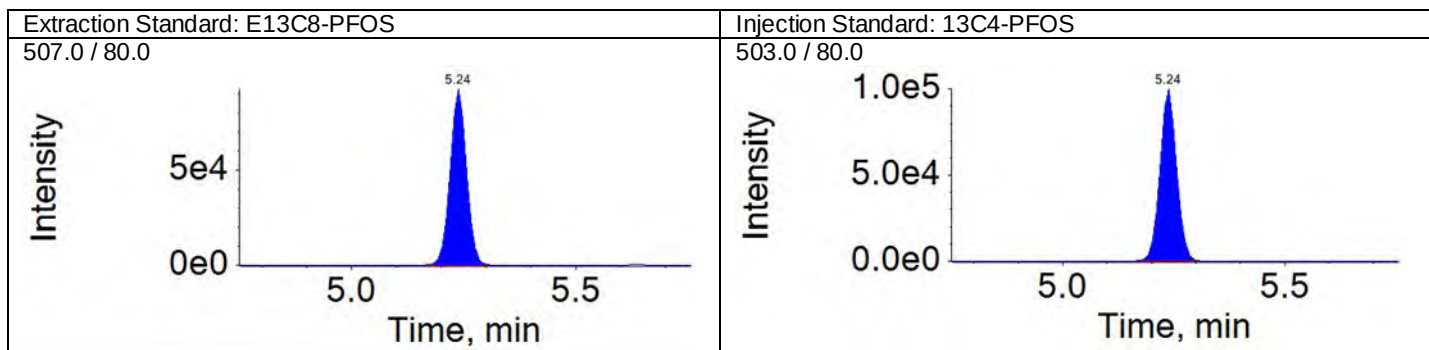
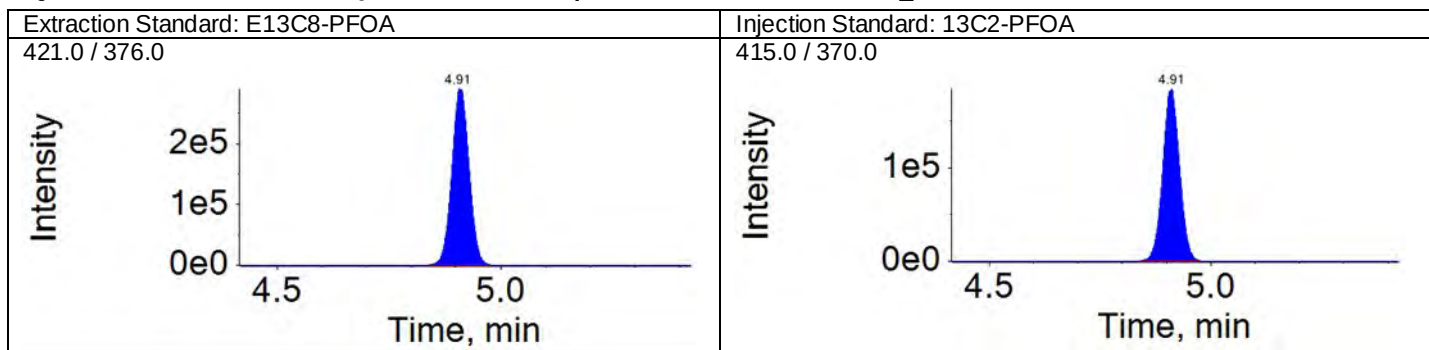
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



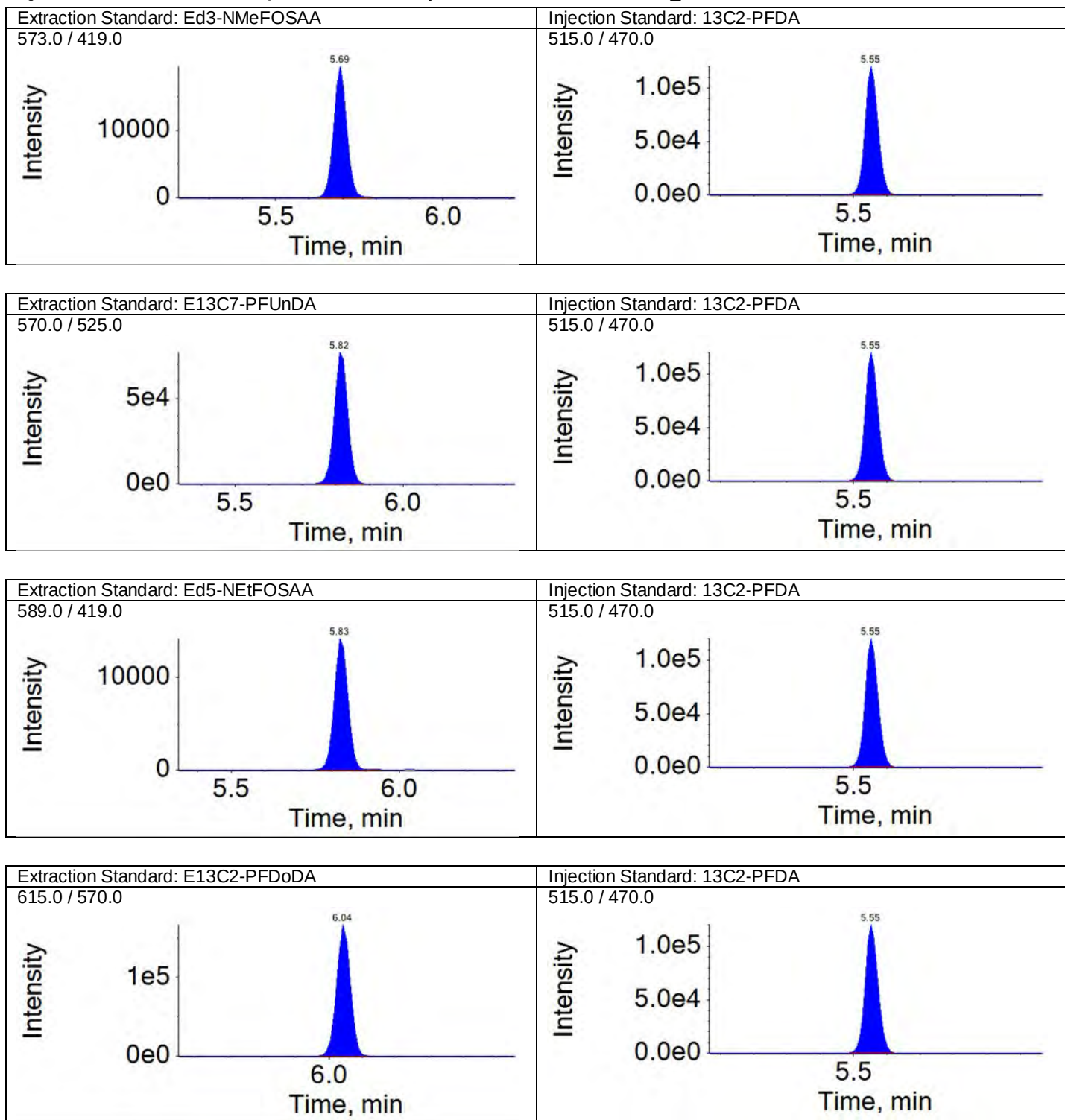
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



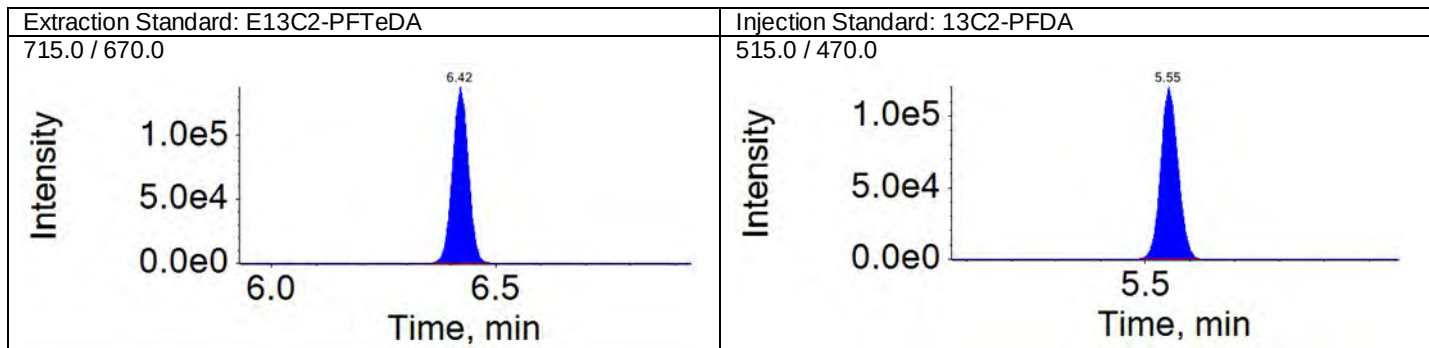
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

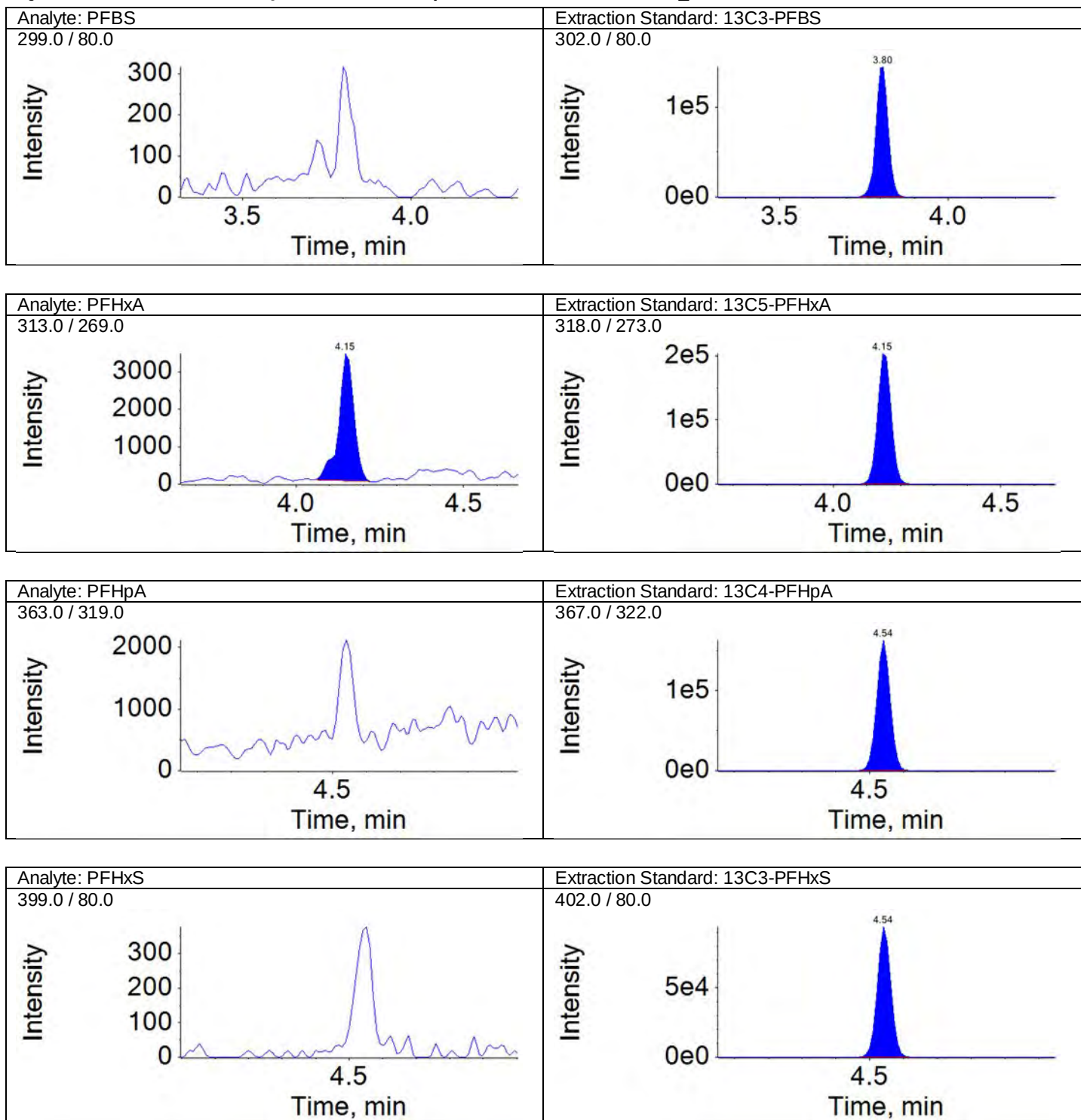
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

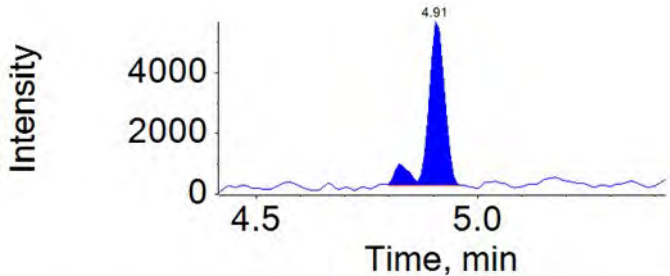
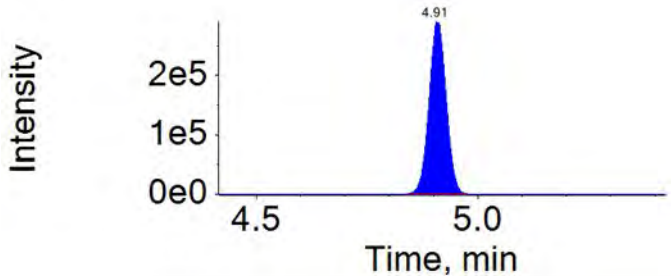
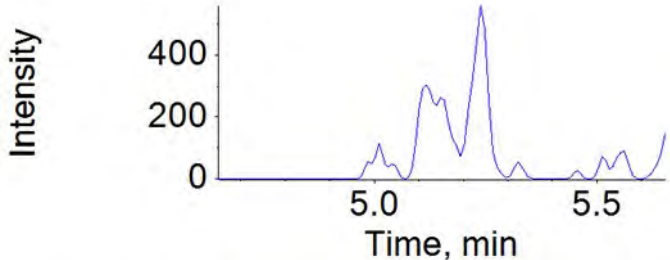
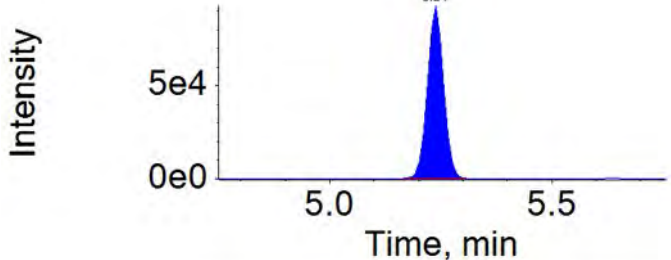
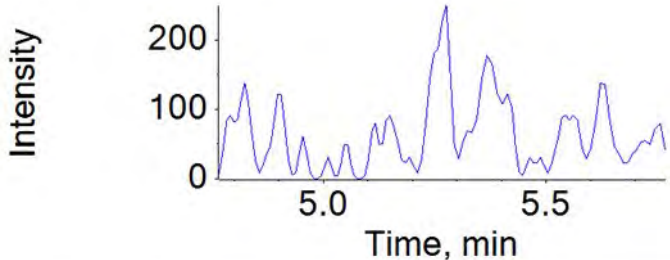
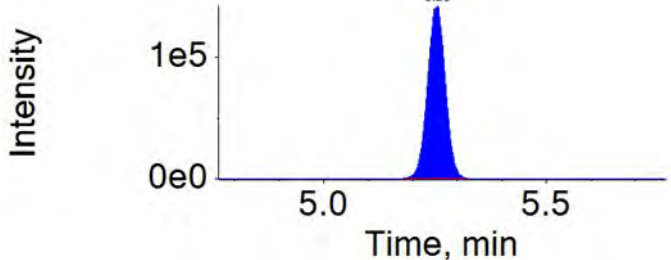
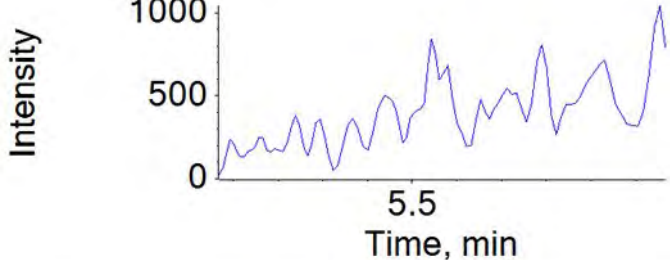
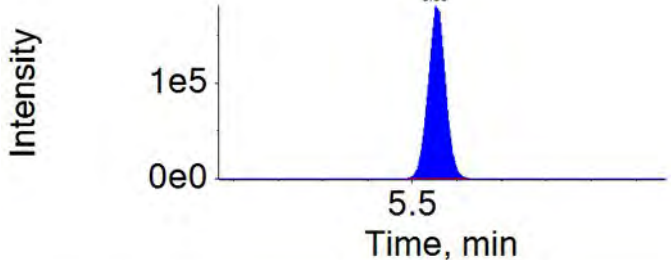
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



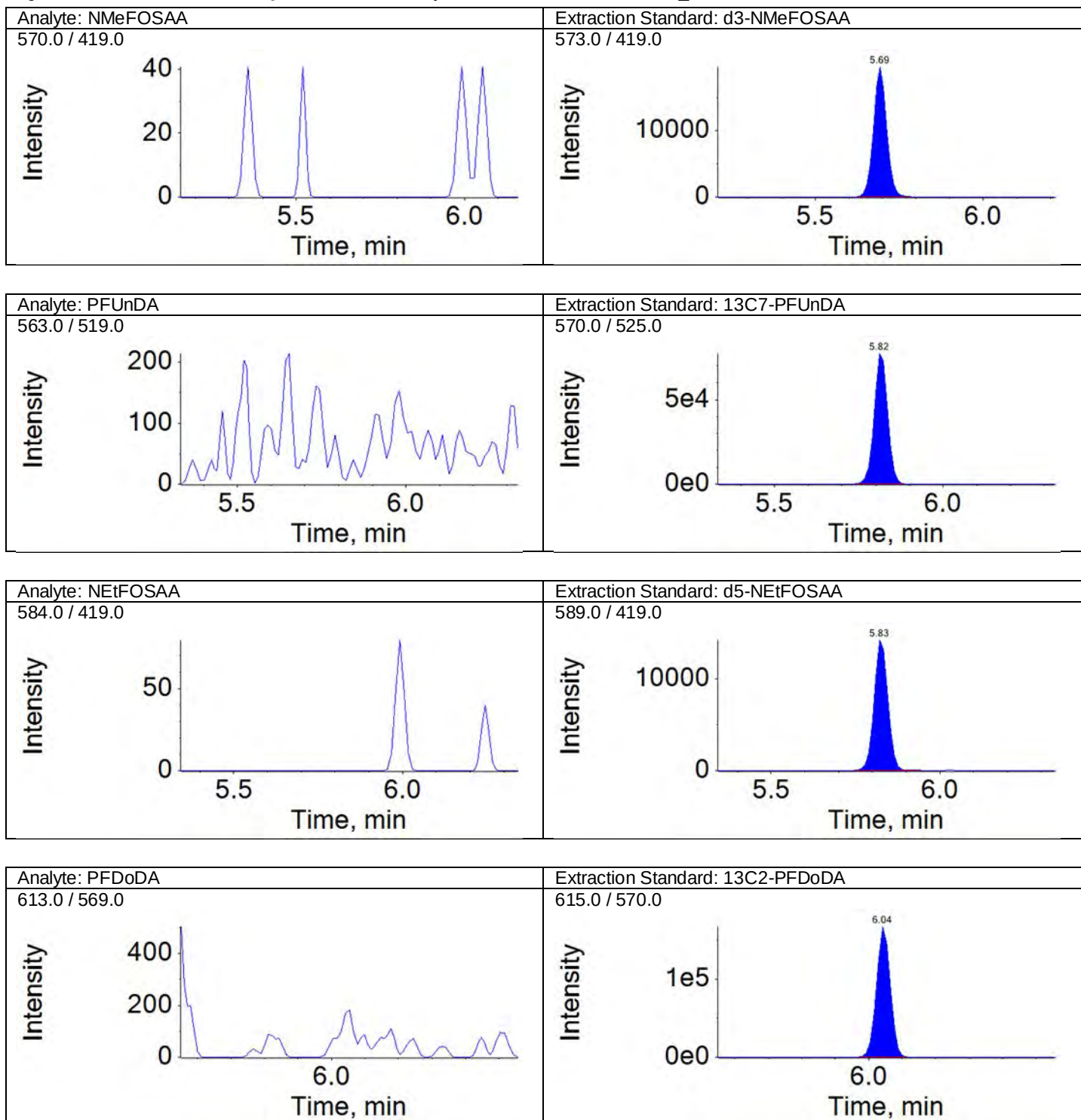
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

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 
Analyte: PFNA 463.0 / 419.0 	Extraction Standard: 13C9-PFNA 472.0 / 427.0 
Analyte: PFDA 513.0 / 469.0 	Extraction Standard: 13C6-PFDA 519.0 / 474.0 

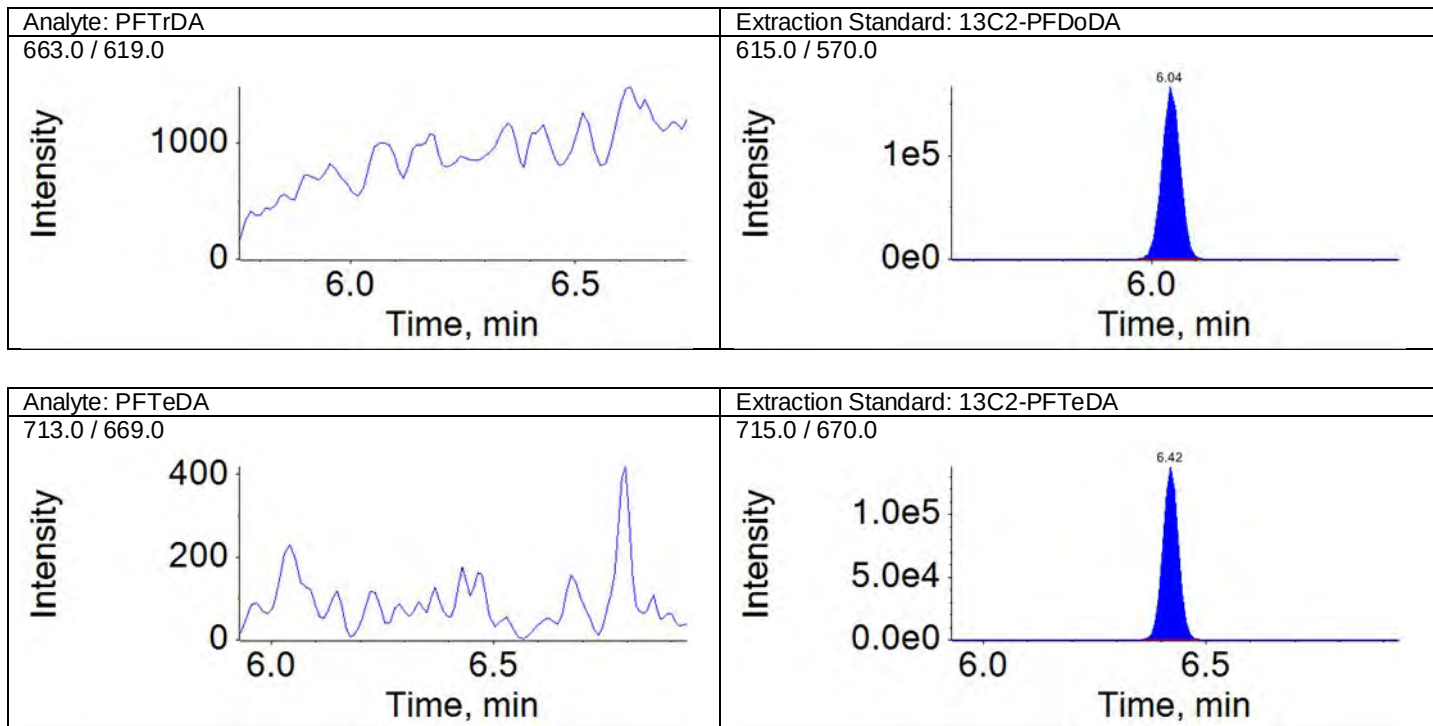
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



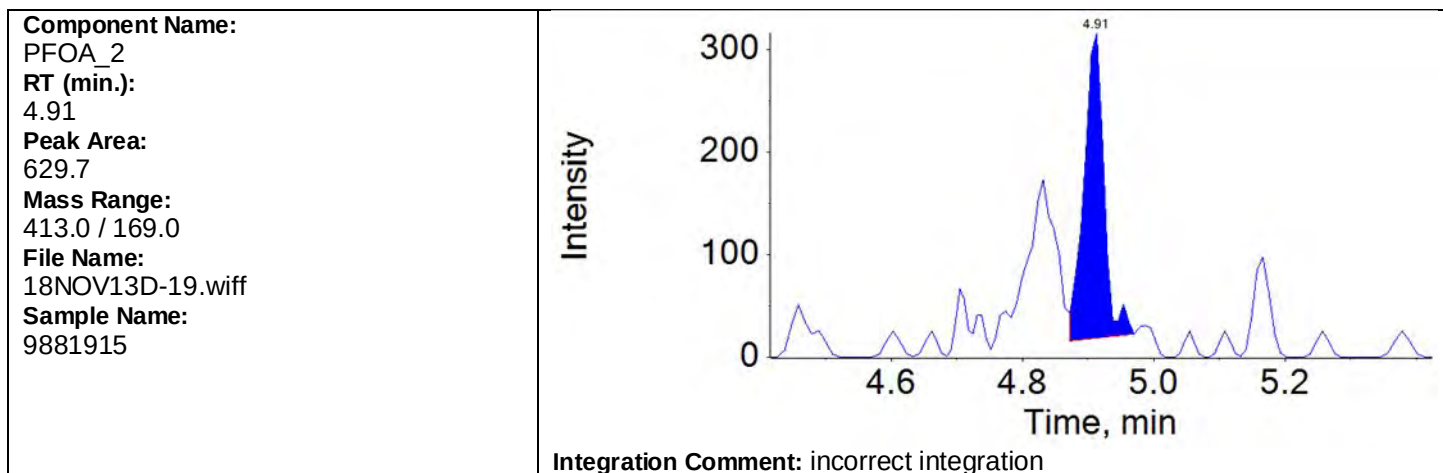
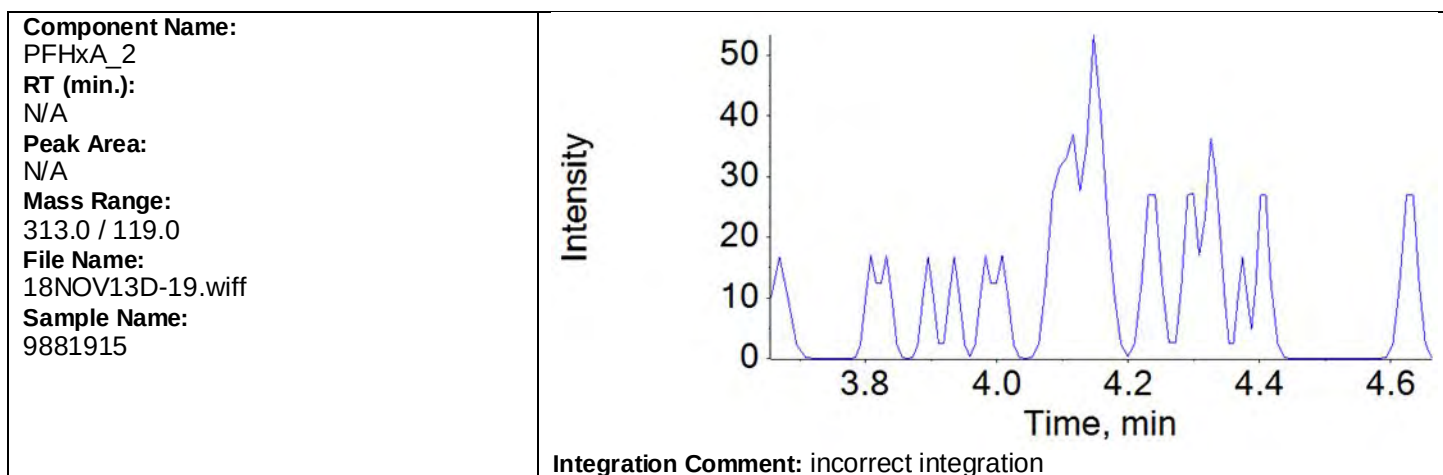
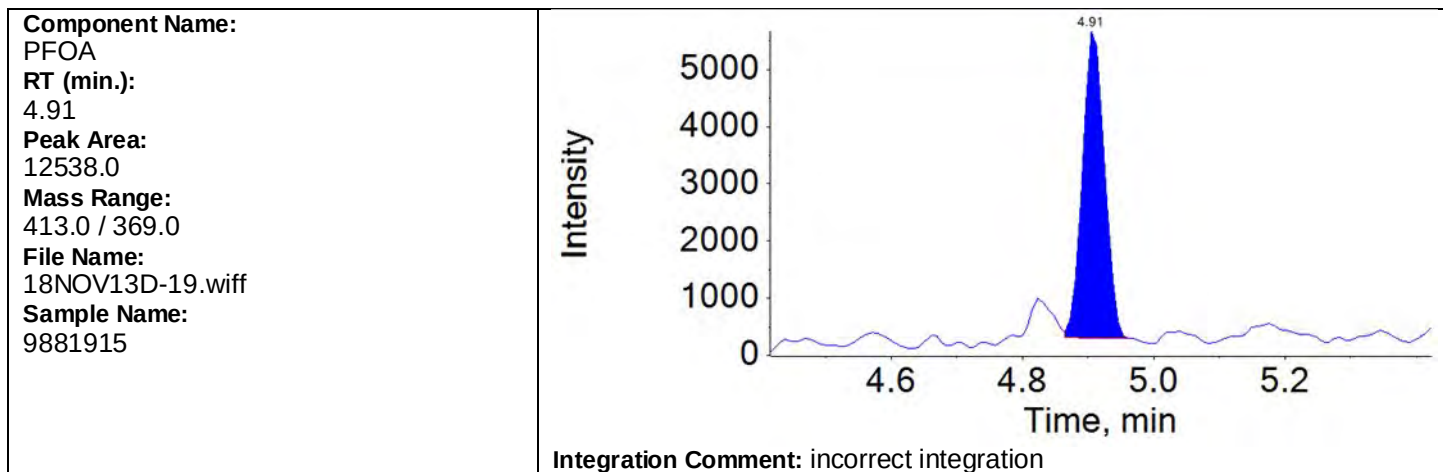
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

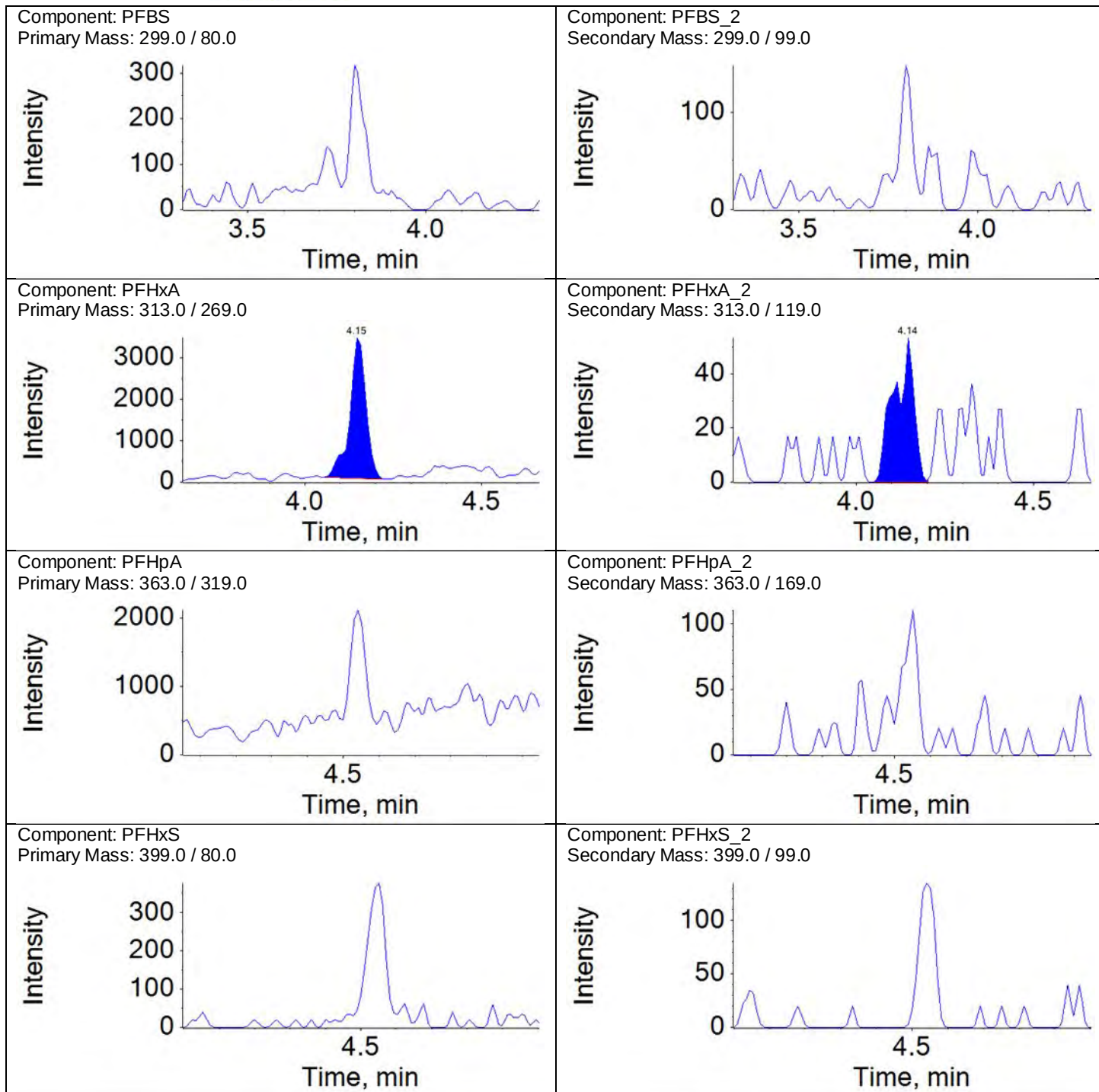
Ion Ratio Report

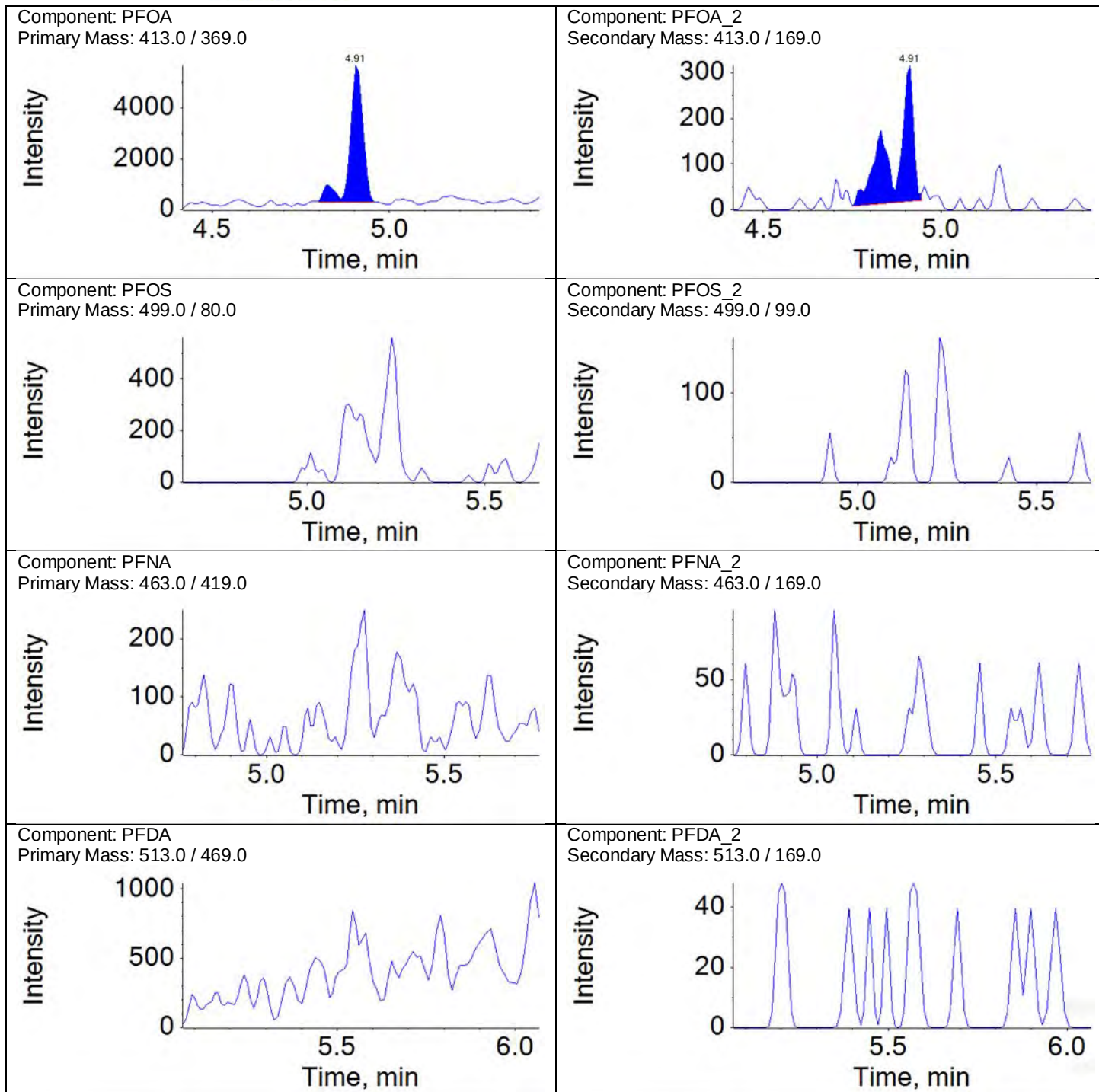
Sample Name: 9881915

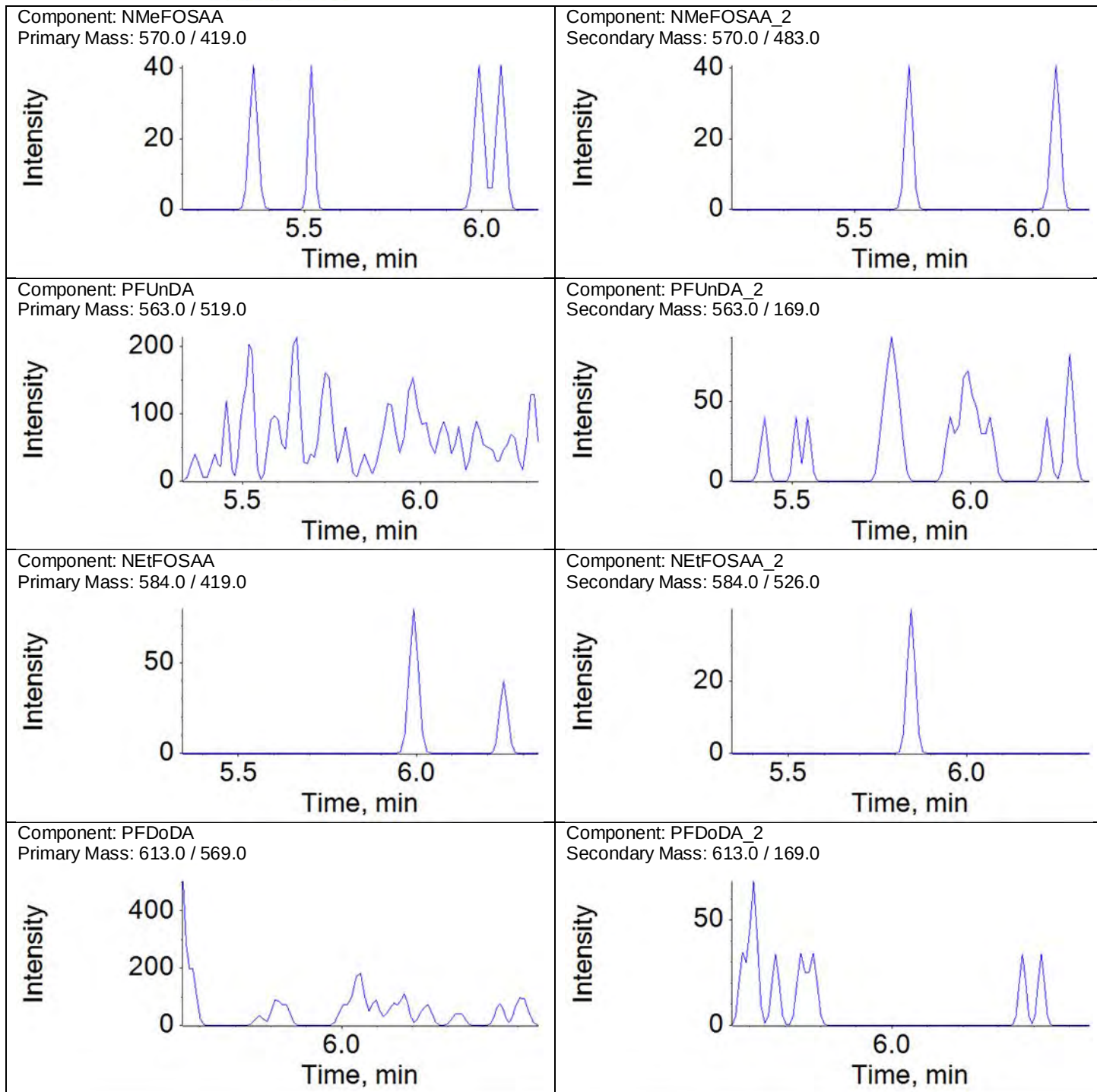
Instrument Name: LM27631

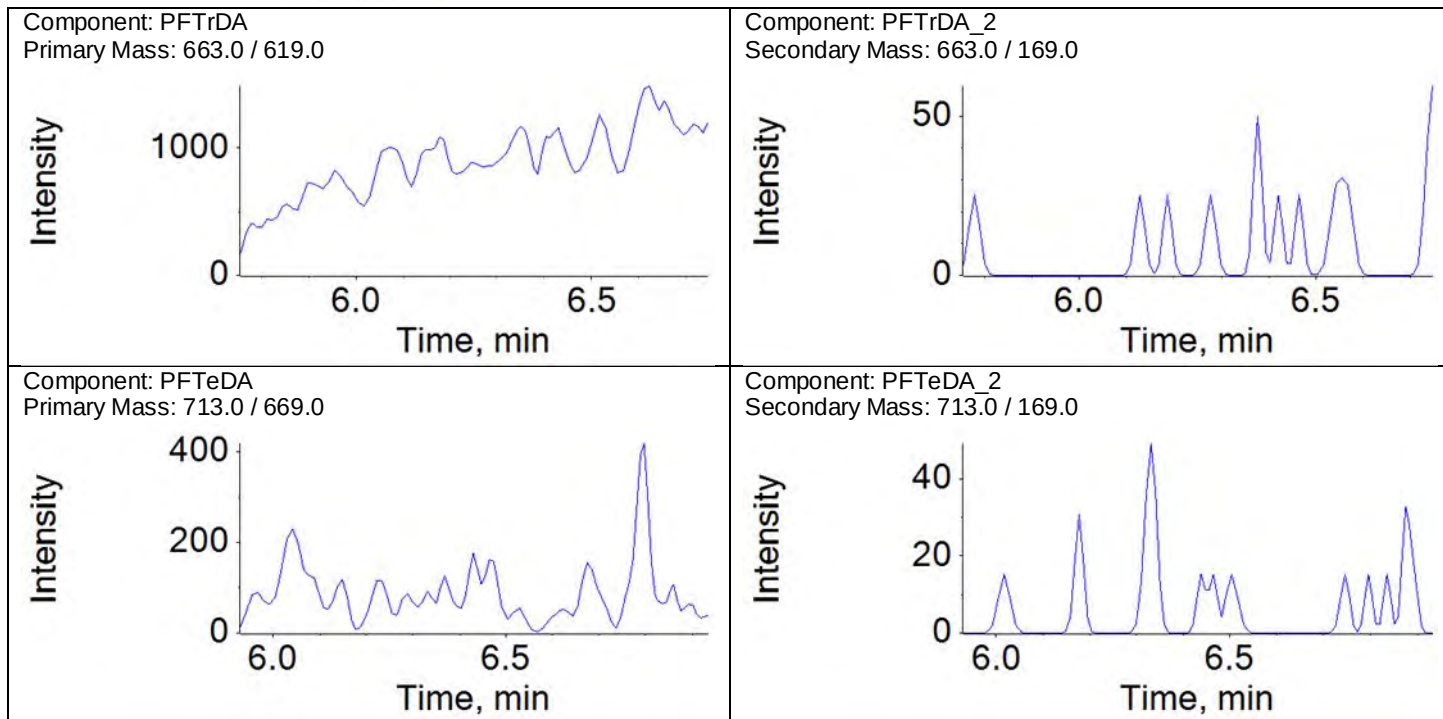
File Name: 18NOV13D-19.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.15	1.00	10827.8	A	N/A	0.0195			
PFHxA_2	4.14	1.00	211.4	M	N/A	0.0195	68	50	OOS
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	4.91	1.00	14212.5	M	N/A	0.0789			
PFOA_2	4.91	1.00	1121.9	M	N/A	0.0789	41	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881916			Data File:		18NOV13D-20.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-06-03 Grab Soil			Acquis Date:		2018-11-13T11:59:26
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	25			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			Operator:		MCD7824
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: 18NOV13D-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	694562.7	661126.9	5	50	
13C2-PFOA	5.0	510748.1	466902.6	9	50	
13C4-PFOS	4.8	257719.3	247446.9	4	50	
13C2-PFDA	5.0	306184.6	295381.6	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
E13C3-PFBS	364254.9	13C3-PFBA	694562.7	0.524	8.611	6.856	80	50-150	
E13C5-PFHxA	596052.1	13C2-PFOA	510748.1	1.167	9.259	7.807	84	50-150	
E13C3-PFHxS	272157.8	13C2-PFOA	510748.1	0.533	8.759	6.771	77	50-150	
E13C4-PFHpA	450573.0	13C2-PFOA	510748.1	0.882	9.259	7.360	79	50-150	
E13C8-PFOA	776628.4	13C2-PFOA	510748.1	1.521	9.259	7.758	84	50-150	
E13C8-PFOS	231014.8	13C4-PFOS	257719.3	0.896	8.852	7.355	83	50-150	
E13C9-PFNA	403241.0	13C4-PFOS	257719.3	1.565	9.259	8.079	87	50-150	
E13C6-PFDA	532472.4	13C2-PFDA	306184.6	1.739	9.259	7.515	81	50-150	
Ed3-NMeFOSAA	40567.9	13C2-PFDA	306184.6	0.132	9.259	4.429	48	50-150	OOS
E13C7-PFUnDA	221388.1	13C2-PFDA	306184.6	0.723	9.259	7.774	84	50-150	
Ed5-NEtFOSAA	37829.2	13C2-PFDA	306184.6	0.124	9.259	4.841	52	50-150	
E13C2-PFDODA	478516.7	13C2-PFDA	306184.6	1.563	9.259	7.514	81	50-150	
E13C2-PFTeDA	345619.0	13C2-PFDA	306184.6	1.129	9.259	7.339	79	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

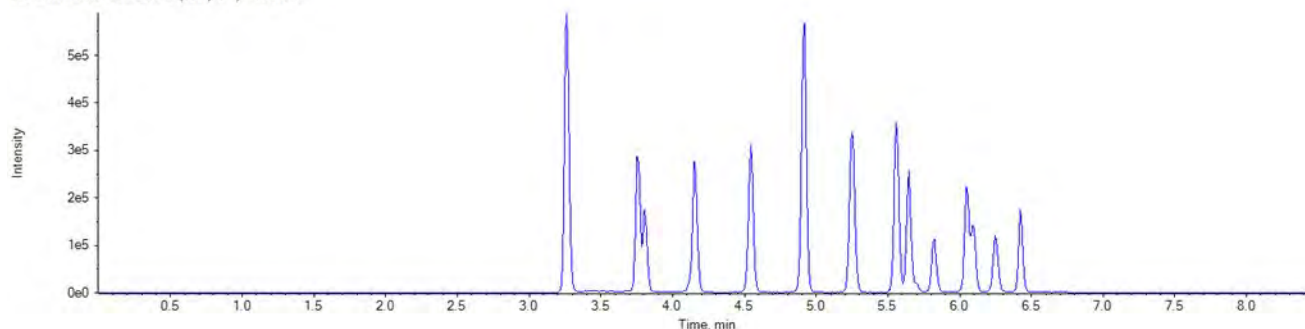
Sample Name: 9881916 Instrument Name: LM27631 File Name: 18NOV13D-20.wiff

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	364254.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	596052.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	450573.0	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	272157.8	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	776628.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	231014.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	403241.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	532472.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	40567.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	221388.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	37829.2	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	478516.7	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	478516.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	345619.0	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-20.wiff (sample 1) - 9881916

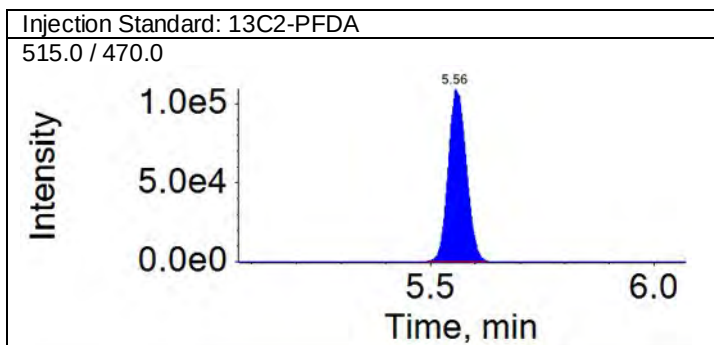
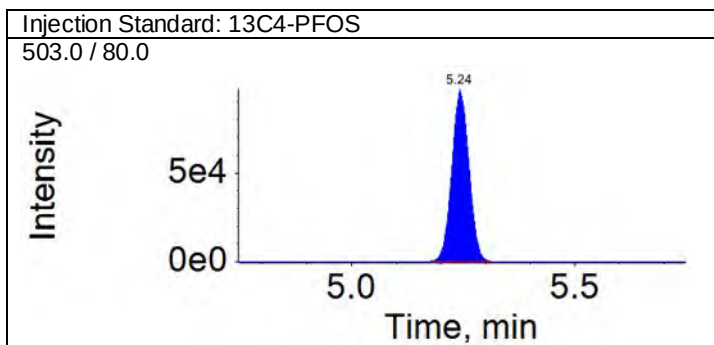
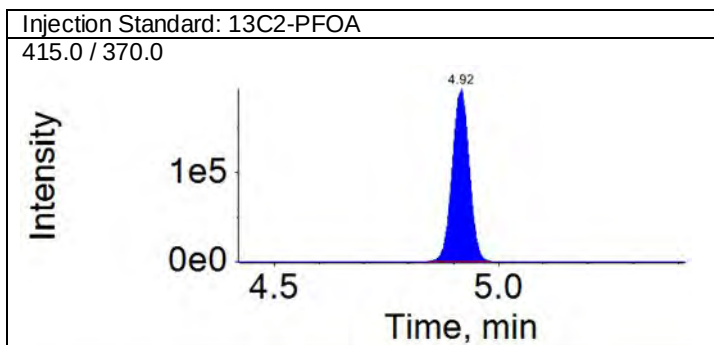
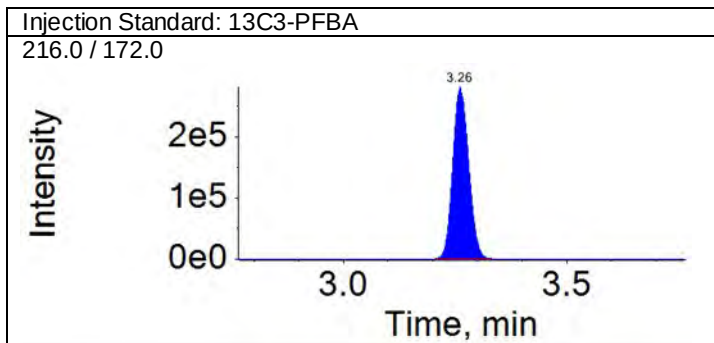


APPROVED
By MCD at 10:39 pm, 11/13/18

REVIEWED
By HMK at 2:12 pm, 11/14/18

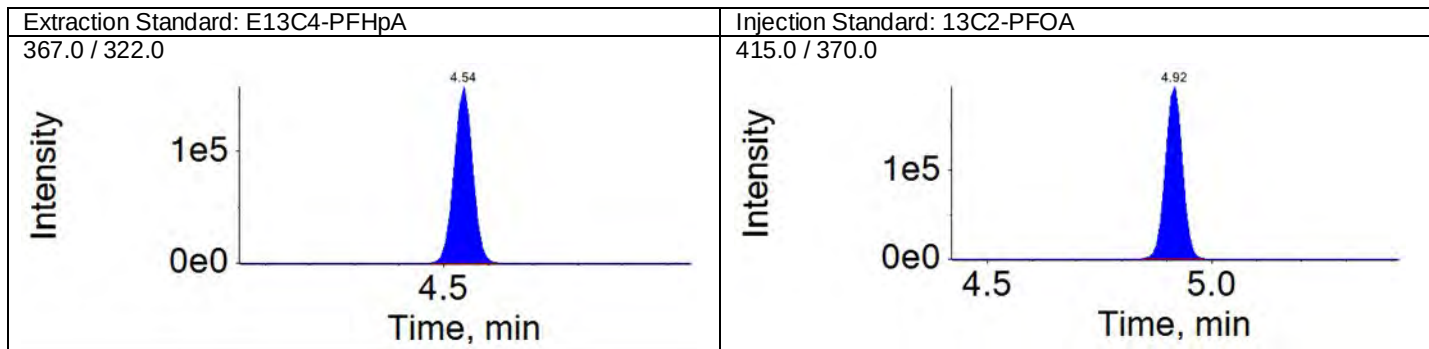
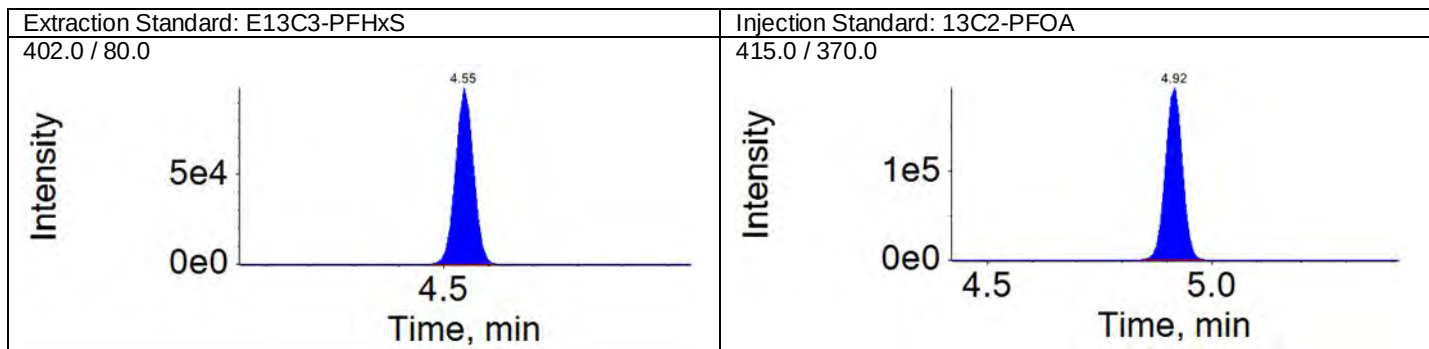
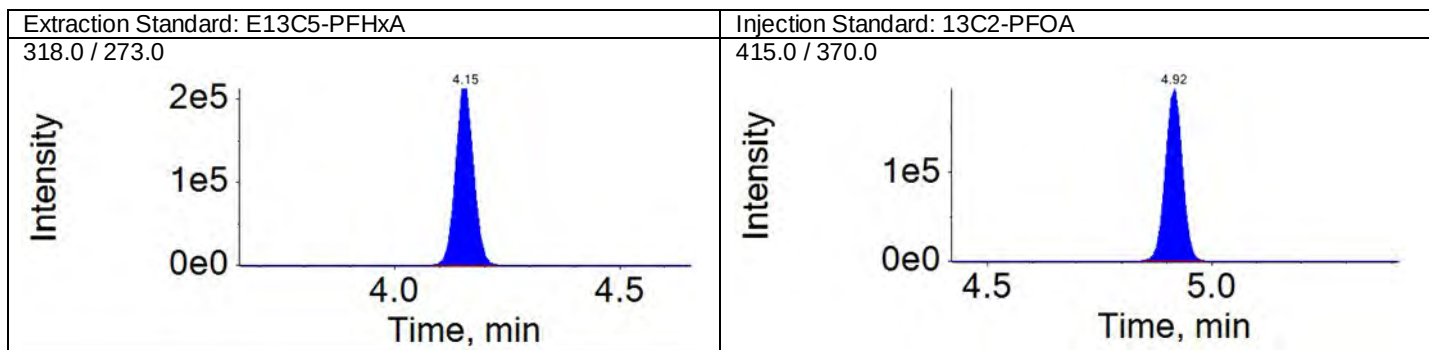
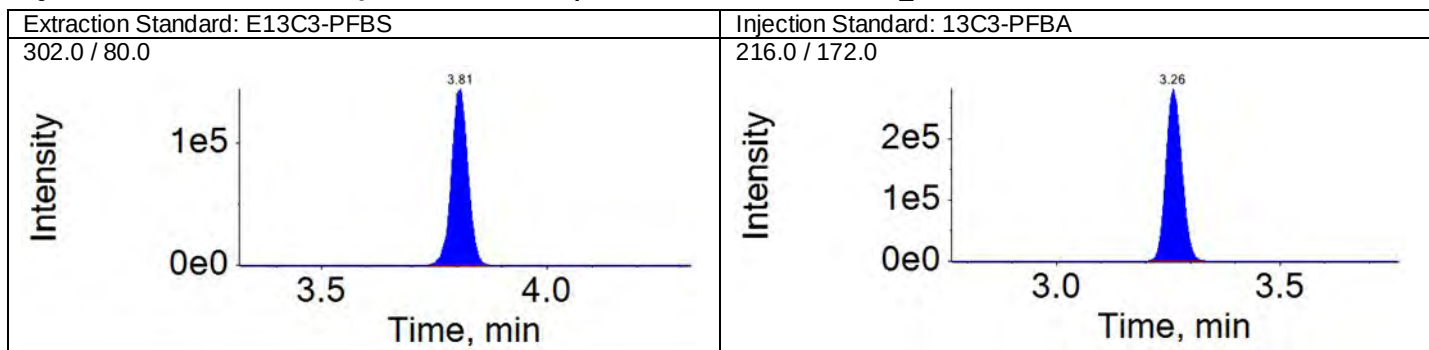
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



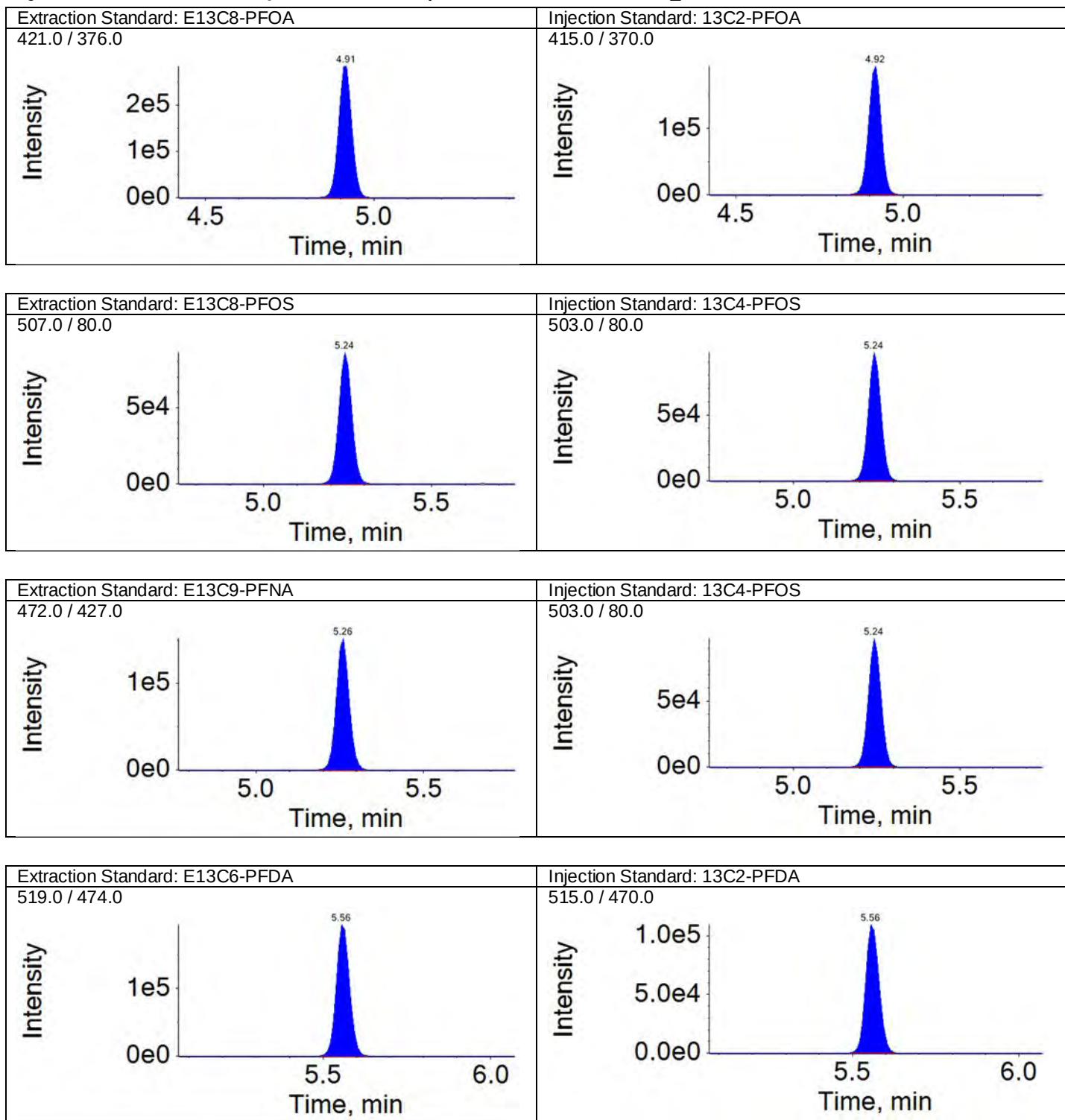
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



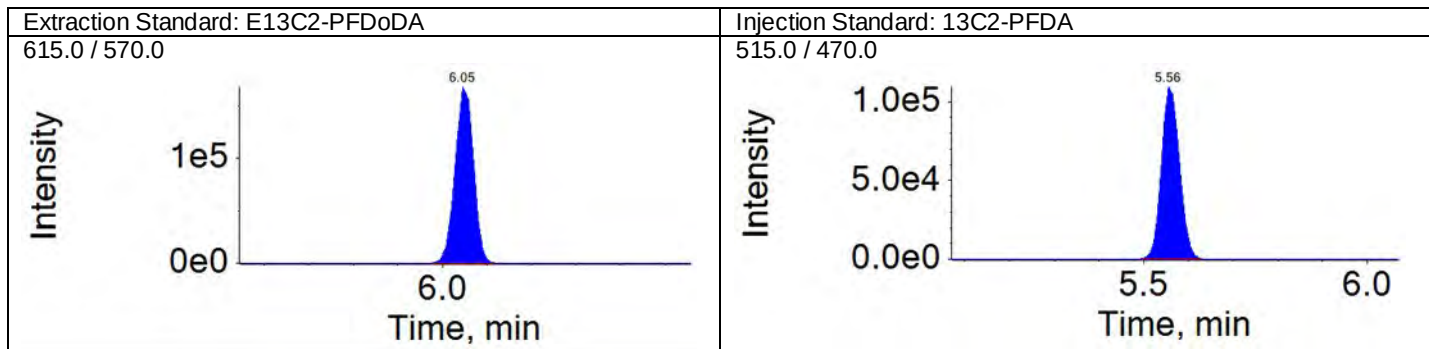
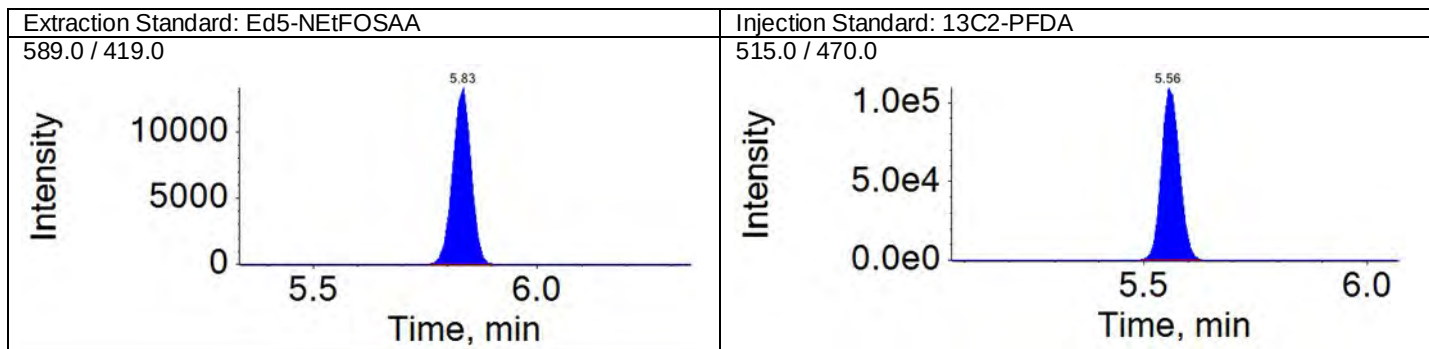
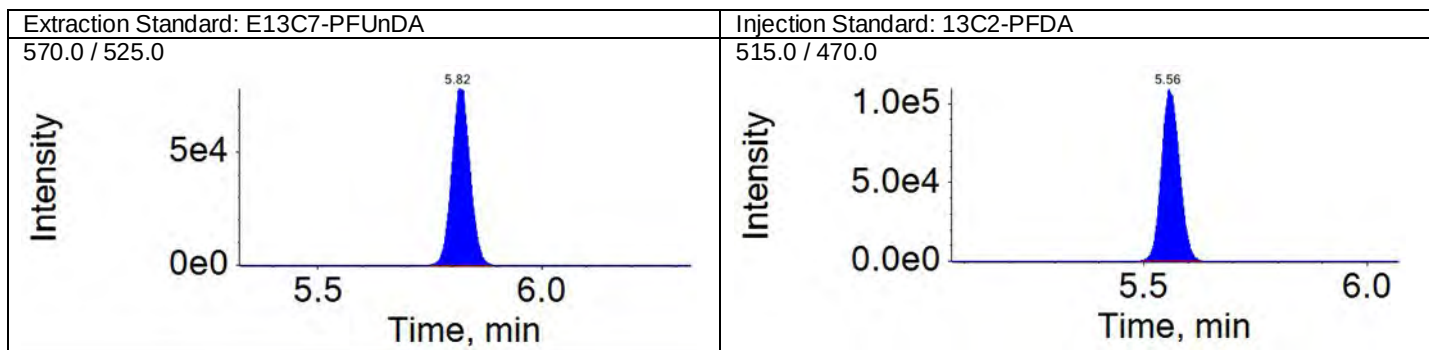
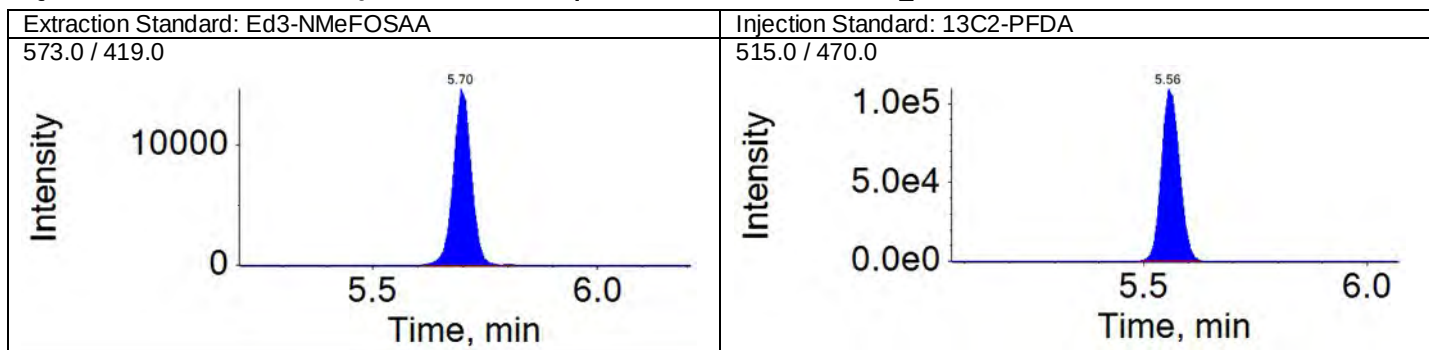
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



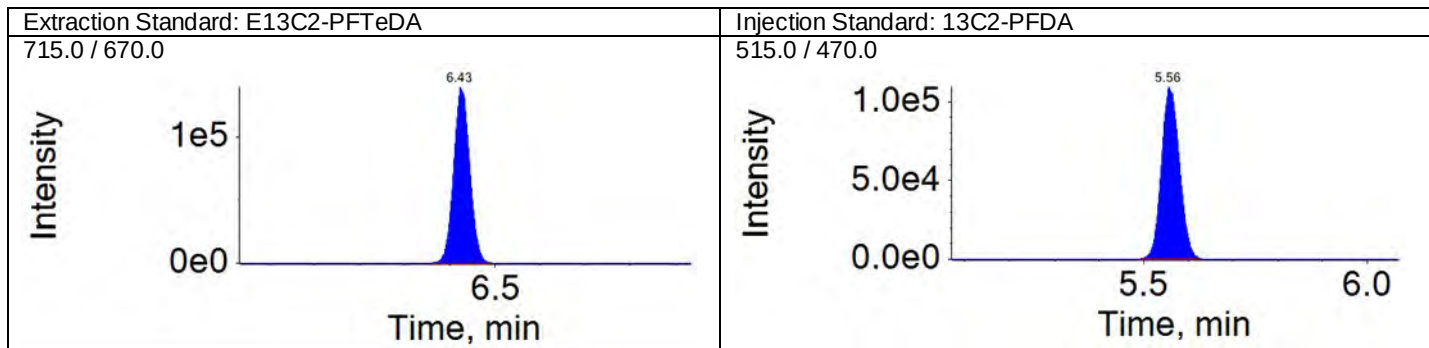
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



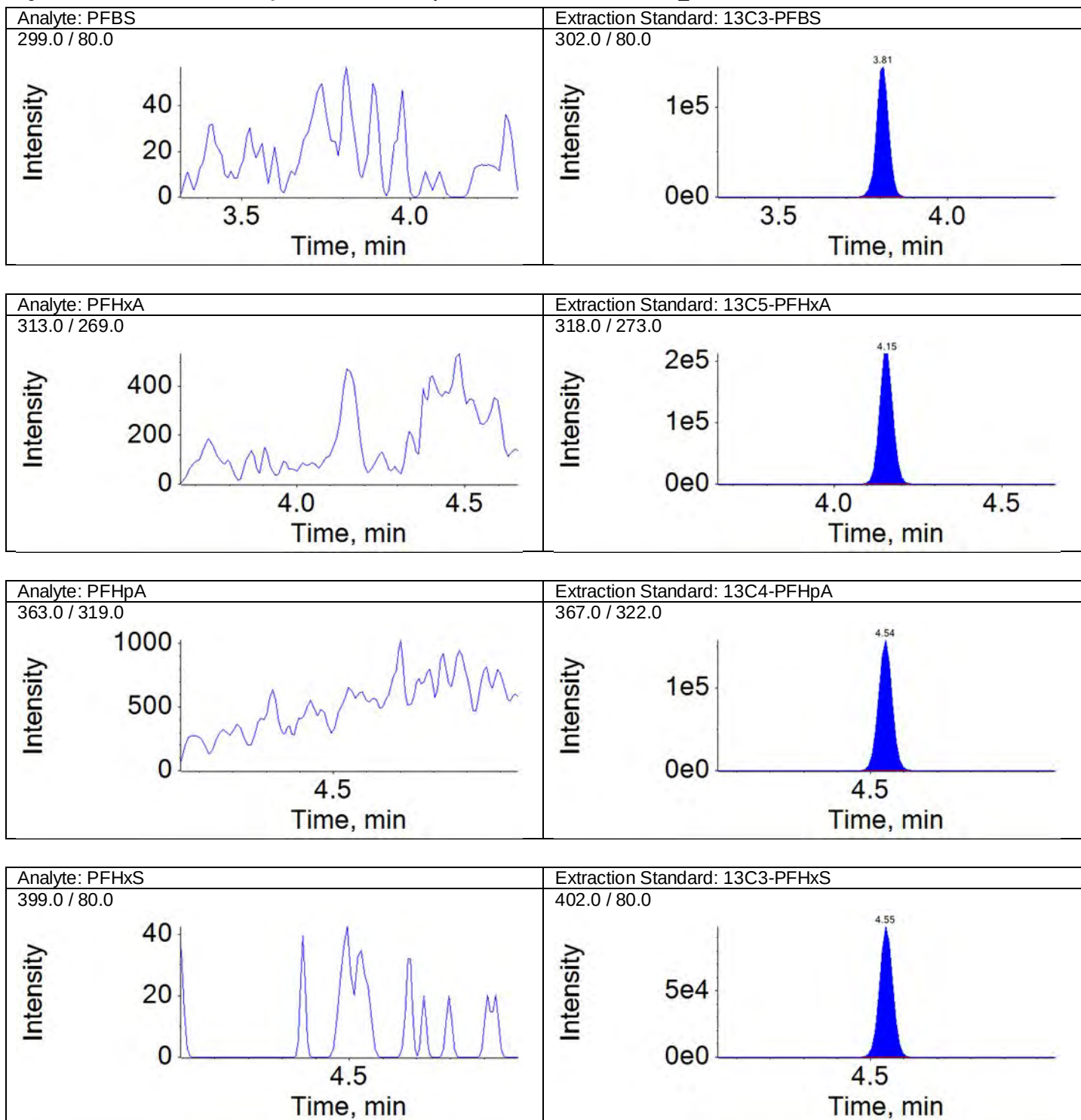
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



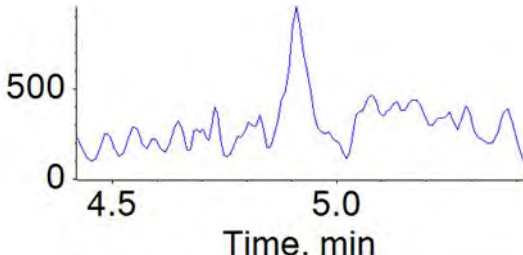
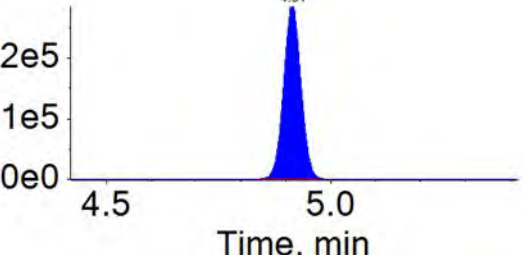
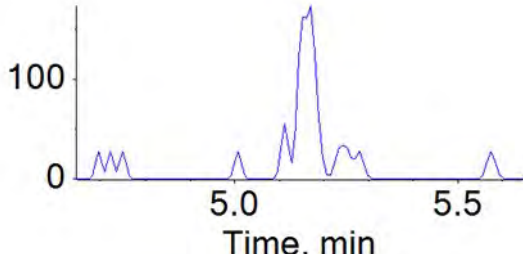
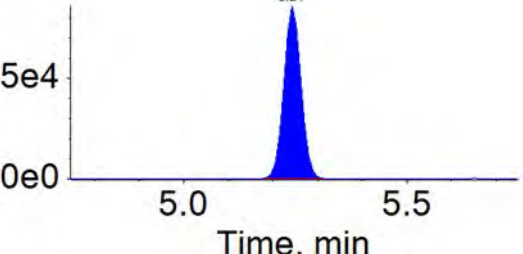
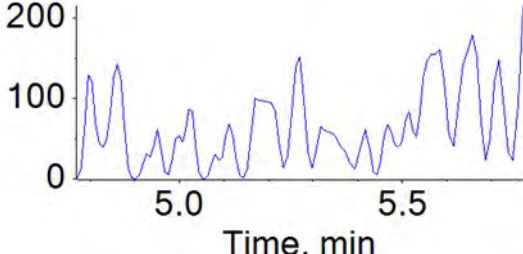
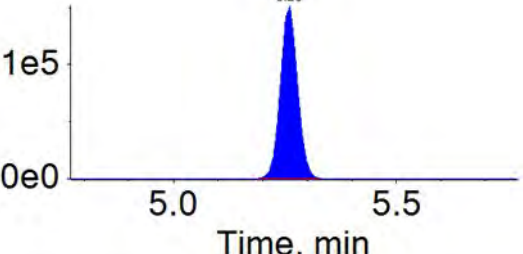
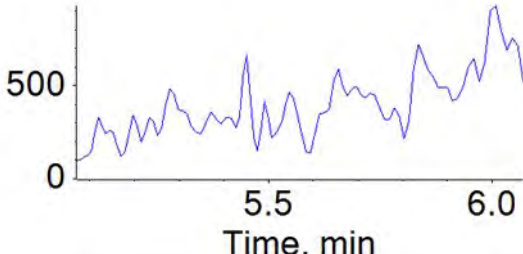
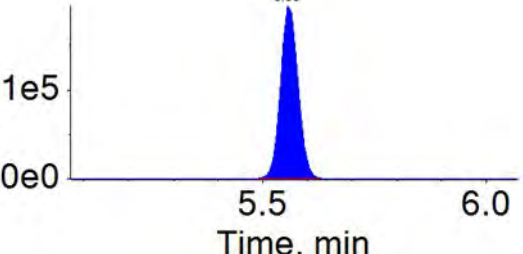
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



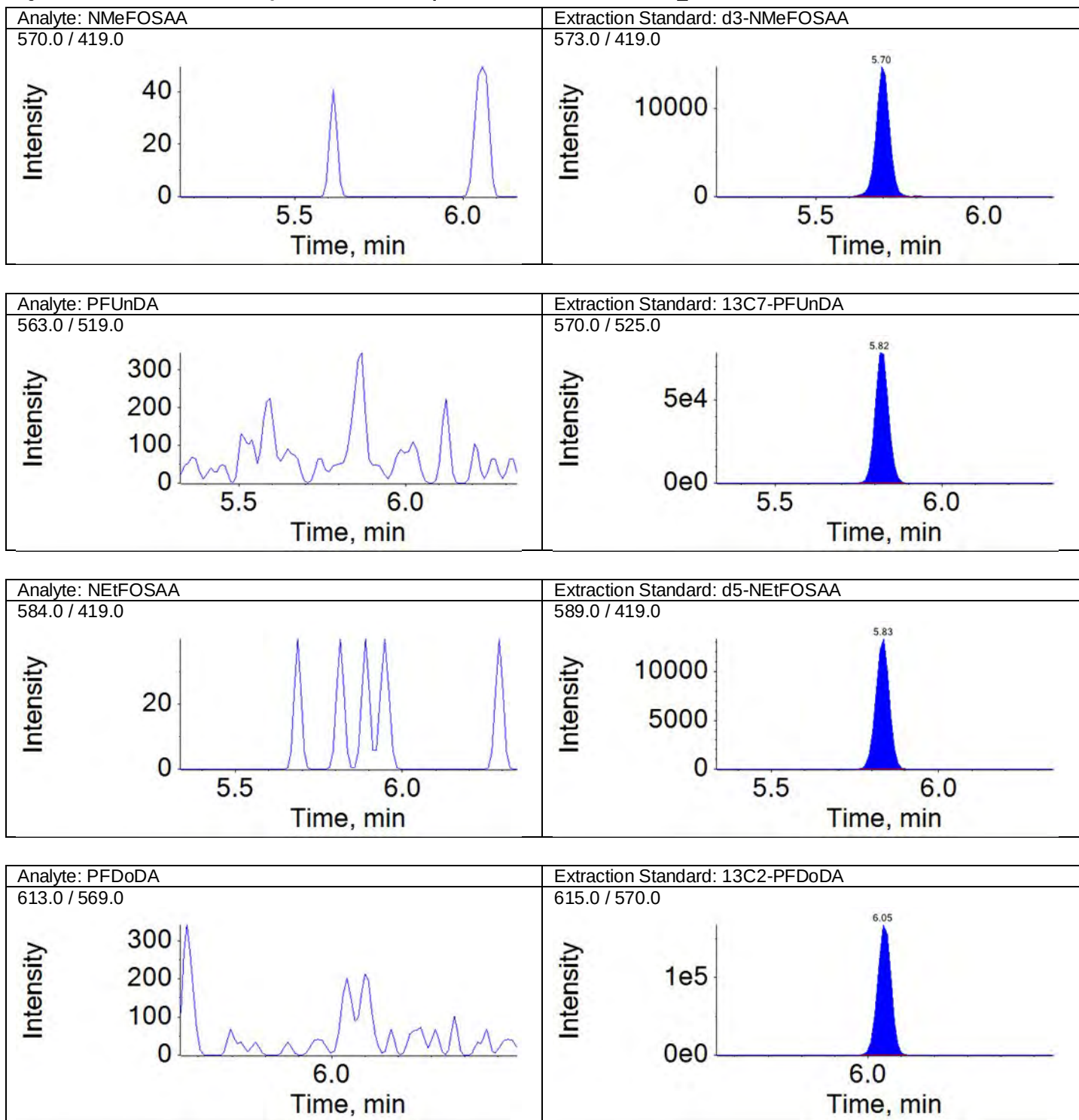
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

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 
Analyte: PFNA 463.0 / 419.0 	Extraction Standard: 13C9-PFNA 472.0 / 427.0 
Analyte: PFDA 513.0 / 469.0 	Extraction Standard: 13C6-PFDA 519.0 / 474.0 

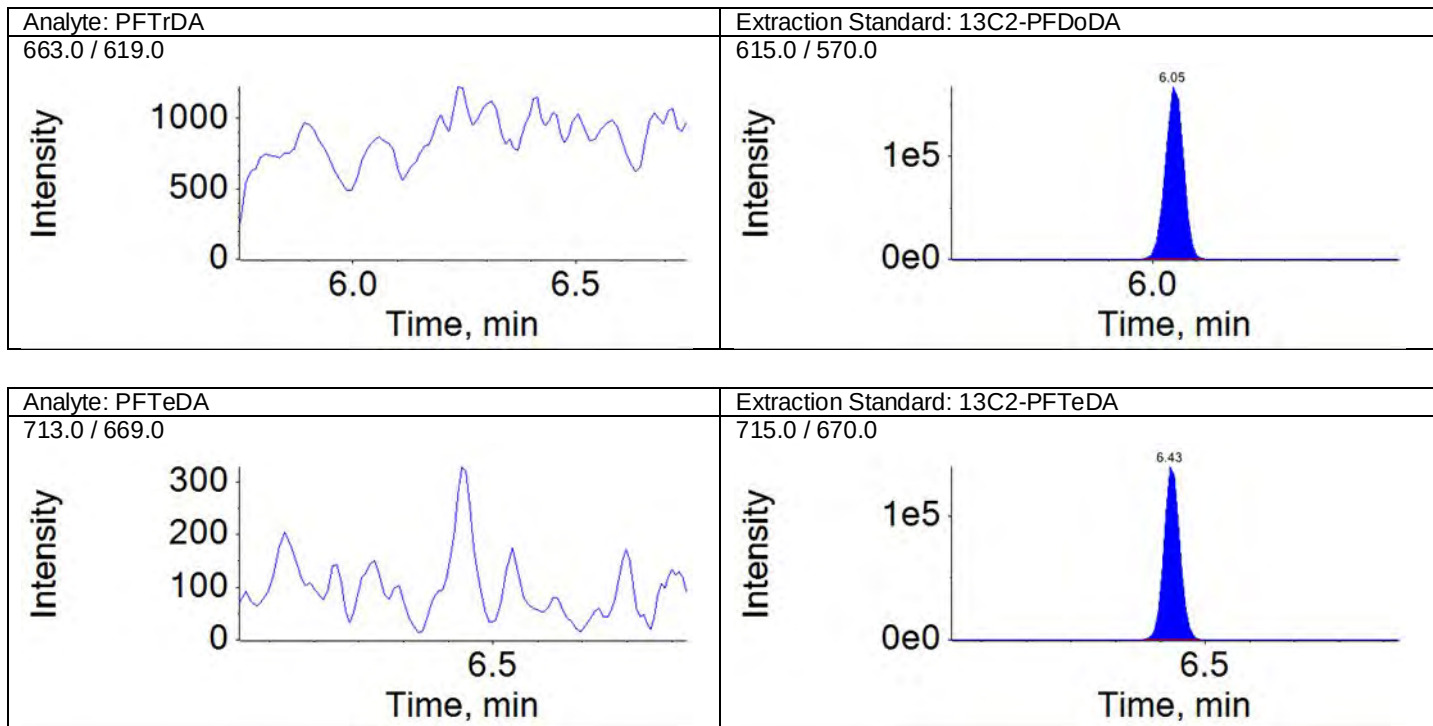
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



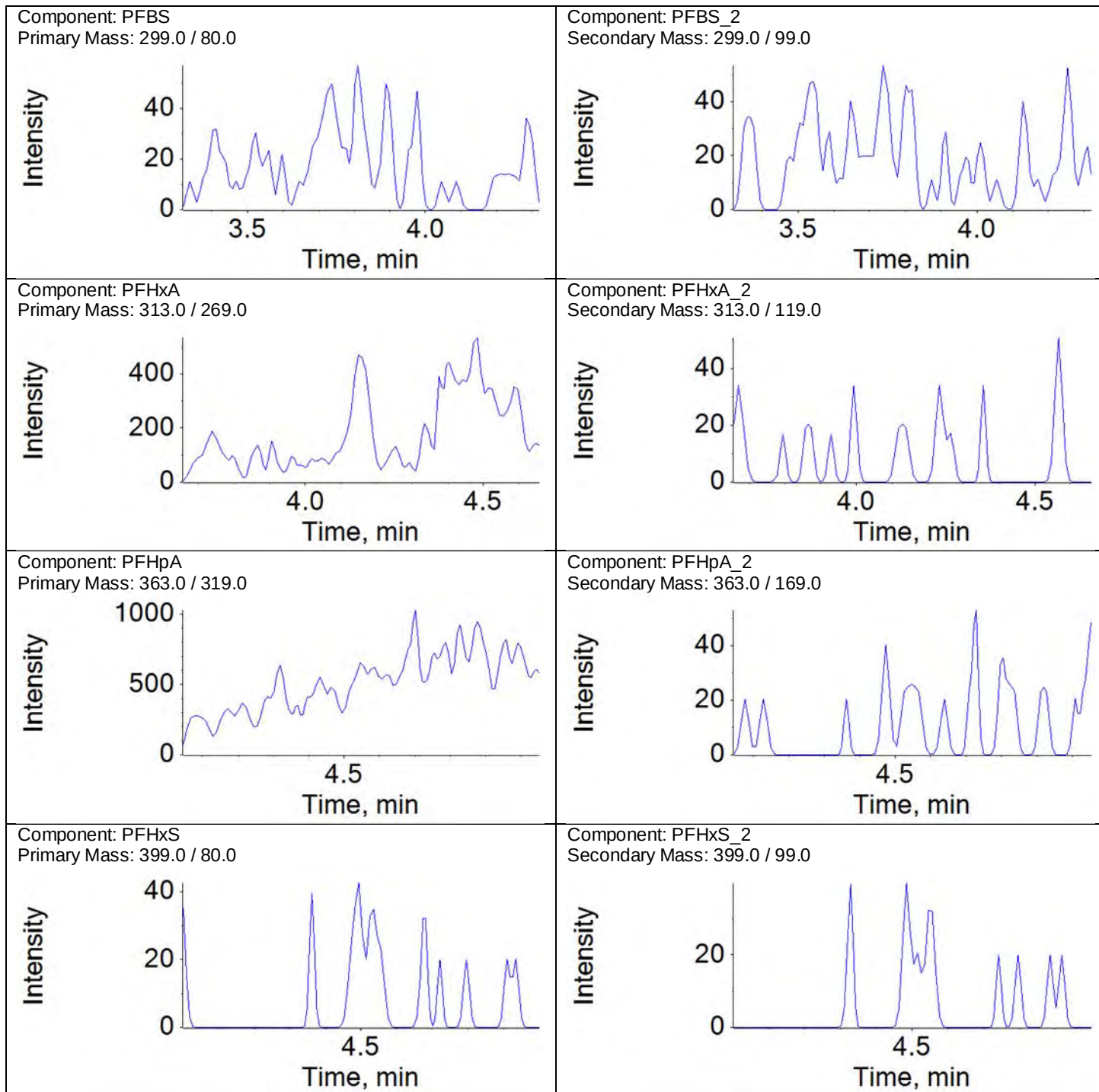
Ion Ratio Report

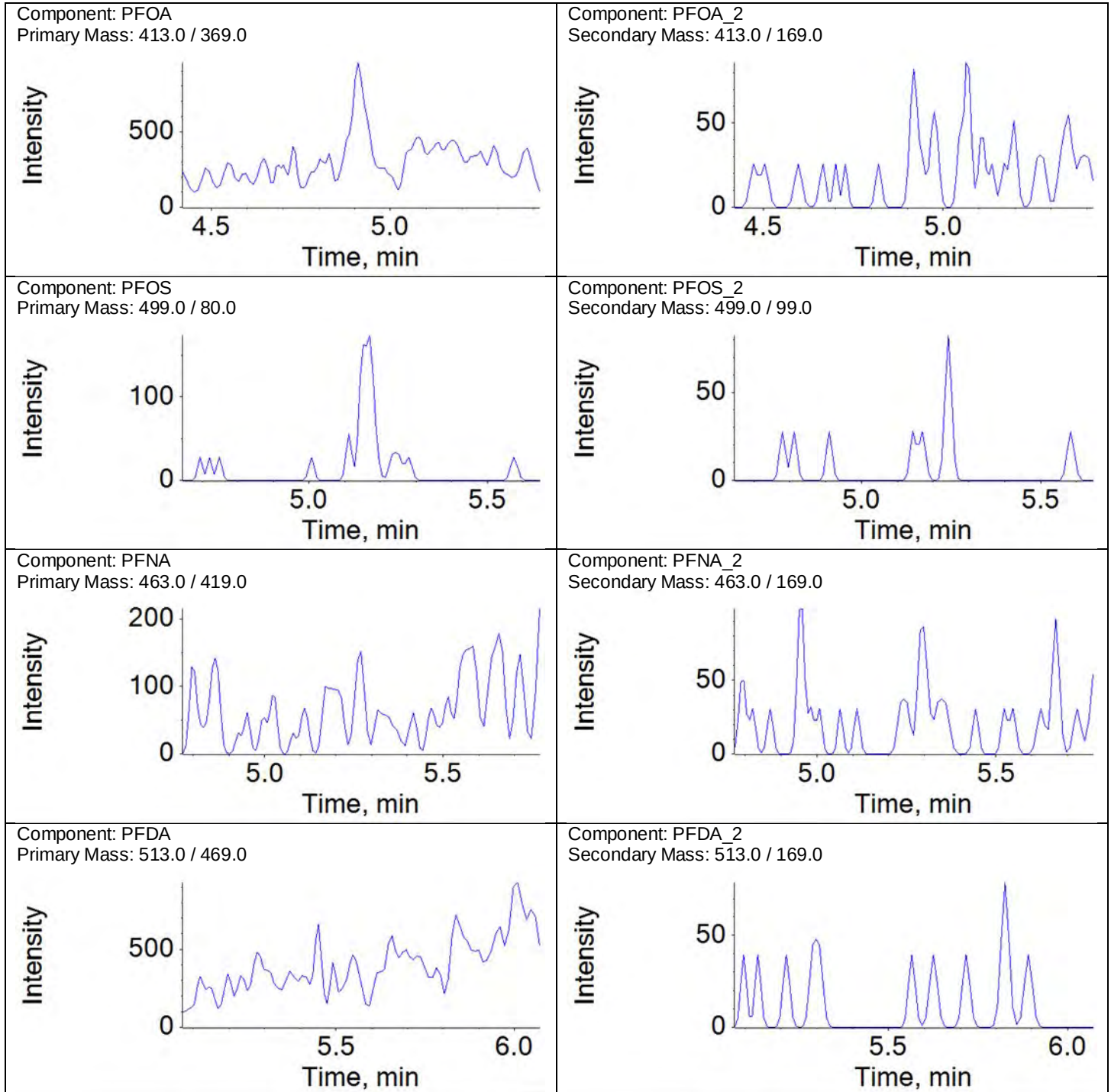
Sample Name: 9881916

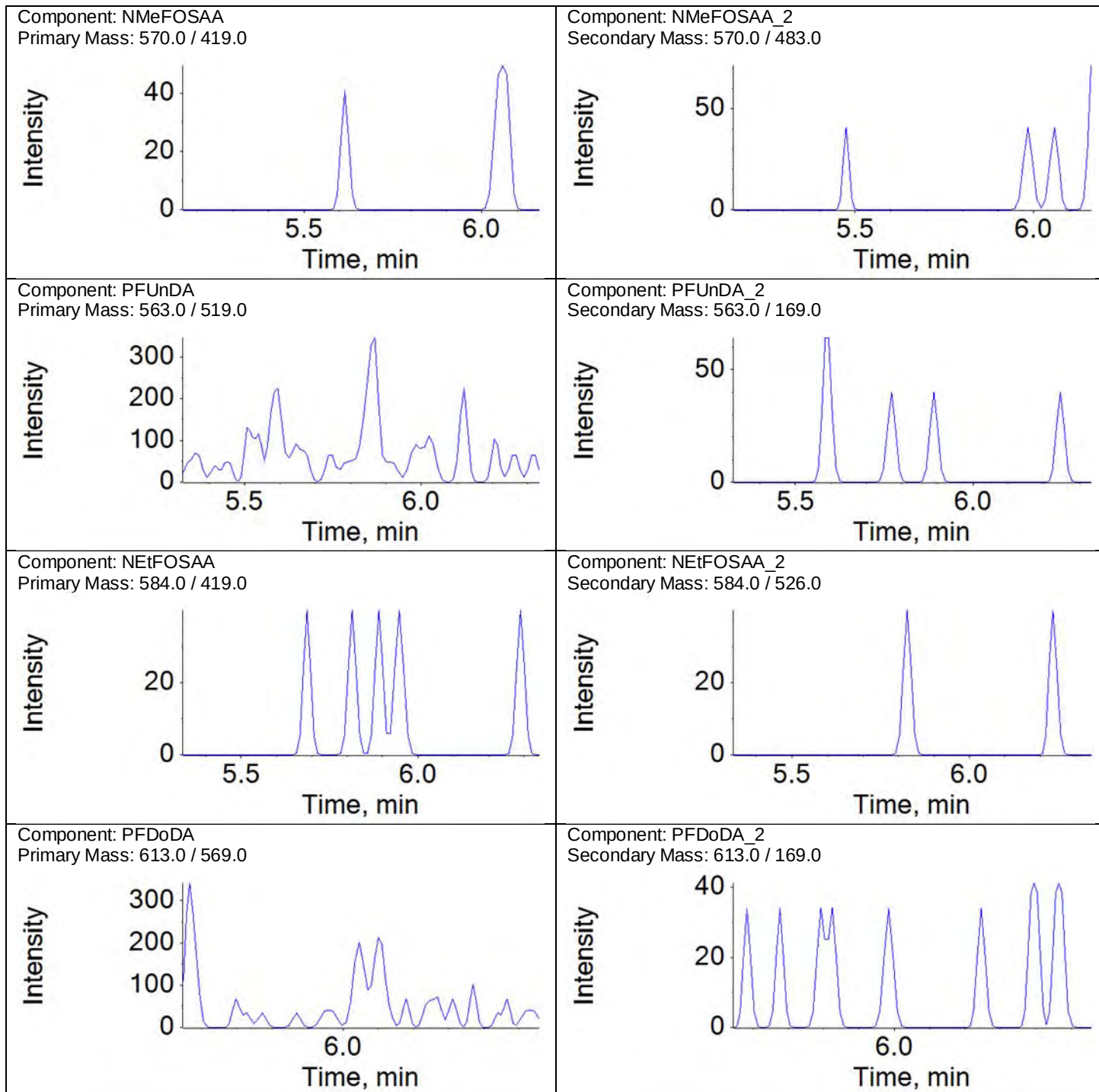
Instrument Name: LM27631

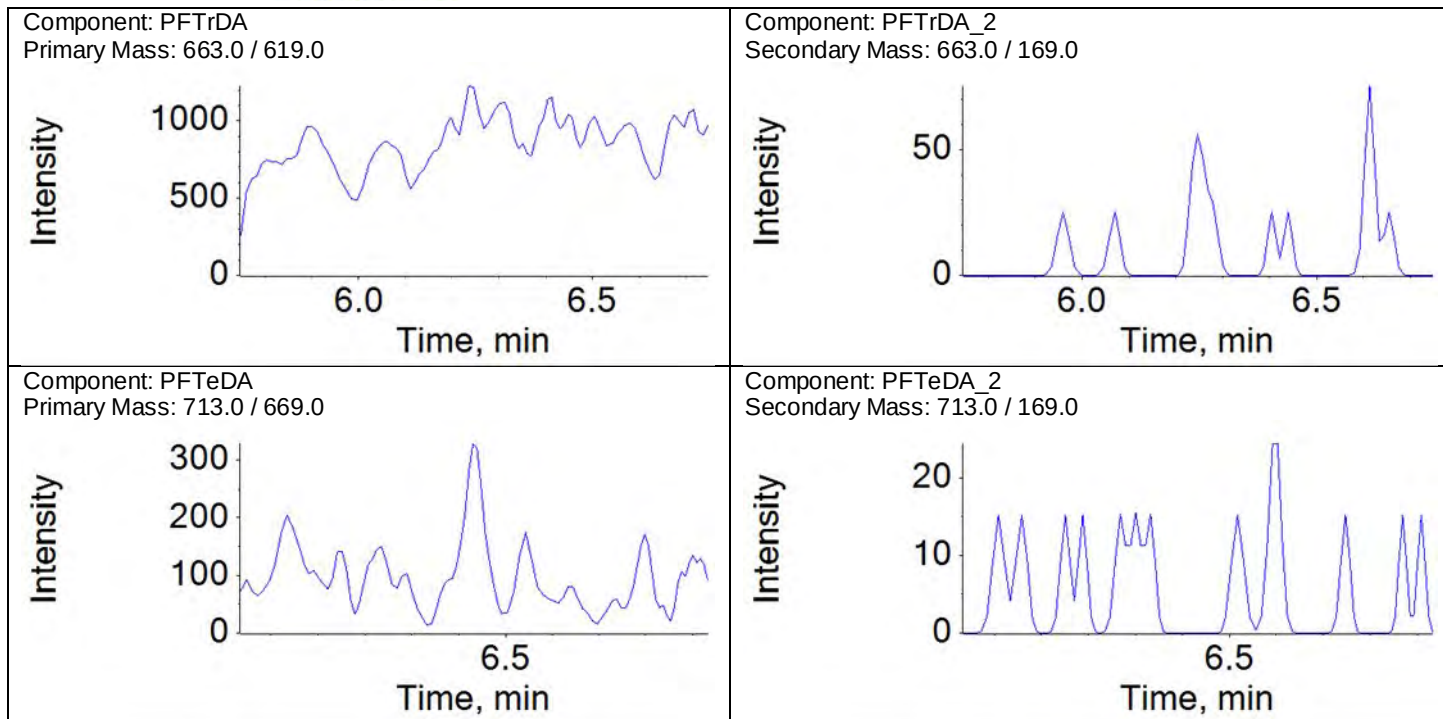
File Name: 18NOV13D-20.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881916RE			Data File:		18NOV08D-83.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-06-03 Grab Soil			Acquis Date:		2018-11-09T00:08:25
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	25			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18310012_Batch QC+9881916
QMethod File:	MQ4-18AUG13			ICAL Name:		18NOV07DCAL
Batch Number:	18310012			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: 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	858121.4	728839.7	18	50	
13C2-PFOA	5.0	585246.8	491983.1	19	50	
13C4-PFOS	4.8	333691.5	255568.1	31	50	
13C2-PFDA	5.0	363454.0	315407.5	15	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	364781.2	13C3-PFBA	858121.4	0.425	8.942	6.000	67	50-150	
E13C5-PFHxA	579148.7	13C2-PFOA	585246.8	0.990	9.615	7.000	73	50-150	
E13C3-PFHxS	292469.2	13C2-PFOA	585246.8	0.500	9.096	6.899	76	50-150	
E13C4-PFHpA	459801.3	13C2-PFOA	585246.8	0.786	9.615	6.873	71	50-150	
E13C8-PFOA	820979.4	13C2-PFOA	585246.8	1.403	9.615	7.523	78	50-150	
E13C8-PFOS	261258.1	13C4-PFOS	333691.5	0.783	9.192	6.658	72	50-150	
E13C9-PFNA	428396.2	13C4-PFOS	333691.5	1.284	9.615	6.744	70	50-150	
E13C6-PFDA	553607.4	13C2-PFDA	363454.0	1.523	9.615	7.366	77	50-150	
Ed3-NMeFOSAA	47836.9	13C2-PFDA	363454.0	0.132	9.615	4.707	49	50-150	OOS
E13C7-PFUnDA	239712.2	13C2-PFDA	363454.0	0.660	9.615	7.317	76	50-150	
Ed5-NEtFOSAA	34343.0	13C2-PFDA	363454.0	0.094	9.615	4.205	44	50-150	OOS
E13C2-PFDODA	521800.0	13C2-PFDA	363454.0	1.436	9.615	7.443	77	50-150	
E13C2-PFTeDA	332106.1	13C2-PFDA	363454.0	0.914	9.615	6.326	66	50-150	

APPROVED

By MCD at 11:15 pm, 11/13/18

REVIEWED

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

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

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881916RE

Instrument Name: LM27631

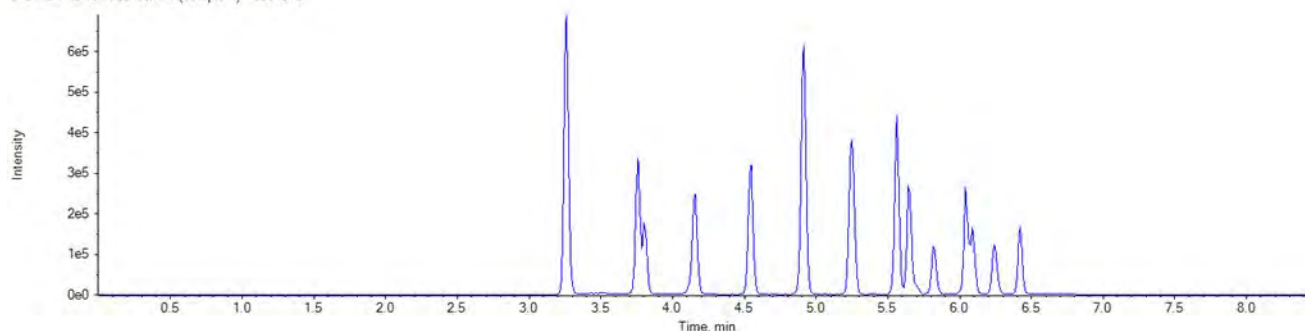
File Name: 18NOV08D-83.wiff

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	364781.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	579148.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	292469.2	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	459801.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	820979.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	261258.1	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	428396.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	553607.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	47836.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	239712.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	34343.0	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	521800.0	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	521800.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	332106.1	N/A	

Total Ion Chromatogram

TIC from 18NOV08D-83.wiff (sample 1) - 9881916



APPROVED

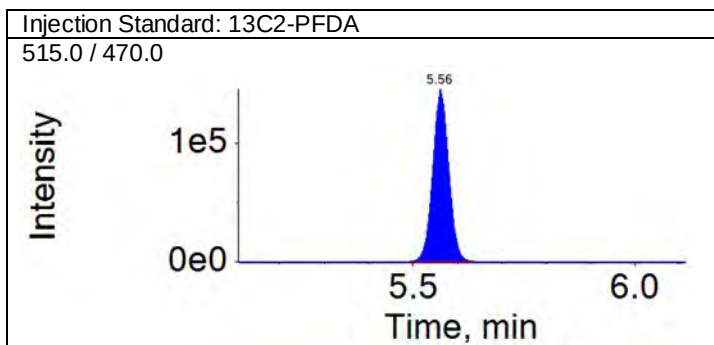
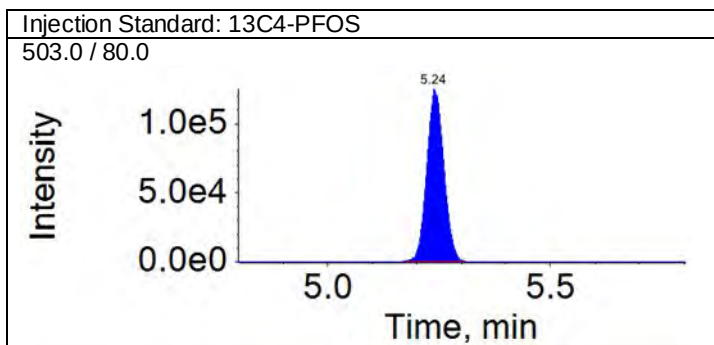
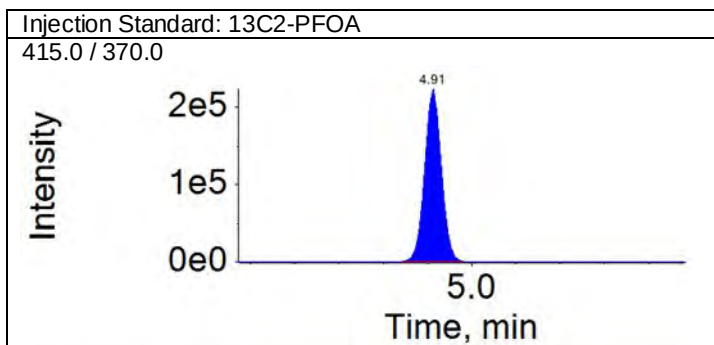
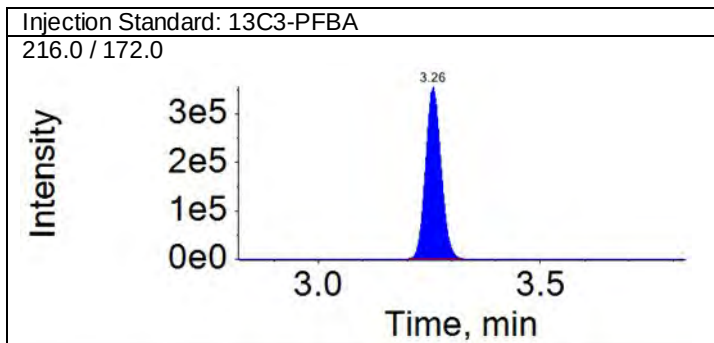
By MCD at 11:15 pm, 11/13/18

REVIEWED

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

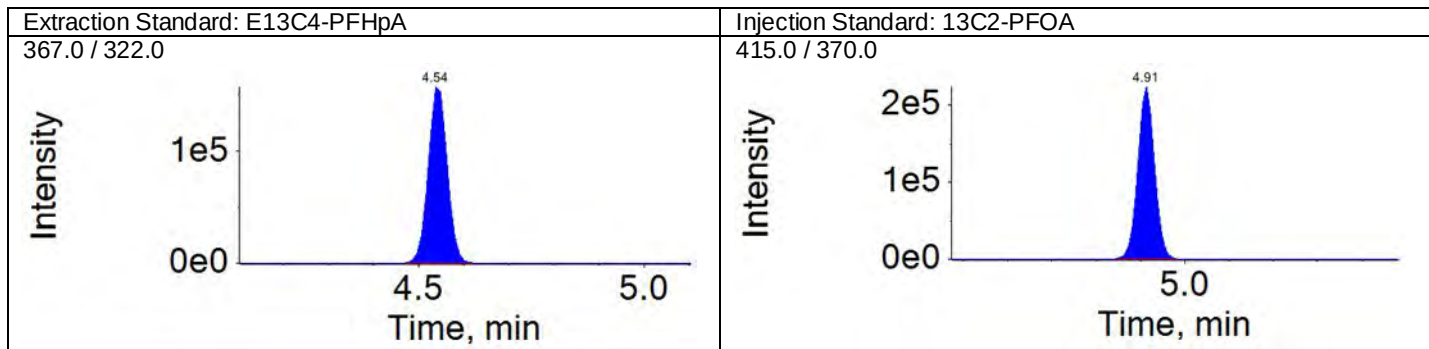
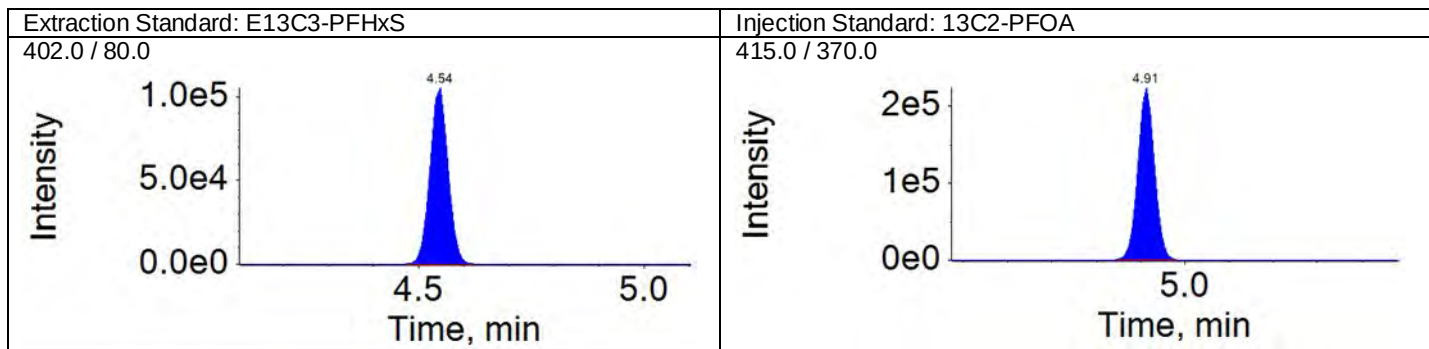
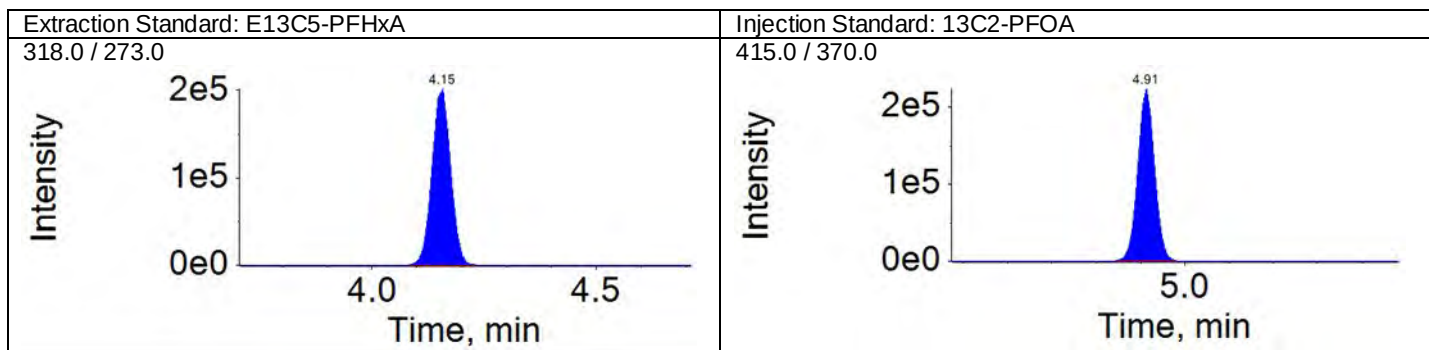
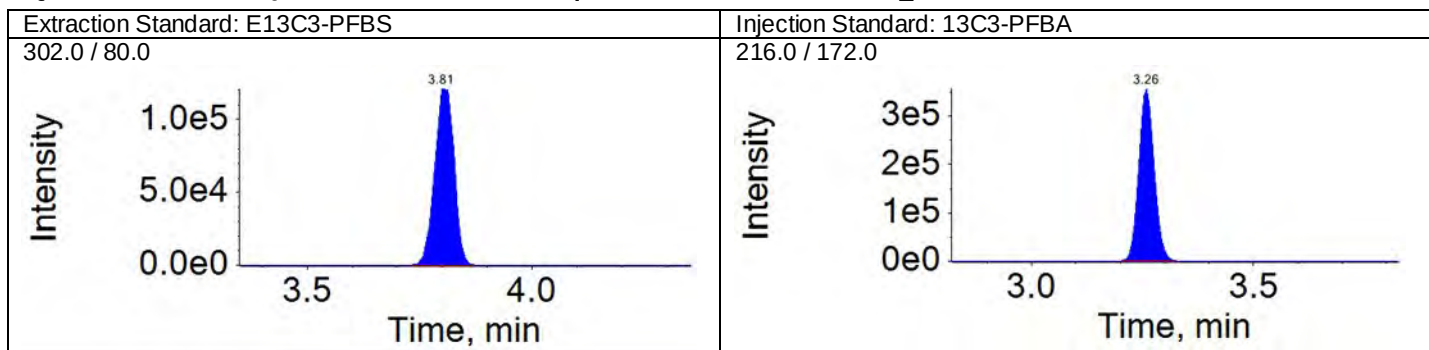
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



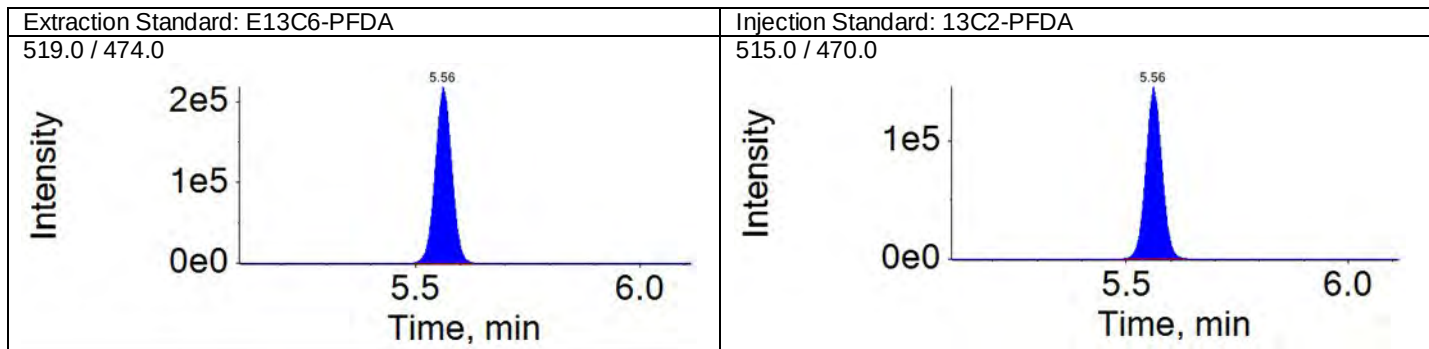
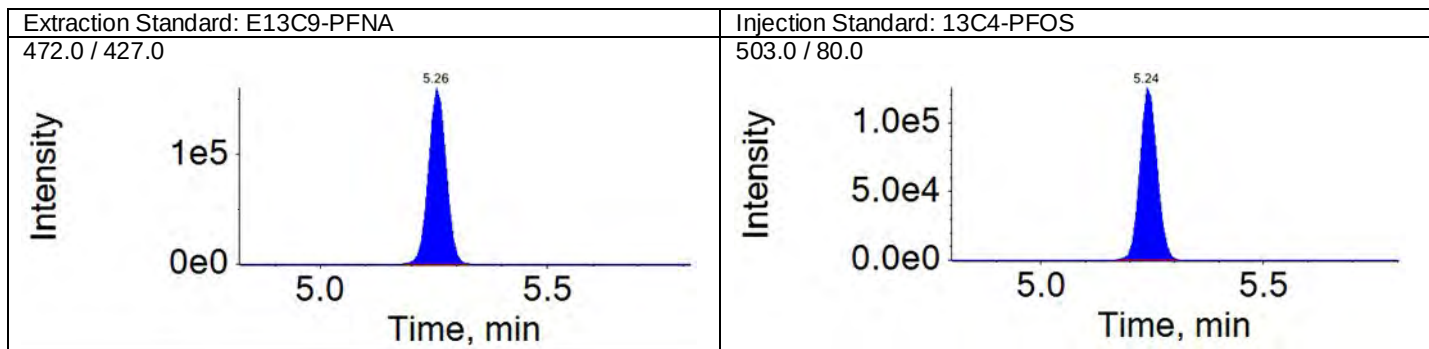
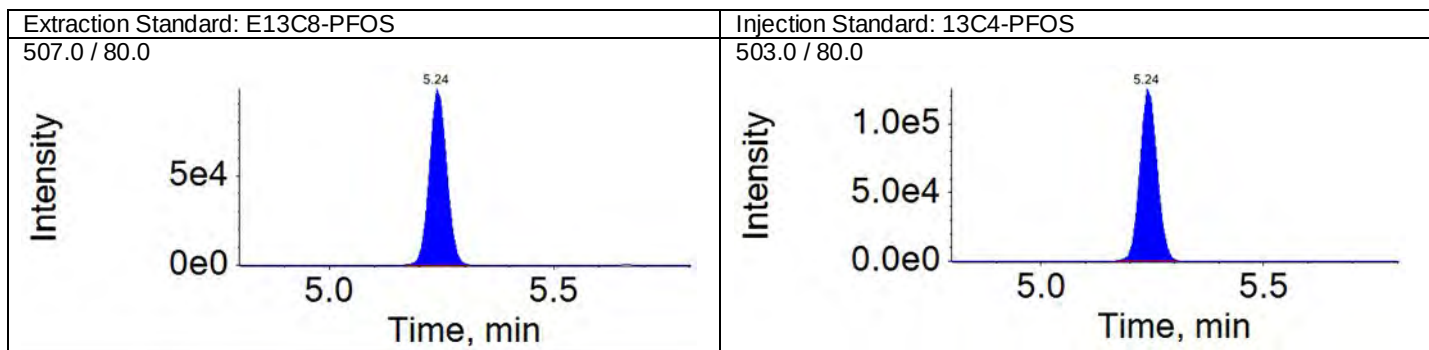
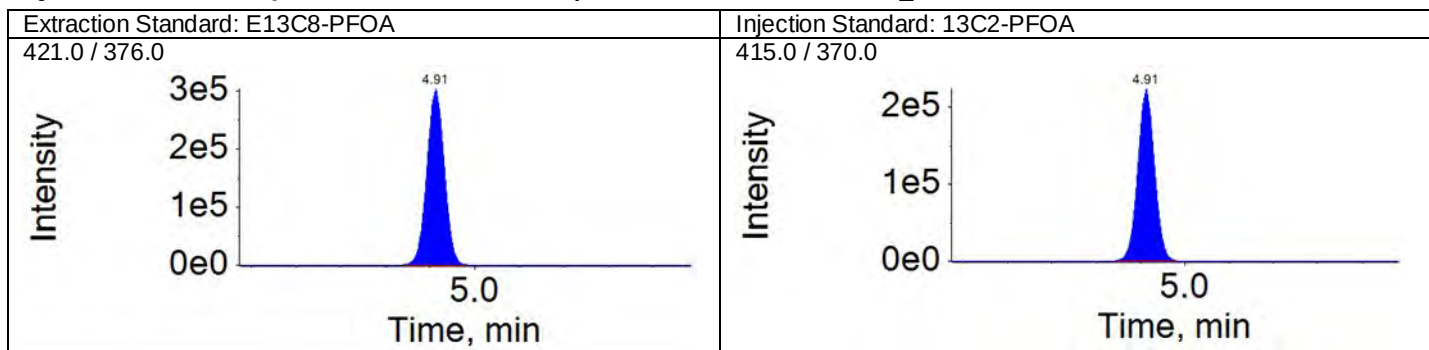
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



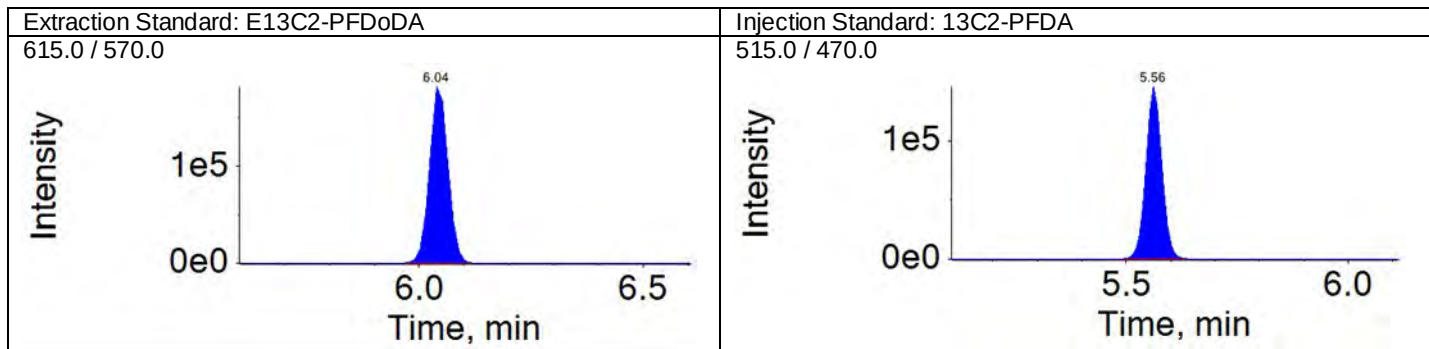
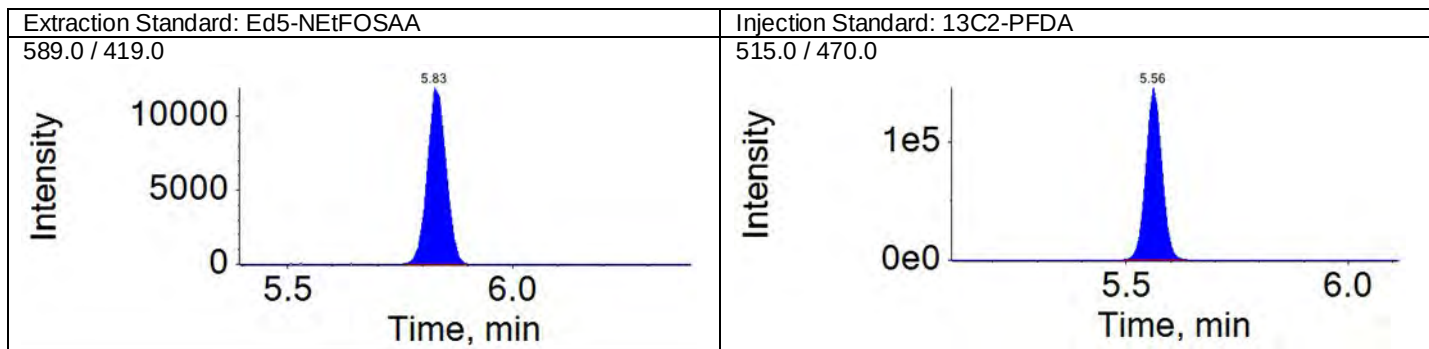
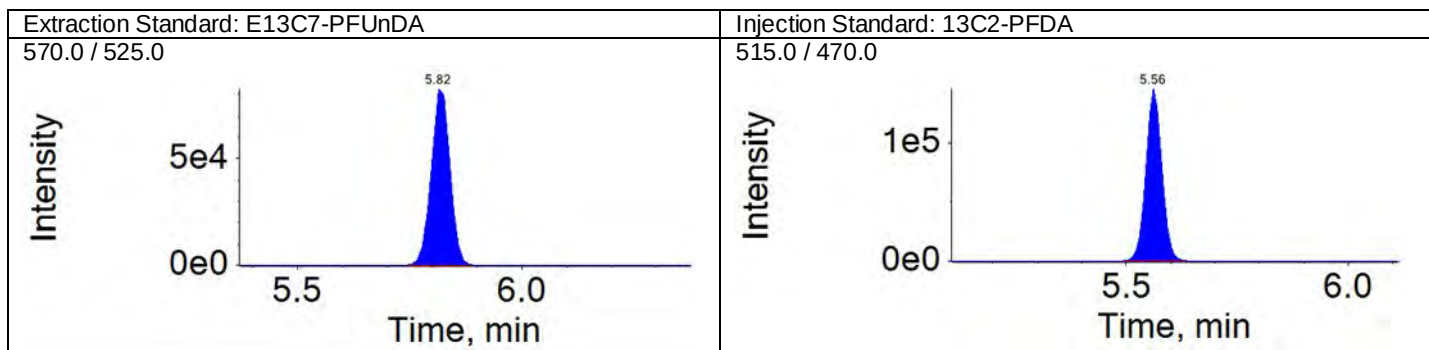
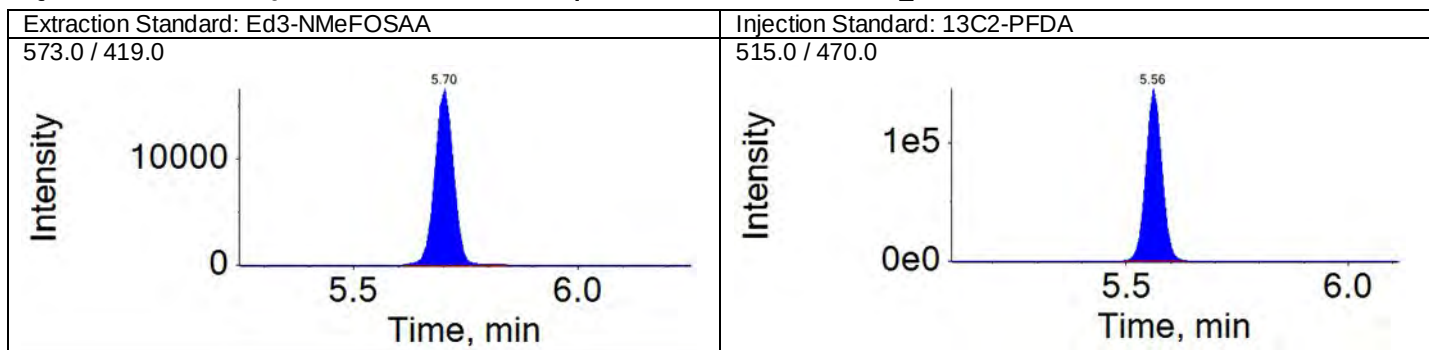
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



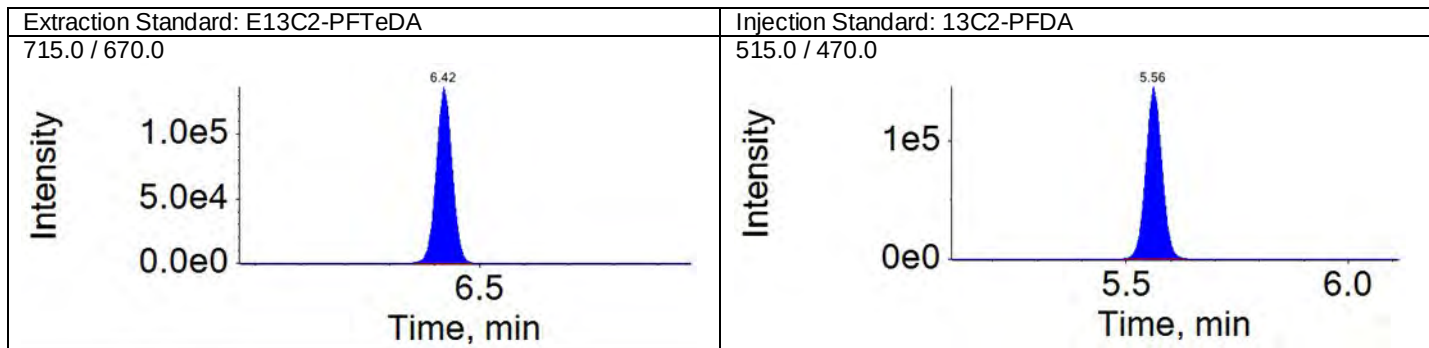
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

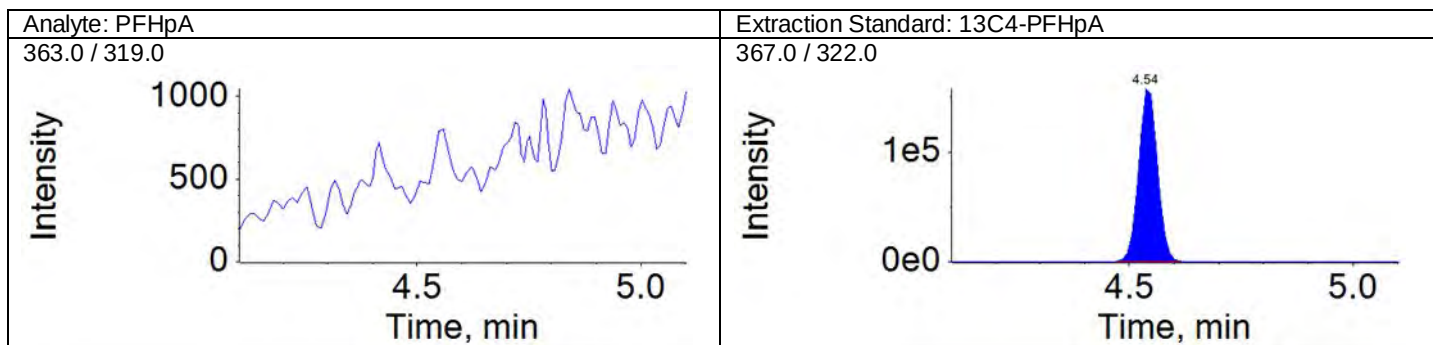
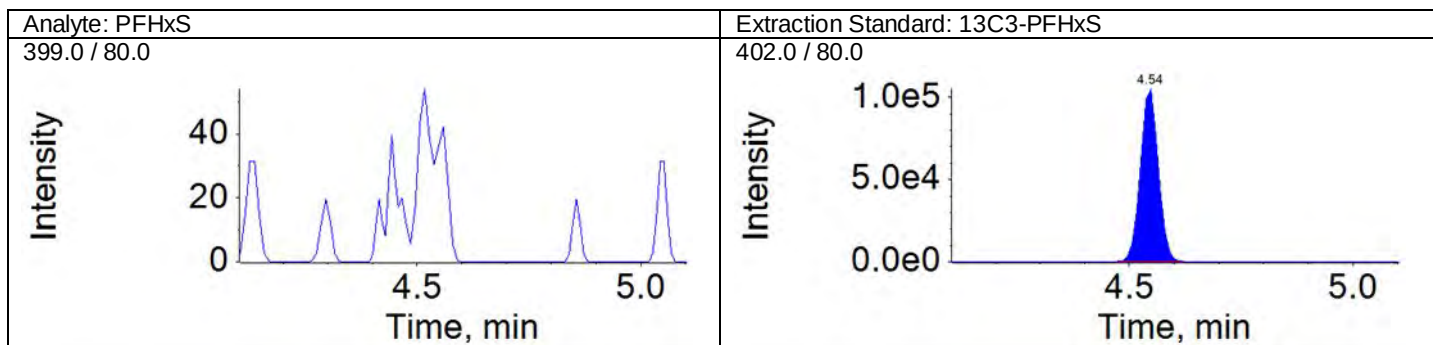
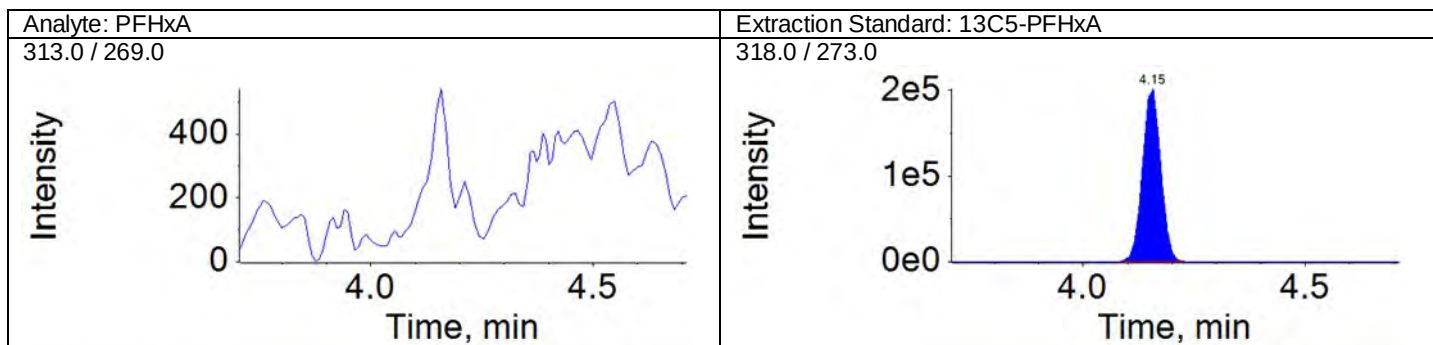
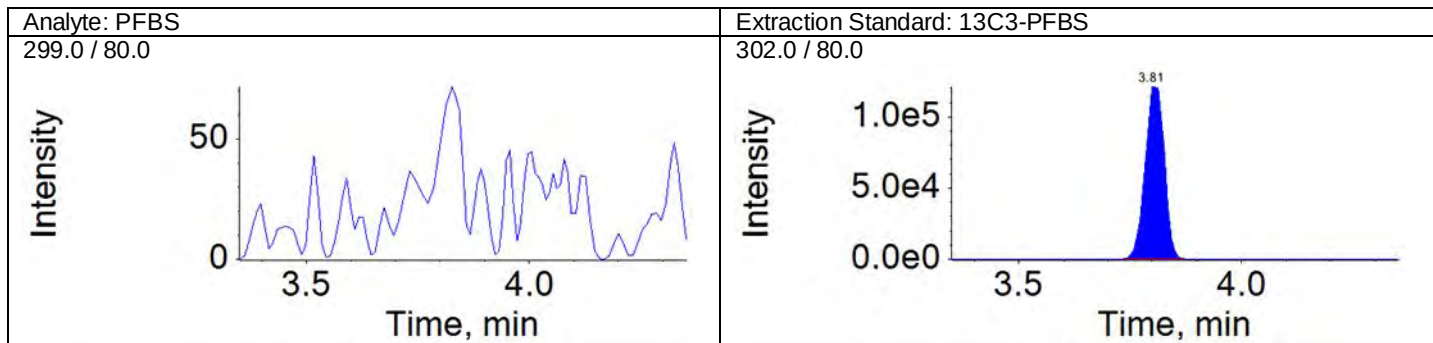
By MCD at 11:15 pm, 11/13/18

REVIEWED

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

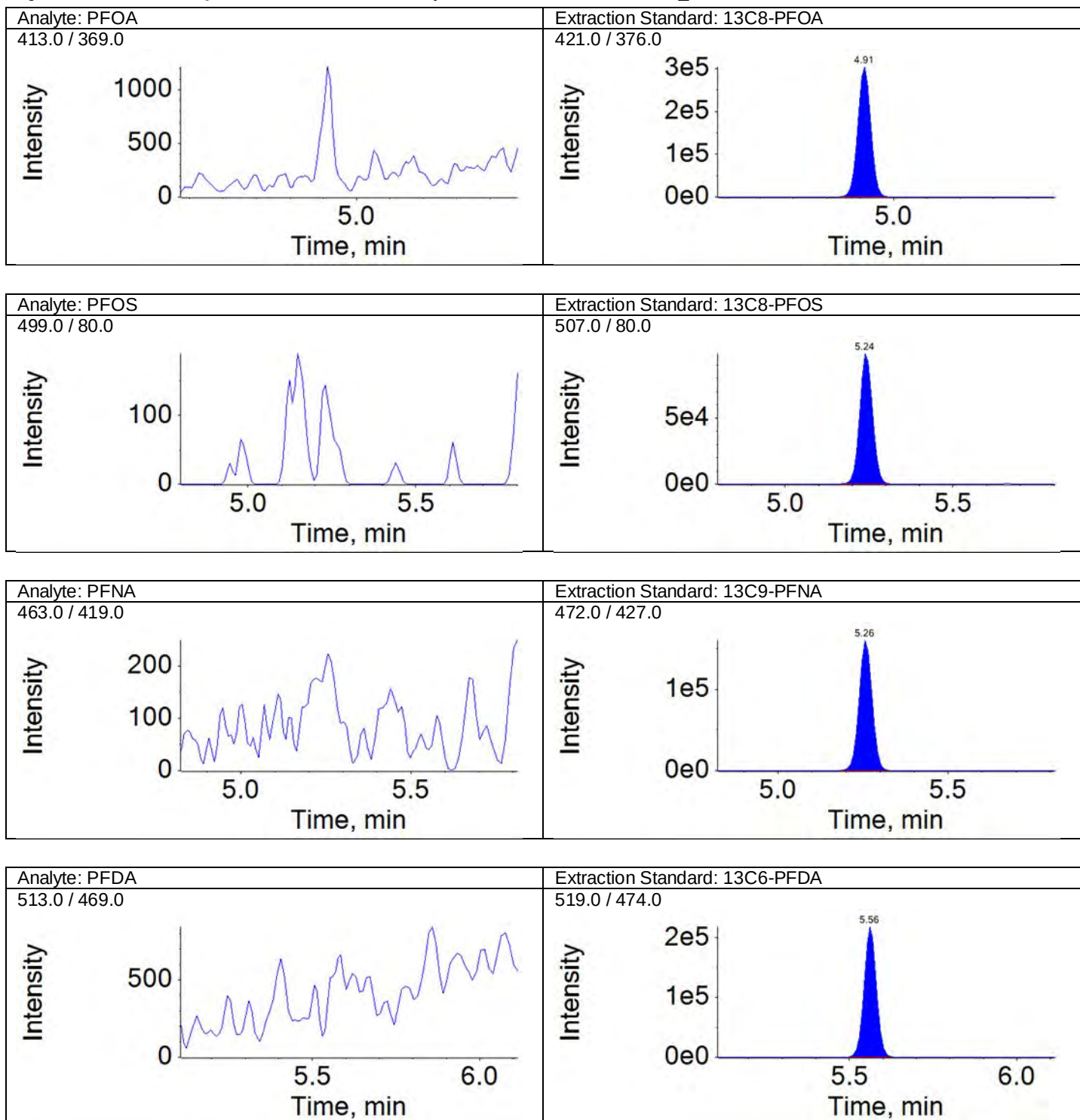
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



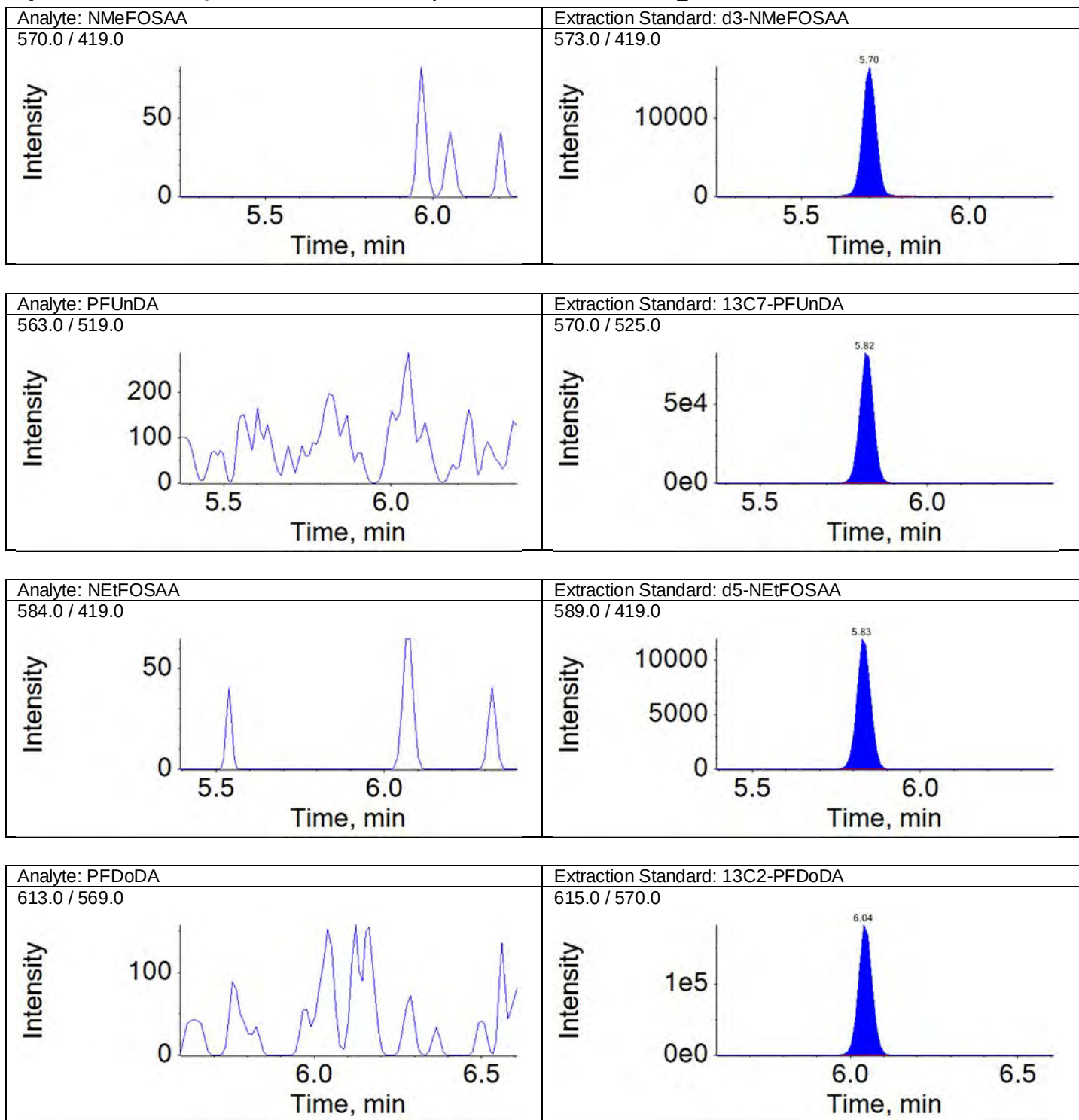
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



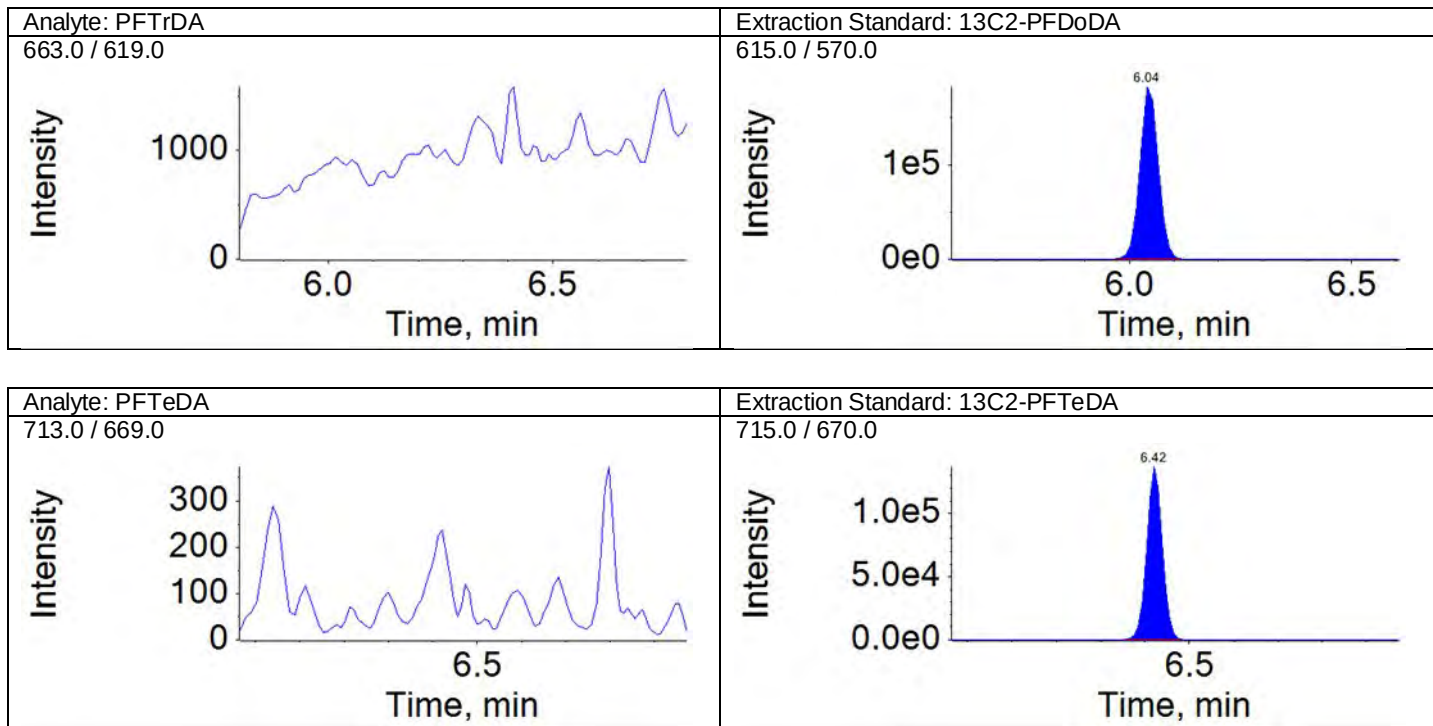
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



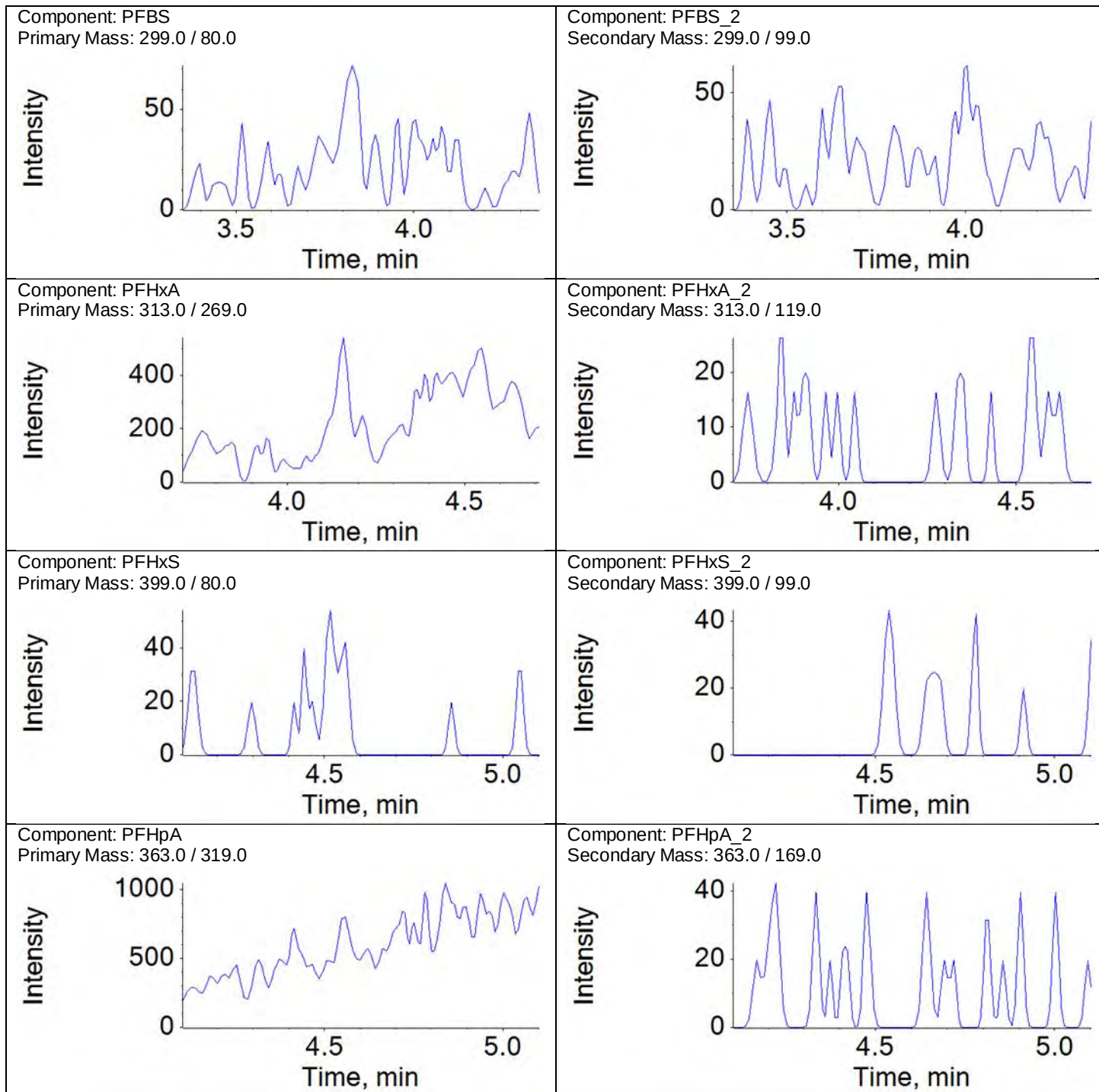
Ion Ratio Report

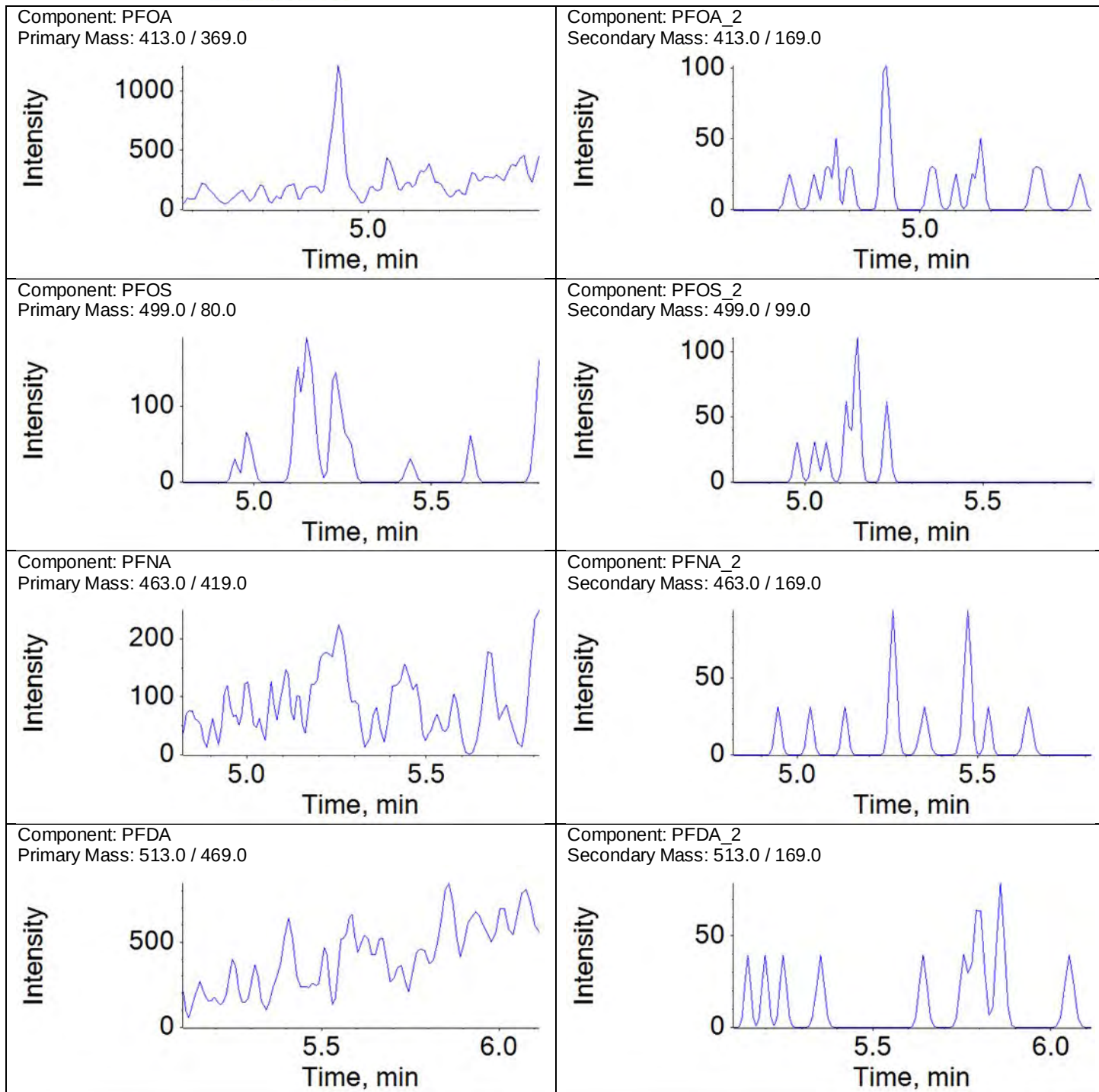
Sample Name: 9881916RE

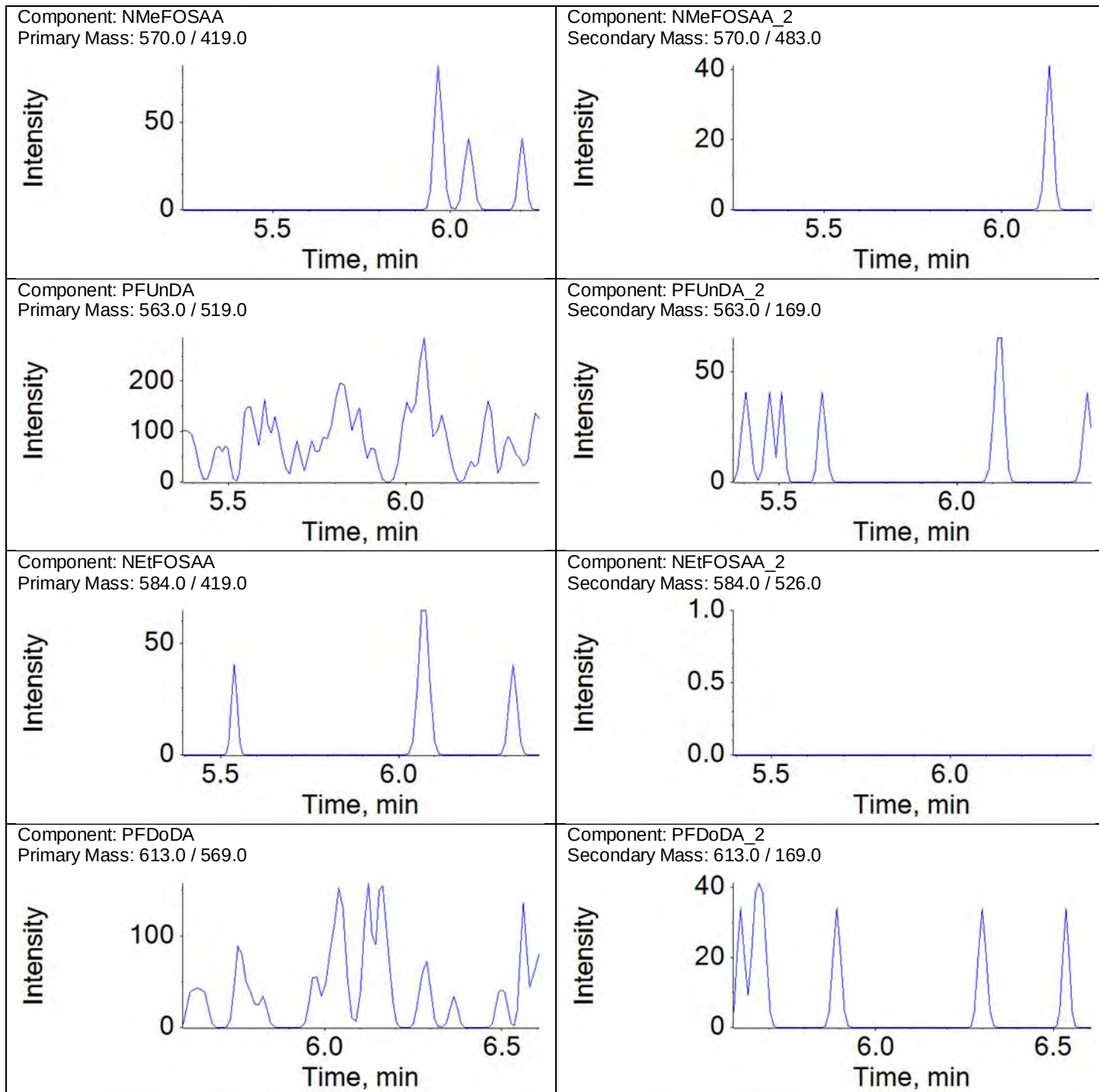
Instrument Name: LM27631

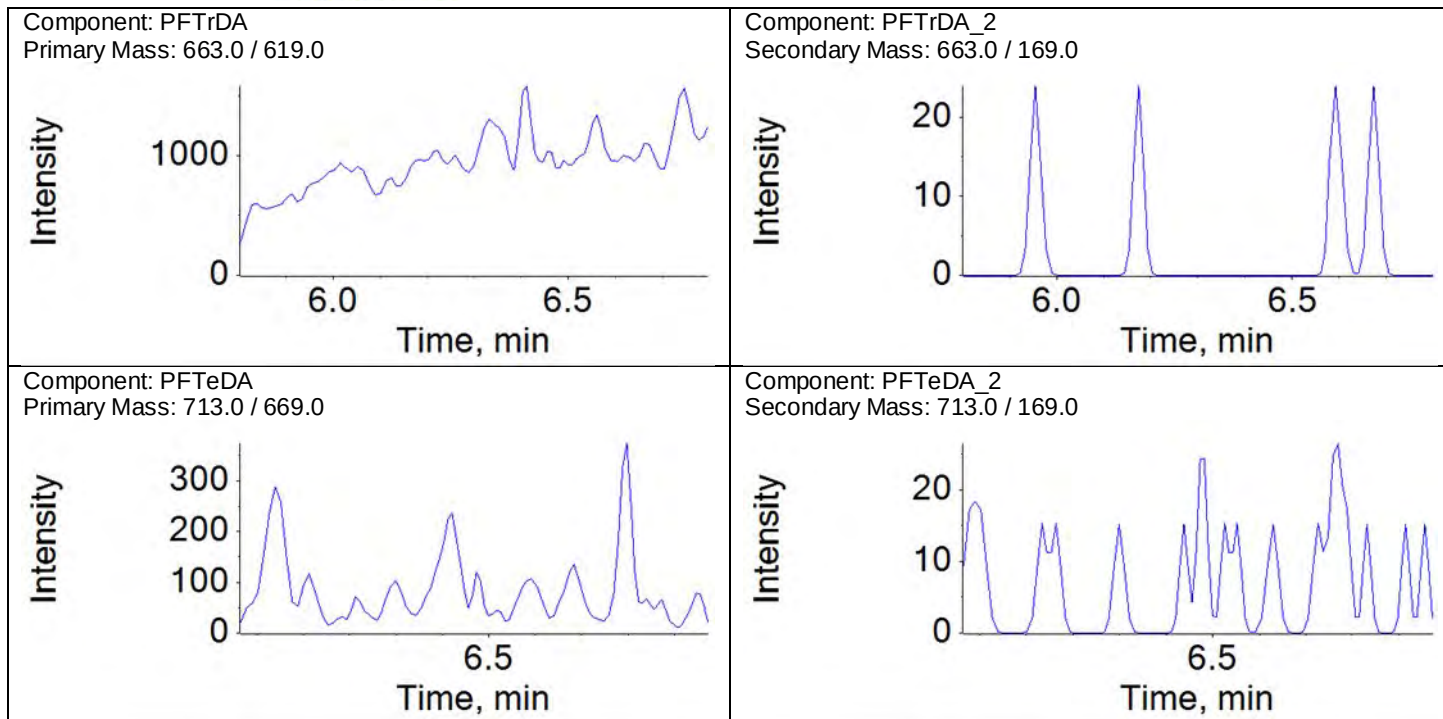
File Name: 18NOV08D-83.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881917			Data File:		18NOV13D-21.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-06-05 Grab Soil			Acquis Date:		2018-11-13T12:08:26
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	26			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			Operator:		MCD7824
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: 18NOV13D-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	695964.1	661126.9	5	50	
13C2-PFOA	5.0	483746.6	466902.6	4	50	
13C4-PFOS	4.8	264240.2	247446.9	7	50	
13C2-PFDA	5.0	307336.1	295381.6	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
E13C3-PFBS	380557.7	13C3-PFBA	695964.1	0.547	8.692	7.215	83	50-150	
E13C5-PFHxA	589220.1	13C2-PFOA	483746.6	1.218	9.346	8.224	88	50-150	
E13C3-PFHxS	268927.7	13C2-PFOA	483746.6	0.556	8.841	7.130	81	50-150	
E13C4-PFHpA	462581.5	13C2-PFOA	483746.6	0.956	9.346	8.052	86	50-150	
E13C8-PFOA	797255.3	13C2-PFOA	483746.6	1.648	9.346	8.487	91	50-150	
E13C8-PFOS	235520.5	13C4-PFOS	264240.2	0.891	8.935	7.382	83	50-150	
E13C9-PFNA	410080.8	13C4-PFOS	264240.2	1.552	9.346	8.088	87	50-150	
E13C6-PFDA	546069.9	13C2-PFDA	307336.1	1.777	9.346	7.750	83	50-150	
Ed3-NMeFOSAA	55209.5	13C2-PFDA	307336.1	0.180	9.346	6.061	65	50-150	
E13C7-PFUnDA	226237.4	13C2-PFDA	307336.1	0.736	9.346	7.989	85	50-150	
Ed5-NEtFOSAA	39972.8	13C2-PFDA	307336.1	0.130	9.346	5.143	55	50-150	
E13C2-PFDODA	477102.5	13C2-PFDA	307336.1	1.552	9.346	7.534	81	50-150	
E13C2-PFTeDA	340570.6	13C2-PFDA	307336.1	1.108	9.346	7.272	78	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881917

Instrument Name: LM27631

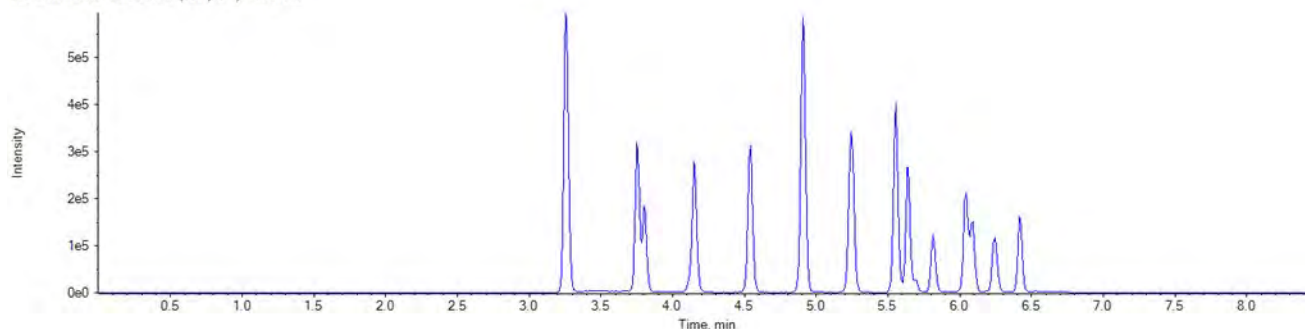
File Name: 18NOV13D-21.wiff

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	3.80	380557.7	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	589220.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	462581.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	268927.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	797255.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	235520.5	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	410080.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	546069.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	55209.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	226237.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	39972.8	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	477102.5	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	477102.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	340570.6	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-21.wiff (sample 1) - 9881917



APPROVED

By MCD at 10:39 pm, 11/13/18

BSI05 Page 272 of 1595

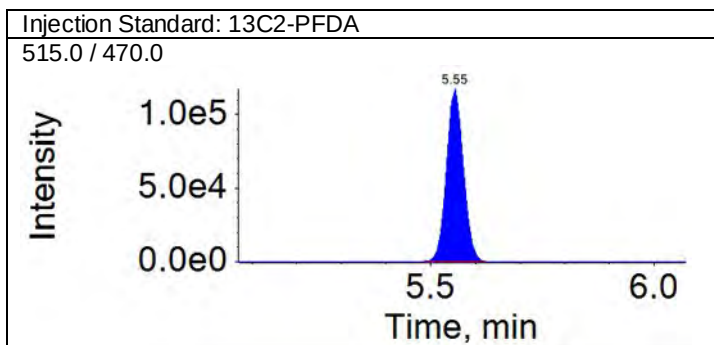
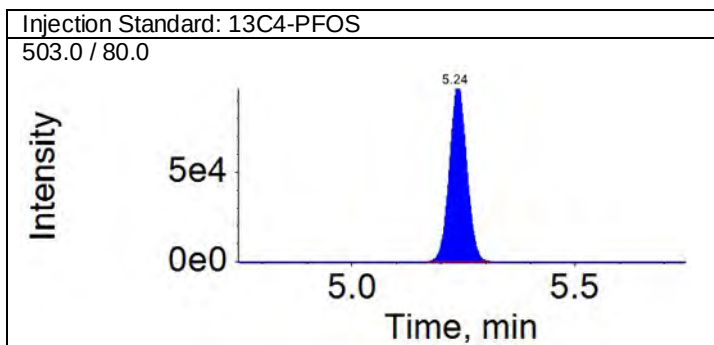
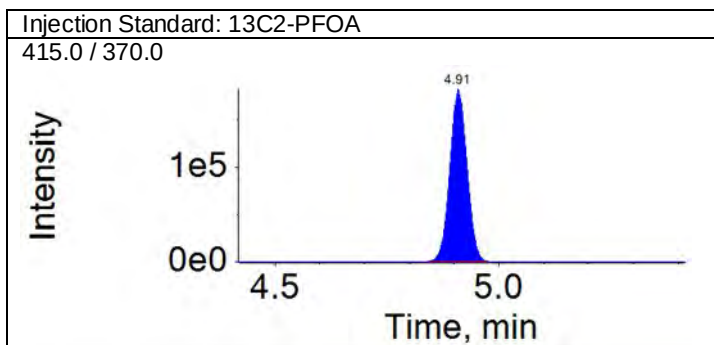
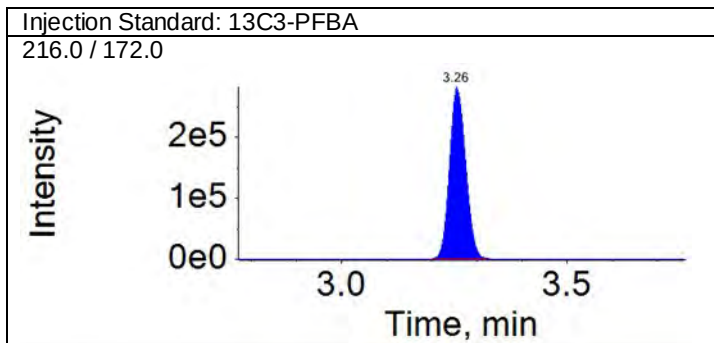
REVIEWED

By HMK at 2:12 pm, 11/14/18

Page 2 of 11

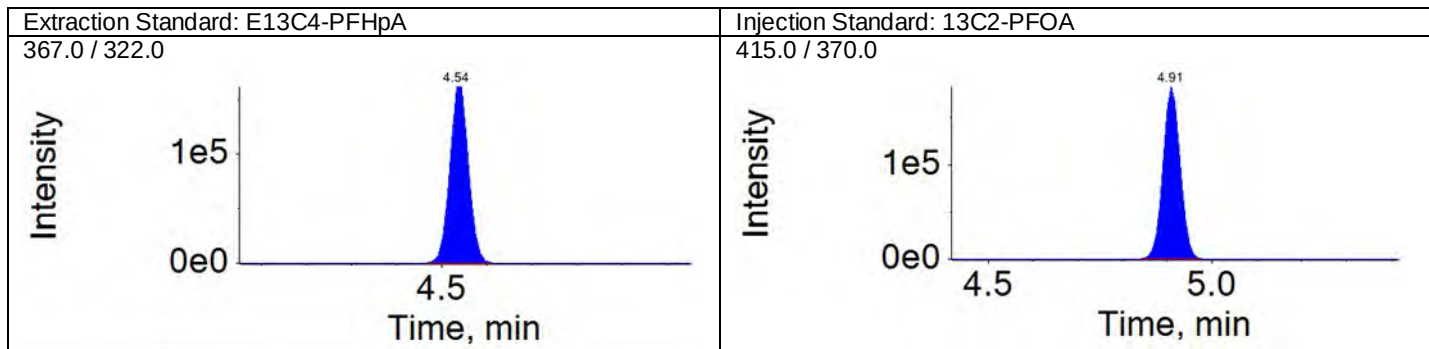
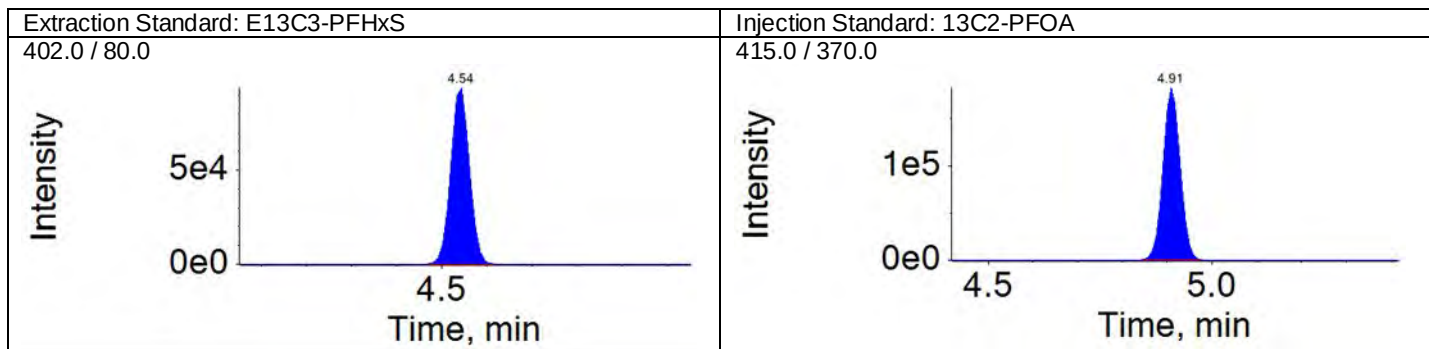
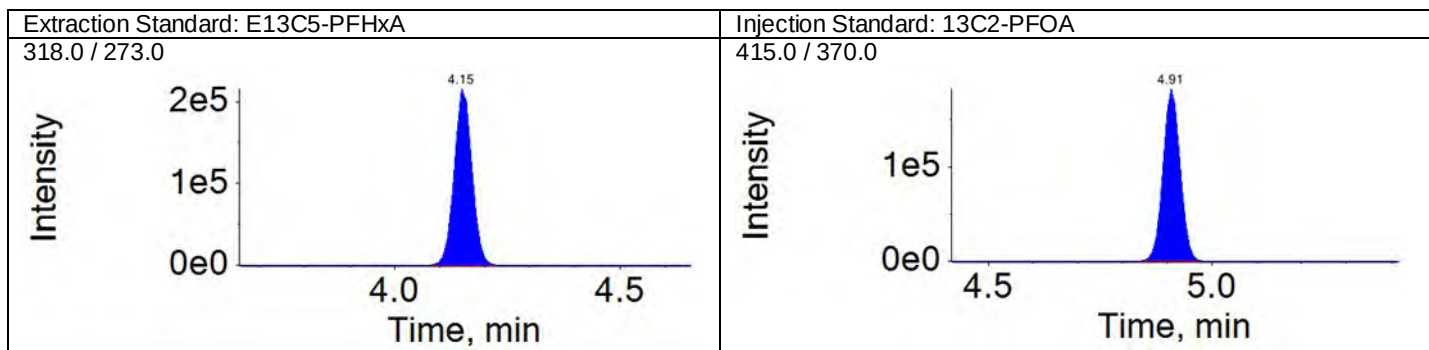
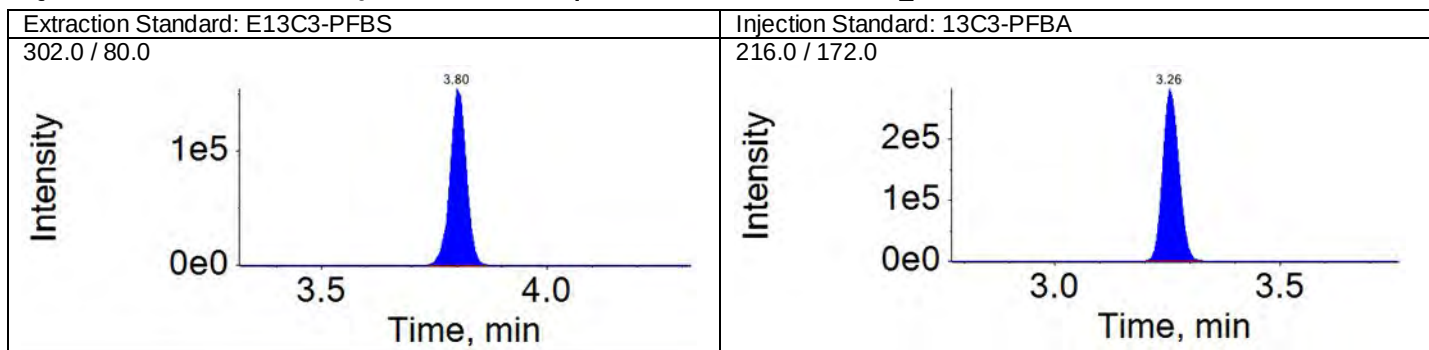
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



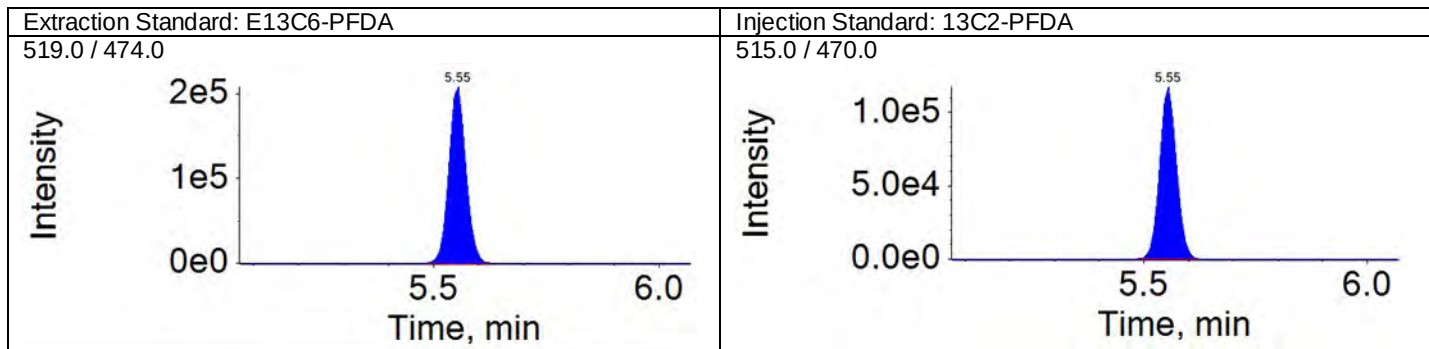
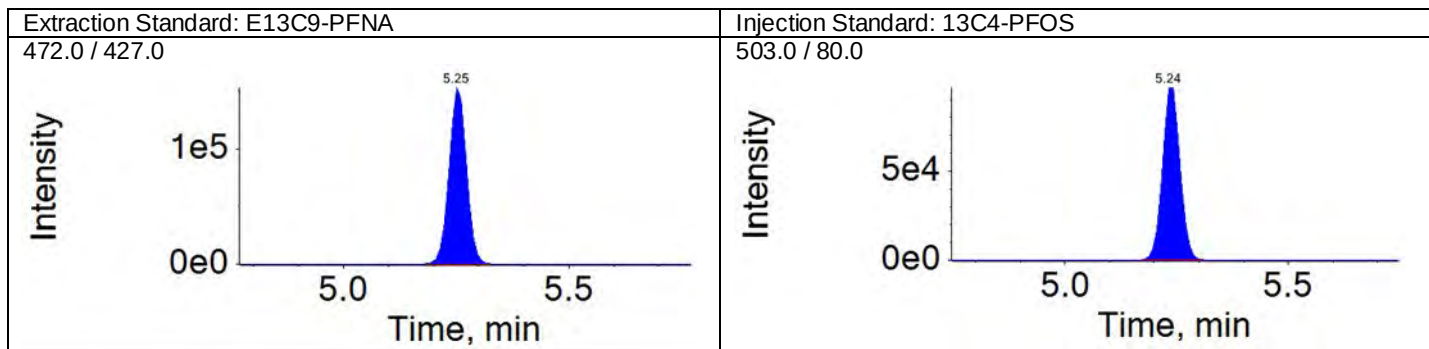
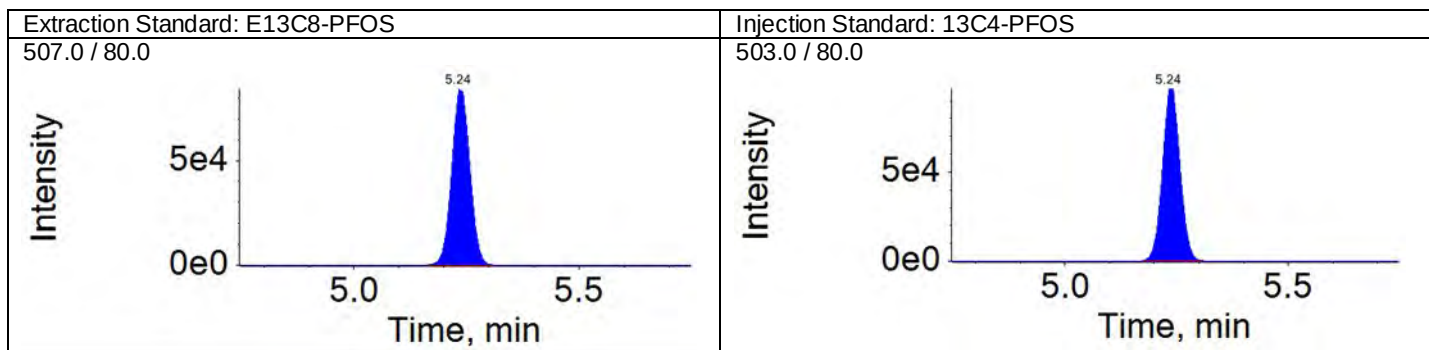
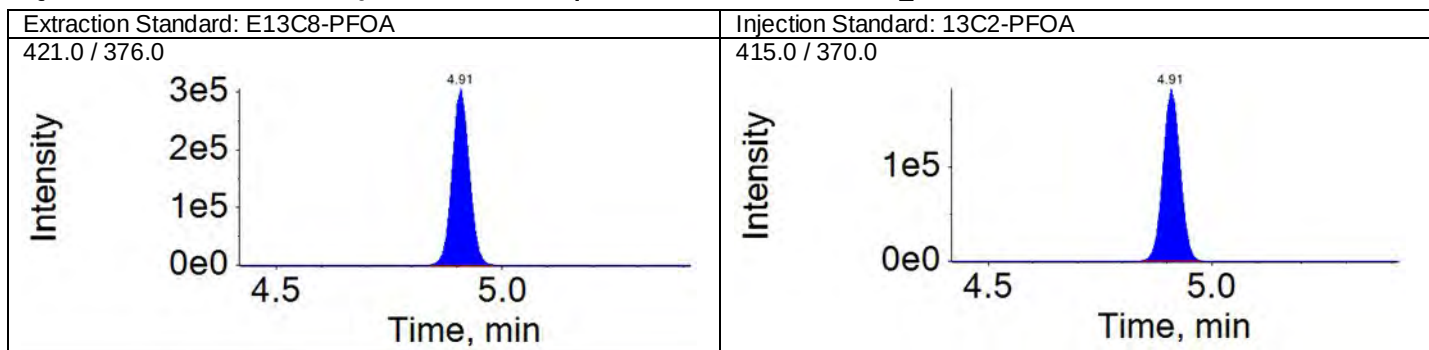
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



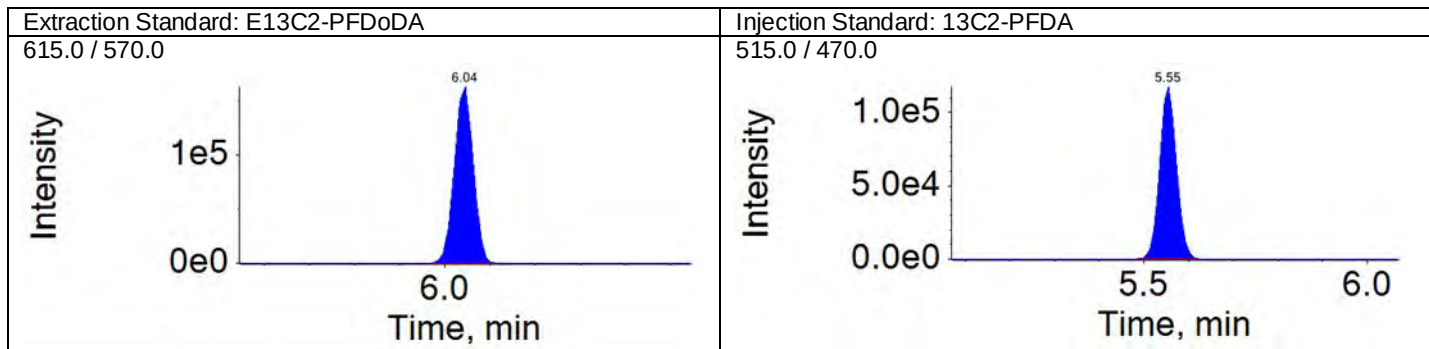
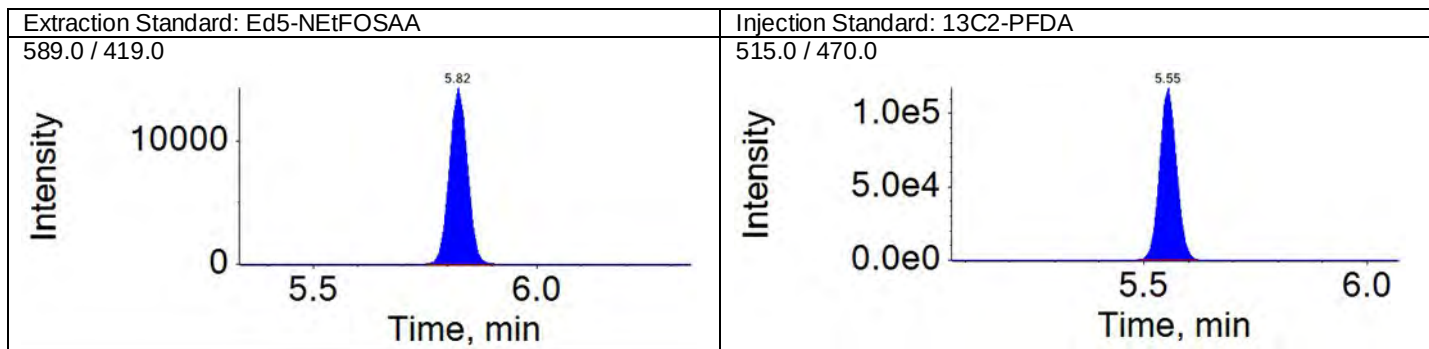
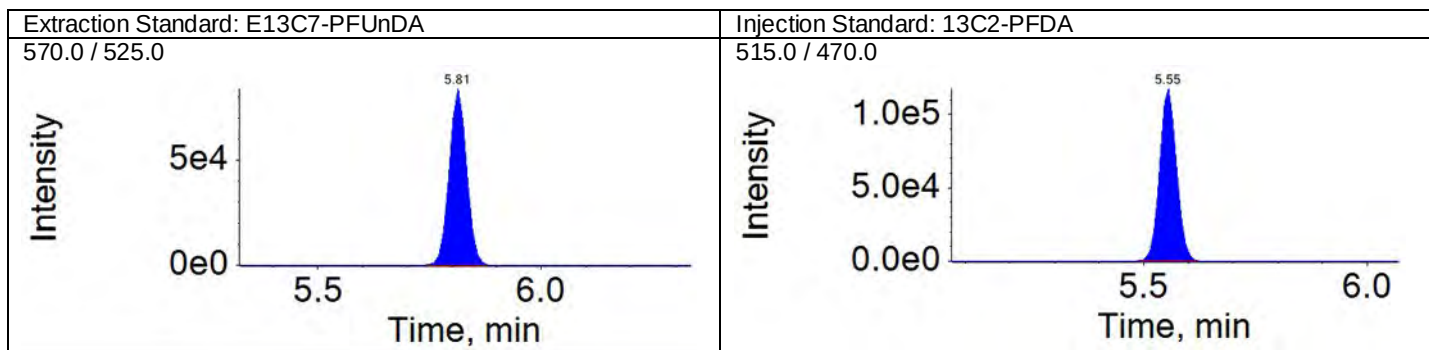
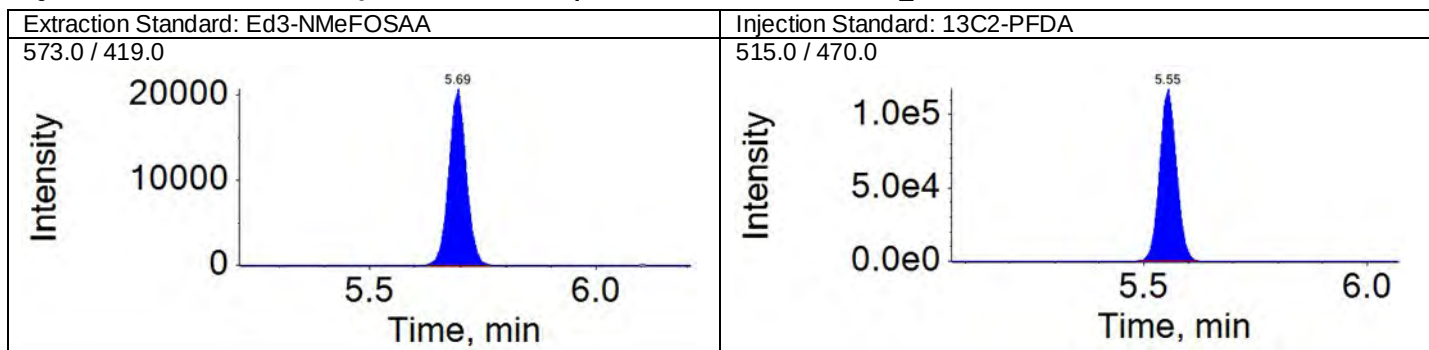
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



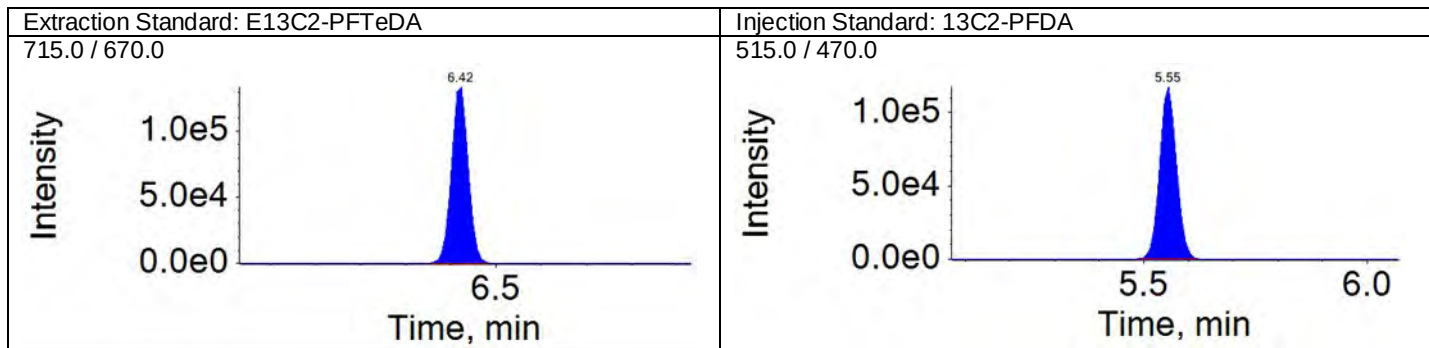
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

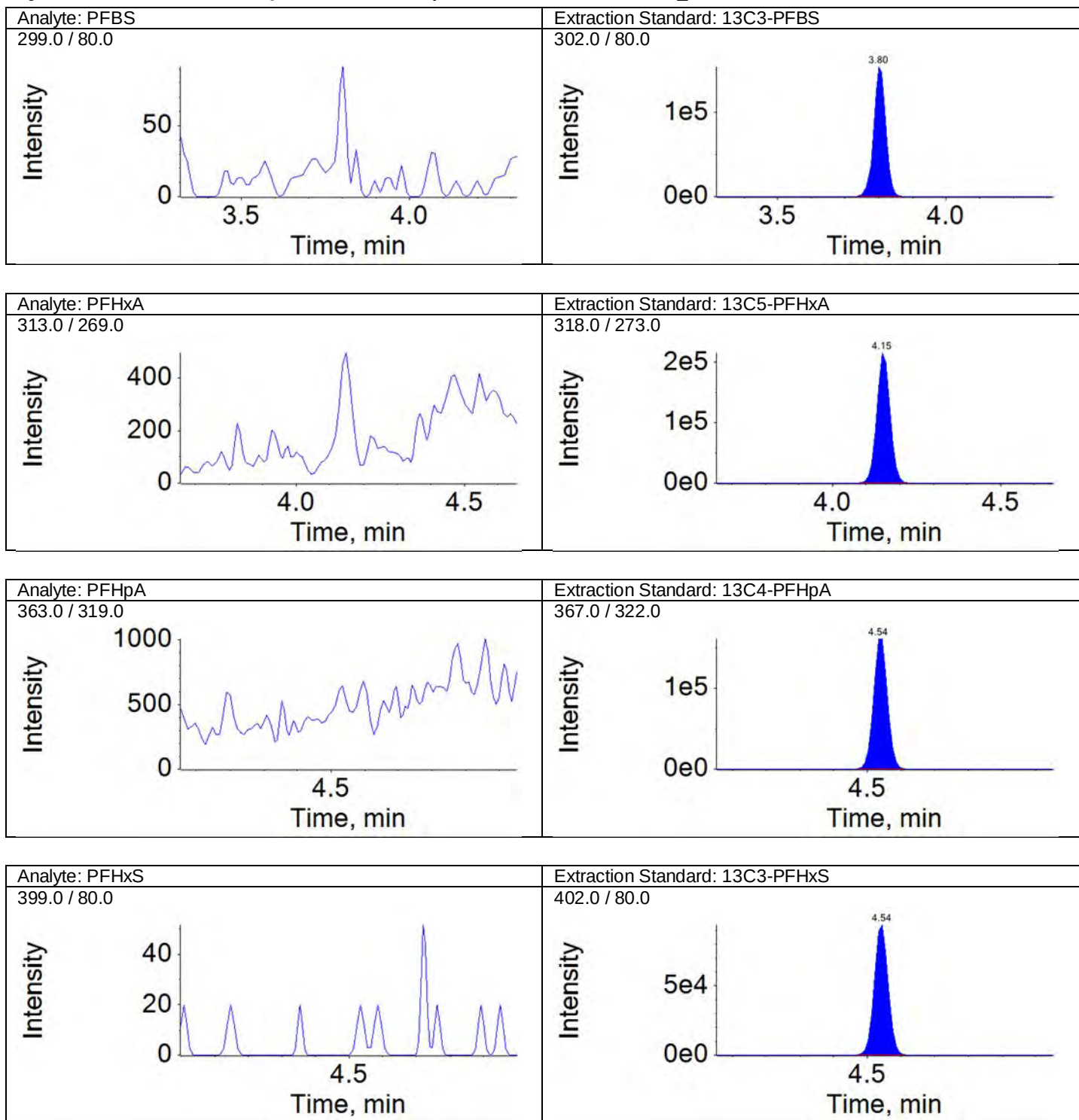
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

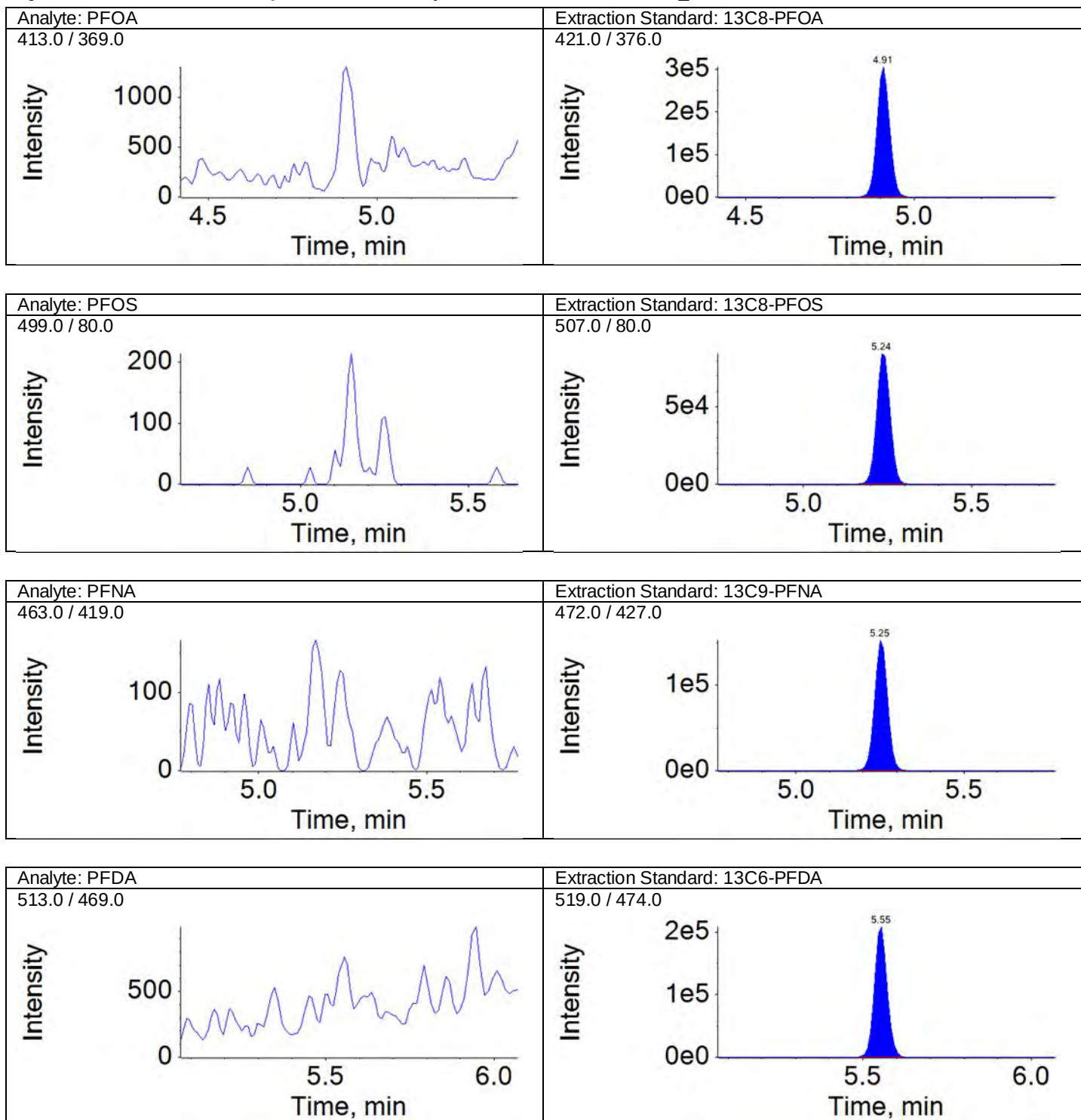
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



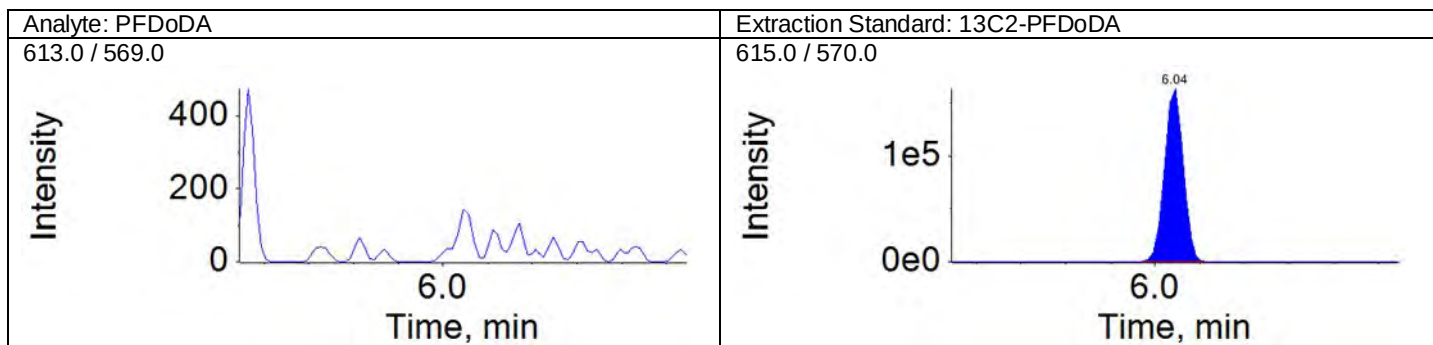
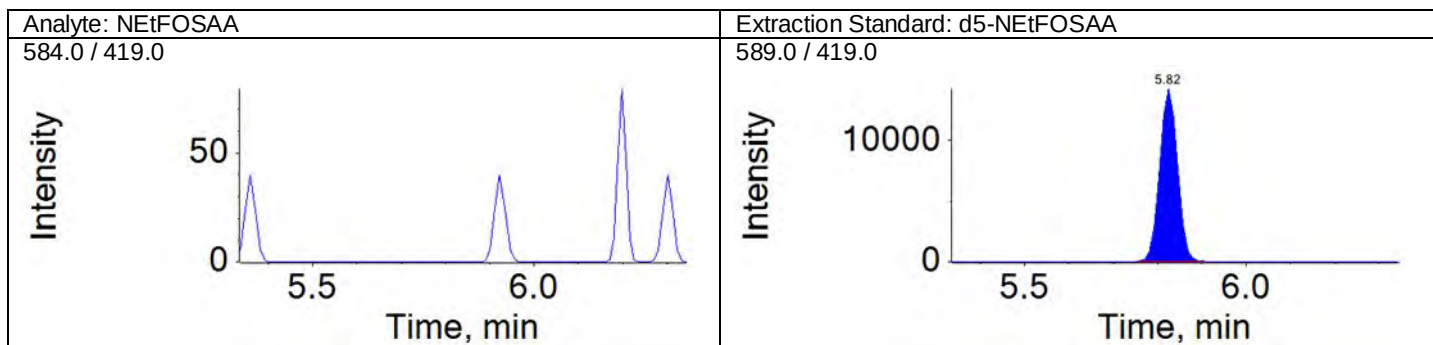
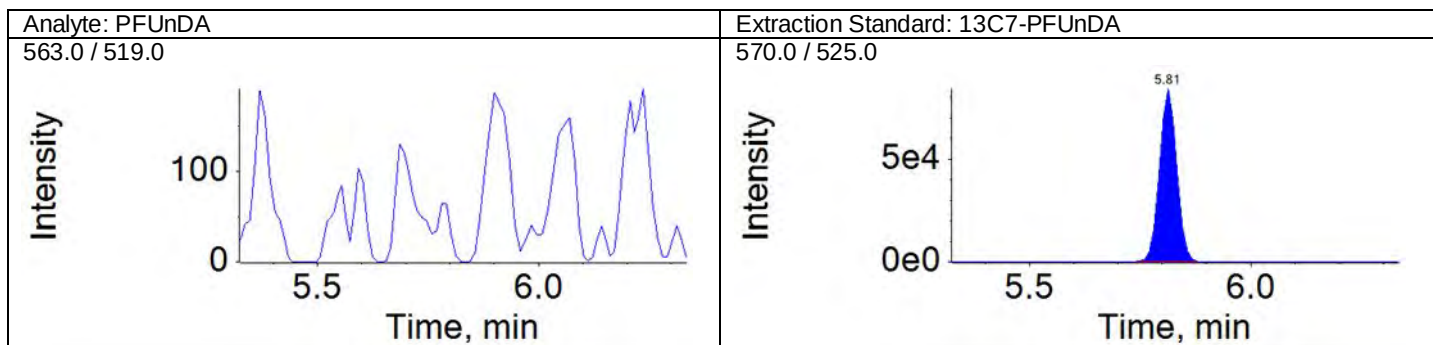
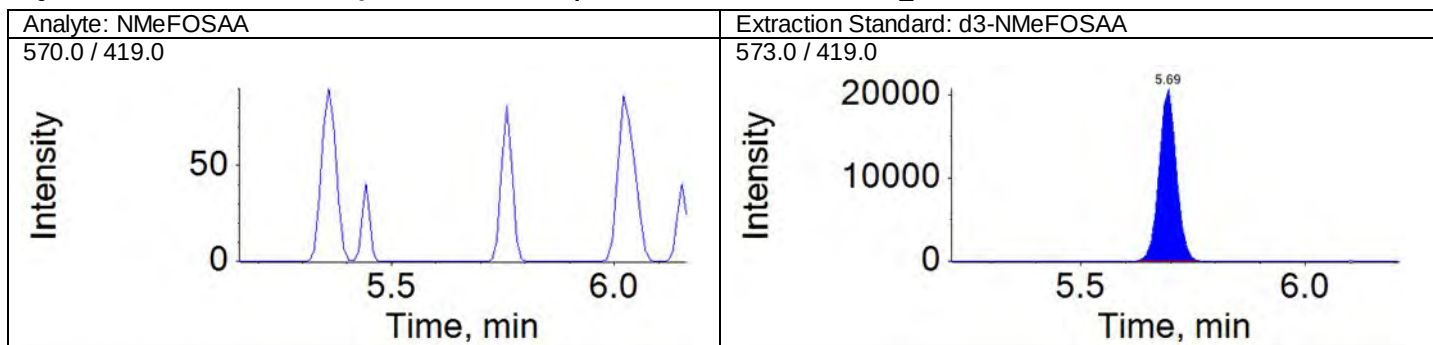
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



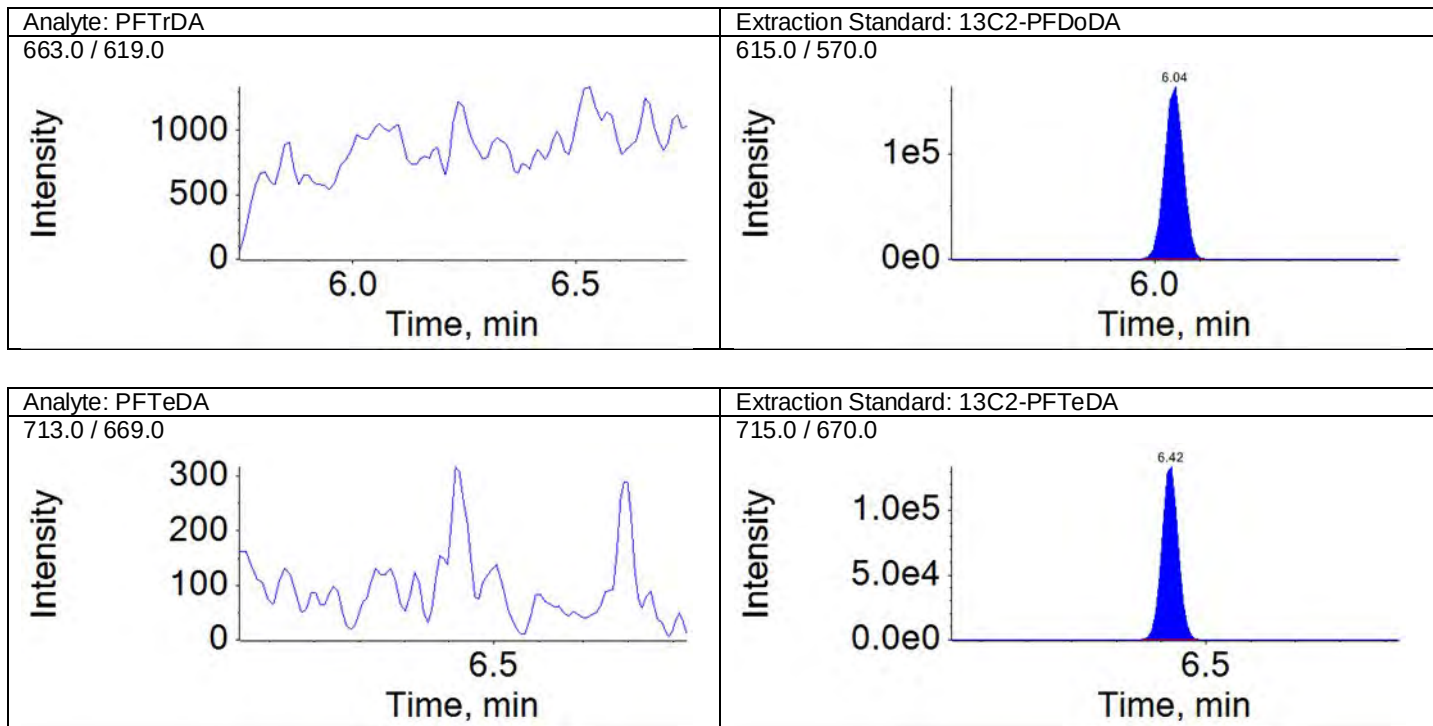
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



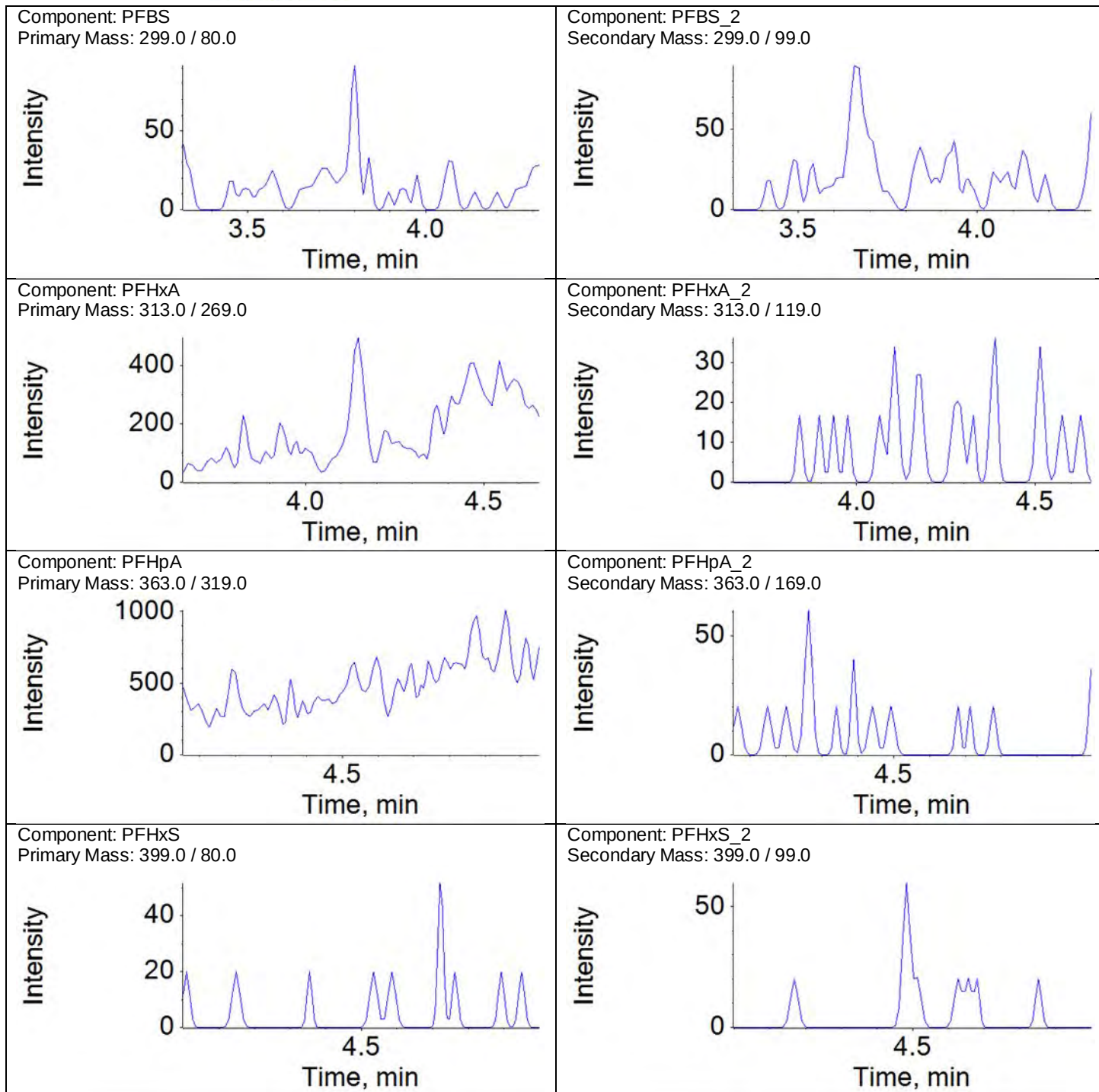
Ion Ratio Report

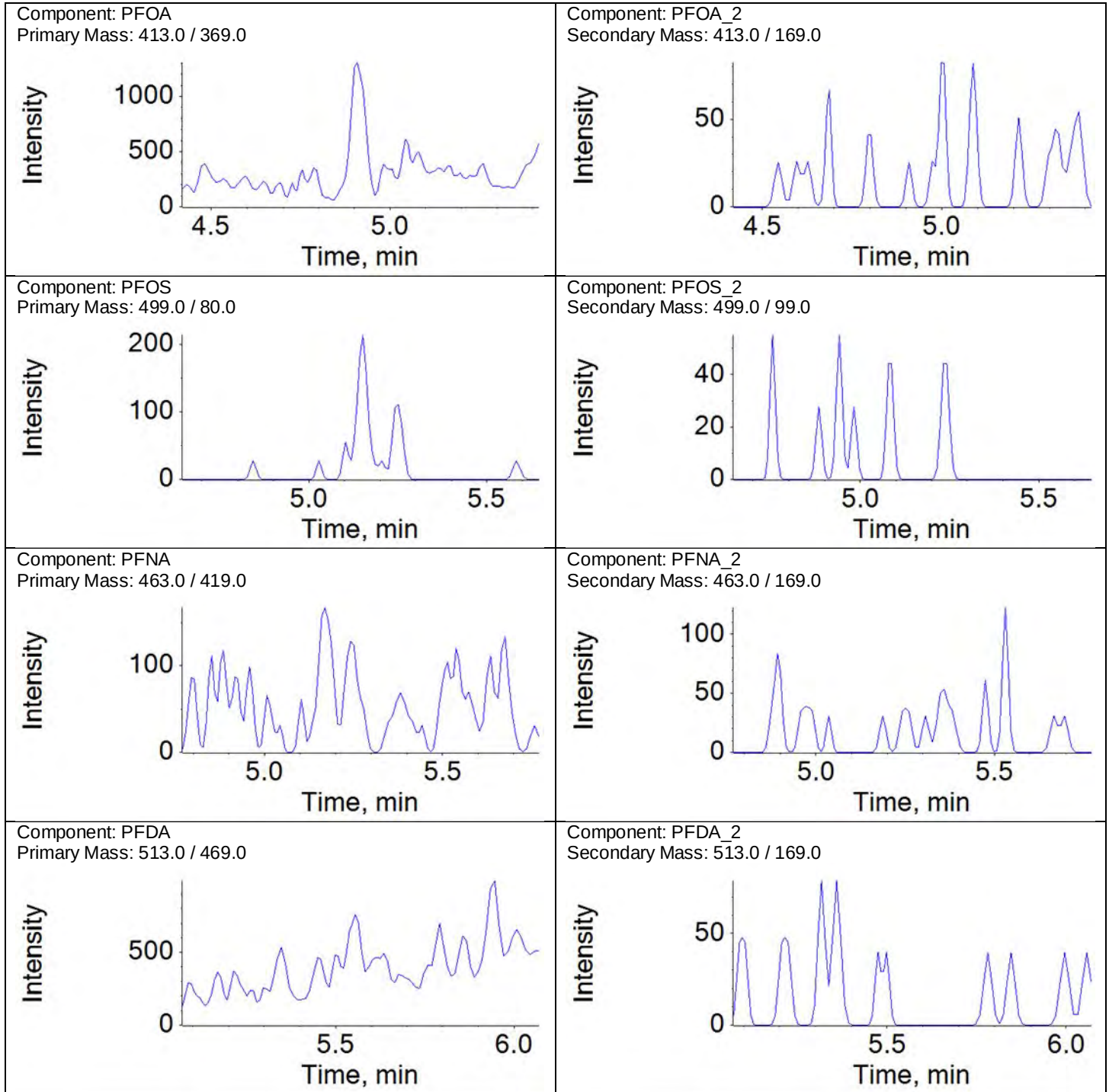
Sample Name: 9881917

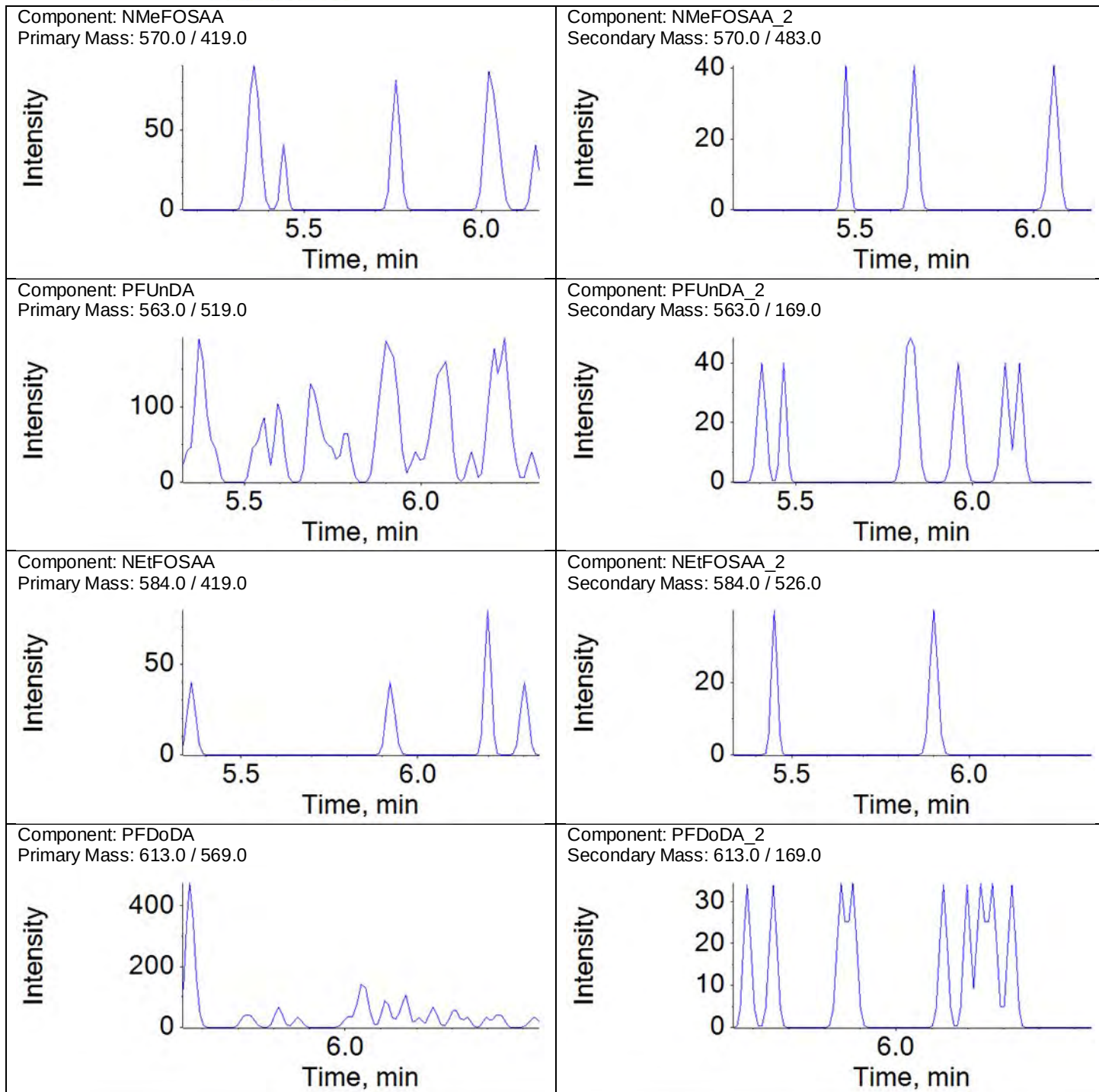
Instrument Name: LM27631

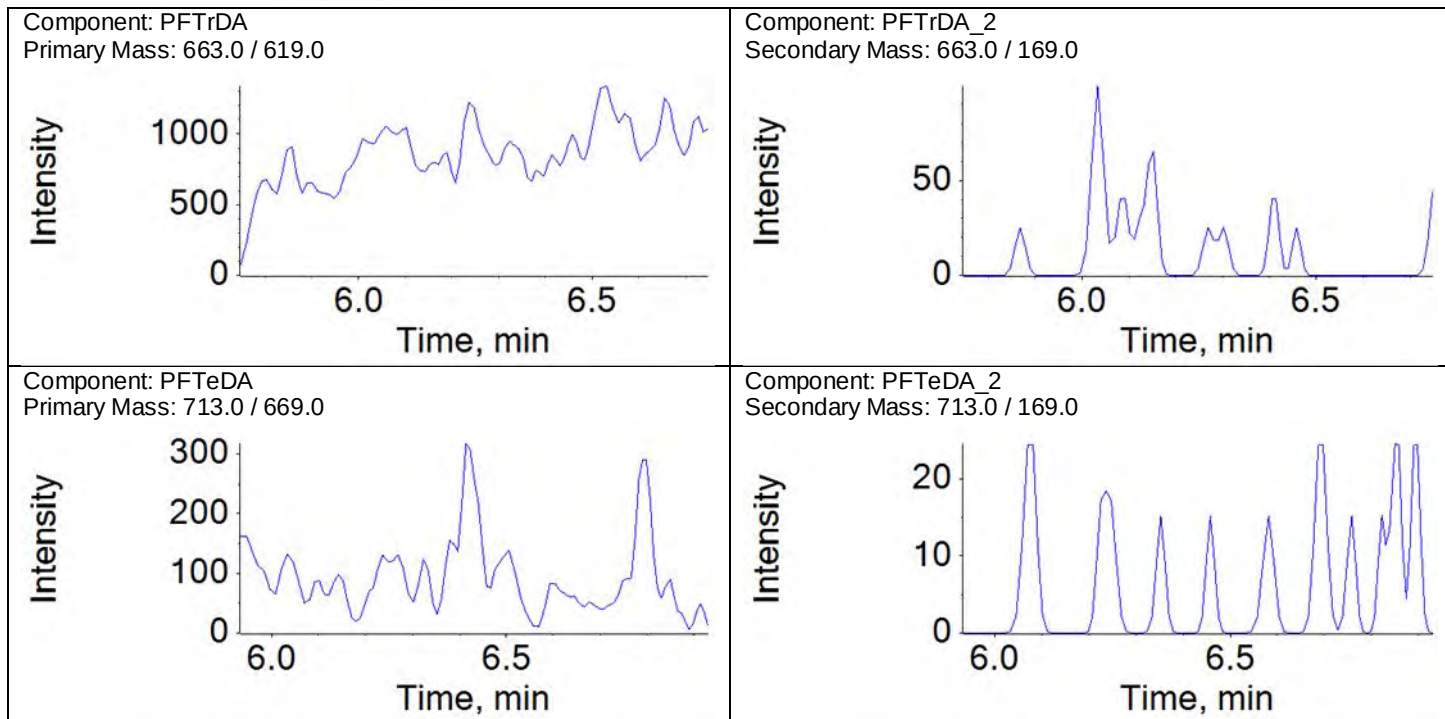
File Name: 18NOV13D-21.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881918			Data File:		18NOV13D-22.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-06-08 Grab Soil			Acquis Date:		2018-11-13T12:17:29
Sample Type:	Unknown			Instrument:		LM27631
Vial Position:	27			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18316012
QMethod File:	18AUG20QM			ICAL Name:		18NOV12DCAL
Batch Number:	18316012			Operator:		MCD7824
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: 18NOV13D-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	705651.3	661126.9	7	50	
13C2-PFOA	5.0	514499.8	466902.6	10	50	
13C4-PFOS	4.8	246109.5	247446.9	-1	50	
13C2-PFDA	5.0	310076.7	295381.6	5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	346890.2	13C3-PFBA	705651.3	0.492	8.611	6.426	75	50-150	
E13C5-PFHxA	521367.3	13C2-PFOA	514499.8	1.013	9.259	6.779	73	50-150	
E13C3-PFHxS	243581.8	13C2-PFOA	514499.8	0.473	8.759	6.016	69	50-150	
E13C4-PFHpA	424833.4	13C2-PFOA	514499.8	0.826	9.259	6.889	74	50-150	
E13C8-PFOA	731942.6	13C2-PFOA	514499.8	1.423	9.259	7.258	78	50-150	
E13C8-PFOS	225984.8	13C4-PFOS	246109.5	0.918	8.852	7.534	85	50-150	
E13C9-PFNA	369441.8	13C4-PFOS	246109.5	1.501	9.259	7.751	84	50-150	
E13C6-PFDA	501679.0	13C2-PFDA	310076.7	1.618	9.259	6.992	76	50-150	
Ed3-NMeFOSAA	46302.2	13C2-PFDA	310076.7	0.149	9.259	4.991	54	50-150	
E13C7-PFUnDA	207216.8	13C2-PFDA	310076.7	0.668	9.259	7.185	78	50-150	
Ed5-NEtFOSAA	42057.2	13C2-PFDA	310076.7	0.136	9.259	5.314	57	50-150	
E13C2-PFDODA	446865.0	13C2-PFDA	310076.7	1.441	9.259	6.929	75	50-150	
E13C2-PFTeDA	319787.6	13C2-PFDA	310076.7	1.031	9.259	6.705	72	50-150	

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881918

Instrument Name: LM27631

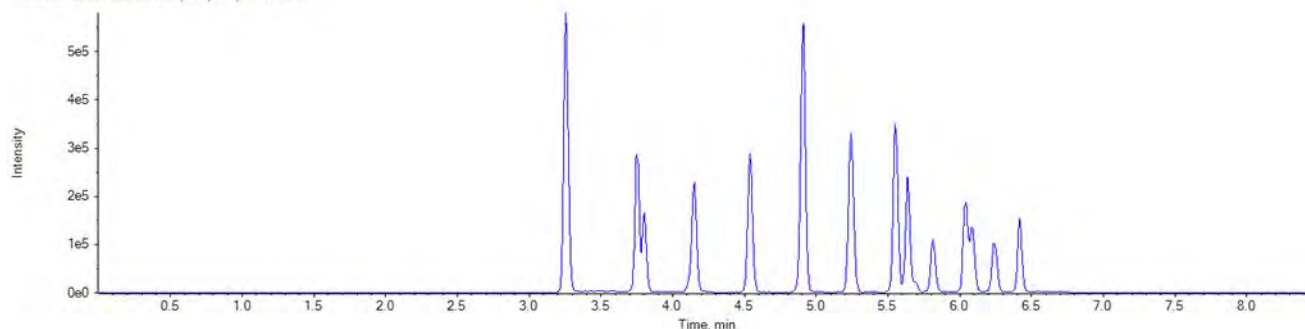
File Name: 18NOV13D-22.wiff

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	3.80	346890.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	521367.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	424833.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	243581.8	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	731942.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	225984.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	369441.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	501679.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	46302.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	207216.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	42057.2	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	446865.0	N/A	
PFTTrDA	N/A	N/A	N/A		A	13C2-PFDODA	6.04	446865.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	319787.6	N/A	

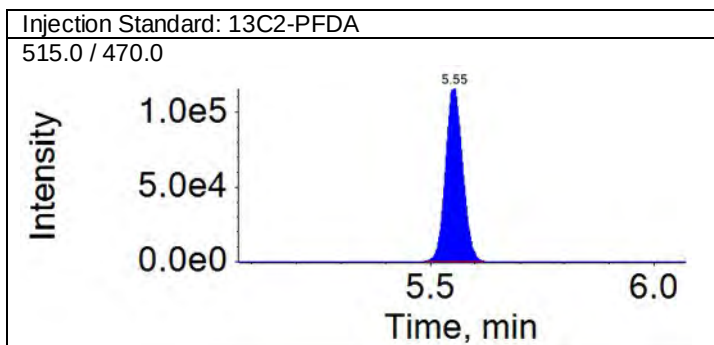
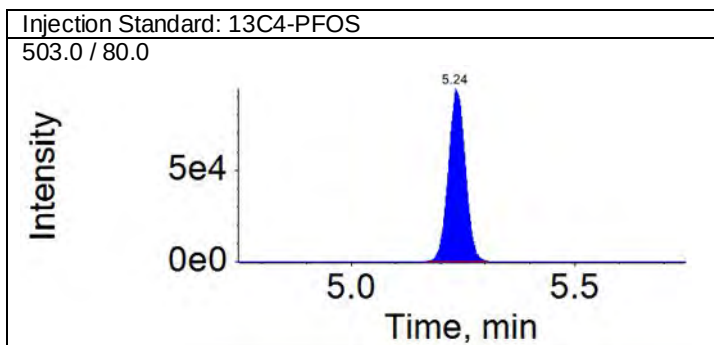
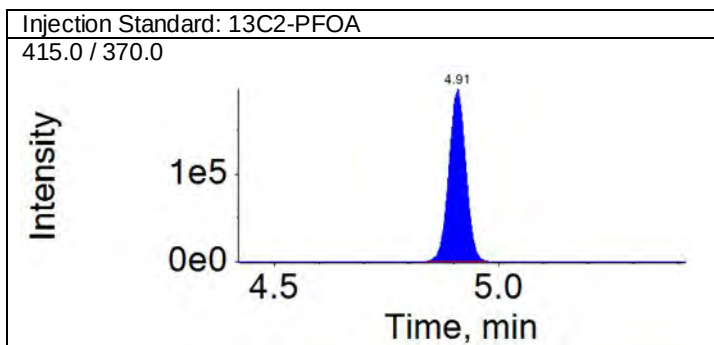
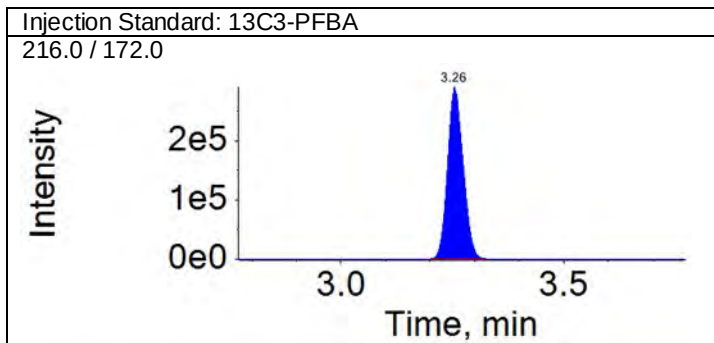
Total Ion Chromatogram

TIC from 18NOV13D-22.wiff (sample 1) - 9881918



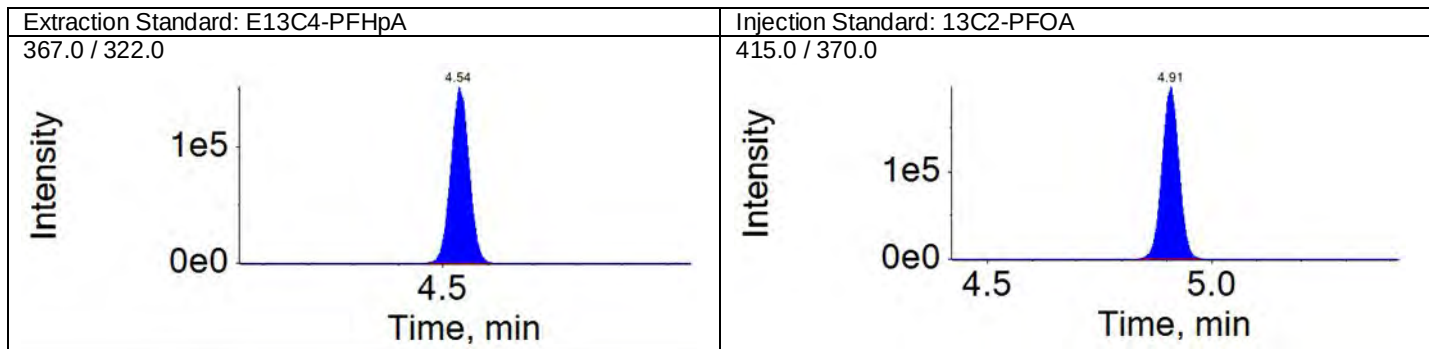
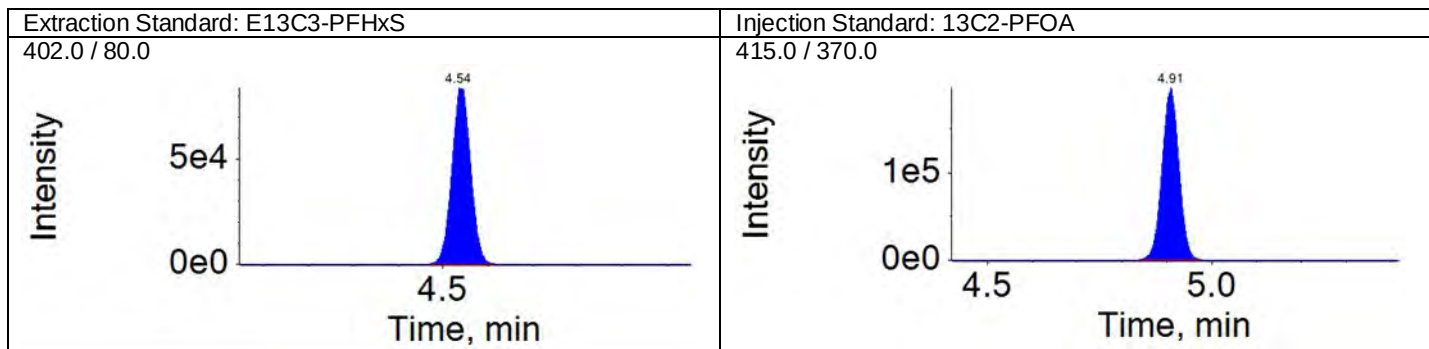
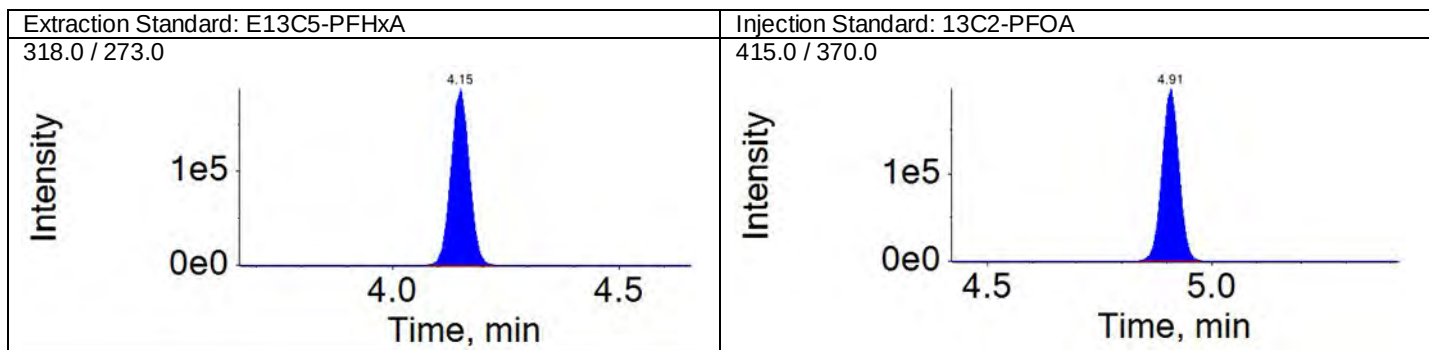
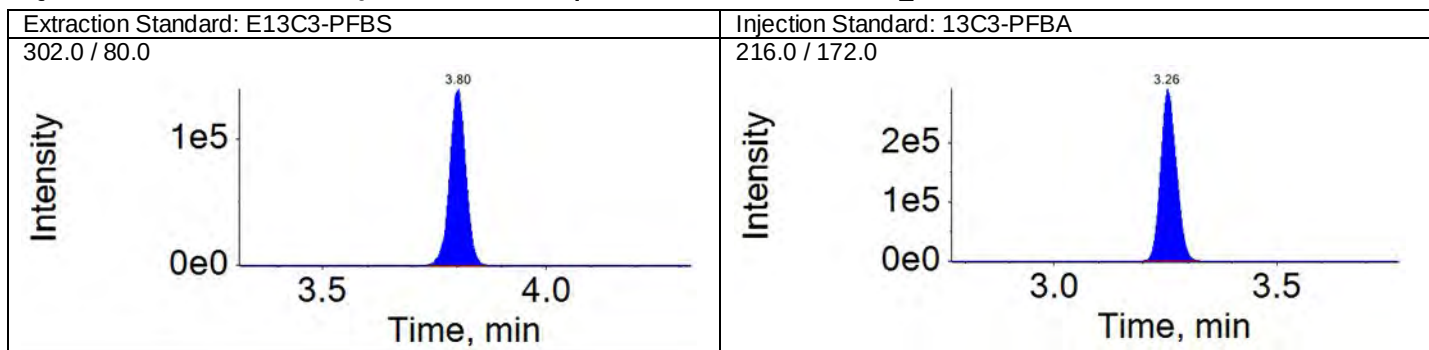
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



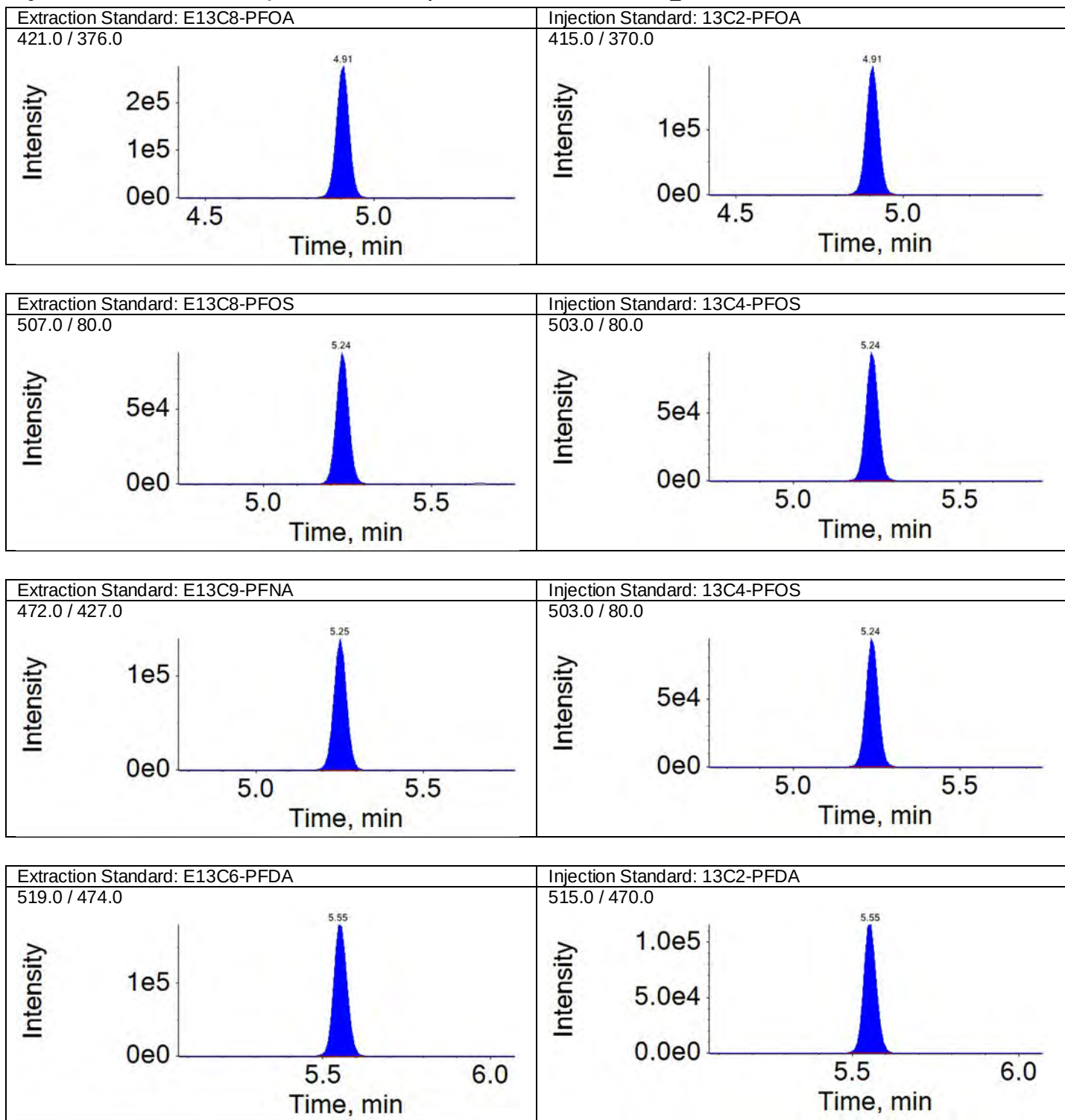
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



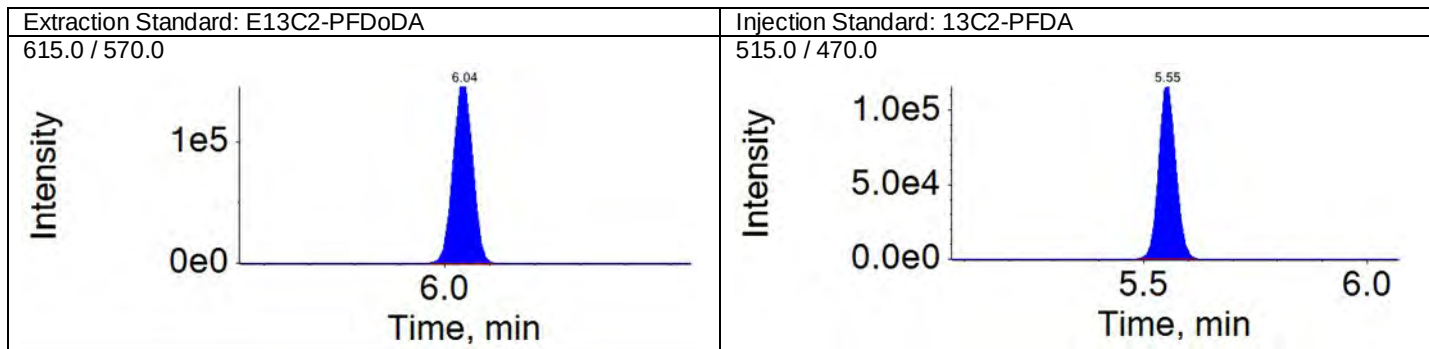
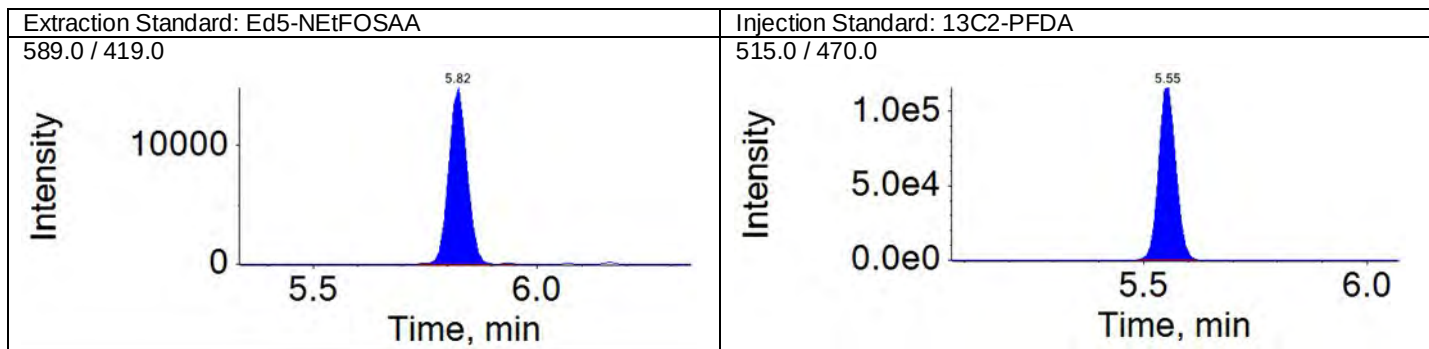
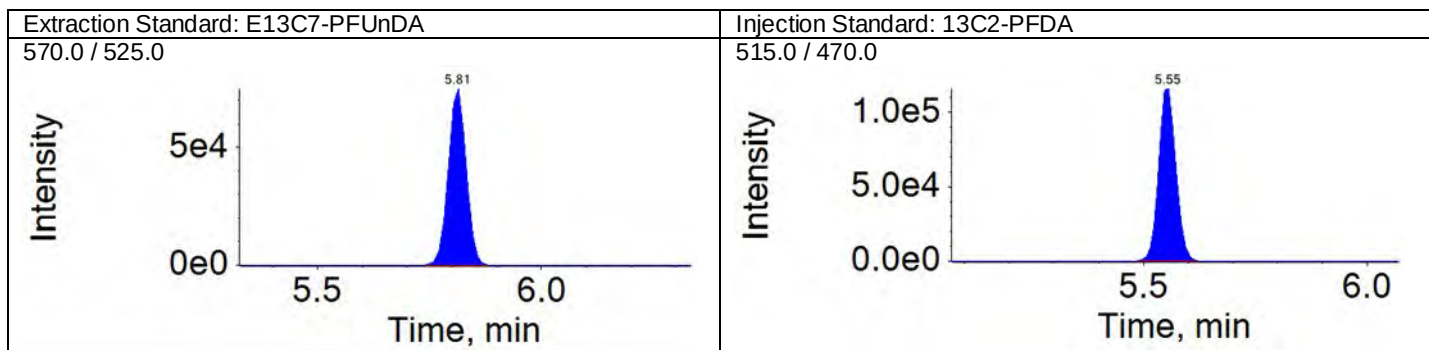
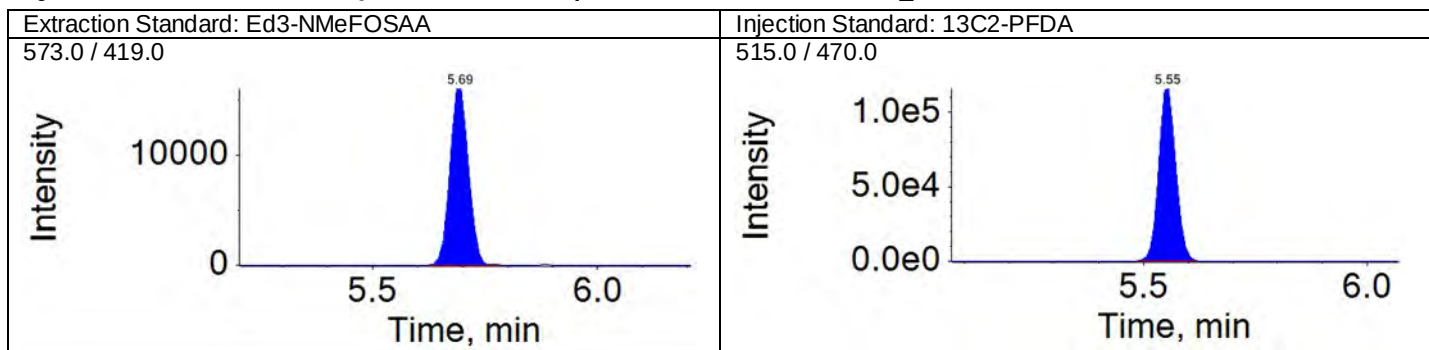
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



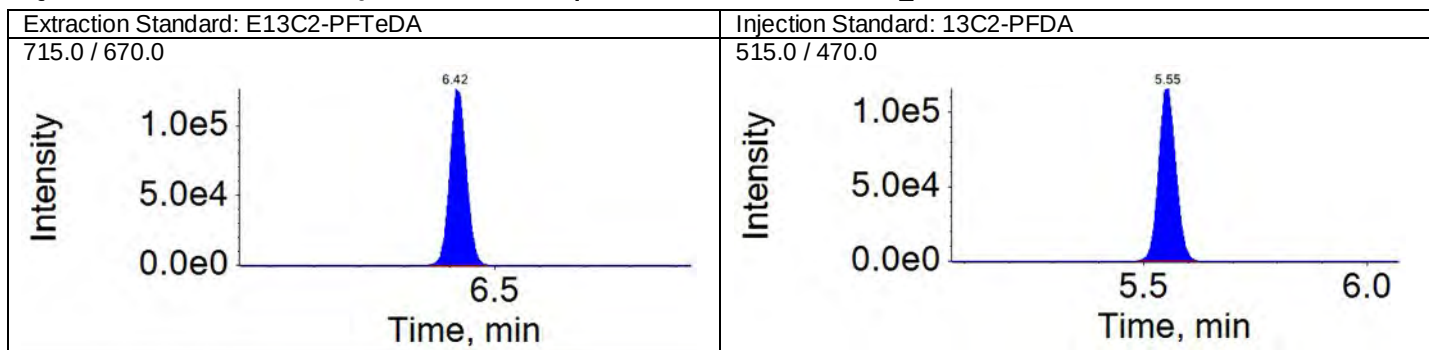
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

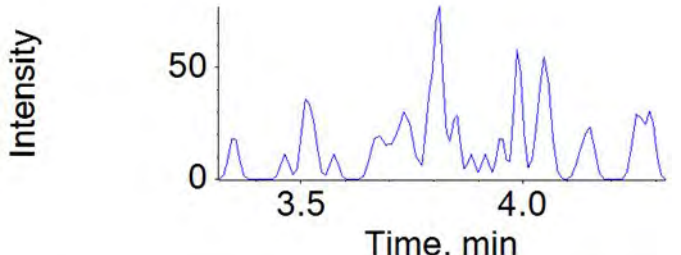
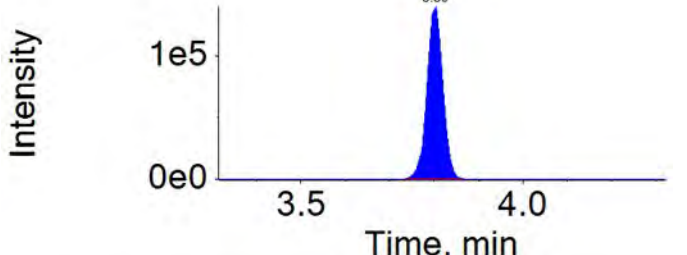
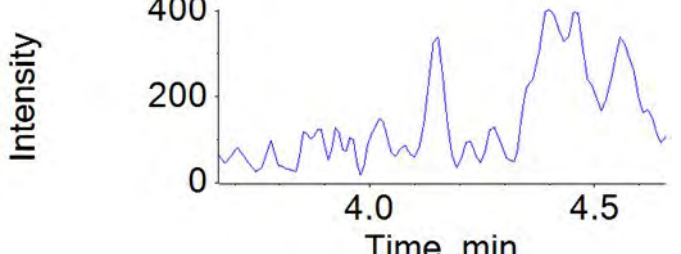
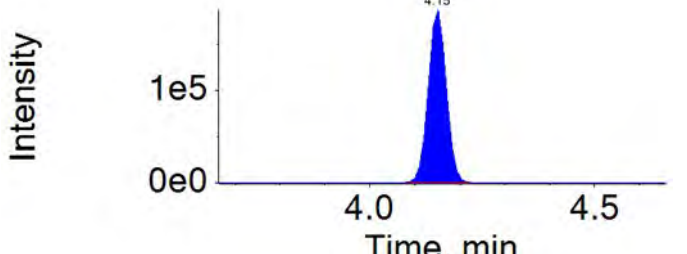
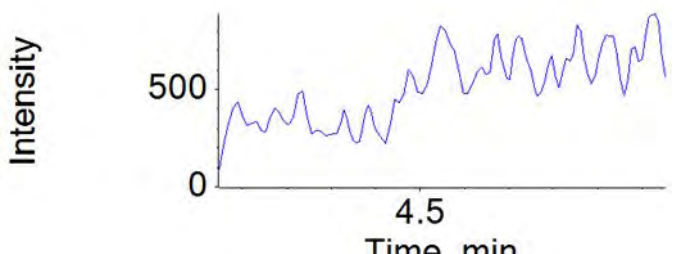
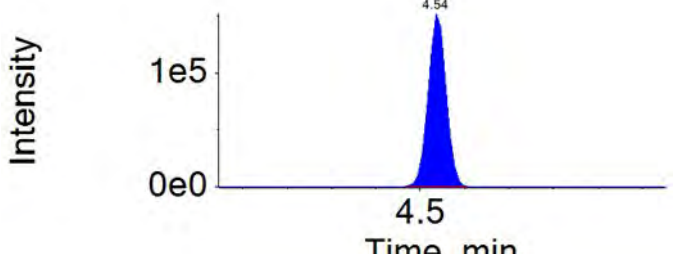
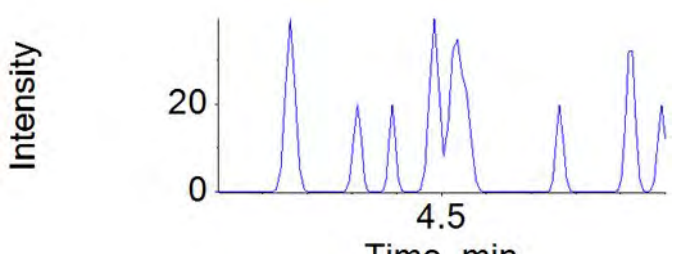
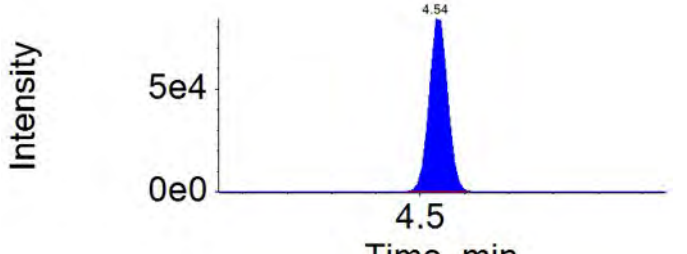
By MCD at 10:39 pm, 11/13/18

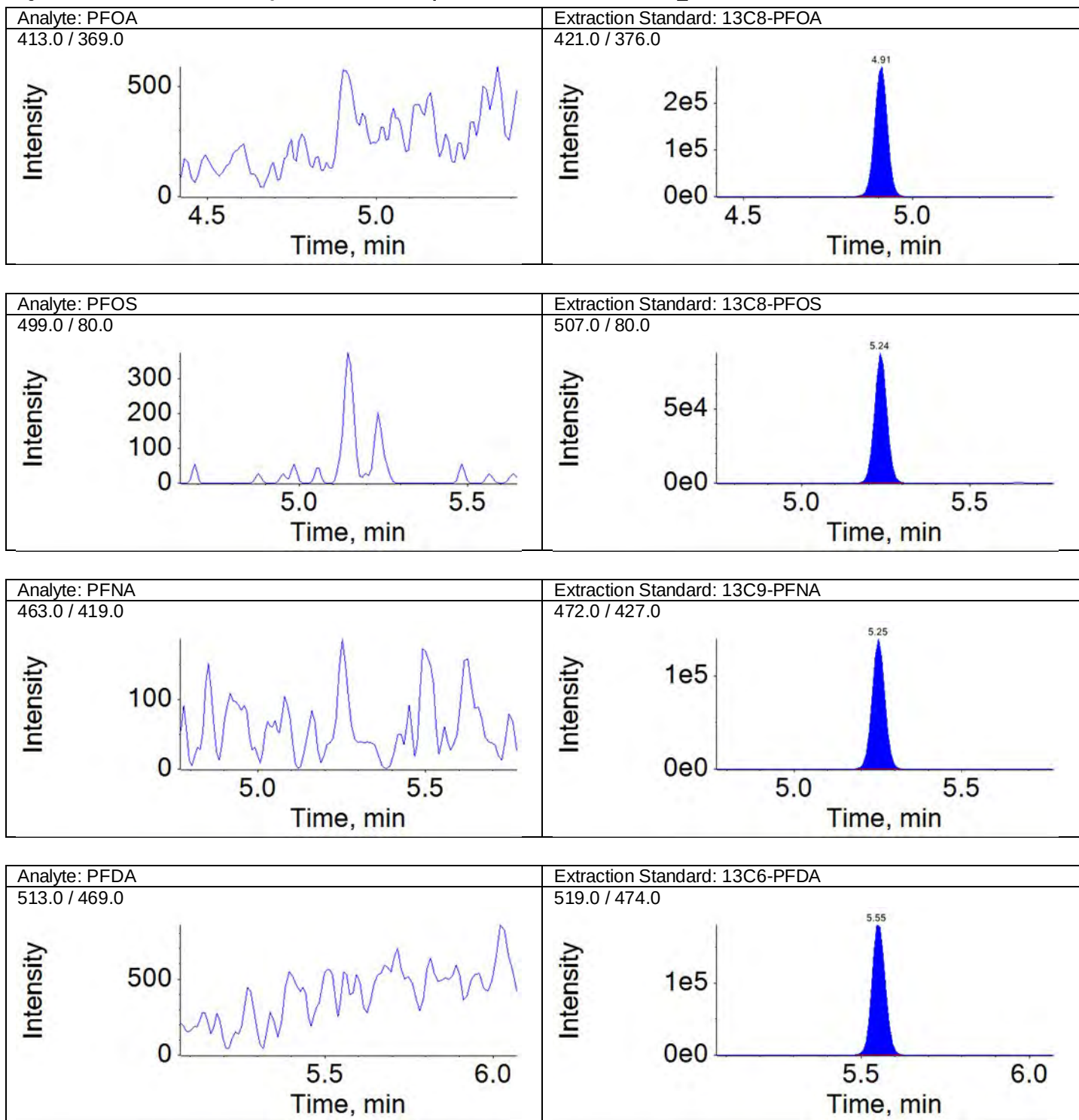
REVIEWED

By HMK at 2:12 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

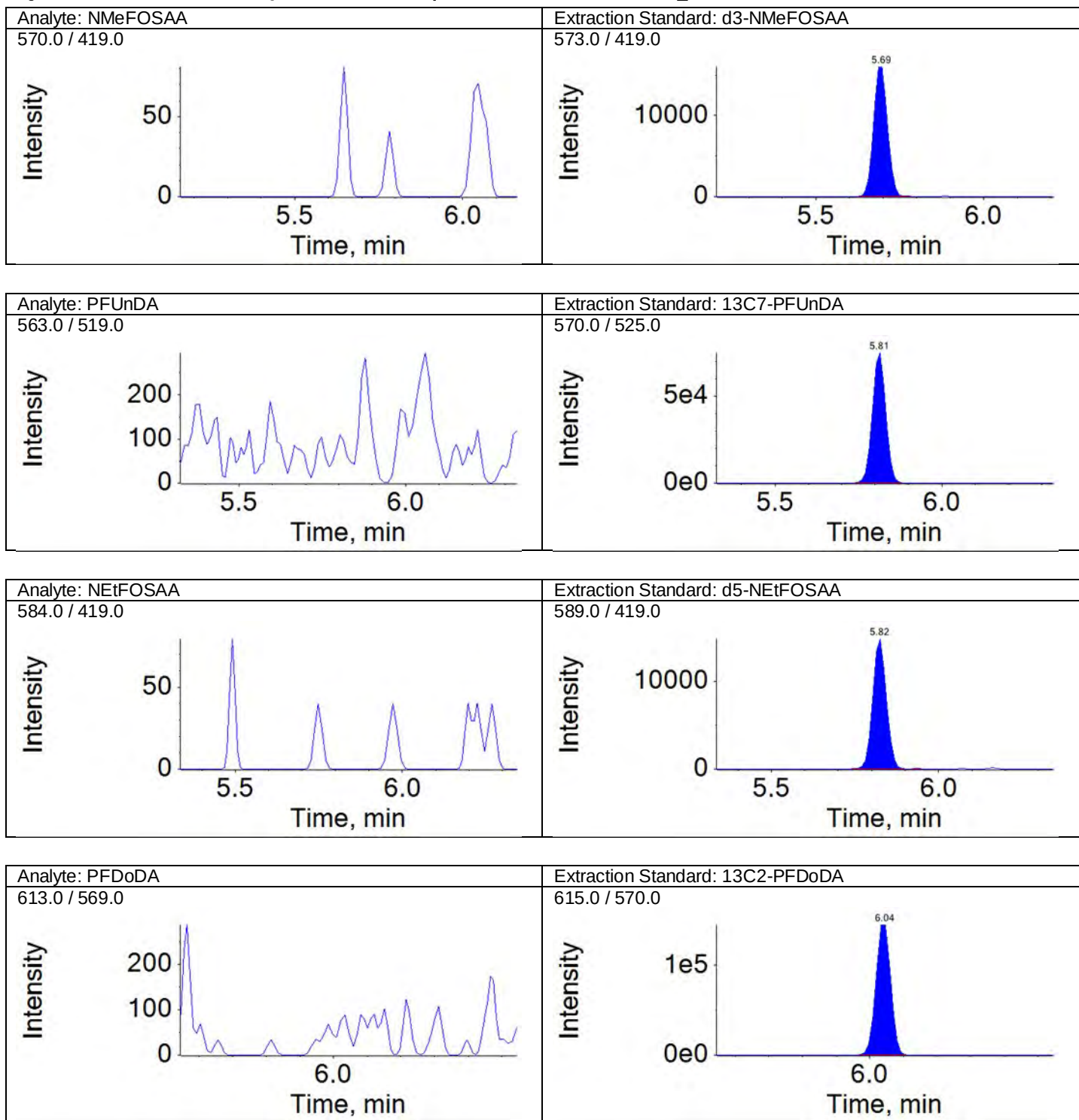
Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte: PFBS 299.0 / 80.0 	Extraction Standard: 13C3-PFBS 302.0 / 80.0 
Analyte: PFHxA 313.0 / 269.0 	Extraction Standard: 13C5-PFHxA 318.0 / 273.0 
Analyte: PFHpA 363.0 / 319.0 	Extraction Standard: 13C4-PFHpA 367.0 / 322.0 
Analyte: PFHxS 399.0 / 80.0 	Extraction Standard: 13C3-PFHxS 402.0 / 80.0 

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

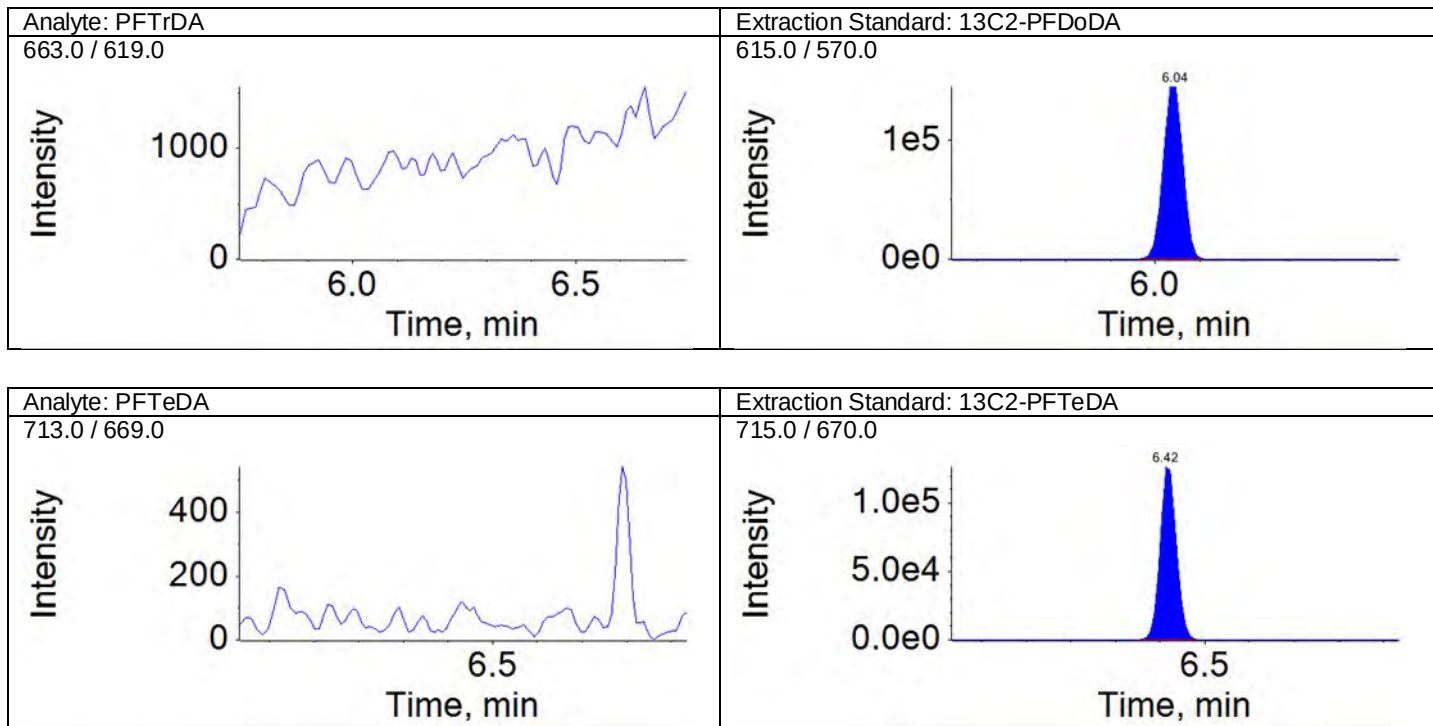
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



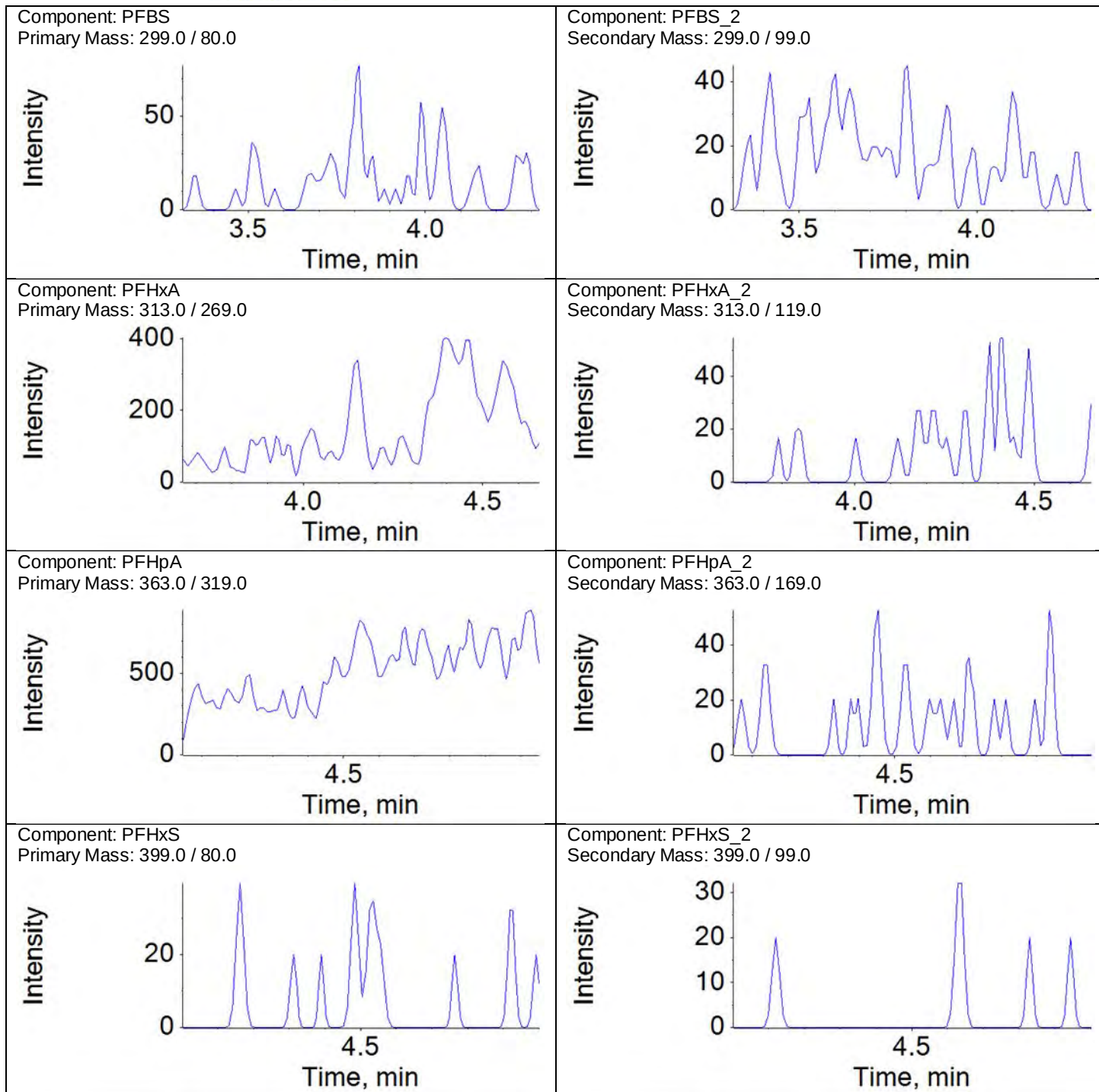
Ion Ratio Report

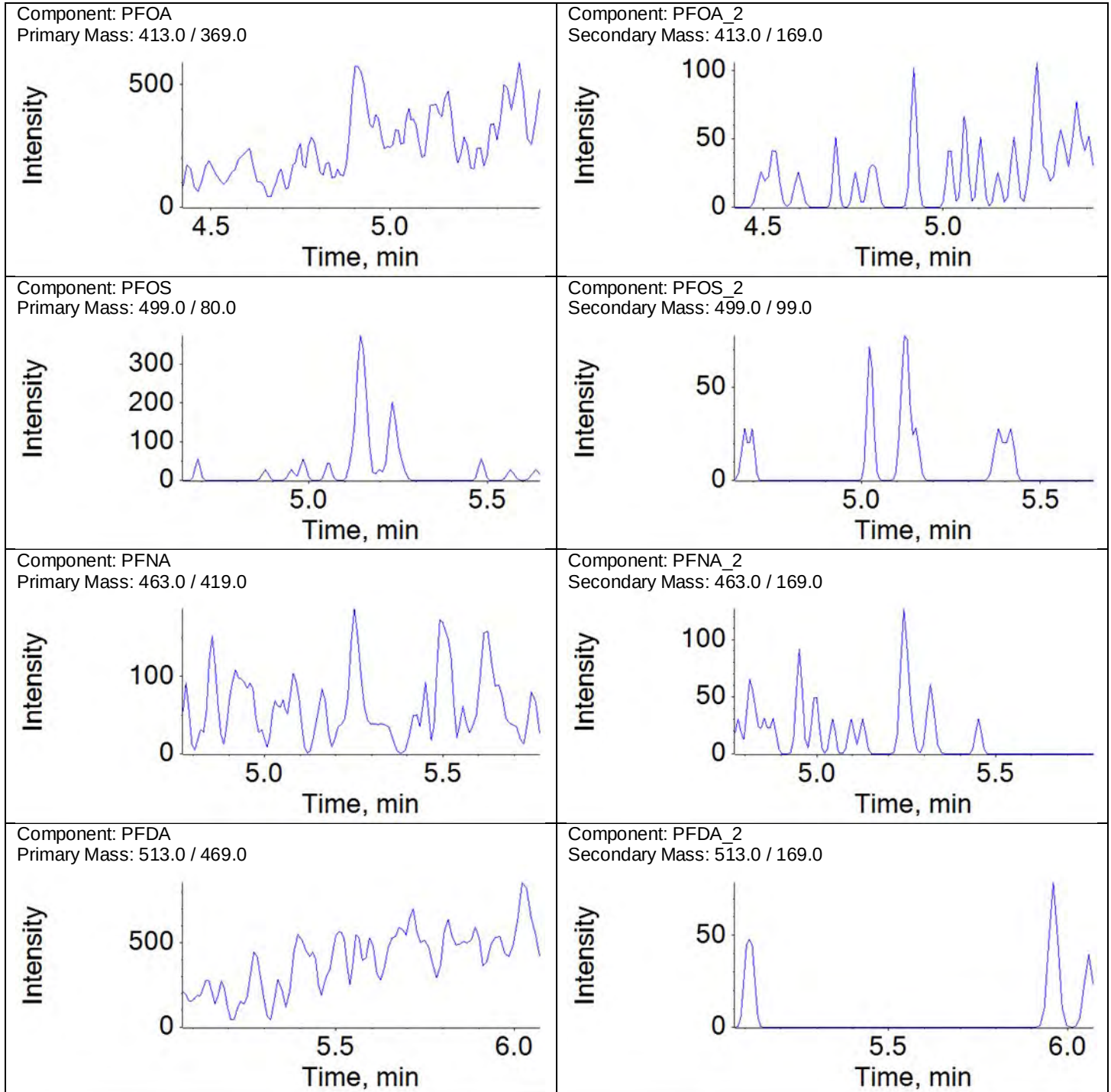
Sample Name: 9881918

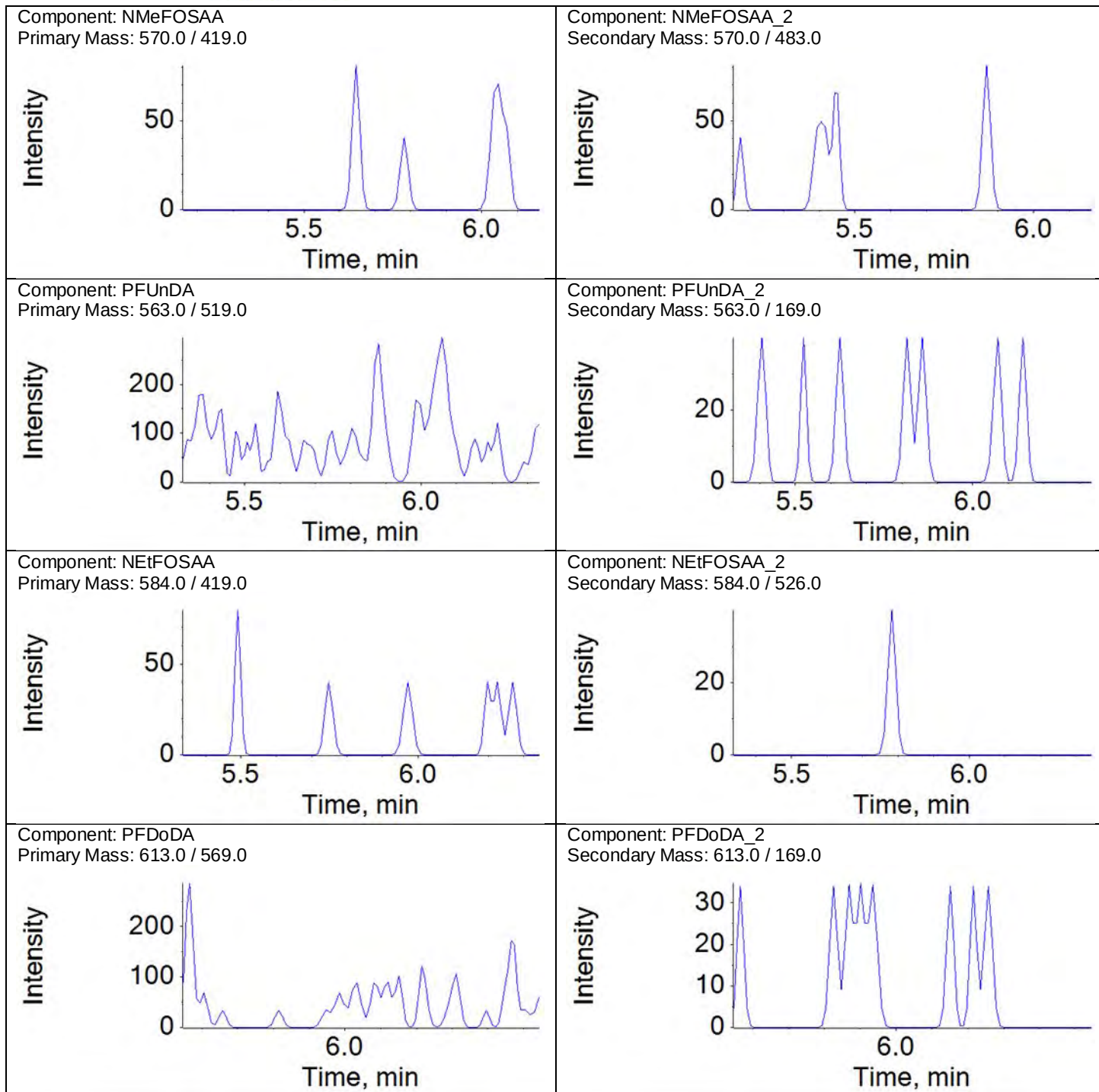
Instrument Name: LM27631

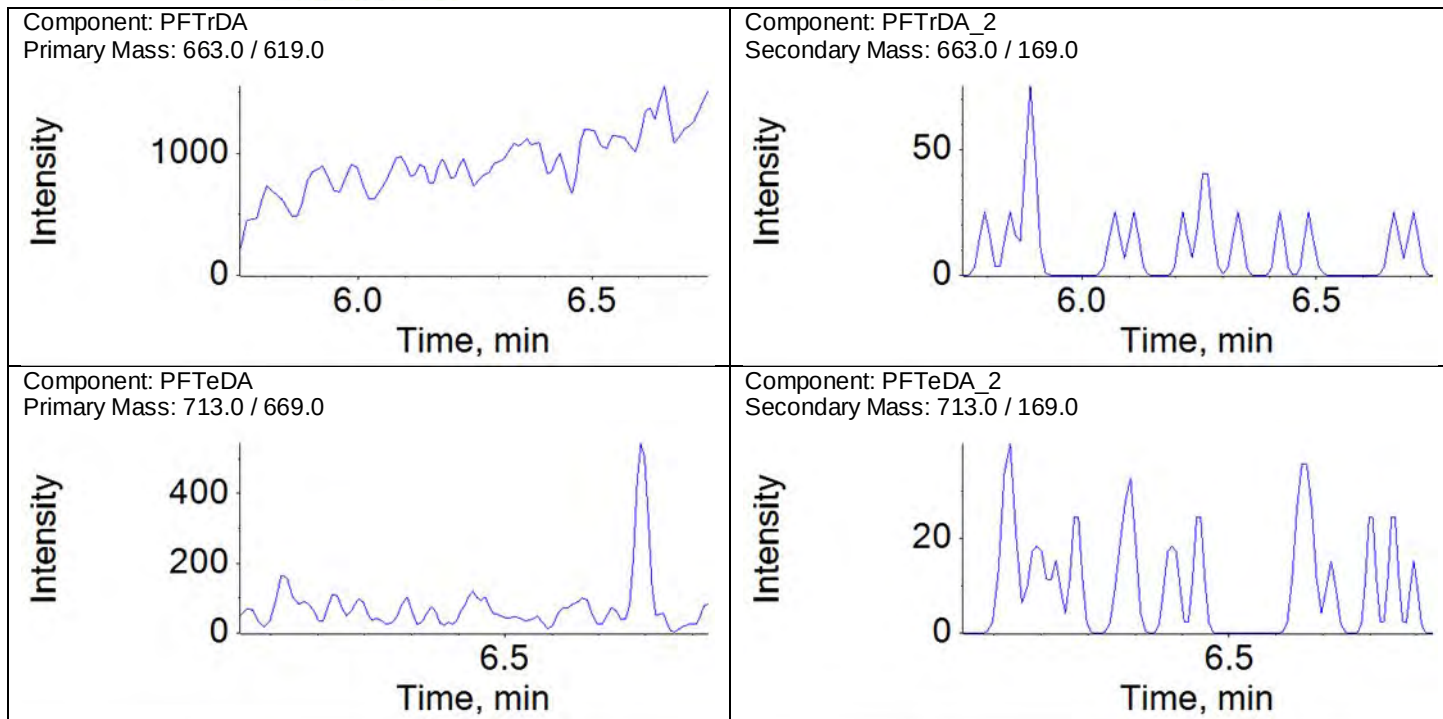
File Name: 18NOV13D-22.wiff

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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	









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

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

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
18NOV13D-01.wiff	solvent	N/A	11/13/2018 9:07:50 AM
18NOV13D-02.wiff	solvent	N/A	11/13/2018 9:16:53 AM
18NOV13D-03.wiff	solvent	N/A	11/13/2018 9:25:56 AM
18NOV13D-04.wiff	solvent	N/A	11/13/2018 9:34:59 AM
18NOV13D-05.wiff	CCV1_ISC_CAL2	N/A	11/13/2018 9:44:02 AM
18NOV13D-06.wiff	INBLK	N/A	11/13/2018 9:53:05 AM
18NOV13D-07.wiff	BLK316012	18316012	11/13/2018 10:02:05 AM
18NOV13D-08.wiff	LCS316012	18316012	11/13/2018 10:11:09 AM
18NOV13D-09.wiff	9881902	18316012	11/13/2018 10:20:11 AM
18NOV13D-10.wiff	9881903	18316012	11/13/2018 10:29:14 AM
18NOV13D-11.wiff	9881904	18316012	11/13/2018 10:38:14 AM
18NOV13D-12.wiff	9881907BKG	18316012	11/13/2018 10:47:14 AM
18NOV13D-13.wiff	9881908MS	18316012	11/13/2018 10:56:14 AM
18NOV13D-14.wiff	9881909MSD	18316012	11/13/2018 11:05:17 AM
18NOV13D-15.wiff	9881910	18316012	11/13/2018 11:14:20 AM
18NOV13D-16.wiff	9881911	18316012	11/13/2018 11:23:20 AM
18NOV13D-17.wiff	CCV2_CAL3	N/A	11/13/2018 11:32:20 AM
18NOV13D-18.wiff	9881912	18316012	11/13/2018 11:41:23 AM
18NOV13D-19.wiff	9881915	18316012	11/13/2018 11:50:23 AM
18NOV13D-20.wiff	9881916	18316012	11/13/2018 11:59:26 AM
18NOV13D-21.wiff	9881917	18316012	11/13/2018 12:08:26 PM
18NOV13D-22.wiff	9881918	18316012	11/13/2018 12:17:29 PM
18NOV13D-23.wiff	CCV3_CAL4	N/A	11/13/2018 12:26:35 PM
18NOV13D-24.wiff	solvent	N/A	11/13/2018 1:10:48 PM
18NOV13D-25.wiff	BLK316028	18316028	11/13/2018 1:19:50 PM
18NOV13D-26.wiff	LCS316028	18316028	11/13/2018 1:28:53 PM
18NOV13D-27.wiff	9885141	18316028	11/13/2018 1:37:56 PM
18NOV13D-28.wiff	9885142BKG	18316028	11/13/2018 1:46:59 PM
18NOV13D-29.wiff	9885143MS	18316028	11/13/2018 1:55:59 PM
18NOV13D-30.wiff	9885144MSD	18316028	11/13/2018 2:05:02 PM
18NOV13D-31.wiff	9885145	18316028	11/13/2018 2:14:02 PM
18NOV13D-32.wiff	9885147	18316028	11/13/2018 2:23:02 PM
18NOV13D-33.wiff	9885148	18316028	11/13/2018 2:32:05 PM
18NOV13D-34.wiff	9885149	18316028	11/13/2018 2:41:05 PM
18NOV13D-35.wiff	CCV4_ISC_CAL2	N/A	11/13/2018 2:50:05 PM
18NOV13D-36.wiff	9885150	18316028	11/13/2018 2:59:05 PM
18NOV13D-37.wiff	9885152	18316028	11/13/2018 3:08:08 PM
18NOV13D-38.wiff	9885153	18316028	11/13/2018 3:17:11 PM
18NOV13D-39.wiff	9885154	18316028	11/13/2018 3:26:14 PM
18NOV13D-40.wiff	9885155	18316028	11/13/2018 3:35:17 PM
18NOV13D-41.wiff	9885156	18316028	11/13/2018 3:44:17 PM
18NOV13D-42.wiff	9885157	18316028	11/13/2018 3:53:20 PM
18NOV13D-43.wiff	solvent	N/A	11/13/2018 4:02:23 PM
18NOV13D-44.wiff	9881576	18314009	11/13/2018 4:11:23 PM
18NOV13D-45.wiff	9881589	18314009	11/13/2018 4:20:26 PM

Instrument Name: LM27631

18NOV13D-46.wiff	9881595	18314009	11/13/2018 4:29:26 PM
18NOV13D-47.wiff	CCV5_CAL3	N/A	11/13/2018 4:38:29 PM
18NOV13D-48.wiff	solvent	N/A	11/13/2018 4:47:29 PM
18NOV13D-49.wiff	BLK316011	18316011	11/13/2018 4:56:29 PM
18NOV13D-50.wiff	LCS316011	18316011	11/13/2018 5:05:29 PM
18NOV13D-51.wiff	9885080	18316011	11/13/2018 5:14:29 PM
18NOV13D-52.wiff	9885081	18316011	11/13/2018 5:23:29 PM
18NOV13D-53.wiff	9885082	18316011	11/13/2018 5:32:29 PM
18NOV13D-54.wiff	9885085	18316011	11/13/2018 5:41:29 PM
18NOV13D-55.wiff	9885086BKG	18316011	11/13/2018 5:50:29 PM
18NOV13D-56.wiff	9885087MS	18316011	11/13/2018 5:59:32 PM
18NOV13D-57.wiff	9885088MSD	18316011	11/13/2018 6:08:35 PM
18NOV13D-58.wiff	9885089	18316011	11/13/2018 6:17:35 PM
18NOV13D-59.wiff	CCV6_CAL4	N/A	11/13/2018 6:26:35 PM
18NOV13D-60.wiff	9885090	18316011	11/13/2018 6:35:38 PM
18NOV13D-61.wiff	9885092	18316011	11/13/2018 6:44:38 PM
18NOV13D-62.wiff	9885093	18316011	11/13/2018 6:53:41 PM
18NOV13D-63.wiff	9885094	18316011	11/13/2018 7:02:41 PM
18NOV13D-64.wiff	9885095	18316011	11/13/2018 7:11:44 PM
18NOV13D-65.wiff	9885098	18316011	11/13/2018 7:20:47 PM
18NOV13D-66.wiff	9885099	18316011	11/13/2018 7:29:50 PM
18NOV13D-67.wiff	9885100	18316011	11/13/2018 7:38:50 PM
18NOV13D-68.wiff	9885101	18316011	11/13/2018 7:47:50 PM
18NOV13D-69.wiff	9885104	18316011	11/13/2018 7:56:50 PM
18NOV13D-70.wiff	CCV7_ISC_CAL2	N/A	11/13/2018 8:05:50 PM
18NOV13D-71.wiff	9885105	18316011	11/13/2018 8:14:50 PM
18NOV13D-72.wiff	9885106	18316011	11/13/2018 8:23:50 PM
18NOV13D-73.wiff	9885118	18316011	11/13/2018 8:32:50 PM
18NOV13D-74.wiff	9885119	18316011	11/13/2018 8:41:50 PM
18NOV13D-75.wiff	CCV8_CAL3	N/A	11/13/2018 8:50:50 PM
18NOV13D-76.wiff	Instrument Blank	N/A	11/13/2018 8:59:50 PM
18NOV13D-77.wiff	BLK316024	18316024	11/13/2018 9:08:52 PM
18NOV13D-78.wiff	LCS316024	18316024	11/13/2018 9:17:53 PM
18NOV13D-79.wiff	9885056	18316024	11/13/2018 9:26:53 PM
18NOV13D-80.wiff	9885057	18316024	11/13/2018 9:35:55 PM
18NOV13D-81.wiff	9885058	18316024	11/13/2018 9:44:58 PM
18NOV13D-82.wiff	9885059	18316024	11/13/2018 9:53:58 PM
18NOV13D-83.wiff	9885062BKG	18316024	11/13/2018 10:02:58 PM
18NOV13D-84.wiff	9885063MS	18316024	11/13/2018 10:11:59 PM
18NOV13D-85.wiff	9885064MSD	18316024	11/13/2018 10:20:58 PM
18NOV13D-86.wiff	9885065	18316024	11/13/2018 10:29:58 PM
18NOV13D-87.wiff	CCV9_CAL4	N/A	11/13/2018 10:38:59 PM
18NOV13D-88.wiff	9885075	18316024	11/13/2018 10:47:59 PM
18NOV13D-89.wiff	solvent	N/A	11/13/2018 10:56:58 PM
18NOV13D-90.wiff	BLK316029	18316029	11/13/2018 11:06:02 PM
18NOV13D-91.wiff	LCS316029	18316029	11/13/2018 11:15:01 PM
18NOV13D-92.wiff	9885078	18316029	11/13/2018 11:24:02 PM
18NOV13D-93.wiff	9885160	18316029	11/13/2018 11:33:01 PM
18NOV13D-94.wiff	9885161BKG	18316029	11/13/2018 11:42:03 PM
18NOV13D-95.wiff	9885162MS	18316029	11/13/2018 11:51:04 PM
18NOV13D-96.wiff	9885163MSD	18316029	11/14/2018 12:00:09 AM
18NOV13D-97.wiff	9885164	18316029	11/14/2018 12:09:10 AM
18NOV13D-98.wiff	9885165	18316029	11/14/2018 12:18:11 AM
18NOV13D-99.wiff	CCV10_ISC_CAL2	N/A	11/14/2018 12:27:10 AM
18NOV13D-100.wiff	INBLK	N/A	11/14/2018 12:36:10 AM

20 mM Ammonium Acetate in H₂O: 782411091833A
20 mM Ammonium Acetate in 0.5% H₂O|Methanol: 782411091833B

DOD Initial Calibration Verification

Instrument ID: LM27631 ICAL Name: 18NOV07DCAL QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM Acquisition Method: 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV07DCAL-10.wiff	11/7/2018 9:39:56 AM	CALMOD11833G	CAL1
18NOV07DCAL-11.wiff	11/7/2018 9:48:56 AM	CALMOD21833F	CAL2
18NOV07DCAL-12.wiff	11/7/2018 9:57:56 AM	CALMOD31833F	CAL3
18NOV07DCAL-13.wiff	11/7/2018 10:06:59 AM	CALMOD41833F	CAL4
18NOV07DCAL-14.wiff	11/7/2018 10:15:59 AM	CALMOD51833F	CAL5
18NOV07DCAL-15.wiff	11/7/2018 10:24:59 AM	CALMOD61833E	CAL6
18NOV07DCAL-16.wiff	11/7/2018 10:33:59 AM	CALMOD71833E	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	730410.6
CAL3	13C2-PFOA	524423.6
CAL3	13C4-PFOS	274061.7
CAL3	13C2-PFDA	311442.1

DOD Initial Calibration Verification

Instrument ID: LM27631 ICAI 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	
PFTTrDA	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

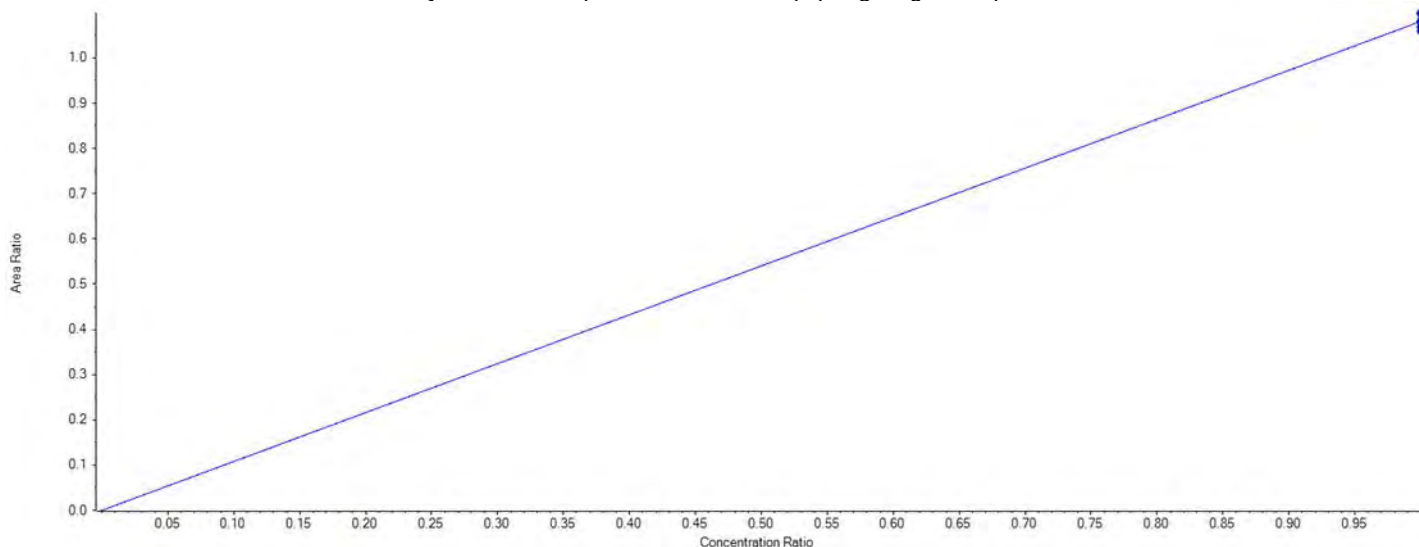
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

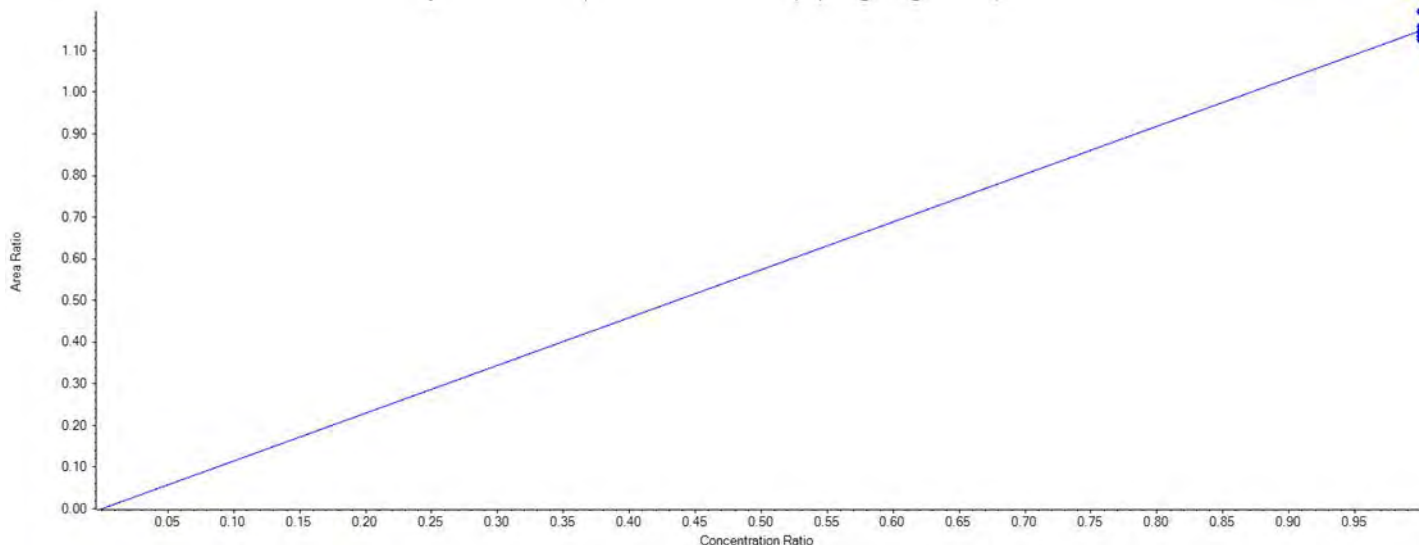
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C5-PFPeA

 $y = 1.14776 \times (\text{std. dev.} = 0.02271)$ (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

BSI05 Page 312 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 4 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

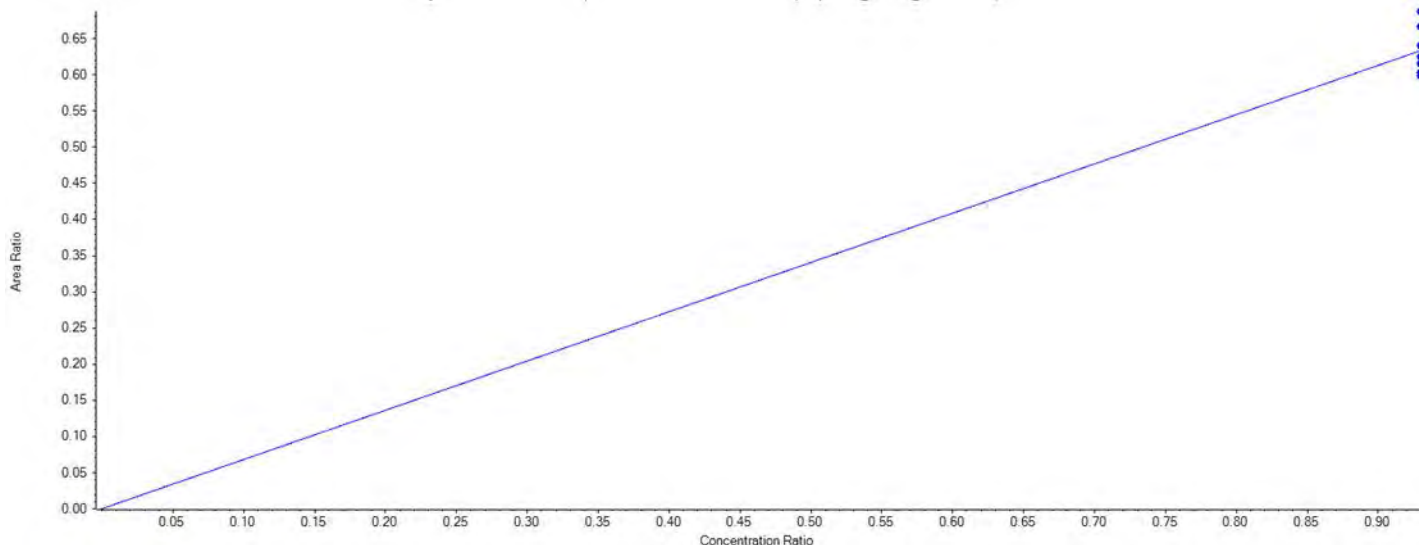
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

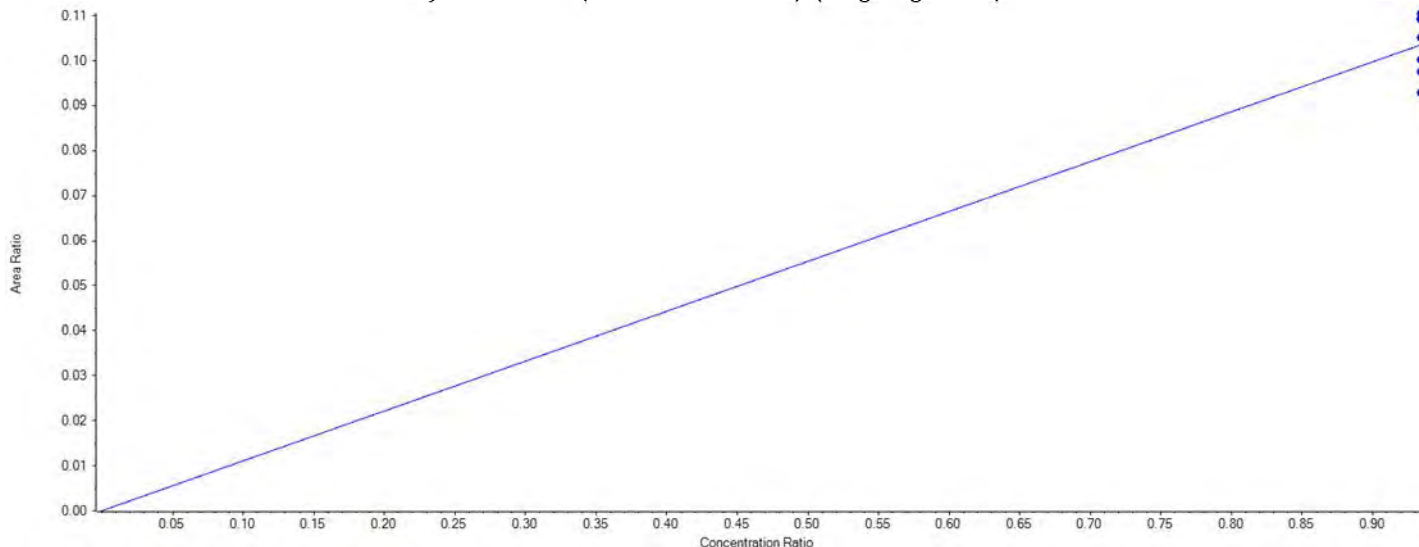
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

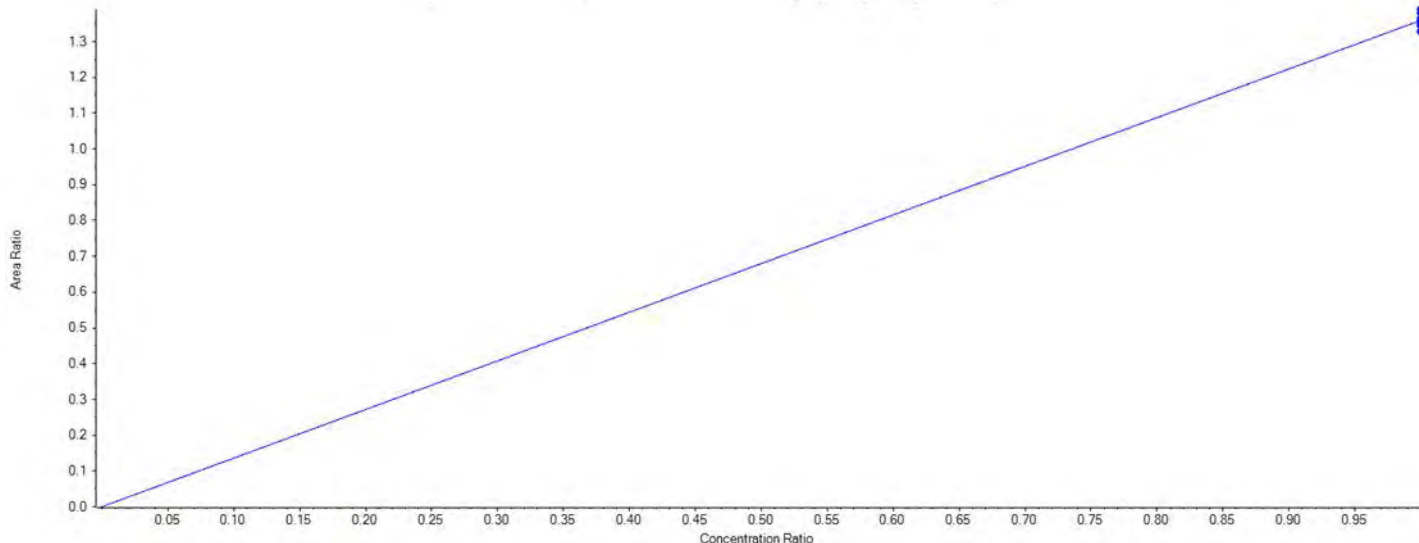
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C5-PFHxA

 $y = 1.35927 \times (\text{std. dev.} = 0.02135)$ (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

BSI05 Page 315 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 7 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

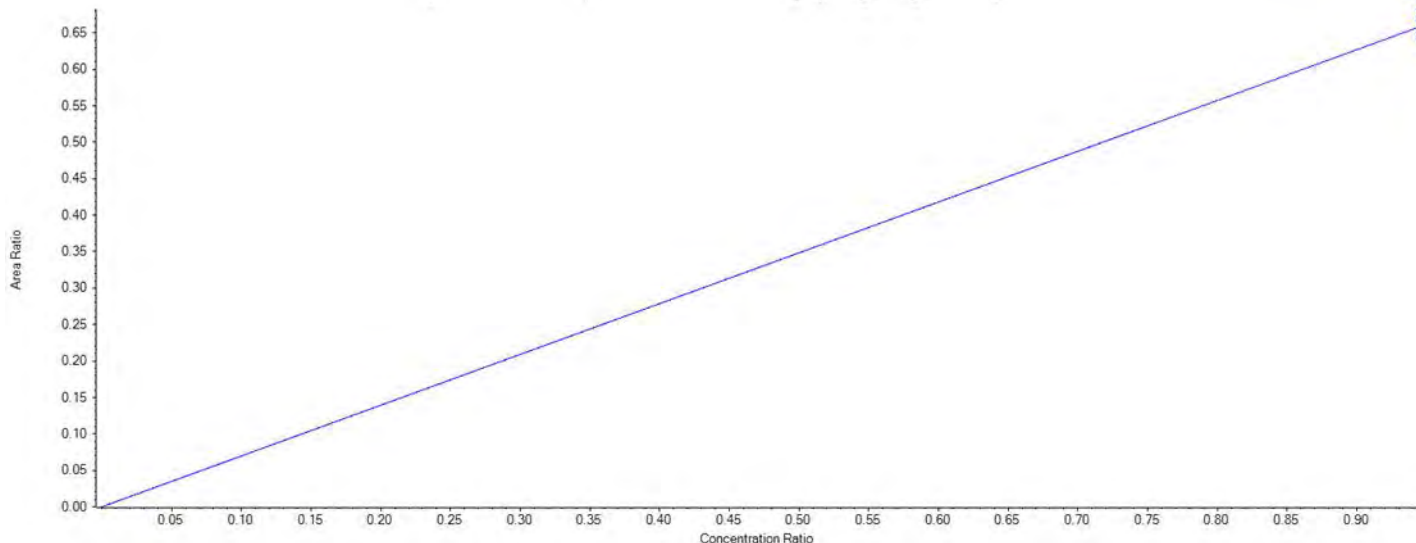
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C3-PFHxS

 $y = 0.69649x$ (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

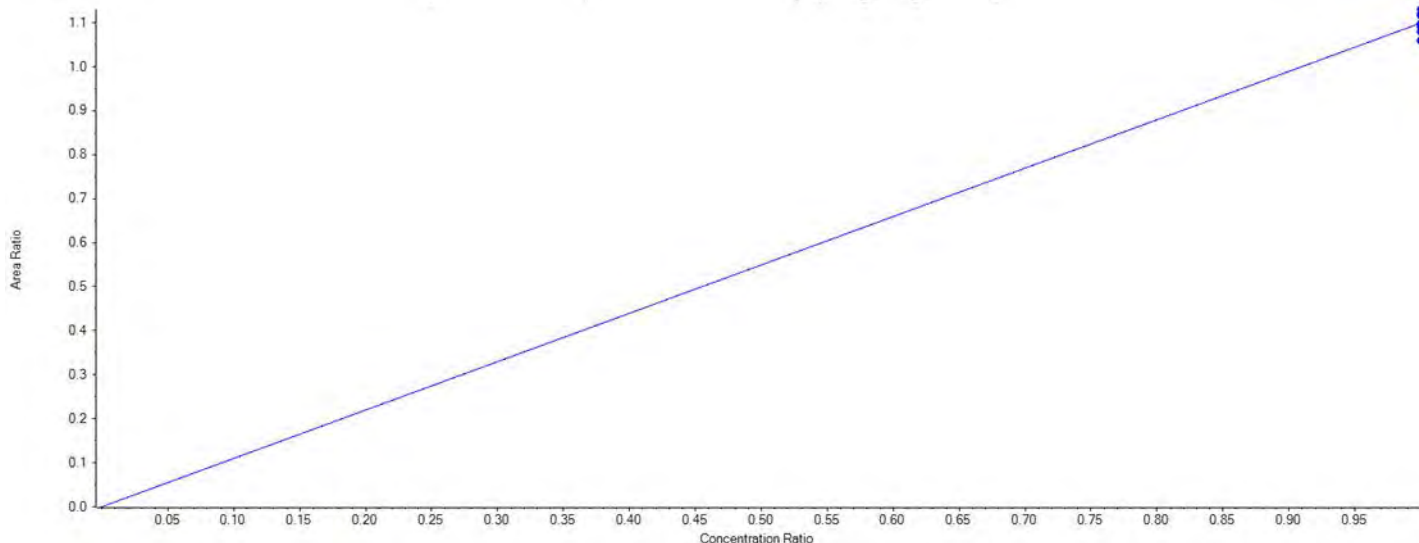
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

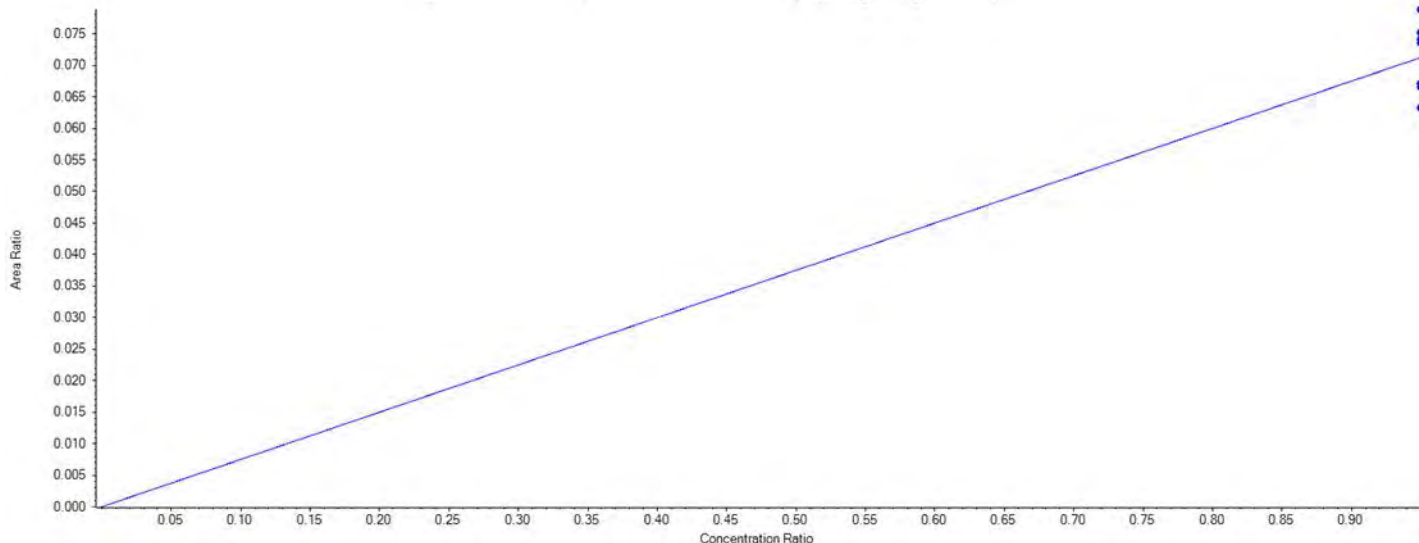
ICAL Name: 18NOV07DCAL

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

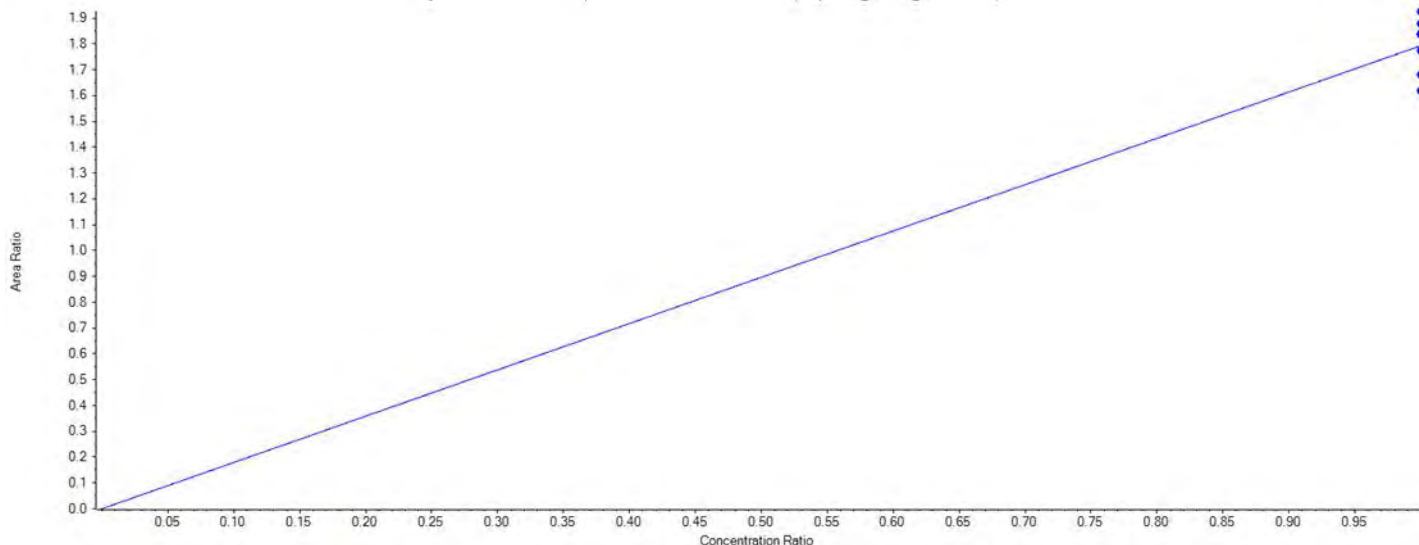
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C8-PFOA

 $y = 1.79299x$ (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	

DOD Initial Calibration Verification

Instrument ID: LM27631

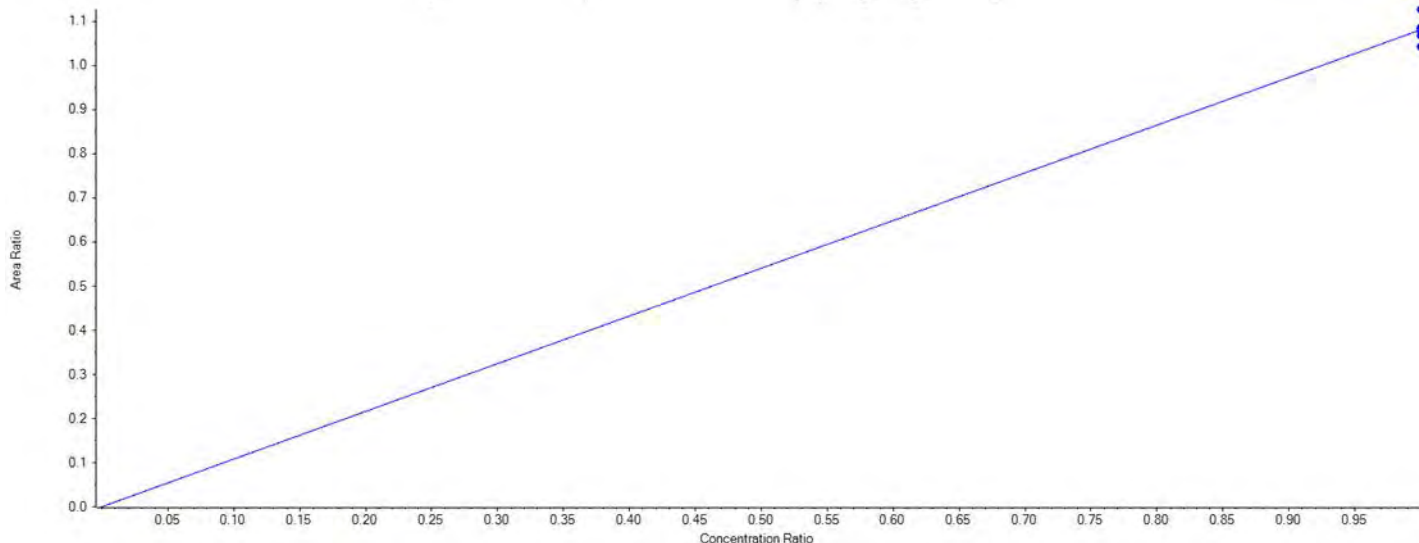
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

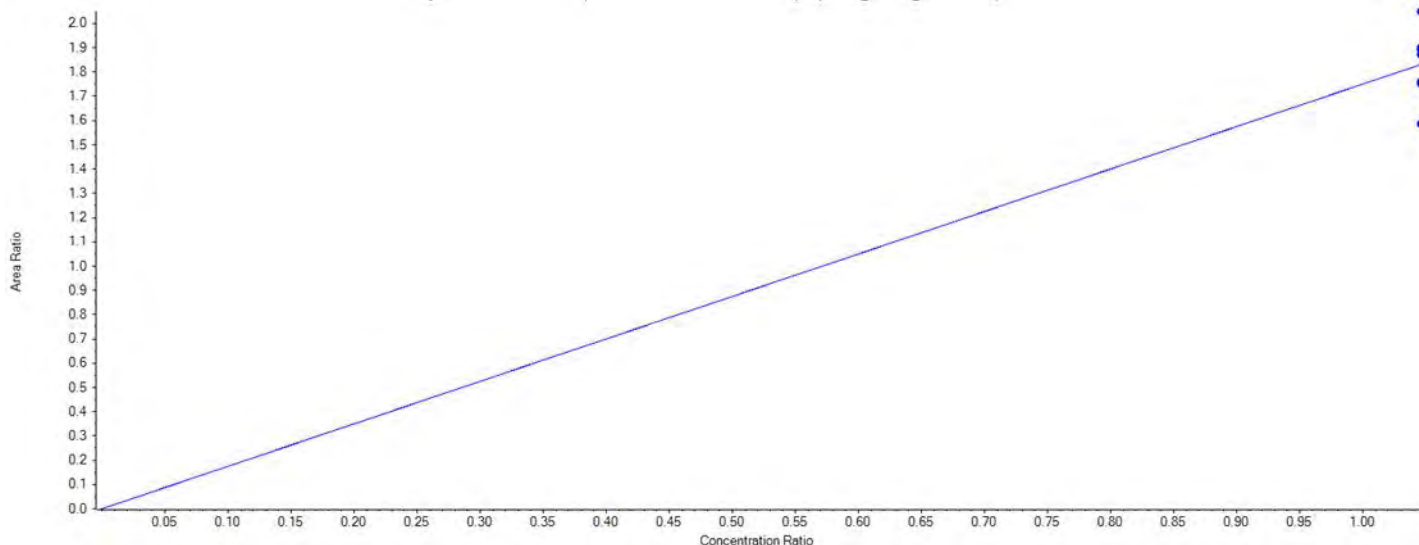
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

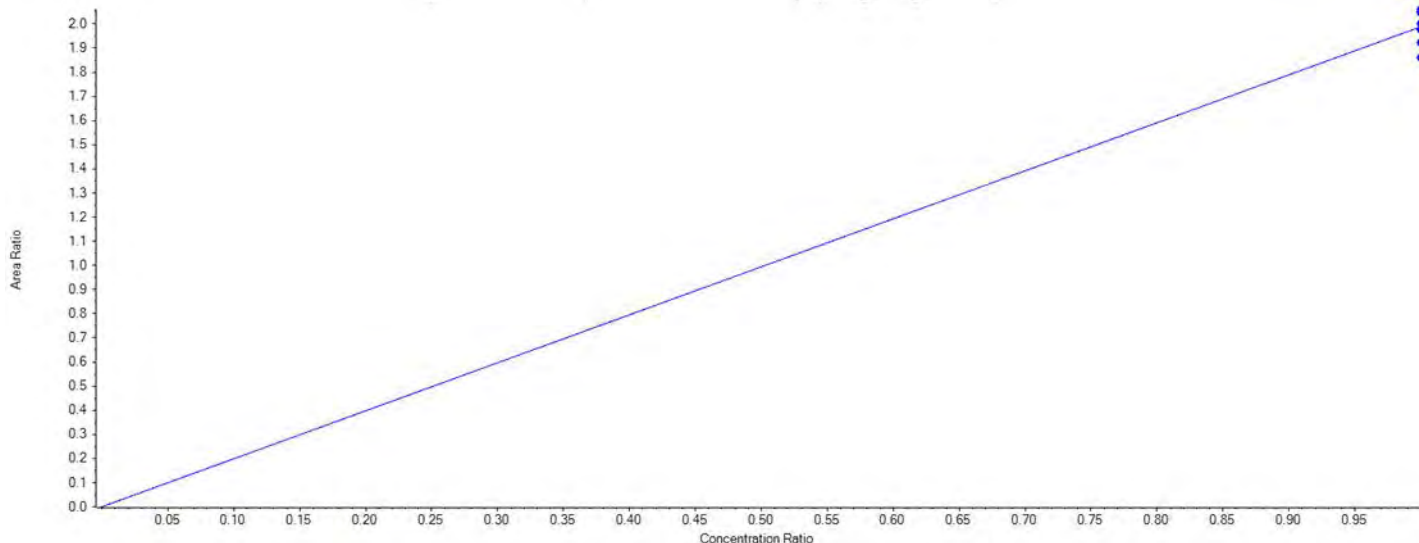
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C6-PFDA

 $y = 1.98822 x$ (std. dev. = 0.07436) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	651348.0	338833.714	True	5.00	1.922	5.57	1.000	5.000	4.834	-3	30	
CAL2	661423.8	334958.441	True	5.00	1.975	5.57	1.000	5.000	4.966	-1	30	
CAL3	639022.8	311442.089	True	5.00	2.052	5.57	1.000	5.000	5.160	3	30	
CAL4	656868.3	320985.487	True	5.00	2.046	5.56	1.000	5.000	5.146	3	30	
CAL5	598009.7	298912.145	True	5.00	2.001	5.57	1.000	5.000	5.031	1	30	
CAL6	536626.2	260528.967	True	5.00	2.060	5.56	1.000	5.000	5.180	4	30	
CAL7	480927.9	258292.235	True	5.00	1.862	5.56	1.000	5.000	4.682	-6	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

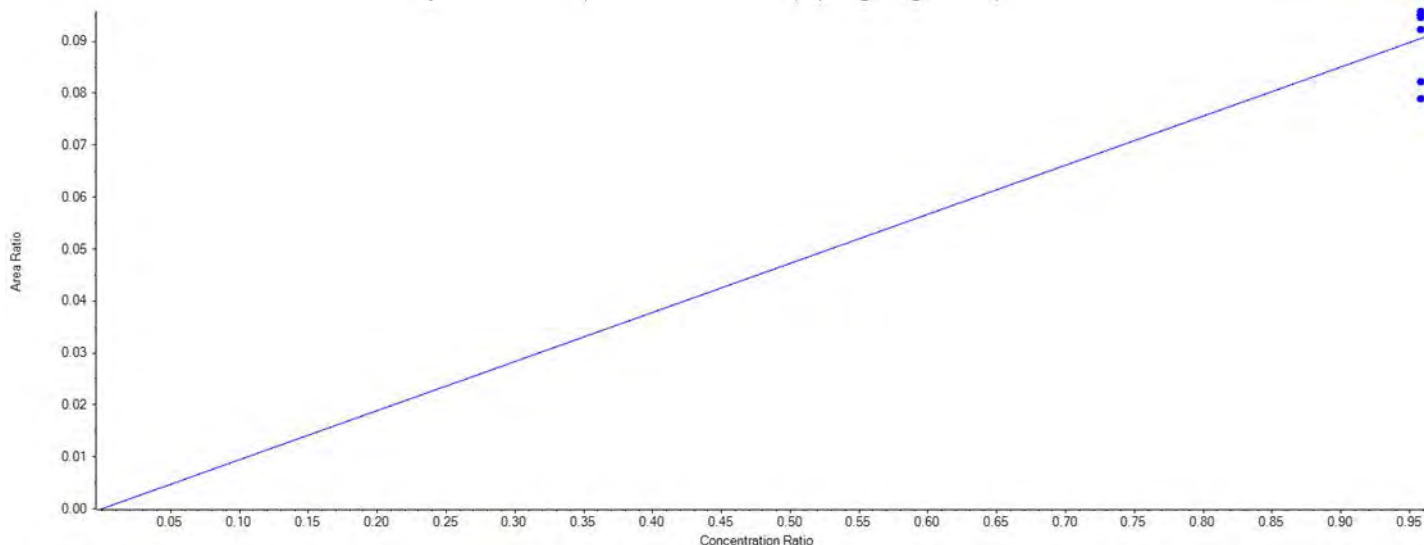
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C2-8:2-FTS

 $y = 0.09449x$ (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	

DOD Initial Calibration Verification

Instrument ID: LM27631

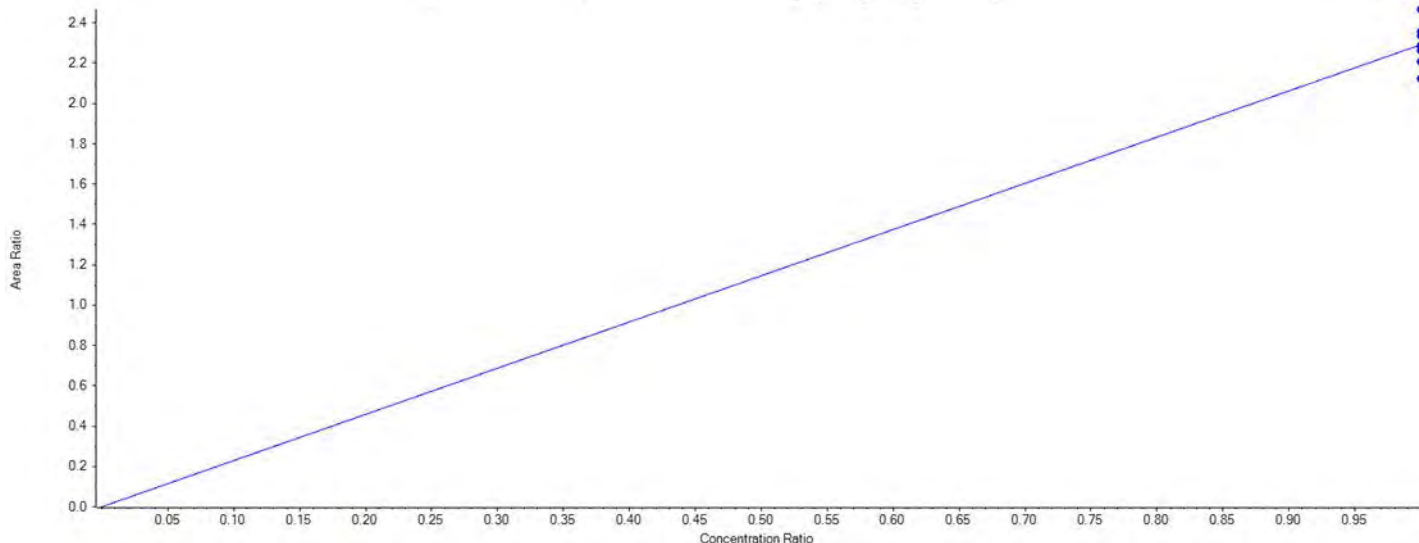
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

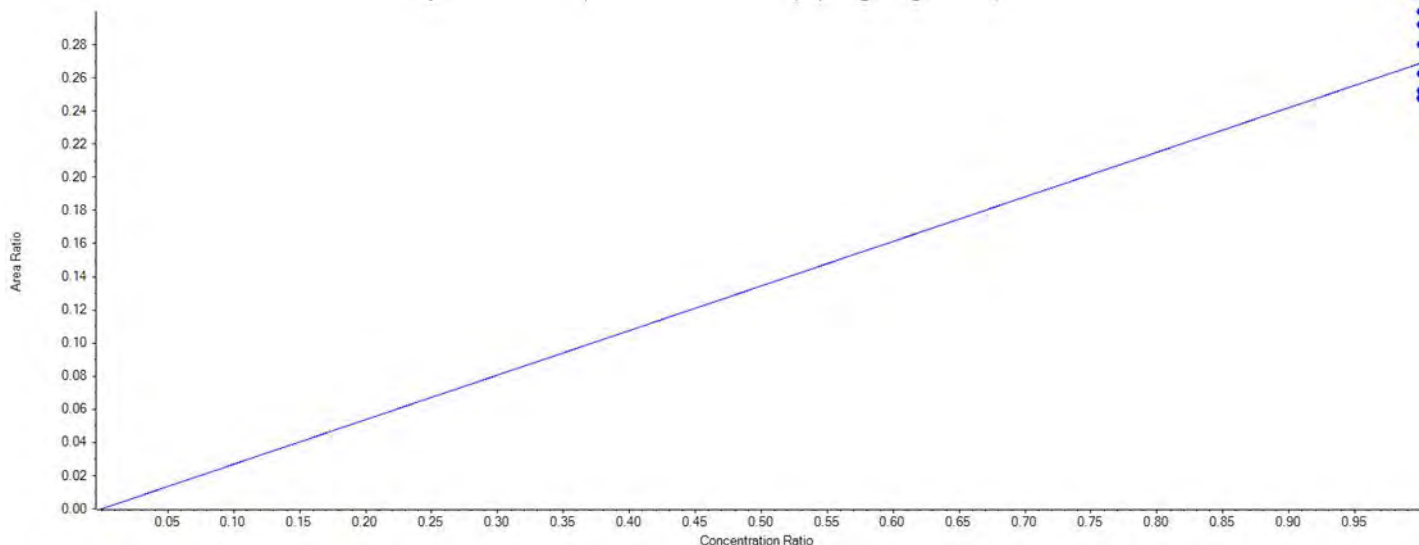
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

Ed3-NMeFOSAA

 $y = 0.26888x$ (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	

DOD Initial Calibration Verification

Instrument ID: LM27631

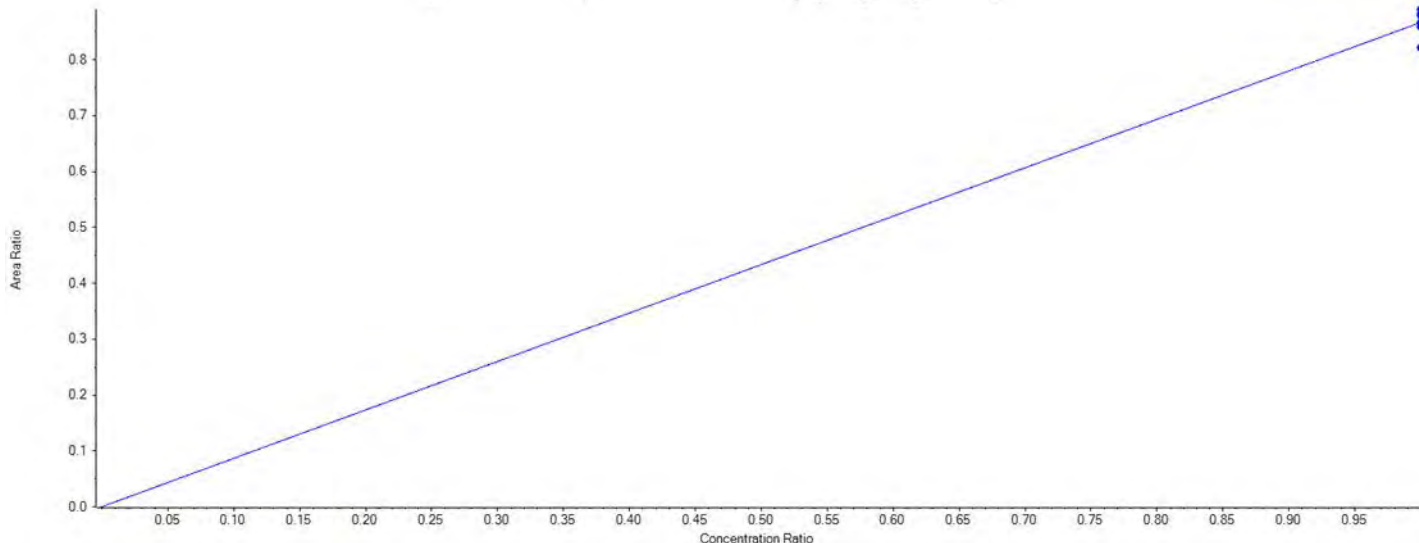
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C7-PFUnDA

 $y = 0.86673 \times (\text{std. dev.} = 0.02232)$ (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	

DOD Initial Calibration Verification

Instrument ID: LM27631

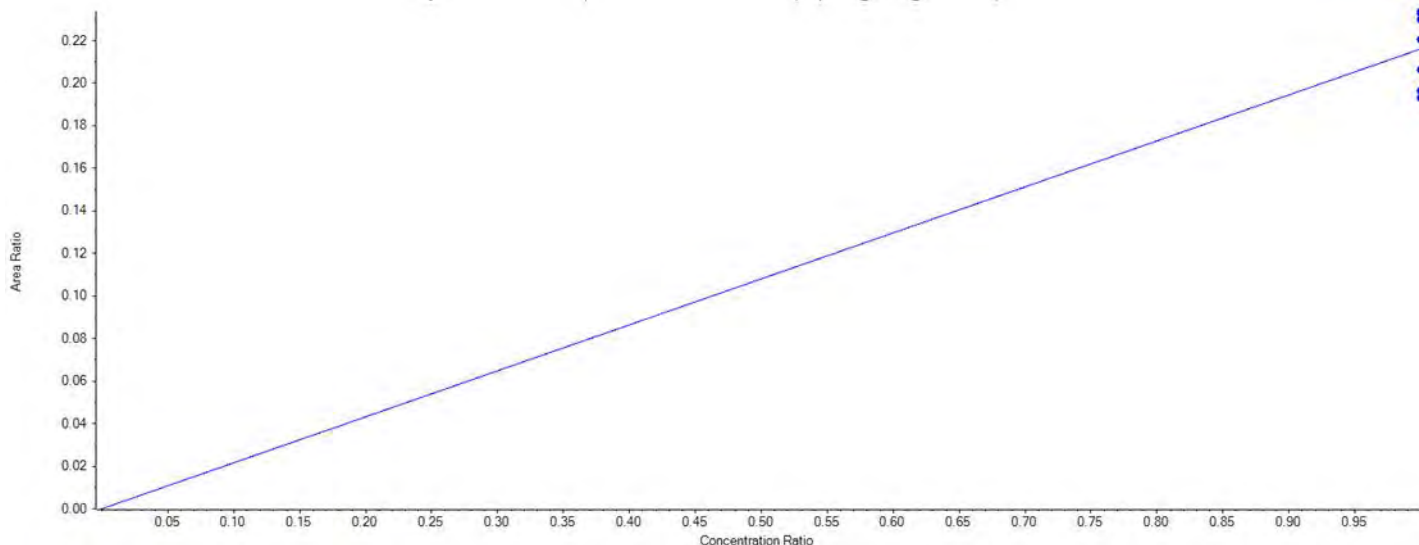
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

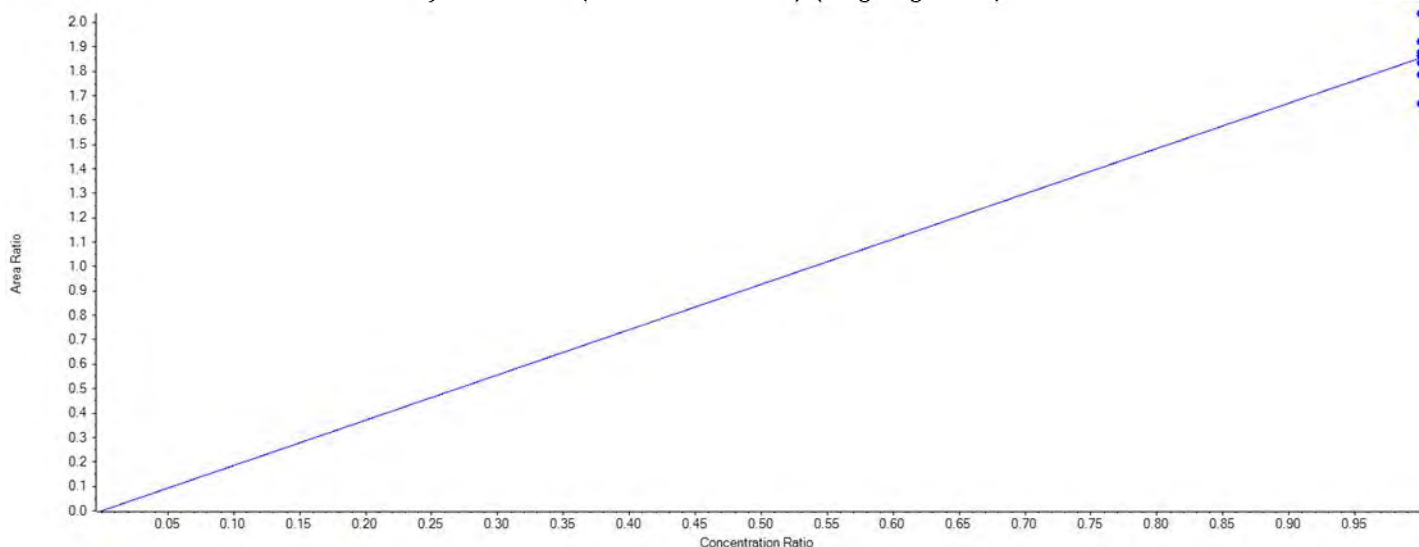
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

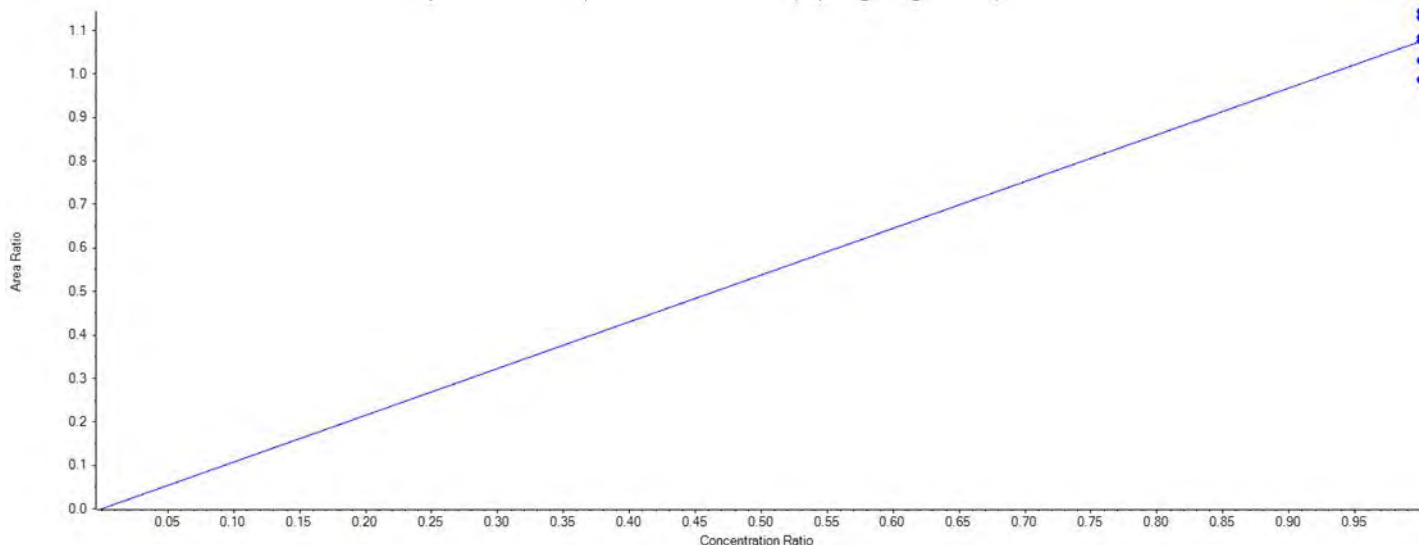
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

Ed7-NMePFOSAE

 $y = 1.07520 \times (\text{std. dev.} = 0.05435)$ (weighting: None)

Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSA E 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	

DOD Initial Calibration Verification

Instrument ID: LM27631

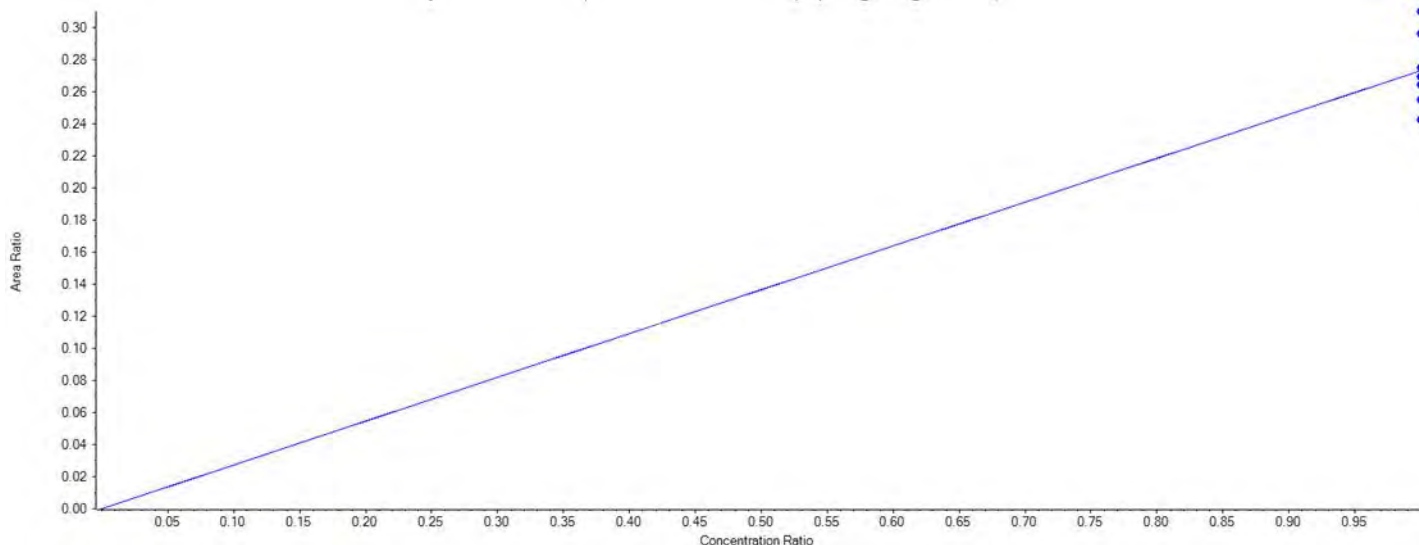
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

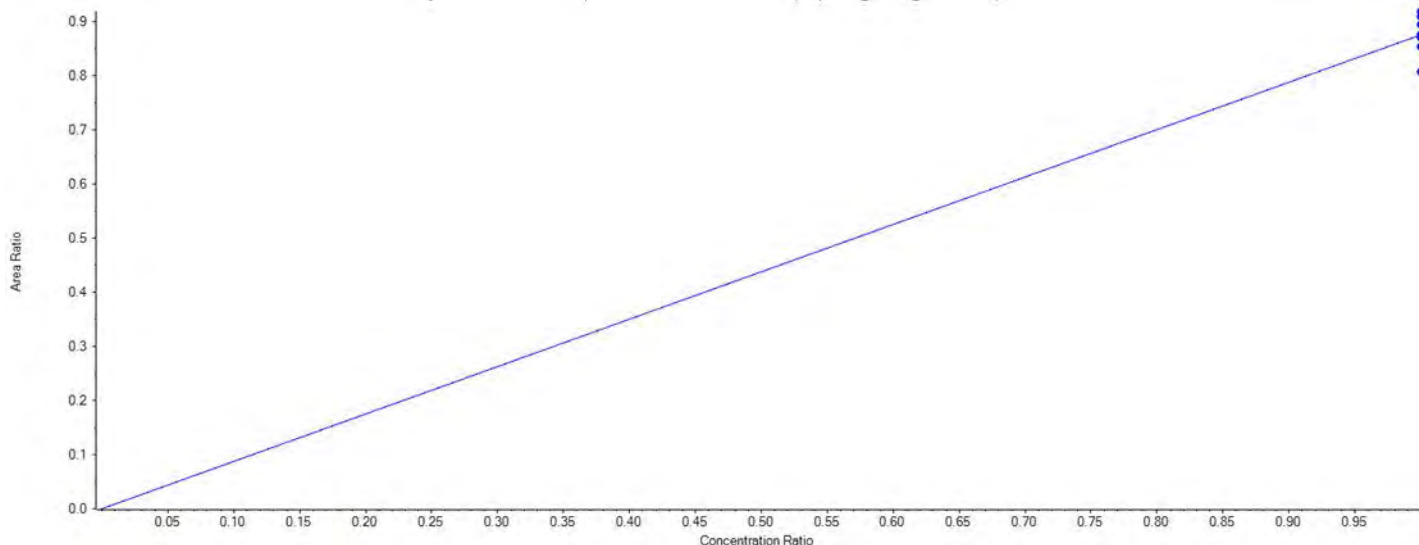
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

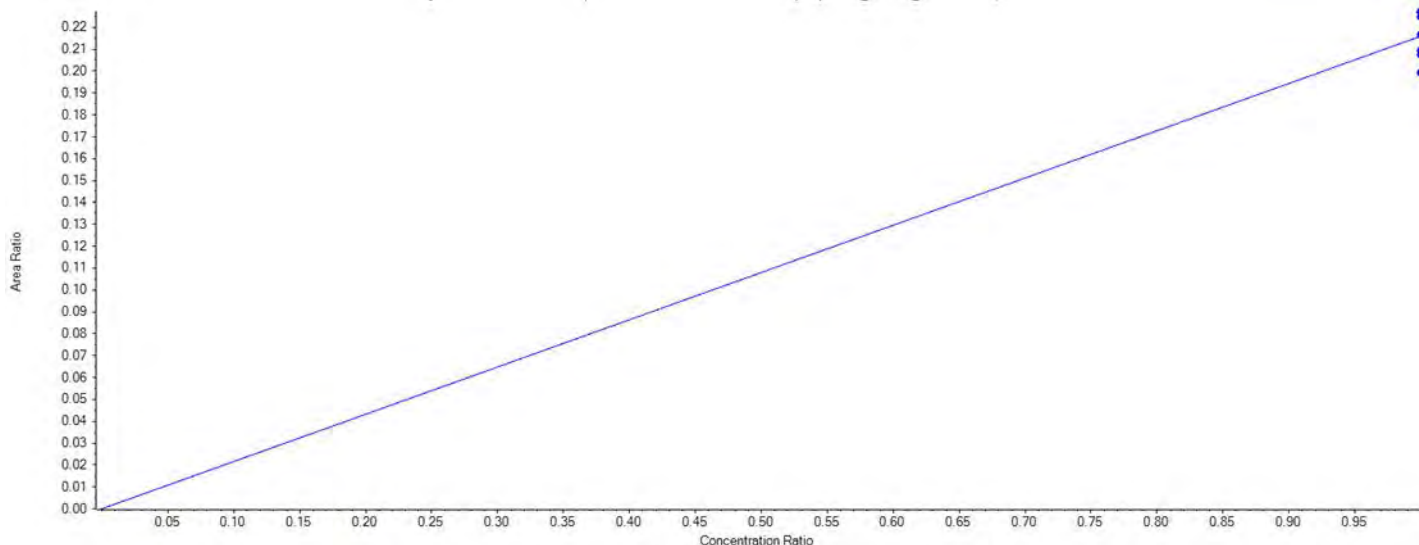
ICAL Name: 18NOV07DCAL

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	

DOD Initial Calibration Verification

Instrument ID: LM27631

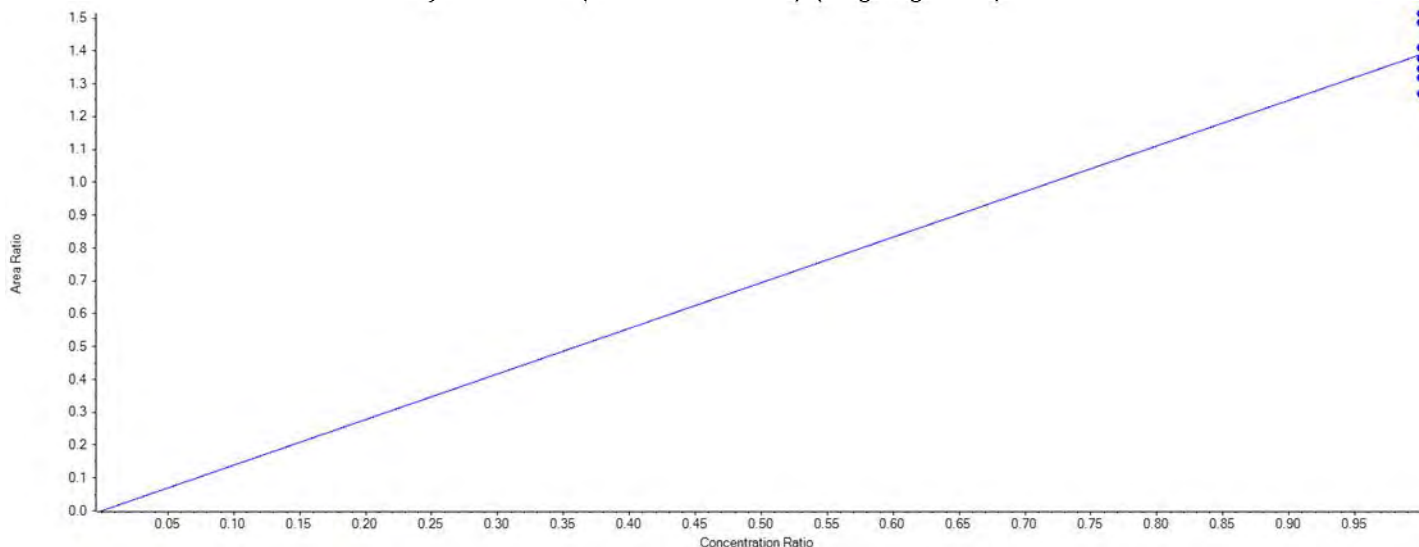
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

E13C2-PFTeDA

 $y = 1.38890 \times (\text{std. dev.} = 0.08847)$ (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	

DOD Initial Calibration Verification

Instrument ID: LM27631

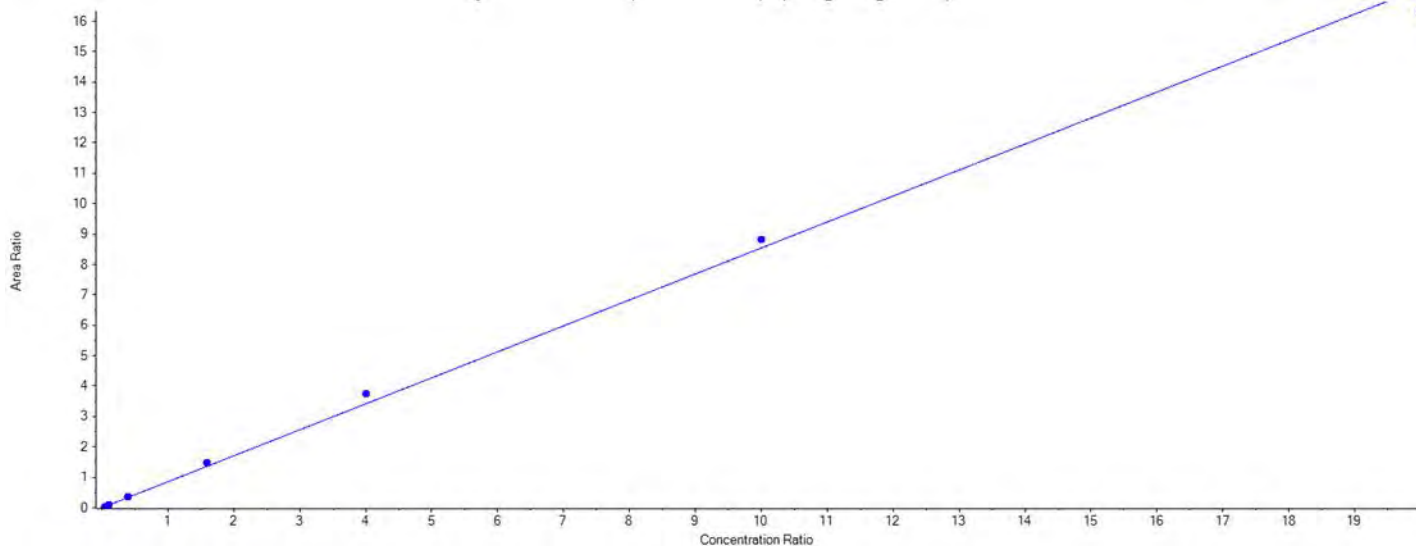
ICAL Name: 18NOV07DCAL

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

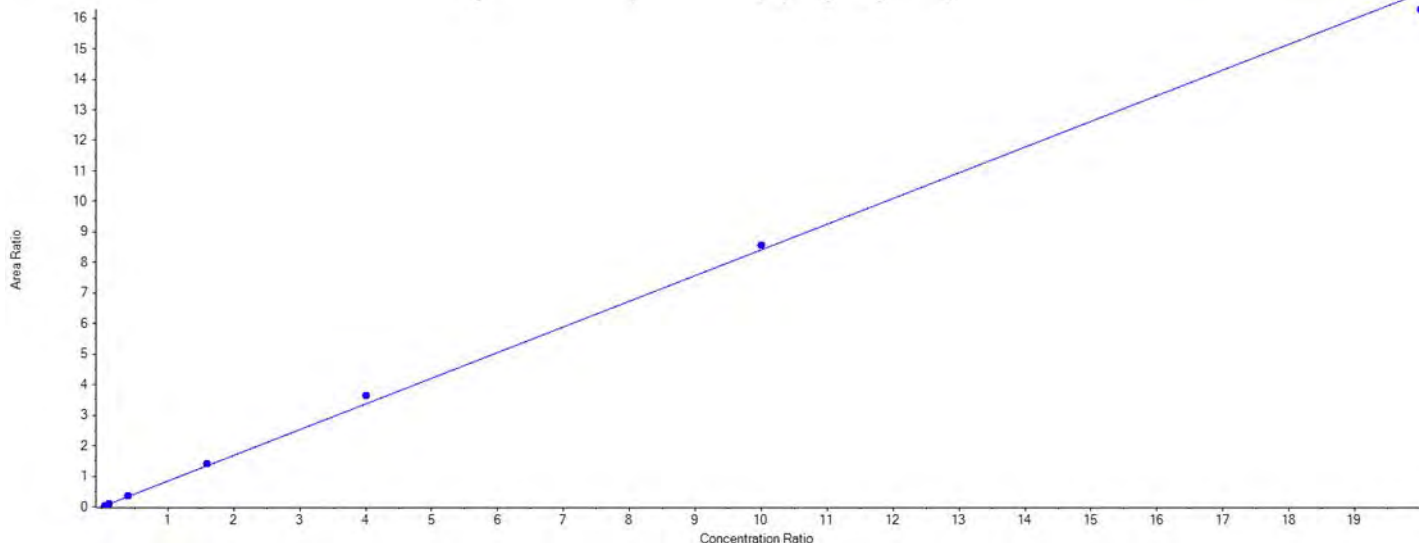
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFPeA

$$y = 0.84134 x \text{ (r = 0.99918) (weighting: 1 / x)}$$



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	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

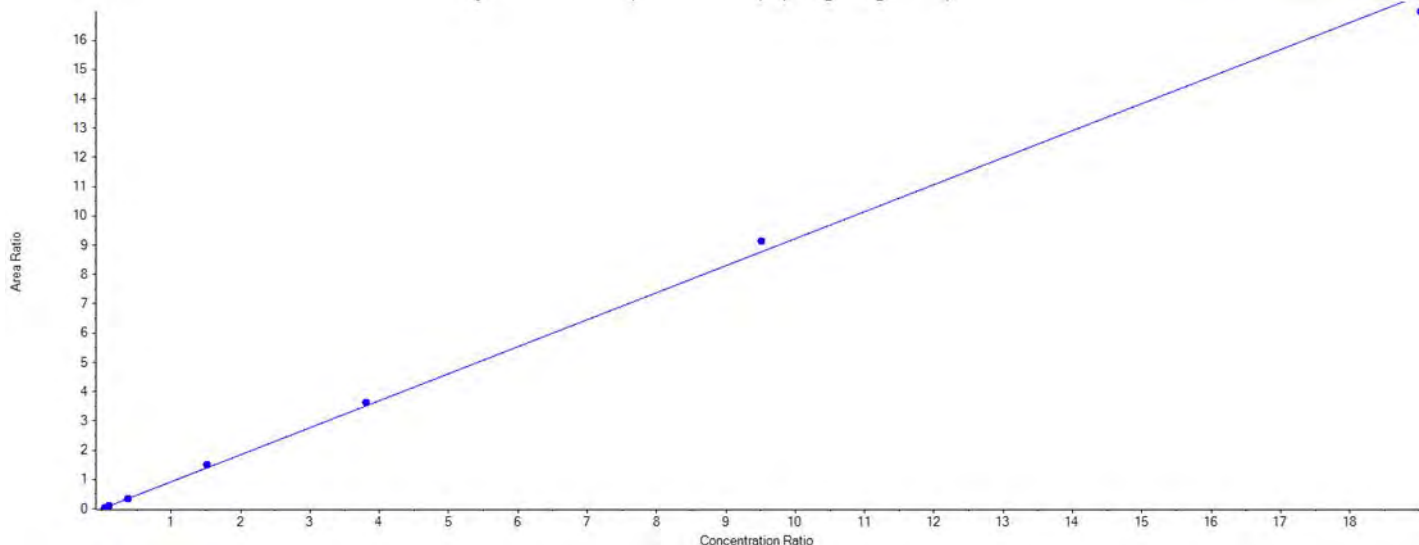
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFBS

$$y = 0.92230x \text{ (} r = 0.99933 \text{) (weighting: } 1/x \text{)}$$



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	

DOD Initial Calibration Verification

Instrument ID: LM27631

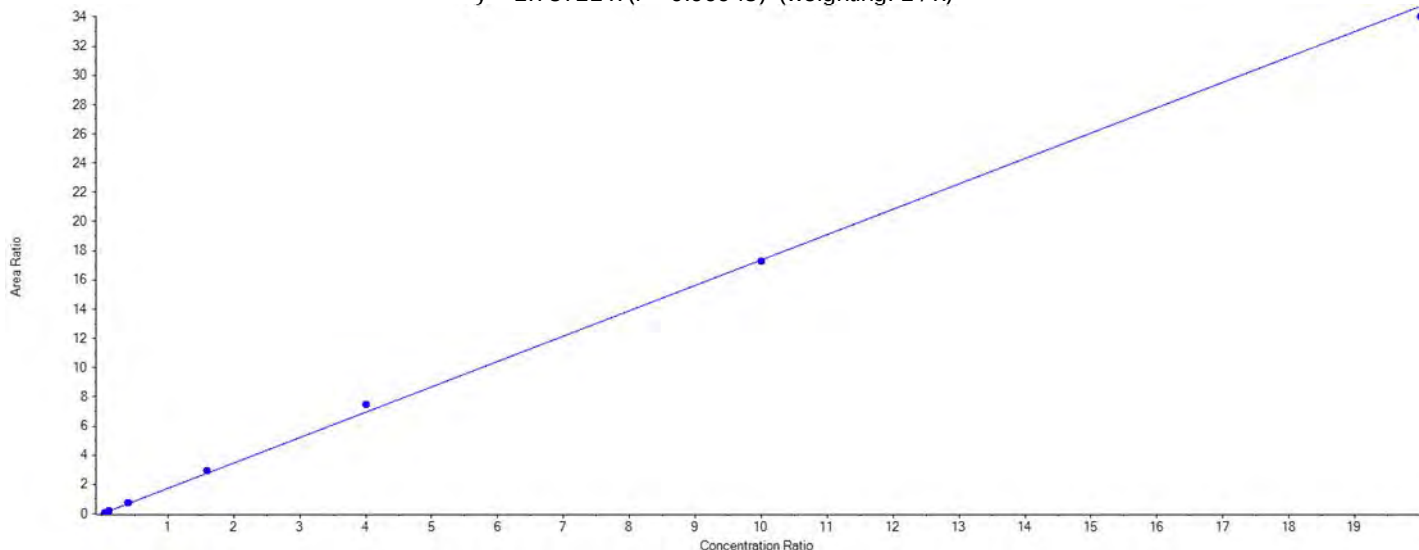
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

4:2-FTS

 $y = 1.73711x$ ($r = 0.99943$) (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

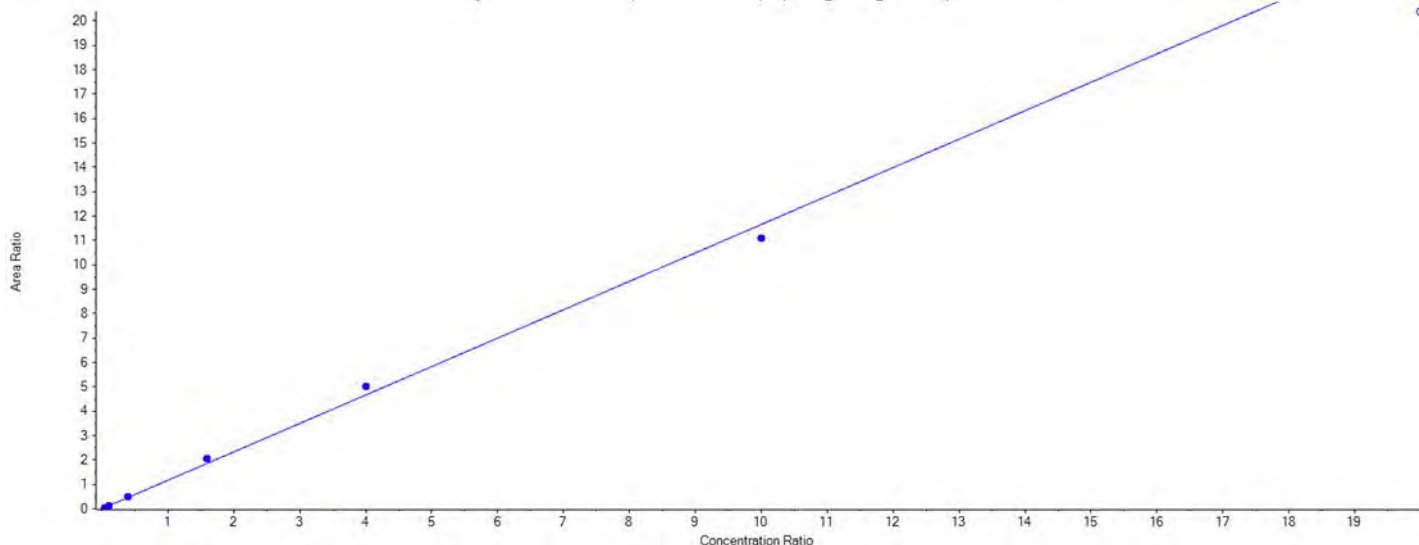
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFHxA

$$y = 1.16591x \text{ (} r = 0.99804 \text{) (weighting: } 1/x \text{)}$$



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

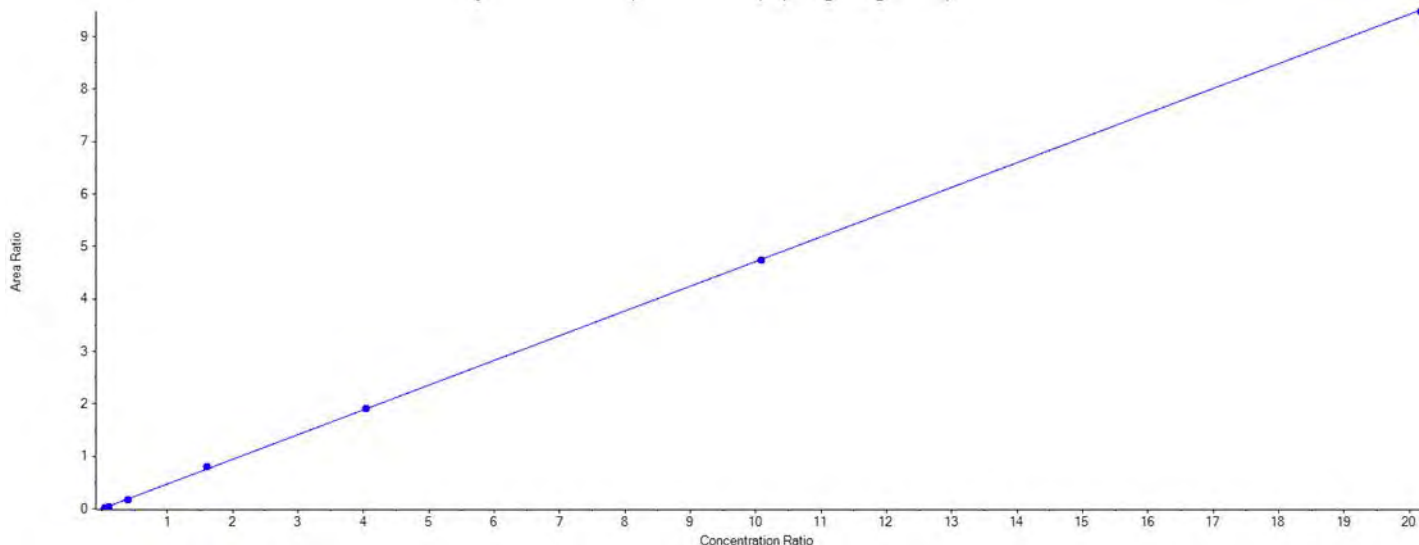
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFPeS

$$y = 0.47146 x \text{ (r = 0.99990) (weighting: 1 / x)}$$



Component Calibration Verification

Sample Name	PFPeS Area	S/N	¹³ C3-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

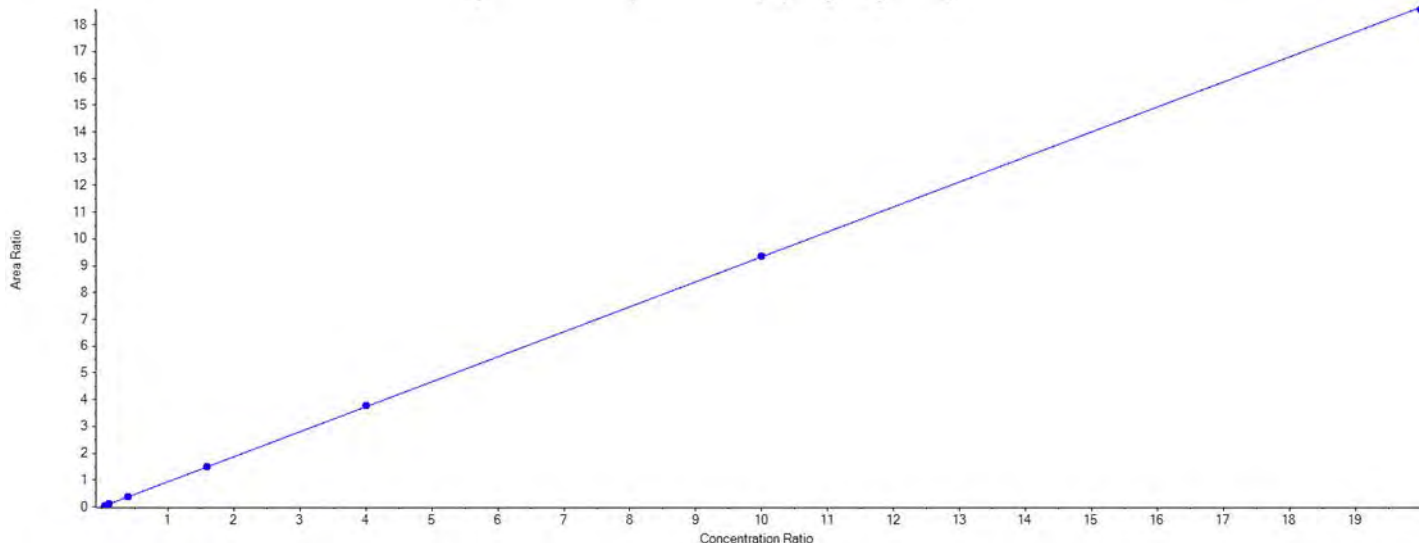
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFHxS

$$y = 0.93317 x \text{ (r = 0.99996) (weighting: } 1/x \text{)}$$



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	

DOD Initial Calibration Verification

Instrument ID: LM27631

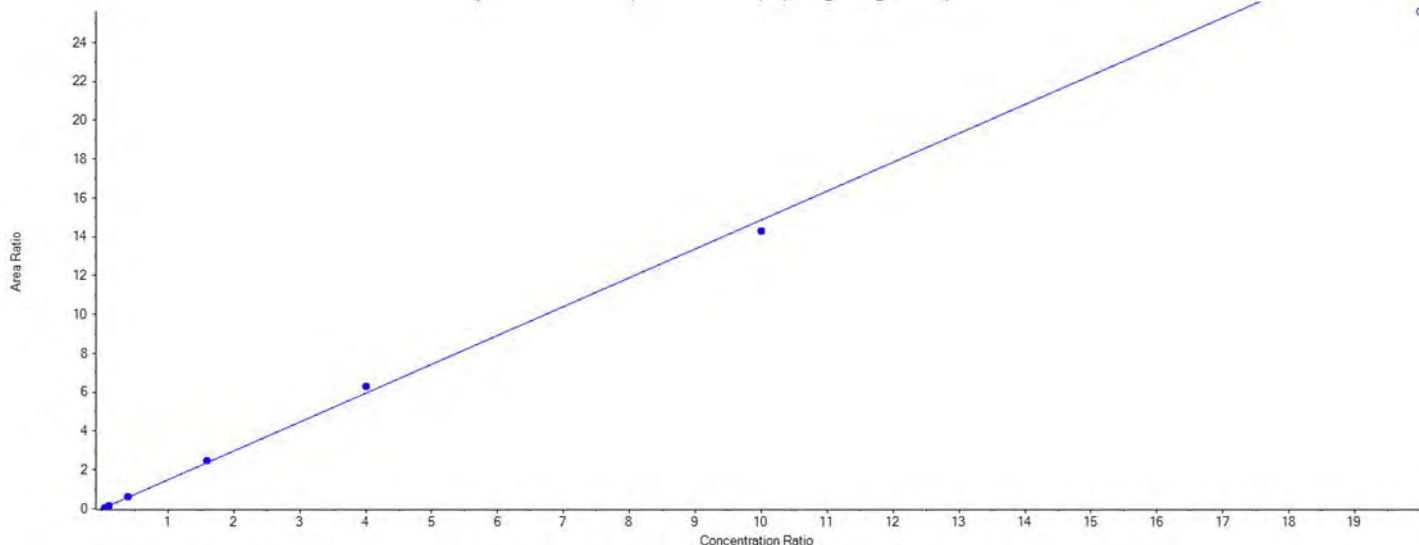
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFHpA

 $y = 1.48669x$ ($r = 0.99890$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	PFHpA Area	S/N	¹³ C4-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

BSI05 Page 341 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 33 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

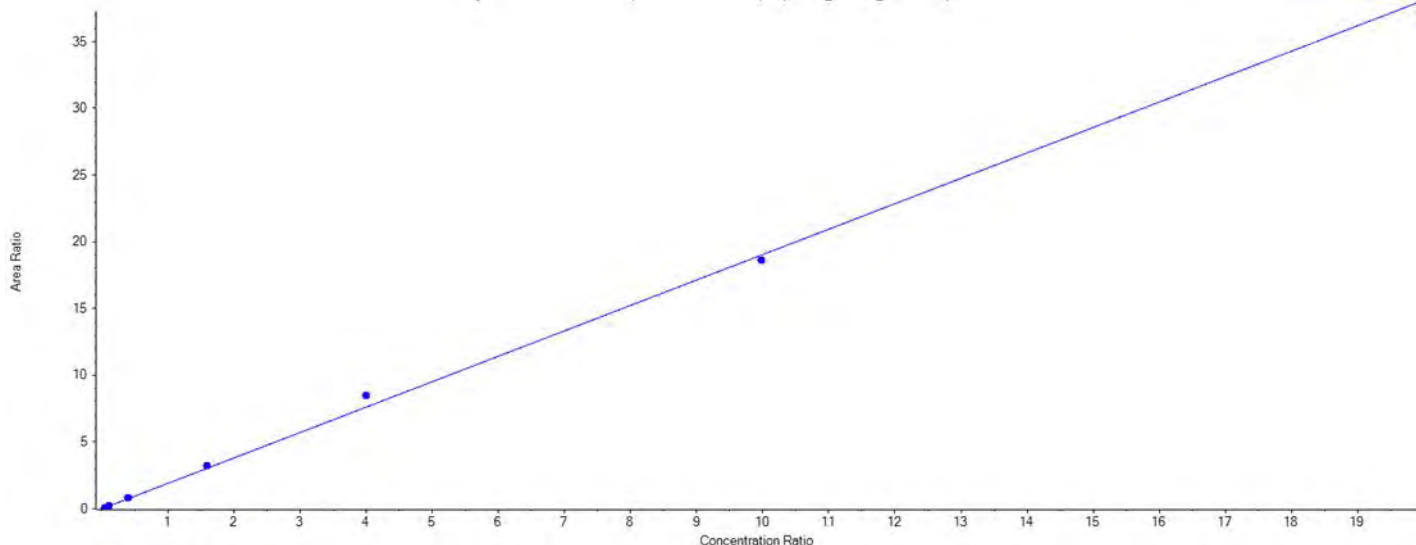
ICAL Name: 18NOV07DCAL

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

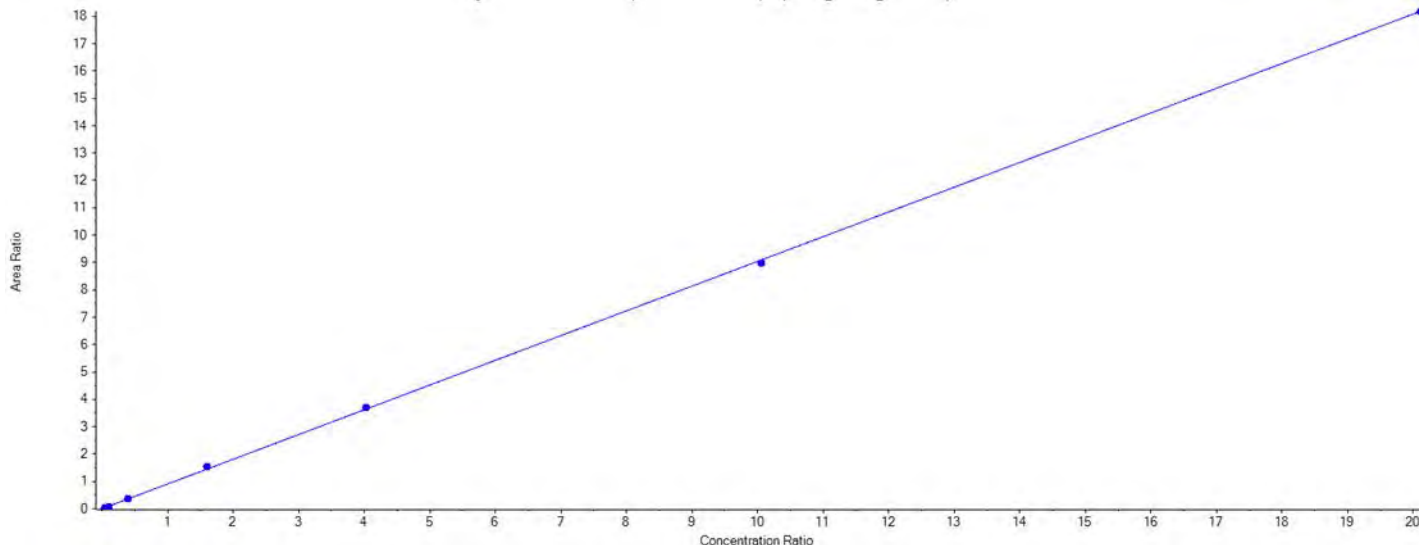
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFHpS

$$y = 0.90410 x \text{ (} r = 0.99989 \text{) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	PFHpS Area	S/N	¹³ C3-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

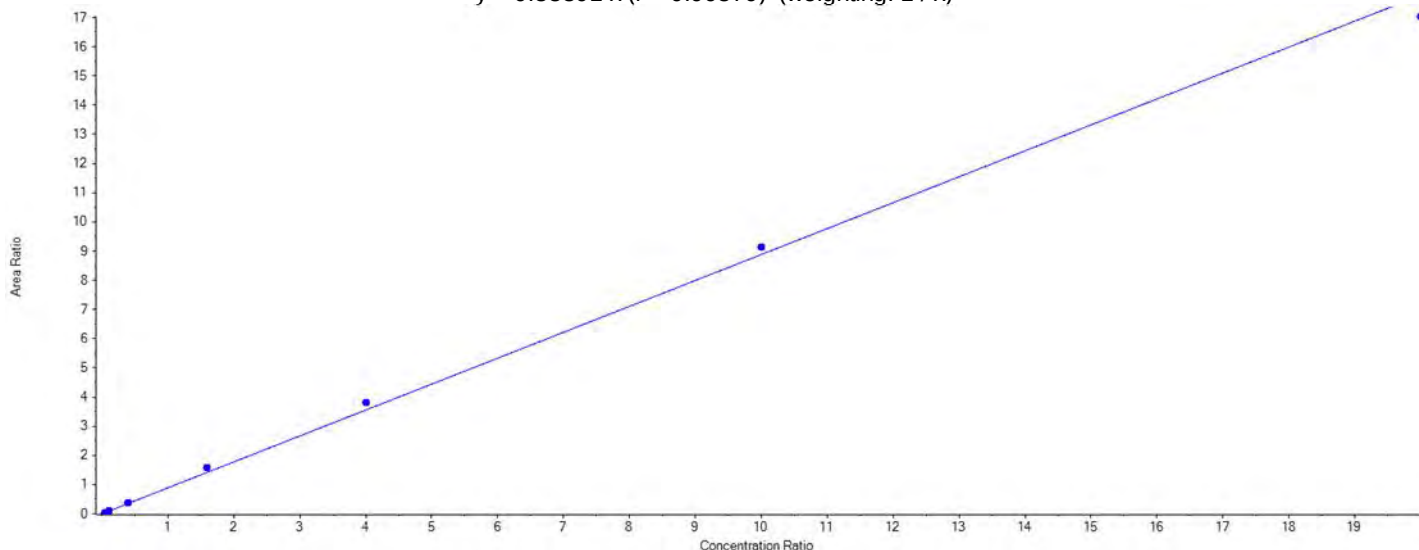
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFOA

$$y = 0.88801 x \text{ (r = 0.99876) (weighting: 1 / x)}$$



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	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

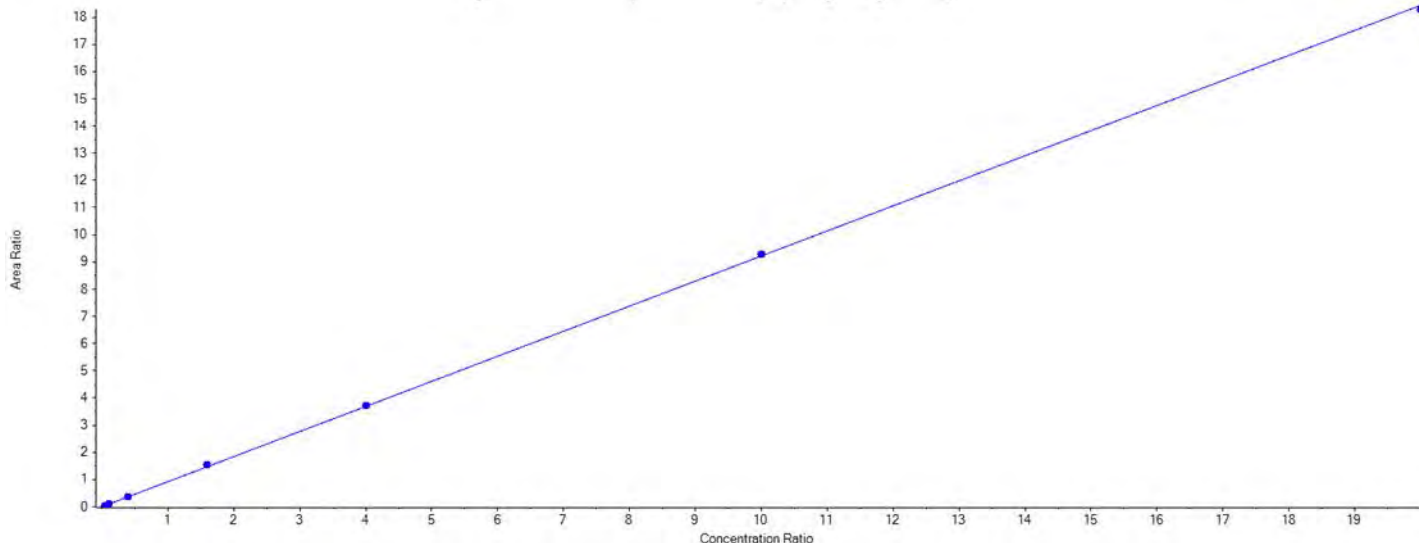
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFOS

$$y = 0.92182x \text{ (} r = 0.99994 \text{) (weighting: } 1/x \text{)}$$



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	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

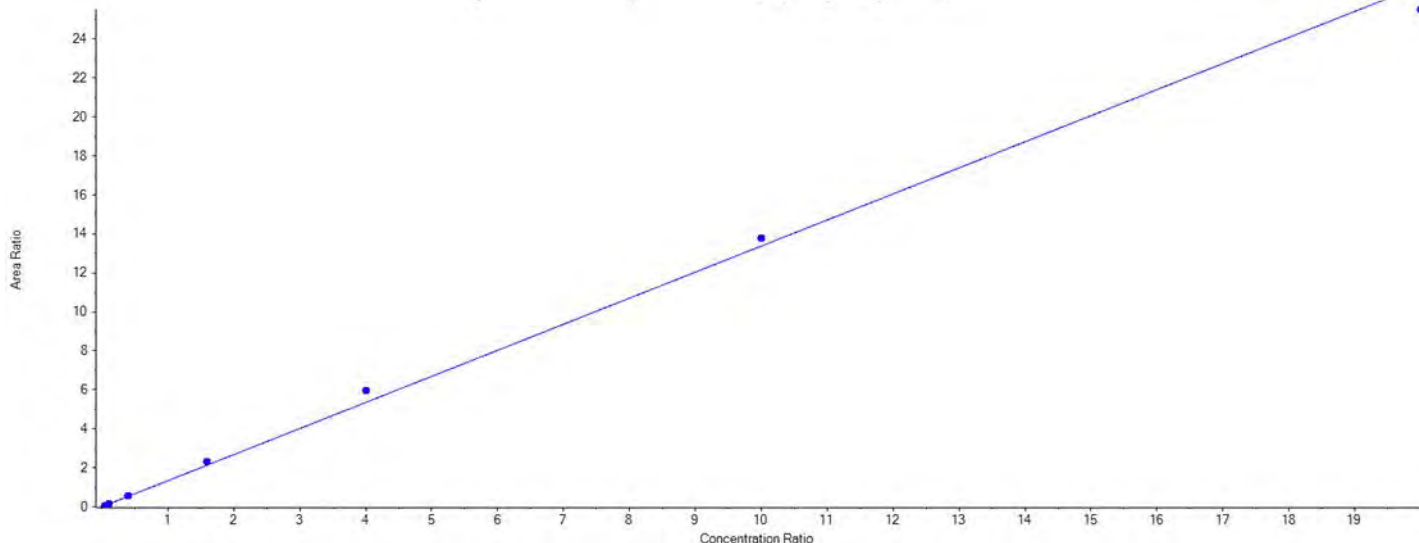
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFNA

$$y = 1.33790 x \text{ (r = 0.99838) (weighting: 1 / x)}$$



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

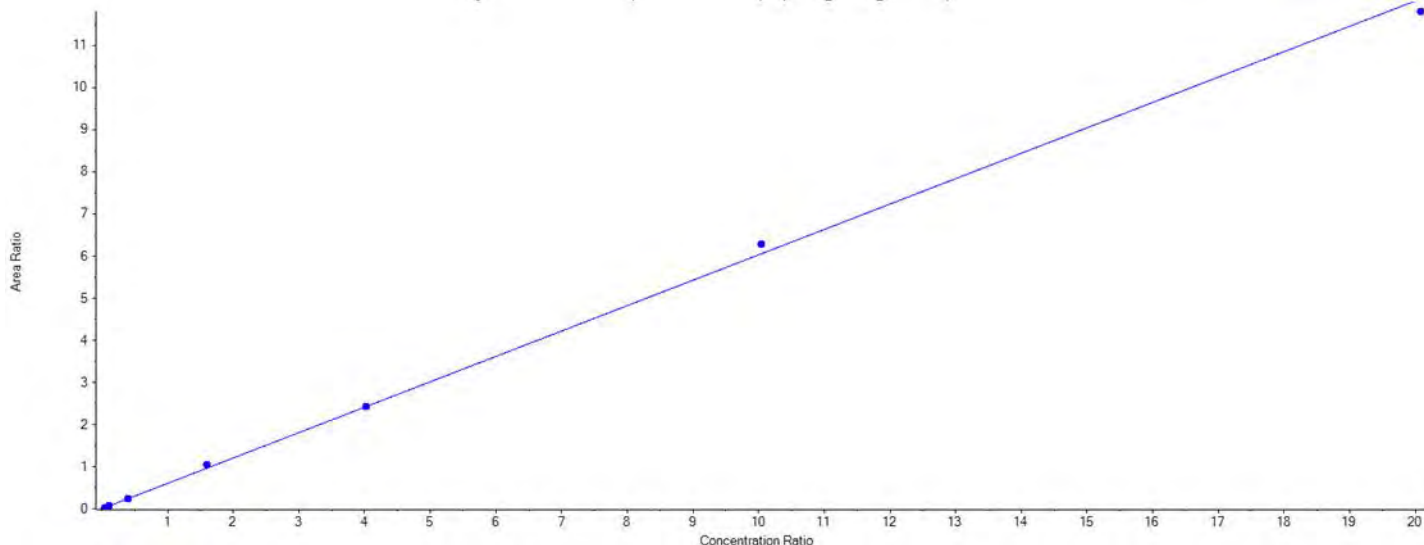
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFNS

$$y = 0.60287x \text{ (} r = 0.99948 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6748.5	139.2	307224.329	True	4.78	0.022	5.55	1.060	0.190	0.174	-8	30	
CAL2	17507.8	298.5	286174.783	True	4.78	0.061	5.55	1.060	0.480	0.485	1	30	
CAL3	72940.0	700.2	297259.750	True	4.78	0.245	5.55	1.060	1.920	1.946	1	30	
CAL4	305013.7	830.3	291941.558	True	4.78	1.045	5.54	1.060	7.680	8.284	8	30	
CAL5	722178.3	1119.3	297995.609	True	4.78	2.423	5.54	1.060	19.200	19.215	0	30	
CAL6	1684601.2	897.8	268368.993	True	4.78	6.277	5.54	1.060	48.000	49.770	4	30	
CAL7	3119908.2	856.2	264295.900	True	4.78	11.805	5.54	1.060	96.000	93.596	-3	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631

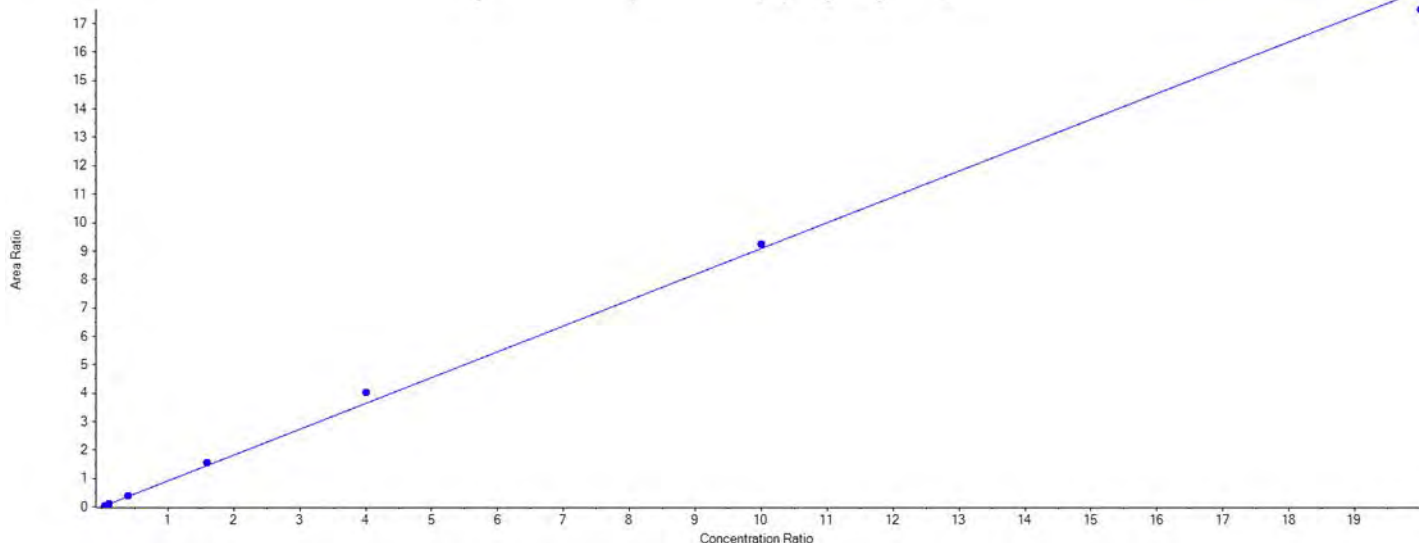
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFDA

 $y = 0.90882x$ ($r = 0.99881$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	25530.0	80.6	651347.959	True	5.00	0.039	5.57	1.000	0.200	0.216	8	30	
CAL2	62530.6	137.6	661423.810	True	5.00	0.095	5.57	1.000	0.500	0.520	4	30	
CAL3	244693.9	357.4	639022.779	True	5.00	0.383	5.57	1.000	2.000	2.107	5	30	
CAL4	1029893.8	556.8	656868.302	True	5.00	1.568	5.56	1.000	8.000	8.626	8	30	
CAL5	2401274.2	683.6	598009.725	True	5.00	4.015	5.57	1.000	20.000	22.091	10	30	
CAL6	4962332.7	791.5	536626.204	True	5.00	9.247	5.56	1.000	50.000	50.875	2	30	
CAL7	8415098.4	928.9	480927.883	True	5.00	17.498	5.56	1.000	100.000	96.265	-4	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 348 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 40 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

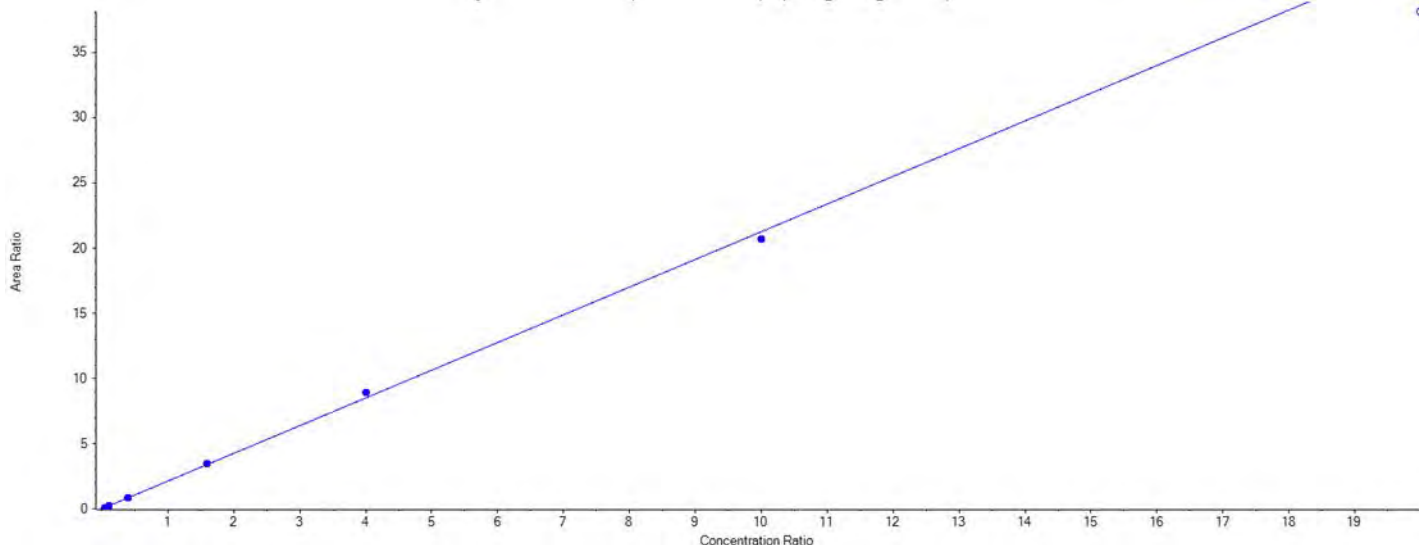
ICAL Name: 18NOV07DCAL

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

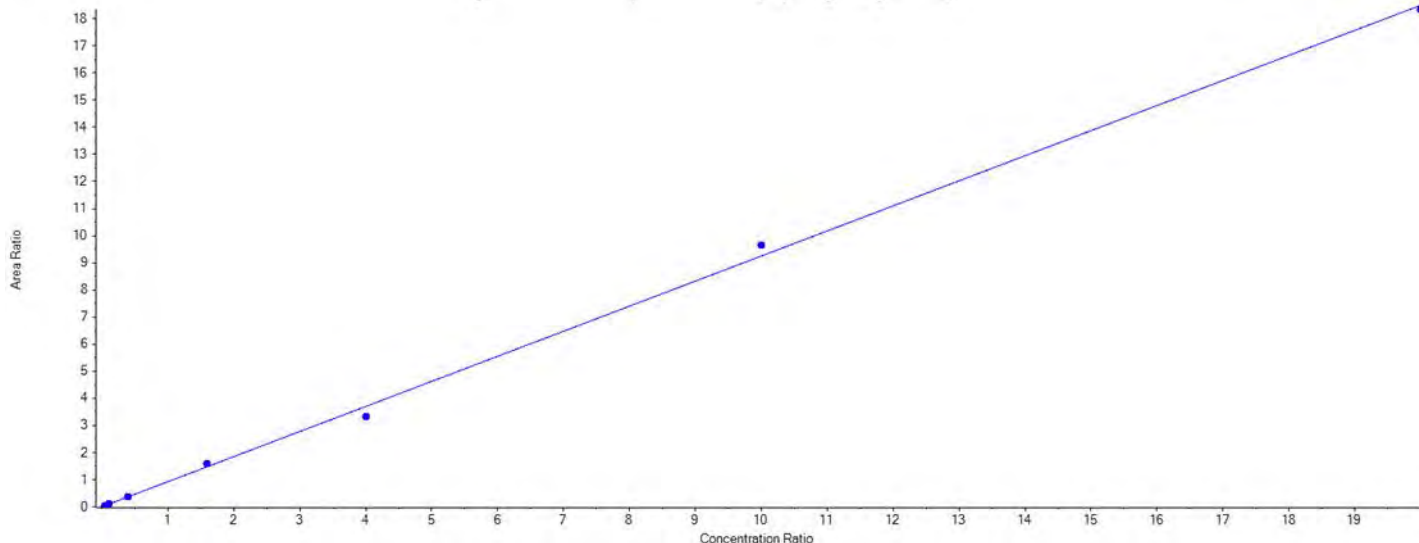
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFOSA

 $y = 0.92498x$ ($r = 0.99897$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	PFOSA Area	S/N	¹³ C8-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

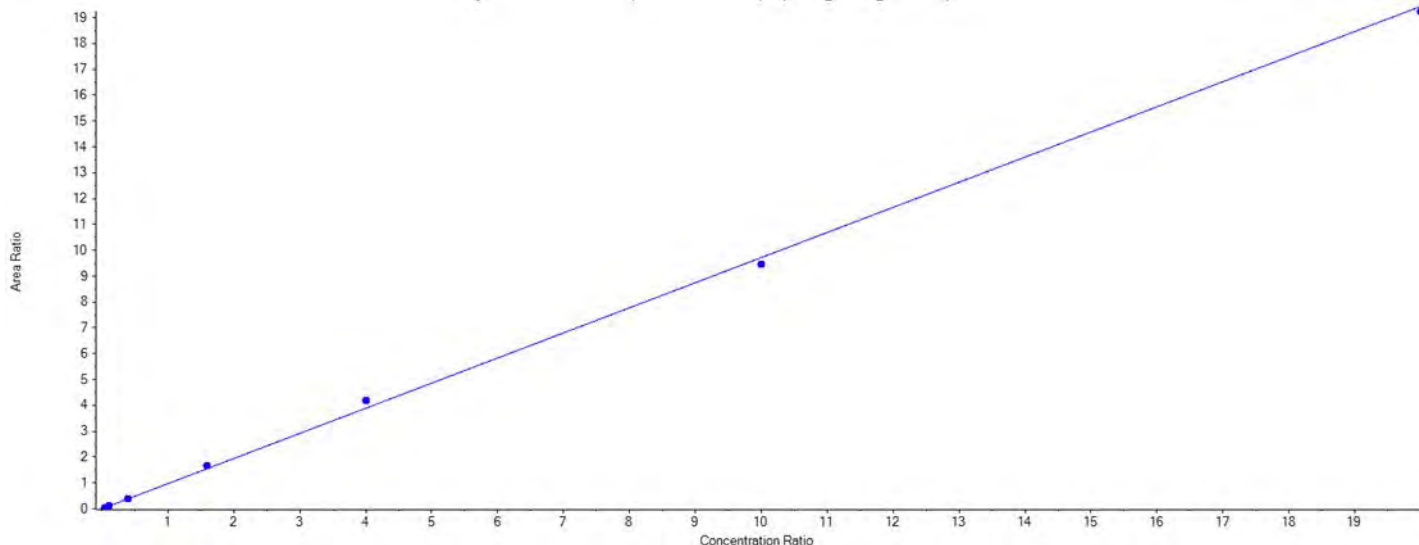
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

NMeFOSAA

$$y = 0.97172 x \text{ (r = 0.99935) (weighting: 1 / x)}$$



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3293.8	523.5	94966.986	True	5.00	0.035	5.71	1.000	0.200	0.178	-11	30	
CAL2	9807.4	1757.7	83112.192	True	5.00	0.118	5.71	1.000	0.500	0.607	21	30	
CAL3	32400.4	714.3	81763.338	True	5.00	0.396	5.71	1.000	2.000	2.039	2	30	
CAL4	136316.9	1055.9	80900.105	True	5.00	1.685	5.71	1.000	8.000	8.670	8	30	
CAL5	308507.7	1864.0	73896.081	True	5.00	4.175	5.71	1.000	20.000	21.482	7	30	
CAL6	740651.6	2592.1	78157.968	True	5.00	9.476	5.70	1.000	50.000	48.760	-2	30	
CAL7	1450331.2	3029.7	75408.724	True	5.00	19.233	5.70	1.000	100.000	98.963	-1	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

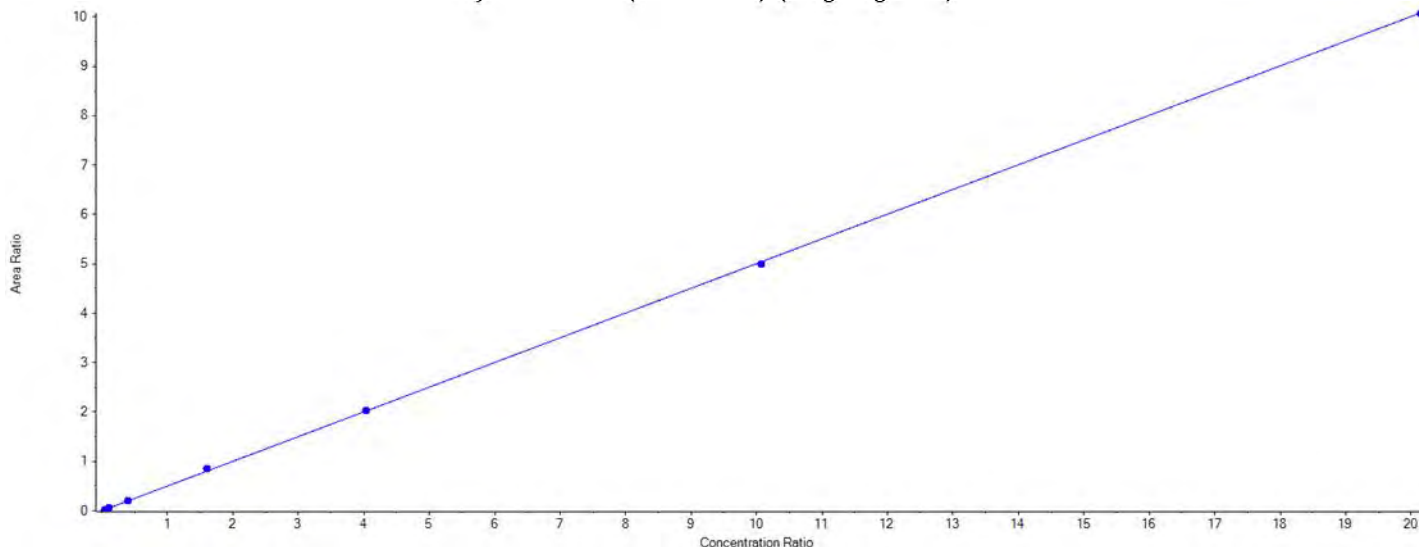
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFDS

$$y = 0.50039x \text{ (} r = 0.99988 \text{) (weighting: } 1/x \text{)}$$



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

BSI05 Page 352 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 44 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

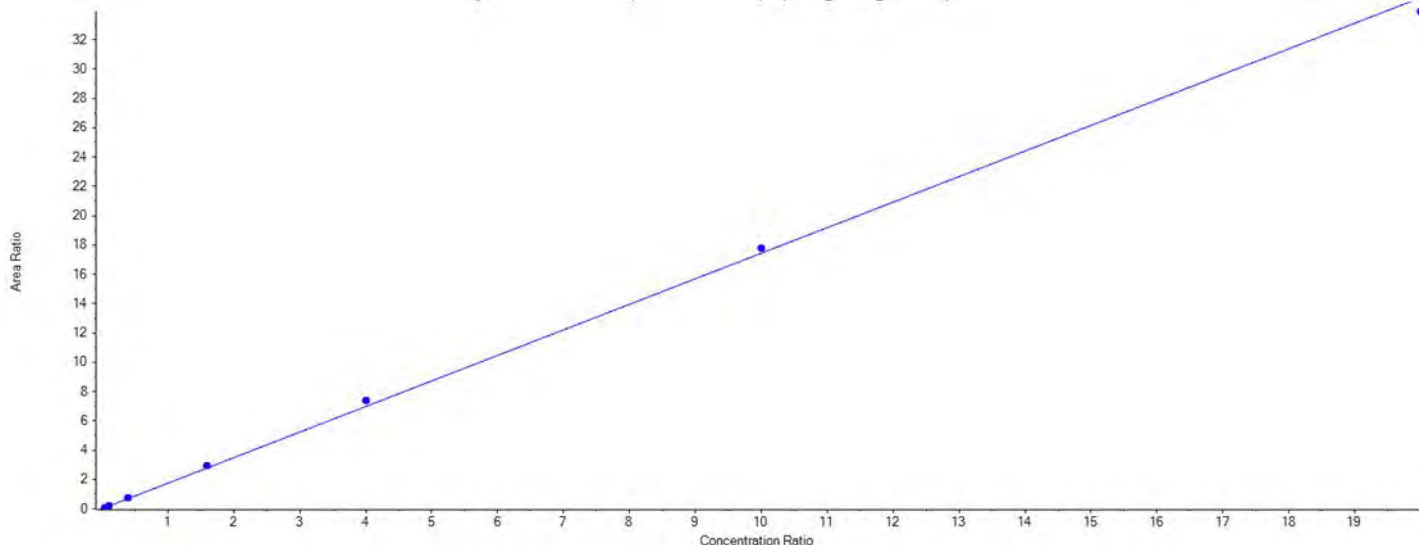
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFUnDA

$$y = 1.74352 x \text{ (r = 0.99948) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23275.5	123.3	293658.674	True	5.00	0.079	5.83	1.000	0.200	0.227	14	30	
CAL2	54085.5	306.2	289985.074	True	5.00	0.187	5.83	1.000	0.500	0.535	7	30	
CAL3	209644.8	492.6	277115.542	True	5.00	0.757	5.83	1.000	2.000	2.170	8	30	
CAL4	802732.3	974.7	275977.201	True	5.00	2.909	5.83	1.000	8.000	8.341	4	30	
CAL5	1952356.4	1160.8	263924.687	True	5.00	7.397	5.83	1.000	20.000	21.214	6	30	
CAL6	4071590.3	1109.0	229237.069	True	5.00	17.761	5.82	1.000	50.000	50.936	2	30	
CAL7	7204782.9	1154.1	212399.757	True	5.00	33.921	5.82	1.000	100.000	97.277	-3	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

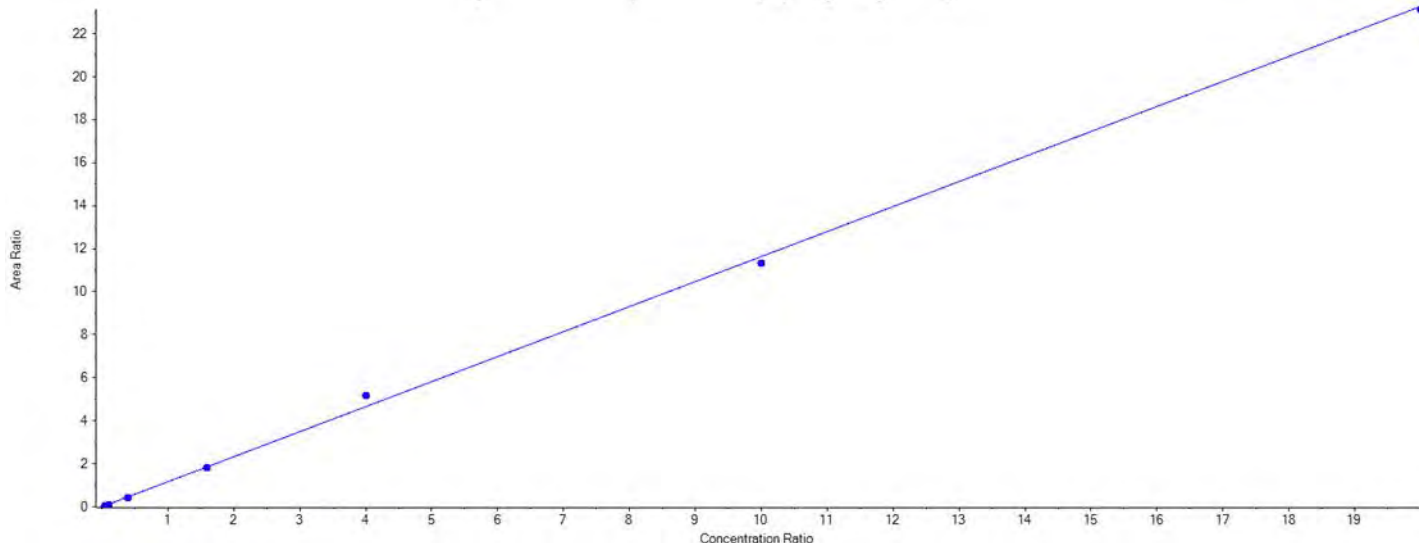
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

NEtFOSAA

$$y = 1.16344 x \text{ (r = 0.99914) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3313.0	102.1	77938.309	True	5.00	0.043	5.84	1.000	0.200	0.183	-9	30	
CAL2	7253.7	357.6	65815.920	True	5.00	0.110	5.84	1.000	0.500	0.474	-5	30	
CAL3	32100.8	3488.9	72755.747	True	5.00	0.441	5.85	1.000	2.000	1.896	-5	30	
CAL4	121615.1	1770.9	66162.445	True	5.00	1.838	5.84	1.000	8.000	7.900	-1	30	
CAL5	298834.2	3536.0	57745.714	True	5.00	5.175	5.85	1.000	20.000	22.240	11	30	
CAL6	685447.7	2450.9	60556.615	True	5.00	11.319	5.84	1.000	50.000	48.645	-3	30	
CAL7	1317020.6	2554.3	56963.053	True	5.00	23.121	5.84	1.000	100.000	99.363	-1	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631

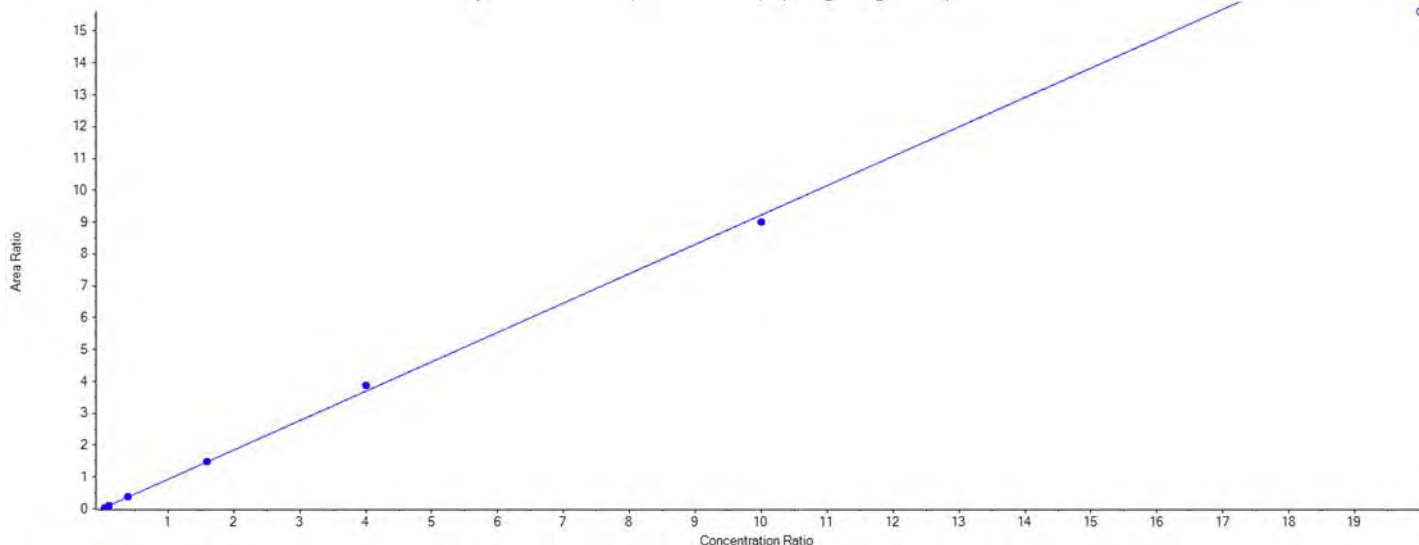
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFDODA

 $y = 0.92260 x$ ($r = 0.99946$) (weighting: $1 / x$)

Component Calibration Verification

Sample Name	PFDODA Area	S/N	¹³ C2-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

BSI05 Page 355 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 47 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

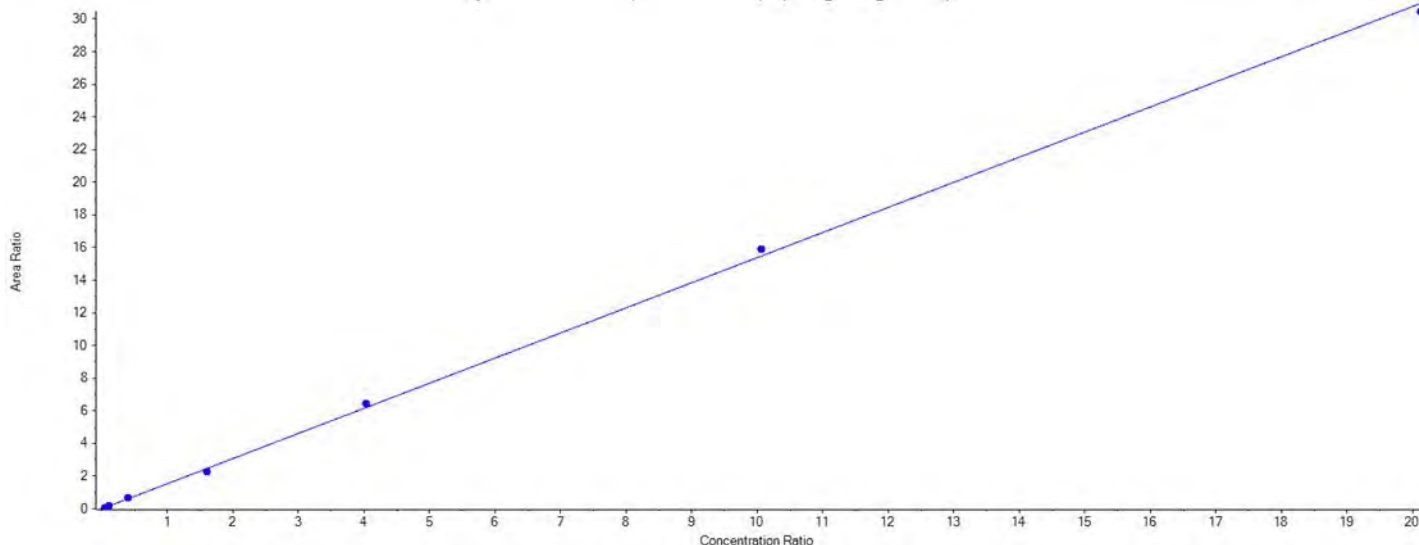
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

10:2-FTS

 $y = 1.53829x$ ($r = 0.99956$) (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

BSI05 Page 356 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 48 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

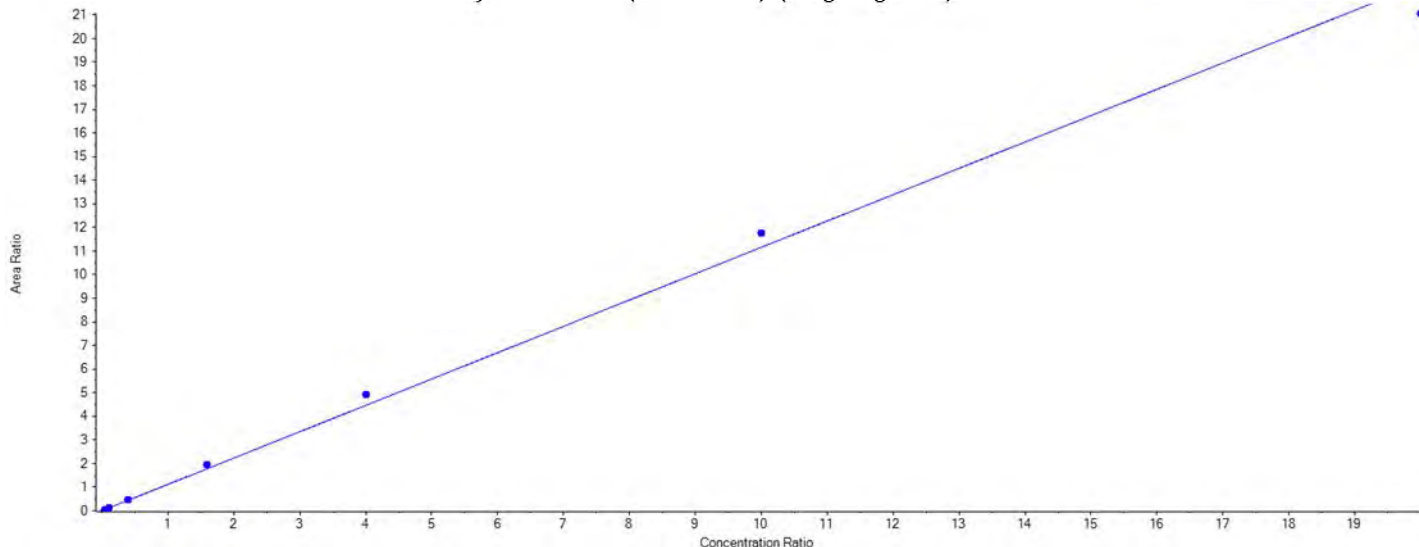
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

NMePFOSAE

$$y = 1.11579x \text{ (} r = 0.99792 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19989.4	87.7	366847.670	True	5.00	0.054	6.10	1.000	0.200	0.244	22	30	
CAL2	40902.1	140.8	330298.603	True	5.00	0.124	6.10	1.000	0.500	0.555	11	30	
CAL3	151795.0	297.4	335206.816	True	5.00	0.453	6.10	1.000	2.000	2.029	1	30	
CAL4	648523.4	496.3	330968.748	True	5.00	1.959	6.09	1.000	8.000	8.781	10	30	
CAL5	1583085.5	689.6	321549.477	True	5.00	4.923	6.10	1.000	20.000	22.062	10	30	
CAL6	3462215.2	801.3	294617.585	True	5.00	11.752	6.09	1.000	50.000	52.660	5	30	
CAL7	6220772.1	824.6	295395.339	True	5.00	21.059	6.09	1.000	100.000	94.369	-6	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631

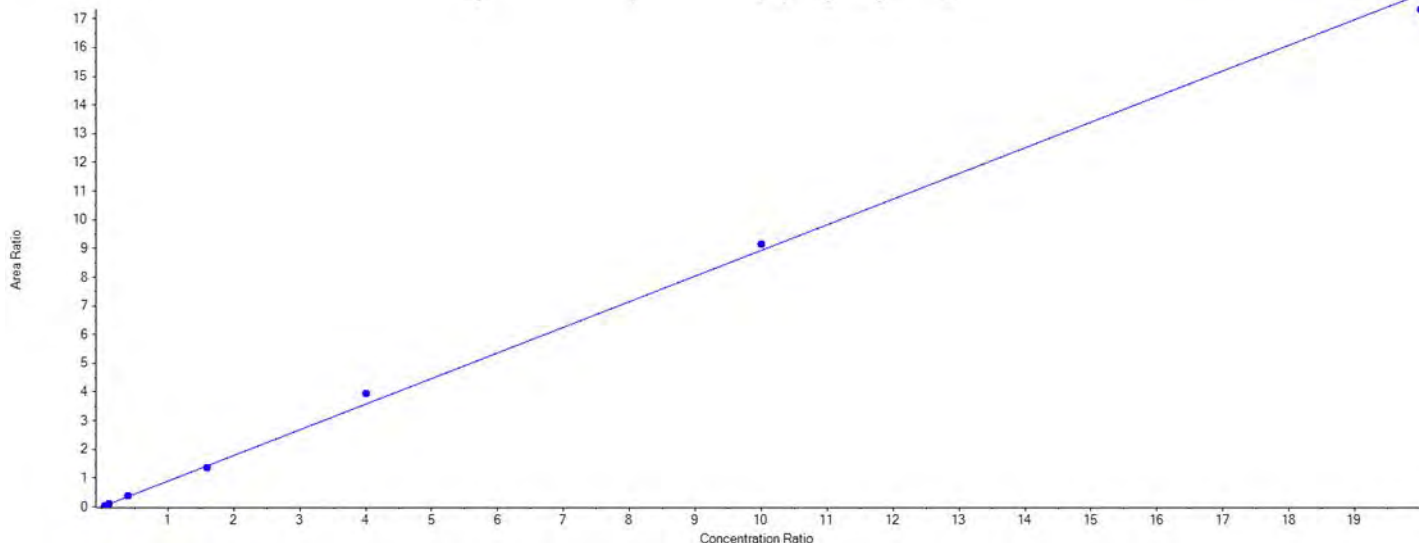
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

NMePFOSA

 $y = 0.89328x$ ($r = 0.99899$) (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

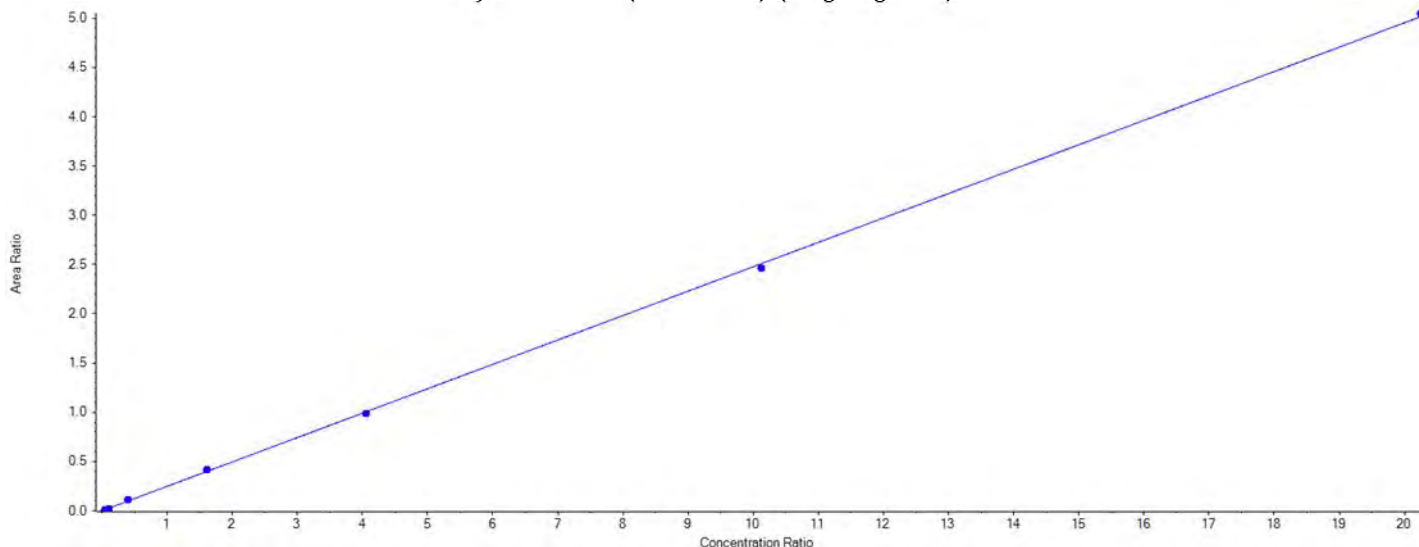
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFDoS

$$y = 0.24766 x \text{ (} r = 0.99988 \text{) (weighting: } 1/x \text{)}$$



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	

DOD Initial Calibration Verification

Instrument ID: LM27631

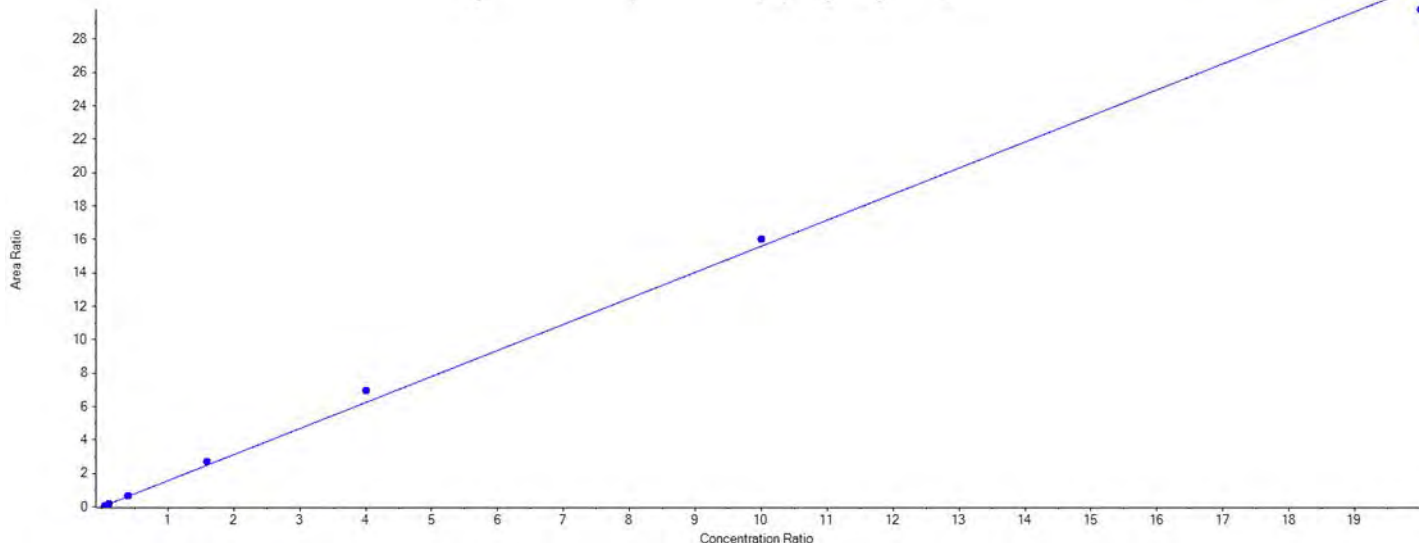
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

NEtPFOSAE

 $y = 1.55971x$ ($r = 0.99840$) (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

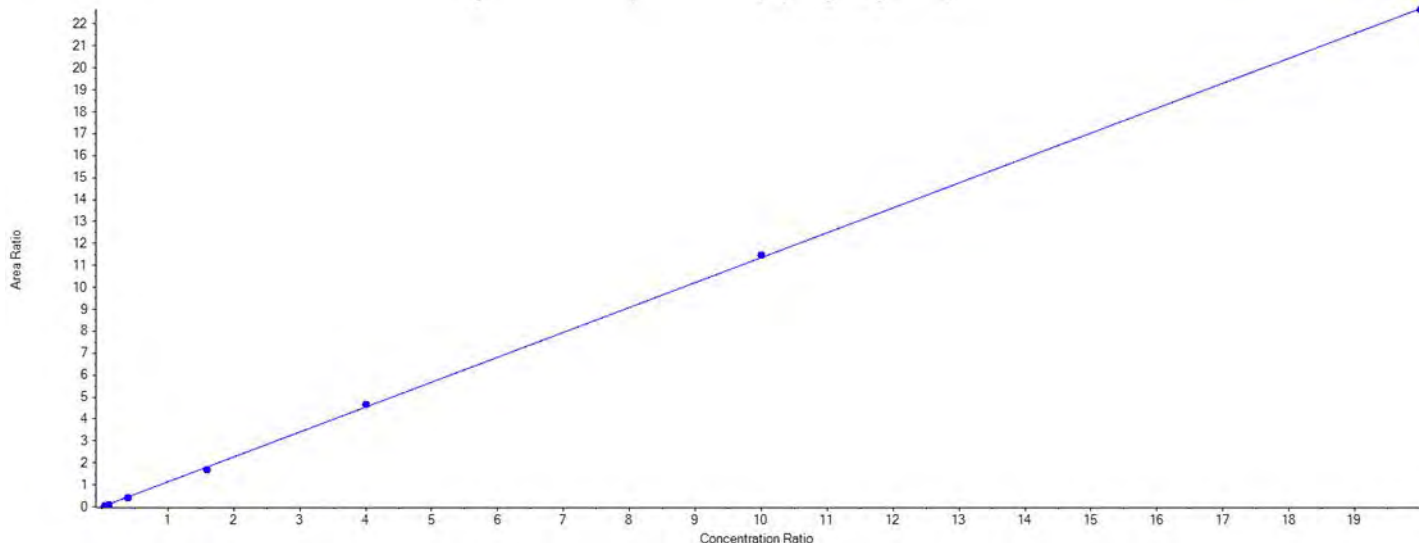
ICAL Name: 18NOV07DCAL

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

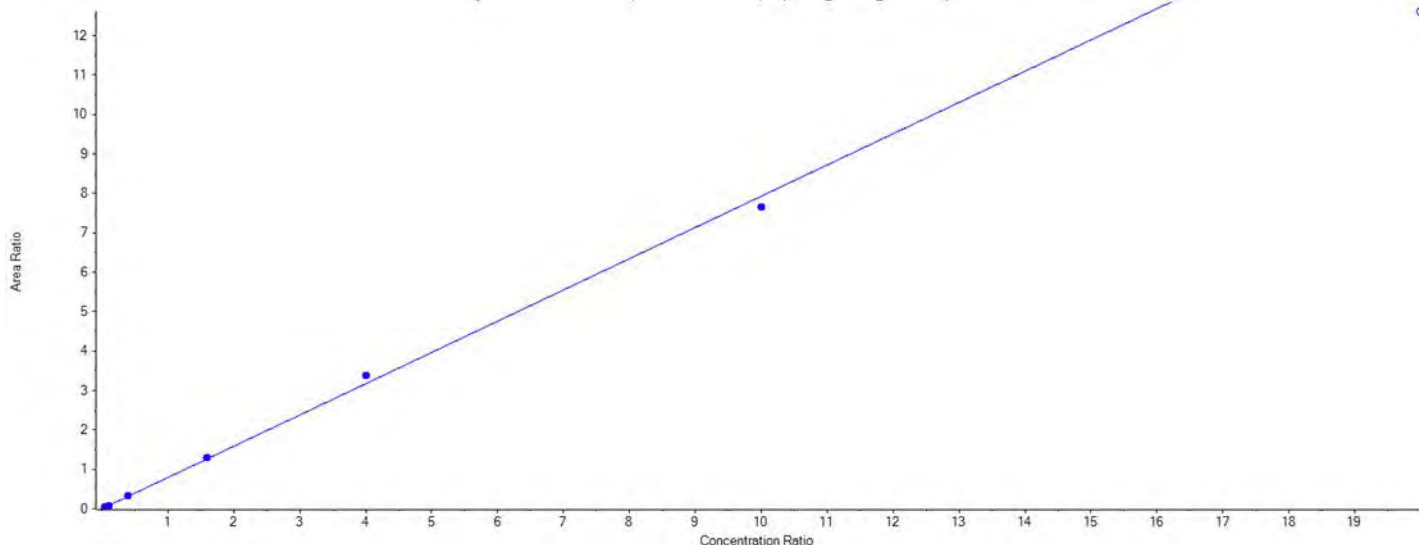
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFTrDA

$$y = 0.79287 x \text{ (} r = 0.99904 \text{) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	¹³ C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22403.2	67.6	564794.852	True	5.00	0.040	6.25	1.030	0.200	0.250	25	30	
CAL2	49218.5	108.1	597616.302	True	5.00	0.082	6.25	1.030	0.500	0.519	4	30	
CAL3	197290.7	195.6	584631.538	True	5.00	0.337	6.25	1.030	2.000	2.128	6	30	
CAL4	781283.7	366.6	598287.433	True	5.00	1.306	6.25	1.030	8.000	8.235	3	30	
CAL5	1851055.0	610.7	548536.046	True	5.00	3.375	6.25	1.030	20.000	21.280	6	30	
CAL6	3829048.4	757.6	500065.276	True	5.00	7.657	6.25	1.030	50.000	48.287	-3	30	
CAL7	6633128.3	811.0	525971.755	False	5.00	12.611	6.25	1.030	100.000	79.528	-20	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

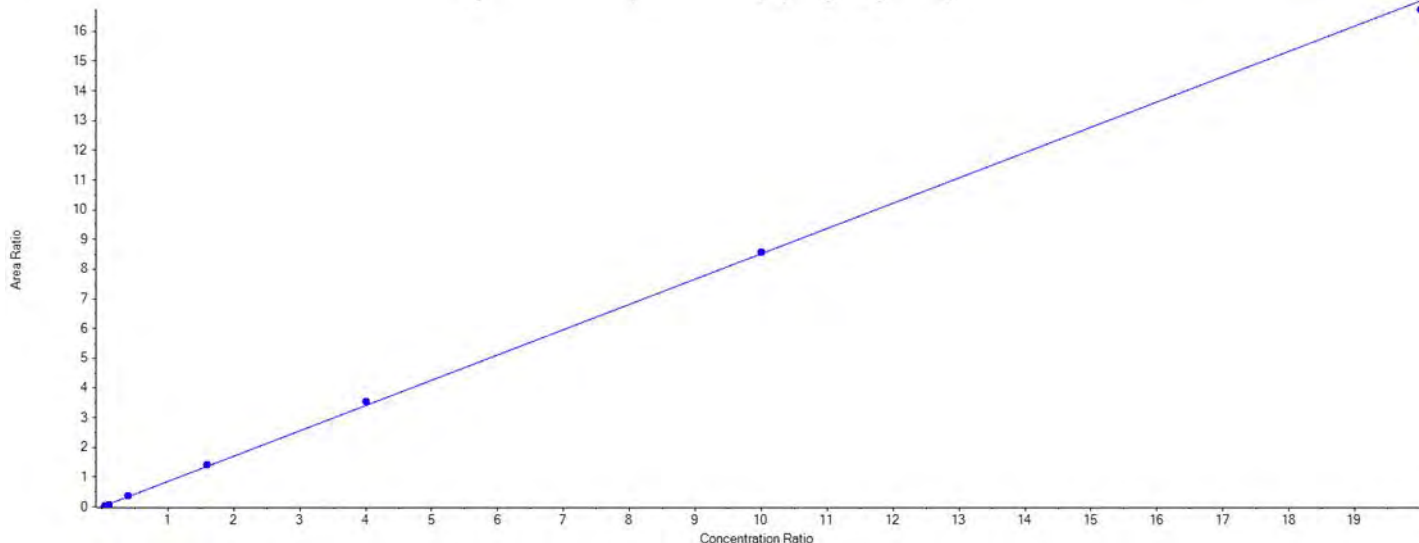
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFTeDA

$$y = 0.85145x \text{ (} r = 0.99973 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	¹³ C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17031.0	49.1	430341.267	True	5.00	0.040	6.43	1.000	0.200	0.232	16	30	
CAL2	36223.2	102.6	441206.866	True	5.00	0.082	6.43	1.000	0.500	0.482	-4	30	
CAL3	150162.8	175.3	419341.711	True	5.00	0.358	6.43	1.000	2.000	2.103	5	30	
CAL4	630801.4	309.8	441858.057	True	5.00	1.428	6.43	1.000	8.000	8.383	5	30	
CAL5	1500655.1	416.1	421798.801	True	5.00	3.558	6.43	1.000	20.000	20.892	4	30	
CAL6	3381511.1	591.7	394433.888	True	5.00	8.573	6.42	1.000	50.000	50.344	1	30	
CAL7	6426587.4	783.6	384058.101	True	5.00	16.733	6.43	1.000	100.000	98.263	-2	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 363 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Page 55 of 61

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

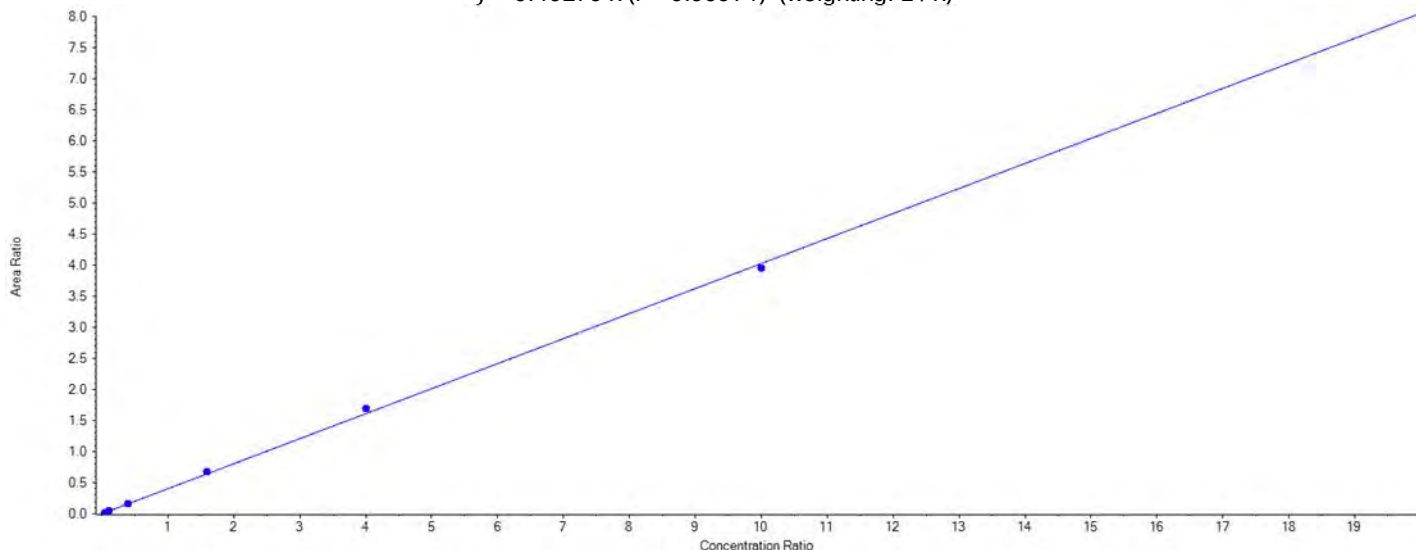
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFHxDA

$$y = 0.40279x \text{ (} r = 0.99974 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	¹³ C ₂ -PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8175.1	231.4	430341.267	True	5.00	0.019	6.74	1.050	0.200	0.236	18	30	
CAL2	18619.3	372.3	441206.866	True	5.00	0.042	6.74	1.050	0.500	0.524	5	30	
CAL3	70193.5	676.5	419341.711	True	5.00	0.167	6.74	1.050	2.000	2.078	4	30	
CAL4	297242.6	1318.1	441858.057	True	5.00	0.673	6.73	1.050	8.000	8.351	4	30	
CAL5	716467.3	1493.6	421798.801	True	5.00	1.699	6.73	1.050	20.000	21.085	5	30	
CAL6	1559604.6	1330.2	394433.888	True	5.00	3.954	6.73	1.050	50.000	49.083	-2	30	
CAL7	3073572.7	1322.0	384058.101	True	5.00	8.003	6.73	1.050	100.000	99.343	-1	30	

APPROVED

By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631

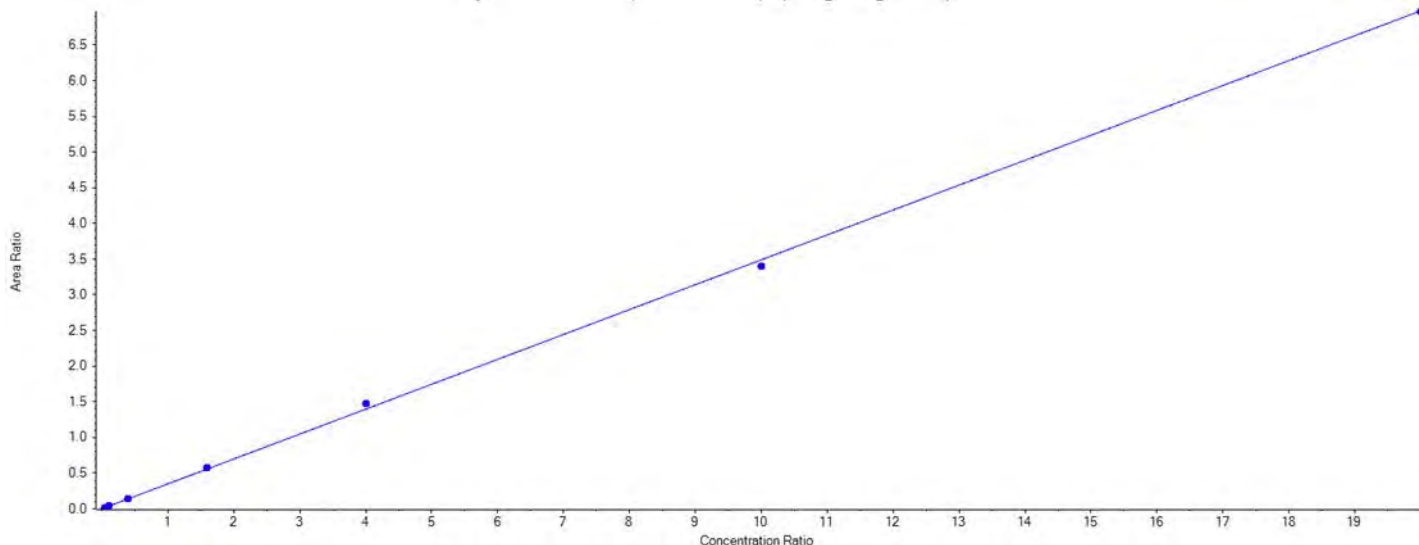
ICAL Name: 18NOV07DCAL

QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam

PFODA

 $y = 0.34900 x$ ($r = 0.99969$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	PFODA Area	S/N	¹³ C ₂ -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	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV07DCAL

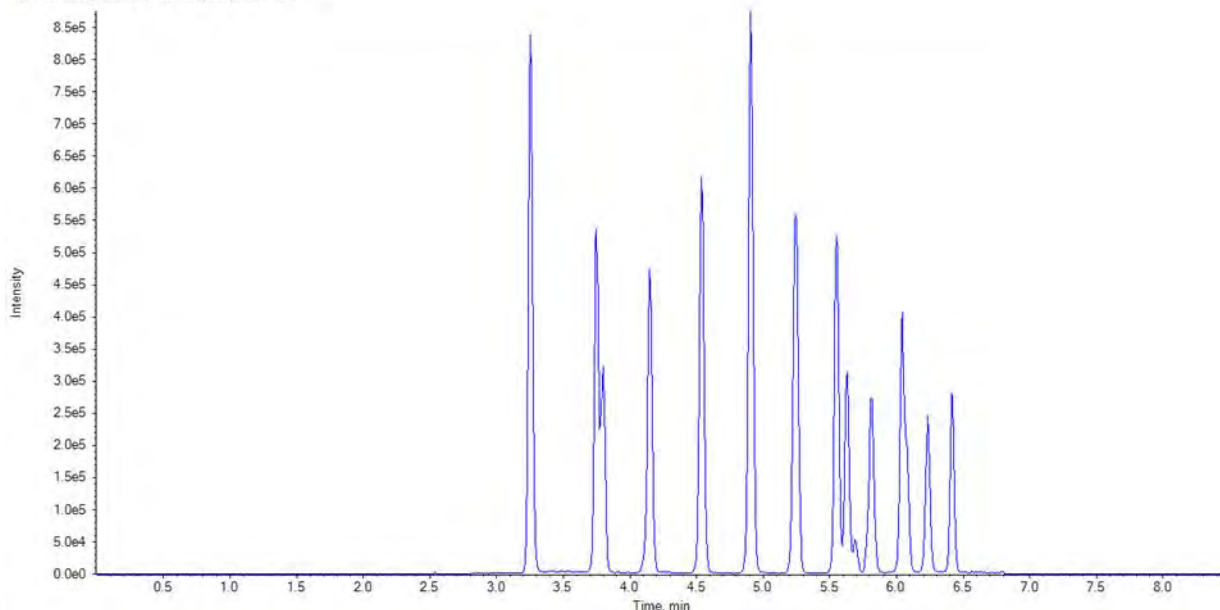
QMethod Name: MQ4-18AUG13

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

TIC from 18NOV07DCAL-18.wiff (sample 2) - ICV



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	809267.46 0	5.00	0.380	3.25	1.00	2.000	2.226	11	30	
PFPeA	325574.9	13C5-PFPeA	881218.23 6	5.00	0.369	3.75	1.00	2.000	2.196	10	30	
PFBS	159719.5	13C3-PFBS	459507.47 1	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	721013.61 3	5.00	0.551	4.15	1.00	2.000	2.364	18	30	
PFPeS	N/A	13C3-PFBS	459507.47 1	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHxS	126635.3	13C3-PFHxS	351165.97 5	4.73	0.361	4.54	1.00	1.890	1.828	-3	30	
PFHpA	390197.1	13C4-PFHpA	564695.35 2	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	351165.97 5	4.73	0.361	4.90	1.08	1.900	1.889	-1	30	
PFOA	387215.1	13C8-PFOA	985027.09 2	5.00	0.393	4.91	1.00	2.000	2.213	11	30	
PFOS	114911.8	13C8-PFOS	289450.12 1	4.78	0.397	5.23	1.00	1.910	2.059	8	30	
PFNA	329644.4	13C9-PFNA	531663.02 6	5.00	0.620	5.25	1.00	2.000	2.317	16	30	
PFNS	N/A	13C8-PFOS	289450.12 1	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	262760.0	13C6-PFDA	669137.11 1	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	741232.18 6	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	289450.12 1	4.78	0.228	5.79	1.11	1.930	2.177	13	30	
PFUnDA	225137.5	13C7-PFUnDA	292761.51 1	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	580675.05 6	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	334001.43 0	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	289450.12 1	4.78	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	293829.69 3	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	
PFTDA	206908.4	13C2-PFDODA	580675.05 6	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	427601.64 3	5.00	0.369	6.42	1.00	2.000	2.169	8	30	
PFHxDA	N/A	13C2-PFTeDA	427601.64 3	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	427601.64 3	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
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	Reference 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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL1

Instrument Name: LM27631

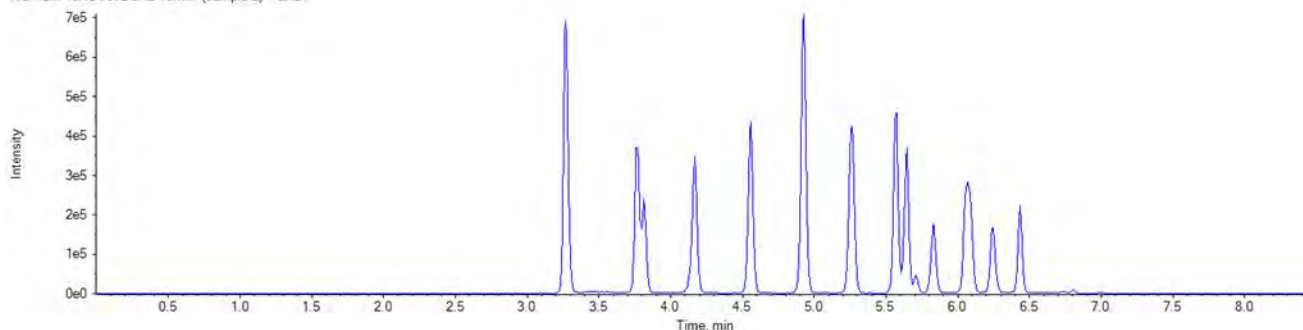
File Name: 18NOV07DCAL-10.wiff

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

TIC from 18NOV07DCAL-10.wiff (sample 2) - CAL1



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 371 of 1595

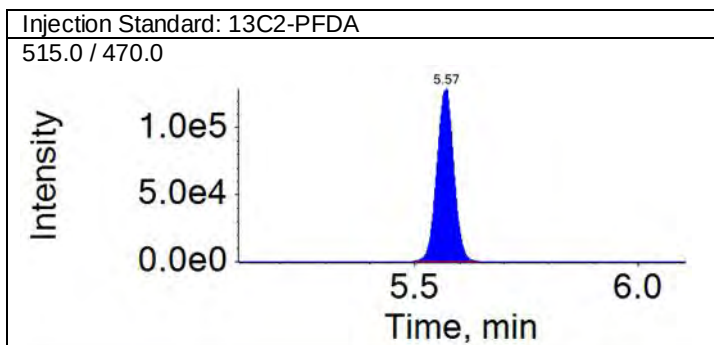
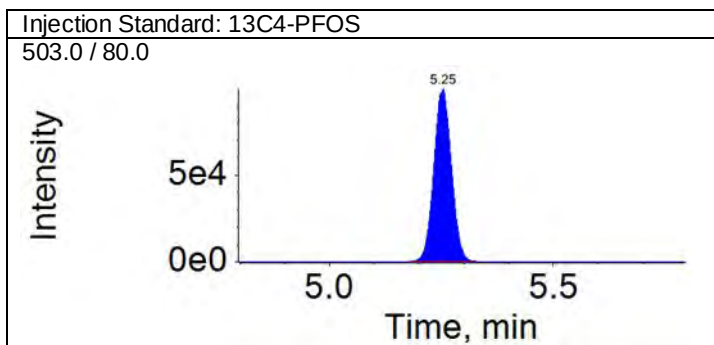
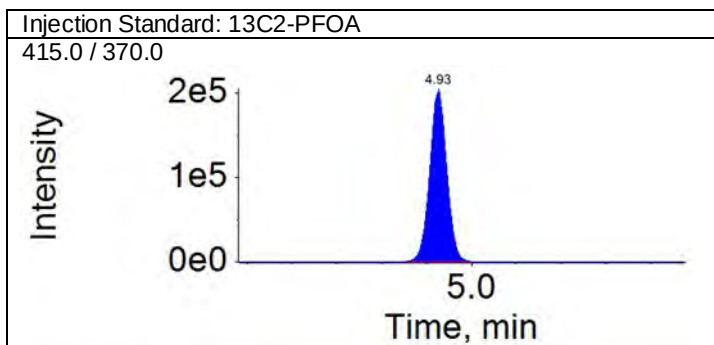
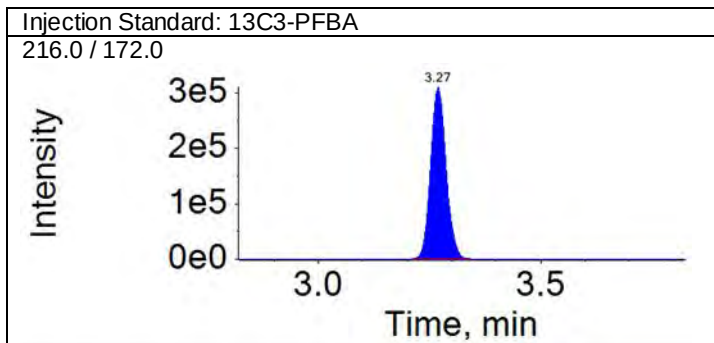
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

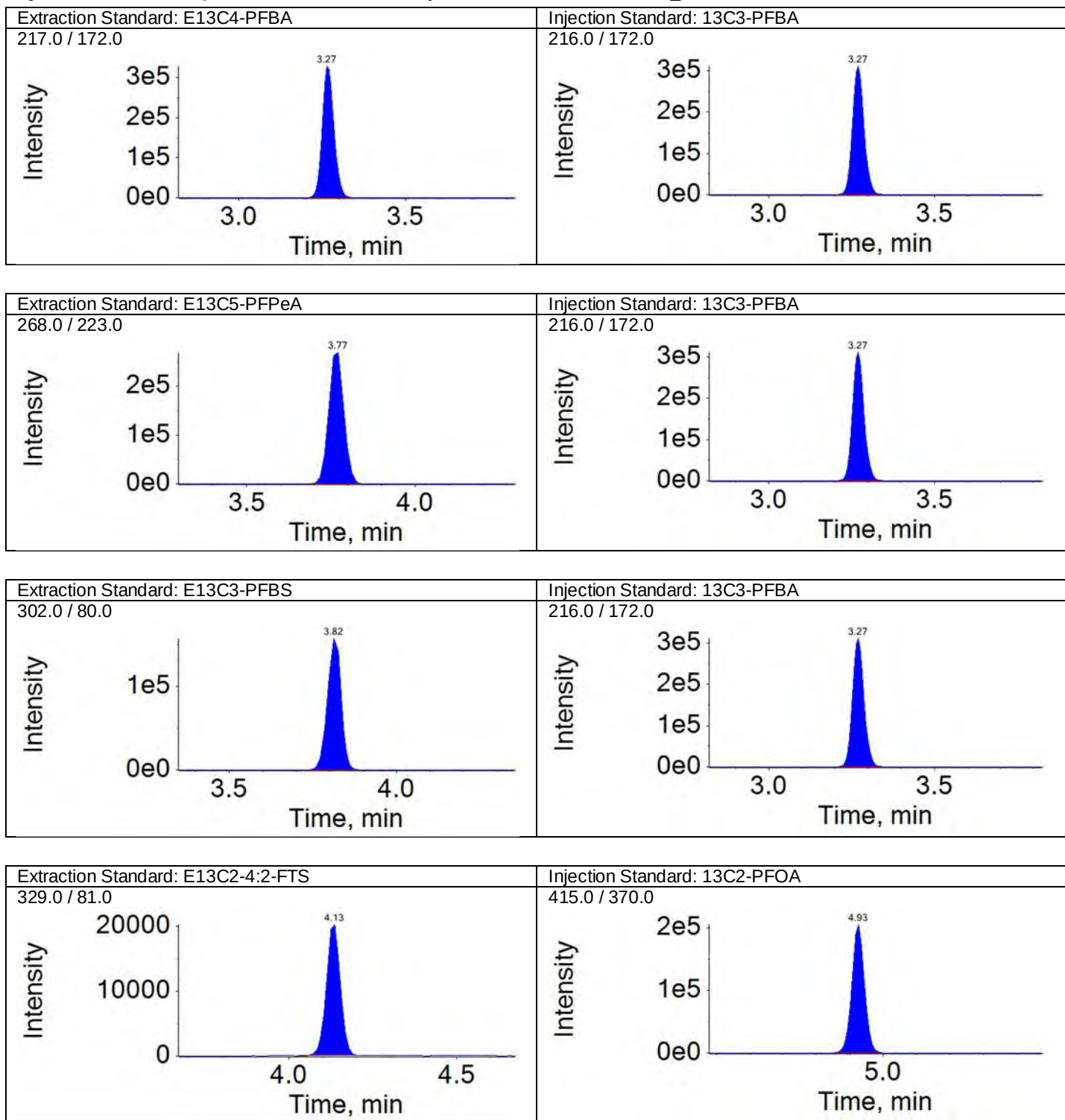
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

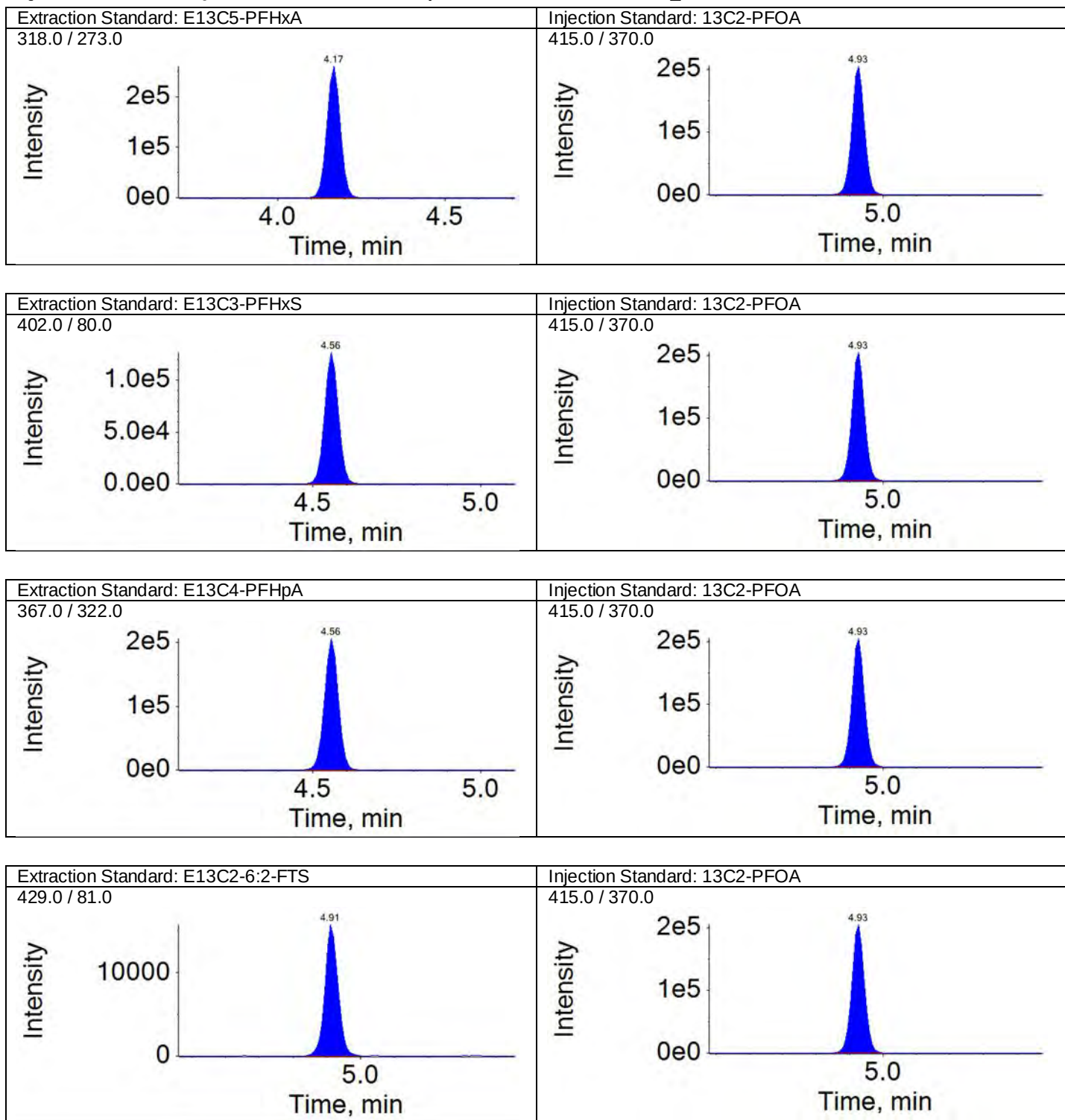
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

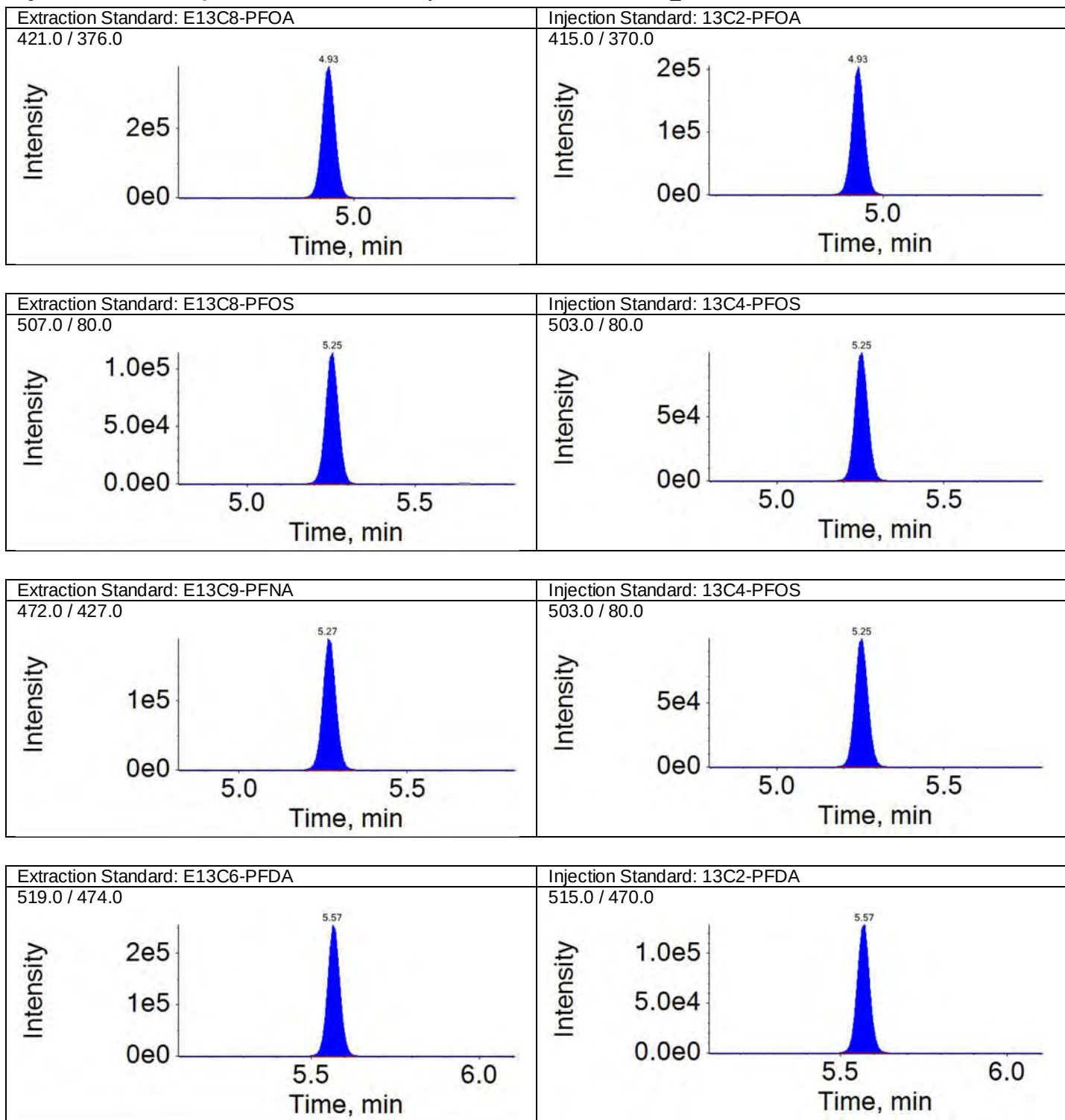
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

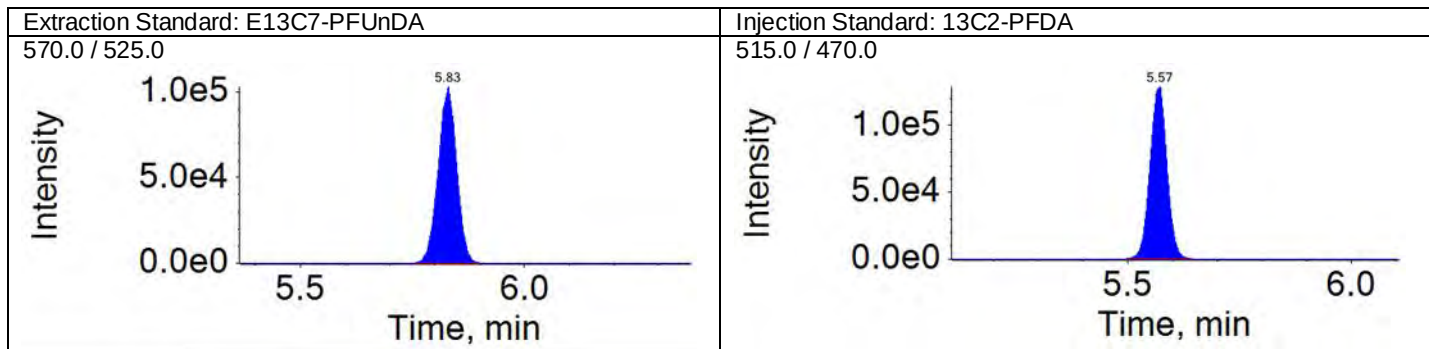
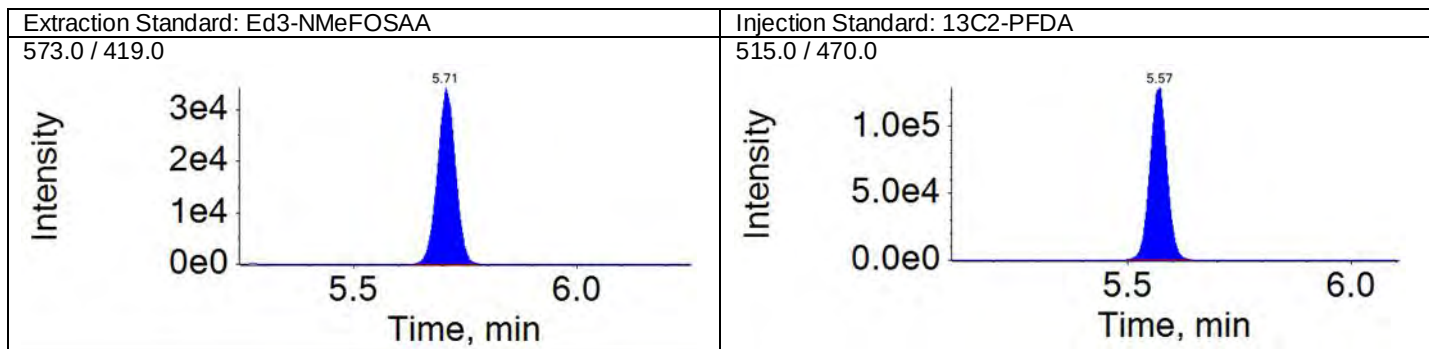
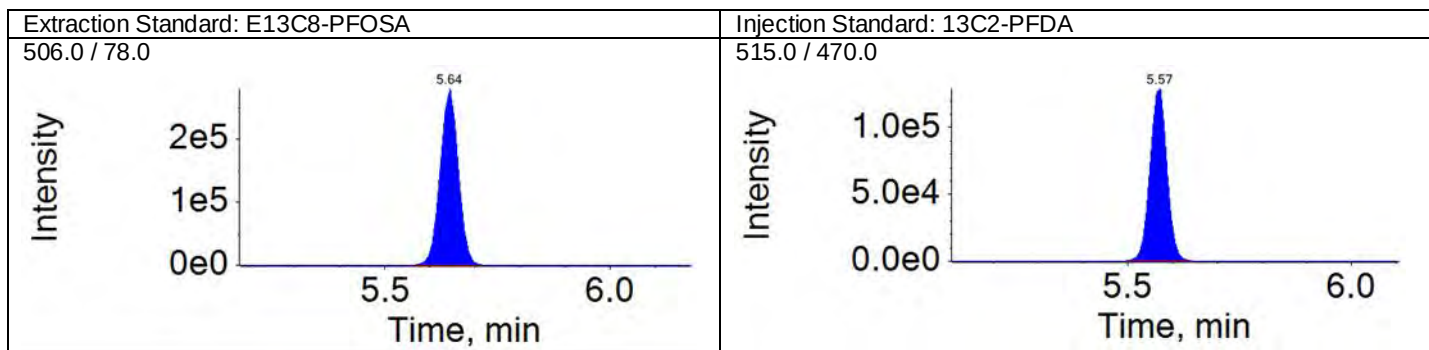
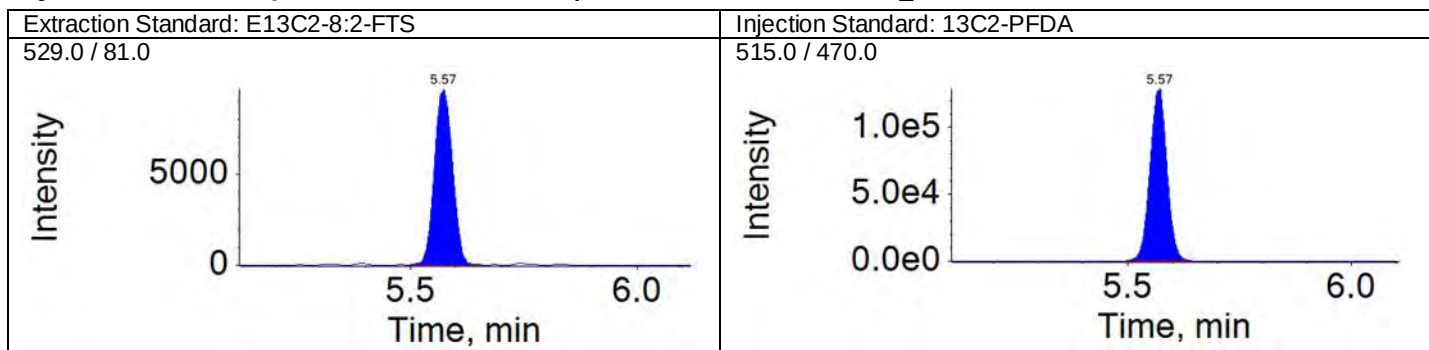
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

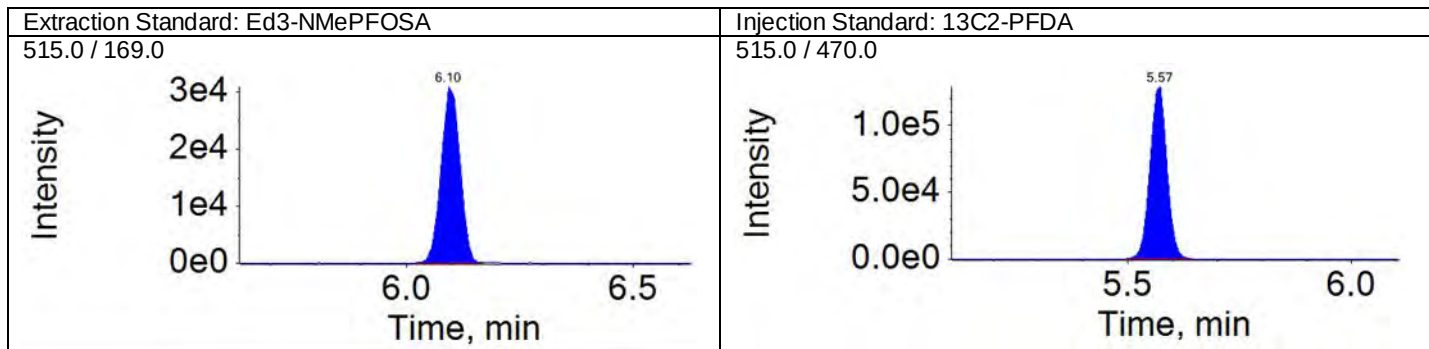
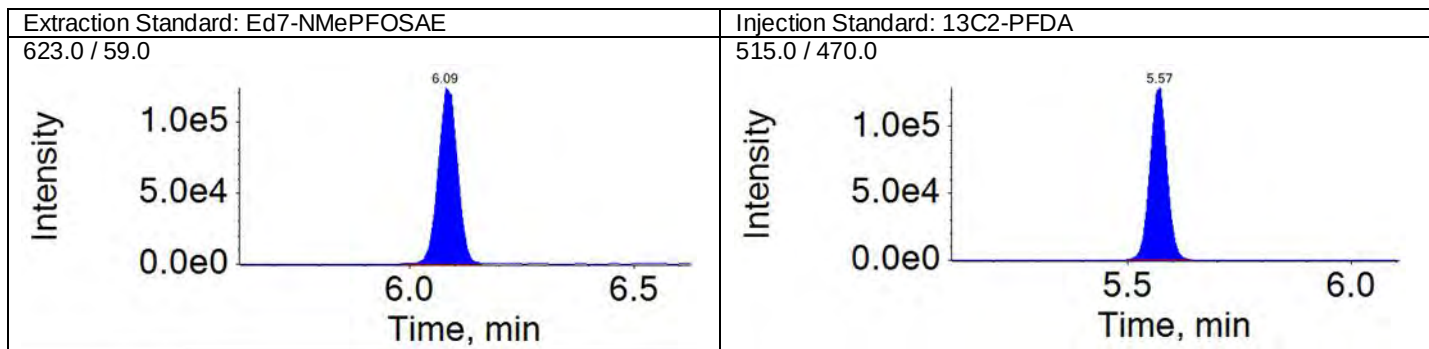
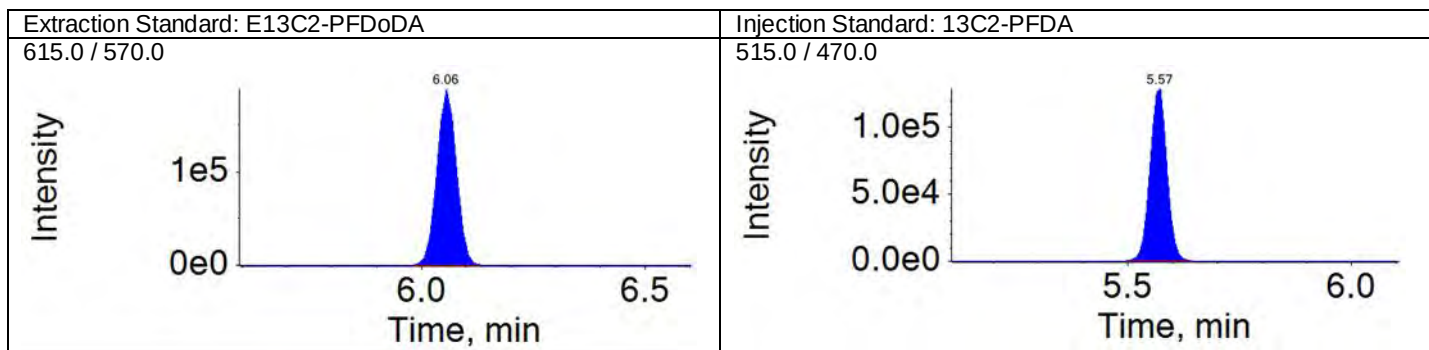
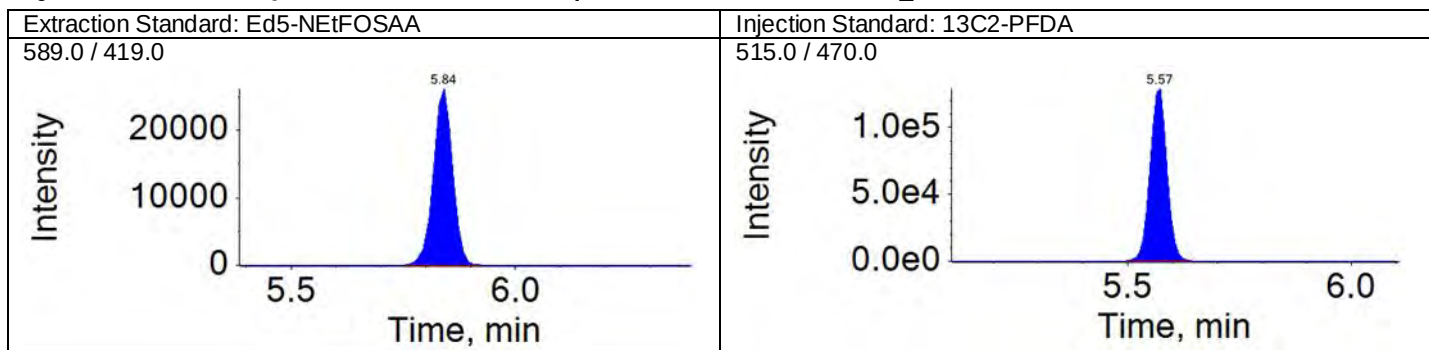
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



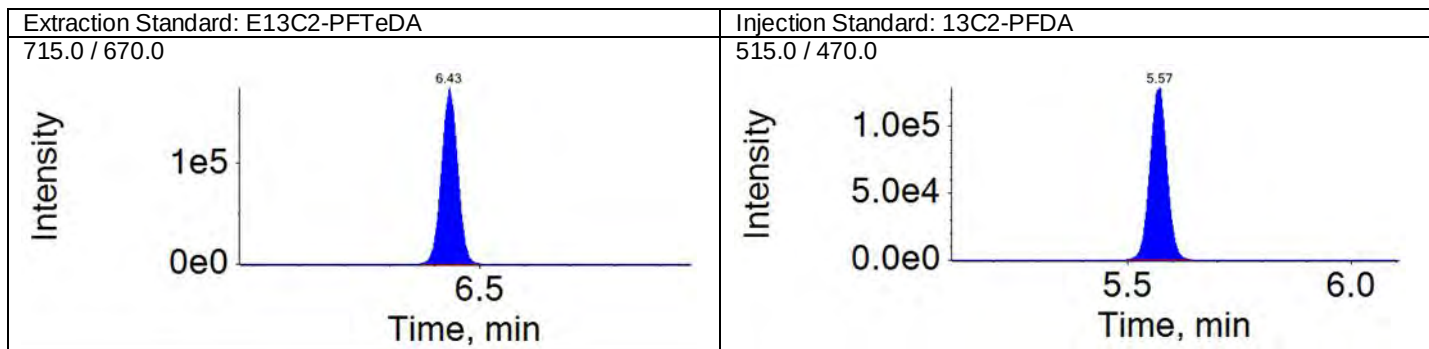
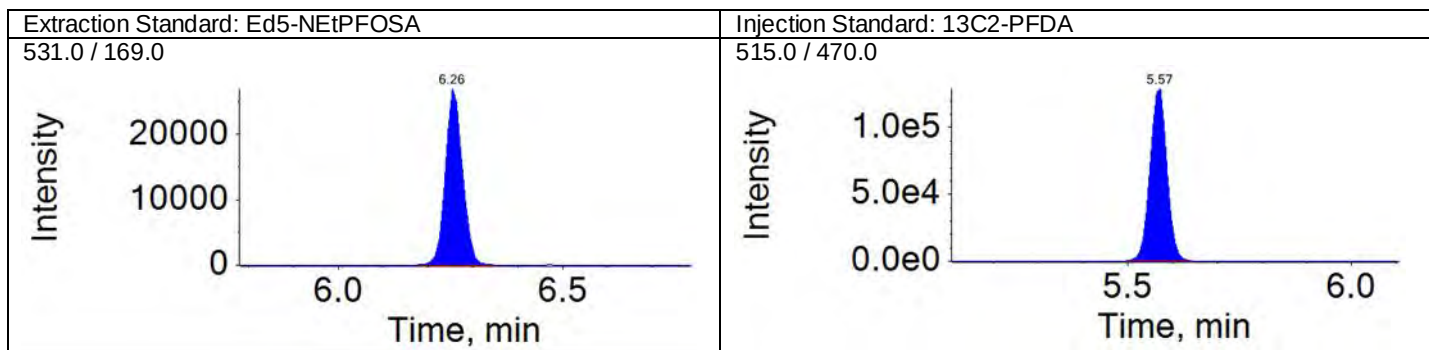
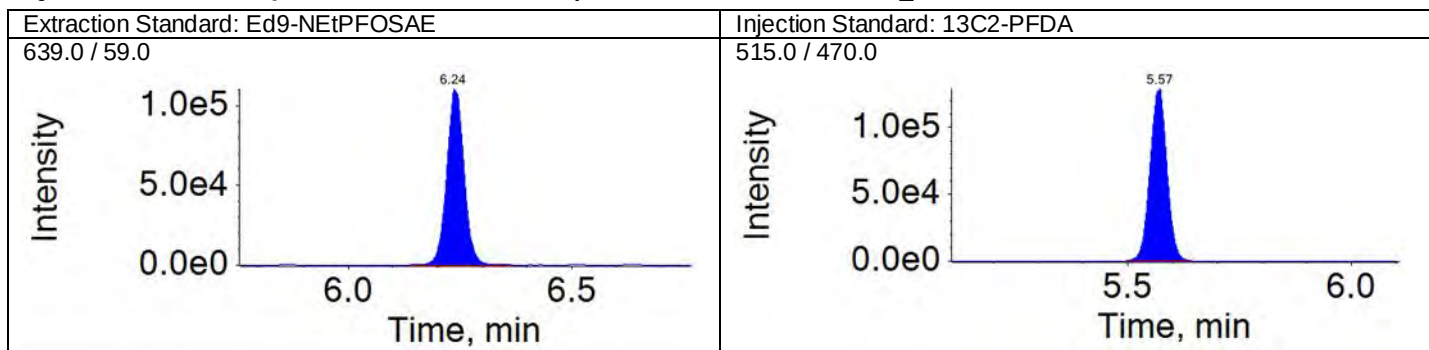
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



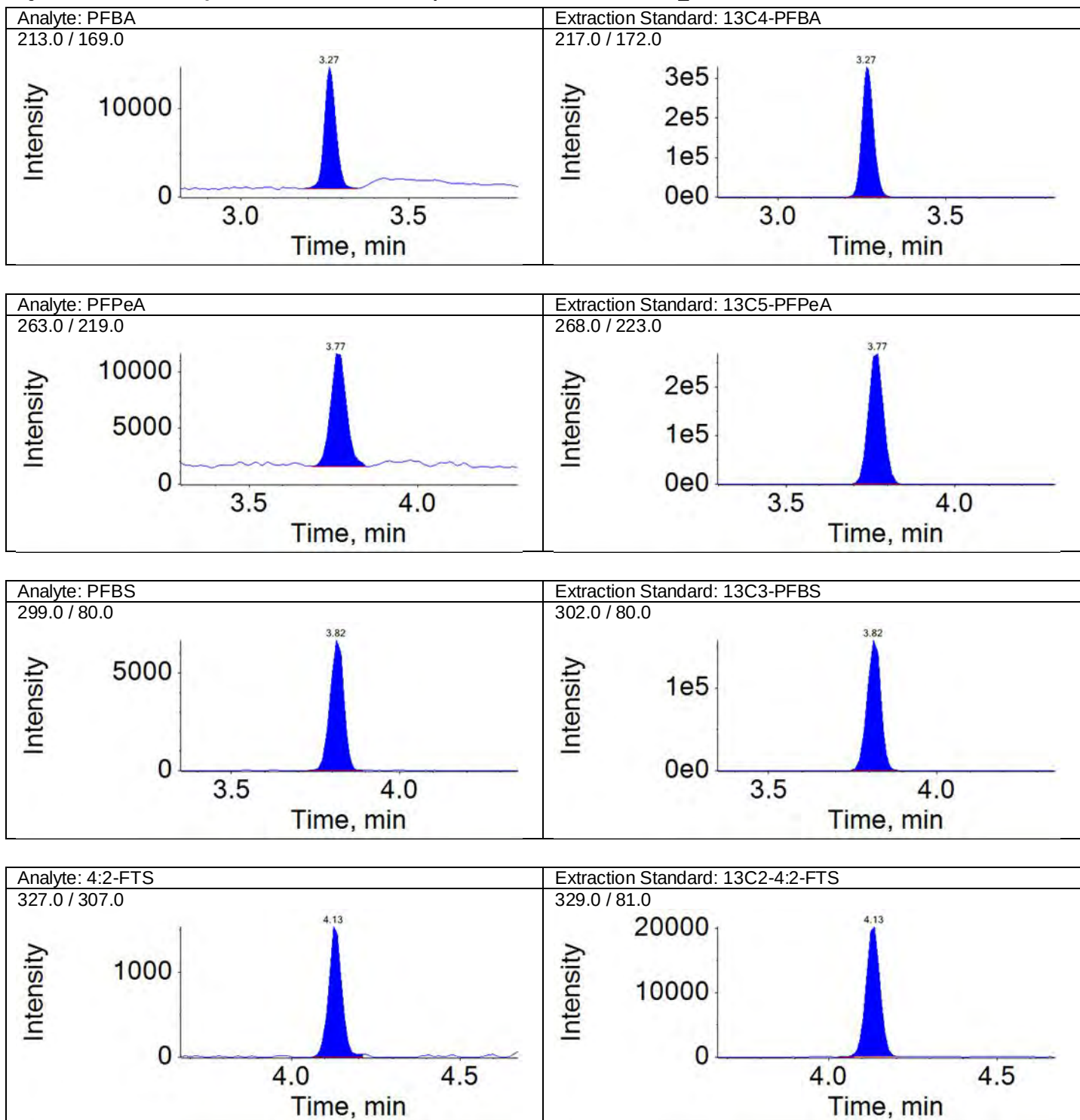
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



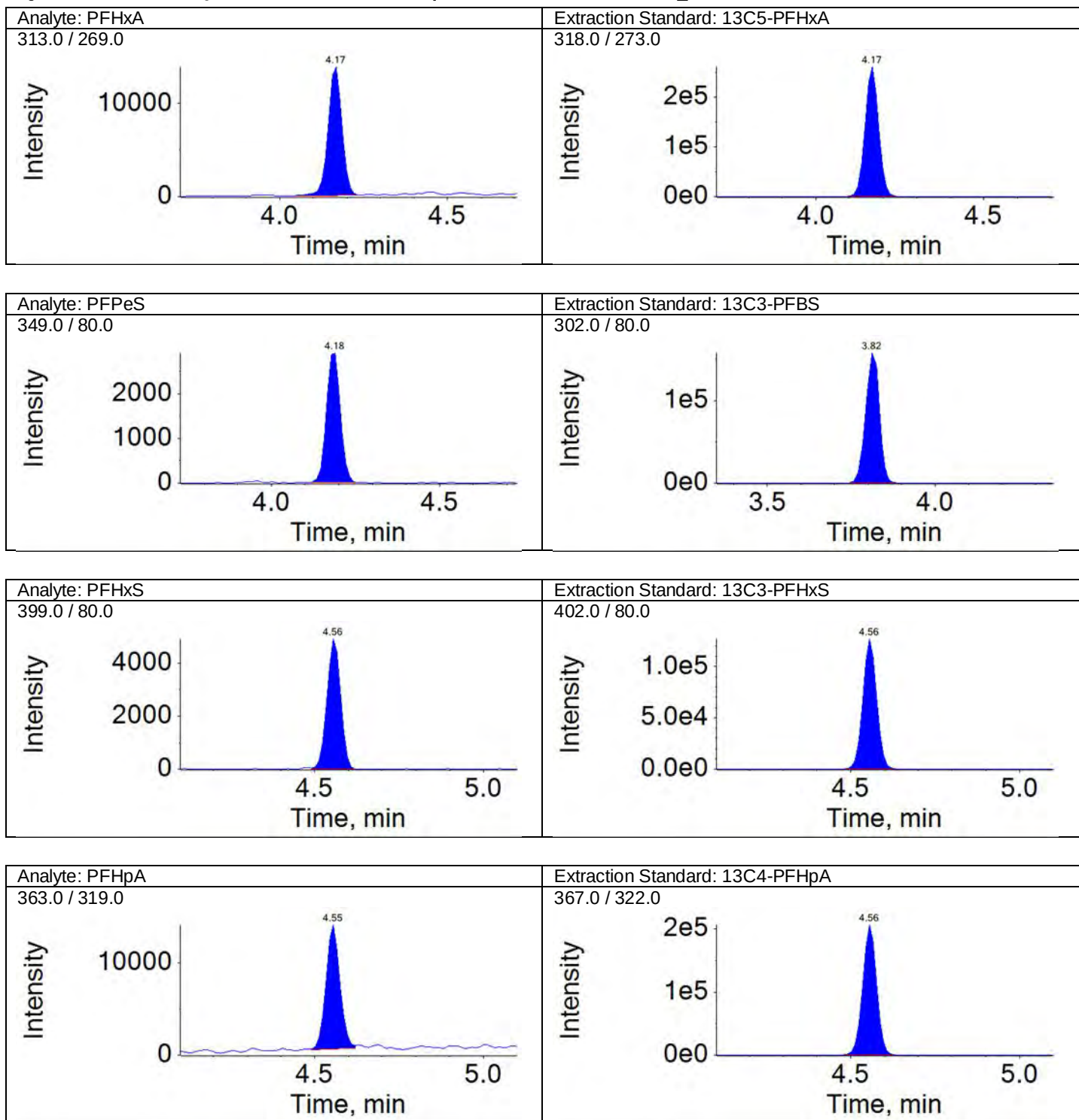
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

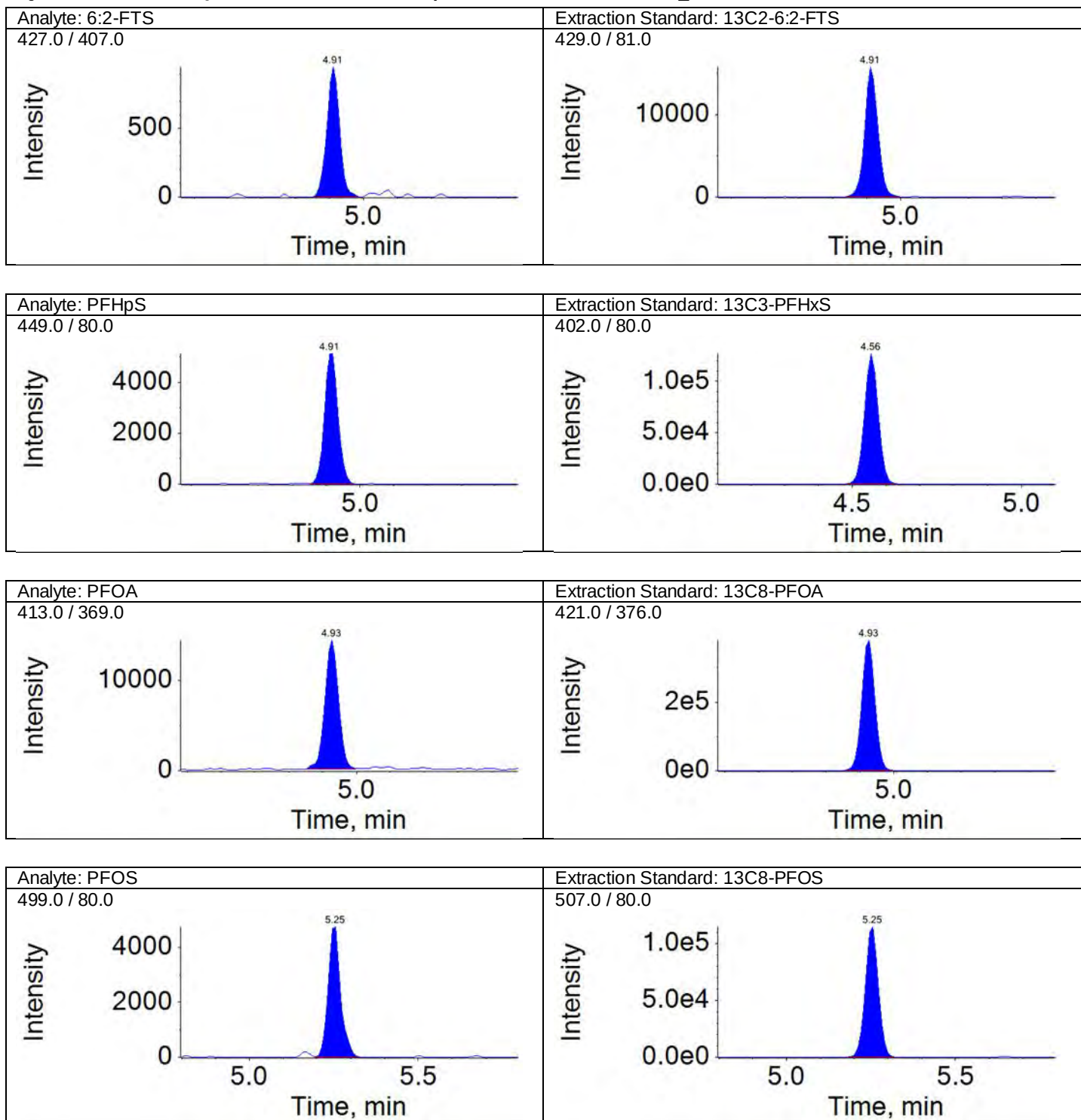
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

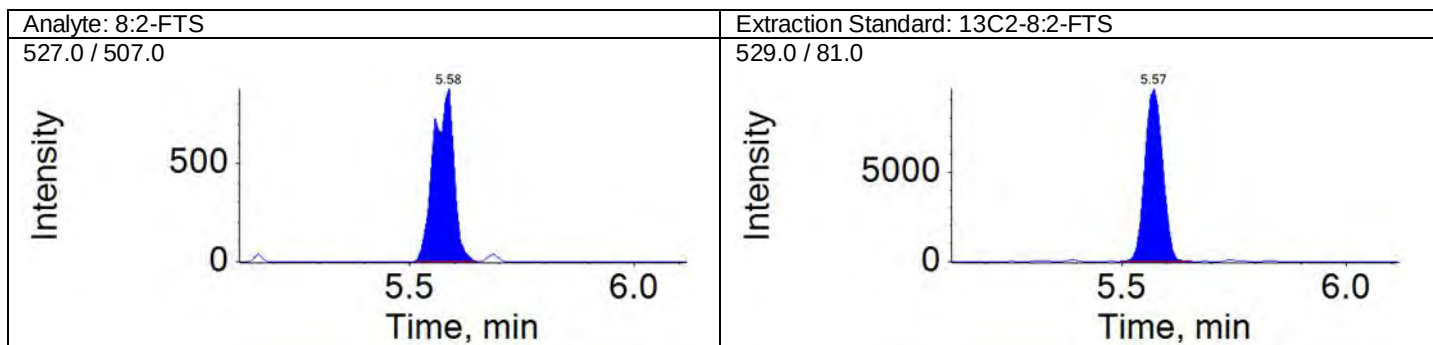
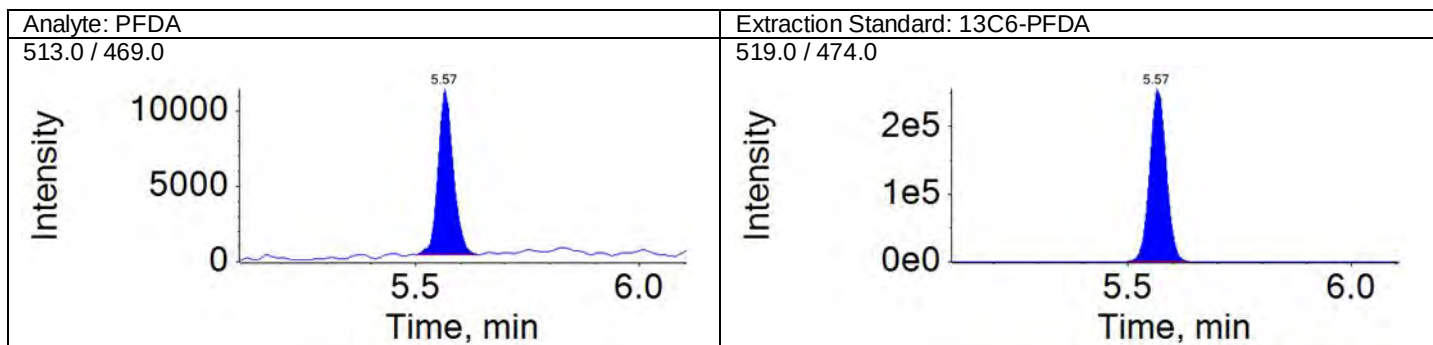
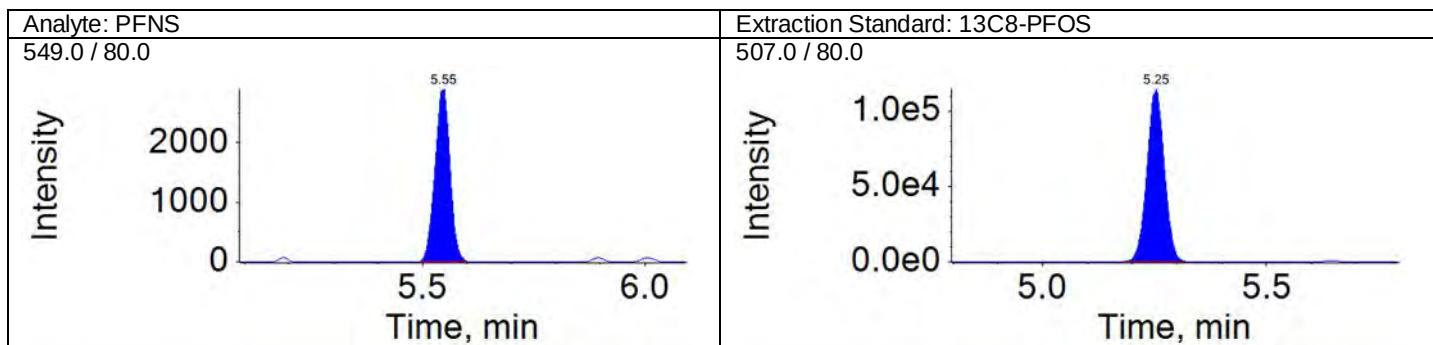
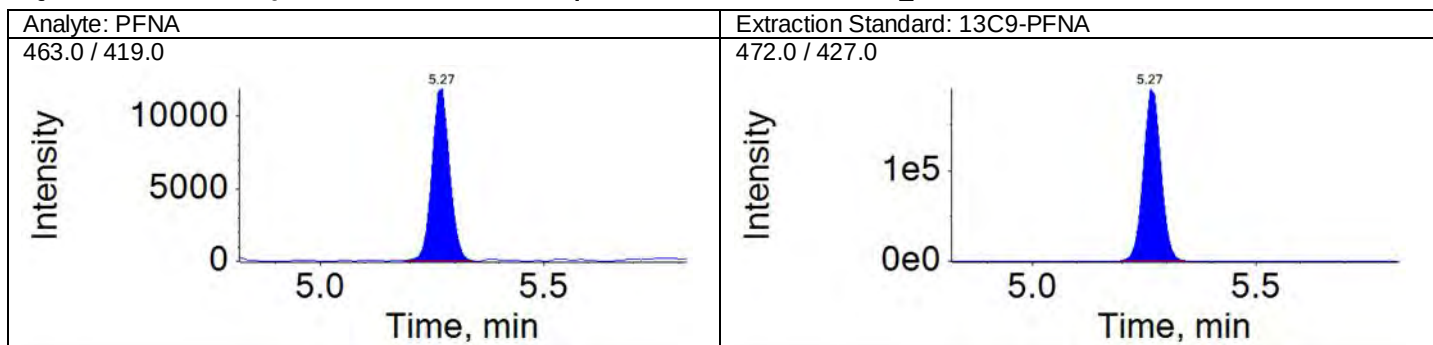
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

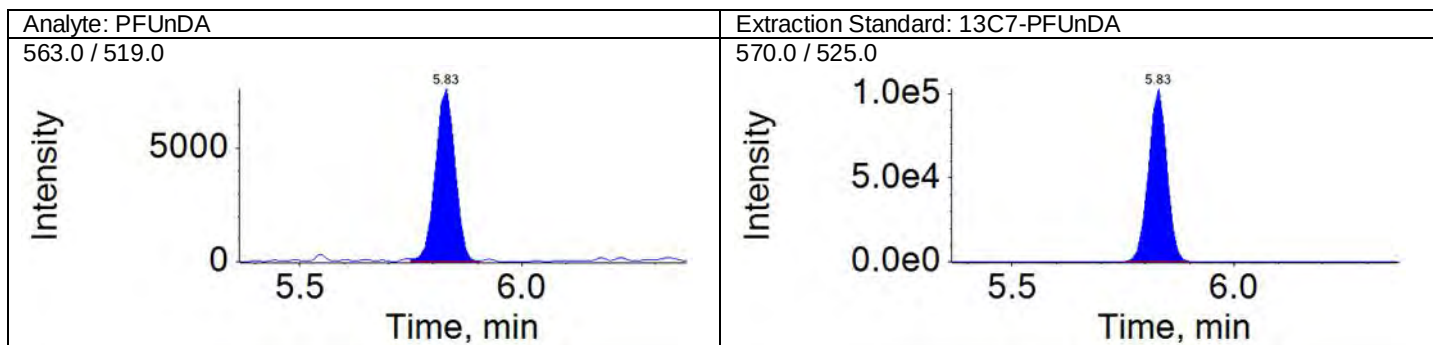
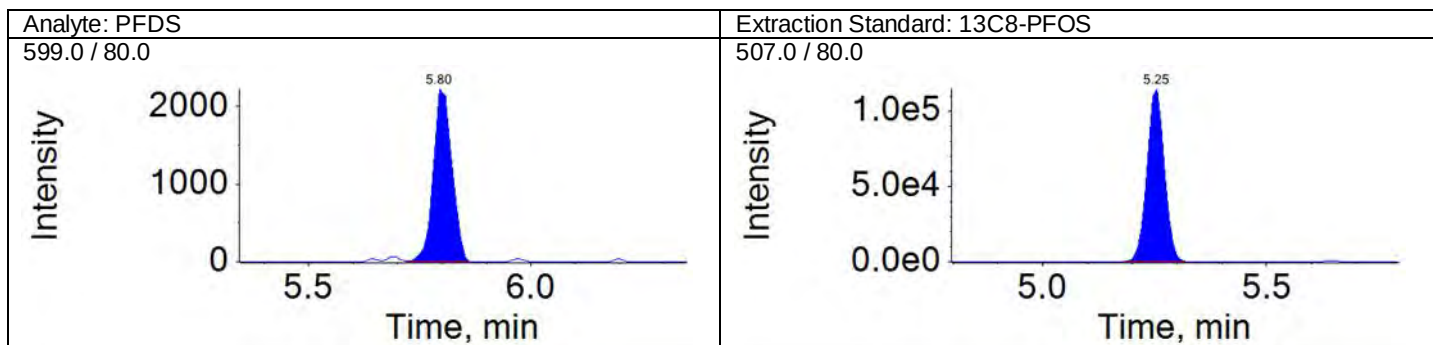
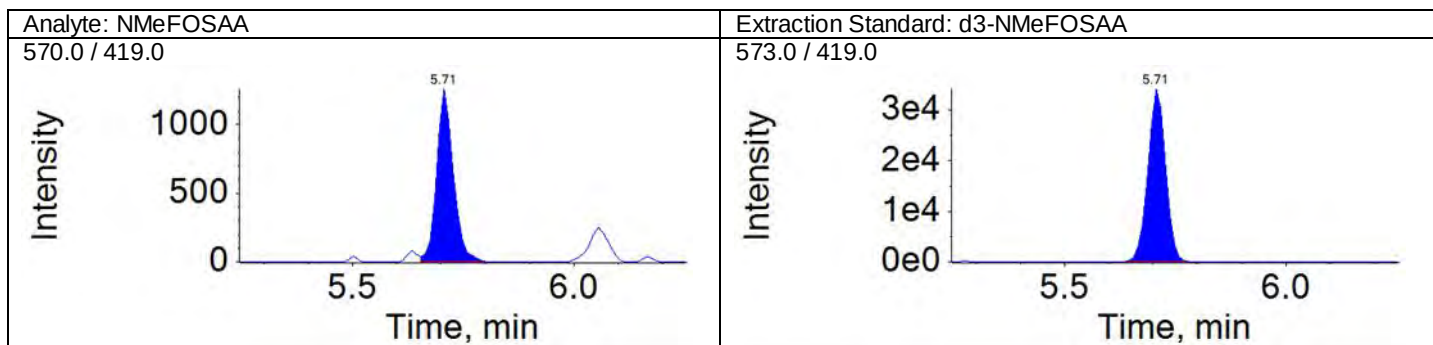
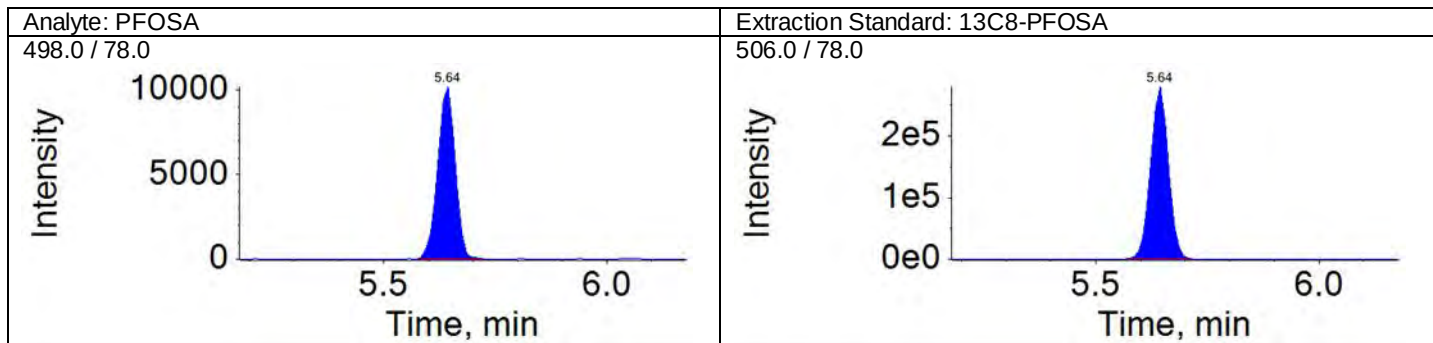
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

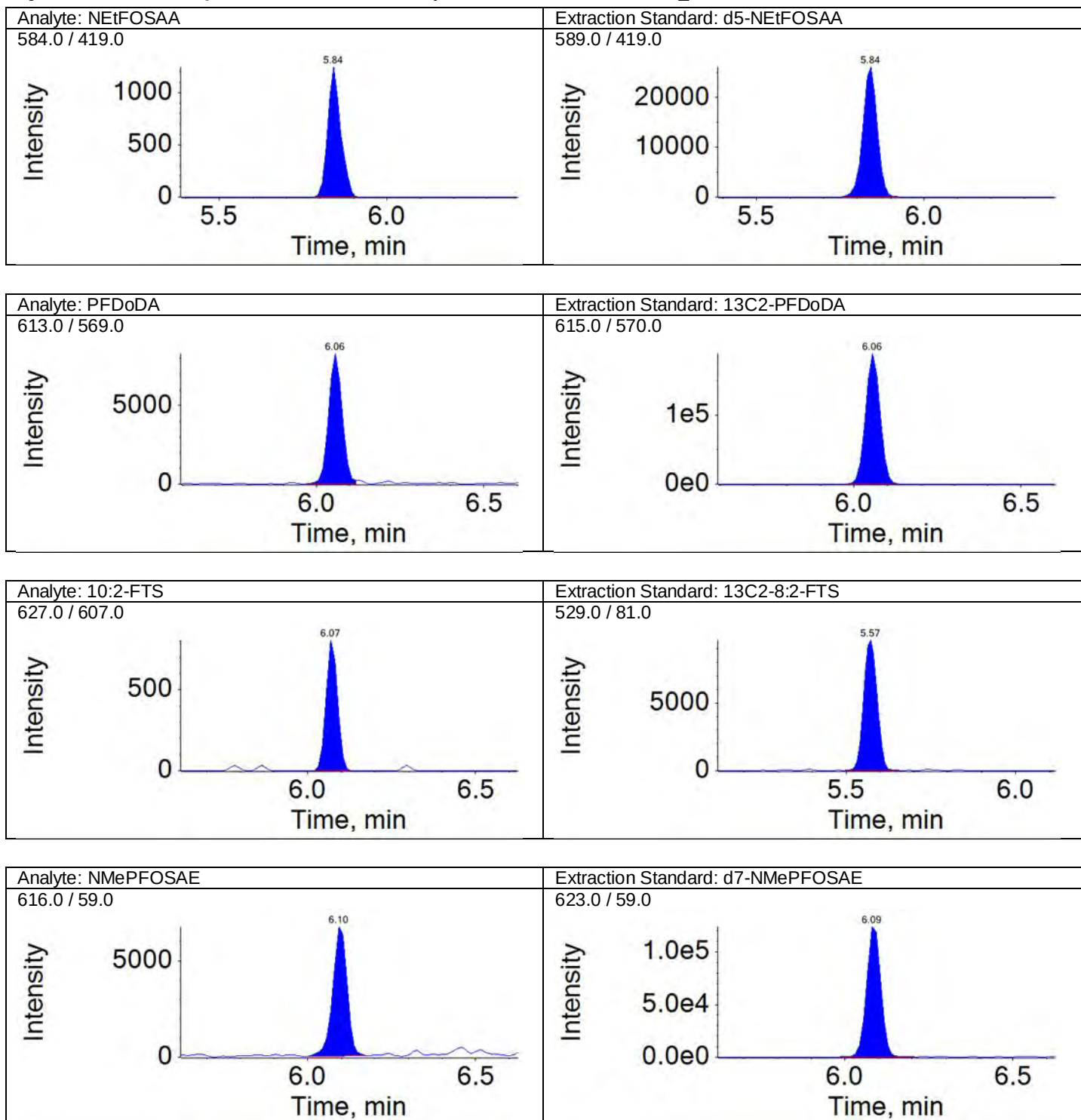
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

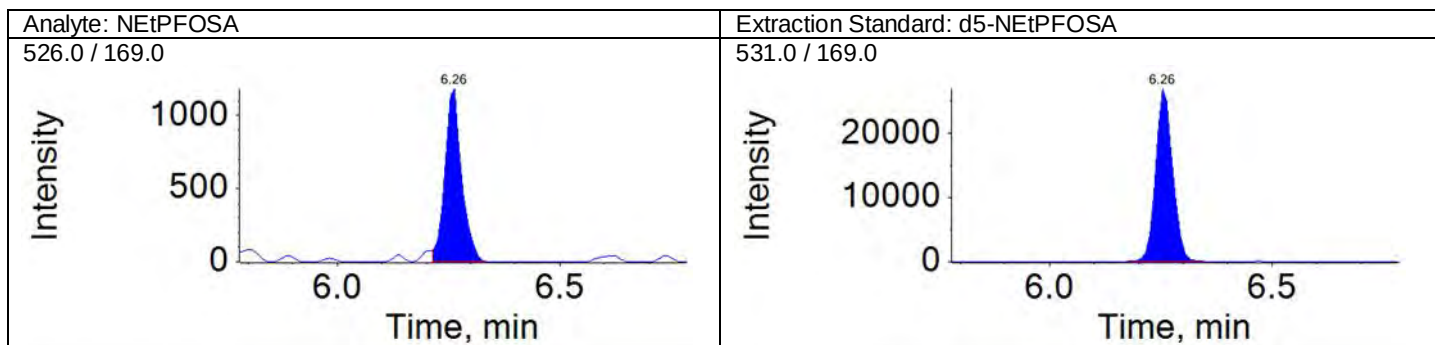
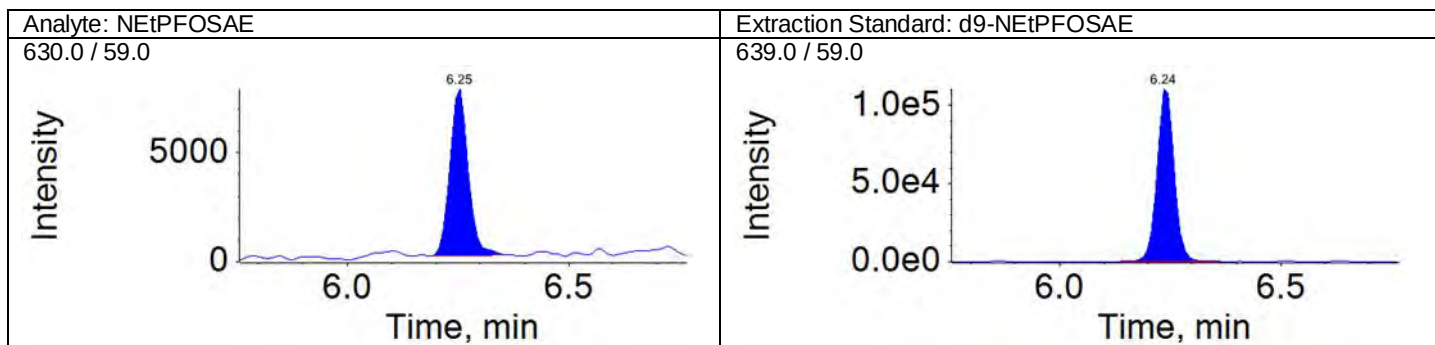
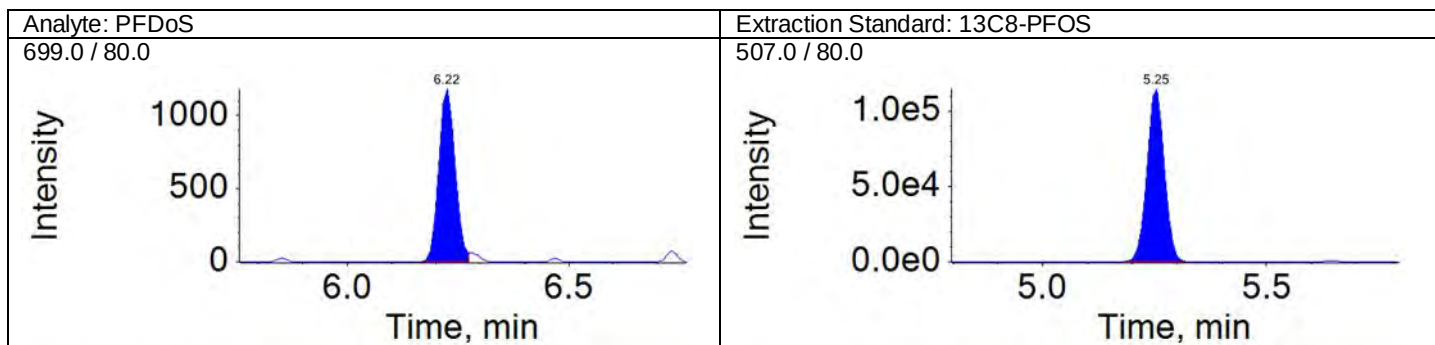
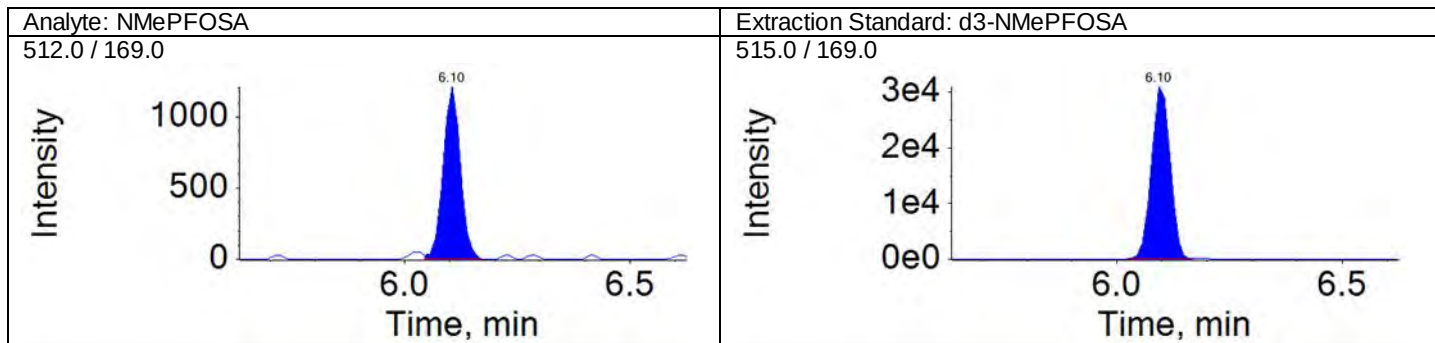
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

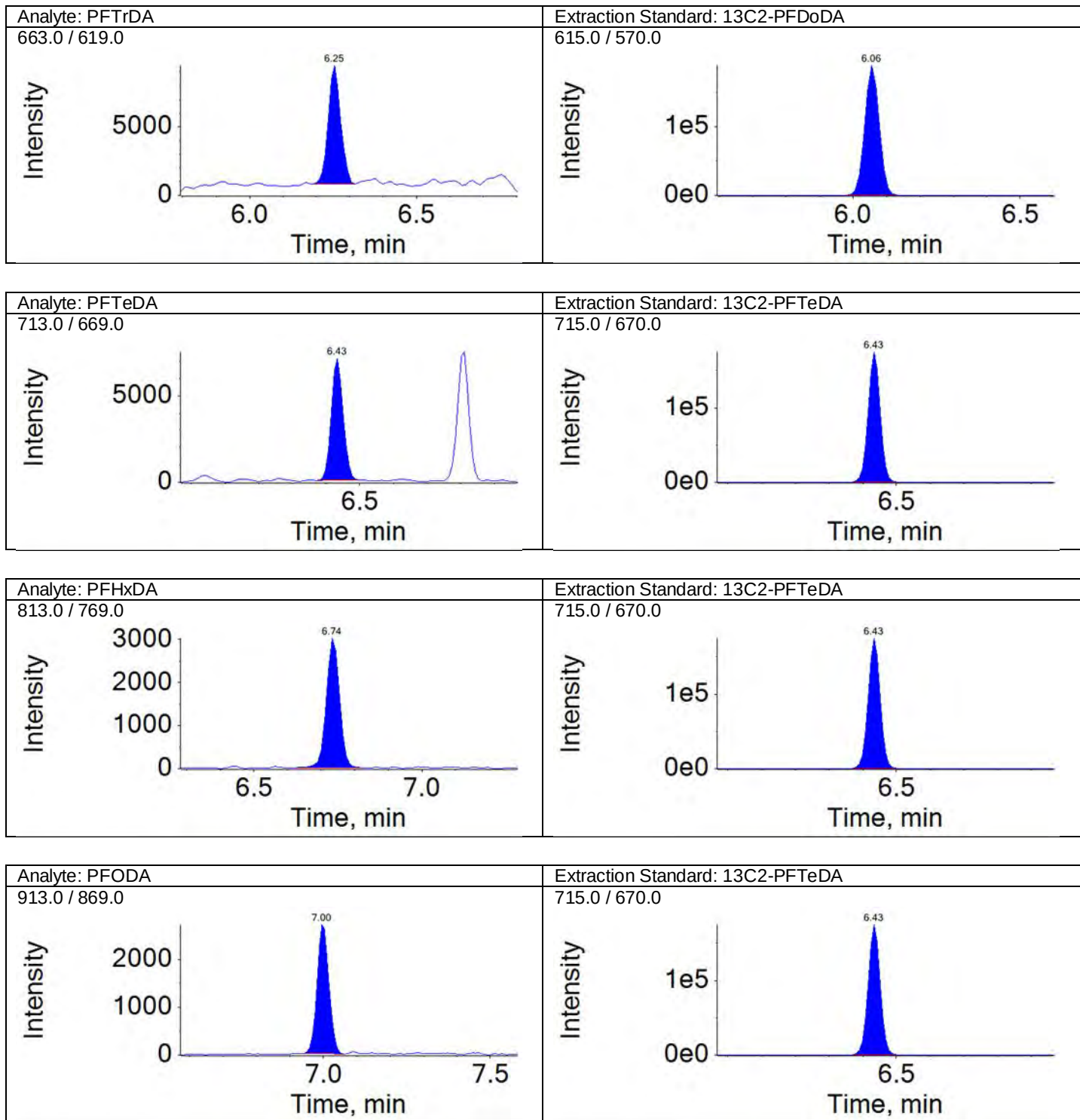
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



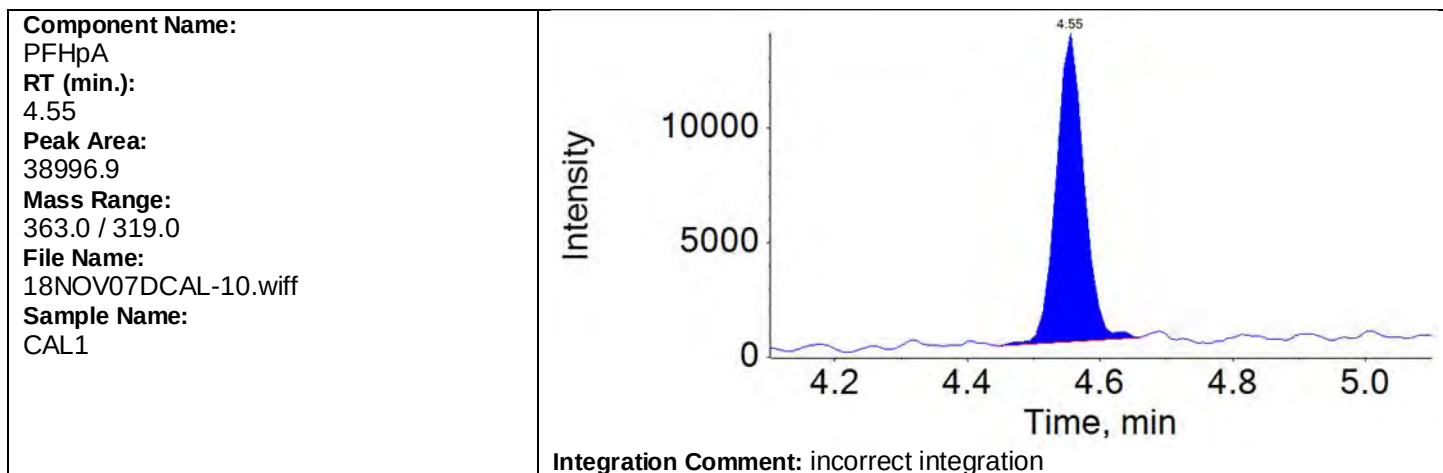
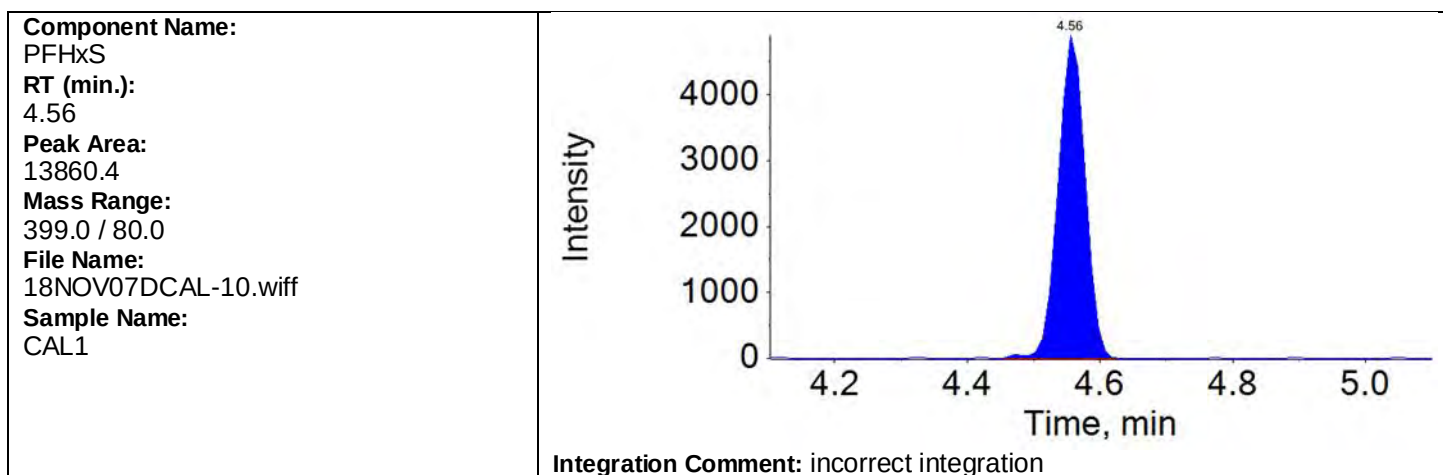
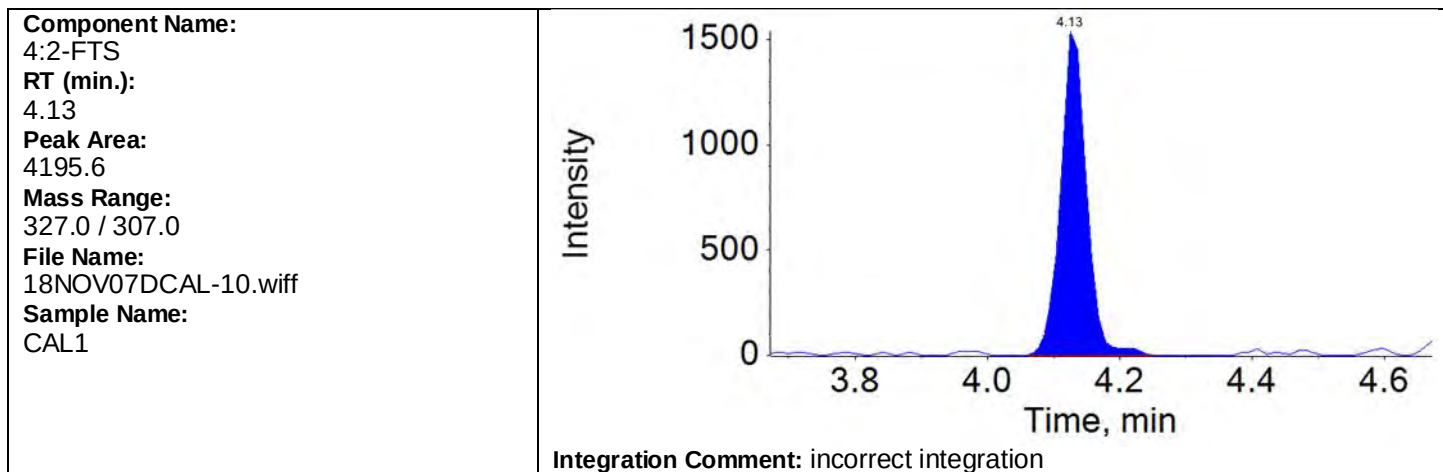
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

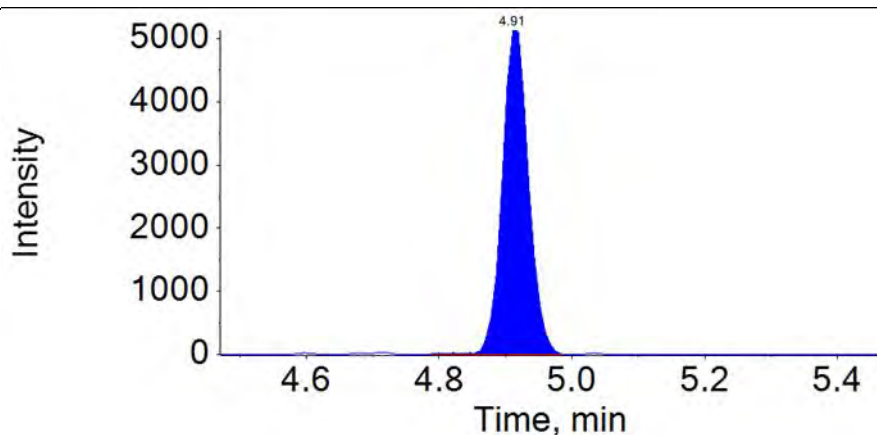
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13



Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

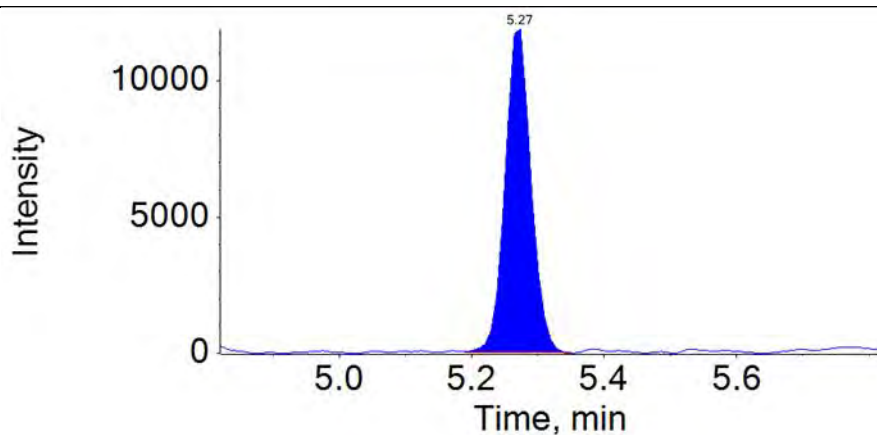
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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



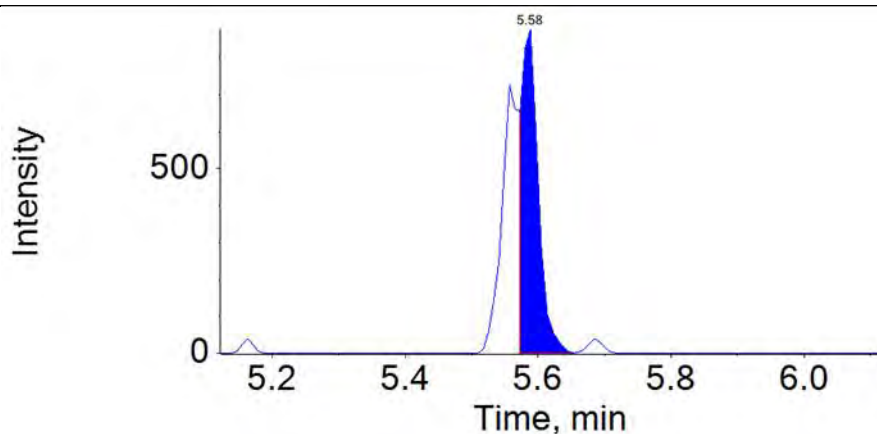
Integration Comment: incorrect integration

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

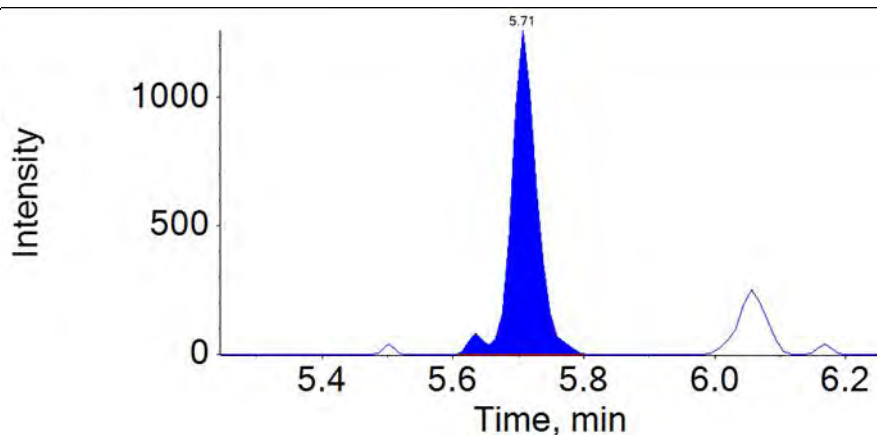


Integration Comment: incorrect integration

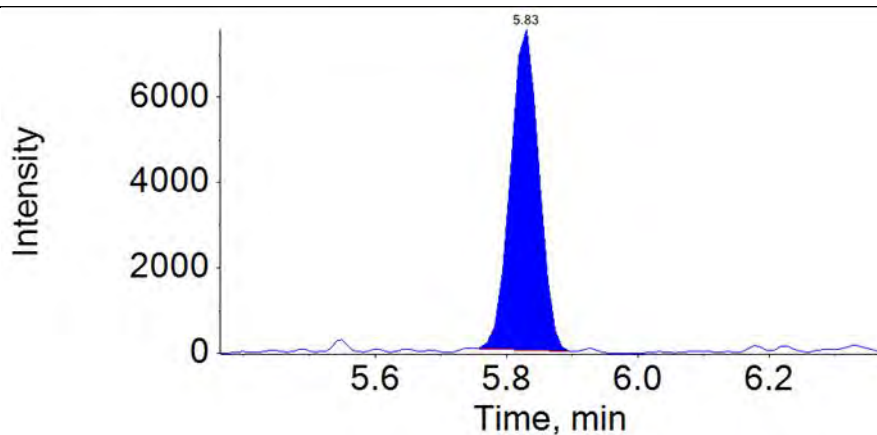
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

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

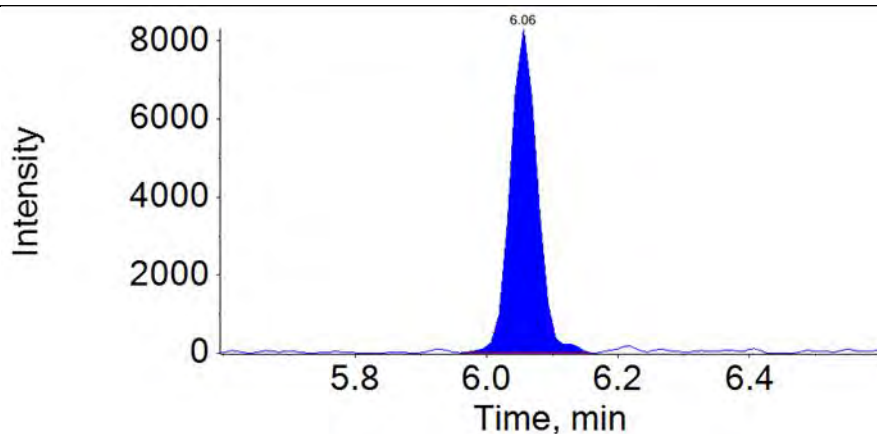
Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
3425.3
Mass Range:
570.0 / 419.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



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



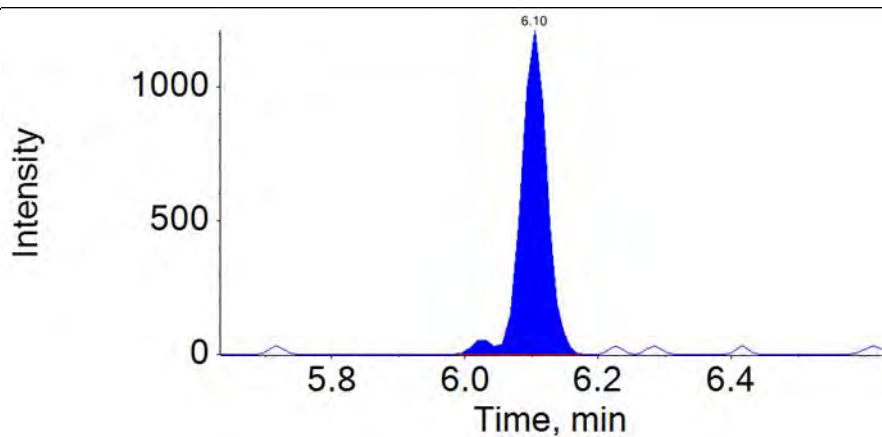
Component Name:
PFDoDA
RT (min.):
6.06
Peak Area:
23623.5
Mass Range:
613.0 / 569.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

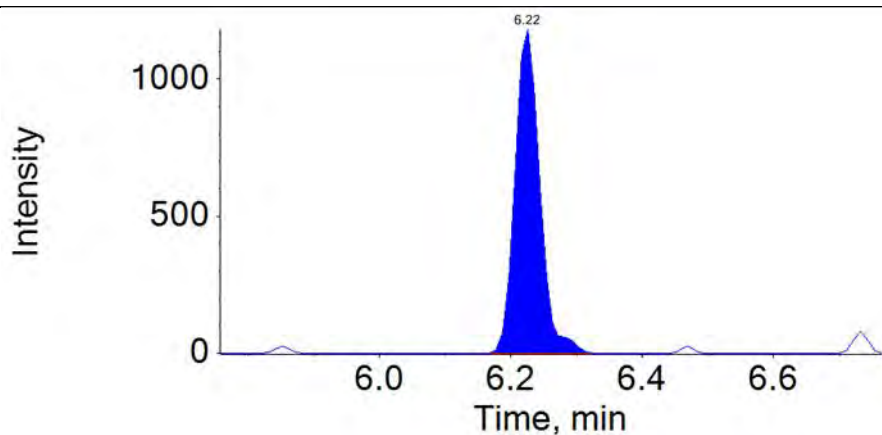
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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



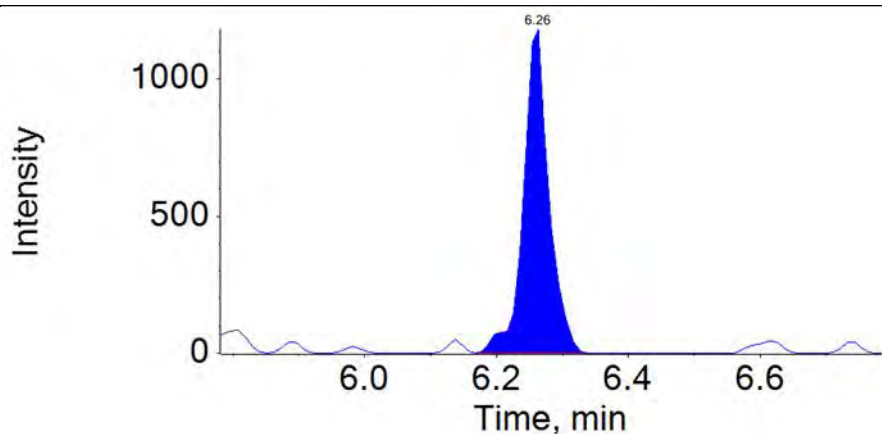
Integration Comment: incorrect integration

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

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

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

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

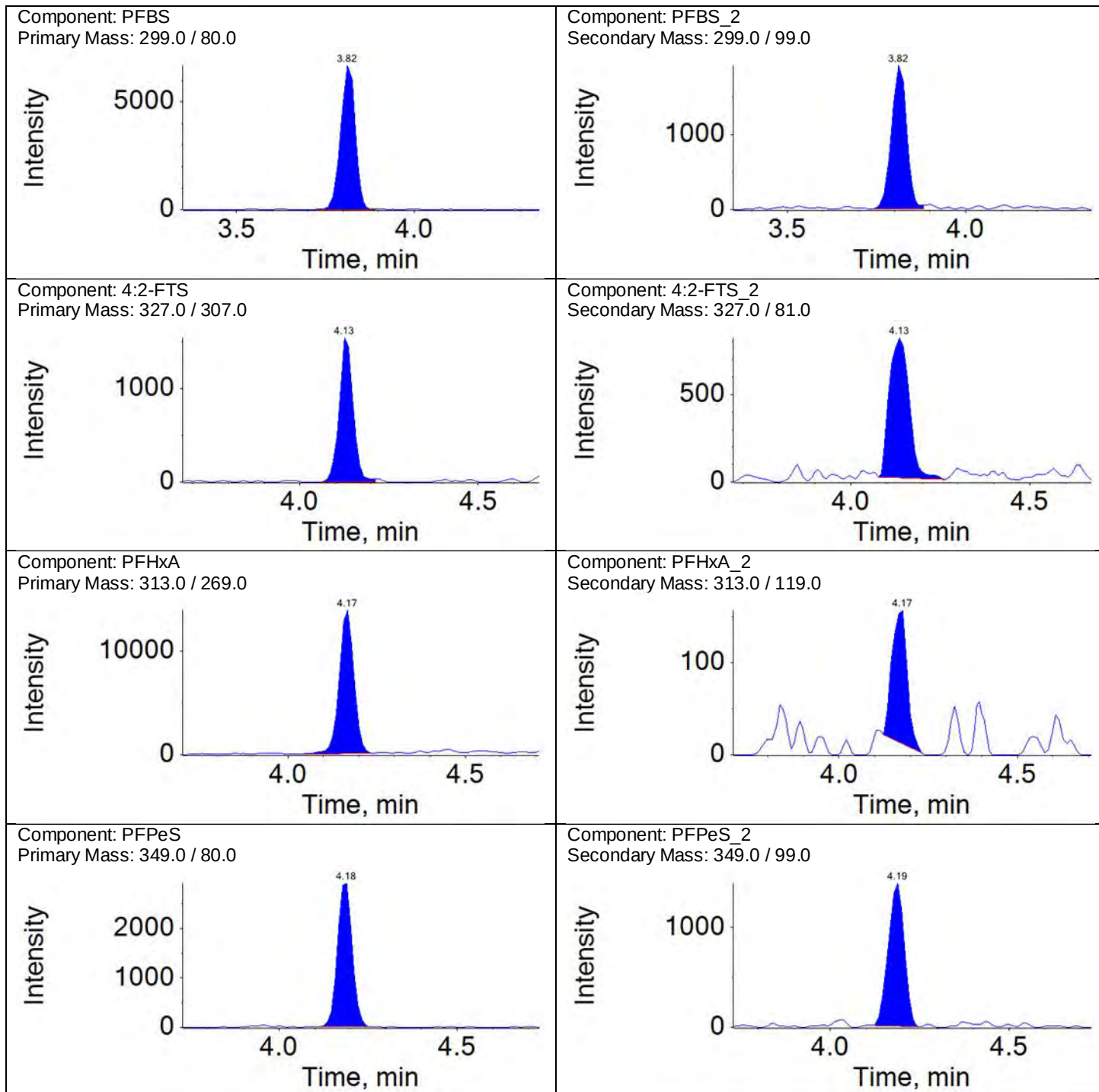
Ion Ratio Report

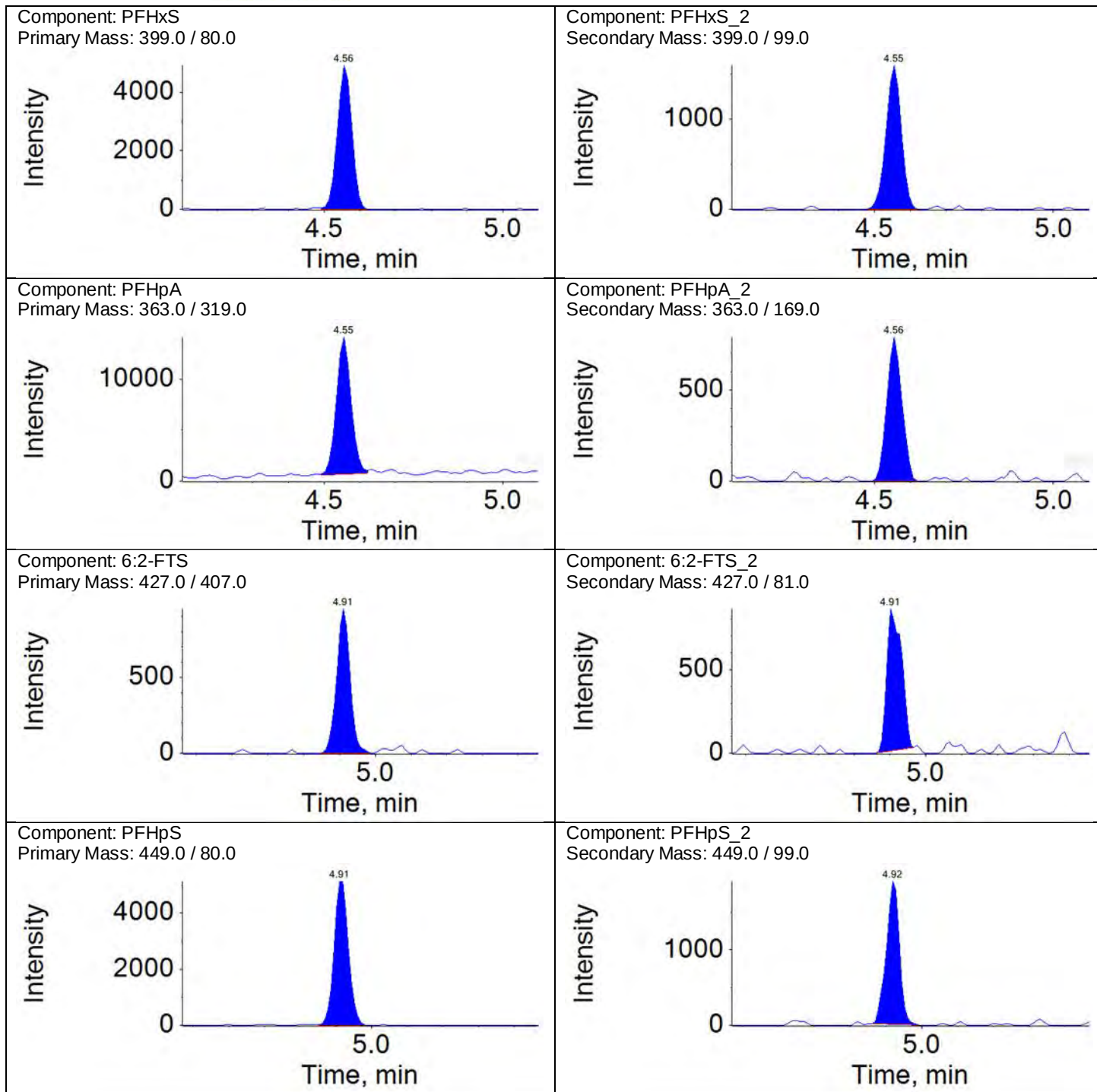
Sample Name: CAL1

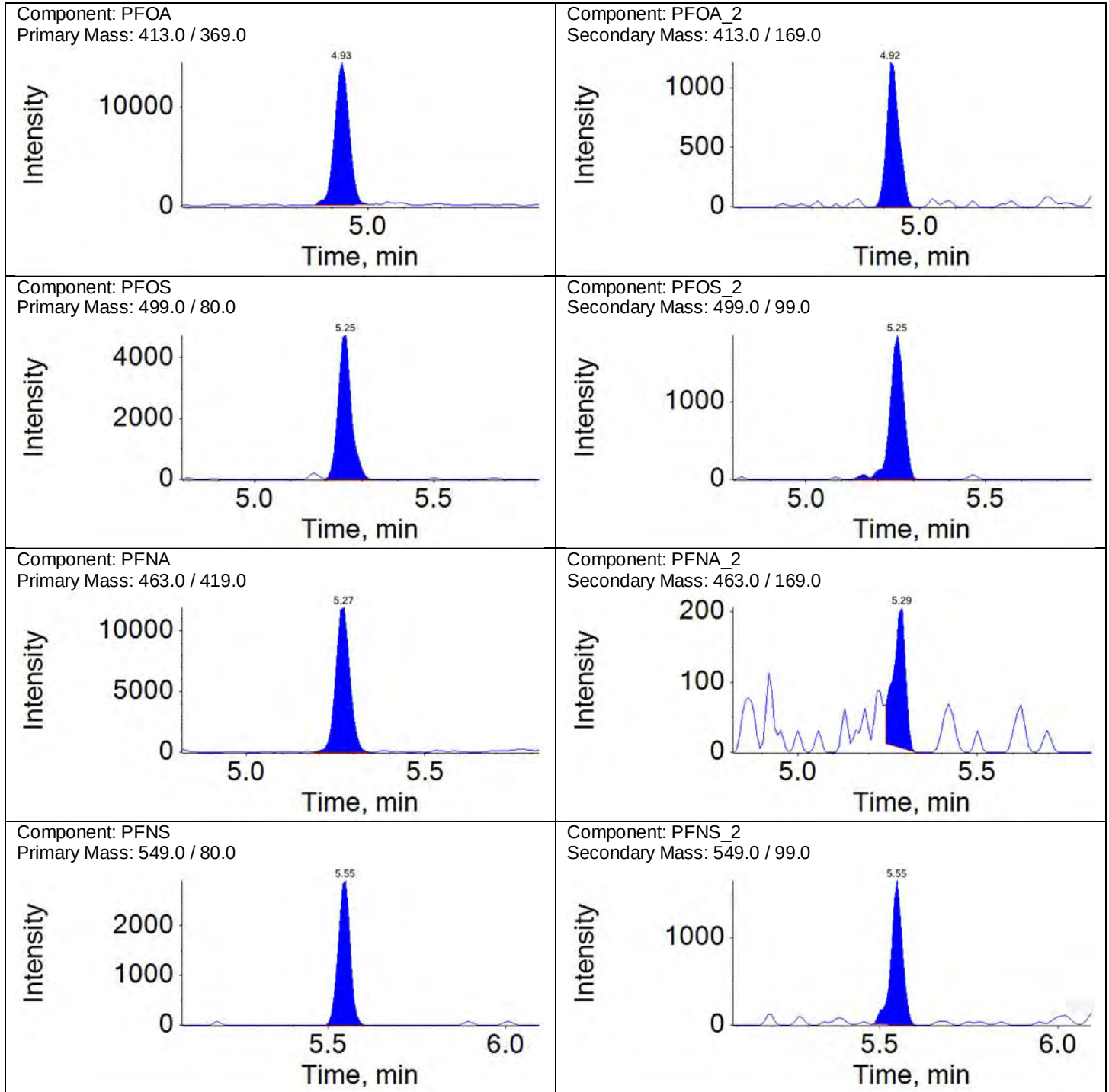
Instrument Name: LM27631

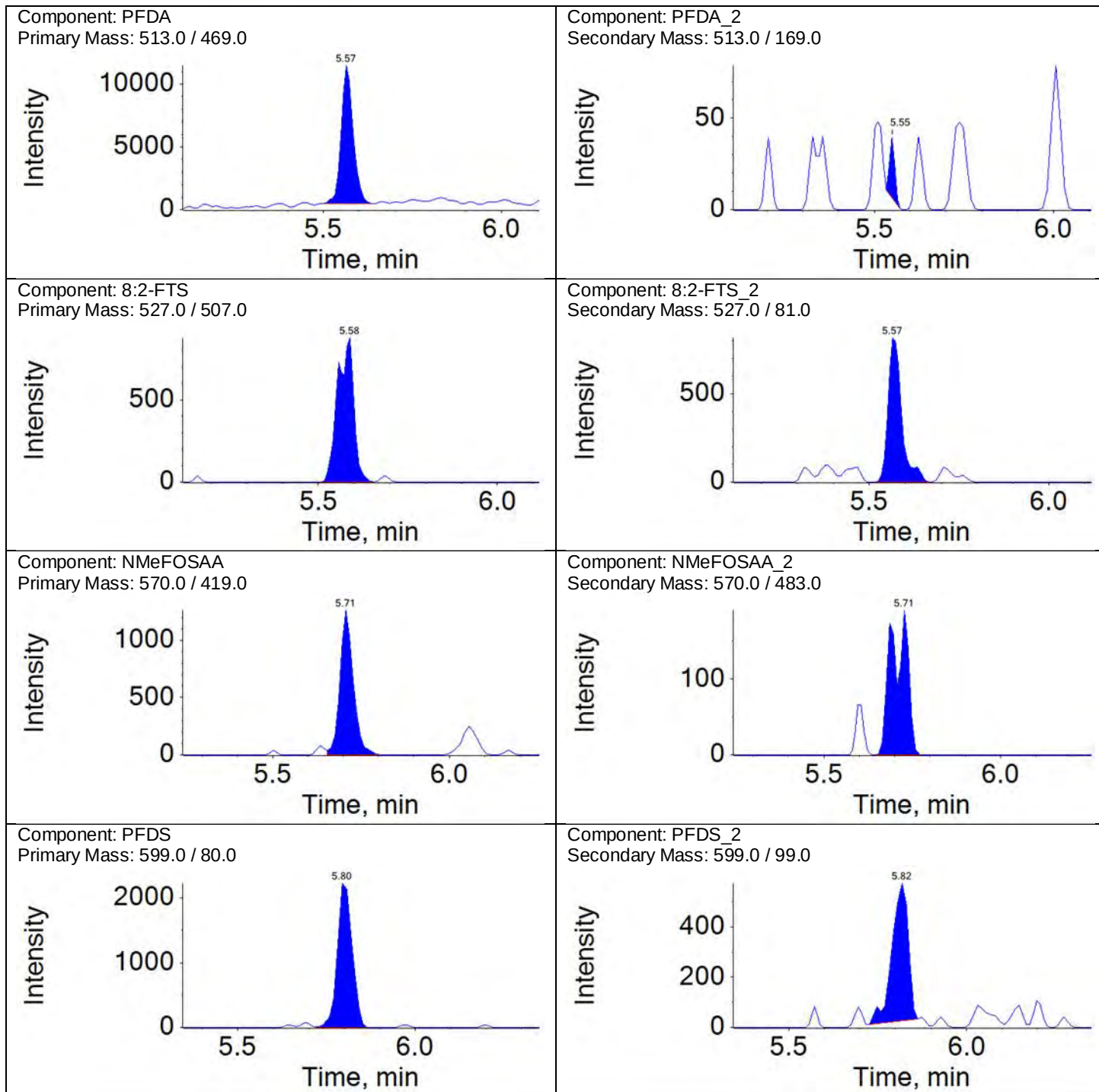
File Name: 18NOV07DCAL-10.wiff

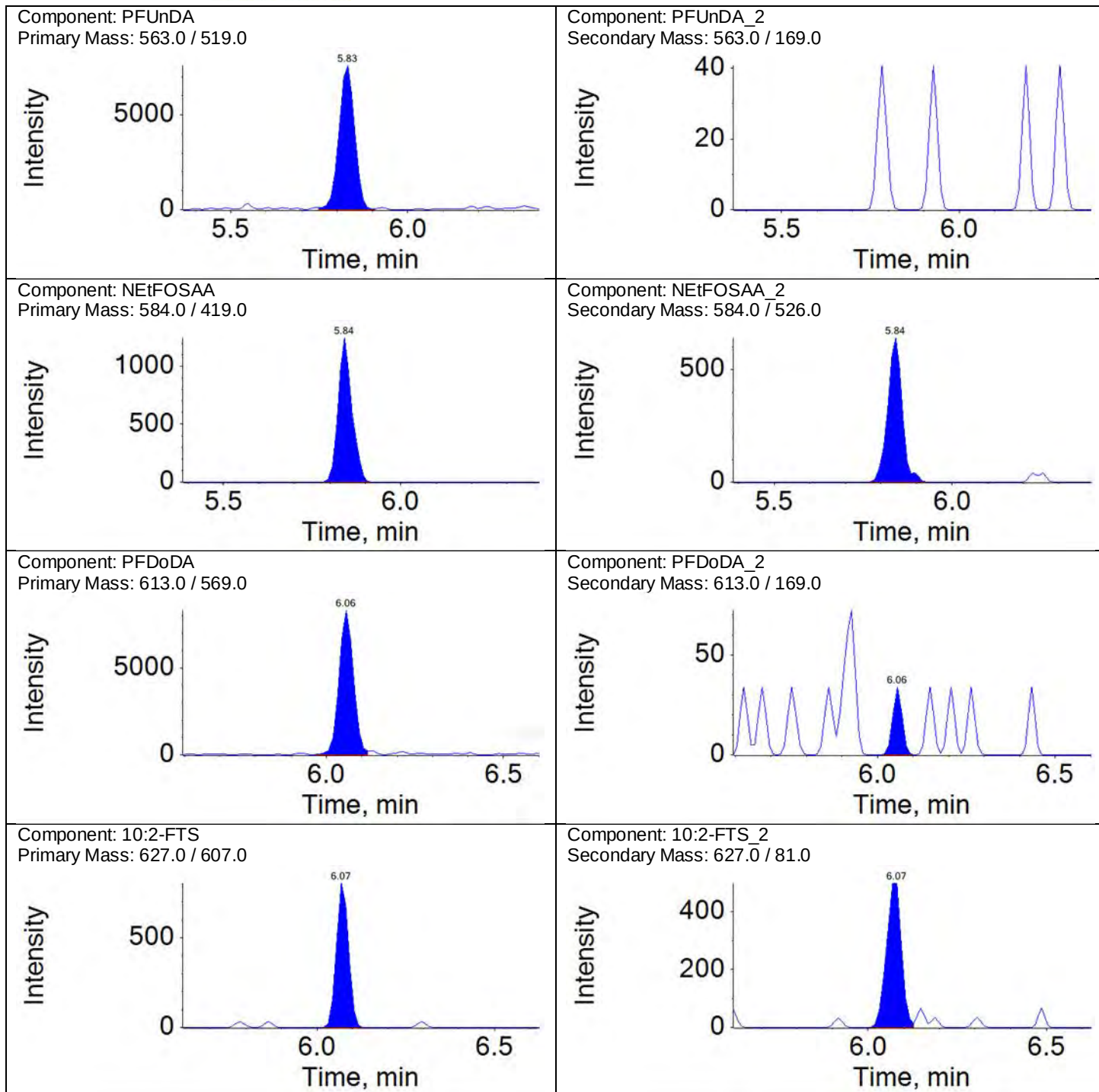
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	19024.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	5667.0	A	0.3576	0.2979	-17	50	
4:2-FTS	4.13	1.00	4145.4	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	3113.1	A	0.6359	0.7510	18	50	
PFHxA	4.17	1.00	39732.2	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	426.0	A	0.0115	0.0107	-7	50	
PFPeS	4.18	1.10	8335.4	A	1.0000	1.0000			
PFPeS_2	4.19	1.10	4437.8	A	0.5384	0.5324	-1	50	
PFHxS	4.56	1.00	13762.6	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	4694.9	A	0.3569	0.3411	-4	50	
PFHpA	4.55	1.00	38331.9	M	1.0000	1.0000			
PFHpA_2	4.56	1.00	2299.9	A	0.0577	0.0600	4	50	
6:2-FTS	4.91	1.00	2460.6	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	2419.1	A	0.6752	0.9832	46	50	
PFHpS	4.91	1.08	14183.4	M	1.0000	1.0000			
PFHpS_2	4.92	1.08	4803.7	A	0.3950	0.3387	-14	50	
PFOA	4.93	1.00	39843.5	A	1.0000	1.0000			
PFOA_2	4.92	1.00	2905.3	A	0.0635	0.0729	15	50	
PFOS	5.25	1.00	12181.7	A	1.0000	1.0000			
PFOS_2	5.25	1.00	4968.4	A	0.3494	0.4079	17	50	
PFNA	5.27	1.00	32563.3	M	1.0000	1.0000			
PFNA_2	5.29	1.00	475.0	A	0.0207	0.0146	-29	50	
PFNS	5.55	1.06	6748.5	A	1.0000	1.0000			
PFNS_2	5.55	1.06	3646.4	A	0.4890	0.5403	10	50	
PFDA	5.57	1.00	25530.0	A	1.0000	1.0000			
PFDA_2	5.55	1.00	33.4	A	0.0057	0.0013	-77	50	OOS
8:2-FTS	5.58	1.00	2783.3	M	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	2168.5	A	0.6169	0.7791	26	50	
NMeFOSAA	5.71	1.00	3293.8	M	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	644.8	A	0.2206	0.1958	-11	50	
PFDS	5.80	1.10	6453.6	A	1.0000	1.0000			
PFDS_2	5.82	1.11	1756.6	A	0.4648	0.2722	-41	50	
PFUnDA	5.83	1.00	23275.5	M	1.0000	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	5.84	1.00	3313.0	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	1807.4	A	0.6082	0.5455	-10	50	
PFDODA	6.06	1.00	23314.2	M	1.0000	1.0000			
PFDODA_2	6.06	1.00	62.7	A	0.0109	0.0027	-75	50	OOS
10:2-FTS	6.07	1.09	1903.7	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	1472.7	A	0.7082	0.7736	9	50	
PFTTrDA	6.25	1.03	22403.2	A	1.0000	1.0000			
PFTTrDA_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	

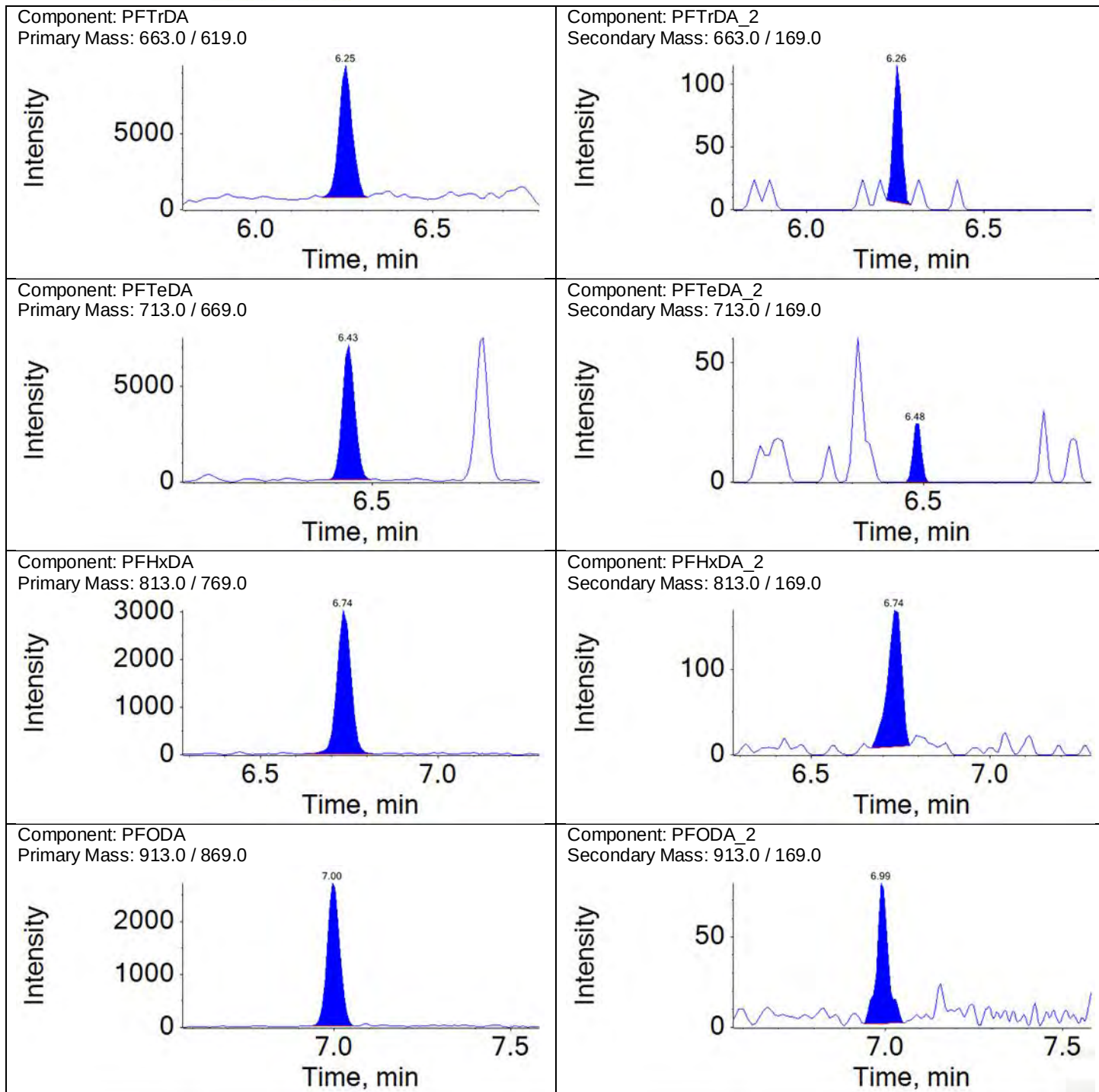












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL2

Instrument Name: LM27631

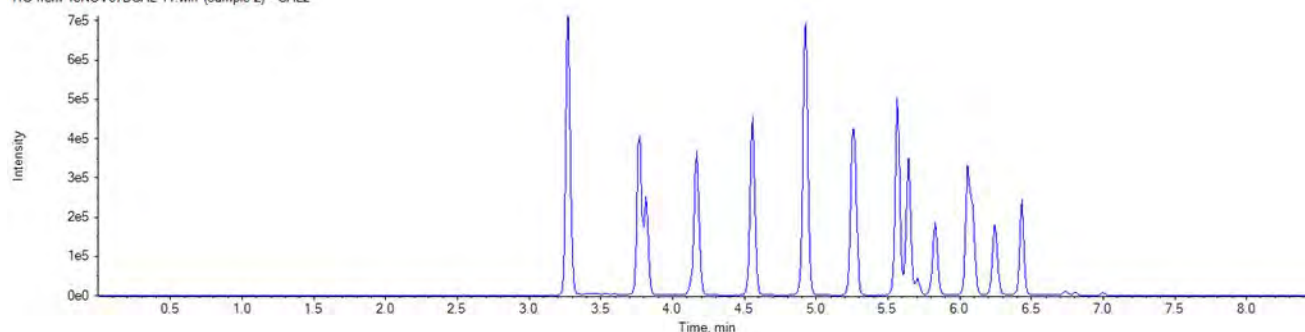
File Name: 18NOV07DCAL-11.wiff

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

TIC from 18NOV07DCAL-11.wiff (sample 2) - CAL2



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 400 of 1595

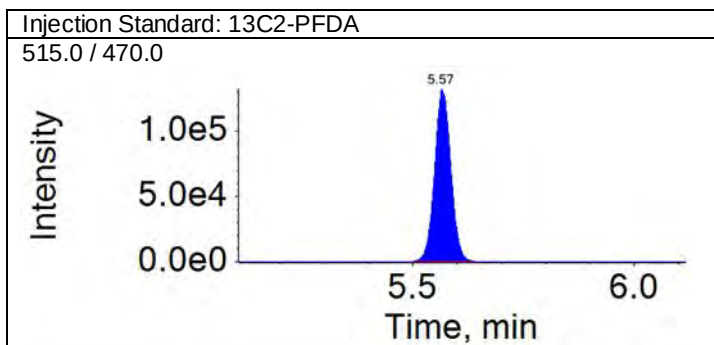
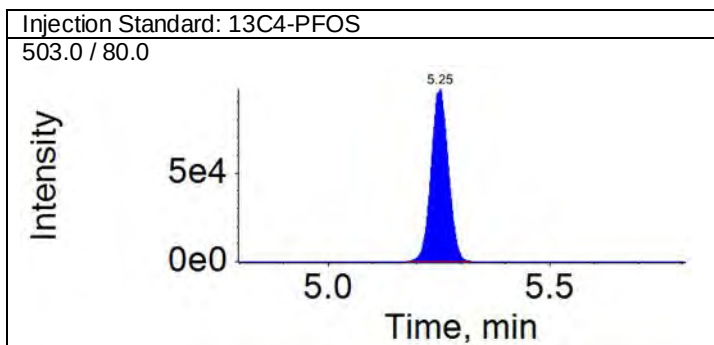
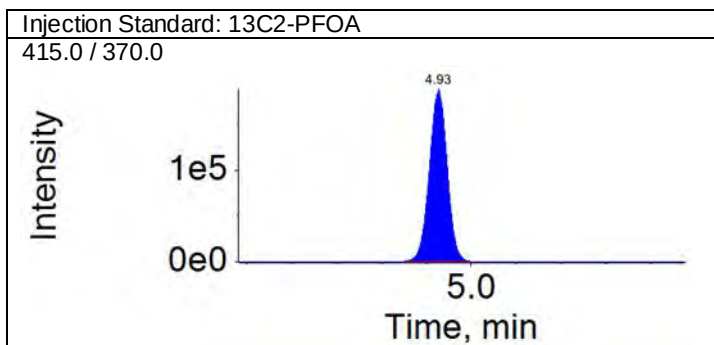
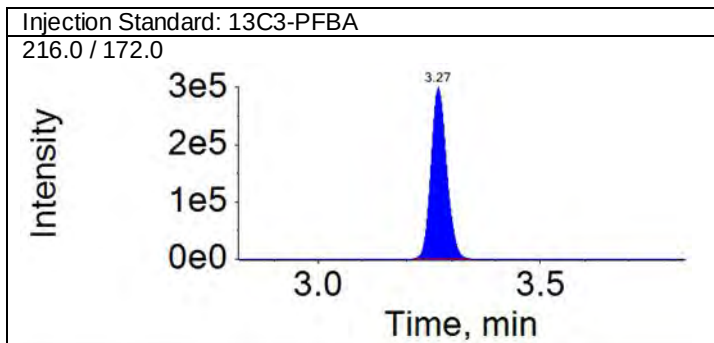
REVIEWED

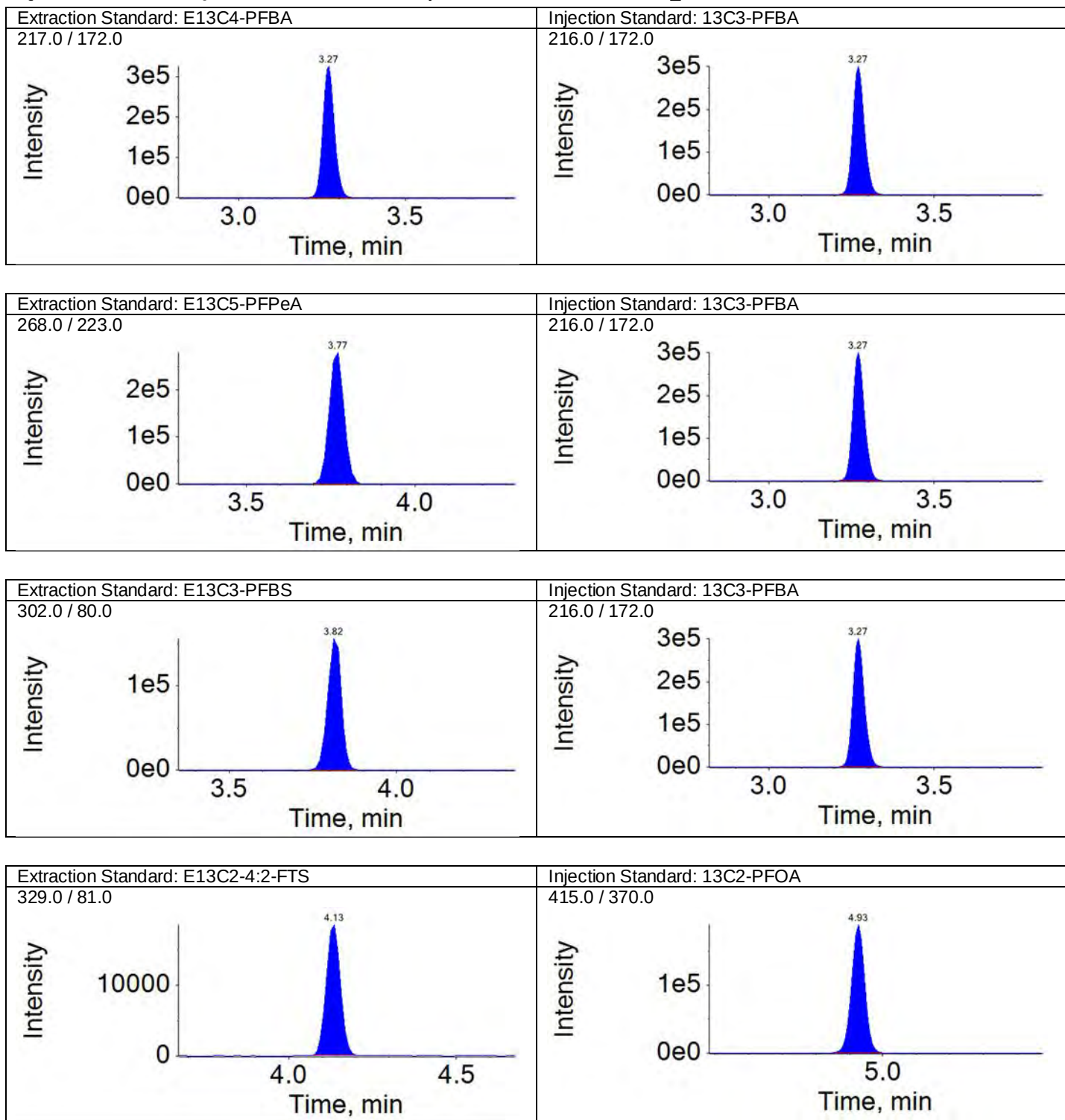
By umar at 5:23 pm, 11/9/18

Page 2 of 17

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED

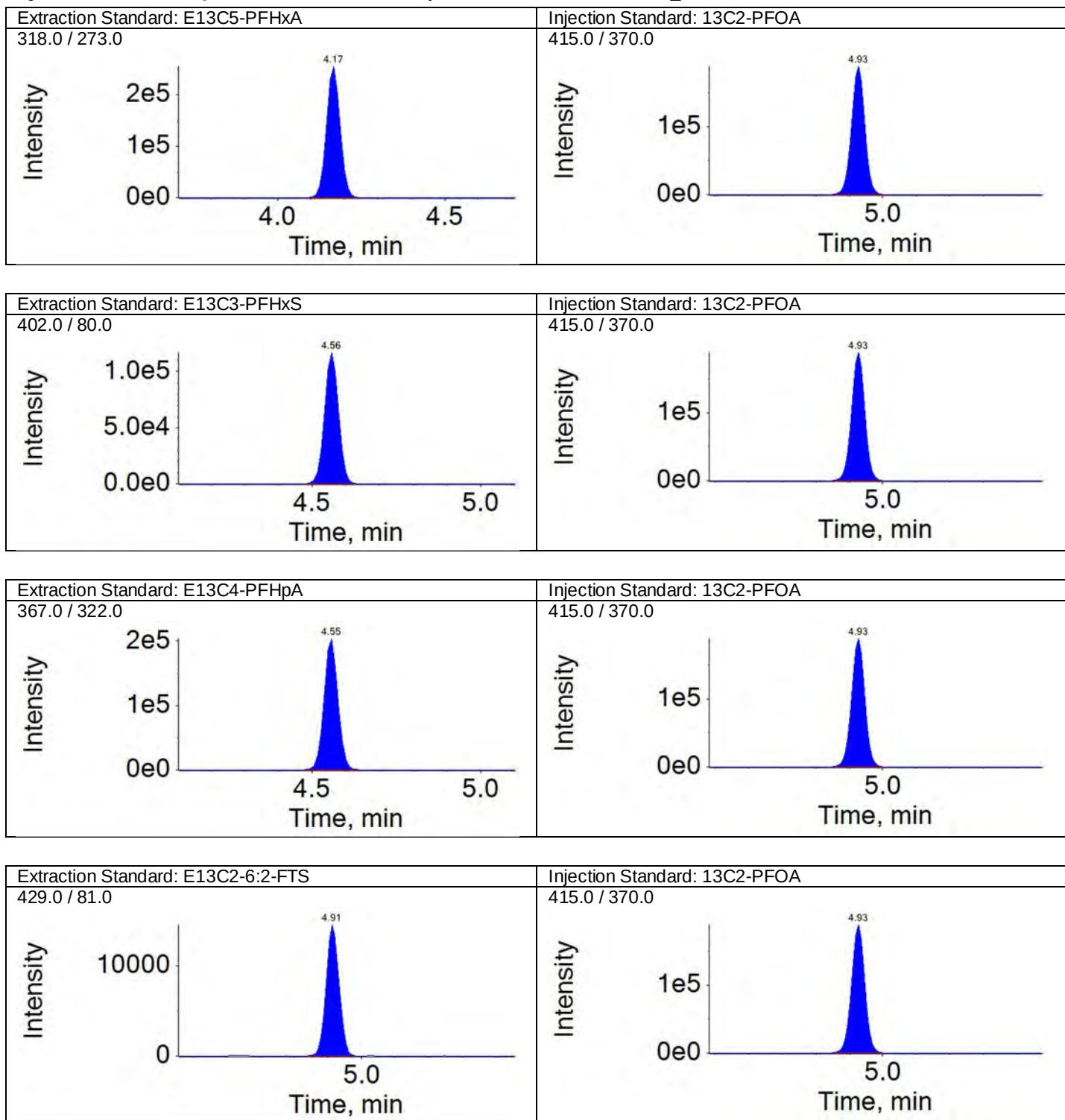
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

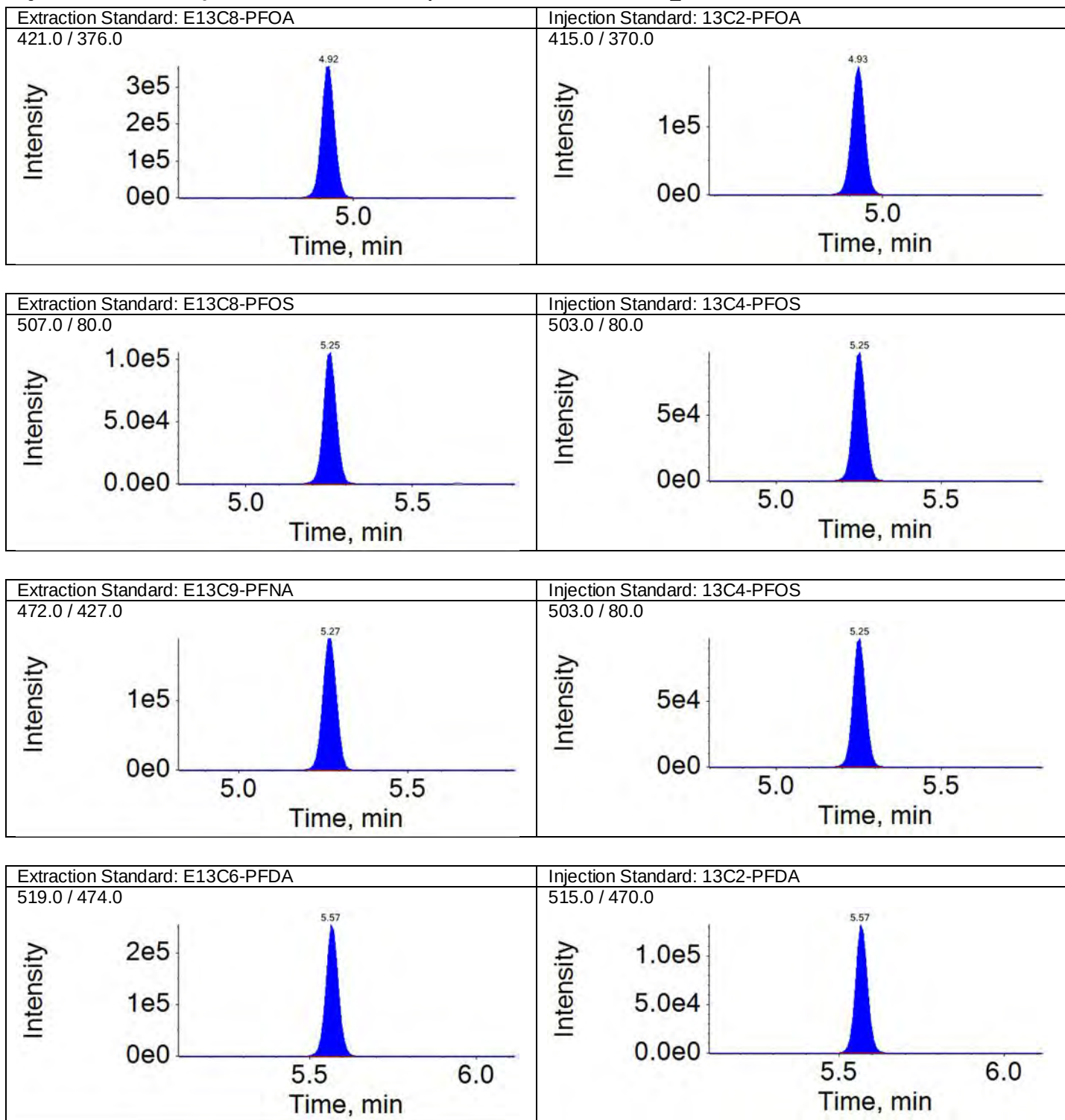
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

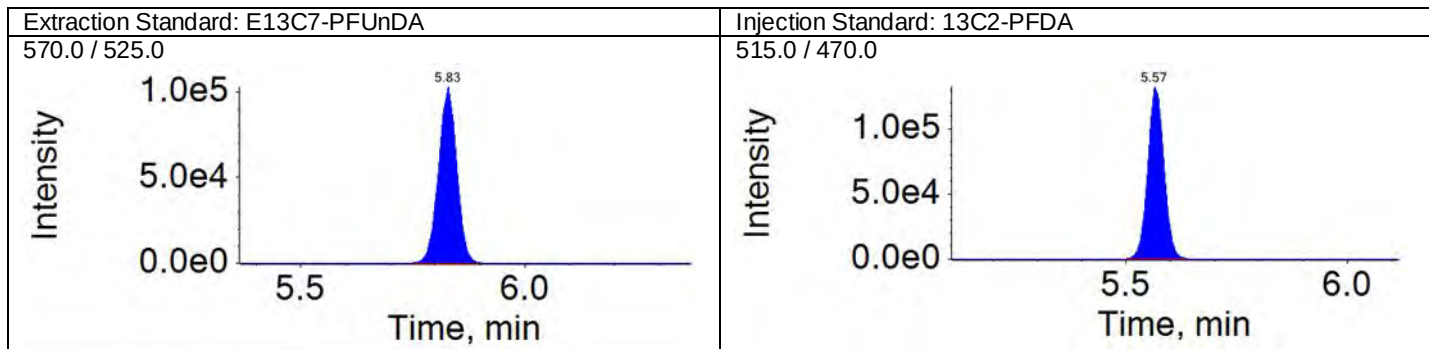
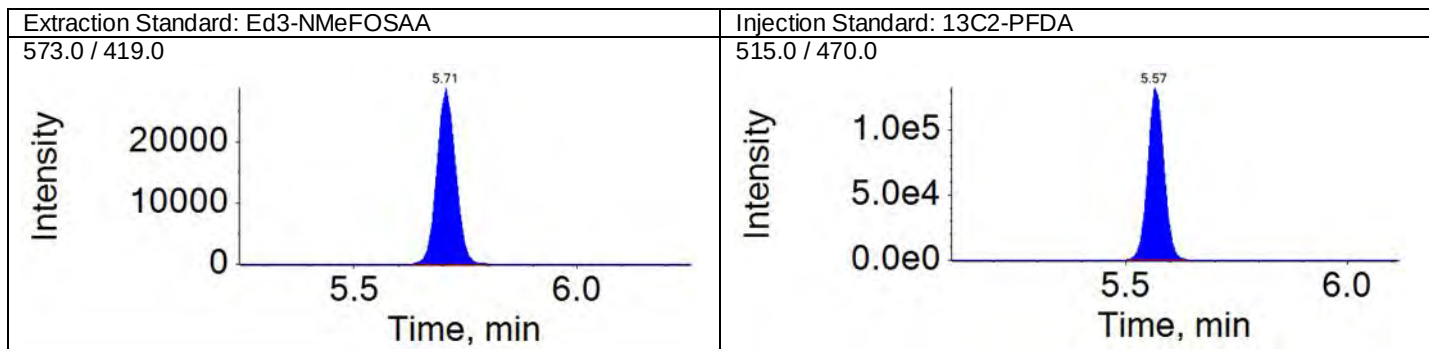
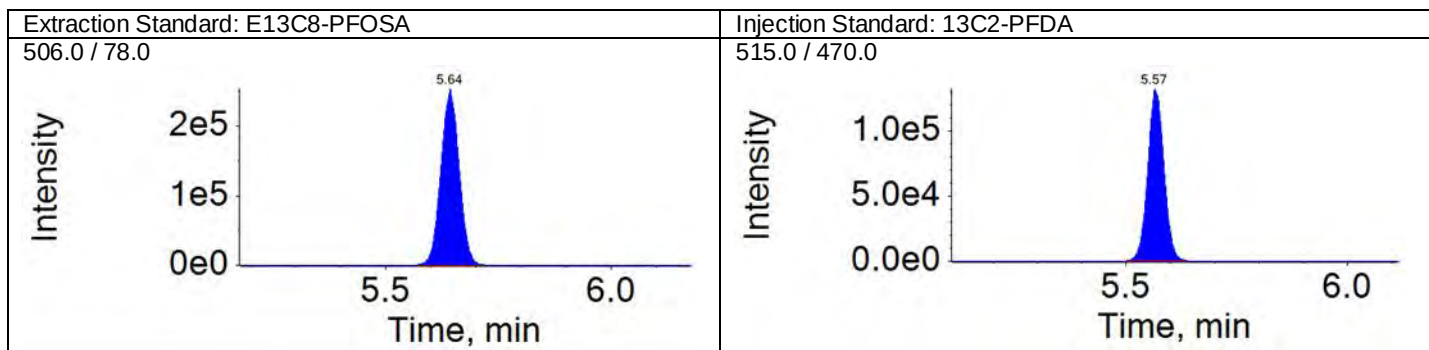
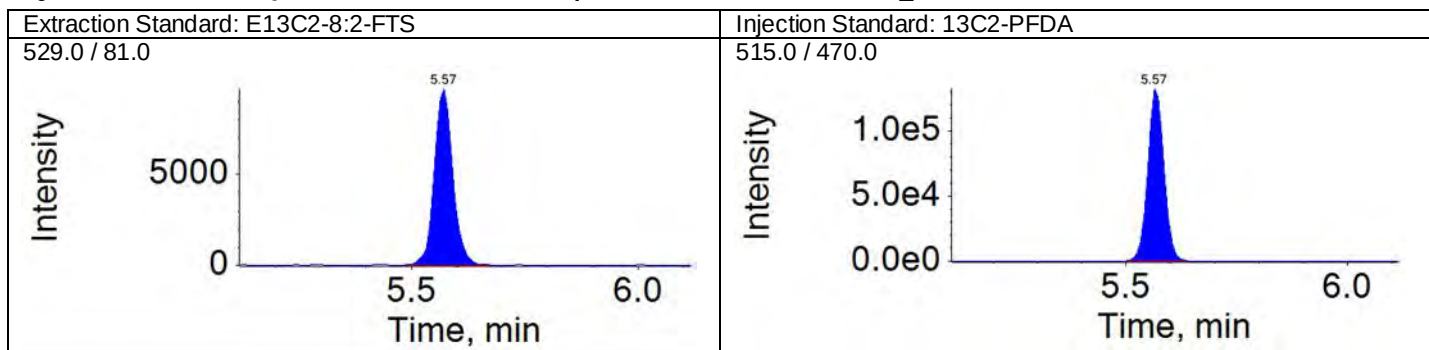
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

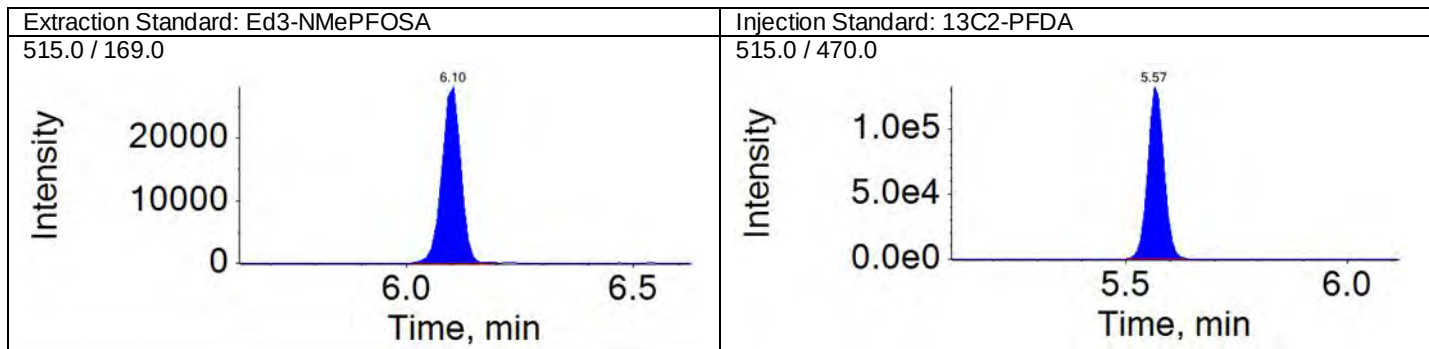
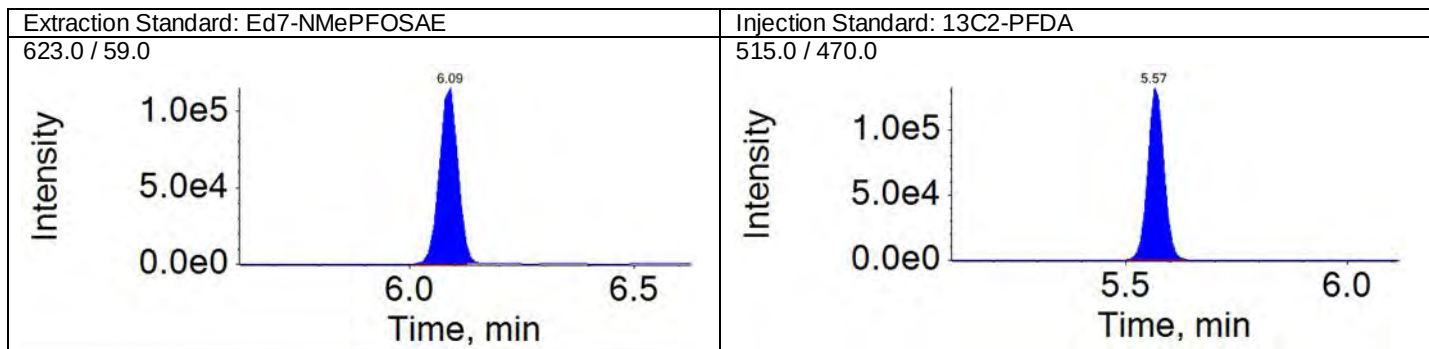
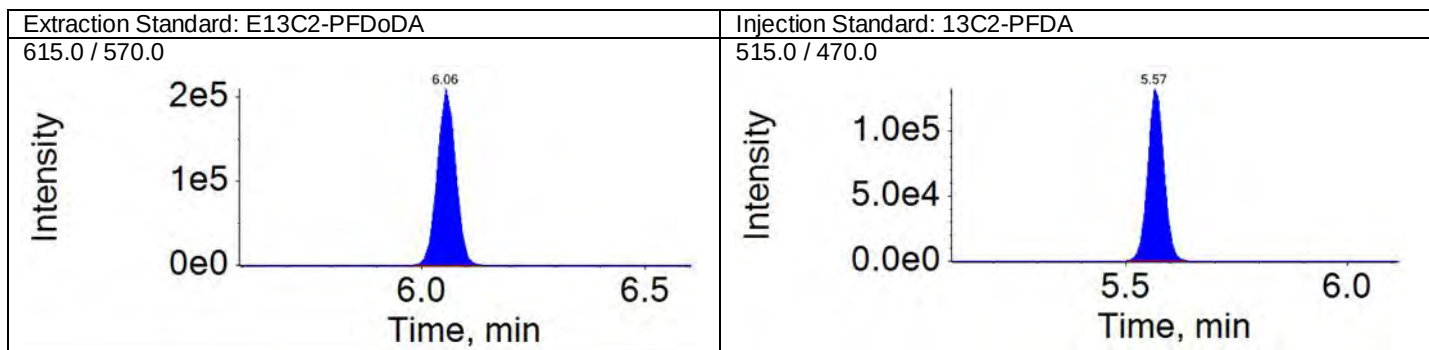
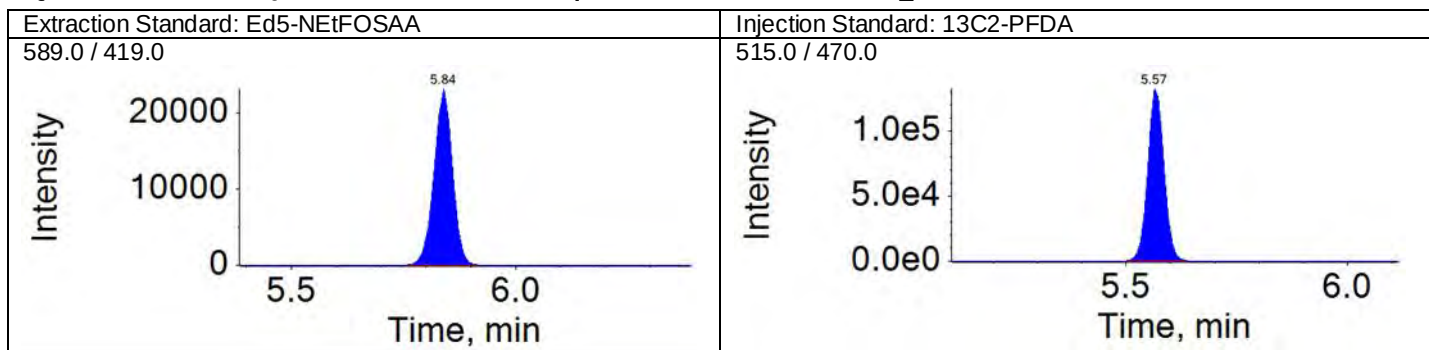
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

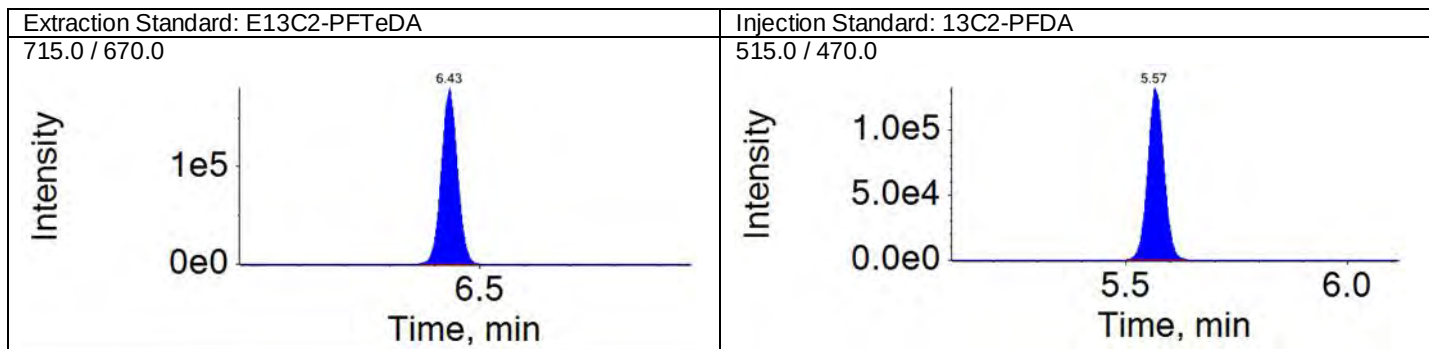
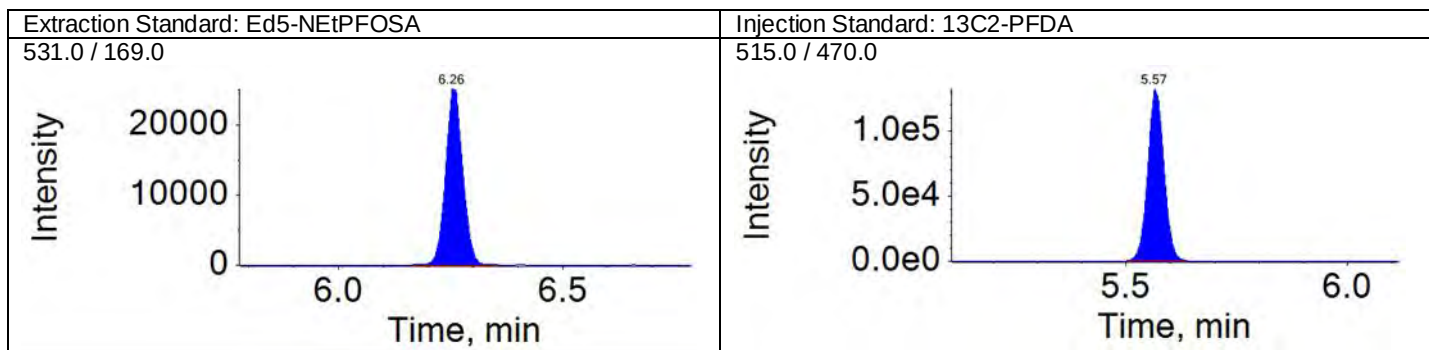
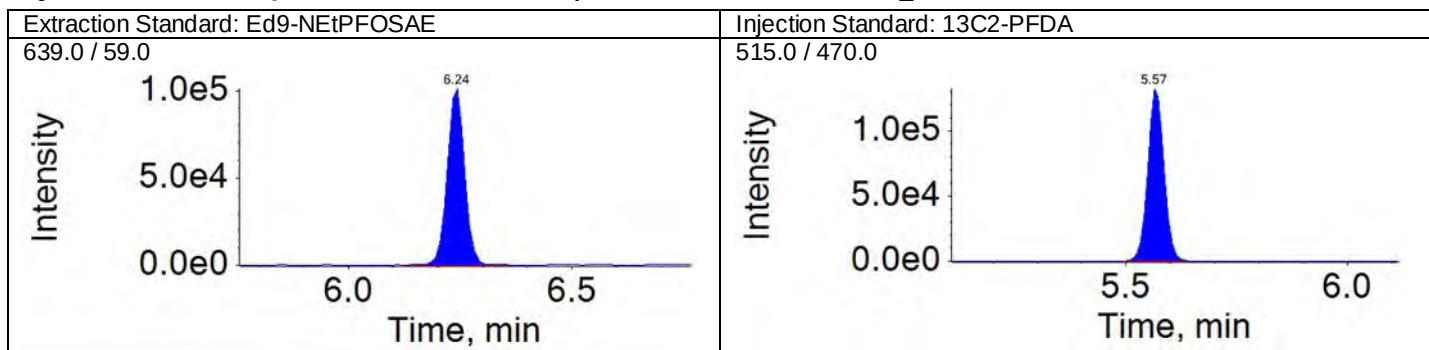
By JPT at 2:53 pm, 11/7/18

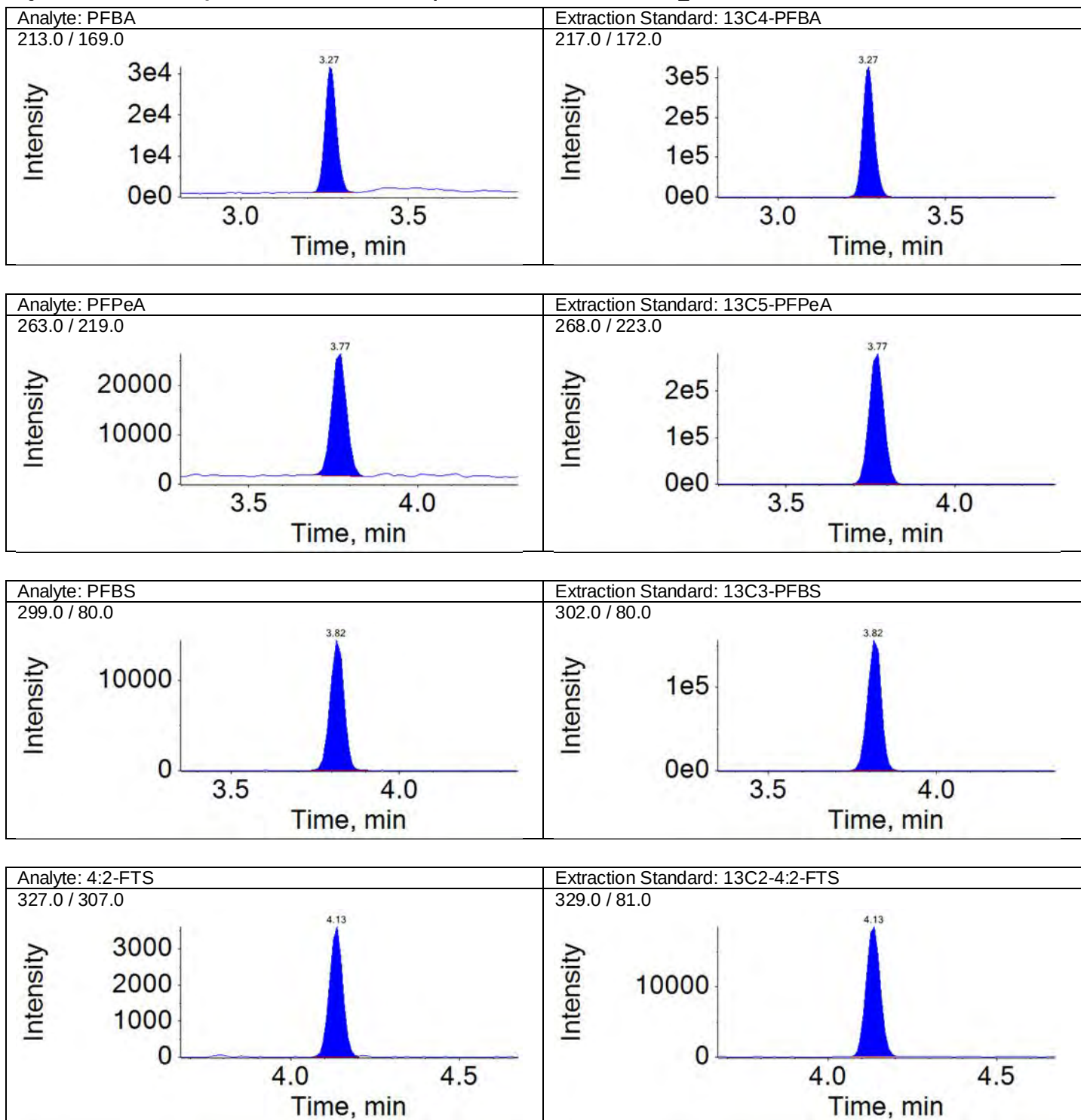
REVIEWED

By umar at 5:23 pm, 11/9/18

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

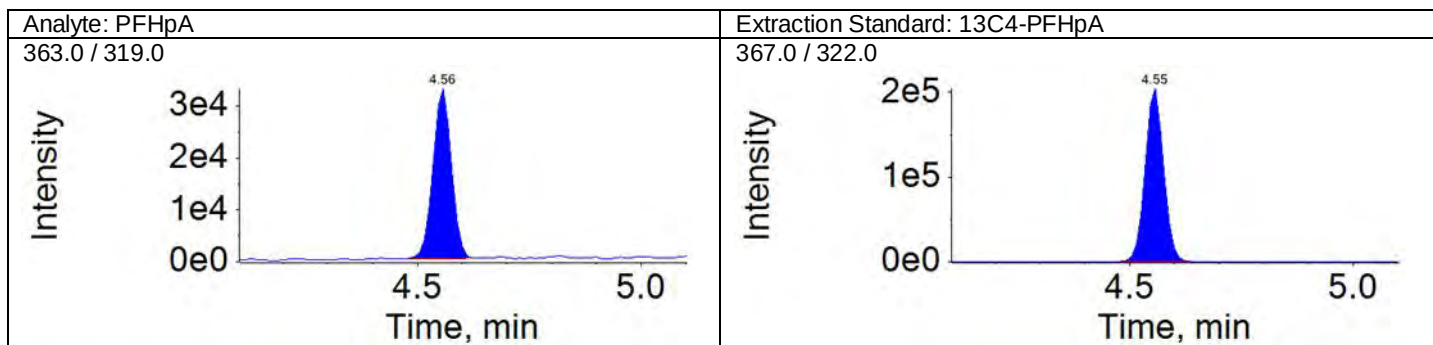
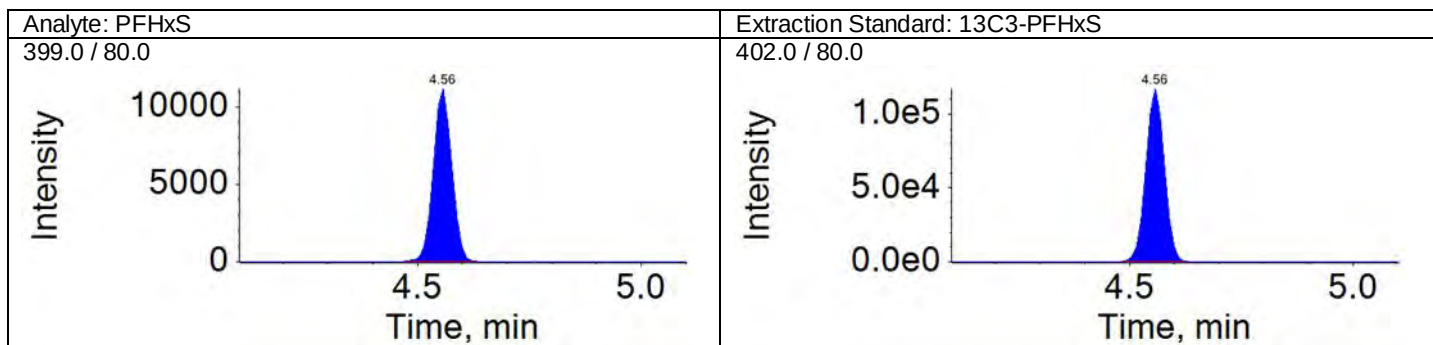
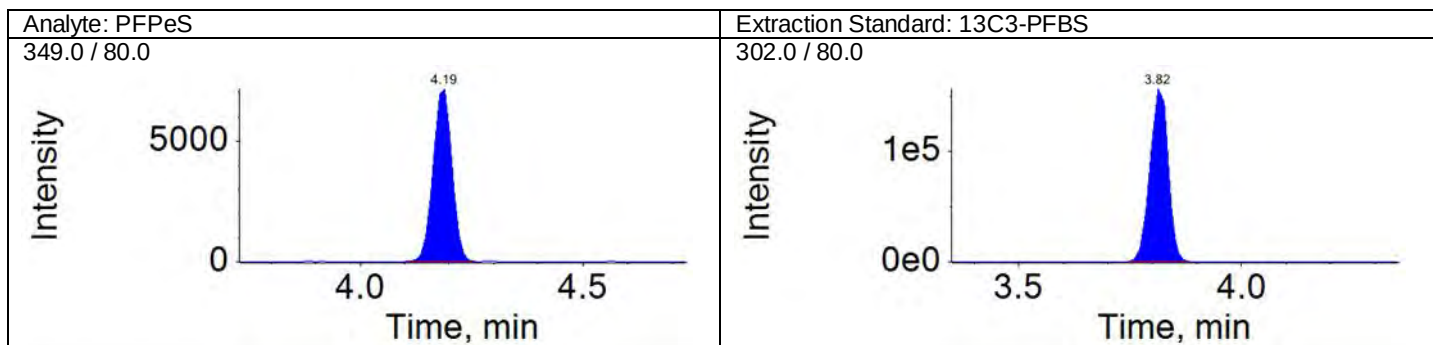
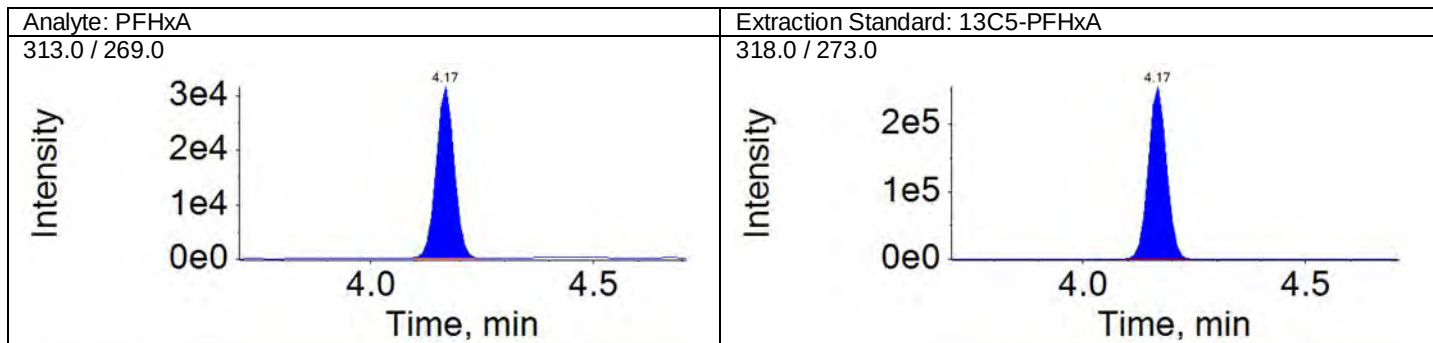
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

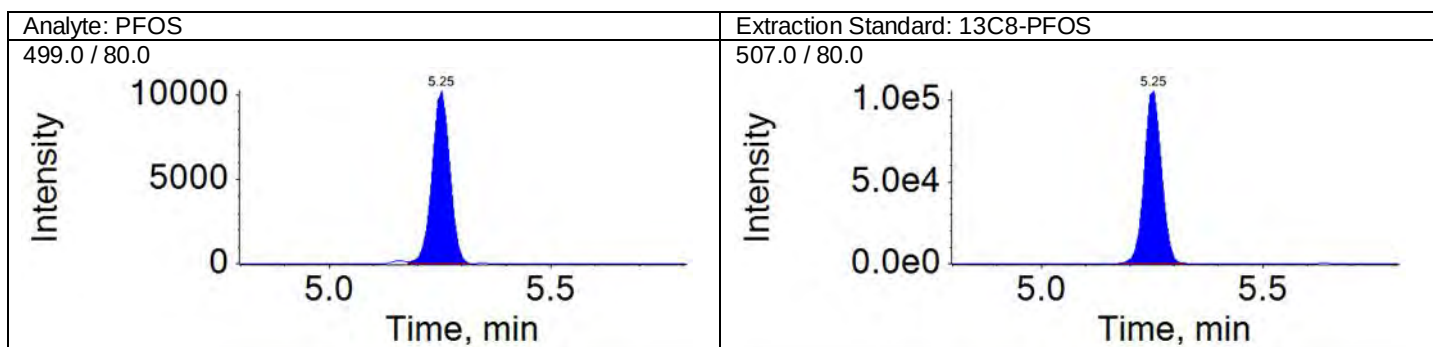
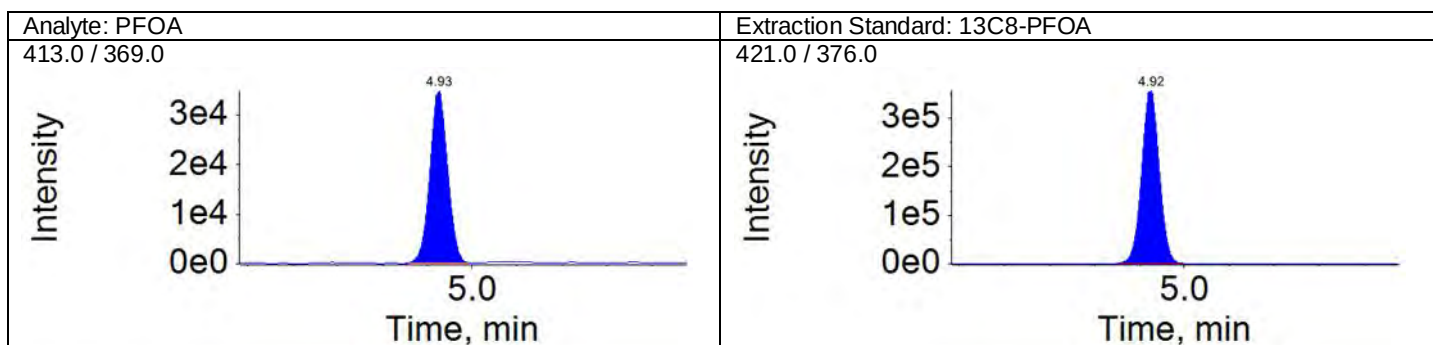
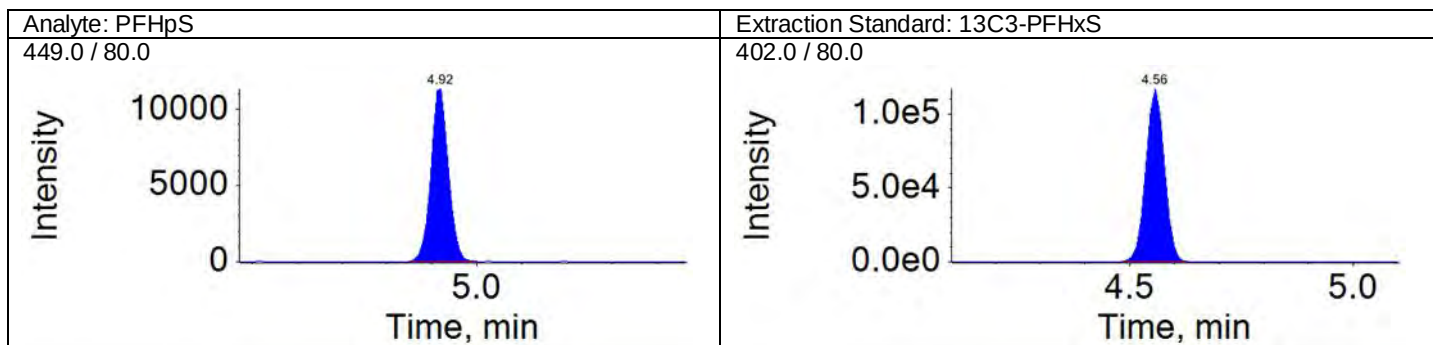
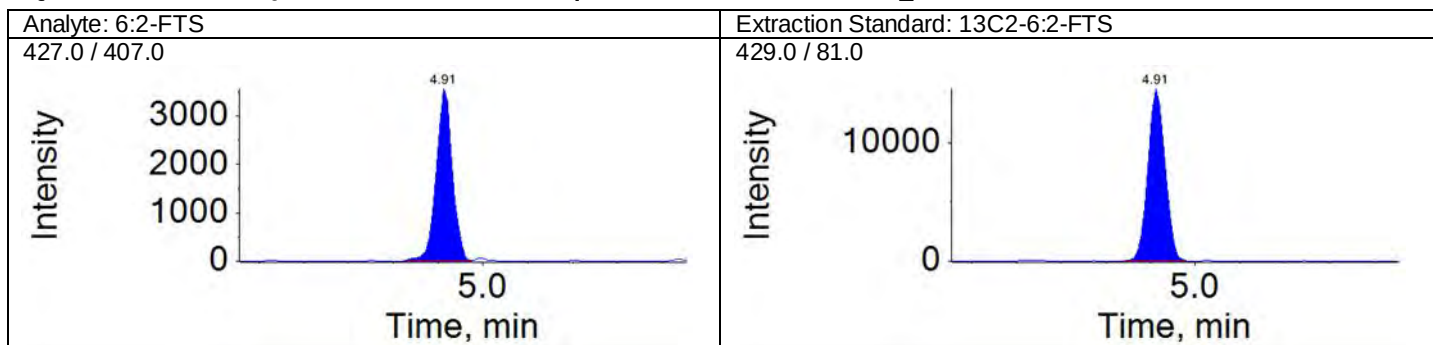
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



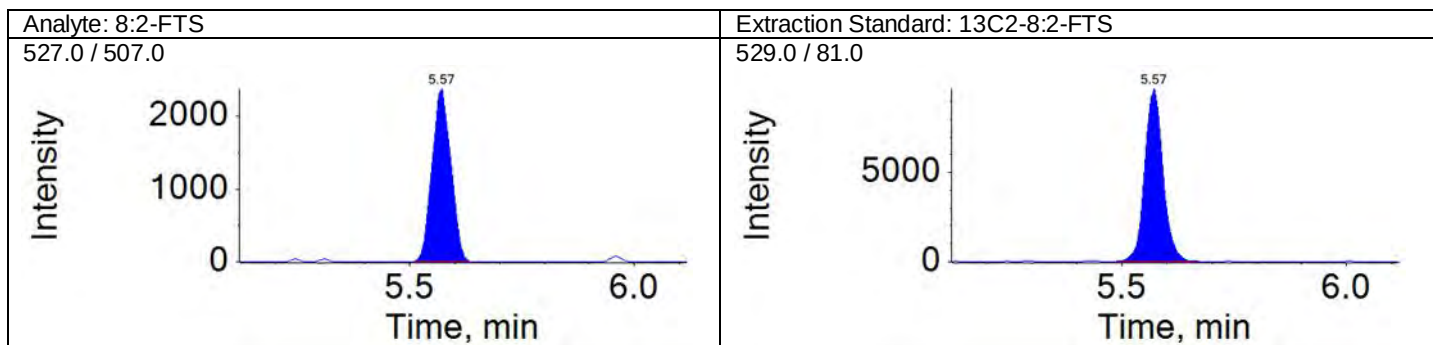
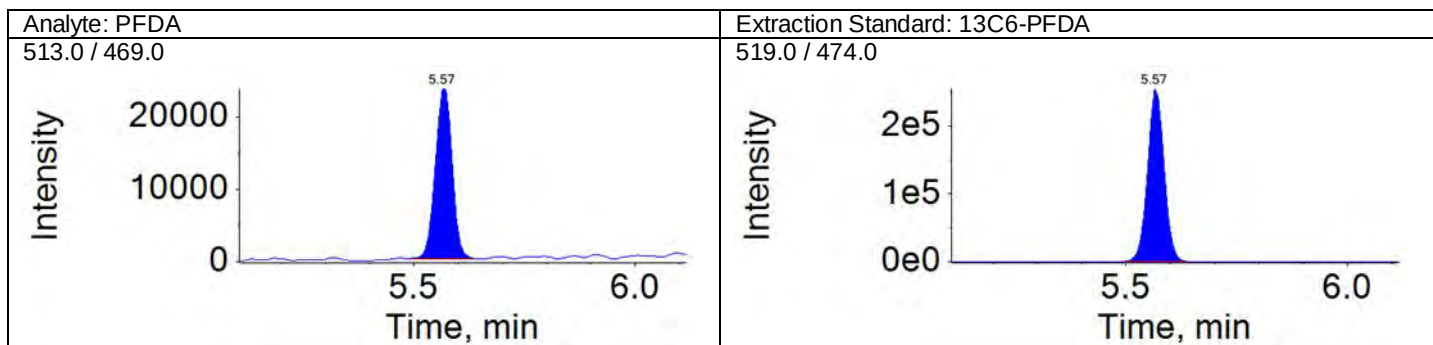
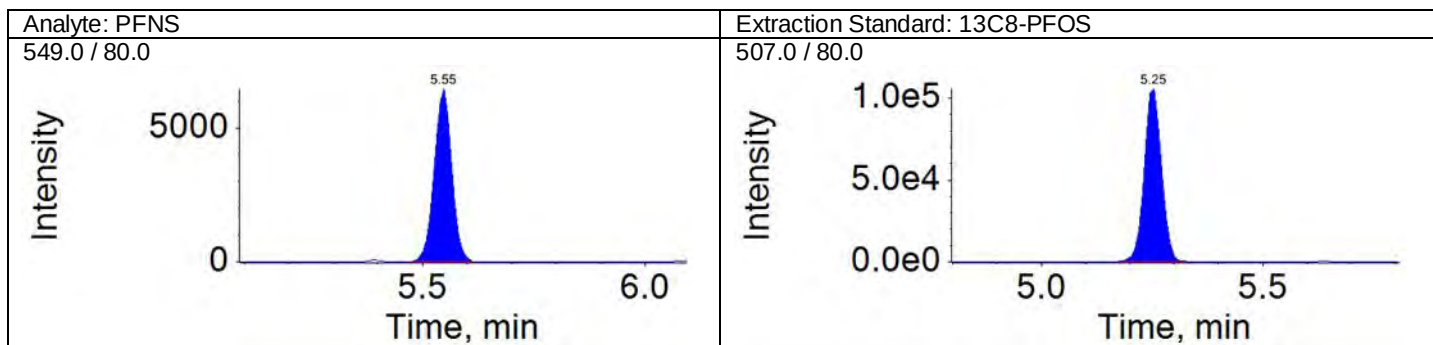
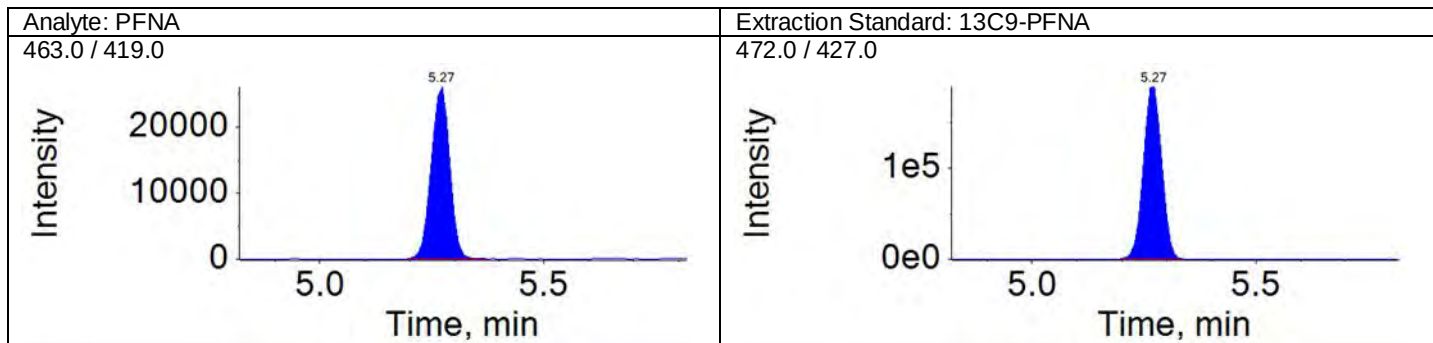
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



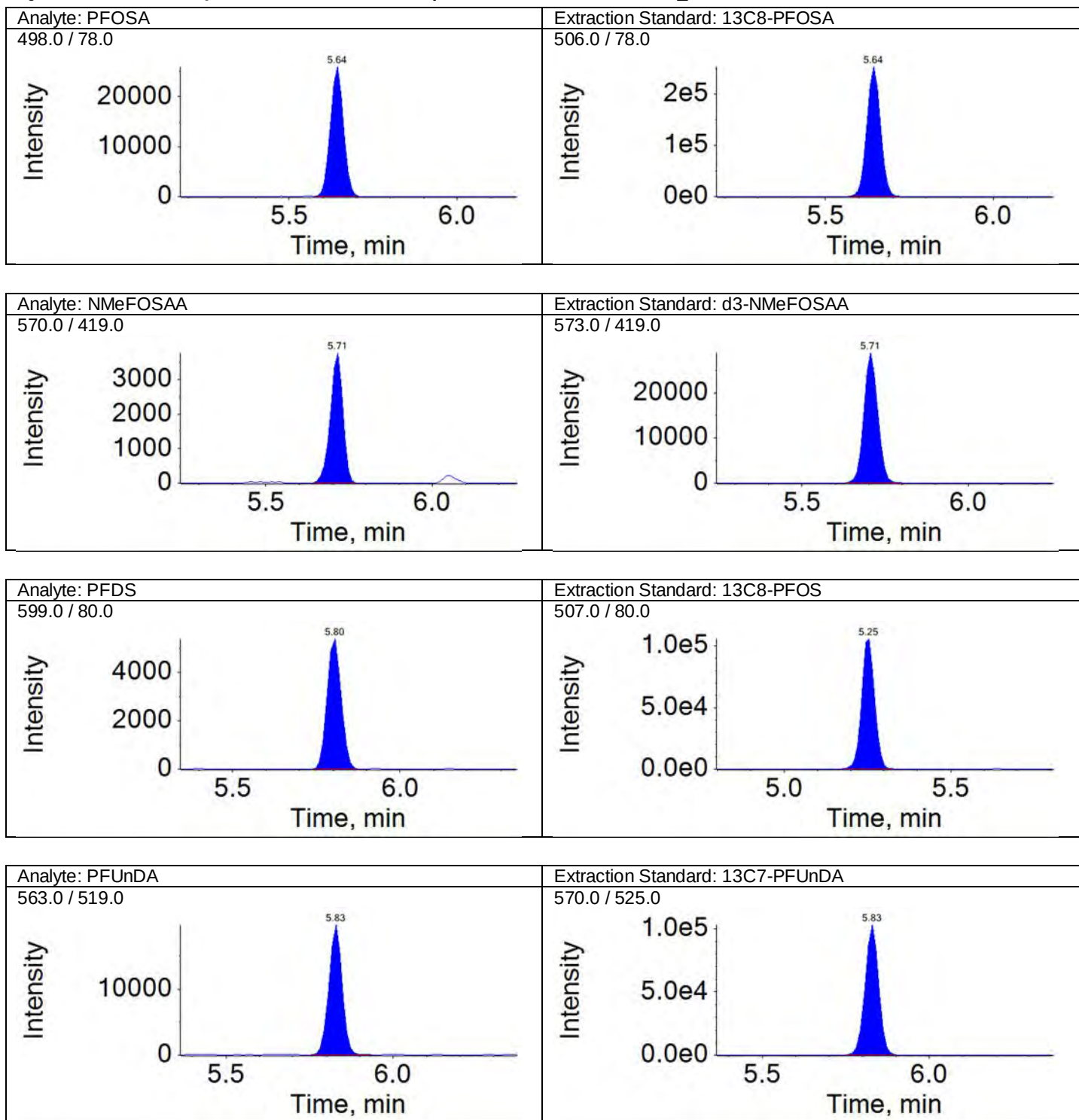
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



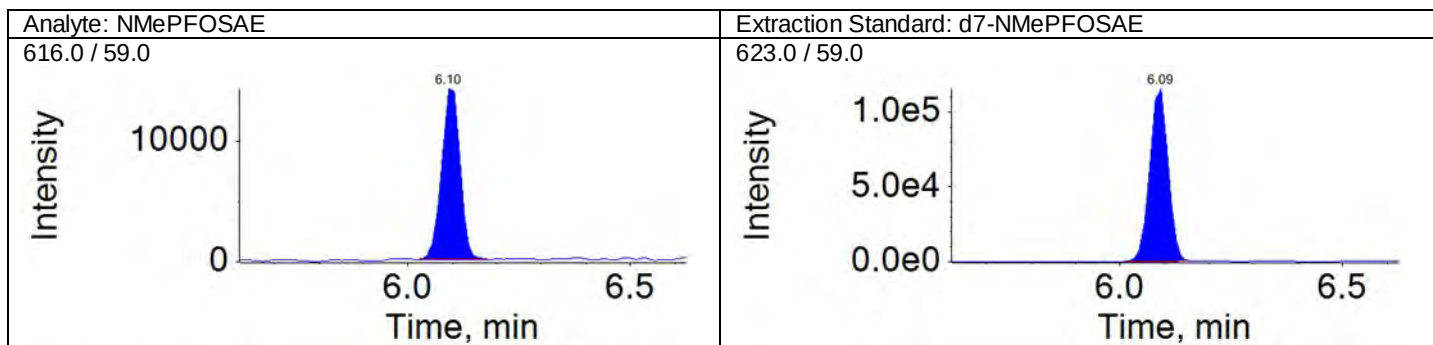
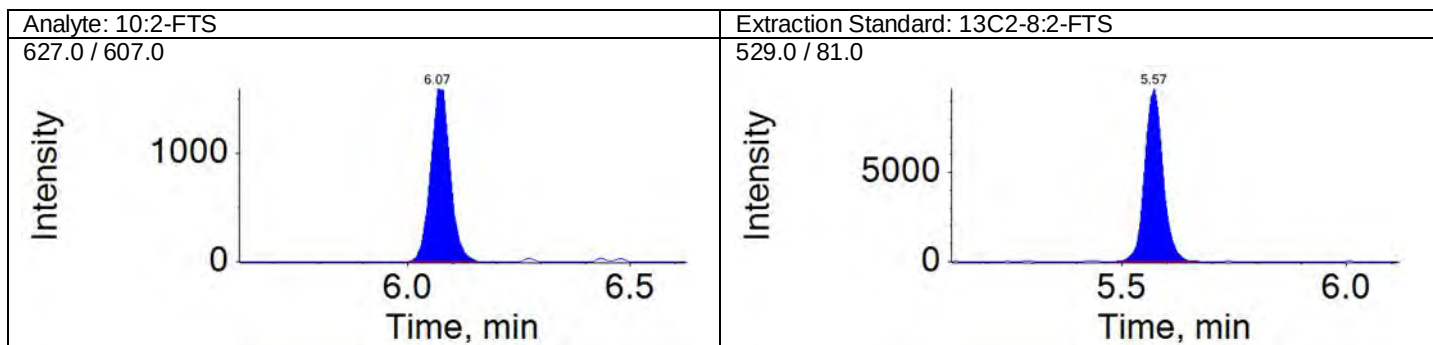
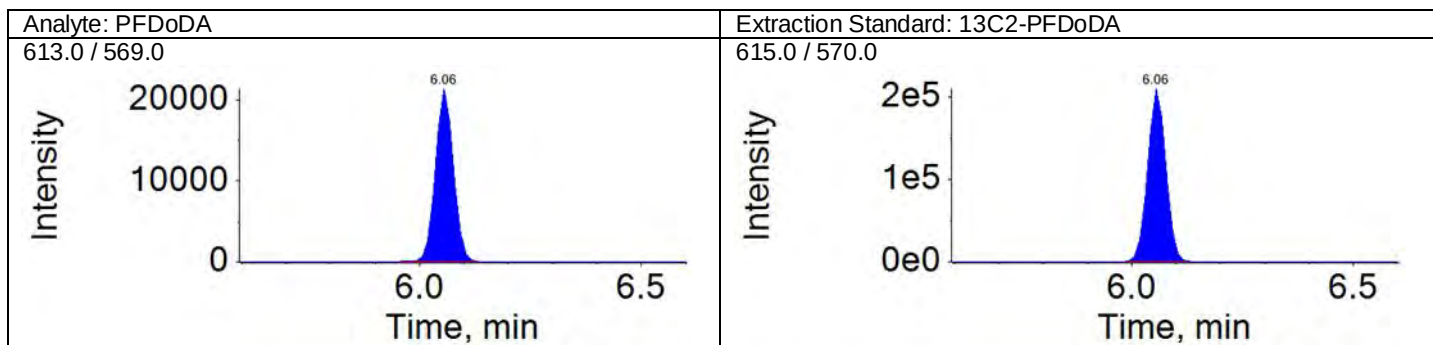
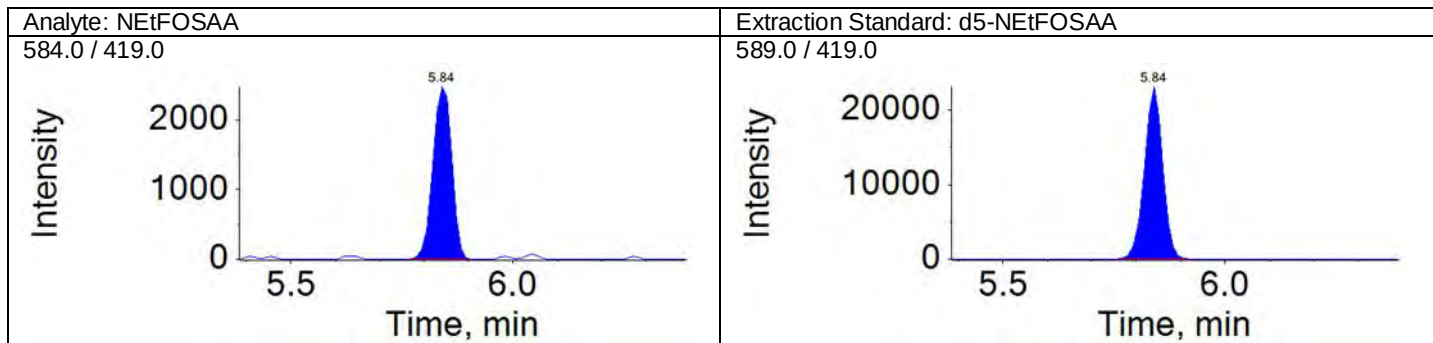
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

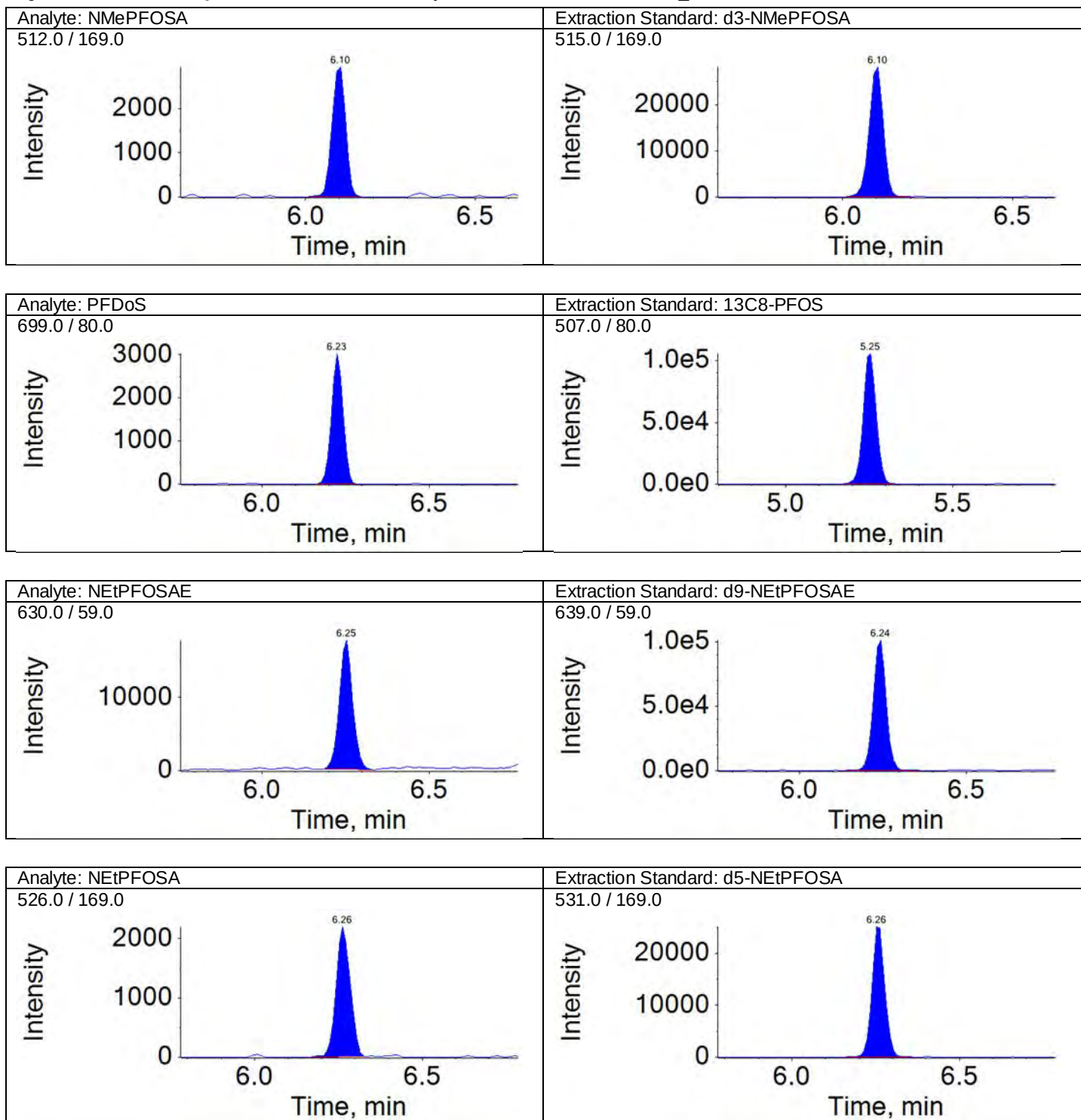
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

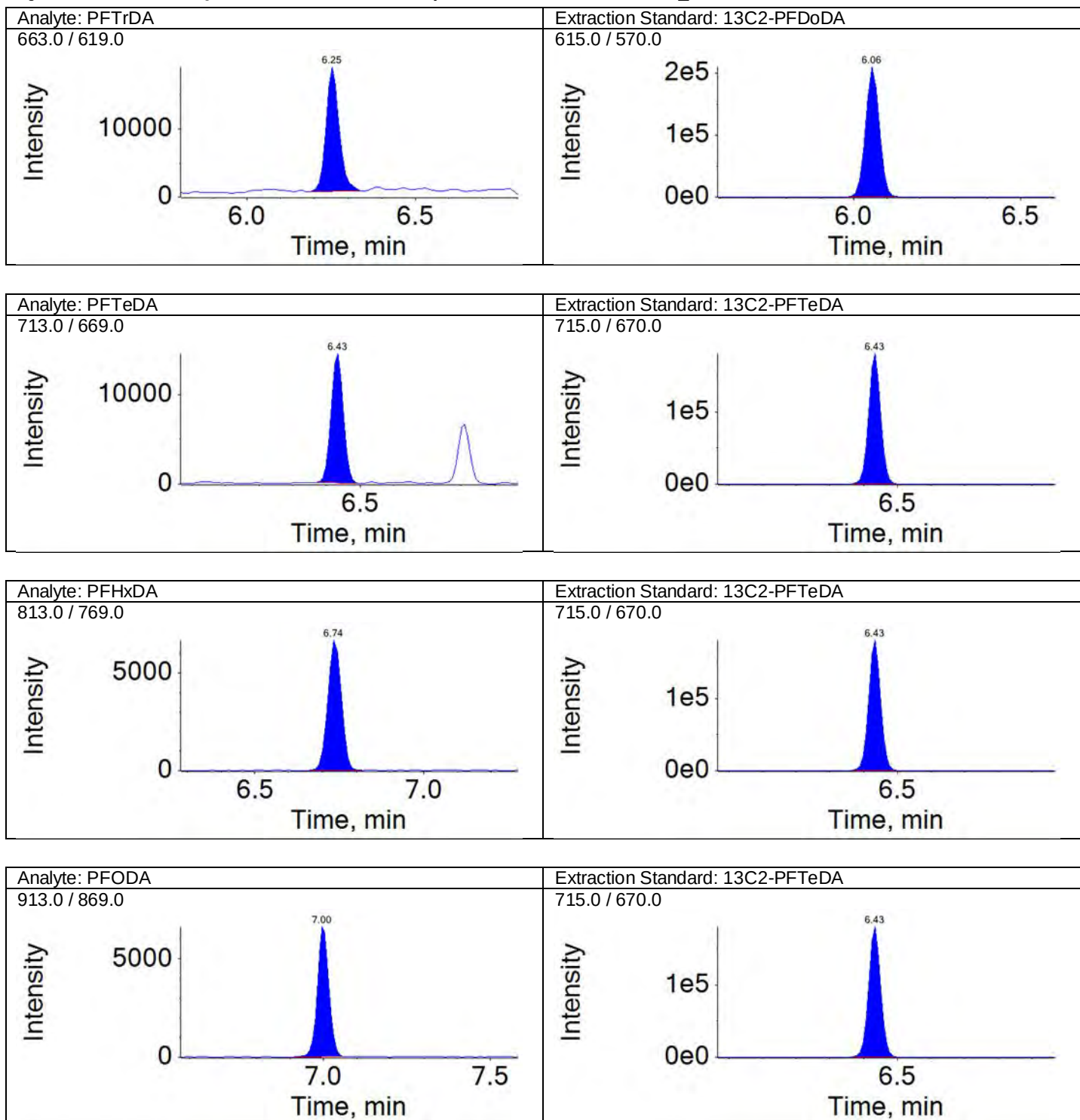
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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:

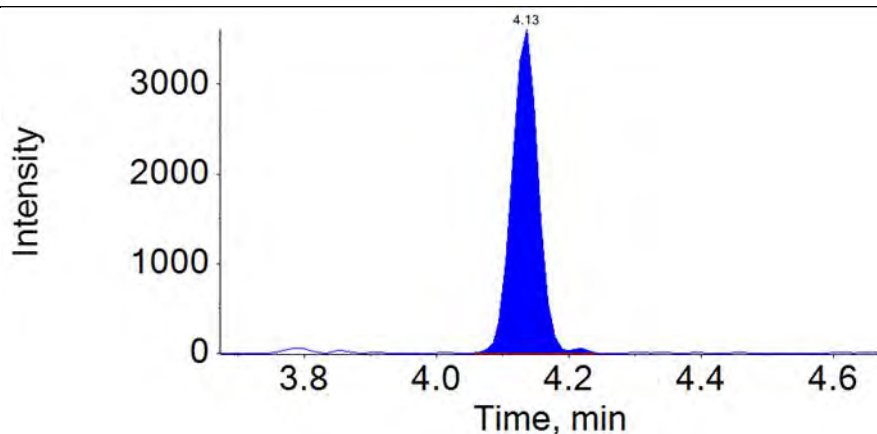
327.0 / 307.0

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:

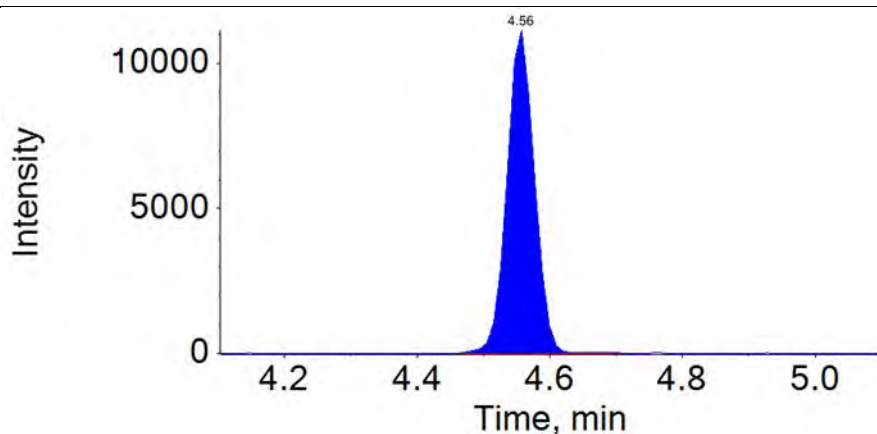
399.0 / 80.0

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:

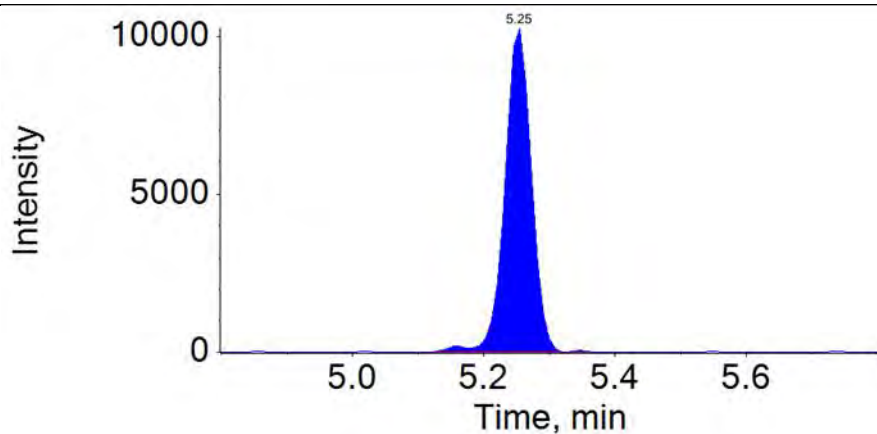
499.0 / 80.0

File Name:

18NOV07DCAL-11.wiff

Sample Name:

CAL2



Integration Comment: incorrect integration

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

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

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

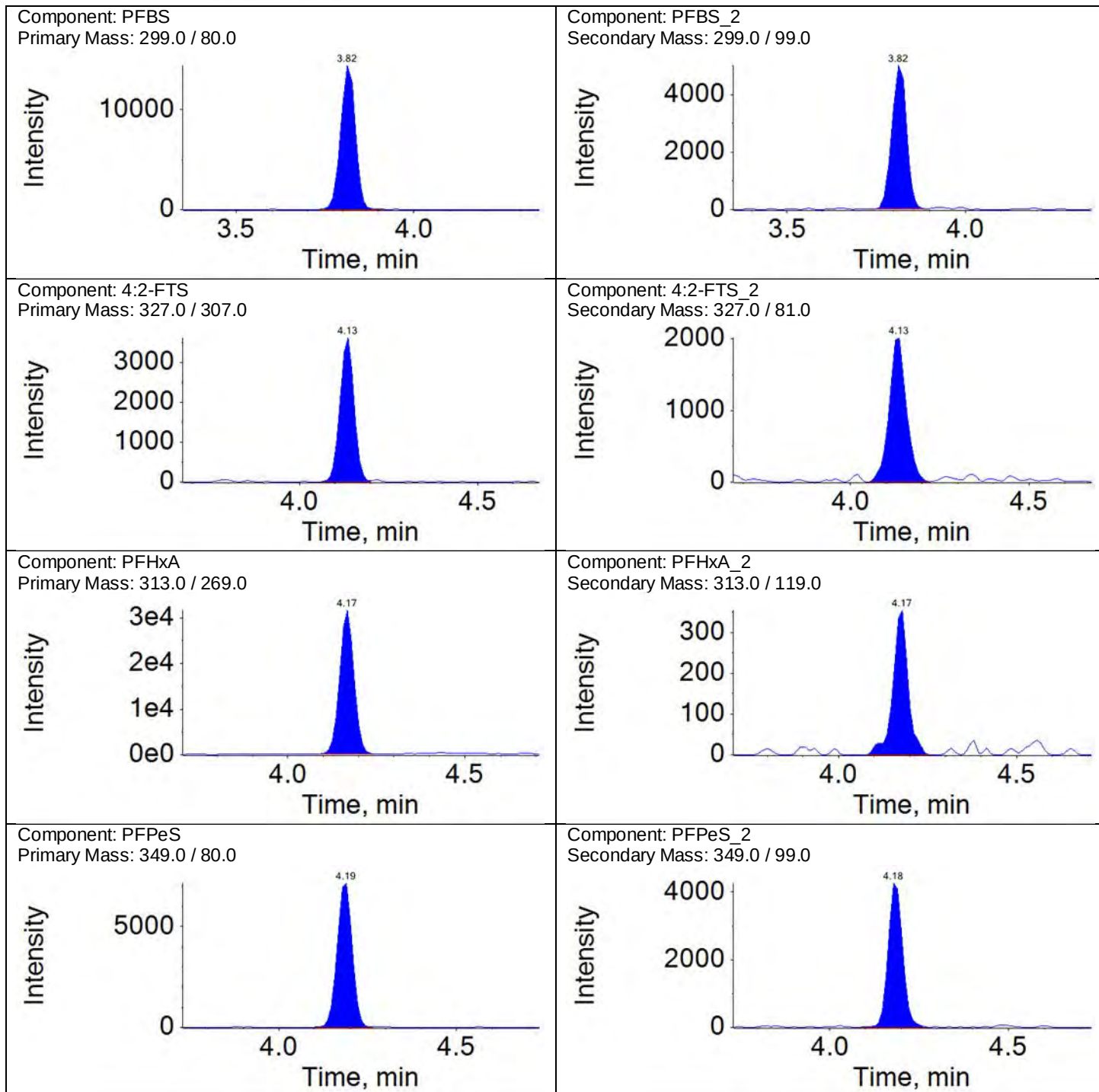
Ion Ratio Report

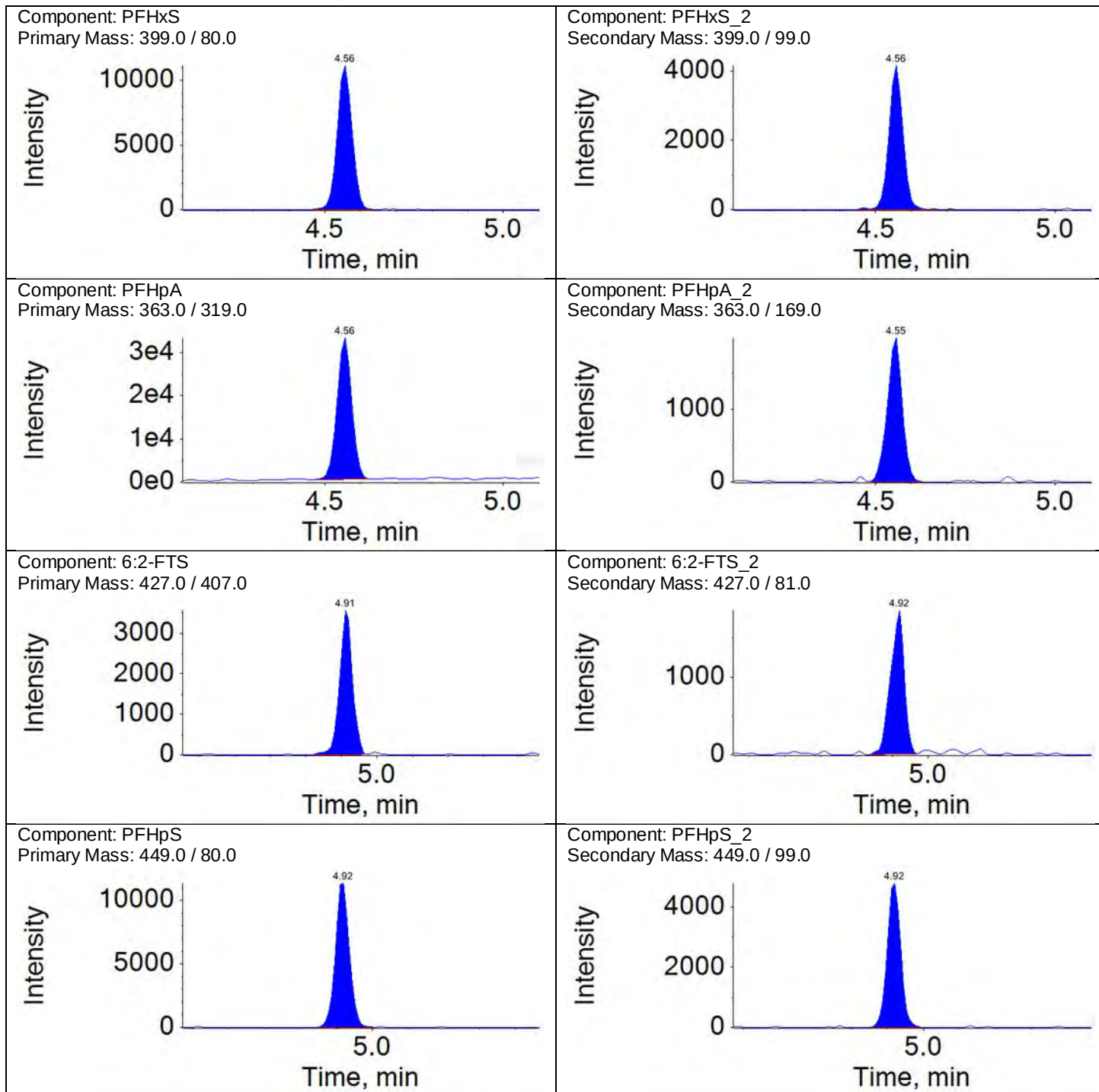
Sample Name: CAL2

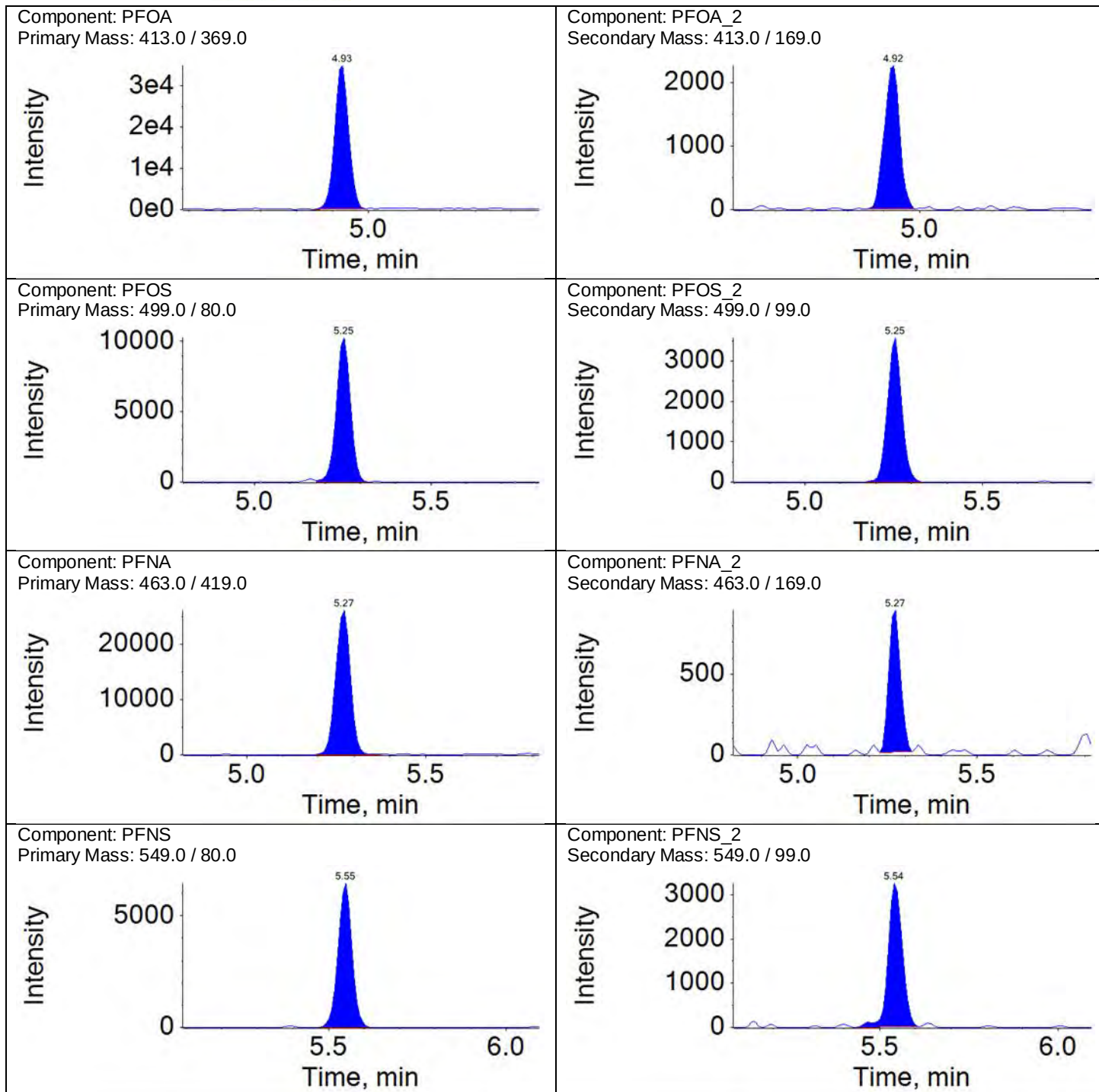
Instrument Name: LM27631

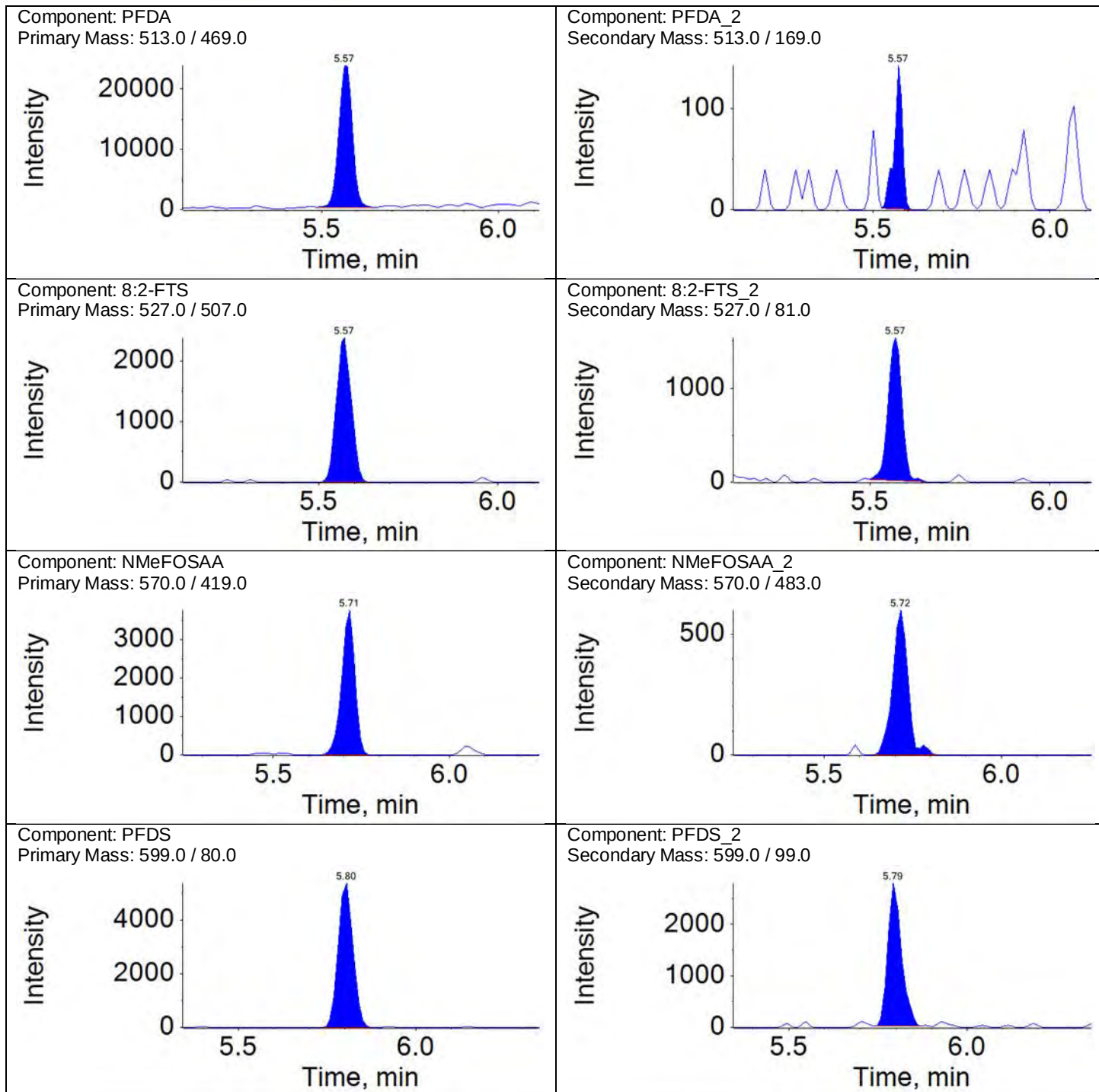
File Name: 18NOV07DCAL-11.wiff

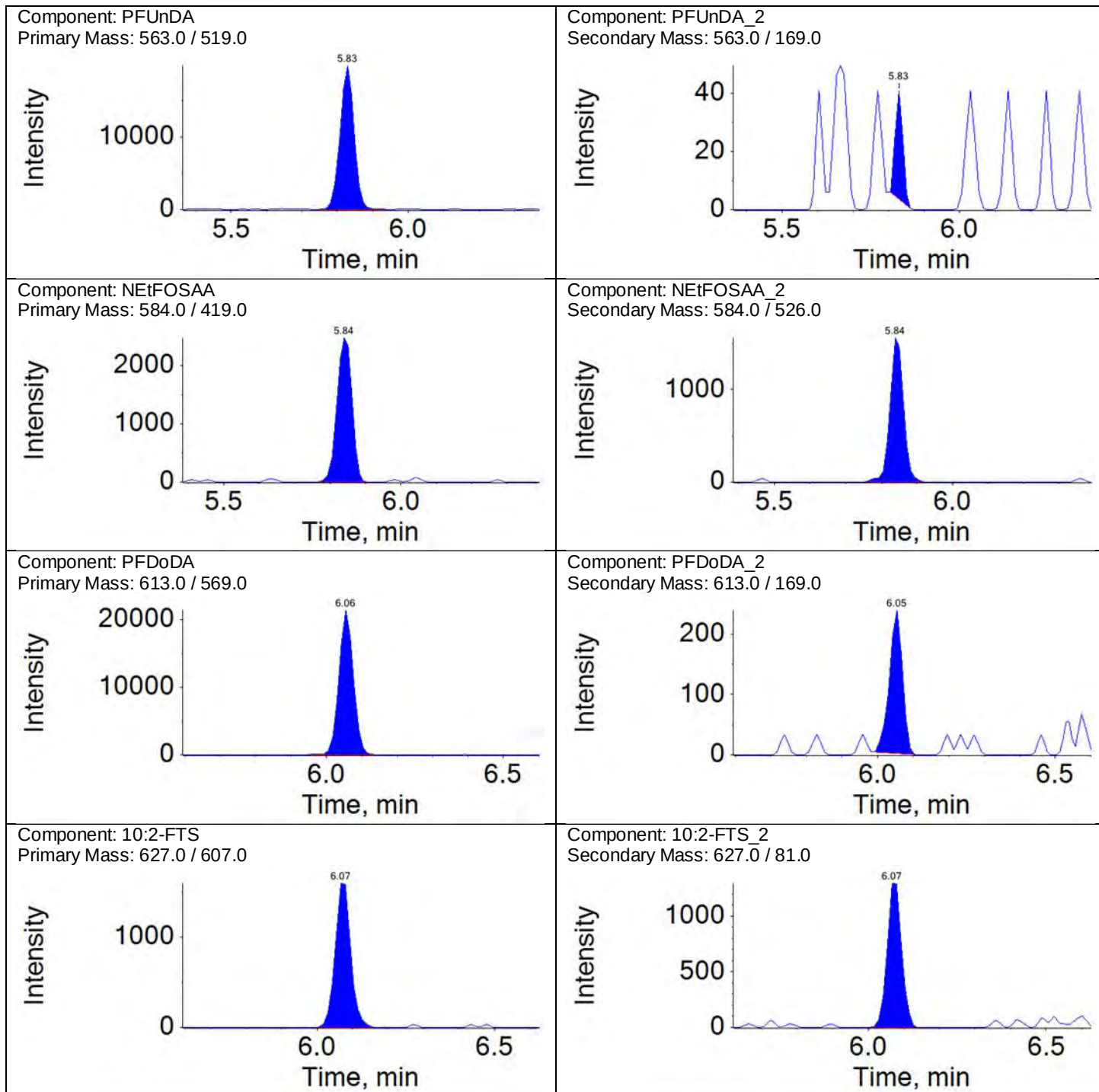
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	41415.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	14355.0	A	0.3576	0.3466	-3	50	
4:2-FTS	4.13	1.00	9924.9	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	6720.6	A	0.6359	0.6771	6	50	
PFHxA	4.17	1.00	88469.9	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	1053.3	A	0.0115	0.0119	4	50	
PFPeS	4.19	1.10	20956.8	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	12018.2	A	0.5384	0.5735	7	50	
PFHxS	4.56	1.00	32061.0	M	1.0000	1.0000			
PFHxS_2	4.56	1.00	11356.8	A	0.3569	0.3542	-1	50	
PFHpA	4.56	1.00	93502.9	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	5694.0	A	0.0577	0.0609	6	50	
6:2-FTS	4.91	1.00	8883.8	A	1.0000	1.0000			
6:2-FTS_2	4.92	1.00	4933.5	A	0.6752	0.5553	-18	50	
PFHpS	4.92	1.08	30553.2	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	12511.0	A	0.3950	0.4095	4	50	
PFOA	4.93	1.00	94348.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	6706.8	A	0.0635	0.0711	12	50	
PFOS	5.25	1.00	28529.2	M	1.0000	1.0000			
PFOS_2	5.25	1.00	9986.4	A	0.3494	0.3500	0	50	
PFNA	5.27	1.00	74743.9	A	1.0000	1.0000			
PFNA_2	5.27	1.00	2006.2	A	0.0207	0.0268	30	50	
PFNS	5.55	1.06	17507.8	A	1.0000	1.0000			
PFNS_2	5.54	1.06	9005.6	A	0.4890	0.5144	5	50	
PFDA	5.57	1.00	62530.6	A	1.0000	1.0000			
PFDA_2	5.57	1.00	229.8	A	0.0057	0.0037	-35	50	
8:2-FTS	5.57	1.00	6917.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	4092.7	A	0.6169	0.5916	-4	50	
NMeFOSAA	5.71	1.00	9807.4	A	1.0000	1.0000			
NMeFOSAA_2	5.72	1.00	1815.6	A	0.2206	0.1851	-16	50	
PFDS	5.80	1.11	15726.3	A	1.0000	1.0000			
PFDS_2	5.79	1.10	7422.2	A	0.4648	0.4720	2	50	
PFUnDA	5.83	1.00	54085.5	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	55.5	A	0.0031	0.0010	-67	50	OOS
NEtFOSAA	5.84	1.00	7253.7	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	4097.5	A	0.6082	0.5649	-7	50	
PFDODA	6.06	1.00	60098.0	A	1.0000	1.0000			
PFDODA_2	6.05	1.00	610.7	A	0.0109	0.0102	-7	50	
10:2-FTS	6.07	1.09	4874.3	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	3667.0	A	0.7082	0.7523	6	50	
PFTTrDA	6.25	1.03	49218.5	A	1.0000	1.0000			
PFTTrDA_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	

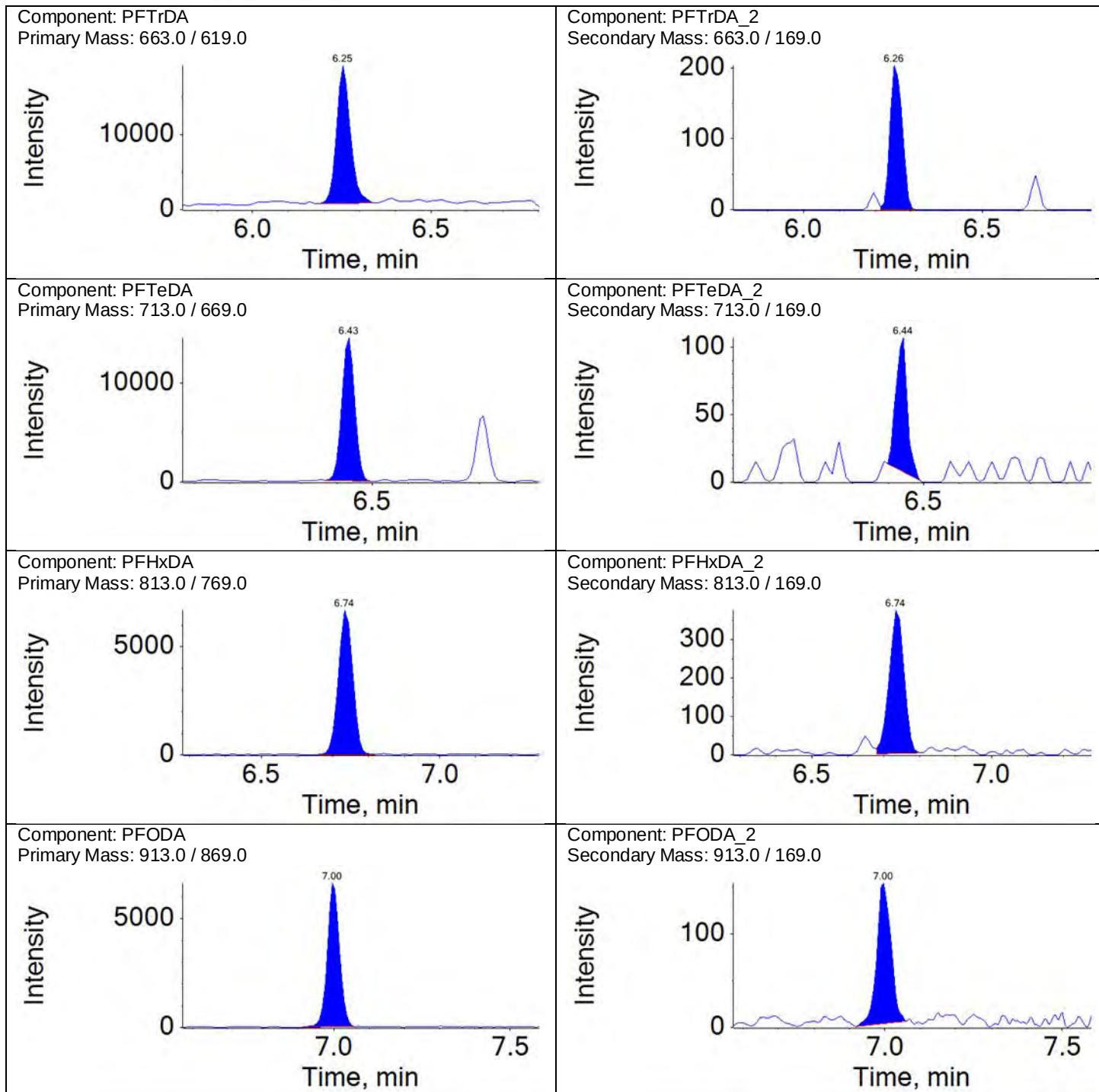












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	Reference 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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL3

Instrument Name: LM27631

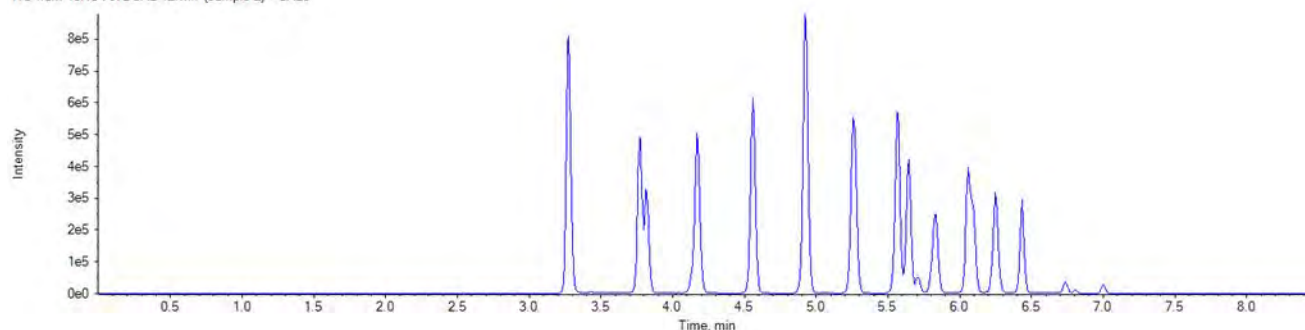
File Name: 18NOV07DCAL-12.wiff

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
PFTDA	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

TIC from 18NOV07DCAL-12.wiff (sample 2) - CAL3



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 426 of 1595

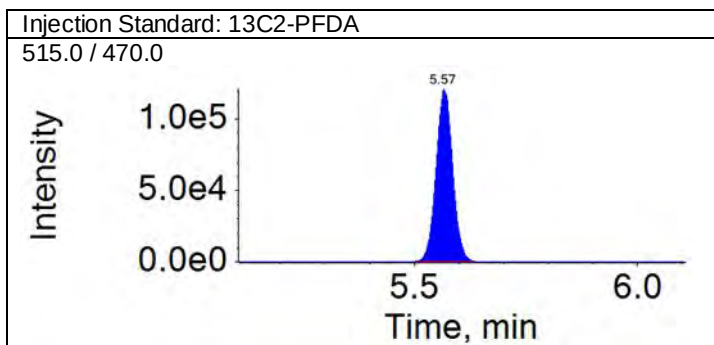
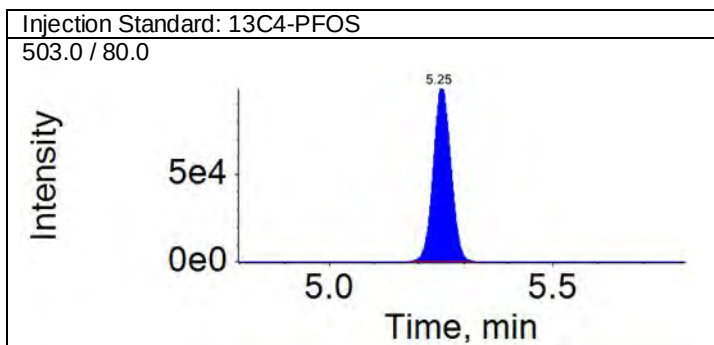
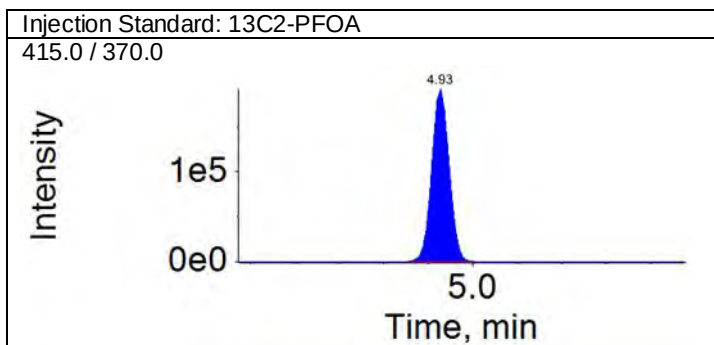
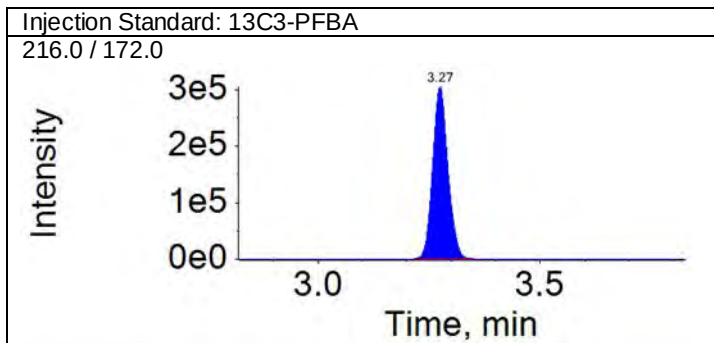
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

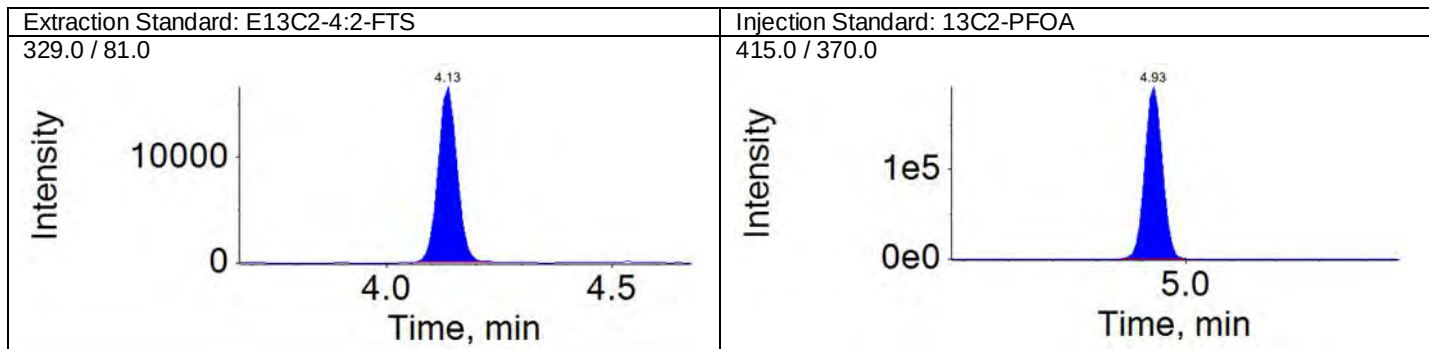
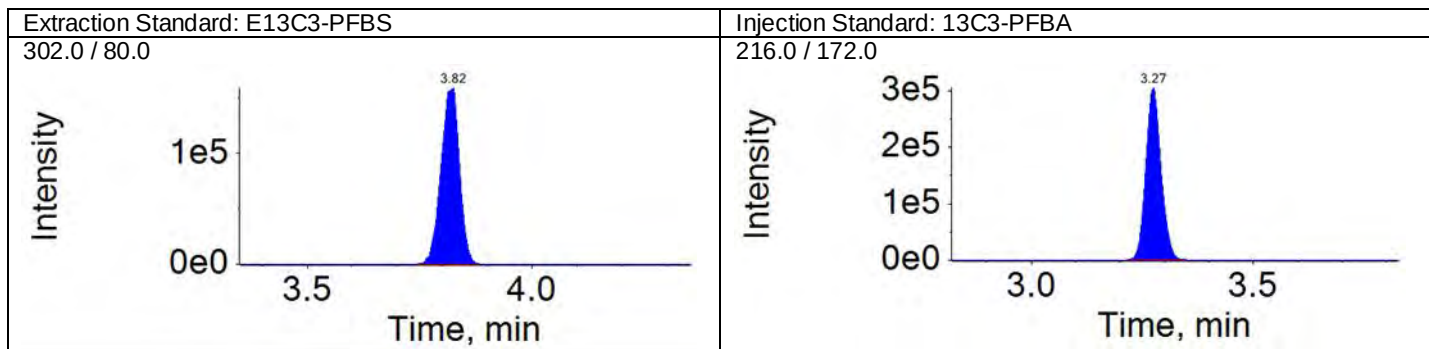
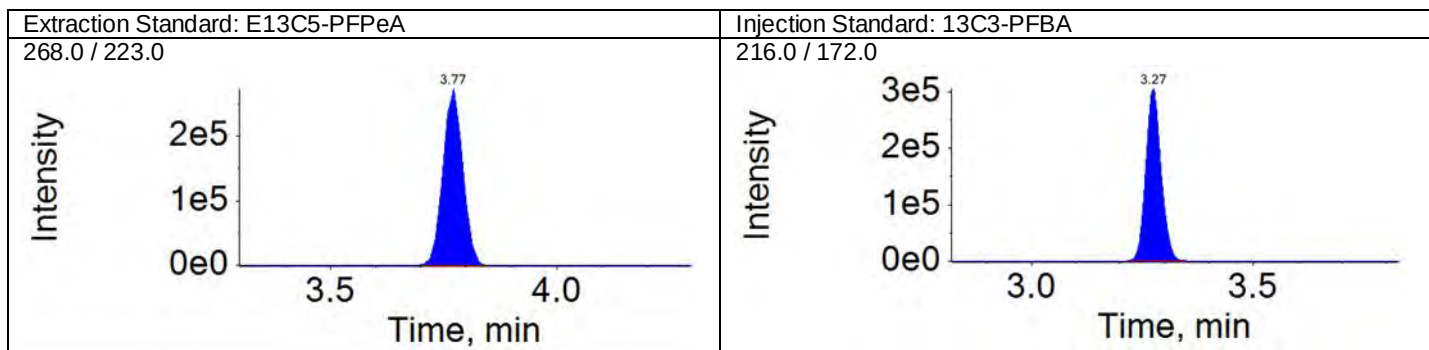
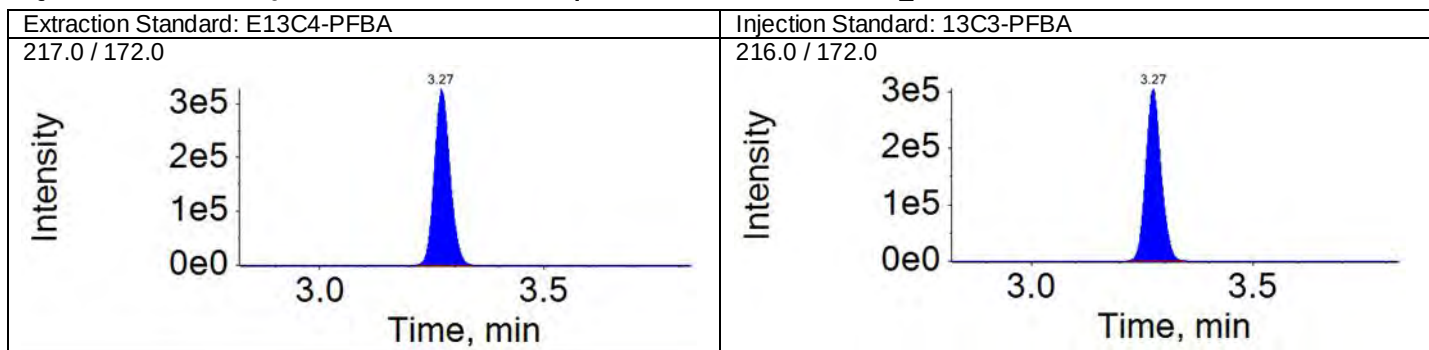
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

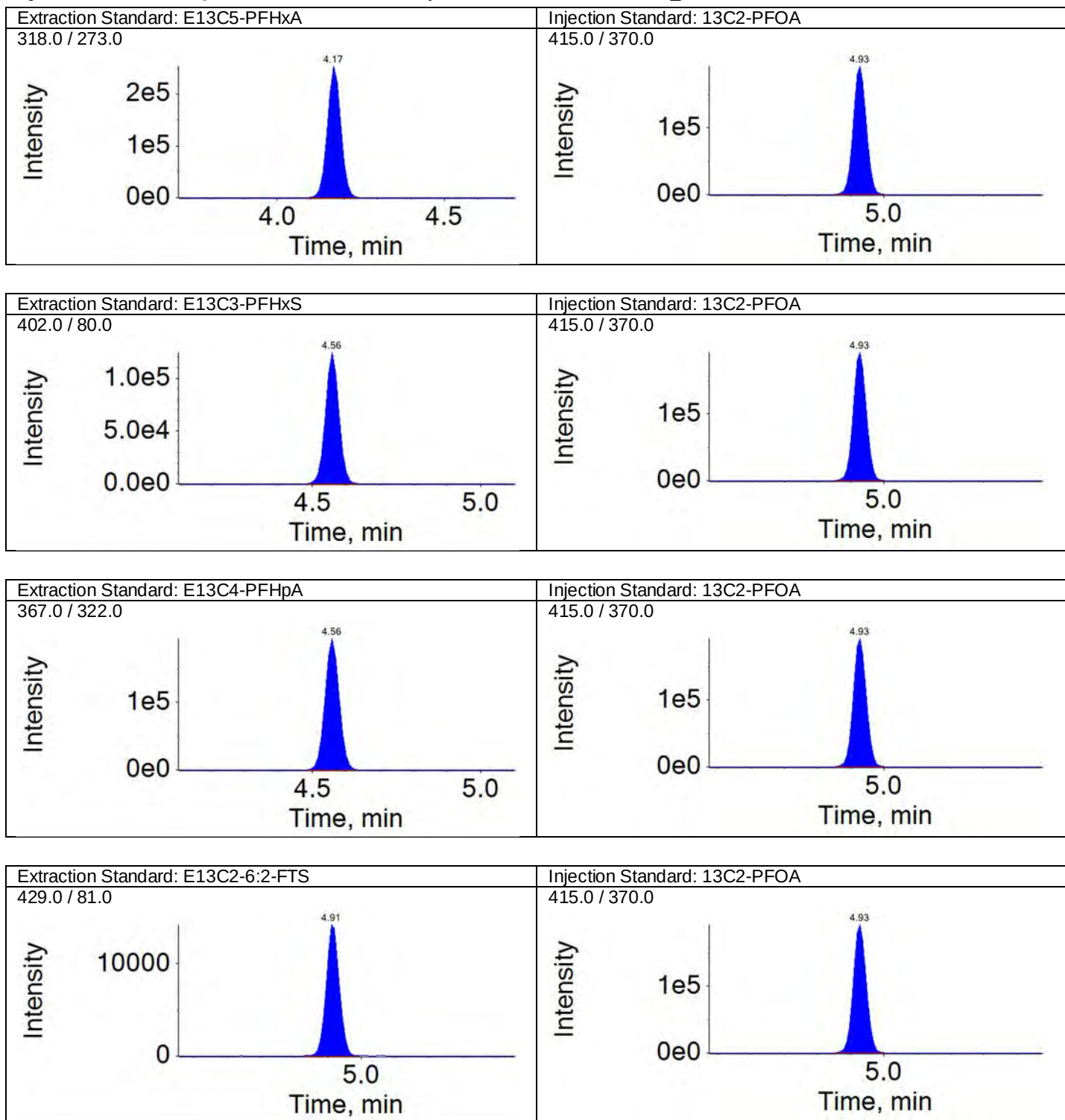
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

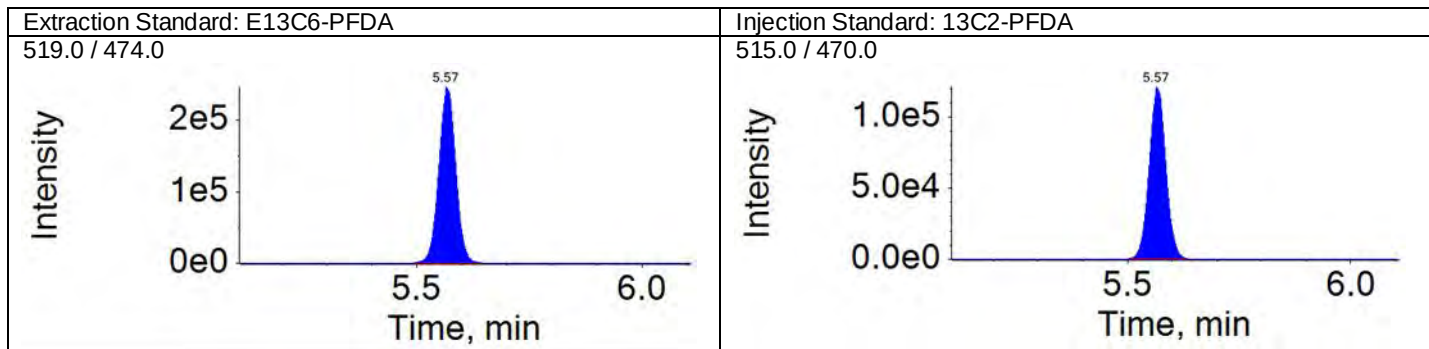
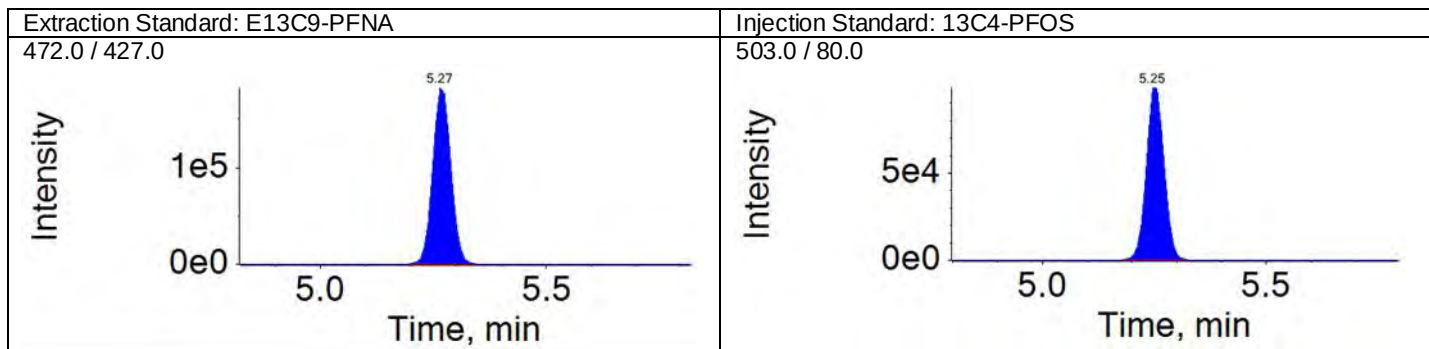
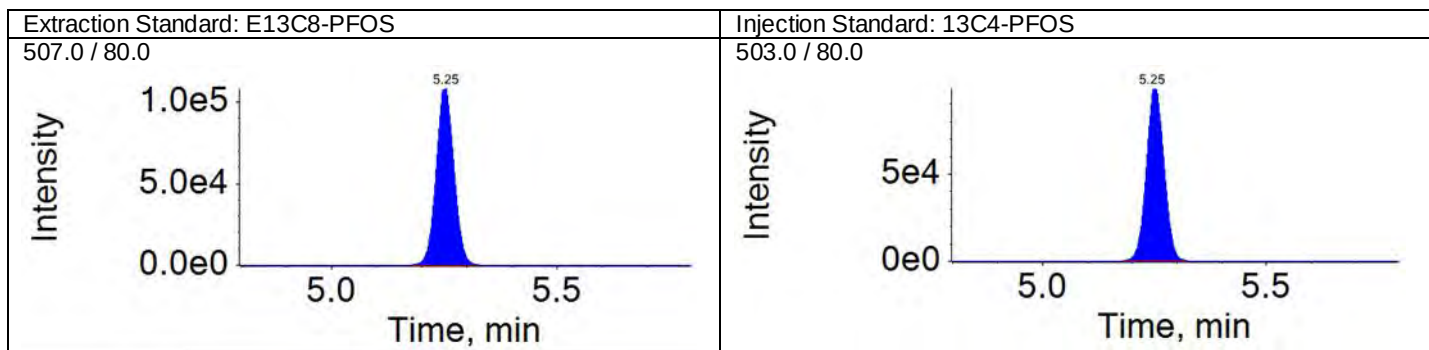
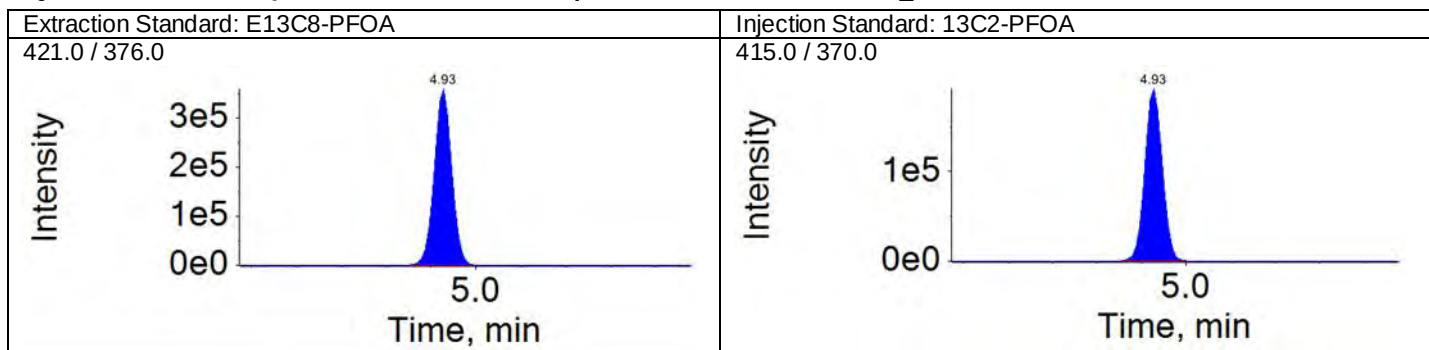
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

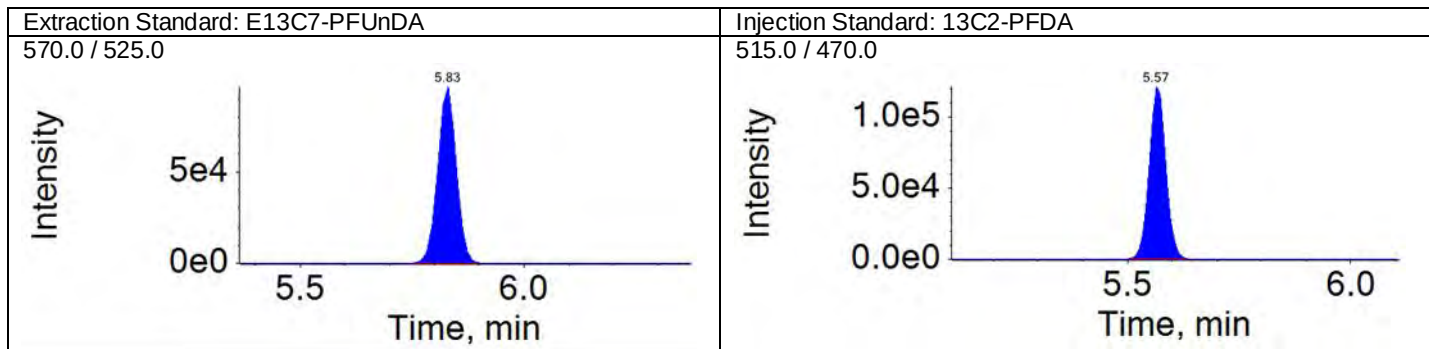
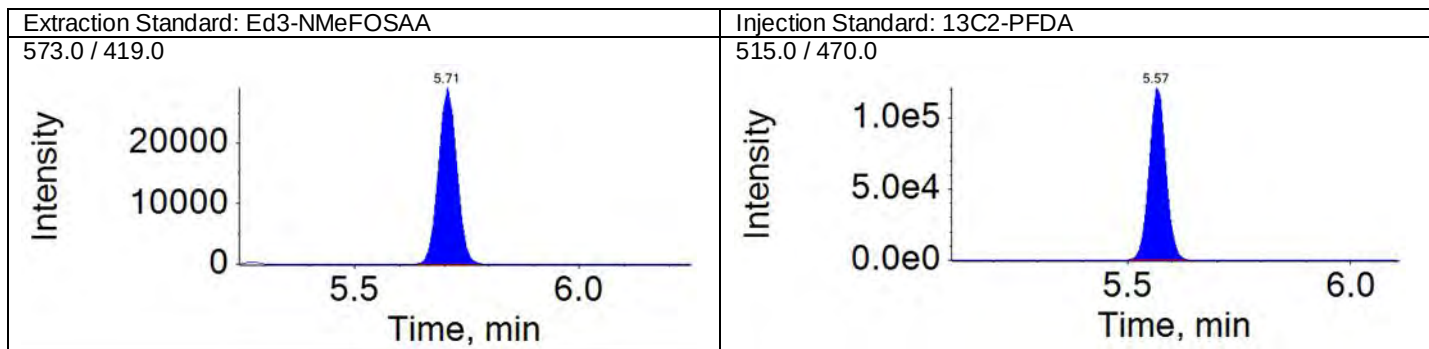
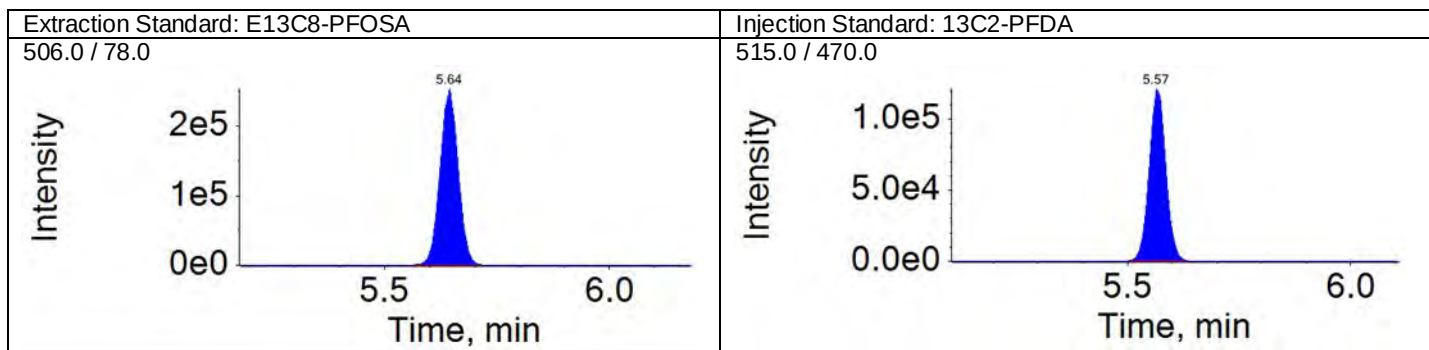
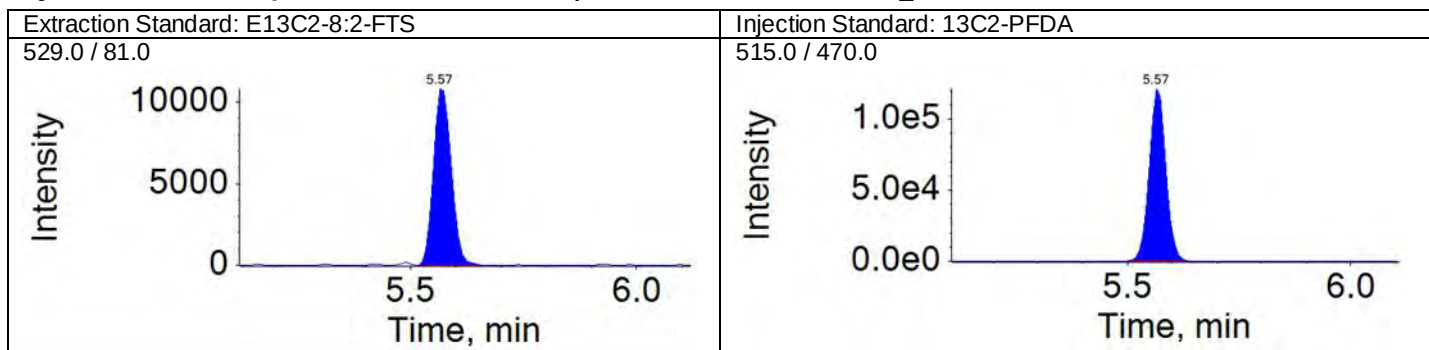
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

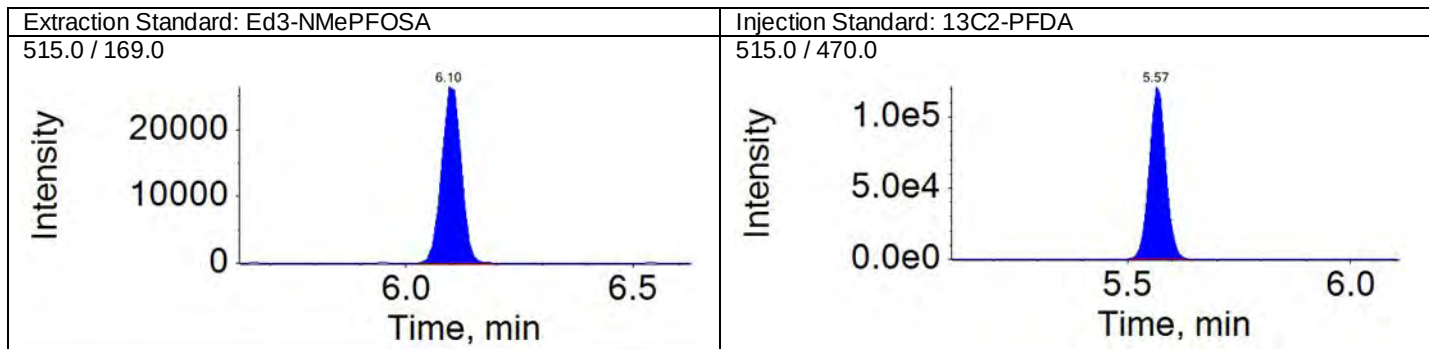
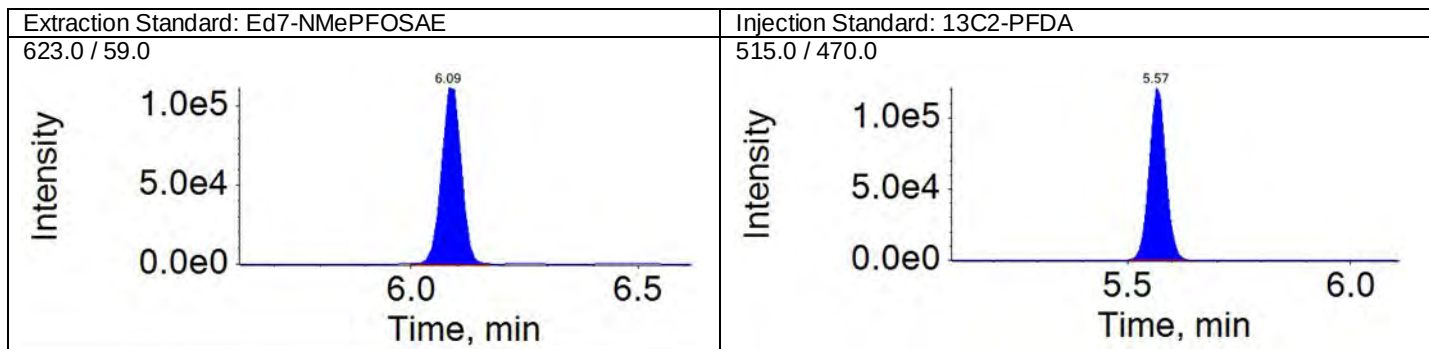
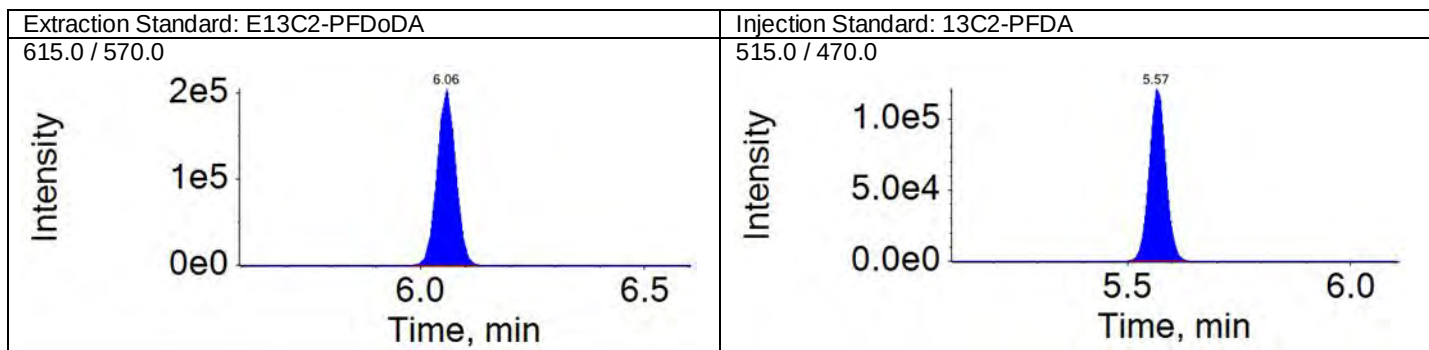
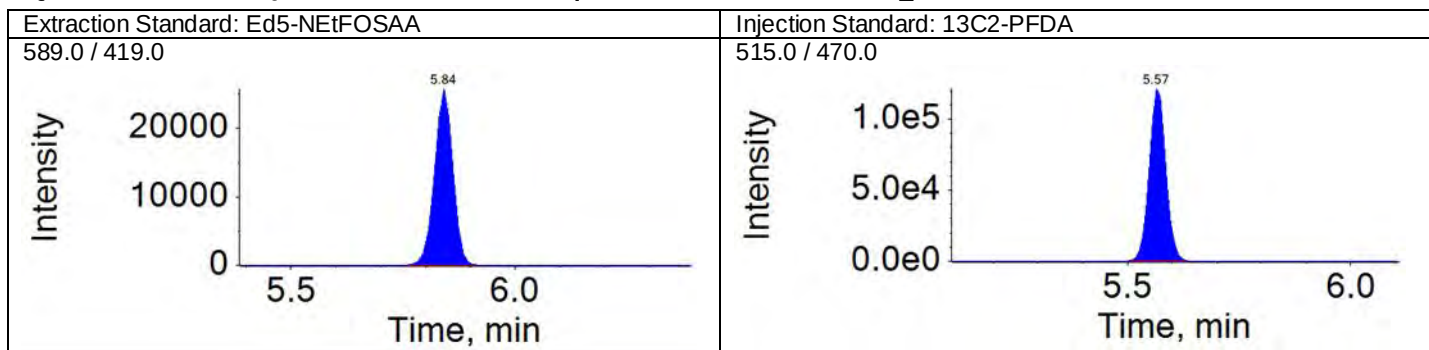
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

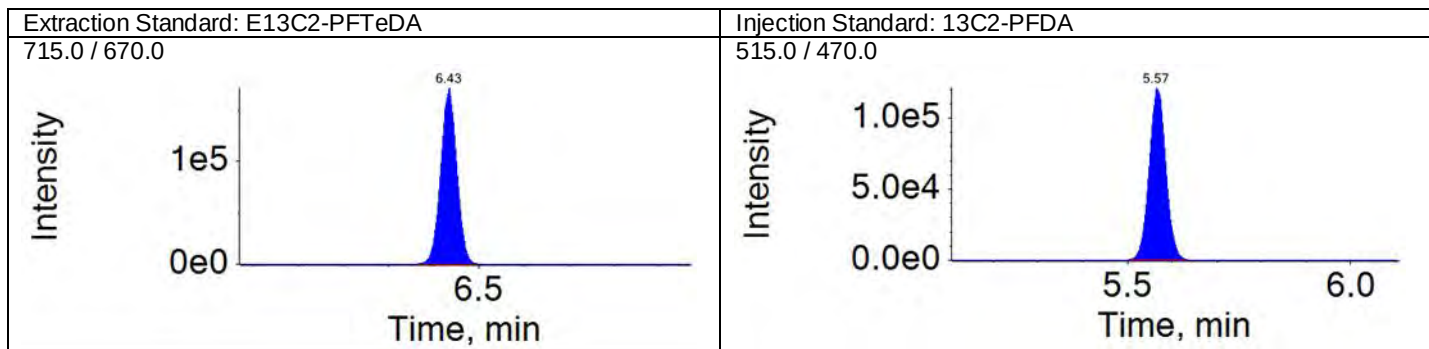
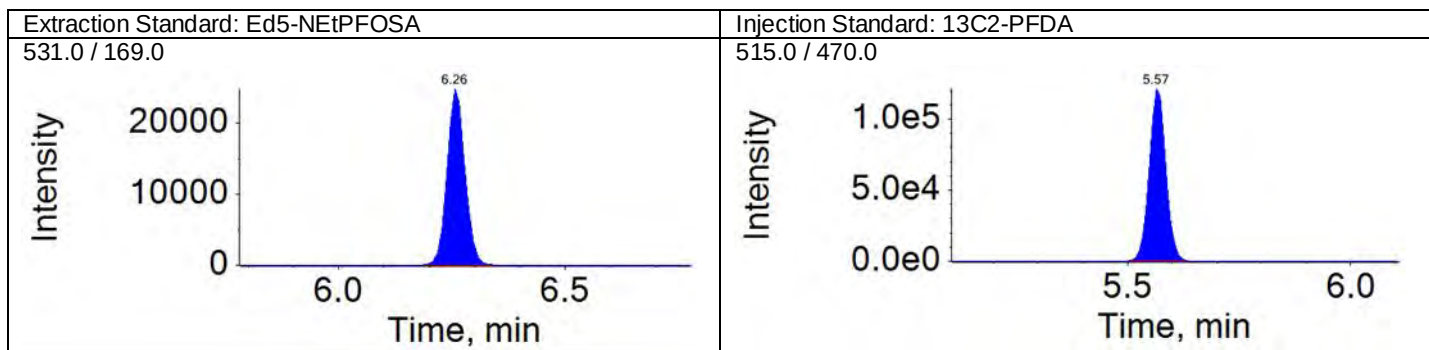
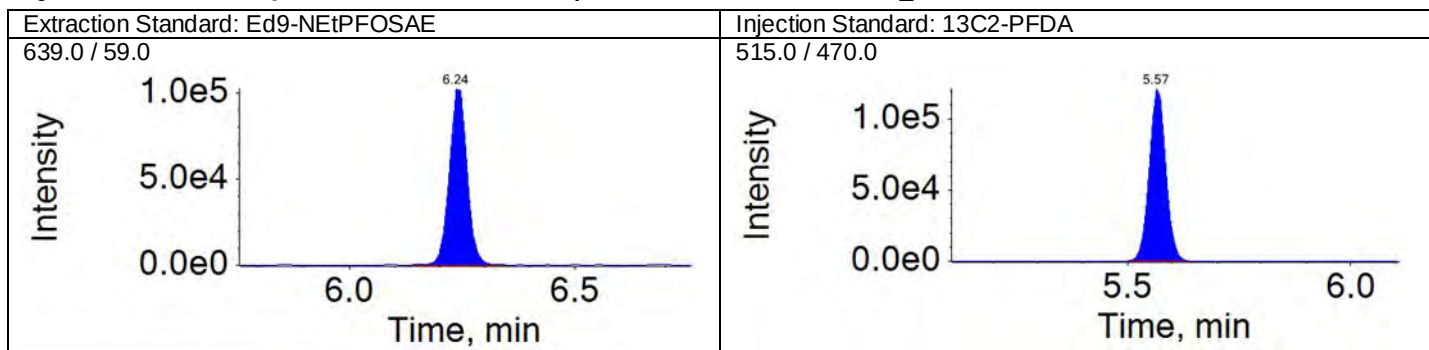
By JPT at 2:53 pm, 11/7/18

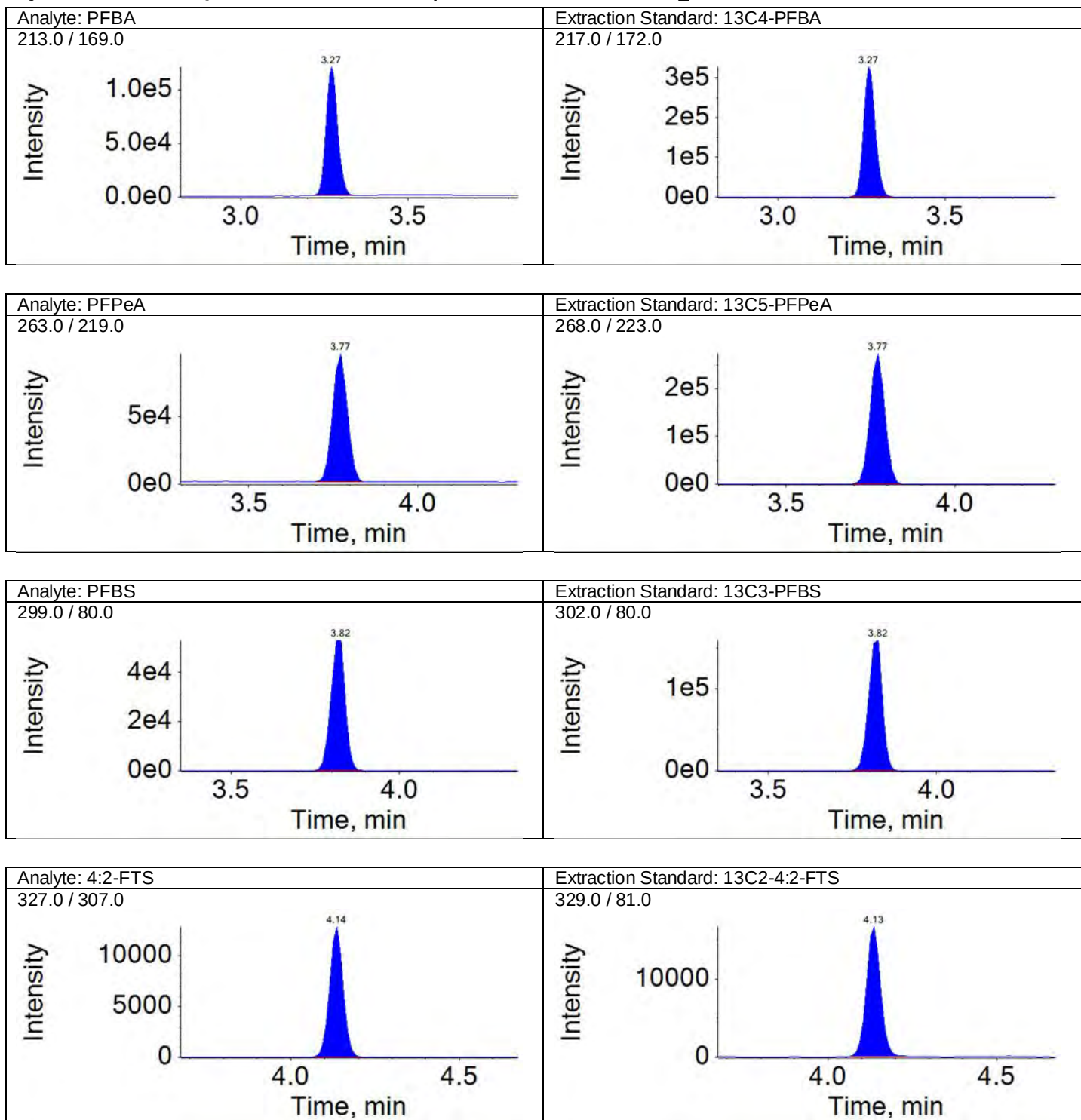
REVIEWED

By umar at 5:23 pm, 11/9/18

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

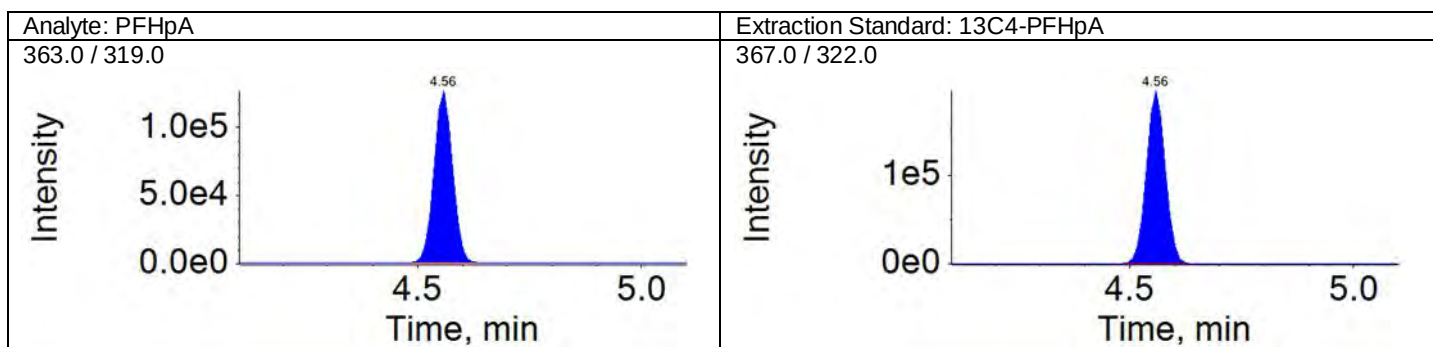
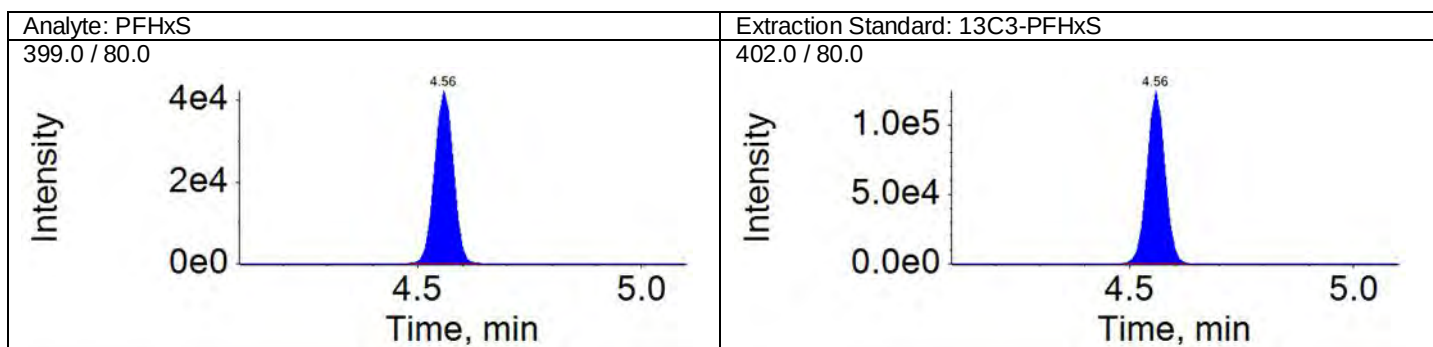
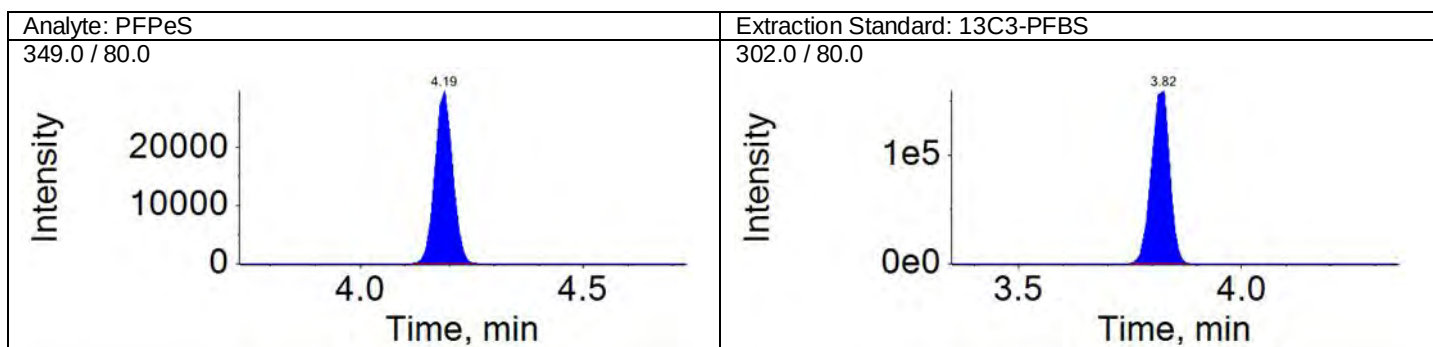
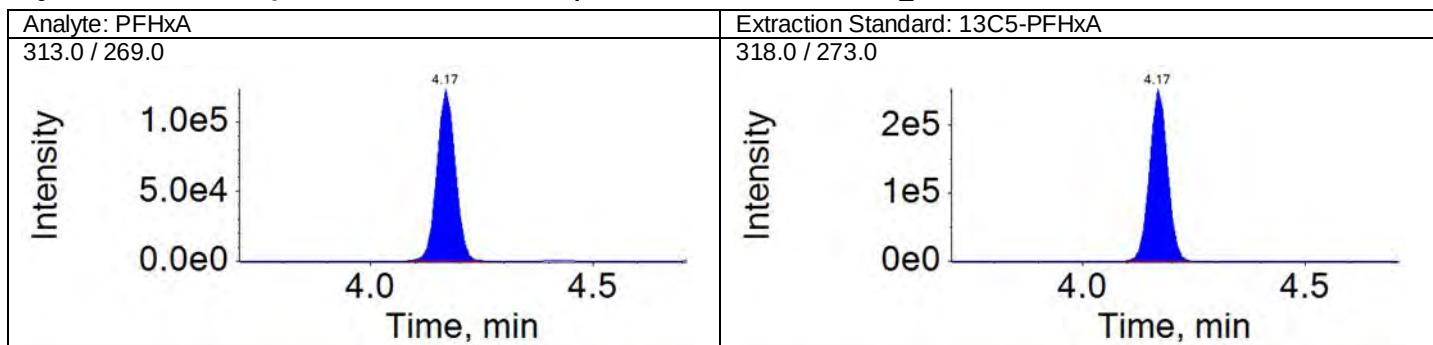
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

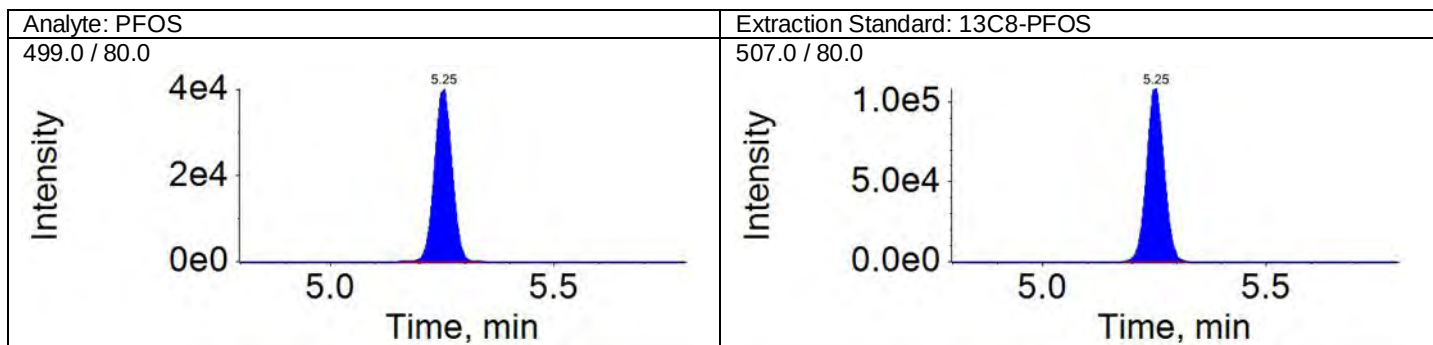
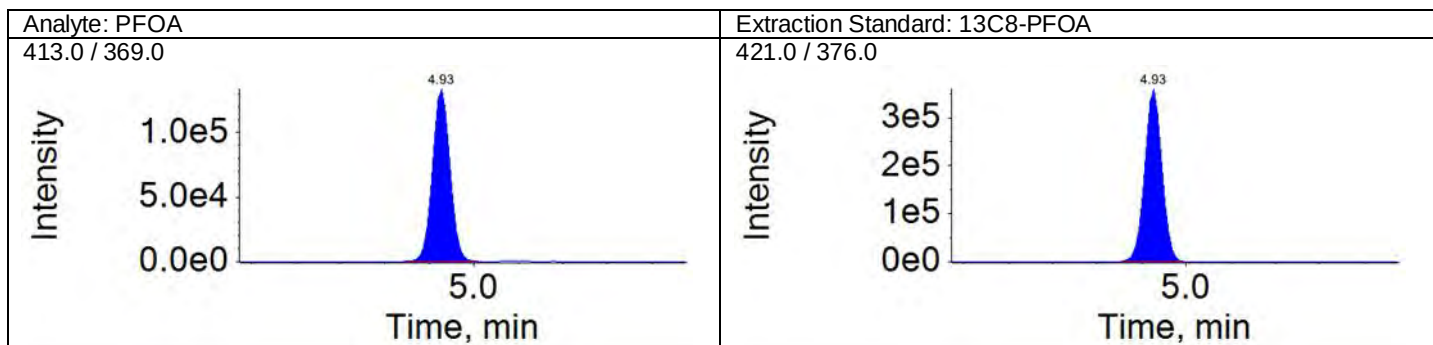
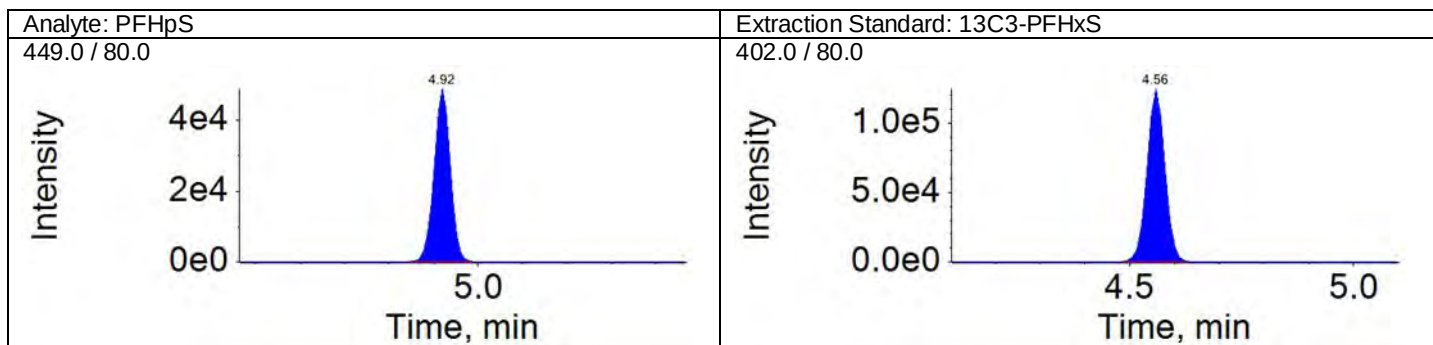
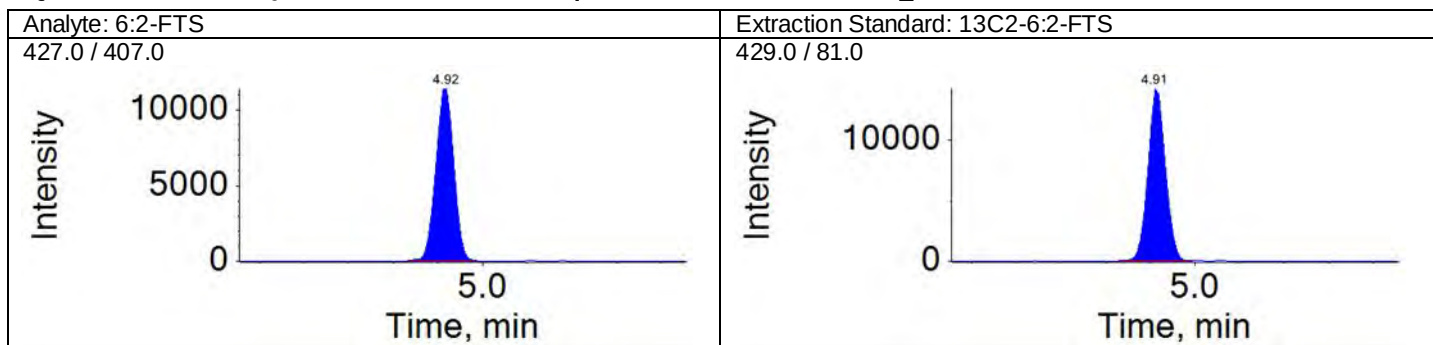
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



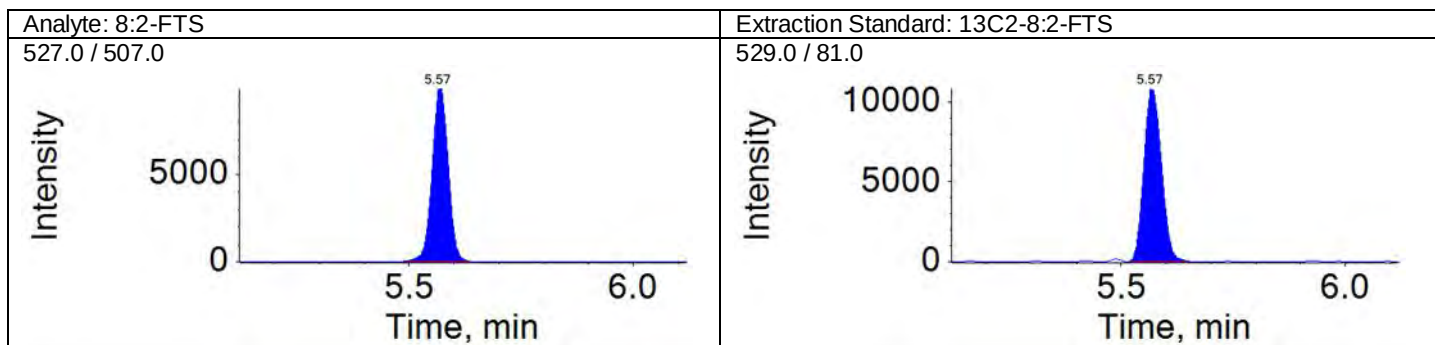
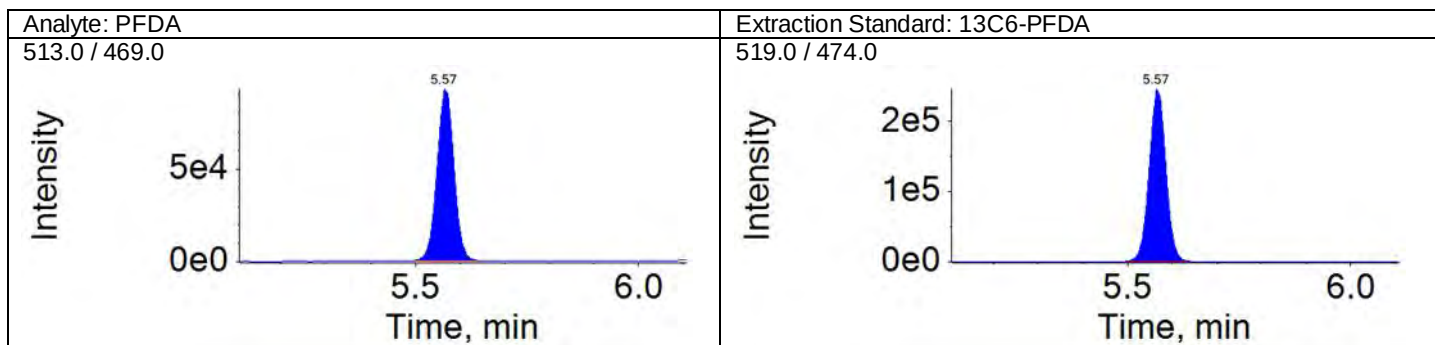
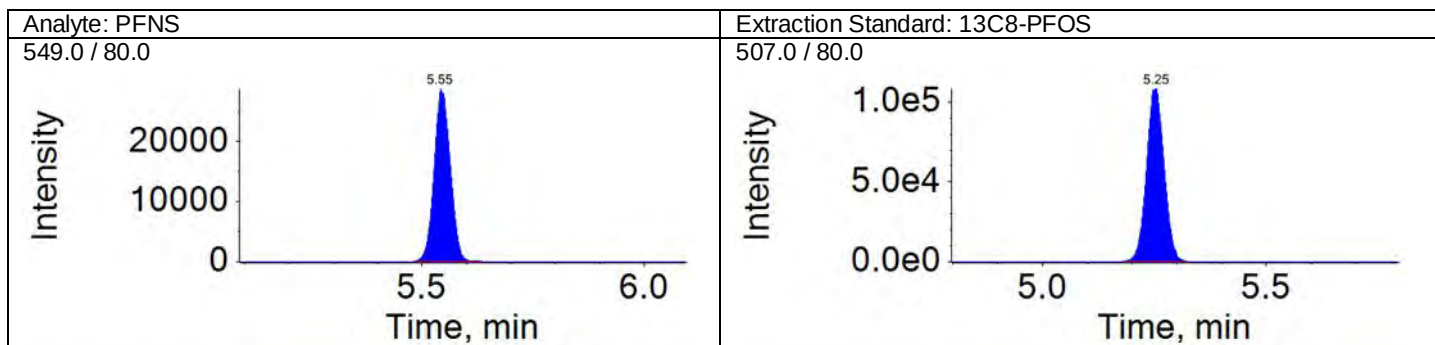
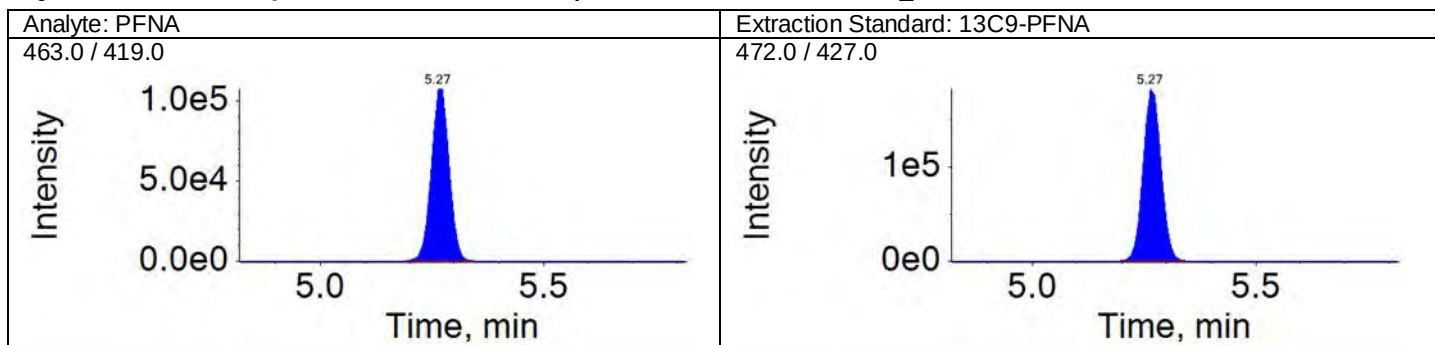
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



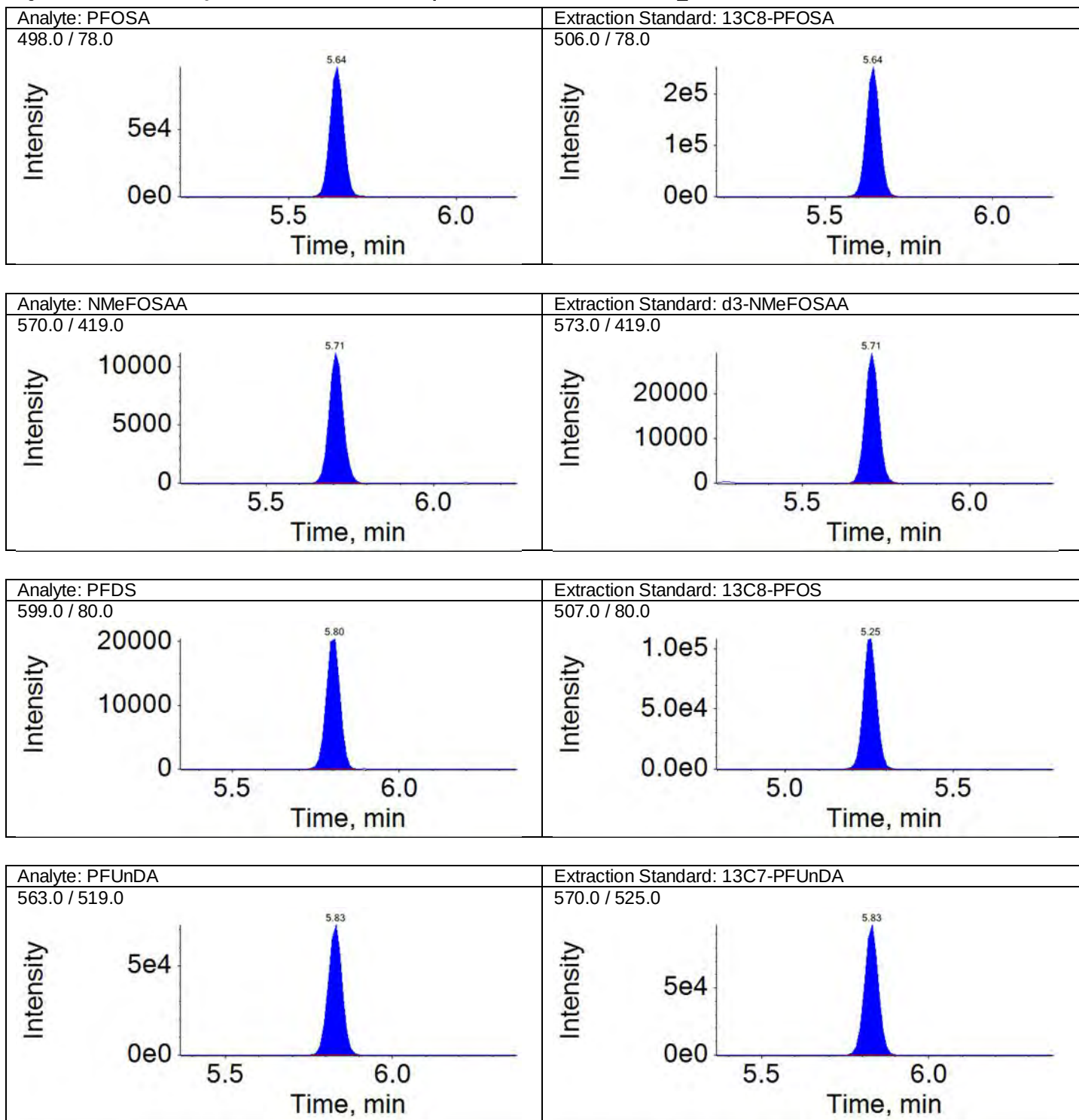
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



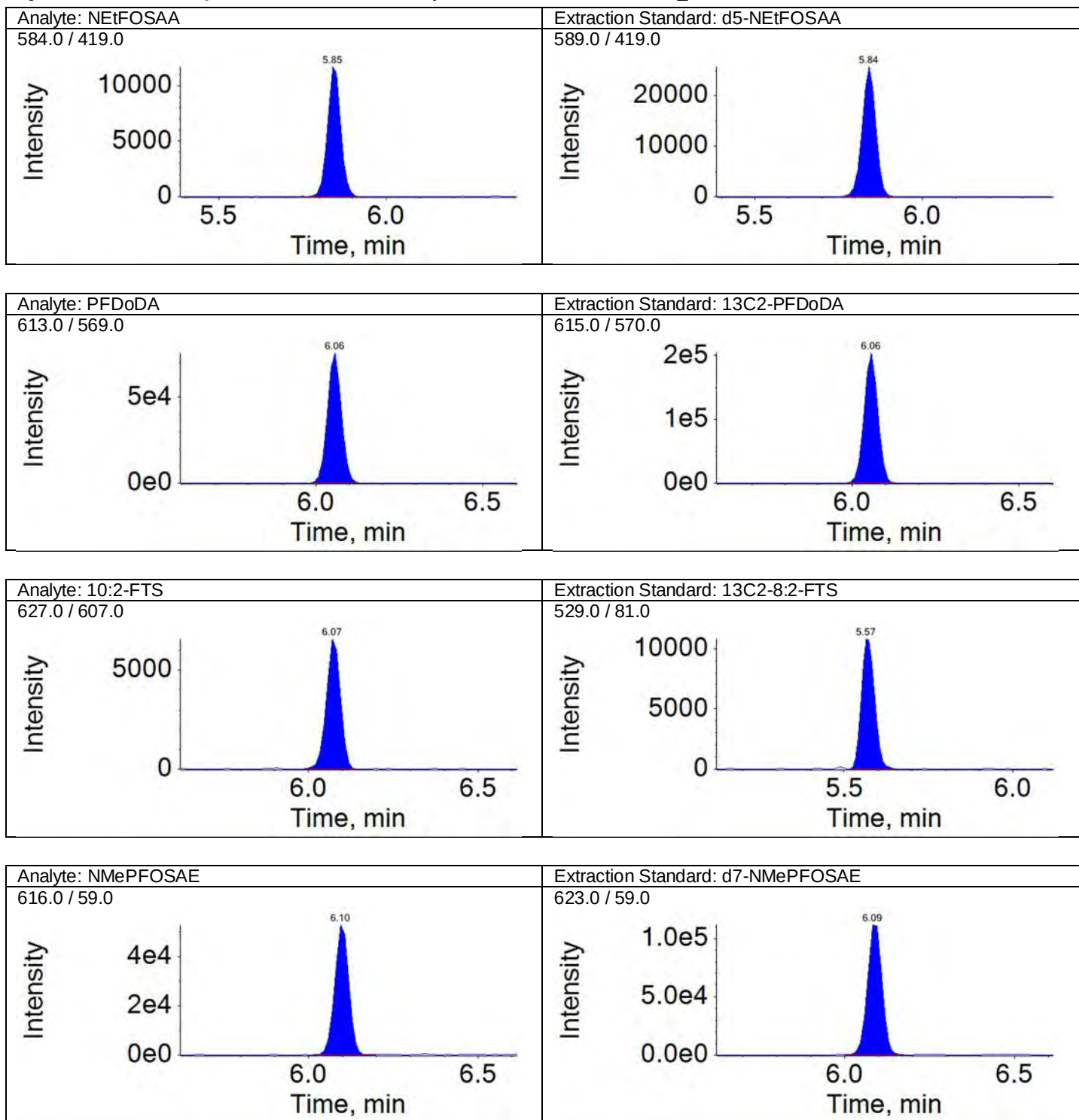
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



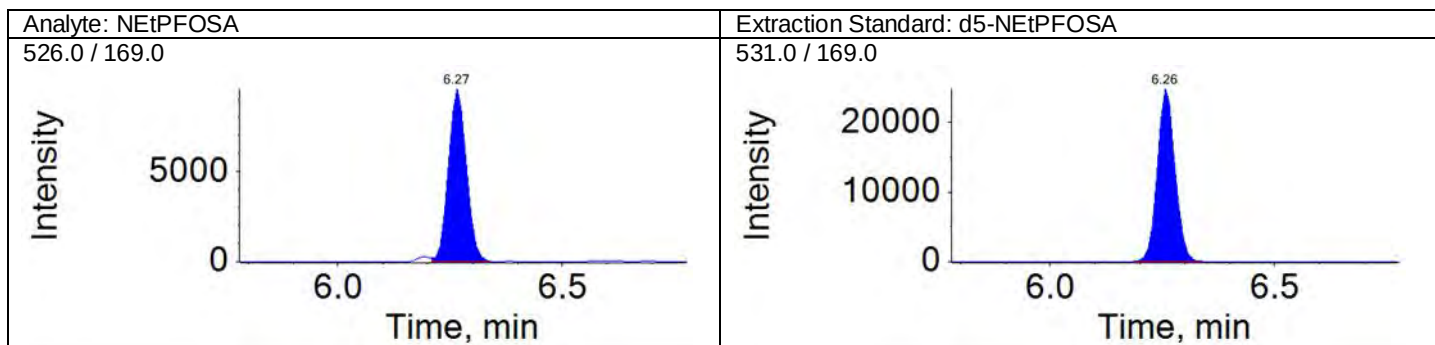
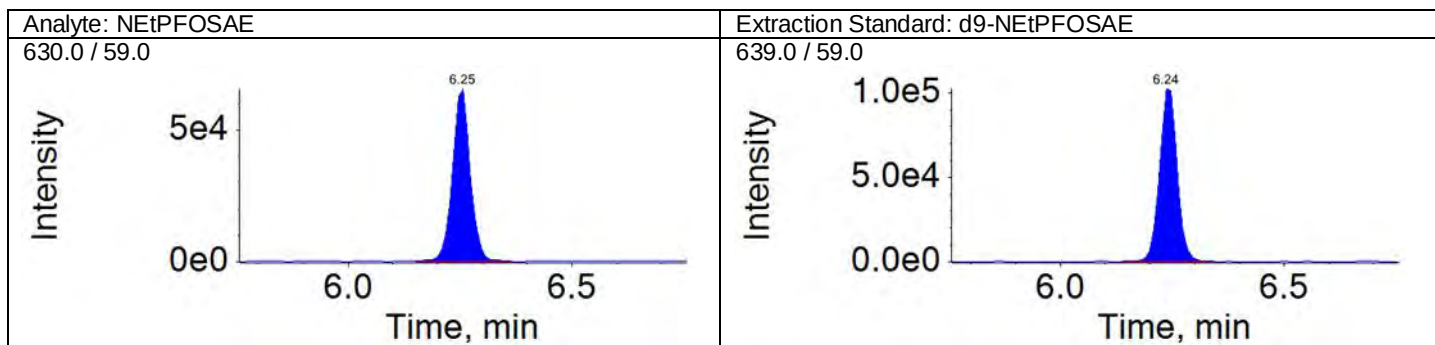
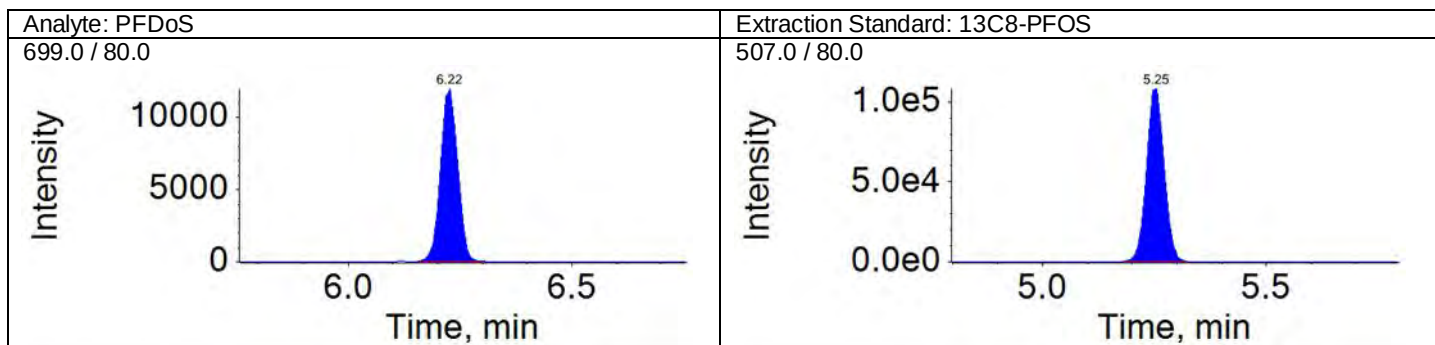
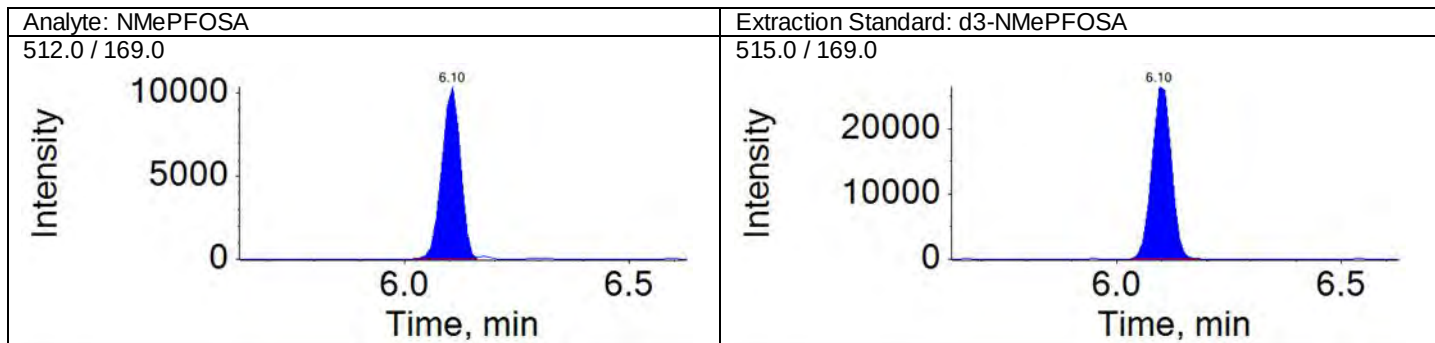
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



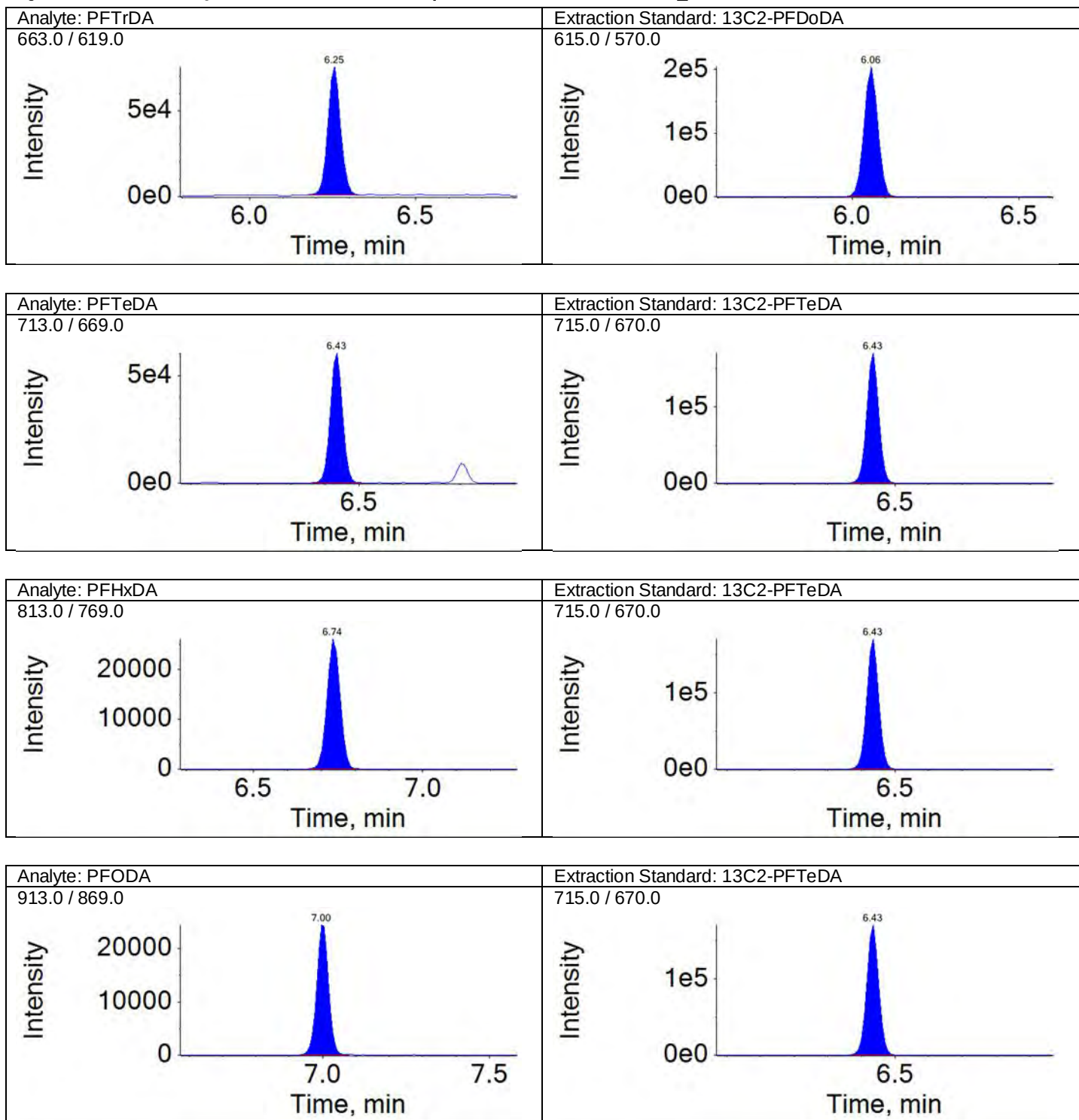
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



Ion Ratio Report

Sample Name: CAL3

Instrument Name: LM27631

File Name: 18NOV07DCAL-12.wiff

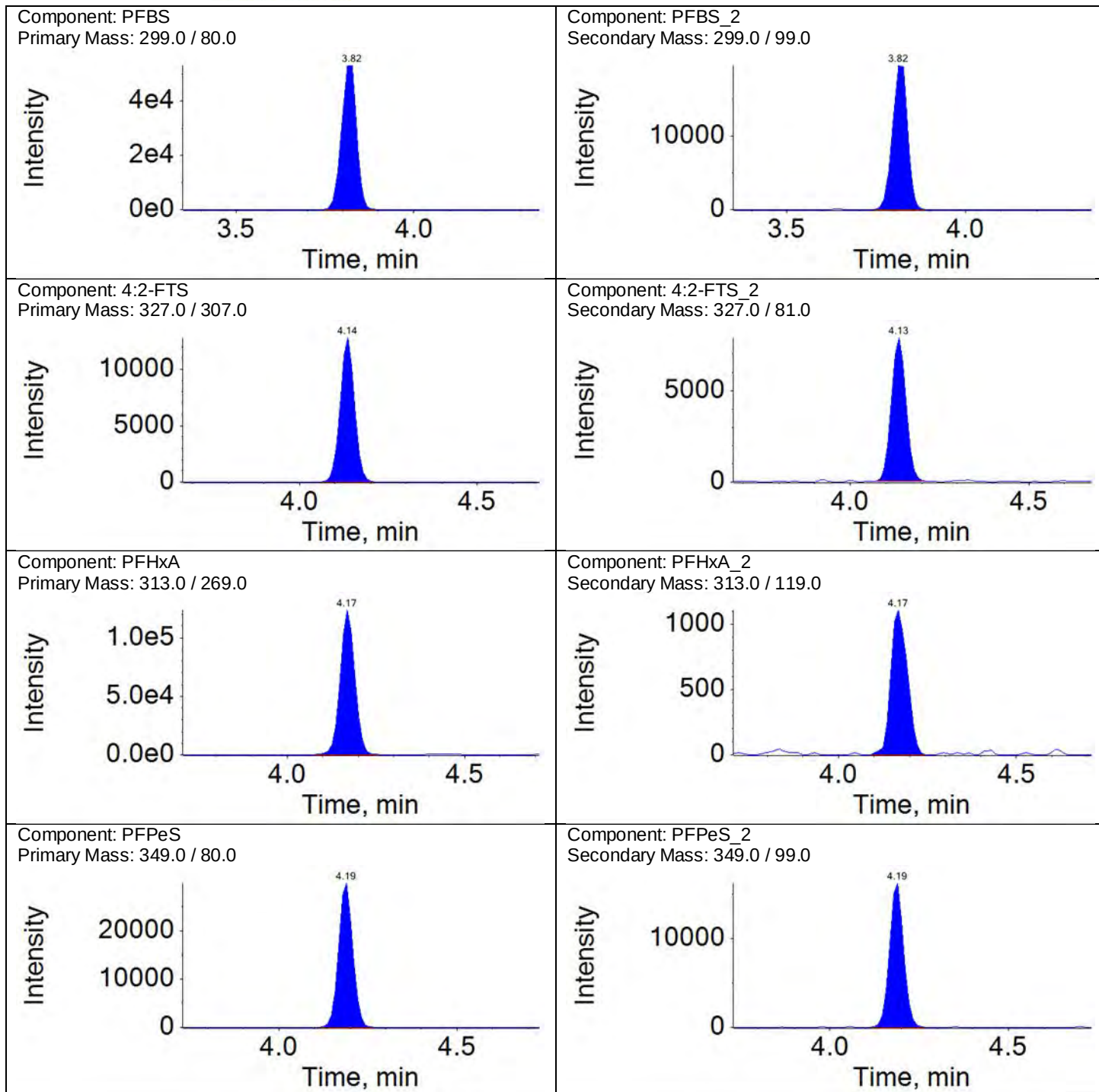
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	157656.3	A	1.0000	1.0000			
PFBS_2	3.82	1.00	57942.5	A	0.3576	0.3675	3	50	
4:2-FTS	4.14	1.00	35586.2	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	22248.8	A	0.6359	0.6252	-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	
PFTTrDA	6.25	1.03	197290.7	A	1.0000	1.0000			
PFTTrDA_2	6.26	1.03	2128.7	A	0.0096	0.0108	12	50	
PFTeDA	6.43	1.00	150162.8	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	849.9	A	0.0055	0.0057	2	50	
PFHxDA	6.74	1.05	70193.5	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	4327.4	A	0.0596	0.0616	3	50	
PFODA	7.00	1.09	59736.9	A	1.0000	1.0000			
PFODA_2	7.00	1.09	1504.6	A	0.0257	0.0252	-2	50	

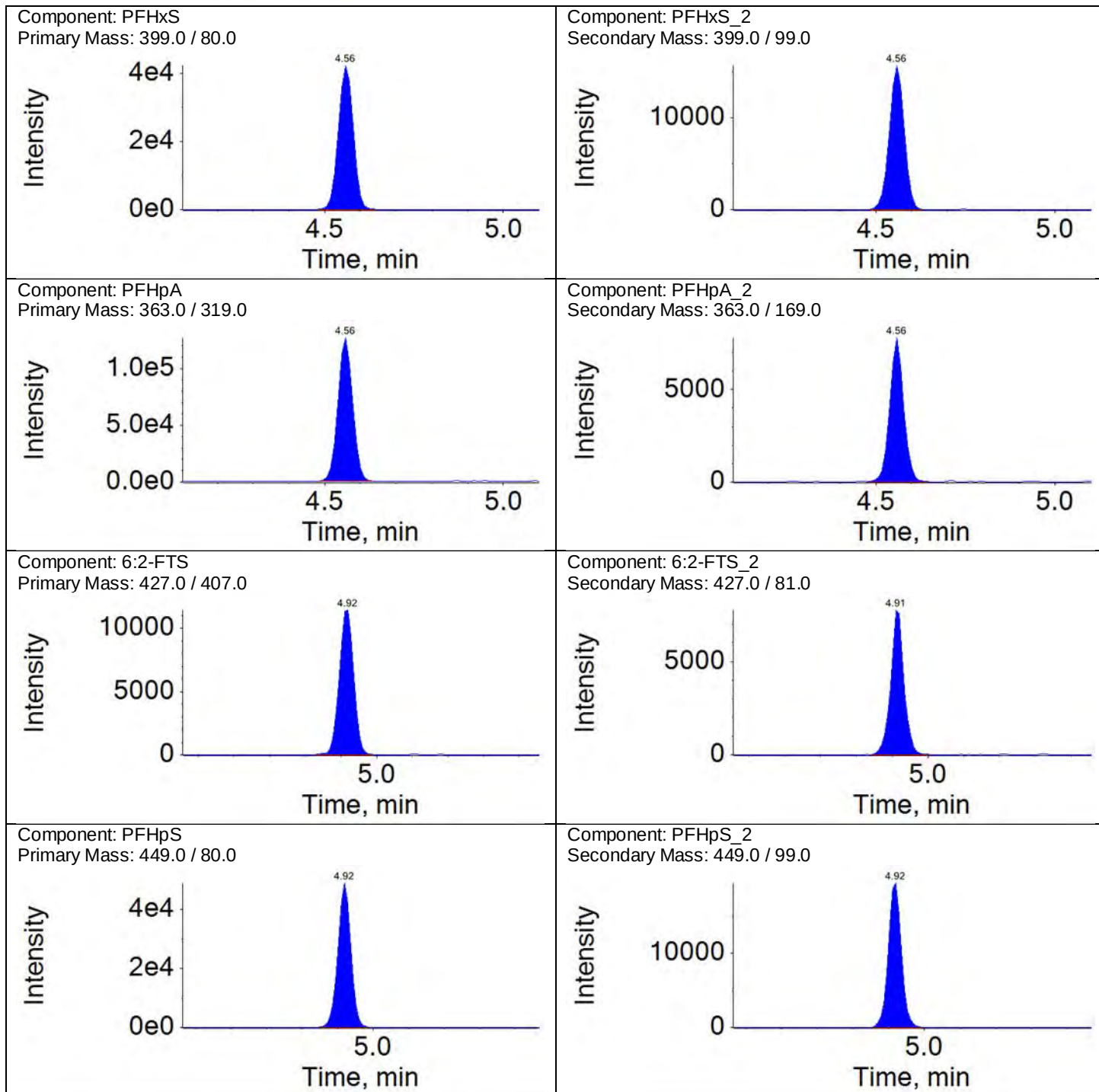
APPROVED

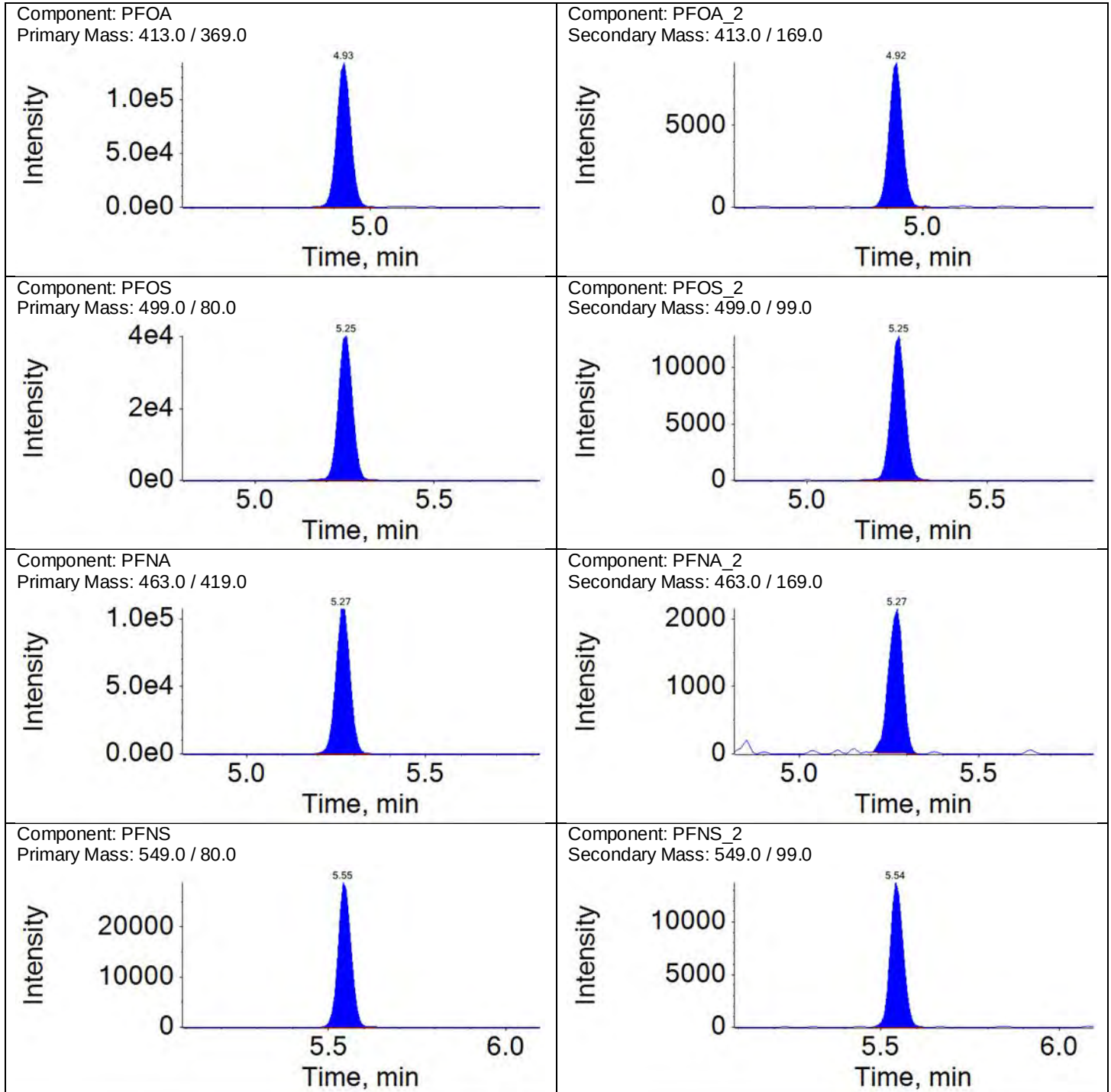
By JPT at 2:53 pm, 11/7/18

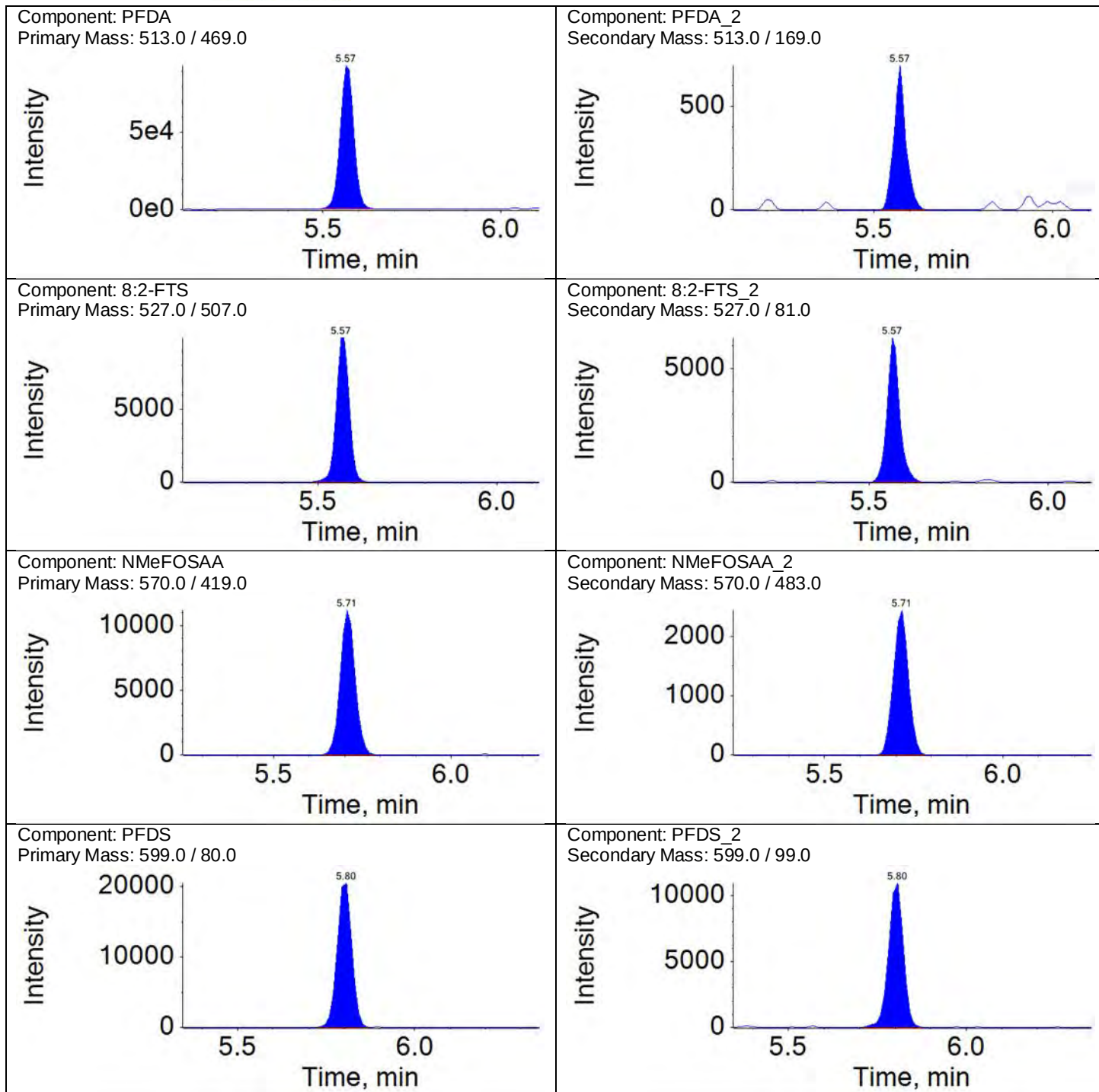
REVIEWED

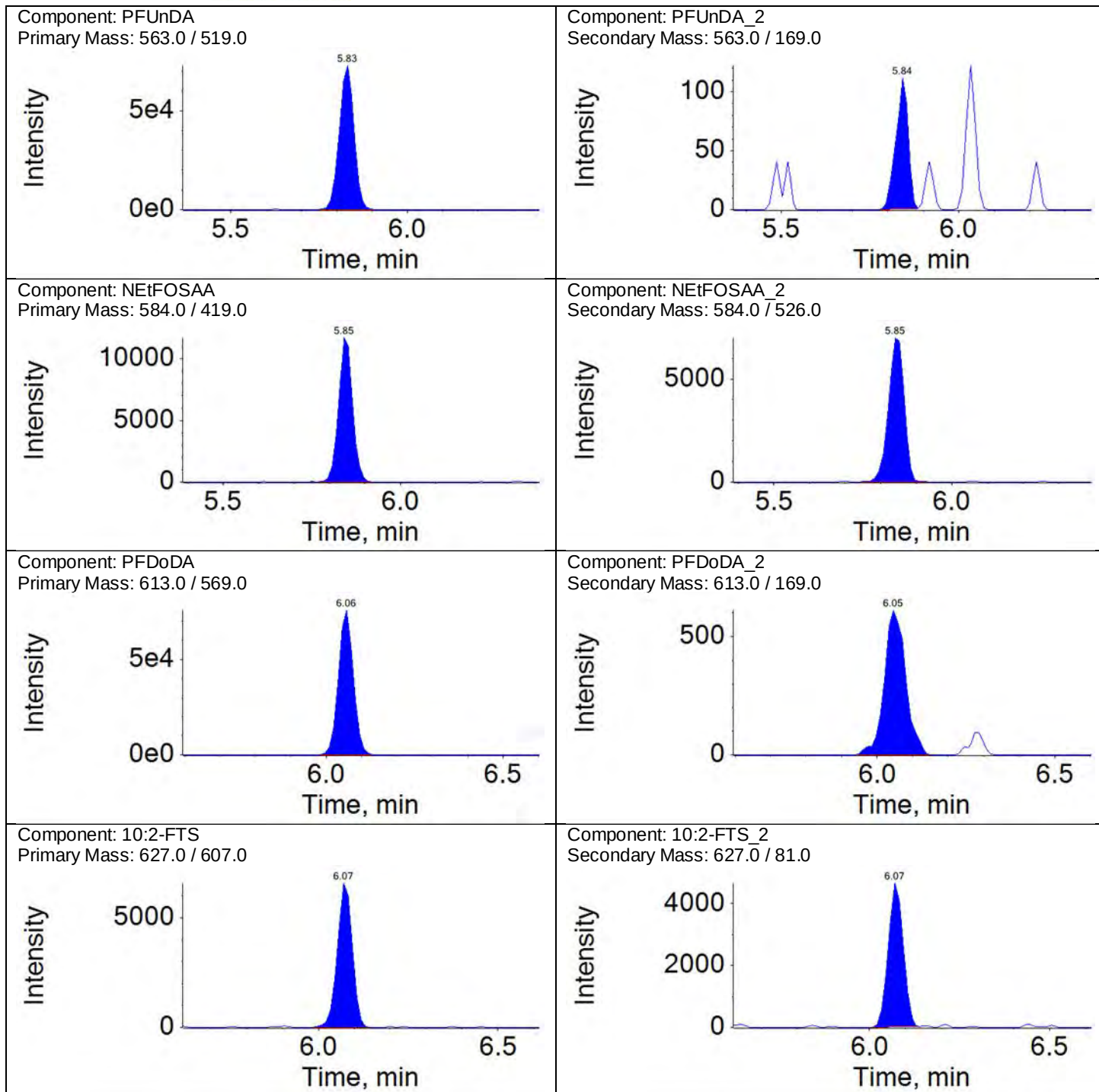
By umar at 5:23 pm, 11/9/18

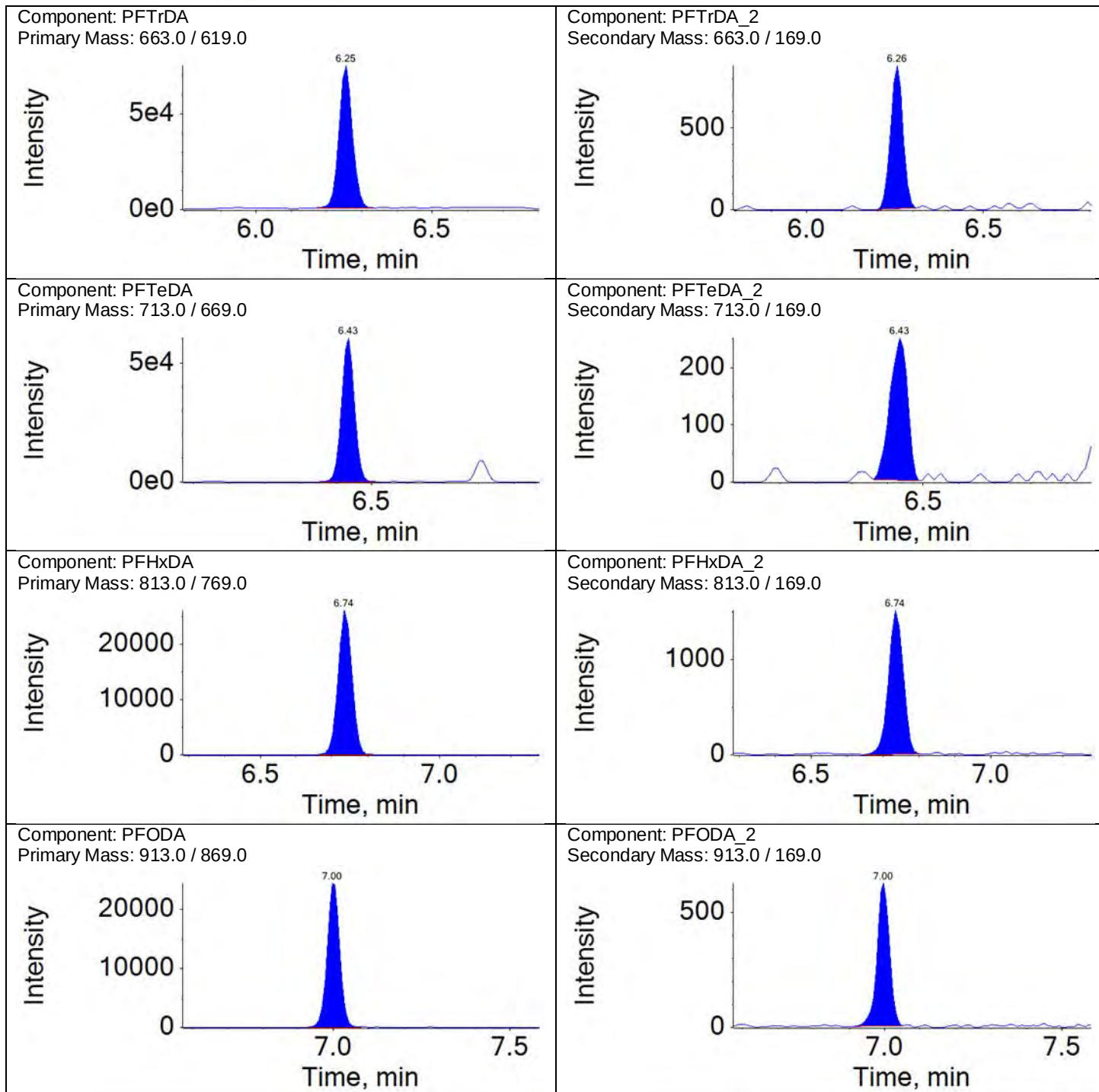












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

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	Reference 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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL4

Instrument Name: LM27631

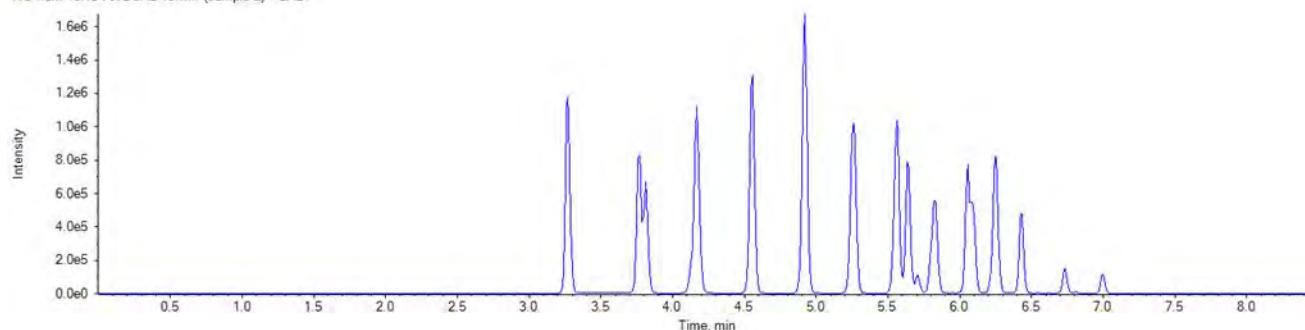
File Name: 18NOV07DCAL-13.wiff

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
PFTDA	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

TIC from 18NOV07DCAL-13.wiff (sample 2) - CAL4



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 450 of 1595

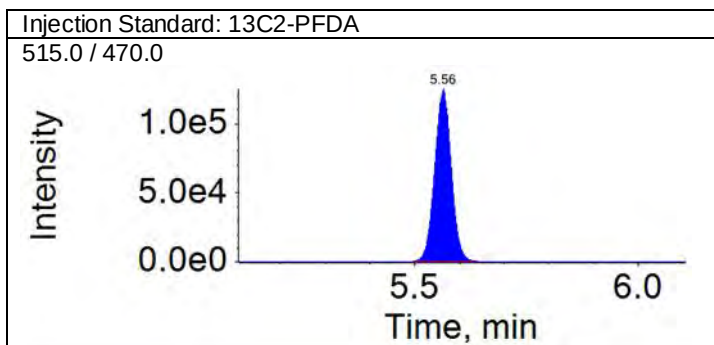
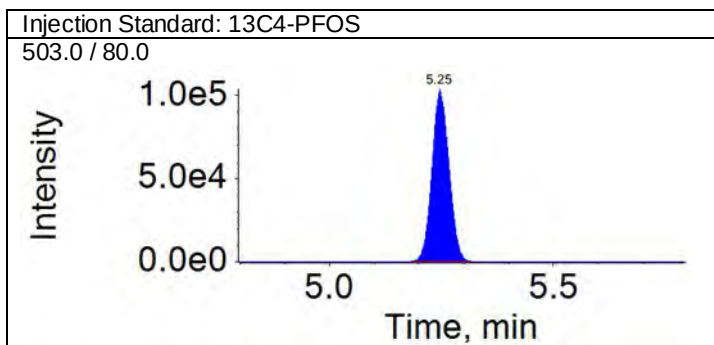
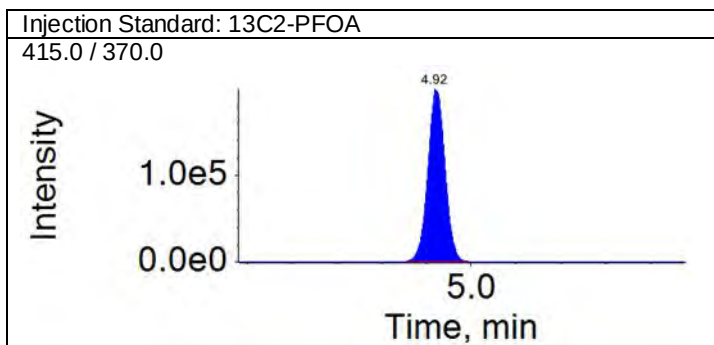
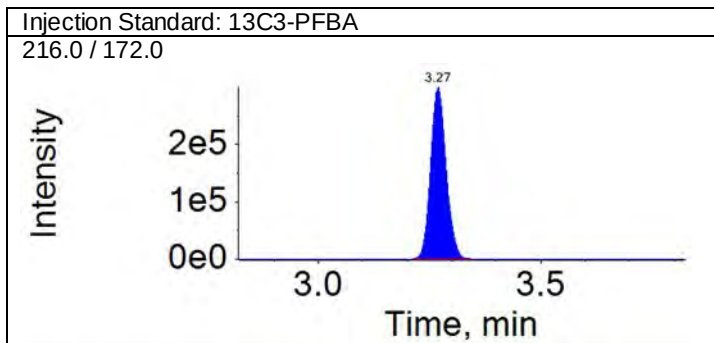
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

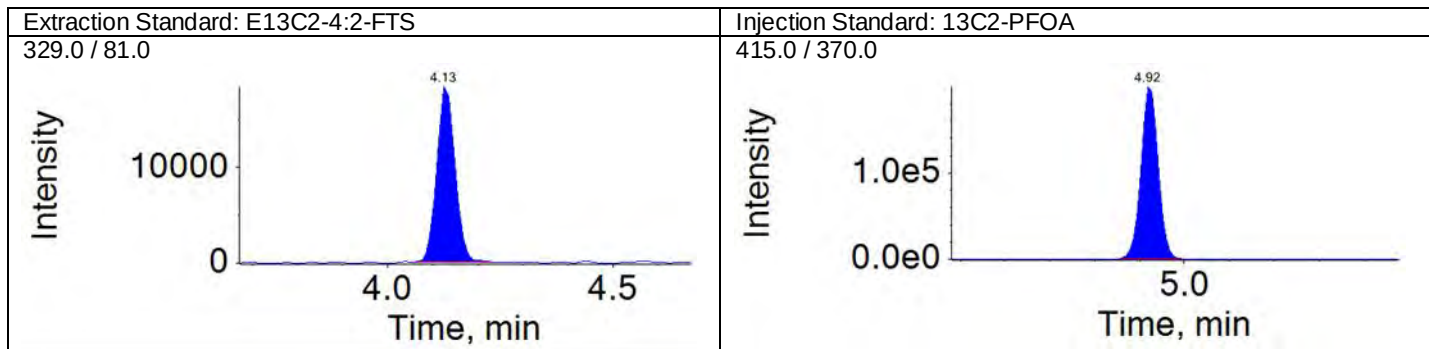
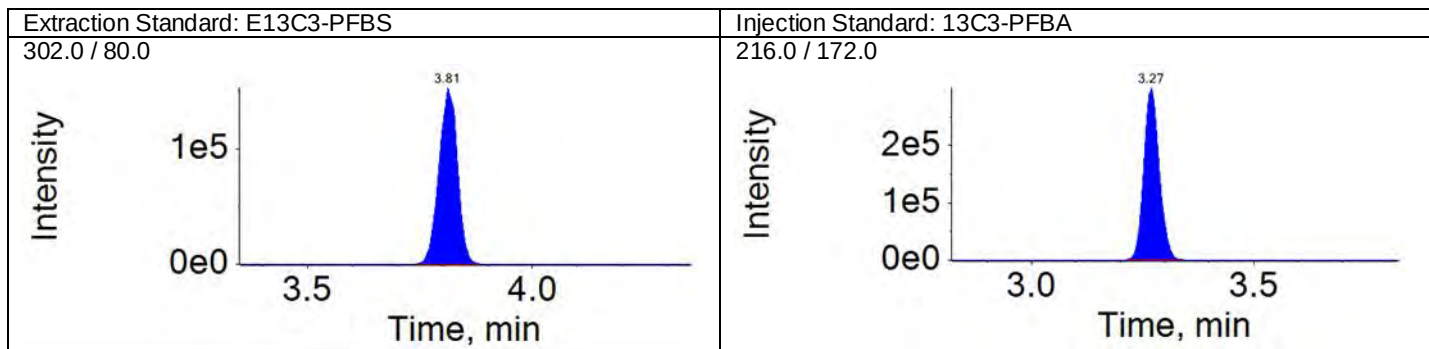
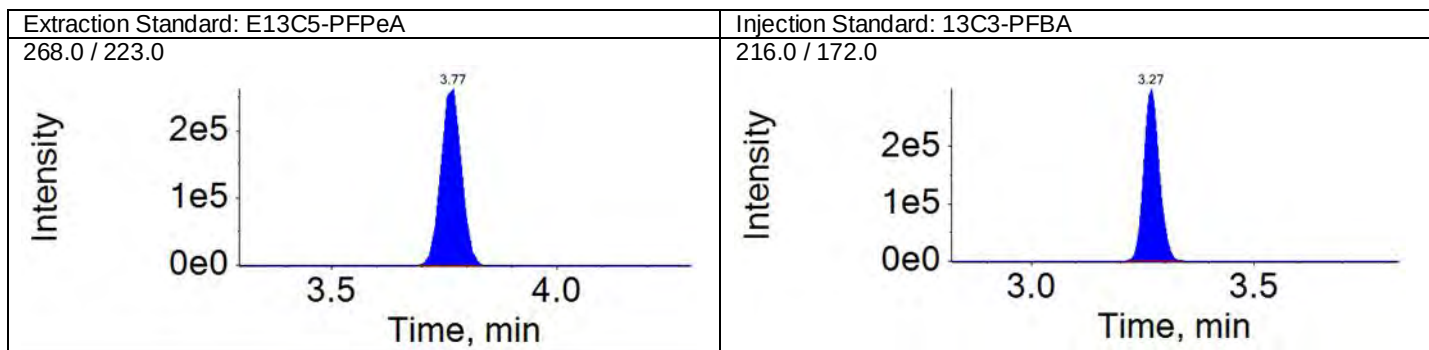
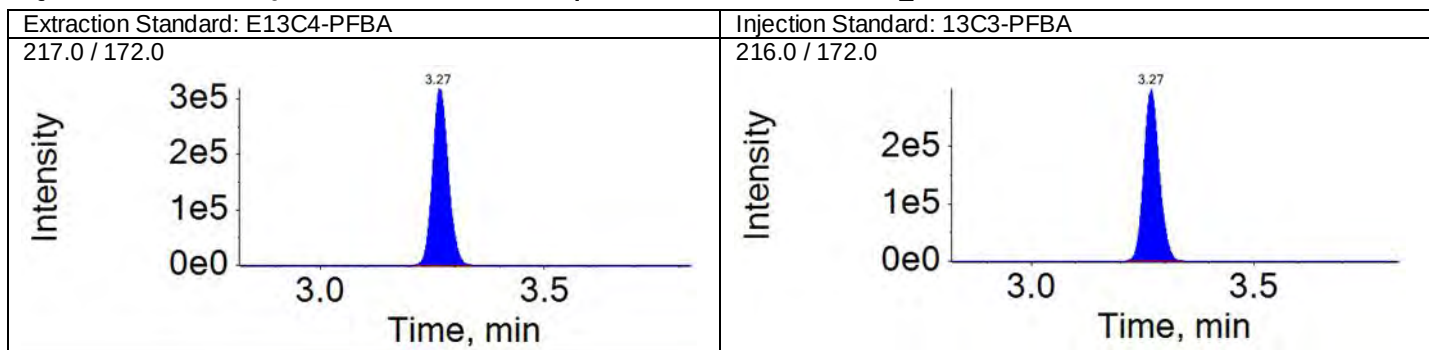
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



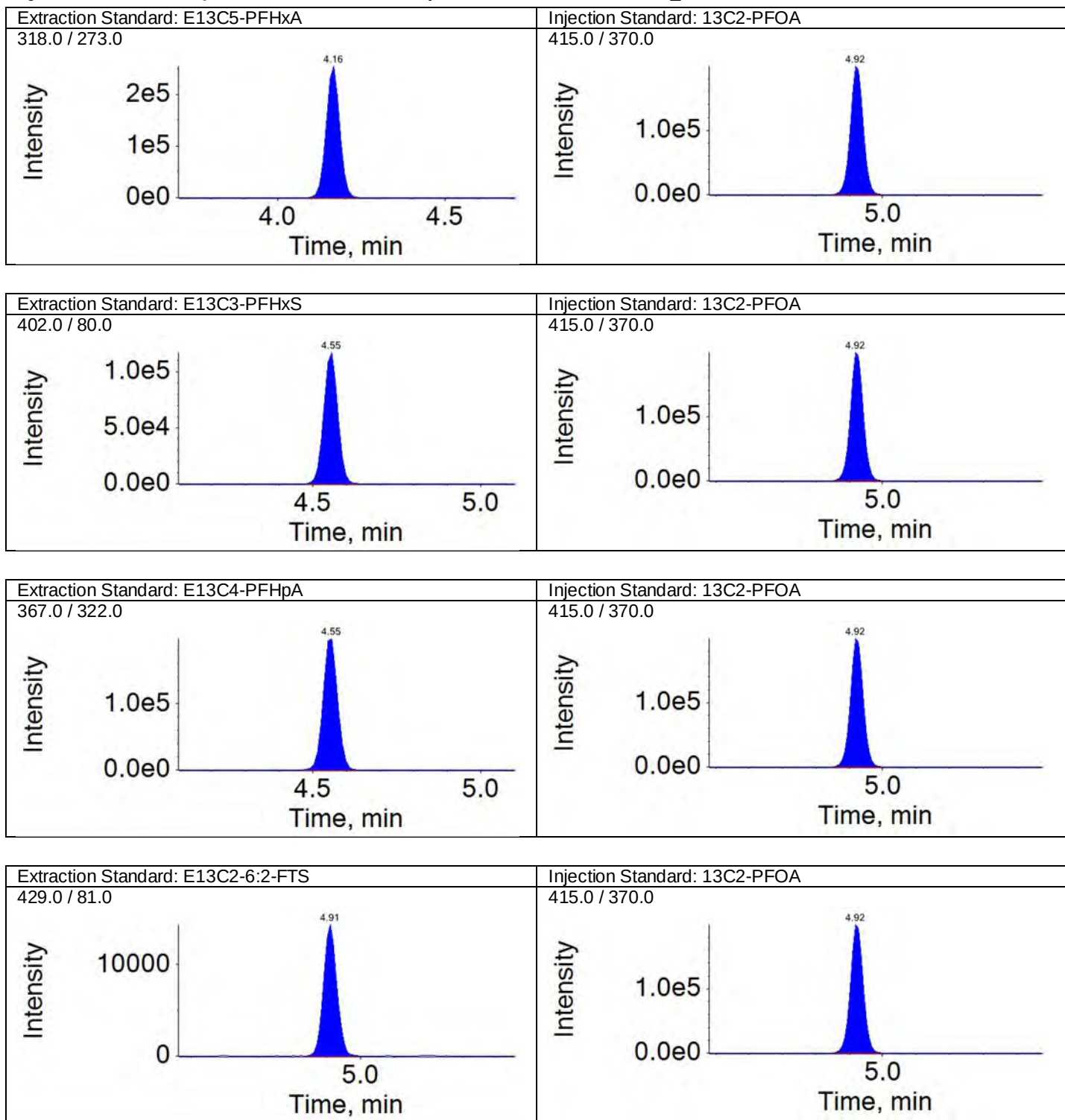
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



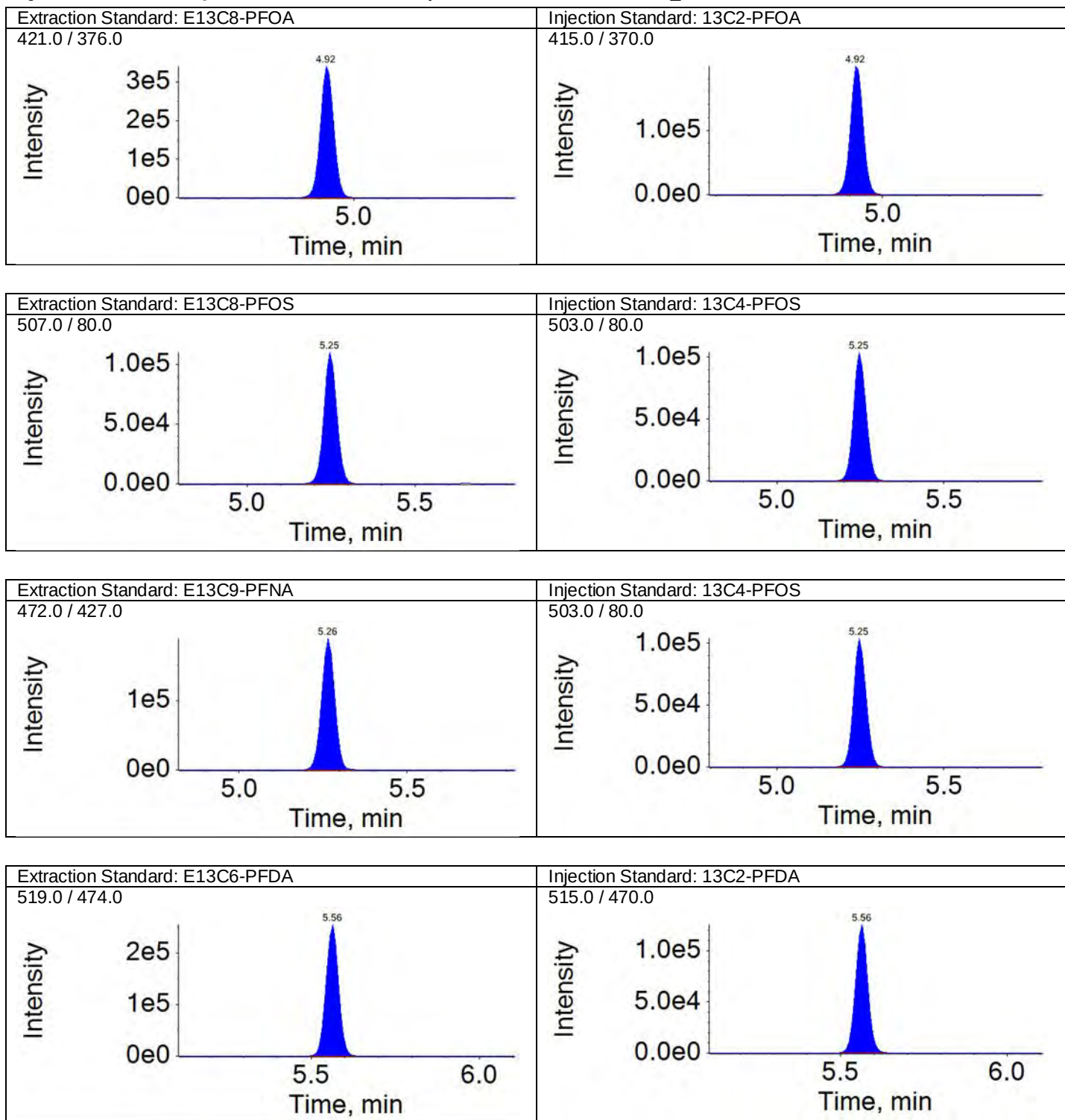
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

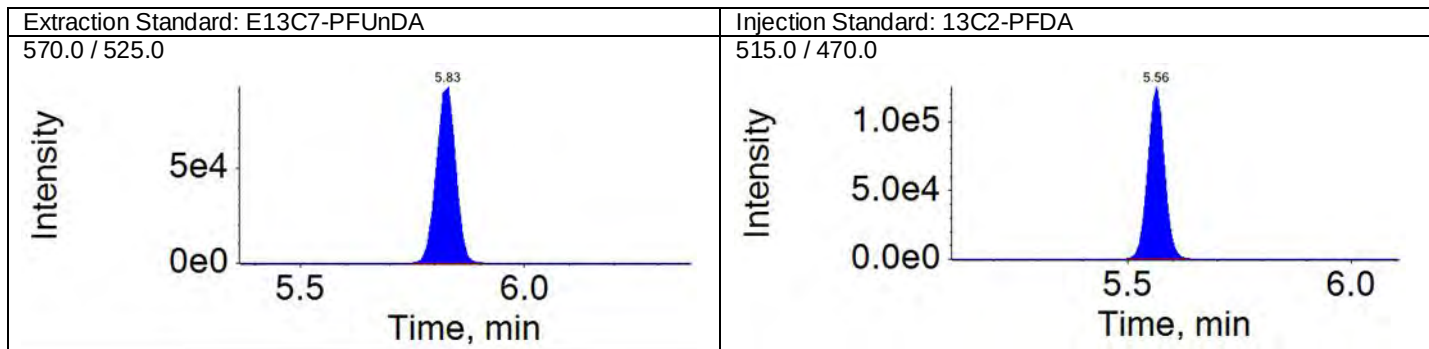
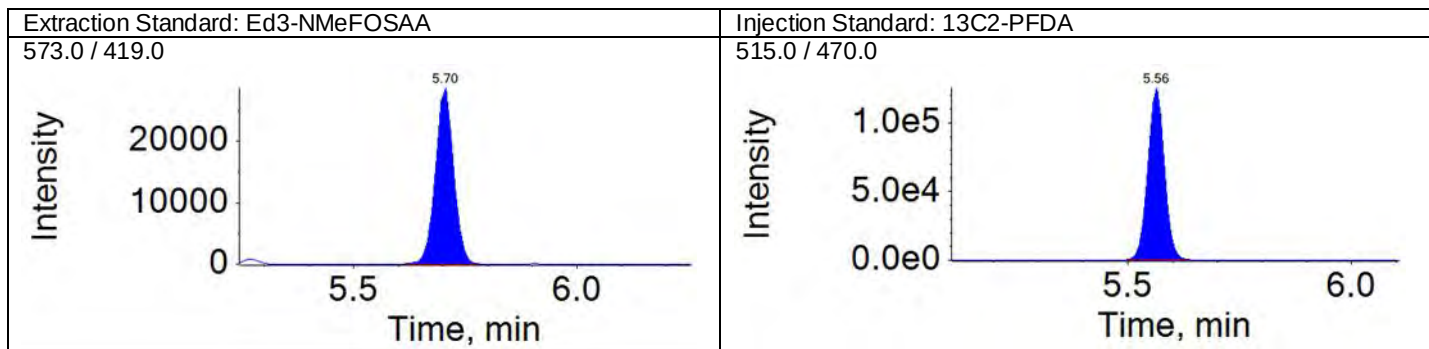
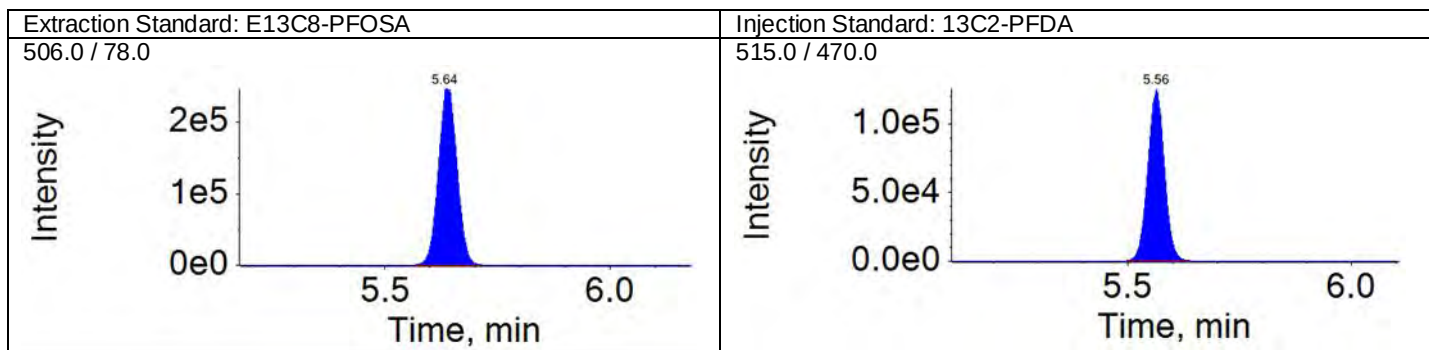
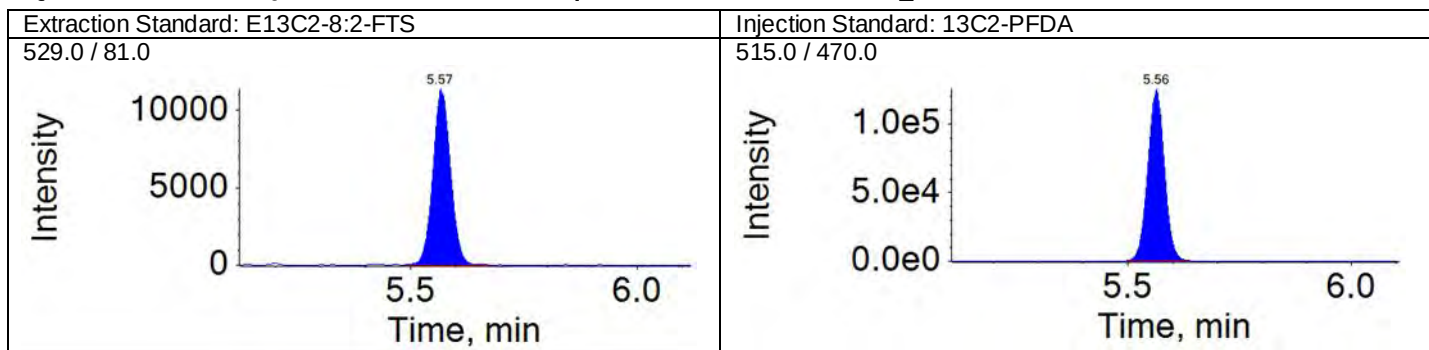
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

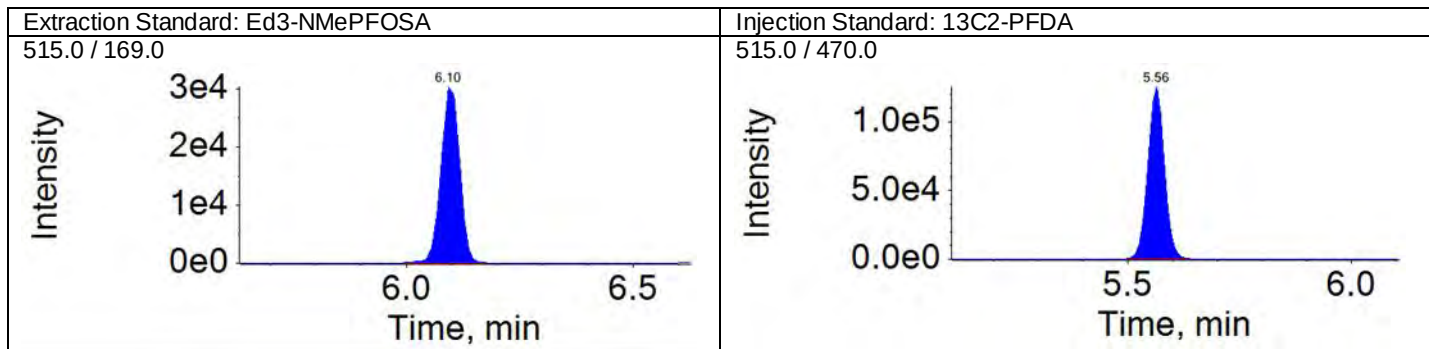
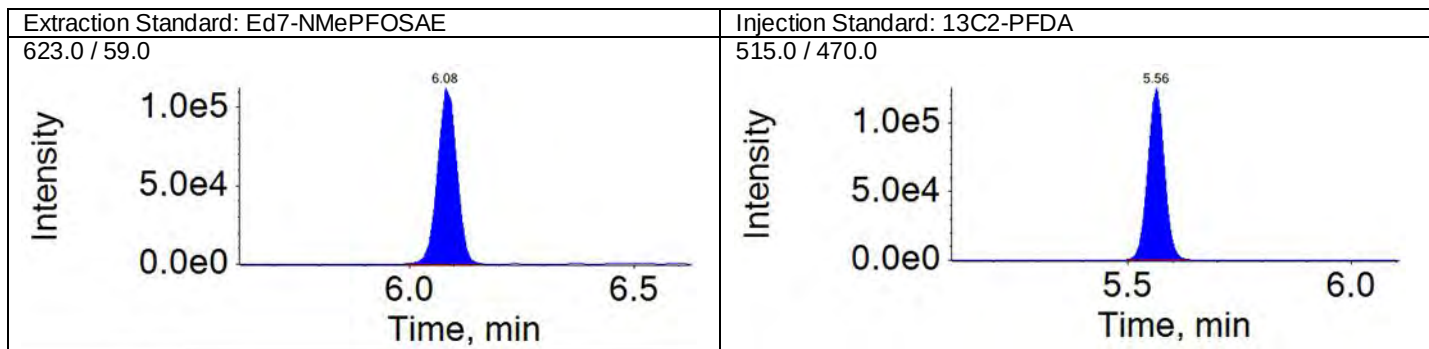
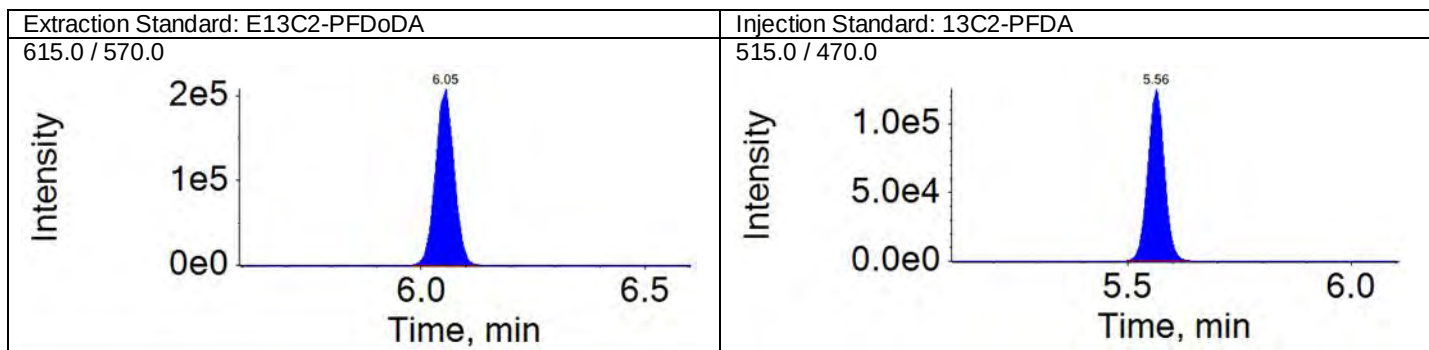
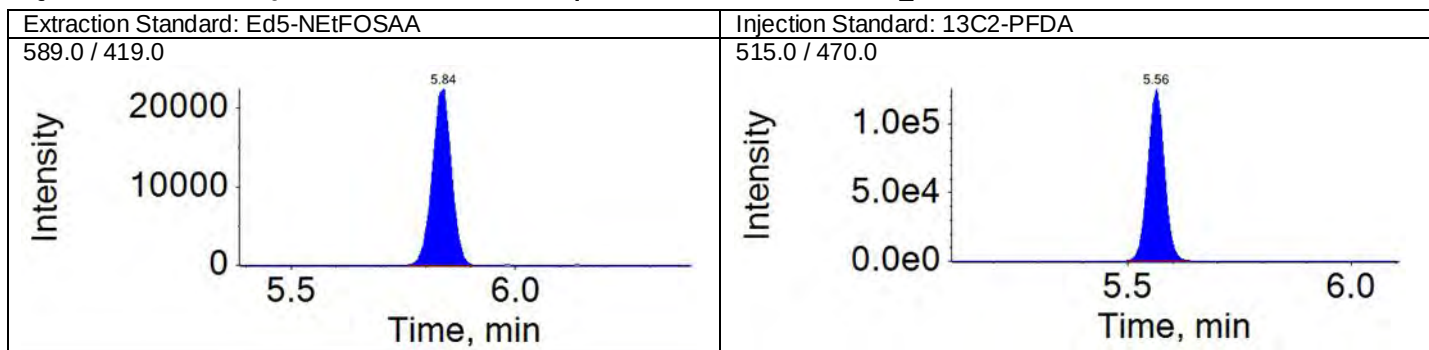
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

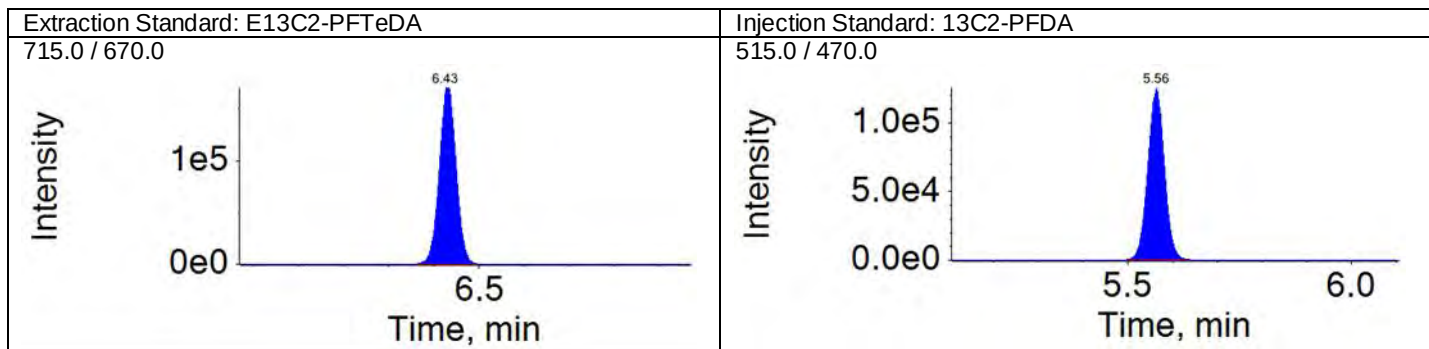
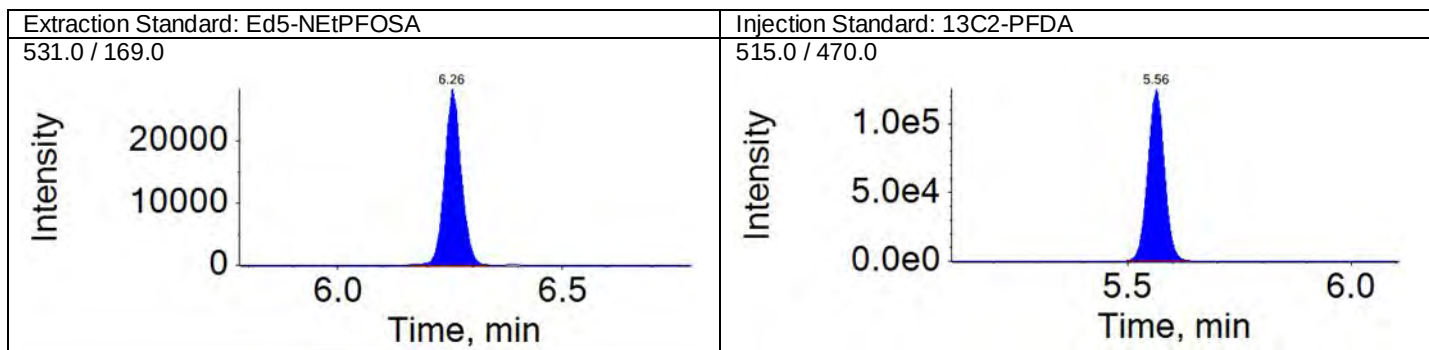
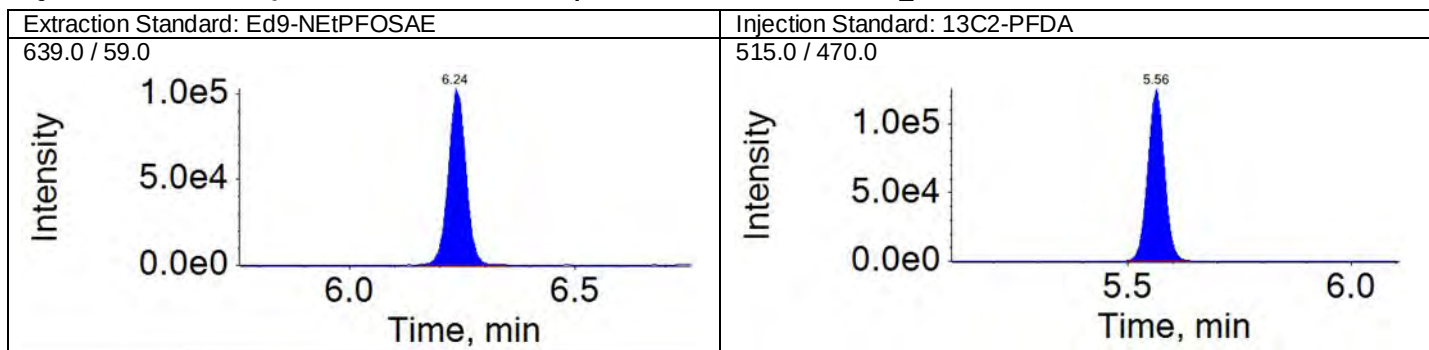
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

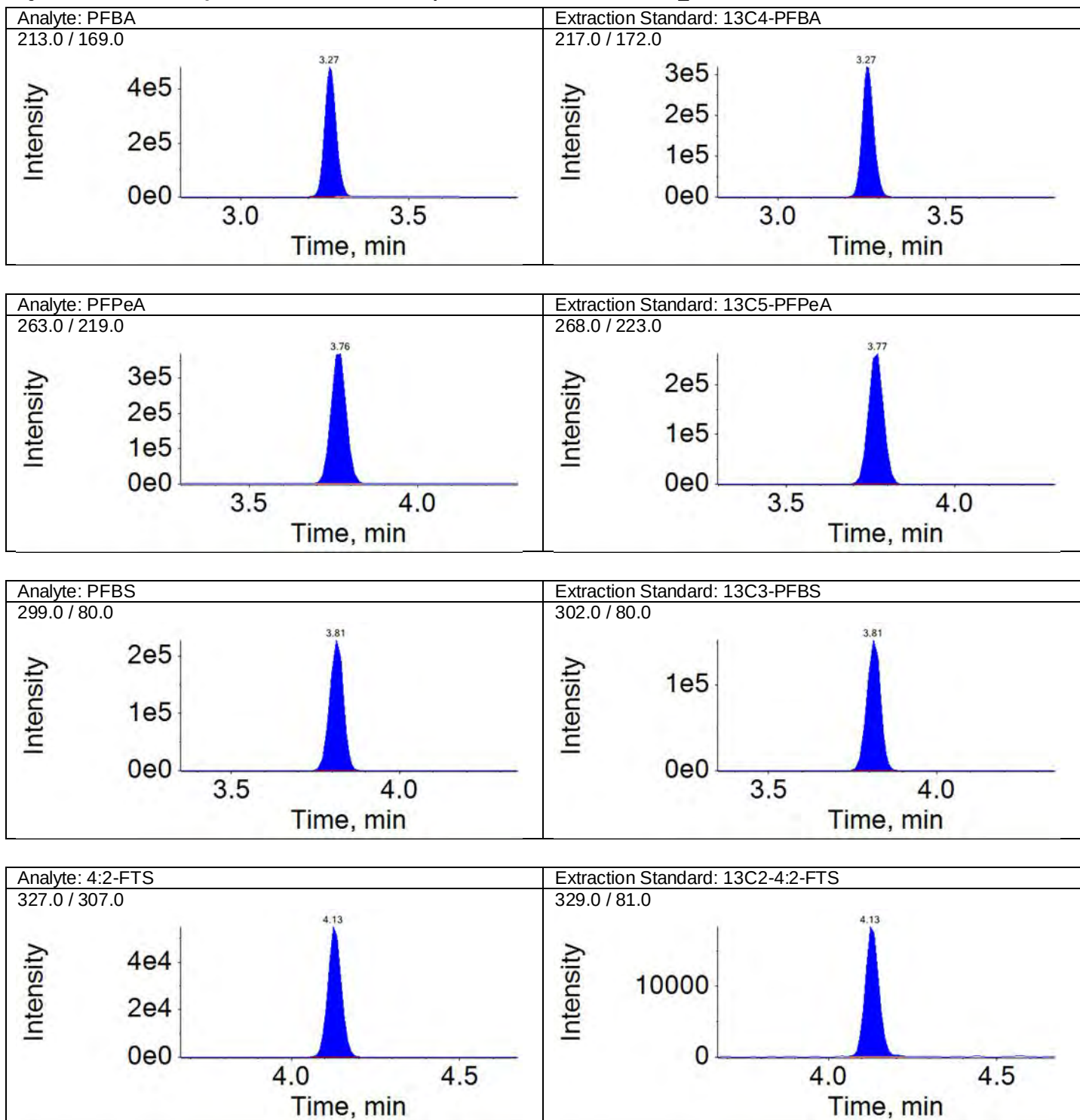
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



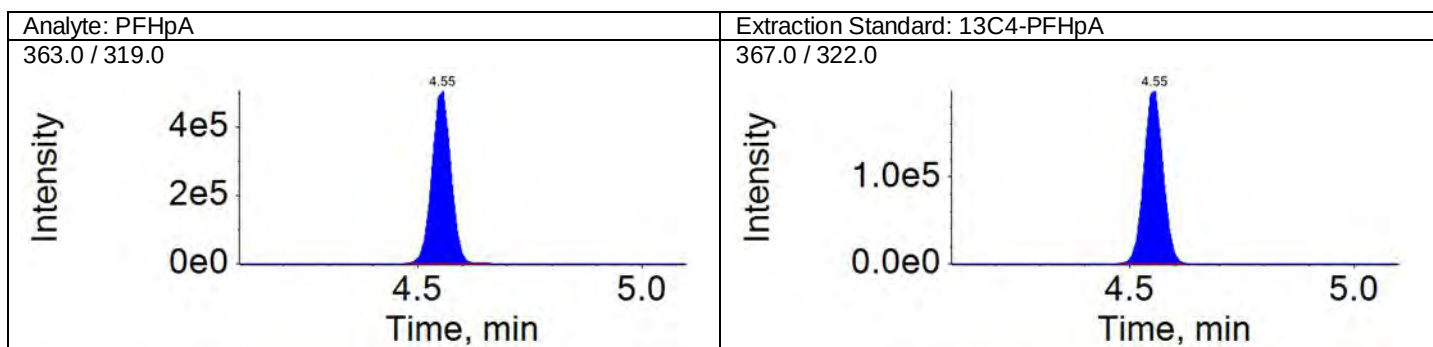
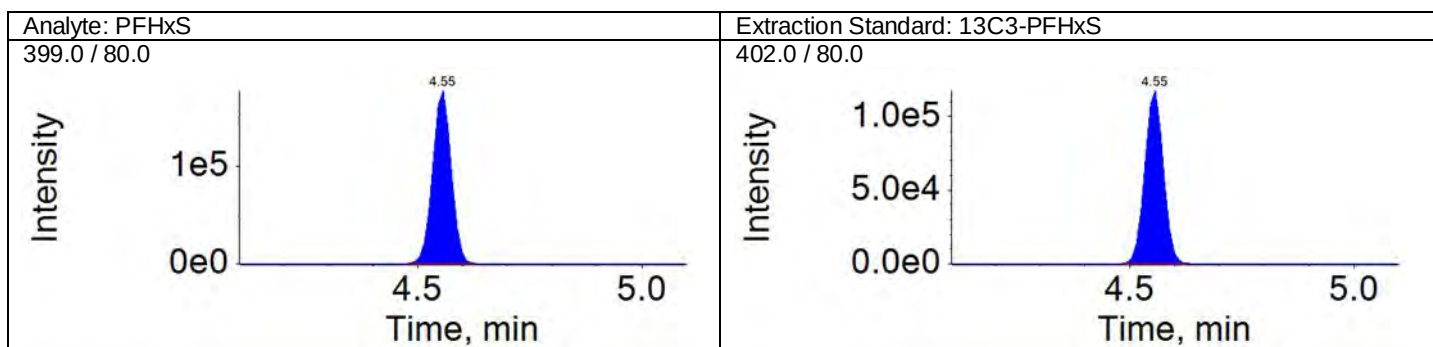
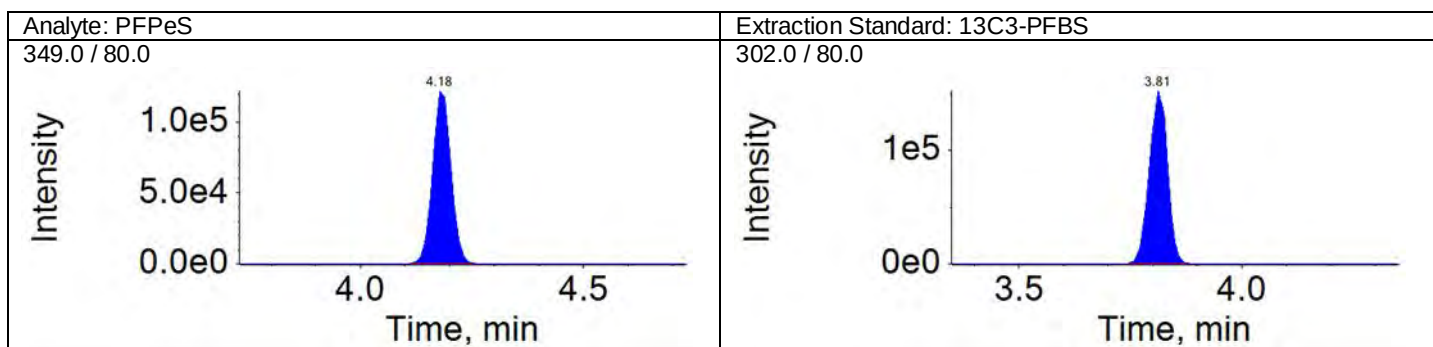
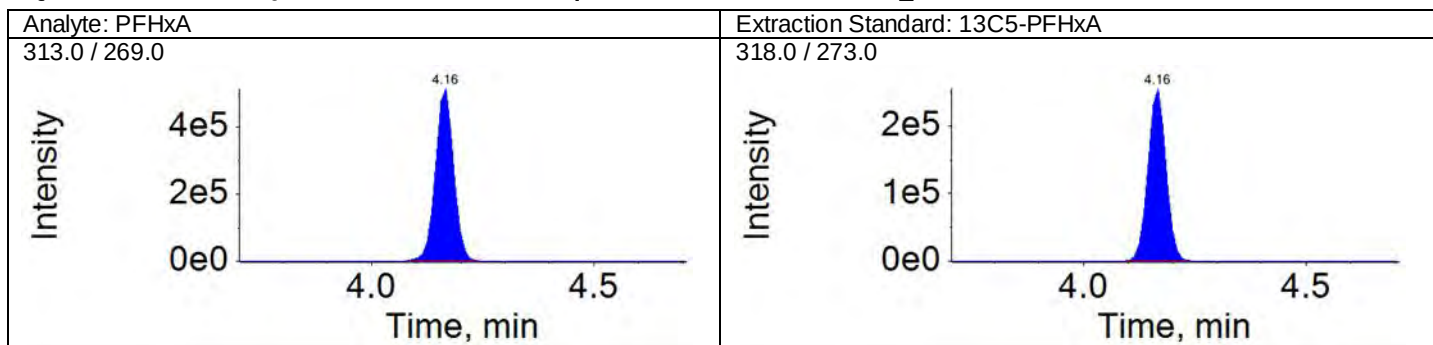
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



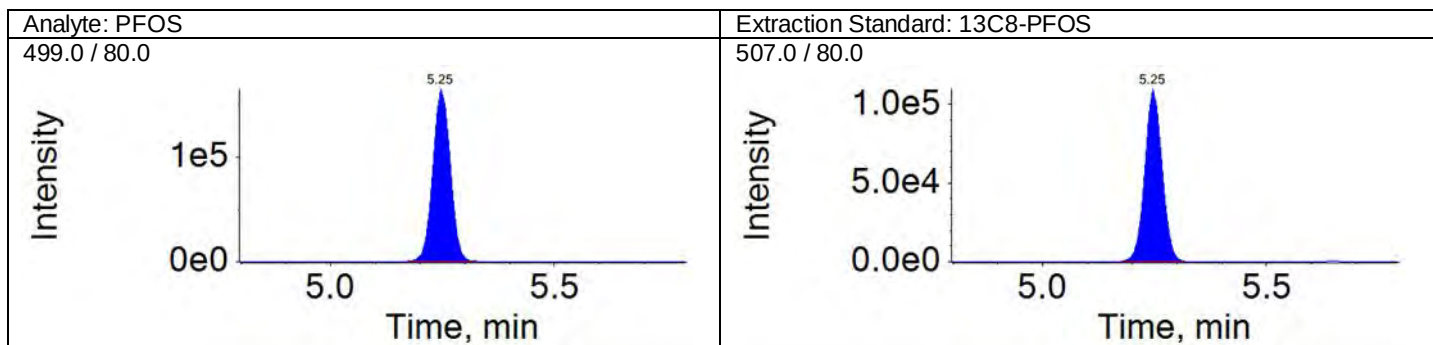
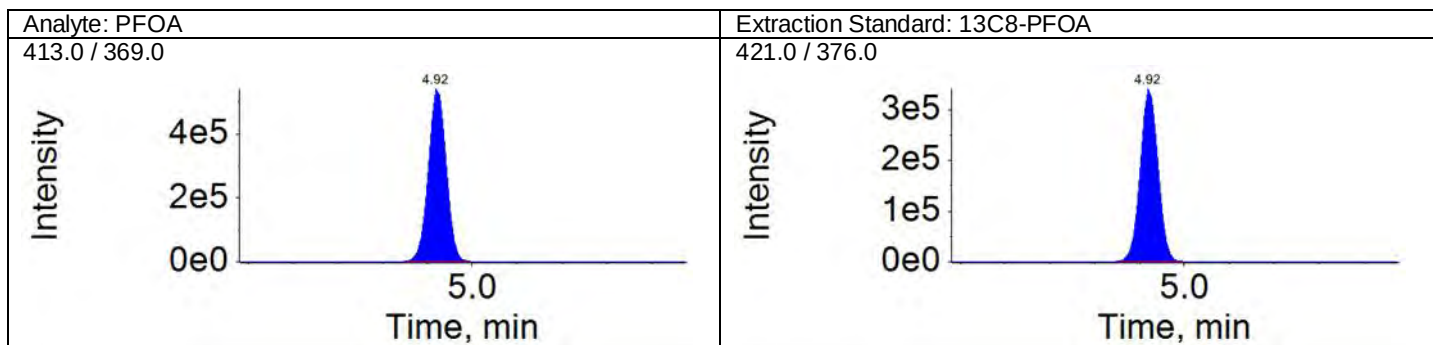
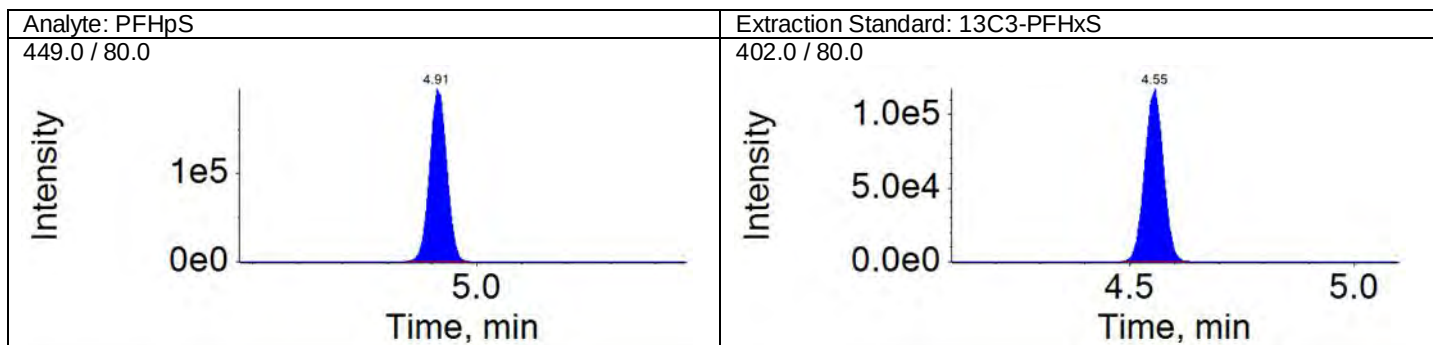
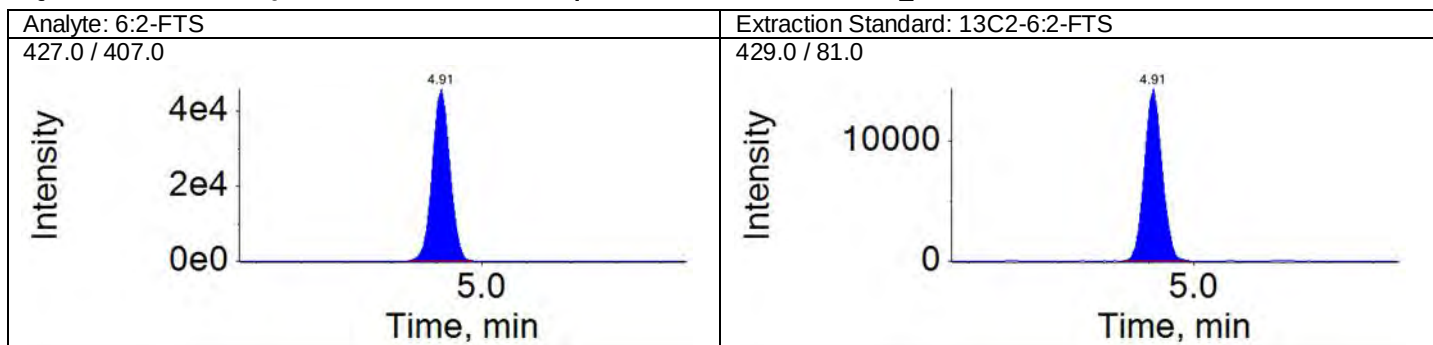
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



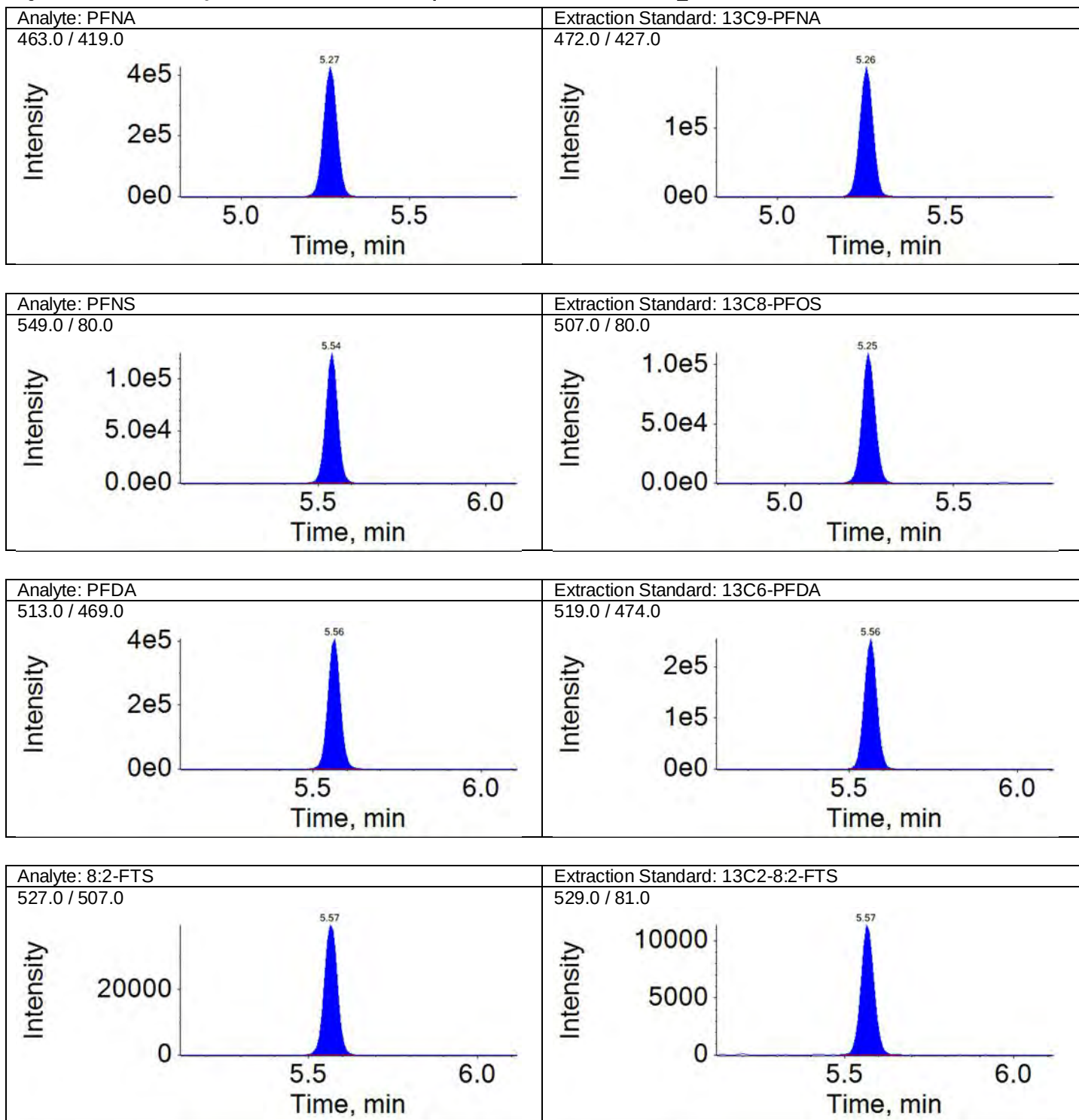
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

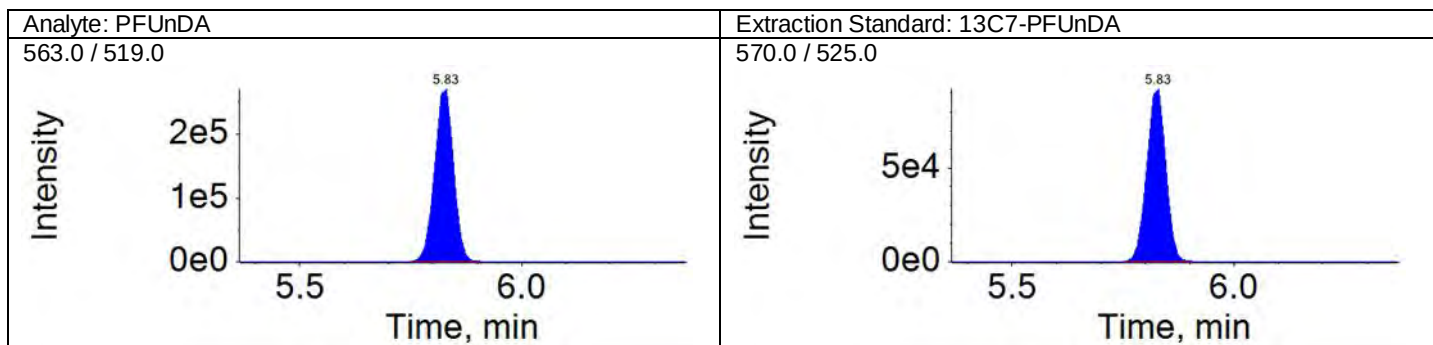
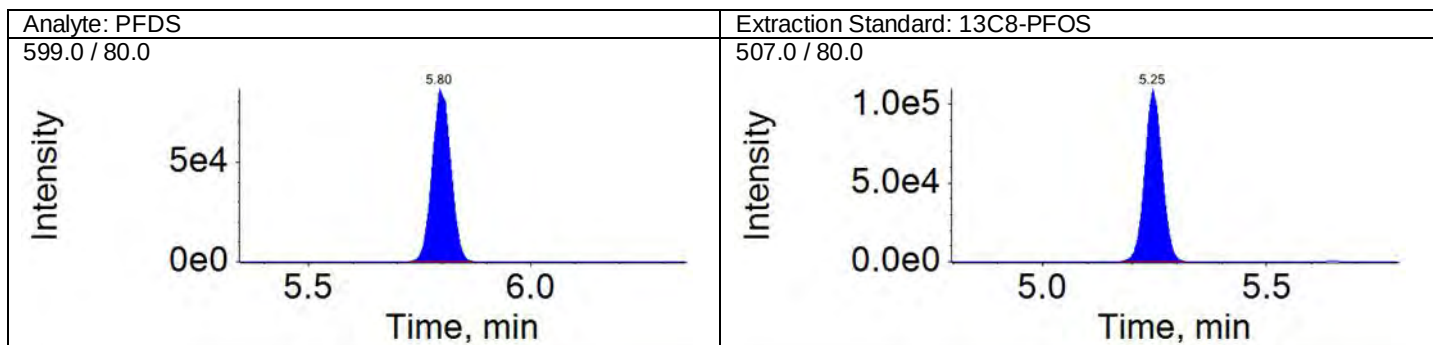
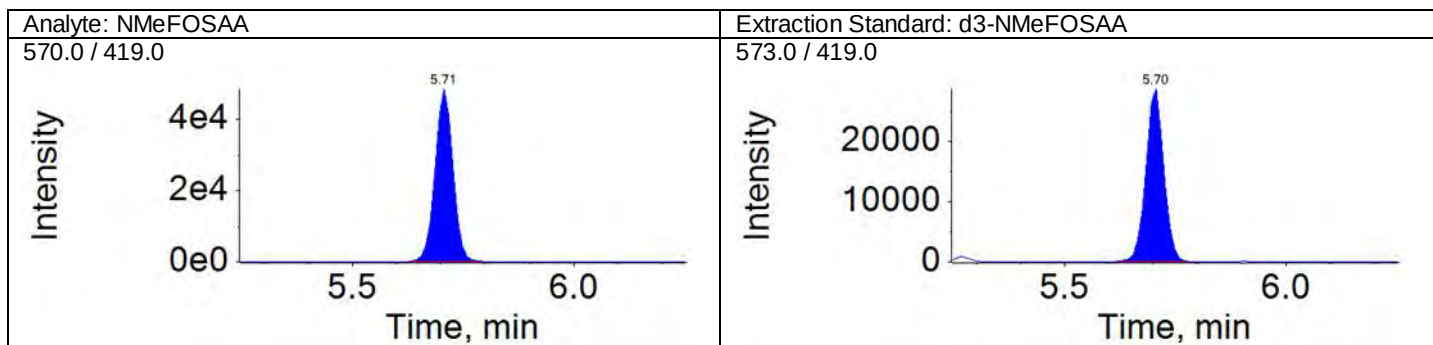
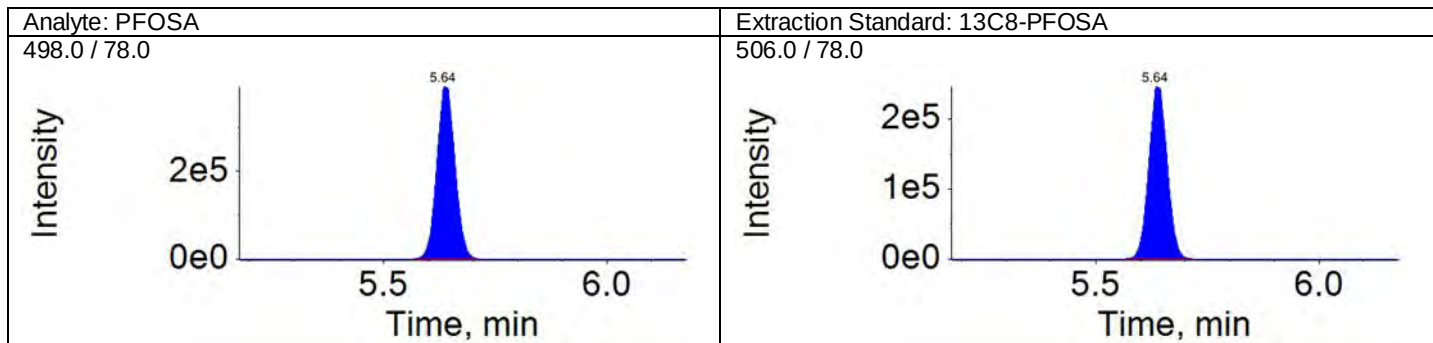
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

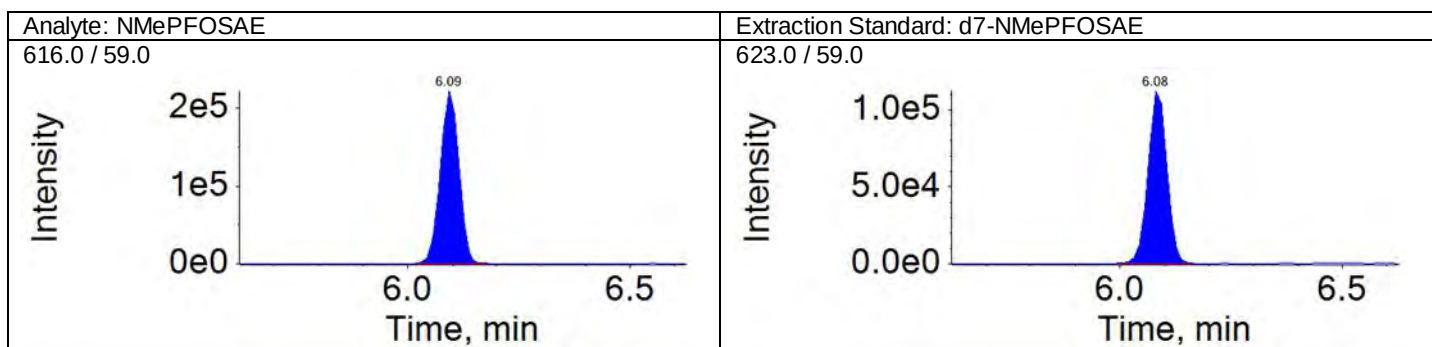
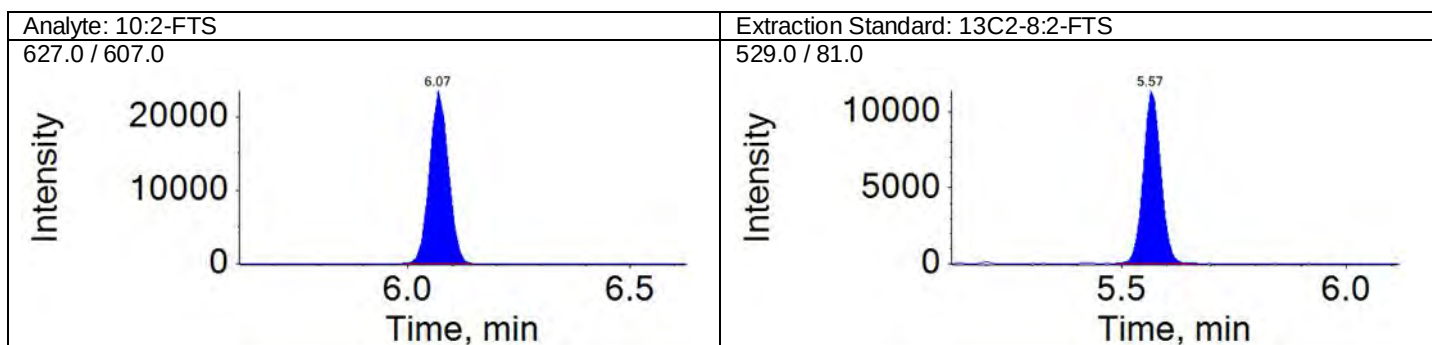
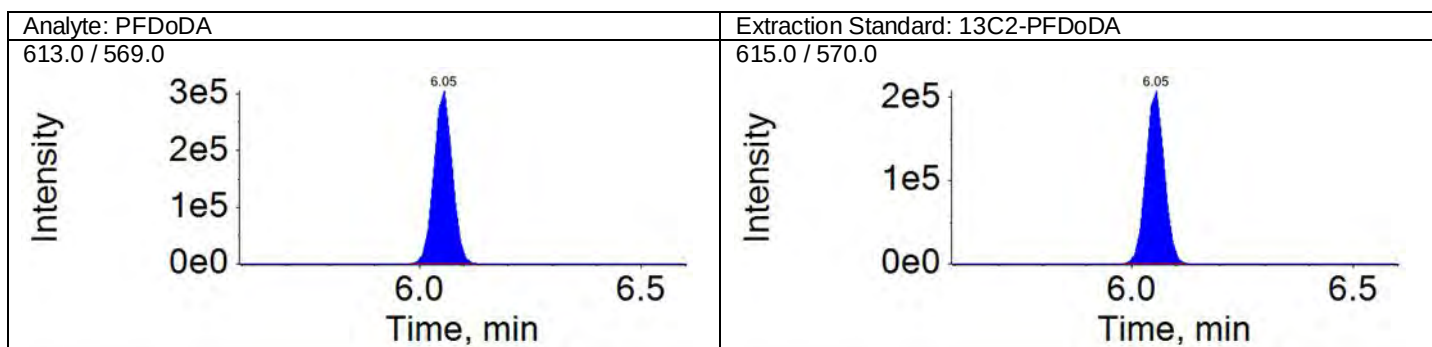
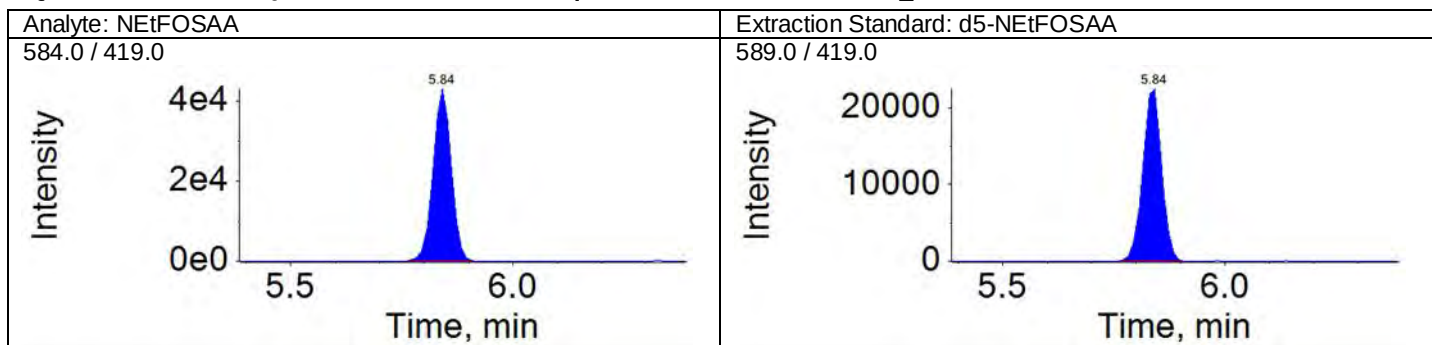
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

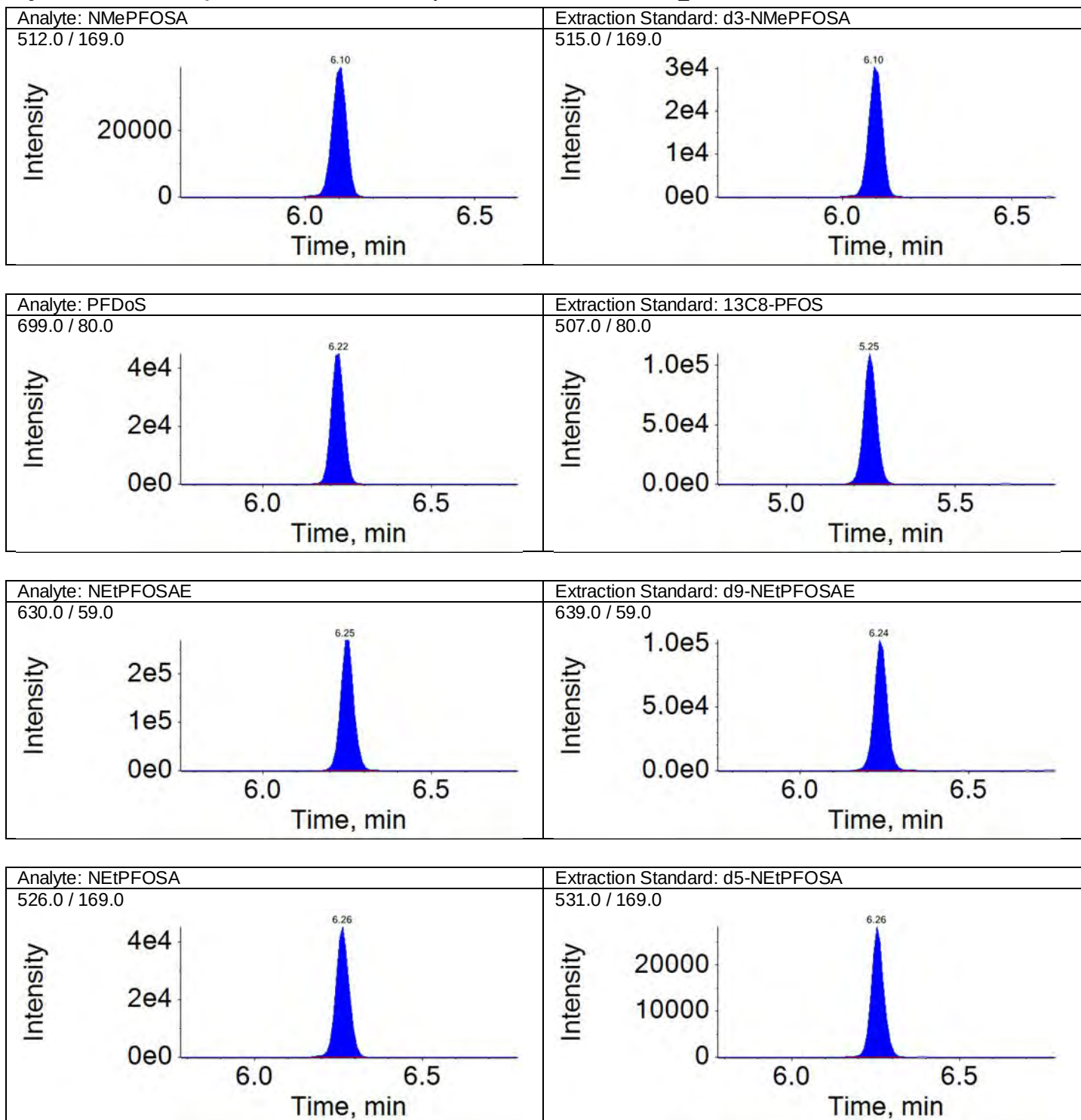
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

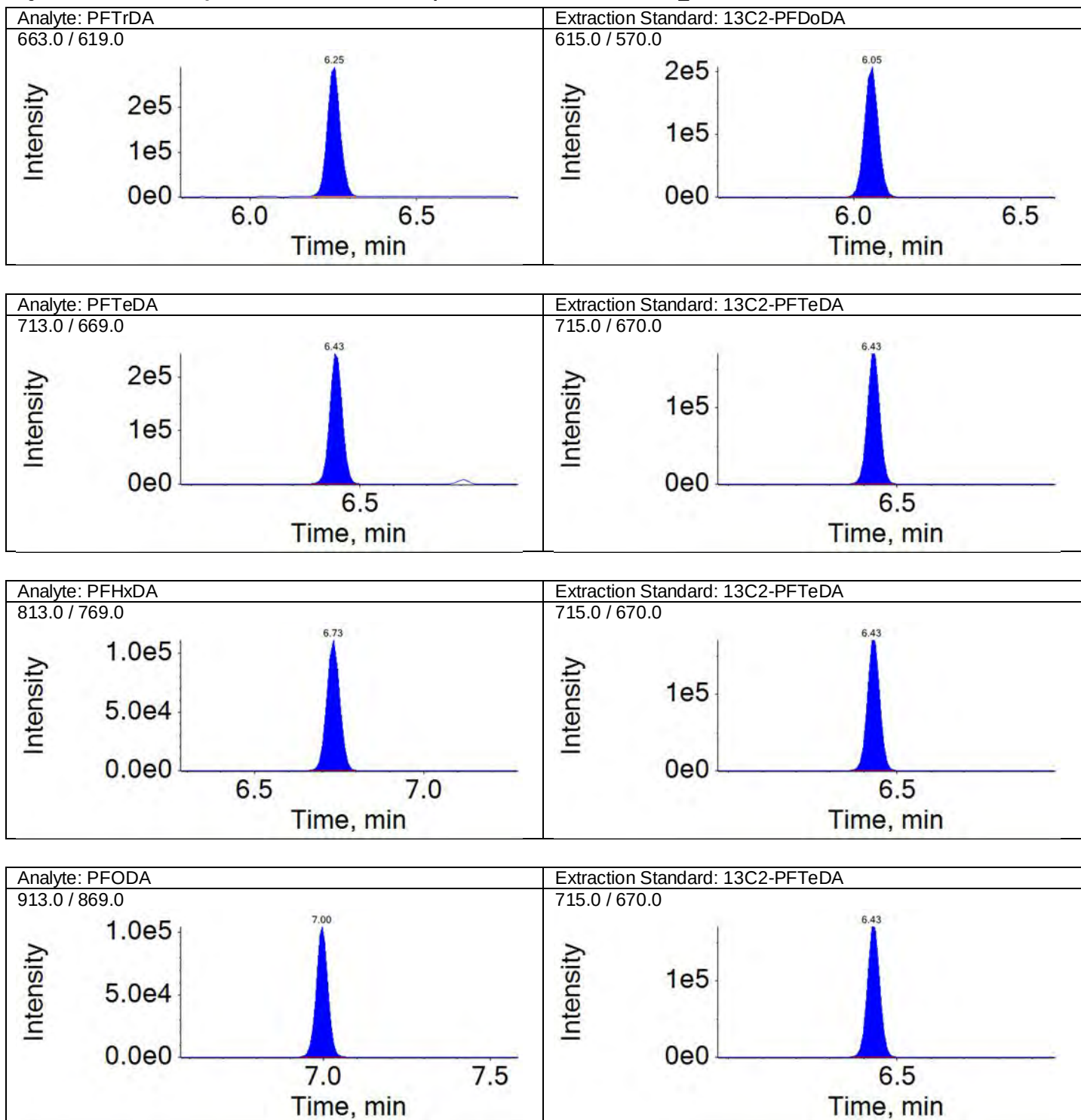
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



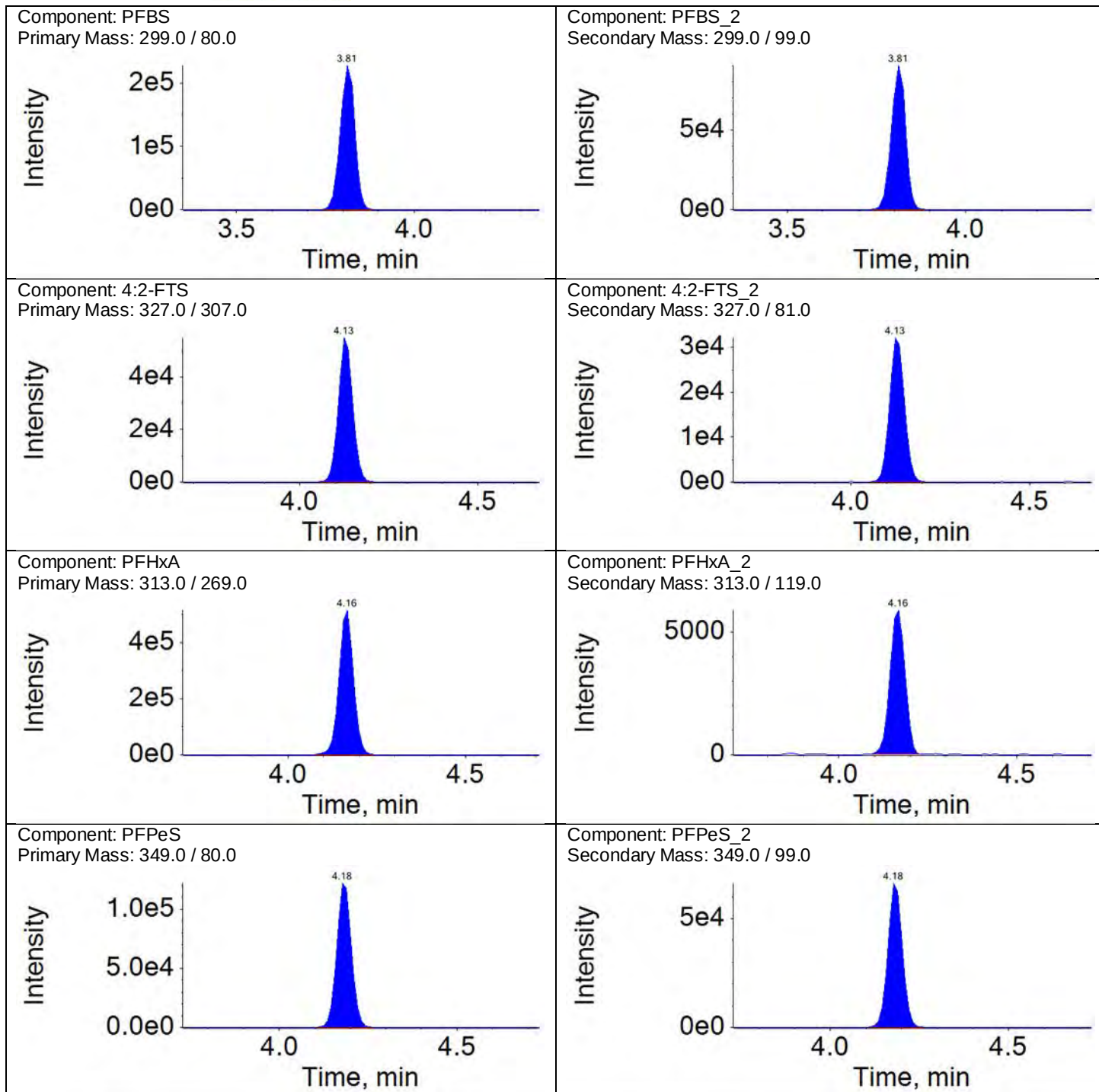
Ion Ratio Report

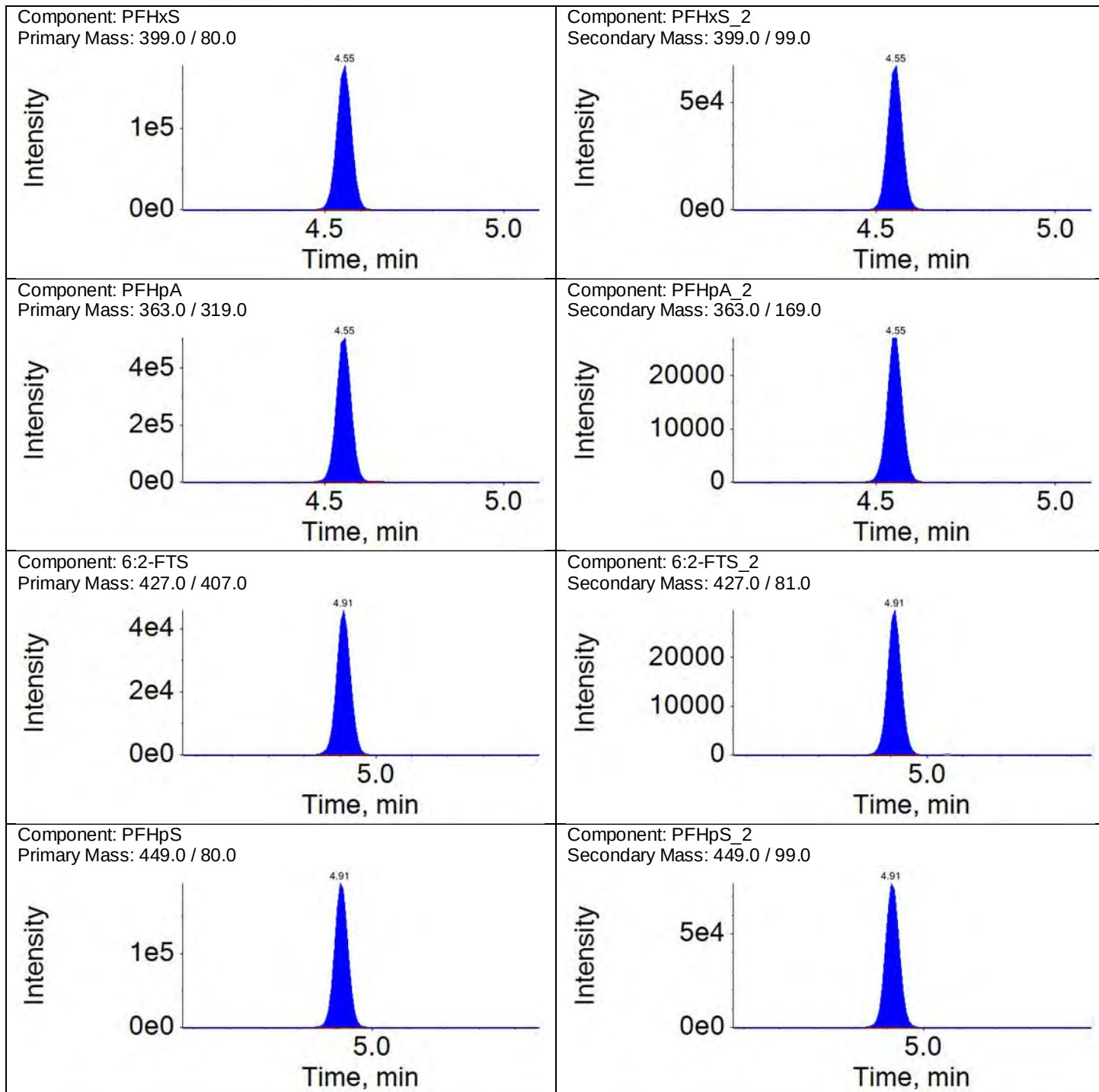
Sample Name: CAL4

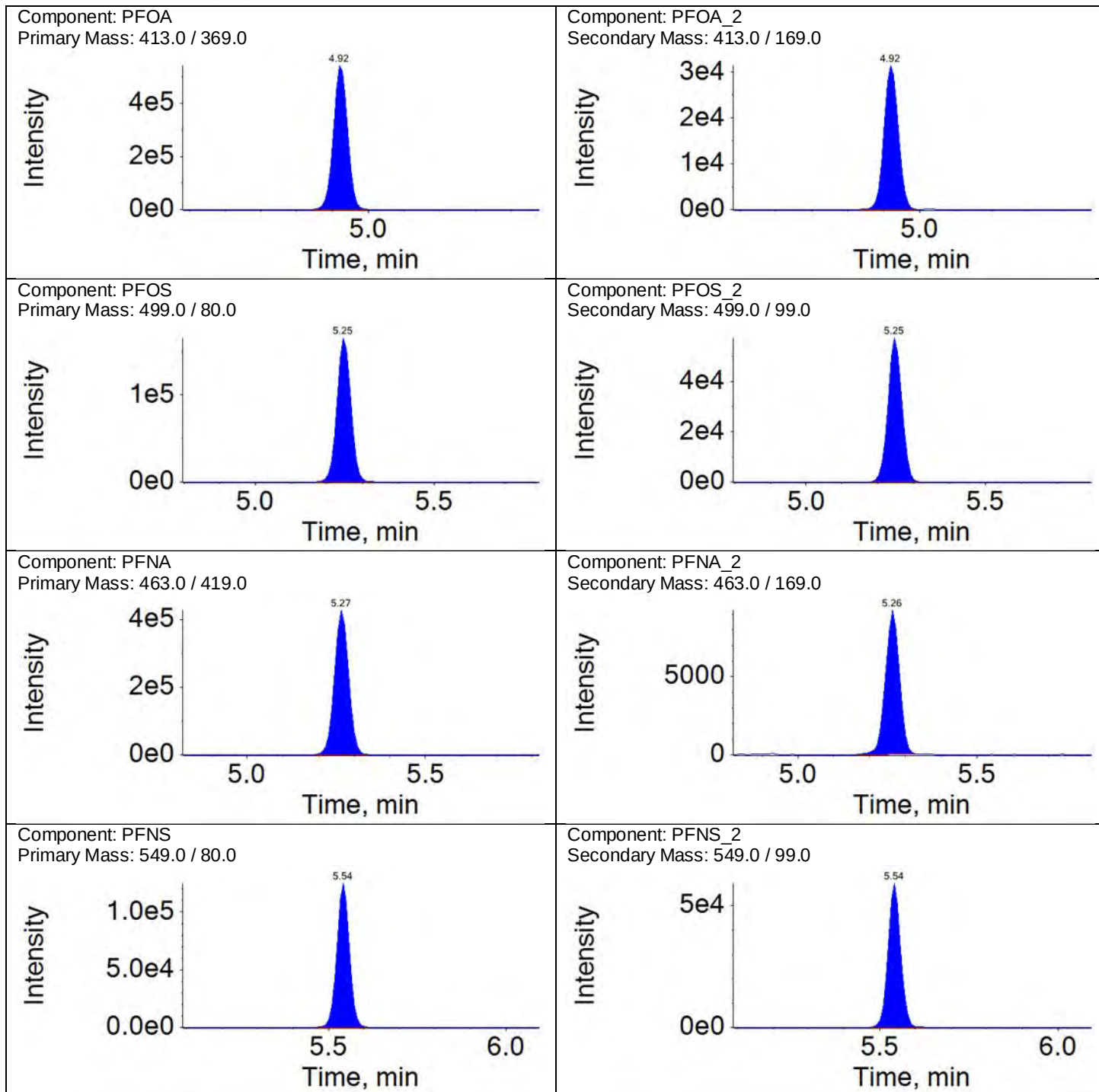
Instrument Name: LM27631

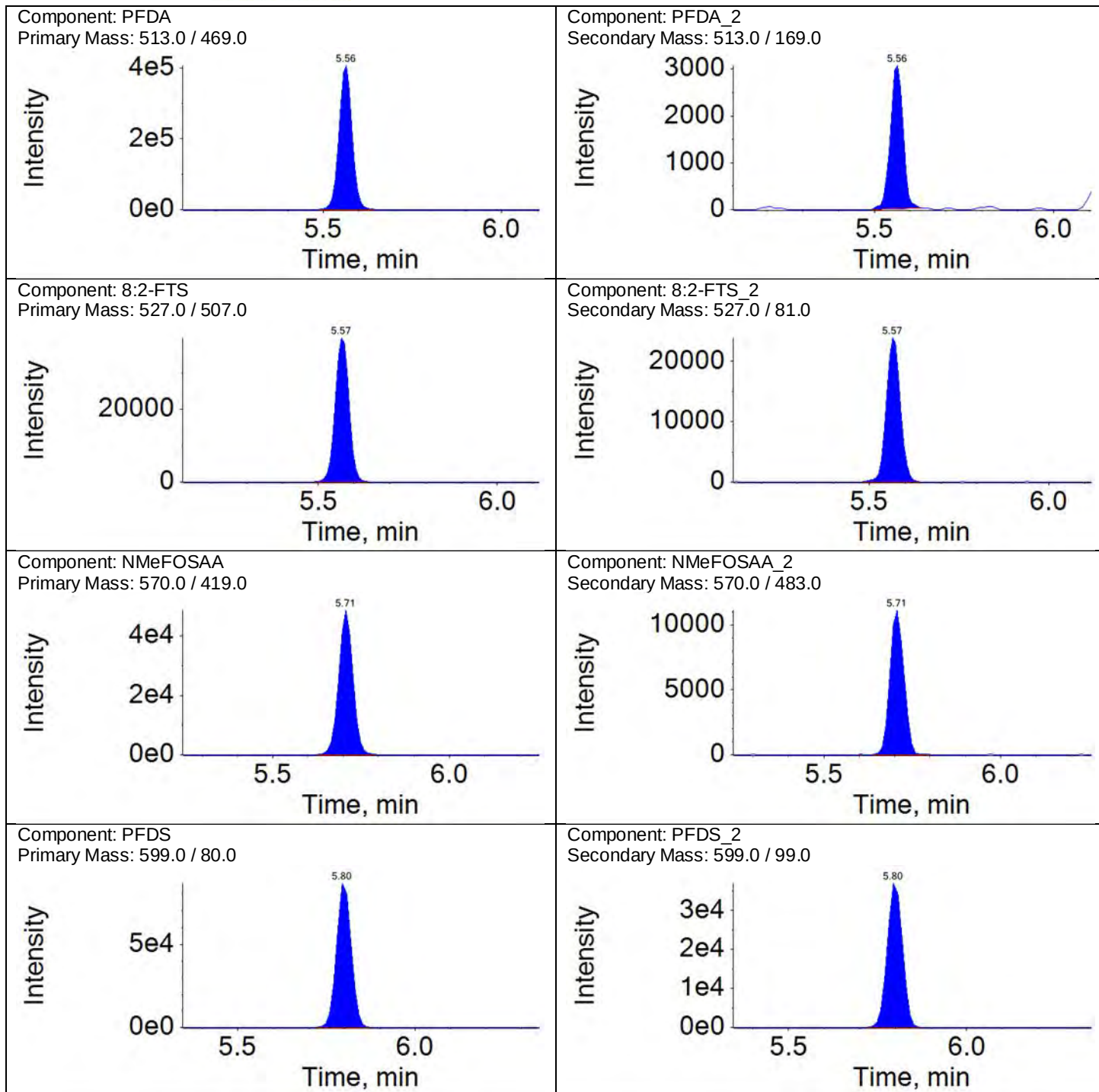
File Name: 18NOV07DCAL-13.wiff

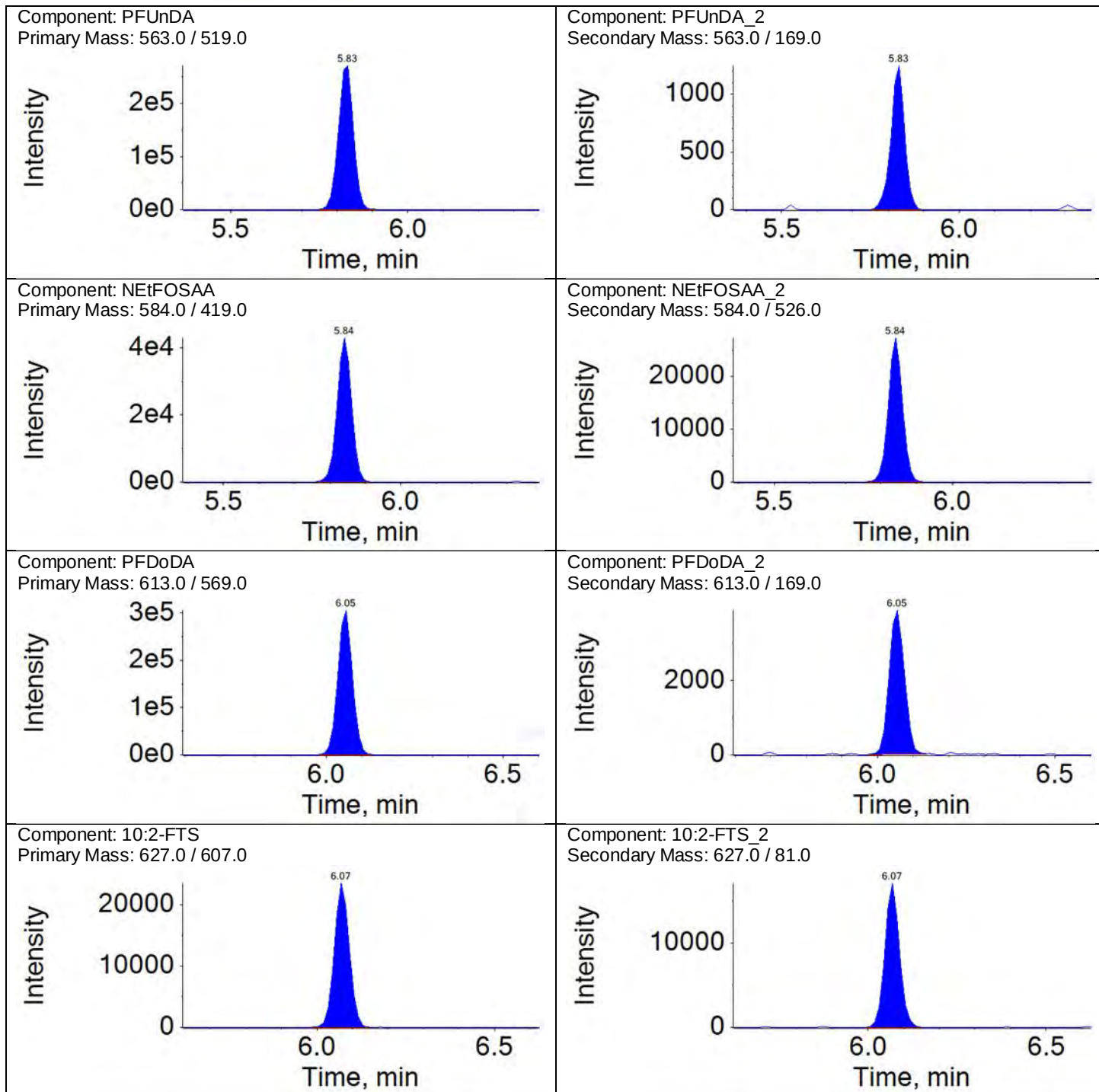
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	648524.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	251751.9	A	0.3576	0.3882	9	50	
4:2-FTS	4.13	1.00	153295.4	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	92676.3	A	0.6359	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	
PFTTrDA	6.25	1.03	781283.7	A	1.0000	1.0000			
PFTTrDA_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	

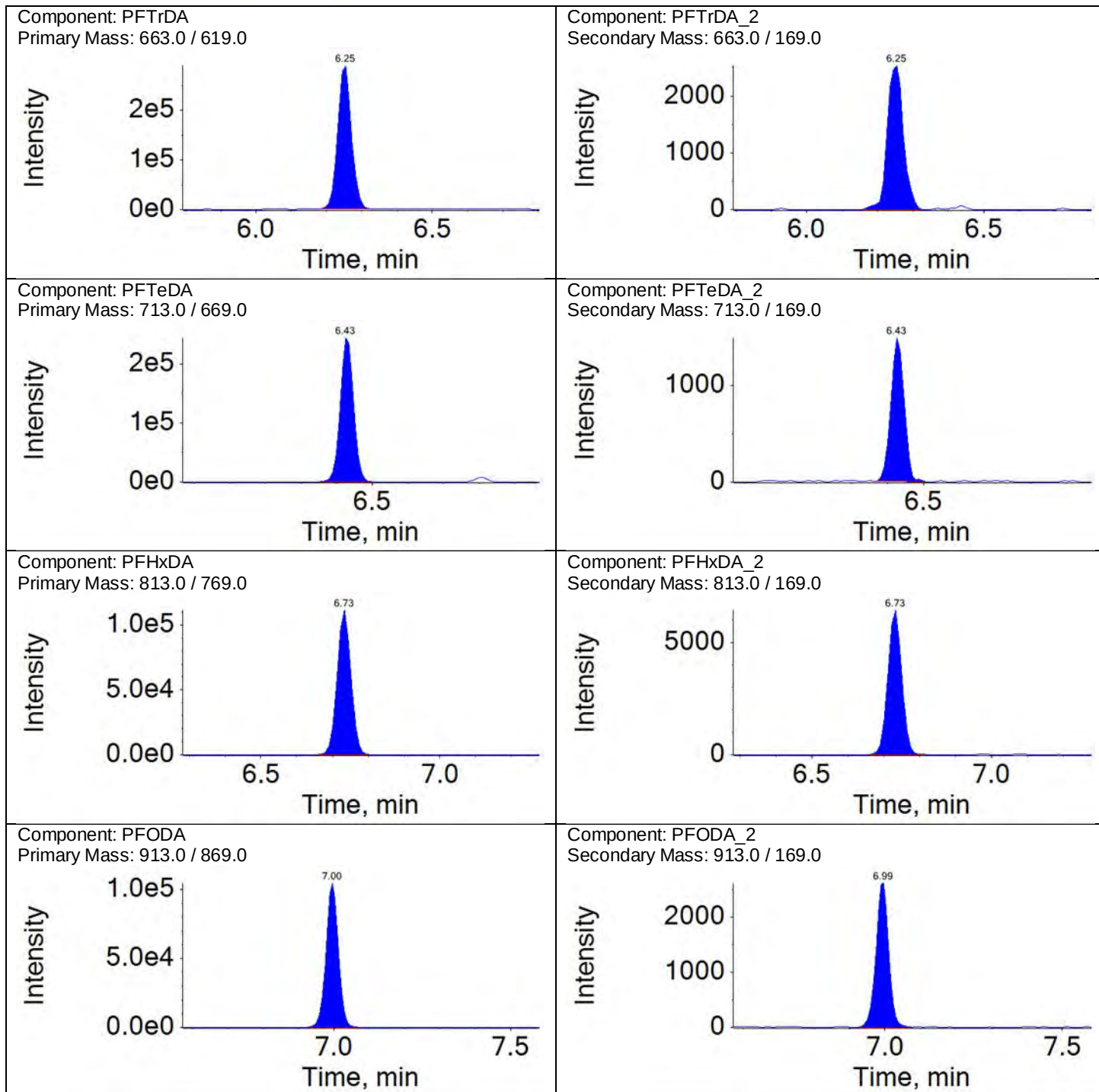












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL5

Instrument Name: LM27631

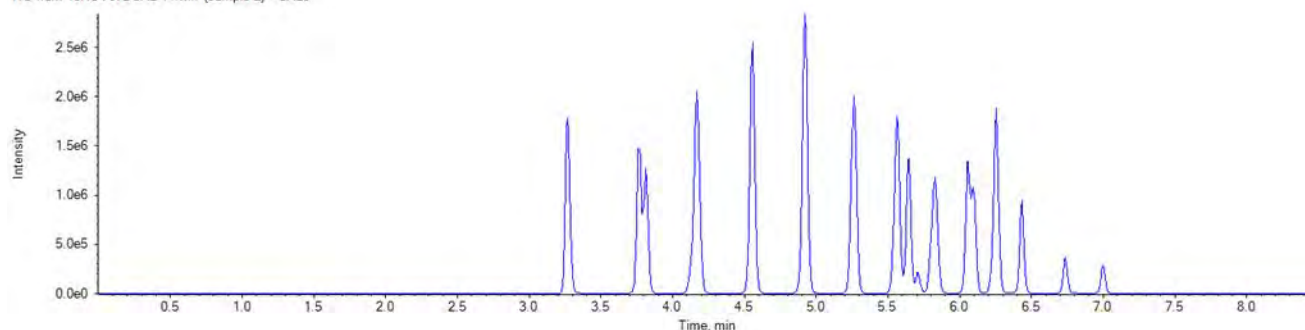
File Name: 18NOV07DCAL-14.wiff

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
PFTDA	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

TIC from 18NOV07DCAL-14.wiff (sample 2) - CAL5



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 474 of 1595

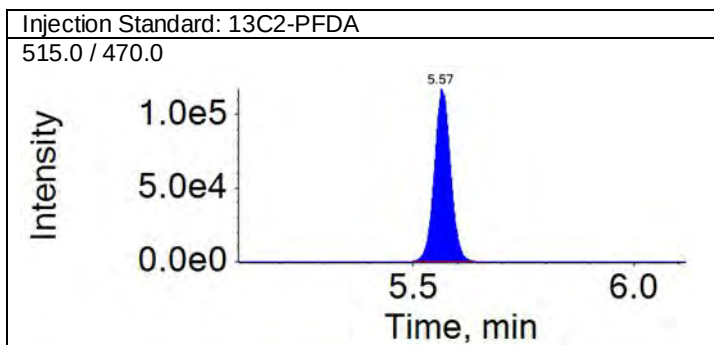
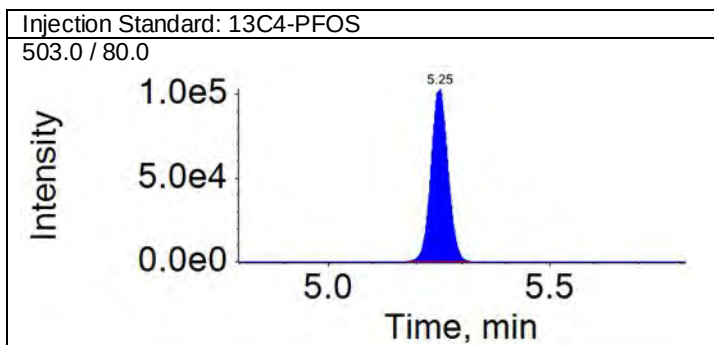
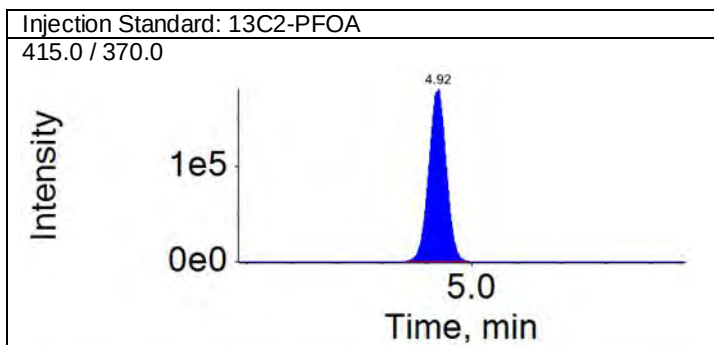
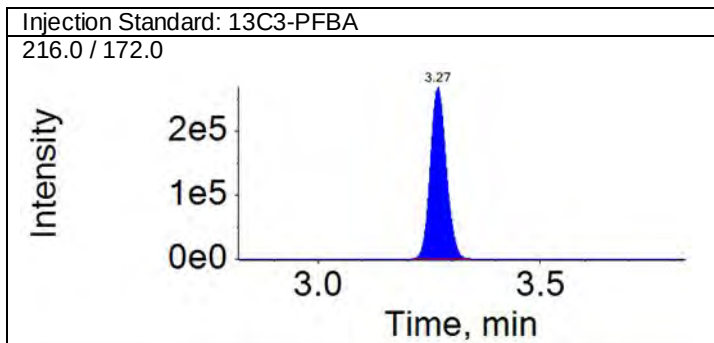
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

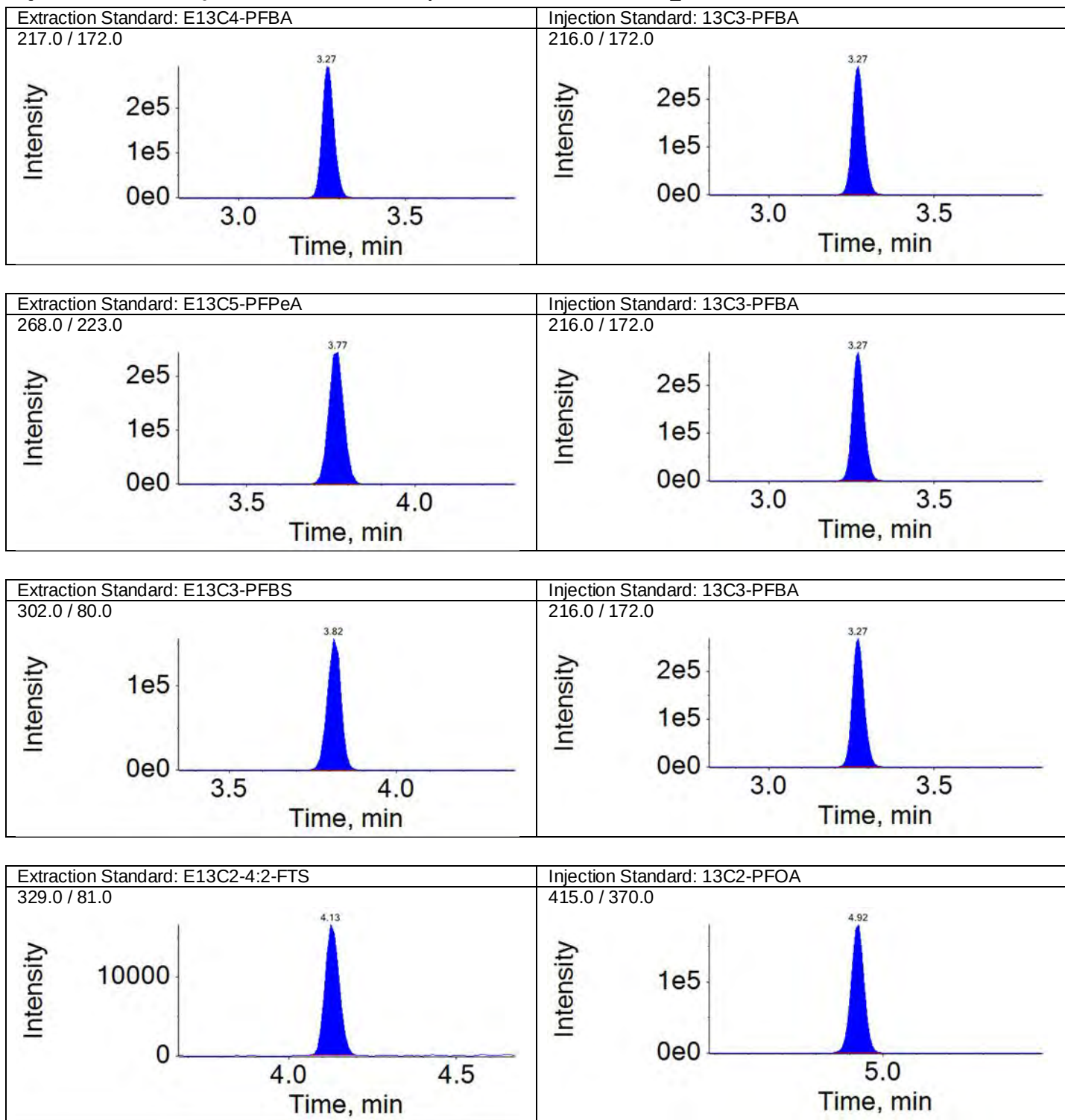
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



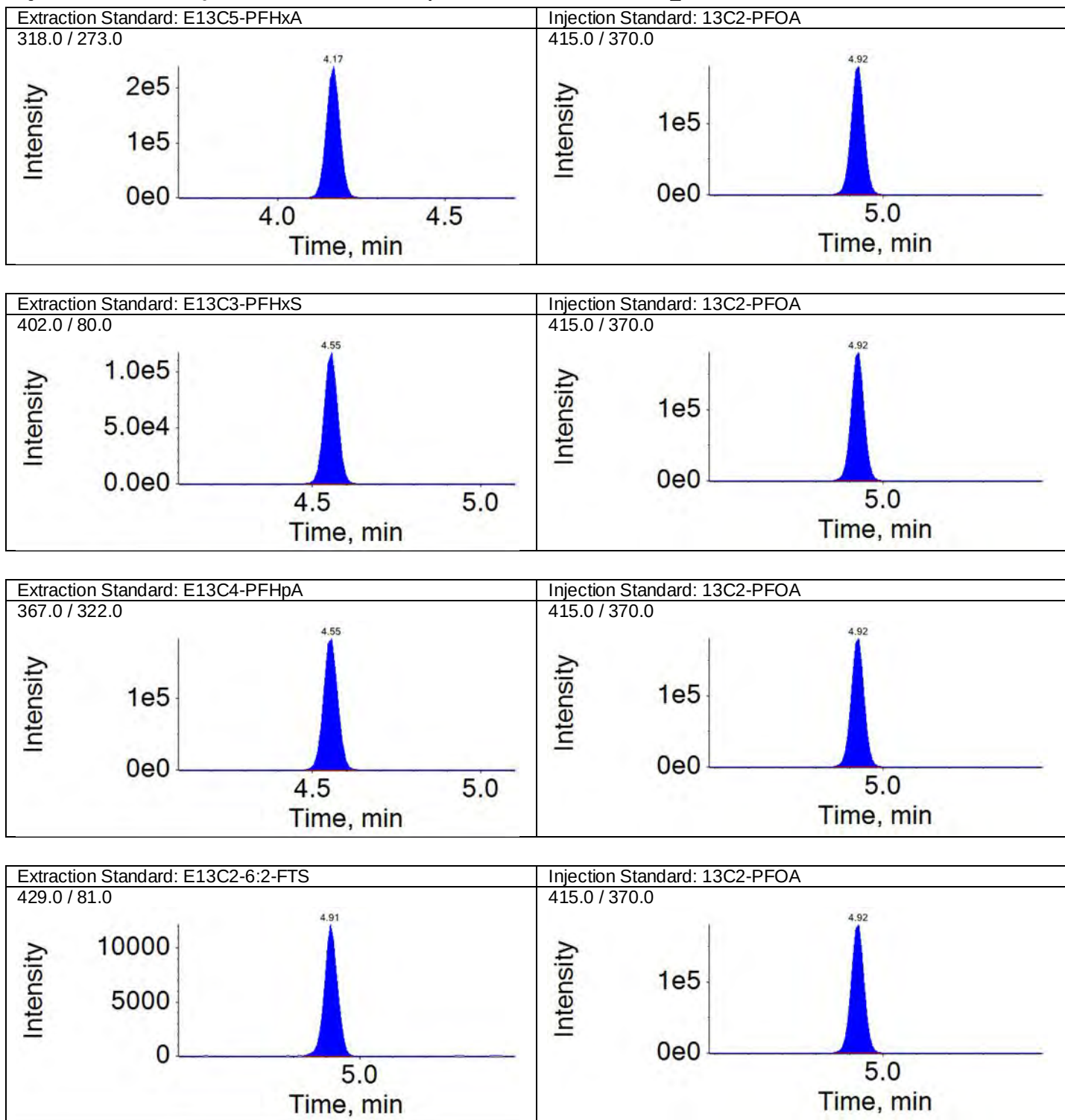
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



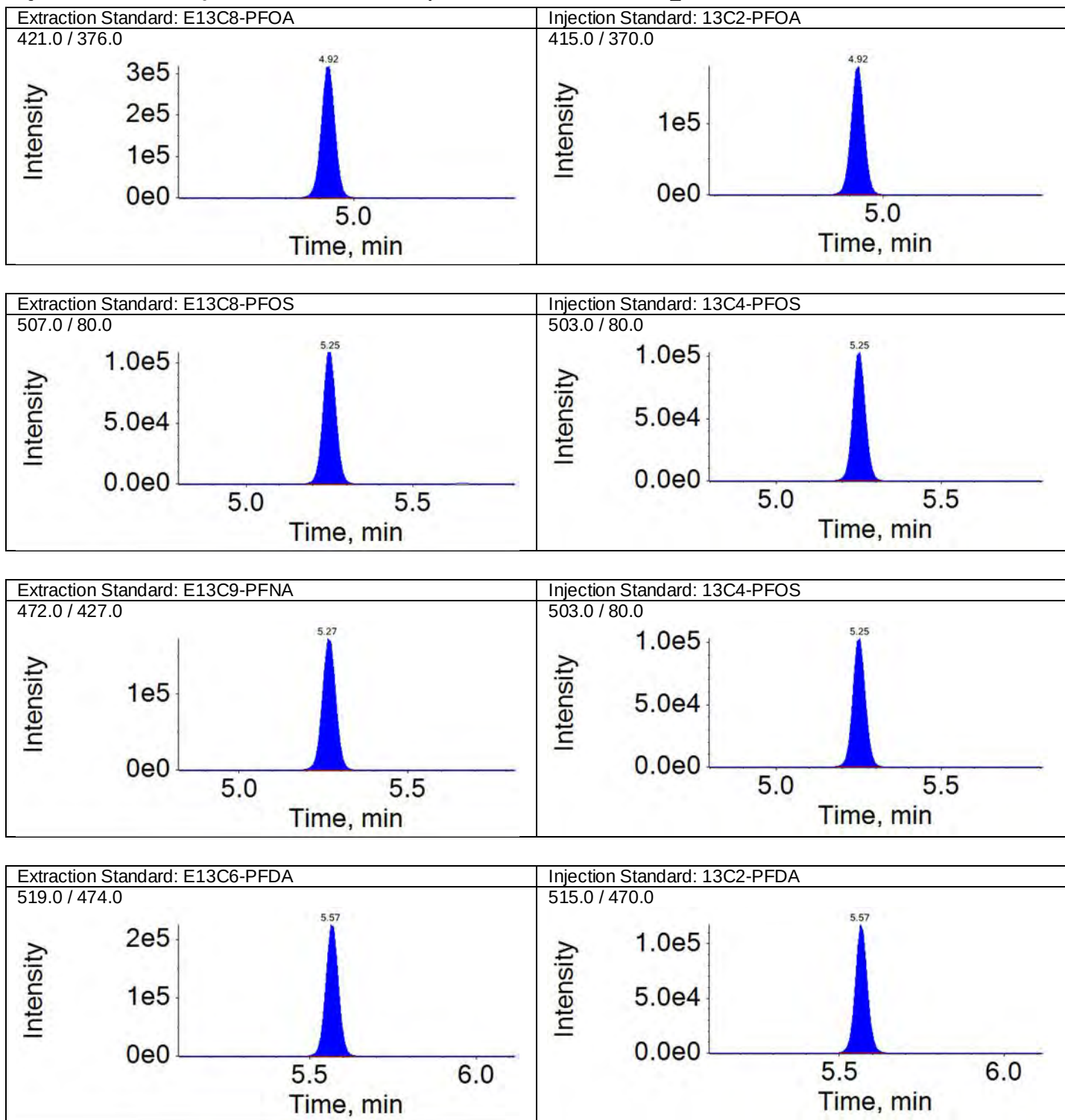
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

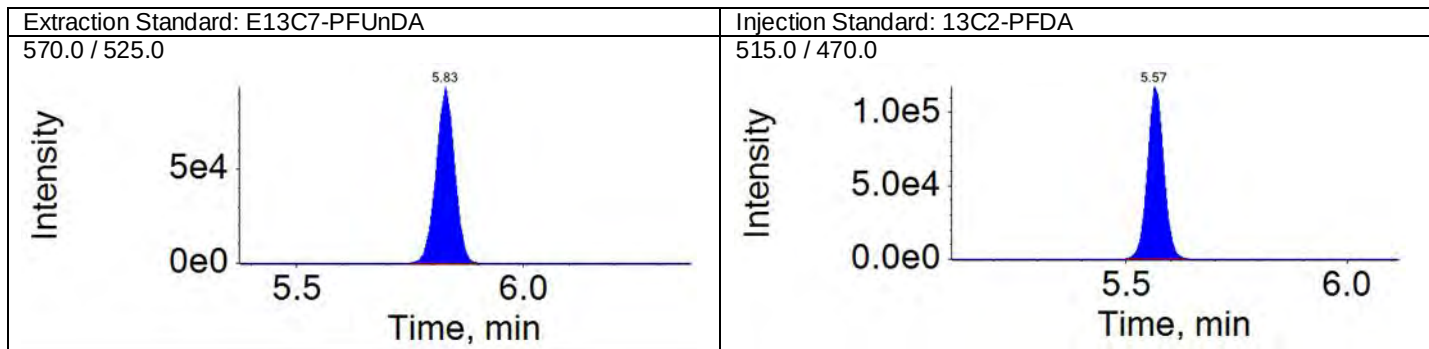
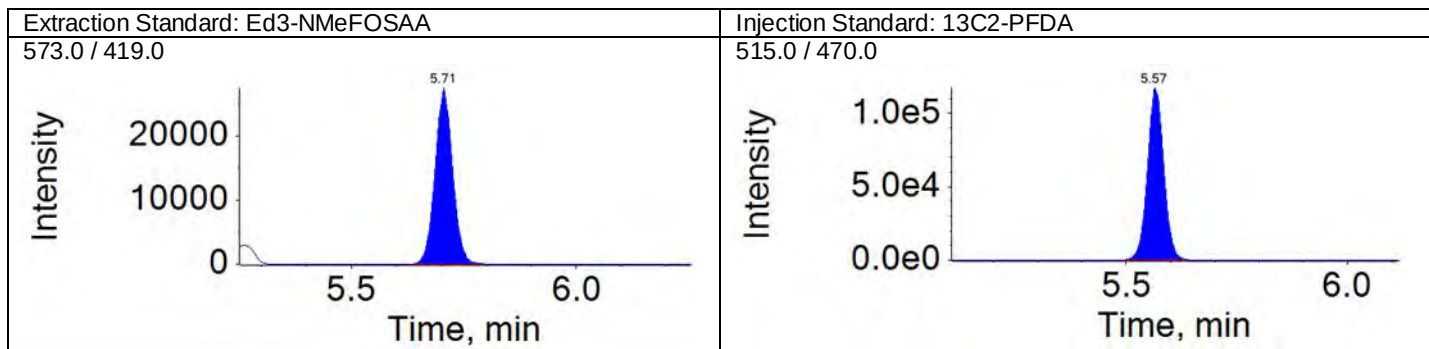
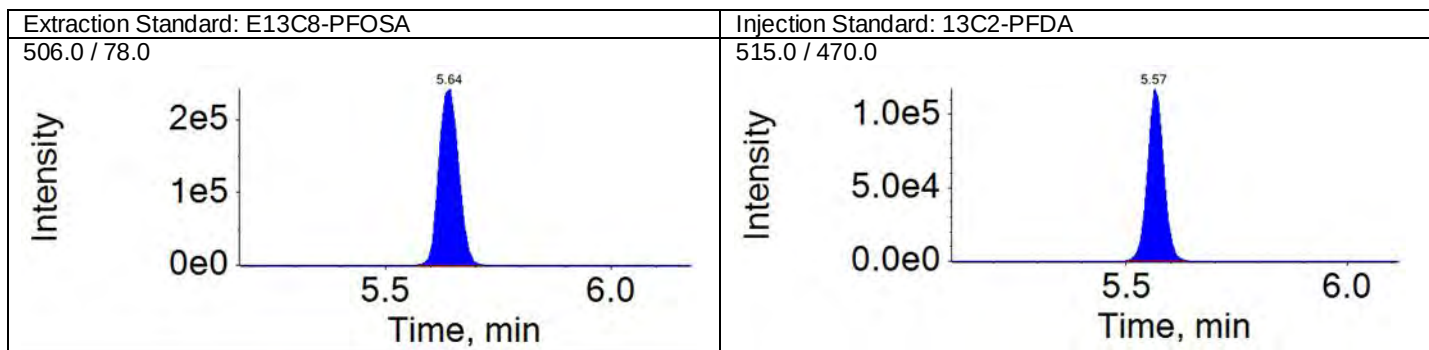
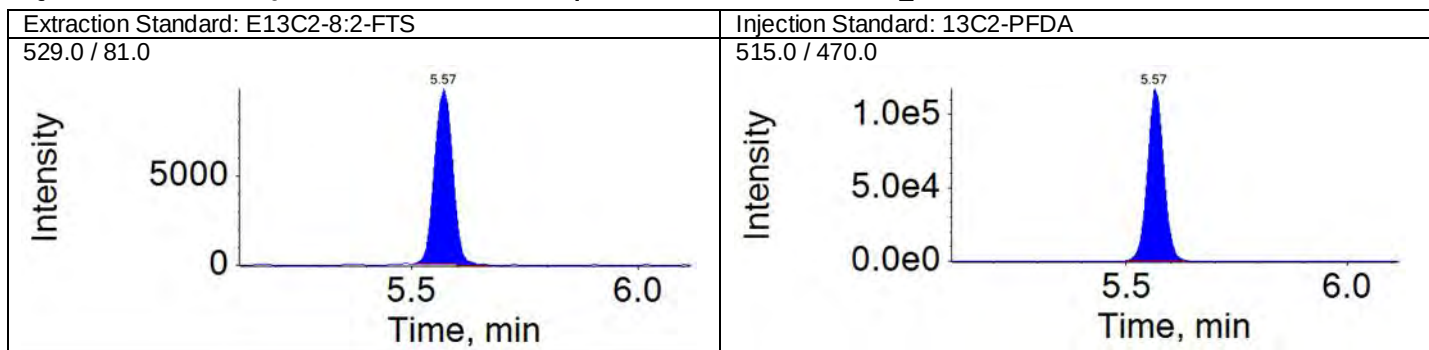
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

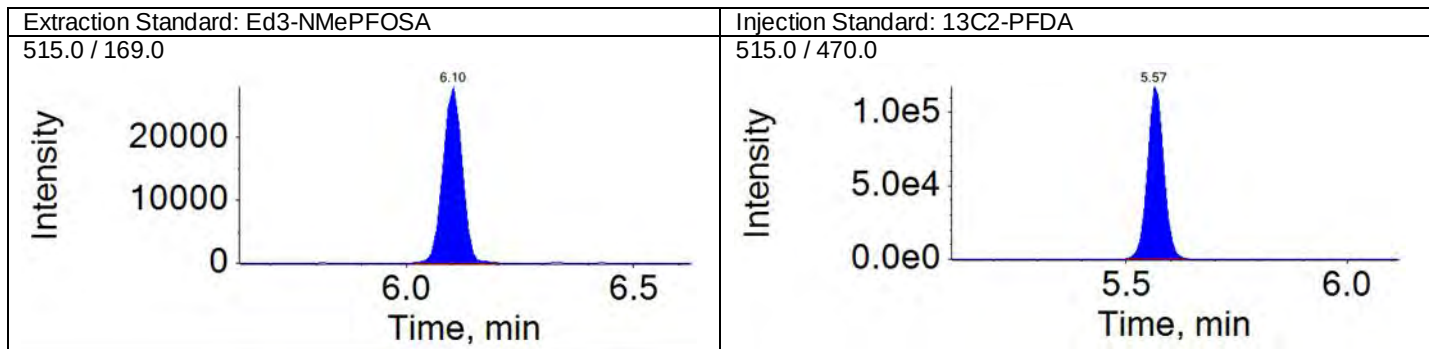
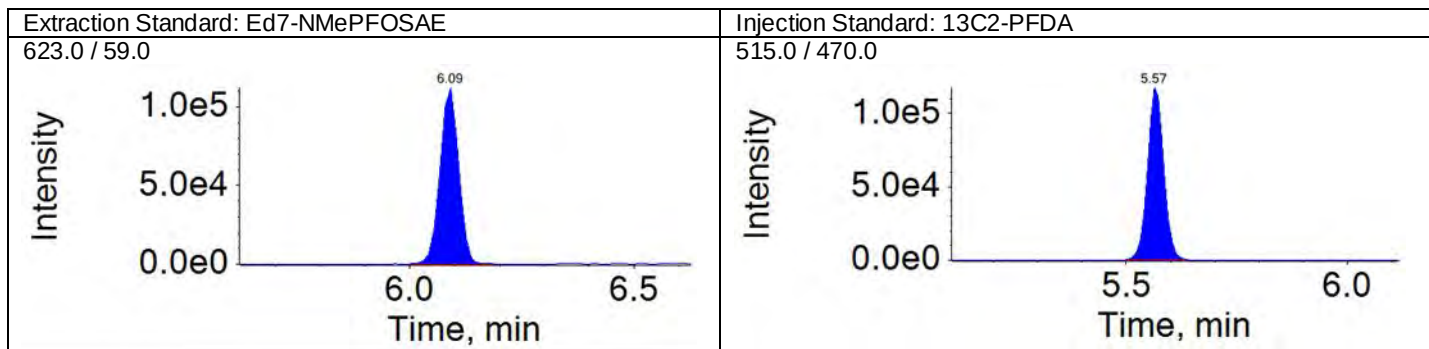
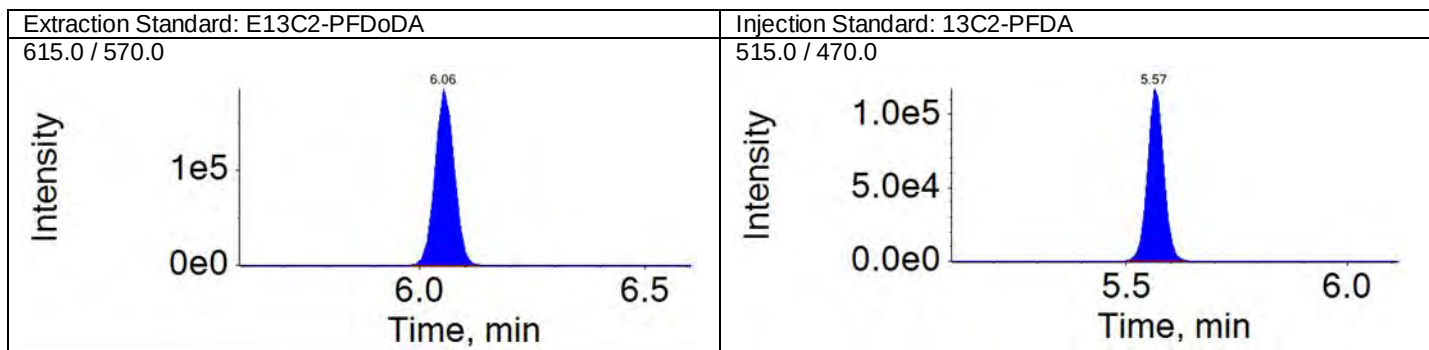
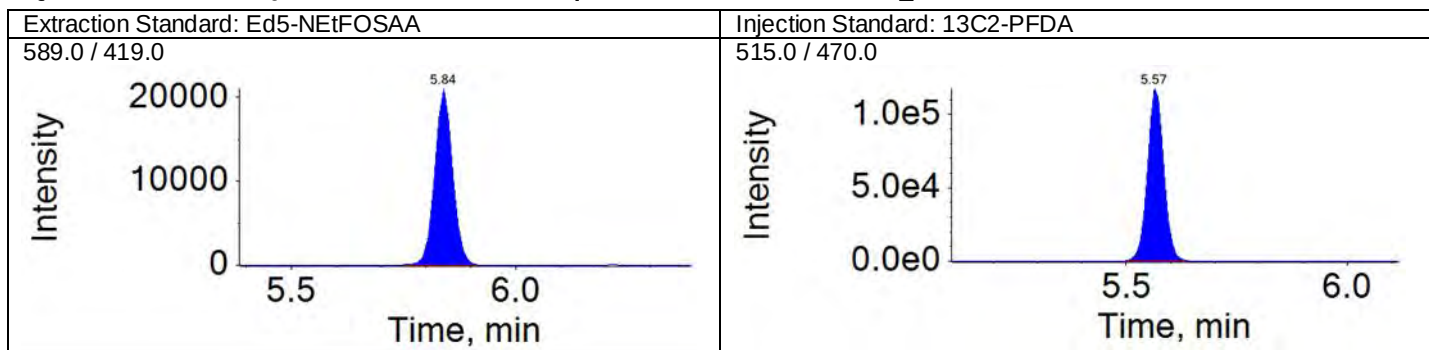
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

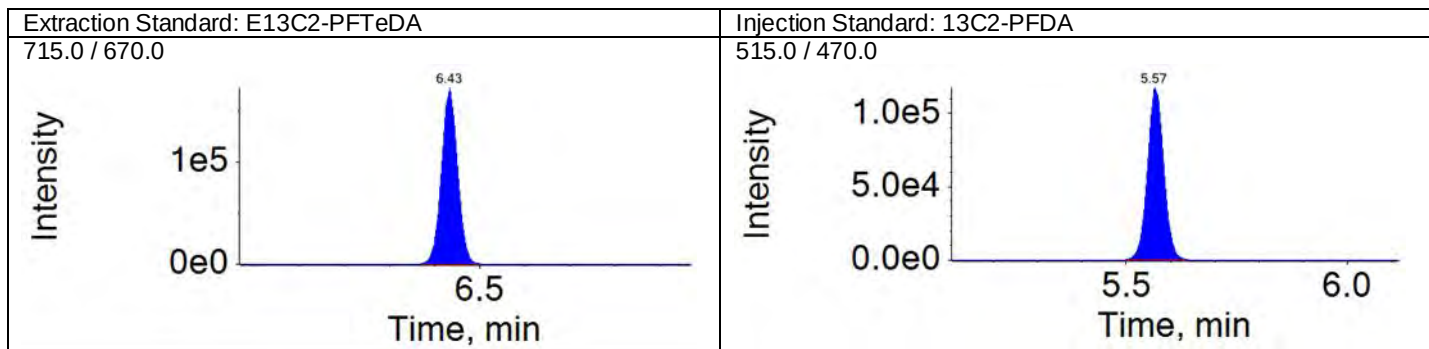
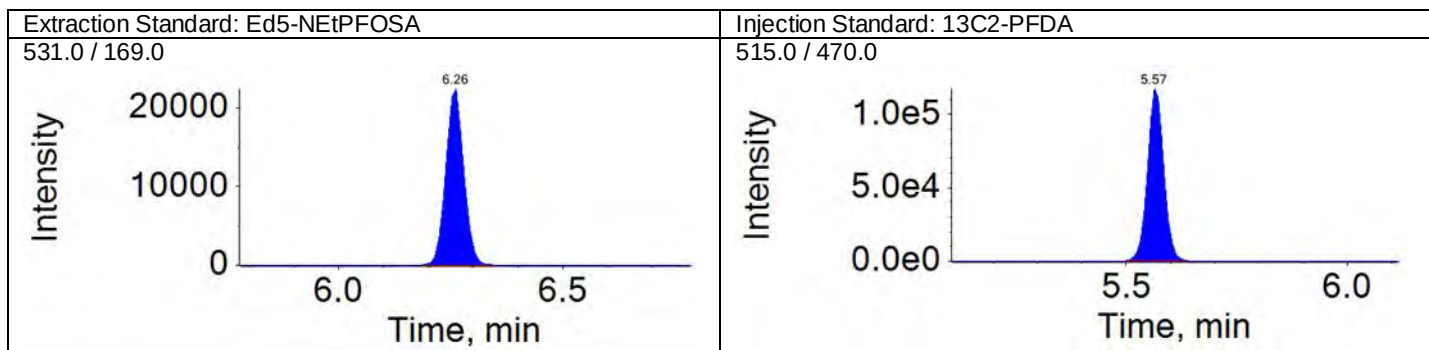
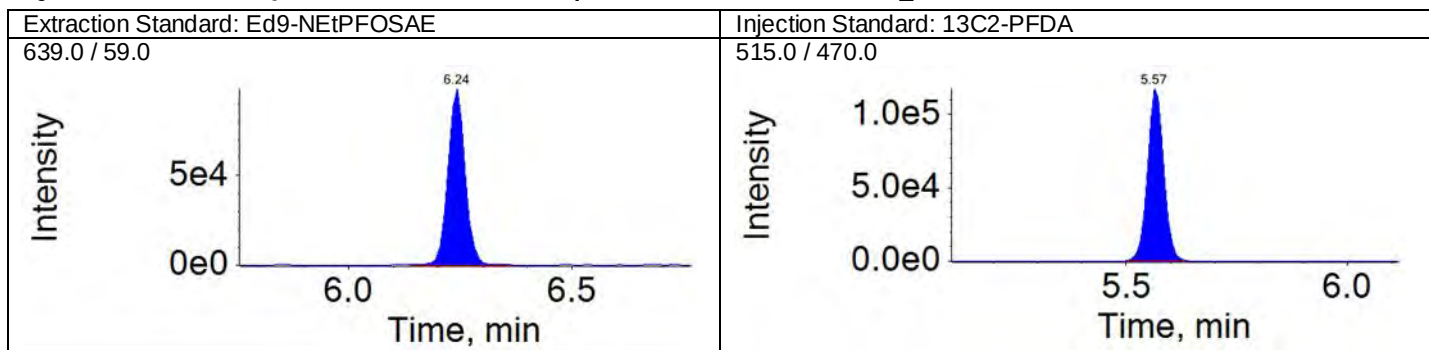
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



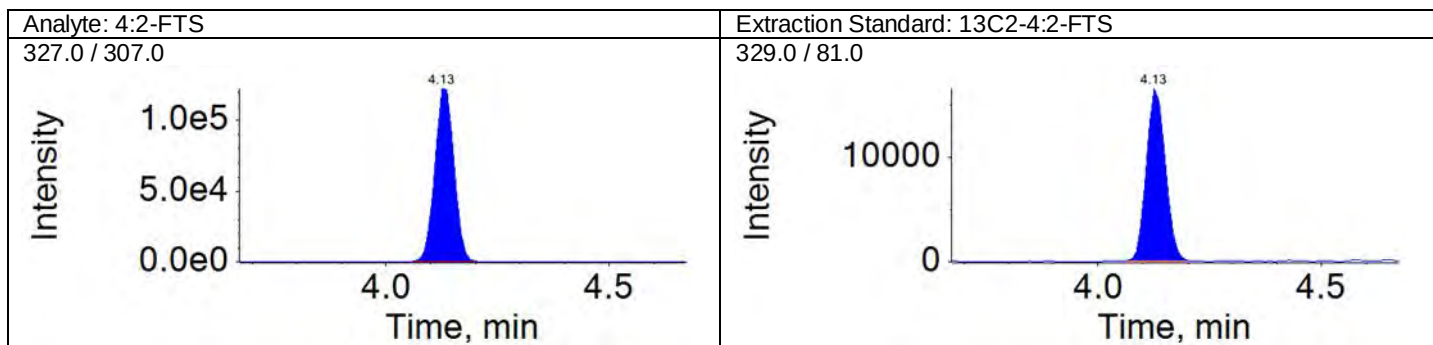
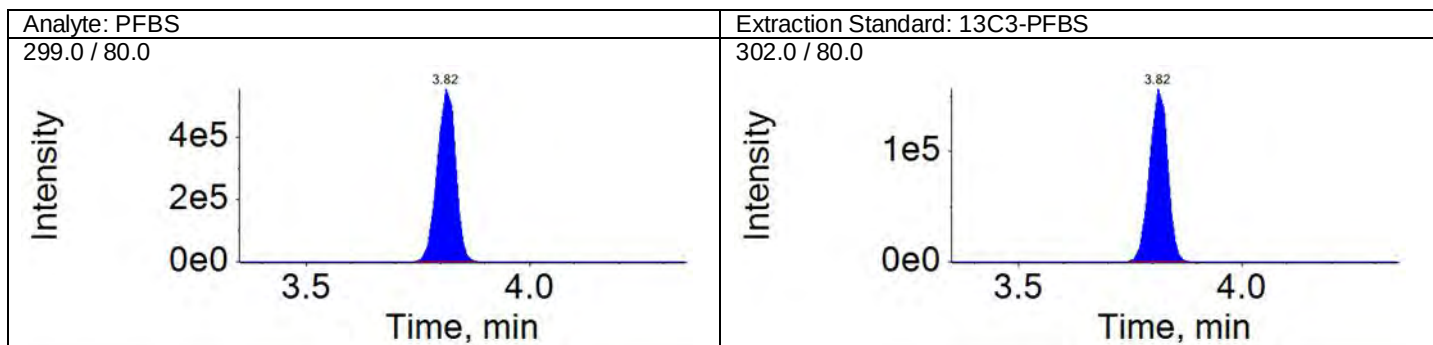
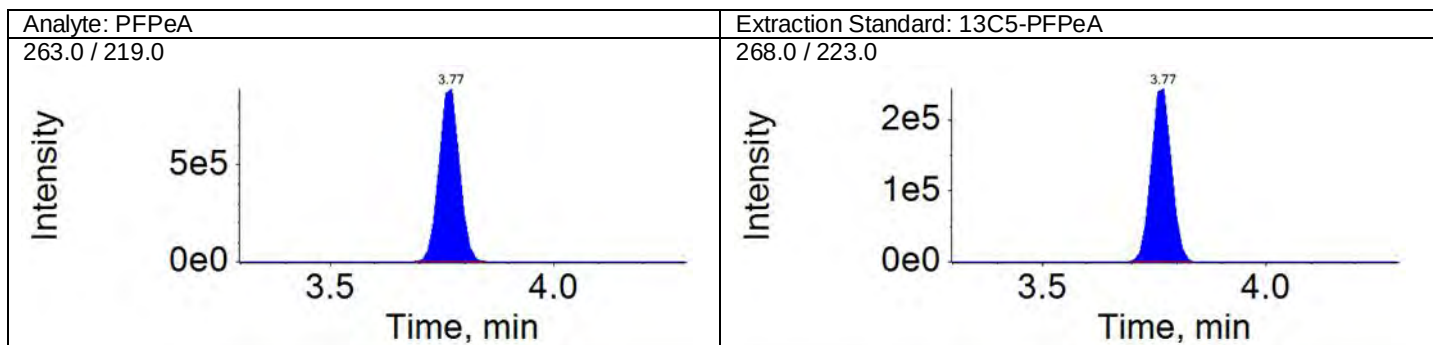
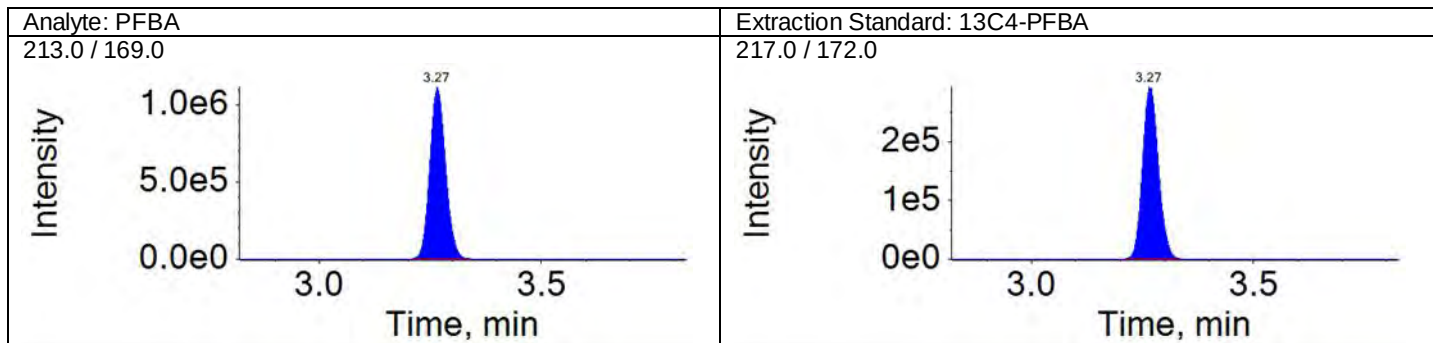
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



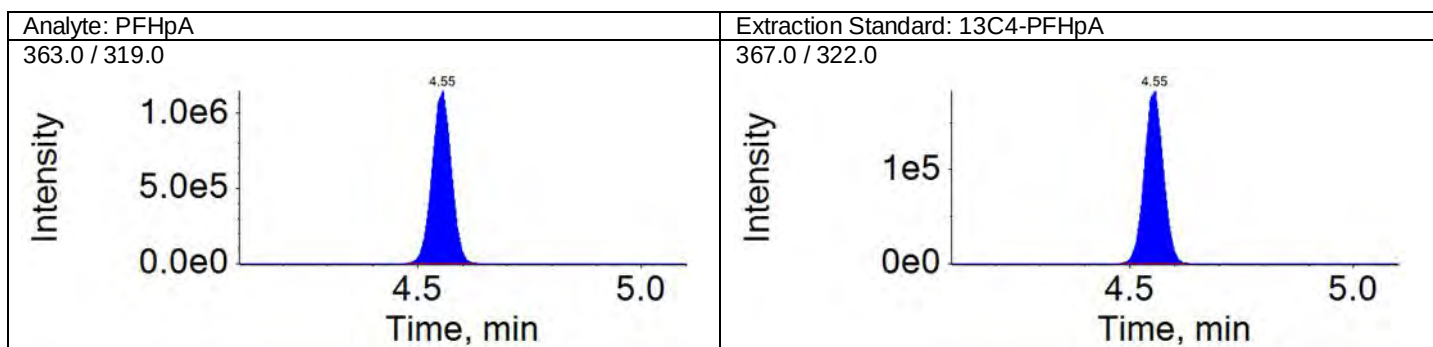
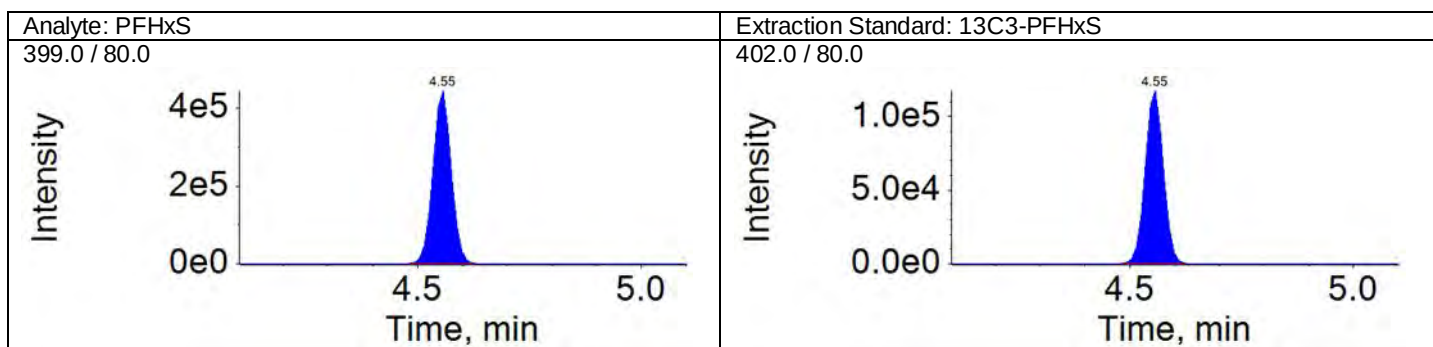
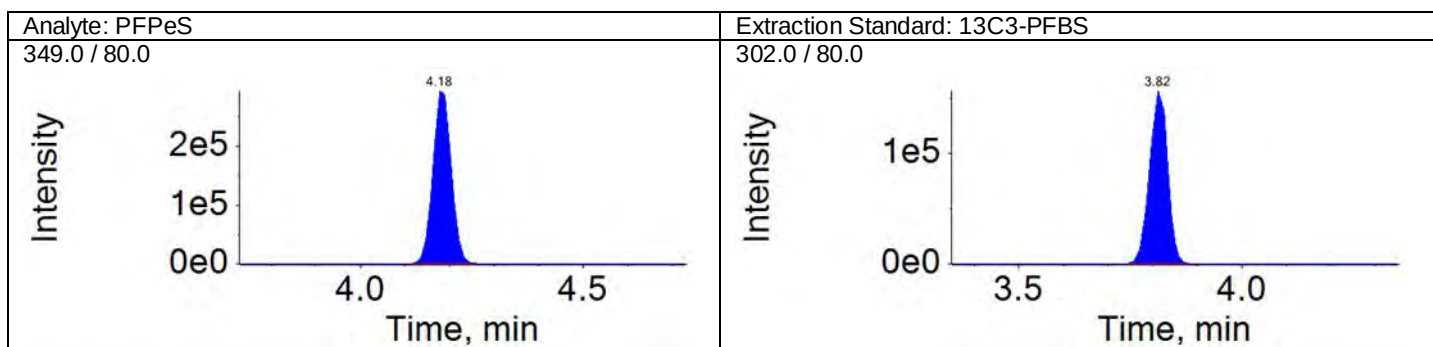
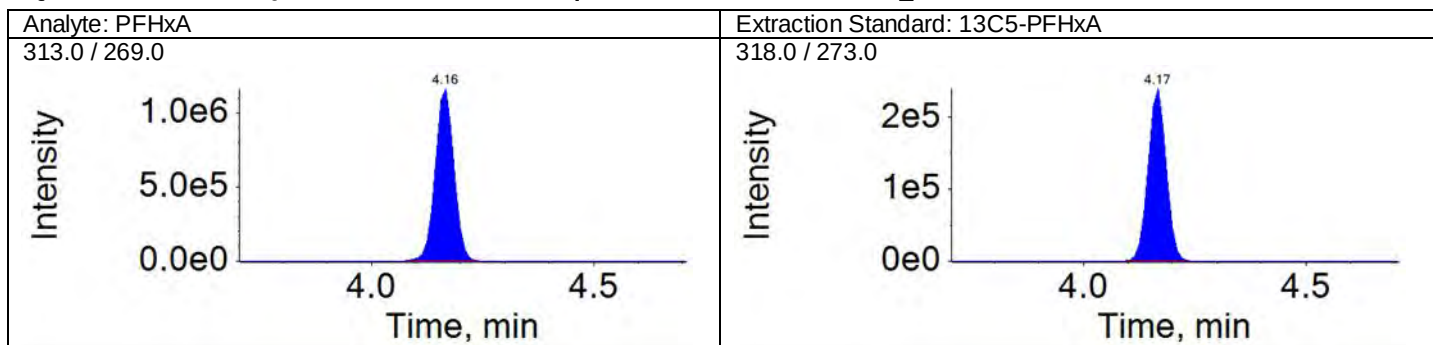
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



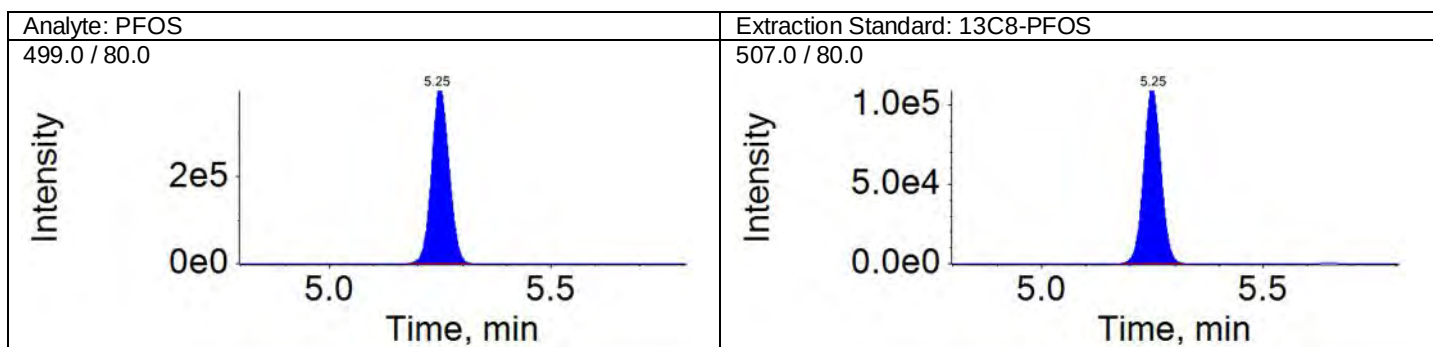
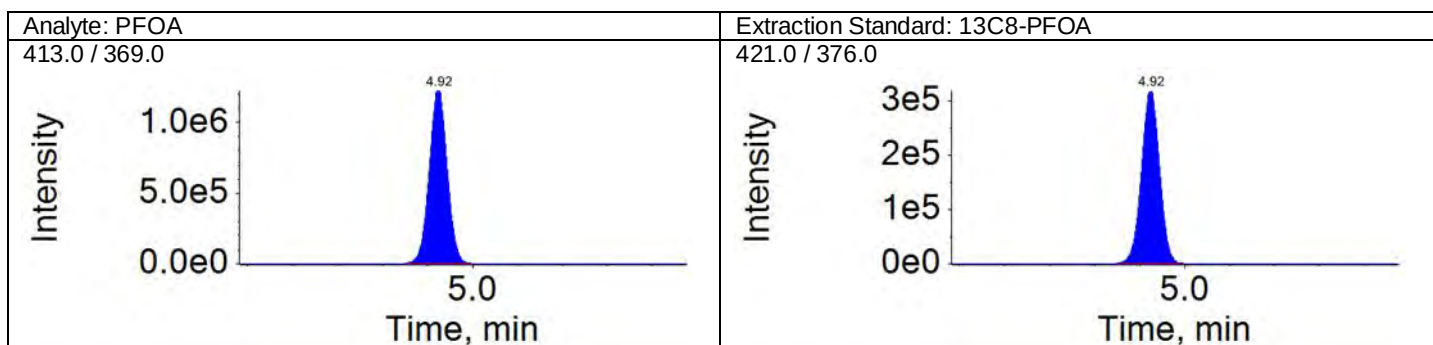
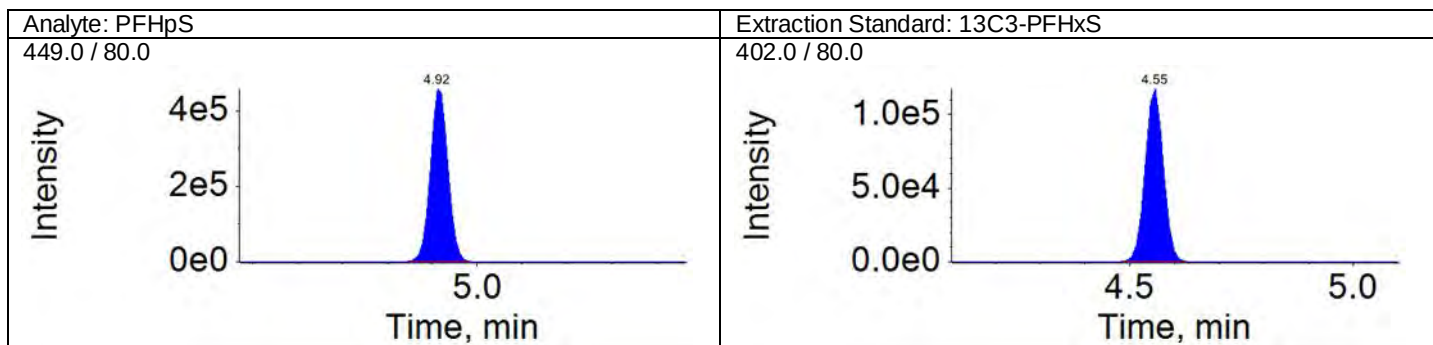
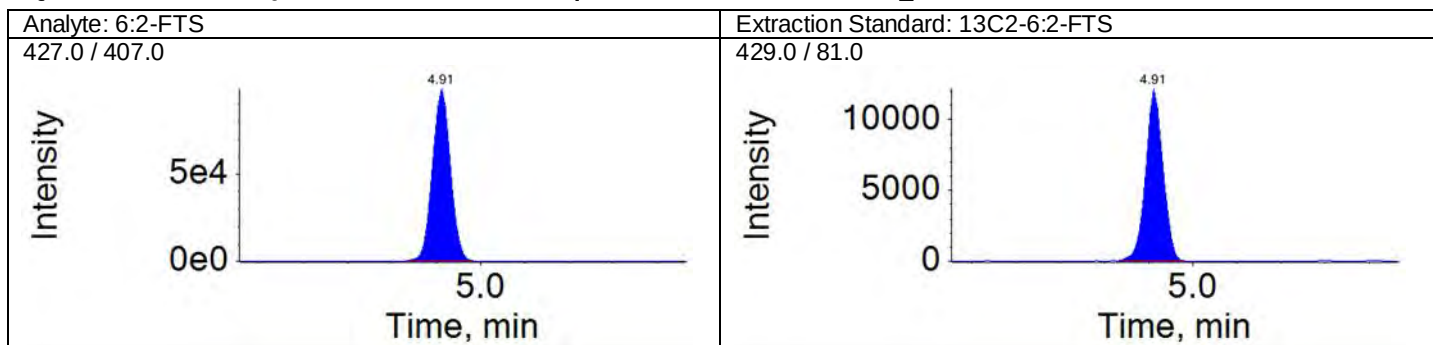
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



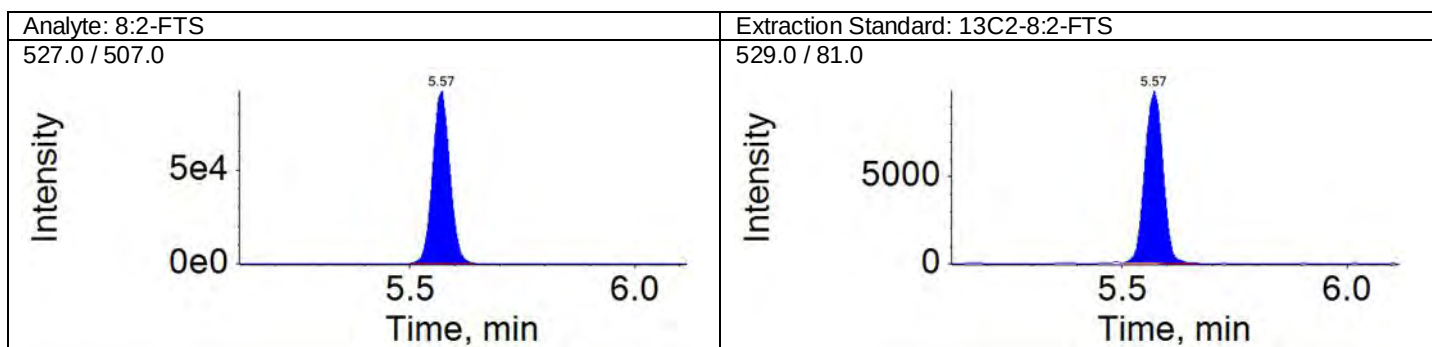
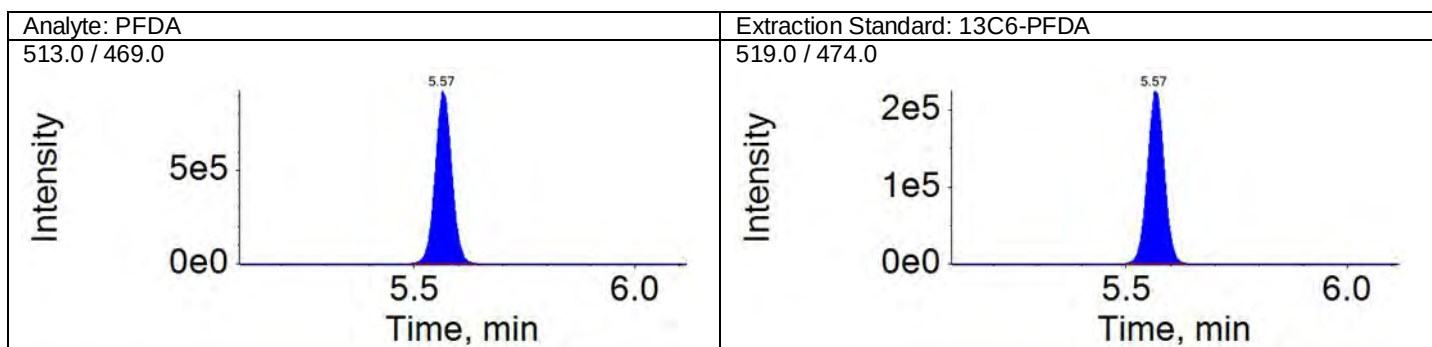
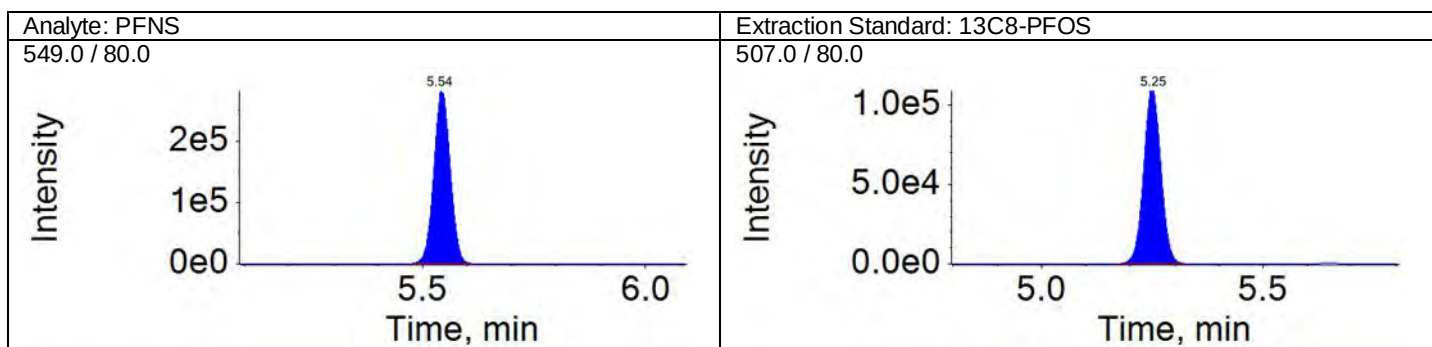
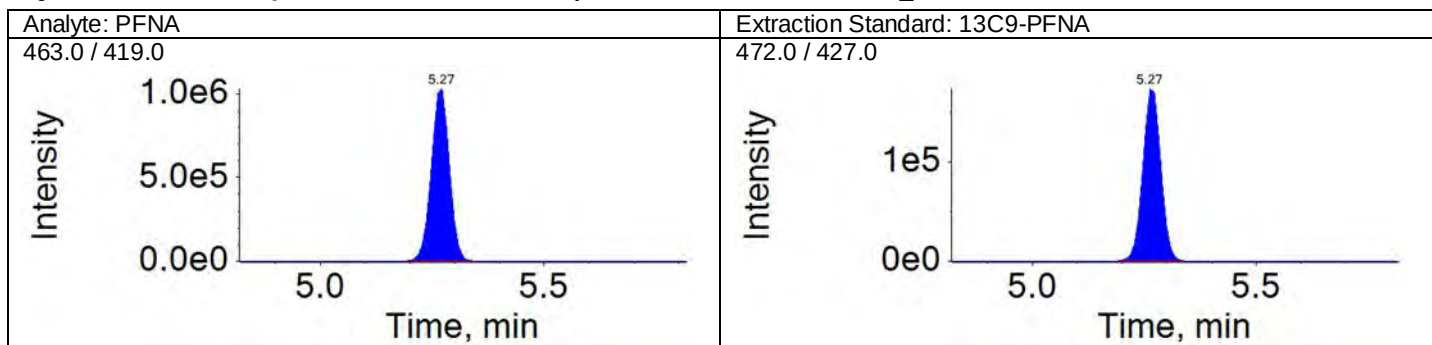
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



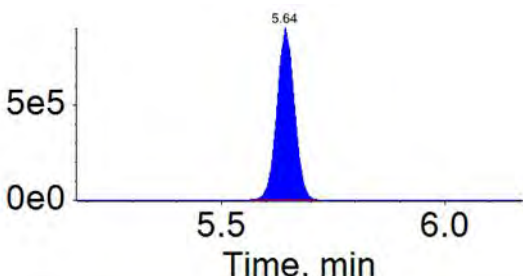
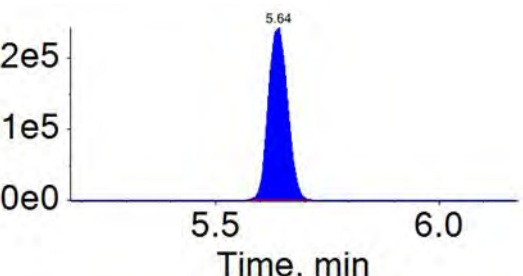
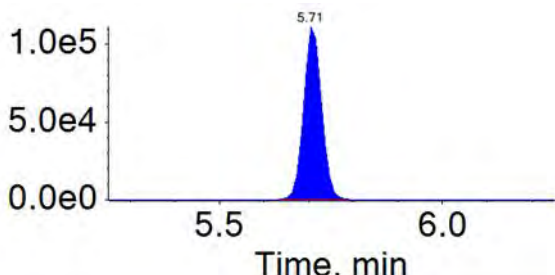
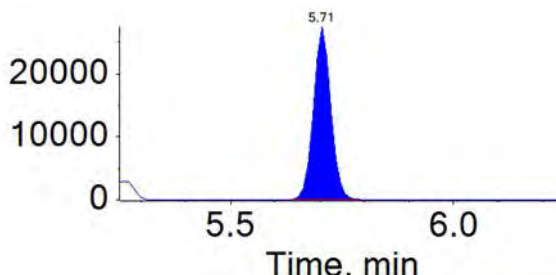
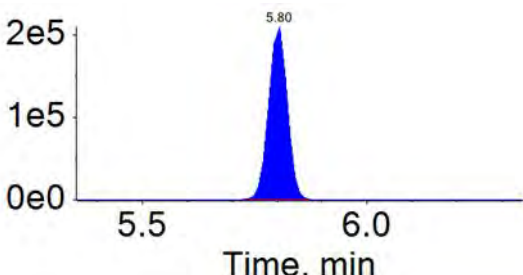
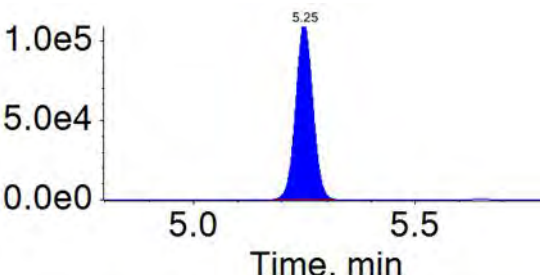
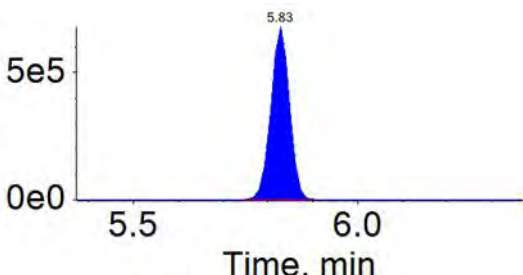
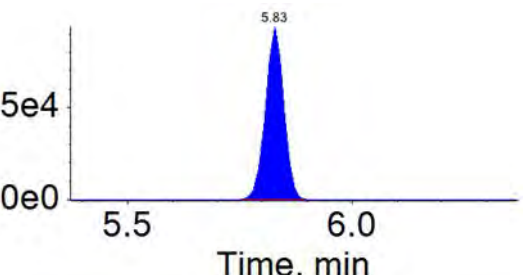
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte: PFOSA 498.0 / 78.0 	Extraction Standard: 13C8-PFOSA 506.0 / 78.0 
Analyte: NMeFOSAA 570.0 / 419.0 	Extraction Standard: d3-NMeFOSAA 573.0 / 419.0 
Analyte: PFDS 599.0 / 80.0 	Extraction Standard: 13C8-PFOS 507.0 / 80.0 
Analyte: PFUnDA 563.0 / 519.0 	Extraction Standard: 13C7-PFUnDA 570.0 / 525.0 

APPROVED

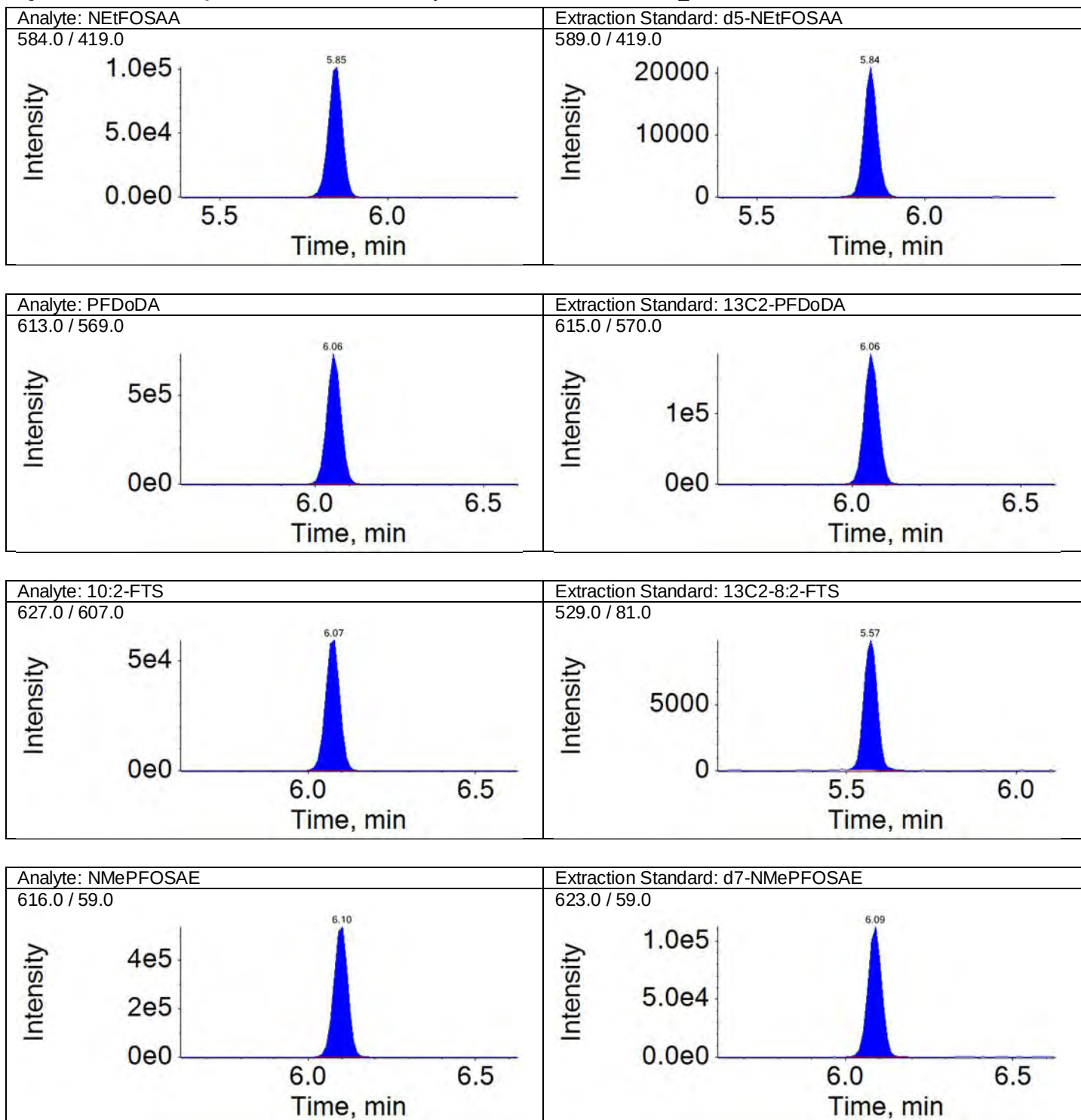
By JPT at 2:53 pm, 11/7/18

BSI05 Page 486 of 1595

REVIEWED

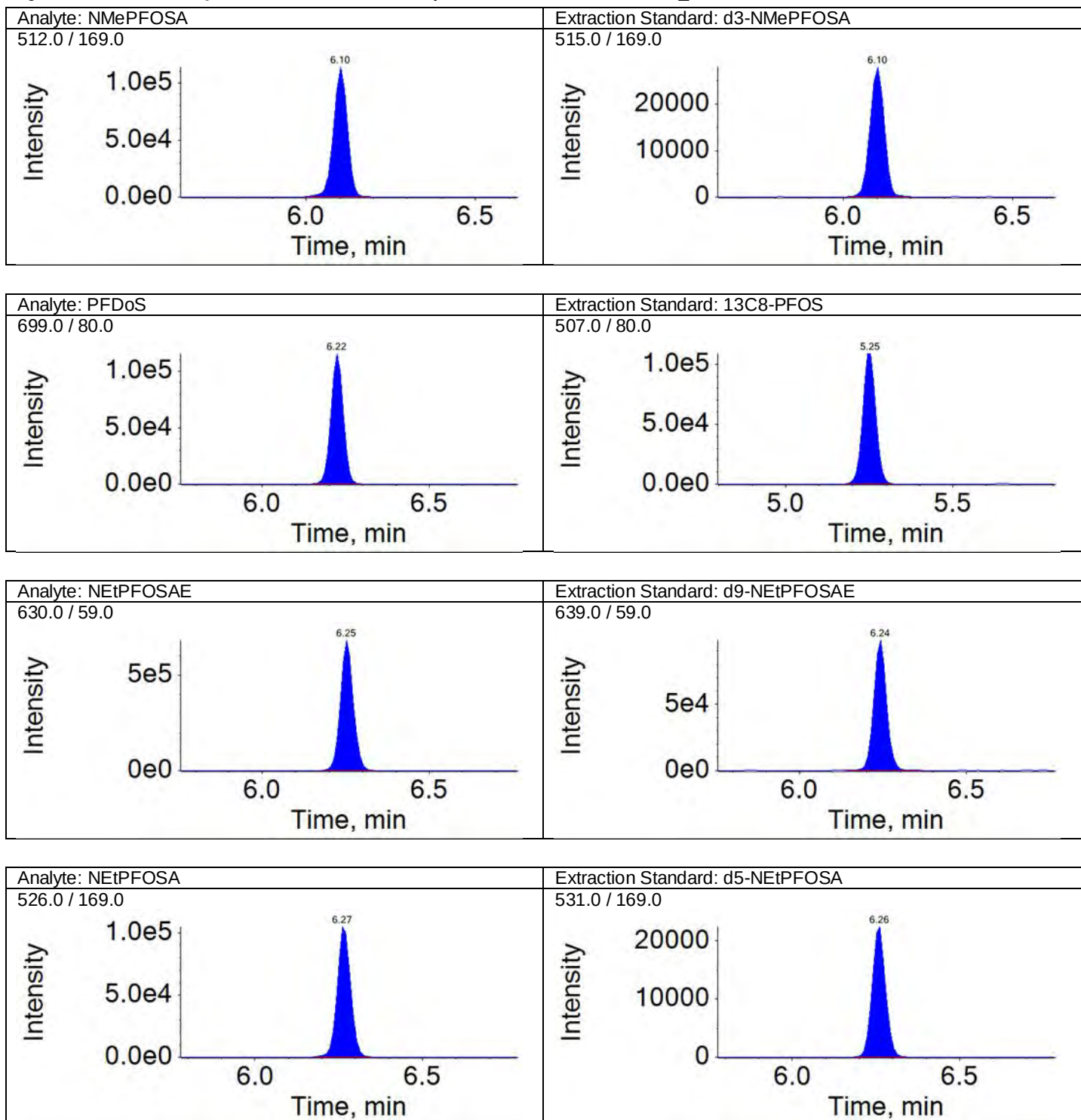
By umar at 5:23 pm, 11/9/18

Page 14 of 17

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

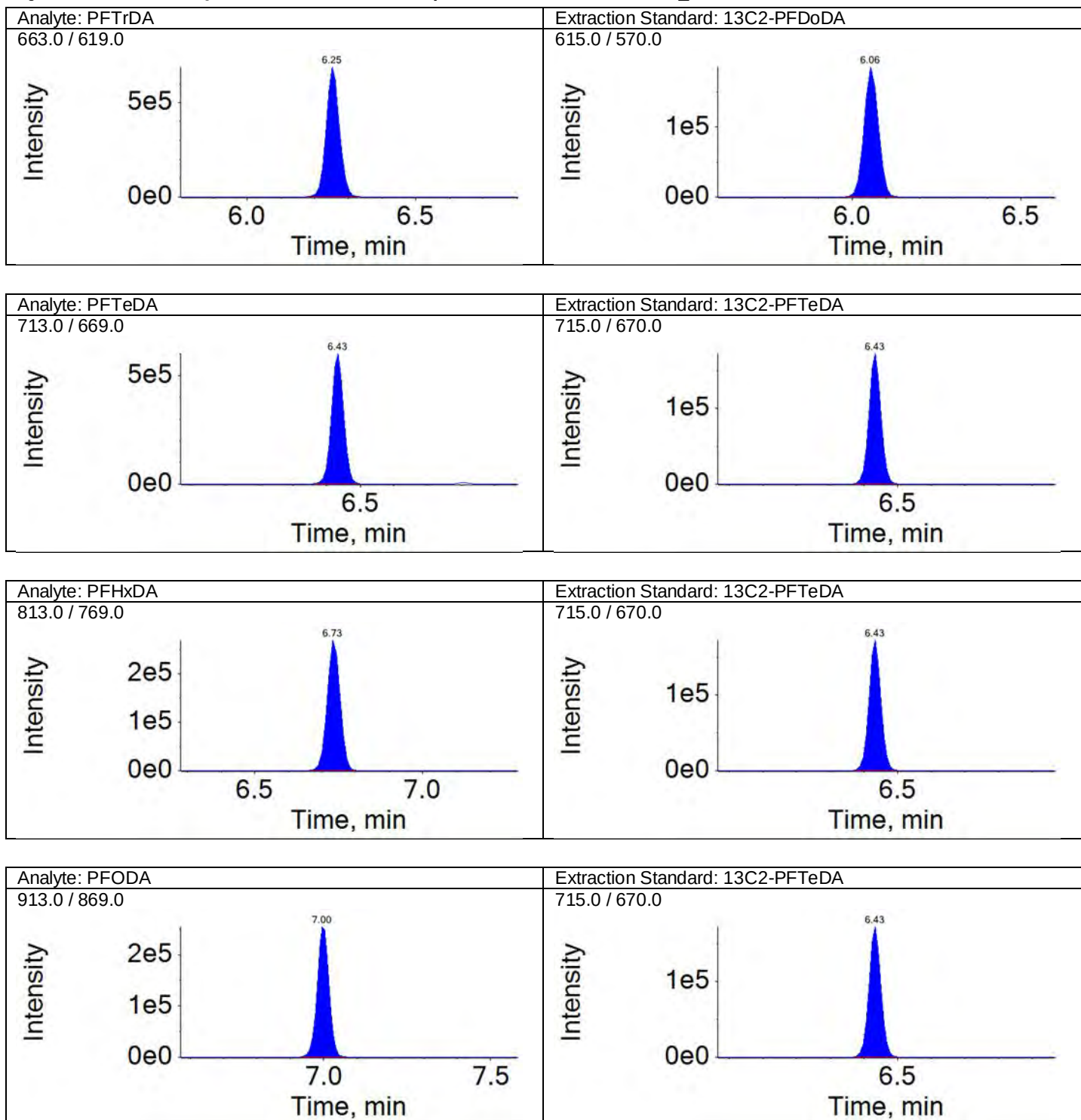
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



Ion Ratio Report

Sample Name: CAL5

Instrument Name: LM27631

File Name: 18NOV07DCAL-14.wiff

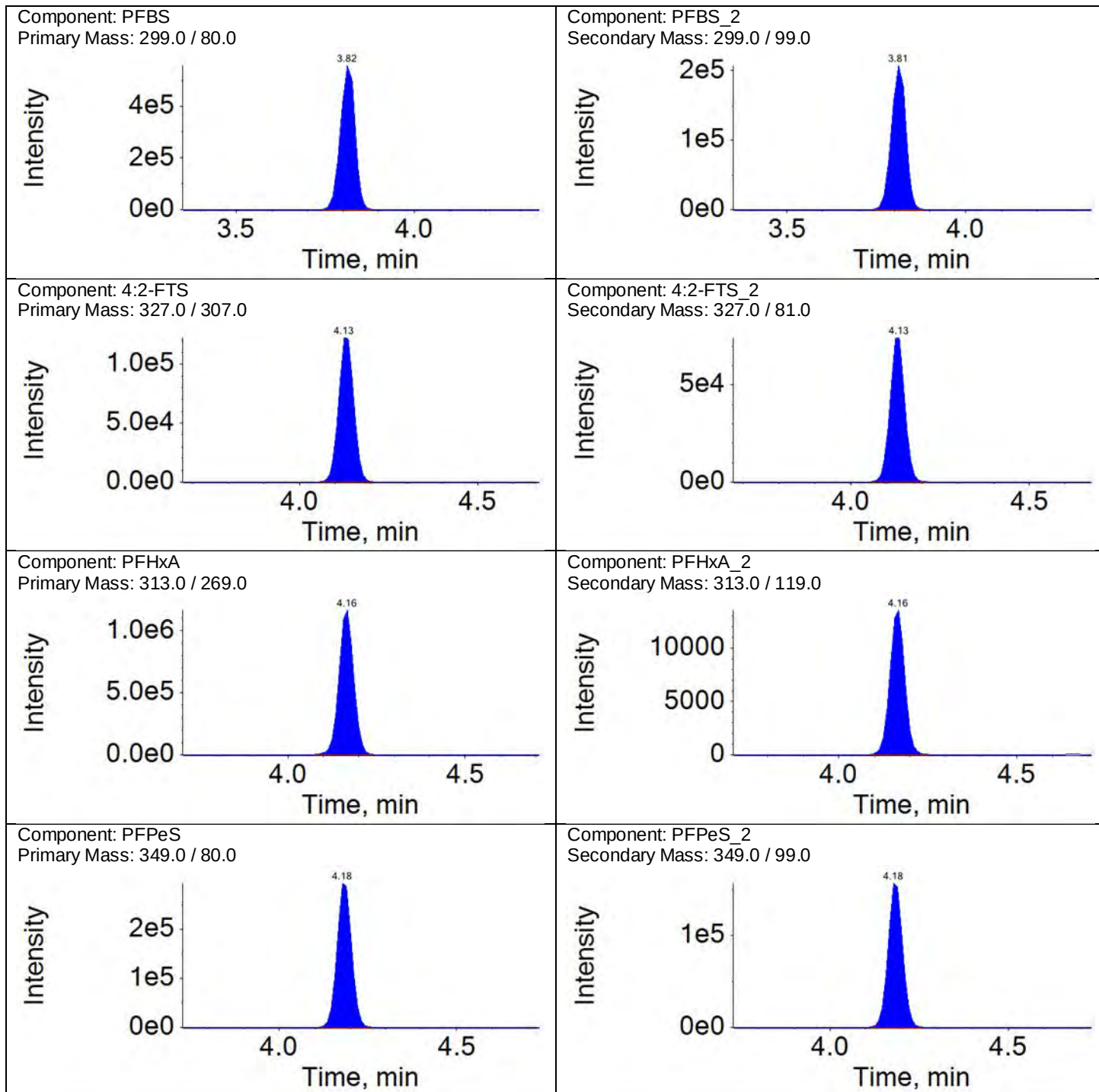
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	1601296.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	589199.3	A	0.3576	0.3680	3	50	
4:2-FTS	4.13	1.00	365423.8	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	215025.0	A	0.6359	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	
PFTTrDA	6.25	1.03	1851055.0	A	1.0000	1.0000			
PFTTrDA_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	

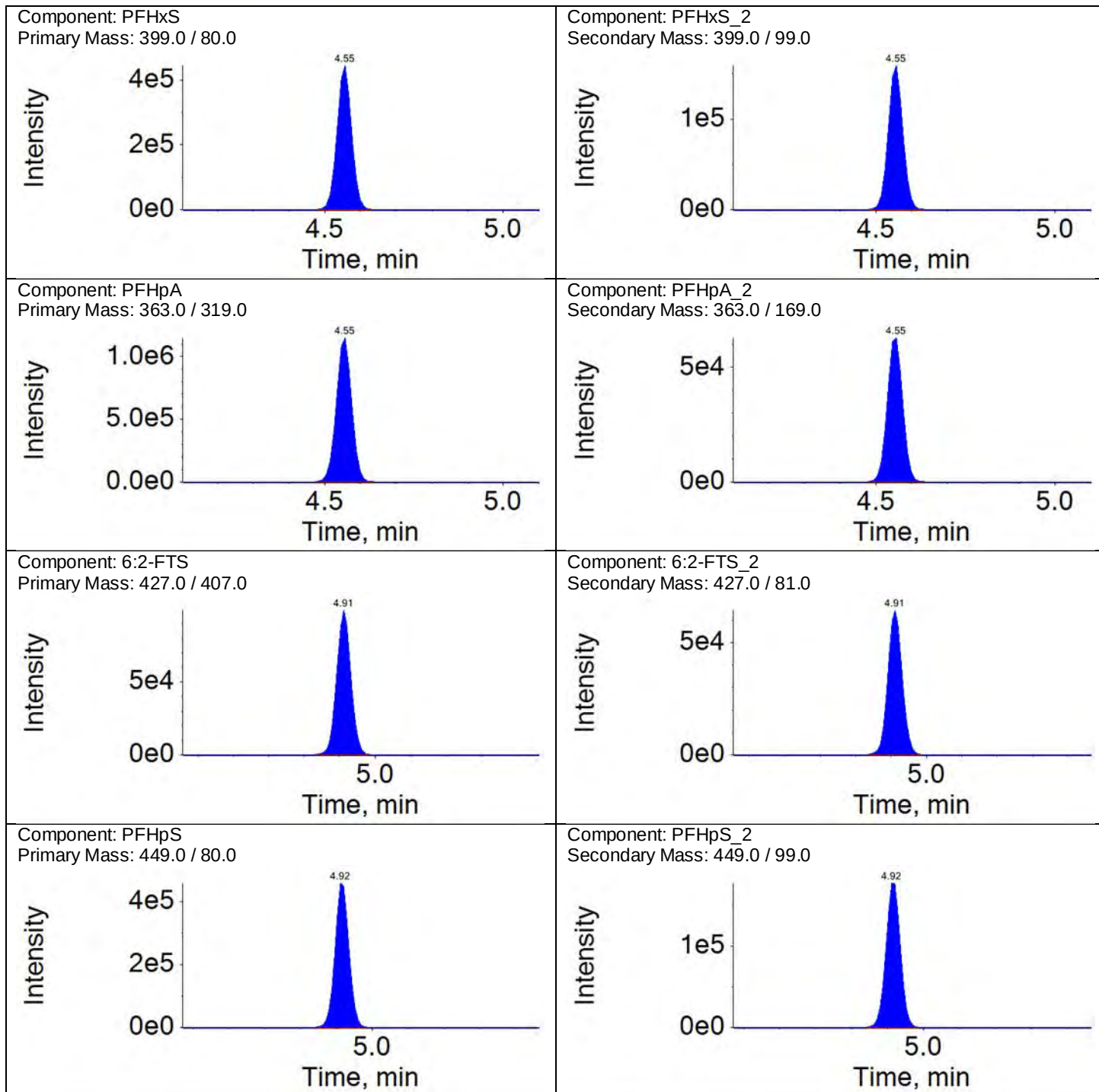
APPROVED

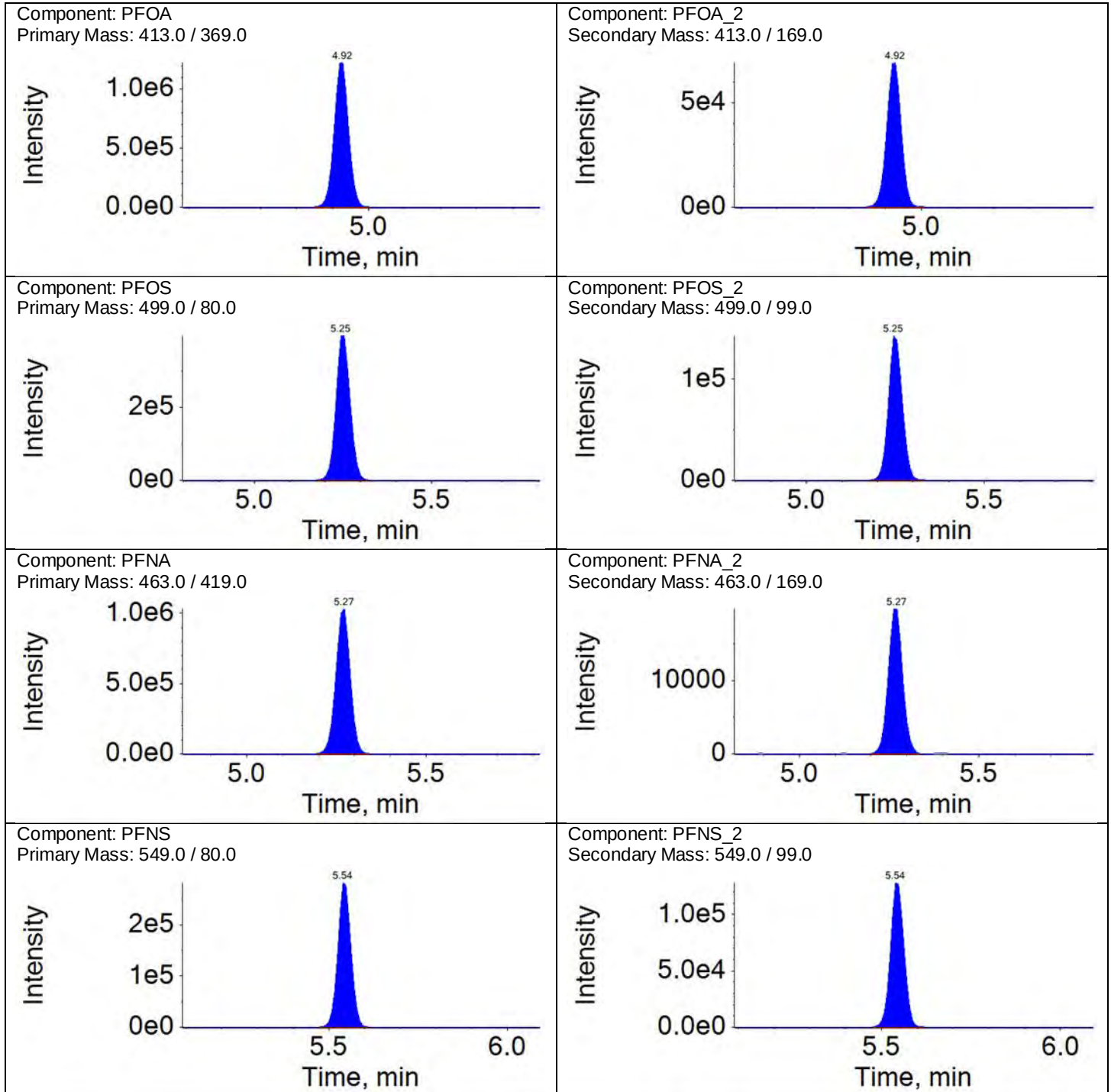
By JPT at 2:53 pm, 11/7/18

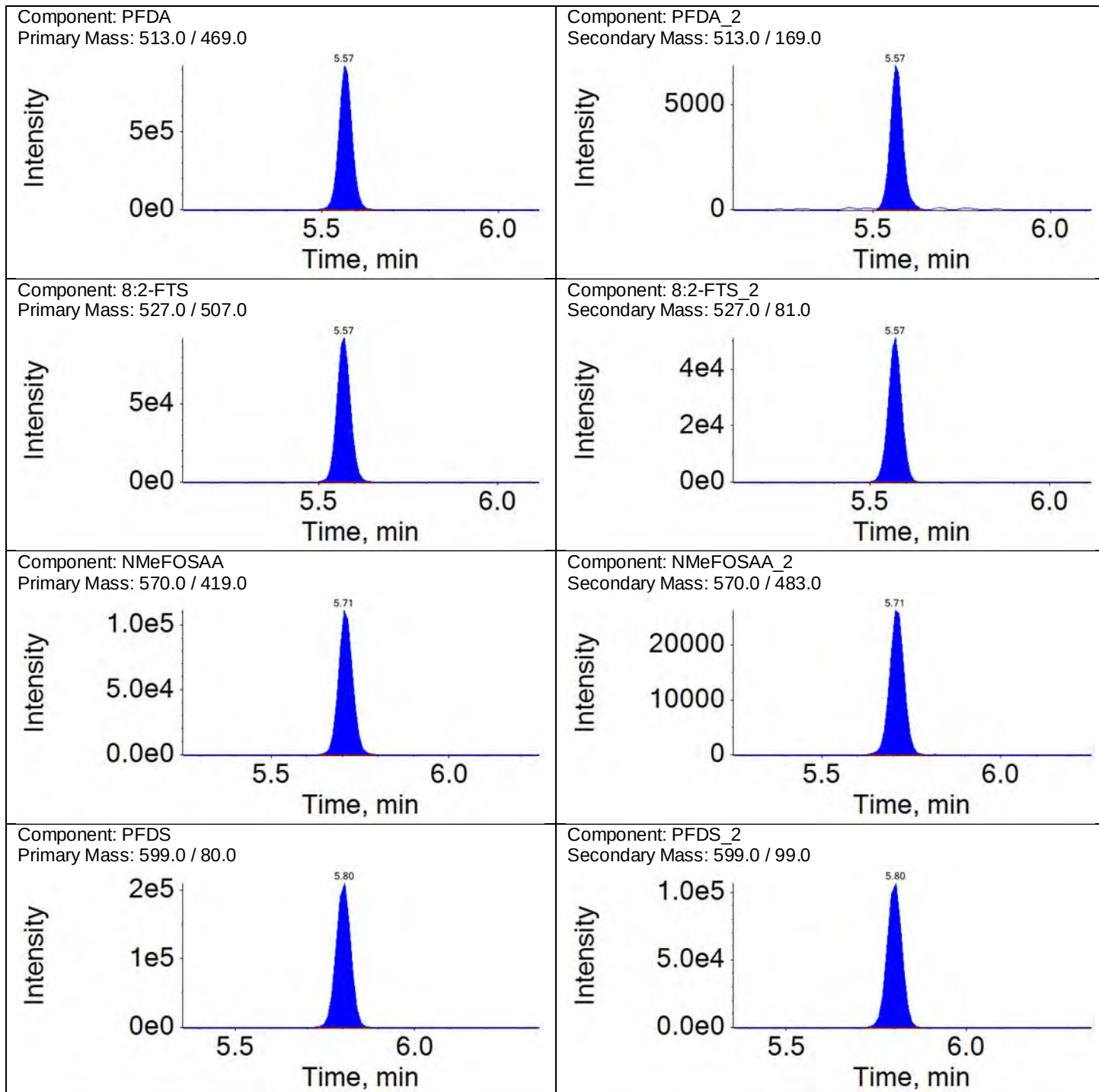
REVIEWED

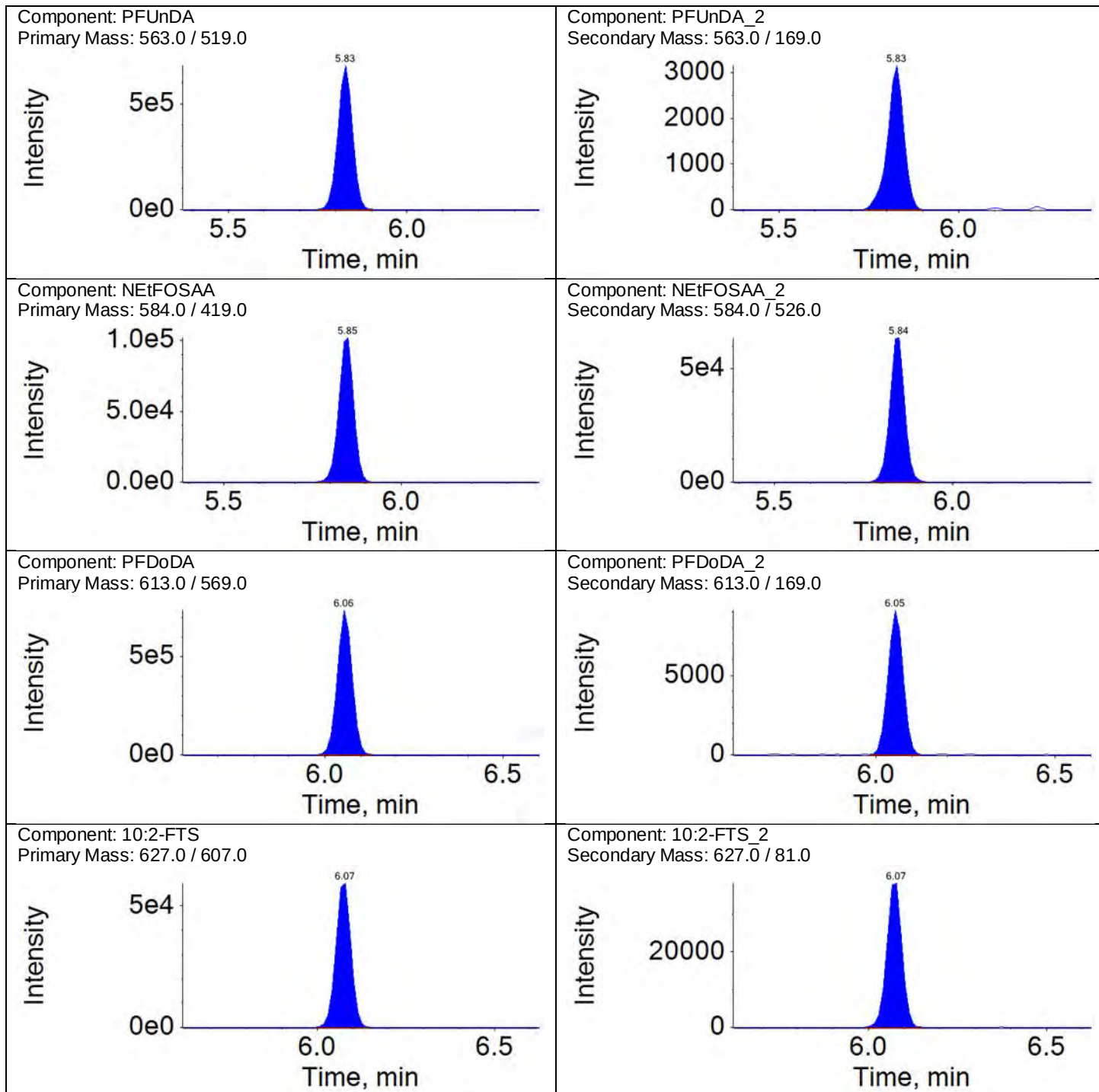
By umar at 5:23 pm, 11/9/18

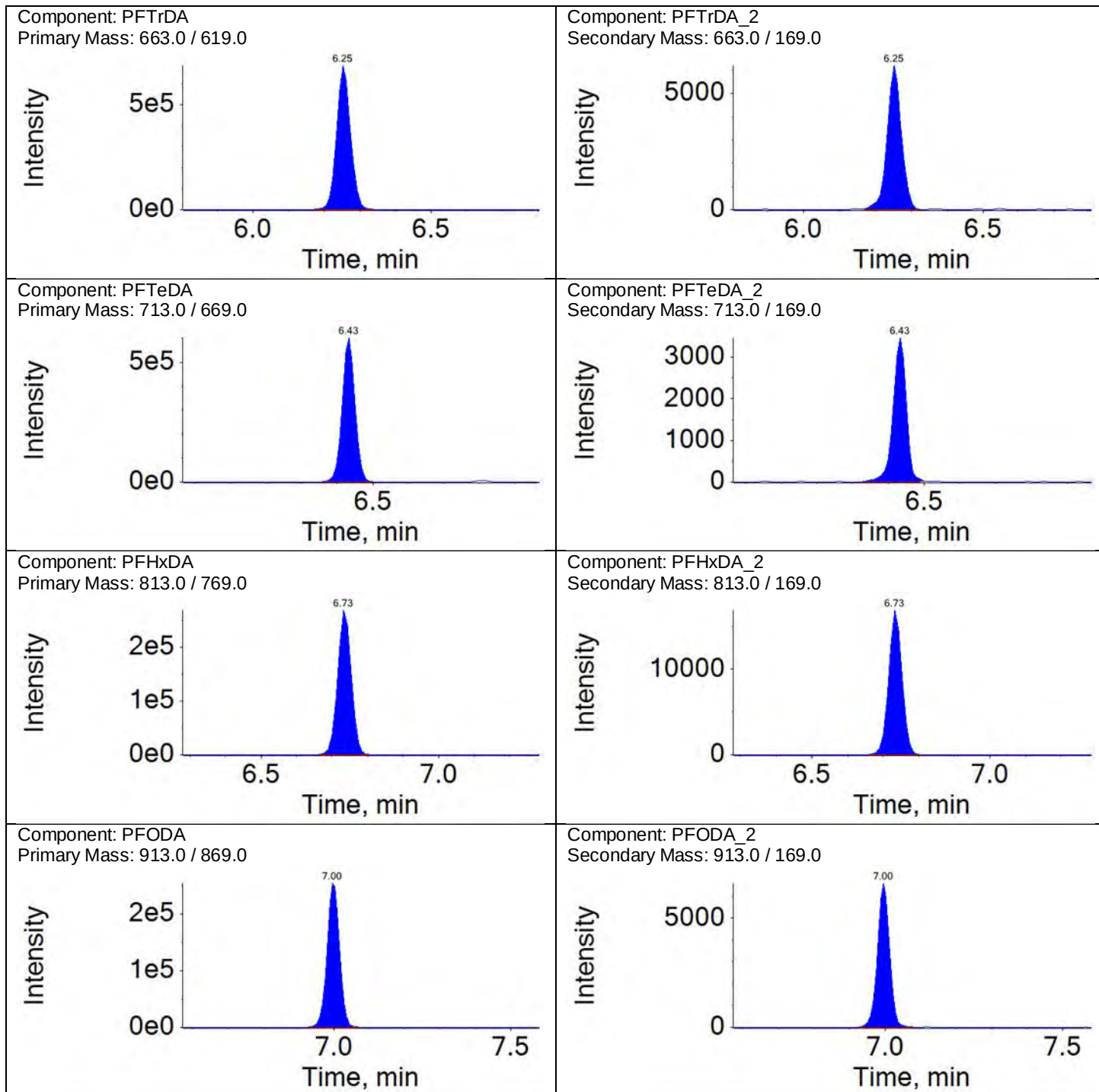












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	Reference 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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL6

Instrument Name: LM27631

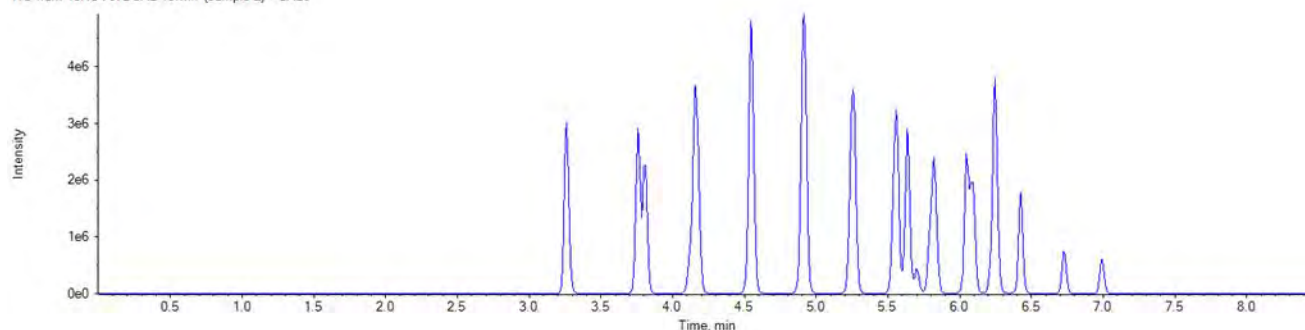
File Name: 18NOV07DCAL-15.wiff

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
PFTDA	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

TIC from 18NOV07DCAL-15.wiff (sample 2) - CAL6



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 498 of 1595

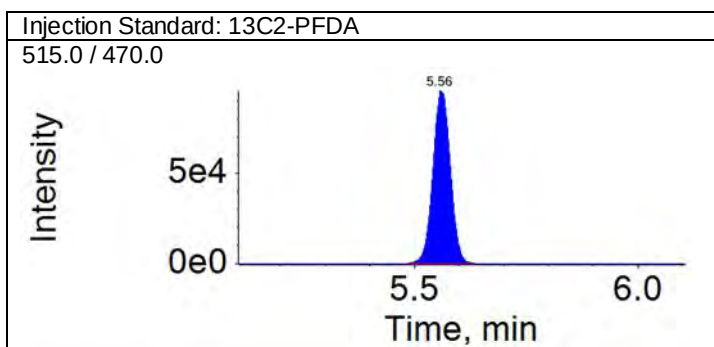
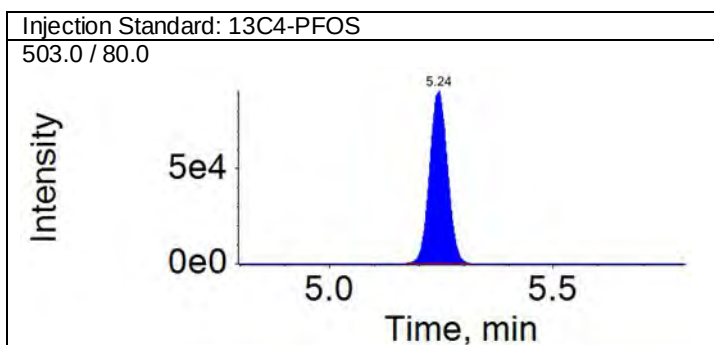
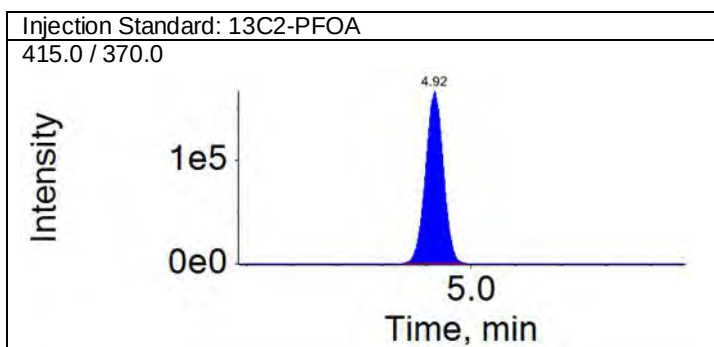
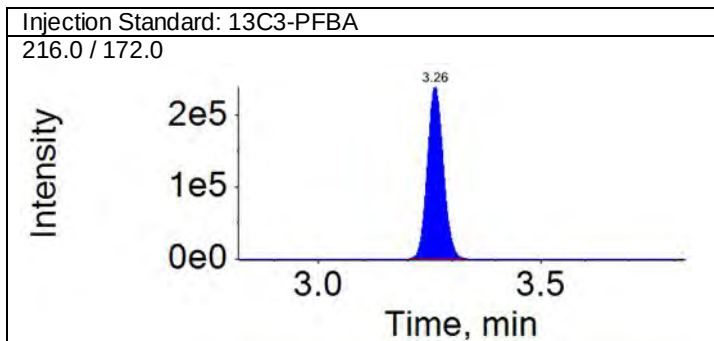
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

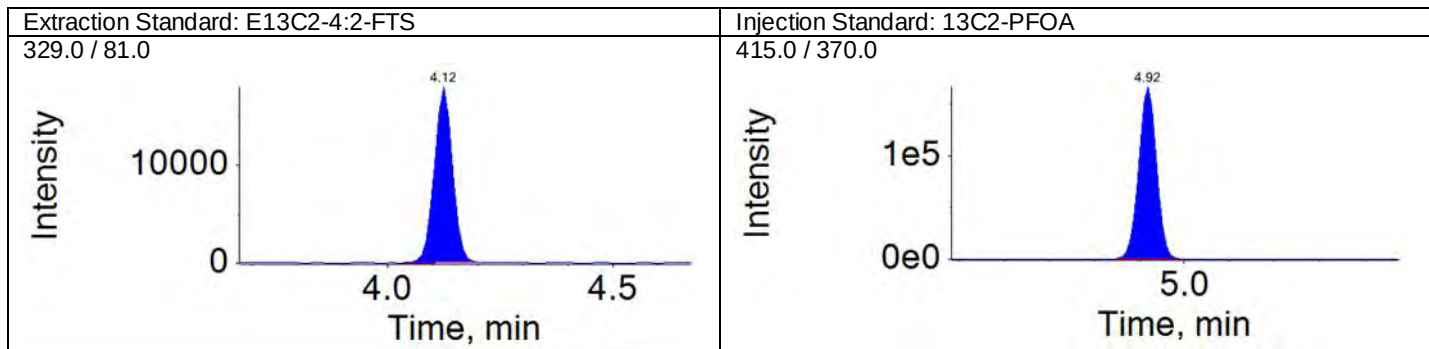
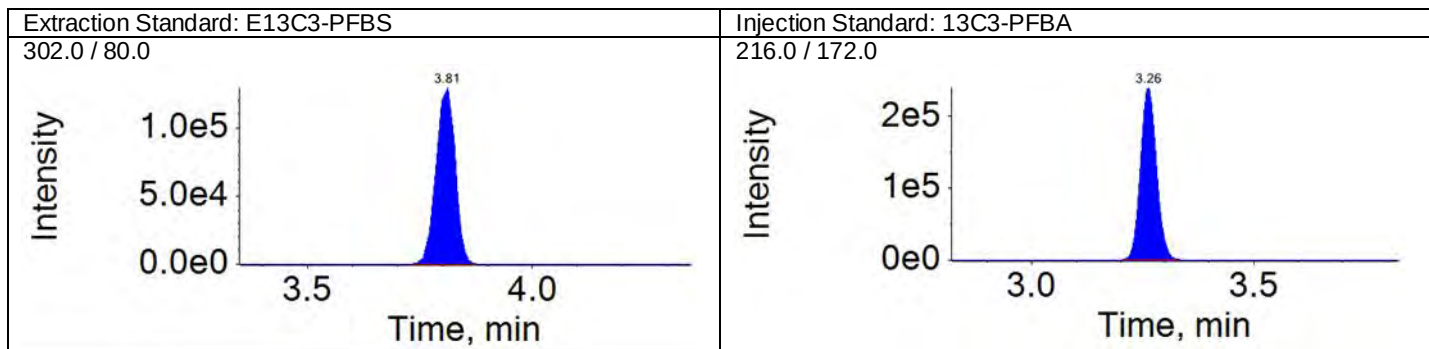
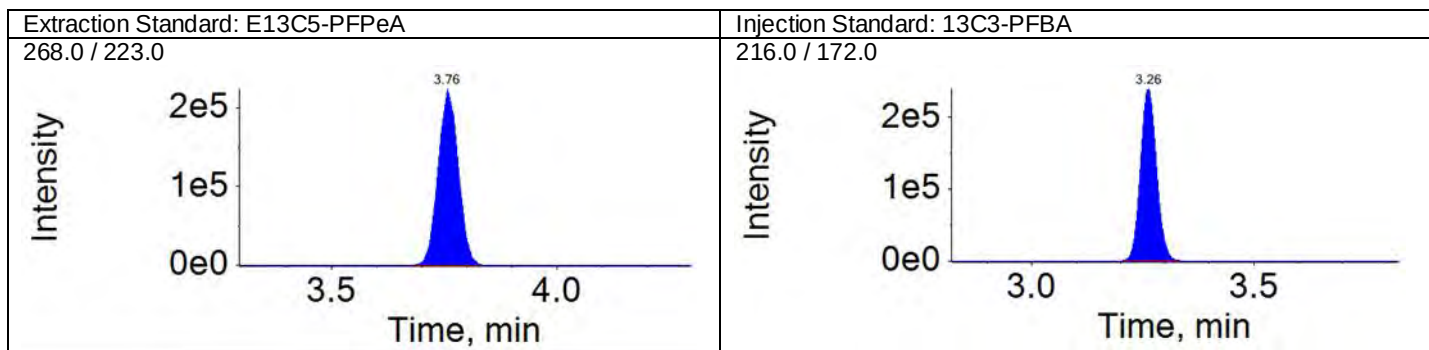
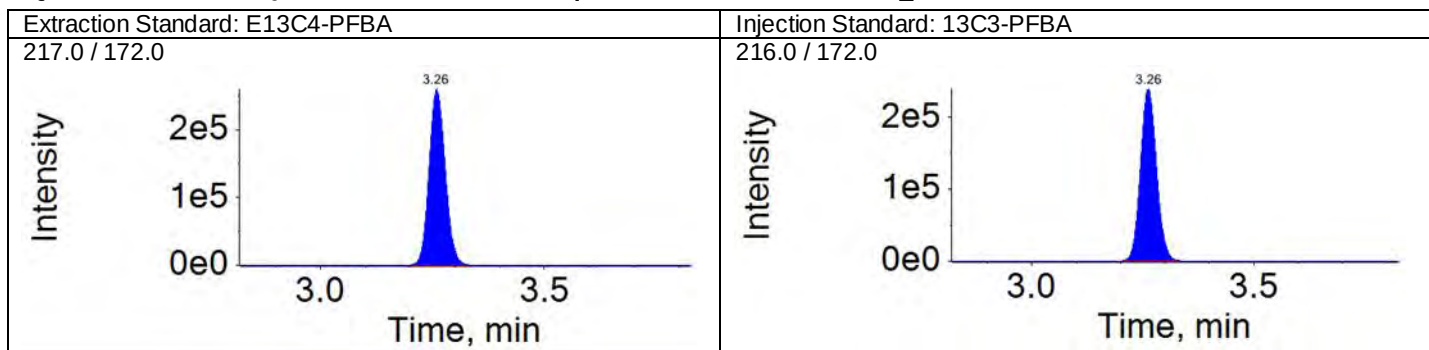
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

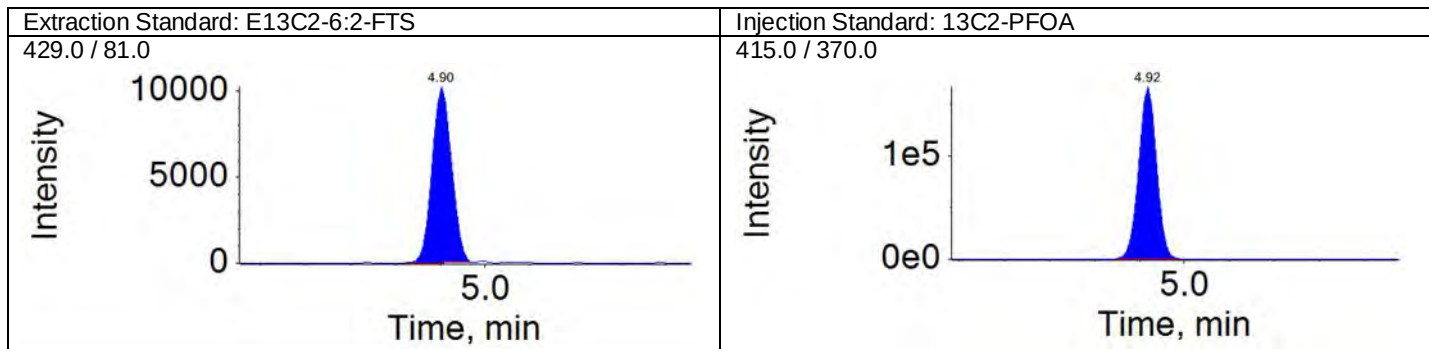
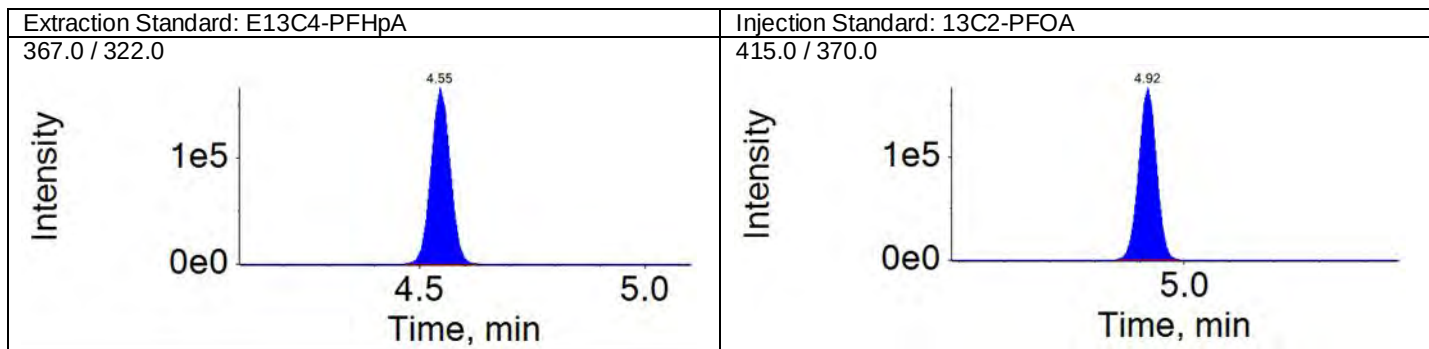
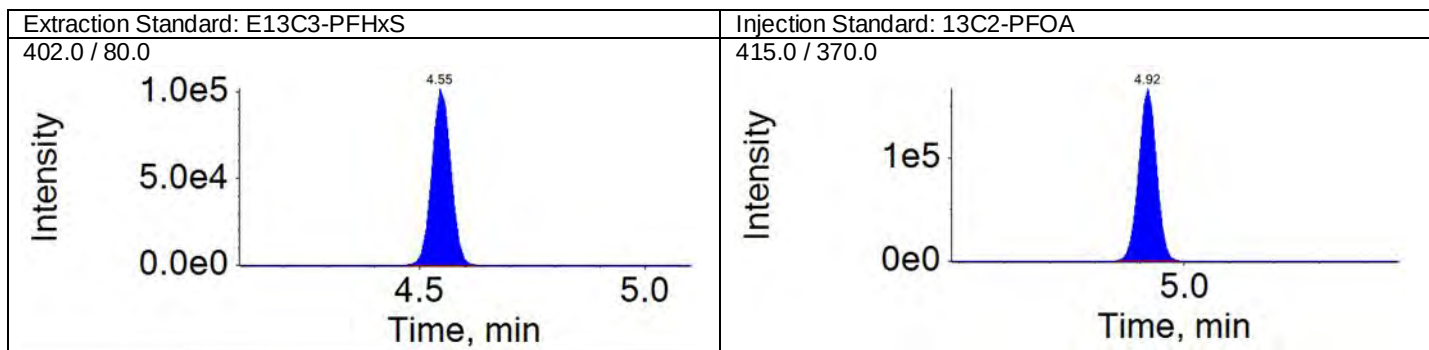
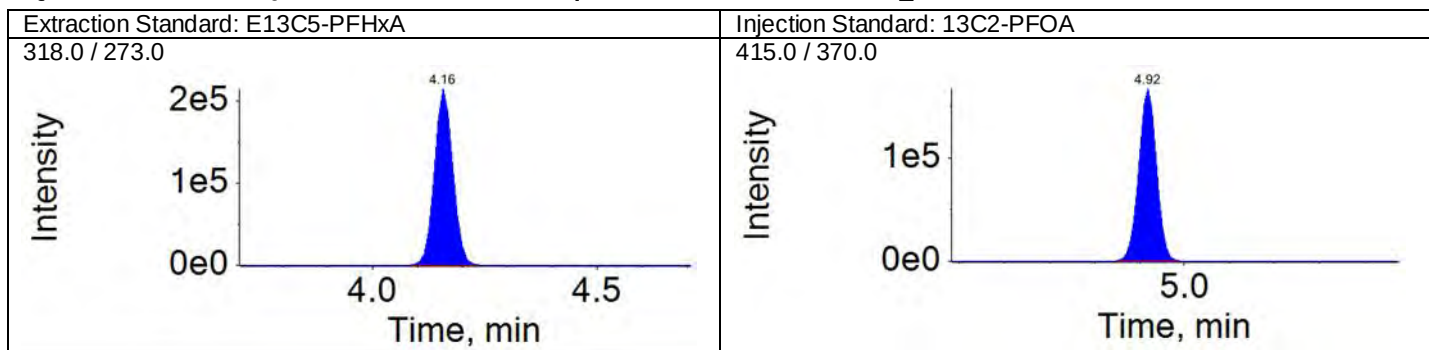
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

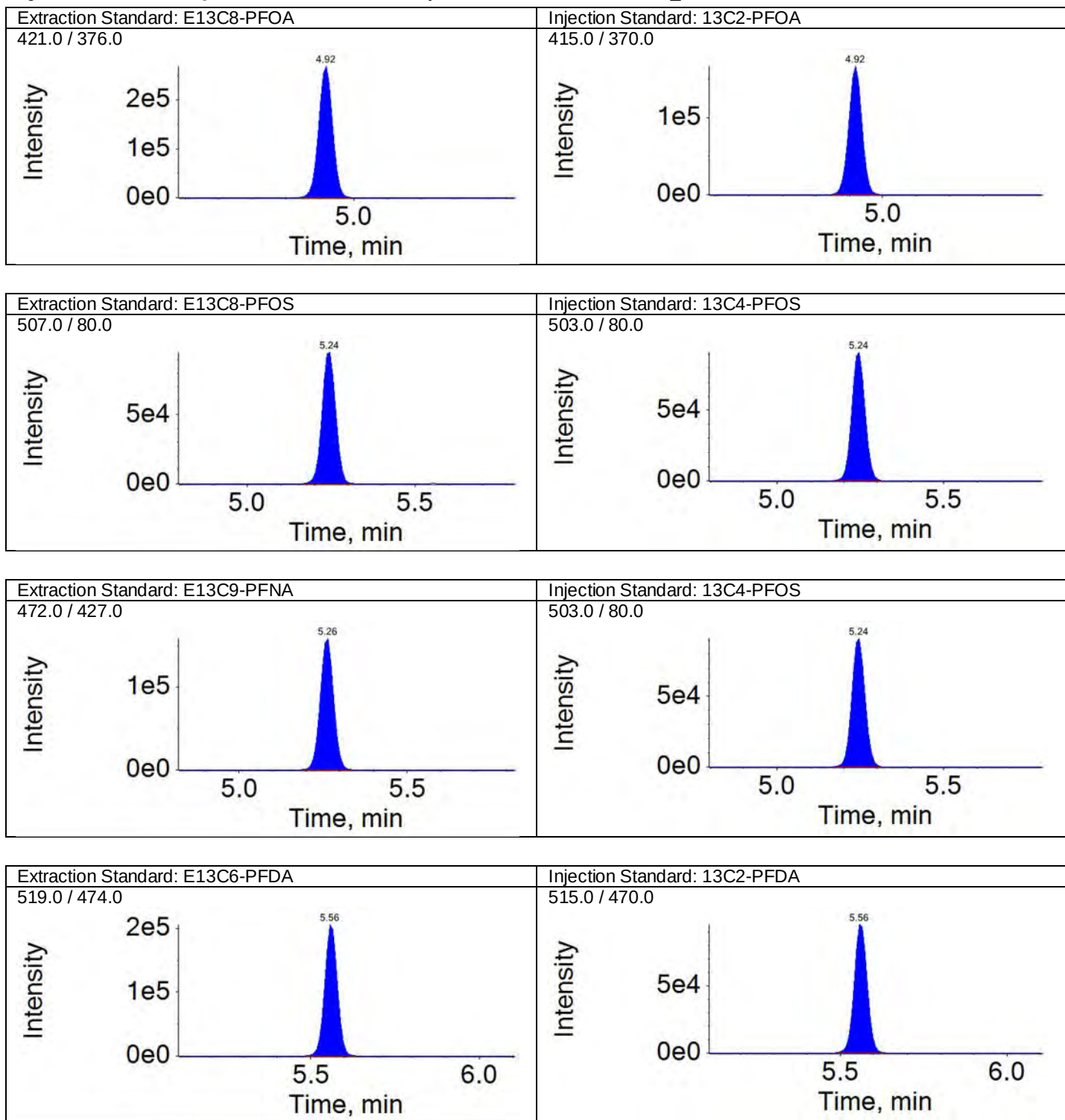
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

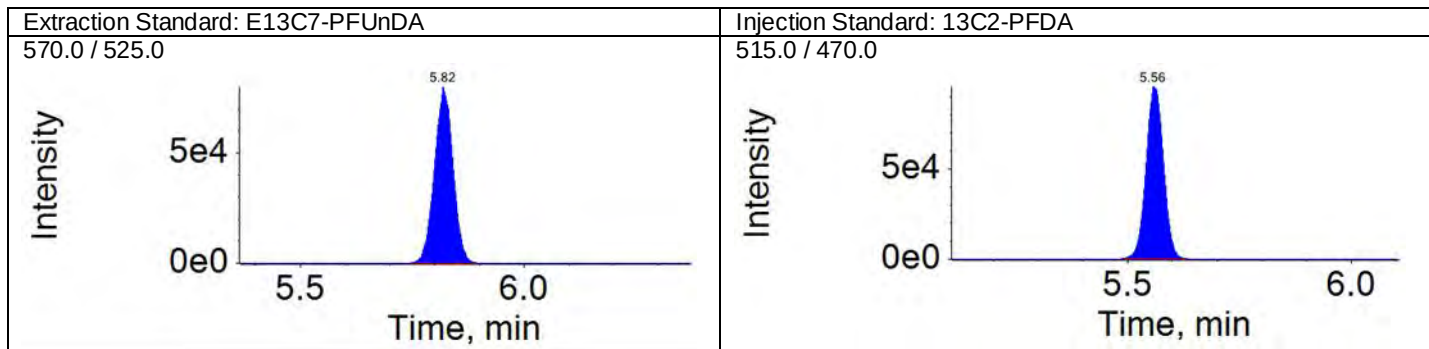
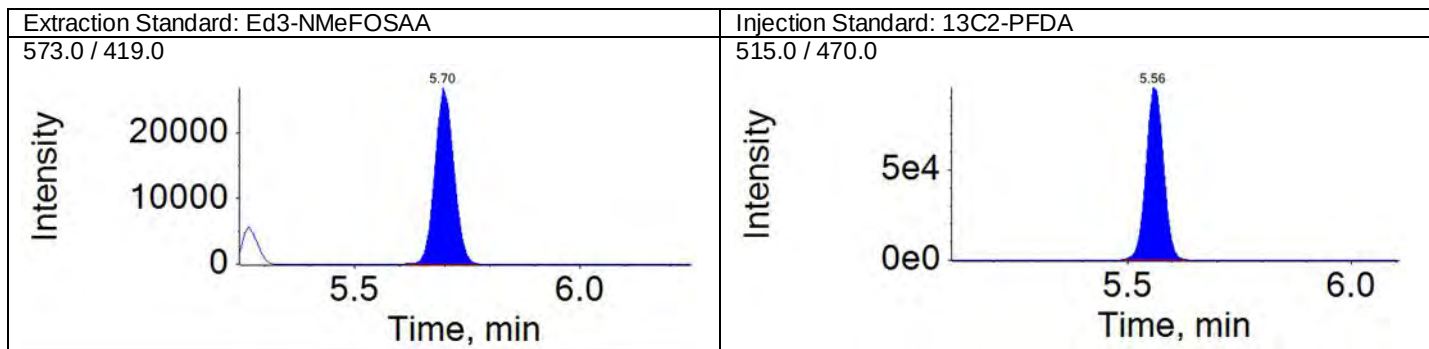
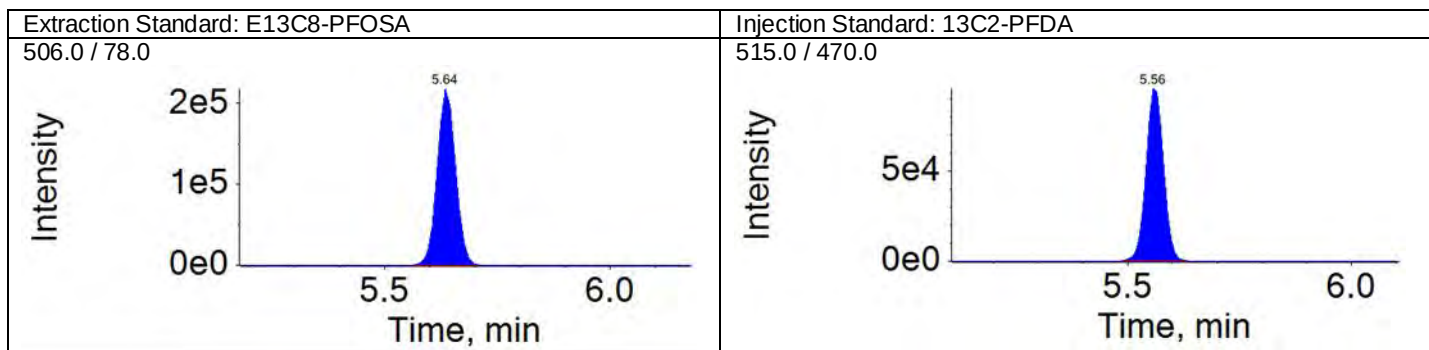
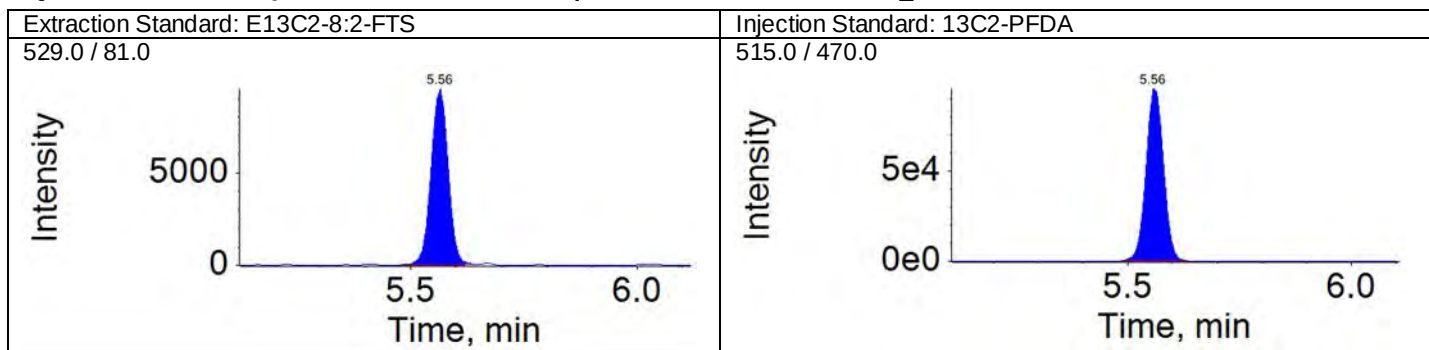
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

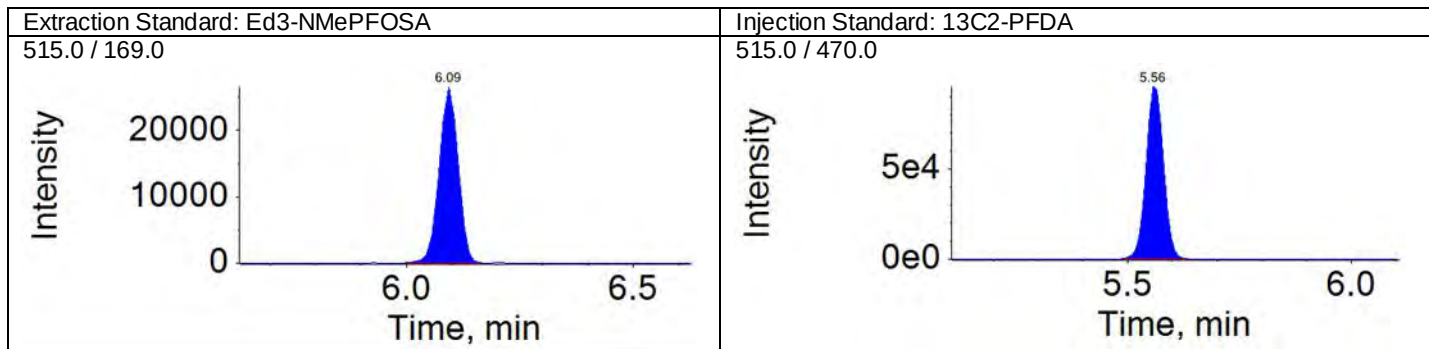
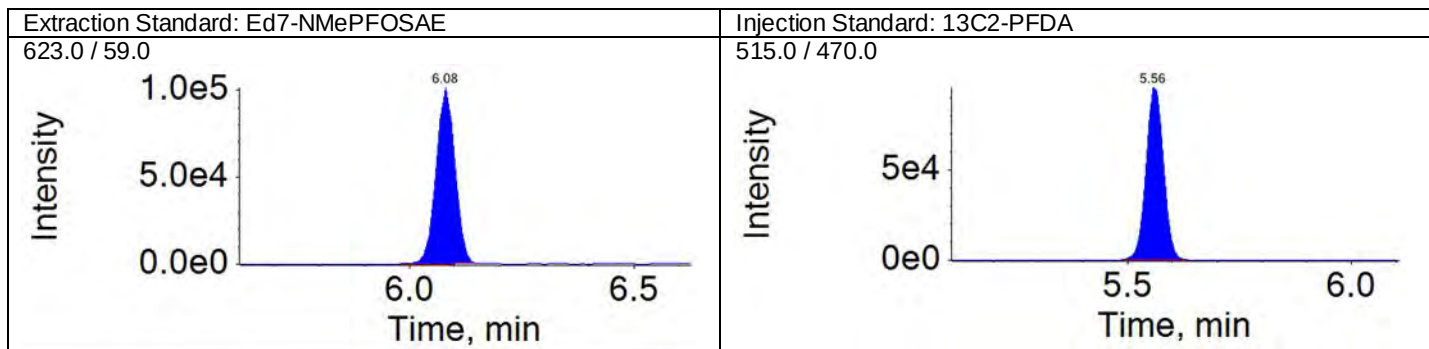
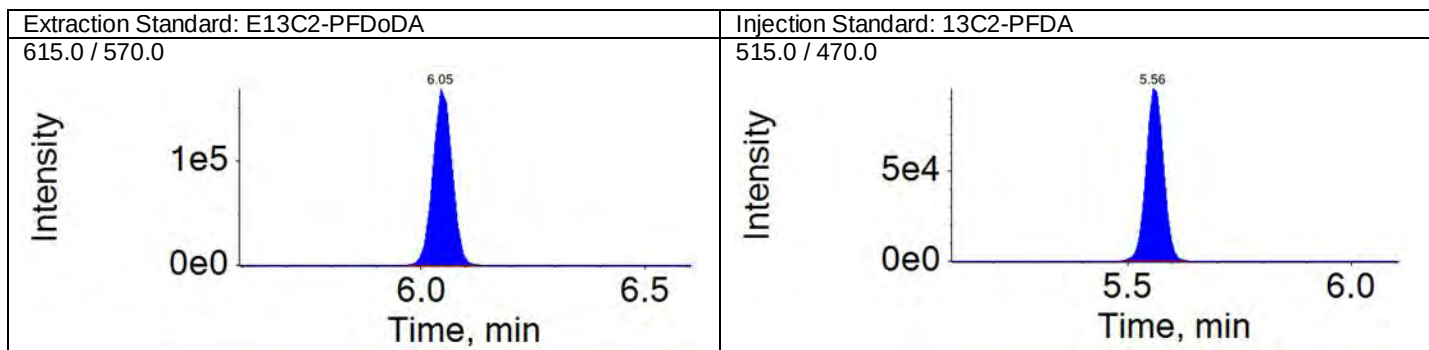
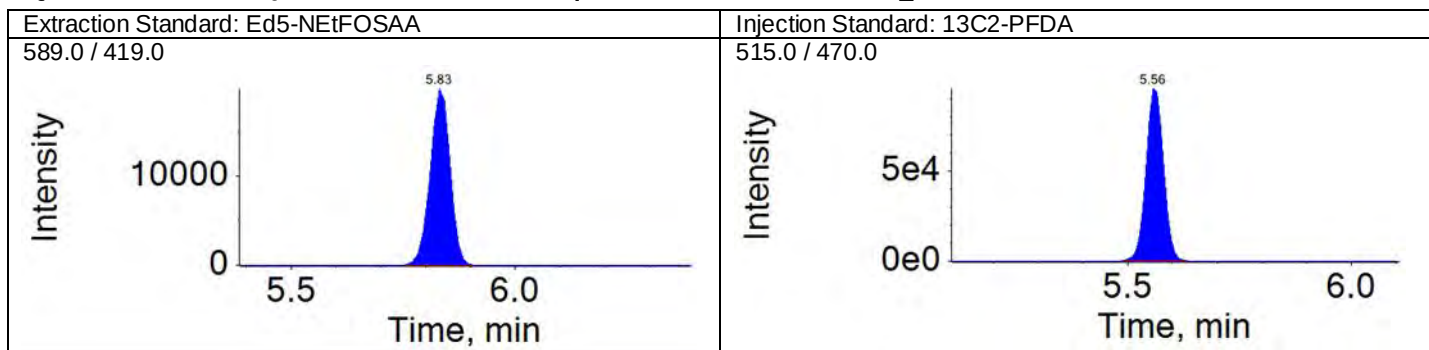
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

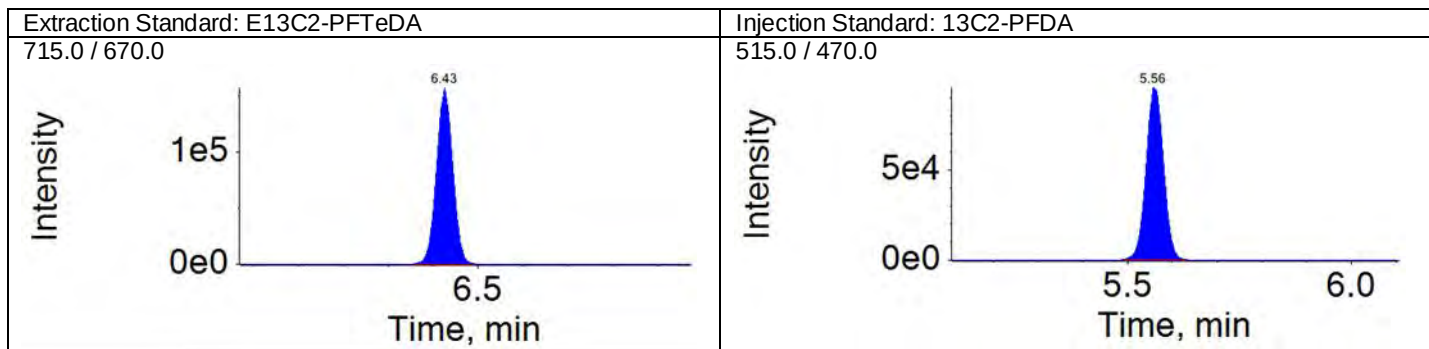
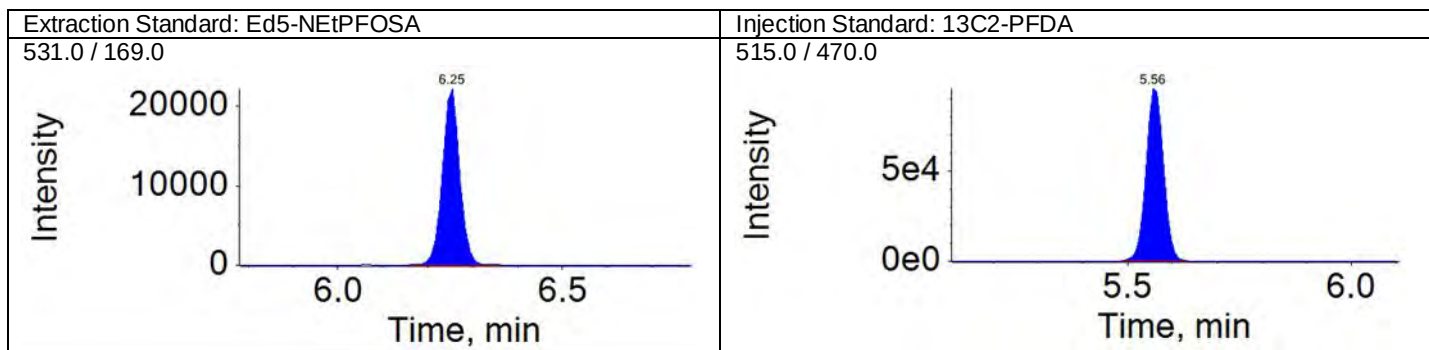
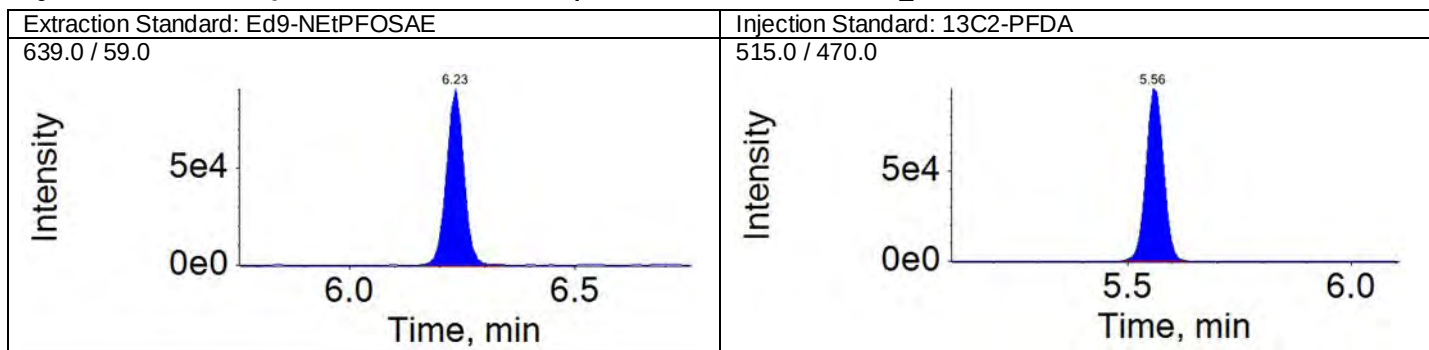
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



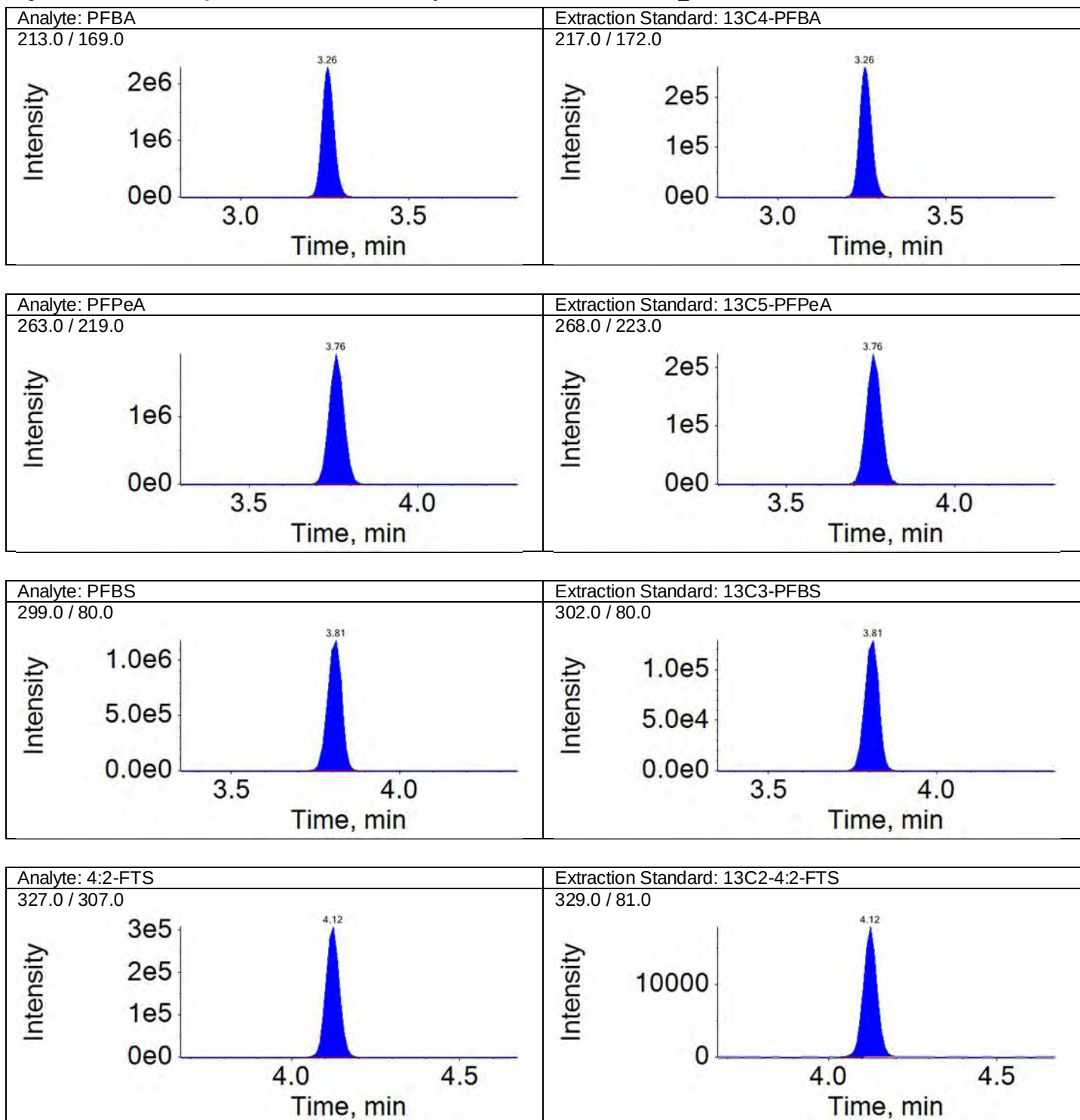
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



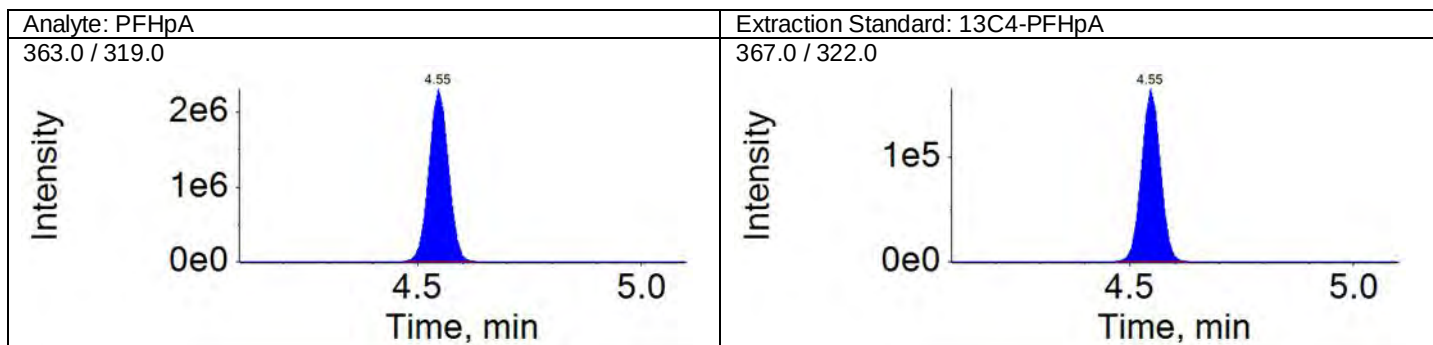
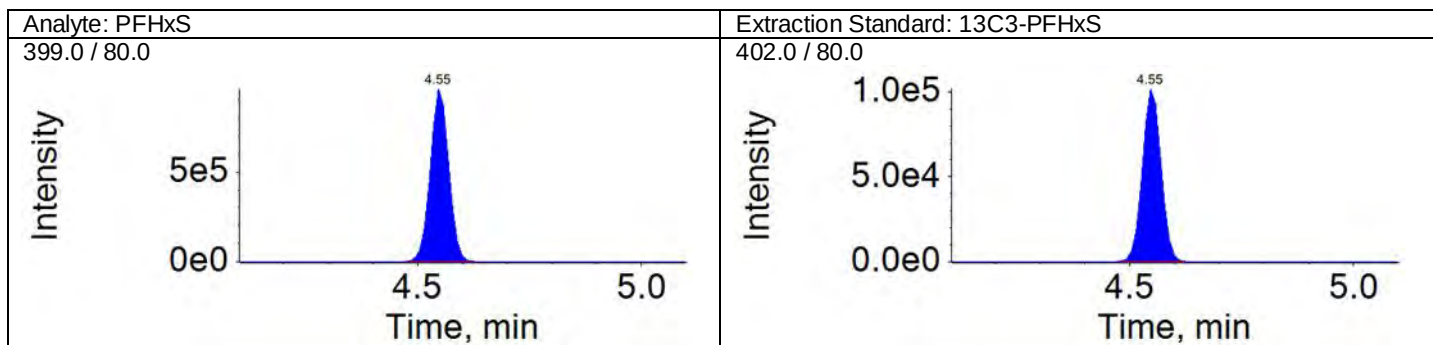
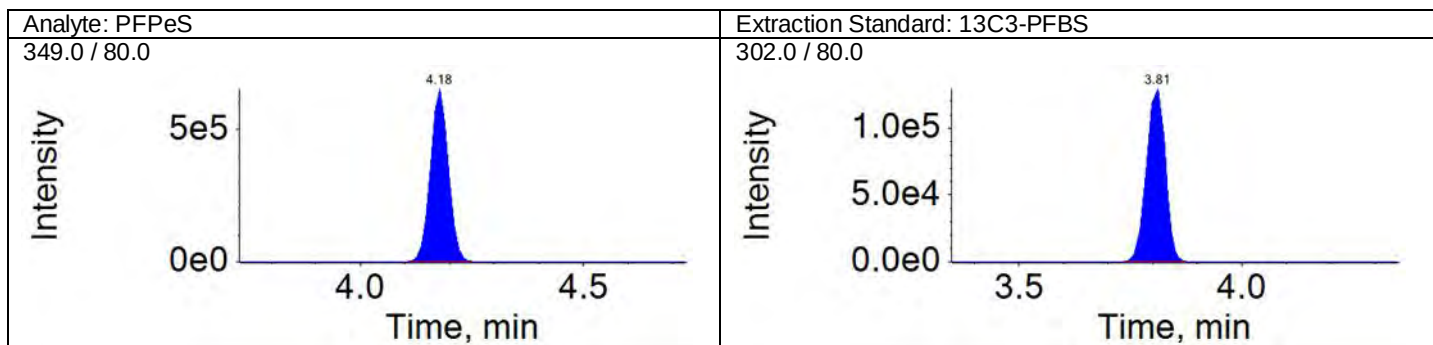
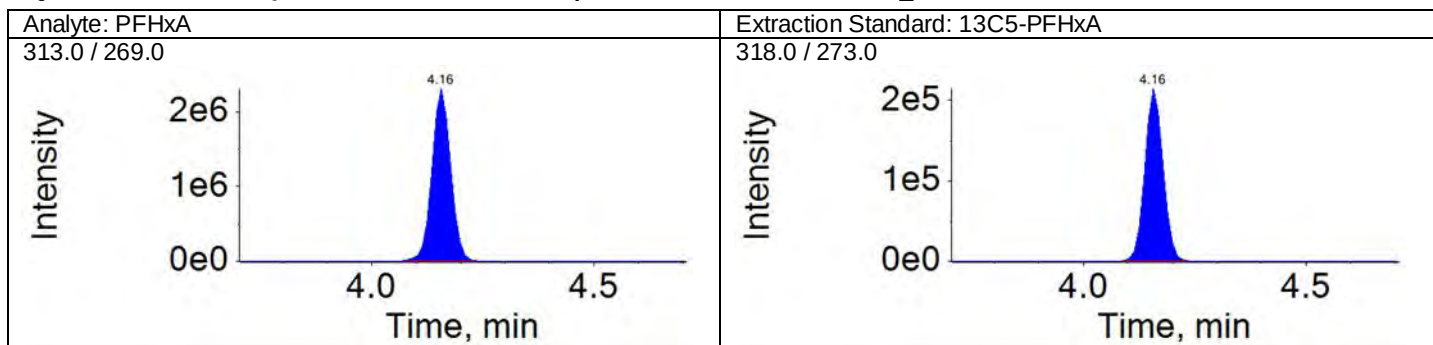
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



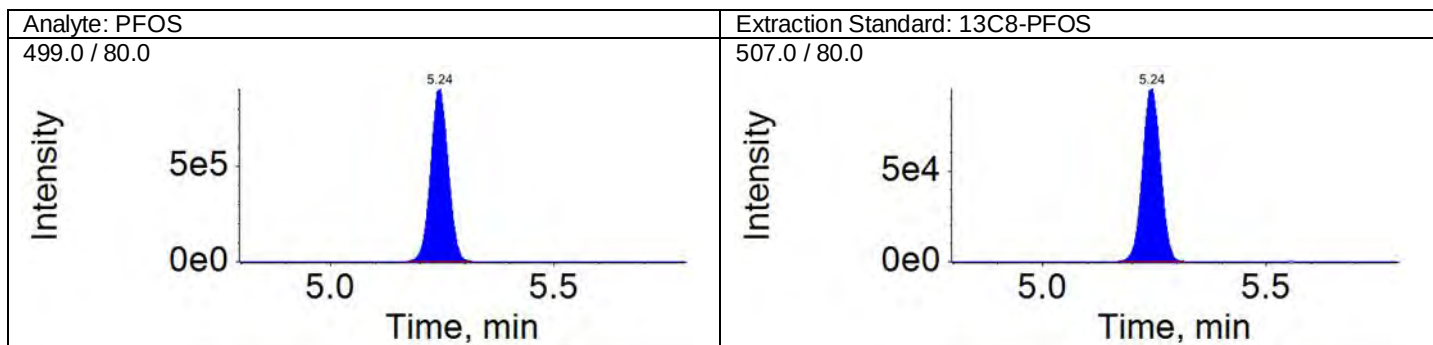
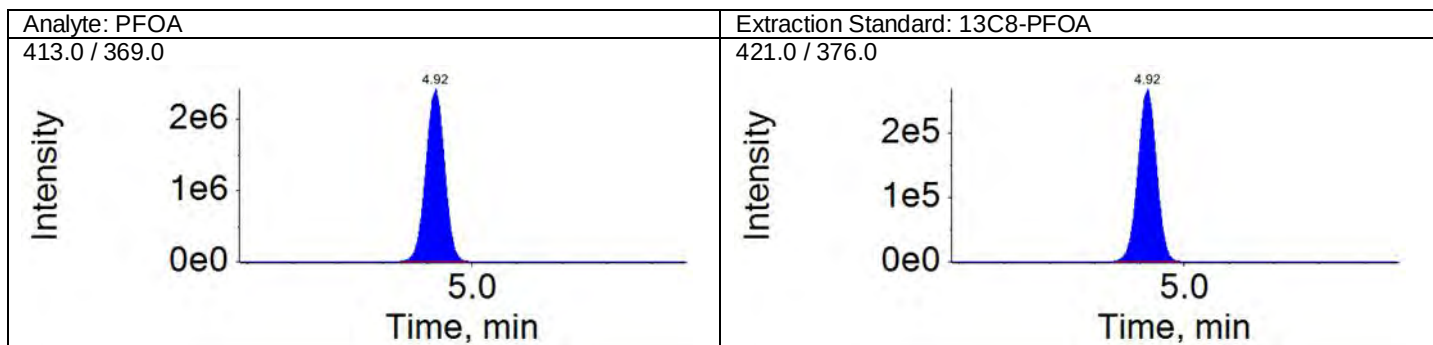
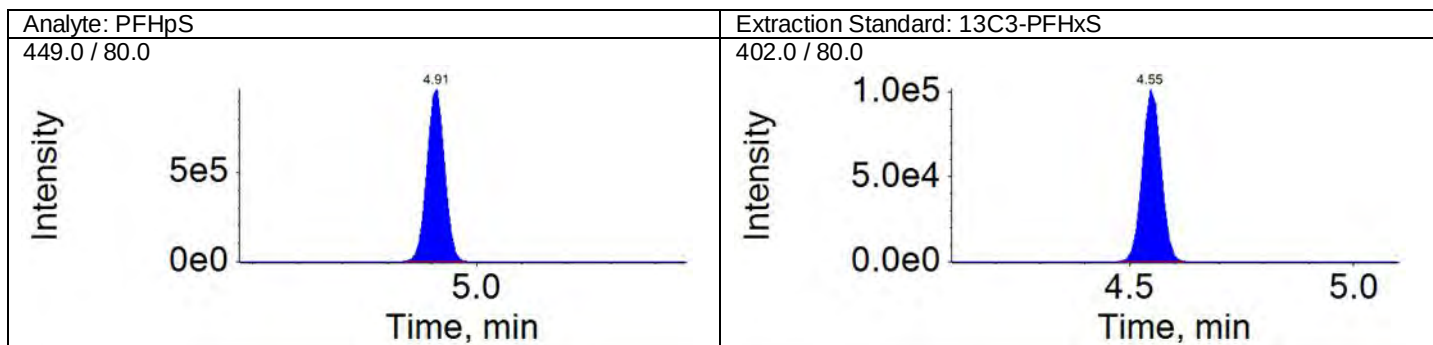
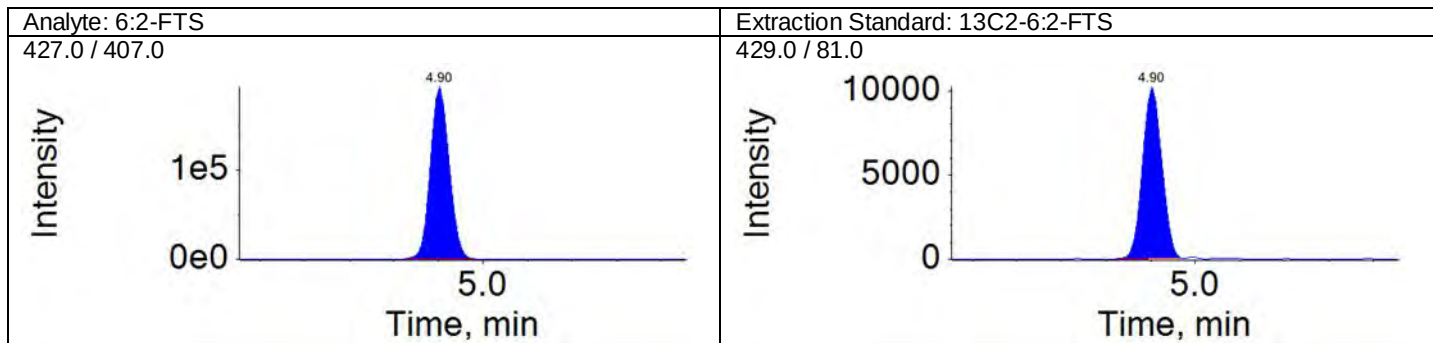
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



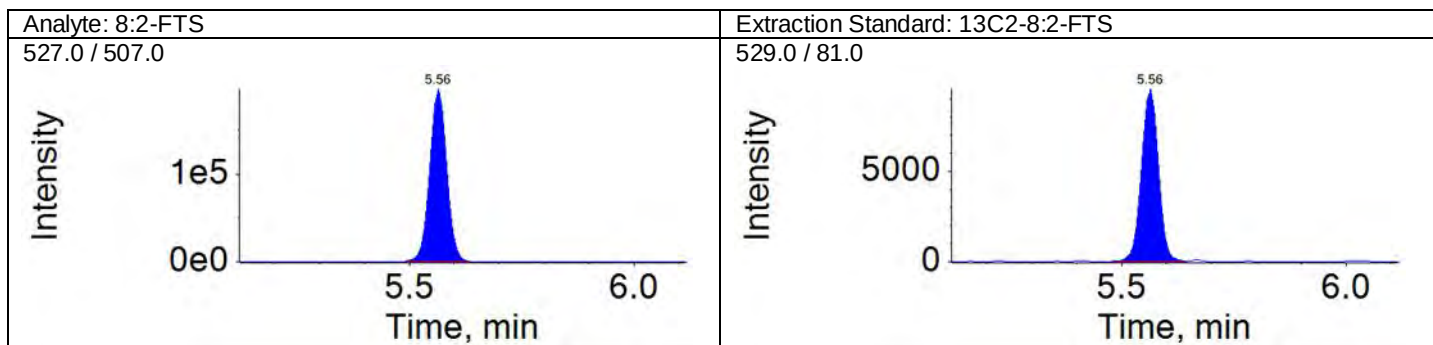
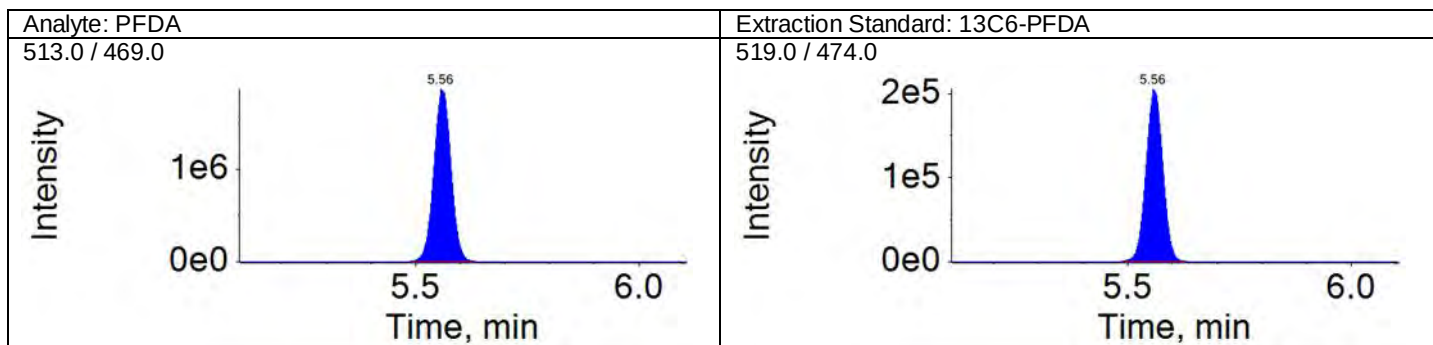
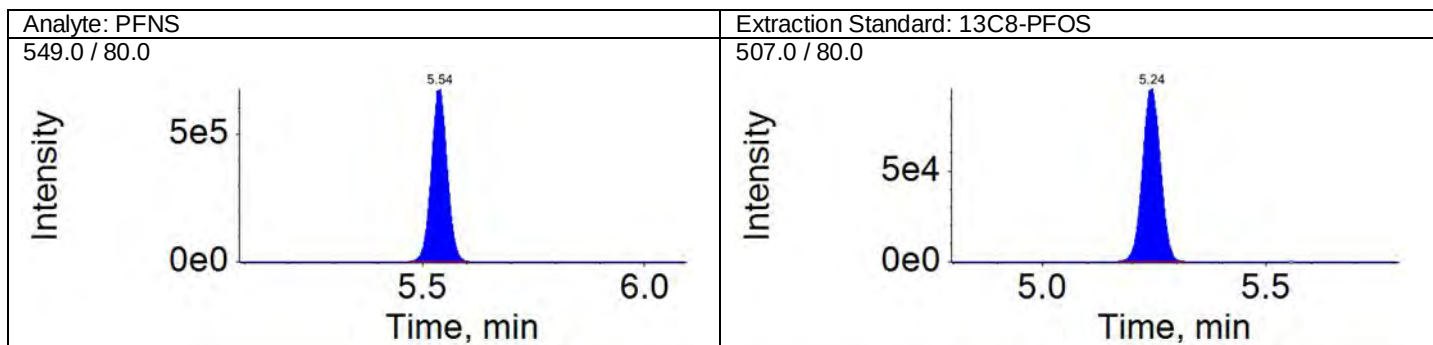
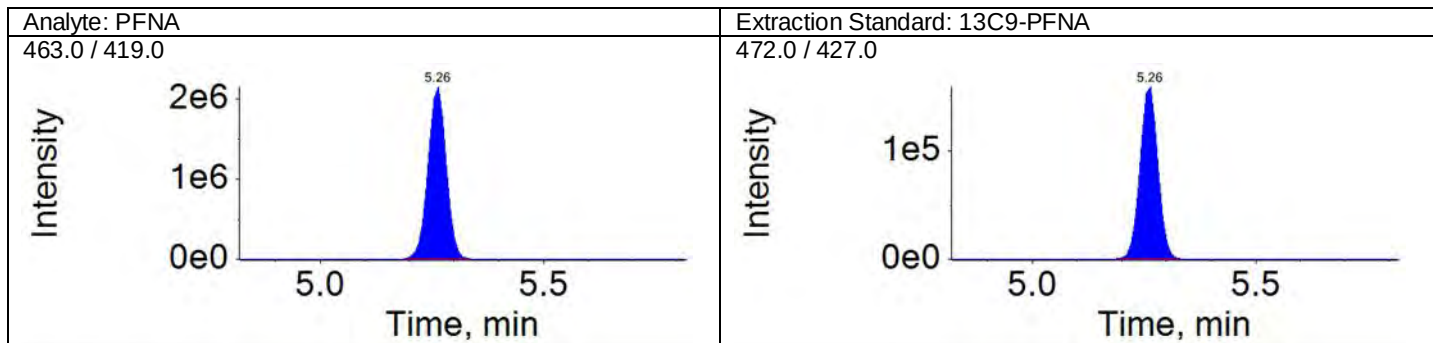
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



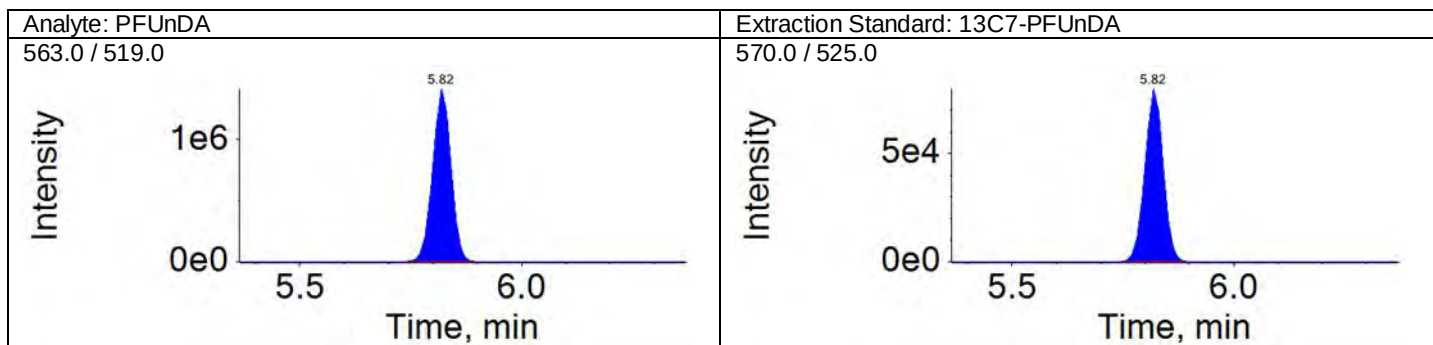
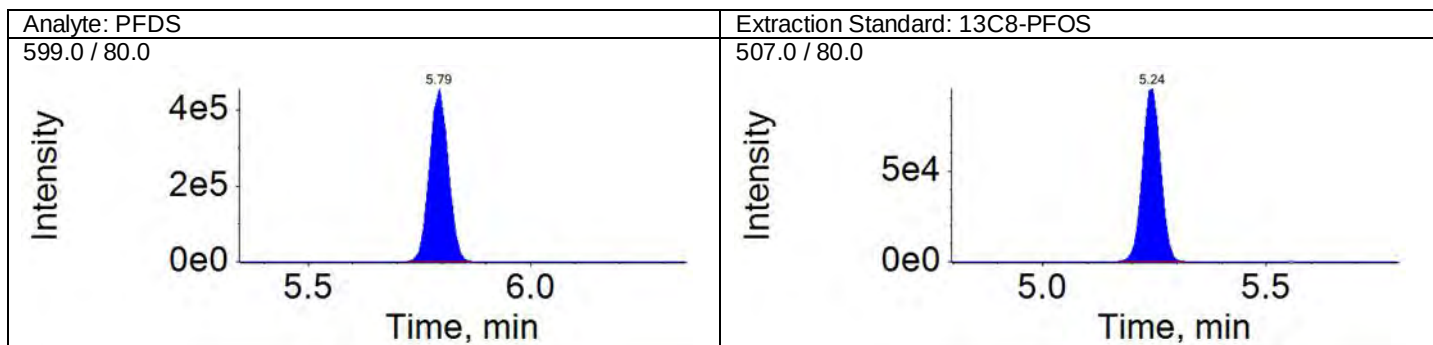
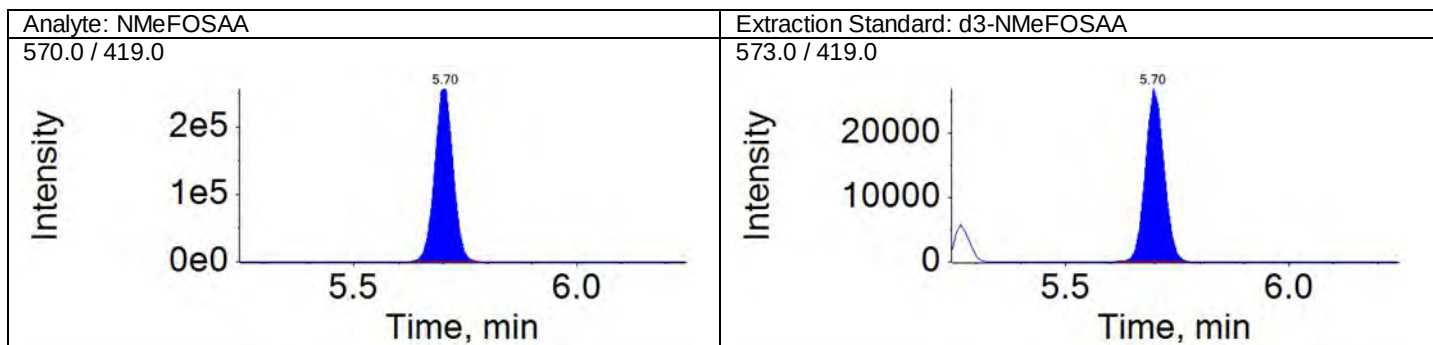
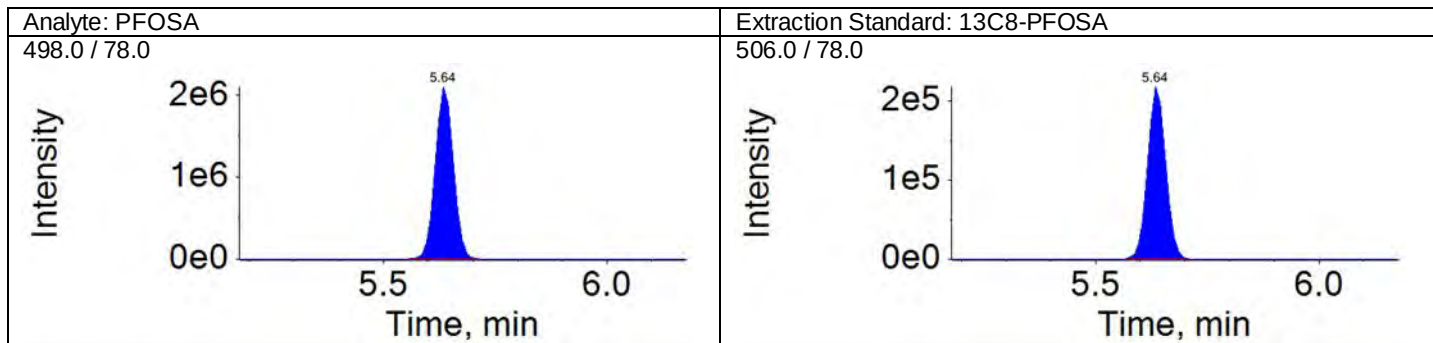
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



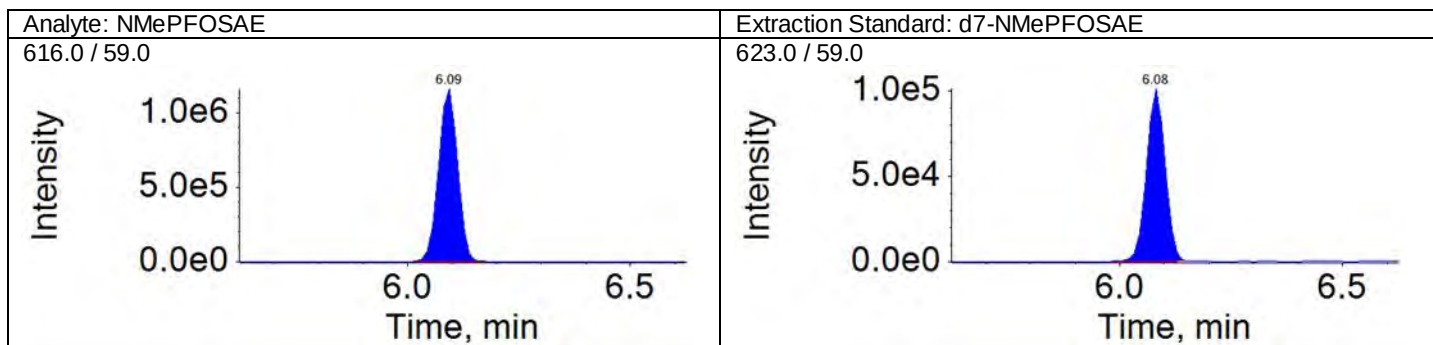
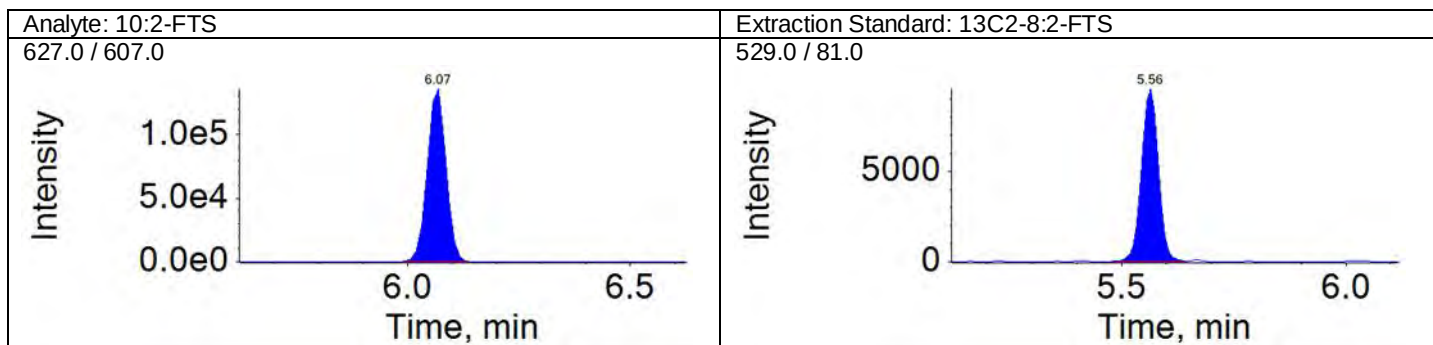
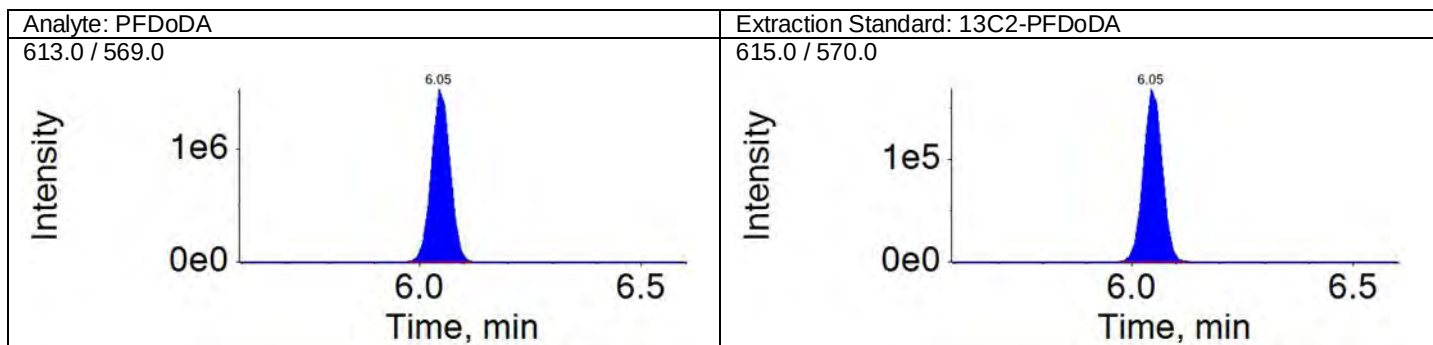
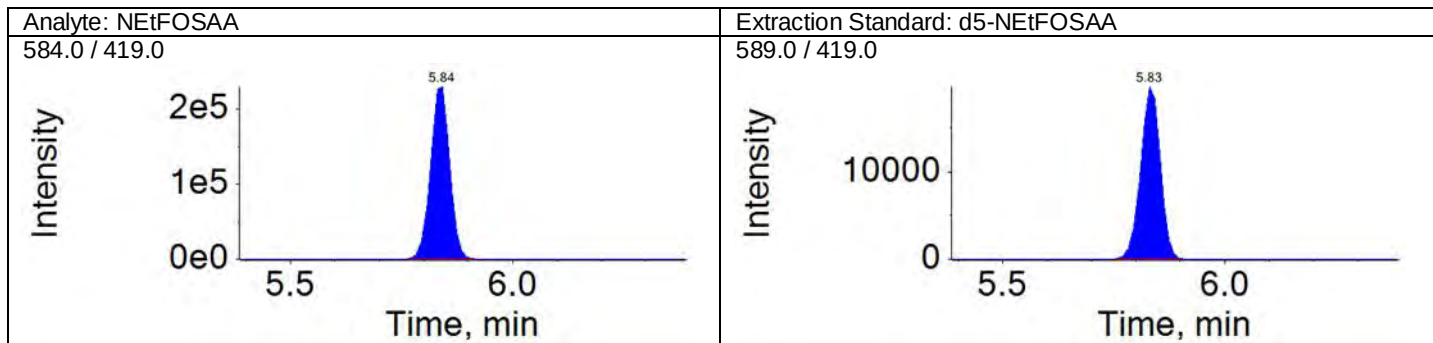
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



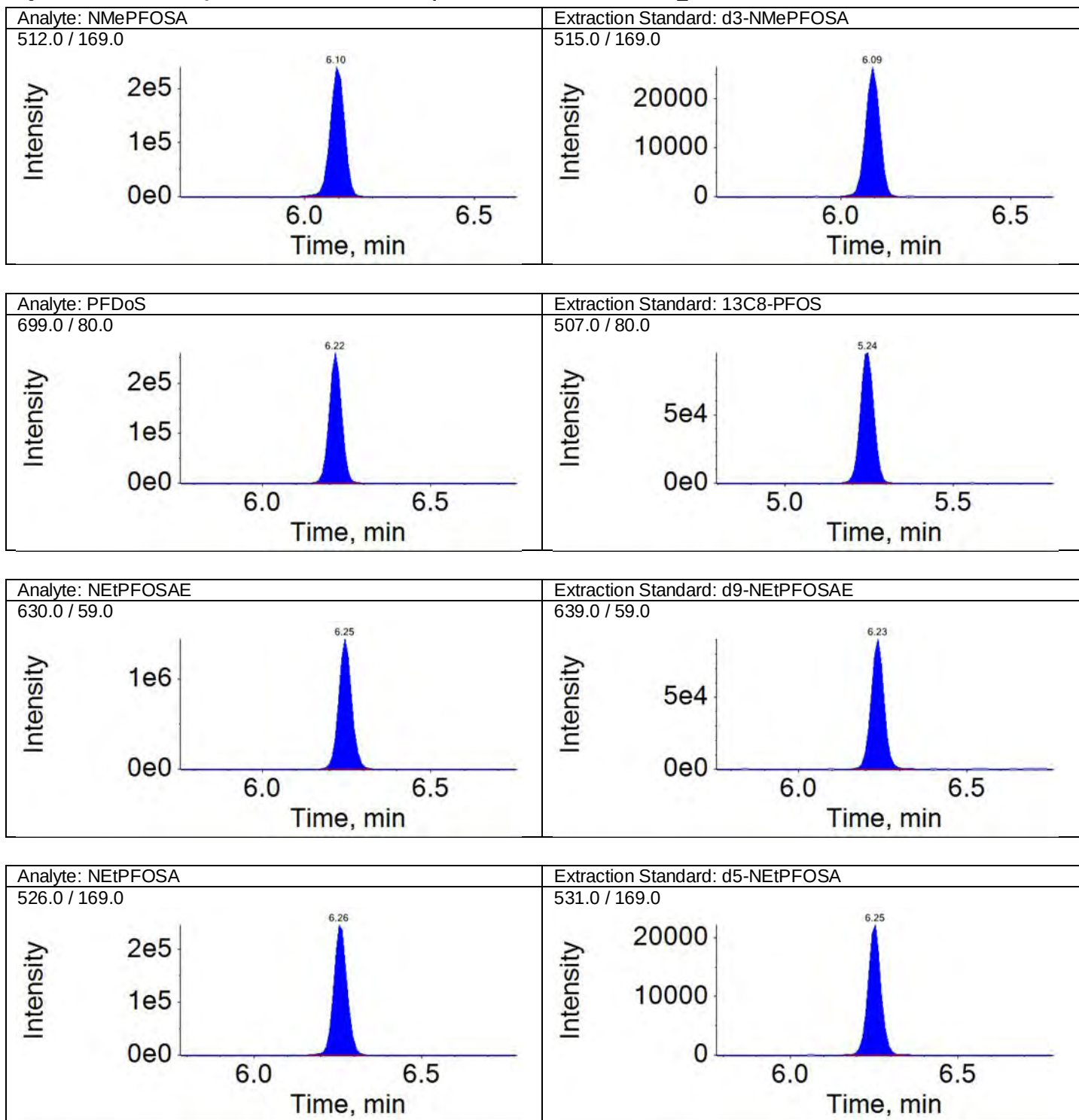
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



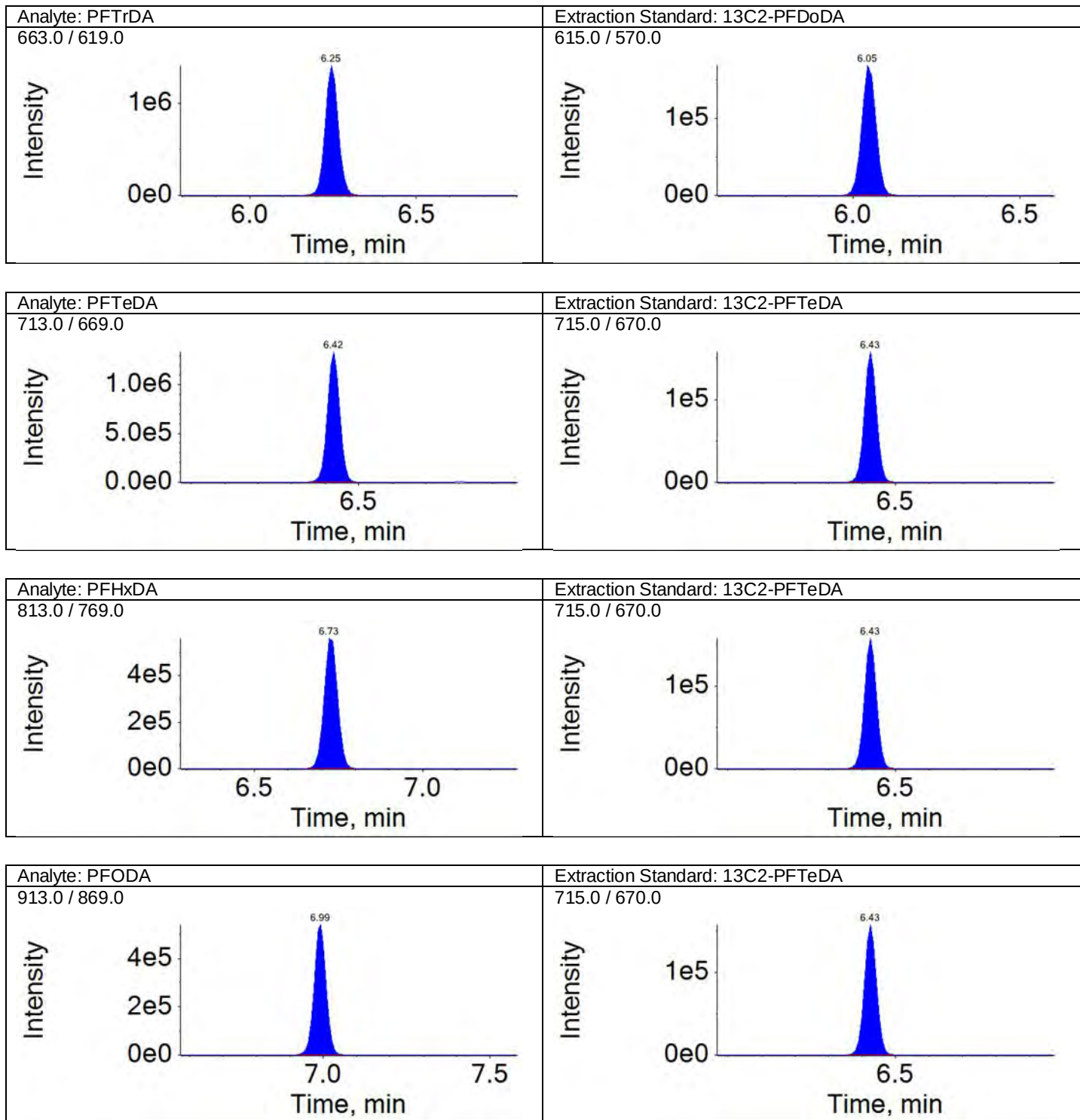
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



Ion Ratio Report

Sample Name: CAL6

Instrument Name: LM27631

File Name: 18NOV07DCAL-15.wiff

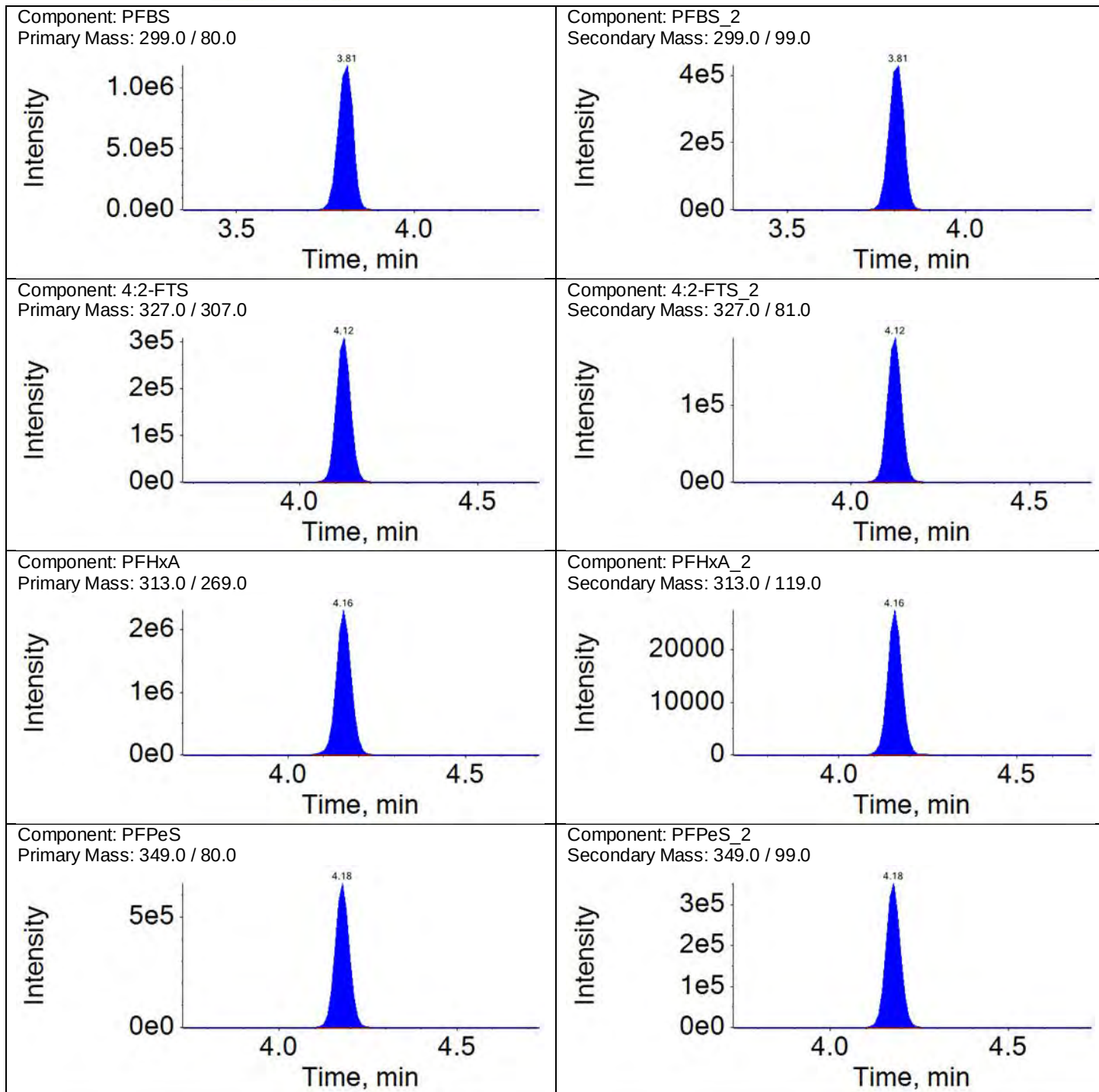
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3508201.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	1286846.1	A	0.3576	0.3668	3	50	
4:2-FTS	4.12	1.00	866263.6	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	524123.7	A	0.6359	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	
PFTTrDA	6.25	1.03	3829048.4	A	1.0000	1.0000			
PFTTrDA_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	

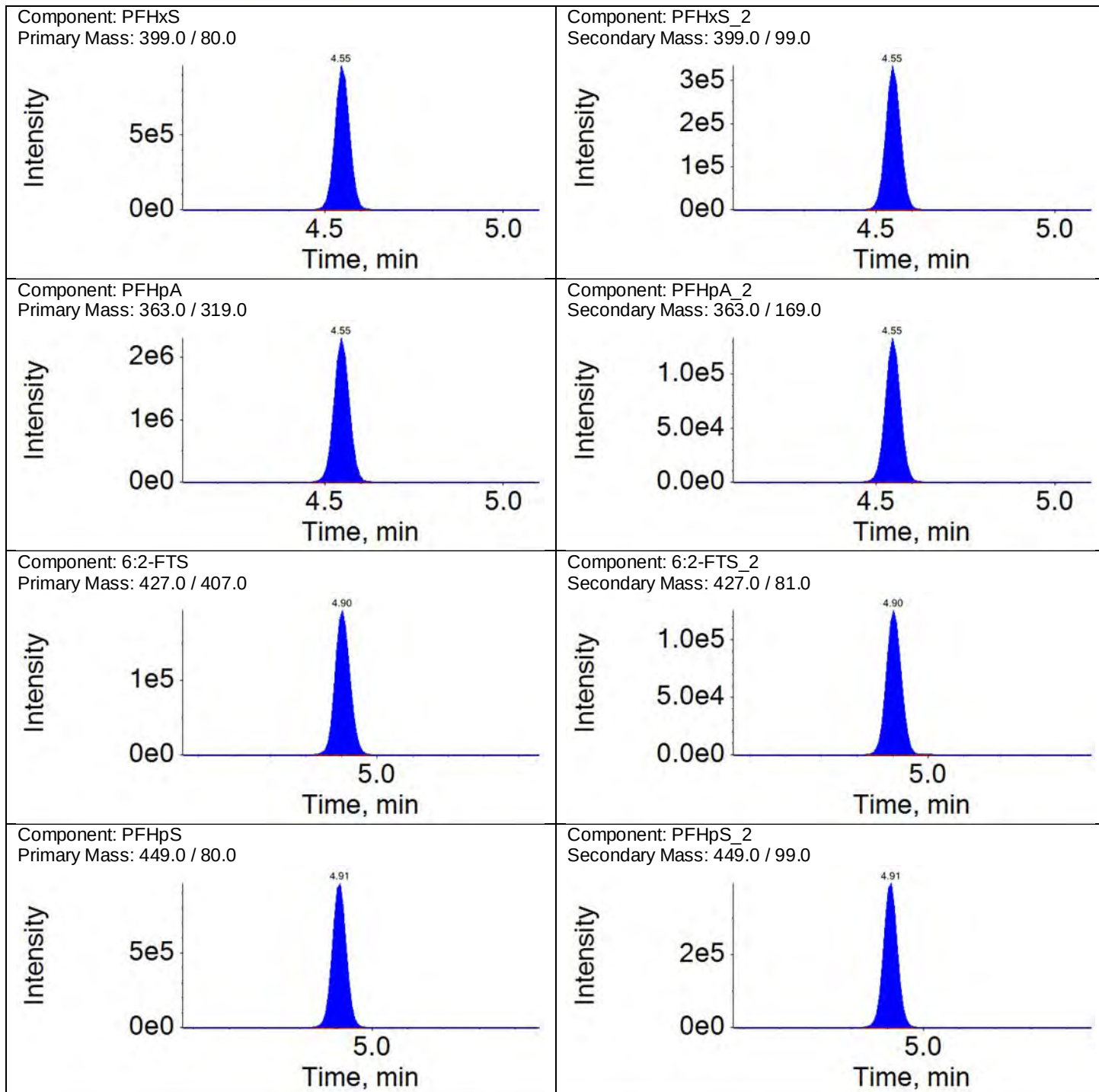
APPROVED

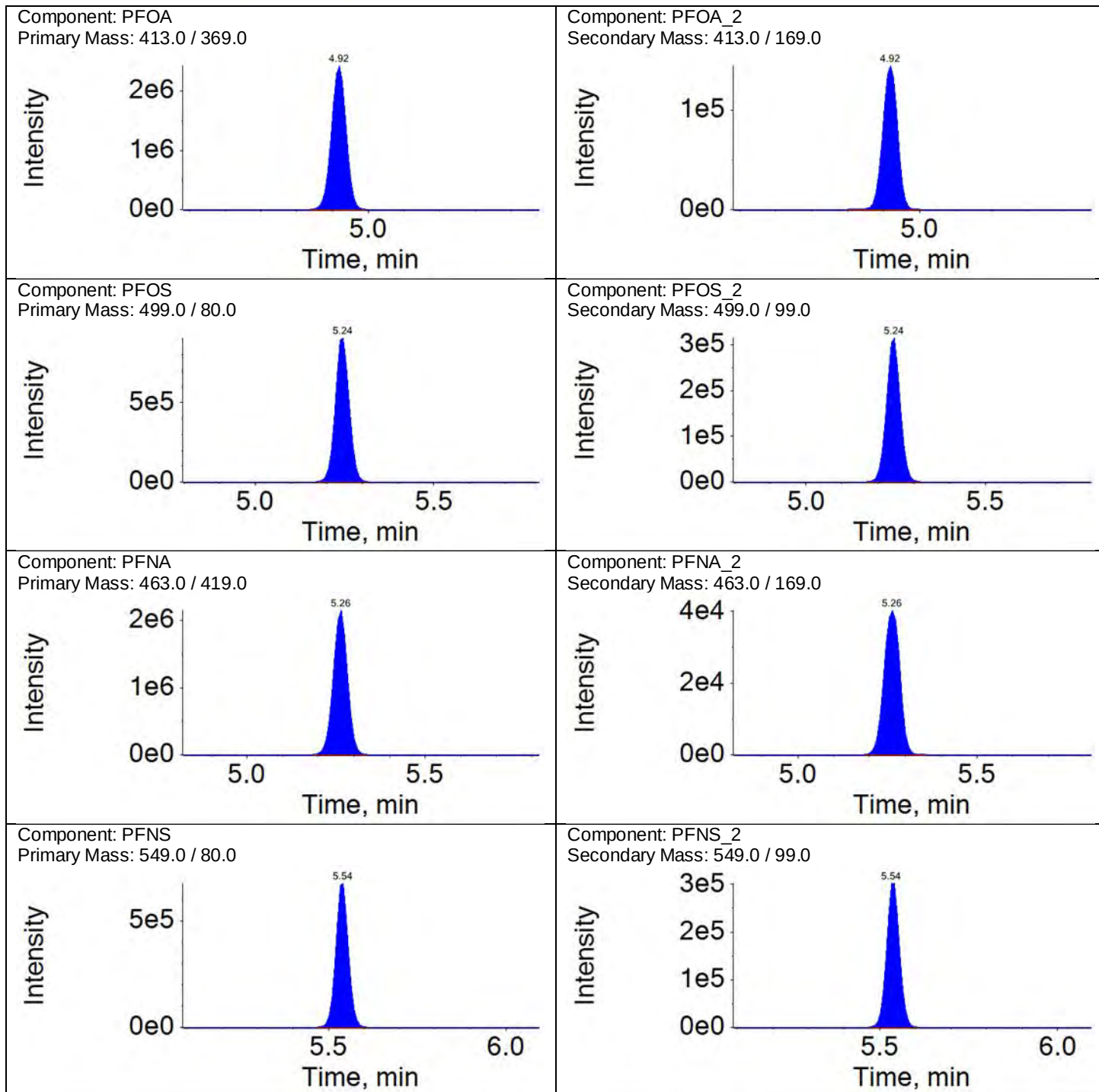
By JPT at 2:53 pm, 11/7/18

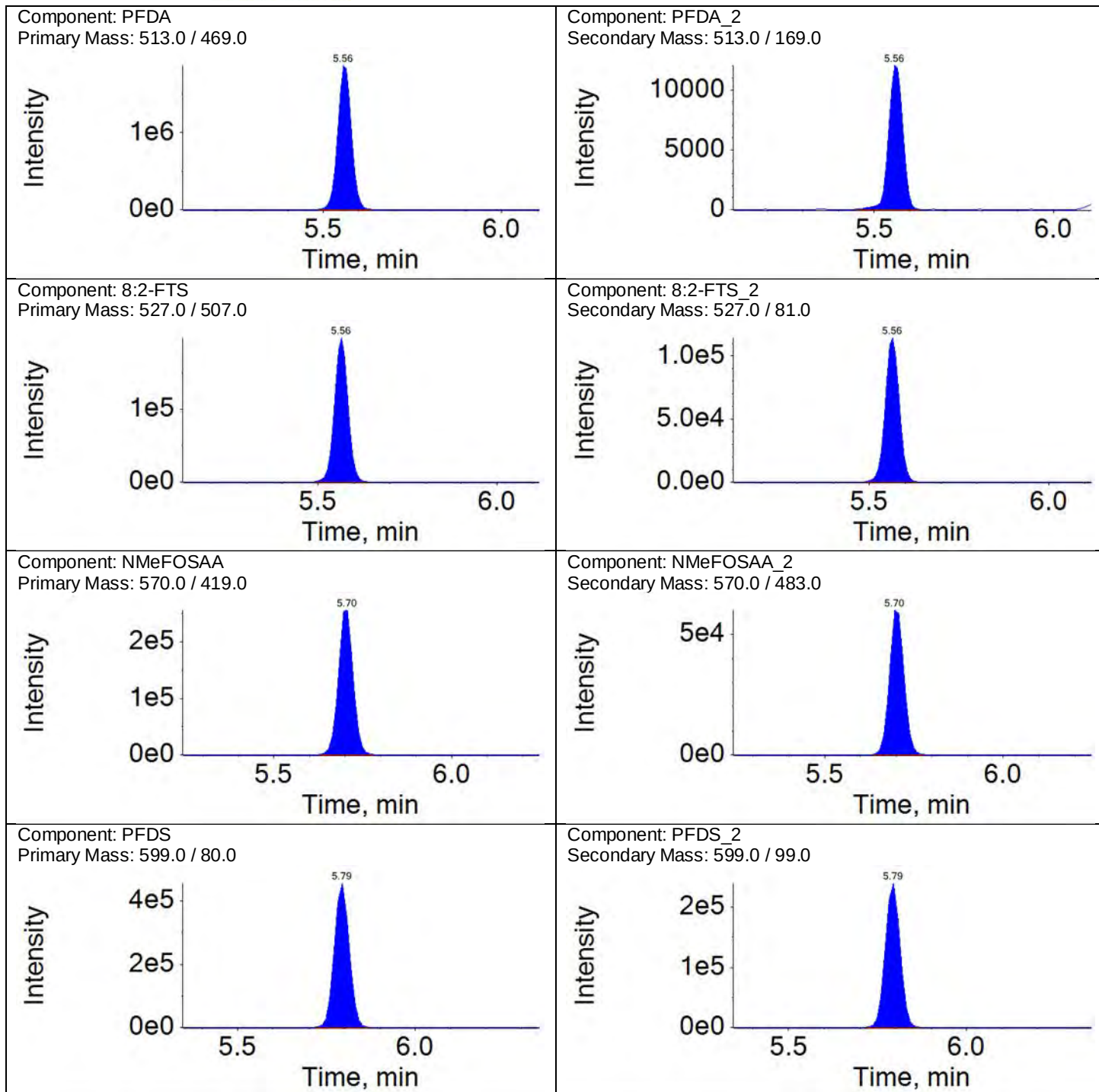
REVIEWED

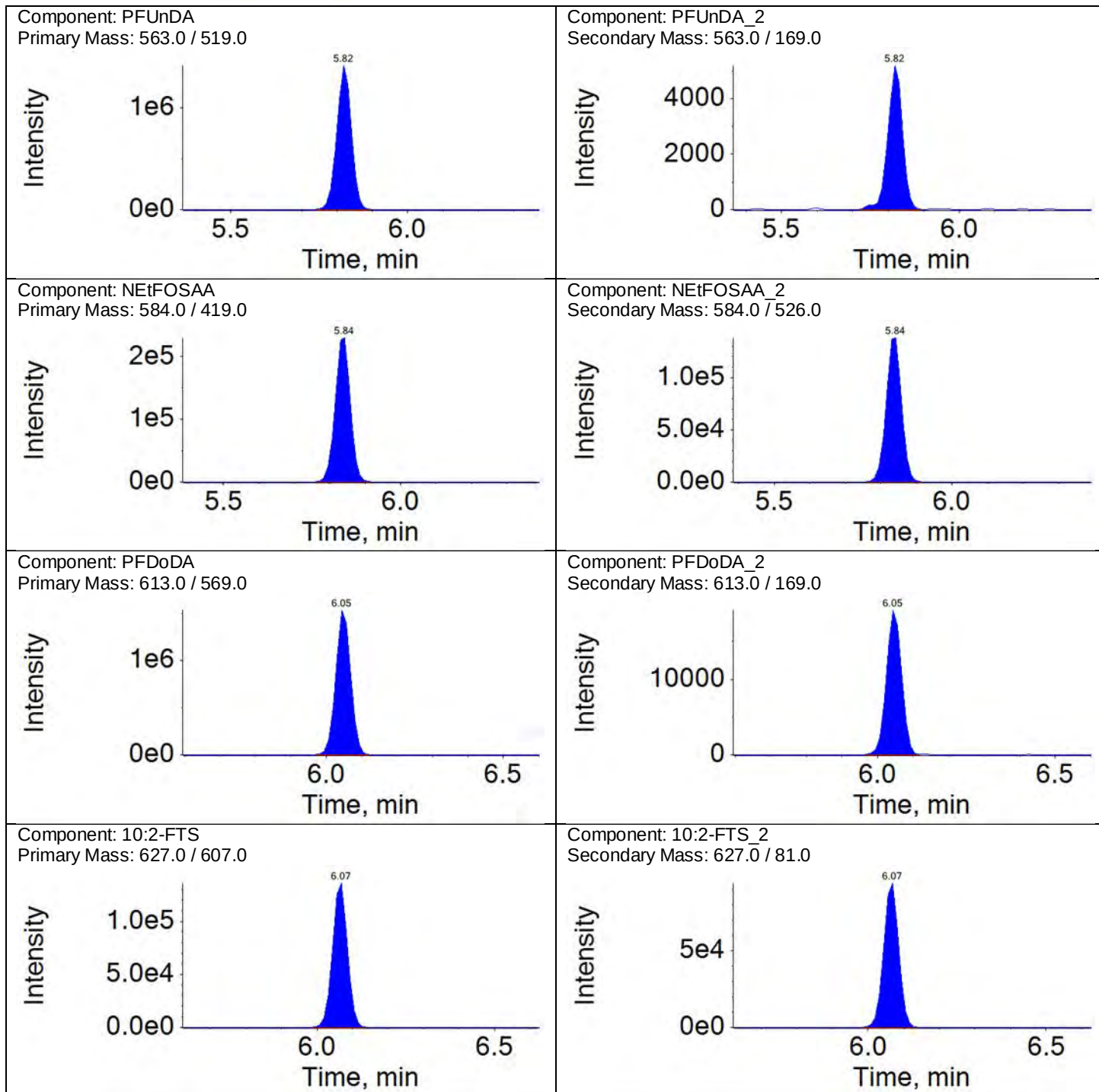
By umar at 5:23 pm, 11/9/18

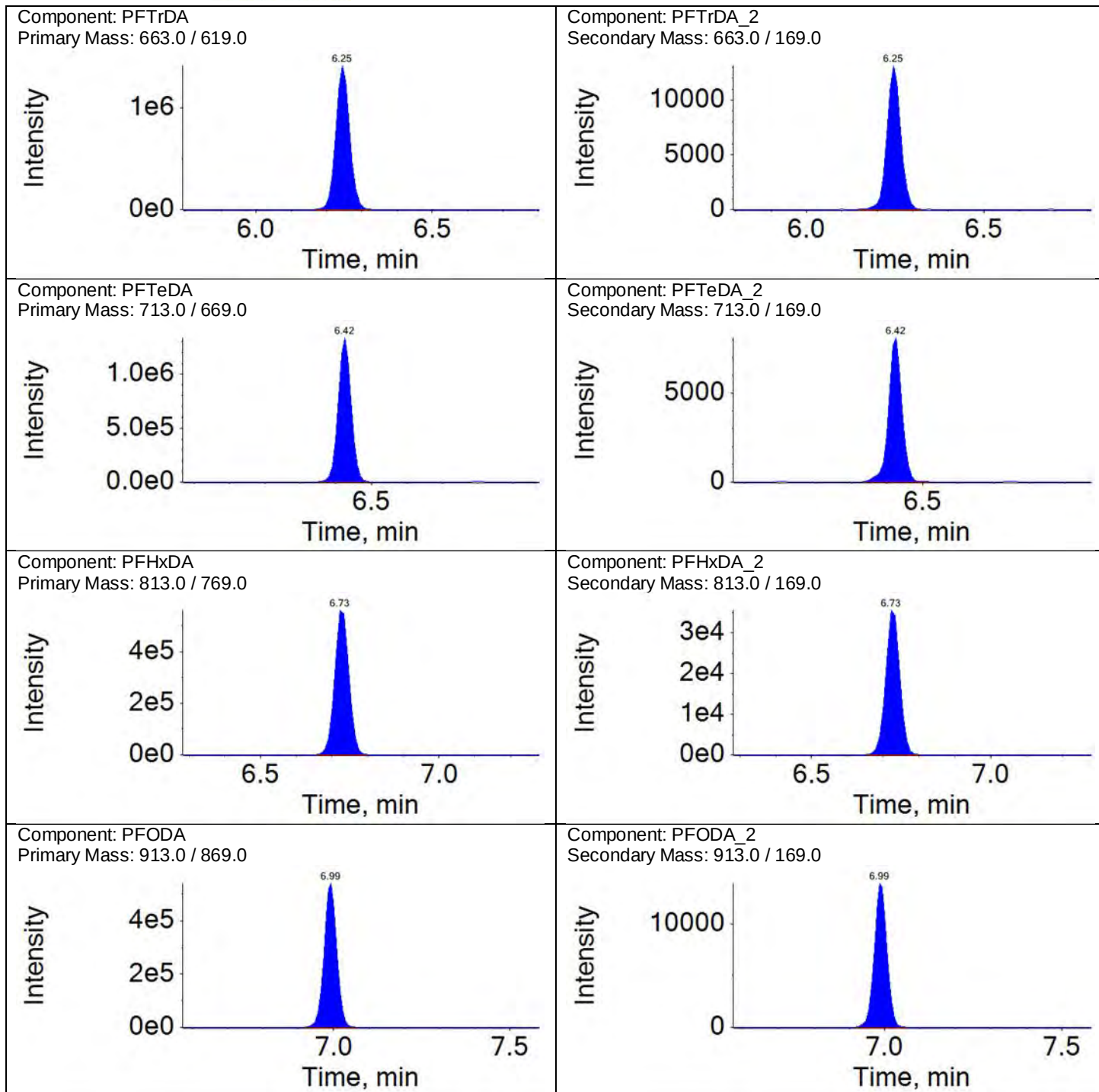












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	Reference 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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL7

Instrument Name: LM27631

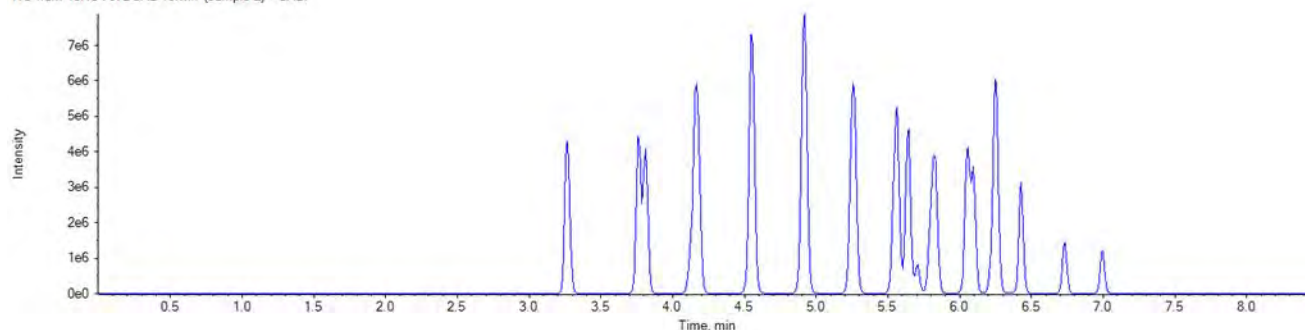
File Name: 18NOV07DCAL-16.wiff

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
PFTDA	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

TIC from 18NOV07DCAL-16.wiff (sample 2) - CAL7



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 522 of 1595

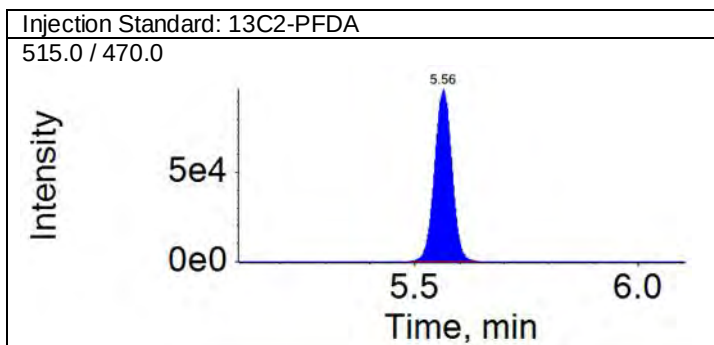
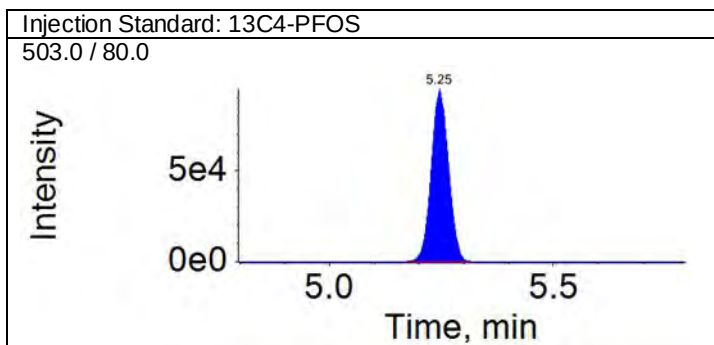
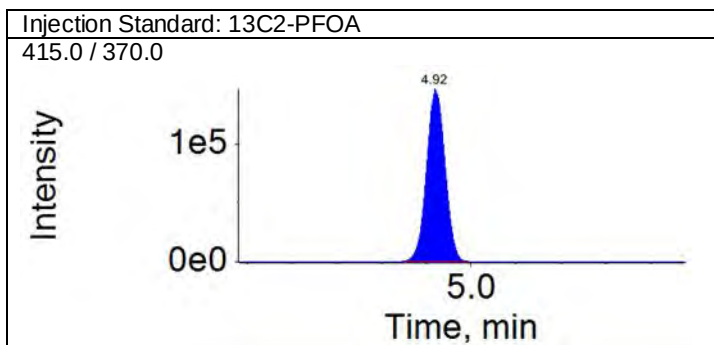
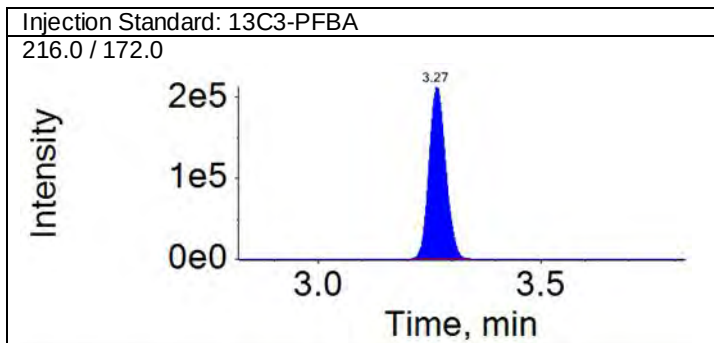
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

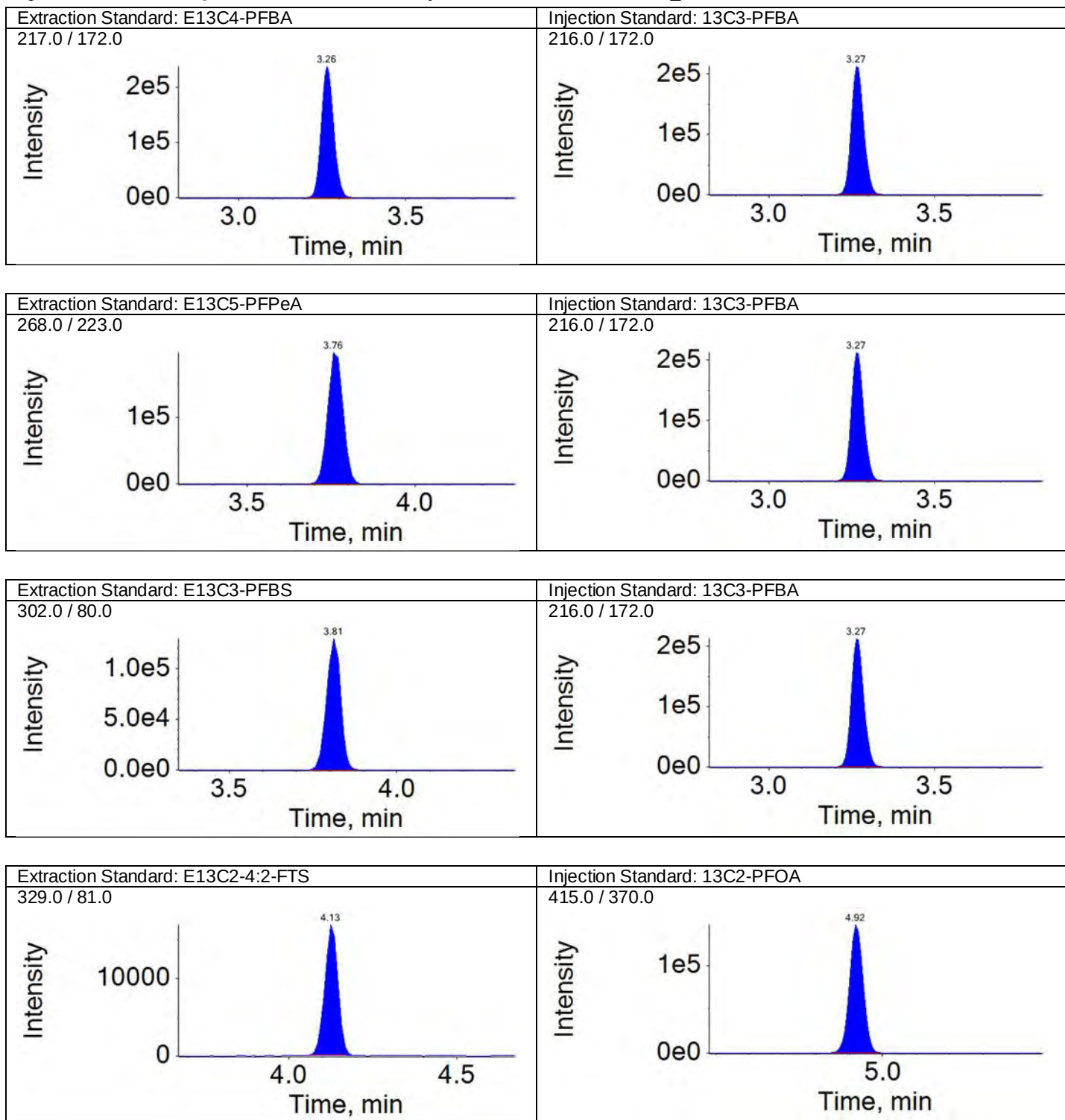
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



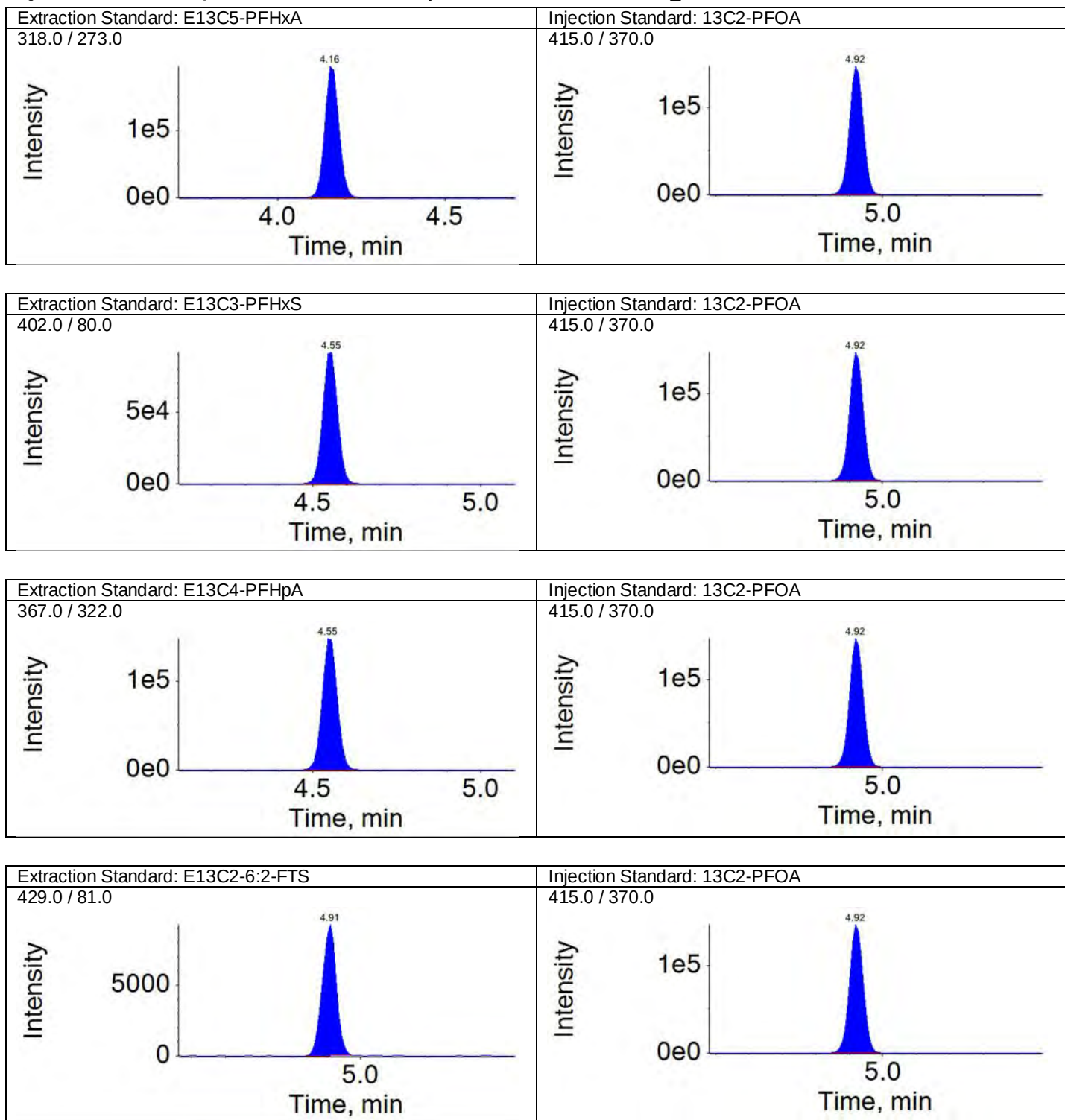
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



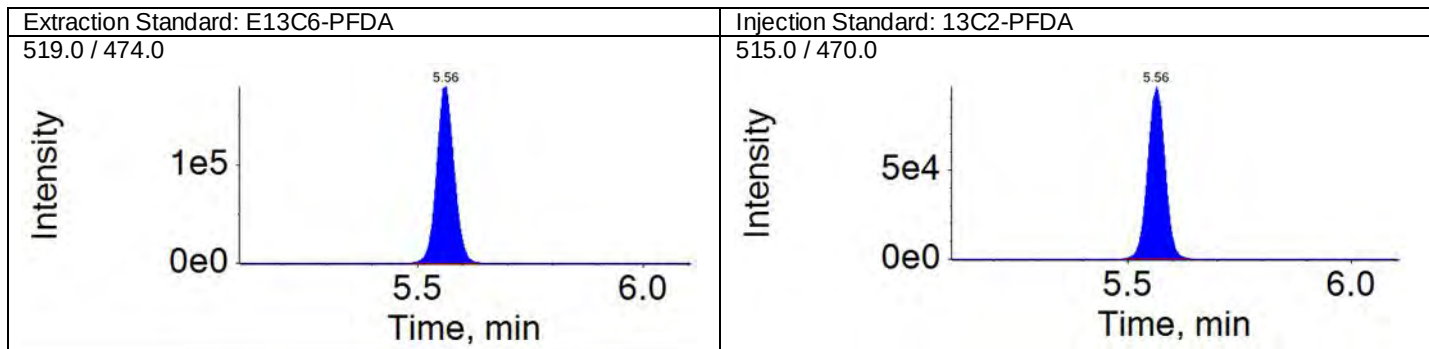
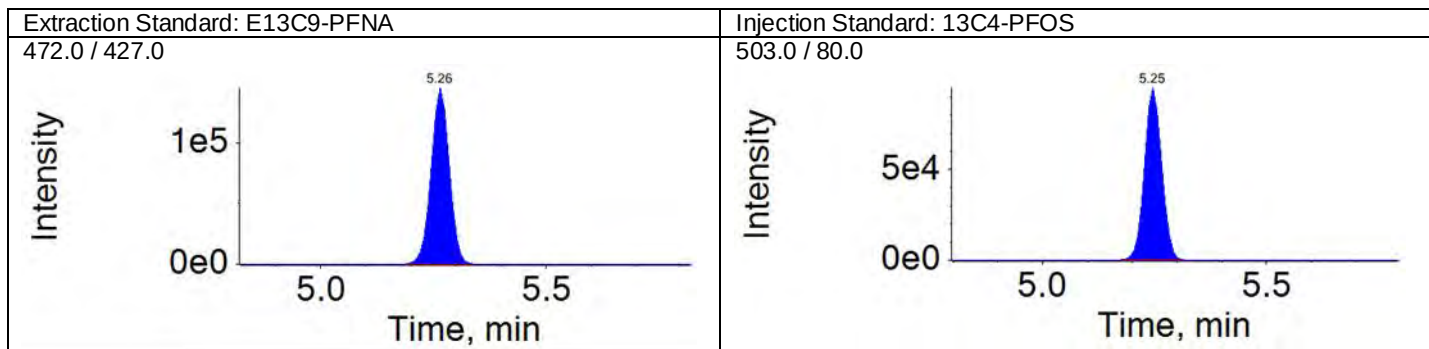
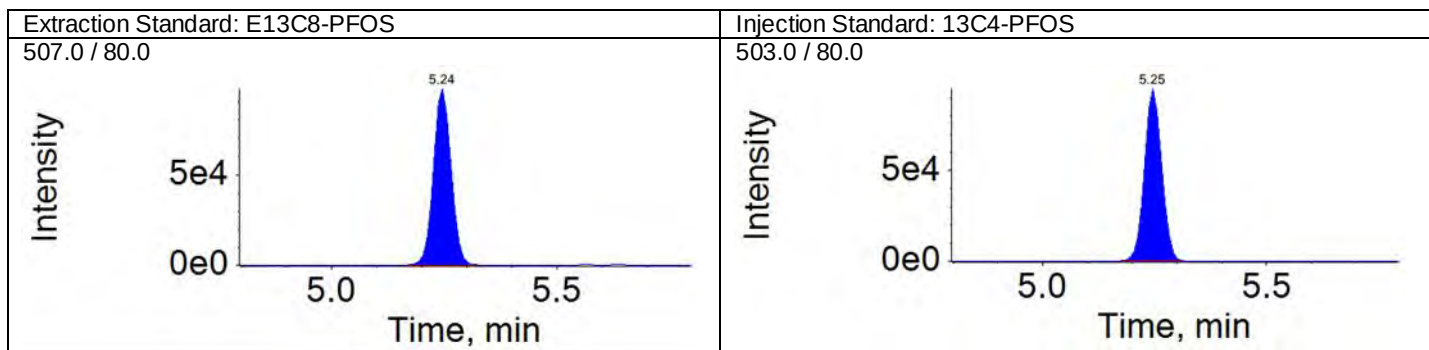
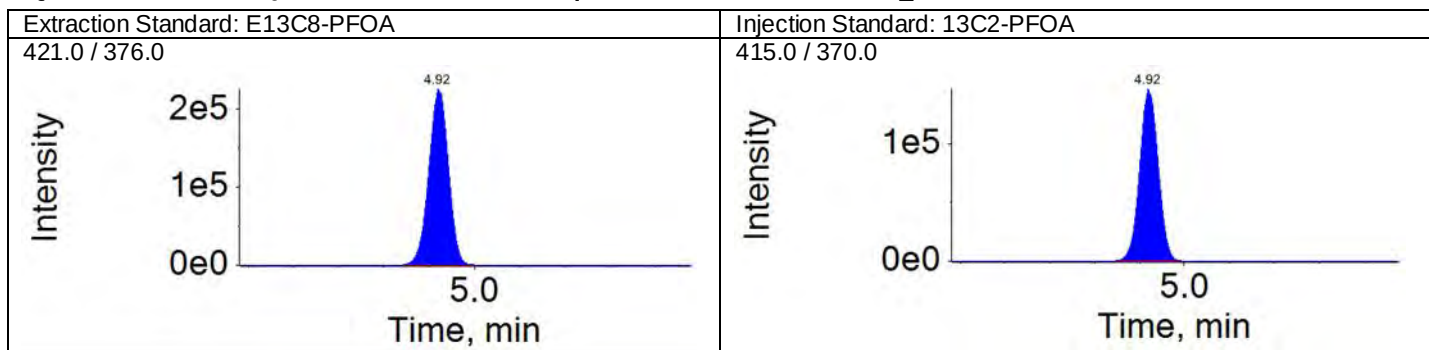
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



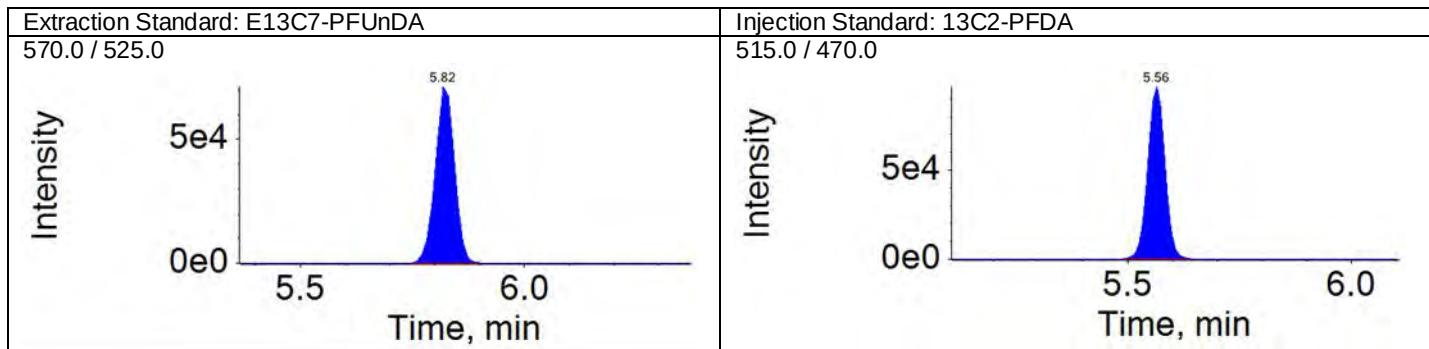
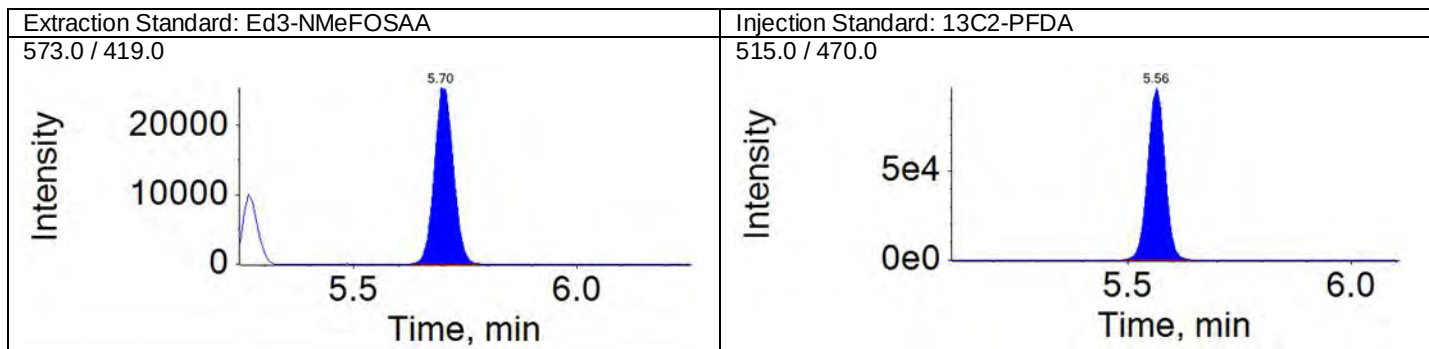
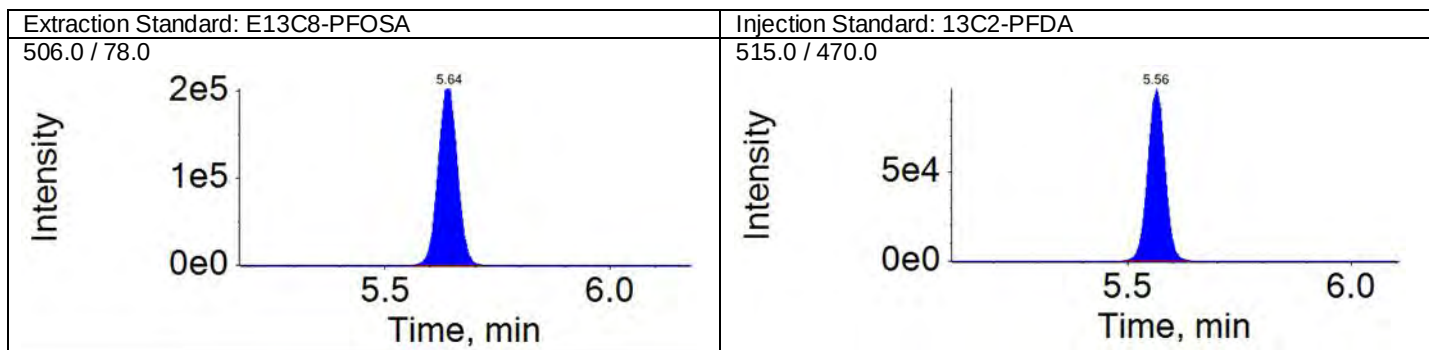
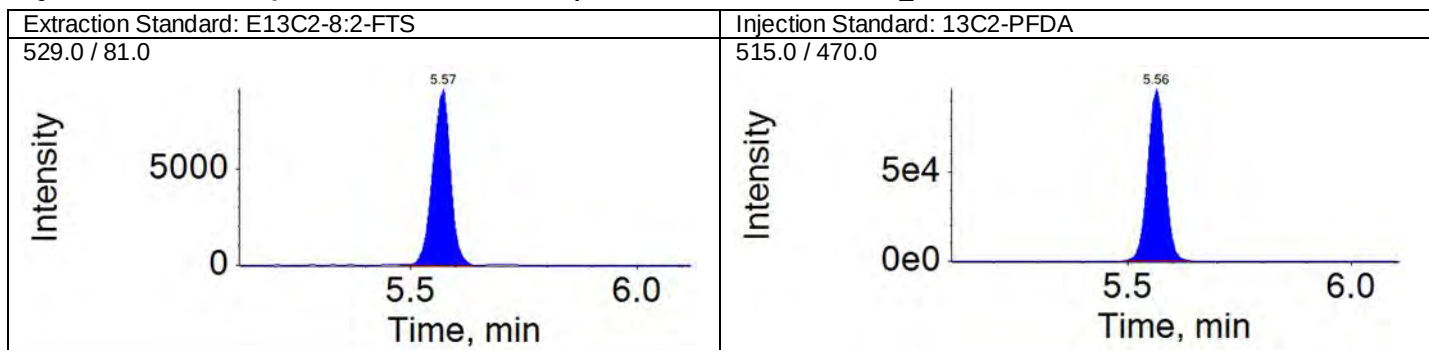
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

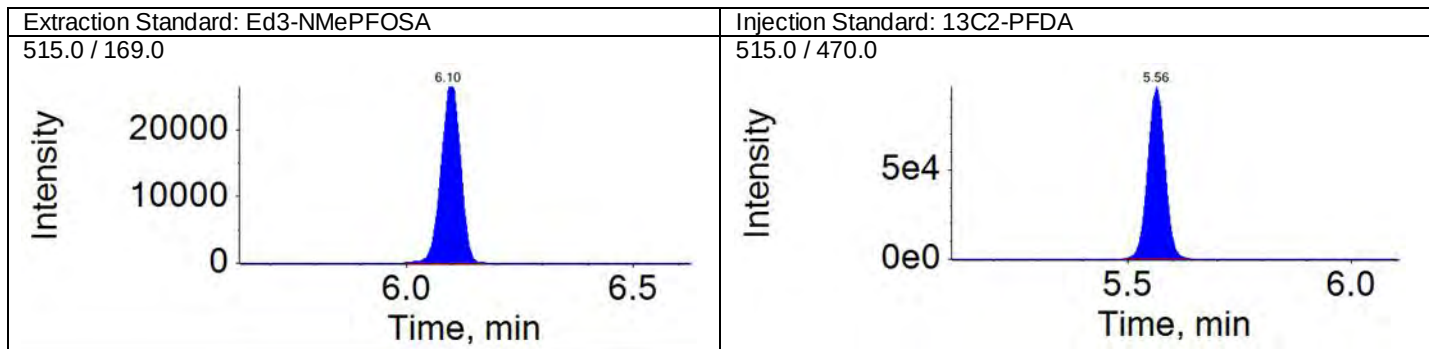
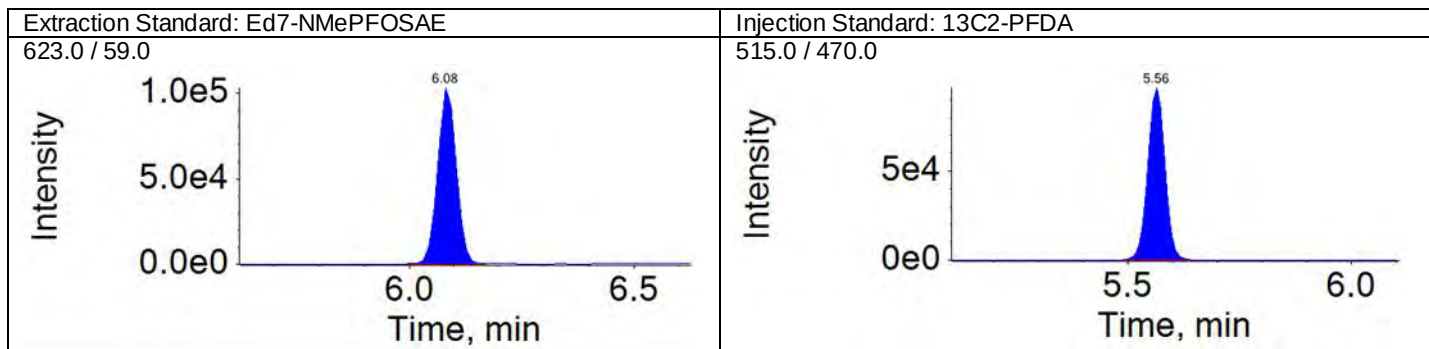
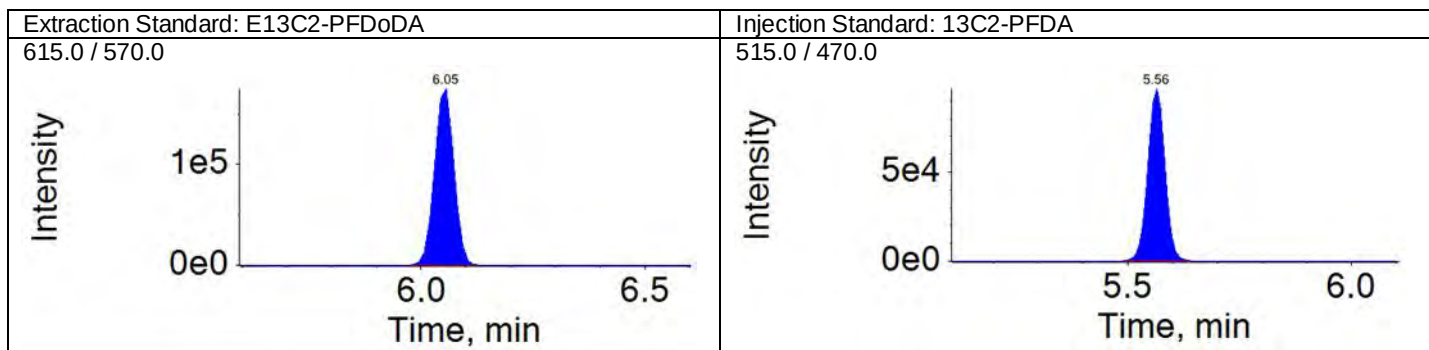
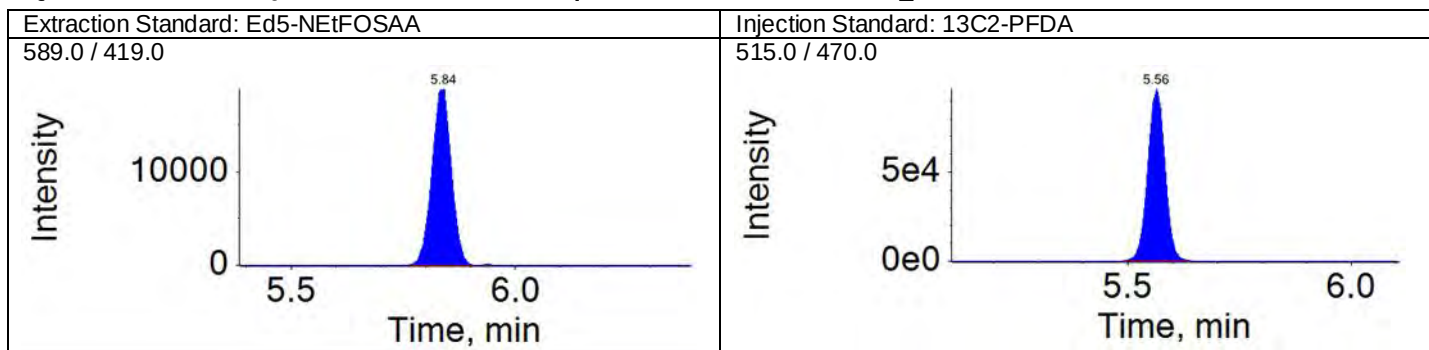
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

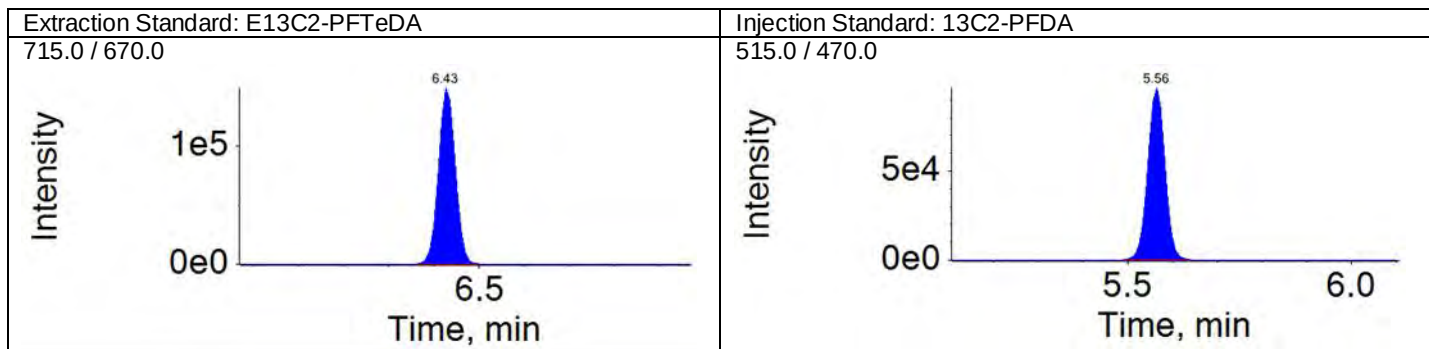
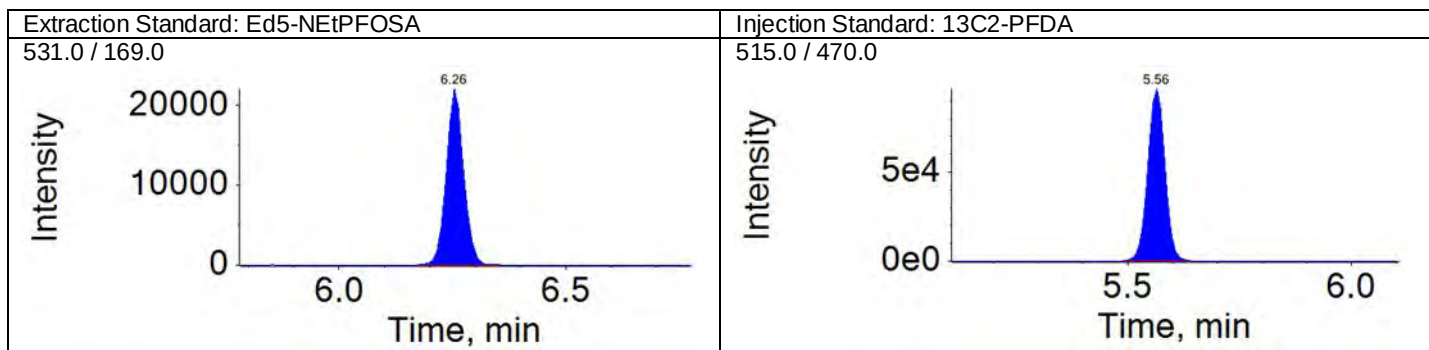
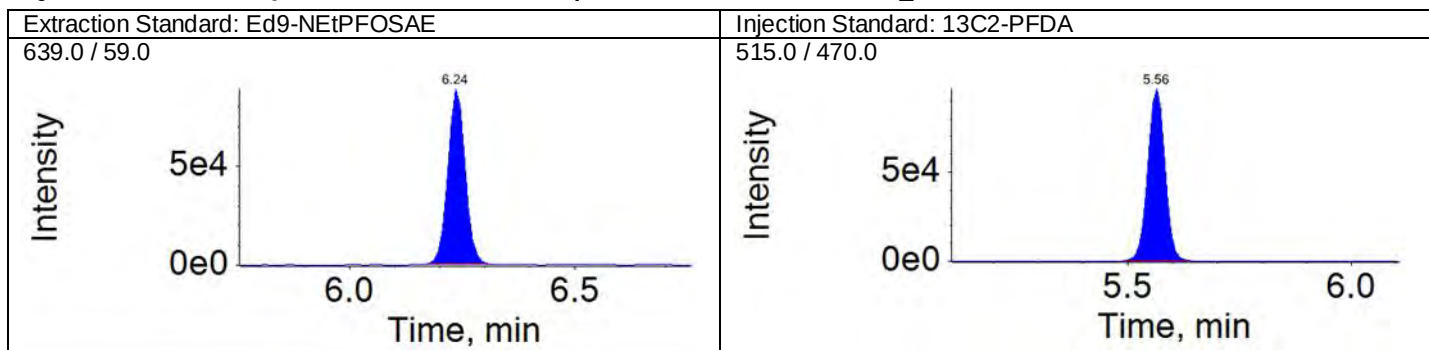
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



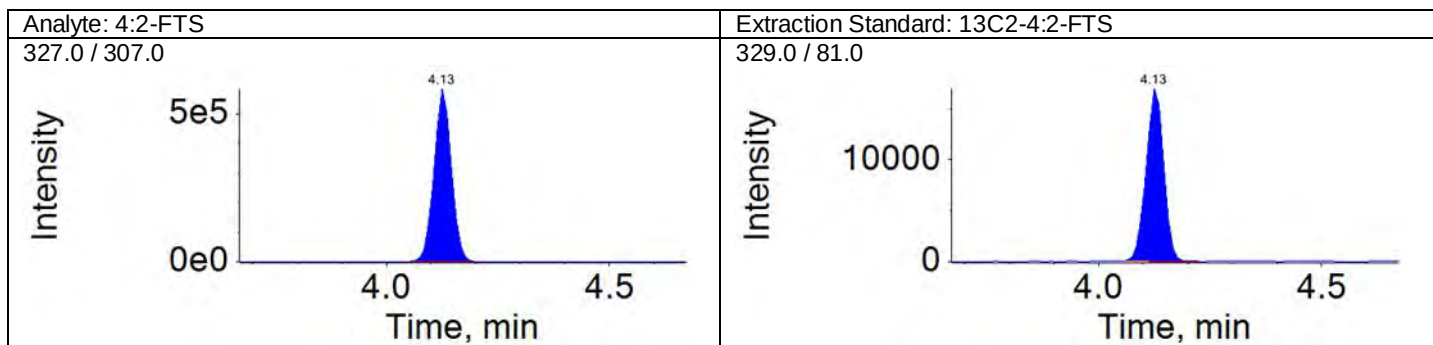
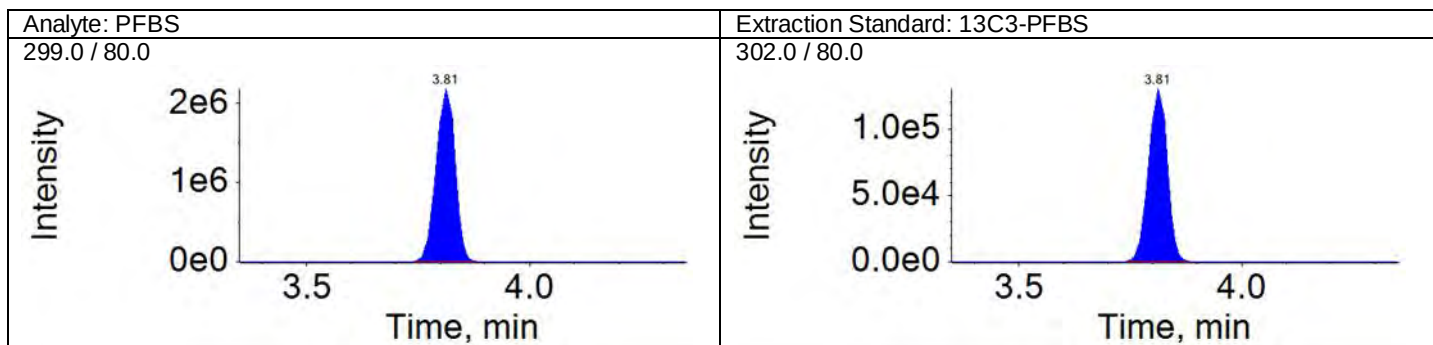
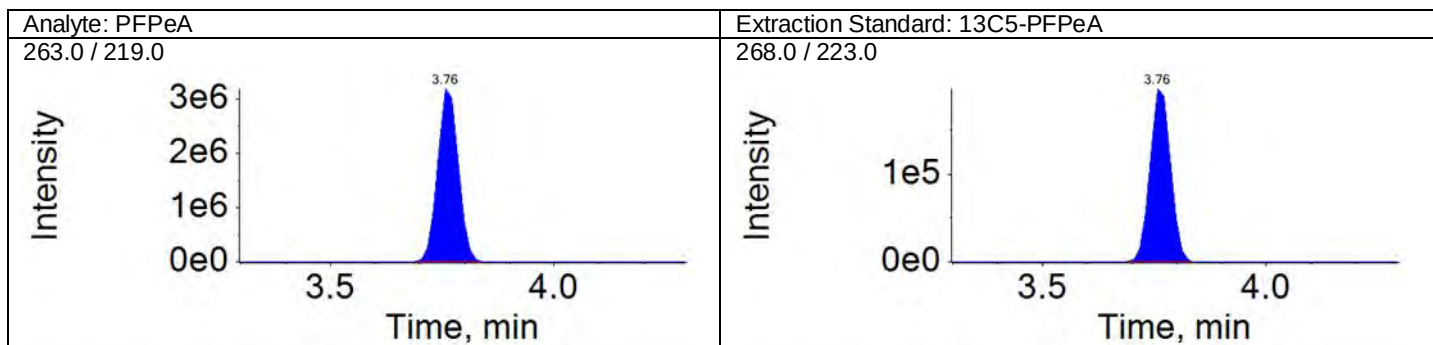
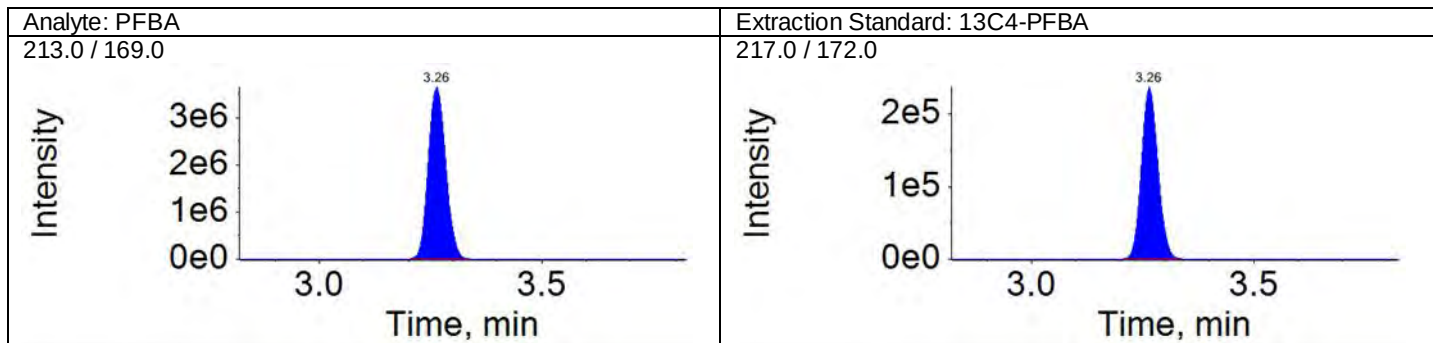
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



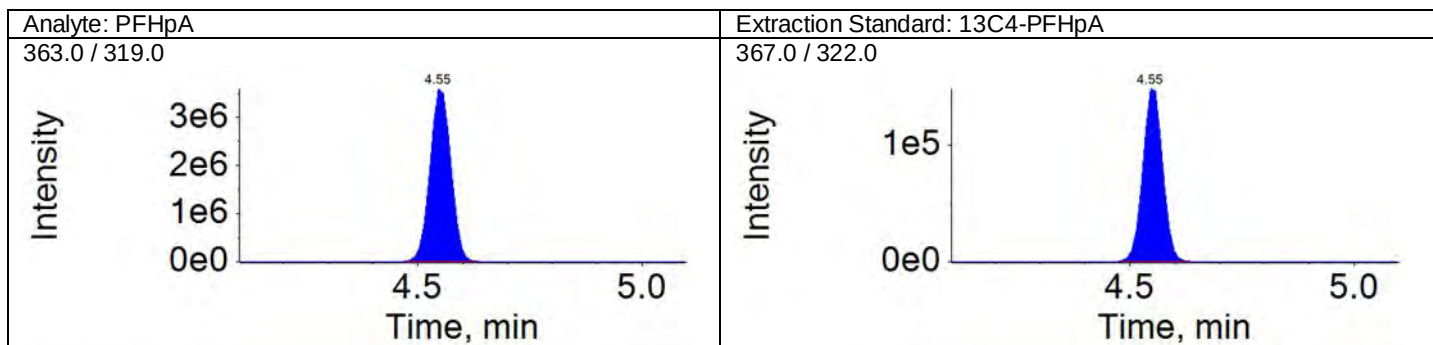
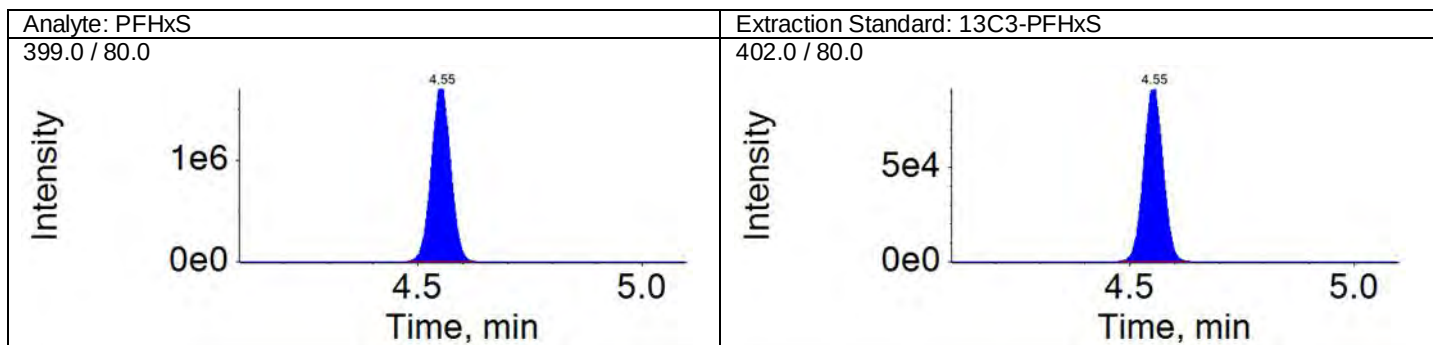
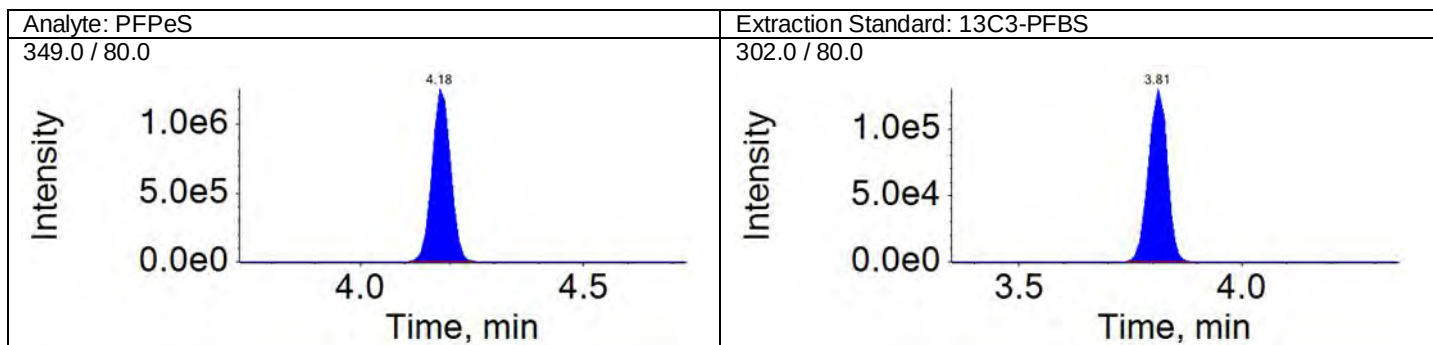
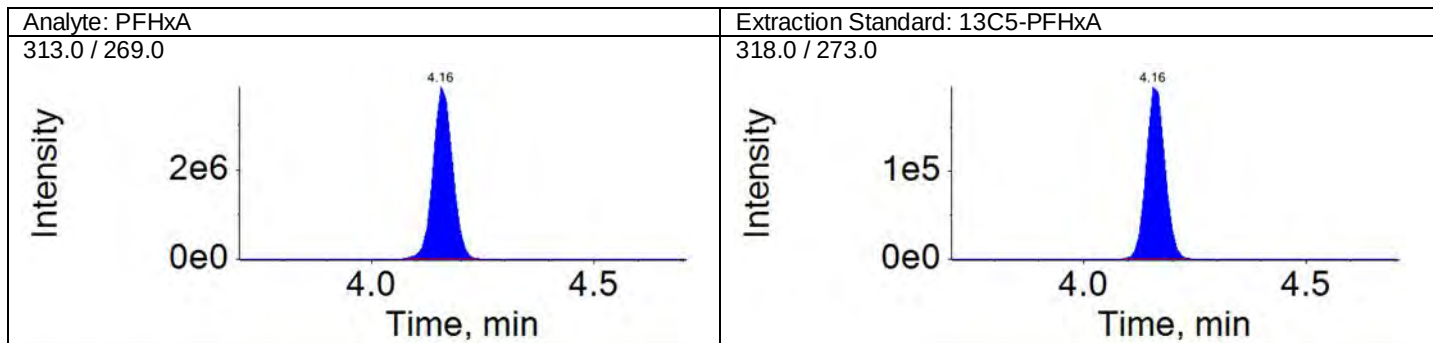
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



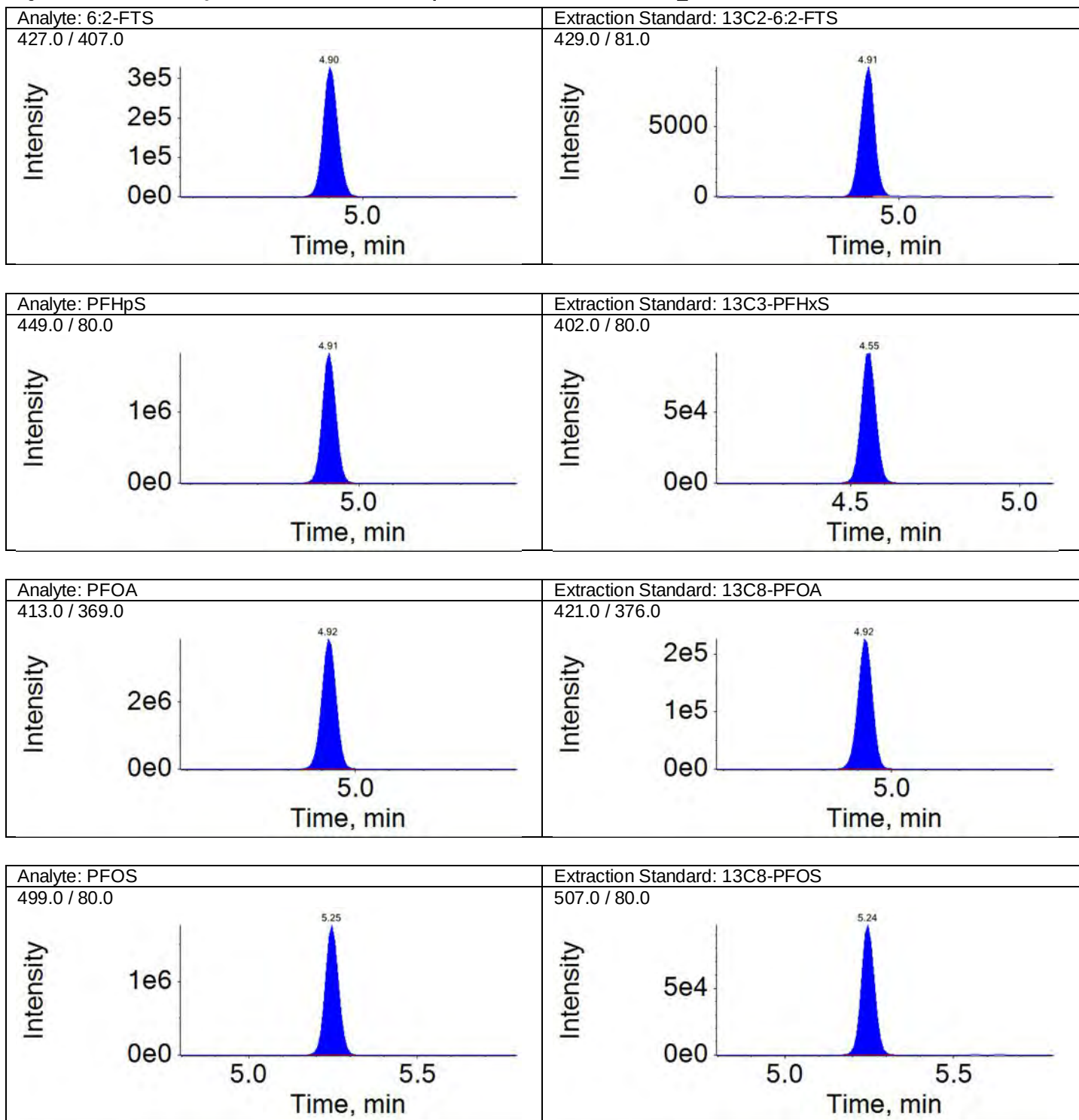
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



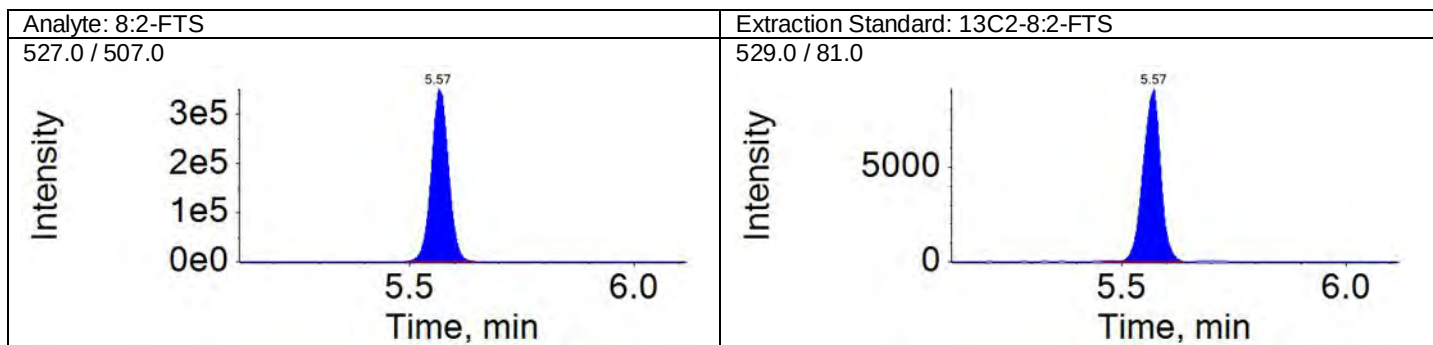
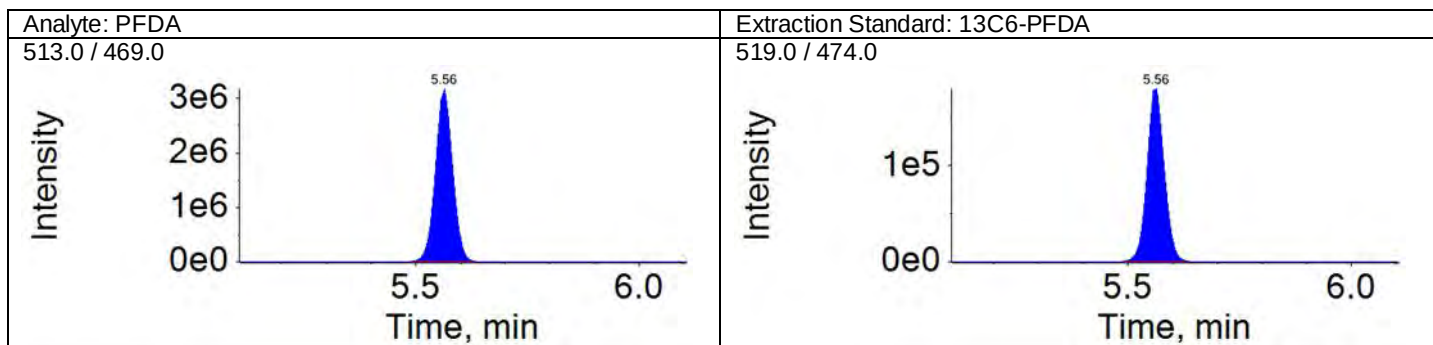
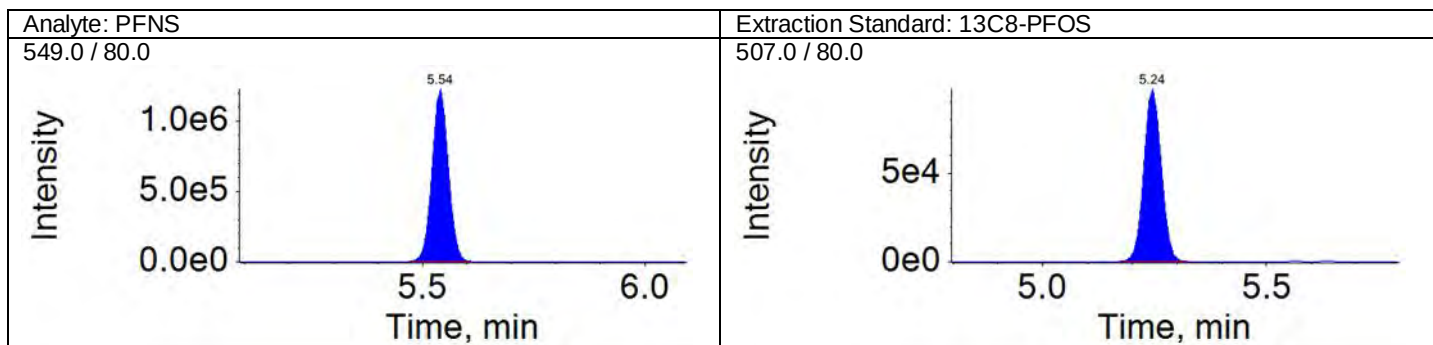
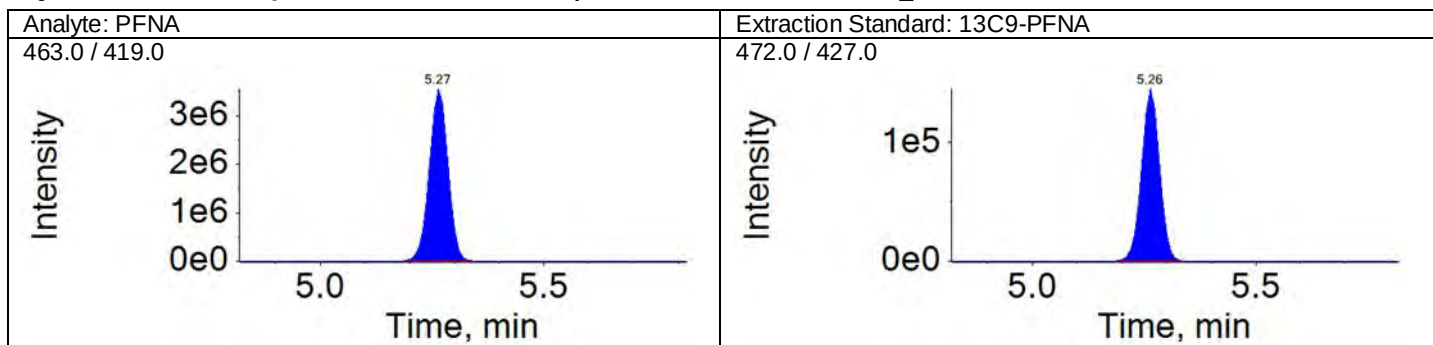
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



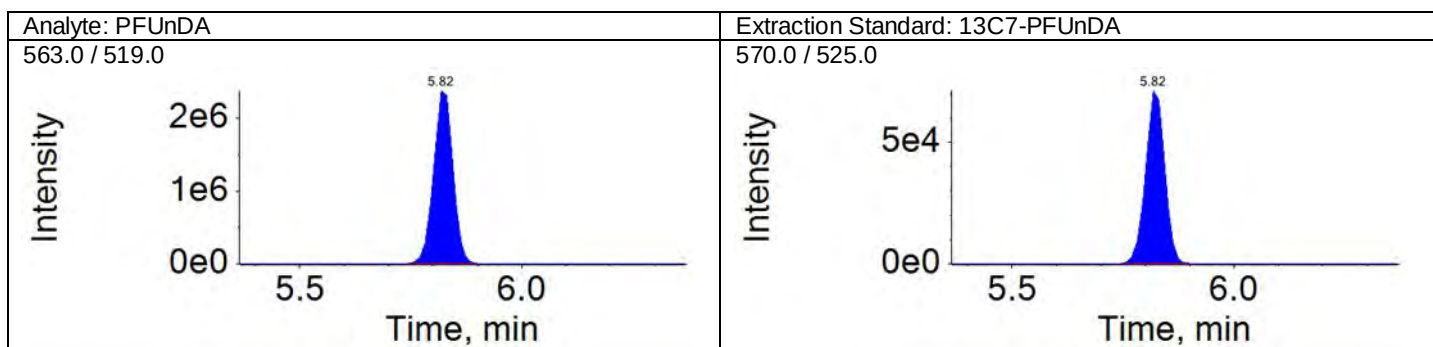
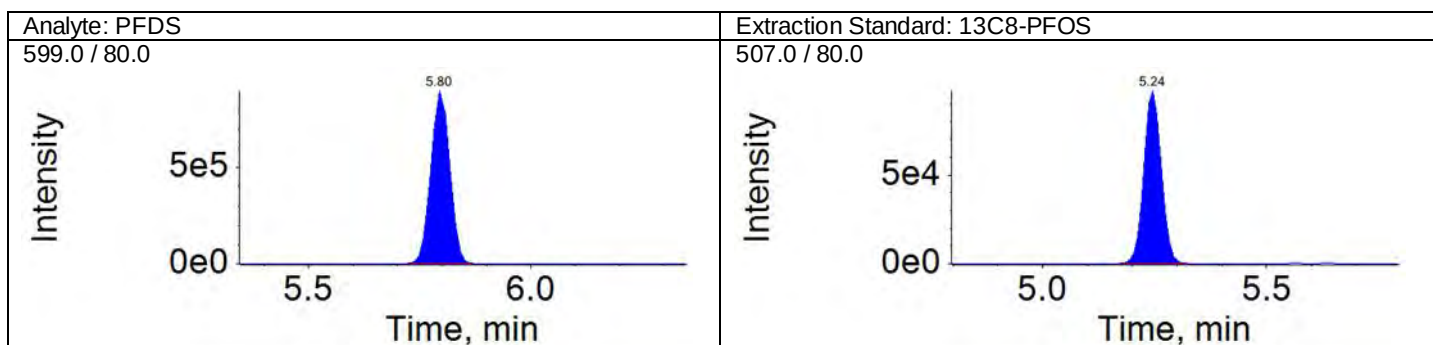
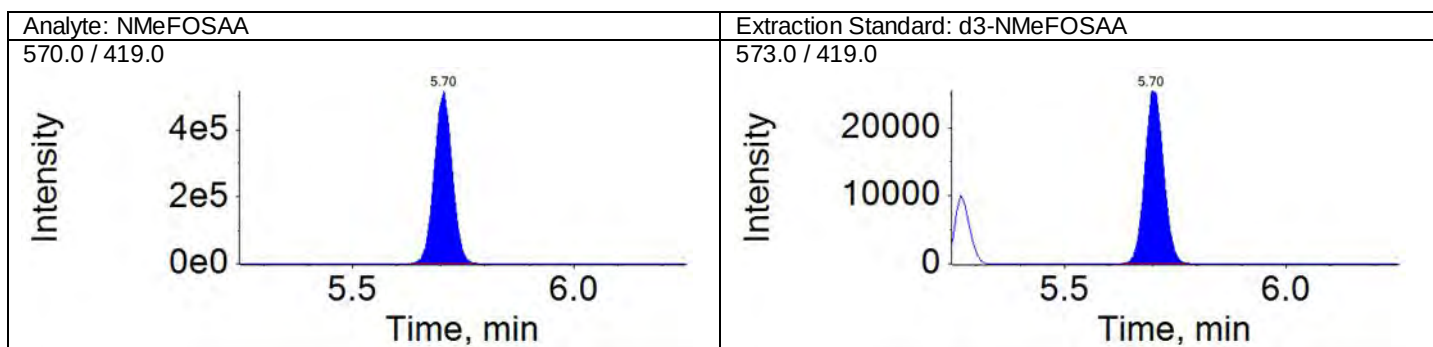
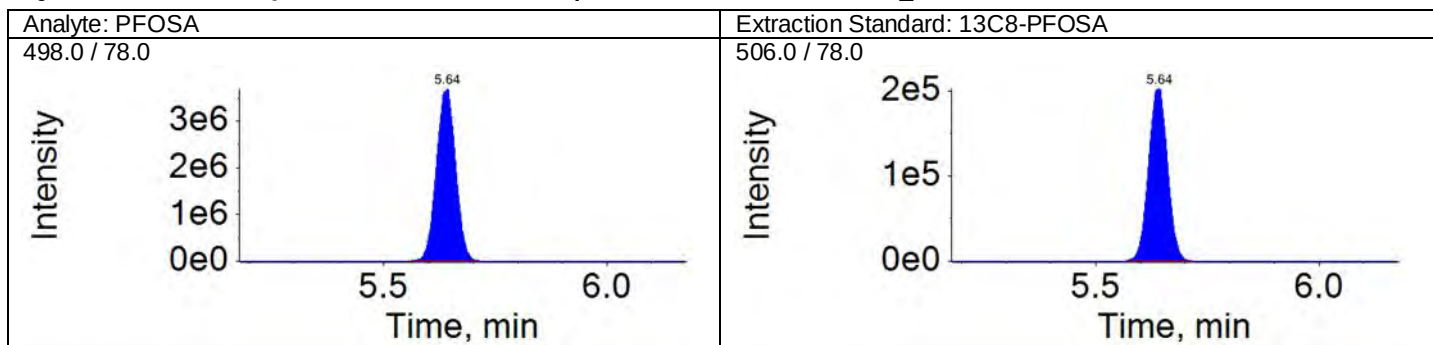
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



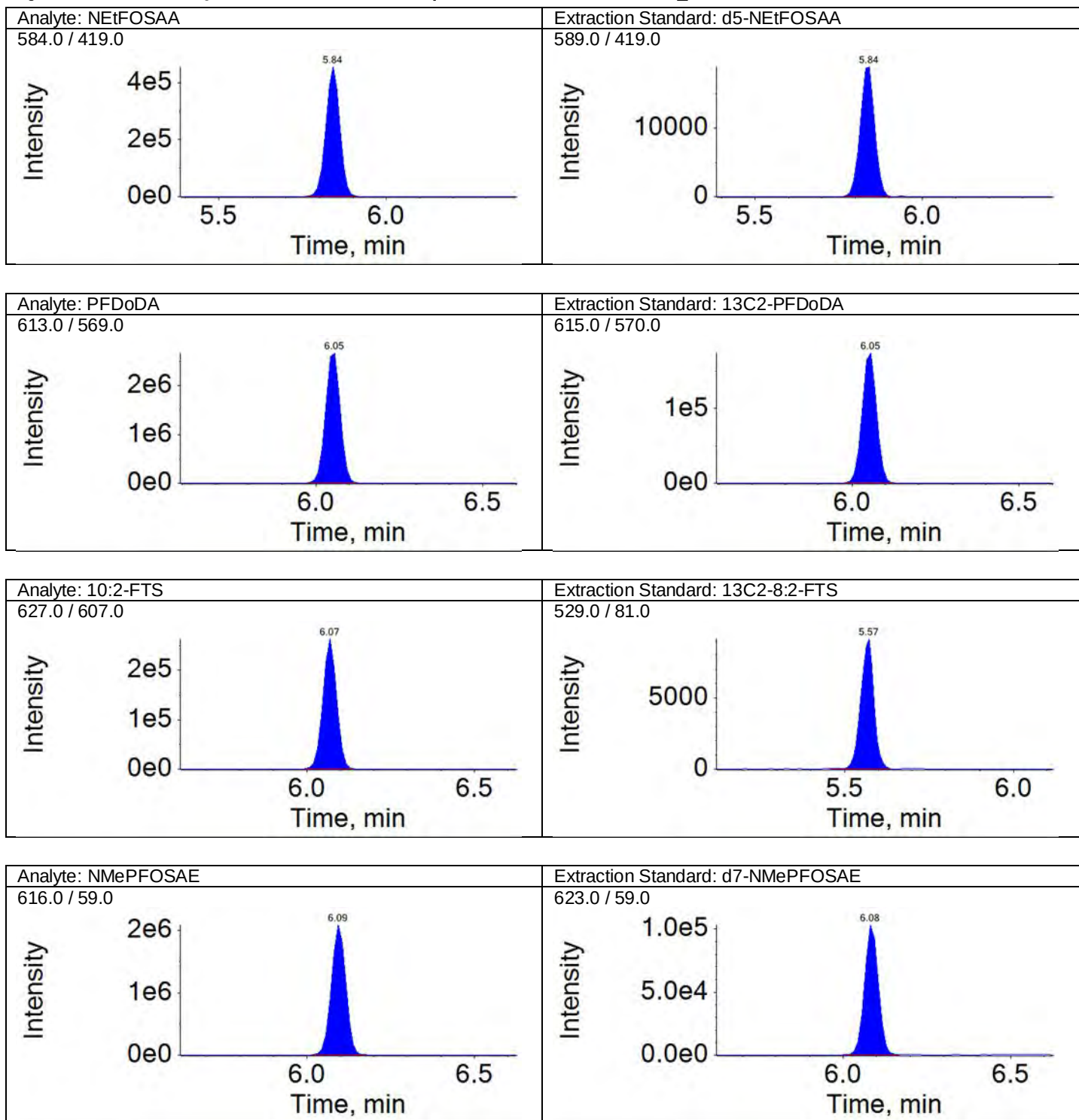
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



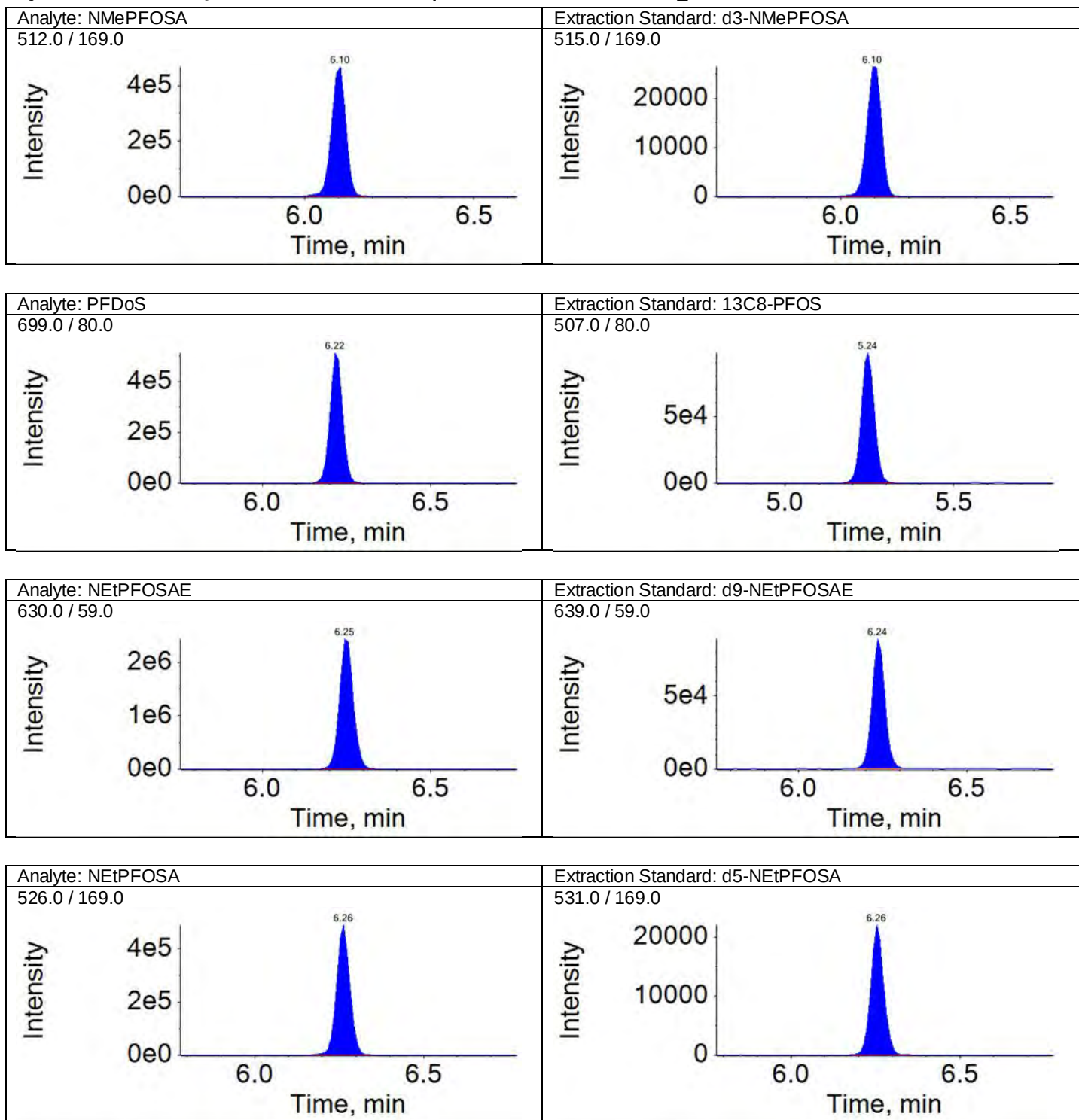
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



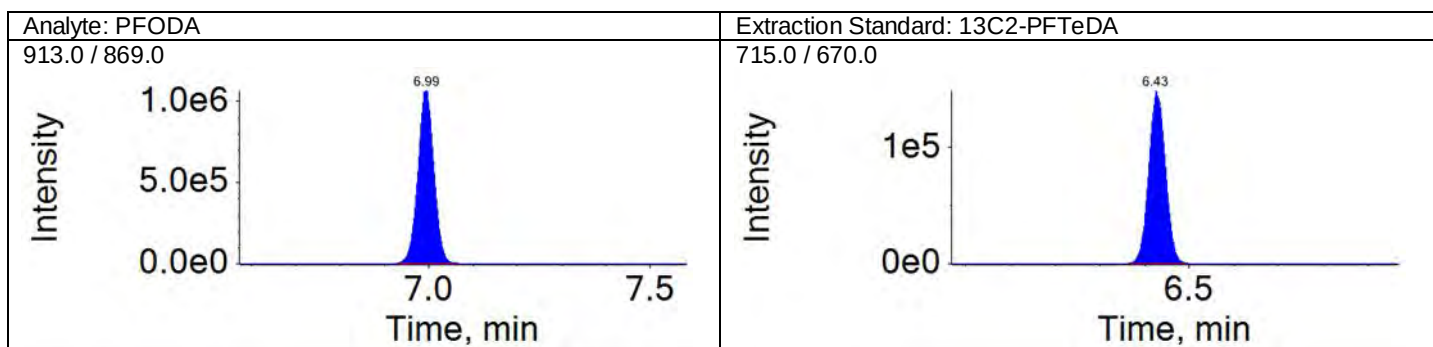
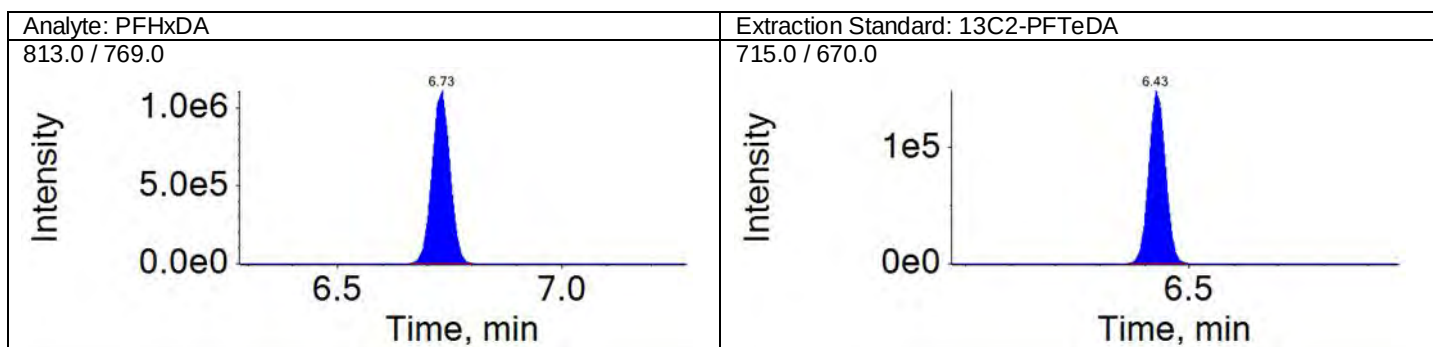
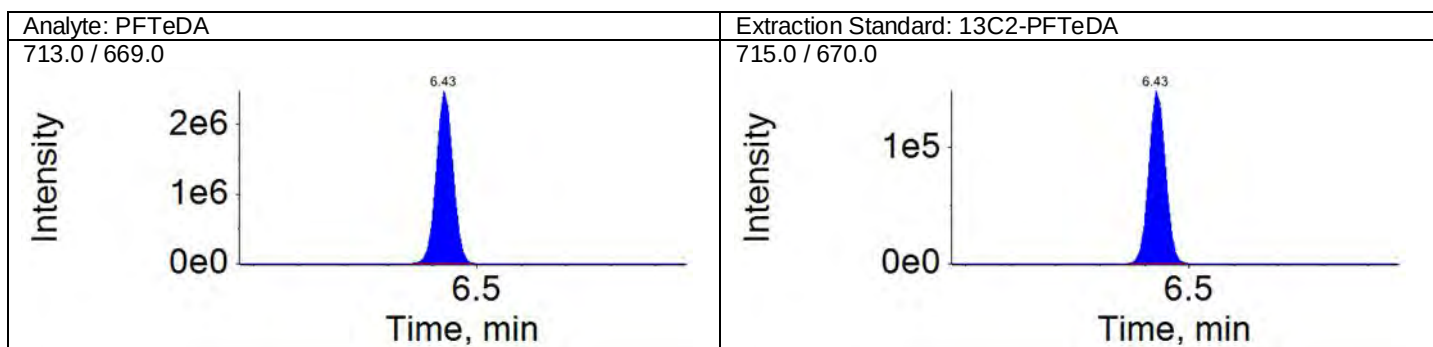
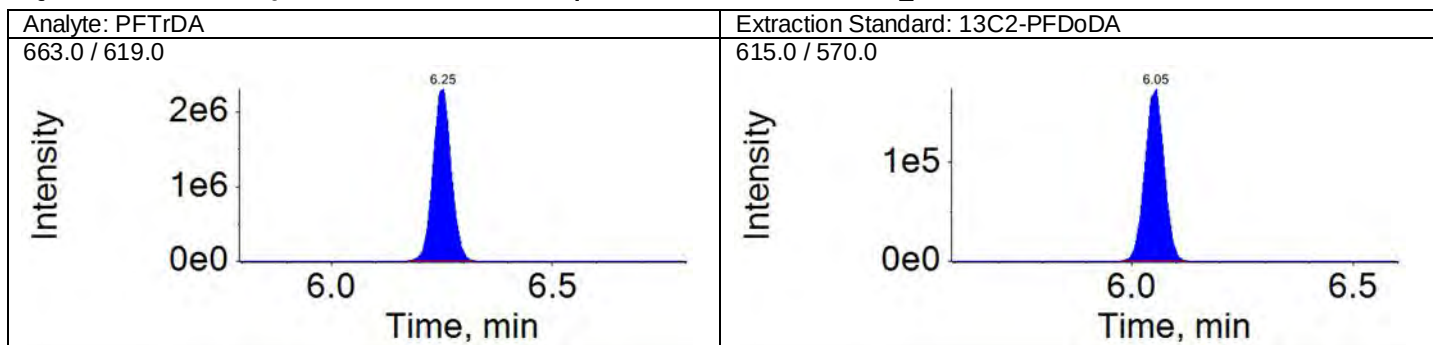
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



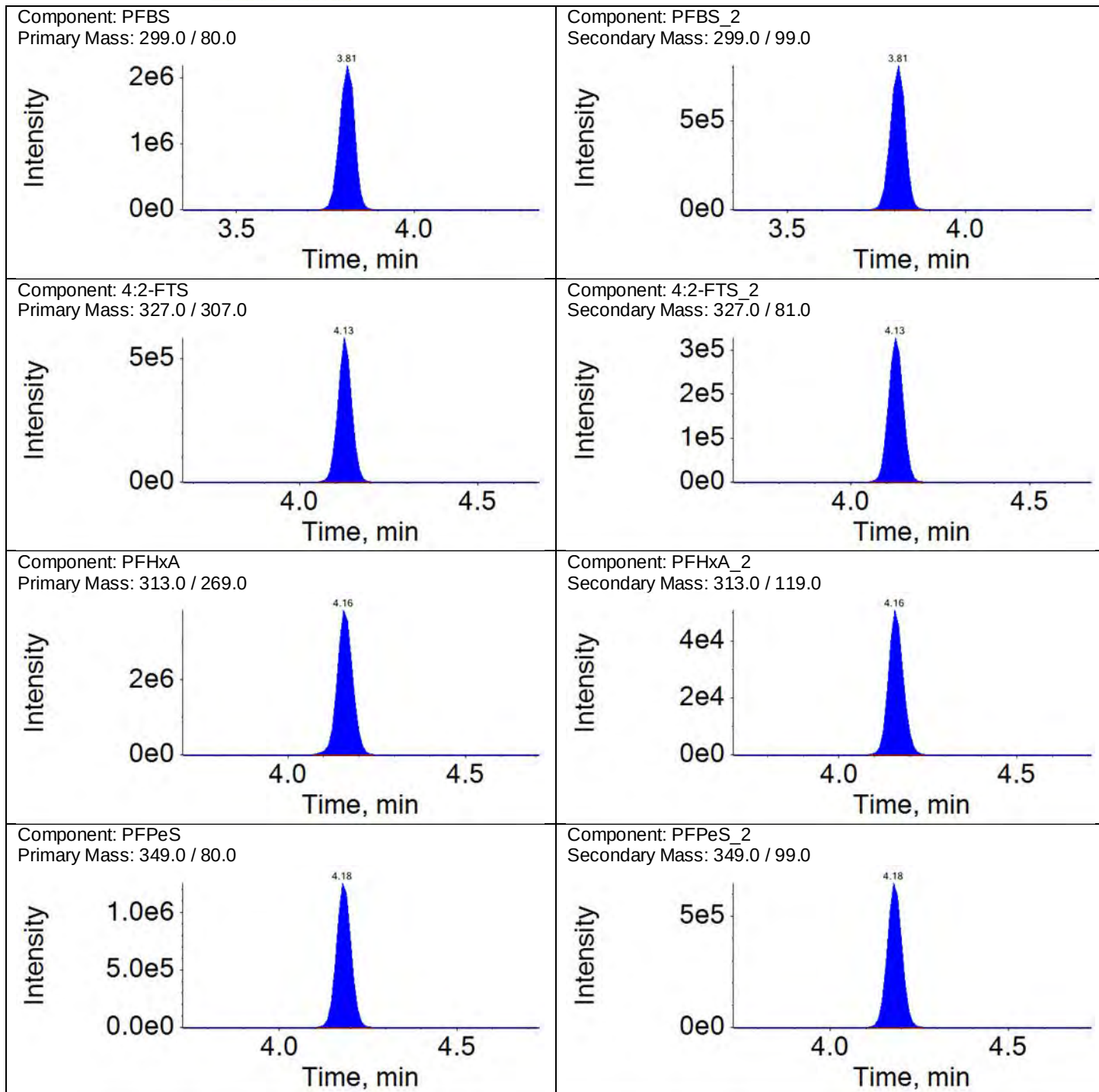
Ion Ratio Report

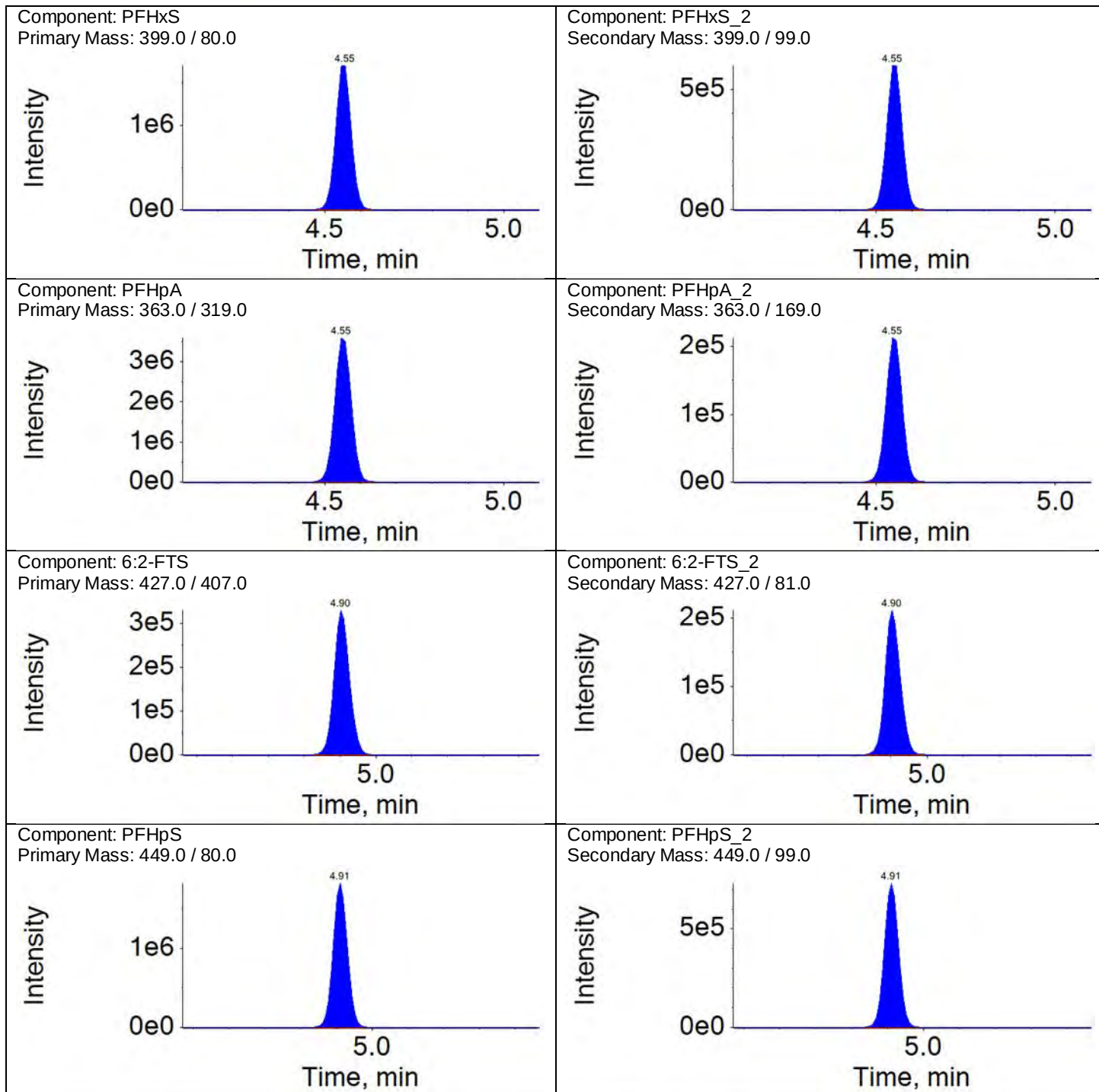
Sample Name: CAL7

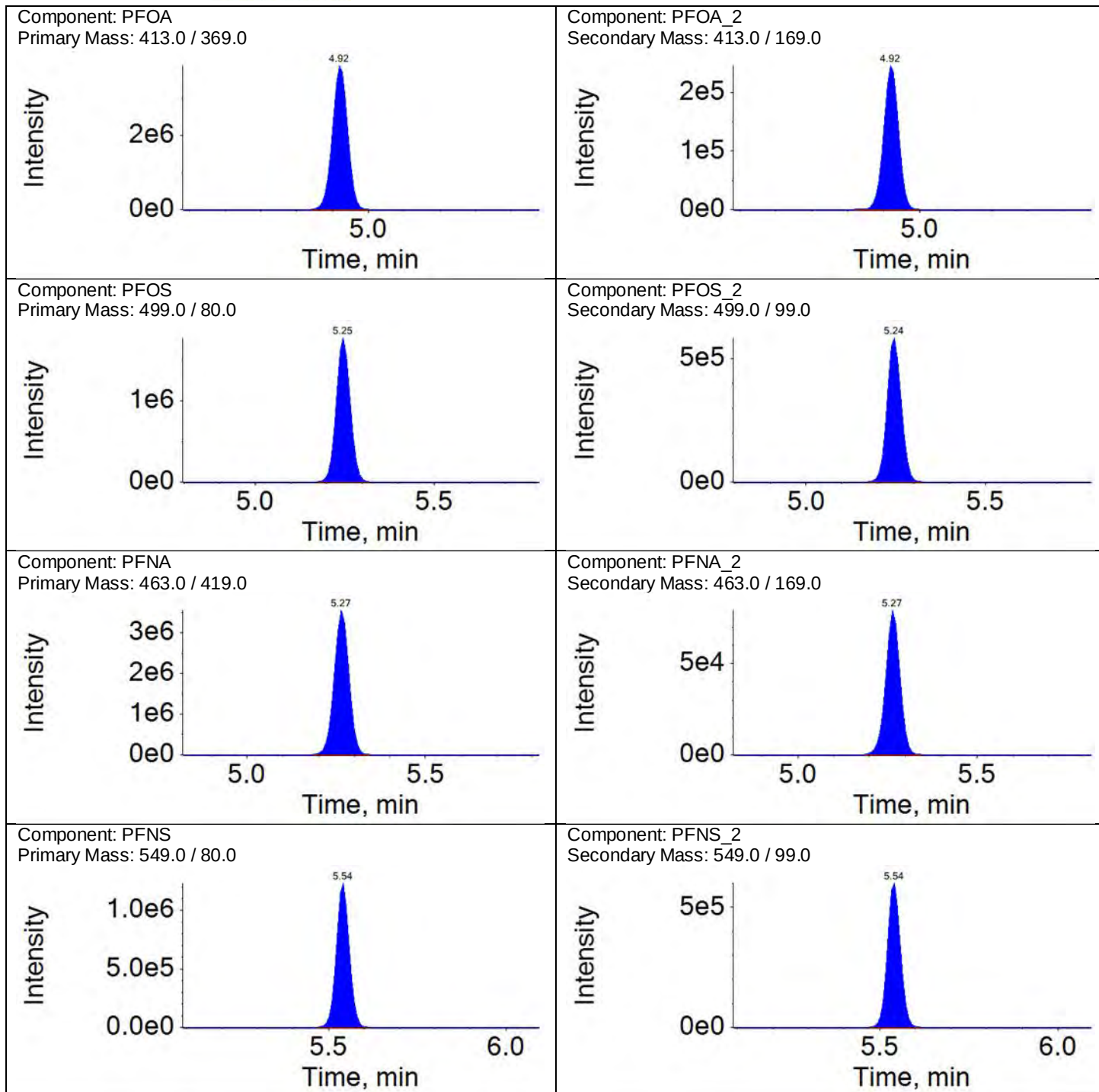
Instrument Name: LM27631

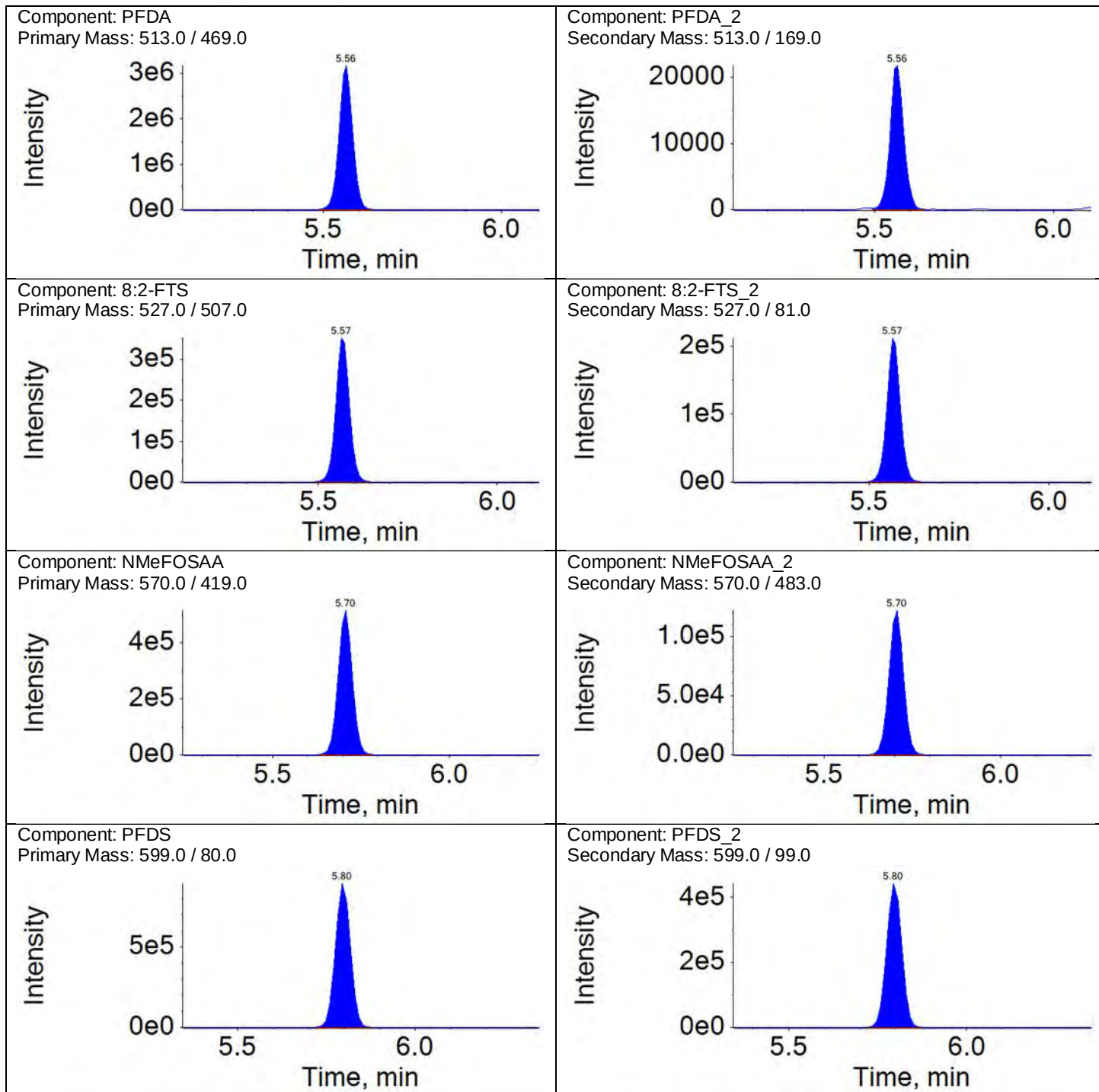
File Name: 18NOV07DCAL-16.wiff

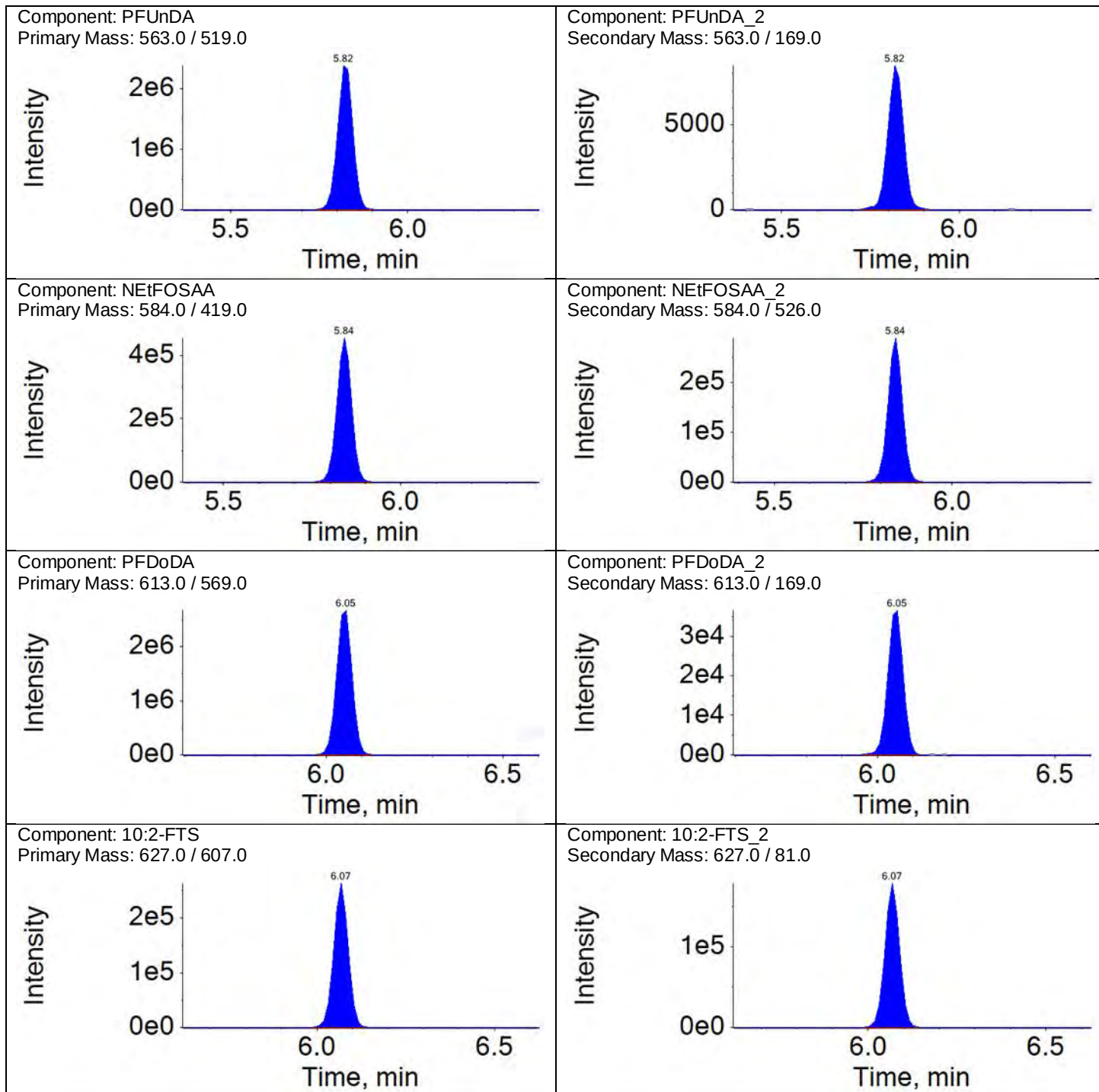
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	6474525.0	A	1.0000	1.0000			
PFBS_2	3.81	1.00	2381935.1	A	0.3576	0.3679	3	50	
4:2-FTS	4.13	1.00	1576786.3	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	946320.6	A	0.6359	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	
PFTTrDA	6.25	1.03	6633128.3	A	1.0000	1.0000			
PFTTrDA_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	

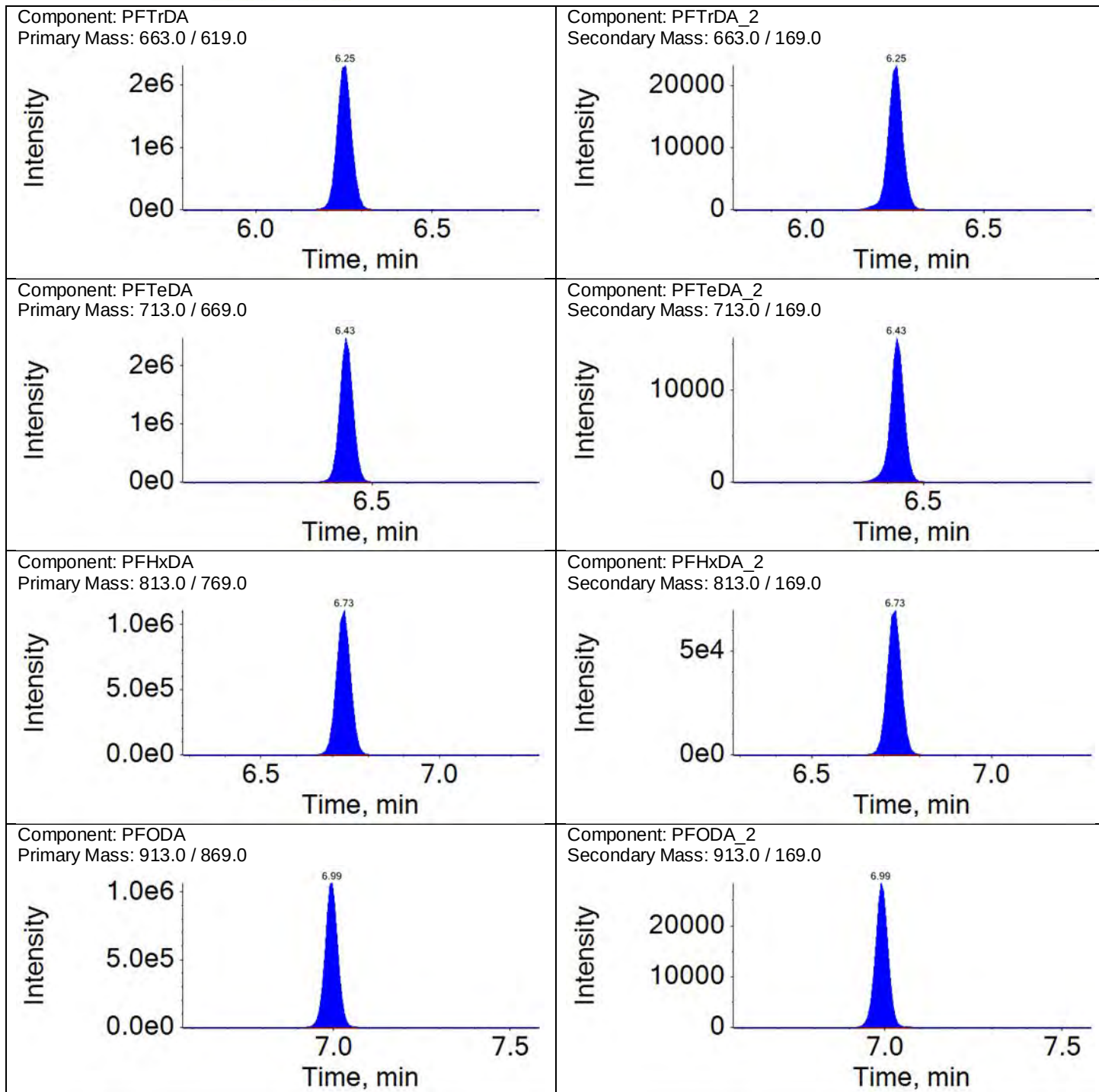












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	MDL		Data File:	18NOV07DCAL-09.wiff
Sample ID:	MDLMDX1833E		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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

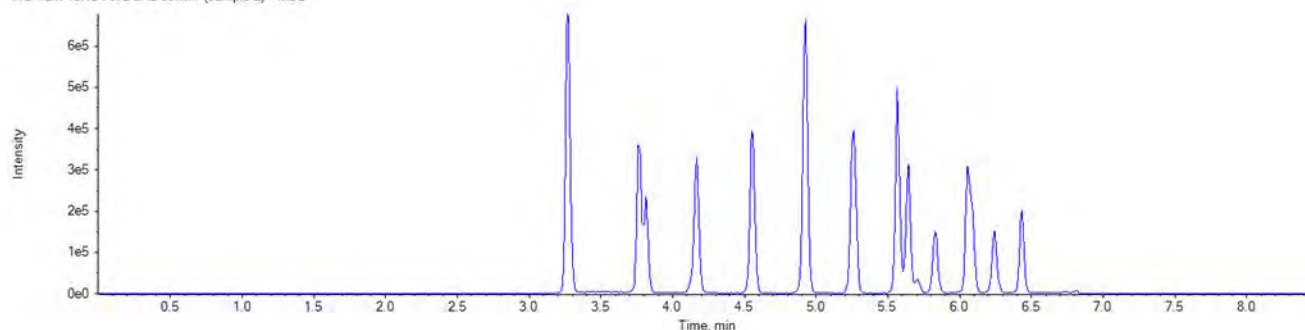
Sample Name: MDL Instrument Name: LM27631 File Name: 18NOV07DCAL-09.wiff

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
PFTDA	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

TIC from 18NOV07DCAL-09.wiff (sample 2) - MDL



APPROVED

By JPT at 2:54 pm, 11/7/18

BSI05 Page 546 of 1595

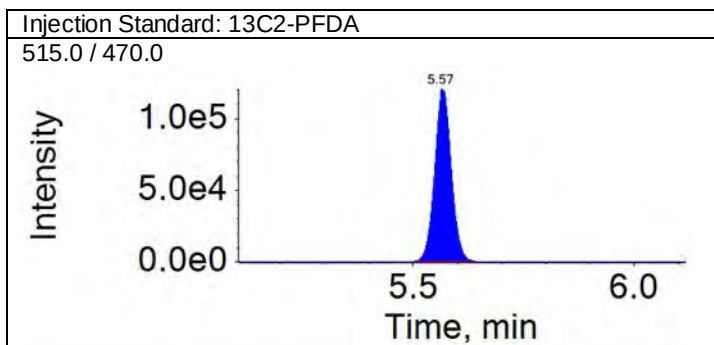
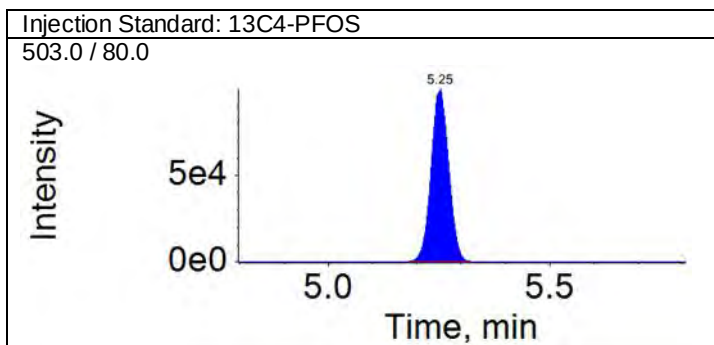
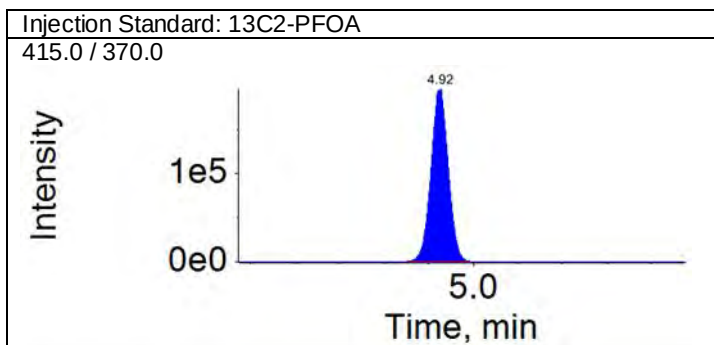
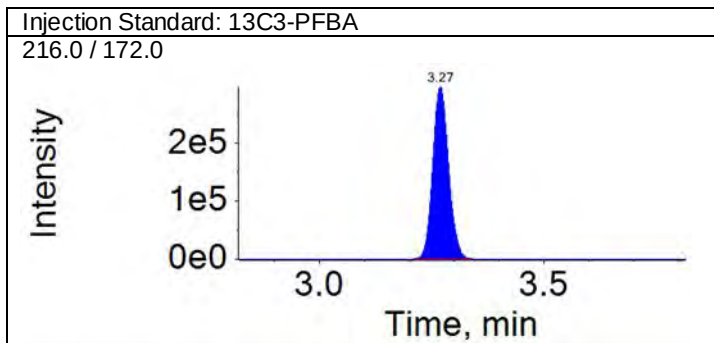
REVIEWED

By umar at 5:24 pm, 11/9/18

Page 2 of 17

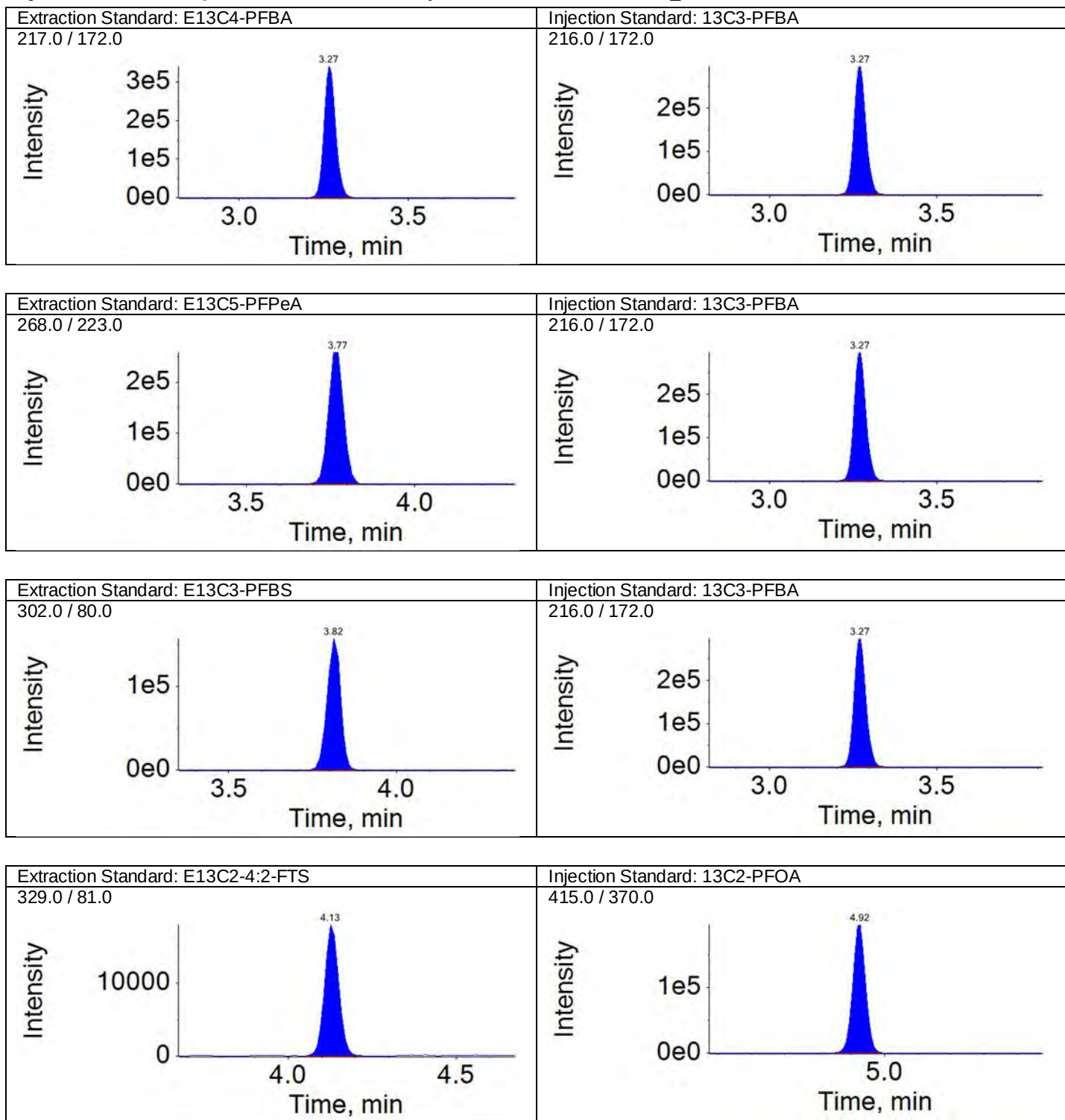
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

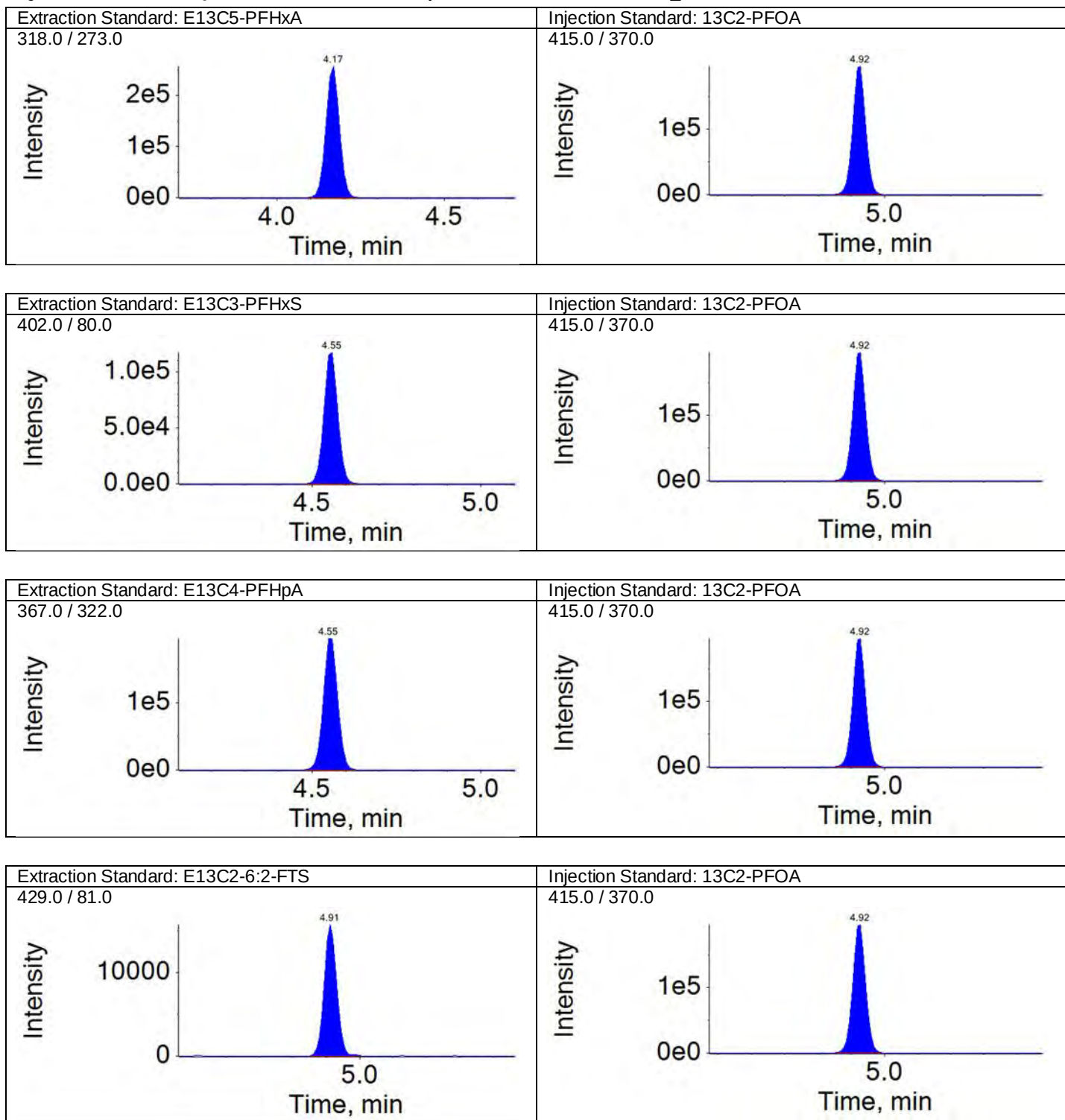
By JPT at 2:54 pm, 11/7/18

REVIEWED

By umar at 5:24 pm, 11/9/18

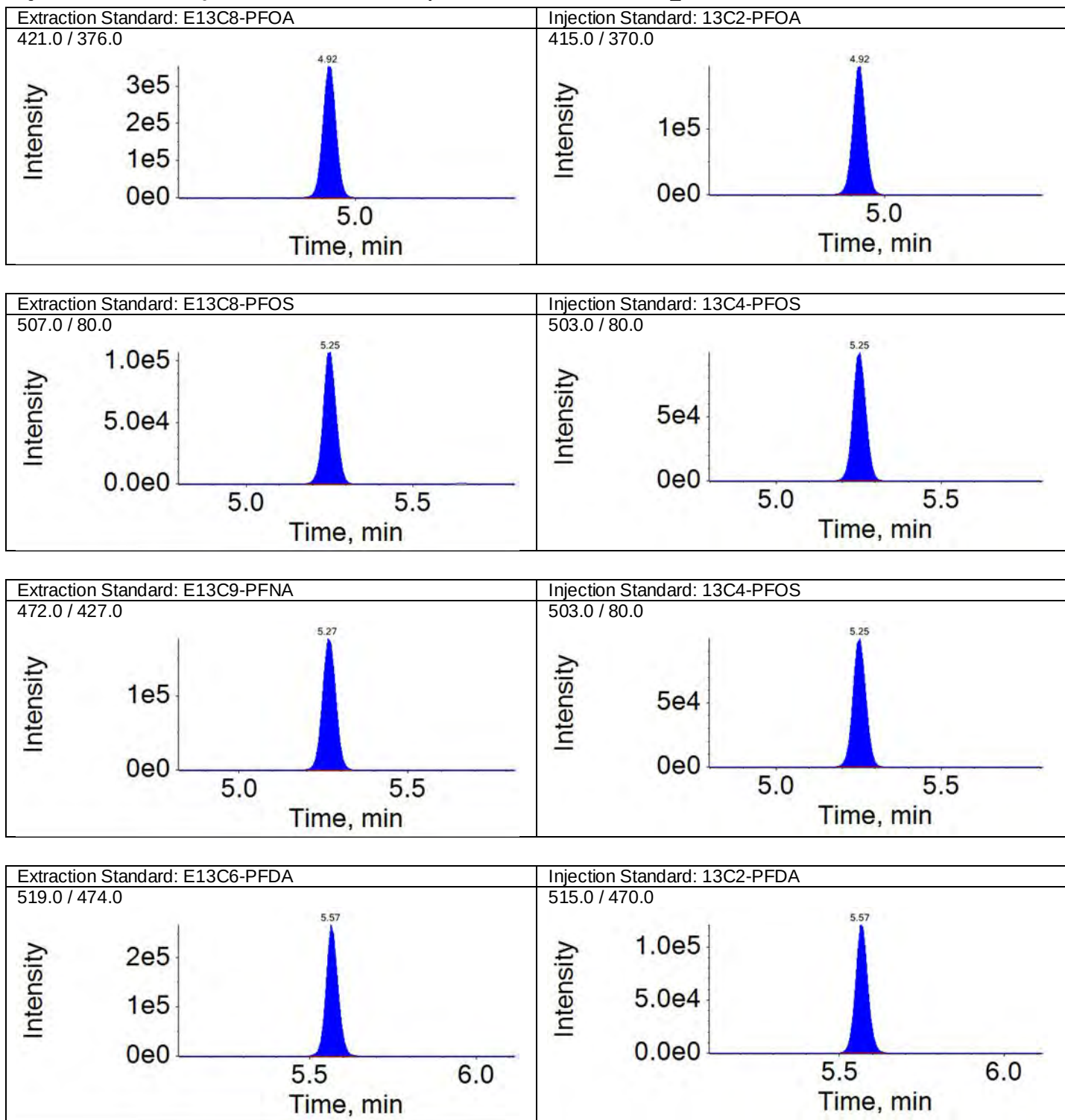
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

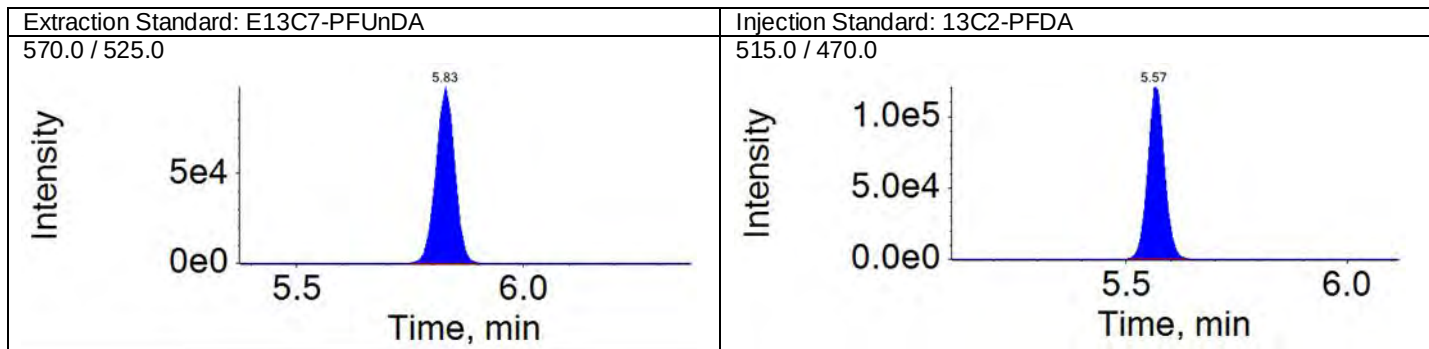
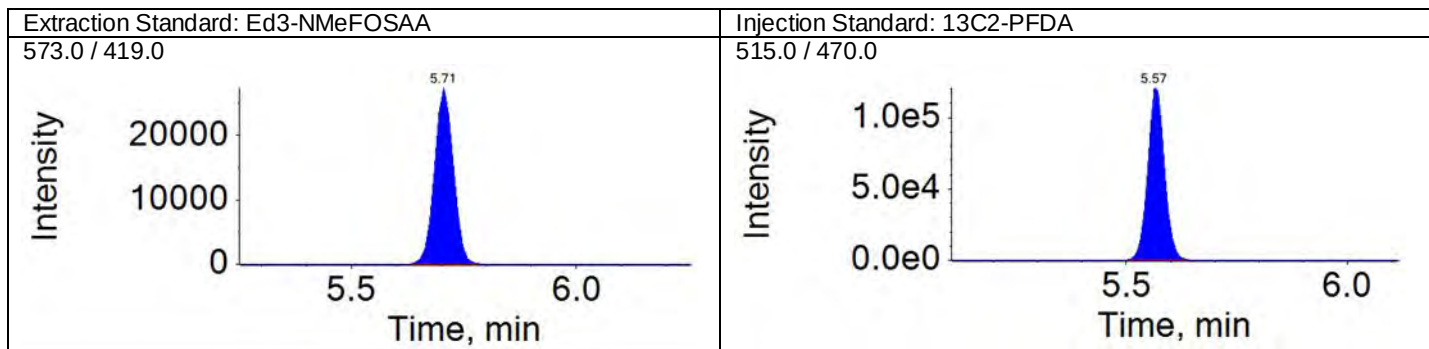
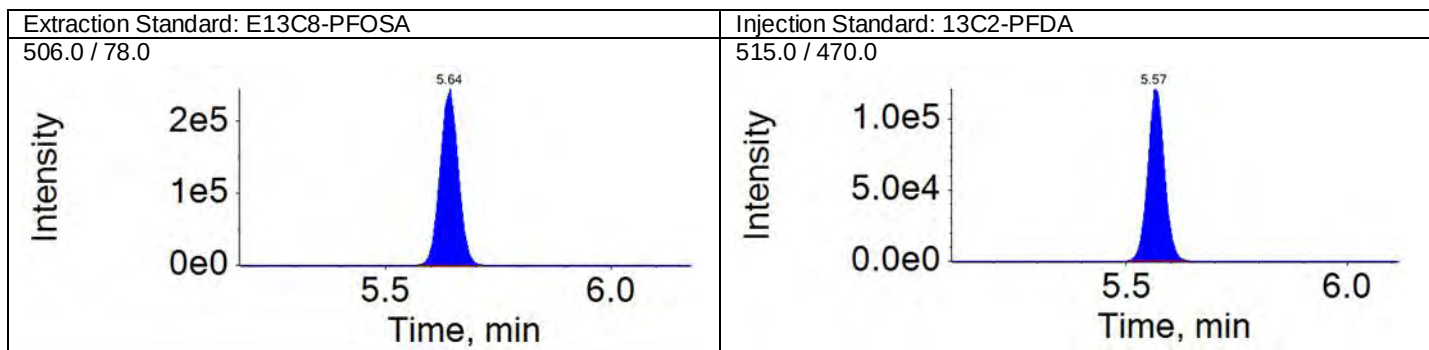
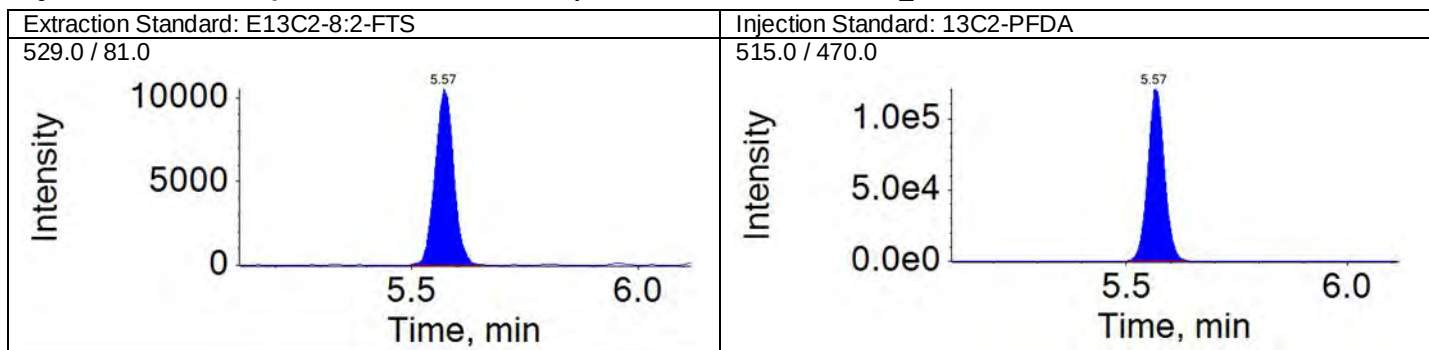
By JPT at 2:54 pm, 11/7/18

REVIEWED

By umar at 5:24 pm, 11/9/18

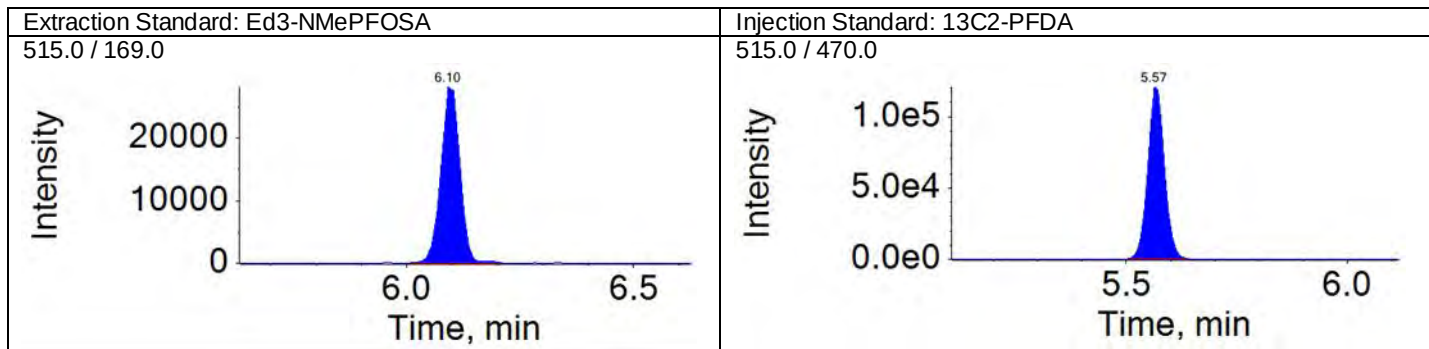
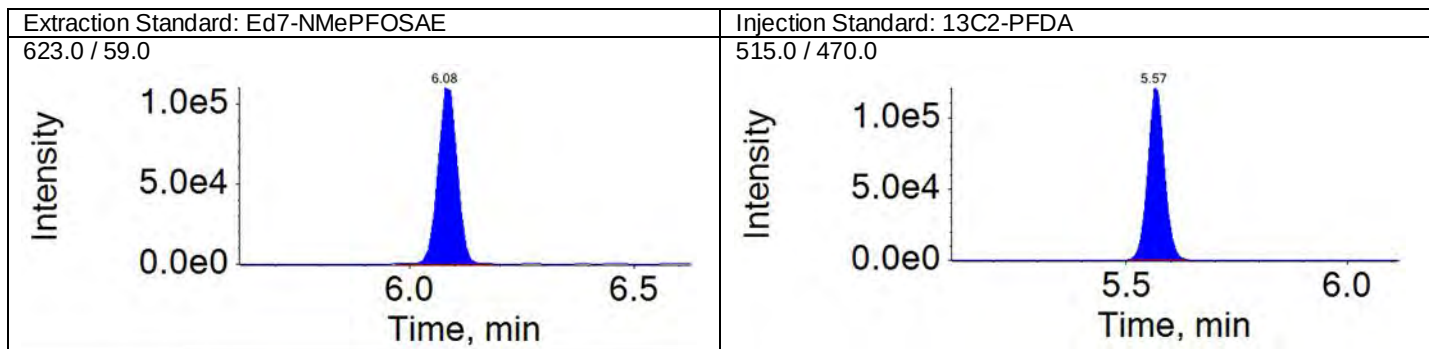
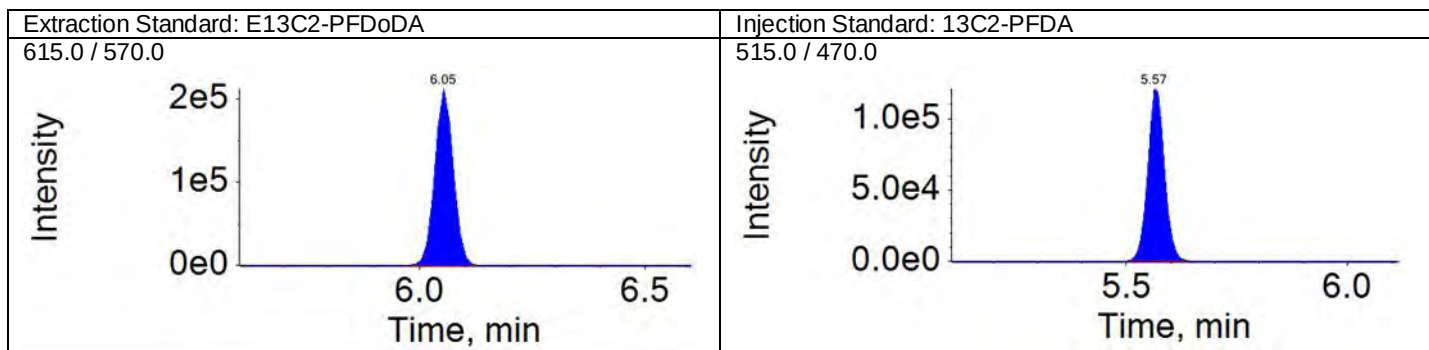
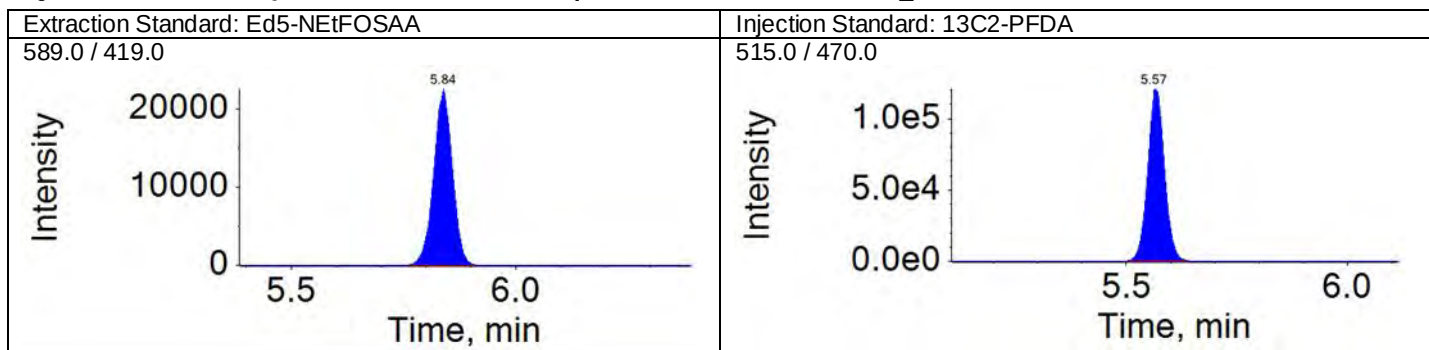
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



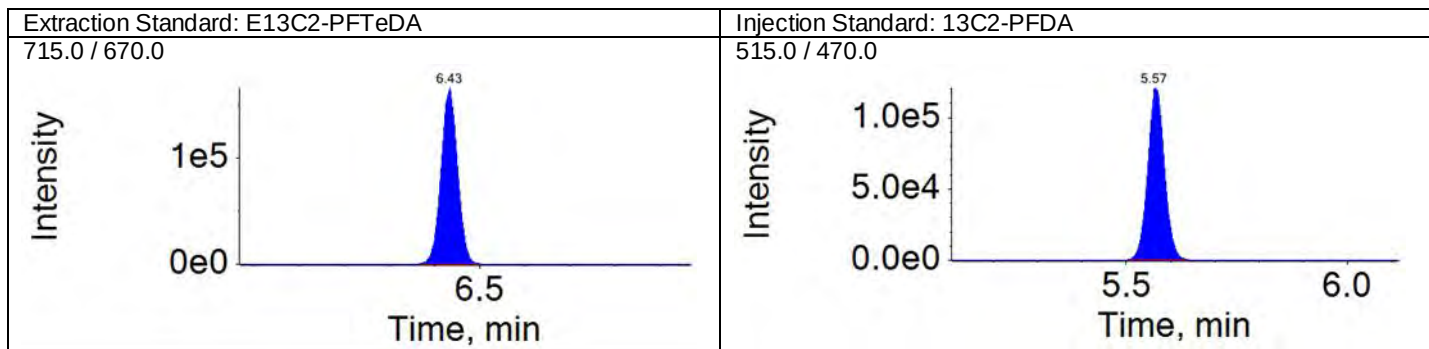
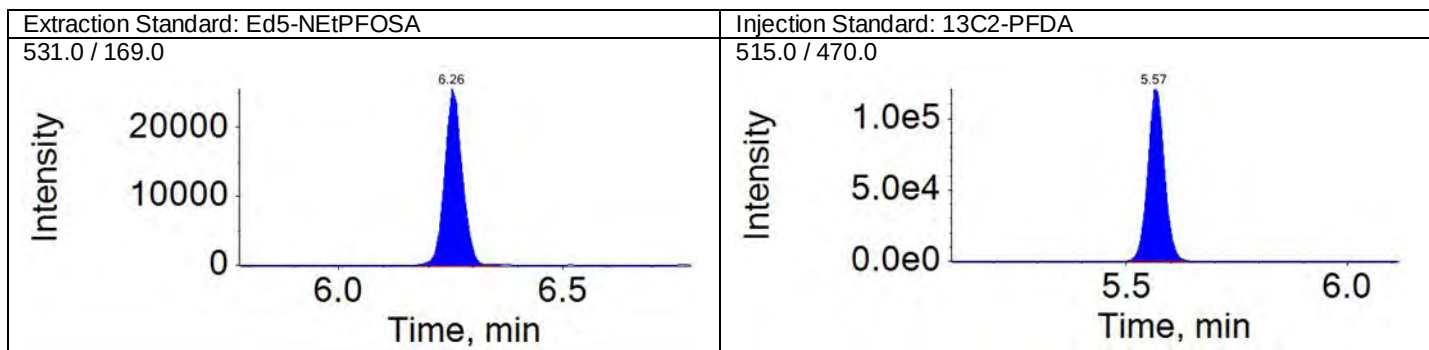
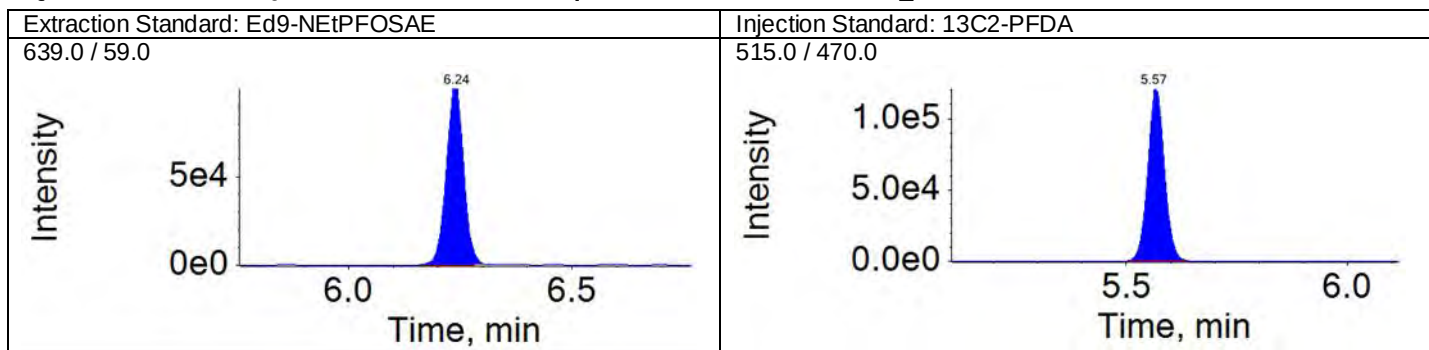
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



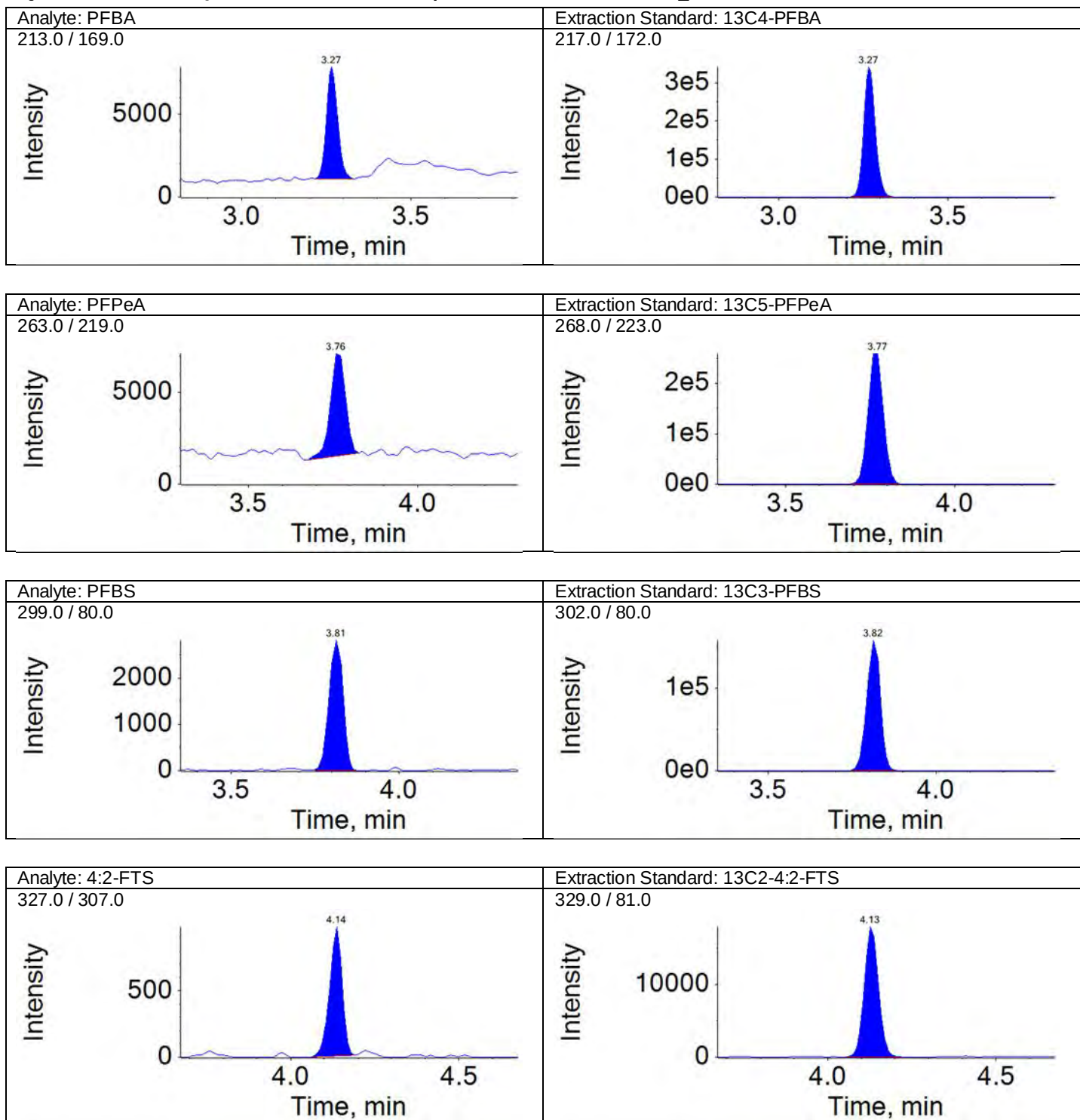
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



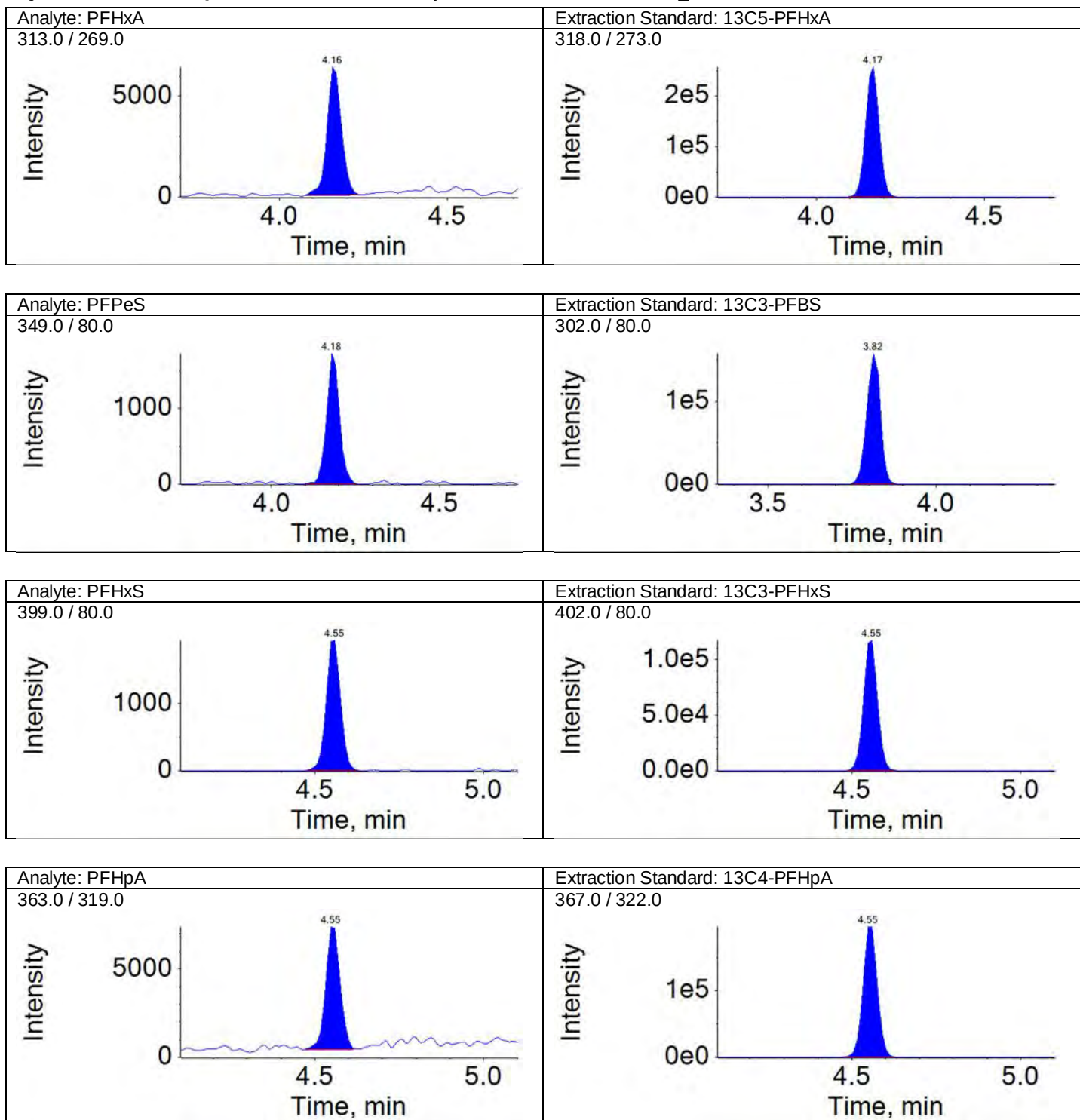
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



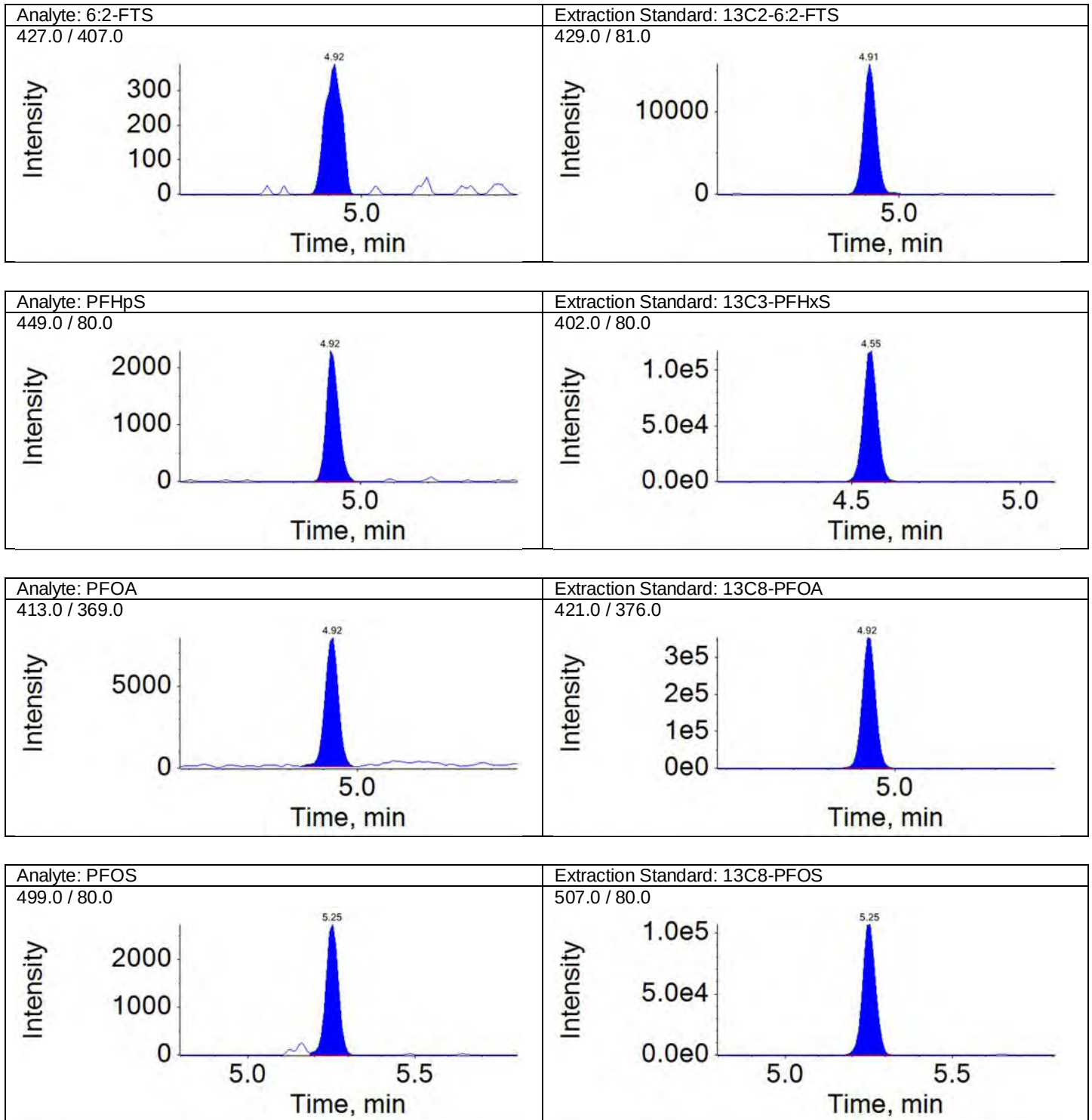
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



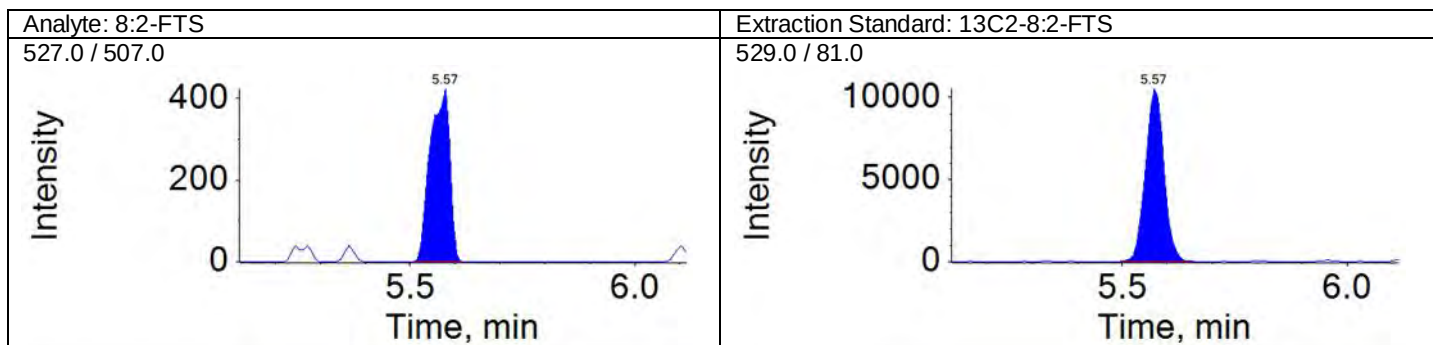
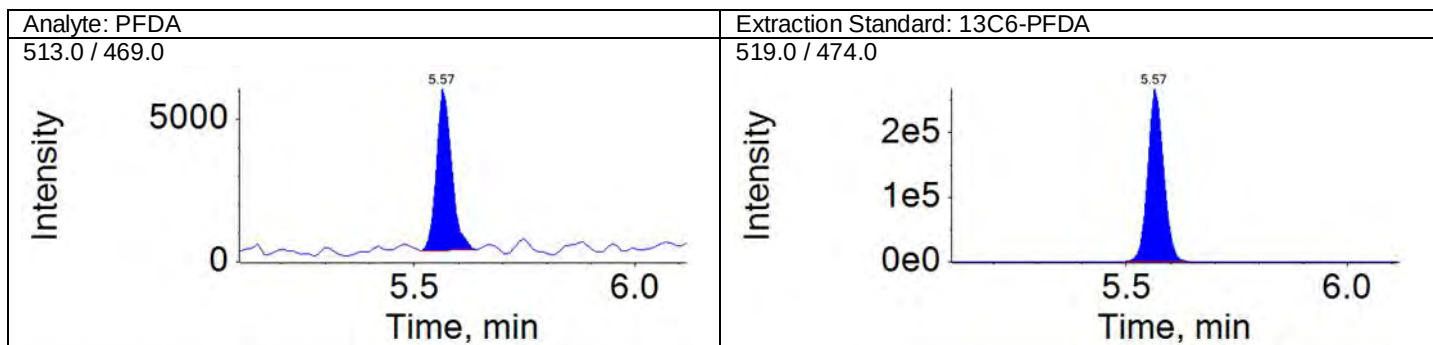
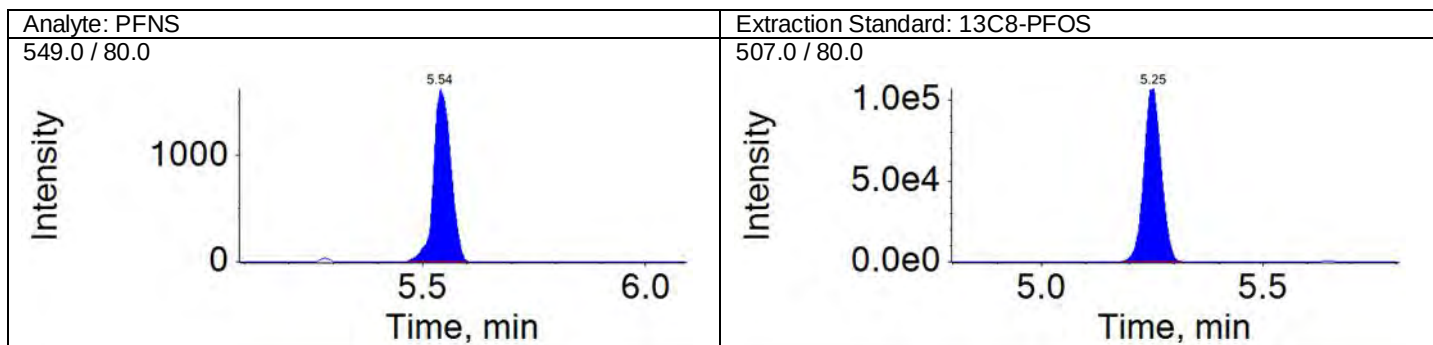
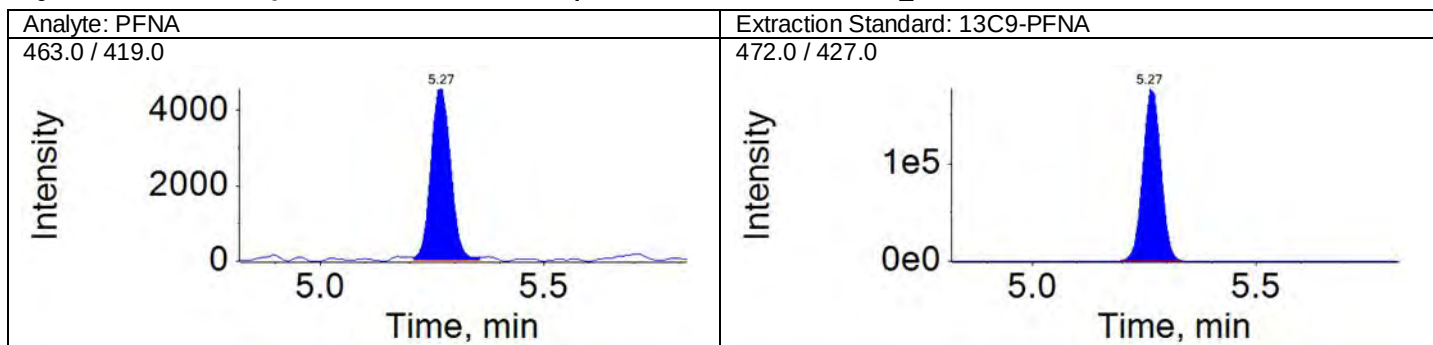
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



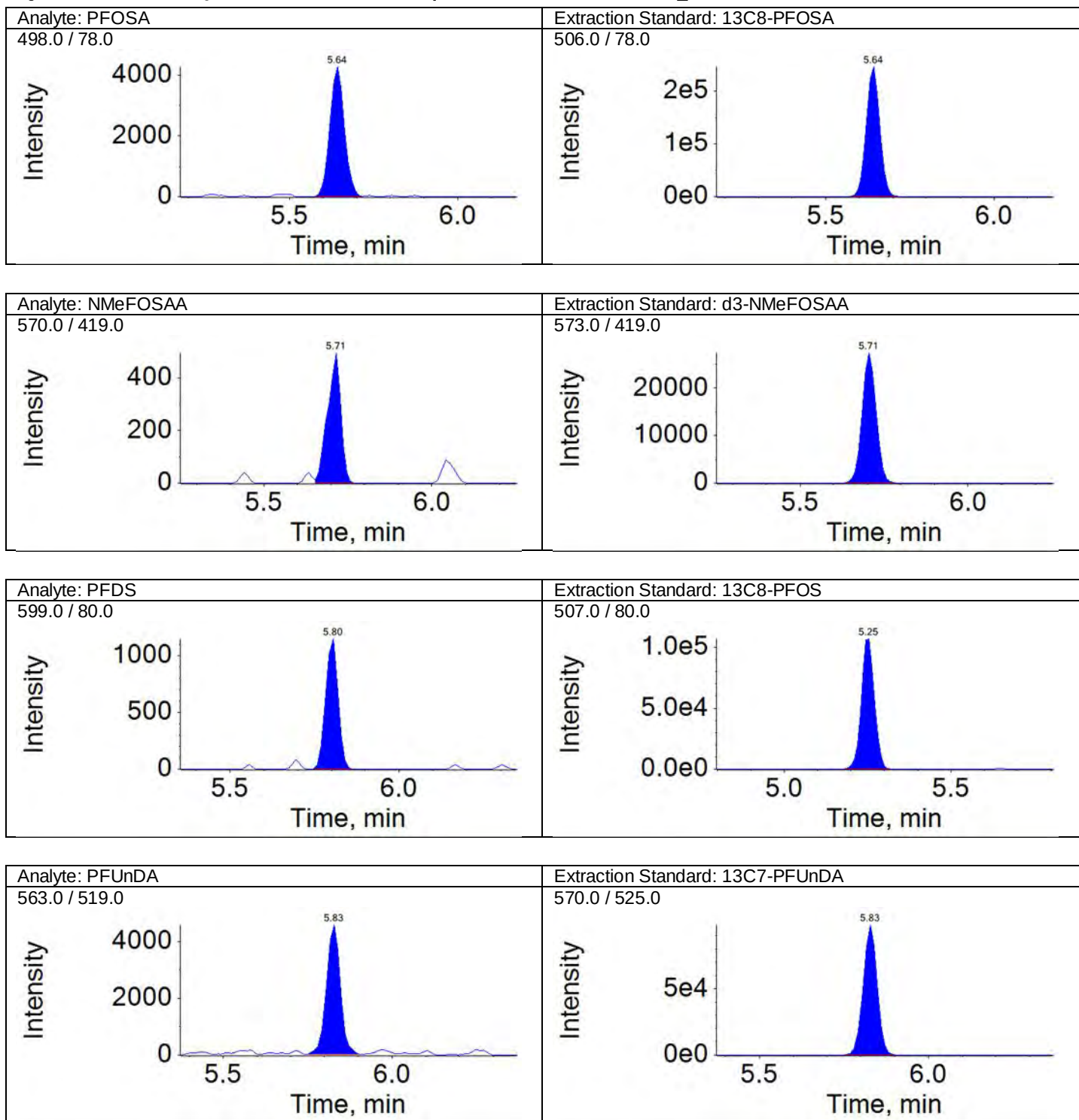
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

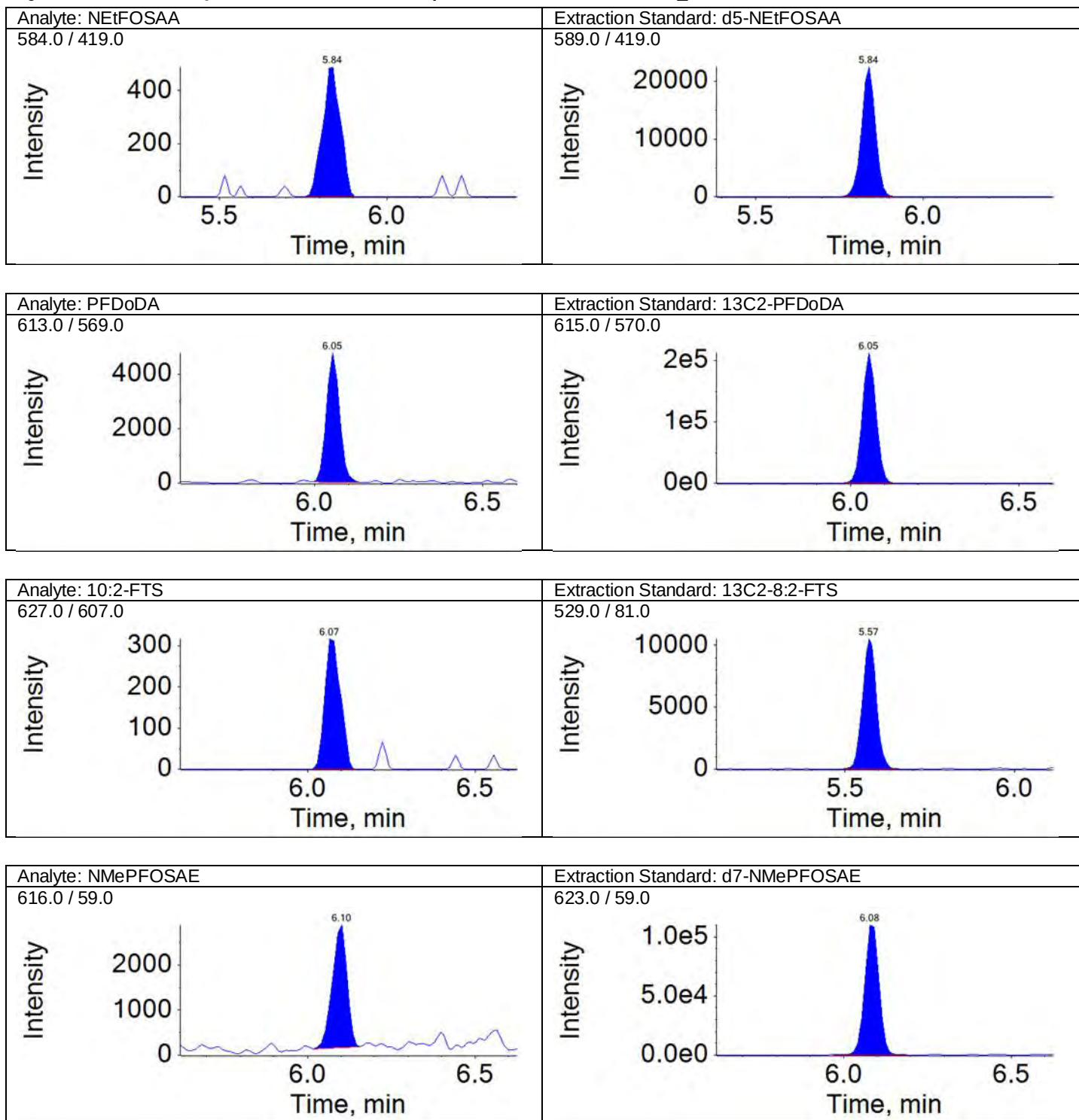
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

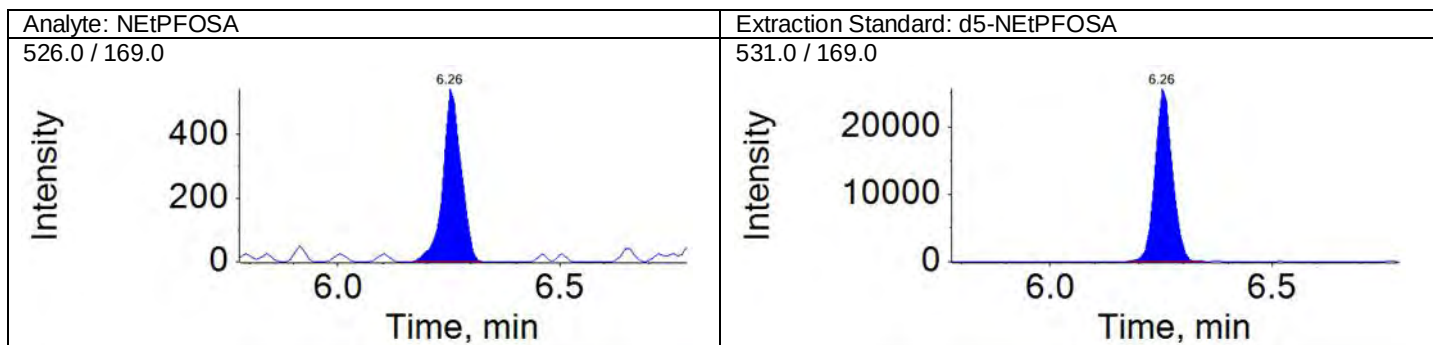
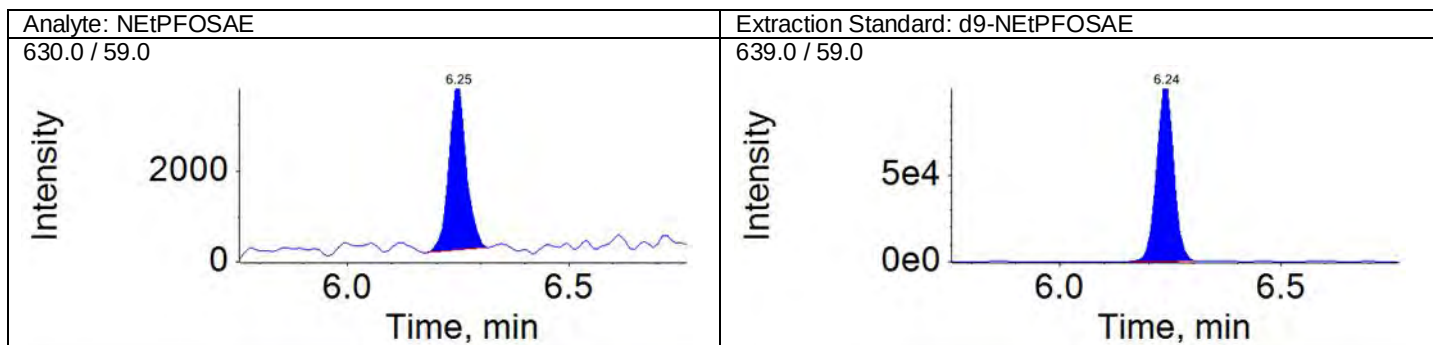
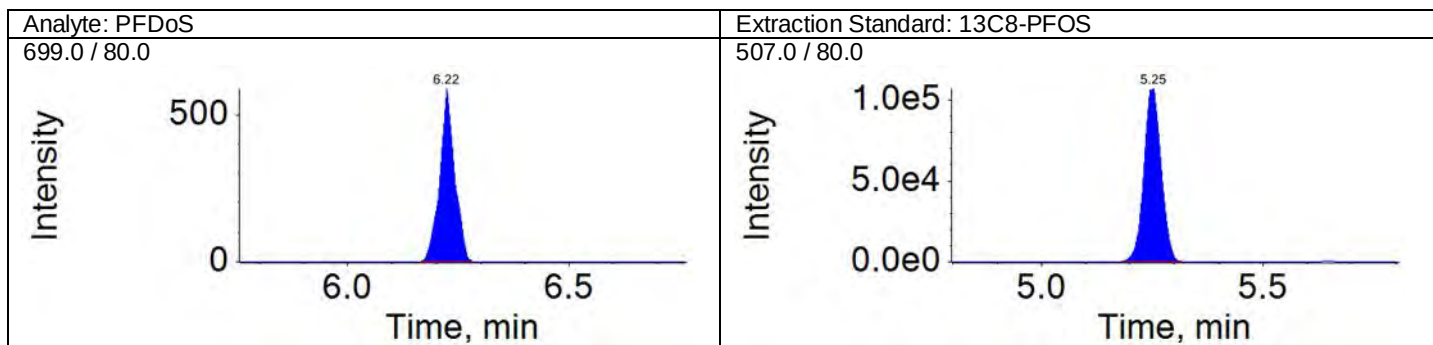
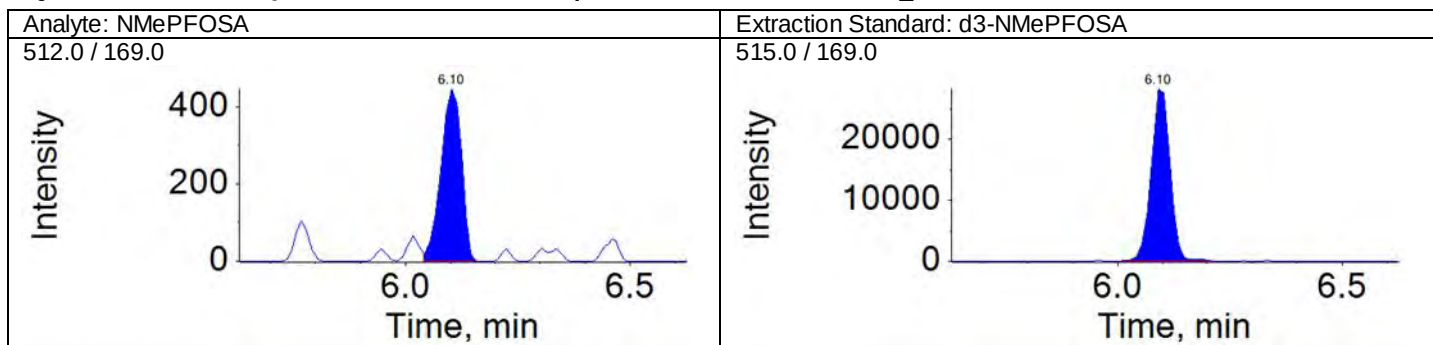
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

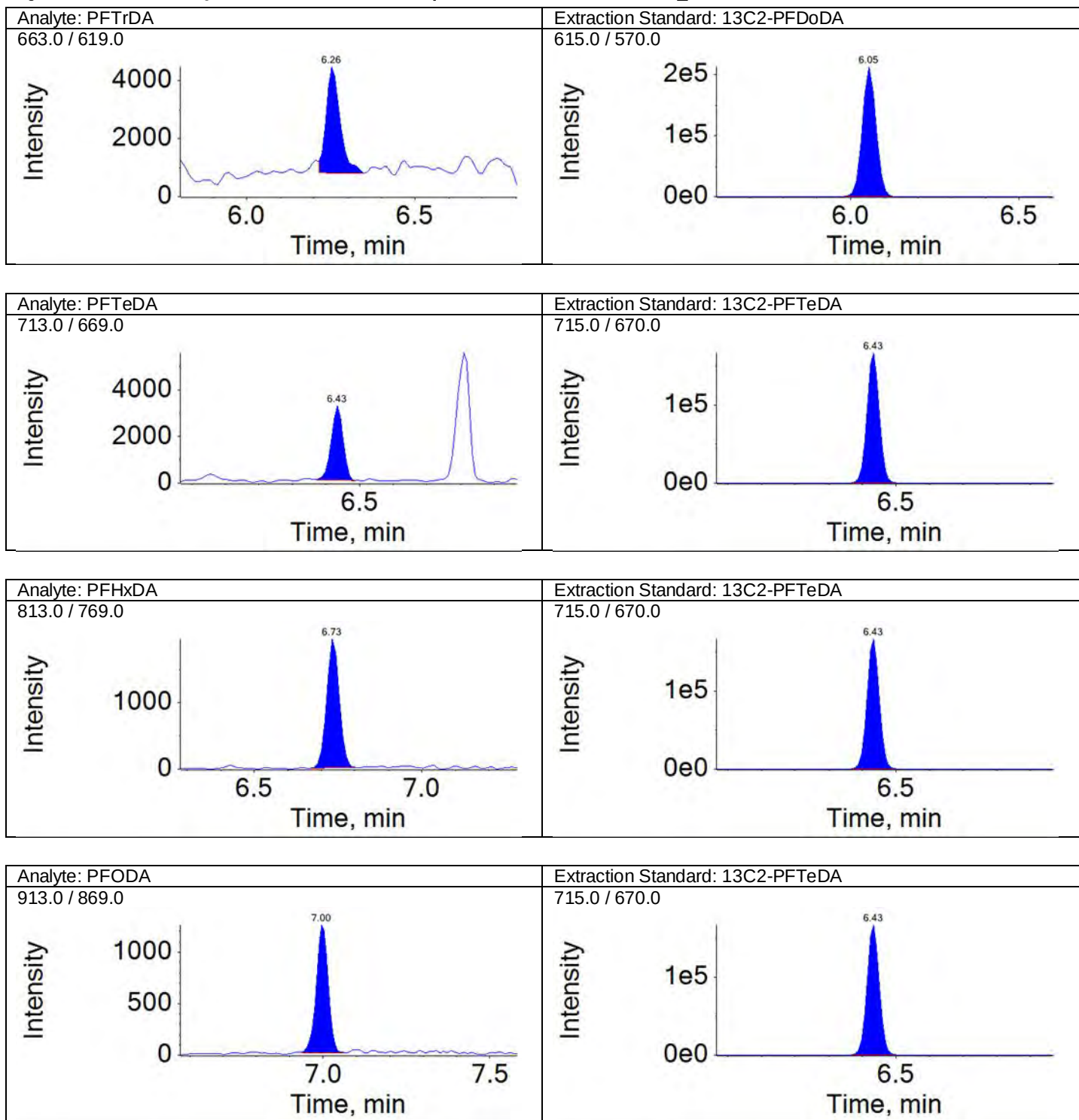
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



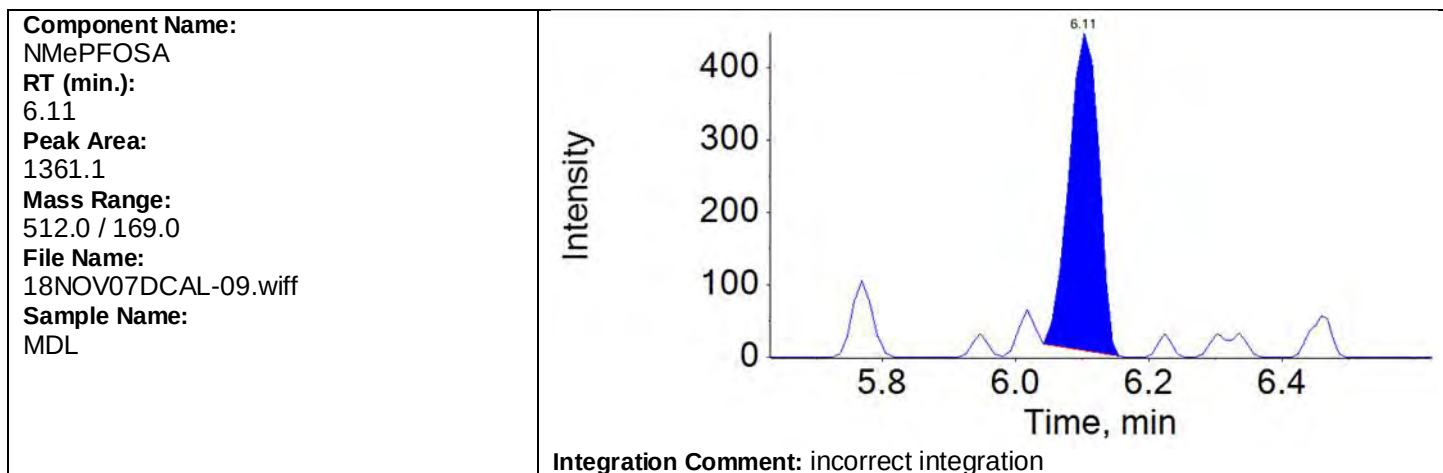
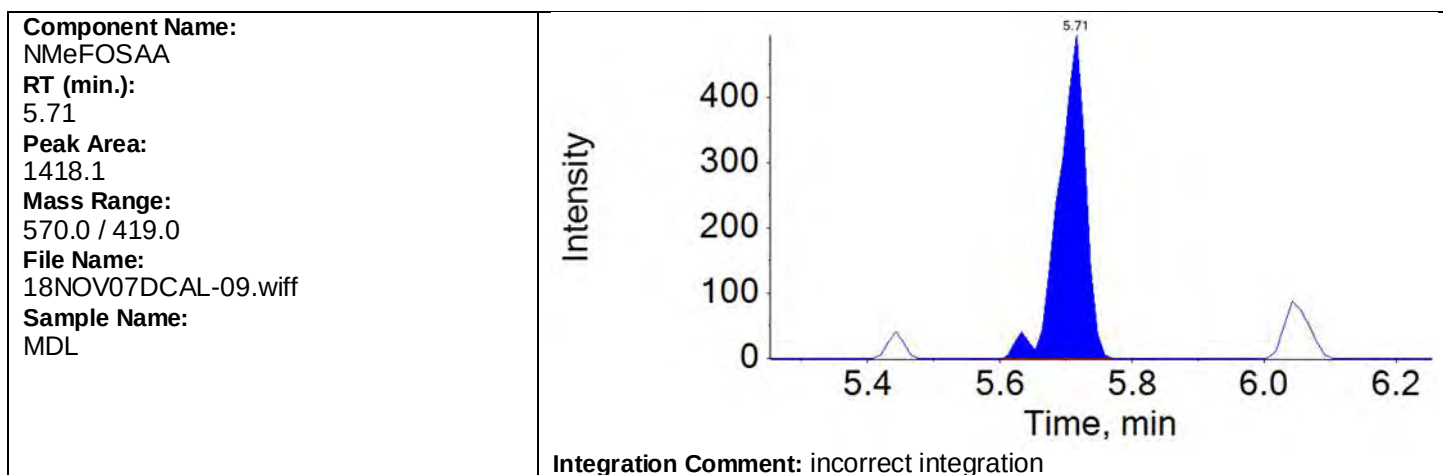
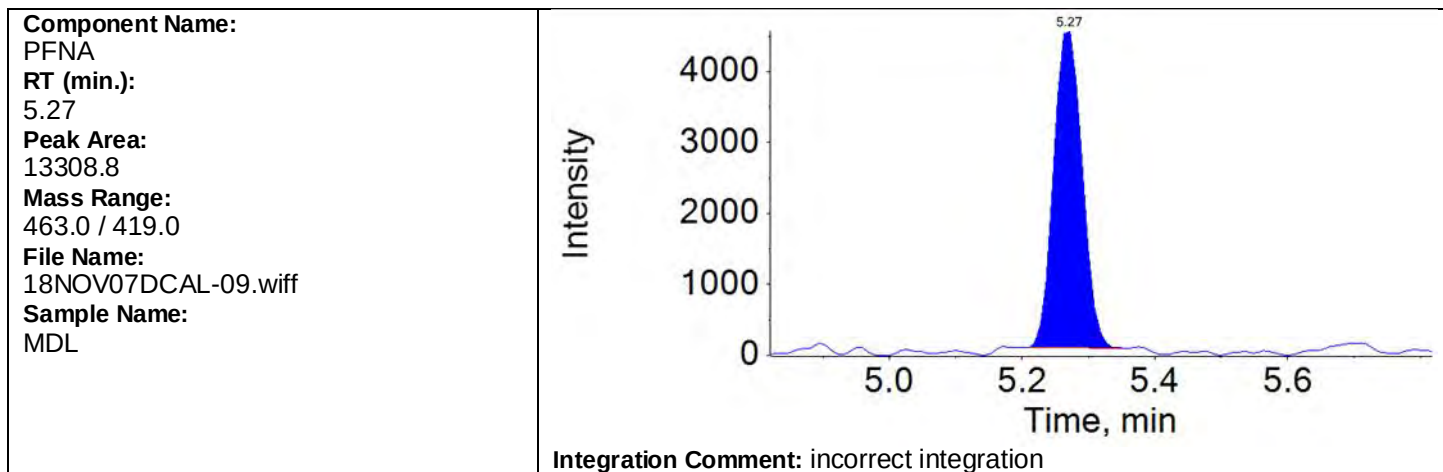
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

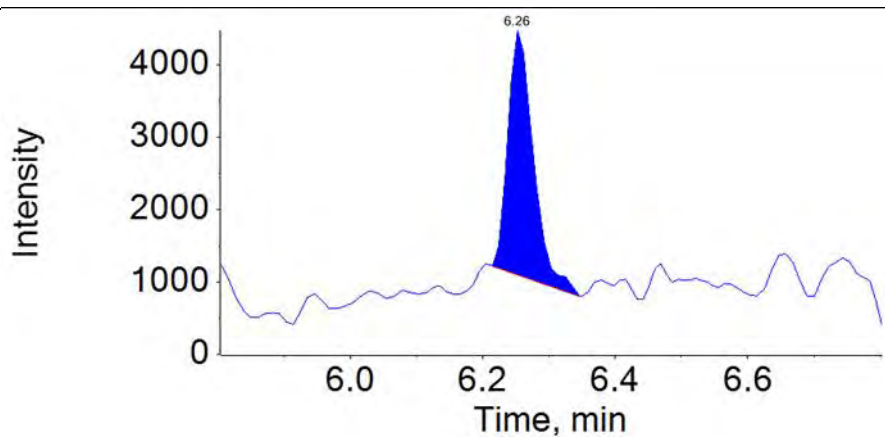
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13



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

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

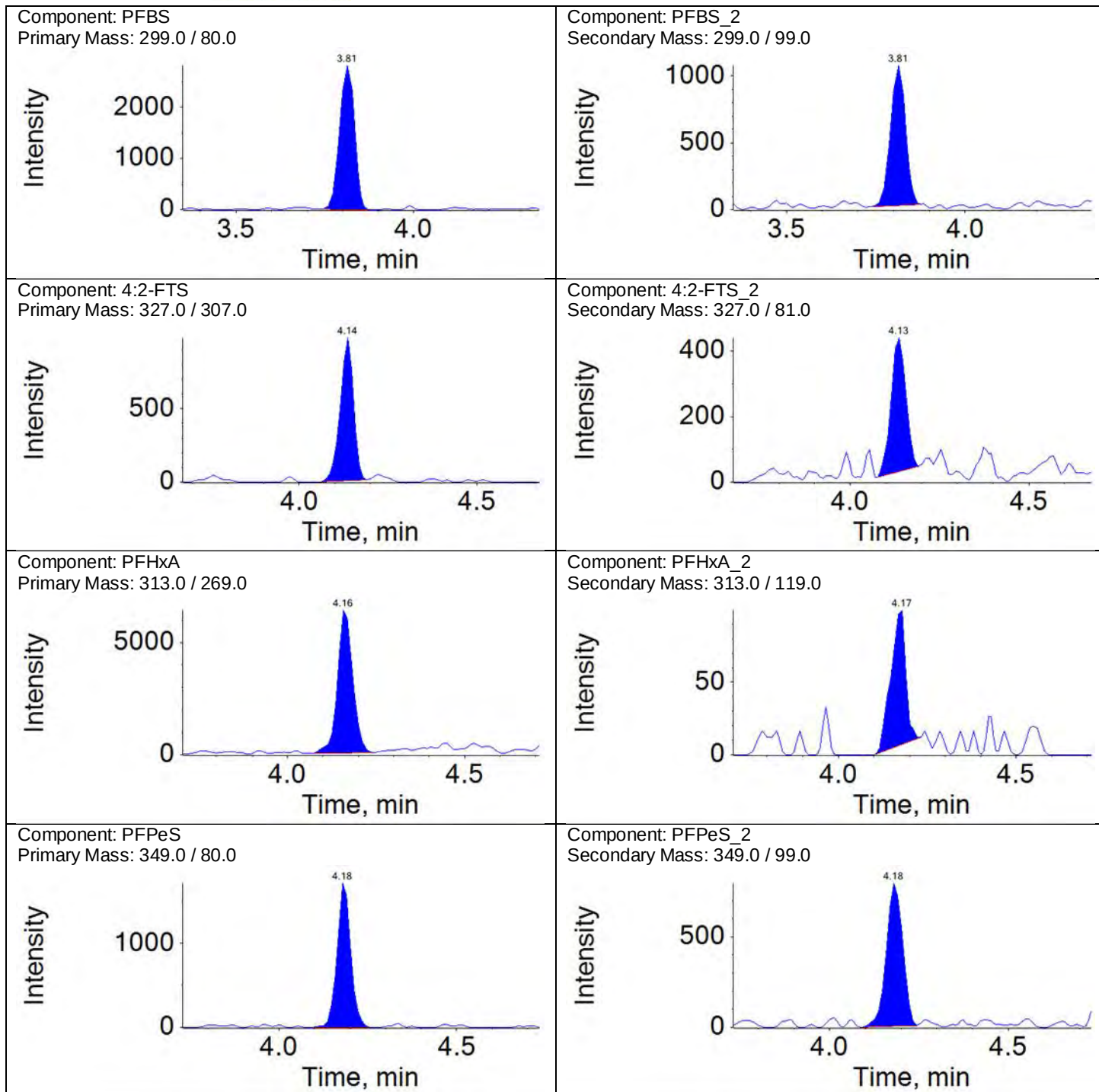
Ion Ratio Report

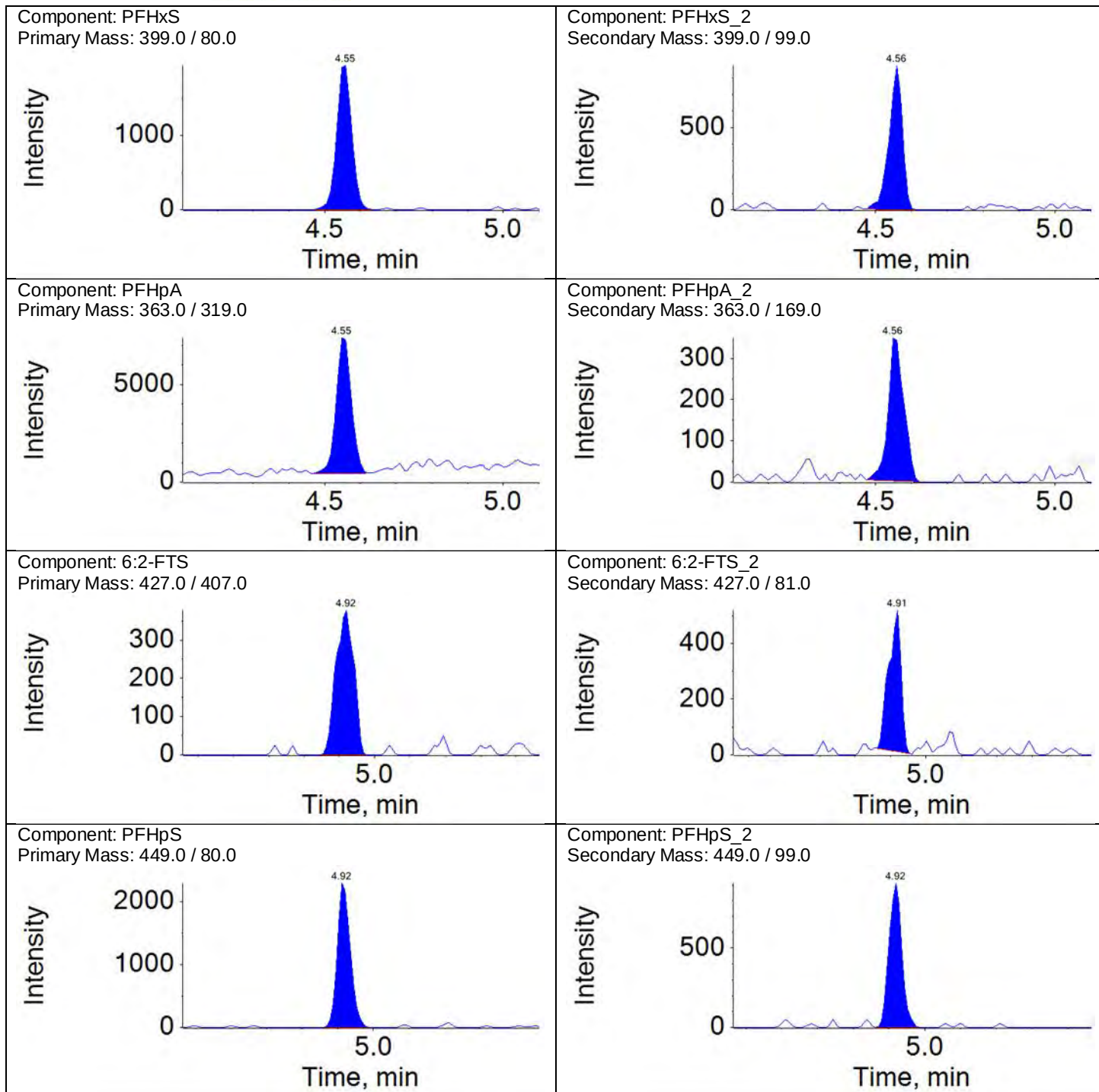
Sample Name: MDL

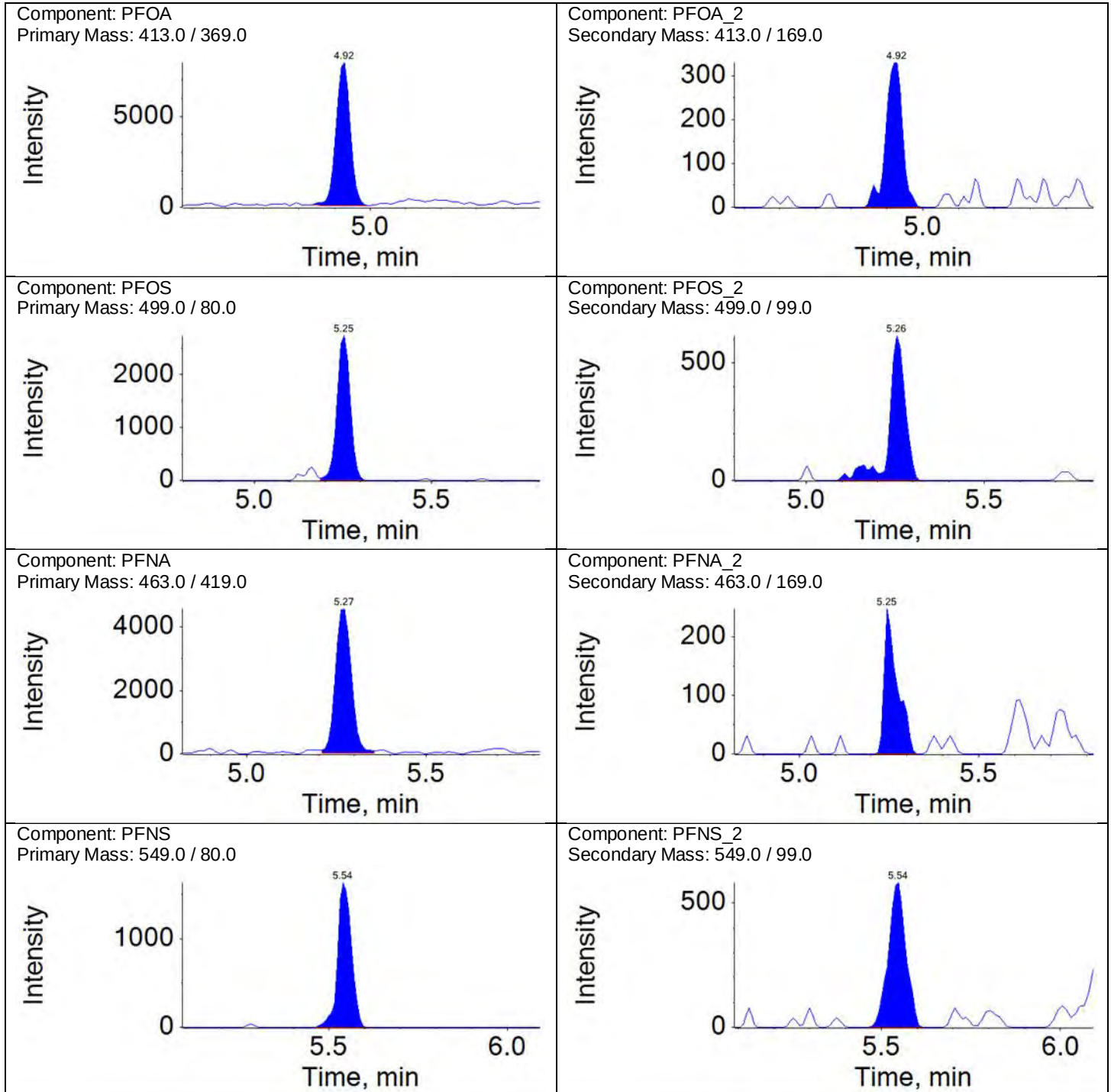
Instrument Name: LM27631

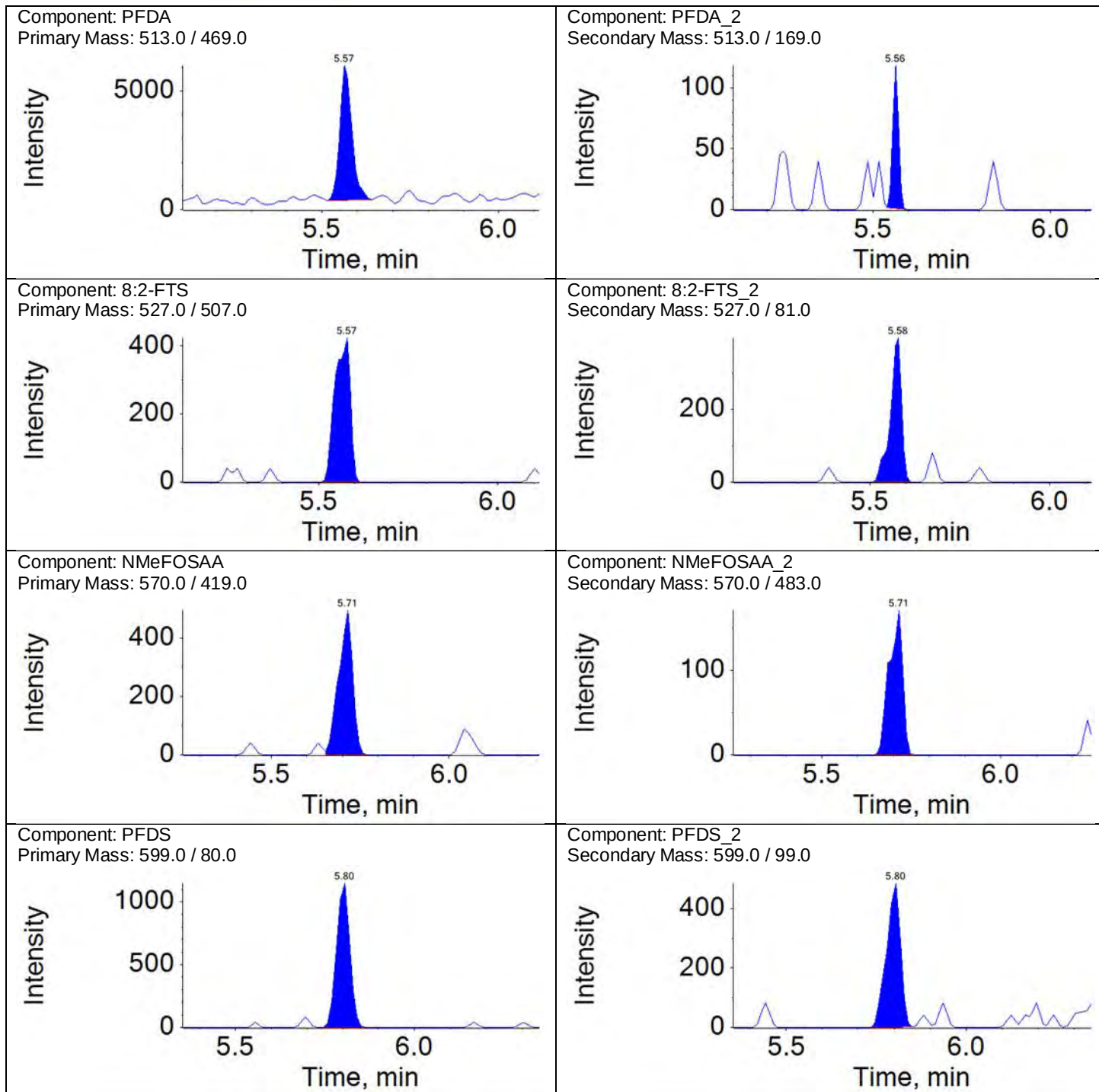
File Name: 18NOV07DCAL-09.wiff

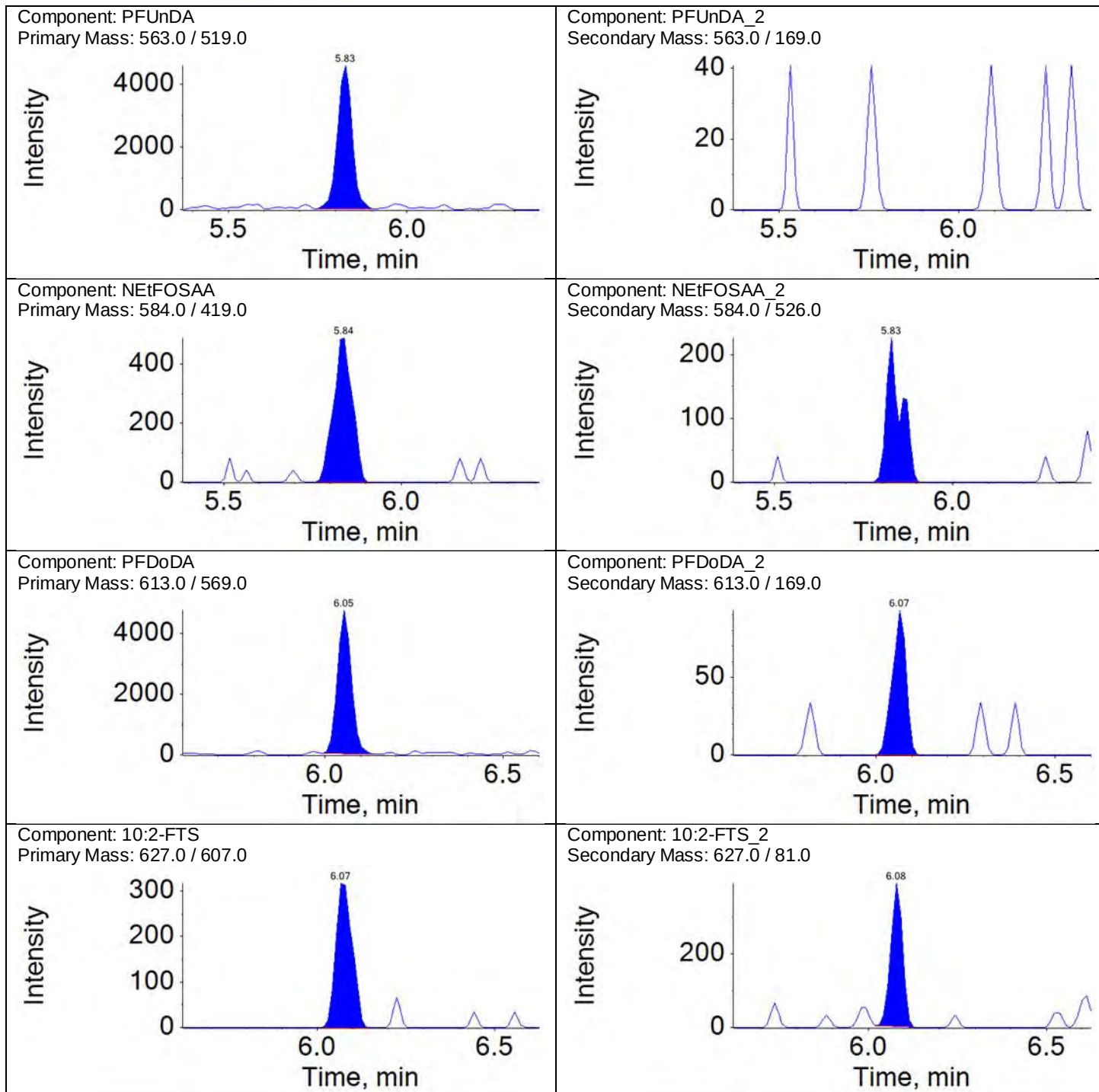
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	8179.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	3067.3	A	0.3576	0.3750	5	50	
4:2-FTS	4.14	1.00	2516.6	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	1184.6	A	0.6359	0.4707	-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	
PFTTrDA	6.26	1.03	10576.8	M	1.0000	1.0000			
PFTTrDA_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	

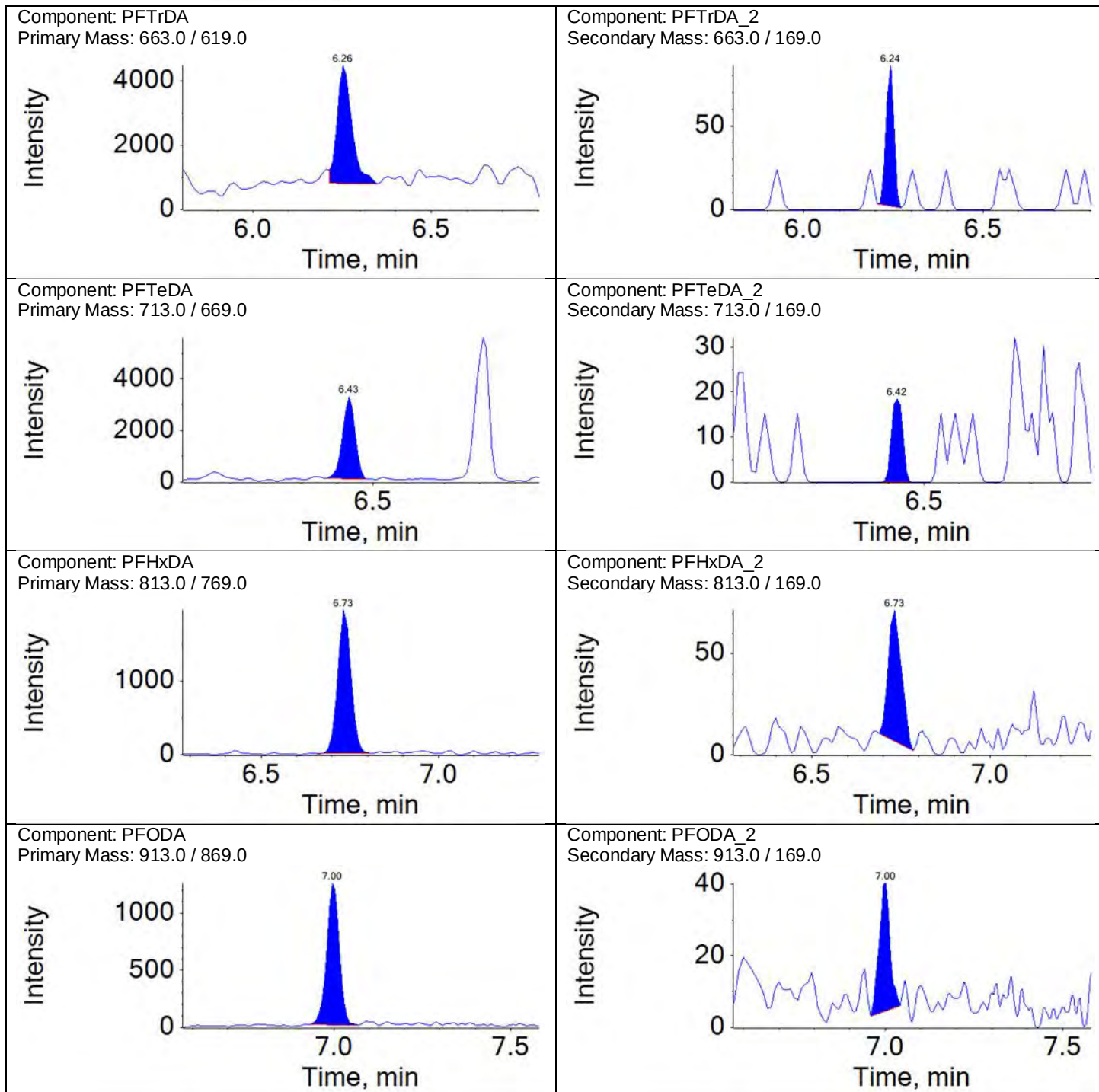












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

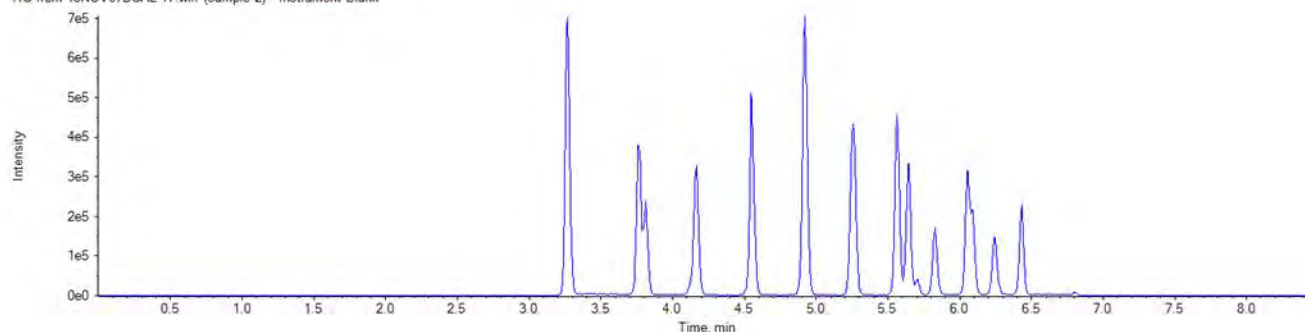
Sample Name: Instrument Blank Instrument Name: LM27631 File Name: 18NOV07DCAL-17.wiff

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	
PFTDA	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

TIC from 18NOV07DCAL-17.wiff (sample 2) - Instrument Blank



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 573 of 1595

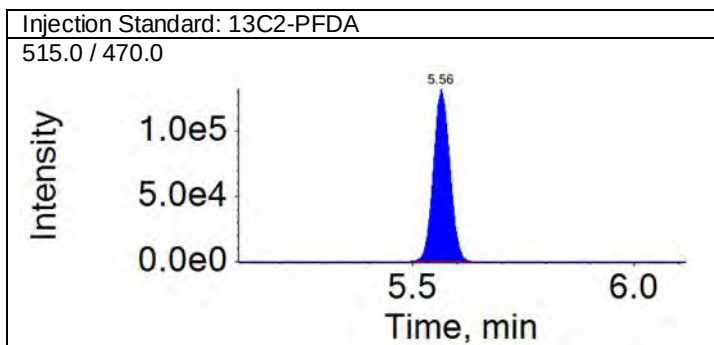
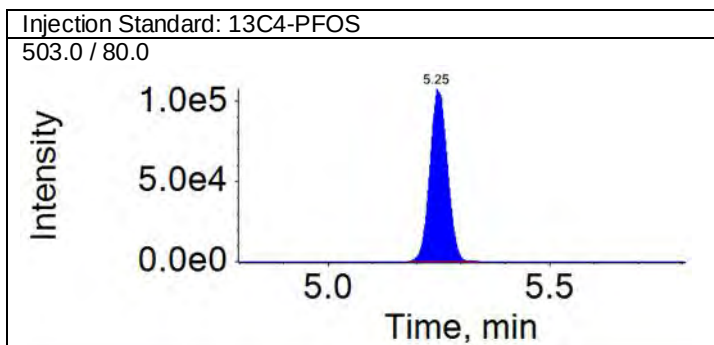
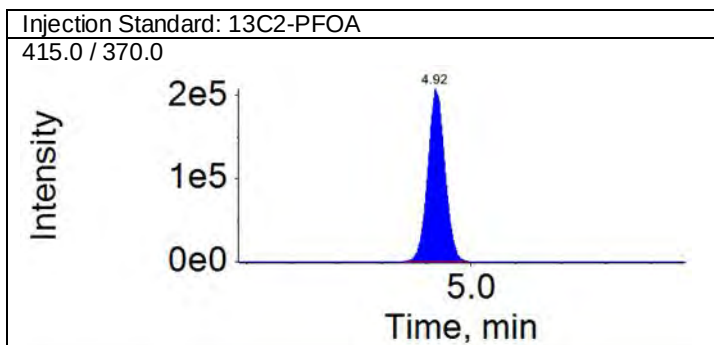
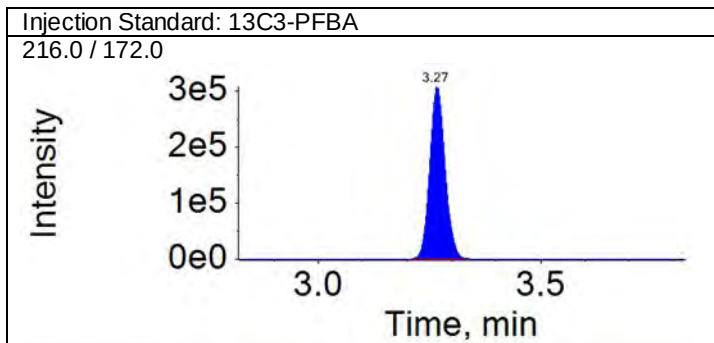
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

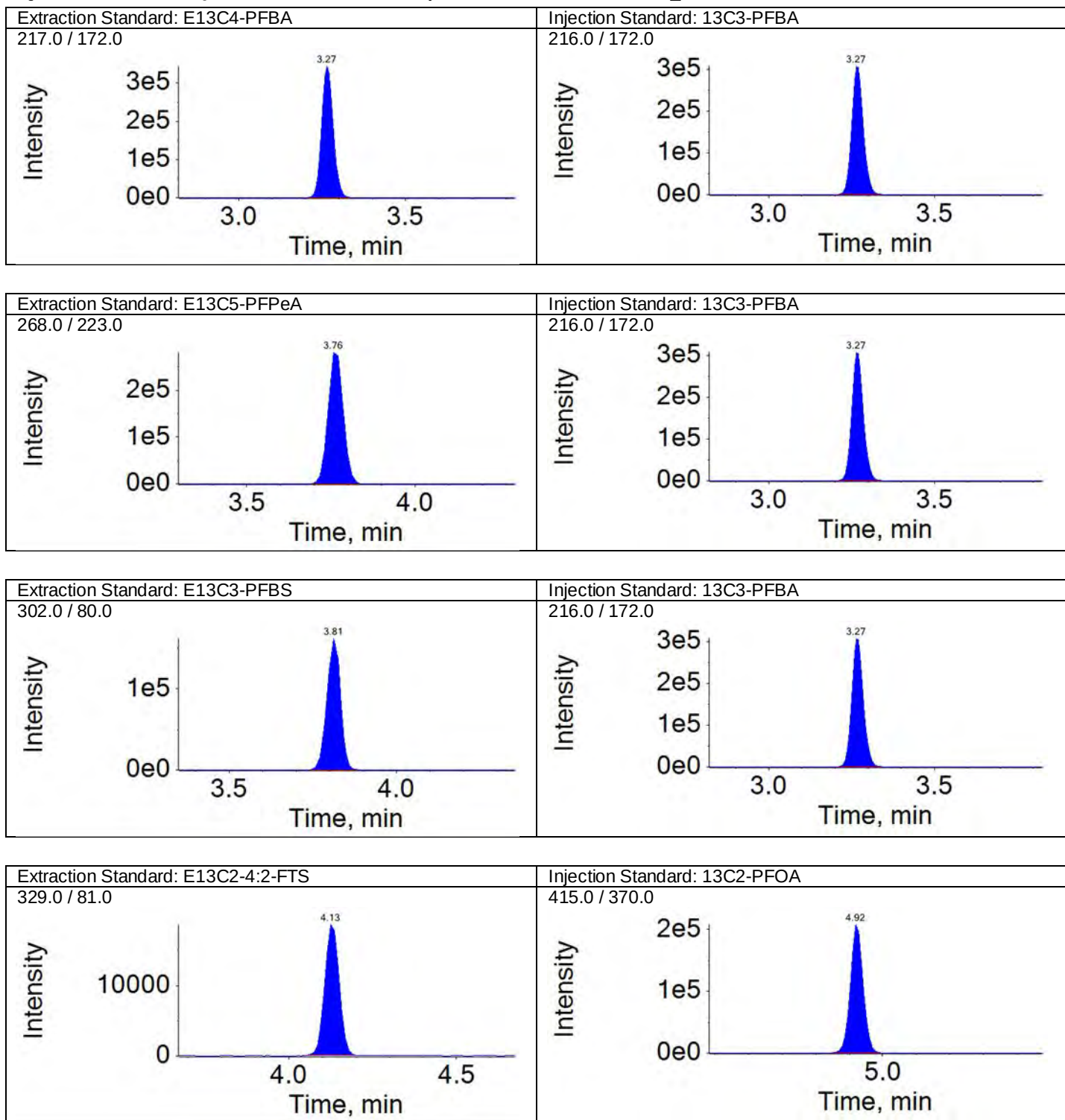
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

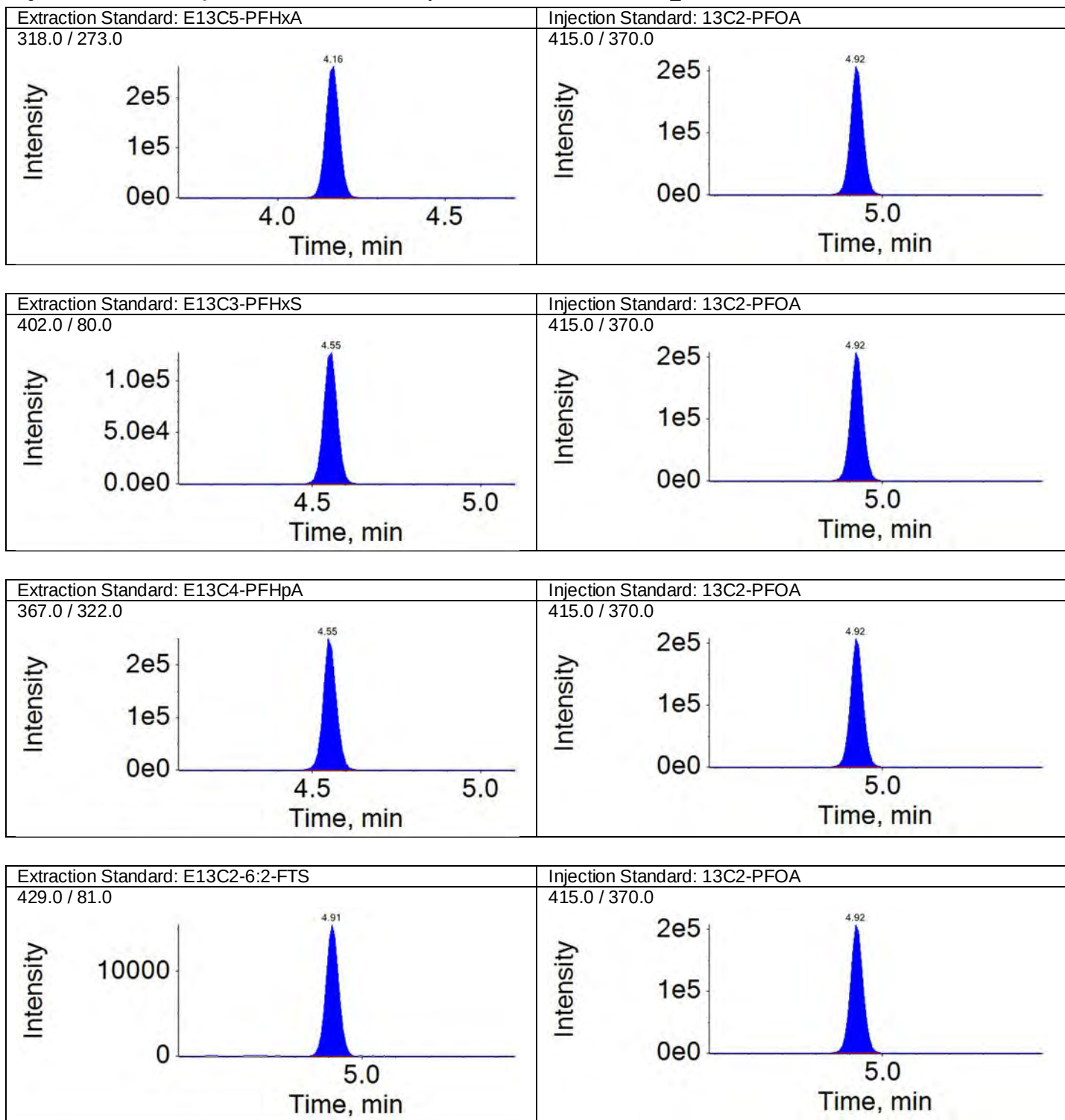
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

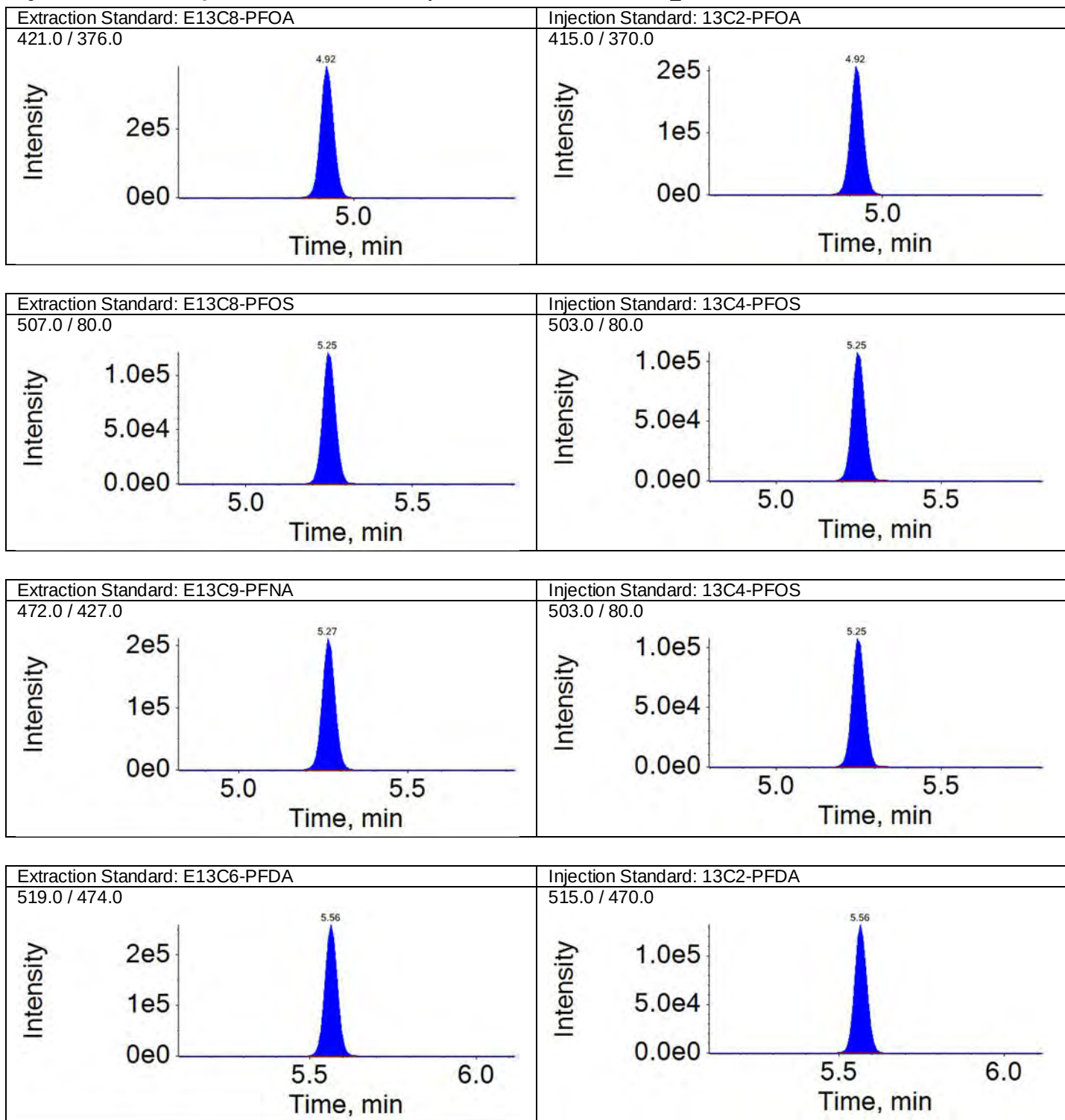
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



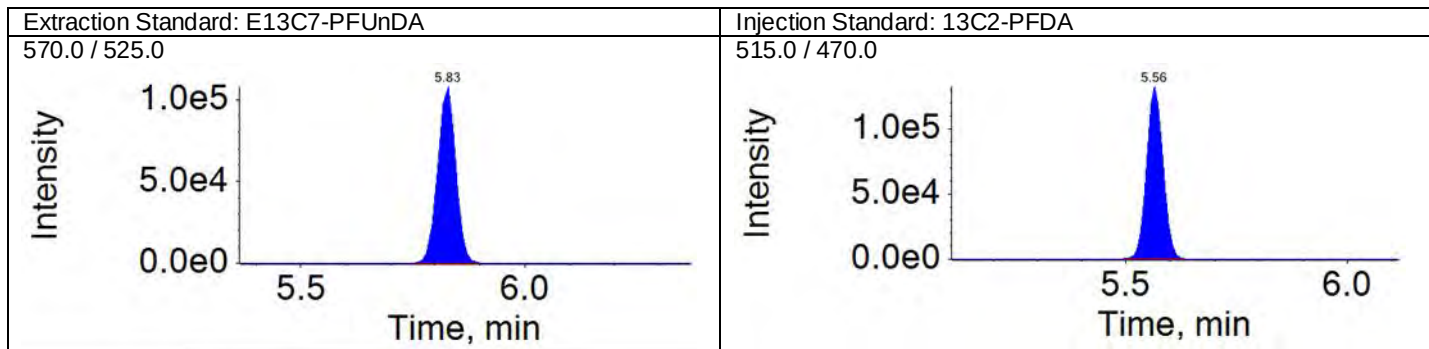
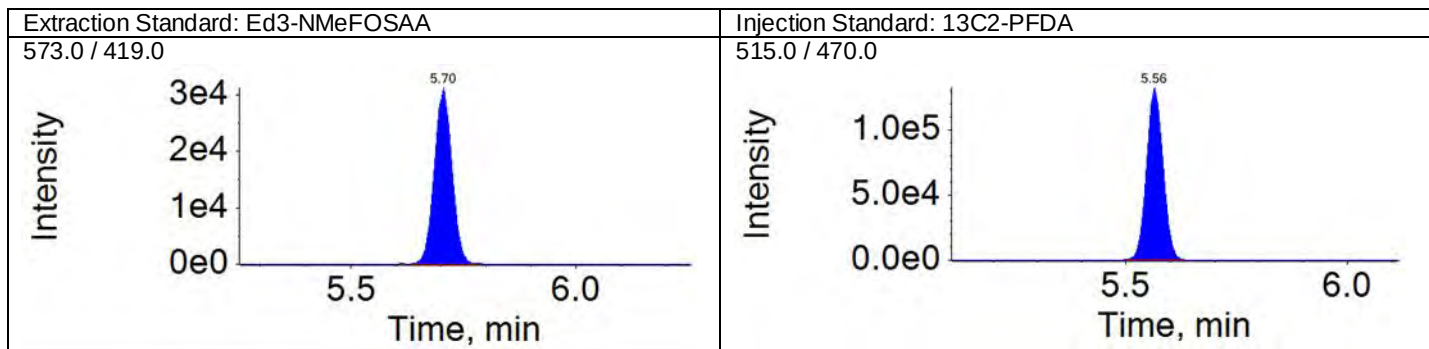
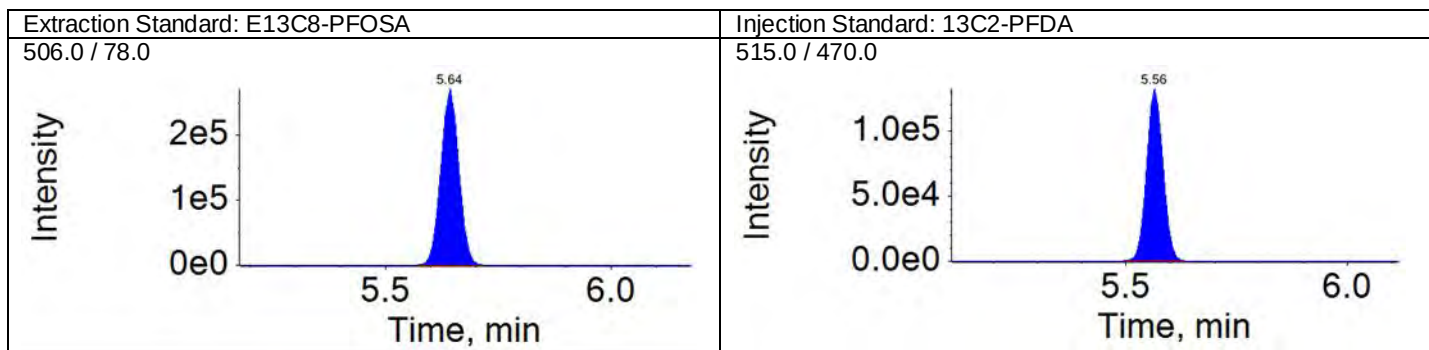
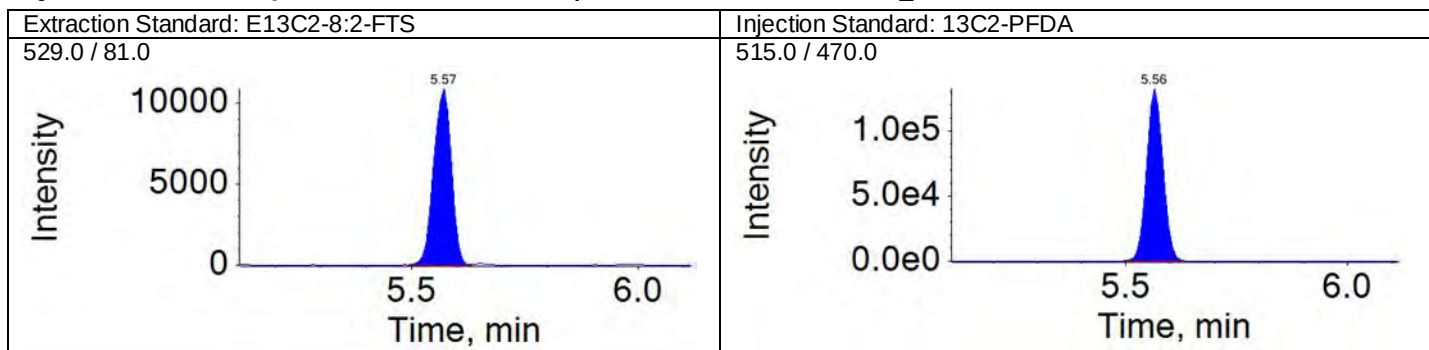
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

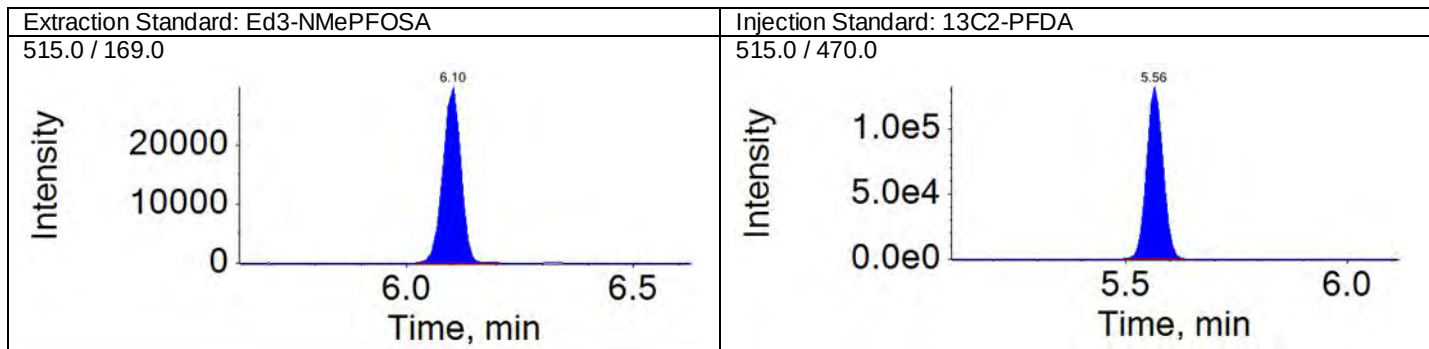
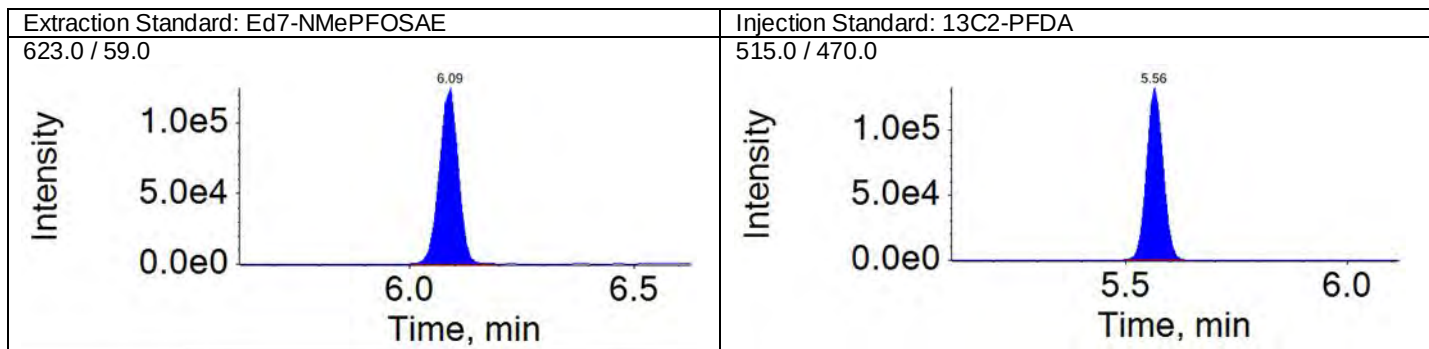
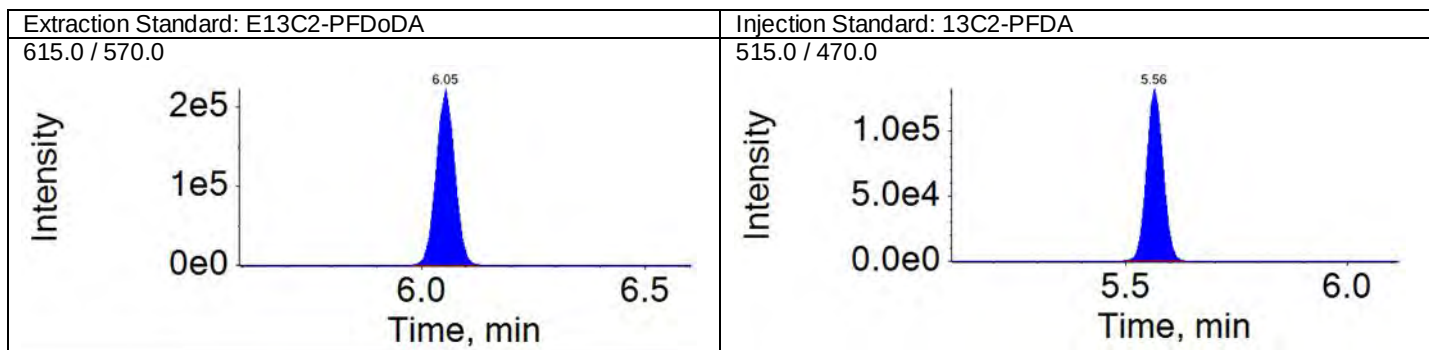
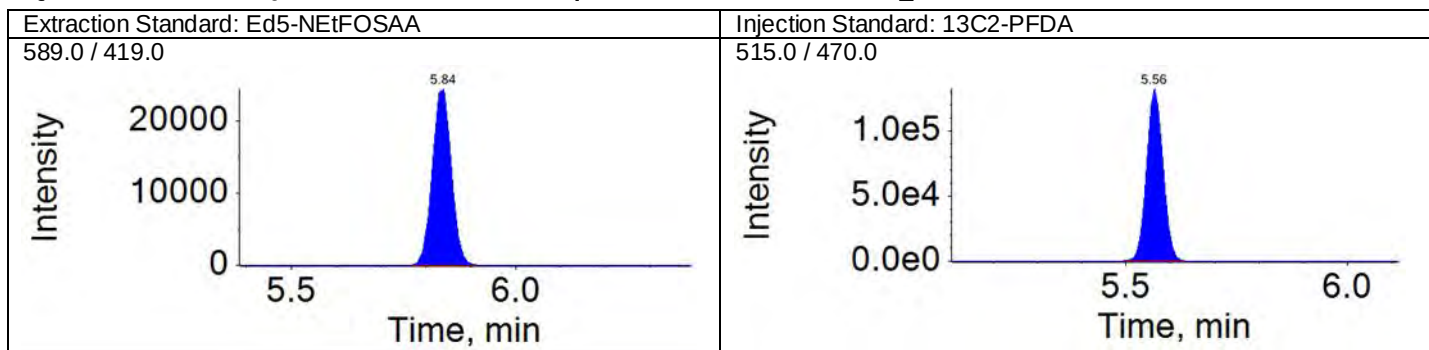
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

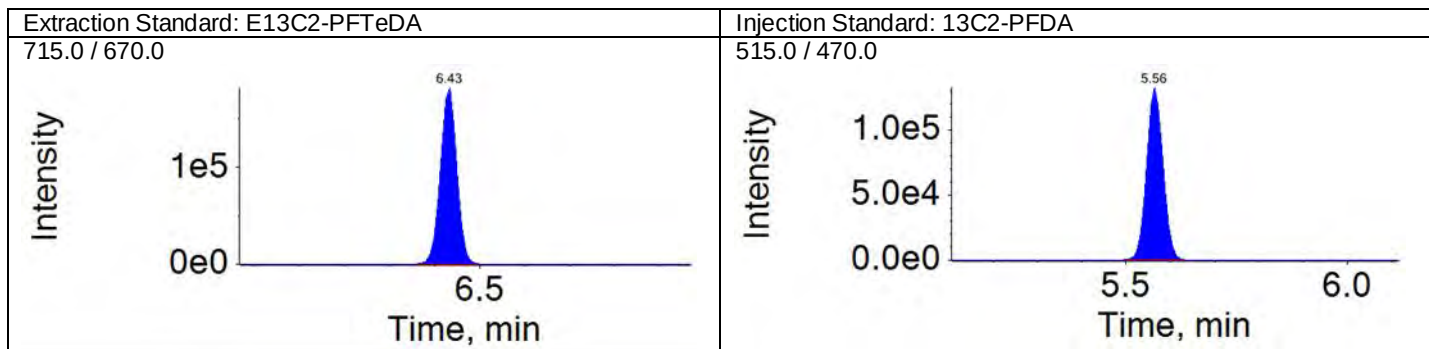
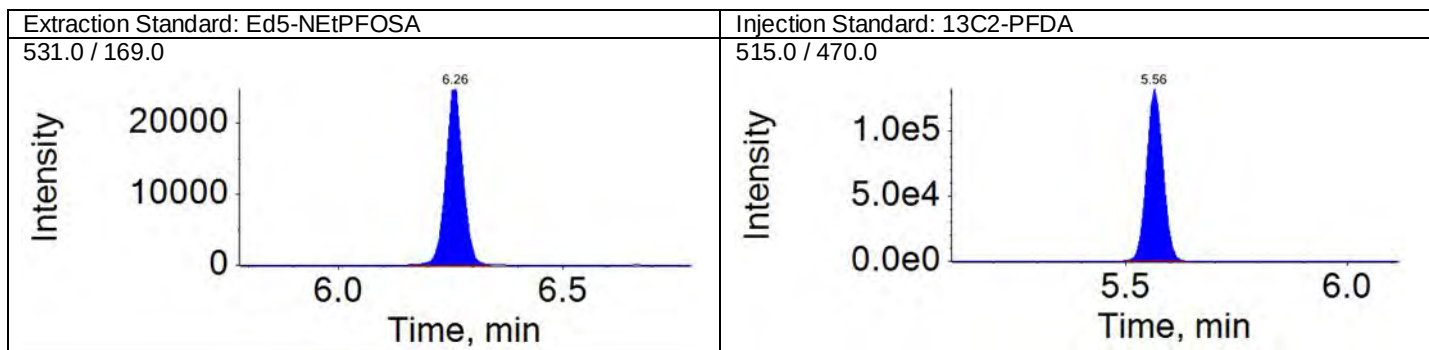
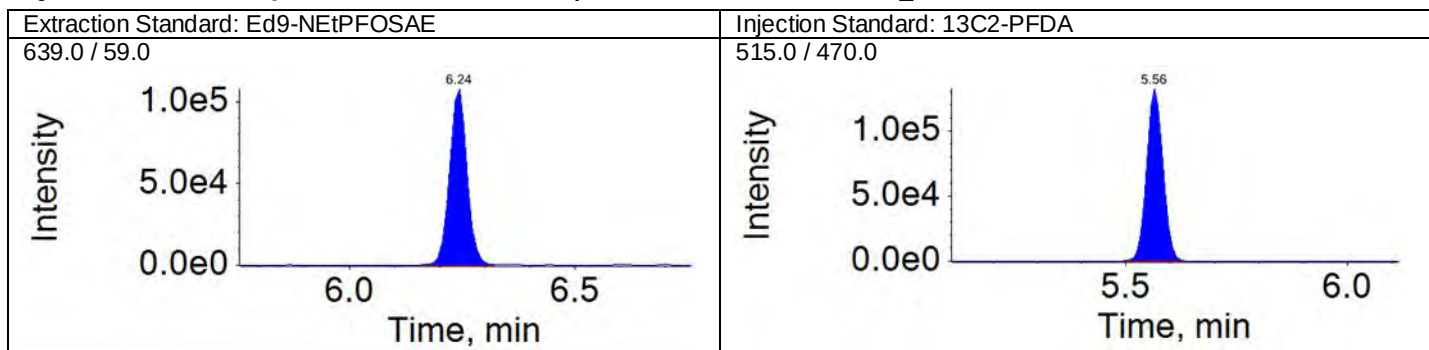
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

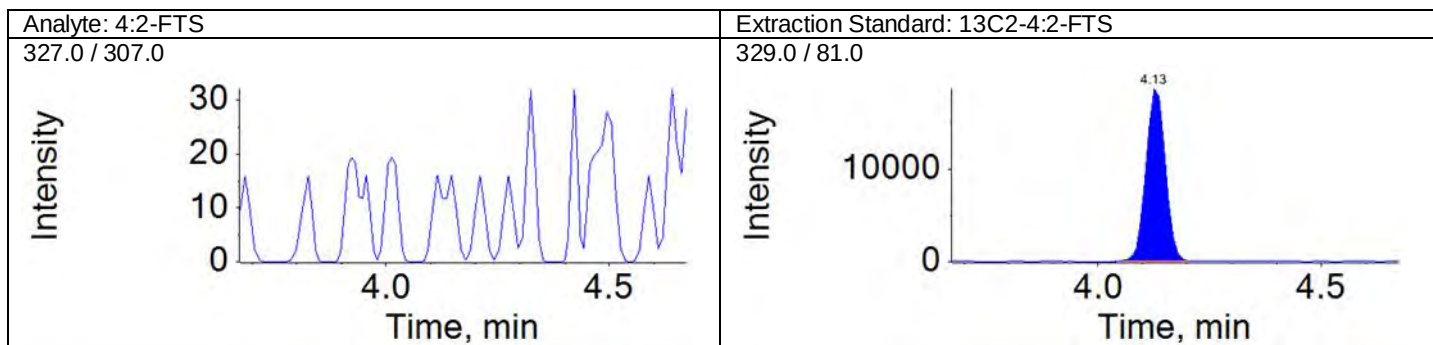
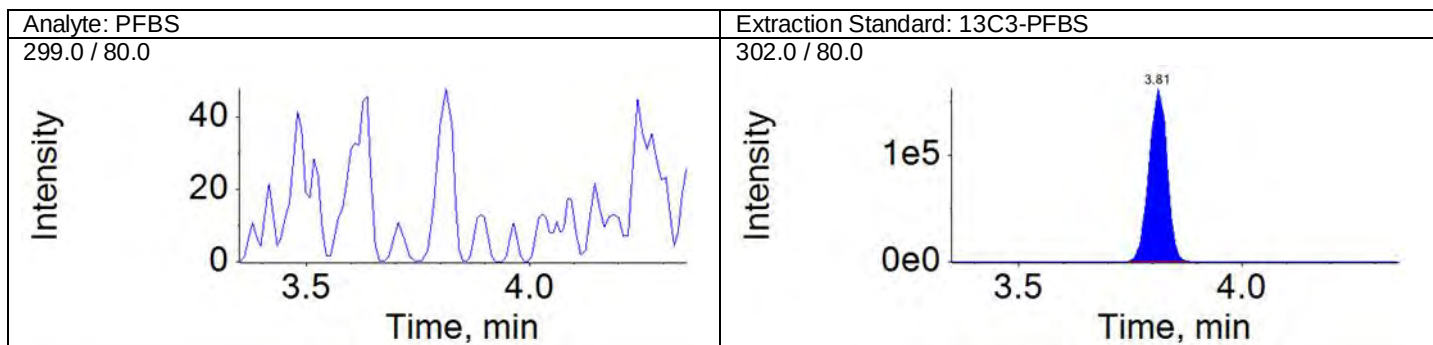
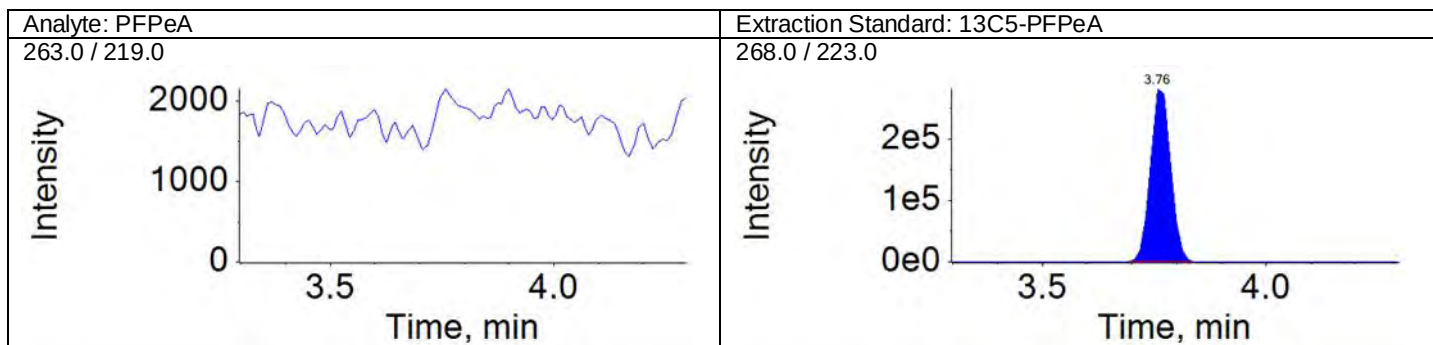
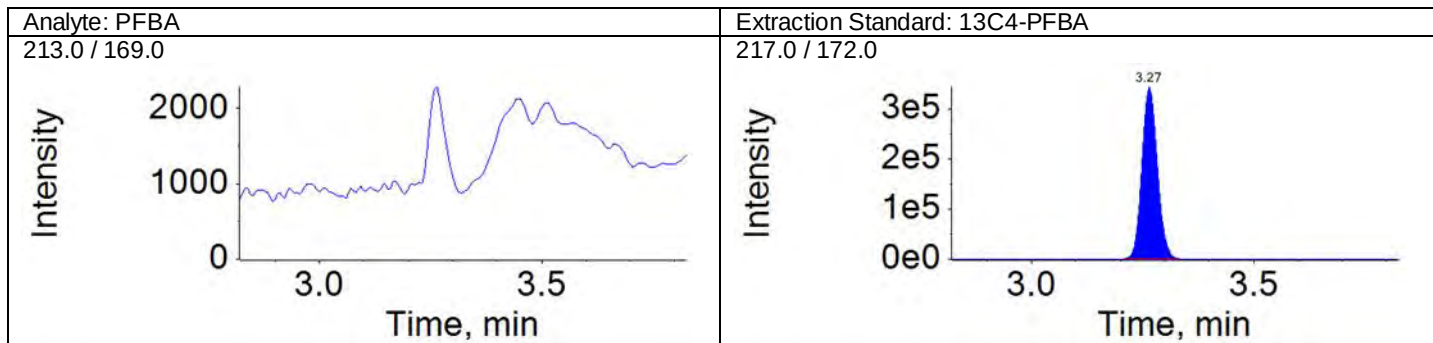
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



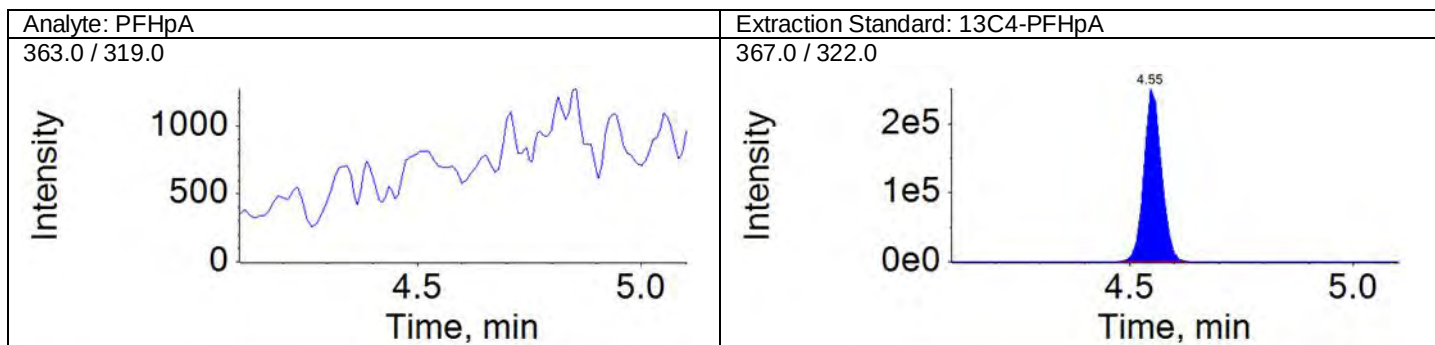
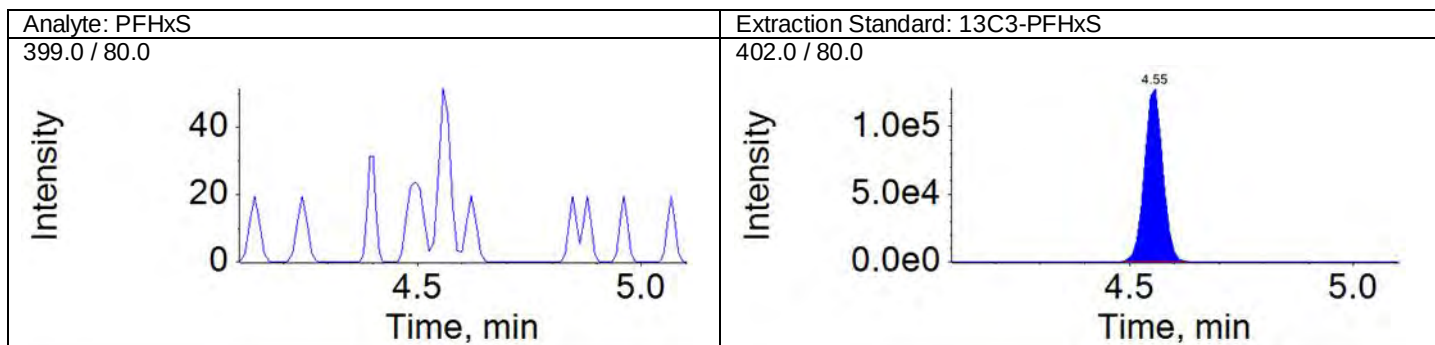
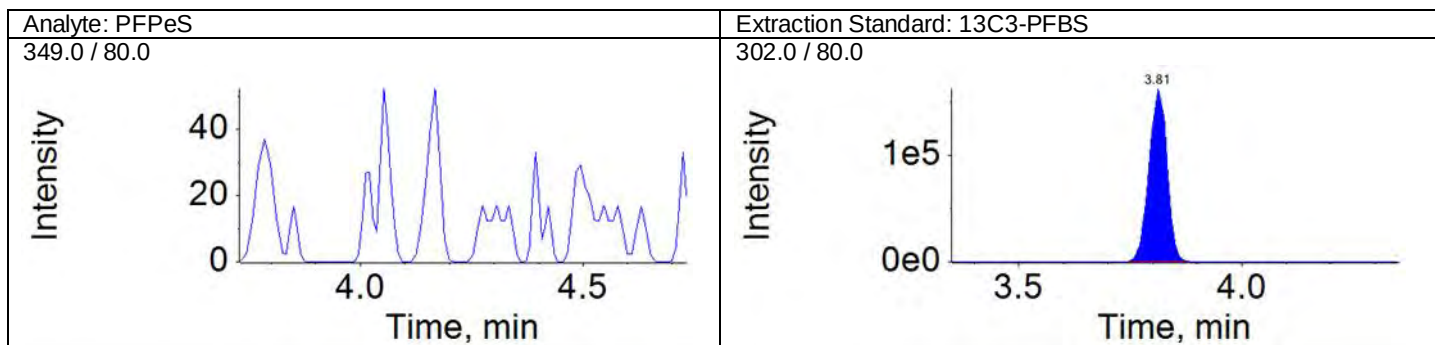
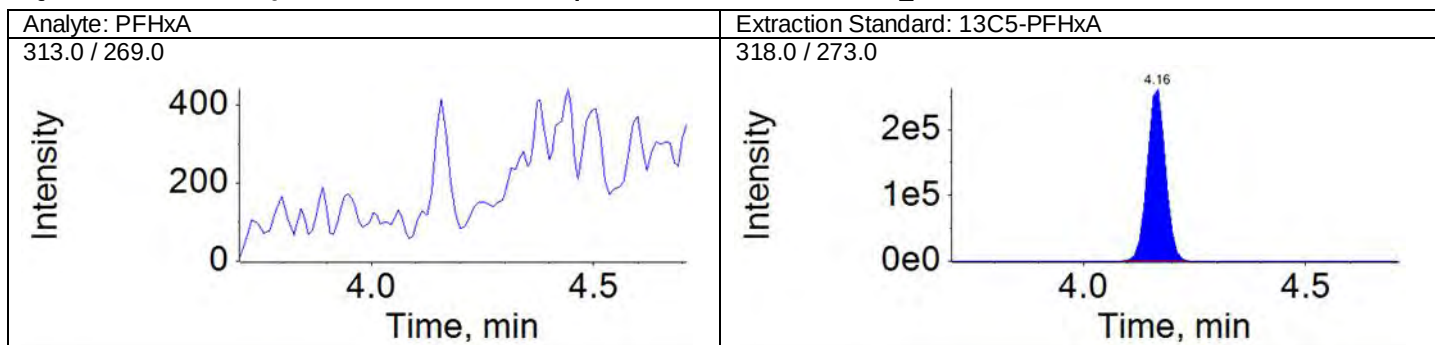
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



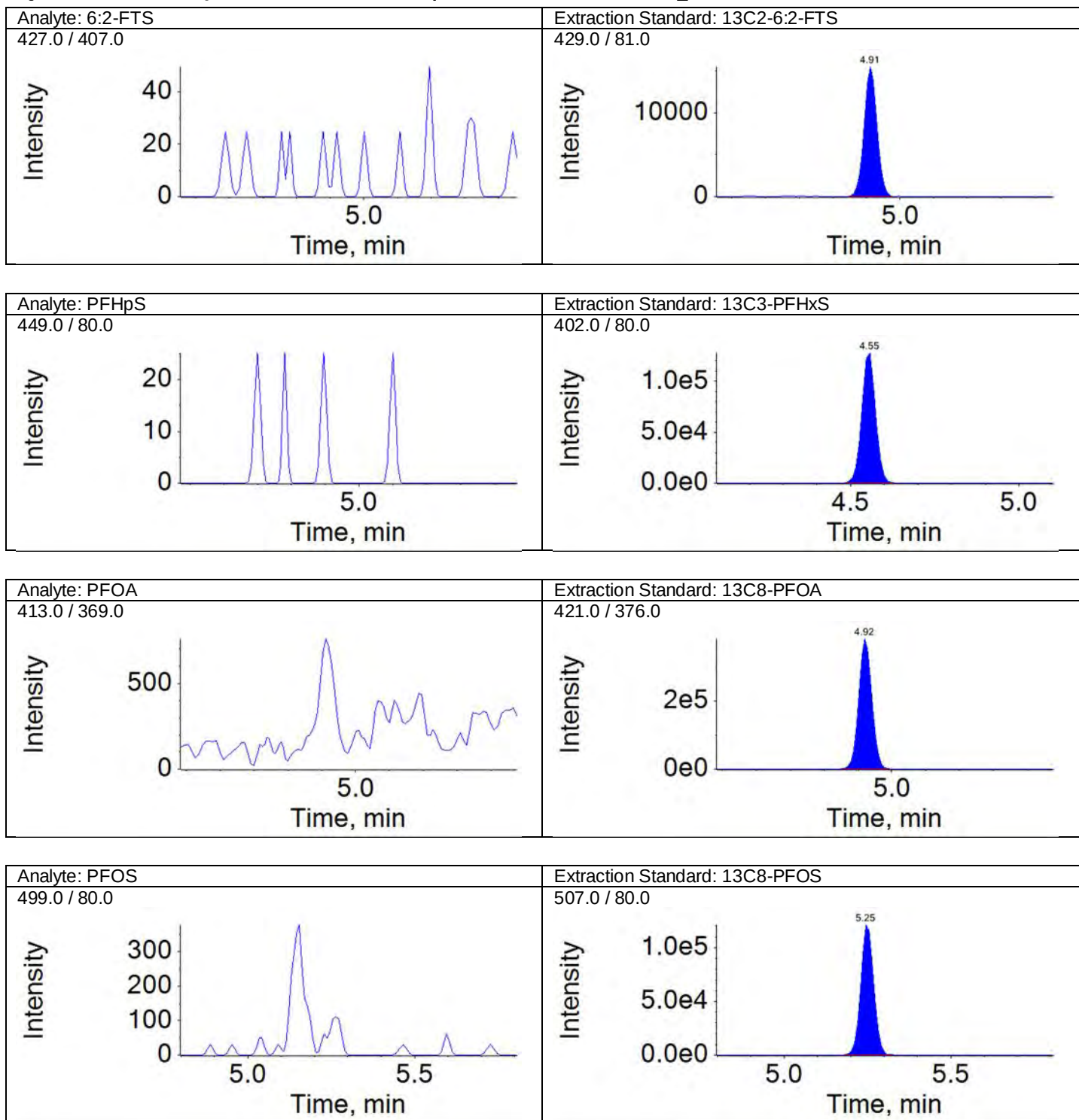
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



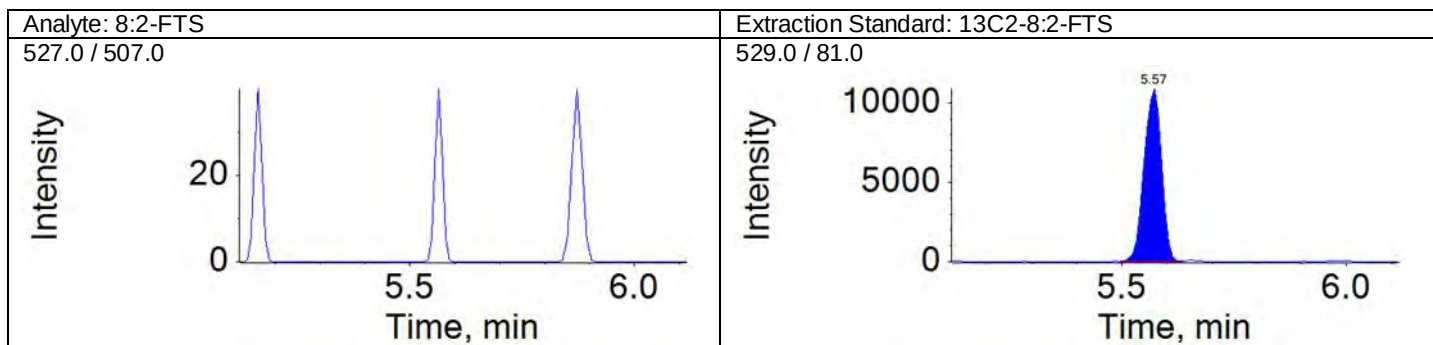
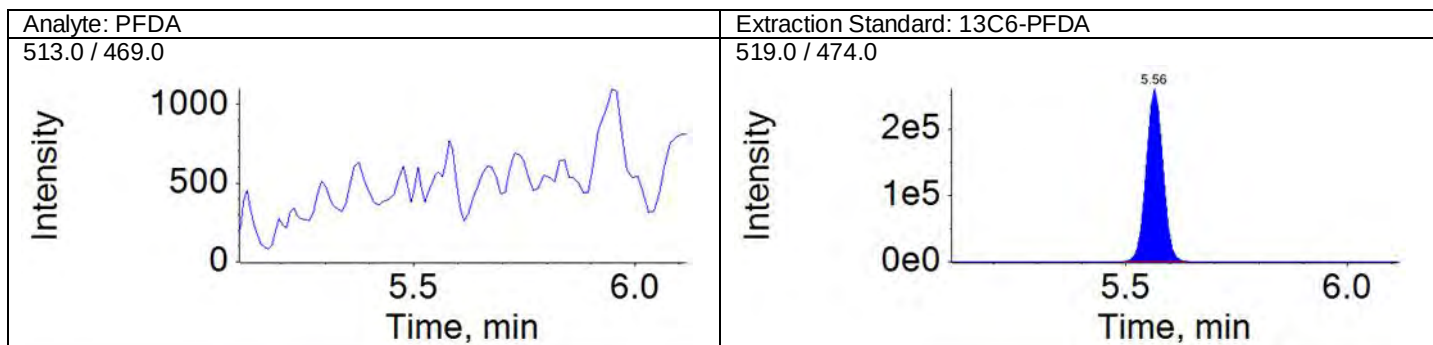
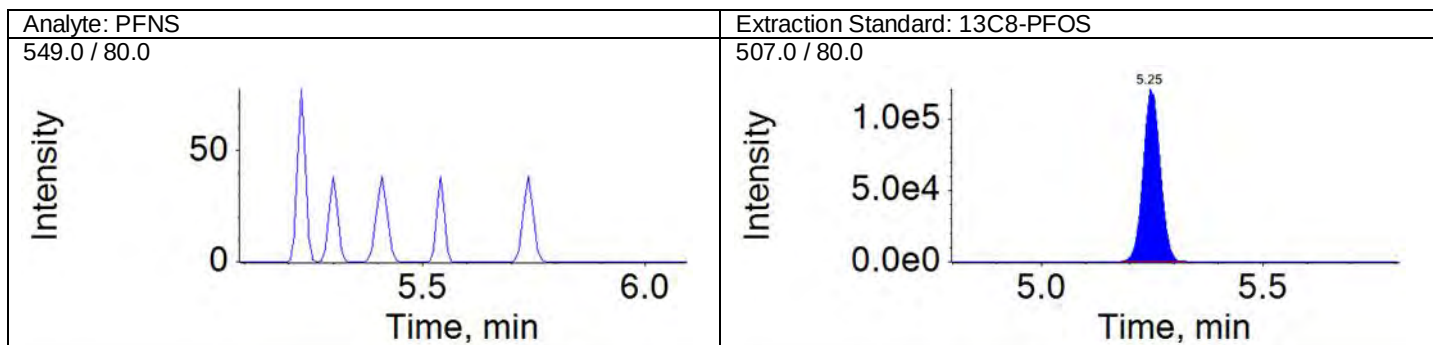
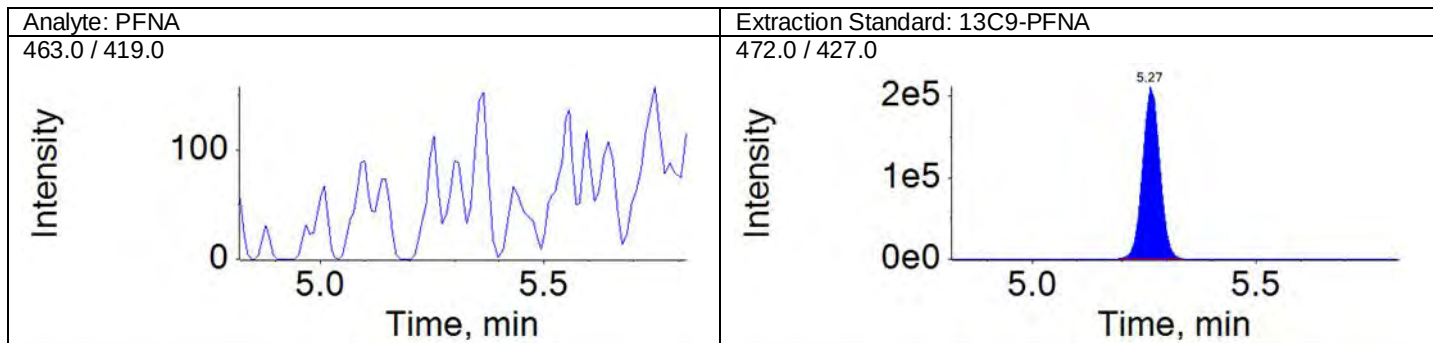
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

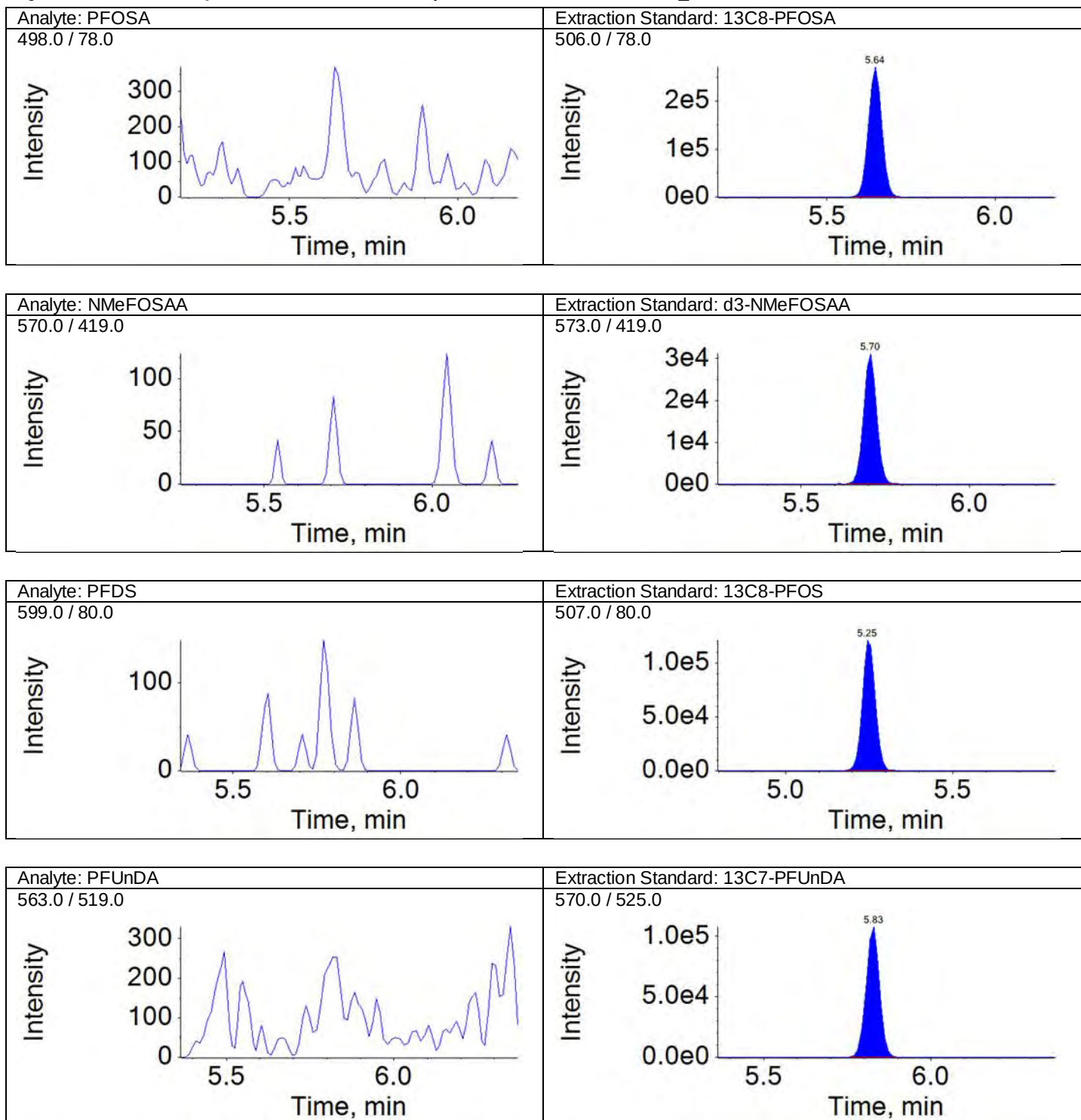
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

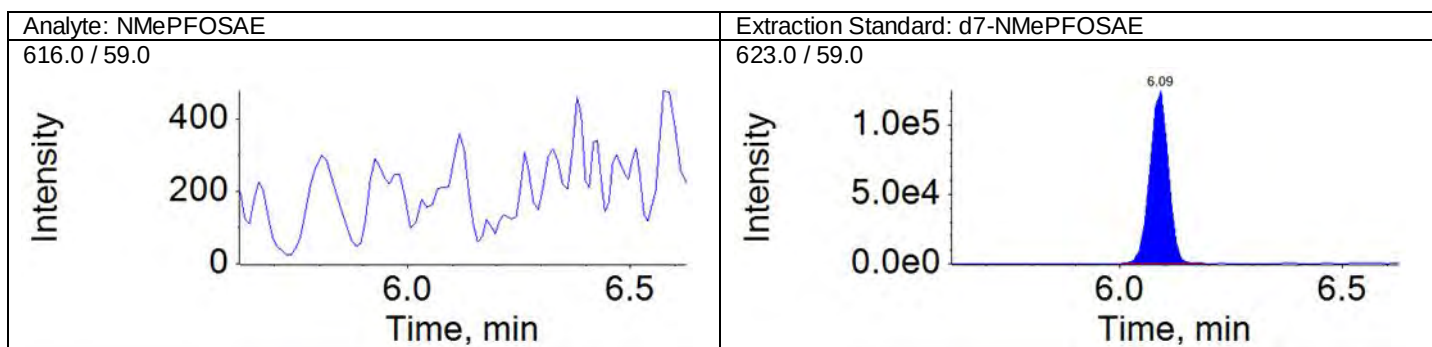
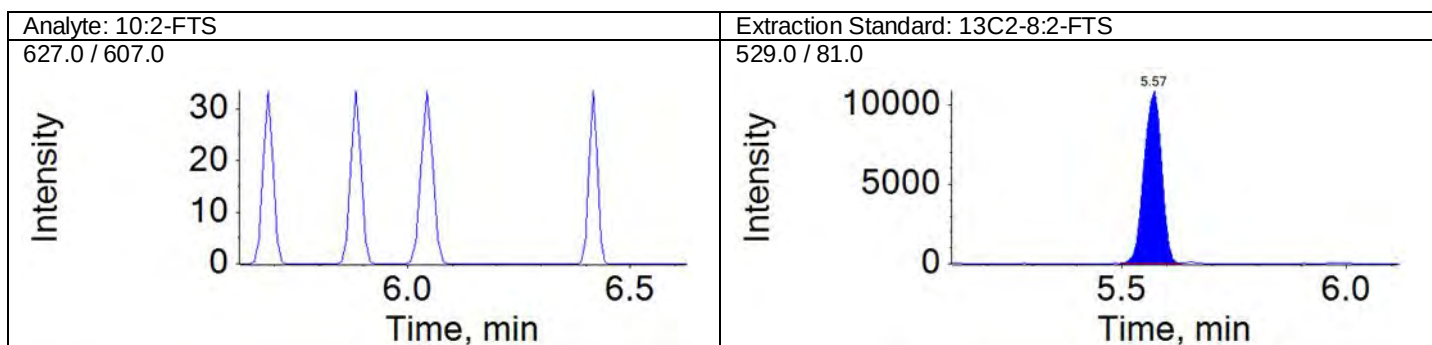
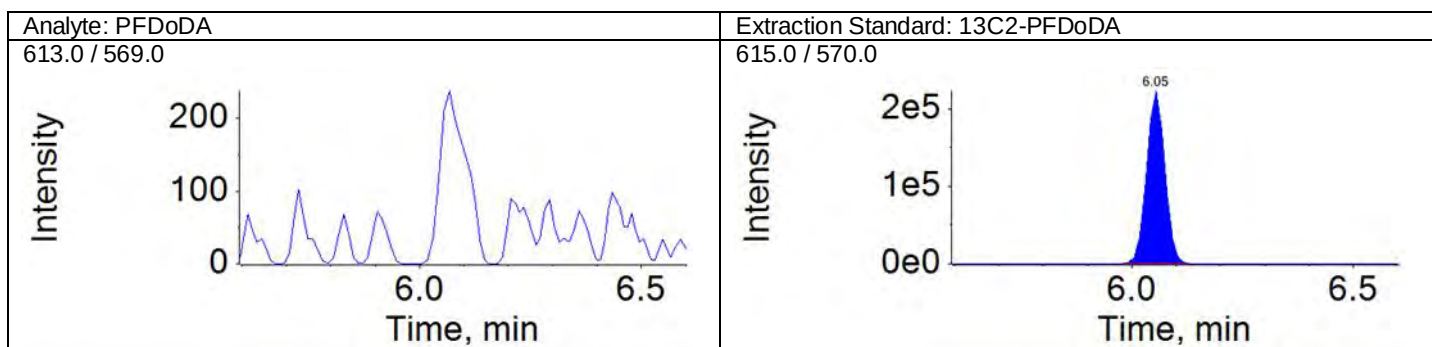
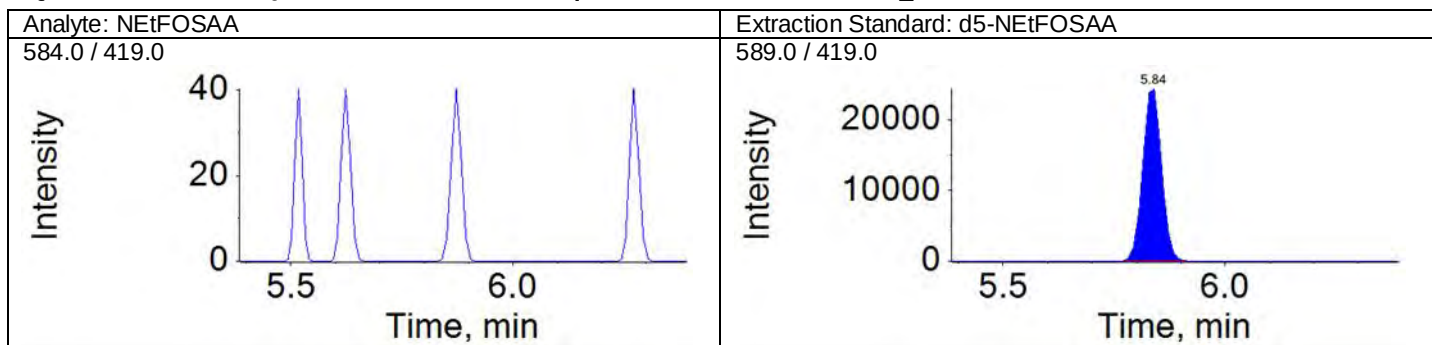
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

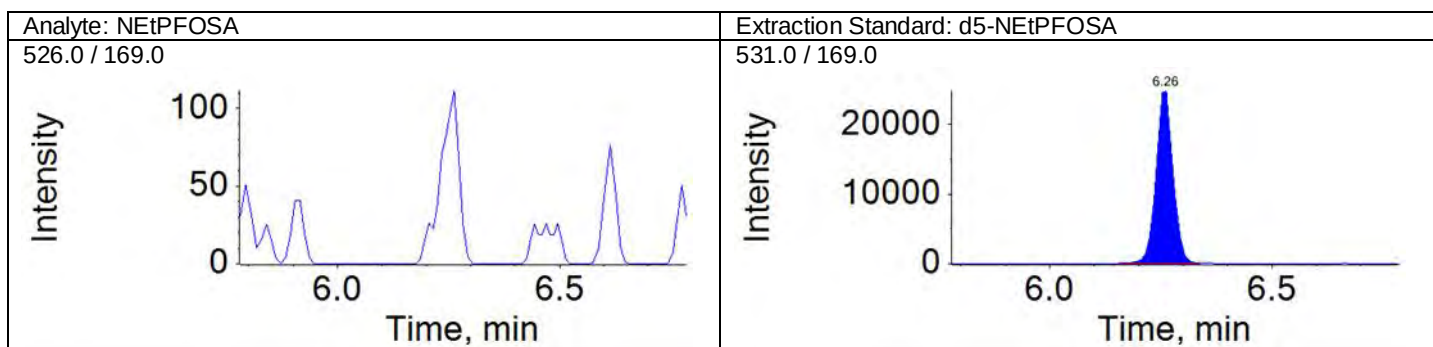
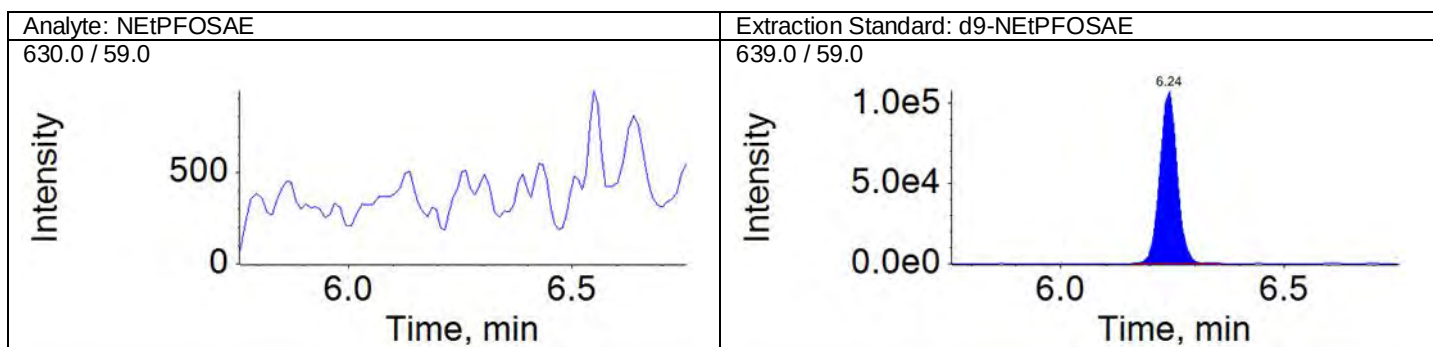
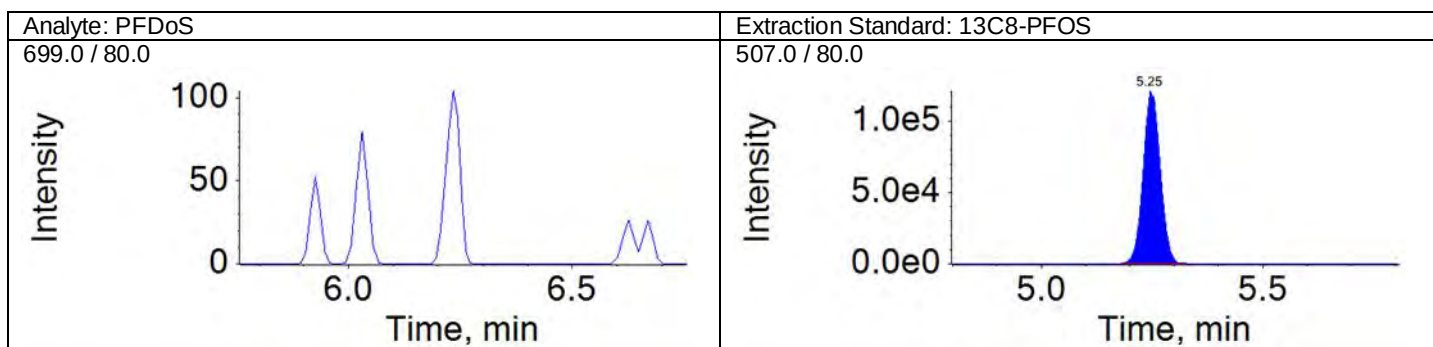
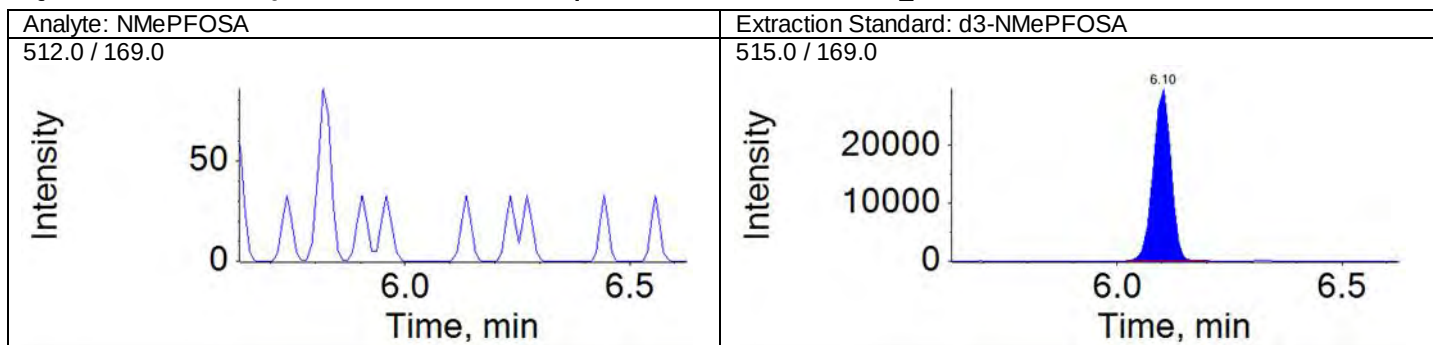
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

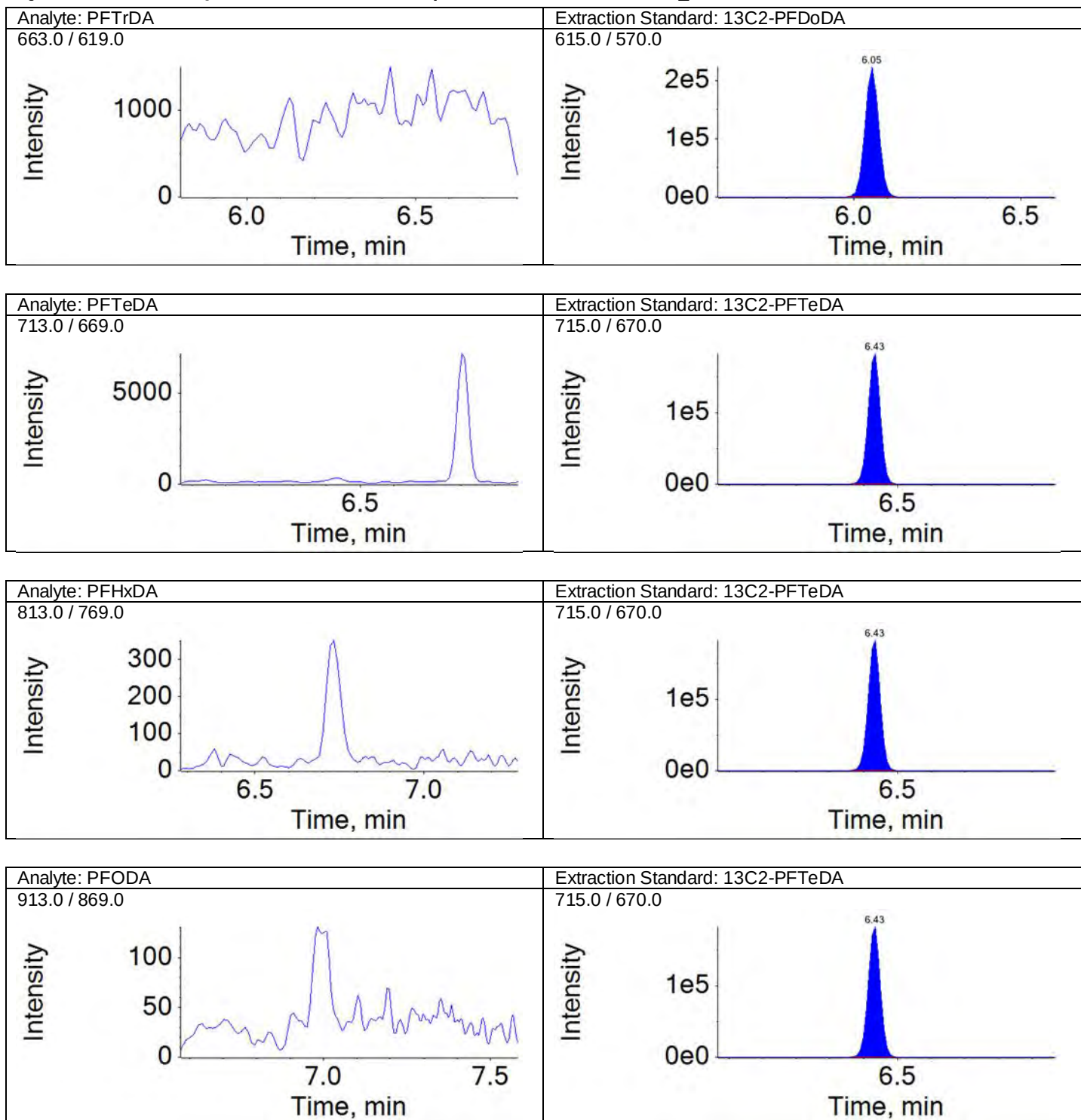
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

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	
PFTTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTTrDA_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

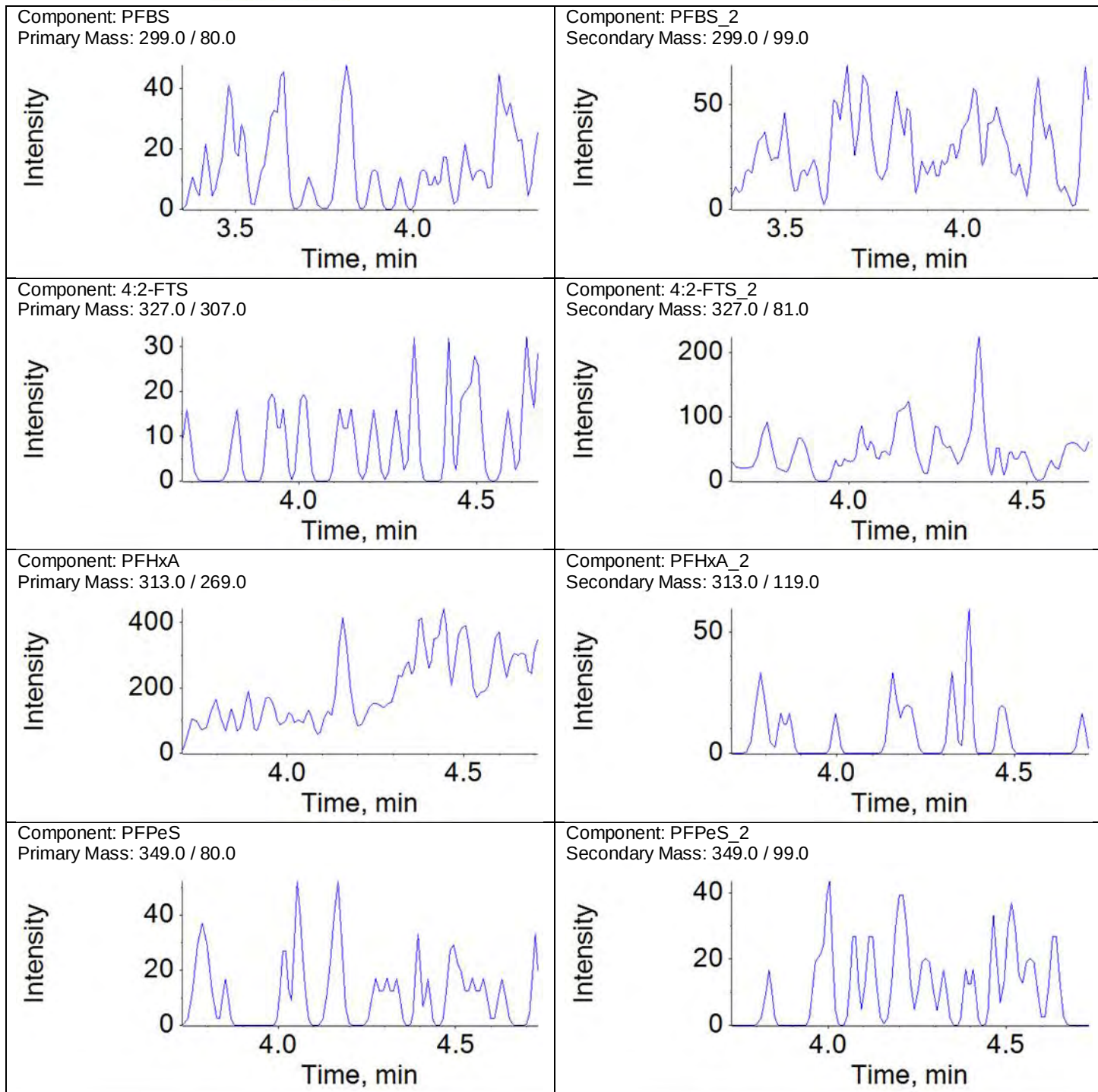
By JPT at 2:53 pm, 11/7/18

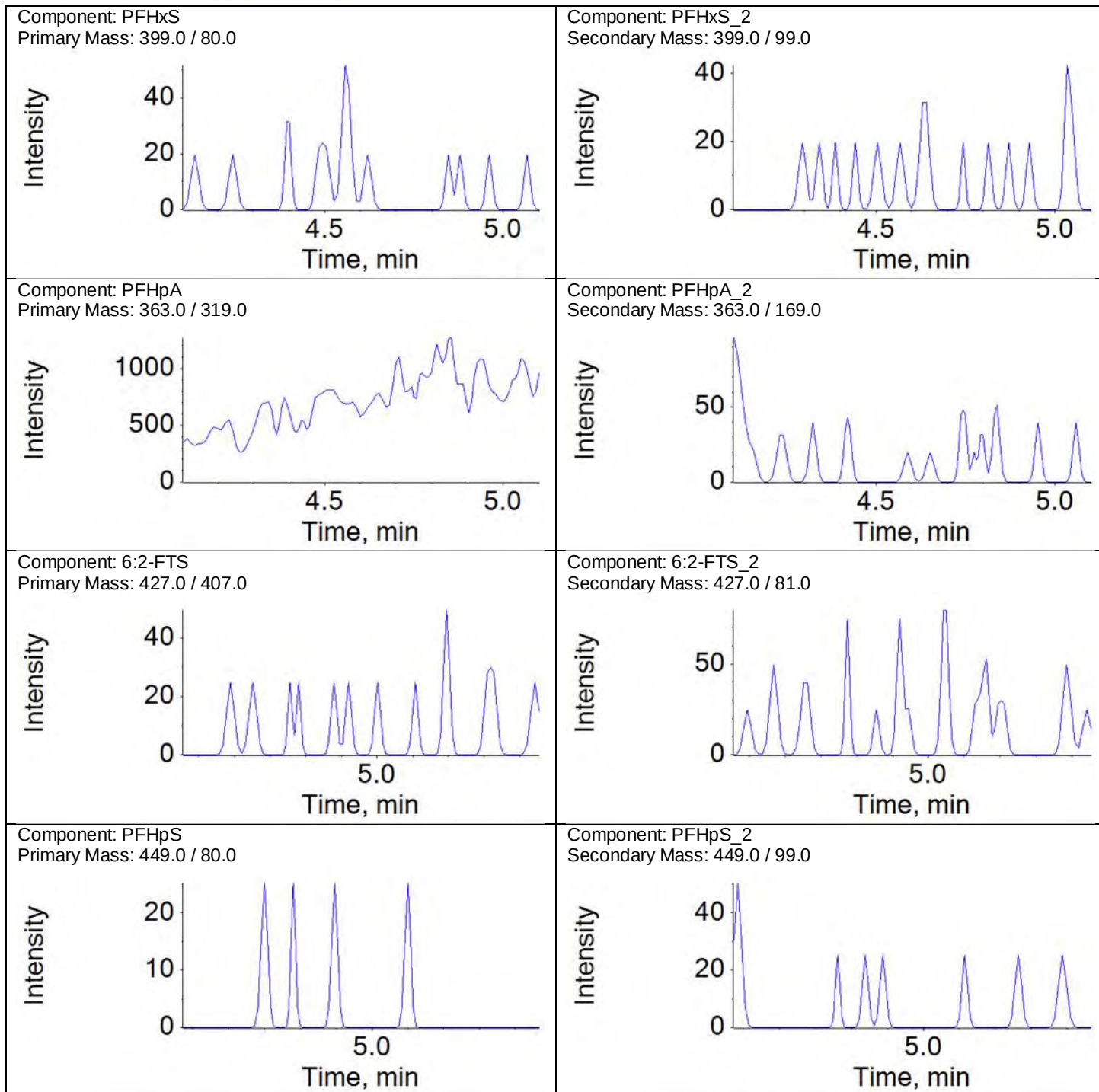
BSI05 Page 589 of 1595

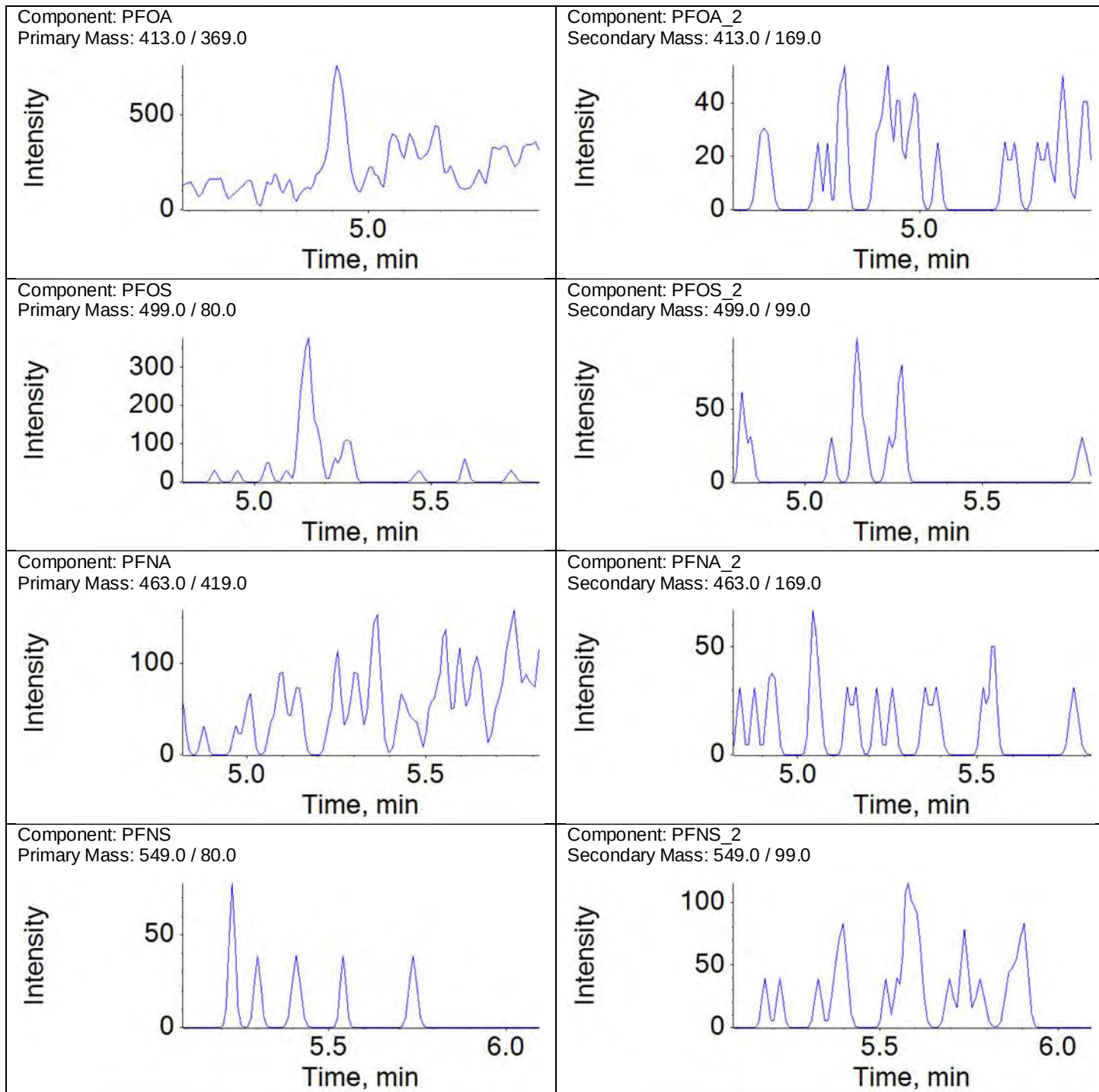
REVIEWED

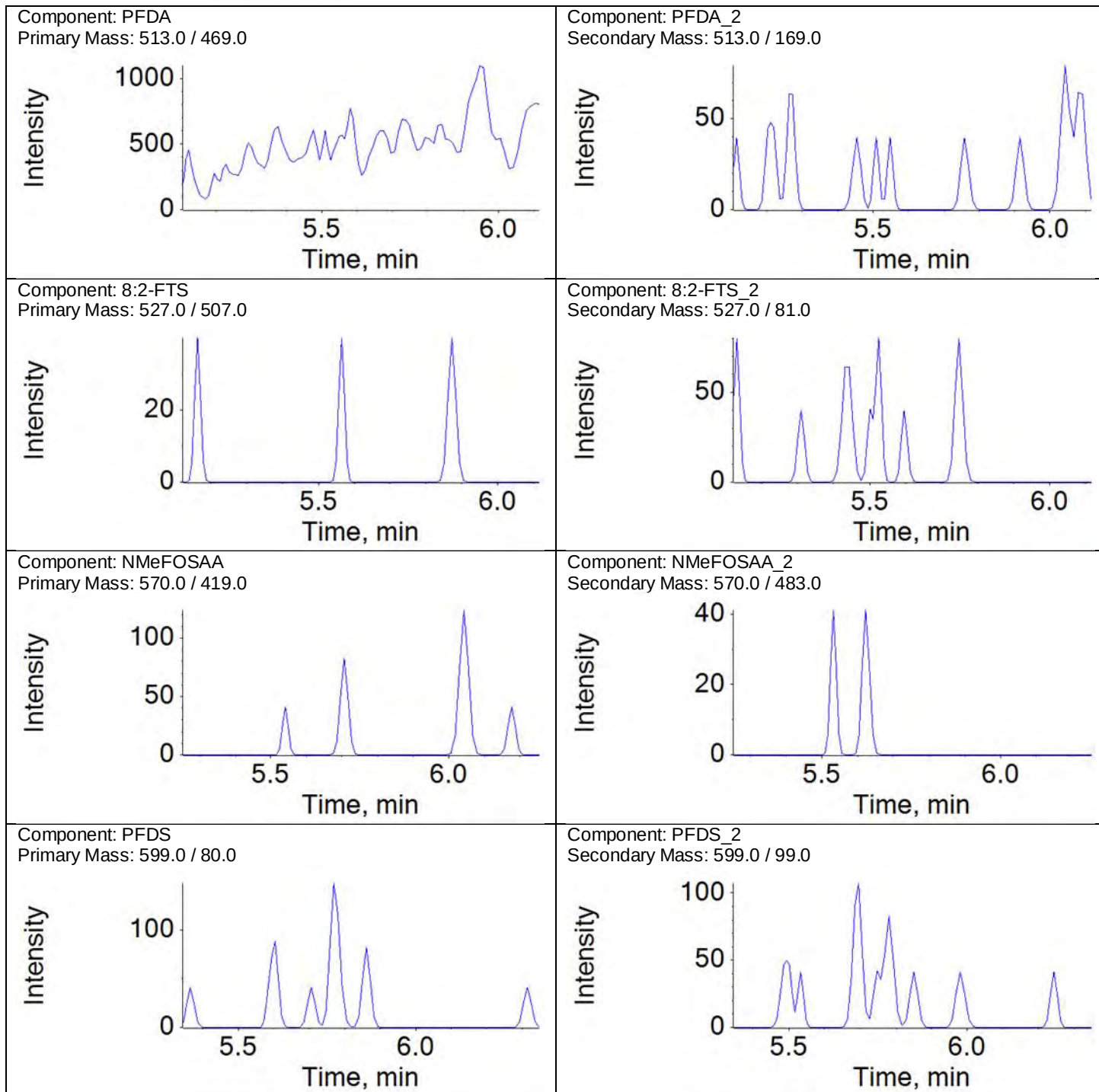
By umar at 5:23 pm, 11/9/18

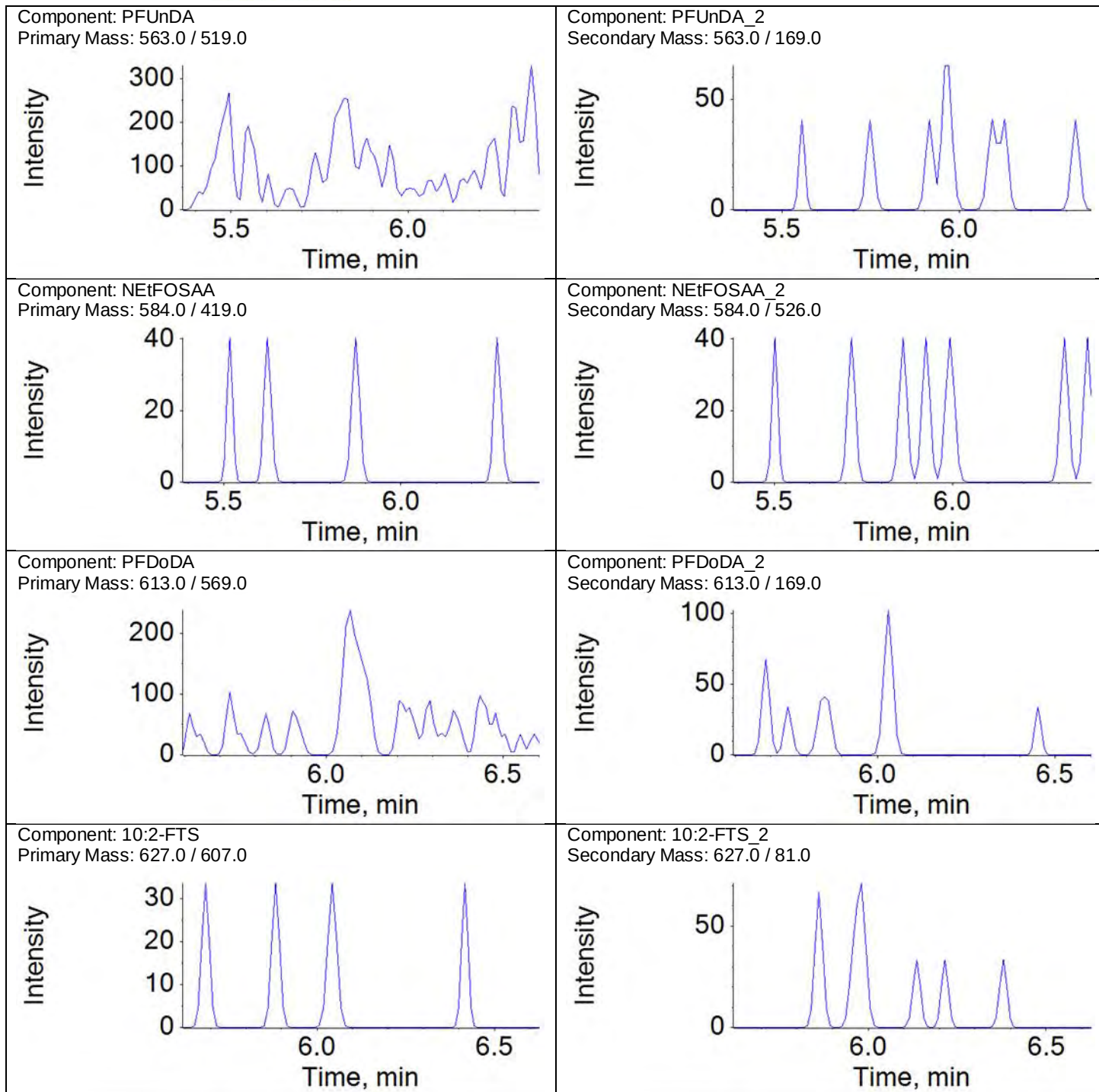
Page 1 of 7

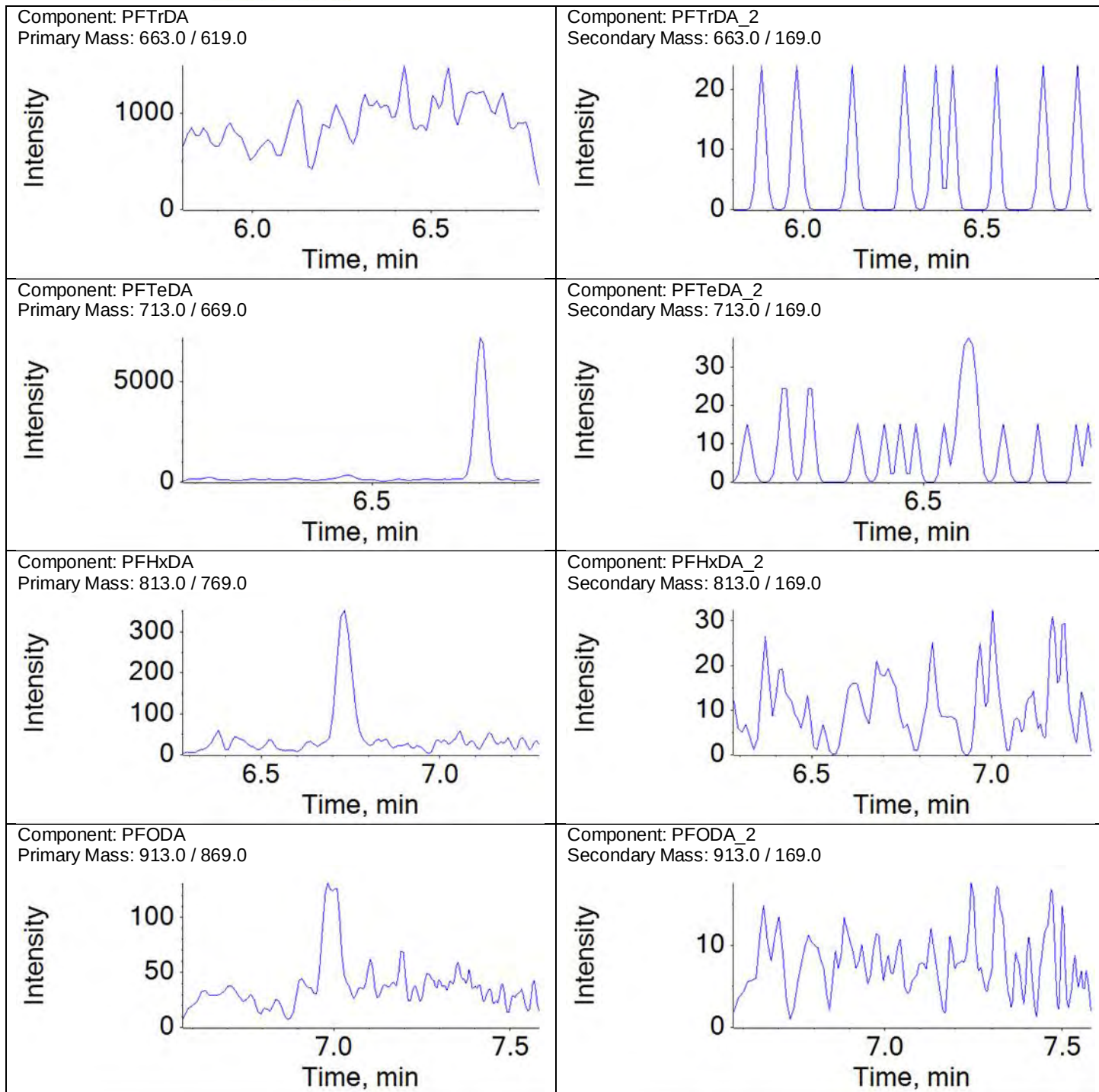












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

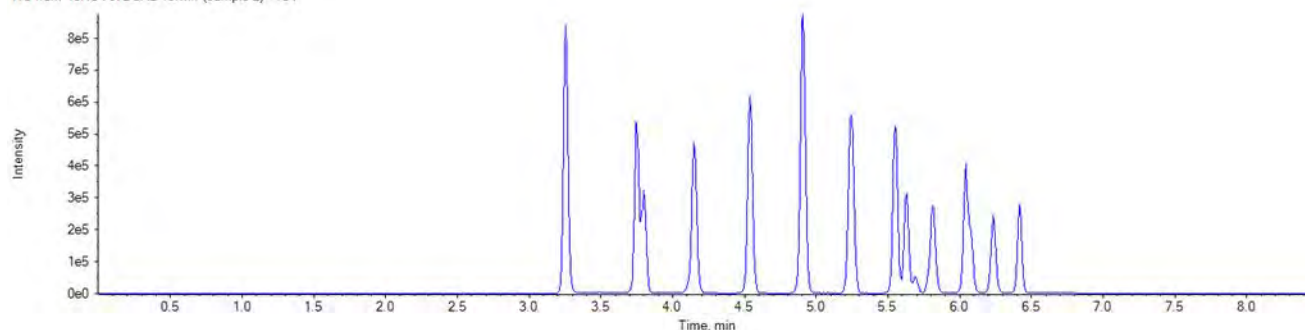
Sample Name: ICV Instrument Name: LM27631 File Name: 18NOV07DCAL-18.wiff

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	
PFTDA	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

TIC from 18NOV07DCAL-18.wiff (sample 2) - ICV



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 597 of 1595

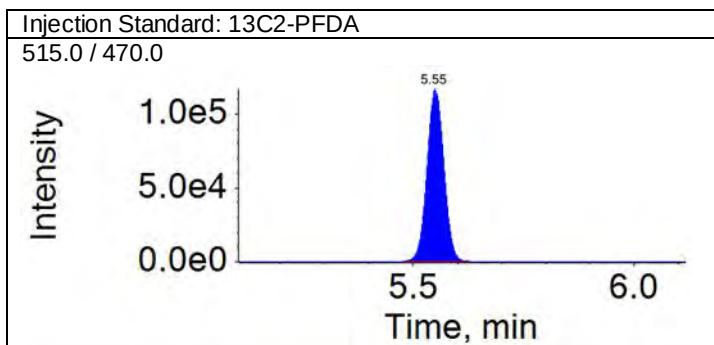
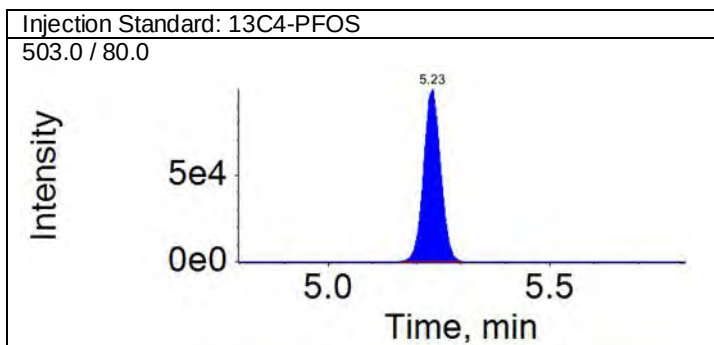
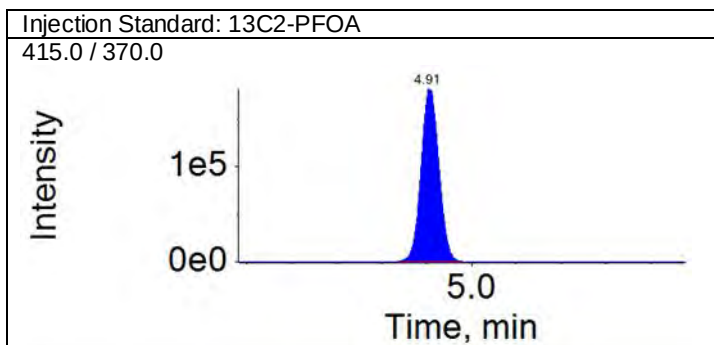
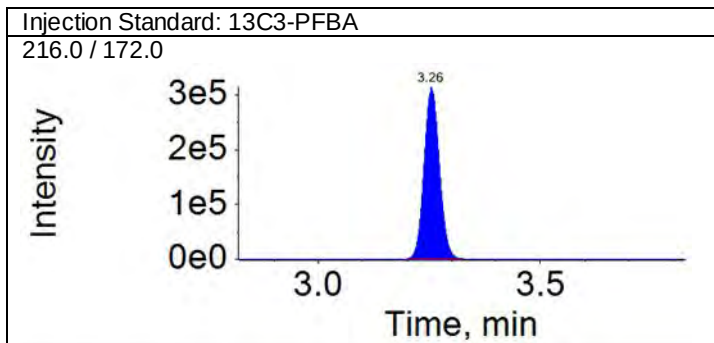
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

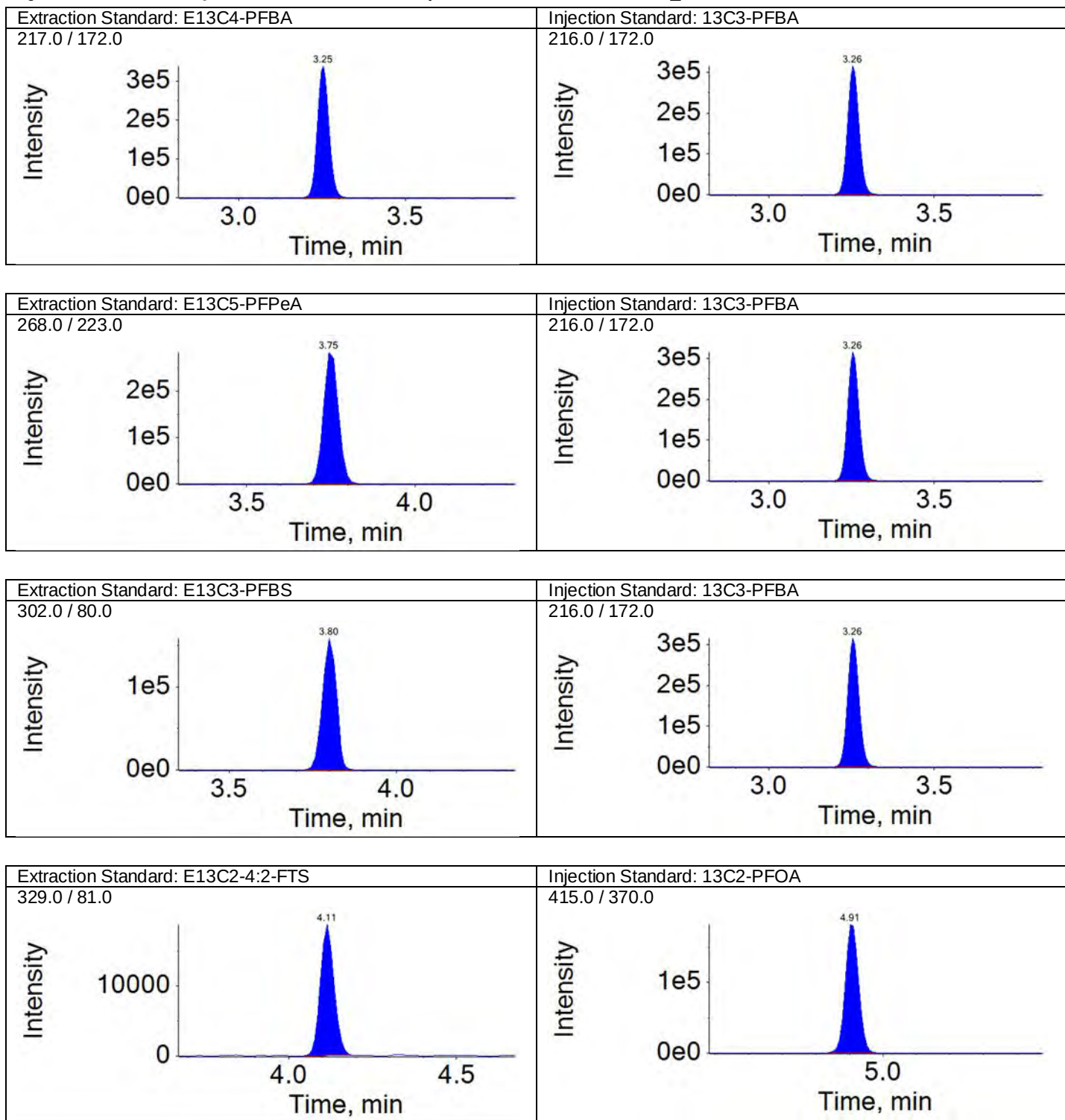
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



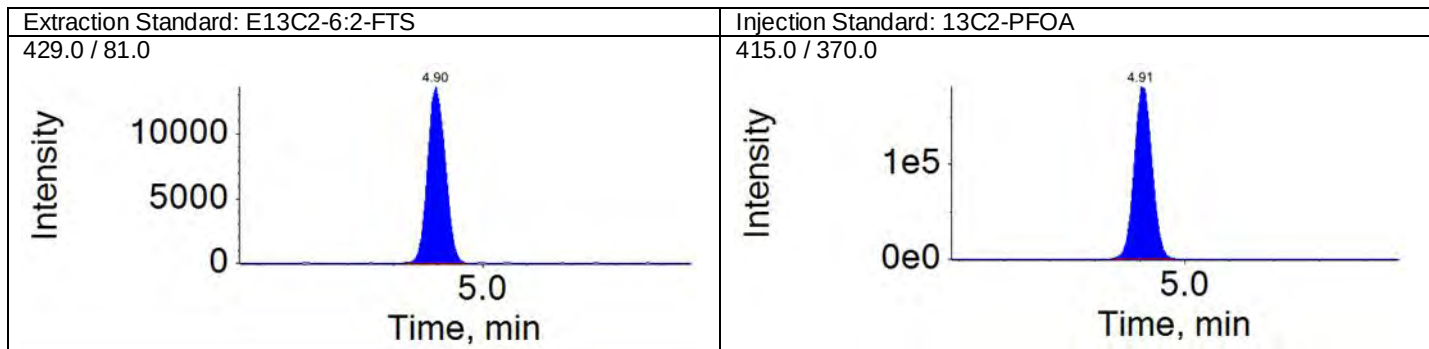
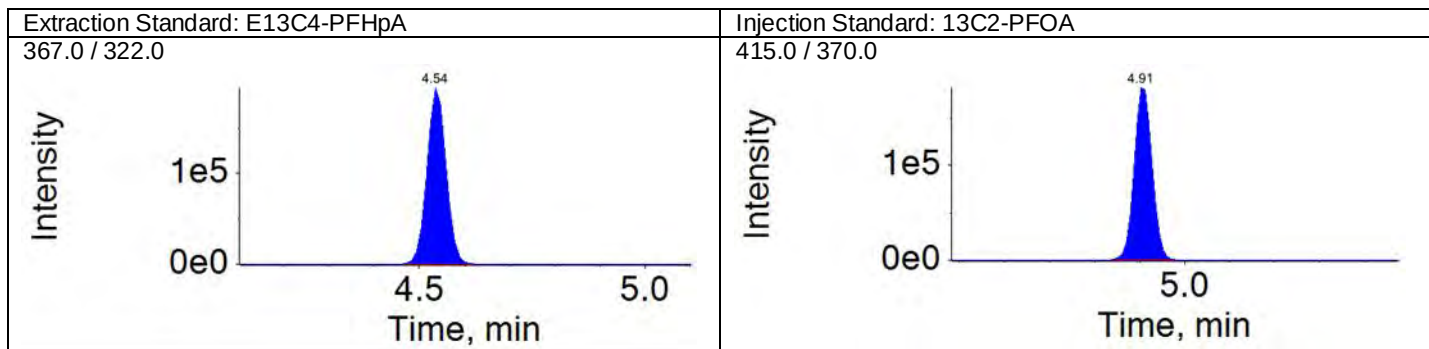
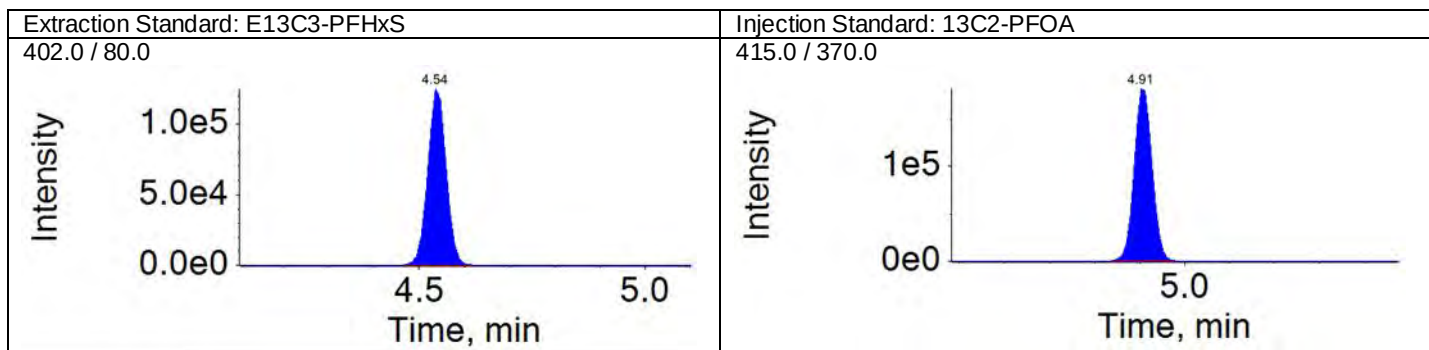
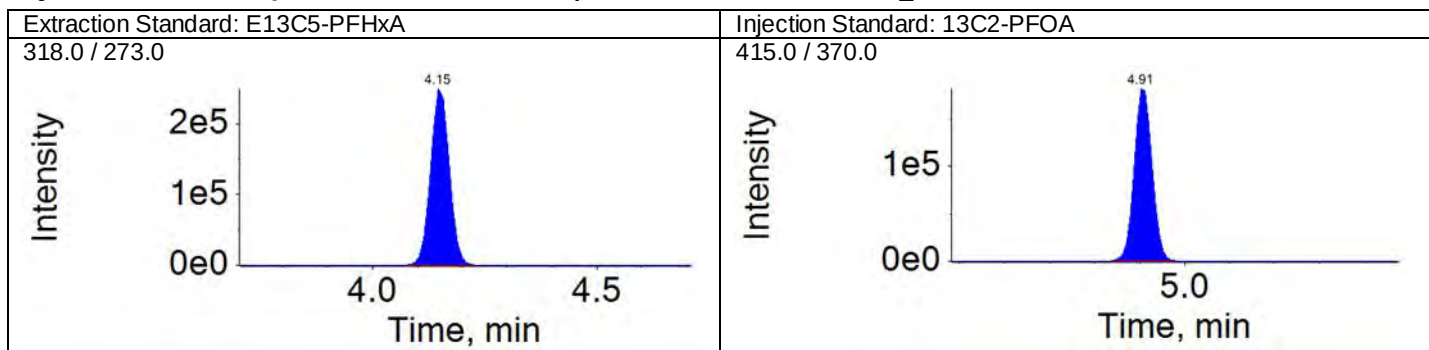
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



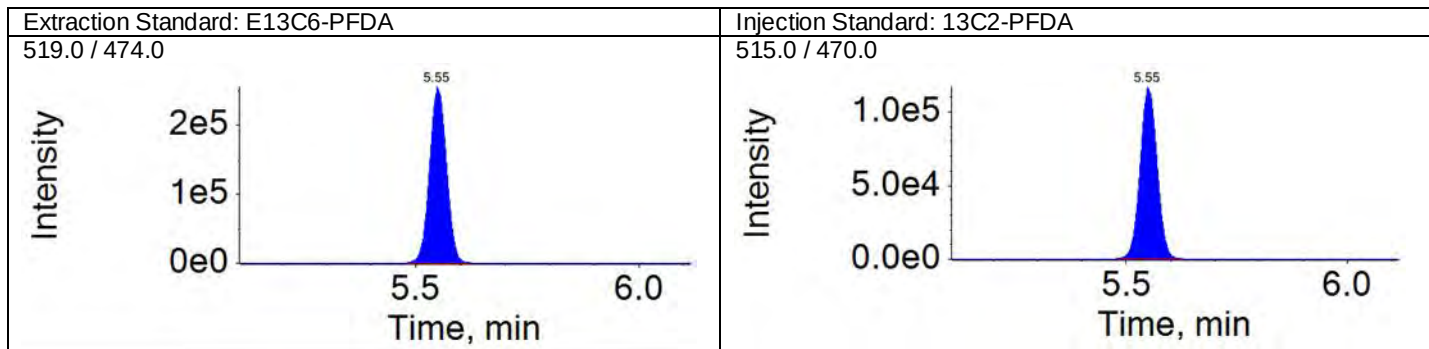
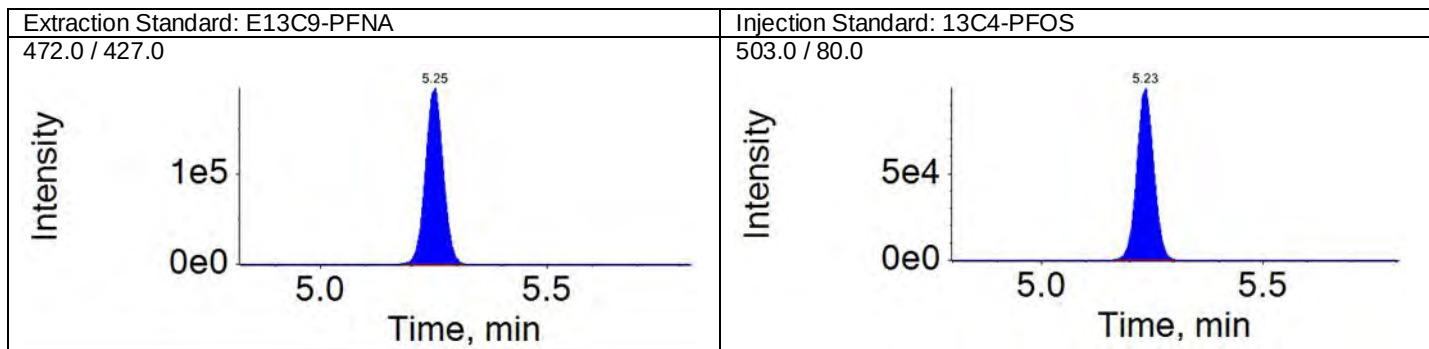
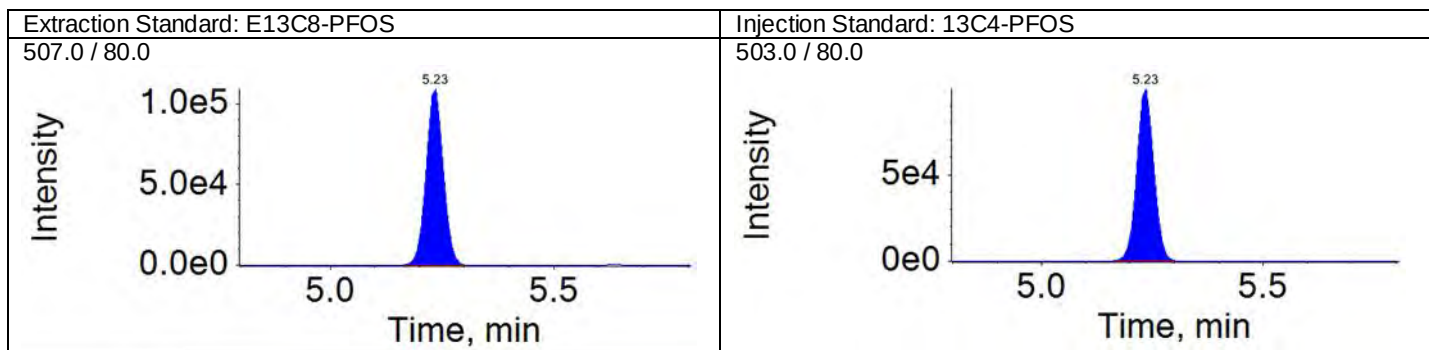
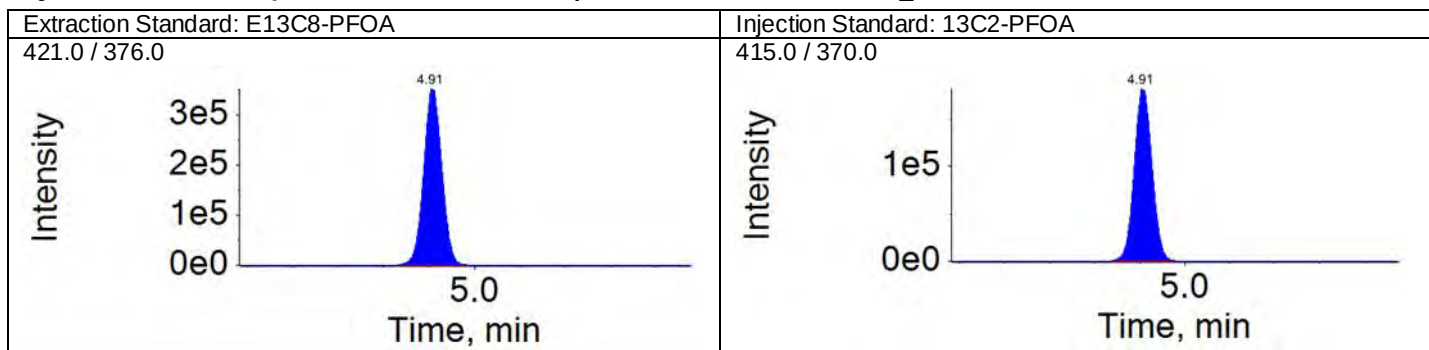
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

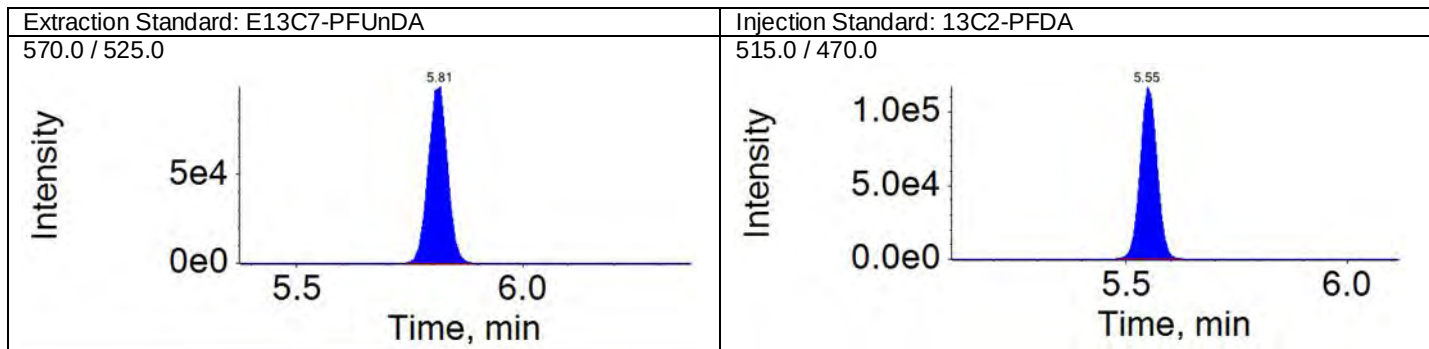
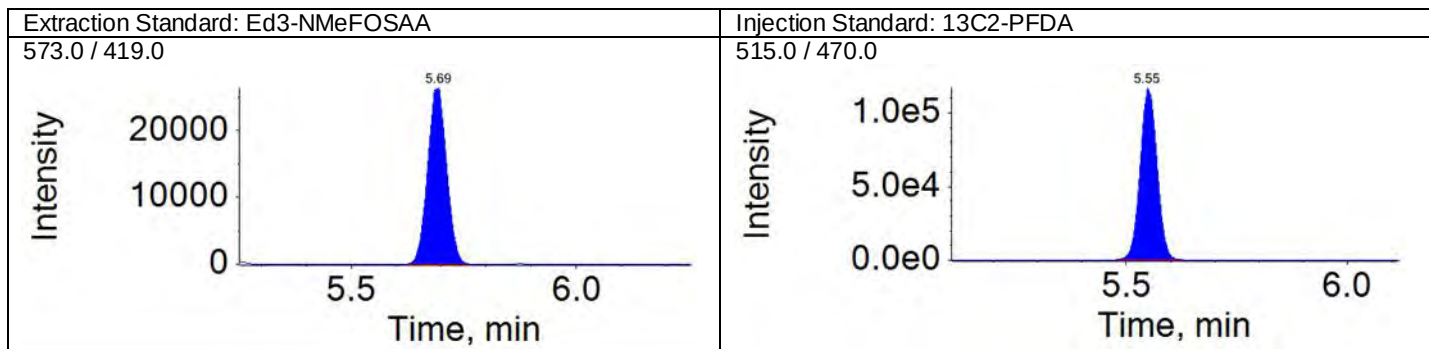
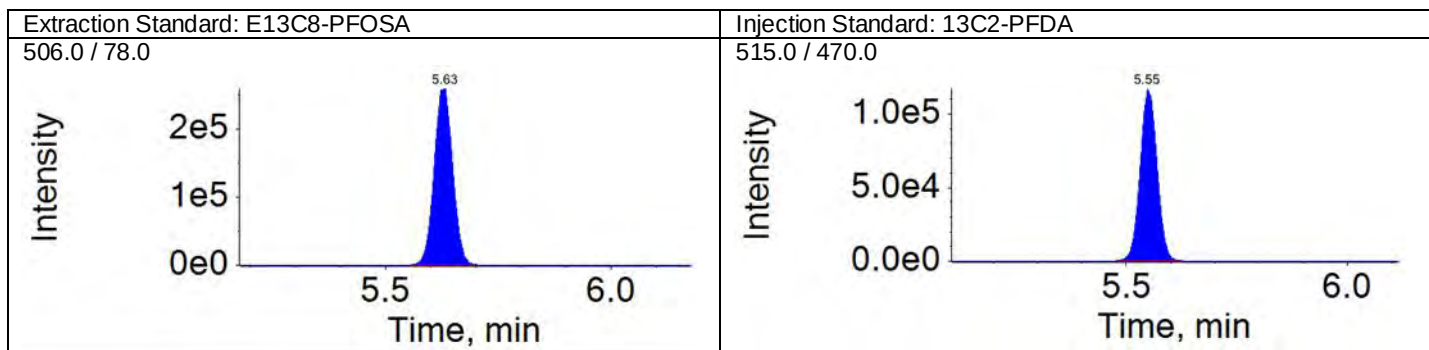
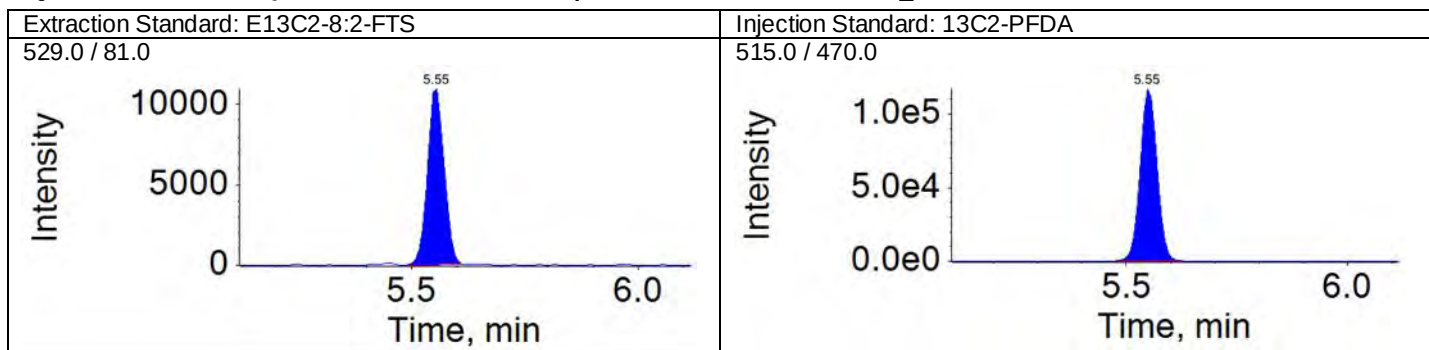
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

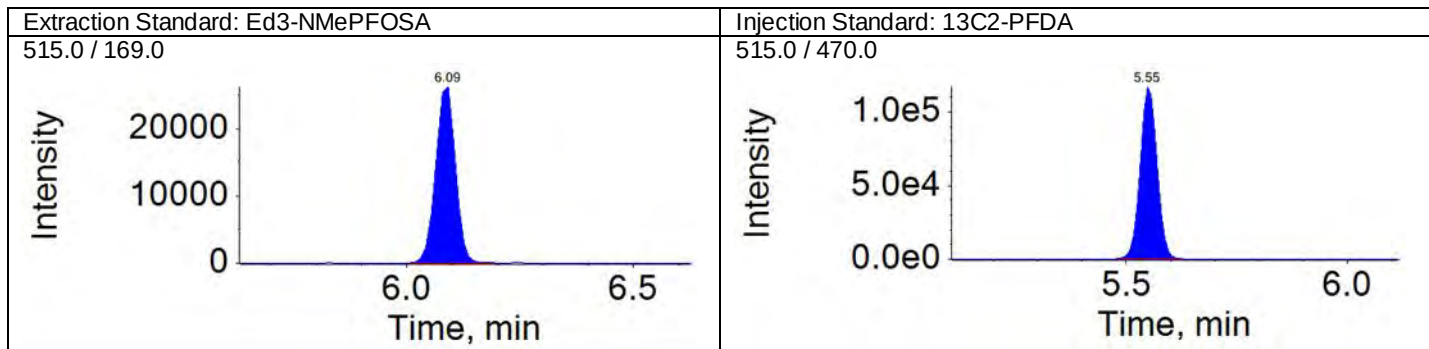
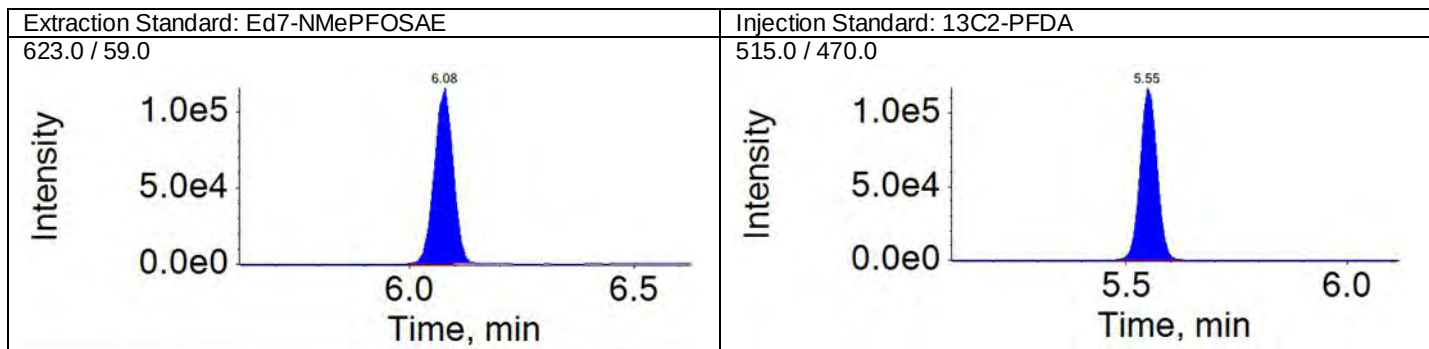
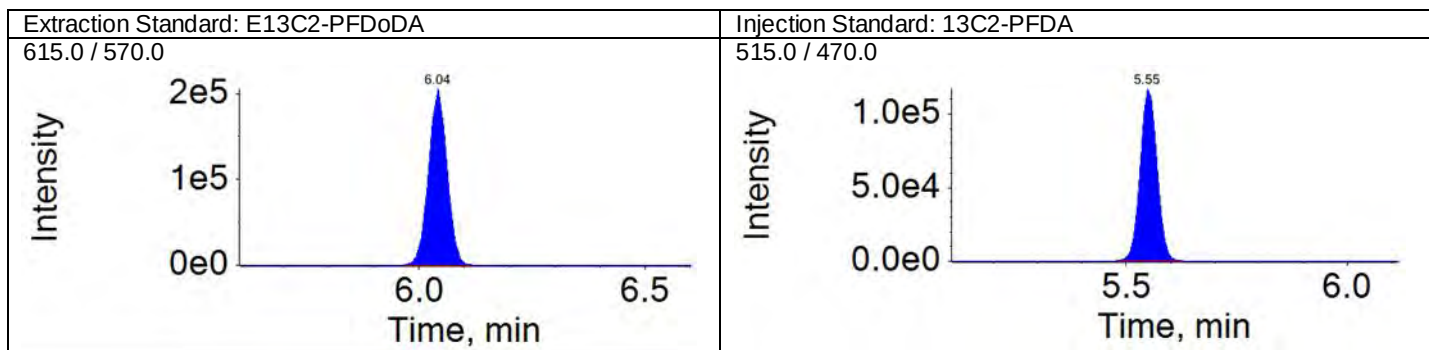
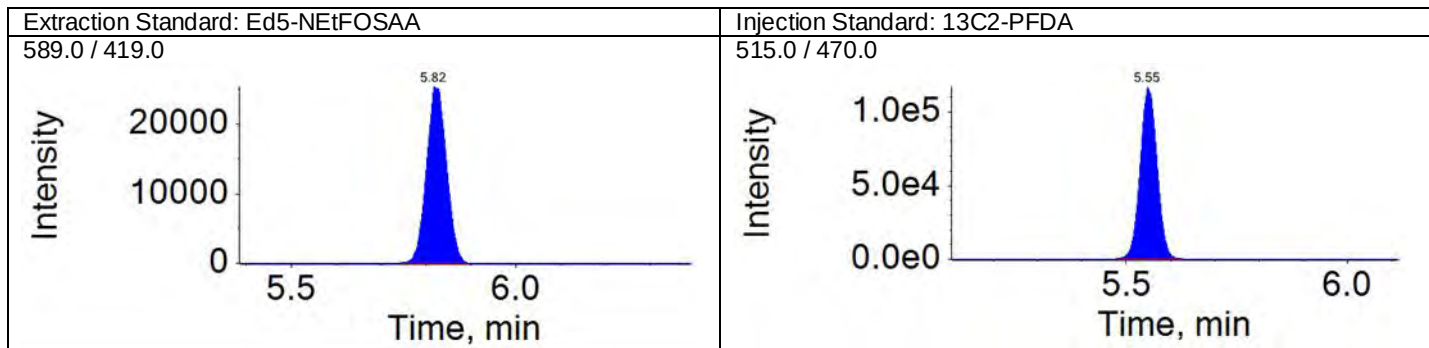
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

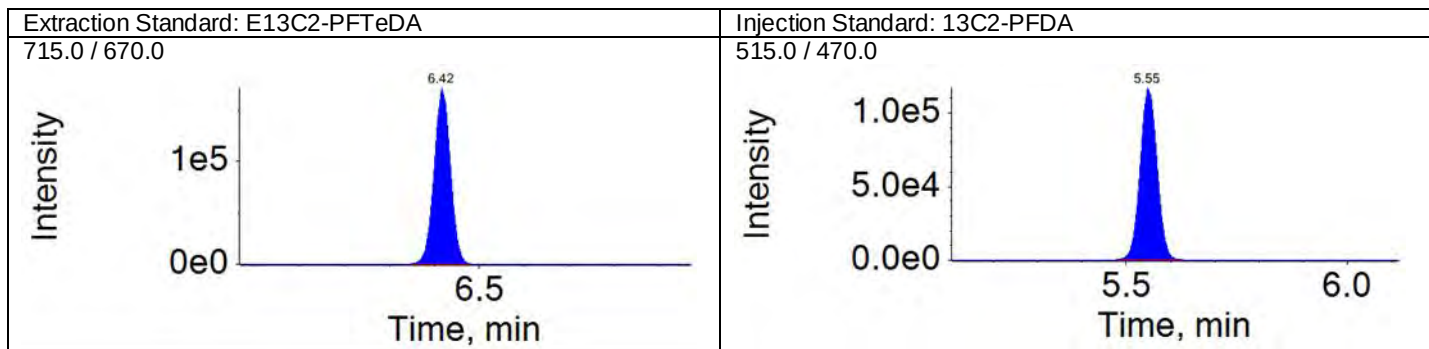
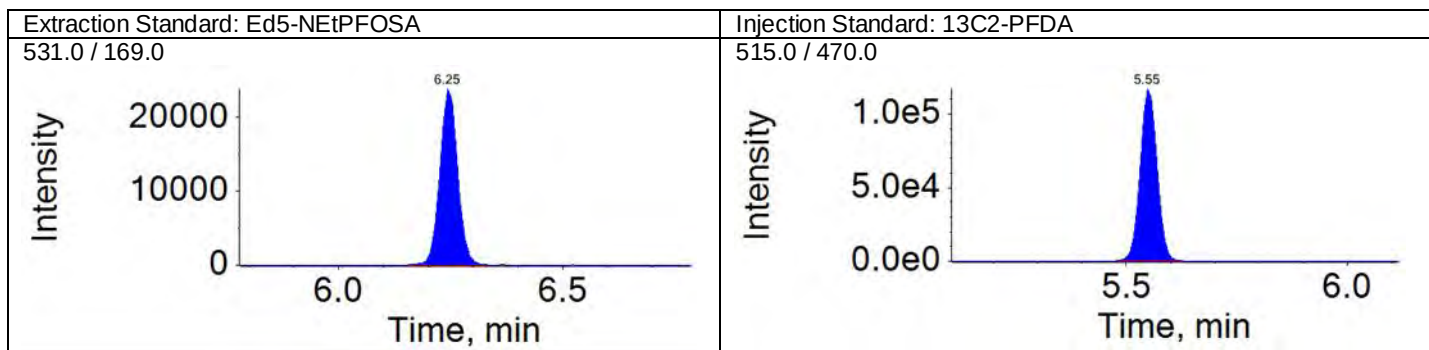
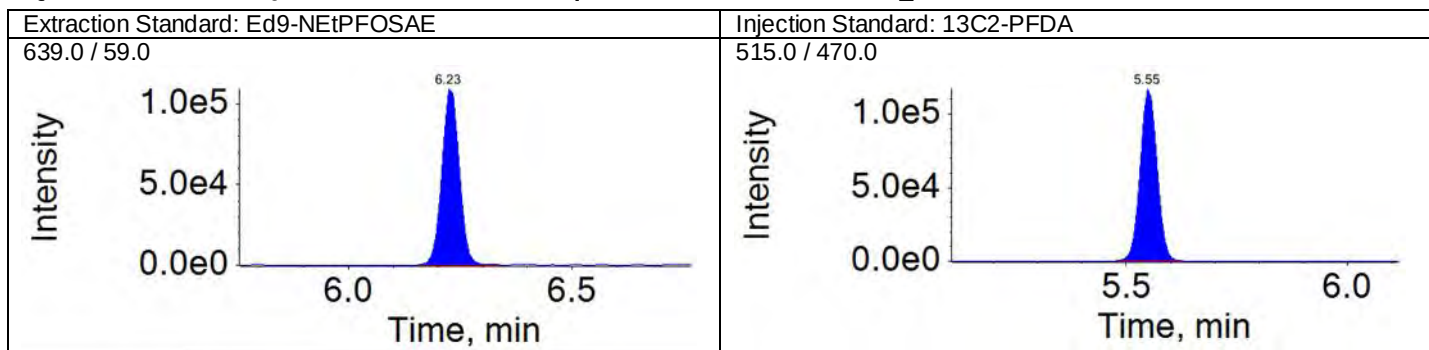
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

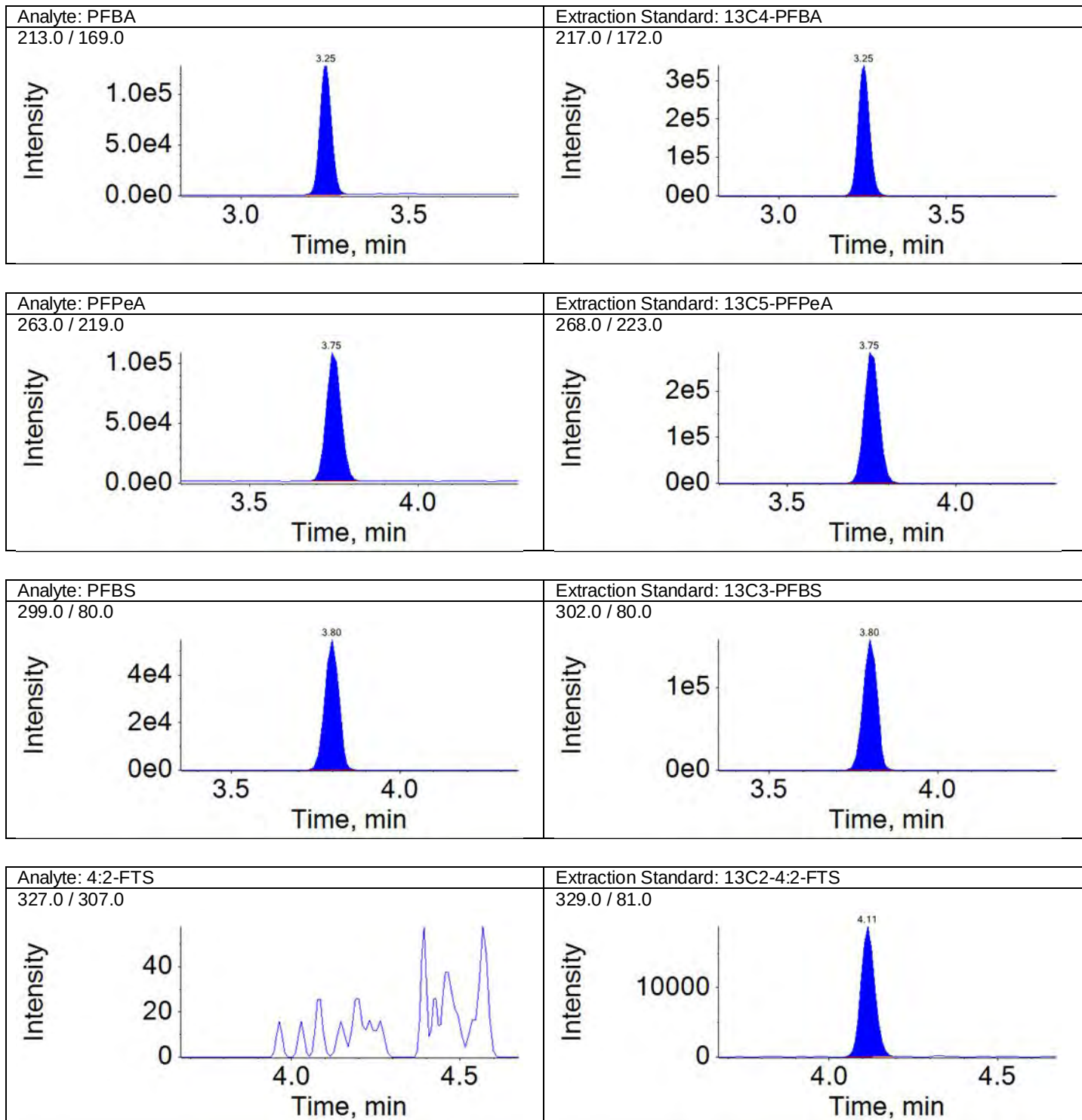
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



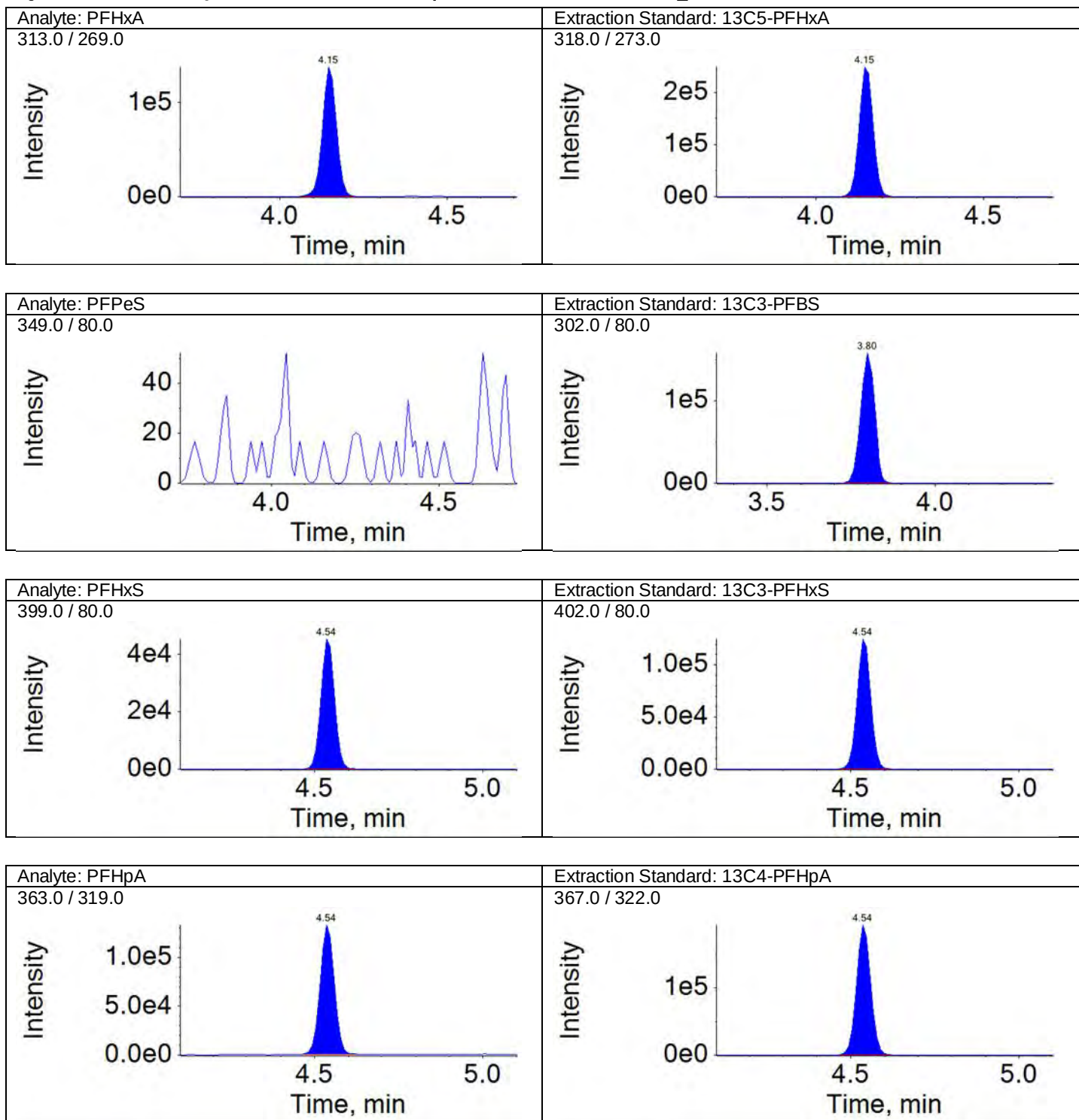
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



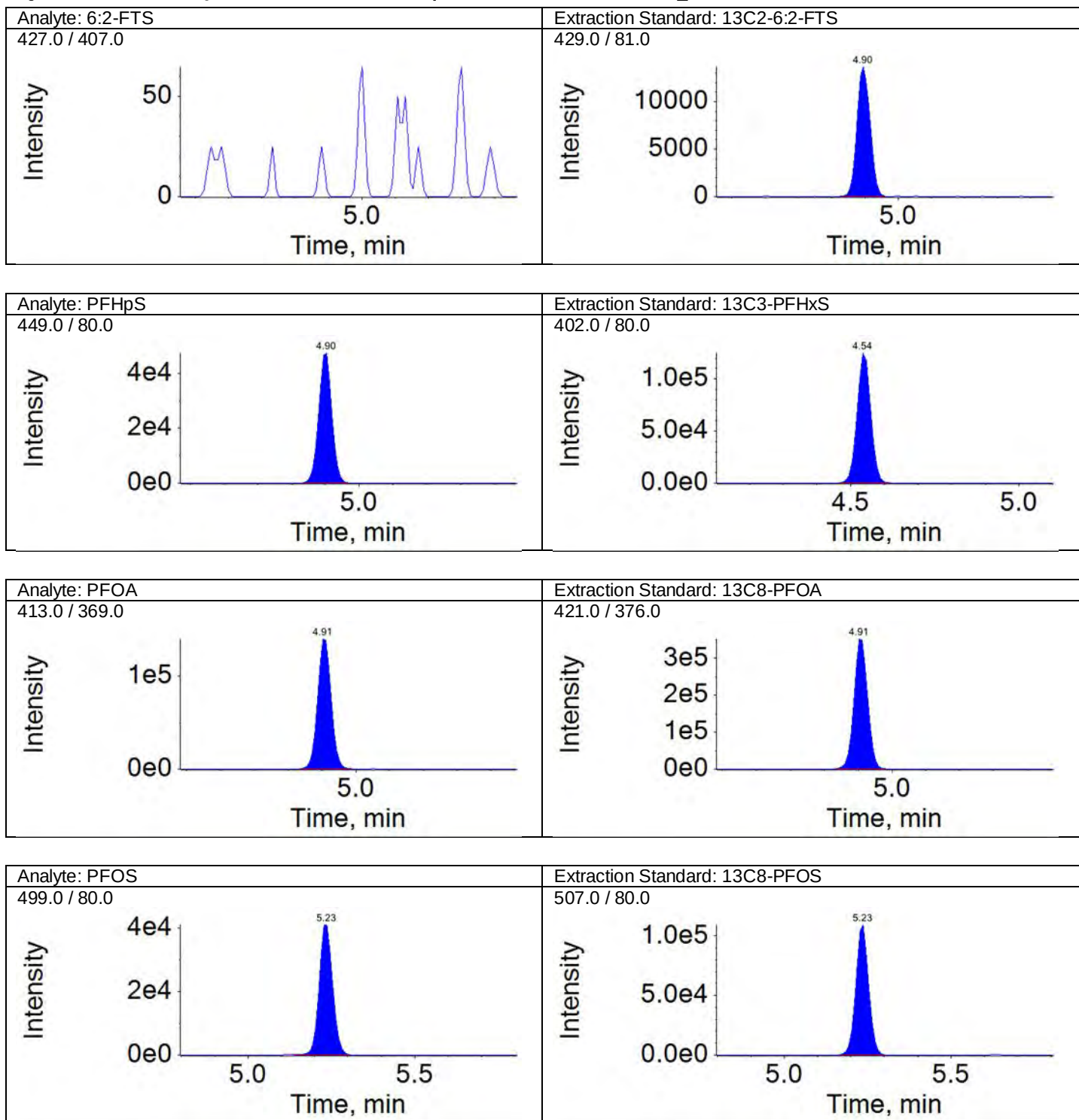
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



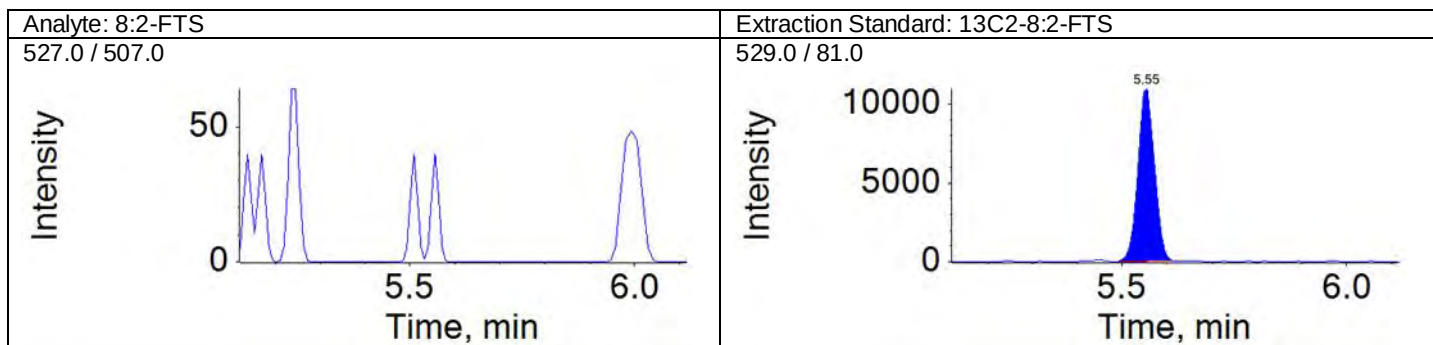
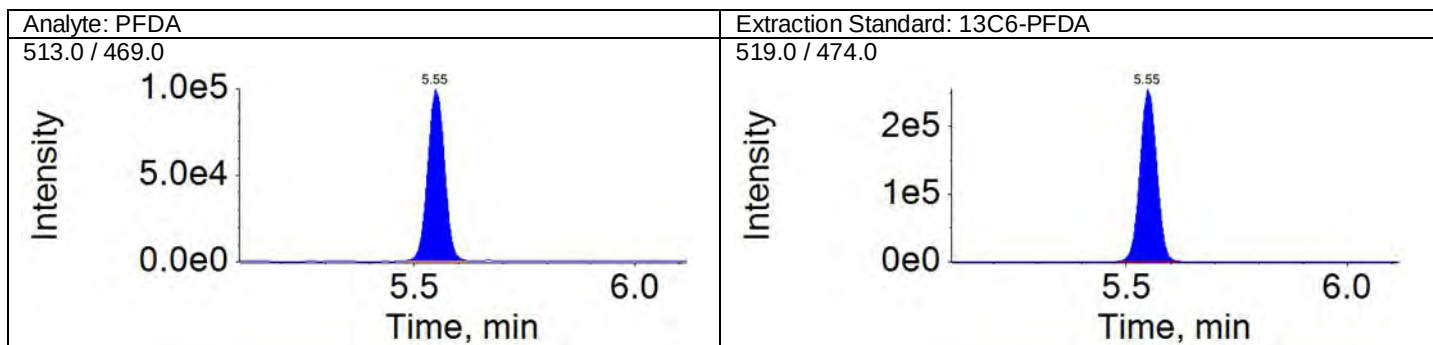
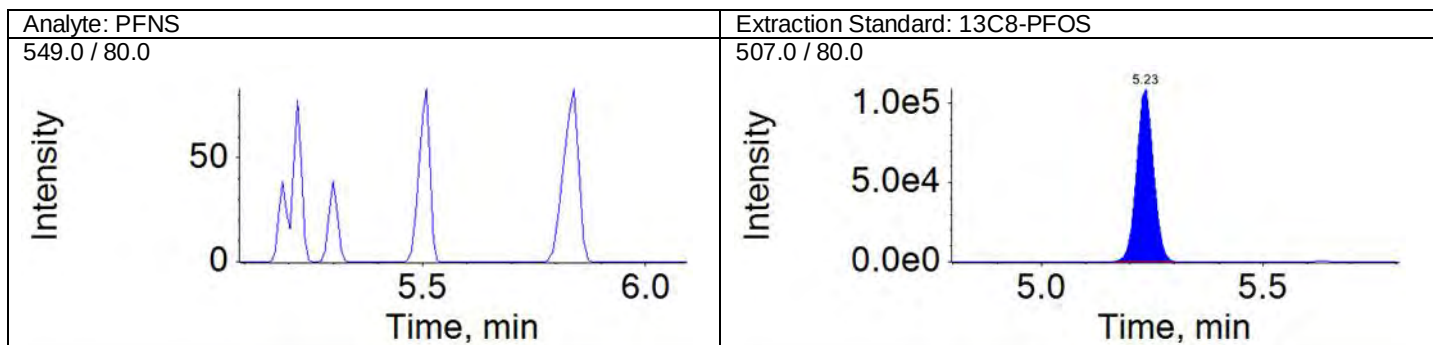
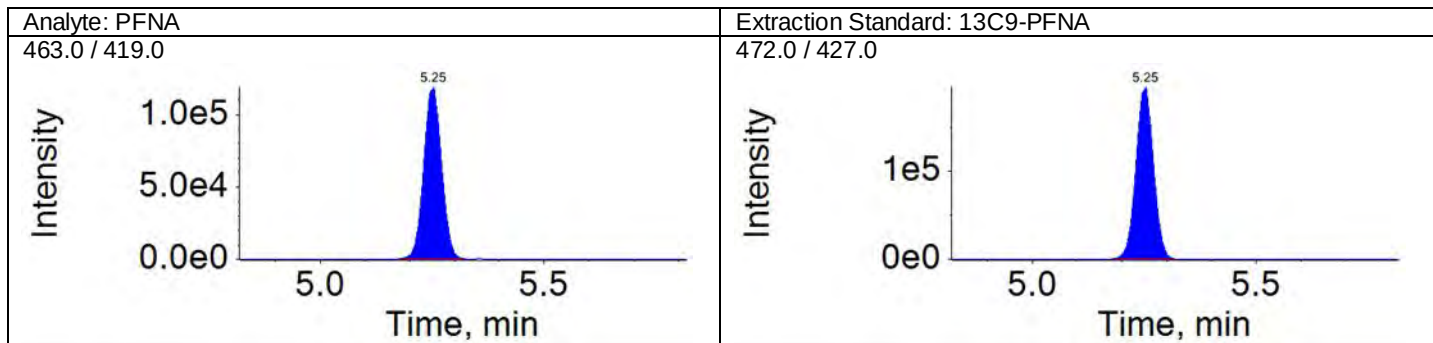
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



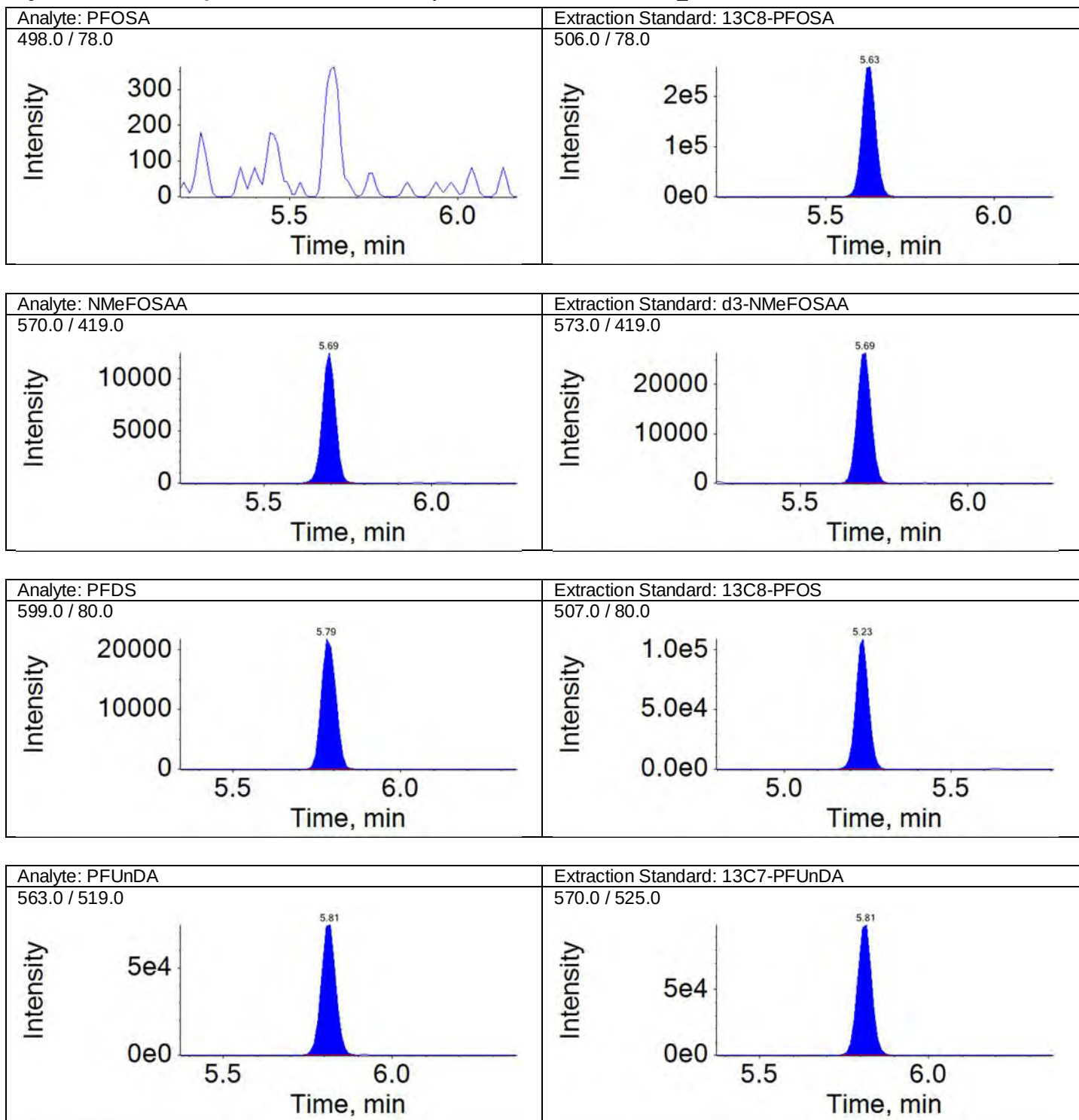
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



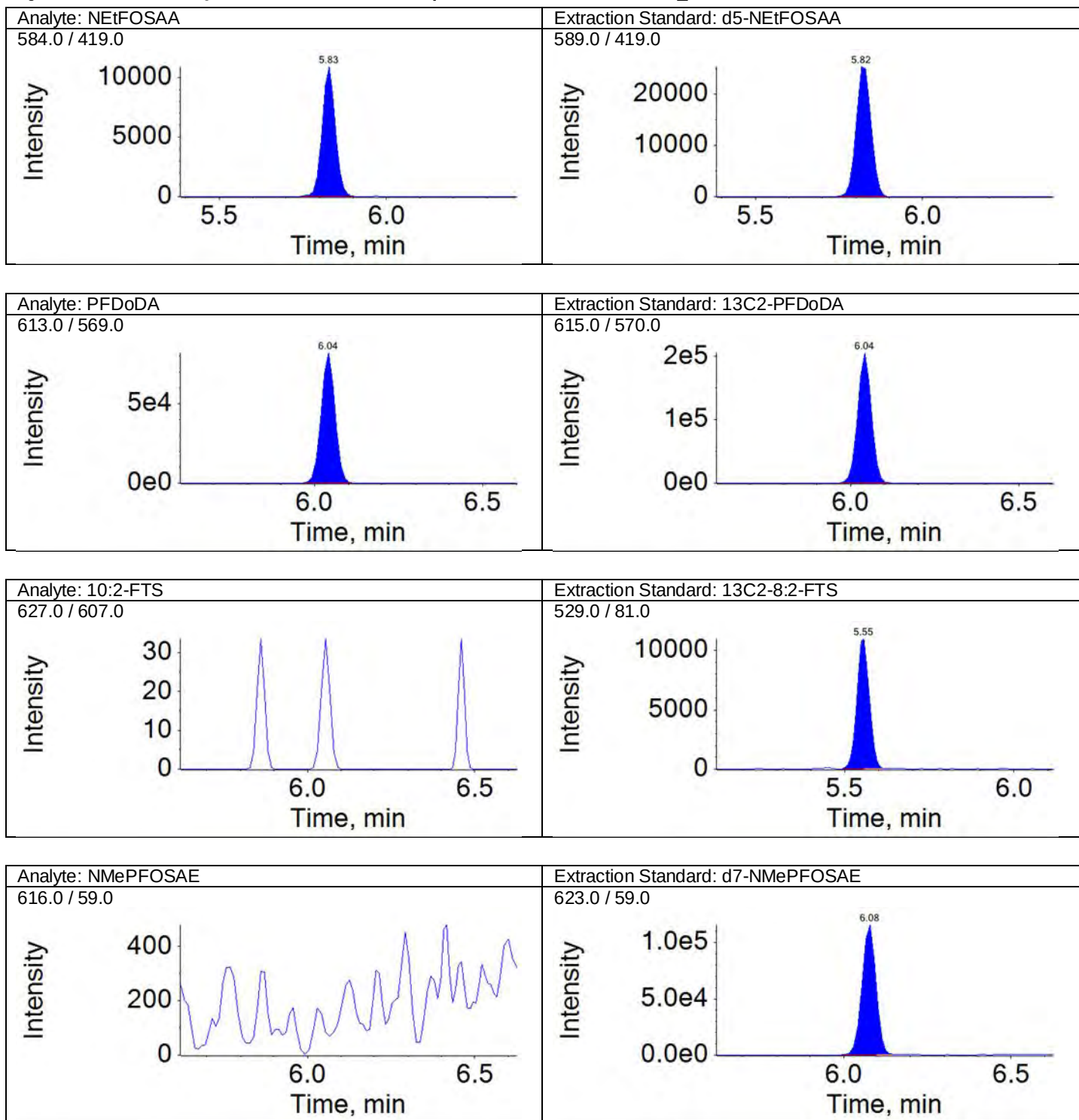
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



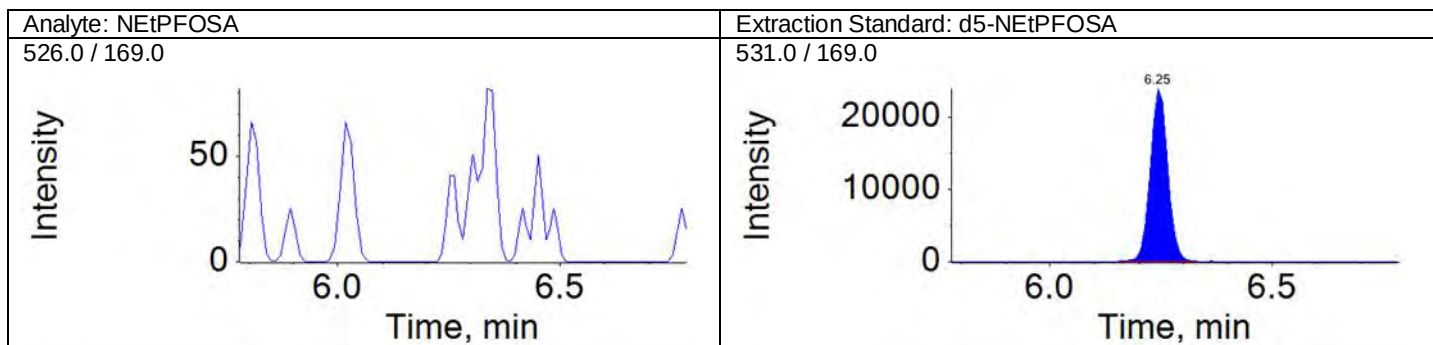
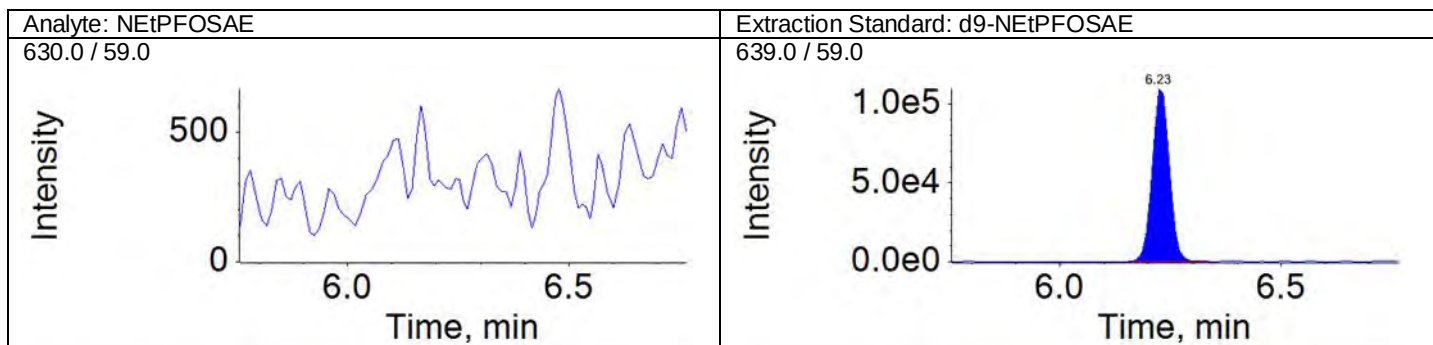
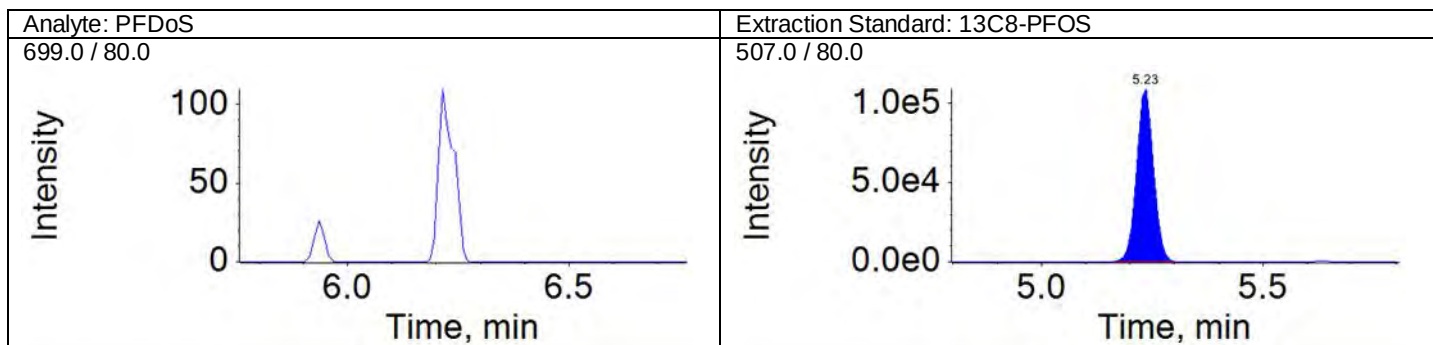
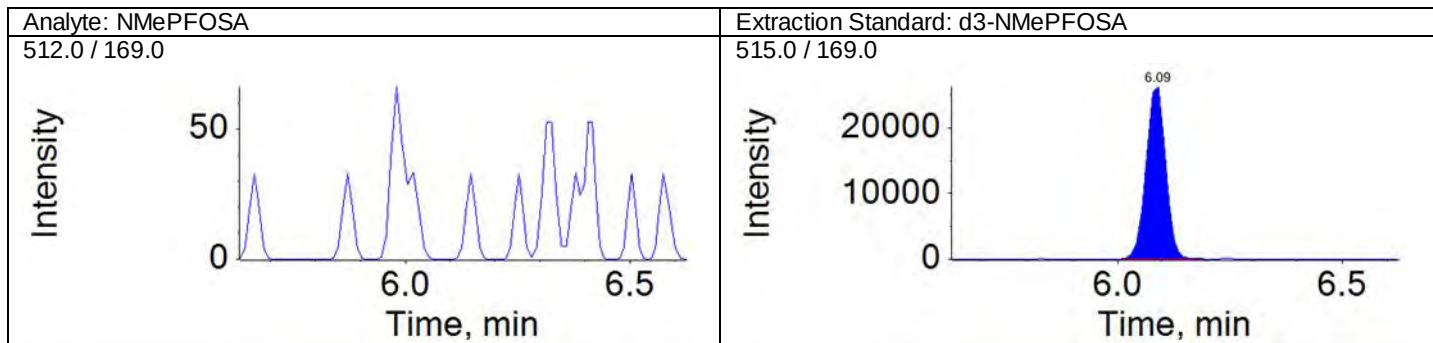
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



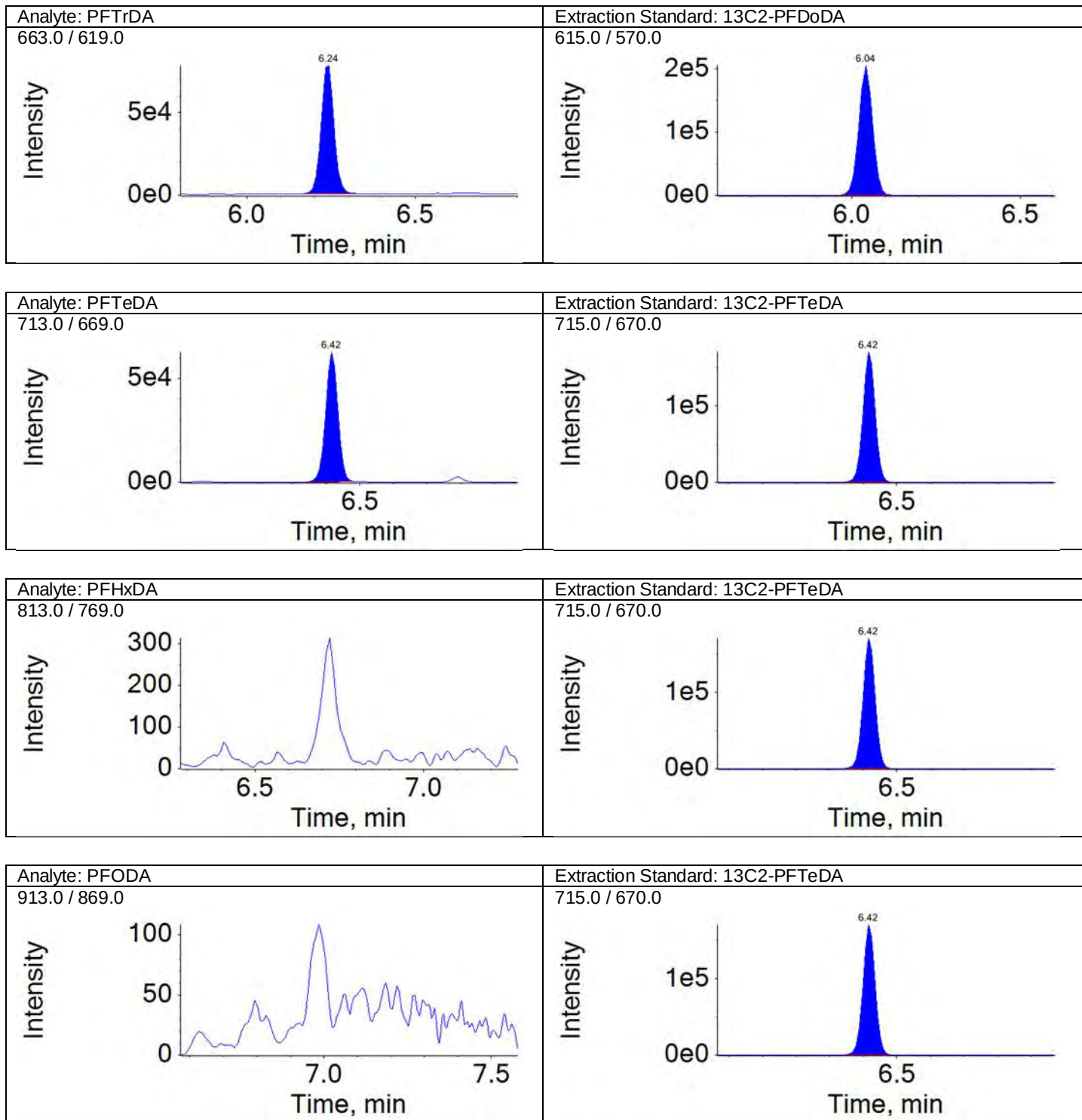
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



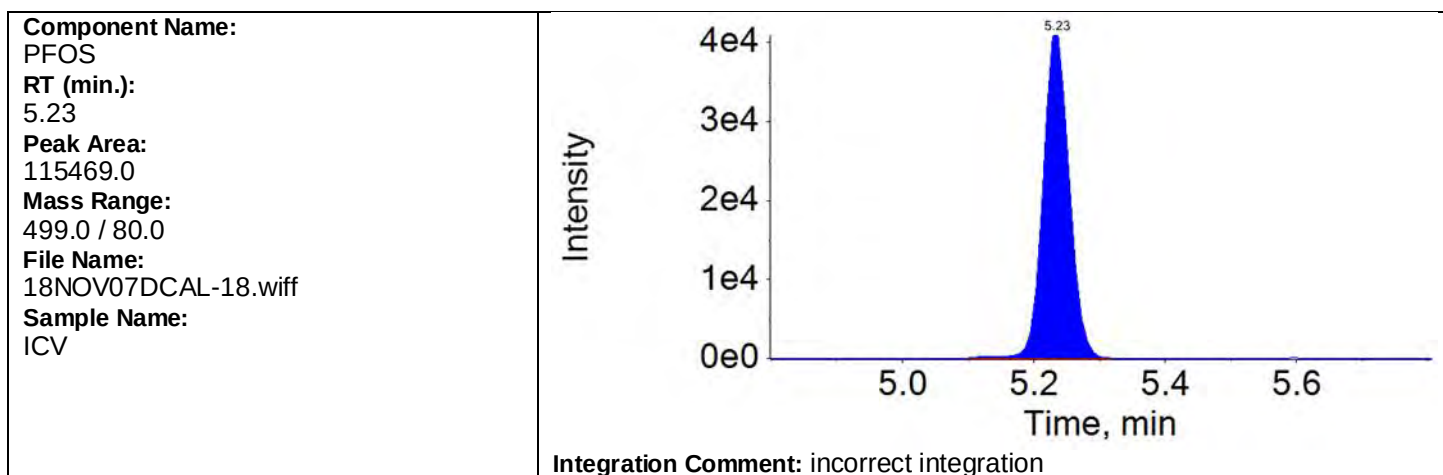
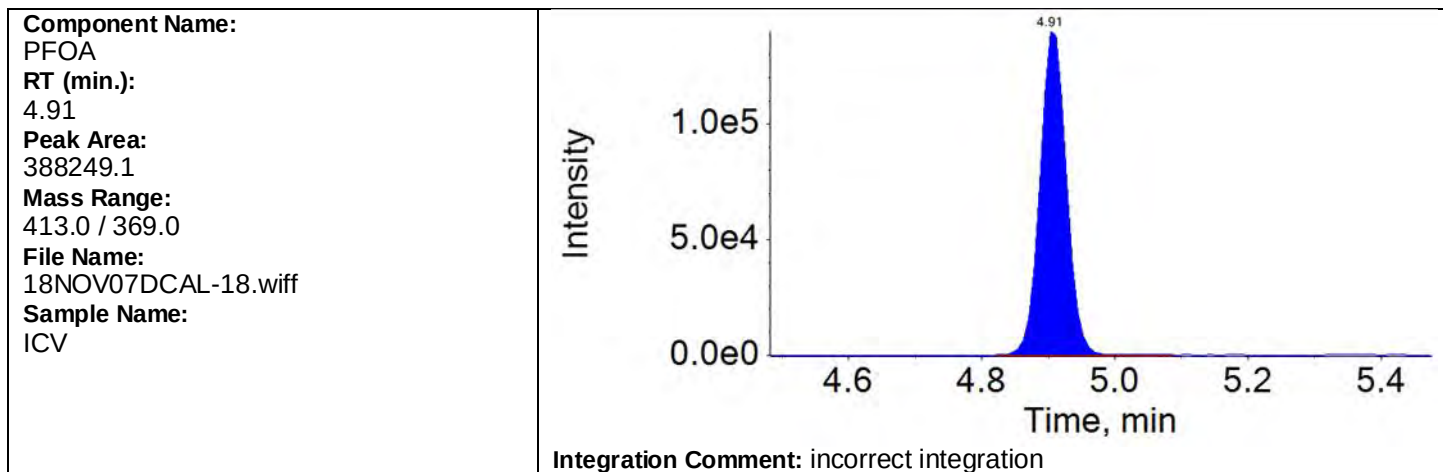
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

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



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

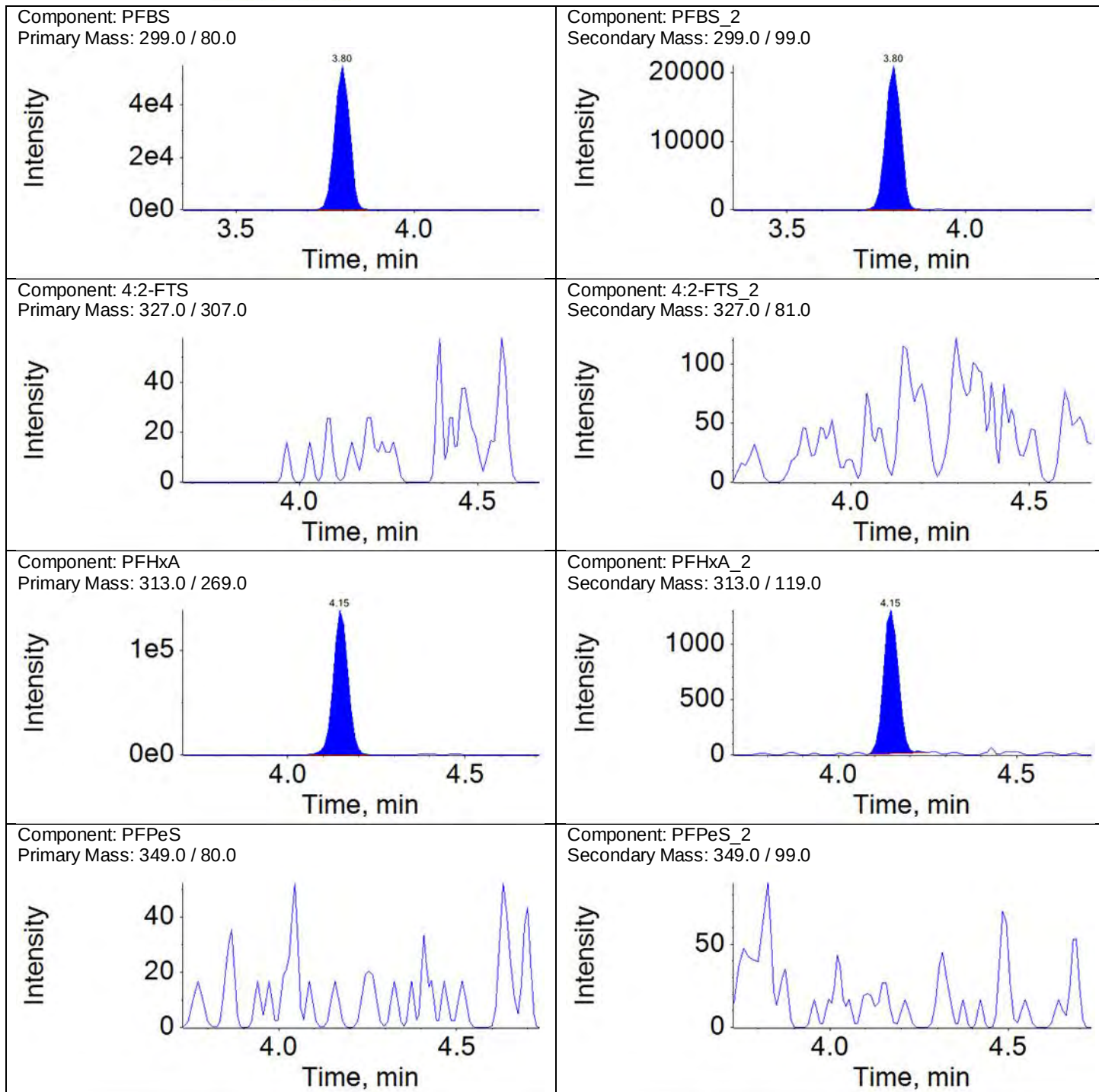
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	159719.5	A	1.0000	1.0000			
PFBS_2	3.80	1.00	61541.1	A	0.3576	0.3853	8	50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	4.15	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	
PFTTrDA	6.24	1.03	206908.4	A	1.0000	1.0000			
PFTTrDA_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	

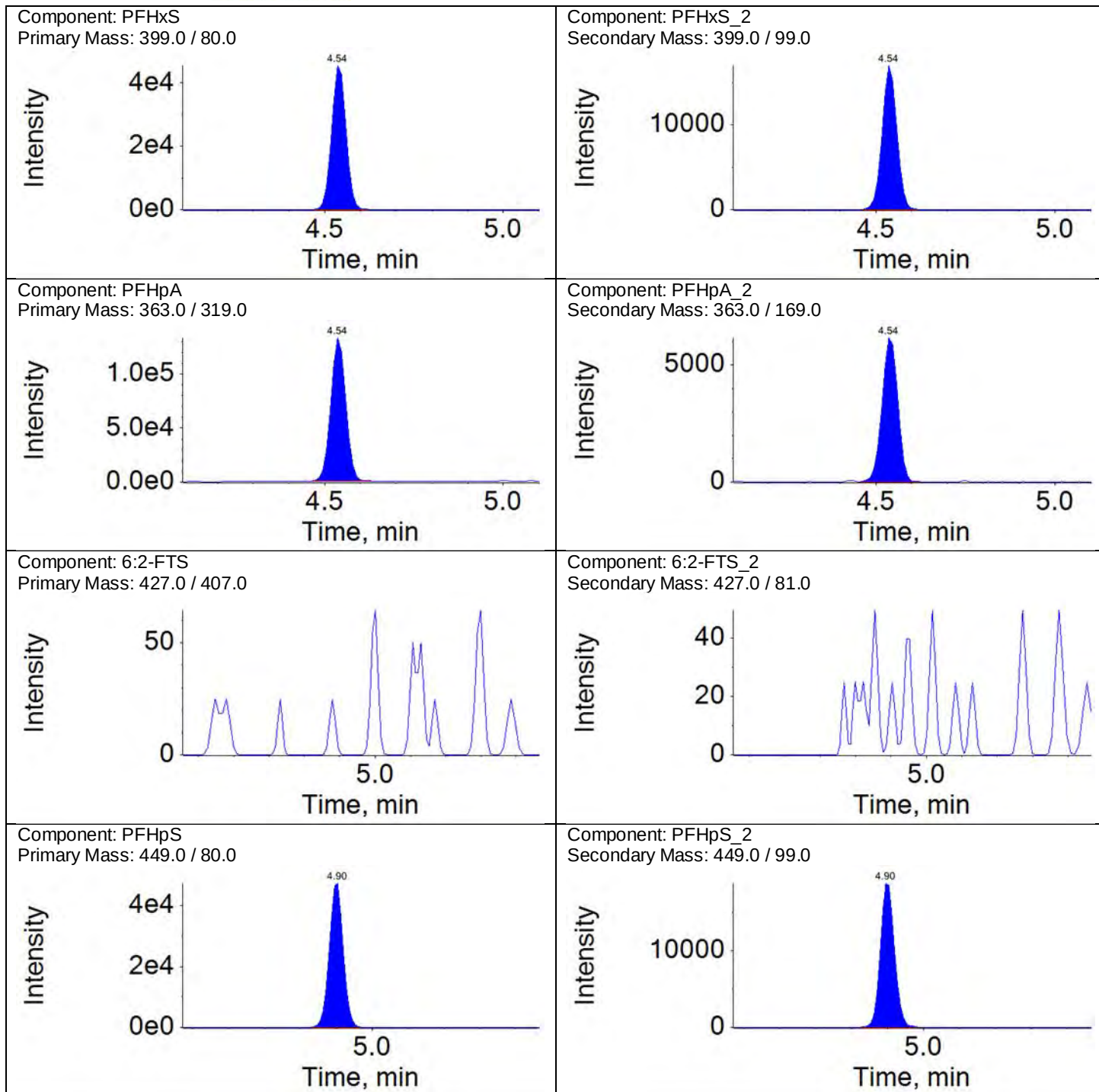
APPROVED

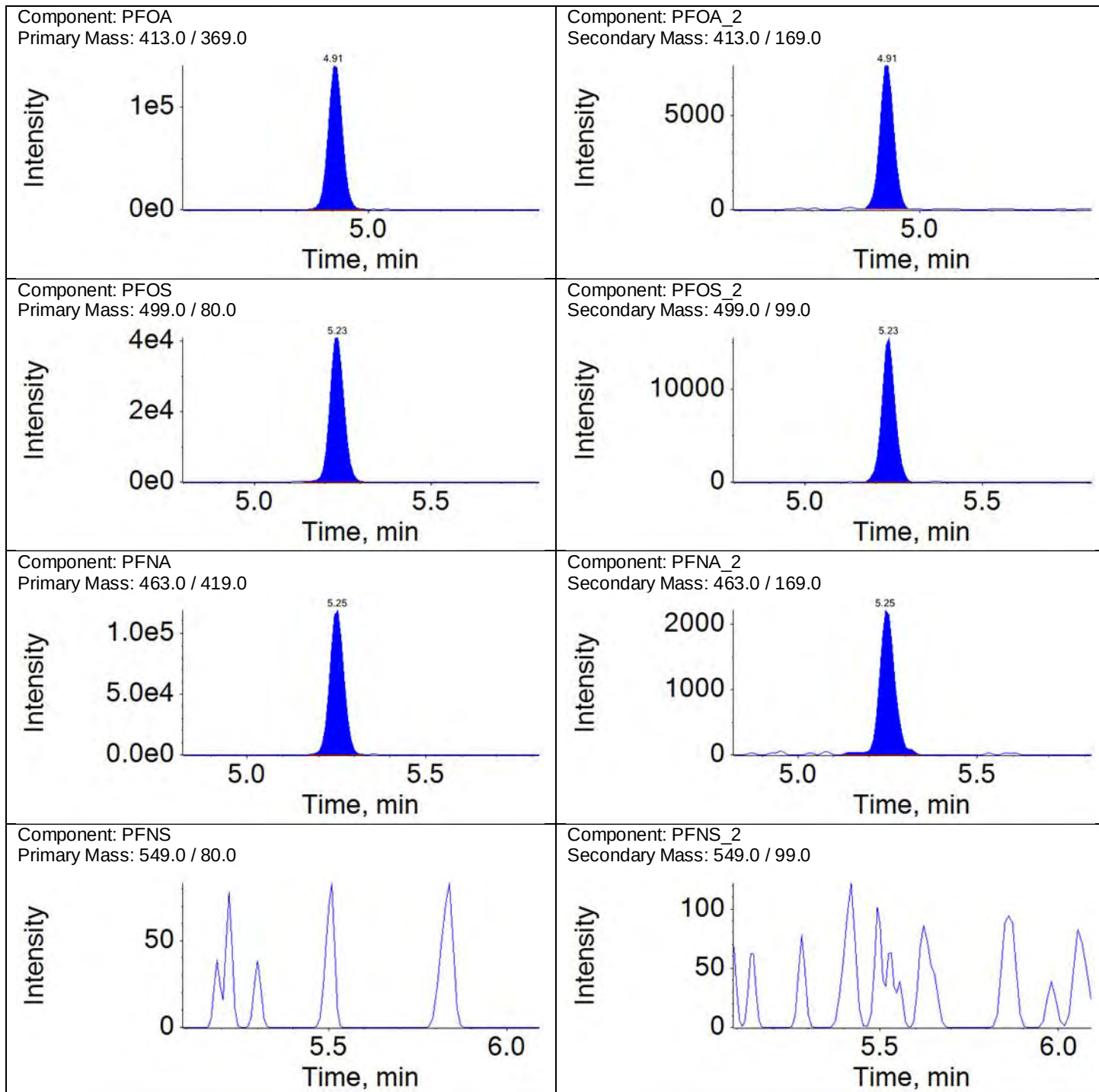
By JPT at 2:53 pm, 11/7/18

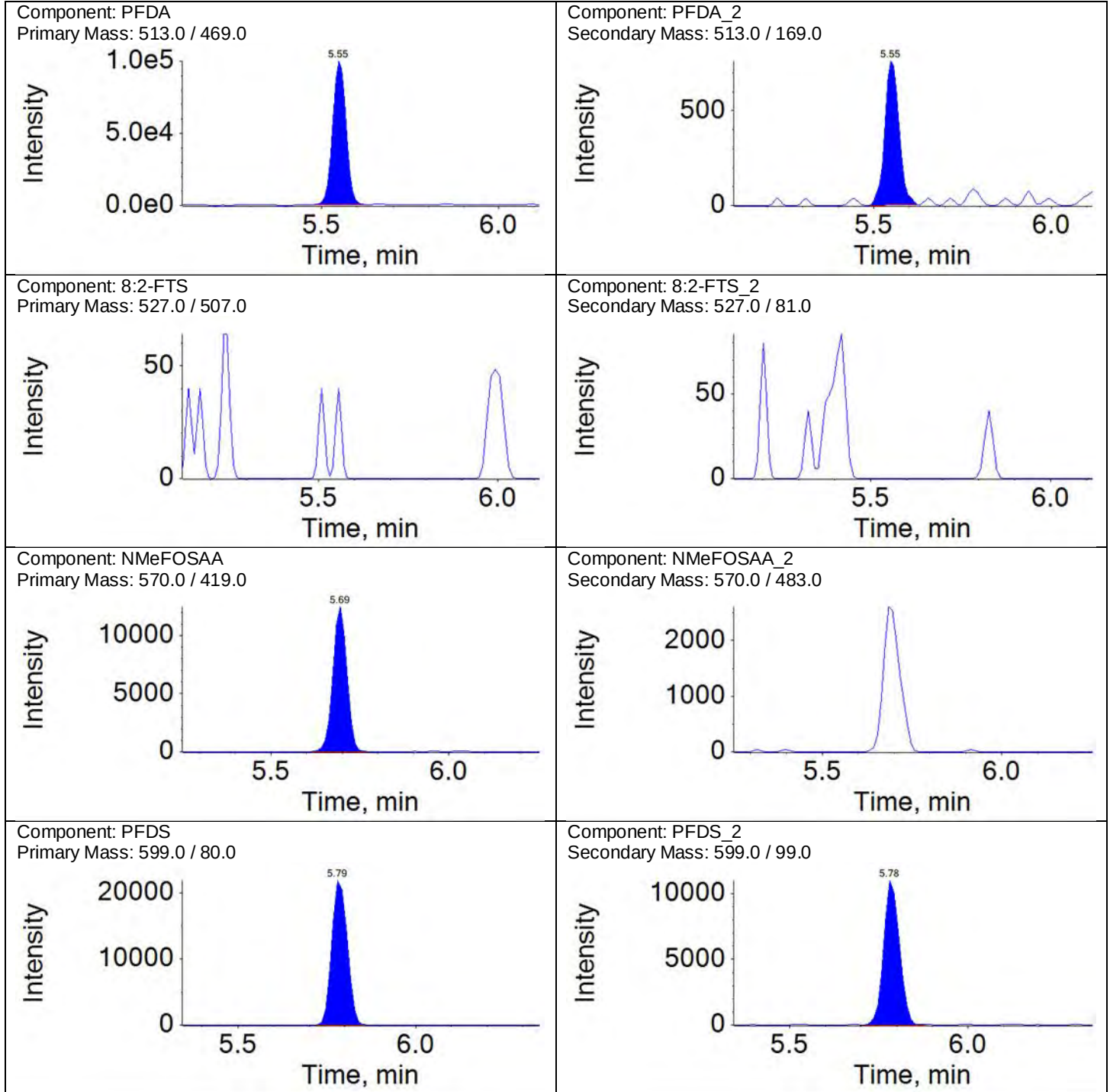
REVIEWED

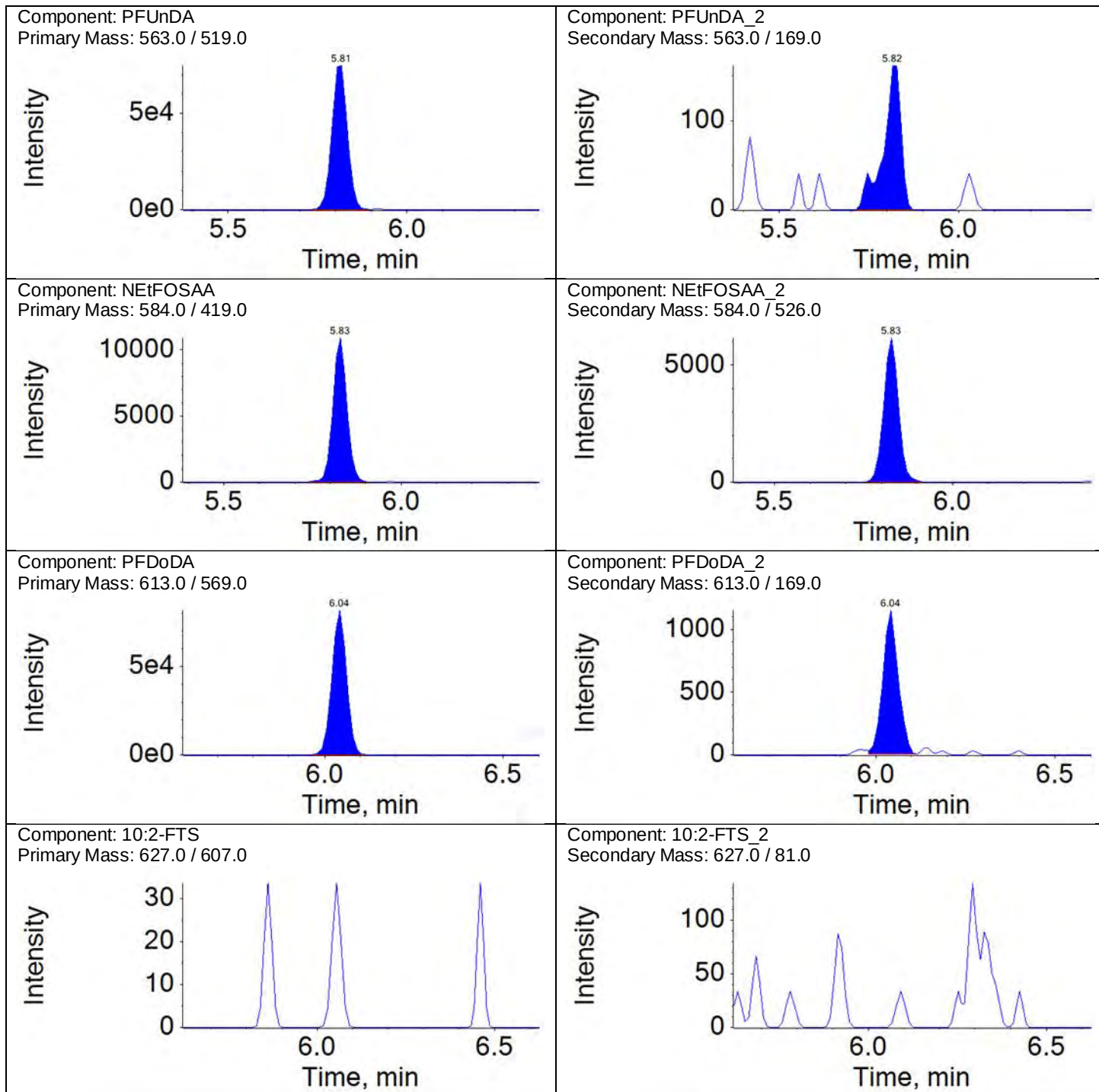
By umar at 5:23 pm, 11/9/18

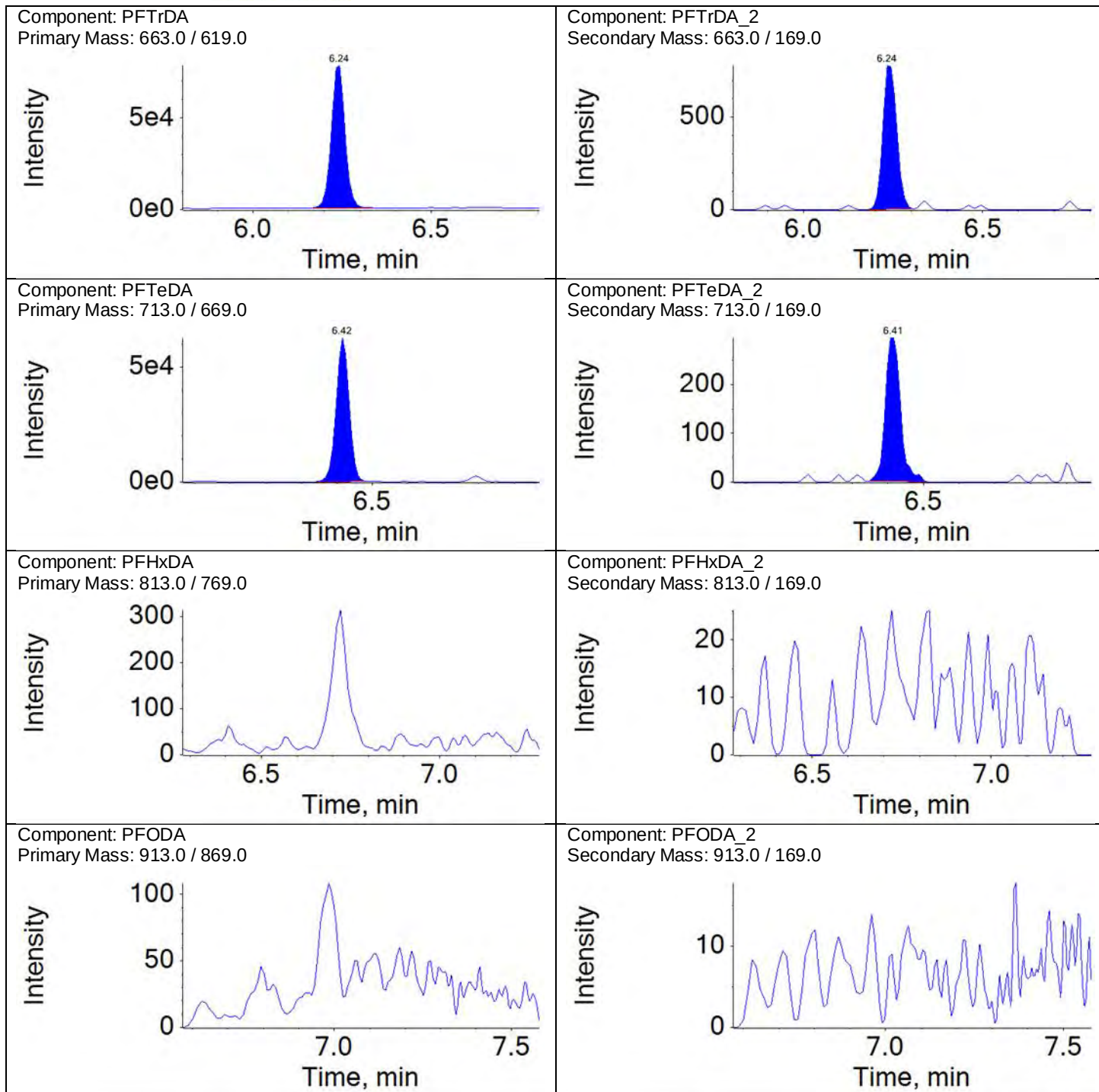












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	Reference 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	

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

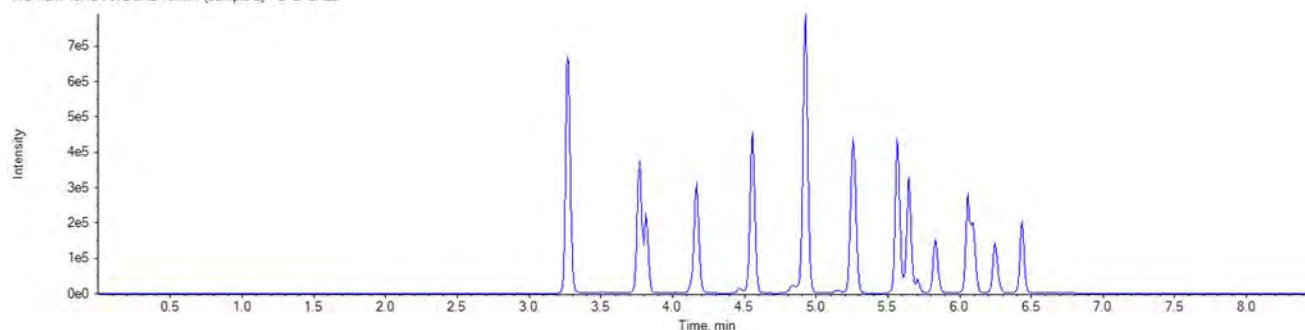
Sample Name: L+B CAL3 Instrument Name: LM27631 File Name: 18NOV07DCAL-19.wiff

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	
PFTDA	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	
PFOA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	

Total Ion Chromatogram

TIC from 18NOV07DCAL-19.wiff (sample 2) - L+B CAL3

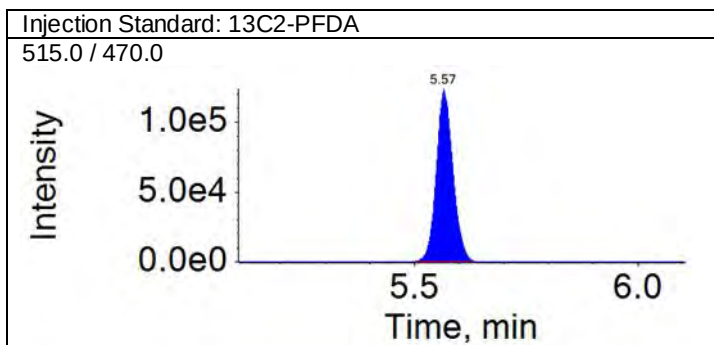
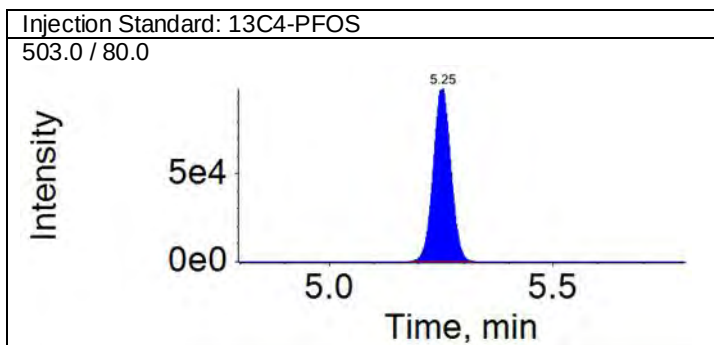
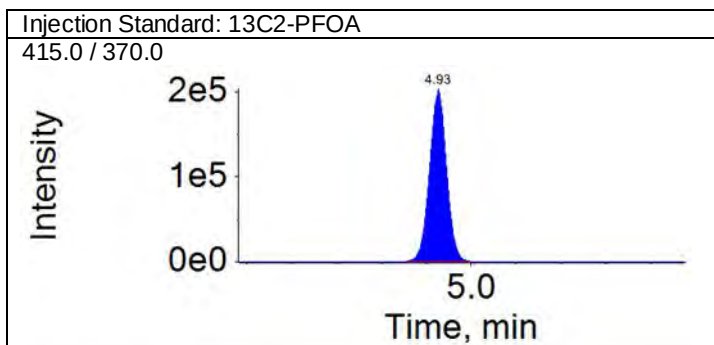
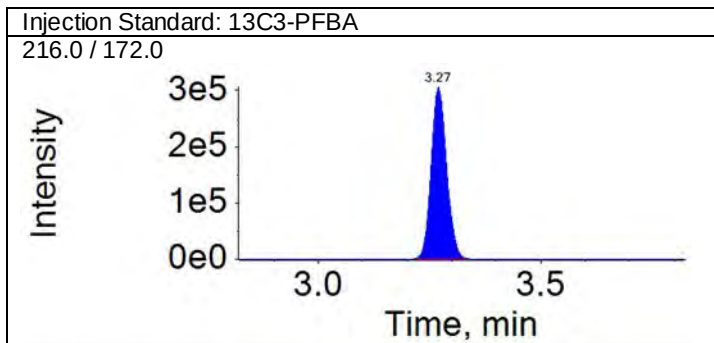


APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

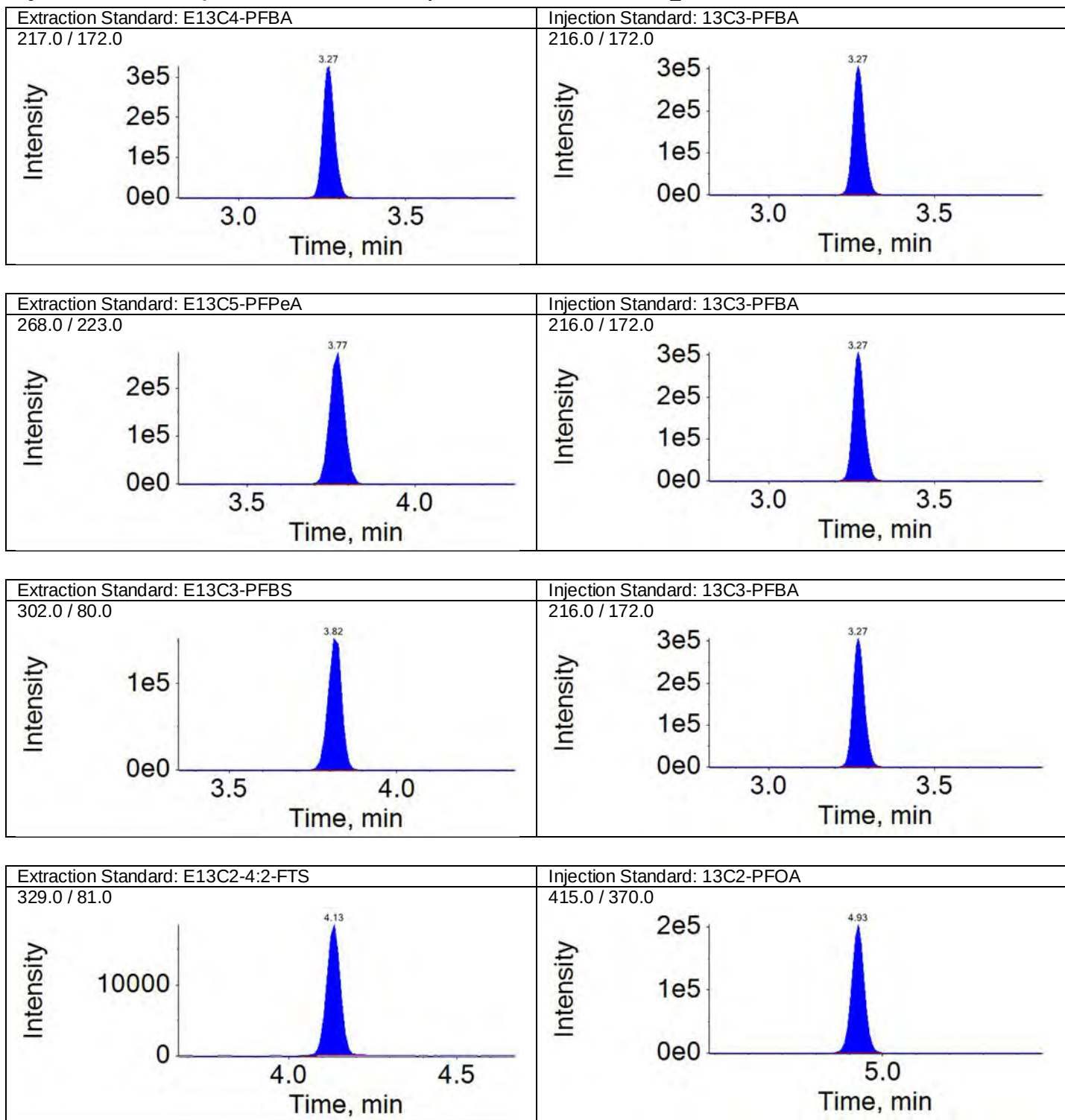
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

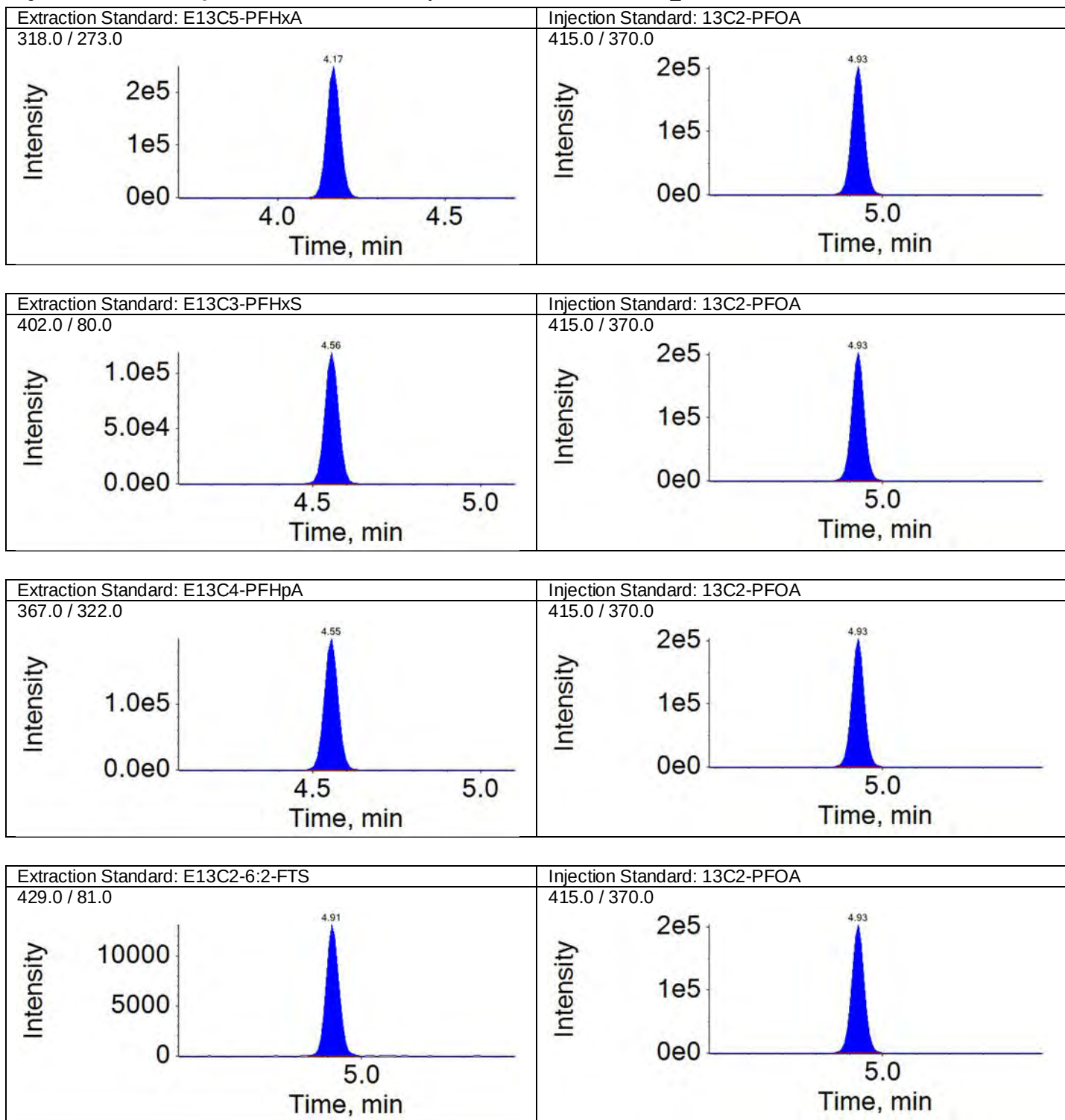
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

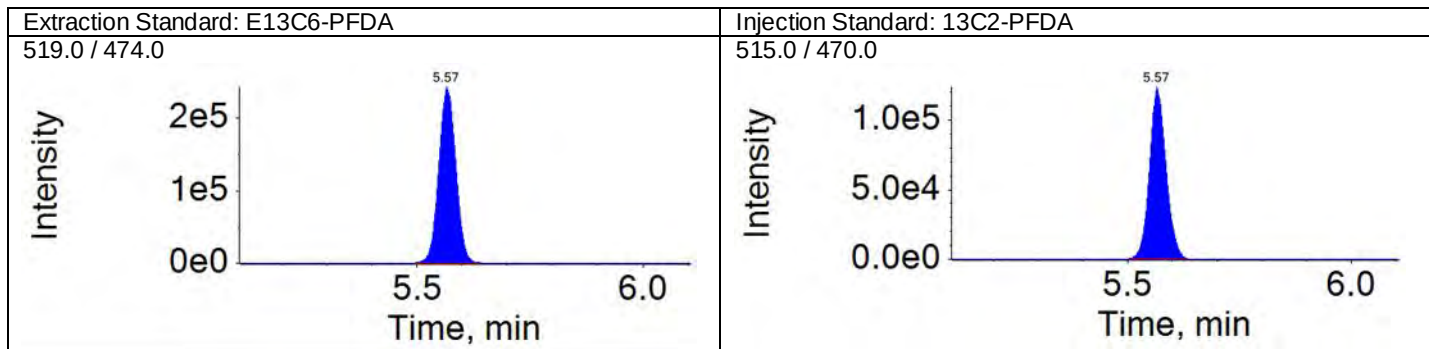
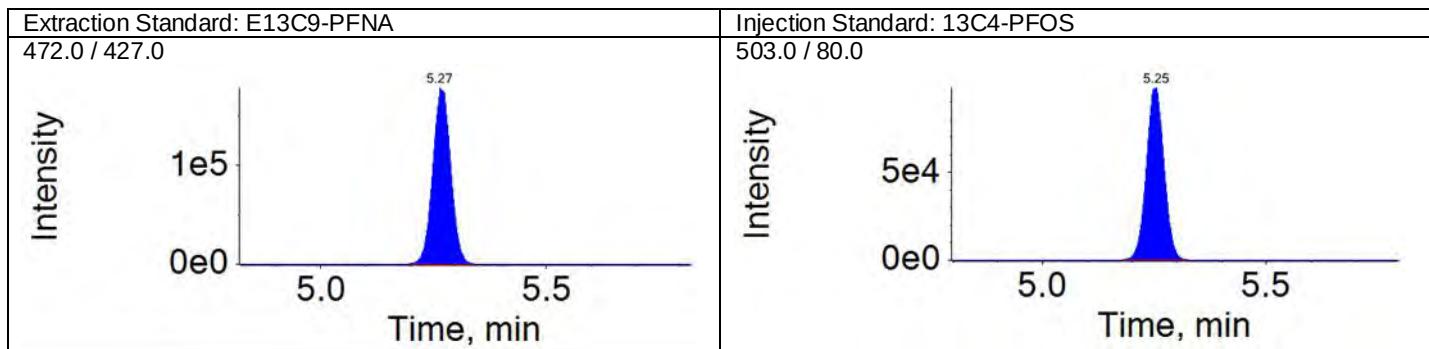
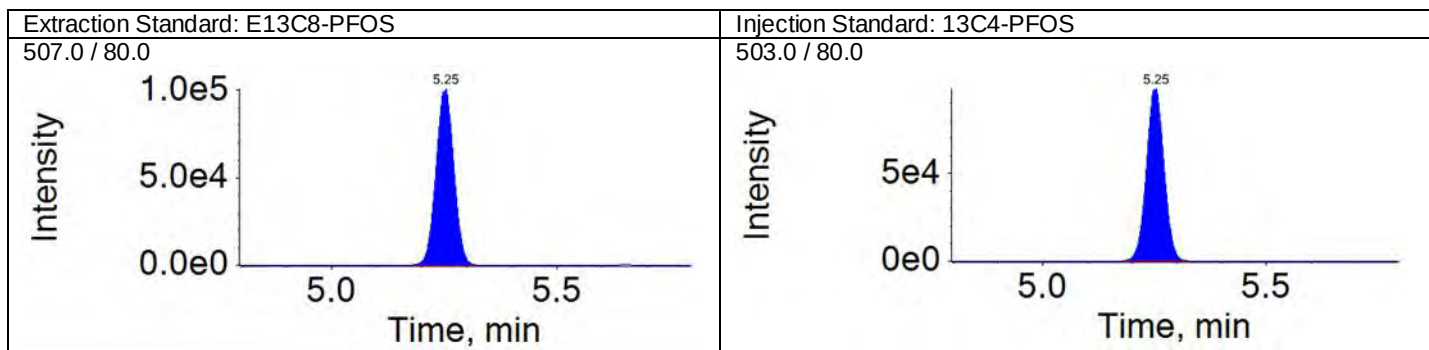
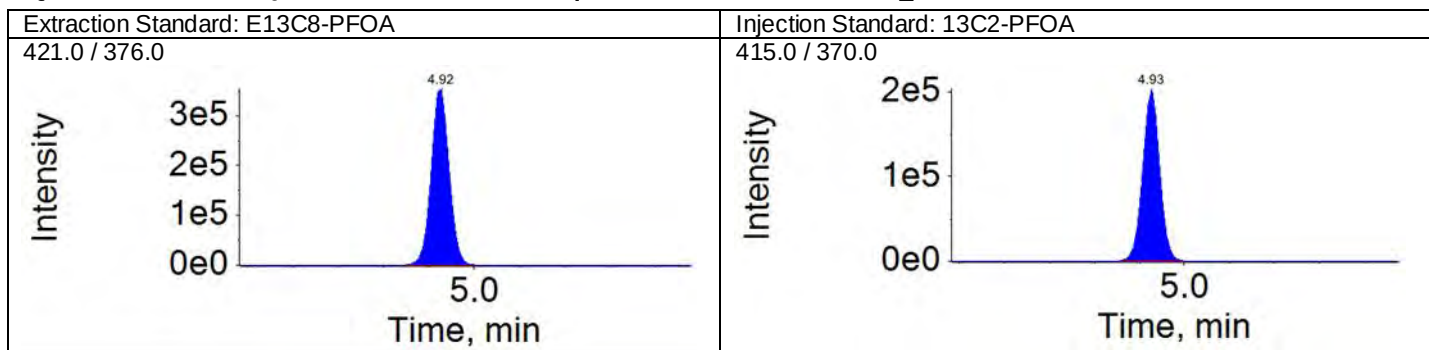
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

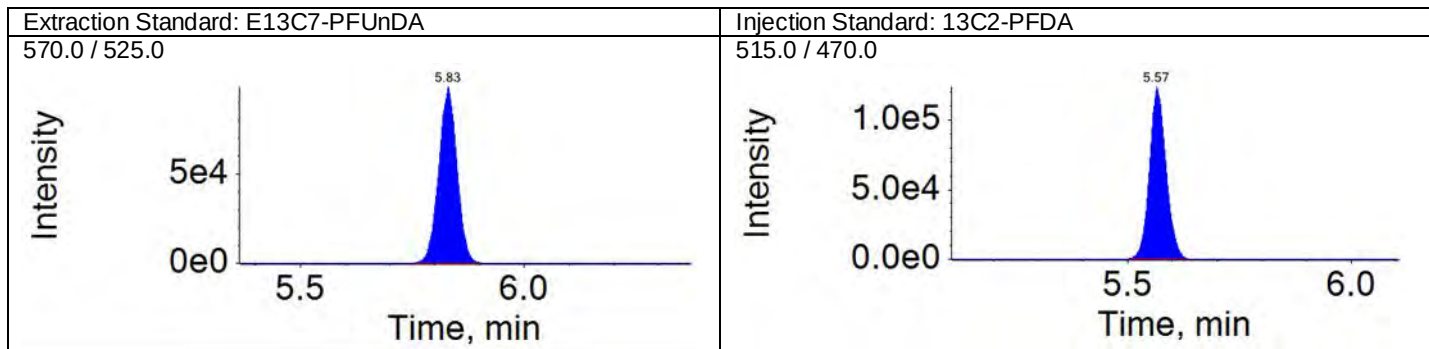
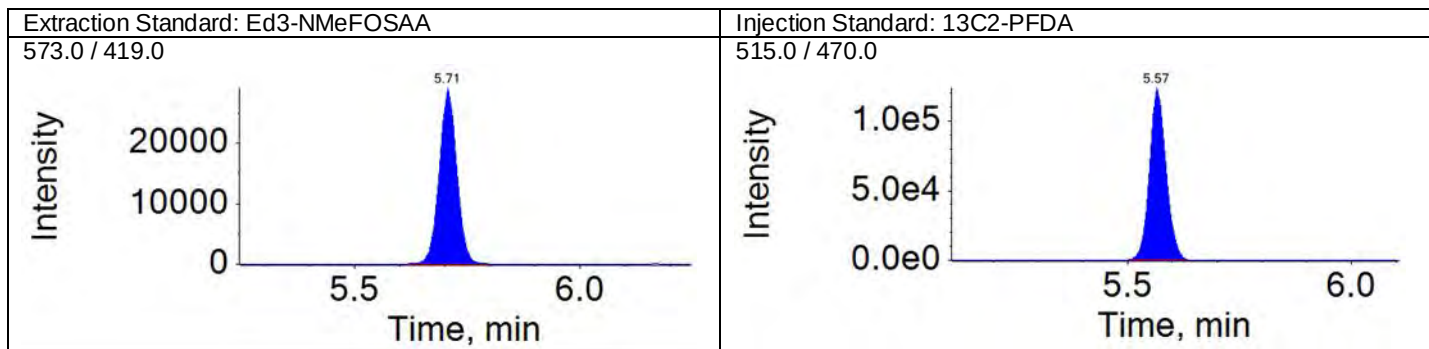
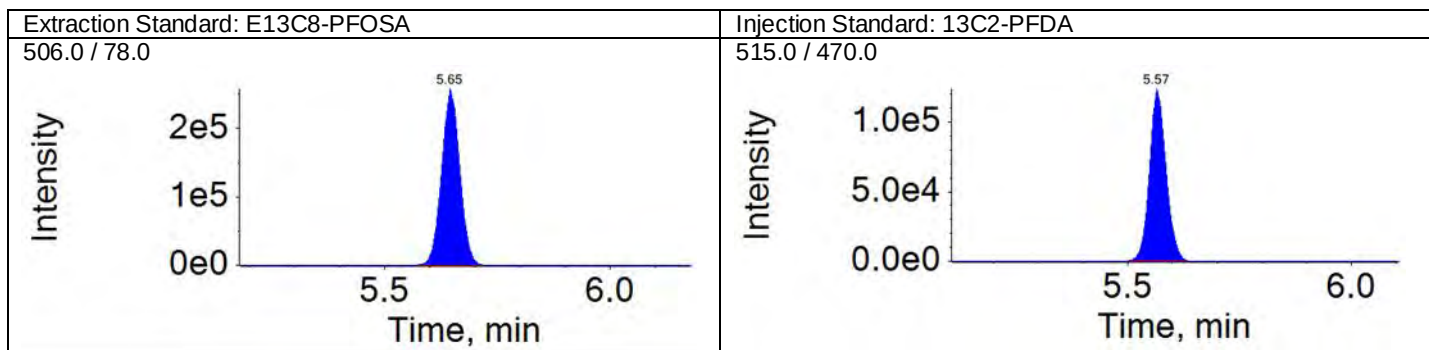
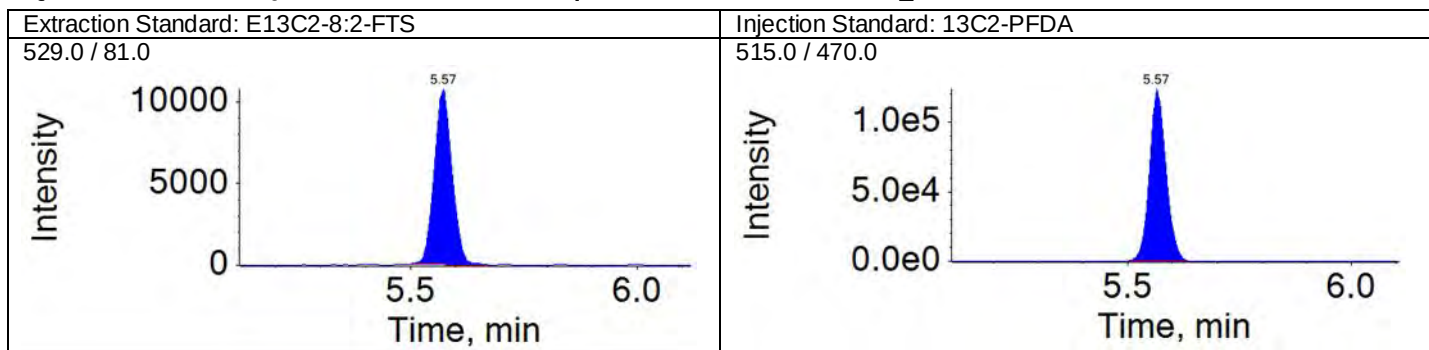
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:24 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

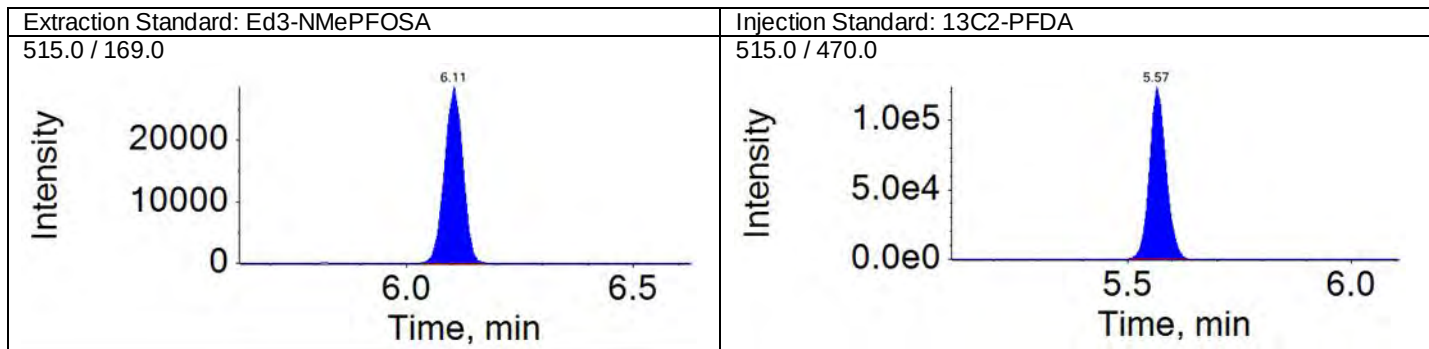
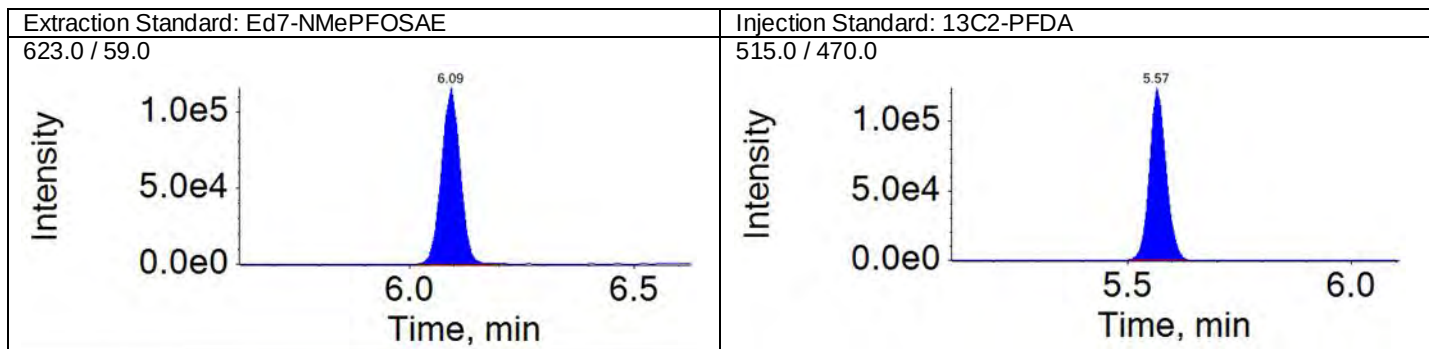
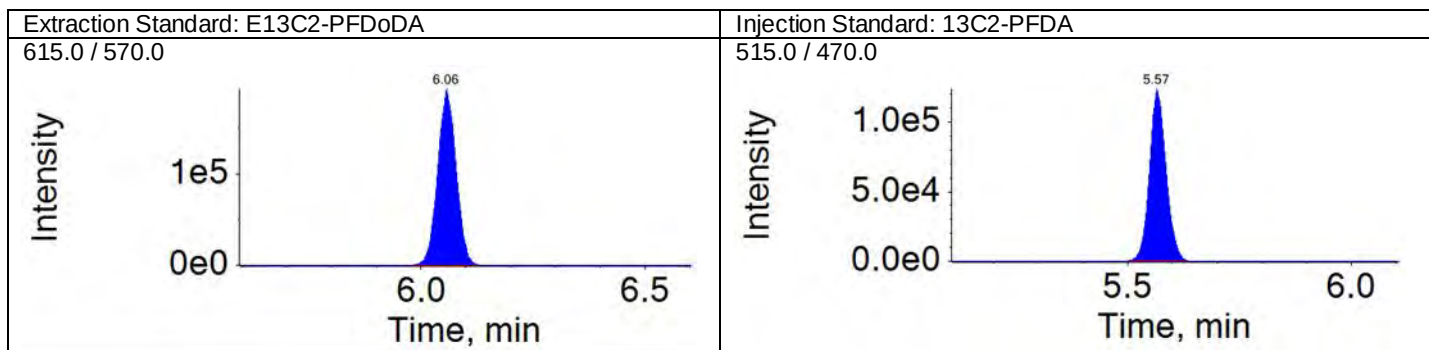
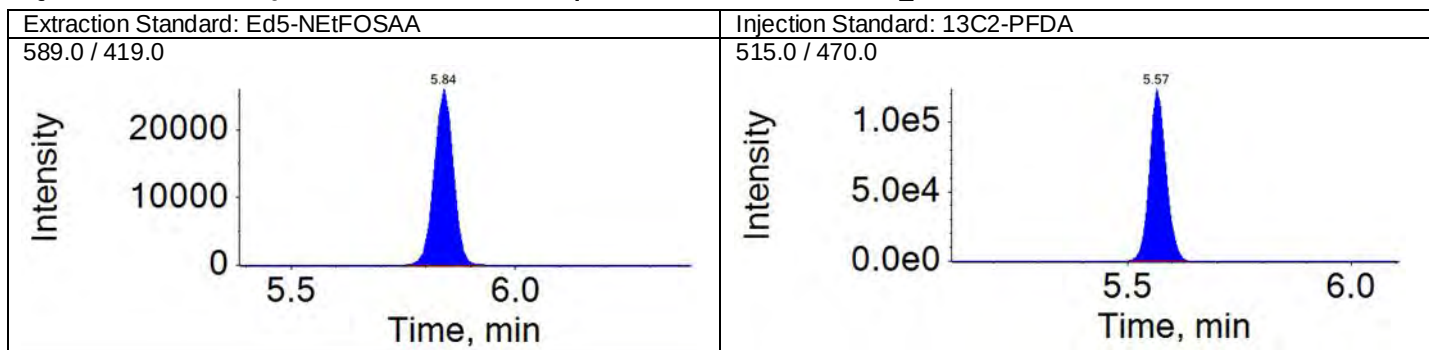
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:24 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

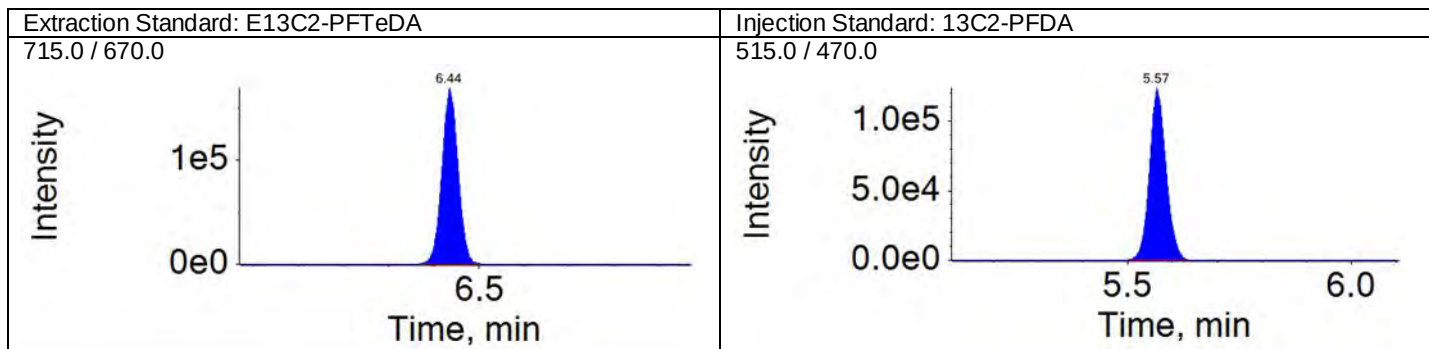
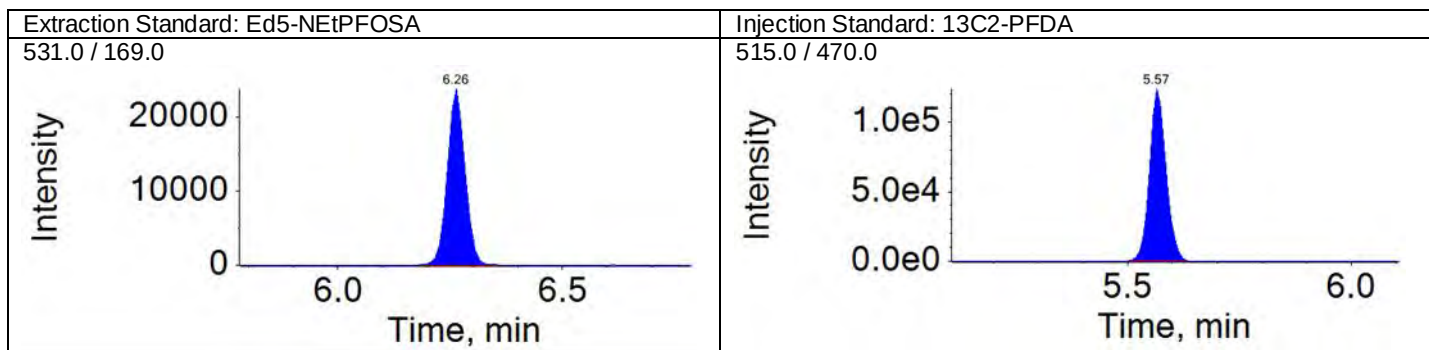
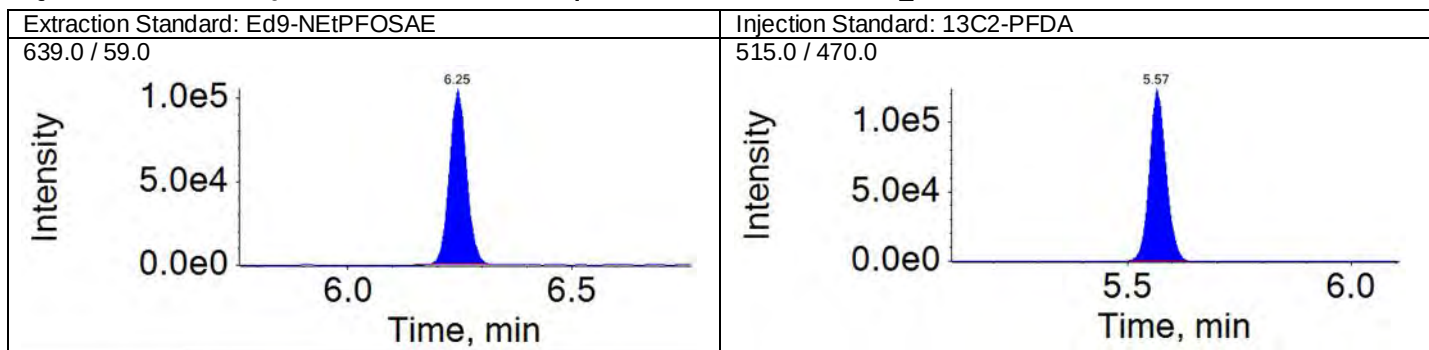
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:24 pm, 11/9/18

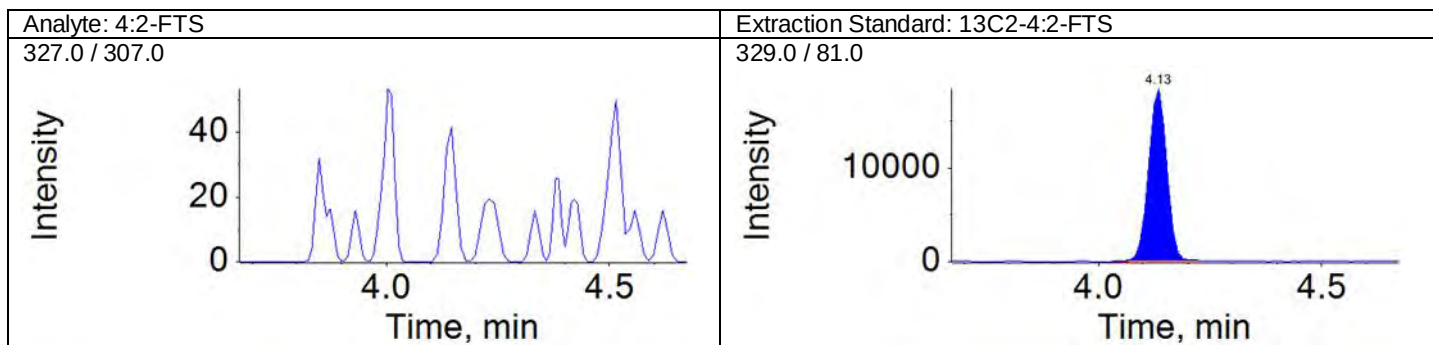
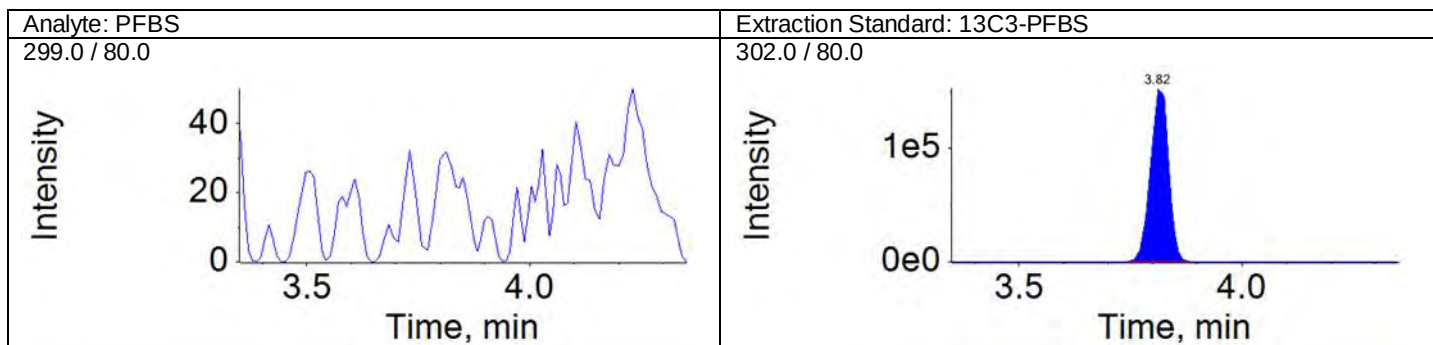
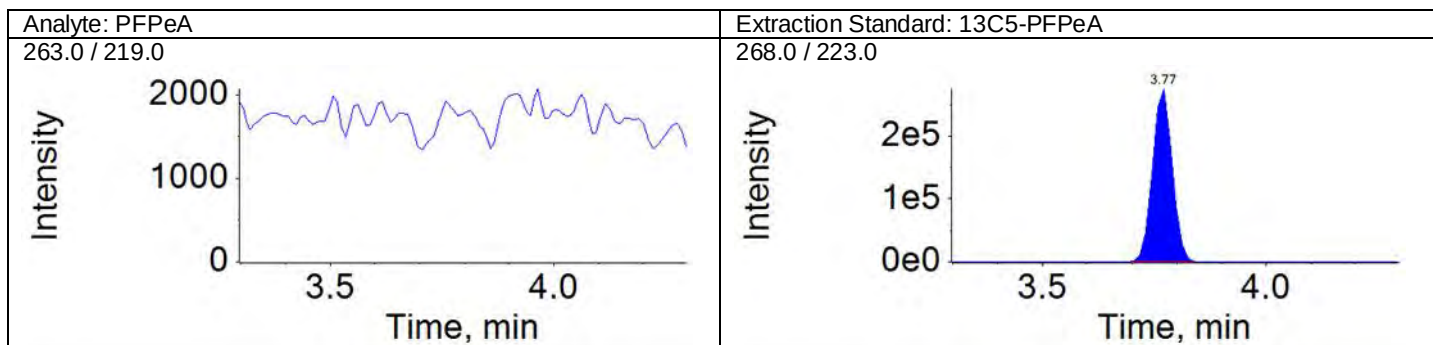
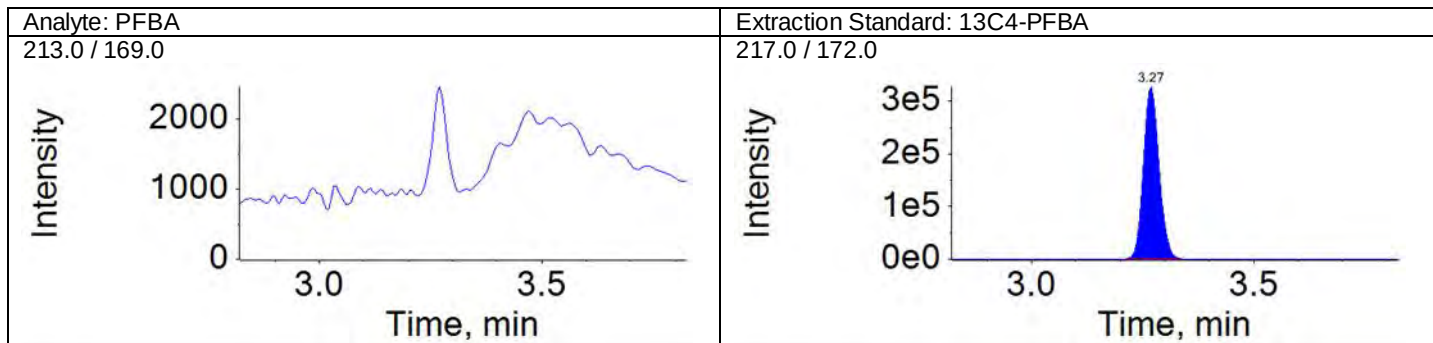
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



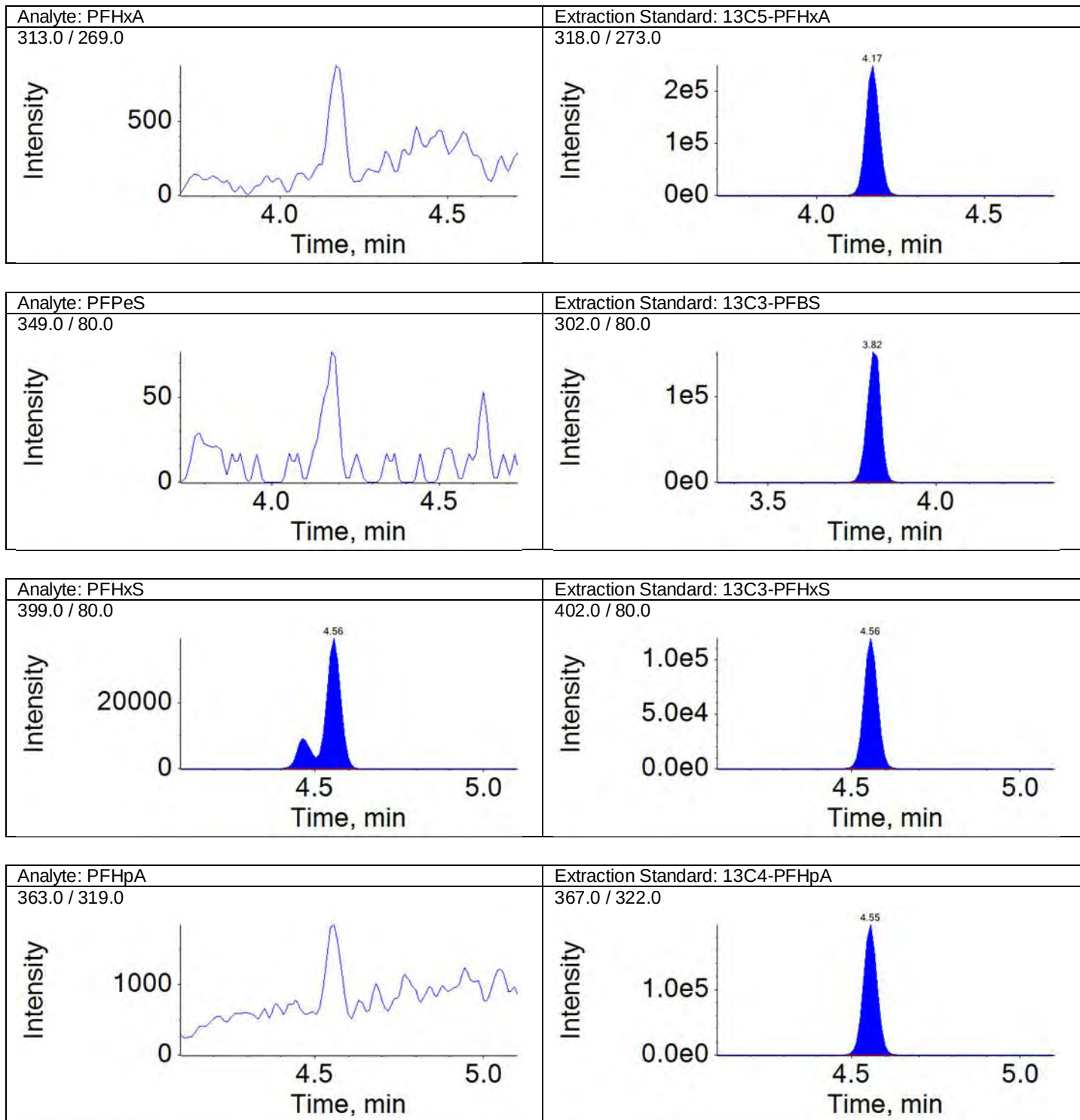
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

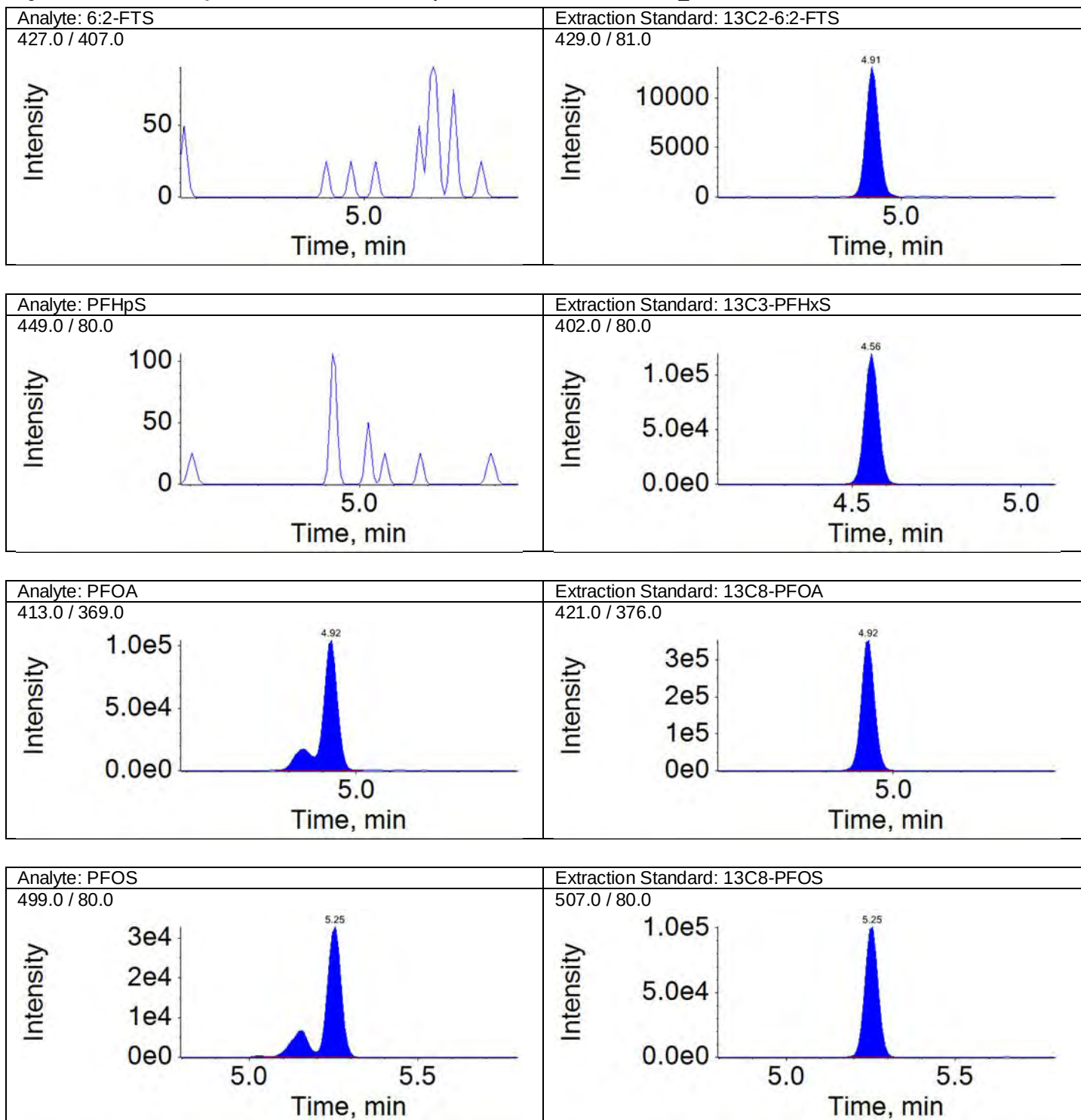
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

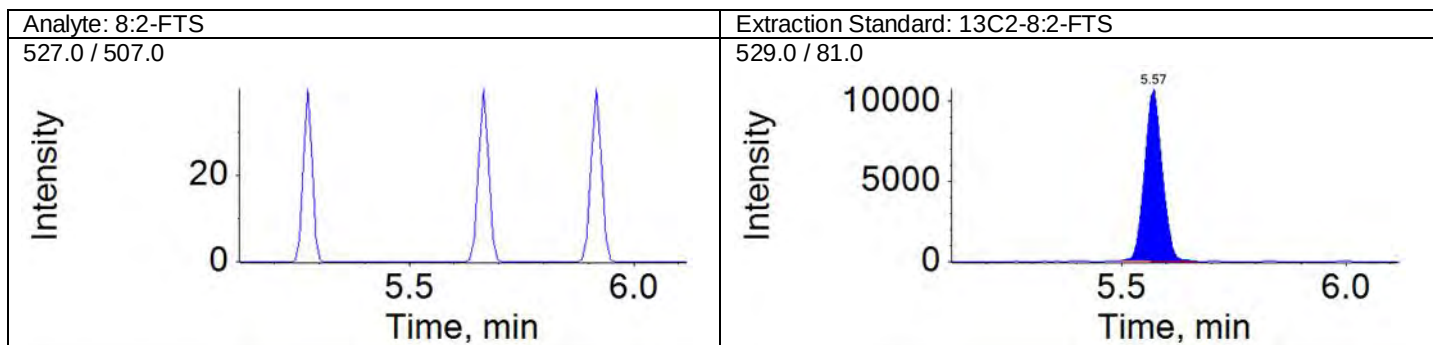
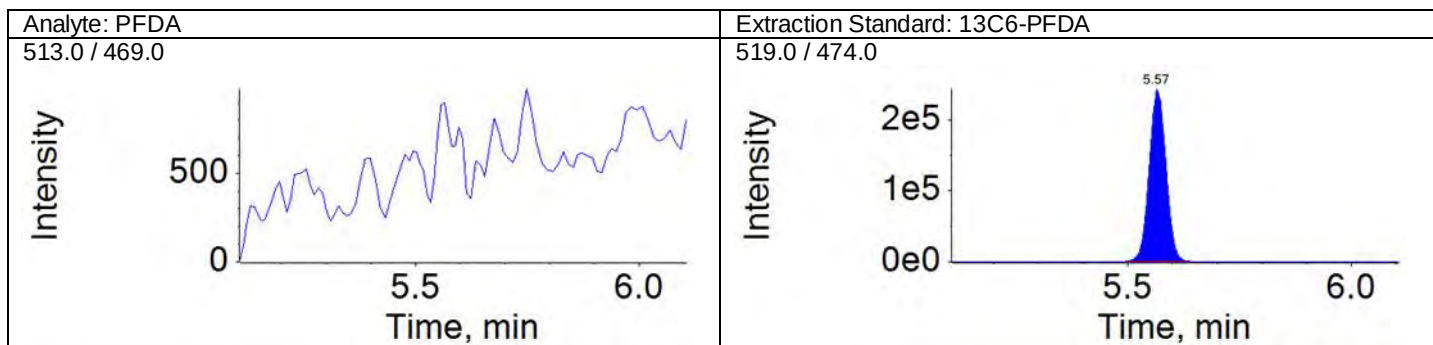
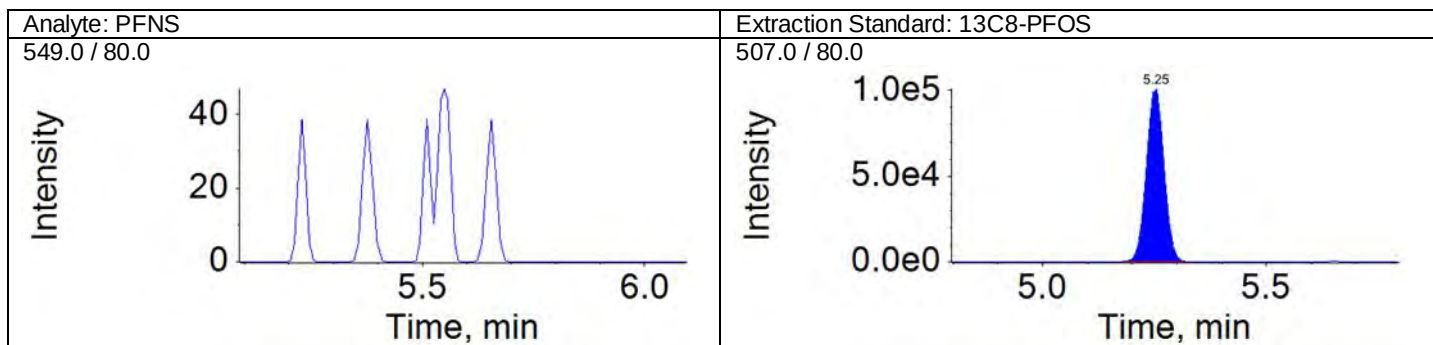
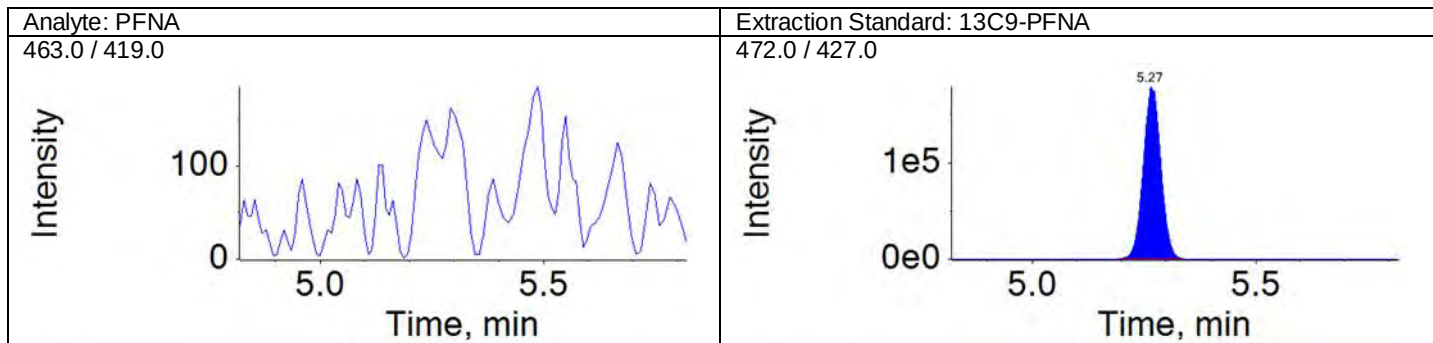
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

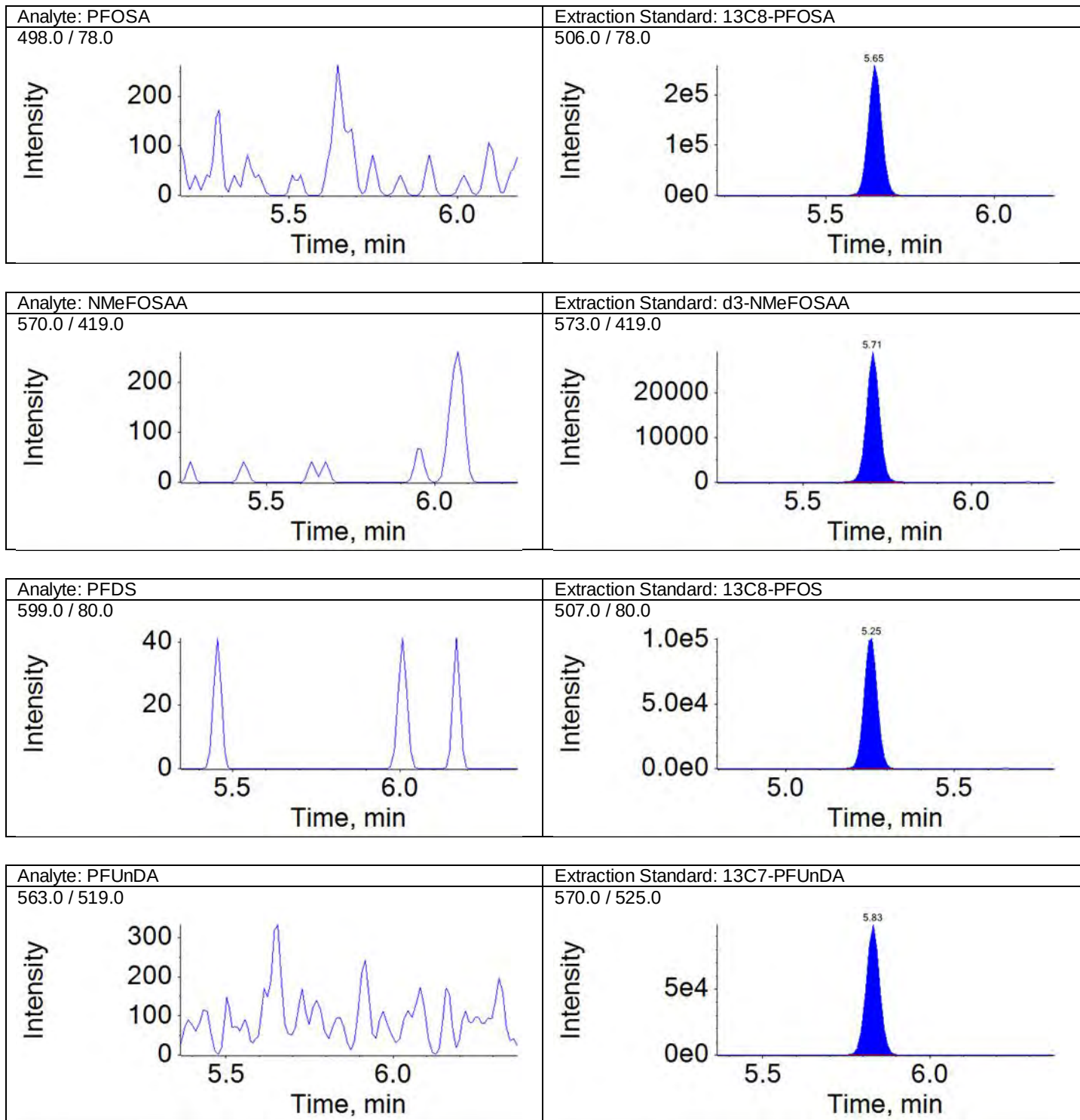
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

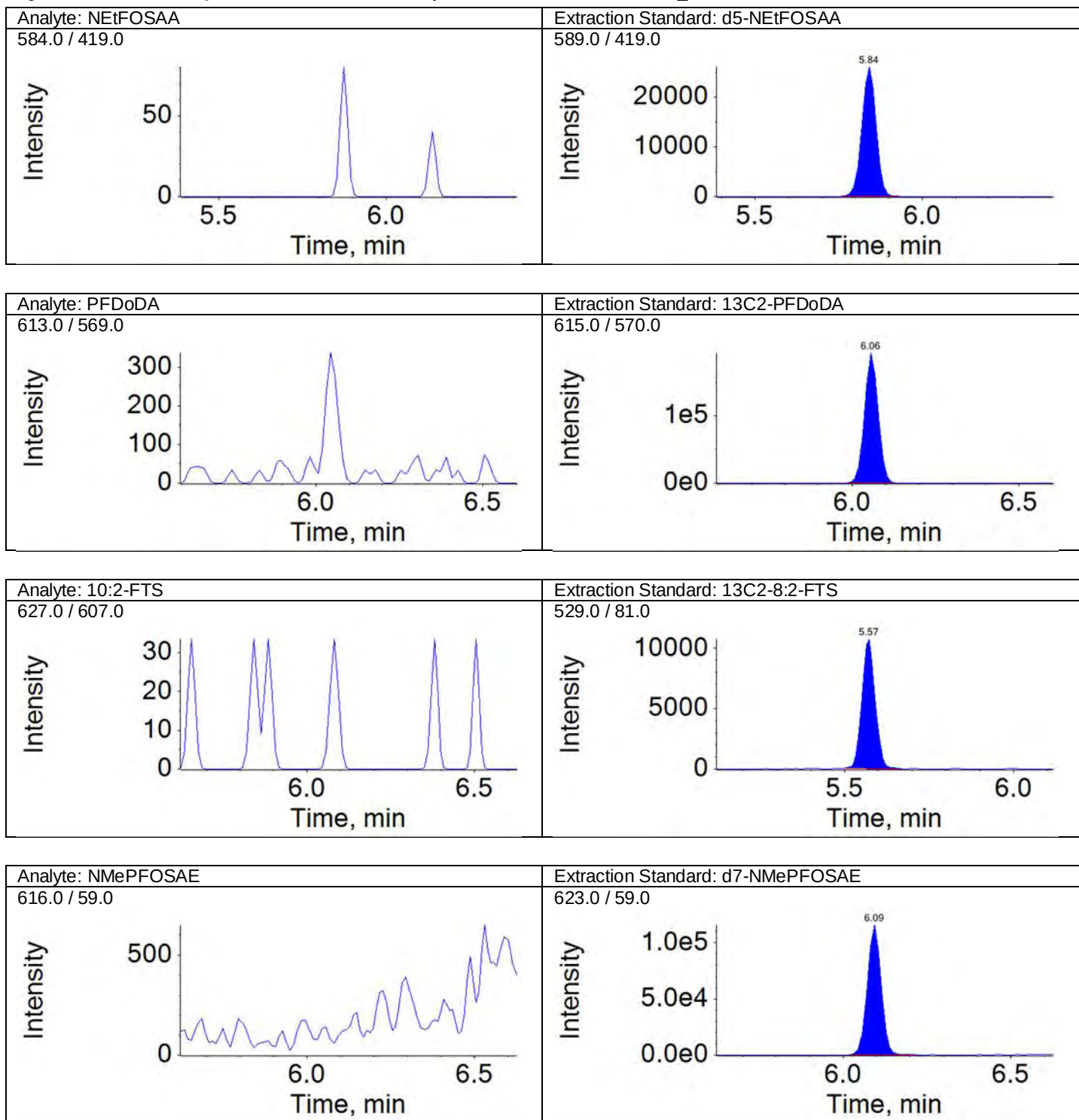
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

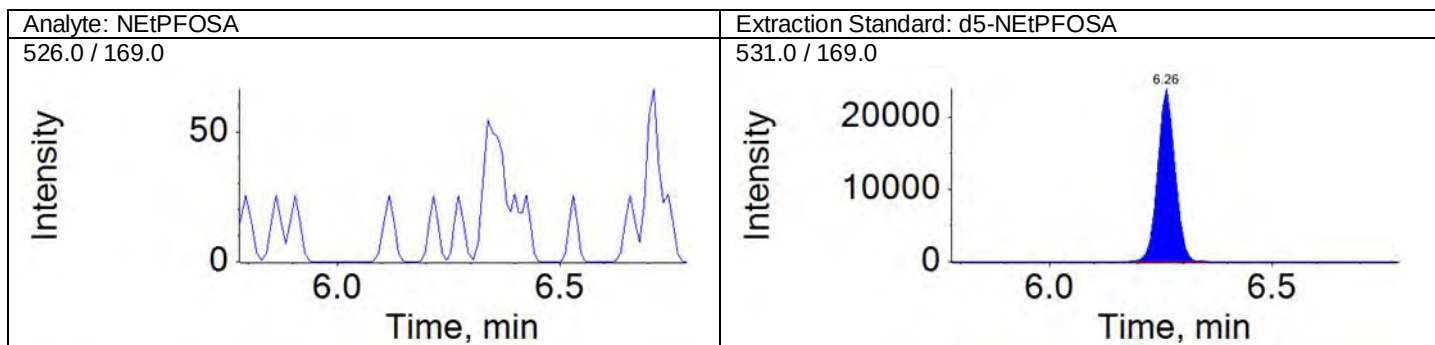
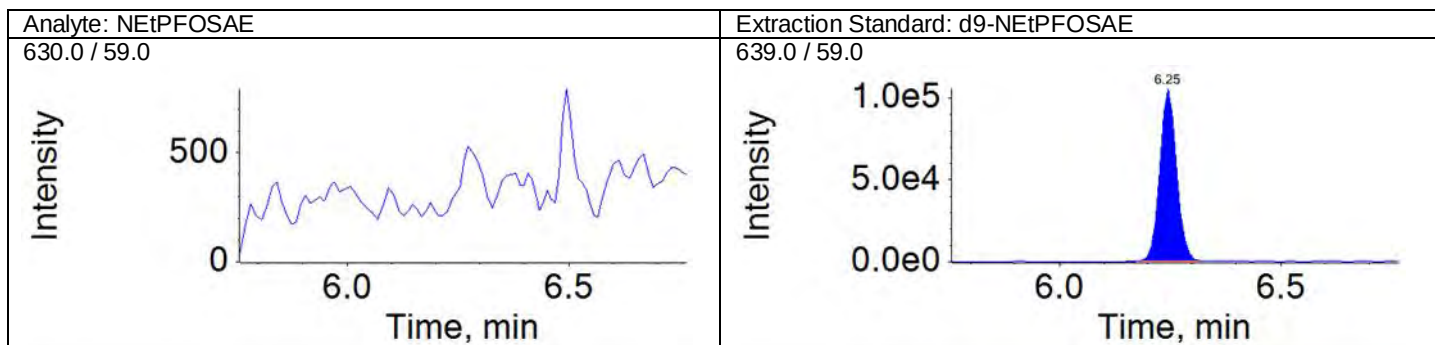
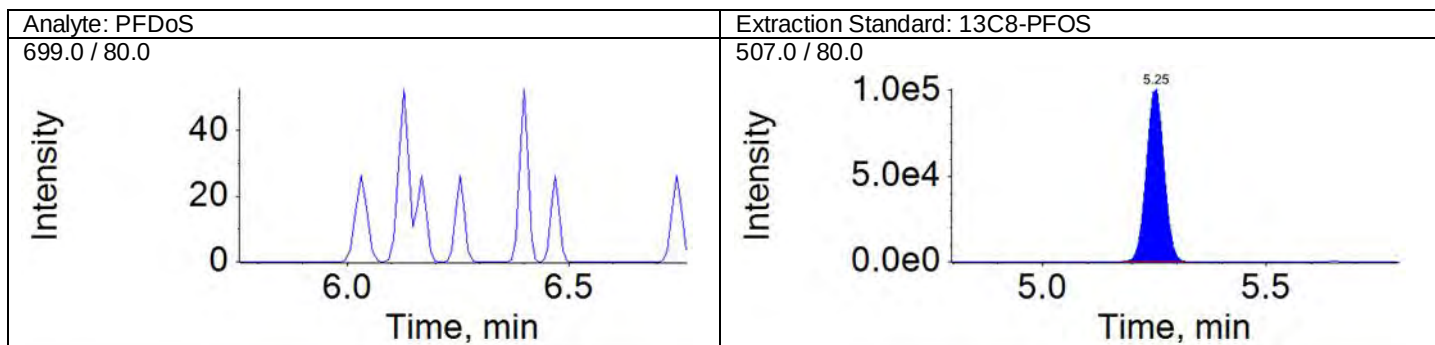
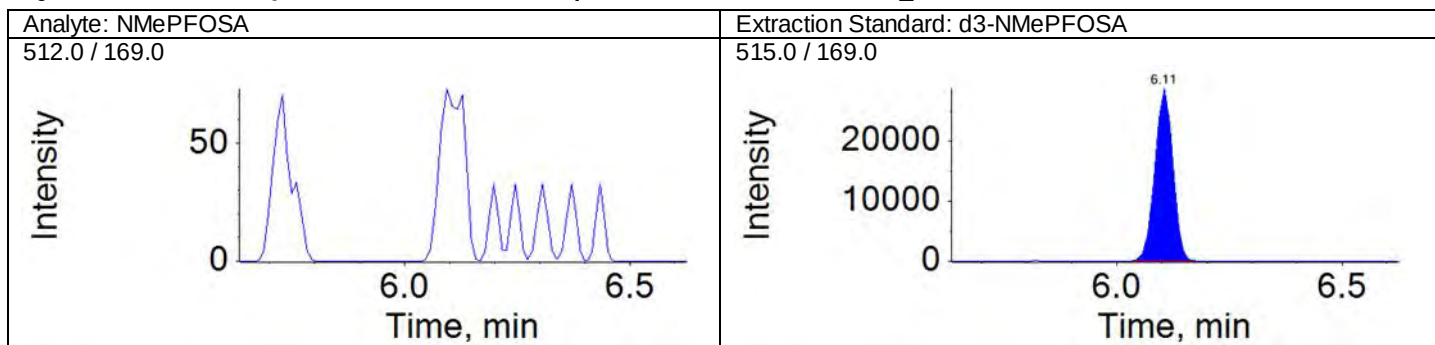
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

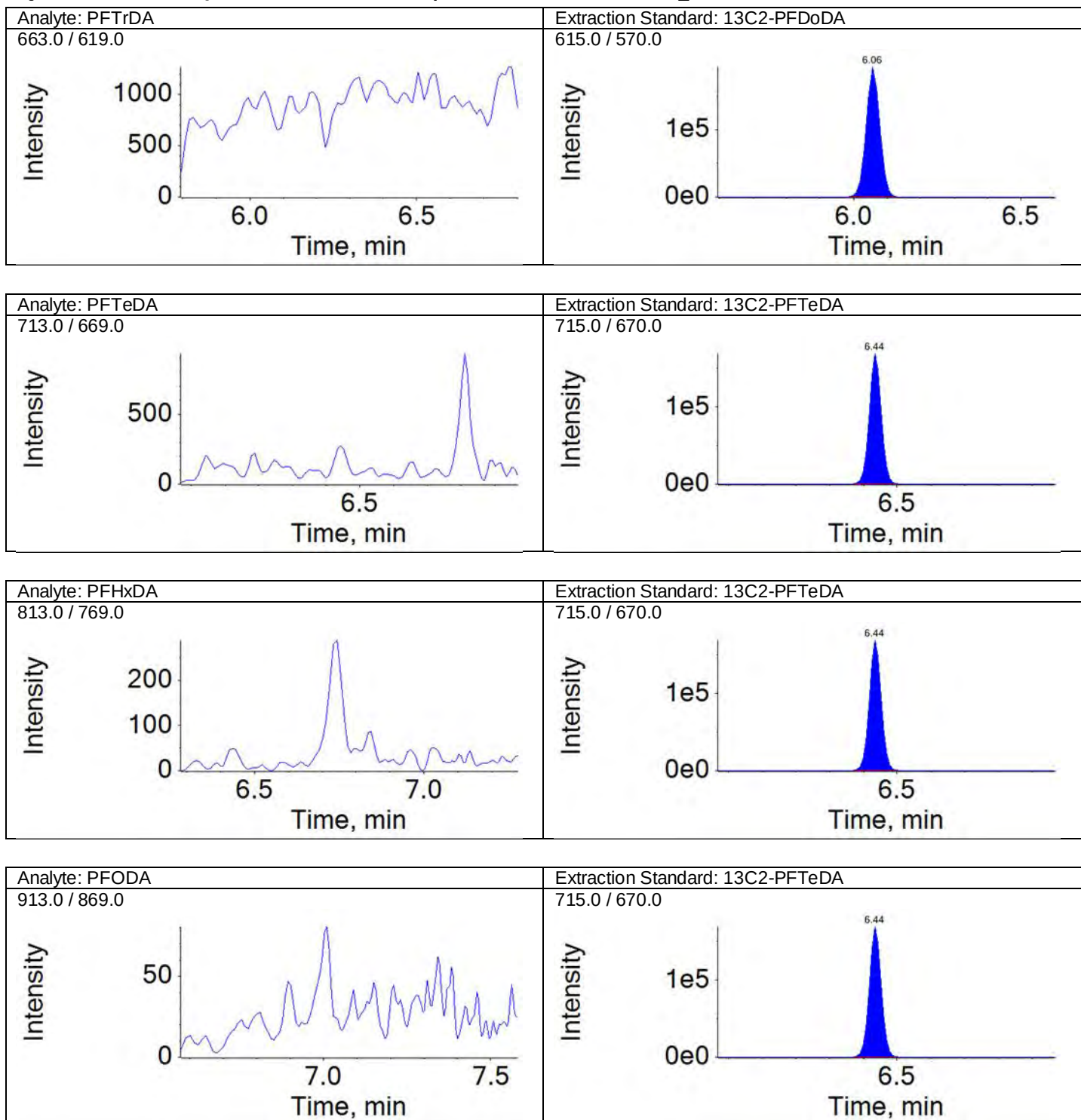


ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

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

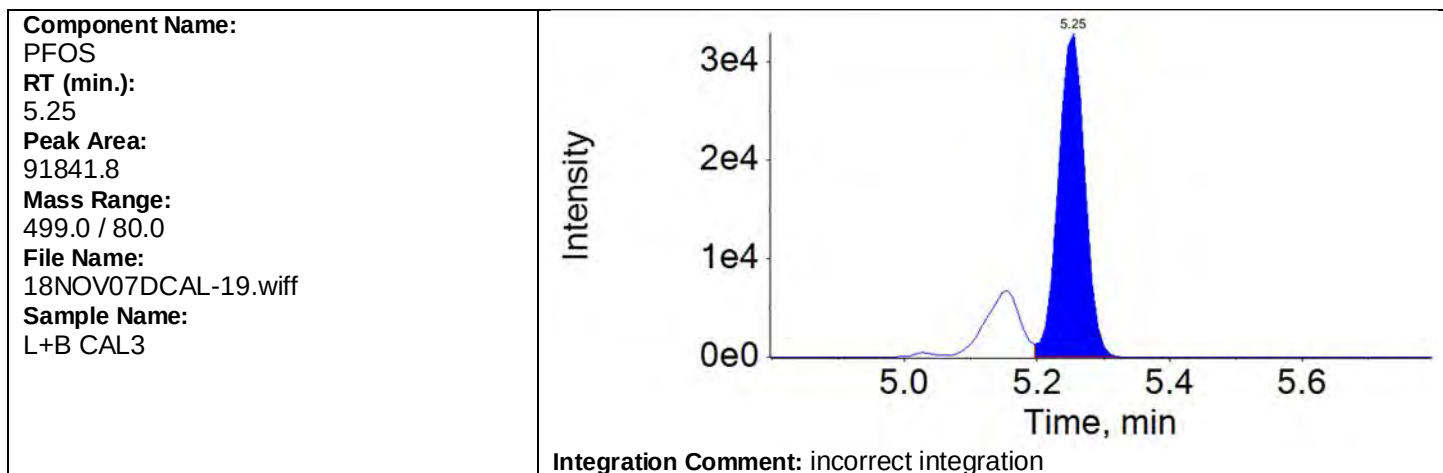
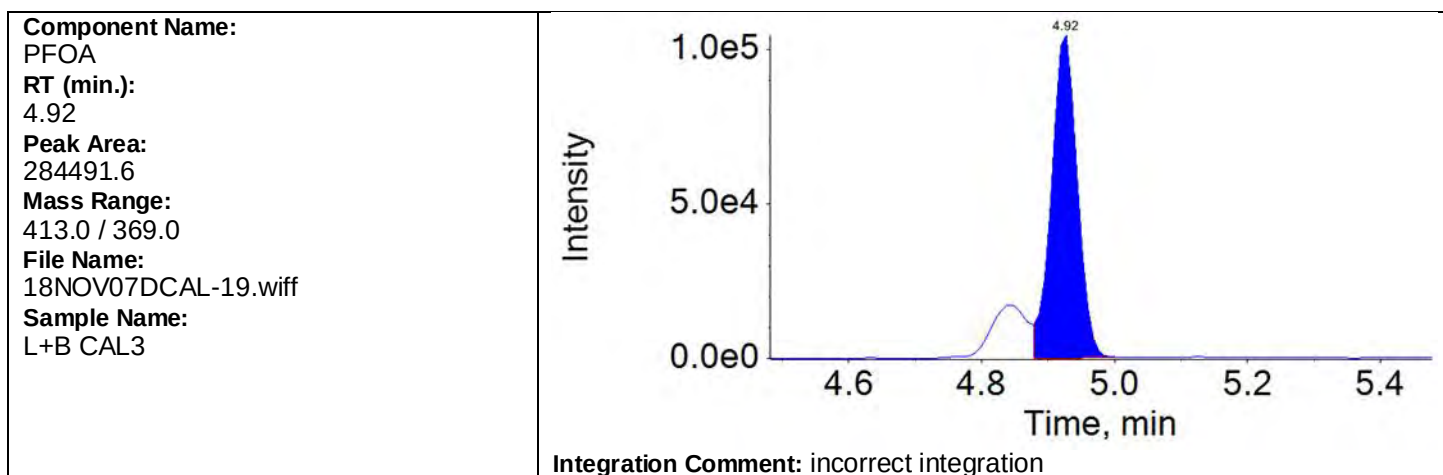
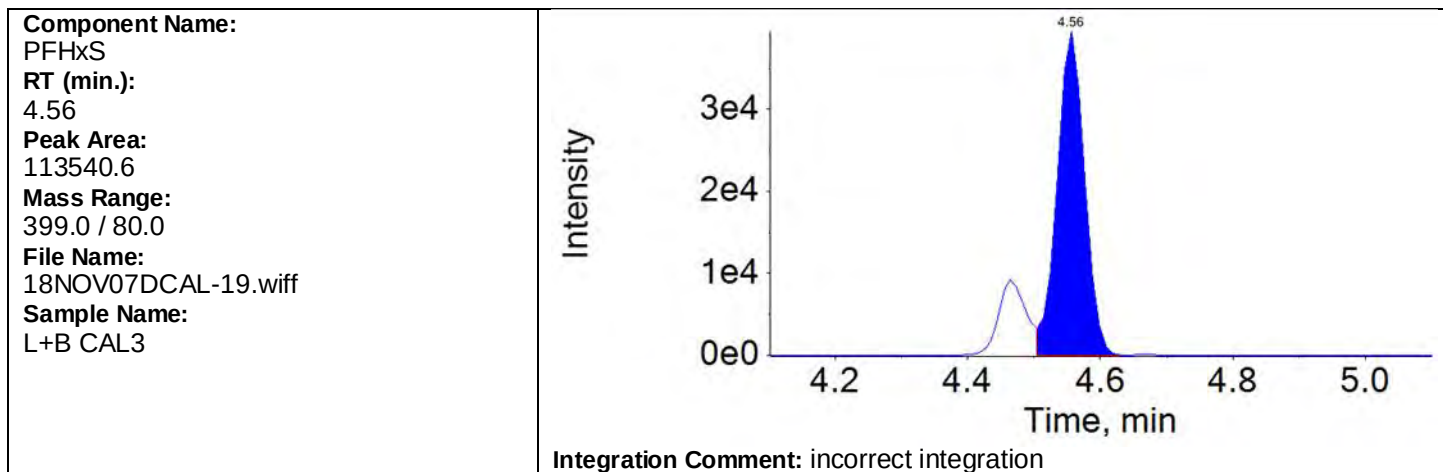
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

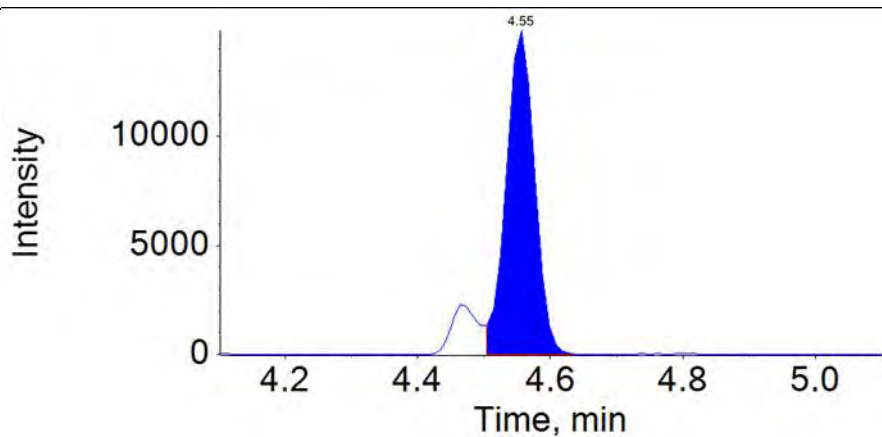
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13



Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

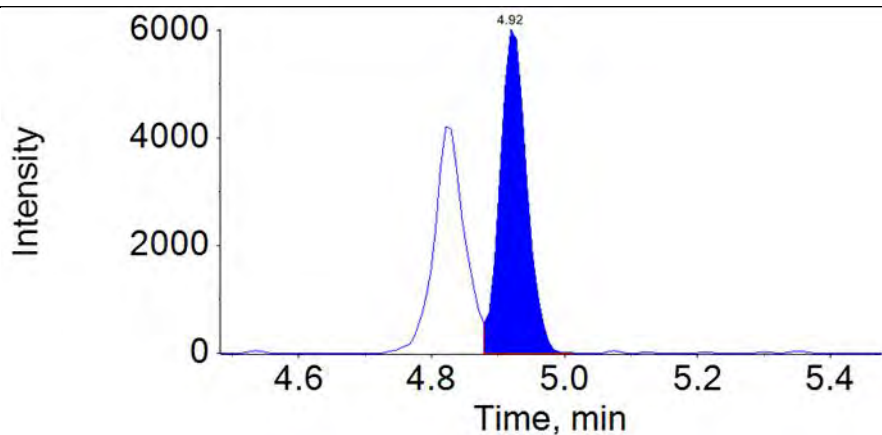
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

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



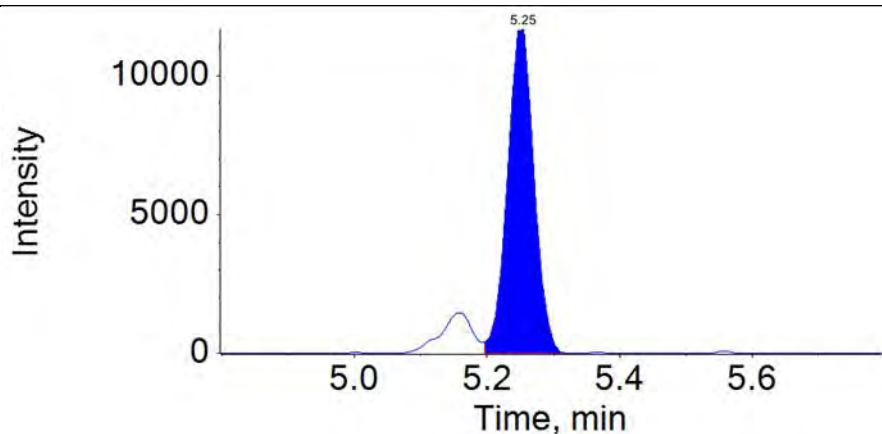
Integration Comment: incorrect integration

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

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

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

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Ion Ratio Report

Sample Name: L+B CAL3

Instrument Name: LM27631

File Name: 18NOV07DCAL-19.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	1.0000	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3576	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0115	N/A		50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	4.56	1.00	140012.1	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	50830.8	M	0.3569	0.3630	2	50	
PFHpA	N/A	N/A	N/A	A	1.0000	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0577	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	N/A	N/A	N/A	A	1.0000	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3950	N/A		50	
PFOA	4.92	1.00	347563.0	M	1.0000	1.0000			
PFOA_2	4.90	0.99	30355.3	M	0.0635	0.0873	38	50	
PFOS	5.25	1.00	117649.0	M	1.0000	1.0000			
PFOS_2	5.25	1.00	37584.5	M	0.3494	0.3195	-9	50	
PFNA	N/A	N/A	N/A	A	1.0000	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0207	N/A		50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0057	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	N/A	N/A	N/A	A	1.0000	N/A			
PFDS_2	N/A	N/A	N/A	A	0.4648	N/A		50	
PFUnDA	N/A	N/A	N/A	A	1.0000	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.6082	N/A		50	
PFDODA	N/A	N/A	N/A	A	1.0000	N/A			
PFDODA_2	N/A	N/A	N/A	A	0.0109	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTTrDA_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

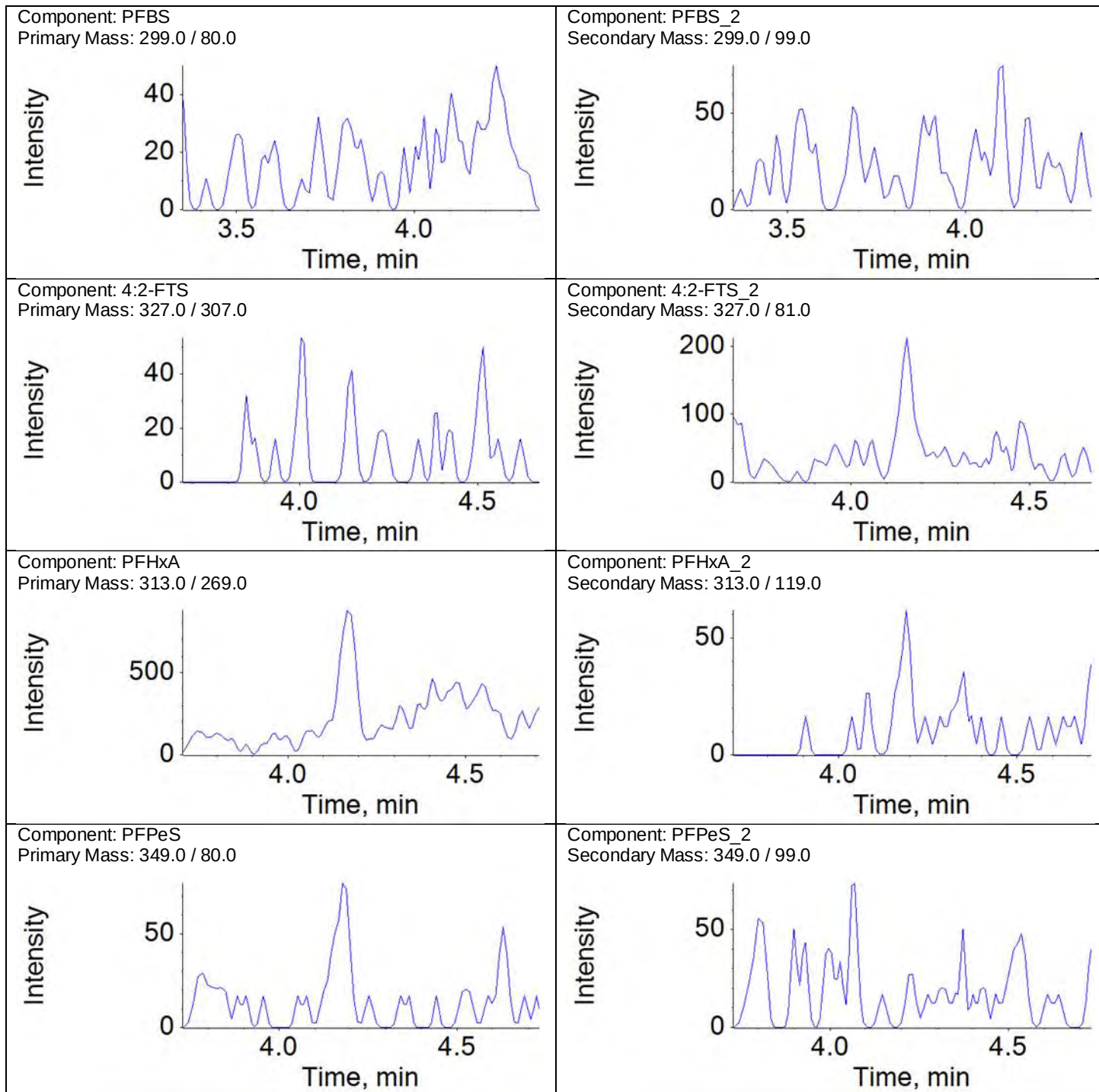
By JPT at 2:54 pm, 11/7/18

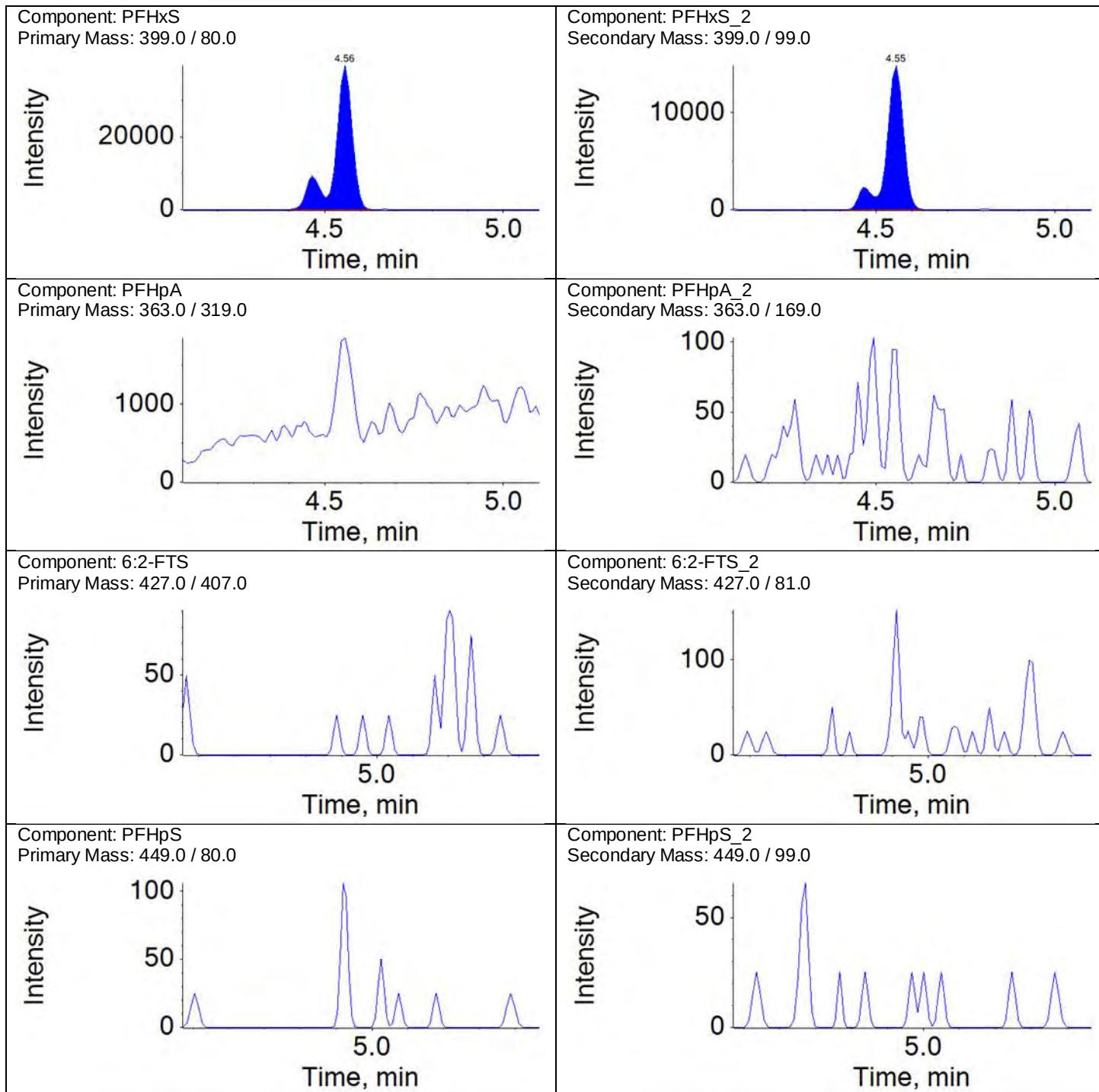
BSI05 Page 642 of 1595

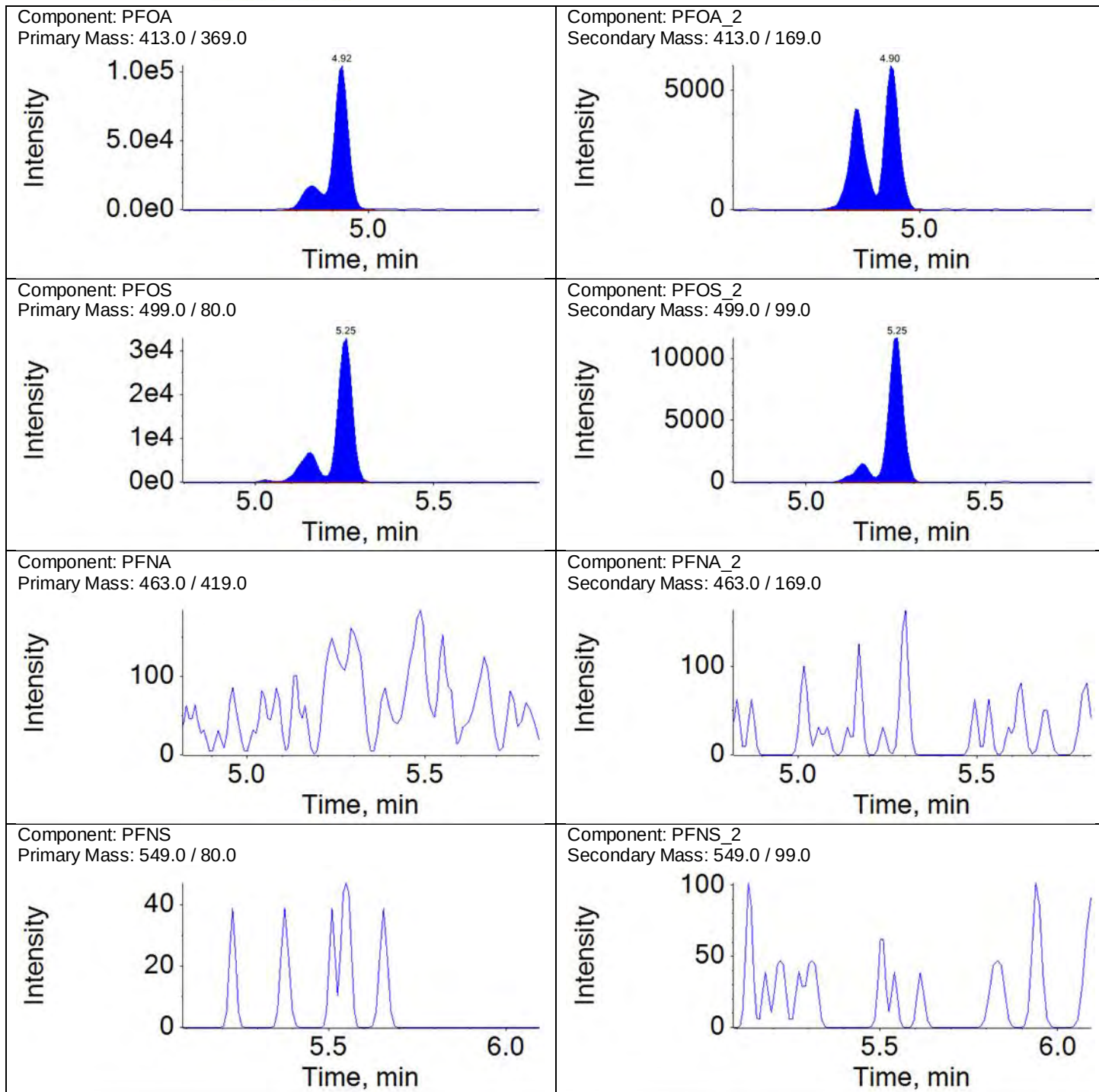
REVIEWED

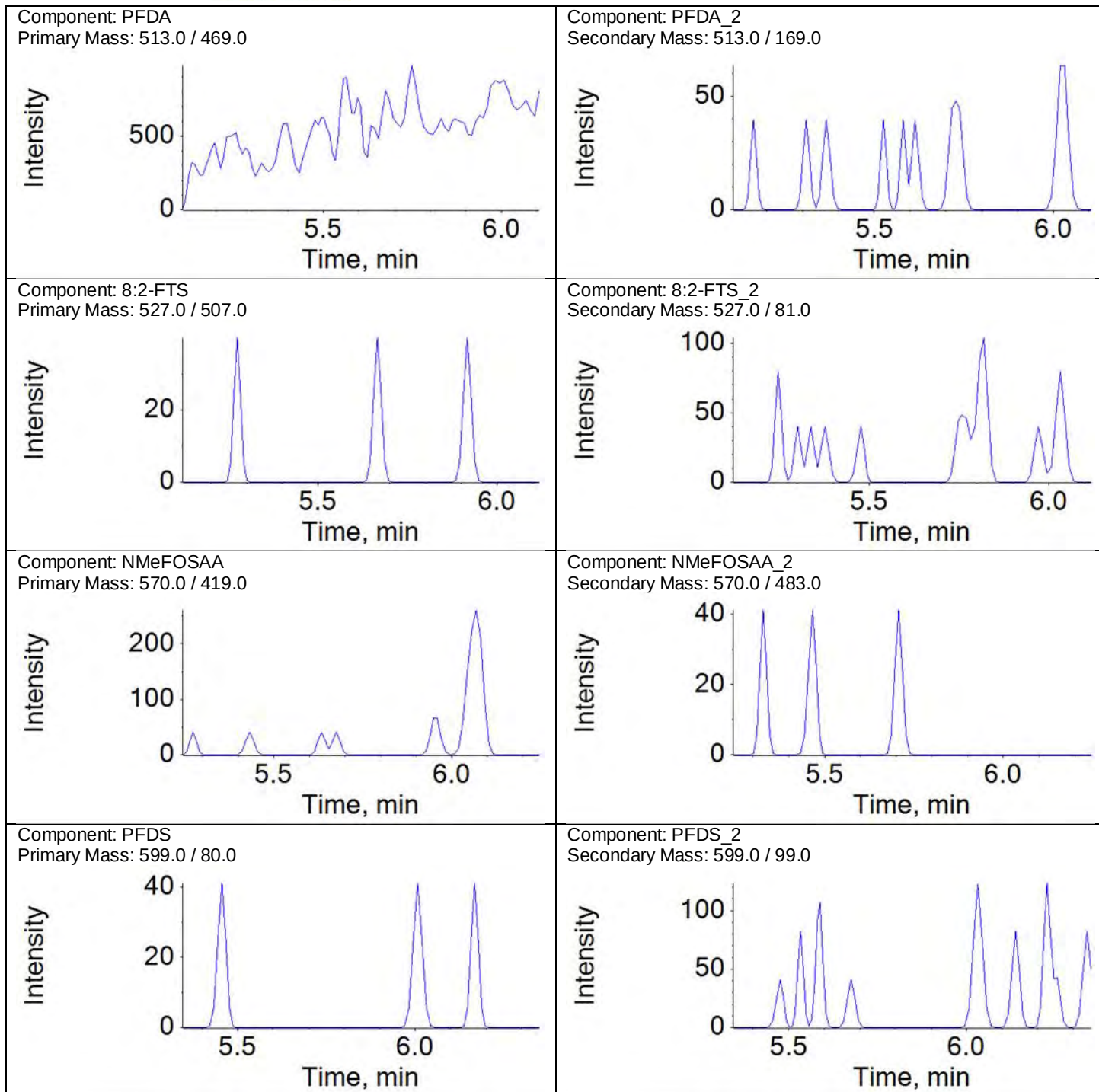
By umar at 5:24 pm, 11/9/18

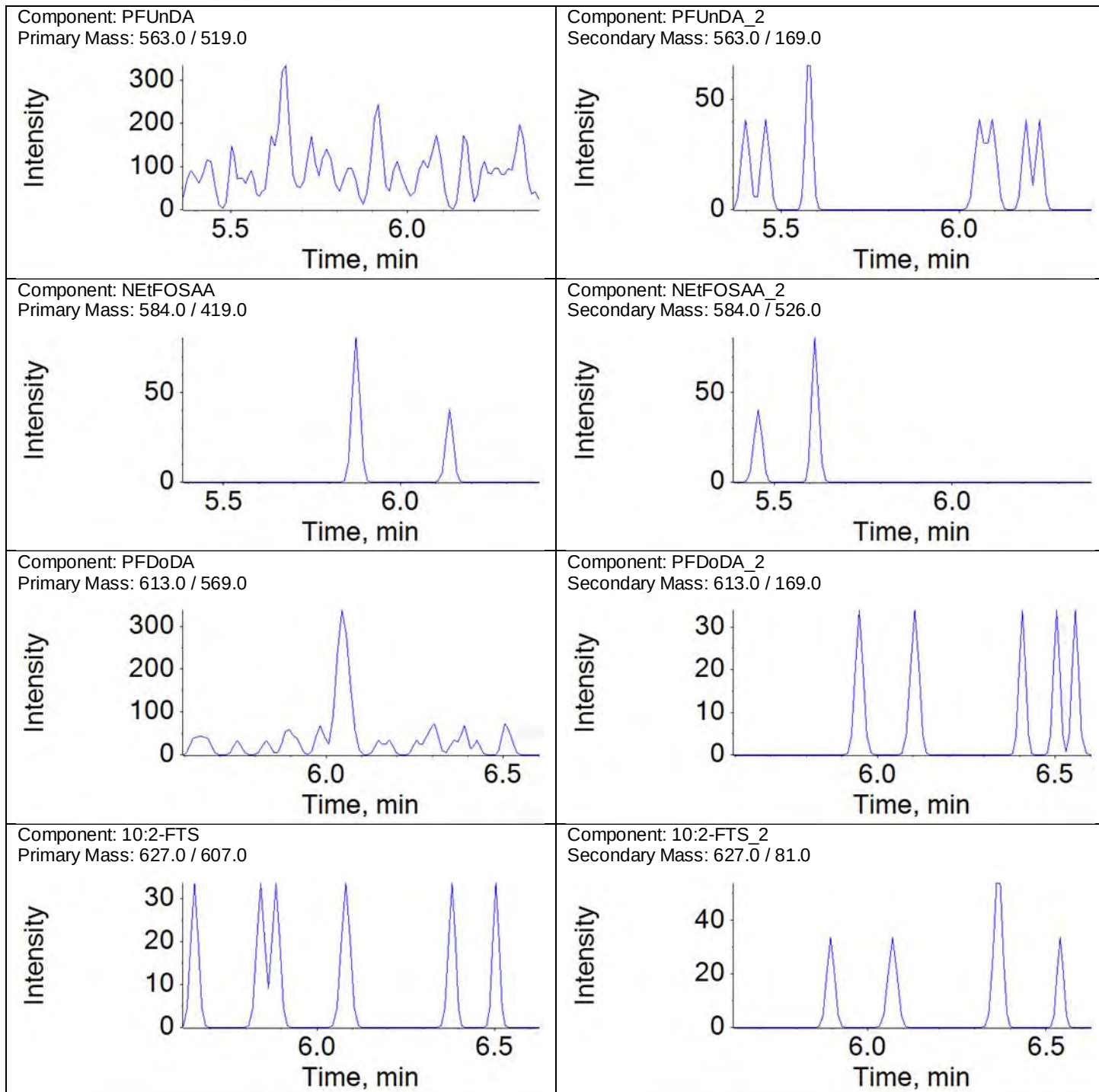
Page 1 of 7

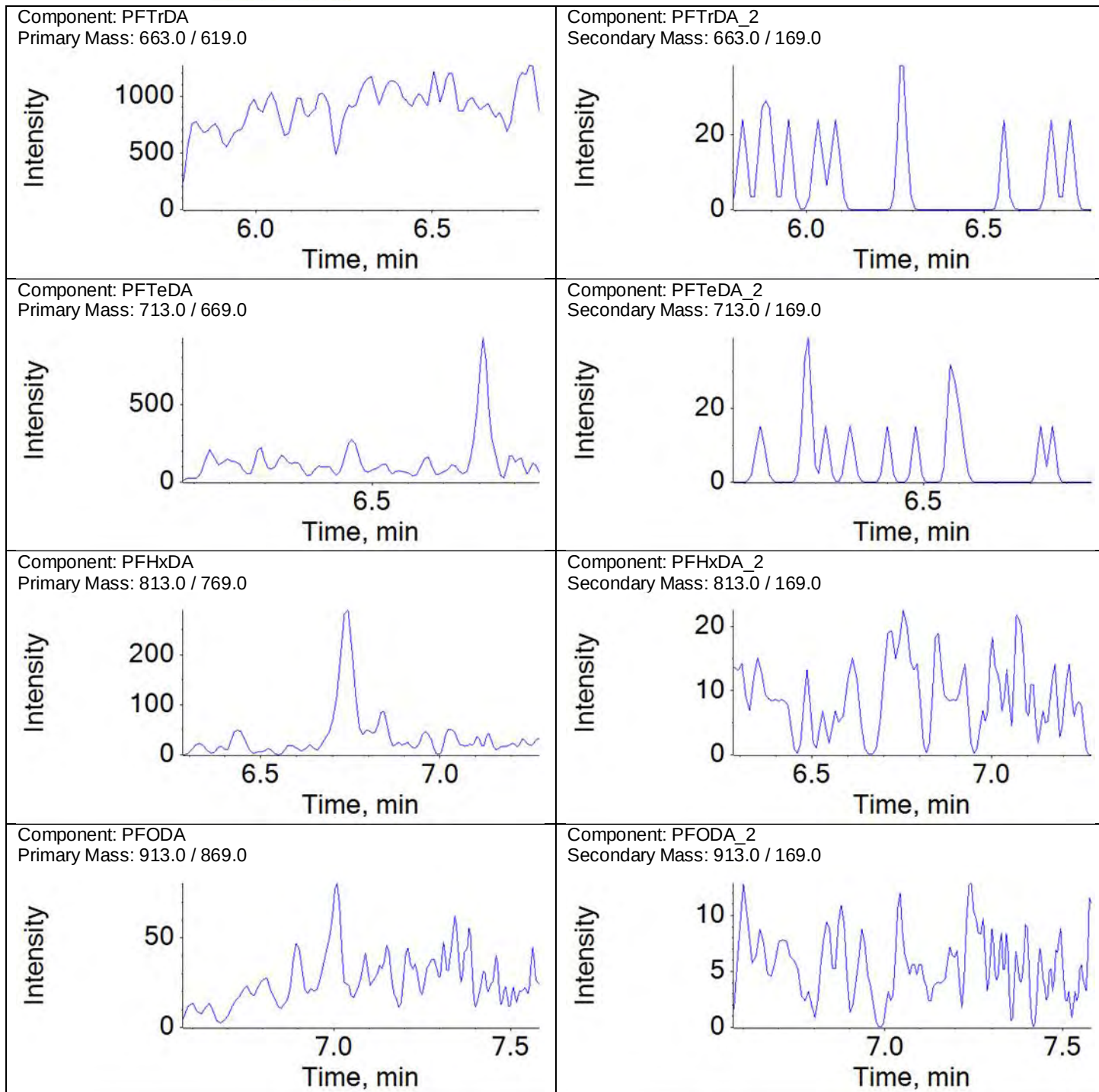










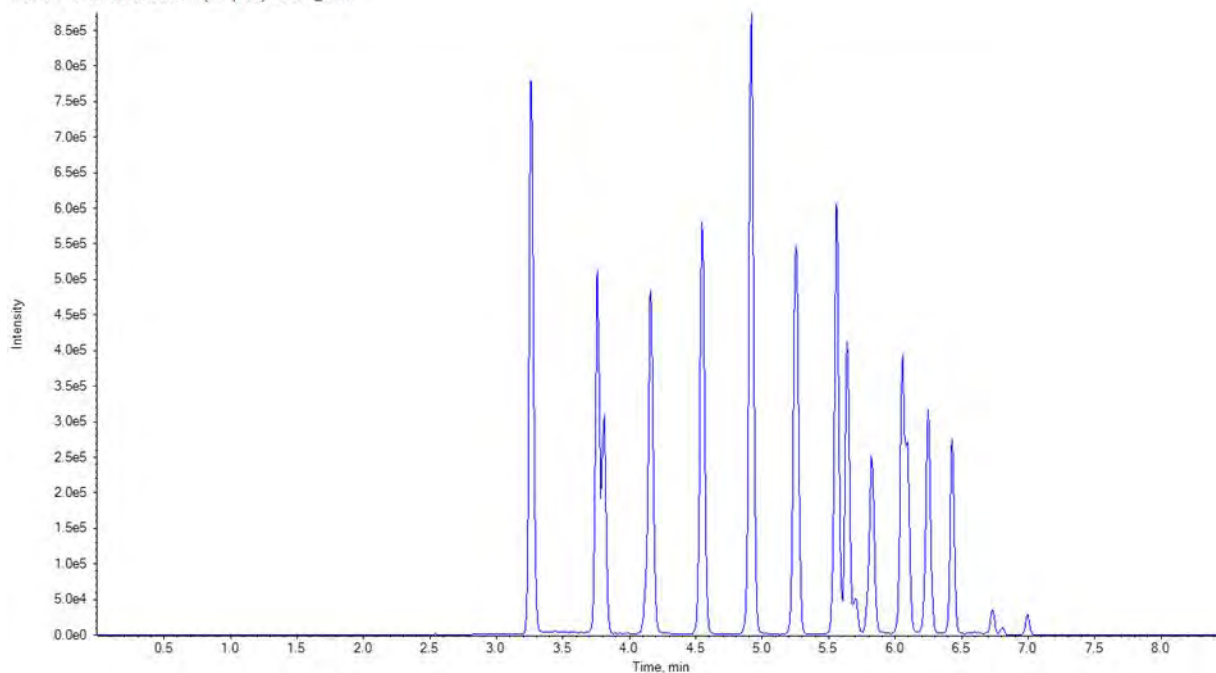


Continuing Calibration Verification

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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

TIC from 18NOV07DCAL-20.wiff (sample 2) - CCV1_CAL3



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

BSI05 Page 649 of 1595

REVIEWED

By umar at 5:23 pm, 11/9/18

Continuing Calibration Verification

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-PFPeS	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-PFHxA	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	
PFTTrDA	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	
PFOA	60356.7	10	13C2-PFTeDA	429266.0	5.0	0.141	6.99	1.090	2.000	2.014	1	30	

Continuing Calibration Verification

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
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3

Instrument Name: LM27631

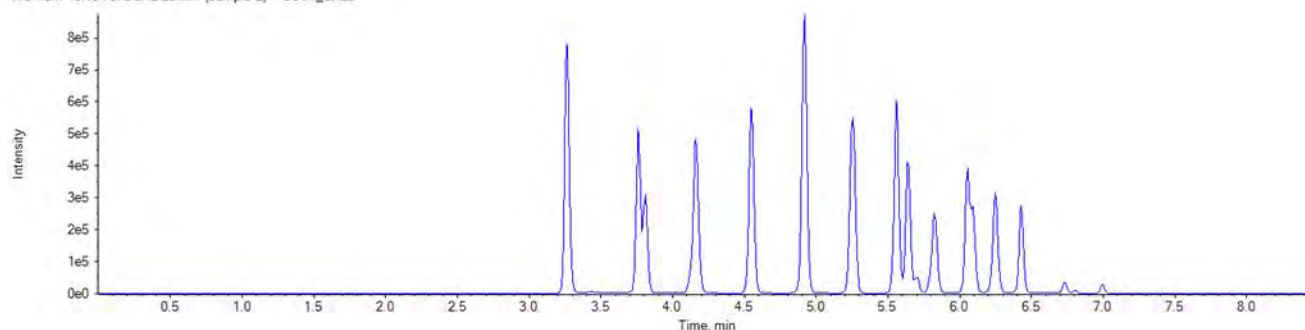
File Name: 18NOV07DCAL-20.wiff

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
PFTDA	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

TIC from 18NOV07DCAL-20.wiff (sample 2) - CCV1_CAL3



APPROVED

By JPT at 2:53 pm, 11/7/18

BSI05 Page 653 of 1595

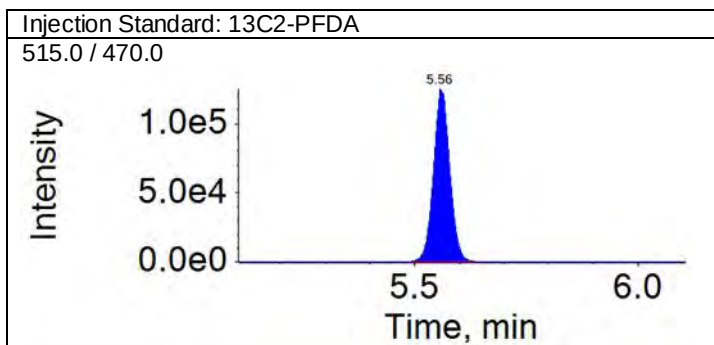
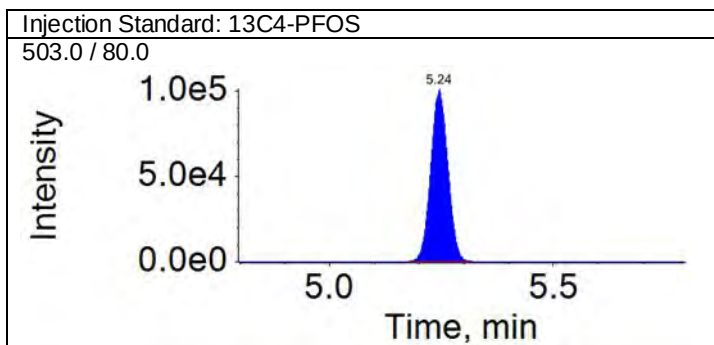
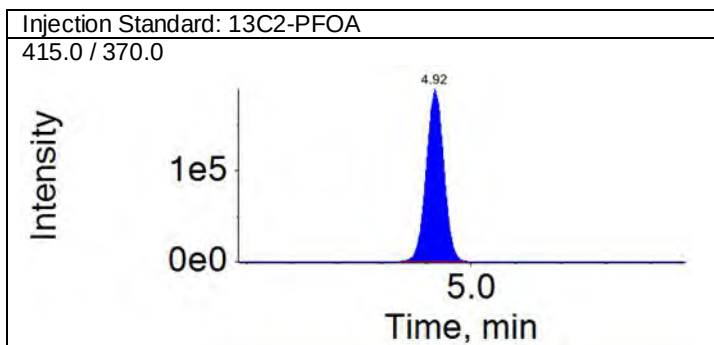
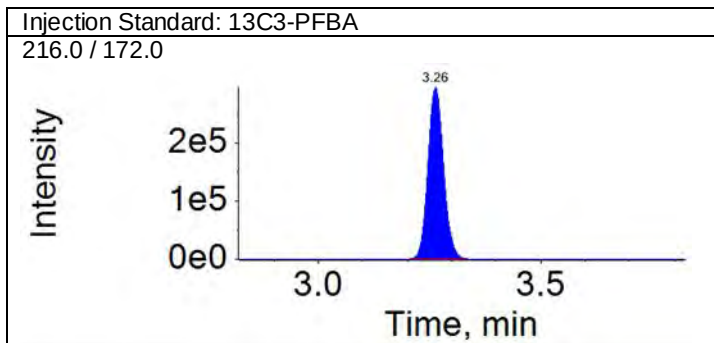
REVIEWED

By umar at 5:23 pm, 11/9/18

Page 2 of 17

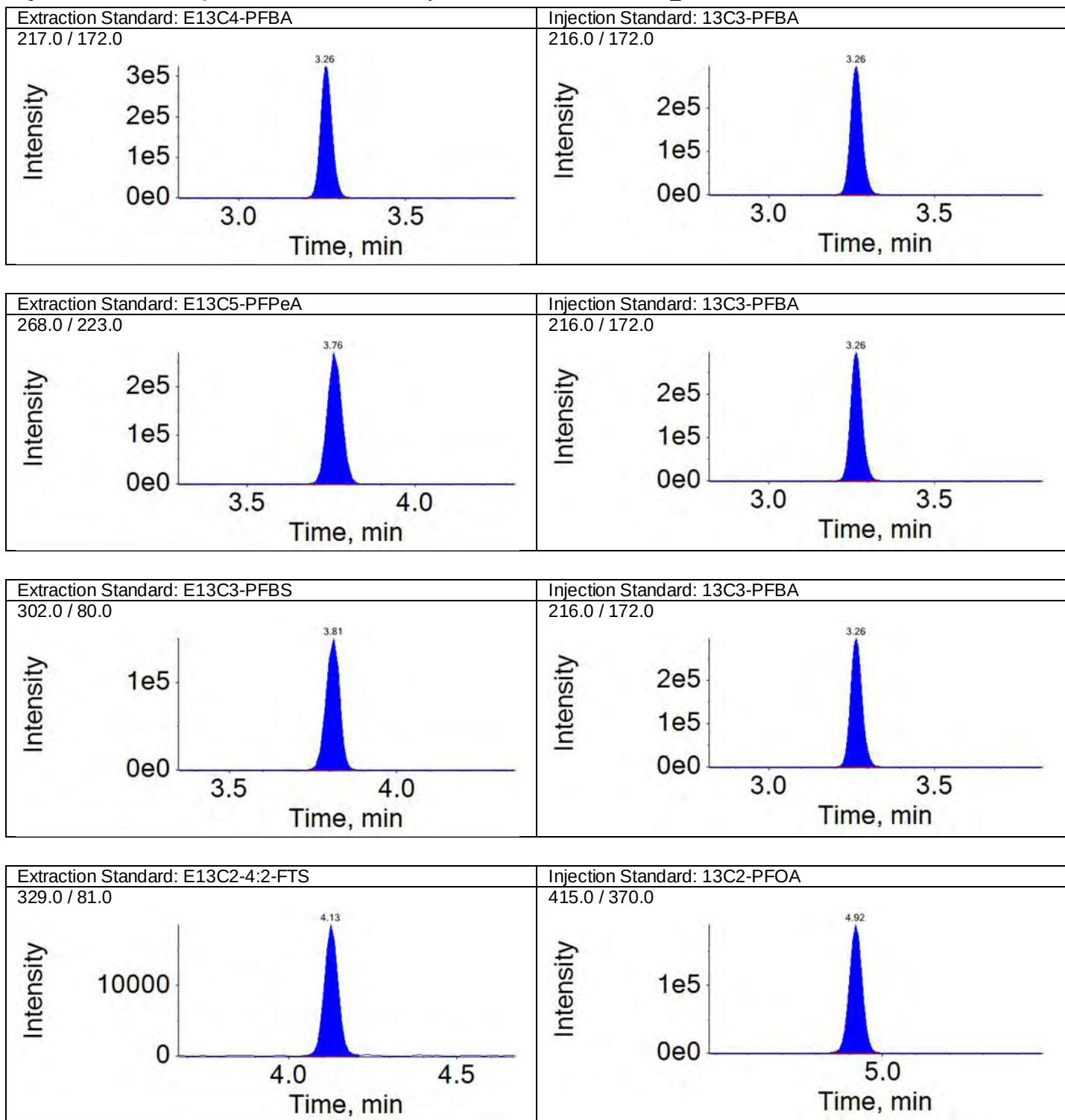
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



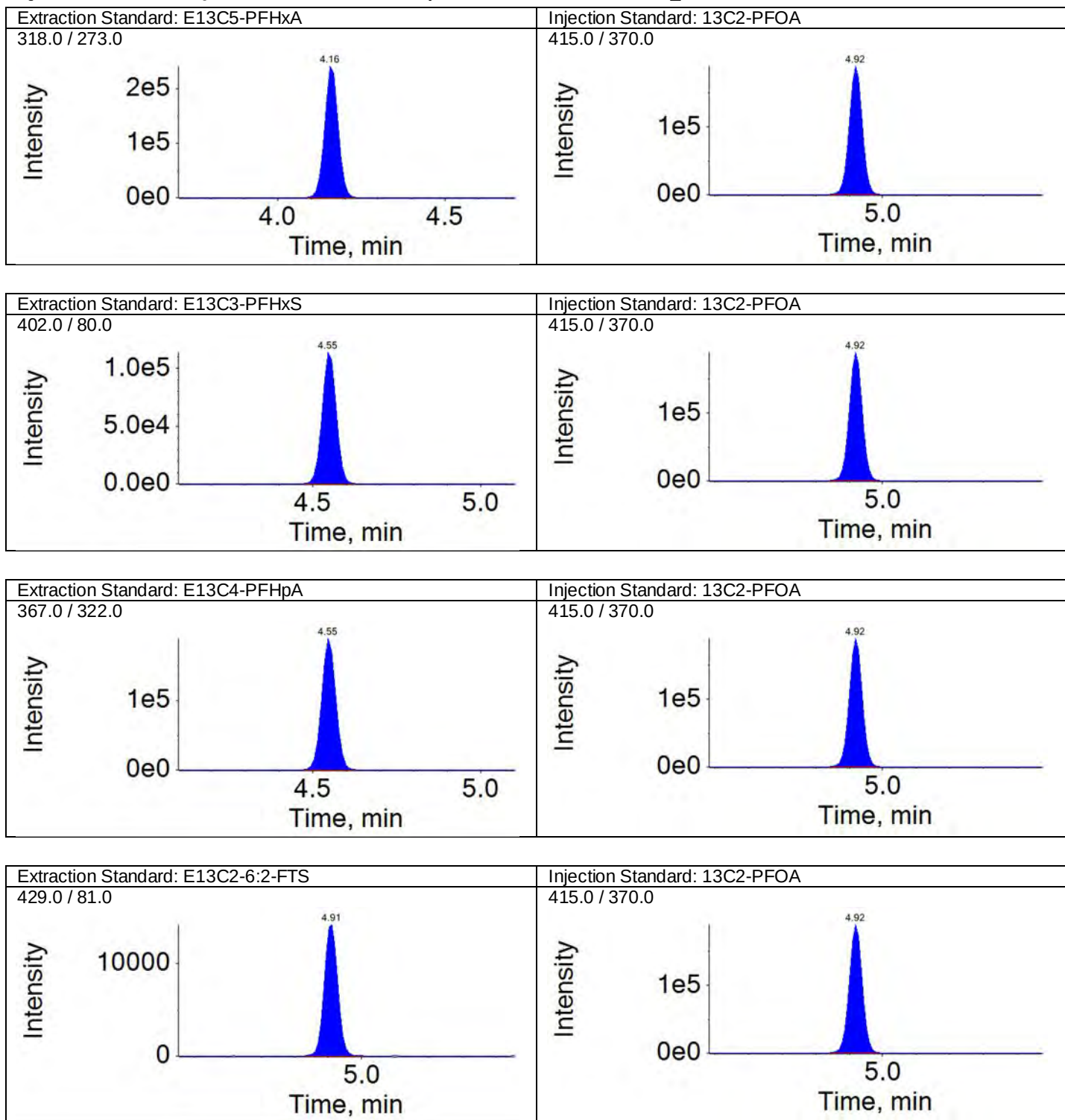
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



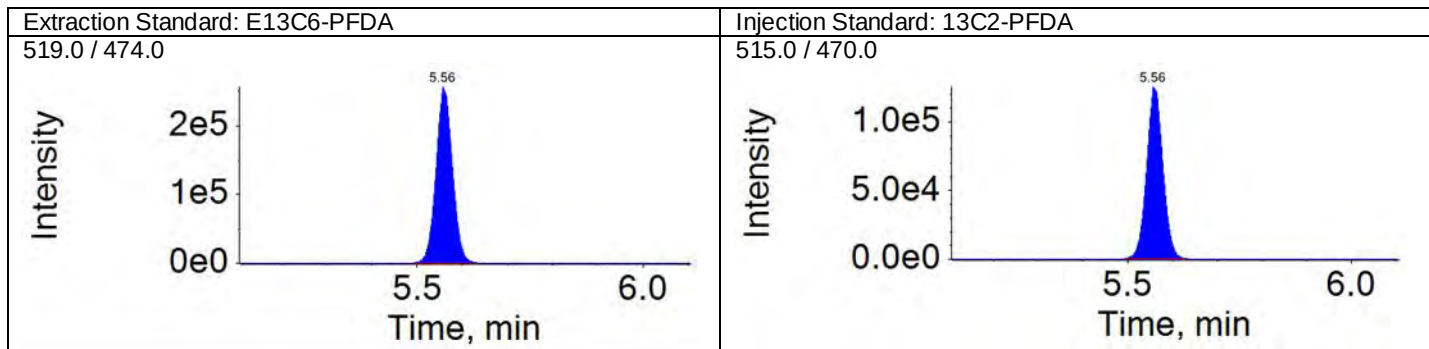
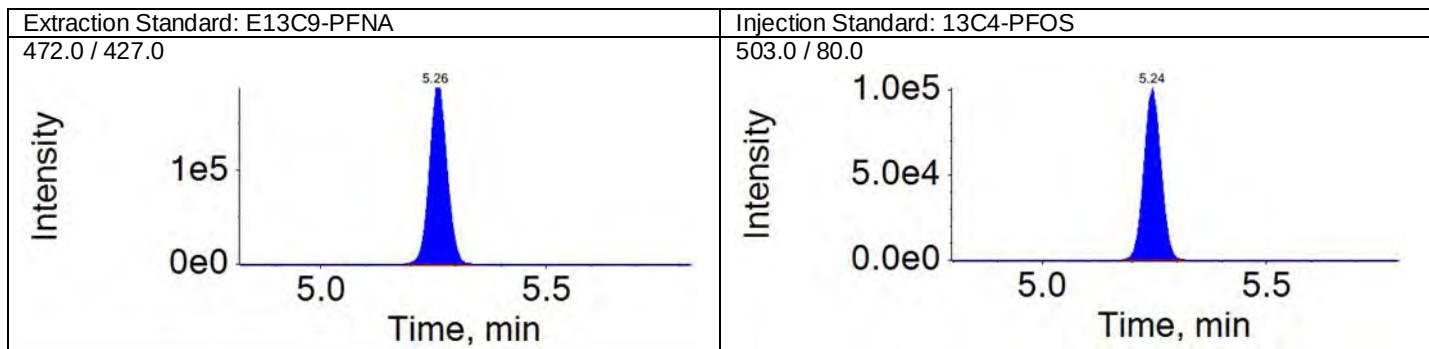
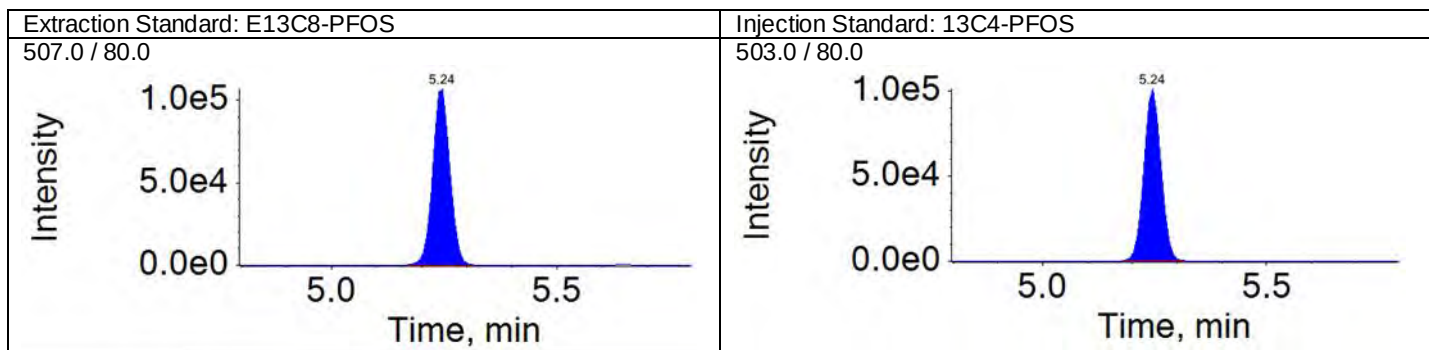
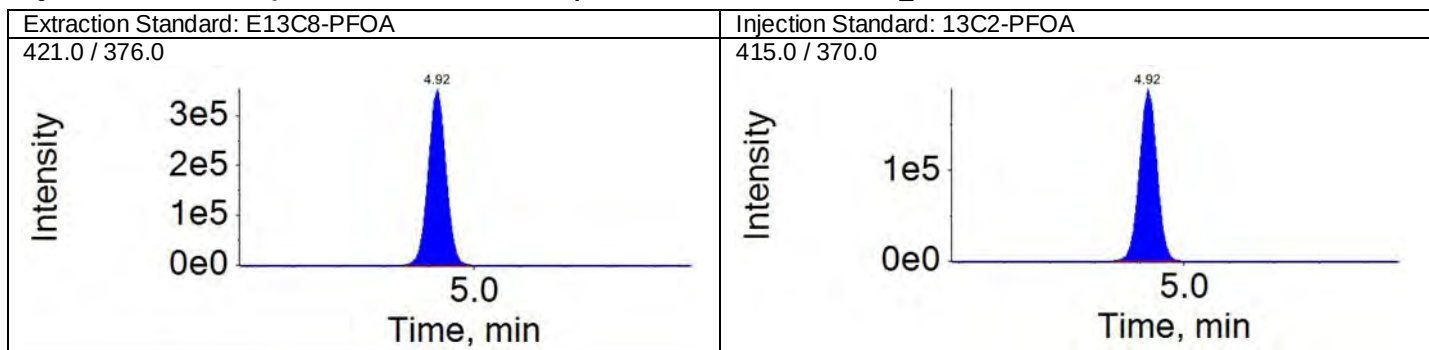
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

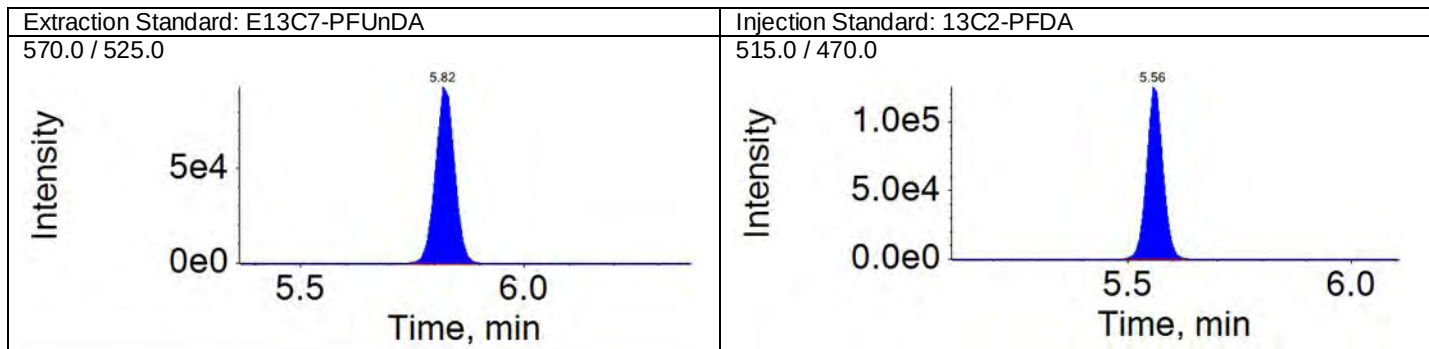
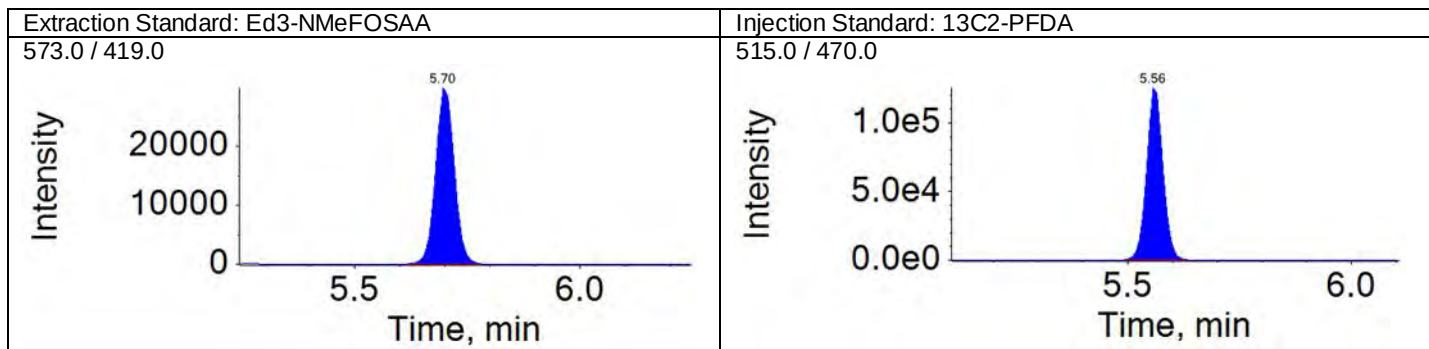
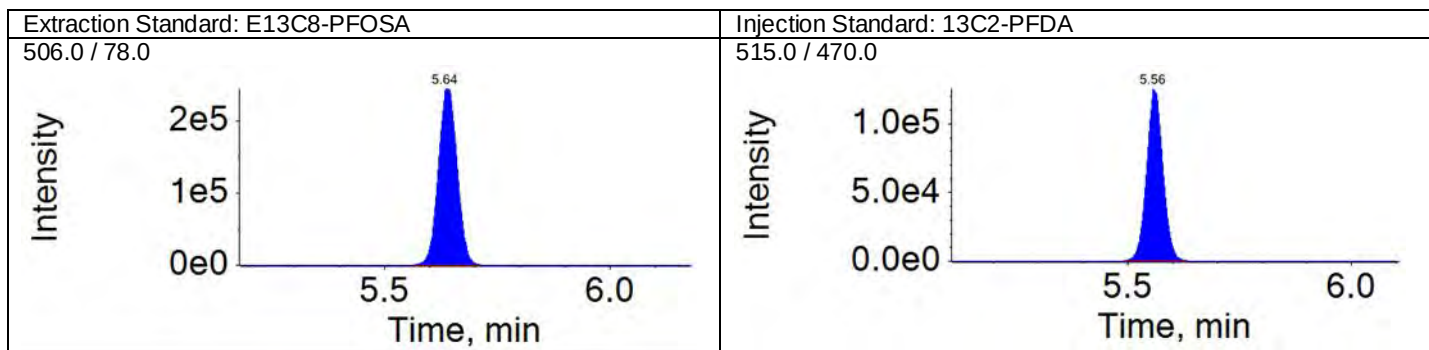
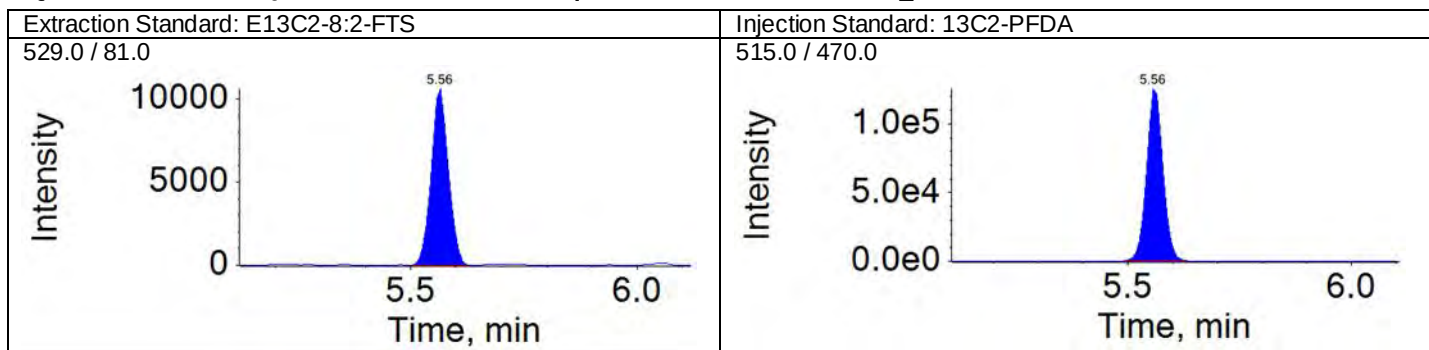
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

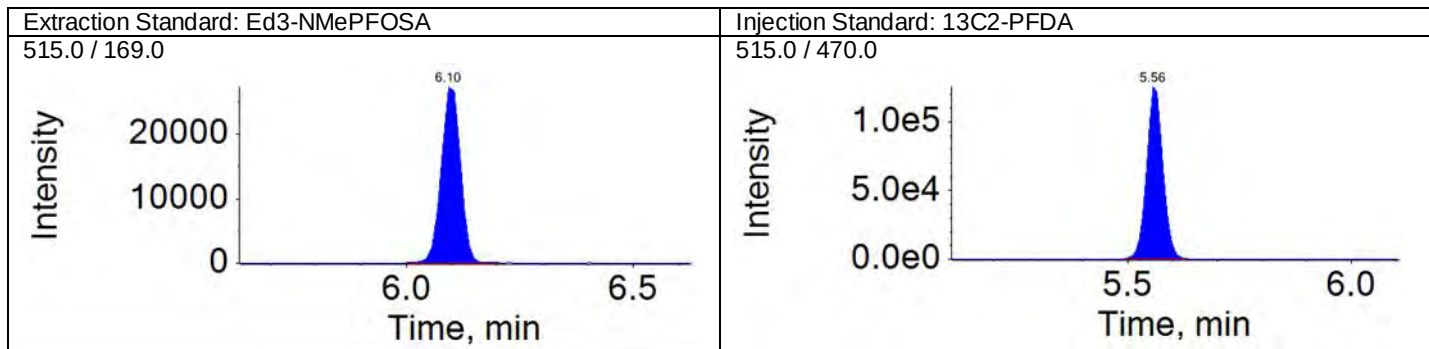
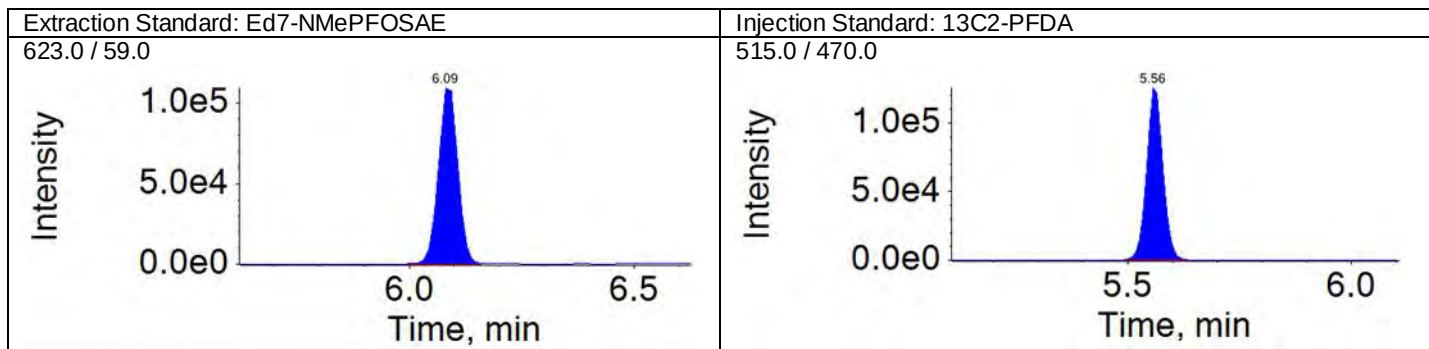
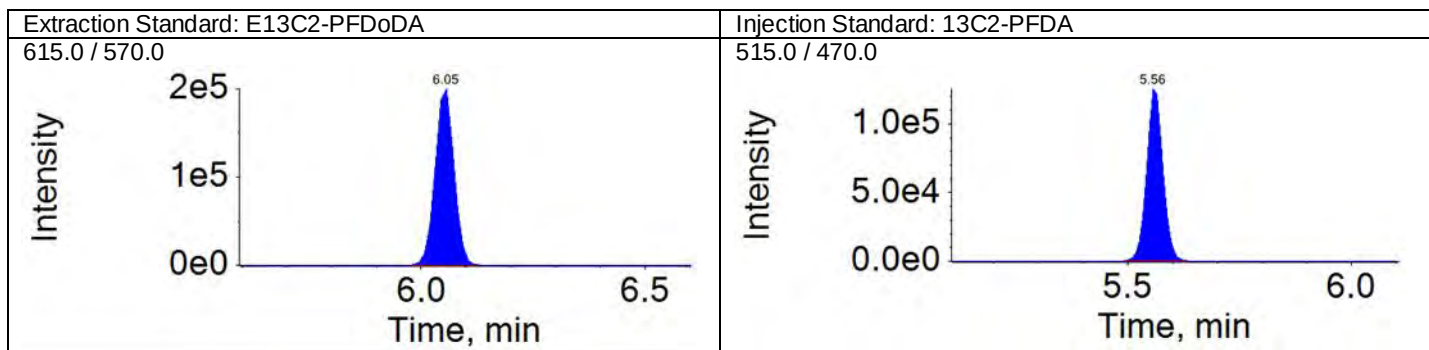
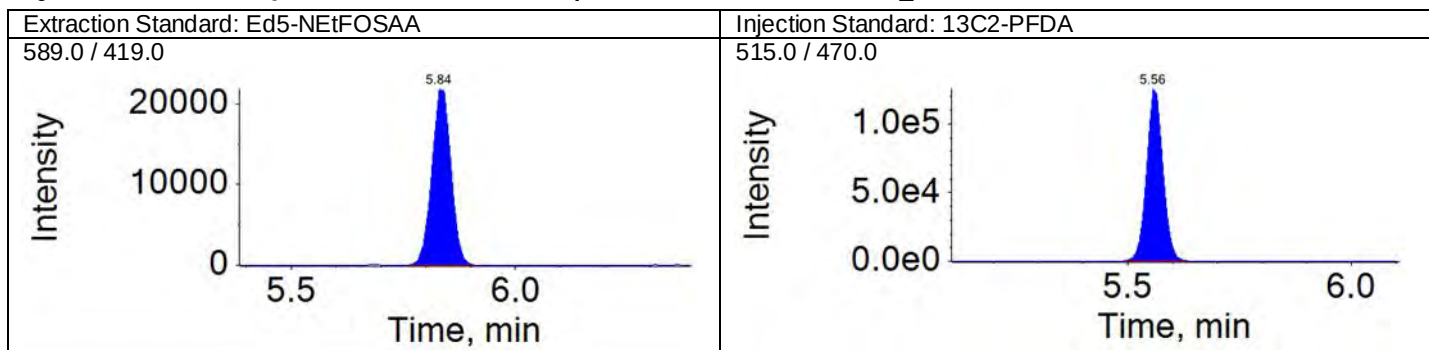
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

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

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

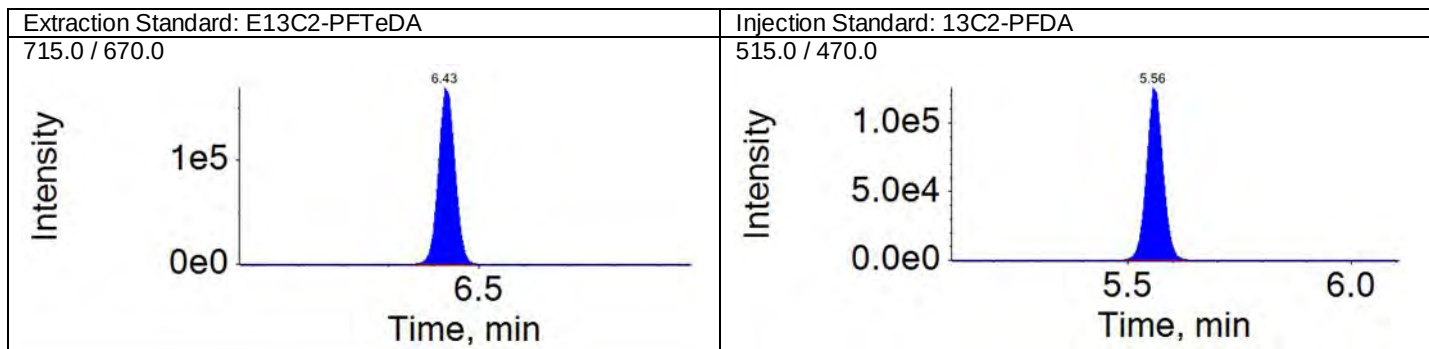
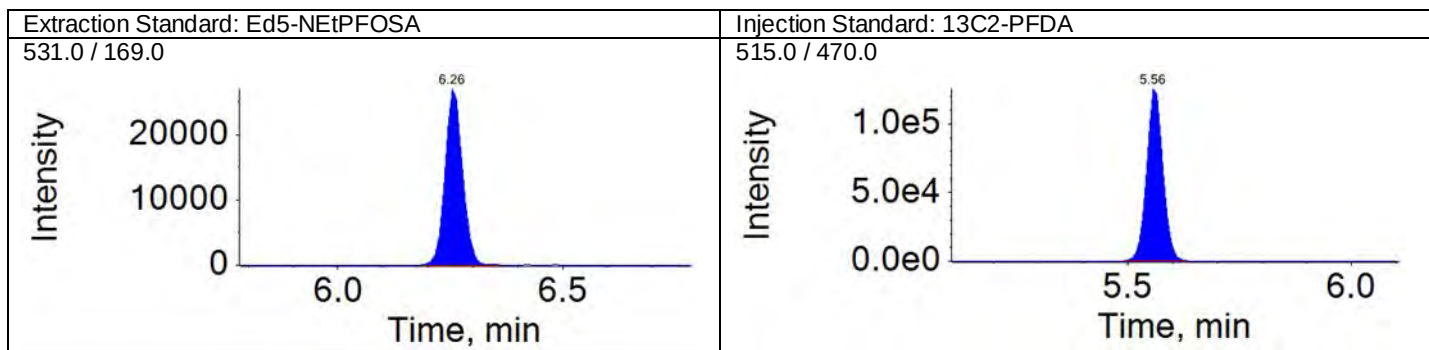
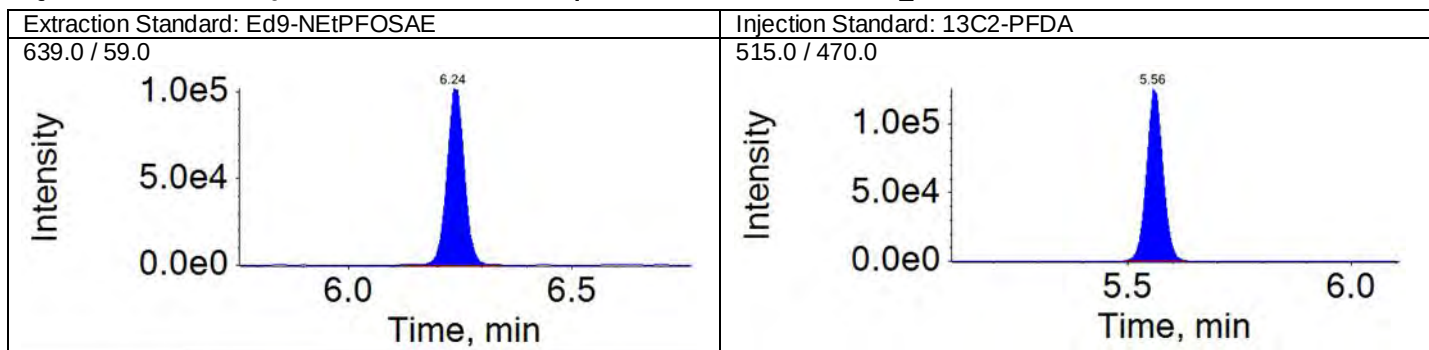
By JPT at 2:53 pm, 11/7/18

REVIEWED

By umar at 5:23 pm, 11/9/18

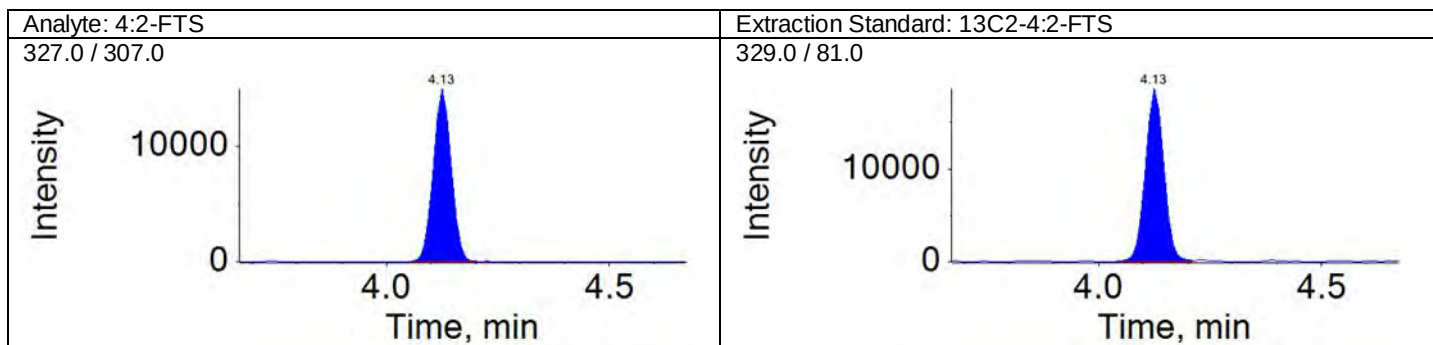
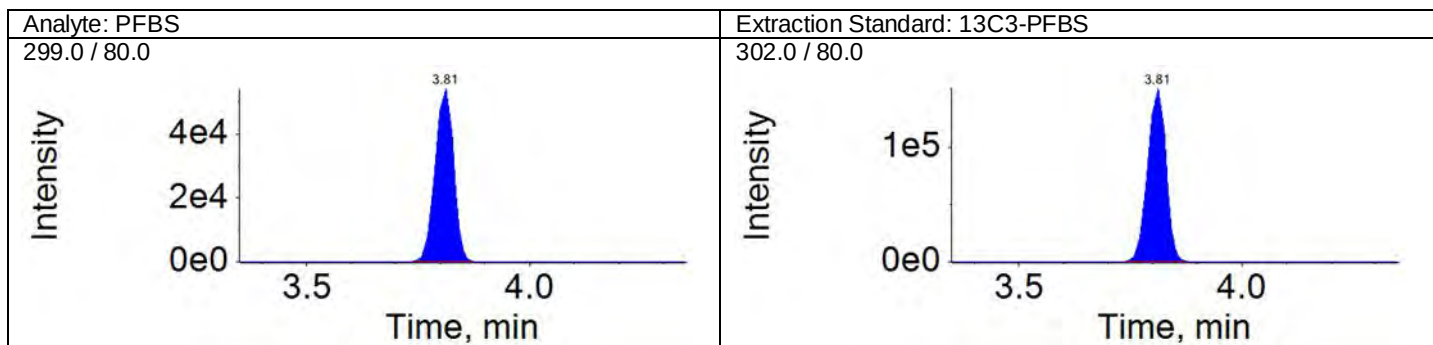
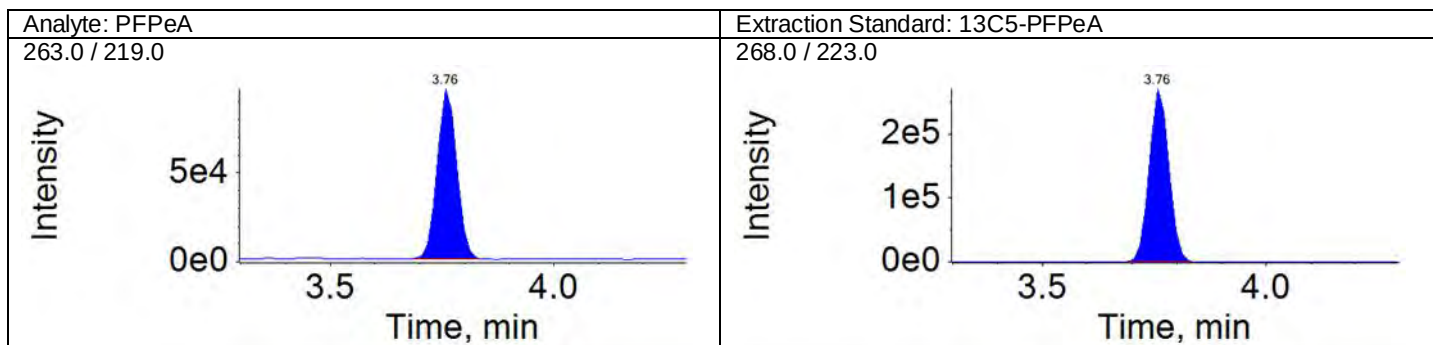
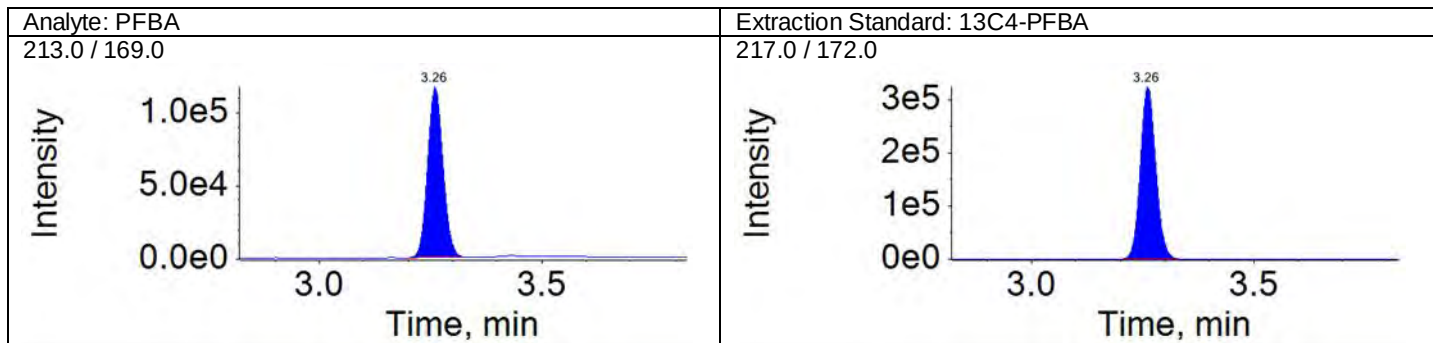
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



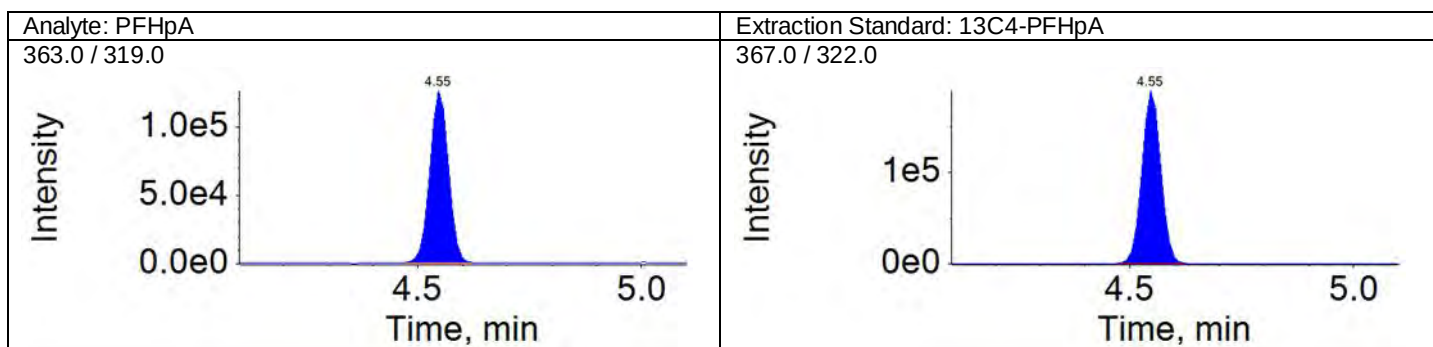
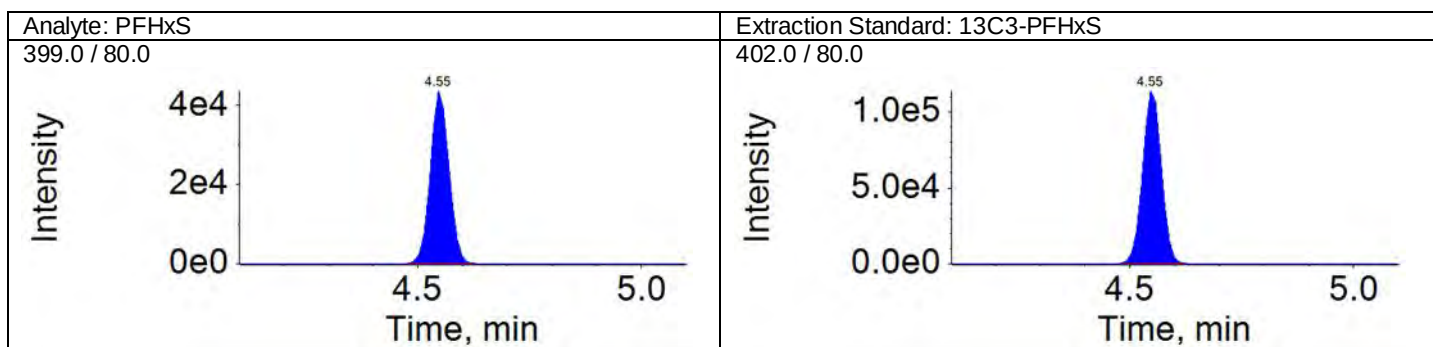
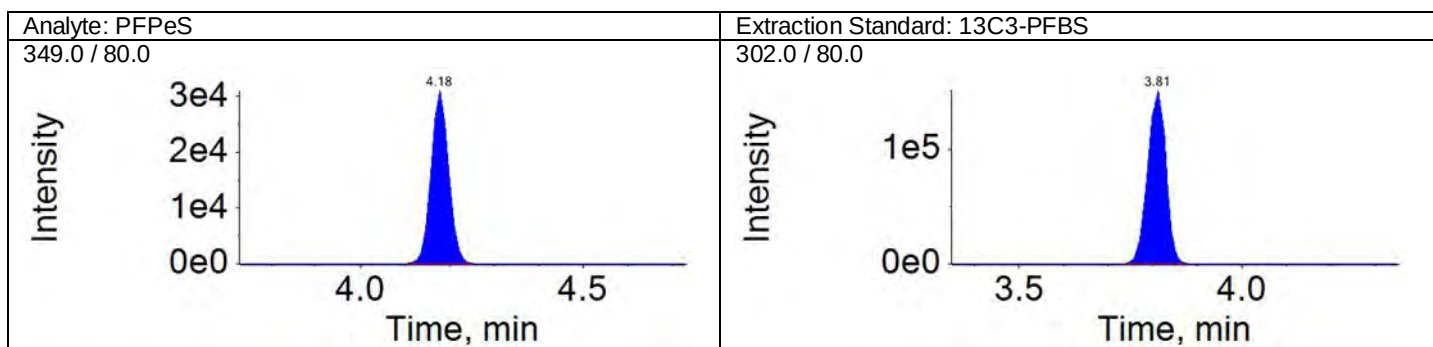
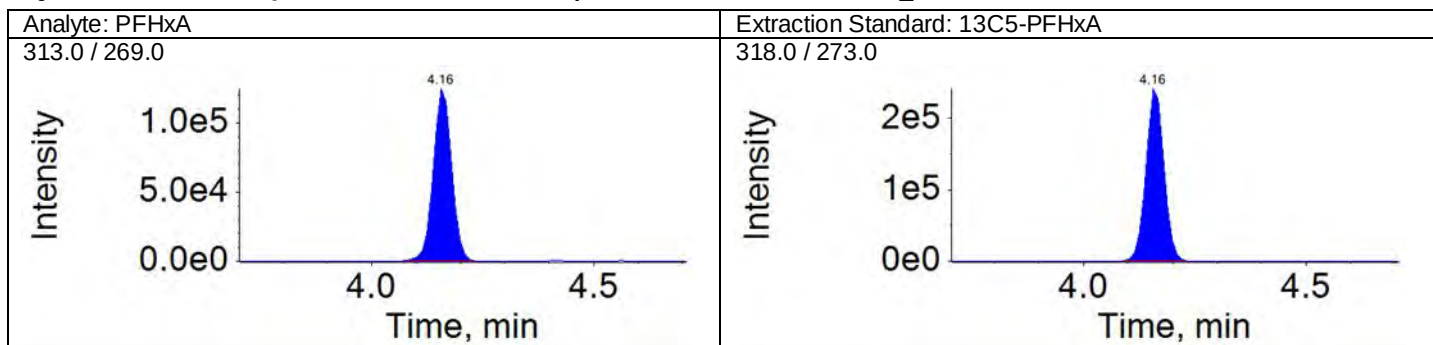
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



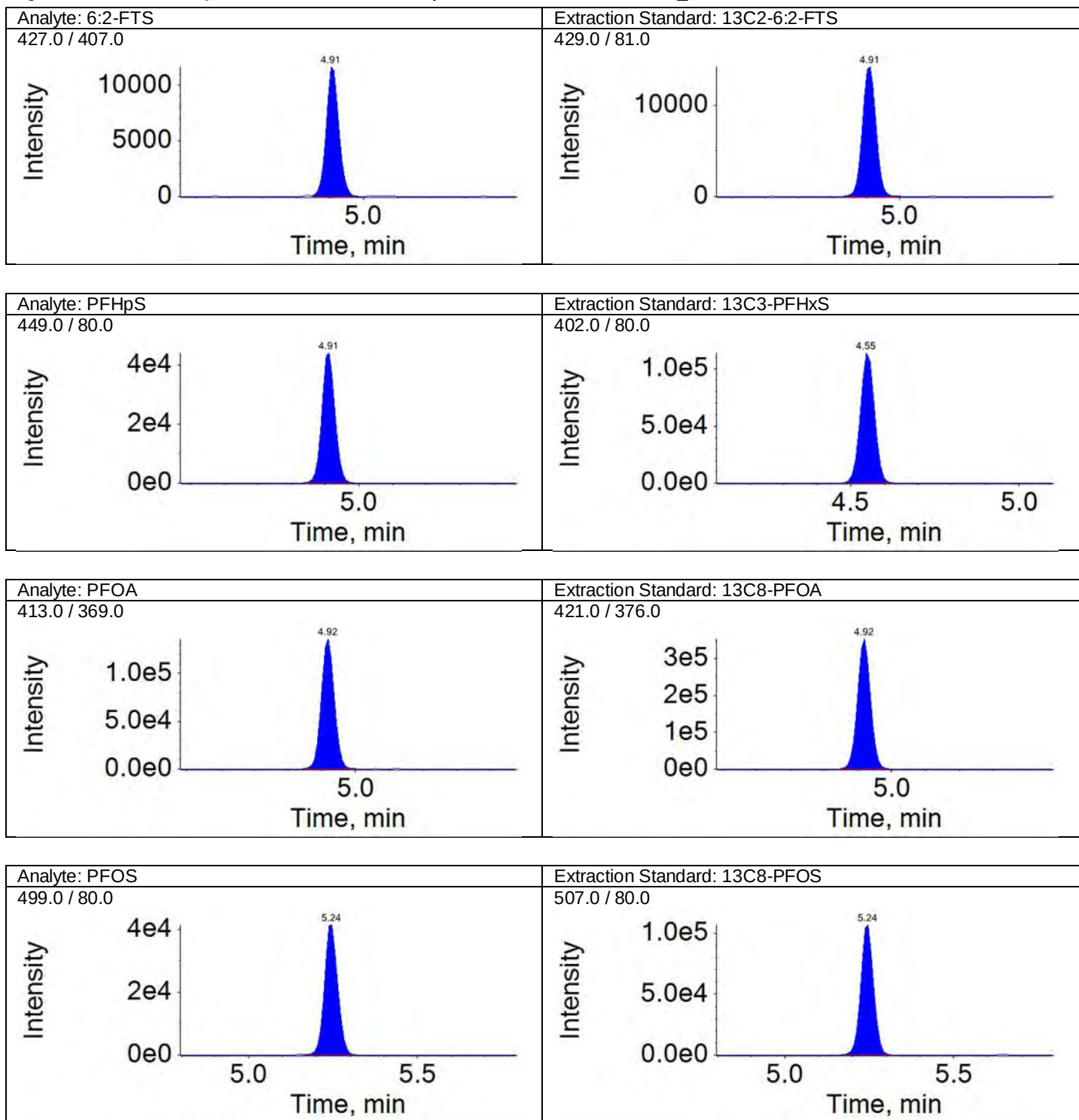
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



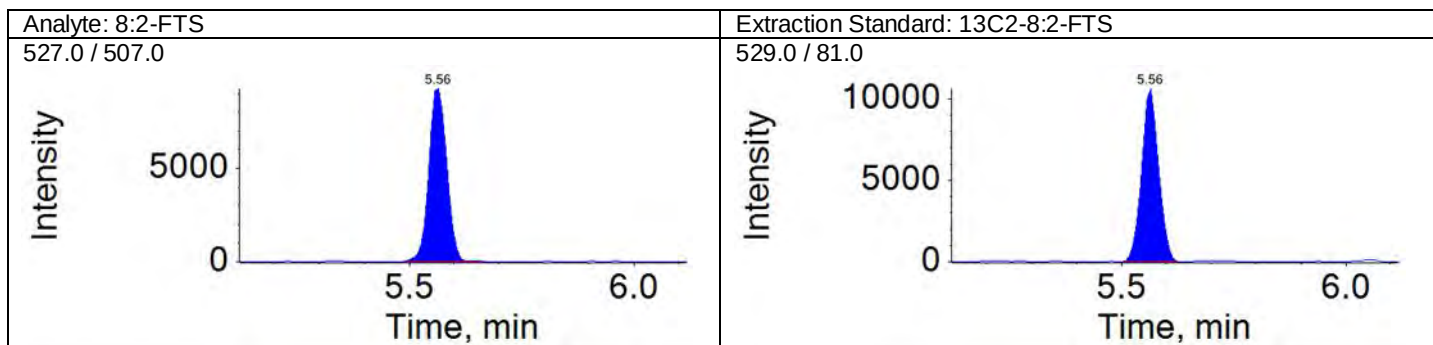
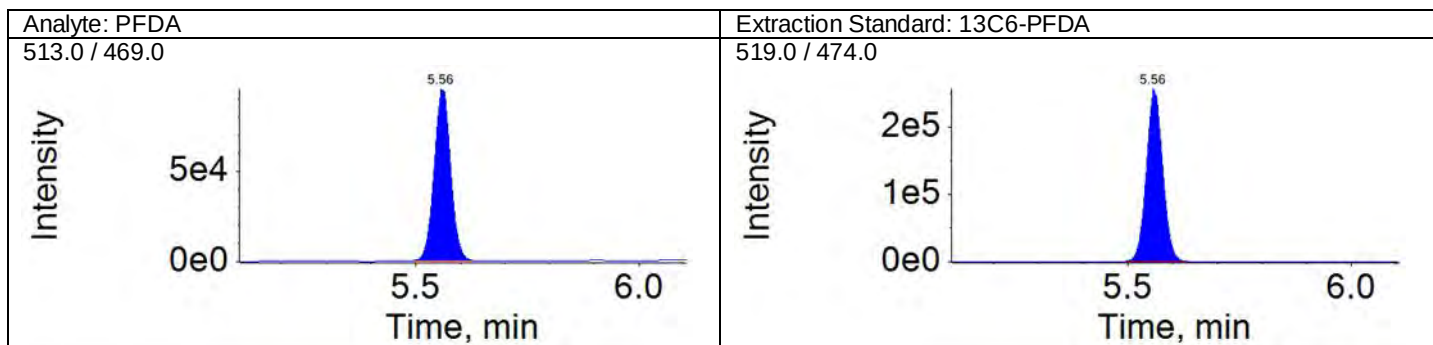
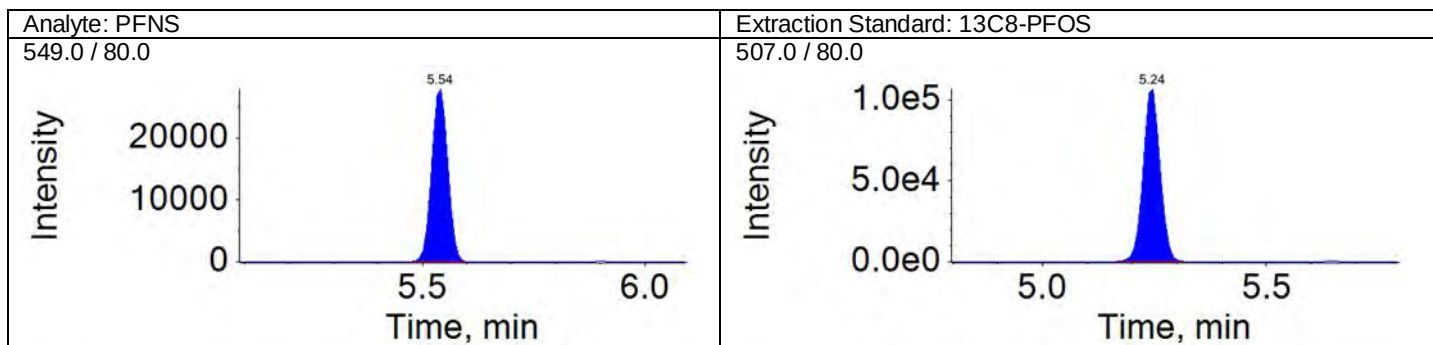
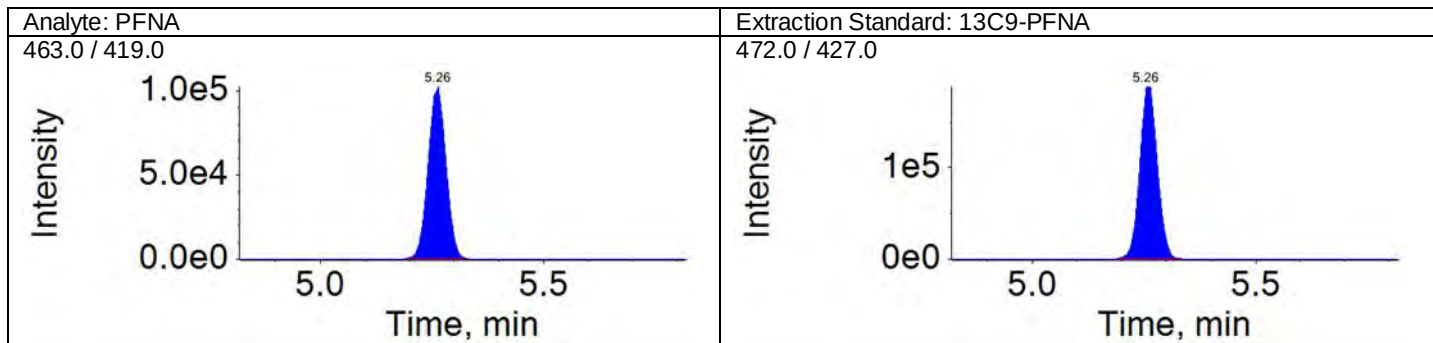
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



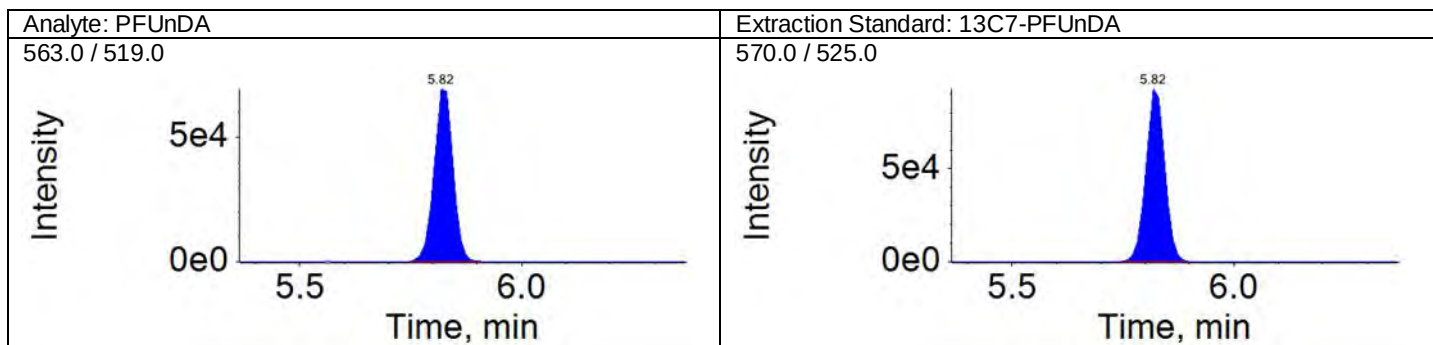
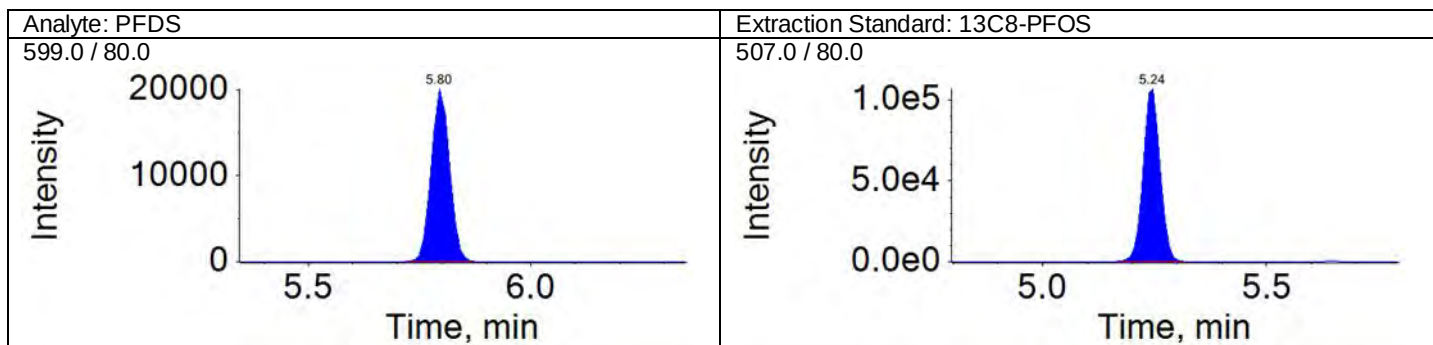
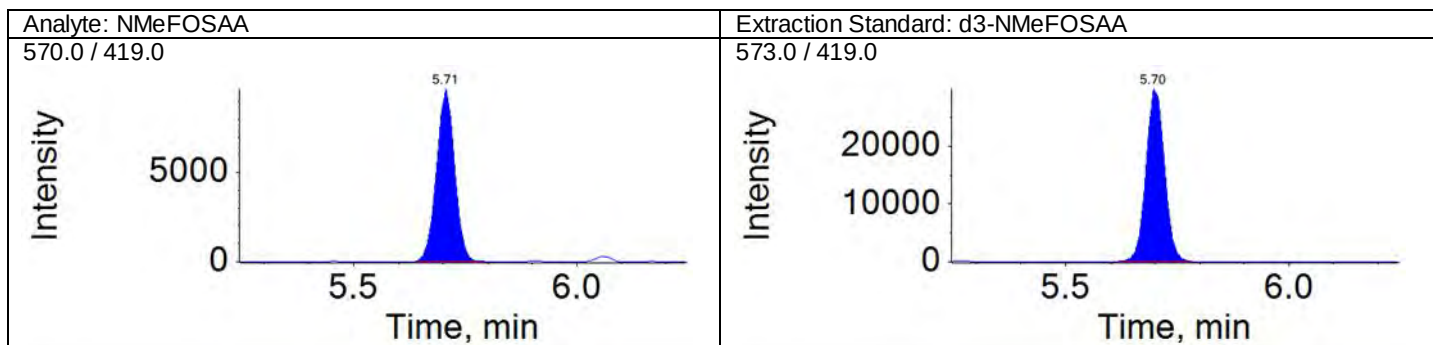
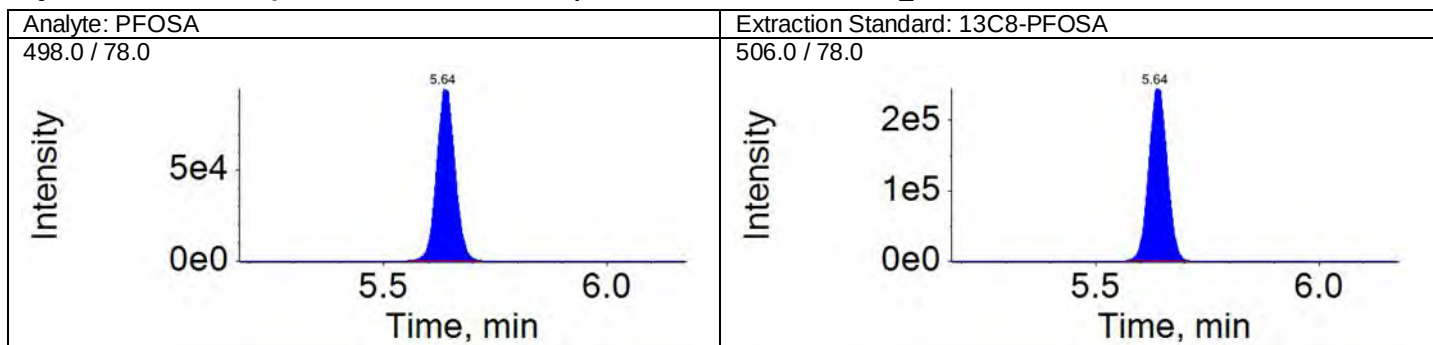
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

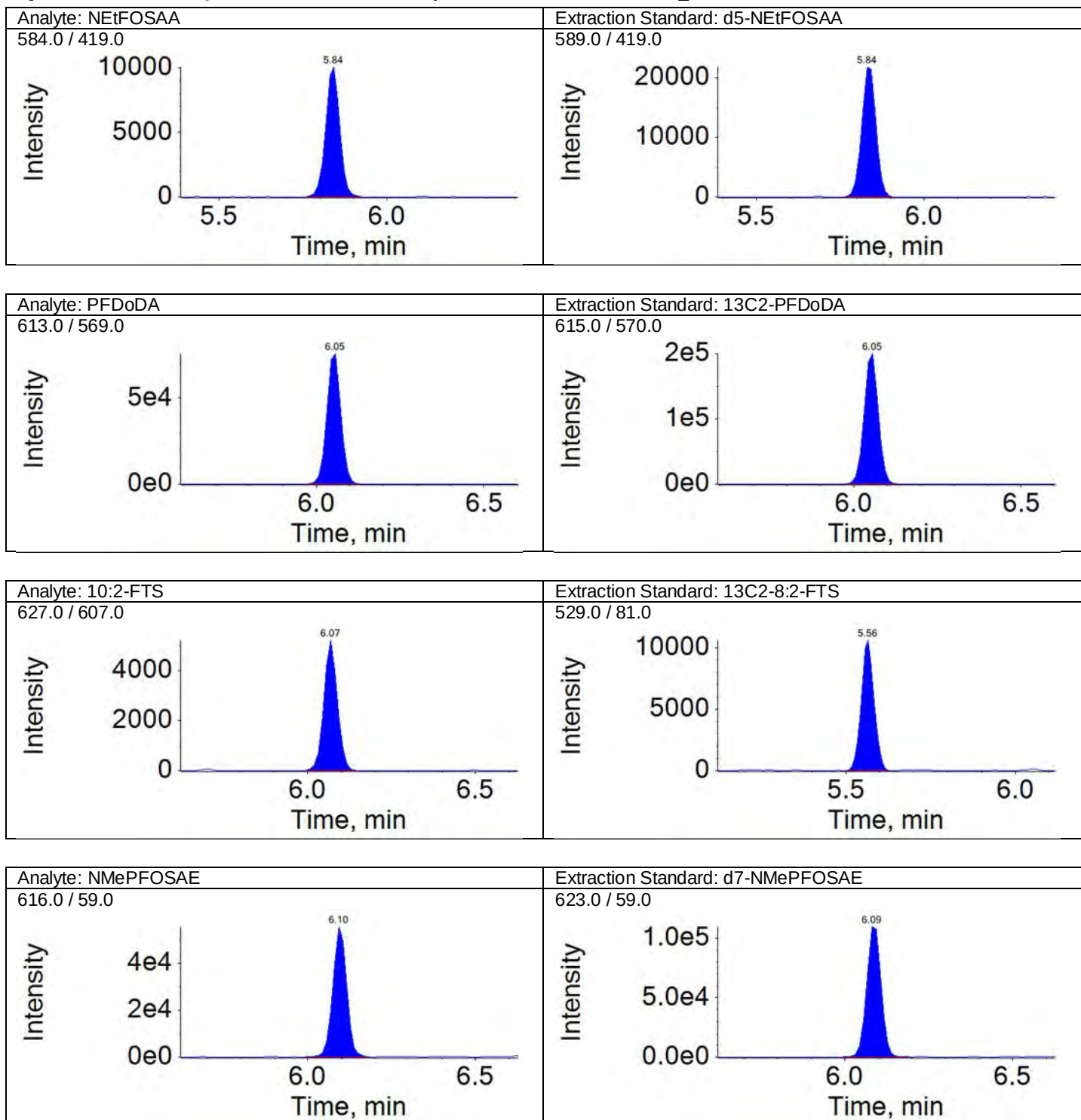
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

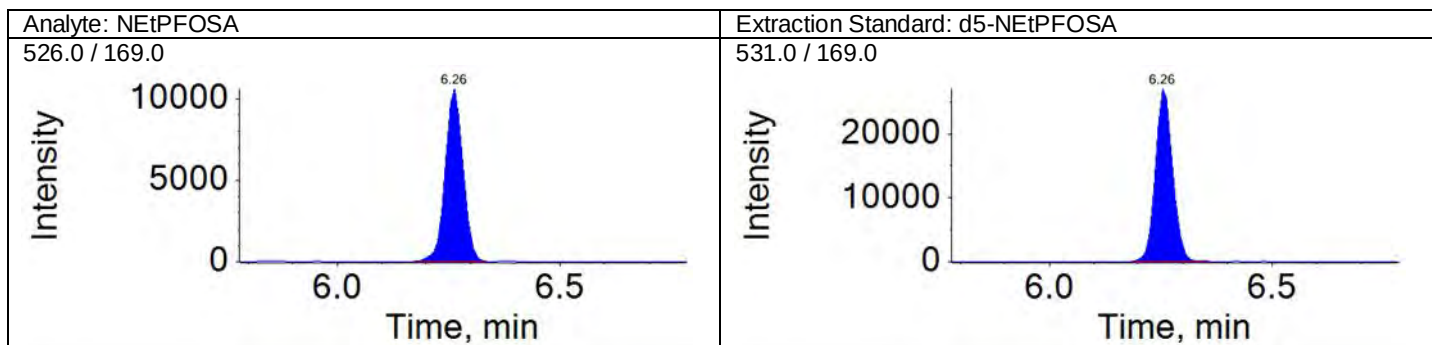
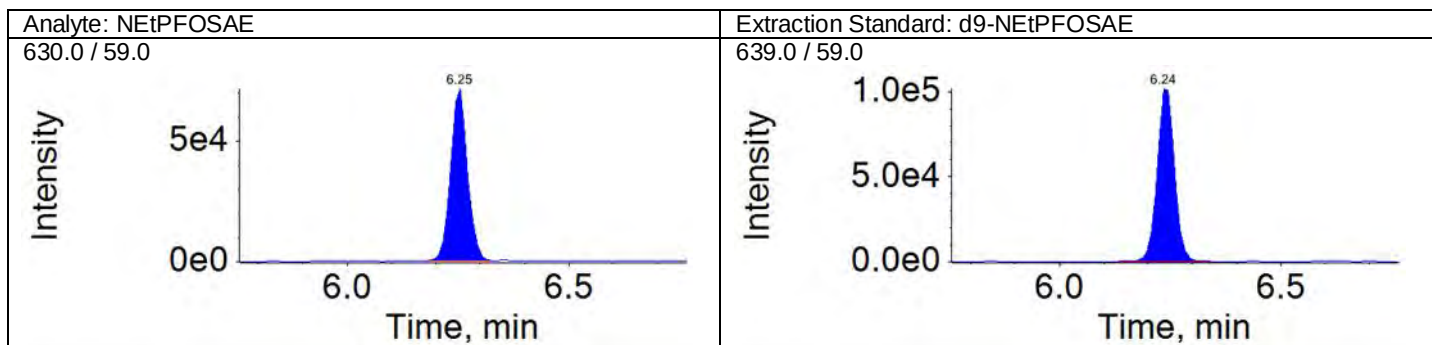
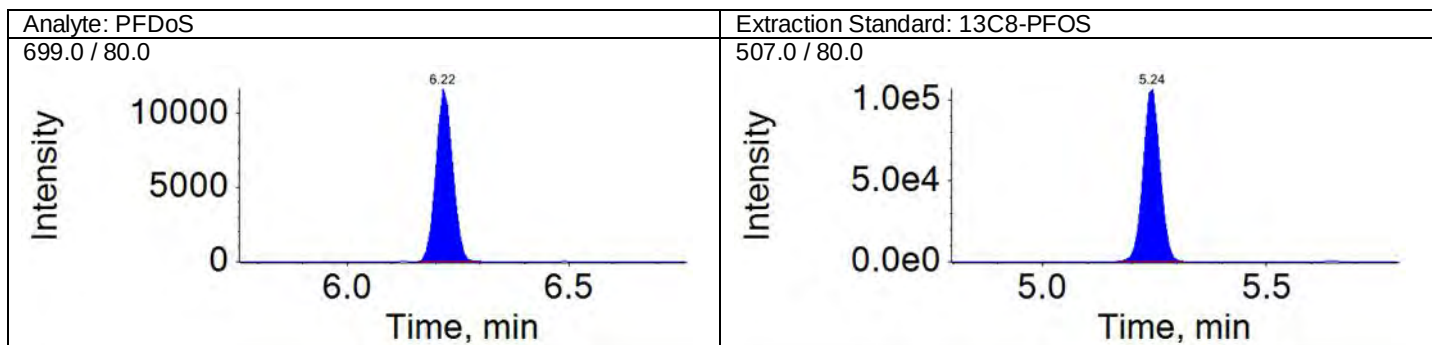
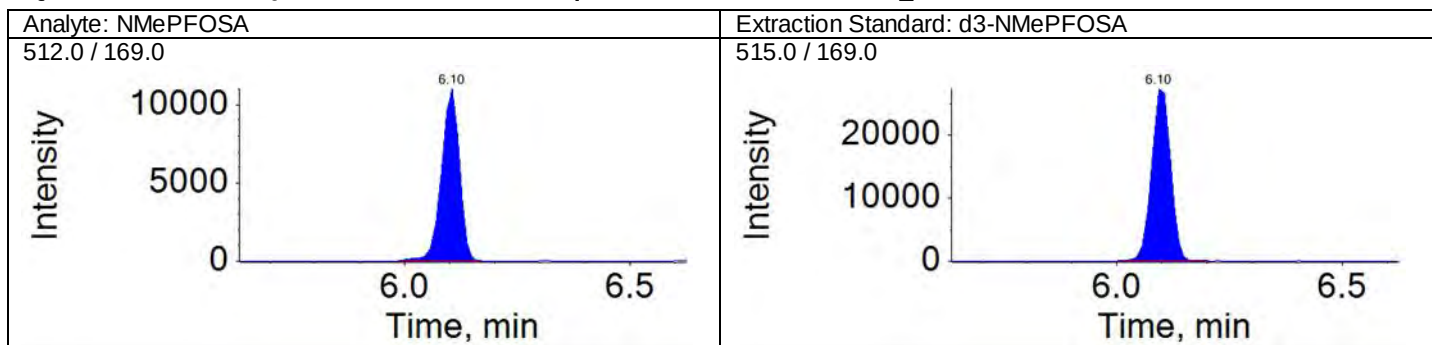
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

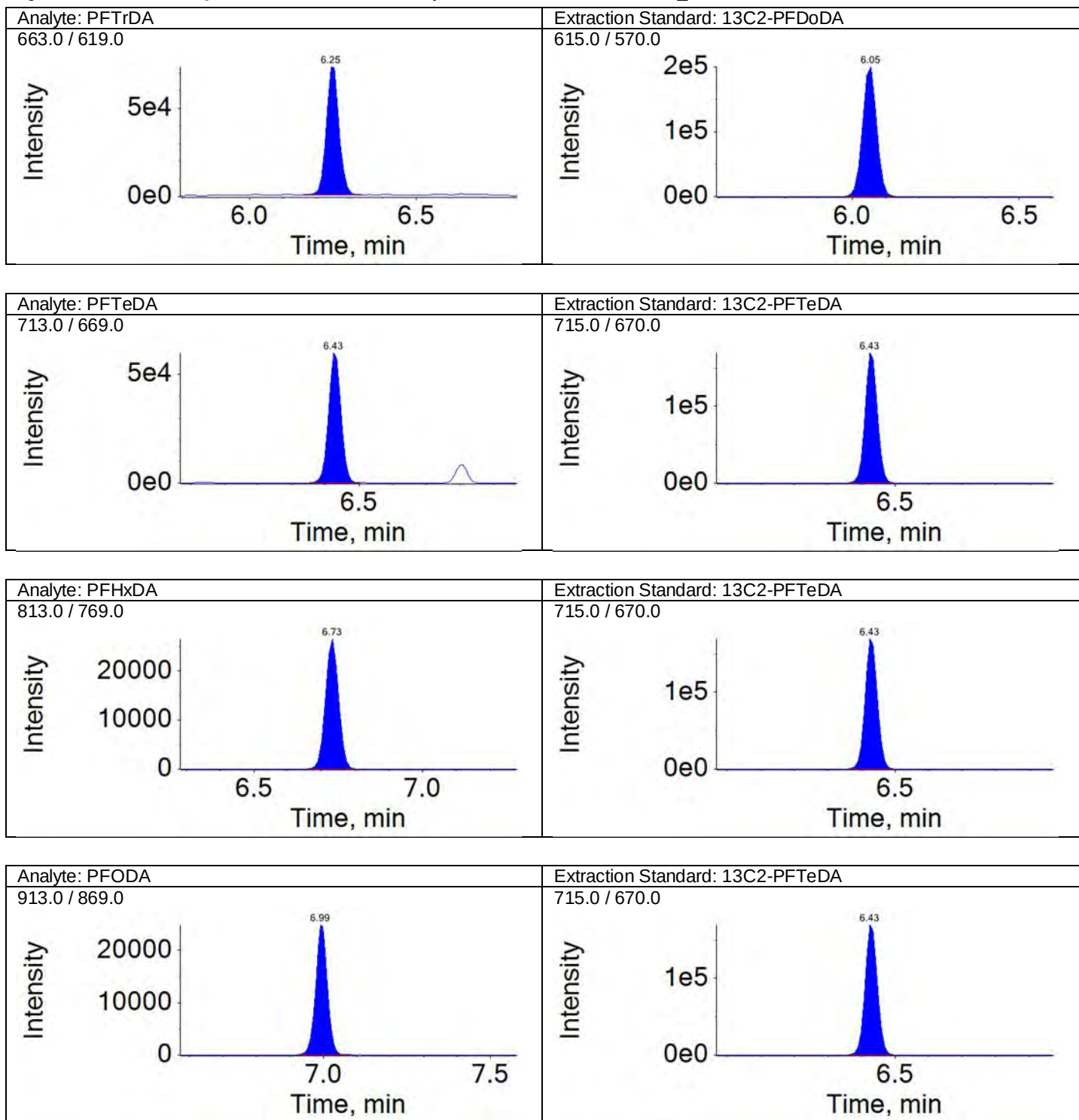
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

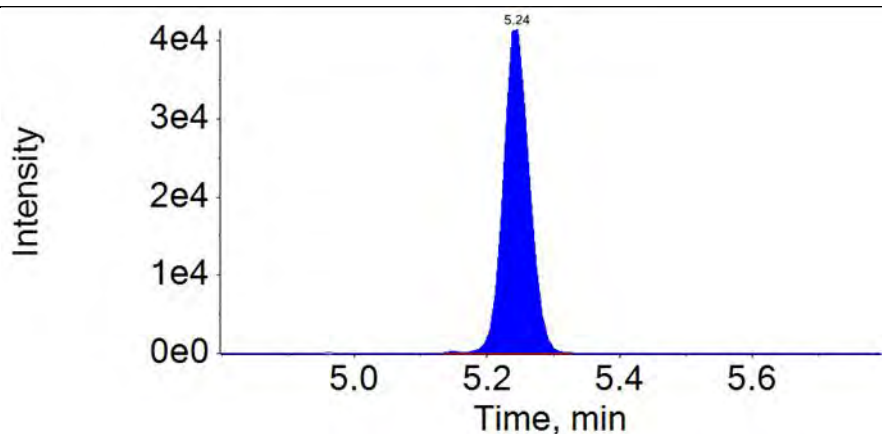
REVIEWED

By umar at 5:23 pm, 11/9/18

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

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

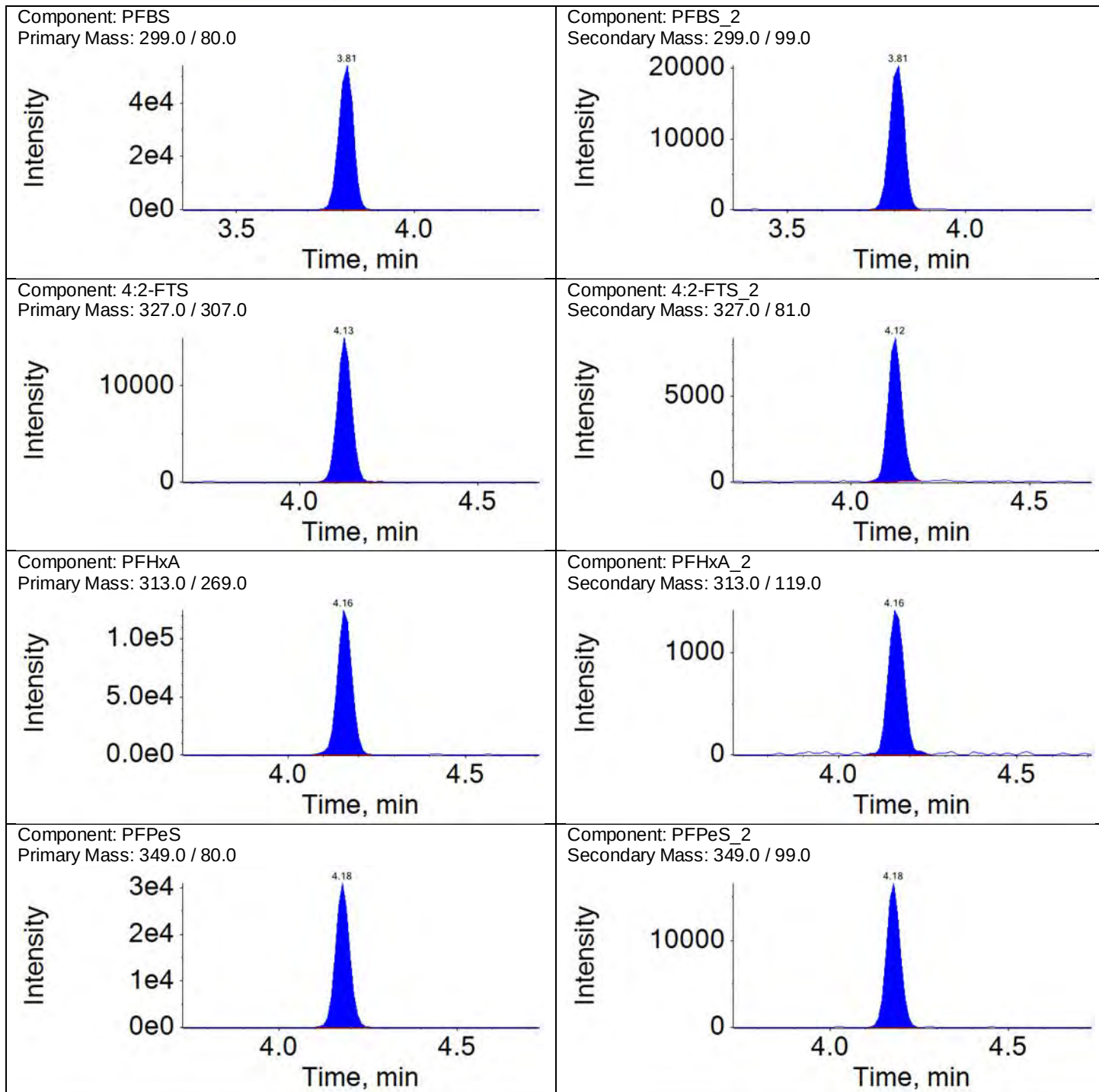
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	155917.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	59330.4	A	0.3576	0.3805	6	50	
4:2-FTS	4.13	1.00	41869.1	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	22969.1	A	0.6359	0.5486	-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	
PFTTrDA	6.25	1.03	191338.9	A	1.0000	1.0000			
PFTTrDA_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	

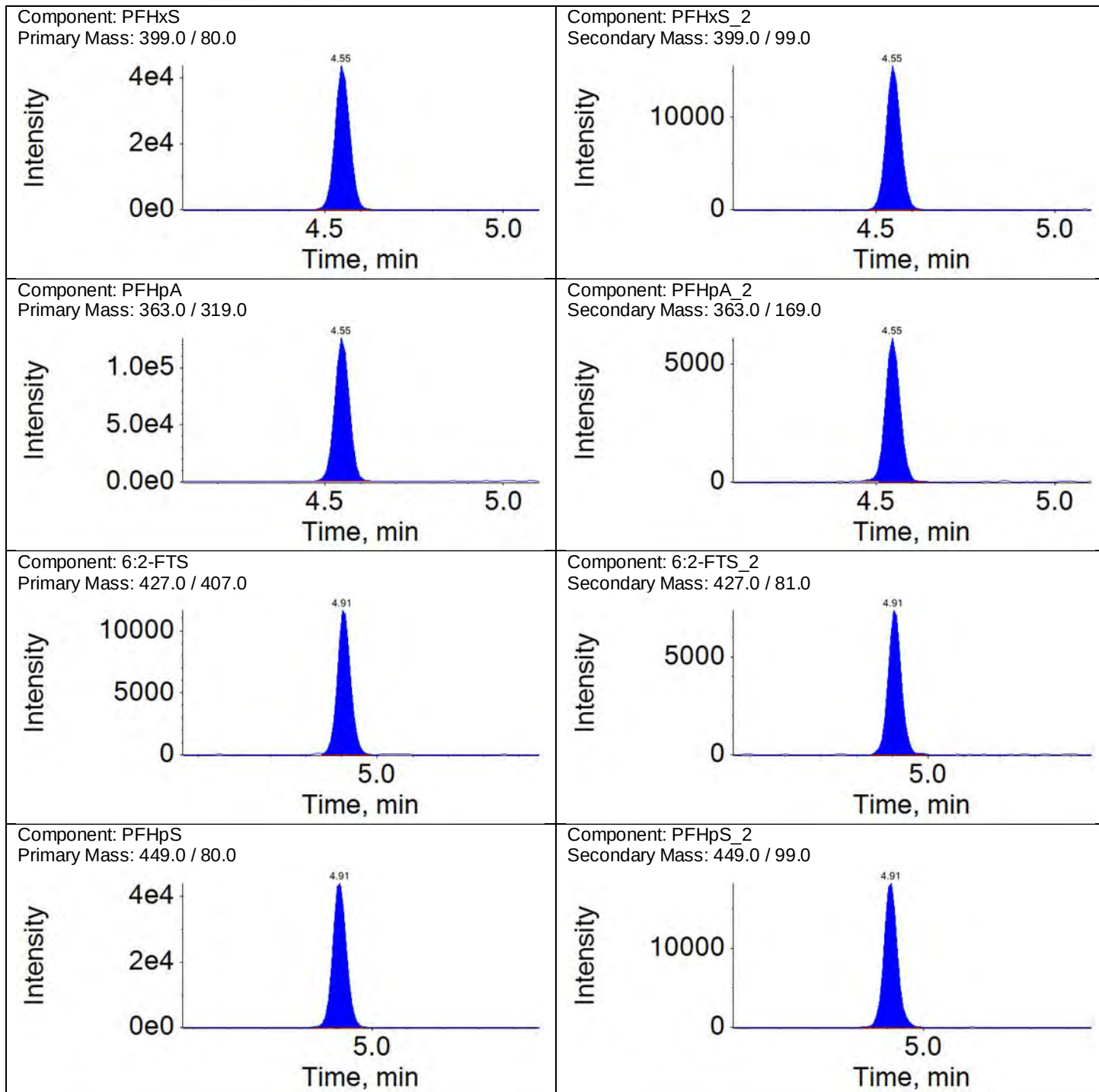
APPROVED

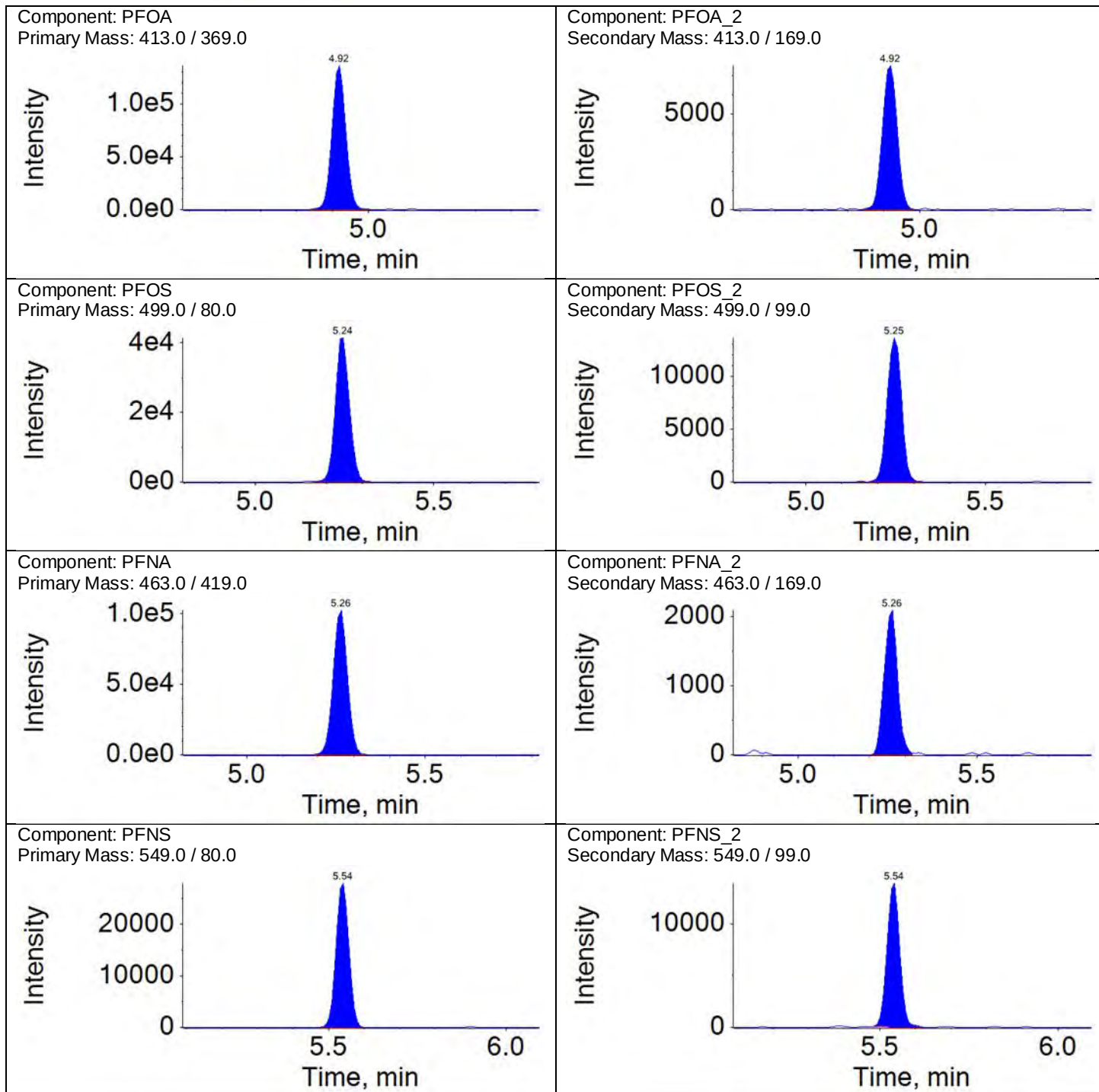
By JPT at 2:53 pm, 11/7/18

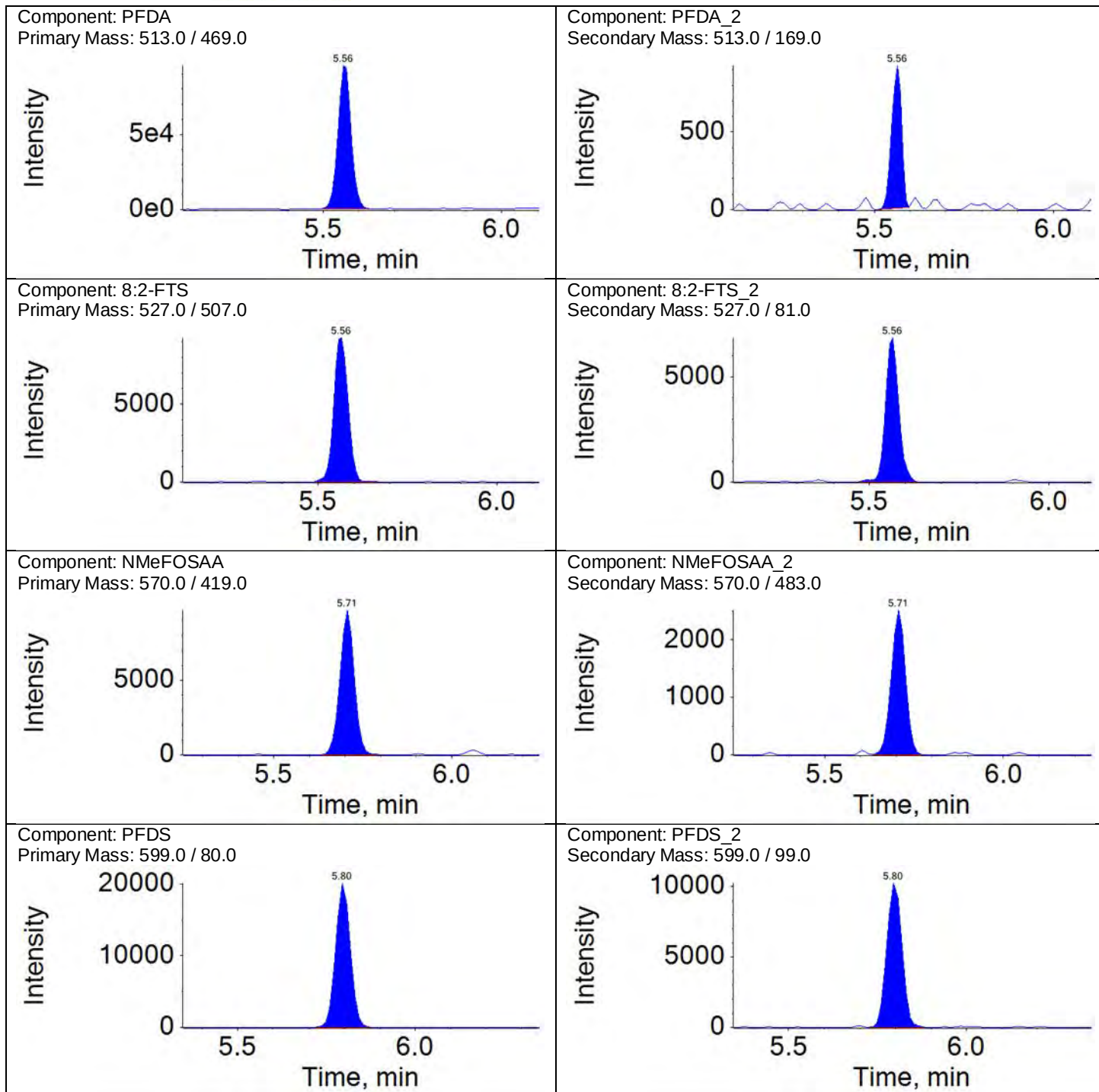
REVIEWED

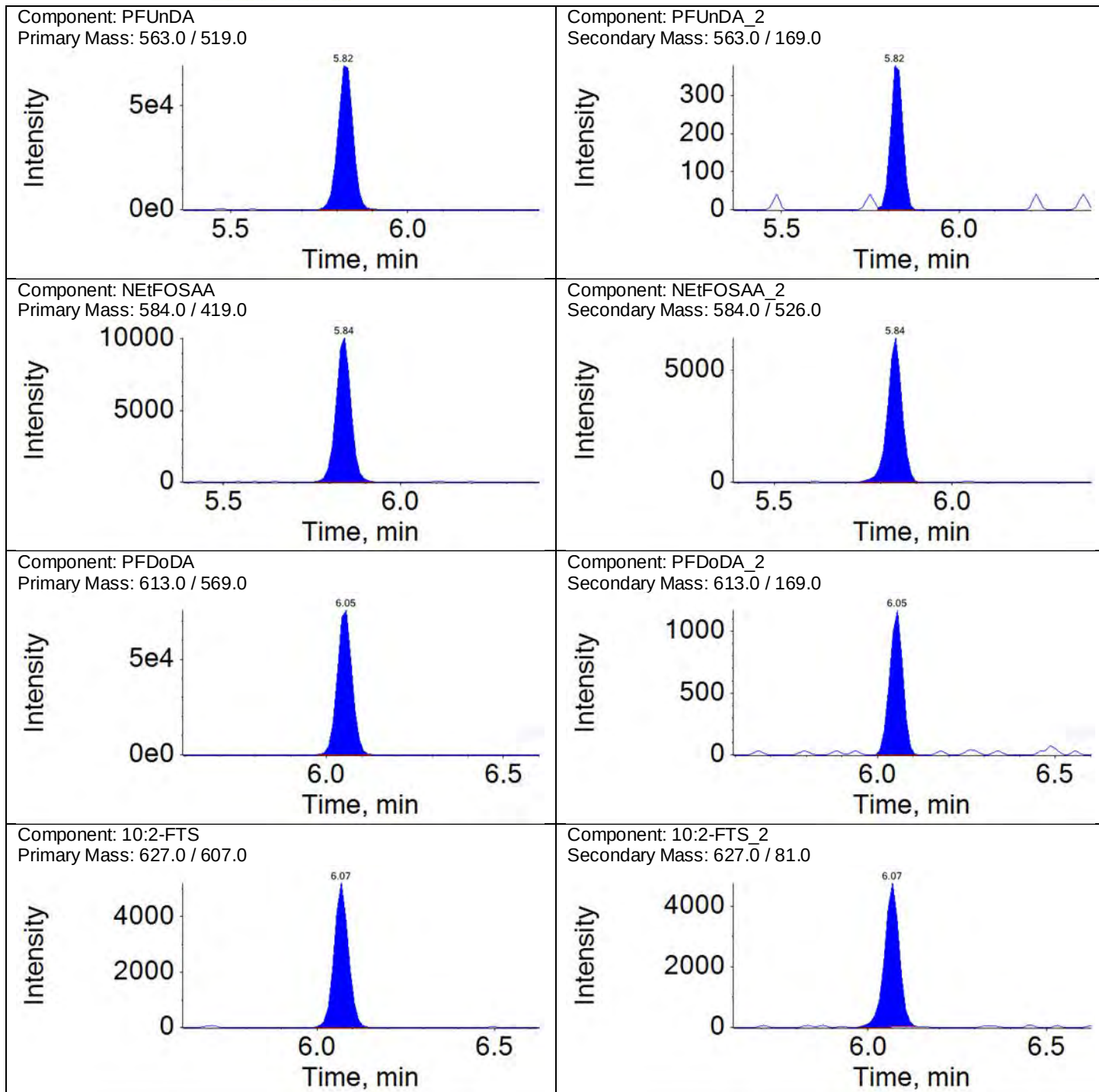
By umar at 5:23 pm, 11/9/18

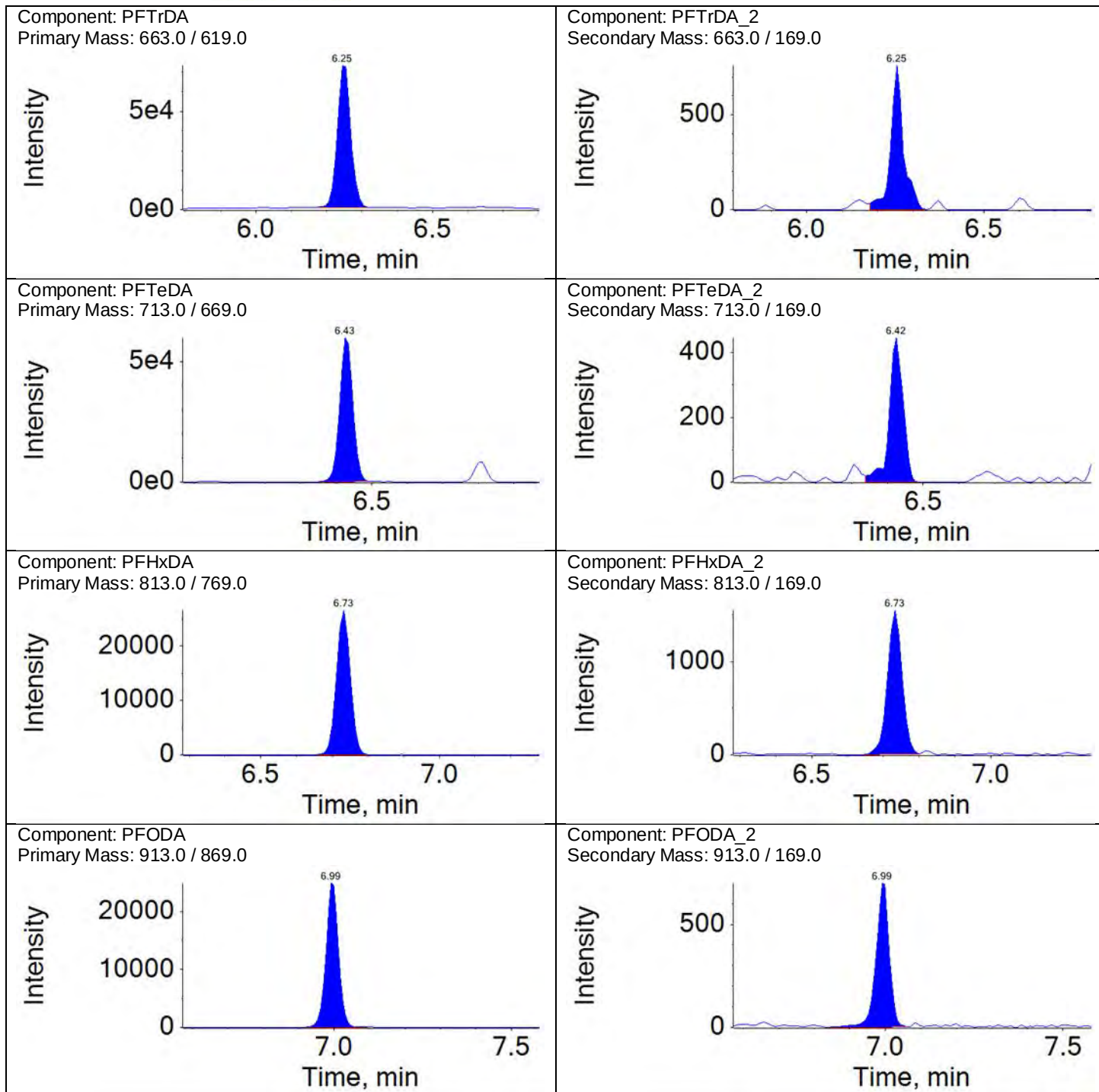












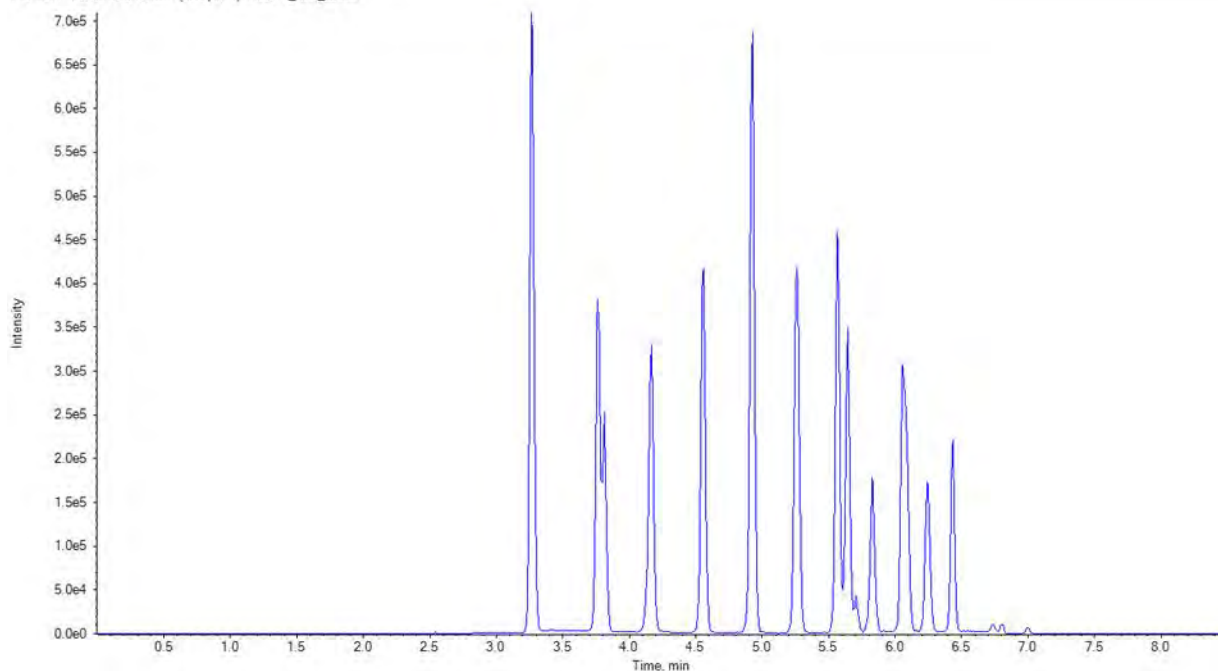
Instrument Sensitivity Check/ Continuing Calibration Verification

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

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
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

TIC from 18NOV08D-05.wiff (sample 1) - CCV1_ISC_CAL2



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	

Instrument Sensitivity Check/ Continuing Calibration Verification

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

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
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	
PFTDA	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	
PFOA	14725.2	10	13C2-PFTeDA	403281.7	5.0	0.037	7.00	1.090	0.500	0.523	5	30	

**Instrument Sensitivity Check/
Continuing Calibration Verification**

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	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	

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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2

Instrument Name: LM27631

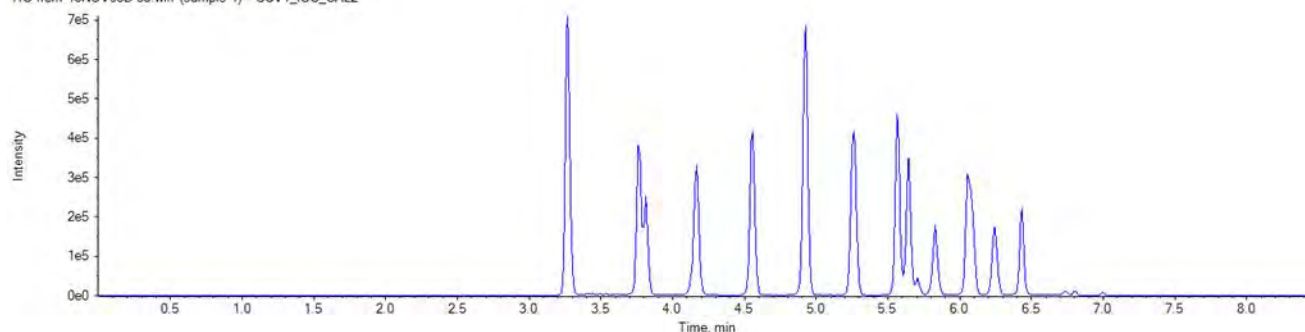
File Name: 18NOV08D-05.wiff

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
PFTDA	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

TIC from 18NOV08D-05.wiff (sample 1) - CCV1_ISC_CAL2



APPROVED

By JPT at 5:07 pm, 11/8/18

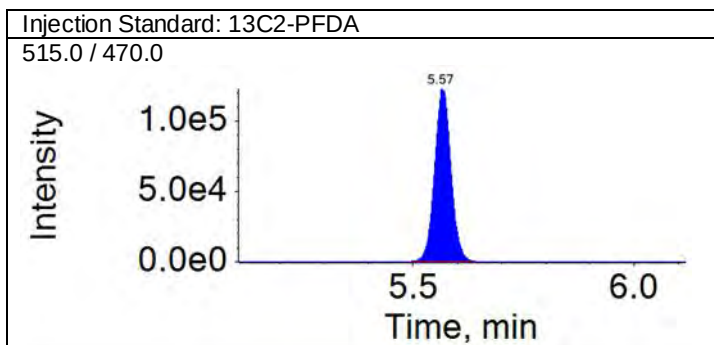
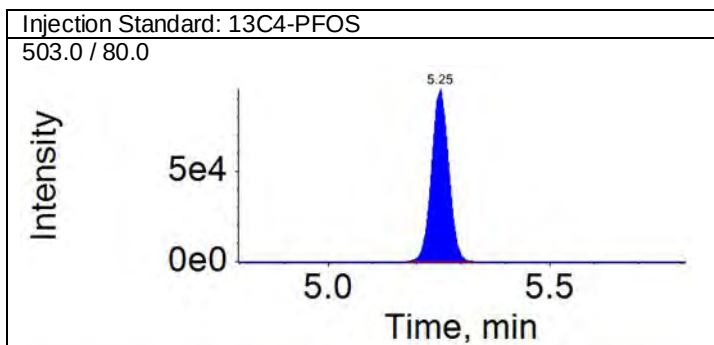
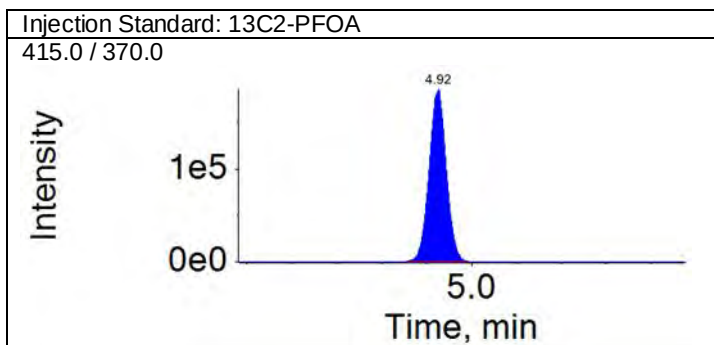
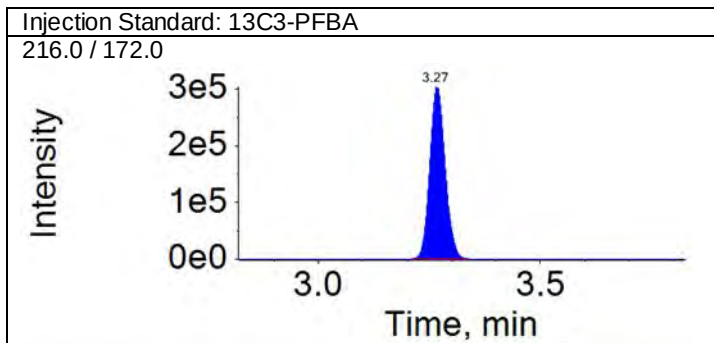
BSI05 Page 682 of 1595

REVIEWED

By HMK at 2:58 pm, 11/11/18

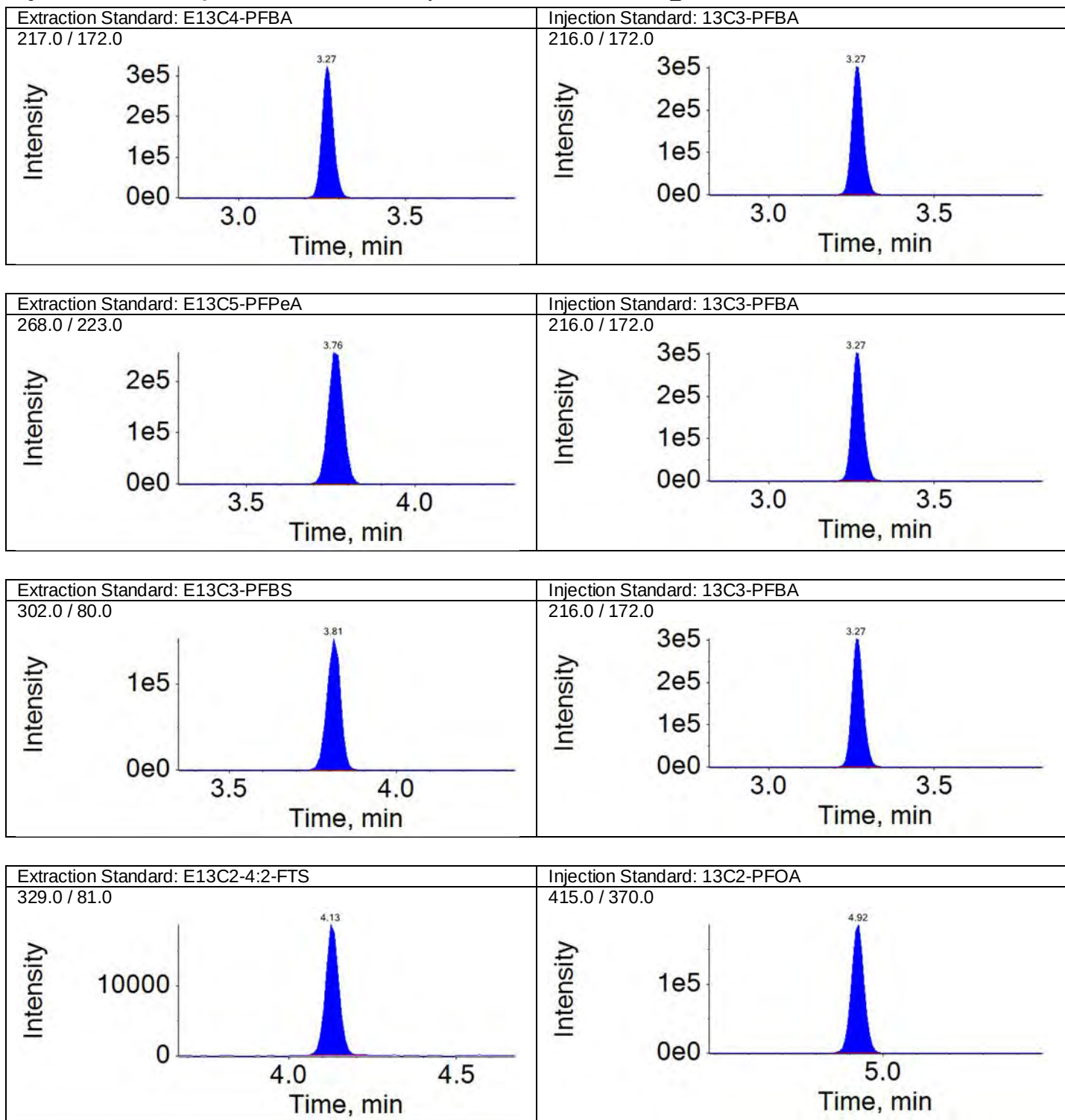
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



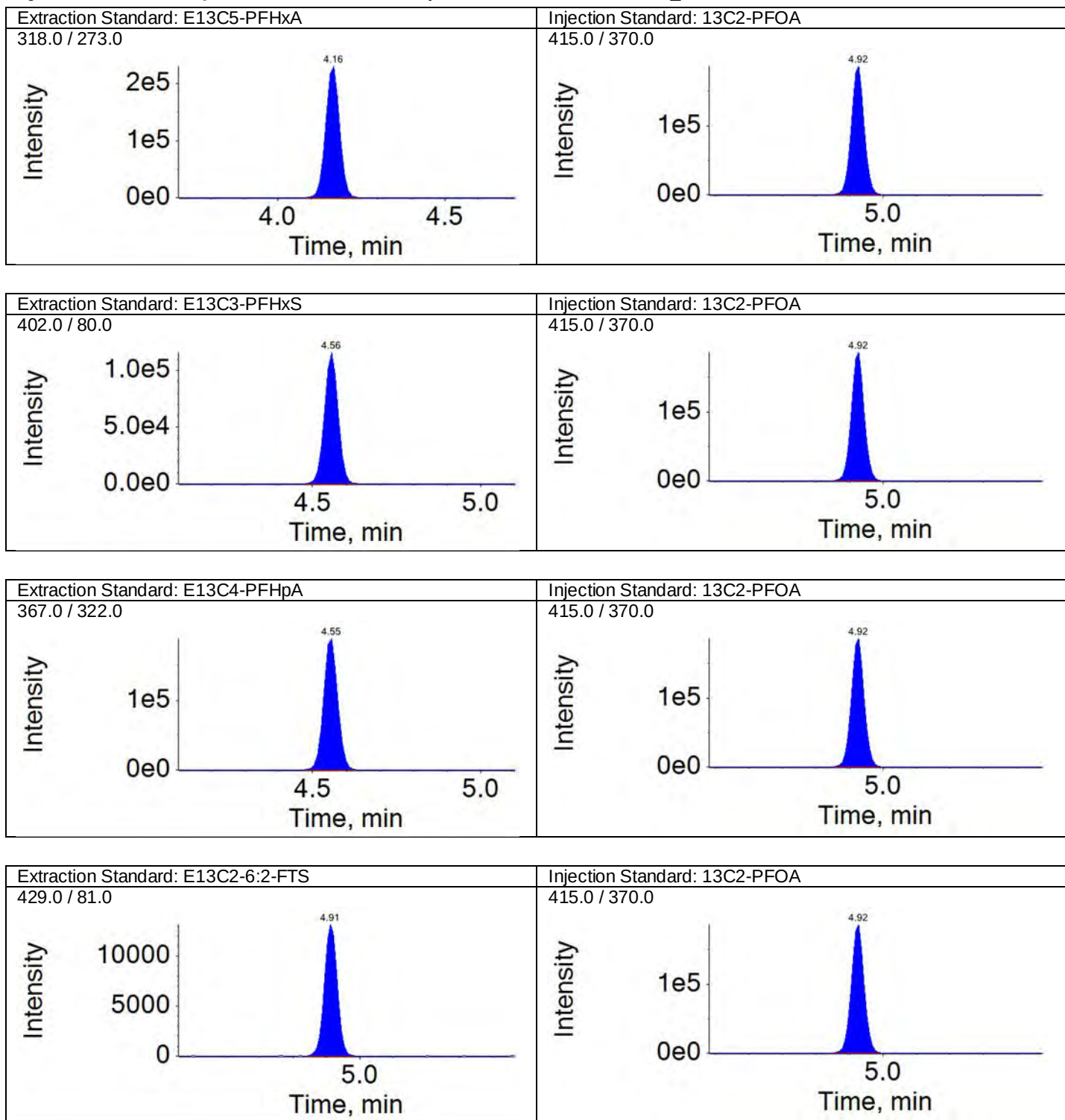
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

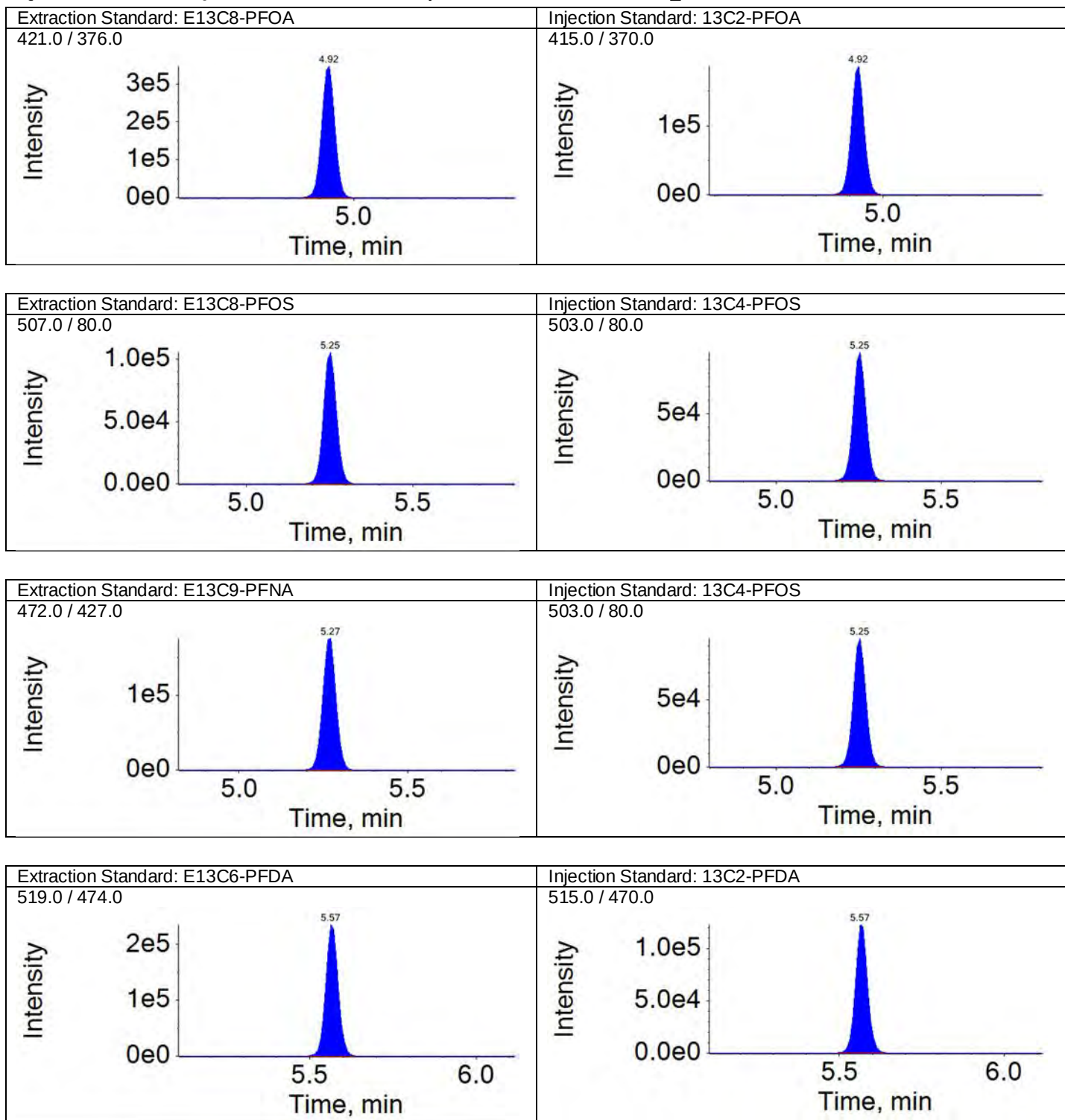
By JPT at 5:07 pm, 11/8/18

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



APPROVED

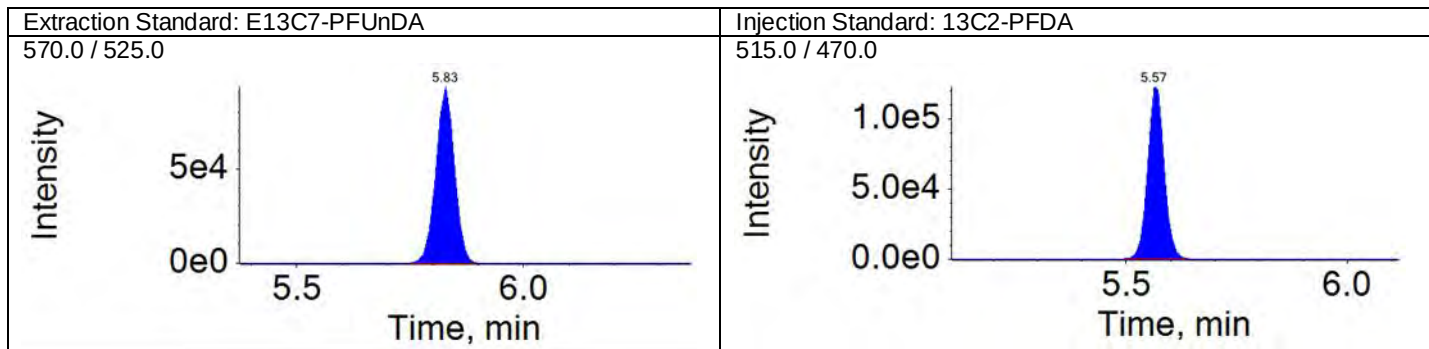
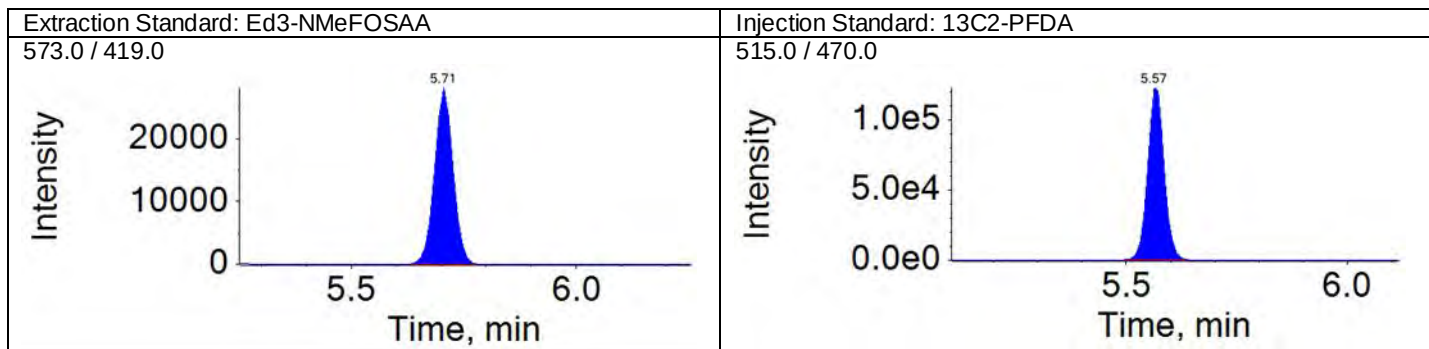
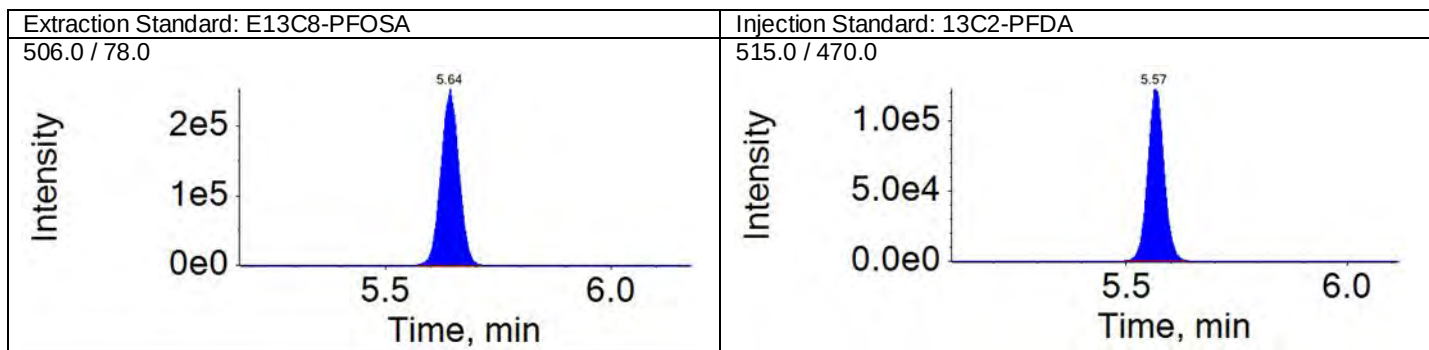
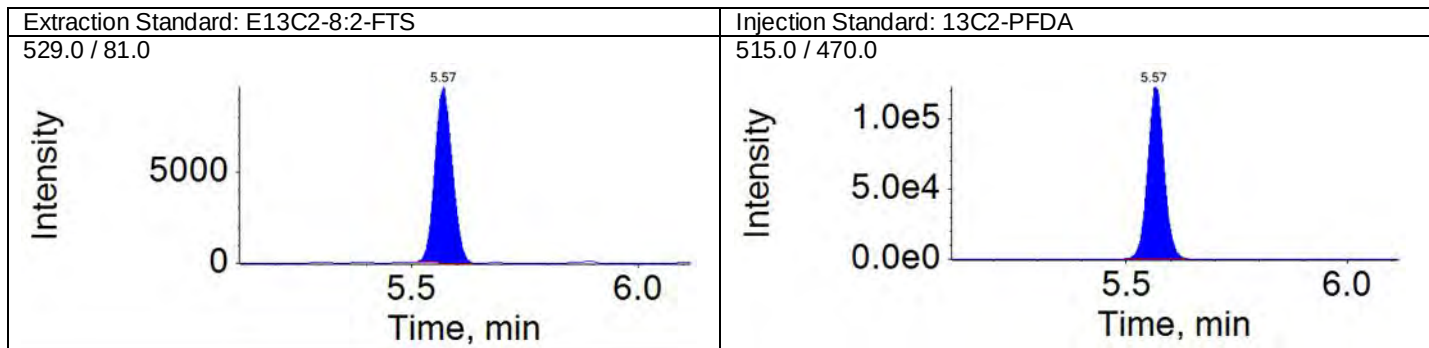
By JPT at 5:07 pm, 11/8/18

REVIEWED

By HMK at 2:58 pm, 11/11/18

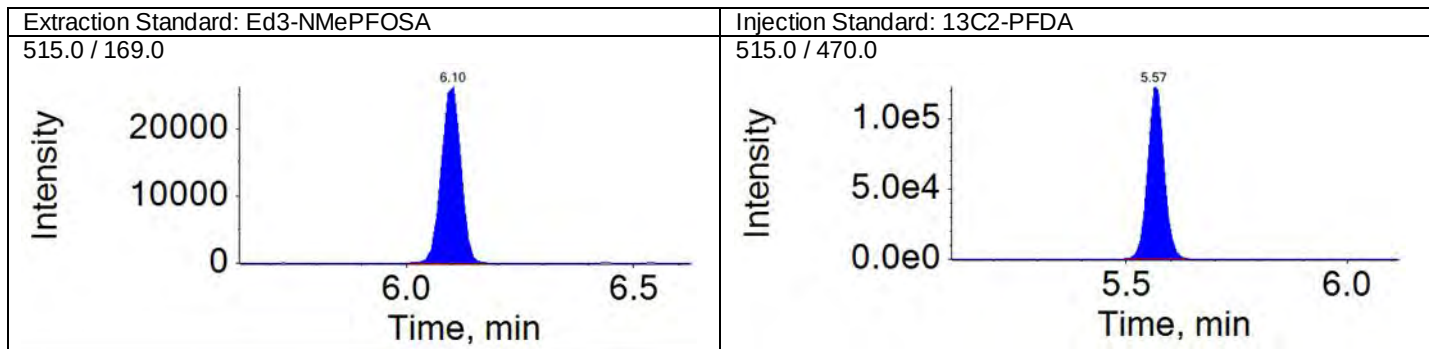
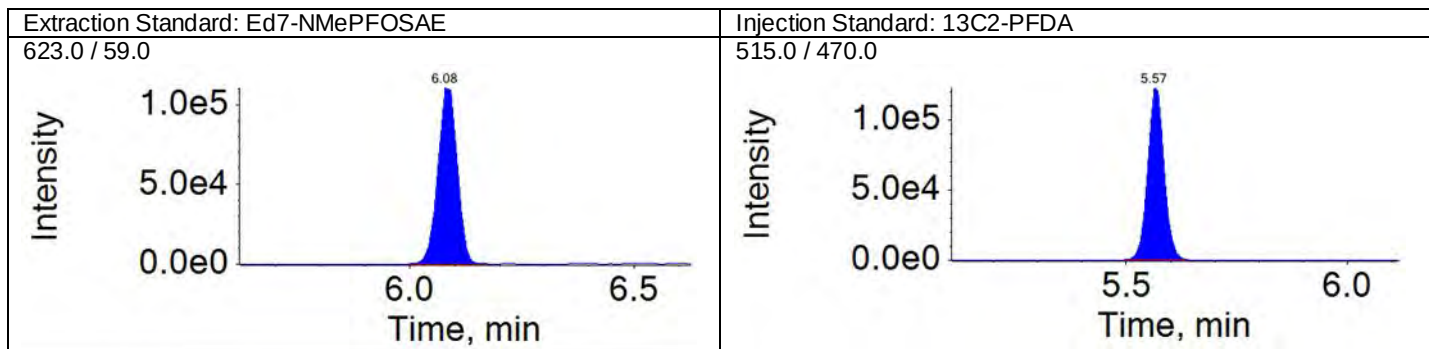
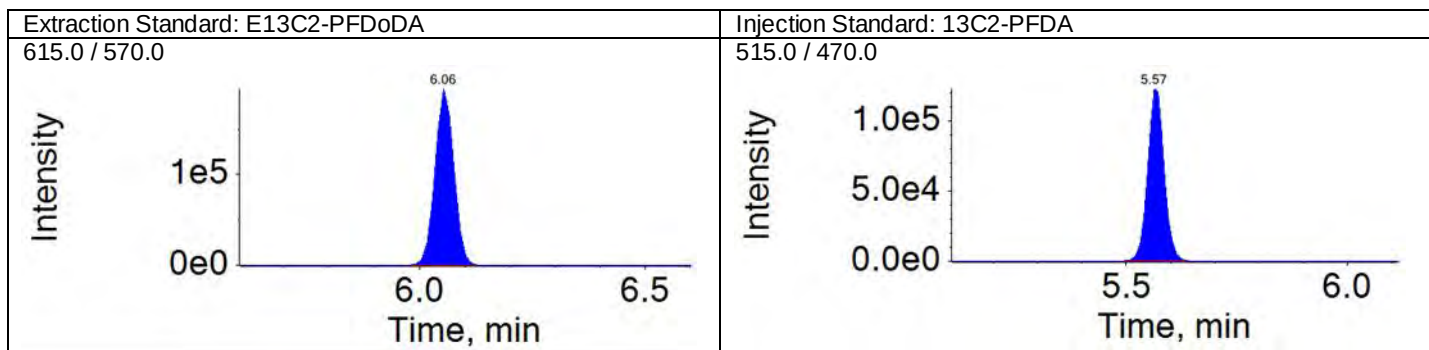
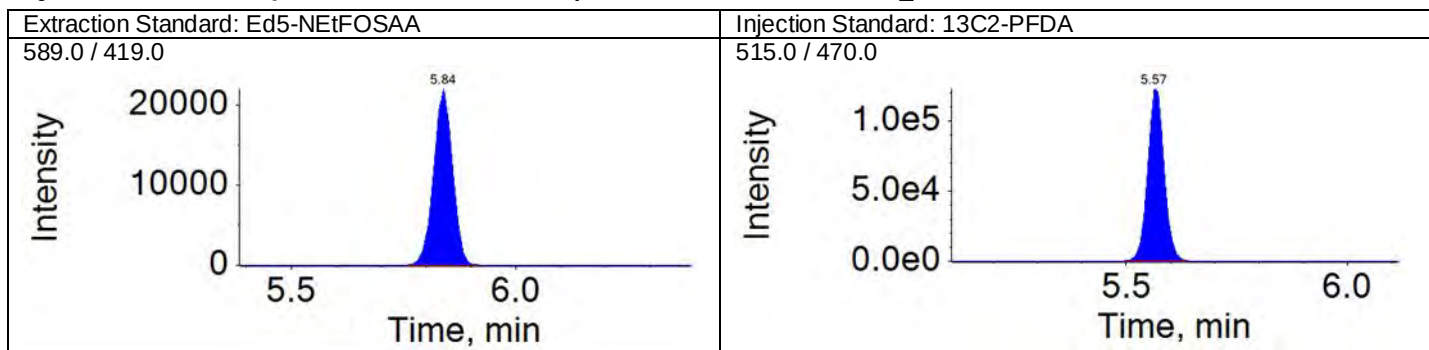
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



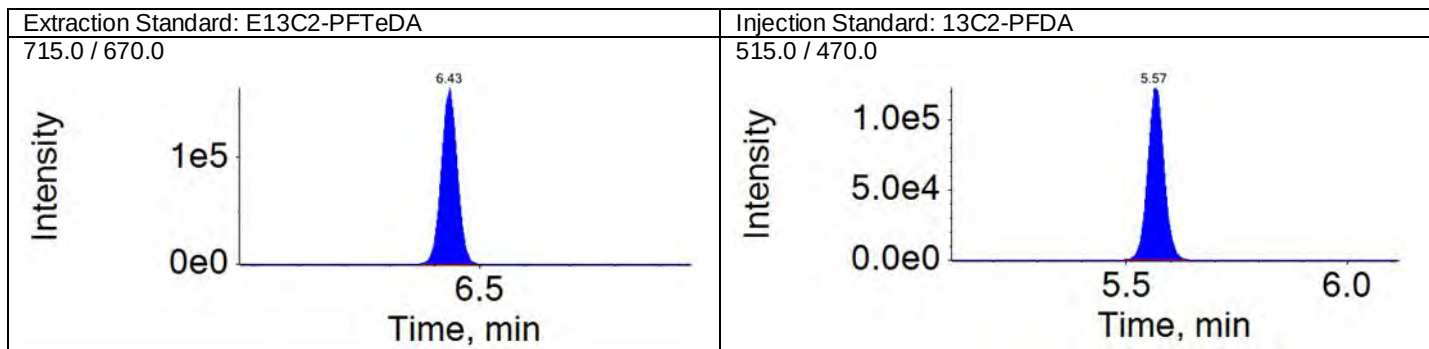
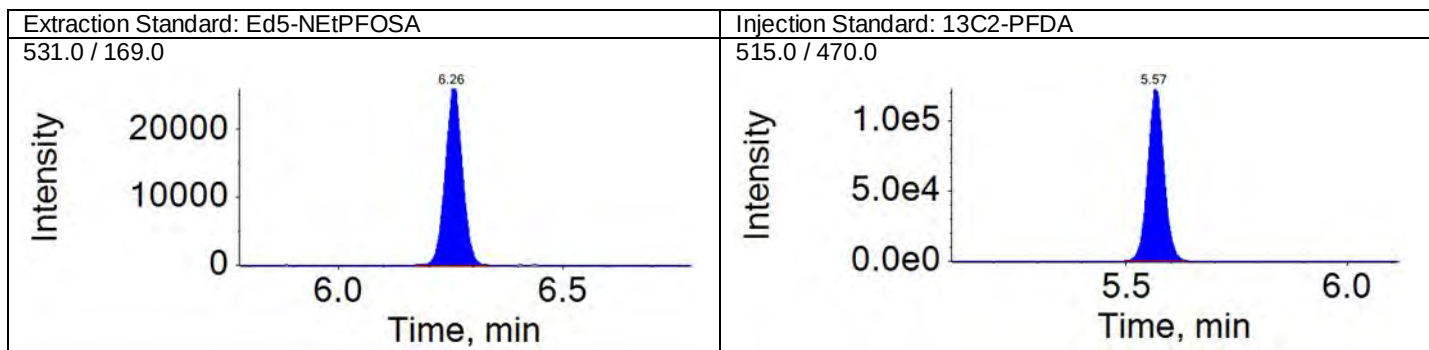
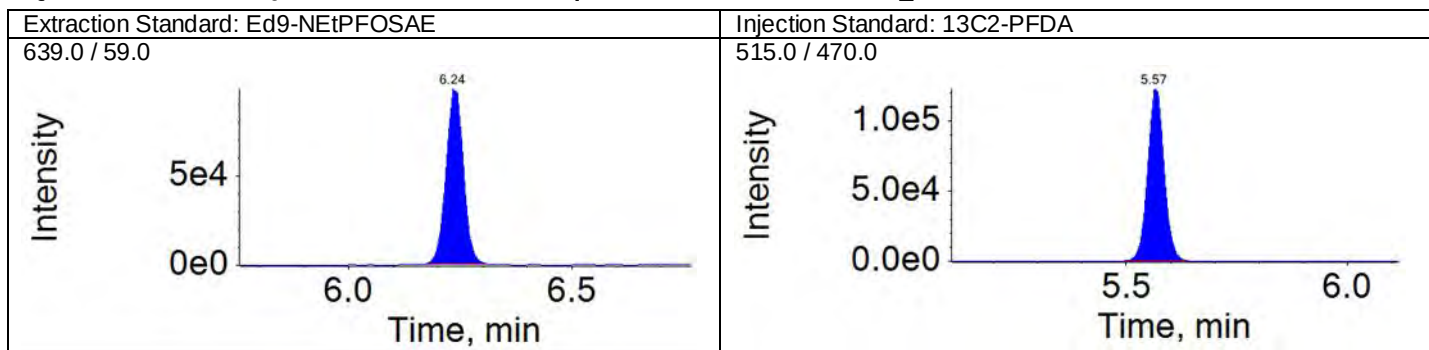
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



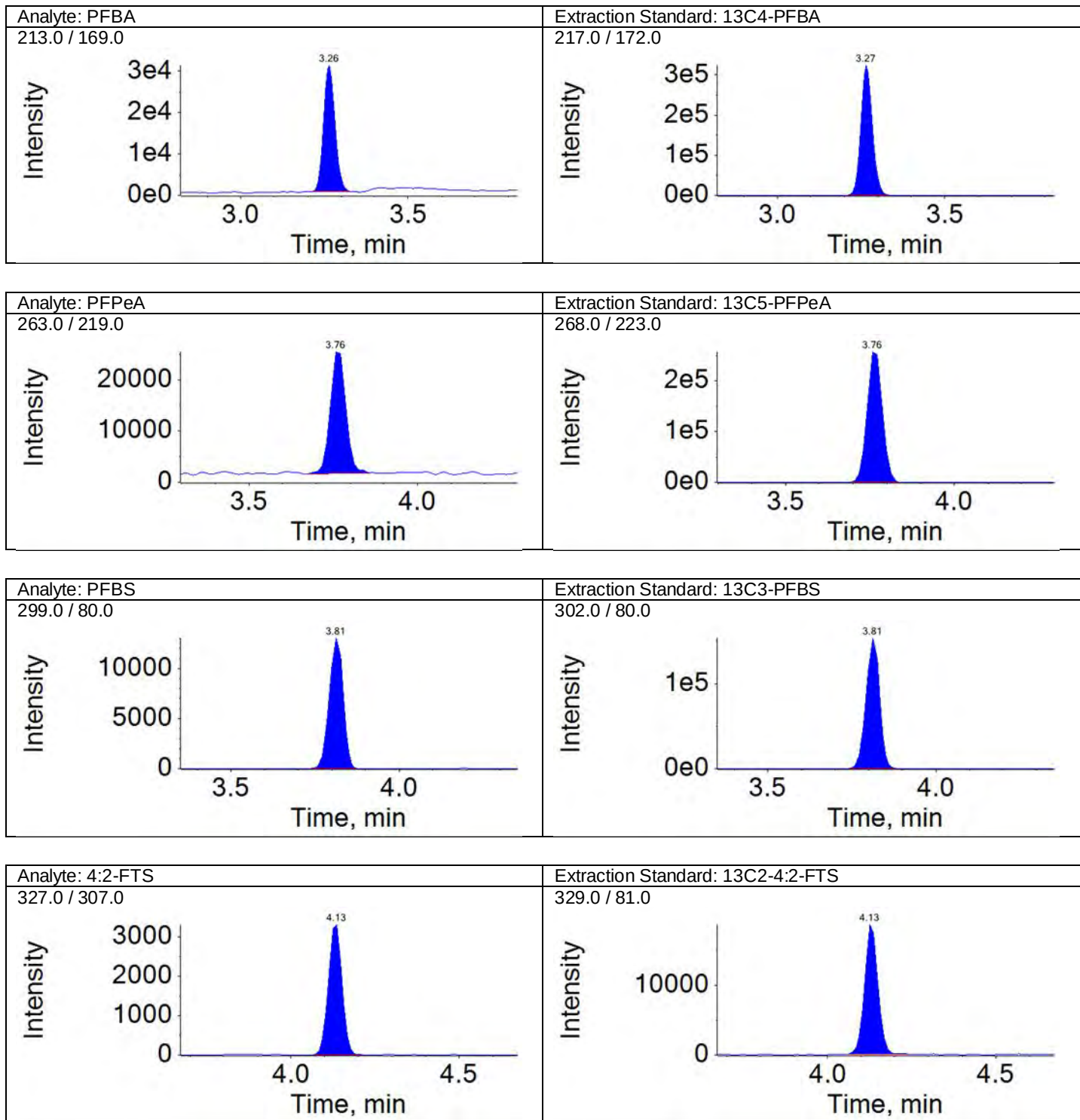
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



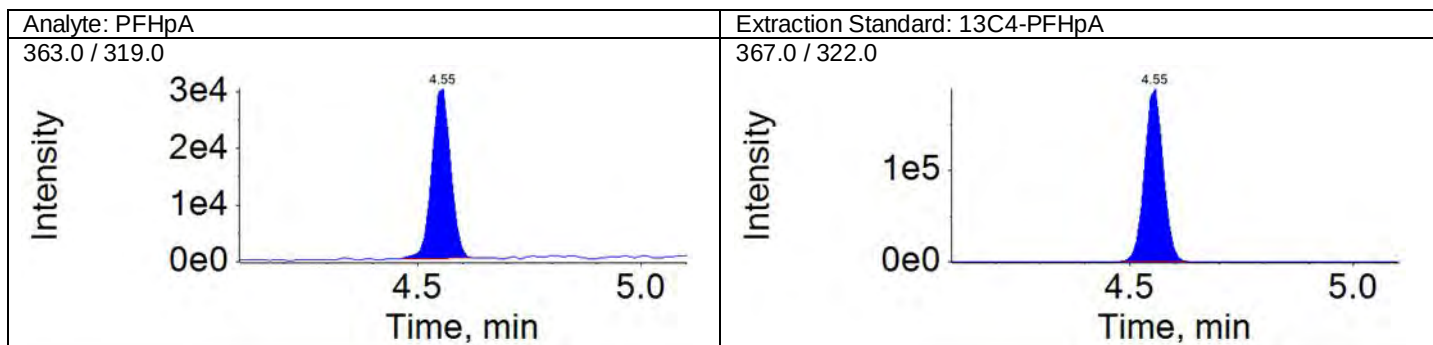
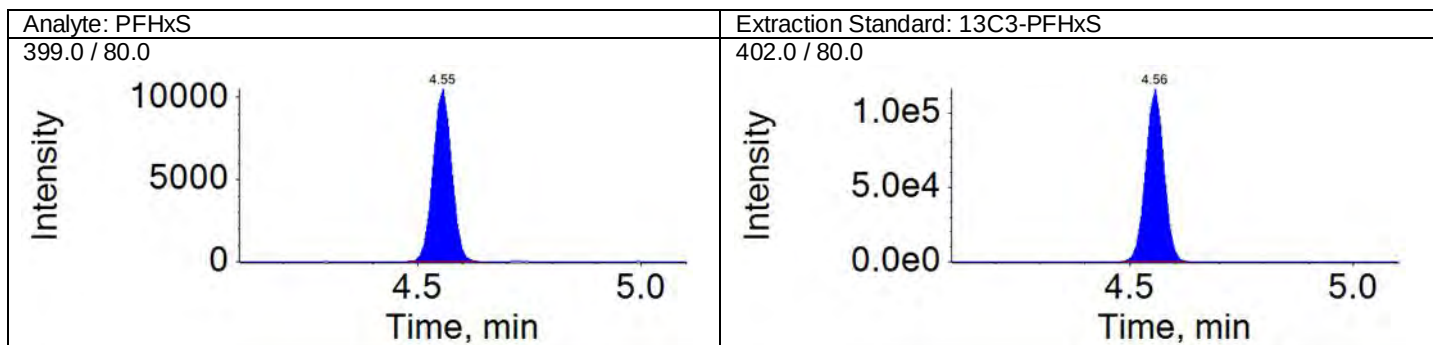
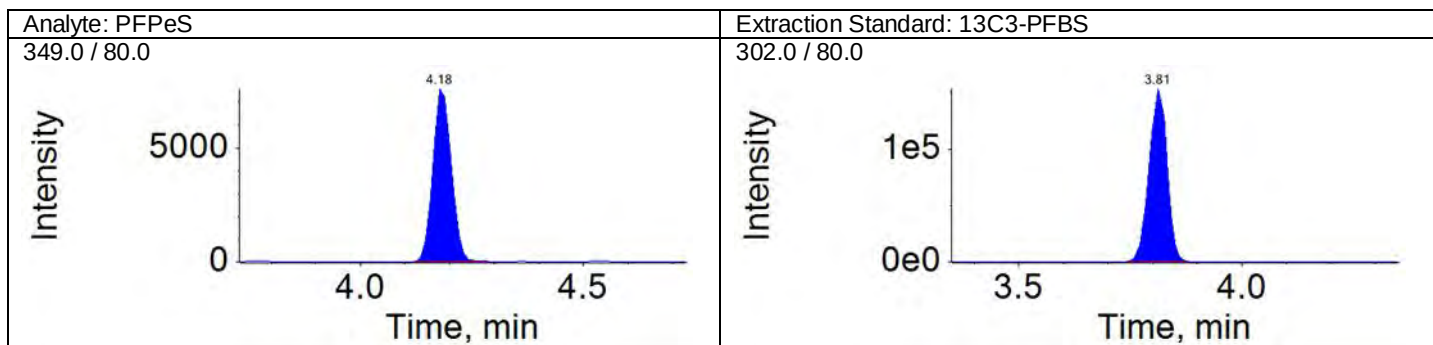
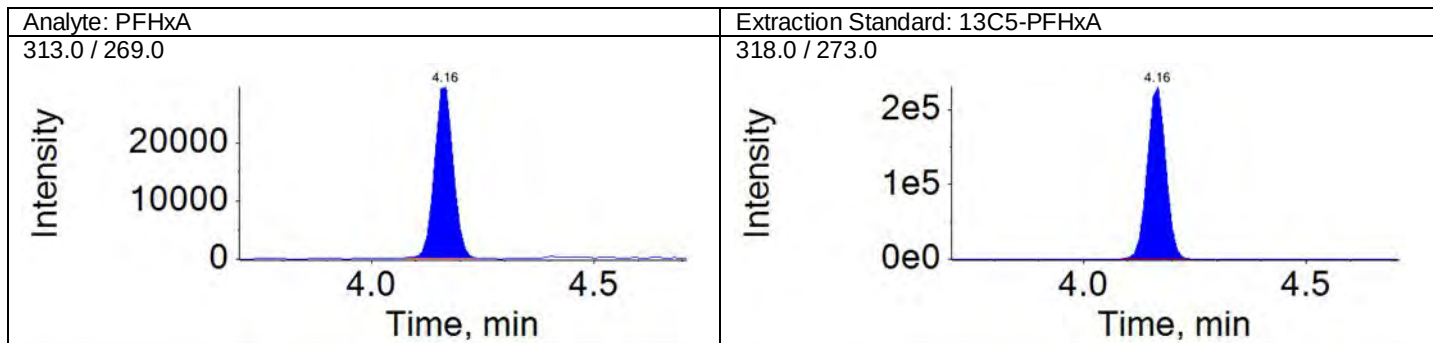
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



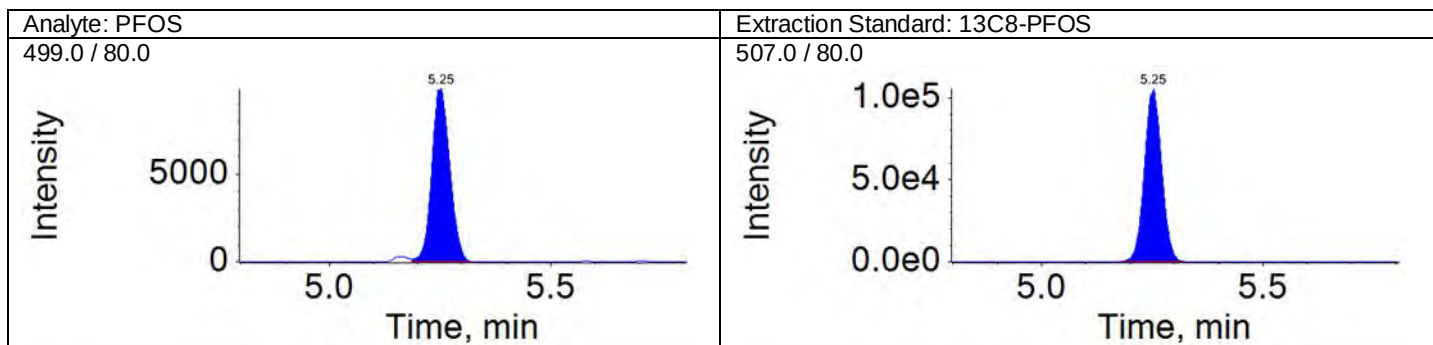
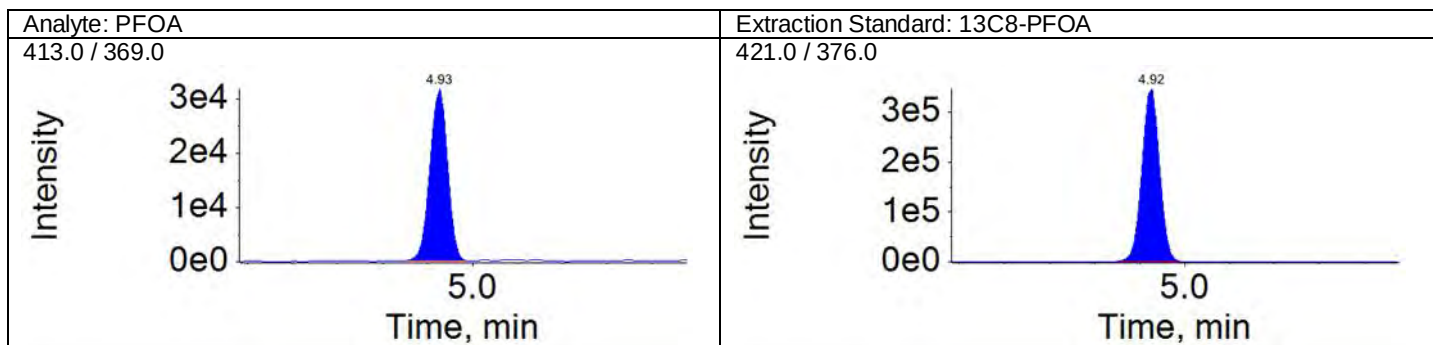
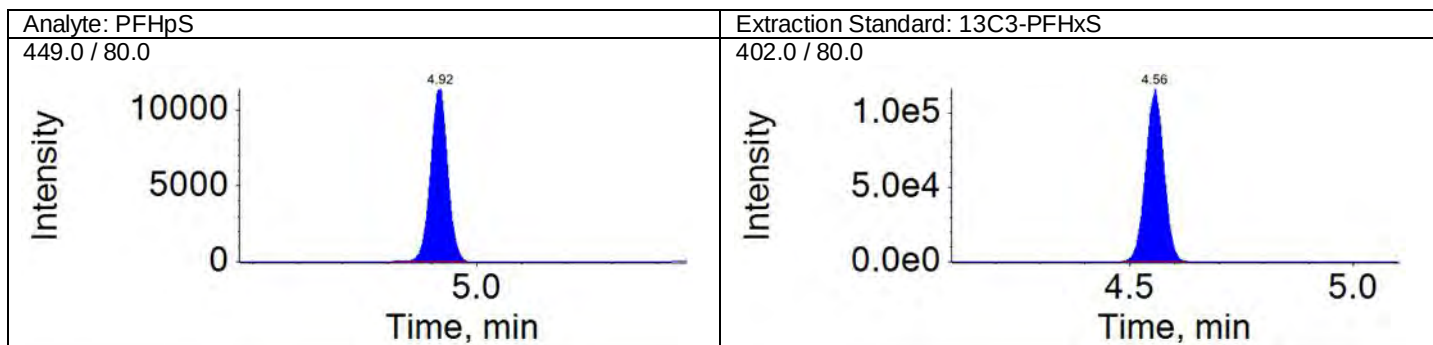
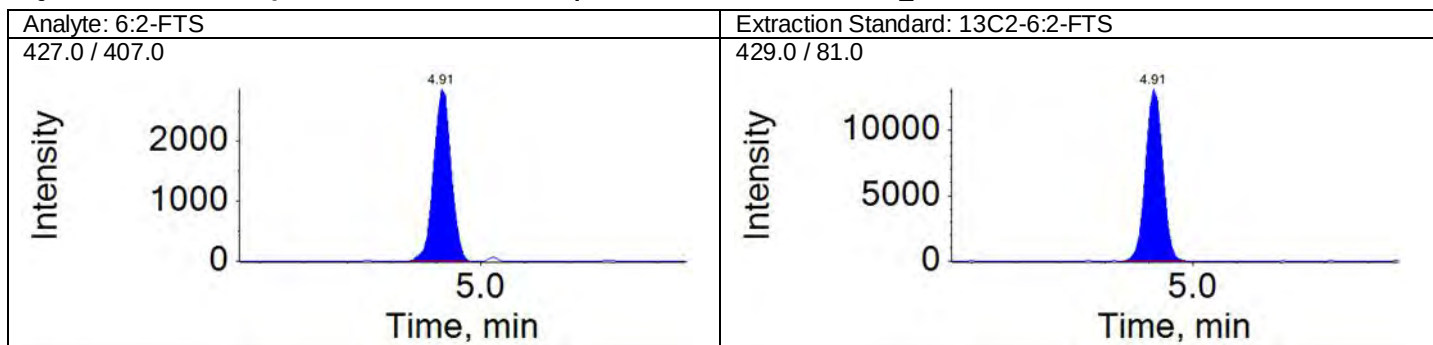
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



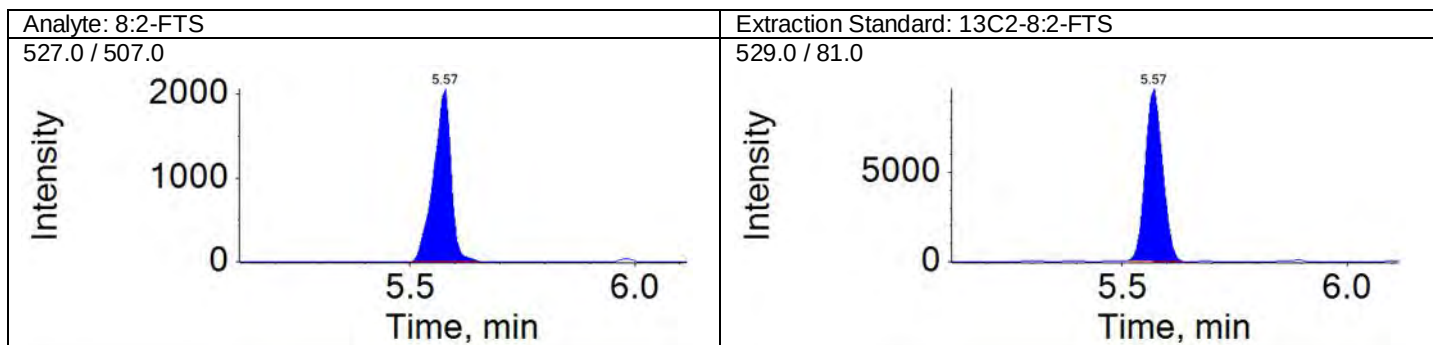
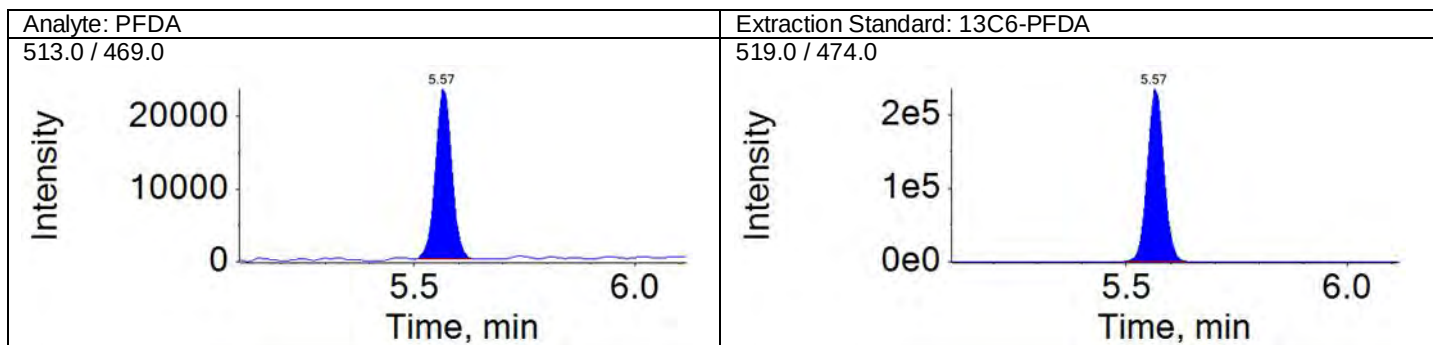
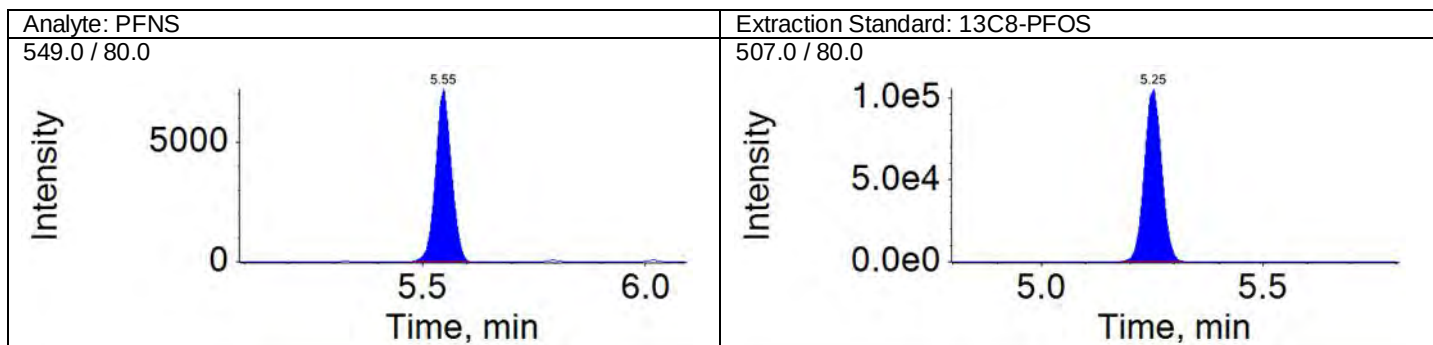
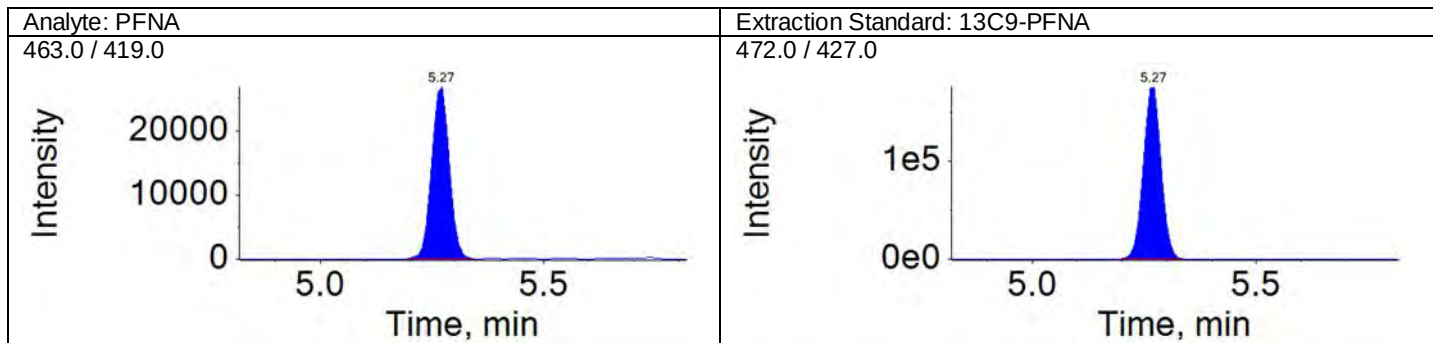
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



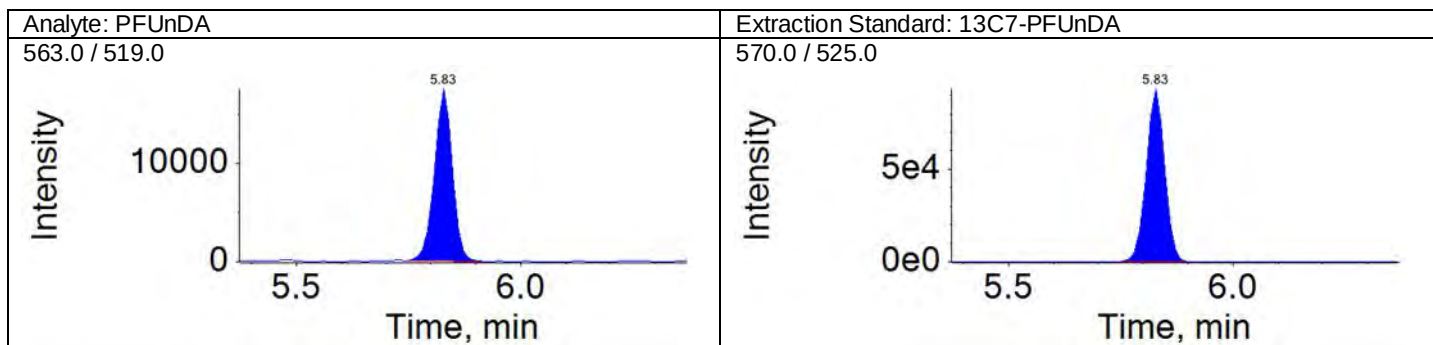
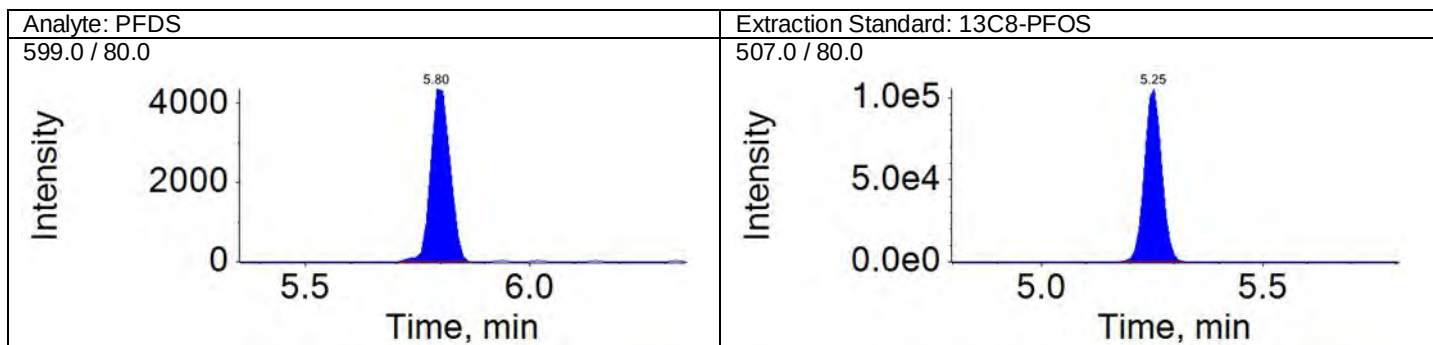
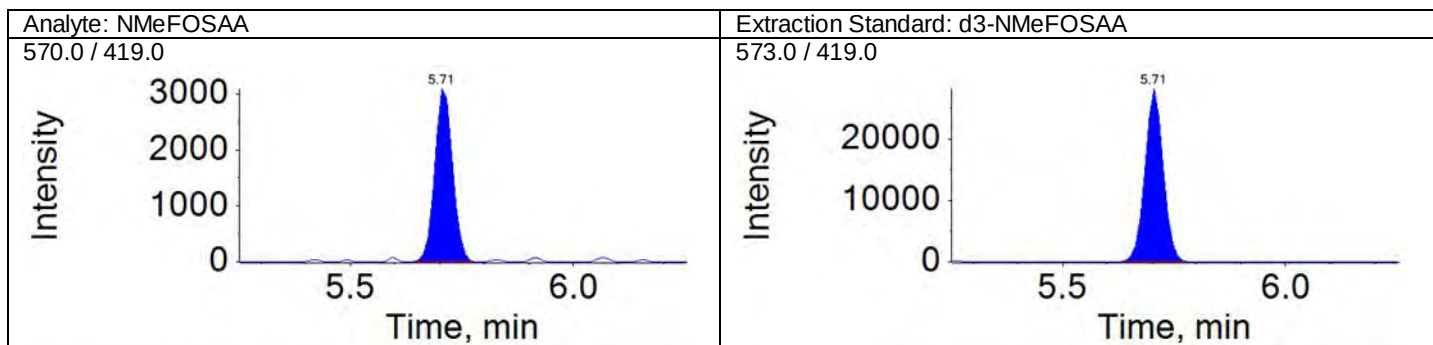
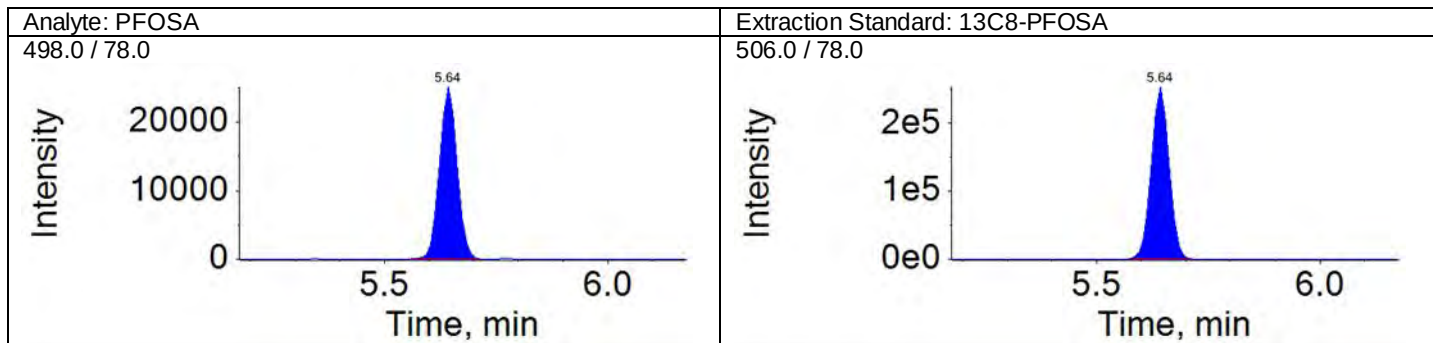
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



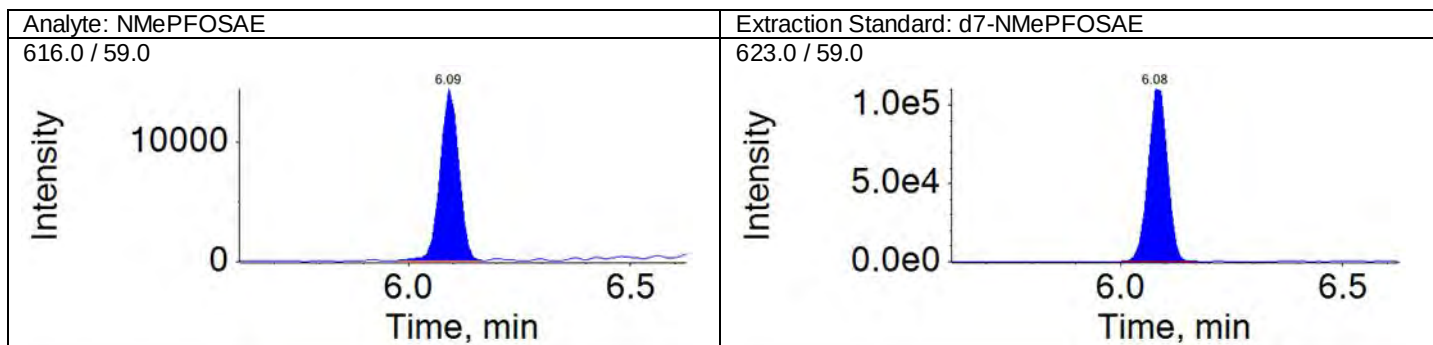
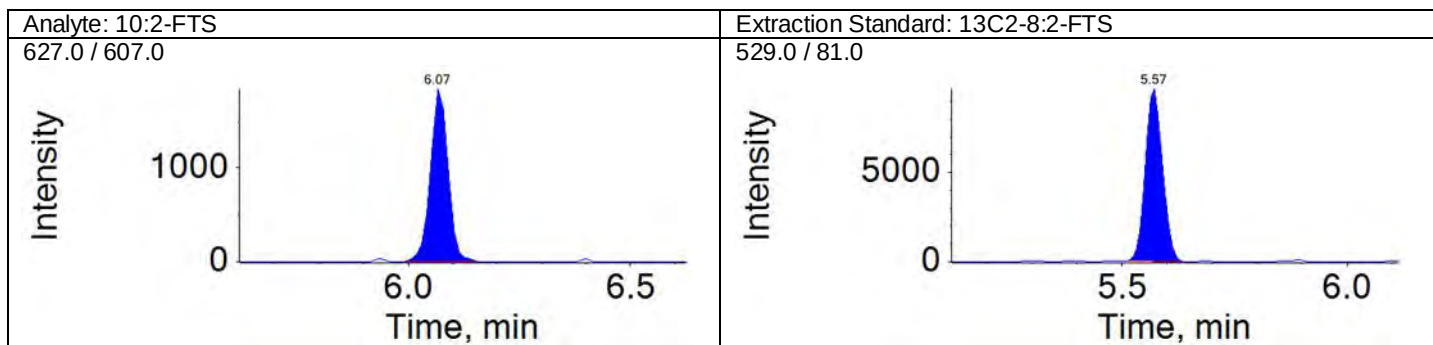
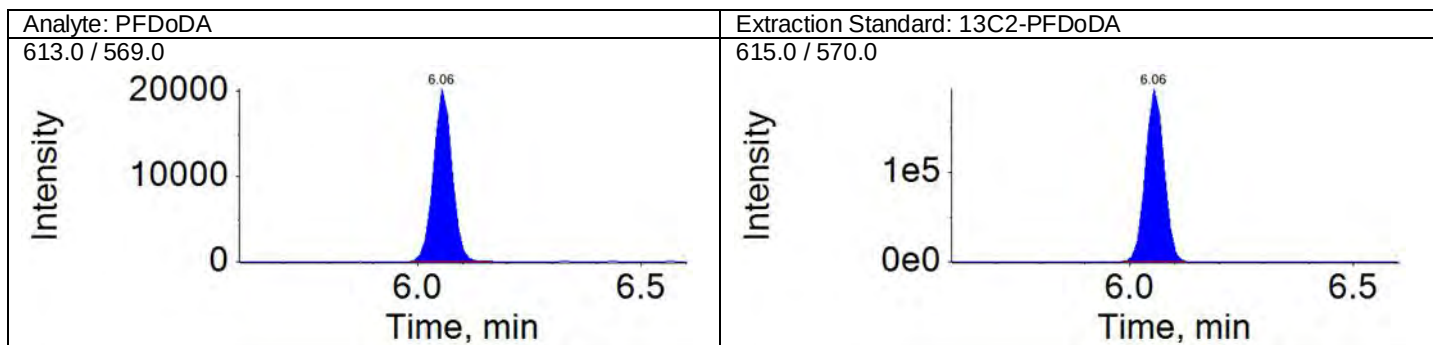
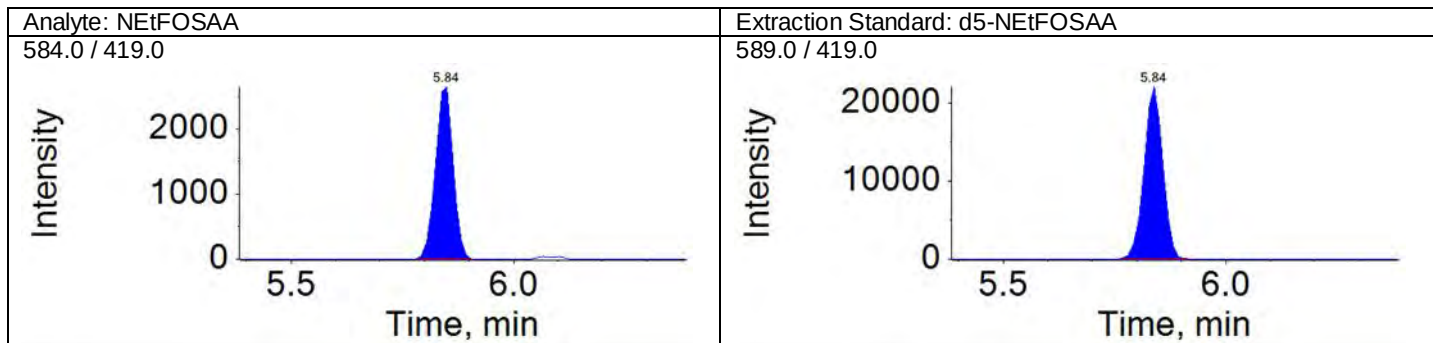
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



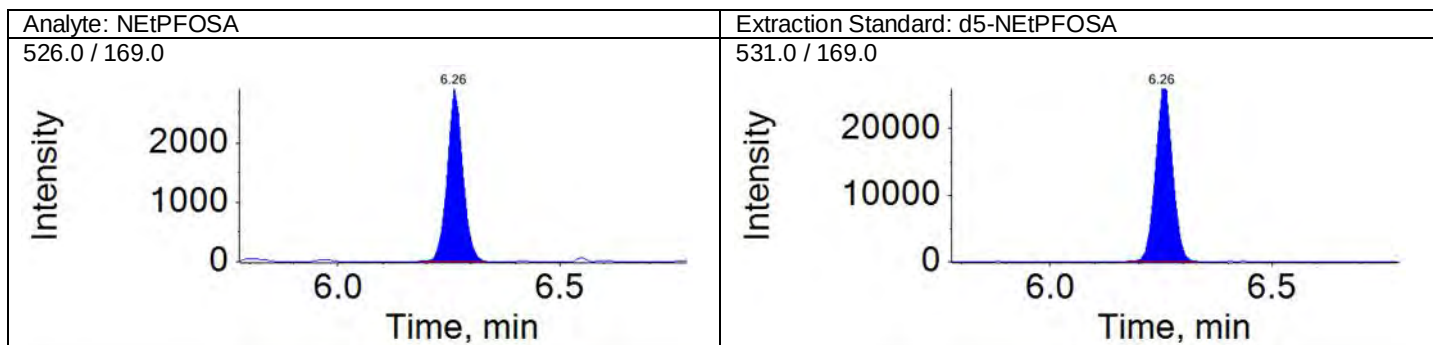
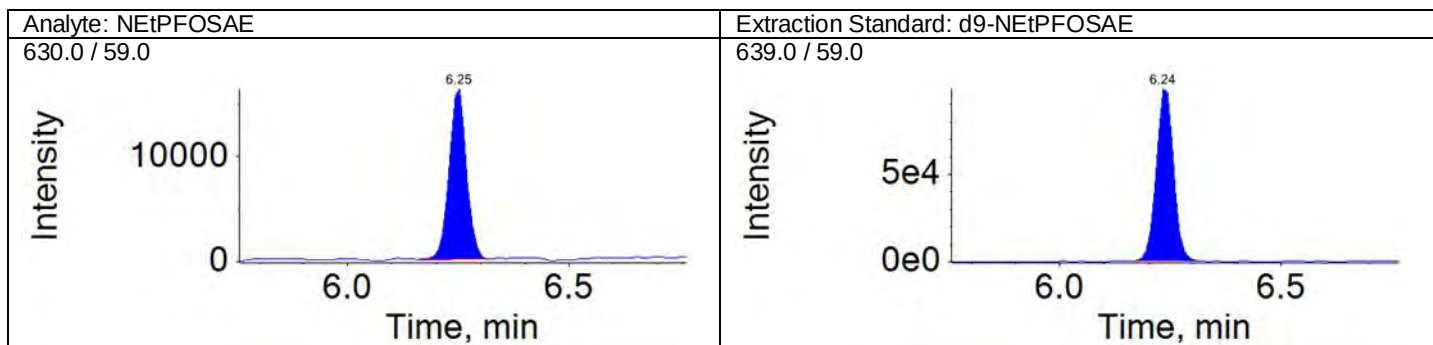
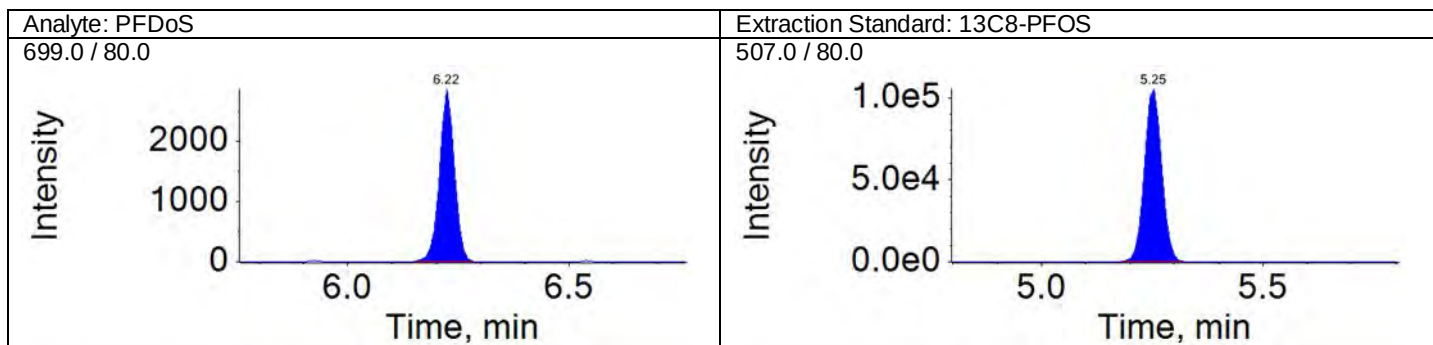
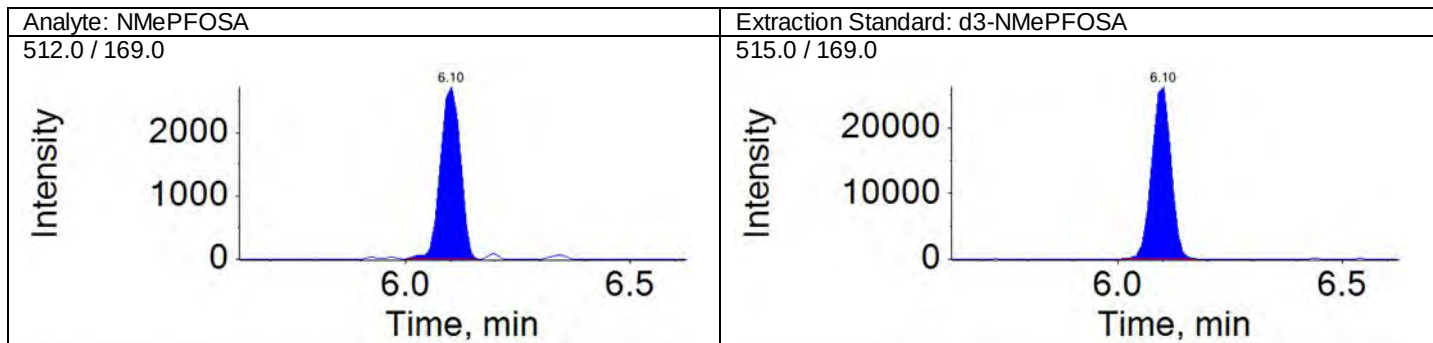
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



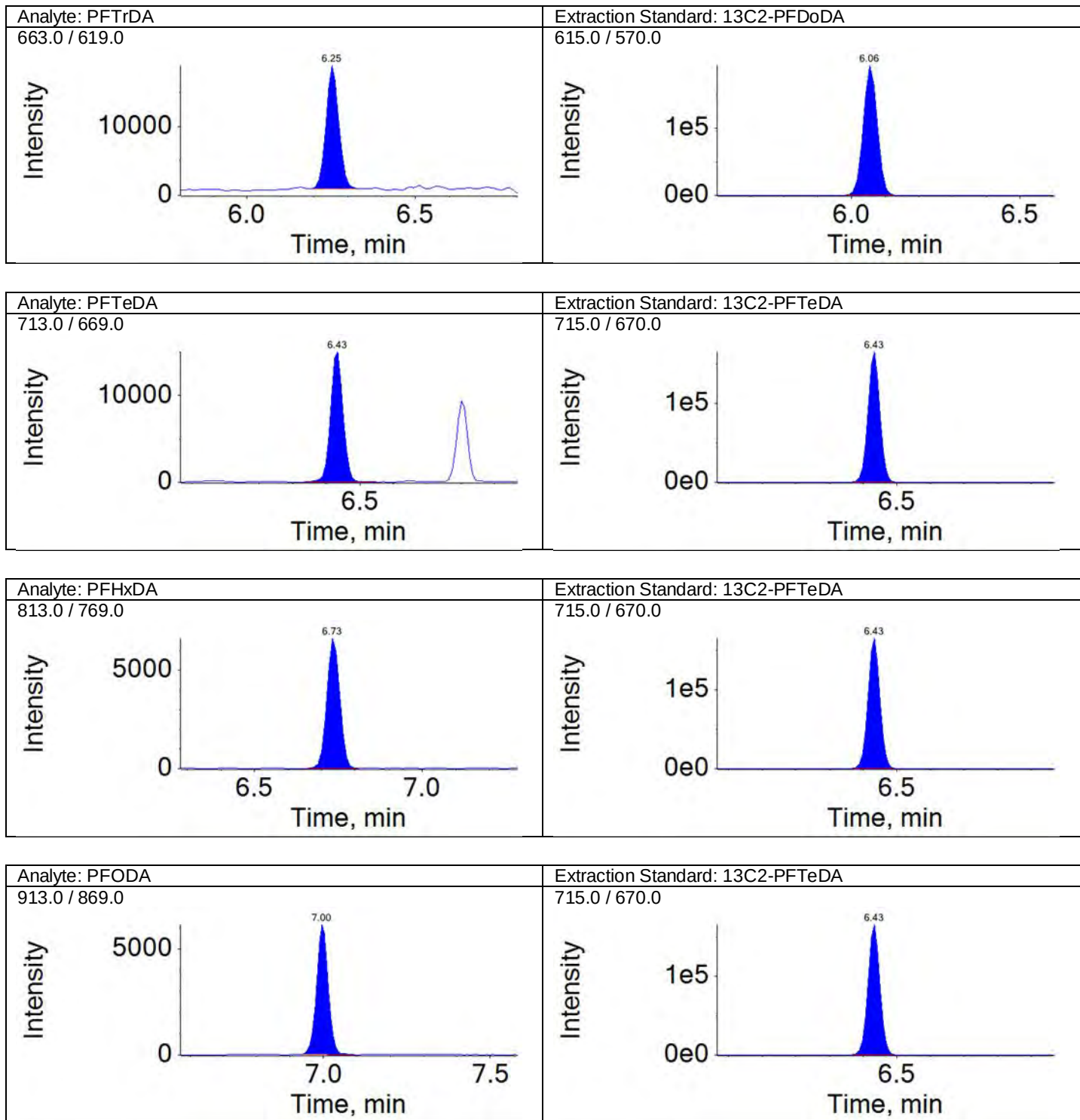
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



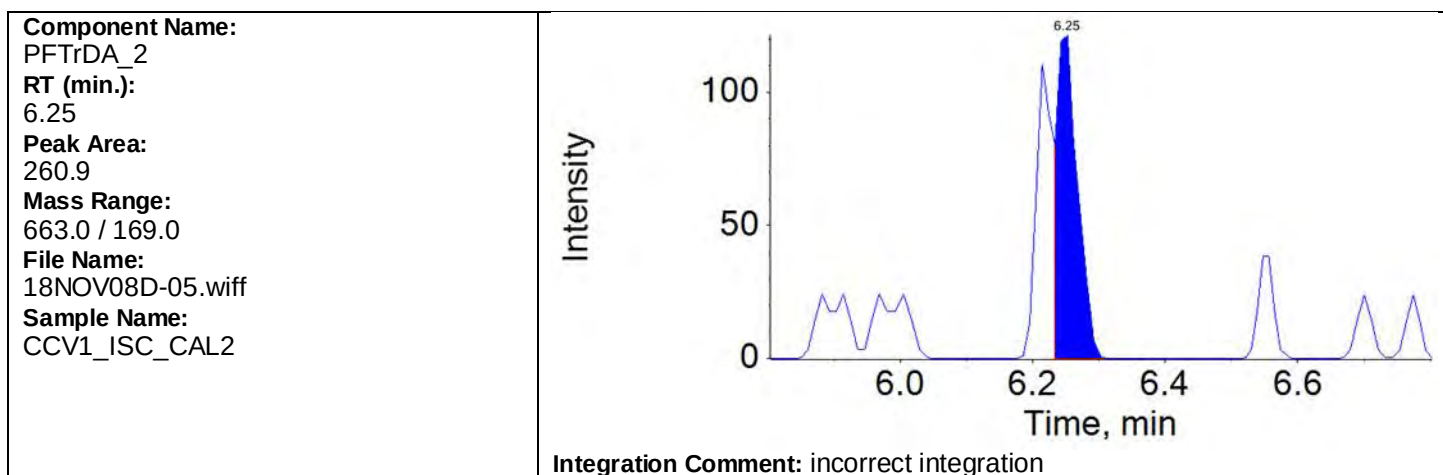
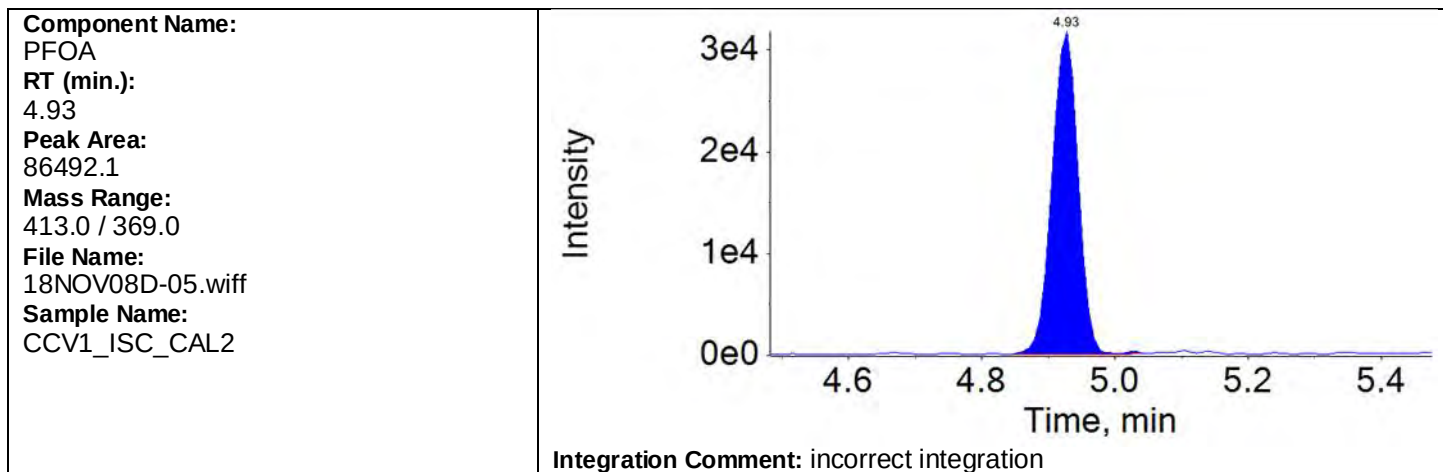
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM

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



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

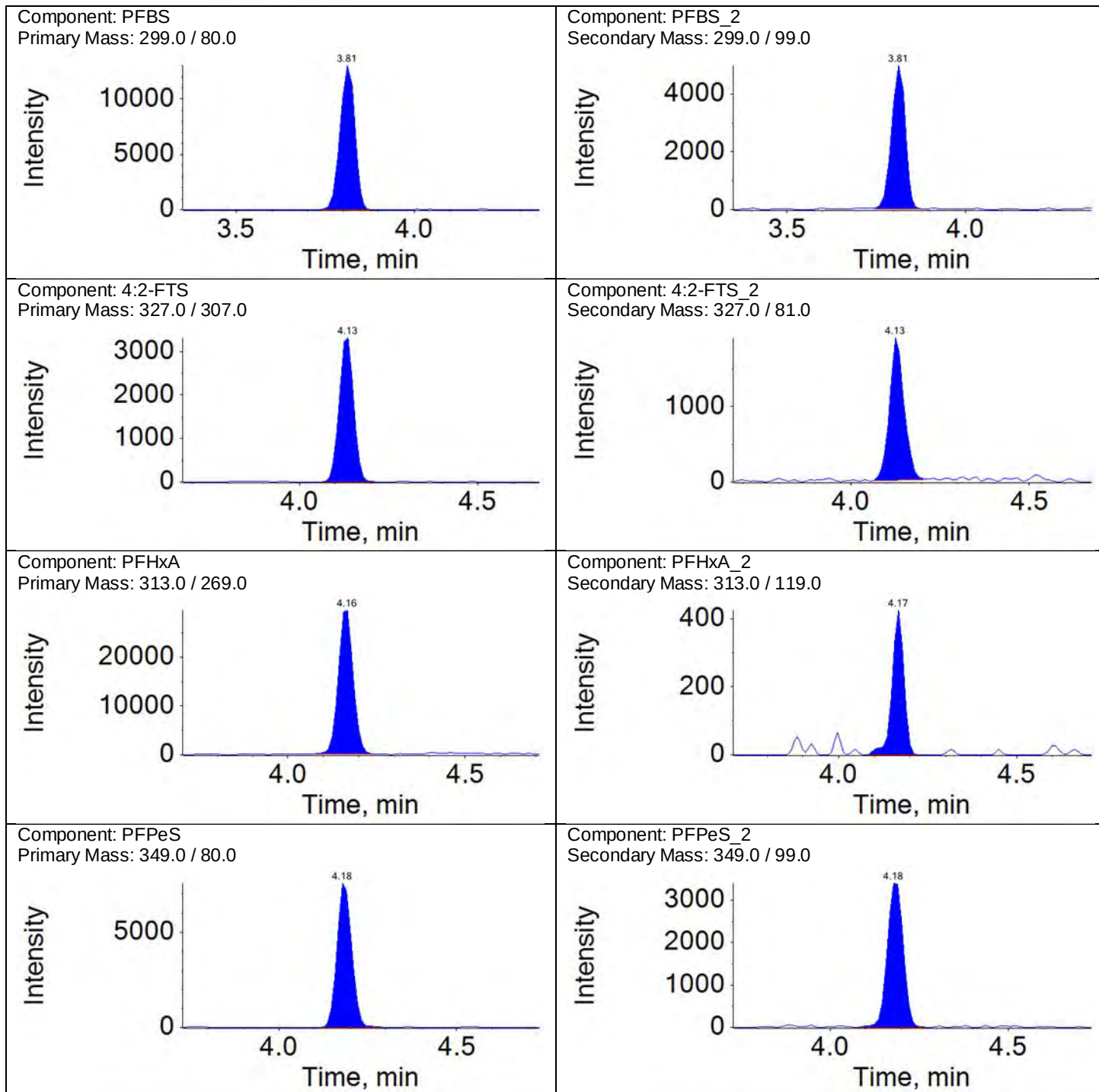
REVIEWED
By HMK at 2:58 pm, 11/11/18

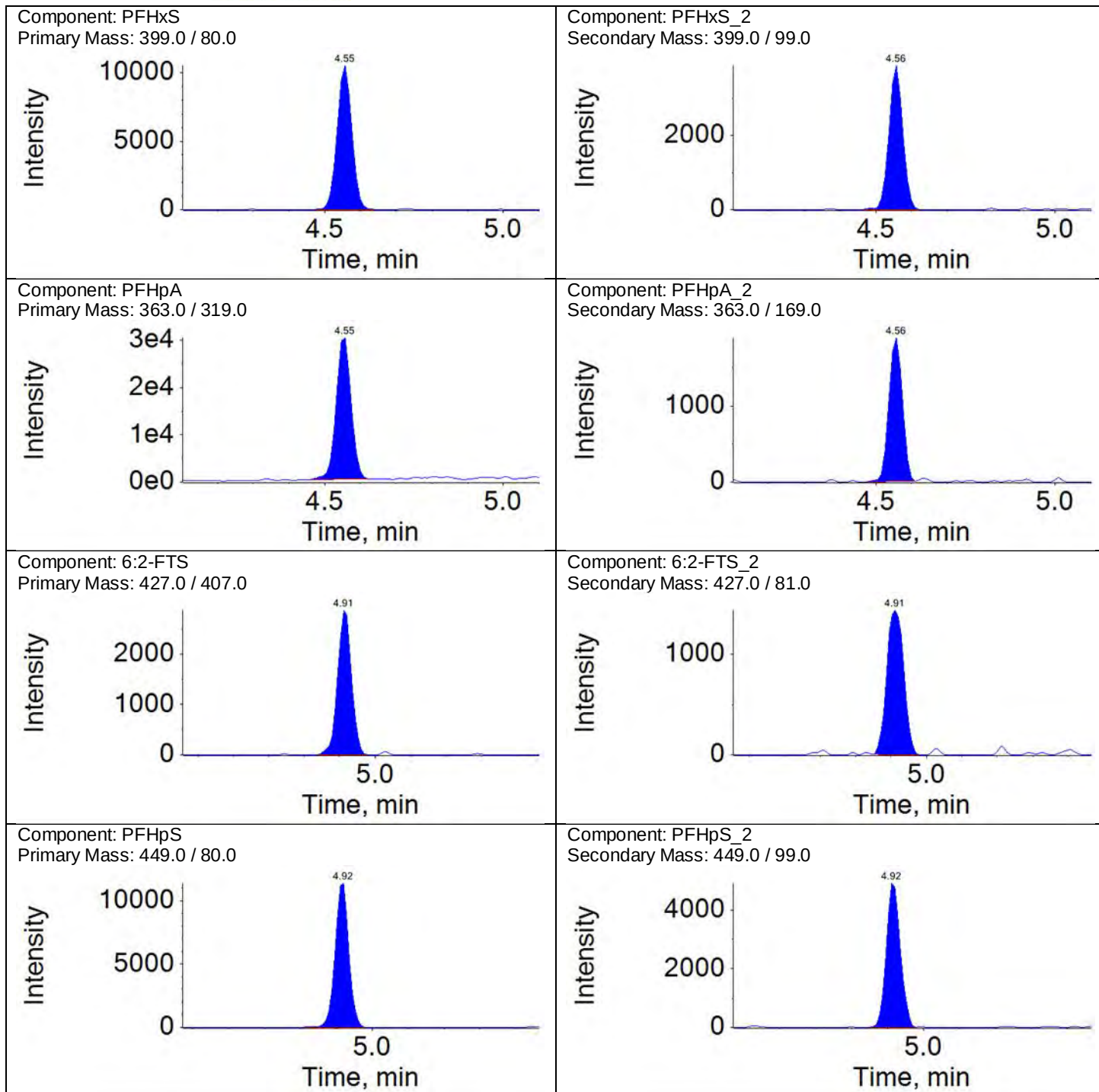
Ion Ratio Report

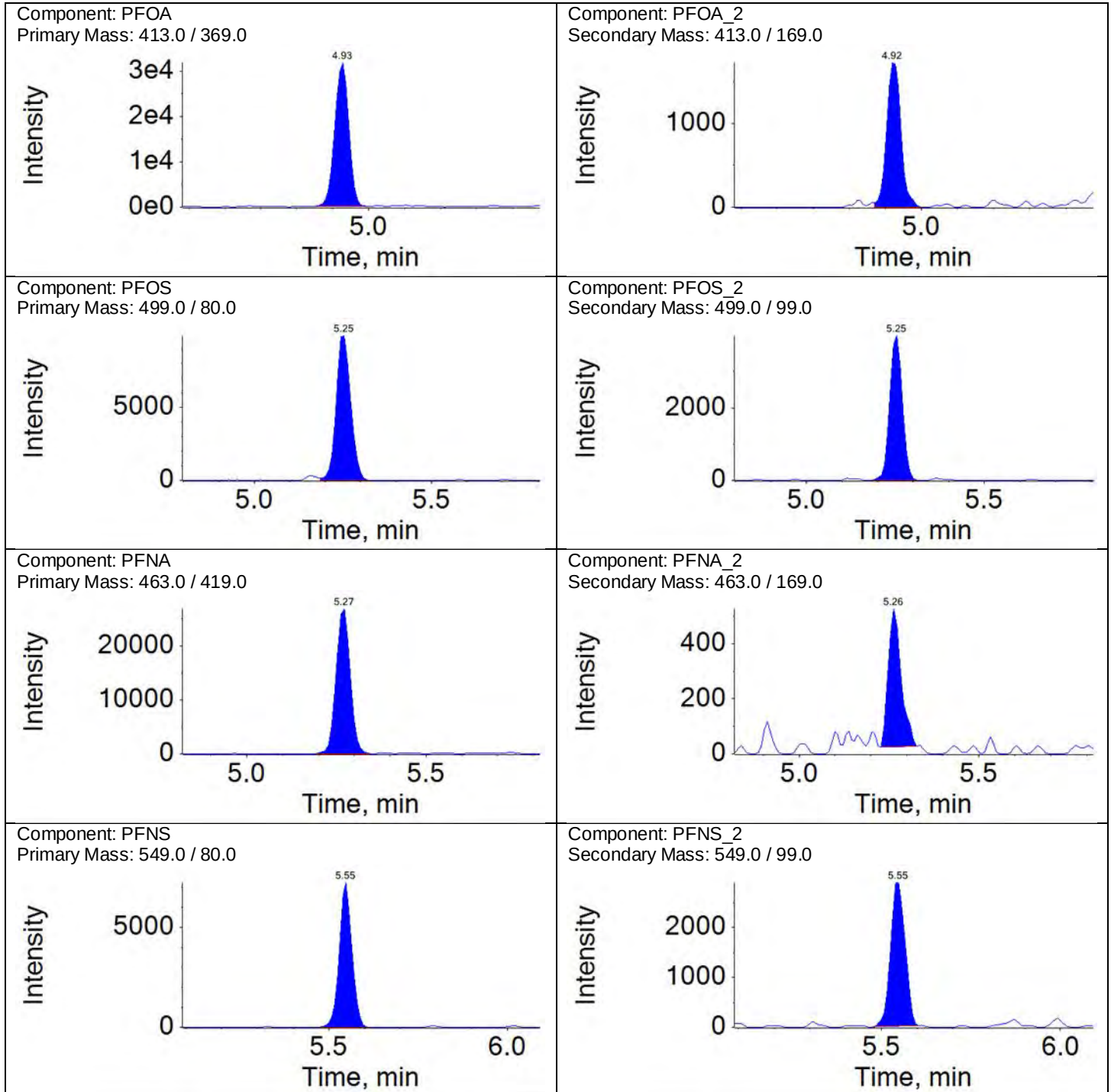
Sample Name: CCV1_ISC_CAL2 Instrument Name: LM27631

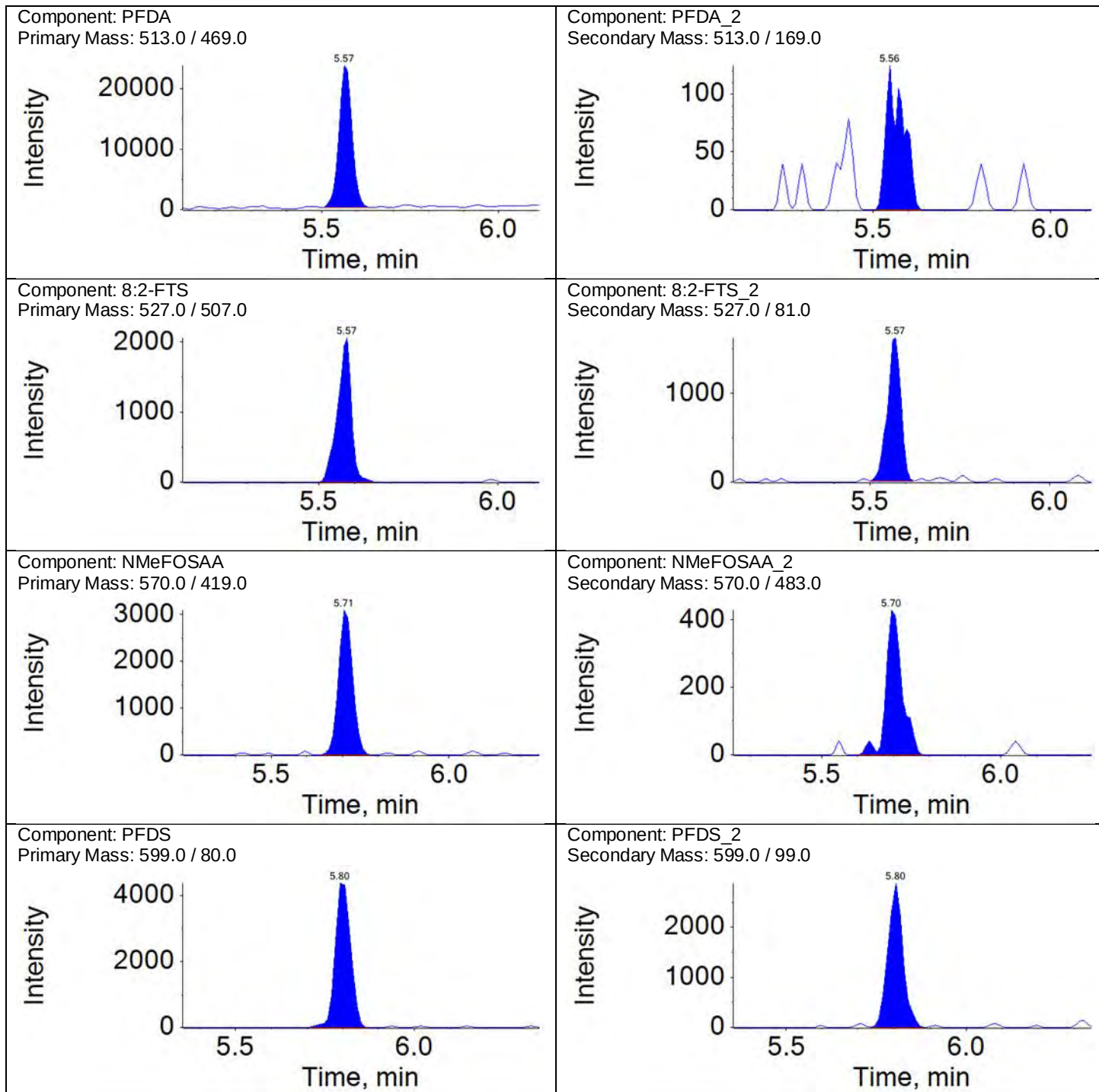
File Name: 18NOV08D-05.wiff

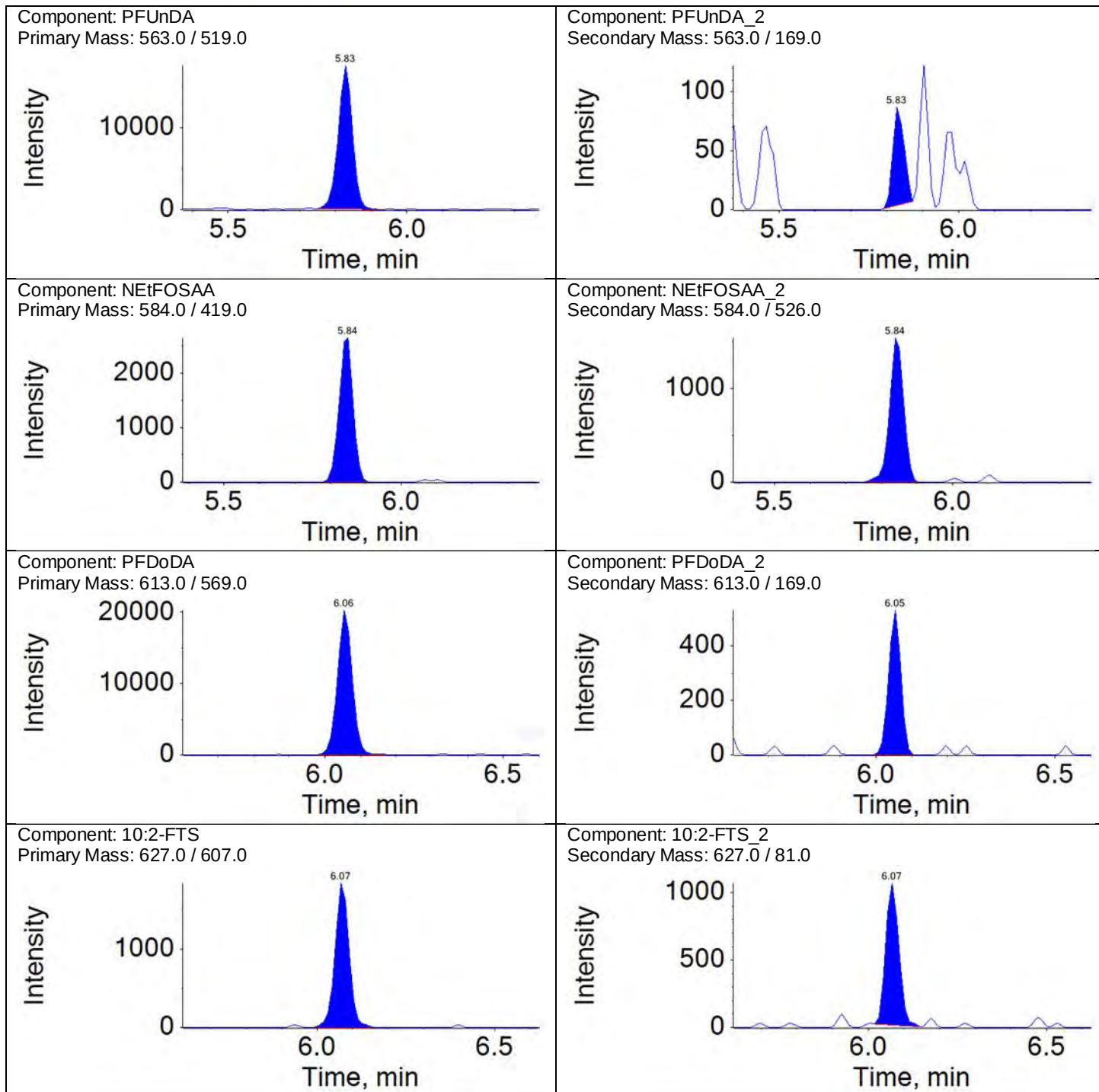
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	37650.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	13251.9	A	N/A	0.3520	-2	50	
4:2-FTS	4.13	1.00	9377.7	A	N/A	1.0000			
4:2-FTS_2	4.13	1.00	5342.6	A	N/A	0.5697	-10	50	
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	
PFTTrDA	6.25	1.03	46666.6	A	N/A	1.0000			
PFTTrDA_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	

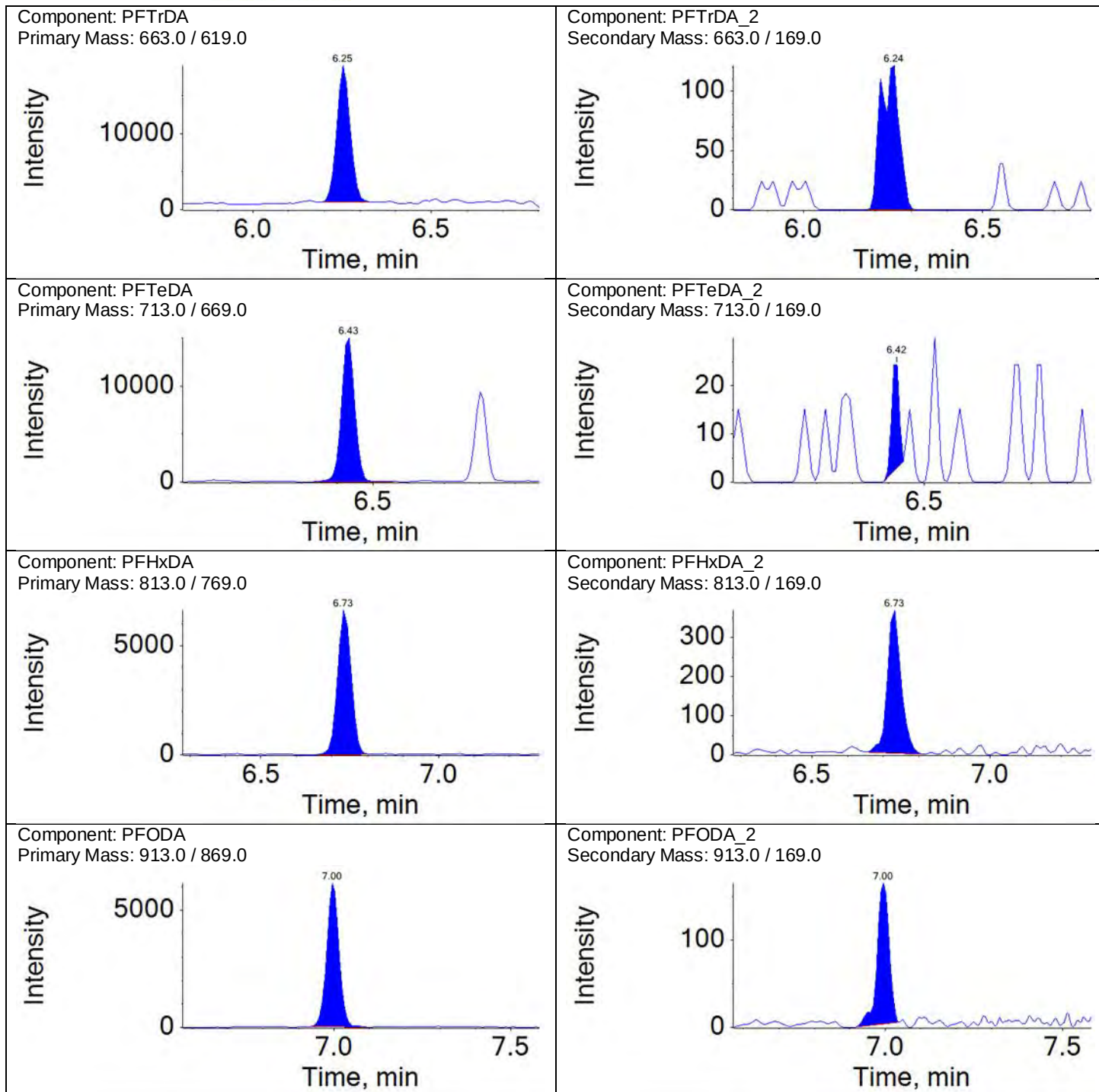












ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: INBLK

Instrument Name: LM27631

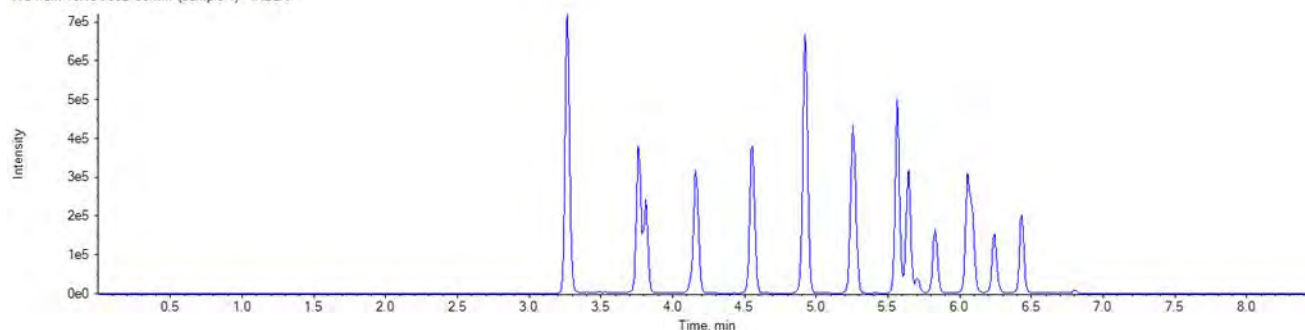
File Name: 18NOV08D-06.wiff

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	
PFTDA	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

TIC from 18NOV08D-06.wiff (sample 1) - INBLK



APPROVED

By JPT at 5:07 pm, 11/8/18

BSI05 Page 708 of 1595

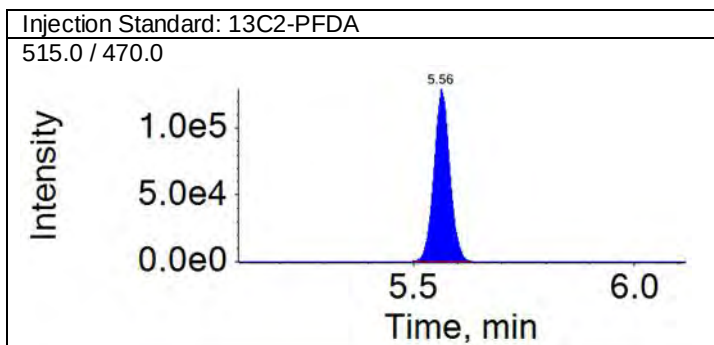
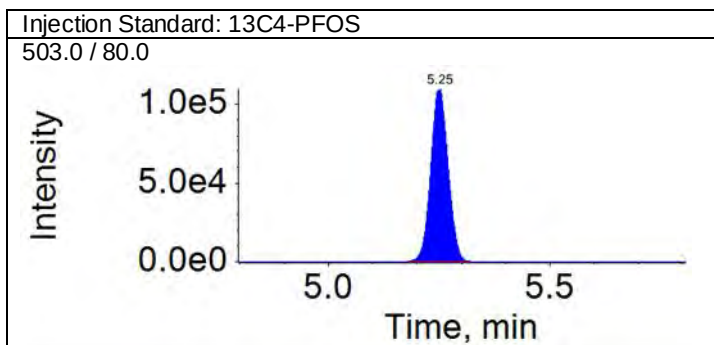
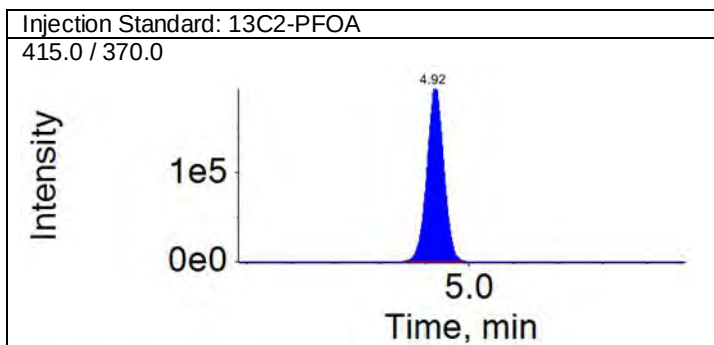
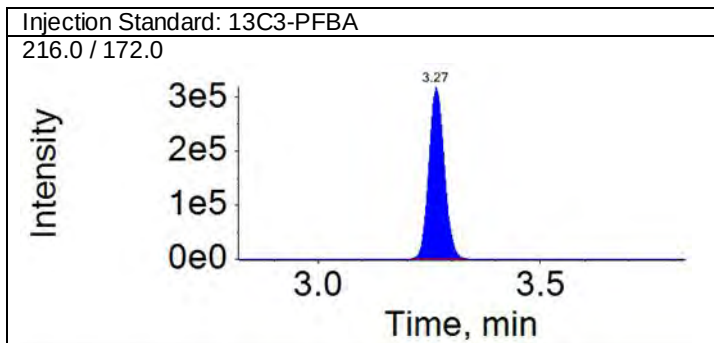
REVIEWED

By umar at 12:13 pm, 11/12/18

Page 2 of 17

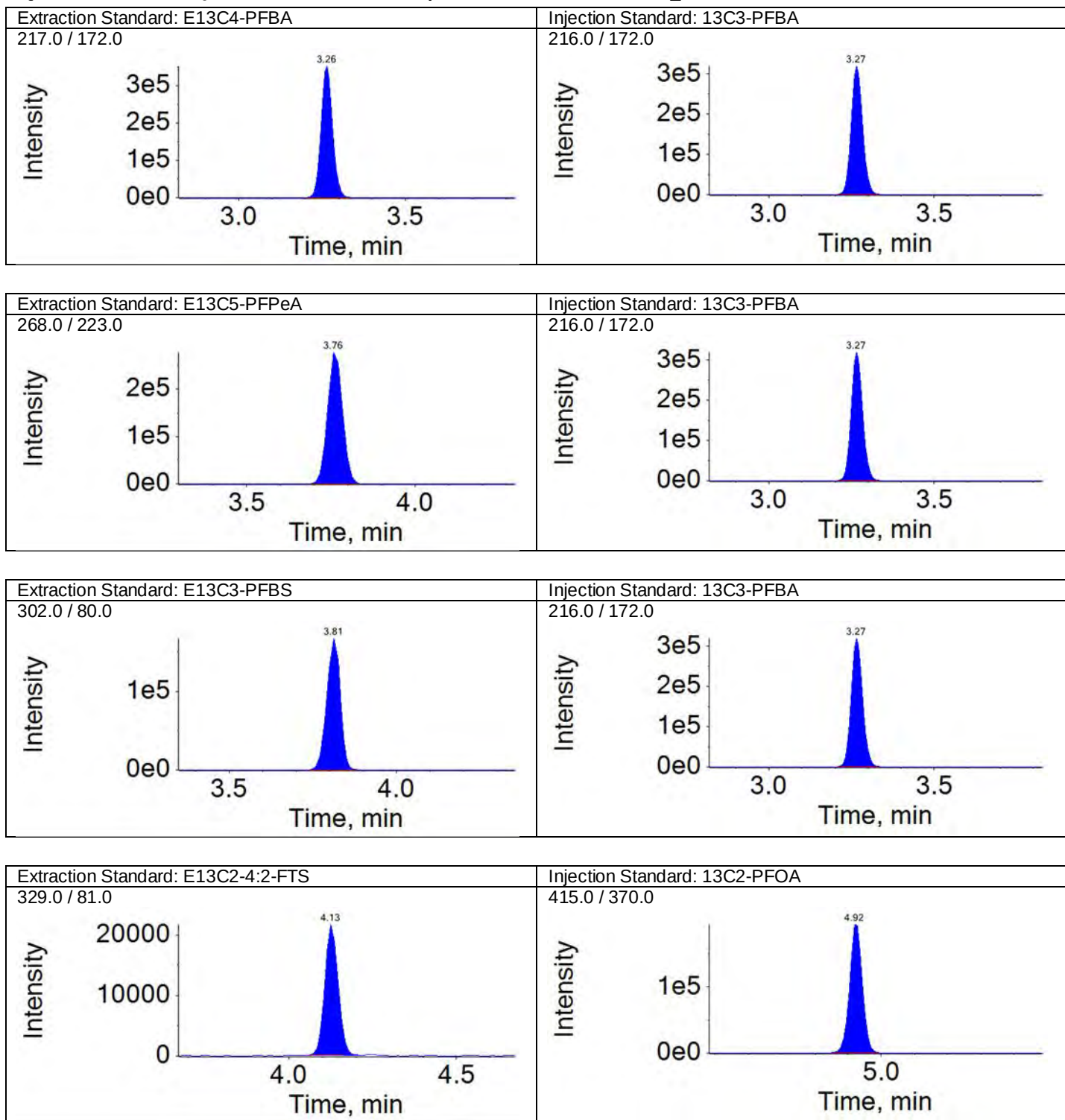
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



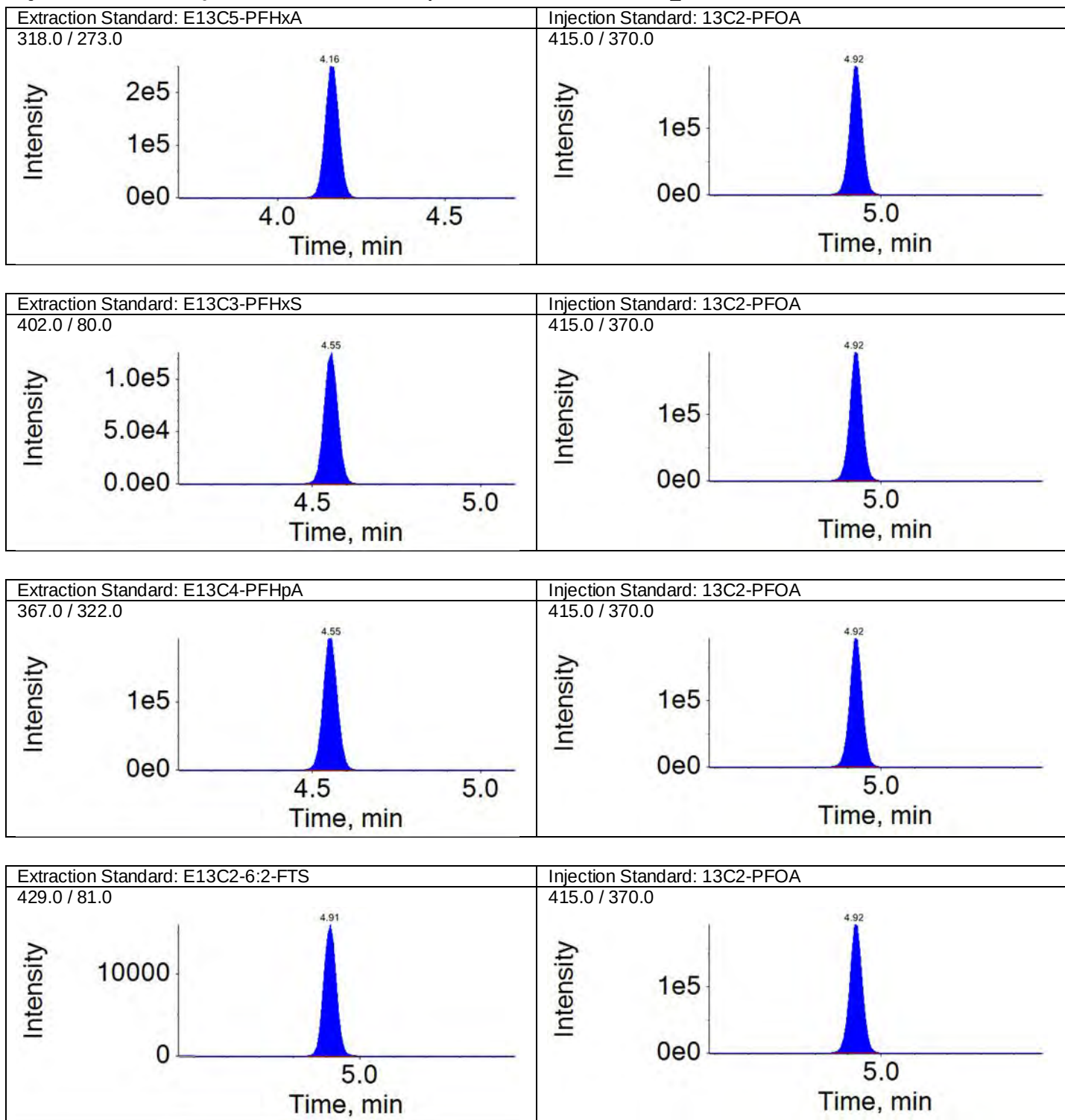
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

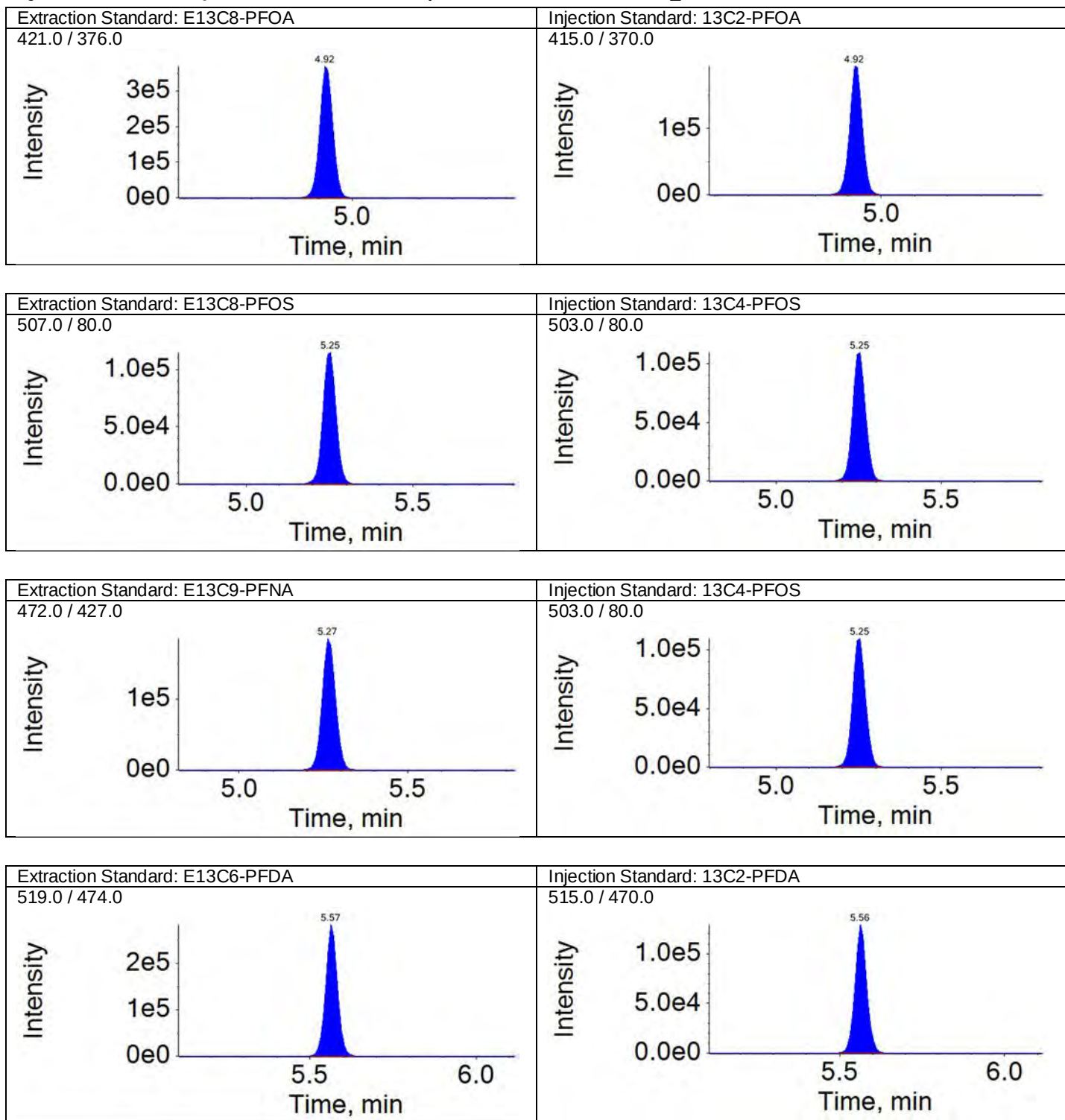
By JPT at 5:07 pm, 11/8/18

REVIEWED

By umar at 12:13 pm, 11/12/18

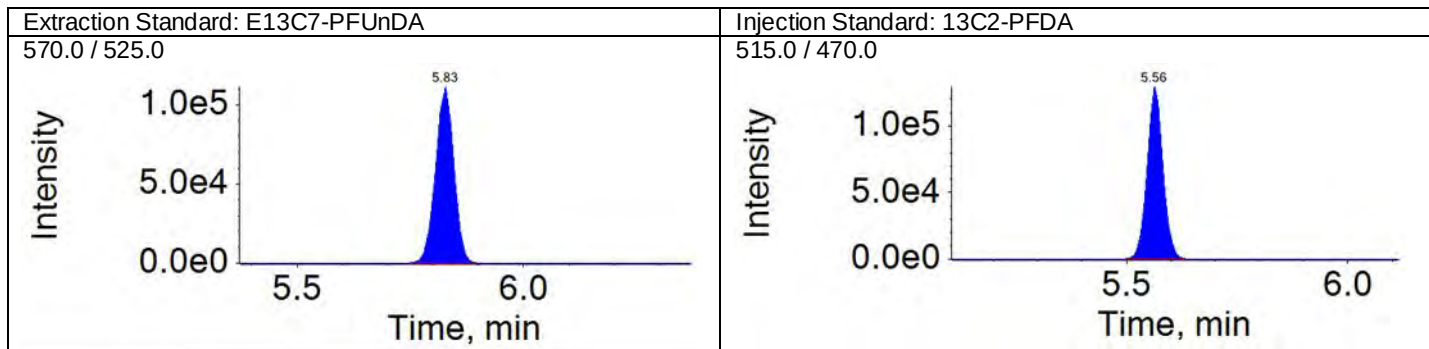
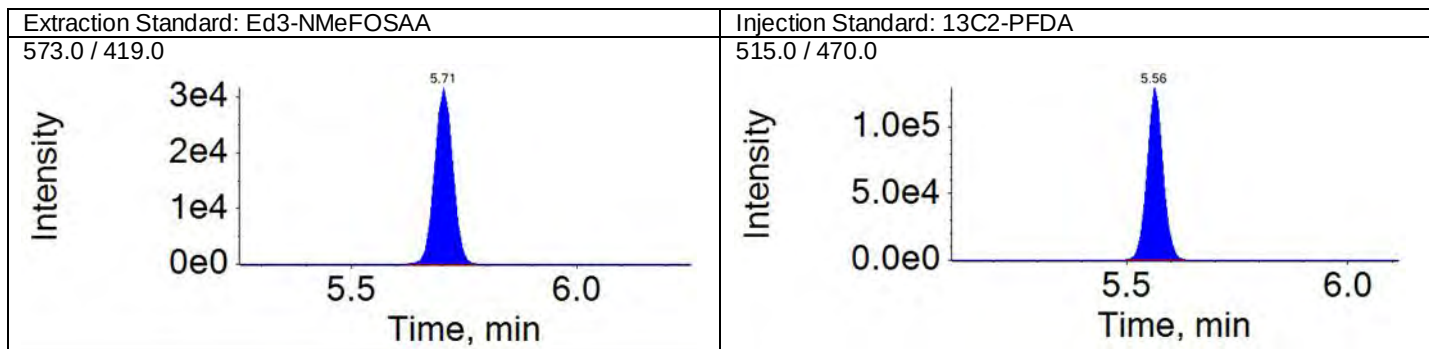
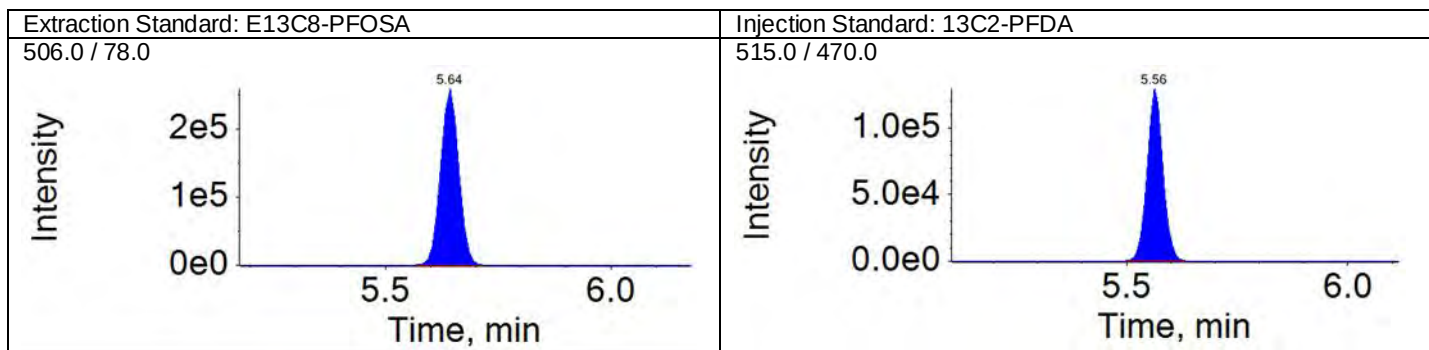
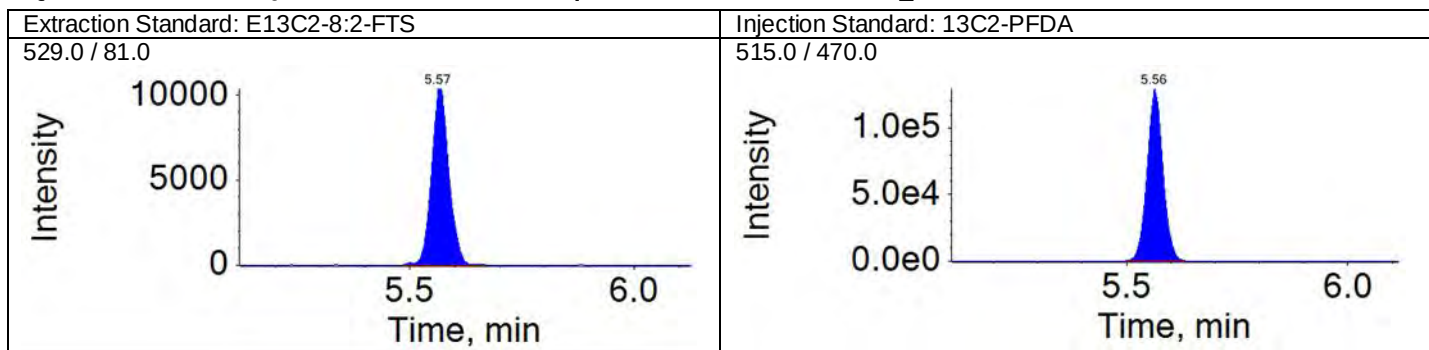
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



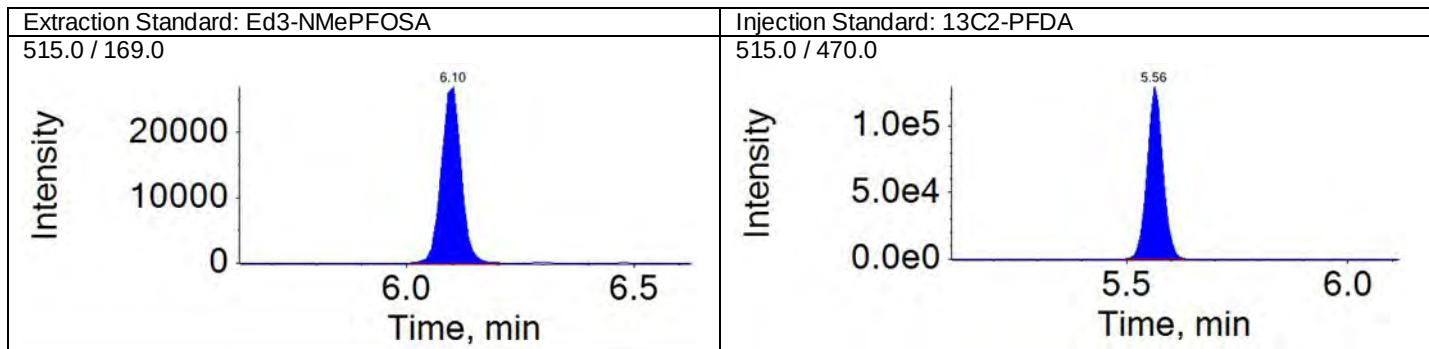
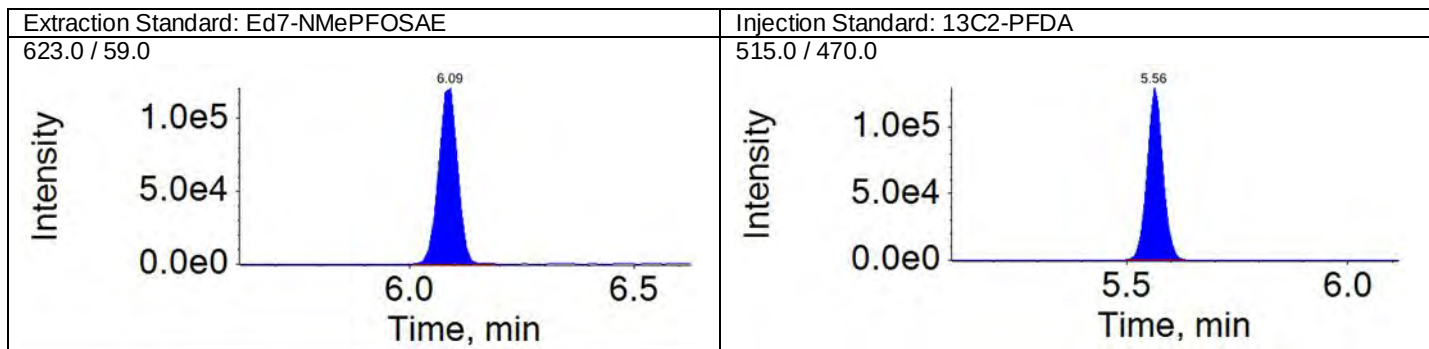
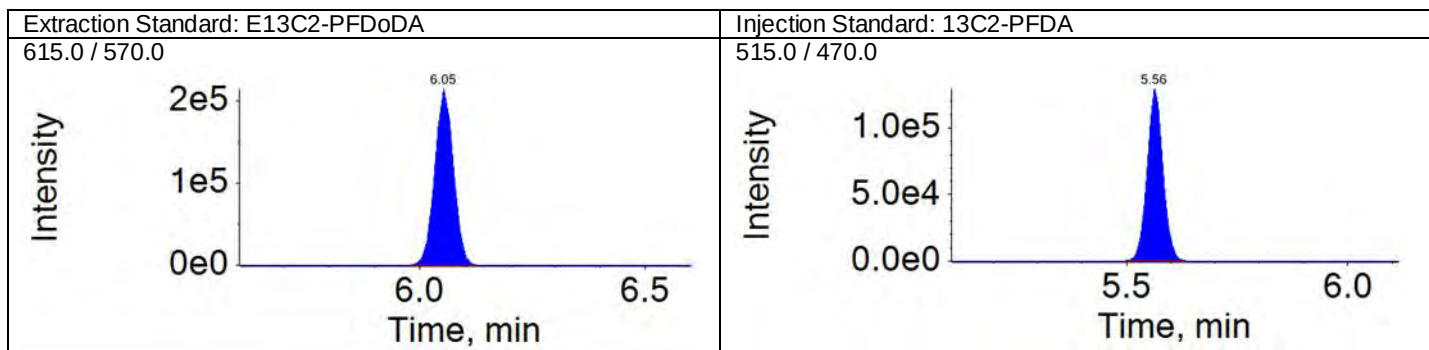
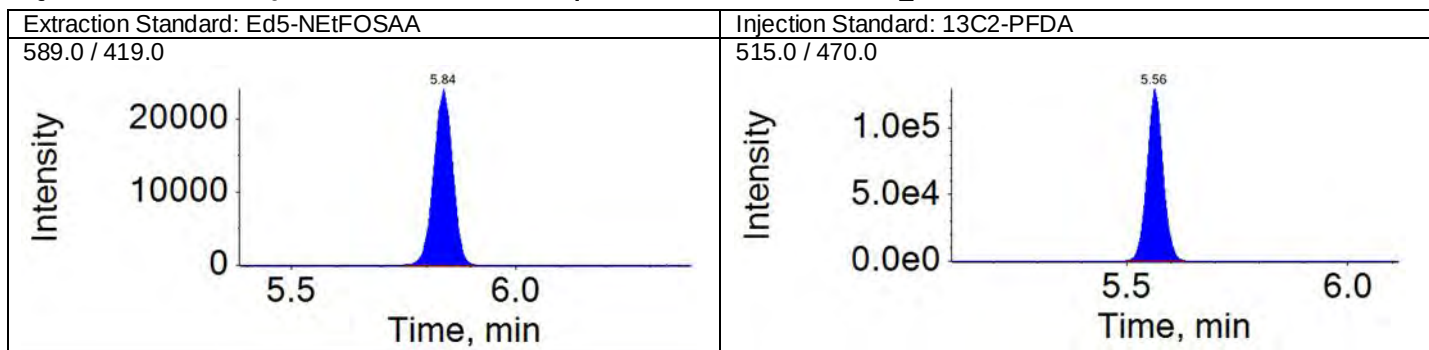
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



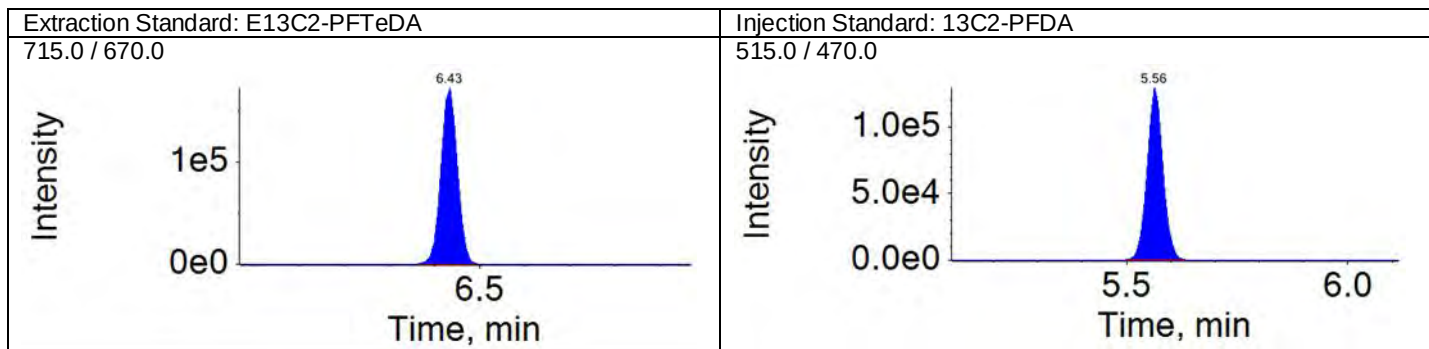
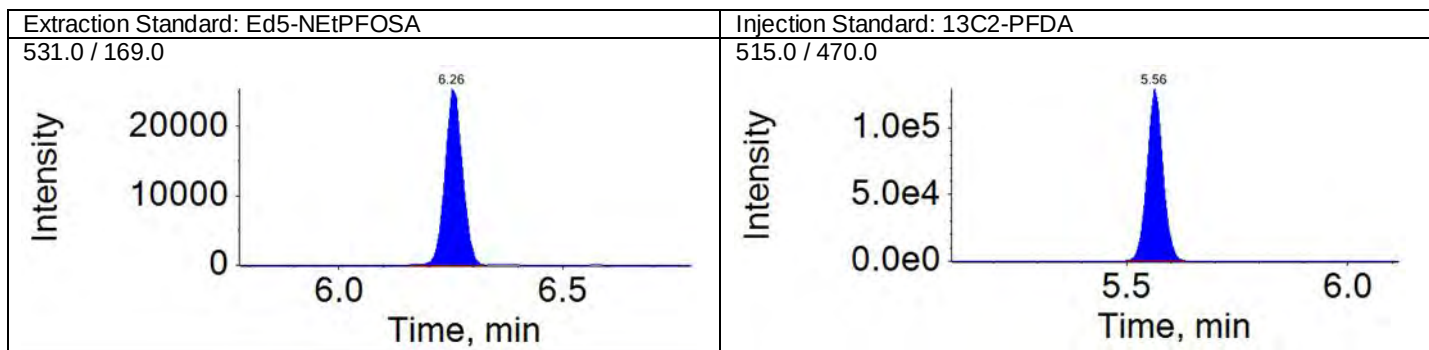
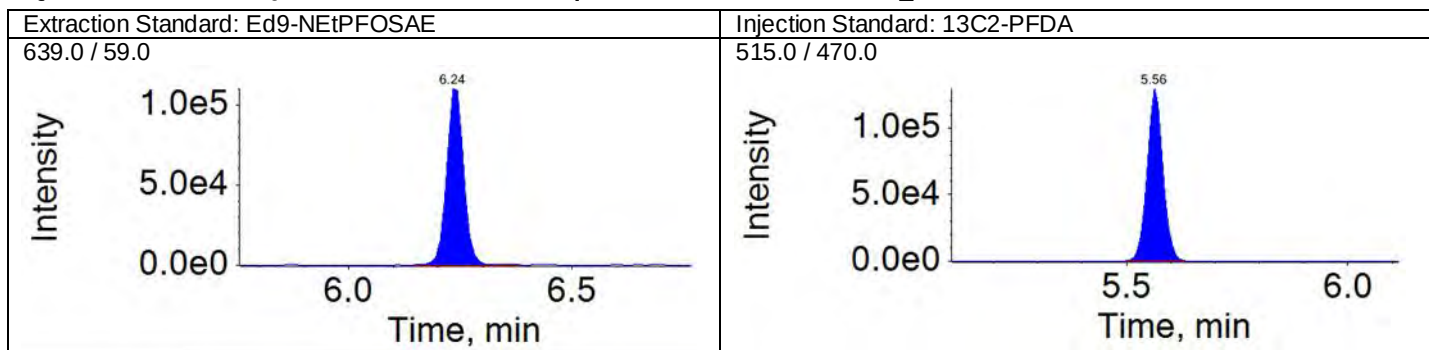
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



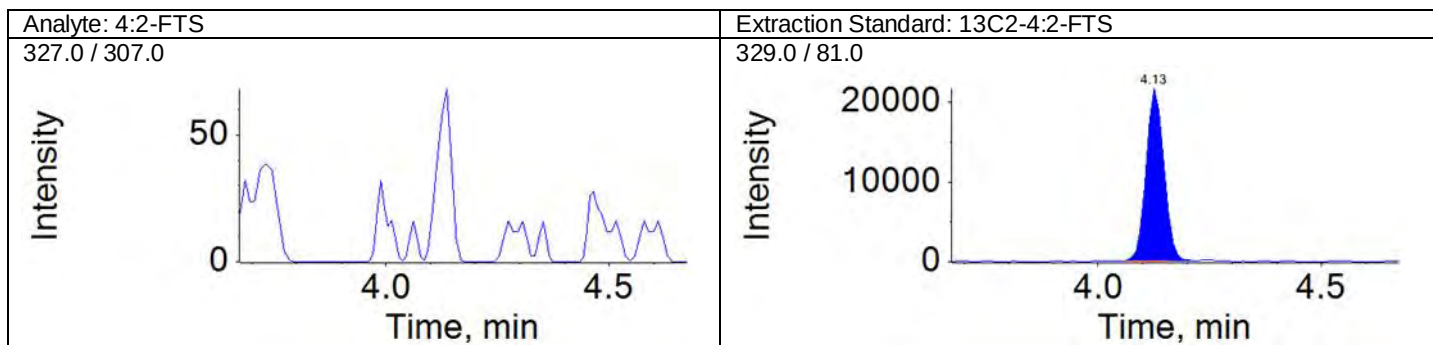
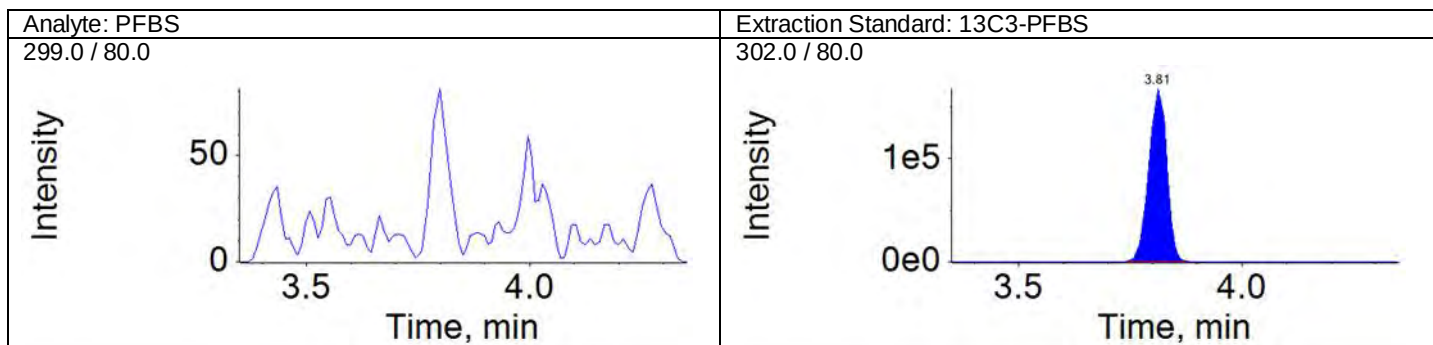
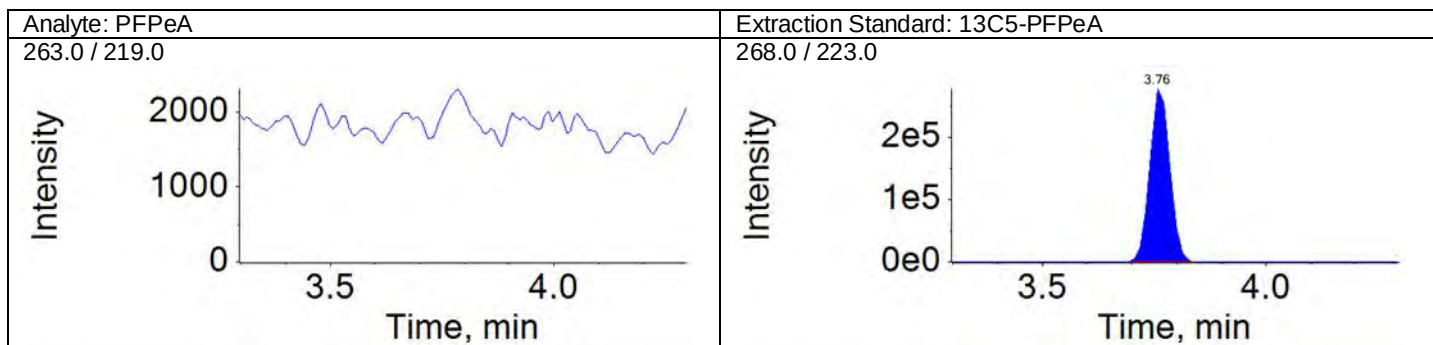
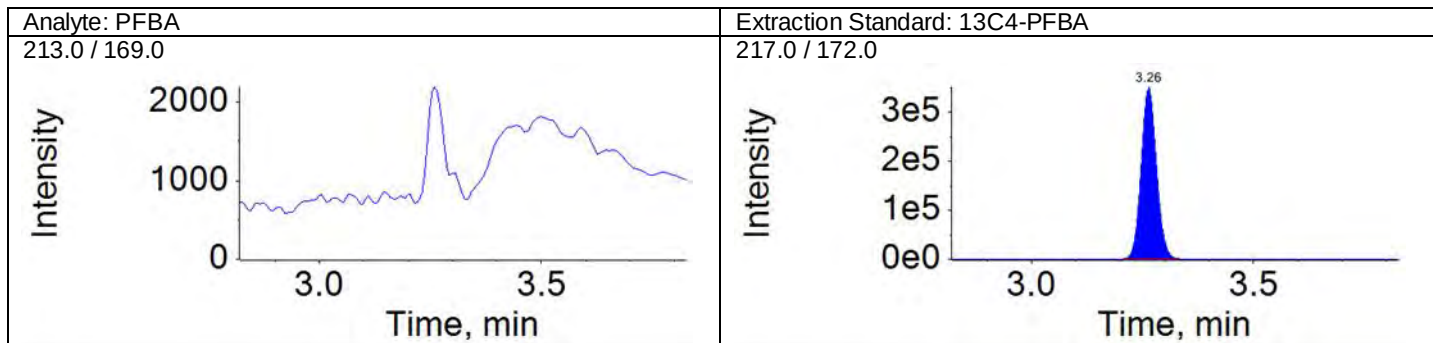
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



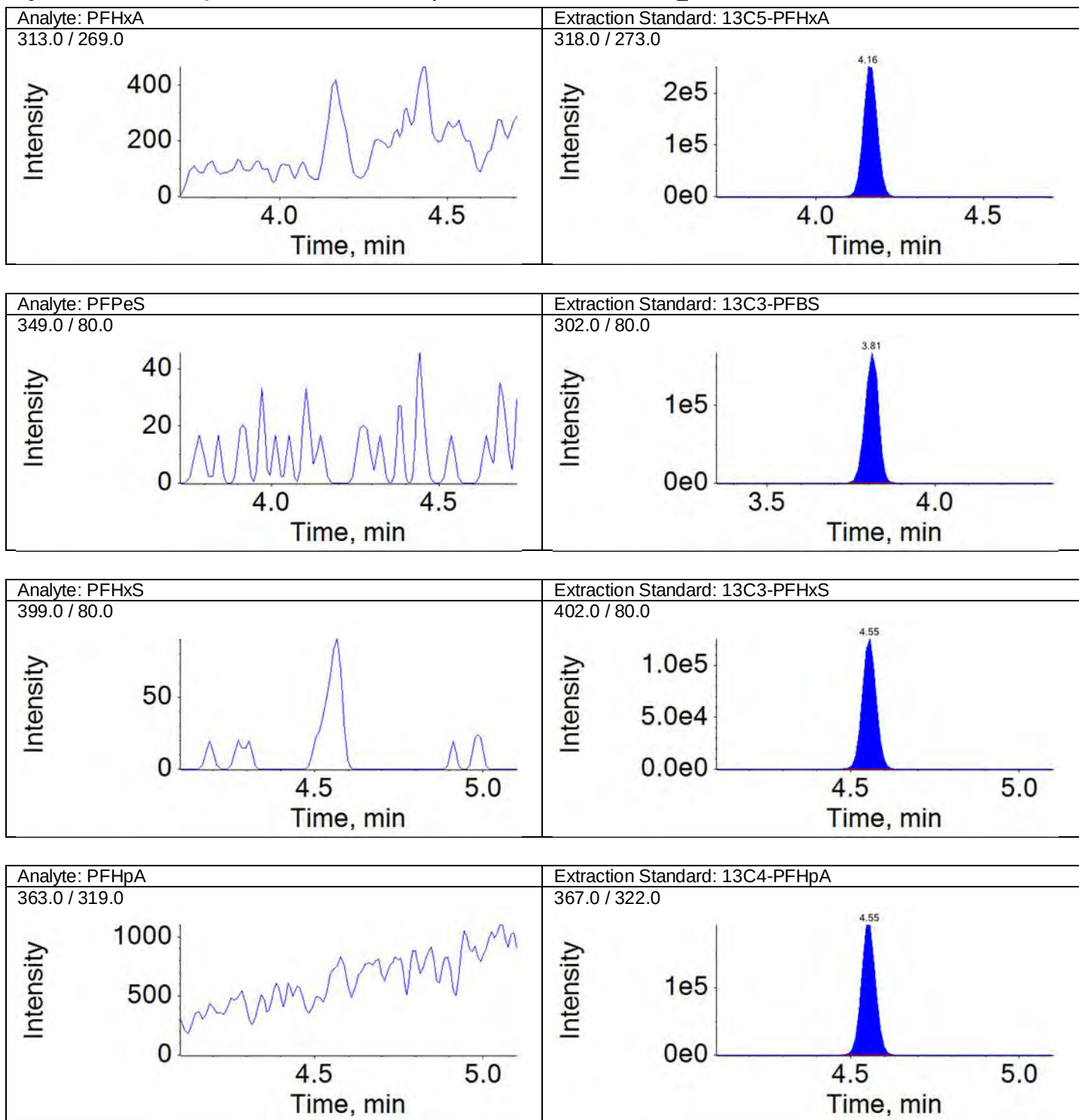
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



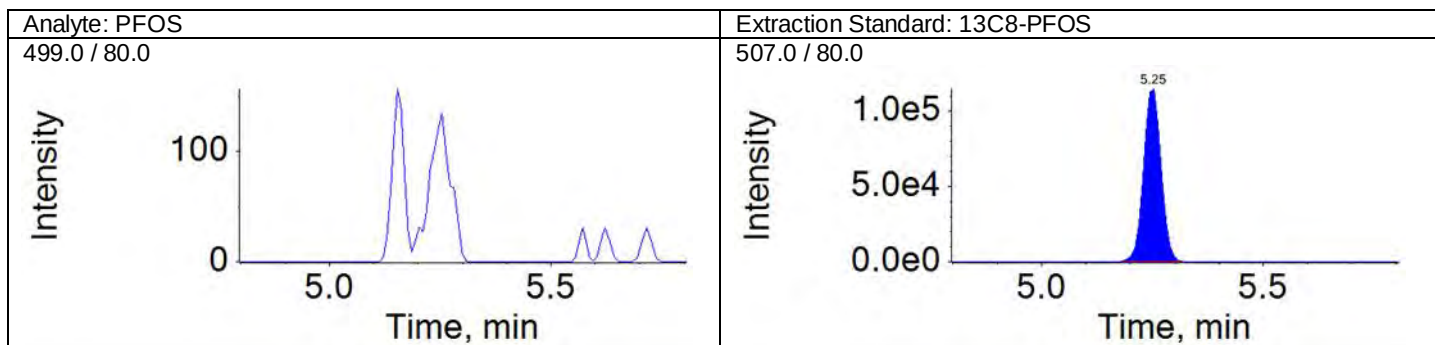
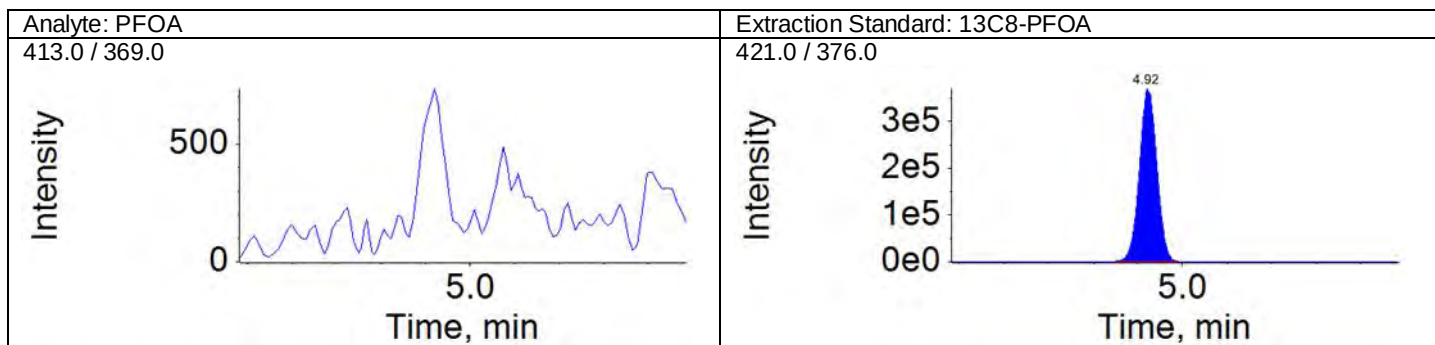
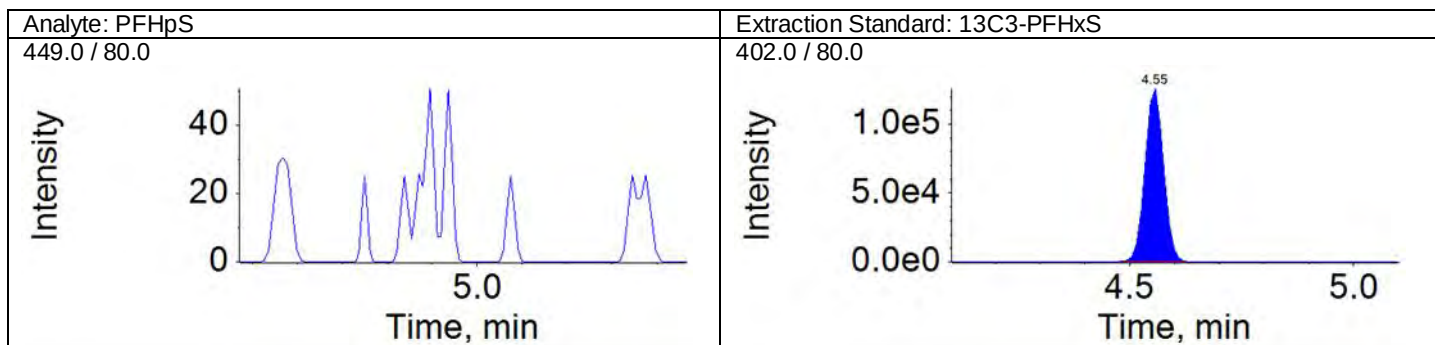
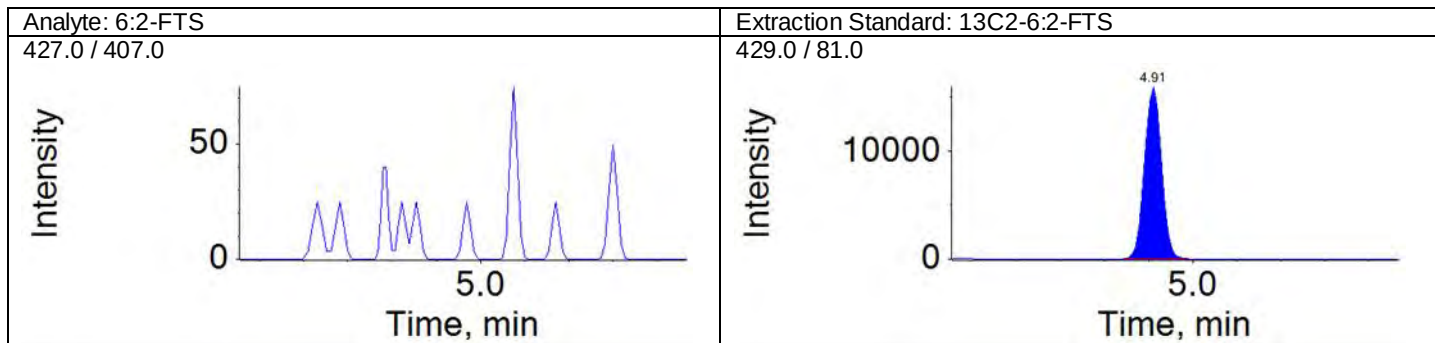
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



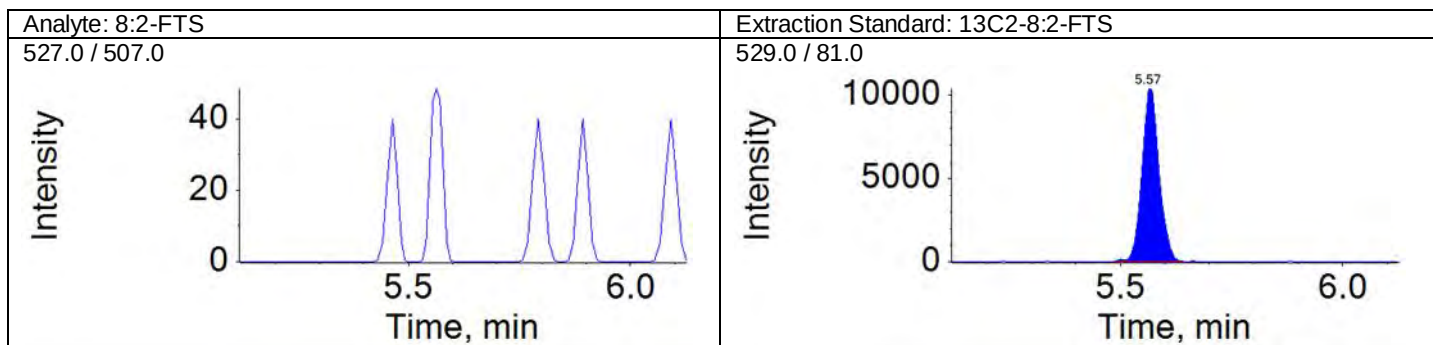
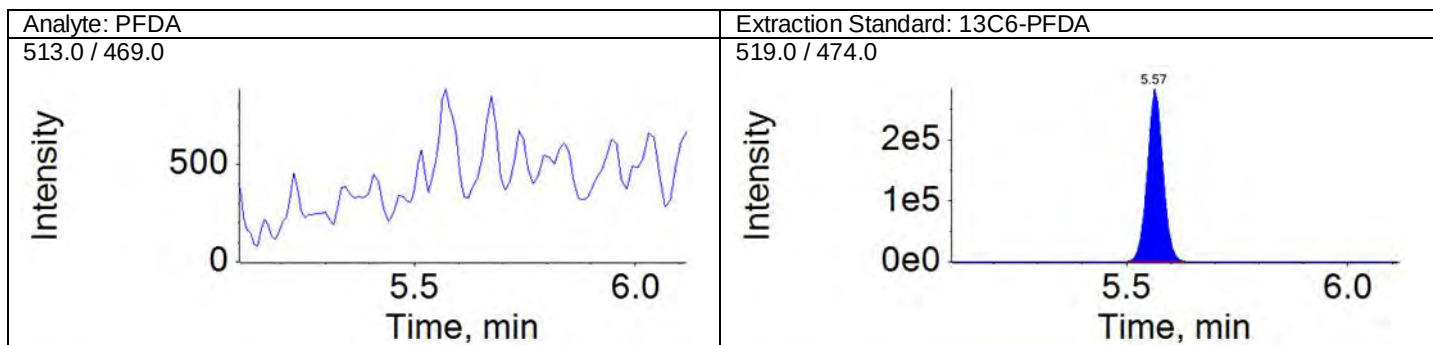
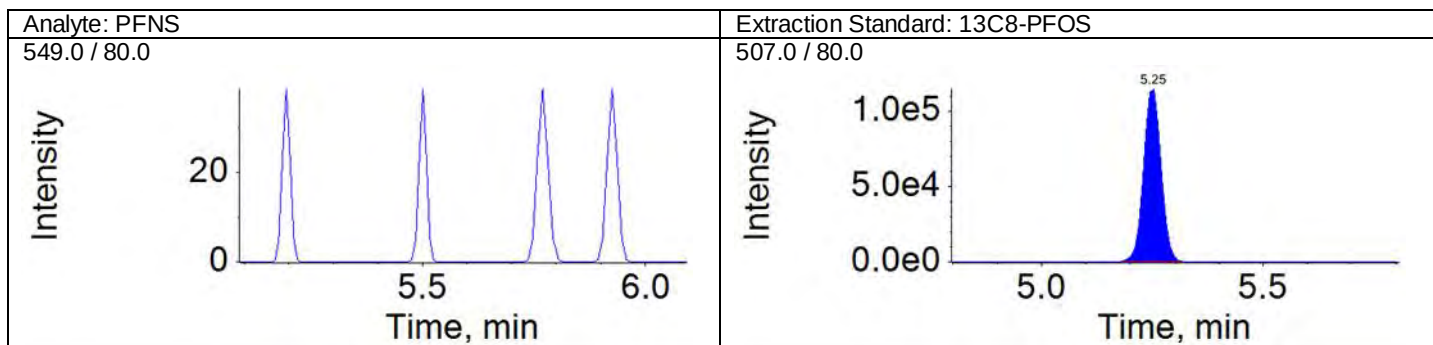
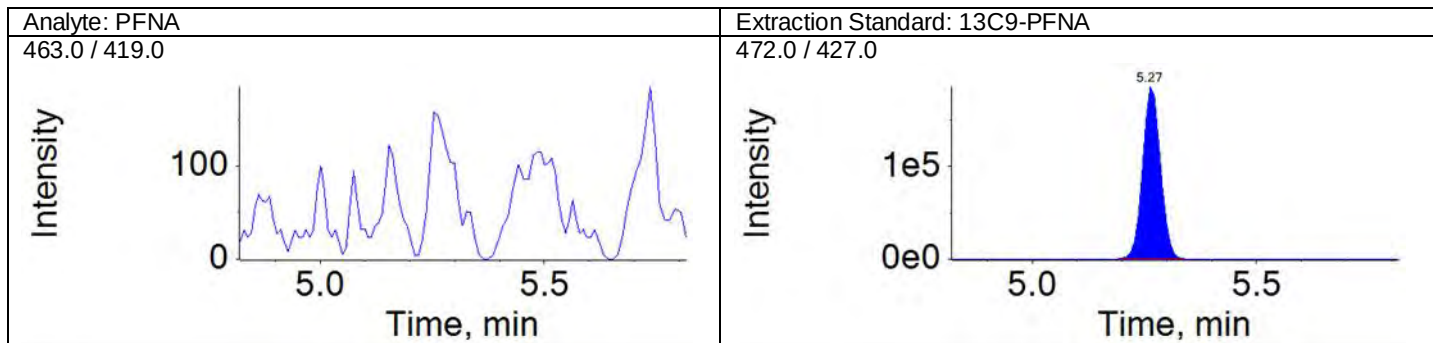
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



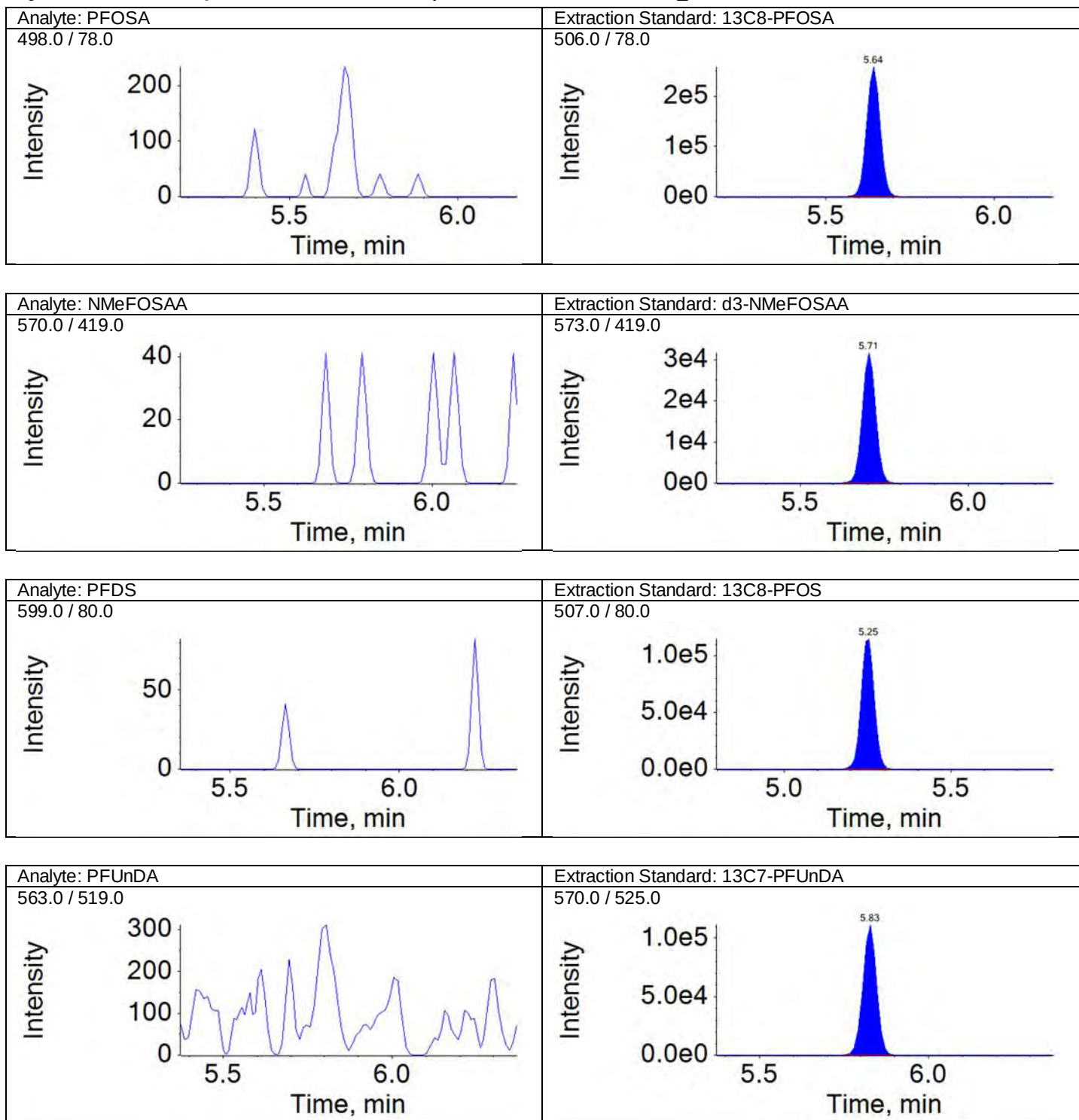
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

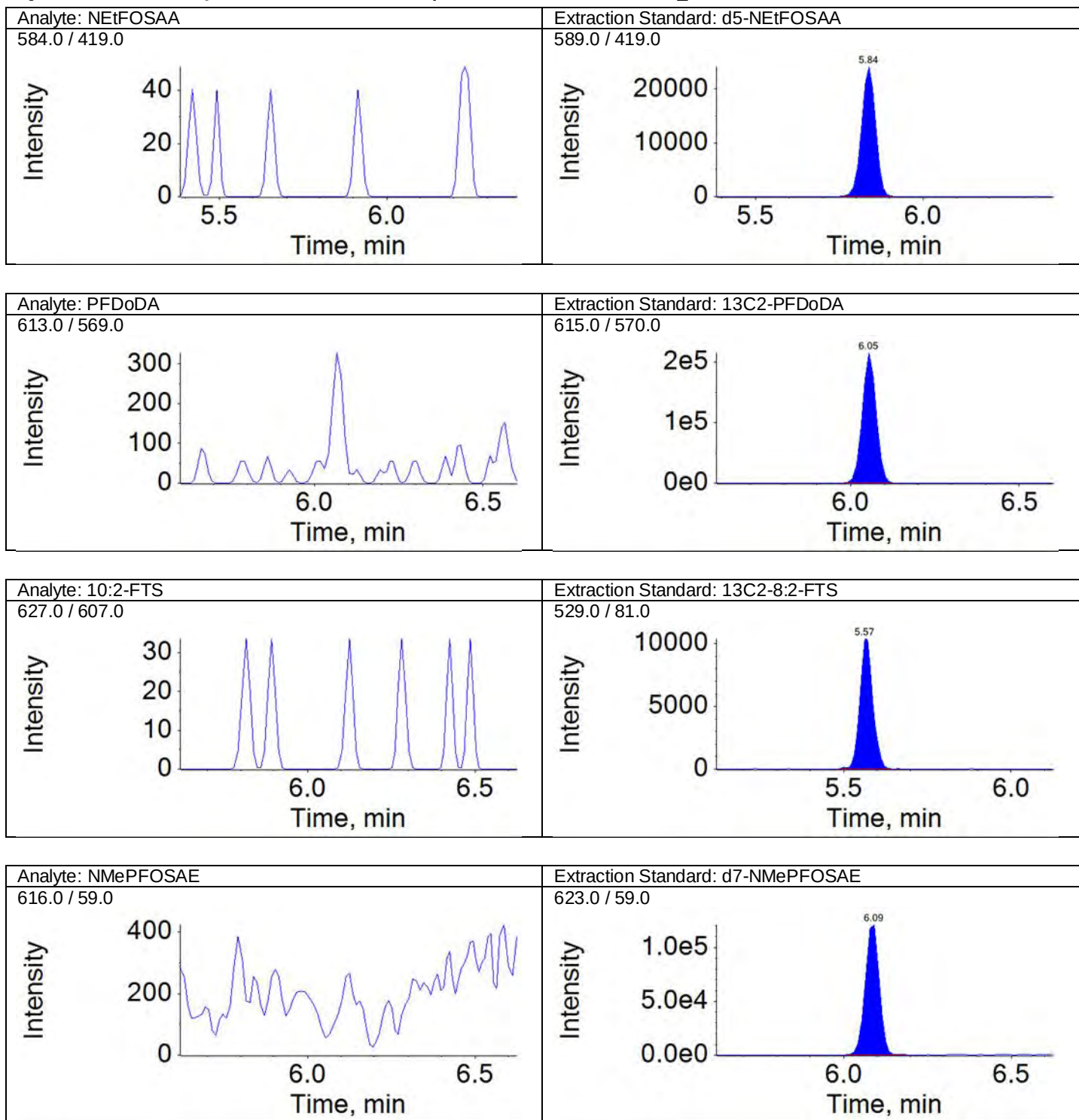
Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

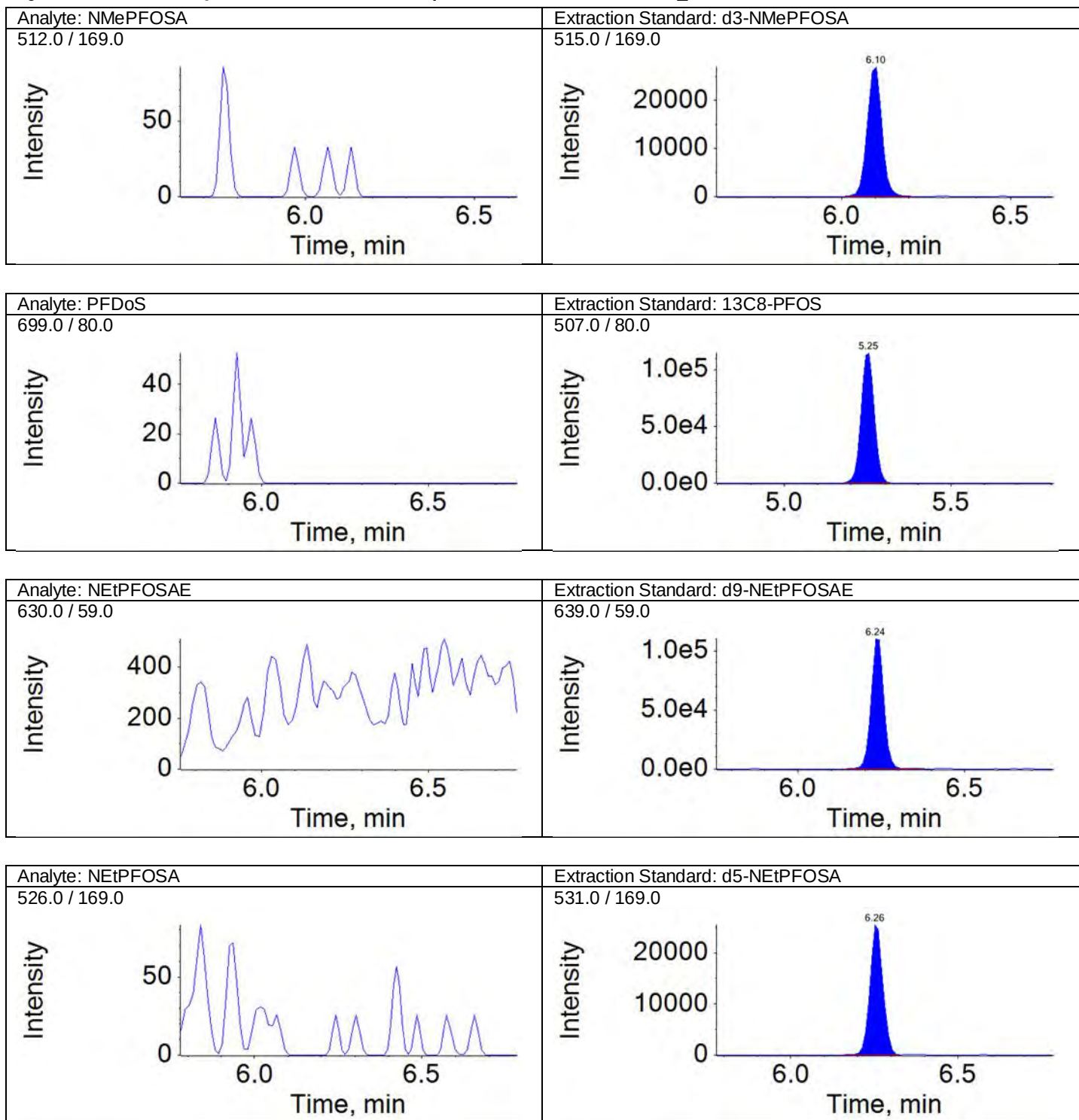
Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

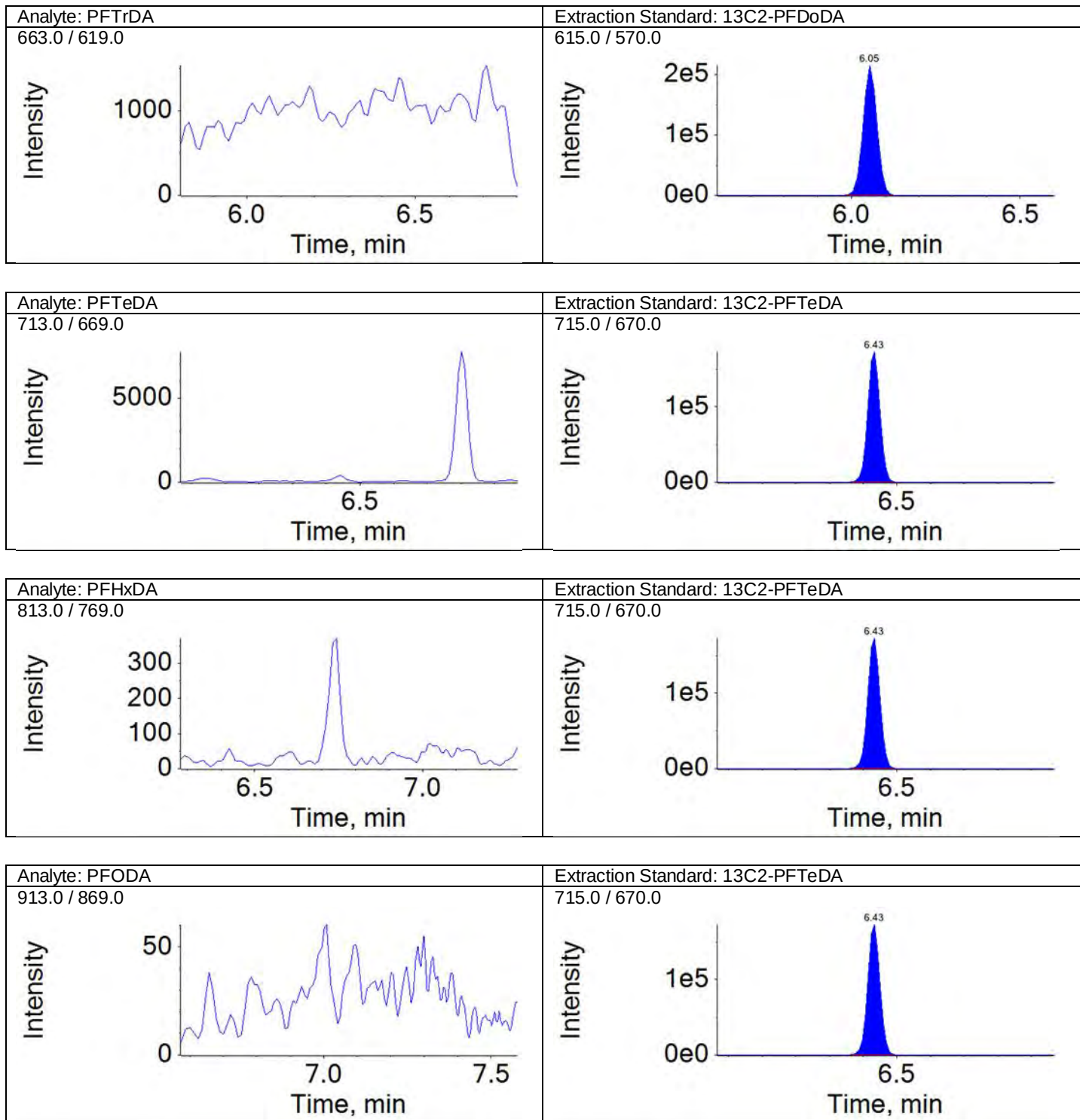
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam



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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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

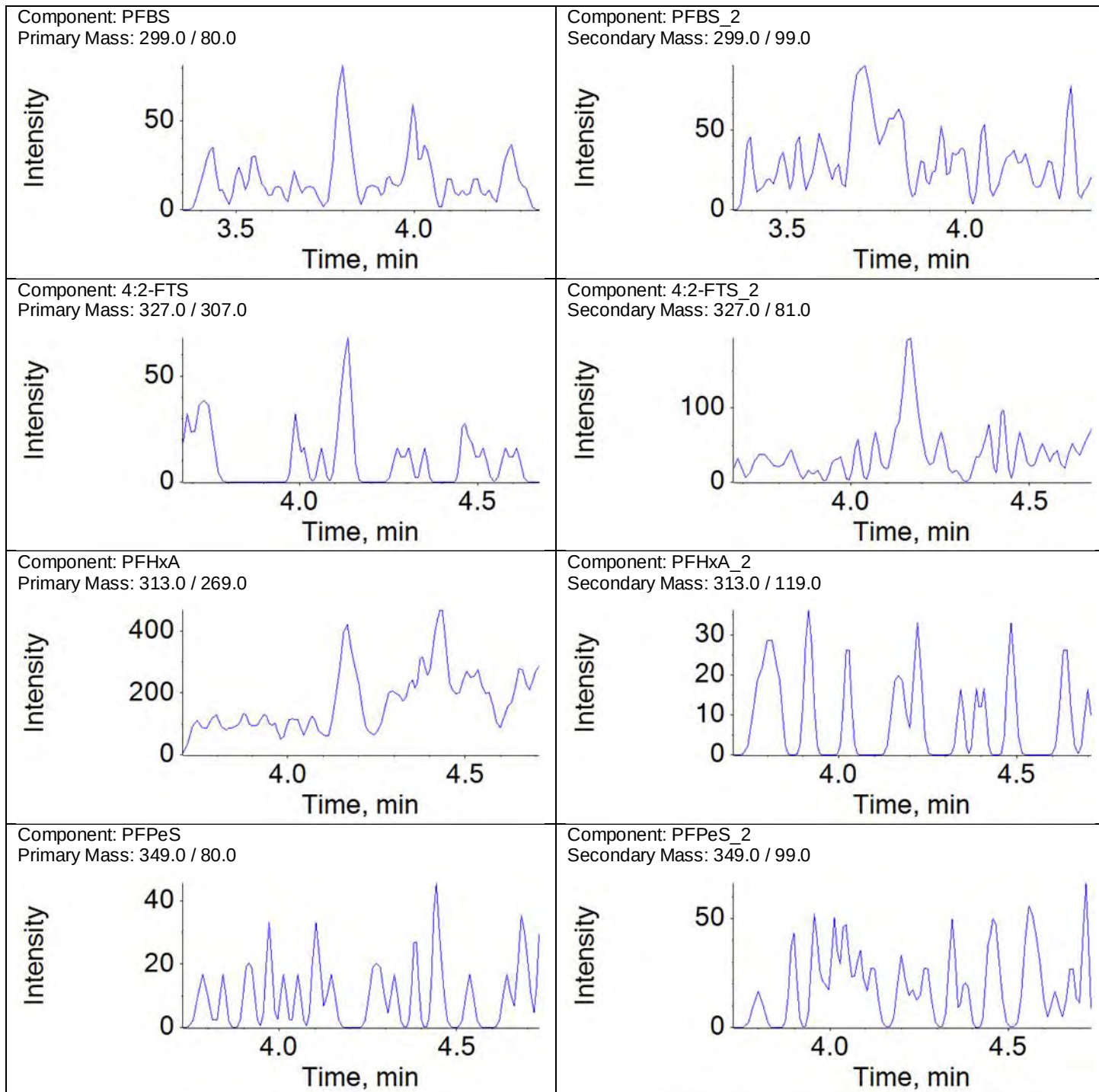
By JPT at 5:07 pm, 11/8/18

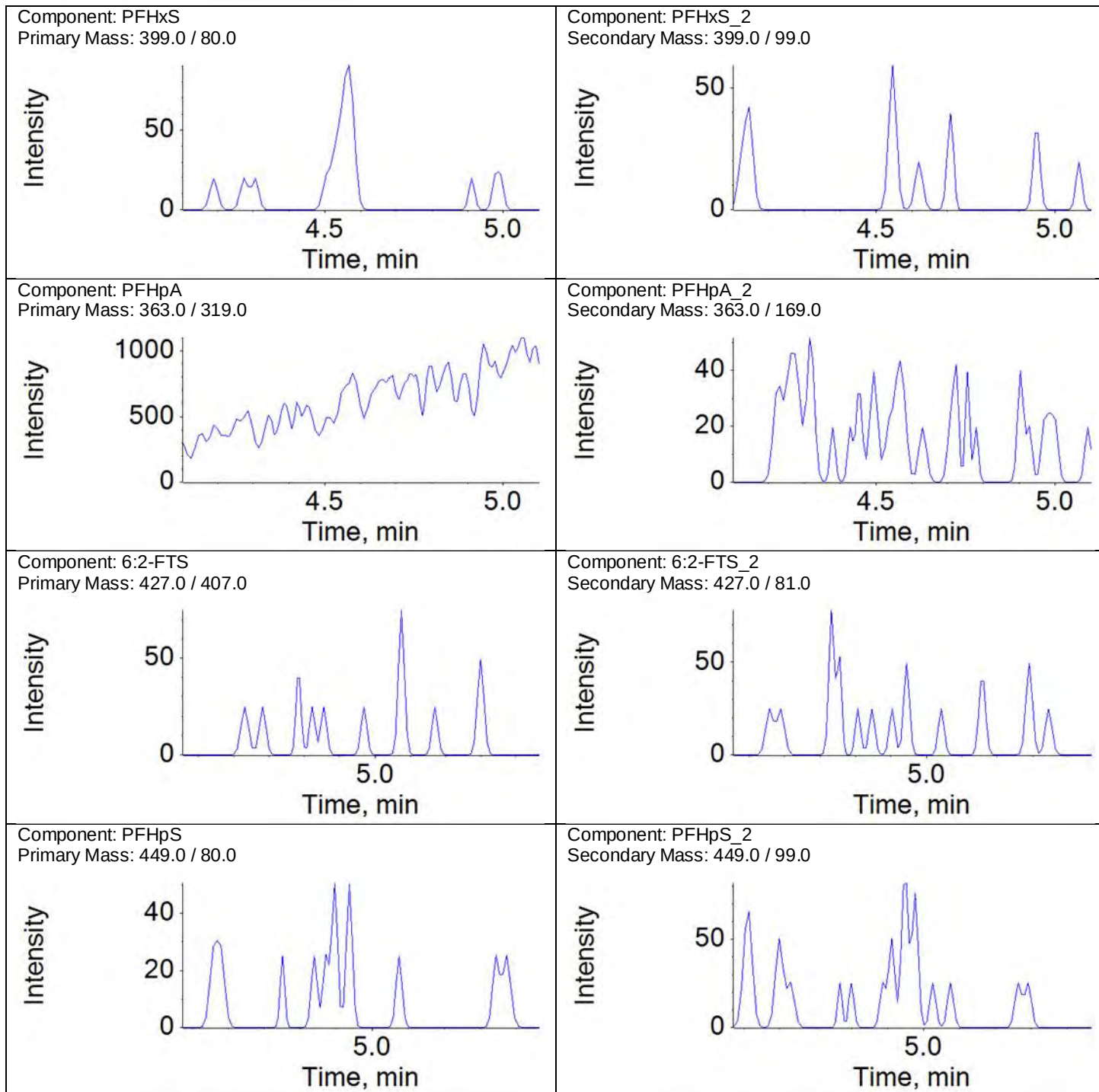
BSI05 Page 724 of 1595

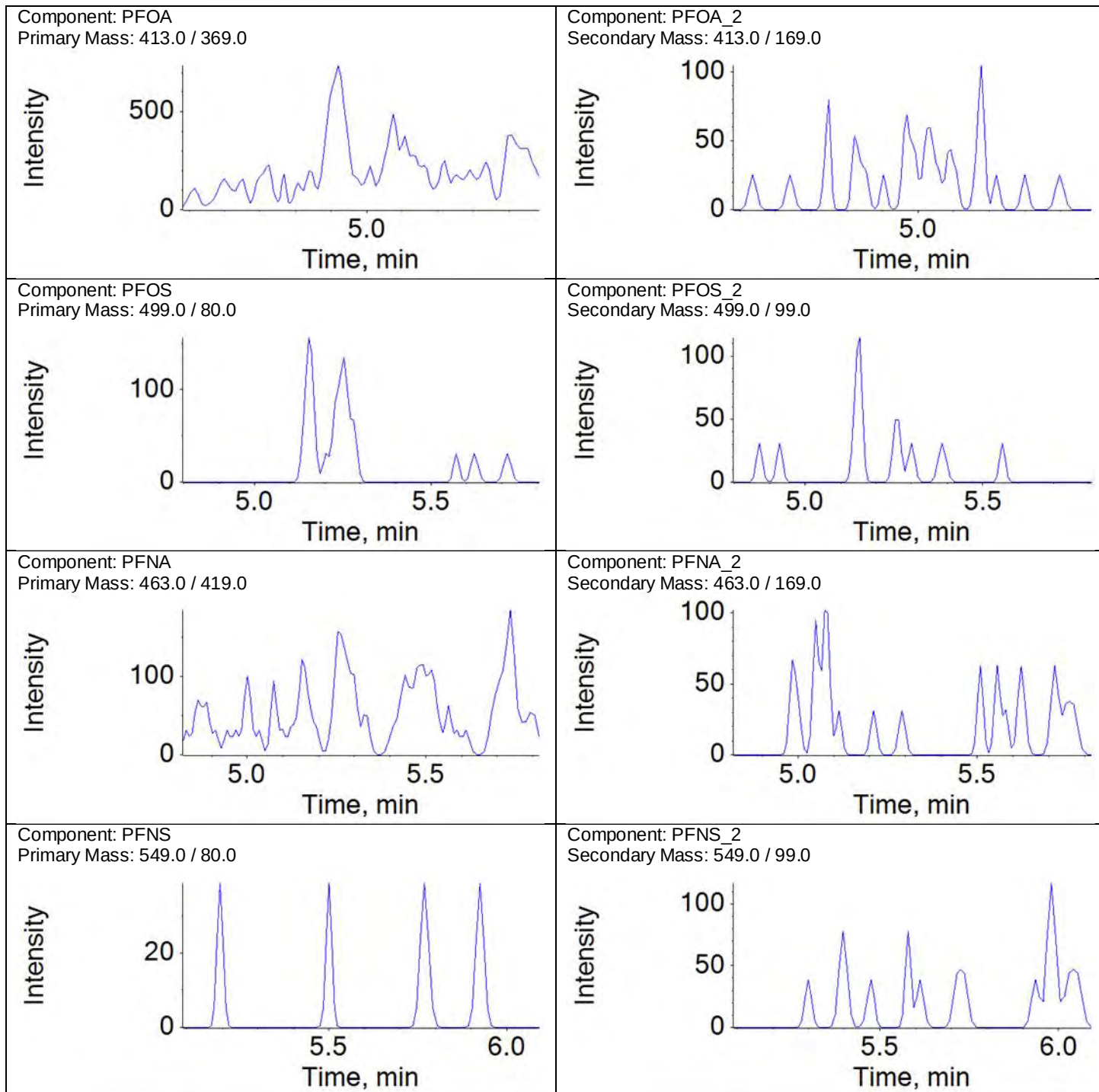
REVIEWED

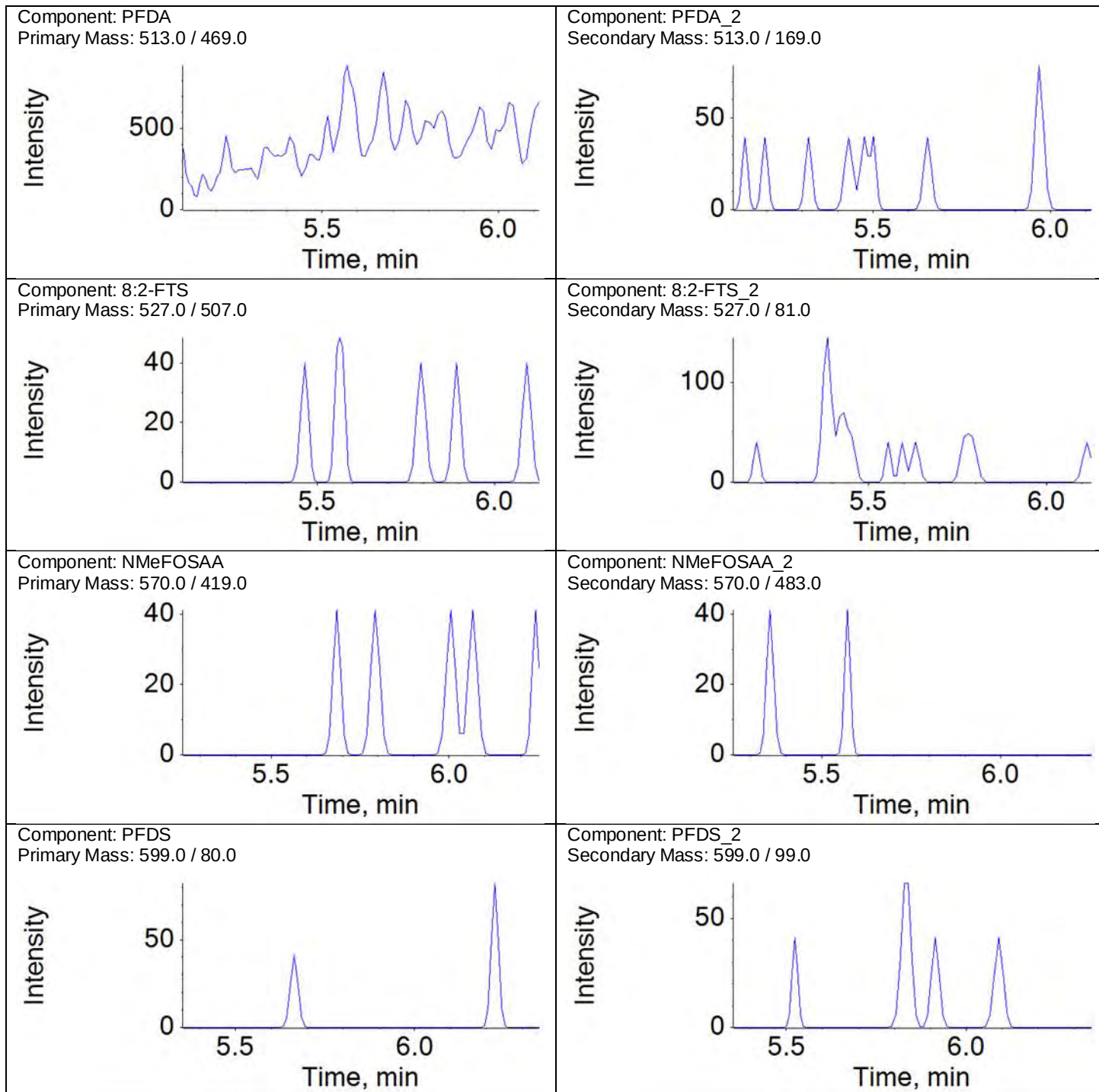
By umar at 12:13 pm, 11/12/18

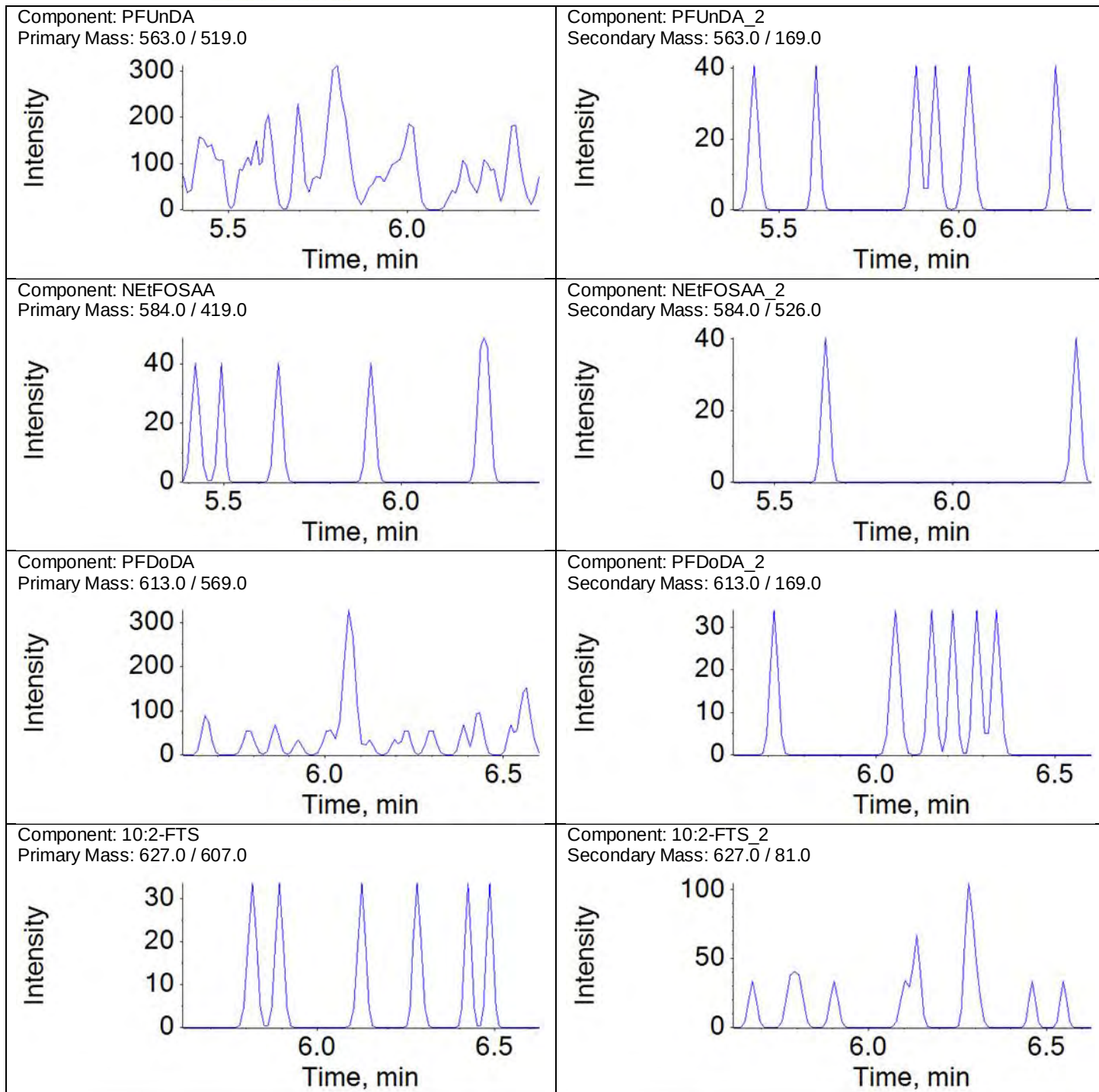
Page 1 of 7

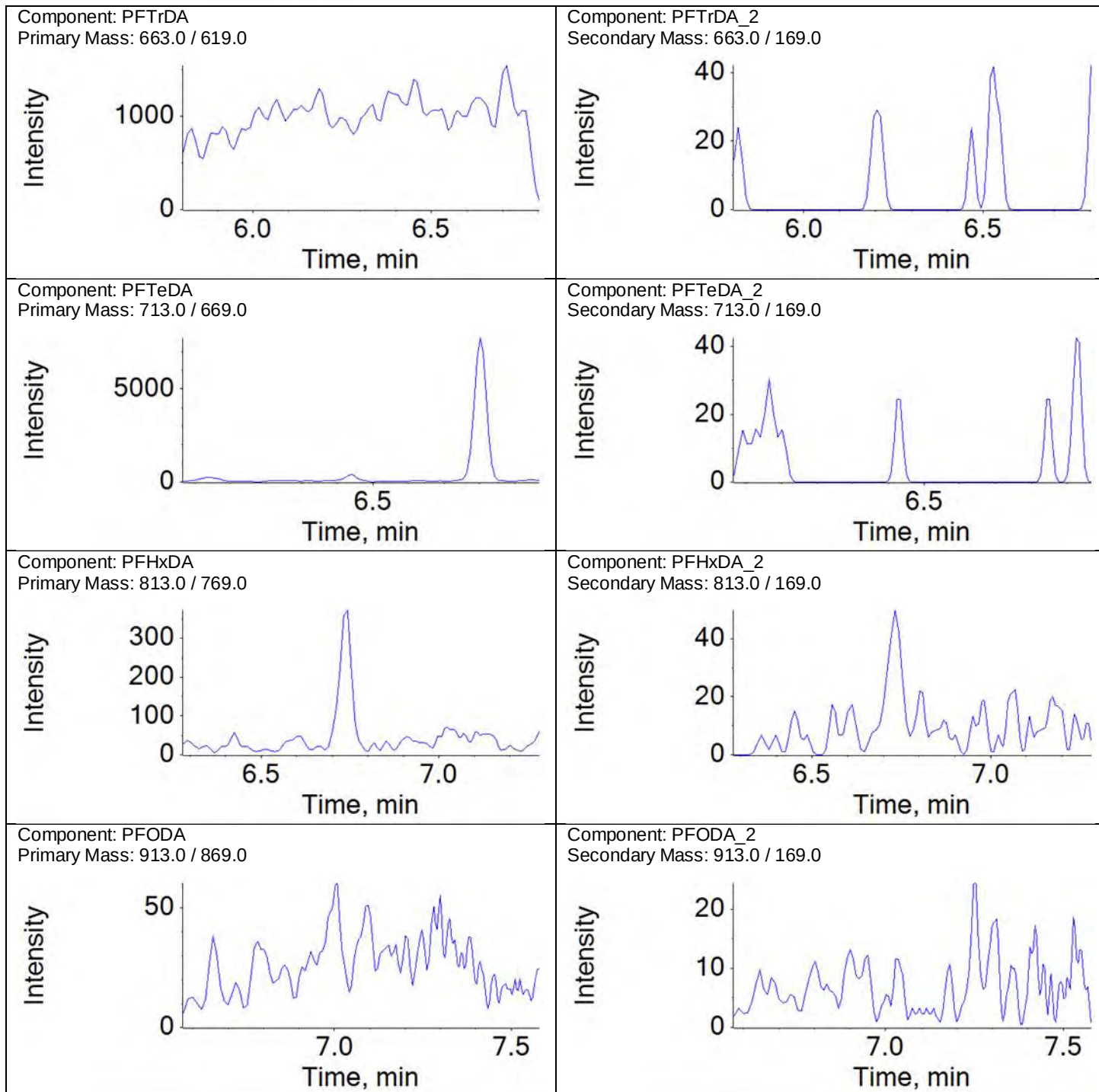










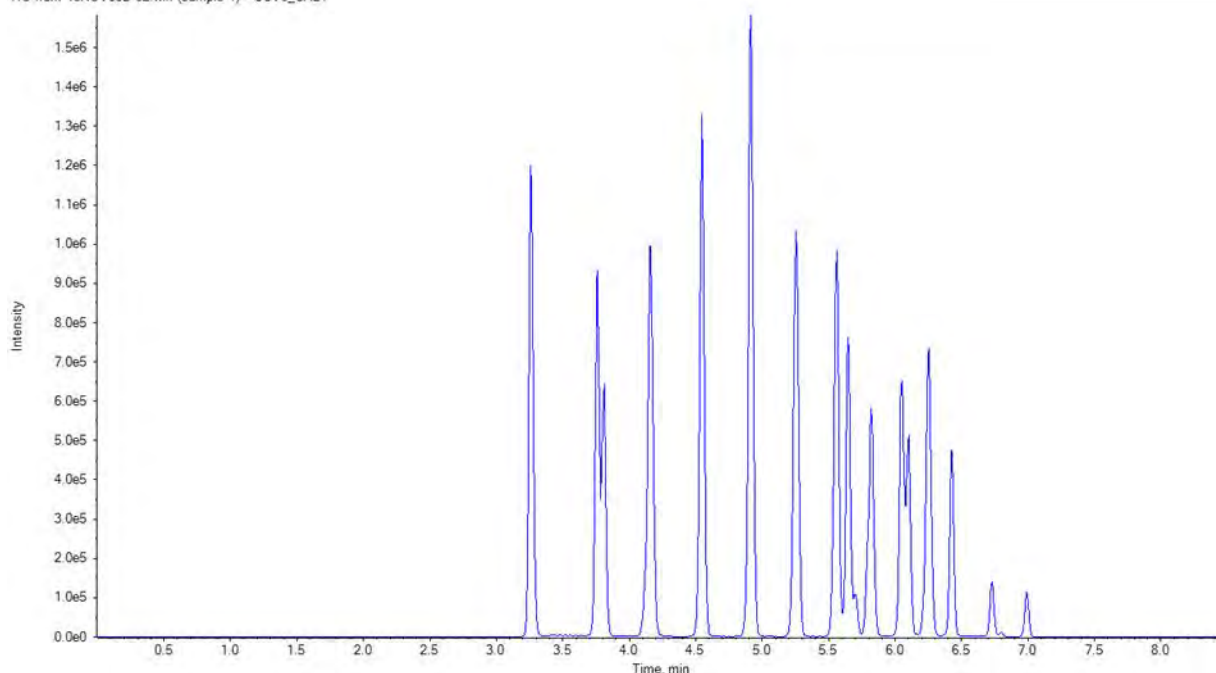


Continuing Calibration Verification

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALMOD41833F	18NOV08D-62.wiff	2018-11-08T20:58:46

TIC from 18NOV08D-62.wiff (sample 1) - CCV6_CAL4



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	720767.6	728839.7	-1	50	
13C2-PFOA	5.0	506864.5	491983.1	3	50	
13C4-PFOS	4.8	283392.2	255568.1	11	50	
13C2-PFDA	5.0	307626.3	315407.5	-2	50	

APPROVED

By JPT at 10:55 am, 11/9/18

REVIEWED

By HMK at 2:58 pm, 11/11/18

Continuing Calibration Verification

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	CCV6_CAL4	CALMOD41833F	18NOV08D-62.wiff	2018-11-08T20:58:46

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	1157894.2	10	13C4-PFBA	783981.8	5.0	1.477	3.26	1.000	8.000	8.644	8	30	
PFPeA	1183681.0	12	13C5-PFPeA	830578.2	5.0	1.425	3.76	1.000	8.000	8.469	6	30	
PFBS	657287.0	11	13C3-PFBS	432655.4	4.7	1.519	3.81	1.000	7.080	7.659	8	30	
4:2-FTS	146243.7	11	13C2-4:2-FTS	51120.1	4.7	2.861	4.12	1.000	7.472	7.691	3	30	
PfHxA	1346936.2	12	13C5-PfHxA	688614.9	5.0	1.956	4.16	1.000	8.000	8.388	5	30	
PFPeS	336126.3	11	13C3-PFBS	432655.4	4.7	0.777	4.18	1.100	7.500	7.662	2	30	
PfHxS	517560.2	12	13C3-PfHxS	337057.5	4.7	1.536	4.55	1.000	7.560	7.783	3	30	
PfHpA	1397451.3	12	13C4-PfHpA	556010.0	5.0	2.513	4.55	1.000	8.000	8.453	6	30	
6:2-FTS	117232.5	11	13C2-6:2-FTS	37244.0	4.8	3.148	4.91	1.000	7.584	7.852	4	30	
PfHpS	506255.7	11	13C3-PfHxS	337057.5	4.7	1.502	4.91	1.080	7.610	7.858	3	30	
PFOA	1391831.6	11	13C8-PFOA	907073.1	5.0	1.534	4.92	1.000	8.000	8.640	8	30	
PFOS	463209.5	11	13C8-PFOS	303123.7	4.8	1.528	5.24	1.000	7.650	7.924	4	30	
PFNA	1122647.7	11	13C9-PFNA	478762.9	5.0	2.345	5.26	1.000	8.000	8.763	10	30	
PFNS	294830.9	11	13C8-PFOS	303123.7	4.8	0.973	5.54	1.060	7.680	7.712	0	30	
PFDA	960254.8	11	13C6-PFDA	629995.5	5.0	1.524	5.56	1.000	8.000	8.386	5	30	
8:2-FTS	95318.5	11	13C2-8:2-FTS	26813.4	4.8	3.555	5.56	1.000	7.664	8.013	5	30	
PFOSA	1067434.0	11	13C8-PFOSA	691392.1	5.0	1.544	5.65	1.000	8.000	8.346	4	30	
NMeFOSAA	130282.1	11	d3-NMeFOSAA	79601.1	5.0	1.637	5.70	1.000	8.000	8.422	5	30	
PFDS	246351.8	11	13C8-PFOS	303123.7	4.8	0.813	5.79	1.100	7.700	7.763	1	30	
PfUnDA	759410.0	12	13C7-PfUnDA	267039.4	5.0	2.844	5.82	1.000	8.000	8.155	2	30	
NEtFOSAA	118906.4	12	d5-NEtFOSAA	67502.4	5.0	1.762	5.84	1.000	8.000	7.570	-5	30	
PFDODA	888527.8	12	13C2-PFDODA	558553.6	5.0	1.591	6.05	1.000	8.000	8.621	8	30	
10:2-FTS	72975.2	12	13C2-8:2-FTS	26813.4	4.8	2.722	6.07	1.090	7.712	8.475	10	30	
NMePFOSAE	630908.8	11	d7-NMePFOSAE	342444.1	5.0	1.842	6.10	1.000	8.000	8.256	3	30	
NMePFOSA	129083.8	12	d3-NMePFOSA	83322.8	5.0	1.549	6.11	1.000	8.000	8.671	8	30	
PFDOS	120202.8	10	13C8-PFOS	303123.7	4.8	0.397	6.22	1.190	7.740	7.654	-1	30	
NEtPFOSAE	735100.2	11	d9-NEtPFOSAE	263337.5	5.0	2.791	6.26	1.000	8.000	8.949	12	30	
NEtPFOSA	118507.2	11	d5-NEtPFOSA	71551.9	5.0	1.656	6.27	1.000	8.000	7.294	-9	30	
PFTTrDA	692553.1	11	13C2-PFDODA	558553.6	5.0	1.240	6.25	1.030	8.000	7.819	-2	30	
PFTeDA	598497.1	10	13C2-PFTeDA	410264.7	5.0	1.459	6.43	1.000	8.000	8.567	7	30	
PfHxDA	283375.4	11	13C2-PFTeDA	410264.7	5.0	0.691	6.73	1.050	8.000	8.574	7	30	
PFOA	242797.3	10	13C2-PFTeDA	410264.7	5.0	0.592	6.99	1.090	8.000	8.479	6	30	

Continuing Calibration Verification

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 HMK at 2:58 pm, 11/11/18

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:	CCV6 CAL4		Data File:		18NOV08D-62.wiff
Sample ID:	CALMOD41833F		Acquis Date:		2018-11-08T20:58:46
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	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	720767.6	728839.7	-1	50	
13C2-PFOA	5.0	506864.5	491983.1	3	50	
13C4-PFOS	4.8	283392.2	255568.1	11	50	
13C2-PFDA	5.0	307626.3	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	783981.8	13C3-PFBA	720767.6	1.088	5.000	5.034	101	70-130	
E13C5-PFPeA	830578.2	13C3-PFBA	720767.6	1.152	5.000	5.020	100	70-130	
E13C3-PFBS	432655.4	13C3-PFBA	720767.6	0.600	4.650	4.405	95	70-130	
E13C2-4:2-FTS	51120.1	13C2-PFOA	506864.5	0.101	4.670	4.551	97	70-130	
E13C5-PFHxA	688614.9	13C2-PFOA	506864.5	1.359	5.000	4.997	100	70-130	
E13C3-PFHxS	337057.5	13C2-PFOA	506864.5	0.665	4.730	4.774	101	70-130	
E13C4-PFHpA	556010.0	13C2-PFOA	506864.5	1.097	5.000	4.990	100	70-130	
E13C2-6:2-FTS	37244.0	13C2-PFOA	506864.5	0.073	4.750	4.900	103	70-130	
E13C8-PFOA	907073.1	13C2-PFOA	506864.5	1.790	5.000	4.990	100	70-130	
E13C8-PFOS	303123.7	13C4-PFOS	283392.2	1.070	4.780	4.730	99	70-130	
E13C9-PFNA	478762.9	13C4-PFOS	283392.2	1.689	5.000	4.615	92	70-130	
E13C6-PFDA	629995.5	13C2-PFDA	307626.3	2.048	5.000	5.150	103	70-130	
E13C2-8:2-FTS	26813.4	13C2-PFDA	307626.3	0.087	4.790	4.612	96	70-130	
E13C8-PFOSA	691392.1	13C2-PFDA	307626.3	2.248	5.000	4.904	98	70-130	
Ed3-NMeFOSAA	79601.1	13C2-PFDA	307626.3	0.259	5.000	4.812	96	70-130	
E13C7-PFUnDA	267039.4	13C2-PFDA	307626.3	0.868	5.000	5.008	100	70-130	
Ed5-NEtFOSAA	67502.4	13C2-PFDA	307626.3	0.219	5.000	5.078	102	70-130	
E13C2-PFDODA	558553.6	13C2-PFDA	307626.3	1.816	5.000	4.895	98	70-130	
Ed7-NMePFOSAE	342444.1	13C2-PFDA	307626.3	1.113	5.000	5.177	104	70-130	
Ed3-NMePFOSA	83322.8	13C2-PFDA	307626.3	0.271	5.000	4.959	99	70-130	
Ed9-NEtPFOSAE	263337.5	13C2-PFDA	307626.3	0.856	5.000	4.889	98	70-130	
Ed5-NEtPFOSA	71551.9	13C2-PFDA	307626.3	0.233	5.000	5.386	108	70-130	
E13C2-PFTeDA	410264.7	13C2-PFDA	307626.3	1.334	5.000	4.801	96	70-130	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV6_CAL4

Instrument Name: LM27631

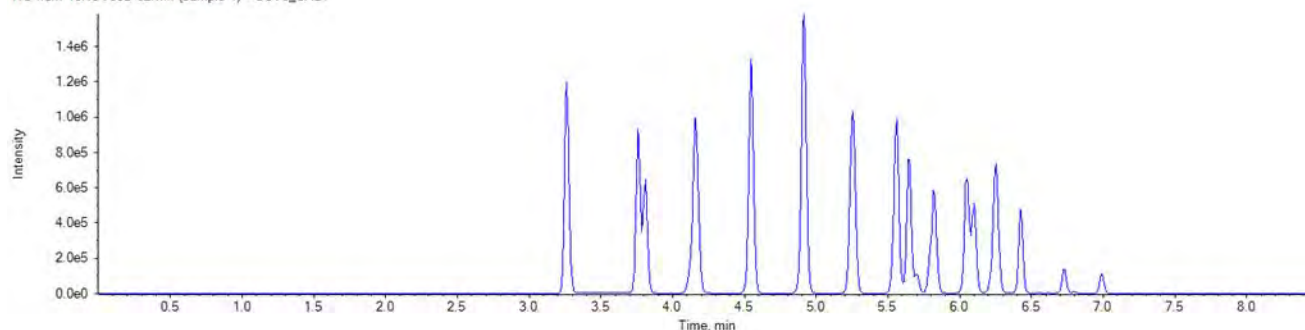
File Name: 18NOV08D-62.wiff

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	1157894.2		A	13C4-PFBA	3.26	783981.8	1.477	8.644
PFPeA	3.76	1.000	1183681.0		A	13C5-PFPeA	3.76	830578.2	1.425	8.469
PFBS	3.81	1.000	657287.0		A	13C3-PFBS	3.81	432655.4	1.519	7.659
4:2-FTS	4.12	1.000	146243.7		A	13C2-4:2-FTS	4.12	51120.1	2.861	7.691
PFHxA	4.16	1.000	1346936.2		A	13C5-PFHxA	4.16	688614.9	1.956	8.388
PFPeS	4.18	1.100	336126.3		A	13C3-PFBS	3.81	432655.4	0.777	7.662
PFHxS	4.55	1.000	517560.2		A	13C3-PFHxS	4.55	337057.5	1.536	7.783
PFHpA	4.55	1.000	1397451.3		A	13C4-PFHpA	4.55	556010.0	2.513	8.453
6:2-FTS	4.91	1.000	117232.5		A	13C2-6:2-FTS	4.90	37244.0	3.148	7.852
PFHpS	4.91	1.080	506255.7		A	13C3-PFHxS	4.55	337057.5	1.502	7.858
PFOA	4.92	1.000	1391831.6		A	13C8-PFOA	4.92	907073.1	1.534	8.640
PFOS	5.24	1.000	463209.5		A	13C8-PFOS	5.24	303123.7	1.528	7.924
PFNA	5.26	1.000	1122647.7		A	13C9-PFNA	5.26	478762.9	2.345	8.763
PFNS	5.54	1.060	294830.9		A	13C8-PFOS	5.24	303123.7	0.973	7.712
PFDA	5.56	1.000	960254.8		A	13C6-PFDA	5.56	629995.5	1.524	8.386
8:2-FTS	5.56	1.000	95318.5		A	13C2-8:2-FTS	5.56	26813.4	3.555	8.013
PFOSA	5.65	1.000	1067434.0		A	13C8-PFOSA	5.65	691392.1	1.544	8.346
NMeFOSAA	5.70	1.000	130282.1		A	d3-NMeFOSAA	5.70	79601.1	1.637	8.422
PFDS	5.79	1.100	246351.8		A	13C8-PFOS	5.24	303123.7	0.813	7.763
PFUnDA	5.82	1.000	759410.0		A	13C7-PFUnDA	5.82	267039.4	2.844	8.155
NEtFOSAA	5.84	1.000	118906.4		A	d5-NEtFOSAA	5.83	67502.4	1.762	7.570
PFDODA	6.05	1.000	888527.8		A	13C2-PFDODA	6.05	558553.6	1.591	8.621
10:2-FTS	6.07	1.090	72975.2		A	13C2-8:2-FTS	5.56	26813.4	2.722	8.475
NMePFOSAE	6.10	1.000	630908.8		A	d7-NMePFOSAE	6.09	342444.1	1.842	8.256
NMePFOSA	6.11	1.000	129083.8		A	d3-NMePFOSA	6.11	83322.8	1.549	8.671
PFDoS	6.22	1.190	120202.8		A	13C8-PFOS	5.24	303123.7	0.397	7.654
NEtPFOSAE	6.26	1.000	735100.2		A	d9-NEtPFOSAE	6.25	263337.5	2.791	8.949
NEtPFOSA	6.27	1.000	118507.2		A	d5-NEtPFOSA	6.26	71551.9	1.656	7.294
PFTeDA	6.25	1.030	692553.1		A	13C2-PFDODA	6.05	558553.6	1.240	7.819
PFTeDA	6.43	1.000	598497.1		A	13C2-PFTeDA	6.43	410264.7	1.459	8.567
PFHxDA	6.73	1.050	283375.4		A	13C2-PFTeDA	6.43	410264.7	0.691	8.574
PFODA	6.99	1.090	242797.3		A	13C2-PFTeDA	6.43	410264.7	0.592	8.479

Total Ion Chromatogram

TIC from 18NOV08D-62.wiff (sample 1) - CCV6_CAL4



APPROVED

By JPT at 10:55 am, 11/9/18

BSI05 Page 735 of 1595

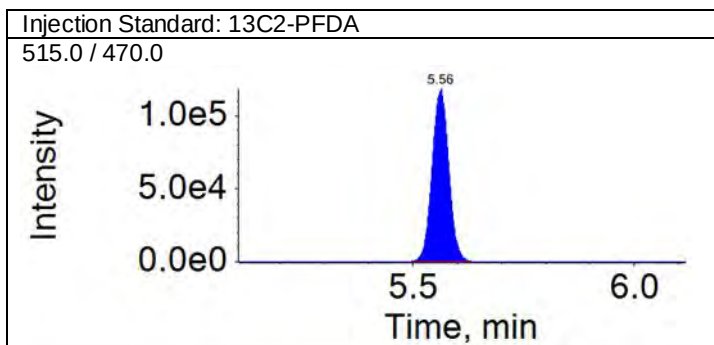
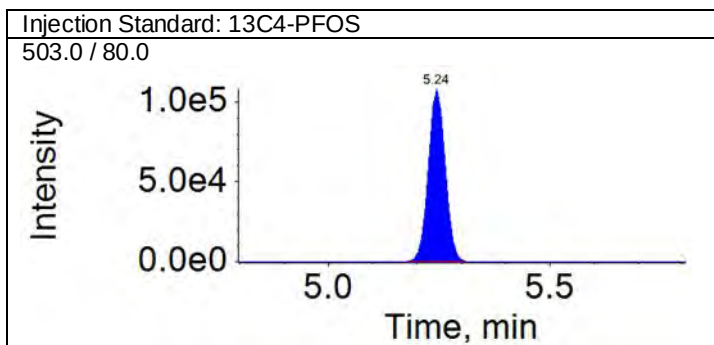
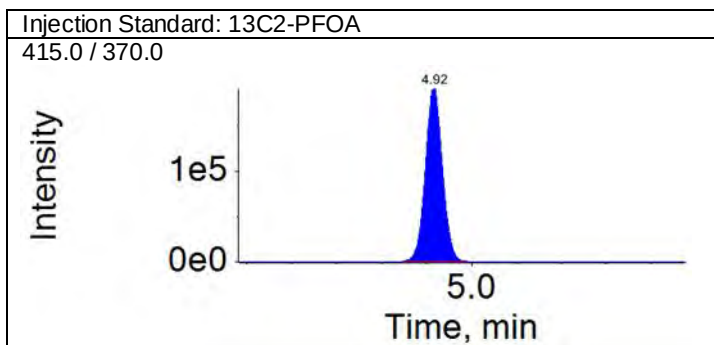
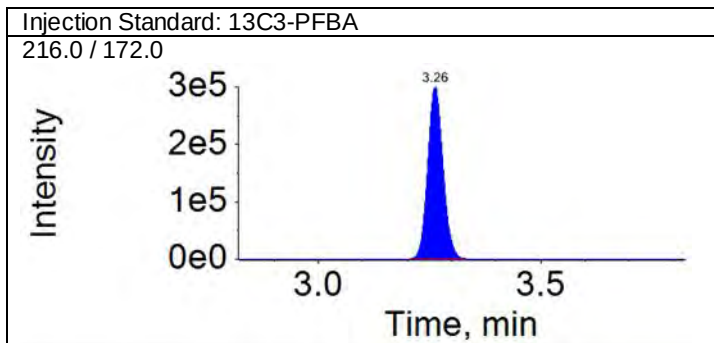
REVIEWED

By HMK at 2:58 pm, 11/11/18

Page 2 of 17

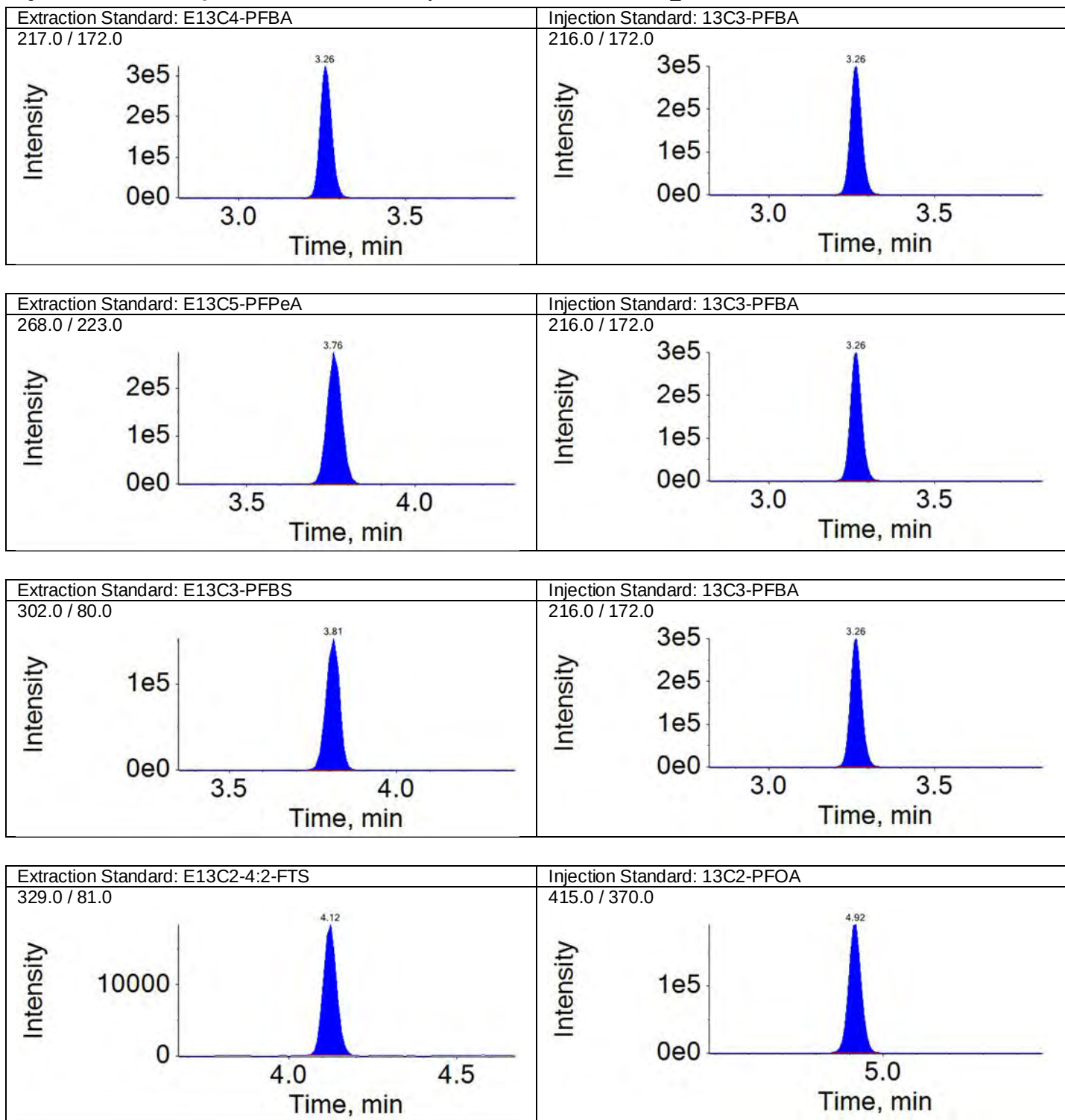
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



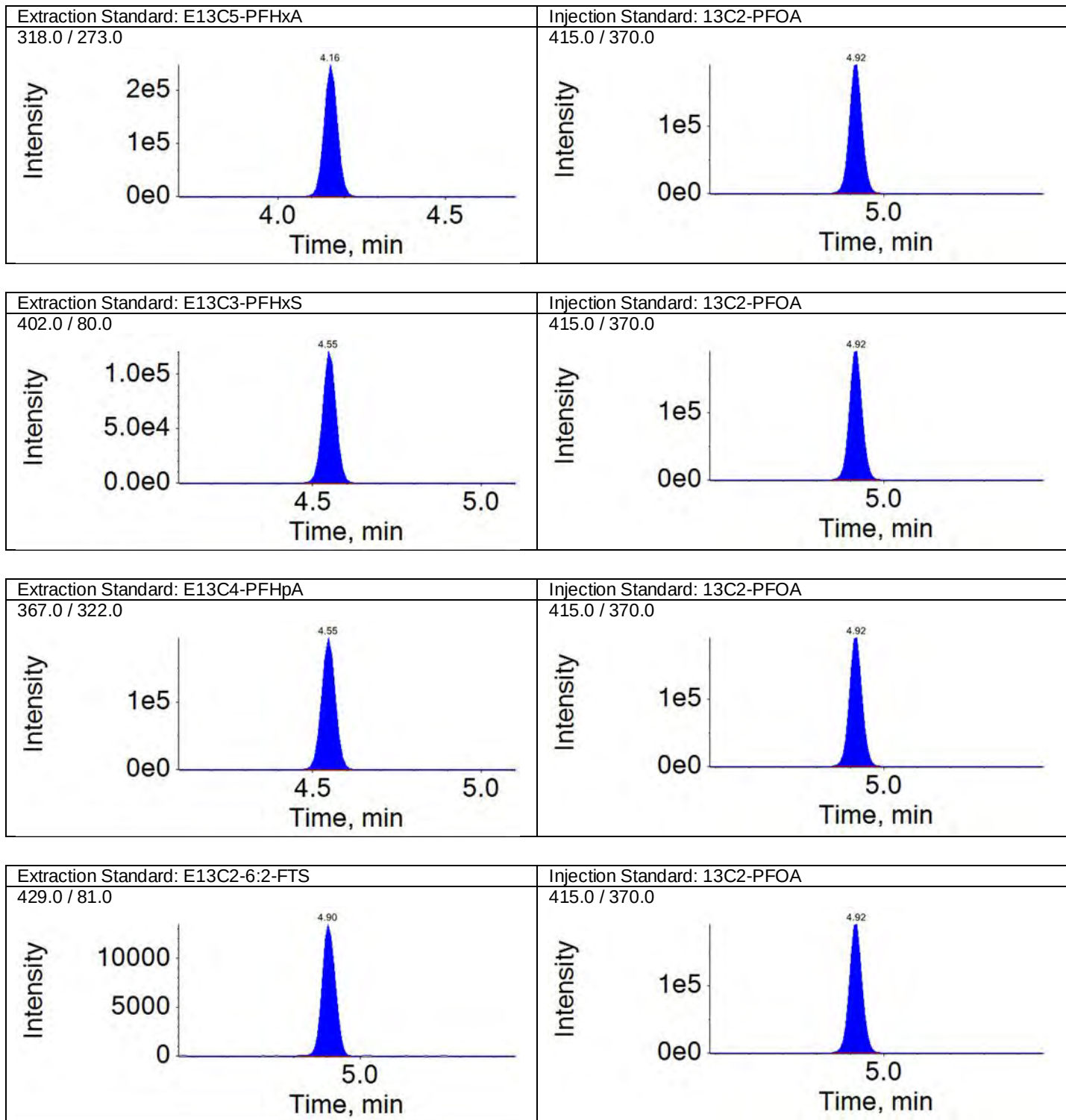
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

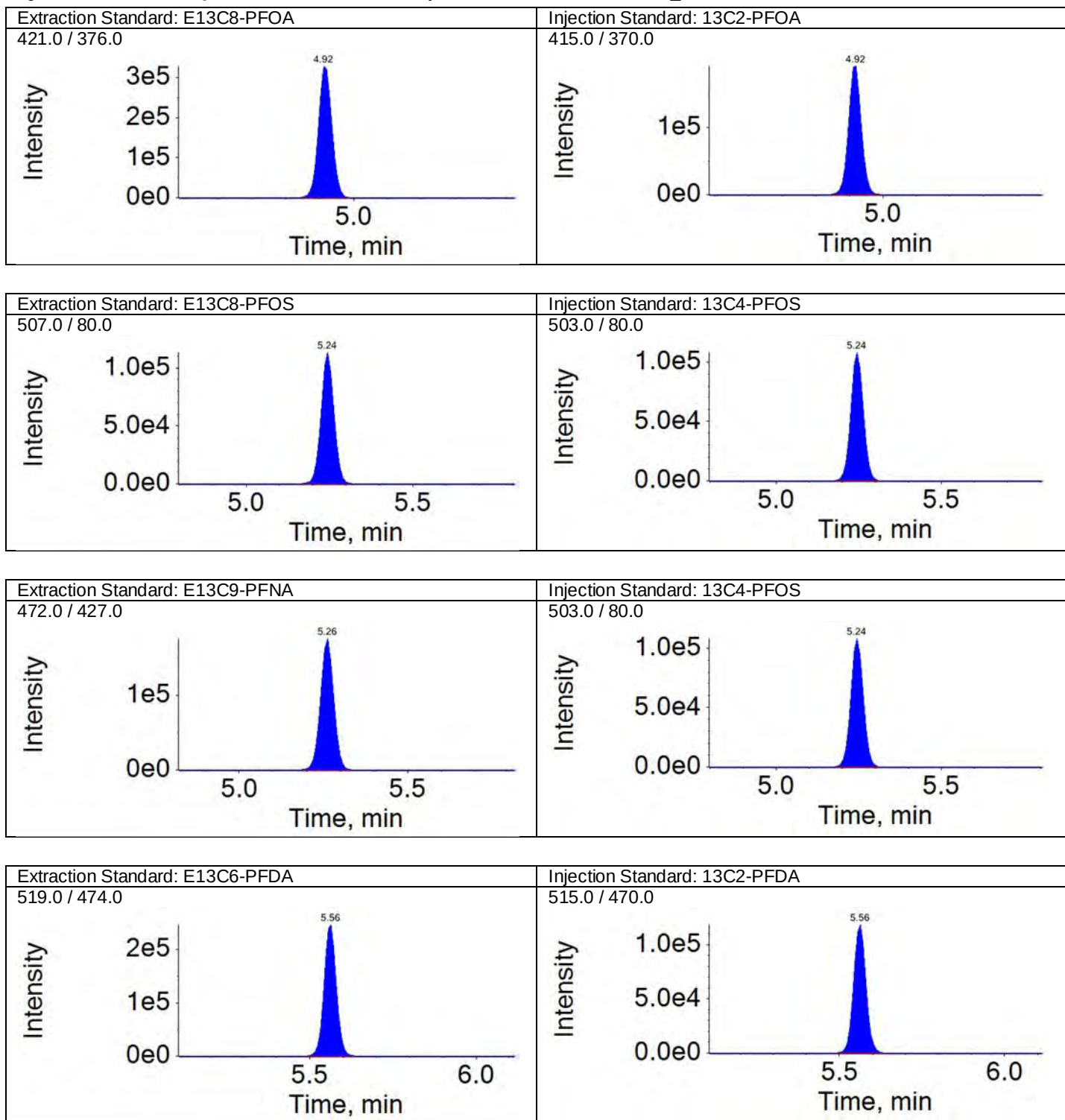
By JPT at 10:55 am, 11/9/18

REVIEWED

By HMK at 2:58 pm, 11/11/18

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

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

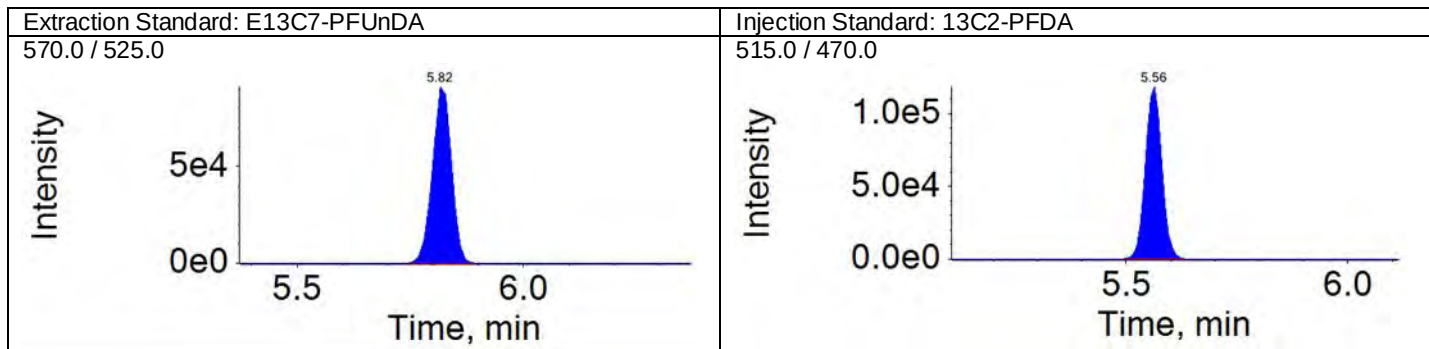
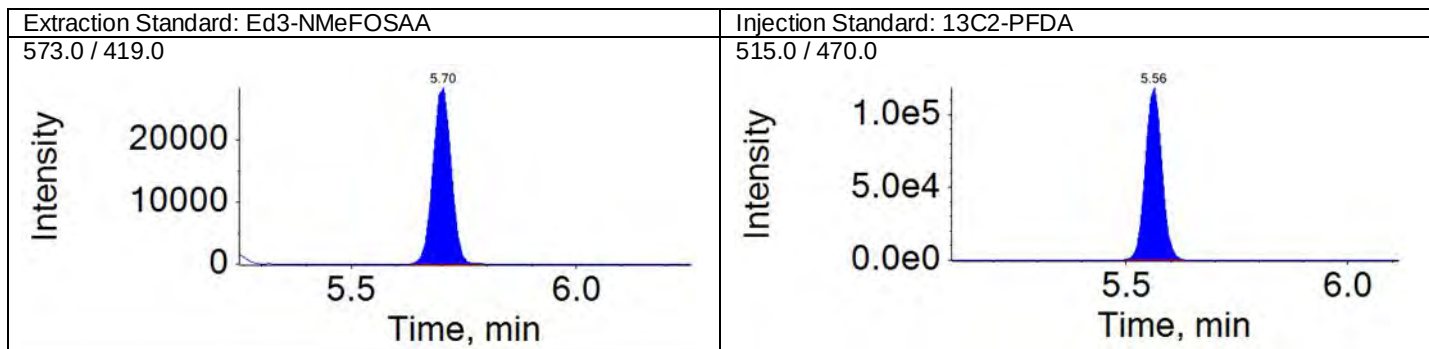
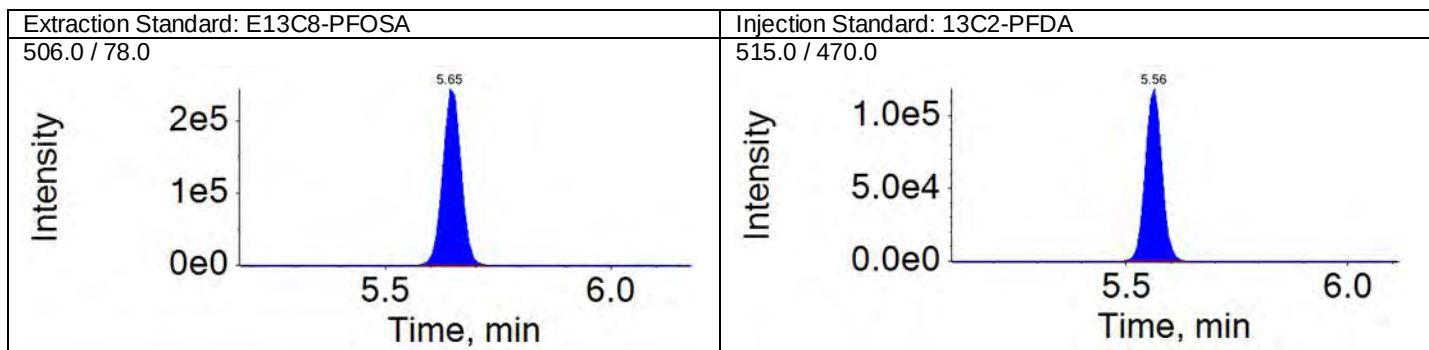
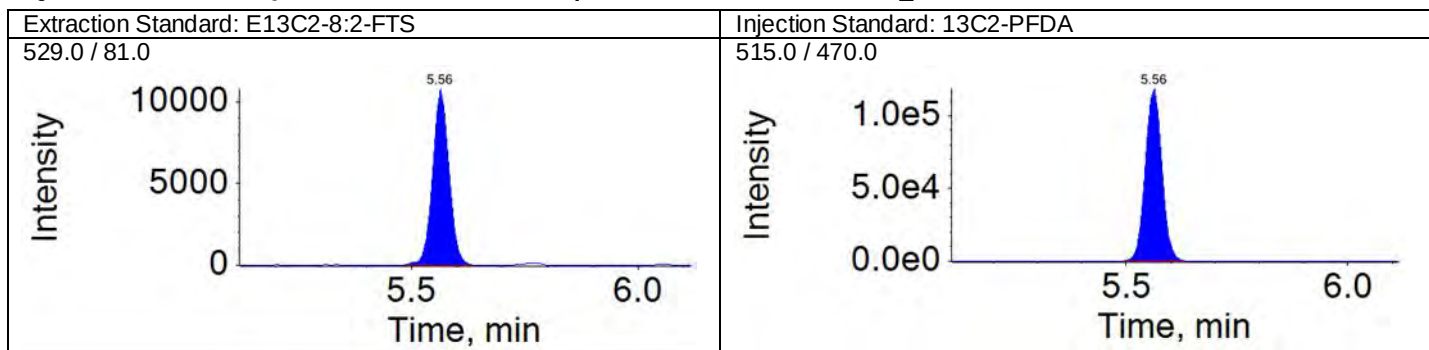
By JPT at 10:55 am, 11/9/18

REVIEWED

By HMK at 2:58 pm, 11/11/18

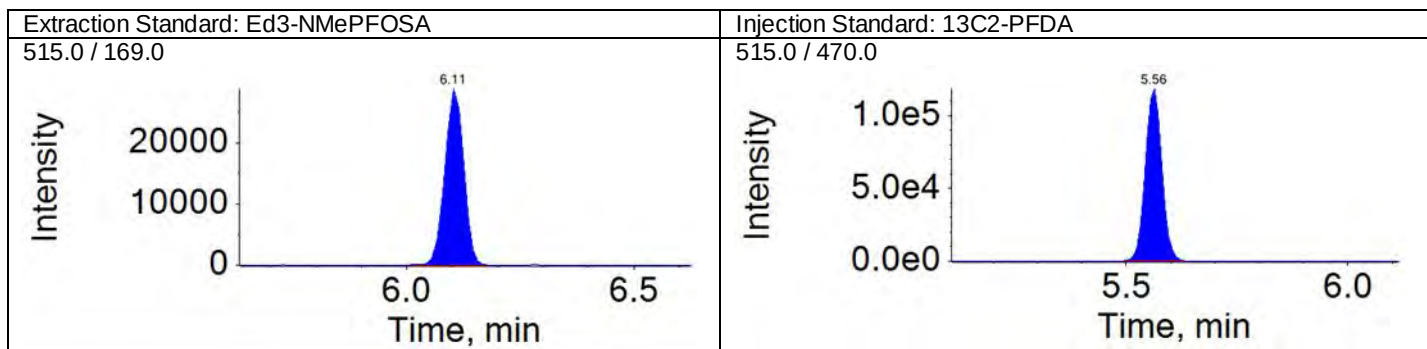
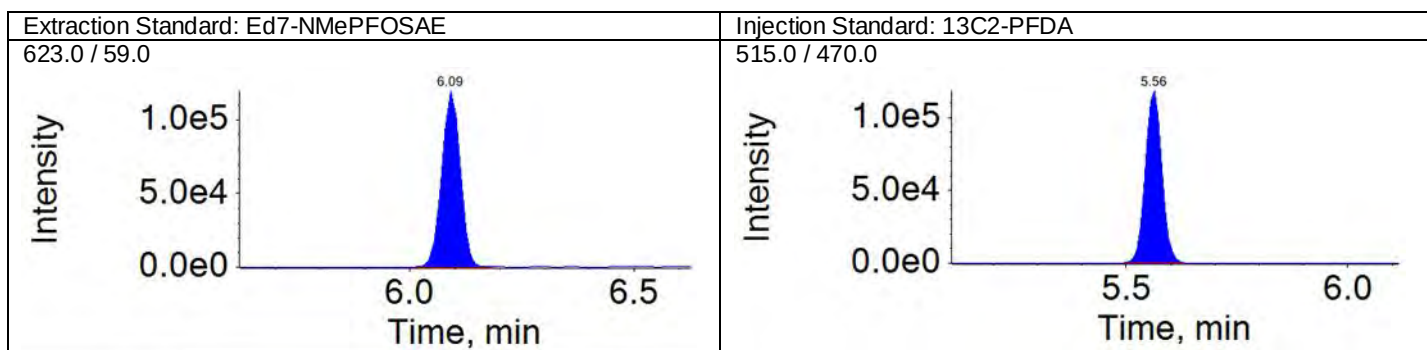
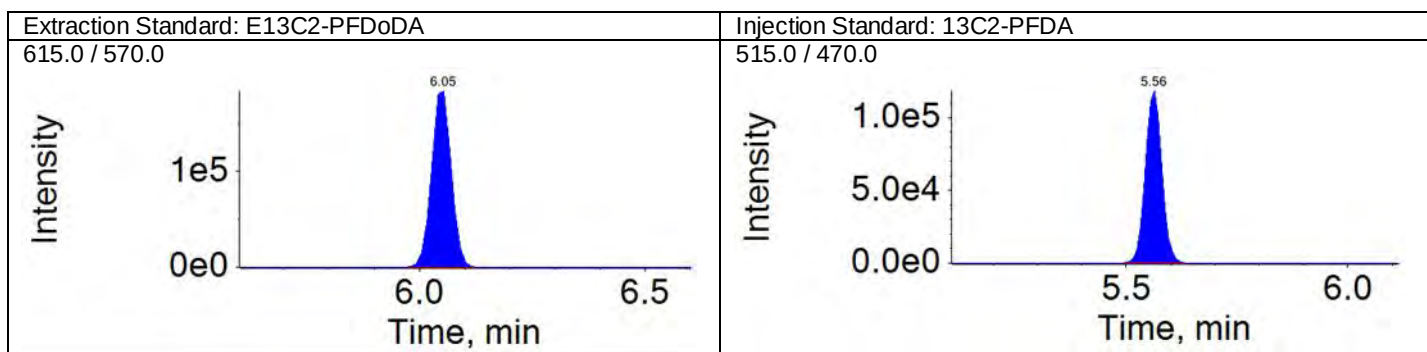
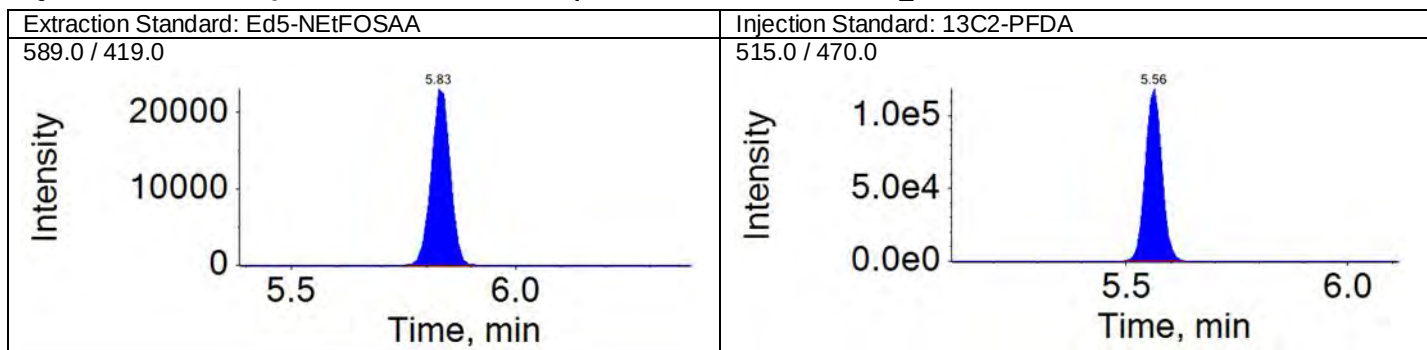
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



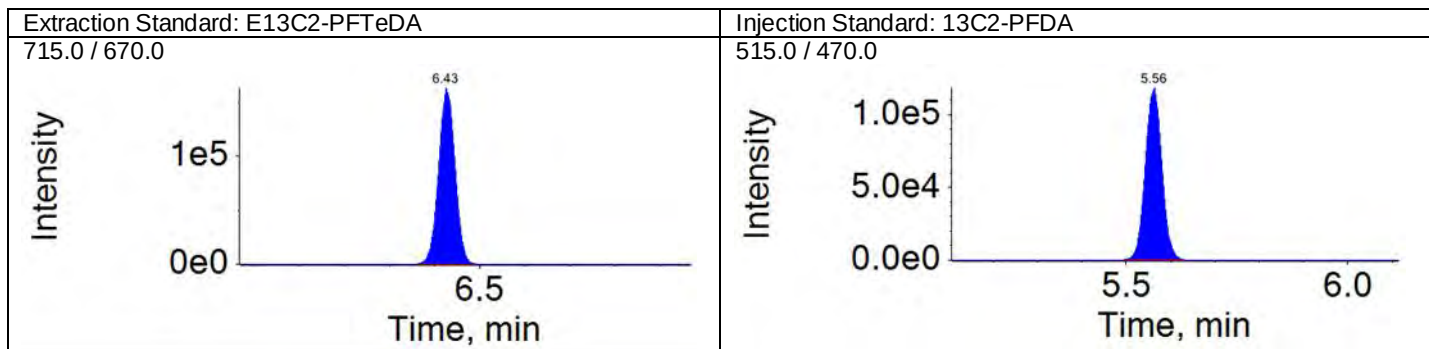
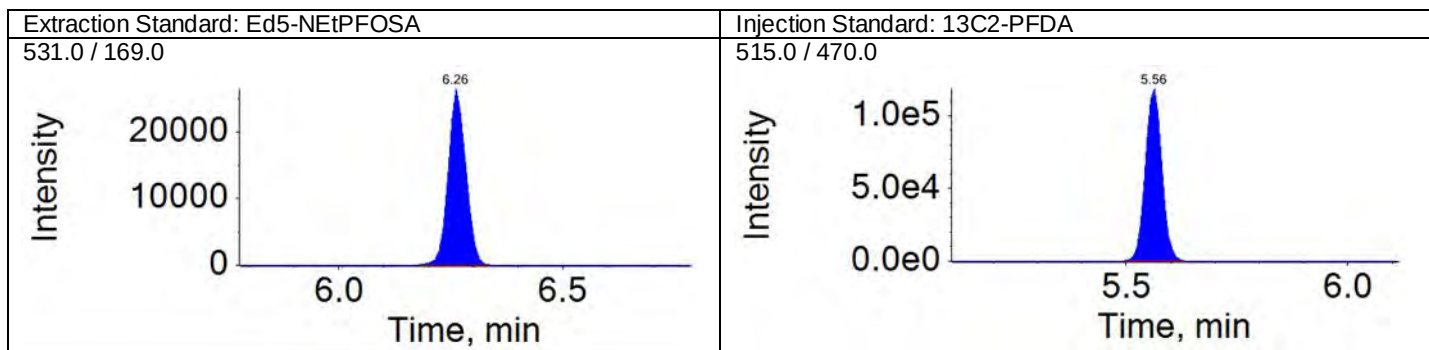
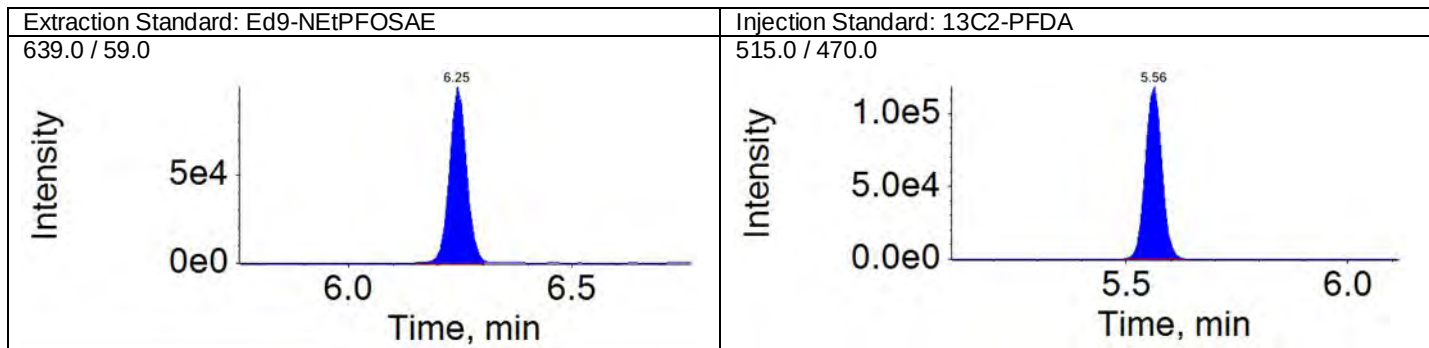
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



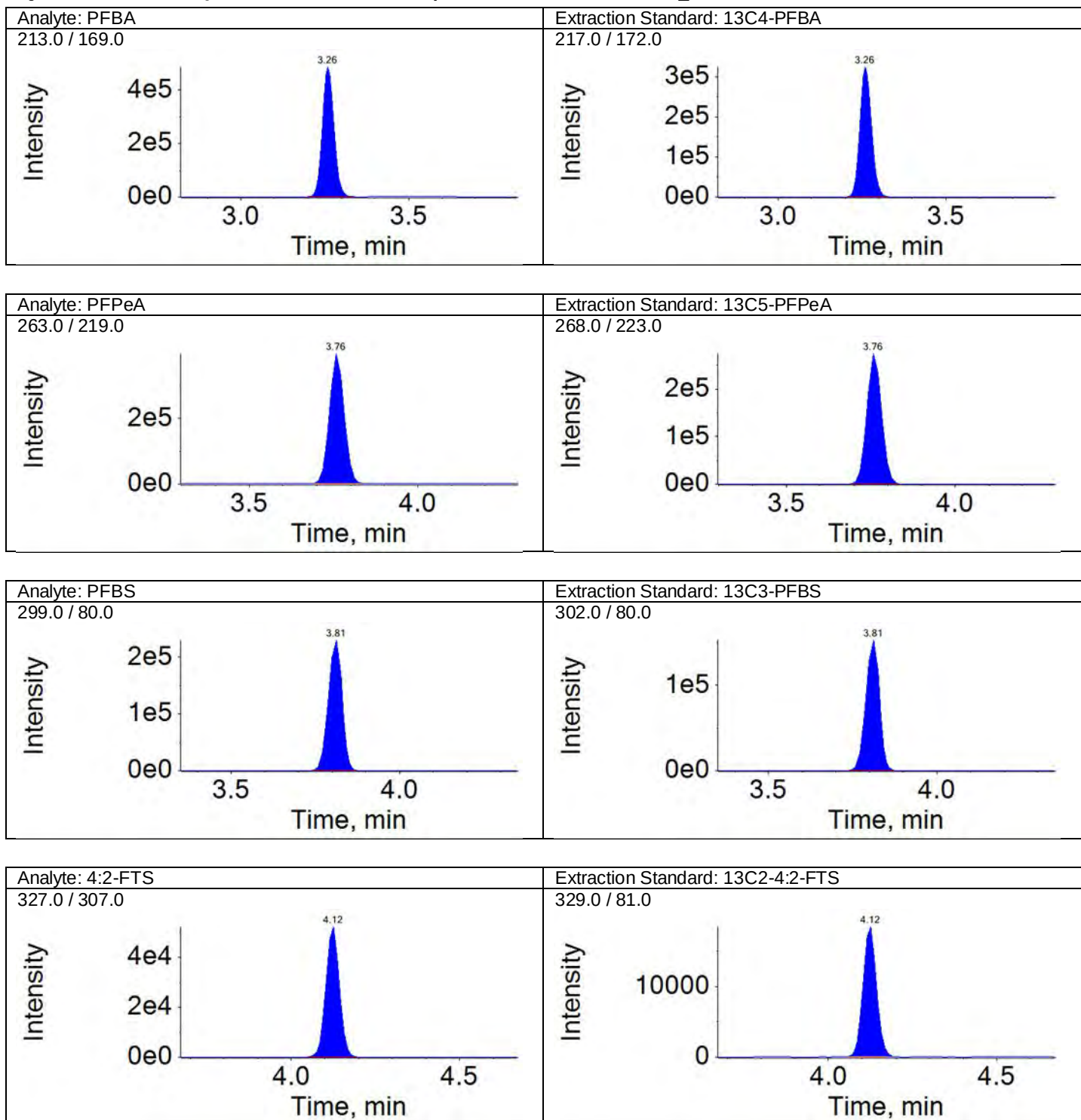
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



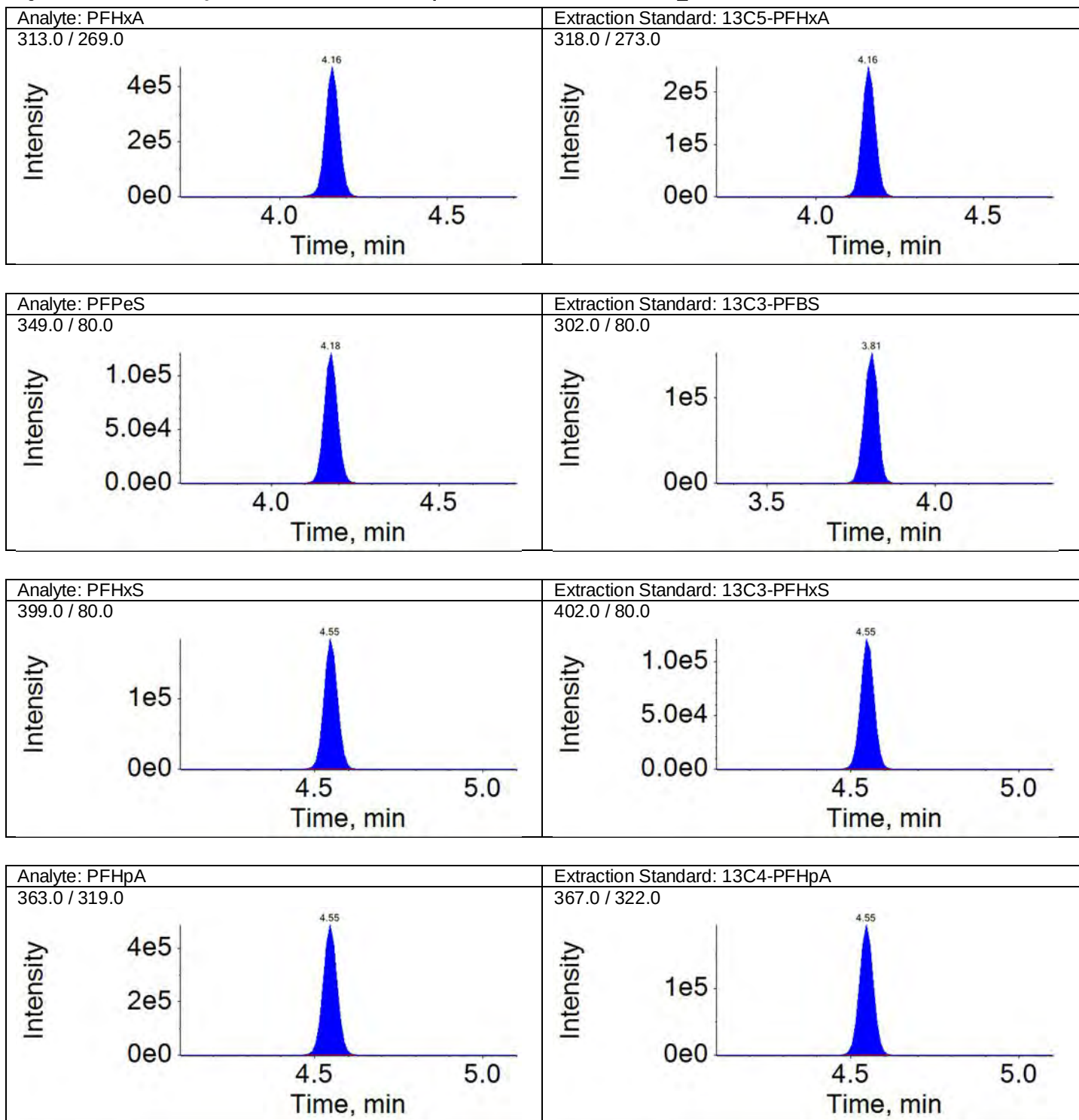
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



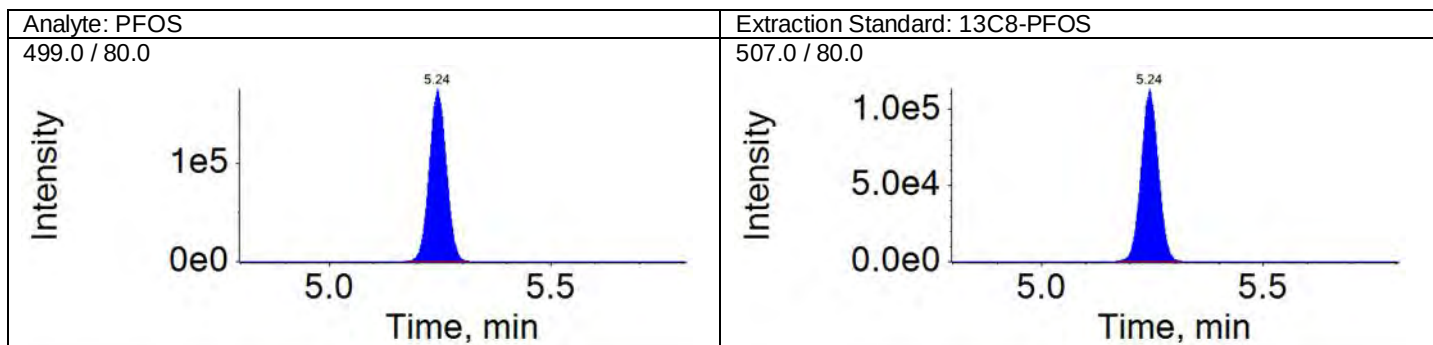
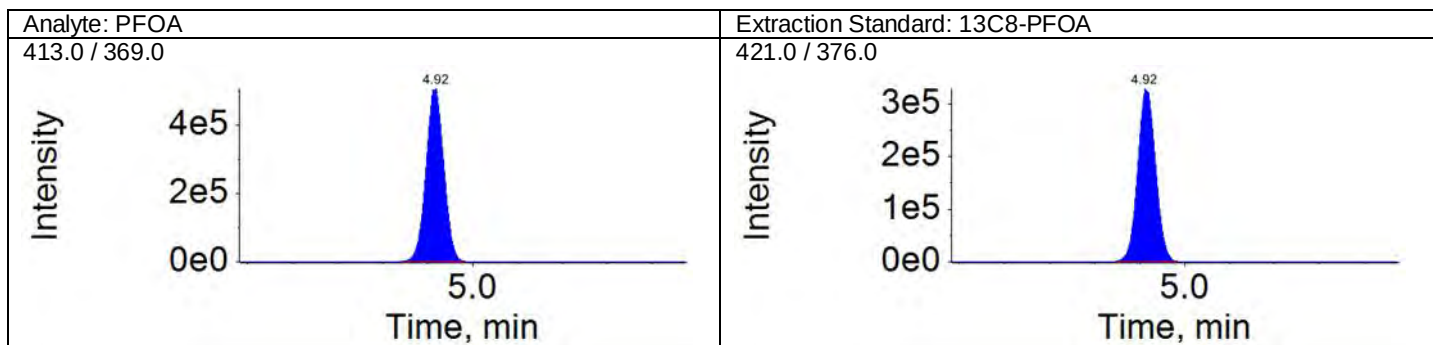
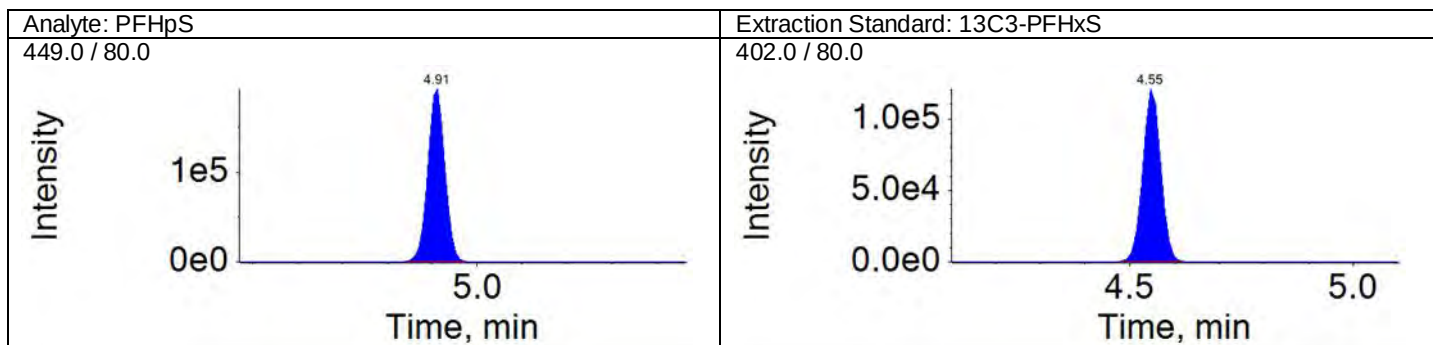
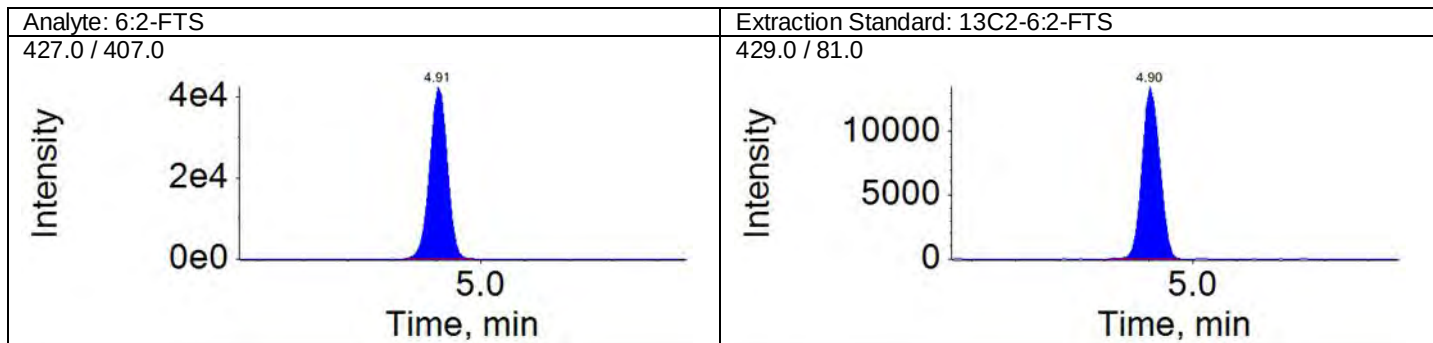
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



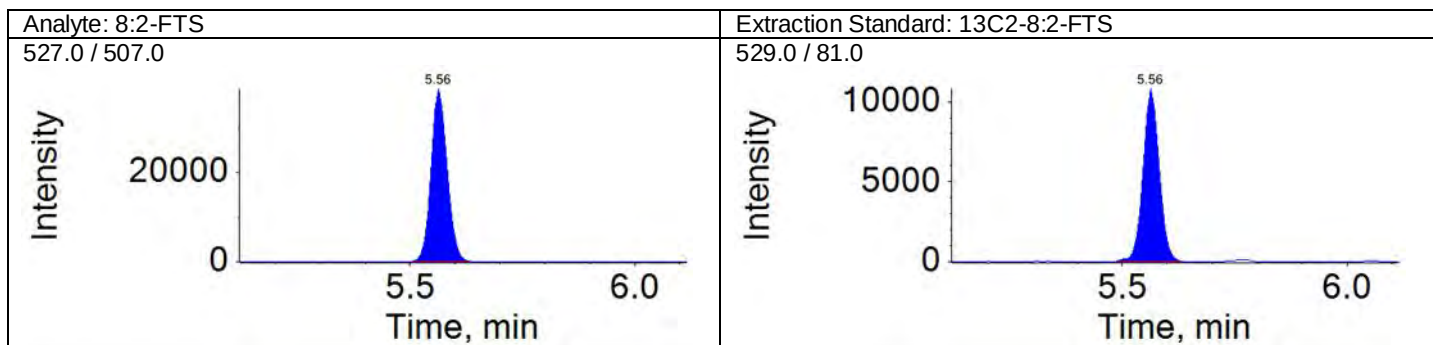
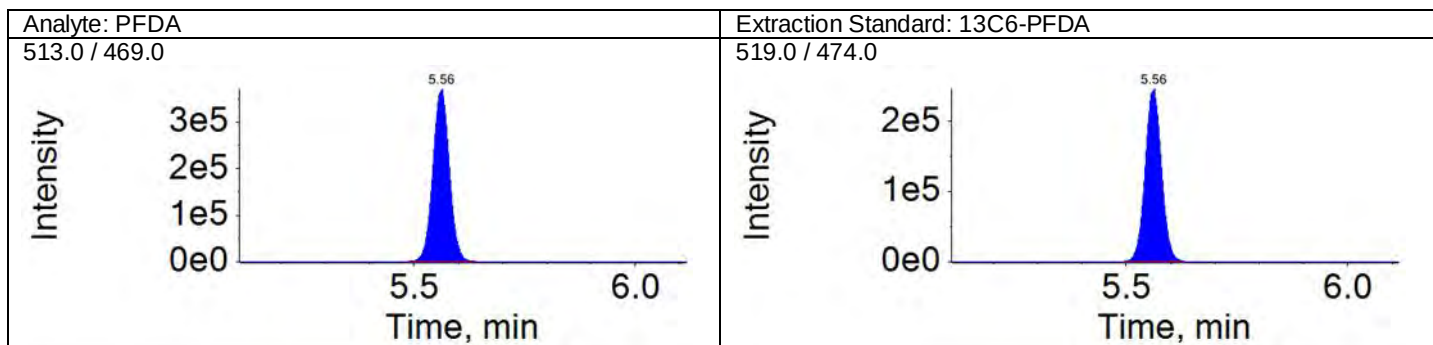
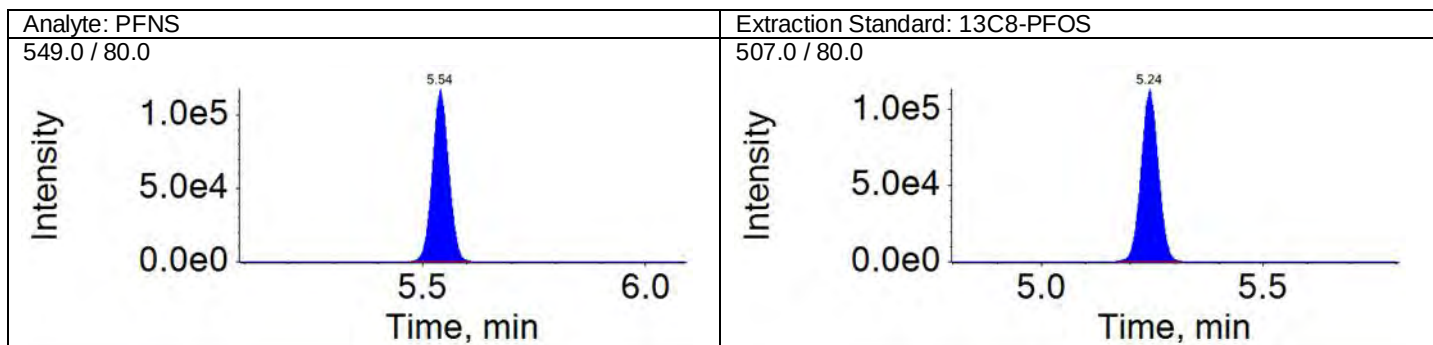
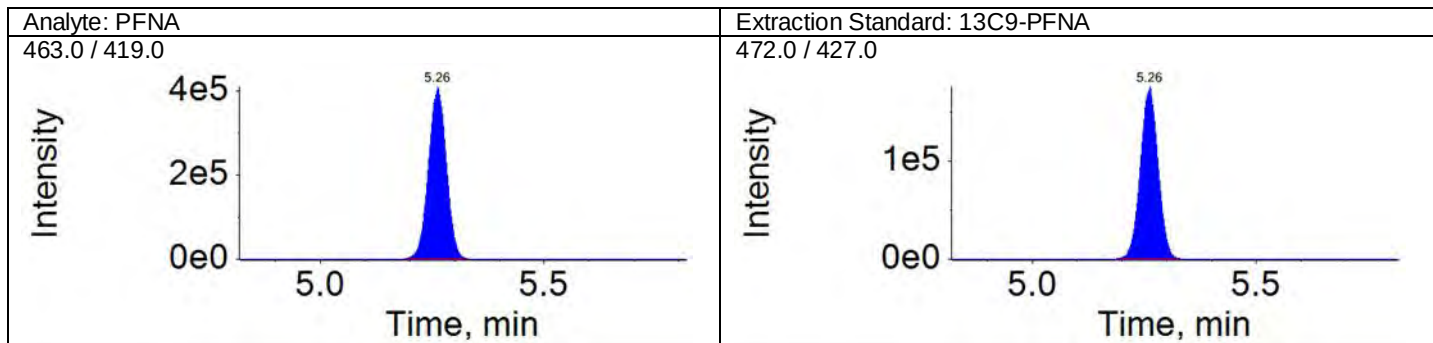
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



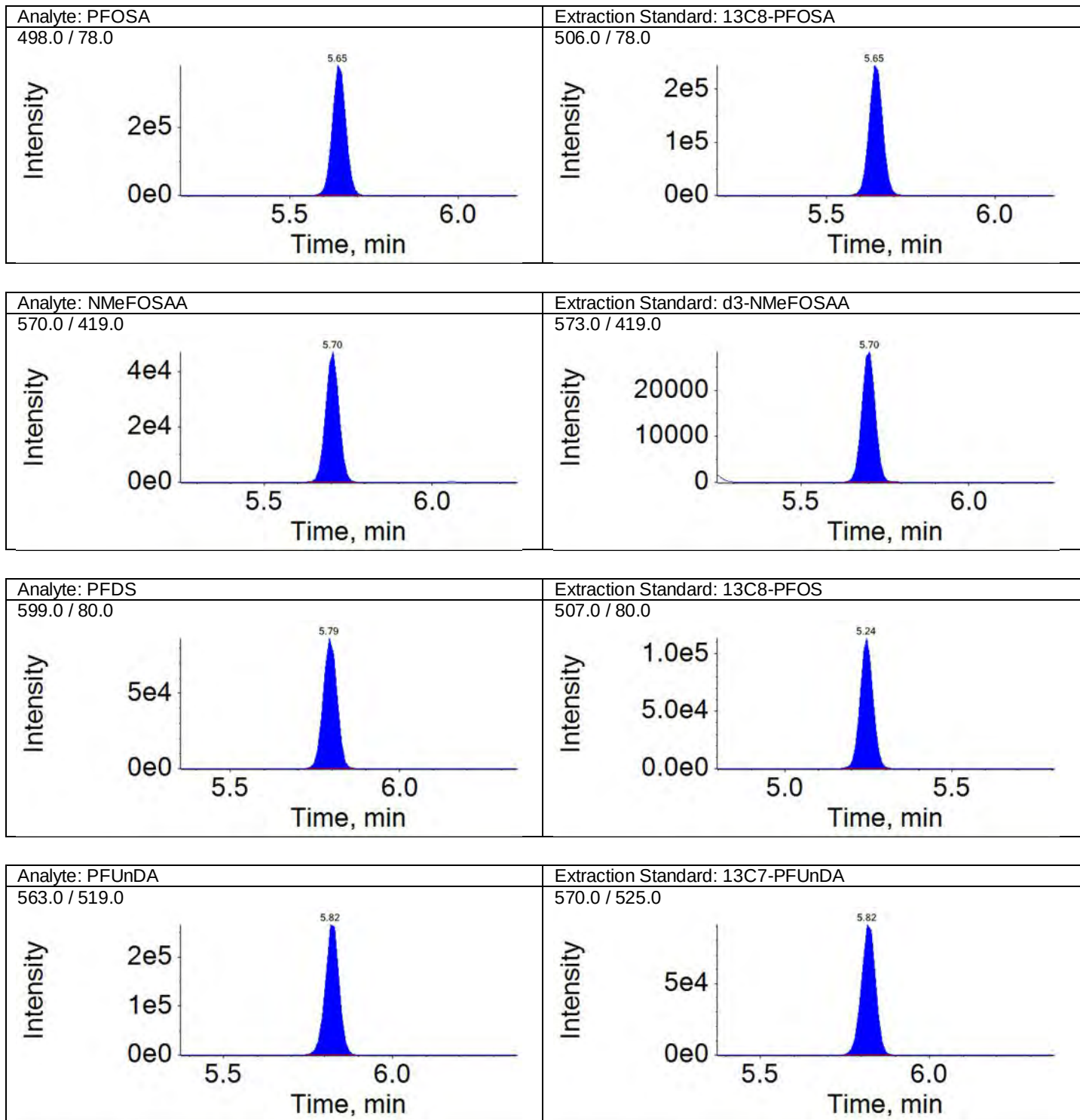
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



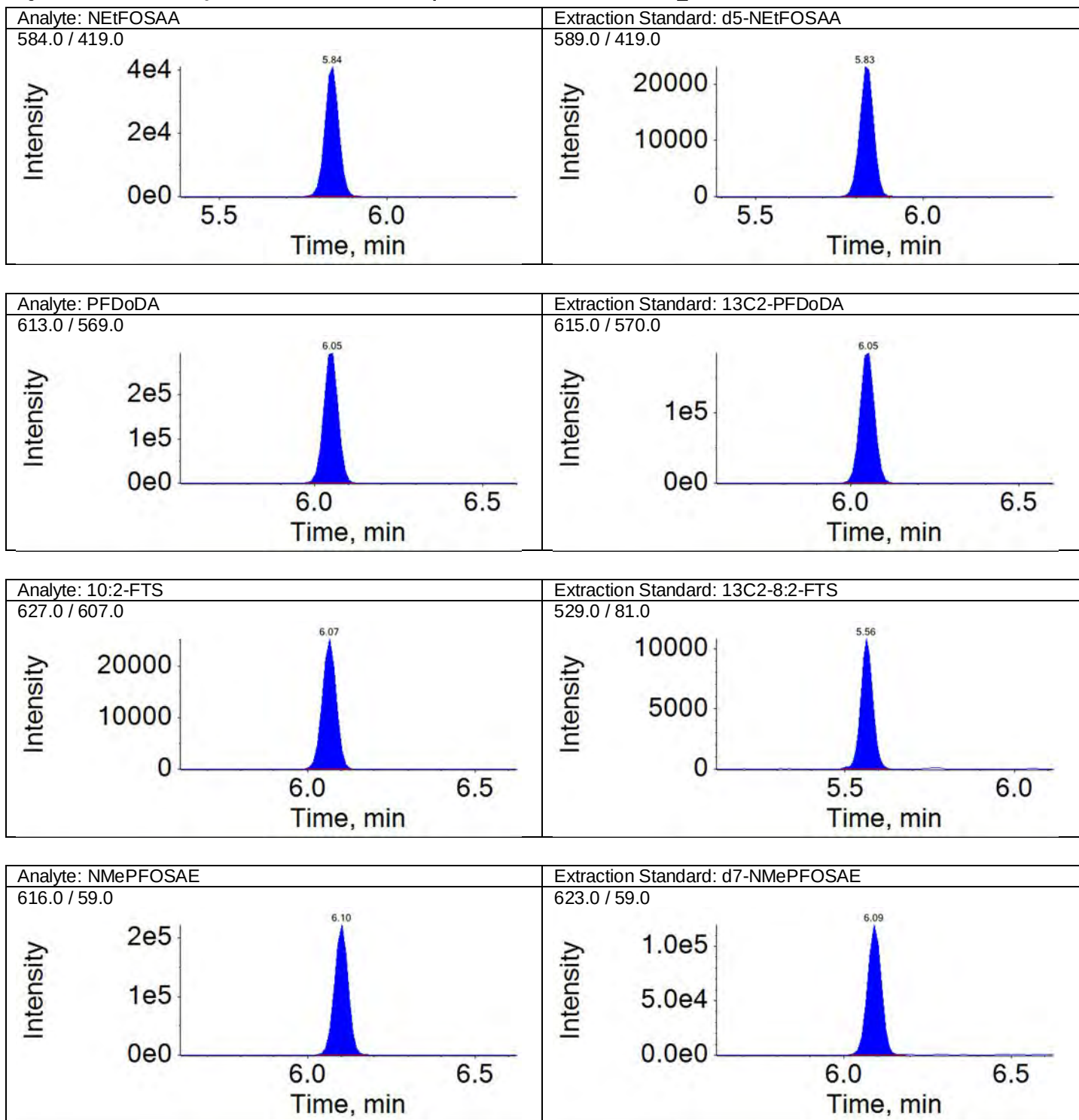
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



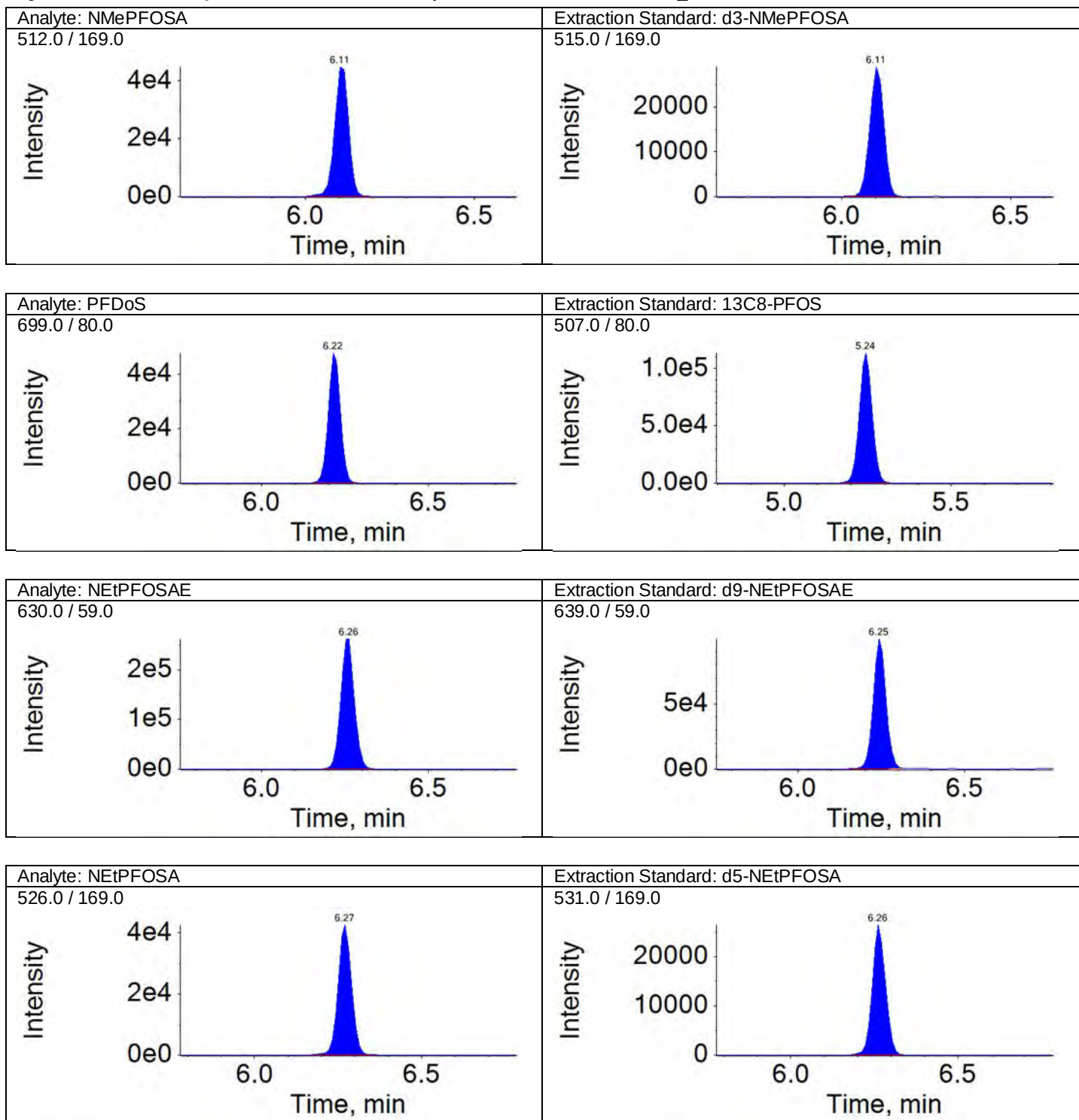
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



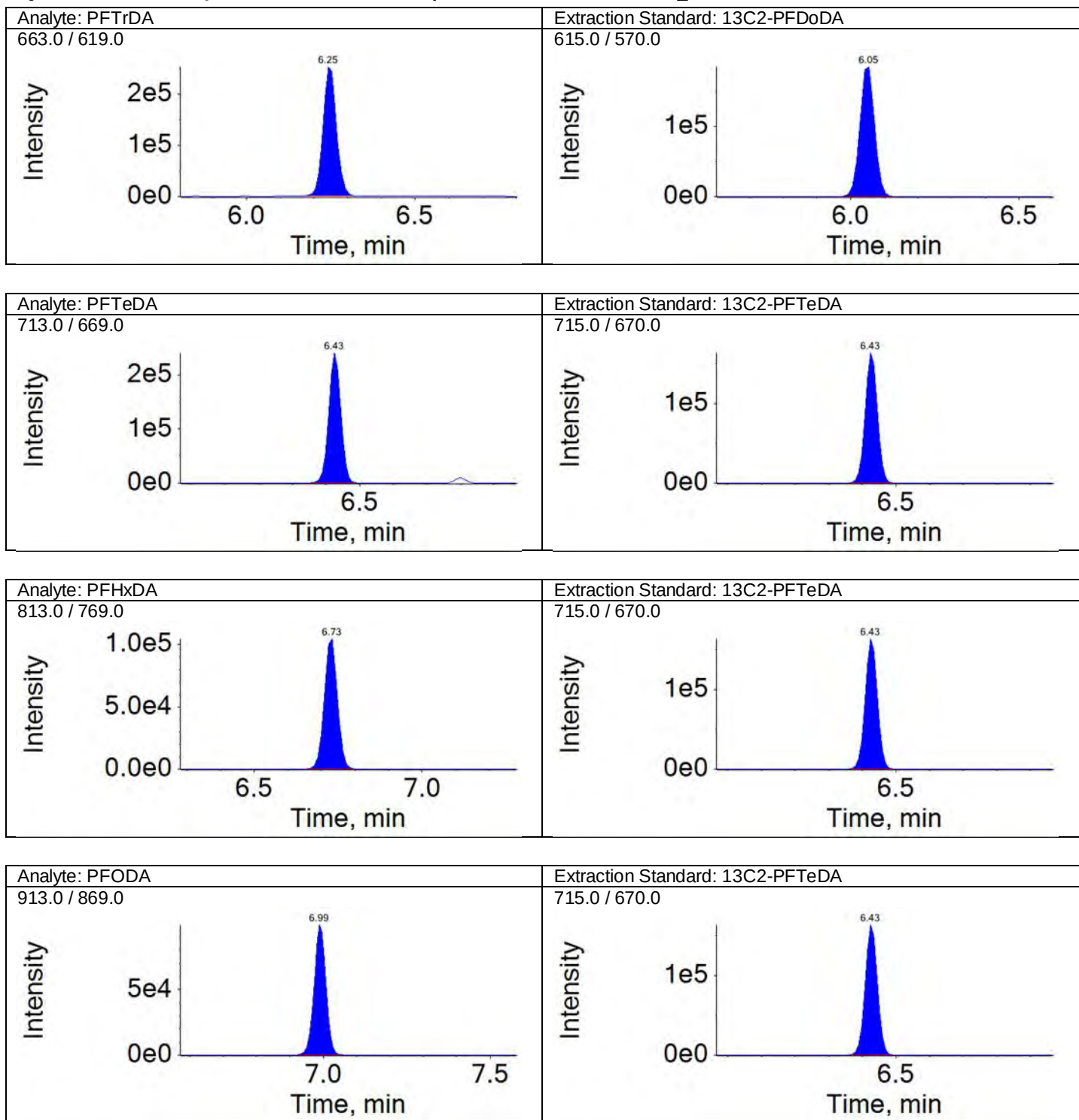
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



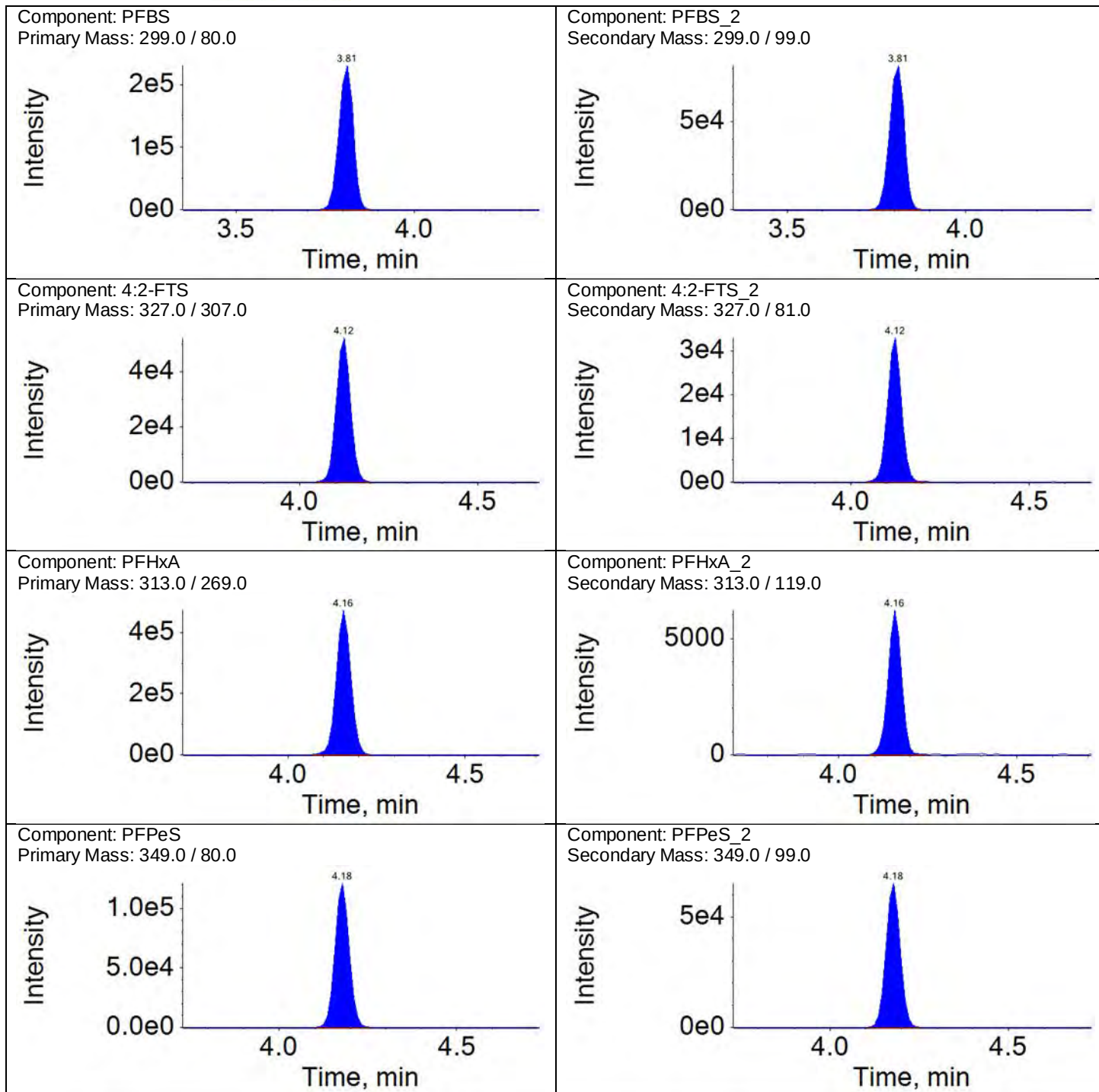
Ion Ratio Report

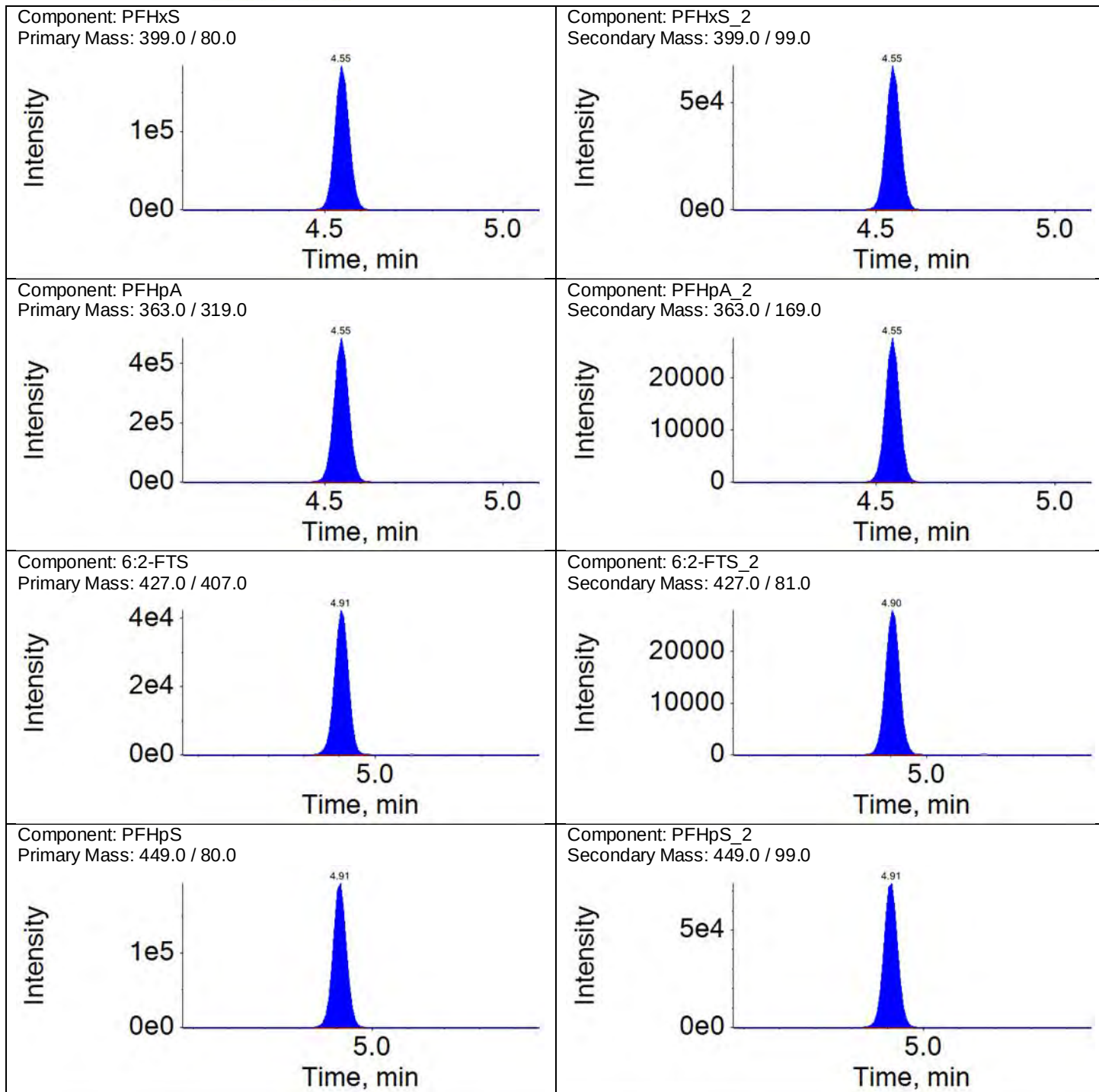
Sample Name: CCV6_CAL4

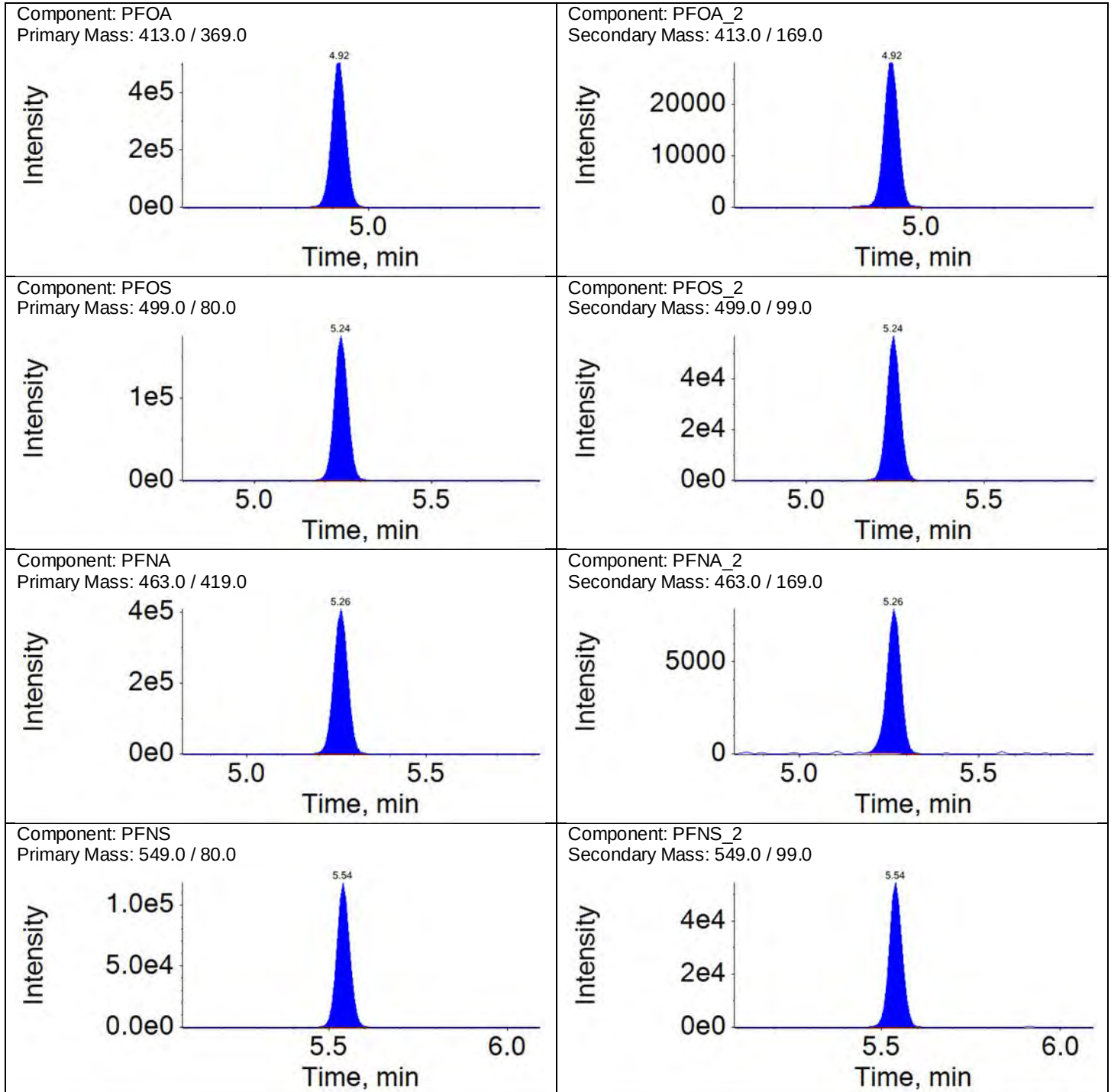
Instrument Name: LM27631

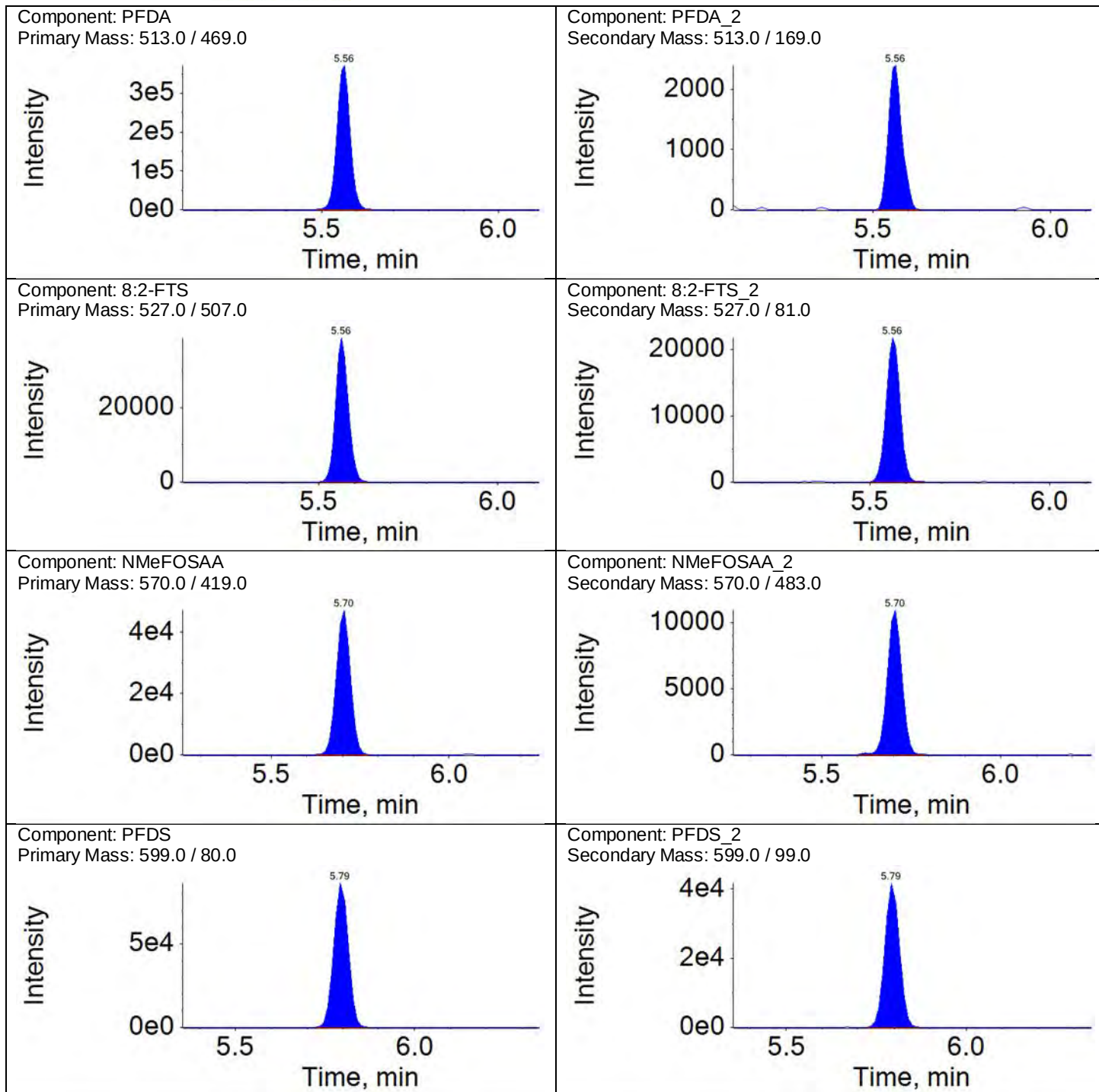
File Name: 18NOV08D-62.wiff

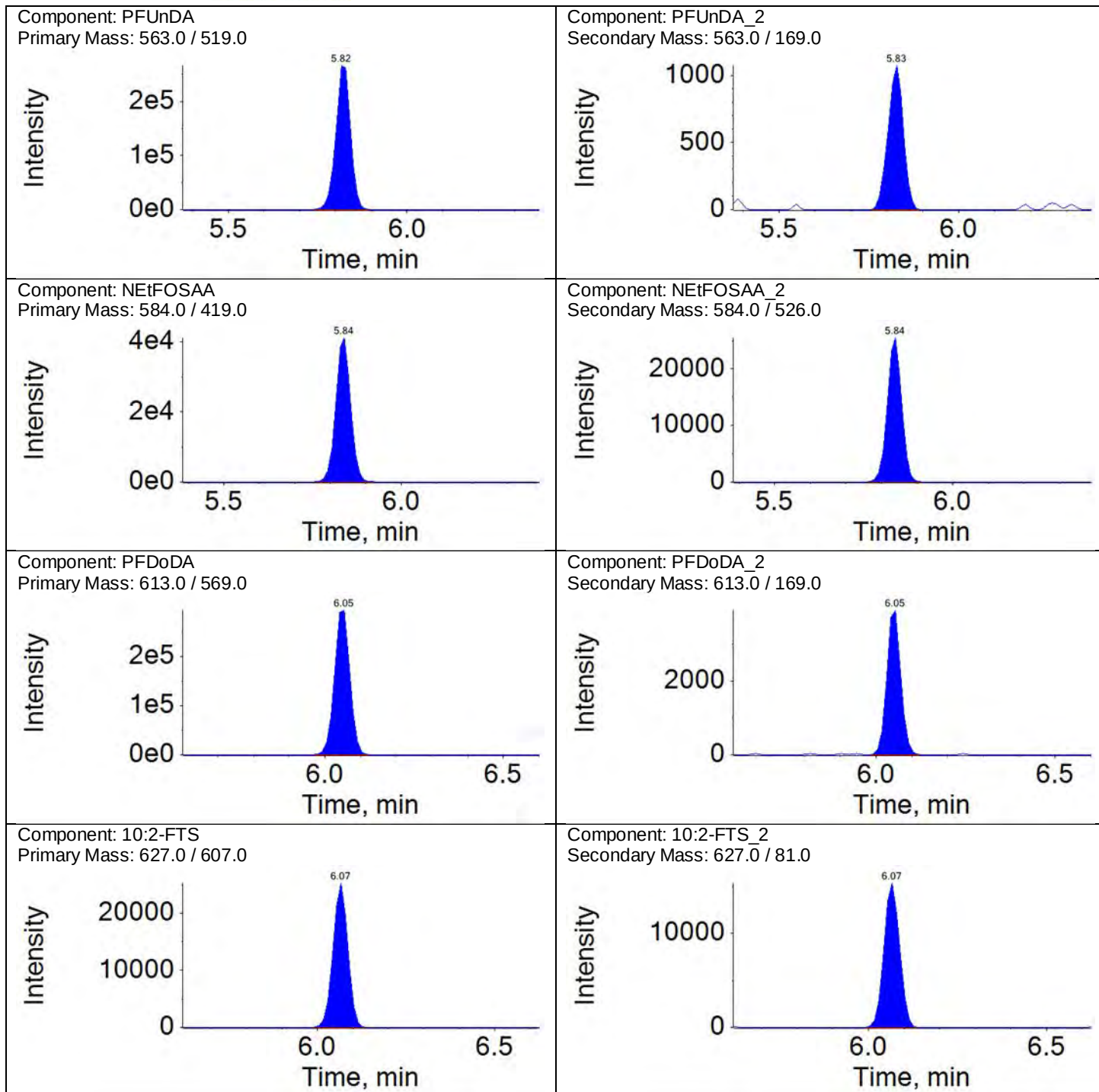
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	657287.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	235760.5	A	N/A	0.3587	0	50	
4:2-FTS	4.12	1.00	146243.7	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	89867.5	A	N/A	0.6145	-3	50	
PFHxA	4.16	1.00	1346936.2	A	N/A	1.0000			
PFHxA_2	4.16	1.00	16333.6	A	N/A	0.0121	6	50	
PFPeS	4.18	1.10	336126.3	A	N/A	1.0000			
PFPeS_2	4.18	1.10	180418.9	A	N/A	0.5368	0	50	
PFHxS	4.55	1.00	517560.2	A	N/A	1.0000			
PFHxS_2	4.55	1.00	187334.5	A	N/A	0.3620	1	50	
PFHpA	4.55	1.00	1397451.3	A	N/A	1.0000			
PFHpA_2	4.55	1.00	77052.1	A	N/A	0.0551	-4	50	
6:2-FTS	4.91	1.00	117232.5	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	78768.8	A	N/A	0.6719	0	50	
PFHpS	4.91	1.08	506255.7	A	N/A	1.0000			
PFHpS_2	4.91	1.08	201216.9	A	N/A	0.3975	1	50	
PFOA	4.92	1.00	1391831.6	A	N/A	1.0000			
PFOA_2	4.92	1.00	79996.8	A	N/A	0.0575	-9	50	
PFOS	5.24	1.00	463209.5	A	N/A	1.0000			
PFOS_2	5.24	1.00	149684.2	A	N/A	0.3231	-8	50	
PFNA	5.26	1.00	1122647.7	A	N/A	1.0000			
PFNA_2	5.26	1.00	21280.3	A	N/A	0.0190	-8	50	
PFNS	5.54	1.06	294830.9	A	N/A	1.0000			
PFNS_2	5.54	1.06	135895.0	A	N/A	0.4609	-6	50	
PFDA	5.56	1.00	960254.8	A	N/A	1.0000			
PFDA_2	5.56	1.00	6461.2	A	N/A	0.0067	19	50	
8:2-FTS	5.56	1.00	95318.5	A	N/A	1.0000			
8:2-FTS_2	5.56	1.00	58496.7	A	N/A	0.6137	-1	50	
NMeFOSAA	5.70	1.00	130282.1	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	31272.2	A	N/A	0.2400	9	50	
PFDS	5.79	1.10	246351.8	A	N/A	1.0000			
PFDS_2	5.79	1.10	118536.2	A	N/A	0.4812	4	50	
PFUnDA	5.82	1.00	759410.0	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	3198.3	A	N/A	0.0042	34	50	
NEtFOSAA	5.84	1.00	118906.4	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	71233.7	A	N/A	0.5991	-2	50	
PFDODA	6.05	1.00	888527.8	A	N/A	1.0000			
PFDODA_2	6.05	1.00	10620.8	A	N/A	0.0120	9	50	
10:2-FTS	6.07	1.09	72975.2	A	N/A	1.0000			
10:2-FTS_2	6.07	1.09	46721.9	A	N/A	0.6402	-10	50	
PFTTrDA	6.25	1.03	692553.1	A	N/A	1.0000			
PFTTrDA_2	6.25	1.03	6515.8	A	N/A	0.0094	-2	50	
PFTeDA	6.43	1.00	598497.1	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	4043.3	A	N/A	0.0068	22	50	
PFHxDA	6.73	1.05	283375.4	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	16881.1	A	N/A	0.0596	0	50	
PFODA	6.99	1.09	242797.3	A	N/A	1.0000			
PFODA_2	6.99	1.09	6415.0	A	N/A	0.0264	3	50	

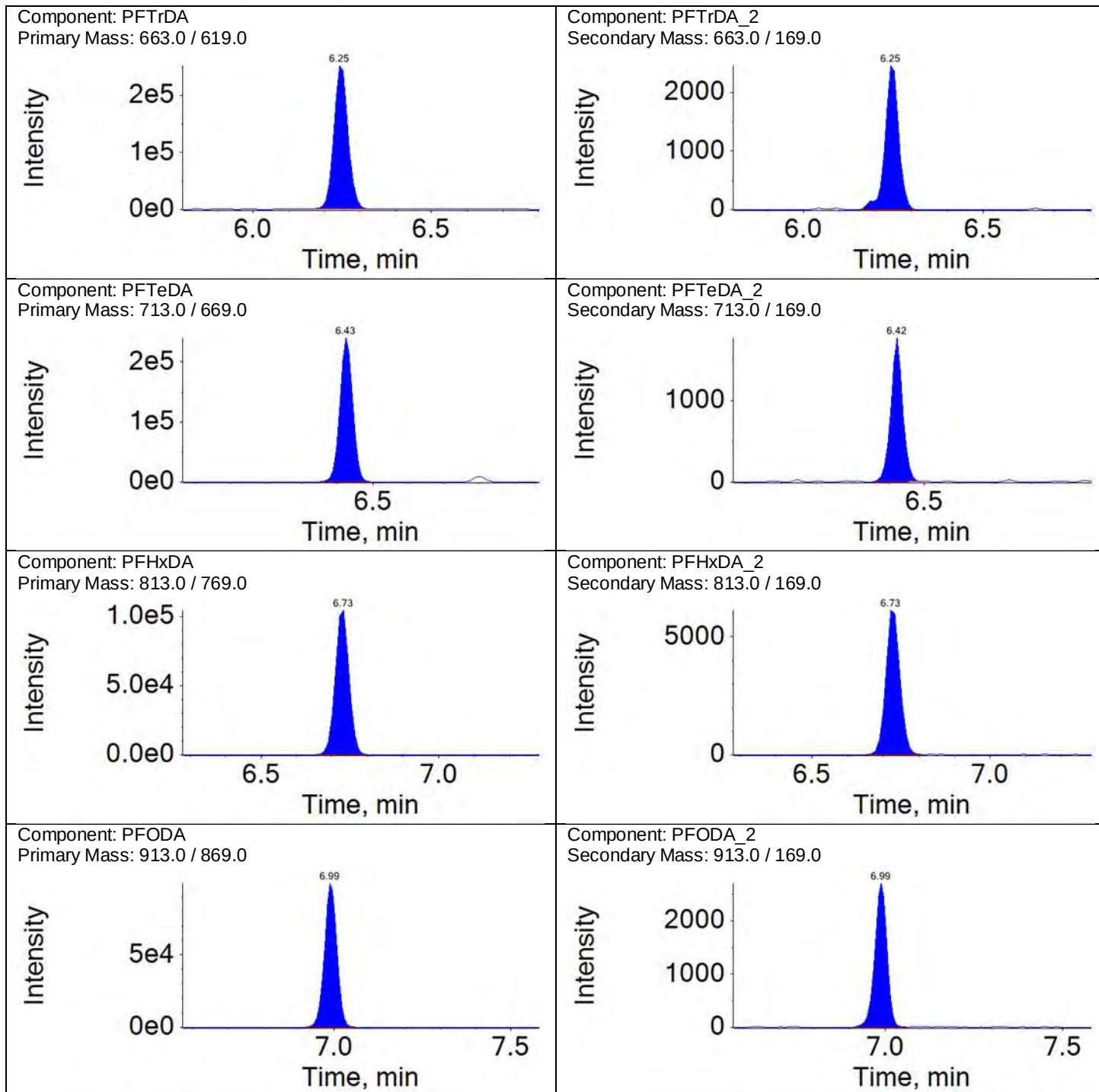








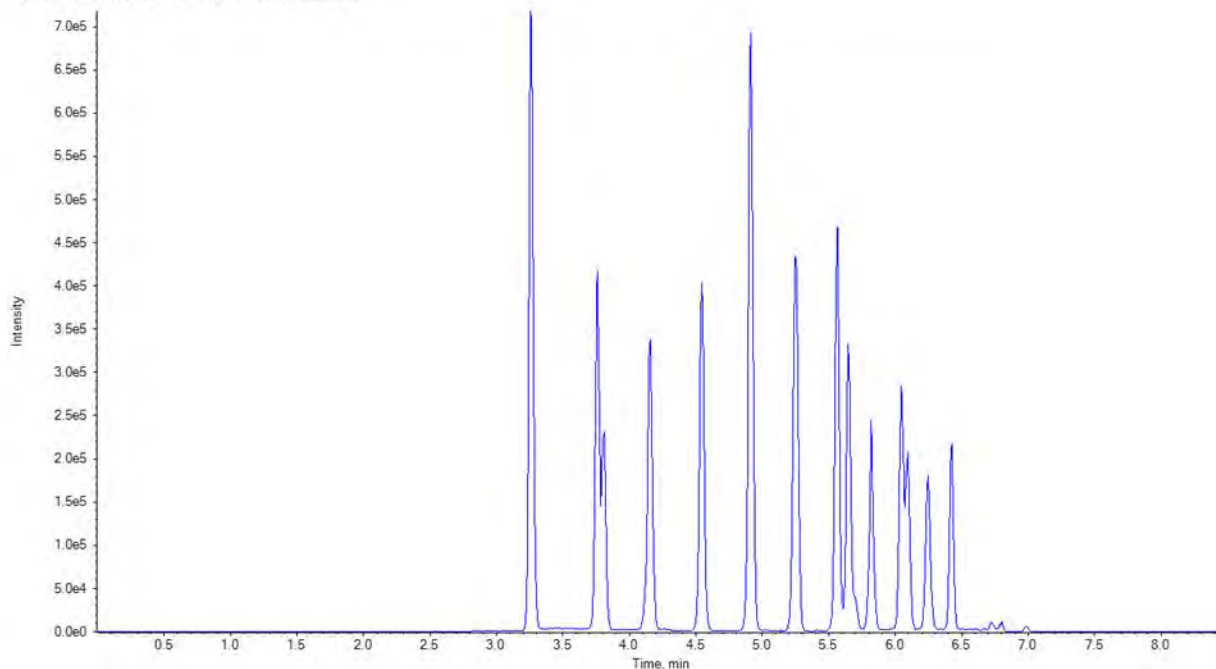




Instrument Sensitivity Check/
Continuing Calibration VerificationICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALMOD21833F	18NOV08D-75.wiff	2018-11-08T22:56:07

TIC from 18NOV08D-75.wiff (sample 1) - CCV7_ISC_CAL2



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	726487.9	728839.7	0	50	
13C2-PFOA	5.0	507332.3	491983.1	3	50	
13C4-PFOS	4.8	284533.0	255568.1	11	50	
13C2-PFDA	5.0	302232.2	315407.5	-4	50	

APPROVED

By JPT at 10:55 am, 11/9/18

REVIEWED

By HMK at 2:58 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verification

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

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALMOD21833F	18NOV08D-75.wiff	2018-11-08T22:56:07

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	74057.5	10	13C4-PFBA	791764.8	5.0	0.094	3.26	1.000	0.500	0.547	9	30	
PFPeA	74030.9	12	13C5-PFPeA	820050.2	5.0	0.090	3.76	1.000	0.500	0.537	7	30	
PFBS	39832.5	11	13C3-PFBS	440110.2	4.7	0.091	3.81	1.000	0.440	0.456	4	30	
4:2-FTS	10606.0	12	13C2-4:2-FTS	52818.0	4.7	0.201	4.12	1.000	0.467	0.540	16	30	
PFHxA	83198.1	11	13C5-PFHxA	677901.1	5.0	0.123	4.16	1.000	0.500	0.526	5	30	
PFPeS	21062.1	11	13C3-PFBS	440110.2	4.7	0.048	4.18	1.100	0.469	0.472	1	30	
PFHxS	31930.8	11	13C3-PFHxS	332263.0	4.7	0.096	4.55	1.000	0.473	0.487	3	30	
PFHpA	90113.5	12	13C4-PFHpA	506540.8	5.0	0.178	4.54	1.000	0.500	0.598	20	30	
6:2-FTS	7571.0	12	13C2-6:2-FTS	37265.3	4.8	0.203	4.90	1.000	0.474	0.507	7	30	
PFHpS	28658.3	11	13C3-PFHxS	332263.0	4.7	0.086	4.91	1.080	0.476	0.451	-5	30	
PFOA	89452.0	11	13C8-PFOA	942604.8	5.0	0.095	4.91	1.000	0.500	0.534	7	30	
PFOS	27768.1	11	13C8-PFOS	289413.6	4.8	0.096	5.24	1.000	0.478	0.498	4	30	
PFNA	72707.1	11	13C9-PFNA	505277.1	5.0	0.144	5.26	1.000	0.500	0.538	8	30	
PFNS	17926.4	10	13C8-PFOS	289413.6	4.8	0.062	5.54	1.060	0.480	0.491	2	30	
PFDA	61927.2	11	13C6-PFDA	630364.9	5.0	0.098	5.56	1.000	0.500	0.540	8	30	
8:2-FTS	6846.3	10	13C2-8:2-FTS	28148.0	4.8	0.243	5.57	1.000	0.479	0.548	14	30	
PFOSA	68586.5	11	13C8-PFOSA	690901.4	5.0	0.099	5.65	1.000	0.500	0.537	7	30	
NMeFOSAA	6968.7	12	d3-NMeFOSAA	72881.0	5.0	0.096	5.71	1.000	0.500	0.492	-2	30	
PFDS	15279.2	11	13C8-PFOS	289413.6	4.8	0.053	5.79	1.110	0.482	0.504	5	30	
PFUnDA	48246.0	12	13C7-PFUnDA	326462.6	5.0	0.148	5.82	1.000	0.500	0.424	-15	30	
NEtFOSAA	7757.6	13	d5-NEtFOSAA	70713.2	5.0	0.110	5.84	1.000	0.500	0.471	-6	30	
PFDODA	54056.4	12	13C2-PFDODA	568370.6	5.0	0.095	6.05	1.000	0.500	0.515	3	30	
10:2-FTS	3682.3	13	13C2-8:2-FTS	28148.0	4.8	0.131	6.06	1.090	0.482	0.407	-15	30	
NMePFOSAE	40670.4	12	d7-NMePFOSAE	343224.1	5.0	0.118	6.10	1.000	0.500	0.531	6	30	
NMePFOSA	9113.3	11	d3-NMePFOSA	80017.6	5.0	0.114	6.11	1.000	0.500	0.637	27	30	
PFDoS	6684.0	10	13C8-PFOS	289413.6	4.8	0.023	6.22	1.190	0.484	0.446	-8	30	
NEtPFOSAE	47180.7	11	d9-NEtPFOSAE	270452.0	5.0	0.174	6.25	1.000	0.500	0.559	12	30	
NEtPFOSA	7229.9	11	d5-NEtPFOSA	67424.7	5.0	0.107	6.27	1.000	0.500	0.472	-6	30	
PFTTrDA	49062.7	12	13C2-PFDODA	568370.6	5.0	0.086	6.24	1.030	0.500	0.544	9	30	
PFTeDA	35545.8	11	13C2-PFTeDA	410346.0	5.0	0.087	6.42	1.000	0.500	0.509	2	30	
PFHxDA	17512.1	11	13C2-PFTeDA	410346.0	5.0	0.043	6.72	1.050	0.500	0.530	6	30	
PFOA	14402.6	10	13C2-PFTeDA	410346.0	5.0	0.035	6.99	1.090	0.500	0.503	1	30	

**Instrument Sensitivity Check/
Continuing Calibration Verification**

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 HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV7 ISC CAL2	Data File:	18NOV08D-75.wiff
Sample ID:	CALMOD21833F	Acquis Date:	2018-11-08T22:56:07
Sample Type:	Quality Control	Instrument:	LM27631
Vial Position:	4	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	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	726487.9	728839.7	0	50	
13C2-PFOA	5.0	507332.3	491983.1	3	50	
13C4-PFOS	4.8	284533.0	255568.1	11	50	
13C2-PFDA	5.0	302232.2	315407.5	-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	791764.8	13C3-PFBA	726487.9	1.090	5.000	5.044	101	70-130	
E13C5-PFPeA	820050.2	13C3-PFBA	726487.9	1.129	5.000	4.917	98	70-130	
E13C3-PFBS	440110.2	13C3-PFBA	726487.9	0.606	4.650	4.446	96	70-130	
E13C2-4:2-FTS	52818.0	13C2-PFOA	507332.3	0.104	4.670	4.698	101	70-130	
E13C5-PFHxA	677901.1	13C2-PFOA	507332.3	1.336	5.000	4.915	98	70-130	
E13C3-PFHxS	332263.0	13C2-PFOA	507332.3	0.655	4.730	4.702	99	70-130	
E13C4-PFHpA	506540.8	13C2-PFOA	507332.3	0.998	5.000	4.542	91	70-130	
E13C2-6:2-FTS	37265.3	13C2-PFOA	507332.3	0.073	4.750	4.898	103	70-130	
E13C8-PFOA	942604.8	13C2-PFOA	507332.3	1.858	5.000	5.181	104	70-130	
E13C8-PFOS	289413.6	13C4-PFOS	284533.0	1.017	4.780	4.498	94	70-130	
E13C9-PFNA	505277.1	13C4-PFOS	284533.0	1.776	5.000	4.851	97	70-130	
E13C6-PFDA	630364.9	13C2-PFDA	302232.2	2.086	5.000	5.245	105	70-130	
E13C2-8:2-FTS	28148.0	13C2-PFDA	302232.2	0.093	4.790	4.928	103	70-130	
E13C8-PFOSA	690901.4	13C2-PFDA	302232.2	2.286	5.000	4.988	100	70-130	
Ed3-NMeFOSAA	72881.0	13C2-PFDA	302232.2	0.241	5.000	4.484	90	70-130	
E13C7-PFUnDA	326462.6	13C2-PFDA	302232.2	1.080	5.000	6.231	125	70-130	
Ed5-NEtFOSAA	70713.2	13C2-PFDA	302232.2	0.234	5.000	5.415	108	70-130	
E13C2-PFDoDA	568370.6	13C2-PFDA	302232.2	1.881	5.000	5.070	101	70-130	
Ed7-NMePFOSAE	343224.1	13C2-PFDA	302232.2	1.136	5.000	5.281	106	70-130	
Ed3-NMePFOSA	80017.6	13C2-PFDA	302232.2	0.265	5.000	4.847	97	70-130	
Ed9-NEtPFOSAE	270452.0	13C2-PFDA	302232.2	0.895	5.000	5.110	102	70-130	
Ed5-NEtPFOSA	67424.7	13C2-PFDA	302232.2	0.223	5.000	5.166	103	70-130	
E13C2-PFTeDA	410346.0	13C2-PFDA	302232.2	1.358	5.000	4.888	98	70-130	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV7_ISC_CAL2

Instrument Name: LM27631

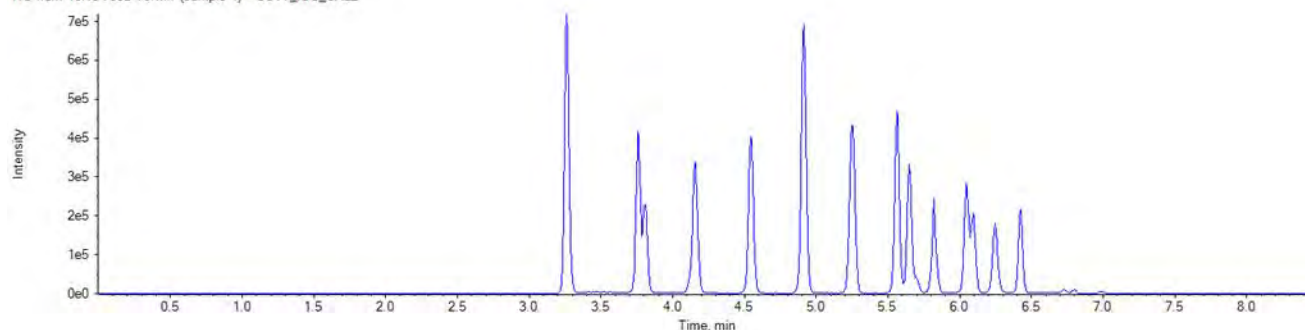
File Name: 18NOV08D-75.wiff

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	74057.5		A	13C4-PFBA	3.26	791764.8	0.094	0.547
PFPeA	3.76	1.000	74030.9		A	13C5-PFPeA	3.76	820050.2	0.090	0.537
PFBS	3.81	1.000	39832.5		A	13C3-PFBS	3.81	440110.2	0.091	0.456
4:2-FTS	4.12	1.000	10606.0		A	13C2-4:2-FTS	4.12	52818.0	0.201	0.540
PFHxA	4.16	1.000	83198.1		A	13C5-PFHxA	4.16	677901.1	0.123	0.526
PFPeS	4.18	1.100	21062.1		A	13C3-PFBS	3.81	440110.2	0.048	0.472
PFHxS	4.55	1.000	31930.8		A	13C3-PFHxS	4.55	332263.0	0.096	0.487
PFHpA	4.54	1.000	90113.5		A	13C4-PFHpA	4.54	506540.8	0.178	0.598
6:2-FTS	4.90	1.000	7571.0		A	13C2-6:2-FTS	4.90	37265.3	0.203	0.507
PFHpS	4.91	1.080	28658.3		A	13C3-PFHxS	4.55	332263.0	0.086	0.451
PFOA	4.91	1.000	89452.0		A	13C8-PFOA	4.91	942604.8	0.095	0.534
PFOS	5.24	1.000	27768.1		A	13C8-PFOS	5.24	289413.6	0.096	0.498
PFNA	5.26	1.000	72707.1		A	13C9-PFNA	5.26	505277.1	0.144	0.538
PFNS	5.54	1.060	17926.4		A	13C8-PFOS	5.24	289413.6	0.062	0.491
PFDA	5.56	1.000	61927.2		A	13C6-PFDA	5.56	630364.9	0.098	0.540
8:2-FTS	5.57	1.000	6846.3		A	13C2-8:2-FTS	5.57	28148.0	0.243	0.548
PFOSA	5.65	1.000	68586.5		A	13C8-PFOSA	5.65	690901.4	0.099	0.537
NMeFOSAA	5.71	1.000	6968.7		A	d3-NMeFOSAA	5.70	72881.0	0.096	0.492
PFDS	5.79	1.110	15279.2		A	13C8-PFOS	5.24	289413.6	0.053	0.504
PfUnDA	5.82	1.000	48246.0		A	13C7-PfUnDA	5.82	326462.6	0.148	0.424
NEtFOSAA	5.84	1.000	7757.6		M	d5-NEtFOSAA	5.83	70713.2	0.110	0.471
PFDODA	6.05	1.000	54056.4		A	13C2-PFDODA	6.05	568370.6	0.095	0.515
10:2-FTS	6.06	1.090	3682.3		A	13C2-8:2-FTS	5.57	28148.0	0.131	0.407
NMePFOSAE	6.10	1.000	40670.4		A	d7-NMePFOSAE	6.09	343224.1	0.118	0.531
NMePFOSA	6.11	1.000	9113.3		A	d3-NMePFOSA	6.10	80017.6	0.114	0.637
PFDoS	6.22	1.190	6684.0		A	13C8-PFOS	5.24	289413.6	0.023	0.446
NEtPFOSAE	6.25	1.000	47180.7		A	d9-NEtPFOSAE	6.24	270452.0	0.174	0.559
NEtPFOSA	6.27	1.000	7229.9		M	d5-NEtPFOSA	6.26	67424.7	0.107	0.472
PFTrDA	6.24	1.030	49062.7		A	13C2-PFDODA	6.05	568370.6	0.086	0.544
PFTeDA	6.42	1.000	35545.8		A	13C2-PFTeDA	6.42	410346.0	0.087	0.509
PFHxDA	6.72	1.050	17512.1		A	13C2-PFTeDA	6.42	410346.0	0.043	0.530
PFODA	6.99	1.090	14402.6		A	13C2-PFTeDA	6.42	410346.0	0.035	0.503

Total Ion Chromatogram

TIC from 18NOV08D-75.wiff (sample 1) - CCV7_ISC_CAL2



APPROVED

By JPT at 10:55 am, 11/9/18

BSI05 Page 762 of 1595

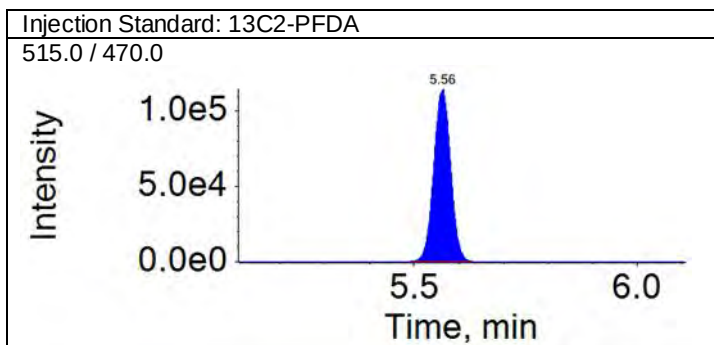
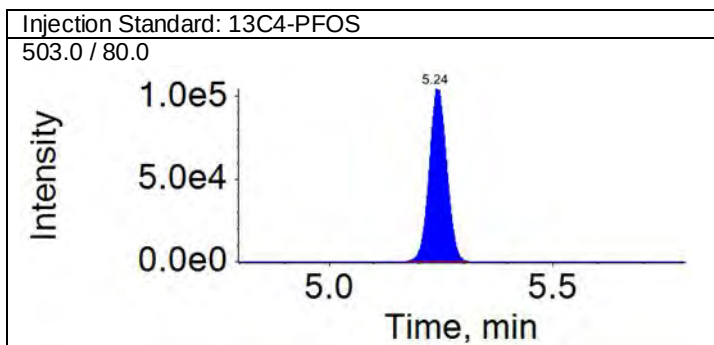
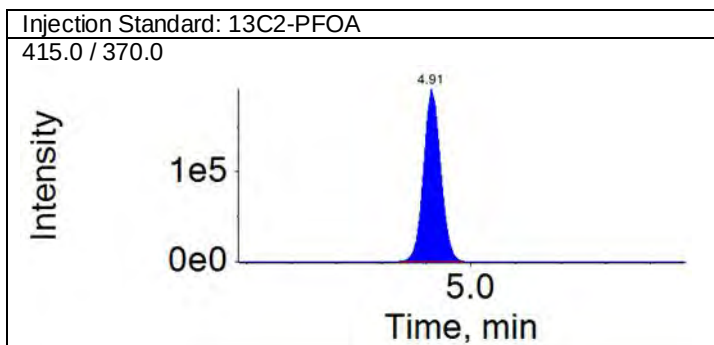
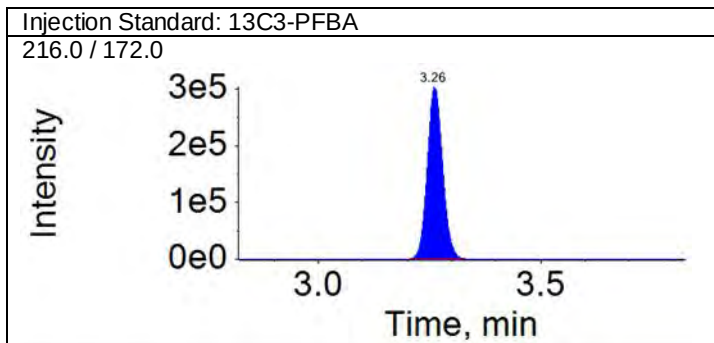
REVIEWED

By HMK at 2:58 pm, 11/11/18

Page 2 of 17

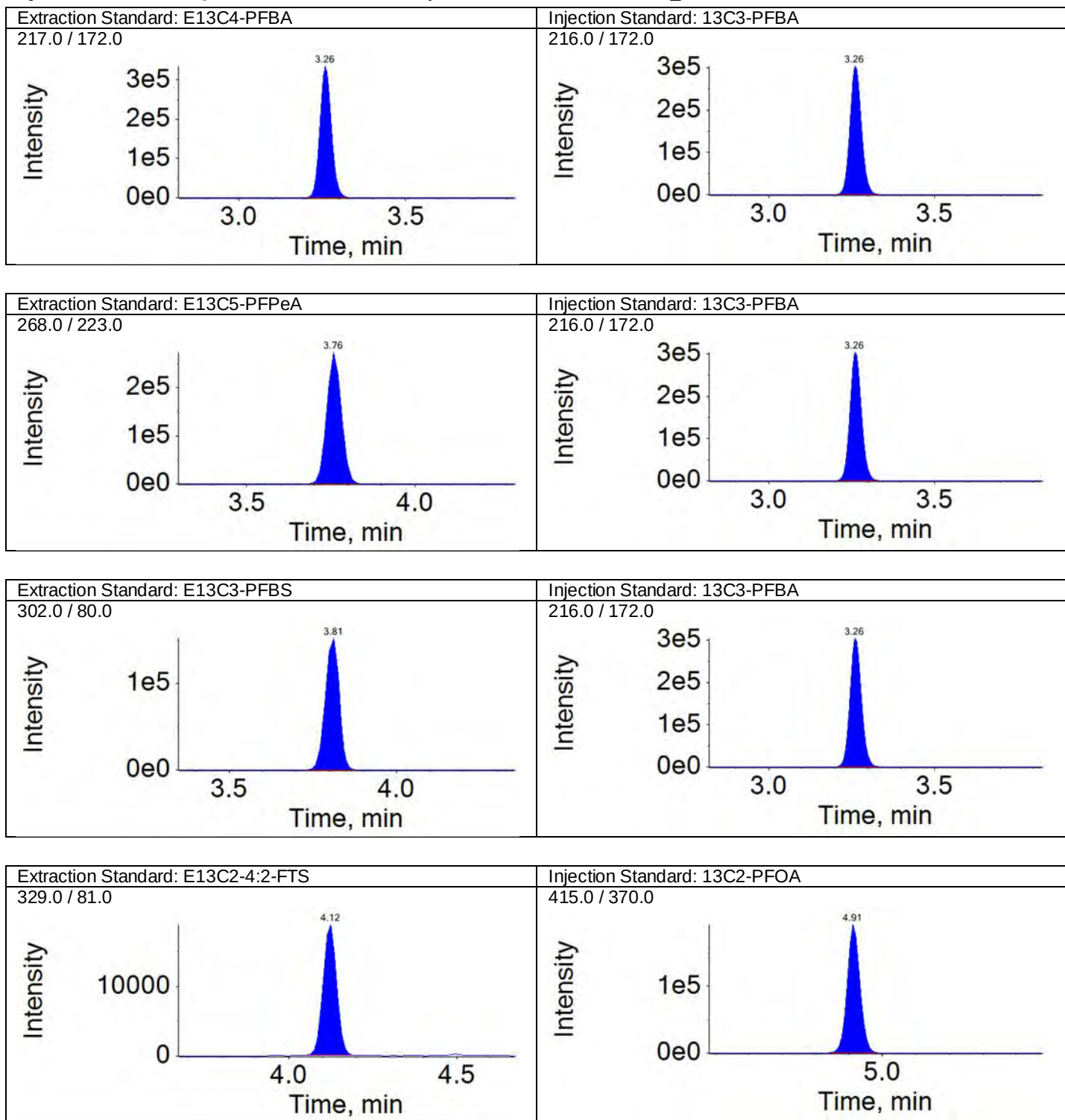
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



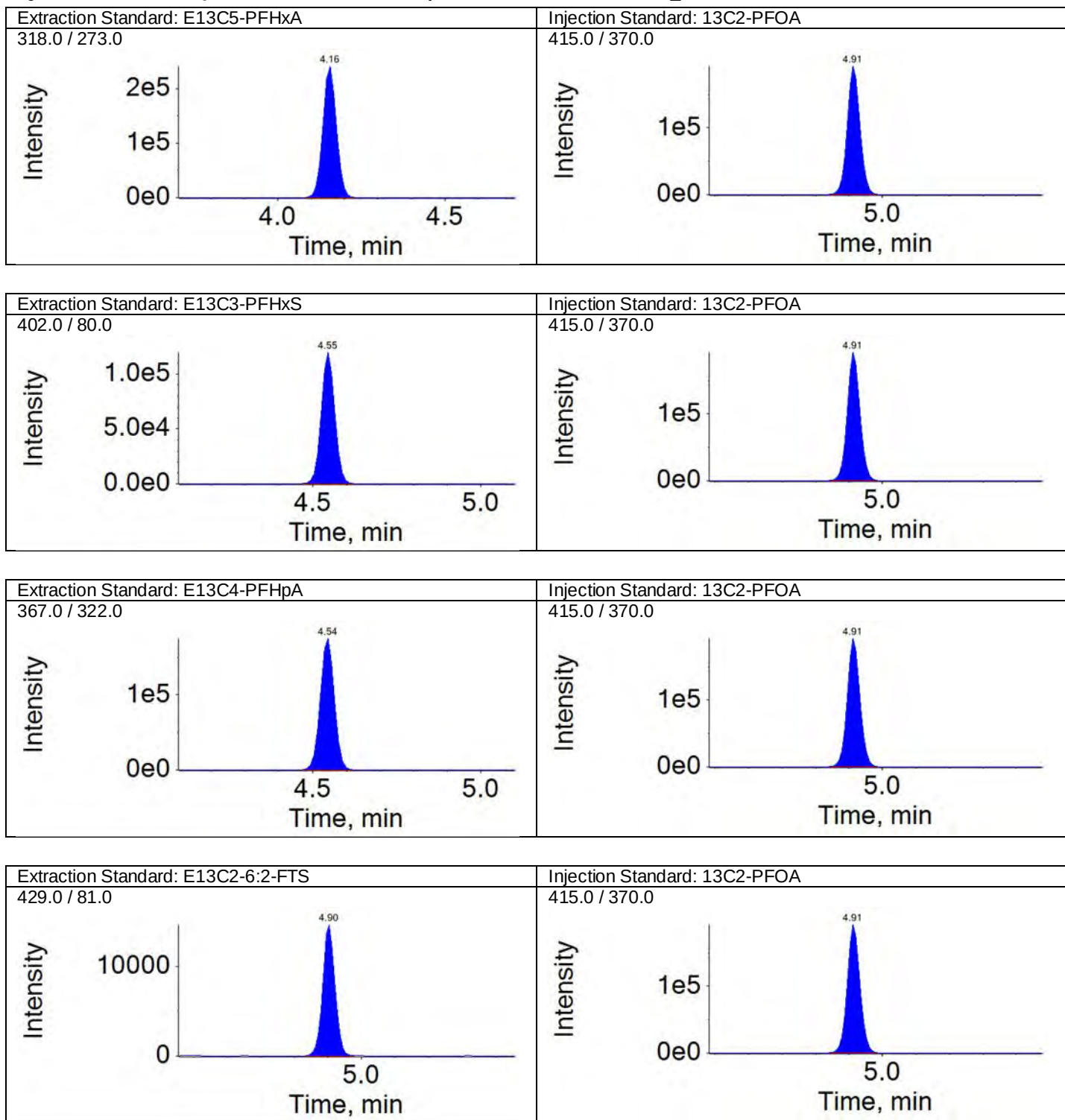
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



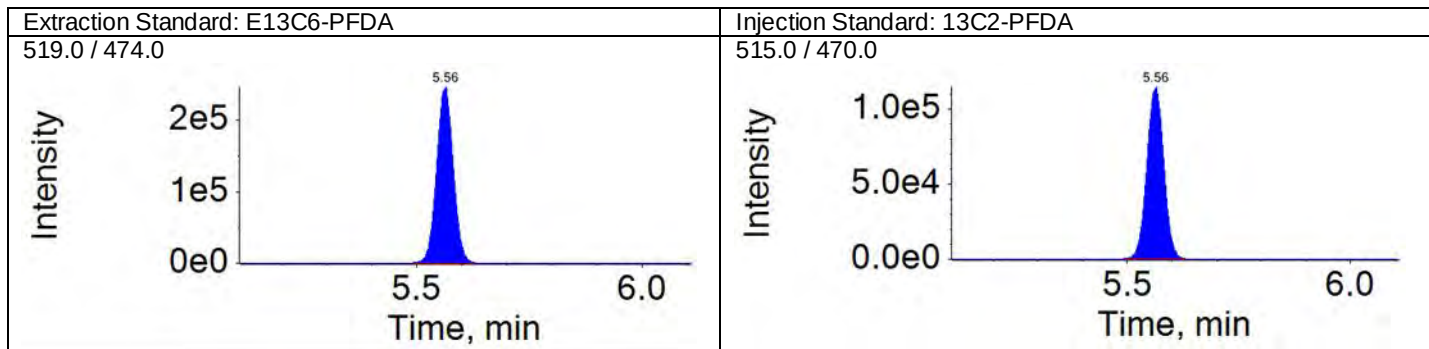
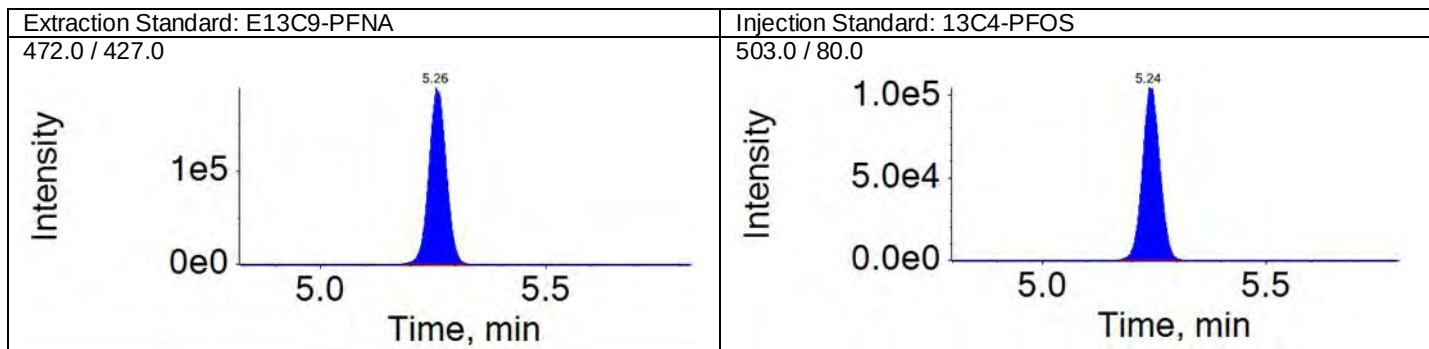
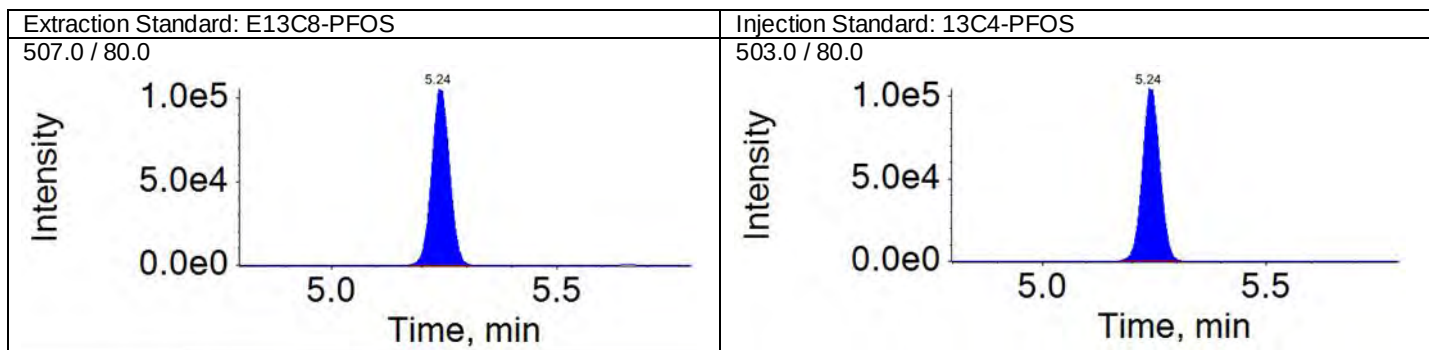
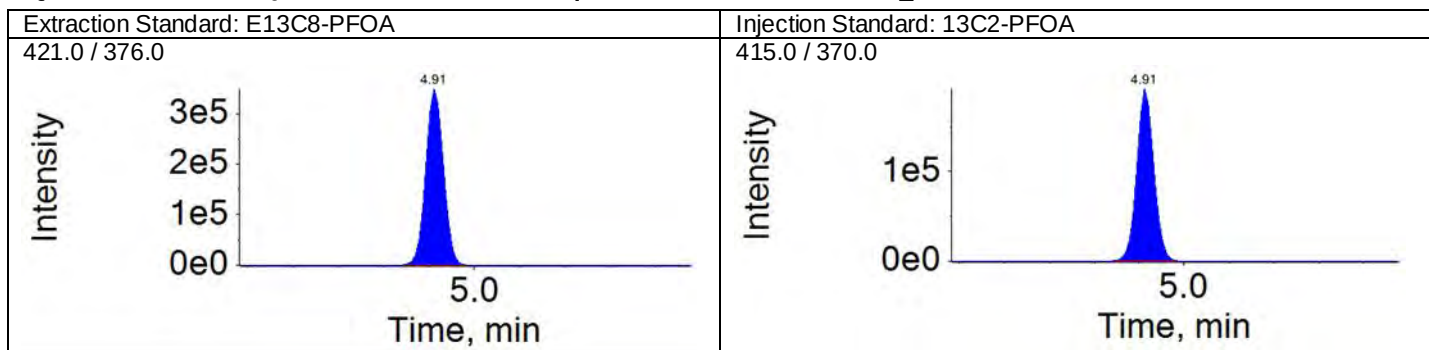
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



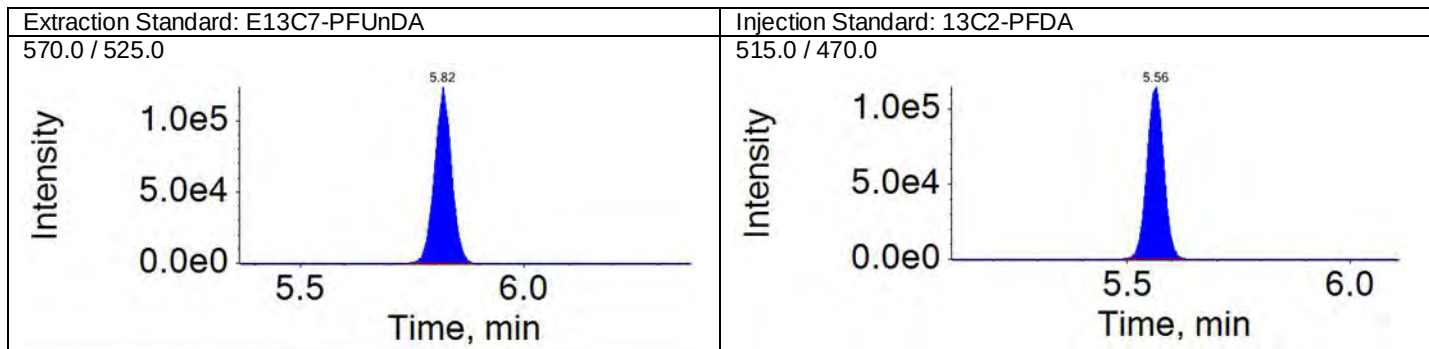
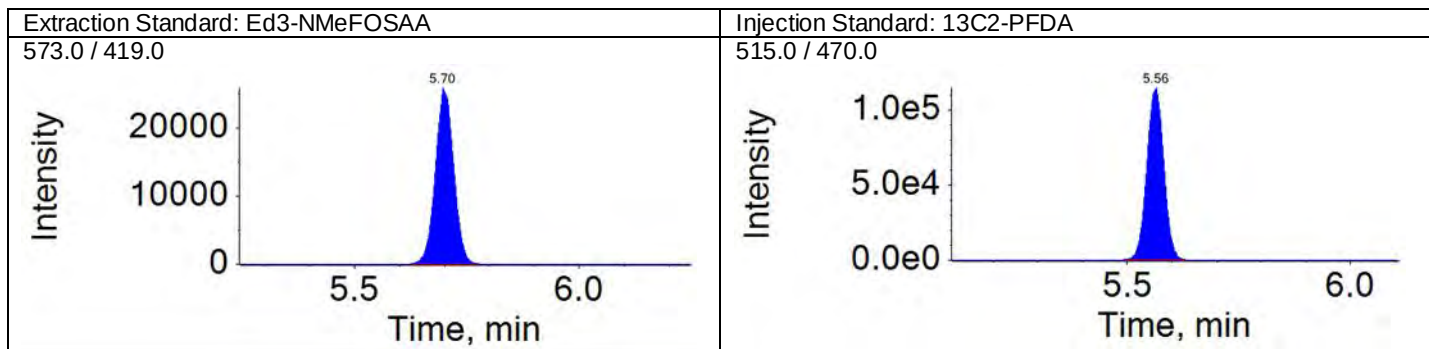
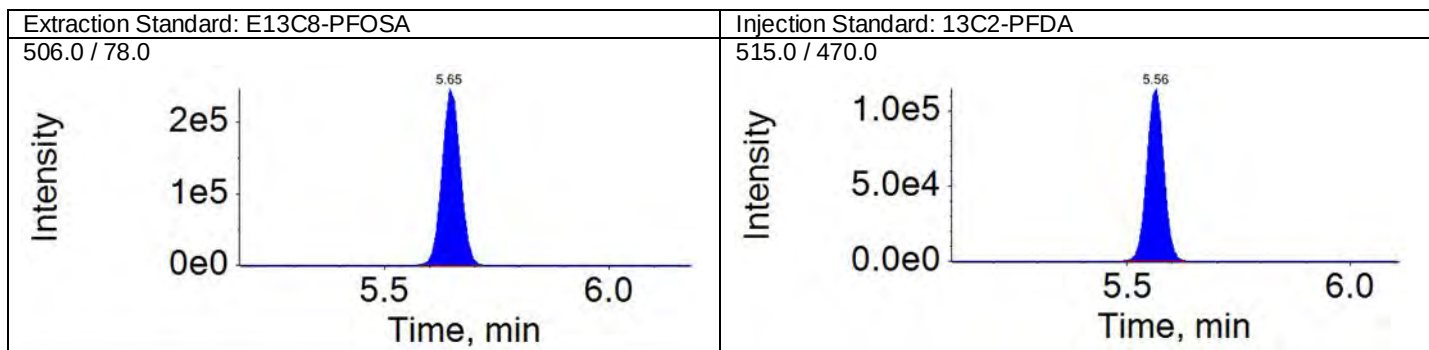
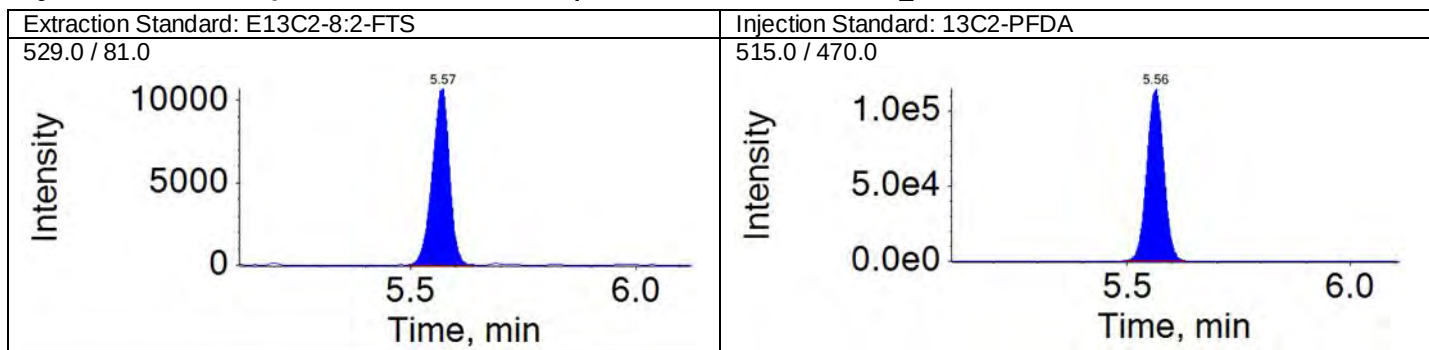
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



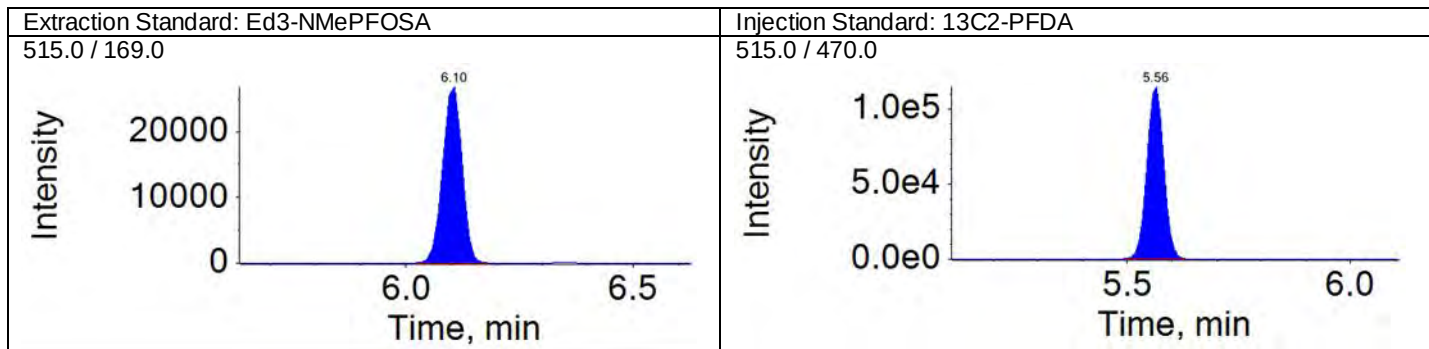
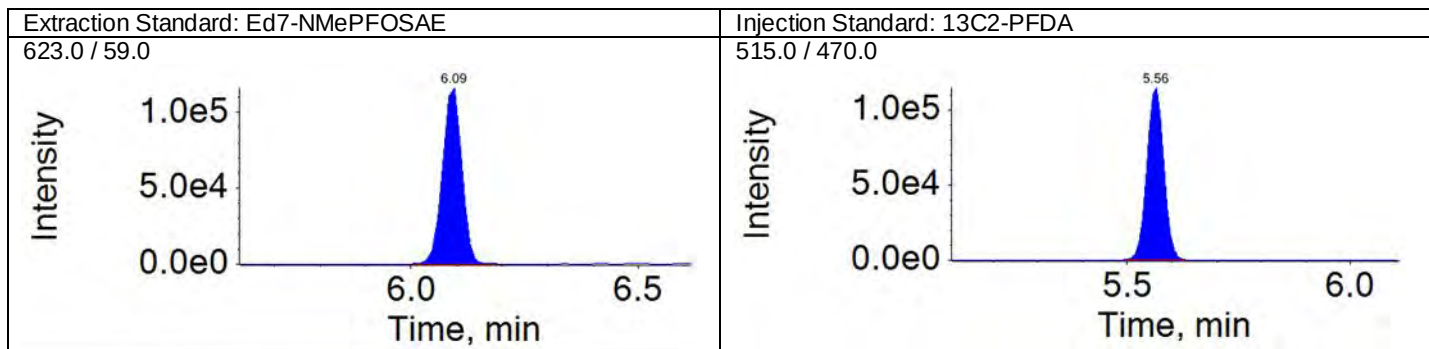
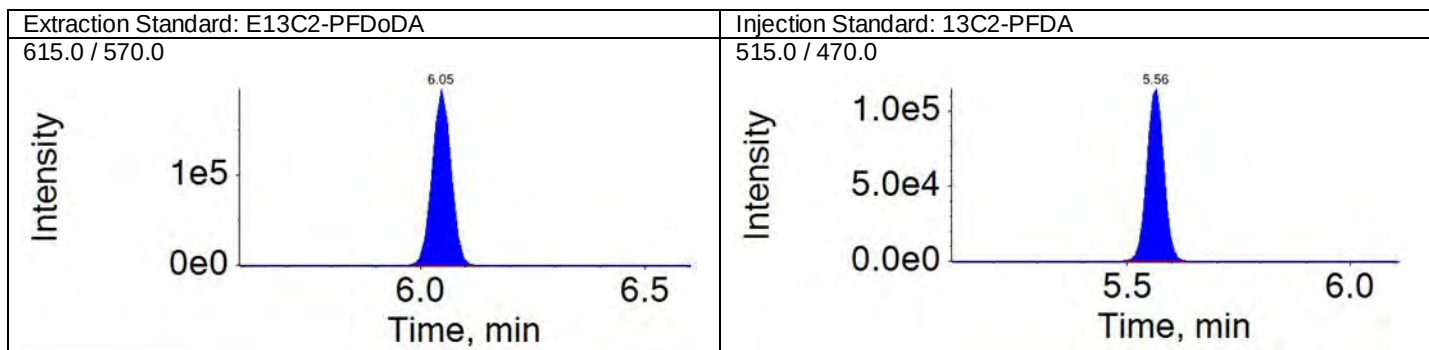
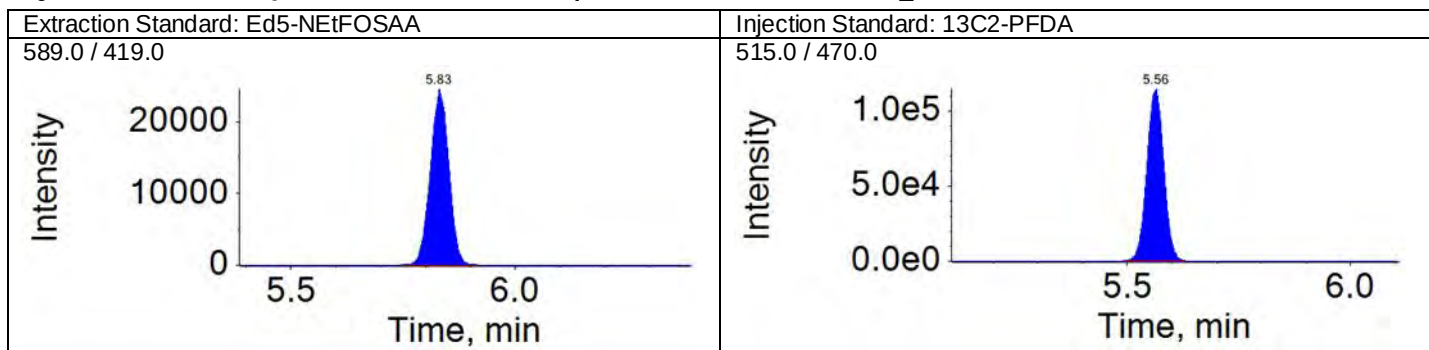
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



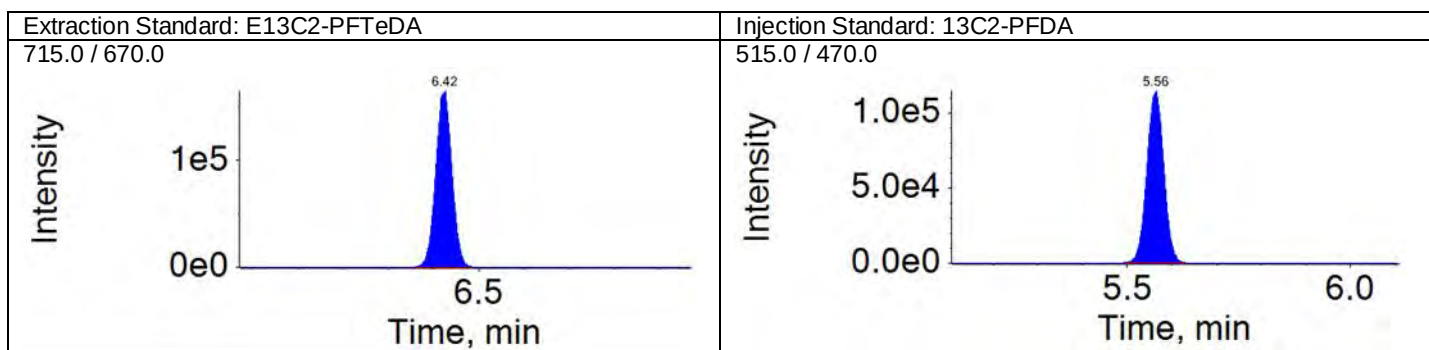
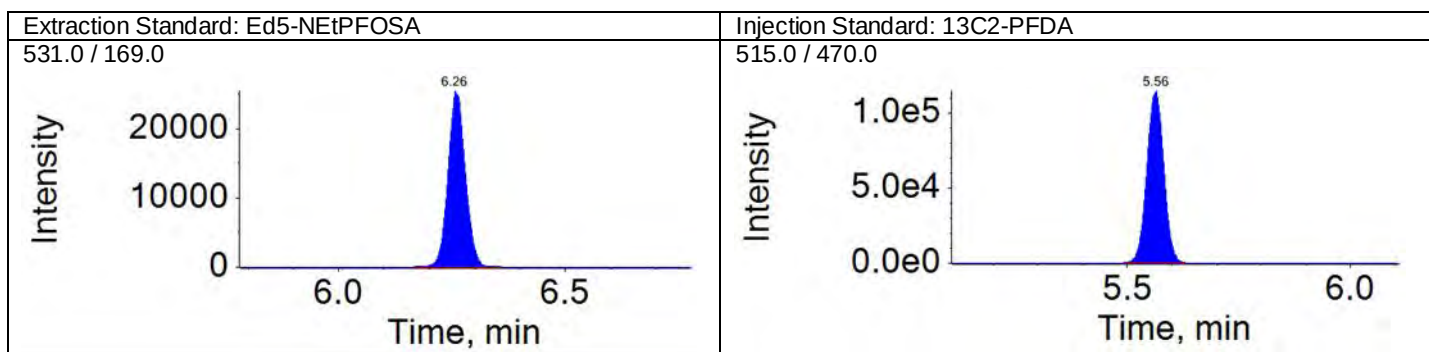
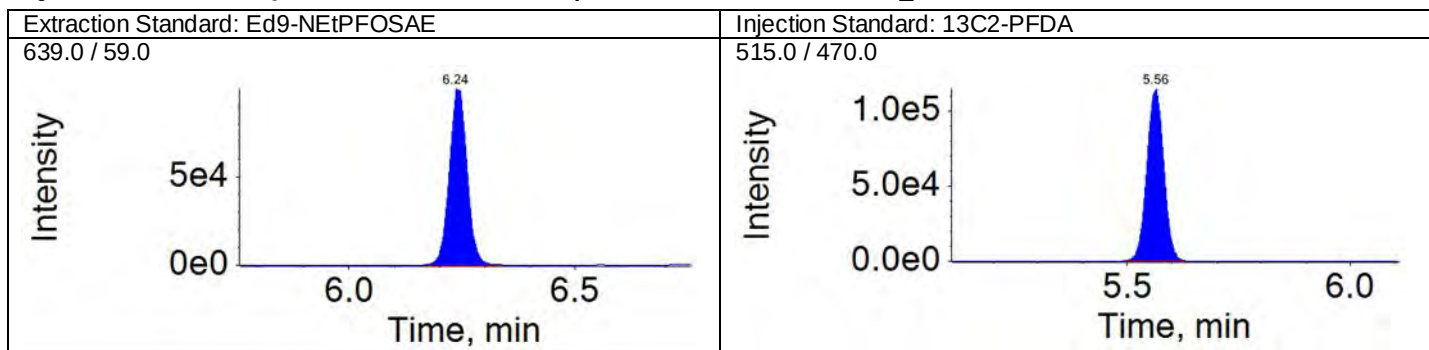
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



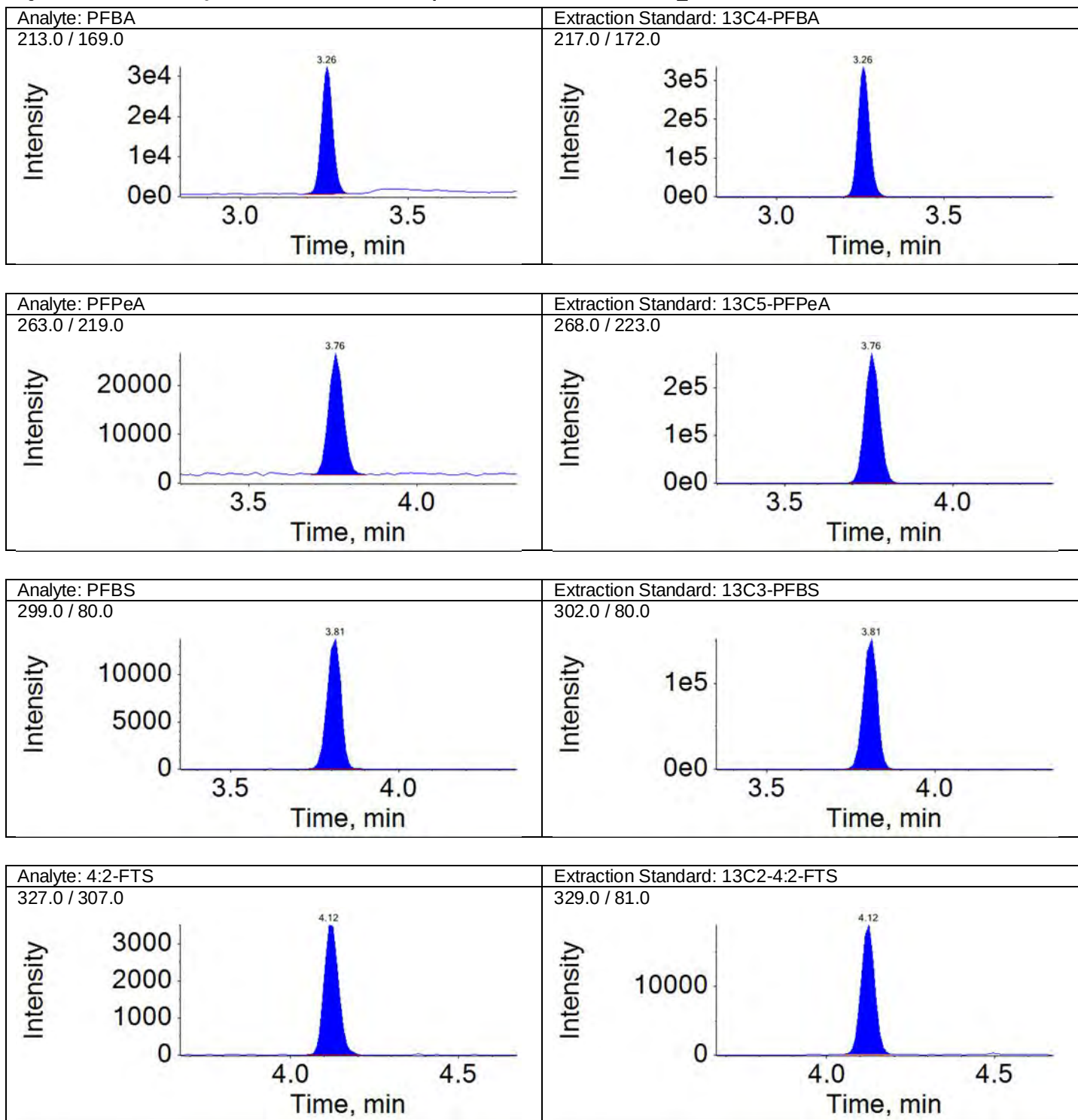
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



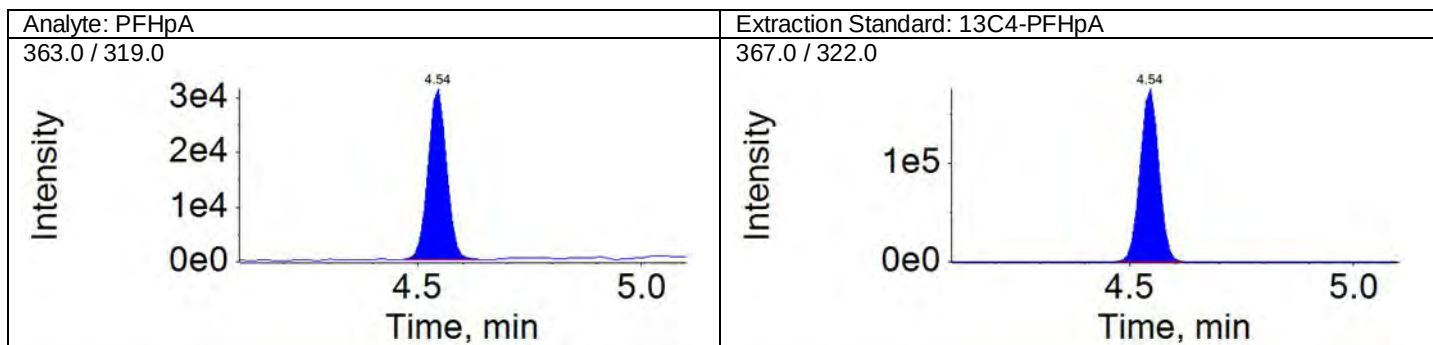
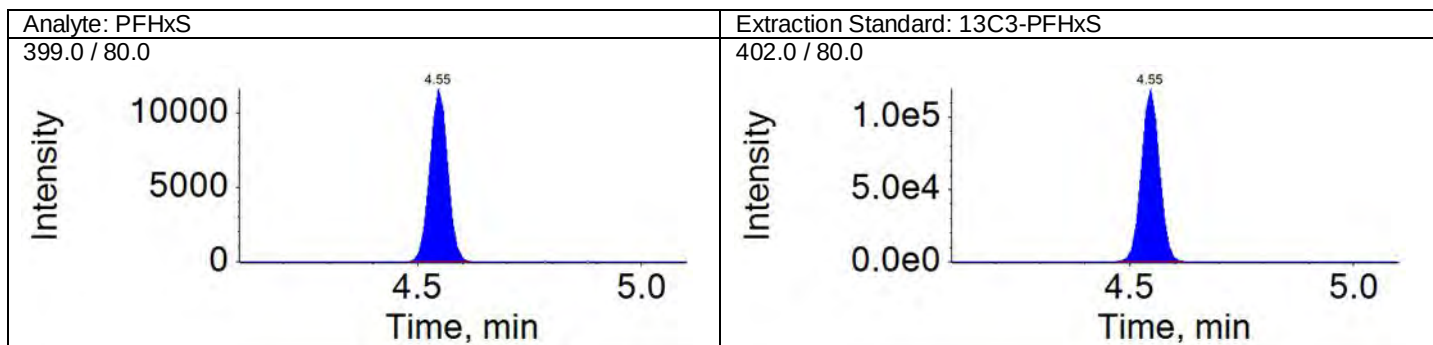
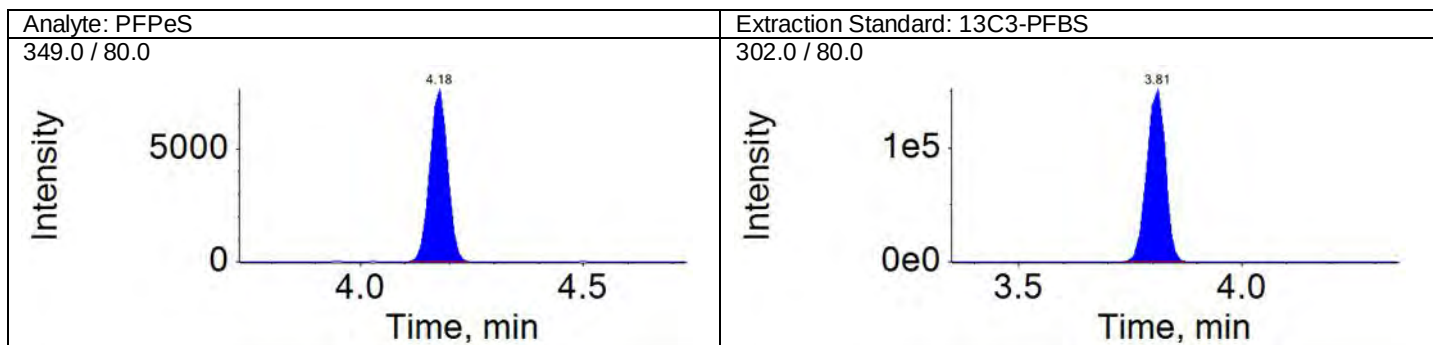
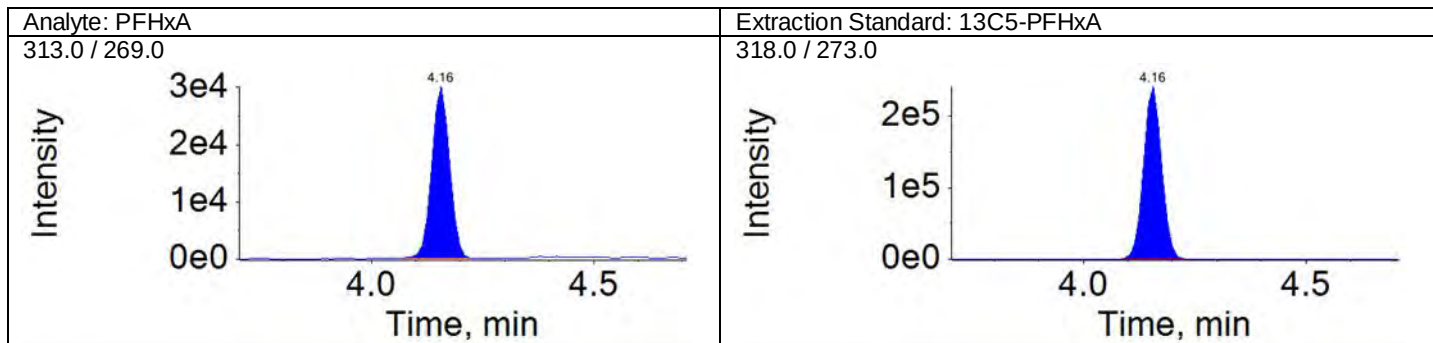
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



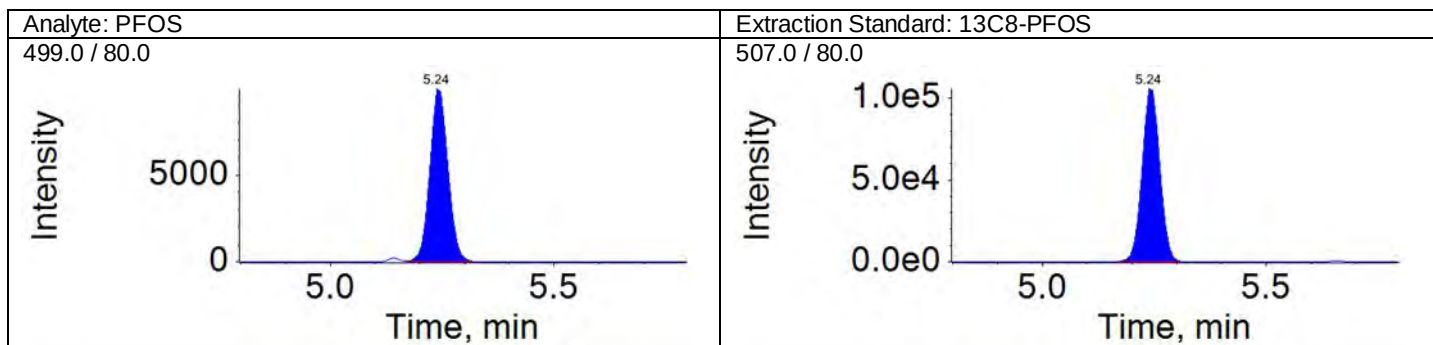
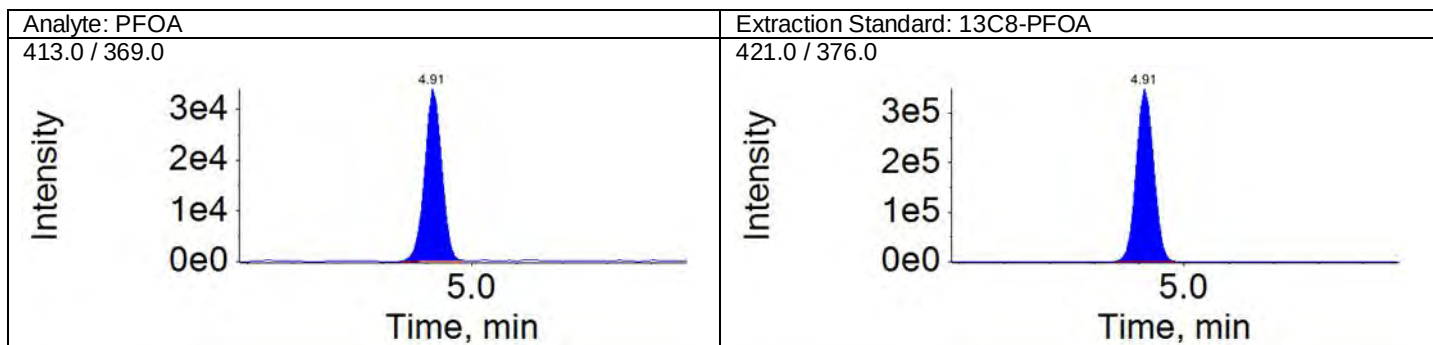
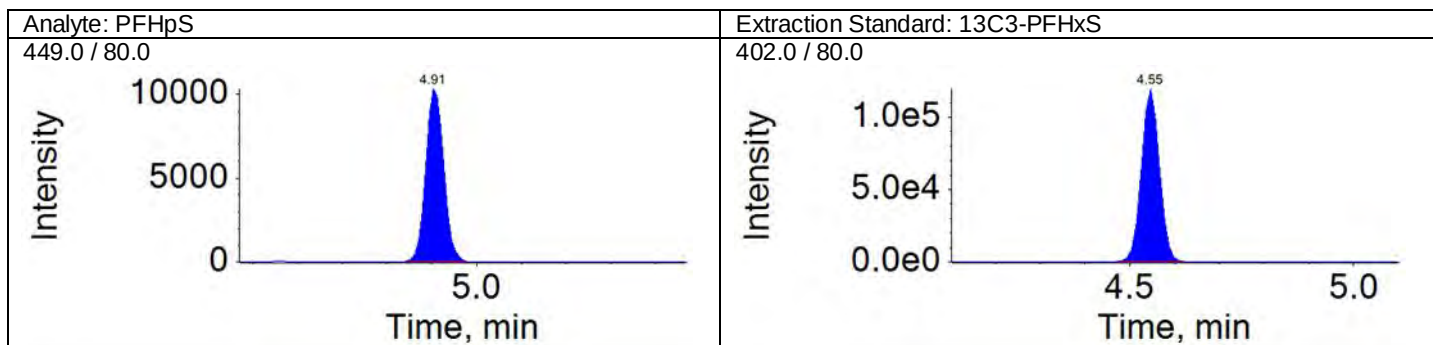
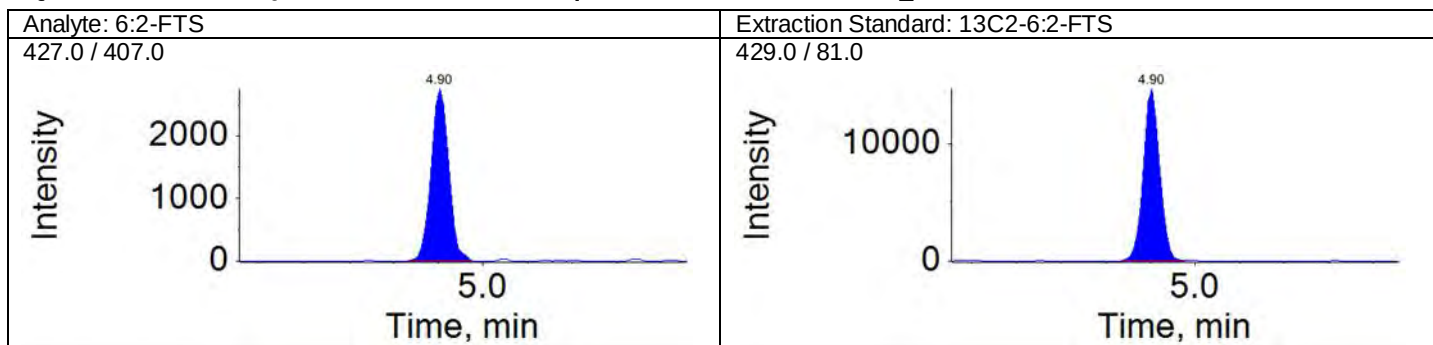
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



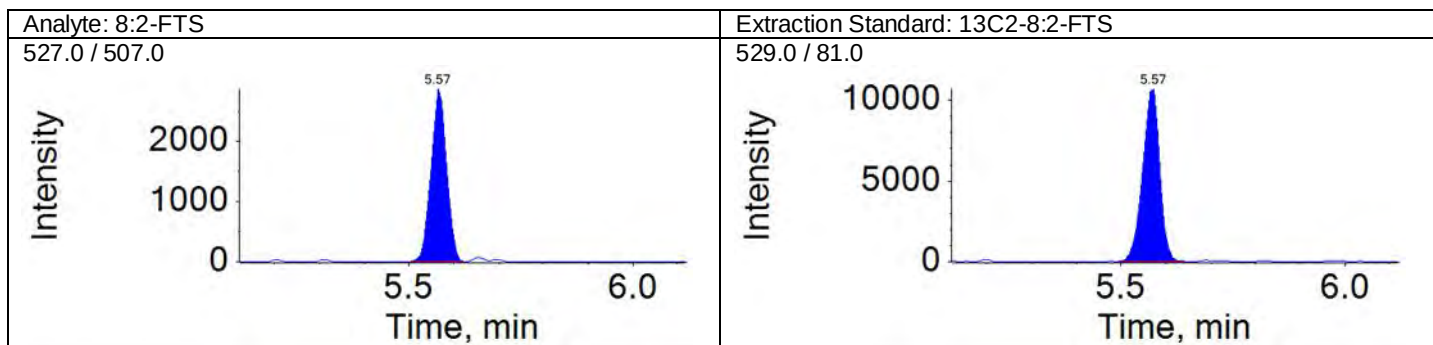
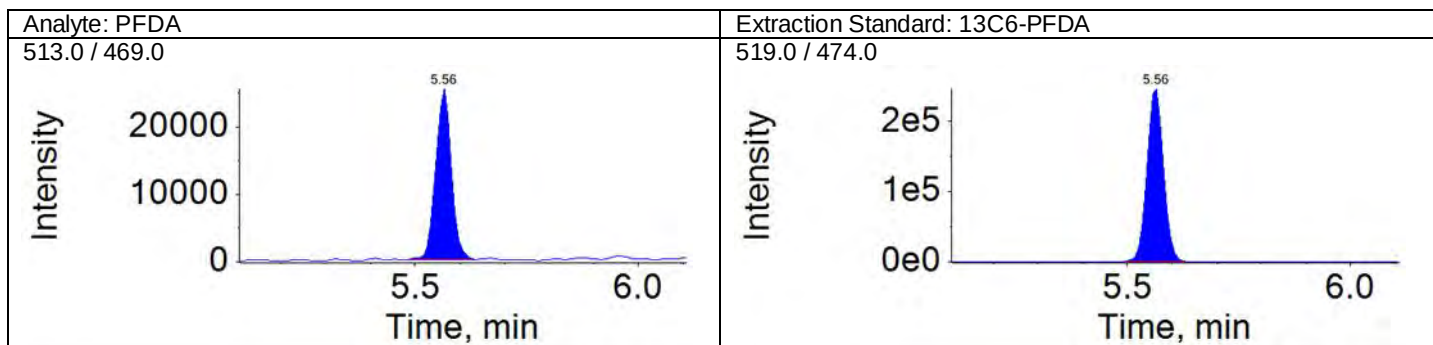
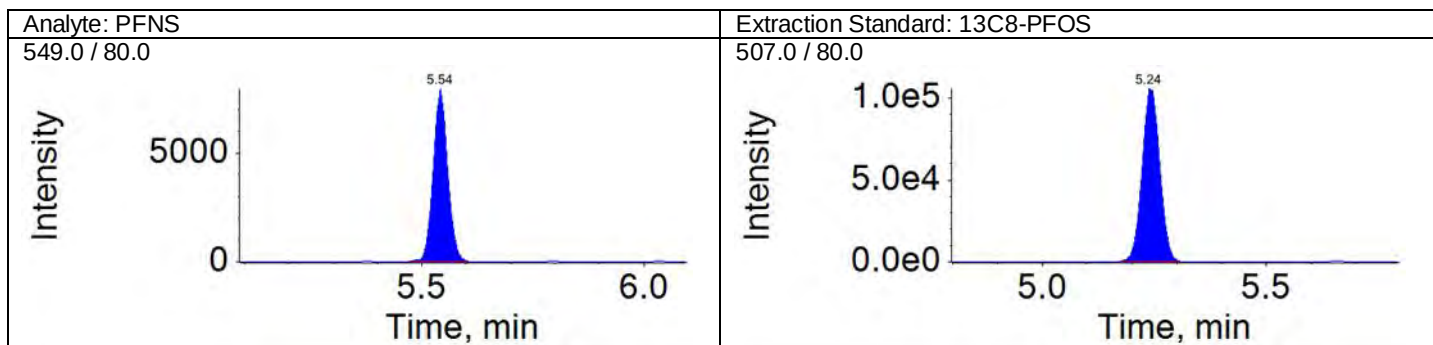
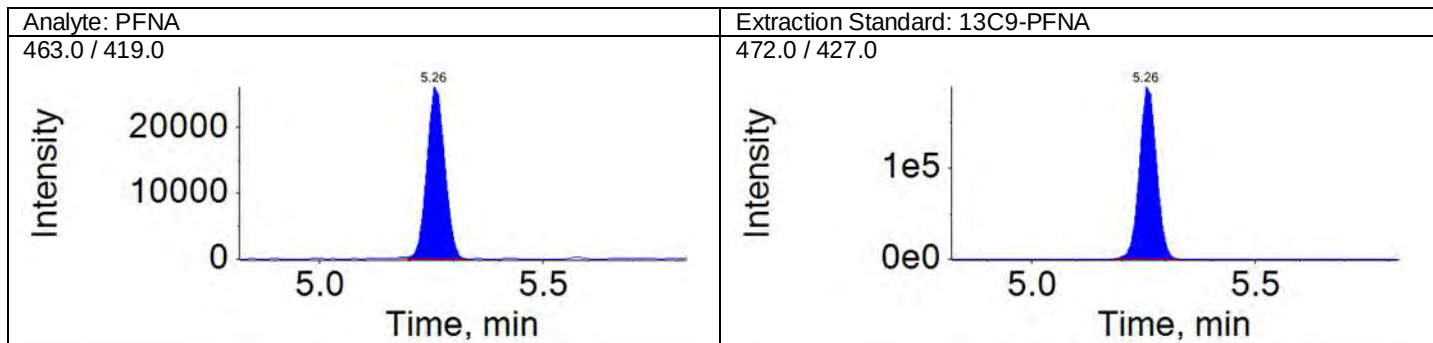
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



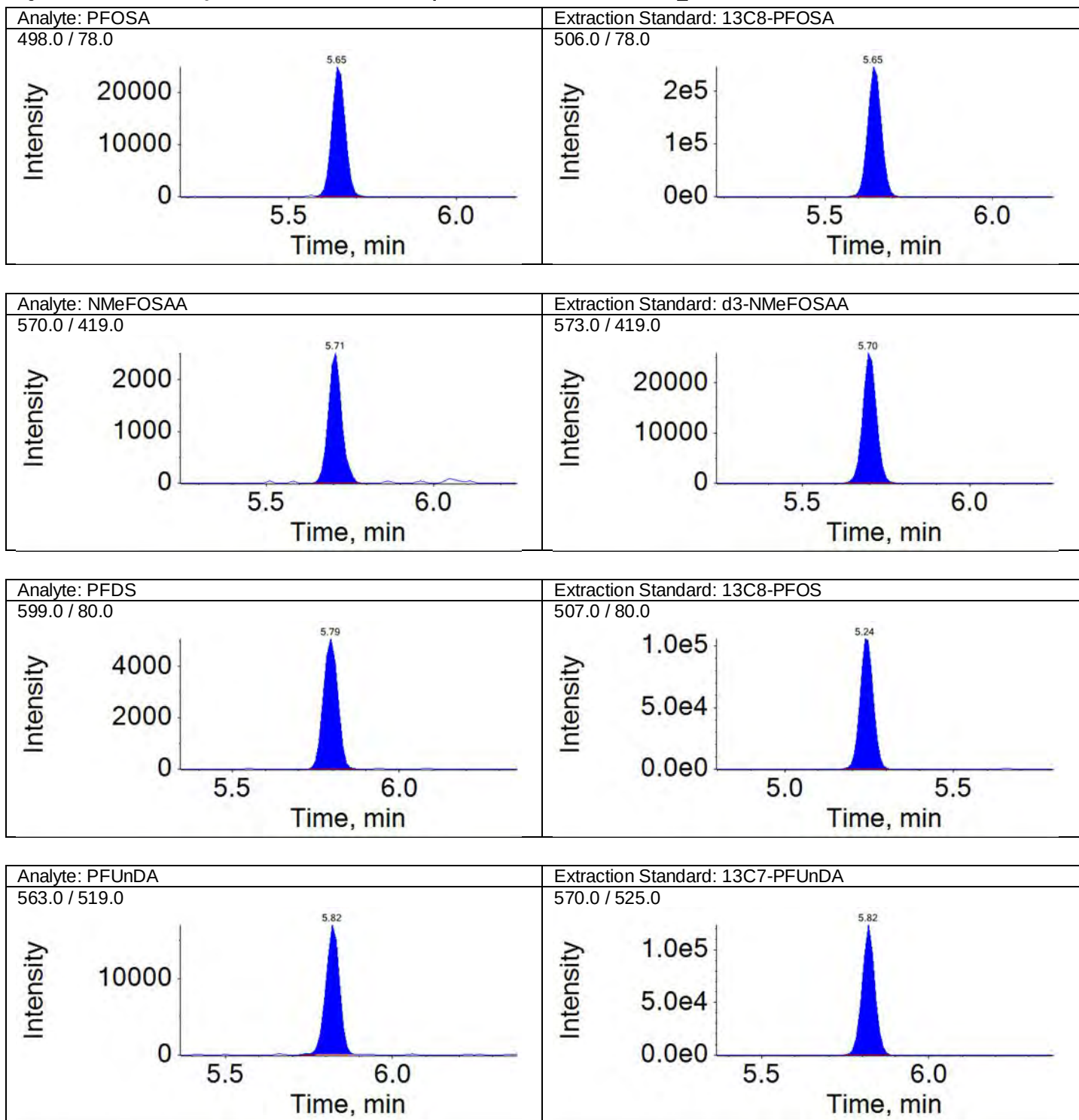
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



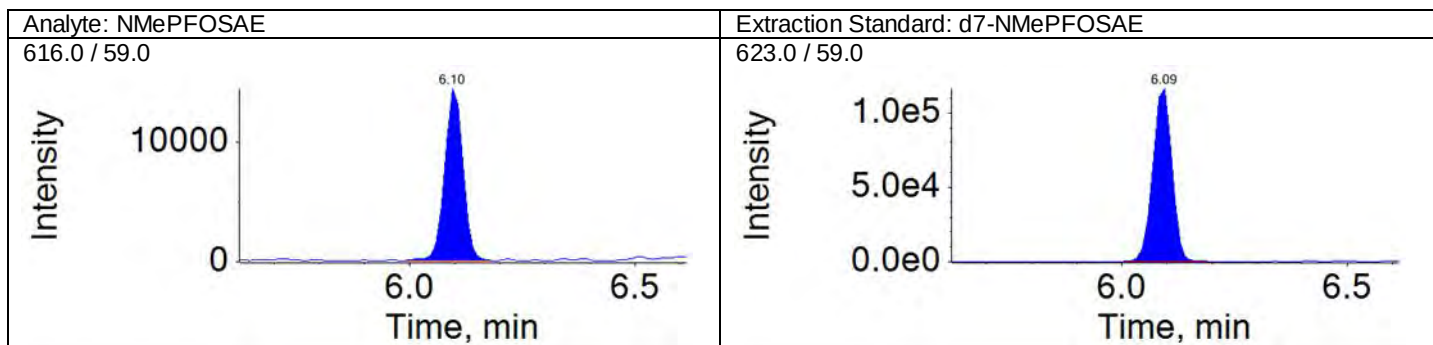
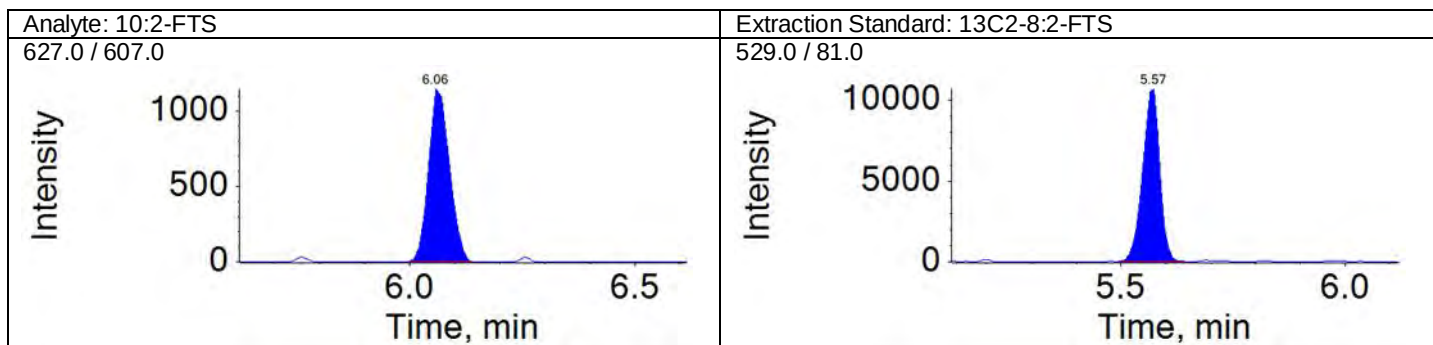
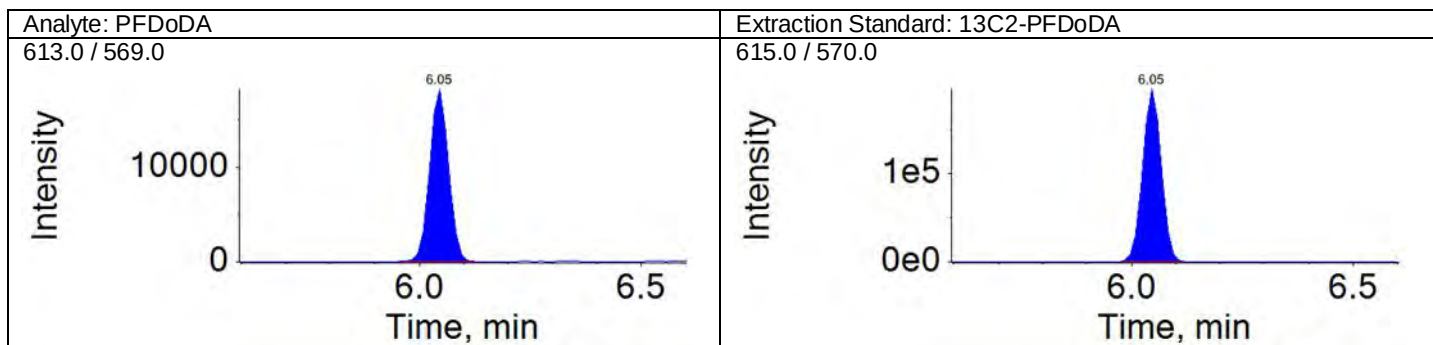
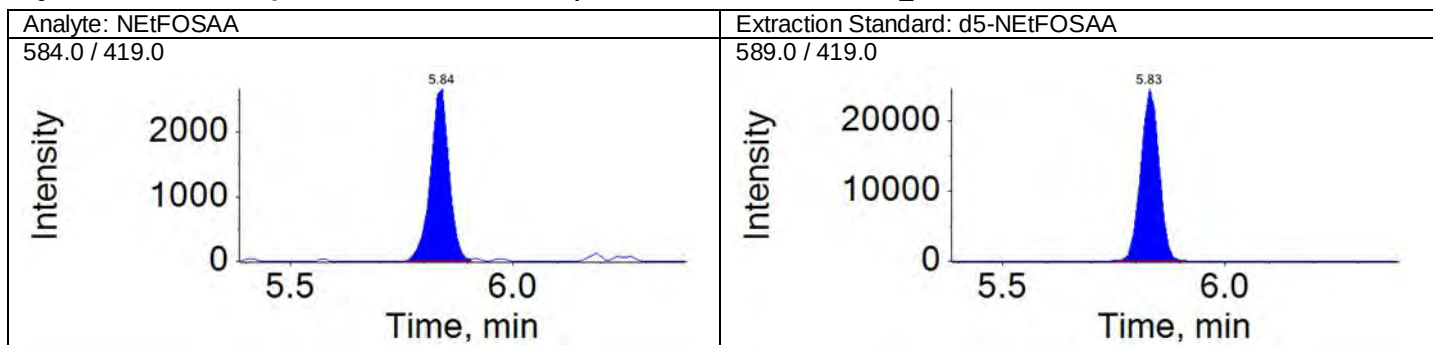
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



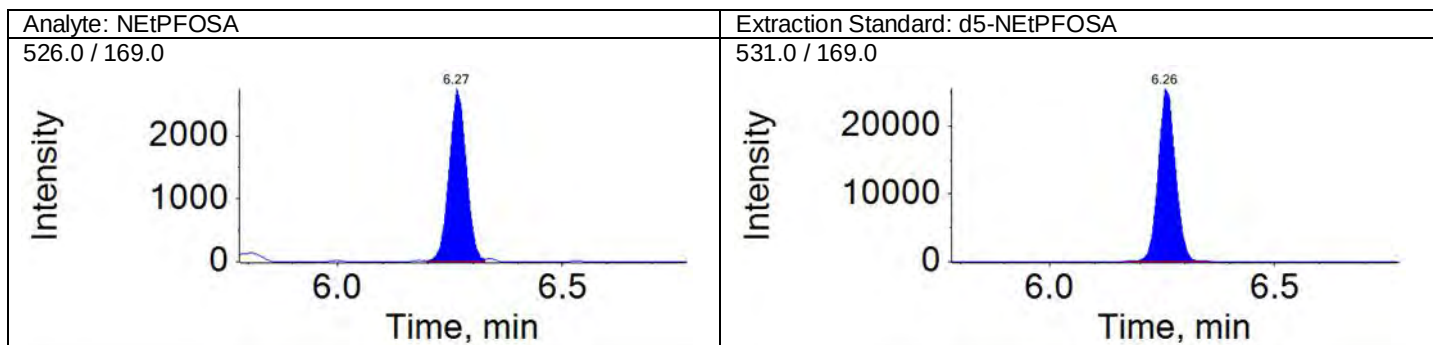
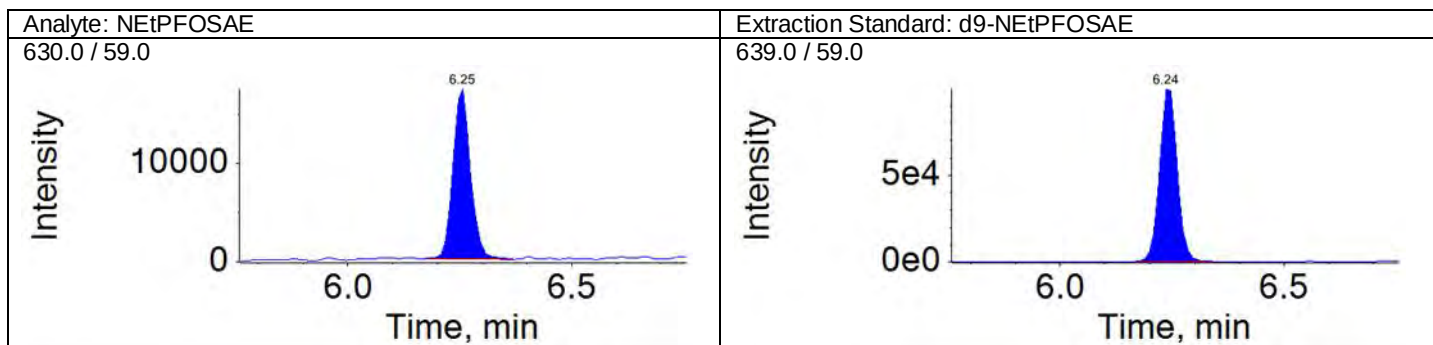
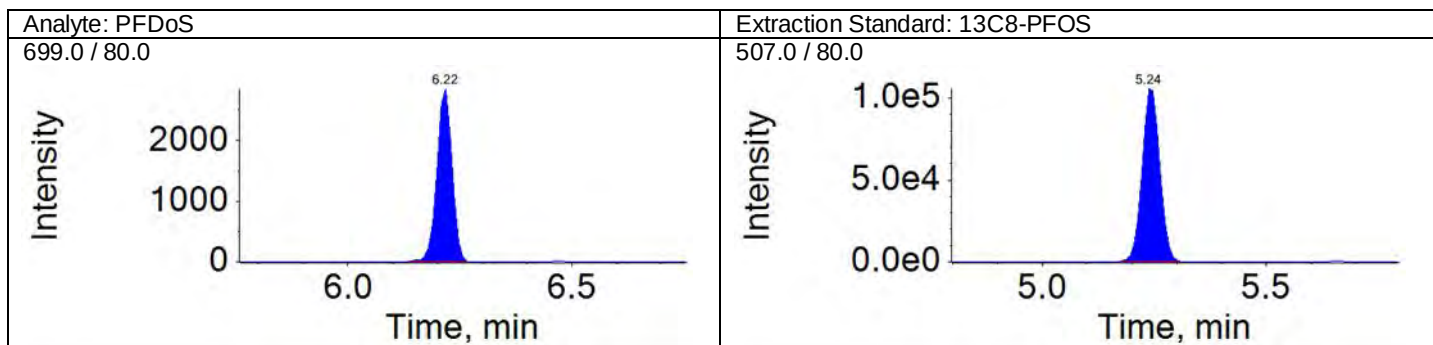
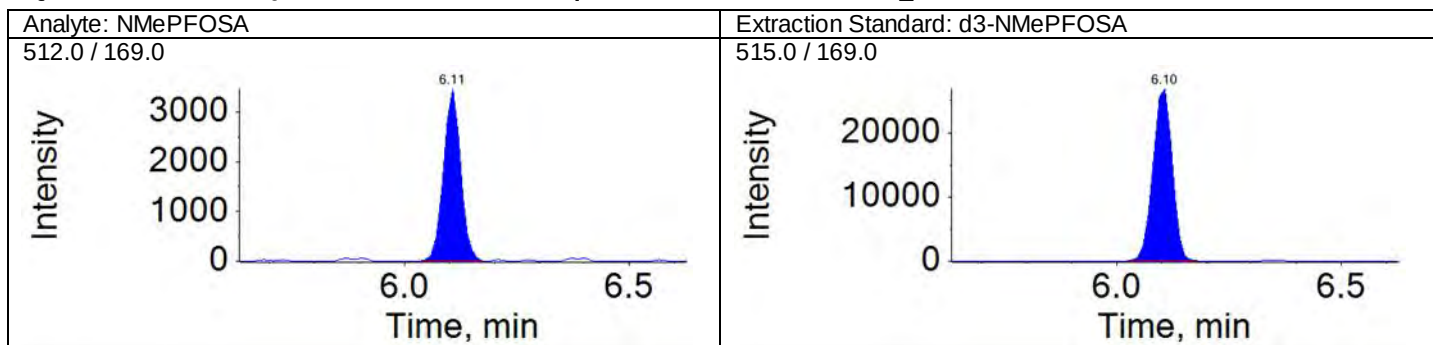
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



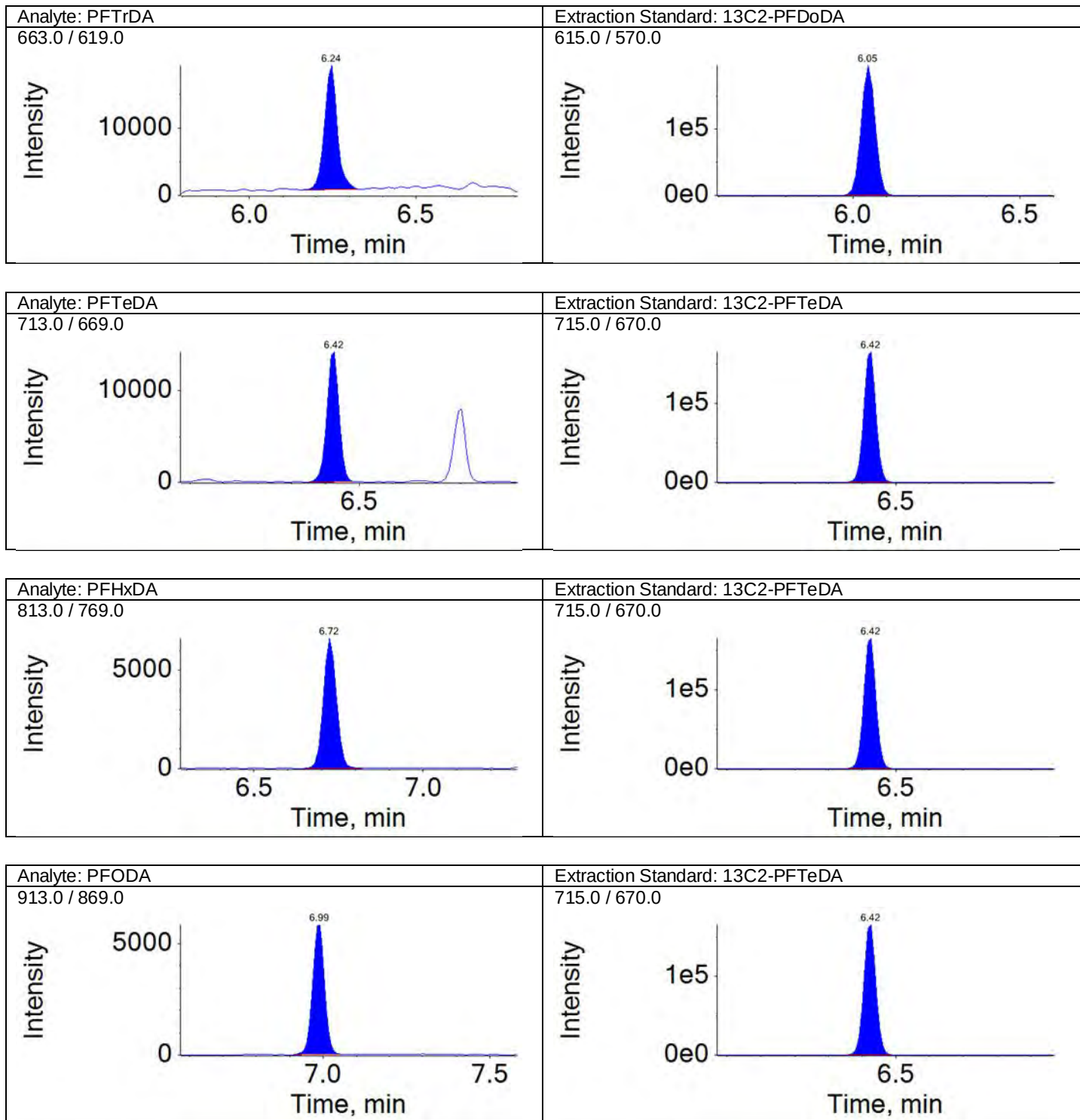
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



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

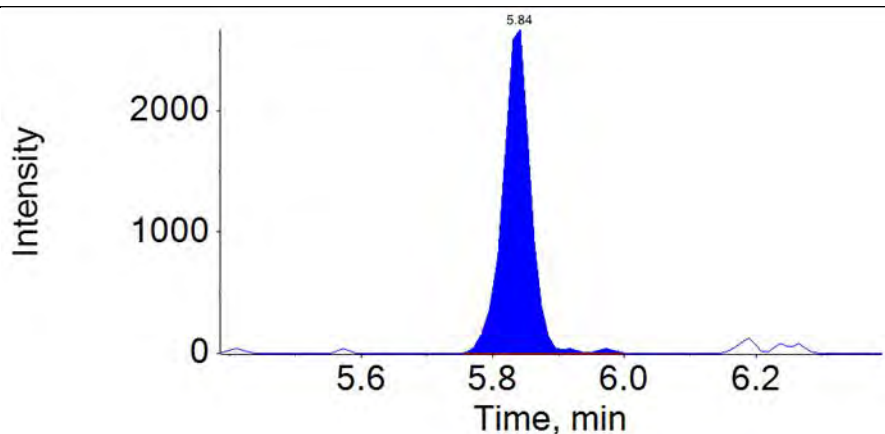
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV08DCCV6-12
Results Table Date: 11/9/2018 9:21:41 AM

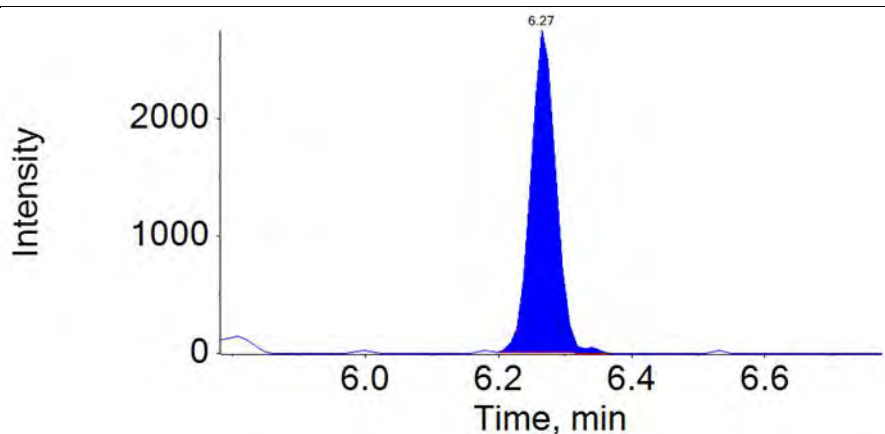
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
7889.8
Mass Range:
584.0 / 419.0
File Name:
18NOV08D-75.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
7245.9
Mass Range:
526.0 / 169.0
File Name:
18NOV08D-75.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Results Table Name: 18NOV08DCCV6-12
Results Table Date: 11/9/2018 9:21:41 AM

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

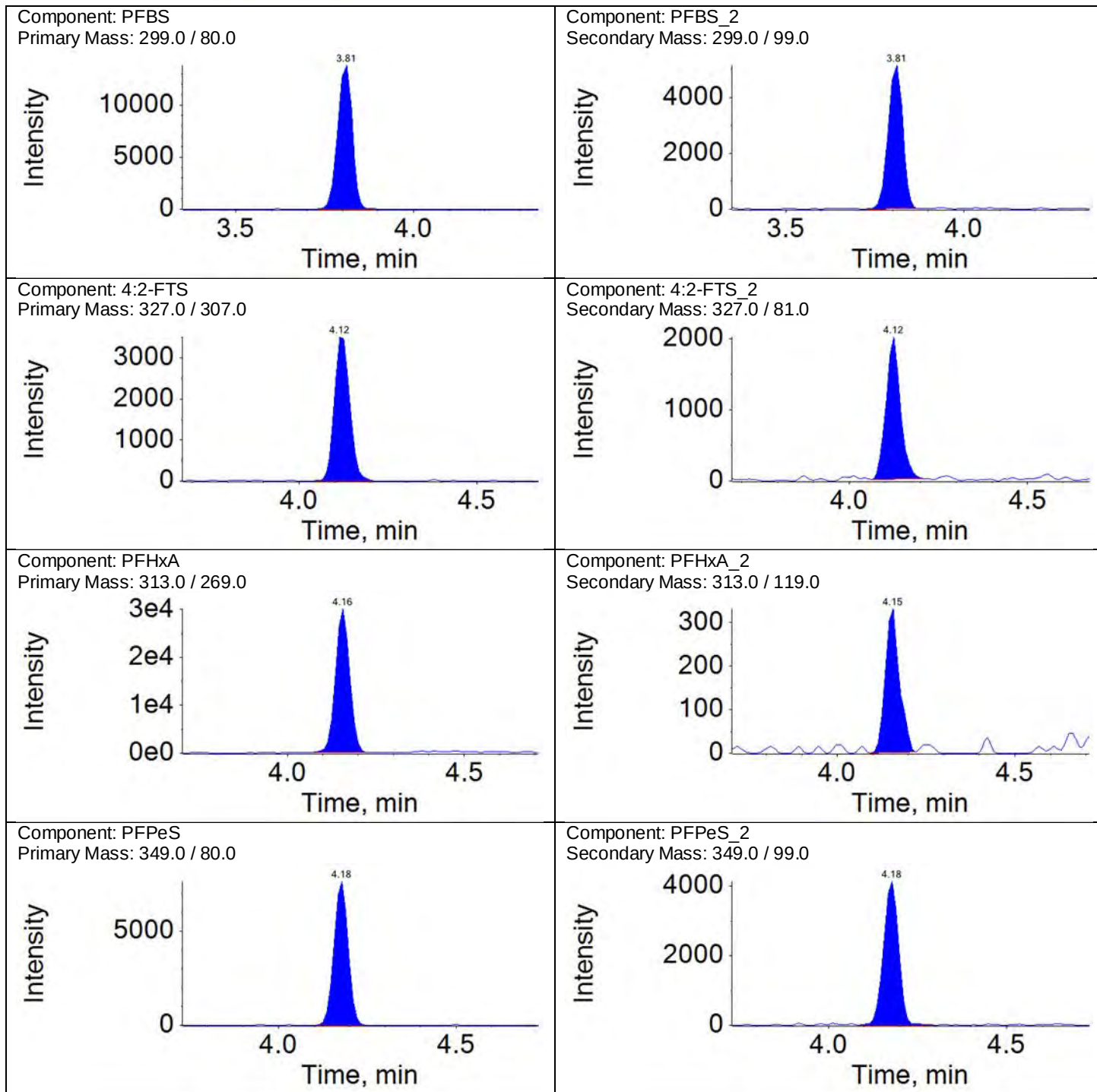
APPROVED
By JPT at 10:55 am, 11/9/18

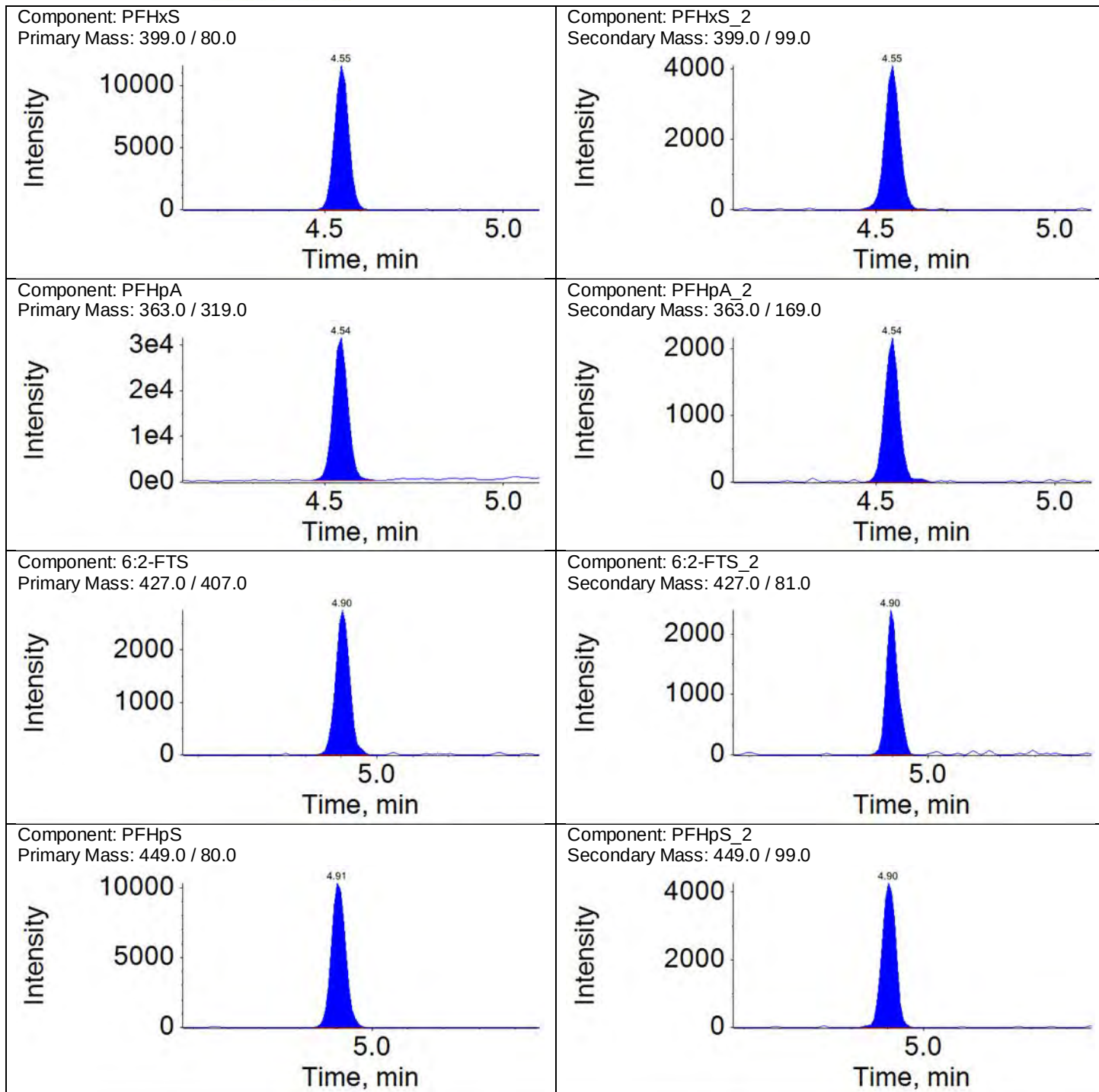
REVIEWED
By HMK at 2:58 pm, 11/11/18

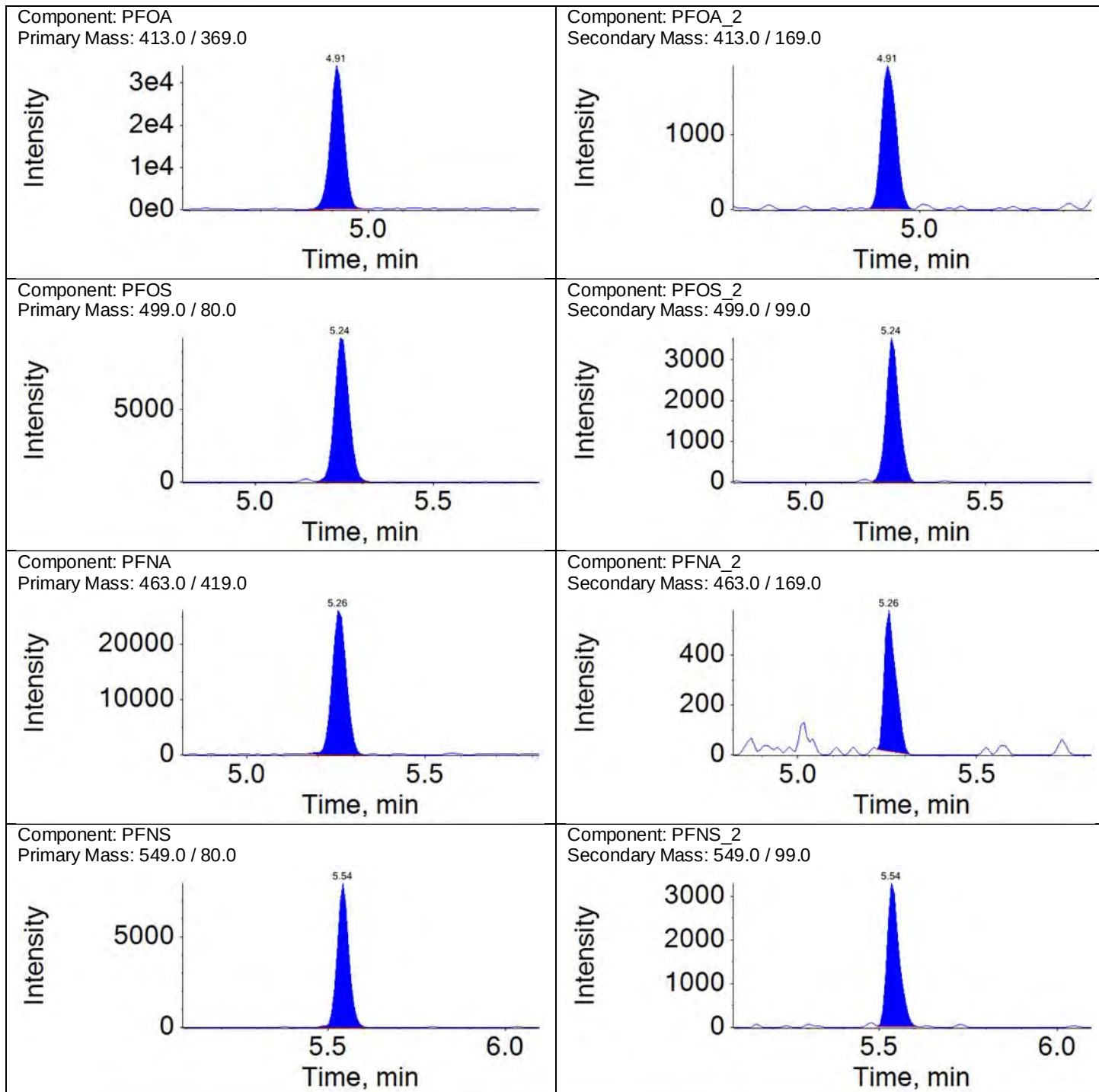
Ion Ratio Report

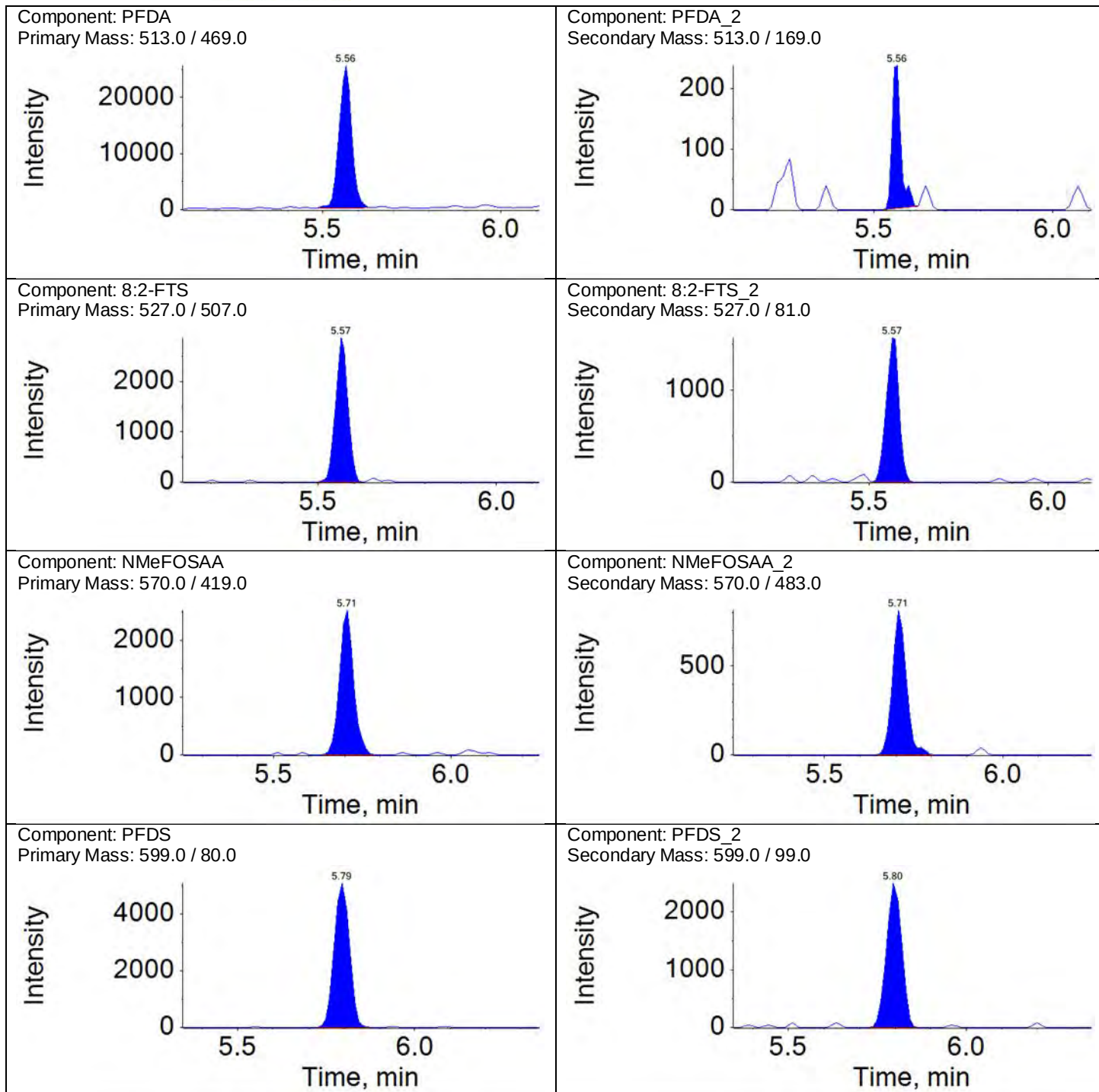
Sample Name: CCV7_ISC_CAL2 Instrument Name: LM27631 File Name: 18NOV08D-75.wiff

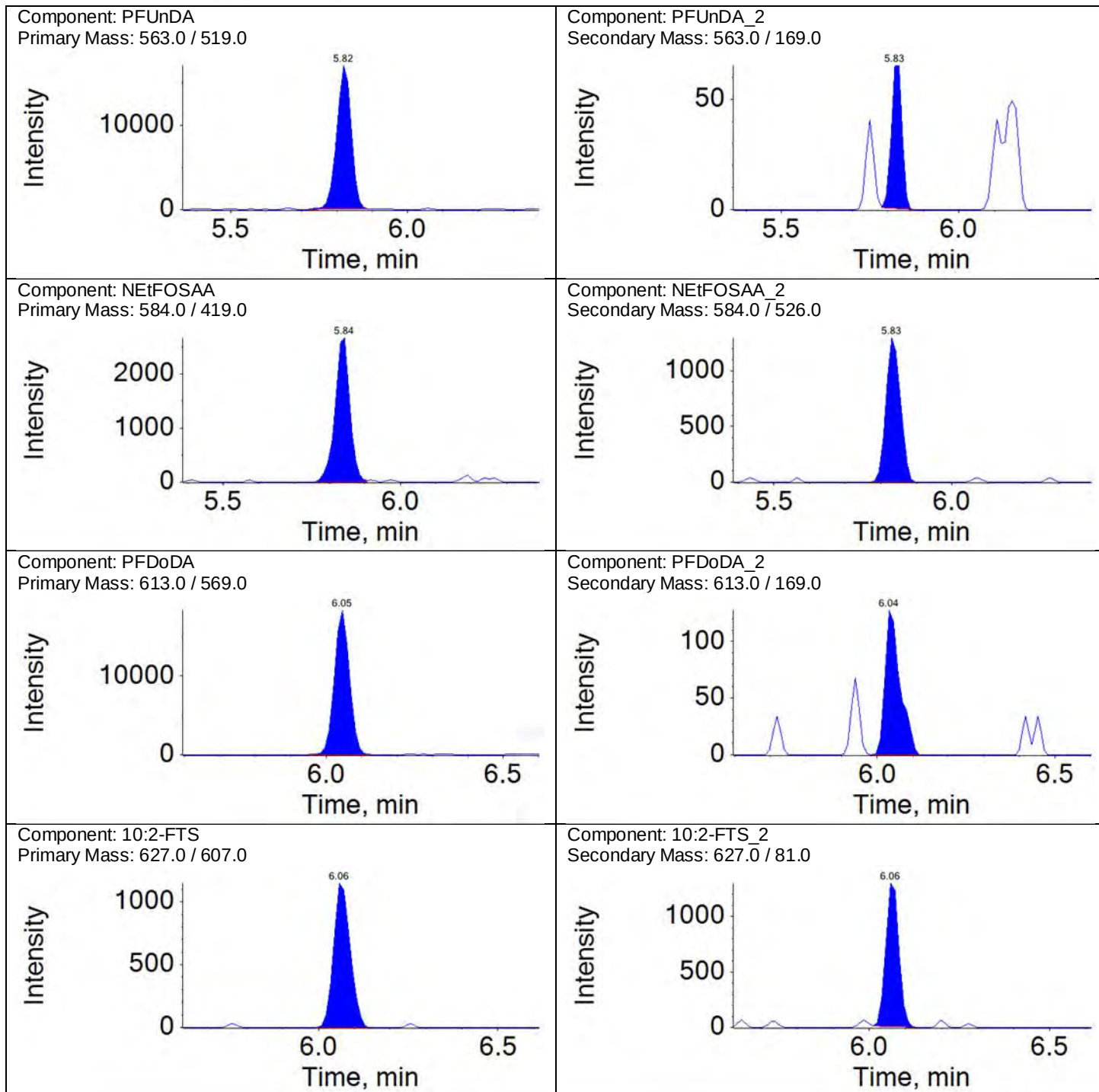
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	39832.5	A	N/A	1.0000			
PFBS_2	3.81	1.00	14699.7	A	N/A	0.3690	3	50	
4:2-FTS	4.12	1.00	10606.0	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	5571.2	A	N/A	0.5253	-17	50	
PFHxA	4.16	1.00	83198.1	A	N/A	1.0000			
PFHxA_2	4.15	1.00	909.7	A	N/A	0.0109	-5	50	
PFPeS	4.18	1.10	21062.1	A	N/A	1.0000			
PFPeS_2	4.18	1.10	12093.9	A	N/A	0.5742	7	50	
PFHxS	4.55	1.00	31930.8	A	N/A	1.0000			
PFHxS_2	4.55	1.00	11803.8	A	N/A	0.3697	4	50	
PFHpA	4.54	1.00	90113.5	A	N/A	1.0000			
PFHpA_2	4.54	1.00	6135.2	A	N/A	0.0681	18	50	
6:2-FTS	4.90	1.00	7571.0	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	5503.5	A	N/A	0.7269	8	50	
PFHpS	4.91	1.08	28658.3	A	N/A	1.0000			
PFHpS_2	4.90	1.08	11500.5	A	N/A	0.4013	2	50	
PFOA	4.91	1.00	89452.0	A	N/A	1.0000			
PFOA_2	4.91	1.00	5458.3	A	N/A	0.0610	-4	50	
PFOS	5.24	1.00	27768.1	A	N/A	1.0000			
PFOS_2	5.24	1.00	8739.6	A	N/A	0.3147	-10	50	
PFNA	5.26	1.00	72707.1	A	N/A	1.0000			
PFNA_2	5.26	1.00	1248.7	A	N/A	0.0172	-17	50	
PFNS	5.54	1.06	17926.4	A	N/A	1.0000			
PFNS_2	5.54	1.06	7594.2	A	N/A	0.4236	-13	50	
PFDA	5.56	1.00	61927.2	A	N/A	1.0000			
PFDA_2	5.56	1.00	406.6	A	N/A	0.0066	16	50	
8:2-FTS	5.57	1.00	6846.3	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	3867.3	A	N/A	0.5649	-8	50	
NMeFOSAA	5.71	1.00	6968.7	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	2199.5	A	N/A	0.3156	43	50	
PFDS	5.79	1.11	15279.2	A	N/A	1.0000			
PFDS_2	5.80	1.11	7453.8	A	N/A	0.4878	5	50	
PFUnDA	5.82	1.00	48246.0	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	137.4	A	N/A	0.0028	-10	50	
NEtFOSAA	5.84	1.00	7757.6	M	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	3638.8	A	N/A	0.4691	-23	50	
PFDODA	6.05	1.00	54056.4	A	N/A	1.0000			
PFDODA_2	6.04	1.00	376.6	A	N/A	0.0070	-36	50	
10:2-FTS	6.06	1.09	3682.3	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	3280.9	A	N/A	0.8910	26	50	
PFTTrDA	6.24	1.03	49062.7	A	N/A	1.0000			
PFTTrDA_2	6.23	1.03	515.7	A	N/A	0.0105	9	50	
PFTeDA	6.42	1.00	35545.8	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	297.8	A	N/A	0.0084	51	50	OOS
PFHxDA	6.72	1.05	17512.1	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1183.0	A	N/A	0.0676	13	50	
PFODA	6.99	1.09	14402.6	A	N/A	1.0000			
PFODA_2	6.99	1.09	477.9	A	N/A	0.0332	29	50	

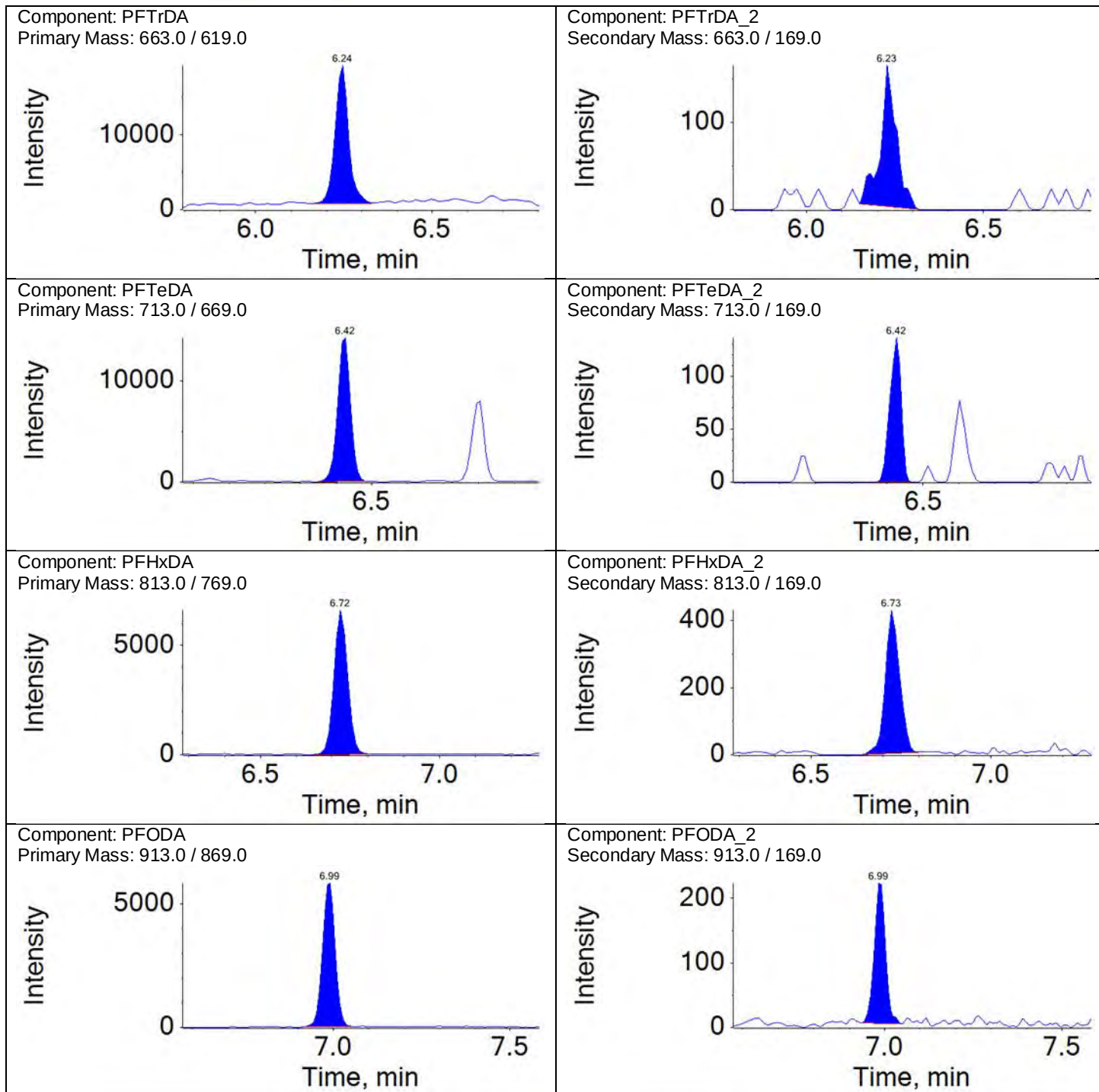










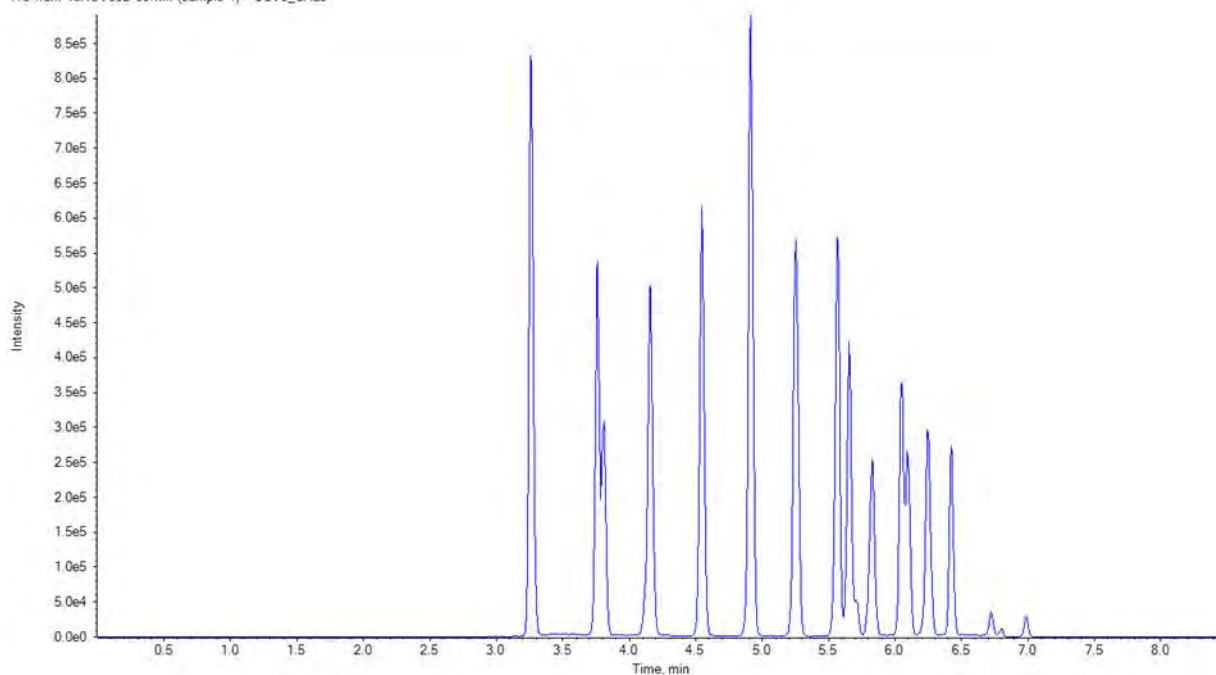


Continuing Calibration Verification

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
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

TIC from 18NOV08D-86.wiff (sample 1) - CCV8_CAL3



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 Verification

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-PFPeS	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-PFHxA	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	
PFTTrDA	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	
PFOA	63043.0	10	13C2-PFTeDA	416875.0	5.0	0.151	6.99	1.090	2.000	2.167	8	30	

Continuing Calibration Verification

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: MQ4-18AUG13Result 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	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	

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	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV8_CAL3

Instrument Name: LM27631

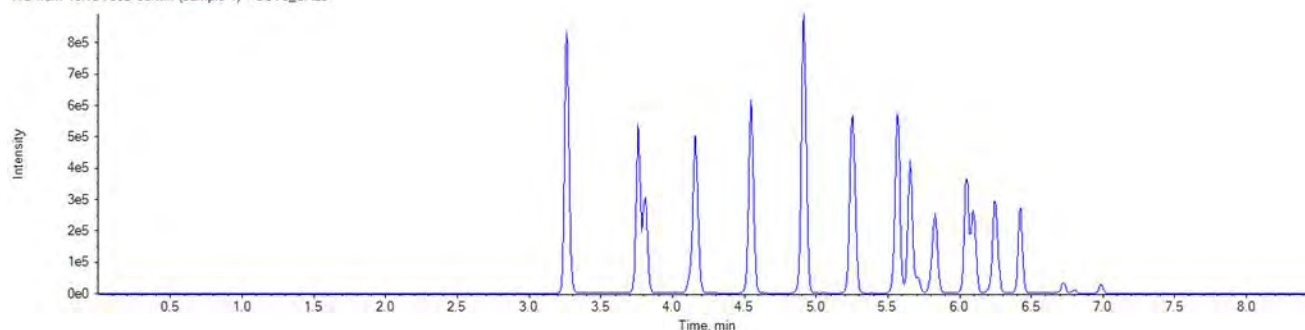
File Name: 18NOV08D-86.wiff

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
PFTDA	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

TIC from 18NOV08D-86.wiff (sample 1) - CCV8_CAL3



APPROVED

By JPT at 10:55 am, 11/9/18

BSI05 Page 791 of 1595

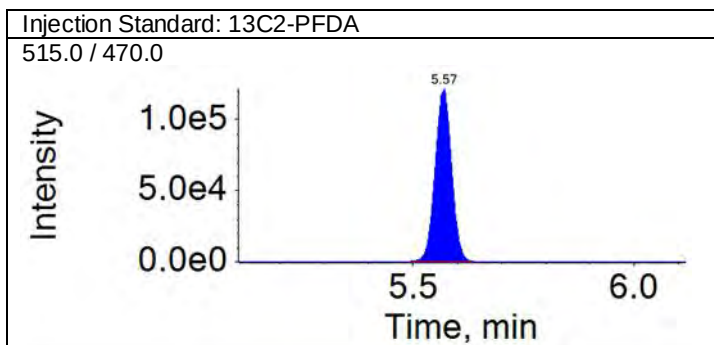
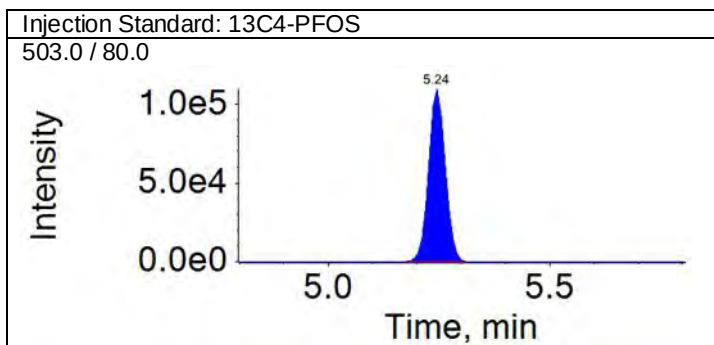
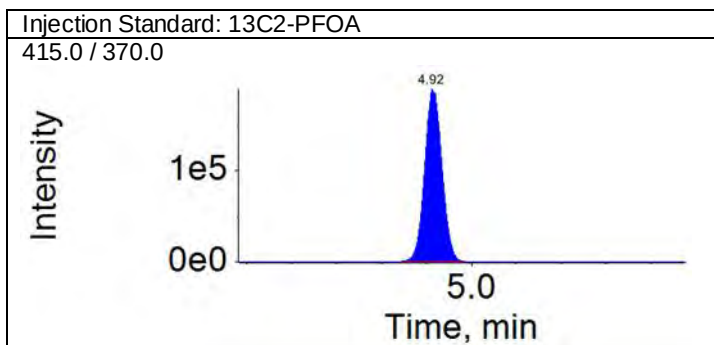
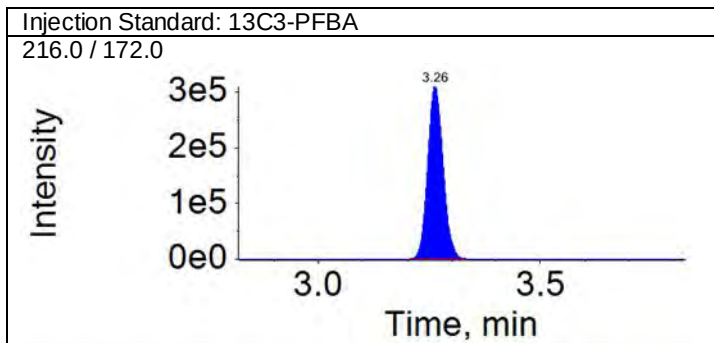
REVIEWED

By umar at 3:41 pm, 11/12/18

Page 2 of 17

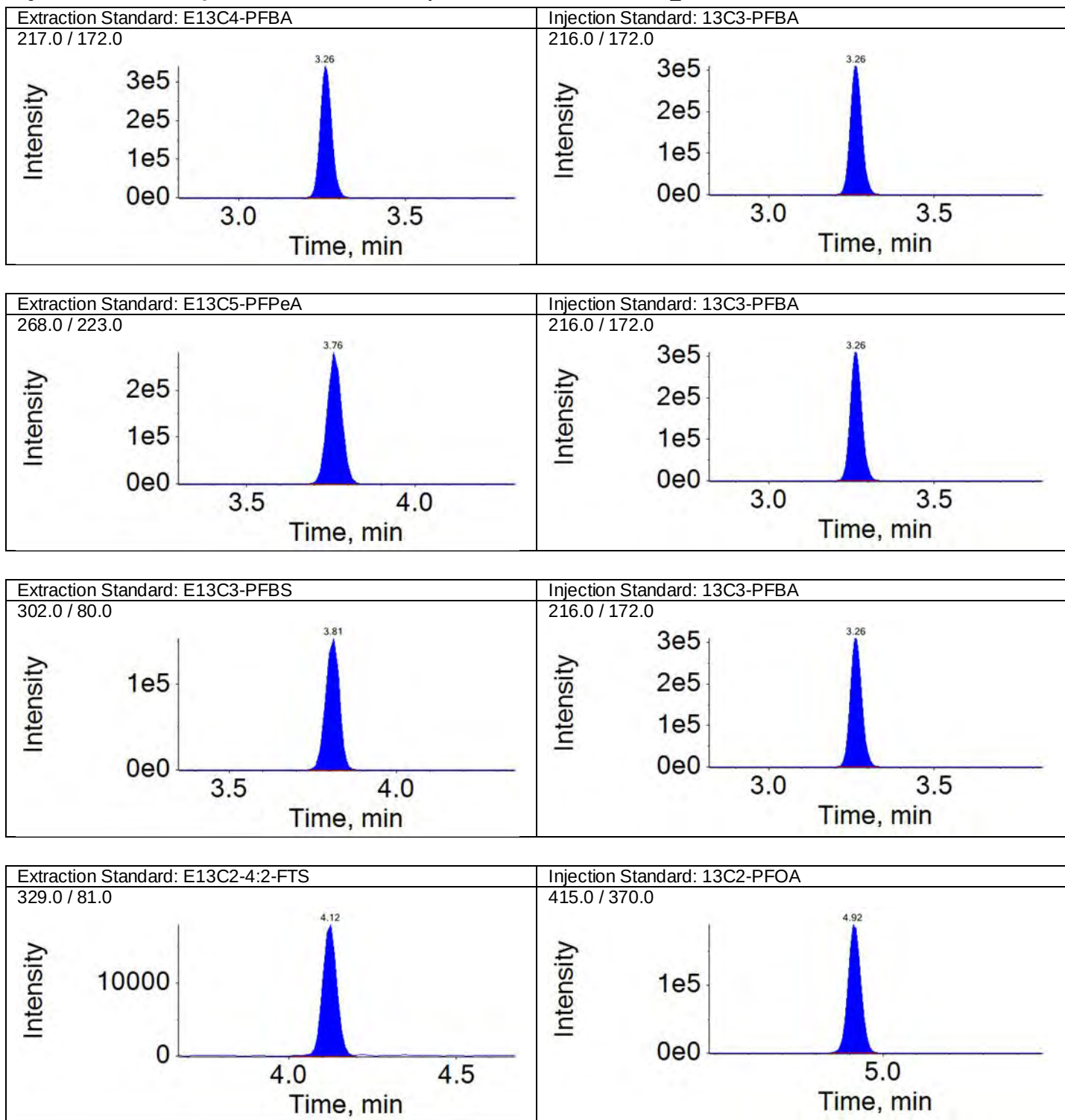
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



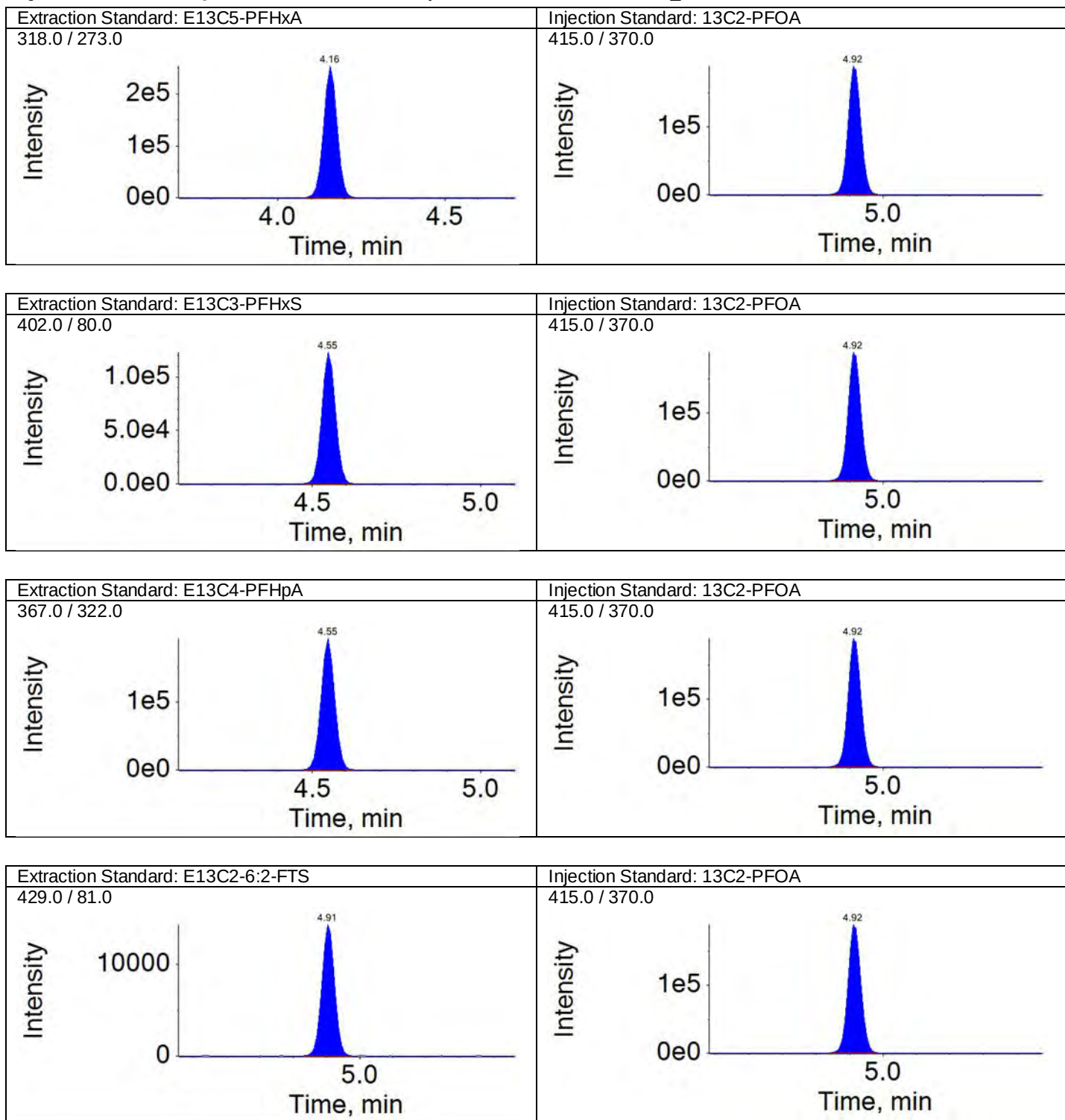
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



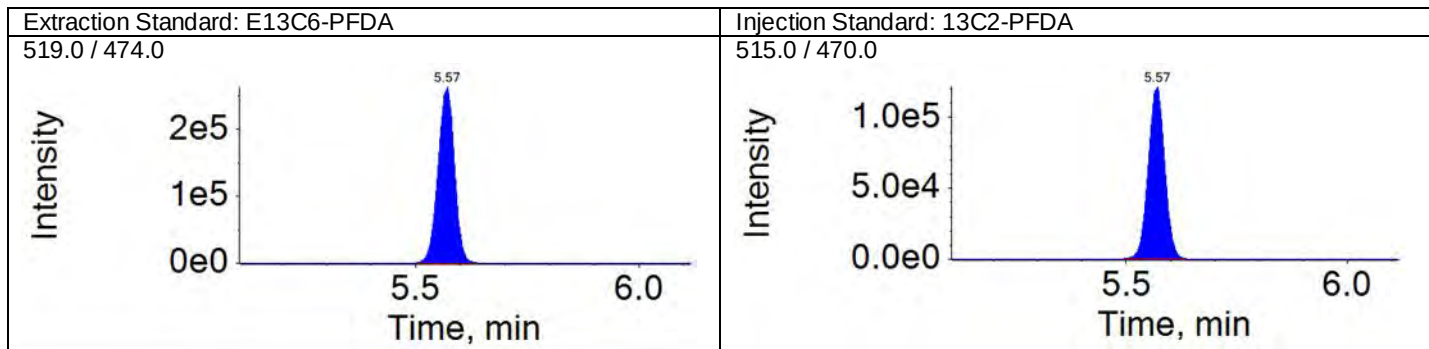
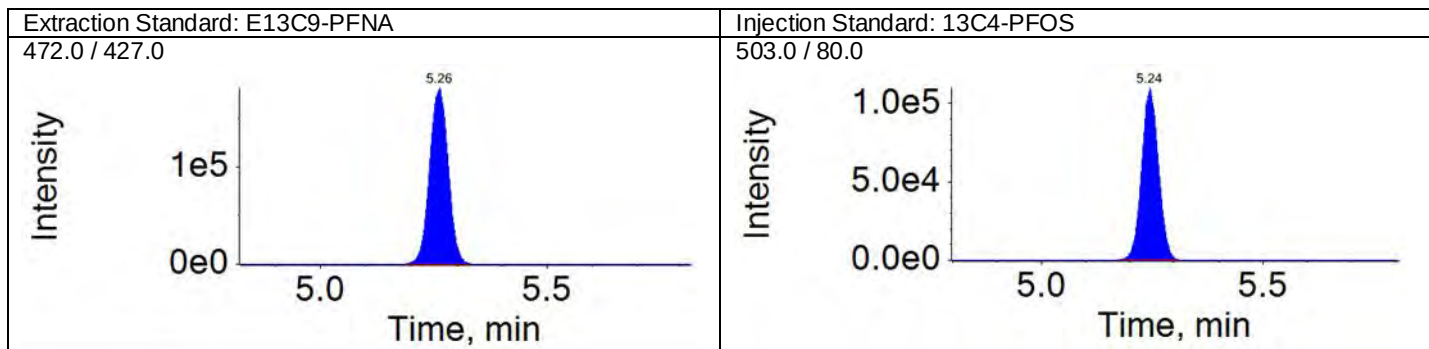
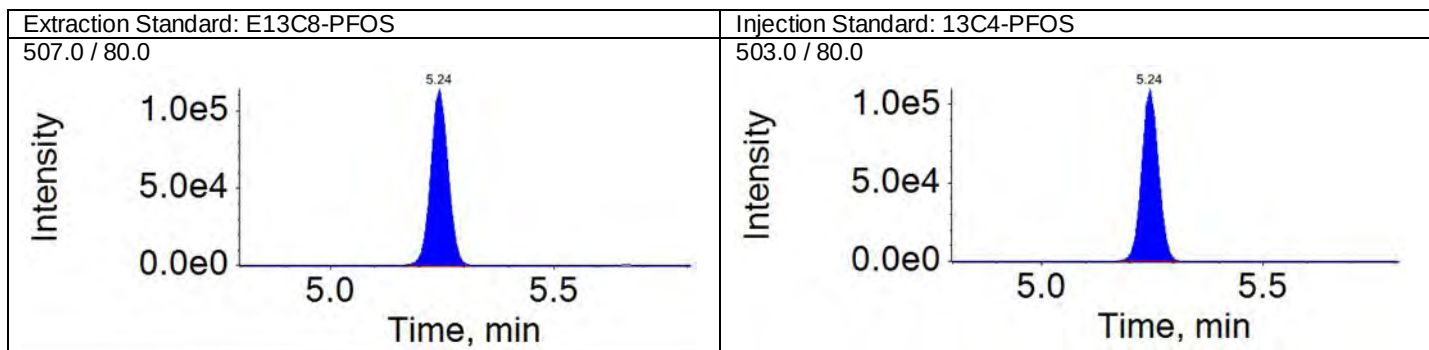
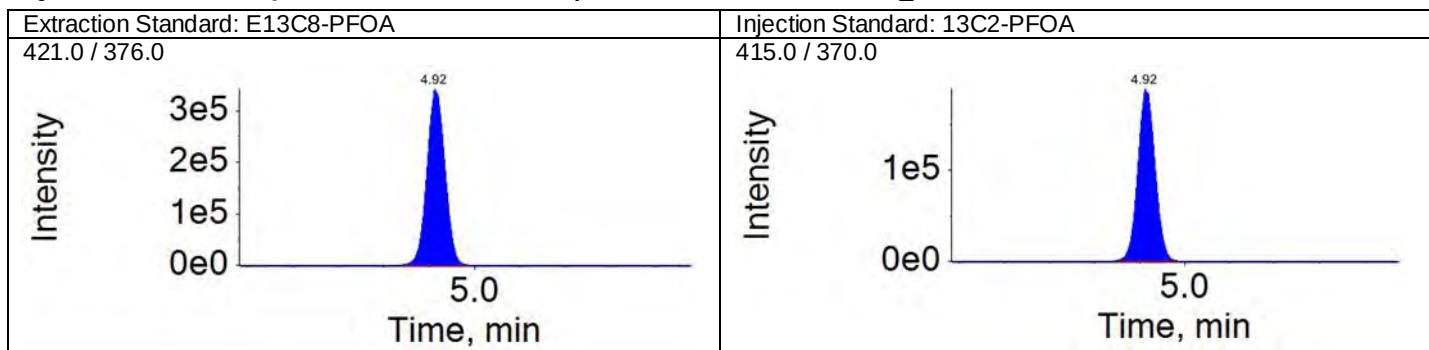
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

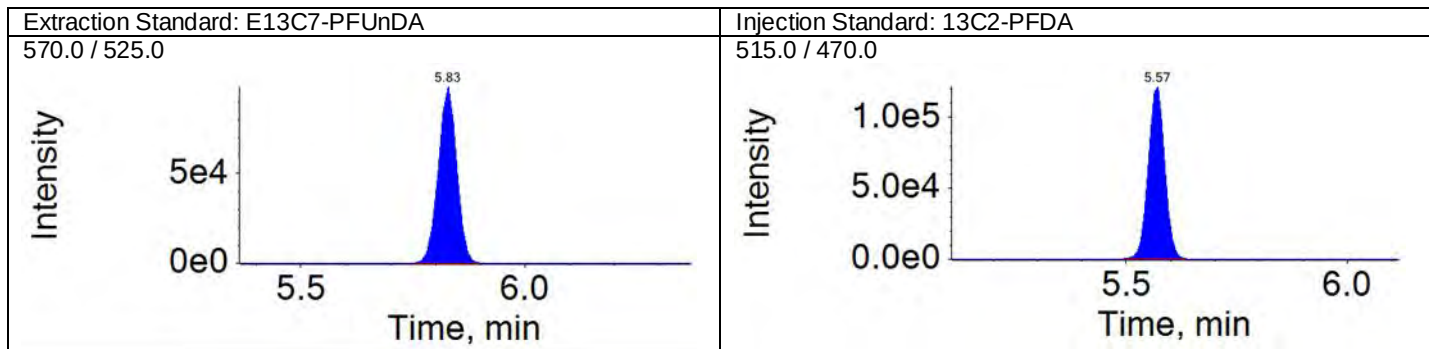
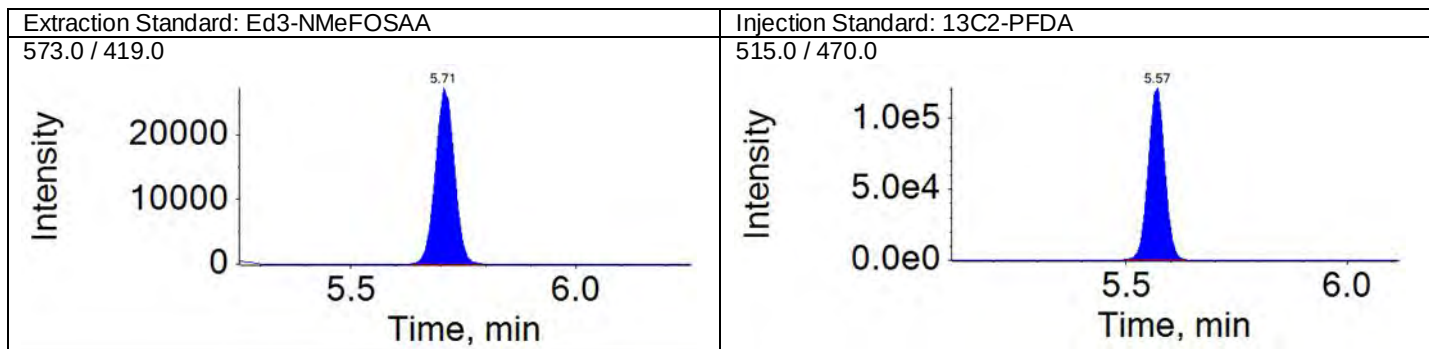
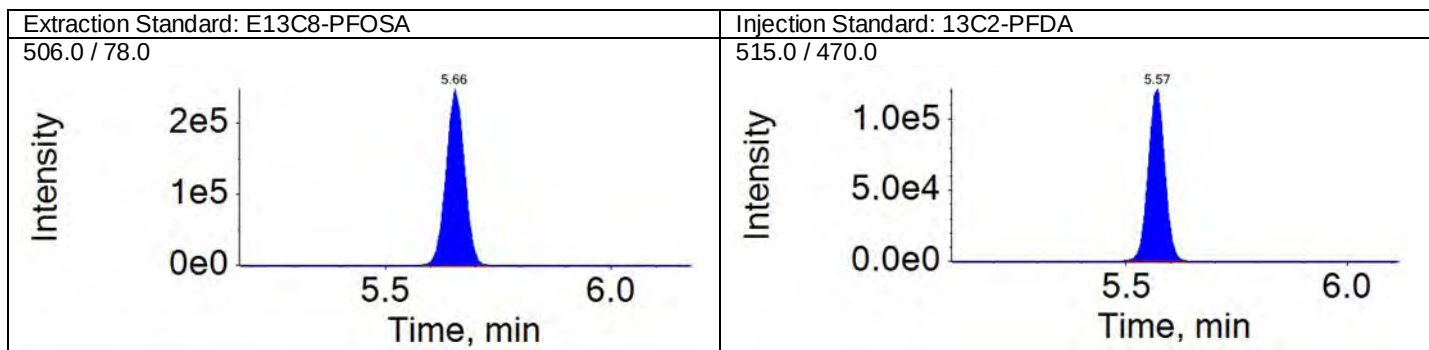
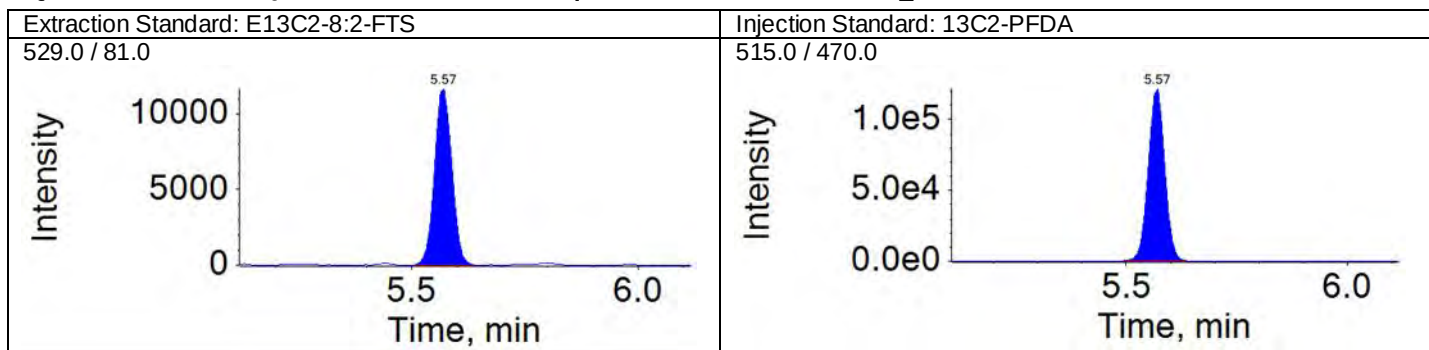
By JPT at 10:55 am, 11/9/18

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



APPROVED

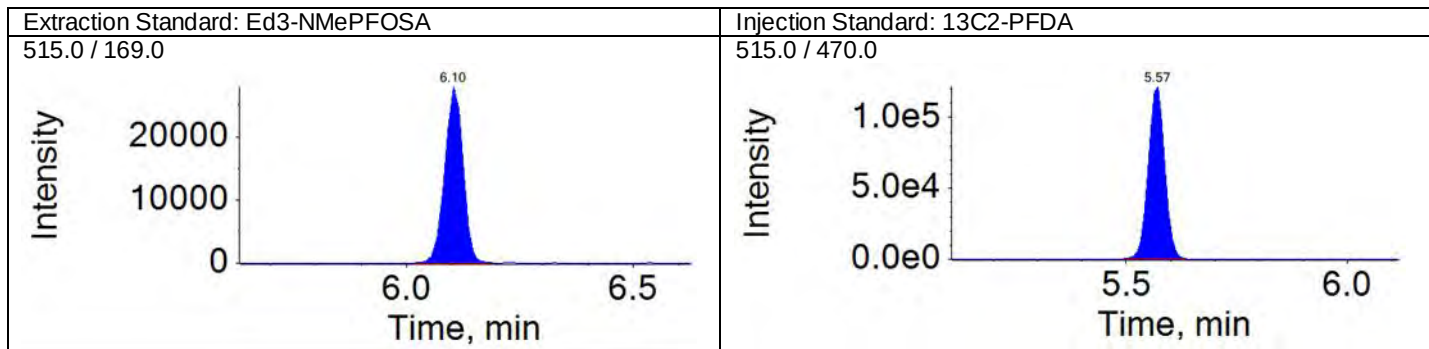
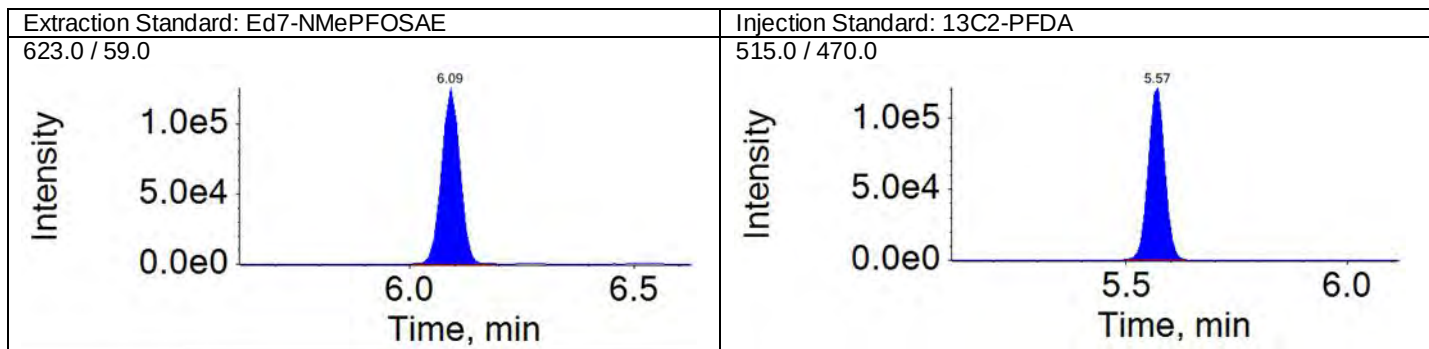
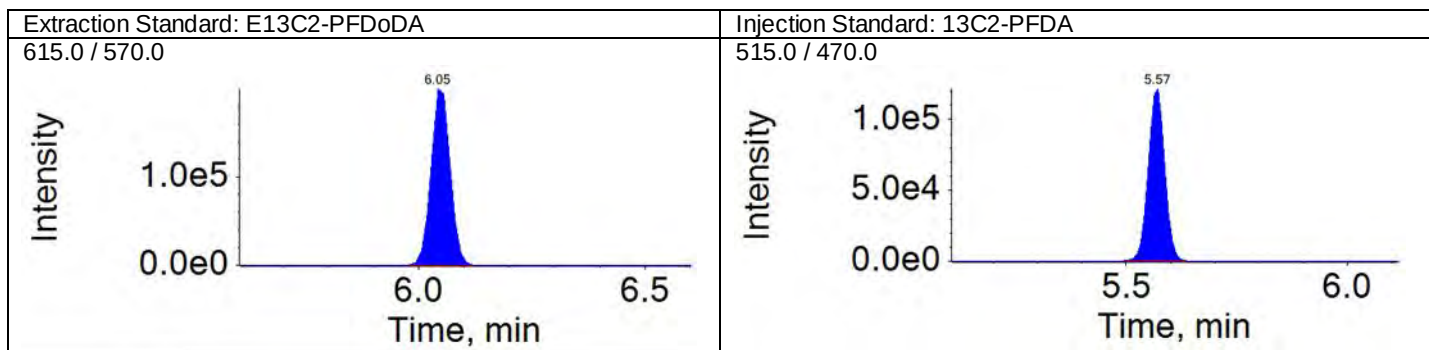
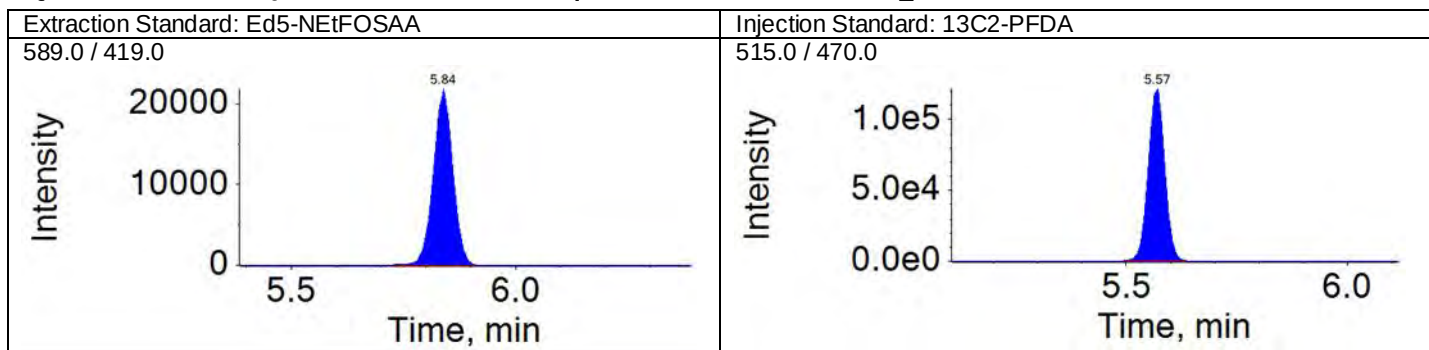
By JPT at 10:55 am, 11/9/18

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



APPROVED

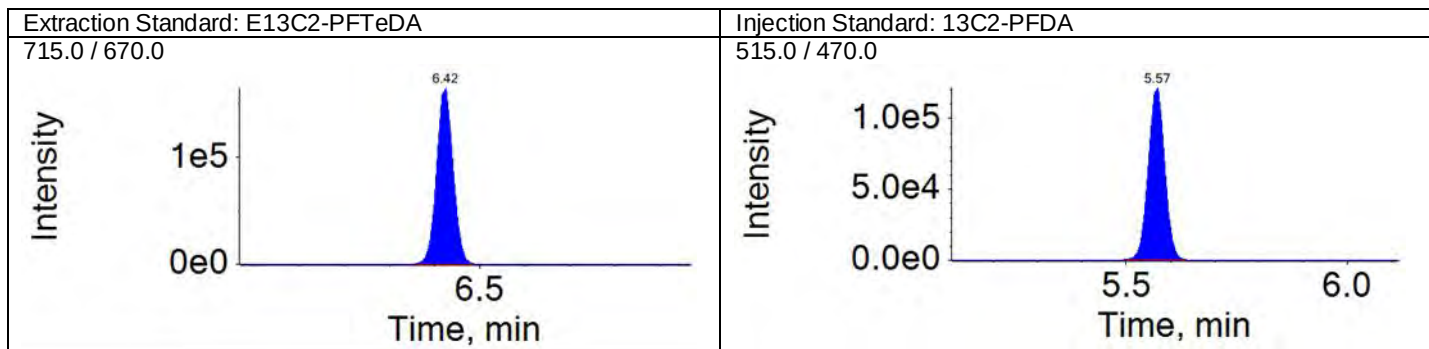
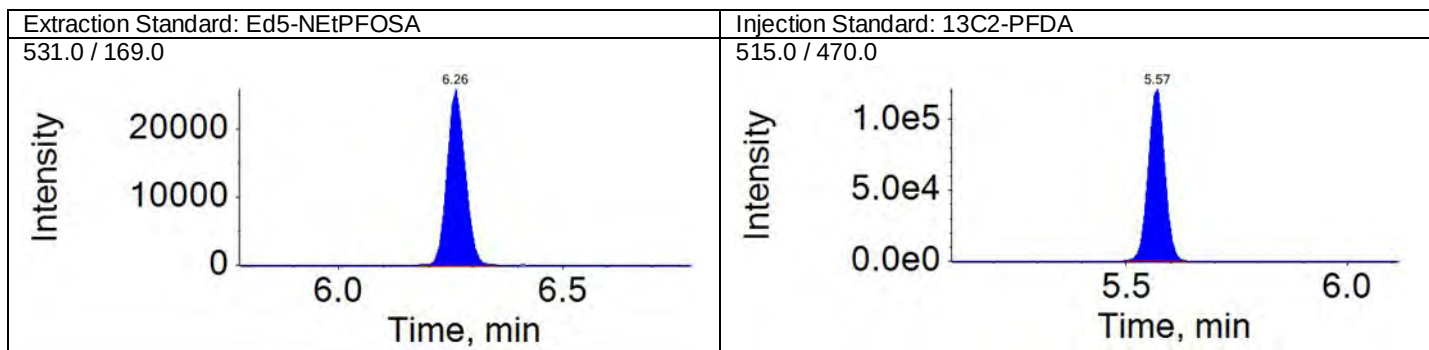
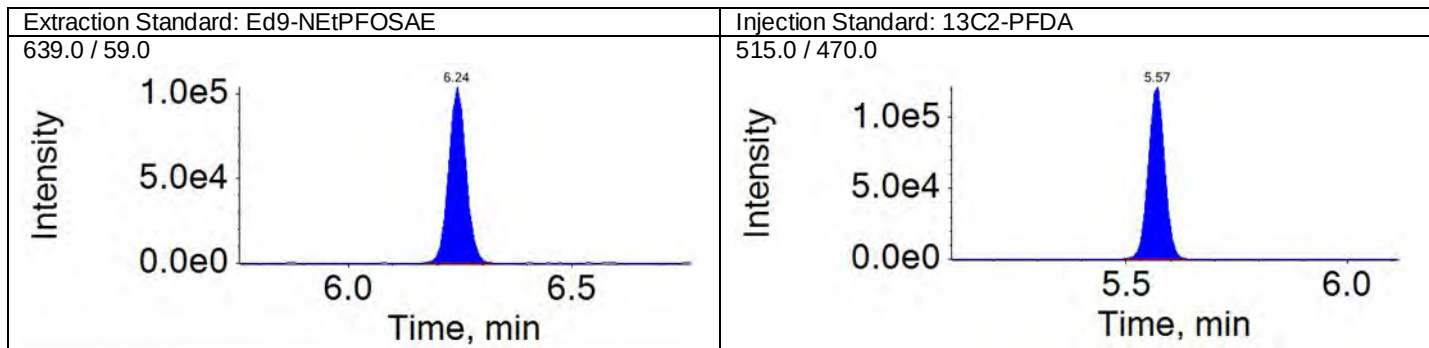
By JPT at 10:55 am, 11/9/18

REVIEWED

By umar at 3:41 pm, 11/12/18

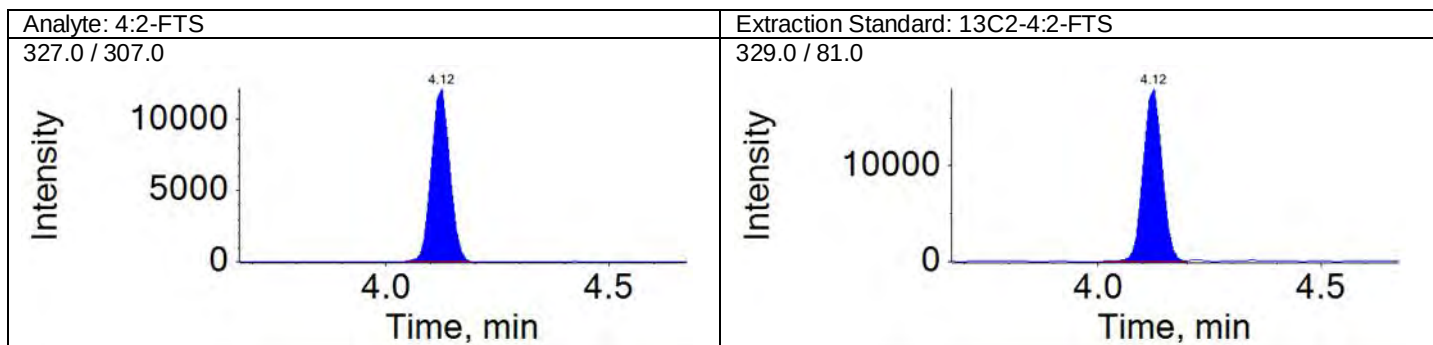
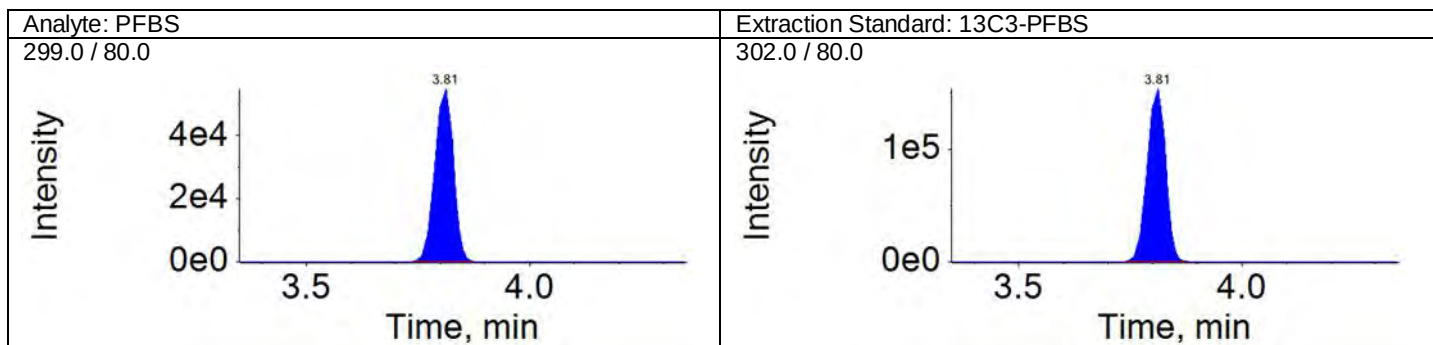
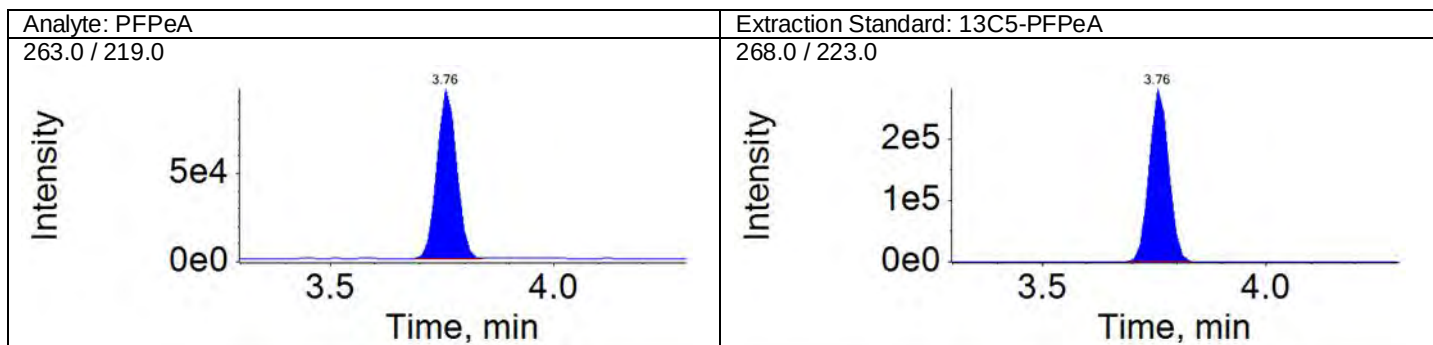
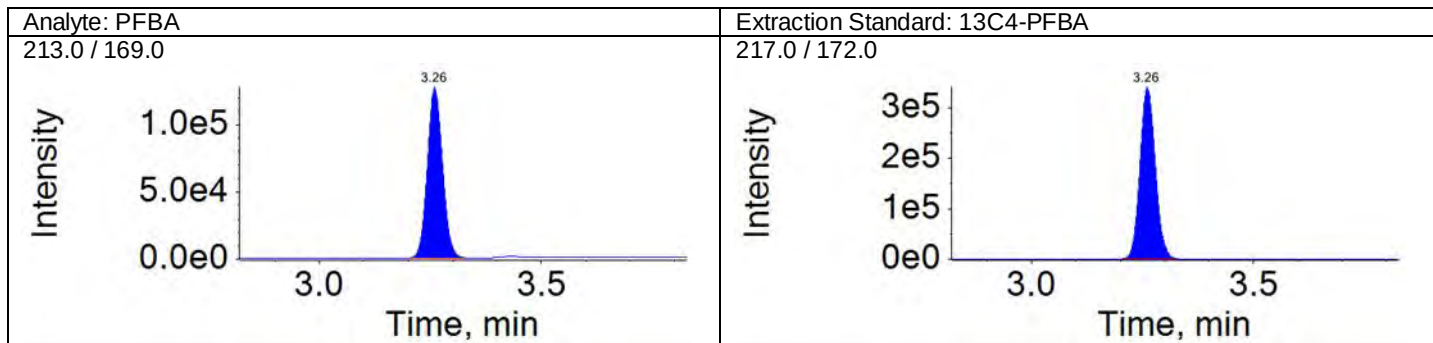
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



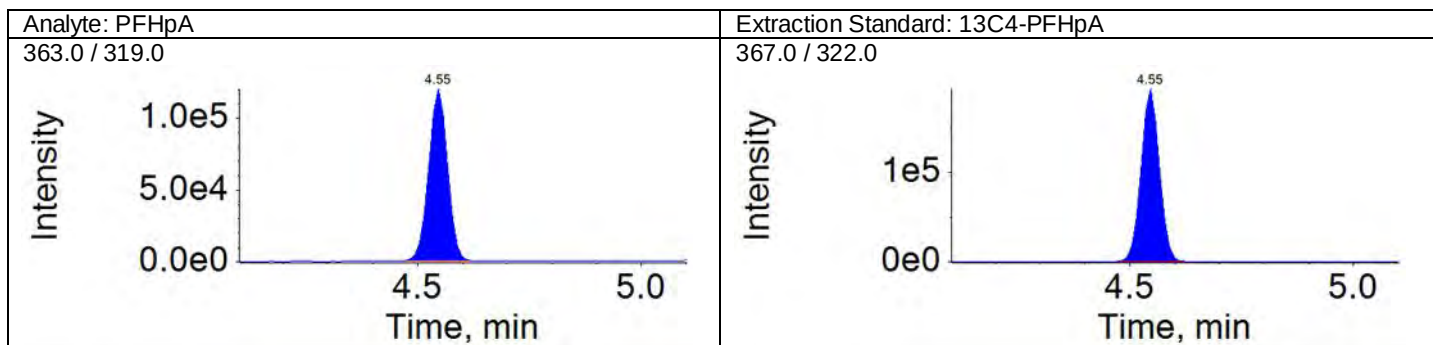
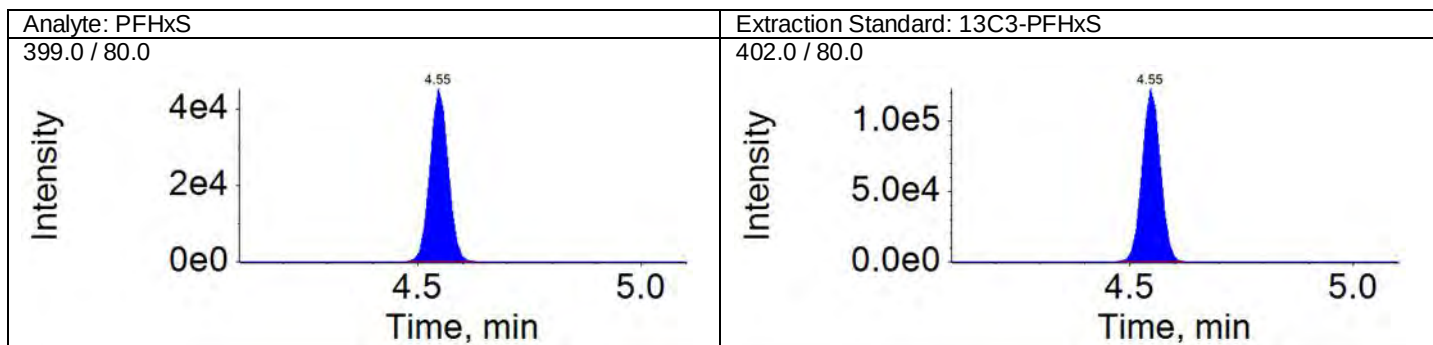
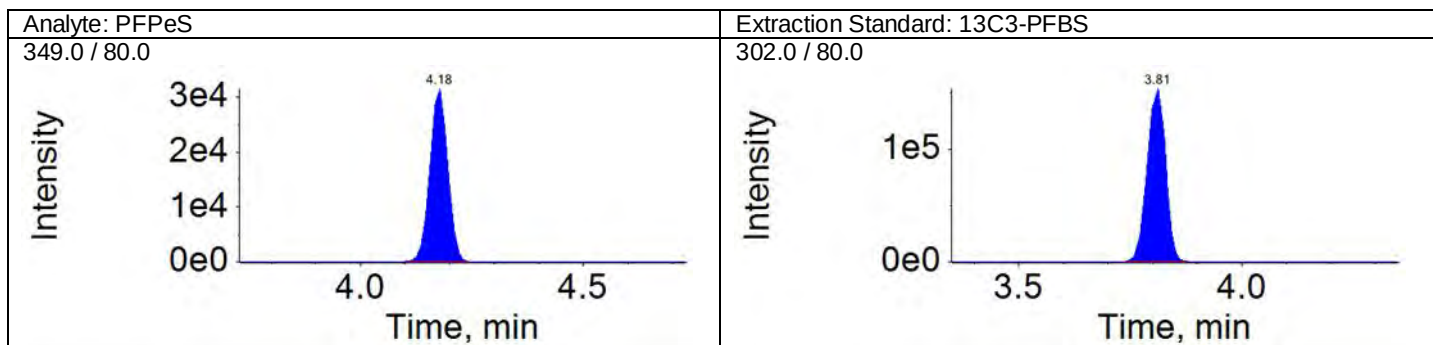
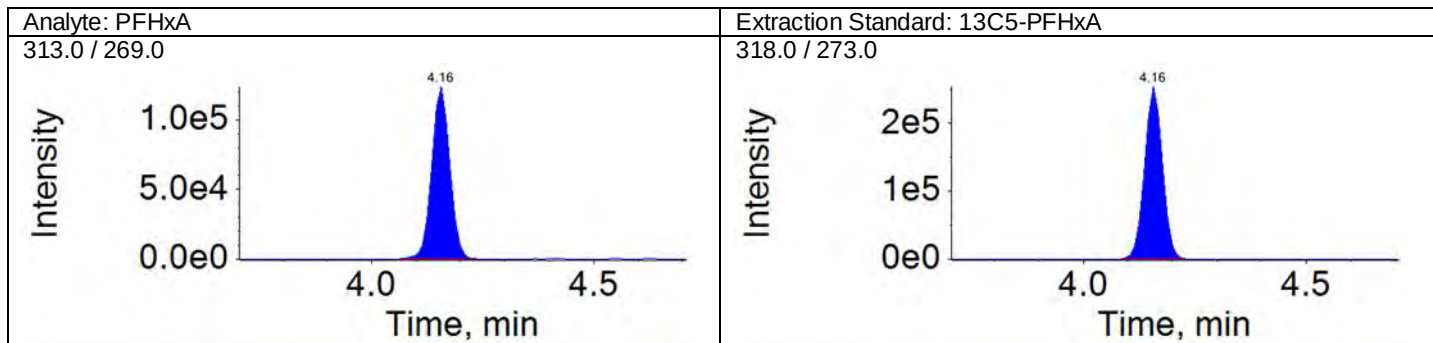
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



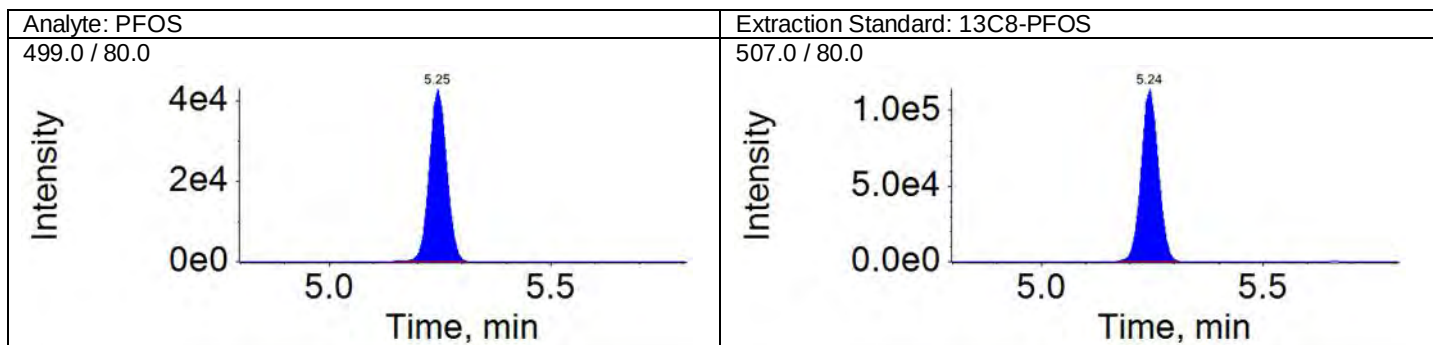
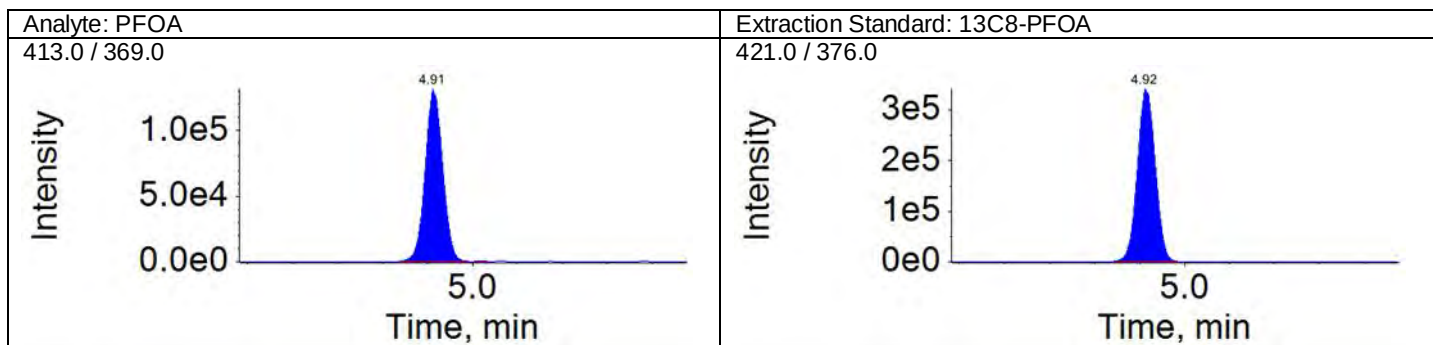
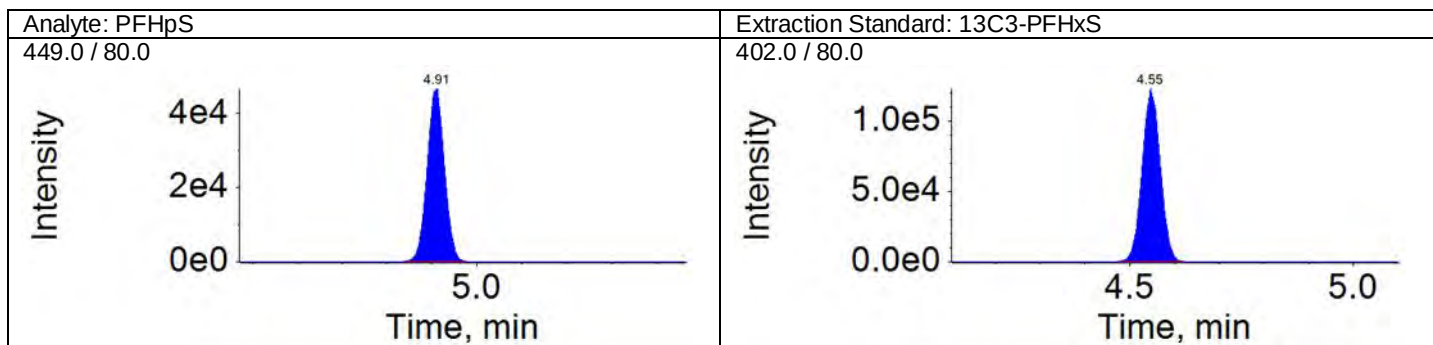
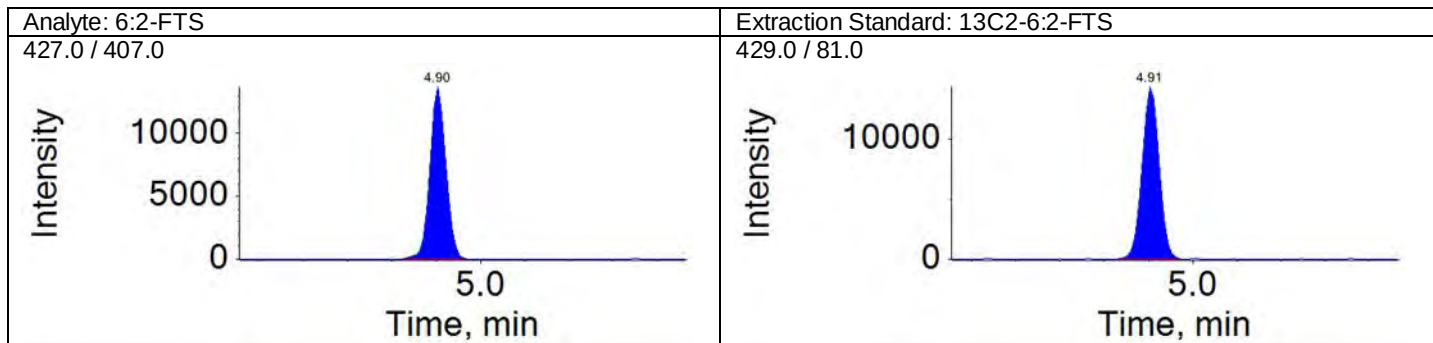
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



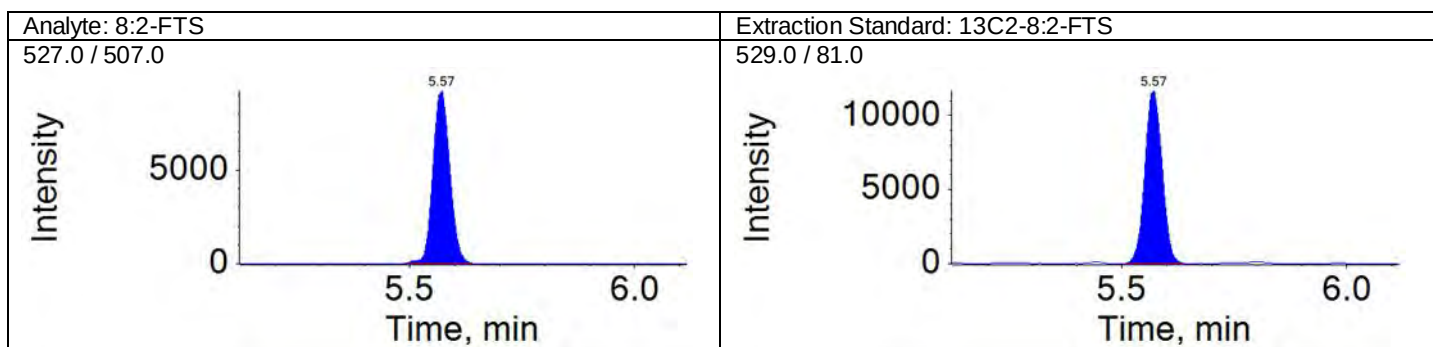
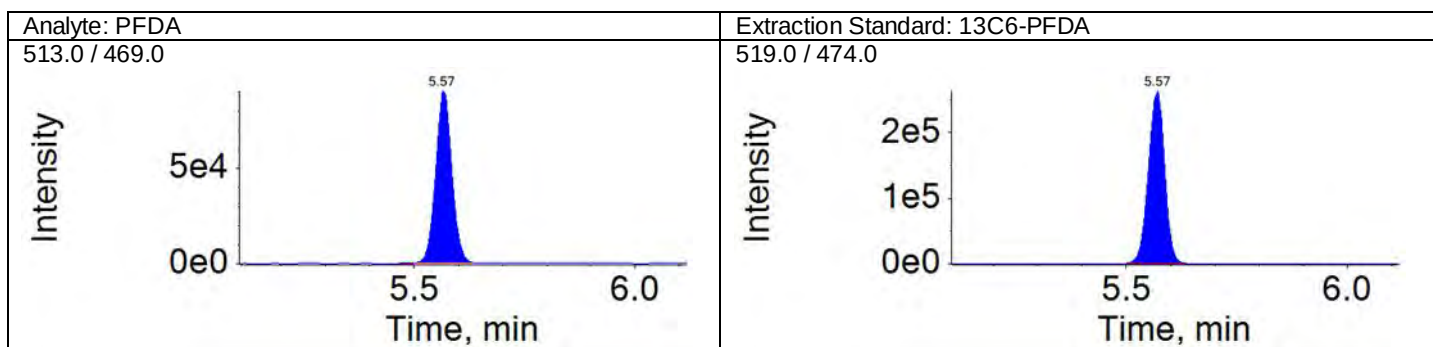
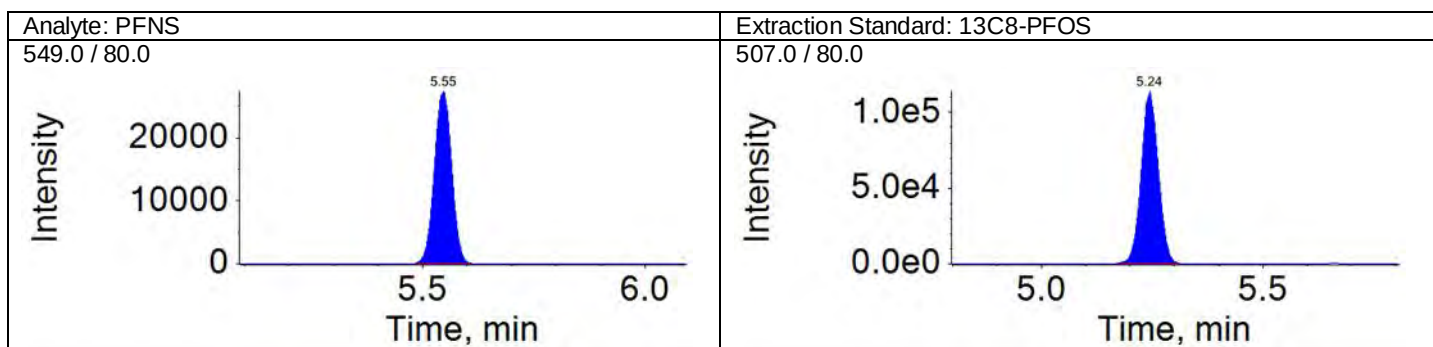
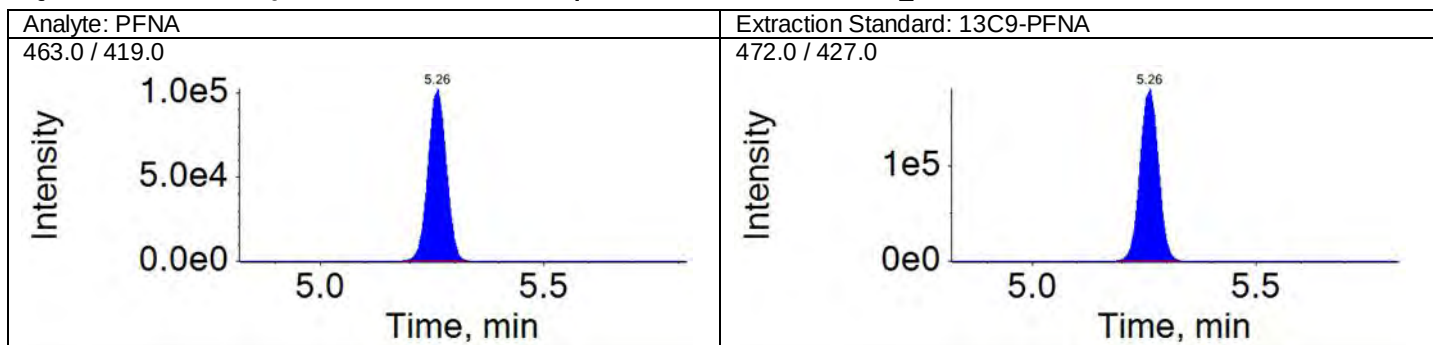
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

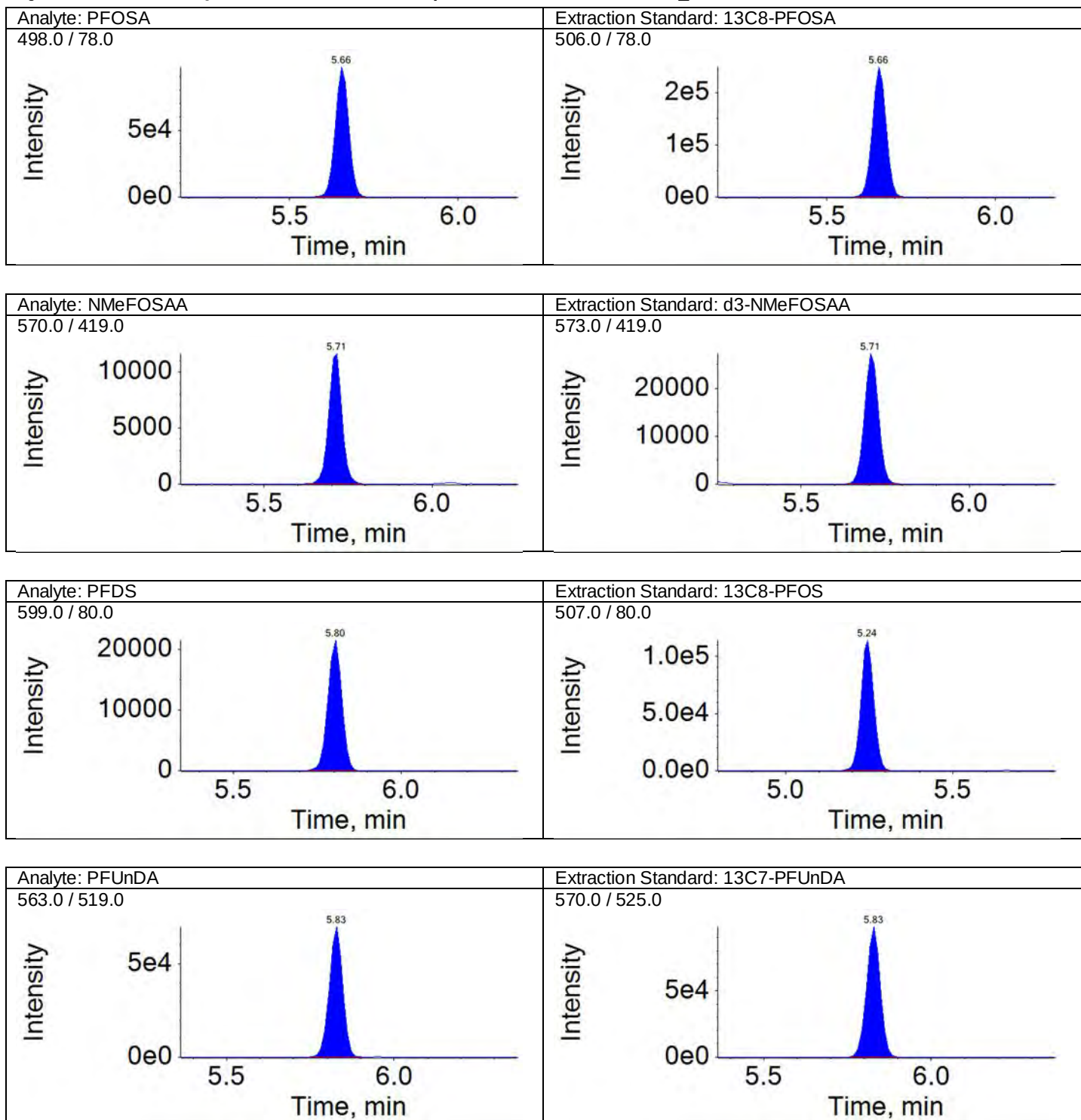
Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

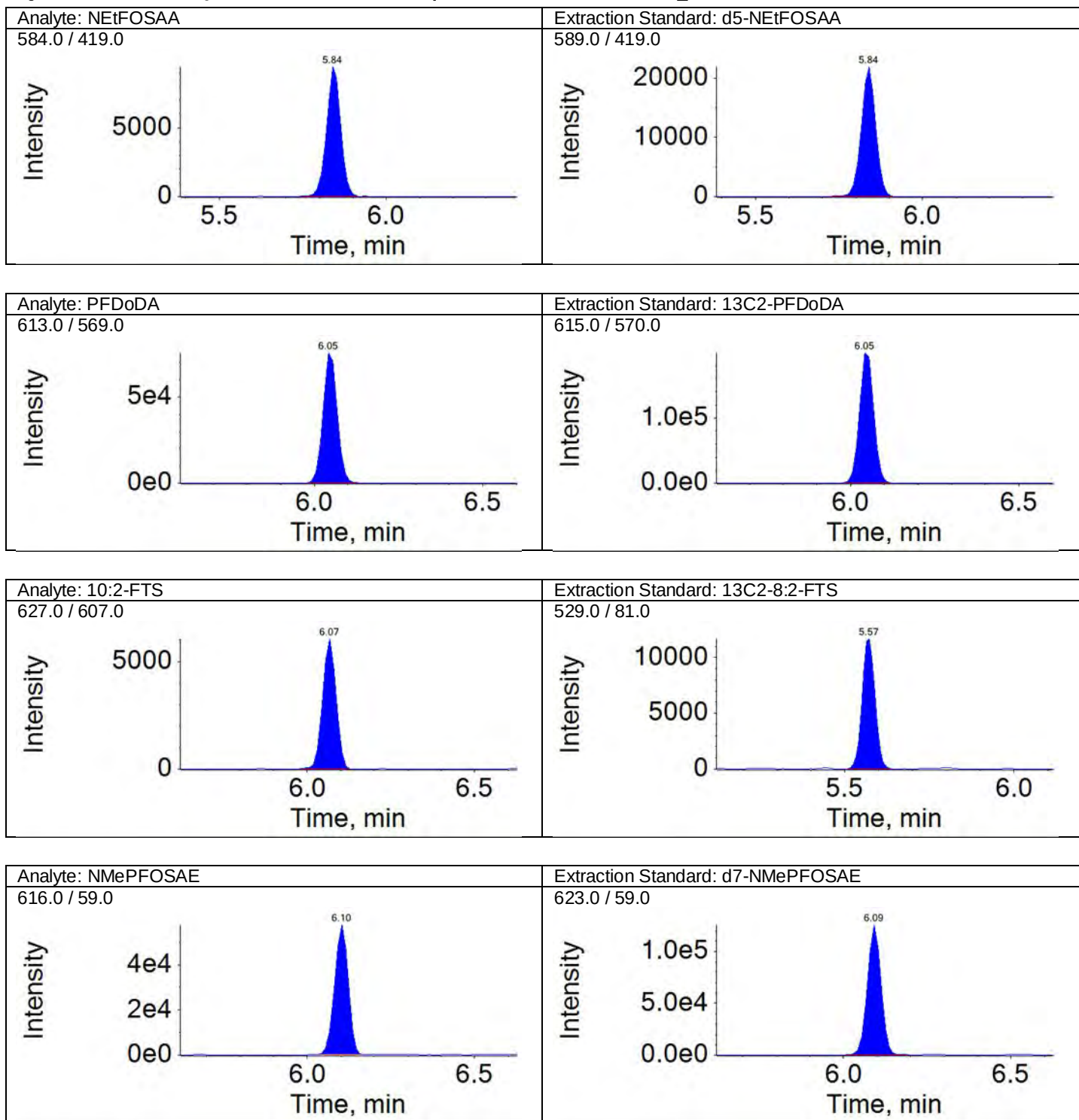


ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

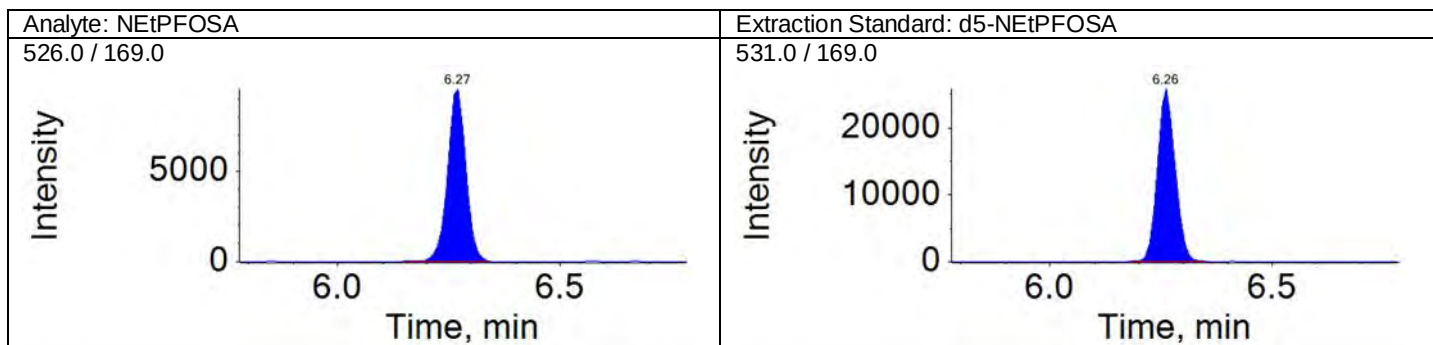
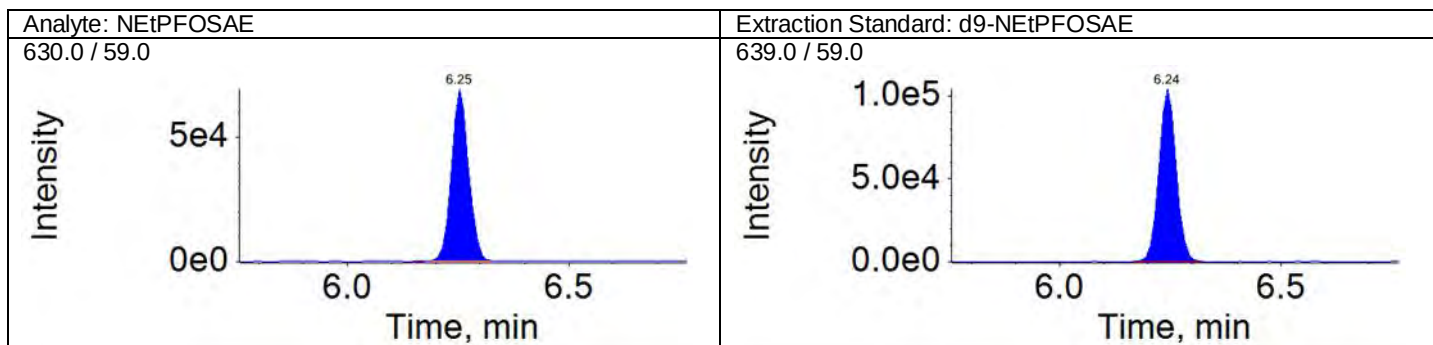
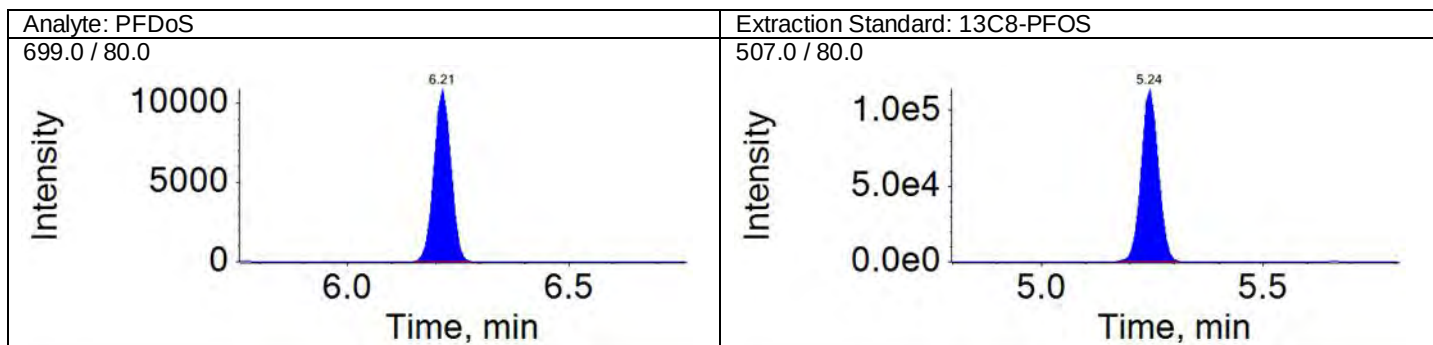
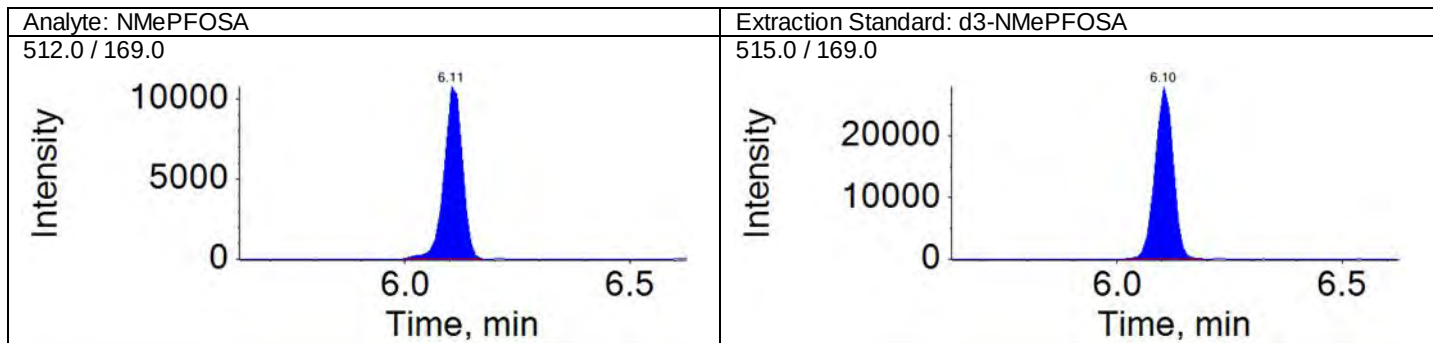


ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam

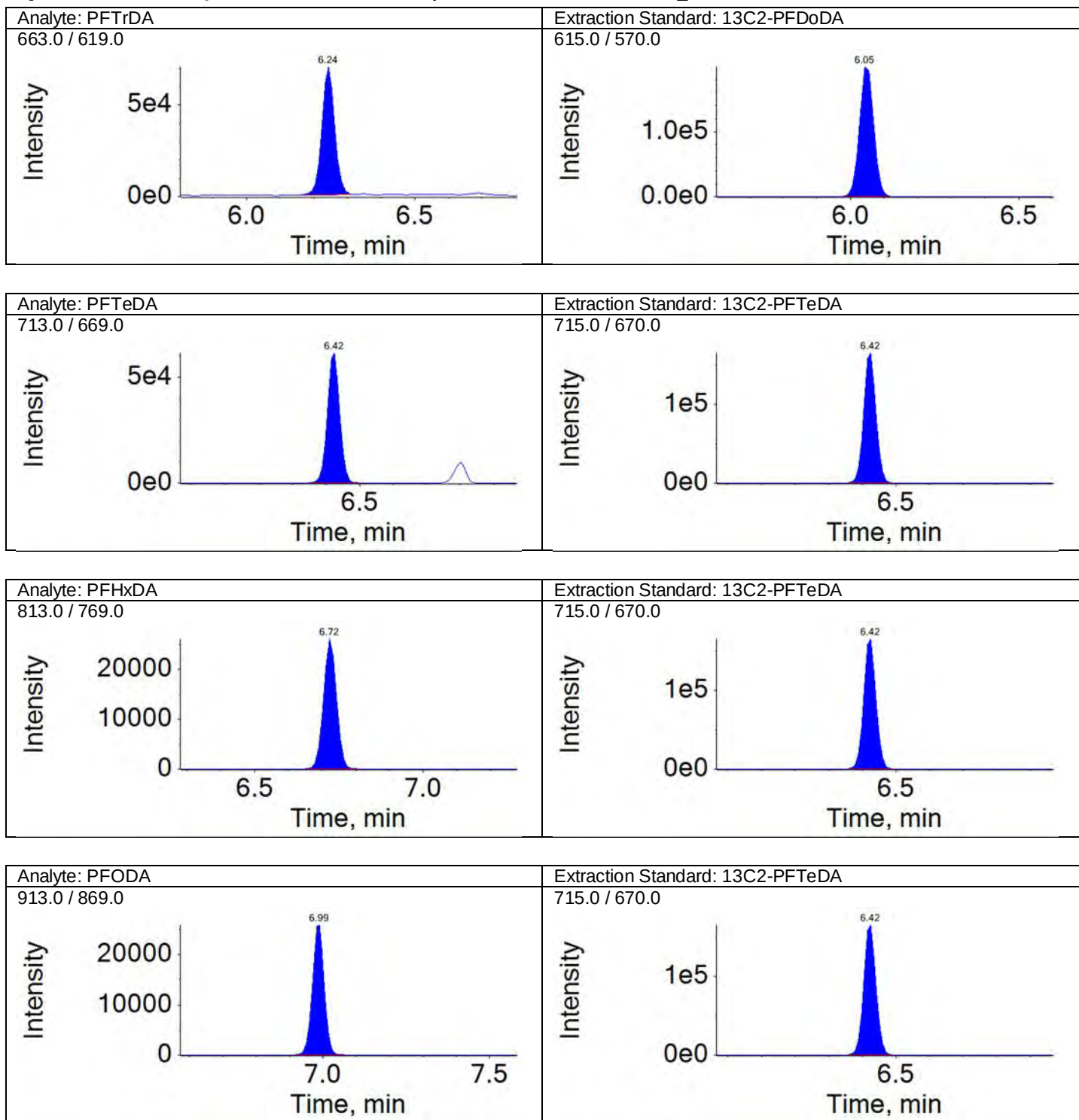
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18NOV08DCCV6-12 11/9/2018 9:21:41 AM
Acquisition Method: 18AUG13_3uL.dam



Ion Ratio Report

Sample Name: CCV8_CAL3

Instrument Name: LM27631

File Name: 18NOV08D-86.wiff

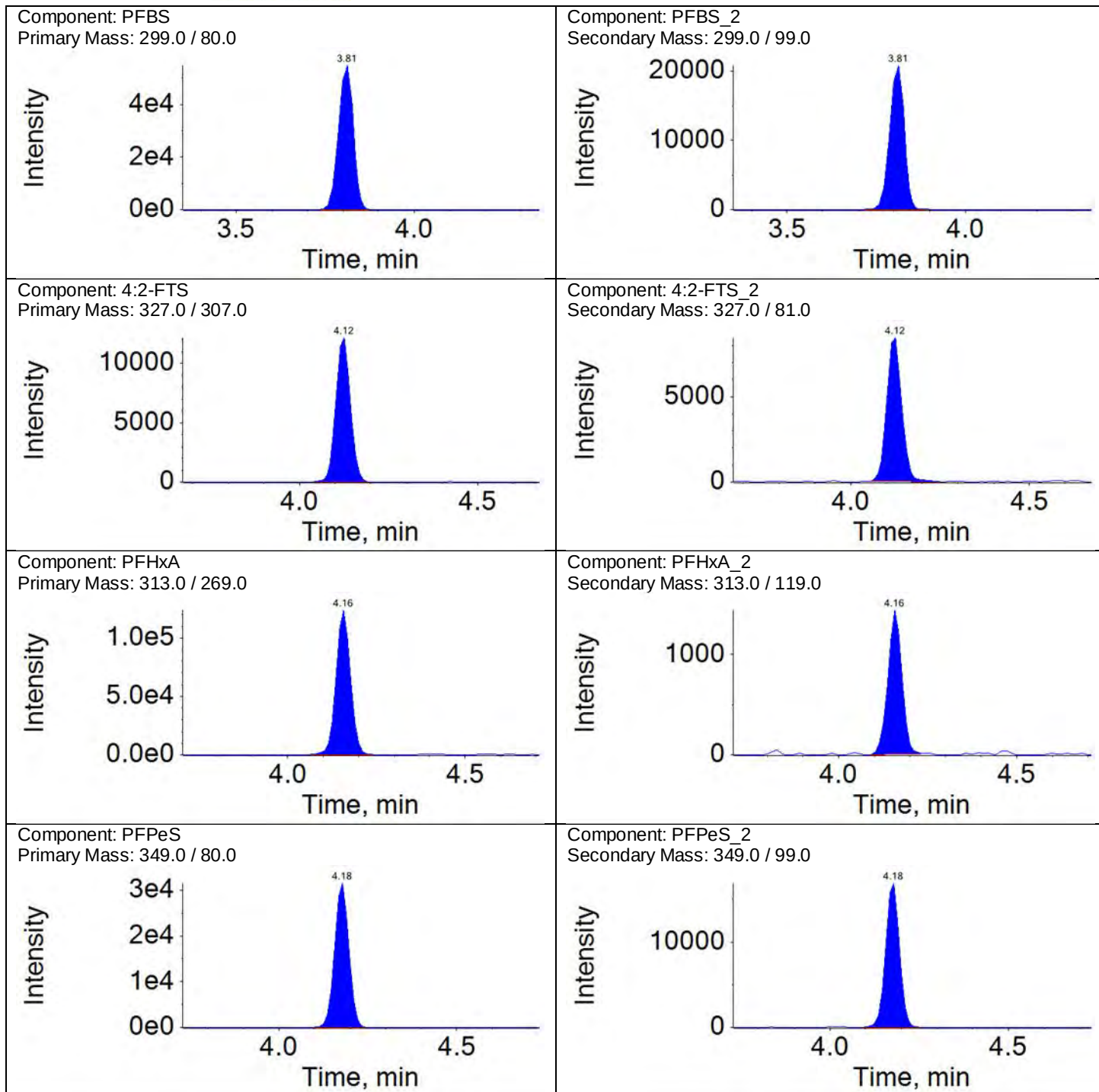
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	159879.7	A	N/A	1.0000			
PFBS_2	3.81	1.00	59535.3	A	N/A	0.3724	4	50	
4:2-FTS	4.12	1.00	34586.7	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	24784.2	A	N/A	0.7166	13	50	
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	
PFTTrDA	6.24	1.03	182645.5	A	N/A	1.0000			
PFTTrDA_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	

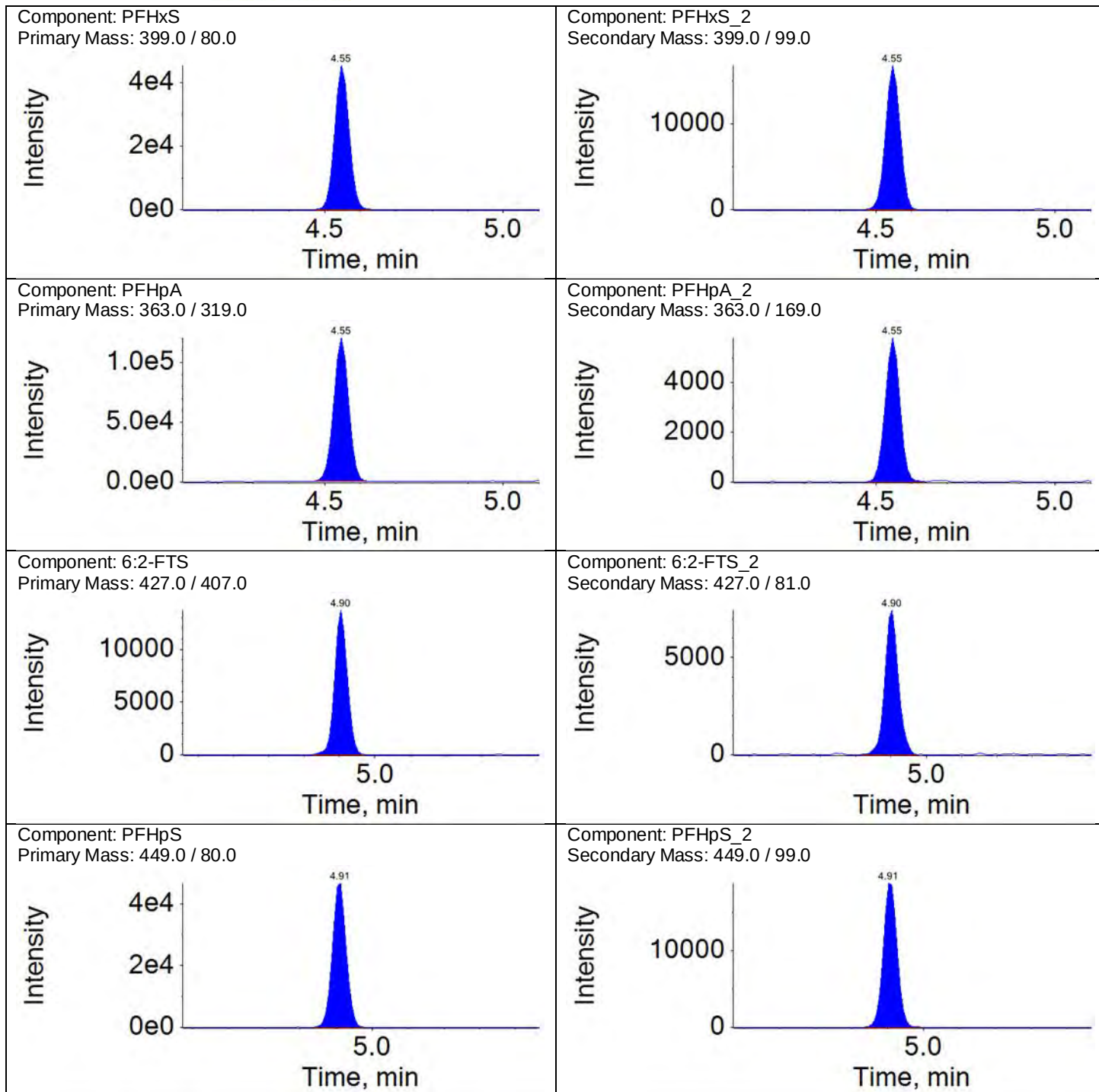
APPROVED

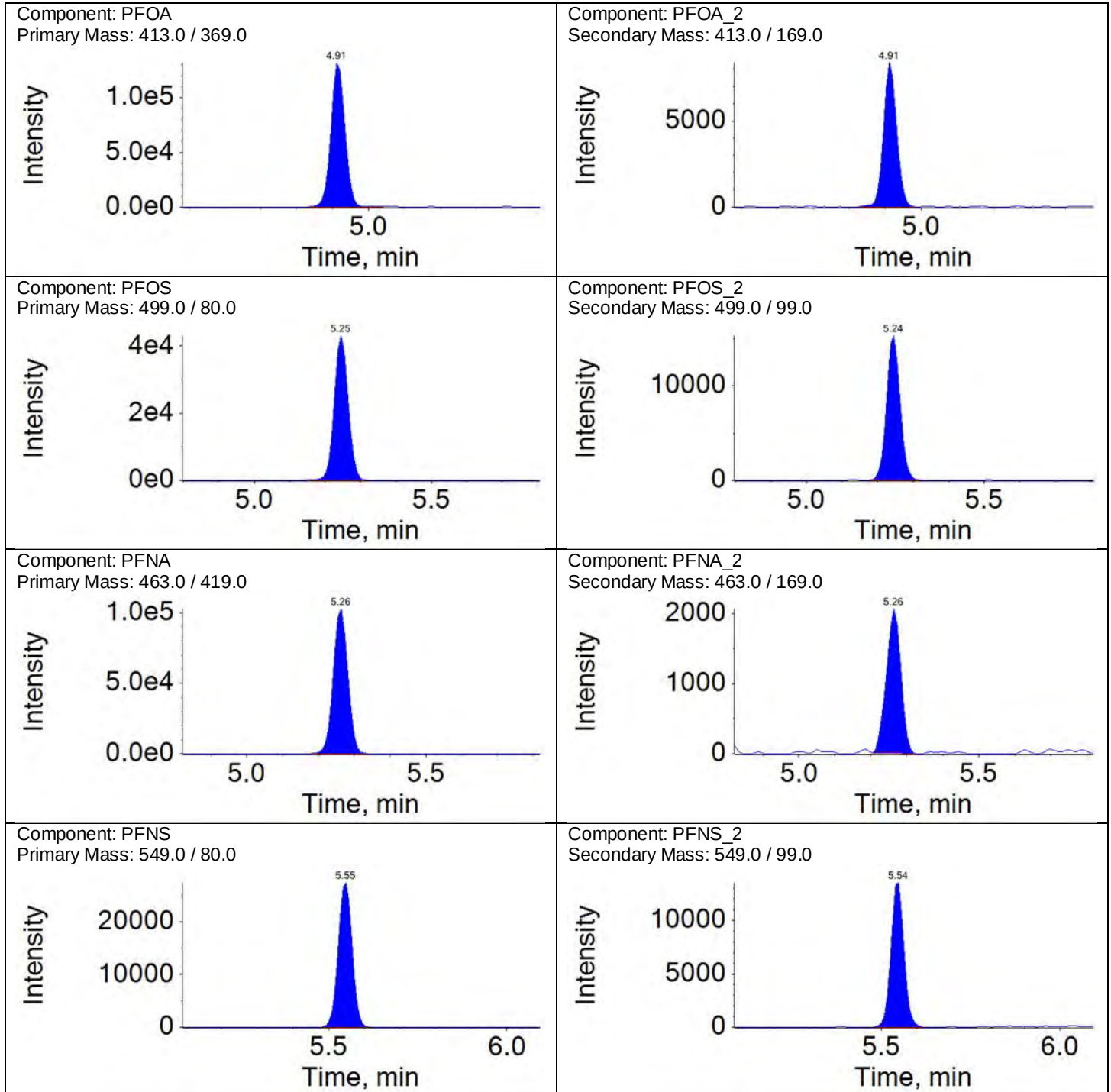
By JPT at 10:55 am, 11/9/18

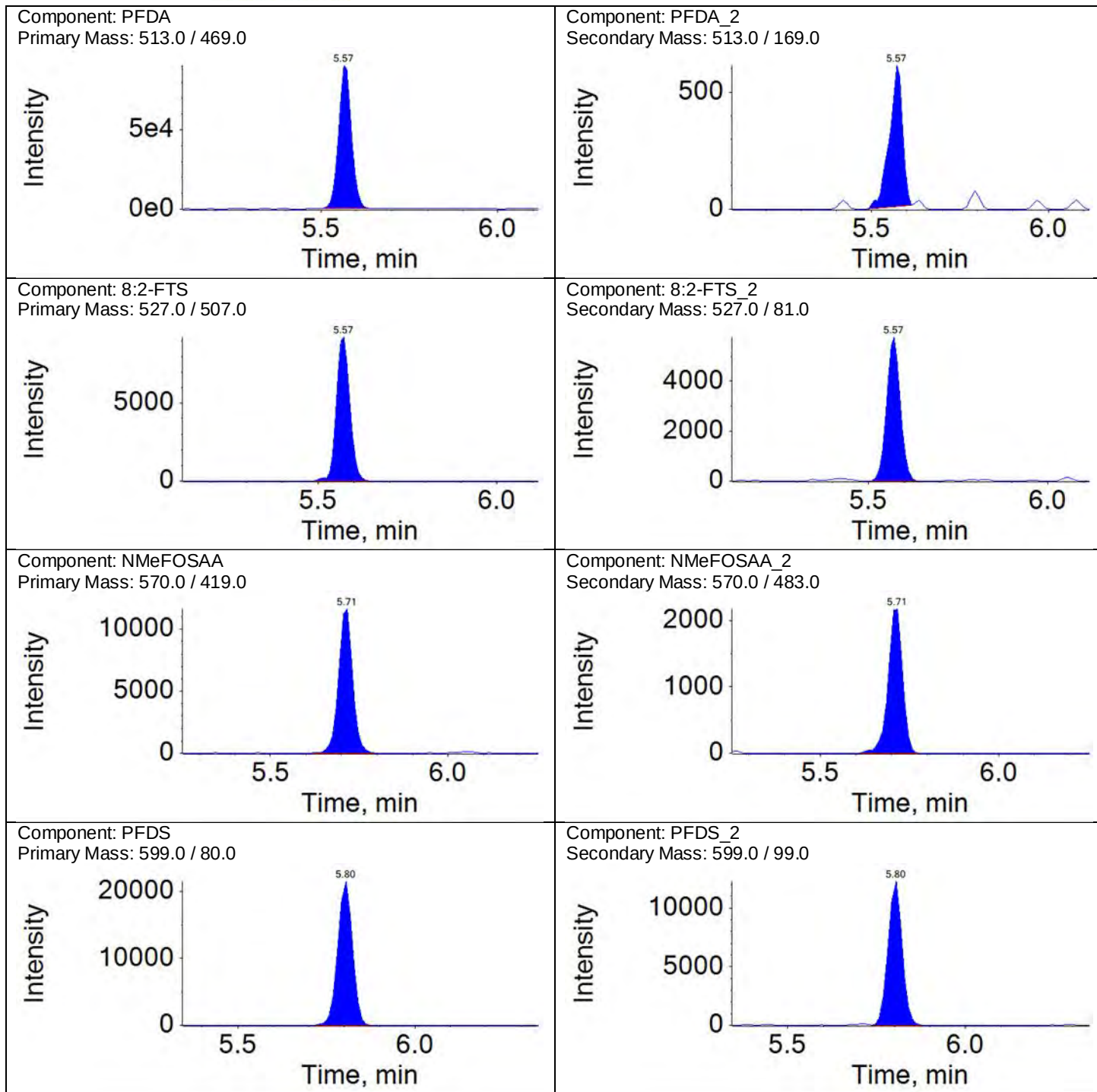
REVIEWED

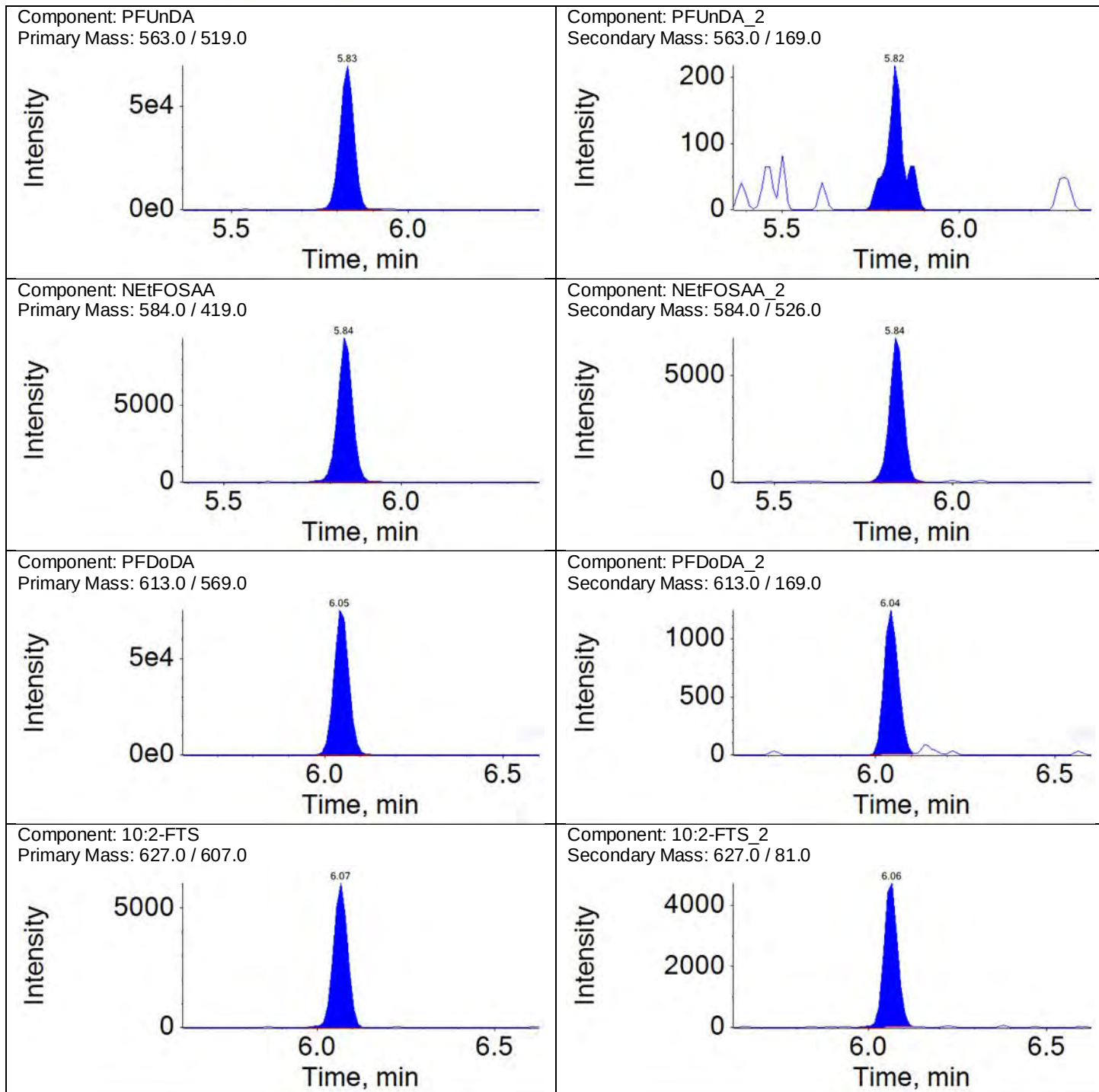
By umar at 3:41 pm, 11/12/18

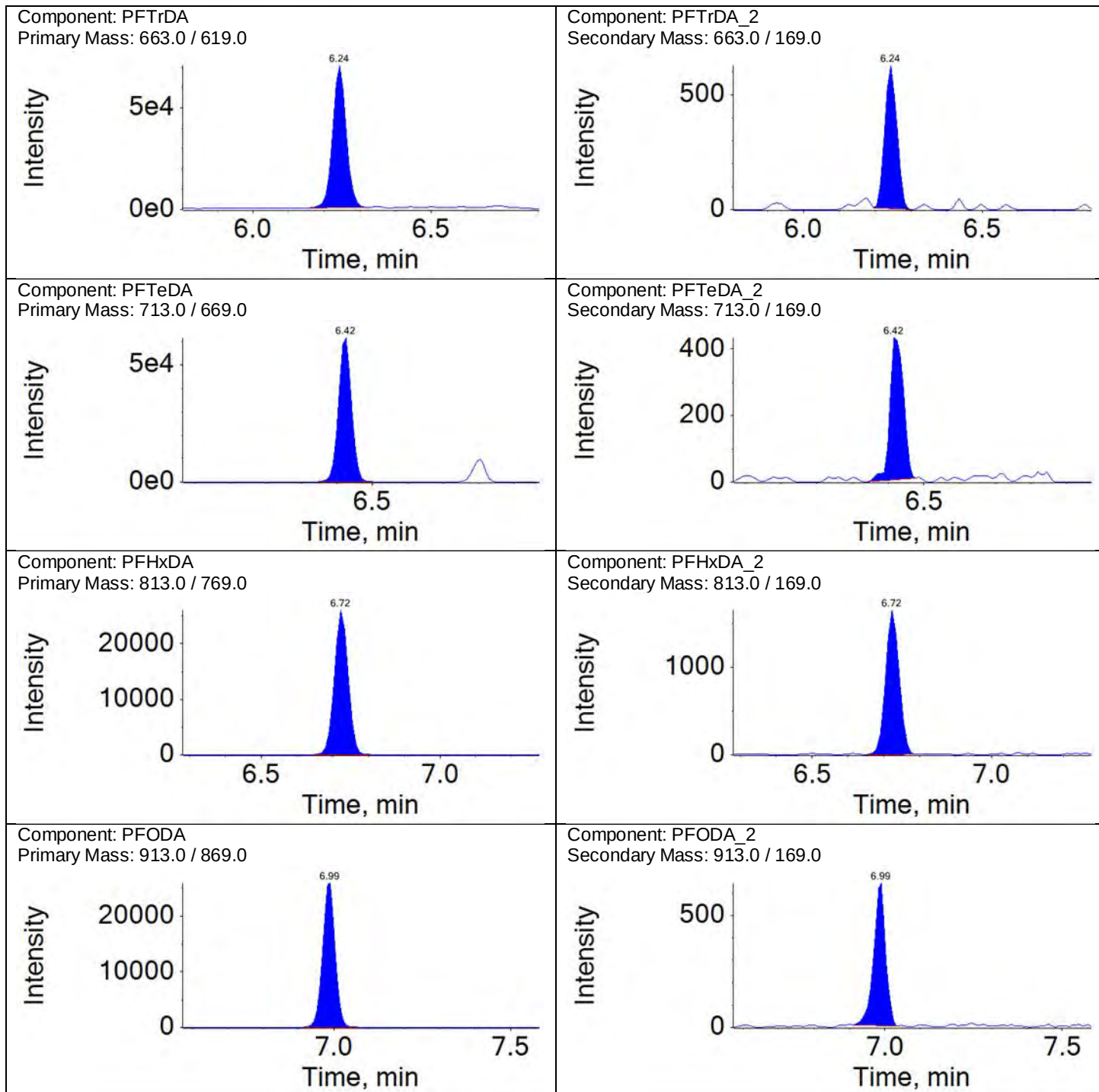












DOD Initial Calibration Verification

Instrument ID: LM27631 ICAI Name: 18NOV12DCAL QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM Acquisition Method: 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV12DCAL-42.wiff	11/12/2018 3:05:54 PM	CALBRN11833C	CAL1
18NOV12DCAL-43.wiff	11/12/2018 3:15:03 PM	CALBRN21833C	CAL2
18NOV12DCAL-44.wiff	11/12/2018 3:24:03 PM	CALBRN31833B	CAL3
18NOV12DCAL-45.wiff	11/12/2018 3:33:03 PM	CALBRN41833B	CAL4
18NOV12DCAL-46.wiff	11/12/2018 3:42:06 PM	CALBRN51833B	CAL5
18NOV12DCAL-47.wiff	11/12/2018 3:51:06 PM	CALBRN61833B	CAL6
18NOV12DCAL-48.wiff	11/12/2018 4:00:06 PM	CALBRN71833B	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	659926.2
CAL3	13C2-PFOA	450219.7
CAL3	13C4-PFOS	249205.8
CAL3	13C2-PFDA	278743.9

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Response Factor Table

Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r ²	OOS
PFBA	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7	20		0.999	
PFPeA	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8	20		0.999	
PFBS	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5	20		1.000	
4:2-FTS	1.764	1.591	1.797	1.672	1.662	1.782	1.703	4	20		0.999	
PFHxA	1.470	1.241	1.361	1.233	1.255	1.160	N/A	8	20		0.998	
PFPeS	0.534	0.400	0.499	0.479	0.471	0.484	0.478	8	20		1.000	
PFHpA	1.776	1.486	1.766	1.619	1.555	1.461	N/A	8	20		0.998	
PFHxS	1.019	0.838	1.029	0.984	0.957	0.972	0.980	6	20		1.000	
6:2-FTS	1.892	1.888	2.214	2.112	2.098	1.876	N/A	7	20		0.996	
PFHpS	1.007	0.773	0.988	0.856	0.922	0.911	0.890	8	20		1.000	
PFOA	1.136	0.940	1.059	0.960	1.022	0.956	0.904	7	20		0.998	
PFOS	1.194	1.024	1.112	1.084	1.110	1.087	1.093	4	20		1.000	
PFNA	1.545	1.489	1.658	1.424	1.542	1.407	1.336	7	20		0.997	
PFNS	0.602	0.621	0.674	0.628	0.676	0.673	0.695	5	20		0.999	
PFDA	1.122	0.883	1.037	0.962	0.987	0.919	N/A	8	20		0.999	
8:2-FTS	2.201	1.873	2.243	1.857	2.127	2.051	N/A	7	20		0.998	
PFOSA	1.113	0.931	1.074	0.954	1.047	1.024	N/A	6	20		0.999	
NMeFOSAA	0.663	0.620	0.877	0.890	0.865	0.893	0.886	13	20		1.000	
PFDS	0.521	0.496	0.511	0.520	0.537	0.515	0.533	2	20		1.000	
PFUnDA	2.280	1.757	2.026	2.069	1.918	1.881	N/A	8	20		0.999	
NEtFOSAA	0.709	1.011	1.153	0.906	0.931	0.963	N/A	14	20		0.998	
PFDODA	1.015	0.935	1.079	0.963	1.034	0.961	N/A	5	20		0.999	
10:2-FTS	1.703	1.561	1.573	1.278	1.573	1.511	1.383	9	20		0.997	
NMePFOSAE	1.287	1.110	1.331	1.179	1.255	1.278	1.152	6	20		0.997	
NMePFOSA	0.758	0.950	0.975	1.020	1.096	0.983	N/A	11	20		0.998	
PFDoS	0.306	0.272	0.264	0.272	0.266	0.278	0.272	5	20		1.000	
NEtPFOSAE	1.873	1.487	1.717	1.622	1.623	1.516	N/A	8	20		0.999	
NEtPFOSA	1.129	1.156	1.156	1.125	1.166	1.070	1.078	3	20		0.999	
PFTTrDA	0.925	0.751	0.839	0.808	0.827	0.774	N/A	7	20		0.999	
PFTeDA	0.996	0.851	0.994	0.911	0.934	0.892	0.880	6	20		0.999	
PFHxDA	0.486	0.402	0.442	0.409	0.413	0.435	0.414	6	20		0.999	
PFODA	0.367	0.316	0.367	0.349	0.358	0.360	0.359	5	20		1.000	

DOD Initial Calibration Verification

Instrument ID: LM27631

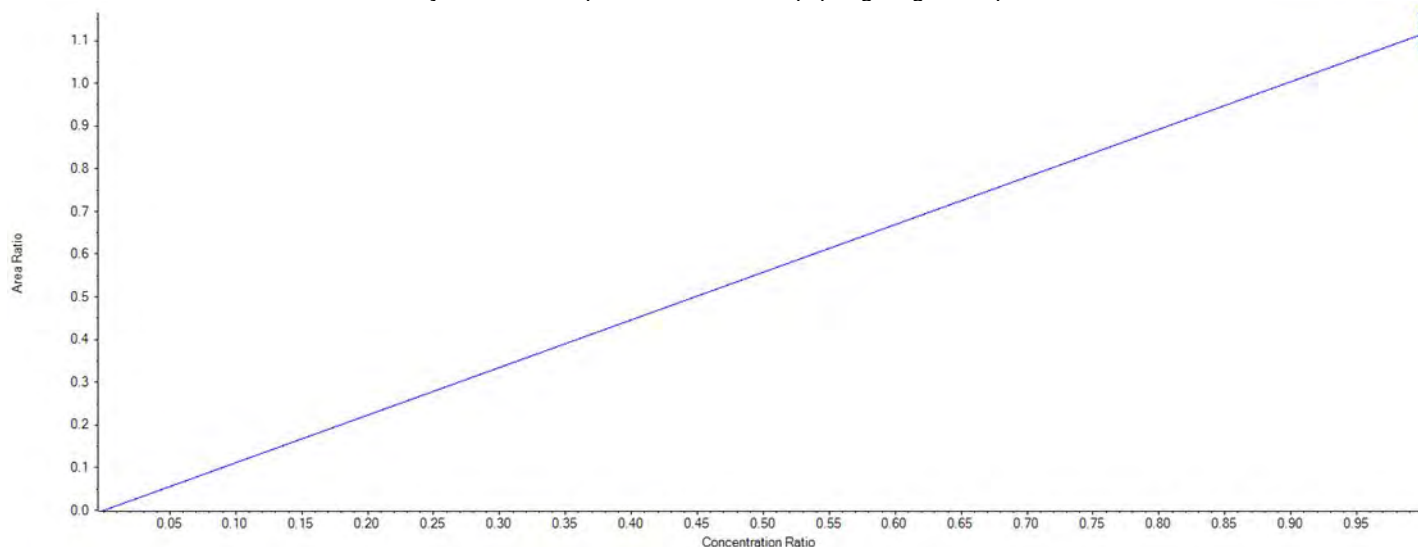
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C4-PFBA

 $y = 1.11523 x$ (std. dev. = 0.03058) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	763334.27	676527.50	True	5.00	1.128	3.27	1.000	5.000	5.059	1	30	
CAL2	771445.80	662396.70	True	5.00	1.165	3.27	1.000	5.000	5.221	4	30	
CAL3	733360.15	659926.18	True	5.00	1.111	3.27	1.000	5.000	4.982	0	30	
CAL4	726395.96	671568.05	True	5.00	1.082	3.26	1.000	5.000	4.849	-3	30	
CAL5	698871.91	641789.51	True	5.00	1.089	3.26	1.000	5.000	4.882	-2	30	
CAL6	633648.38	555817.86	True	5.00	1.140	3.27	1.000	5.000	5.111	2	30	
CAL7	557392.78	510525.81	True	5.00	1.092	3.25	1.000	5.000	4.895	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

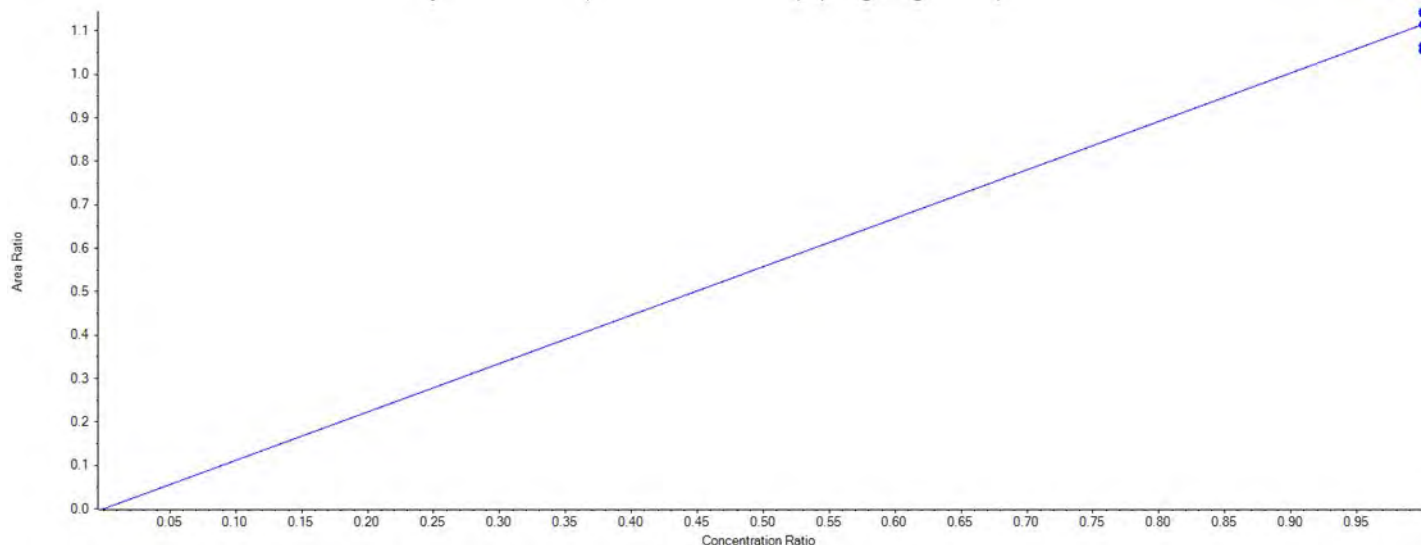
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C5-PFPeA

 $y = 1.11477 x$ (std. dev. = 0.03868) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	771179.39	676527.50	True	5.00	1.140	3.76	1.150	5.000	5.113	2	30	
CAL2	738194.74	662396.70	True	5.00	1.114	3.77	1.150	5.000	4.998	0	30	
CAL3	695805.67	659926.18	True	5.00	1.054	3.77	1.150	5.000	4.729	-5	30	
CAL4	716206.93	671568.05	True	5.00	1.066	3.76	1.150	5.000	4.783	-4	30	
CAL5	734598.25	641789.51	True	5.00	1.145	3.76	1.150	5.000	5.134	3	30	
CAL6	635977.79	555817.86	True	5.00	1.144	3.76	1.150	5.000	5.132	3	30	
CAL7	581688.66	510525.81	True	5.00	1.139	3.75	1.150	5.000	5.110	2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

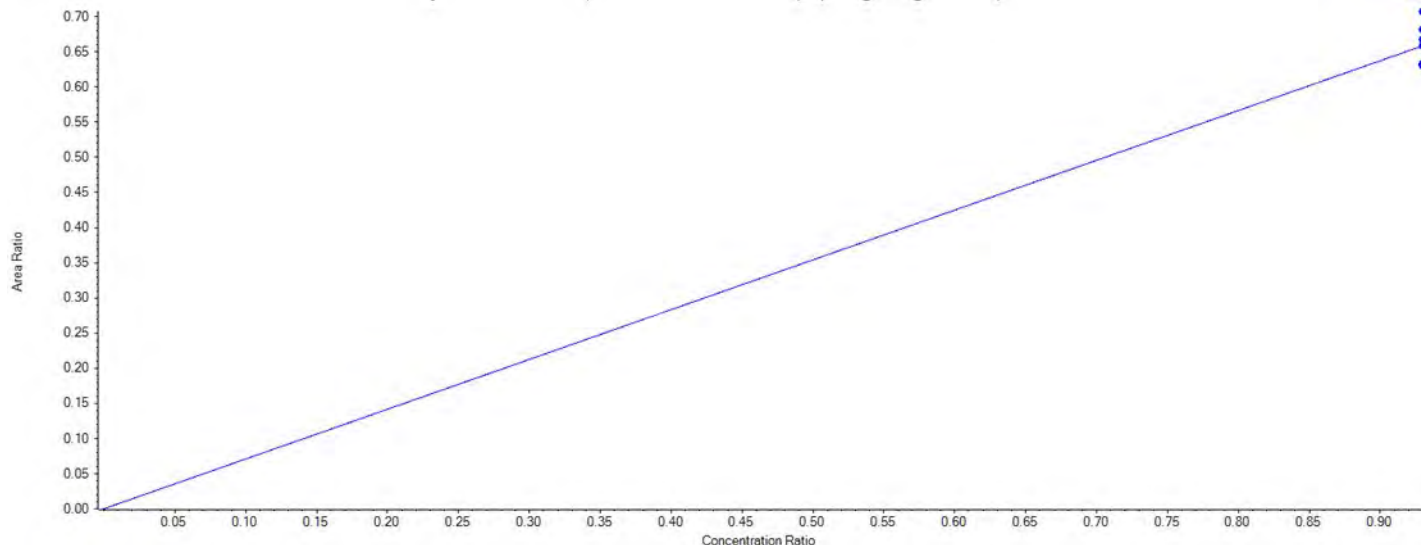
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C3-PFBS

 $y = 0.70830 x$ (std. dev. = 0.03132) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	445963.43	676527.50	True	5.00	0.659	3.81	1.170	4.650	4.653	0	30	
CAL2	418860.68	662396.70	True	5.00	0.632	3.82	1.170	4.650	4.464	-4	30	
CAL3	416352.75	659926.18	True	5.00	0.631	3.82	1.170	4.650	4.454	-4	30	
CAL4	425015.72	671568.05	True	5.00	0.633	3.81	1.170	4.650	4.468	-4	30	
CAL5	428050.64	641789.51	True	5.00	0.667	3.81	1.170	4.650	4.708	1	30	
CAL6	378676.81	555817.86	True	5.00	0.681	3.81	1.170	4.650	4.809	3	30	
CAL7	361166.00	510525.81	True	5.00	0.707	3.80	1.170	4.650	4.994	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

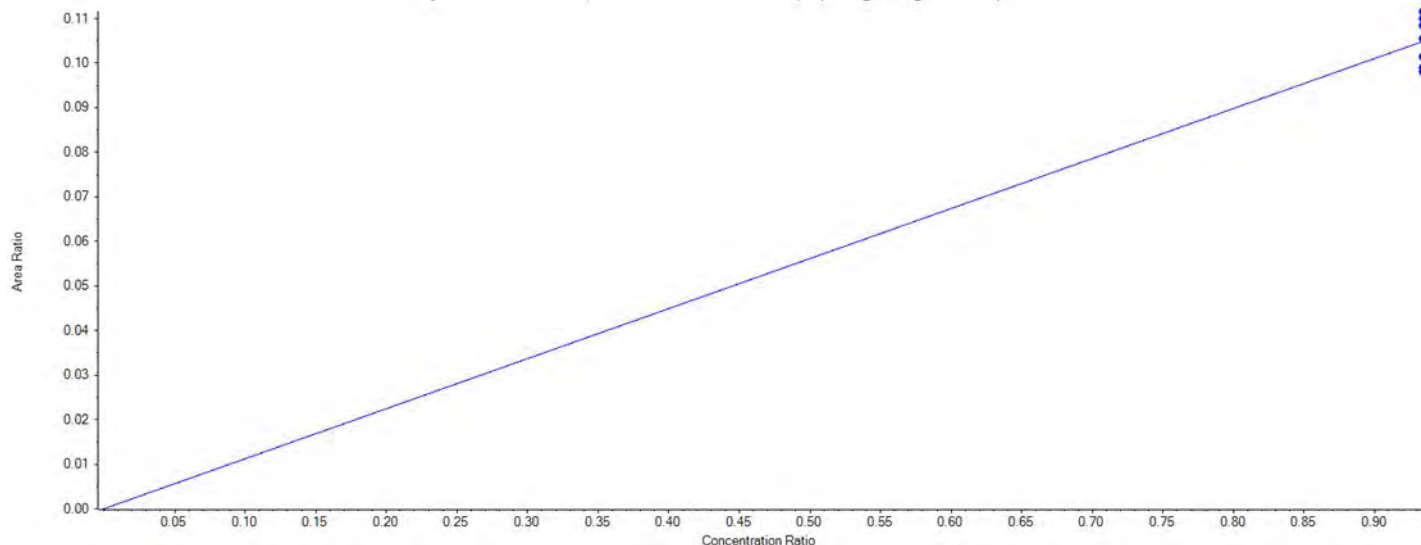
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C2-4:2-FTS

 $y = 0.11226 x$ (std. dev. = 0.00584) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	51494.57	474834.93	True	5.00	0.108	4.13	0.840	4.670	4.830	3	30	
CAL2	46141.76	454466.72	True	5.00	0.102	4.13	0.840	4.670	4.522	-3	30	
CAL3	47514.79	450219.68	True	5.00	0.106	4.13	0.840	4.670	4.700	1	30	
CAL4	47246.37	477519.68	True	5.00	0.099	4.13	0.840	4.670	4.407	-6	30	
CAL5	51791.87	464284.62	True	5.00	0.112	4.12	0.840	4.670	4.968	6	30	
CAL6	41422.17	422900.47	True	5.00	0.098	4.13	0.840	4.670	4.362	-7	30	
CAL7	40505.09	368158.25	True	5.00	0.110	4.11	0.840	4.670	4.900	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

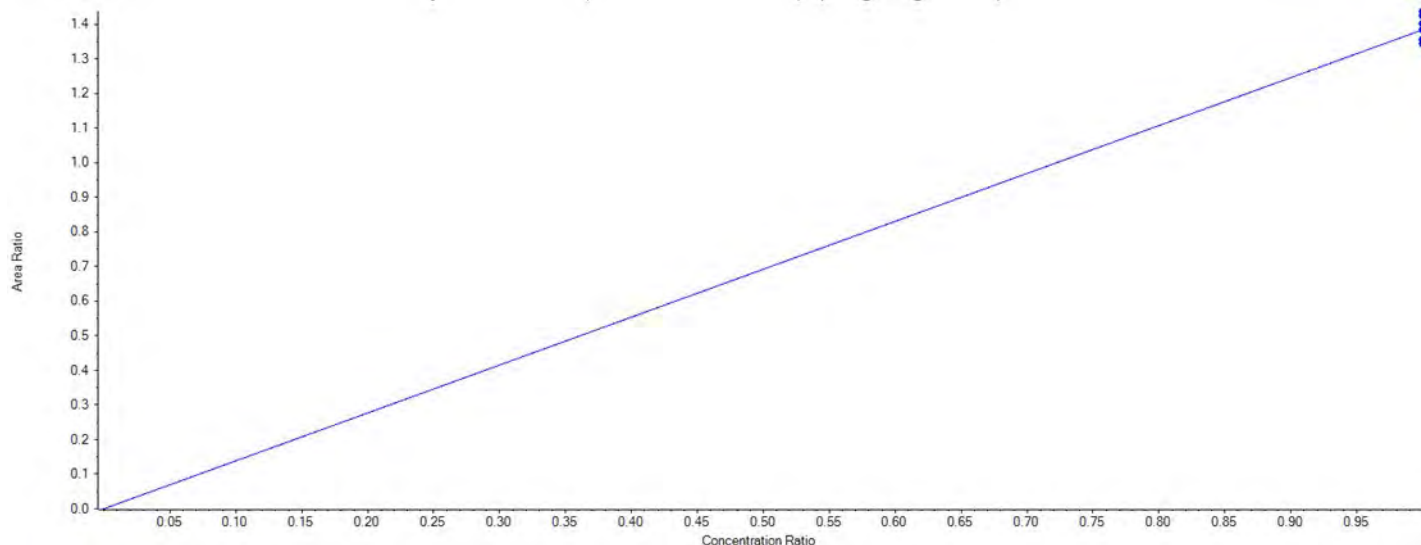
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C5-PFHxA

 $y = 1.38415 \times (\text{std. dev.} = 0.03876)$ (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664975.88	474834.93	True	5.00	1.400	4.16	0.850	5.000	5.059	1	30	
CAL2	648170.06	454466.72	True	5.00	1.426	4.17	0.850	5.000	5.152	3	30	
CAL3	646783.50	450219.68	True	5.00	1.437	4.17	0.850	5.000	5.189	4	30	
CAL4	641195.85	477519.68	True	5.00	1.343	4.16	0.850	5.000	4.851	-3	30	
CAL5	628952.79	464284.62	True	5.00	1.355	4.15	0.850	5.000	4.894	-2	30	
CAL6	568205.82	422900.47	True	5.00	1.344	4.16	0.850	5.000	4.854	-3	30	
CAL7	509807.95	368158.25	True	5.00	1.385	4.15	0.840	5.000	5.002	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

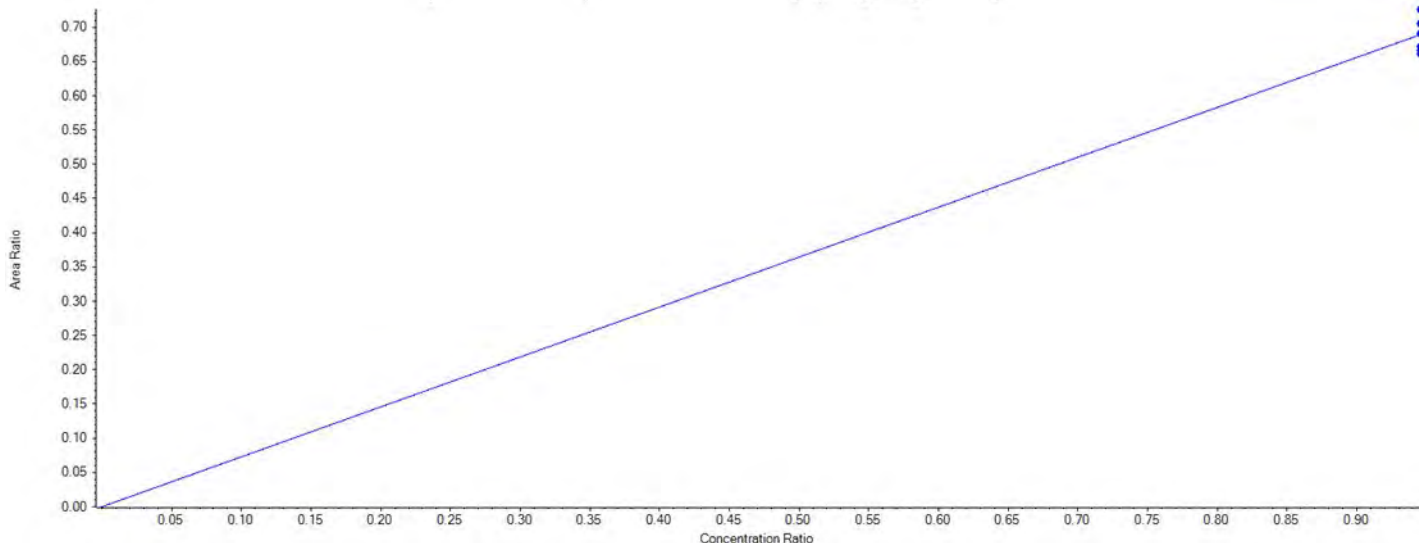
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C3-PFHxS

 $y = 0.72866 x$ (std. dev. = 0.02531) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	327944.53	474834.93	True	5.00	0.691	4.55	0.930	4.730	4.739	0	30	
CAL2	320400.37	454466.72	True	5.00	0.705	4.56	0.930	4.730	4.838	2	30	
CAL3	317243.20	450219.68	True	5.00	0.705	4.56	0.930	4.730	4.835	2	30	
CAL4	315722.63	477519.68	True	5.00	0.661	4.55	0.930	4.730	4.537	-4	30	
CAL5	309304.49	464284.62	True	5.00	0.666	4.54	0.920	4.730	4.571	-3	30	
CAL6	284116.51	422900.47	True	5.00	0.672	4.55	0.920	4.730	4.610	-3	30	
CAL7	267182.79	368158.25	True	5.00	0.726	4.54	0.920	4.730	4.980	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

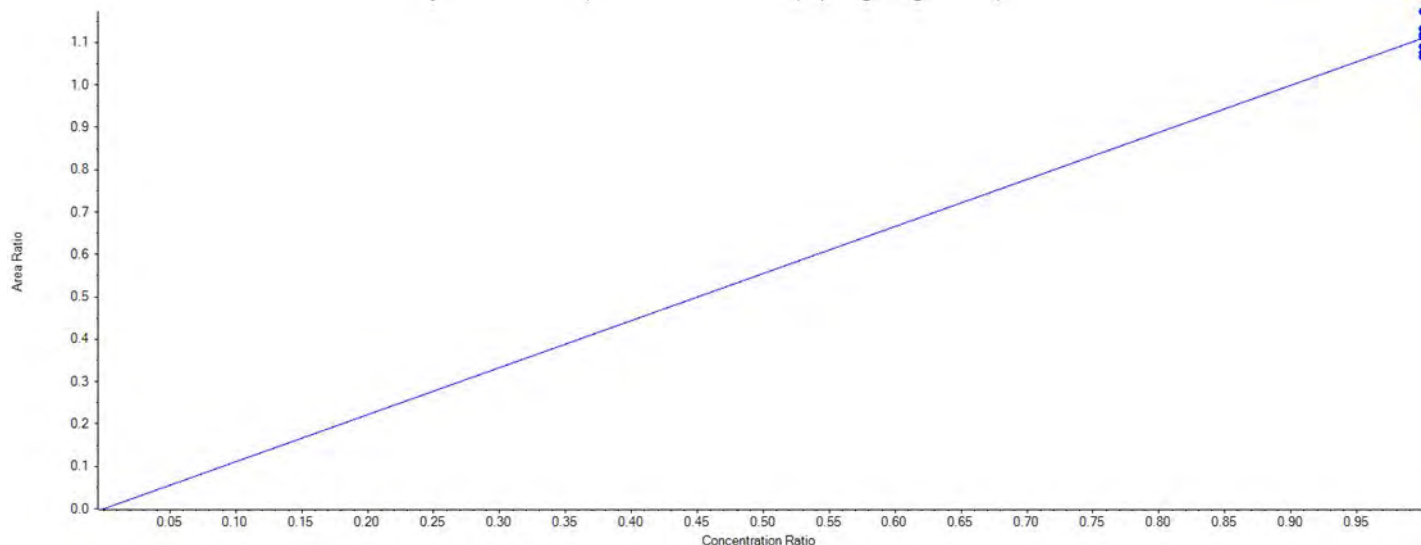
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C4-PFHpA

 $y = 1.10984 \times (\text{std. dev.} = 0.03656)$ (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	528473.49	474834.93	True	5.00	1.113	4.55	0.920	5.000	5.014	0	30	
CAL2	532987.49	454466.72	True	5.00	1.173	4.55	0.920	5.000	5.284	6	30	
CAL3	503681.03	450219.68	True	5.00	1.119	4.55	0.920	5.000	5.040	1	30	
CAL4	509151.78	477519.68	True	5.00	1.066	4.55	0.920	5.000	4.804	-4	30	
CAL5	525802.05	464284.62	True	5.00	1.132	4.54	0.920	5.000	5.102	2	30	
CAL6	455005.81	422900.47	True	5.00	1.076	4.55	0.920	5.000	4.847	-3	30	
CAL7	401203.88	368158.25	True	5.00	1.090	4.54	0.920	5.000	4.910	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

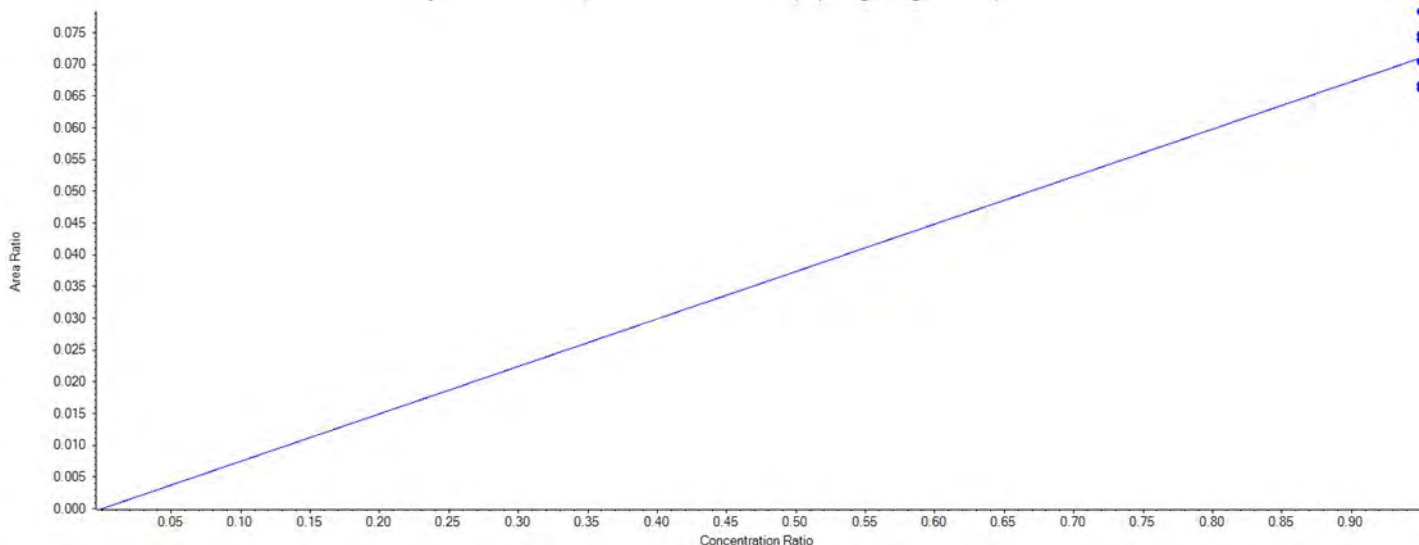
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C2-6:2-FTS

 $y = 0.07473 \times (\text{std. dev.} = 0.00497)$ (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	35455.22	474834.93	True	5.00	0.075	4.91	1.000	4.750	4.996	5	30	
CAL2	35585.69	454466.72	True	5.00	0.078	4.91	1.000	4.750	5.239	10	30	
CAL3	31706.42	450219.68	True	5.00	0.070	4.91	1.000	4.750	4.712	-1	30	
CAL4	31883.28	477519.68	True	5.00	0.067	4.91	1.000	4.750	4.467	-6	30	
CAL5	31012.00	464284.62	True	5.00	0.067	4.90	1.000	4.750	4.469	-6	30	
CAL6	27988.49	422900.47	True	5.00	0.066	4.91	1.000	4.750	4.428	-7	30	
CAL7	27180.24	368158.25	True	5.00	0.074	4.89	1.000	4.750	4.939	4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

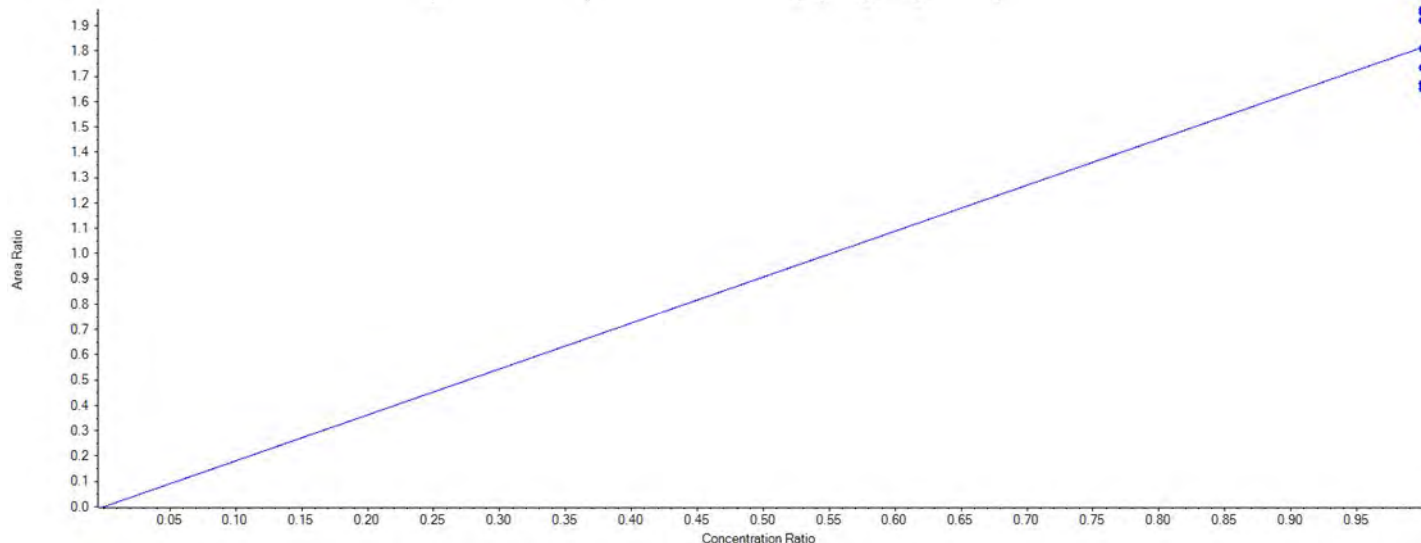
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C8-PFOA

 $y = 1.81479x$ (std. dev. = 0.13316) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	912537.72	474834.93	True	5.00	1.922	4.92	1.000	5.000	5.295	6	30	
CAL2	892584.21	454466.72	True	5.00	1.964	4.92	1.000	5.000	5.411	8	30	
CAL3	878868.48	450219.68	True	5.00	1.952	4.93	1.000	5.000	5.378	8	30	
CAL4	863597.26	477519.68	True	5.00	1.809	4.92	1.000	5.000	4.983	0	30	
CAL5	805288.72	464284.62	True	5.00	1.734	4.91	1.000	5.000	4.779	-4	30	
CAL6	707130.31	422900.47	True	5.00	1.672	4.92	1.000	5.000	4.607	-8	30	
CAL7	607669.53	368158.25	True	5.00	1.651	4.91	1.000	5.000	4.548	-9	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

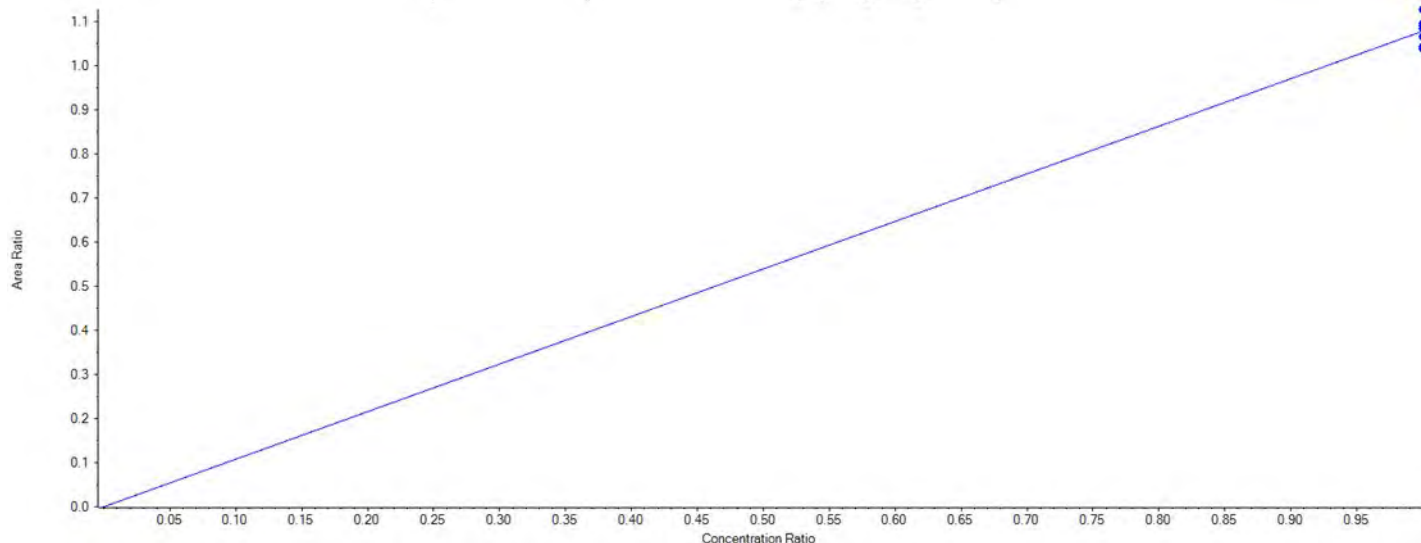
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C8-PFOS

 $y = 1.07880 x$ (std. dev. = 0.03134) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	283127.43	265368.99	True	4.78	1.067	5.25	1.000	4.780	4.727	-1	30	
CAL2	271778.84	250483.82	True	4.78	1.085	5.25	1.000	4.780	4.808	1	30	
CAL3	281035.50	249205.78	True	4.78	1.128	5.25	1.000	4.780	4.997	5	30	
CAL4	267380.81	256143.29	True	4.78	1.044	5.25	1.000	4.780	4.625	-3	30	
CAL5	267157.61	243589.87	True	4.78	1.097	5.24	1.000	4.780	4.860	2	30	
CAL6	253129.16	231712.12	True	4.78	1.092	5.25	1.000	4.780	4.840	1	30	
CAL7	242617.53	233532.69	True	4.78	1.039	5.24	1.000	4.780	4.603	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

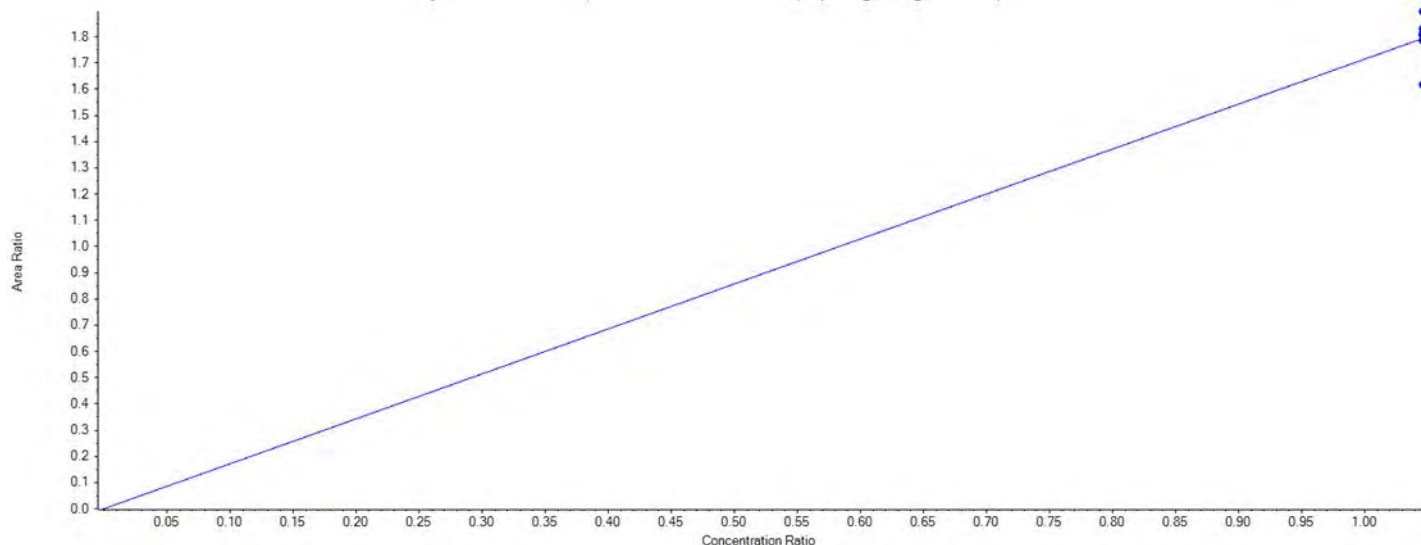
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C9-PFNA

 $y = 1.71440 x$ (std. dev. = 0.08194) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	479931.43	265368.99	True	4.78	1.809	5.26	1.000	5.000	5.042	1	30	
CAL2	451850.14	250483.82	True	4.78	1.804	5.27	1.000	5.000	5.030	1	30	
CAL3	455948.85	249205.78	True	4.78	1.830	5.27	1.000	5.000	5.101	2	30	
CAL4	485570.41	256143.29	True	4.78	1.896	5.26	1.000	5.000	5.285	6	30	
CAL5	441776.75	243589.87	True	4.78	1.814	5.26	1.000	5.000	5.057	1	30	
CAL6	413811.35	231712.12	True	4.78	1.786	5.27	1.000	5.000	4.979	0	30	
CAL7	377369.76	233532.69	True	4.78	1.616	5.25	1.000	5.000	4.505	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

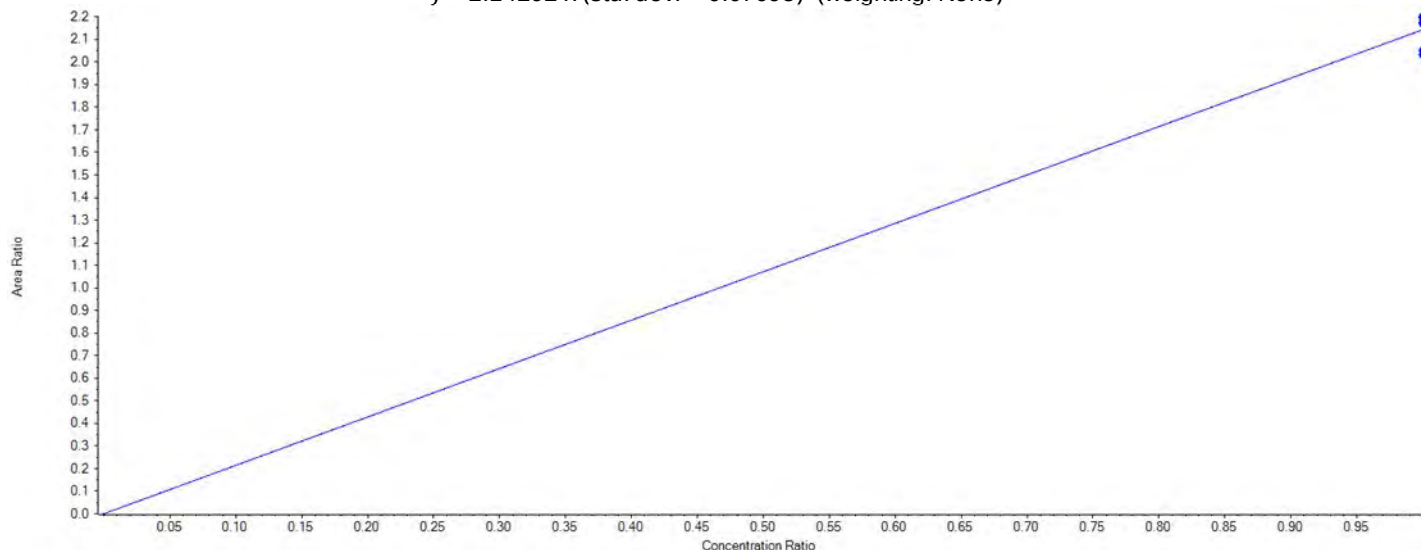
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C6-PFDA

 $y = 2.14262 \times (\text{std. dev.} = 0.07095)$ (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	612577.43	281654.75	True	5.00	2.175	5.57	1.000	5.000	5.075	2	30	
CAL2	601859.80	277324.19	True	5.00	2.170	5.57	1.000	5.000	5.064	1	30	
CAL3	612680.79	278743.89	True	5.00	2.198	5.57	1.000	5.000	5.129	3	30	
CAL4	612056.47	301327.18	True	5.00	2.031	5.56	1.000	5.000	4.740	-5	30	
CAL5	585231.23	269315.72	True	5.00	2.173	5.56	1.000	5.000	5.071	1	30	
CAL6	522613.81	237446.93	True	5.00	2.201	5.57	1.000	5.000	5.136	3	30	
CAL7	479333.06	233825.07	True	5.00	2.050	5.55	1.000	5.000	4.784	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

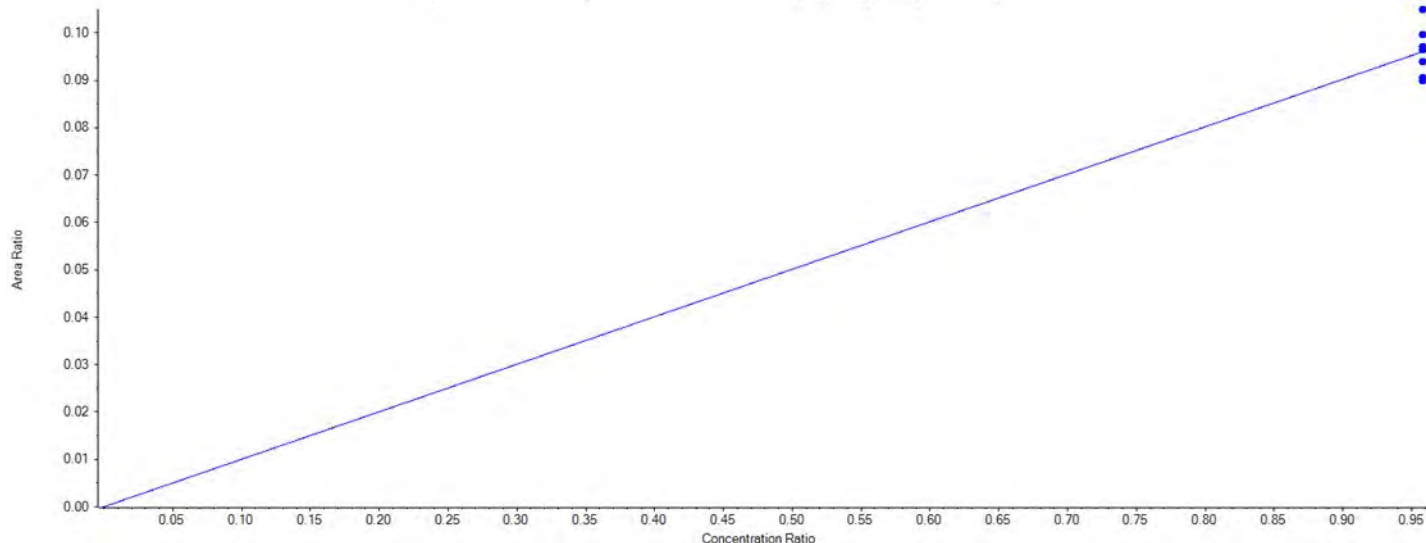
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C2-8:2-FTS

 $y = 0.10026 x$ (std. dev. = 0.00552) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26445.48	281654.75	True	5.00	0.094	5.57	1.000	4.790	4.683	-2	30	
CAL2	27639.19	277324.19	True	5.00	0.100	5.57	1.000	4.790	4.970	4	30	
CAL3	29249.84	278743.89	True	5.00	0.105	5.57	1.000	4.790	5.233	9	30	
CAL4	27253.46	301327.18	True	5.00	0.090	5.57	1.000	4.790	4.511	-6	30	
CAL5	24192.14	269315.72	True	5.00	0.090	5.56	1.000	4.790	4.480	-6	30	
CAL6	22899.00	237446.93	True	5.00	0.096	5.57	1.000	4.790	4.810	0	30	
CAL7	22710.95	233825.07	True	5.00	0.097	5.56	1.000	4.790	4.844	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

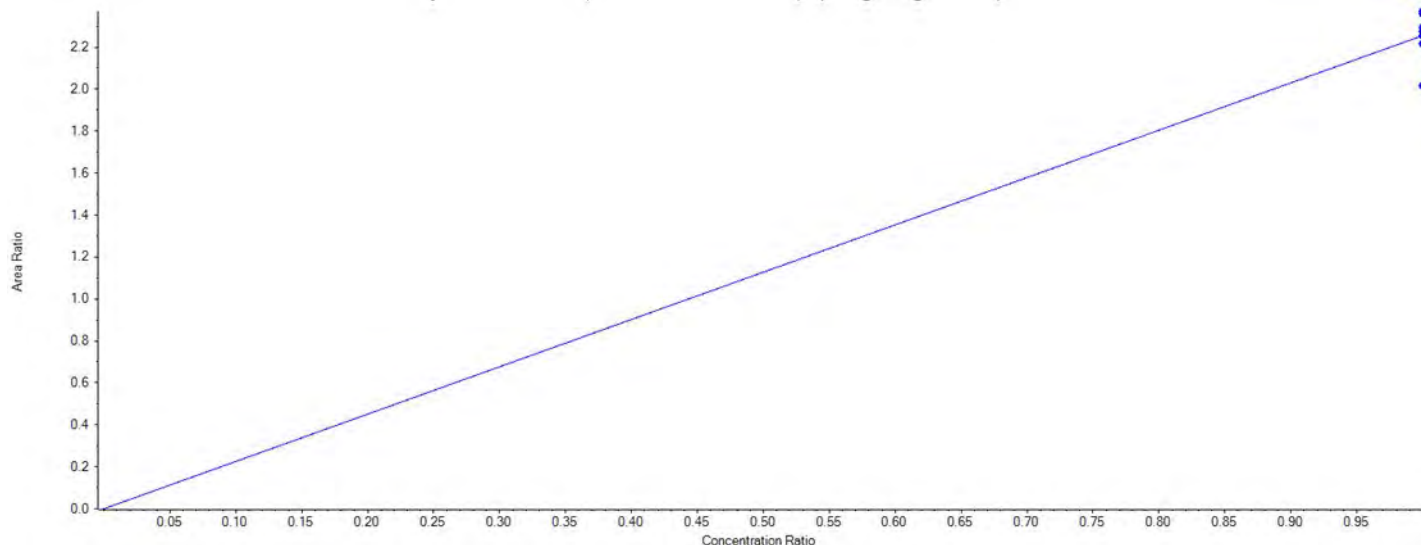
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C8-PFOSA

 $y = 2.25533 \times (\text{std. dev.} = 0.11852)$ (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664489.93	281654.75	True	5.00	2.359	5.65	1.010	5.000	5.230	5	30	
CAL2	636543.15	277324.19	True	5.00	2.295	5.65	1.010	5.000	5.089	2	30	
CAL3	629109.87	278743.89	True	5.00	2.257	5.65	1.010	5.000	5.004	0	30	
CAL4	607762.03	301327.18	True	5.00	2.017	5.64	1.010	5.000	4.472	-11	30	
CAL5	596544.13	269315.72	True	5.00	2.215	5.64	1.010	5.000	4.911	-2	30	
CAL6	539992.50	237446.93	True	5.00	2.274	5.65	1.010	5.000	5.042	1	30	
CAL7	554092.64	233825.07	True	5.00	2.370	5.63	1.010	5.000	5.254	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

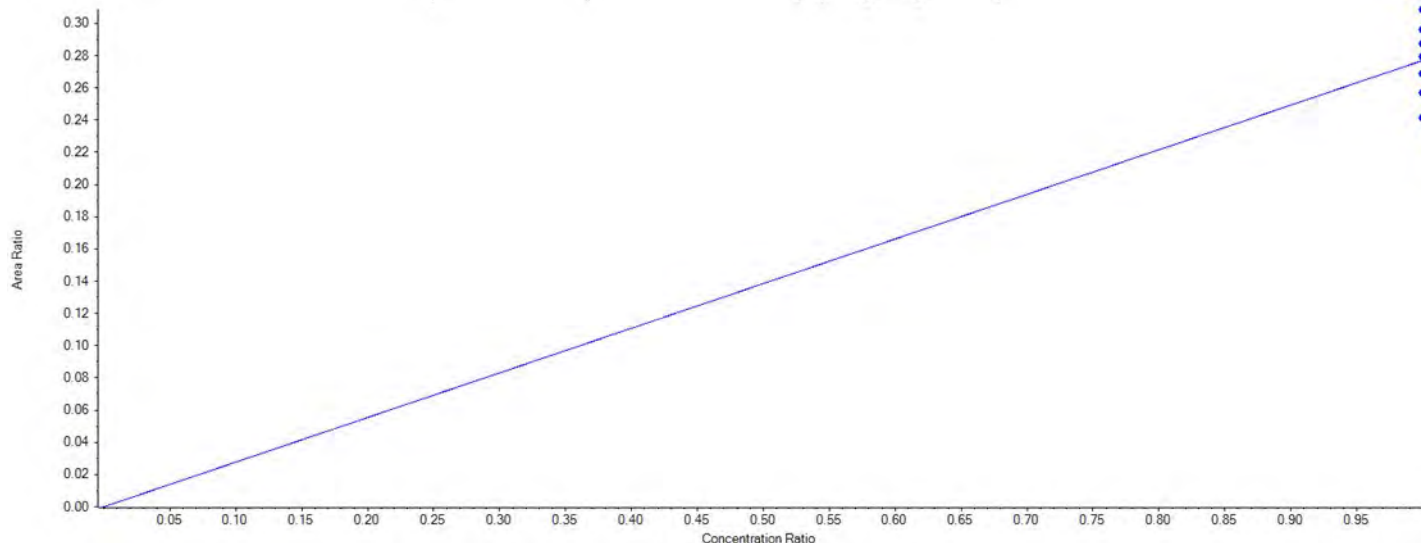
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Ed3-NMeFOSAA

 $y = 0.27700 x$ (std. dev. = 0.02309) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	86914.51	281654.75	True	5.00	0.309	5.70	1.020	5.000	5.570	11	30	
CAL2	77388.61	277324.19	True	5.00	0.279	5.71	1.020	5.000	5.037	1	30	
CAL3	71670.26	278743.89	True	5.00	0.257	5.71	1.030	5.000	4.641	-7	30	
CAL4	72788.02	301327.18	True	5.00	0.242	5.70	1.020	5.000	4.360	-13	30	
CAL5	72424.49	269315.72	True	5.00	0.269	5.70	1.020	5.000	4.854	-3	30	
CAL6	70320.26	237446.93	True	5.00	0.296	5.71	1.020	5.000	5.346	7	30	
CAL7	67250.45	233825.07	True	5.00	0.288	5.69	1.020	5.000	5.192	4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

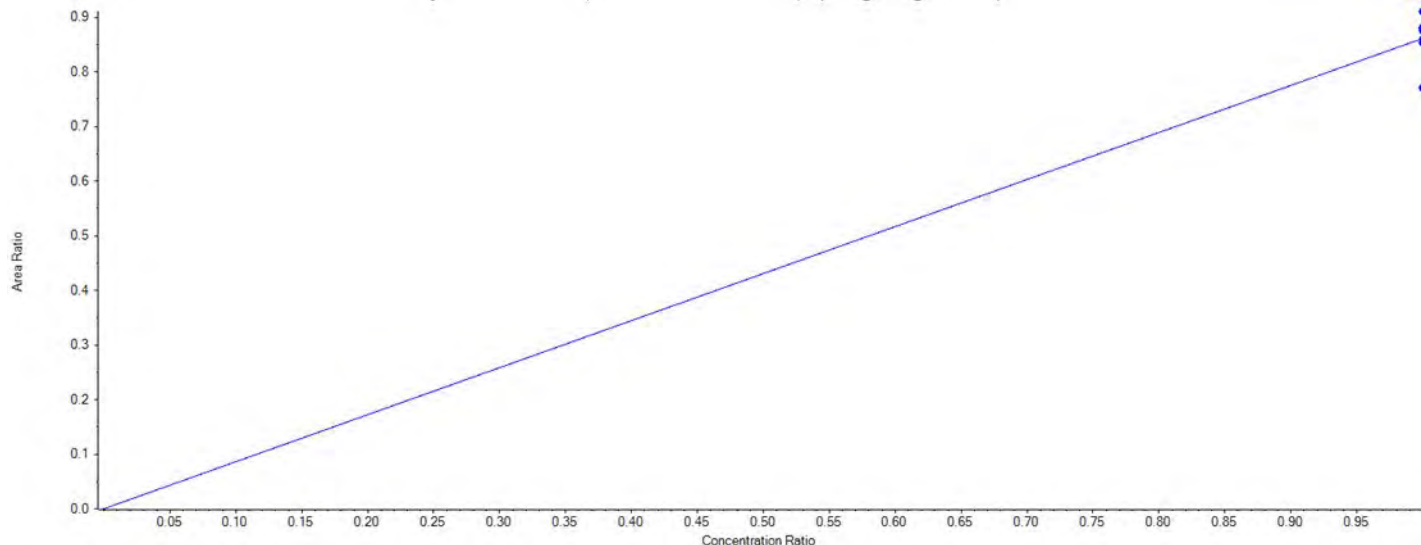
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C7-PFUnDA

 $y = 0.86119x$ (std. dev. = 0.04416) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	256401.96	281654.75	True	5.00	0.910	5.83	1.050	5.000	5.285	6	30	
CAL2	242881.75	277324.19	True	5.00	0.876	5.83	1.050	5.000	5.085	2	30	
CAL3	245605.30	278743.89	True	5.00	0.881	5.83	1.050	5.000	5.116	2	30	
CAL4	232014.10	301327.18	True	5.00	0.770	5.82	1.050	5.000	4.470	-11	30	
CAL5	231187.89	269315.72	True	5.00	0.858	5.82	1.050	5.000	4.984	0	30	
CAL6	208574.11	237446.93	True	5.00	0.878	5.83	1.050	5.000	5.100	2	30	
CAL7	199746.83	233825.07	True	5.00	0.854	5.81	1.050	5.000	4.960	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

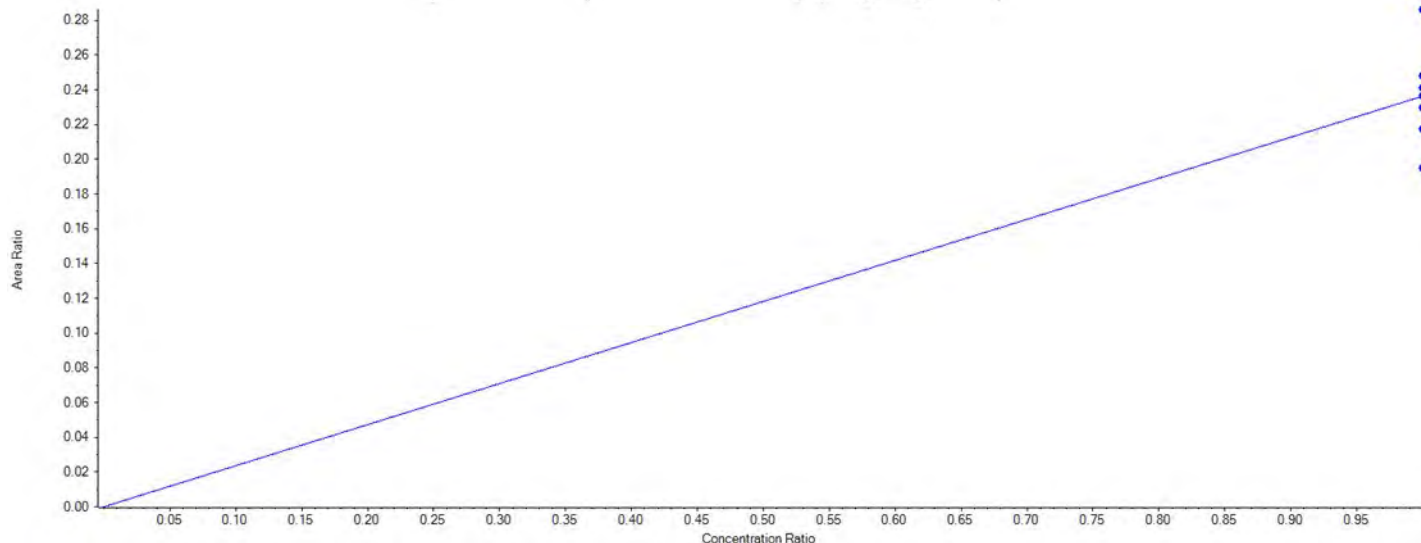
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Ed5-NEtFOSAA

 $y = 0.23634 x$ (std. dev. = 0.02816) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	80597.24	281654.75	True	5.00	0.286	5.84	1.050	5.000	6.054	21	30	
CAL2	63686.93	277324.19	True	5.00	0.230	5.84	1.050	5.000	4.859	-3	30	
CAL3	54383.91	278743.89	True	5.00	0.195	5.84	1.050	5.000	4.128	-17	30	
CAL4	65477.96	301327.18	True	5.00	0.217	5.83	1.050	5.000	4.597	-8	30	
CAL5	63701.69	269315.72	True	5.00	0.237	5.83	1.050	5.000	5.004	0	30	
CAL6	57308.08	237446.93	True	5.00	0.241	5.84	1.050	5.000	5.106	2	30	
CAL7	58049.49	233825.07	True	5.00	0.248	5.82	1.050	5.000	5.252	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

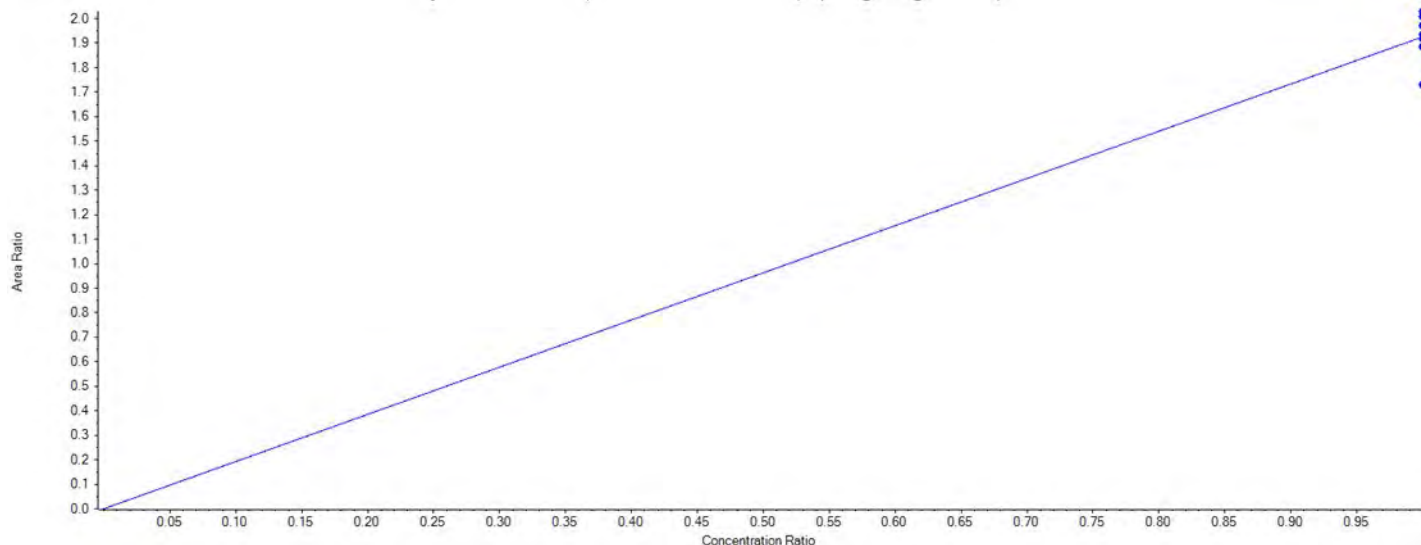
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C2-PFDoDA

 $y = 1.92577 x$ (std. dev. = 0.09966) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C2-PFDoDA Area	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	545413.19	281654.75	True	5.00	1.936	6.05	1.090	5.000	5.028	1	30	
CAL2	532175.35	277324.19	True	5.00	1.919	6.06	1.090	5.000	4.982	0	30	
CAL3	549542.28	278743.89	True	5.00	1.971	6.06	1.090	5.000	5.119	2	30	
CAL4	521514.09	301327.18	True	5.00	1.731	6.05	1.090	5.000	4.494	-10	30	
CAL5	507556.82	269315.72	True	5.00	1.885	6.04	1.090	5.000	4.893	-2	30	
CAL6	477105.49	237446.93	True	5.00	2.009	6.06	1.090	5.000	5.217	4	30	
CAL7	474393.79	233825.07	True	5.00	2.029	6.04	1.090	5.000	5.268	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

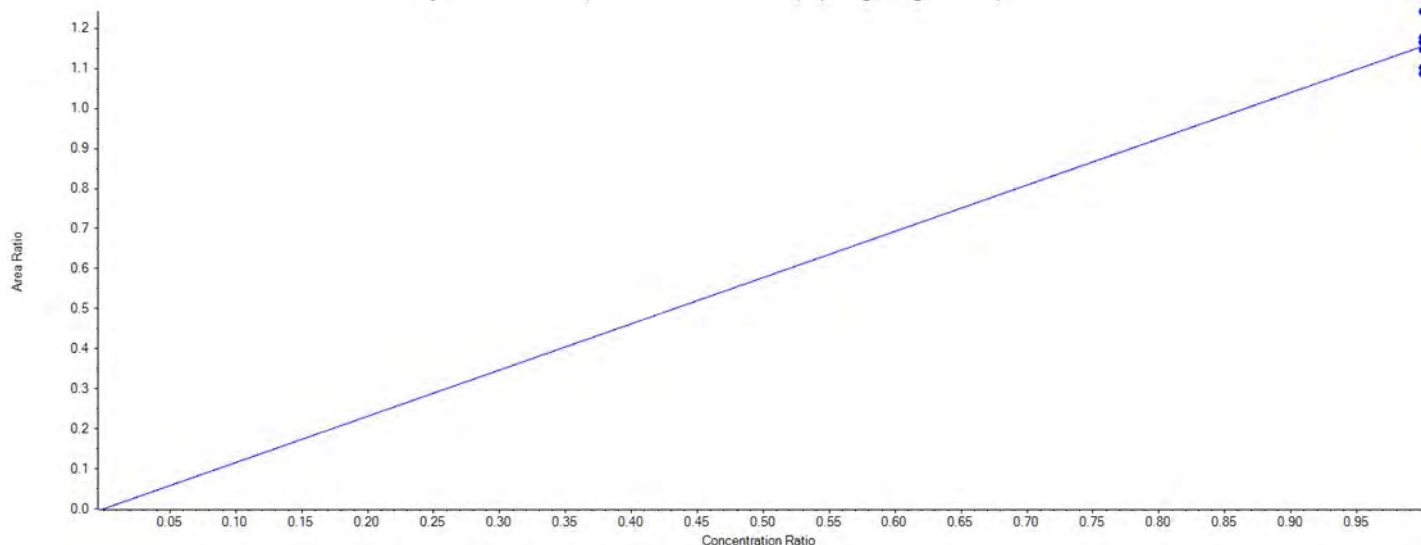
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Ed7-NMePFOSAE

 $y = 1.15541 x$ (std. dev. = 0.05092) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSA E Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	349854.47	281654.75	True	5.00	1.242	6.09	1.090	5.000	5.375	8	30	
CAL2	323456.51	277324.19	True	5.00	1.166	6.09	1.090	5.000	5.047	1	30	
CAL3	307355.43	278743.89	True	5.00	1.103	6.09	1.090	5.000	4.772	-5	30	
CAL4	327796.39	301327.18	True	5.00	1.088	6.09	1.090	5.000	4.708	-6	30	
CAL5	316777.82	269315.72	True	5.00	1.176	6.08	1.090	5.000	5.090	2	30	
CAL6	272638.97	237446.93	True	5.00	1.148	6.09	1.090	5.000	4.969	-1	30	
CAL7	272283.14	233825.07	True	5.00	1.164	6.08	1.090	5.000	5.039	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

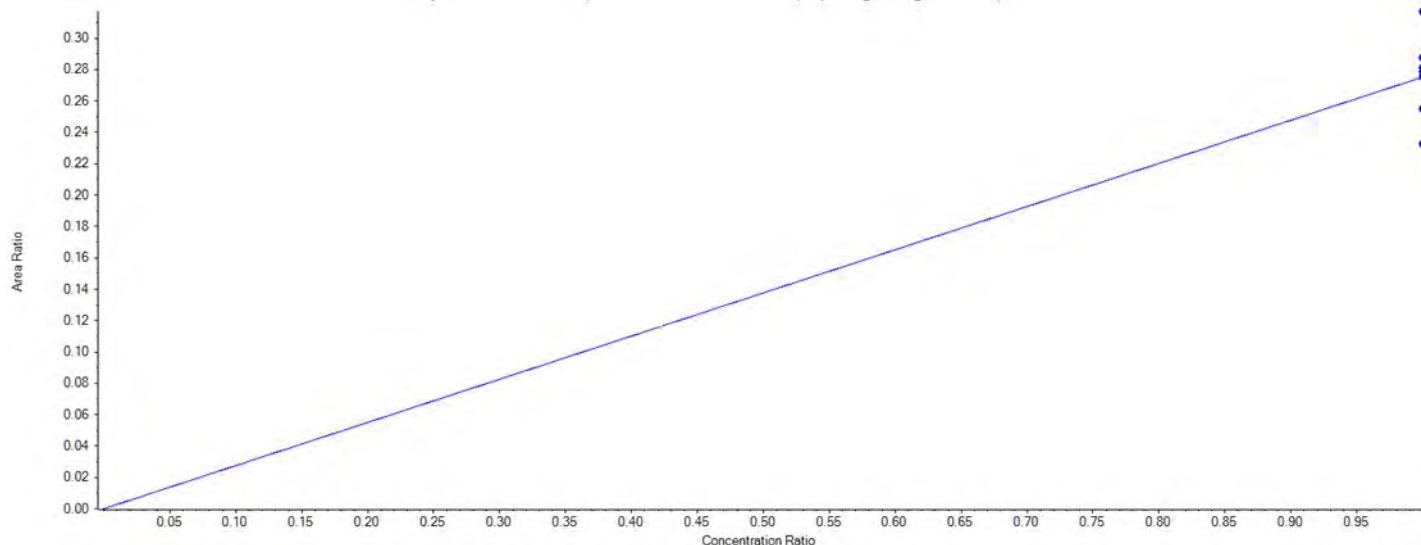
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Ed3-NMePFOSA

$y = 0.27520 x$ (std. dev. = 0.02631) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	78396.49	281654.75	True	5.00	0.278	6.10	1.100	5.000	5.057	1	30	
CAL2	77893.24	277324.19	True	5.00	0.281	6.11	1.100	5.000	5.103	2	30	
CAL3	76782.89	278743.89	True	5.00	0.275	6.11	1.100	5.000	5.005	0	30	
CAL4	70122.47	301327.18	True	5.00	0.233	6.10	1.100	5.000	4.228	-15	30	
CAL5	68615.66	269315.72	True	5.00	0.255	6.09	1.100	5.000	4.629	-7	30	
CAL6	68215.94	237446.93	True	5.00	0.287	6.11	1.100	5.000	5.220	4	30	
CAL7	74110.30	233825.07	True	5.00	0.317	6.09	1.100	5.000	5.758	15	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

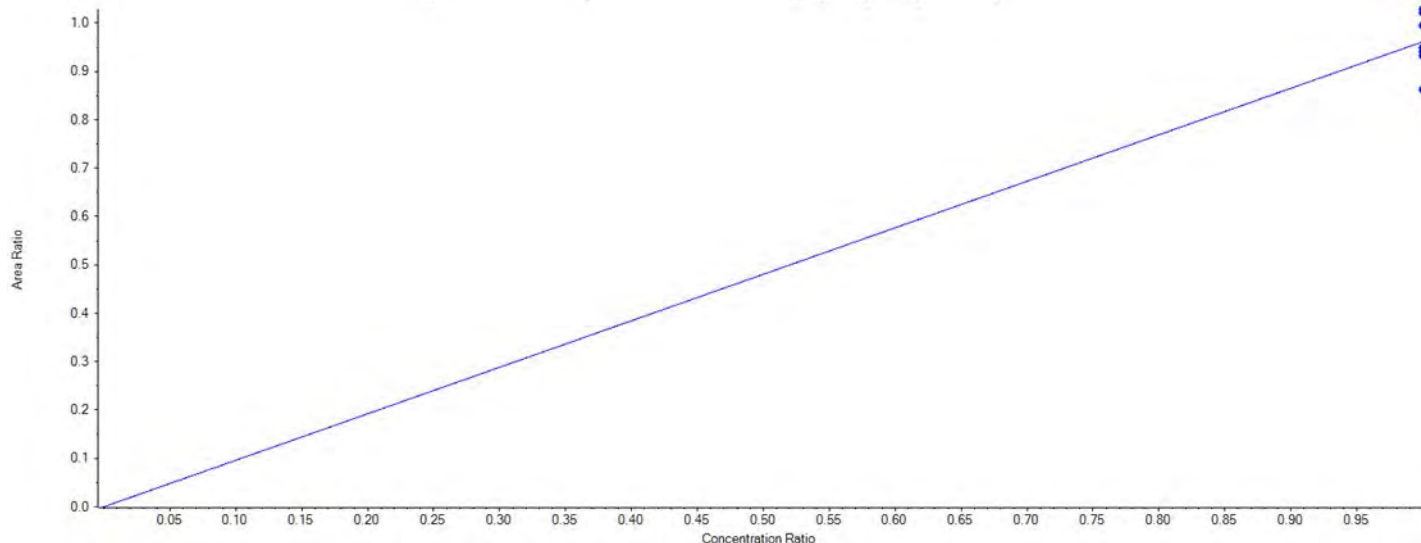
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Ed9-NEtPFOSAE

 $y = 0.96134 x$ (std. dev. = 0.05866) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	280311.62	281654.75	True	5.00	0.995	6.24	1.120	5.000	5.176	4	30	
CAL2	261195.61	277324.19	True	5.00	0.942	6.25	1.120	5.000	4.899	-2	30	
CAL3	259792.28	278743.89	True	5.00	0.932	6.25	1.120	5.000	4.847	-3	30	
CAL4	259467.37	301327.18	True	5.00	0.861	6.24	1.120	5.000	4.479	-10	30	
CAL5	255767.75	269315.72	True	5.00	0.950	6.23	1.120	5.000	4.939	-1	30	
CAL6	242587.53	237446.93	True	5.00	1.022	6.25	1.120	5.000	5.314	6	30	
CAL7	240346.47	233825.07	True	5.00	1.028	6.23	1.120	5.000	5.346	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

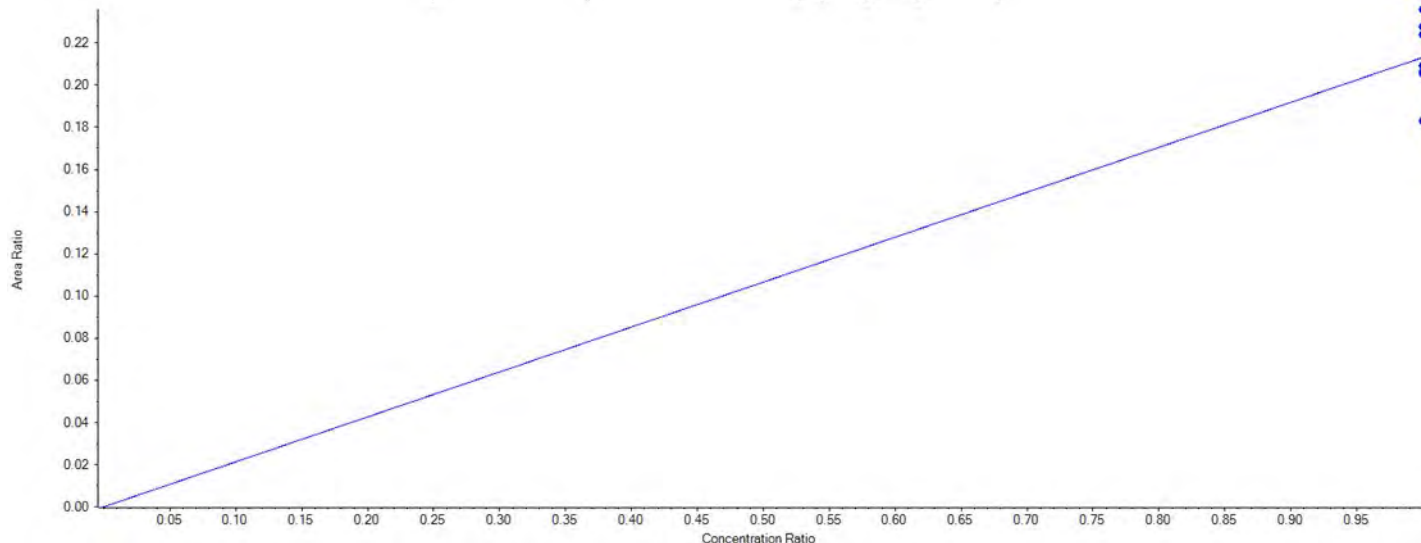
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Ed5-NEtPFOSA

 $y = 0.21315 \times (\text{std. dev.} = 0.01765) (\text{weighting: None})$ 

Extraction Standard Calibration Verification

Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	63047.06	281654.75	True	5.00	0.224	6.26	1.130	5.000	5.251	5	30	
CAL2	58073.45	277324.19	True	5.00	0.209	6.27	1.130	5.000	4.912	-2	30	
CAL3	57485.89	278743.89	True	5.00	0.206	6.27	1.130	5.000	4.838	-3	30	
CAL4	55177.27	301327.18	True	5.00	0.183	6.26	1.130	5.000	4.296	-14	30	
CAL5	55378.45	269315.72	True	5.00	0.206	6.25	1.130	5.000	4.824	-4	30	
CAL6	56004.04	237446.93	True	5.00	0.236	6.27	1.130	5.000	5.533	11	30	
CAL7	53297.85	233825.07	True	5.00	0.228	6.25	1.130	5.000	5.347	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

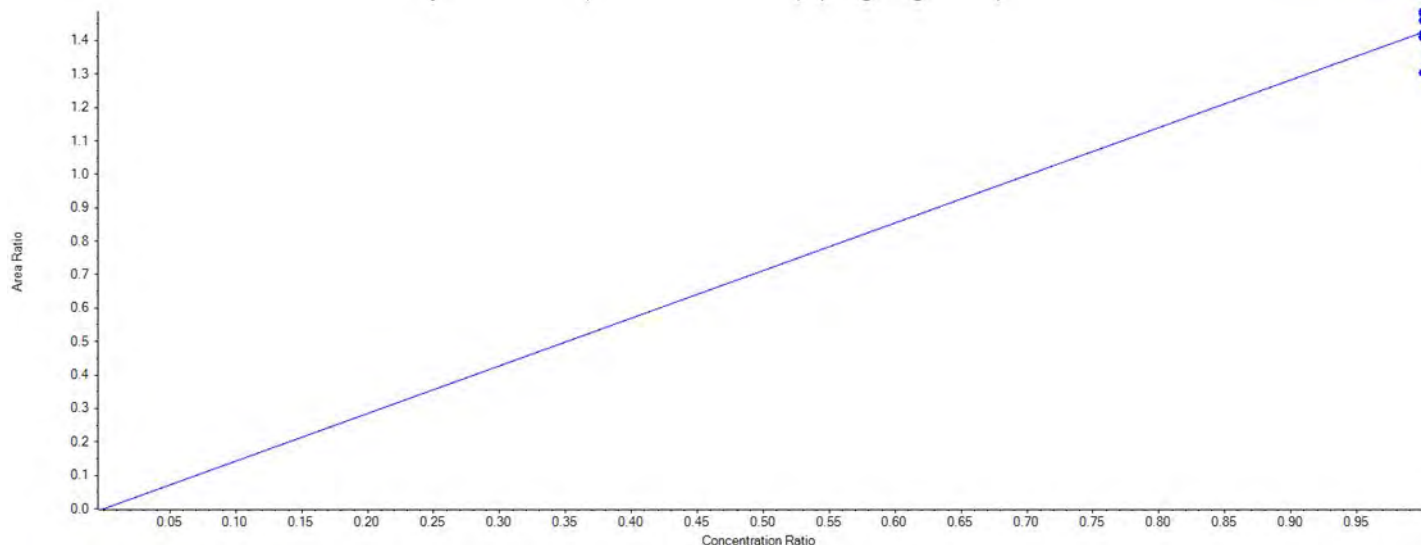
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

E13C2-PFTeDA

 $y = 1.42422 x$ (std. dev. = 0.06255) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	410633.04	281654.75	True	5.00	1.458	6.43	1.160	5.000	5.118	2	30	
CAL2	394146.24	277324.19	True	5.00	1.421	6.43	1.160	5.000	4.990	0	30	
CAL3	393544.94	278743.89	True	5.00	1.412	6.43	1.160	5.000	4.957	-1	30	
CAL4	392356.63	301327.18	True	5.00	1.302	6.43	1.160	5.000	4.571	-9	30	
CAL5	379571.56	269315.72	True	5.00	1.409	6.42	1.160	5.000	4.948	-1	30	
CAL6	352892.21	237446.93	True	5.00	1.486	6.43	1.160	5.000	5.218	4	30	
CAL7	346256.59	233825.07	True	5.00	1.481	6.42	1.160	5.000	5.199	4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

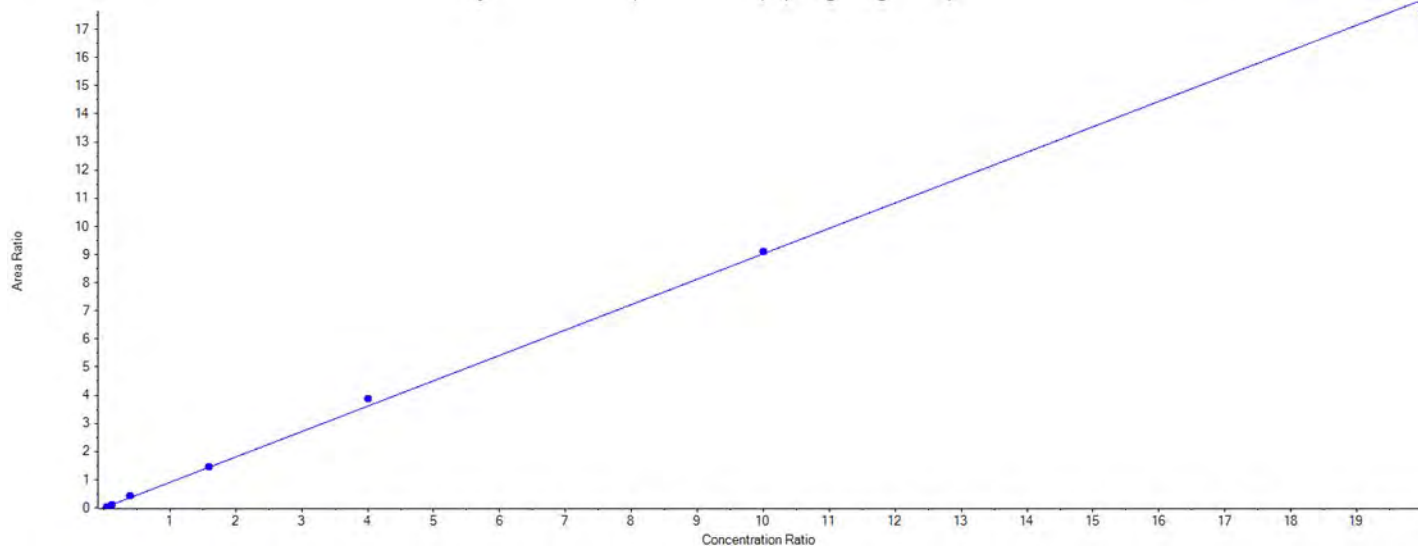
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFBA

 $y = 0.90257 x$ ($r = 0.99946$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32322.94	189.9	763334.27	True	5.00	0.042	3.27	1.000	0.200	0.235	17	30	
CAL2	80396.23	328.7	771445.80	True	5.00	0.104	3.27	1.000	0.600	0.577	-4	30	
CAL3	303228.65	603.0	733360.15	True	5.00	0.413	3.27	1.000	2.000	2.291	15	30	
CAL4	1068414.88	996.7	726395.96	True	5.00	1.471	3.26	1.000	8.000	8.148	2	30	
CAL5	2700090.79	1579.9	698871.91	True	5.00	3.863	3.26	1.000	20.000	21.403	7	30	
CAL6	5765353.41	2132.7	633648.38	True	5.00	9.099	3.26	1.000	50.000	50.404	1	30	
CAL7	9834601.68	2326.7	557392.78	True	5.00	17.644	3.25	1.000	100.000	97.743	-2	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

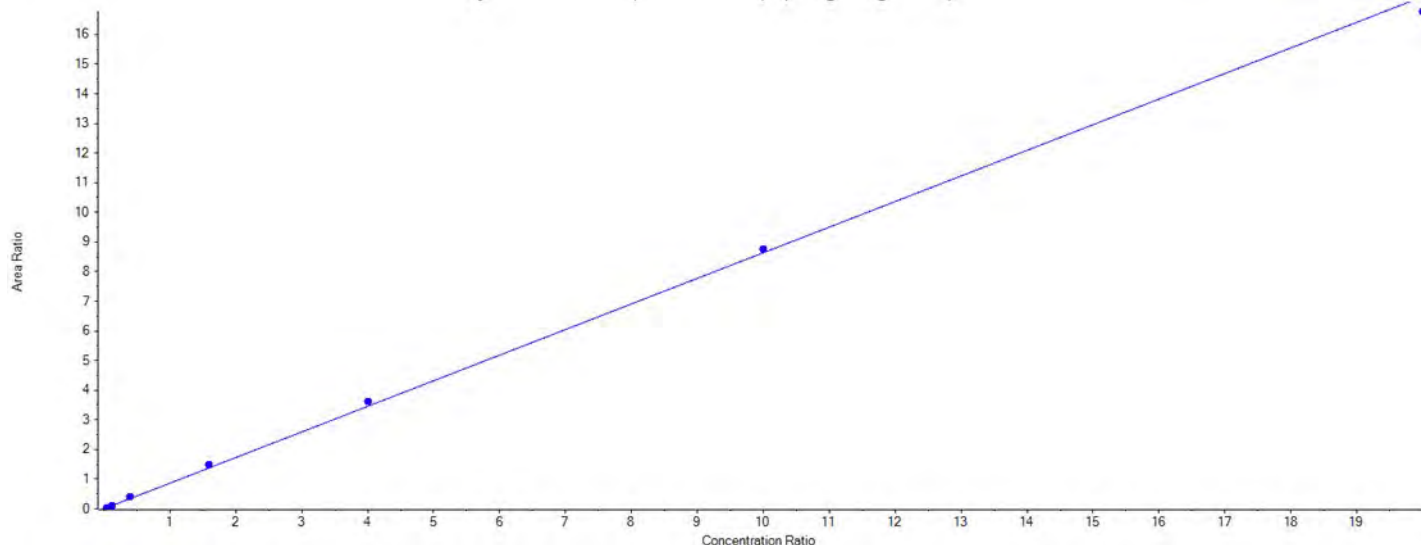
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFPeA

$$y = 0.86373x \text{ (} r = 0.99928 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32633.13	78.7	771179.39	True	5.00	0.042	3.77	1.000	0.200	0.245	22	30	
CAL2	84319.38	153.0	738194.74	True	5.00	0.114	3.77	1.000	0.600	0.661	10	30	
CAL3	292715.83	240.6	695805.67	True	5.00	0.421	3.77	1.000	2.000	2.435	22	30	
CAL4	1075643.54	403.4	716206.93	True	5.00	1.502	3.76	1.000	8.000	8.694	9	30	
CAL5	2660895.37	642.6	734598.25	True	5.00	3.622	3.76	1.000	20.000	20.969	5	30	
CAL6	5570221.70	1016.0	635977.79	True	5.00	8.759	3.77	1.000	50.000	50.702	1	30	
CAL7	9756431.51	1095.7	581688.66	True	5.00	16.773	3.75	1.000	100.000	97.094	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

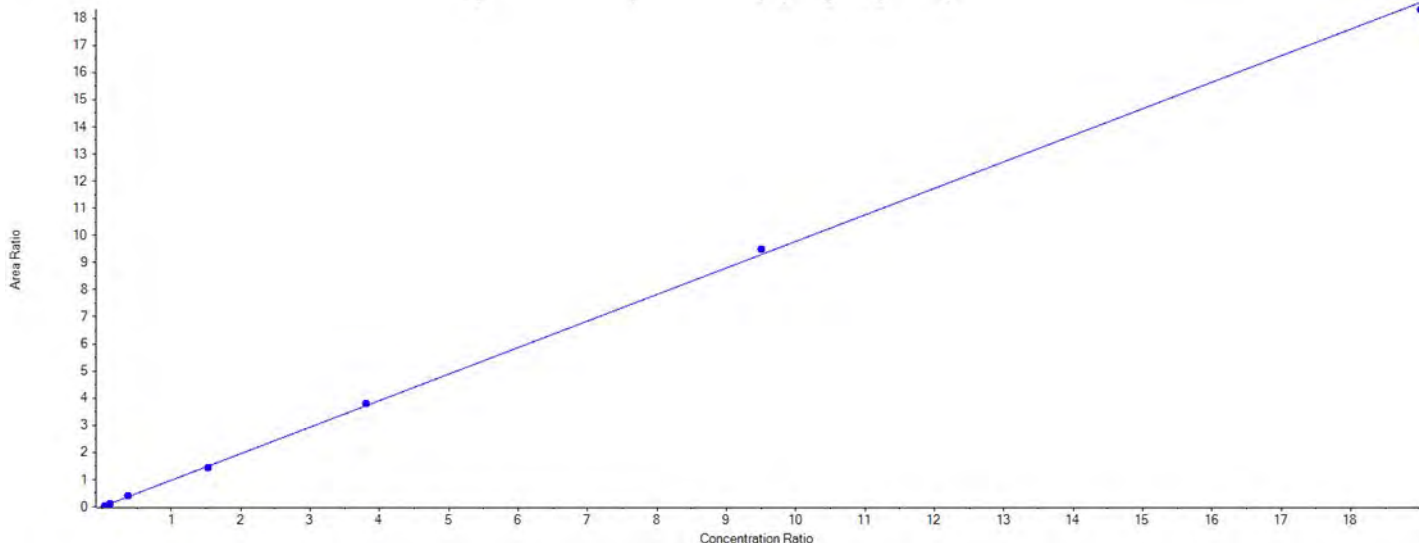
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFBS

$$y = 0.9775x \text{ (} r = 0.99980 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18010.03	456.9	445963.43	True	4.65	0.040	3.81	1.000	0.177	0.192	9	30	
CAL2	44885.16	959.4	418860.68	True	4.65	0.107	3.82	1.000	0.531	0.510	-4	30	
CAL3	168144.64	1287.7	416352.75	True	4.65	0.404	3.82	1.000	1.770	1.921	9	30	
CAL4	617045.58	2604.2	425015.72	True	4.65	1.452	3.81	1.000	7.080	6.906	-2	30	
CAL5	1630613.49	4013.6	428050.64	True	4.65	3.809	3.80	1.000	17.700	18.121	2	30	
CAL6	3588084.15	4714.2	378676.81	True	4.65	9.475	3.81	1.000	44.200	45.072	2	30	
CAL7	6615935.34	4086.7	361166.00	True	4.65	18.318	3.80	1.000	88.400	87.136	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

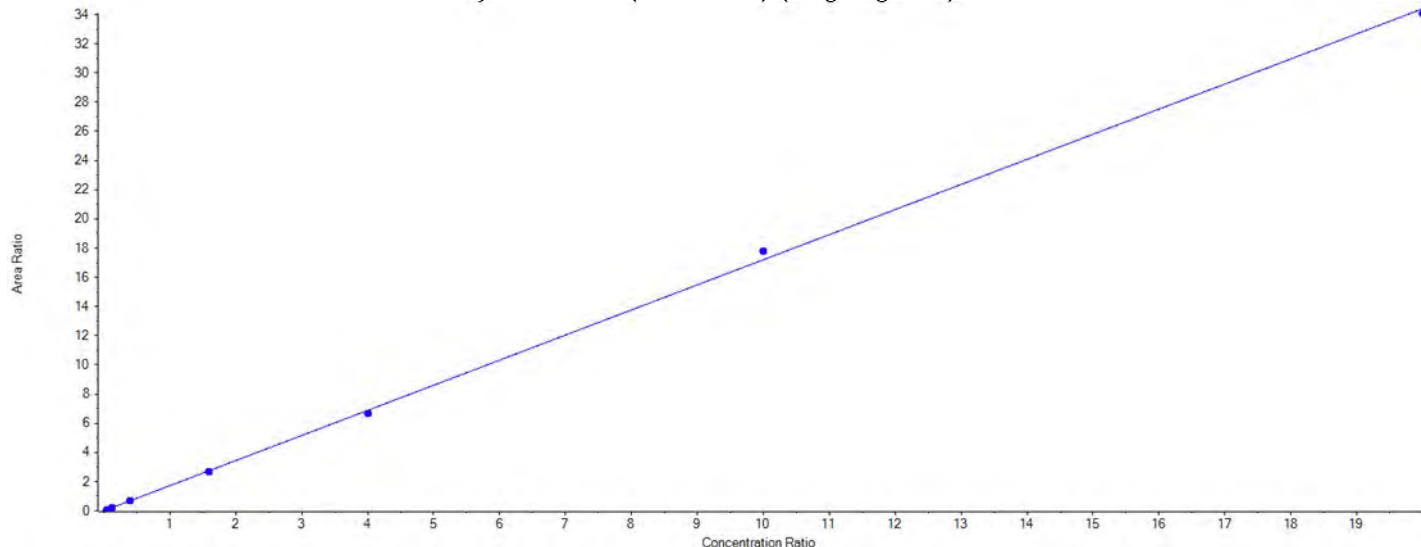
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

4:2-FTS

 $y = 1.72006 \times (r = 0.99968)$ (weighting: $1/x$)

Component Calibration Verification

Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3636.36	188.8	51494.57	True	4.67	0.071	4.13	1.000	0.187	0.192	3	30	
CAL2	8803.96	391.1	46141.76	True	4.67	0.191	4.13	1.000	0.560	0.518	-7	30	
CAL3	34188.48	932.2	47514.79	True	4.67	0.720	4.13	1.000	1.870	1.954	4	30	
CAL4	126396.51	2063.7	47246.37	True	4.67	2.675	4.13	1.000	7.470	7.263	-3	30	
CAL5	344695.89	2546.9	51791.87	True	4.67	6.655	4.12	1.000	18.700	18.070	-3	30	
CAL6	738293.95	3115.2	41422.17	True	4.67	17.824	4.13	1.000	46.700	48.392	4	30	
CAL7	1379983.90	3342.5	40505.09	True	4.67	34.069	4.11	1.000	93.400	92.499	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

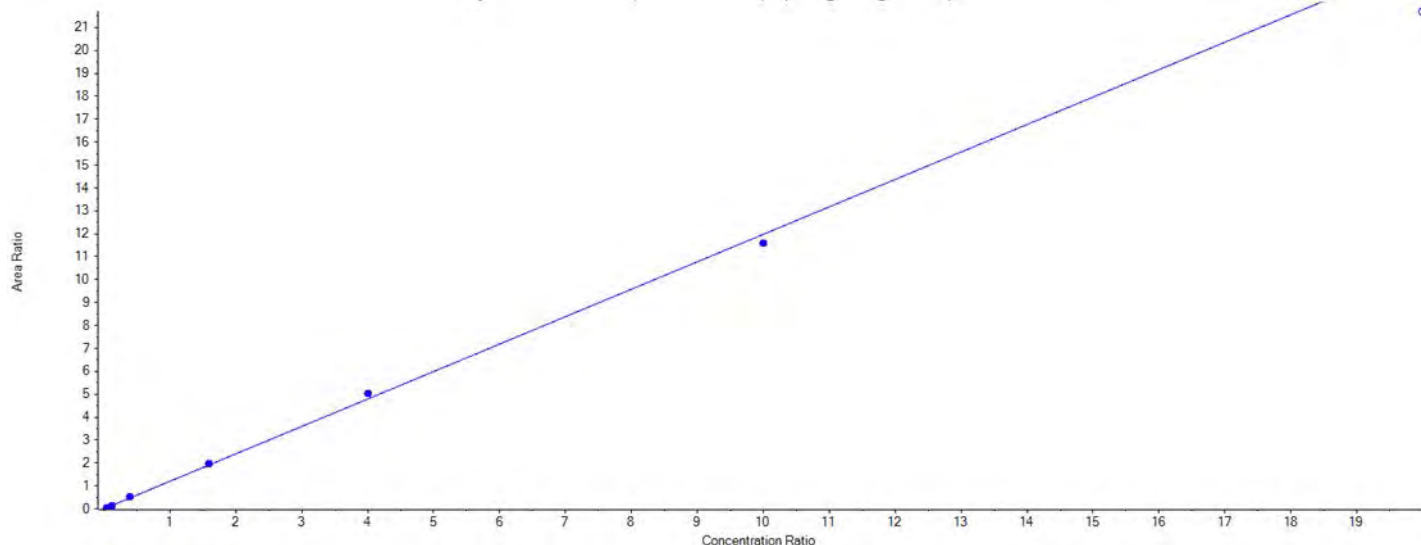
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFHxA

$$y = 1.19750 x \text{ (r = 0.99920) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFHxA Area	S/N	¹³ C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39108.19	254.9	664975.88	True	5.00	0.059	4.16	1.000	0.200	0.246	23	30	
CAL2	96559.34	367.8	648170.06	True	5.00	0.149	4.16	1.000	0.600	0.622	4	30	
CAL3	352013.45	713.4	646783.50	True	5.00	0.544	4.17	1.000	2.000	2.272	14	30	
CAL4	1265231.12	1181.4	641195.85	True	5.00	1.973	4.16	1.000	8.000	8.239	3	30	
CAL5	3158486.41	1640.8	628952.79	True	5.00	5.022	4.15	1.000	20.000	20.968	5	30	
CAL6	6593778.96	2095.1	568205.82	True	5.00	11.605	4.16	1.000	50.000	48.453	-3	30	
CAL7	11059420.28	2611.8	509807.95	False	5.00	21.693	4.15	1.000	100.000	90.577	-9	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

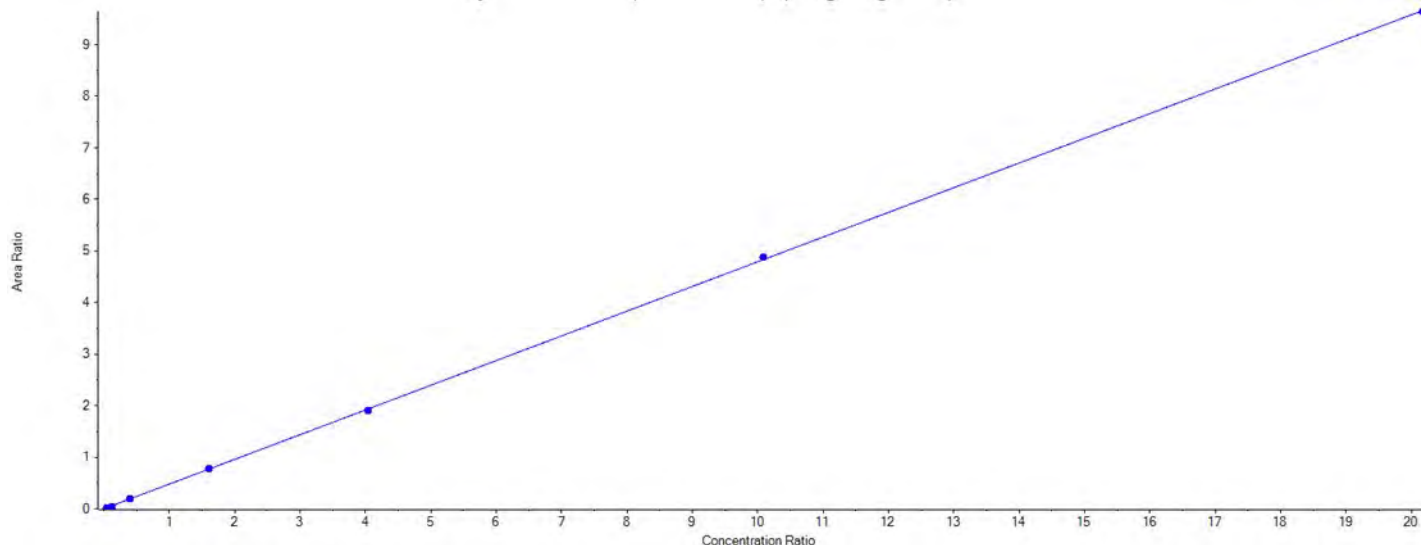
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFPeS

$$y = 0.47896 x \text{ (} r = 0.99991 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFPeS Area	S/N	¹³ C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	9620.09	321.5	445963.43	True	4.65	0.022	4.18	1.100	0.188	0.209	11	30	
CAL2	20295.04	611.8	418860.68	True	4.65	0.048	4.19	1.100	0.563	0.470	-16	30	
CAL3	84071.24	1175.2	416352.75	True	4.65	0.202	4.19	1.100	1.880	1.960	4	30	
CAL4	328681.66	3455.2	425015.72	True	4.65	0.773	4.18	1.100	7.500	7.508	0	30	
CAL5	815928.18	2443.7	428050.64	True	4.65	1.906	4.17	1.100	18.800	18.506	-2	30	
CAL6	1847826.78	3263.9	378676.81	True	4.65	4.880	4.18	1.100	46.900	47.375	1	30	
CAL7	3482095.87	4201.9	361166.00	True	4.65	9.641	4.17	1.100	93.800	93.602	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

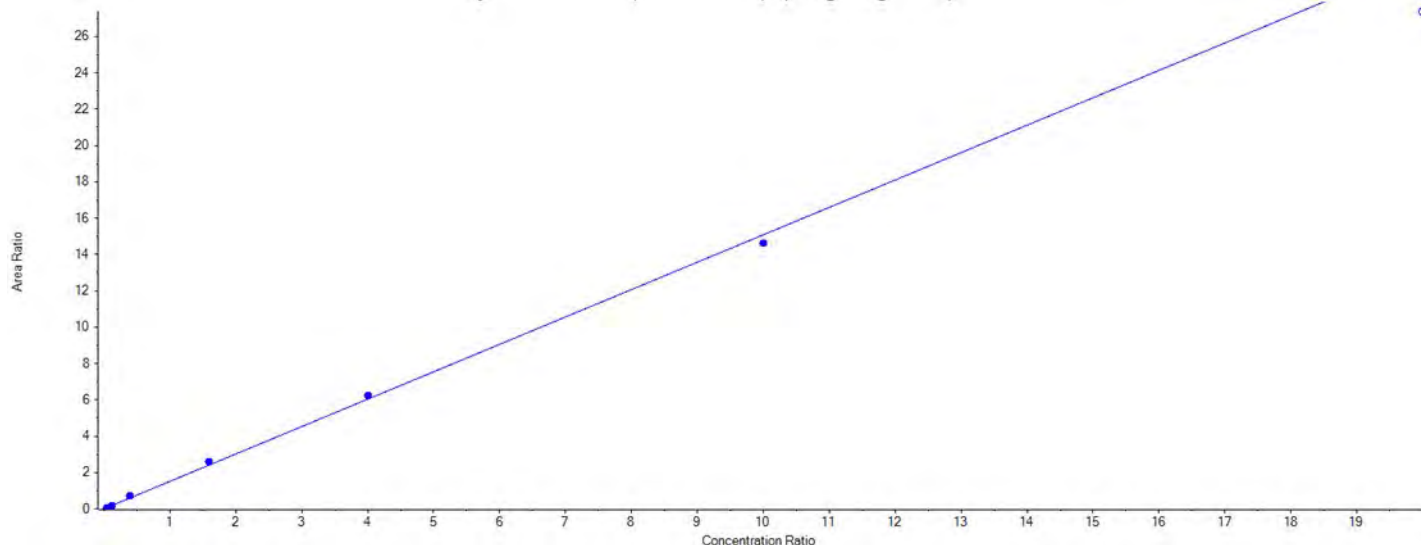
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFHpA

$$y = 1.50842 x \text{ (} r = 0.99899 \text{) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	PFHpA Area	S/N	¹³ C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	37545.37	111.6	528473.49	True	5.00	0.071	4.55	1.000	0.200	0.235	18	30	
CAL2	95048.34	255.2	532987.49	True	5.00	0.178	4.55	1.000	0.600	0.591	-1	30	
CAL3	355834.18	621.3	503681.03	True	5.00	0.706	4.56	1.000	2.000	2.342	17	30	
CAL4	1318774.50	846.6	509151.78	True	5.00	2.590	4.55	1.000	8.000	8.586	7	30	
CAL5	3269561.01	1266.8	525802.05	True	5.00	6.218	4.54	1.000	20.000	20.612	3	30	
CAL6	6648455.32	1607.4	455005.81	True	5.00	14.612	4.55	1.000	50.000	48.434	-3	30	
CAL7	10981922.82	1824.2	401203.88	False	5.00	27.372	4.54	1.000	100.000	90.732	-9	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

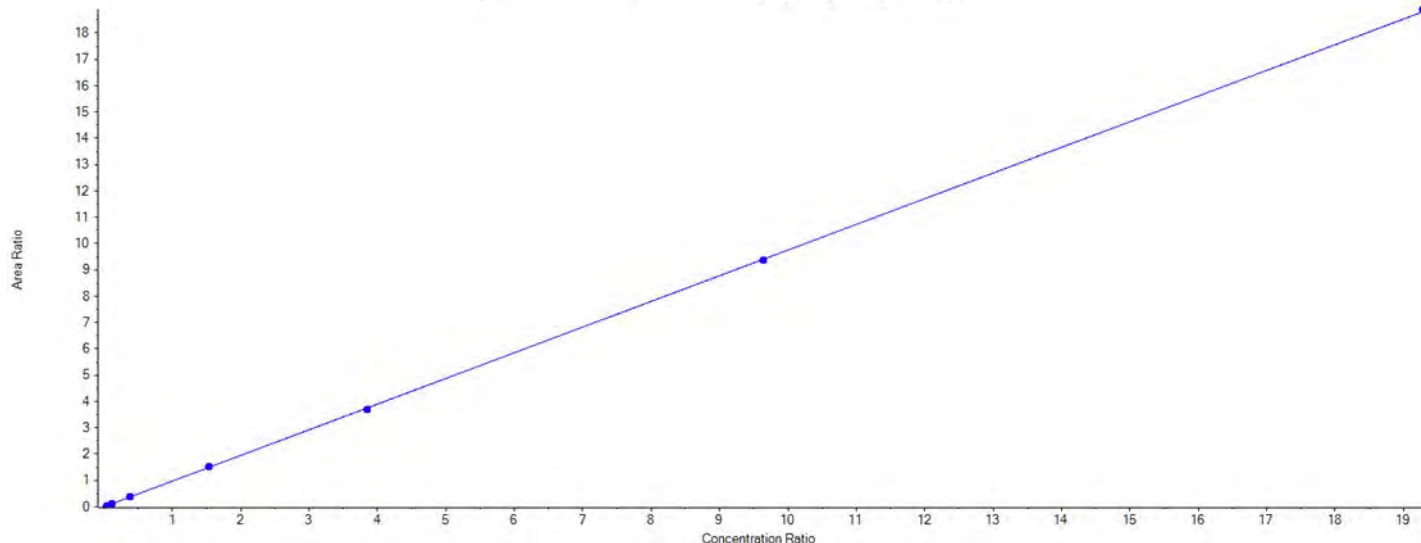
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFHxS

$$y = 0.97552 x \text{ (} r = 0.99992 \text{) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	PFHxS Area	S/N	¹³ C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12858.11	420.7	327944.53	True	4.73	0.039	4.55	1.000	0.182	0.190	4	30	
CAL2	31064.73	21916.1	320400.37	True	4.73	0.097	4.56	1.000	0.547	0.470	-14	30	
CAL3	125622.02	1397.4	317243.20	True	4.73	0.396	4.56	1.000	1.820	1.920	5	30	
CAL4	479290.97	1690.0	315722.63	True	4.73	1.518	4.55	1.000	7.300	7.361	1	30	
CAL5	1138604.25	1511.8	309304.49	True	4.73	3.681	4.54	1.000	18.200	17.849	-2	30	
CAL6	2662852.00	1747.2	284116.51	True	4.73	9.372	4.55	1.000	45.600	45.444	0	30	
CAL7	5048349.82	1449.1	267182.79	True	4.73	18.895	4.54	1.000	91.200	91.615	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

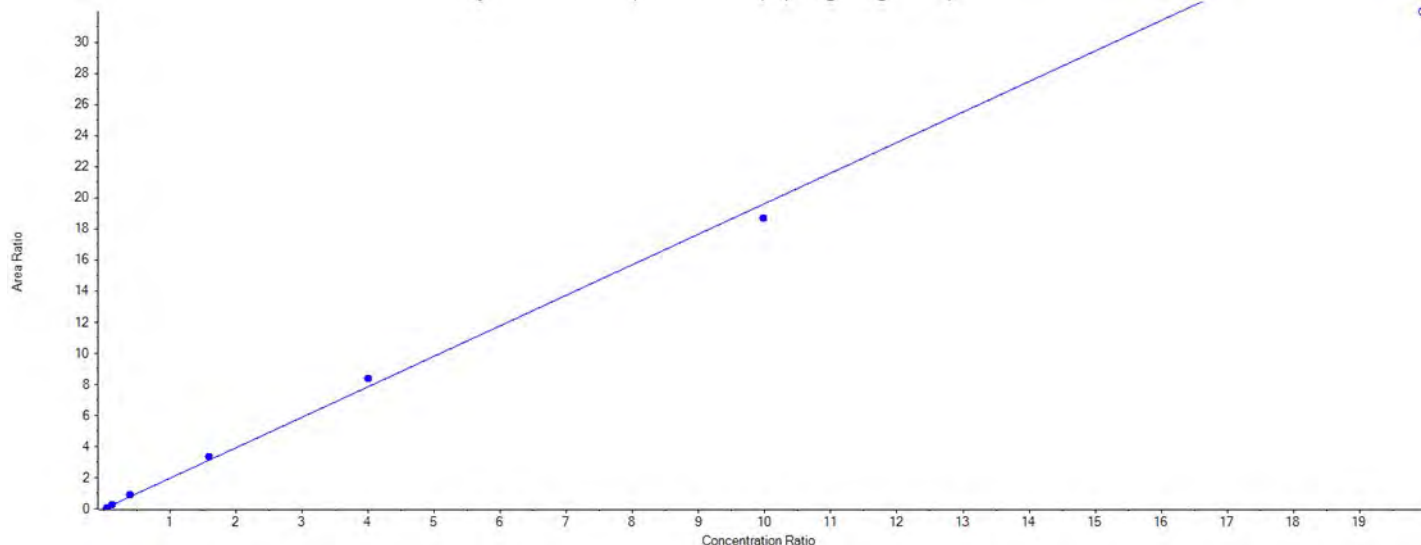
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

6:2-FTS

$$y = 1.96291x \text{ (} r = 0.99822 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2683.12	289.4	35455.22	True	4.75	0.076	4.90	1.000	0.190	0.183	-4	30	
CAL2	8048.37	680.8	35585.69	True	4.75	0.226	4.91	1.000	0.569	0.547	-4	30	
CAL3	28084.91	4492.0	31706.42	True	4.75	0.886	4.91	1.000	1.900	2.143	13	30	
CAL4	107470.62	1876.3	31883.28	True	4.75	3.371	4.91	1.000	7.580	8.157	8	30	
CAL5	260254.34	2335.4	31012.00	True	4.75	8.392	4.90	1.000	19.000	20.308	7	30	
CAL6	523949.46	2243.2	27988.49	True	4.75	18.720	4.91	1.000	47.400	45.301	-4	30	
CAL7	869227.19	3021.8	27180.24	False	4.75	31.980	4.89	1.000	94.800	77.388	-18	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

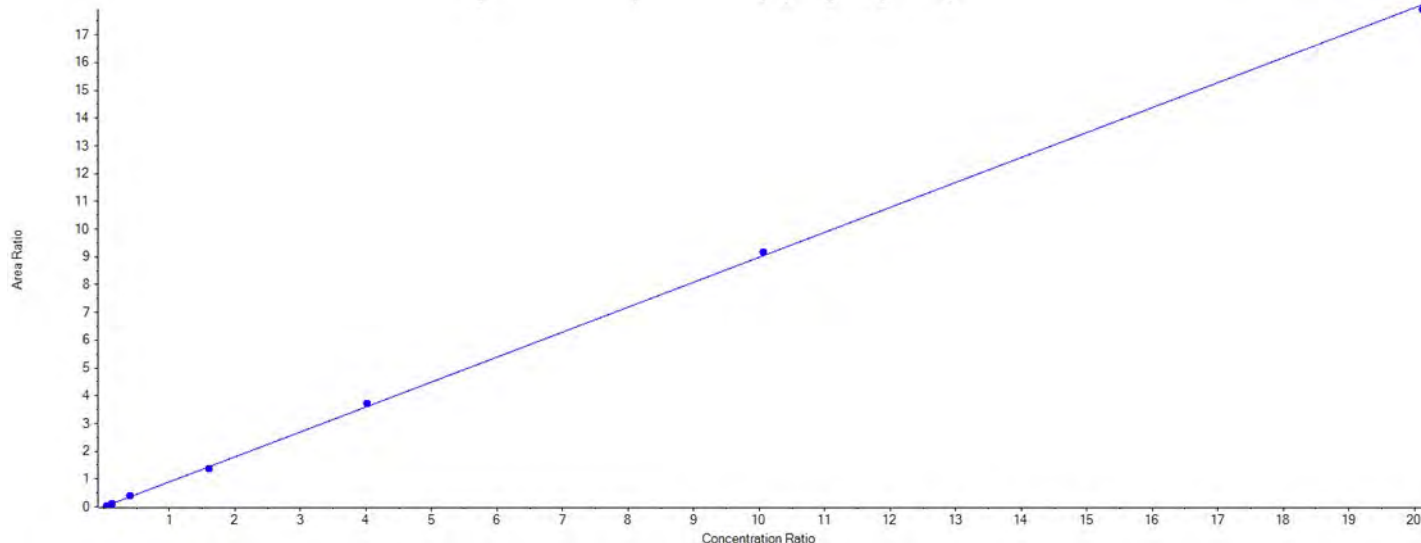
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFHpS

$$y = 0.89855x \text{ (} r = 0.99976 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFHpS Area	S/N	¹³ C ₃ -PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13262.78	924.7	327944.53	True	4.73	0.040	4.91	1.080	0.190	0.213	12	30	
CAL2	29902.32	1651.5	320400.37	True	4.73	0.093	4.92	1.080	0.571	0.491	-14	30	
CAL3	125907.86	2910.0	317243.20	True	4.73	0.397	4.92	1.080	1.900	2.089	10	30	
CAL4	434949.18	2606.3	315722.63	True	4.73	1.378	4.91	1.080	7.610	7.252	-5	30	
CAL5	1145559.80	3668.3	309304.49	True	4.73	3.704	4.90	1.080	19.000	19.496	3	30	
CAL6	2604868.63	3378.5	284116.51	True	4.73	9.168	4.91	1.080	47.600	48.262	1	30	
CAL7	4784682.82	2777.4	267182.79	True	4.73	17.908	4.90	1.080	95.200	94.267	-1	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

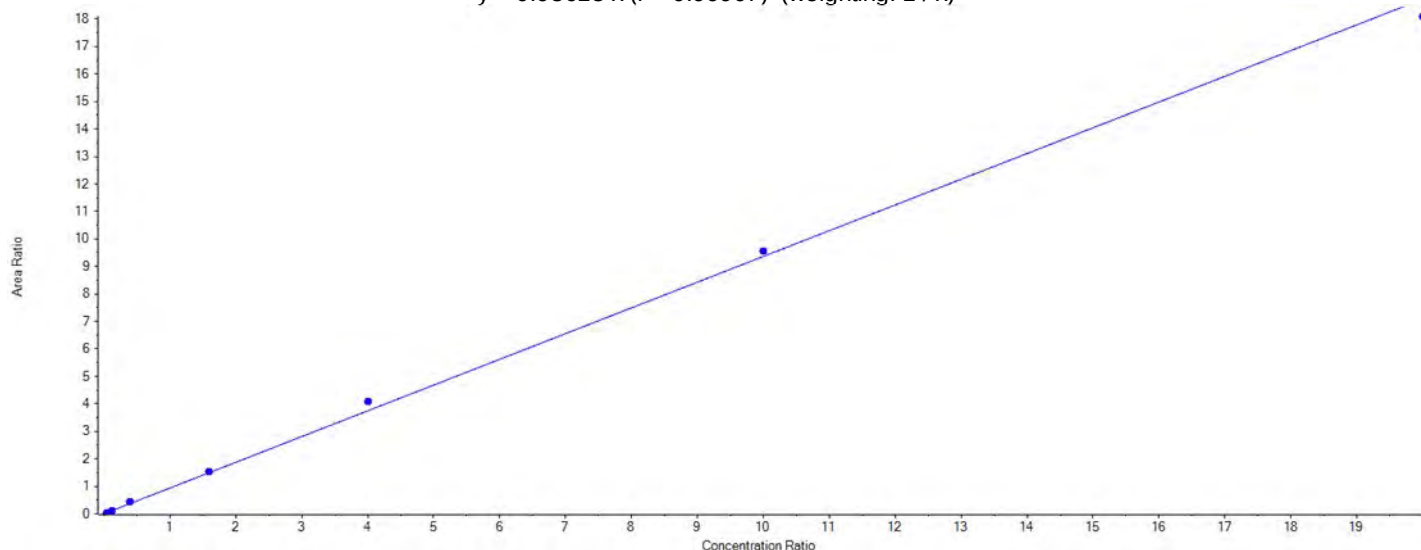
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFOA

$$y = 0.93618x \text{ (} r = 0.99907 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFOA Area	S/N	¹³ C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	41467.99	187.1	912537.72	True	5.00	0.045	4.92	1.000	0.200	0.243	21	30	
CAL2	100710.53	331.7	892584.21	True	5.00	0.113	4.93	1.000	0.600	0.603	0	30	
CAL3	372258.90	744.4	878868.48	True	5.00	0.424	4.93	1.000	2.000	2.262	13	30	
CAL4	1327086.09	1187.5	863597.26	True	5.00	1.537	4.92	1.000	8.000	8.207	3	30	
CAL5	3291549.40	1816.2	805288.72	True	5.00	4.087	4.91	1.000	20.000	21.830	9	30	
CAL6	6758642.79	2708.4	707130.31	True	5.00	9.558	4.92	1.000	50.000	51.047	2	30	
CAL7	10991740.12	2902.7	607669.53	True	5.00	18.088	4.91	1.000	100.000	96.608	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

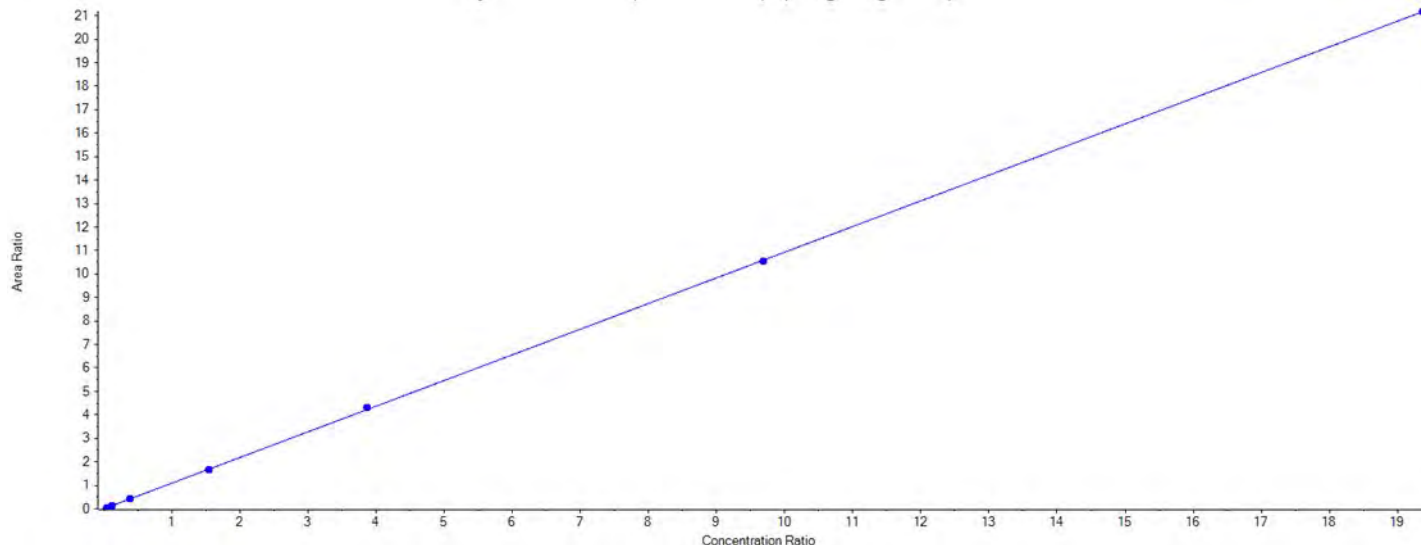
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFOS

$$y = 1.09305x \text{ (} r = 0.99997 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13088.49	581.9	283127.43	True	4.78	0.046	5.25	1.000	0.185	0.202	9	30	
CAL2	32300.98	342.7	271778.84	True	4.78	0.119	5.25	1.000	0.555	0.520	-6	30	
CAL3	120897.45	739.8	281035.50	True	4.78	0.430	5.25	1.000	1.850	1.881	2	30	
CAL4	448833.83	1353.6	267380.81	True	4.78	1.679	5.25	1.000	7.400	7.341	-1	30	
CAL5	1147826.77	1190.7	267157.61	True	4.78	4.296	5.24	1.000	18.500	18.789	2	30	
CAL6	2664957.22	1191.1	253129.16	True	4.78	10.528	5.25	1.000	46.300	46.040	-1	30	
CAL7	5138366.95	1123.0	242617.53	True	4.78	21.179	5.24	1.000	92.600	92.617	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

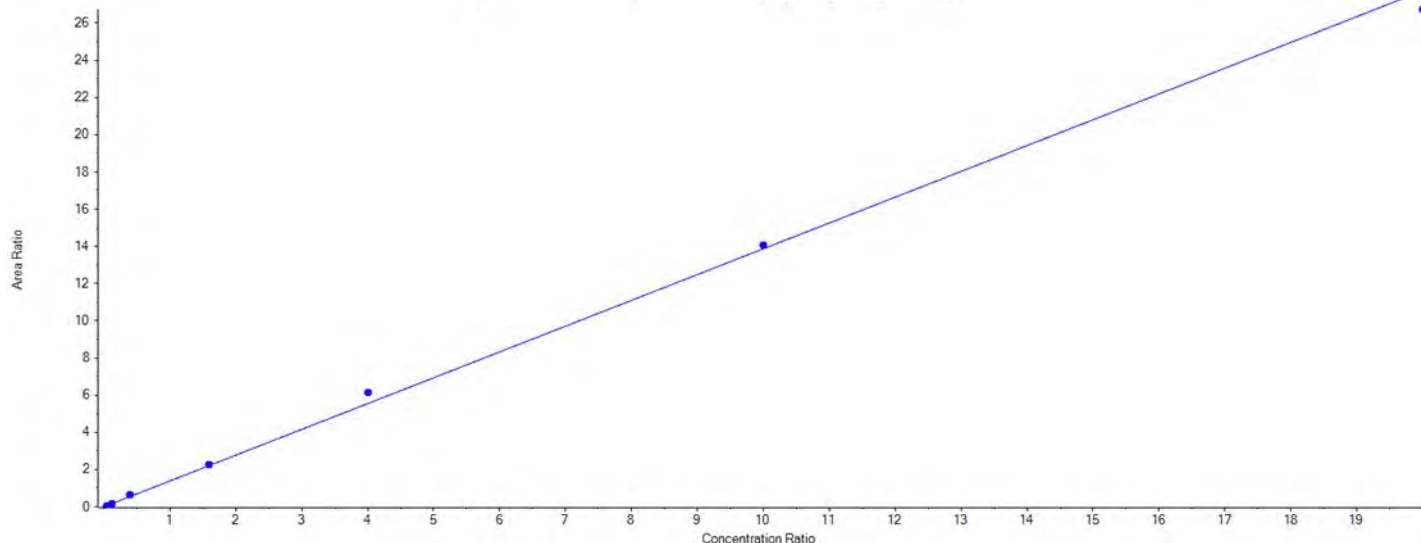
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFNA

$$y = 1.38660 x \text{ (r = 0.99871) (weighting: 1 / x)}$$



Component Calibration Verification

Sample Name	PFNA Area	S/N	¹³ C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29660.05	270.7	479931.43	True	5.00	0.062	5.26	1.000	0.200	0.223	11	30	
CAL2	80724.19	537.0	451850.14	True	5.00	0.179	5.27	1.000	0.600	0.644	7	30	
CAL3	302323.82	1252.4	455948.85	True	5.00	0.663	5.27	1.000	2.000	2.391	20	30	
CAL4	1106664.23	1697.5	485570.41	True	5.00	2.279	5.26	1.000	8.000	8.218	3	30	
CAL5	2725089.71	2530.1	441776.75	True	5.00	6.168	5.26	1.000	20.000	22.243	11	30	
CAL6	5820576.59	3024.4	413811.35	True	5.00	14.066	5.27	1.000	50.000	50.720	1	30	
CAL7	10084288.28	3917.9	377369.76	True	5.00	26.723	5.25	1.000	100.000	96.360	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

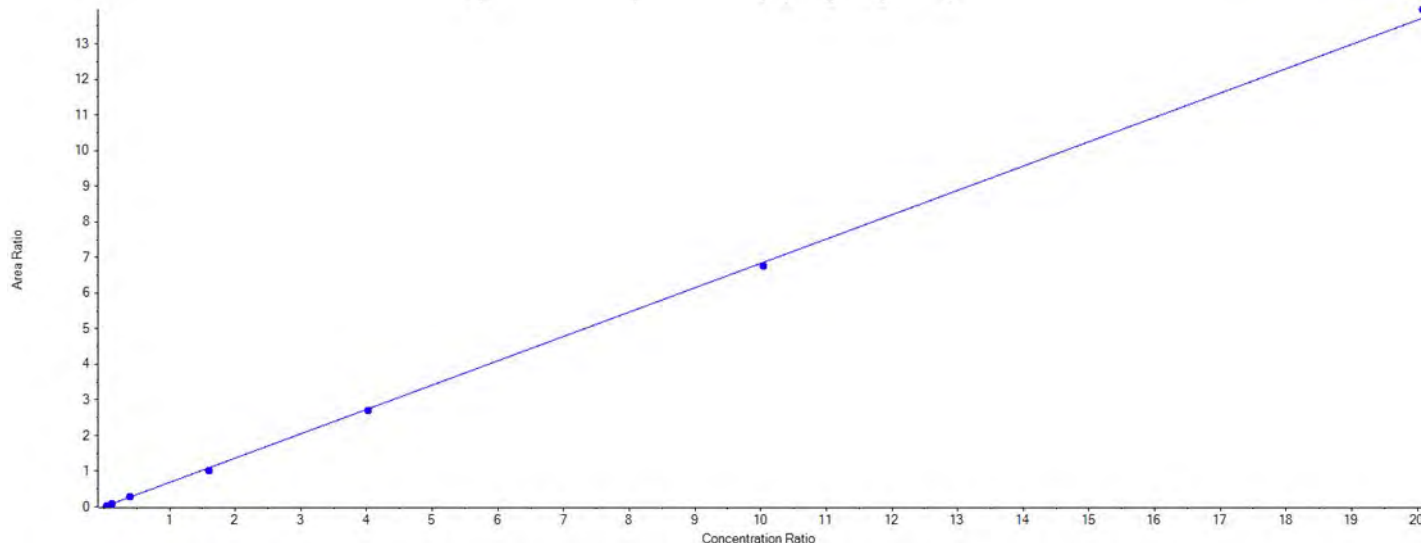
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFNS

$$y = 0.68322 x \text{ (} r = 0.99974 \text{) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6846.55	64175.9	283127.43	True	4.78	0.024	5.54	1.060	0.192	0.169	-12	30	
CAL2	20326.14	1643.1	271778.84	True	4.78	0.075	5.55	1.060	0.576	0.523	-9	30	
CAL3	76049.00	306613.9	281035.50	True	4.78	0.271	5.55	1.060	1.920	1.893	-1	30	
CAL4	269712.27	3708.3	267380.81	True	4.78	1.009	5.54	1.060	7.680	7.057	-8	30	
CAL5	725402.00	3853.5	267157.61	True	4.78	2.715	5.53	1.060	19.200	18.997	-1	30	
CAL6	1709959.45	3115.5	253129.16	True	4.78	6.755	5.55	1.060	48.000	47.262	-2	30	
CAL7	3386860.46	3789.1	242617.53	True	4.78	13.960	5.53	1.060	96.000	97.666	2	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

BSI05 Page 852 of 1595

REVIEWED

By HMK at 10:53 am, 11/13/18

Page 39 of 59

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

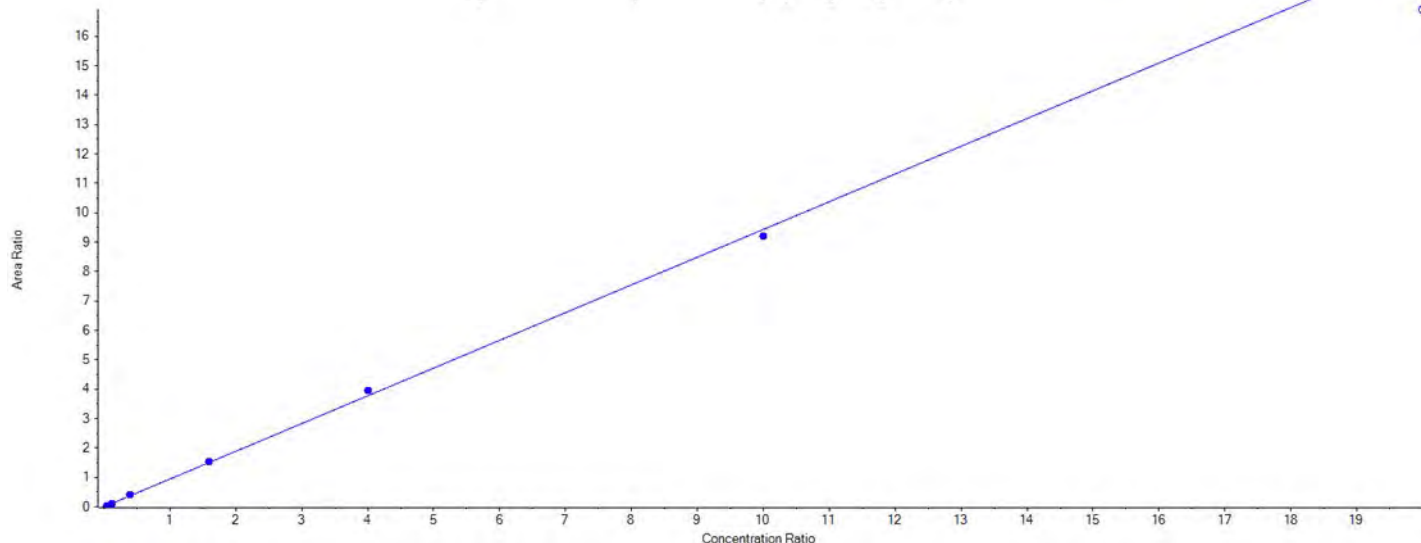
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFDA

$$y = 0.94313x \text{ (} r = 0.99936 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27488.55	91.3	612577.43	True	5.00	0.045	5.56	1.000	0.200	0.238	19	30	
CAL2	63802.06	156.0	601859.80	True	5.00	0.106	5.57	1.000	0.600	0.562	-6	30	
CAL3	254047.79	380.5	612680.79	True	5.00	0.415	5.57	1.000	2.000	2.198	10	30	
CAL4	941985.31	720.2	612056.47	True	5.00	1.539	5.56	1.000	8.000	8.159	2	30	
CAL5	2309359.54	1113.9	585231.23	True	5.00	3.946	5.56	1.000	20.000	20.920	5	30	
CAL6	4802967.81	1415.3	522613.81	True	5.00	9.190	5.57	1.000	50.000	48.722	-3	30	
CAL7	8104726.61	2024.7	479333.06	False	5.00	16.908	5.55	1.000	100.000	89.640	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

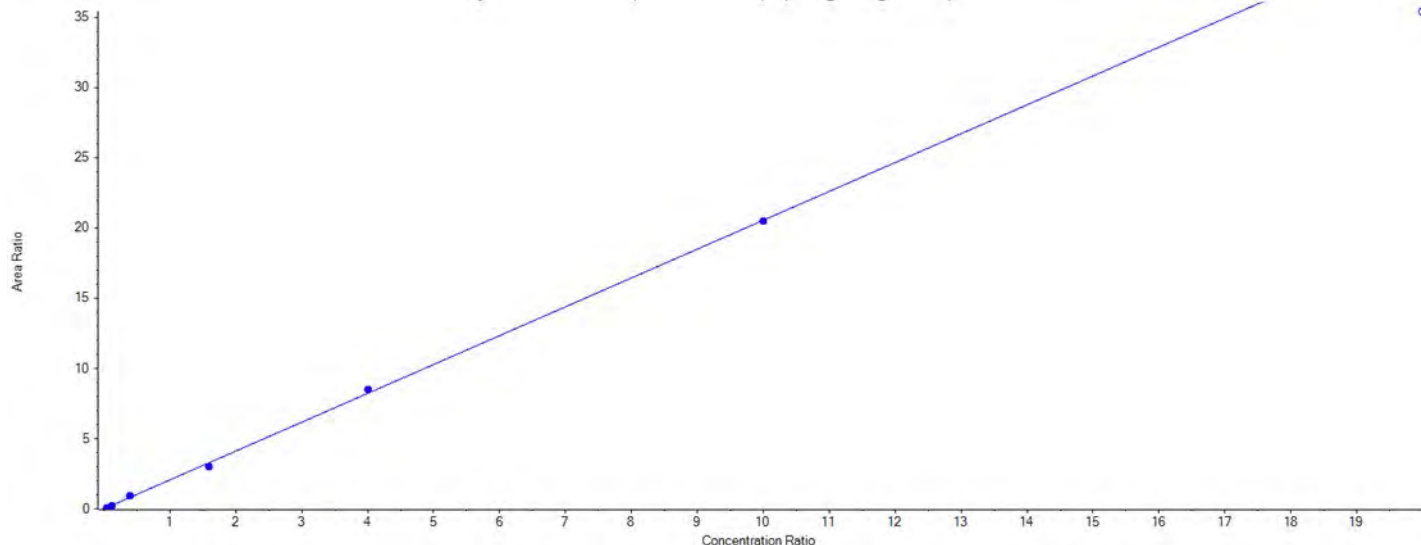
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

8:2-FTS

 $y = 2.05449x$ ($r = 0.99920$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2333.06	294799.1	26445.48	True	4.79	0.088	5.57	1.000	0.192	0.206	7	30	
CAL2	6214.24	6270.0	27639.19	True	4.79	0.225	5.57	1.000	0.575	0.524	-9	30	
CAL3	26295.08	17693.1	29249.84	True	4.79	0.899	5.57	1.000	1.920	2.096	9	30	
CAL4	80922.57	6228.9	27253.46	True	4.79	2.969	5.57	1.000	7.660	6.923	-10	30	
CAL5	206213.12	2630.2	24192.14	True	4.79	8.524	5.56	1.000	19.200	19.873	4	30	
CAL6	469719.63	3836.0	22899.00	True	4.79	20.513	5.57	1.000	47.900	47.825	0	30	
CAL7	804019.53	2307.7	22710.95	False	4.79	35.402	5.56	1.000	95.800	82.540	-14	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

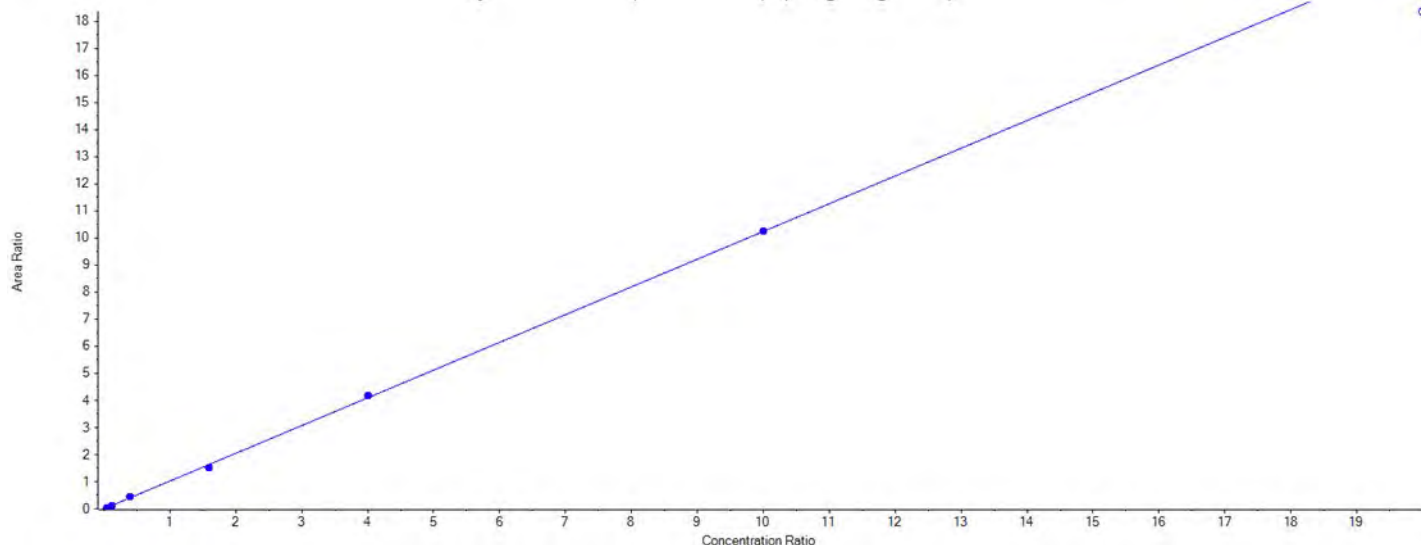
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFOSA

$$y = 1.02368x \text{ (} r = 0.99961 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29582.80	441.0	664489.93	True	5.00	0.045	5.64	1.000	0.200	0.217	9	30	
CAL2	71087.03	726.6	636543.15	True	5.00	0.112	5.65	1.000	0.600	0.545	-9	30	
CAL3	270175.45	1379.9	629109.87	True	5.00	0.429	5.65	1.000	2.000	2.098	5	30	
CAL4	927660.45	2034.5	607762.03	True	5.00	1.526	5.64	1.000	8.000	7.455	-7	30	
CAL5	2498877.87	2082.0	596544.13	True	5.00	4.189	5.64	1.000	20.000	20.460	2	30	
CAL6	5530440.62	2331.7	539992.50	True	5.00	10.242	5.65	1.000	50.000	50.024	0	30	
CAL7	10169176.93	2455.7	554092.64	False	5.00	18.353	5.63	1.000	100.000	89.642	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

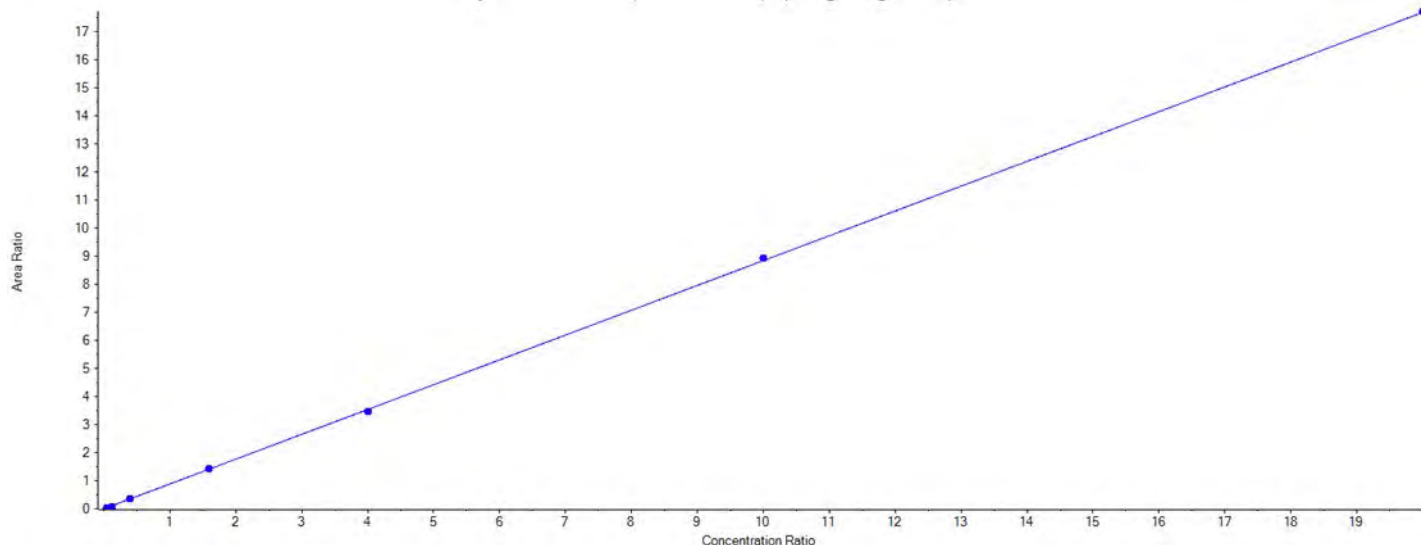
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

NMeFOSAA

$$y = 0.88469x \text{ (} r = 0.99990 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2306.38	597.4	86914.51	True	5.00	0.027	5.71	1.000	0.200	0.150	-25	30	
CAL2	5759.59	226.1	77388.61	True	5.00	0.074	5.71	1.000	0.600	0.421	-30	30	
CAL3	25147.65	632.7	71670.26	True	5.00	0.351	5.71	1.000	2.000	1.983	-1	30	
CAL4	103649.07	37382.5	72788.02	True	5.00	1.424	5.70	1.000	8.000	8.048	1	30	
CAL5	250711.49	2299.0	72424.49	True	5.00	3.462	5.70	1.000	20.000	19.564	-2	30	
CAL6	627854.43	1632.7	70320.26	True	5.00	8.928	5.71	1.000	50.000	50.461	1	30	
CAL7	1191981.70	2314.0	67250.45	True	5.00	17.725	5.69	1.000	100.000	100.173	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

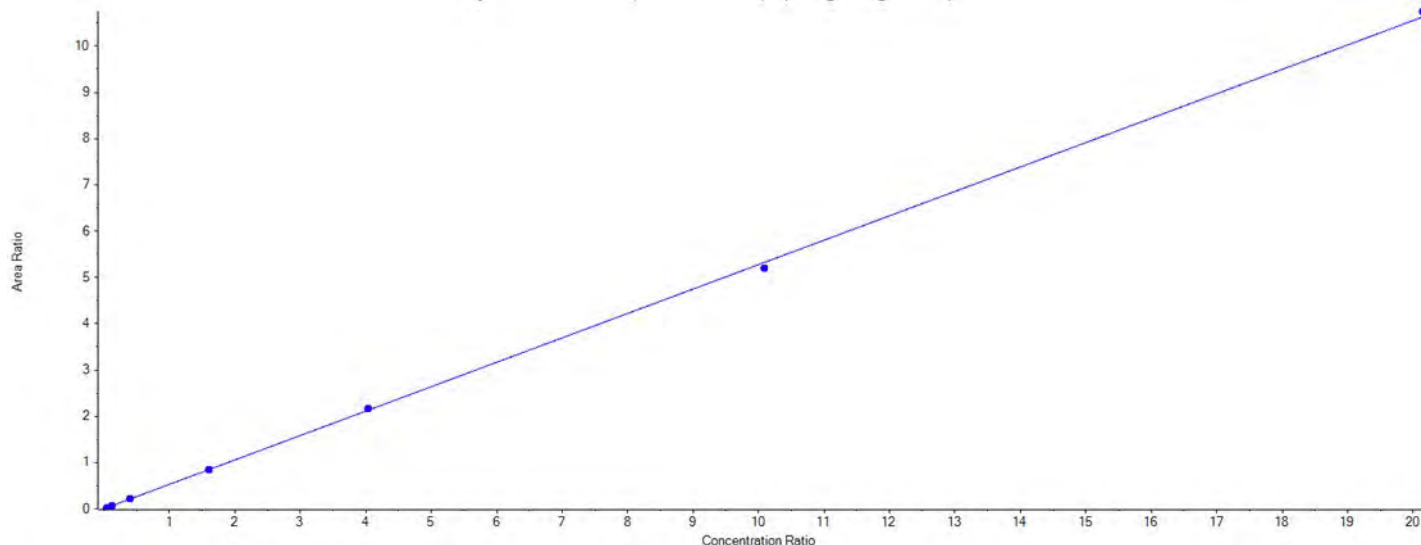
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFDS

$$y = 0.52754x \text{ (} r = 0.99985 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5952.23	1142.3	283127.43	True	4.78	0.021	5.80	1.100	0.193	0.190	-1	30	
CAL2	16291.91	12424.6	271778.84	True	4.78	0.060	5.80	1.100	0.578	0.543	-6	30	
CAL3	57966.88	3930335.8	281035.50	True	4.78	0.206	5.80	1.110	1.930	1.869	-3	30	
CAL4	224031.22	2859776.1	267380.81	True	4.78	0.838	5.80	1.110	7.700	7.592	-1	30	
CAL5	578877.50	2392.5	267157.61	True	4.78	2.167	5.79	1.100	19.300	19.633	2	30	
CAL6	1313570.32	3303.1	253129.16	True	4.78	5.189	5.80	1.100	48.200	47.020	-2	30	
CAL7	2606720.69	3557.3	242617.53	True	4.78	10.744	5.79	1.110	96.300	97.353	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

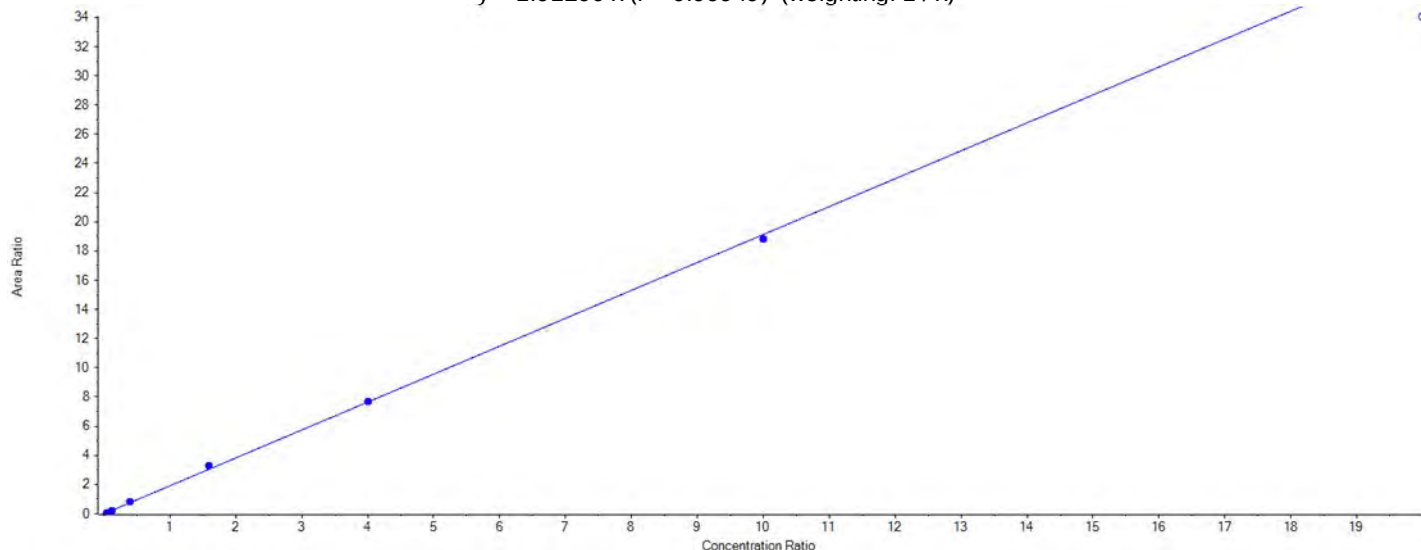
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFUnDA

 $y = 1.91260x$ ($r = 0.99949$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23379.53	206.2	256401.96	True	5.00	0.091	5.82	1.000	0.200	0.238	19	30	
CAL2	51206.76	285.0	242881.75	True	5.00	0.211	5.83	1.000	0.600	0.551	-8	30	
CAL3	199061.83	846.0	245605.30	True	5.00	0.810	5.83	1.000	2.000	2.119	6	30	
CAL4	768010.80	1510.9	232014.10	True	5.00	3.310	5.82	1.000	8.000	8.654	8	30	
CAL5	1773582.60	2061.6	231187.89	True	5.00	7.672	5.82	1.000	20.000	20.055	0	30	
CAL6	3923979.21	2695.3	208574.11	True	5.00	18.813	5.83	1.000	50.000	49.183	-2	30	
CAL7	6802701.21	3209.1	199746.83	False	5.00	34.057	5.81	1.000	100.000	89.032	-11	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

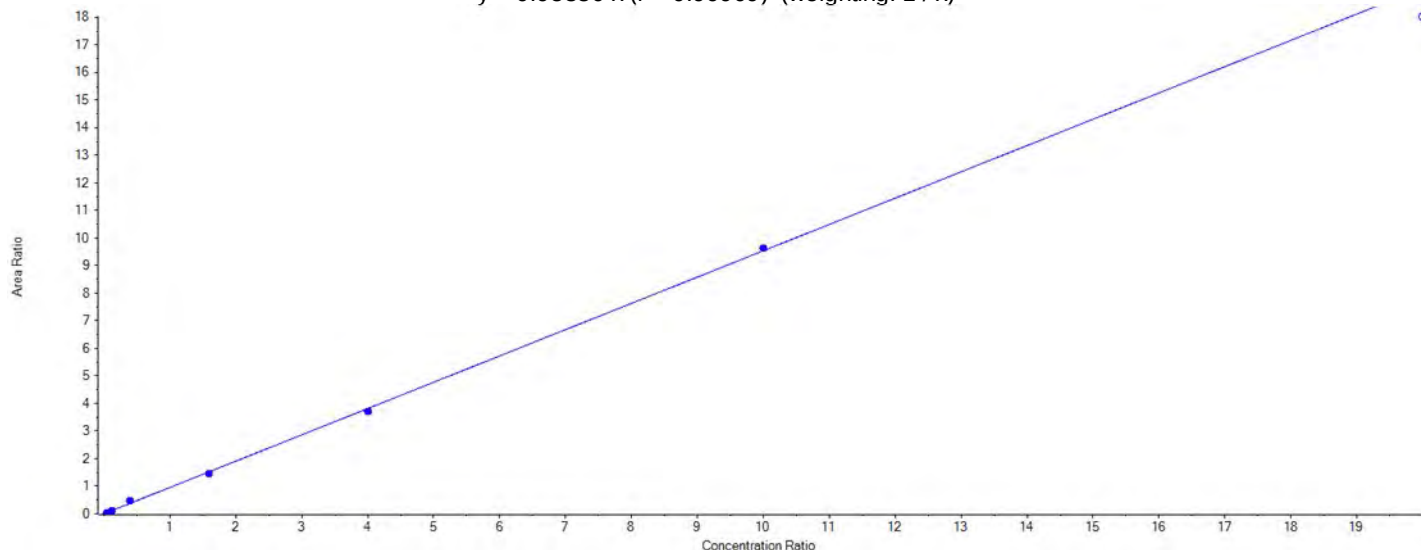
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

NEtFOSAA

 $y = 0.95380x$ ($r = 0.99909$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2284.89	20256.7	80597.24	True	5.00	0.028	5.85	1.000	0.200	0.149	-26	30	
CAL2	7727.12	209.6	63686.93	True	5.00	0.121	5.85	1.000	0.600	0.636	6	30	
CAL3	25089.02	97.0	54383.91	True	5.00	0.461	5.84	1.000	2.000	2.418	21	30	
CAL4	94877.84	20462.7	65477.96	True	5.00	1.449	5.84	1.000	8.000	7.596	-5	30	
CAL5	237197.18	1311.0	63701.69	True	5.00	3.724	5.83	1.000	20.000	19.520	-2	30	
CAL6	551865.73	1762.3	57308.08	True	5.00	9.630	5.84	1.000	50.000	50.481	1	30	
CAL7	1046636.11	1311.5	58049.49	False	5.00	18.030	5.83	1.000	100.000	94.517	-5	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

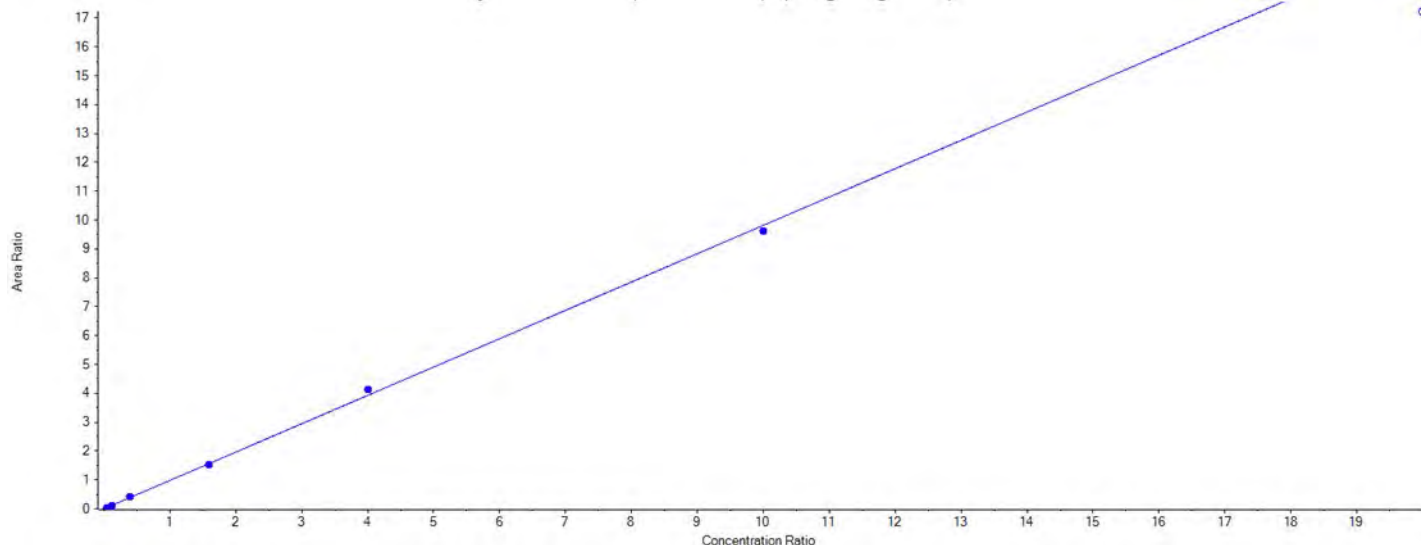
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFDODA

$$y = 0.98190x \text{ (} r = 0.99932 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFDODA Area	S/N	13C2-PFDODA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22143.56	430.3	545413.19	True	5.00	0.041	6.05	1.000	0.200	0.207	3	30	
CAL2	59695.25	467.4	532175.35	True	5.00	0.112	6.06	1.000	0.600	0.571	-5	30	
CAL3	237252.63	1192.0	549542.28	True	5.00	0.432	6.06	1.000	2.000	2.198	10	30	
CAL4	803646.84	1372.0	521514.09	True	5.00	1.541	6.05	1.000	8.000	7.847	-2	30	
CAL5	2099385.04	2645.1	507556.82	True	5.00	4.136	6.04	1.000	20.000	21.062	5	30	
CAL6	4582985.49	2623.0	477105.49	True	5.00	9.606	6.06	1.000	50.000	48.914	-2	30	
CAL7	8171355.35	3494.7	474393.79	False	5.00	17.225	6.04	1.000	100.000	87.711	-12	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

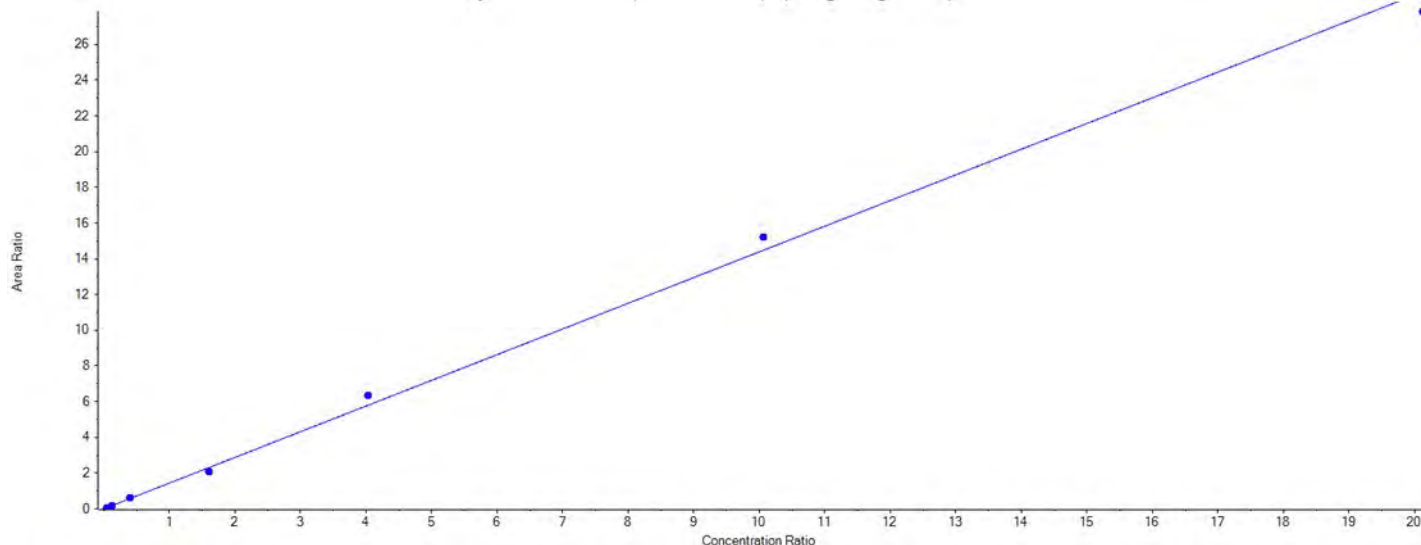
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

10:2-FTS

$$y = 1.43807 x \text{ (} r = 0.99838 \text{) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1814.19	3265.8	26445.48	True	4.79	0.069	6.07	1.090	0.193	0.229	18	30	
CAL2	5206.47	6837.3	27639.19	True	4.79	0.188	6.08	1.090	0.578	0.627	9	30	
CAL3	18541.69	12580.7	29249.84	True	4.79	0.634	6.07	1.090	1.930	2.111	9	30	
CAL4	56040.80	5520.1	27253.46	True	4.79	2.056	6.07	1.090	7.710	6.849	-11	30	
CAL5	153343.55	2460.5	24192.14	True	4.79	6.339	6.06	1.090	19.300	21.113	9	30	
CAL6	348263.21	3159.4	22899.00	True	4.79	15.209	6.07	1.090	48.200	50.658	5	30	
CAL7	632223.71	3215.8	22710.95	True	4.79	27.838	6.06	1.090	96.400	92.724	-4	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

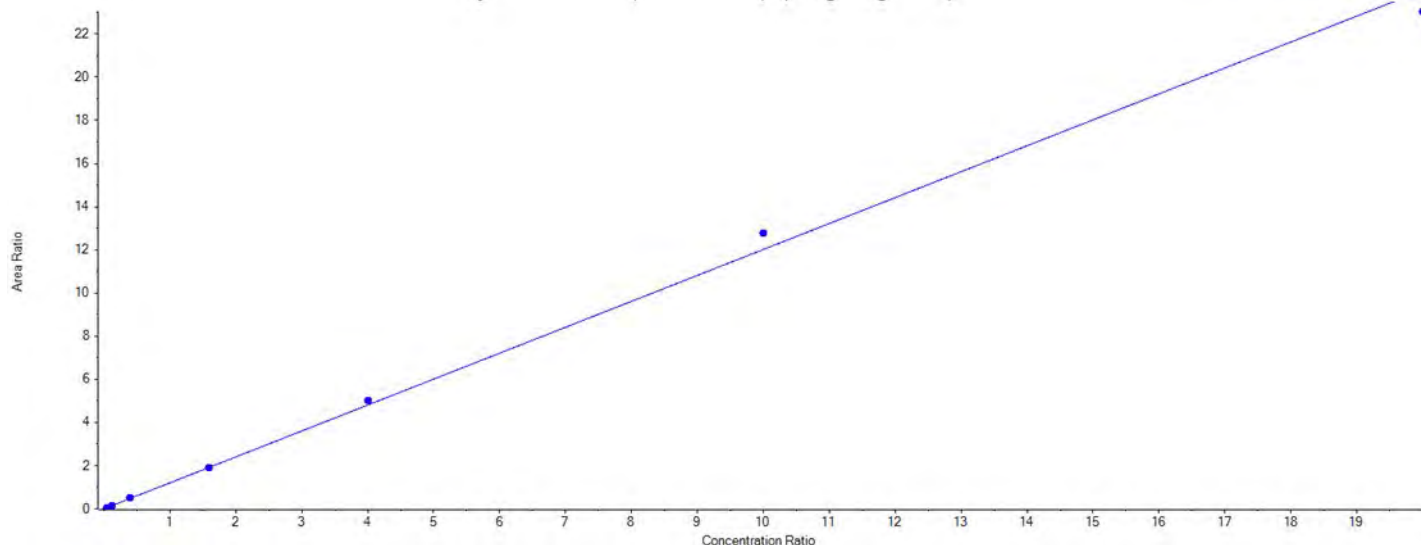
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

NMePFOSAE

 $y = 1.20138x$ ($r = 0.99873$) (weighting: $1/x$)

Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18013.88	109.4	349854.47	True	5.00	0.051	6.10	1.000	0.200	0.214	7	30	
CAL2	43085.10	193.1	323456.51	True	5.00	0.133	6.10	1.000	0.600	0.554	-8	30	
CAL3	163668.66	409.2	307355.43	True	5.00	0.533	6.10	1.000	2.000	2.216	11	30	
CAL4	618314.36	740.2	327796.39	True	5.00	1.886	6.10	1.000	8.000	7.850	-2	30	
CAL5	1590507.13	975.1	316777.82	True	5.00	5.021	6.09	1.000	20.000	20.896	4	30	
CAL6	3484588.79	1388.9	272638.97	True	5.00	12.781	6.10	1.000	50.000	53.193	6	30	
CAL7	6272486.25	1388.0	272283.14	True	5.00	23.037	6.09	1.000	100.000	95.876	-4	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

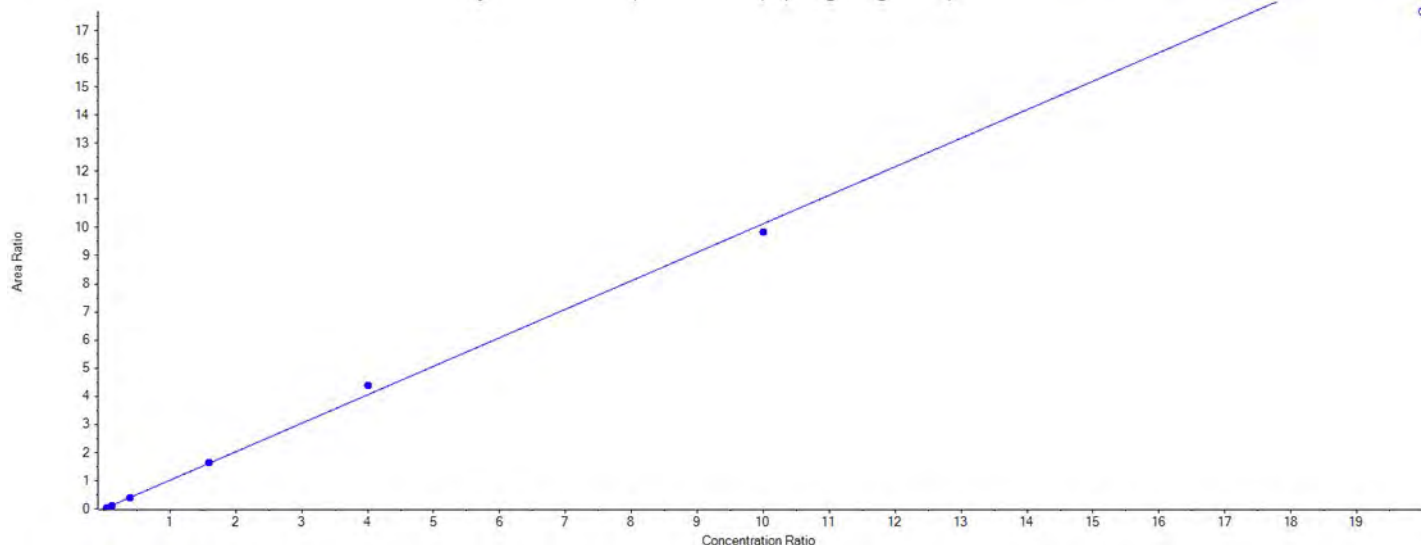
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

NMePFOSA

$$y = 1.01352 x \text{ (r = 0.99879) (weighting: 1 / x)}$$



Component Calibration Verification

Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2376.29	153.9	78396.49	True	5.00	0.030	6.11	1.000	0.200	0.150	-25	30	
CAL2	8877.69	472.1	77893.24	True	5.00	0.114	6.11	1.000	0.600	0.562	-6	30	
CAL3	29934.31	447.4	76782.89	True	5.00	0.390	6.11	1.000	2.000	1.923	-4	30	
CAL4	114415.89	890.1	70122.47	True	5.00	1.632	6.10	1.000	8.000	8.049	1	30	
CAL5	300855.72	937.9	68615.66	True	5.00	4.385	6.10	1.000	20.000	21.631	8	30	
CAL6	670429.56	1054.0	68215.94	True	5.00	9.828	6.11	1.000	50.000	48.485	-3	30	
CAL7	1310162.93	1043.5	74110.30	False	5.00	17.679	6.09	1.000	100.000	87.214	-13	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

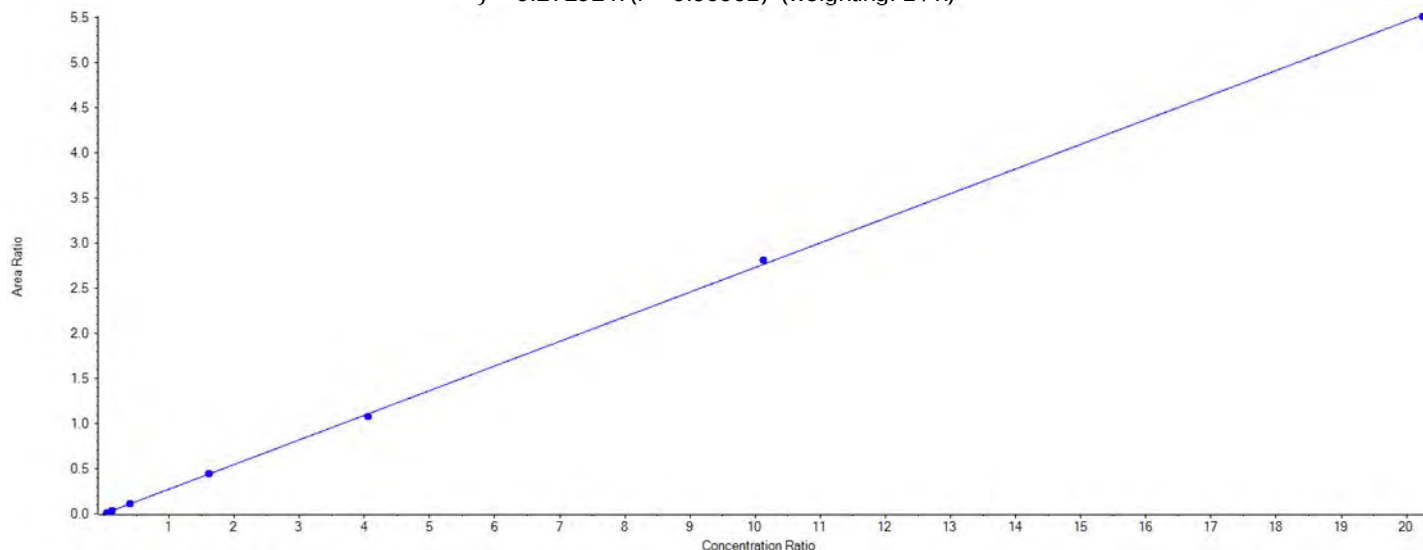
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFDoS

$$y = 0.27292 x \text{ (r = 0.99991) (weighting: 1 / x)}$$



Component Calibration Verification

Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3520.93	58335.2	283127.43	True	4.78	0.012	6.22	1.190	0.194	0.218	12	30	
CAL2	8992.48	12149.3	271778.84	True	4.78	0.033	6.22	1.190	0.581	0.580	0	30	
CAL3	30098.33	137145.7	281035.50	True	4.78	0.107	6.23	1.190	1.940	1.876	-3	30	
CAL4	117663.31	1376.2	267380.81	True	4.78	0.440	6.22	1.190	7.740	7.707	0	30	
CAL5	288905.05	1660.8	267157.61	True	4.78	1.081	6.21	1.190	19.400	18.940	-2	30	
CAL6	711567.54	2275.7	253129.16	True	4.78	2.811	6.23	1.190	48.400	49.234	2	30	
CAL7	1336765.26	3028.7	242617.53	True	4.78	5.510	6.21	1.190	96.800	96.500	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

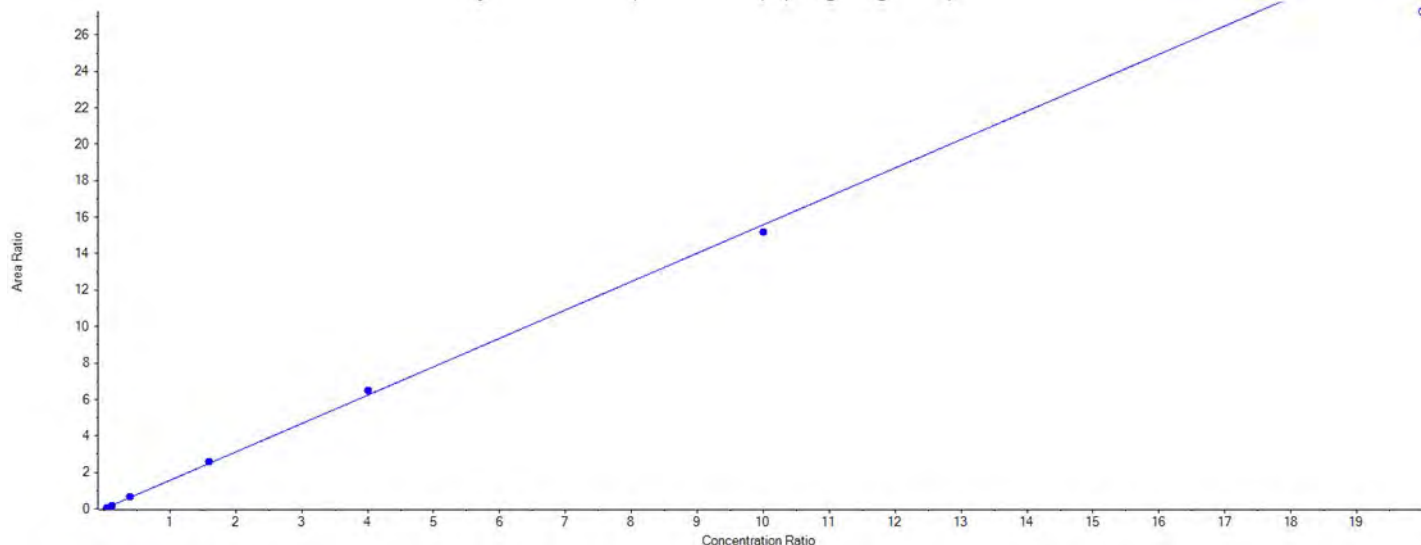
ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

NEtPFOSAE

 $y = 1.55847 x$ ($r = 0.99933$) (weighting: $1 / x$)

Component Calibration Verification

Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	21005.85	119.5	280311.62	True	5.00	0.075	6.26	1.000	0.200	0.240	20	30	
CAL2	46623.33	205.6	261195.61	True	5.00	0.178	6.26	1.000	0.600	0.573	-5	30	
CAL3	178457.85	320.7	259792.28	True	5.00	0.687	6.26	1.000	2.000	2.204	10	30	
CAL4	673196.14	592.1	259467.37	True	5.00	2.595	6.25	1.000	8.000	8.324	4	30	
CAL5	1660562.59	810.5	255767.75	True	5.00	6.492	6.25	1.000	20.000	20.830	4	30	
CAL6	3677006.58	1204.8	242587.53	True	5.00	15.157	6.26	1.000	50.000	48.629	-3	30	
CAL7	6557402.46	1093.9	240346.47	False	5.00	27.283	6.25	1.000	100.000	87.532	-12	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

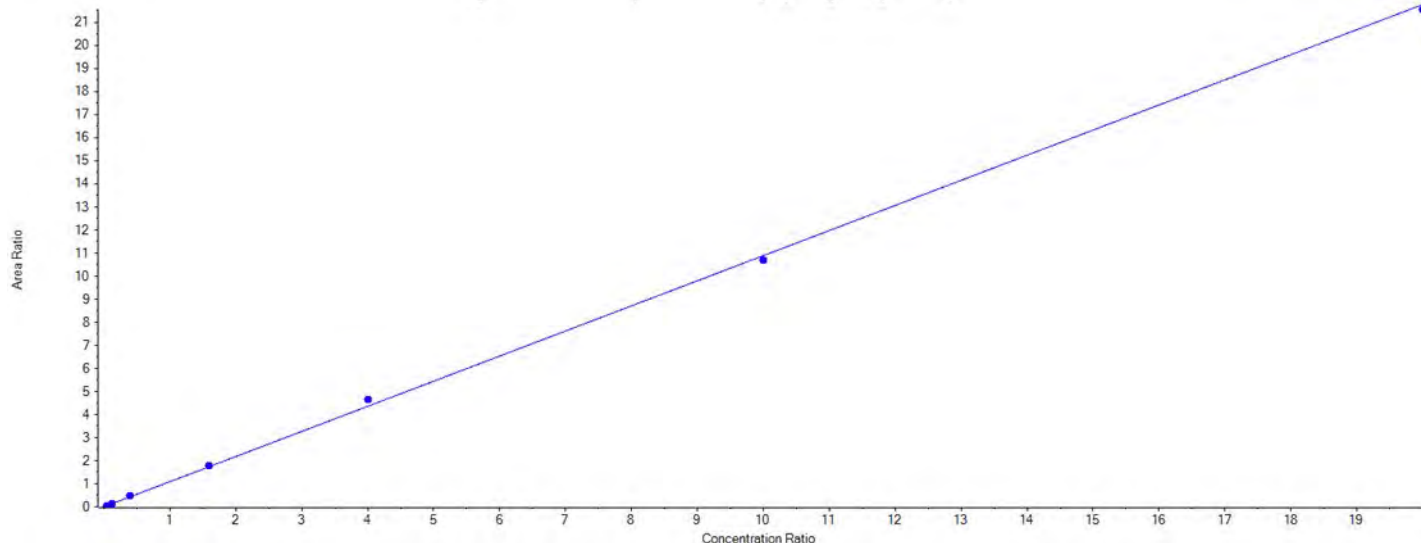
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

NEtPFOSA

$$y = 1.08874 \times (r = 0.99961) \text{ (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2846.21	154.5	63047.06	True	5.00	0.045	6.27	1.000	0.200	0.207	4	30	
CAL2	8053.68	439.3	58073.45	True	5.00	0.139	6.27	1.000	0.600	0.637	6	30	
CAL3	26590.22	407.4	57485.89	True	5.00	0.463	6.27	1.000	2.000	2.124	6	30	
CAL4	99354.14	862.8	55177.27	True	5.00	1.801	6.27	1.000	8.000	8.269	3	30	
CAL5	258300.34	1044.0	55378.45	True	5.00	4.664	6.26	1.000	20.000	21.421	7	30	
CAL6	599280.41	865.2	56004.04	True	5.00	10.701	6.27	1.000	50.000	49.142	-2	30	
CAL7	1148933.01	1266.7	53297.85	True	5.00	21.557	6.26	1.000	100.000	98.999	-1	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

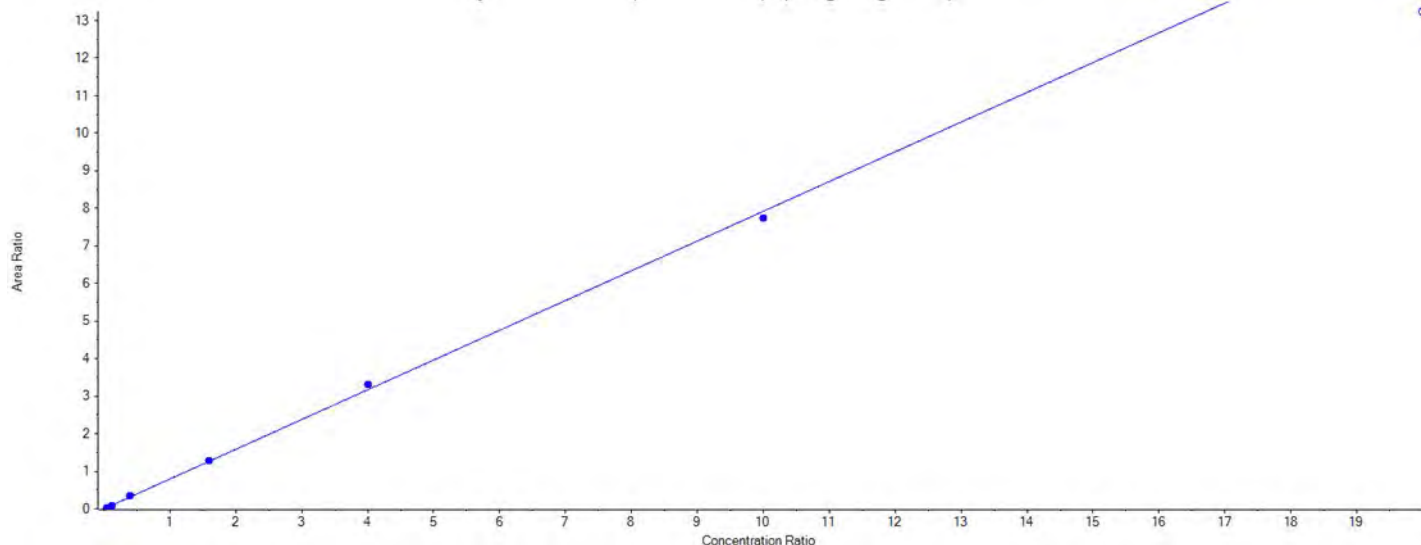
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFTrDA

$$y = 0.79219x \text{ (} r = 0.99949 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	20185.08	68.6	545413.19	True	5.00	0.037	6.25	1.030	0.200	0.234	17	30	
CAL2	47991.31	109.2	532175.35	True	5.00	0.090	6.26	1.030	0.600	0.569	-5	30	
CAL3	184322.87	257.3	549542.28	True	5.00	0.335	6.26	1.030	2.000	2.117	6	30	
CAL4	674140.32	350.0	521514.09	True	5.00	1.293	6.25	1.030	8.000	8.159	2	30	
CAL5	1679407.24	589.3	507556.82	True	5.00	3.309	6.24	1.030	20.000	20.884	4	30	
CAL6	3691733.76	935.9	477105.49	True	5.00	7.738	6.26	1.030	50.000	48.838	-2	30	
CAL7	6281239.03	1061.9	474393.79	False	5.00	13.241	6.24	1.030	100.000	83.569	-16	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

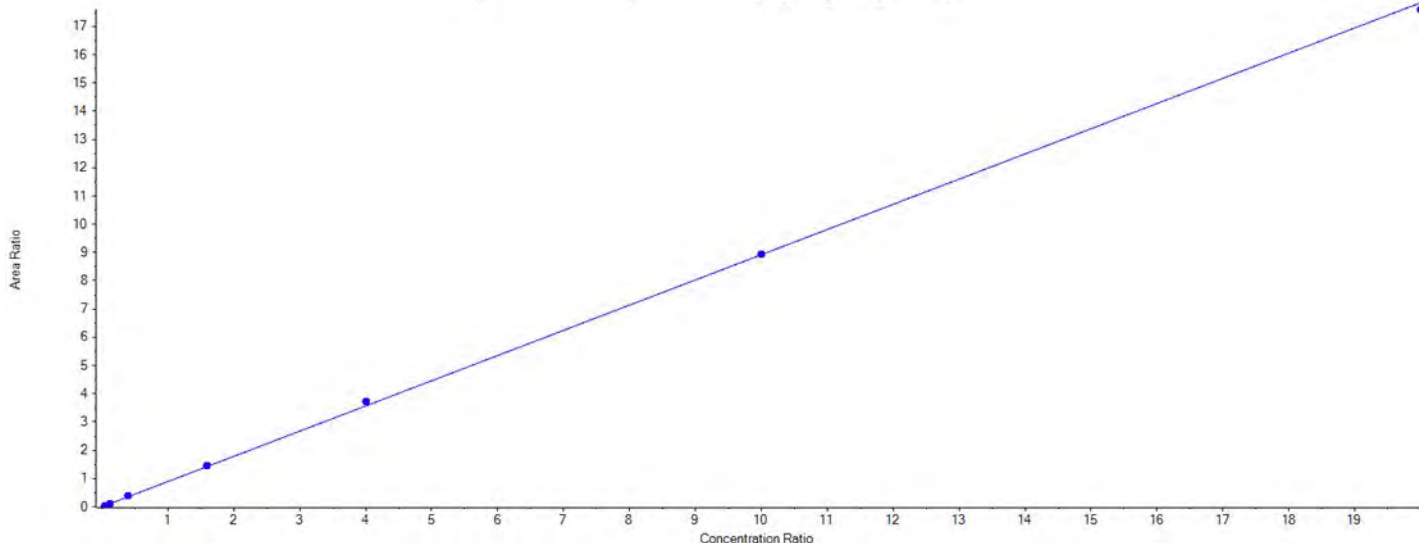
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFTeDA

$$y = 0.89197 x \text{ (r = 0.99974) (weighting: 1 / x)}$$



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	¹³ C ₂ -PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	16357.53	210.0	410633.04	True	5.00	0.040	6.43	1.000	0.200	0.223	12	30	
CAL2	40236.53	281.3	394146.24	True	5.00	0.102	6.43	1.000	0.600	0.572	-5	30	
CAL3	156439.94	700.6	393544.94	True	5.00	0.398	6.43	1.000	2.000	2.228	11	30	
CAL4	571926.74	1105.3	392356.63	True	5.00	1.458	6.43	1.000	8.000	8.171	2	30	
CAL5	1418276.72	1705.5	379571.56	True	5.00	3.737	6.42	1.000	20.000	20.945	5	30	
CAL6	3149020.22	2109.2	352892.21	True	5.00	8.923	6.43	1.000	50.000	50.021	0	30	
CAL7	6092875.66	2023.1	346256.59	True	5.00	17.596	6.42	1.000	100.000	98.638	-1	30	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

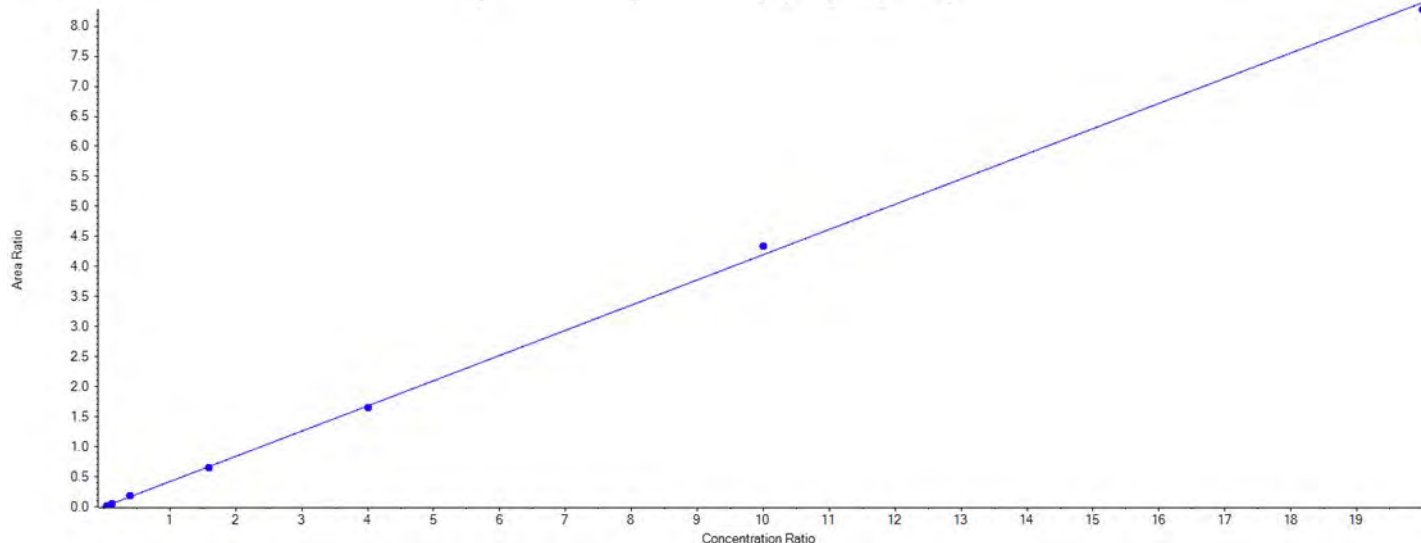
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFHxDA

$$y = 0.41968x \text{ (} r = 0.99971 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	¹³ C ₂ -PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	7976.02	221.5	410633.04	True	5.00	0.019	6.73	1.050	0.200	0.231	16	30	
CAL2	19006.44	621.9	394146.24	True	5.00	0.048	6.74	1.050	0.600	0.575	-4	30	
CAL3	69655.07	986.8	393544.94	True	5.00	0.177	6.74	1.050	2.000	2.109	5	30	
CAL4	256654.28	1362.8	392356.63	True	5.00	0.654	6.73	1.050	8.000	7.793	-3	30	
CAL5	627350.68	1919.3	379571.56	True	5.00	1.653	6.72	1.050	20.000	19.691	-2	30	
CAL6	1533920.21	4020.8	352892.21	True	5.00	4.347	6.74	1.050	50.000	51.786	4	30	
CAL7	2866097.32	3342.9	346256.59	True	5.00	8.277	6.72	1.050	100.000	98.615	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

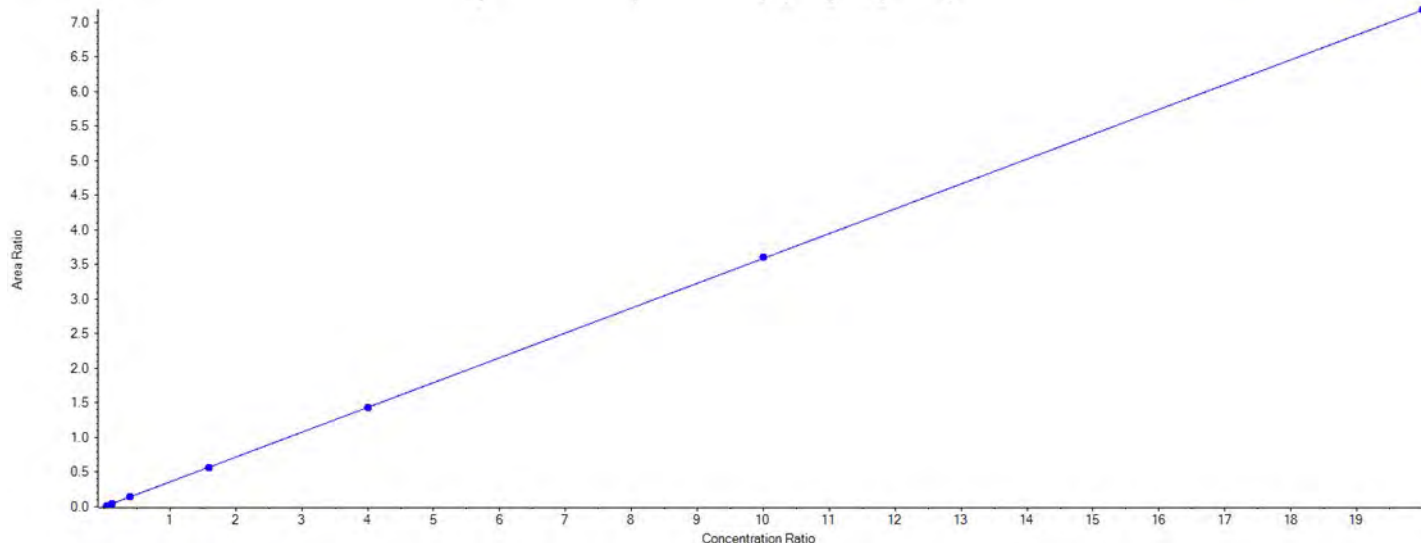
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

PFODA

$$y = 0.35901 x \text{ (} r = 0.99996 \text{) (weighting: } 1 / x \text{)}$$



Component Calibration Verification

Sample Name	PFODA Area	S/N	¹³ C ₂ -PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6020.31	470.6	410633.04	True	5.00	0.015	7.00	1.090	0.200	0.204	2	30	
CAL2	14955.56	635.0	394146.24	True	5.00	0.038	7.00	1.090	0.600	0.528	-12	30	
CAL3	57795.96	1304.8	393544.94	True	5.00	0.147	7.00	1.090	2.000	2.045	2	30	
CAL4	219359.64	2291.9	392356.63	True	5.00	0.559	6.99	1.090	8.000	7.786	-3	30	
CAL5	544296.46	2946.8	379571.56	True	5.00	1.434	6.98	1.090	20.000	19.971	0	30	
CAL6	1270897.62	3196.4	352892.21	True	5.00	3.601	7.00	1.090	50.000	50.157	0	30	
CAL7	2488863.64	3668.3	346256.59	True	5.00	7.188	6.98	1.090	100.000	100.107	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

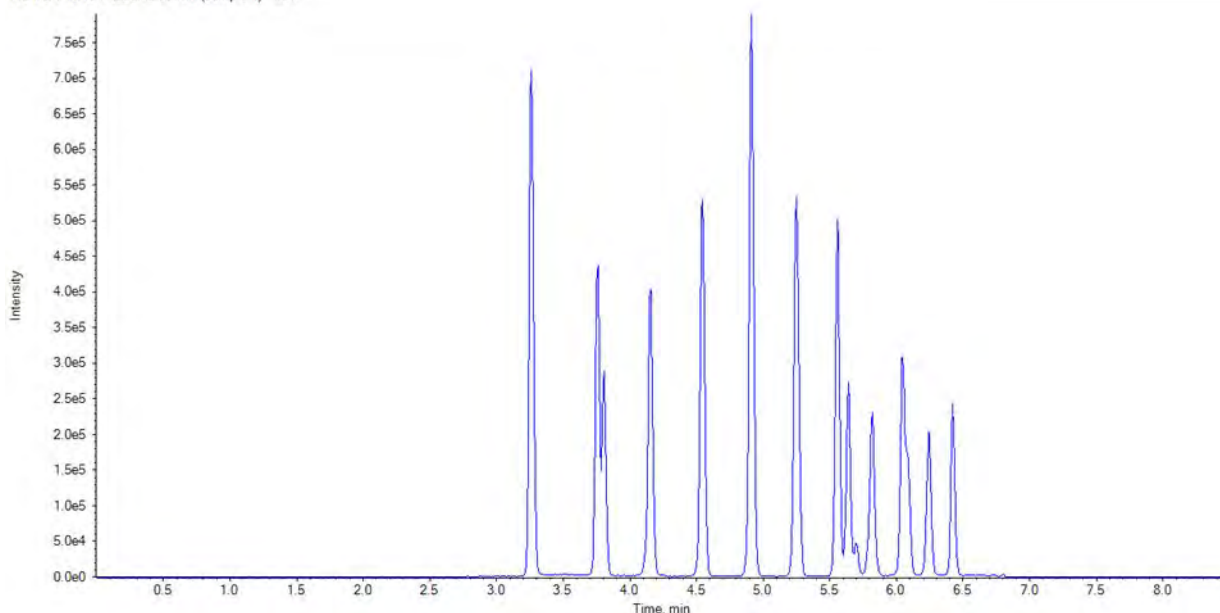
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM

TIC from 18NOV12DCAL-50.wiff (sample 1) - ICV



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	655209.26	659926.2	-0.7	50	
13C2-PFOA	5.000	452726.16	450219.7	0.6	50	
13C4-PFOS	4.780	253010.34	249205.8	1.5	50	
13C2-PFDA	5.000	277002.66	278743.9	-0.6	50	

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

DOD Initial Calibration Verification

Instrument ID: LM27631

ICAL Name: 18NOV12DCAL

QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL11/12/2018 6:14:07 PM

Acquisition Method: 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	270820.62	13C4-PFBA	715834.41	5.00	0.378	3.26	1.00	2.000	2.096	5	30	
PFPeA	265646.79	13C5-PFPeA	699482.19	5.00	0.380	3.76	1.00	2.000	2.198	10	30	
PFBS	150059.59	13C3-PFBS	394903.38	4.65	0.380	3.80	1.00	1.769	1.808	2	30	
4:2-FTS	N/A	13C2-4:2-FTS	47297.29	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	328694.28	13C5-PFHxA	613579.43	5.00	0.536	4.15	1.00	2.000	2.237	12	30	
PFPeS	N/A	13C3-PFBS	394903.38	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHpA	316975.28	13C4-PFHxA	485394.91	5.00	0.653	4.54	1.00	2.000	2.165	8	30	
PFHxS	115564.23	13C3-PFHxS	304897.78	4.73	0.379	4.55	1.00	1.890	1.838	-3	30	
6:2-FTS	N/A	13C2-6:2-FTS	31532.78	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	118318.71	13C3-PFHxS	304897.78	4.73	0.388	4.91	1.08	1.900	2.043	8	30	
PFOA	332094.35	13C8-PFOA	843573.28	5.00	0.394	4.91	1.00	2.000	2.103	5	30	
PFOS	100952.54	13C8-PFOS	266211.35	4.78	0.379	5.24	1.00	1.910	1.658	-13	30	
PFNA	271240.37	13C9-PFNA	458821.54	5.00	0.591	5.26	1.00	2.000	2.132	7	30	
PFNS	N/A	13C8-PFOS	266211.35	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	224279.75	13C6-PFDA	590290.29	5.00	0.380	5.56	1.00	0.000	2.014		30	
8:2-FTS	N/A	13C2-8:2-FTS	22188.87	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	587080.14	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	30591.86	d3-NMeFOSAA	70133.21	5.00	0.436	5.70	1.00	2.000	2.465	23	30	
PFDS	52860.94	13C8-PFOS	266211.35	4.78	0.199	5.79	1.11	0.000	1.799		30	
PFUnDA	183511.26	13C7-PFUnDA	228363.91	5.00	0.804	5.82	1.00	2.000	2.101	5	30	
NEtFOSAA	26149.34	d5-NEtFOSAA	59551.26	5.00	0.439	5.83	1.00	2.000	2.302	15	30	
PFDoDA	185295.04	13C2-PFDoDA	495858.06	5.00	0.374	6.05	1.00	2.000	1.903	-5	30	
10:2-FTS	N/A	13C2-8:2-FTS	22188.87	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	299185.38	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	75186.89	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	266211.35	4.78	N/A	N/A	N/A	1.930	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	255149.77	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	53596.17	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFTTrDA	165153.11	13C2-PFDoDA	495858.06	5.00	0.333	6.25	1.03	2.000	2.102	5	30	
PFTeDA	135650.98	13C2-PFTeDA	365300.22	5.00	0.371	6.42	1.00	2.000	2.082	4	30	
PFHxDA	N/A	13C2-PFTeDA	365300.22	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	365300.22	5.00	N/A	N/A	N/A	0.000	N/A		30	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL1		Data File:	18NOV12DCAL-42.wiff
Sample ID:	CALBRN11833C		Acquis Date:	2018-11-12T15:05:54
Sample Type:	Standard		Instrument:	LM27631
Vial Position:	3		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	676527.5	659926.2	3	50	
13C2-PFOA	5.0	474834.9	450219.7	5	50	
13C4-PFOS	4.8	265369.0	249205.8	6	50	
13C2-PFDA	5.0	281654.8	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	763334.3	13C3-PFBA	676527.5	1.128	5.000	5.059	101	70-130	
E13C5-PFPeA	771179.4	13C3-PFBA	676527.5	1.140	5.000	5.113	102	70-130	
E13C3-PFBS	445963.4	13C3-PFBA	676527.5	0.659	4.650	4.653	100	70-130	
E13C2-4:2-FTS	51494.6	13C2-PFOA	474834.9	0.108	4.670	4.830	103	70-130	
E13C5-PFHxA	664975.9	13C2-PFOA	474834.9	1.400	5.000	5.059	101	70-130	
E13C3-PFHxS	327944.5	13C2-PFOA	474834.9	0.691	4.730	4.739	100	70-130	
E13C4-PFHpA	528473.5	13C2-PFOA	474834.9	1.113	5.000	5.014	100	70-130	
E13C2-6:2-FTS	35455.2	13C2-PFOA	474834.9	0.075	4.750	4.996	105	70-130	
E13C8-PFOA	912537.7	13C2-PFOA	474834.9	1.922	5.000	5.295	106	70-130	
E13C8-PFOS	283127.4	13C4-PFOS	265369.0	1.067	4.780	4.727	99	70-130	
E13C9-PFNA	479931.4	13C4-PFOS	265369.0	1.809	5.000	5.042	101	70-130	
E13C6-PFDA	612577.4	13C2-PFDA	281654.8	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	26445.5	13C2-PFDA	281654.8	0.094	4.790	4.683	98	70-130	
E13C8-PFOSA	664489.9	13C2-PFDA	281654.8	2.359	5.000	5.230	105	70-130	
Ed3-NMeFOSAA	86914.5	13C2-PFDA	281654.8	0.309	5.000	5.570	111	70-130	
E13C7-PFUnDA	256402.0	13C2-PFDA	281654.8	0.910	5.000	5.285	106	70-130	
Ed5-NEtFOSAA	80597.2	13C2-PFDA	281654.8	0.286	5.000	6.054	121	70-130	
E13C2-PFDODA	545413.2	13C2-PFDA	281654.8	1.936	5.000	5.028	101	70-130	
Ed7-NMePFOSAE	349854.5	13C2-PFDA	281654.8	1.242	5.000	5.375	108	70-130	
Ed3-NMePFOSA	78396.5	13C2-PFDA	281654.8	0.278	5.000	5.057	101	70-130	
Ed9-NEtPFOSAE	280311.6	13C2-PFDA	281654.8	0.995	5.000	5.176	104	70-130	
Ed5-NEtPFOSA	63047.1	13C2-PFDA	281654.8	0.224	5.000	5.251	105	70-130	
E13C2-PFTeDA	410633.0	13C2-PFDA	281654.8	1.458	5.000	5.118	102	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL1

Instrument Name: LM27631

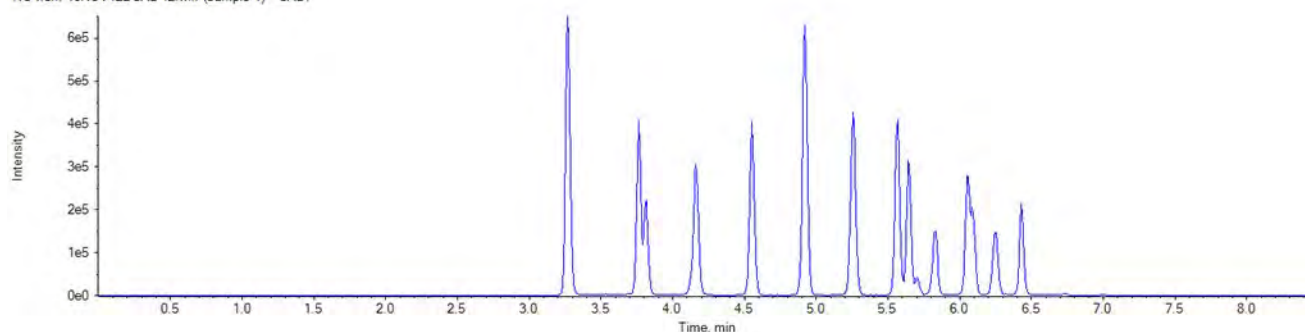
File Name: 18NOV12DCAL-42.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	32322.9		A	13C4-PFBA	3.27	763334.3	0.042	0.235
PFPeA	3.77	1.000	32633.1		M	13C5-PFPeA	3.76	771179.4	0.042	0.245
PFBS	3.81	1.000	18010.0		A	13C3-PFBS	3.81	445963.4	0.040	0.192
4:2-FTS	4.13	1.000	3636.4		A	13C2-4:2-FTS	4.13	51494.6	0.071	0.192
PFHxA	4.16	1.000	39108.2		A	13C5-PFHxA	4.16	664975.9	0.059	0.246
PFPeS	4.18	1.100	9620.1		A	13C3-PFBS	3.81	445963.4	0.022	0.209
PFHpA	4.55	1.000	37545.4		A	13C4-PFHpA	4.55	528473.5	0.071	0.235
PFHxS	4.55	1.000	12858.1		M	13C3-PFHxS	4.55	327944.5	0.039	0.190
6:2-FTS	4.90	1.000	2683.1		M	13C2-6:2-FTS	4.91	35455.2	0.076	0.183
PFHpS	4.91	1.080	13262.8		A	13C3-PFHxS	4.55	327944.5	0.040	0.213
PFOA	4.92	1.000	41468.0		A	13C8-PFOA	4.92	912537.7	0.045	0.243
PFOS	5.25	1.000	13088.5		M	13C8-PFOS	5.25	283127.4	0.046	0.202
PFNA	5.26	1.000	29660.1		A	13C9-PFNA	5.26	479931.4	0.062	0.223
PFNS	5.54	1.060	6846.6		A	13C8-PFOS	5.25	283127.4	0.024	0.169
PFDA	5.56	1.000	27488.6		A	13C6-PFDA	5.57	612577.4	0.045	0.238
8:2-FTS	5.57	1.000	2333.1		A	13C2-8:2-FTS	5.57	26445.5	0.088	0.206
PFOSA	5.64	1.000	29582.8		A	13C8-PFOSA	5.65	664489.9	0.045	0.217
NMeFOSAA	5.71	1.000	2306.4		A	d3-NMeFOSAA	5.70	86914.5	0.027	0.150
PFDS	5.80	1.100	5952.2		A	13C8-PFOS	5.25	283127.4	0.021	0.190
PfUnDA	5.82	1.000	23379.5		A	13C7-PfUnDA	5.83	256402.0	0.091	0.238
NEtFOSAA	5.85	1.000	2284.9		A	d5-NEtFOSAA	5.84	80597.2	0.028	0.149
PFDODA	6.05	1.000	22143.6		A	13C2-PFDODA	6.05	545413.2	0.041	0.207
10:2-FTS	6.07	1.090	1814.2		A	13C2-8:2-FTS	5.57	26445.5	0.069	0.229
NMePFOSAE	6.10	1.000	18013.9		A	d7-NMePFOSAE	6.09	349854.5	0.051	0.214
NMePFOSA	6.11	1.000	2376.3		A	d3-NMePFOSA	6.10	78396.5	0.030	0.150
PFDoS	6.22	1.190	3520.9		A	13C8-PFOS	5.25	283127.4	0.012	0.218
NEtPFOSAE	6.26	1.000	21005.9		A	d9-NEtPFOSAE	6.24	280311.6	0.075	0.240
NEtPFOSA	6.27	1.000	2846.2		M	d5-NEtPFOSA	6.26	63047.1	0.045	0.207
PFTrDA	6.25	1.030	20185.1		M	13C2-PFDODA	6.05	545413.2	0.037	0.234
PFTeDA	6.43	1.000	16357.5		A	13C2-PFTeDA	6.43	410633.0	0.040	0.223
PFHxDA	6.73	1.050	7976.0		M	13C2-PFTeDA	6.43	410633.0	0.019	0.231
PFODA	7.00	1.090	6020.3		A	13C2-PFTeDA	6.43	410633.0	0.015	0.204

Total Ion Chromatogram

TIC from 18NOV12DCAL-42.wiff (sample 1) - CAL1



APPROVED

By MCD at 6:33 pm, 11/12/18

BSI05 Page 874 of 1595

REVIEWED

By HMK at 10:53 am, 11/13/18

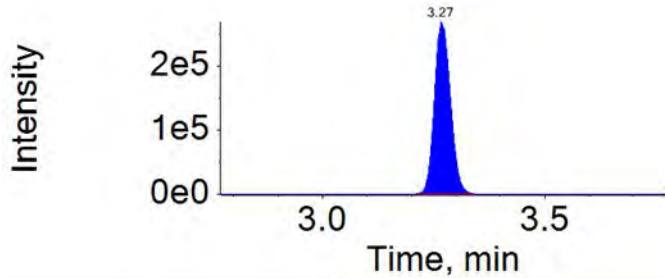
Page 2 of 17

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

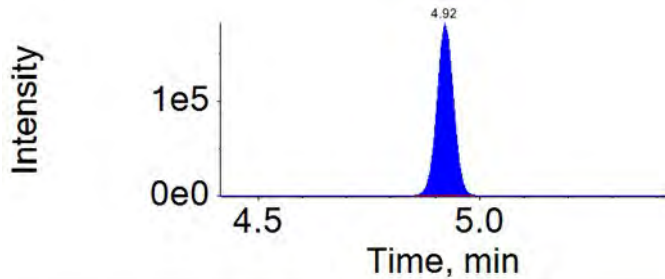
Injection Standard: 13C3-PFBA

216.0 / 172.0



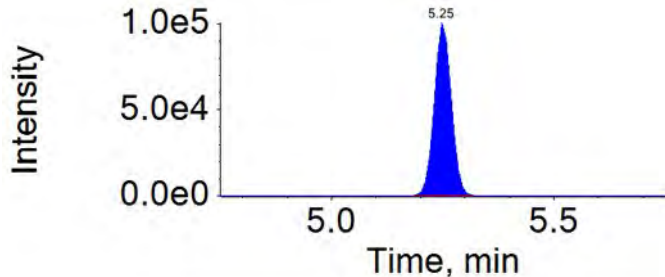
Injection Standard: 13C2-PFOA

415.0 / 370.0



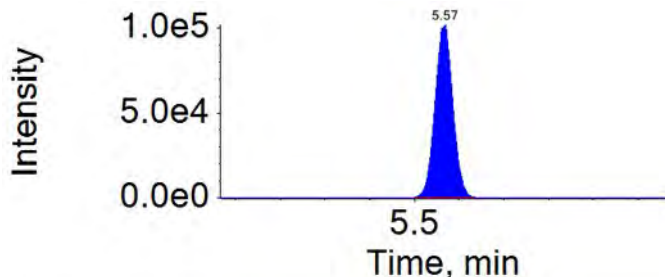
Injection Standard: 13C4-PFOS

503.0 / 80.0



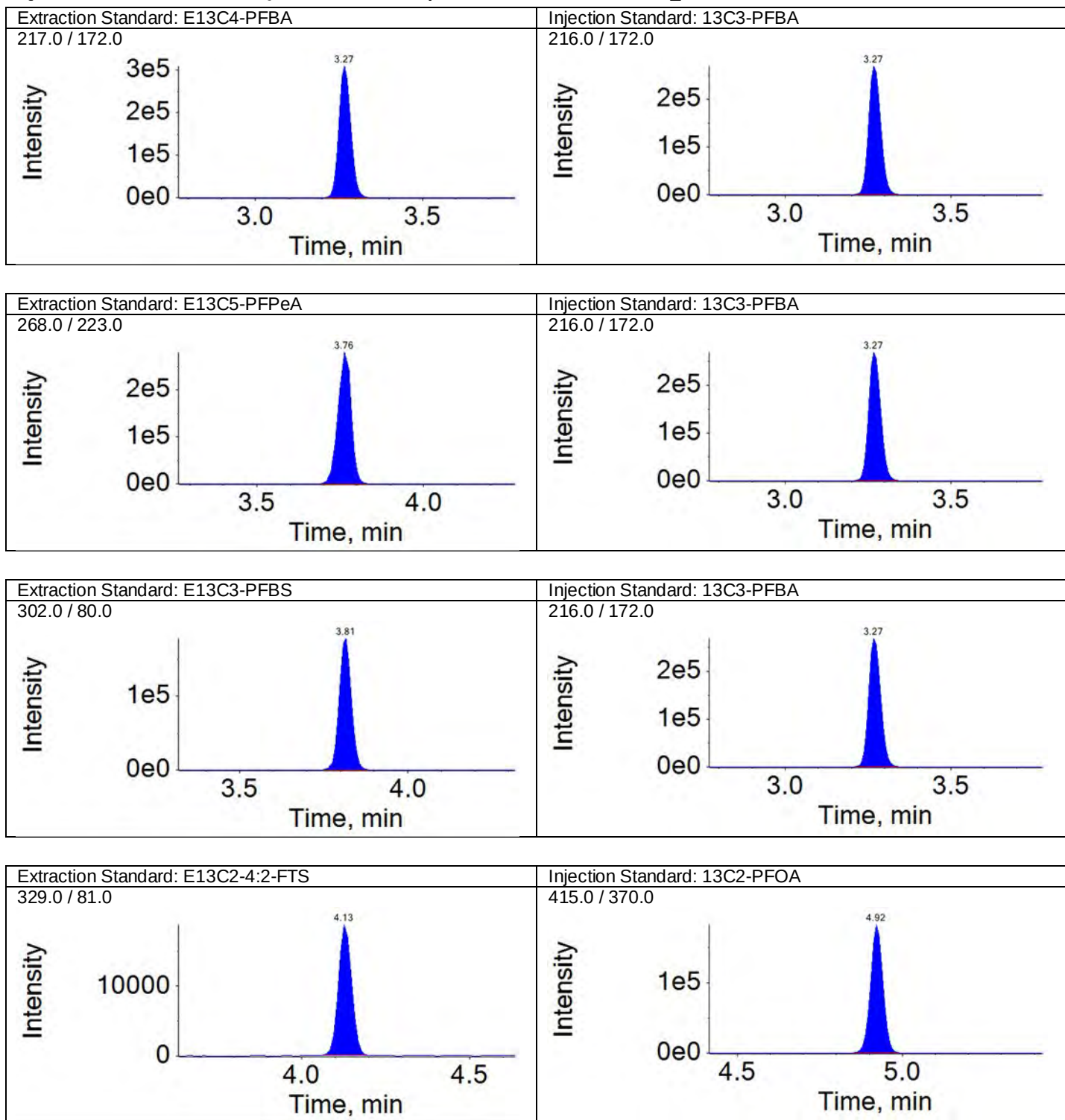
Injection Standard: 13C2-PFDA

515.0 / 470.0



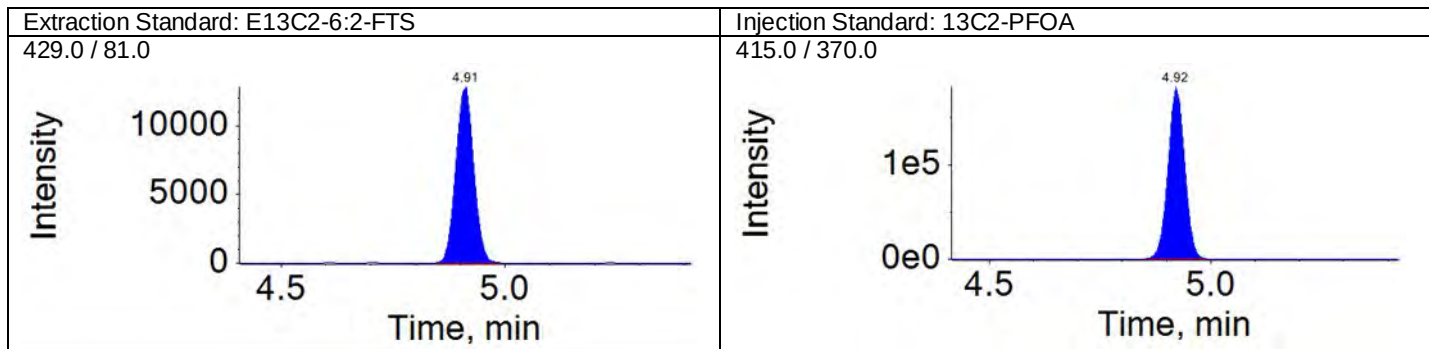
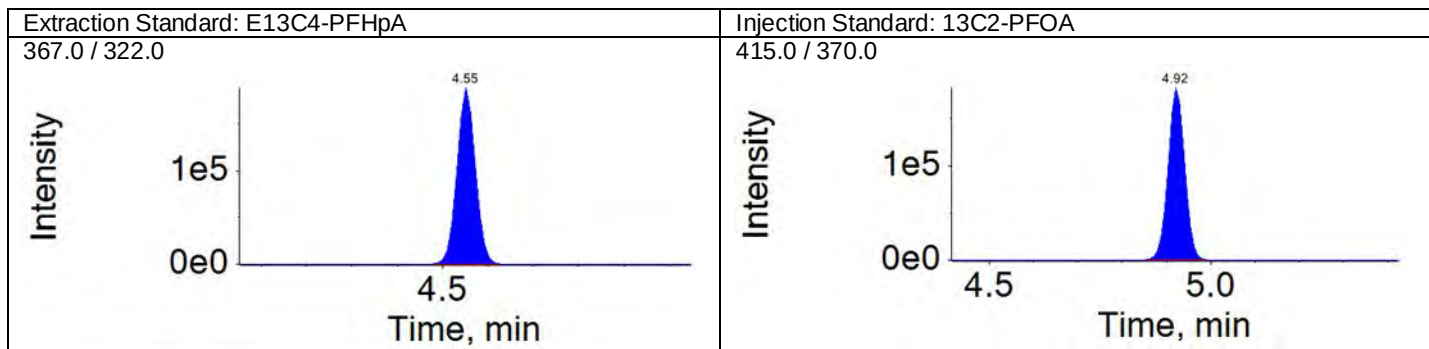
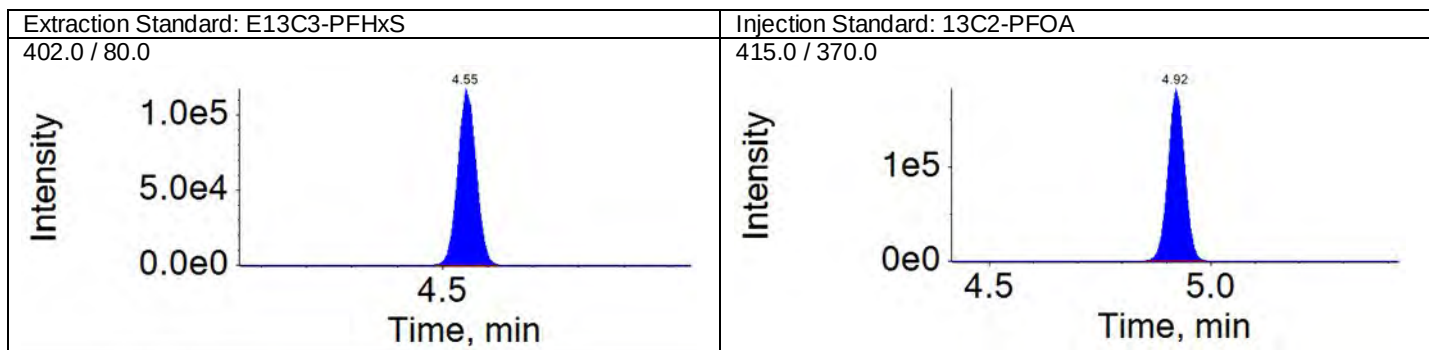
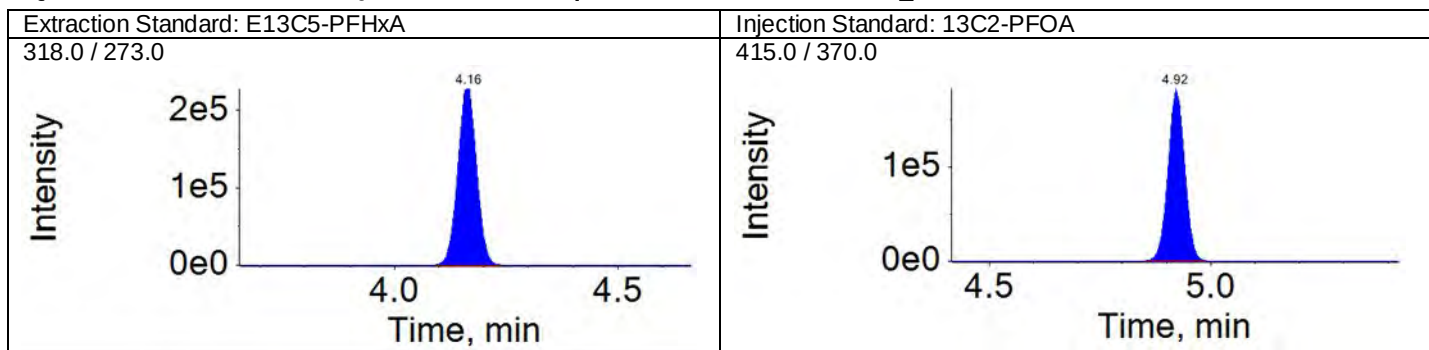
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



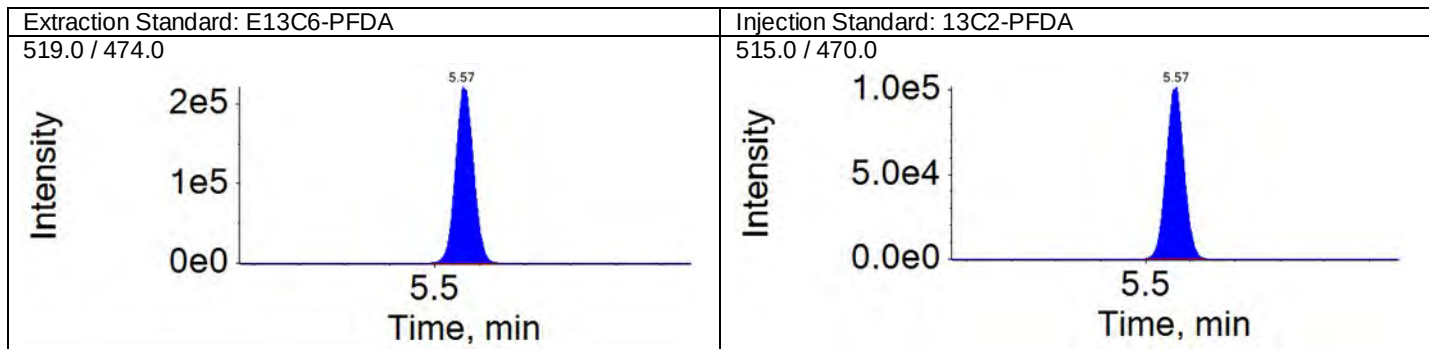
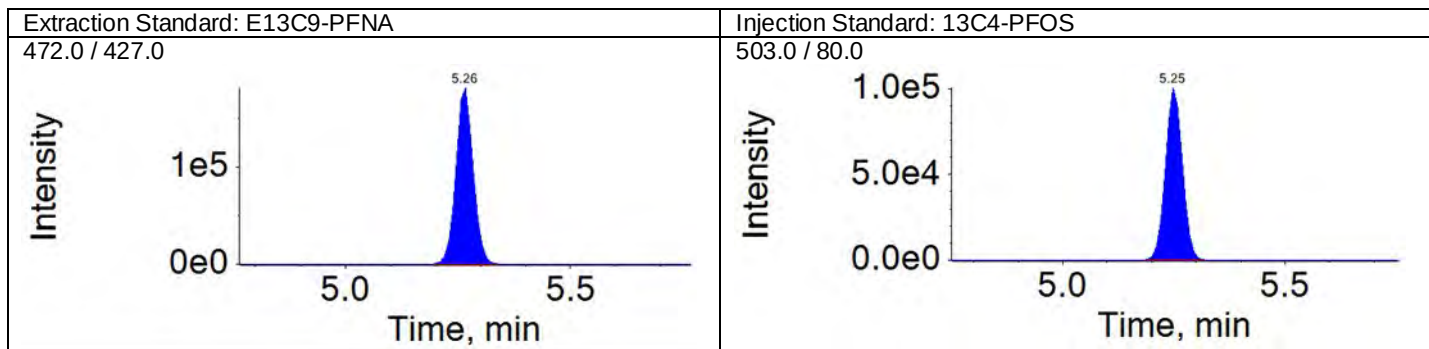
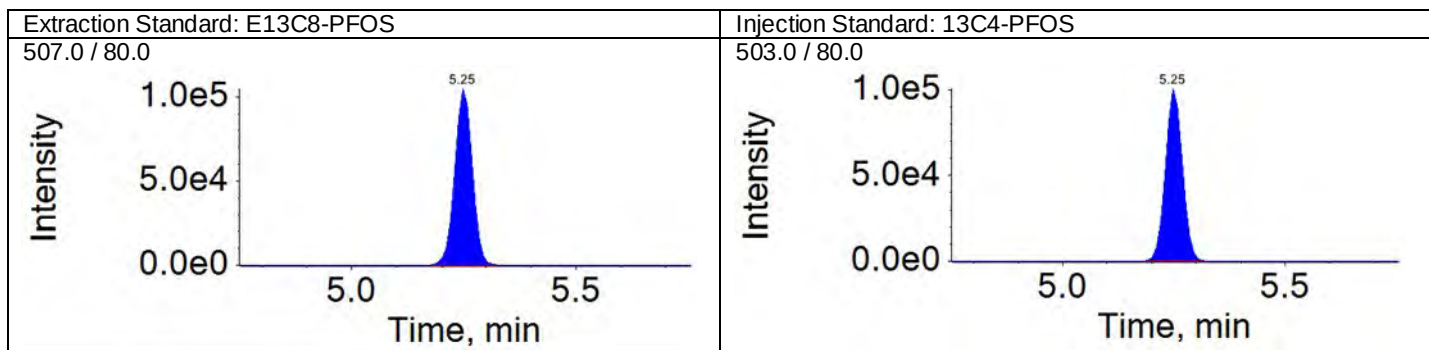
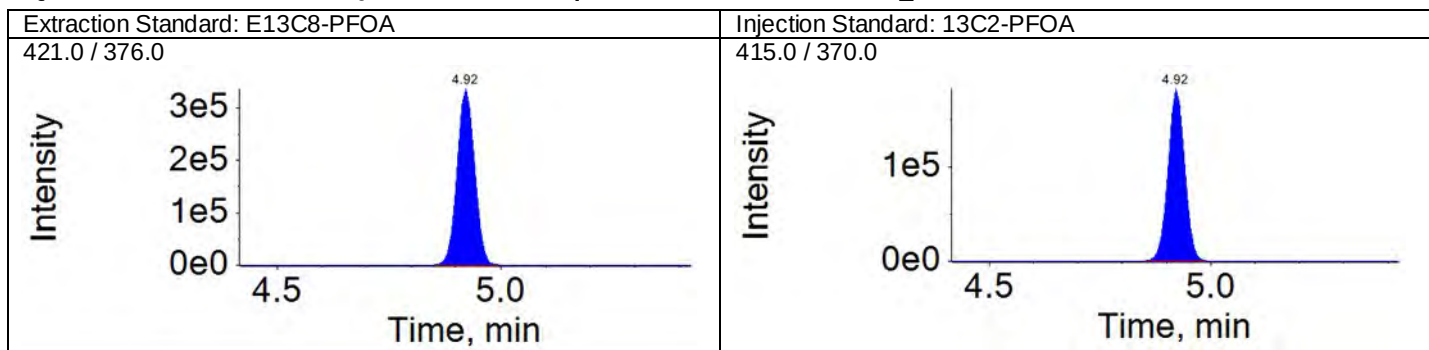
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



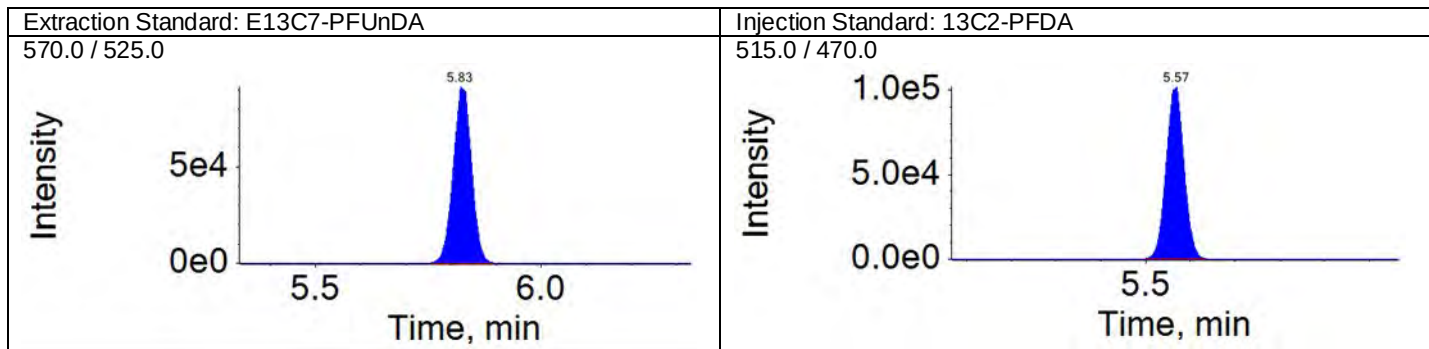
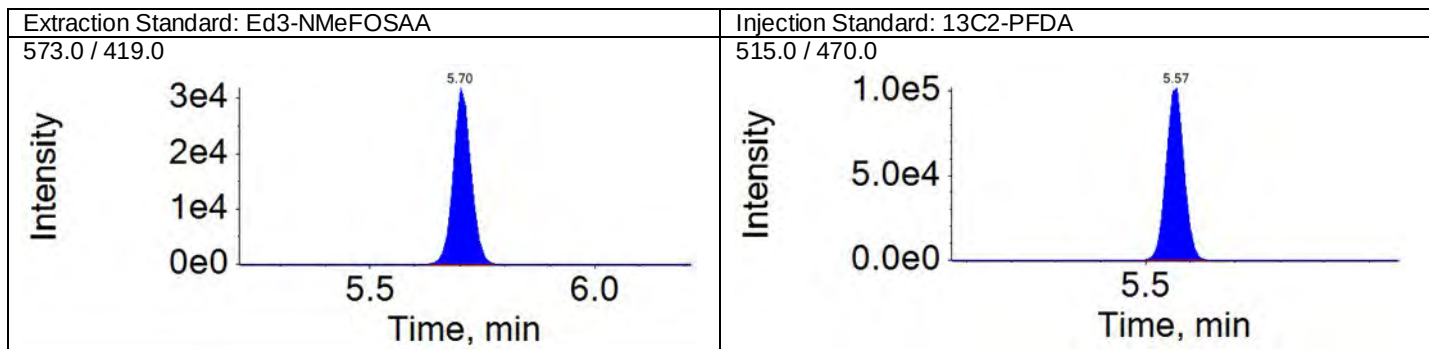
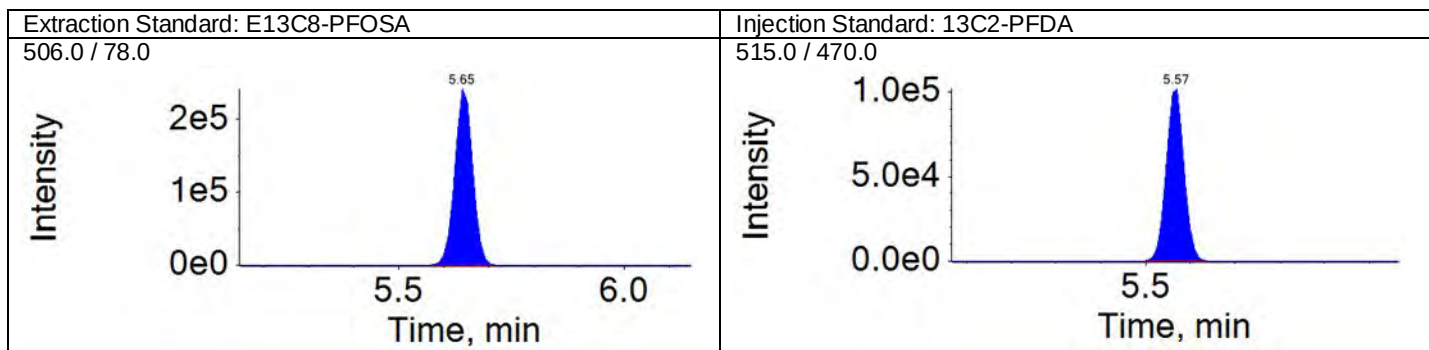
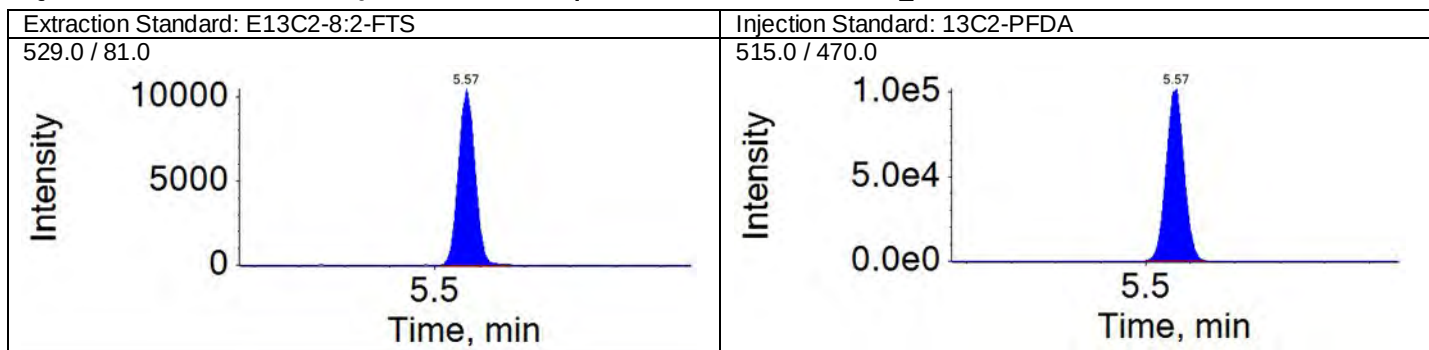
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



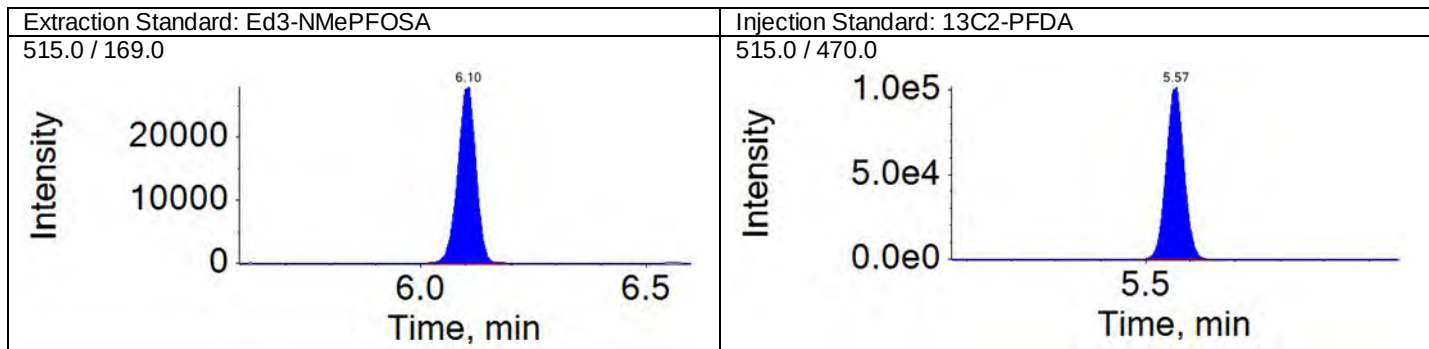
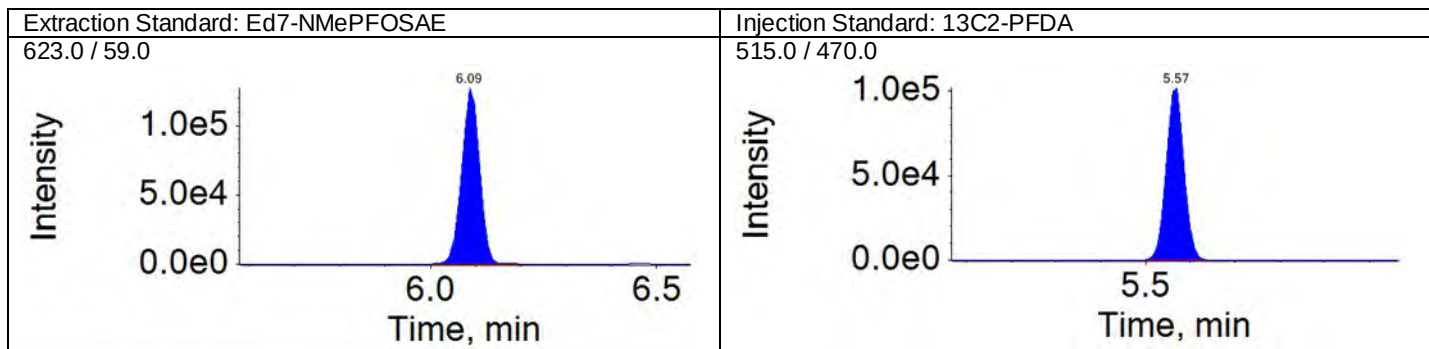
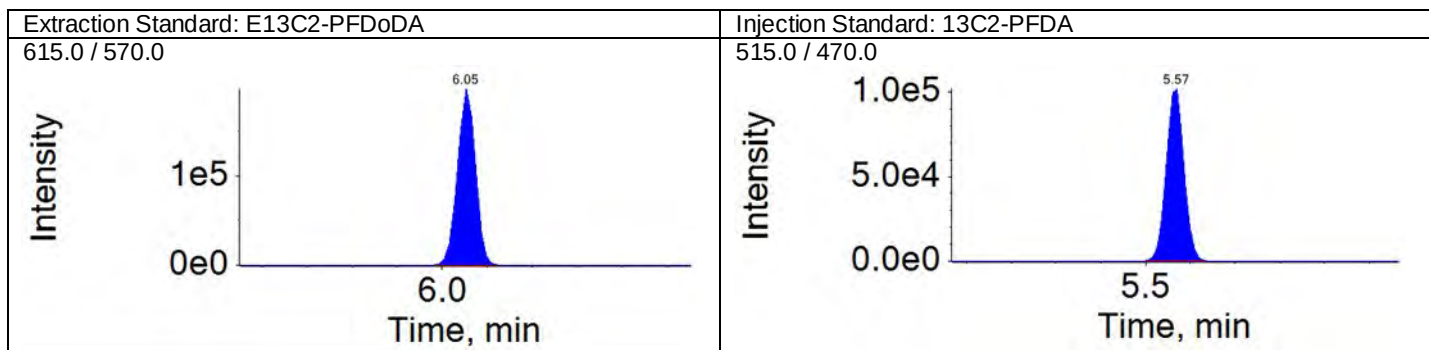
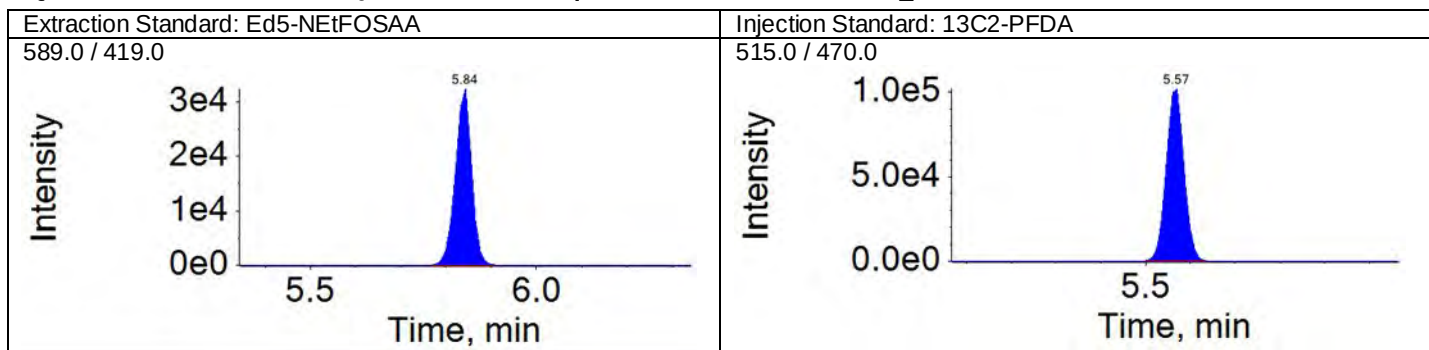
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



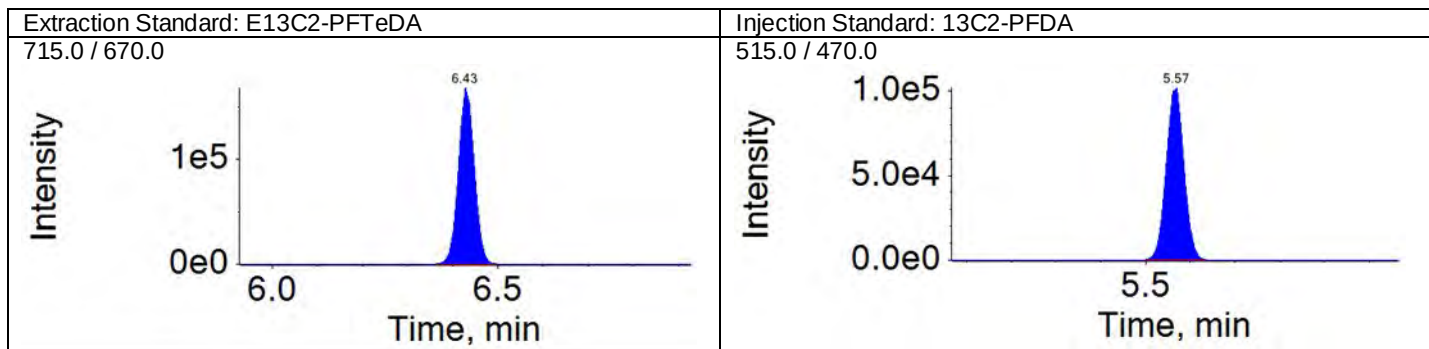
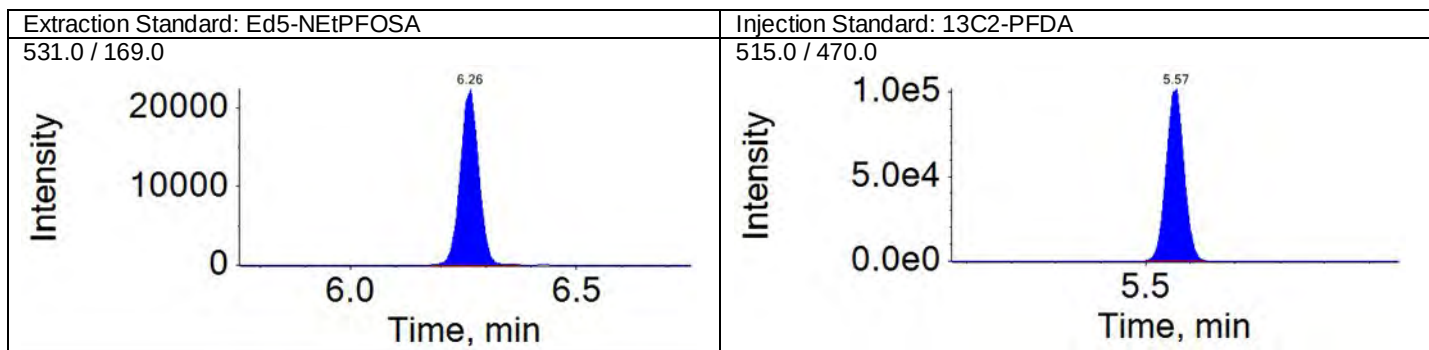
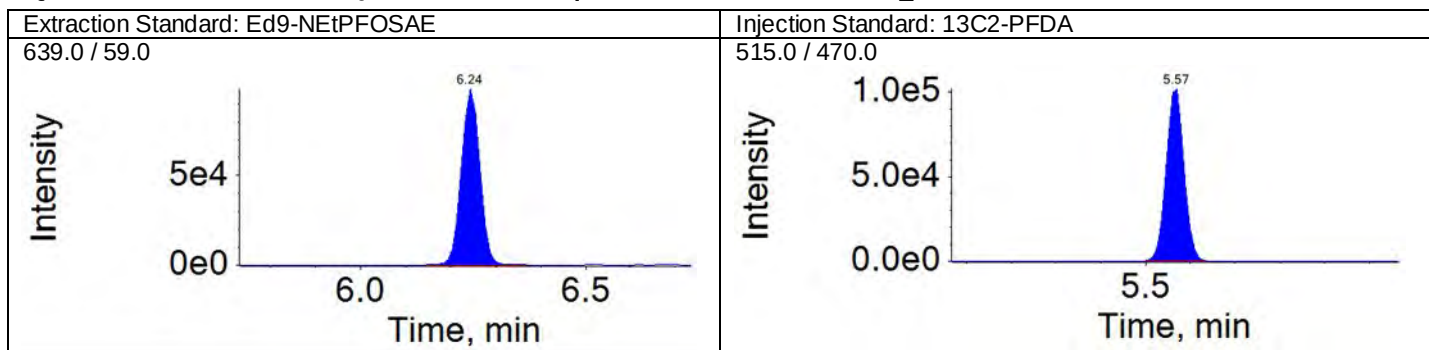
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



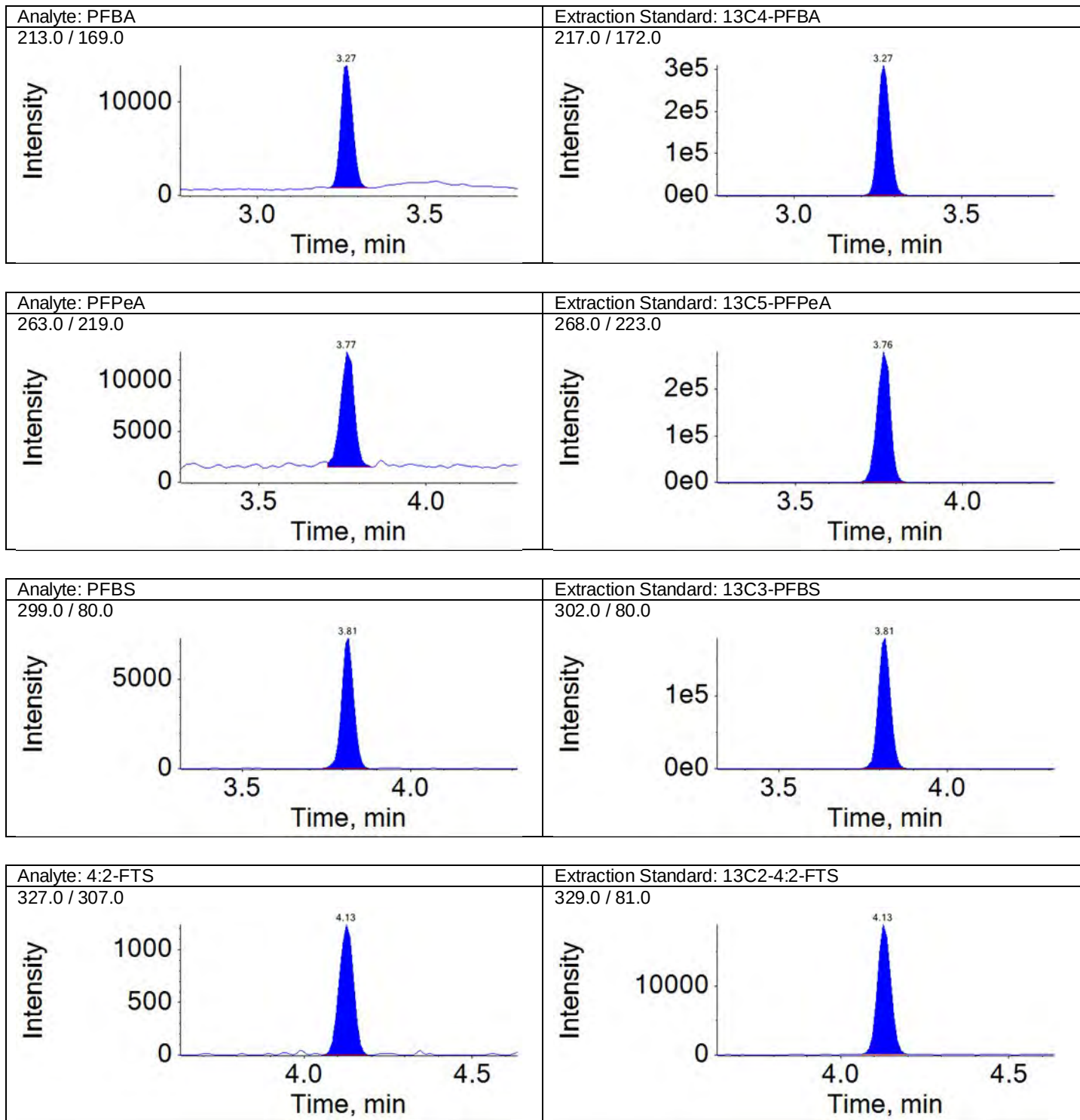
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



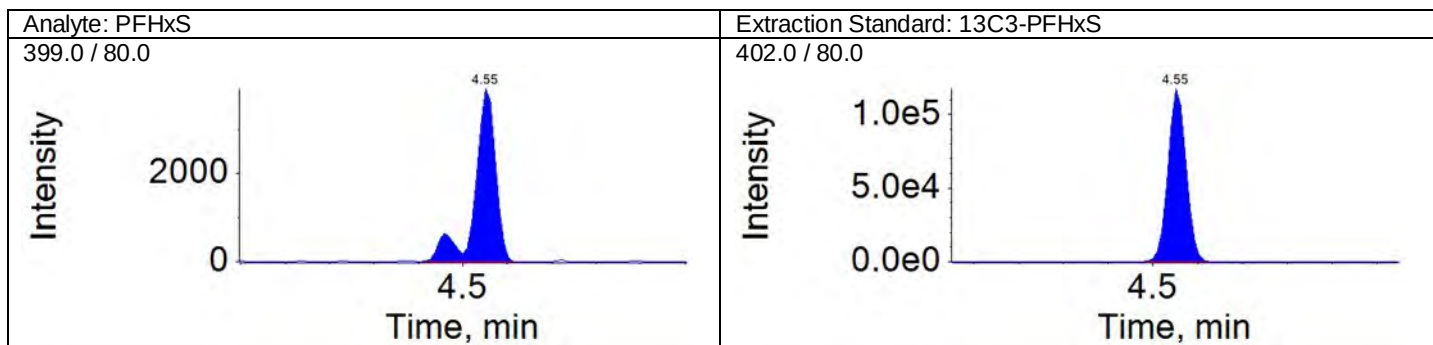
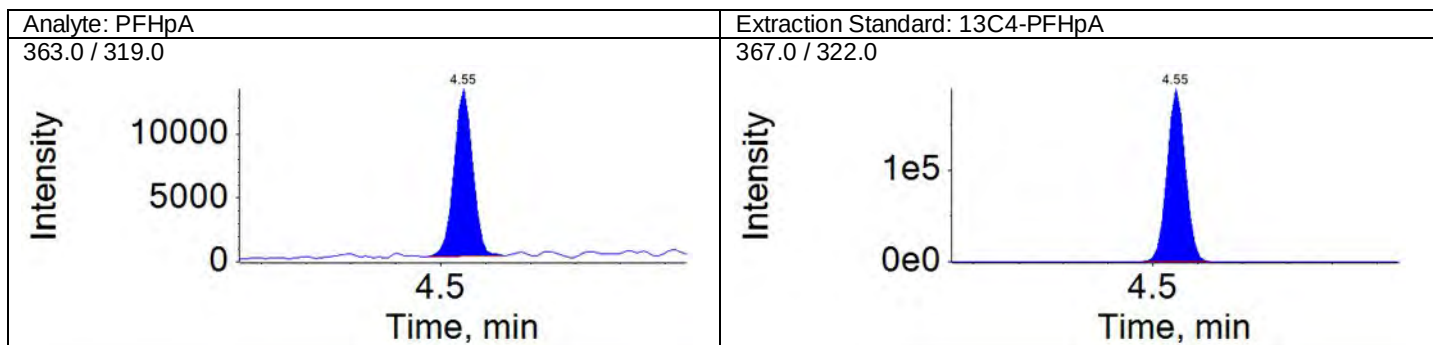
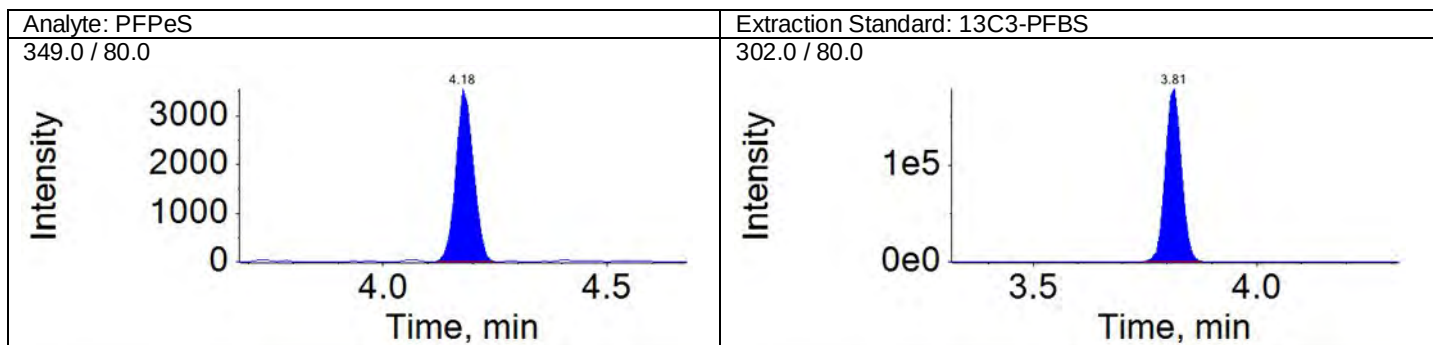
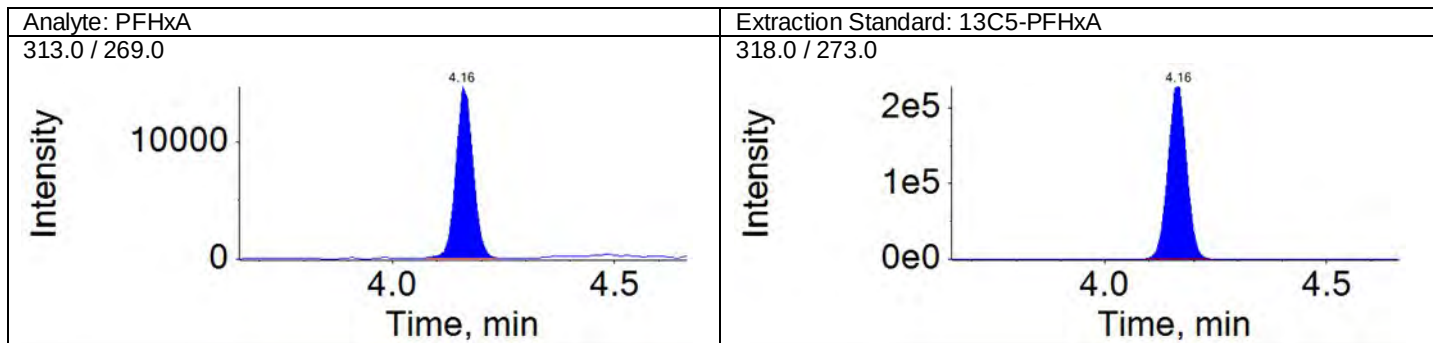
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



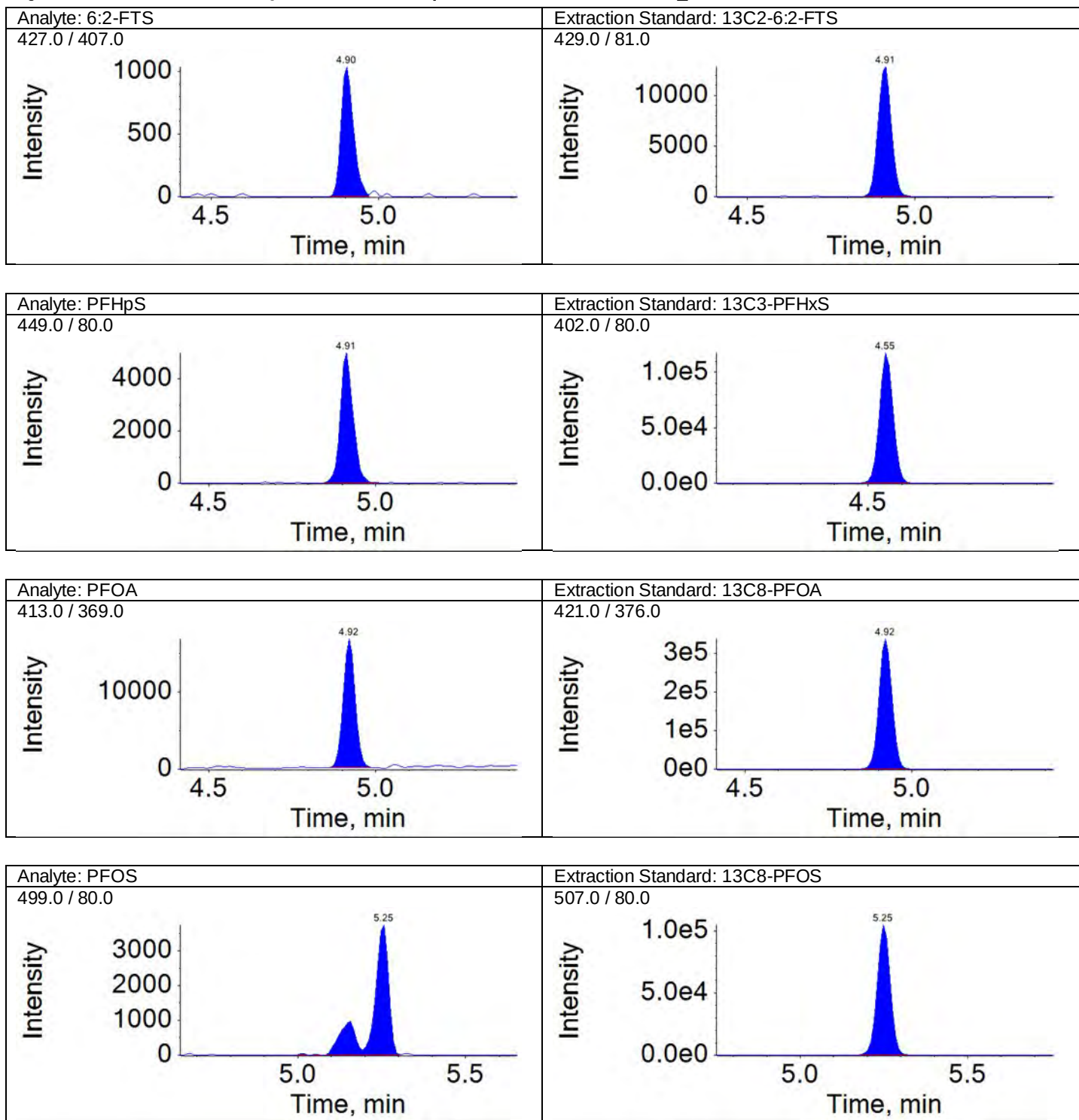
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



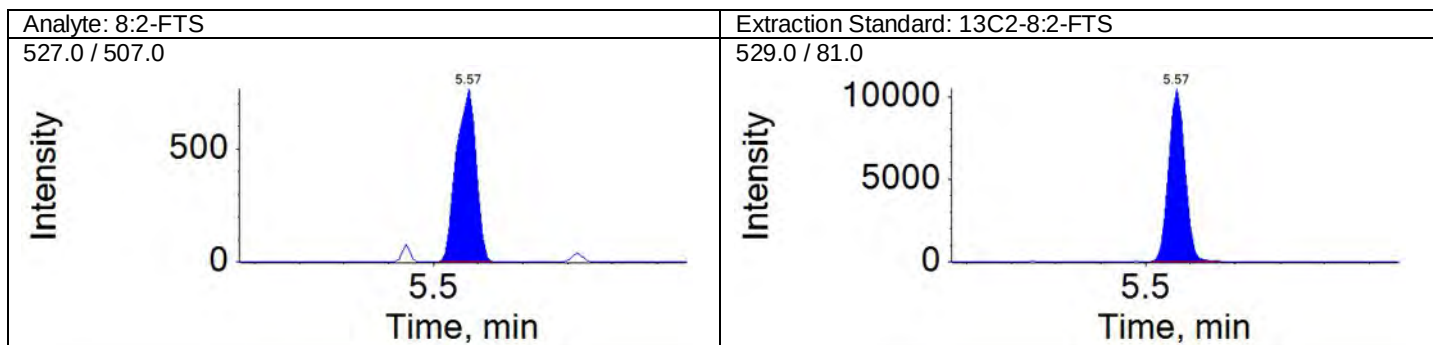
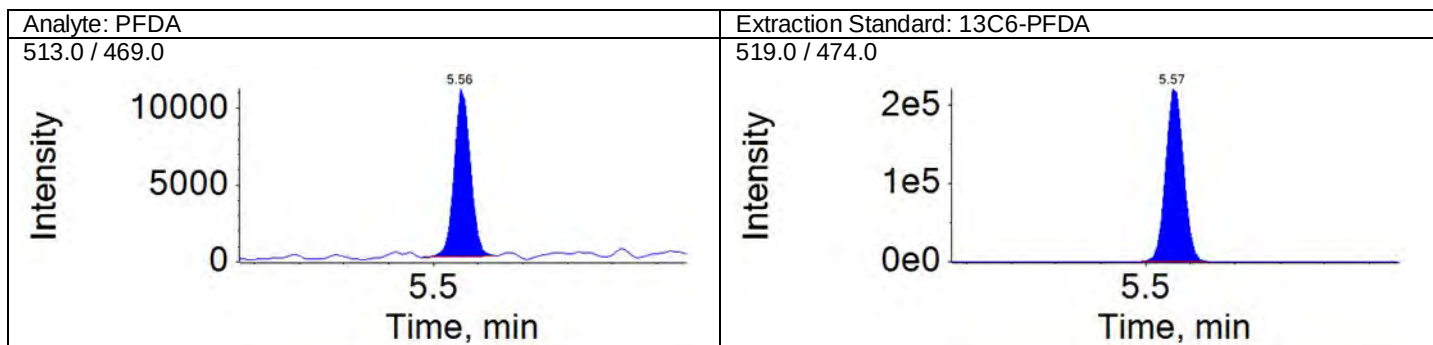
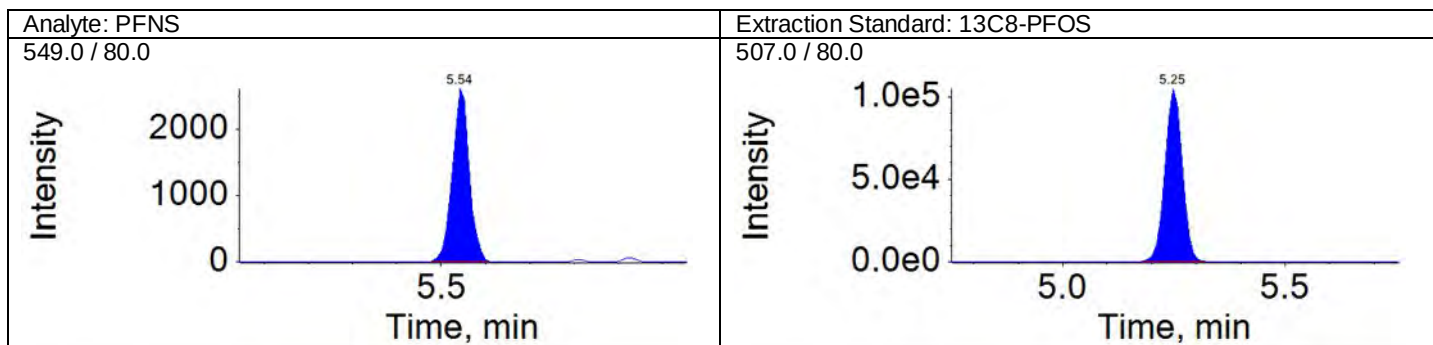
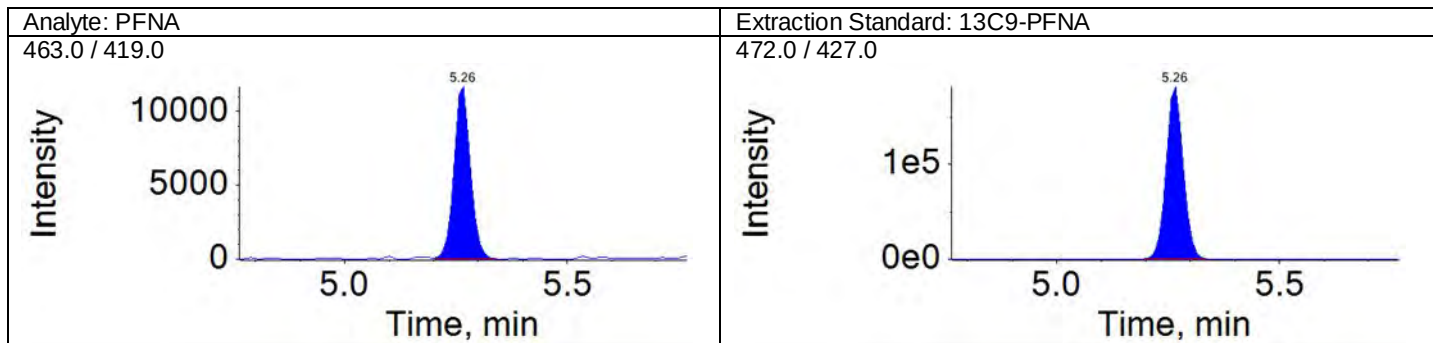
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



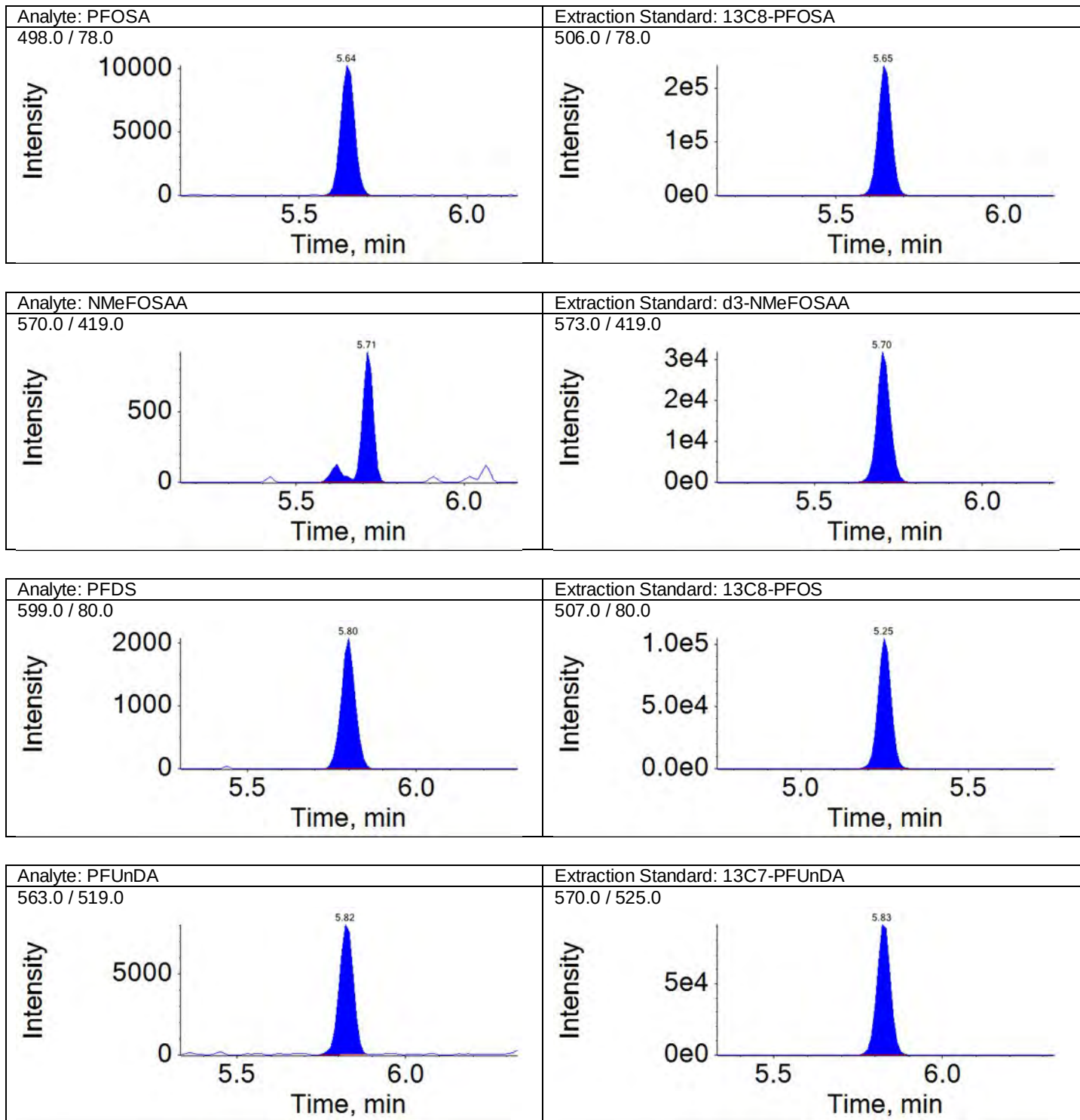
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



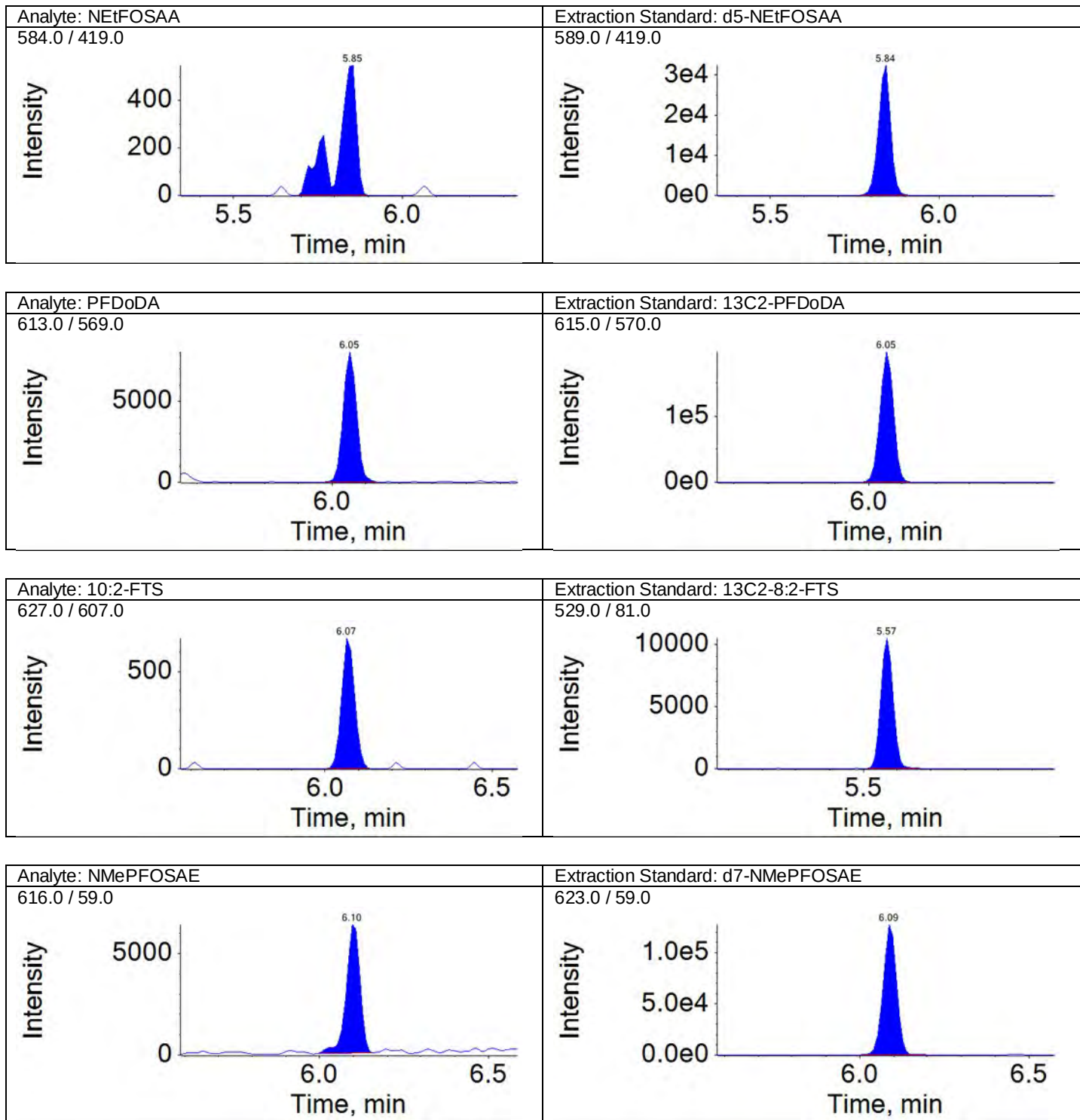
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



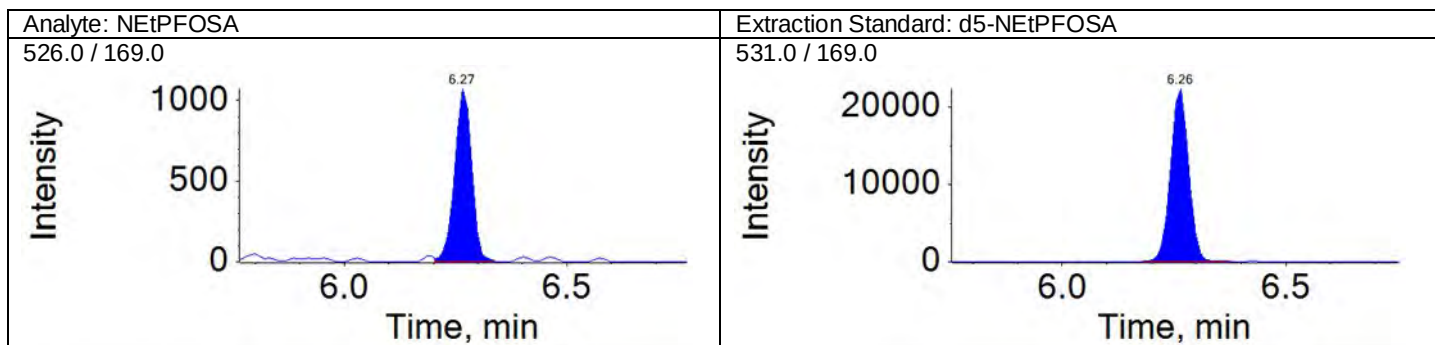
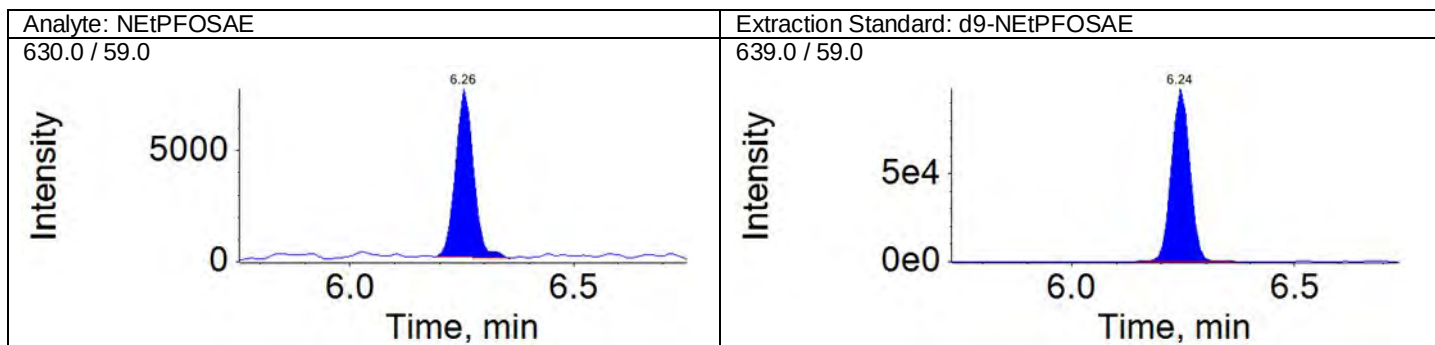
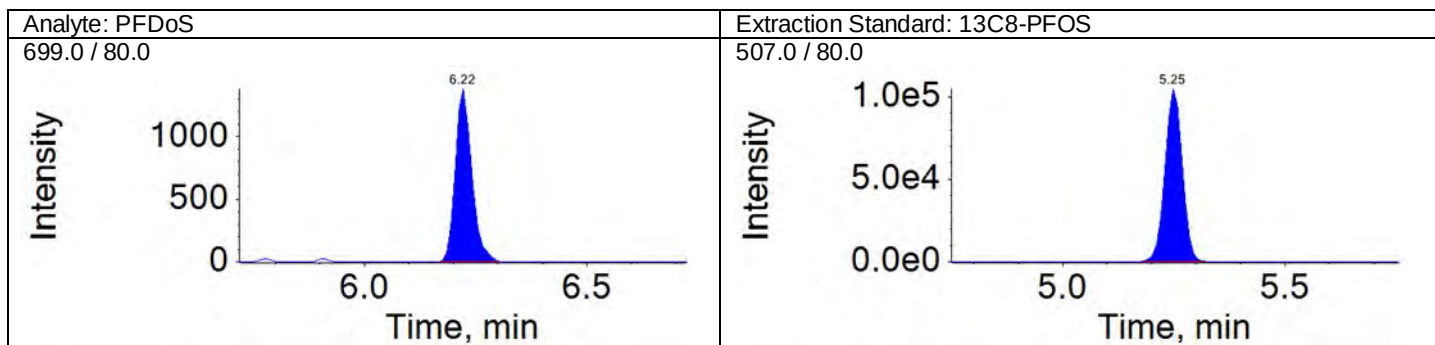
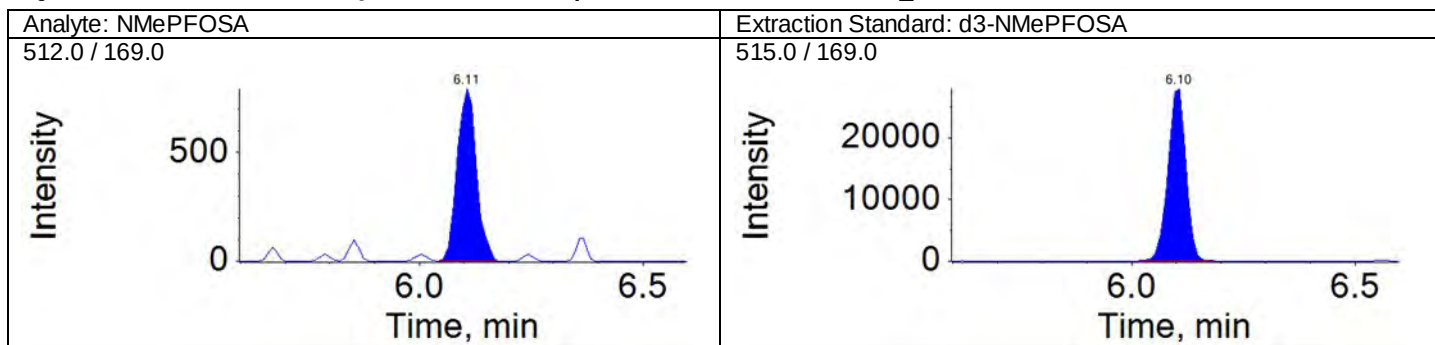
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



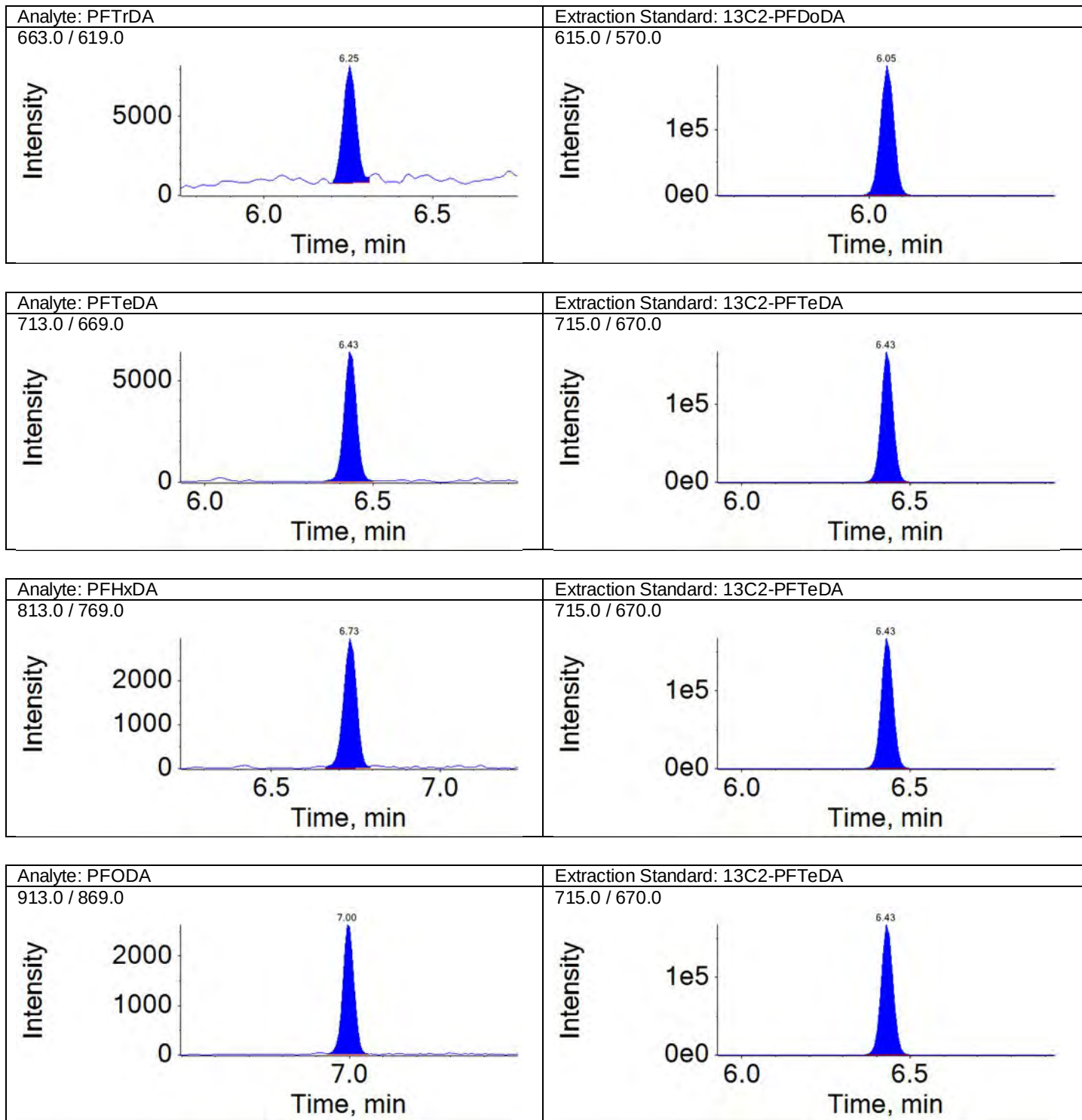
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

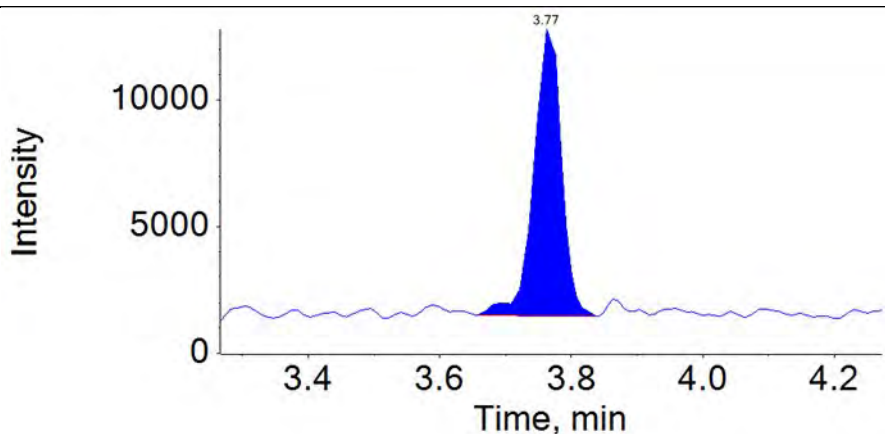
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

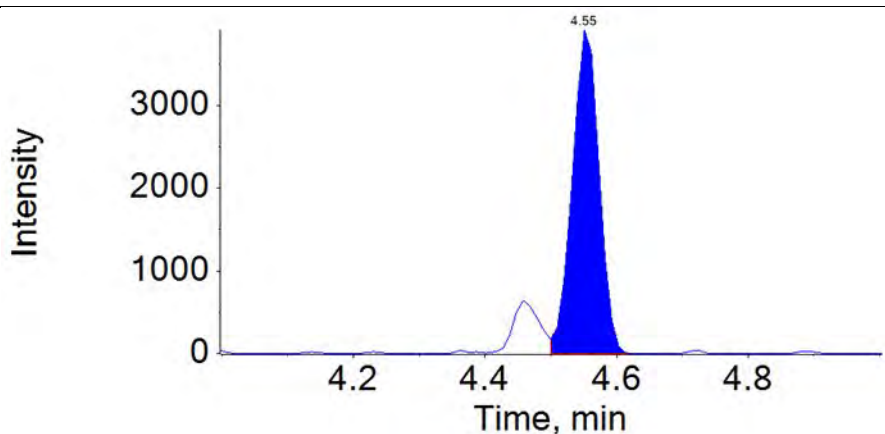
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.77
Peak Area:
33474.86
Mass Range:
263.0 / 219.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



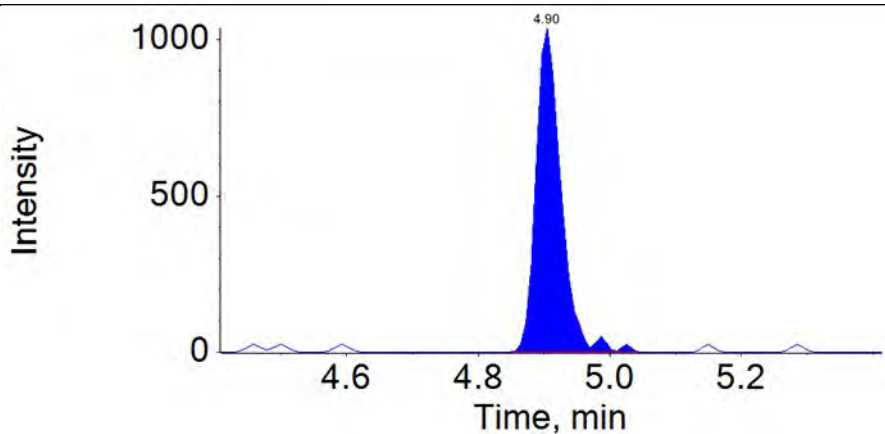
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
11101.81
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
6:2-FTS
RT (min.):
4.90
Peak Area:
2772.78
Mass Range:
427.0 / 407.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1

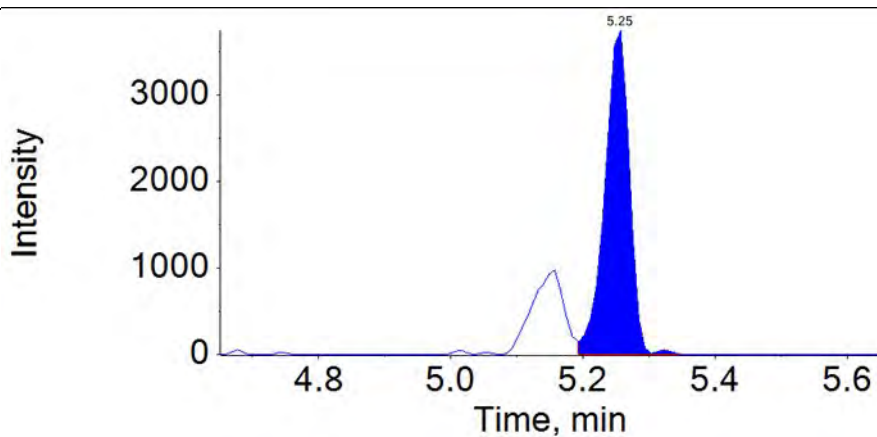


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

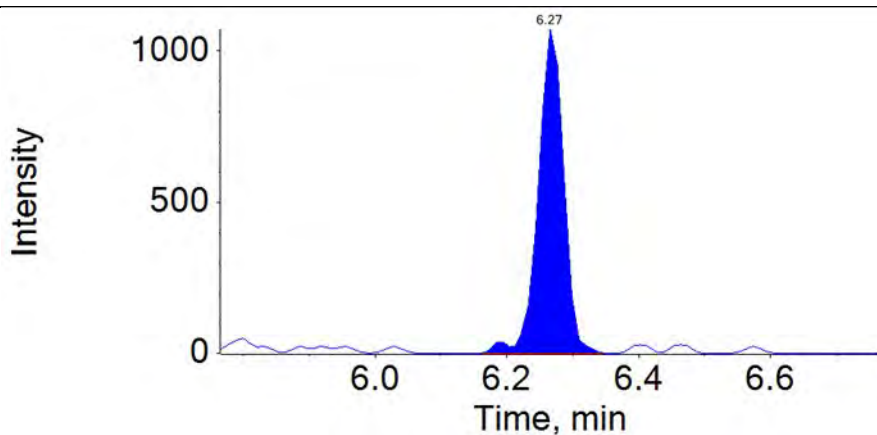
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
9779.70
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



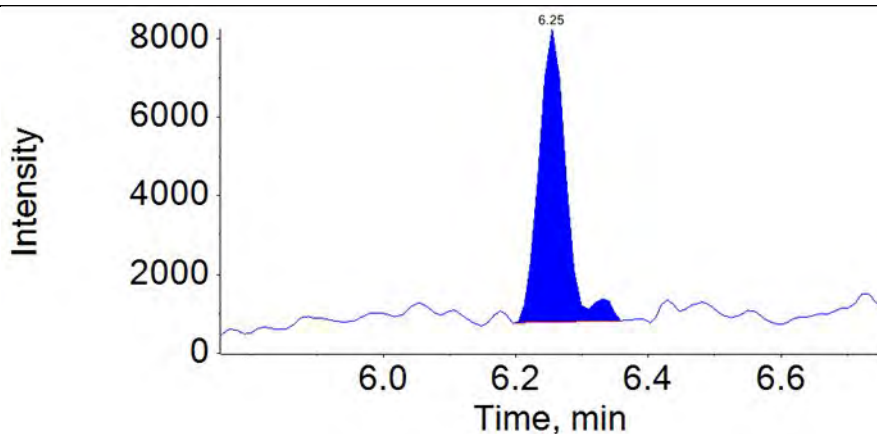
Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
2904.33
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.25
Peak Area:
21221.75
Mass Range:
663.0 / 619.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1

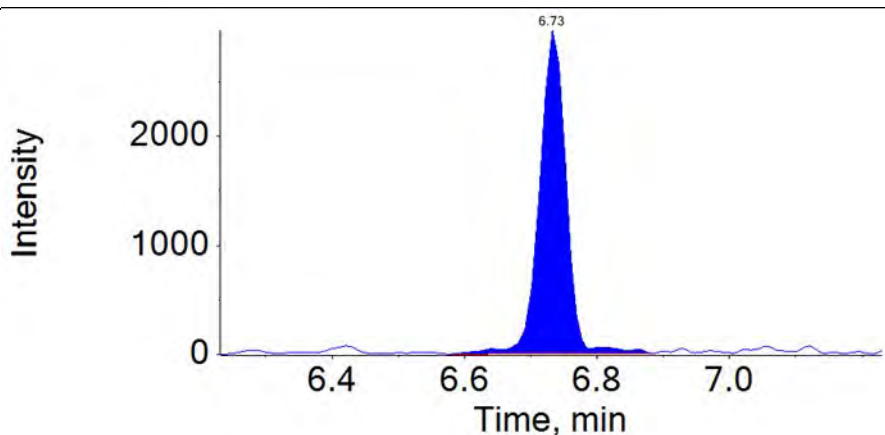


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

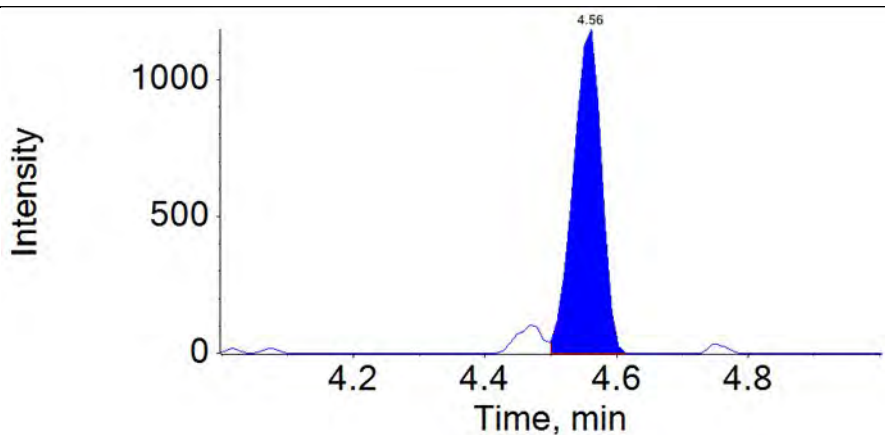
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA
RT (min.):
6.73
Peak Area:
8304.86
Mass Range:
813.0 / 769.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



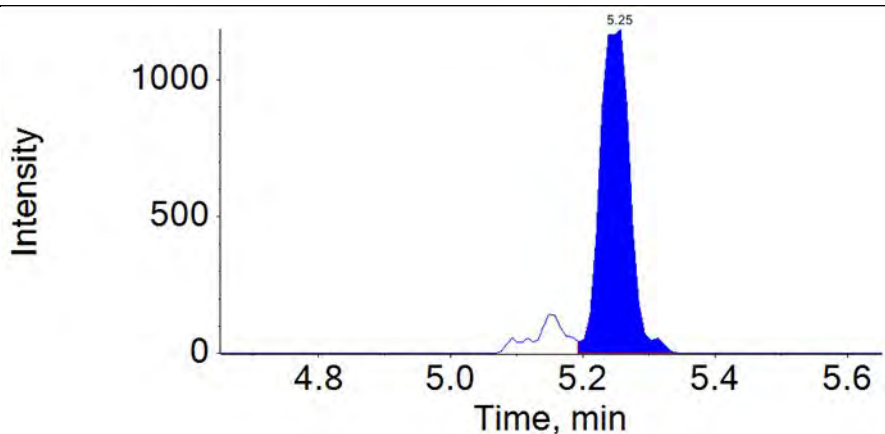
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3529.38
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
3773.94
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1

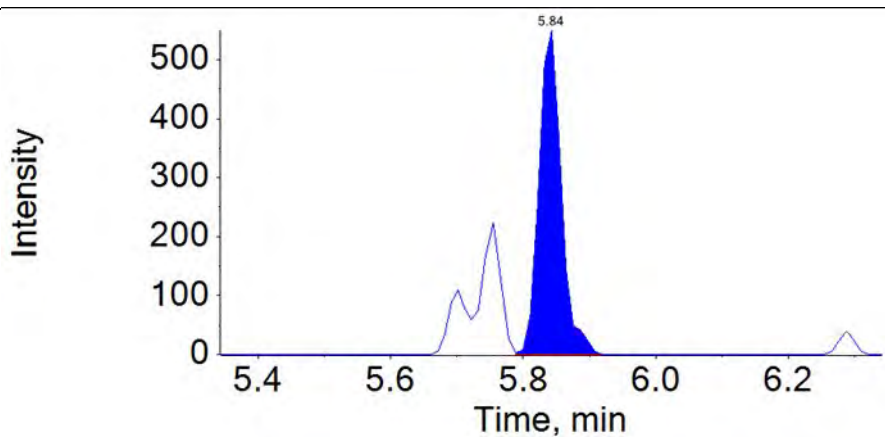


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

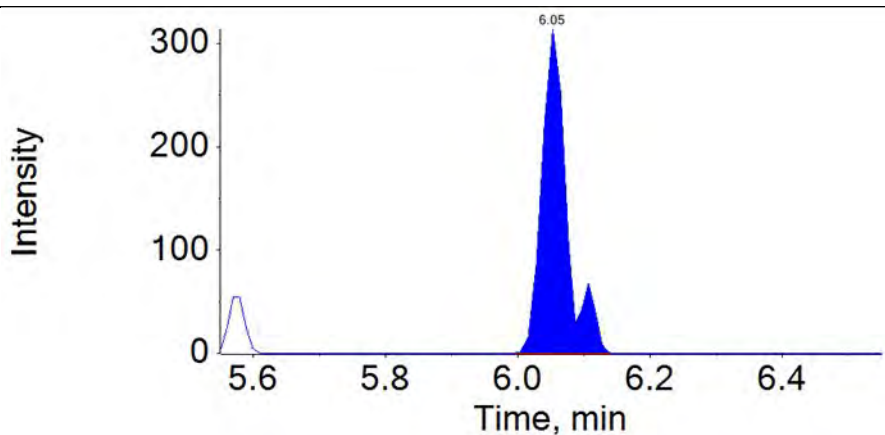
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
1295.22
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



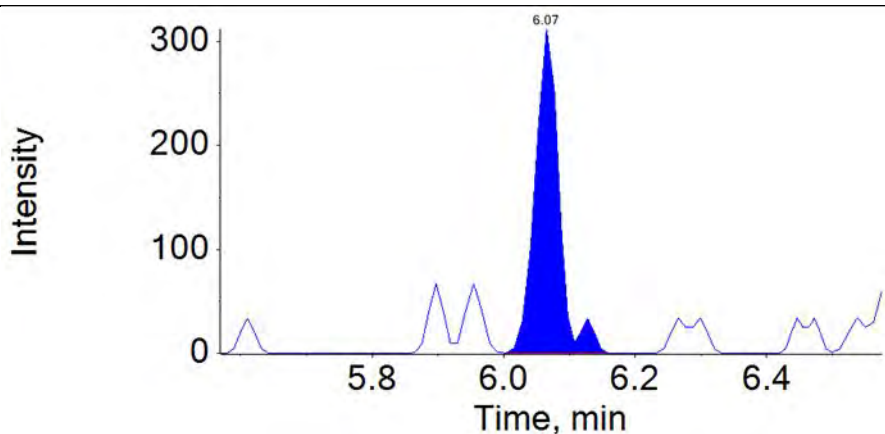
Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
835.89
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
10:2 FTS_2
RT (min.):
6.07
Peak Area:
801.59
Mass Range:
627.0 / 81.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

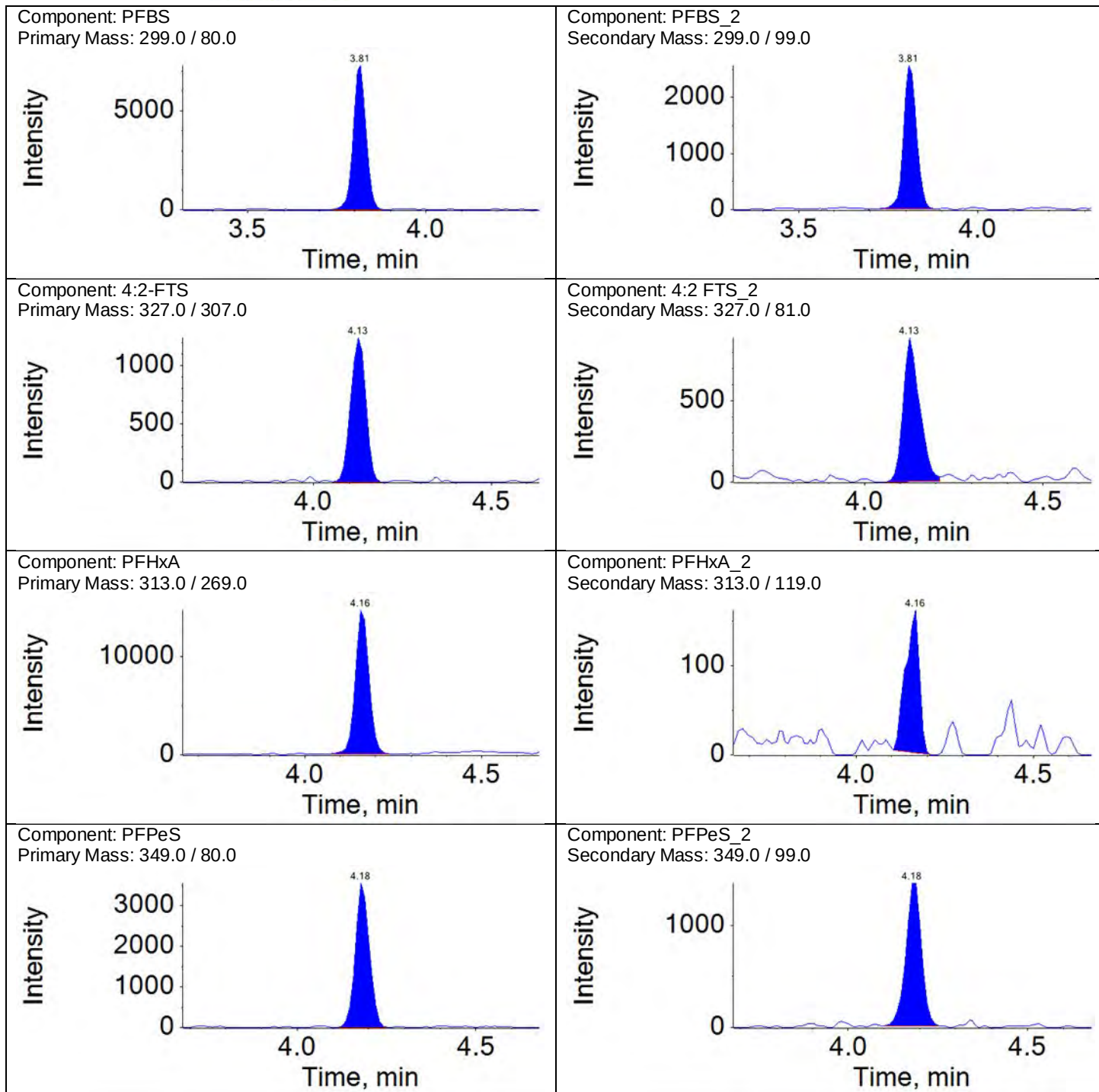
Ion Ratio Report

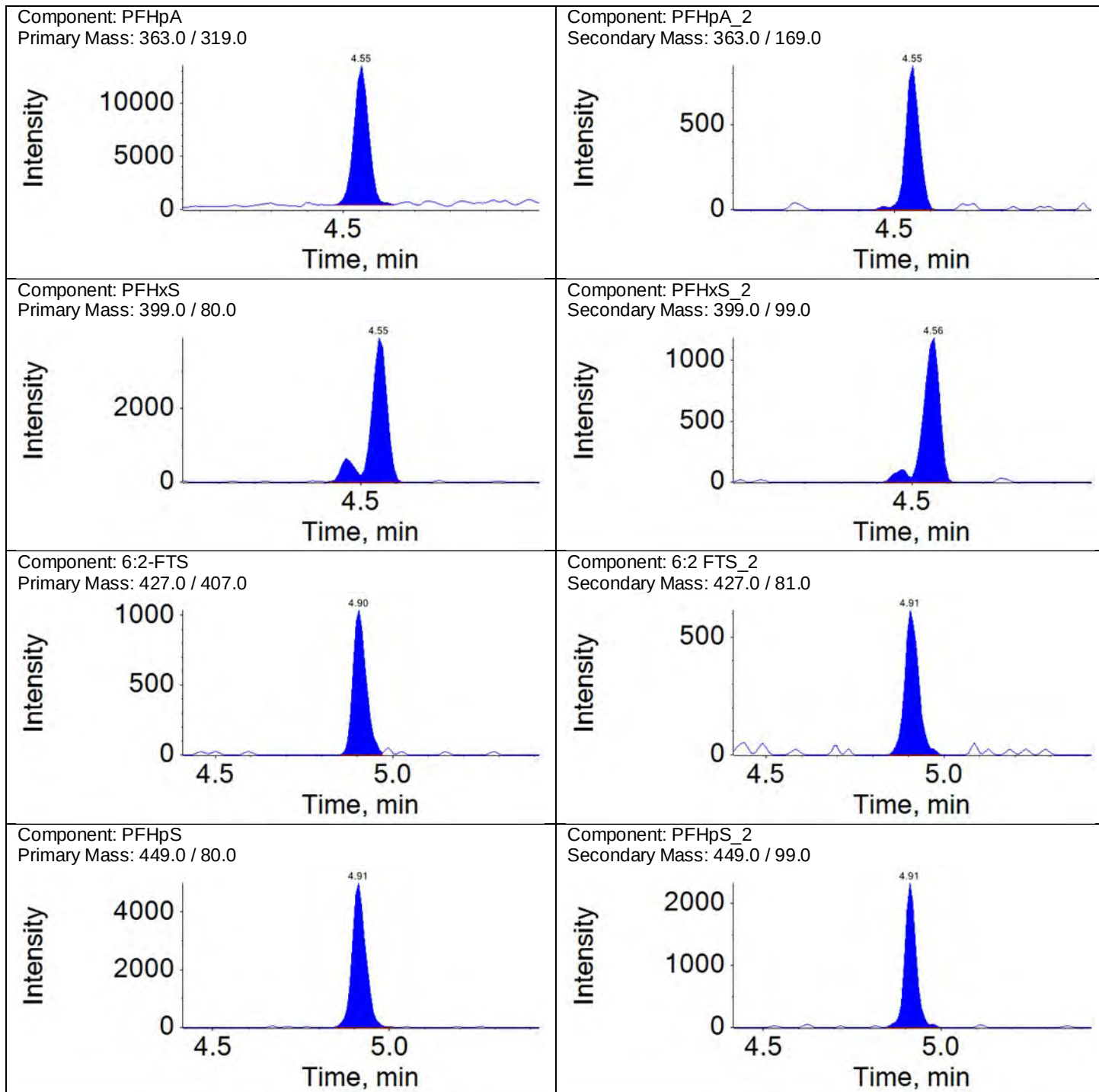
Sample Name: CAL1

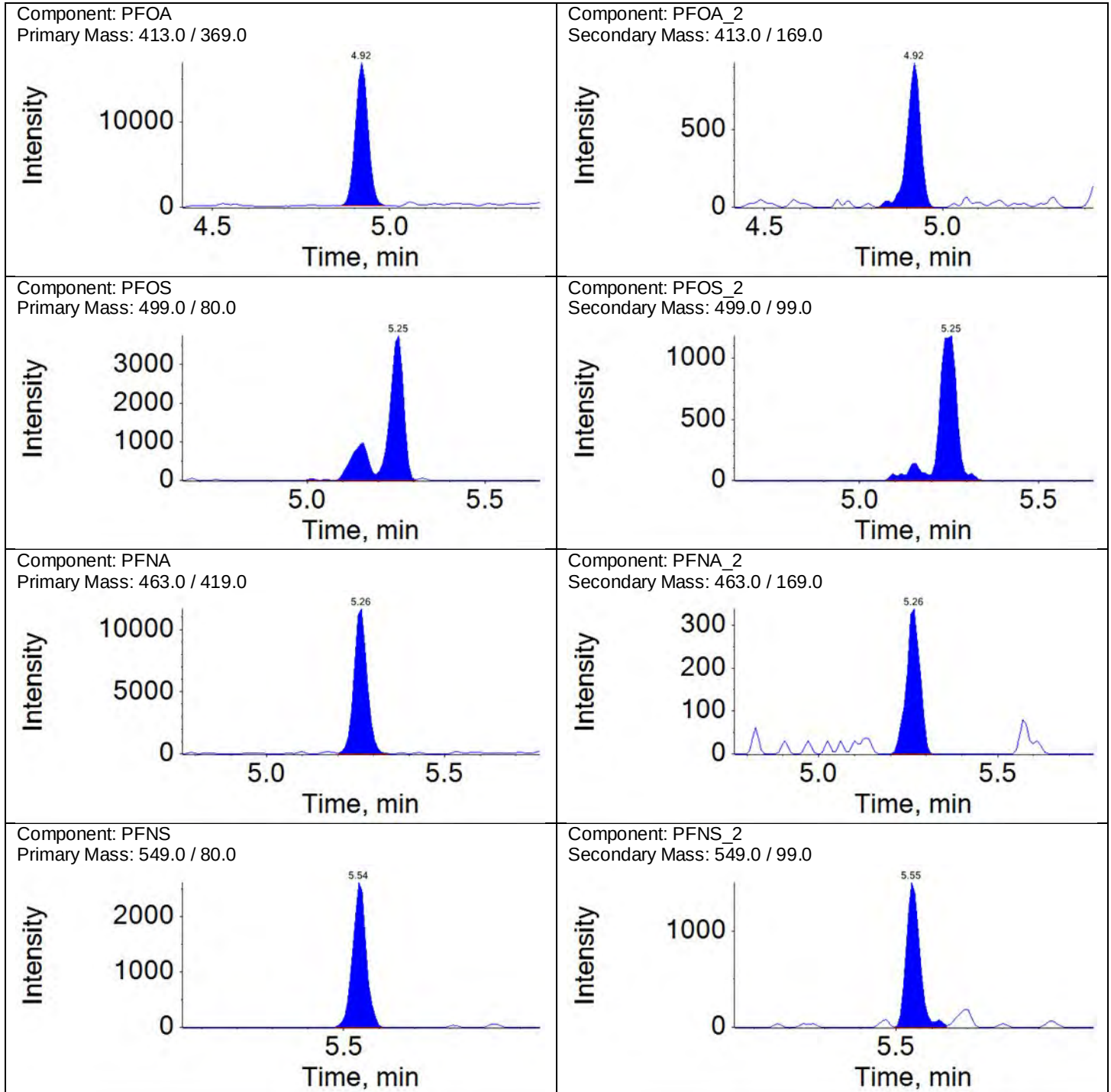
Instrument Name: LM27631

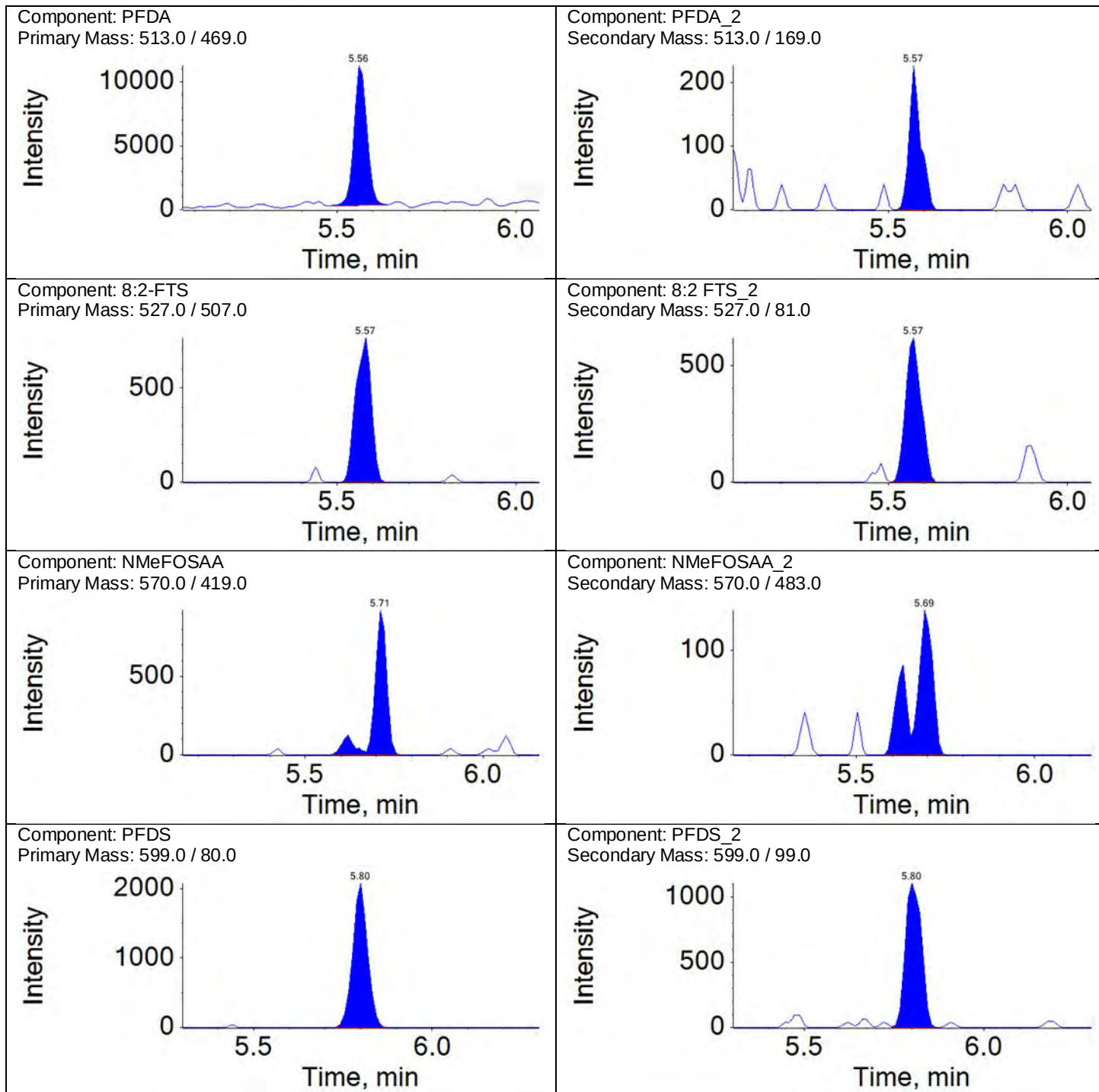
File Name: 18NOV12DCAL-42.wiff

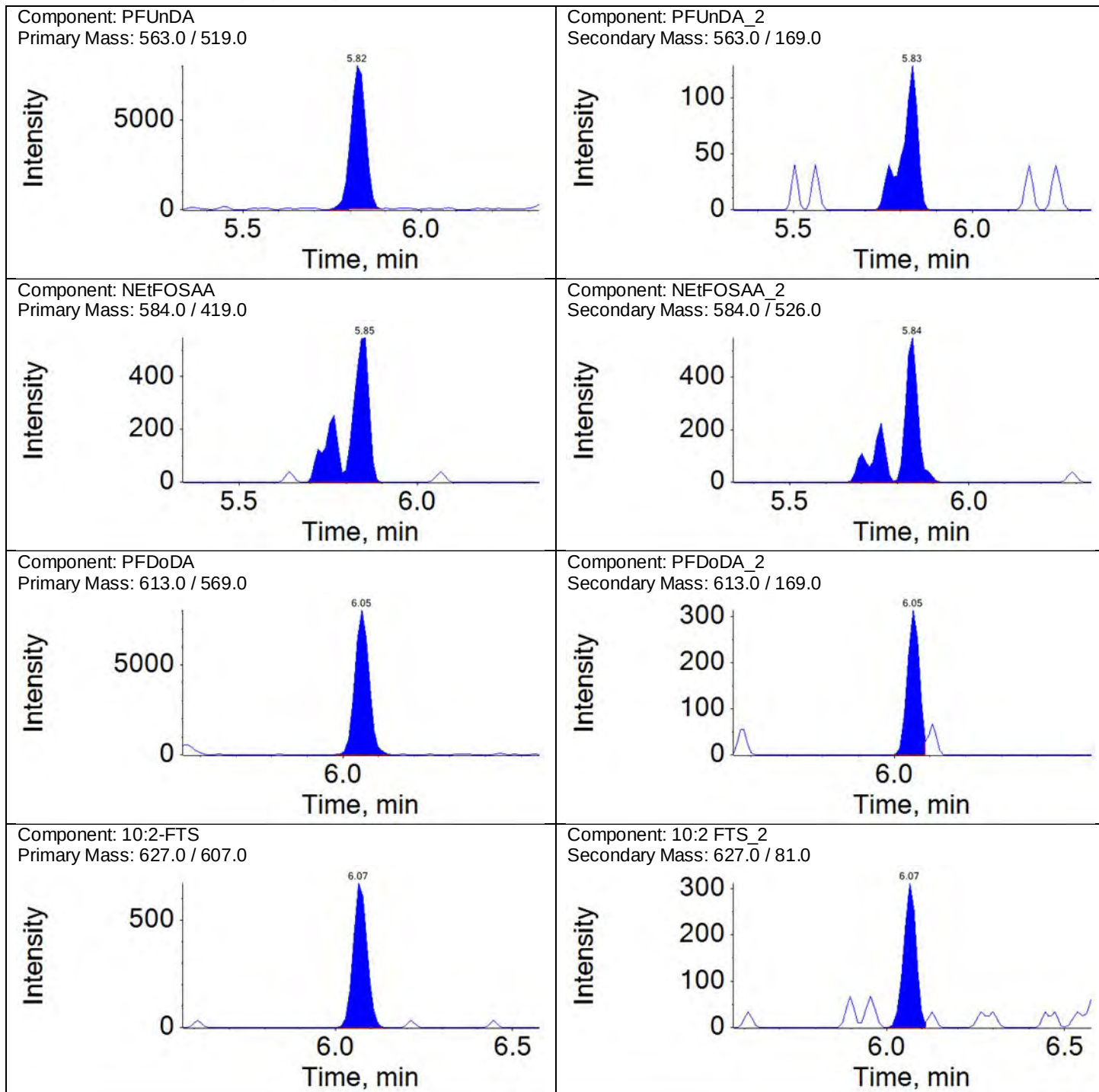
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	18010.03	A	0.3619	0.3587			
PFBS_2	3.81	1.00	6459.67	A	0.3619	0.3587	-1	50	
4:2-FTS	4.13	1.00	3636.36	A	0.6730	0.7769			
4:2 FTS_2	4.13	1.00	2825.20	A	0.6730	0.7769		#NA!	
PFHxA	4.16	1.00	39108.19	A	0.0117	0.0110			
PFHxA_2	4.16	1.00	431.19	A	0.0117	0.0110	-5	50	
PFPeS	4.18	1.10	9620.09	A	0.5191	0.4377			
PFPeS_2	4.18	1.10	4210.95	A	0.5191	0.4377	-16	50	
PFHpA	4.55	1.00	37545.37	A	0.0563	0.0594			
PFHpA_2	4.55	1.00	2229.00	A	0.0563	0.0594	5	50	
PFHxS	4.55	1.00	12858.11	M	0.3428	0.2967			
PFHxS_2	4.56	1.00	3815.05	M	0.3428	0.2967	-13	50	
6:2-FTS	4.90	1.00	2683.12	M	0.6604	0.6208			
6:2 FTS_2	4.91	1.00	1665.70	A	0.6604	0.6208		#NA!	
PFHpS	4.91	1.08	13262.78	A	0.4066	0.3857			
PFHpS_2	4.91	1.08	5115.91	A	0.4066	0.3857	-5	50	
PFOA	4.92	1.00	41467.99	A	0.0562	0.0587			
PFOA_2	4.92	1.00	2433.19	A	0.0562	0.0587	4	50	
PFOS	5.25	1.00	13088.49	M	0.2968	0.3248			
PFOS_2	5.25	1.00	4250.80	M	0.2968	0.3248	9	50	
PFNA	5.26	1.00	29660.05	A	0.0229	0.0300			
PFNA_2	5.26	1.00	890.58	A	0.0229	0.0300	31	50	
PFNS	5.54	1.06	6846.55	A	0.4828	0.5747			
PFNS_2	5.55	1.06	3934.96	A	0.4828	0.5747	19	50	
PFDA	5.56	1.00	27488.55	A	0.0081	0.0185			
PFDA_2	5.57	1.00	509.91	A	0.0081	0.0185	130	50	OOS
8:2-FTS	5.57	1.00	2333.06	A	0.6814	0.8052			
8:2 FTS_2	5.57	1.00	1878.62	A	0.6814	0.8052		#NA!	
NMeFOSAA	5.71	1.00	2306.38	A	0.2569	0.2416			
NMeFOSAA_2	5.69	1.00	557.21	A	0.2569	0.2416	-6	50	
PFDS	5.80	1.10	5952.23	A	0.5144	0.5857			
PFDS_2	5.80	1.11	3486.36	A	0.5144	0.5857	14	50	
PFUnDA	5.82	1.00	23379.53	A	0.0058	0.0168			
PFUnDA_2	5.83	1.00	393.36	A	0.0058	0.0168	189	50	OOS
NEtFOSAA	5.85	1.00	2284.89	A	0.7253	0.8510			
NEtFOSAA_2	5.84	1.00	1944.53	M	0.7253	0.8510	17	50	
PFDODA	6.05	1.00	22143.56	A	0.0157	0.0329			
PFDODA_2	6.05	1.00	728.93	M	0.0157	0.0329	110	50	OOS
10:2-FTS	6.07	1.09	1814.19	A	0.6356	0.4140			
10:2 FTS_2	6.07	1.09	751.03	M	0.6356	0.4140		#NA!	
PFTTrDA	6.25	1.03	20185.08	M	0.0086	0.0098			
PFTTrDA_2	6.24	1.03	198.77	A	0.0086	0.0098	15	50	
PFTeDA	6.43	1.00	16357.53	A	0.0062	0.0036			
PFTeDA_2	6.46	1.01	58.89	A	0.0062	0.0036	-42	50	
PFHxDA	6.73	1.05	7976.02	M	0.0683	0.0708			
PFHxDA_2	6.73	1.05	564.53	A	0.0683	0.0708	4	50	
PFODA	7.00	1.09	6020.31	A	0.0277	0.0307			
PFODA_2	6.99	1.09	185.07	A	0.0277	0.0307	11	50	

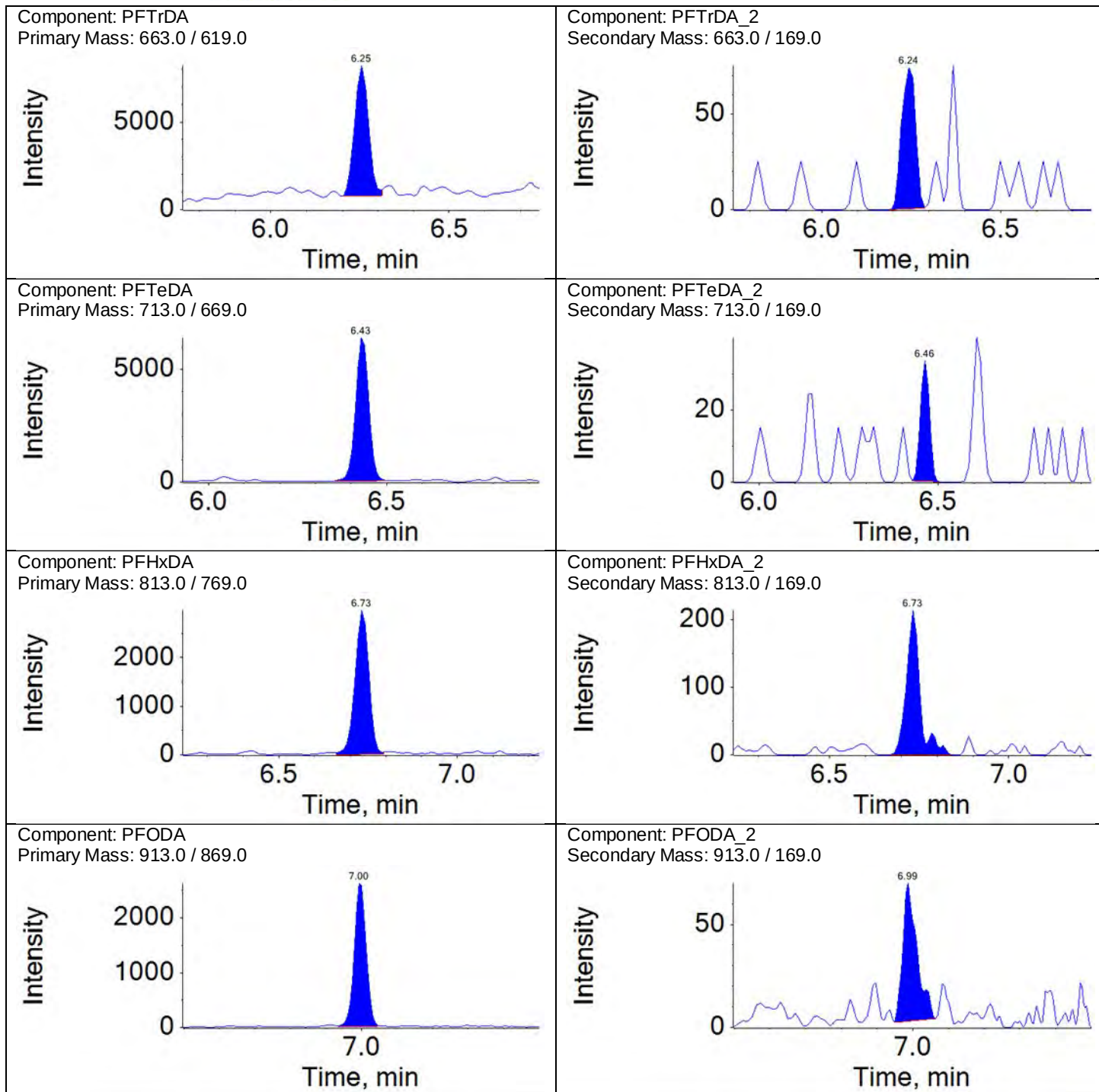












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL2	Data File:	18NOV12DCAL-43.wiff
Sample ID:	CALBRN21833C	Acquis Date:	2018-11-12T15:15:03
Sample Type:	Standard	Instrument:	LM27631
Vial Position:	4	Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00	Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM	ICAL Name:	18NOV12DCAL
Batch Number:	N/A	Operator:	MCD7824
Sample Wt.:	1.00000	Dilution Factor:	1.00
Sample Vol.:	1.000	Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	662396.7	659926.2	0	50	
13C2-PFOA	5.0	454466.7	450219.7	1	50	
13C4-PFOS	4.8	250483.8	249205.8	1	50	
13C2-PFDA	5.0	277324.2	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771445.8	13C3-PFBA	662396.7	1.165	5.000	5.221	104	70-130	
E13C5-PFPeA	738194.7	13C3-PFBA	662396.7	1.114	5.000	4.998	100	70-130	
E13C3-PFBS	418860.7	13C3-PFBA	662396.7	0.632	4.650	4.464	96	70-130	
E13C2-4:2-FTS	46141.8	13C2-PFOA	454466.7	0.102	4.670	4.522	97	70-130	
E13C5-PFHxA	648170.1	13C2-PFOA	454466.7	1.426	5.000	5.152	103	70-130	
E13C3-PFHxS	320400.4	13C2-PFOA	454466.7	0.705	4.730	4.838	102	70-130	
E13C4-PFHpA	532987.5	13C2-PFOA	454466.7	1.173	5.000	5.284	106	70-130	
E13C2-6:2-FTS	35585.7	13C2-PFOA	454466.7	0.078	4.750	5.239	110	70-130	
E13C8-PFOA	892584.2	13C2-PFOA	454466.7	1.964	5.000	5.411	108	70-130	
E13C8-PFOS	271778.8	13C4-PFOS	250483.8	1.085	4.780	4.808	101	70-130	
E13C9-PFNA	451850.1	13C4-PFOS	250483.8	1.804	5.000	5.030	101	70-130	
E13C6-PFDA	601859.8	13C2-PFDA	277324.2	2.170	5.000	5.064	101	70-130	
E13C2-8:2-FTS	27639.2	13C2-PFDA	277324.2	0.100	4.790	4.970	104	70-130	
E13C8-PFOSA	636543.2	13C2-PFDA	277324.2	2.295	5.000	5.089	102	70-130	
Ed3-NMeFOSAA	77388.6	13C2-PFDA	277324.2	0.279	5.000	5.037	101	70-130	
E13C7-PFUnDA	242881.8	13C2-PFDA	277324.2	0.876	5.000	5.085	102	70-130	
Ed5-NEtFOSAA	63686.9	13C2-PFDA	277324.2	0.230	5.000	4.859	97	70-130	
E13C2-PFDoDA	532175.4	13C2-PFDA	277324.2	1.919	5.000	4.982	100	70-130	
Ed7-NMePFOSAE	323456.5	13C2-PFDA	277324.2	1.166	5.000	5.047	101	70-130	
Ed3-NMePFOSA	77893.2	13C2-PFDA	277324.2	0.281	5.000	5.103	102	70-130	
Ed9-NEtPFOSAE	261195.6	13C2-PFDA	277324.2	0.942	5.000	4.899	98	70-130	
Ed5-NEtPFOSA	58073.5	13C2-PFDA	277324.2	0.209	5.000	4.912	98	70-130	
E13C2-PFTeDA	394146.2	13C2-PFDA	277324.2	1.421	5.000	4.990	100	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL2

Instrument Name: LM27631

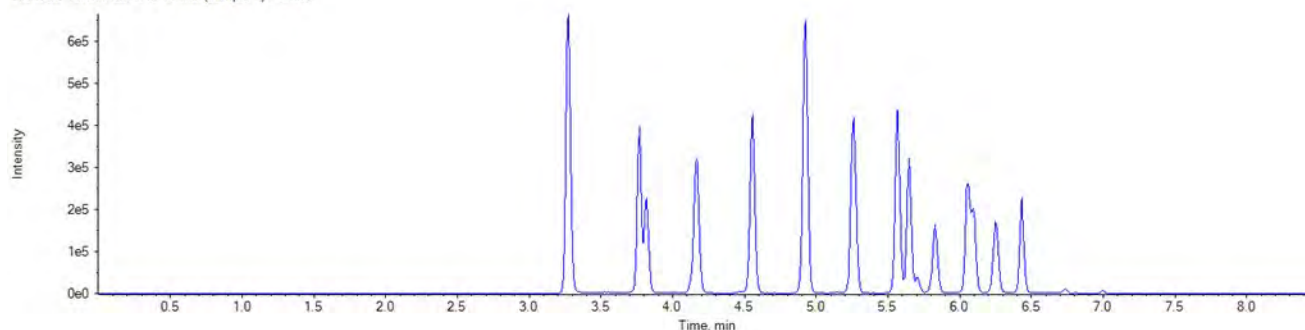
File Name: 18NOV12DCAL-43.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	80396.2		A	13C4-PFBA	3.27	771445.8	0.104	0.577
PFPeA	3.77	1.000	84319.4		A	13C5-PFPeA	3.77	738194.7	0.114	0.661
PFBS	3.82	1.000	44885.2		A	13C3-PFBS	3.82	418860.7	0.107	0.510
4:2-FTS	4.13	1.000	8804.0		A	13C2-4:2-FTS	4.13	46141.8	0.191	0.518
PFHxA	4.16	1.000	96559.3		A	13C5-PFHxA	4.17	648170.1	0.149	0.622
PFPeS	4.19	1.100	20295.0		A	13C3-PFBS	3.82	418860.7	0.048	0.470
PFHpA	4.55	1.000	95048.3		M	13C4-PFHpA	4.55	532987.5	0.178	0.591
PFHxS	4.56	1.000	31064.7		M	13C3-PFHxS	4.56	320400.4	0.097	0.470
6:2-FTS	4.91	1.000	8048.4		A	13C2-6:2-FTS	4.91	35585.7	0.226	0.547
PFHpS	4.92	1.080	29902.3		A	13C3-PFHxS	4.56	320400.4	0.093	0.491
PFOA	4.93	1.000	100710.5		A	13C8-PFOA	4.92	892584.2	0.113	0.603
PFOS	5.25	1.000	32301.0		M	13C8-PFOS	5.25	271778.8	0.119	0.520
PFNA	5.27	1.000	80724.2		A	13C9-PFNA	5.27	451850.1	0.179	0.644
PFNS	5.55	1.060	20326.1		A	13C8-PFOS	5.25	271778.8	0.075	0.523
PFDA	5.57	1.000	63802.1		M	13C6-PFDA	5.57	601859.8	0.106	0.562
8:2-FTS	5.57	1.000	6214.2		A	13C2-8:2-FTS	5.57	27639.2	0.225	0.524
PFOSA	5.65	1.000	71087.0		A	13C8-PFOSA	5.65	636543.2	0.112	0.545
NMeFOSAA	5.71	1.000	5759.6		A	d3-NMeFOSAA	5.71	77388.6	0.074	0.421
PFDS	5.80	1.100	16291.9		A	13C8-PFOS	5.25	271778.8	0.060	0.543
PfUnDA	5.83	1.000	51206.8		A	13C7-PfUnDA	5.83	242881.8	0.211	0.551
NEtFOSAA	5.85	1.000	7727.1		M	d5-NEtFOSAA	5.84	63686.9	0.121	0.636
PFDODA	6.06	1.000	59695.3		A	13C2-PFDODA	6.06	532175.4	0.112	0.571
10:2-FTS	6.08	1.090	5206.5		A	13C2-8:2-FTS	5.57	27639.2	0.188	0.627
NMePFOSAE	6.10	1.000	43085.1		A	d7-NMePFOSAE	6.09	323456.5	0.133	0.554
NMePFOSA	6.11	1.000	8877.7		A	d3-NMePFOSA	6.11	77893.2	0.114	0.562
PFDOS	6.22	1.190	8992.5		M	13C8-PFOS	5.25	271778.8	0.033	0.580
NEtPFOSAE	6.26	1.000	46623.3		M	d9-NEtPFOSAE	6.25	261195.6	0.178	0.573
NEtPFOSA	6.27	1.000	8053.7		M	d5-NEtPFOSA	6.27	58073.5	0.139	0.637
PFTDA	6.26	1.030	47991.3		A	13C2-PFDODA	6.06	532175.4	0.090	0.569
PFTeDA	6.43	1.000	40236.5		A	13C2-PFTeDA	6.43	394146.2	0.102	0.572
PFHxDA	6.74	1.050	19006.4		A	13C2-PFTeDA	6.43	394146.2	0.048	0.575
PFODA	7.00	1.090	14955.6		A	13C2-PFTeDA	6.43	394146.2	0.038	0.528

Total Ion Chromatogram

TIC from 18NOV12DCAL-43.wiff (sample 1) - CAL2



APPROVED

By MCD at 6:33 pm, 11/12/18

BSI05 Page 903 of 1595

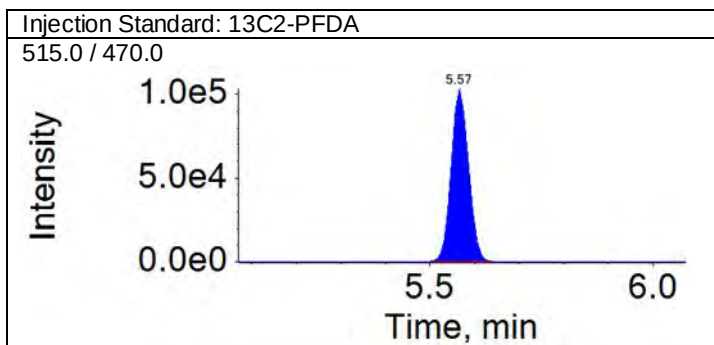
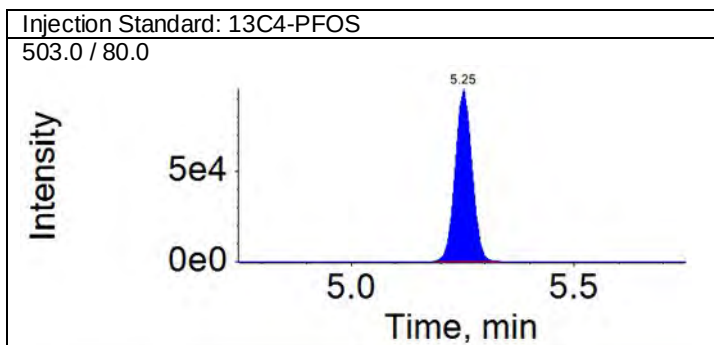
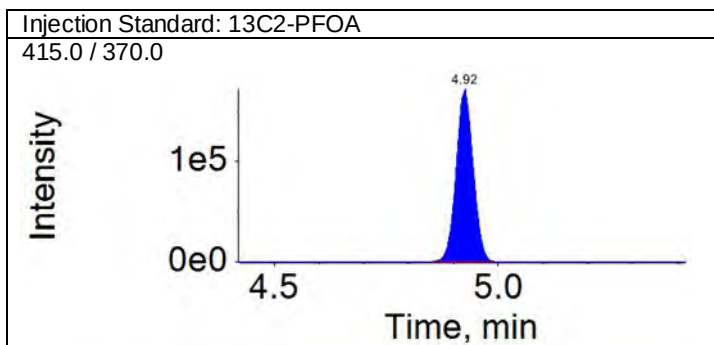
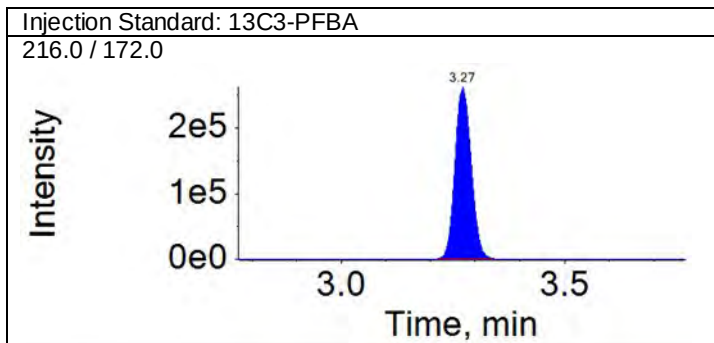
REVIEWED

By HMK at 10:53 am, 11/13/18

Page 2 of 17

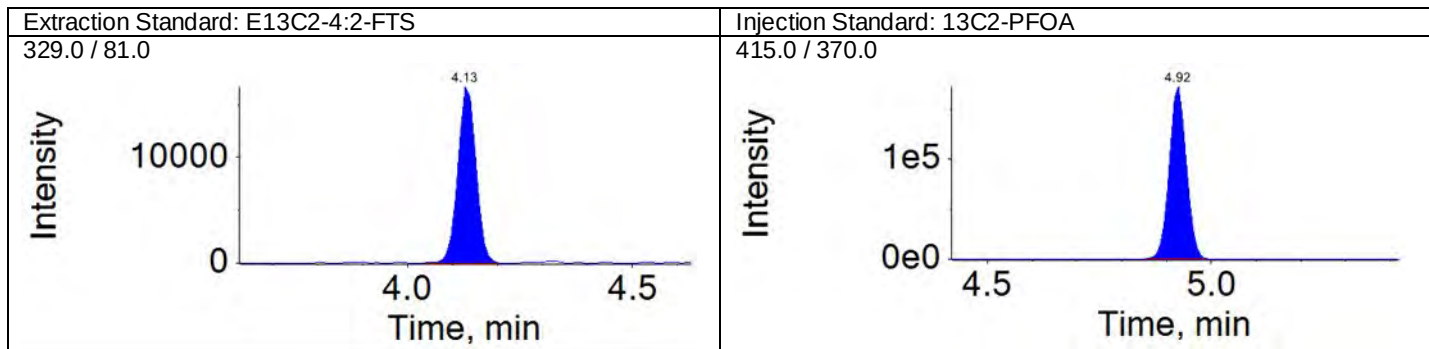
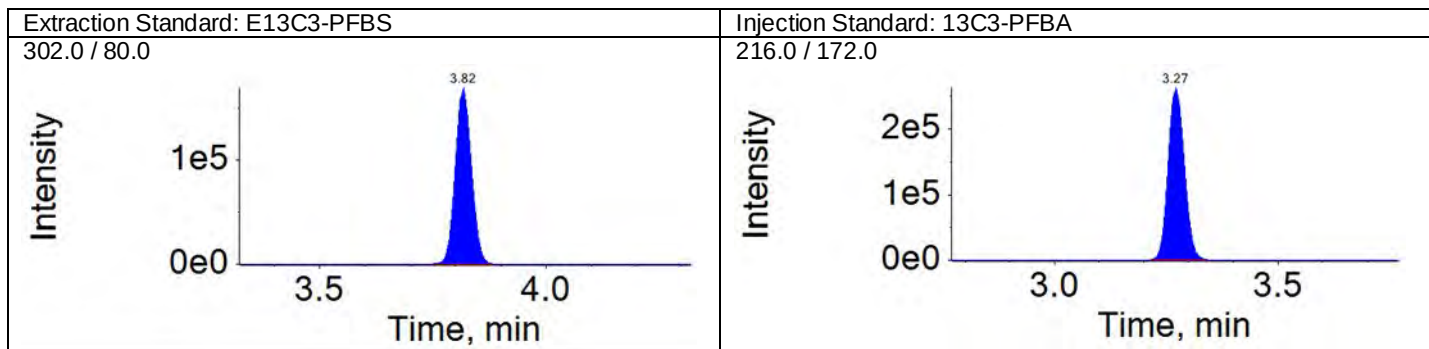
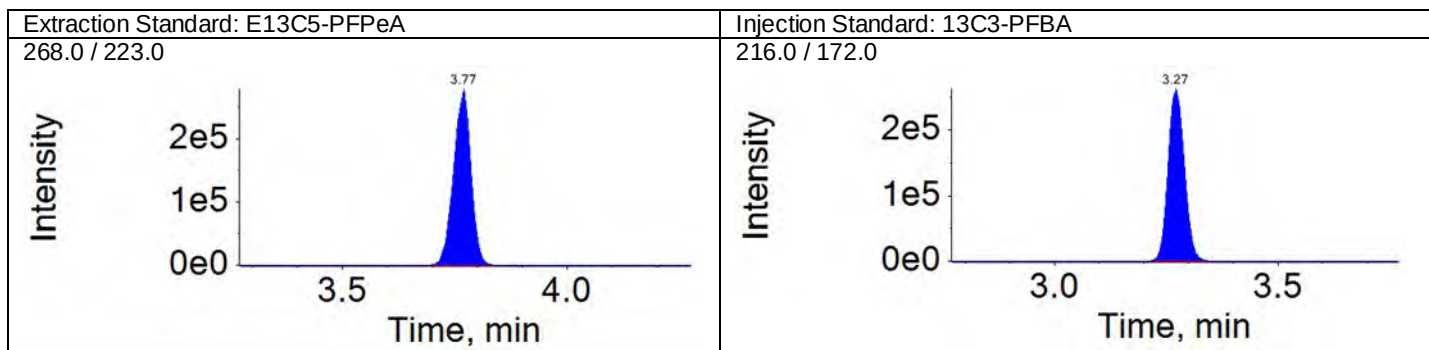
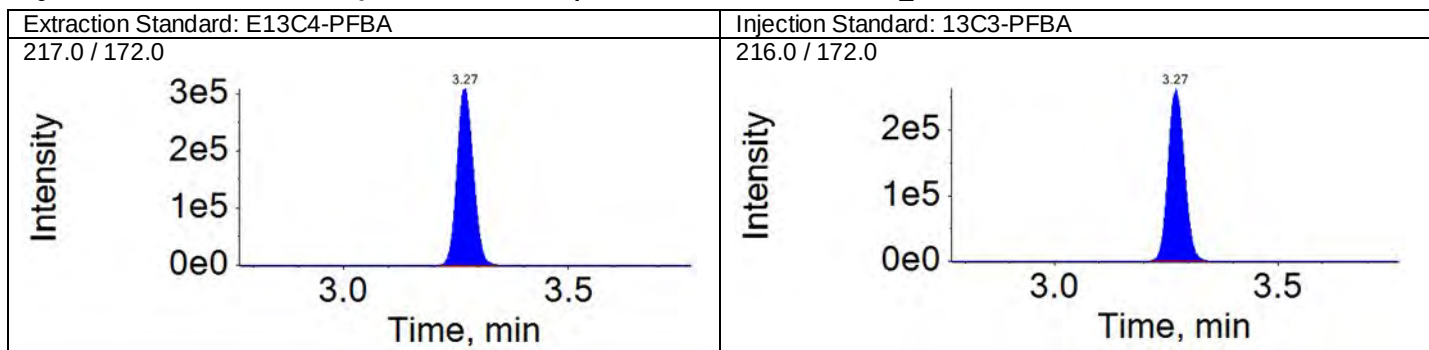
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



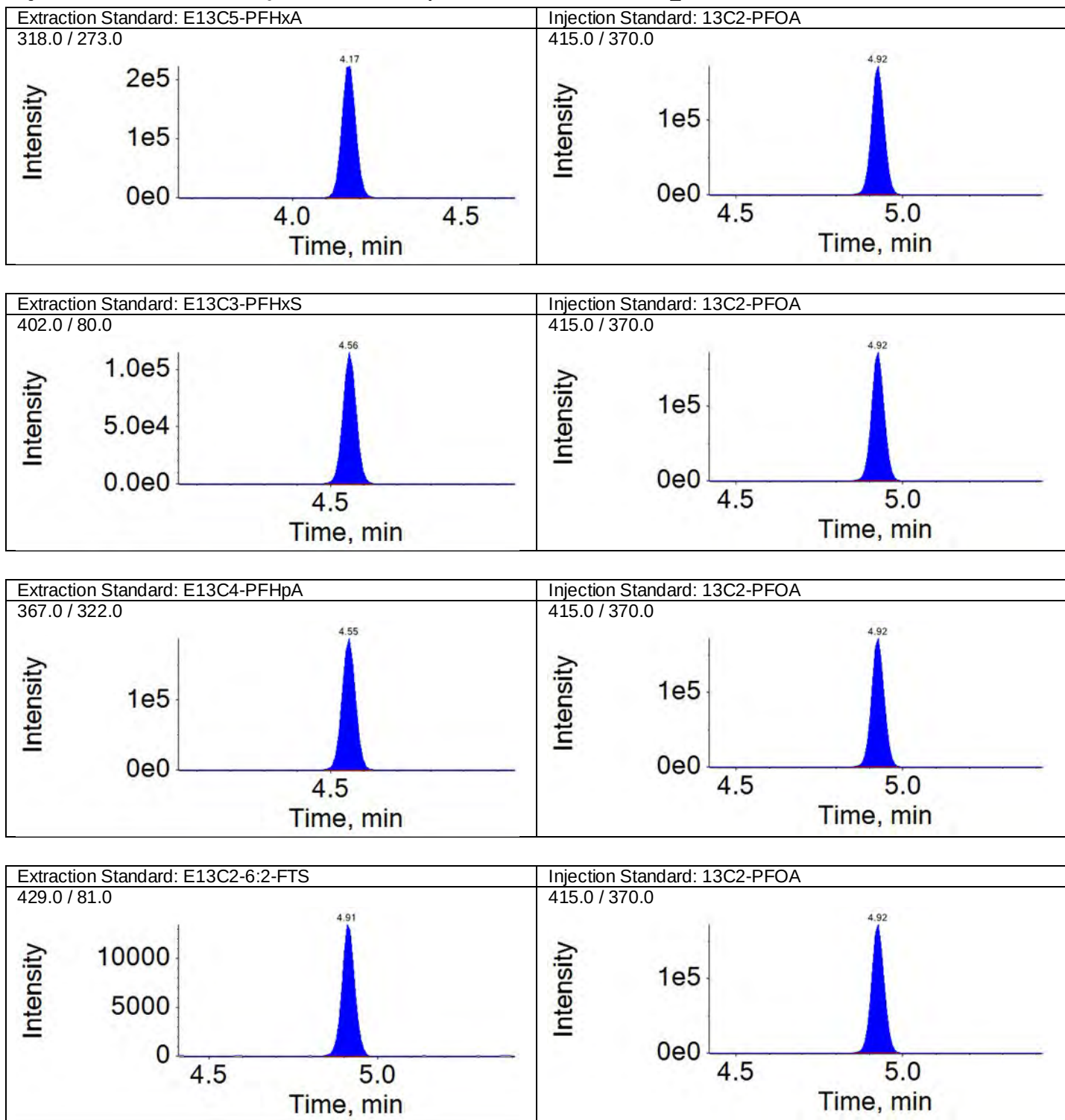
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



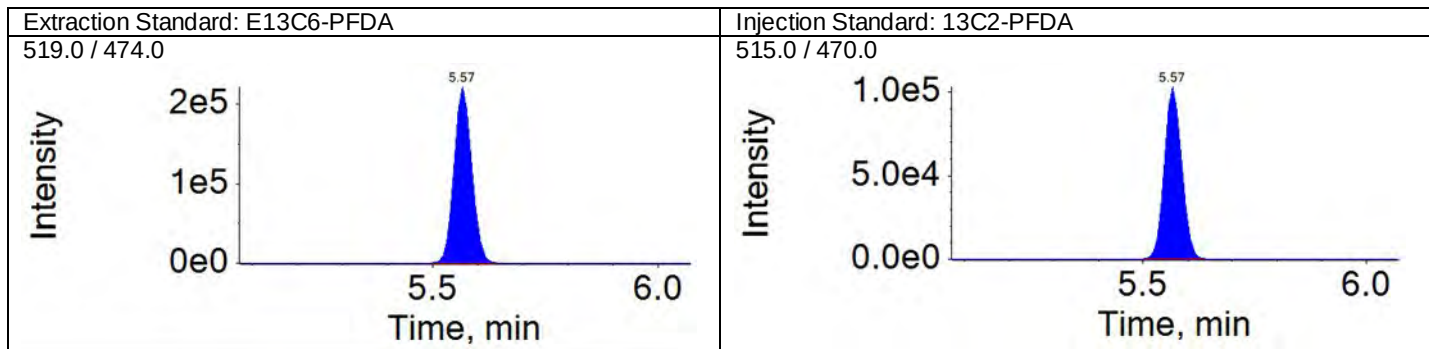
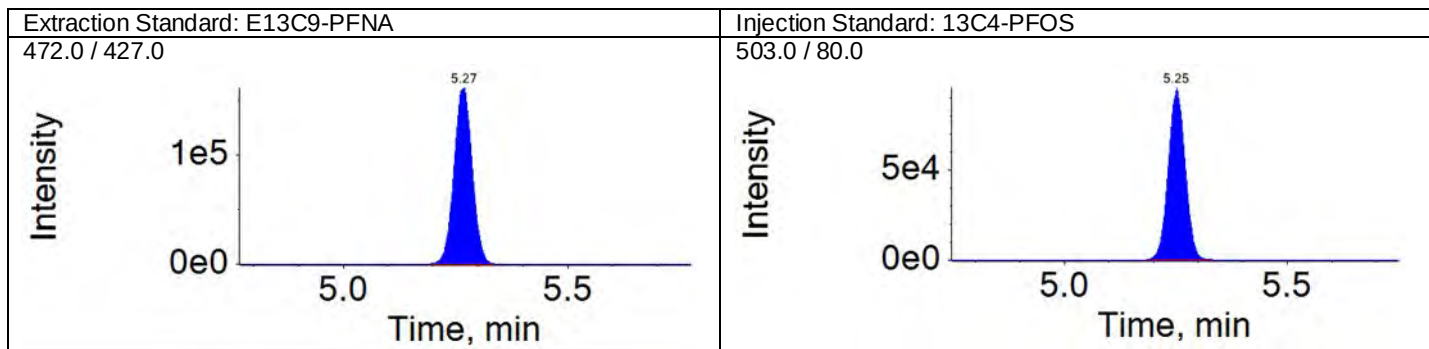
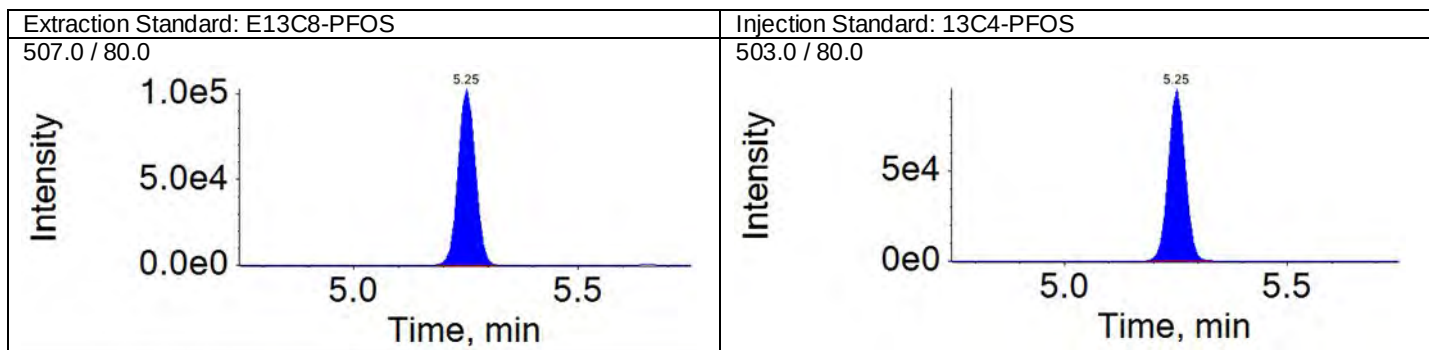
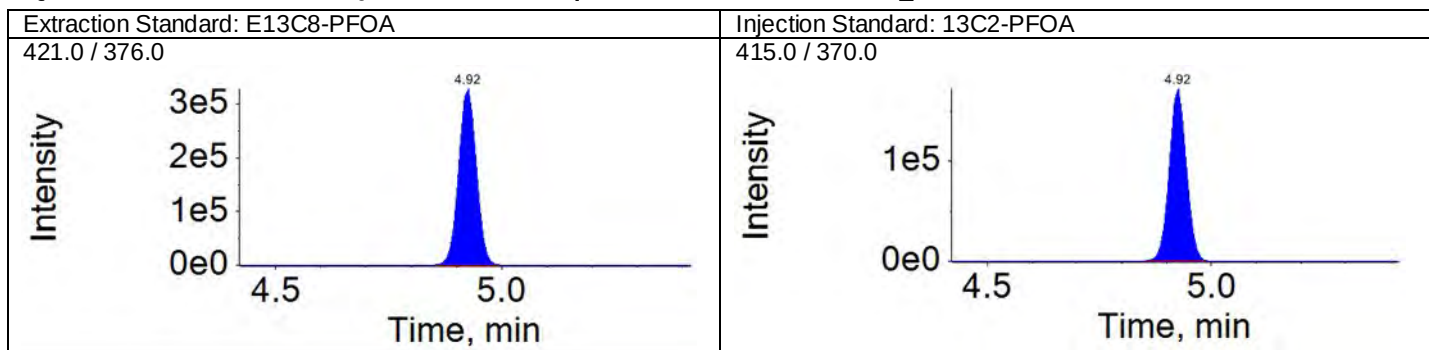
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



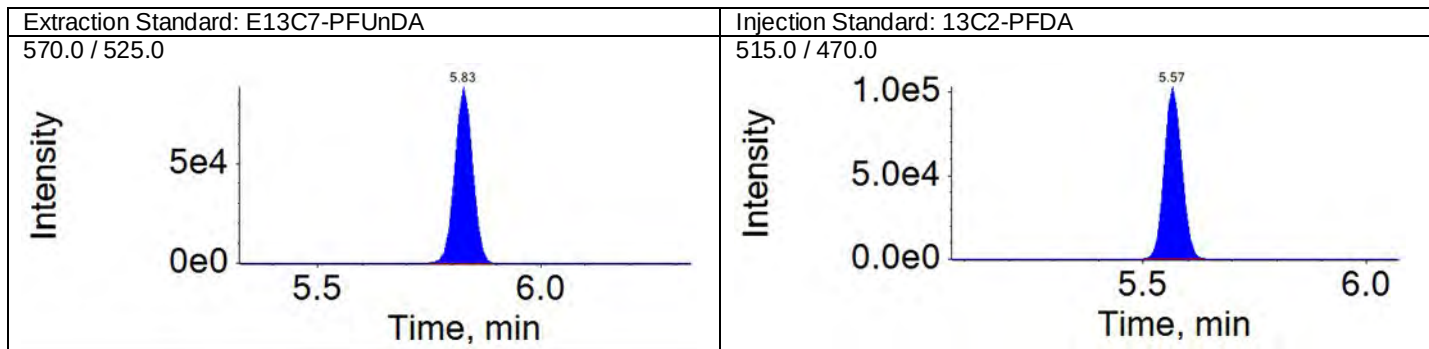
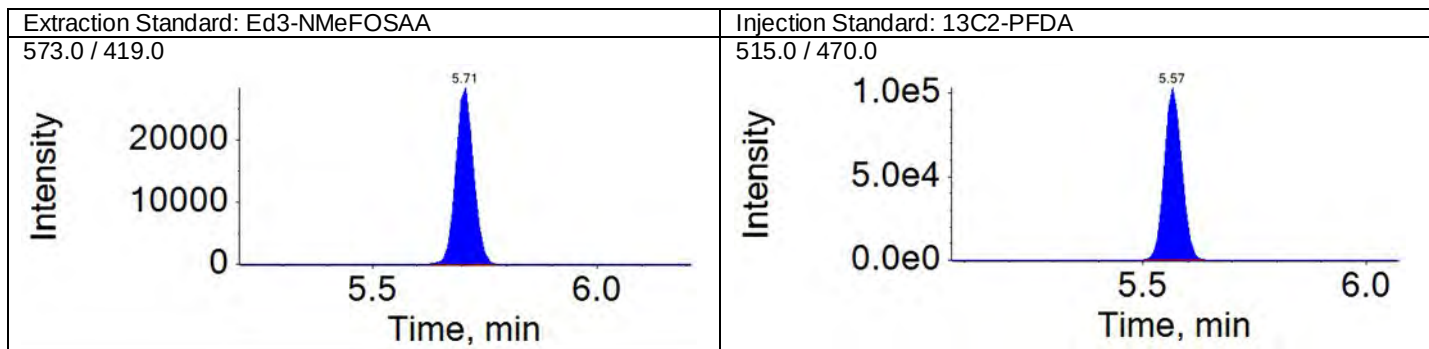
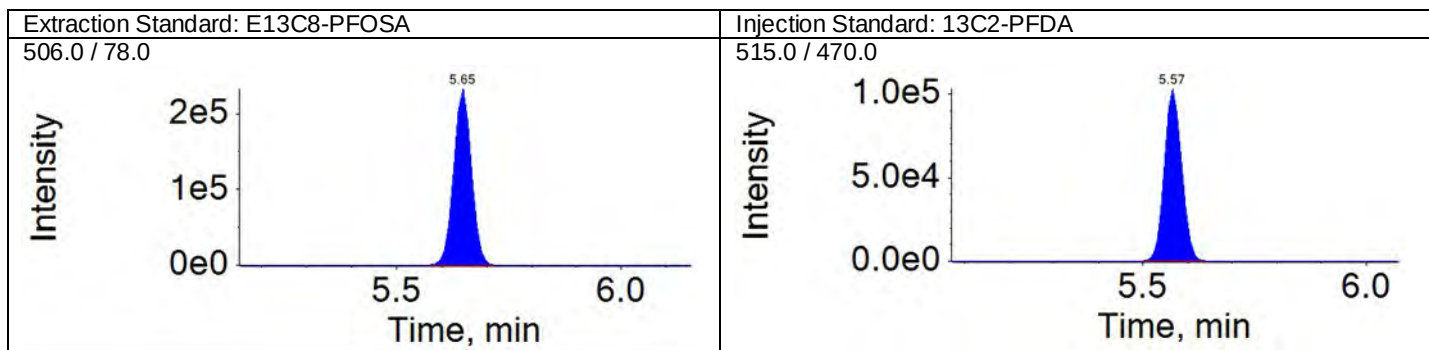
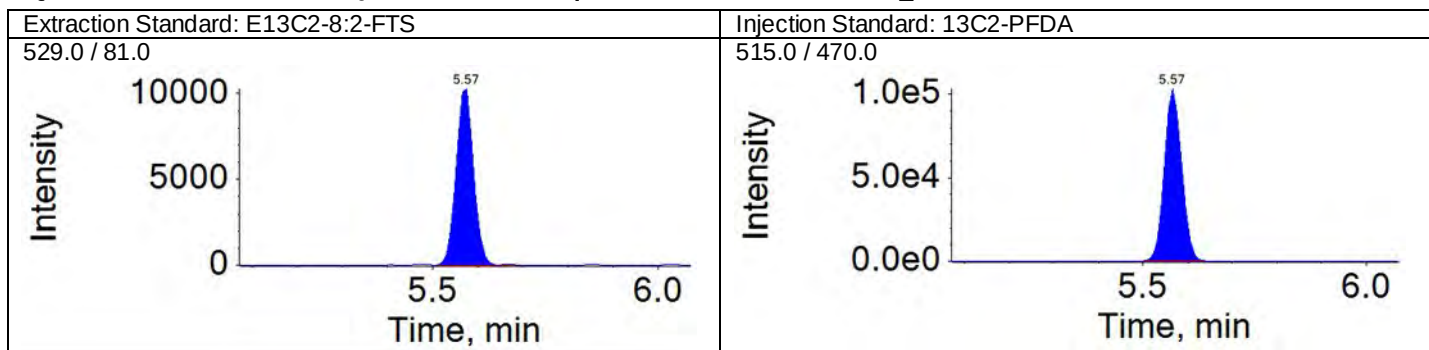
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



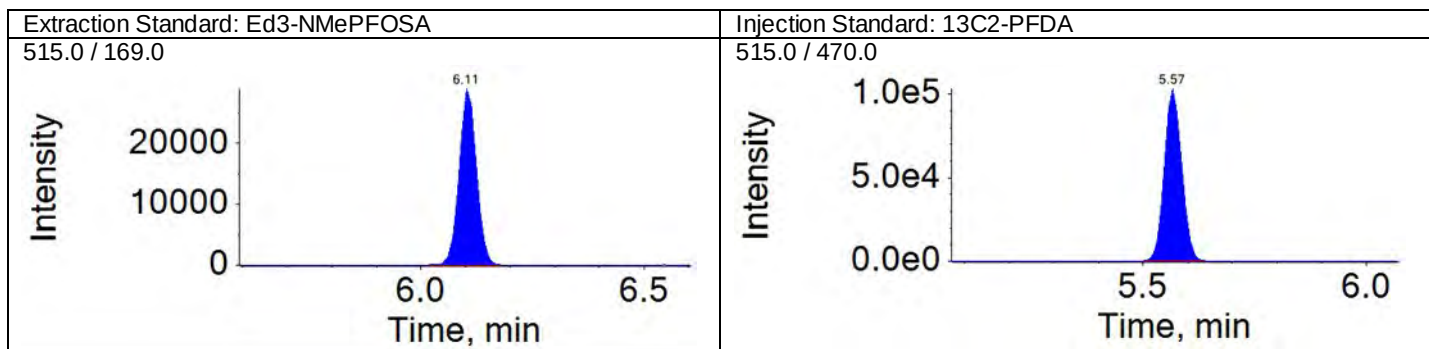
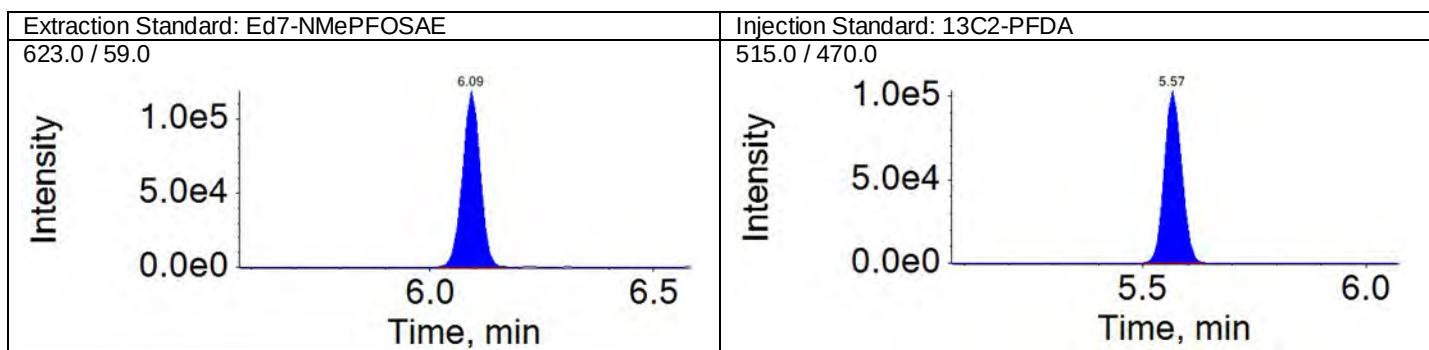
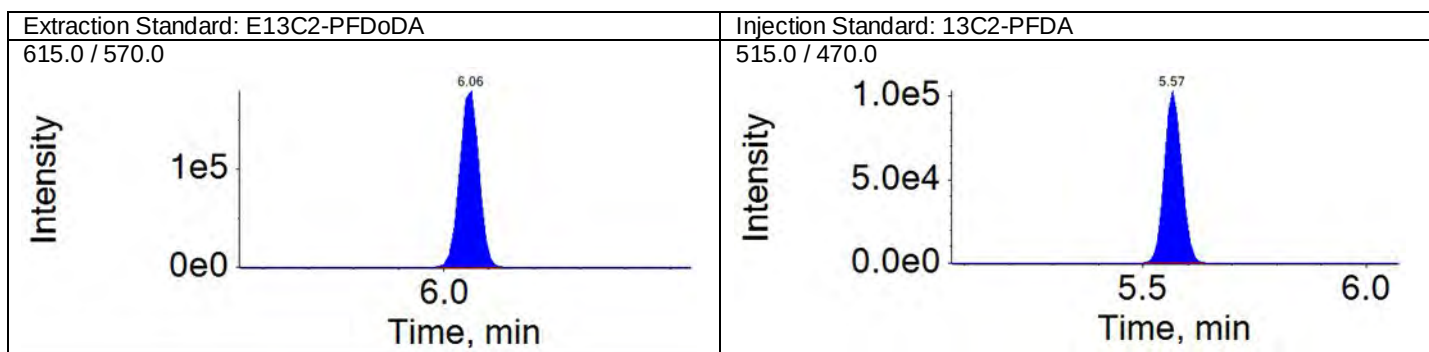
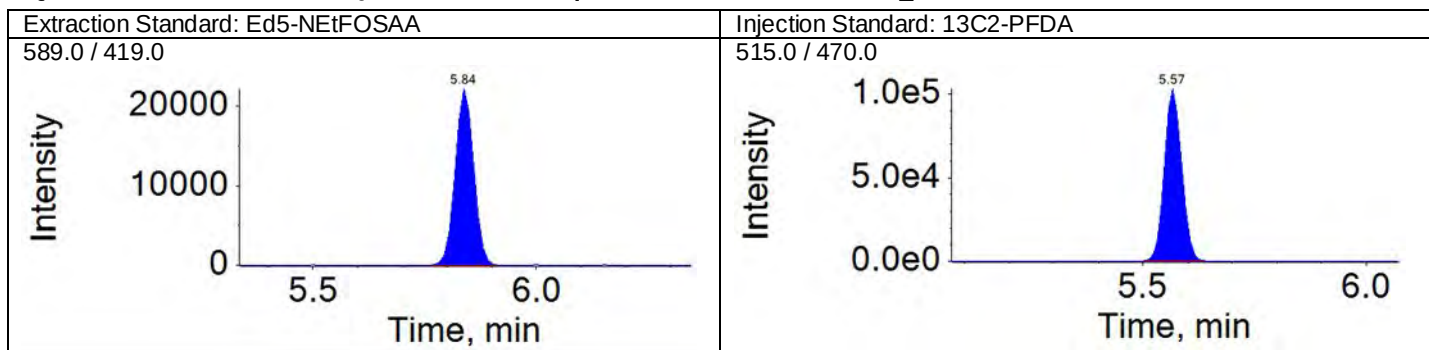
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



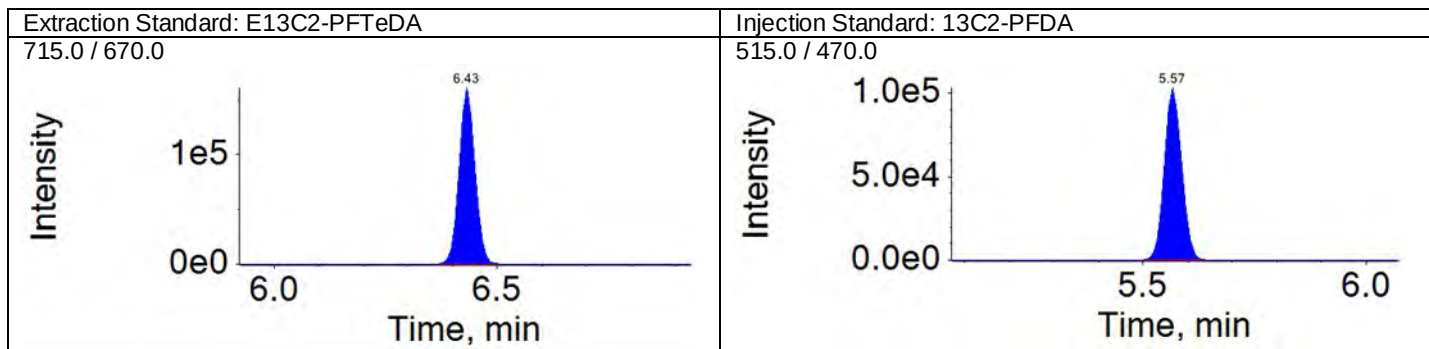
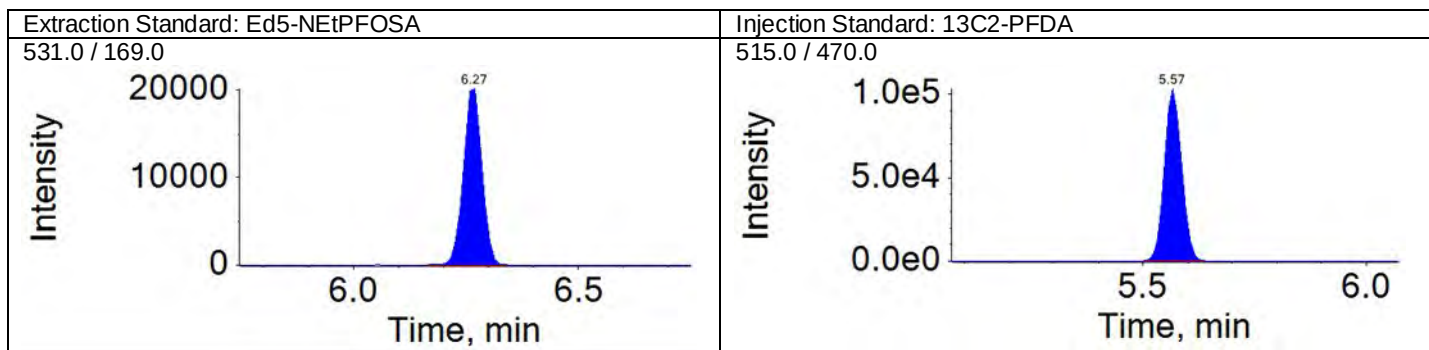
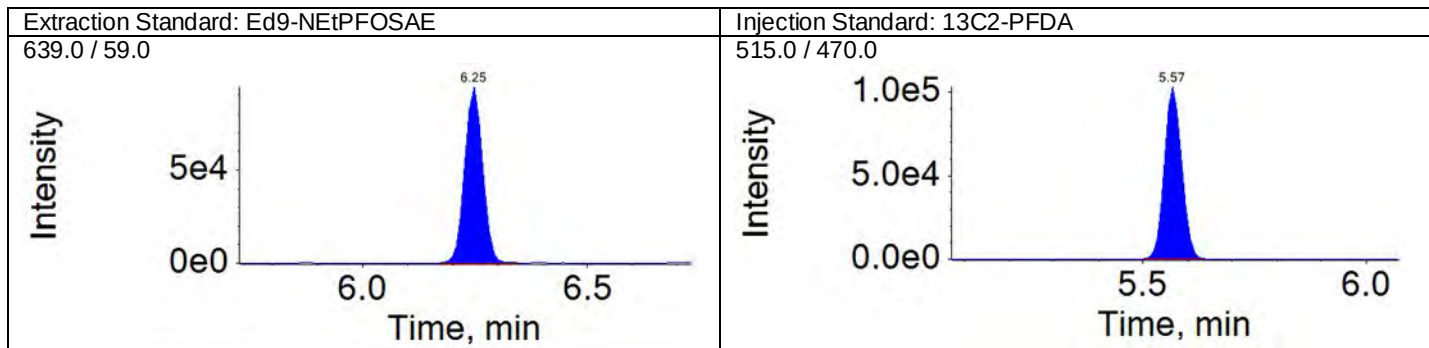
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



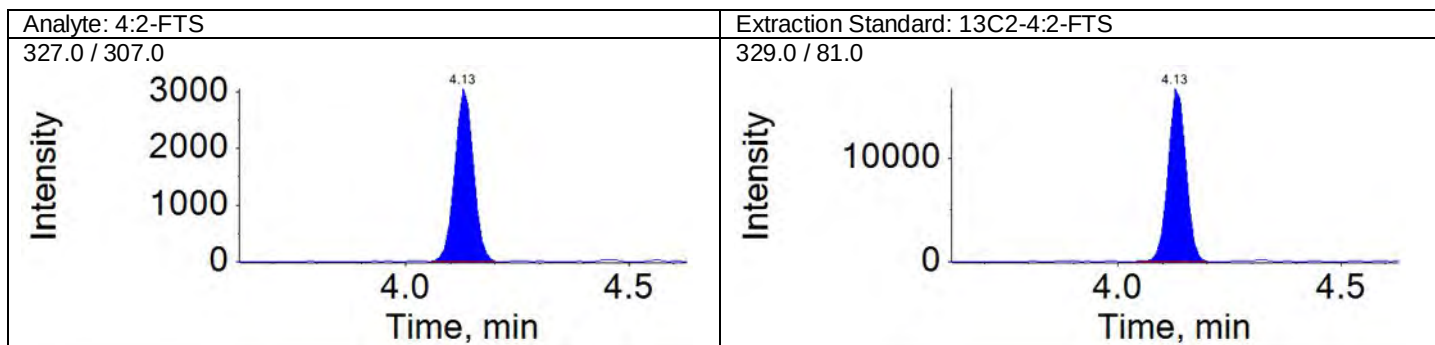
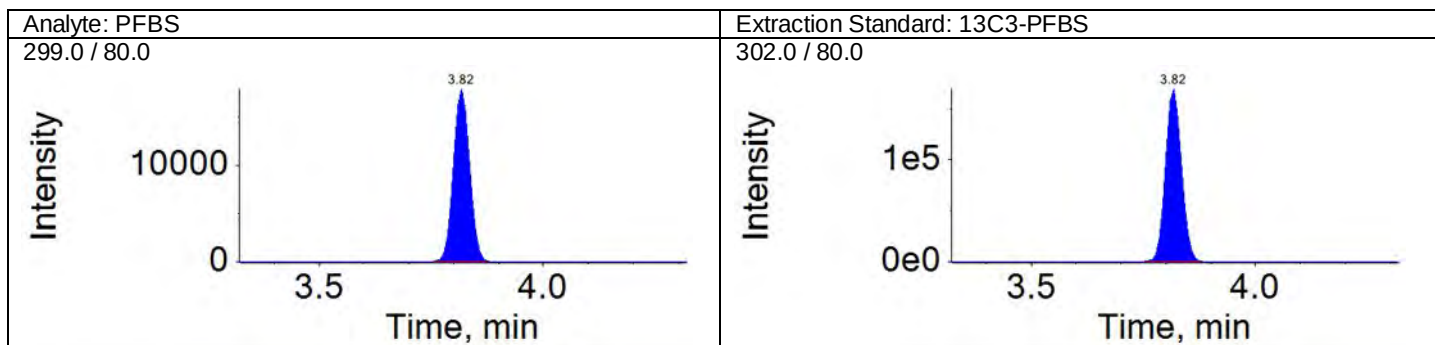
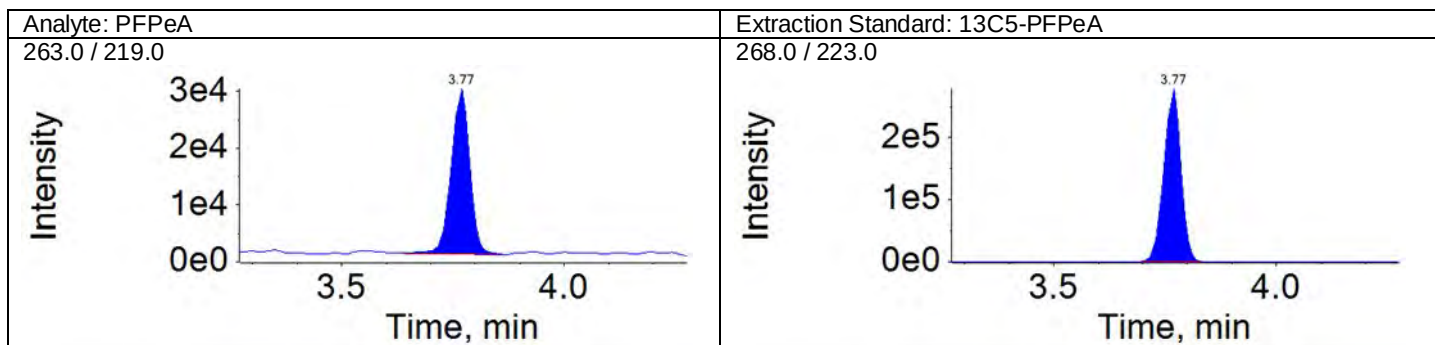
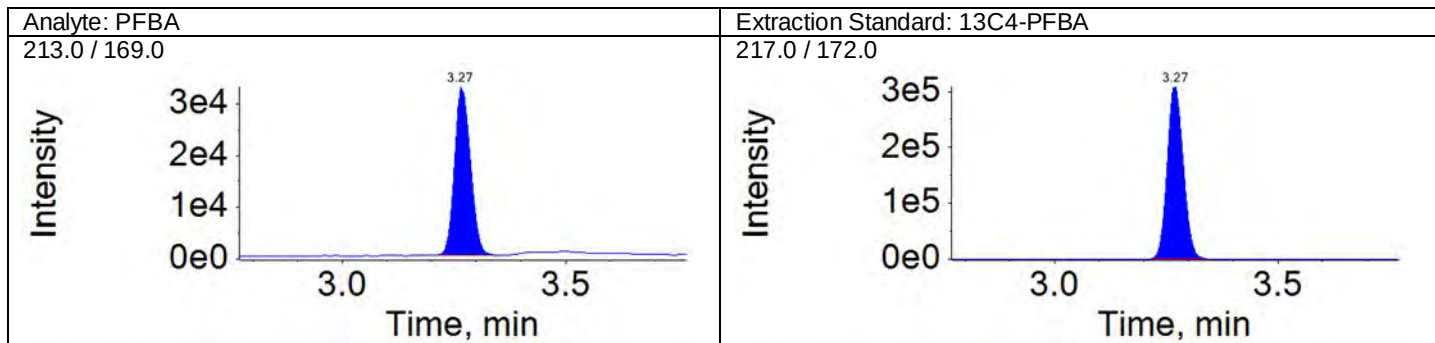
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



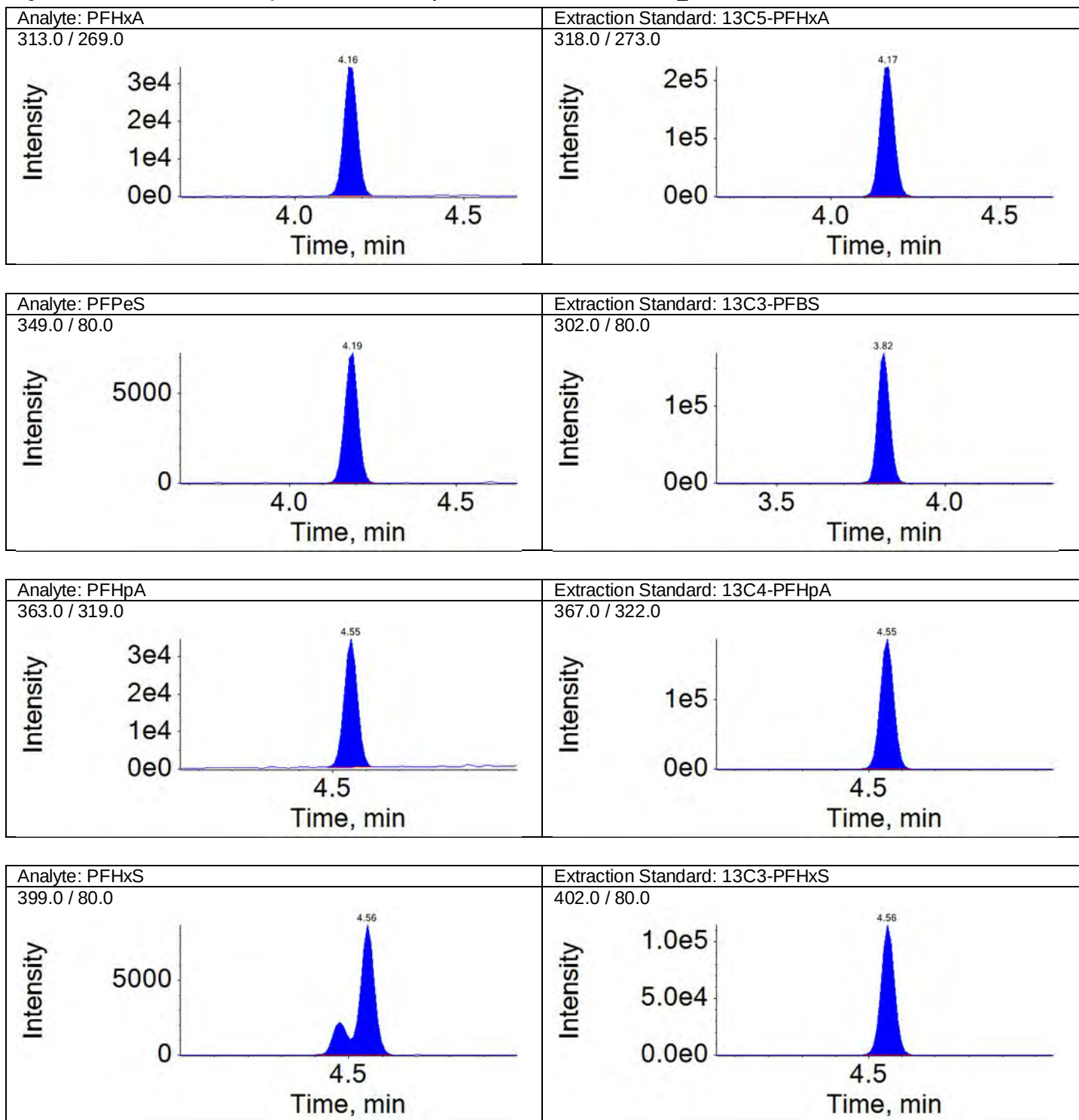
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



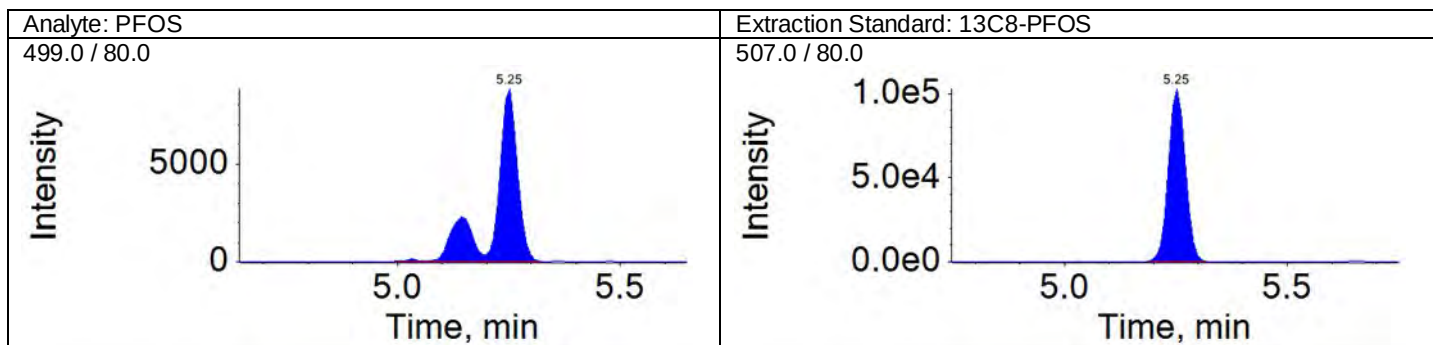
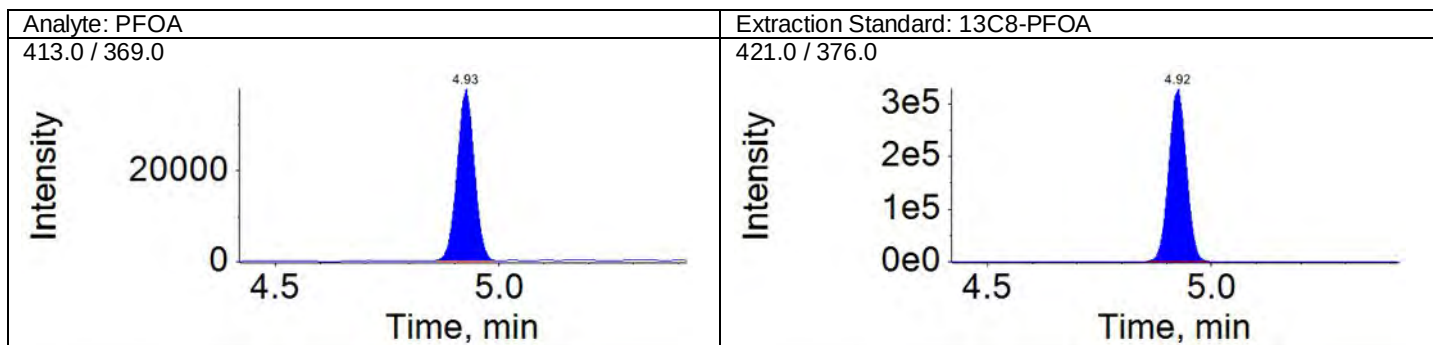
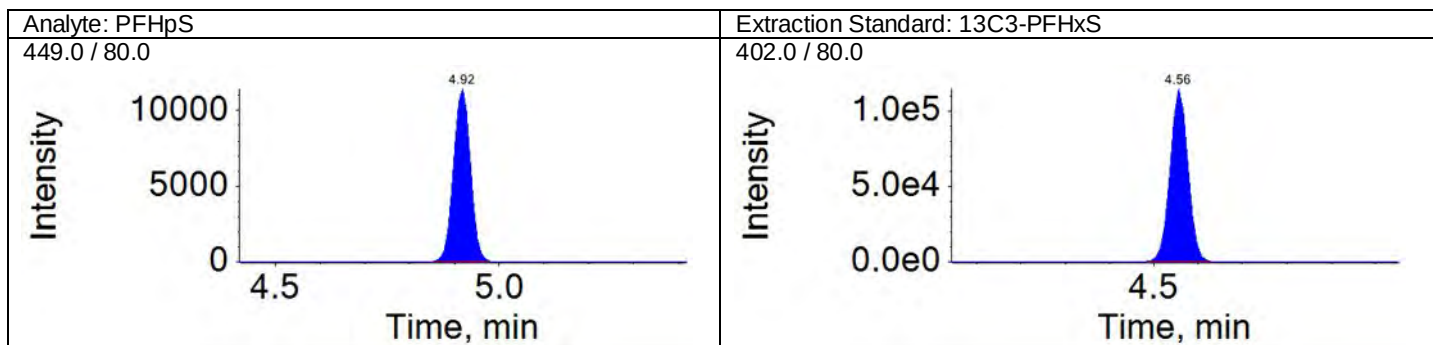
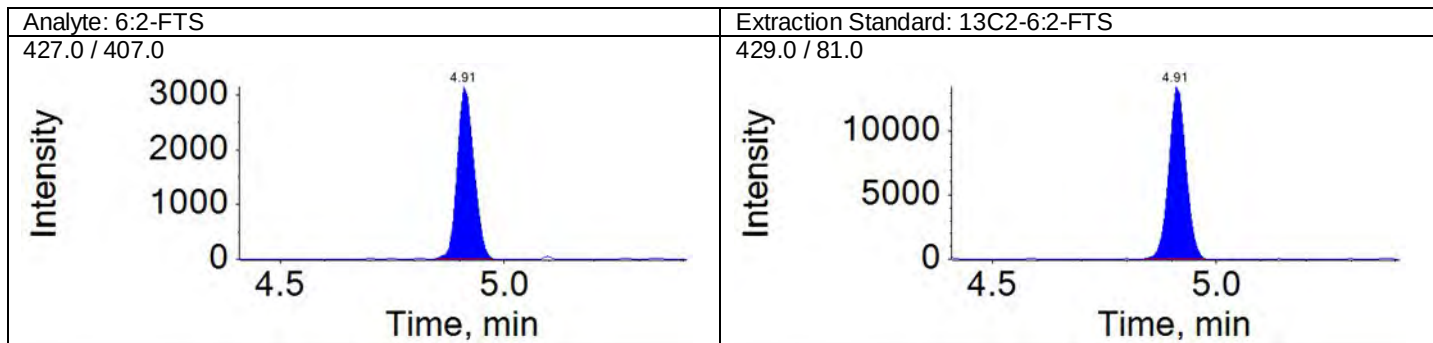
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



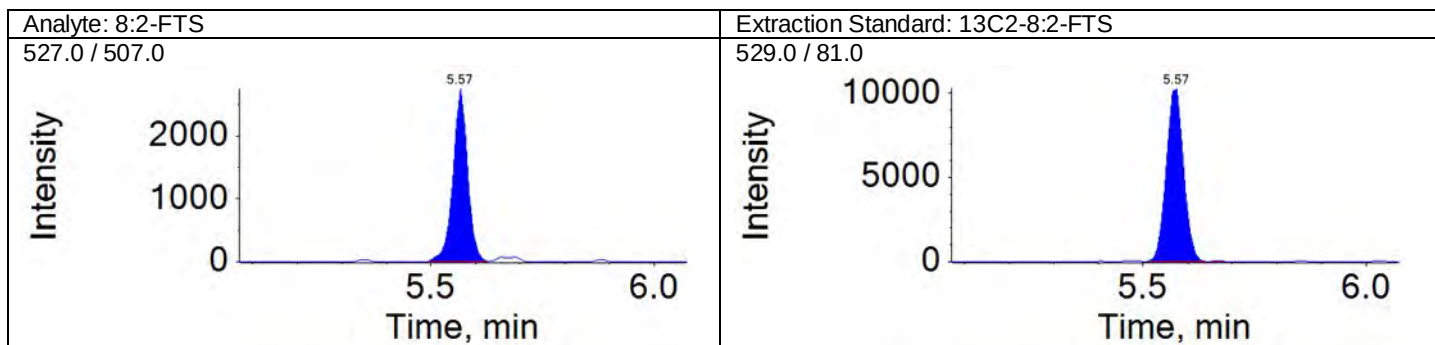
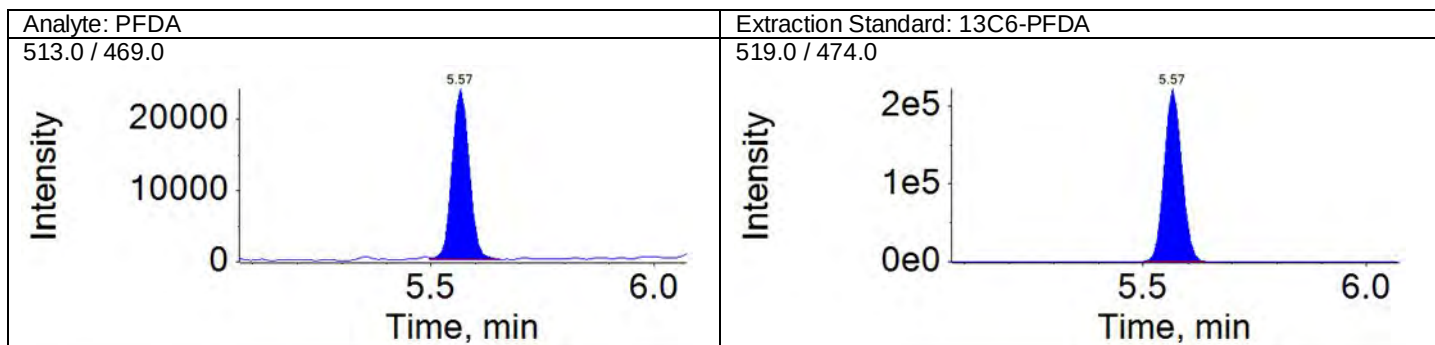
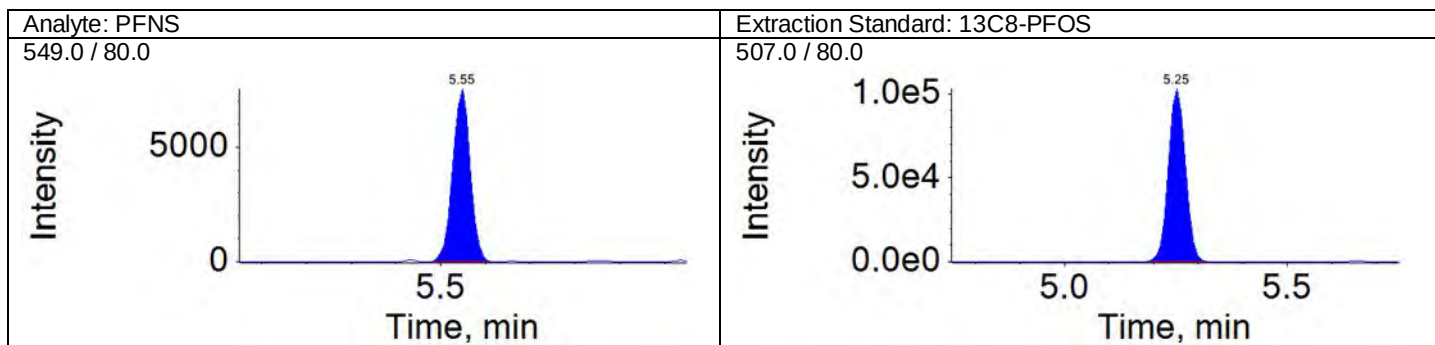
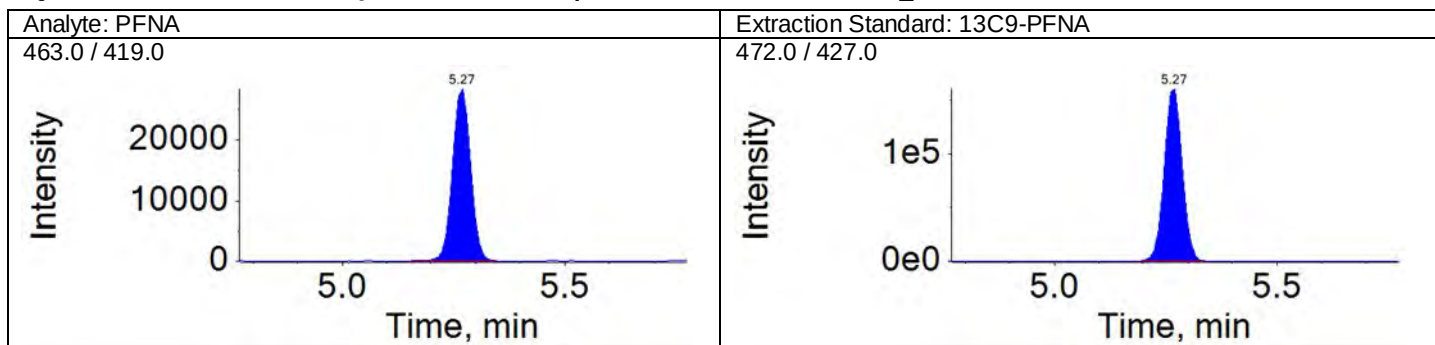
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

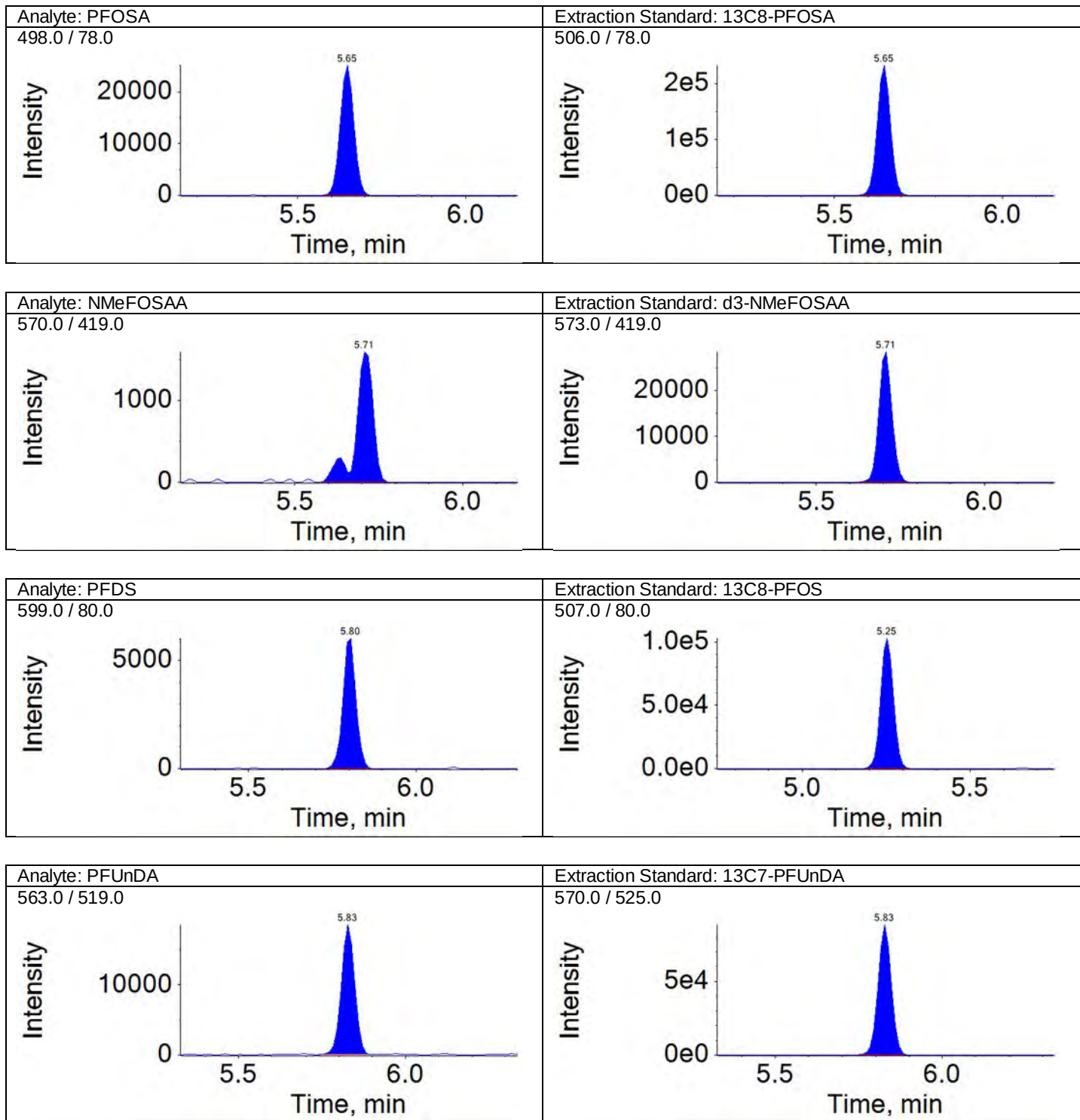
By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

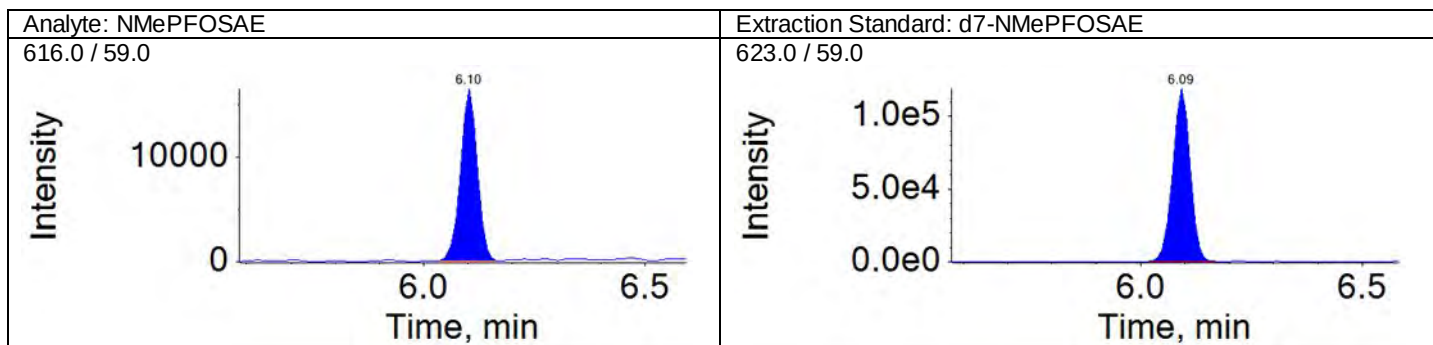
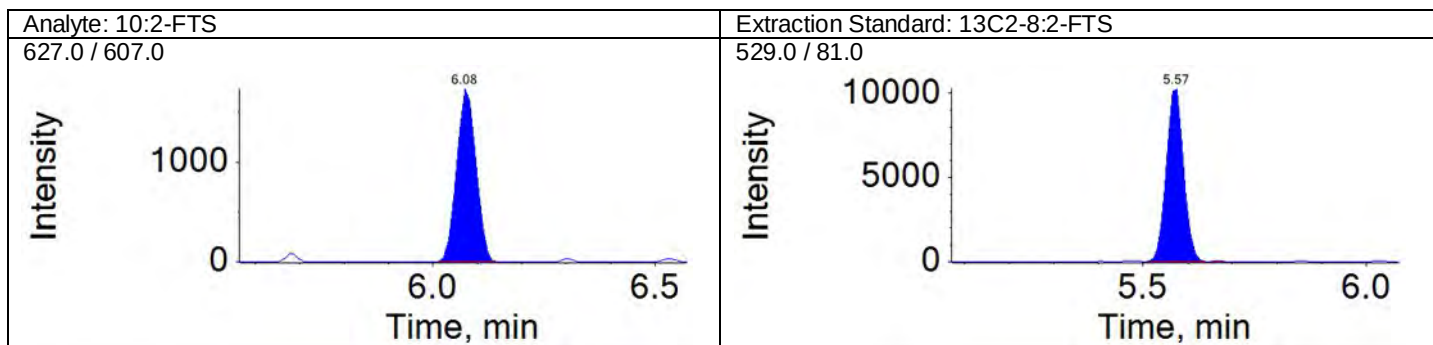
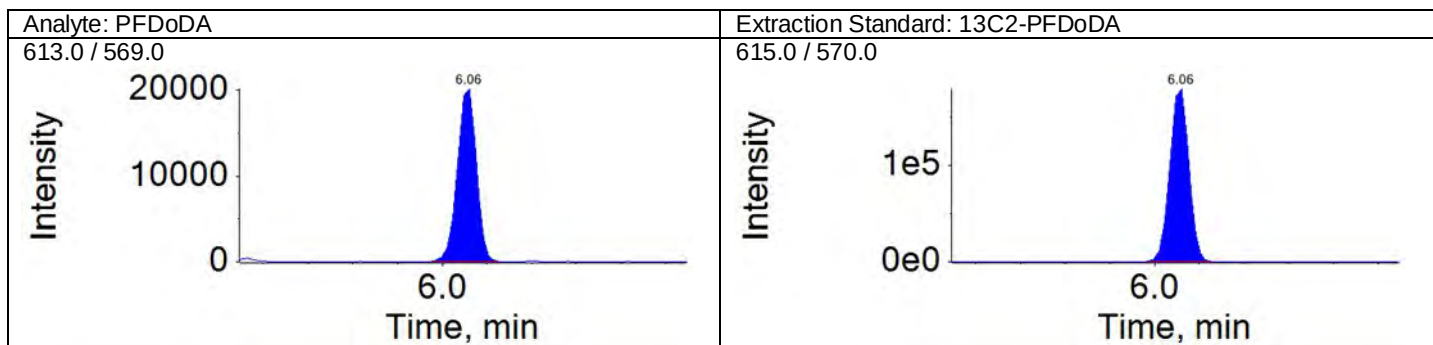
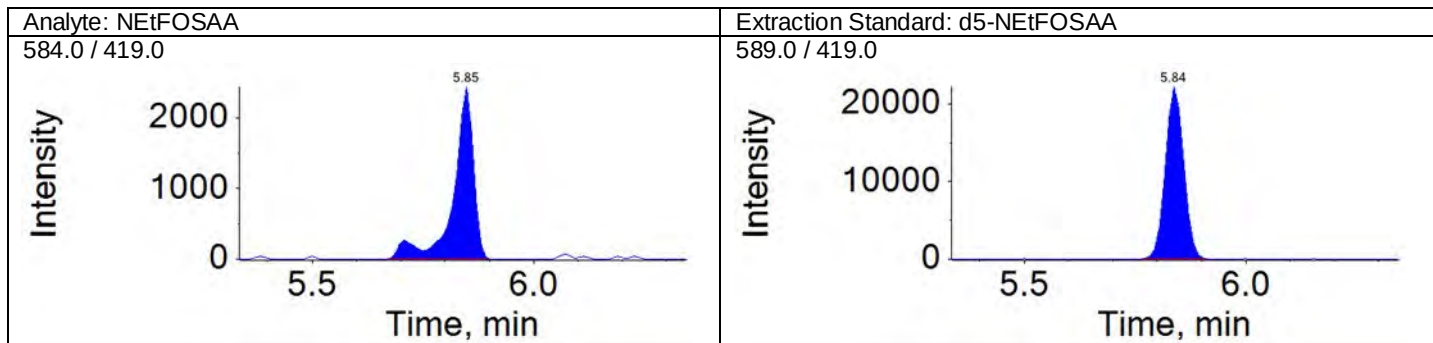
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



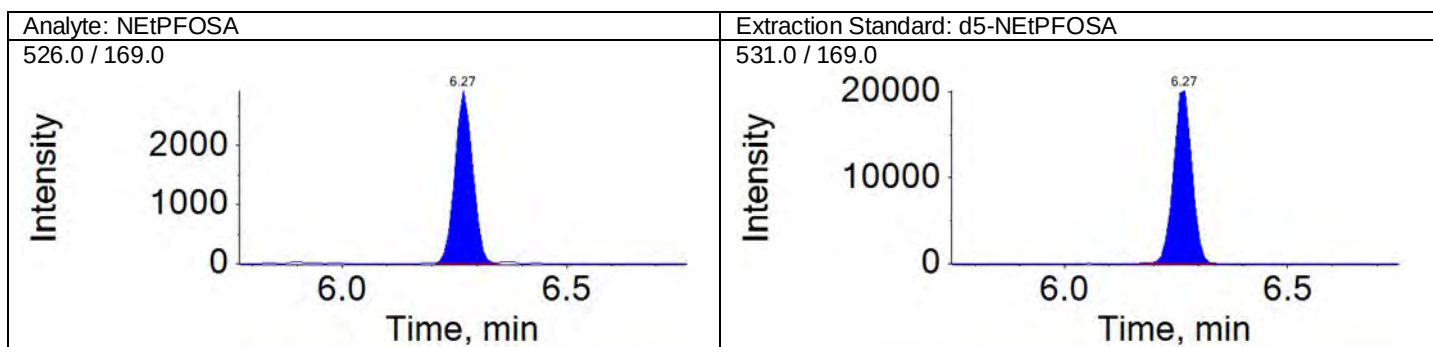
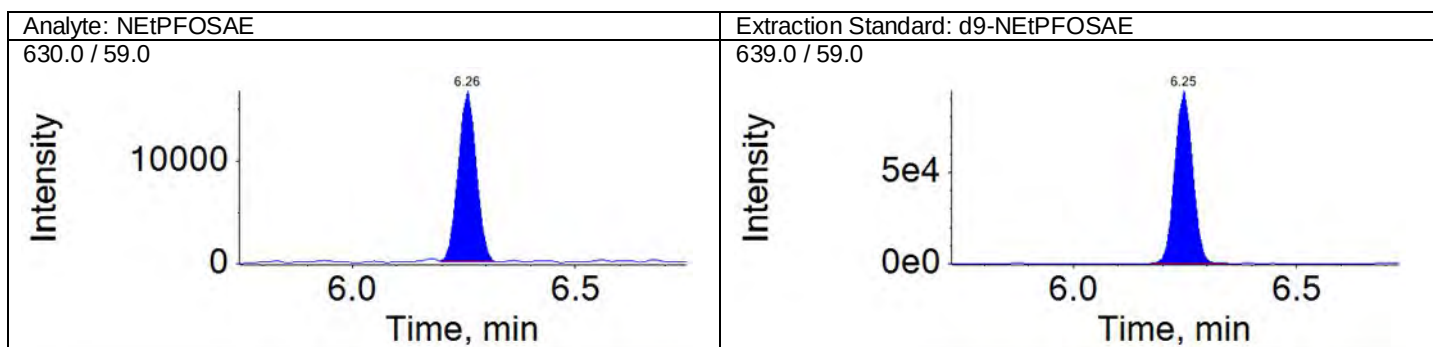
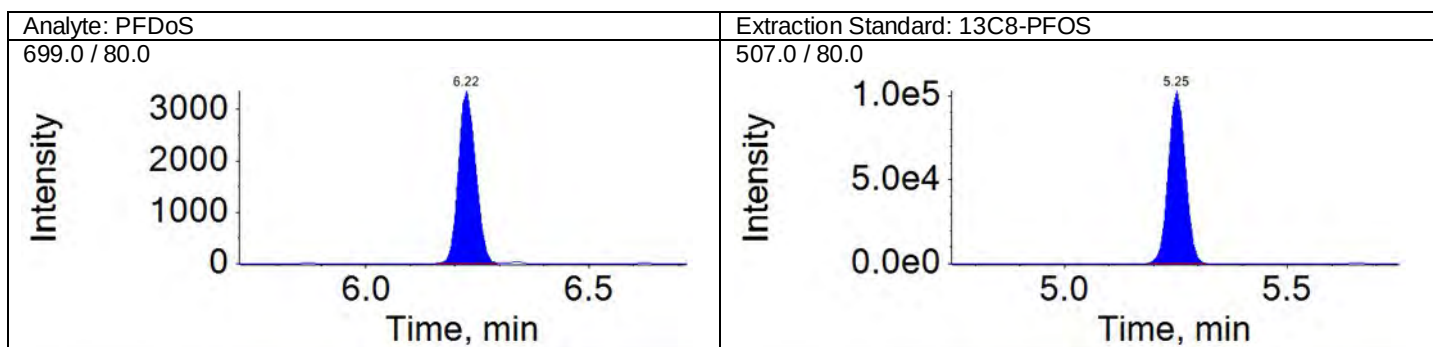
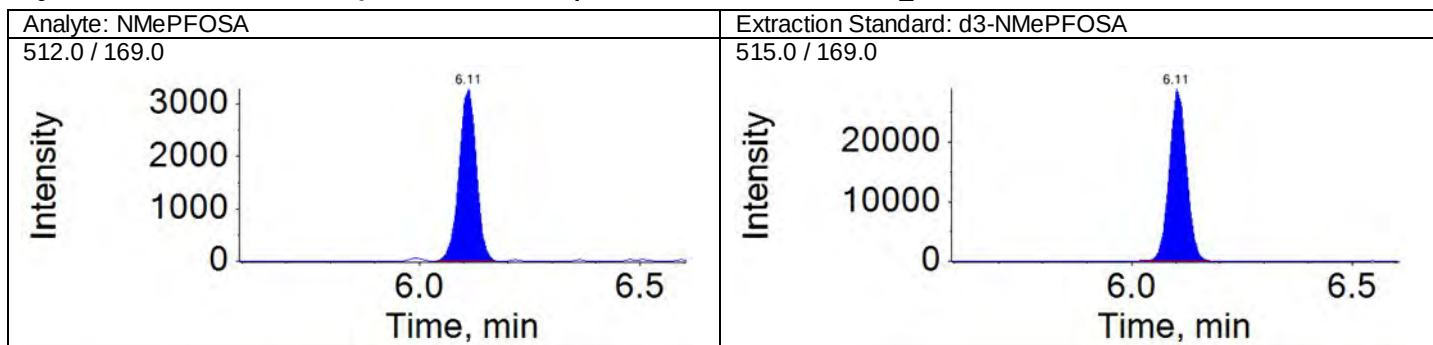
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



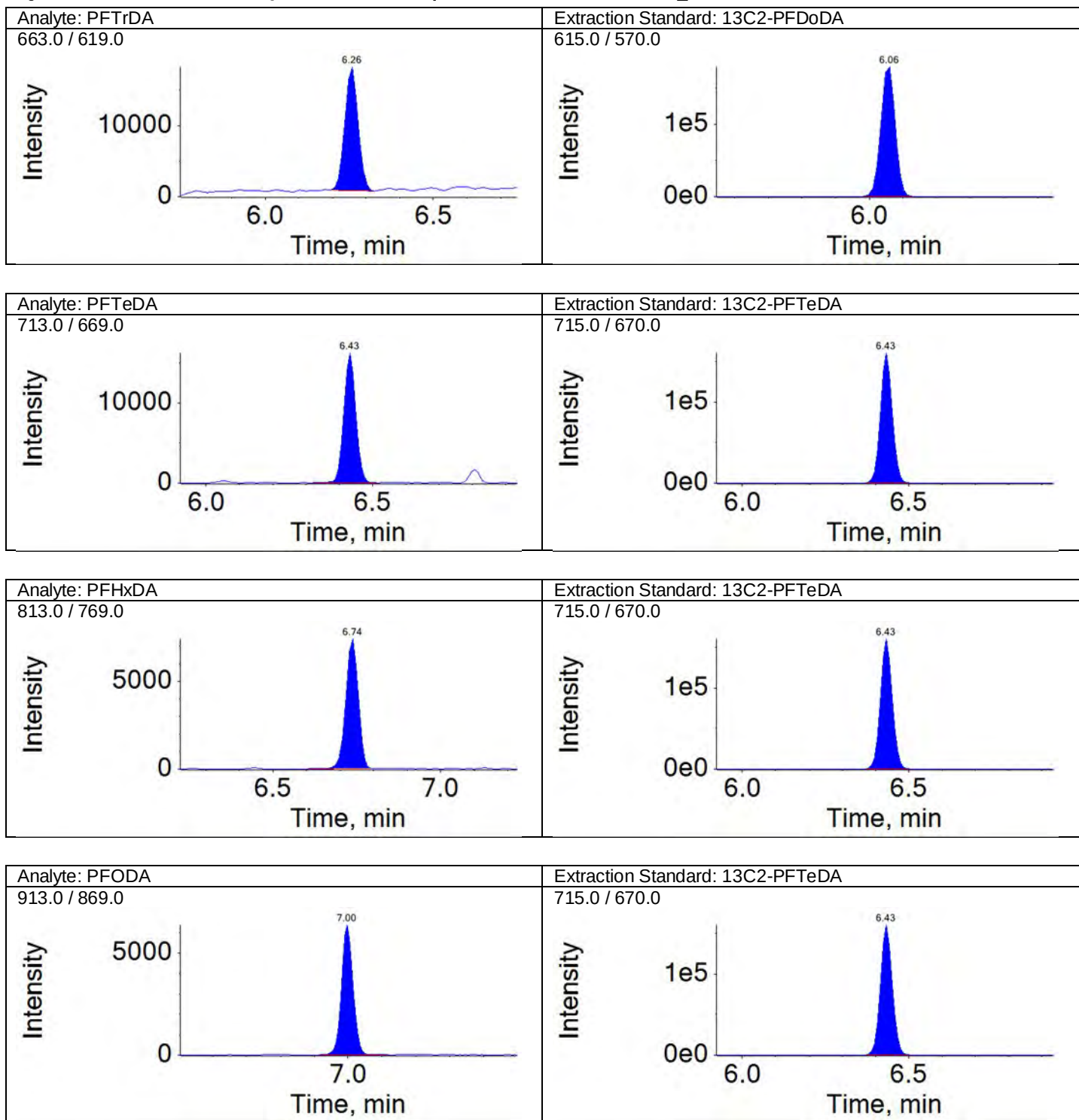
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



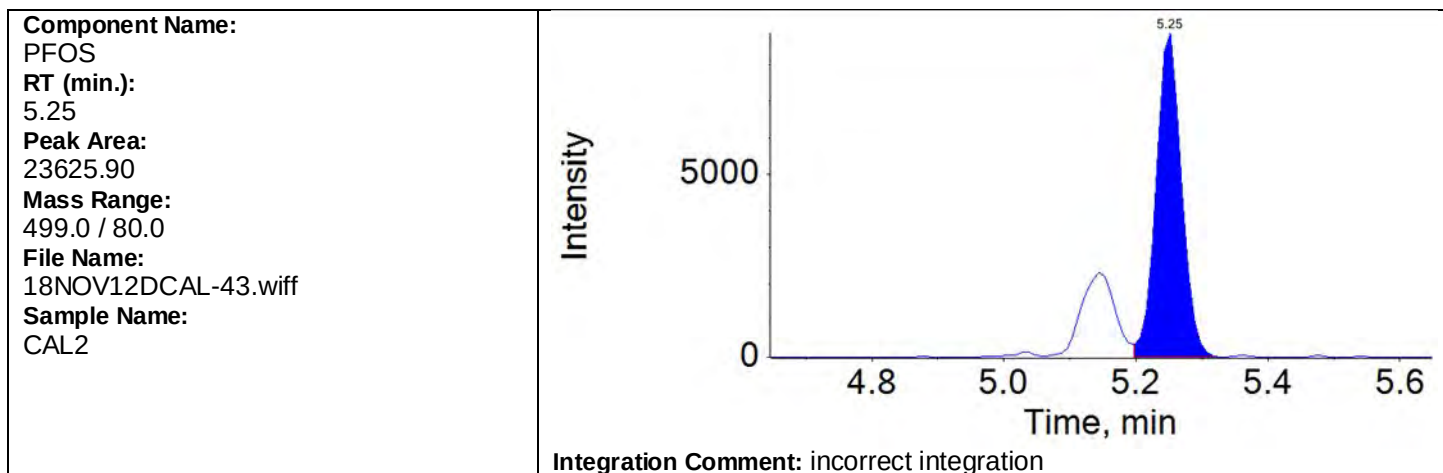
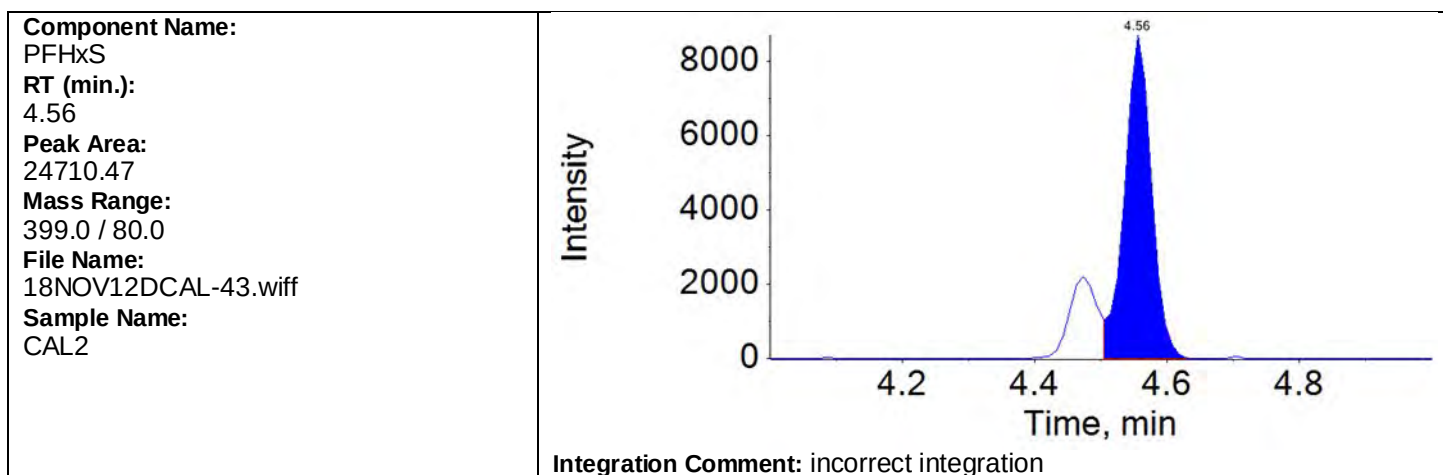
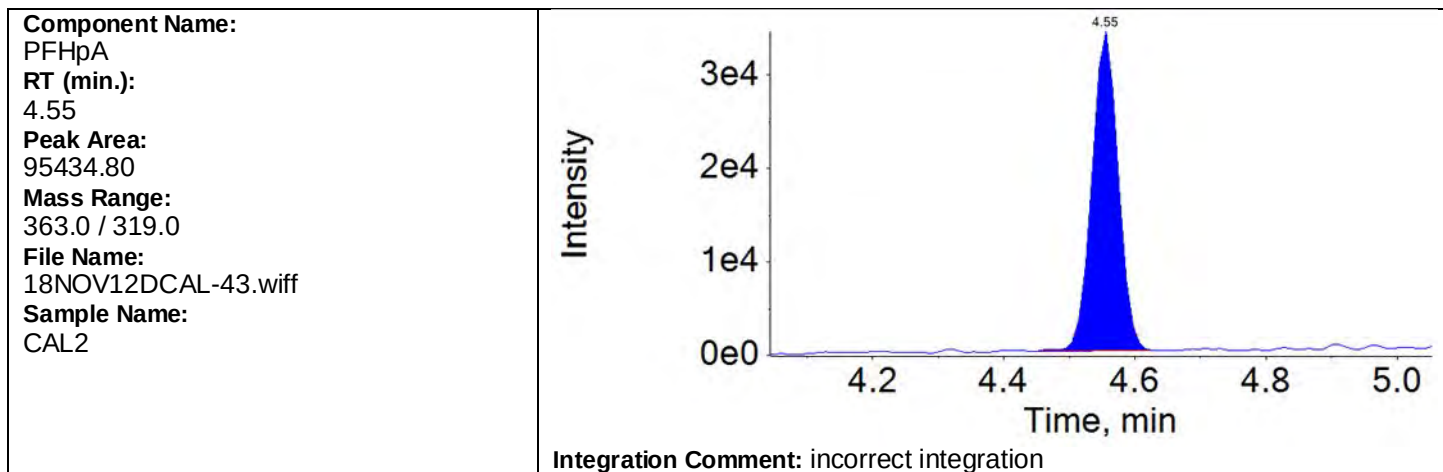
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

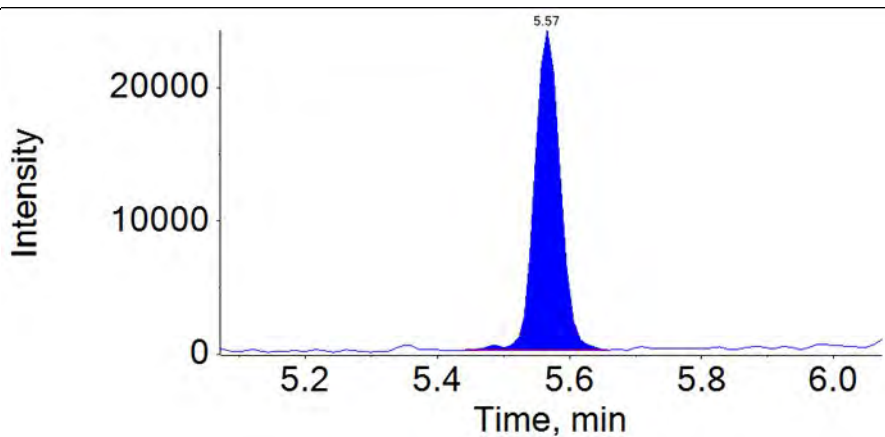
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

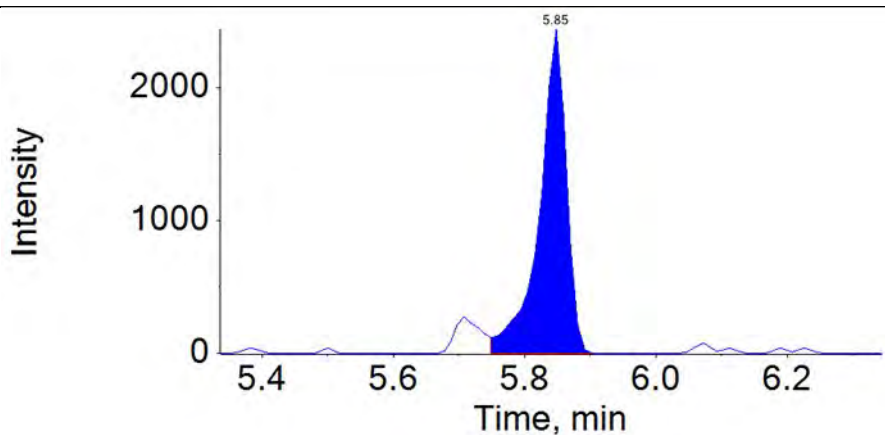
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA
RT (min.):
5.57
Peak Area:
64555.75
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



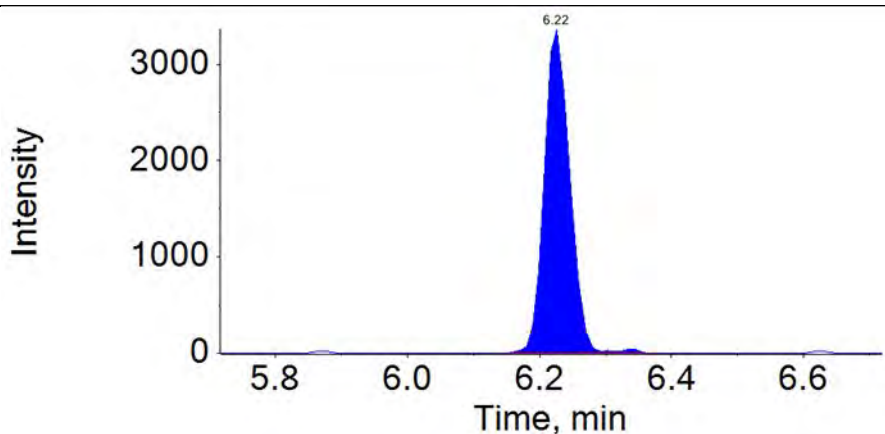
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
6972.11
Mass Range:
584.0 / 419.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFDoS
RT (min.):
6.22
Peak Area:
9104.97
Mass Range:
699.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2

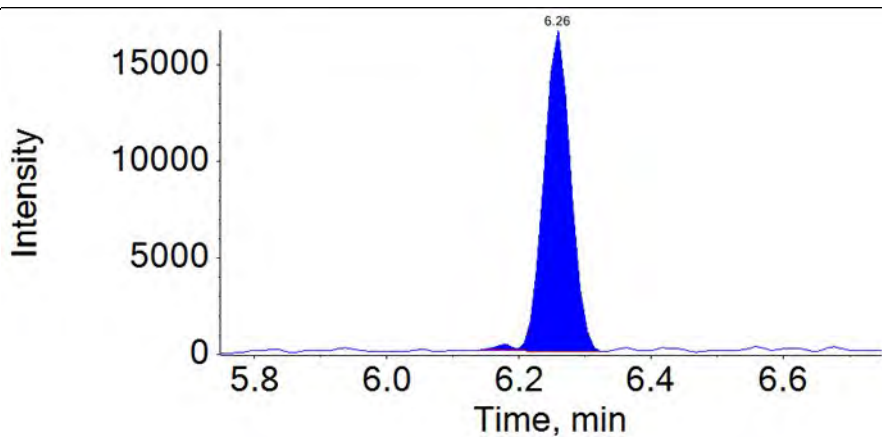


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

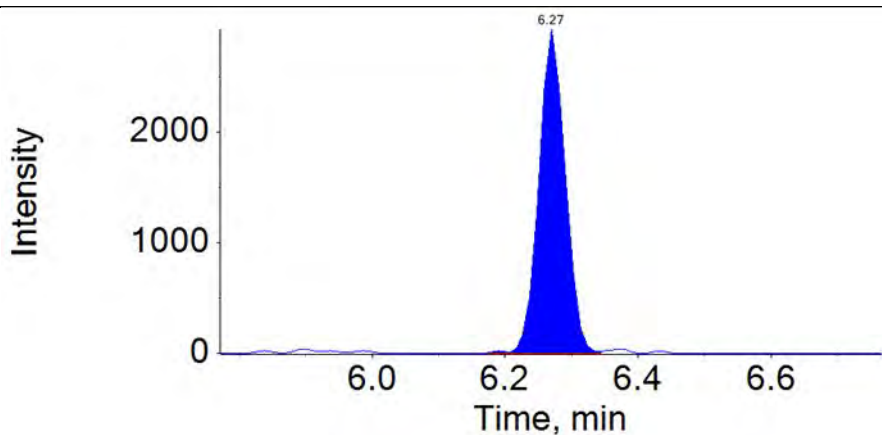
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSAE
RT (min.):
6.26
Peak Area:
47267.14
Mass Range:
630.0 / 59.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



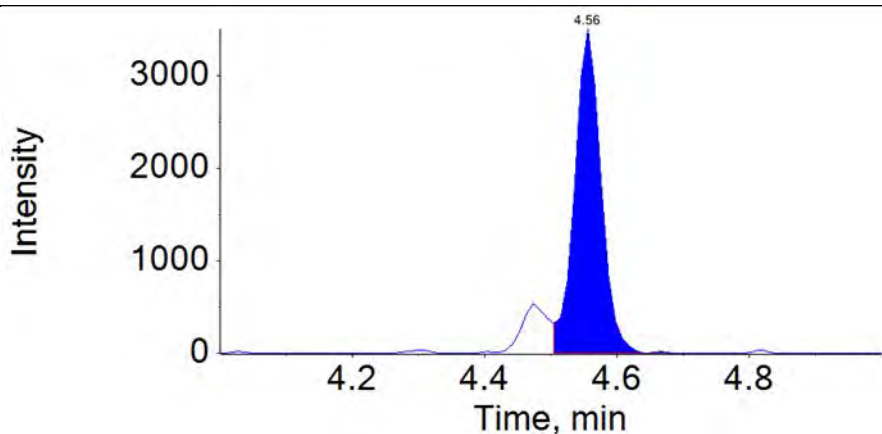
Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
8081.41
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
9734.65
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2

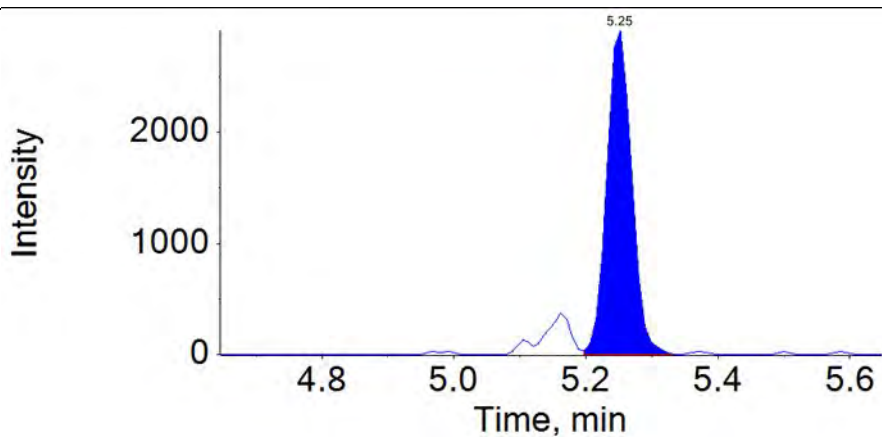


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

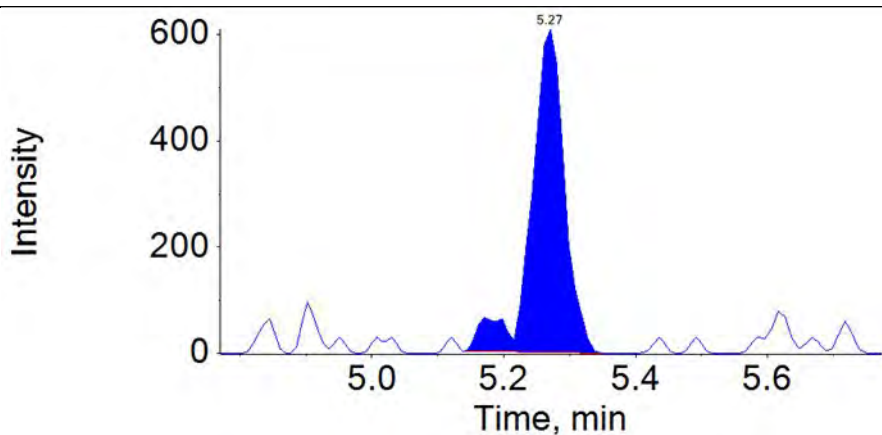
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
7692.11
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



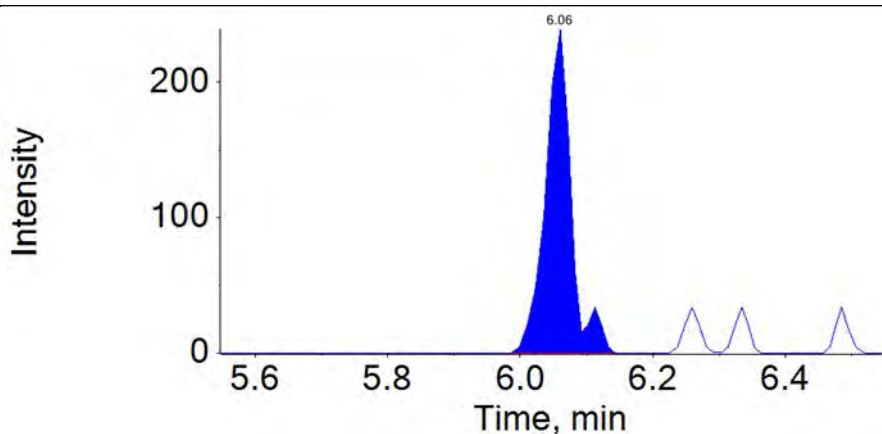
Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.27
Peak Area:
2176.77
Mass Range:
463.0 / 169.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
655.49
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

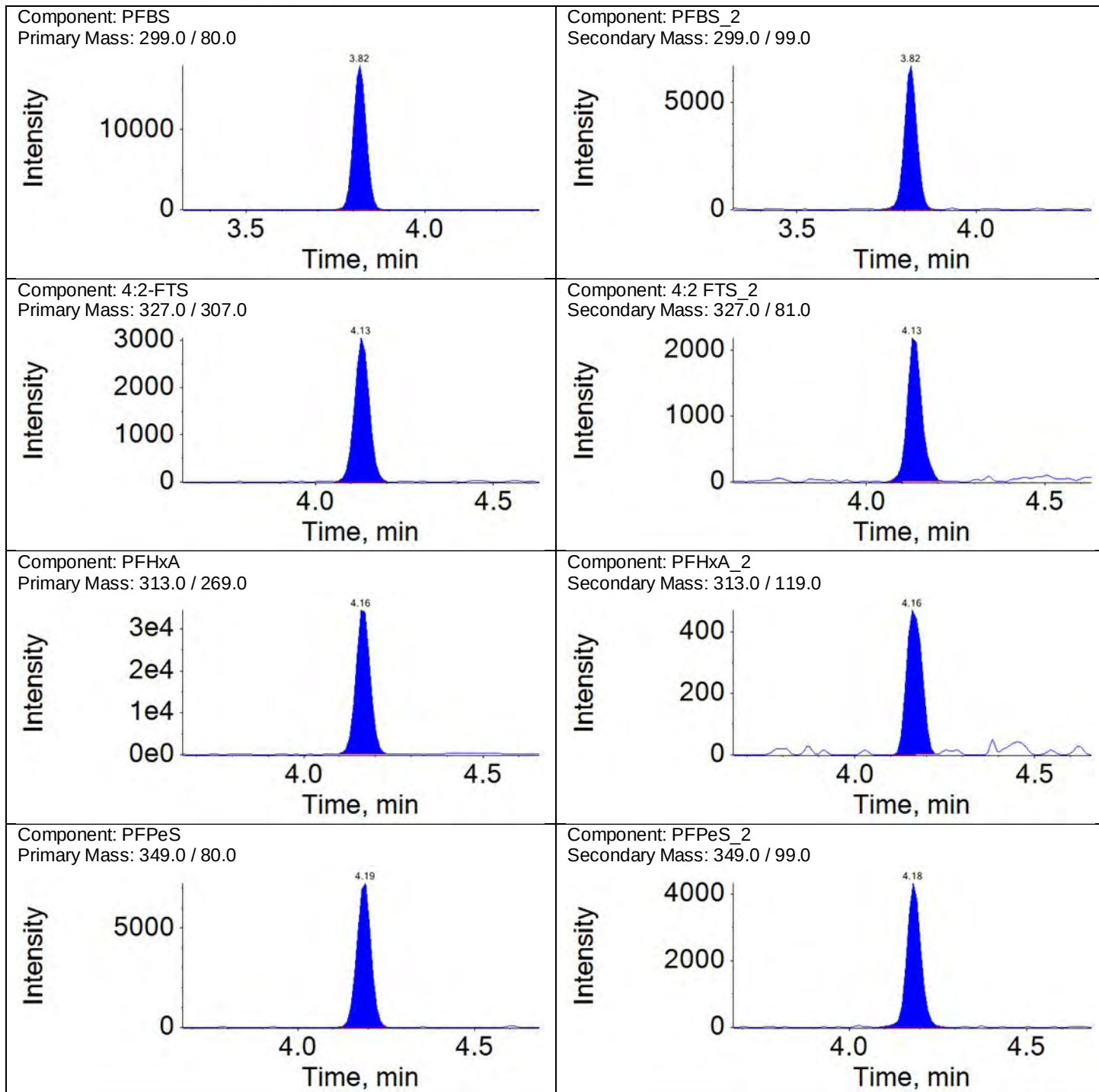
Ion Ratio Report

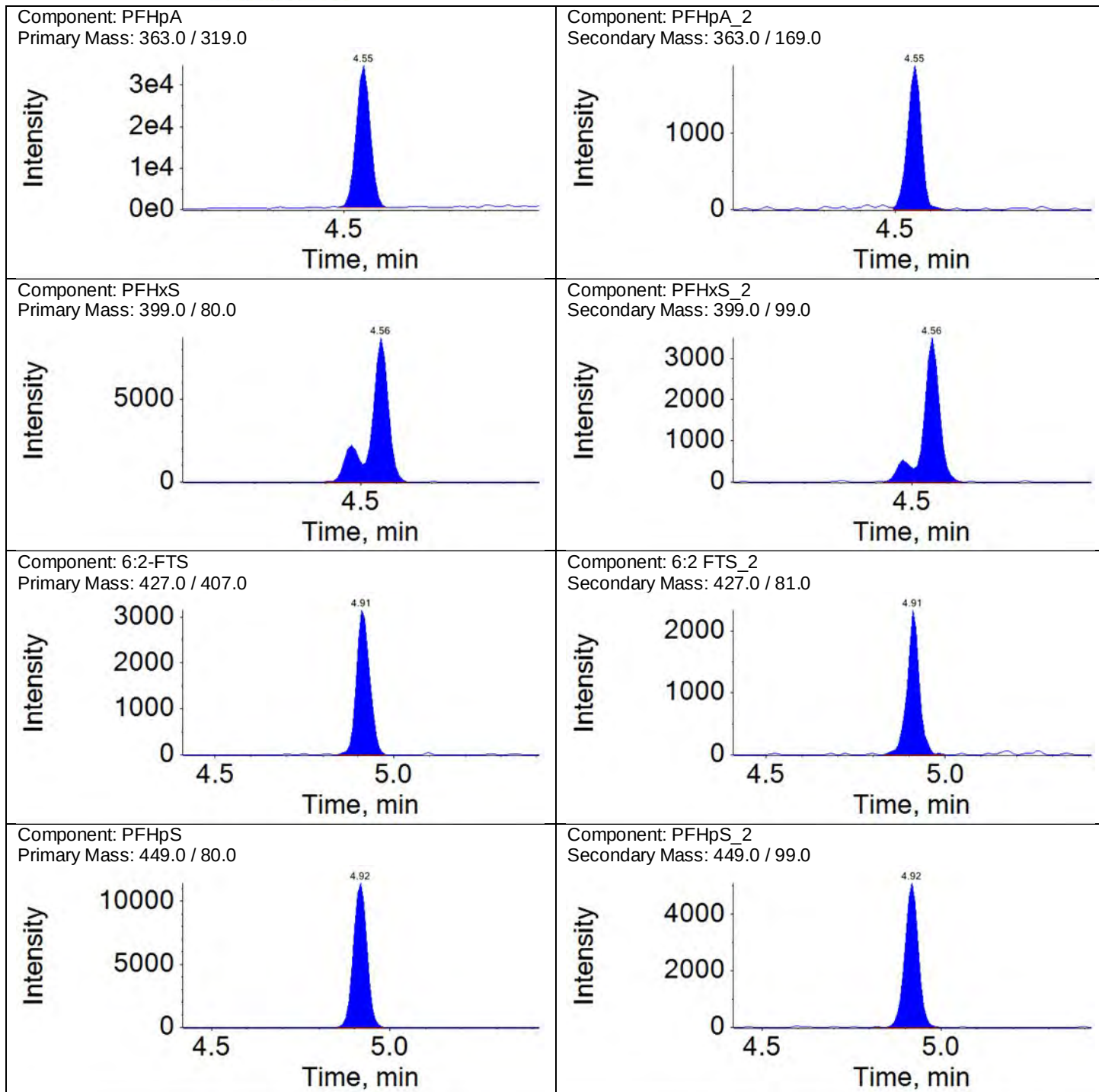
Sample Name: CAL2

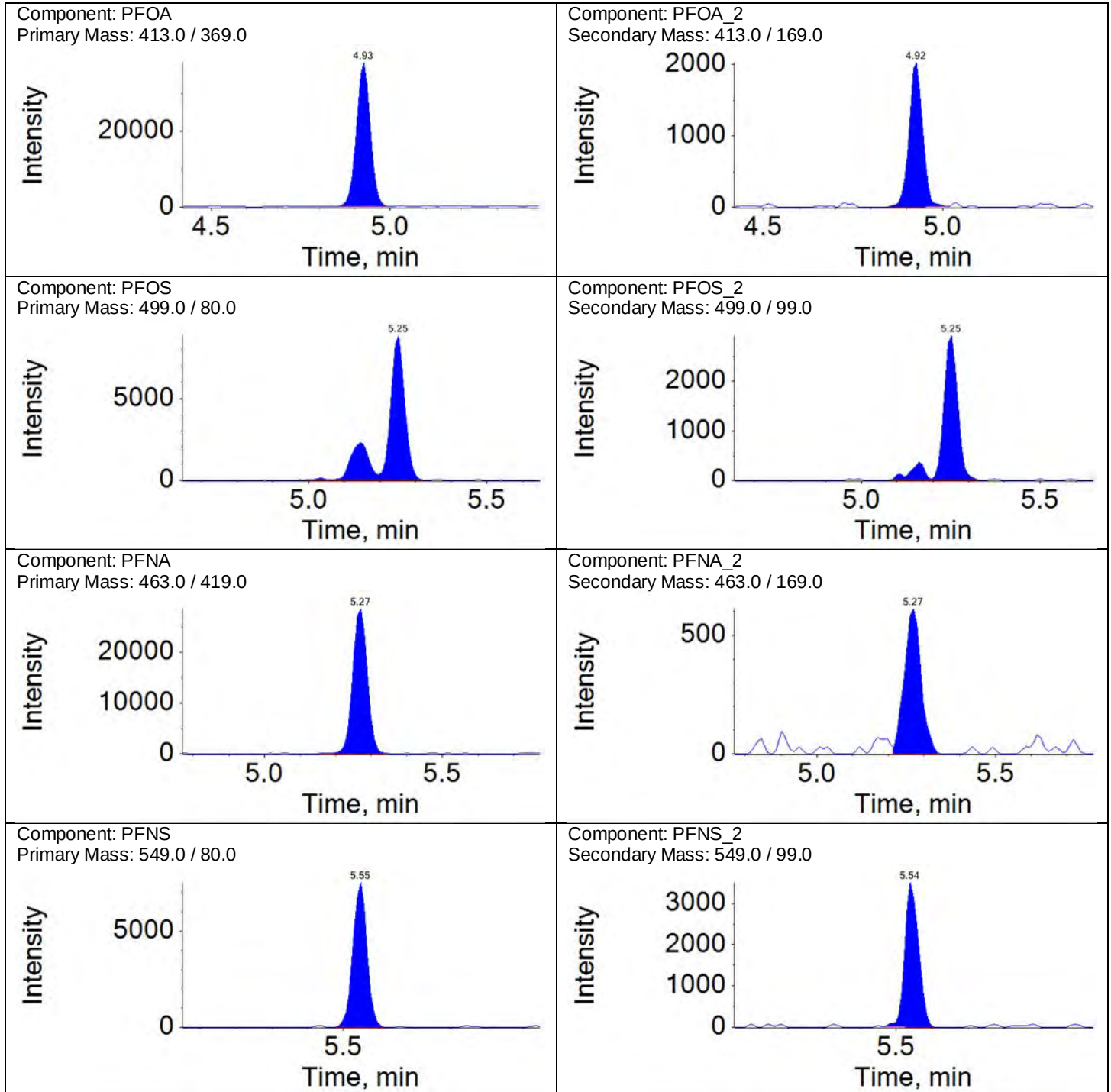
Instrument Name: LM27631

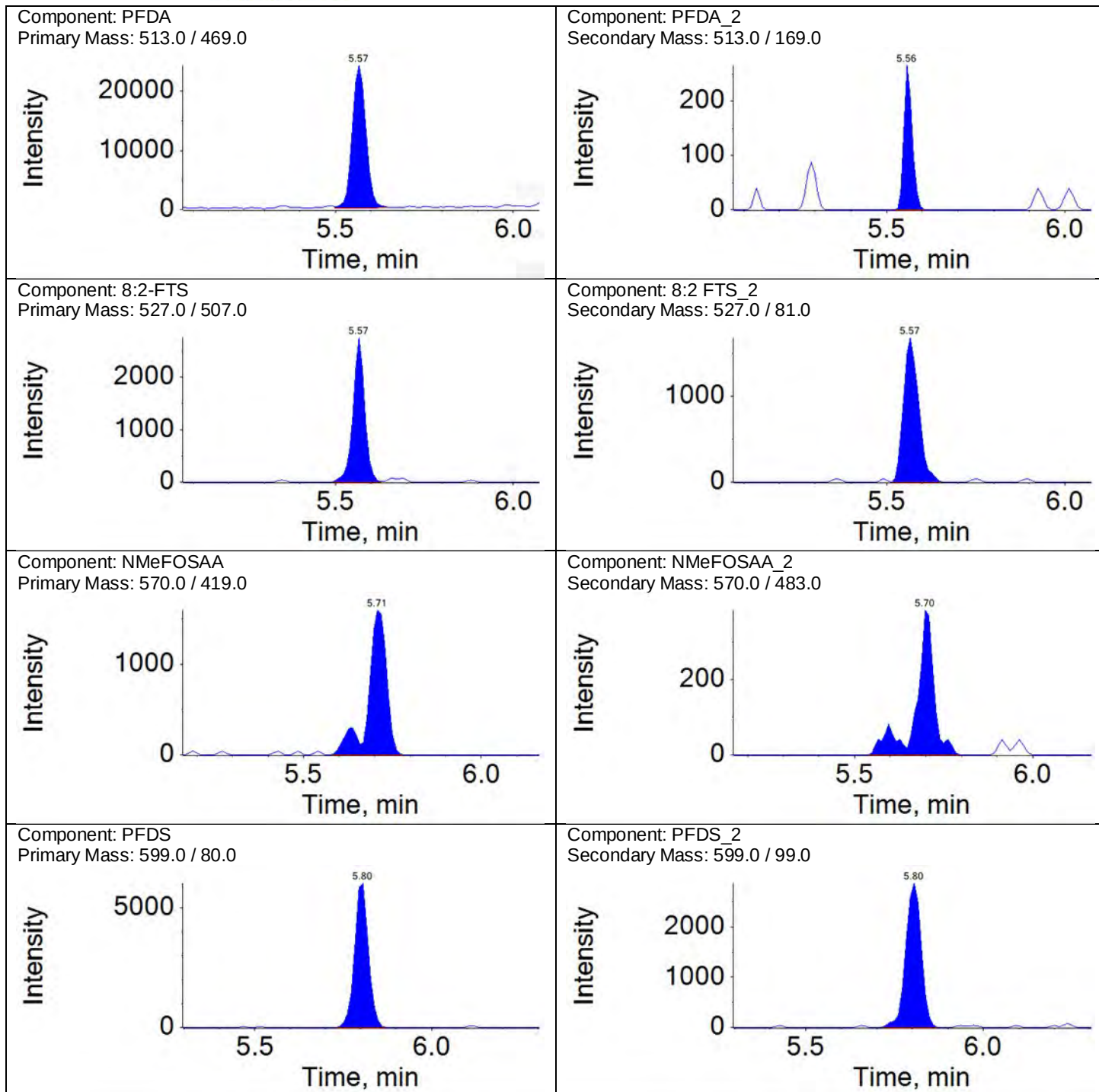
File Name: 18NOV12DCAL-43.wiff

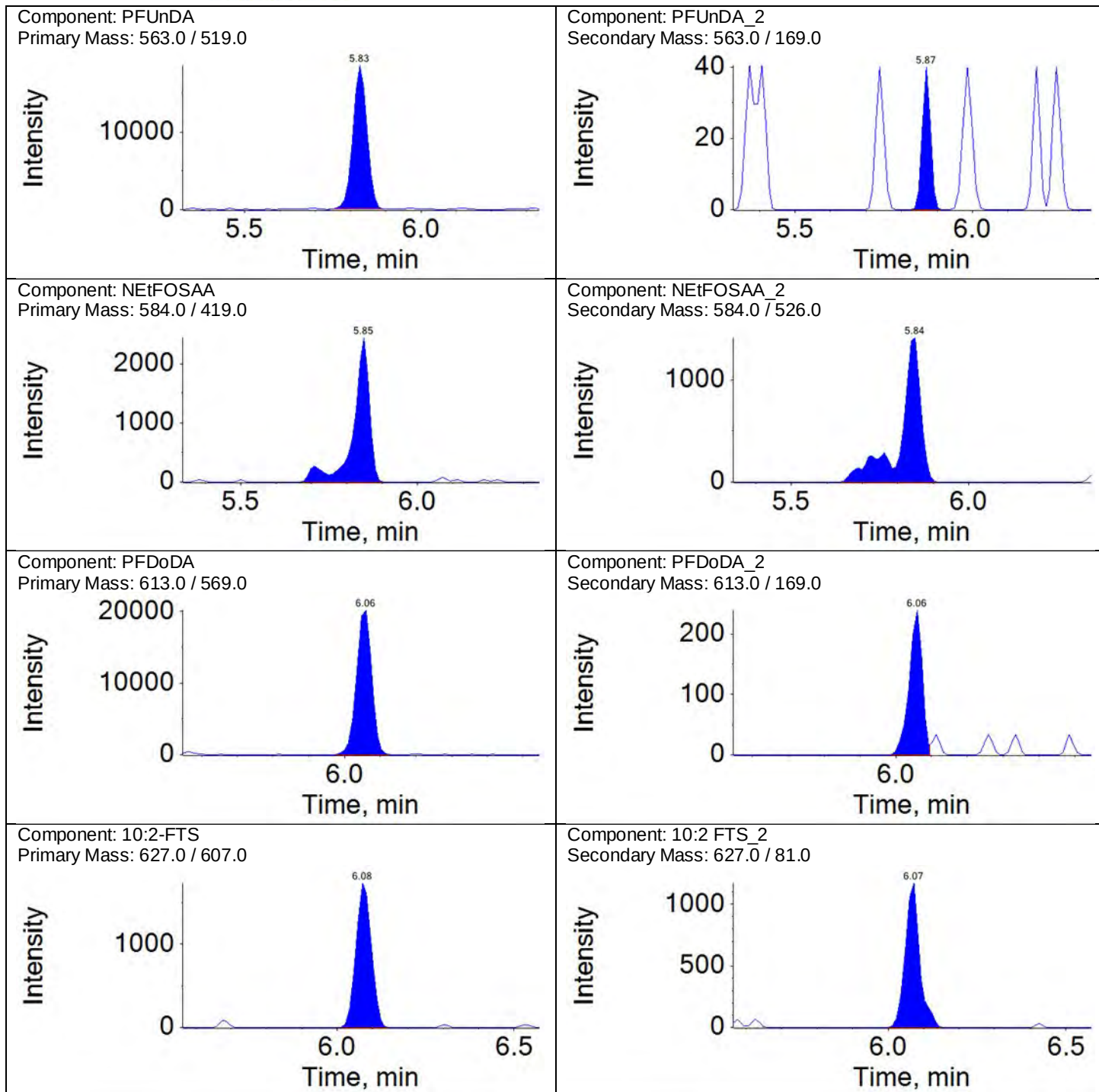
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	44885.16	A	0.3619	0.3622			
PFBS_2	3.82	1.00	16259.22	A	0.3619	0.3622	0	50	
4:2-FTS	4.13	1.00	8803.96	A	0.6730	0.7006			
4:2 FTS_2	4.13	1.00	6168.18	A	0.6730	0.7006		#NA!	
PFHxA	4.16	1.00	96559.34	A	0.0117	0.0147			
PFHxA_2	4.16	1.00	1416.25	A	0.0117	0.0147	26	50	
PFPeS	4.19	1.10	20295.04	A	0.5191	0.5794			
PFPeS_2	4.18	1.10	11758.90	A	0.5191	0.5794	12	50	
PFHpA	4.55	1.00	95048.34	M	0.0563	0.0529			
PFHpA_2	4.55	1.00	5032.31	A	0.0563	0.0529	-6	50	
PFHxS	4.56	1.00	31064.73	M	0.3428	0.3595			
PFHxS_2	4.56	1.00	11169.02	M	0.3428	0.3595	5	50	
6:2-FTS	4.91	1.00	8048.37	A	0.6604	0.6742			
6:2 FTS_2	4.91	1.00	5425.84	A	0.6604	0.6742		#NA!	
PFHpS	4.92	1.08	29902.32	A	0.4066	0.4437			
PFHpS_2	4.92	1.08	13266.19	A	0.4066	0.4437	9	50	
PFOA	4.93	1.00	100710.53	A	0.0562	0.0523			
PFOA_2	4.92	1.00	5264.55	A	0.0562	0.0523	-7	50	
PFOS	5.25	1.00	32300.98	M	0.2968	0.2722			
PFOS_2	5.25	1.00	8793.88	M	0.2968	0.2722	-8	50	
PFNA	5.27	1.00	80724.19	A	0.0229	0.0248			
PFNA_2	5.27	1.00	1999.67	M	0.0229	0.0248	8	50	
PFNS	5.55	1.06	20326.14	A	0.4828	0.4548			
PFNS_2	5.54	1.06	9243.39	A	0.4828	0.4548	-6	50	
PFDA	5.57	1.00	63802.06	M	0.0081	0.0067			
PFDA_2	5.56	1.00	427.00	A	0.0081	0.0067	-17	50	
8:2-FTS	5.57	1.00	6214.24	A	0.6814	0.7964			
8:2 FTS_2	5.57	1.00	4949.26	A	0.6814	0.7964		#NA!	
NMeFOSAA	5.71	1.00	5759.59	A	0.2569	0.2344			
NMeFOSAA_2	5.70	1.00	1350.22	A	0.2569	0.2344	-9	50	
PFDS	5.80	1.10	16291.91	A	0.5144	0.5360			
PFDS_2	5.80	1.11	8732.52	A	0.5144	0.5360	4	50	
PFUnDA	5.83	1.00	51206.76	A	0.0058	0.0013			
PFUnDA_2	5.87	1.01	64.88	A	0.0058	0.0013	-78	50	OOS
NEtFOSAA	5.85	1.00	7727.12	M	0.7253	0.7329			
NEtFOSAA_2	5.84	1.00	5663.34	A	0.7253	0.7329	1	50	
PFDODA	6.06	1.00	59695.25	A	0.0157	0.0101			
PFDODA_2	6.06	1.00	604.13	M	0.0157	0.0101	-35	50	
10:2-FTS	6.08	1.09	5206.47	A	0.6356	0.6377			
10:2 FTS_2	6.07	1.09	3320.12	A	0.6356	0.6377		#NA!	
PFTTrDA	6.26	1.03	47991.31	A	0.0086	0.0047			
PFTTrDA_2	6.26	1.03	226.86	A	0.0086	0.0047	-45	50	
PFTeDA	6.43	1.00	40236.53	A	0.0062	0.0078			
PFTeDA_2	6.43	1.00	314.50	A	0.0062	0.0078	25	50	
PFHxDA	6.74	1.05	19006.44	A	0.0683	0.0747			
PFHxDA_2	6.73	1.05	1419.64	A	0.0683	0.0747	9	50	
PFODA	7.00	1.09	14955.56	A	0.0277	0.0314			
PFODA_2	7.00	1.09	469.81	A	0.0277	0.0314	13	50	

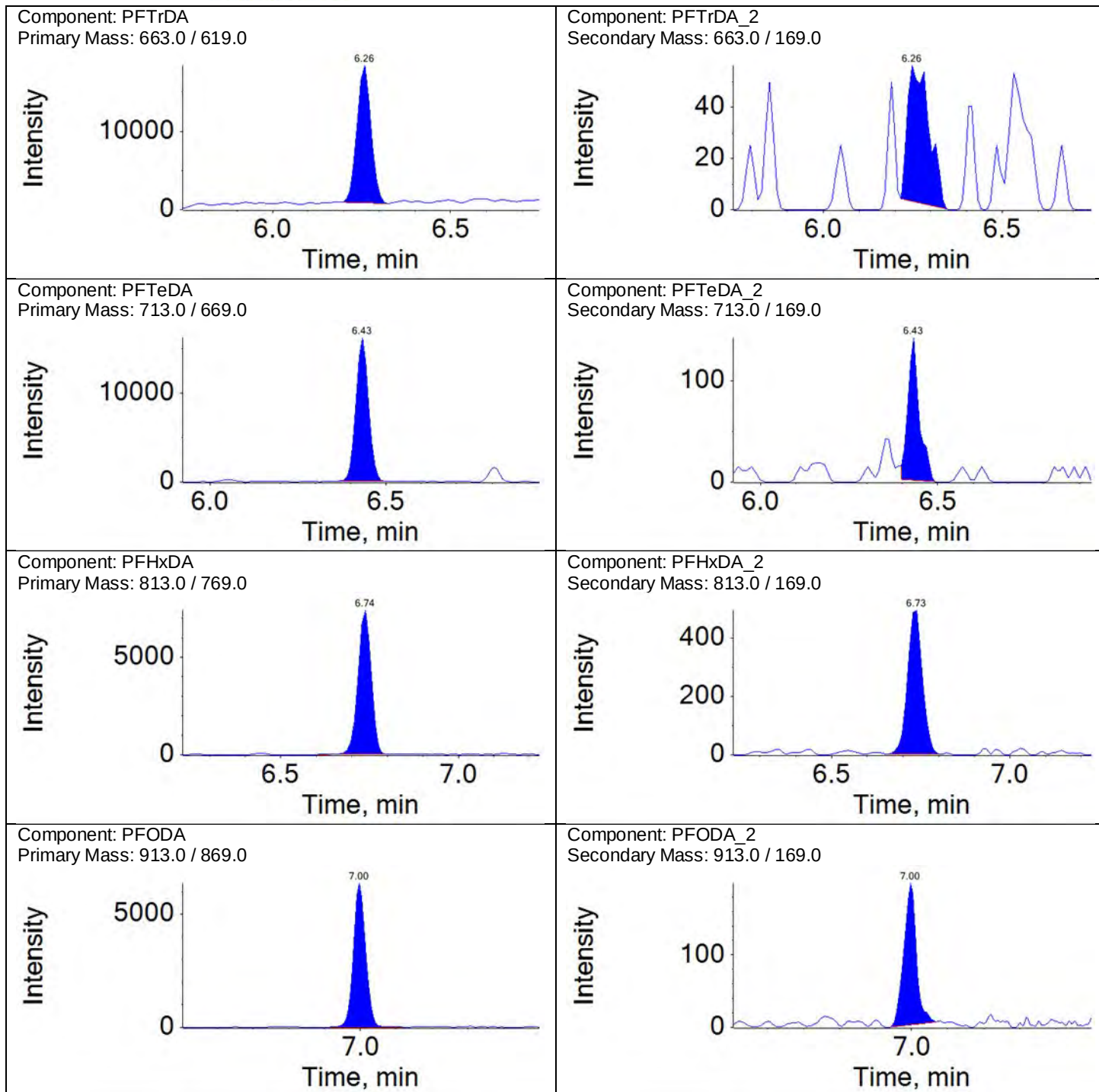












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL3		Data File:	18NOV12DCAL-44.wiff
Sample ID:	CALBRN31833B		Acquis Date:	2018-11-12T15:24:03
Sample Type:	Standard		Instrument:	LM27631
Vial Position:	5		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	659926.2	659926.2	0	50	
13C2-PFOA	5.0	450219.7	450219.7	0	50	
13C4-PFOS	4.8	249205.8	249205.8	0	50	
13C2-PFDA	5.0	278743.9	278743.9	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	733360.2	13C3-PFBA	659926.2	1.111	5.000	4.982	100	70-130	
E13C5-PFPeA	695805.7	13C3-PFBA	659926.2	1.054	5.000	4.729	95	70-130	
E13C3-PFBS	416352.8	13C3-PFBA	659926.2	0.631	4.650	4.454	96	70-130	
E13C2-4:2-FTS	47514.8	13C2-PFOA	450219.7	0.106	4.670	4.700	101	70-130	
E13C5-PFHxA	646783.5	13C2-PFOA	450219.7	1.437	5.000	5.189	104	70-130	
E13C3-PFHxS	317243.2	13C2-PFOA	450219.7	0.705	4.730	4.835	102	70-130	
E13C4-PFHpA	503681.0	13C2-PFOA	450219.7	1.119	5.000	5.040	101	70-130	
E13C2-6:2-FTS	31706.4	13C2-PFOA	450219.7	0.070	4.750	4.712	99	70-130	
E13C8-PFOA	878868.5	13C2-PFOA	450219.7	1.952	5.000	5.378	108	70-130	
E13C8-PFOS	281035.5	13C4-PFOS	249205.8	1.128	4.780	4.997	105	70-130	
E13C9-PFNA	455948.9	13C4-PFOS	249205.8	1.830	5.000	5.101	102	70-130	
E13C6-PFDA	612680.8	13C2-PFDA	278743.9	2.198	5.000	5.129	103	70-130	
E13C2-8:2-FTS	29249.8	13C2-PFDA	278743.9	0.105	4.790	5.233	109	70-130	
E13C8-PFOSA	629109.9	13C2-PFDA	278743.9	2.257	5.000	5.004	100	70-130	
Ed3-NMeFOSAA	71670.3	13C2-PFDA	278743.9	0.257	5.000	4.641	93	70-130	
E13C7-PFUnDA	245605.3	13C2-PFDA	278743.9	0.881	5.000	5.116	102	70-130	
Ed5-NEtFOSAA	54383.9	13C2-PFDA	278743.9	0.195	5.000	4.128	83	70-130	
E13C2-PFDoDA	549542.3	13C2-PFDA	278743.9	1.971	5.000	5.119	102	70-130	
Ed7-NMePFOSAE	307355.4	13C2-PFDA	278743.9	1.103	5.000	4.772	95	70-130	
Ed3-NMePFOSA	76782.9	13C2-PFDA	278743.9	0.275	5.000	5.005	100	70-130	
Ed9-NEtPFOSAE	259792.3	13C2-PFDA	278743.9	0.932	5.000	4.847	97	70-130	
Ed5-NEtPFOSA	57485.9	13C2-PFDA	278743.9	0.206	5.000	4.838	97	70-130	
E13C2-PFTeDA	393544.9	13C2-PFDA	278743.9	1.412	5.000	4.957	99	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL3

Instrument Name: LM27631

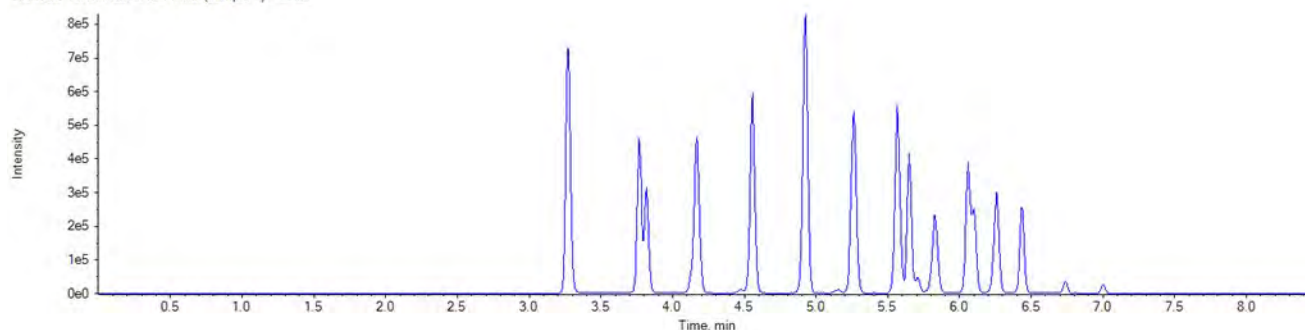
File Name: 18NOV12DCAL-44.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	303228.7		A	13C4-PFBA	3.27	733360.2	0.413	2.291
PFPeA	3.77	1.000	292715.8		A	13C5-PFPeA	3.77	695805.7	0.421	2.435
PFBS	3.82	1.000	168144.6		A	13C3-PFBS	3.82	416352.8	0.404	1.921
4:2-FTS	4.13	1.000	34188.5		A	13C2-4:2-FTS	4.13	47514.8	0.720	1.954
PFHxA	4.17	1.000	352013.5		A	13C5-PFHxA	4.17	646783.5	0.544	2.272
PFPeS	4.19	1.100	84071.2		A	13C3-PFBS	3.82	416352.8	0.202	1.960
PFHpA	4.56	1.000	355834.2		A	13C4-PFHpA	4.55	503681.0	0.706	2.342
PFHxS	4.56	1.000	125622.0		M	13C3-PFHxS	4.56	317243.2	0.396	1.920
6:2-FTS	4.91	1.000	28084.9		A	13C2-6:2-FTS	4.91	31706.4	0.886	2.143
PFHpS	4.92	1.080	125907.9		A	13C3-PFHxS	4.56	317243.2	0.397	2.089
PFOA	4.93	1.000	372258.9		A	13C8-PFOA	4.93	878868.5	0.424	2.262
PFOS	5.25	1.000	120897.5		M	13C8-PFOS	5.25	281035.5	0.430	1.881
PFNA	5.27	1.000	302323.8		A	13C9-PFNA	5.27	455948.9	0.663	2.391
PFNS	5.55	1.060	76049.0		A	13C8-PFOS	5.25	281035.5	0.271	1.893
PFDA	5.57	1.000	254047.8		M	13C6-PFDA	5.57	612680.8	0.415	2.198
8:2-FTS	5.57	1.000	26295.1		A	13C2-8:2-FTS	5.57	29249.8	0.899	2.096
PFOSA	5.65	1.000	270175.5		A	13C8-PFOSA	5.65	629109.9	0.429	2.098
NMeFOSAA	5.71	1.000	25147.7		A	d3-NMeFOSAA	5.71	71670.3	0.351	1.983
PFDS	5.80	1.110	57966.9		A	13C8-PFOS	5.25	281035.5	0.206	1.869
PfUnDA	5.83	1.000	199061.8		A	13C7-PfUnDA	5.83	245605.3	0.810	2.119
NEtFOSAA	5.84	1.000	25089.0		A	d5-NEtFOSAA	5.84	54383.9	0.461	2.418
PFDODA	6.06	1.000	237252.6		A	13C2-PFDODA	6.06	549542.3	0.432	2.198
10:2-FTS	6.07	1.090	18541.7		A	13C2-8:2-FTS	5.57	29249.8	0.634	2.111
NMePFOSAE	6.10	1.000	163668.7		A	d7-NMePFOSAE	6.09	307355.4	0.533	2.216
NMePFOSA	6.11	1.000	29934.3		A	d3-NMePFOSA	6.11	76782.9	0.390	1.923
PFDoS	6.23	1.190	30098.3		A	13C8-PFOS	5.25	281035.5	0.107	1.876
NEtPFOSAE	6.26	1.000	178457.9		A	d9-NEtPFOSAE	6.25	259792.3	0.687	2.204
NEtPFOSA	6.27	1.000	26590.2		M	d5-NEtPFOSA	6.27	57485.9	0.463	2.124
PFTDA	6.26	1.030	184322.9		A	13C2-PFDODA	6.06	549542.3	0.335	2.117
PFTeDA	6.43	1.000	156439.9		A	13C2-PFTeDA	6.43	393544.9	0.398	2.228
PFHxDA	6.74	1.050	69655.1		A	13C2-PFTeDA	6.43	393544.9	0.177	2.109
PFODA	7.00	1.090	57796.0		A	13C2-PFTeDA	6.43	393544.9	0.147	2.045

Total Ion Chromatogram

TIC from 18NOV12DCAL-44.wiff (sample 1) - CAL3



APPROVED

By MCD at 6:33 pm, 11/12/18

BSI05 Page 932 of 1595

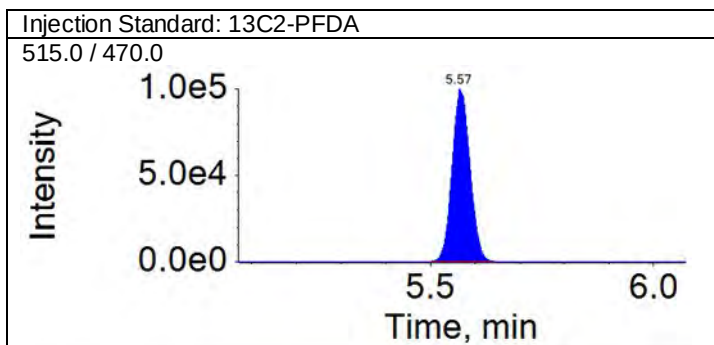
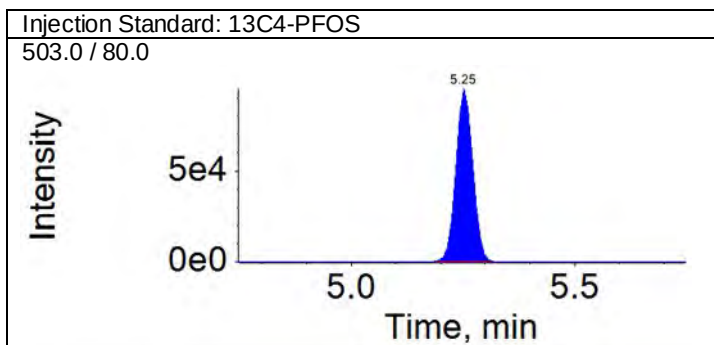
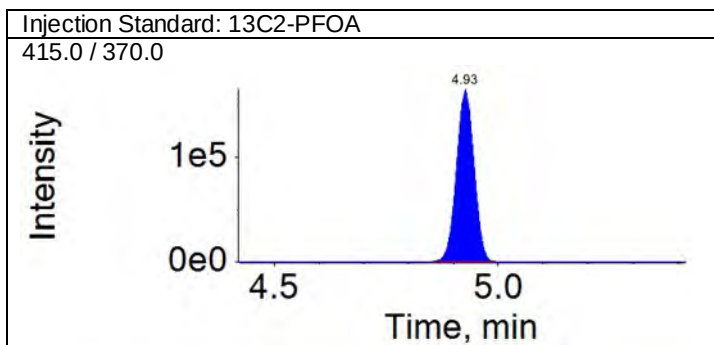
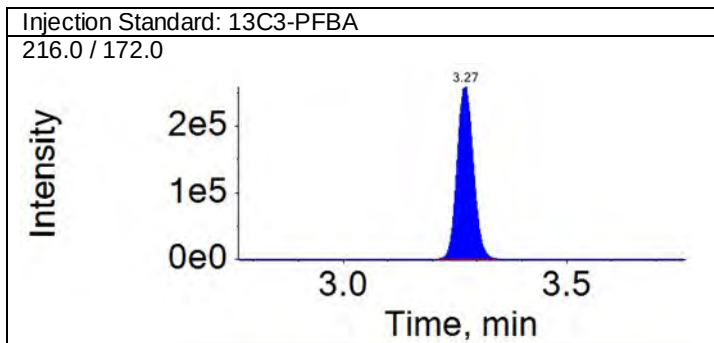
REVIEWED

By HMK at 10:53 am, 11/13/18

Page 2 of 17

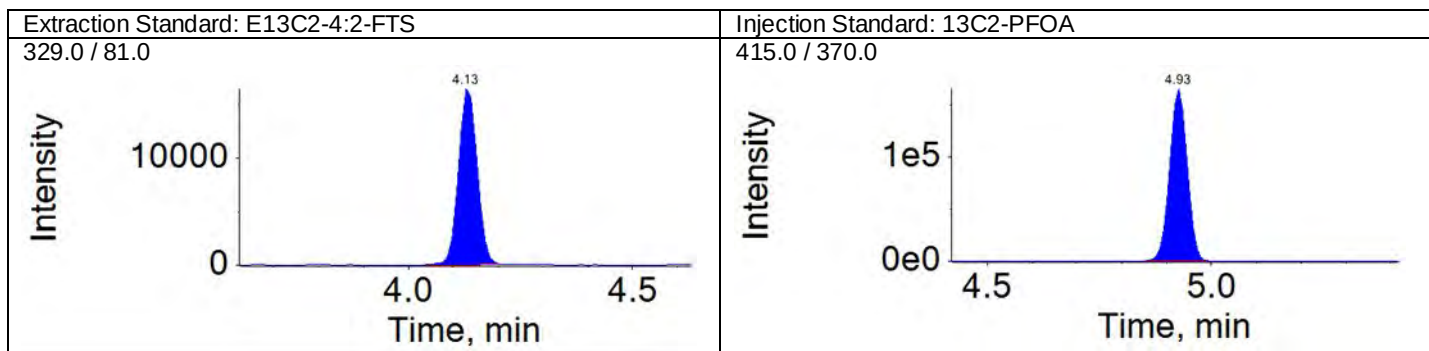
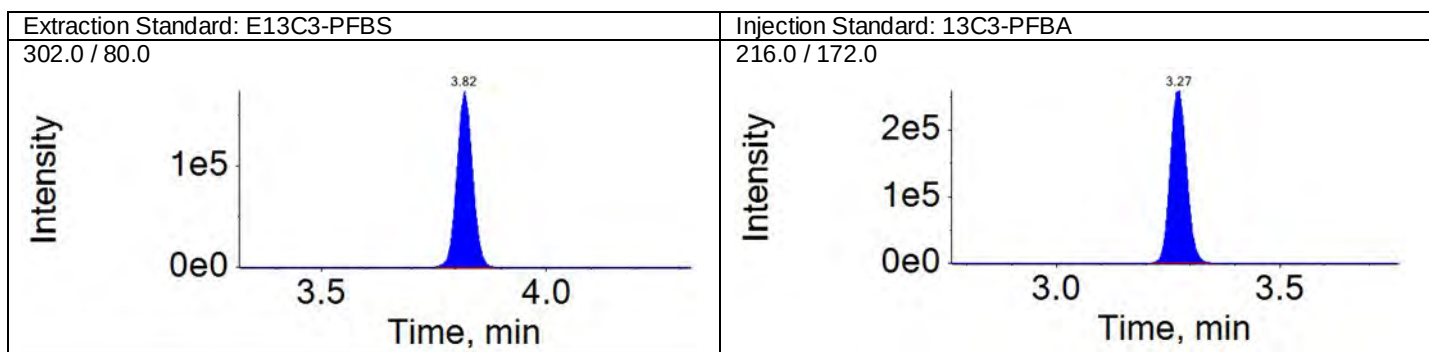
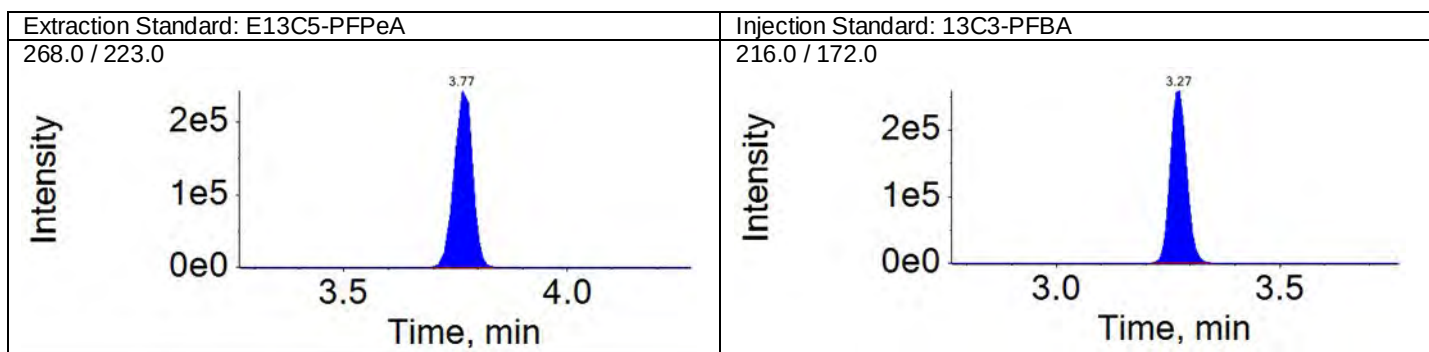
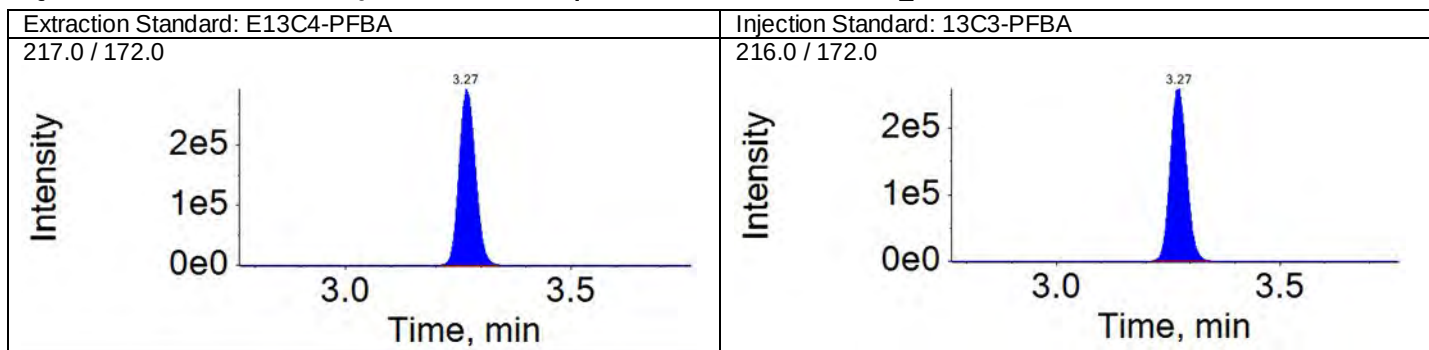
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



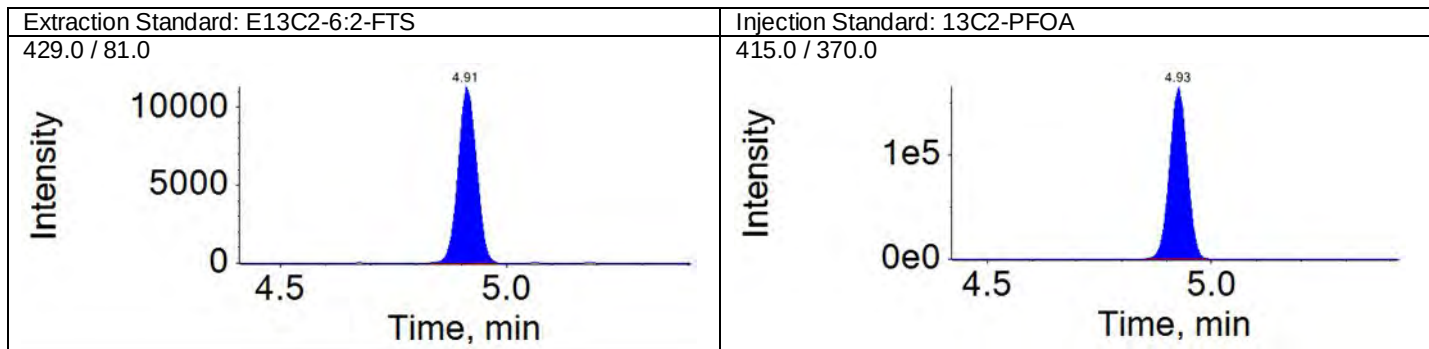
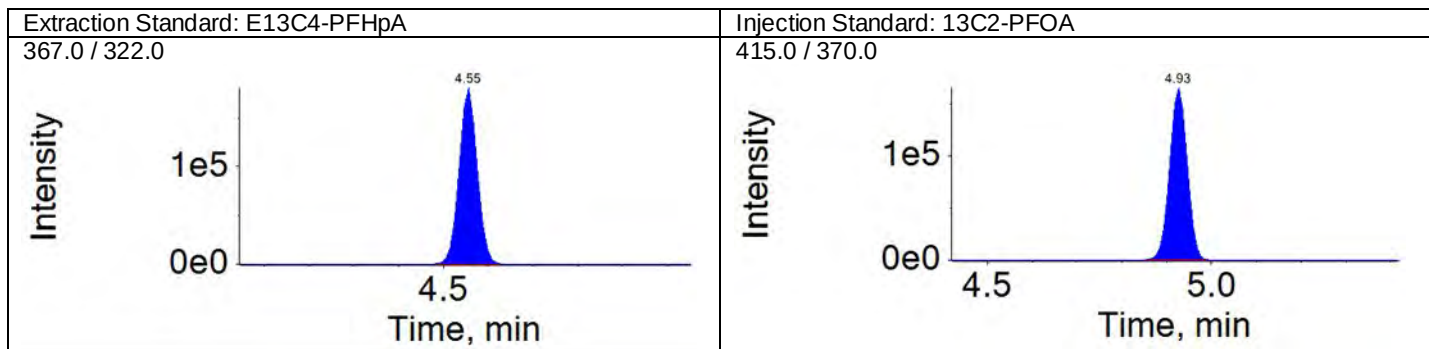
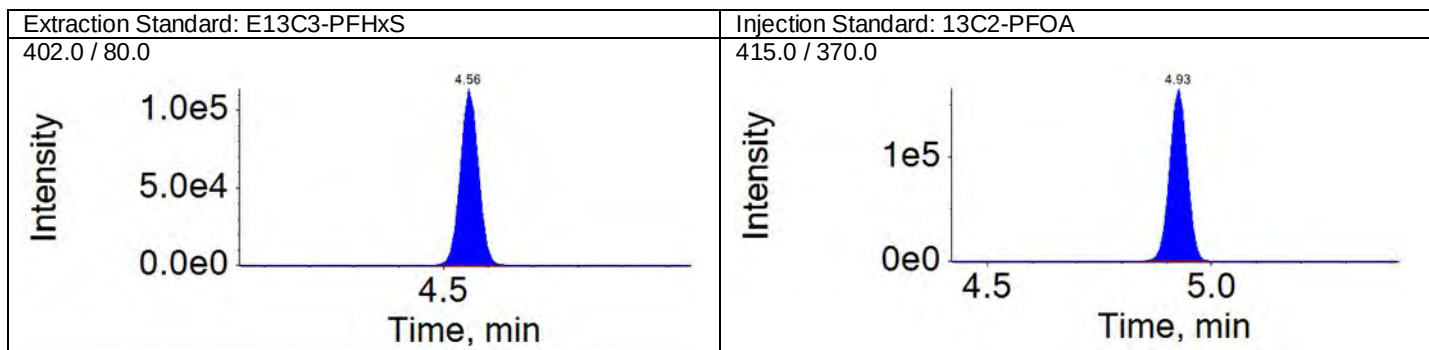
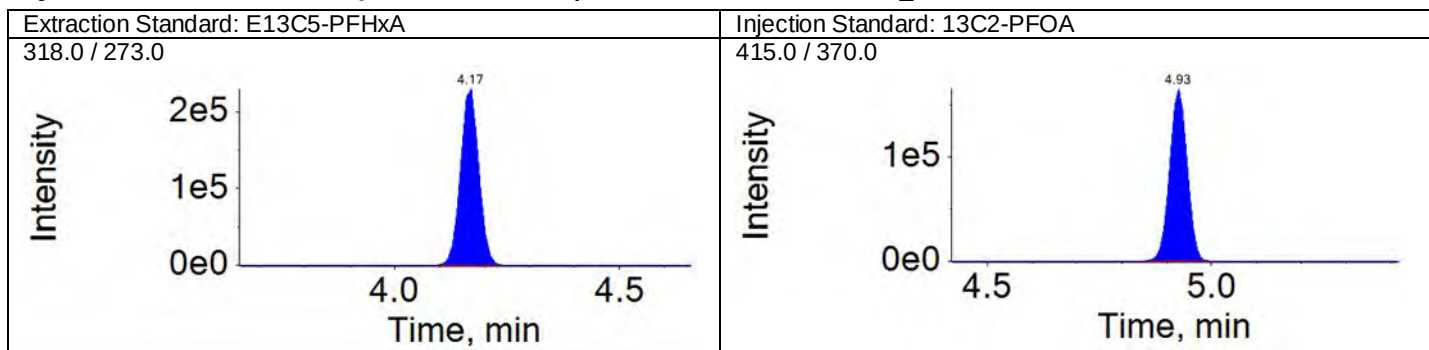
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



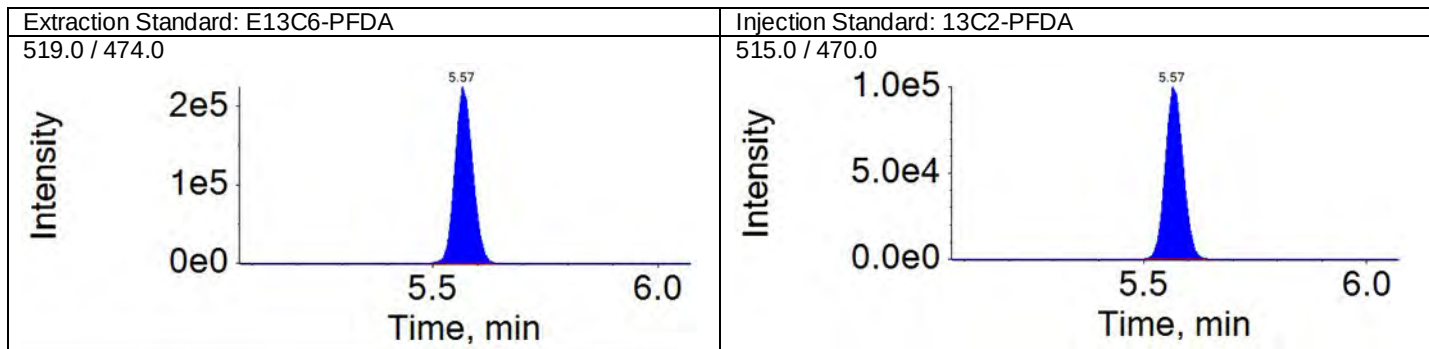
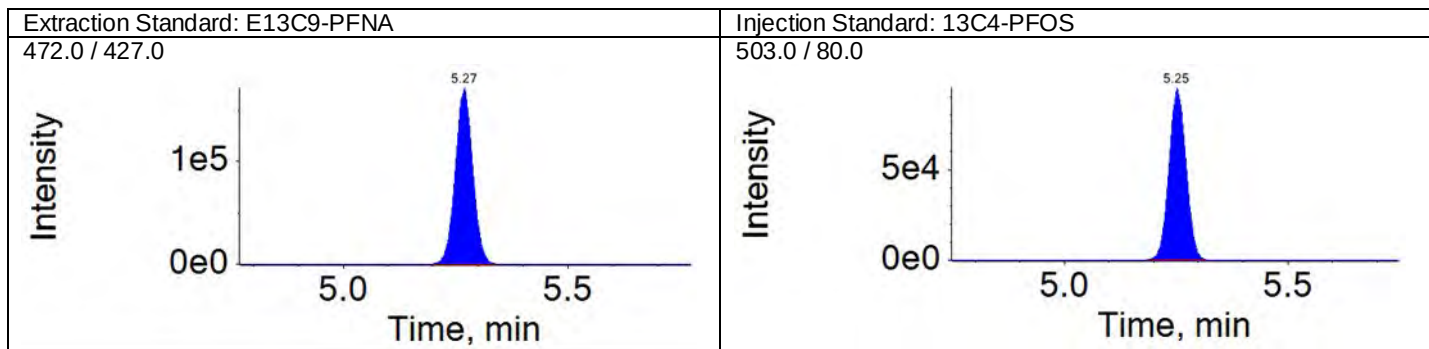
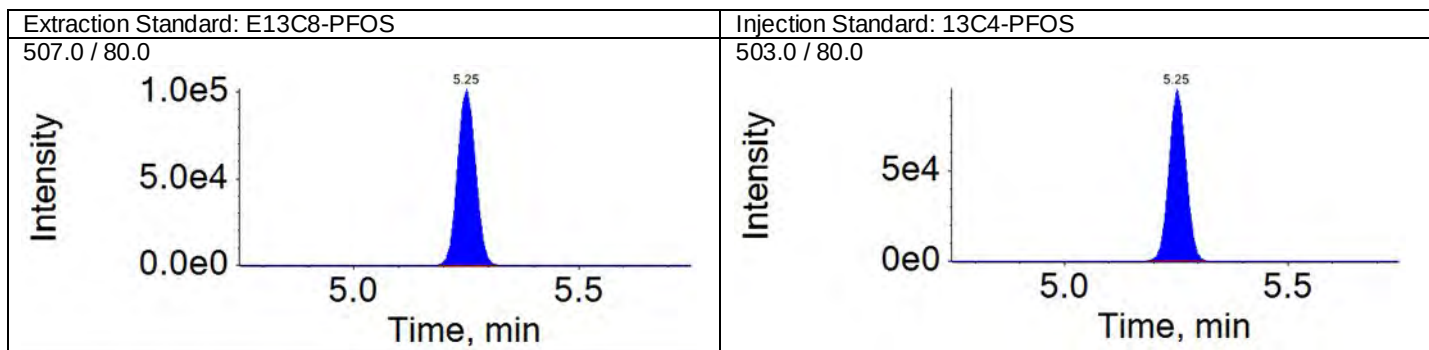
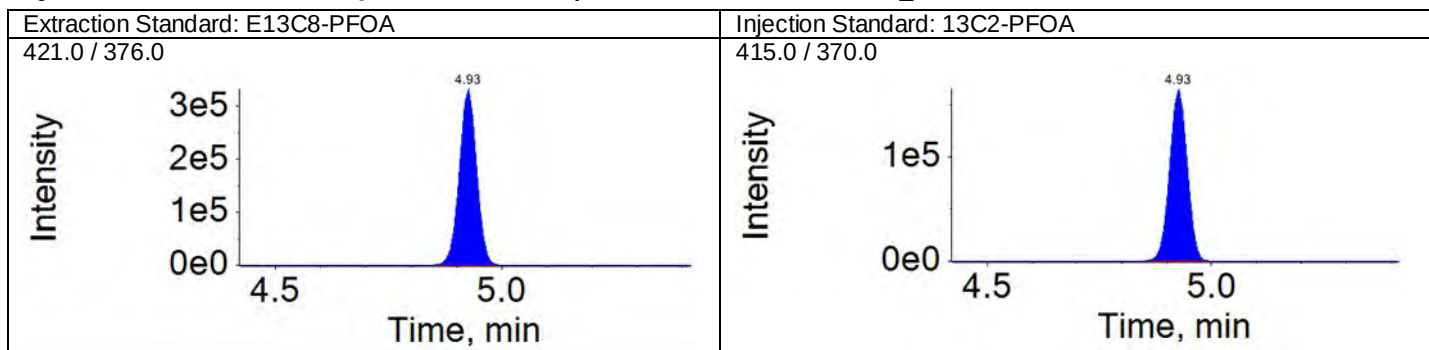
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



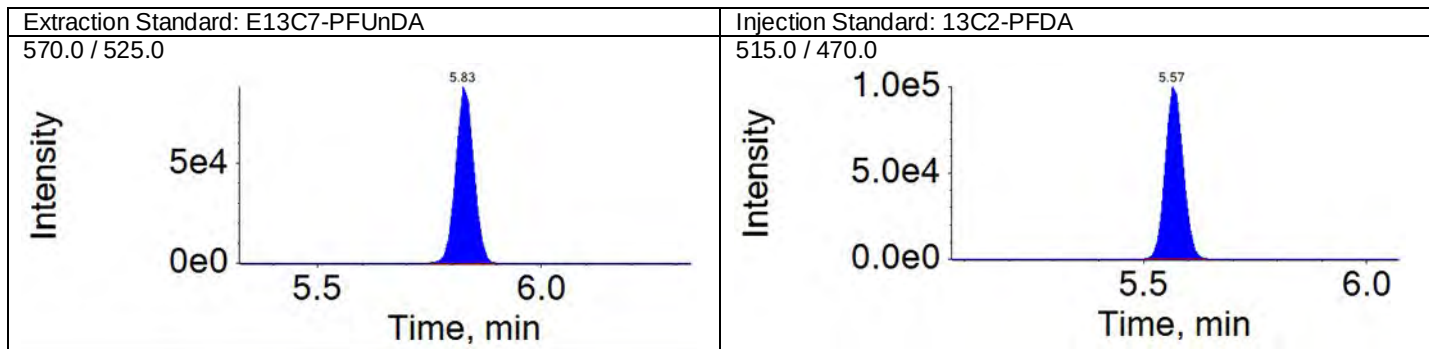
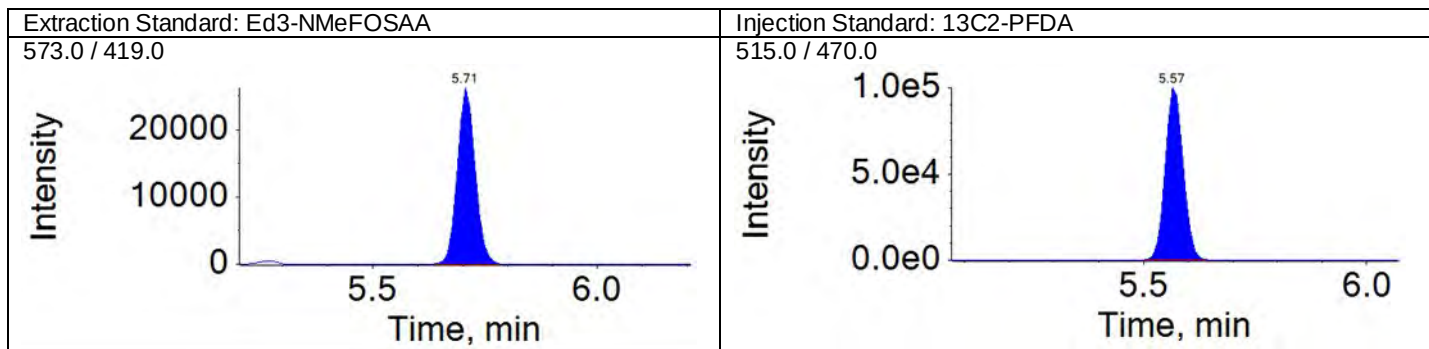
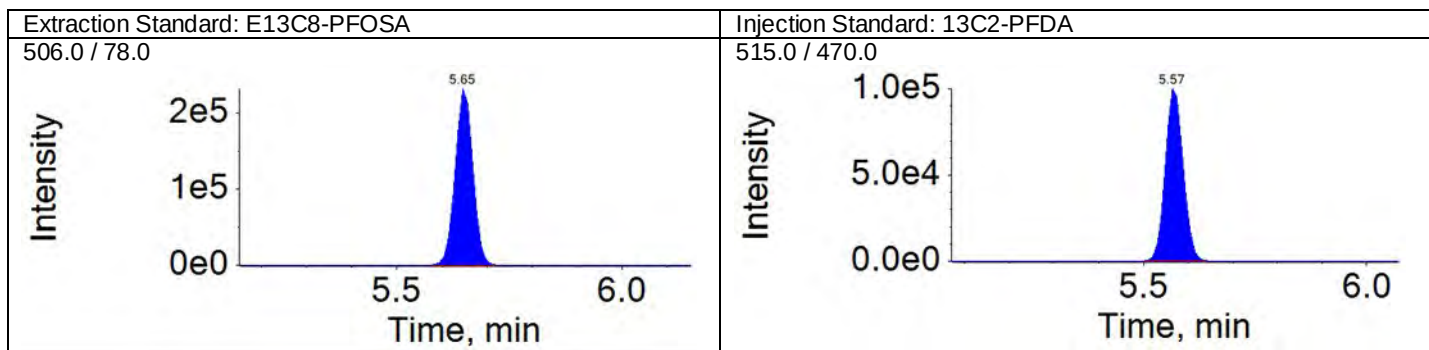
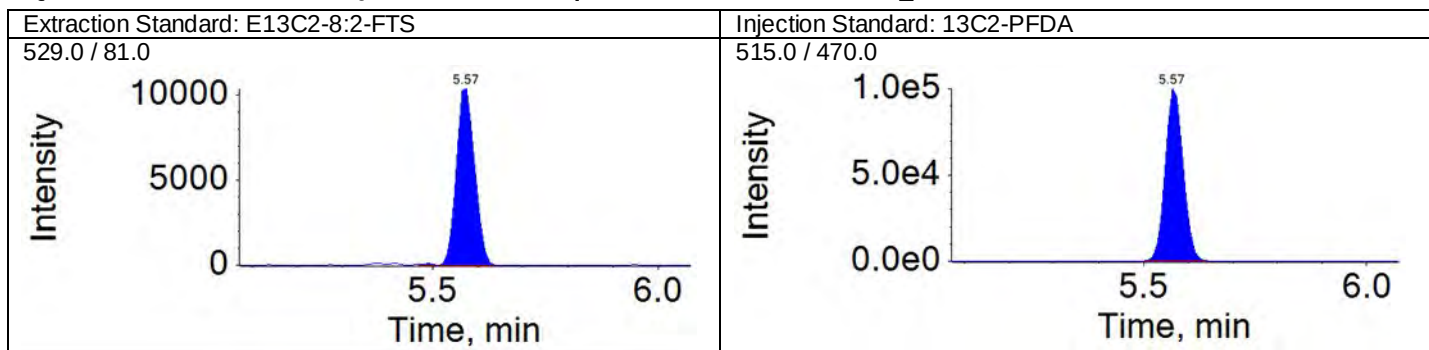
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



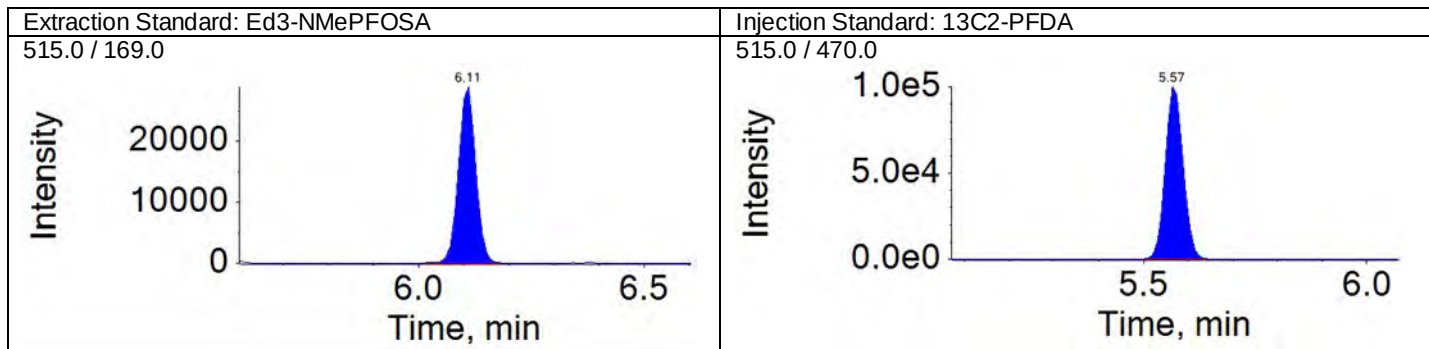
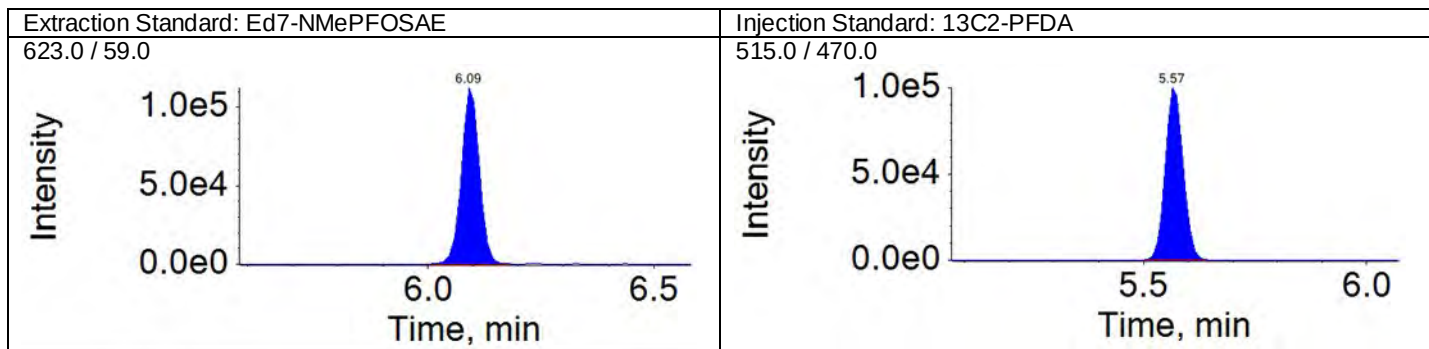
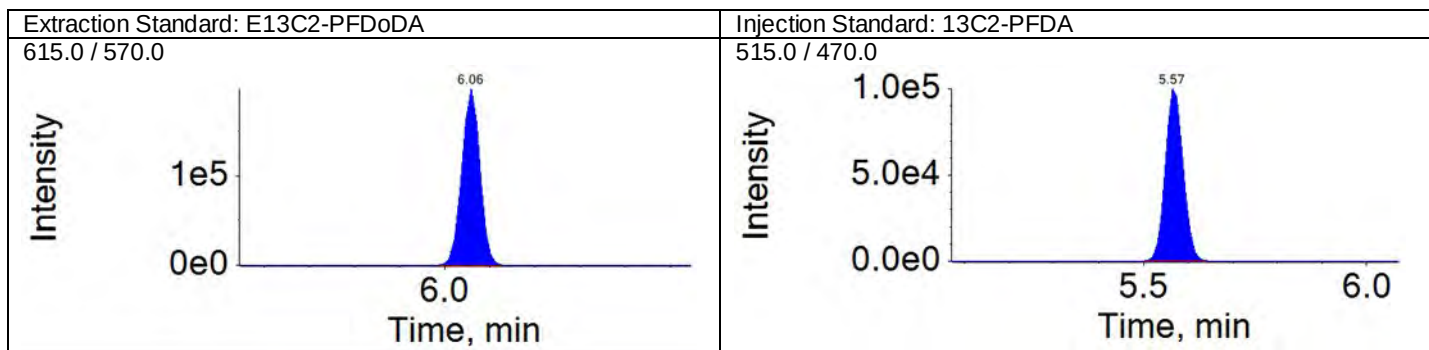
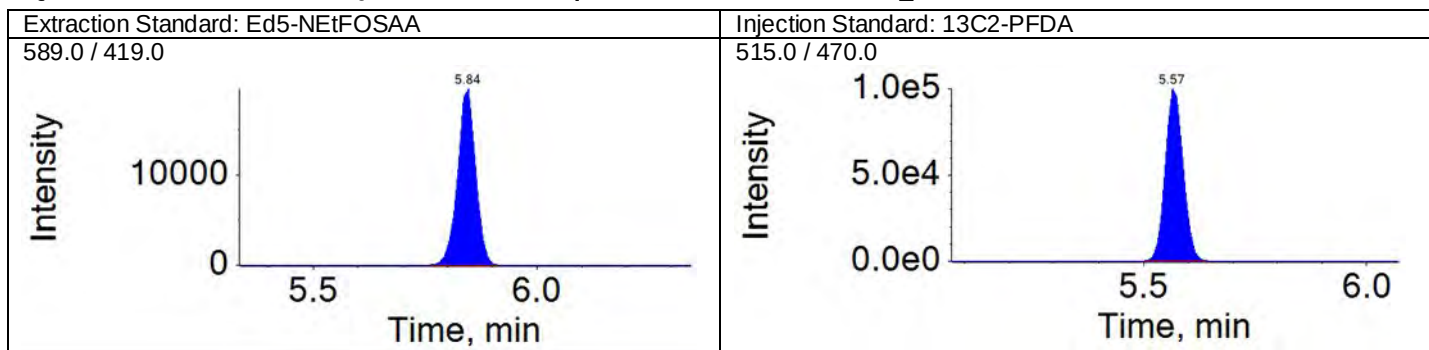
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



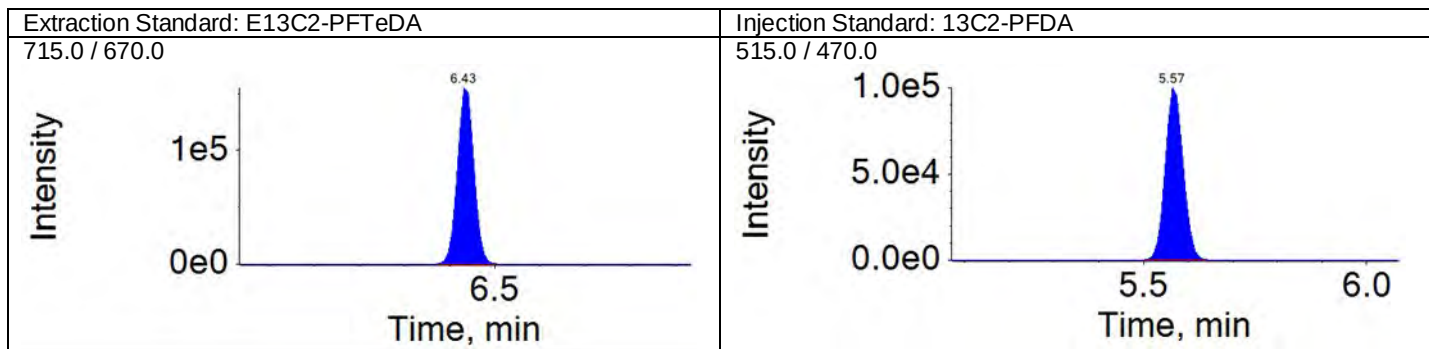
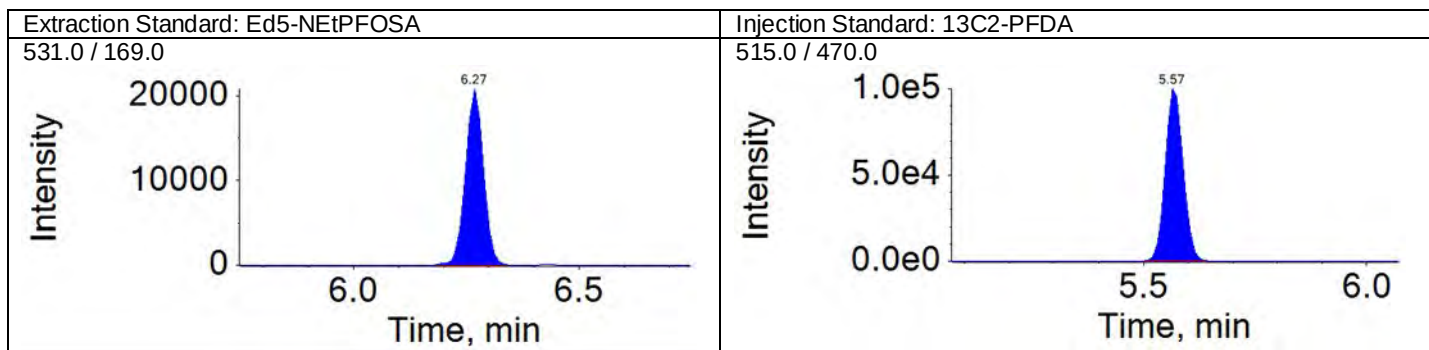
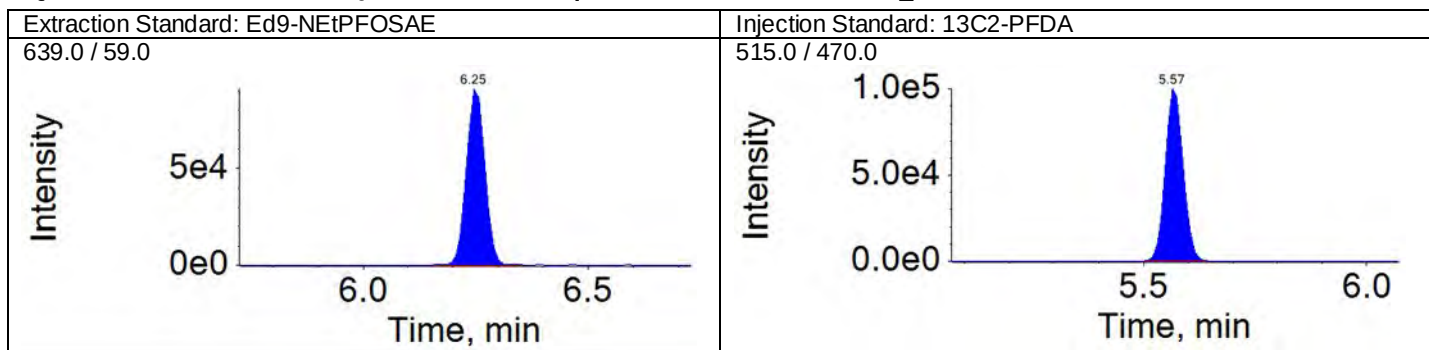
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



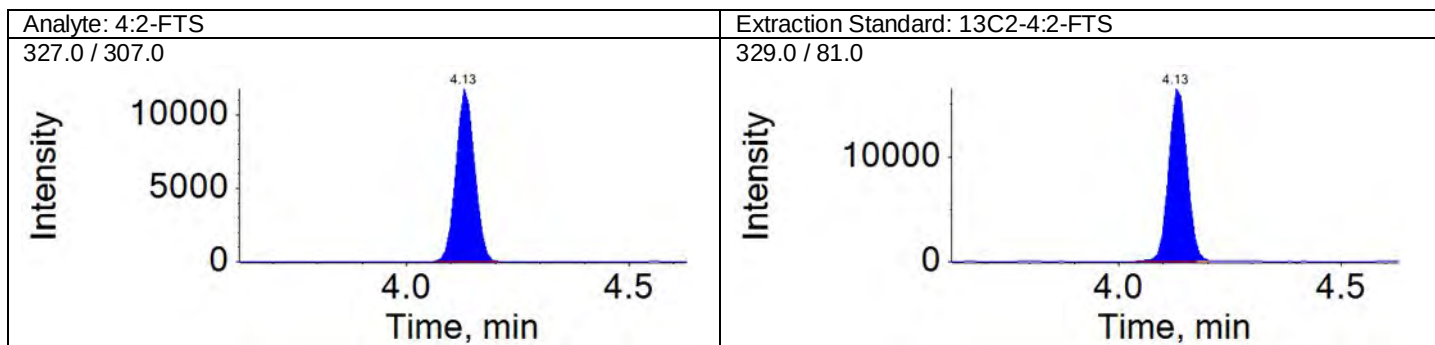
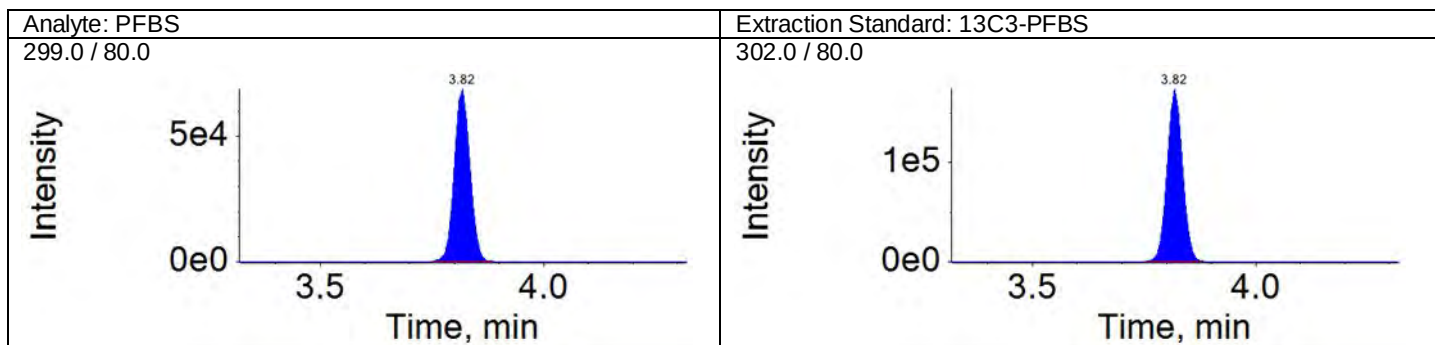
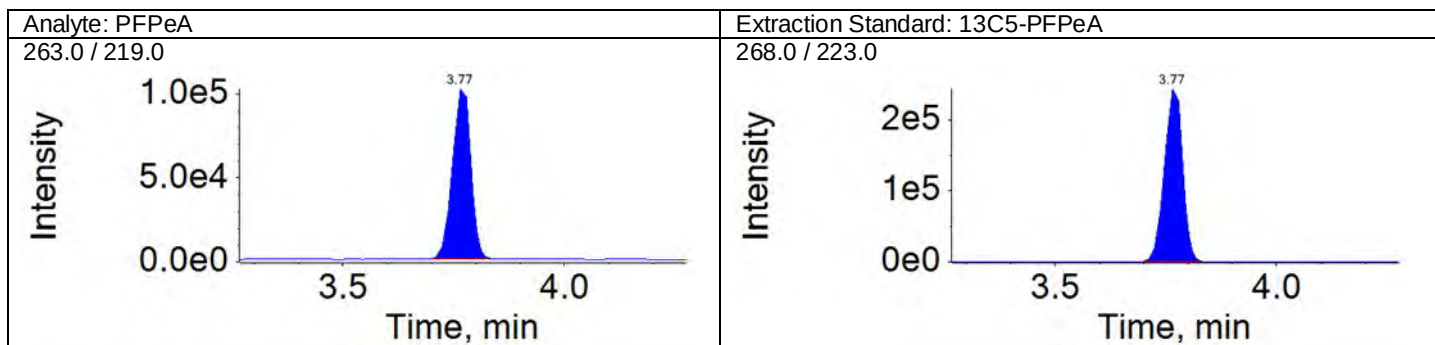
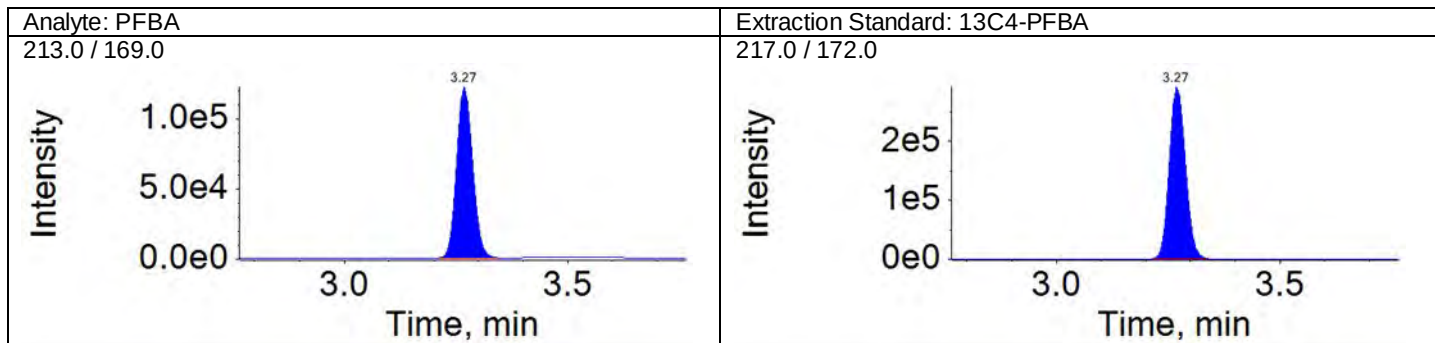
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



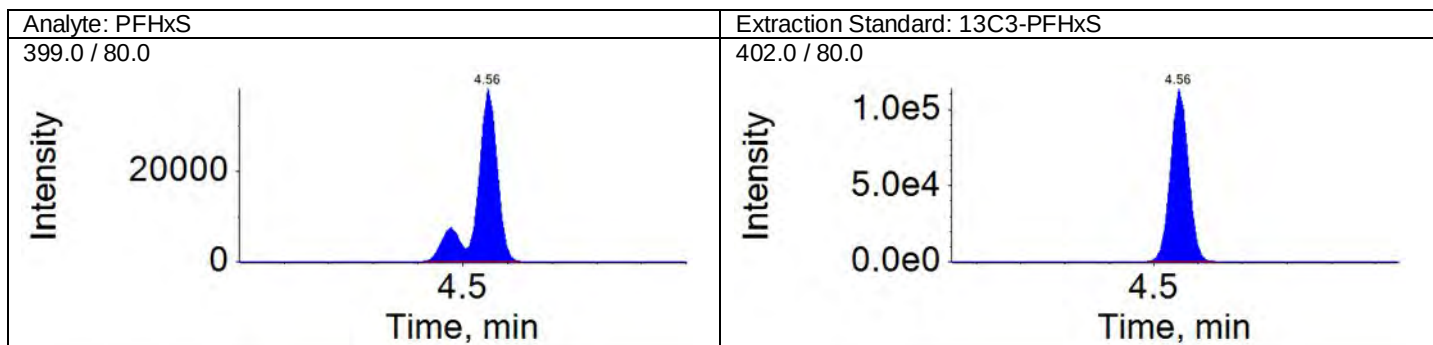
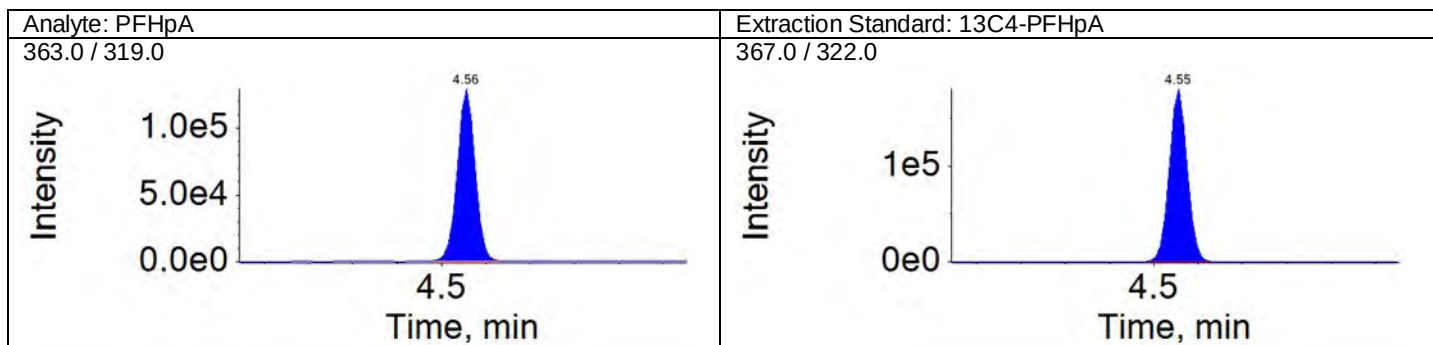
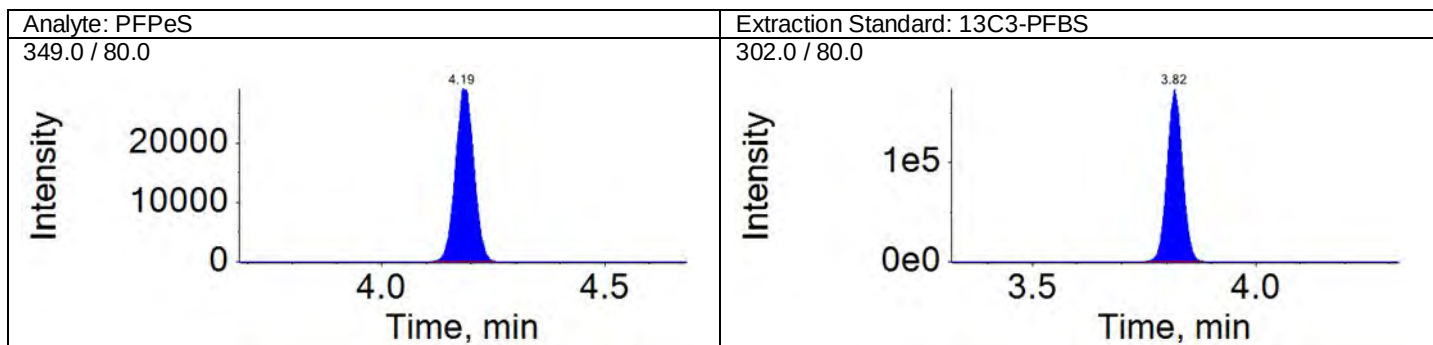
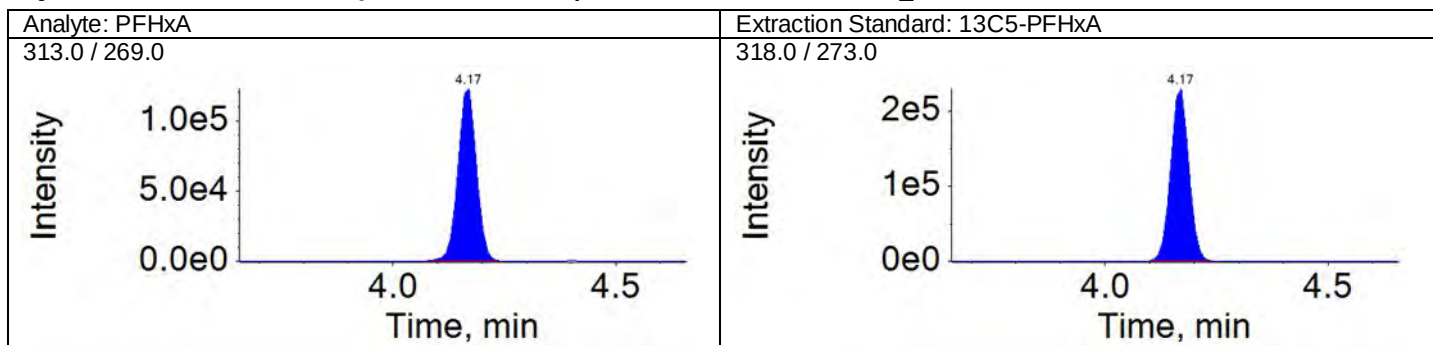
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



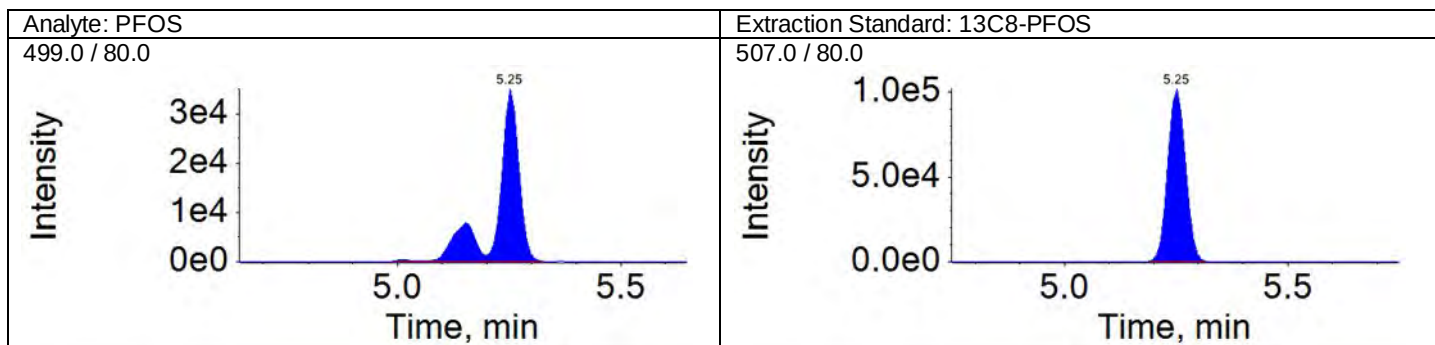
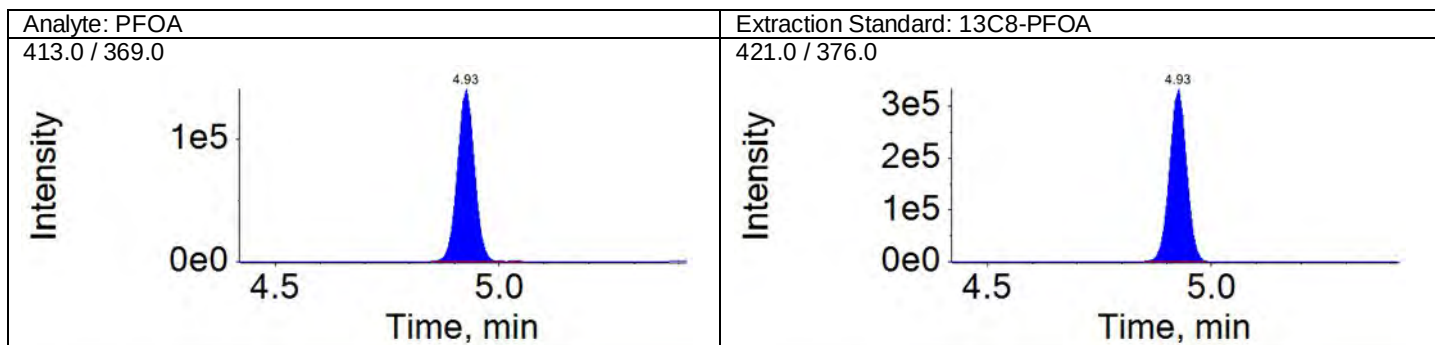
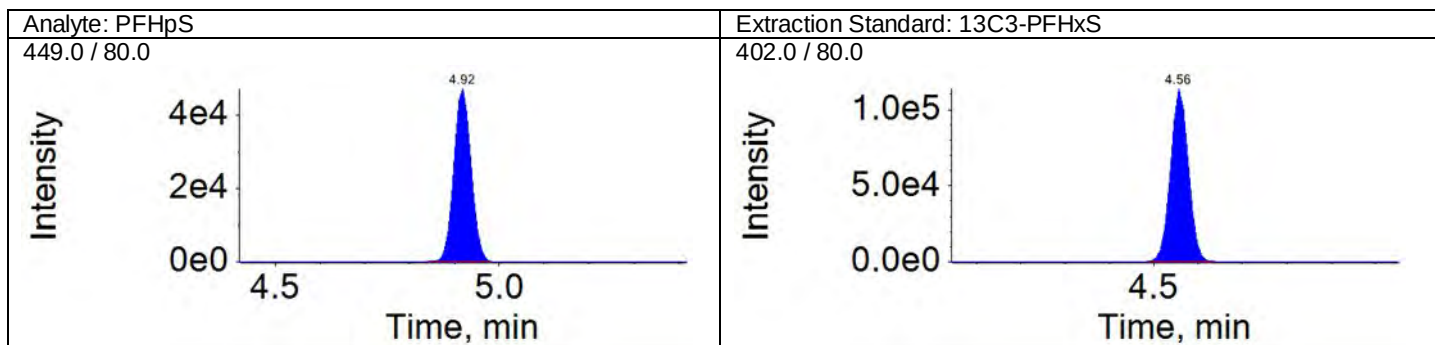
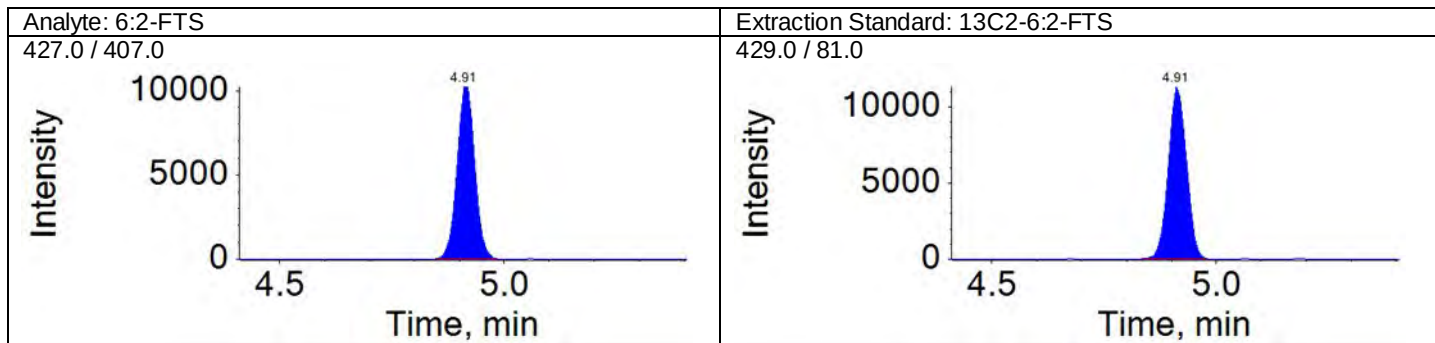
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



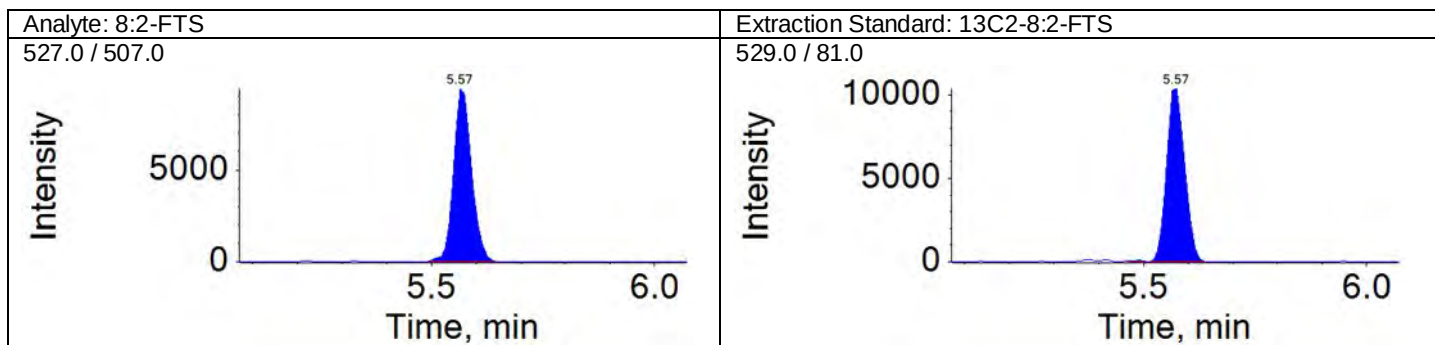
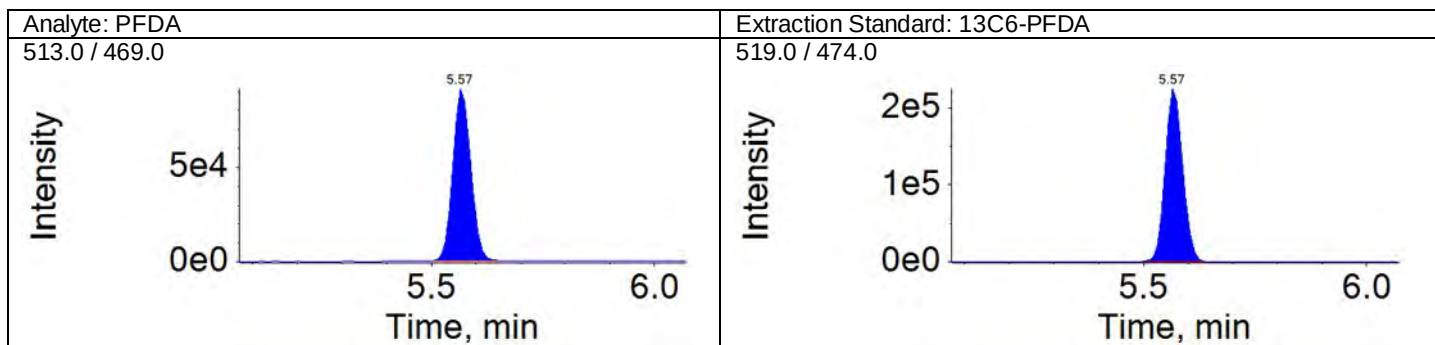
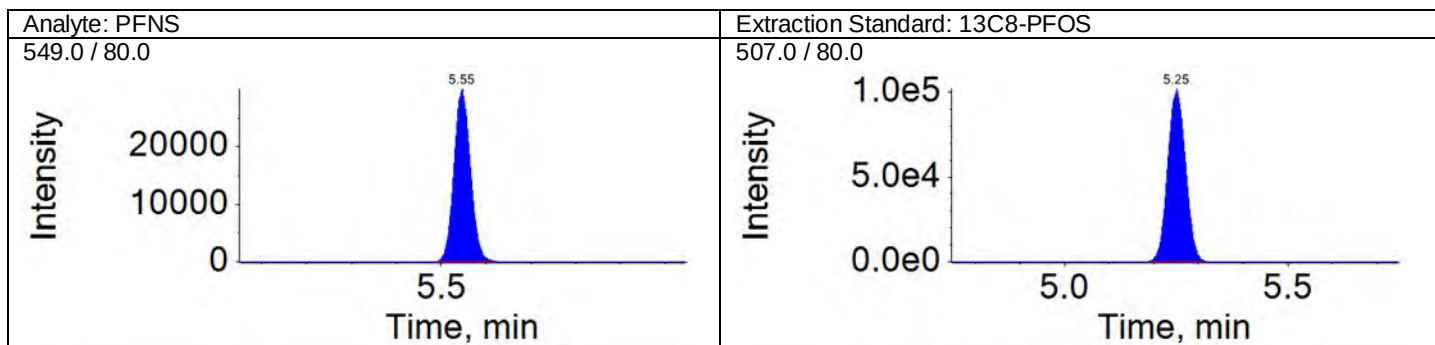
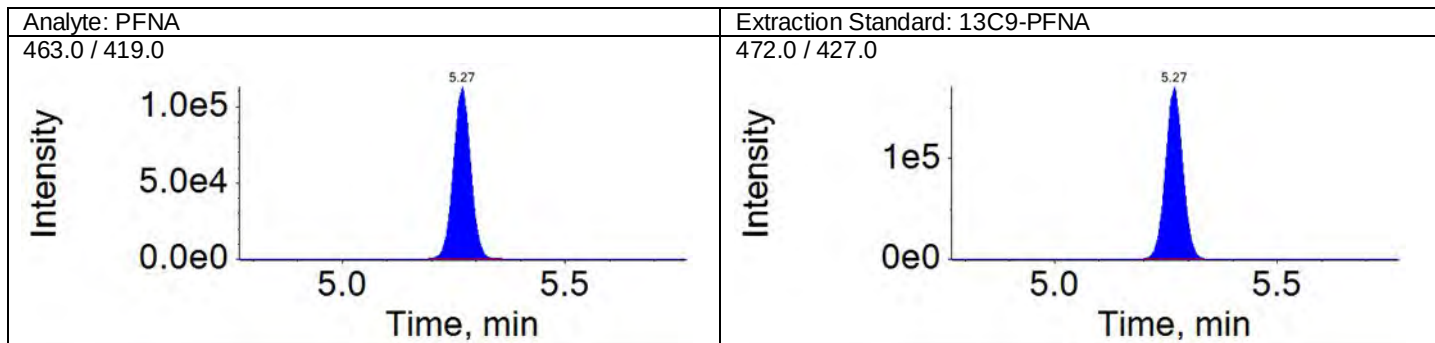
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



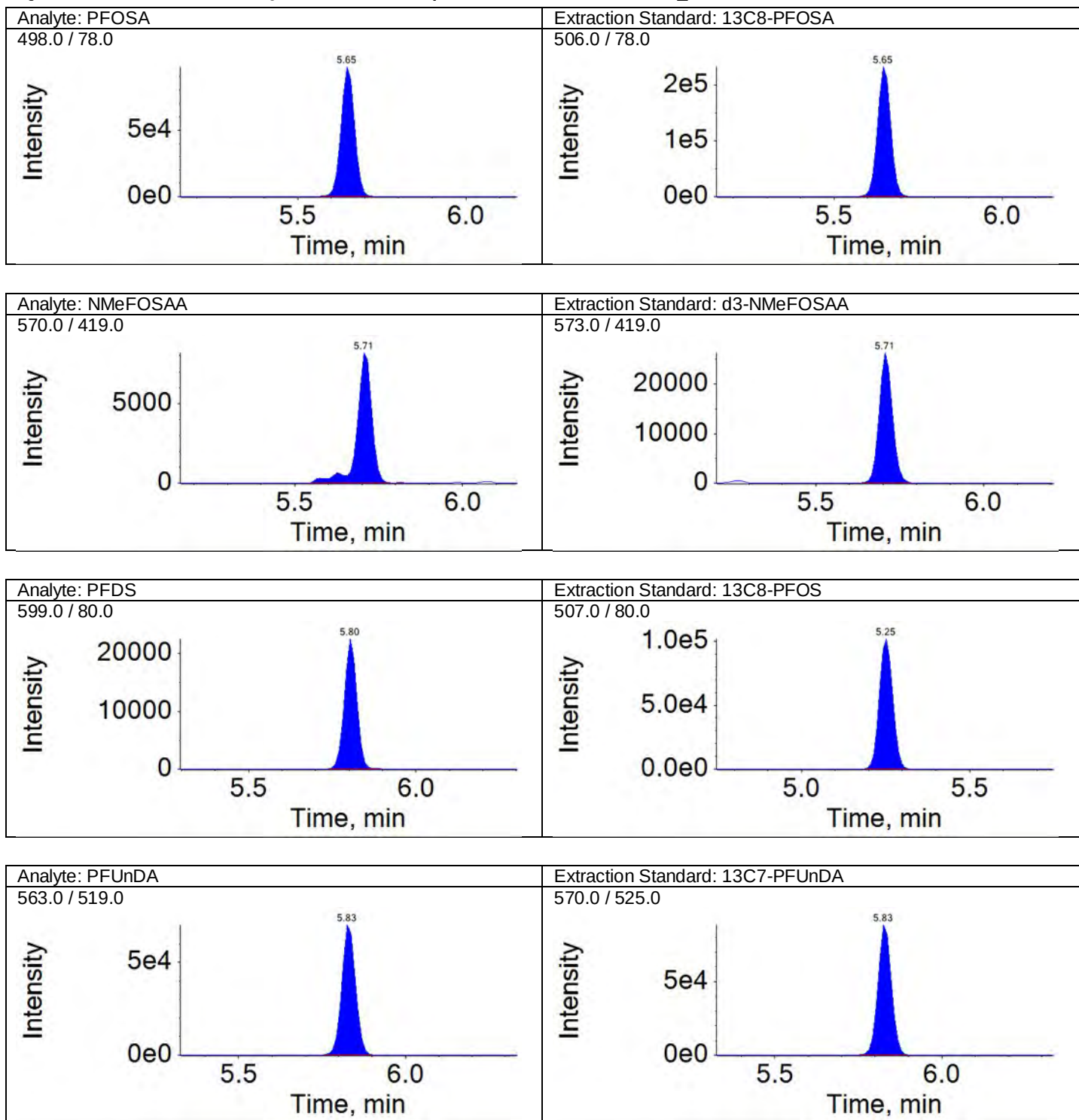
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



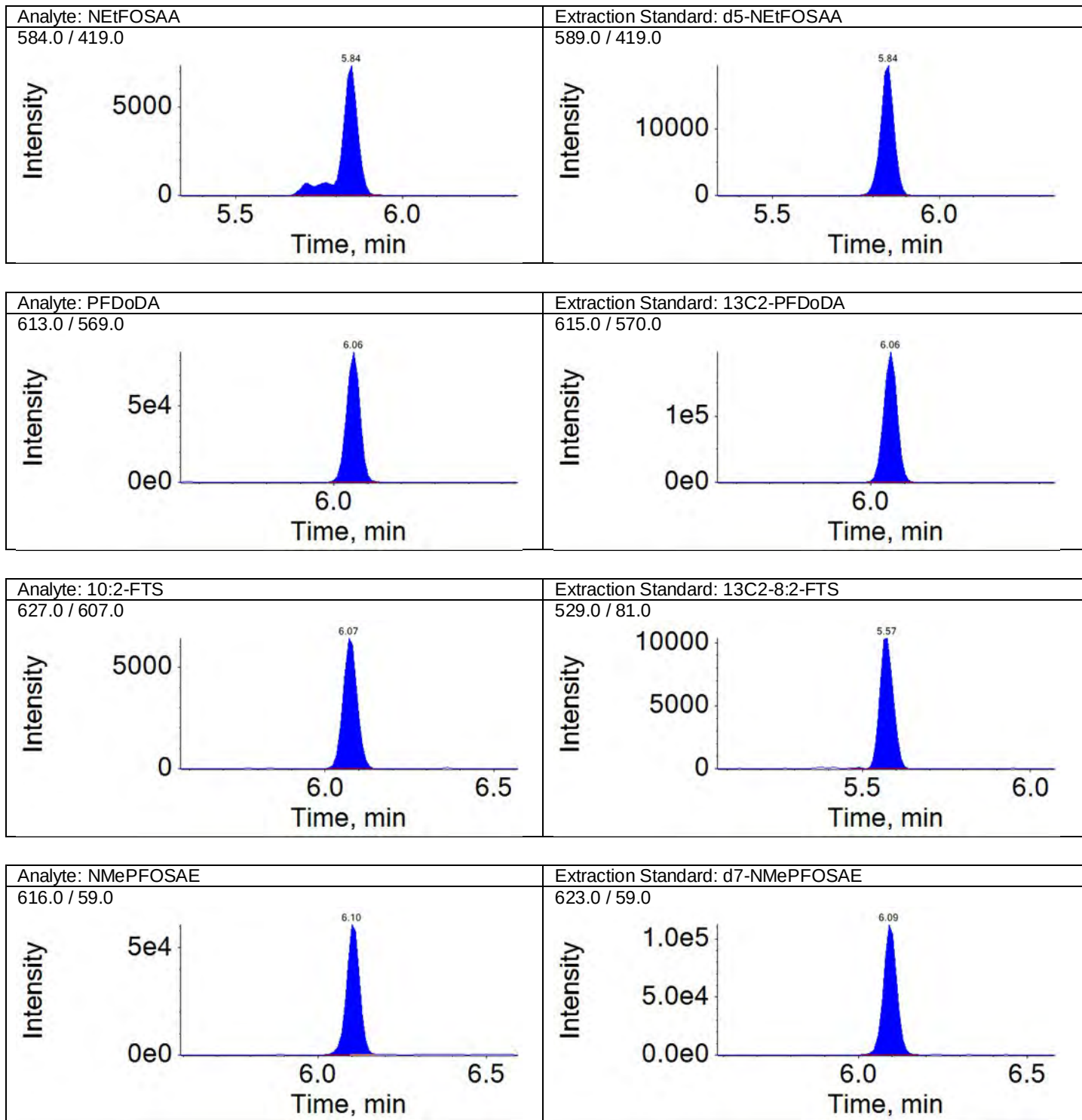
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



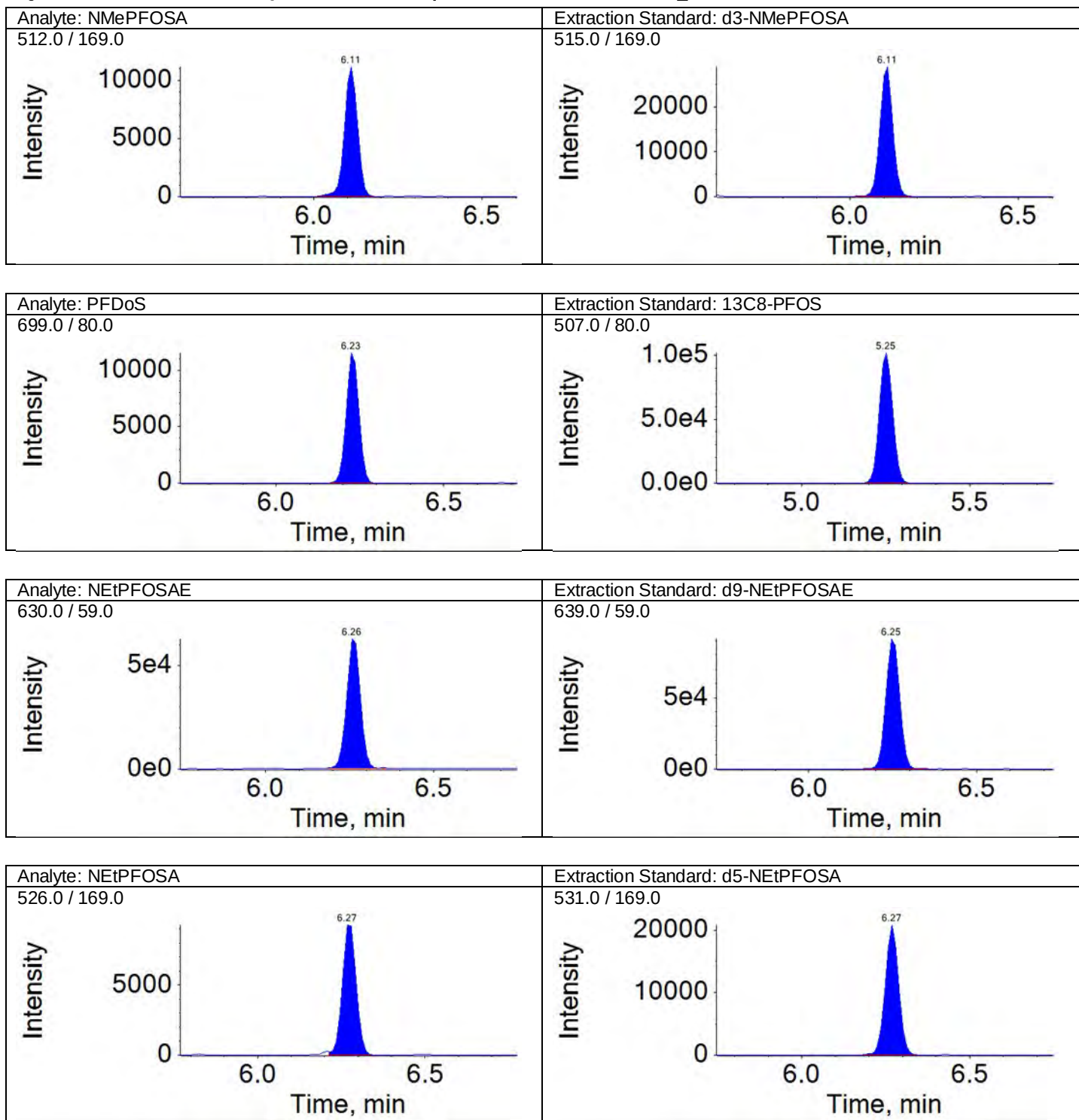
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



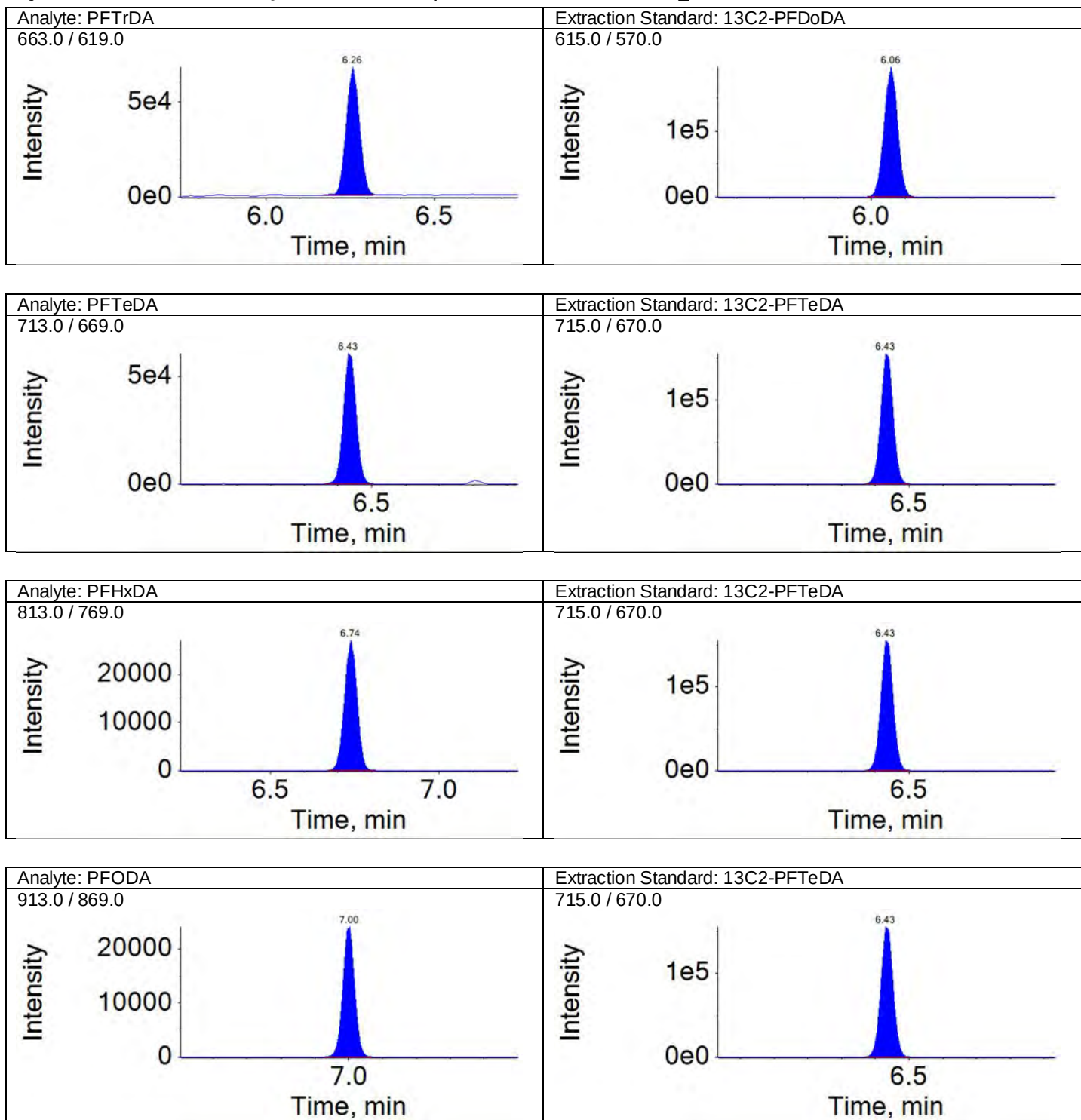
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



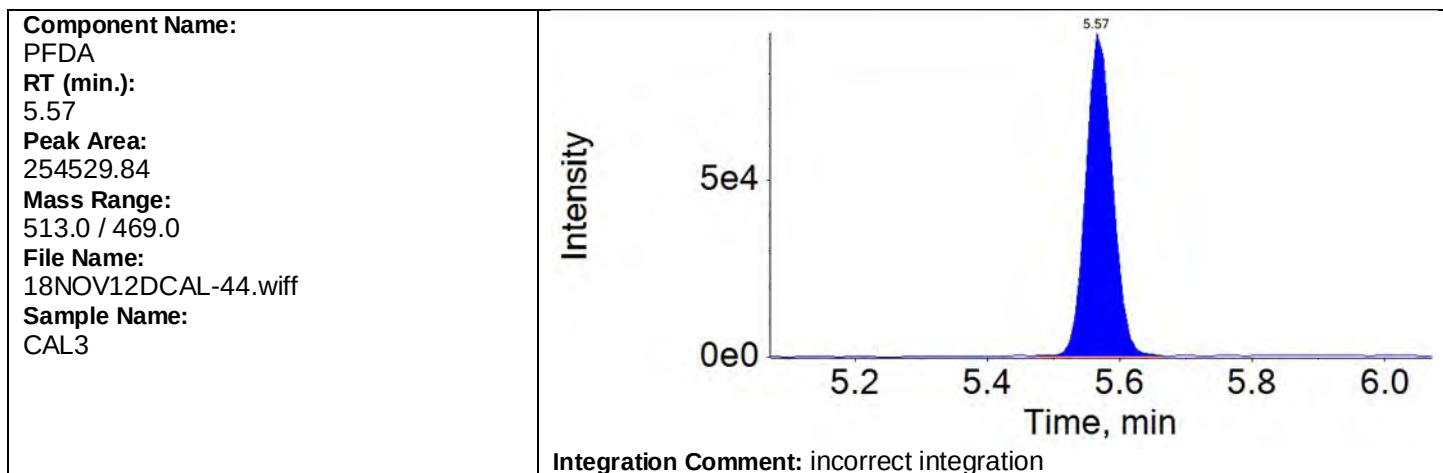
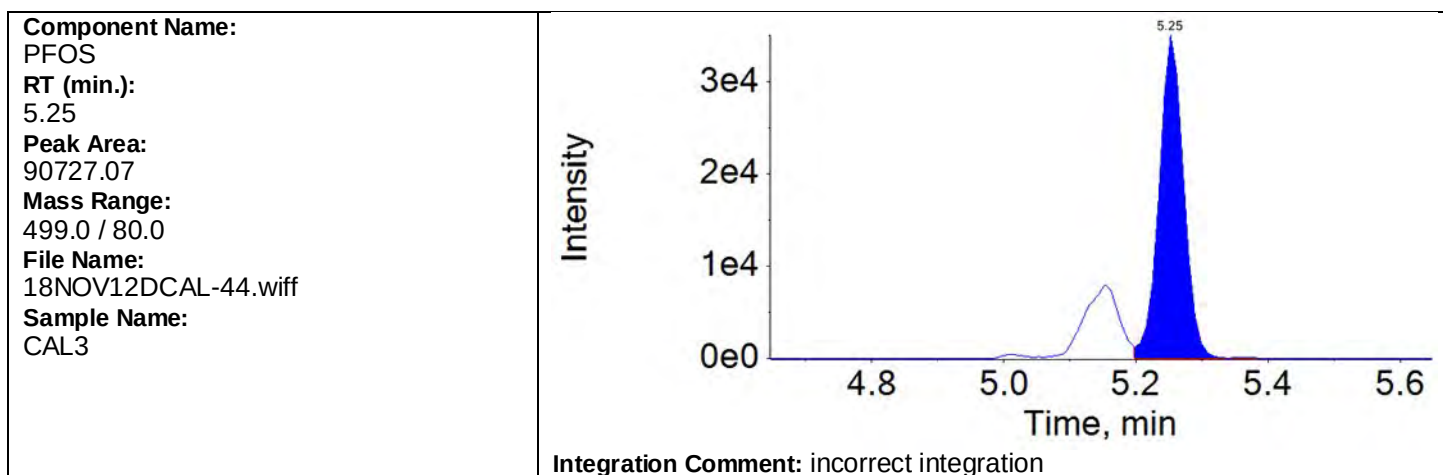
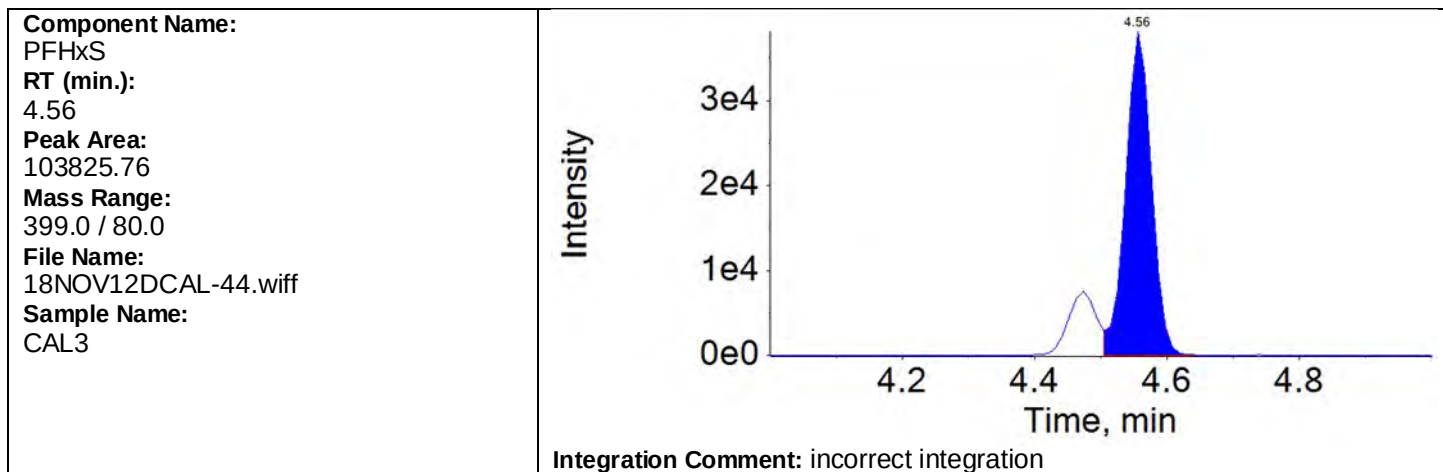
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

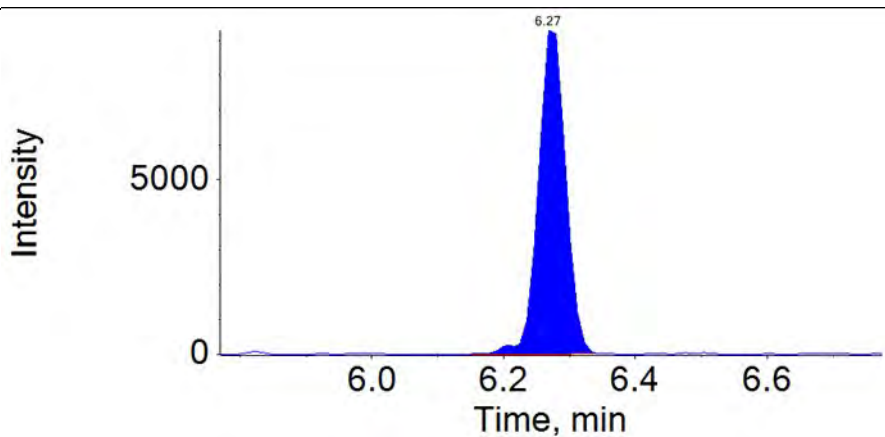
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

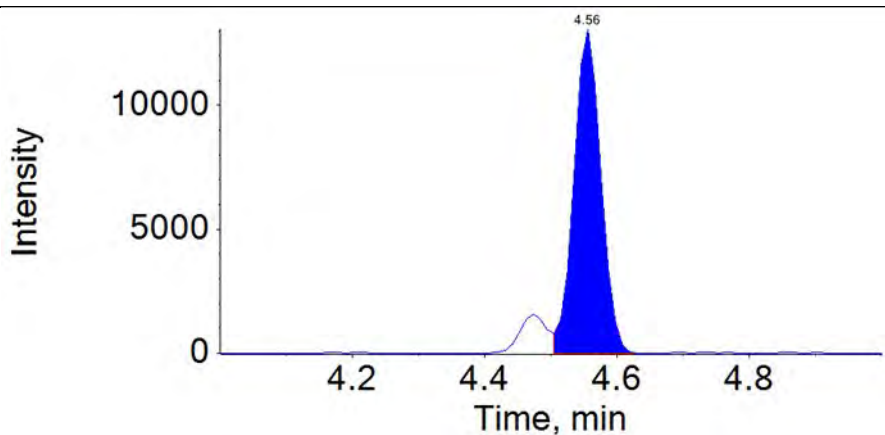
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NETPFOSA
RT (min.):
6.27
Peak Area:
26985.34
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



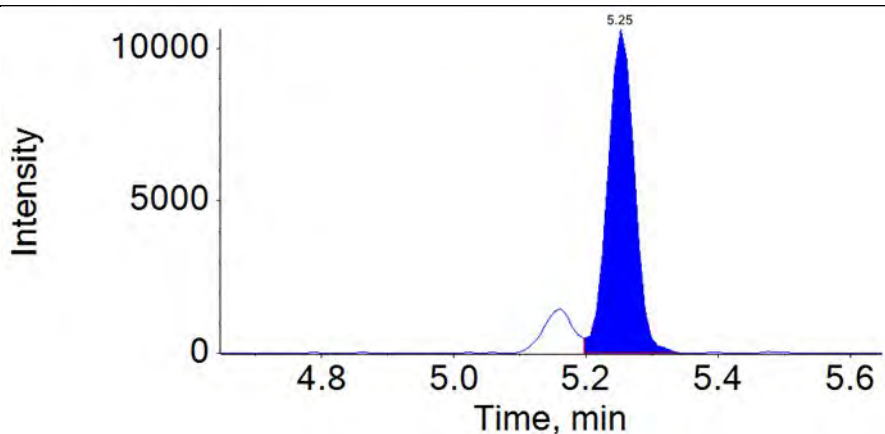
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
37027.02
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
29768.90
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3

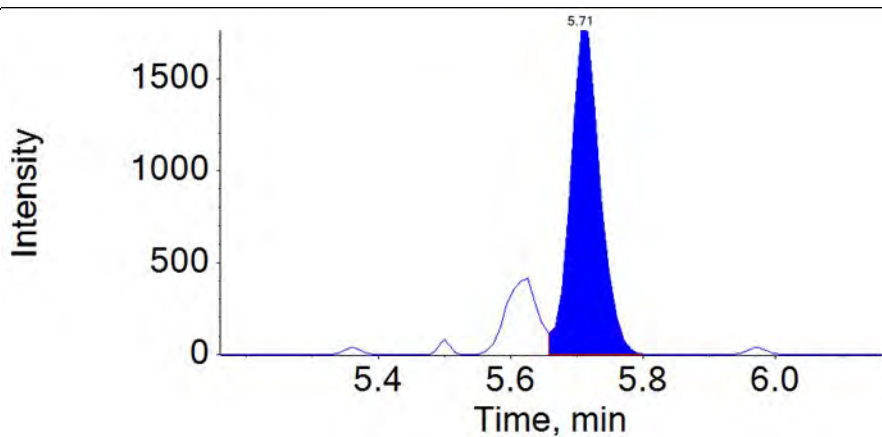


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

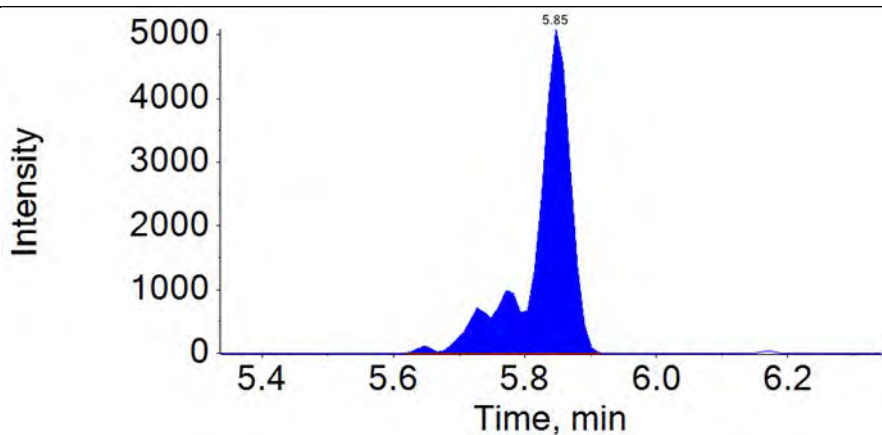
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
5548.71
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



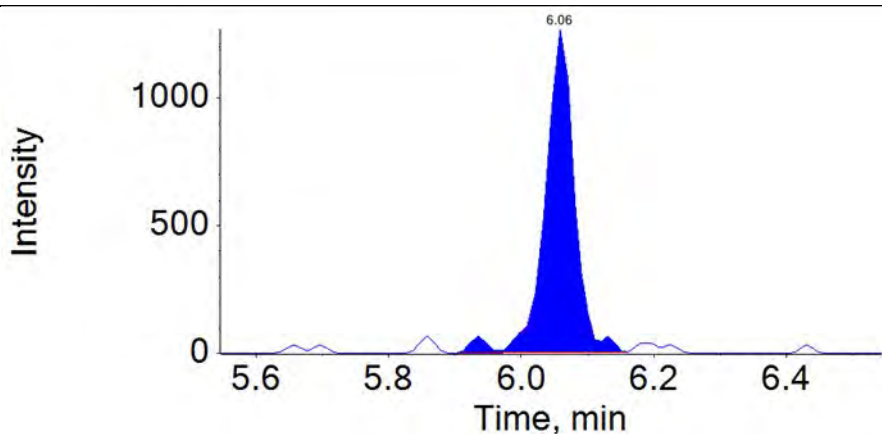
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
19243.29
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
3956.45
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3

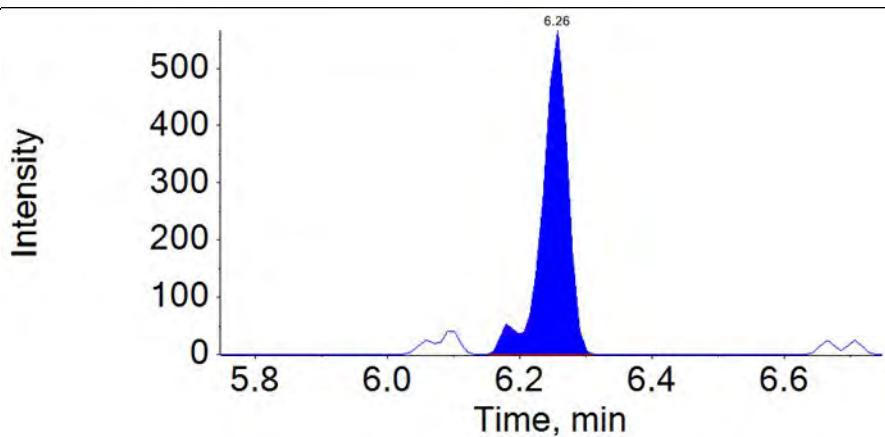


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

Component Name:
PFTTrDA_2
RT (min.):
6.26
Peak Area:
1527.41
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

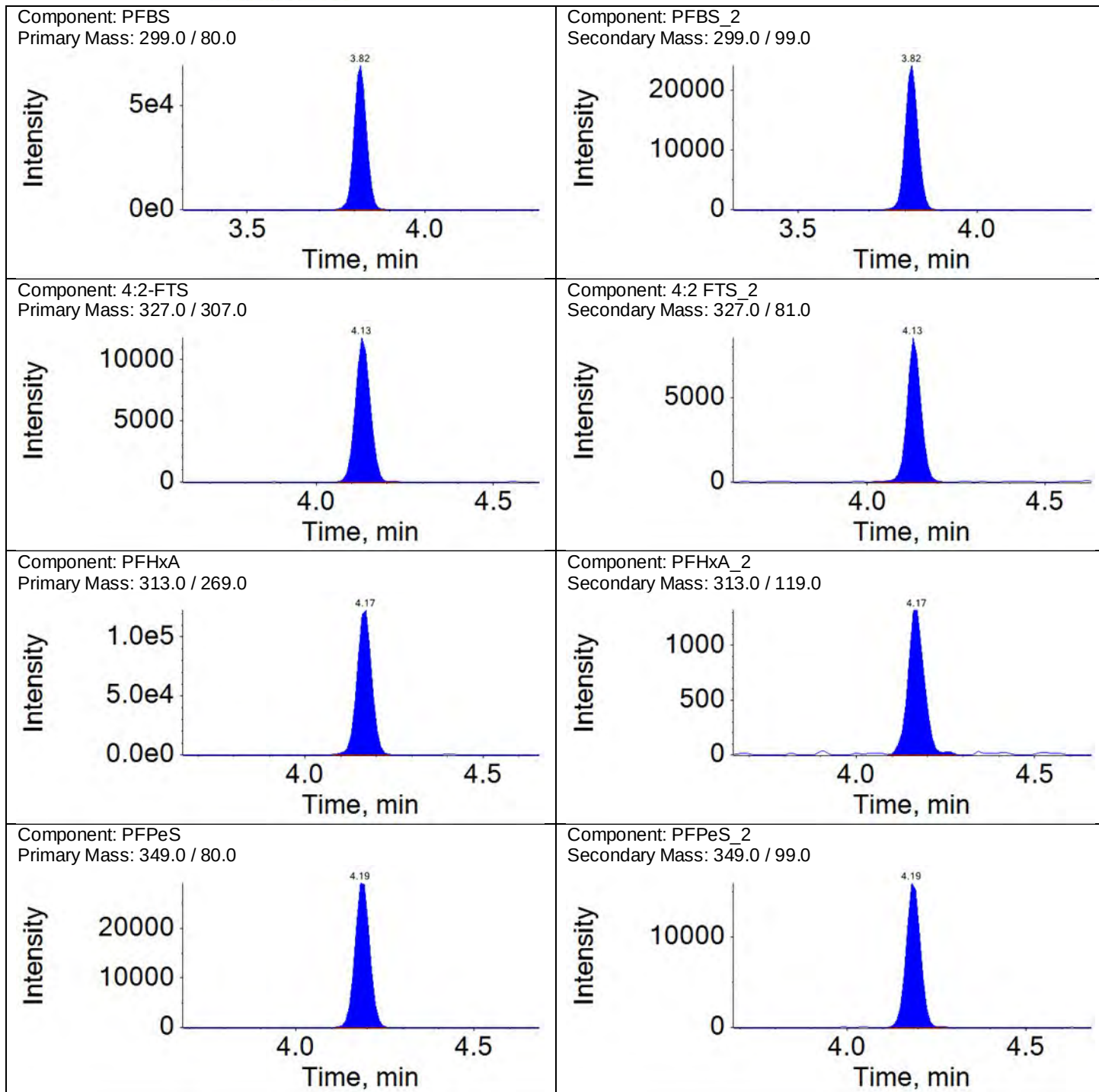
Ion Ratio Report

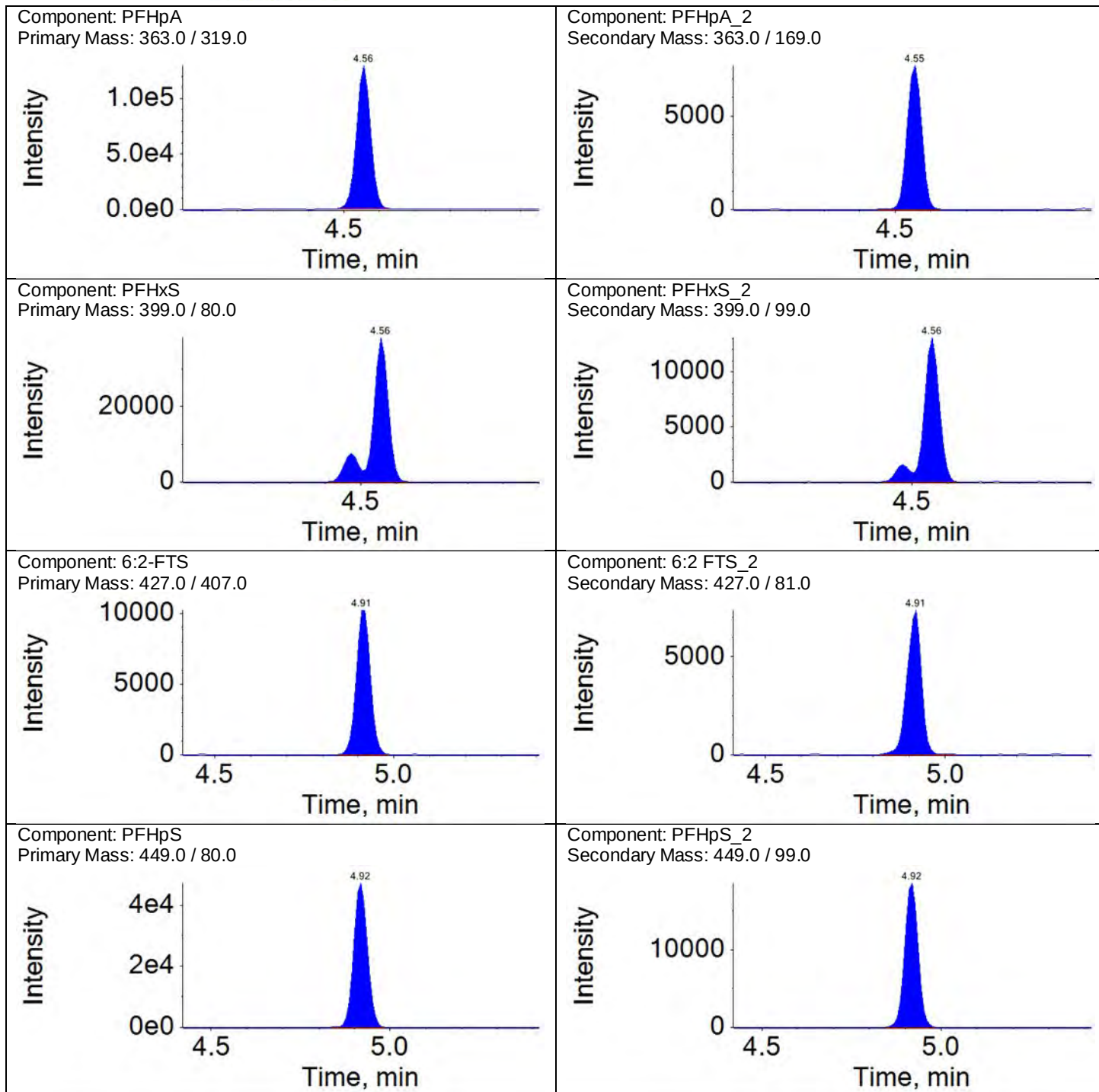
Sample Name: CAL3

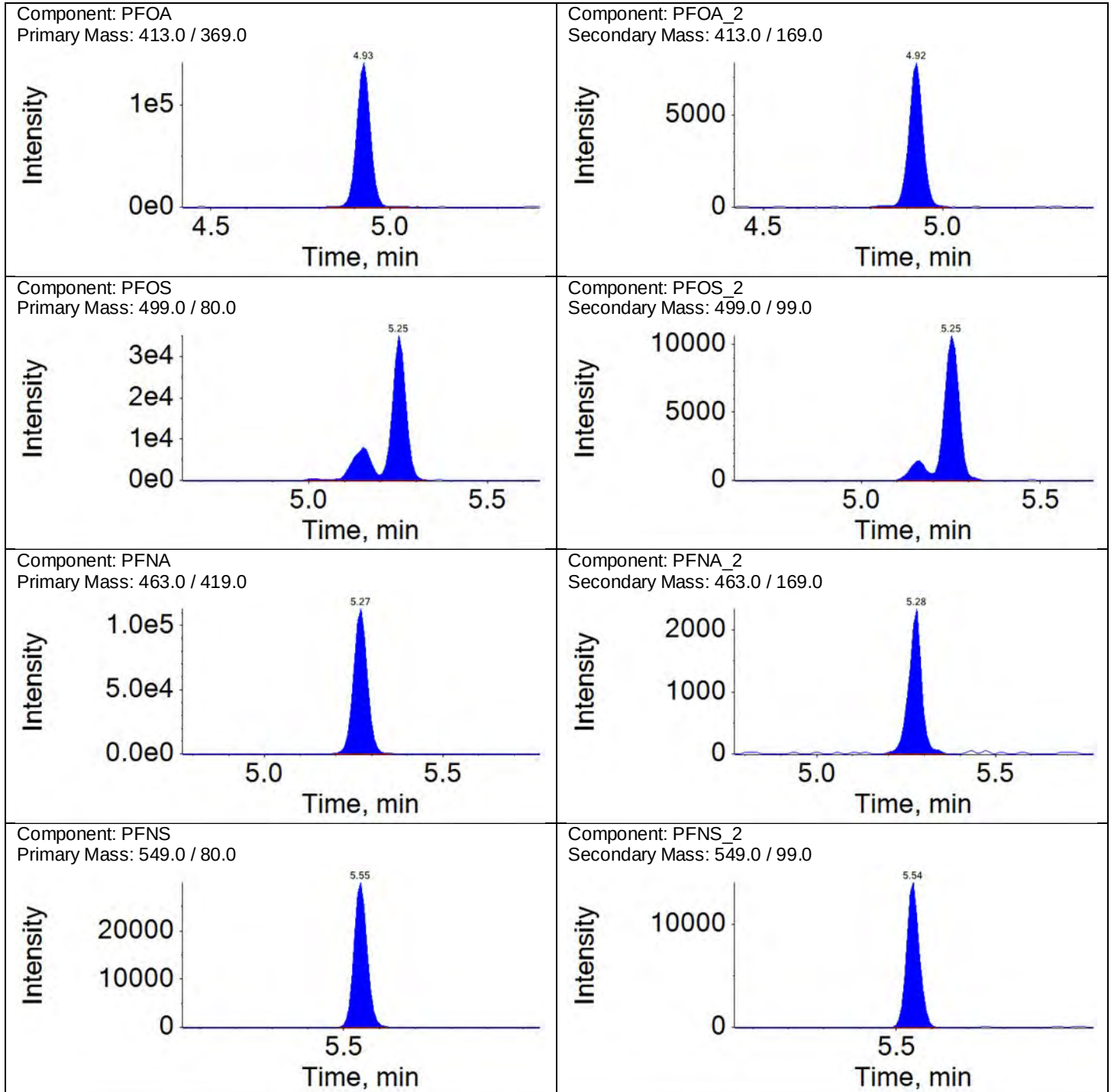
Instrument Name: LM27631

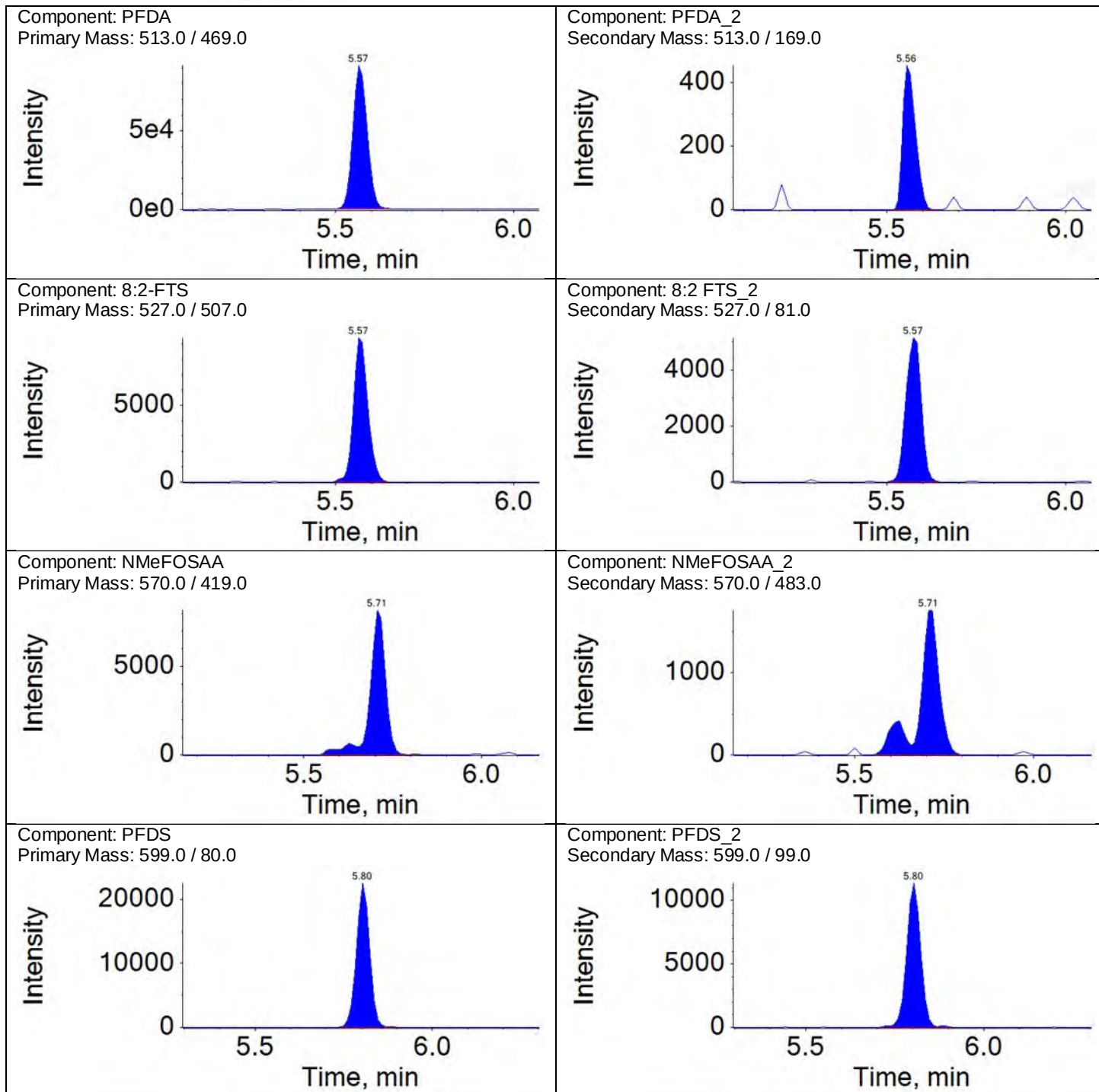
File Name: 18NOV12DCAL-44.wiff

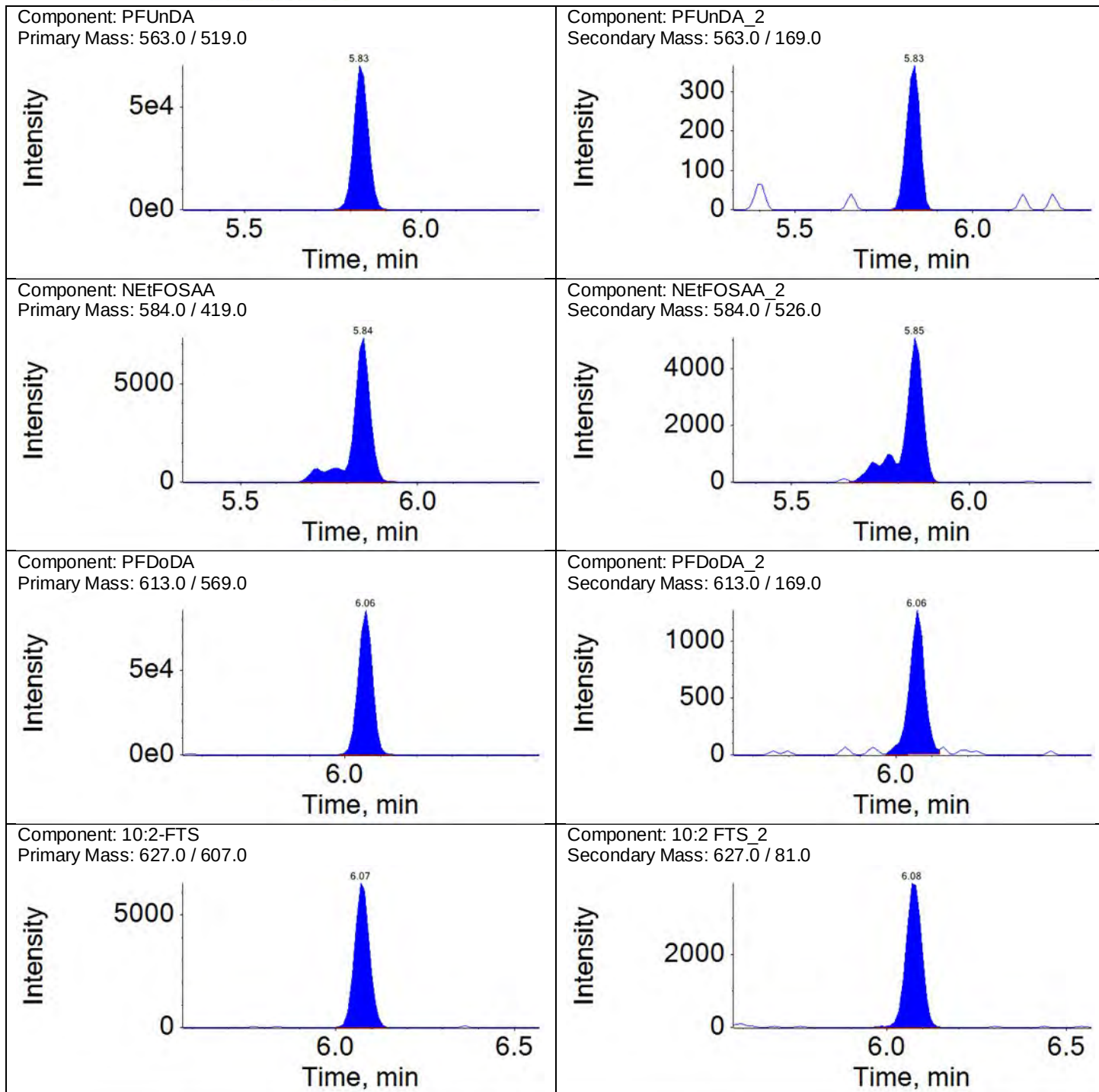
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	168144.64	A	0.3619	0.3569			
PFBS_2	3.82	1.00	60008.36	A	0.3619	0.3569	-1	50	
4:2-FTS	4.13	1.00	34188.48	A	0.6730	0.6730			
4:2 FTS_2	4.13	1.00	23007.23	A	0.6730	0.6730		#NA!	
PFHxA	4.17	1.00	352013.45	A	0.0117	0.0120			
PFHxA_2	4.17	1.00	4207.12	A	0.0117	0.0120	3	50	
PFPeS	4.19	1.10	84071.24	A	0.5191	0.5304			
PFPeS_2	4.19	1.10	44592.70	A	0.5191	0.5304	2	50	
PFHpA	4.56	1.00	355834.18	A	0.0563	0.0619			
PFHpA_2	4.55	1.00	22030.36	A	0.0563	0.0619	10	50	
PFHxS	4.56	1.00	125622.02	M	0.3428	0.3304			
PFHxS_2	4.56	1.00	41506.57	M	0.3428	0.3304	-4	50	
6:2-FTS	4.91	1.00	28084.91	A	0.6604	0.7337			
6:2 FTS_2	4.91	1.00	20606.67	A	0.6604	0.7337		#NA!	
PFHpS	4.92	1.08	125907.86	A	0.4066	0.3838			
PFHpS_2	4.92	1.08	48327.03	A	0.4066	0.3838	-6	50	
PFOA	4.93	1.00	372258.90	A	0.0562	0.0567			
PFOA_2	4.92	1.00	21118.14	A	0.0562	0.0567	1	50	
PFOS	5.25	1.00	120897.45	M	0.2968	0.2842			
PFOS_2	5.25	1.00	34361.90	M	0.2968	0.2842	-4	50	
PFNA	5.27	1.00	302323.82	A	0.0229	0.0192			
PFNA_2	5.28	1.00	5790.58	A	0.0229	0.0192	-16	50	
PFNS	5.55	1.06	76049.00	A	0.4828	0.4502			
PFNS_2	5.54	1.06	34233.54	A	0.4828	0.4502	-7	50	
PFDA	5.57	1.00	254047.79	M	0.0081	0.0044			
PFDA_2	5.56	1.00	1125.96	A	0.0081	0.0044	-45	50	
8:2-FTS	5.57	1.00	26295.08	A	0.6814	0.5850			
8:2 FTS_2	5.57	1.00	15383.41	A	0.6814	0.5850		#NA!	
NMeFOSAA	5.71	1.00	25147.65	A	0.2569	0.2754			
NMeFOSAA_2	5.71	1.00	6926.51	M	0.2569	0.2754	7	50	
PFDS	5.80	1.11	57966.88	A	0.5144	0.5358			
PFDS_2	5.80	1.11	31061.10	A	0.5144	0.5358	4	50	
PFUnDA	5.83	1.00	199061.83	A	0.0058	0.0049			
PFUnDA_2	5.83	1.00	975.19	A	0.0058	0.0049	-16	50	
NEtFOSAA	5.84	1.00	25089.02	A	0.7253	0.7602			
NEtFOSAA_2	5.85	1.00	19071.96	M	0.7253	0.7602	5	50	
PFDODA	6.06	1.00	237252.63	A	0.0157	0.0159			
PFDODA_2	6.06	1.00	3761.16	M	0.0157	0.0159	1	50	
10:2-FTS	6.07	1.09	18541.69	A	0.6356	0.6613			
10:2 FTS_2	6.08	1.09	12260.75	A	0.6356	0.6613		#NA!	
PFTTrDA	6.26	1.03	184322.87	A	0.0086	0.0079			
PFTTrDA_2	6.26	1.03	1447.70	M	0.0086	0.0079	-8	50	
PFTeDA	6.43	1.00	156439.94	A	0.0062	0.0065			
PFTeDA_2	6.44	1.00	1023.07	A	0.0062	0.0065	5	50	
PFHxDA	6.74	1.05	69655.07	A	0.0683	0.0690			
PFHxDA_2	6.74	1.05	4808.92	A	0.0683	0.0690	1	50	
PFODA	7.00	1.09	57795.96	A	0.0277	0.0253			
PFODA_2	7.00	1.09	1464.82	A	0.0277	0.0253	-9	50	

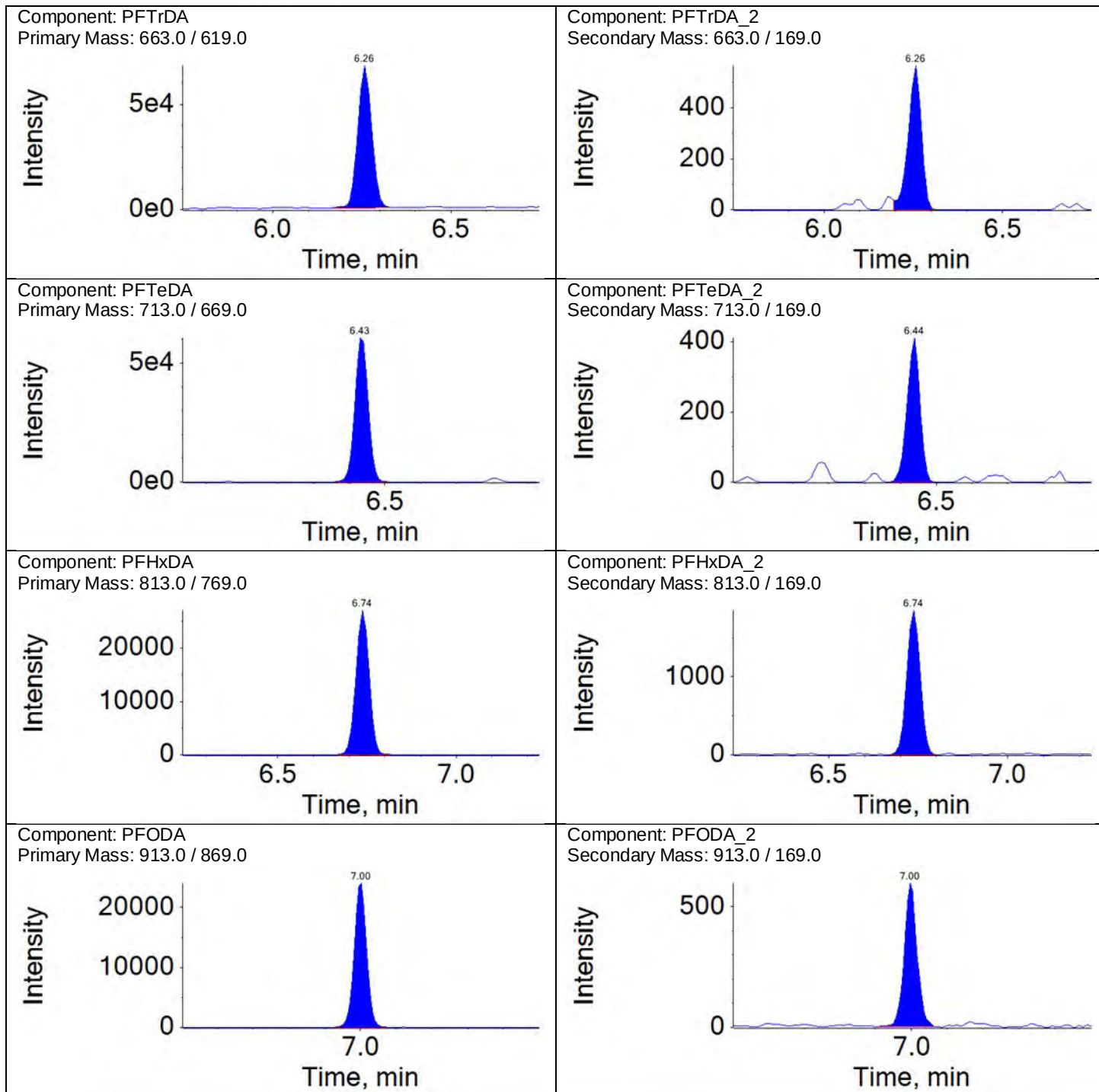












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL4		Data File:	18NOV12DCAL-45.wiff
Sample ID:	CALBRN41833B		Acquis Date:	2018-11-12T15:33:03
Sample Type:	Standard		Instrument:	LM27631
Vial Position:	6		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	671568.1	659926.2	2	50	
13C2-PFOA	5.0	477519.7	450219.7	6	50	
13C4-PFOS	4.8	256143.3	249205.8	3	50	
13C2-PFDA	5.0	301327.2	278743.9	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	726396.0	13C3-PFBA	671568.1	1.082	5.000	4.849	97	70-130	
E13C5-PFPeA	716206.9	13C3-PFBA	671568.1	1.066	5.000	4.783	96	70-130	
E13C3-PFBS	425015.7	13C3-PFBA	671568.1	0.633	4.650	4.468	96	70-130	
E13C2-4:2-FTS	47246.4	13C2-PFOA	477519.7	0.099	4.670	4.407	94	70-130	
E13C5-PFHxA	641195.9	13C2-PFOA	477519.7	1.343	5.000	4.851	97	70-130	
E13C3-PFHxS	315722.6	13C2-PFOA	477519.7	0.661	4.730	4.537	96	70-130	
E13C4-PFHpA	509151.8	13C2-PFOA	477519.7	1.066	5.000	4.804	96	70-130	
E13C2-6:2-FTS	31883.3	13C2-PFOA	477519.7	0.067	4.750	4.467	94	70-130	
E13C8-PFOA	863597.3	13C2-PFOA	477519.7	1.809	5.000	4.983	100	70-130	
E13C8-PFOS	267380.8	13C4-PFOS	256143.3	1.044	4.780	4.625	97	70-130	
E13C9-PFNA	485570.4	13C4-PFOS	256143.3	1.896	5.000	5.285	106	70-130	
E13C6-PFDA	612056.5	13C2-PFDA	301327.2	2.031	5.000	4.740	95	70-130	
E13C2-8:2-FTS	27253.5	13C2-PFDA	301327.2	0.090	4.790	4.511	94	70-130	
E13C8-PFOSA	607762.0	13C2-PFDA	301327.2	2.017	5.000	4.472	89	70-130	
Ed3-NMeFOSAA	72788.0	13C2-PFDA	301327.2	0.242	5.000	4.360	87	70-130	
E13C7-PFUnDA	232014.1	13C2-PFDA	301327.2	0.770	5.000	4.470	89	70-130	
Ed5-NEtFOSAA	65478.0	13C2-PFDA	301327.2	0.217	5.000	4.597	92	70-130	
E13C2-PFDoDA	521514.1	13C2-PFDA	301327.2	1.731	5.000	4.494	90	70-130	
Ed7-NMePFOSAE	327796.4	13C2-PFDA	301327.2	1.088	5.000	4.708	94	70-130	
Ed3-NMePFOSA	70122.5	13C2-PFDA	301327.2	0.233	5.000	4.228	85	70-130	
Ed9-NEtPFOSAE	259467.4	13C2-PFDA	301327.2	0.861	5.000	4.479	90	70-130	
Ed5-NEtPFOSA	55177.3	13C2-PFDA	301327.2	0.183	5.000	4.296	86	70-130	
E13C2-PFTeDA	392356.6	13C2-PFDA	301327.2	1.302	5.000	4.571	91	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL4

Instrument Name: LM27631

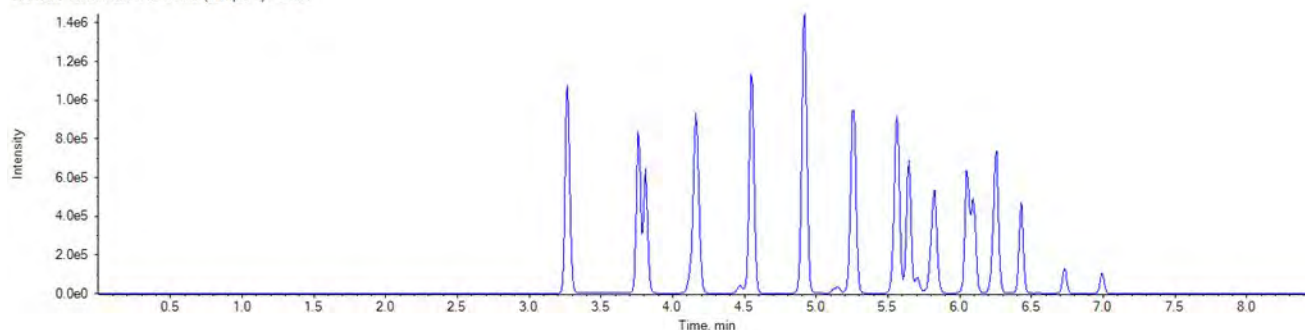
File Name: 18NOV12DCAL-45.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1068414.9		A	13C4-PFBA	3.26	726396.0	1.471	8.148
PFPeA	3.76	1.000	1075643.5		A	13C5-PFPeA	3.76	716206.9	1.502	8.694
PFBS	3.81	1.000	617045.6		A	13C3-PFBS	3.81	425015.7	1.452	6.906
4:2-FTS	4.13	1.000	126396.5		A	13C2-4:2-FTS	4.13	47246.4	2.675	7.263
PFHxA	4.16	1.000	1265231.1		A	13C5-PFHxA	4.16	641195.9	1.973	8.239
PFPeS	4.18	1.100	328681.7		A	13C3-PFBS	3.81	425015.7	0.773	7.508
PFHpA	4.55	1.000	1318774.5		A	13C4-PFHpA	4.55	509151.8	2.590	8.586
PFHxS	4.55	1.000	479291.0		M	13C3-PFHxS	4.55	315722.6	1.518	7.361
6:2-FTS	4.91	1.000	107470.6		A	13C2-6:2-FTS	4.91	31883.3	3.371	8.157
PFHpS	4.91	1.080	434949.2		A	13C3-PFHxS	4.55	315722.6	1.378	7.252
PFOA	4.92	1.000	1327086.1		A	13C8-PFOA	4.92	863597.3	1.537	8.207
PFOS	5.25	1.000	448833.8		M	13C8-PFOS	5.25	267380.8	1.679	7.341
PFNA	5.26	1.000	1106664.2		A	13C9-PFNA	5.26	485570.4	2.279	8.218
PFNS	5.54	1.060	269712.3		A	13C8-PFOS	5.25	267380.8	1.009	7.057
PFDA	5.56	1.000	941985.3		M	13C6-PFDA	5.56	612056.5	1.539	8.159
8:2-FTS	5.57	1.000	80922.6		A	13C2-8:2-FTS	5.57	27253.5	2.969	6.923
PFOSA	5.64	1.000	927660.5		A	13C8-PFOSA	5.64	607762.0	1.526	7.455
NMeFOSAA	5.70	1.000	103649.1		A	d3-NMeFOSAA	5.70	72788.0	1.424	8.048
PFDS	5.80	1.110	224031.2		A	13C8-PFOS	5.25	267380.8	0.838	7.592
PFUnDA	5.82	1.000	768010.8		A	13C7-PFUnDA	5.82	232014.1	3.310	8.654
NEtFOSAA	5.84	1.000	94877.8		A	d5-NEtFOSAA	5.83	65478.0	1.449	7.596
PFDaDA	6.05	1.000	803646.8		A	13C2-PFDaDA	6.05	521514.1	1.541	7.847
10:2-FTS	6.07	1.090	56040.8		A	13C2-8:2-FTS	5.57	27253.5	2.056	6.849
NMePFOSAE	6.10	1.000	618314.4		M	d7-NMePFOSAE	6.09	327796.4	1.886	7.850
NMePFOSA	6.10	1.000	114415.9		M	d3-NMePFOSA	6.10	70122.5	1.632	8.049
PFDaS	6.22	1.190	117663.3		A	13C8-PFOS	5.25	267380.8	0.440	7.707
NEtPFOSAE	6.25	1.000	673196.1		A	d9-NEtPFOSAE	6.24	259467.4	2.595	8.324
NEtPFOSA	6.27	1.000	99354.1		M	d5-NEtPFOSA	6.26	55177.3	1.801	8.269
PFTaDA	6.25	1.030	674140.3		A	13C2-PFDaDA	6.05	521514.1	1.293	8.159
PFTeDA	6.43	1.000	571926.7		A	13C2-PFTeDA	6.43	392356.6	1.458	8.171
PFHxDA	6.73	1.050	256654.3		A	13C2-PFTeDA	6.43	392356.6	0.654	7.793
PFOA	6.99	1.090	219359.6		A	13C2-PFTeDA	6.43	392356.6	0.559	7.786

Total Ion Chromatogram

TIC from 18NOV12DCAL-45.wiff (sample 1) - CAL4



APPROVED

By MCD at 6:33 pm, 11/12/18

BSI05 Page 961 of 1595

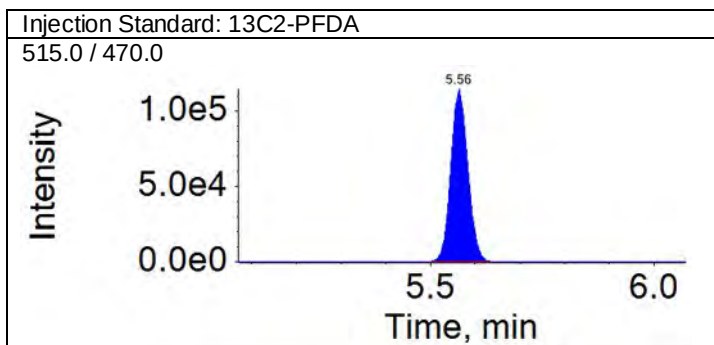
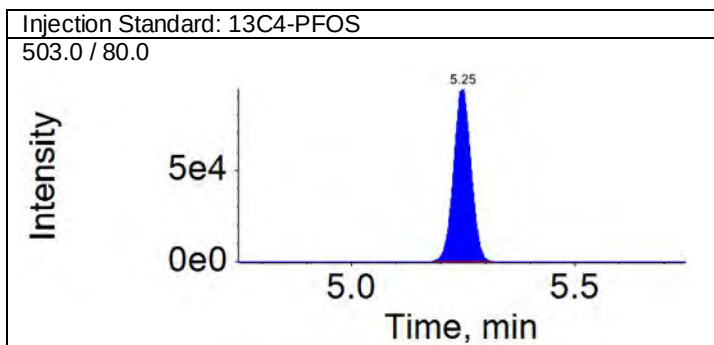
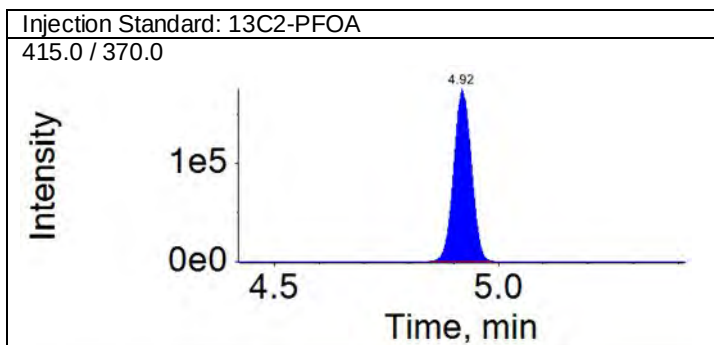
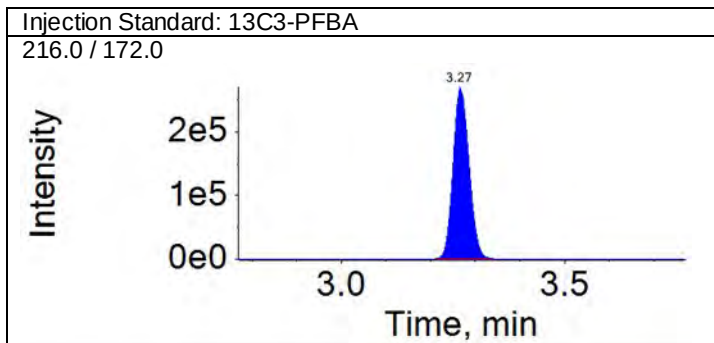
REVIEWED

By HMK at 10:53 am, 11/13/18

Page 2 of 17

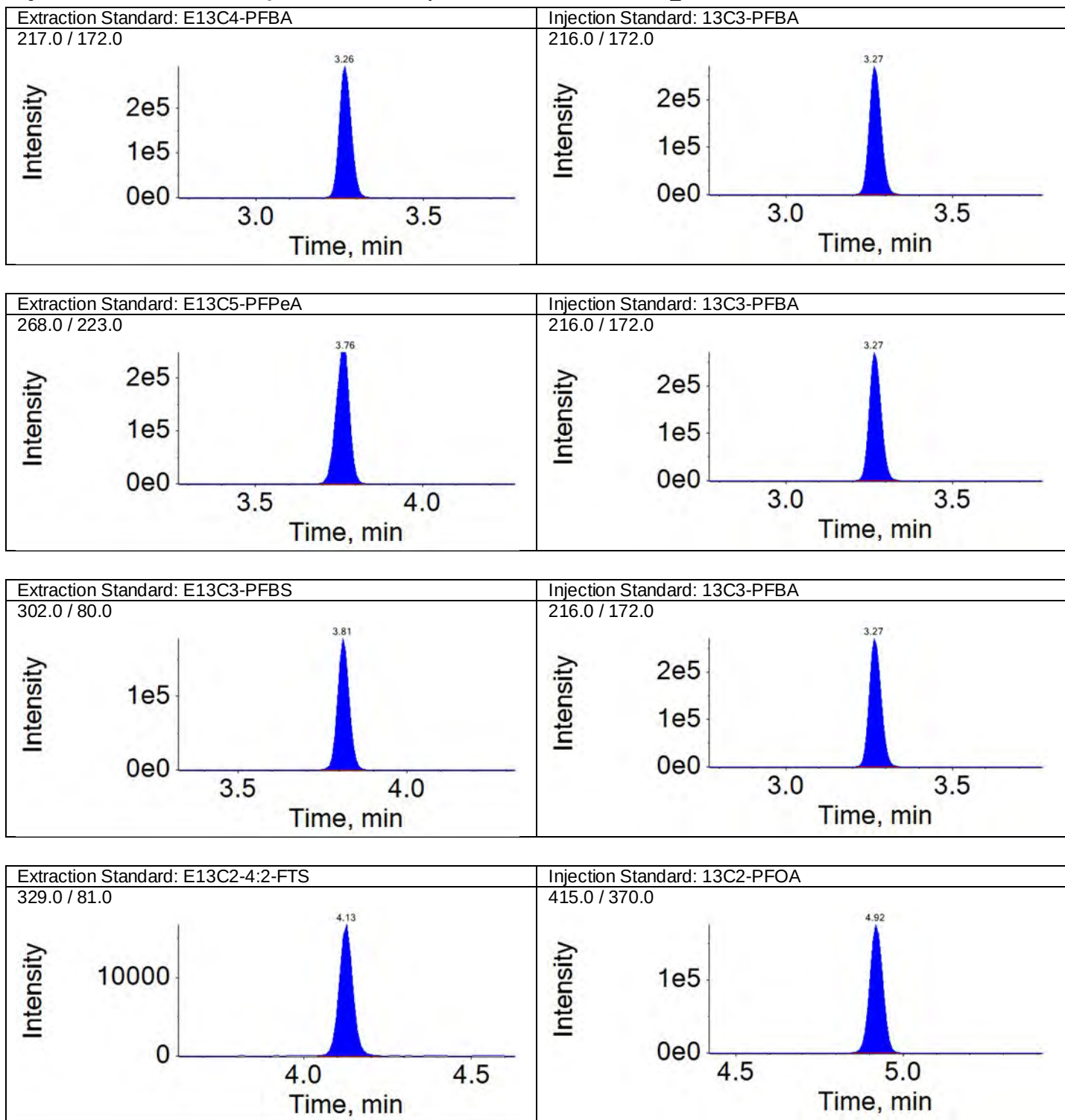
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



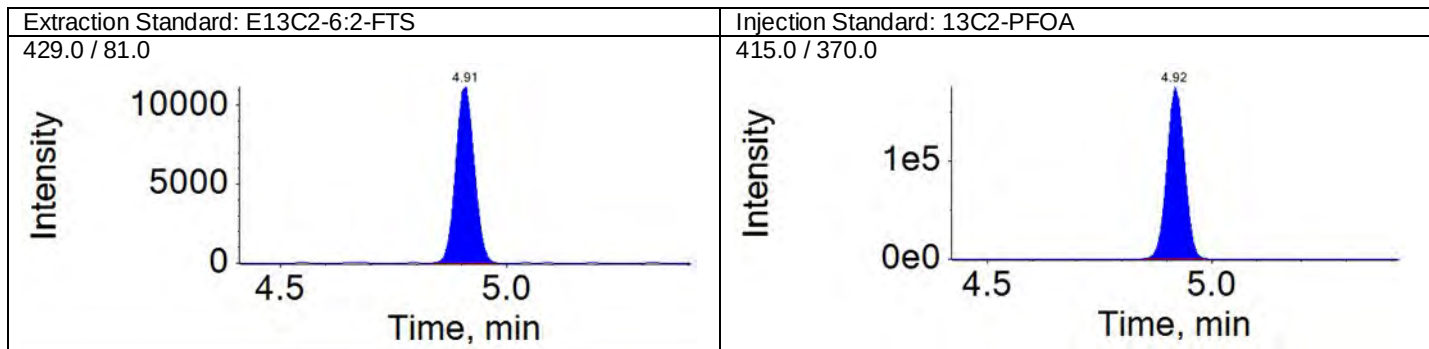
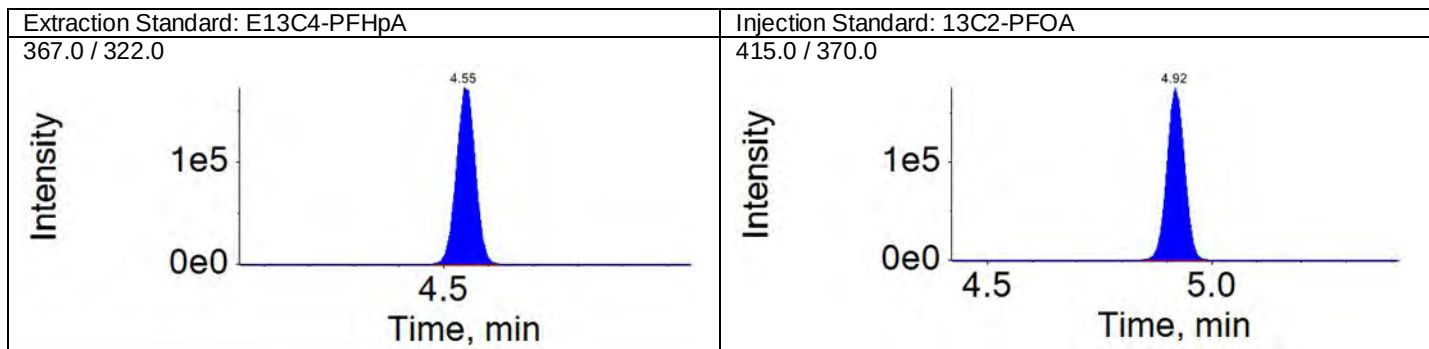
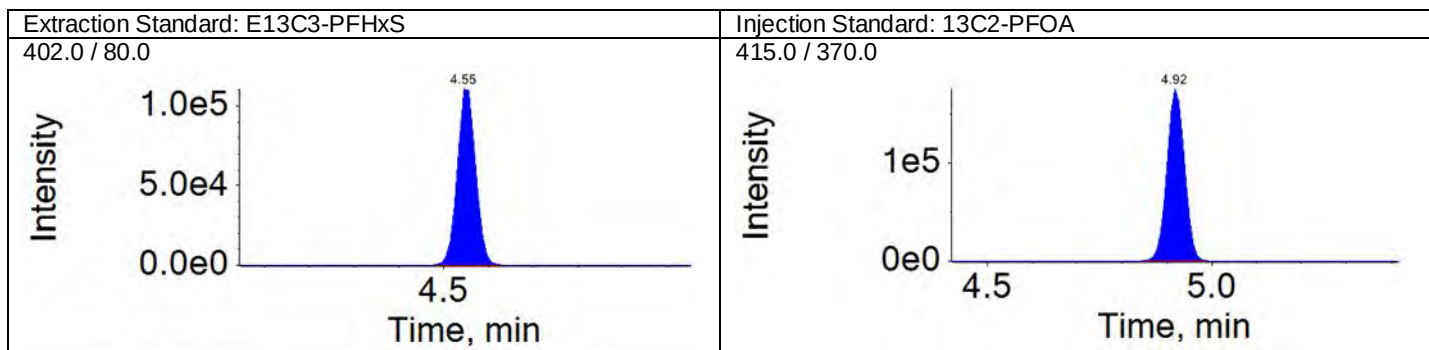
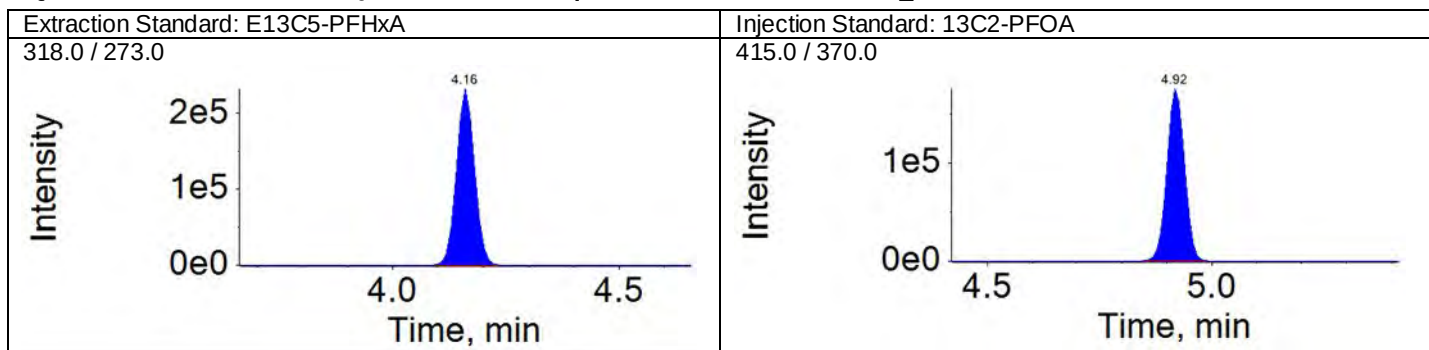
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



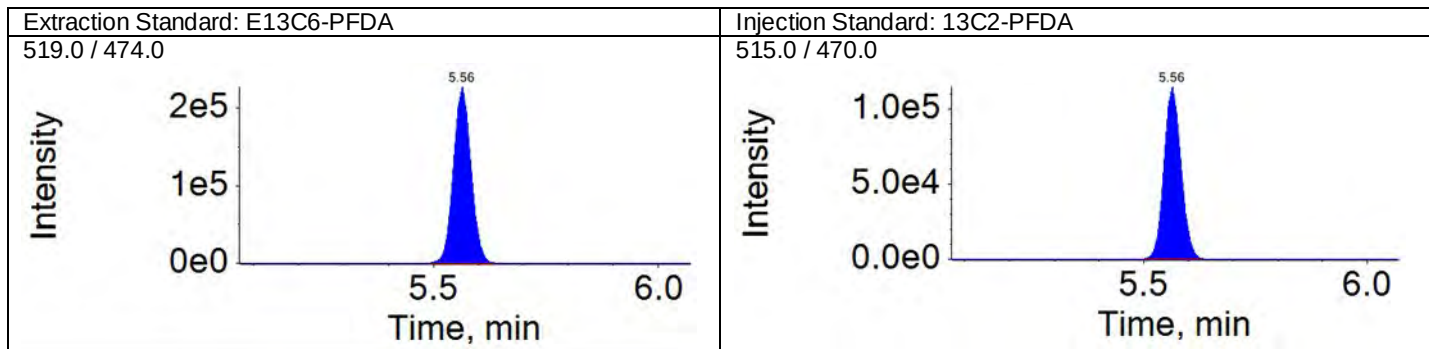
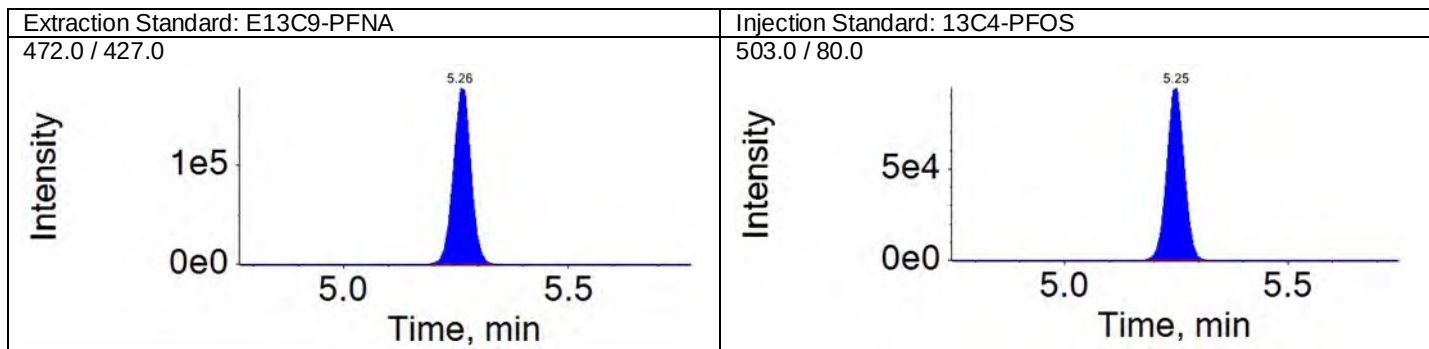
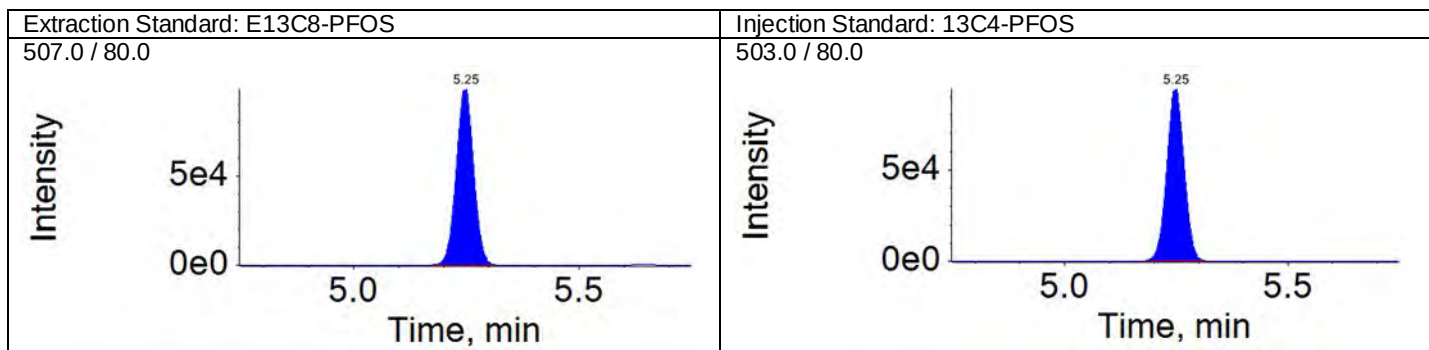
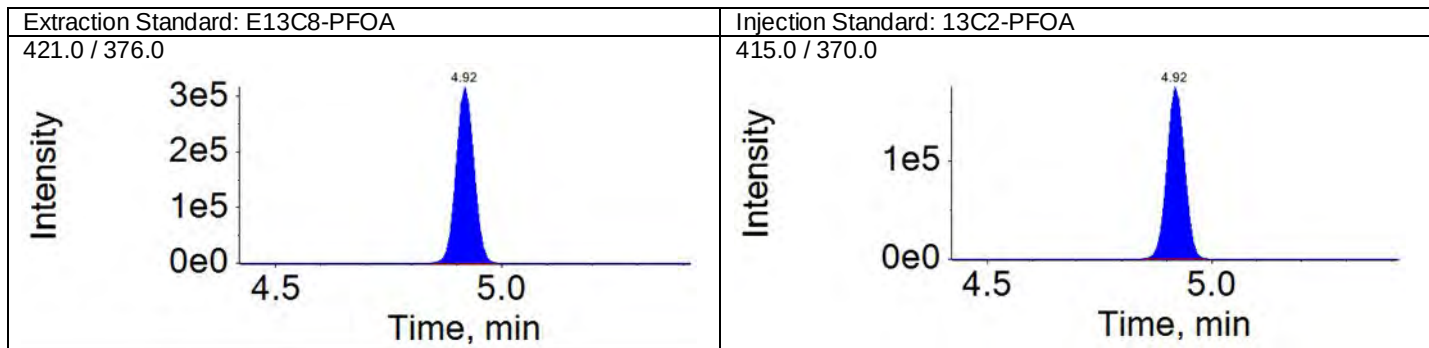
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



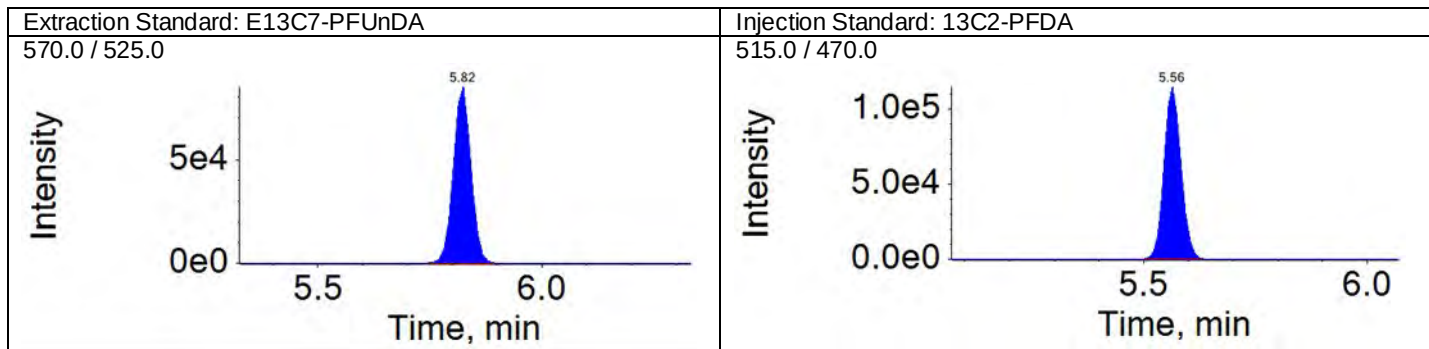
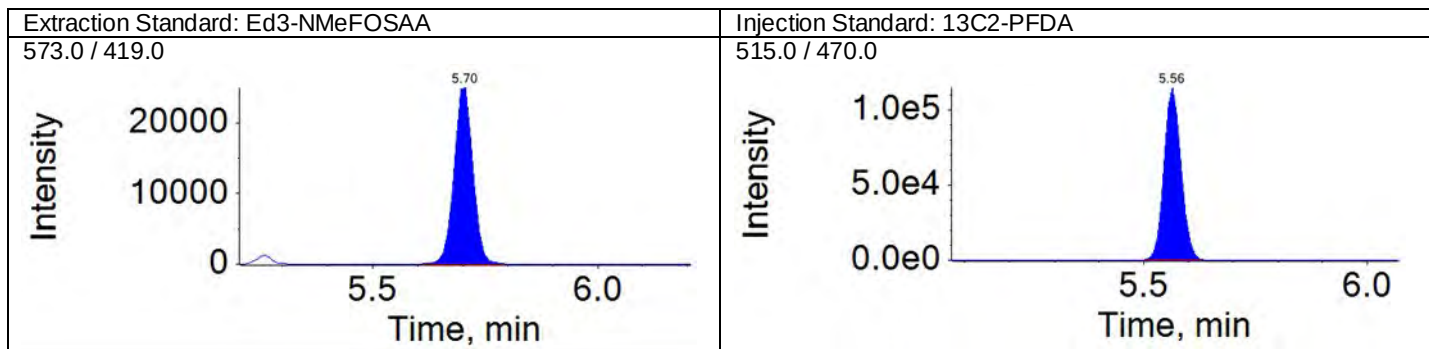
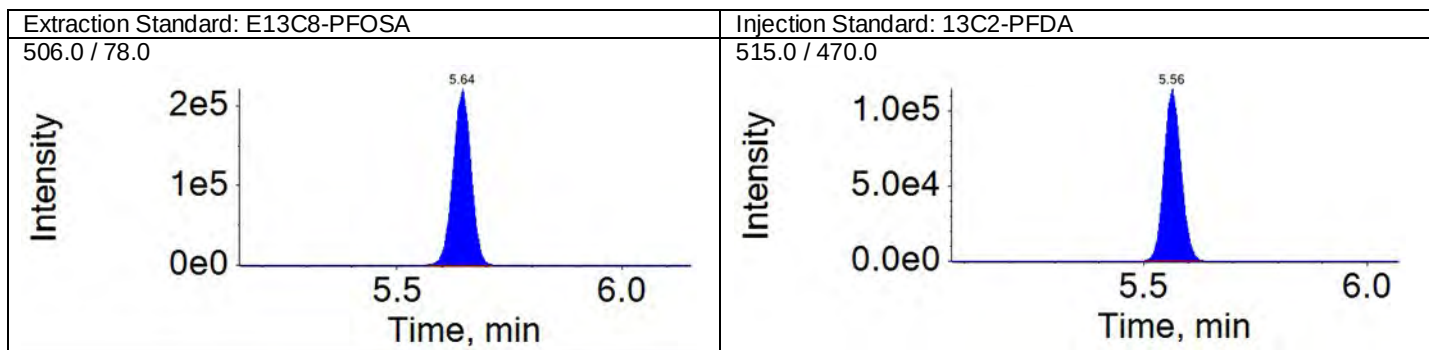
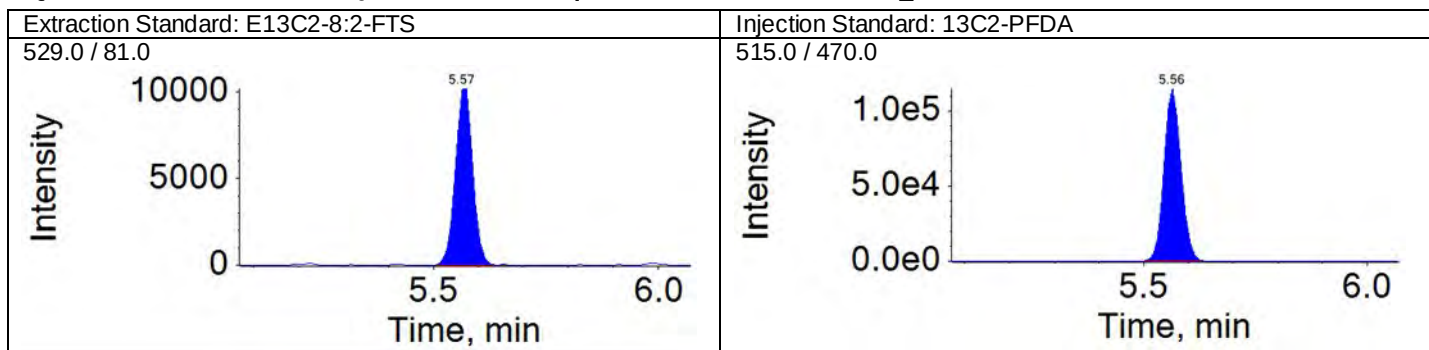
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



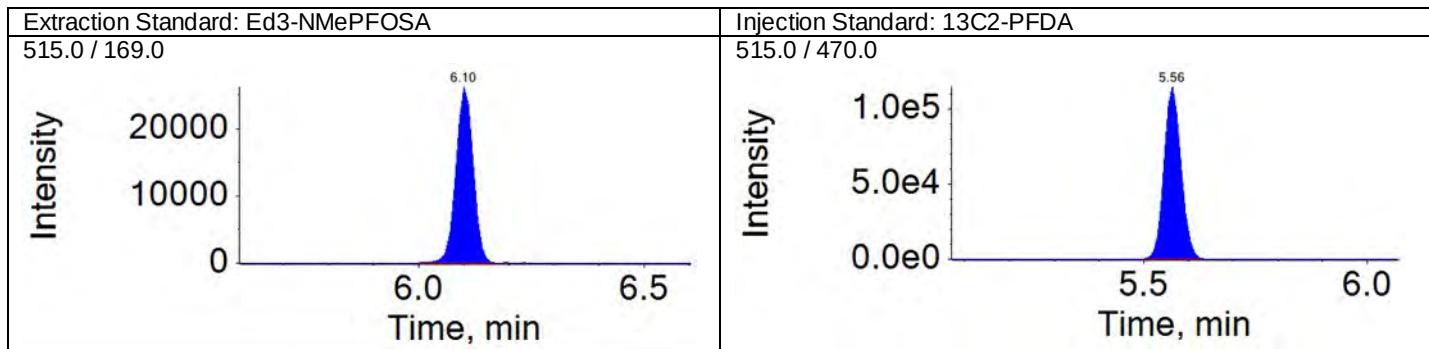
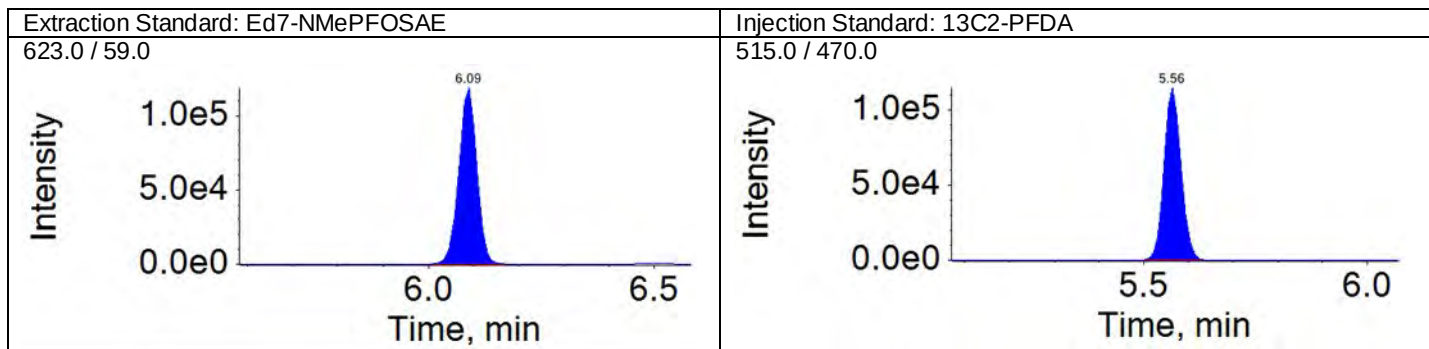
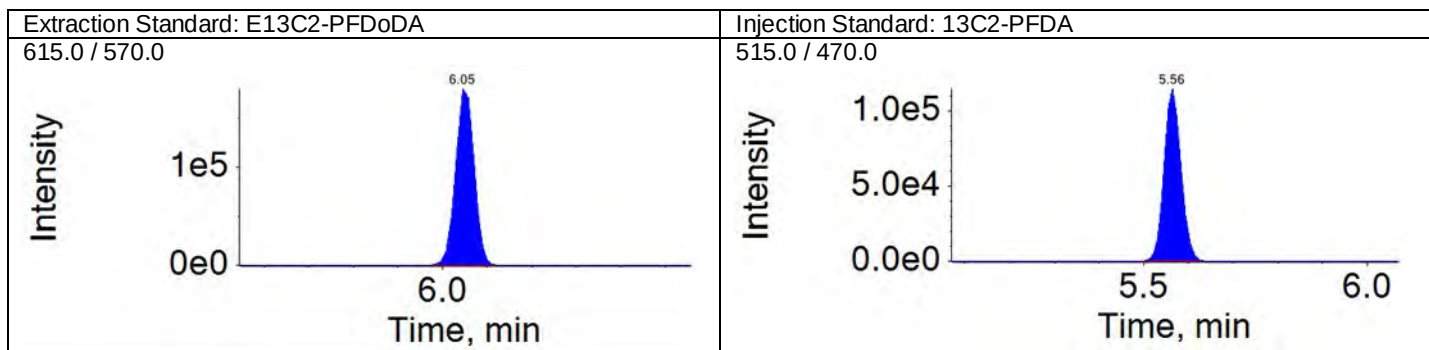
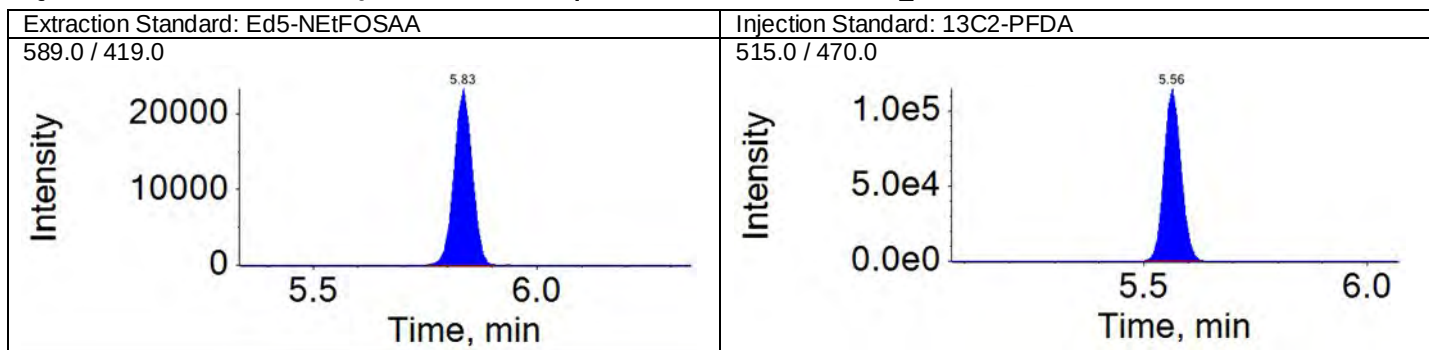
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



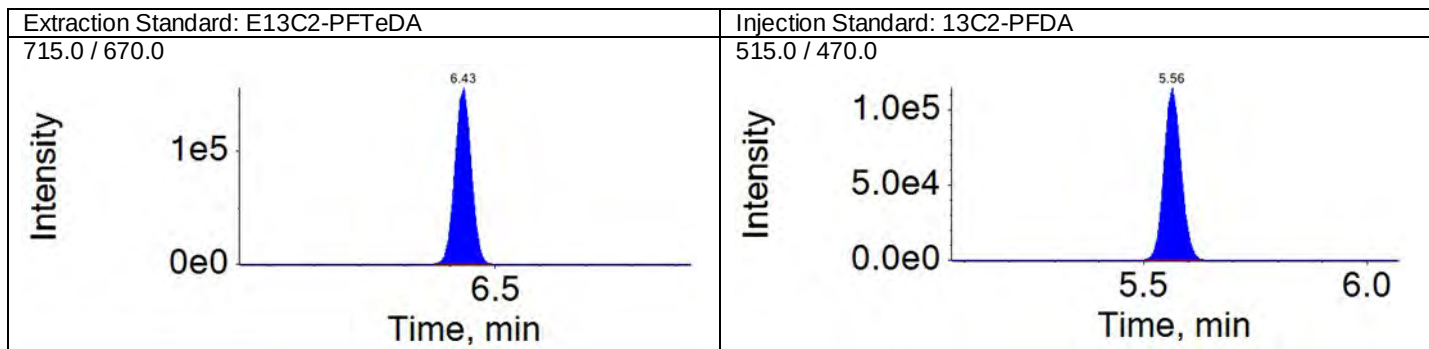
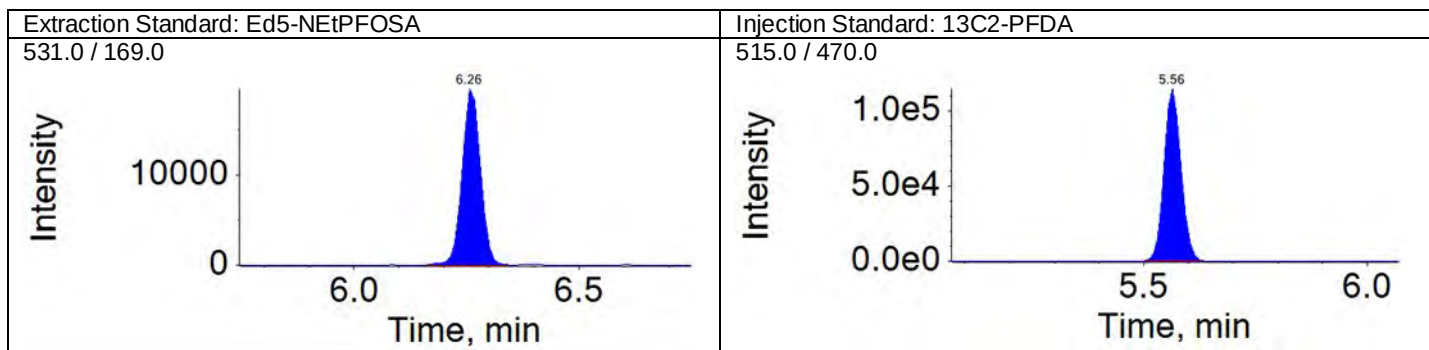
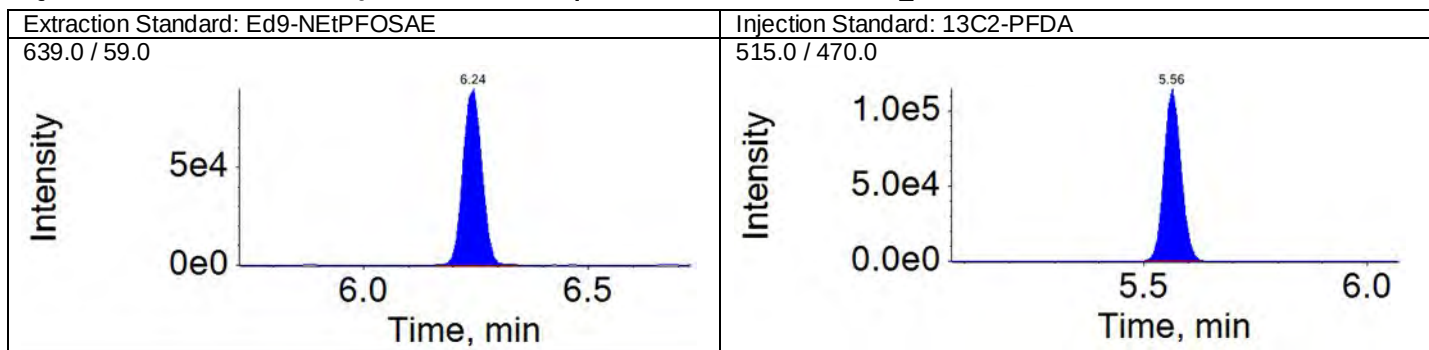
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



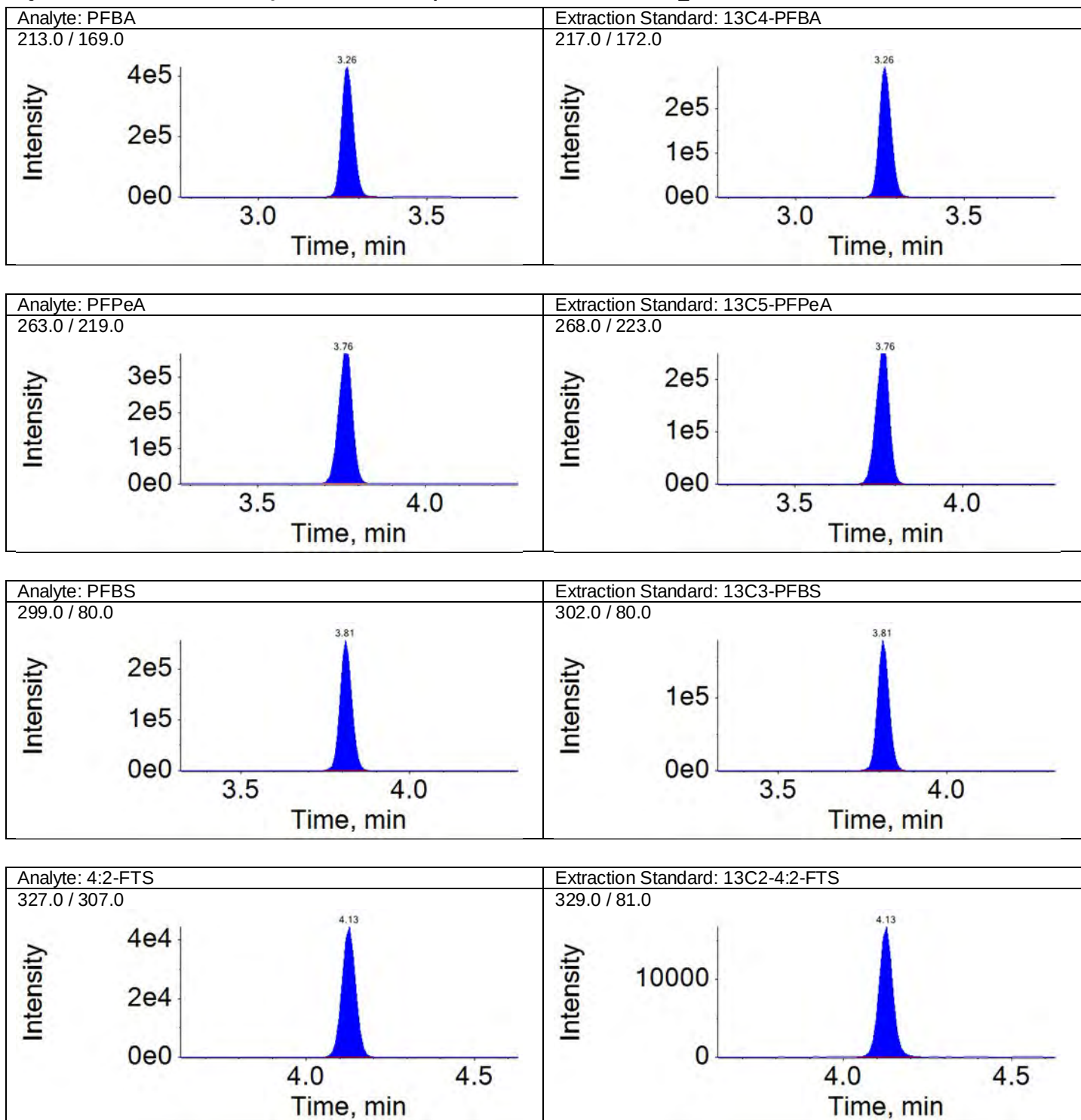
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



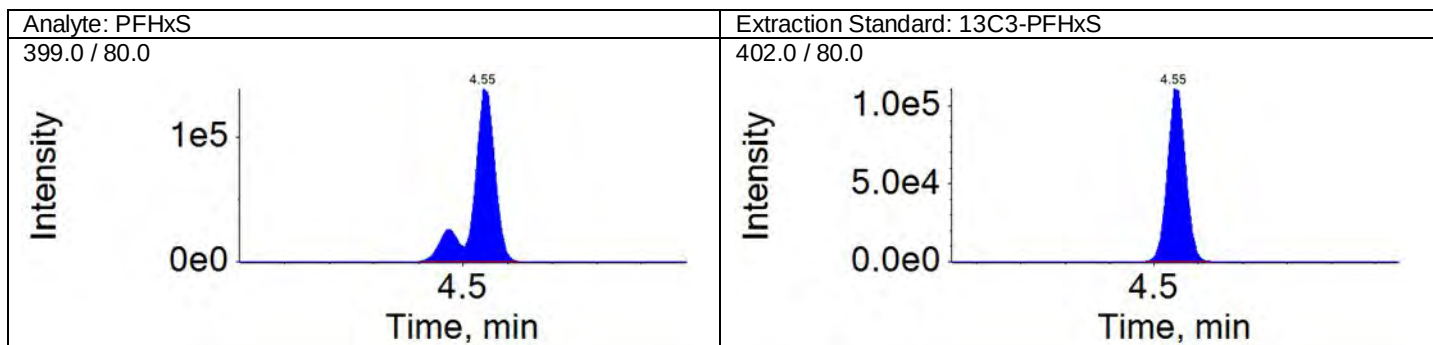
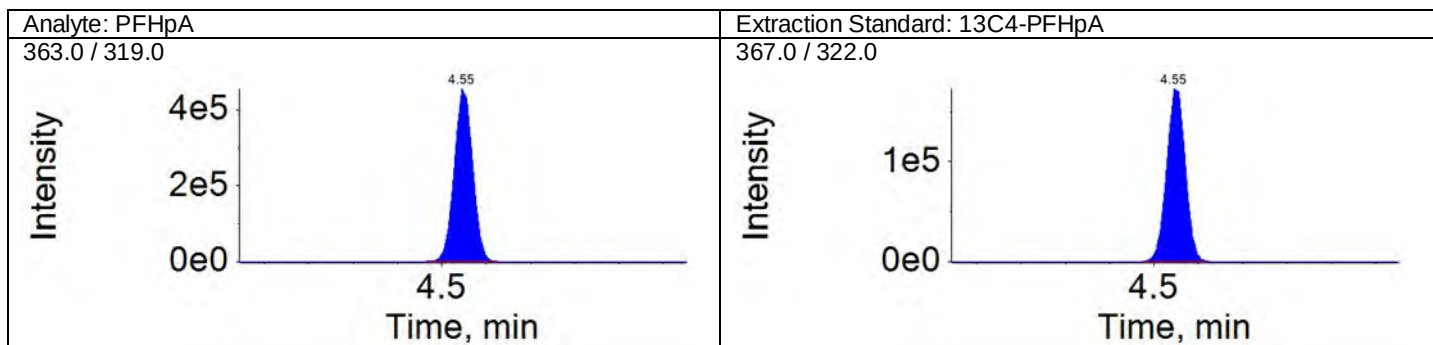
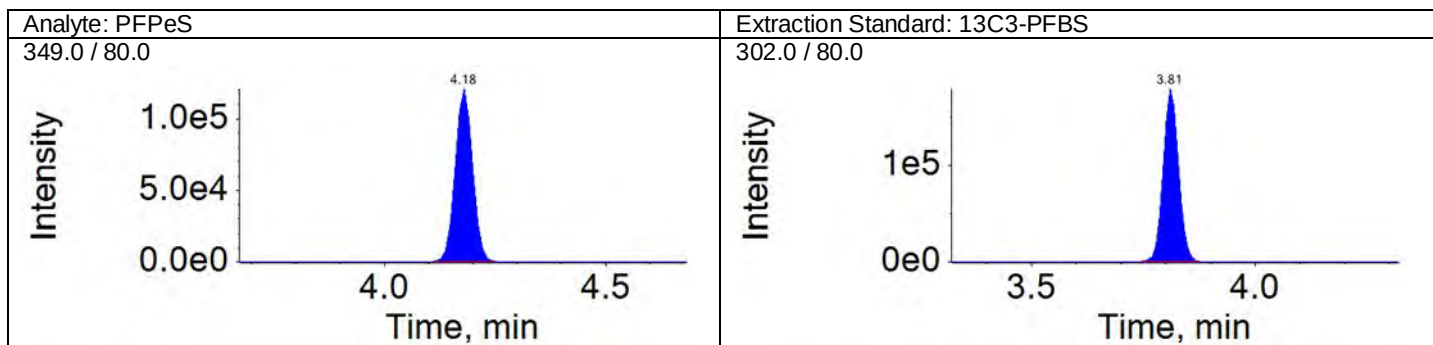
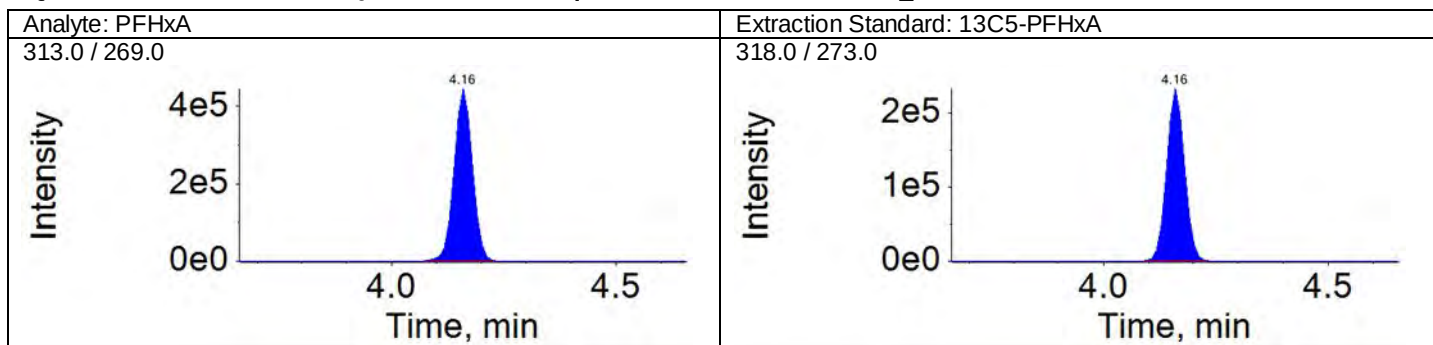
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



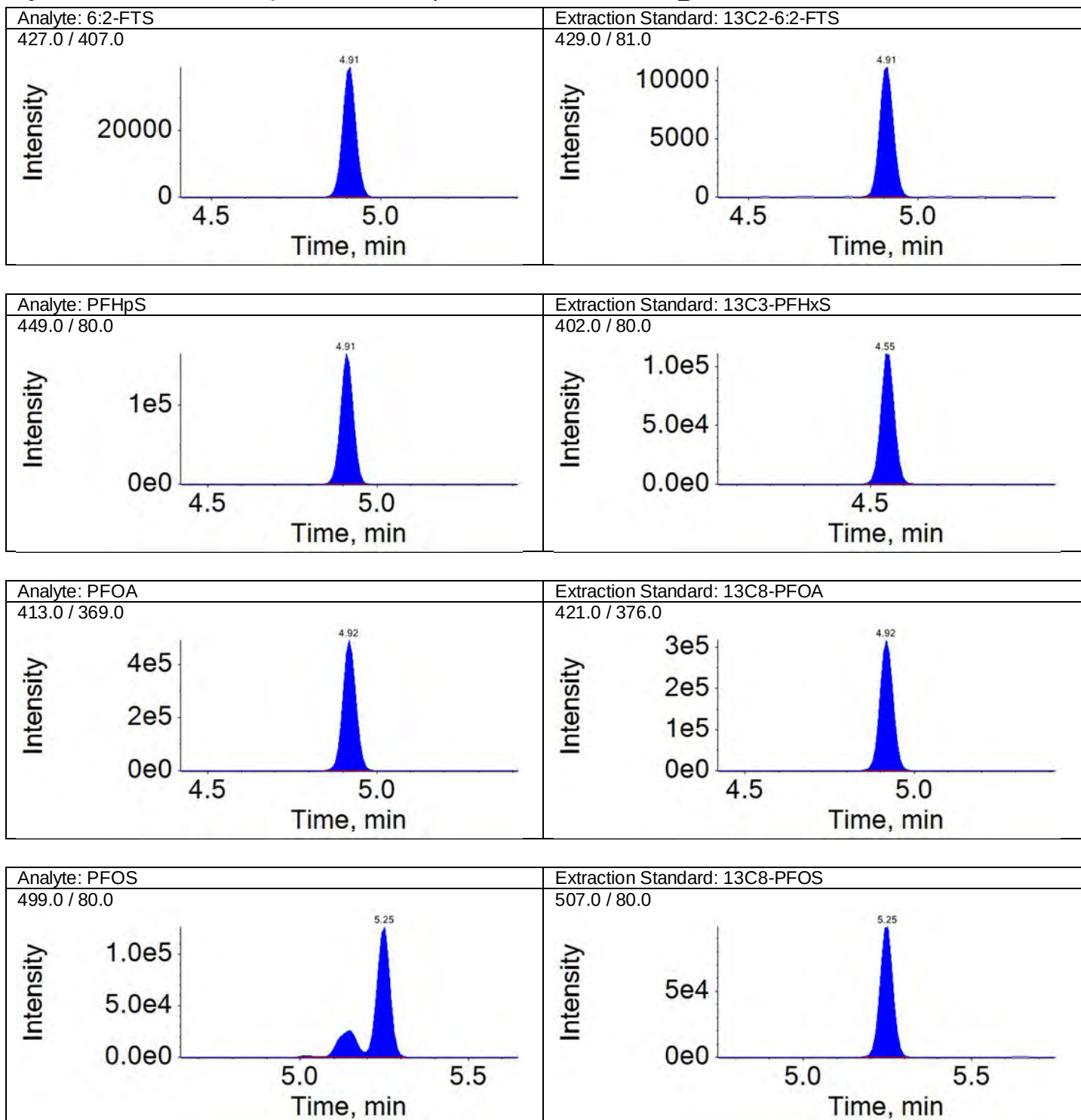
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



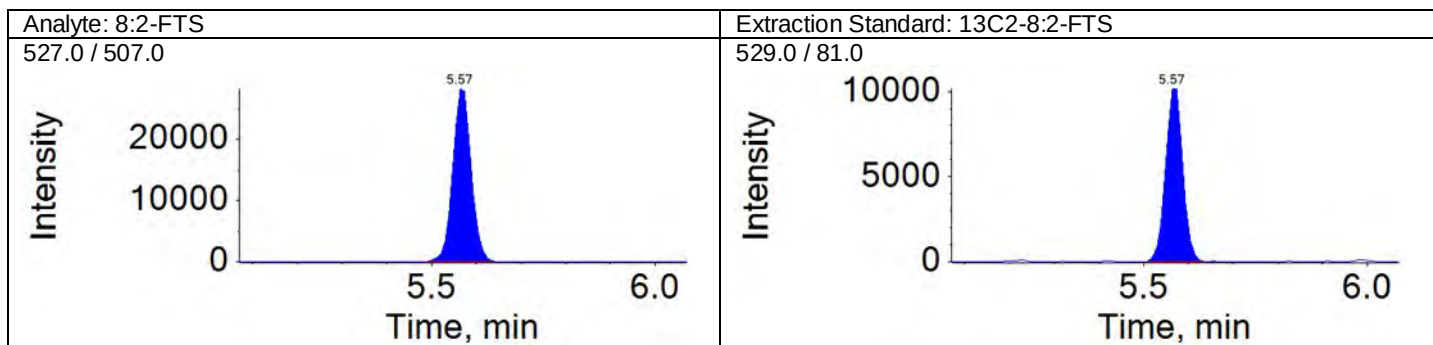
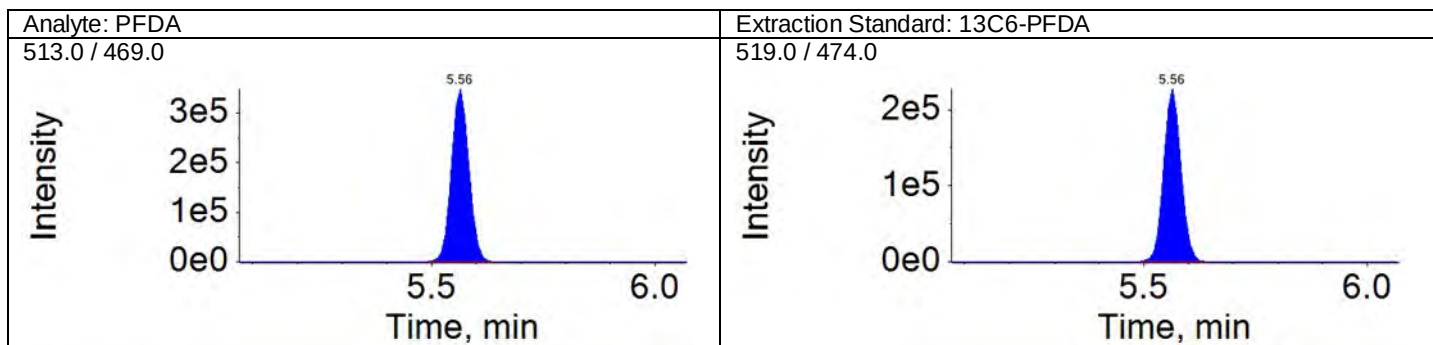
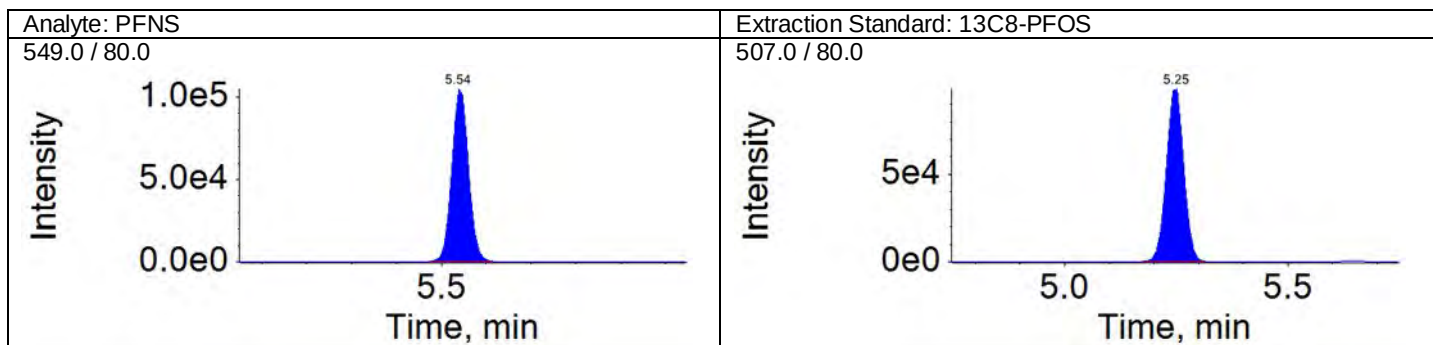
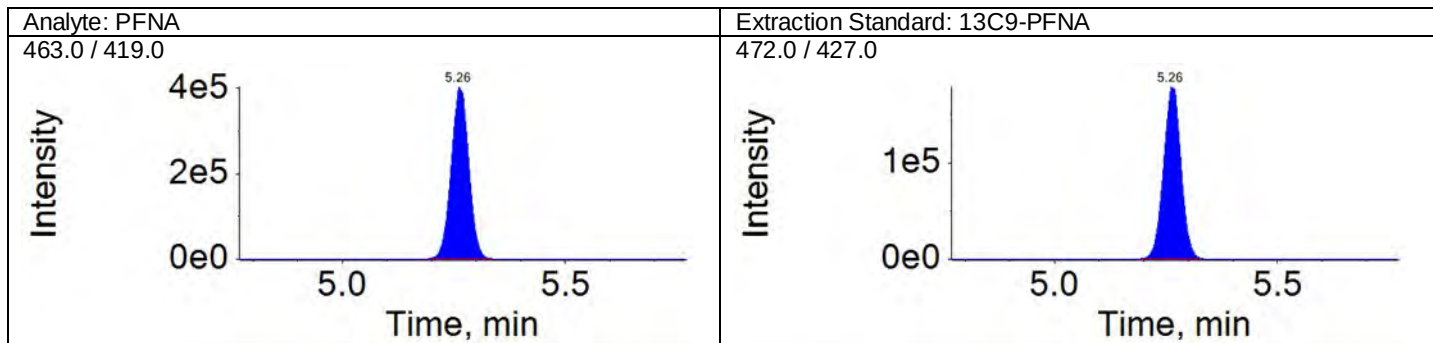
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



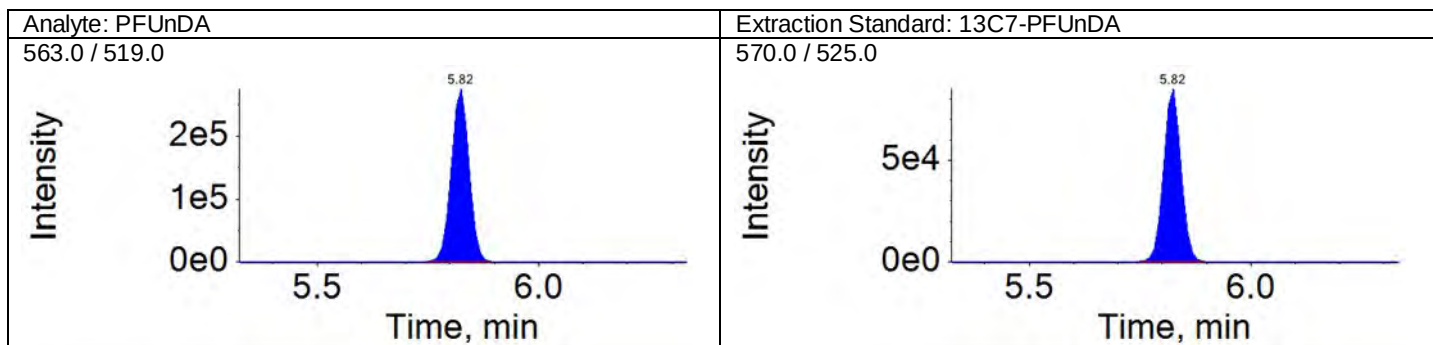
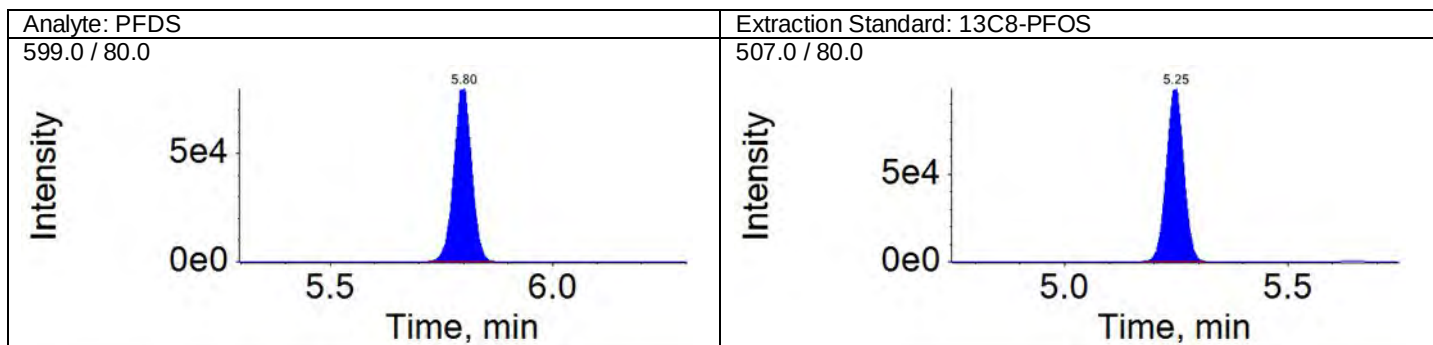
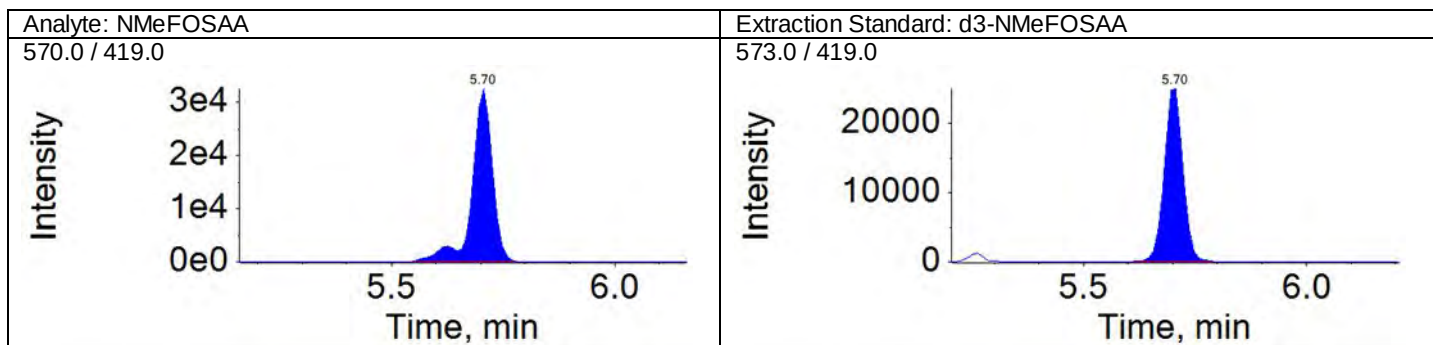
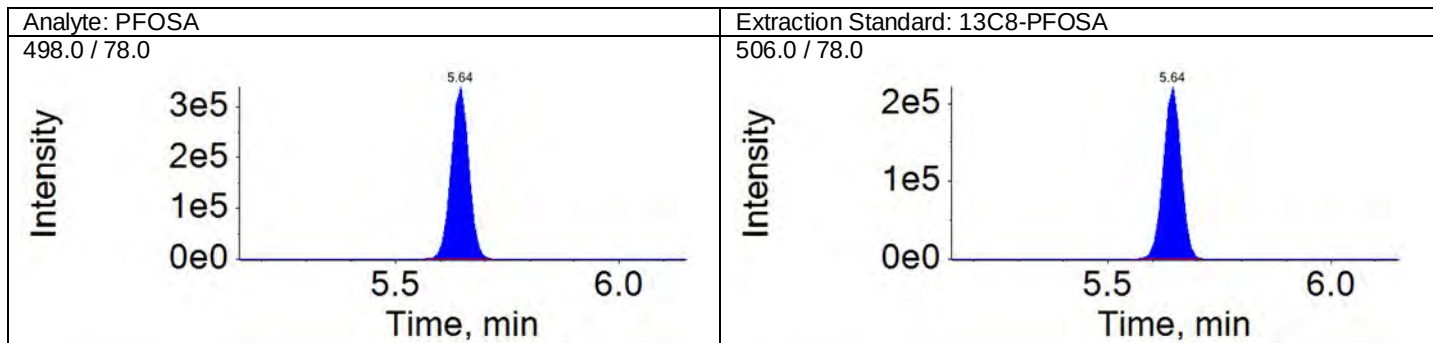
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



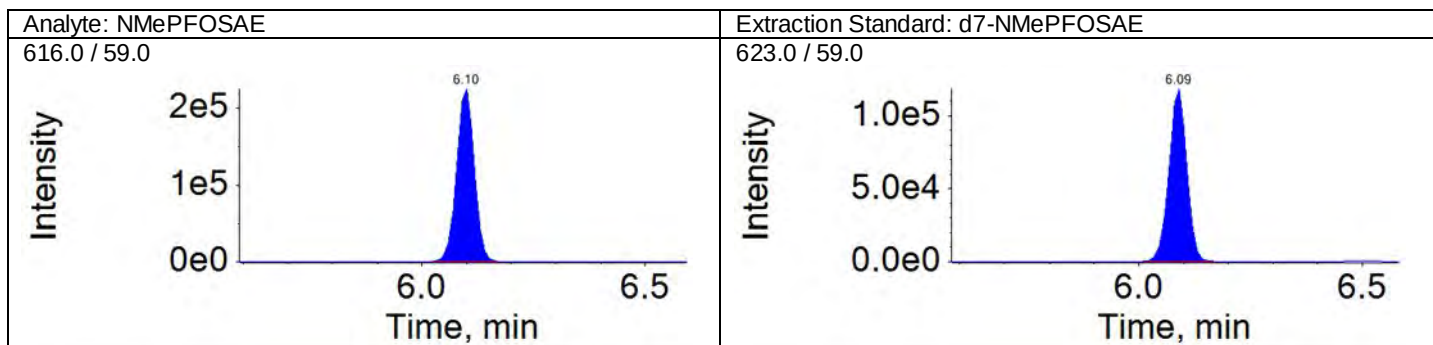
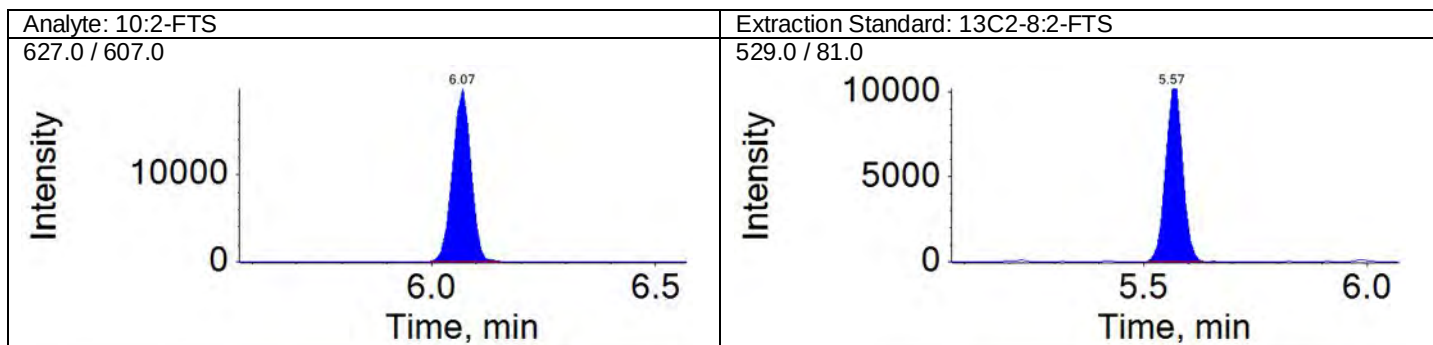
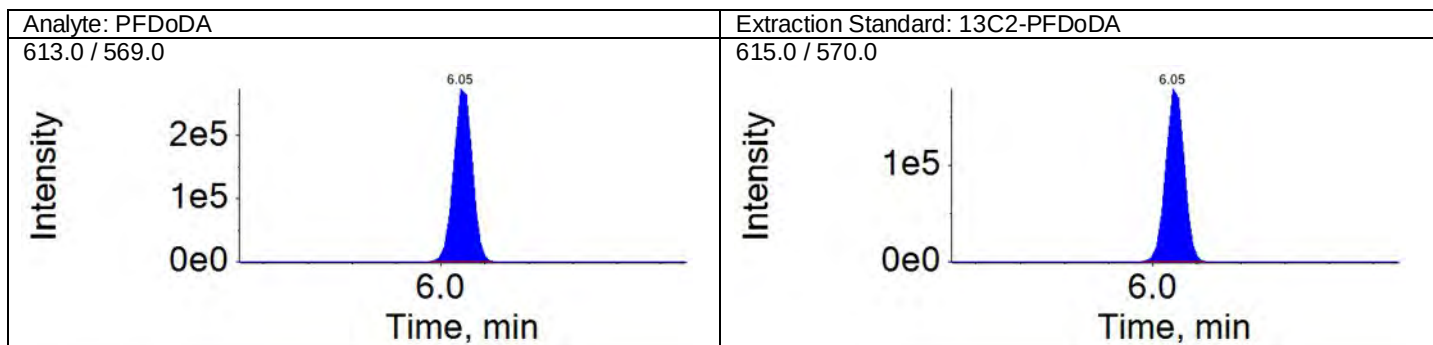
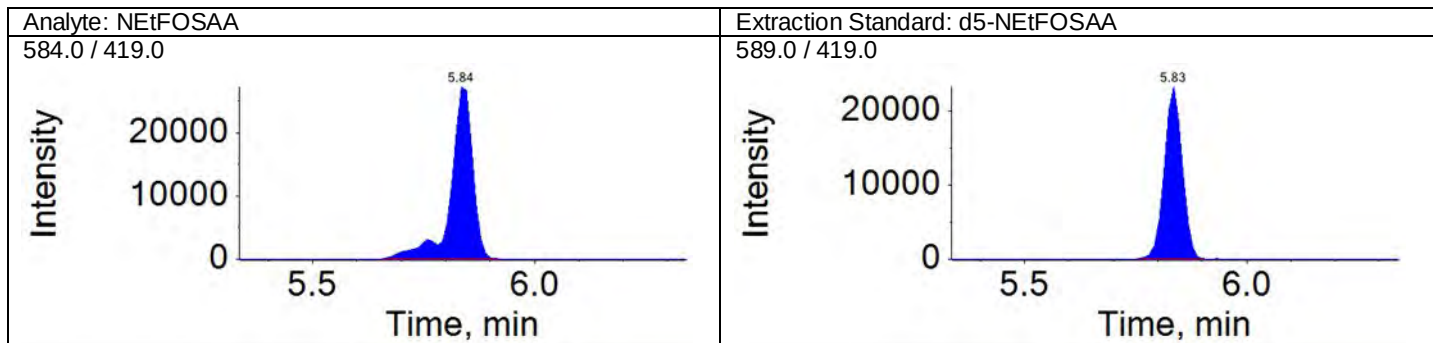
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



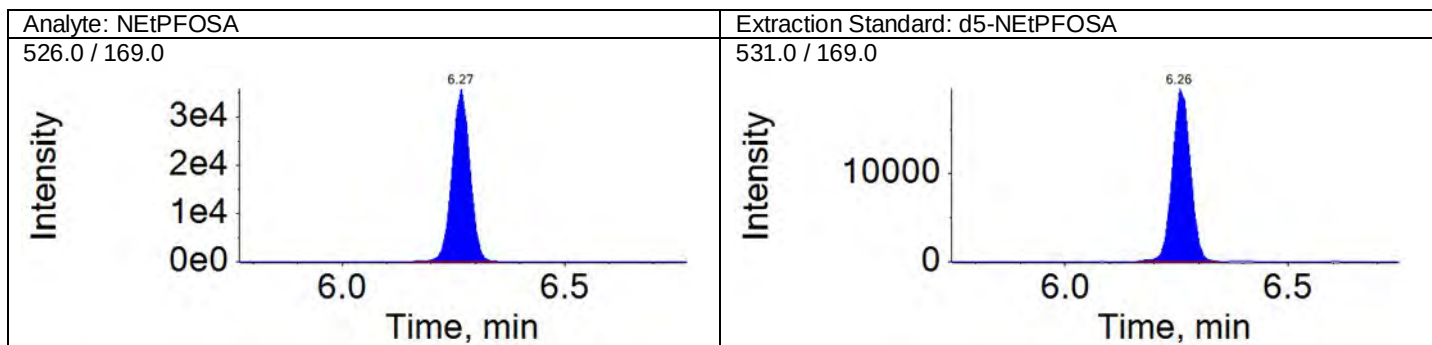
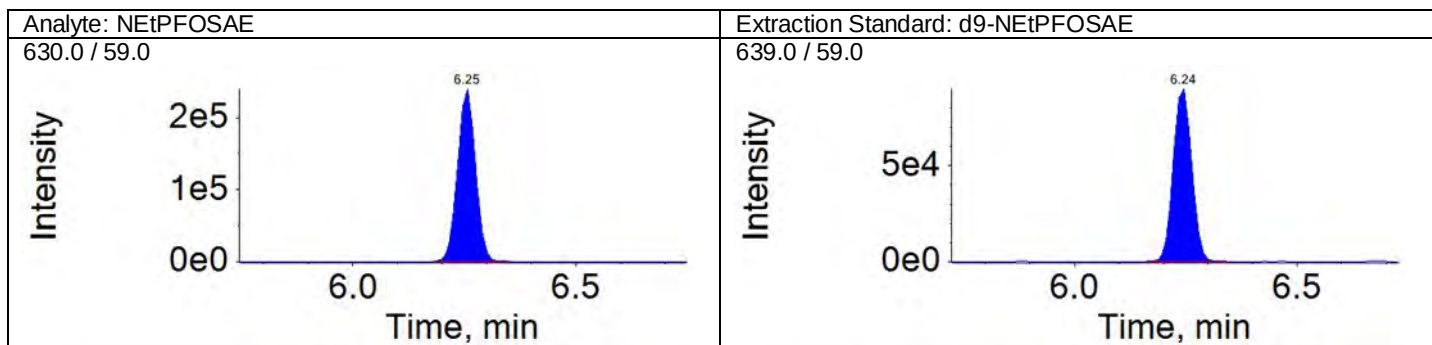
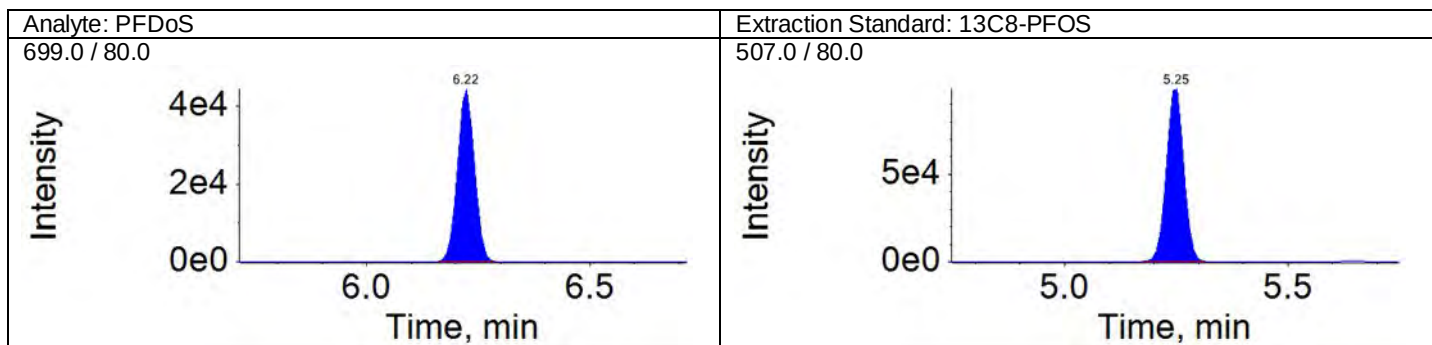
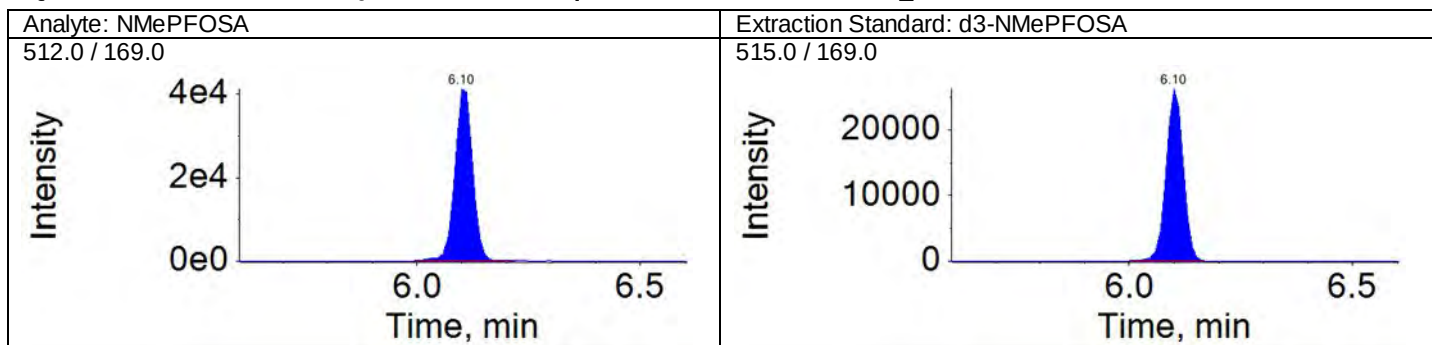
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



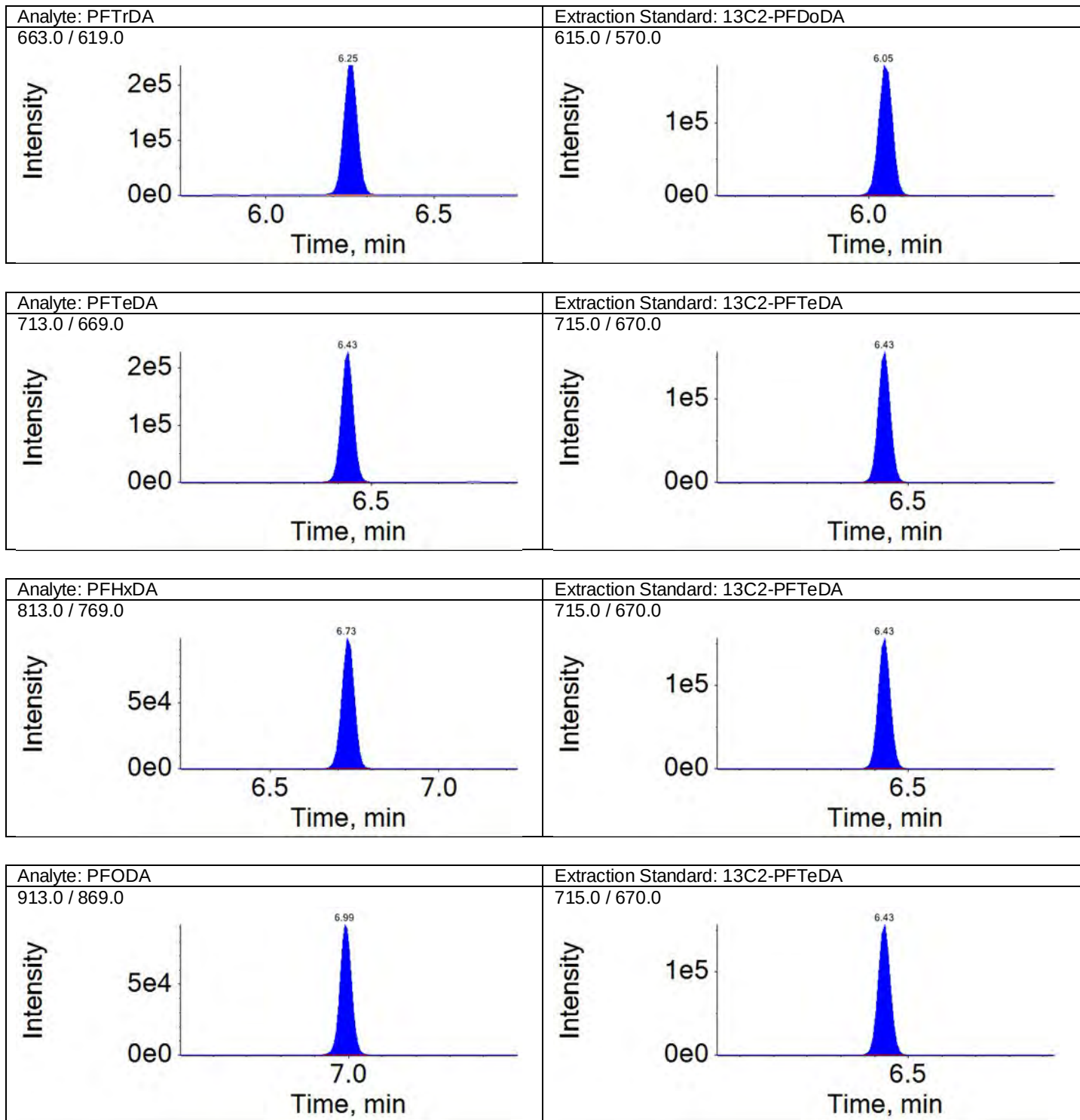
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



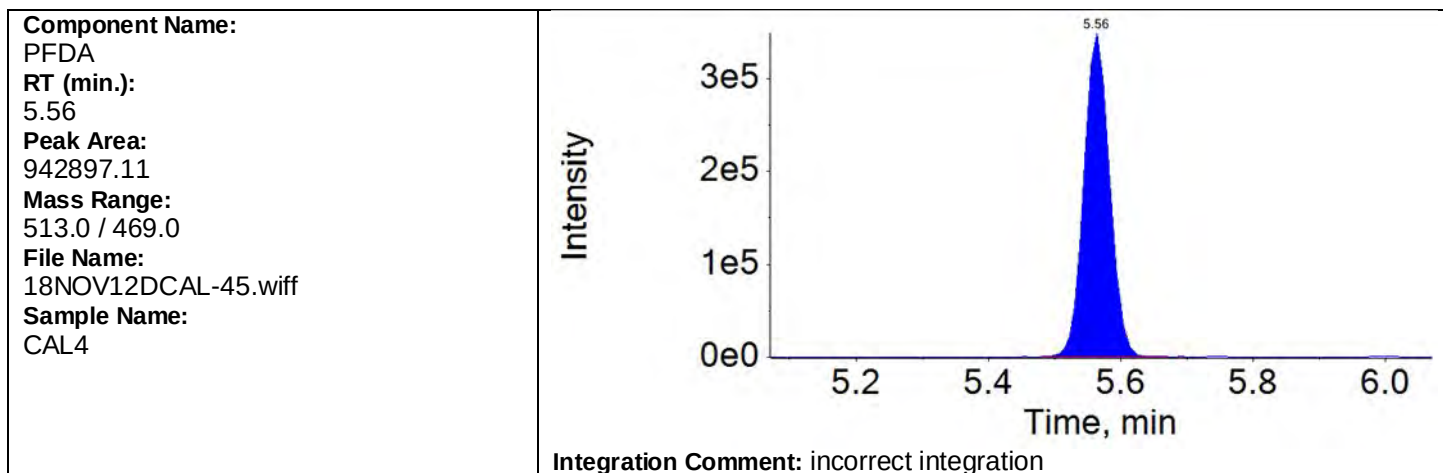
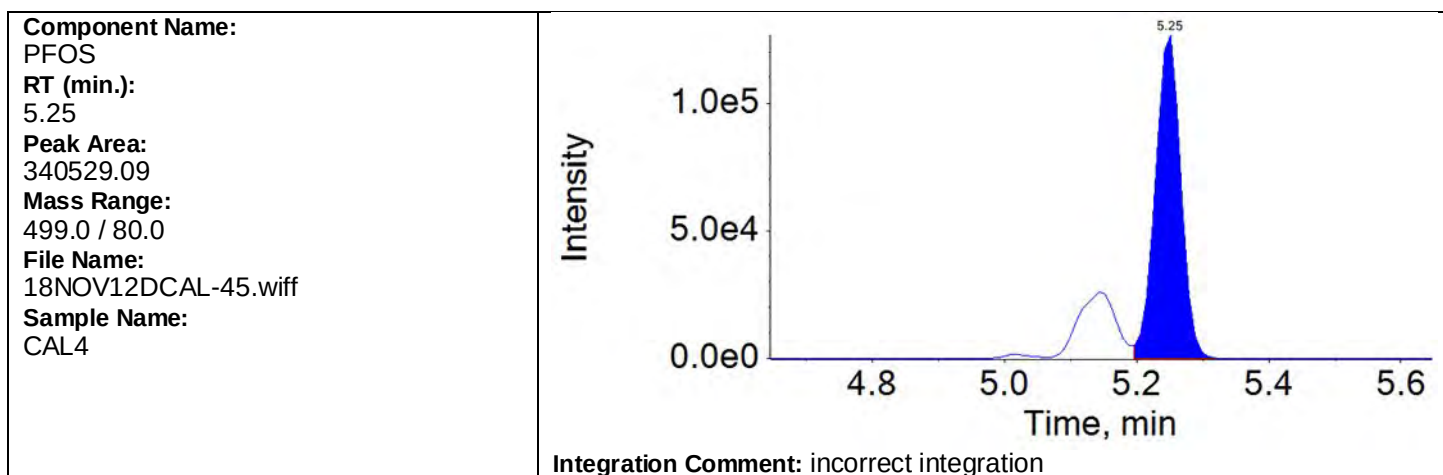
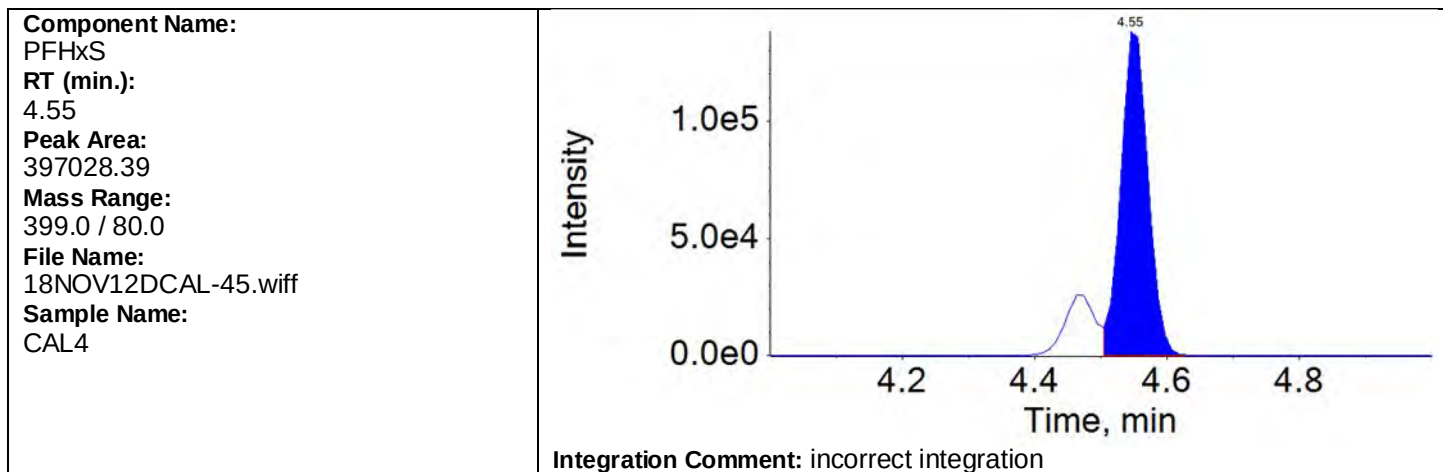
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

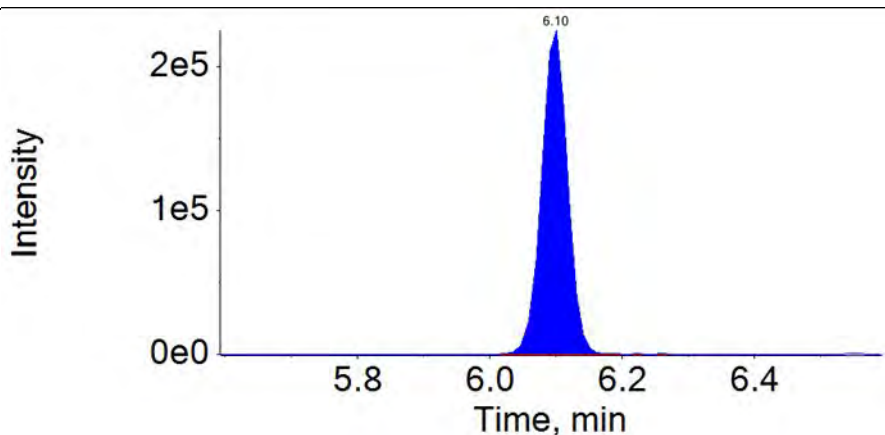
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

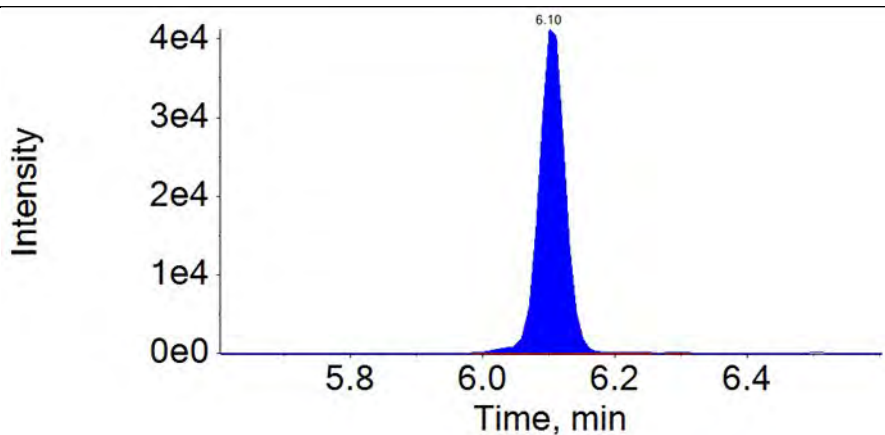
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMePFOSAE
RT (min.):
6.10
Peak Area:
620009.05
Mass Range:
616.0 / 59.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



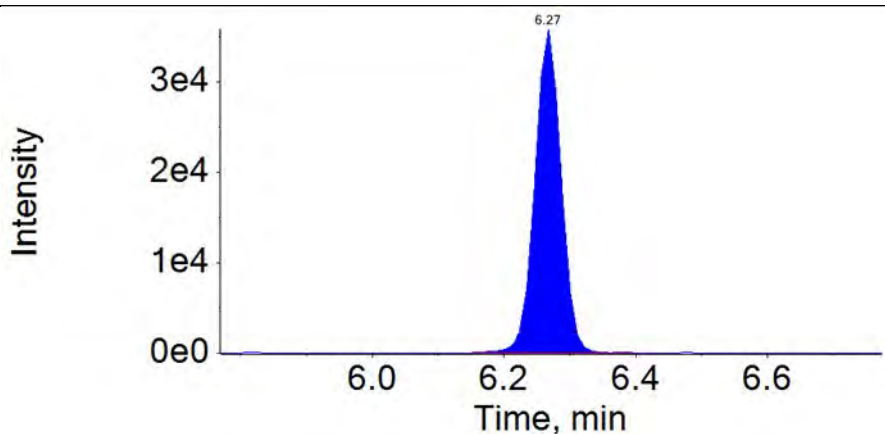
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
115018.95
Mass Range:
512.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

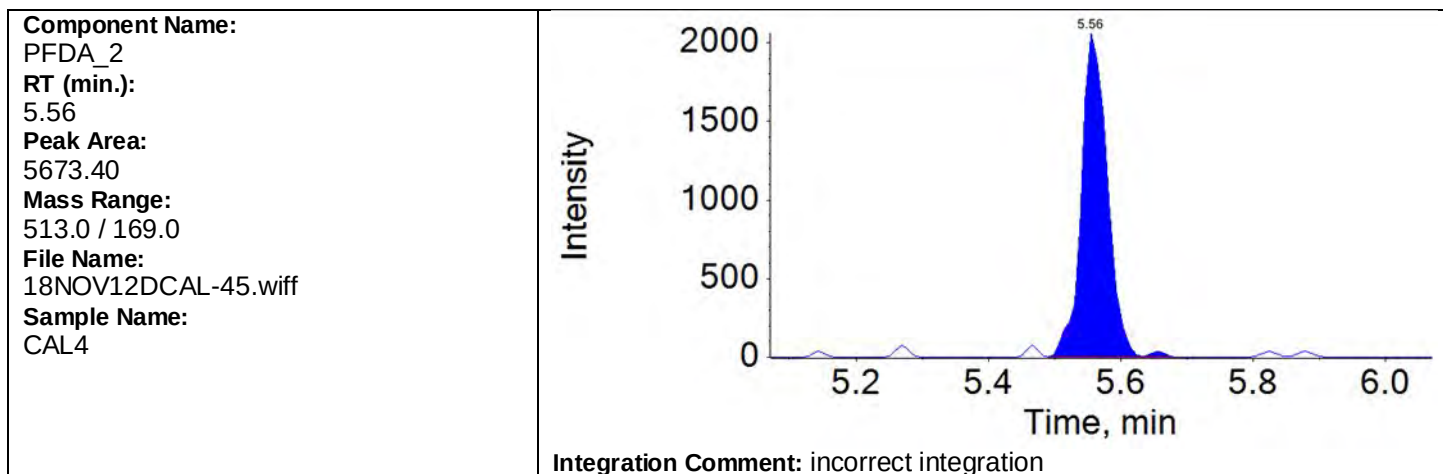
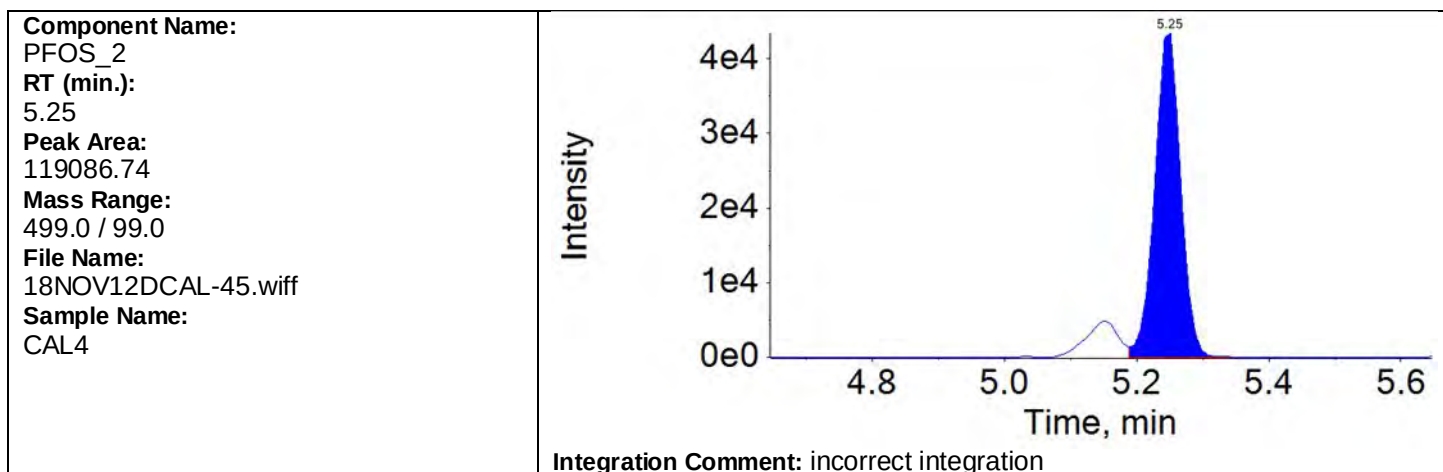
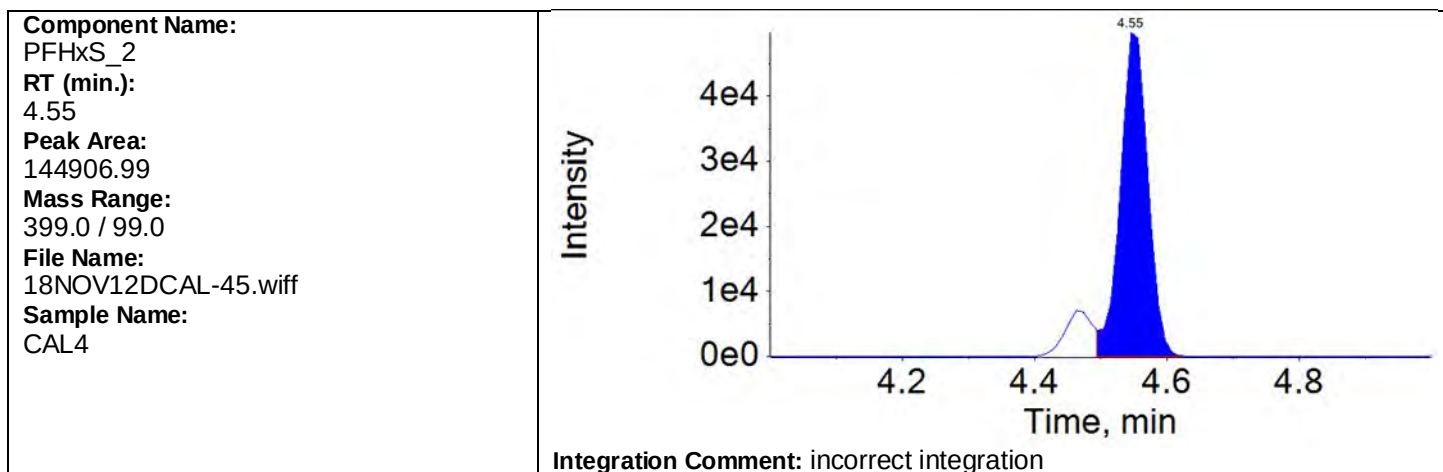
Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
99550.21
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

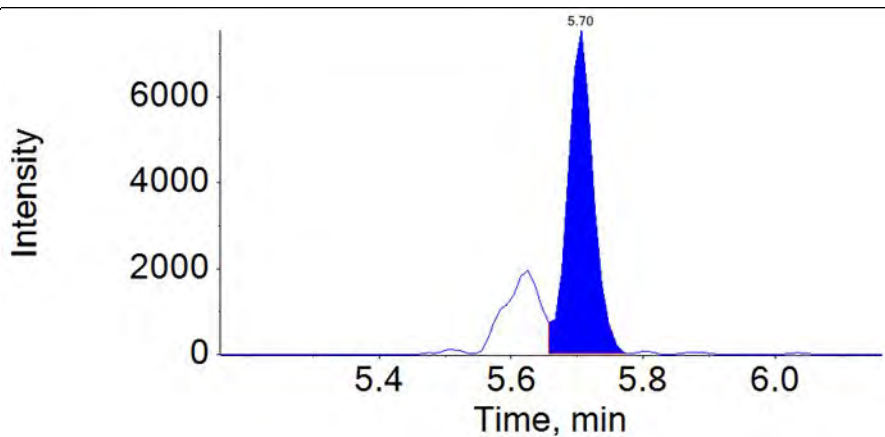
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

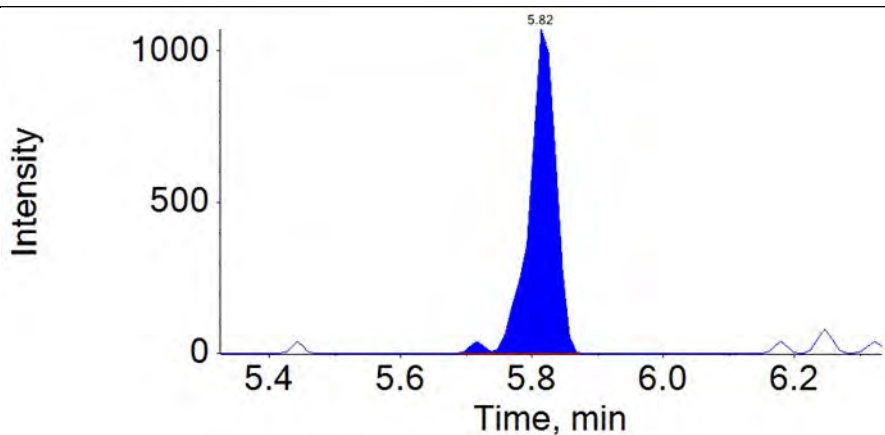
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
20115.54
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



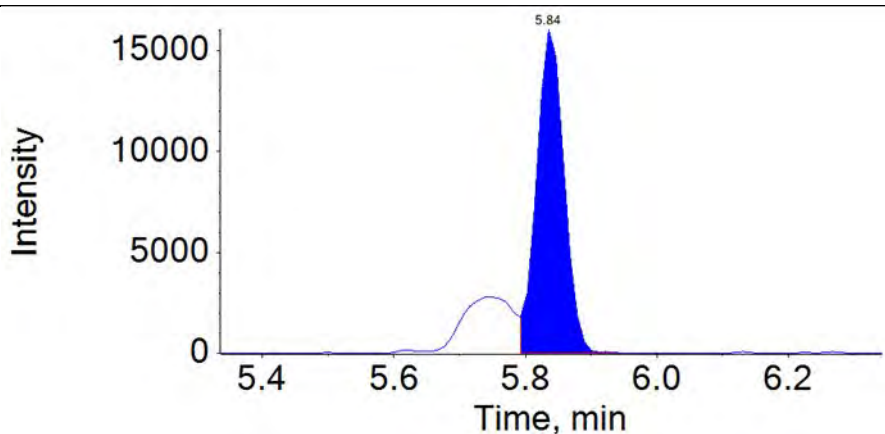
Integration Comment: incorrect integration

Component Name:
PUnDA_2
RT (min.):
5.82
Peak Area:
3055.95
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
46742.13
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

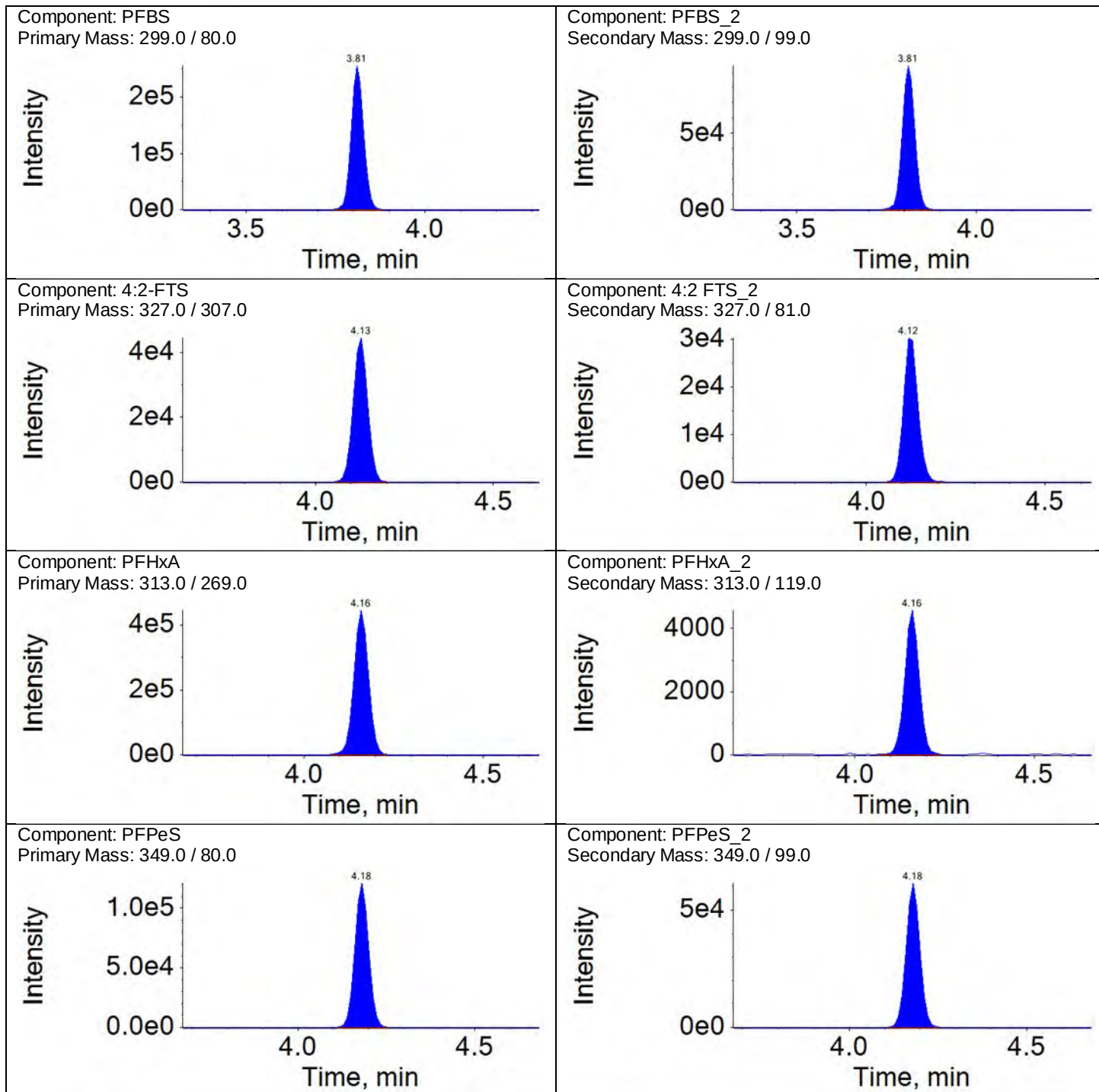
Ion Ratio Report

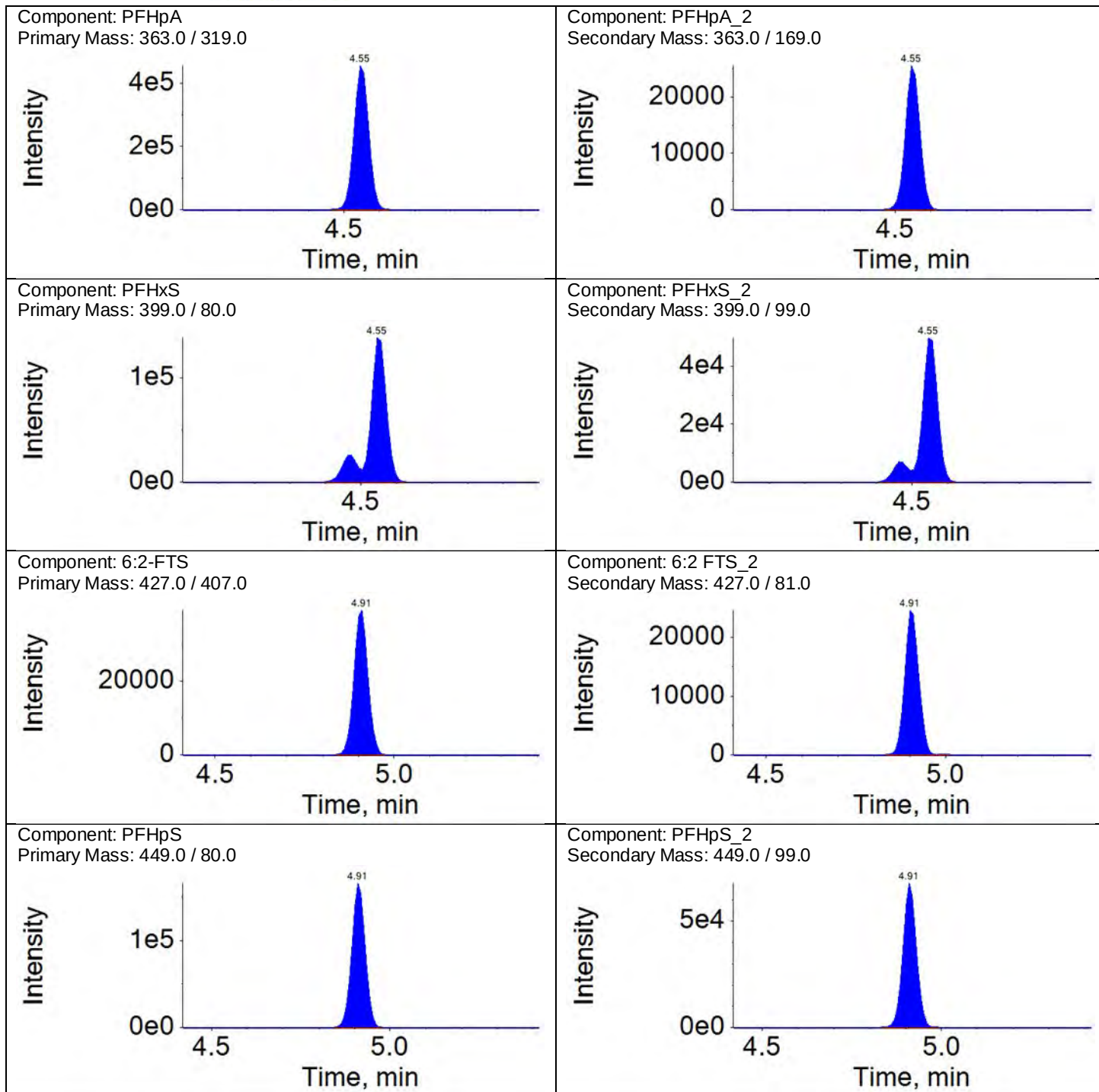
Sample Name: CAL4

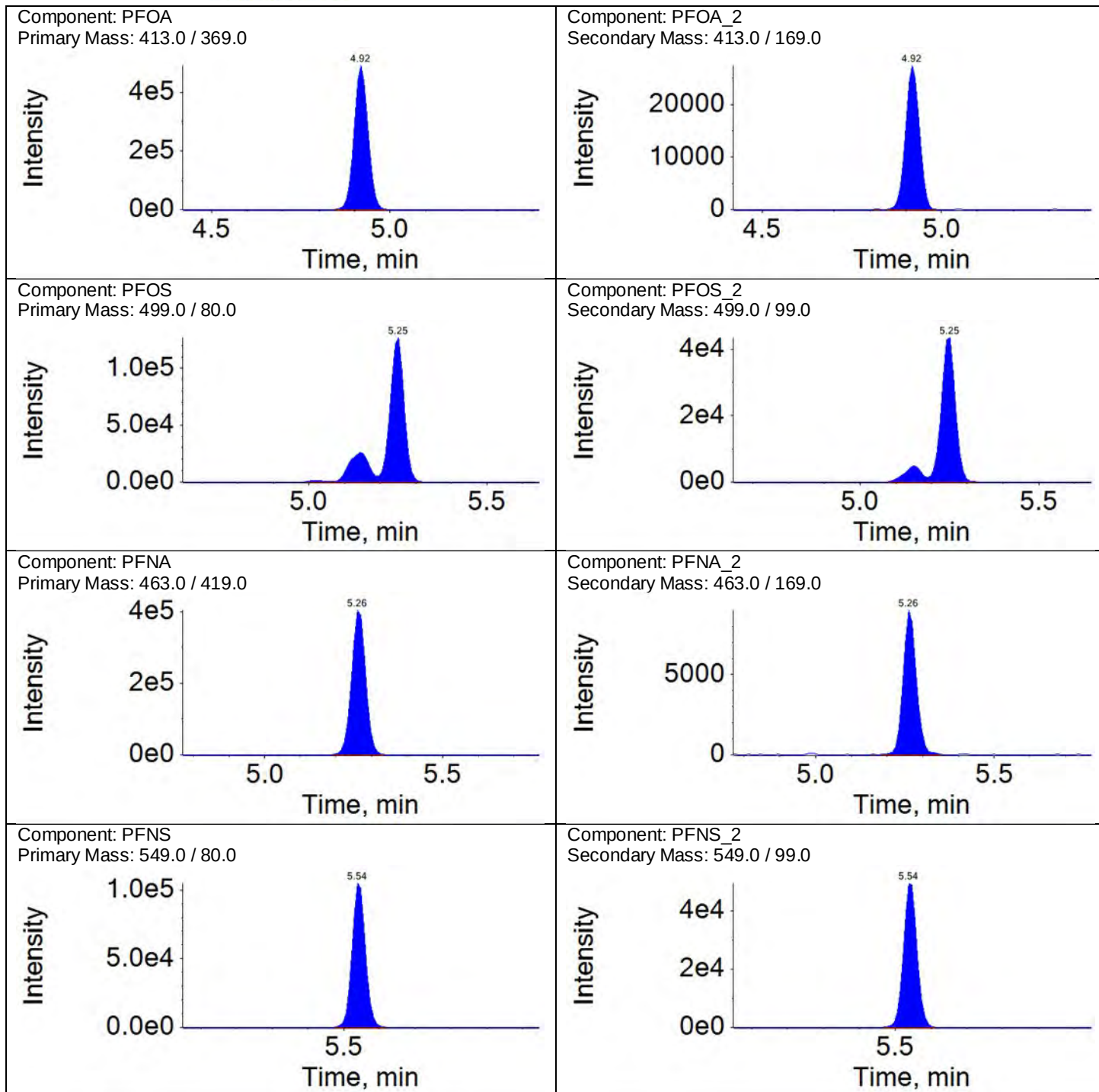
Instrument Name: LM27631

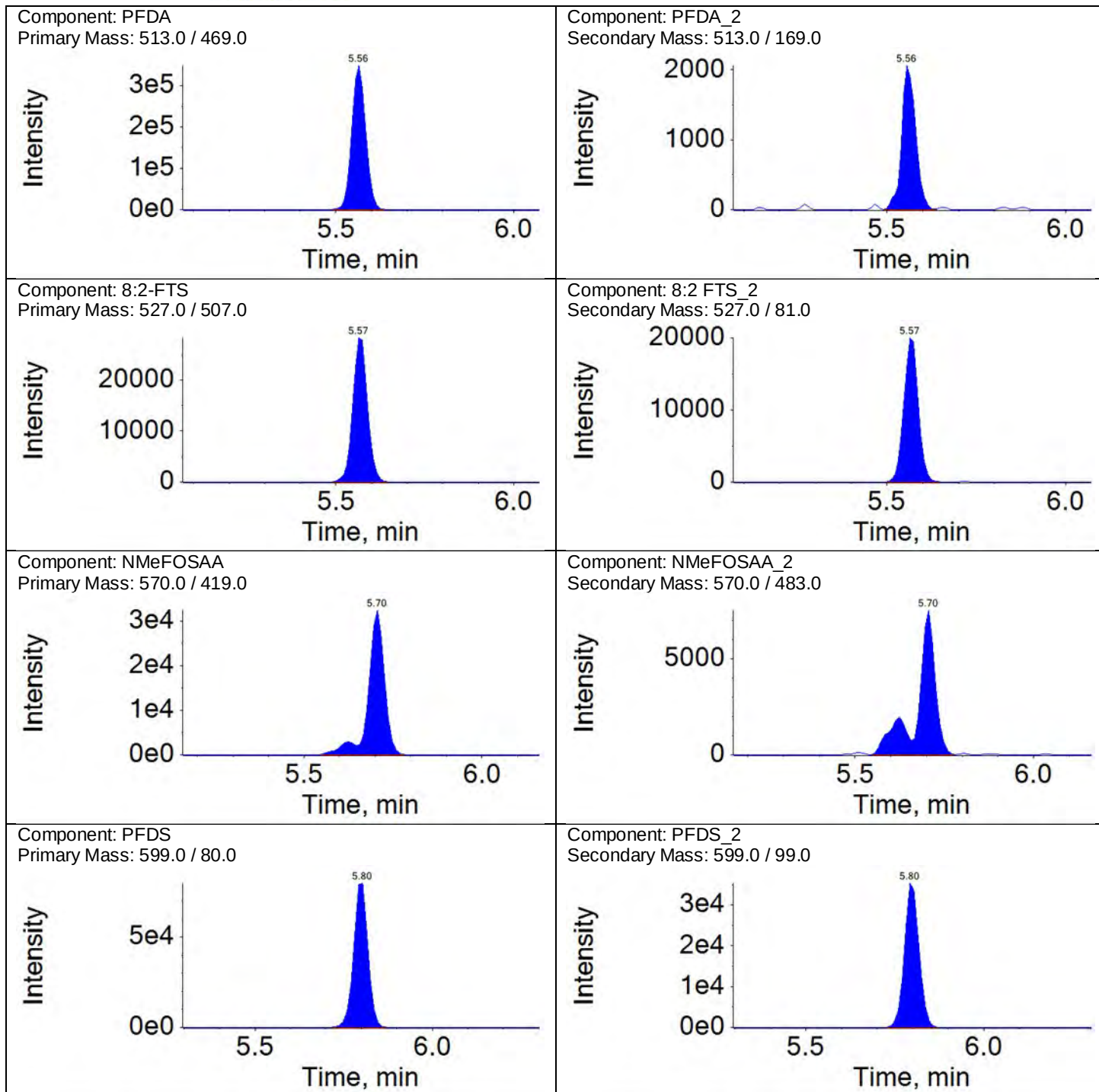
File Name: 18NOV12DCAL-45.wiff

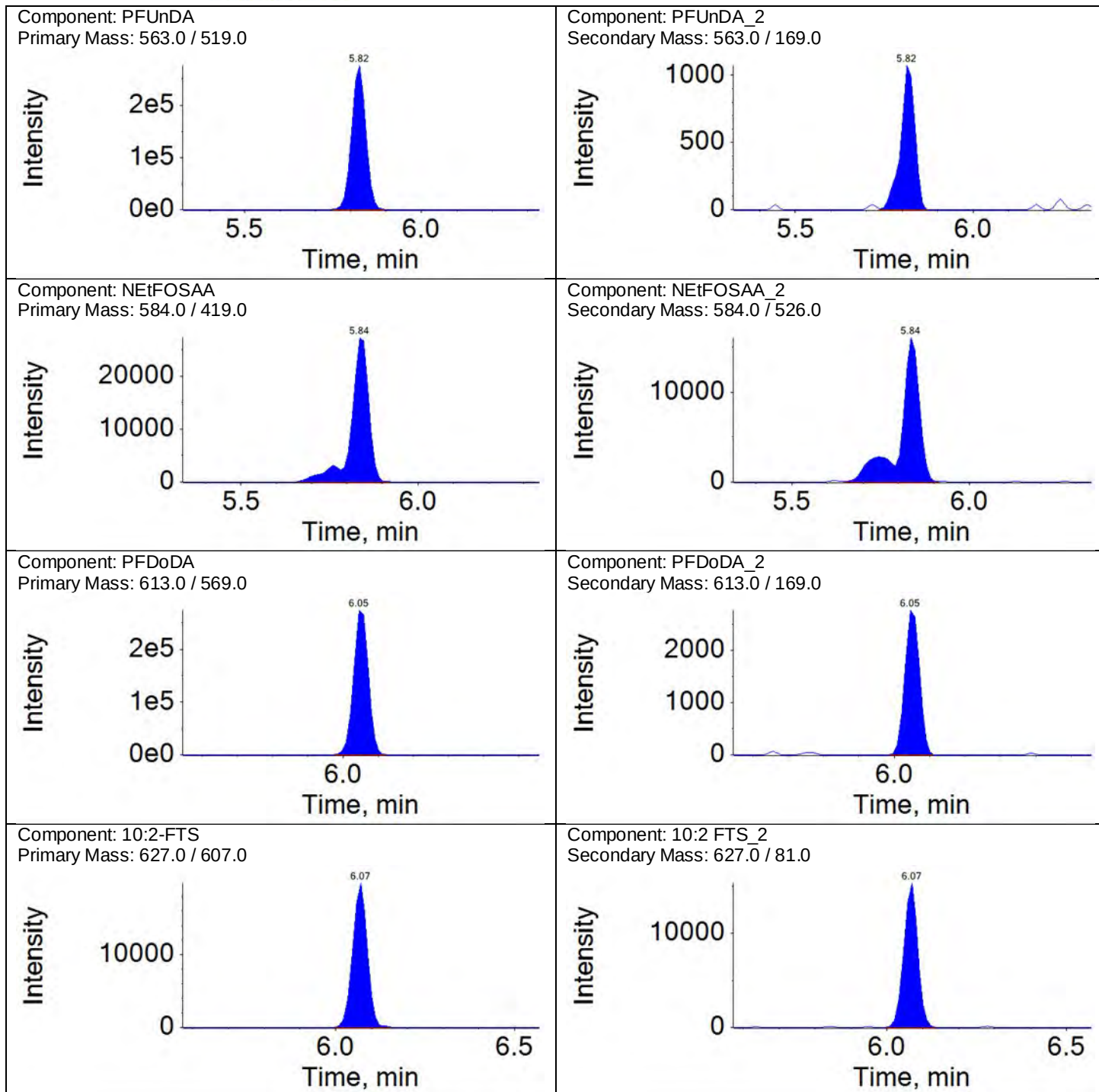
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	617045.58	A	0.3619	0.3710			
PFBS_2	3.81	1.00	228894.51	A	0.3619	0.3710	3	50	
4:2-FTS	4.13	1.00	126396.51	A	0.6730	0.6813			
4:2 FTS_2	4.12	1.00	86110.06	A	0.6730	0.6813		#NA!	
PFHxA	4.16	1.00	1265231.12	A	0.0117	0.0101			
PFHxA_2	4.16	1.00	12793.78	A	0.0117	0.0101	-13	50	
PFPeS	4.18	1.10	328681.66	A	0.5191	0.5078			
PFPeS_2	4.18	1.10	166890.99	A	0.5191	0.5078	-2	50	
PFHpA	4.55	1.00	1318774.50	A	0.0563	0.0555			
PFHpA_2	4.55	1.00	73135.24	A	0.0563	0.0555	-2	50	
PFHxS	4.55	1.00	479290.97	M	0.3428	0.3441			
PFHxS_2	4.55	1.00	164902.13	M	0.3428	0.3441	0	50	
6:2-FTS	4.91	1.00	107470.62	A	0.6604	0.6264			
6:2 FTS_2	4.91	1.00	67319.96	A	0.6604	0.6264		#NA!	
PFHpS	4.91	1.08	434949.18	A	0.4066	0.4089			
PFHpS_2	4.91	1.08	177851.23	A	0.4066	0.4089	1	50	
PFOA	4.92	1.00	1327086.09	A	0.0562	0.0557			
PFOA_2	4.92	1.00	73867.47	A	0.0562	0.0557	-1	50	
PFOS	5.25	1.00	448833.83	M	0.2968	0.3022			
PFOS_2	5.25	1.00	135652.81	M	0.2968	0.3022	2	50	
PFNA	5.26	1.00	1106664.23	A	0.0229	0.0210			
PFNA_2	5.26	1.00	23205.90	A	0.0229	0.0210	-8	50	
PFNS	5.54	1.06	269712.27	A	0.4828	0.4818			
PFNS_2	5.54	1.06	129941.05	A	0.4828	0.4818	0	50	
PFDA	5.56	1.00	941985.31	M	0.0081	0.0060			
PFDA_2	5.56	1.00	5626.45	M	0.0081	0.0060	-26	50	
8:2-FTS	5.57	1.00	80922.57	A	0.6814	0.6947			
8:2 FTS_2	5.57	1.00	56219.65	A	0.6814	0.6947		#NA!	
NMeFOSAA	5.70	1.00	103649.07	A	0.2569	0.2651			
NMeFOSAA_2	5.70	1.00	27472.86	M	0.2569	0.2651	3	50	
PFDS	5.80	1.11	224031.22	A	0.5144	0.4482			
PFDS_2	5.80	1.10	100404.30	A	0.5144	0.4482	-13	50	
PFUnDA	5.82	1.00	768010.80	A	0.0058	0.0039			
PFUnDA_2	5.82	1.00	2997.45	M	0.0058	0.0039	-33	50	
NEtFOSAA	5.84	1.00	94877.84	A	0.7253	0.6488			
NEtFOSAA_2	5.84	1.00	61554.78	M	0.7253	0.6488	-11	50	
PFDODA	6.05	1.00	803646.84	A	0.0157	0.0099			
PFDODA_2	6.05	1.00	7981.38	A	0.0157	0.0099	-37	50	
10:2-FTS	6.07	1.09	56040.80	A	0.6356	0.7371			
10:2 FTS_2	6.07	1.09	41308.18	A	0.6356	0.7371		#NA!	
PFTTrDA	6.25	1.03	674140.32	A	0.0086	0.0101			
PFTTrDA_2	6.25	1.03	6830.51	A	0.0086	0.0101	18	50	
PFTeDA	6.43	1.00	571926.74	A	0.0062	0.0068			
PFTeDA_2	6.43	1.00	3881.08	A	0.0062	0.0068	9	50	
PFHxDA	6.73	1.05	256654.28	A	0.0683	0.0616			
PFHxDA_2	6.73	1.05	15804.20	A	0.0683	0.0616	-10	50	
PFODA	6.99	1.09	219359.64	A	0.0277	0.0258			
PFODA_2	6.99	1.09	5669.48	A	0.0277	0.0258	-7	50	

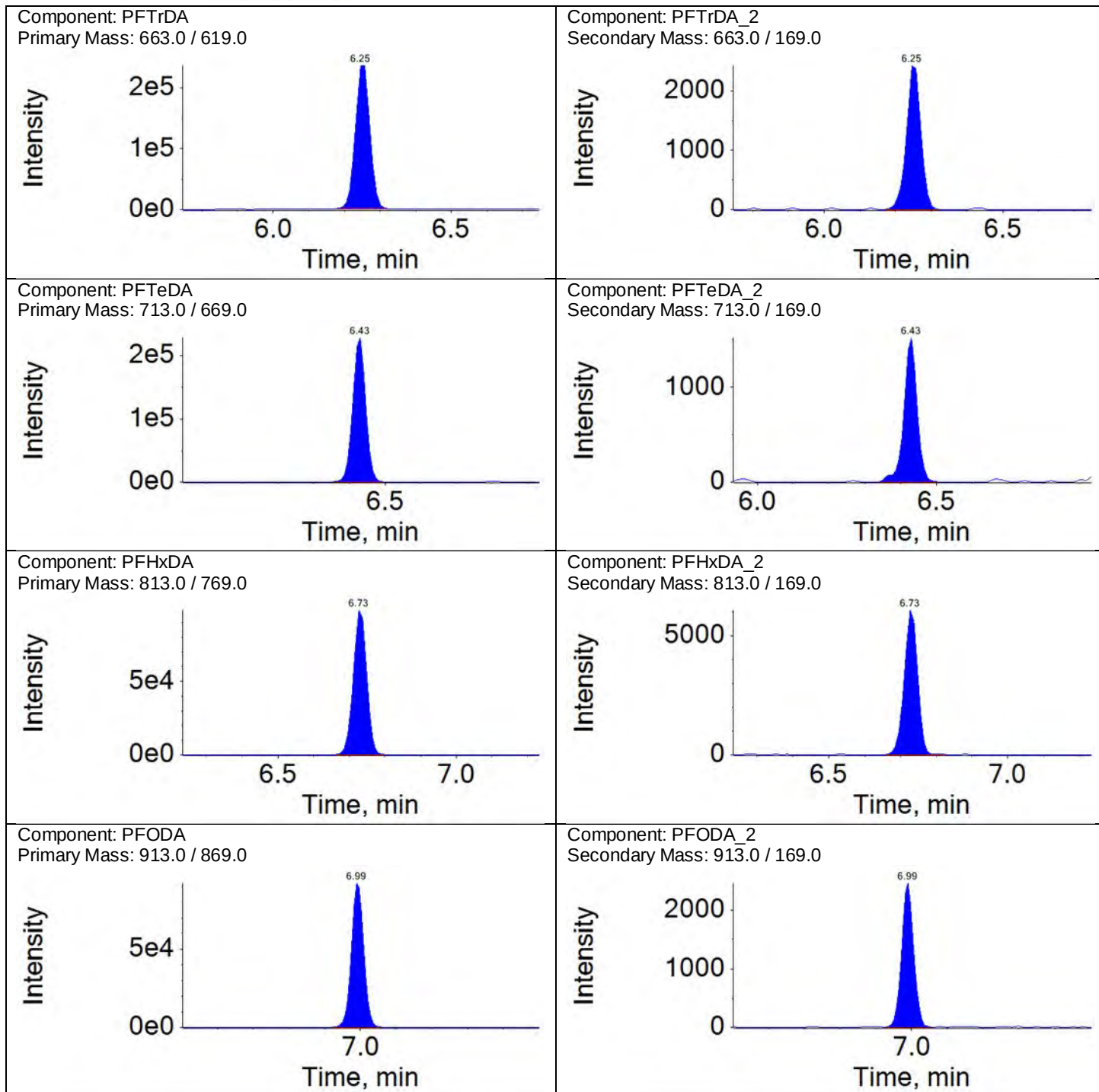












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL5		Data File:	18NOV12DCAL-46.wiff
Sample ID:	CALBRN51833B		Acquis Date:	2018-11-12T15:42:06
Sample Type:	Standard		Instrument:	LM27631
Vial Position:	7		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	641789.5	659926.2	-3	50	
13C2-PFOA	5.0	464284.6	450219.7	3	50	
13C4-PFOS	4.8	243589.9	249205.8	-2	50	
13C2-PFDA	5.0	269315.7	278743.9	-3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	698871.9	13C3-PFBA	641789.5	1.089	5.000	4.882	98	70-130	
E13C5-PFPeA	734598.3	13C3-PFBA	641789.5	1.145	5.000	5.134	103	70-130	
E13C3-PFBS	428050.6	13C3-PFBA	641789.5	0.667	4.650	4.708	101	70-130	
E13C2-4:2-FTS	51791.9	13C2-PFOA	464284.6	0.112	4.670	4.968	106	70-130	
E13C5-PFHxA	628952.8	13C2-PFOA	464284.6	1.355	5.000	4.894	98	70-130	
E13C3-PFHxS	309304.5	13C2-PFOA	464284.6	0.666	4.730	4.571	97	70-130	
E13C4-PFHpA	525802.1	13C2-PFOA	464284.6	1.132	5.000	5.102	102	70-130	
E13C2-6:2-FTS	31012.0	13C2-PFOA	464284.6	0.067	4.750	4.469	94	70-130	
E13C8-PFOA	805288.7	13C2-PFOA	464284.6	1.734	5.000	4.779	96	70-130	
E13C8-PFOS	267157.6	13C4-PFOS	243589.9	1.097	4.780	4.860	102	70-130	
E13C9-PFNA	441776.8	13C4-PFOS	243589.9	1.814	5.000	5.057	101	70-130	
E13C6-PFDA	585231.2	13C2-PFDA	269315.7	2.173	5.000	5.071	101	70-130	
E13C2-8:2-FTS	24192.1	13C2-PFDA	269315.7	0.090	4.790	4.480	94	70-130	
E13C8-PFOSA	596544.1	13C2-PFDA	269315.7	2.215	5.000	4.911	98	70-130	
Ed3-NMeFOSAA	72424.5	13C2-PFDA	269315.7	0.269	5.000	4.854	97	70-130	
E13C7-PFUnDA	231187.9	13C2-PFDA	269315.7	0.858	5.000	4.984	100	70-130	
Ed5-NEtFOSAA	63701.7	13C2-PFDA	269315.7	0.237	5.000	5.004	100	70-130	
E13C2-PFDoDA	507556.8	13C2-PFDA	269315.7	1.885	5.000	4.893	98	70-130	
Ed7-NMePFOSAE	316777.8	13C2-PFDA	269315.7	1.176	5.000	5.090	102	70-130	
Ed3-NMePFOSA	68615.7	13C2-PFDA	269315.7	0.255	5.000	4.629	93	70-130	
Ed9-NEtPFOSAE	255767.8	13C2-PFDA	269315.7	0.950	5.000	4.939	99	70-130	
Ed5-NEtPFOSA	55378.5	13C2-PFDA	269315.7	0.206	5.000	4.824	96	70-130	
E13C2-PFTeDA	379571.6	13C2-PFDA	269315.7	1.409	5.000	4.948	99	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL5

Instrument Name: LM27631

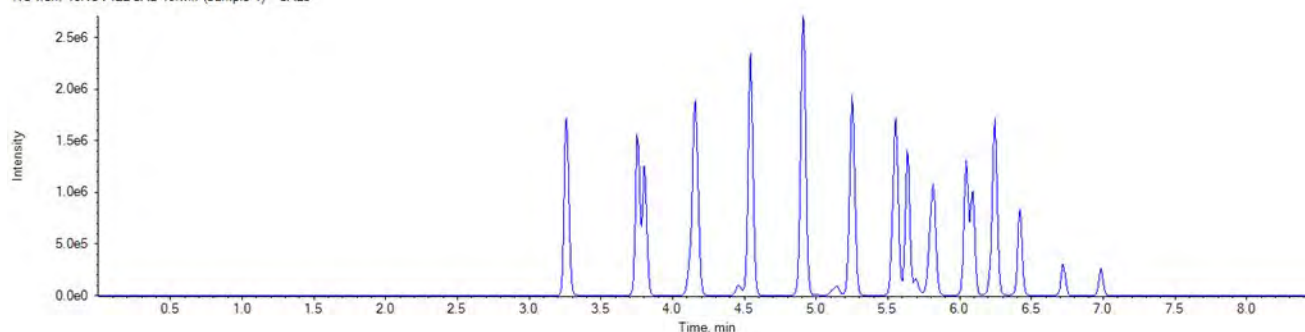
File Name: 18NOV12DCAL-46.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	2700090.8		A	13C4-PFBA	3.26	698871.9	3.863	21.403
PFPeA	3.76	1.000	2660895.4		A	13C5-PFPeA	3.76	734598.3	3.622	20.969
PFBS	3.80	1.000	1630613.5		A	13C3-PFBS	3.81	428050.6	3.809	18.121
4:2-FTS	4.12	1.000	344695.9		A	13C2-4:2-FTS	4.12	51791.9	6.655	18.070
PFHxA	4.15	1.000	3158486.4		A	13C5-PFHxA	4.15	628952.8	5.022	20.968
PFPeS	4.17	1.100	815928.2		A	13C3-PFBS	3.81	428050.6	1.906	18.506
PFHpA	4.54	1.000	3269561.0		A	13C4-PFHpA	4.54	525802.1	6.218	20.612
PFHxS	4.54	1.000	1138604.3		M	13C3-PFHxS	4.54	309304.5	3.681	17.849
6:2-FTS	4.90	1.000	260254.3		A	13C2-6:2-FTS	4.90	31012.0	8.392	20.308
PFHpS	4.90	1.080	1145559.8		A	13C3-PFHxS	4.54	309304.5	3.704	19.496
PFOA	4.91	1.000	3291549.4		A	13C8-PFOA	4.91	805288.7	4.087	21.830
PFOS	5.24	1.000	1147826.8		M	13C8-PFOS	5.24	267157.6	4.296	18.789
PFNA	5.26	1.000	2725089.7		A	13C9-PFNA	5.26	441776.8	6.168	22.243
PFNS	5.53	1.060	725402.0		A	13C8-PFOS	5.24	267157.6	2.715	18.997
PFDA	5.56	1.000	2309359.5		A	13C6-PFDA	5.56	585231.2	3.946	20.920
8:2-FTS	5.56	1.000	206213.1		A	13C2-8:2-FTS	5.56	24192.1	8.524	19.873
PFOSA	5.64	1.000	2498877.9		A	13C8-PFOSA	5.64	596544.1	4.189	20.460
NMeFOSAA	5.70	1.000	250711.5		A	d3-NMeFOSAA	5.70	72424.5	3.462	19.564
PFDS	5.79	1.100	578877.5		A	13C8-PFOS	5.24	267157.6	2.167	19.633
PFUnDA	5.82	1.000	1773582.6		A	13C7-PFUnDA	5.82	231187.9	7.672	20.055
NEtFOSAA	5.83	1.000	237197.2		A	d5-NEtFOSAA	5.83	63701.7	3.724	19.520
PFDODA	6.04	1.000	2099385.0		A	13C2-PFDODA	6.04	507556.8	4.136	21.062
10:2-FTS	6.06	1.090	153343.6		A	13C2-8:2-FTS	5.56	24192.1	6.339	21.113
NMePFOSAE	6.09	1.000	1590507.1		M	d7-NMePFOSAE	6.08	316777.8	5.021	20.896
NMePFOSA	6.10	1.000	300855.7		A	d3-NMePFOSA	6.09	68615.7	4.385	21.631
PFDOS	6.21	1.190	288905.1		A	13C8-PFOS	5.24	267157.6	1.081	18.940
NEtPFOSAE	6.25	1.000	1660562.6		M	d9-NEtPFOSAE	6.23	255767.8	6.492	20.830
NEtPFOSA	6.26	1.000	258300.3		A	d5-NEtPFOSA	6.25	55378.5	4.664	21.421
PFTDA	6.24	1.030	1679407.2		A	13C2-PFDODA	6.04	507556.8	3.309	20.884
PFTeDA	6.42	1.000	1418276.7		A	13C2-PFTeDA	6.42	379571.6	3.737	20.945
PFHxDA	6.72	1.050	627350.7		A	13C2-PFTeDA	6.42	379571.6	1.653	19.691
PFODA	6.98	1.090	544296.5		A	13C2-PFTeDA	6.42	379571.6	1.434	19.971

Total Ion Chromatogram

TIC from 18NOV12DCAL-46.wiff (sample 1) - CAL5

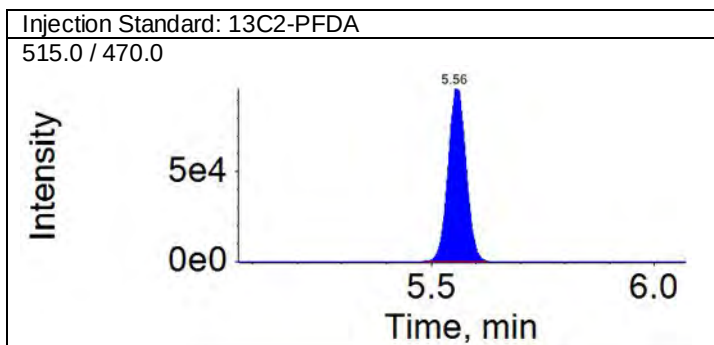
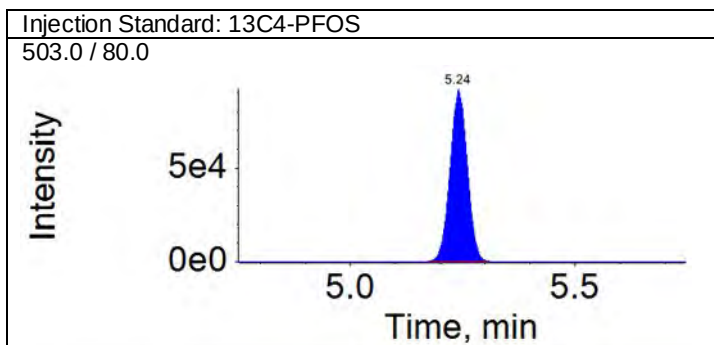
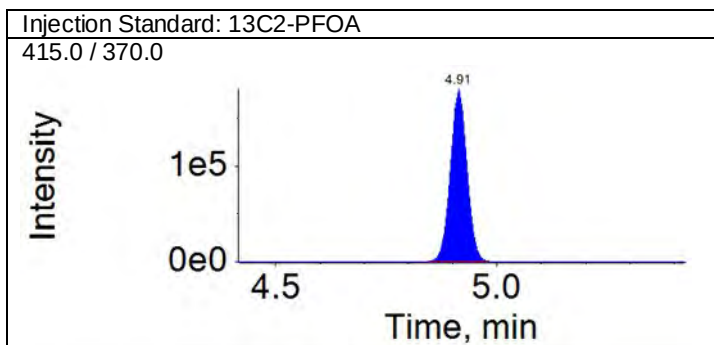
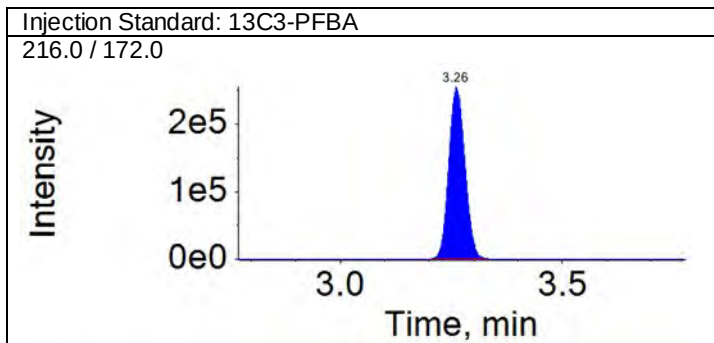
APPROVED
By MCD at 6:33 pm, 11/12/18

BSI05 Page 990 of 1595

REVIEWED
By HMK at 10:53 am, 11/13/18

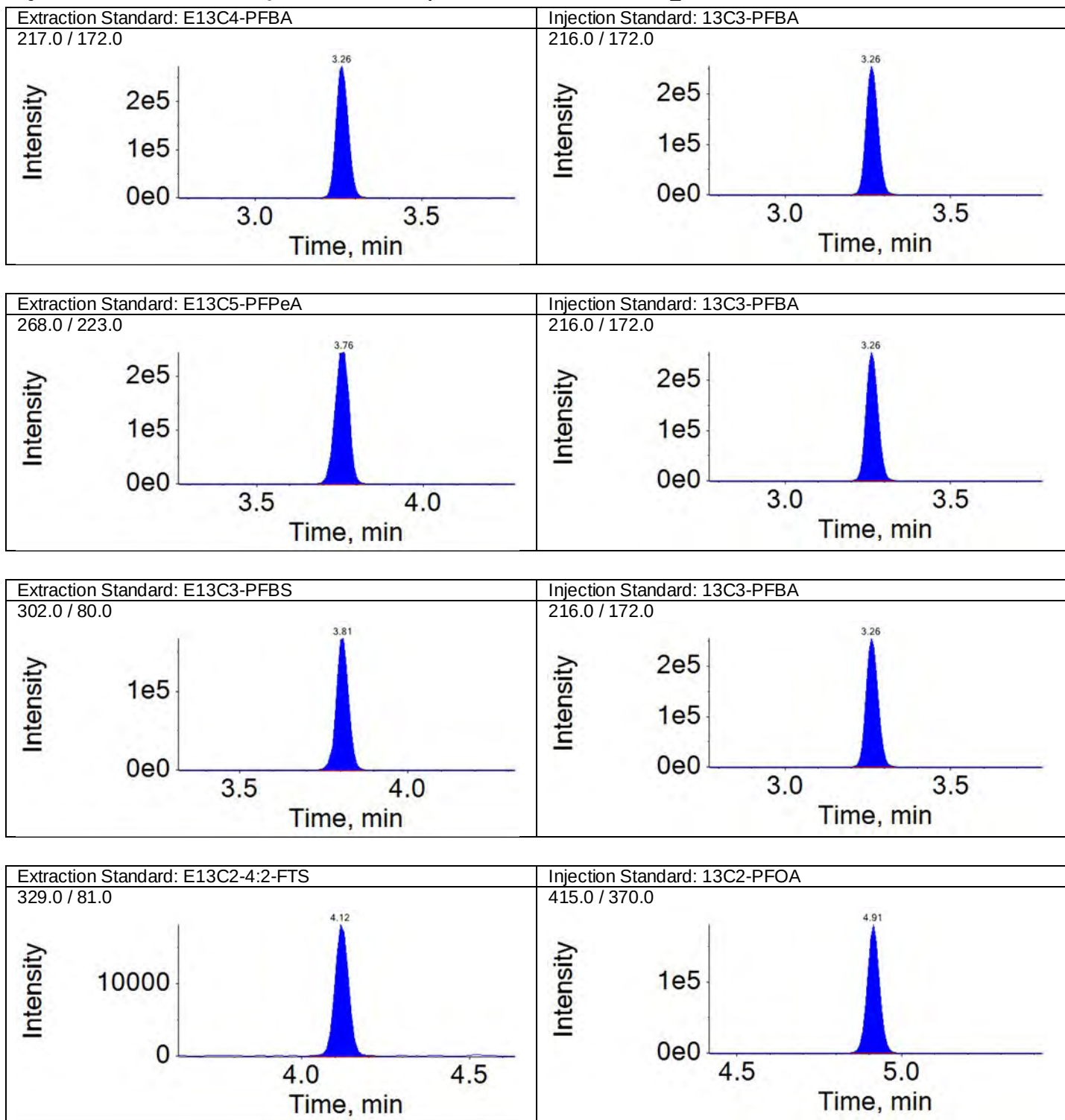
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



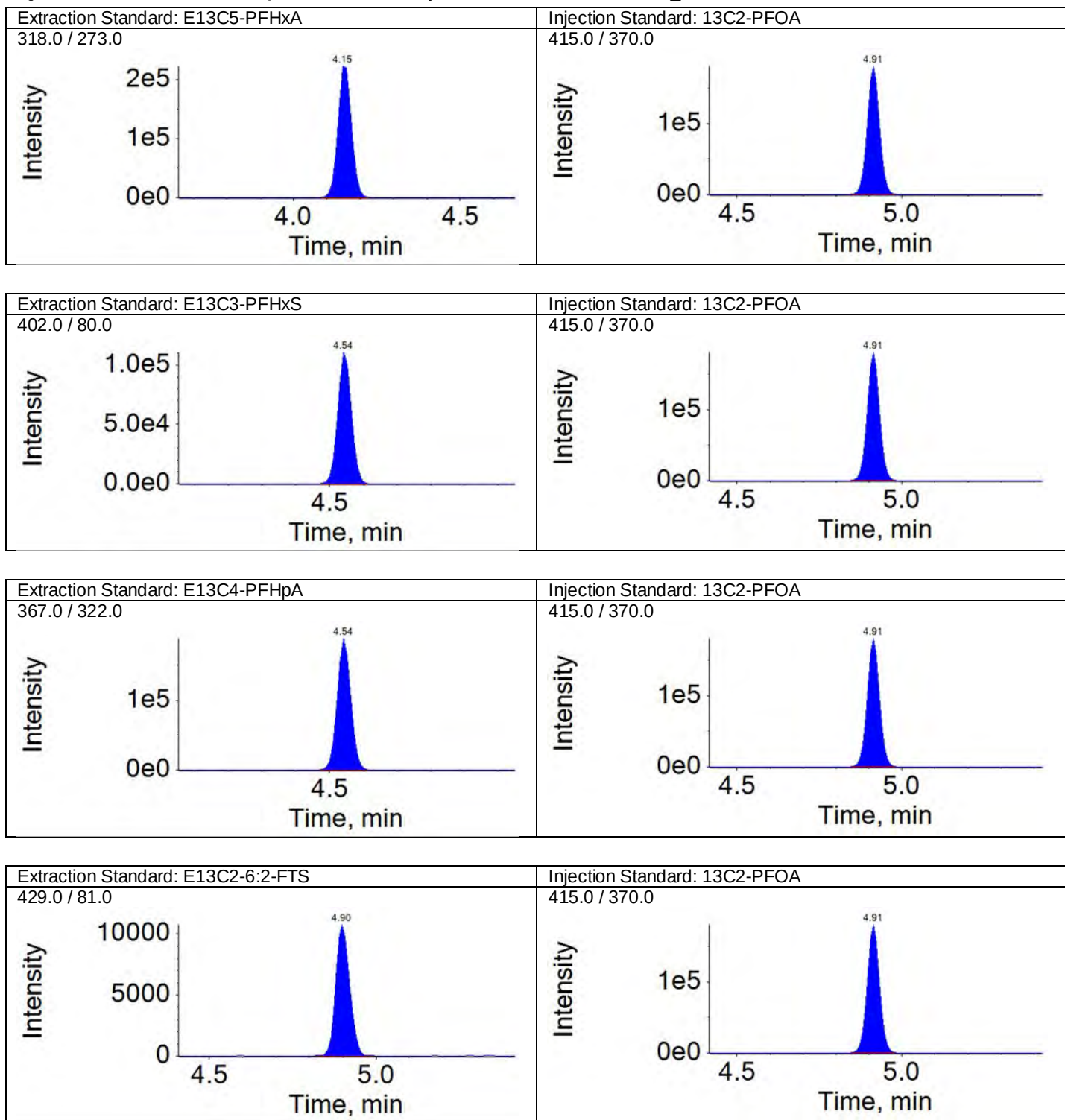
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



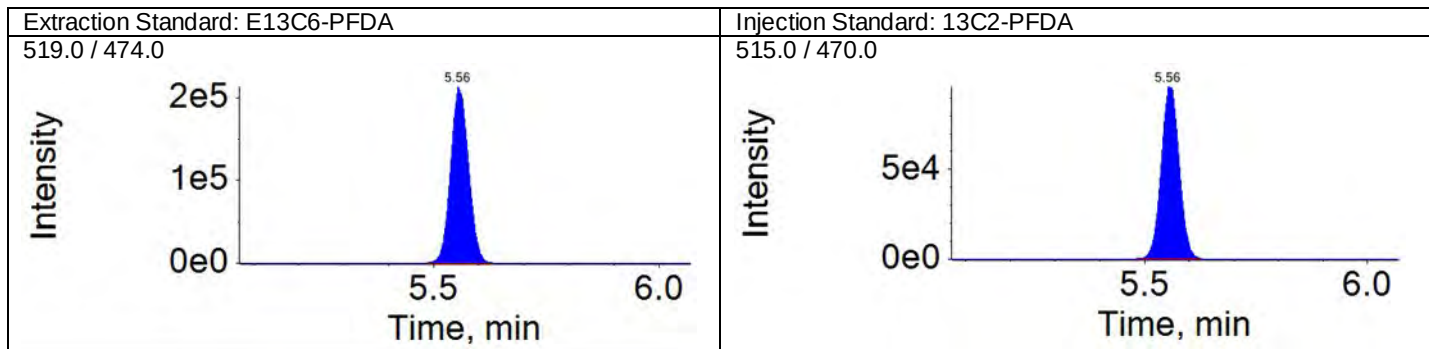
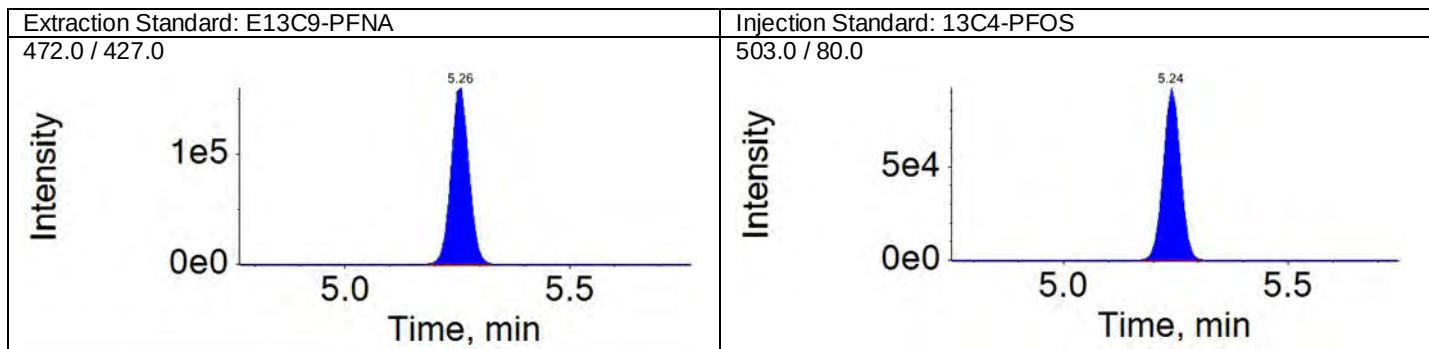
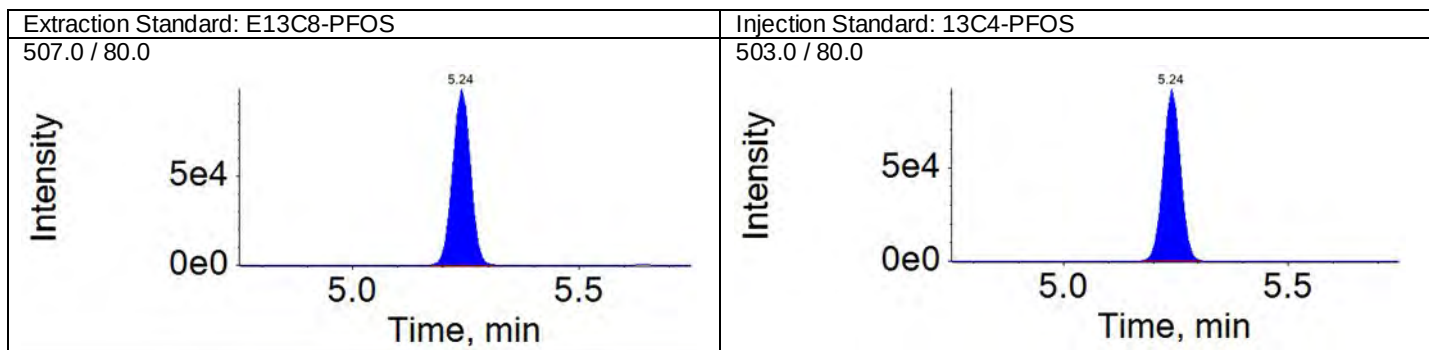
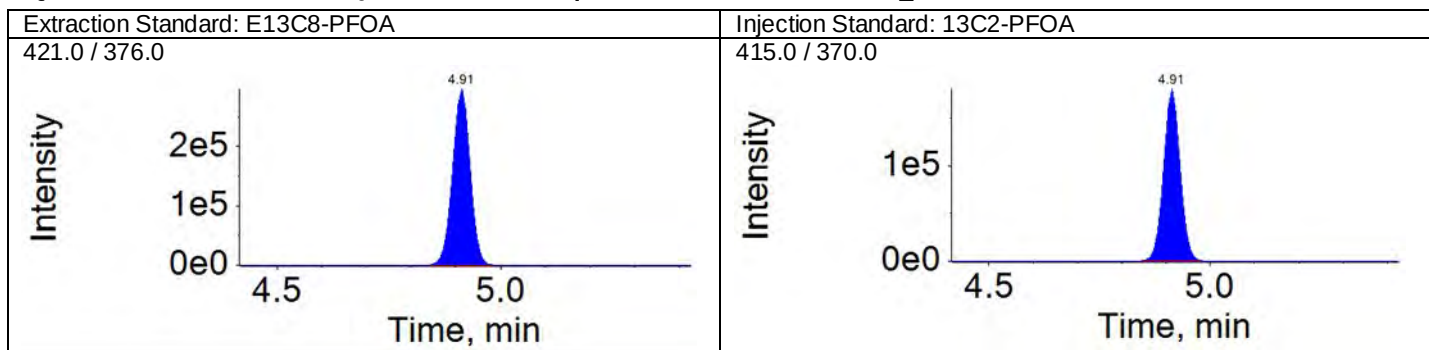
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



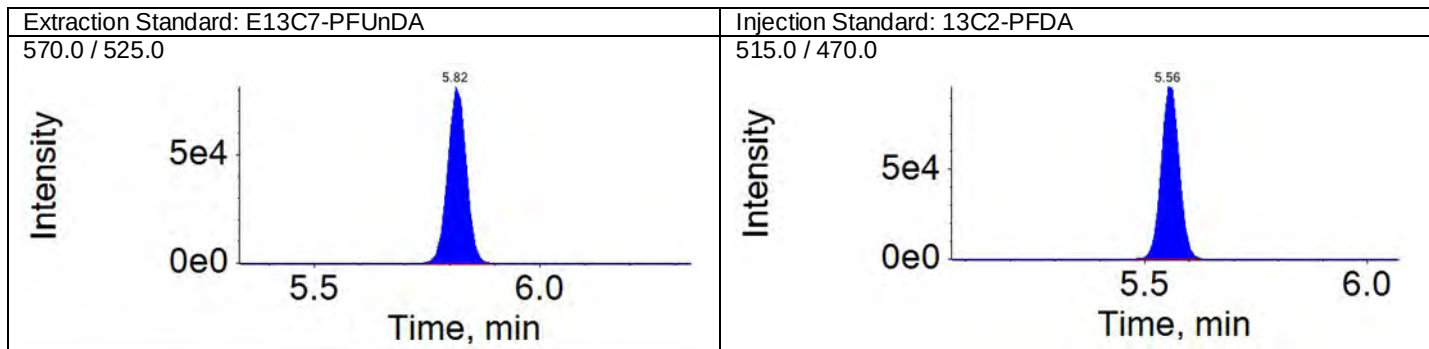
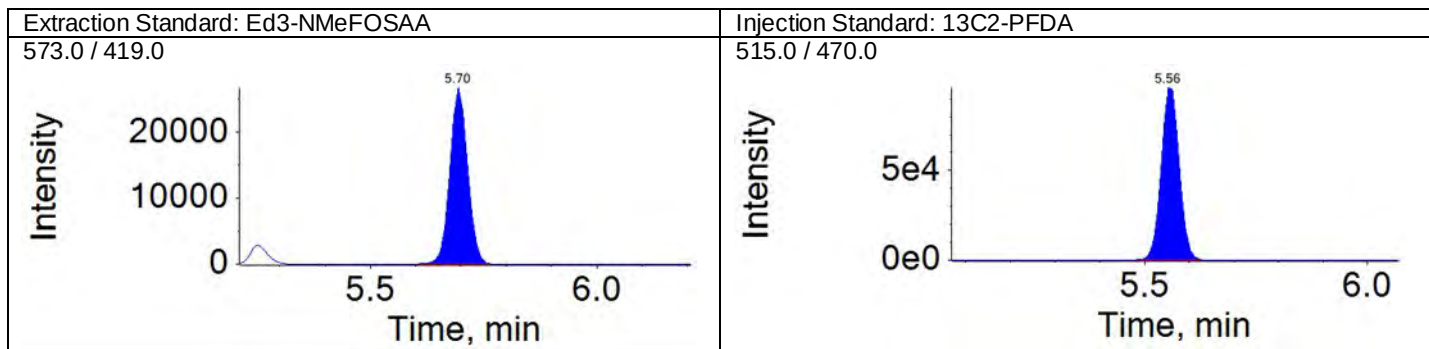
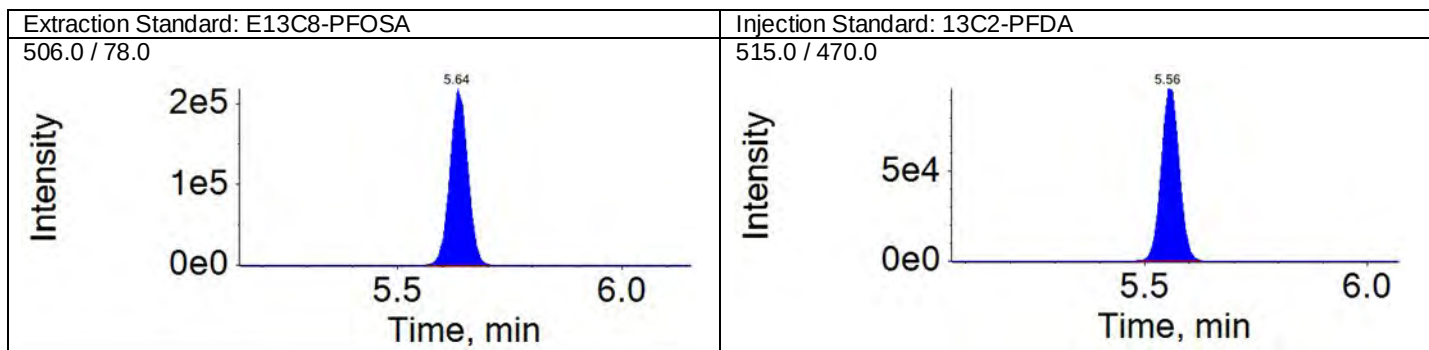
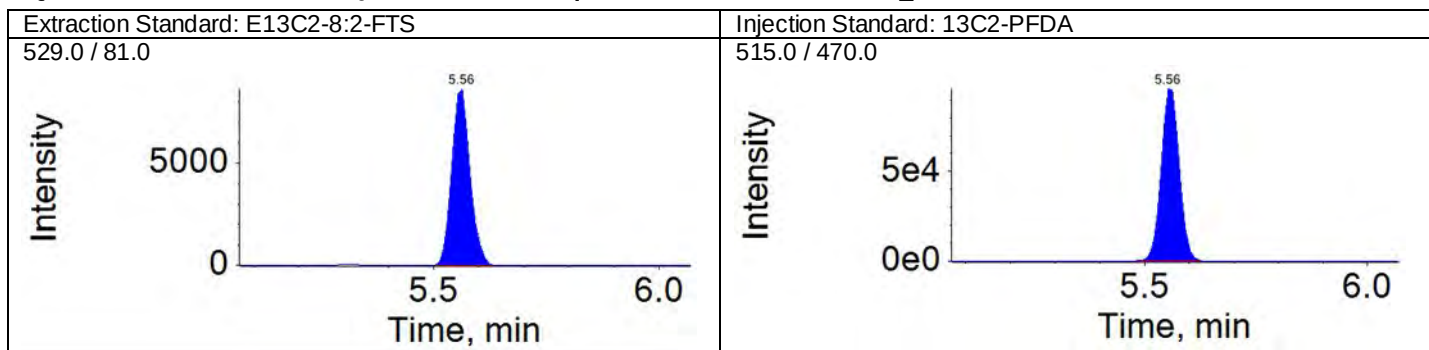
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



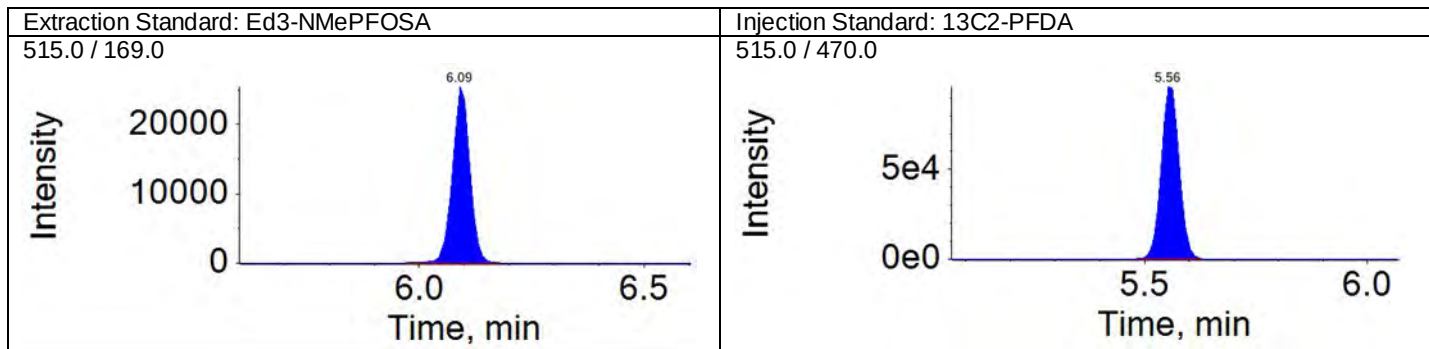
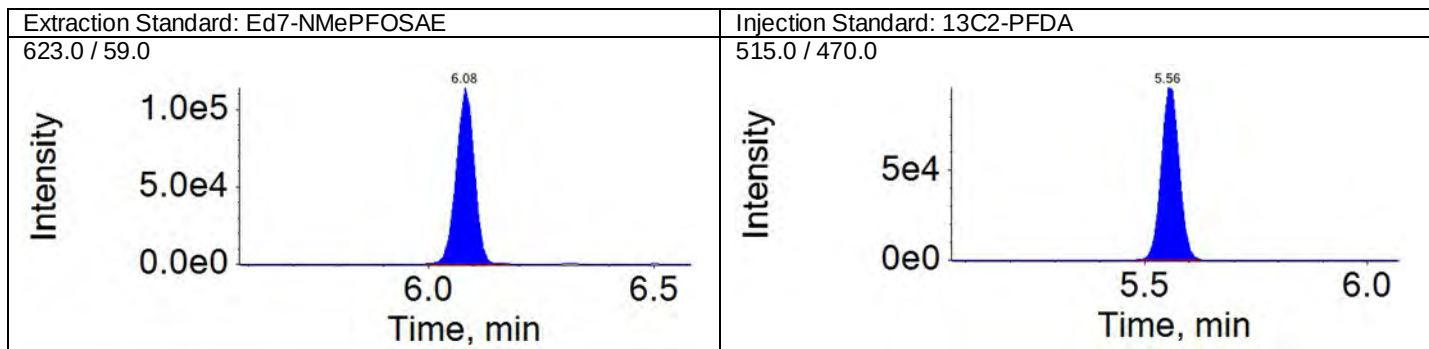
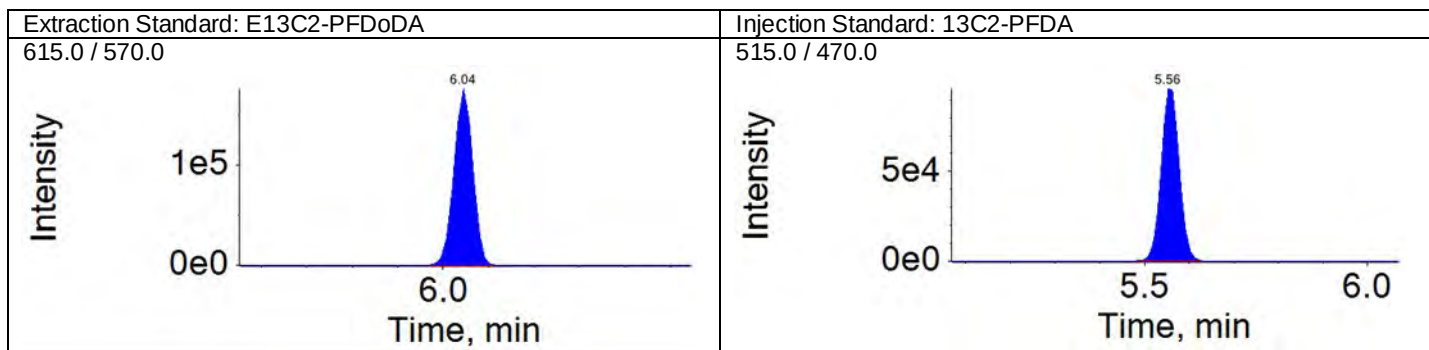
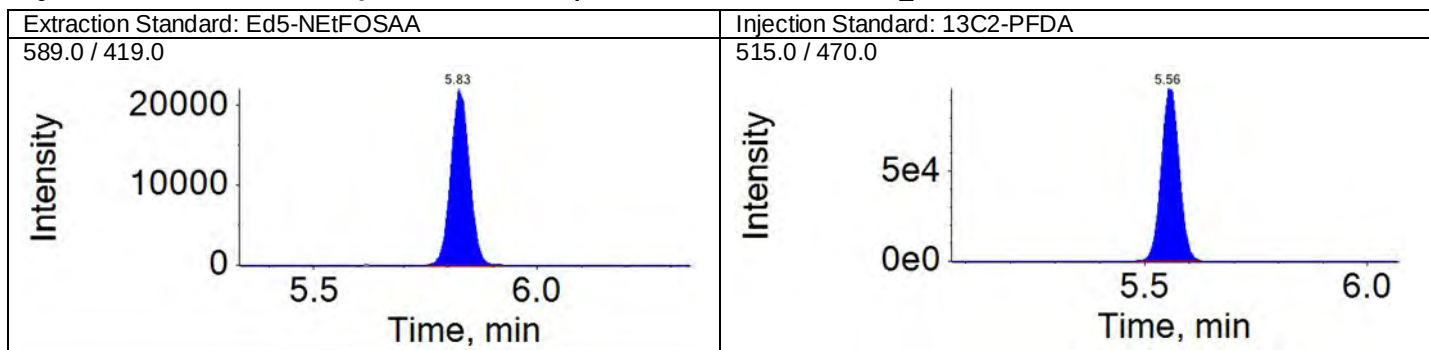
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



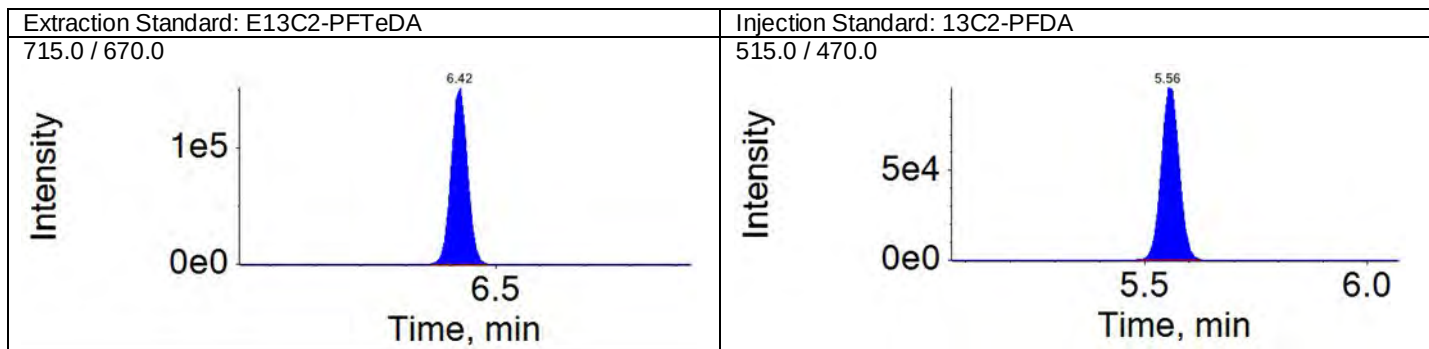
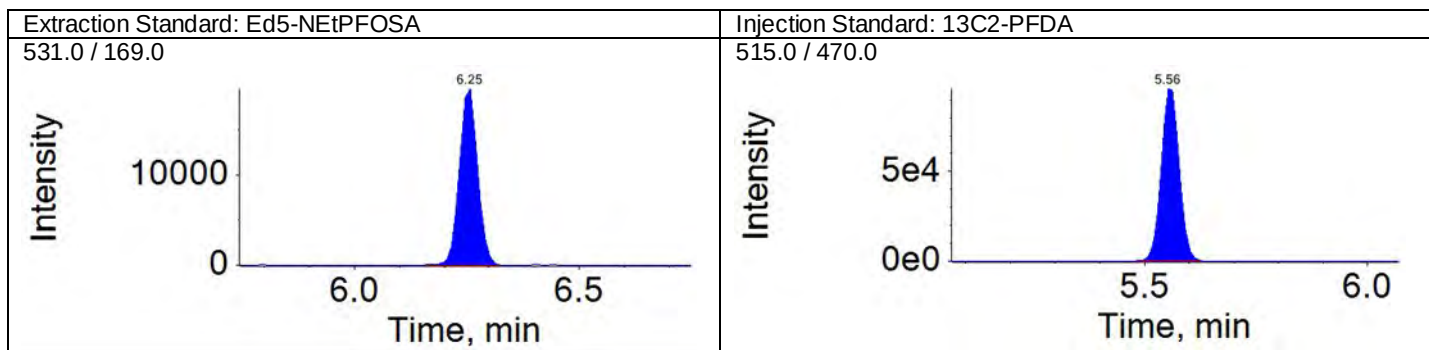
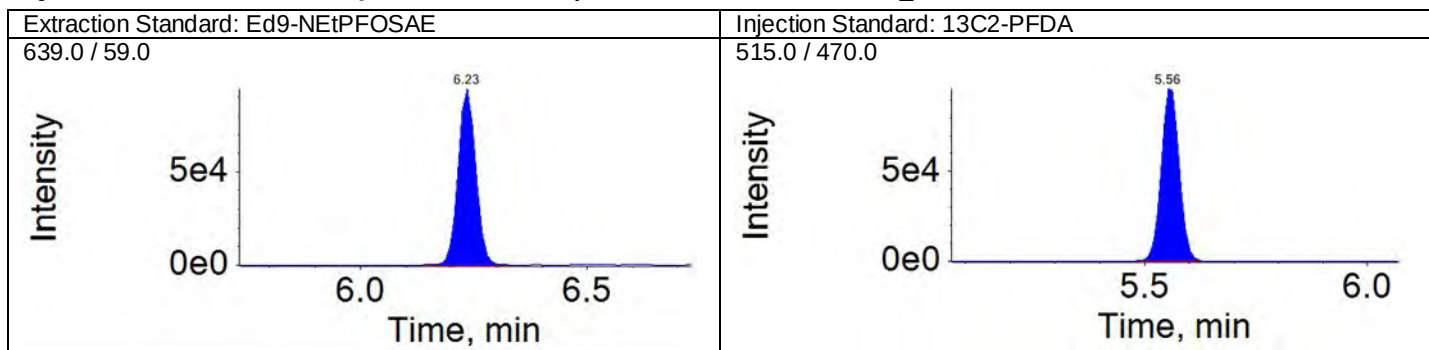
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



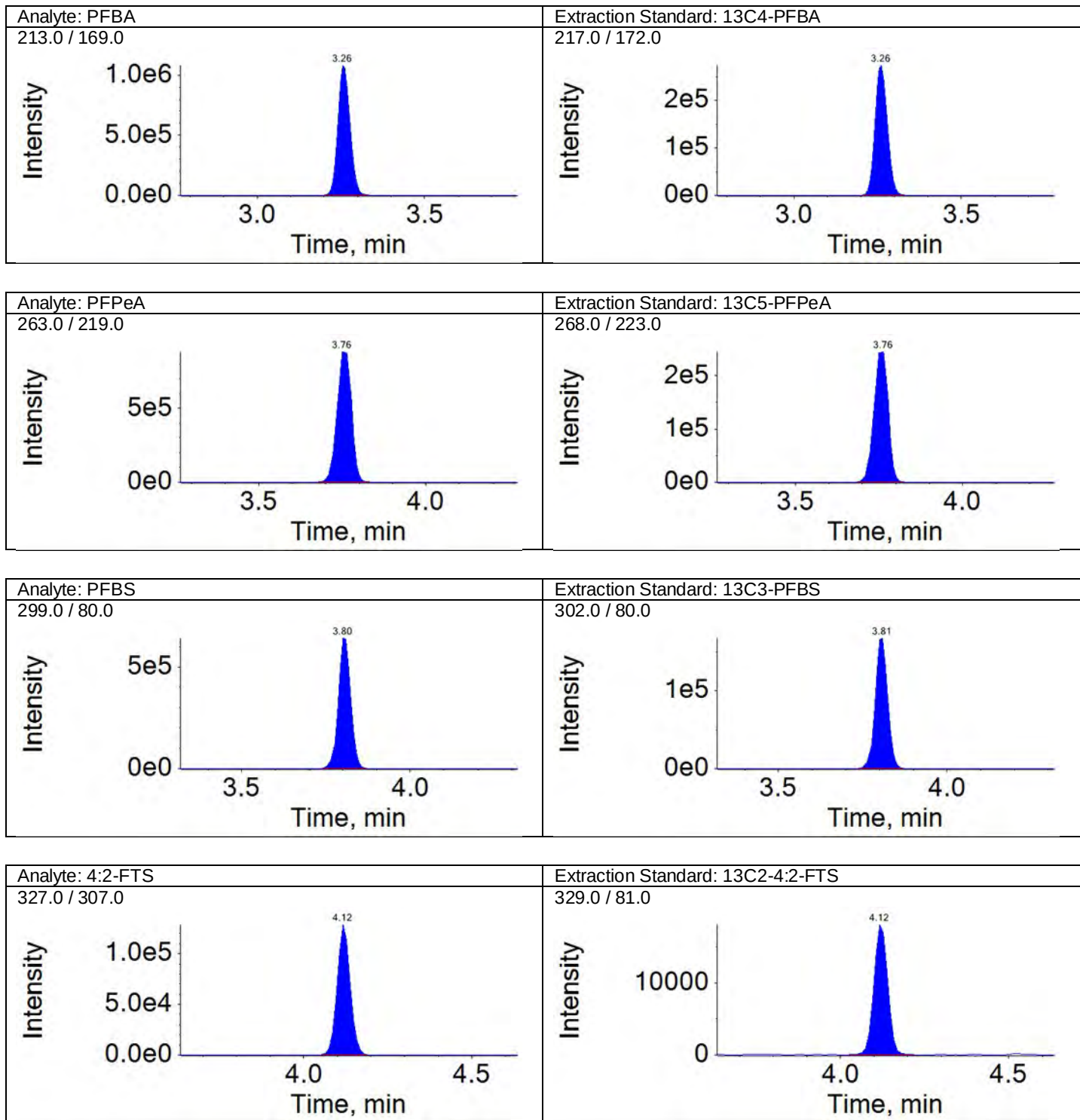
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



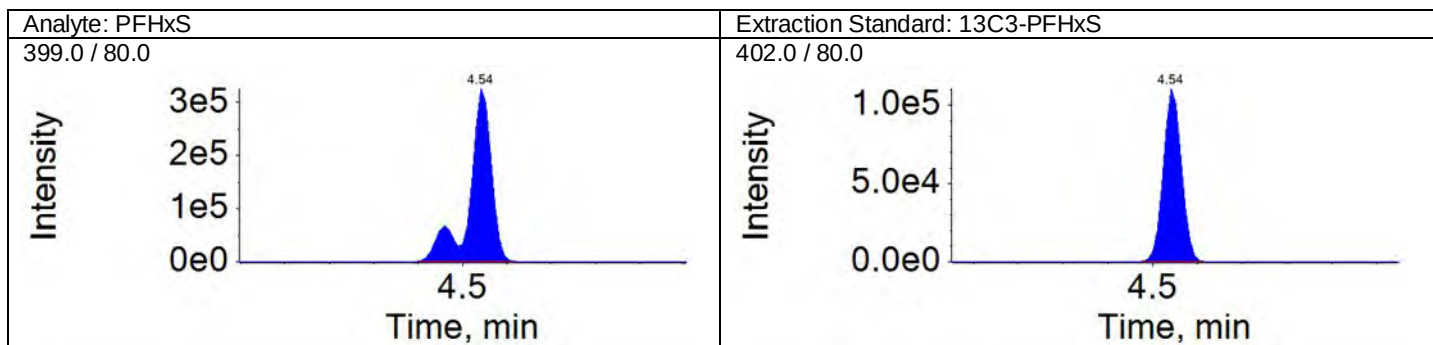
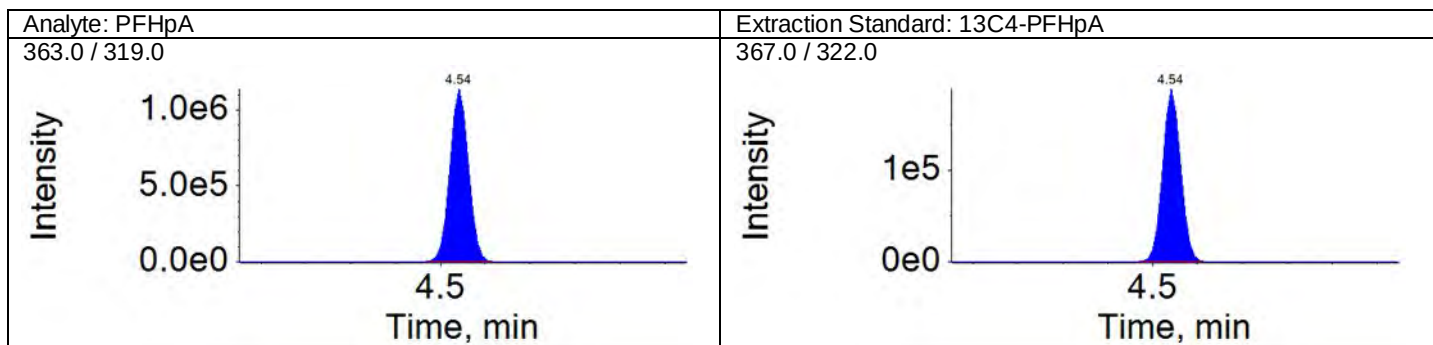
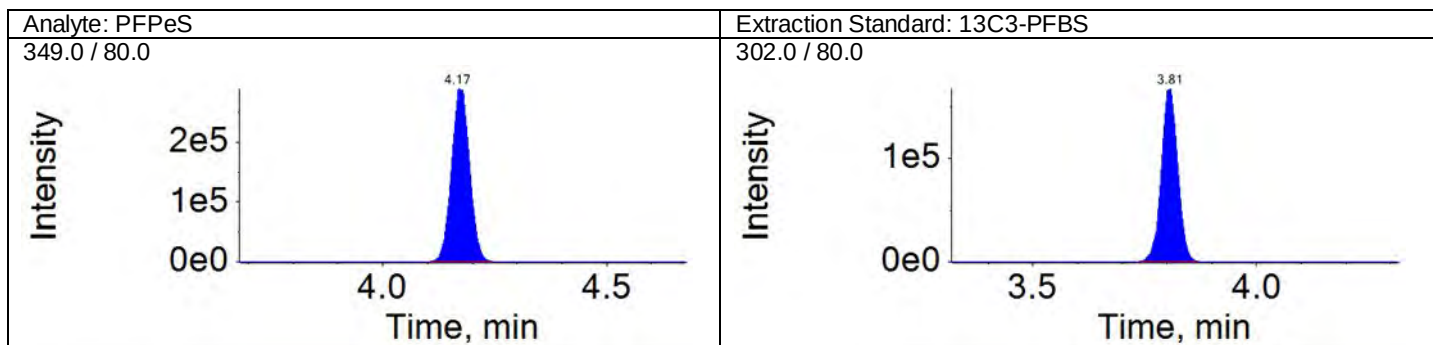
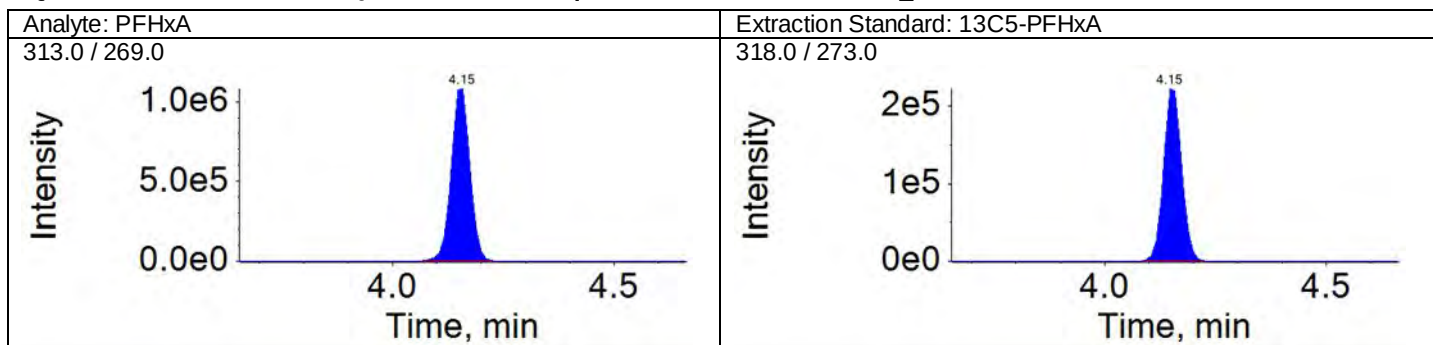
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



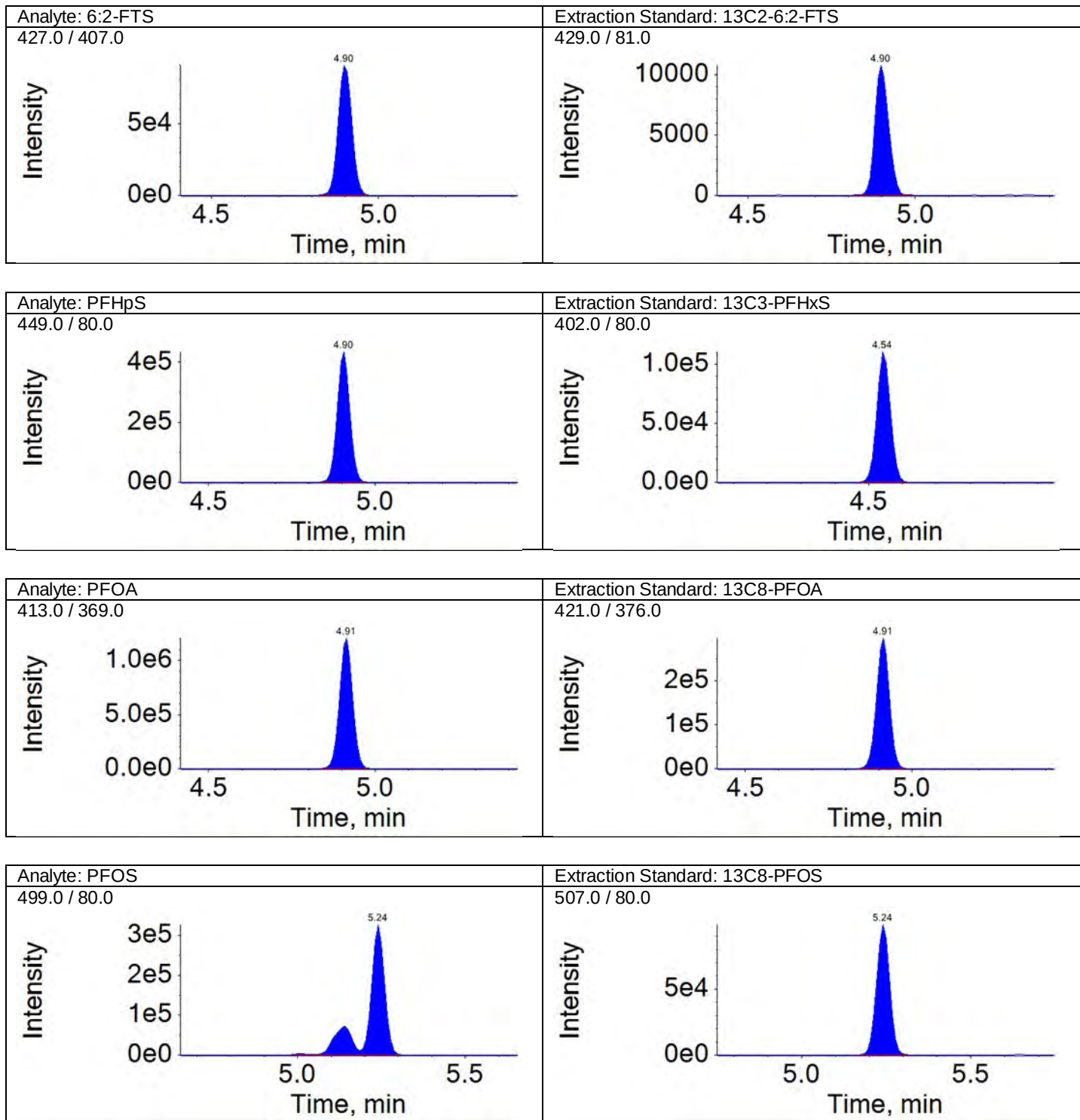
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



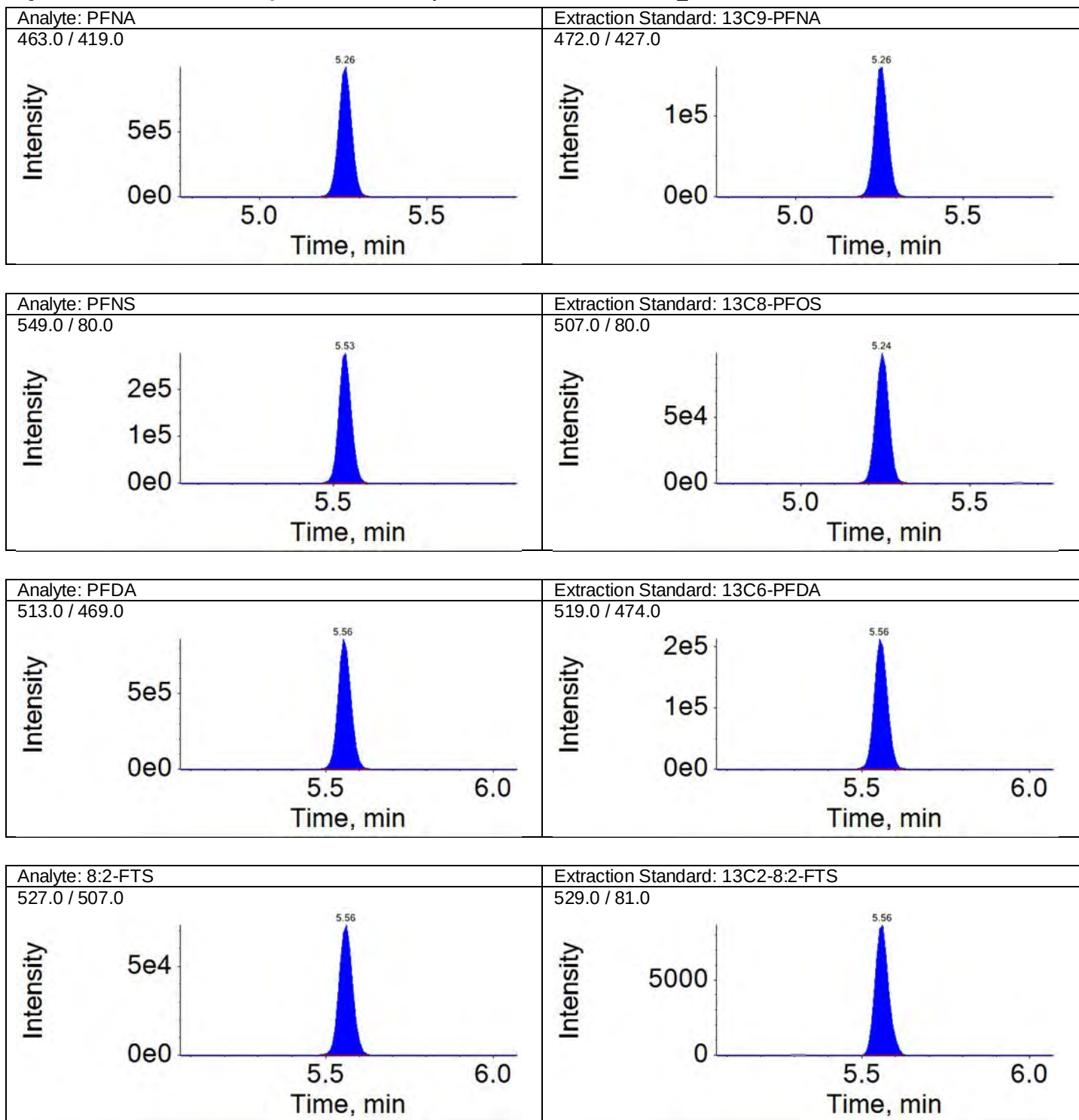
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



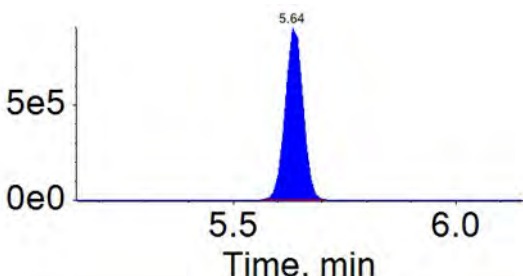
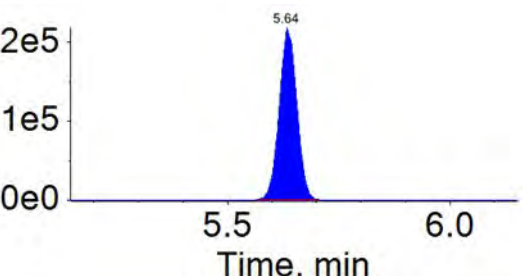
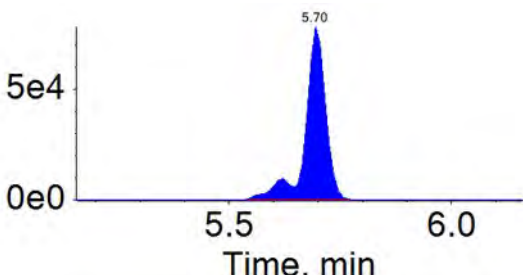
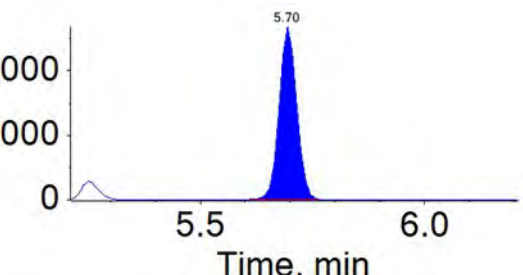
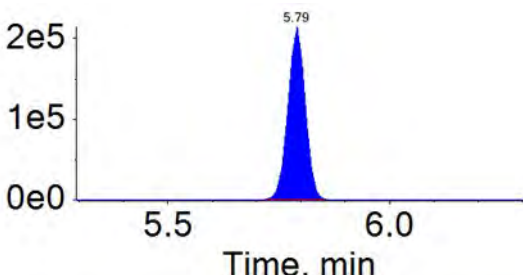
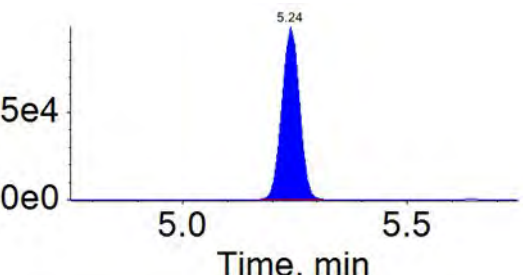
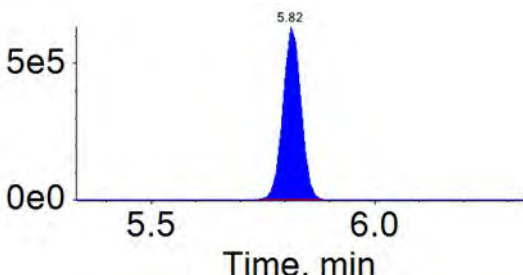
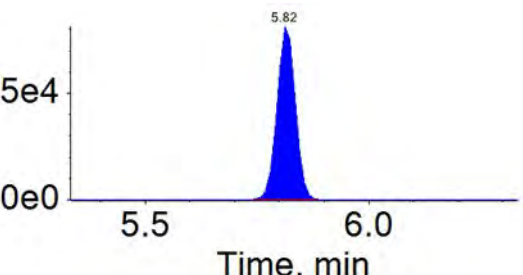
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



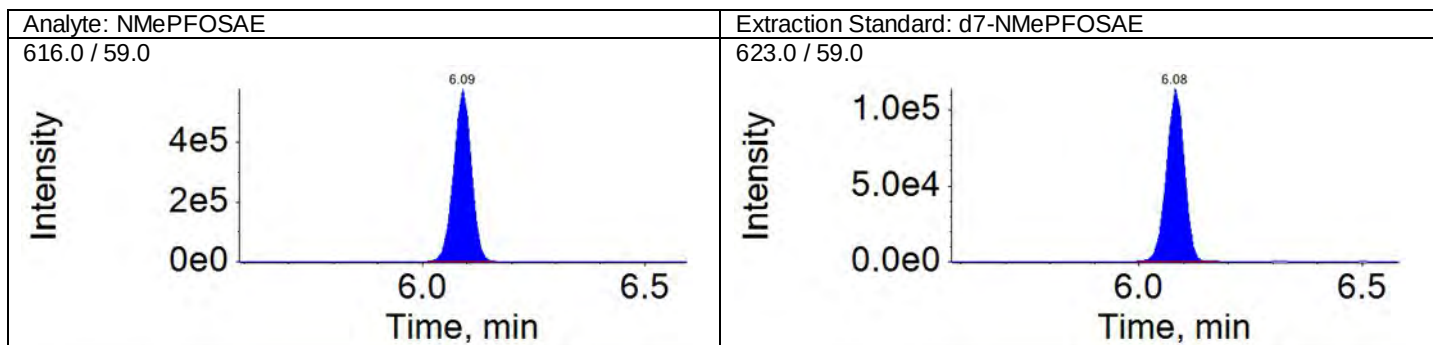
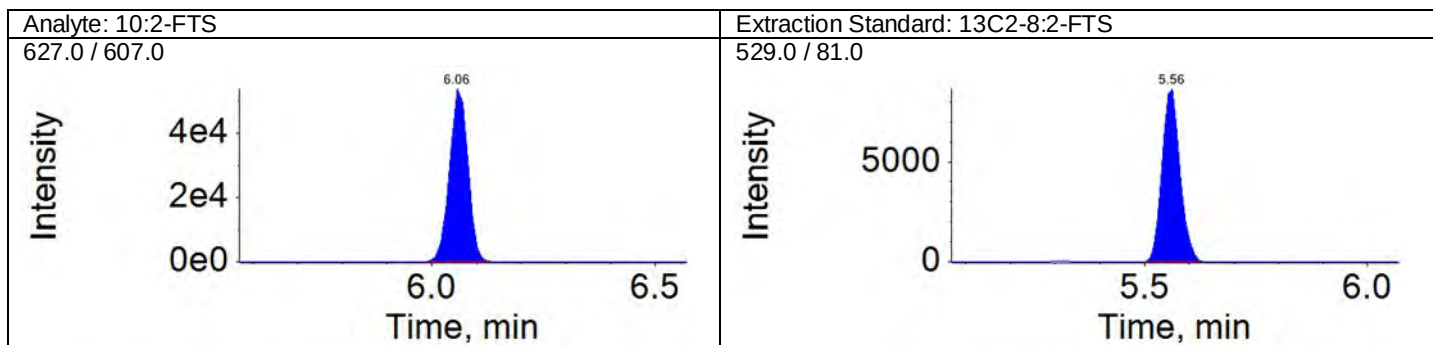
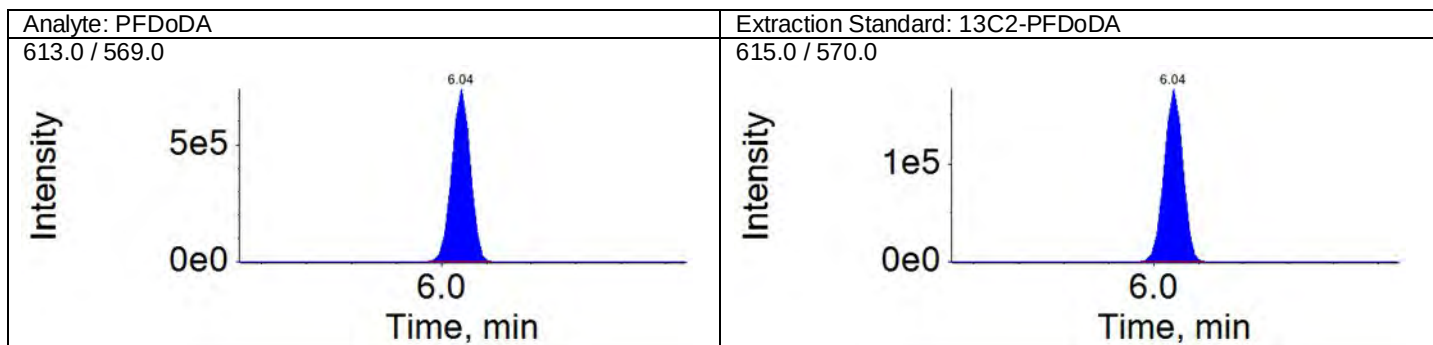
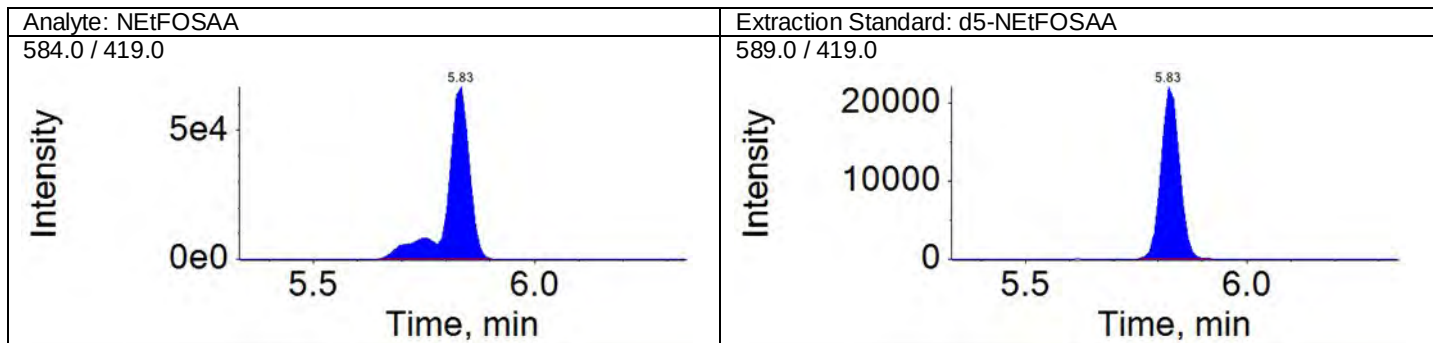
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte: PFOSA 498.0 / 78.0 	Extraction Standard: 13C8-PFOSA 506.0 / 78.0 
Analyte: NMeFOSAA 570.0 / 419.0 	Extraction Standard: d3-NMeFOSAA 573.0 / 419.0 
Analyte: PFDS 599.0 / 80.0 	Extraction Standard: 13C8-PFOS 507.0 / 80.0 
Analyte: PFUnDA 563.0 / 519.0 	Extraction Standard: 13C7-PFUnDA 570.0 / 525.0 

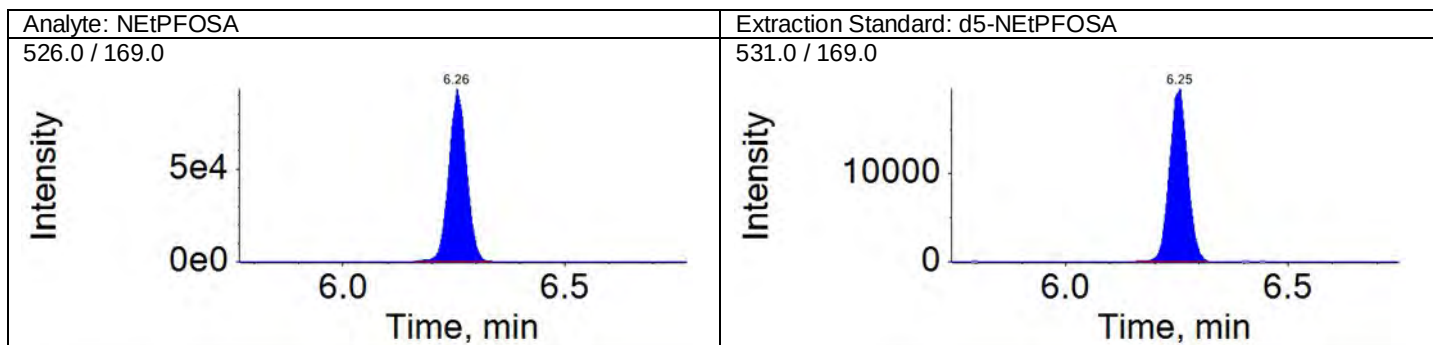
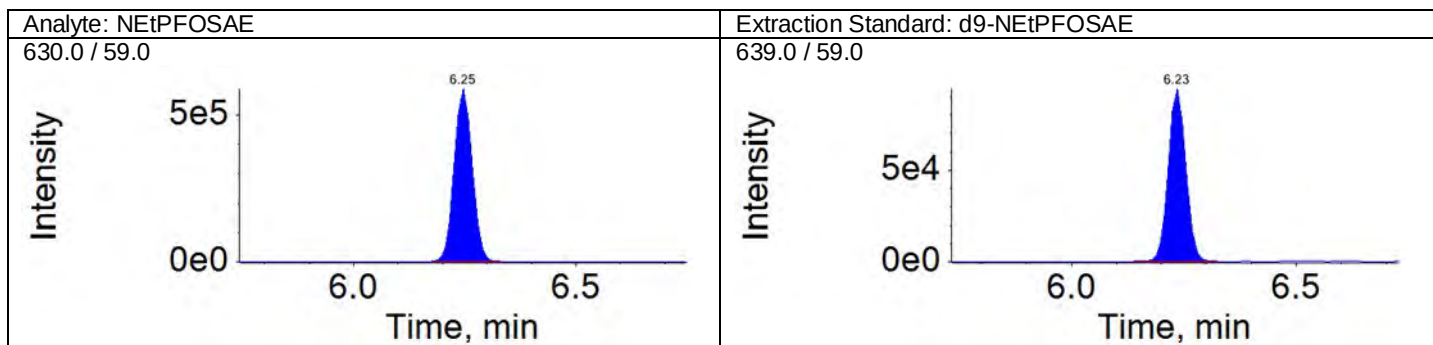
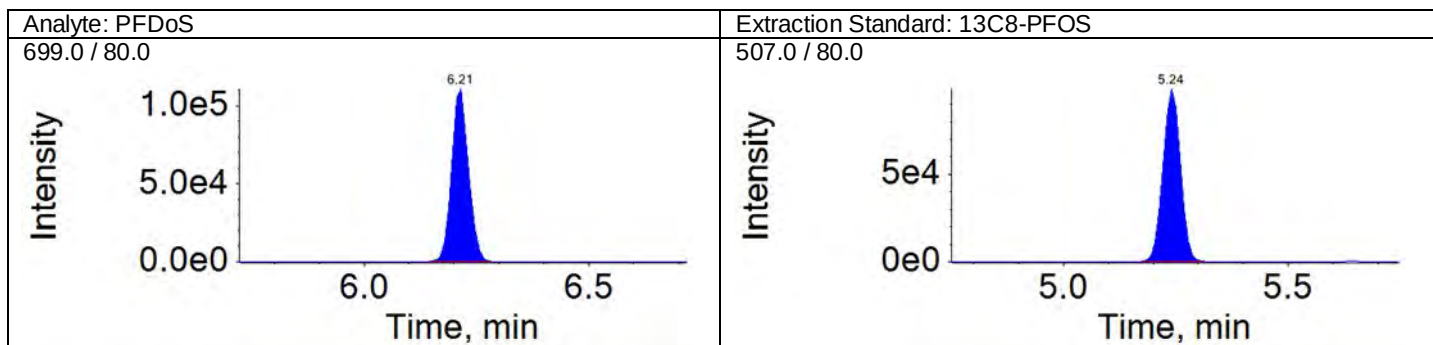
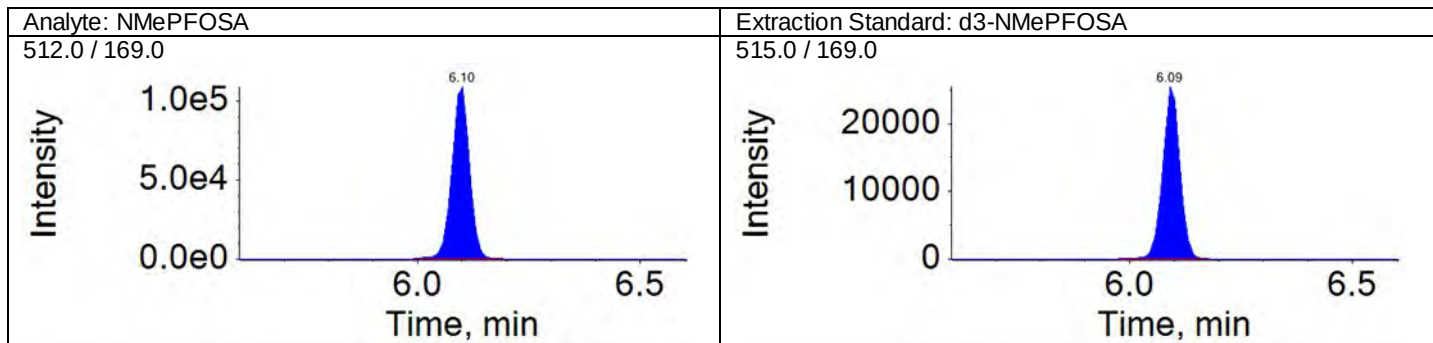
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



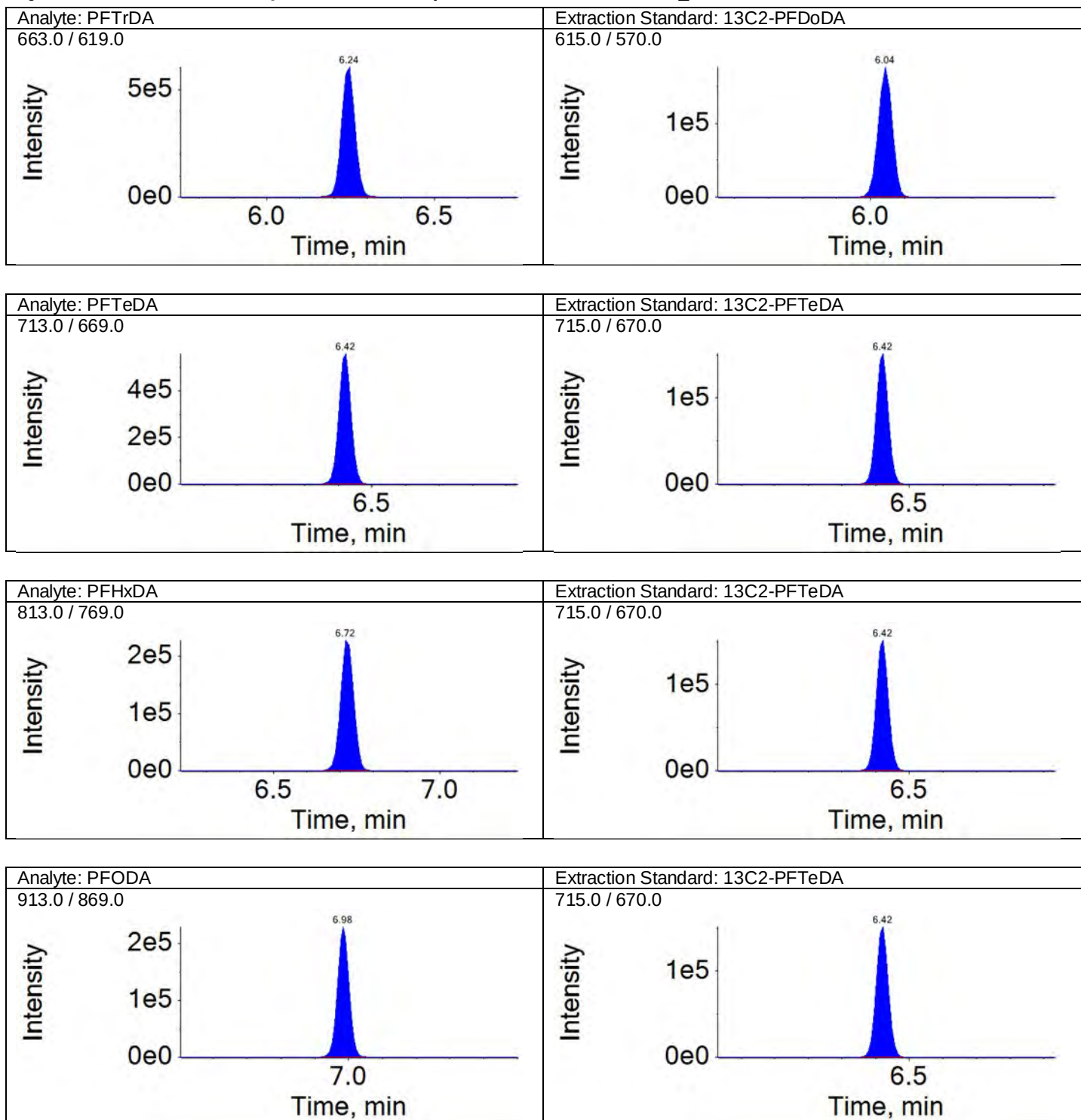
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



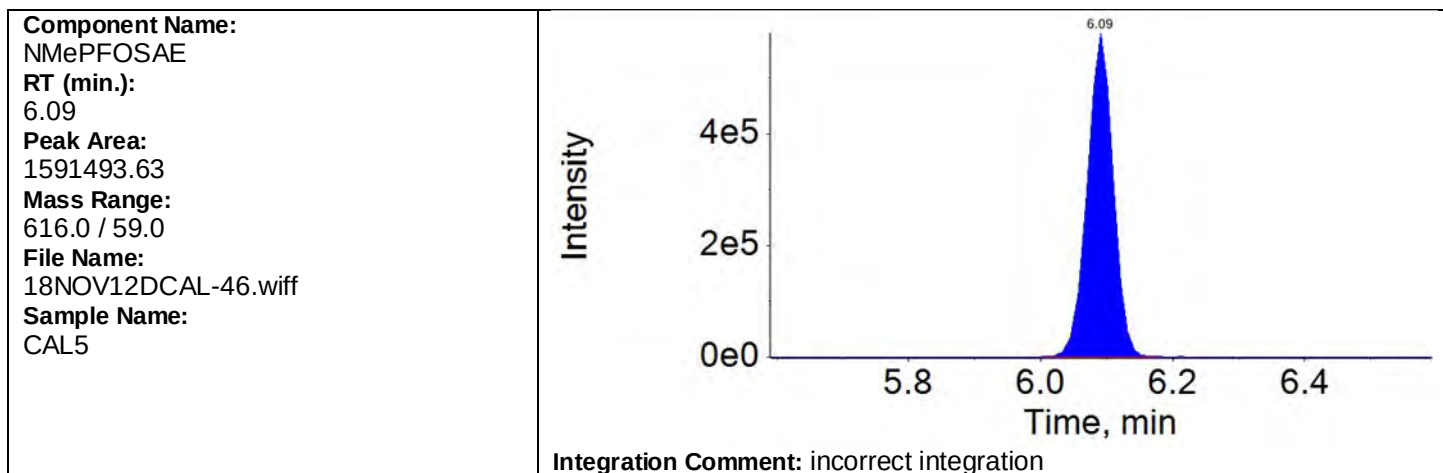
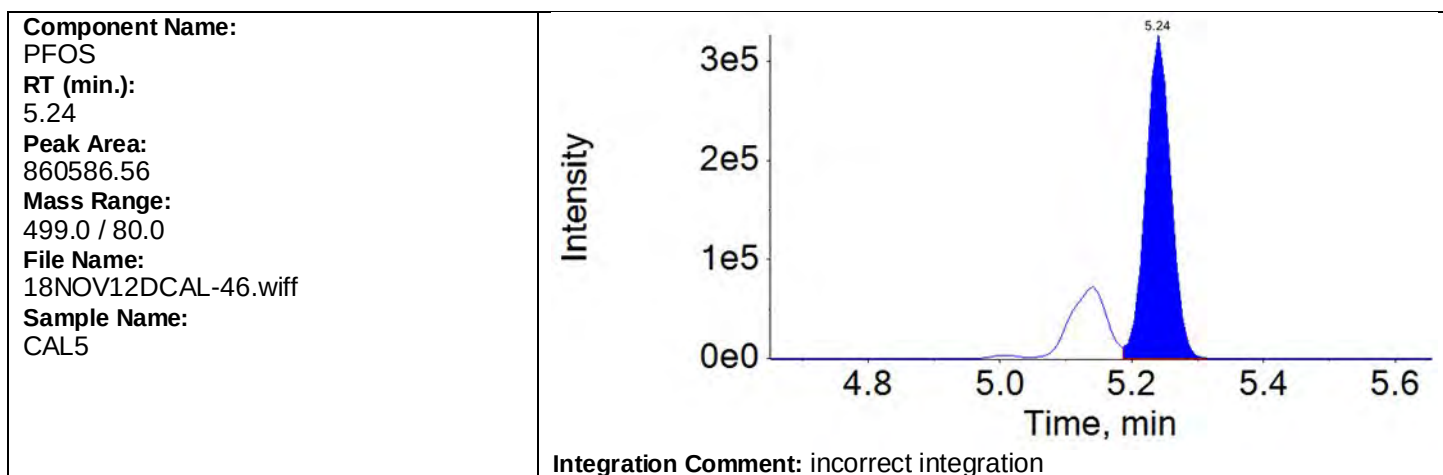
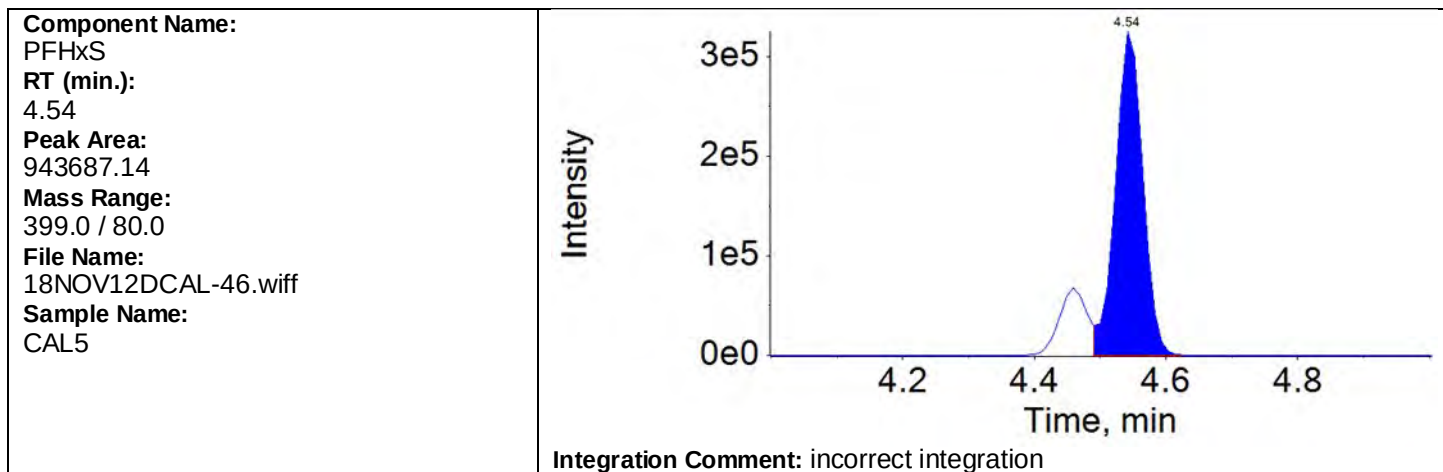
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

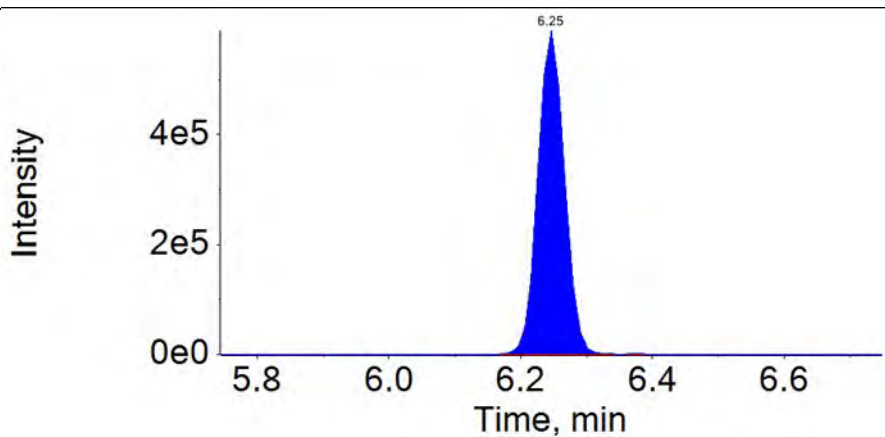
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

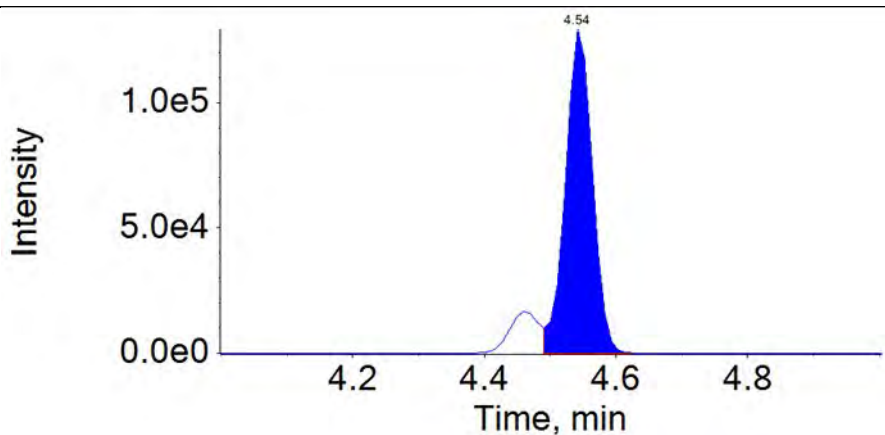
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NETPFOSAE
RT (min.):
6.25
Peak Area:
1662069.44
Mass Range:
630.0 / 59.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



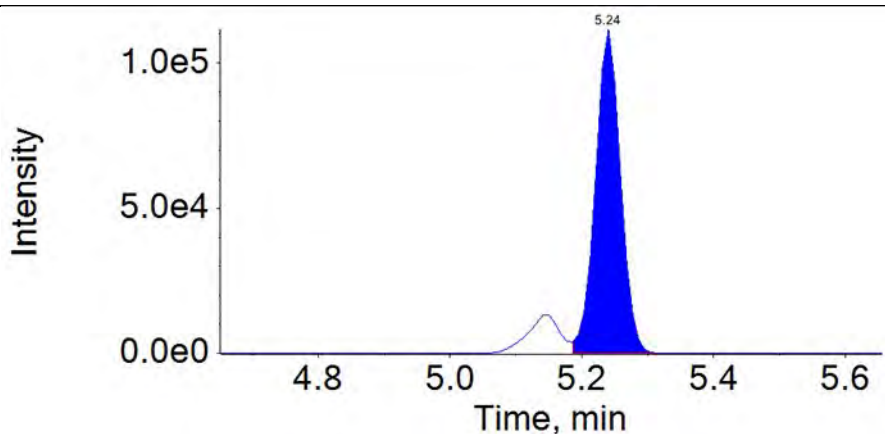
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
369522.57
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
295251.82
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5

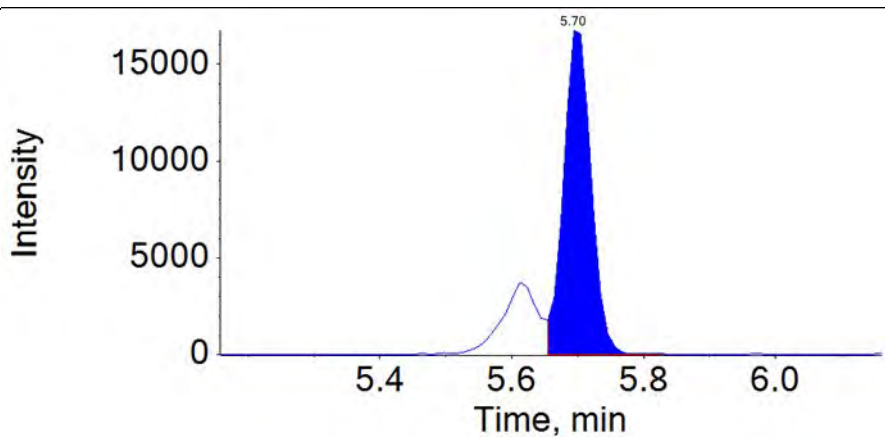


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

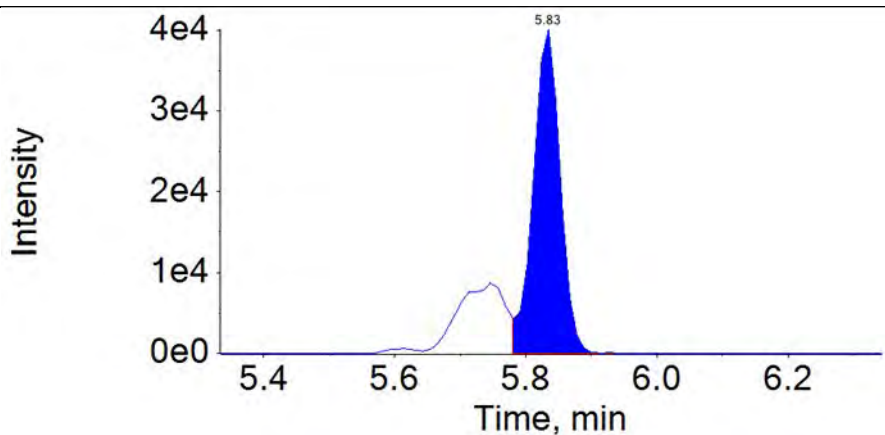
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
48911.60
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



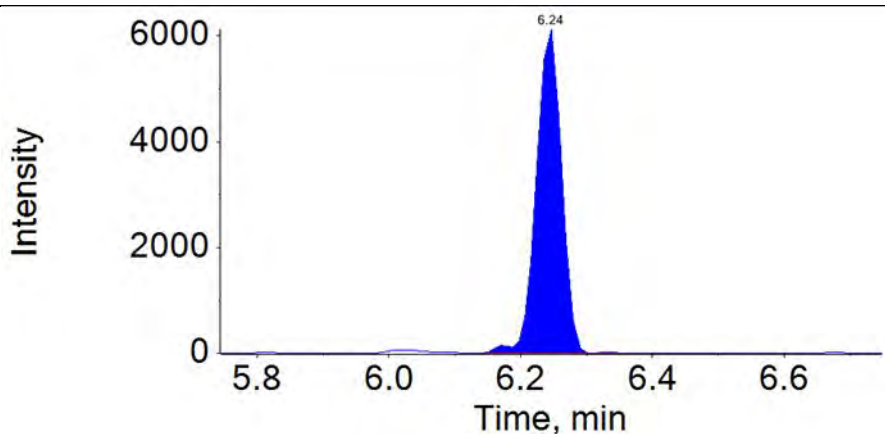
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
114677.93
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFTTrDA_2
RT (min.):
6.24
Peak Area:
16434.79
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

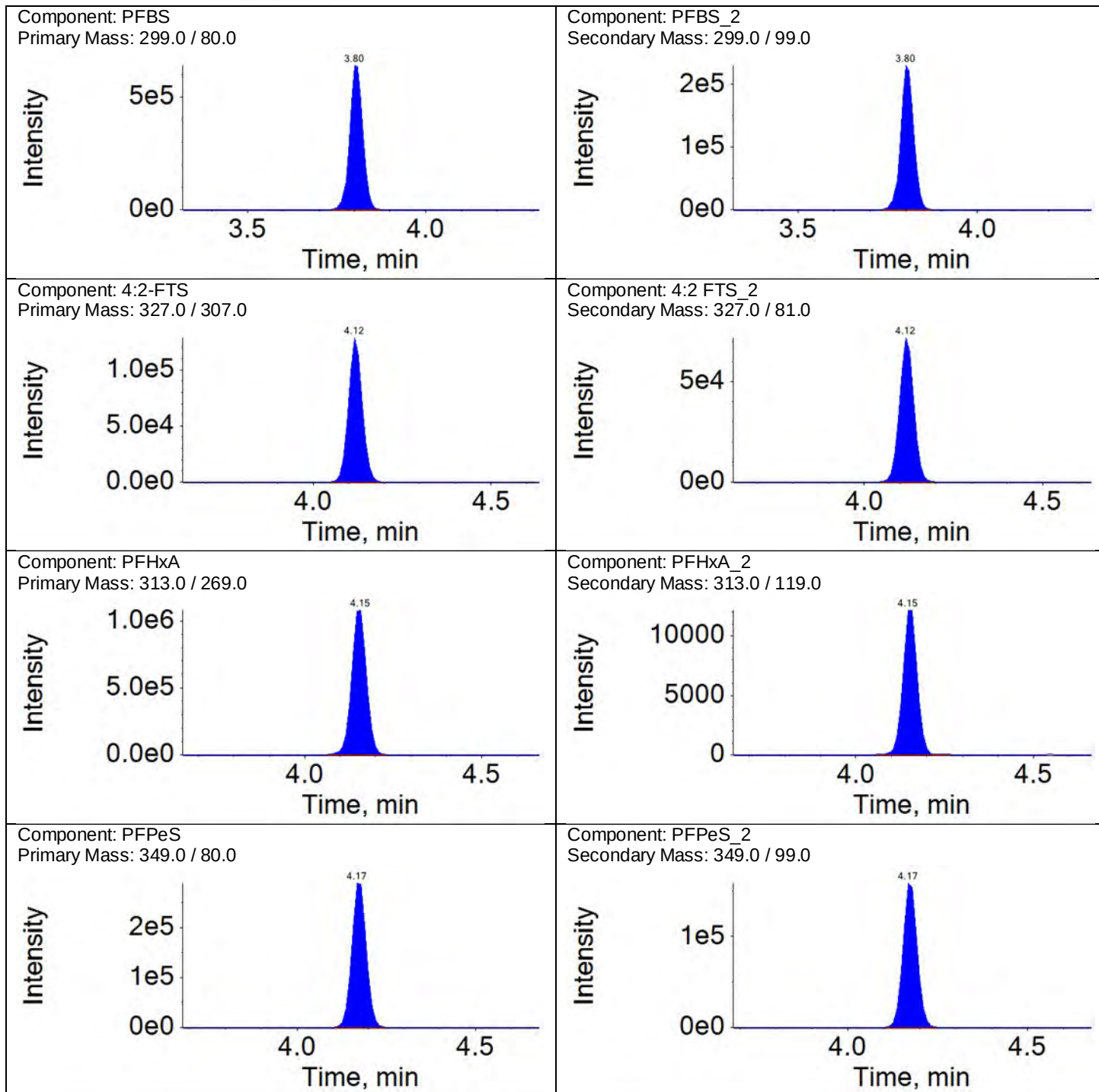
Ion Ratio Report

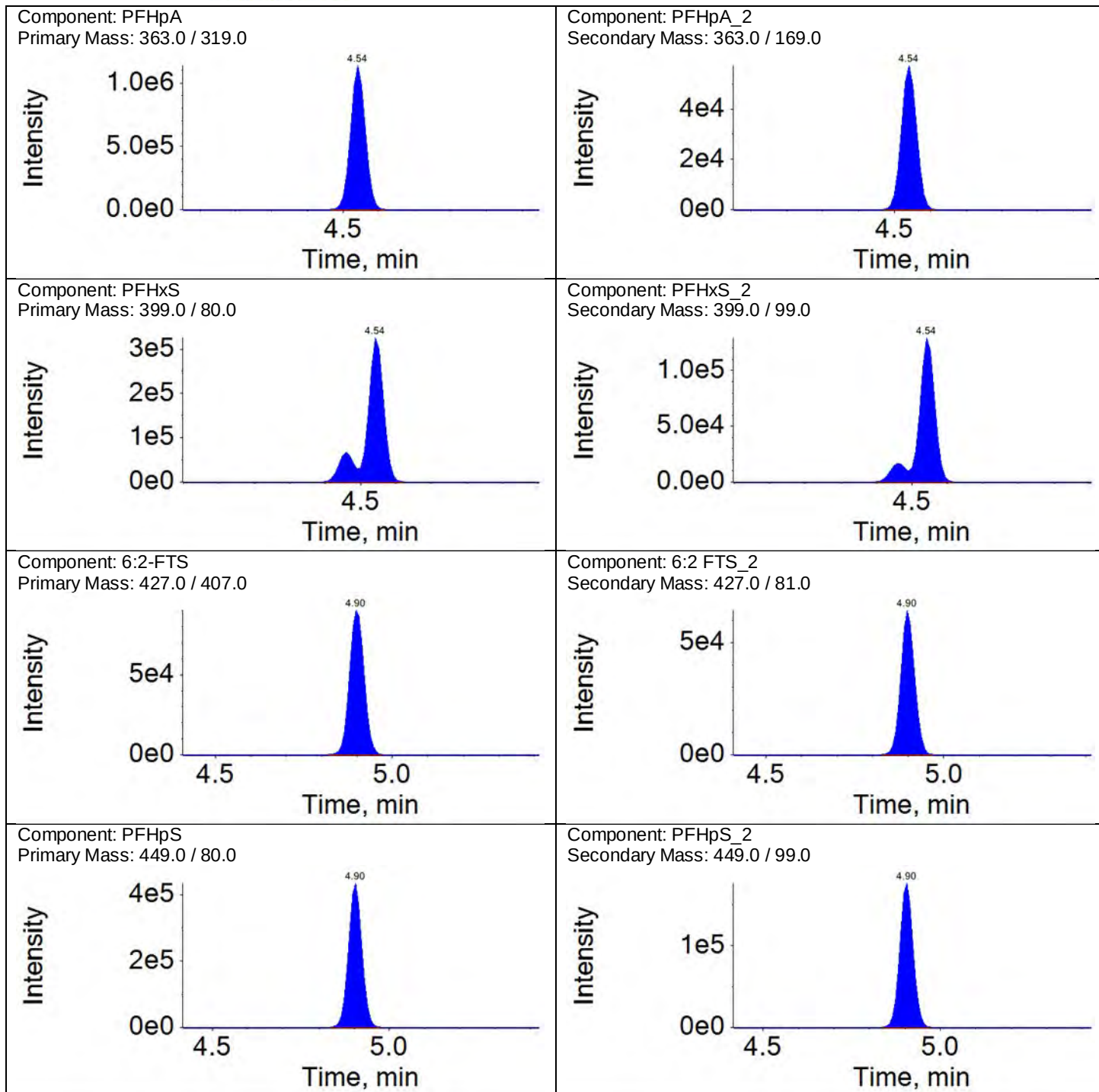
Sample Name: CAL5

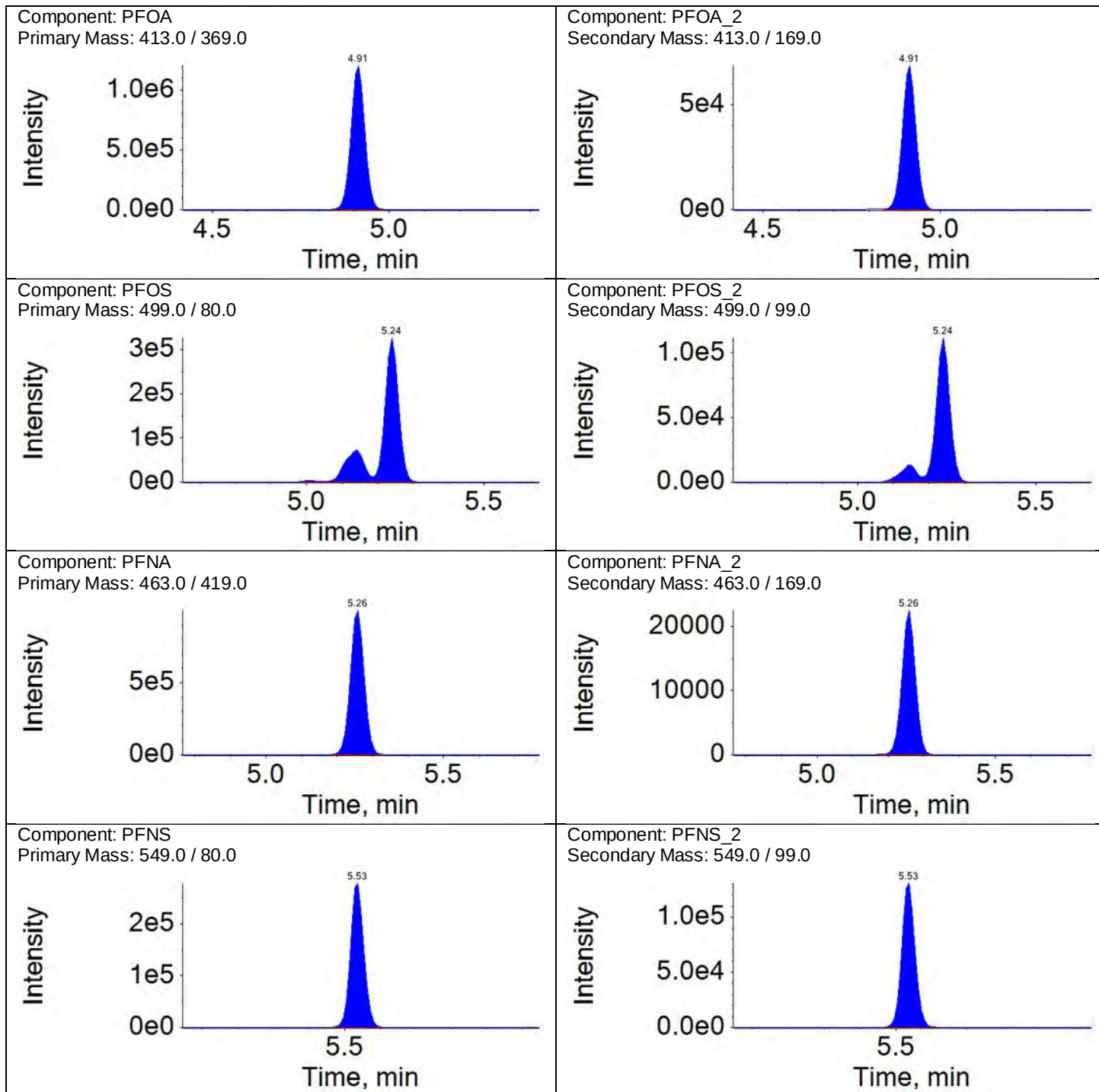
Instrument Name: LM27631

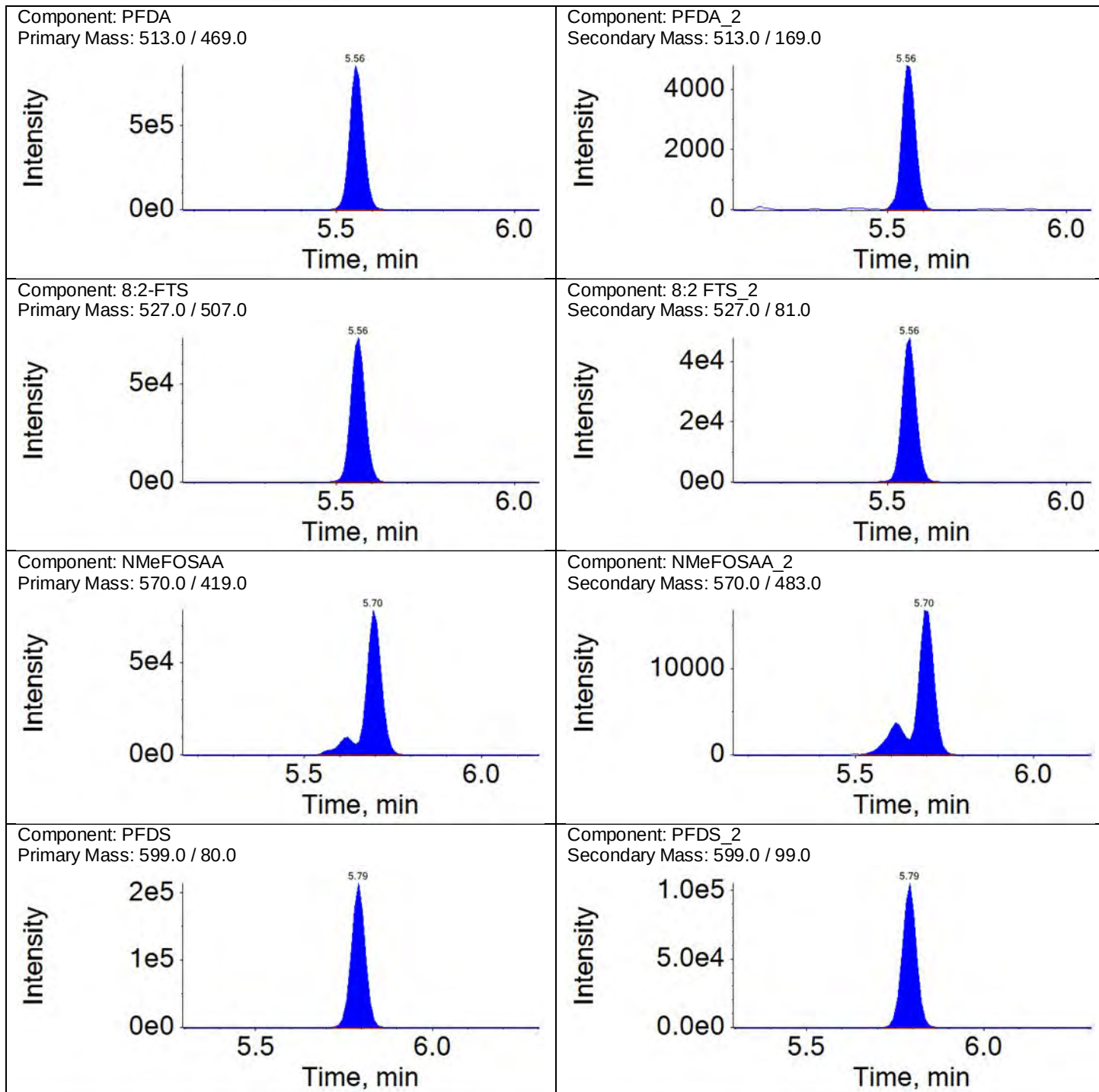
File Name: 18NOV12DCAL-46.wiff

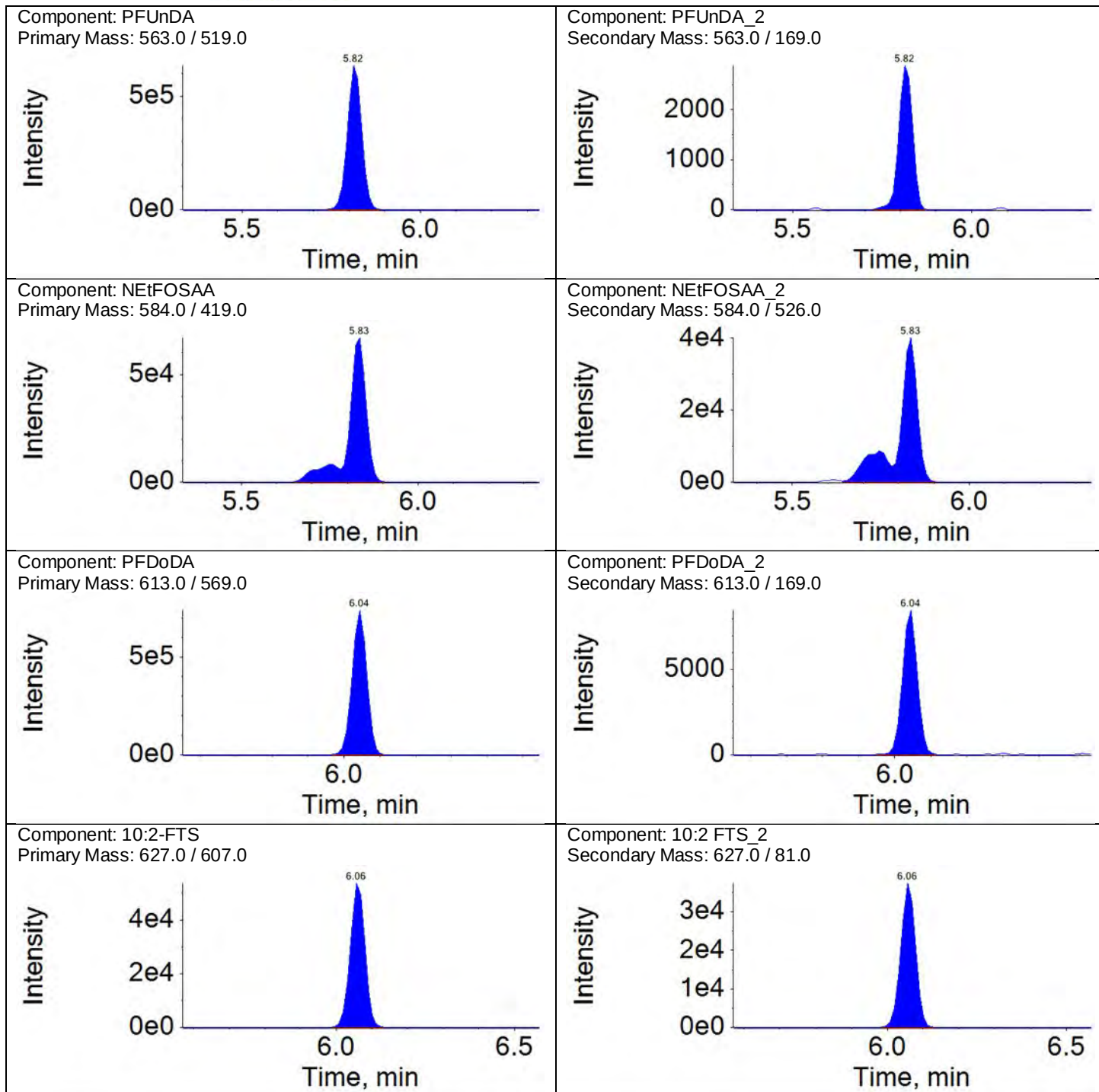
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	1630613.49	A	0.3619	0.3539			
PFBS_2	3.80	1.00	577021.23	A	0.3619	0.3539	-2	50	
4:2-FTS	4.12	1.00	344695.89	A	0.6730	0.5792			
4:2 FTS_2	4.12	1.00	199643.08	A	0.6730	0.5792		#NA!	
PFHxA	4.15	1.00	3158486.41	A	0.0117	0.0109			
PFHxA_2	4.15	1.00	34335.08	A	0.0117	0.0109	-7	50	
PFPeS	4.17	1.10	815928.18	A	0.5191	0.5405			
PFPeS_2	4.17	1.10	440987.79	A	0.5191	0.5405	4	50	
PFHpA	4.54	1.00	3269561.01	A	0.0563	0.0518			
PFHpA_2	4.54	1.00	169510.99	A	0.0563	0.0518	-8	50	
PFHxS	4.54	1.00	1138604.25	M	0.3428	0.3697			
PFHxS_2	4.54	1.00	420898.36	M	0.3428	0.3697	8	50	
6:2-FTS	4.90	1.00	260254.34	A	0.6604	0.6706			
6:2 FTS_2	4.90	1.00	174514.29	A	0.6604	0.6706		#NA!	
PFHpS	4.90	1.08	1145559.80	A	0.4066	0.4043			
PFHpS_2	4.90	1.08	463097.70	A	0.4066	0.4043	-1	50	
PFOA	4.91	1.00	3291549.40	A	0.0562	0.0563			
PFOA_2	4.91	1.00	185238.19	A	0.0562	0.0563	0	50	
PFOS	5.24	1.00	1147826.77	M	0.2968	0.2969			
PFOS_2	5.24	1.00	340771.88	M	0.2968	0.2969	0	50	
PFNA	5.26	1.00	2725089.71	A	0.0229	0.0218			
PFNA_2	5.26	1.00	59324.51	A	0.0229	0.0218	-5	50	
PFNS	5.53	1.06	725402.00	A	0.4828	0.4661			
PFNS_2	5.53	1.06	338109.67	A	0.4828	0.4661	-3	50	
PFDA	5.56	1.00	2309359.54	A	0.0081	0.0056			
PFDA_2	5.56	1.00	12923.91	A	0.0081	0.0056	-31	50	
8:2-FTS	5.56	1.00	206213.12	A	0.6814	0.6384			
8:2 FTS_2	5.56	1.00	131655.86	A	0.6814	0.6384		#NA!	
NMeFOSAA	5.70	1.00	250711.49	A	0.2569	0.2507			
NMeFOSAA_2	5.70	1.00	62849.33	M	0.2569	0.2507	-2	50	
PFDS	5.79	1.10	578877.50	A	0.5144	0.4977			
PFDS_2	5.79	1.10	288112.49	A	0.5144	0.4977	-3	50	
PFUnDA	5.82	1.00	1773582.60	A	0.0058	0.0044			
PFUnDA_2	5.82	1.00	7755.59	A	0.0058	0.0044	-25	50	
NEtFOSAA	5.83	1.00	237197.18	A	0.7253	0.6651			
NEtFOSAA_2	5.83	1.00	157758.05	M	0.7253	0.6651	-8	50	
PFDODA	6.04	1.00	2099385.04	A	0.0157	0.0116			
PFDODA_2	6.04	1.00	24326.91	A	0.0157	0.0116	-26	50	
10:2-FTS	6.06	1.09	153343.55	A	0.6356	0.6979			
10:2 FTS_2	6.06	1.09	107018.53	A	0.6356	0.6979		#NA!	
PFTTrDA	6.24	1.03	1679407.24	A	0.0086	0.0096			
PFTTrDA_2	6.24	1.03	16152.60	M	0.0086	0.0096	12	50	
PFTeDA	6.42	1.00	1418276.72	A	0.0062	0.0062			
PFTeDA_2	6.42	1.00	8850.65	A	0.0062	0.0062	0	50	
PFHxDA	6.72	1.05	627350.68	A	0.0683	0.0680			
PFHxDA_2	6.72	1.05	42651.35	A	0.0683	0.0680	0	50	
PFODA	6.98	1.09	544296.46	A	0.0277	0.0265			
PFODA_2	6.98	1.09	14445.27	A	0.0277	0.0265	-4	50	

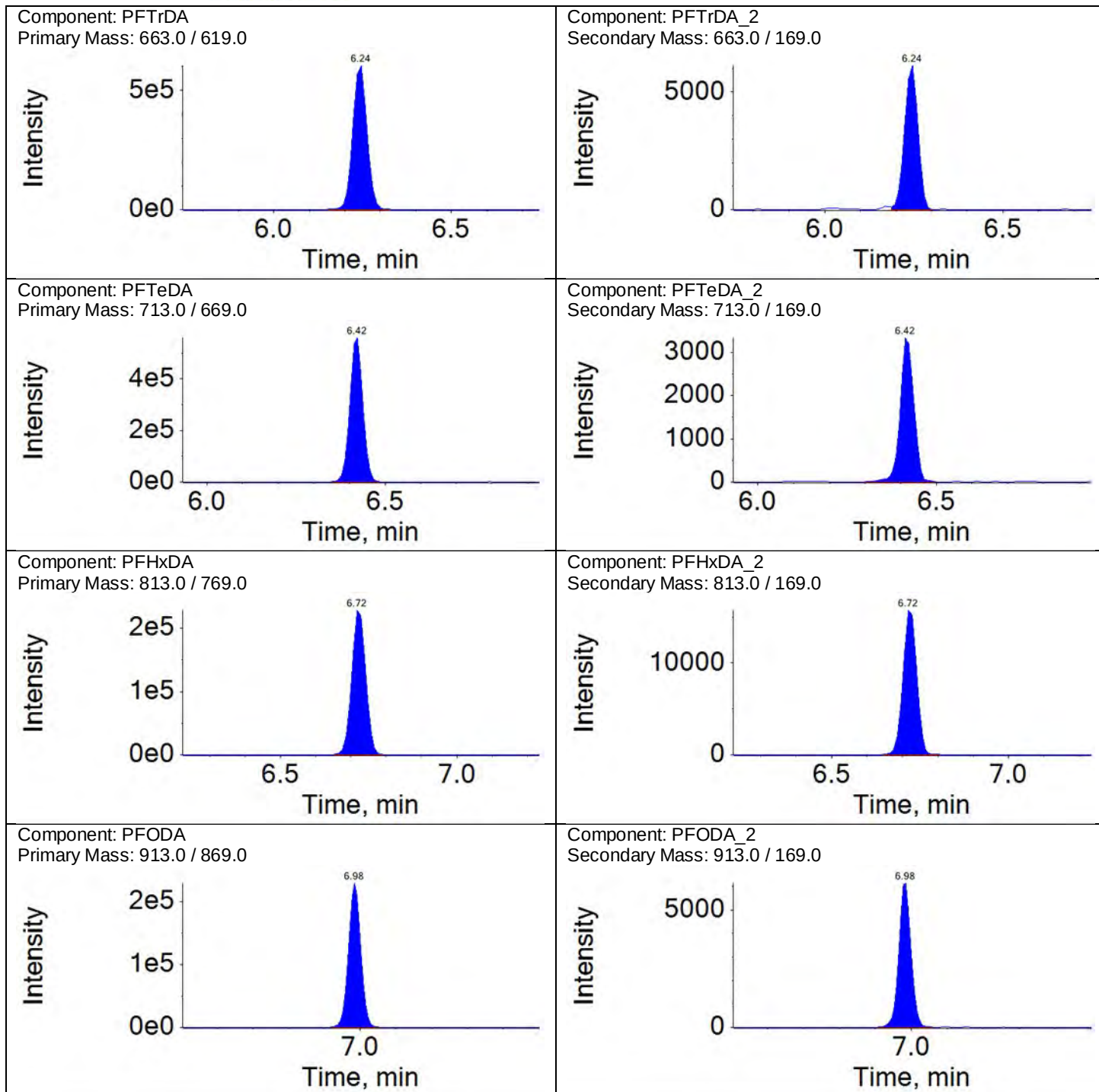












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL6		Data File:	18NOV12DCAL-47.wiff
Sample ID:	CALBRN61833B		Acquis Date:	2018-11-12T15:51:06
Sample Type:	Standard		Instrument:	LM27631
Vial Position:	8		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	555817.9	659926.2	-16	50	
13C2-PFOA	5.0	422900.5	450219.7	-6	50	
13C4-PFOS	4.8	231712.1	249205.8	-7	50	
13C2-PFDA	5.0	237446.9	278743.9	-15	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	633648.4	13C3-PFBA	555817.9	1.140	5.000	5.111	102	70-130	
E13C5-PFPeA	635977.8	13C3-PFBA	555817.9	1.144	5.000	5.132	103	70-130	
E13C3-PFBS	378676.8	13C3-PFBA	555817.9	0.681	4.650	4.809	103	70-130	
E13C2-4:2-FTS	41422.2	13C2-PFOA	422900.5	0.098	4.670	4.362	93	70-130	
E13C5-PFHxA	568205.8	13C2-PFOA	422900.5	1.344	5.000	4.854	97	70-130	
E13C3-PFHxS	284116.5	13C2-PFOA	422900.5	0.672	4.730	4.610	97	70-130	
E13C4-PFHpA	455005.8	13C2-PFOA	422900.5	1.076	5.000	4.847	97	70-130	
E13C2-6:2-FTS	27988.5	13C2-PFOA	422900.5	0.066	4.750	4.428	93	70-130	
E13C8-PFOA	707130.3	13C2-PFOA	422900.5	1.672	5.000	4.607	92	70-130	
E13C8-PFOS	253129.2	13C4-PFOS	231712.1	1.092	4.780	4.840	101	70-130	
E13C9-PFNA	413811.4	13C4-PFOS	231712.1	1.786	5.000	4.979	100	70-130	
E13C6-PFDA	522613.8	13C2-PFDA	237446.9	2.201	5.000	5.136	103	70-130	
E13C2-8:2-FTS	22899.0	13C2-PFDA	237446.9	0.096	4.790	4.810	100	70-130	
E13C8-PFOSA	539992.5	13C2-PFDA	237446.9	2.274	5.000	5.042	101	70-130	
Ed3-NMeFOSAA	70320.3	13C2-PFDA	237446.9	0.296	5.000	5.346	107	70-130	
E13C7-PFUnDA	208574.1	13C2-PFDA	237446.9	0.878	5.000	5.100	102	70-130	
Ed5-NEtFOSAA	57308.1	13C2-PFDA	237446.9	0.241	5.000	5.106	102	70-130	
E13C2-PFDoDA	477105.5	13C2-PFDA	237446.9	2.009	5.000	5.217	104	70-130	
Ed7-NMePFOSAE	272639.0	13C2-PFDA	237446.9	1.148	5.000	4.969	99	70-130	
Ed3-NMePFOSA	68215.9	13C2-PFDA	237446.9	0.287	5.000	5.220	104	70-130	
Ed9-NEtPFOSAE	242587.5	13C2-PFDA	237446.9	1.022	5.000	5.314	106	70-130	
Ed5-NEtPFOSA	56004.0	13C2-PFDA	237446.9	0.236	5.000	5.533	111	70-130	
E13C2-PFTeDA	352892.2	13C2-PFDA	237446.9	1.486	5.000	5.218	104	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL6

Instrument Name: LM27631

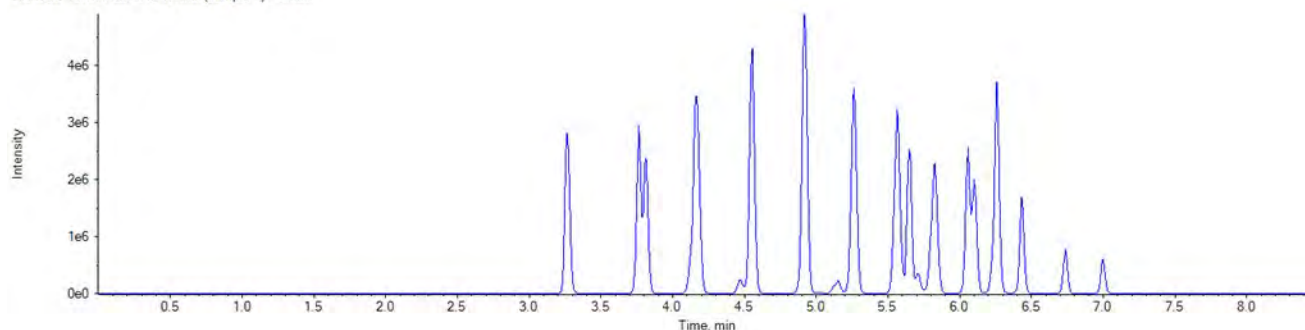
File Name: 18NOV12DCAL-47.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	5765353.4		A	13C4-PFBA	3.27	633648.4	9.099	50.404
PFPeA	3.77	1.000	5570221.7		A	13C5-PFPeA	3.76	635977.8	8.759	50.702
PFBS	3.81	1.000	3588084.2		A	13C3-PFBS	3.81	378676.8	9.475	45.072
4:2-FTS	4.13	1.000	738294.0		A	13C2-4:2-FTS	4.13	41422.2	17.824	48.392
PFHxA	4.16	1.000	6593779.0		A	13C5-PFHxA	4.16	568205.8	11.605	48.453
PFPeS	4.18	1.100	1847826.8		A	13C3-PFBS	3.81	378676.8	4.880	47.375
PFHpA	4.55	1.000	6648455.3		A	13C4-PFHpA	4.55	455005.8	14.612	48.434
PFHxS	4.55	1.000	2662852.0		M	13C3-PFHxS	4.55	284116.5	9.372	45.444
6:2-FTS	4.91	1.000	523949.5		A	13C2-6:2-FTS	4.91	27988.5	18.720	45.301
PFHpS	4.91	1.080	2604868.6		A	13C3-PFHxS	4.55	284116.5	9.168	48.262
PFOA	4.92	1.000	6758642.8		A	13C8-PFOA	4.92	707130.3	9.558	51.047
PFOS	5.25	1.000	2664957.2		M	13C8-PFOS	5.25	253129.2	10.528	46.040
PFNA	5.27	1.000	5820576.6		A	13C9-PFNA	5.27	413811.4	14.066	50.720
PFNS	5.55	1.060	1709959.5		A	13C8-PFOS	5.25	253129.2	6.755	47.262
PFDA	5.57	1.000	4802967.8		A	13C6-PFDA	5.57	522613.8	9.190	48.722
8:2-FTS	5.57	1.000	469719.6		A	13C2-8:2-FTS	5.57	22899.0	20.513	47.825
PFOSA	5.65	1.000	5530440.6		A	13C8-PFOSA	5.65	539992.5	10.242	50.024
NMeFOSAA	5.71	1.000	627854.4		M	d3-NMeFOSAA	5.71	70320.3	8.928	50.461
PFDS	5.80	1.100	1313570.3		A	13C8-PFOS	5.25	253129.2	5.189	47.020
PFUnDA	5.83	1.000	3923979.2		A	13C7-PFUnDA	5.83	208574.1	18.813	49.183
NEtFOSAA	5.84	1.000	551865.7		A	d5-NEtFOSAA	5.84	57308.1	9.630	50.481
PFDODA	6.06	1.000	4582985.5		A	13C2-PFDODA	6.06	477105.5	9.606	48.914
10:2-FTS	6.07	1.090	348263.2		A	13C2-8:2-FTS	5.57	22899.0	15.209	50.658
NMePFOSAE	6.10	1.000	3484588.8		A	d7-NMePFOSAE	6.09	272639.0	12.781	53.193
NMePFOSA	6.11	1.000	670429.6		A	d3-NMePFOSA	6.11	68215.9	9.828	48.485
PFDoS	6.23	1.190	711567.5		A	13C8-PFOS	5.25	253129.2	2.811	49.234
NEtPFOSAE	6.26	1.000	3677006.6		A	d9-NEtPFOSAE	6.25	242587.5	15.157	48.629
NEtPFOSA	6.27	1.000	599280.4		A	d5-NEtPFOSA	6.27	56004.0	10.701	49.142
PFTDA	6.26	1.030	3691733.8		A	13C2-PFDODA	6.06	477105.5	7.738	48.838
PFTeDA	6.43	1.000	3149020.2		A	13C2-PFTeDA	6.43	352892.2	8.923	50.021
PFHxDA	6.74	1.050	1533920.2		A	13C2-PFTeDA	6.43	352892.2	4.347	51.786
PFOA	7.00	1.090	1270897.6		A	13C2-PFTeDA	6.43	352892.2	3.601	50.157

Total Ion Chromatogram

TIC from 18NOV12DCAL-47.wiff (sample 1) - CAL6



APPROVED

By MCD at 6:33 pm, 11/12/18

BSI05 Page 1018 of 1595

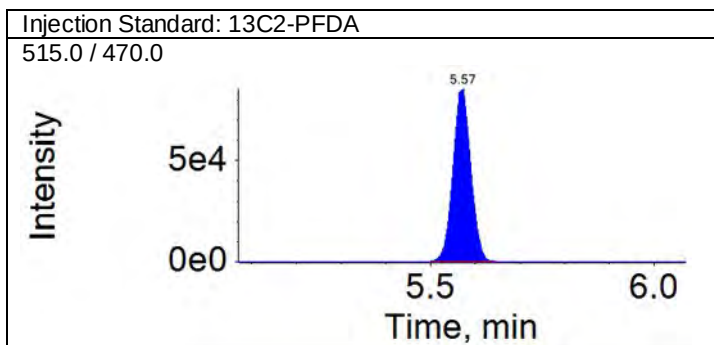
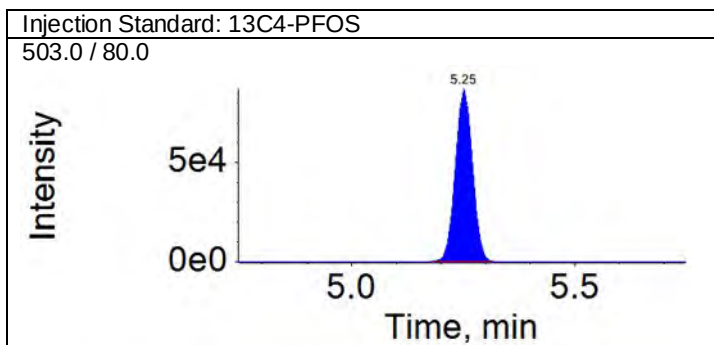
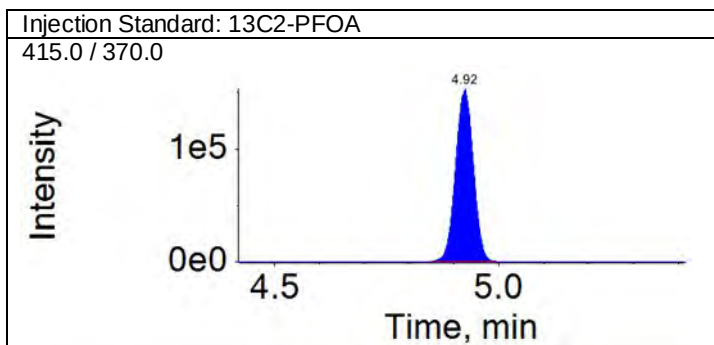
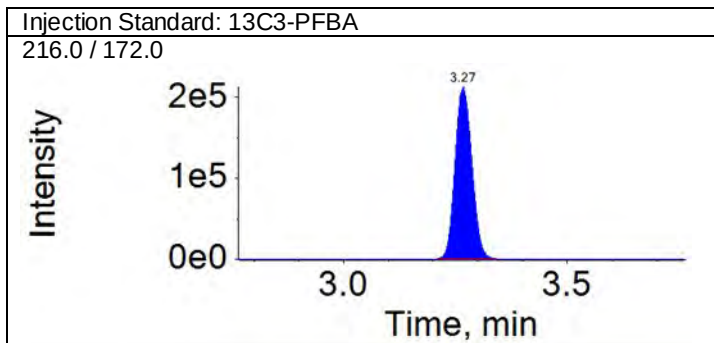
REVIEWED

By HMK at 10:53 am, 11/13/18

Page 2 of 17

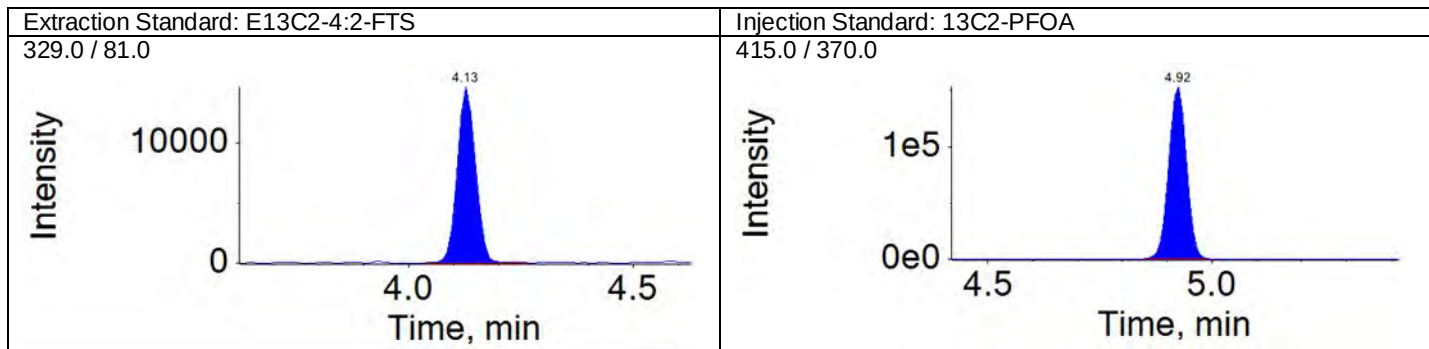
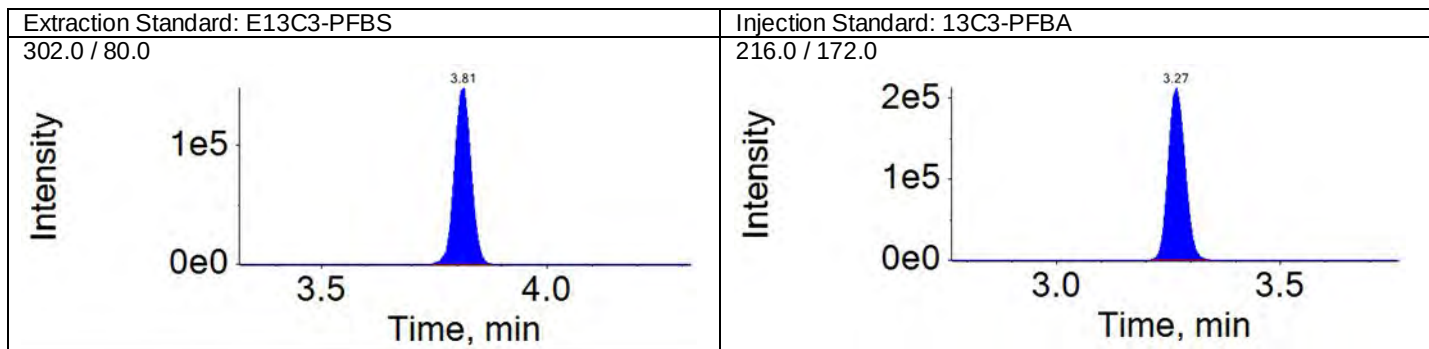
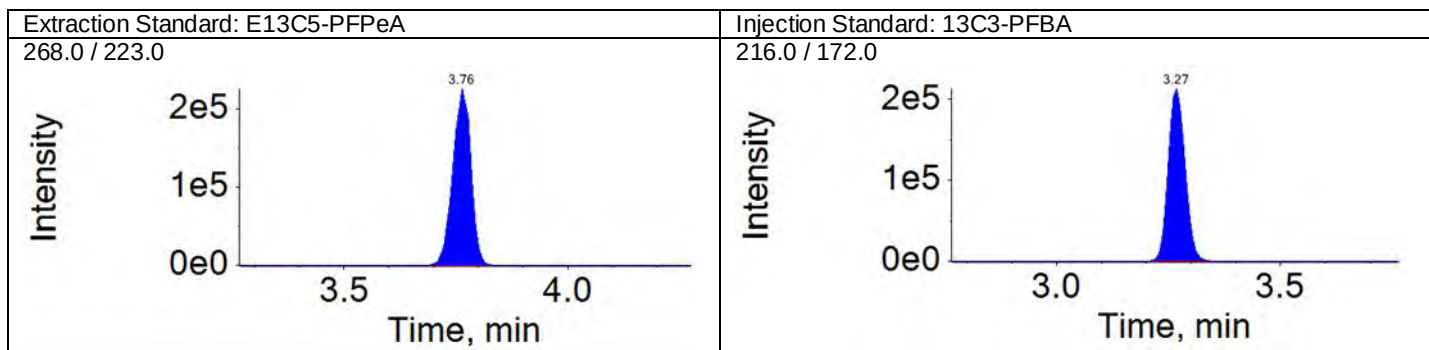
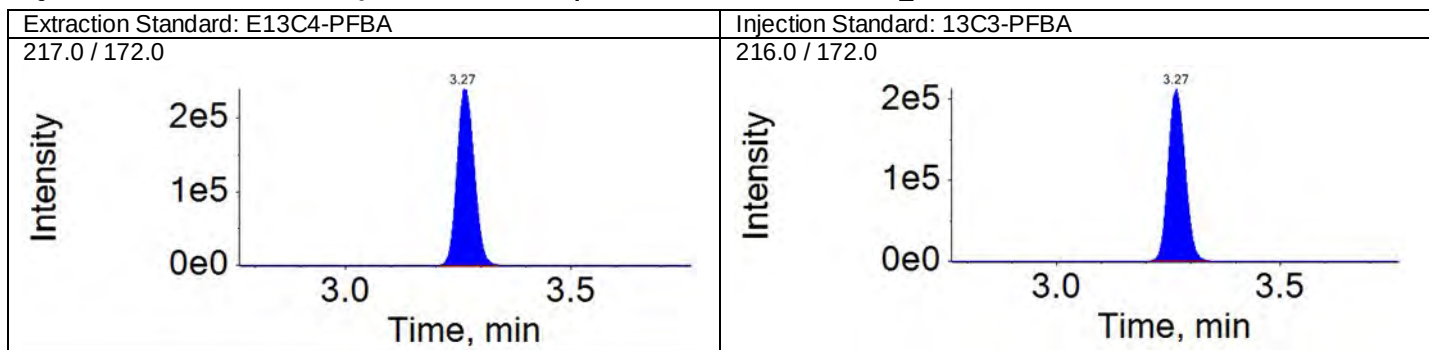
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



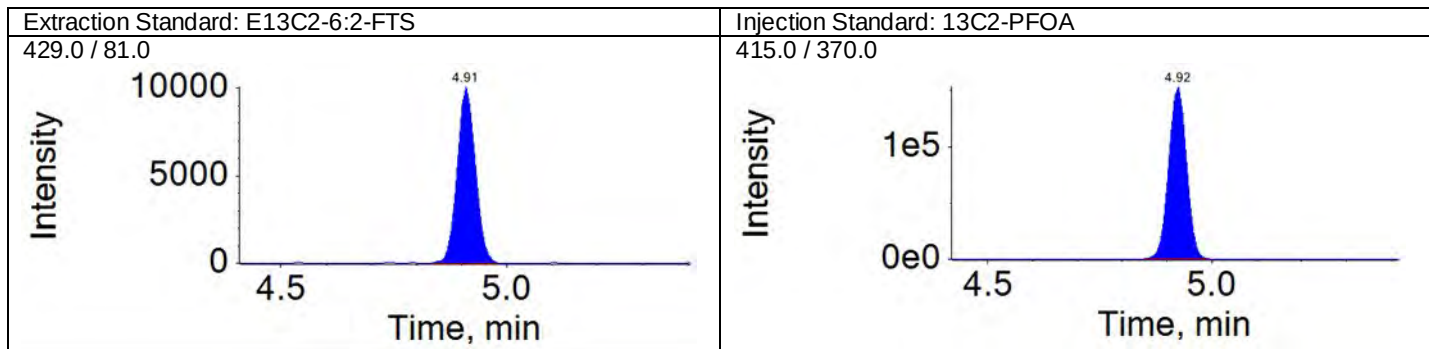
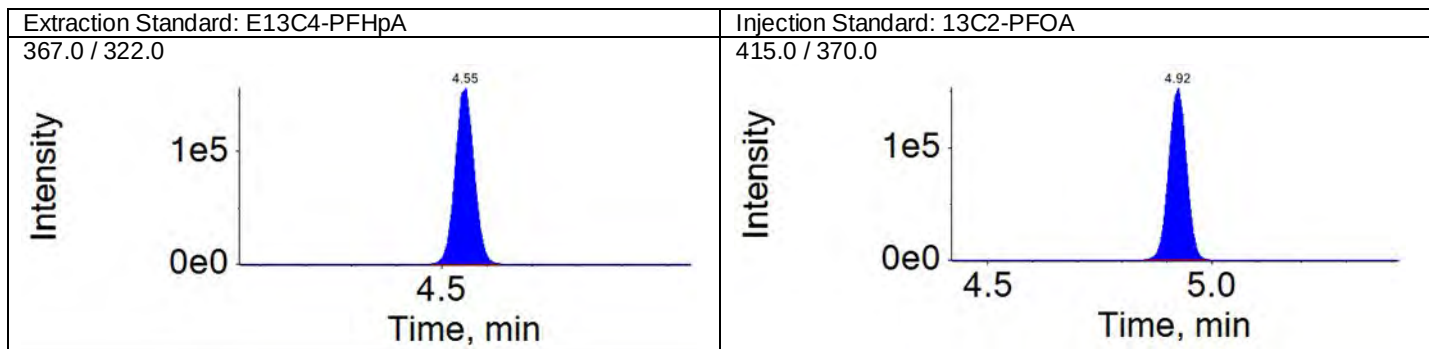
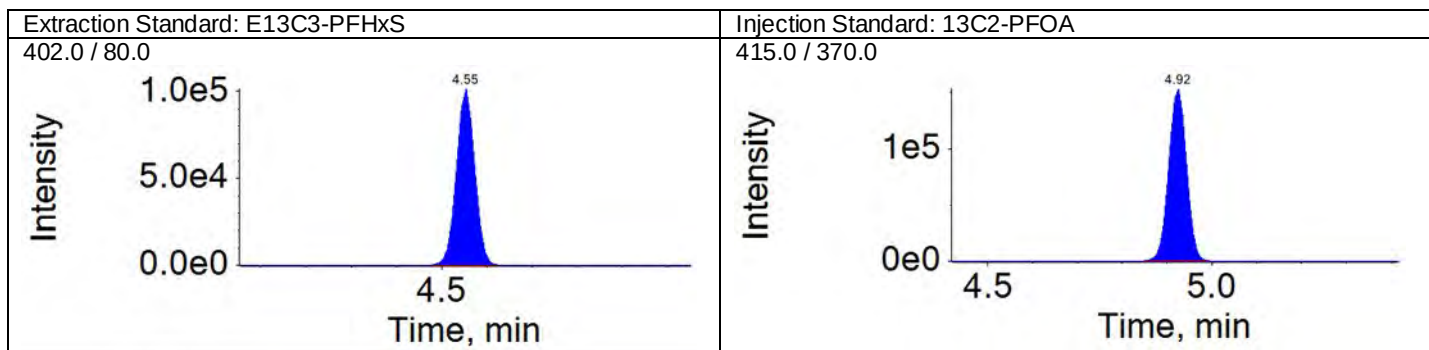
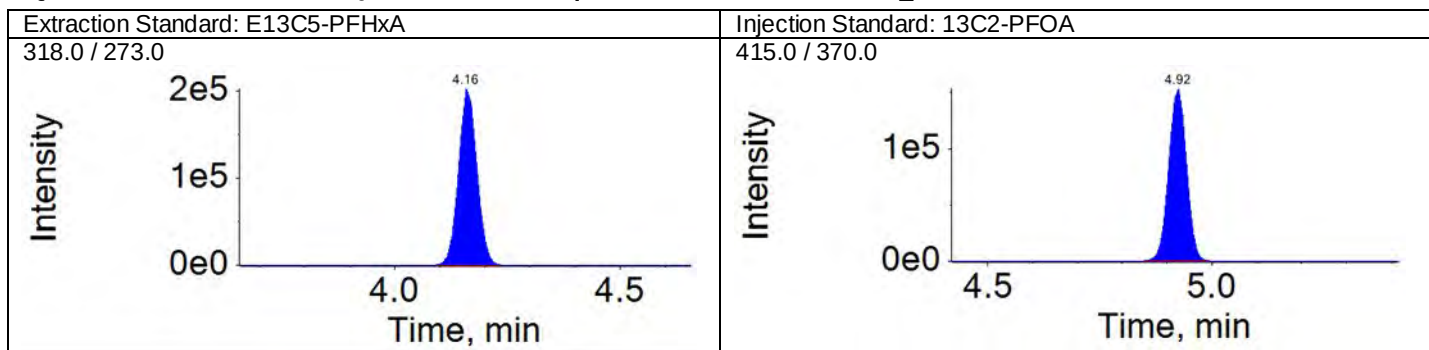
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



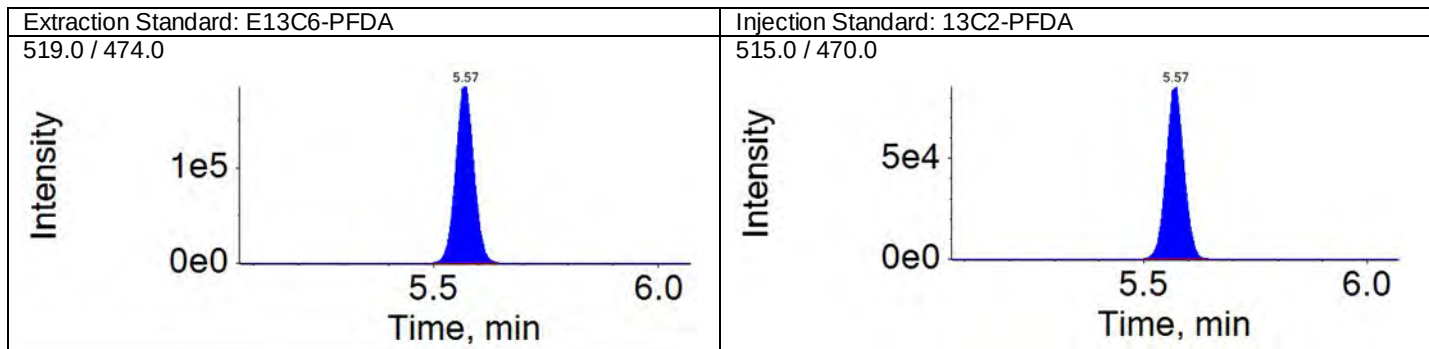
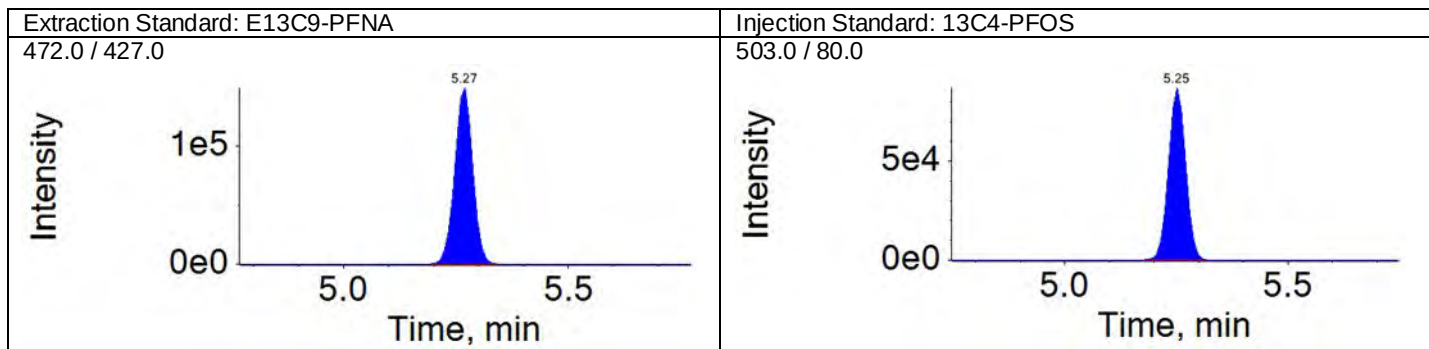
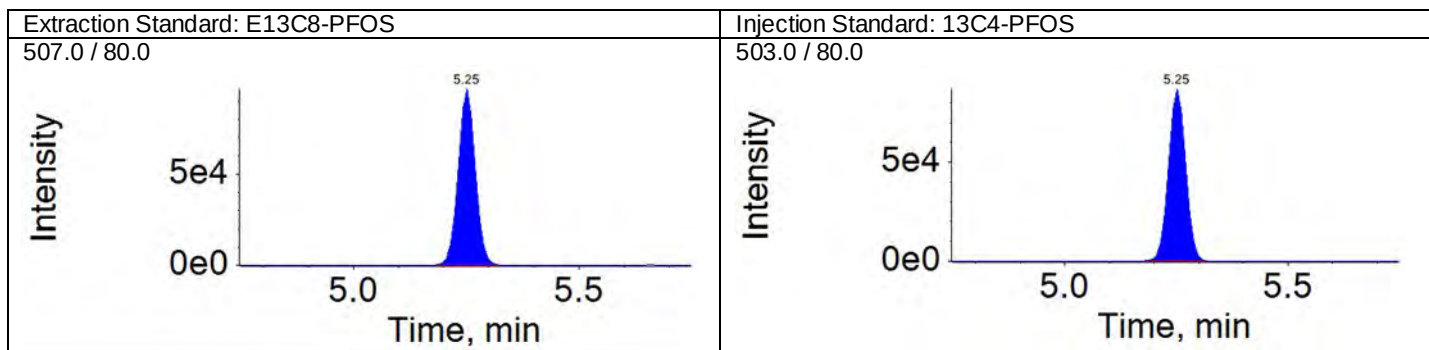
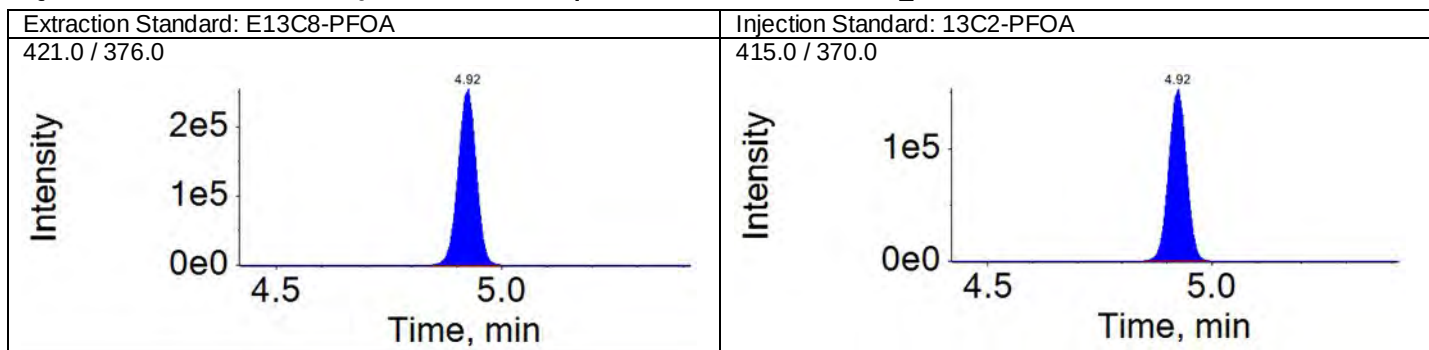
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



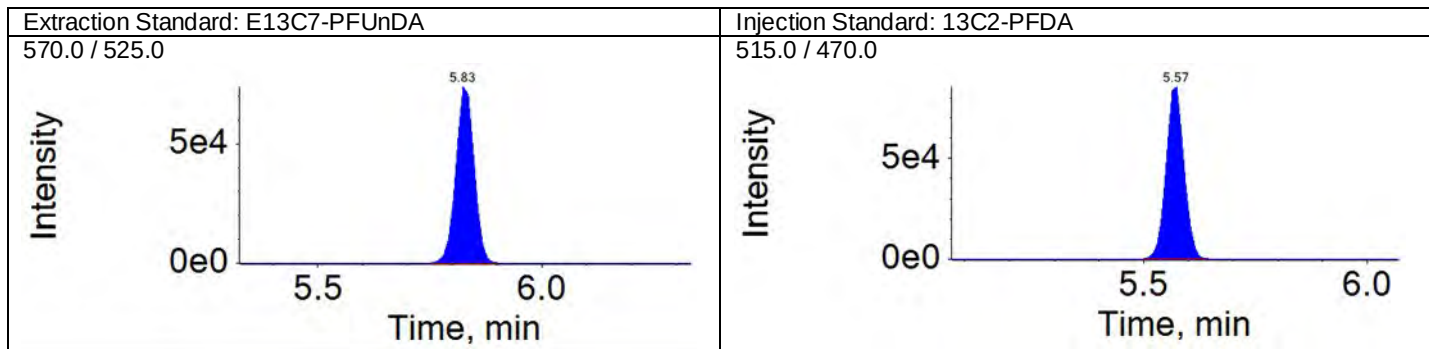
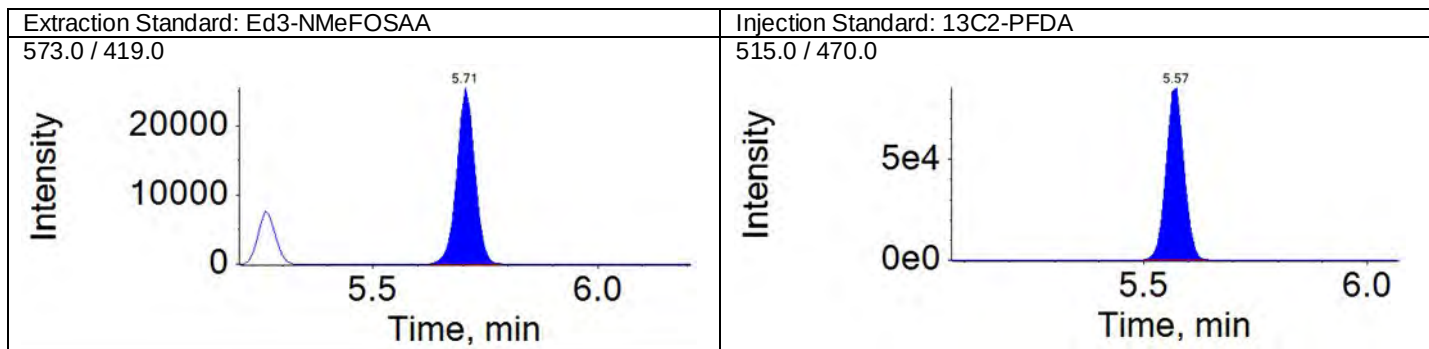
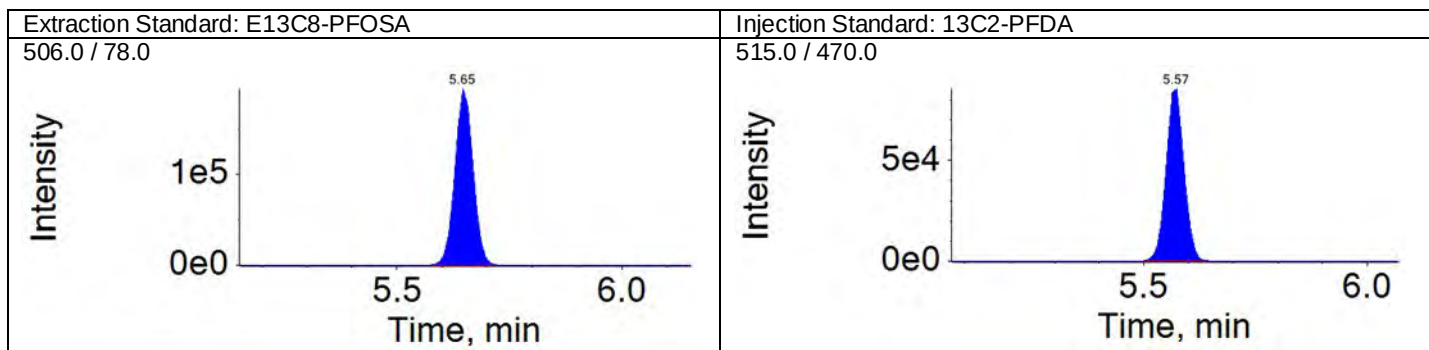
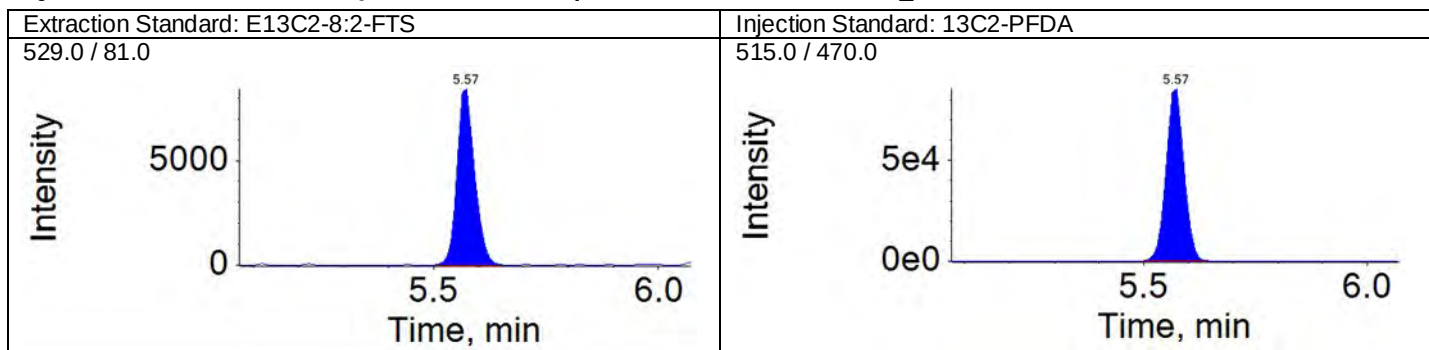
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



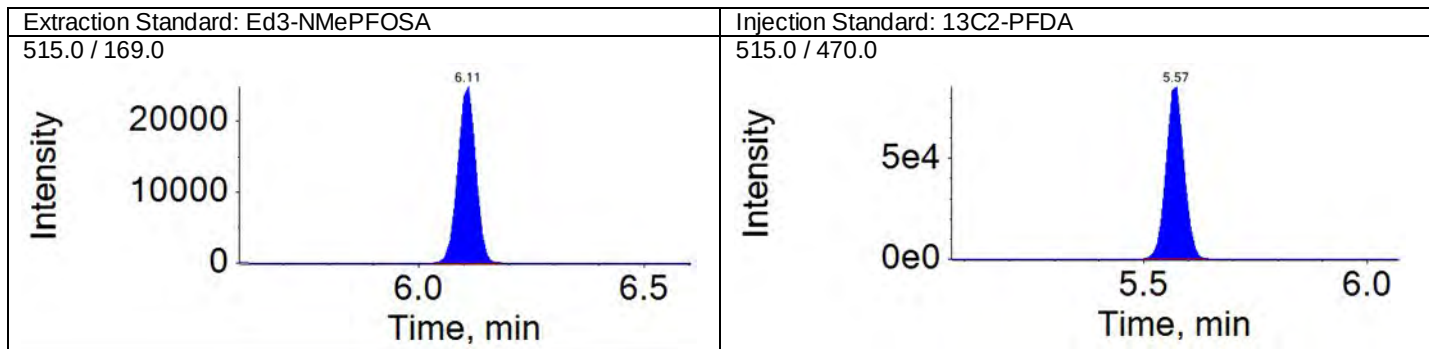
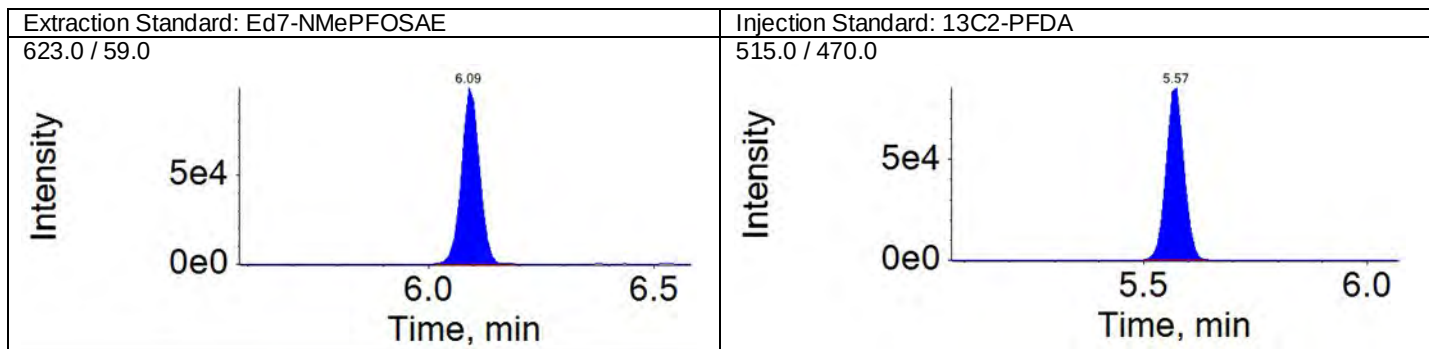
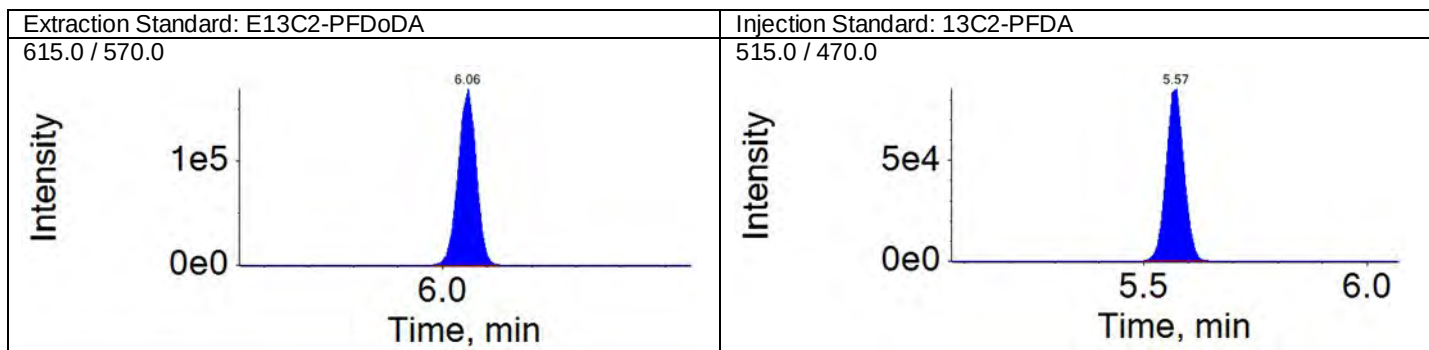
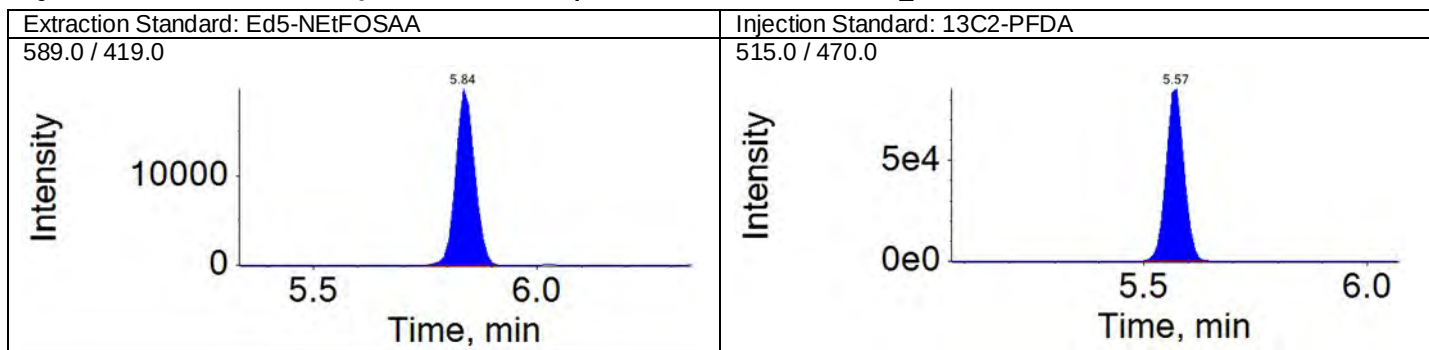
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



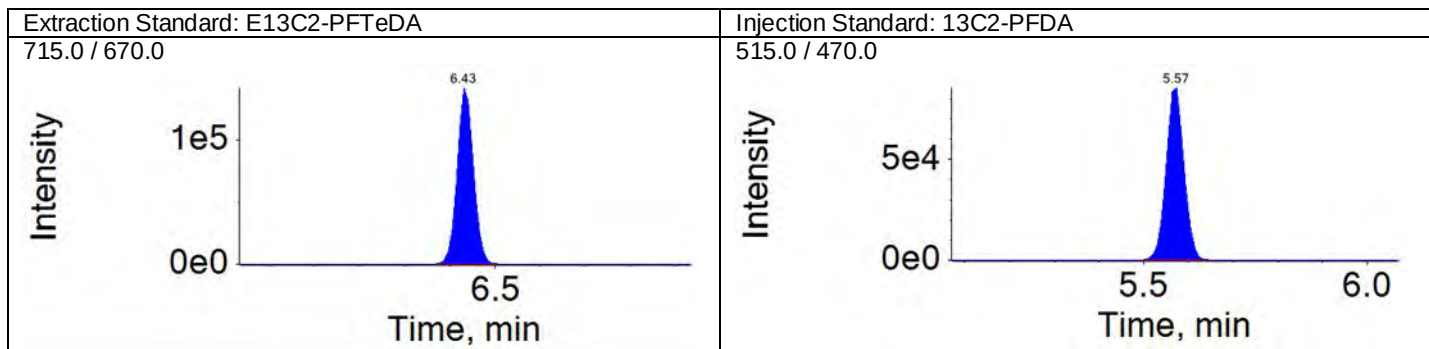
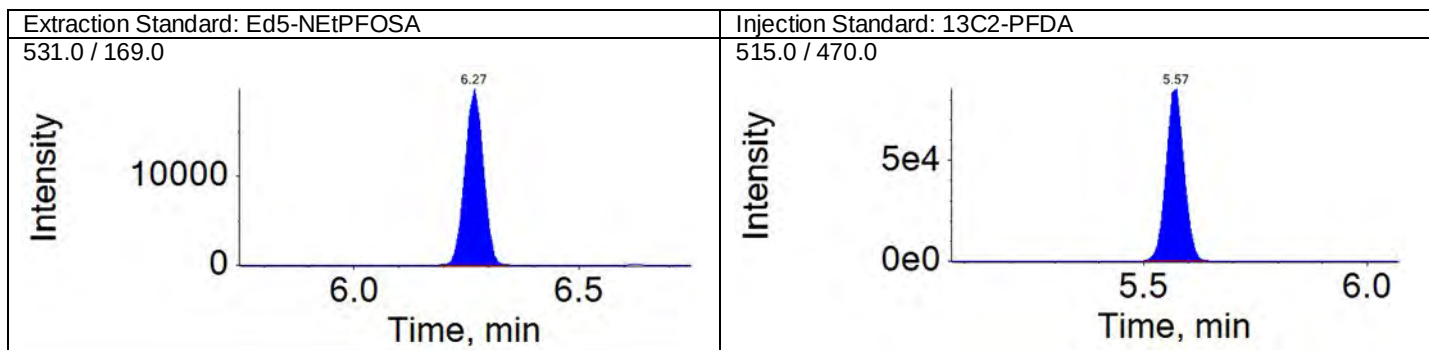
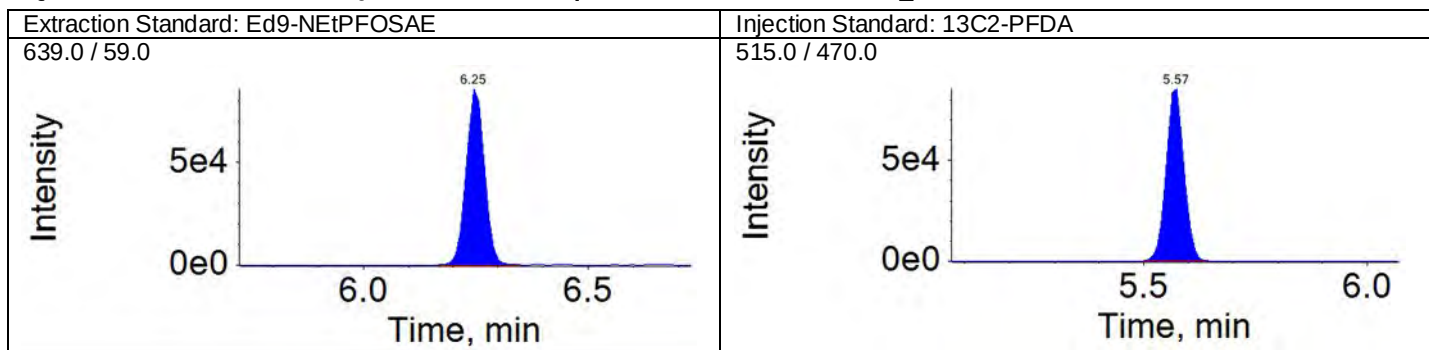
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



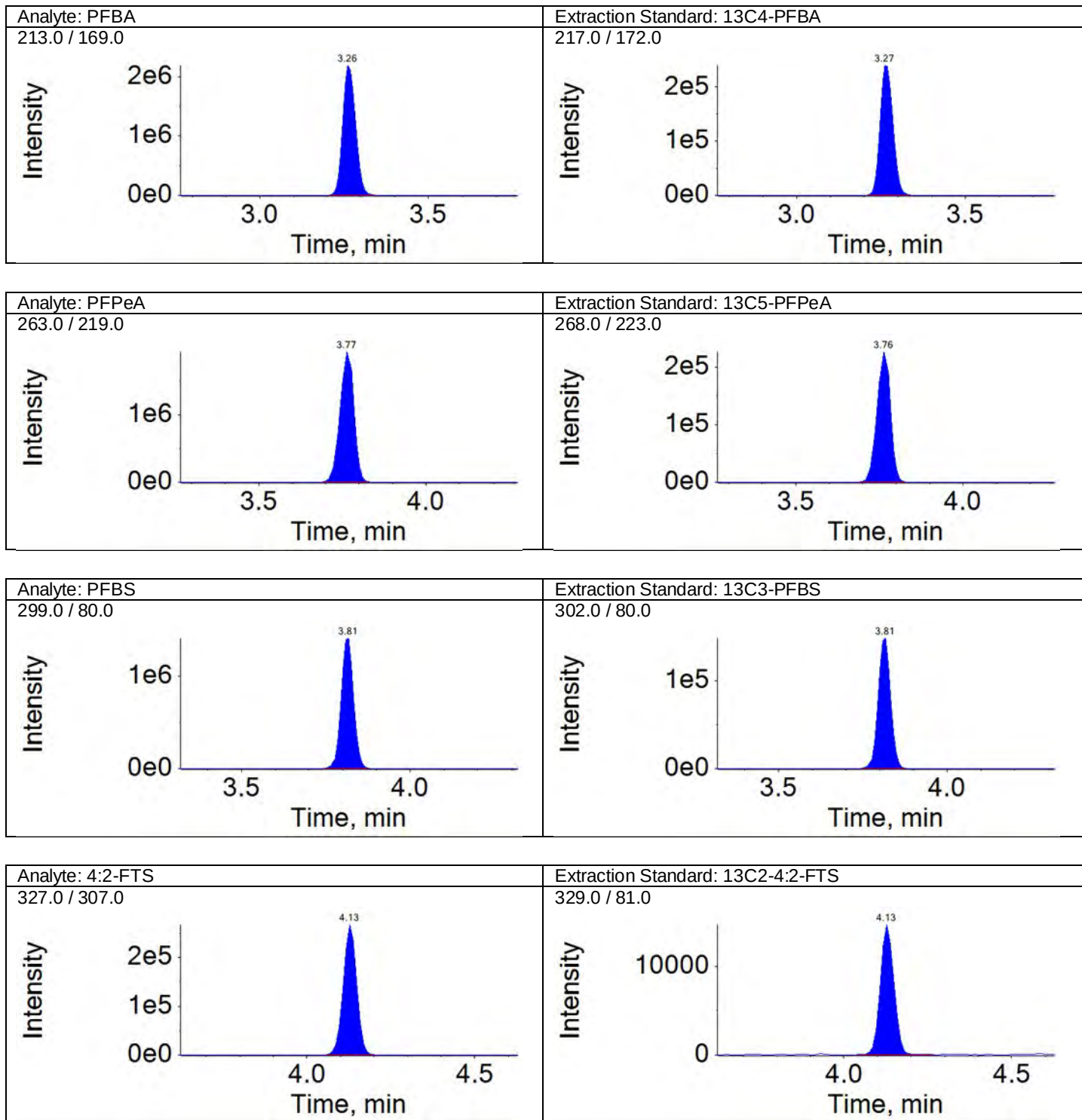
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



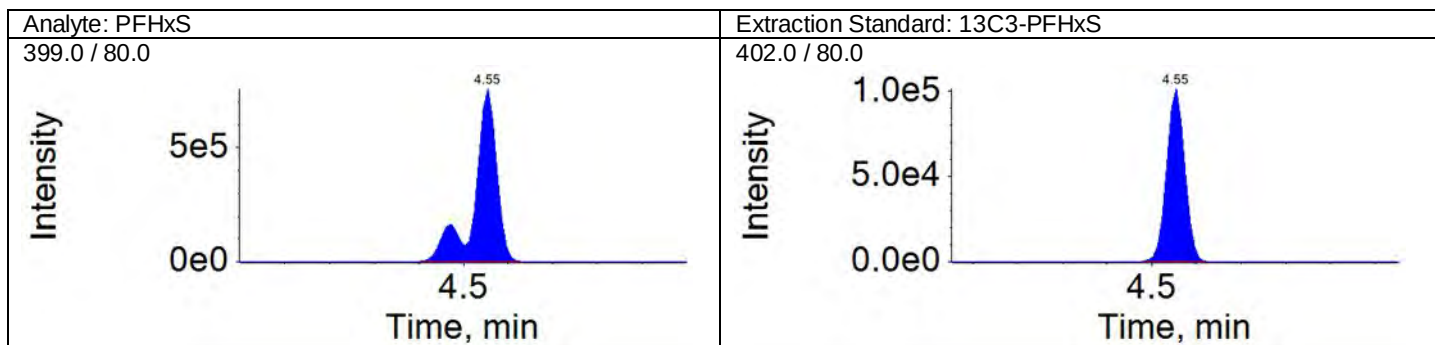
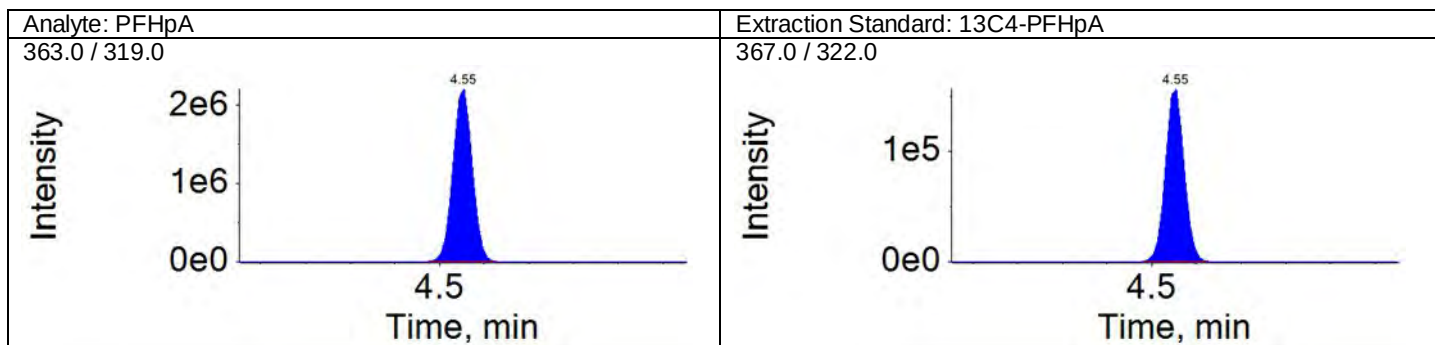
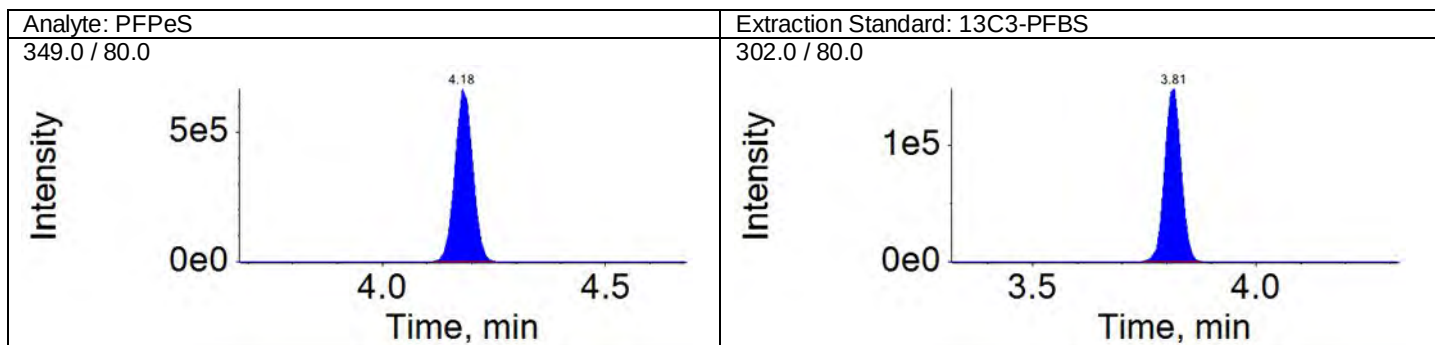
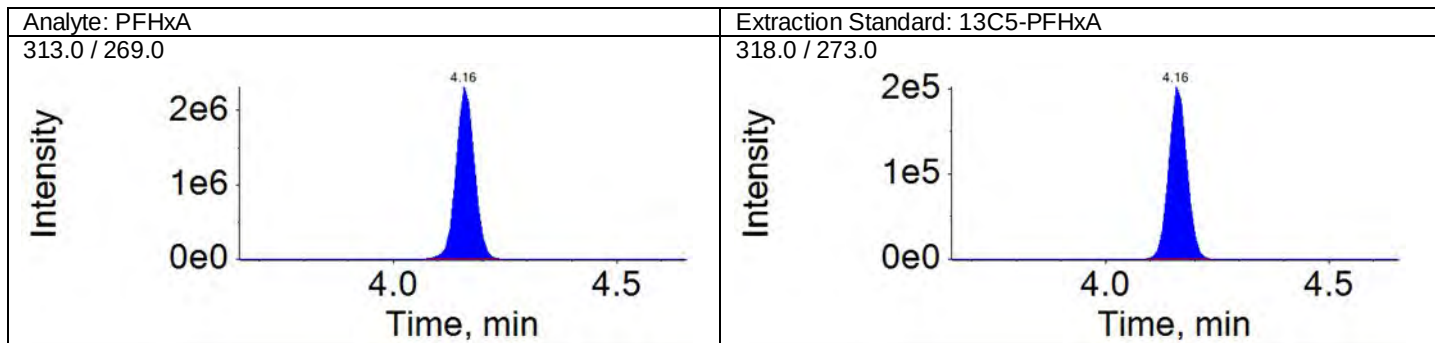
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



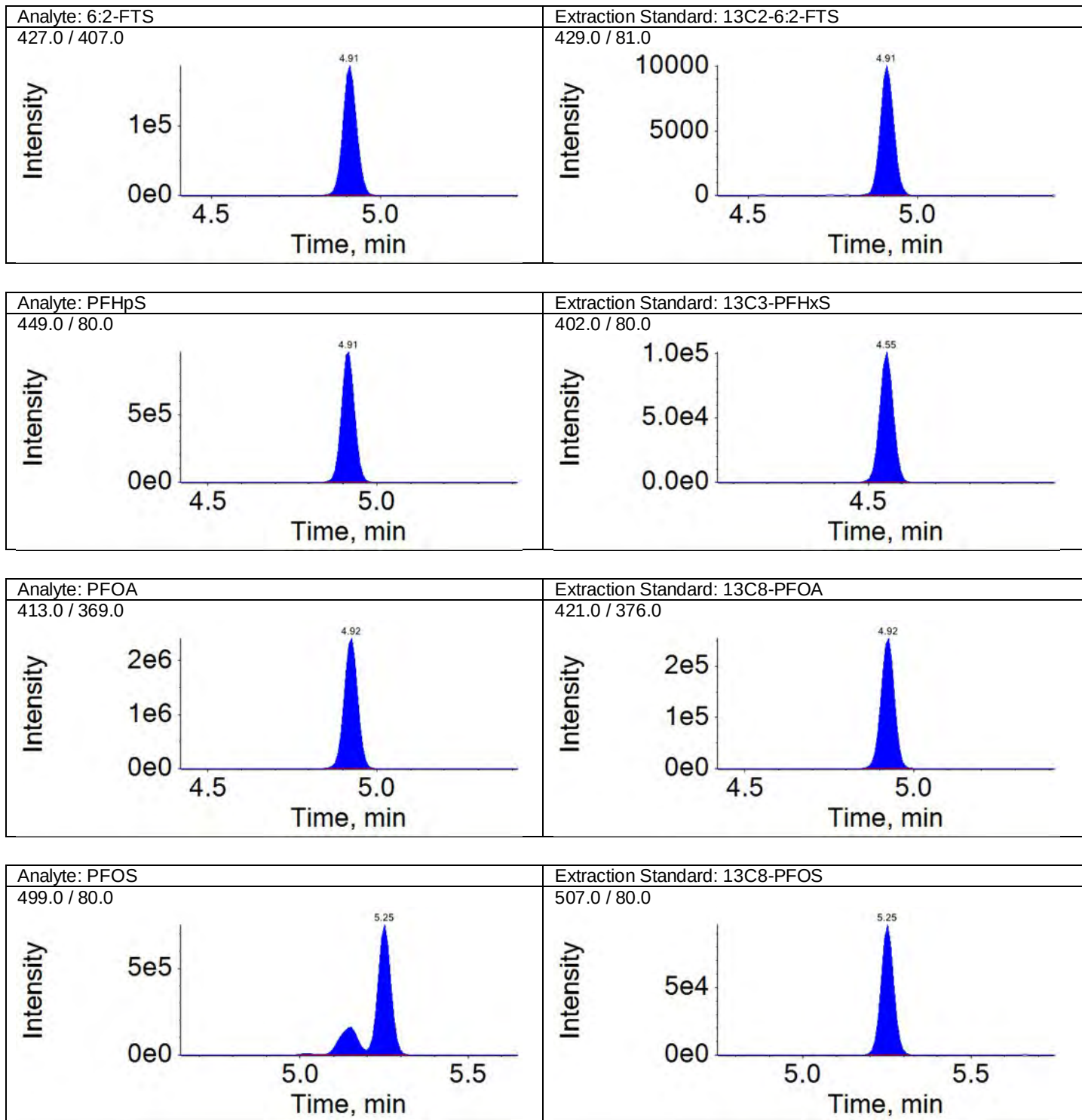
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



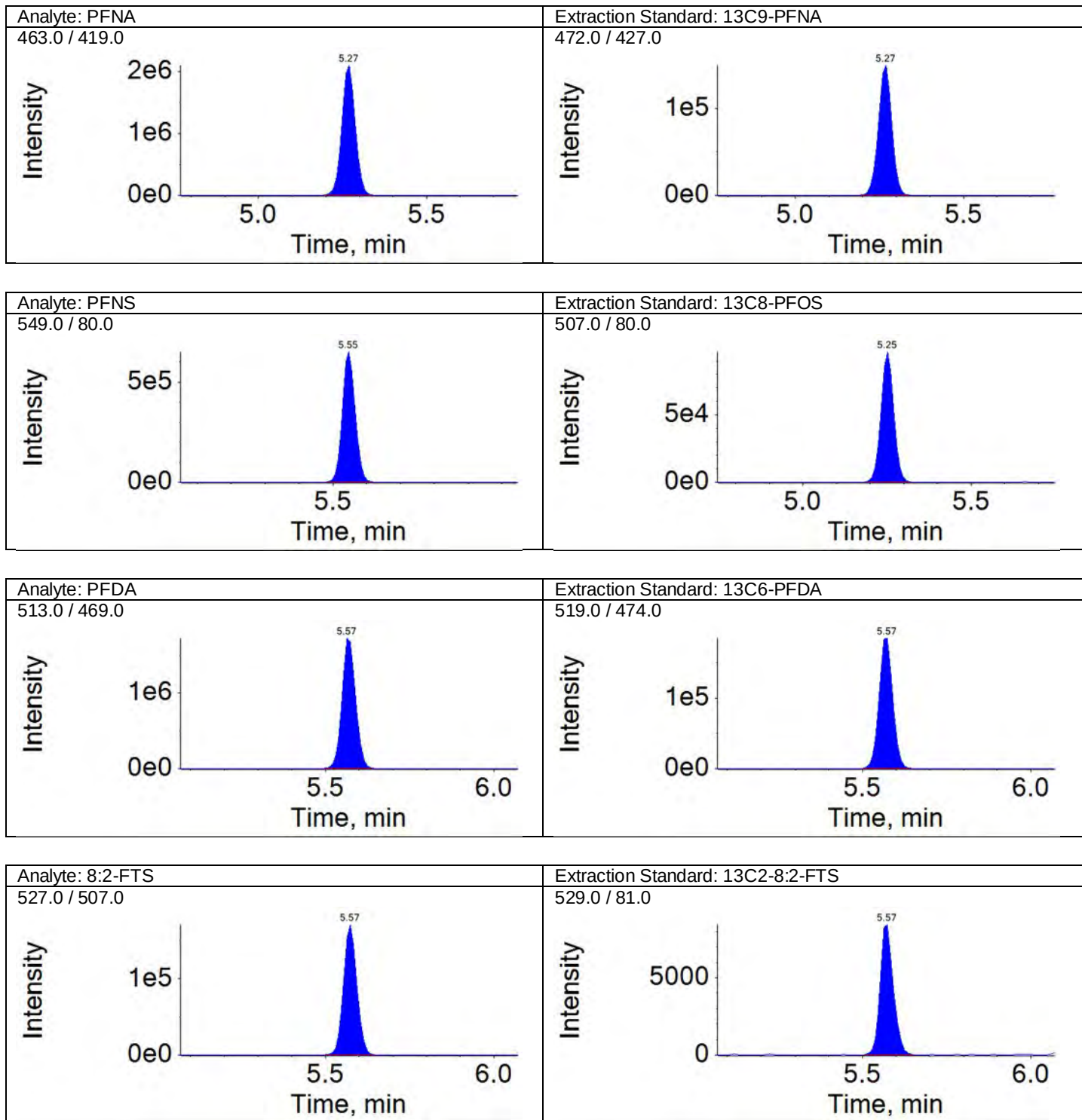
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



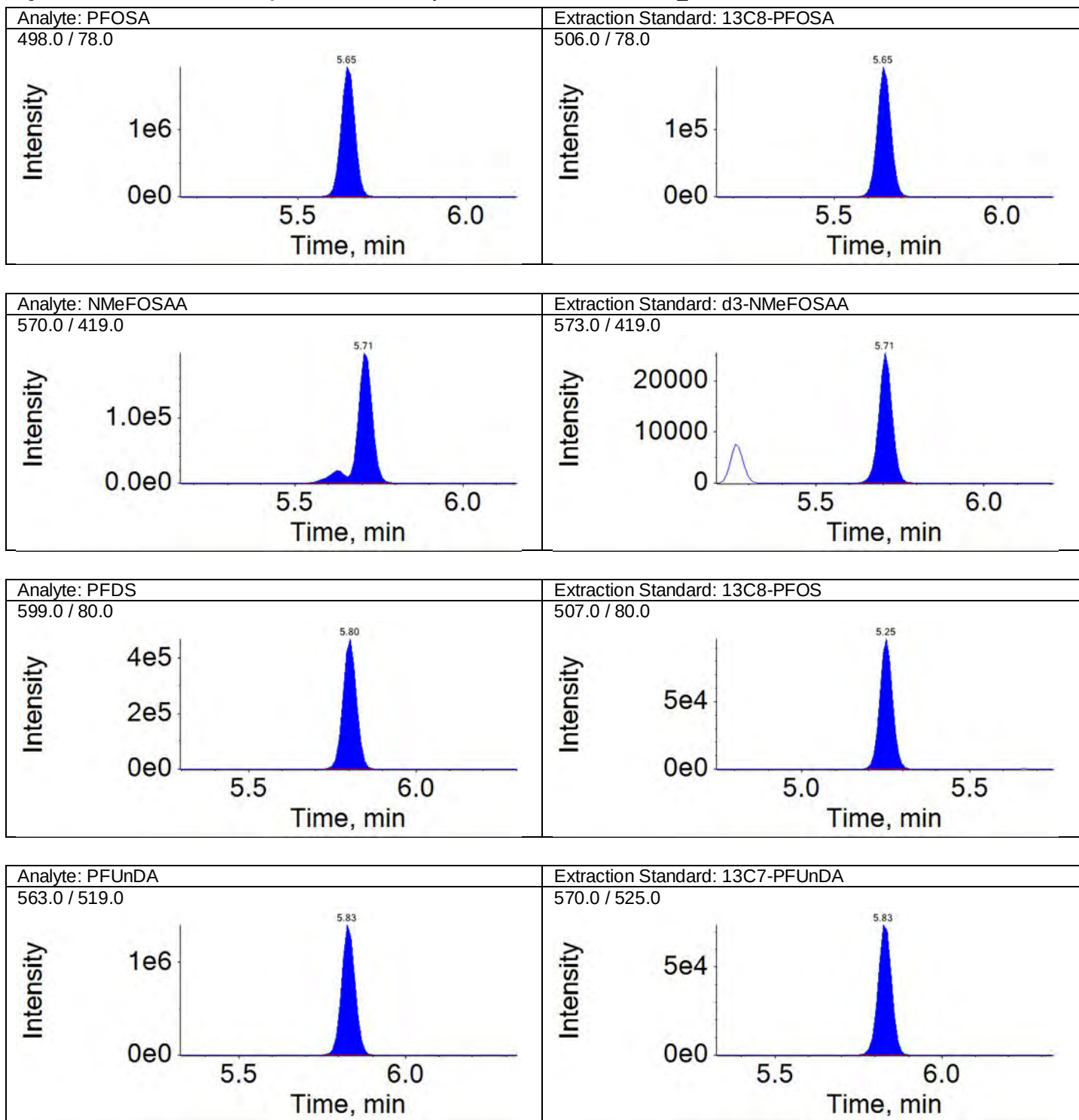
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



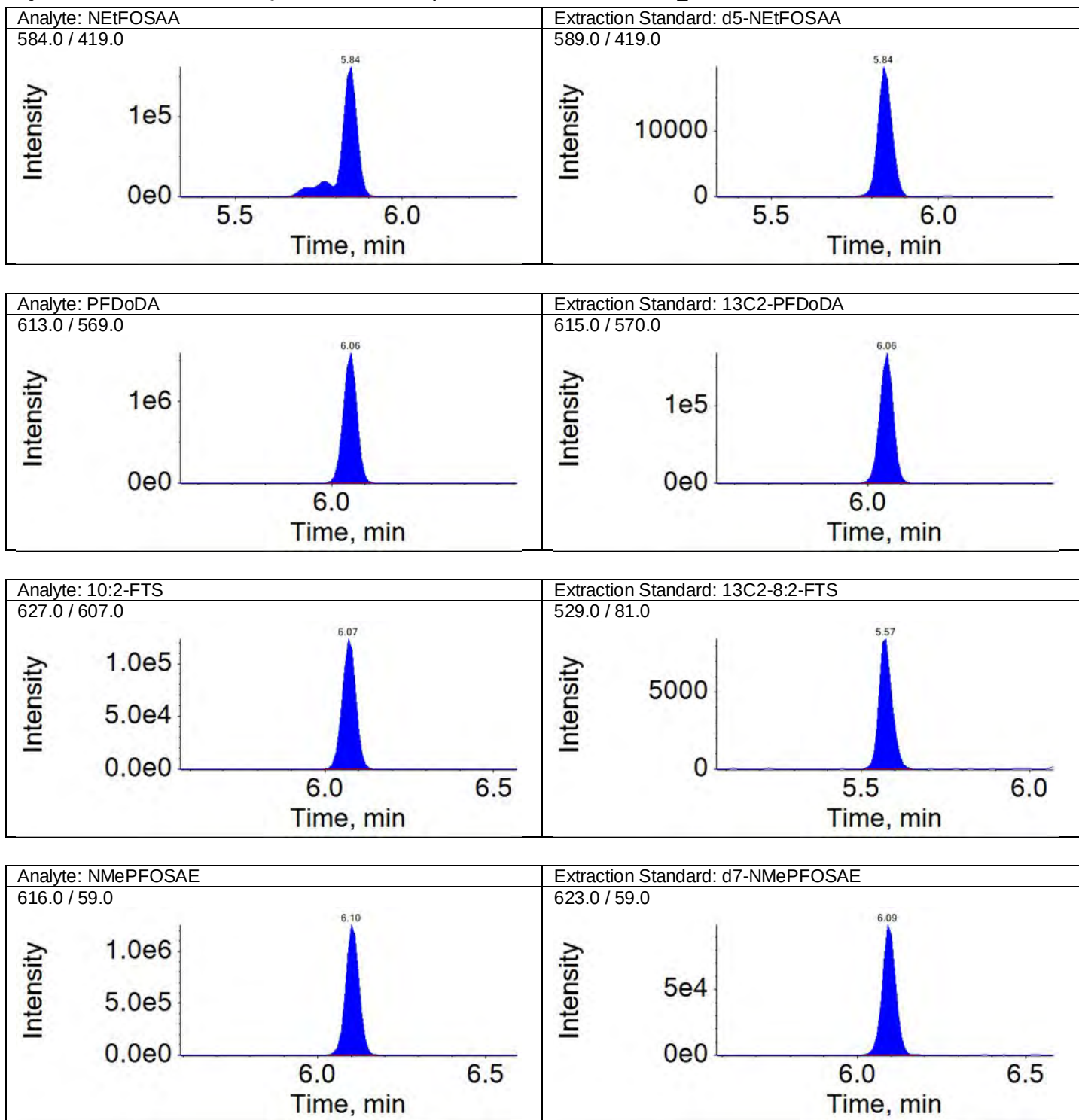
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



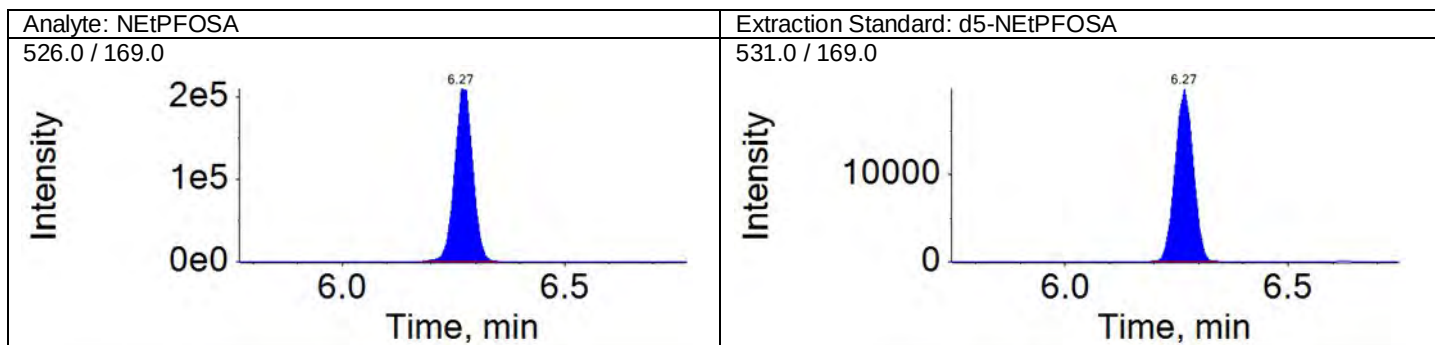
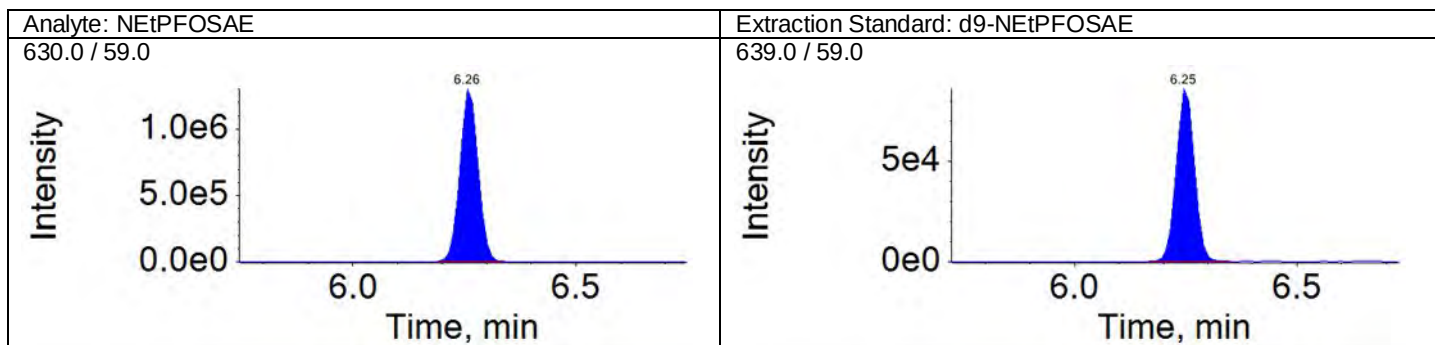
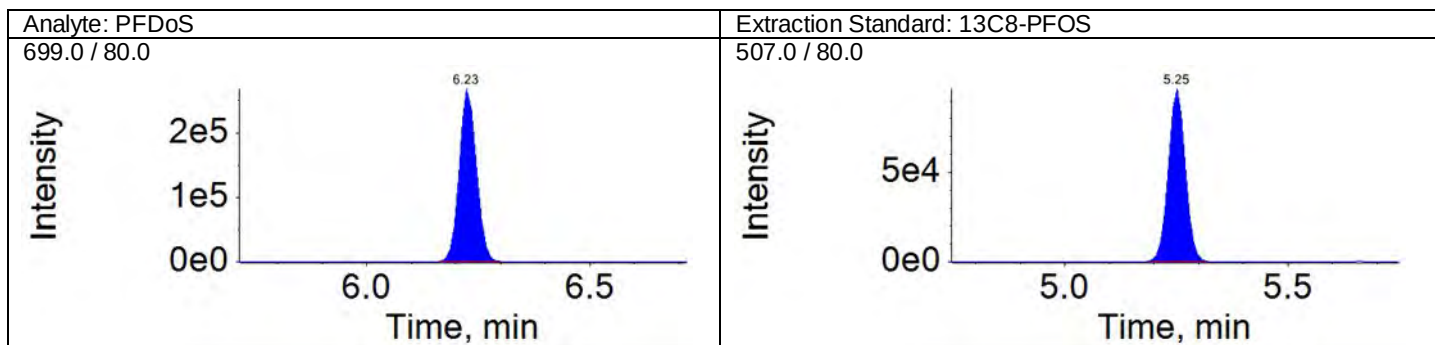
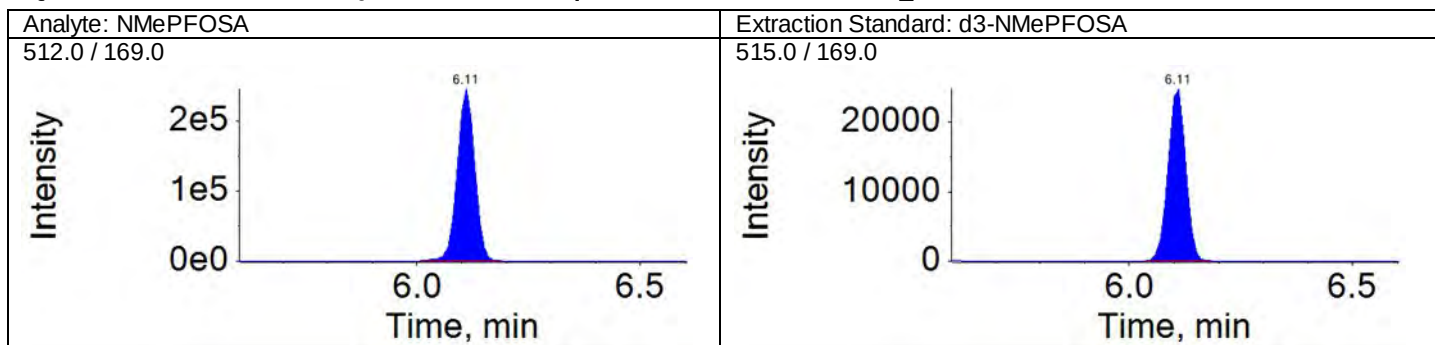
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



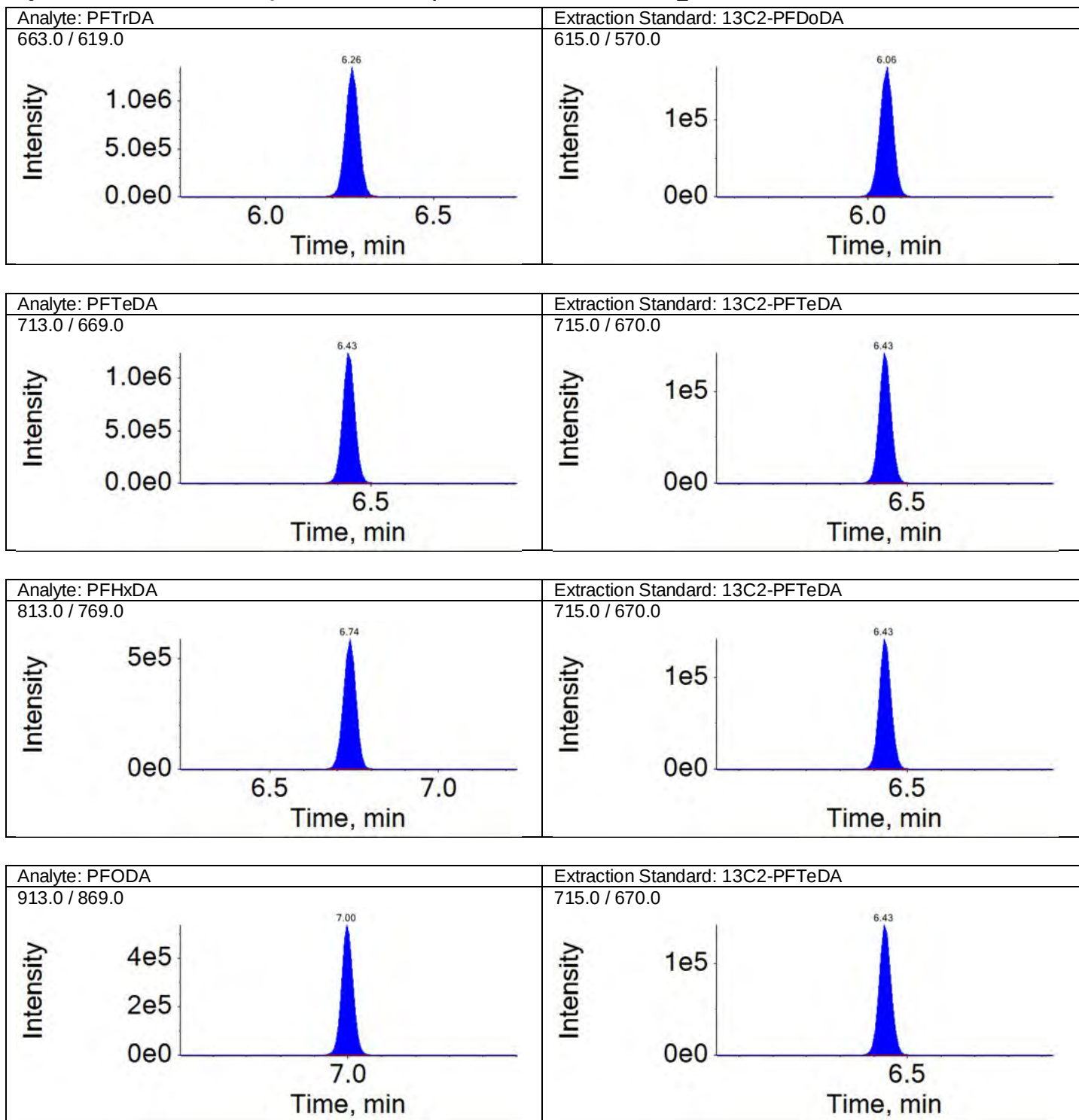
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



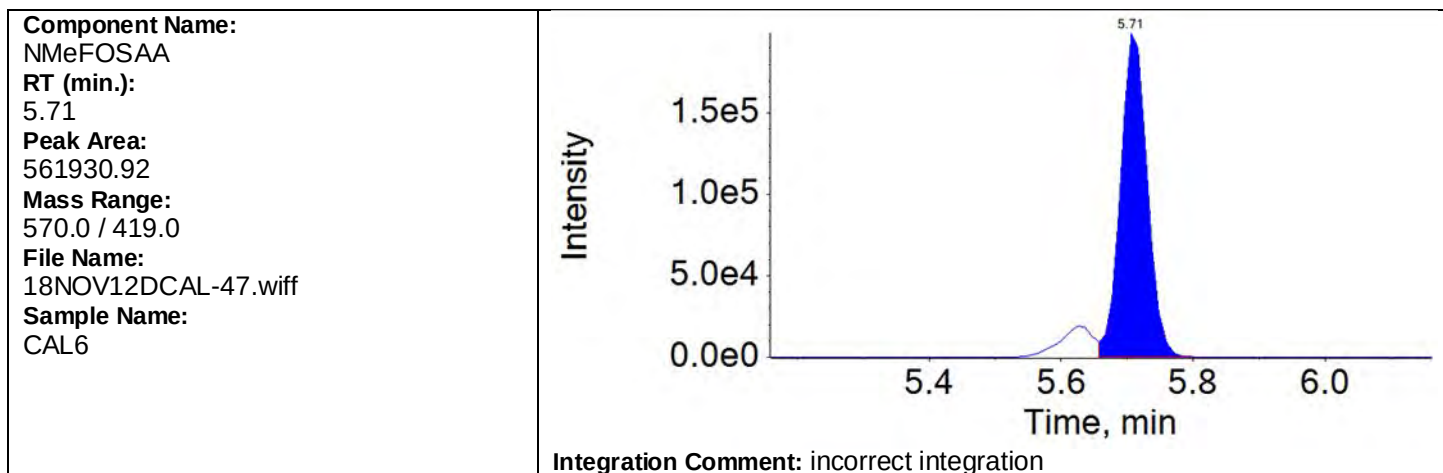
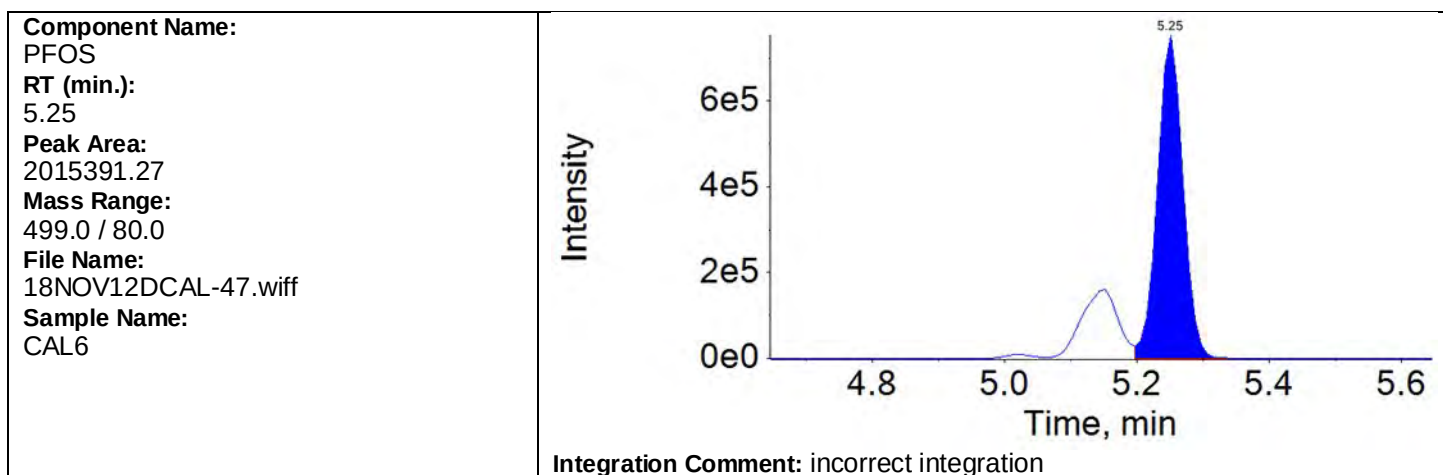
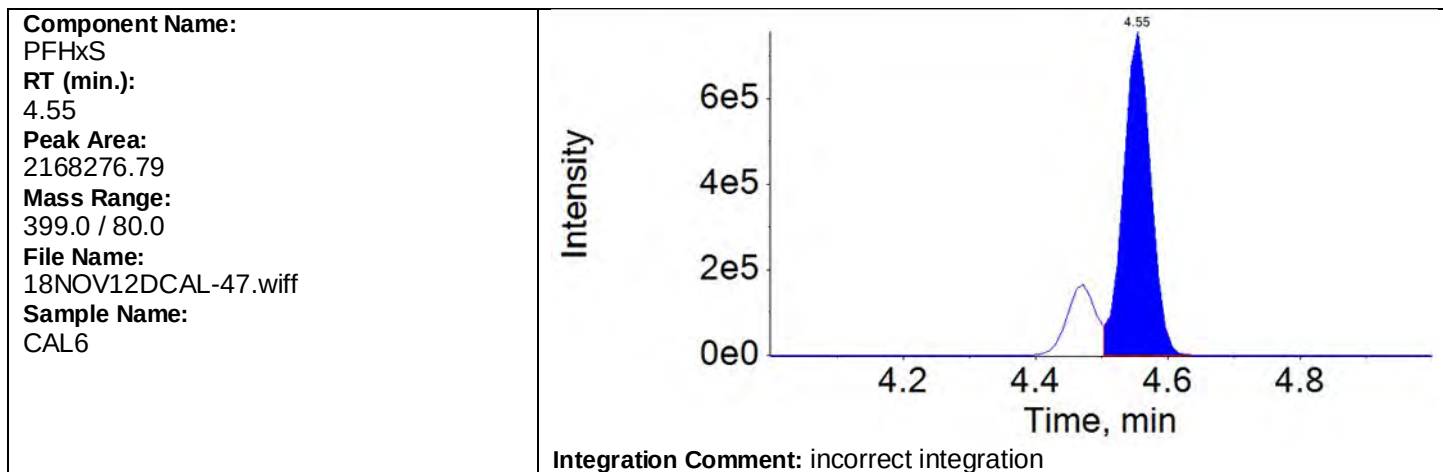
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

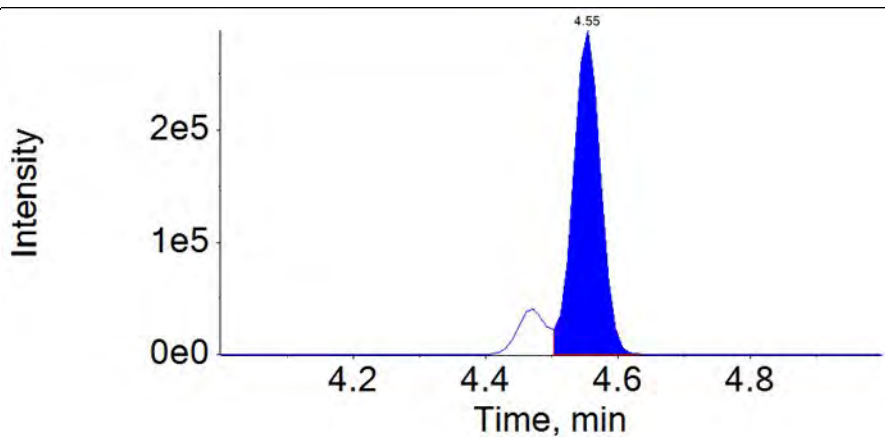
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

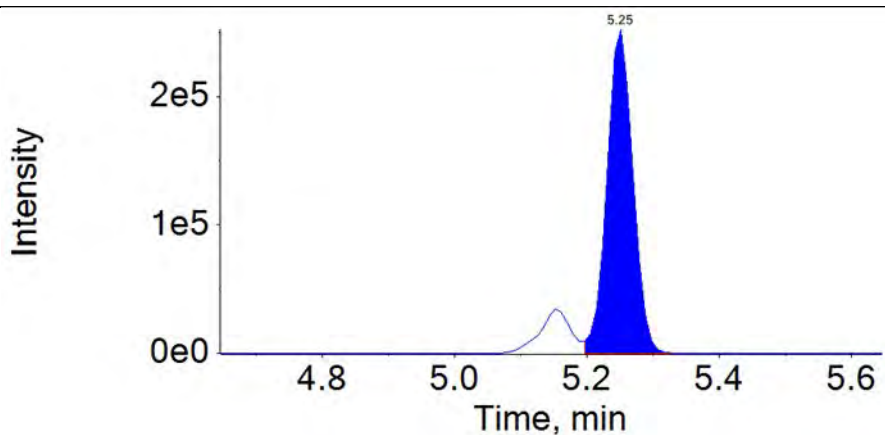
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
827831.34
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



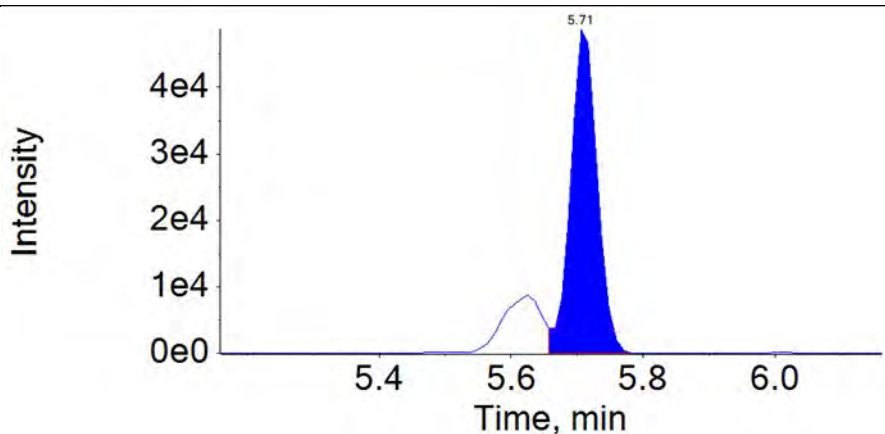
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
689553.42
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
136171.13
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6

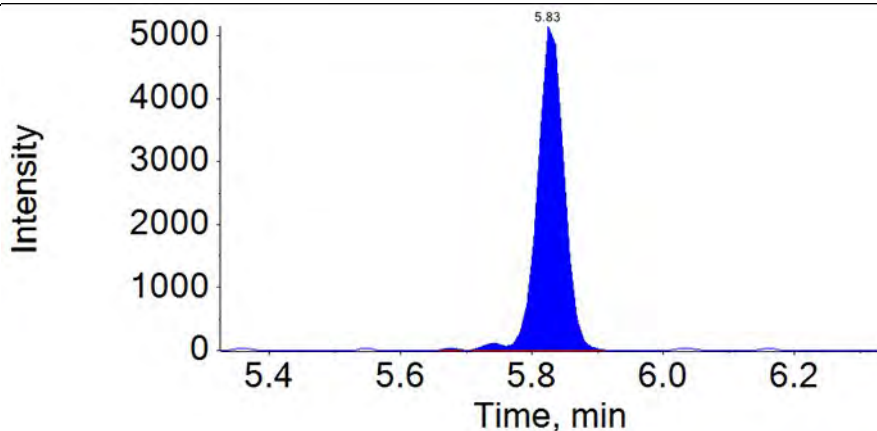


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

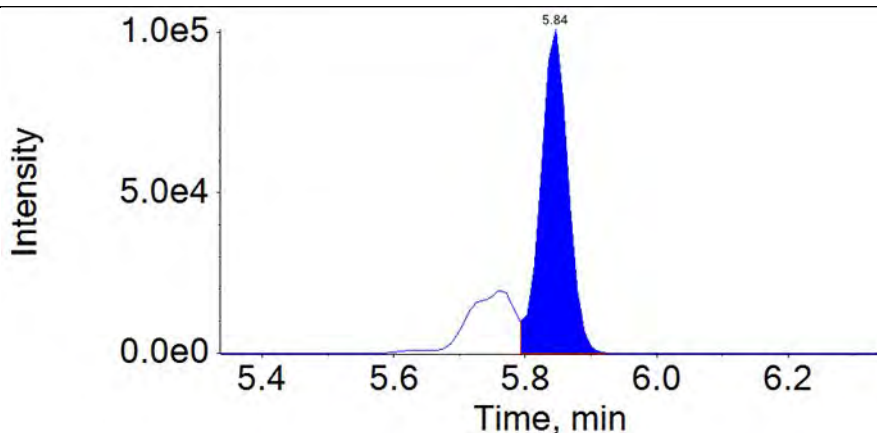
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
5.83
Peak Area:
14552.55
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



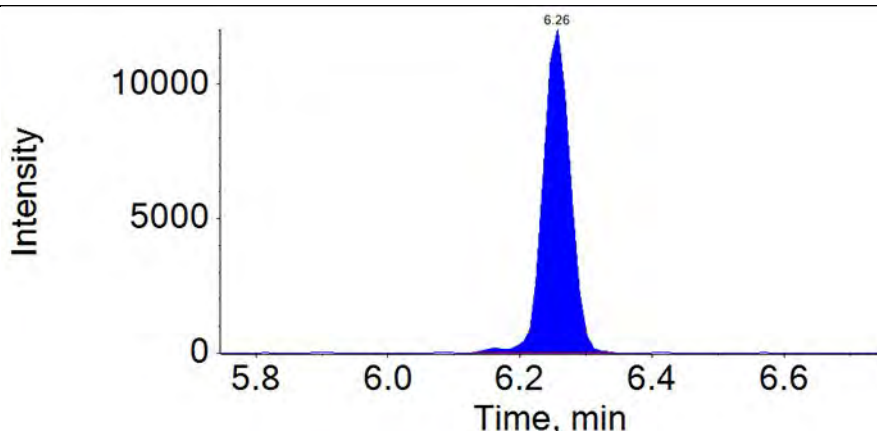
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
290918.50
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
PFTTrDA_2
RT (min.):
6.26
Peak Area:
34575.92
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

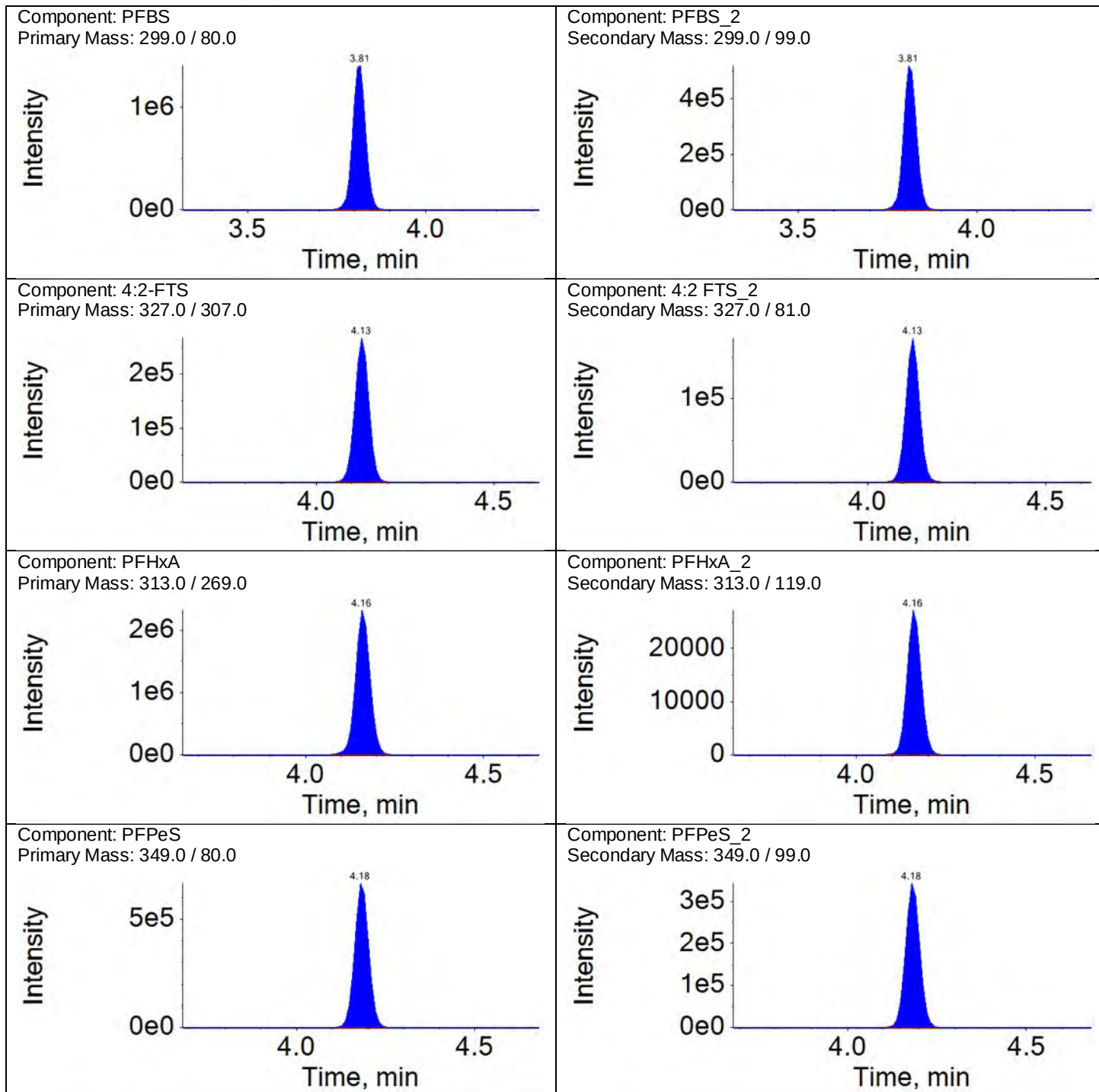
Ion Ratio Report

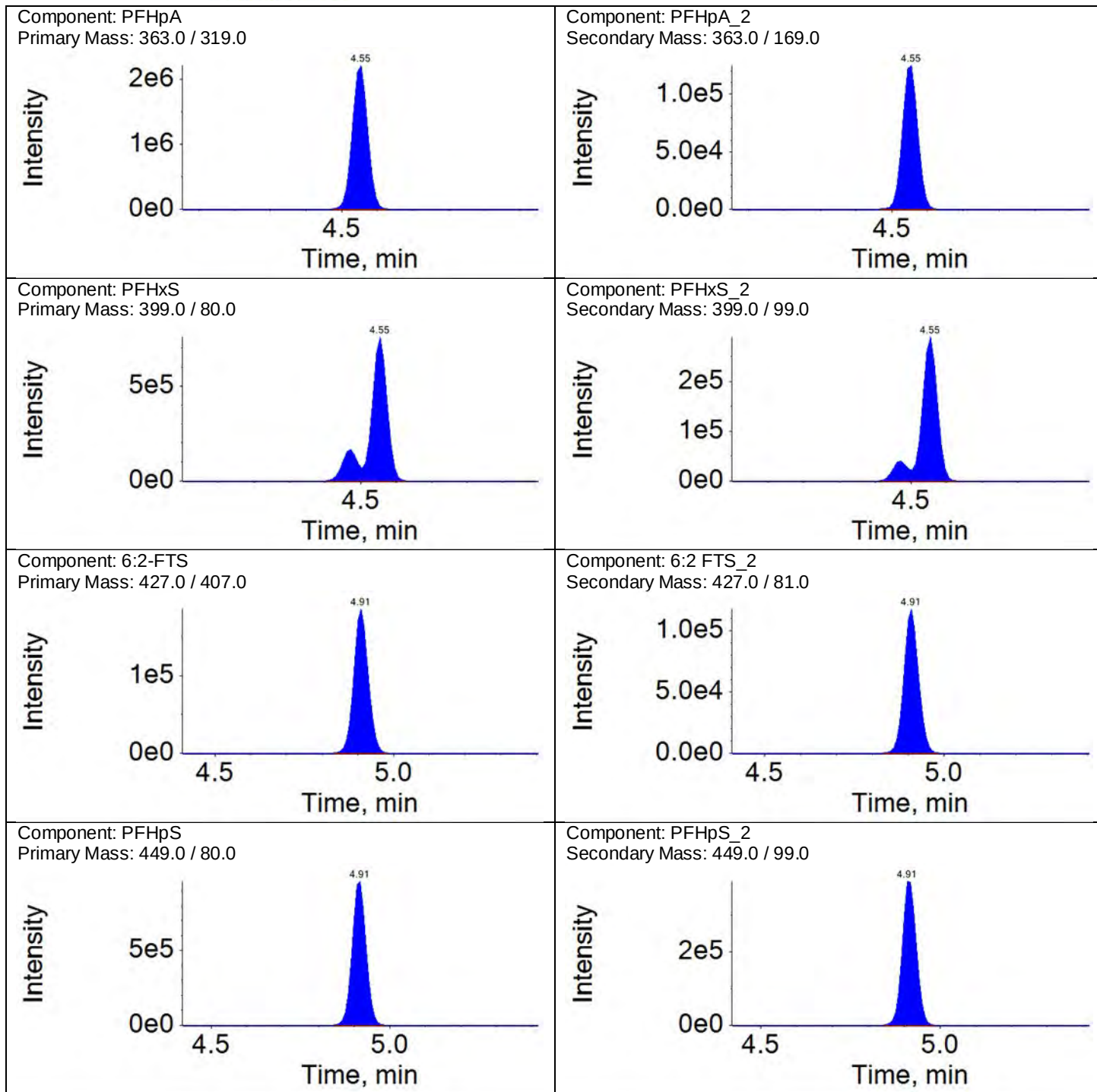
Sample Name: CAL6

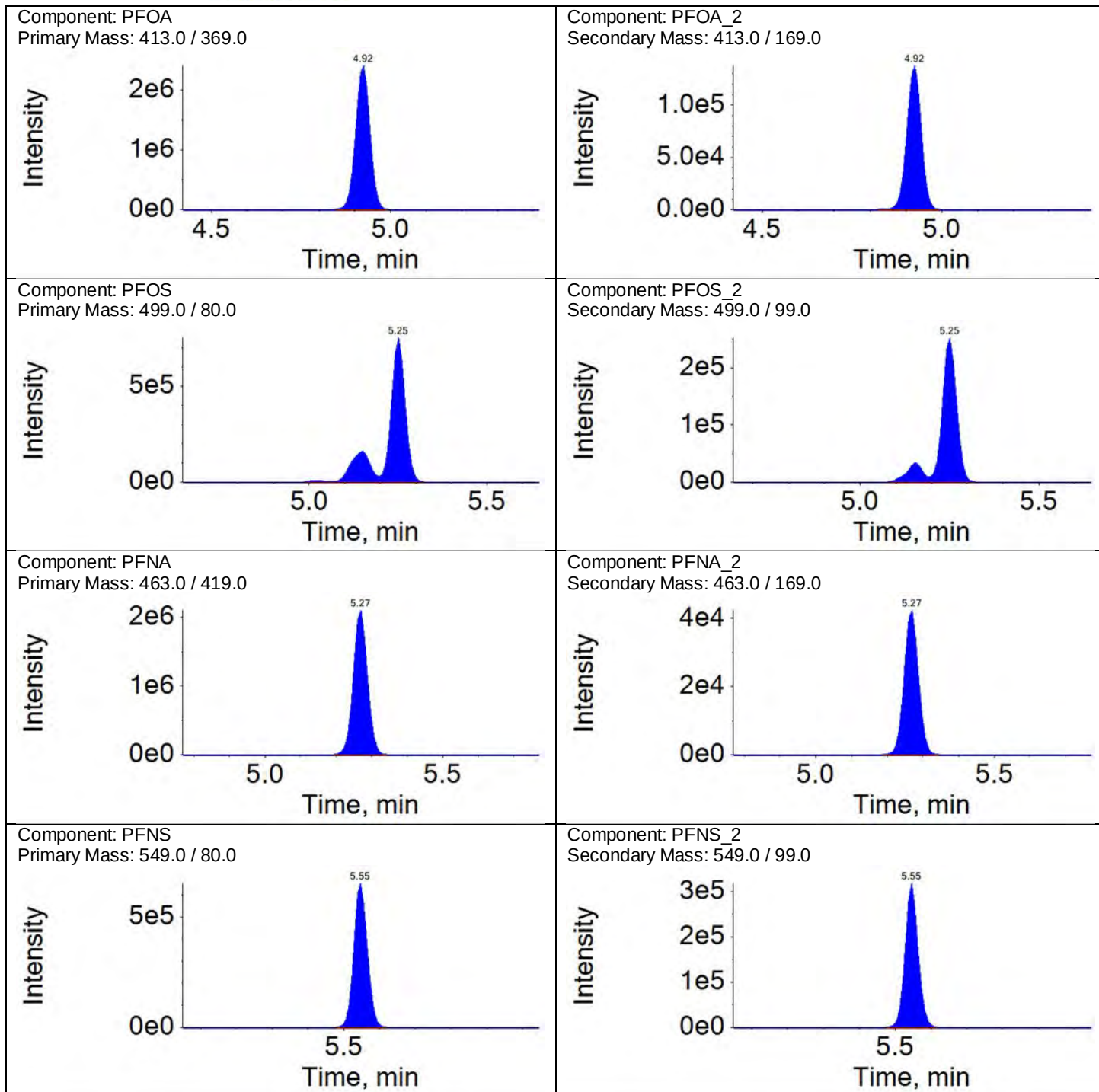
Instrument Name: LM27631

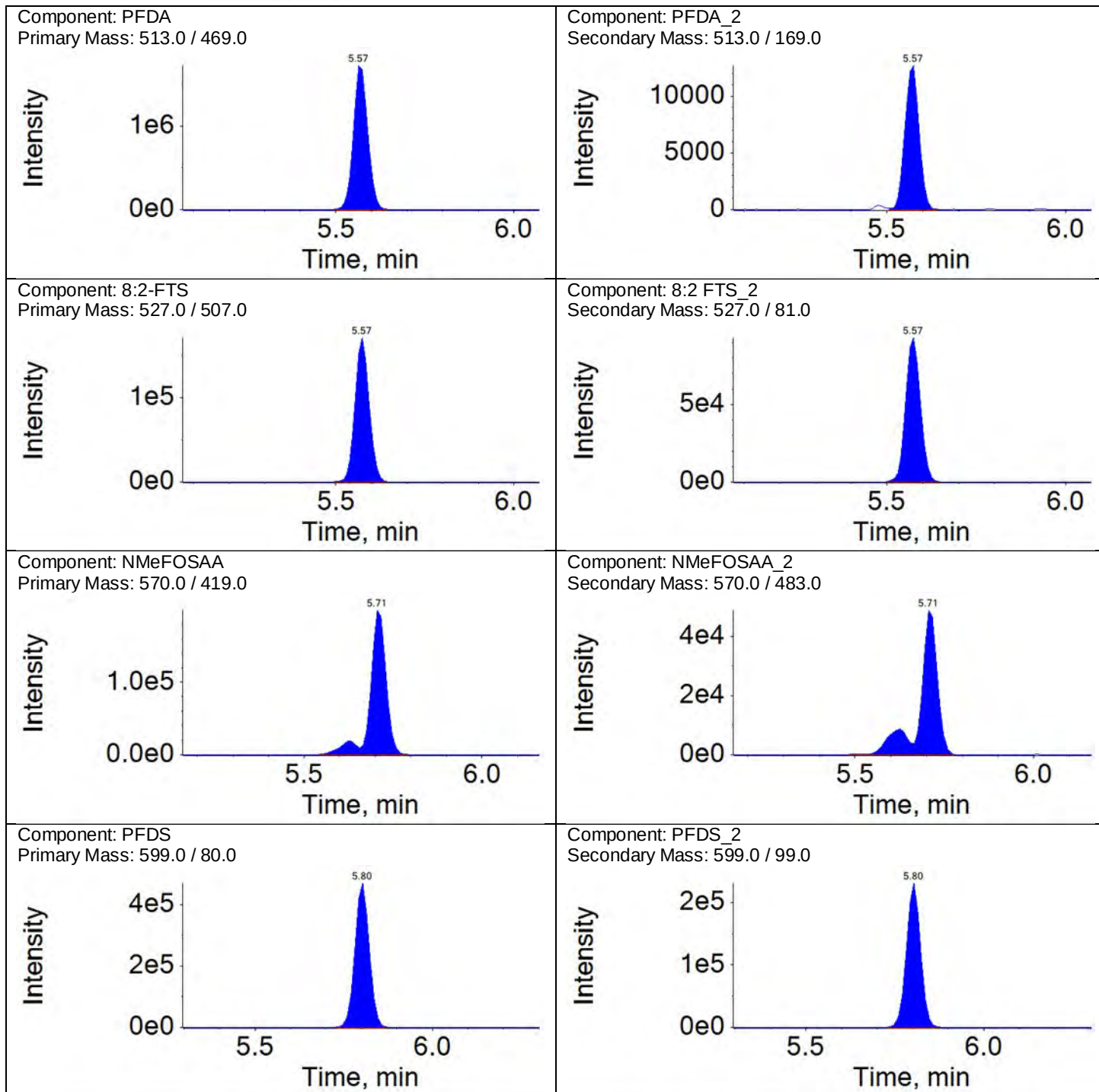
File Name: 18NOV12DCAL-47.wiff

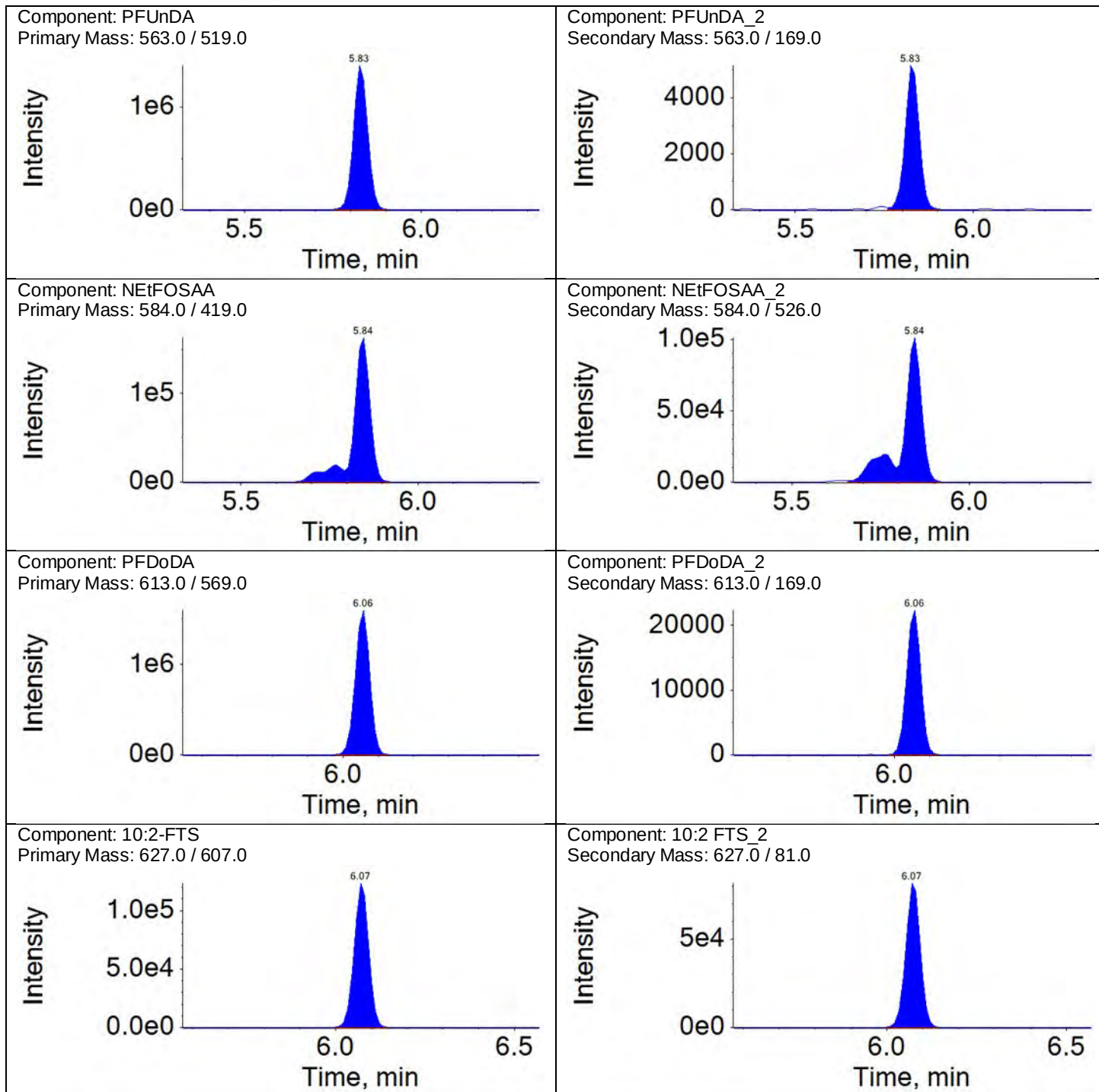
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3588084.15	A	0.3619	0.3688			
PFBS_2	3.81	1.00	1323155.38	A	0.3619	0.3688	2	50	
4:2-FTS	4.13	1.00	738293.95	A	0.6730	0.6272			
4:2 FTS_2	4.13	1.00	463074.71	A	0.6730	0.6272		#NA!	
PFHxA	4.16	1.00	6593778.96	A	0.0117	0.0113			
PFHxA_2	4.16	1.00	74578.79	A	0.0117	0.0113	-3	50	
PFPeS	4.18	1.10	1847826.78	A	0.5191	0.5187			
PFPeS_2	4.18	1.10	958558.40	A	0.5191	0.5187	0	50	
PFHpA	4.55	1.00	6648455.32	A	0.0563	0.0564			
PFHpA_2	4.55	1.00	375071.53	A	0.0563	0.0564	0	50	
PFHxS	4.55	1.00	2662852.00	M	0.3428	0.3565			
PFHxS_2	4.55	1.00	949378.20	M	0.3428	0.3565	4	50	
6:2-FTS	4.91	1.00	523949.46	A	0.6604	0.6368			
6:2 FTS_2	4.91	1.00	333633.12	A	0.6604	0.6368		#NA!	
PFHpS	4.91	1.08	2604868.63	A	0.4066	0.4130			
PFHpS_2	4.91	1.08	1075742.12	A	0.4066	0.4130	2	50	
PFOA	4.92	1.00	6758642.79	A	0.0562	0.0574			
PFOA_2	4.92	1.00	387863.69	A	0.0562	0.0574	2	50	
PFOS	5.25	1.00	2664957.22	M	0.2968	0.3006			
PFOS_2	5.25	1.00	801195.47	M	0.2968	0.3006	1	50	
PFNA	5.27	1.00	5820576.59	A	0.0229	0.0205			
PFNA_2	5.27	1.00	119436.95	A	0.0229	0.0205	-10	50	
PFNS	5.55	1.06	1709959.45	A	0.4828	0.4693			
PFNS_2	5.55	1.06	802535.42	A	0.4828	0.4693	-3	50	
PFDA	5.57	1.00	4802967.81	A	0.0081	0.0072			
PFDA_2	5.57	1.00	34768.56	A	0.0081	0.0072	-10	50	
8:2-FTS	5.57	1.00	469719.63	A	0.6814	0.5683			
8:2 FTS_2	5.57	1.00	266934.57	A	0.6814	0.5683		#NA!	
NMeFOSAA	5.71	1.00	627854.43	M	0.2569	0.2739			
NMeFOSAA_2	5.71	1.00	171981.91	M	0.2569	0.2739	7	50	
PFDS	5.80	1.10	1313570.32	A	0.5144	0.4832			
PFDS_2	5.80	1.11	634717.73	A	0.5144	0.4832	-6	50	
PFUnDA	5.83	1.00	3923979.21	A	0.0058	0.0036			
PFUnDA_2	5.83	1.00	14257.68	M	0.0058	0.0036	-38	50	
NEtFOSAA	5.84	1.00	551865.73	A	0.7253	0.6936			
NEtFOSAA_2	5.84	1.00	382778.11	M	0.7253	0.6936	-4	50	
PFDODA	6.06	1.00	4582985.49	A	0.0157	0.0136			
PFDODA_2	6.06	1.00	62235.50	A	0.0157	0.0136	-13	50	
10:2-FTS	6.07	1.09	348263.21	A	0.6356	0.6654			
10:2 FTS_2	6.07	1.09	231731.38	A	0.6356	0.6654		#NA!	
PFTTrDA	6.26	1.03	3691733.76	A	0.0086	0.0093			
PFTTrDA_2	6.26	1.03	34255.33	M	0.0086	0.0093	8	50	
PFTeDA	6.43	1.00	3149020.22	A	0.0062	0.0065			
PFTeDA_2	6.43	1.00	20486.74	A	0.0062	0.0065	4	50	
PFHxDA	6.74	1.05	1533920.21	A	0.0683	0.0655			
PFHxDA_2	6.73	1.05	100532.17	A	0.0683	0.0655	-4	50	
PFODA	7.00	1.09	1270897.62	A	0.0277	0.0264			
PFODA_2	7.00	1.09	33518.79	A	0.0277	0.0264	-5	50	

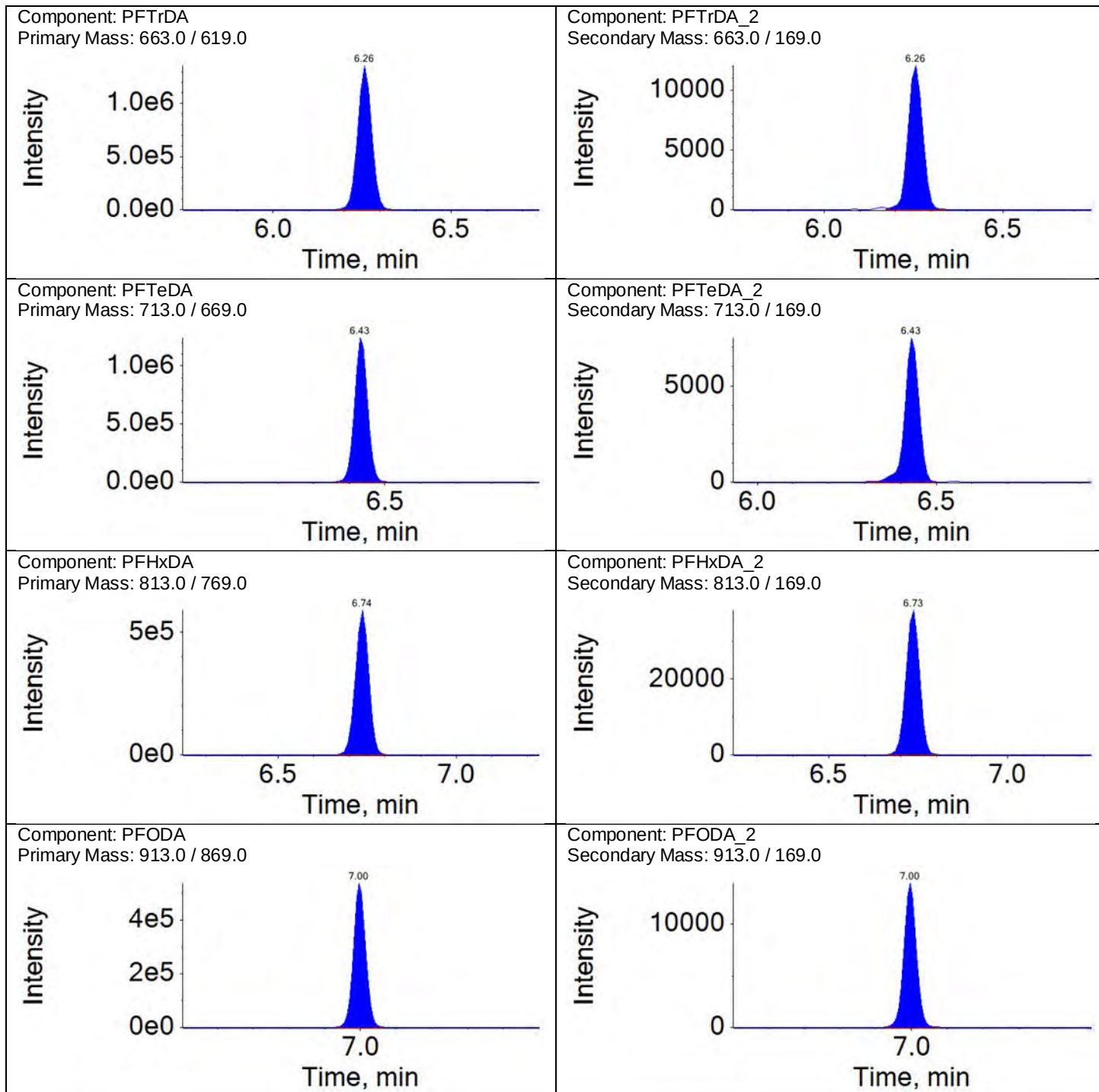












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL7		Data File:	18NOV12DCAL-48.wiff
Sample ID:	CALBRN71833B		Acquis Date:	2018-11-12T16:00:06
Sample Type:	Standard		Instrument:	LM27631
Vial Position:	9		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	510525.8	659926.2	-23	50	
13C2-PFOA	5.0	368158.3	450219.7	-18	50	
13C4-PFOS	4.8	233532.7	249205.8	-6	50	
13C2-PFDA	5.0	233825.1	278743.9	-16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	557392.8	13C3-PFBA	510525.8	1.092	5.000	4.895	98	70-130	
E13C5-PFPeA	581688.7	13C3-PFBA	510525.8	1.139	5.000	5.110	102	70-130	
E13C3-PFBS	361166.0	13C3-PFBA	510525.8	0.707	4.650	4.994	107	70-130	
E13C2-4:2-FTS	40505.1	13C2-PFOA	368158.3	0.110	4.670	4.900	105	70-130	
E13C5-PFHxA	509808.0	13C2-PFOA	368158.3	1.385	5.000	5.002	100	70-130	
E13C3-PFHxS	267182.8	13C2-PFOA	368158.3	0.726	4.730	4.980	105	70-130	
E13C4-PFHpA	401203.9	13C2-PFOA	368158.3	1.090	5.000	4.910	98	70-130	
E13C2-6:2-FTS	27180.2	13C2-PFOA	368158.3	0.074	4.750	4.939	104	70-130	
E13C8-PFOA	607669.5	13C2-PFOA	368158.3	1.651	5.000	4.548	91	70-130	
E13C8-PFOS	242617.5	13C4-PFOS	233532.7	1.039	4.780	4.603	96	70-130	
E13C9-PFNA	377369.8	13C4-PFOS	233532.7	1.616	5.000	4.505	90	70-130	
E13C6-PFDA	479333.1	13C2-PFDA	233825.1	2.050	5.000	4.784	96	70-130	
E13C2-8:2-FTS	22711.0	13C2-PFDA	233825.1	0.097	4.790	4.844	101	70-130	
E13C8-PFOSA	554092.6	13C2-PFDA	233825.1	2.370	5.000	5.254	105	70-130	
Ed3-NMeFOSAA	67250.5	13C2-PFDA	233825.1	0.288	5.000	5.192	104	70-130	
E13C7-PFUnDA	199746.8	13C2-PFDA	233825.1	0.854	5.000	4.960	99	70-130	
Ed5-NEtFOSAA	58049.5	13C2-PFDA	233825.1	0.248	5.000	5.252	105	70-130	
E13C2-PFDoDA	474393.8	13C2-PFDA	233825.1	2.029	5.000	5.268	105	70-130	
Ed7-NMePFOSAE	272283.1	13C2-PFDA	233825.1	1.164	5.000	5.039	101	70-130	
Ed3-NMePFOSA	74110.3	13C2-PFDA	233825.1	0.317	5.000	5.758	115	70-130	
Ed9-NEtPFOSAE	240346.5	13C2-PFDA	233825.1	1.028	5.000	5.346	107	70-130	
Ed5-NEtPFOSA	53297.9	13C2-PFDA	233825.1	0.228	5.000	5.347	107	70-130	
E13C2-PFTeDA	346256.6	13C2-PFDA	233825.1	1.481	5.000	5.199	104	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CAL7

Instrument Name: LM27631

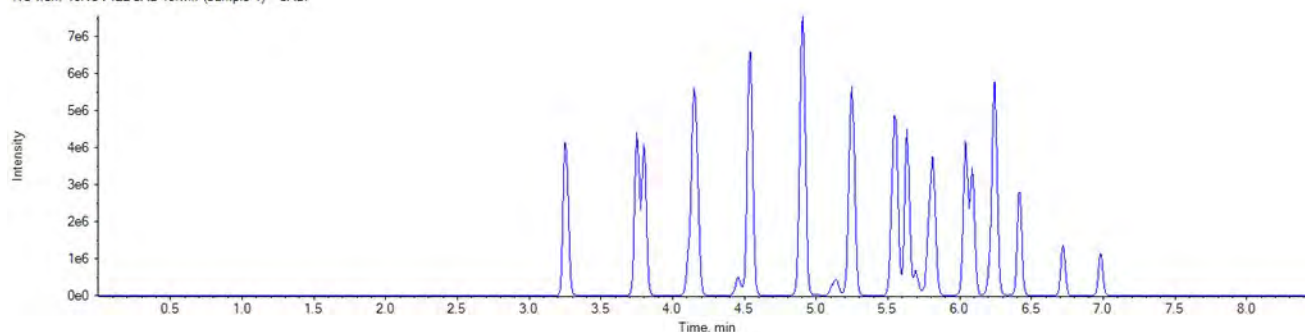
File Name: 18NOV12DCAL-48.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	9834601.7		A	13C4-PFBA	3.25	557392.8	17.644	97.743
PFPeA	3.75	1.000	9756431.5		A	13C5-PFPeA	3.75	581688.7	16.773	97.094
PFBS	3.80	1.000	6615935.3		A	13C3-PFBS	3.80	361166.0	18.318	87.136
4:2-FTS	4.11	1.000	1379983.9		A	13C2-4:2-FTS	4.11	40505.1	34.069	92.499
PFHxA	4.15	1.000	11059420.3		A	13C5-PFHxA	4.15	509808.0	21.693	90.577
PFPeS	4.17	1.100	3482095.9		A	13C3-PFBS	3.80	361166.0	9.641	93.602
PFHpA	4.54	1.000	10981922.8		A	13C4-PFHpA	4.54	401203.9	27.372	90.732
PFHxS	4.54	1.000	5048349.8		M	13C3-PFHxS	4.54	267182.8	18.895	91.615
6:2-FTS	4.89	1.000	869227.2		A	13C2-6:2-FTS	4.89	27180.2	31.980	77.388
PFHpS	4.90	1.080	4784682.8		A	13C3-PFHxS	4.54	267182.8	17.908	94.267
PFOA	4.91	1.000	10991740.1		A	13C8-PFOA	4.91	607669.5	18.088	96.608
PFOS	5.24	1.000	5138367.0		M	13C8-PFOS	5.24	242617.5	21.179	92.617
PFNA	5.25	1.000	10084288.3		A	13C9-PFNA	5.25	377369.8	26.723	96.360
PFNS	5.53	1.060	3386860.5		A	13C8-PFOS	5.24	242617.5	13.960	97.666
PFDA	5.55	1.000	8104726.6		A	13C6-PFDA	5.55	479333.1	16.908	89.640
8:2-FTS	5.56	1.000	804019.5		A	13C2-8:2-FTS	5.56	22711.0	35.402	82.540
PFOSA	5.63	1.000	10169176.9		A	13C8-PFOSA	5.63	554092.6	18.353	89.642
NMeFOSAA	5.69	1.000	1191981.7		M	d3-NMeFOSAA	5.69	67250.5	17.725	100.173
PFDS	5.79	1.110	2606720.7		A	13C8-PFOS	5.24	242617.5	10.744	97.353
PfUnDA	5.81	1.000	6802701.2		A	13C7-PfUnDA	5.81	199746.8	34.057	89.032
NEtFOSAA	5.83	1.000	1046636.1		M	d5-NEtFOSAA	5.82	58049.5	18.030	94.517
PFDODA	6.04	1.000	8171355.4		A	13C2-PFDODA	6.04	474393.8	17.225	87.711
10:2-FTS	6.06	1.090	632223.7		A	13C2-8:2-FTS	5.56	22711.0	27.838	92.724
NMePFOSAE	6.09	1.000	6272486.3		A	d7-NMePFOSAE	6.08	272283.1	23.037	95.876
NMePFOSA	6.09	1.000	1310162.9		A	d3-NMePFOSA	6.09	74110.3	17.679	87.214
PFDOS	6.21	1.190	1336765.3		A	13C8-PFOS	5.24	242617.5	5.510	96.500
NEtPFOSAE	6.25	1.000	6557402.5		A	d9-NEtPFOSAE	6.23	240346.5	27.283	87.532
NEtPFOSA	6.26	1.000	1148933.0		A	d5-NEtPFOSA	6.25	53297.9	21.557	98.999
PFTDA	6.24	1.030	6281239.0		A	13C2-PFDODA	6.04	474393.8	13.241	83.569
PFTeDA	6.42	1.000	6092875.7		A	13C2-PFTeDA	6.42	346256.6	17.596	98.638
PFHxDA	6.72	1.050	2866097.3		A	13C2-PFTeDA	6.42	346256.6	8.277	98.615
PFODA	6.98	1.090	2488863.6		A	13C2-PFTeDA	6.42	346256.6	7.188	100.107

Total Ion Chromatogram

TIC from 18NOV12DCAL-48.wiff (sample 1) - CAL7



APPROVED

By MCD at 6:33 pm, 11/12/18

BSI05 Page 1046 of 1595

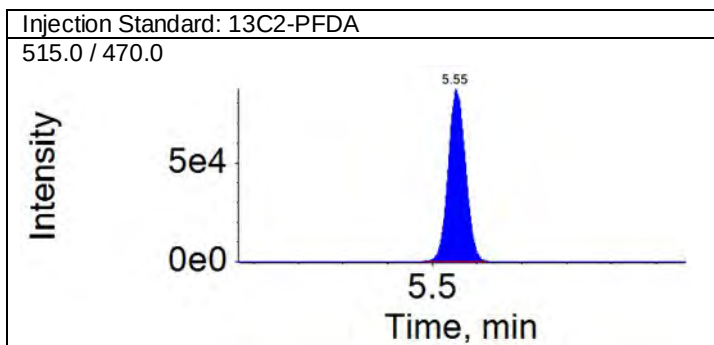
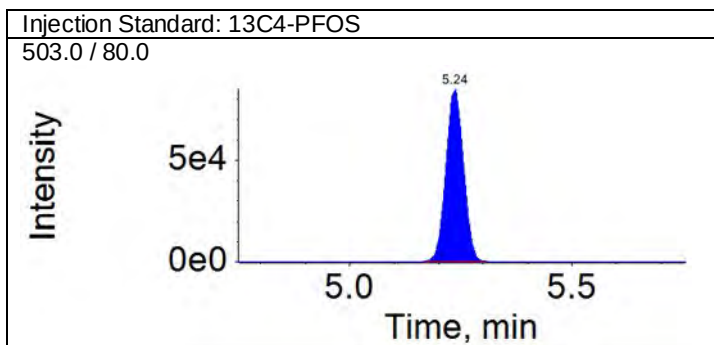
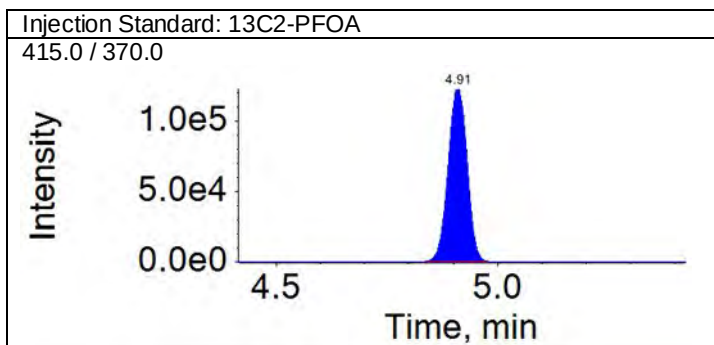
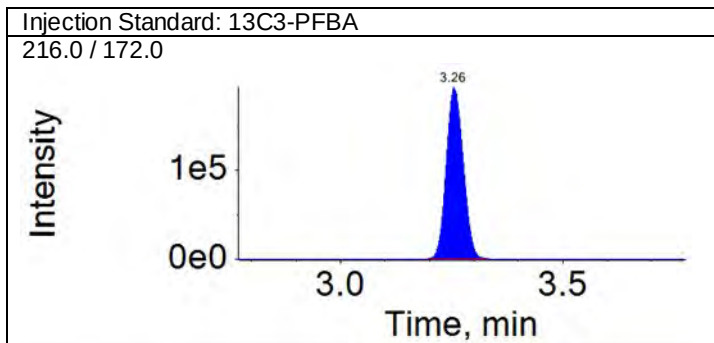
REVIEWED

By HMK at 10:53 am, 11/13/18

Page 2 of 17

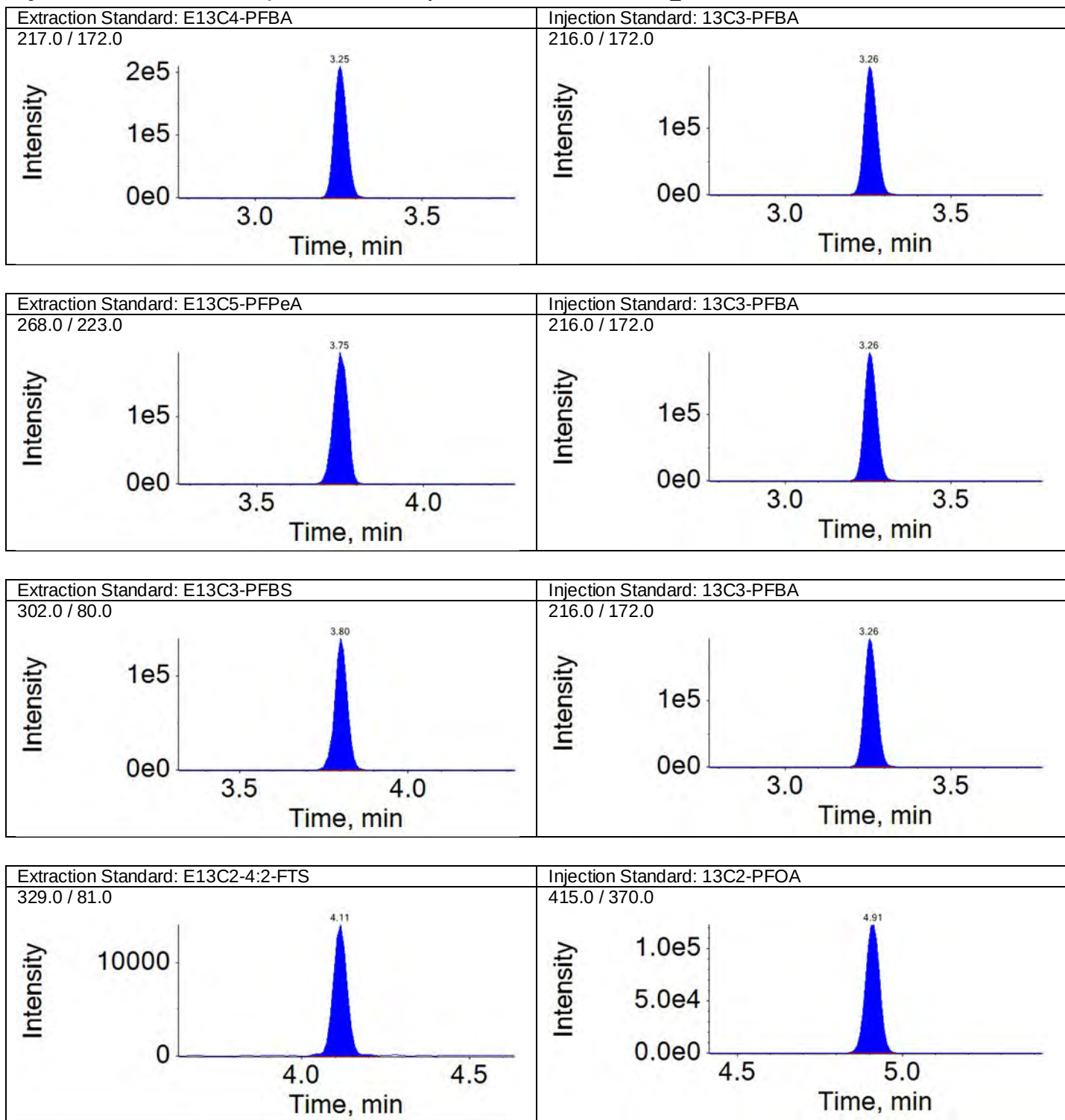
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



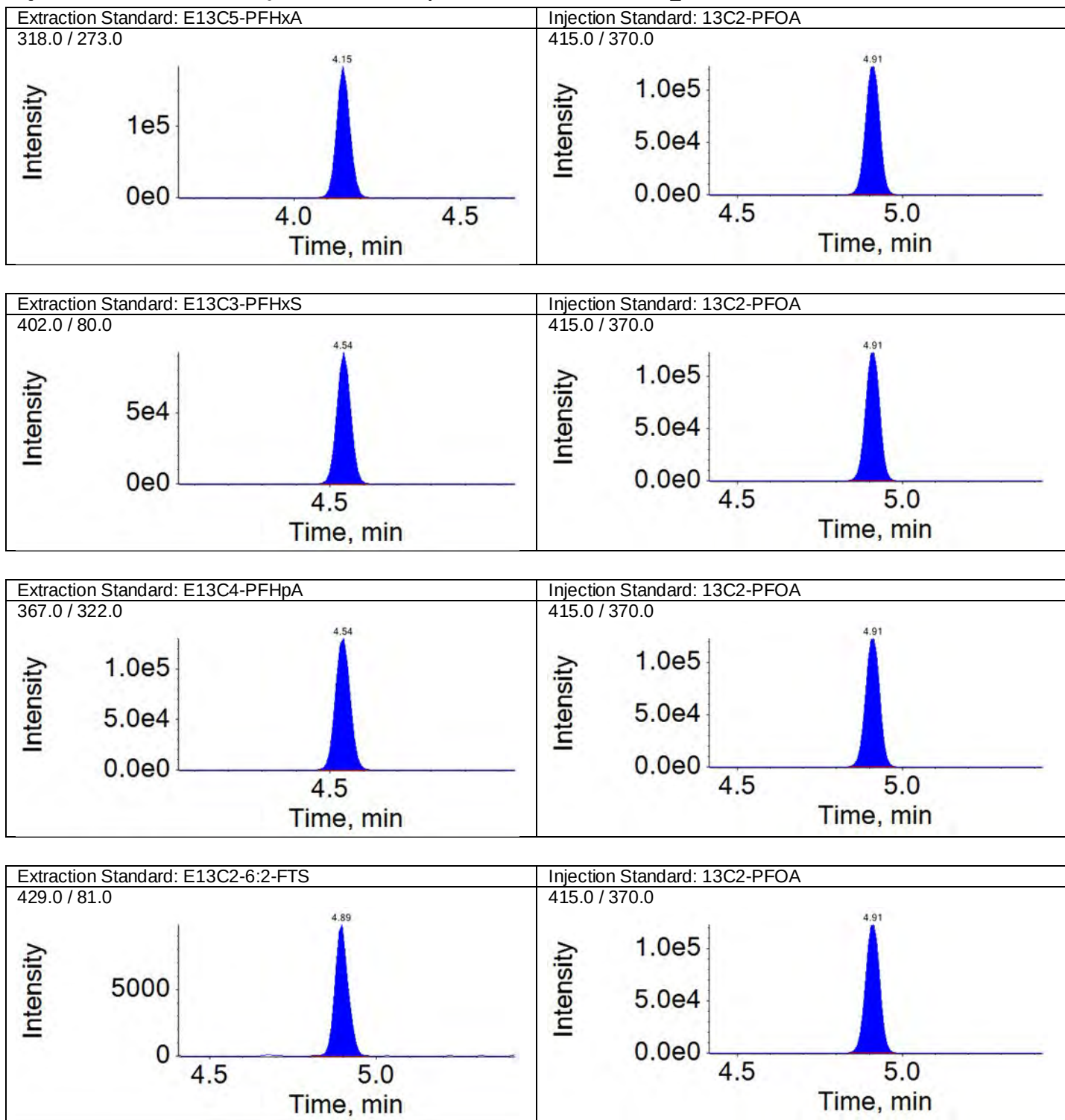
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



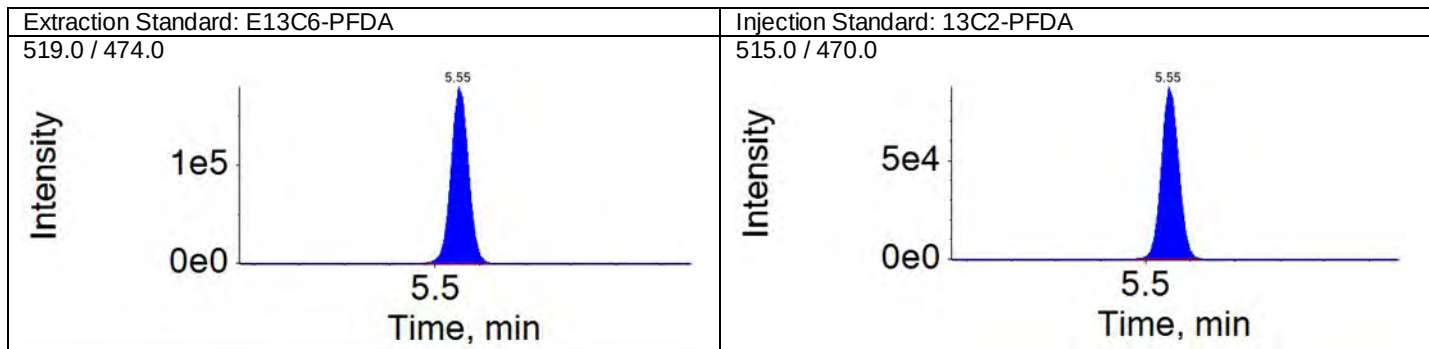
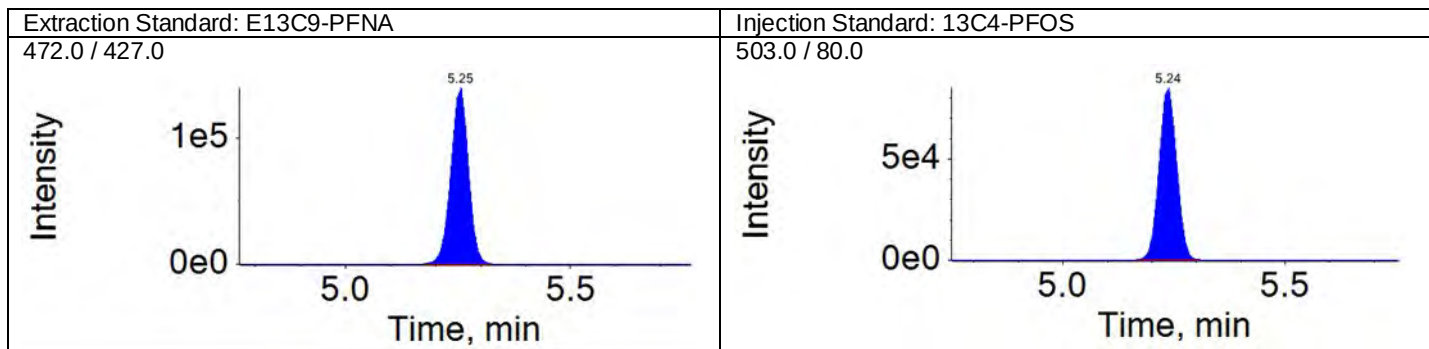
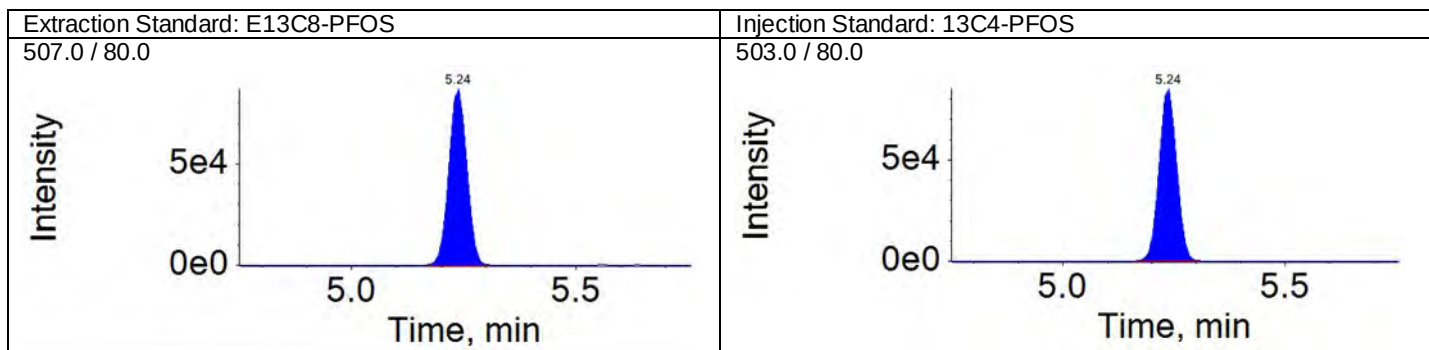
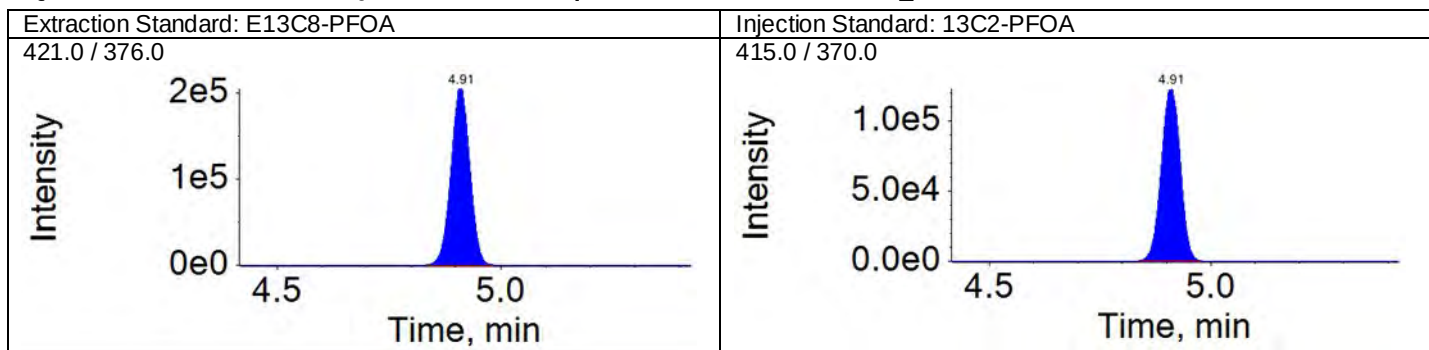
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



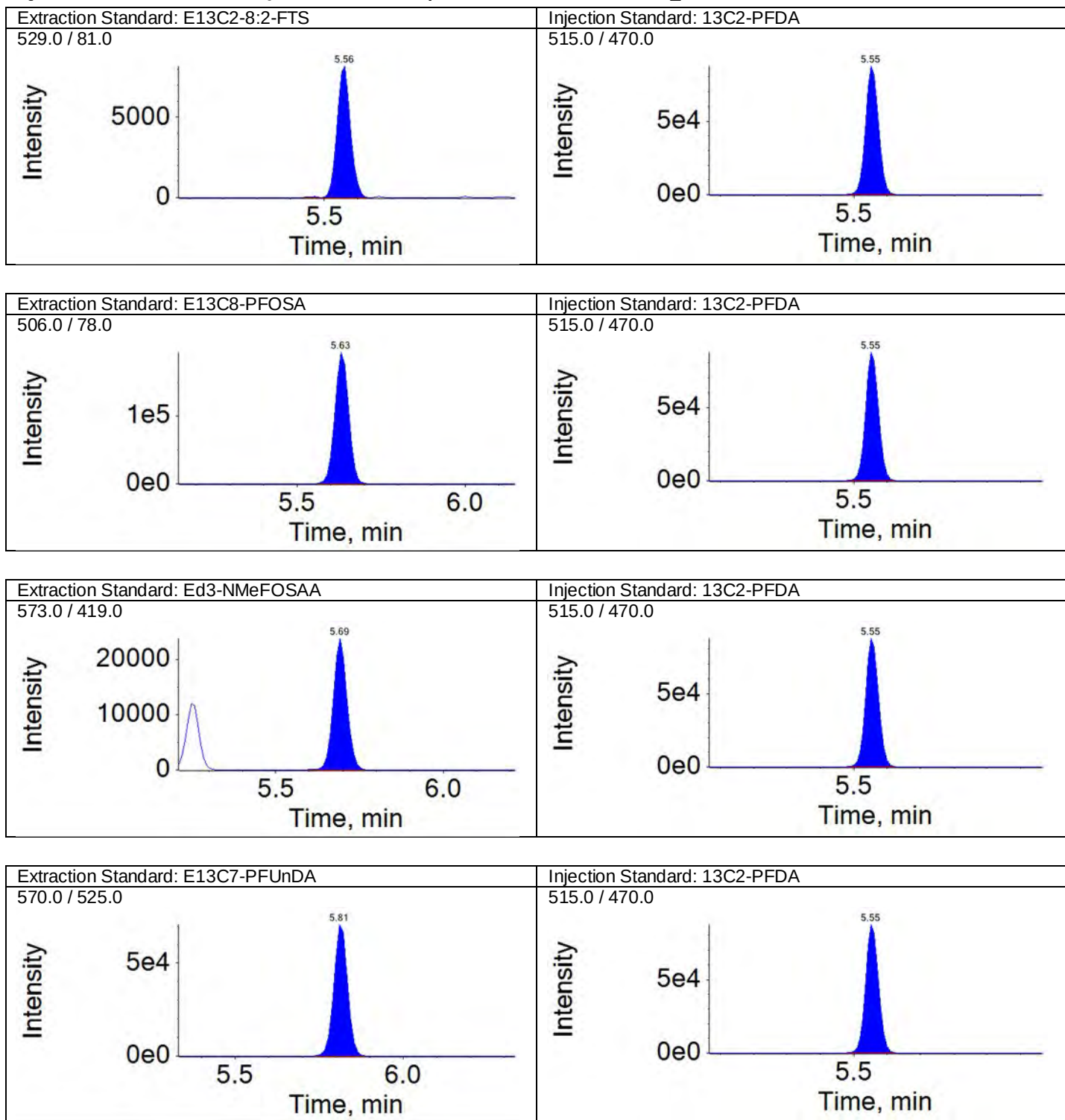
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



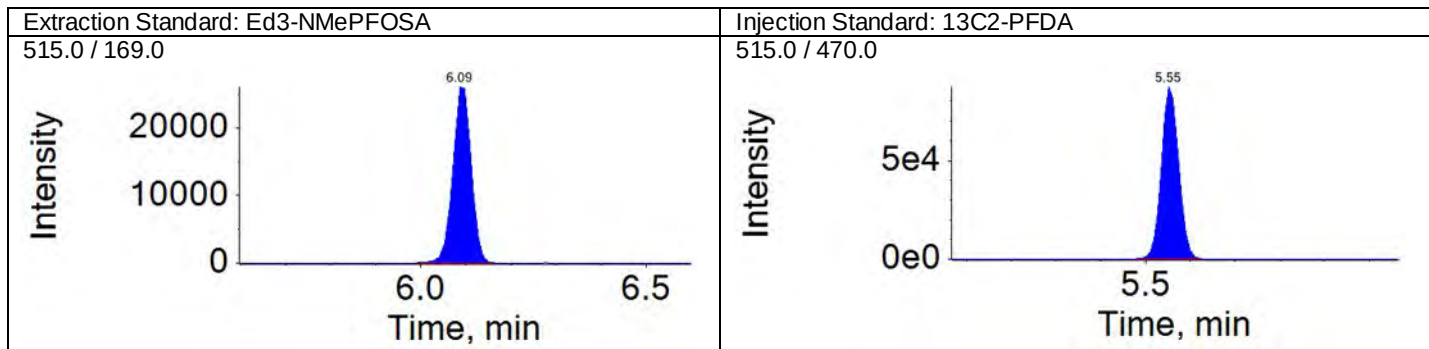
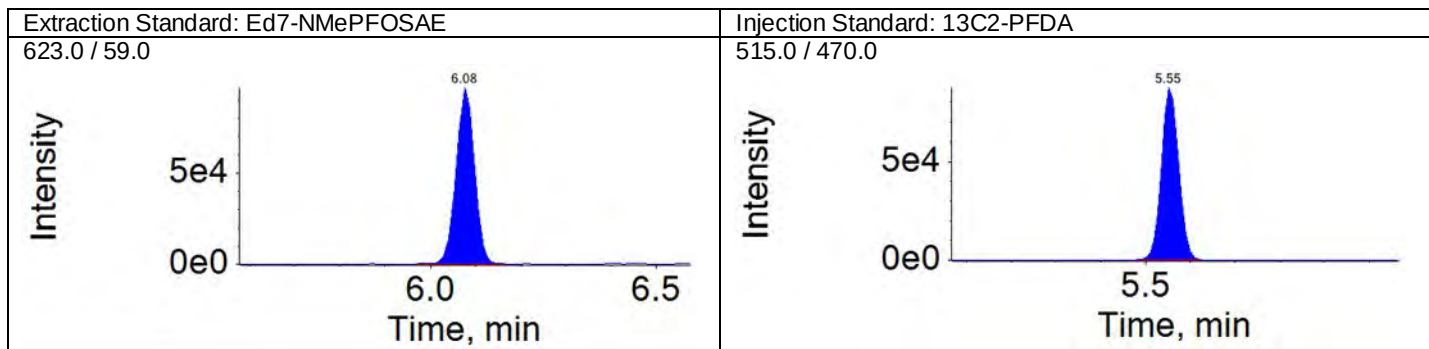
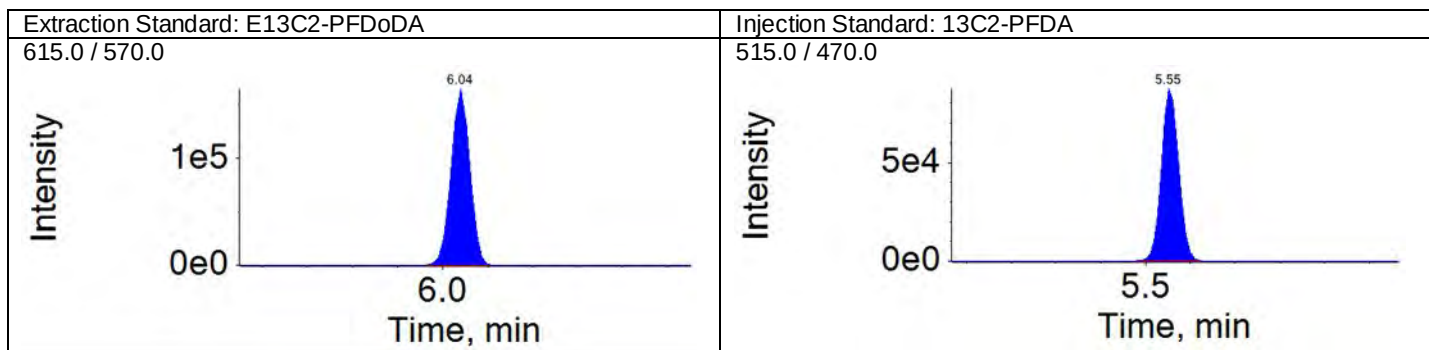
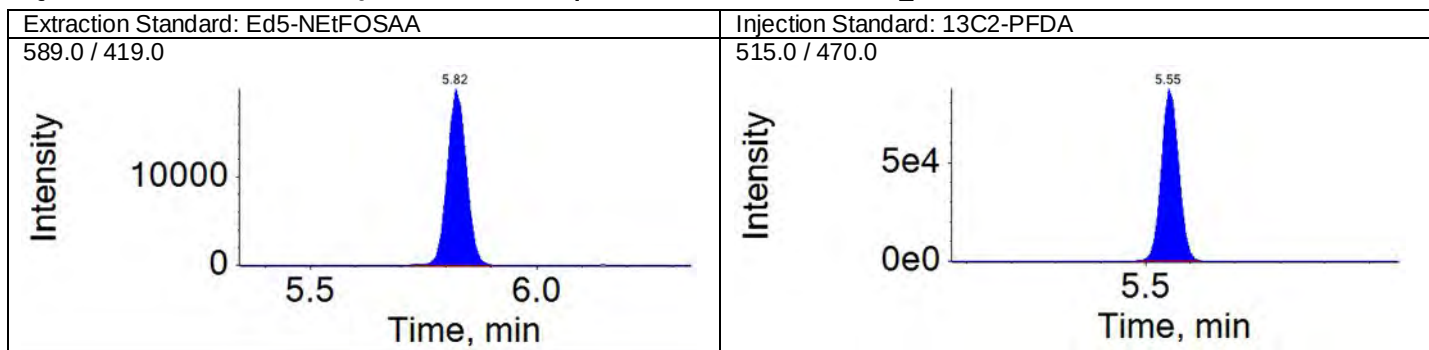
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



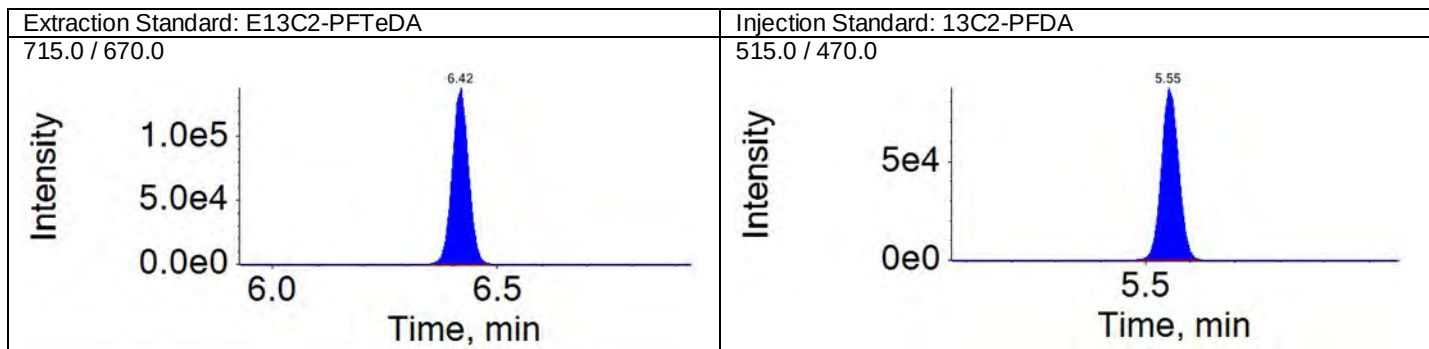
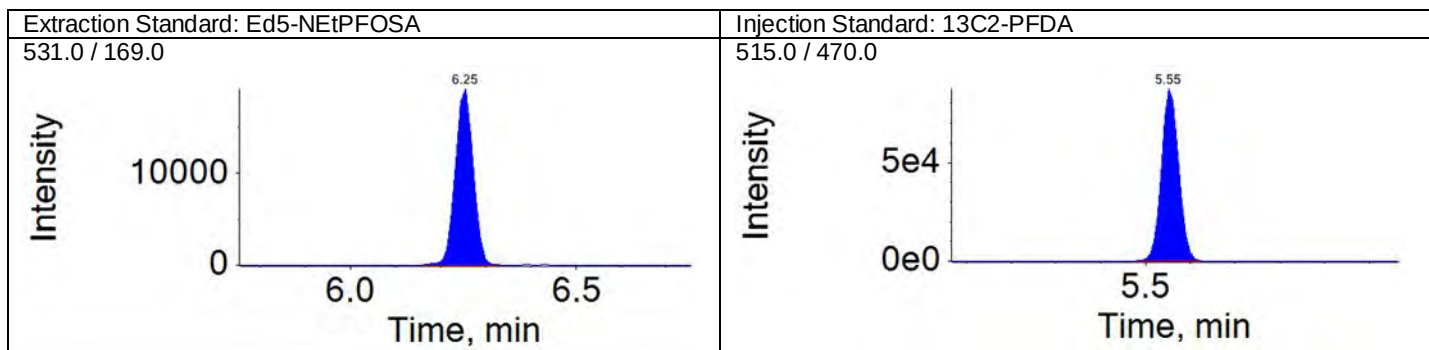
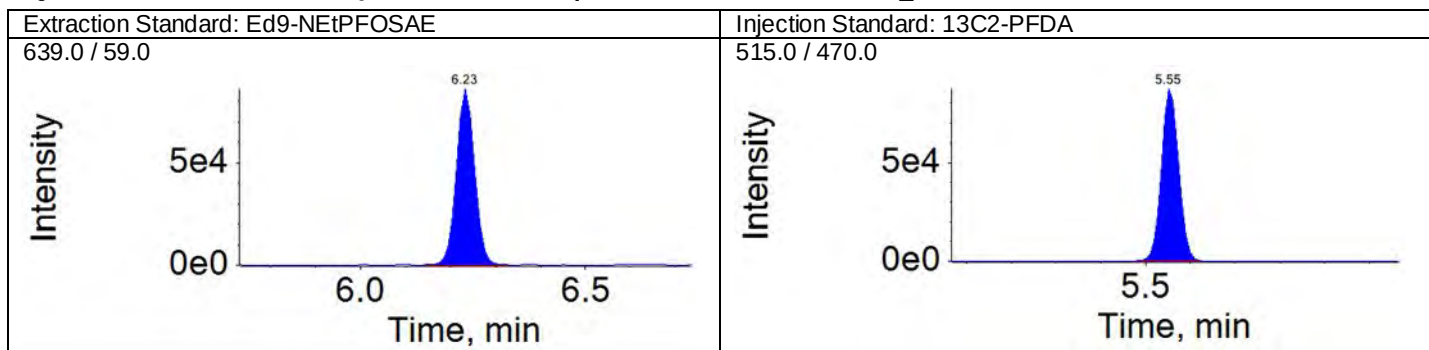
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



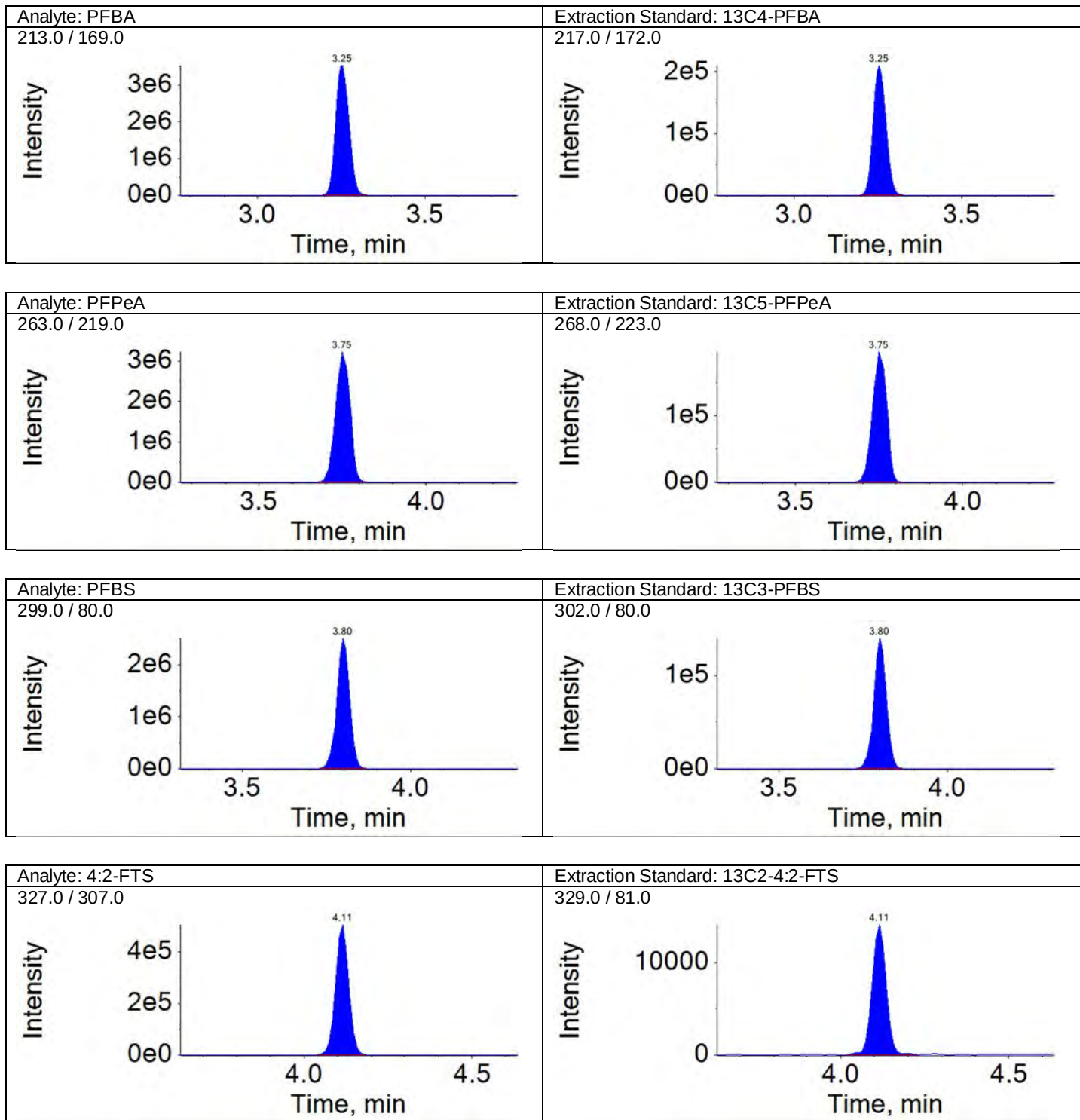
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



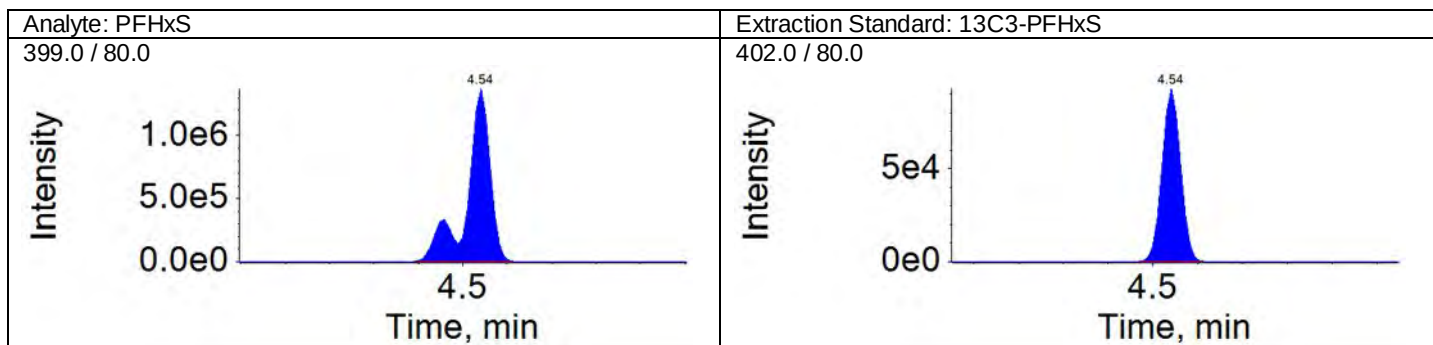
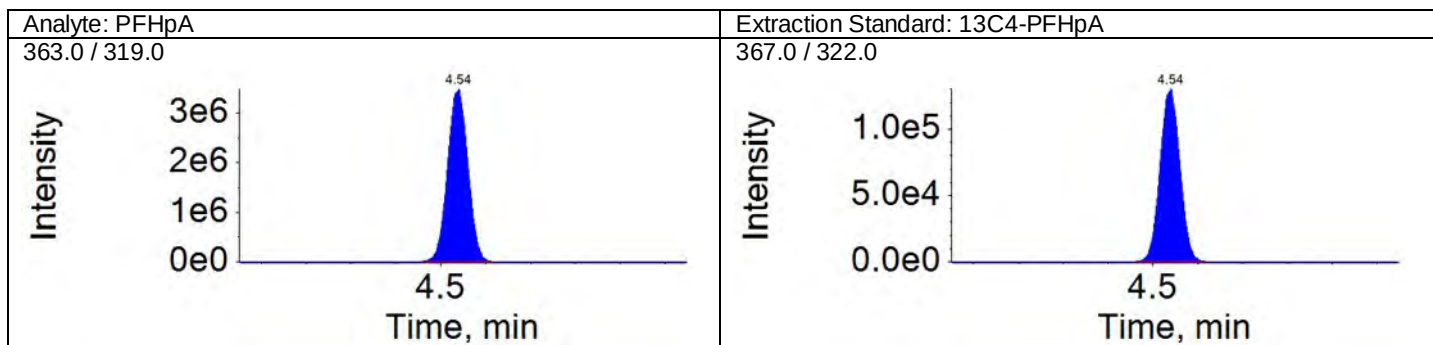
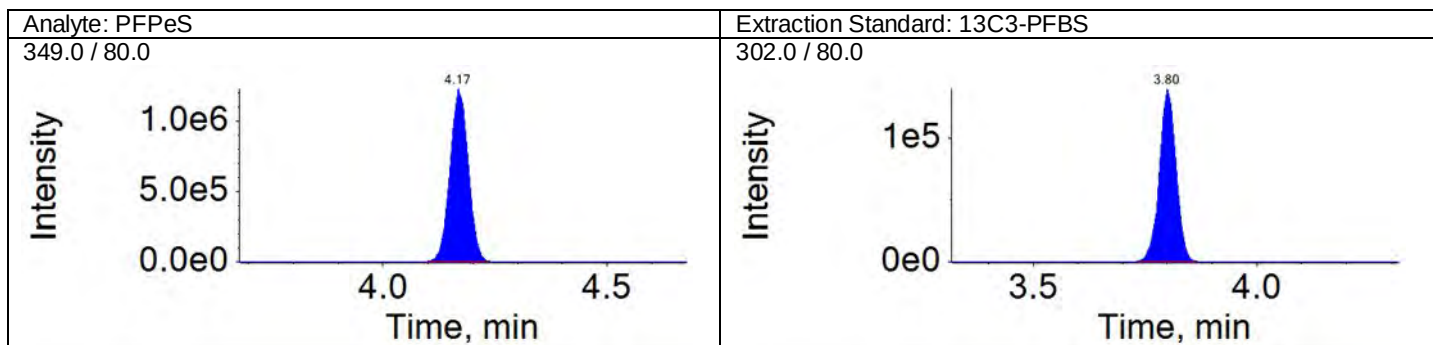
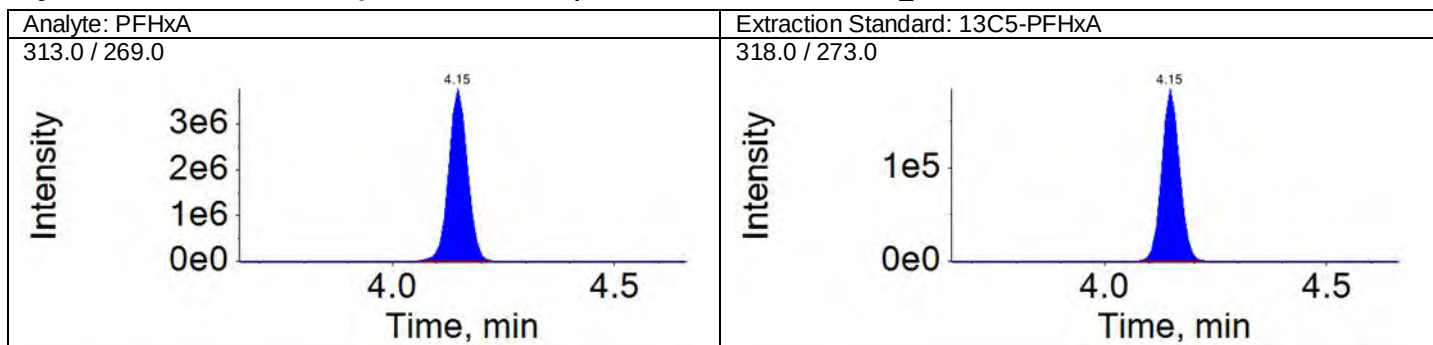
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



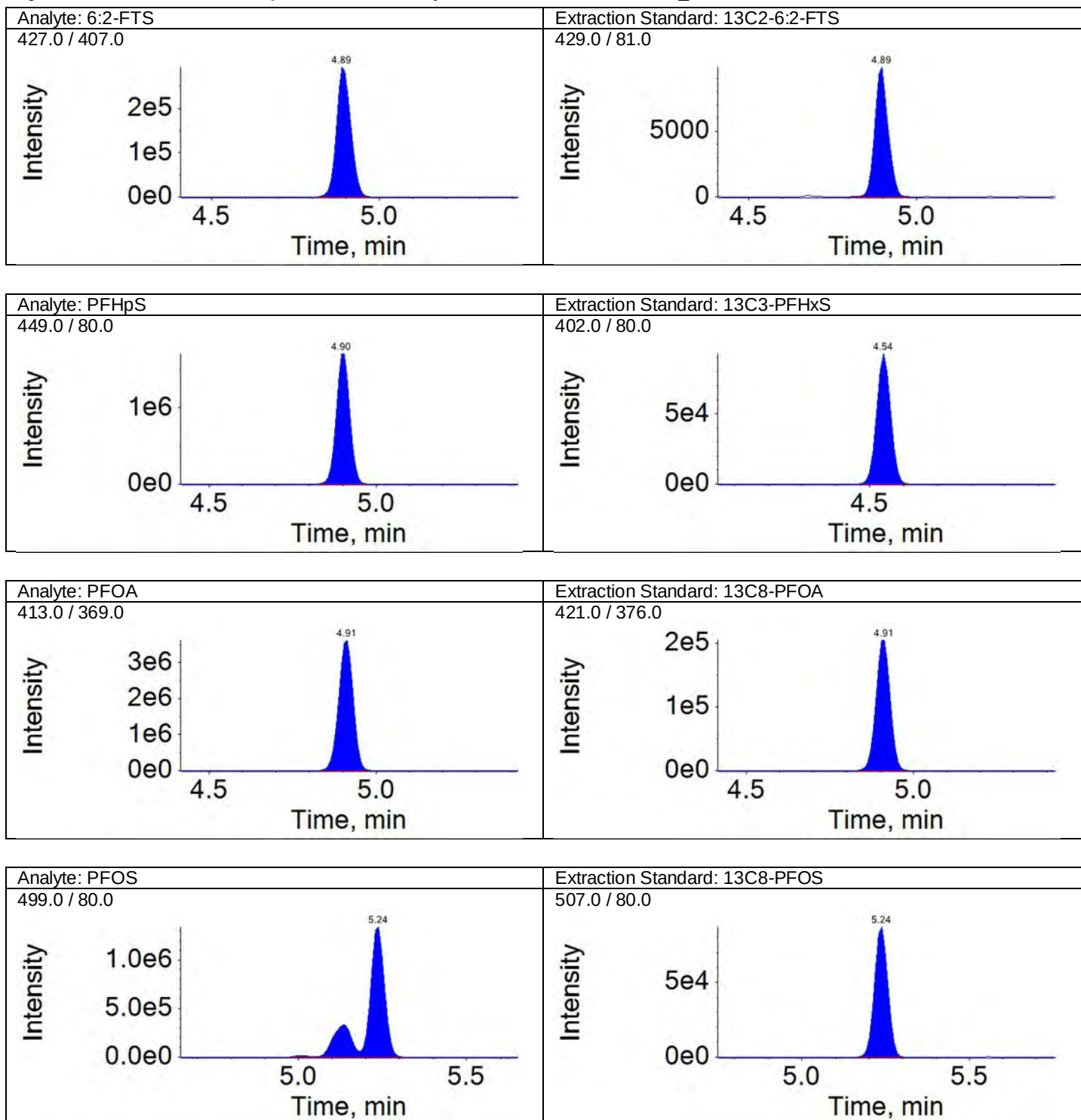
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



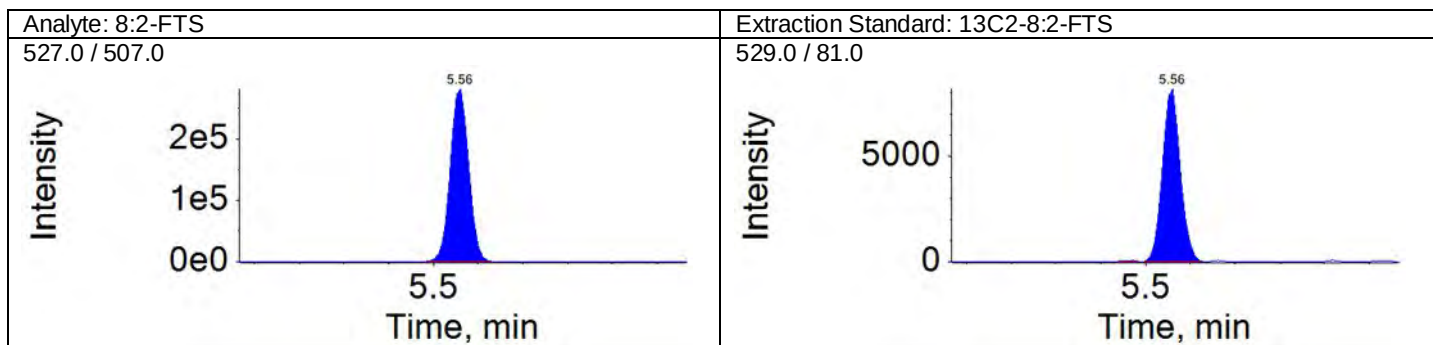
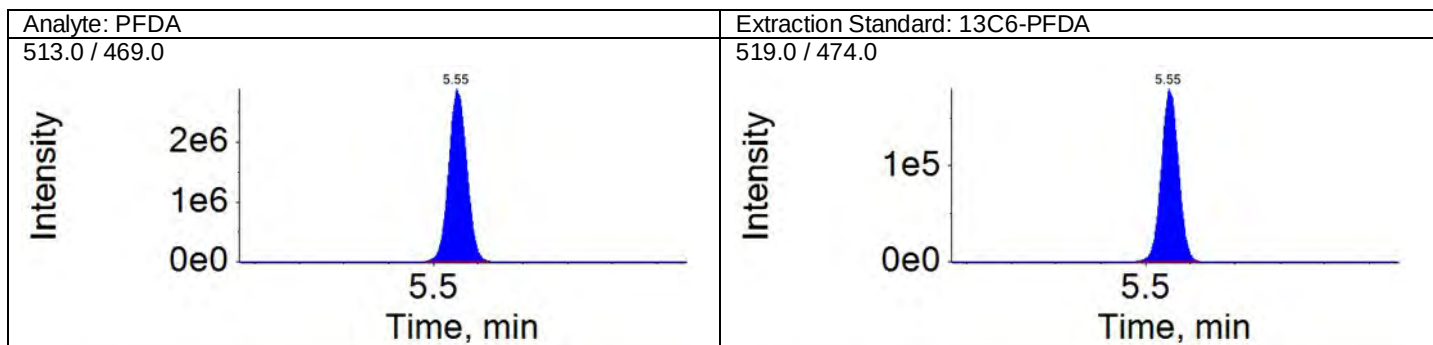
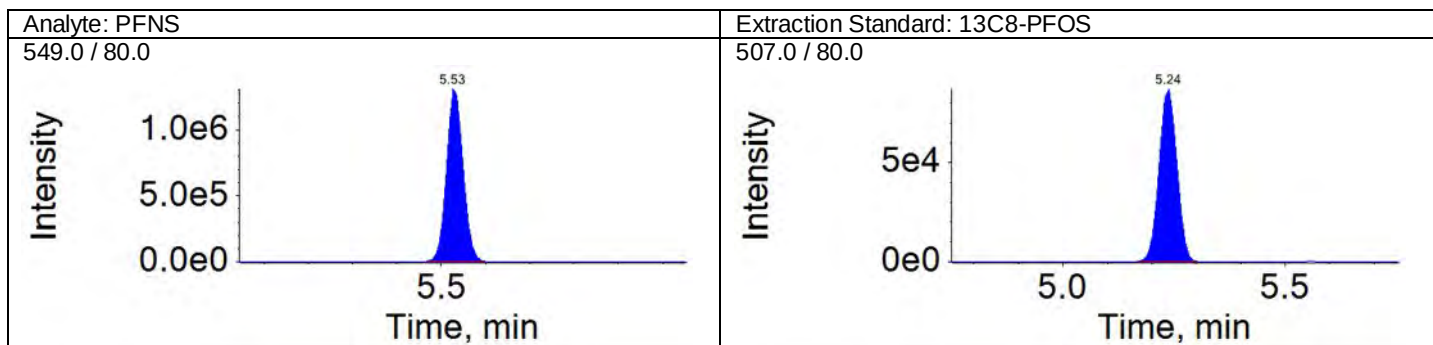
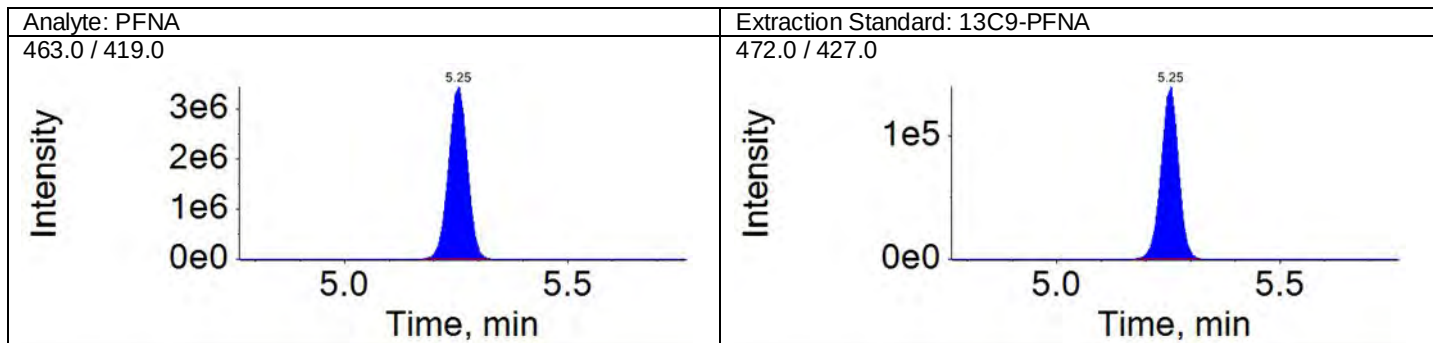
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



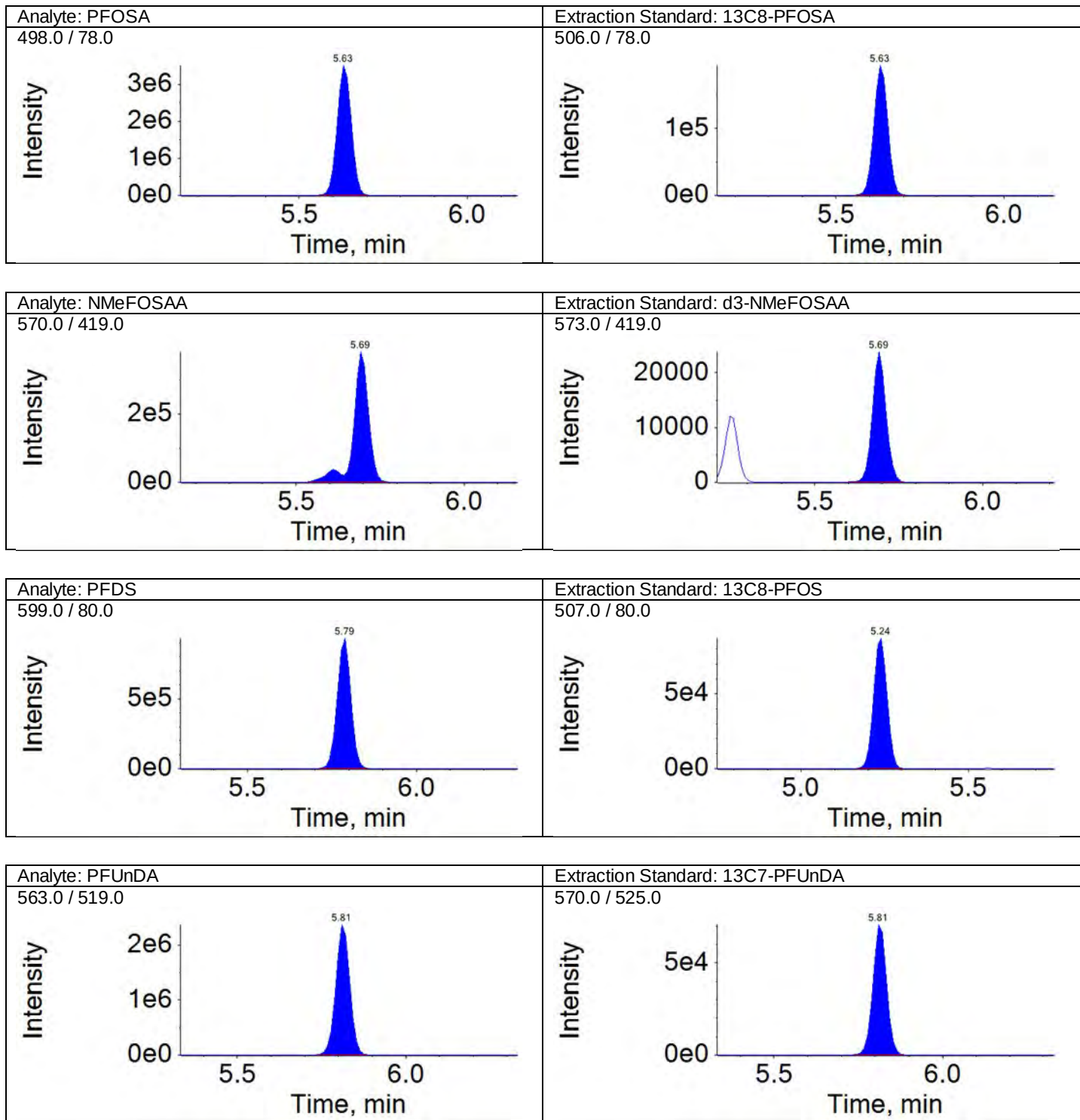
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



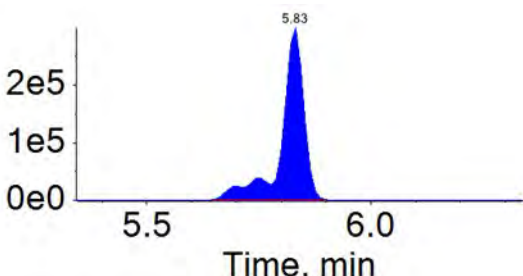
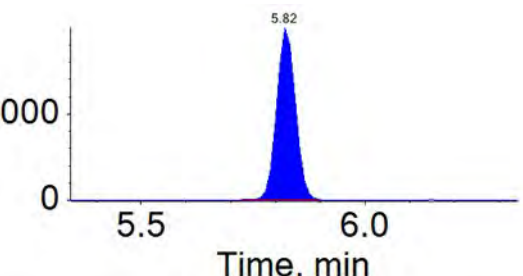
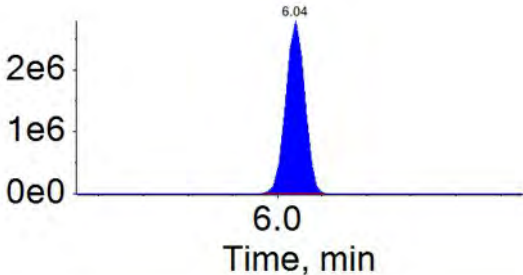
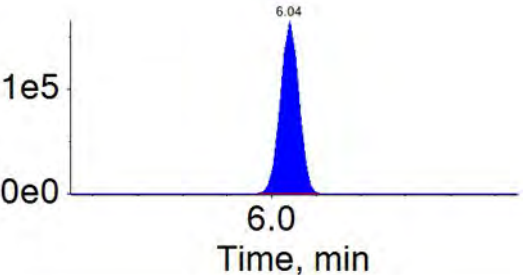
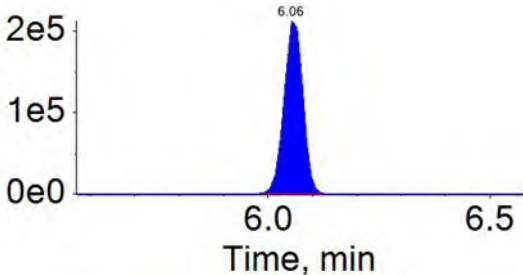
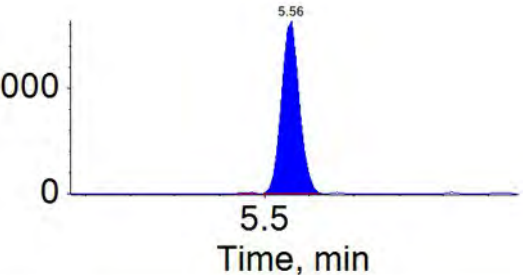
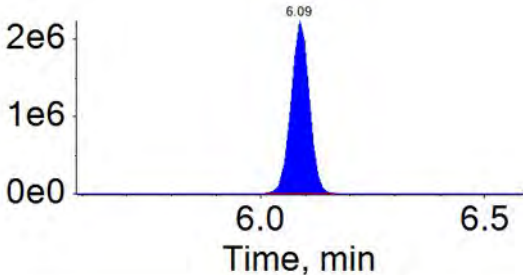
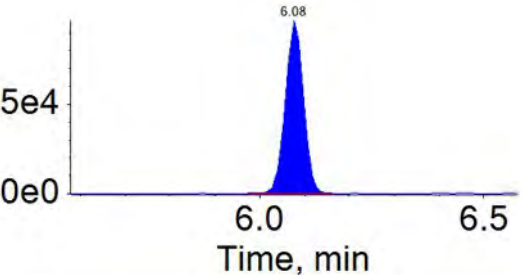
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



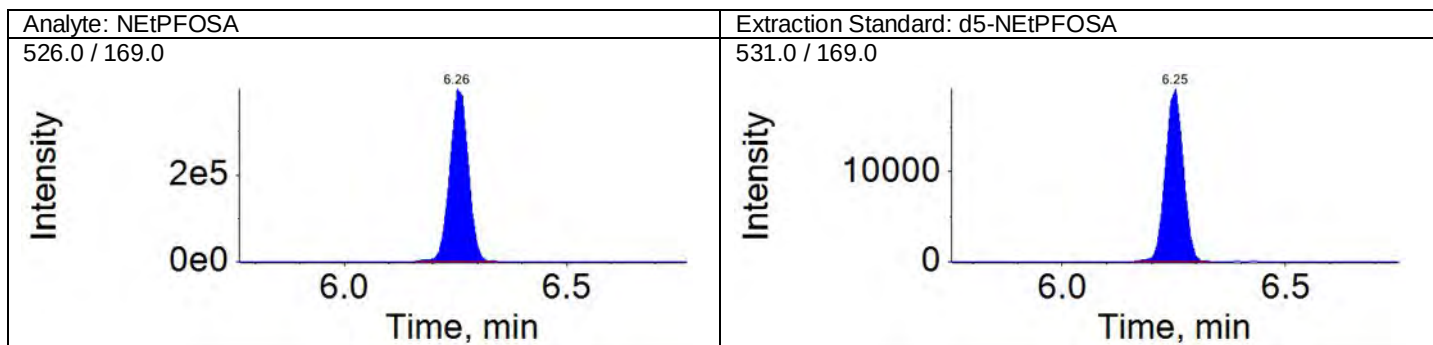
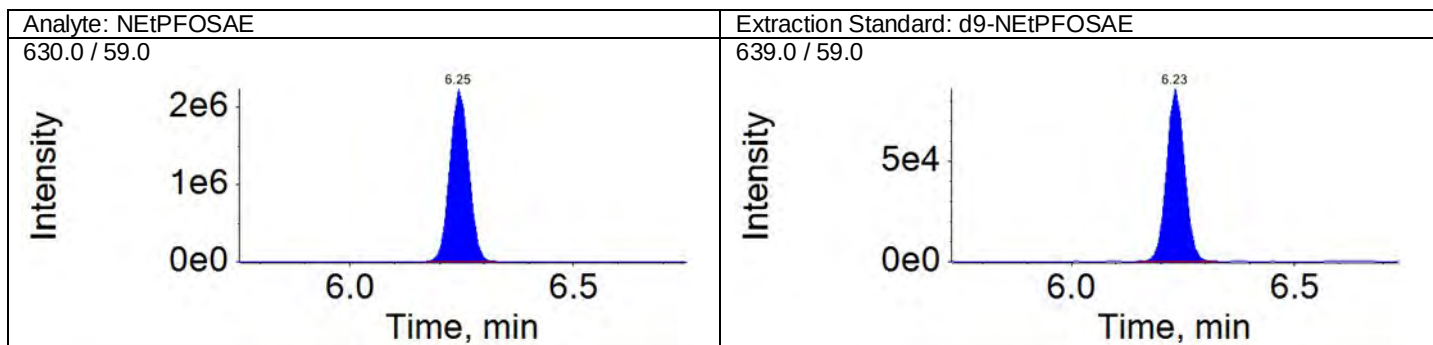
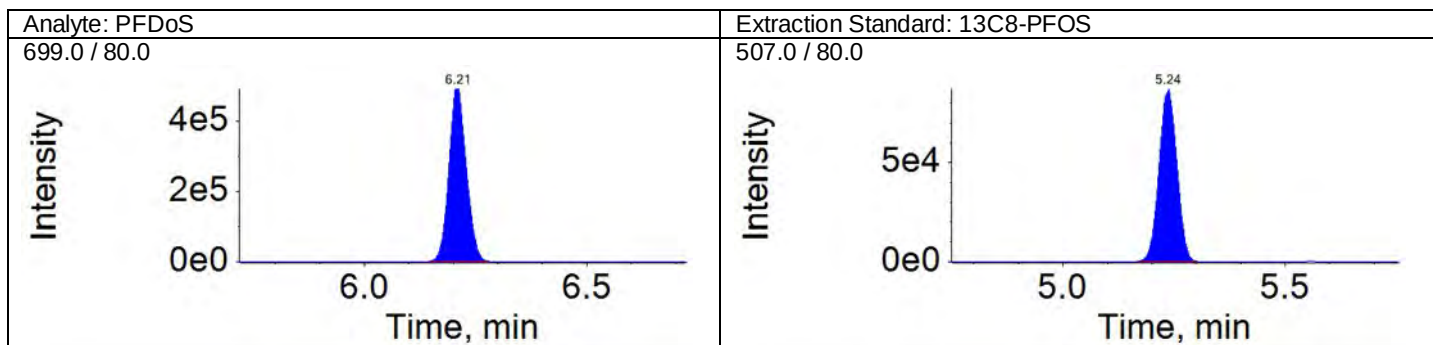
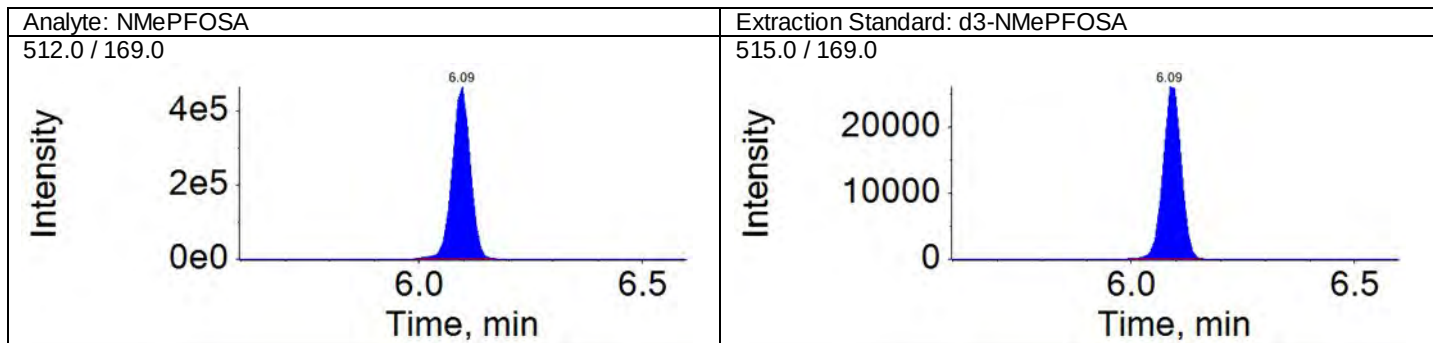
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte: NEtFOSAA 584.0 / 419.0 	Extraction Standard: d5-NEtFOSAA 589.0 / 419.0 
Analyte: PFDoDA 613.0 / 569.0 	Extraction Standard: 13C2-PFDoDA 615.0 / 570.0 
Analyte: 10:2-FTS 627.0 / 607.0 	Extraction Standard: 13C2-8:2-FTS 529.0 / 81.0 
Analyte: NMePFOSAE 616.0 / 59.0 	Extraction Standard: d7-NMePFOSAE 623.0 / 59.0 

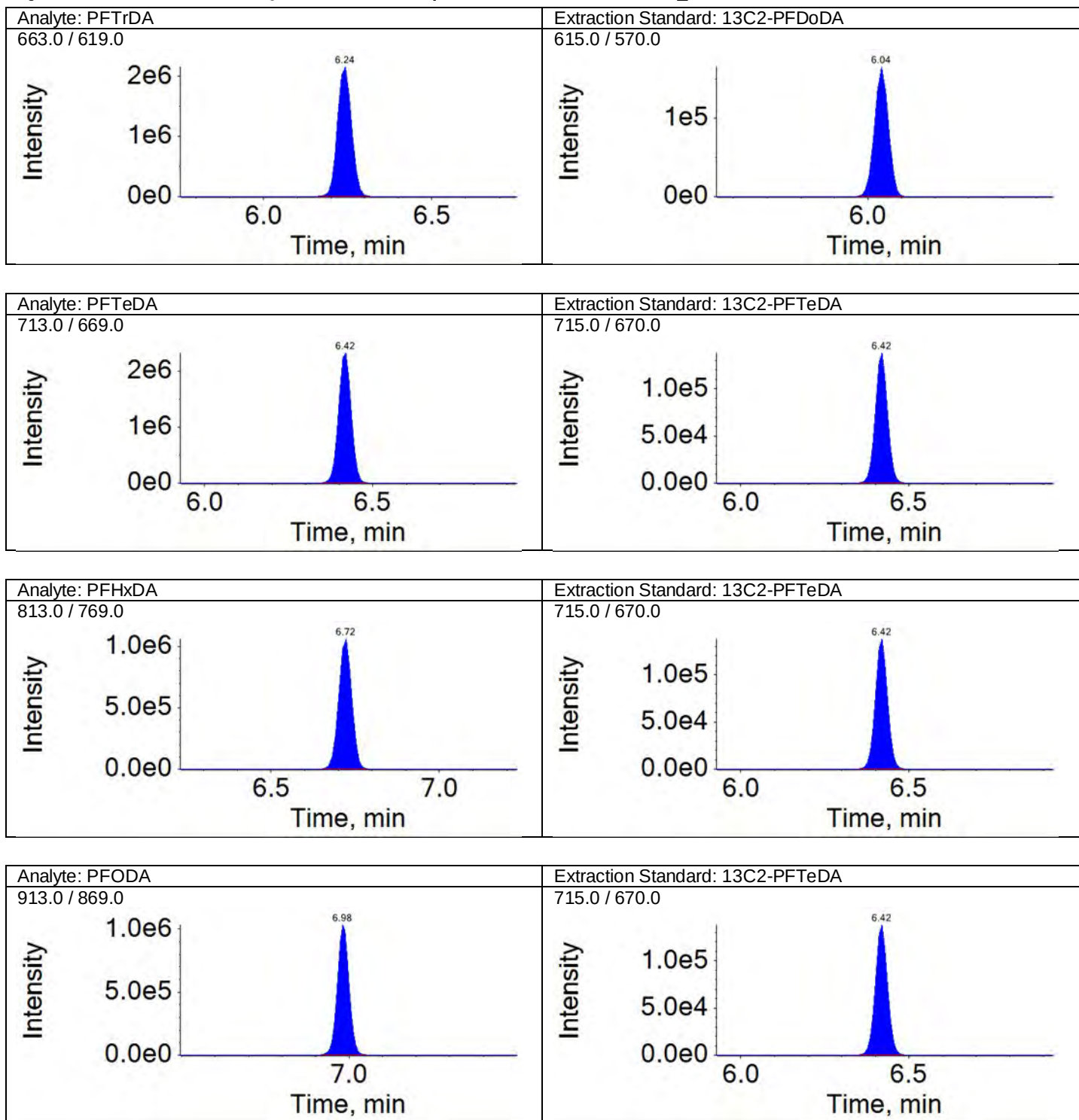
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



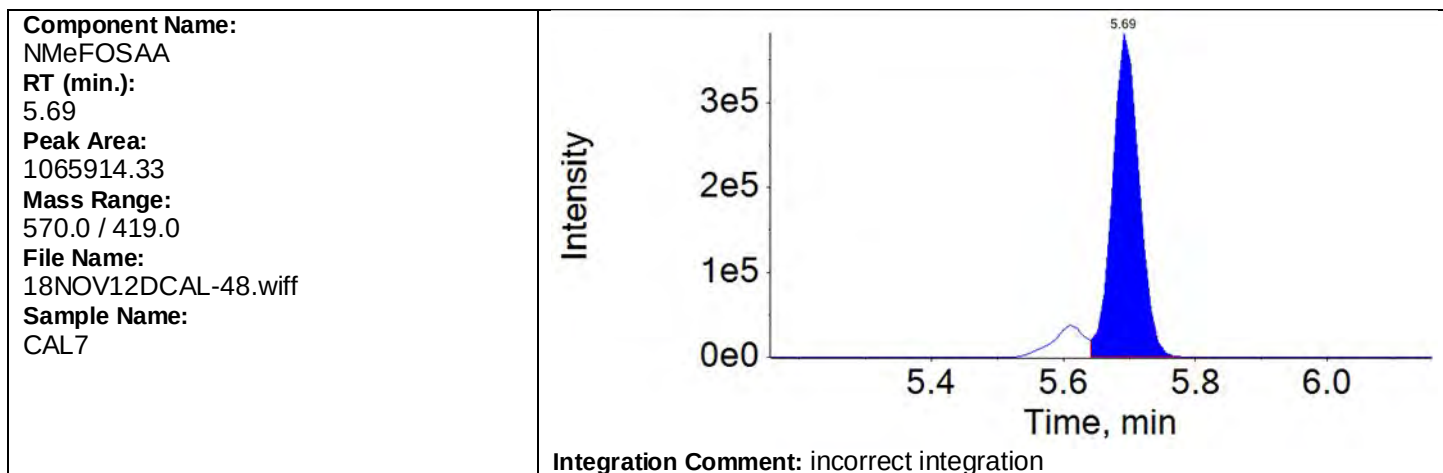
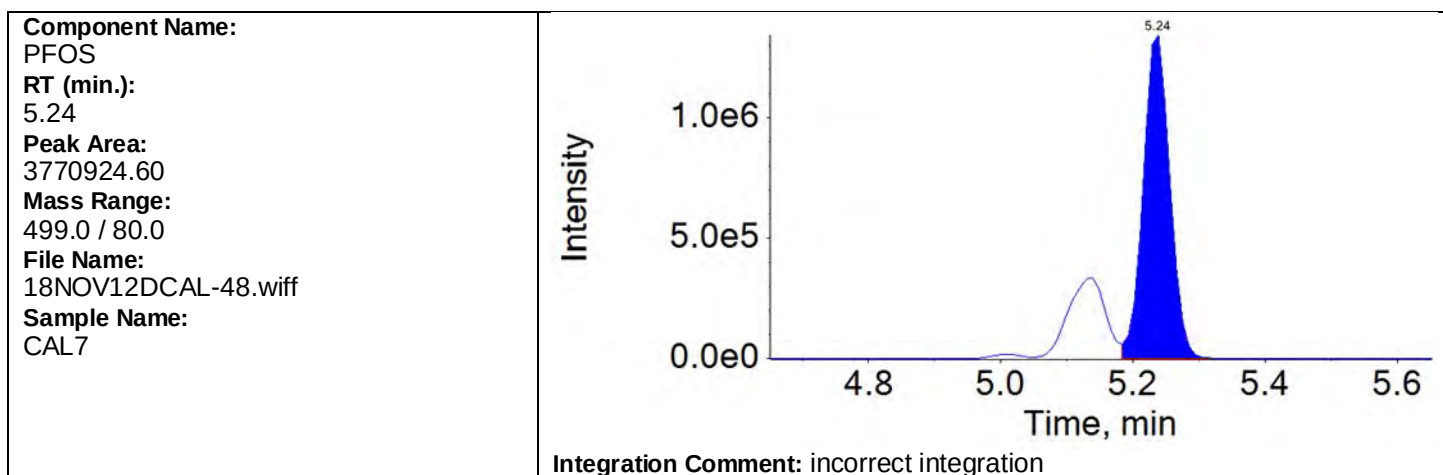
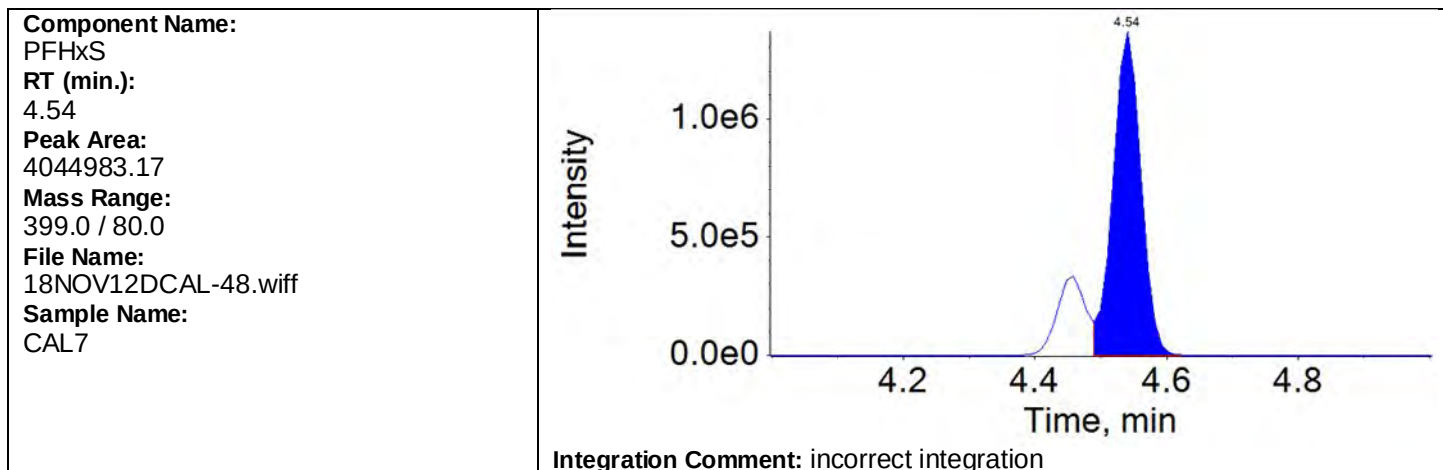
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

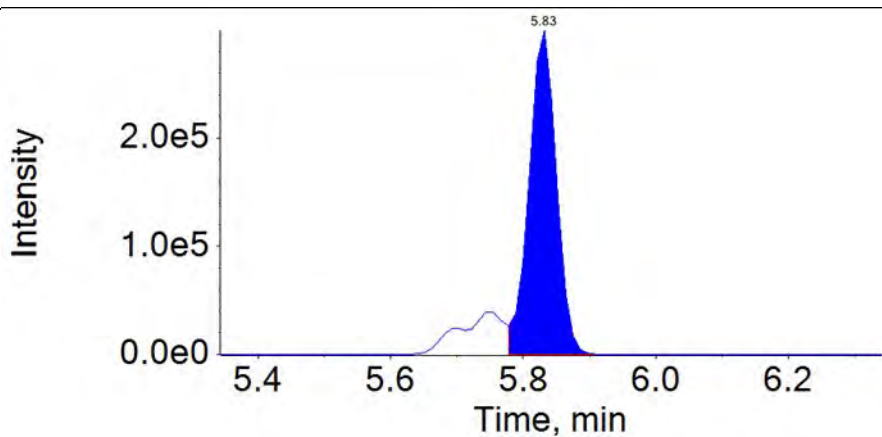
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

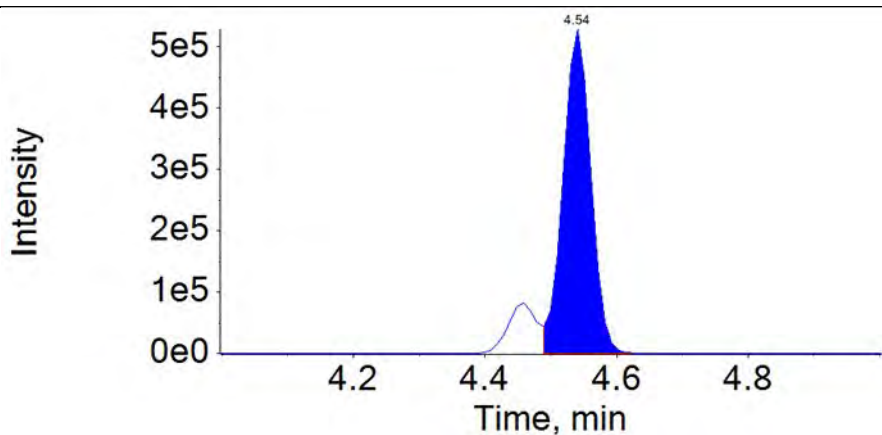
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NETFOSAA
RT (min.):
5.83
Peak Area:
862135.47
Mass Range:
584.0 / 419.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



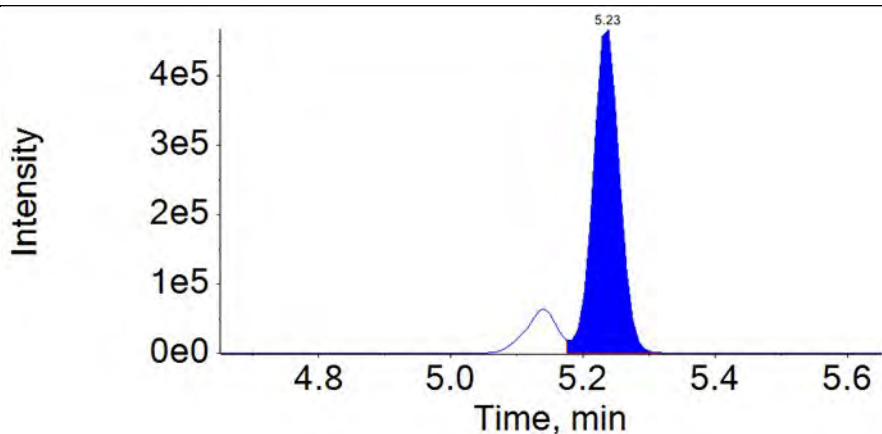
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
1552233.65
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
1316284.93
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7

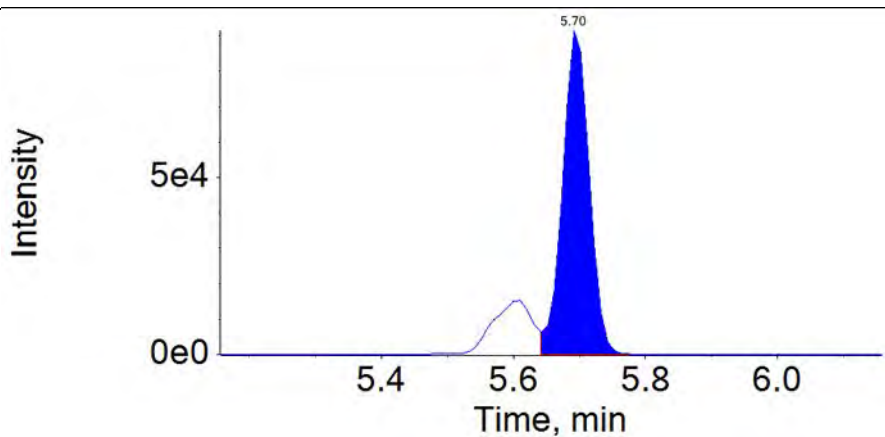


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

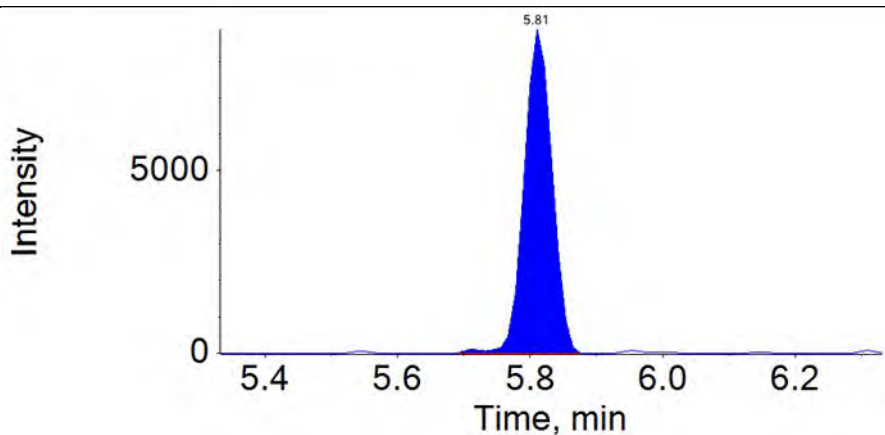
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
256419.22
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



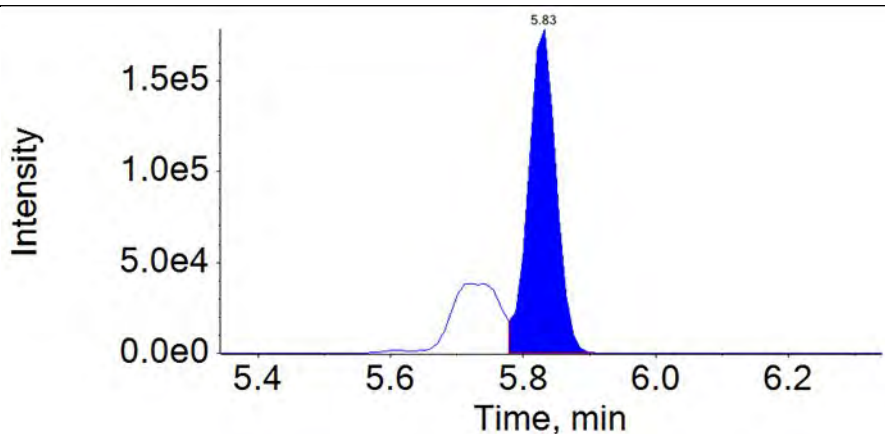
Integration Comment: incorrect integration

Component Name:
PUnDA_2
RT (min.):
5.81
Peak Area:
26121.92
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
517079.85
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7

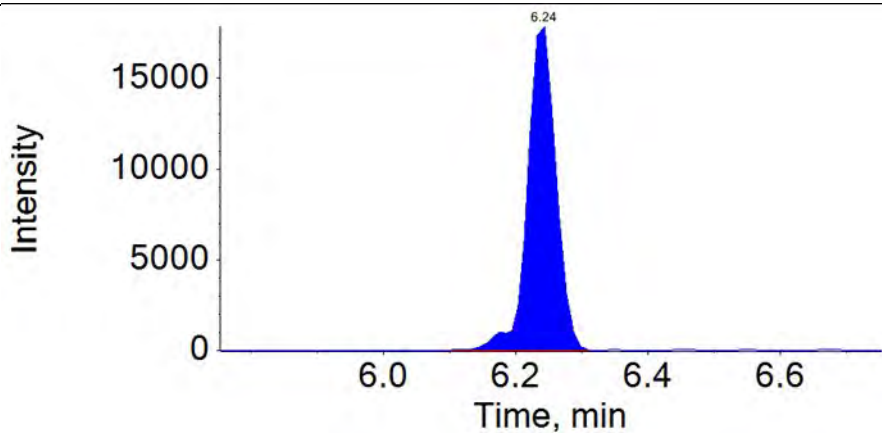


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

Component Name:
PFTTrDA_2
RT (min.):
6.24
Peak Area:
53950.01
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:33 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

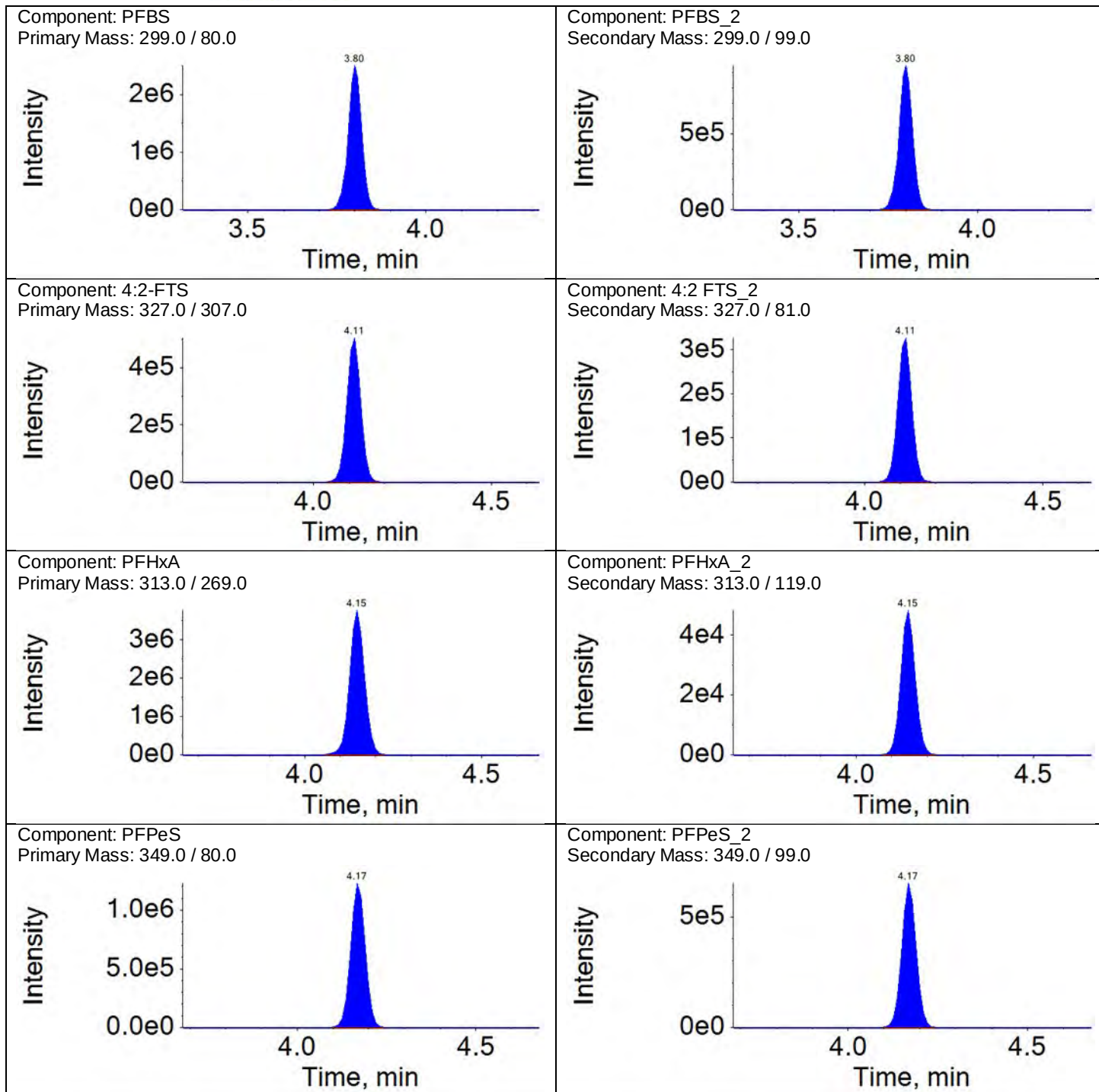
Ion Ratio Report

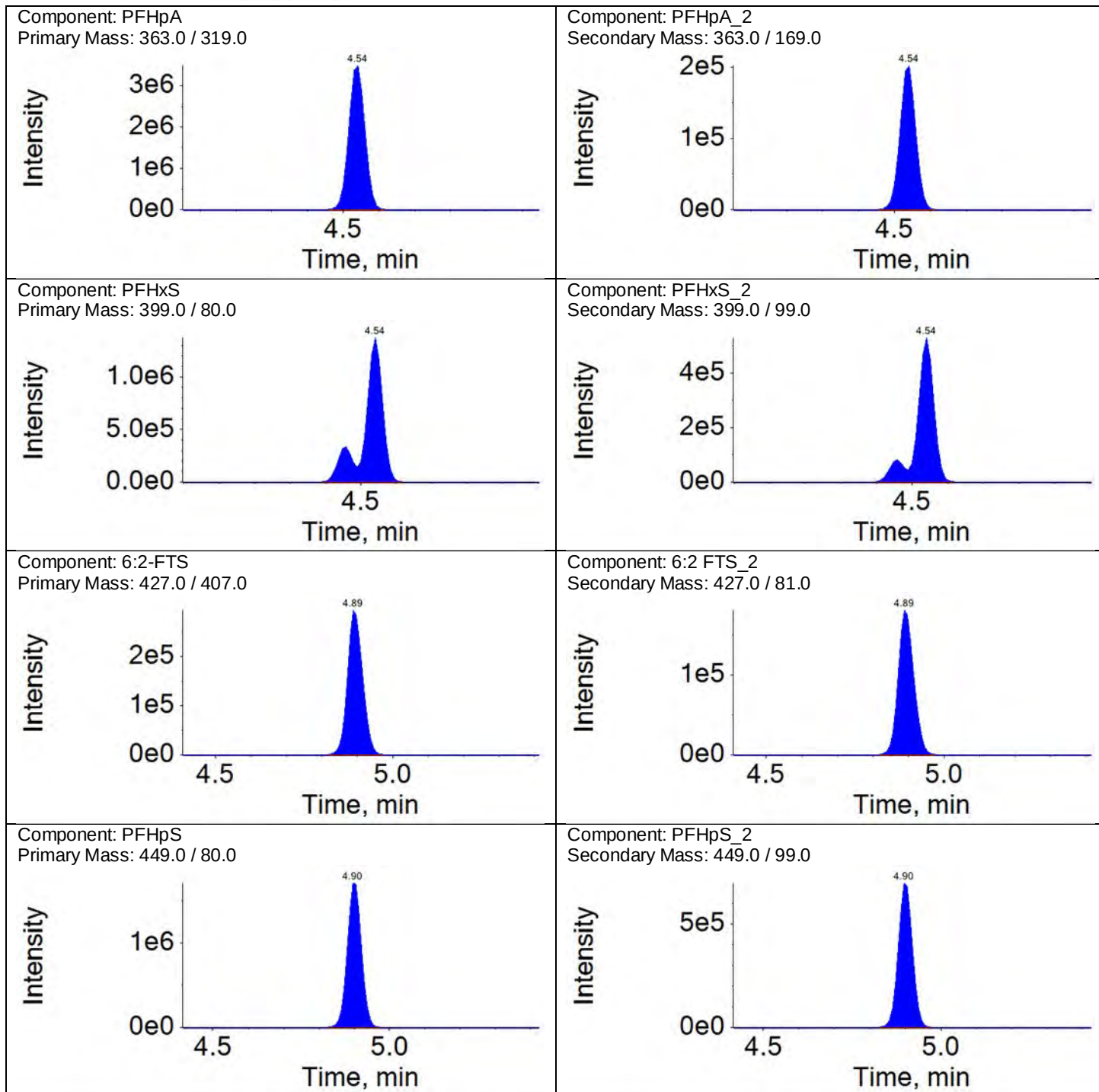
Sample Name: CAL7

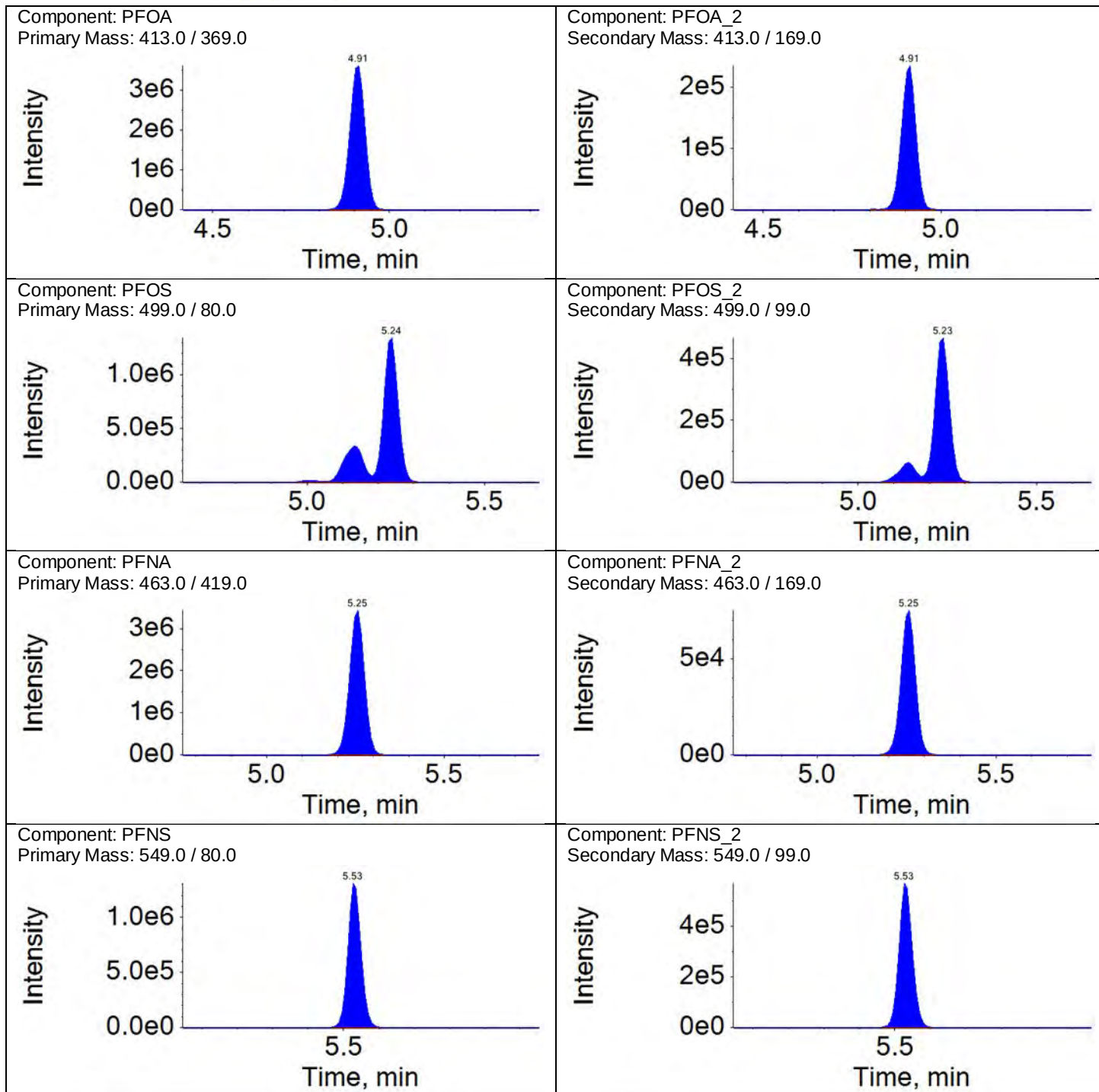
Instrument Name: LM27631

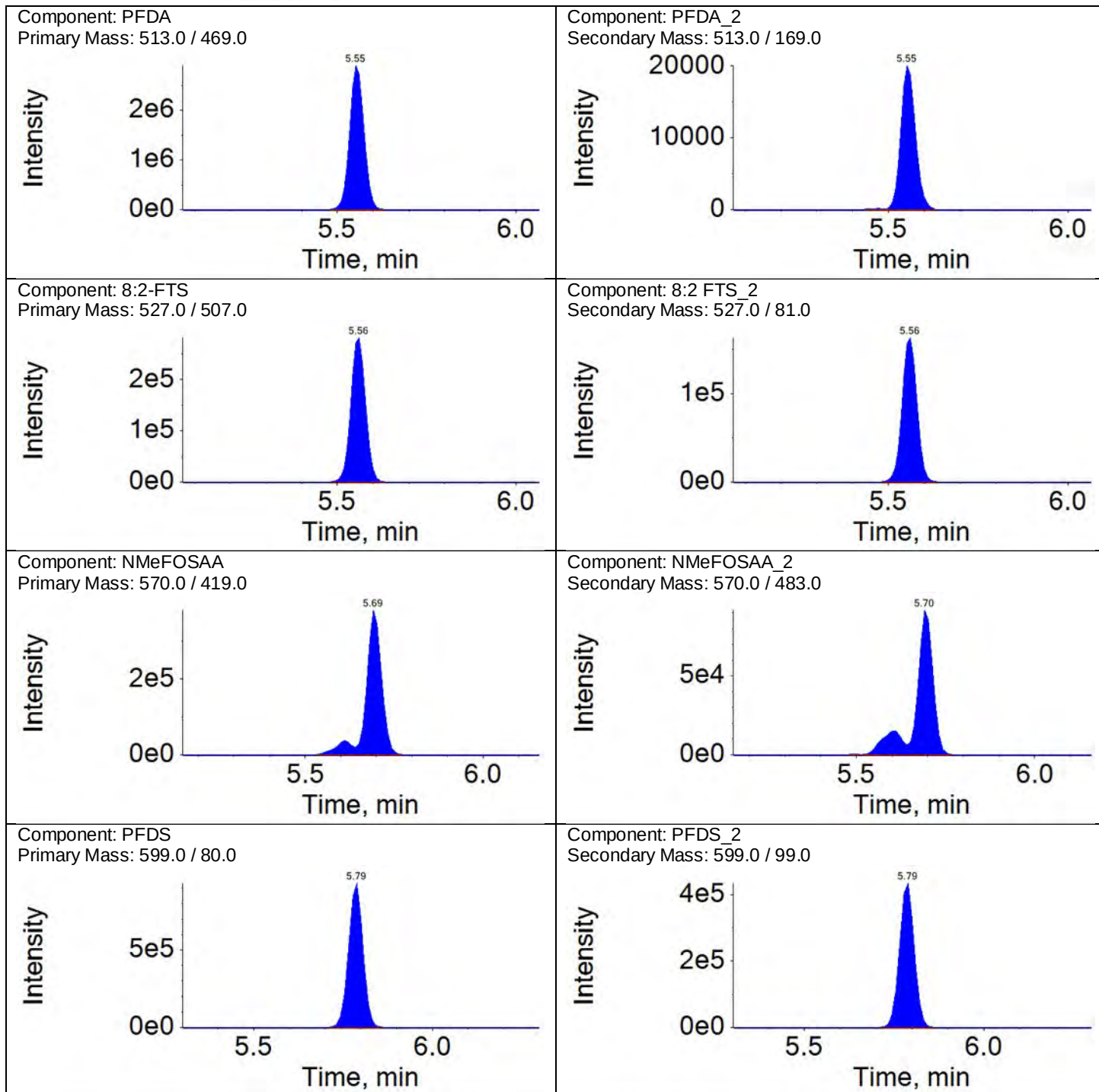
File Name: 18NOV12DCAL-48.wiff

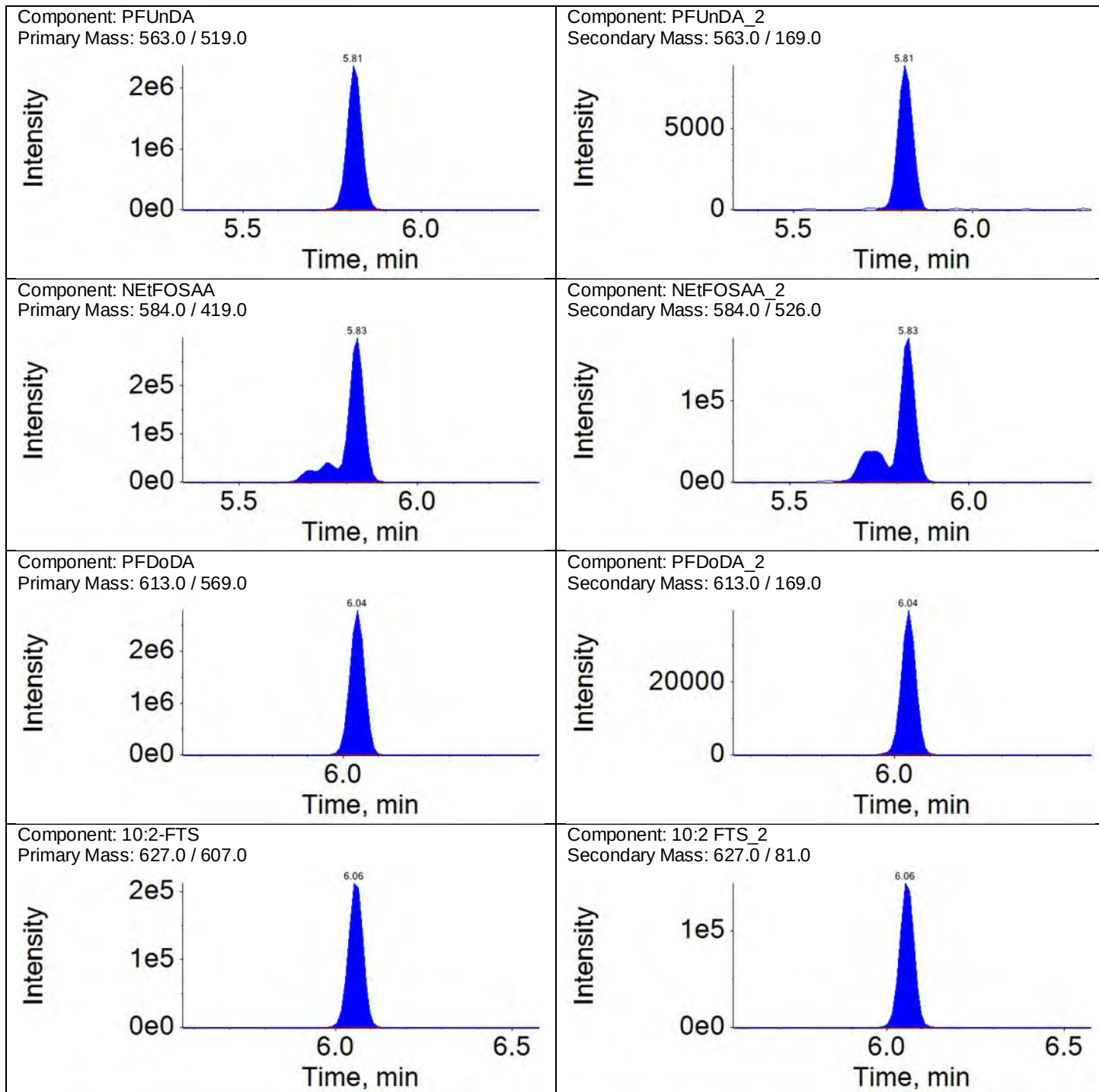
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	6615935.34	A	0.3619	0.3803			
PFBS_2	3.80	1.00	2515947.77	A	0.3619	0.3803	5	50	
4:2-FTS	4.11	1.00	1379983.90	A	0.6730	0.6491			
4:2 FTS_2	4.11	1.00	895801.93	A	0.6730	0.6491		#NA!	
PFHxA	4.15	1.00	11059420.28	A	0.0117	0.0124			
PFHxA_2	4.15	1.00	136818.87	A	0.0117	0.0124	6	50	
PFPeS	4.17	1.10	3482095.87	A	0.5191	0.5217			
PFPeS_2	4.17	1.10	1816709.54	A	0.5191	0.5217	1	50	
PFHpA	4.54	1.00	10981922.82	A	0.0563	0.0563			
PFHpA_2	4.54	1.00	618128.71	A	0.0563	0.0563	0	50	
PFHxS	4.54	1.00	5048349.82	M	0.3428	0.3562			
PFHxS_2	4.54	1.00	1798400.55	M	0.3428	0.3562	4	50	
6:2-FTS	4.89	1.00	869227.19	A	0.6604	0.6365			
6:2 FTS_2	4.89	1.00	553300.52	A	0.6604	0.6365		#NA!	
PFHpS	4.90	1.08	4784682.82	A	0.4066	0.4068			
PFHpS_2	4.90	1.08	1946425.33	A	0.4066	0.4068	0	50	
PFOA	4.91	1.00	10991740.12	A	0.0562	0.0611			
PFOA_2	4.91	1.00	671295.39	A	0.0562	0.0611	9	50	
PFOS	5.24	1.00	5138366.95	M	0.2968	0.2975			
PFOS_2	5.23	1.00	1528751.71	M	0.2968	0.2975	0	50	
PFNA	5.25	1.00	10084288.28	A	0.0229	0.0213			
PFNA_2	5.25	1.00	214560.66	A	0.0229	0.0213	-7	50	
PFNS	5.53	1.06	3386860.46	A	0.4828	0.4408			
PFNS_2	5.53	1.06	1492987.09	A	0.4828	0.4408	-9	50	
PFDA	5.55	1.00	8104726.61	A	0.0081	0.0071			
PFDA_2	5.55	1.00	57305.88	A	0.0081	0.0071	-12	50	
8:2-FTS	5.56	1.00	804019.53	A	0.6814	0.5854			
8:2 FTS_2	5.56	1.00	470706.51	A	0.6814	0.5854		#NA!	
NMeFOSAA	5.69	1.00	1191981.70	M	0.2569	0.2688			
NMeFOSAA_2	5.70	1.00	320371.24	M	0.2569	0.2688	5	50	
PFDS	5.79	1.11	2606720.69	A	0.5144	0.4749			
PFDS_2	5.79	1.10	1238034.03	A	0.5144	0.4749	-8	50	
PFUnDA	5.81	1.00	6802701.21	A	0.0058	0.0038			
PFUnDA_2	5.81	1.00	25933.20	M	0.0058	0.0038	-34	50	
NEtFOSAA	5.83	1.00	1046636.11	M	0.7253	0.6803			
NEtFOSAA_2	5.83	1.00	711980.18	M	0.7253	0.6803	-6	50	
PFDODA	6.04	1.00	8171355.35	A	0.0157	0.0138			
PFDODA_2	6.04	1.00	113144.85	A	0.0157	0.0138	-12	50	
10:2-FTS	6.06	1.09	632223.71	A	0.6356	0.6817			
10:2 FTS_2	6.06	1.09	431003.27	A	0.6356	0.6817		#NA!	
PFTTrDA	6.24	1.03	6281239.03	A	0.0086	0.0083			
PFTTrDA_2	6.24	1.03	52325.72	M	0.0086	0.0083	-3	50	
PFTeDA	6.42	1.00	6092875.66	A	0.0062	0.0060			
PFTeDA_2	6.42	1.00	36395.60	A	0.0062	0.0060	-4	50	
PFHxDA	6.72	1.05	2866097.32	A	0.0683	0.0642			
PFHxDA_2	6.72	1.05	183981.95	A	0.0683	0.0642	-6	50	
PFODA	6.98	1.09	2488863.64	A	0.0277	0.0267			
PFODA_2	6.98	1.09	66332.27	A	0.0277	0.0267	-4	50	

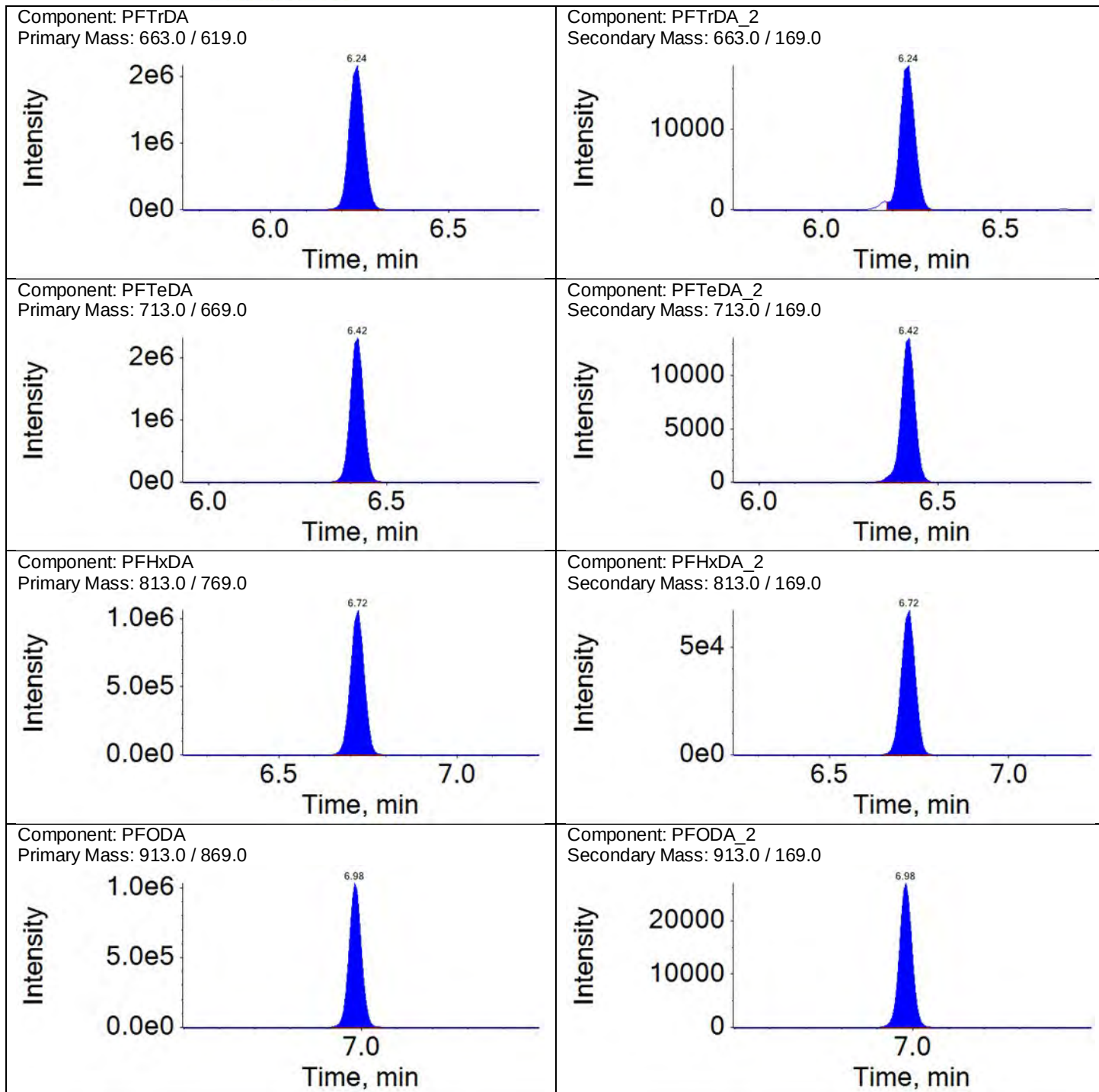












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	INBLK	Data File:	18NOV12DCAL-49.wiff
Sample ID:	methanol	Acquis Date:	11/12/2018 4:09:09 PM
Sample Type:	Unknown	Instrument:	LM27631
Vial Position:	1	Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00	Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM	ICAL Name:	18NOV12DCAL
Batch Number:	N/A	Operator:	JPT12262
Sample Wt.:	1.00000	Dilution Factor:	1.00
Sample Vol.:	1.000	Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	705408.6	659926.2	7	50	
13C2-PFOA	5.0	484266.1	450219.7	8	50	
13C4-PFOS	4.8	261290.0	249205.8	5	50	
13C2-PFDA	5.0	303665.7	278743.9	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778730.1	13C3-PFBA	705408.6	1.104	5.000	4.949	99	70-130	
E13C5-PFPeA	758823.9	13C3-PFBA	705408.6	1.076	5.000	4.825	96	70-130	
E13C3-PFBS	456635.4	13C3-PFBA	705408.6	0.647	4.650	4.570	98	70-130	
E13C2-4:2-FTS	57620.0	13C2-PFOA	484266.1	0.119	4.670	5.299	113	70-130	
E13C5-PFHxA	665797.6	13C2-PFOA	484266.1	1.375	5.000	4.966	99	70-130	
E13C3-PFHxS	372925.2	13C2-PFOA	484266.1	0.770	4.730	5.284	112	70-130	
E13C4-PFHpA	547261.8	13C2-PFOA	484266.1	1.130	5.000	5.091	102	70-130	
E13C2-6:2-FTS	39087.0	13C2-PFOA	484266.1	0.081	4.750	5.400	114	70-130	
E13C8-PFOA	901909.5	13C2-PFOA	484266.1	1.862	5.000	5.131	103	70-130	
E13C8-PFOS	289703.0	13C4-PFOS	261290.0	1.109	4.780	4.913	103	70-130	
E13C9-PFNA	509013.2	13C4-PFOS	261290.0	1.948	5.000	5.432	109	70-130	
E13C6-PFDA	643925.8	13C2-PFDA	303665.7	2.121	5.000	4.948	99	70-130	
E13C2-8:2-FTS	27339.0	13C2-PFDA	303665.7	0.090	4.790	4.490	94	70-130	
E13C8-PFOSA	681332.9	13C2-PFDA	303665.7	2.244	5.000	4.974	99	70-130	
Ed3-NMeFOSAA	73694.3	13C2-PFDA	303665.7	0.243	5.000	4.381	88	70-130	
E13C7-PFUnDA	265353.1	13C2-PFDA	303665.7	0.874	5.000	5.073	101	70-130	
Ed5-NEtFOSAA	59646.1	13C2-PFDA	303665.7	0.196	5.000	4.156	83	70-130	
E13C2-PFDODA	576780.7	13C2-PFDA	303665.7	1.899	5.000	4.932	99	70-130	
Ed7-NMePFOSAE	354624.2	13C2-PFDA	303665.7	1.168	5.000	5.054	101	70-130	
Ed3-NMePFOSA	79601.3	13C2-PFDA	303665.7	0.262	5.000	4.763	95	70-130	
Ed9-NEtPFOSAE	287722.3	13C2-PFDA	303665.7	0.947	5.000	4.928	99	70-130	
Ed5-NEtPFOSA	59772.3	13C2-PFDA	303665.7	0.197	5.000	4.617	92	70-130	
E13C2-PFTeDA	418729.7	13C2-PFDA	303665.7	1.379	5.000	4.841	97	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

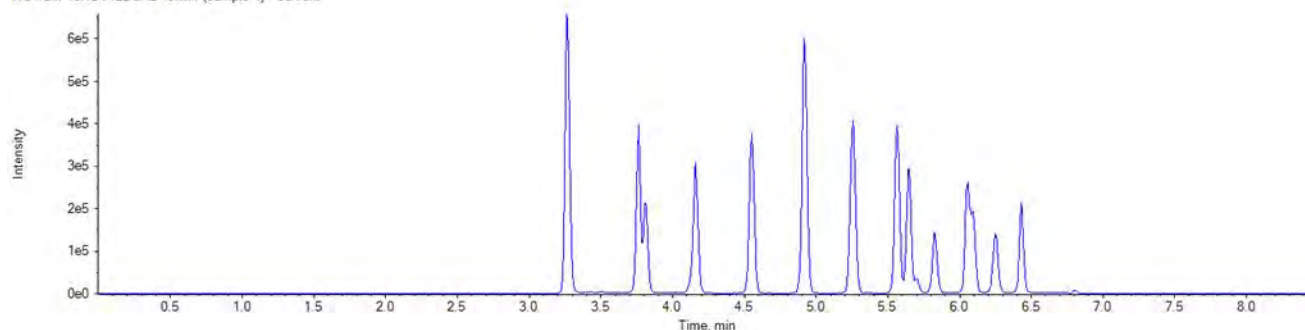
Sample Name: INBLK Instrument Name: LM27631 File Name: 18NOV12DCAL-49.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	778730.1	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	758823.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	57620.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	665797.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	547261.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	39087.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	901909.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	509013.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	643925.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	681332.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	73694.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PfUnDA	N/A	N/A	N/A		A	13C7-PfUnDA	5.83	265353.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	59646.1	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	576780.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	354624.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	79601.3	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	287722.3	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	59772.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	576780.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	
PFHxDA	6.73	1.050	2221.7		A	13C2-PFTeDA	6.43	418729.7	0.005	0.063
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	

Total Ion Chromatogram

TIC from 18NOV12DCAL-49.wiff (sample 1) - solvent



APPROVED

By JPT at 8:42 am, 11/20/18

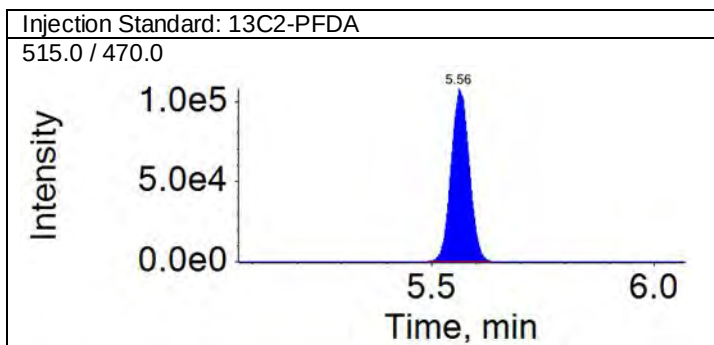
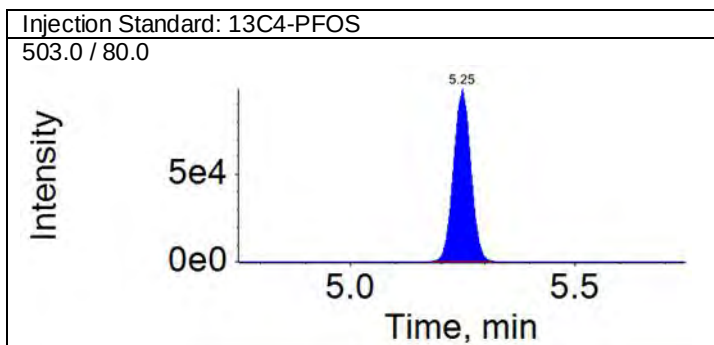
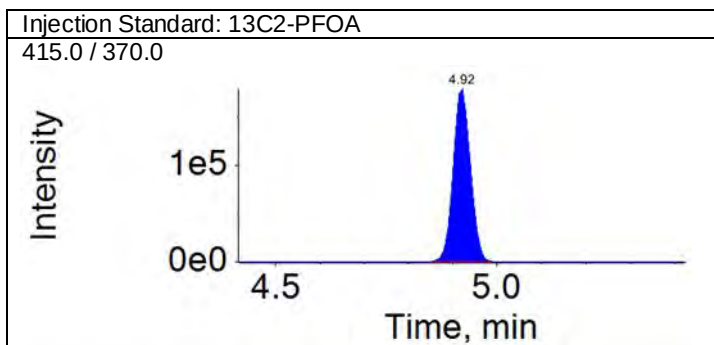
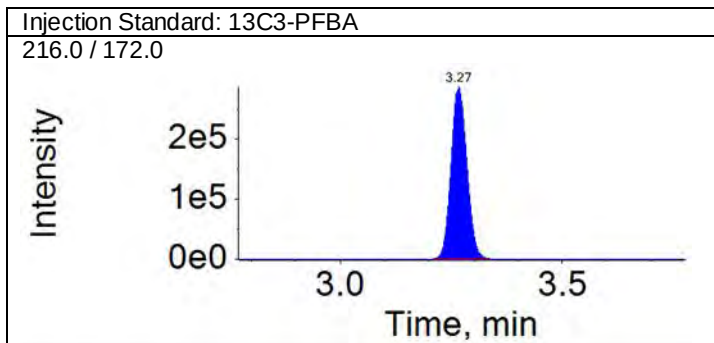
BSI05 Page 1075 of 1595

REVIEWED

By HMK at 8:47 am, 11/20/18

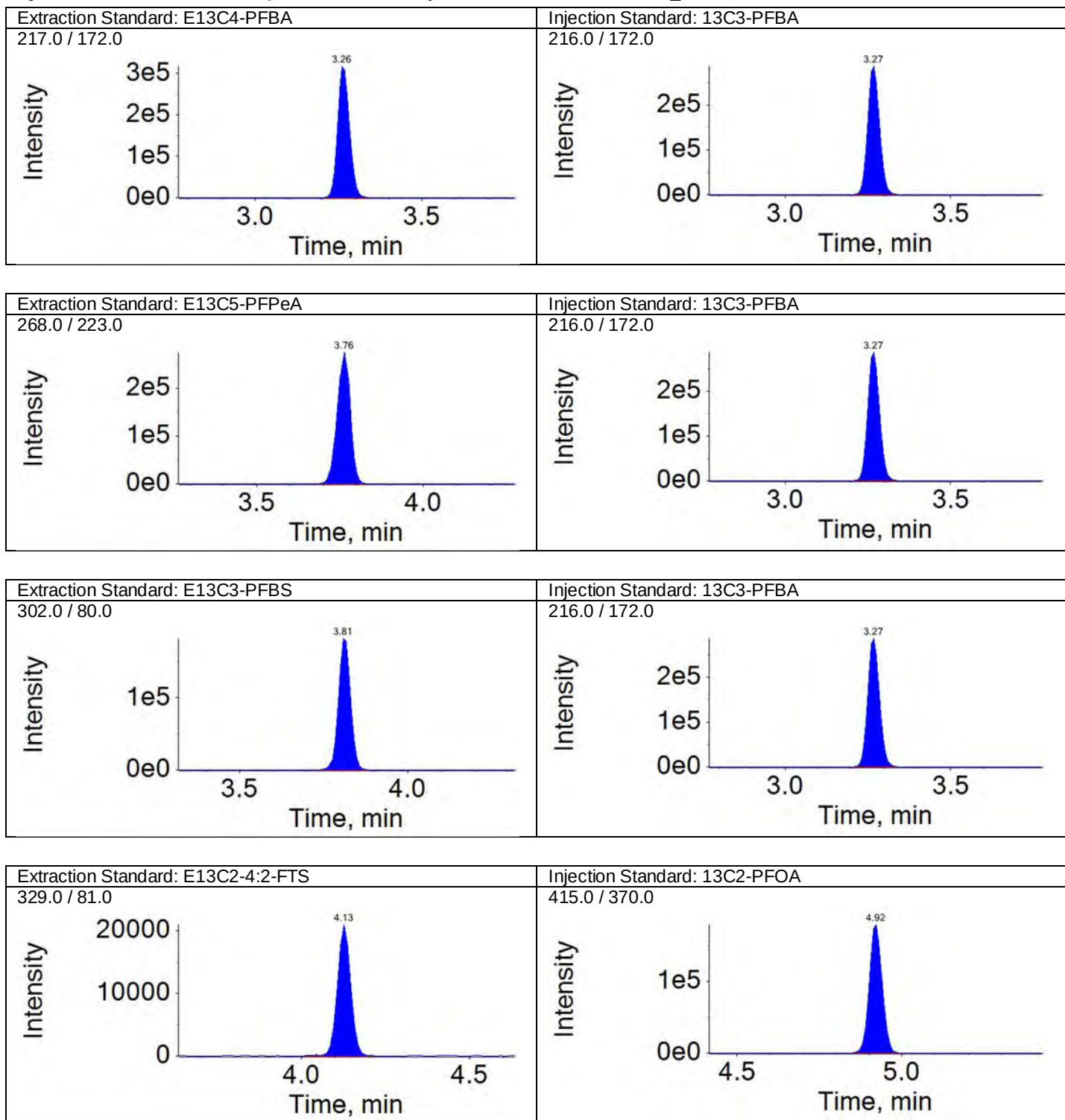
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



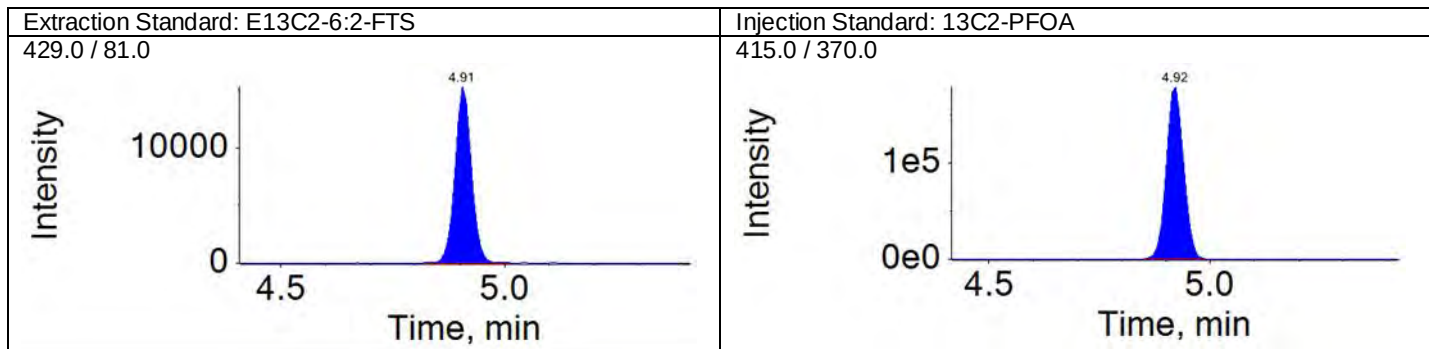
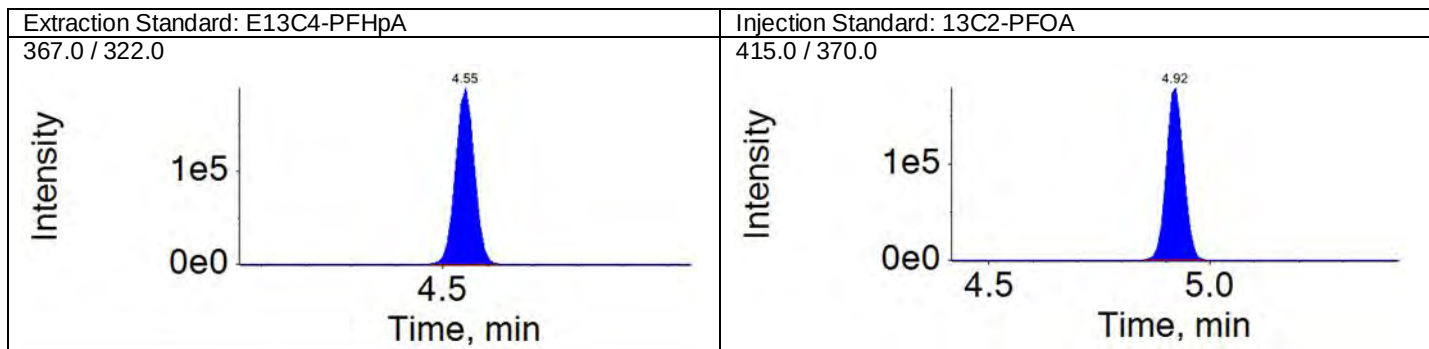
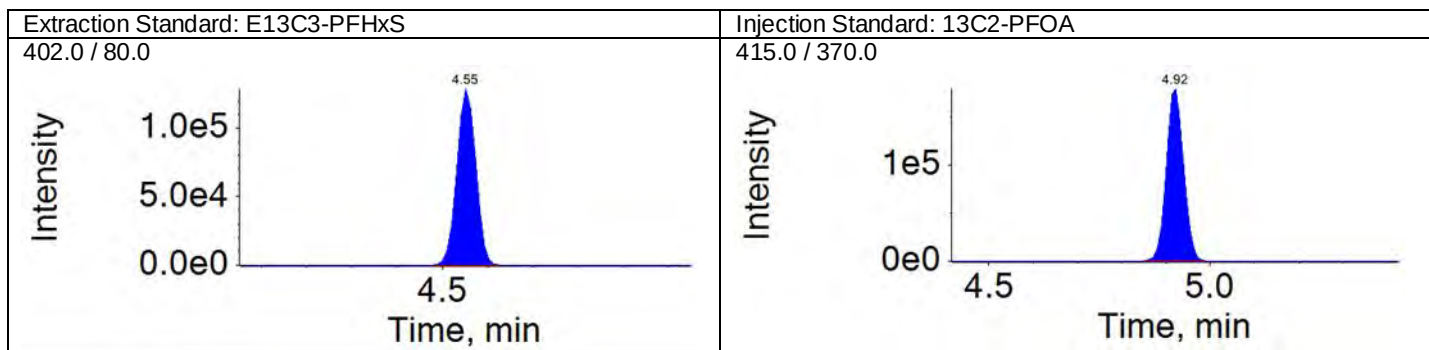
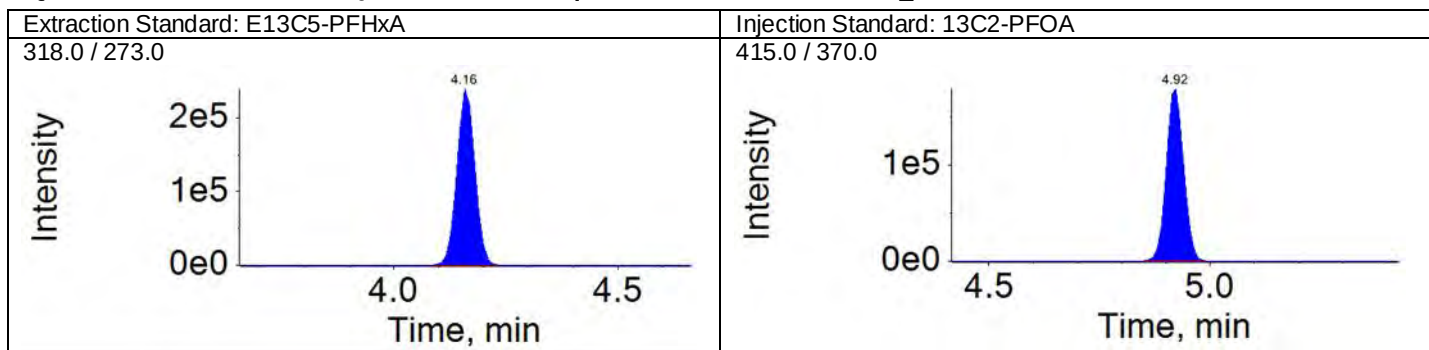
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



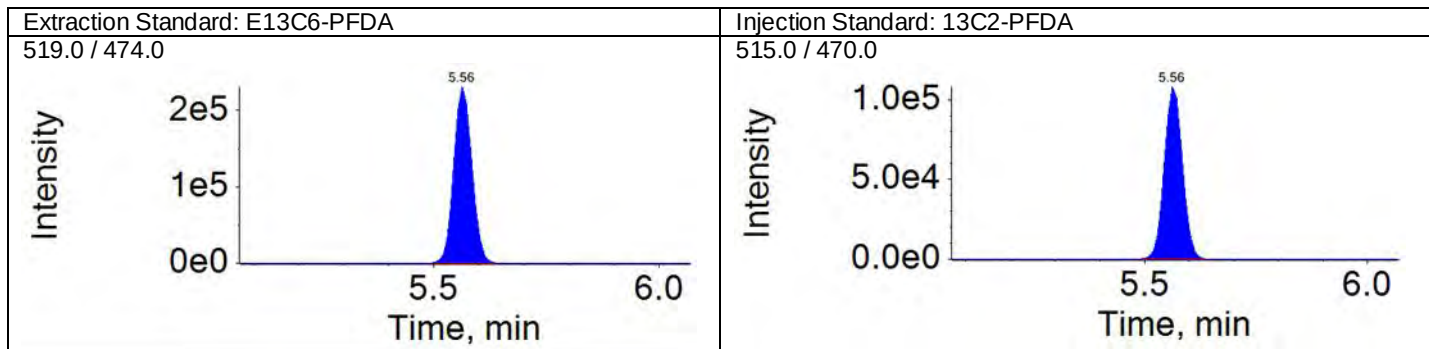
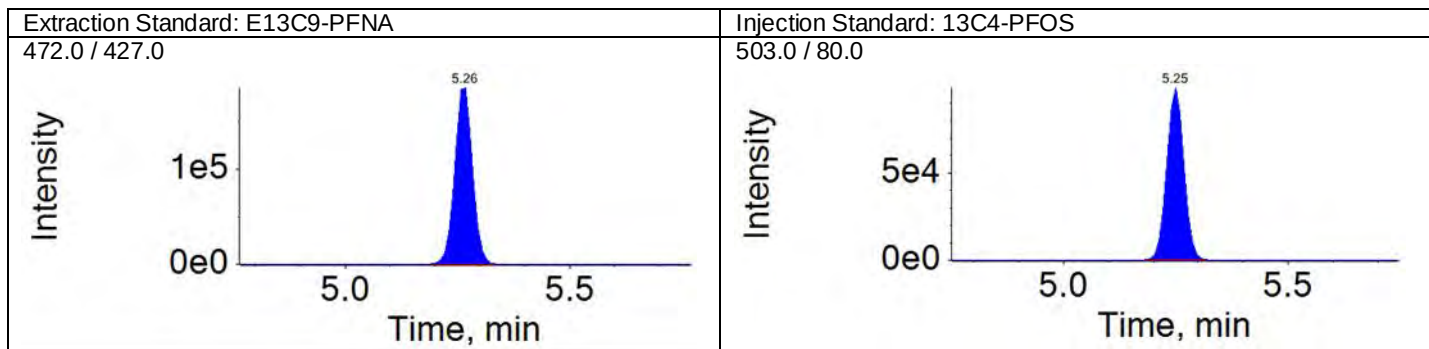
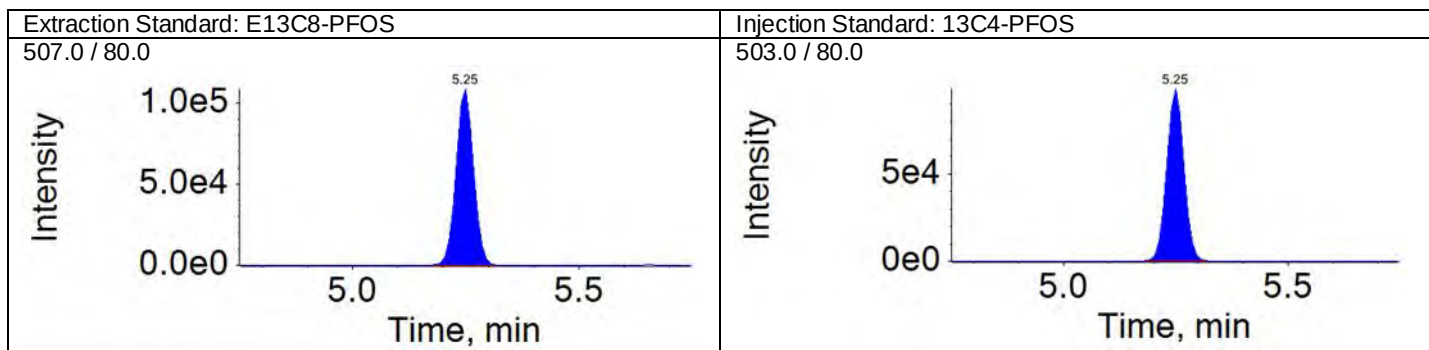
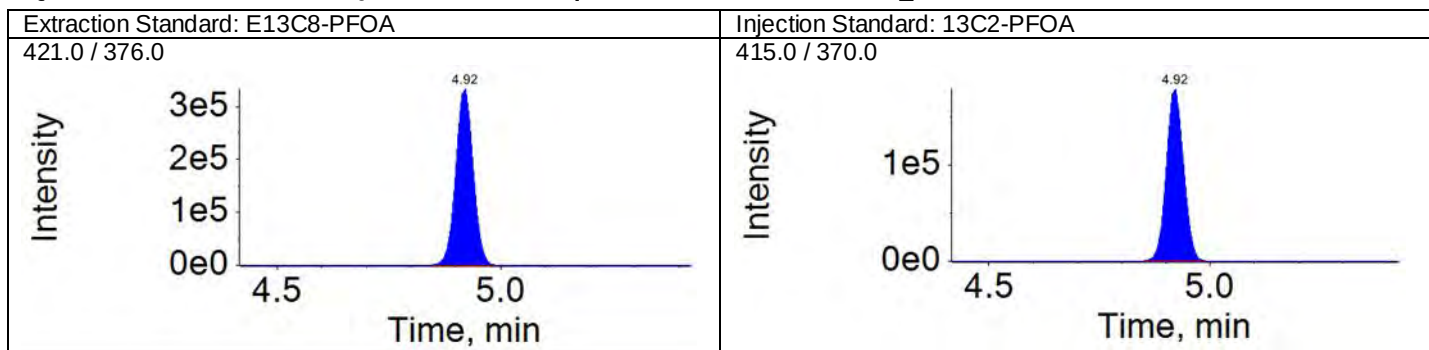
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



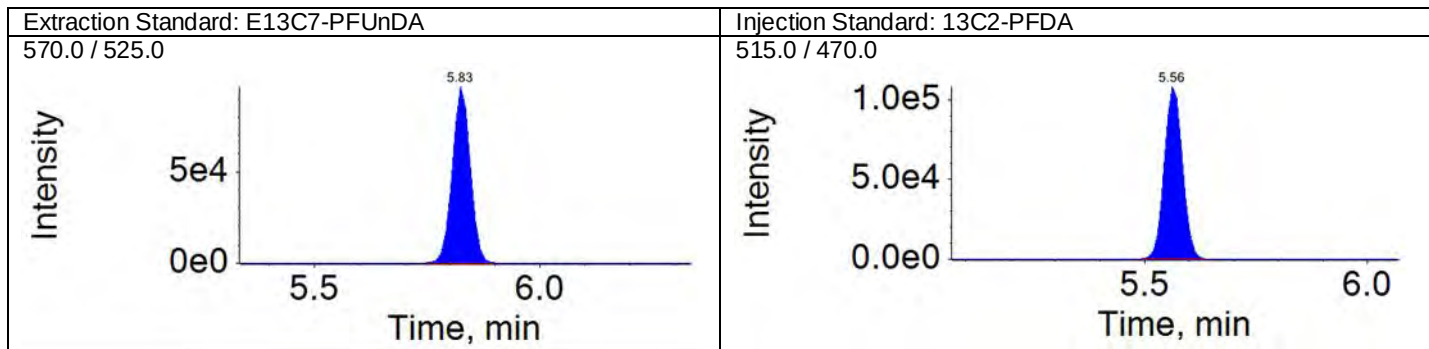
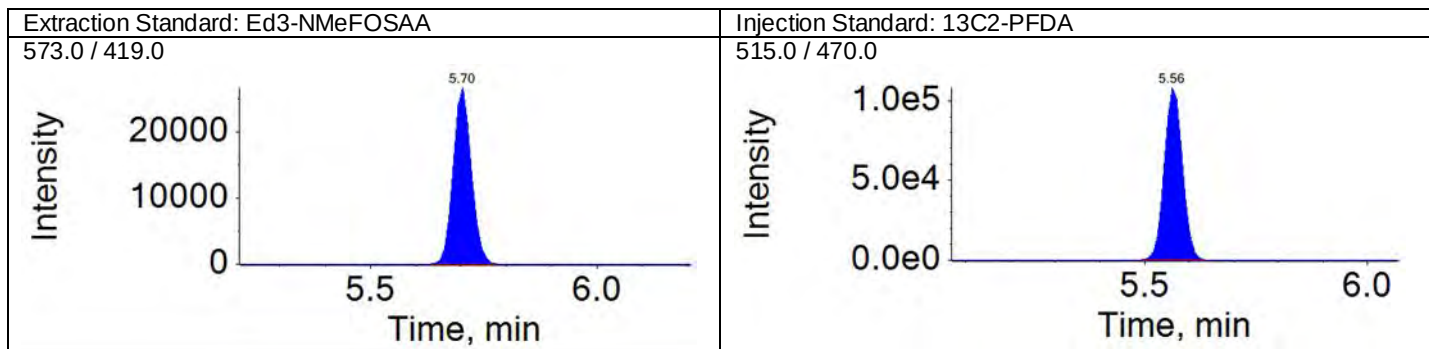
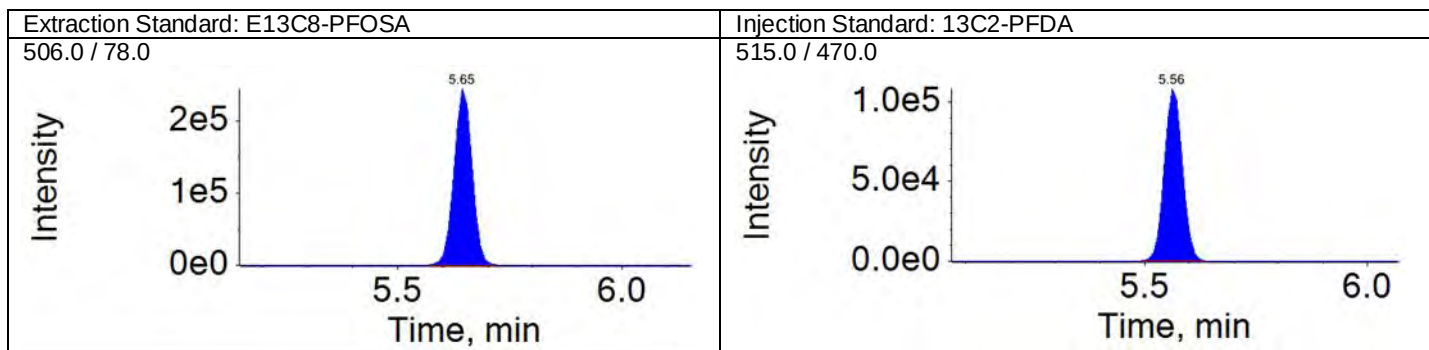
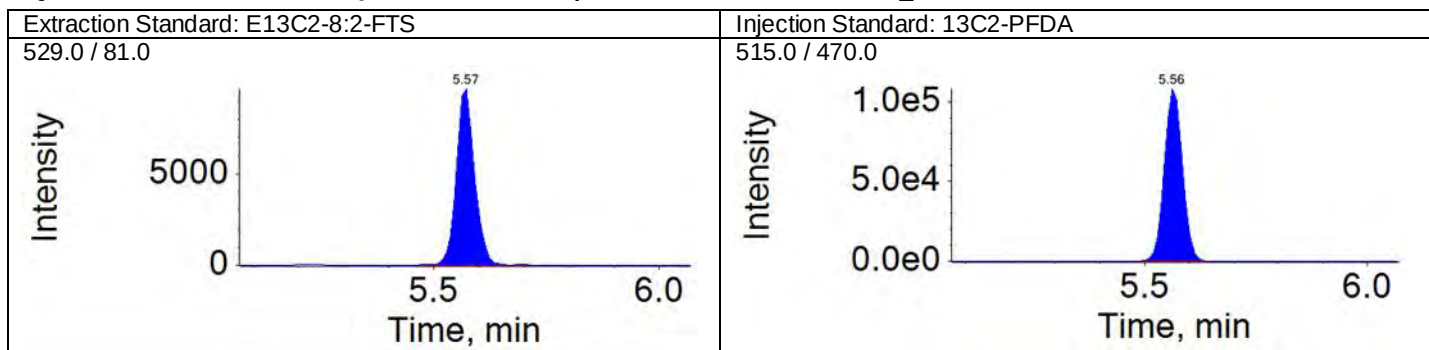
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



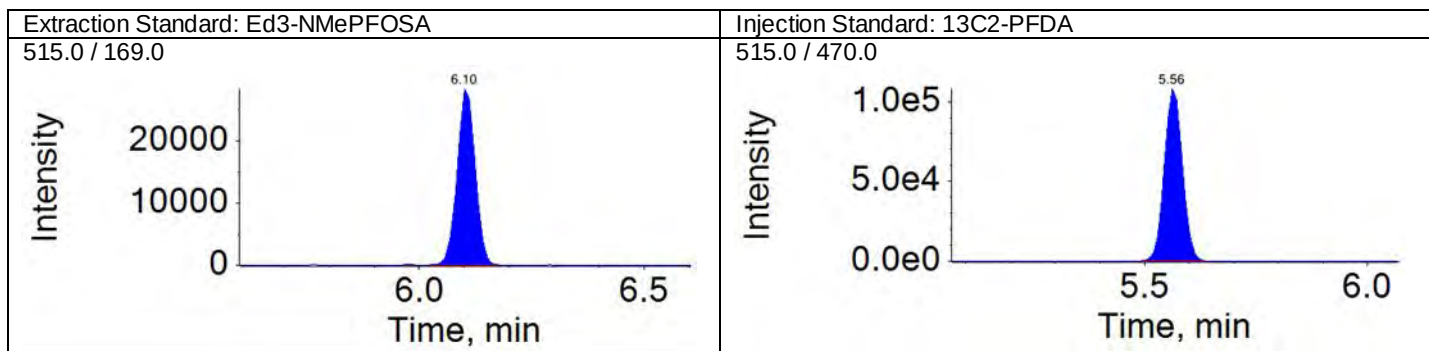
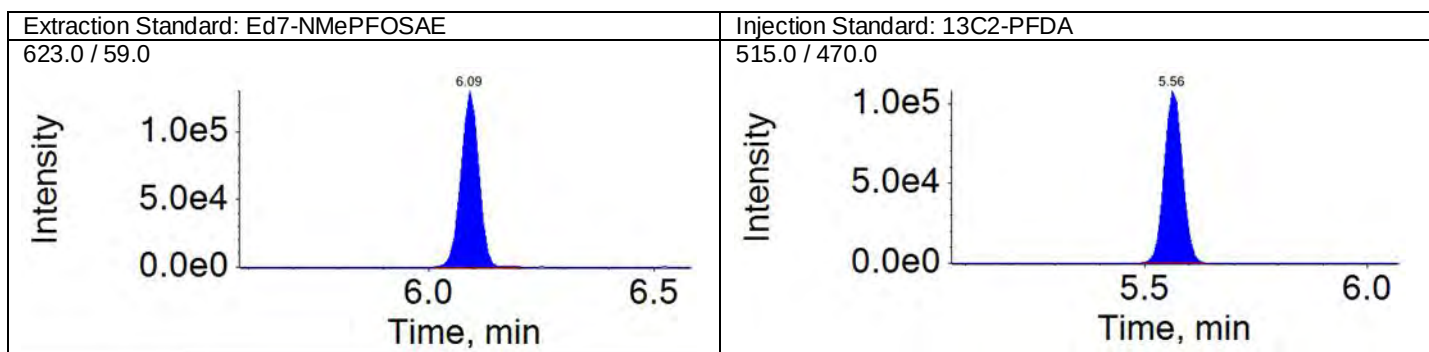
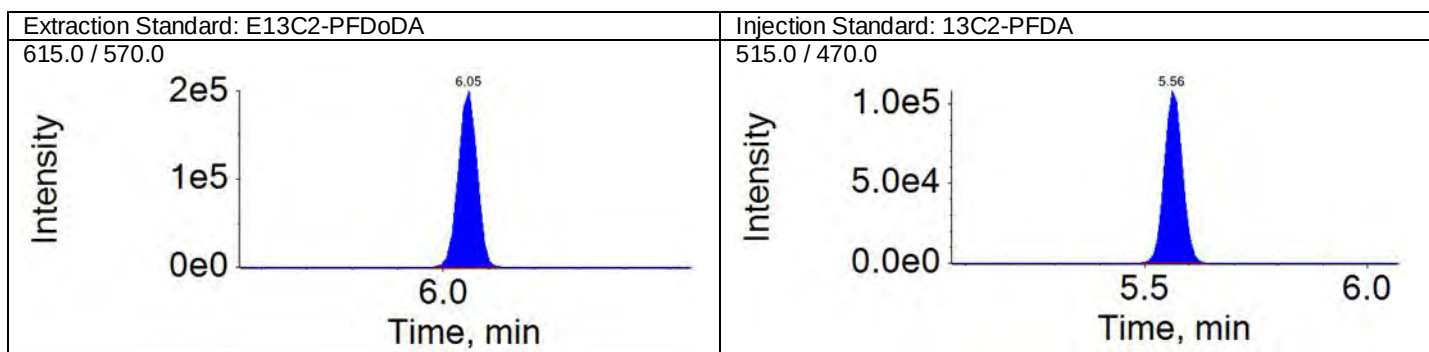
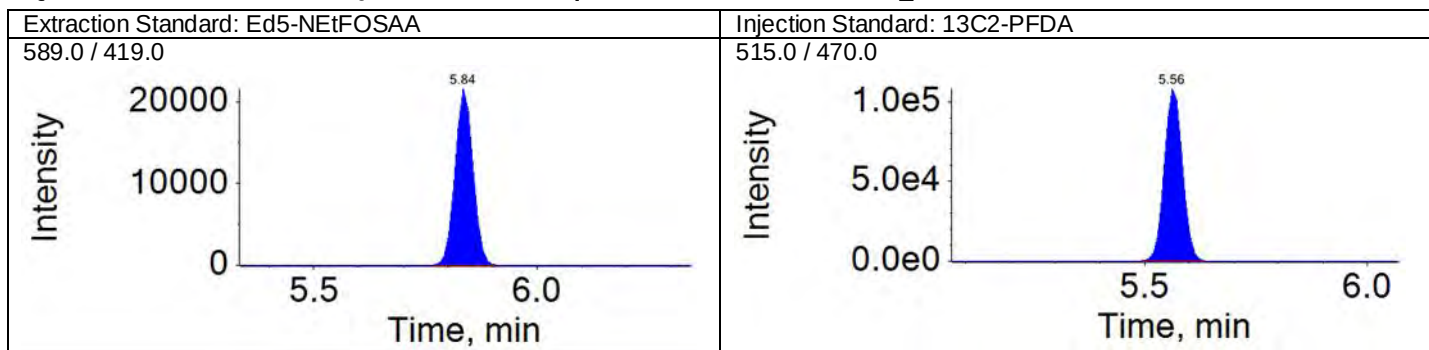
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



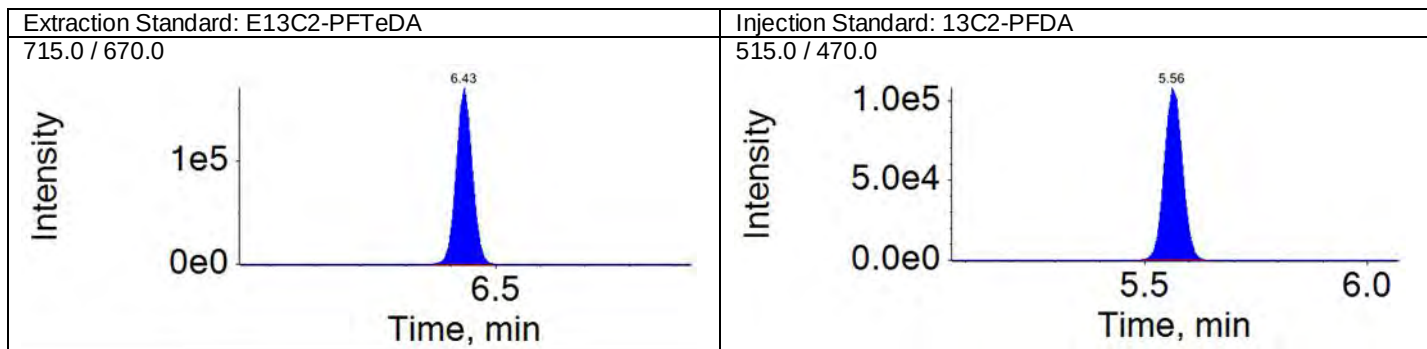
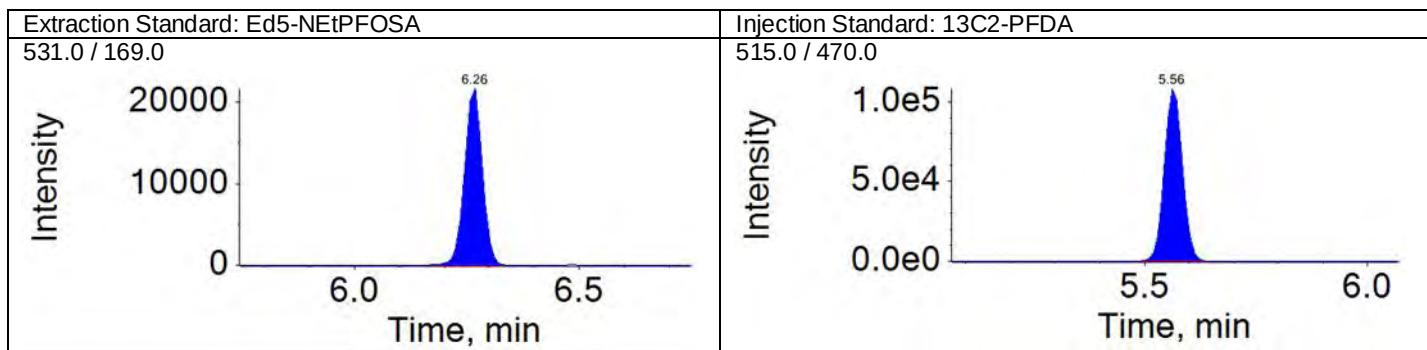
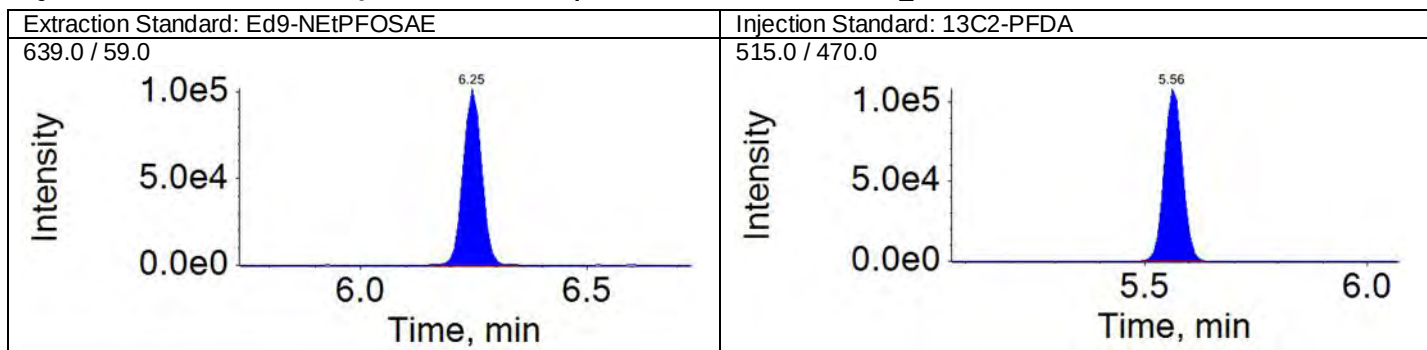
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



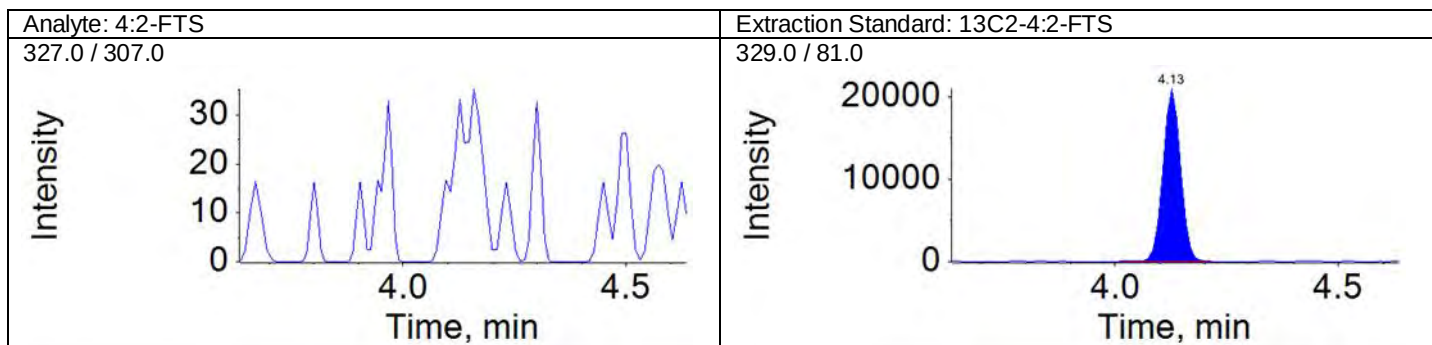
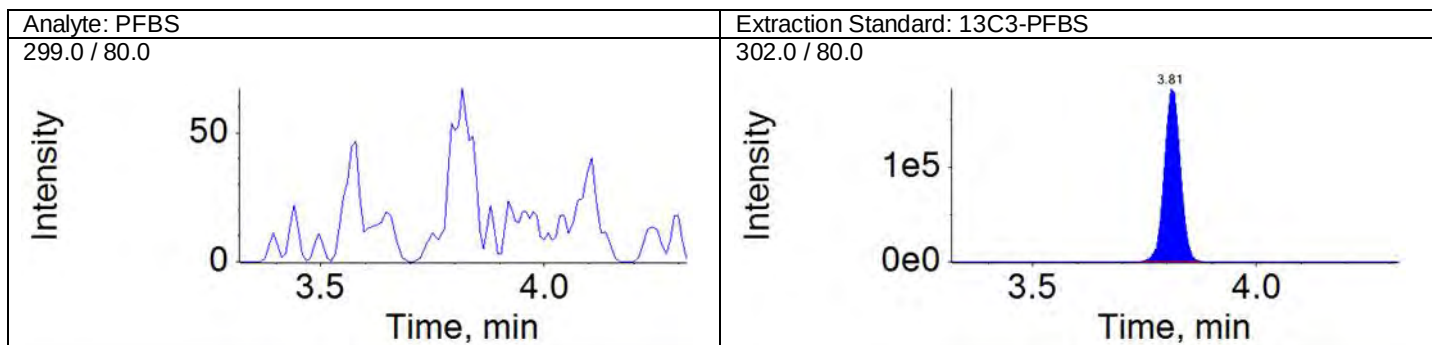
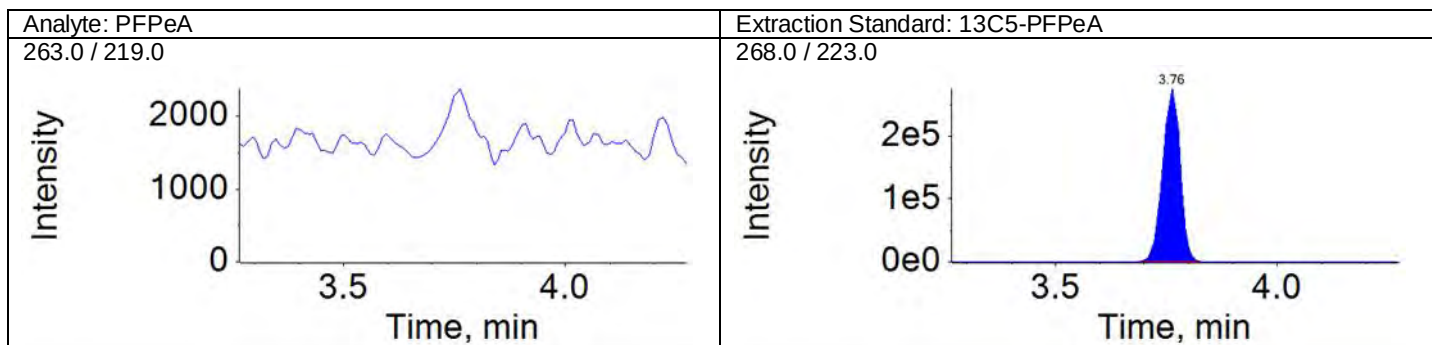
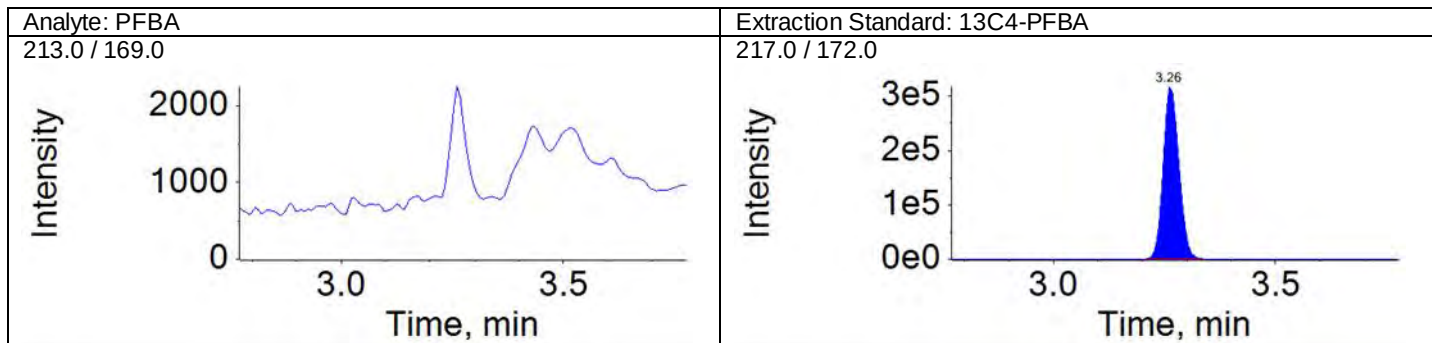
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



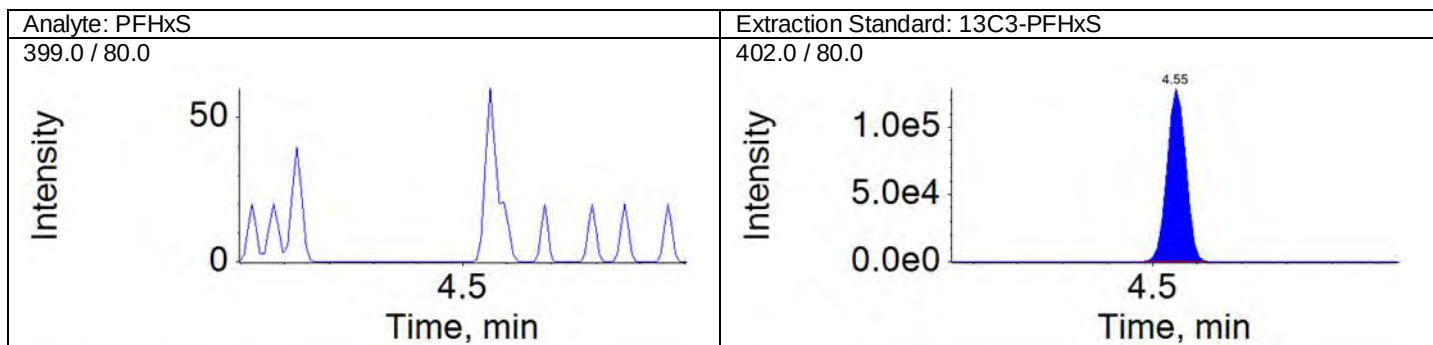
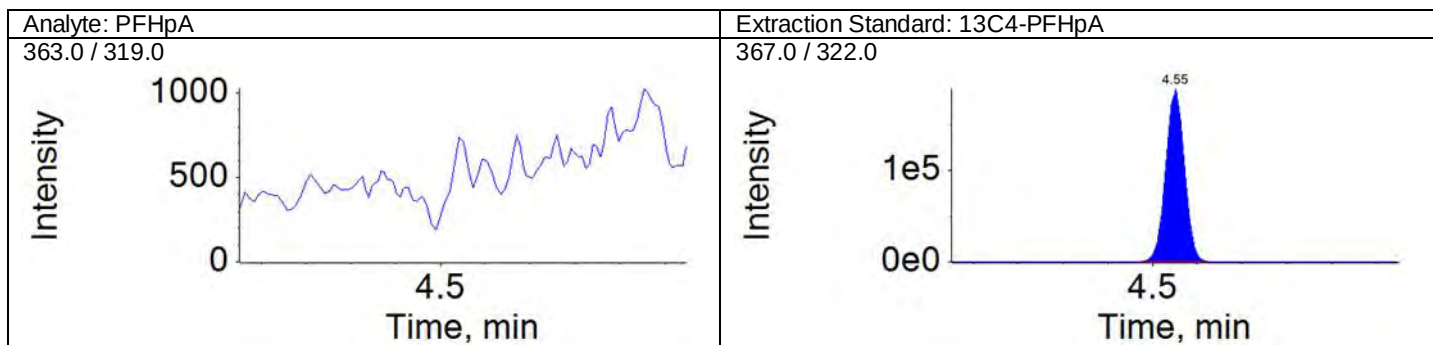
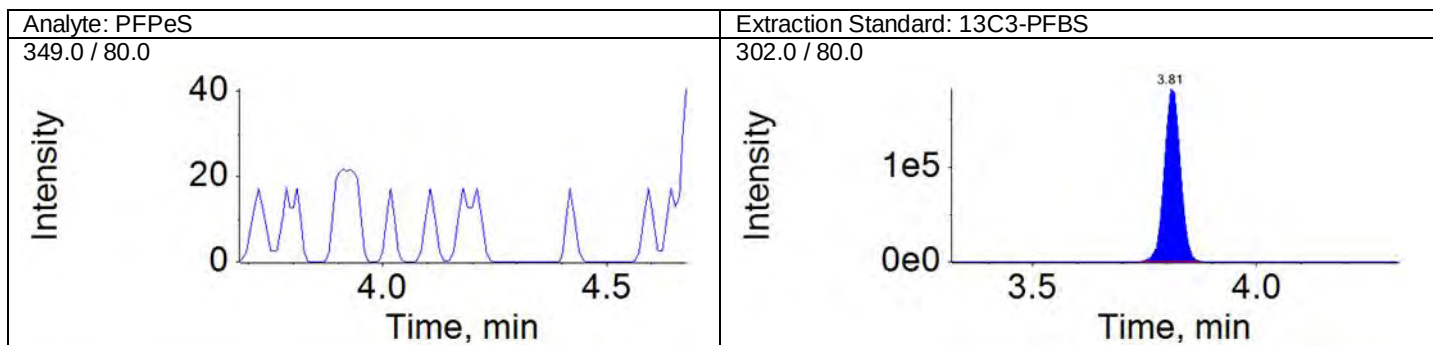
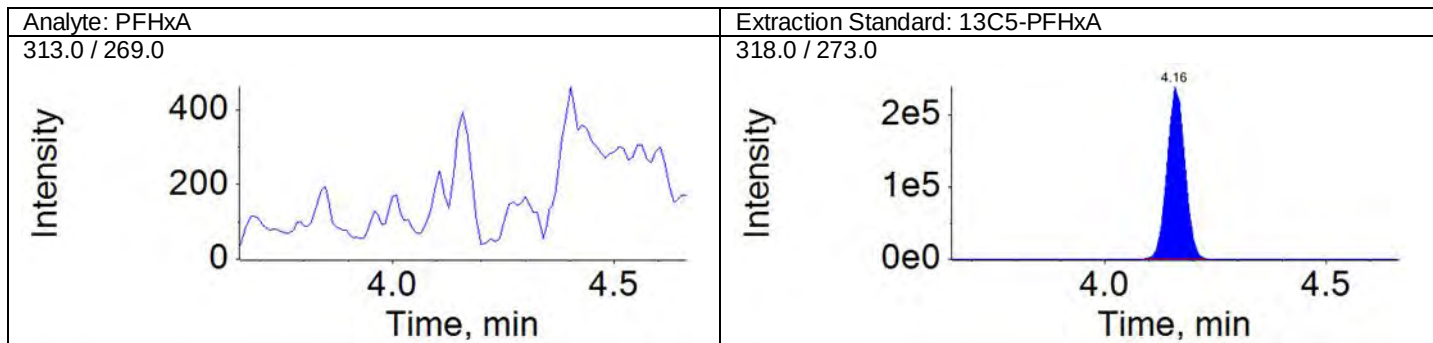
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



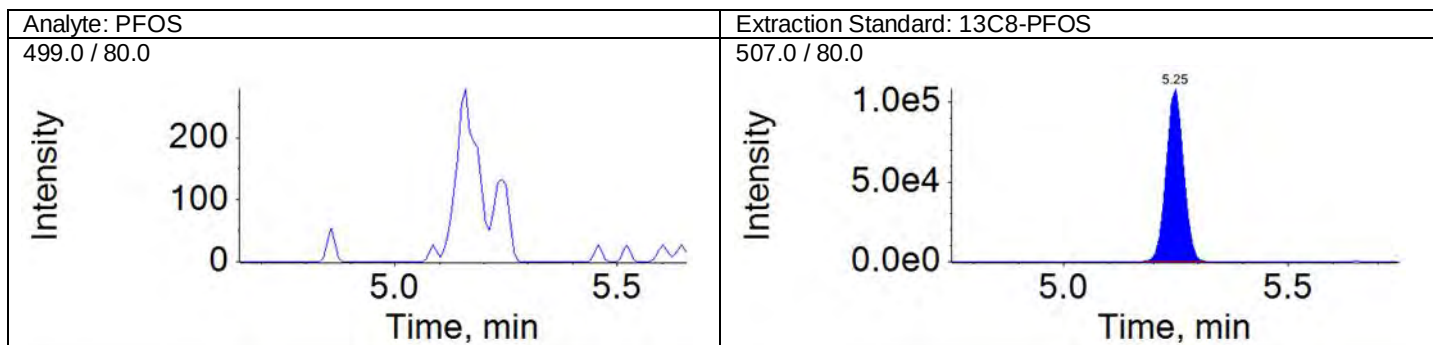
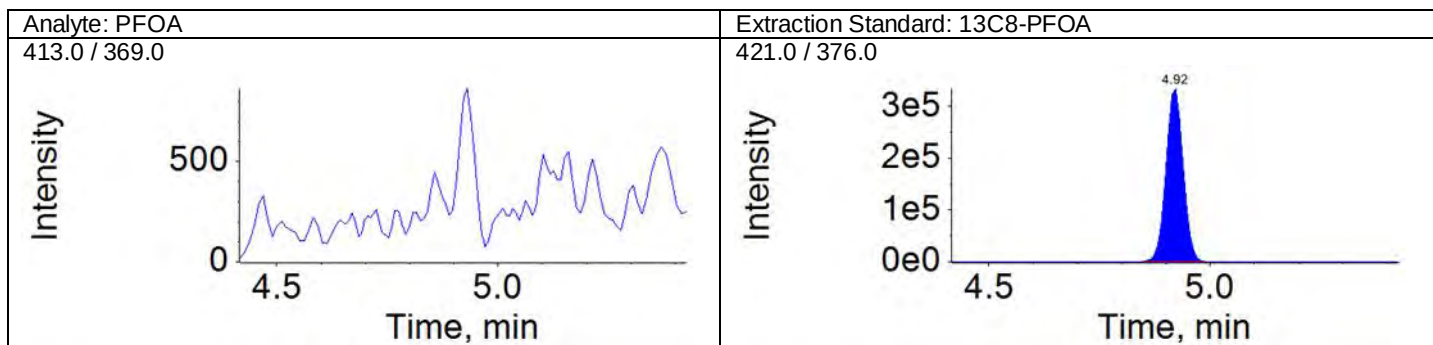
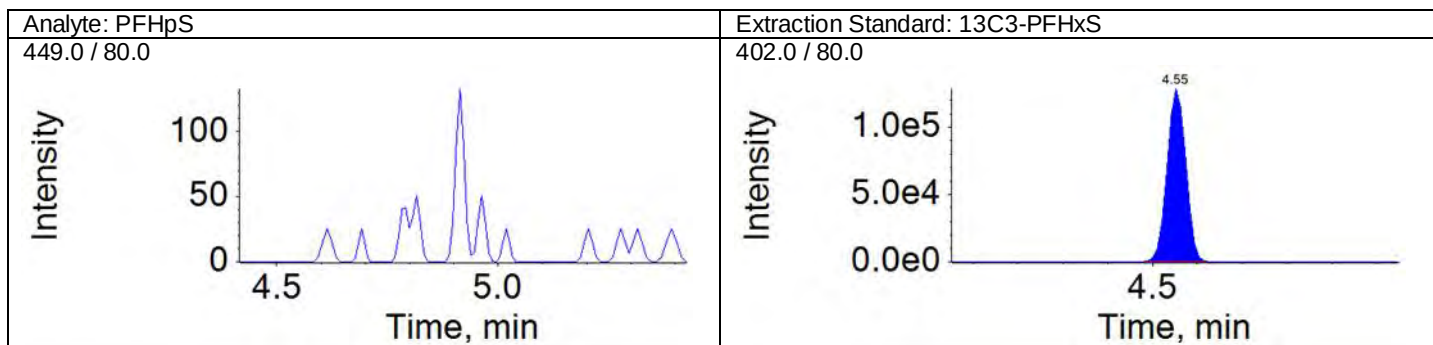
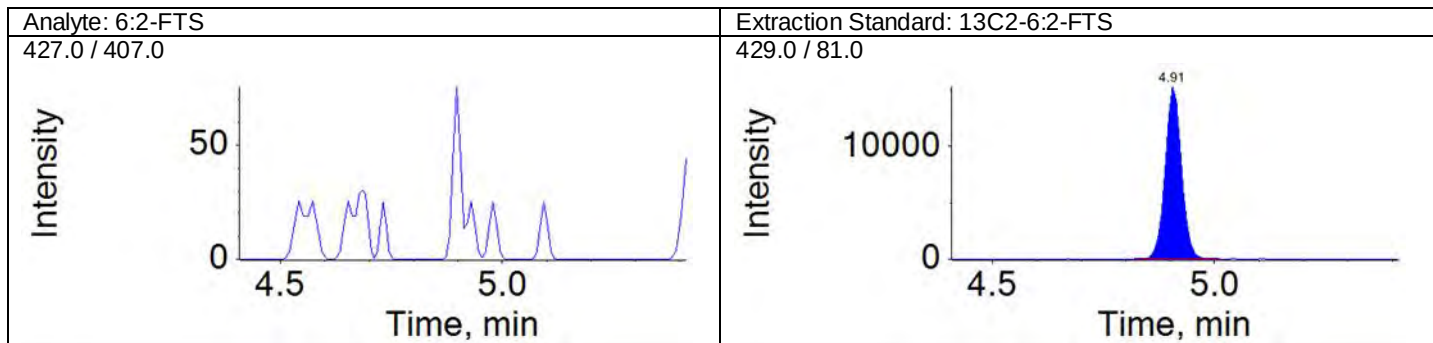
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



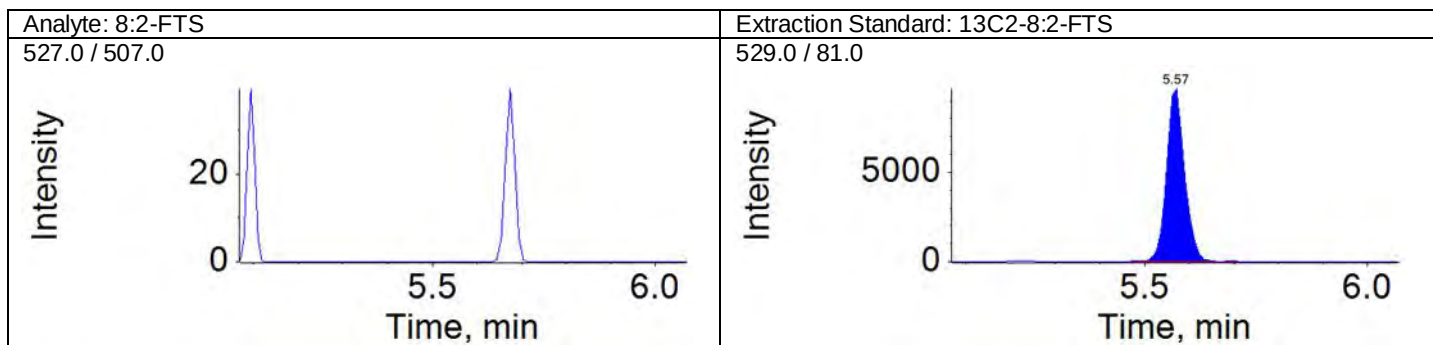
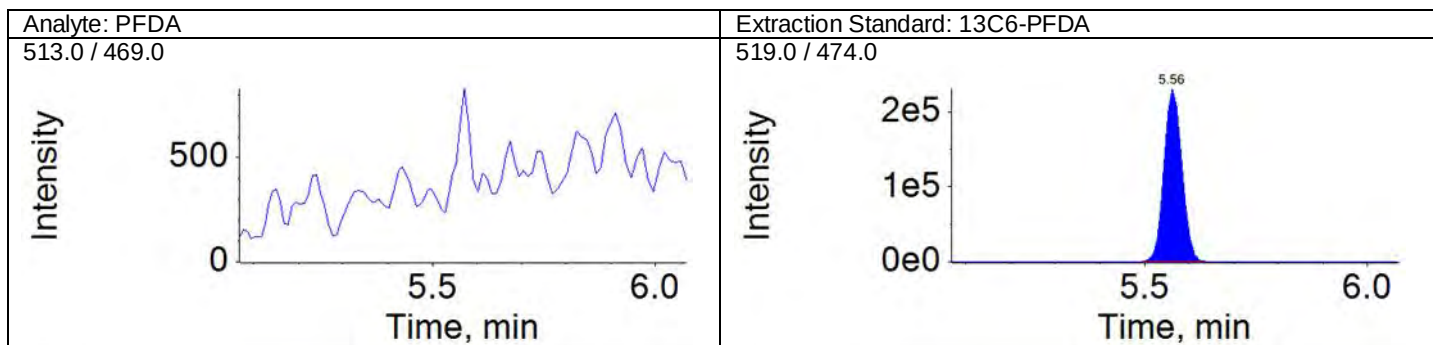
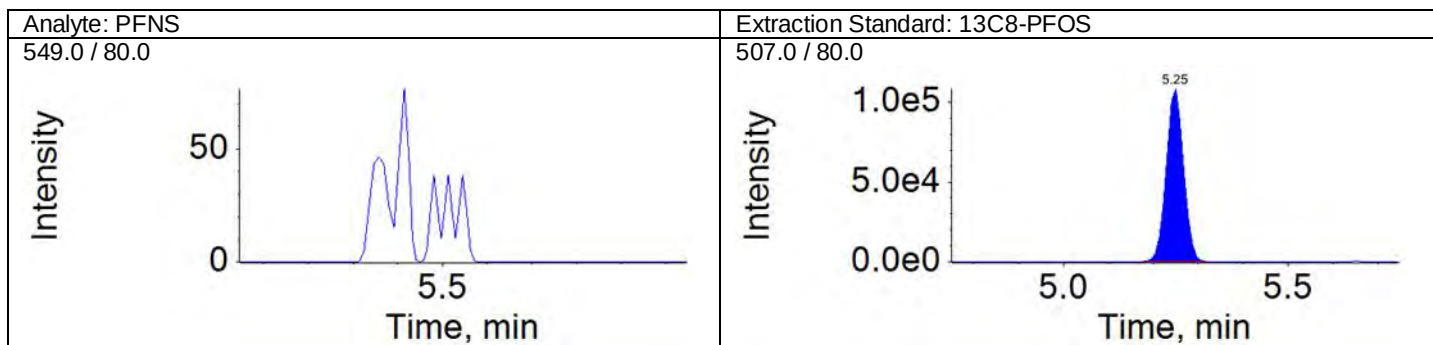
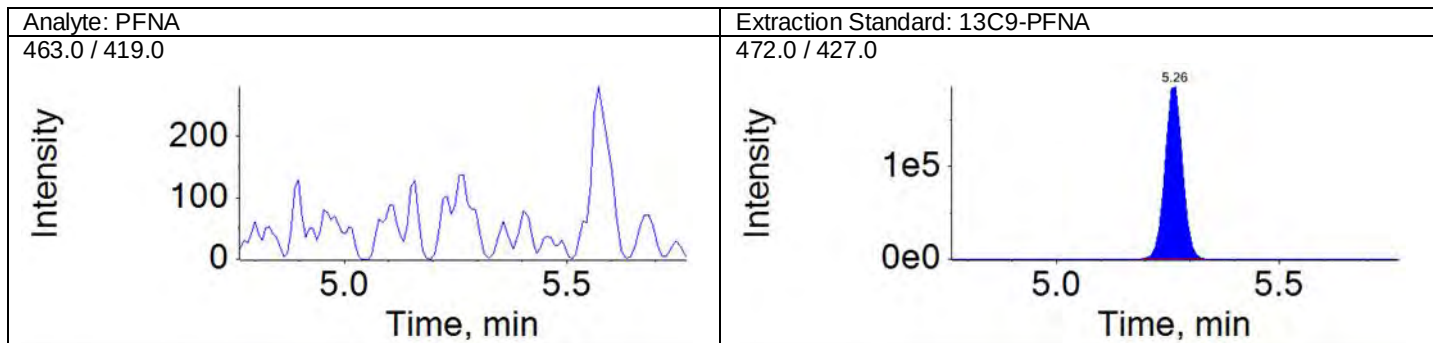
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



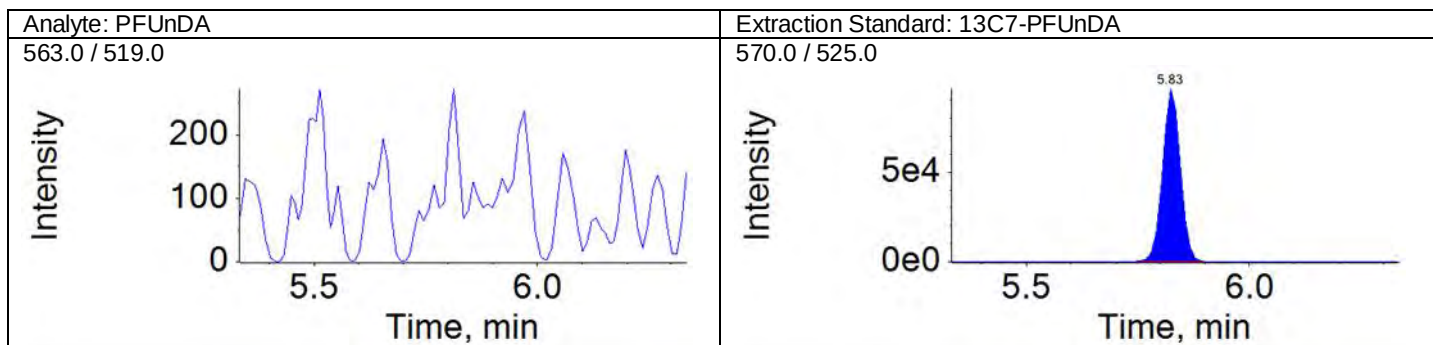
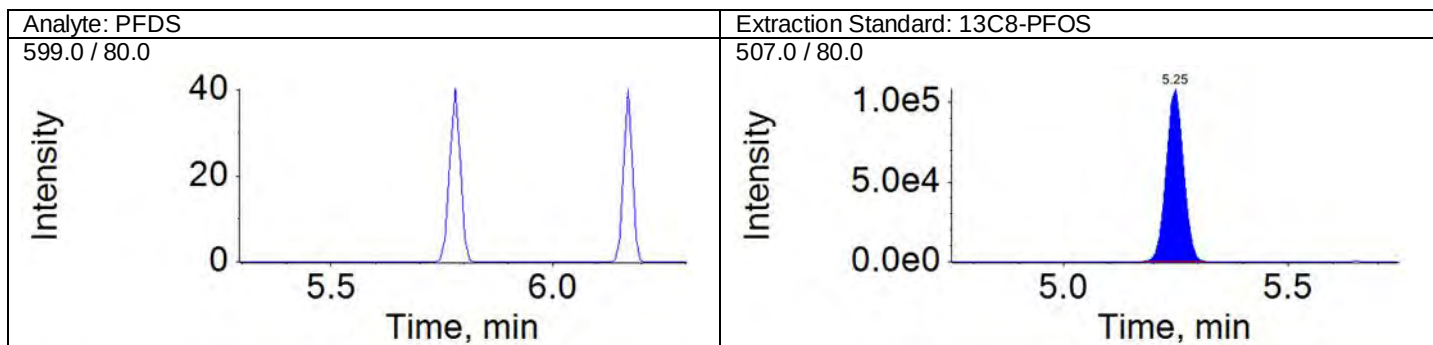
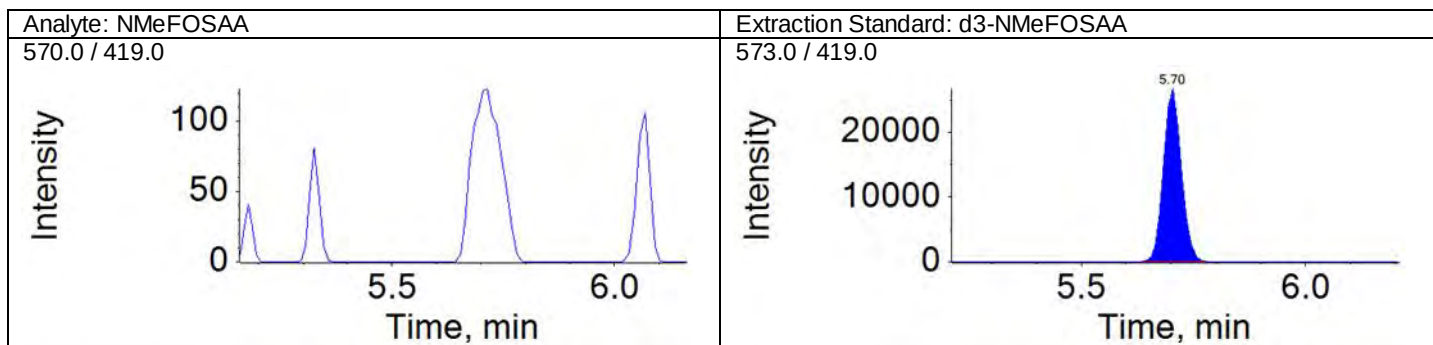
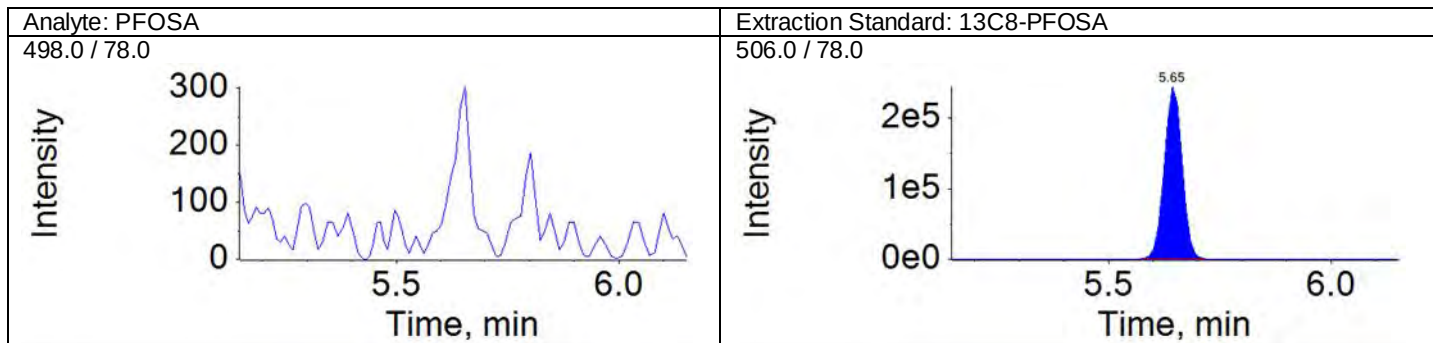
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



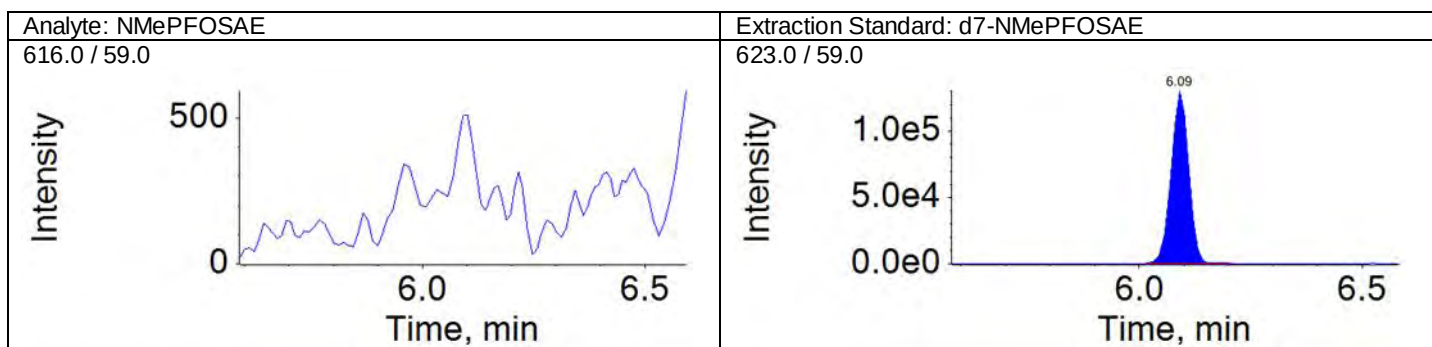
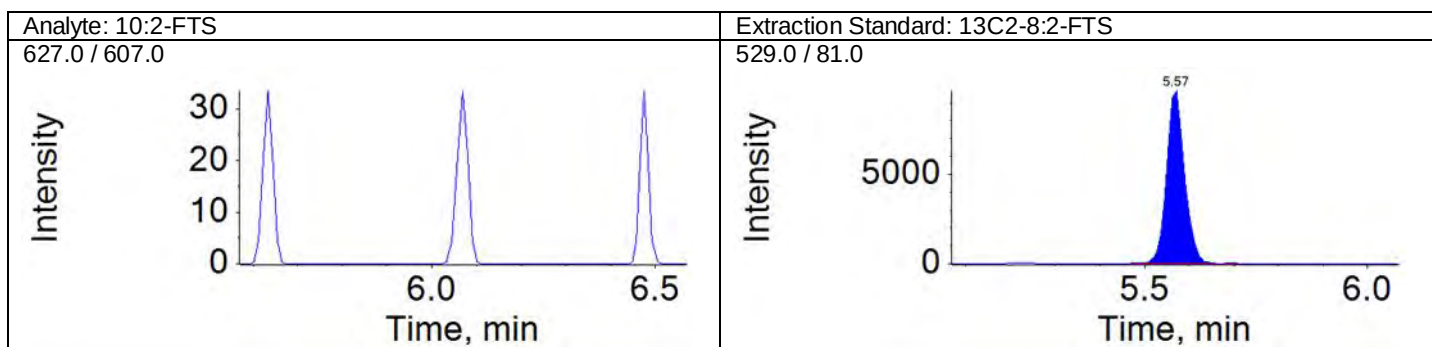
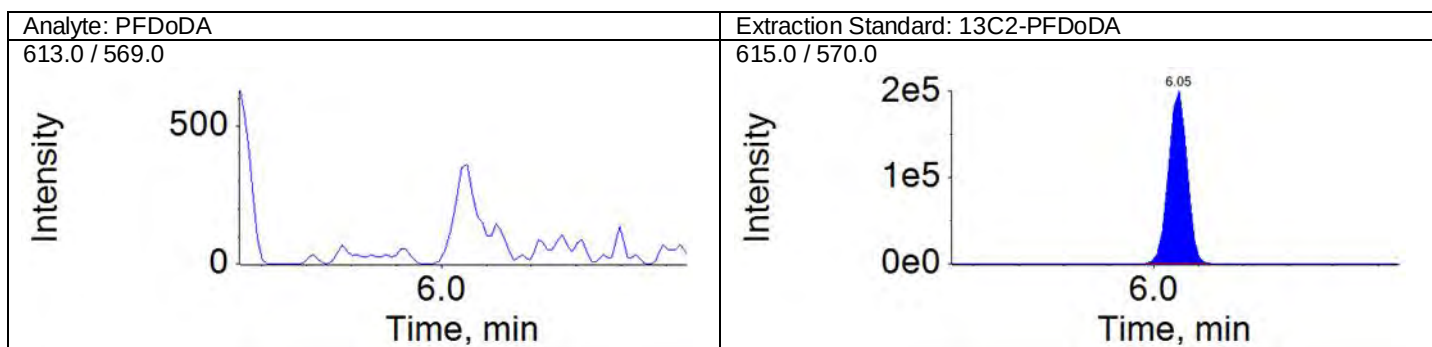
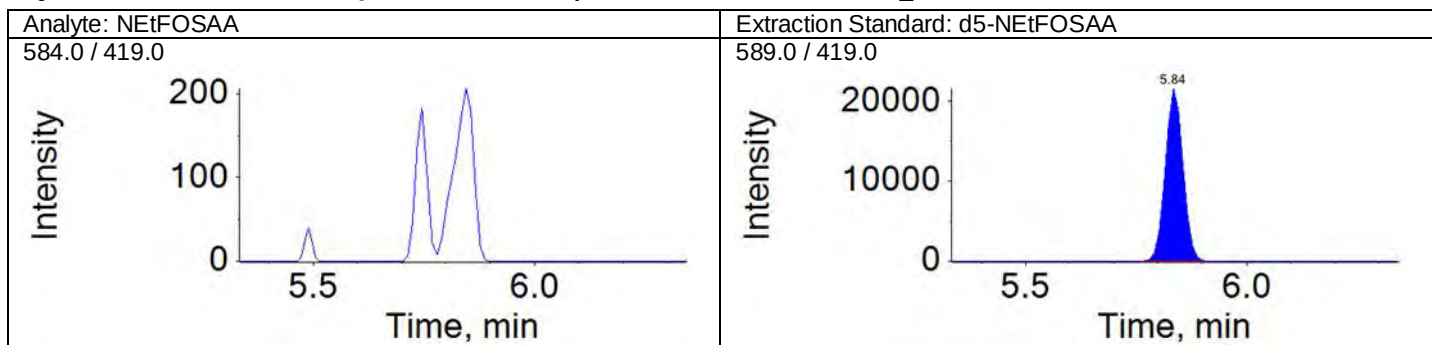
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



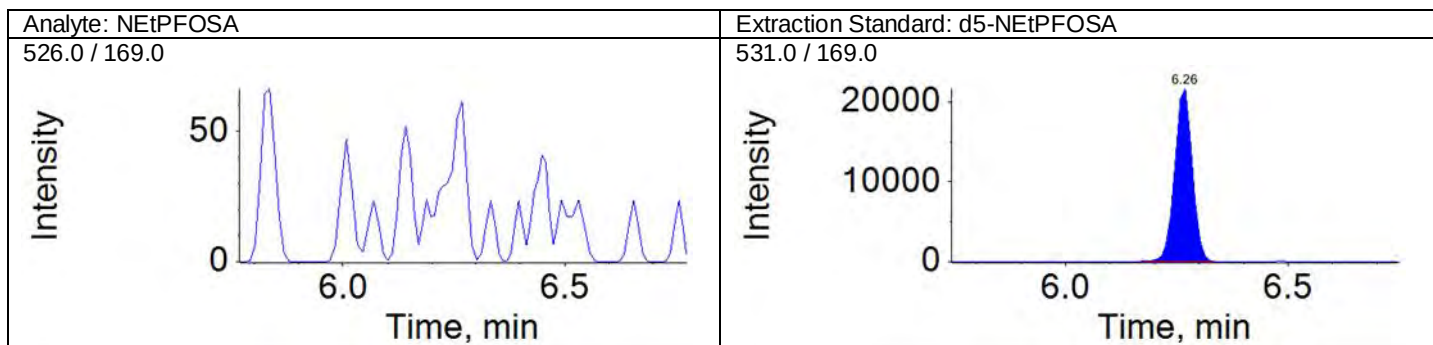
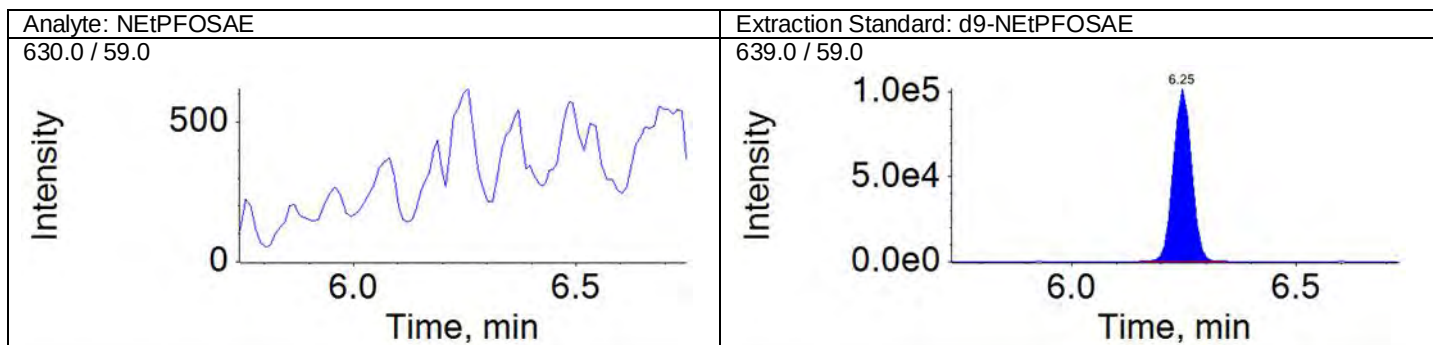
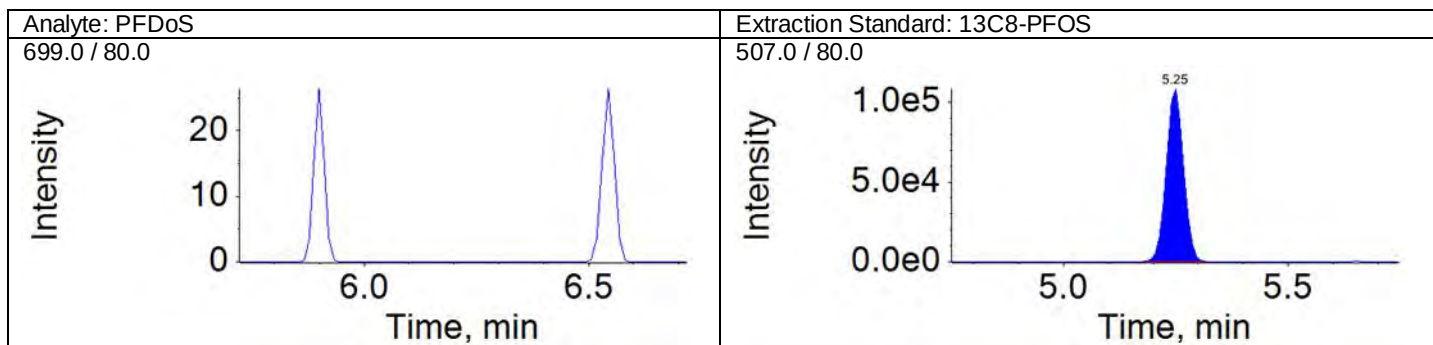
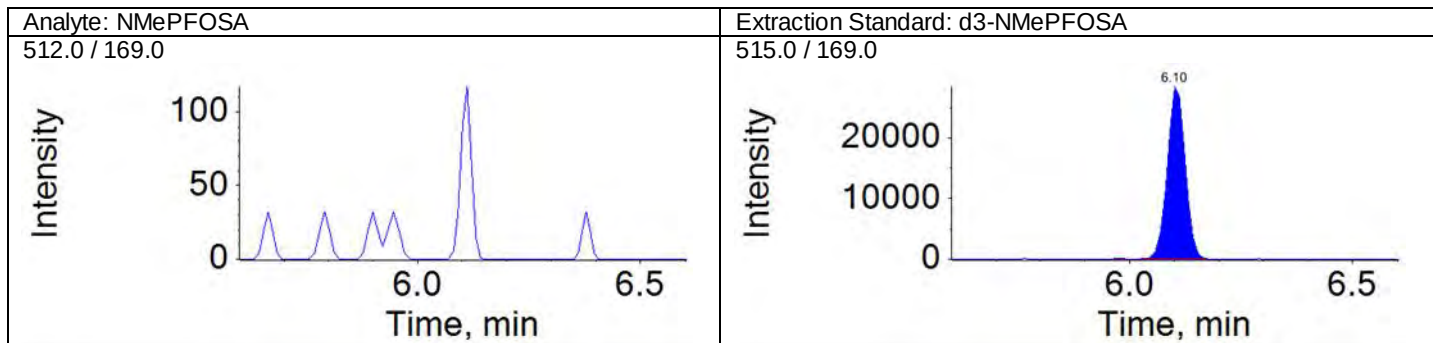
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



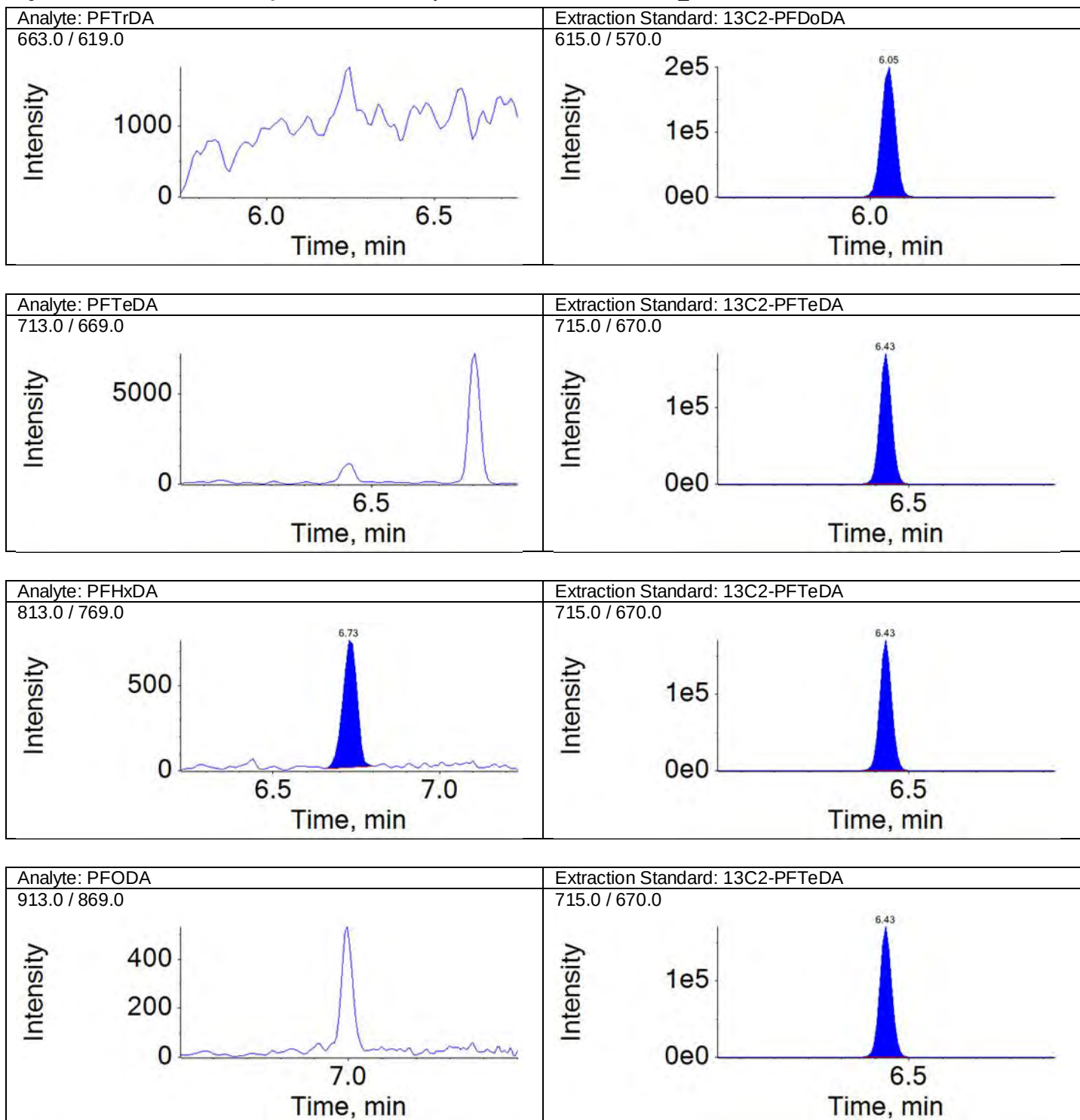
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam



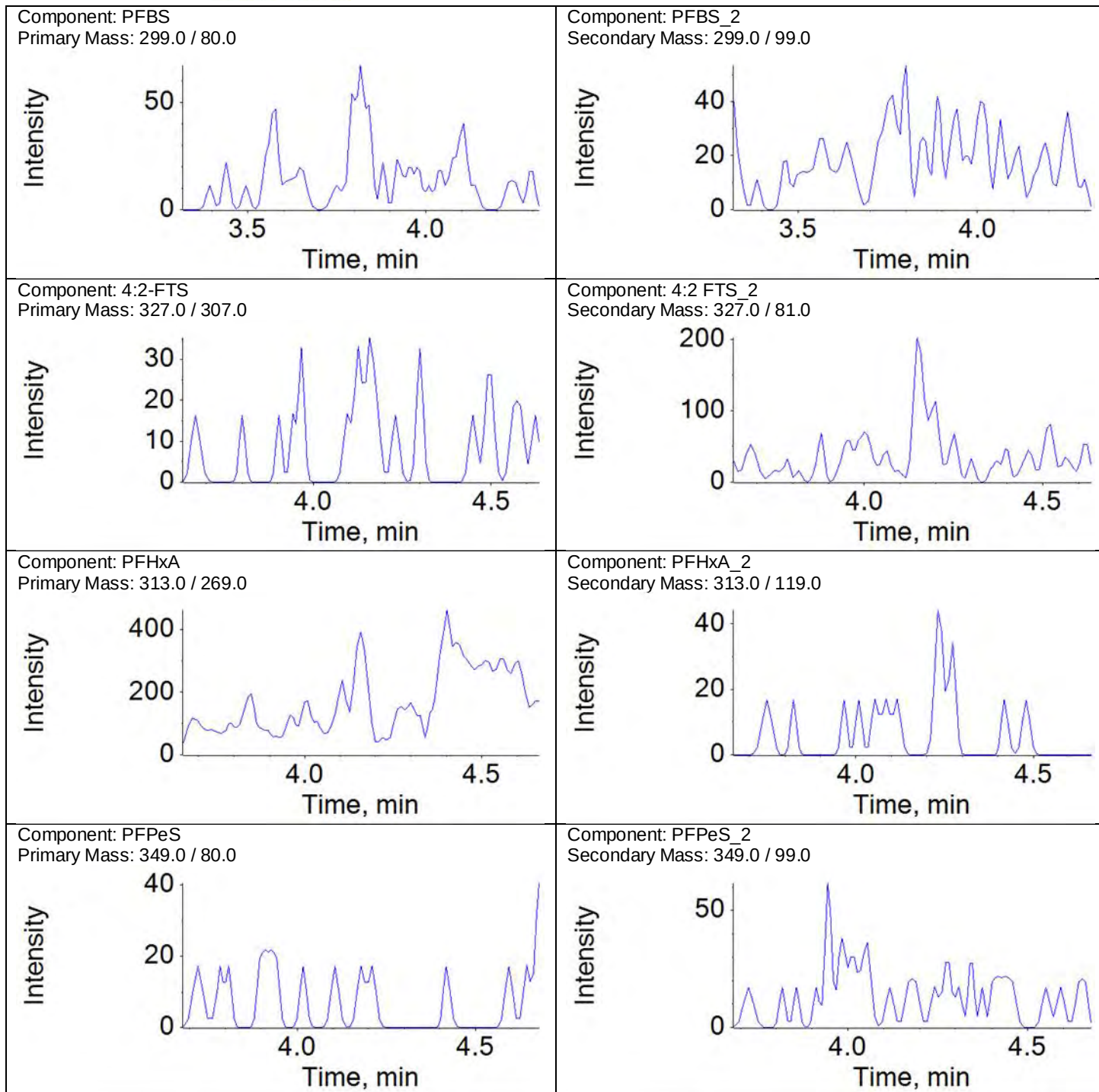
Ion Ratio Report

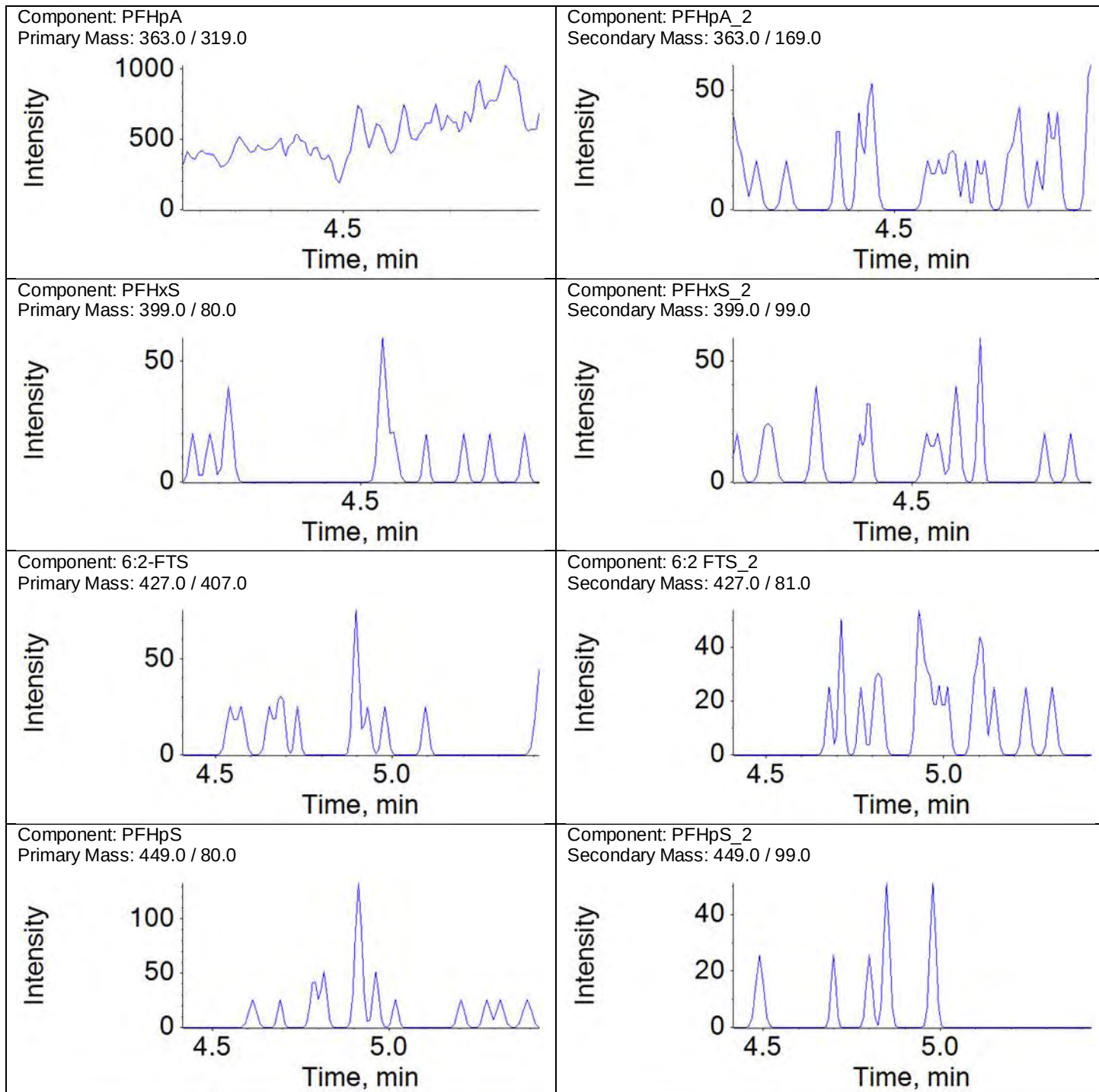
Sample Name: INBLK

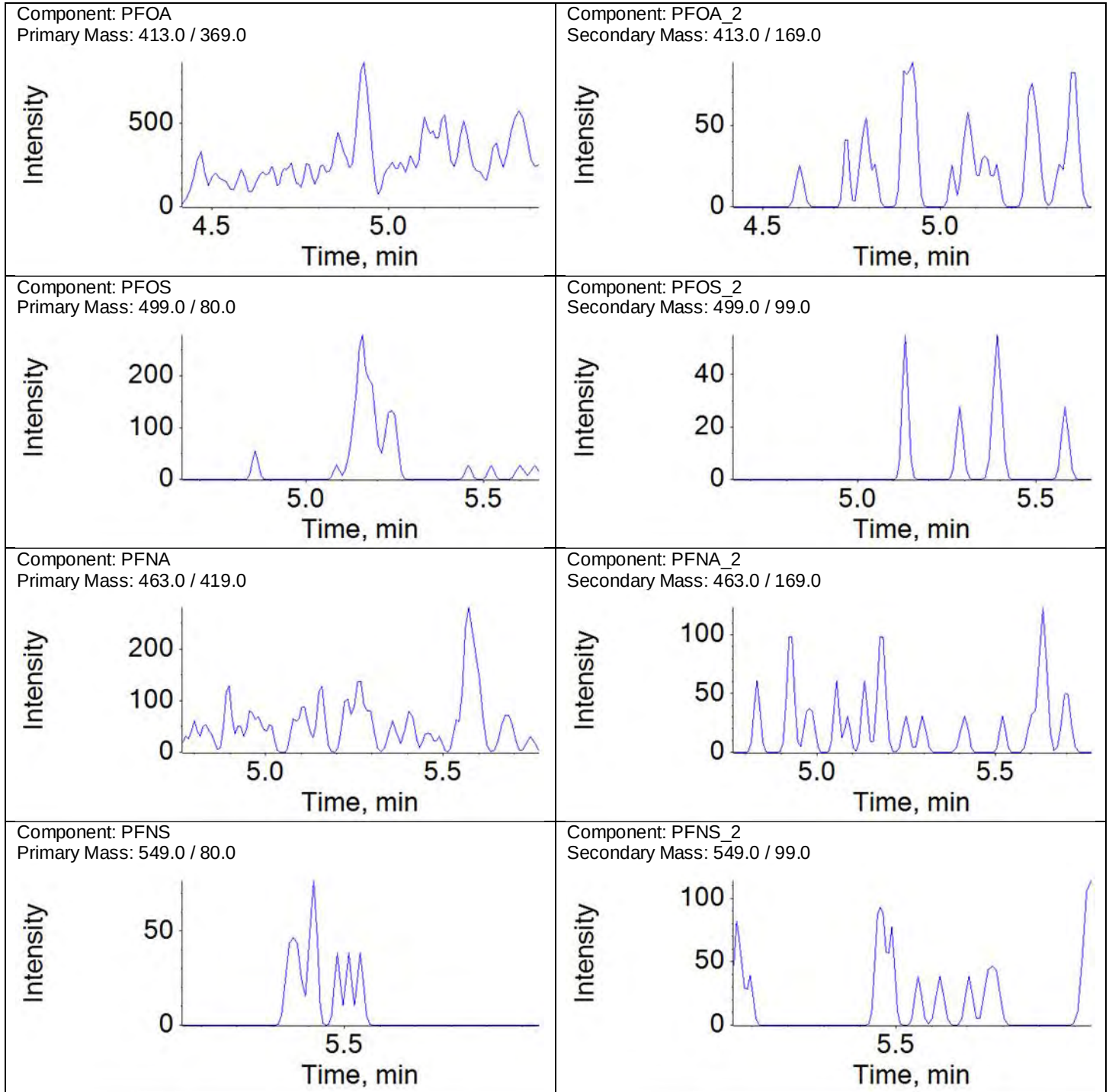
Instrument Name: LM27631

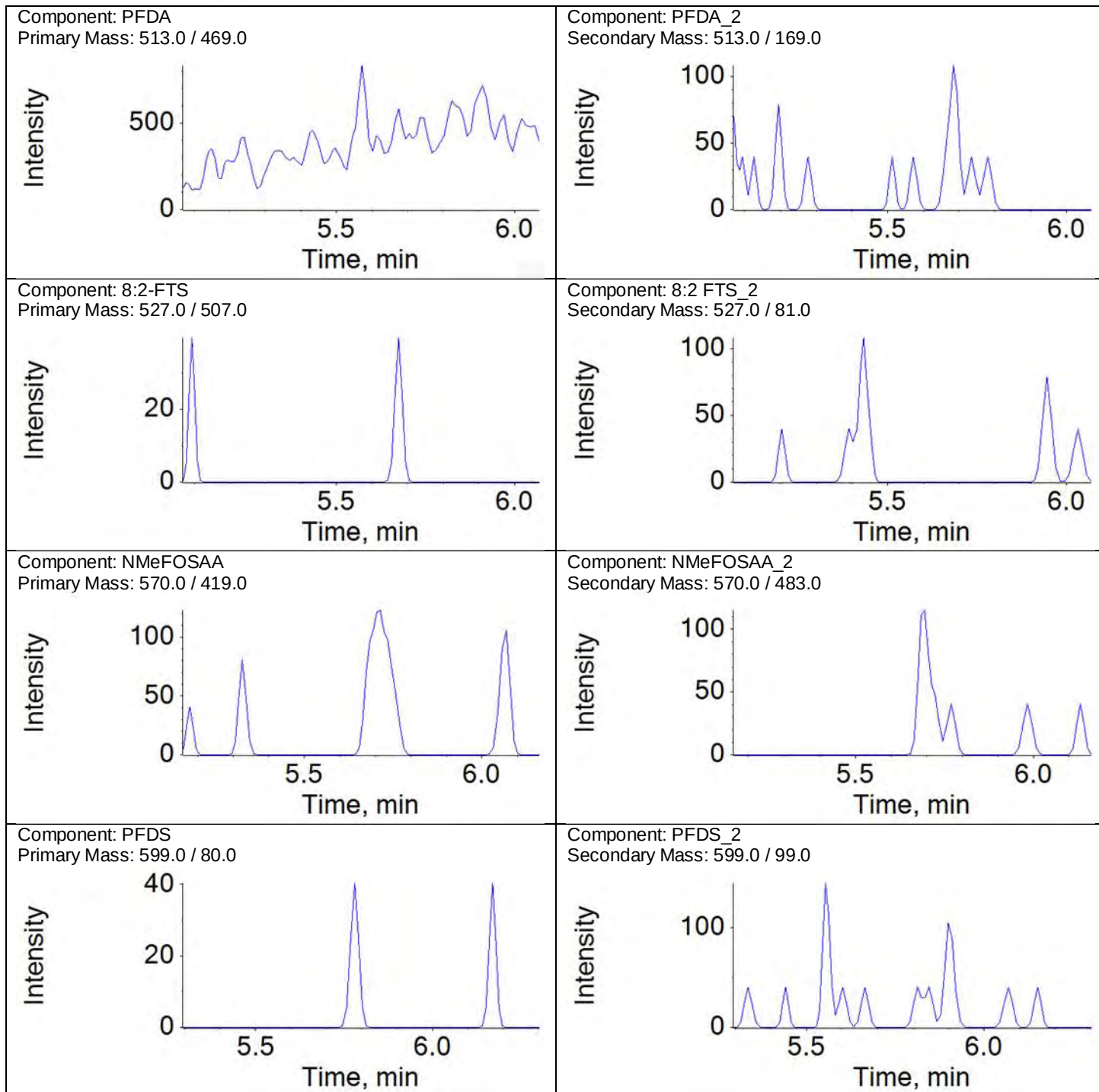
File Name: 18NOV12DCAL-49.wiff

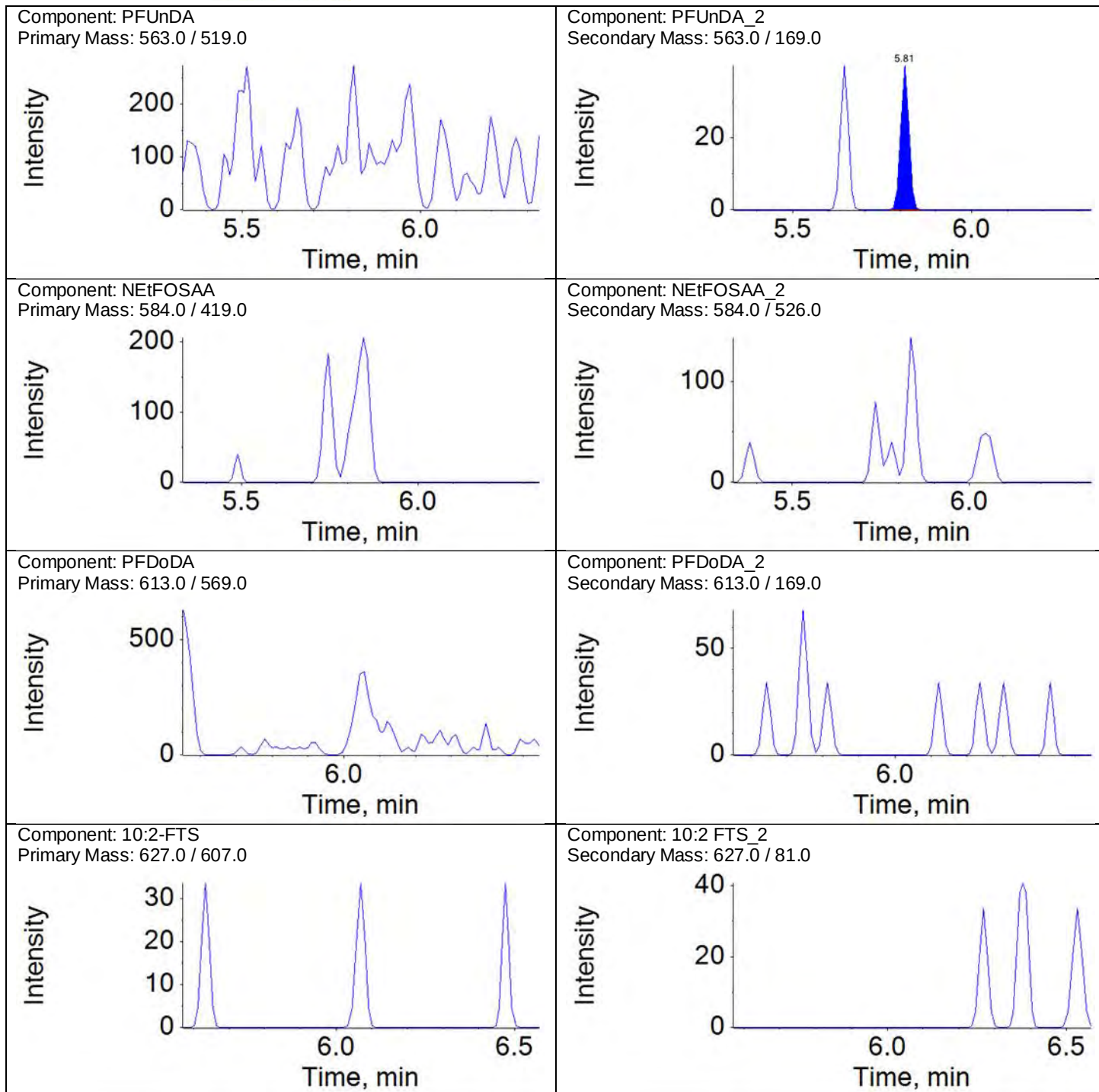
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	5.81	1.00	64.89	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDODA	N/A	N/A	N/A	A	N/A	N/A			
PFDODA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	6.73	1.05	2221.67	A	N/A	1.0000			
PFHxDA_2	6.74	1.05	133.29	A	N/A	0.0600	-11	50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

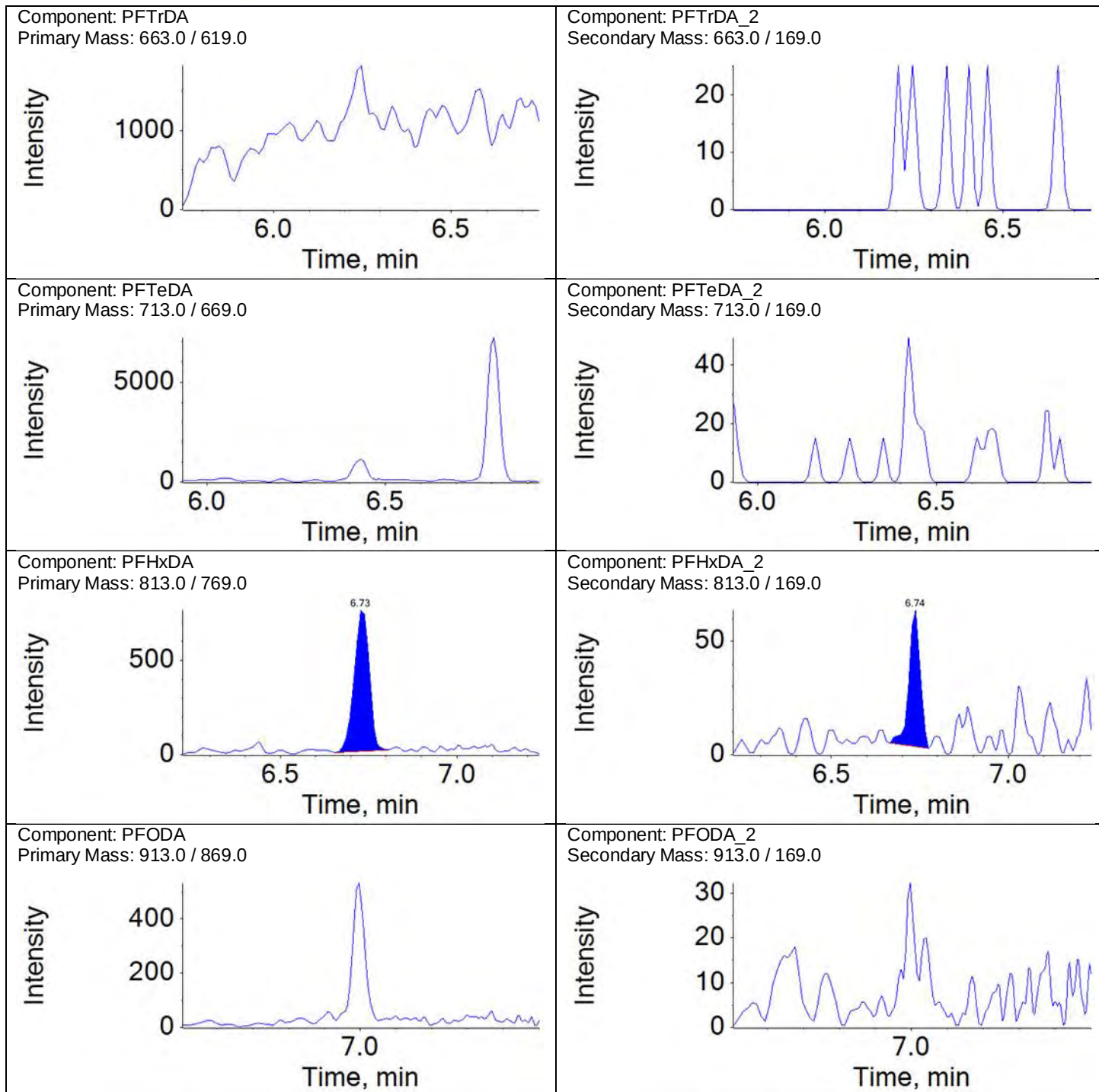












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	MDL		Data File:	18NOV12DCAL-41.wiff
Sample ID:	MDLMDX1833F		Acquis Date:	2018-11-12T14:56:51
Sample Type:	Unknown		Instrument:	LM27631
Vial Position:	2		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	633265.0	659926.2	-4	50	
13C2-PFOA	5.0	422926.0	450219.7	-6	50	
13C4-PFOS	4.8	238608.2	249205.8	-4	50	
13C2-PFDA	5.0	268362.6	278743.9	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	710466.9	13C3-PFBA	633265.0	1.122	5.000	5.030	101	70-130	
E13C5-PFPeA	681259.0	13C3-PFBA	633265.0	1.076	5.000	4.825	97	70-130	
E13C3-PFBS	393264.2	13C3-PFBA	633265.0	0.621	4.650	4.384	94	70-130	
E13C2-4:2-FTS	44526.6	13C2-PFOA	422926.0	0.105	4.670	4.689	100	70-130	
E13C5-PFHxA	637812.0	13C2-PFOA	422926.0	1.508	5.000	5.448	109	70-130	
E13C3-PFHxS	301527.6	13C2-PFOA	422926.0	0.713	4.730	4.892	103	70-130	
E13C4-PFHpA	476944.8	13C2-PFOA	422926.0	1.128	5.000	5.081	102	70-130	
E13C2-6:2-FTS	30514.4	13C2-PFOA	422926.0	0.072	4.750	4.827	102	70-130	
E13C8-PFOA	779343.3	13C2-PFOA	422926.0	1.843	5.000	5.077	102	70-130	
E13C8-PFOS	248479.3	13C4-PFOS	238608.2	1.041	4.780	4.614	97	70-130	
E13C9-PFNA	435787.7	13C4-PFOS	238608.2	1.826	5.000	5.092	102	70-130	
E13C6-PFDA	583105.1	13C2-PFDA	268362.6	2.173	5.000	5.070	101	70-130	
E13C2-8:2-FTS	24193.5	13C2-PFDA	268362.6	0.090	4.790	4.496	94	70-130	
E13C8-PFOSA	559143.9	13C2-PFDA	268362.6	2.084	5.000	4.619	92	70-130	
Ed3-NMeFOSAA	63421.6	13C2-PFDA	268362.6	0.236	5.000	4.266	85	70-130	
E13C7-PFUnDA	227858.5	13C2-PFDA	268362.6	0.849	5.000	4.930	99	70-130	
Ed5-NEtFOSAA	57840.8	13C2-PFDA	268362.6	0.216	5.000	4.560	91	70-130	
E13C2-PFDoDA	487146.2	13C2-PFDA	268362.6	1.815	5.000	4.713	94	70-130	
Ed7-NMePFOSAE	286690.6	13C2-PFDA	268362.6	1.068	5.000	4.623	92	70-130	
Ed3-NMePFOSA	71517.2	13C2-PFDA	268362.6	0.266	5.000	4.842	97	70-130	
Ed9-NEtPFOSAE	252037.2	13C2-PFDA	268362.6	0.939	5.000	4.885	98	70-130	
Ed5-NEtPFOSA	54637.9	13C2-PFDA	268362.6	0.204	5.000	4.776	96	70-130	
E13C2-PFTeDA	362820.8	13C2-PFDA	268362.6	1.352	5.000	4.746	95	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

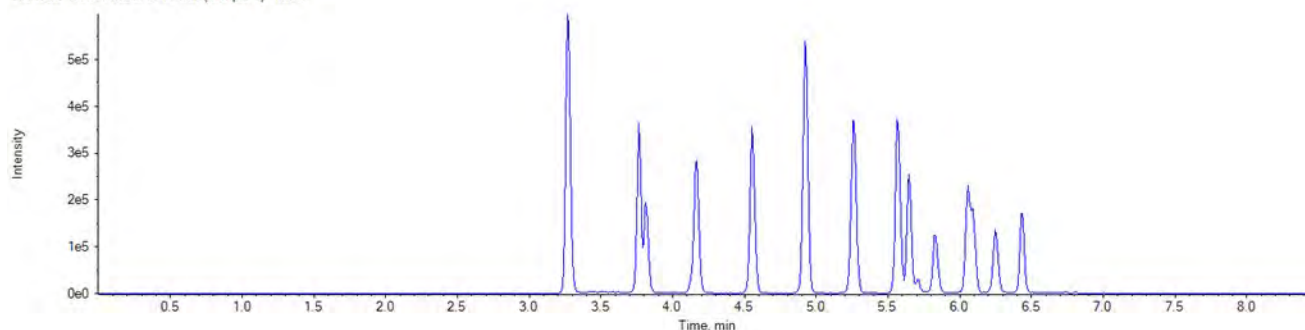
Sample Name: MDL Instrument Name: LM27631 File Name: 18NOV12DCAL-41.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	22532.9		A	13C4-PFBA	3.27	710466.9	0.032	0.176
PFPeA	3.77	1.000	20193.5		M	13C5-PFPeA	3.77	681259.0	0.030	0.172
PFBS	3.81	1.000	9248.3		A	13C3-PFBS	3.81	393264.2	0.024	0.112
4:2-FTS	4.13	1.000	1329.9		A	13C2-4:2-FTS	4.13	44526.6	0.030	0.081
PFHxA	4.17	1.000	21601.6		A	13C5-PFHxA	4.17	637812.0	0.034	0.141
PFPeS	4.19	1.100	4484.8		A	13C3-PFBS	3.81	393264.2	0.011	0.111
PFHpA	4.56	1.000	22043.5		A	13C4-PFHpA	4.55	476944.8	0.046	0.153
PFHxS	4.56	1.000	8143.5		M	13C3-PFHxS	4.56	301527.6	0.027	0.131
6:2-FTS	4.91	1.000	1176.2		M	13C2-6:2-FTS	4.91	30514.4	0.039	0.093
PFHpS	4.92	1.080	7117.5		A	13C3-PFHxS	4.56	301527.6	0.024	0.124
PFOA	4.93	1.000	18045.0		A	13C8-PFOA	4.93	779343.3	0.023	0.124
PFOS	5.25	1.000	6416.9		A	13C8-PFOS	5.25	248479.3	0.026	0.113
PFNA	5.27	1.000	18065.1		M	13C9-PFNA	5.27	435787.7	0.041	0.149
PFNS	5.54	1.060	3661.2		A	13C8-PFOS	5.25	248479.3	0.015	0.103
PFDA	5.57	1.000	17350.5		A	13C6-PFDA	5.57	583105.1	0.030	0.158
8:2-FTS	5.57	1.000	1475.2		A	13C2-8:2-FTS	5.57	24193.5	0.061	0.142
PFOSA	5.64	1.000	10288.3		A	13C8-PFOSA	5.65	559143.9	0.018	0.090
NMeFOSAA	5.72	1.000	1372.4		A	d3-NMeFOSAA	5.71	63421.6	0.022	0.122
PFDS	5.80	1.100	2648.8		A	13C8-PFOS	5.25	248479.3	0.011	0.097
PFUnDA	5.83	1.000	12215.3		M	13C7-PFUnDA	5.83	227858.5	0.054	0.140
NEtFOSAA	5.84	1.000	1937.8		A	d5-NEtFOSAA	5.84	57840.8	0.034	0.176
PFDODA	6.06	1.000	14033.1		A	13C2-PFDODA	6.06	487146.2	0.029	0.147
10:2-FTS	6.06	1.090	352.6		M	13C2-8:2-FTS	5.57	24193.5	0.015	0.049
NMePFOSAE	6.10	1.000	9218.1		A	d7-NMePFOSAE	6.09	286690.6	0.032	0.134
NMePFOSA	6.11	1.000	1339.8		A	d3-NMePFOSA	6.11	71517.2	0.019	0.092
PFDoS	6.22	1.180	1425.7		A	13C8-PFOS	5.25	248479.3	0.006	0.100
NEtPFOSAE	6.26	1.000	10510.3		A	d9-NEtPFOSAE	6.25	252037.2	0.042	0.134
NEtPFOSA	6.28	1.000	1191.3		M	d5-NEtPFOSA	6.27	54637.9	0.022	0.100
PFTDA	6.26	1.030	7825.5		M	13C2-PFDODA	6.06	487146.2	0.016	0.101
PFTeDA	6.43	1.000	8938.5		A	13C2-PFTeDA	6.43	362820.8	0.025	0.138
PFHxDA	6.74	1.050	3934.2		A	13C2-PFTeDA	6.43	362820.8	0.011	0.129
PFODA	7.00	1.090	2726.4		A	13C2-PFTeDA	6.43	362820.8	0.008	0.105

Total Ion Chromatogram

TIC from 18NOV12DCAL-41.wiff (sample 1) - MDL



APPROVED

By MCD at 6:34 pm, 11/12/18

BSI05 Page 1099 of 1595

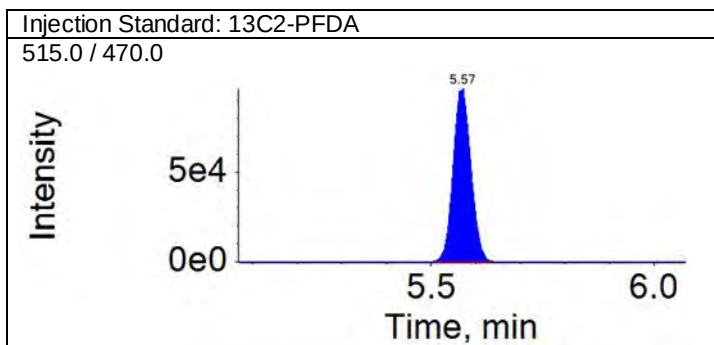
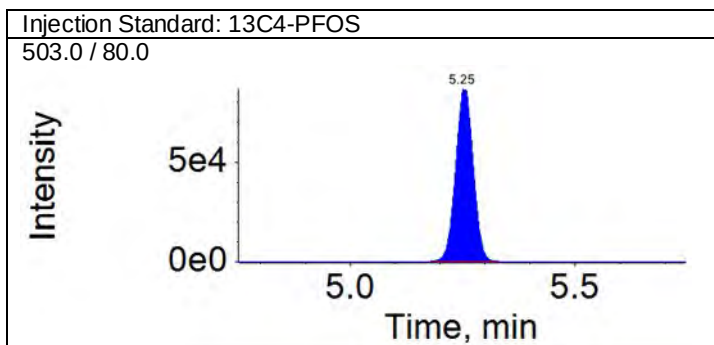
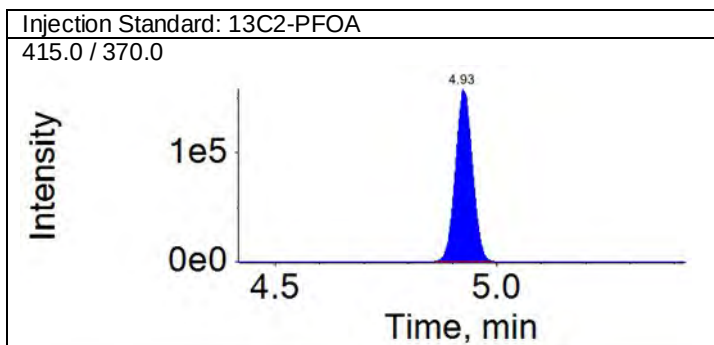
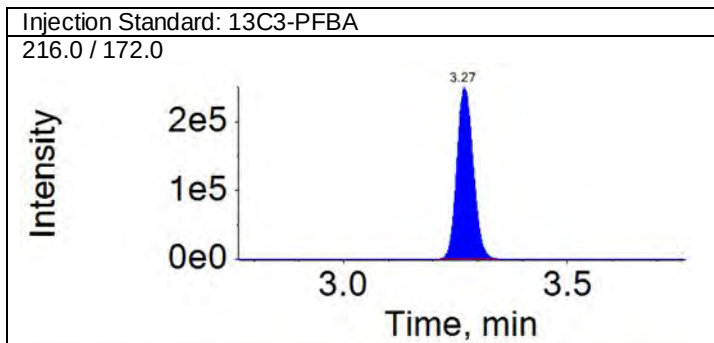
REVIEWED

By HMK at 10:54 am, 11/13/18

Page 2 of 17

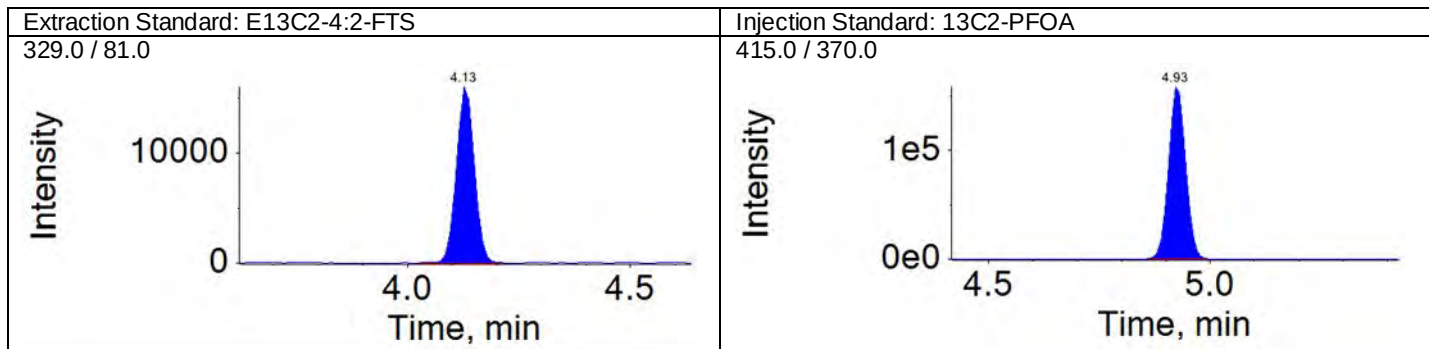
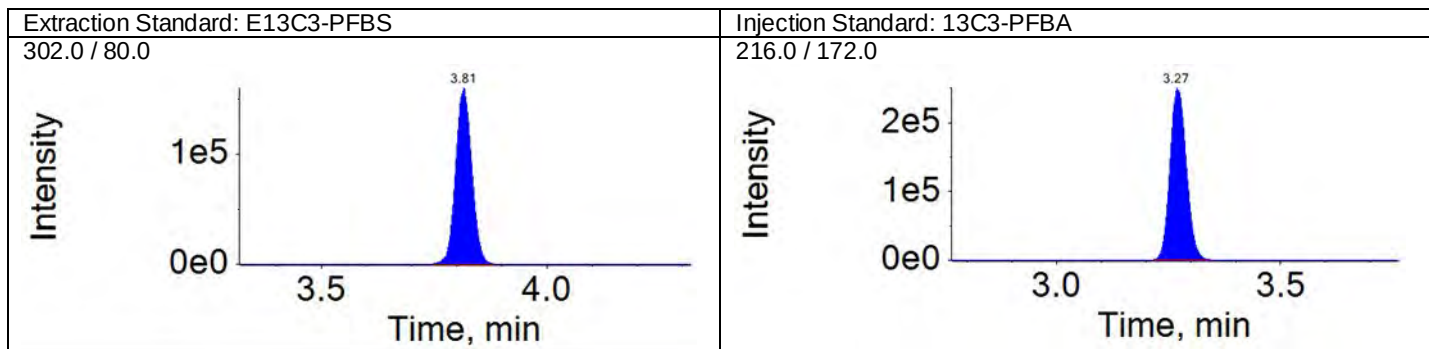
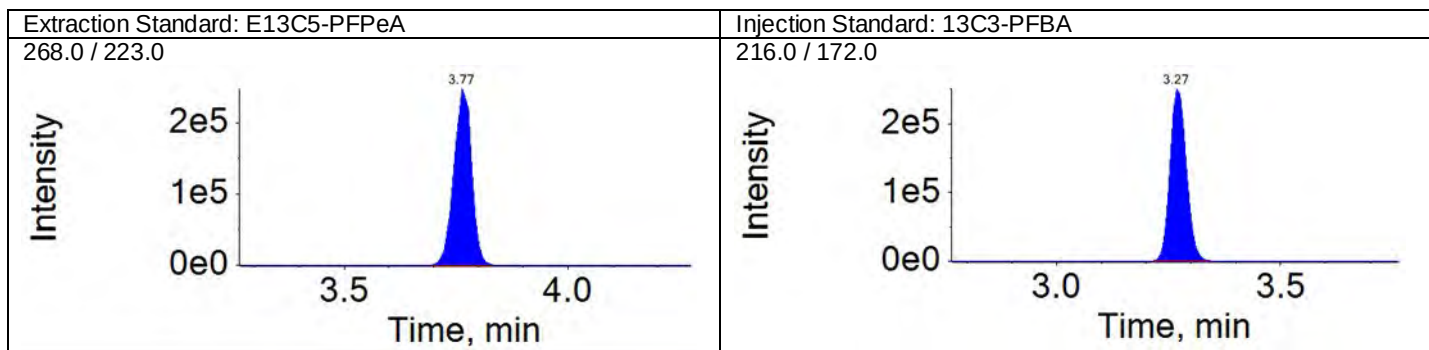
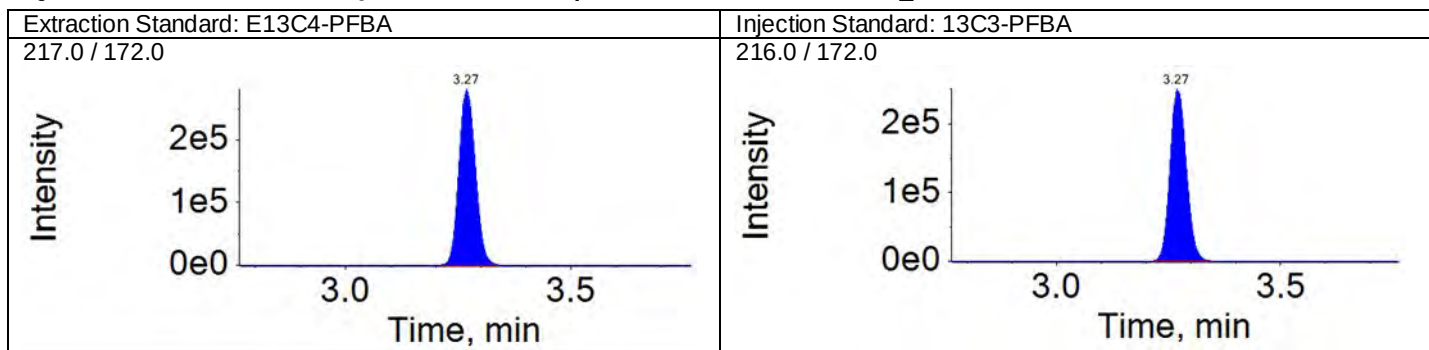
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



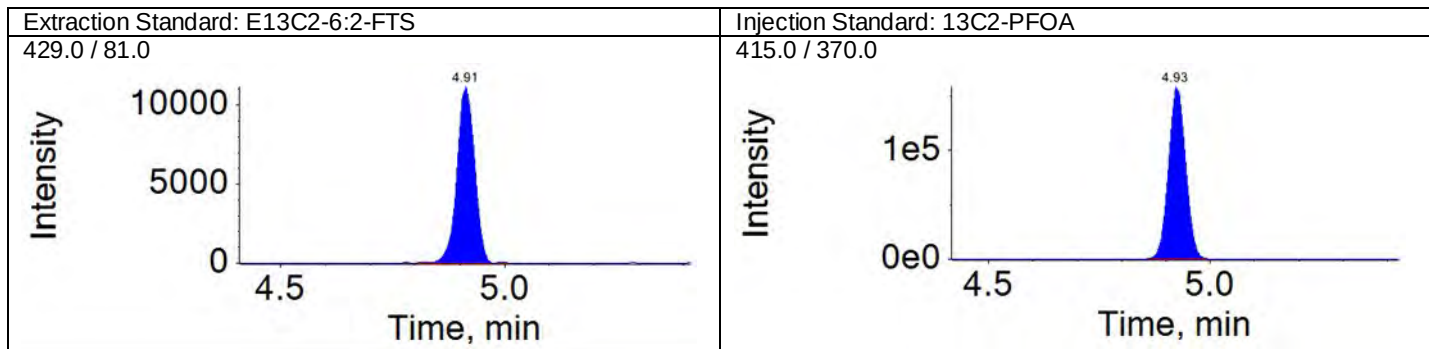
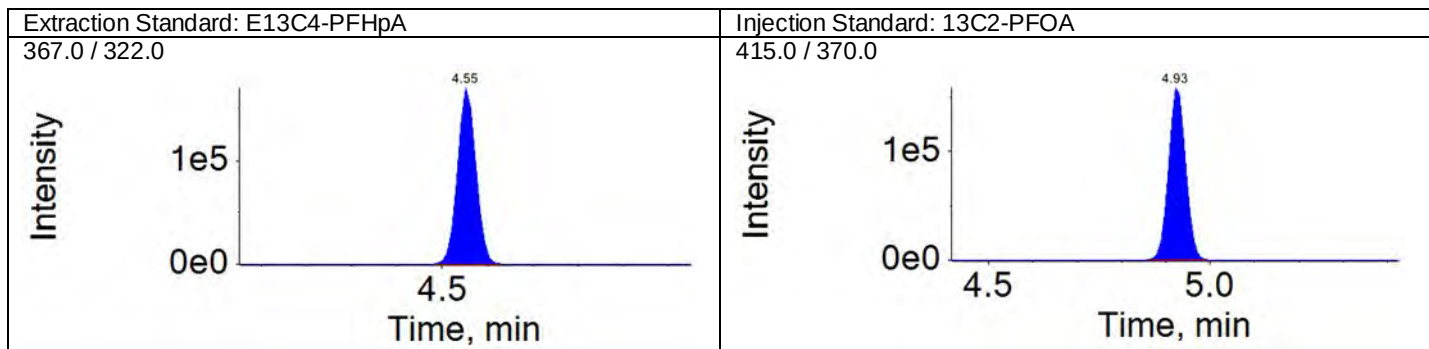
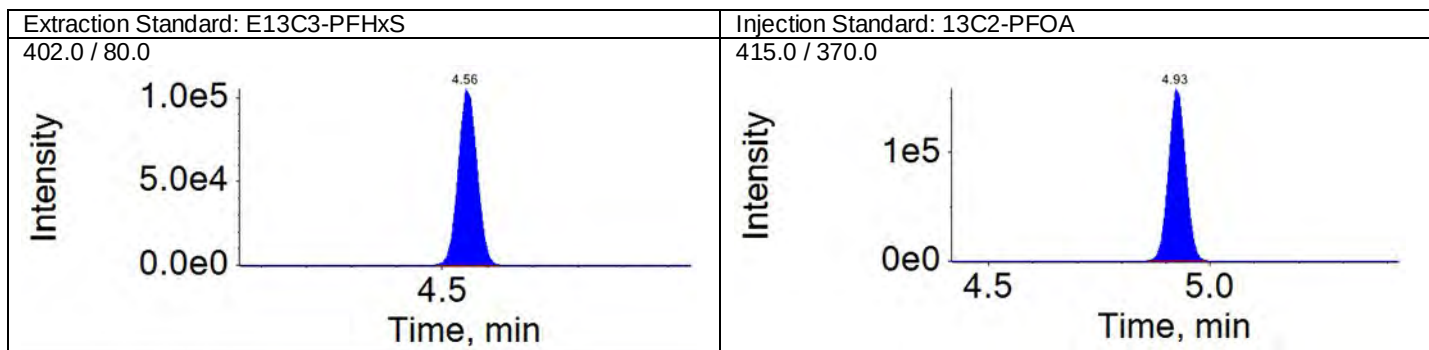
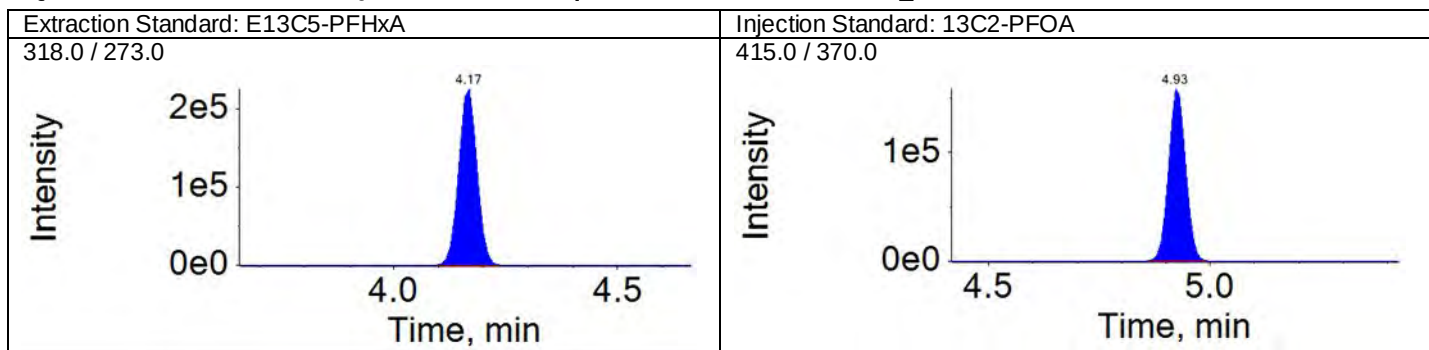
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



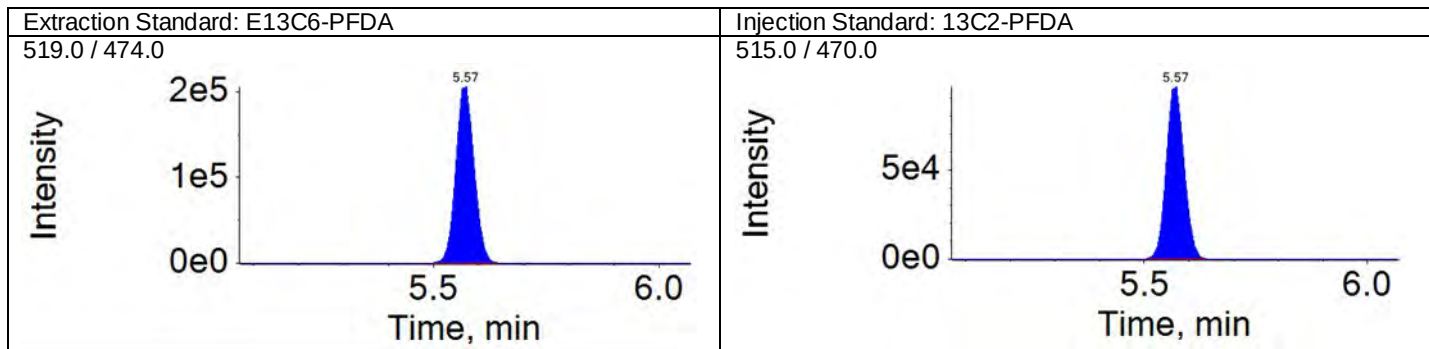
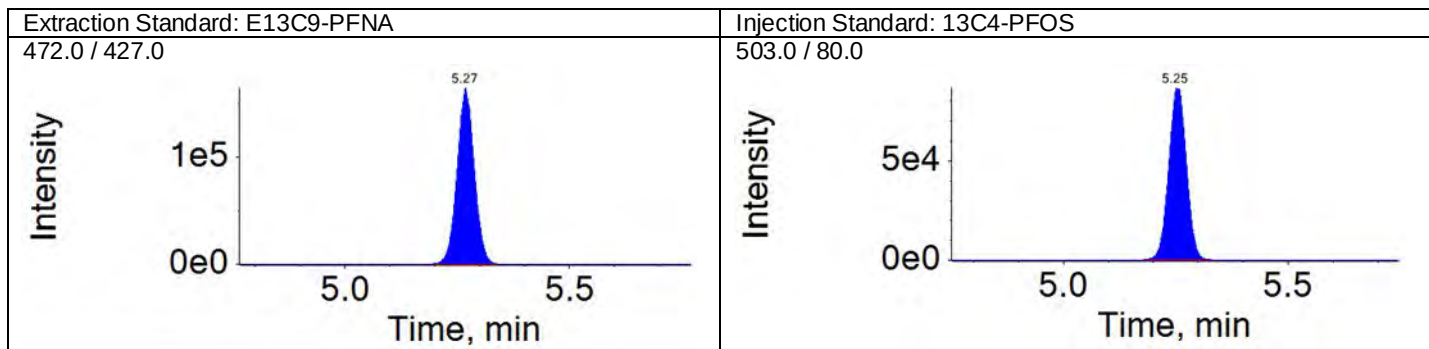
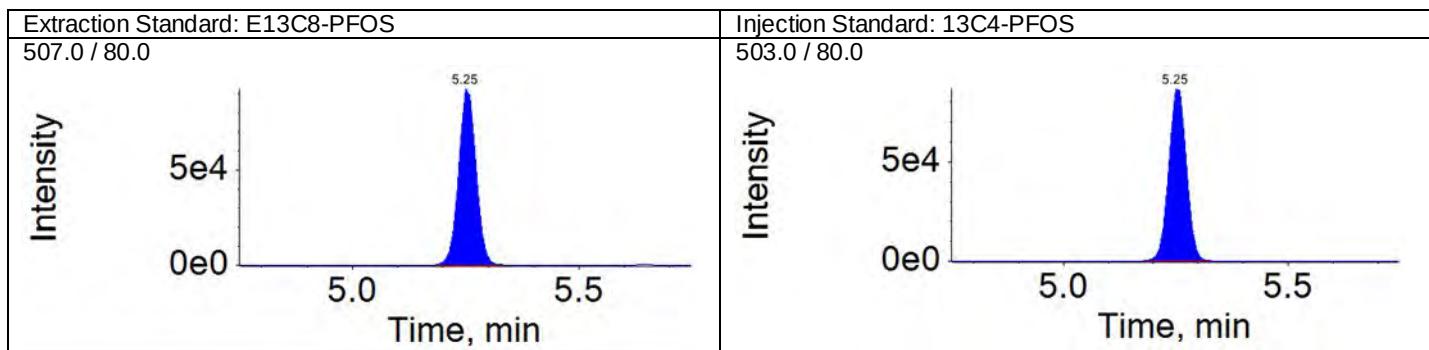
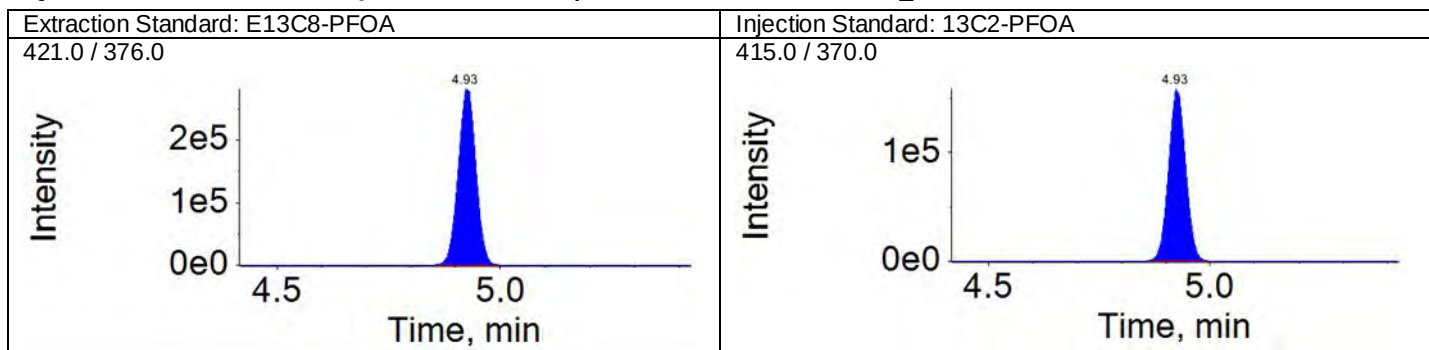
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



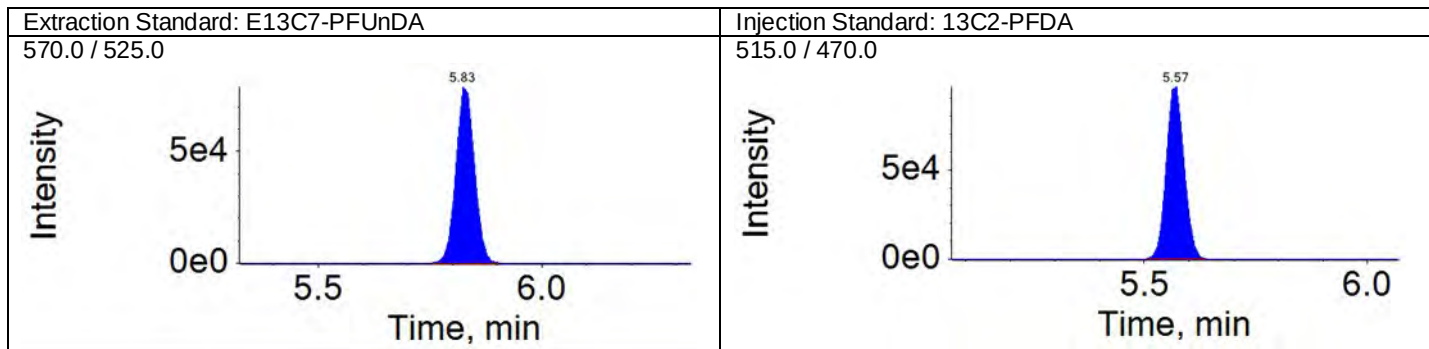
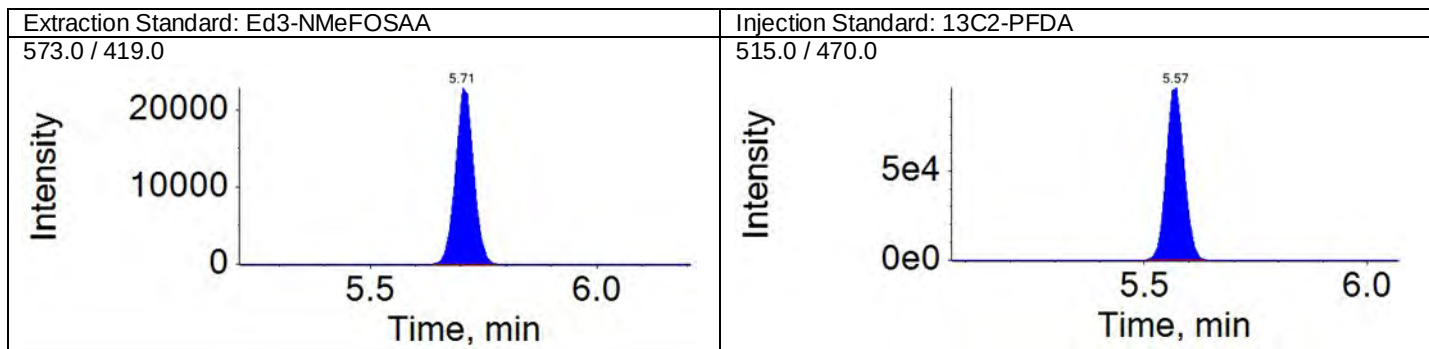
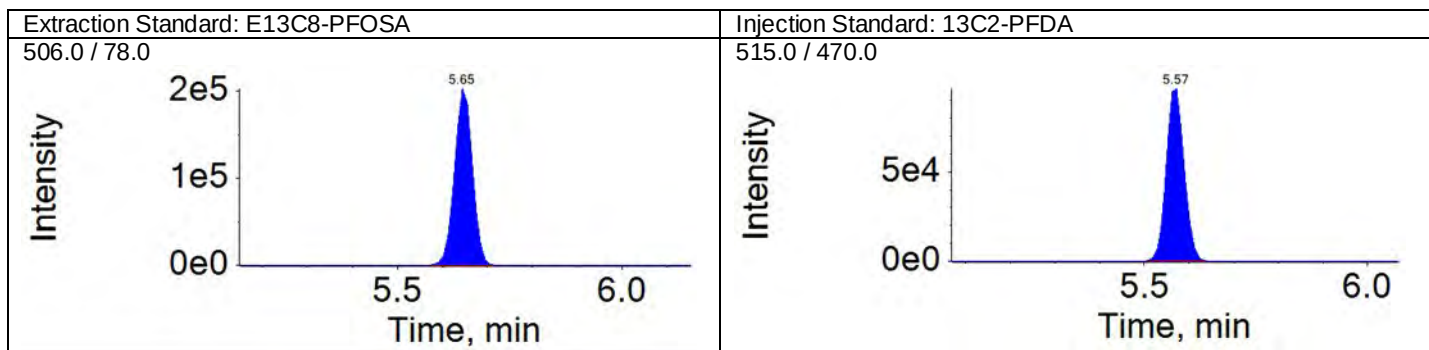
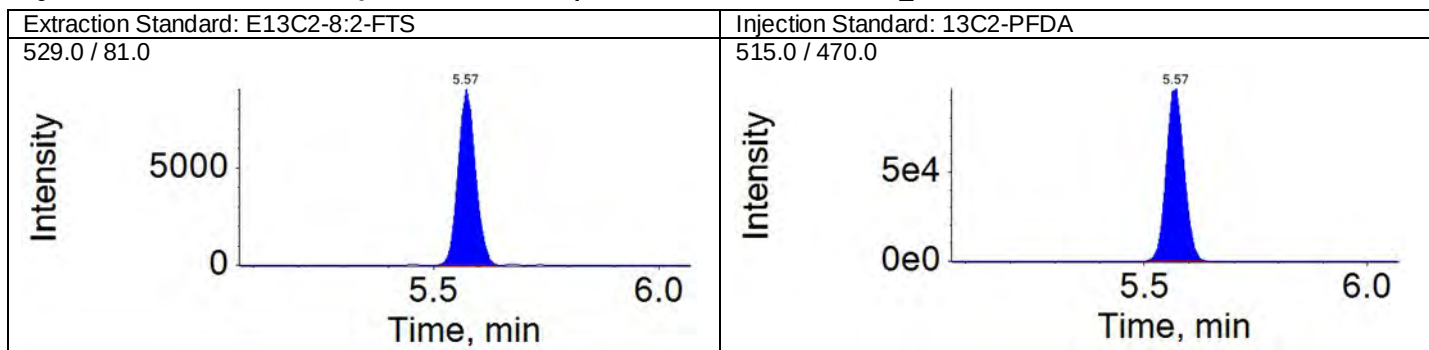
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



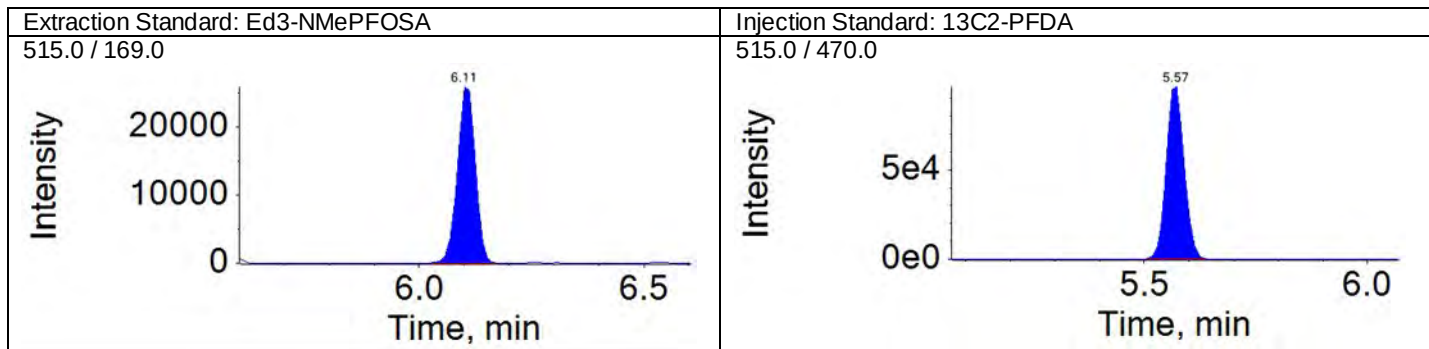
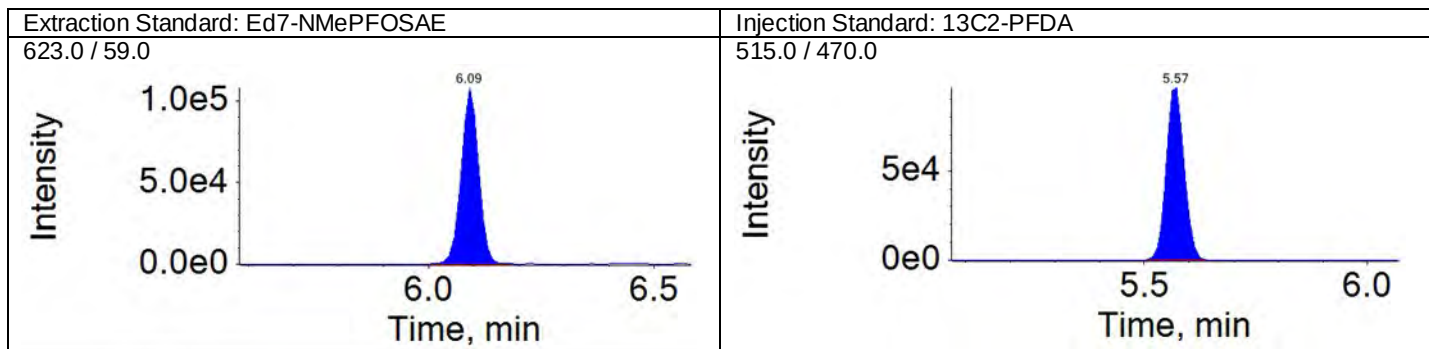
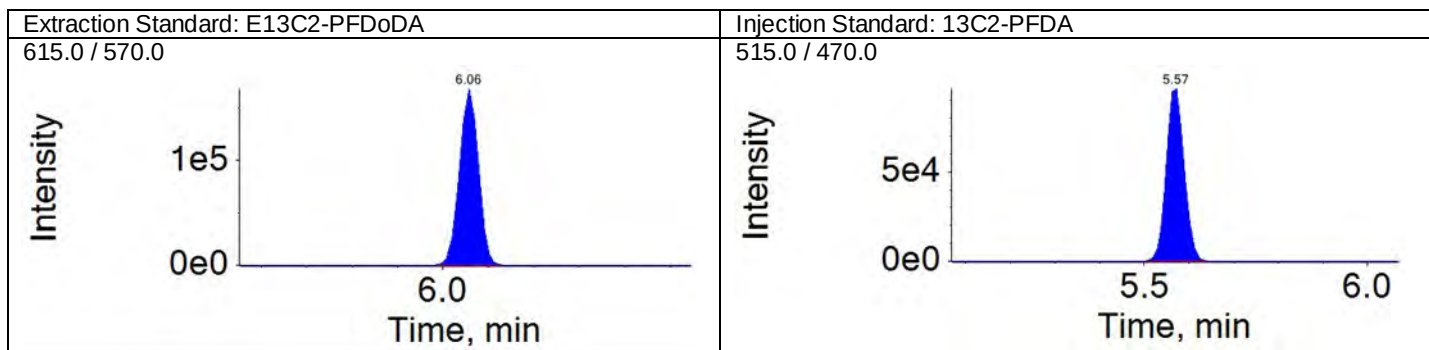
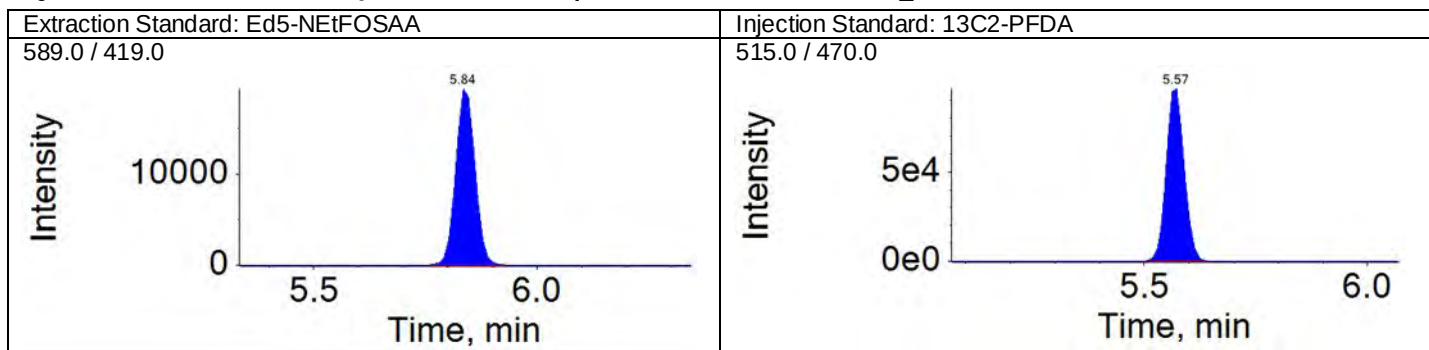
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



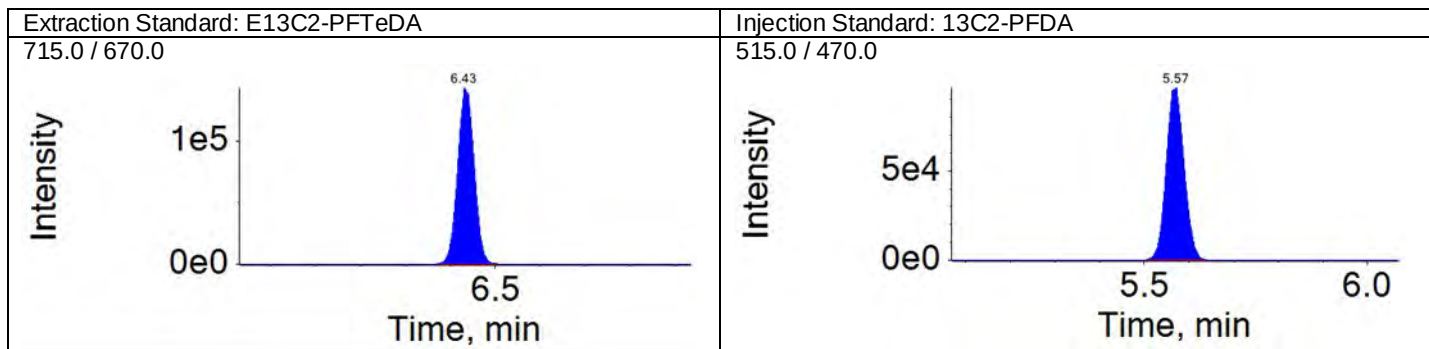
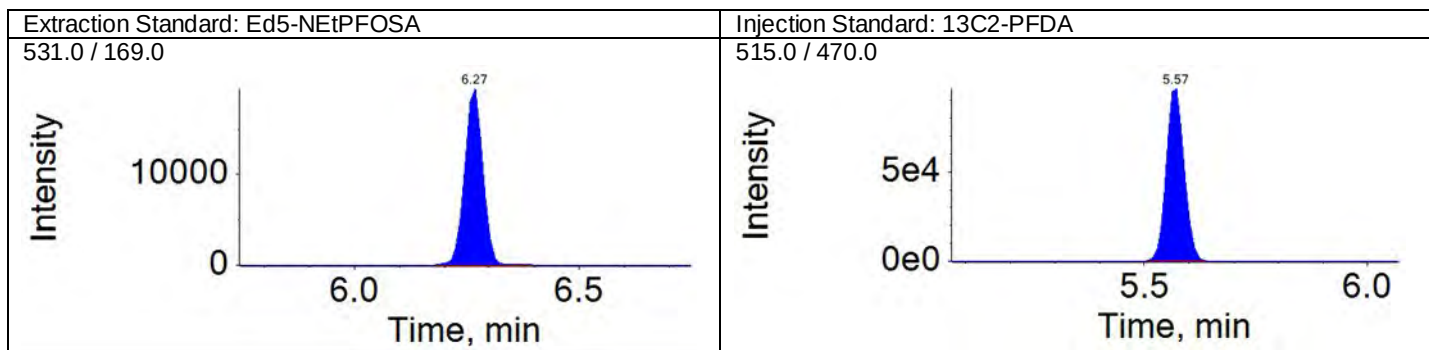
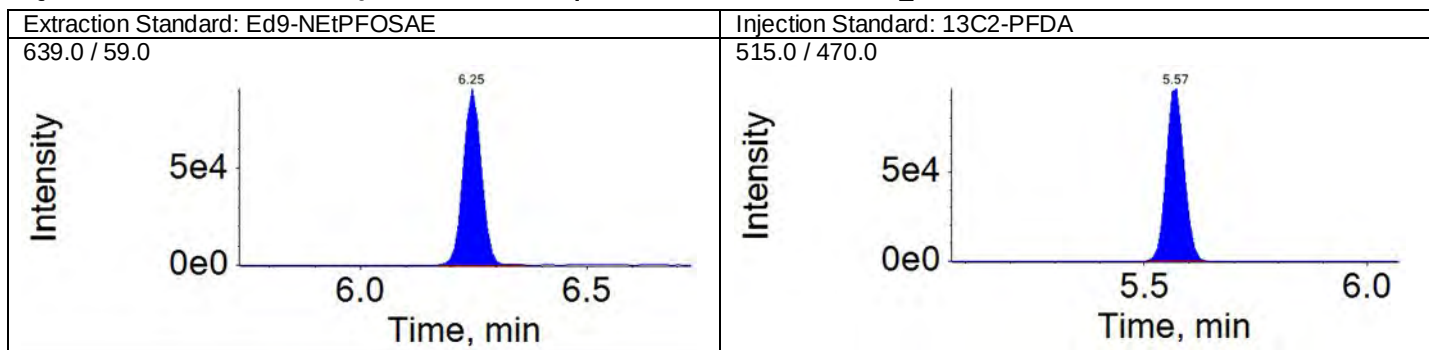
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



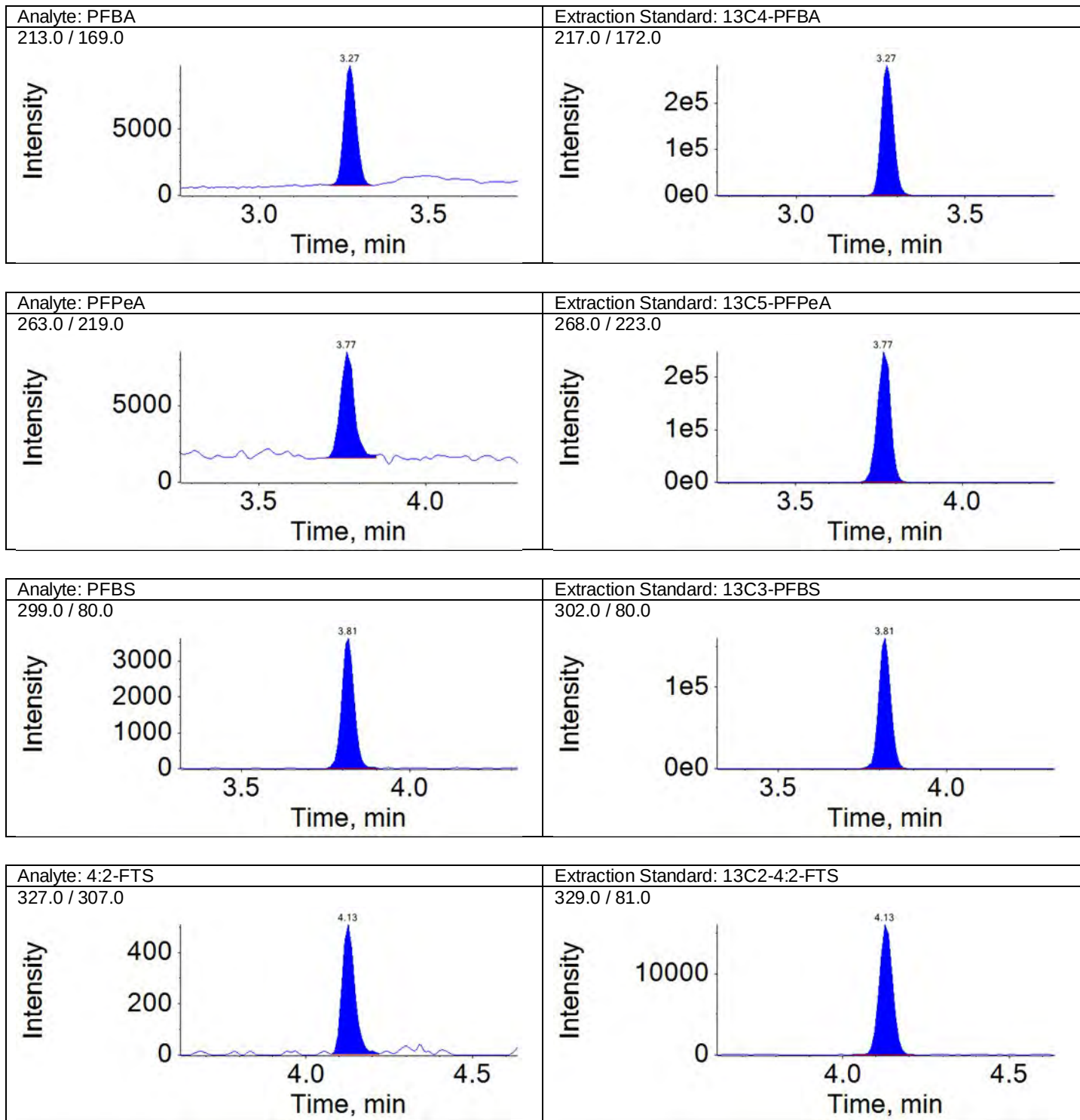
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



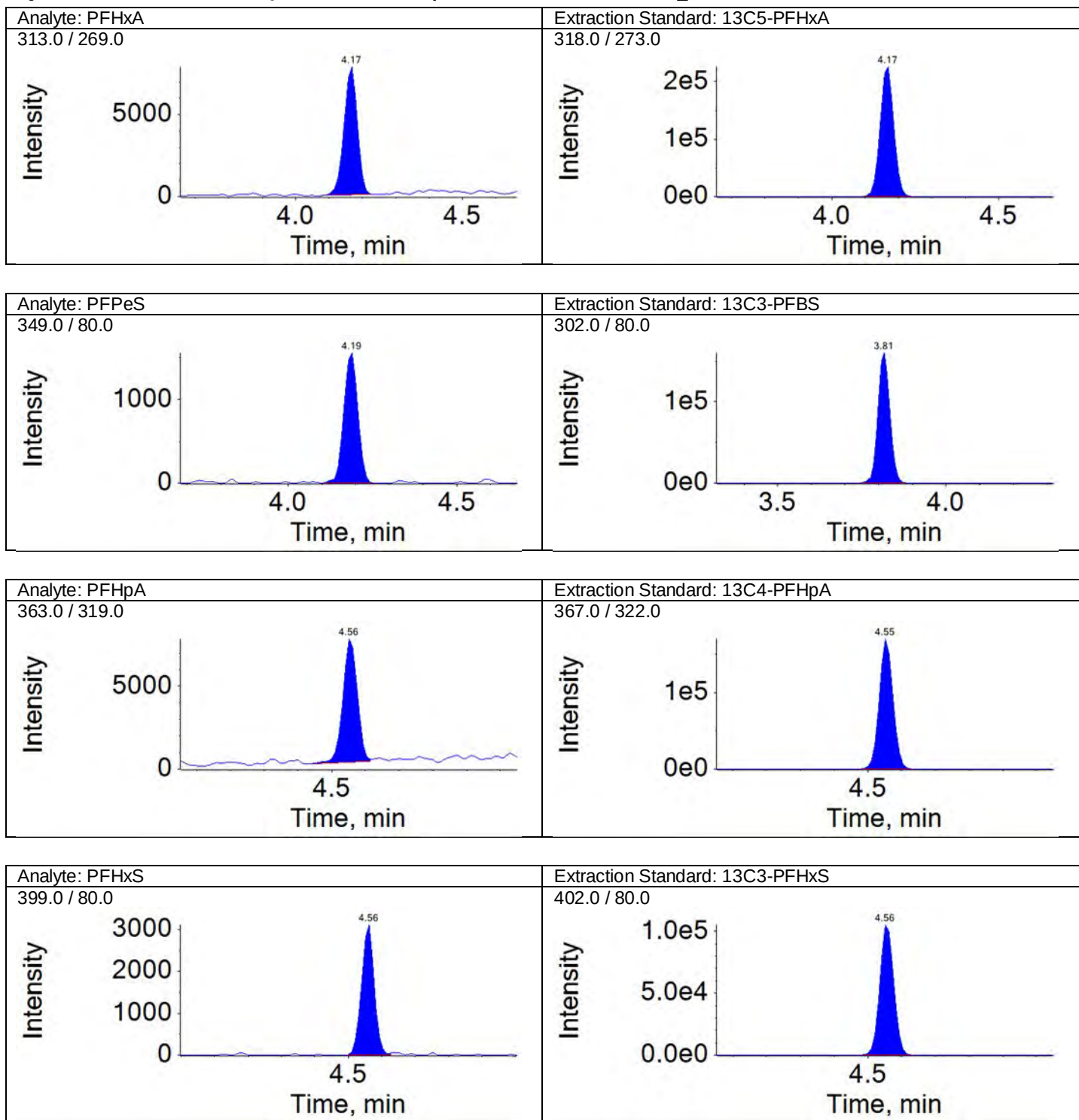
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



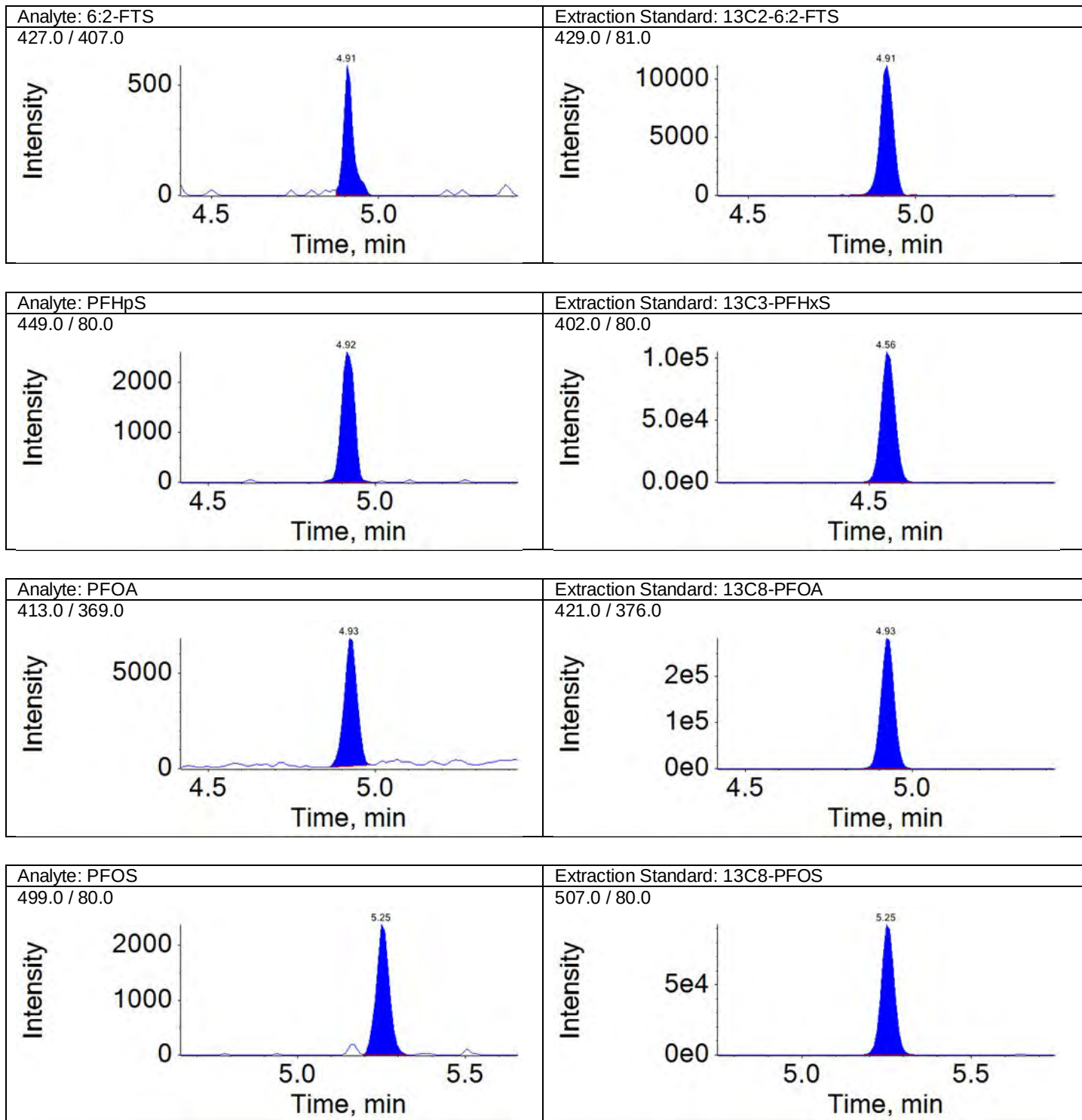
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



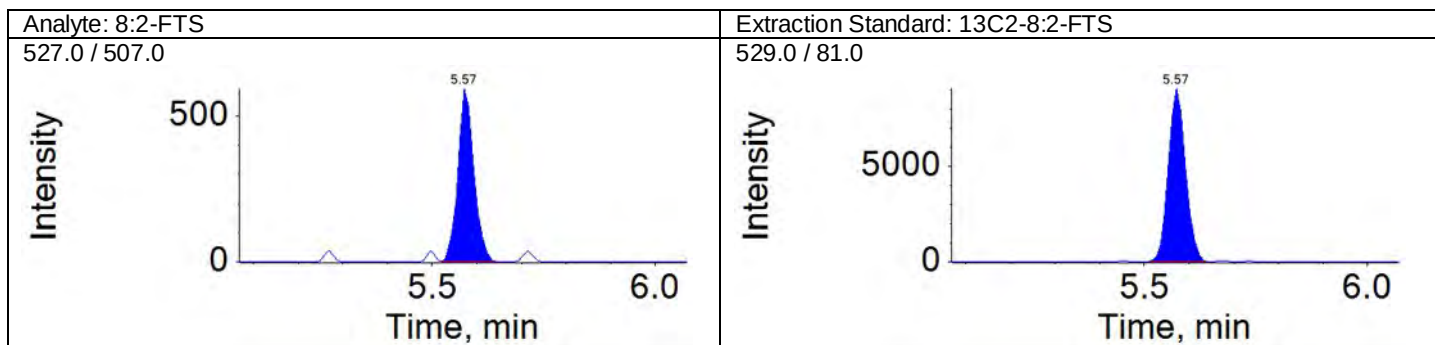
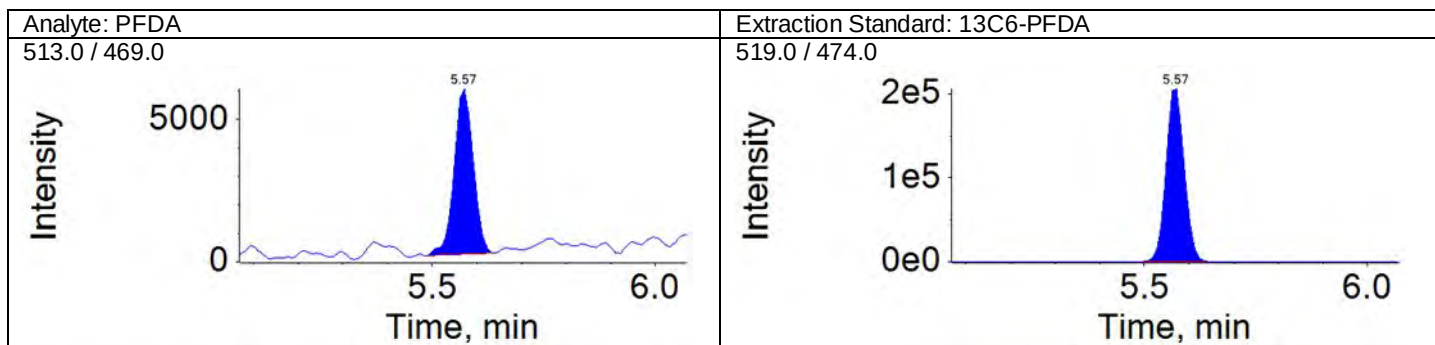
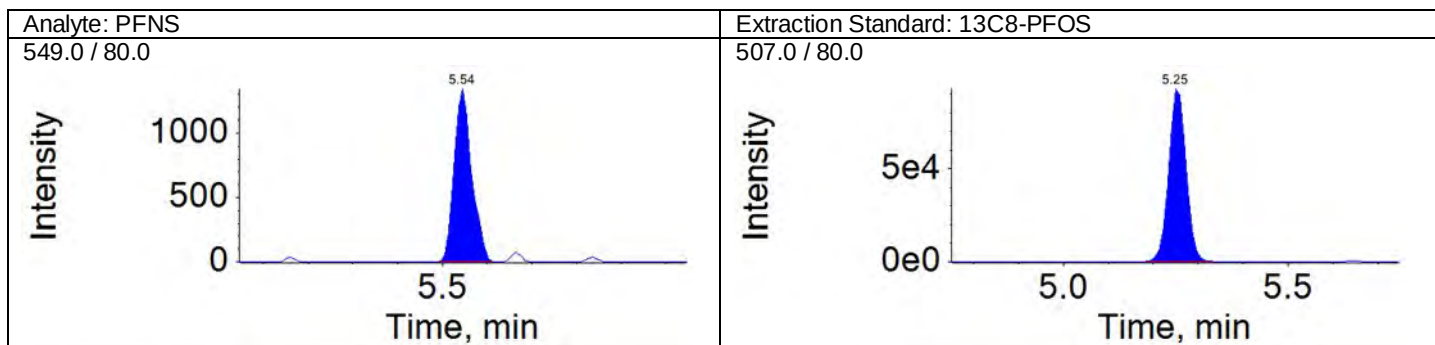
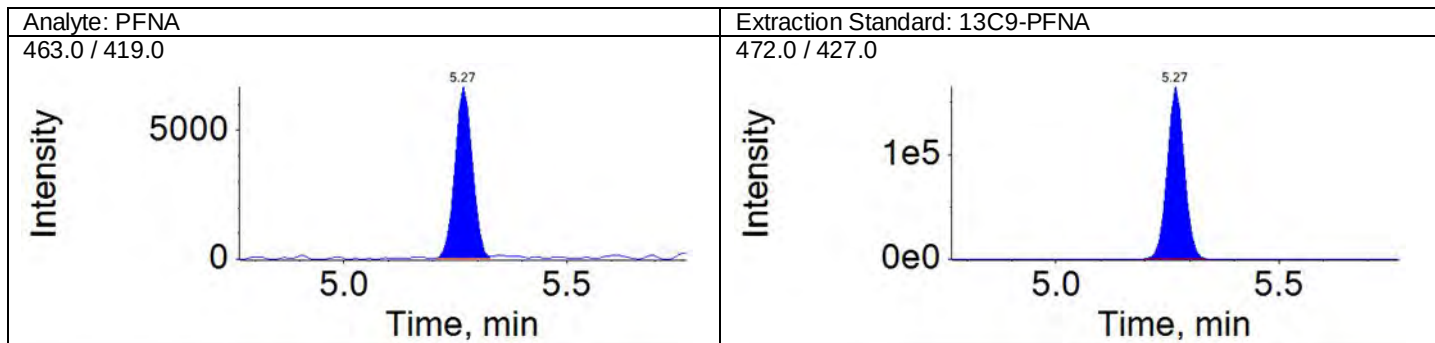
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



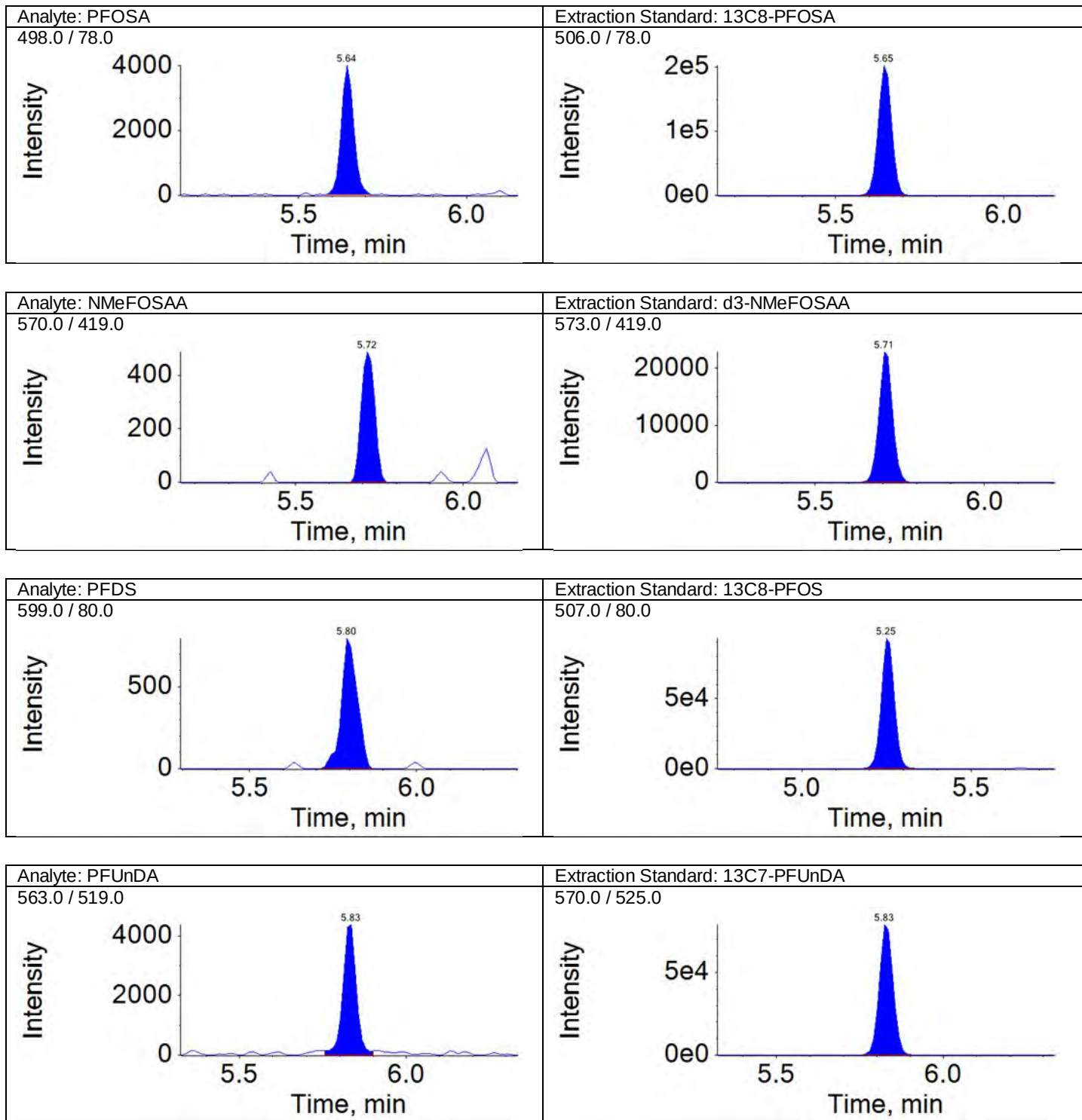
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



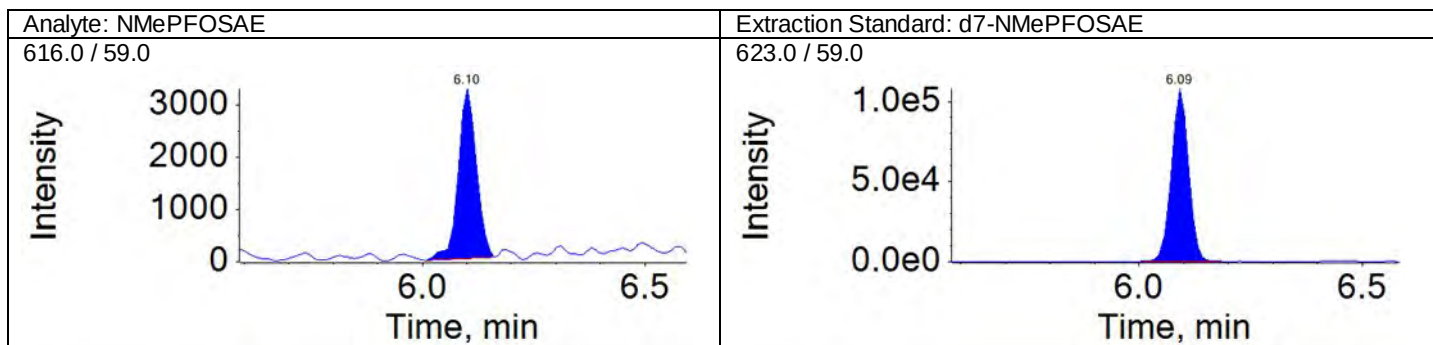
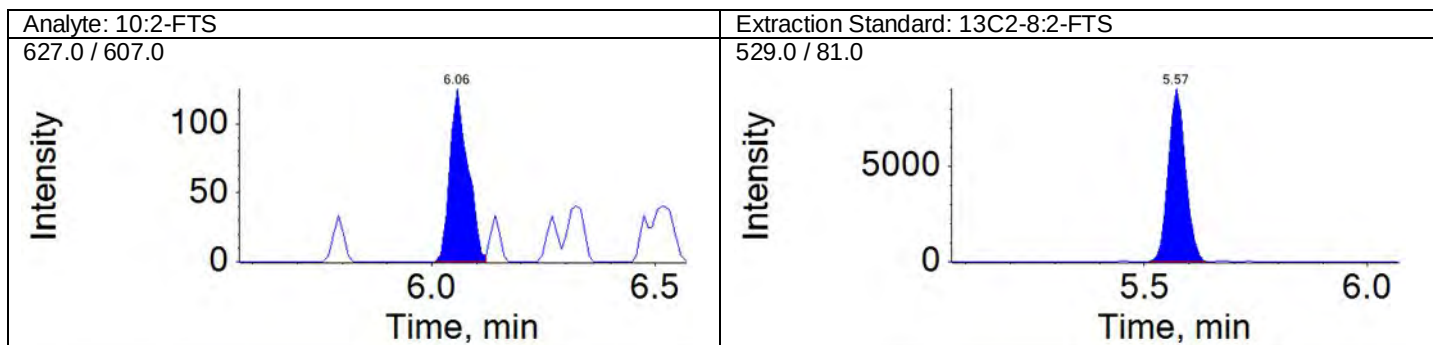
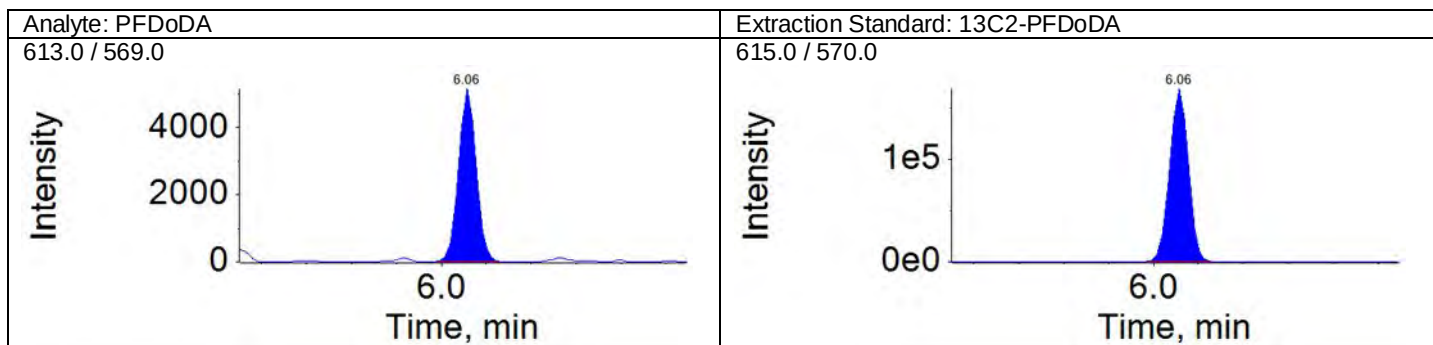
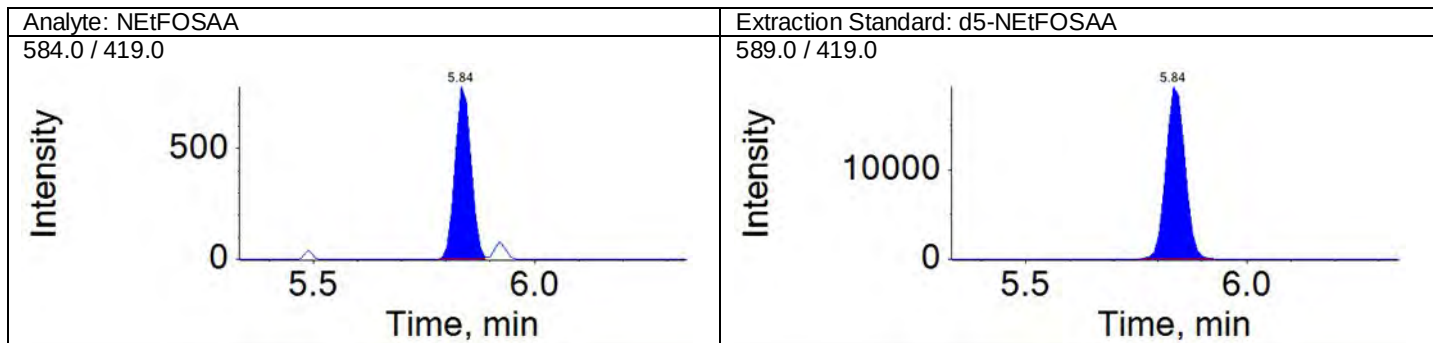
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



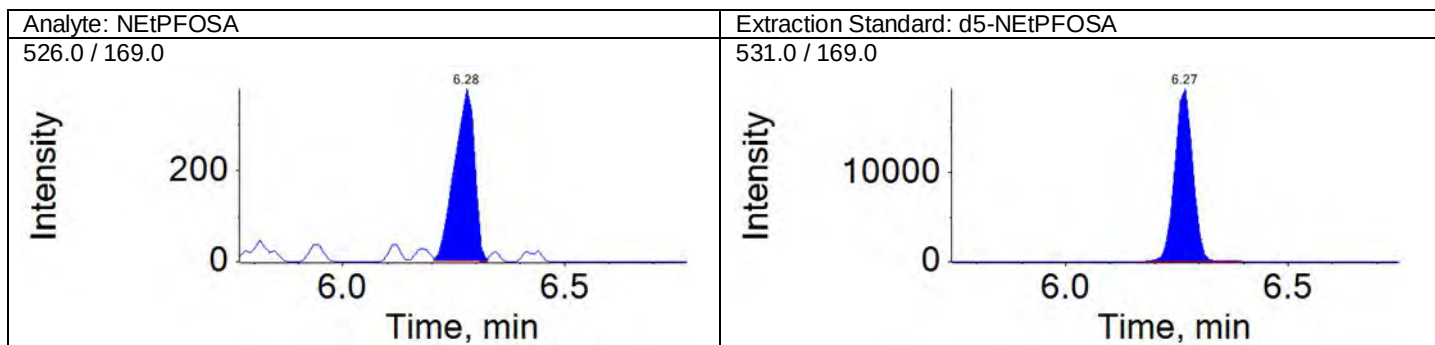
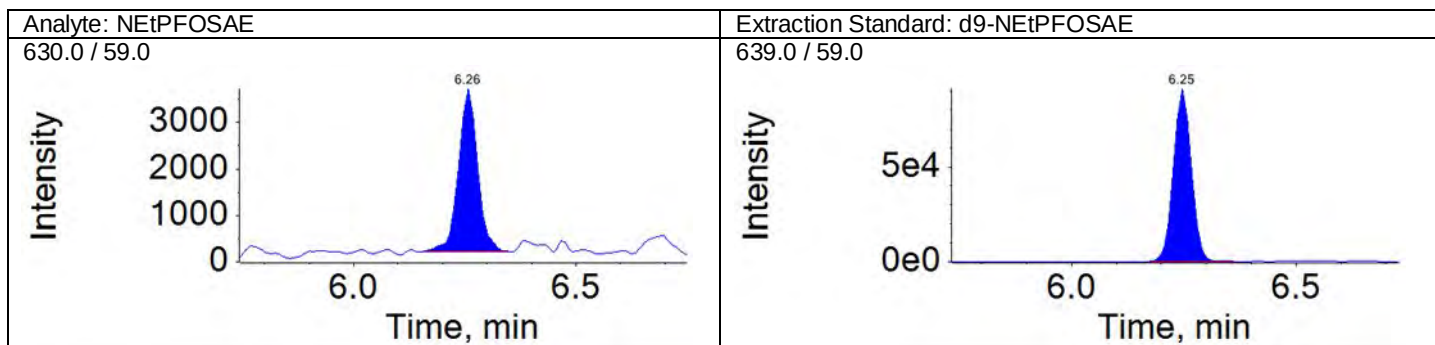
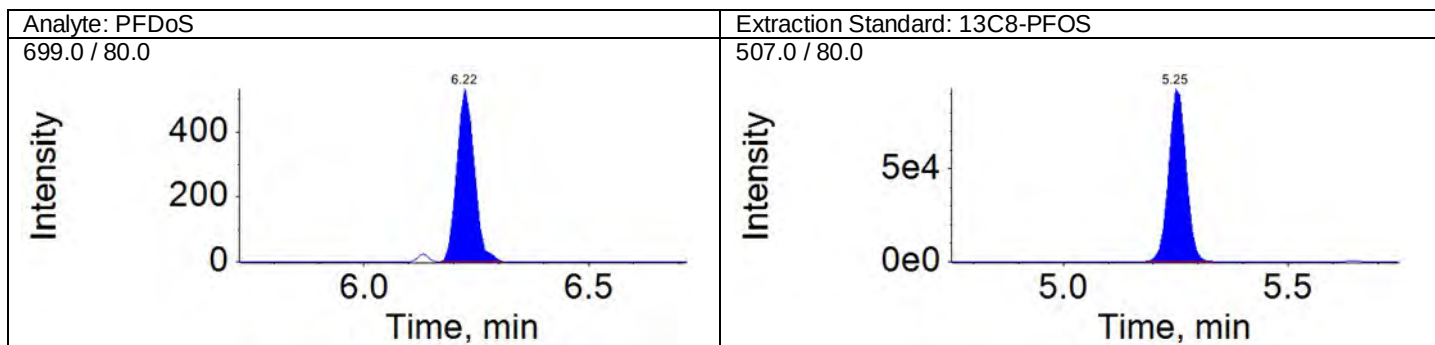
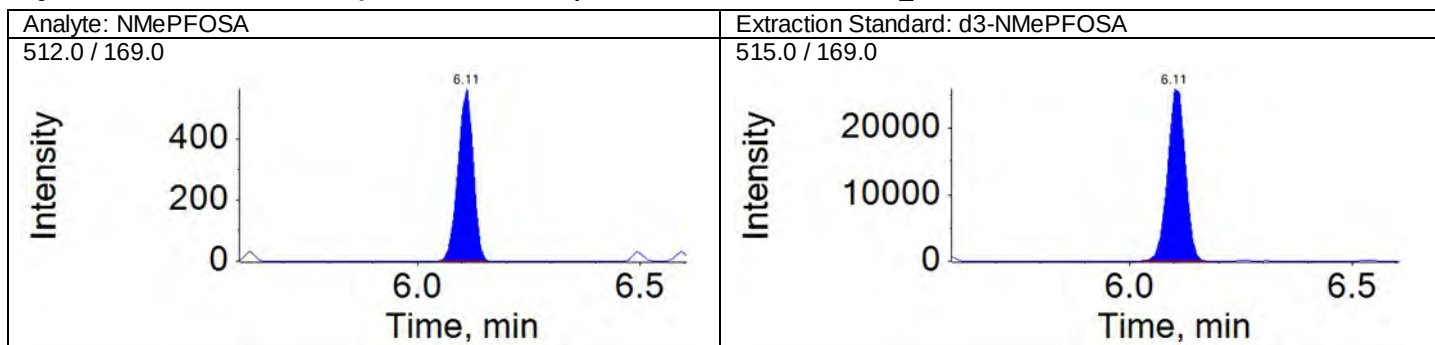
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



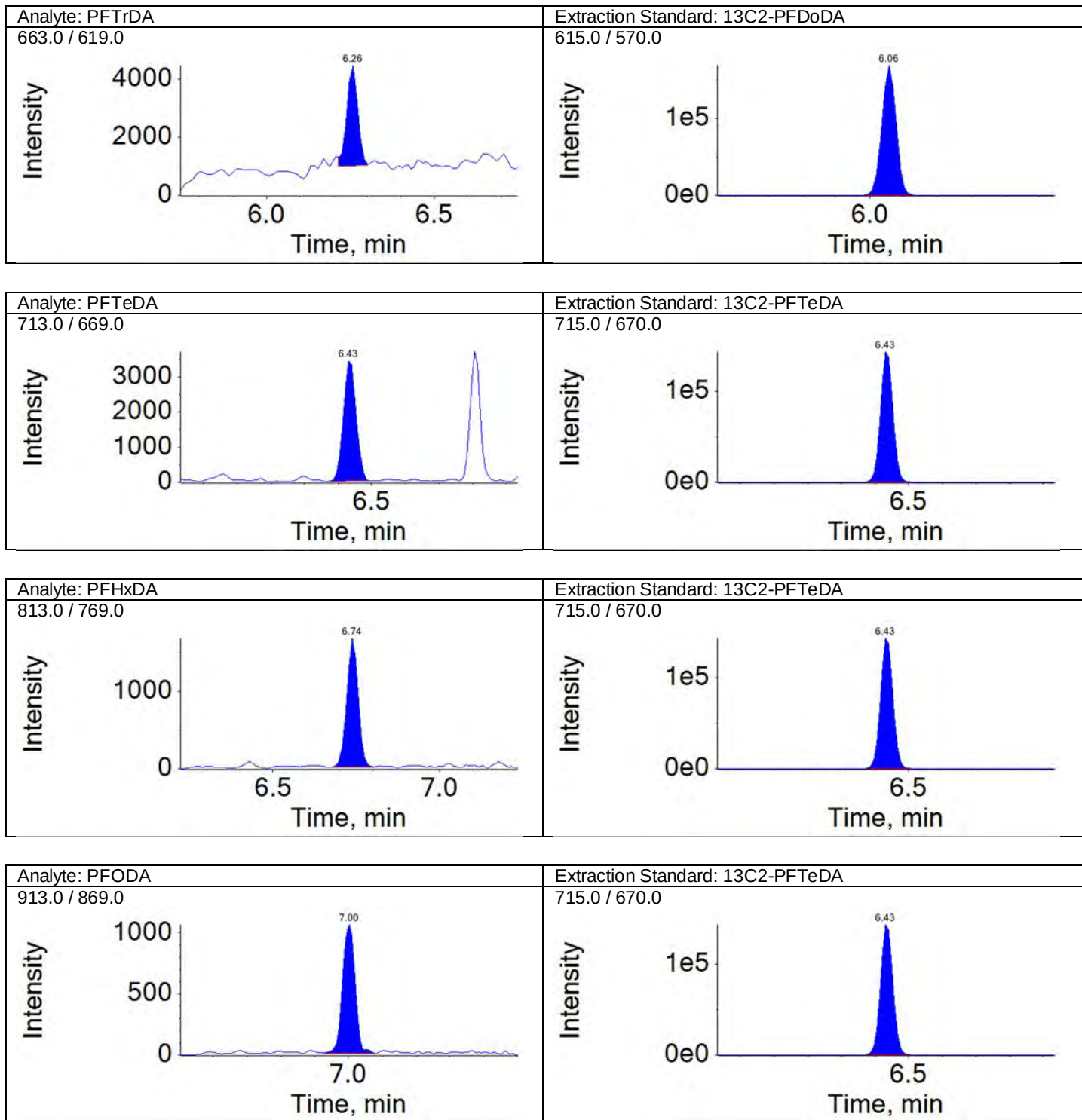
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

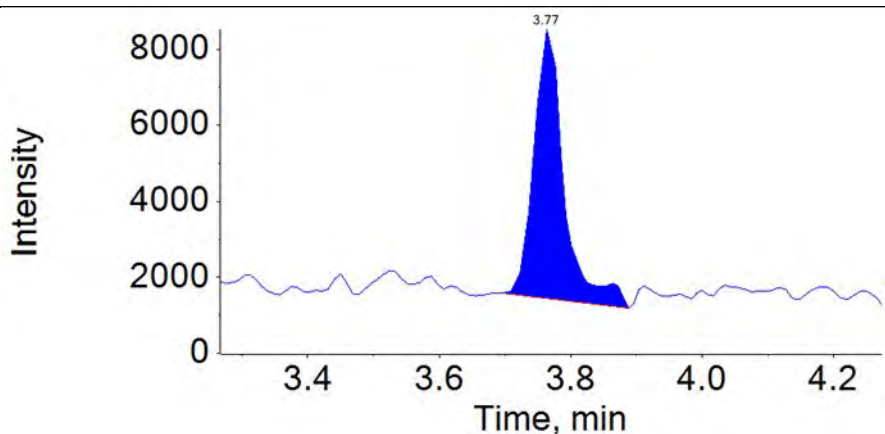
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

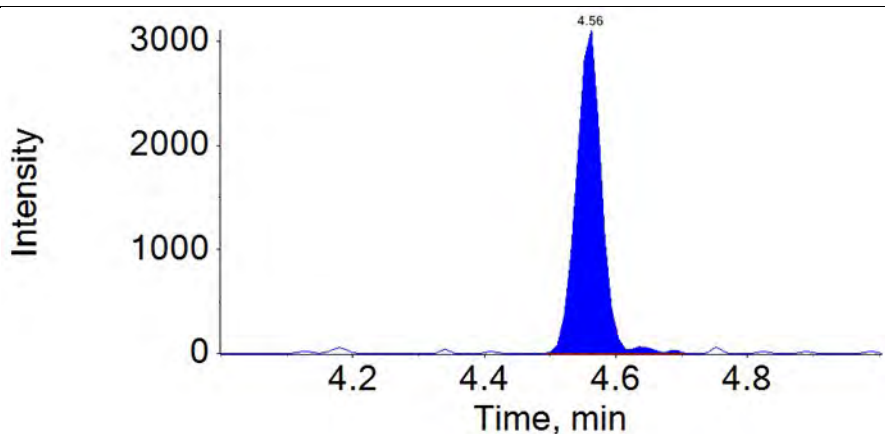
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.77
Peak Area:
22570.74
Mass Range:
263.0 / 219.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



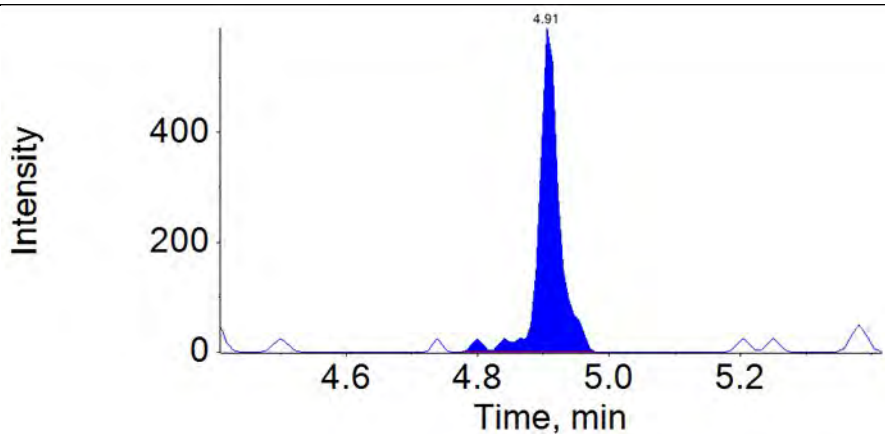
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
8305.21
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
6:2-FTS
RT (min.):
4.91
Peak Area:
1264.35
Mass Range:
427.0 / 407.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL

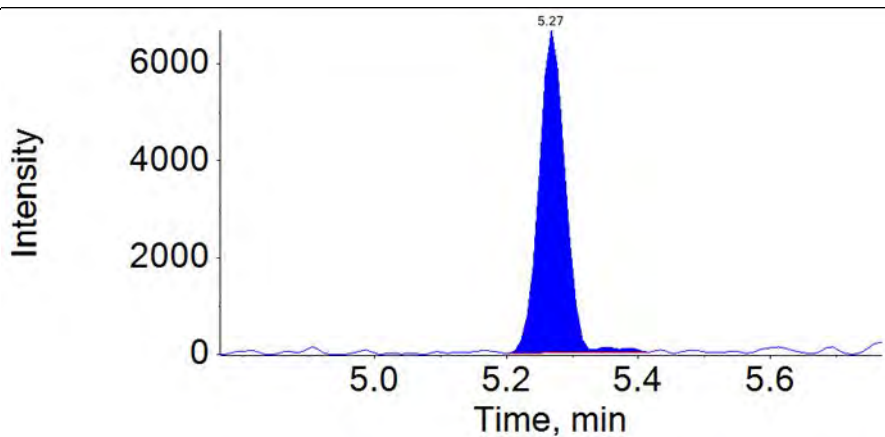


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

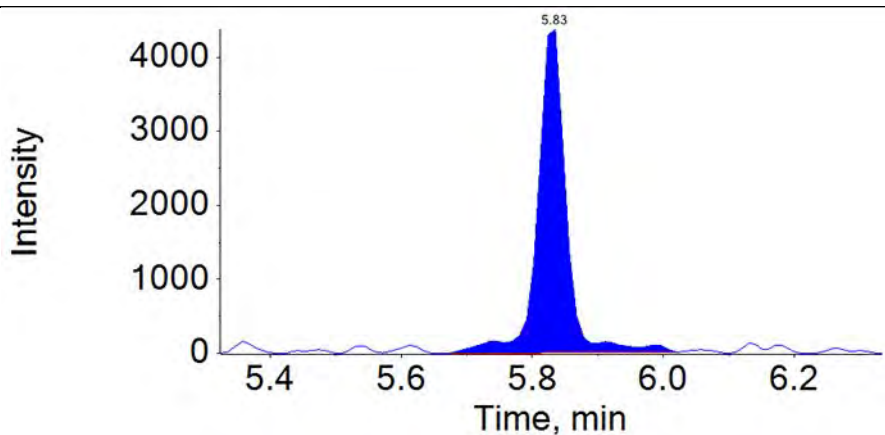
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
18397.36
Mass Range:
463.0 / 419.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



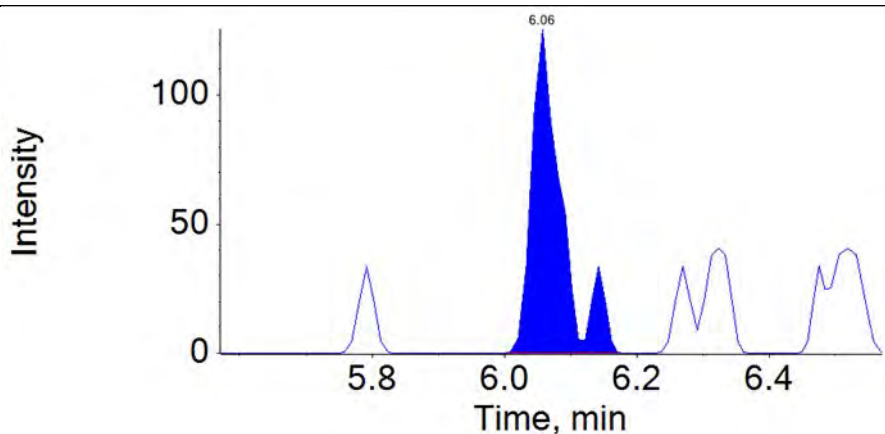
Integration Comment: incorrect integration

Component Name:
PFAUnDA
RT (min.):
5.83
Peak Area:
13277.76
Mass Range:
563.0 / 519.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
6.06
Peak Area:
401.71
Mass Range:
627.0 / 607.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL

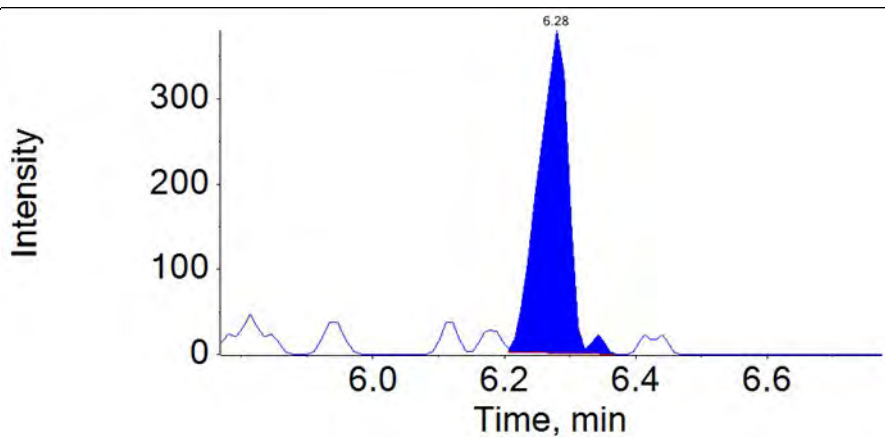


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

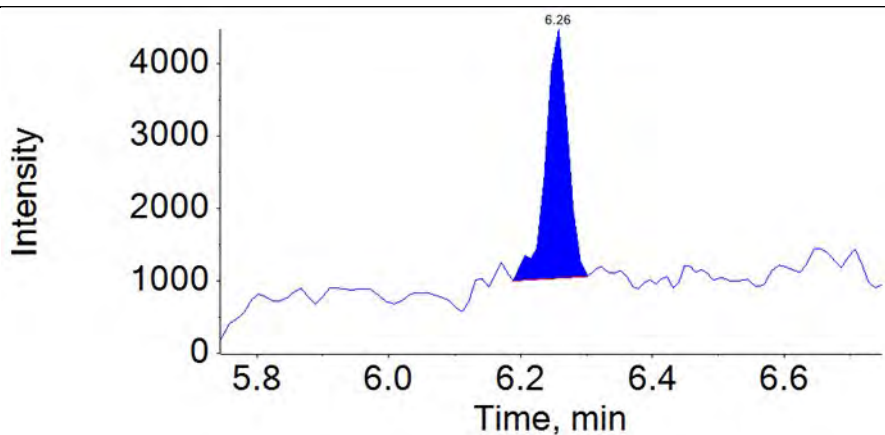
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NETPFOSA
RT (min.):
6.28
Peak Area:
1221.08
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



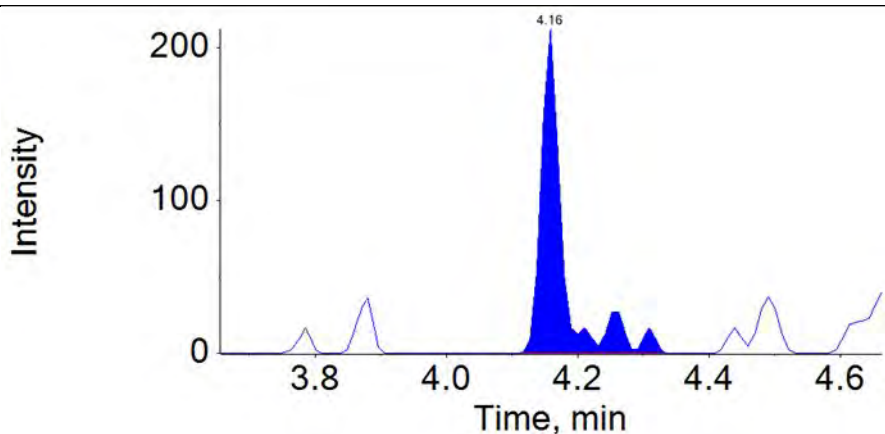
Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.26
Peak Area:
8070.84
Mass Range:
663.0 / 619.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.16
Peak Area:
496.72
Mass Range:
313.0 / 119.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL

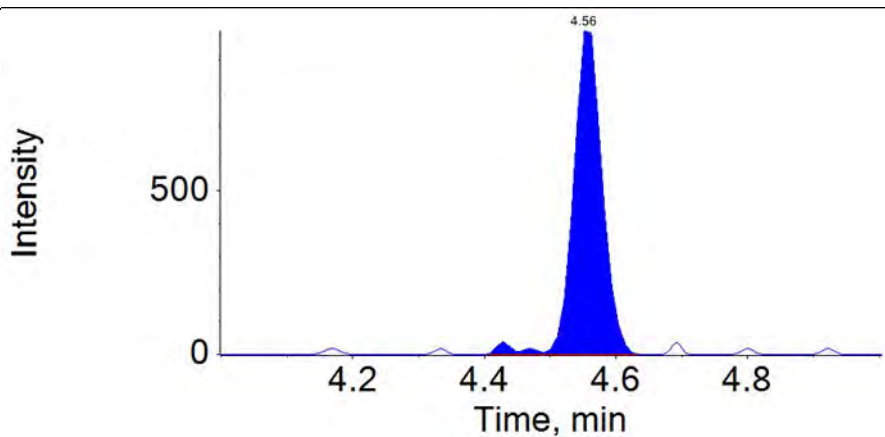


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

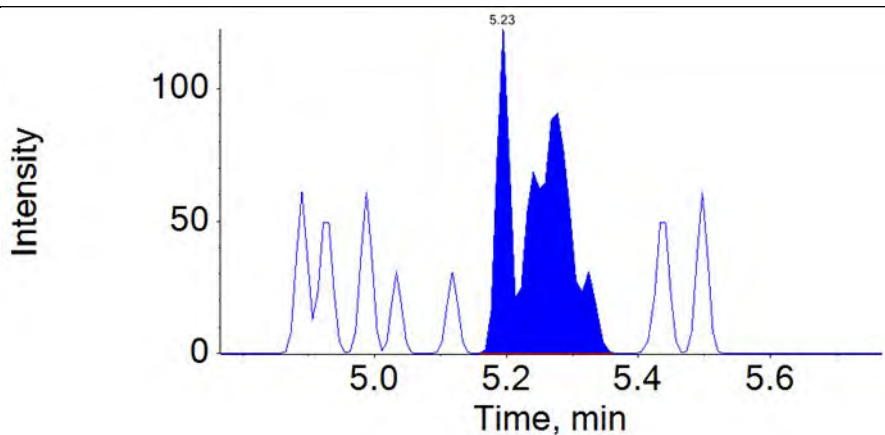
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3074.31
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



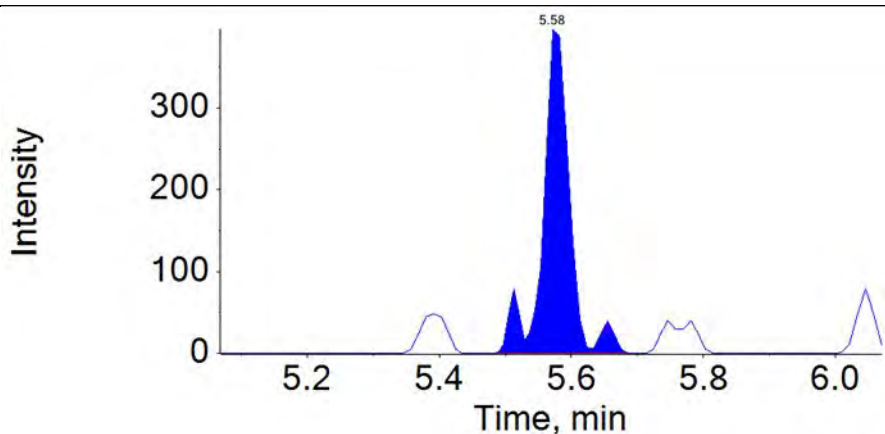
Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.23
Peak Area:
553.54
Mass Range:
463.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

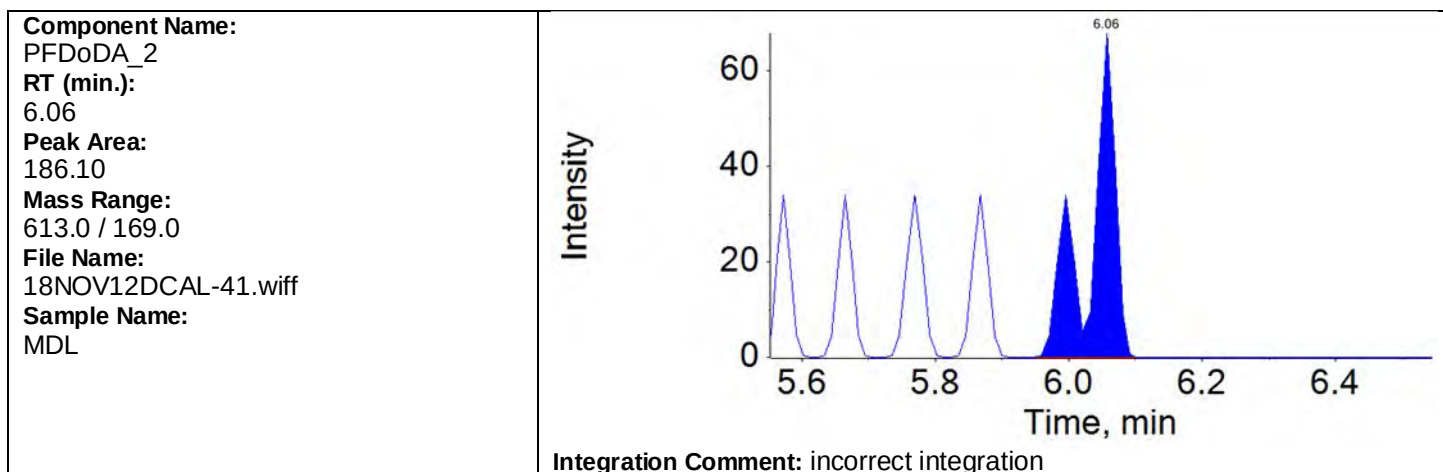
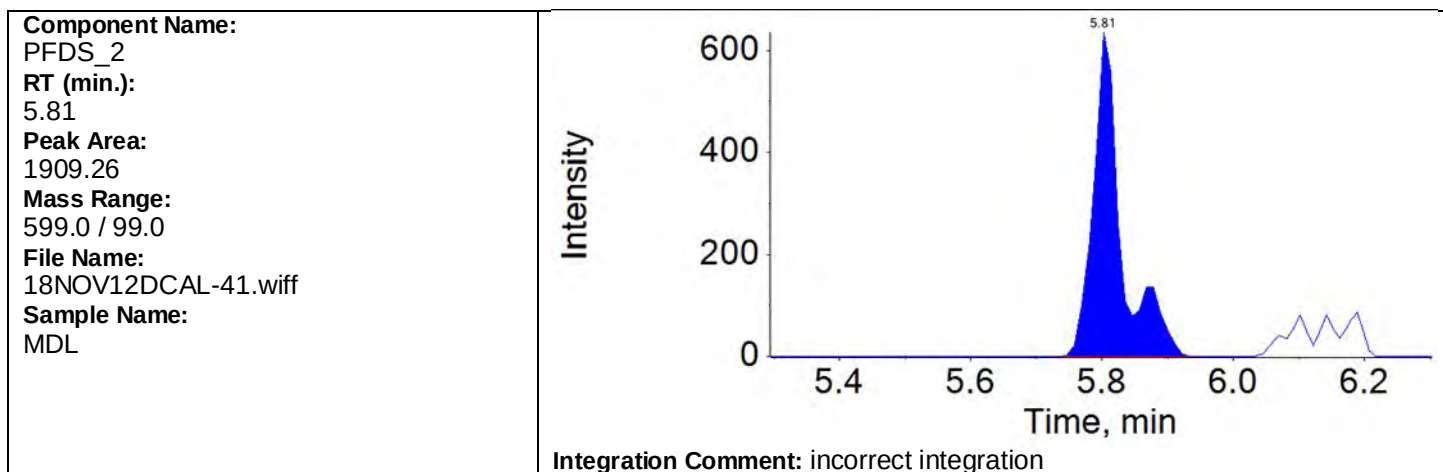
Component Name:
8:2 FTS_2
RT (min.):
5.58
Peak Area:
1126.66
Mass Range:
527.0 / 81.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:34 pm, 11/12/18

REVIEWED

By HMK at 10:54 am, 11/13/18

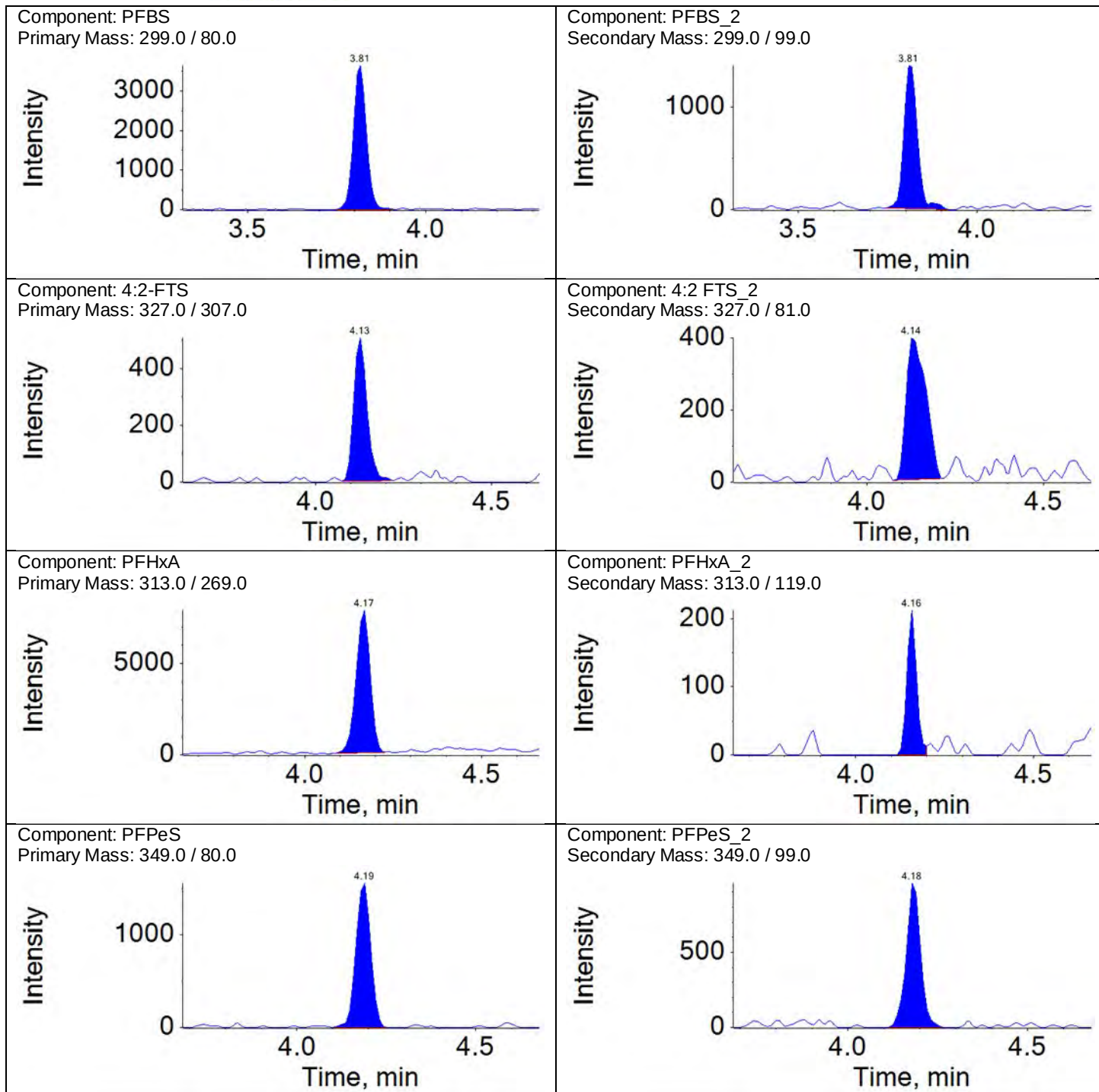
Ion Ratio Report

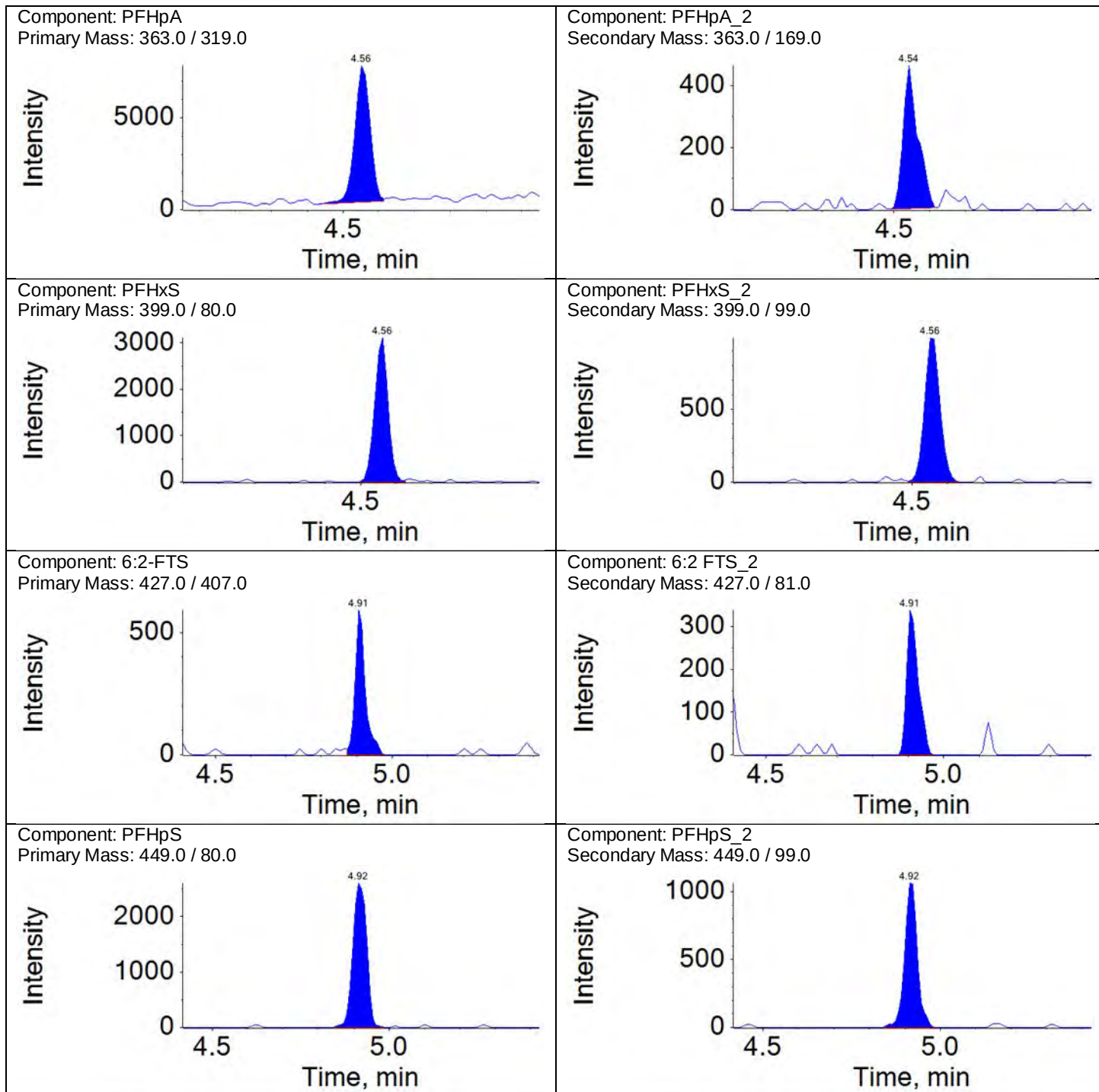
Sample Name: MDL

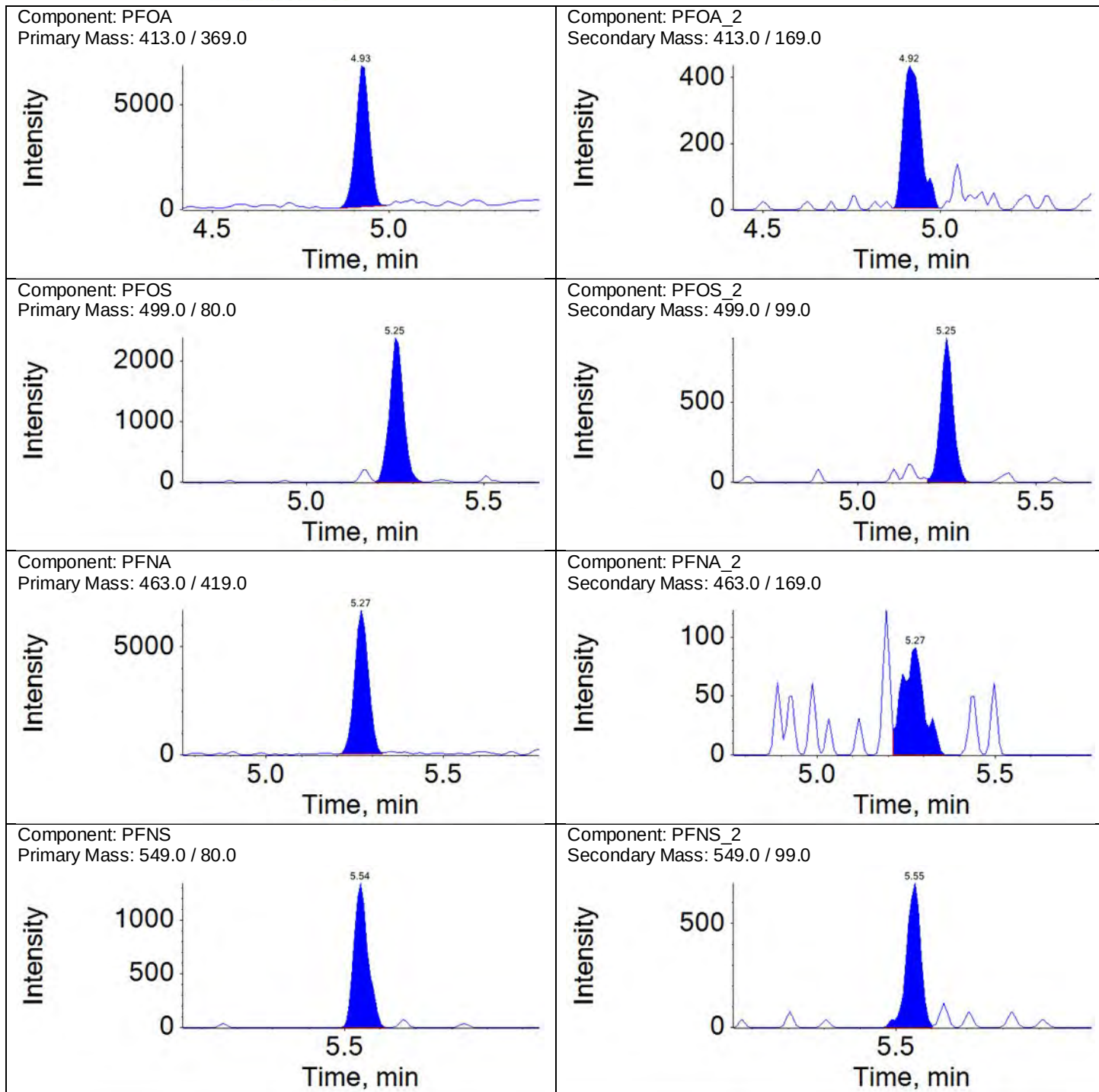
Instrument Name: LM27631

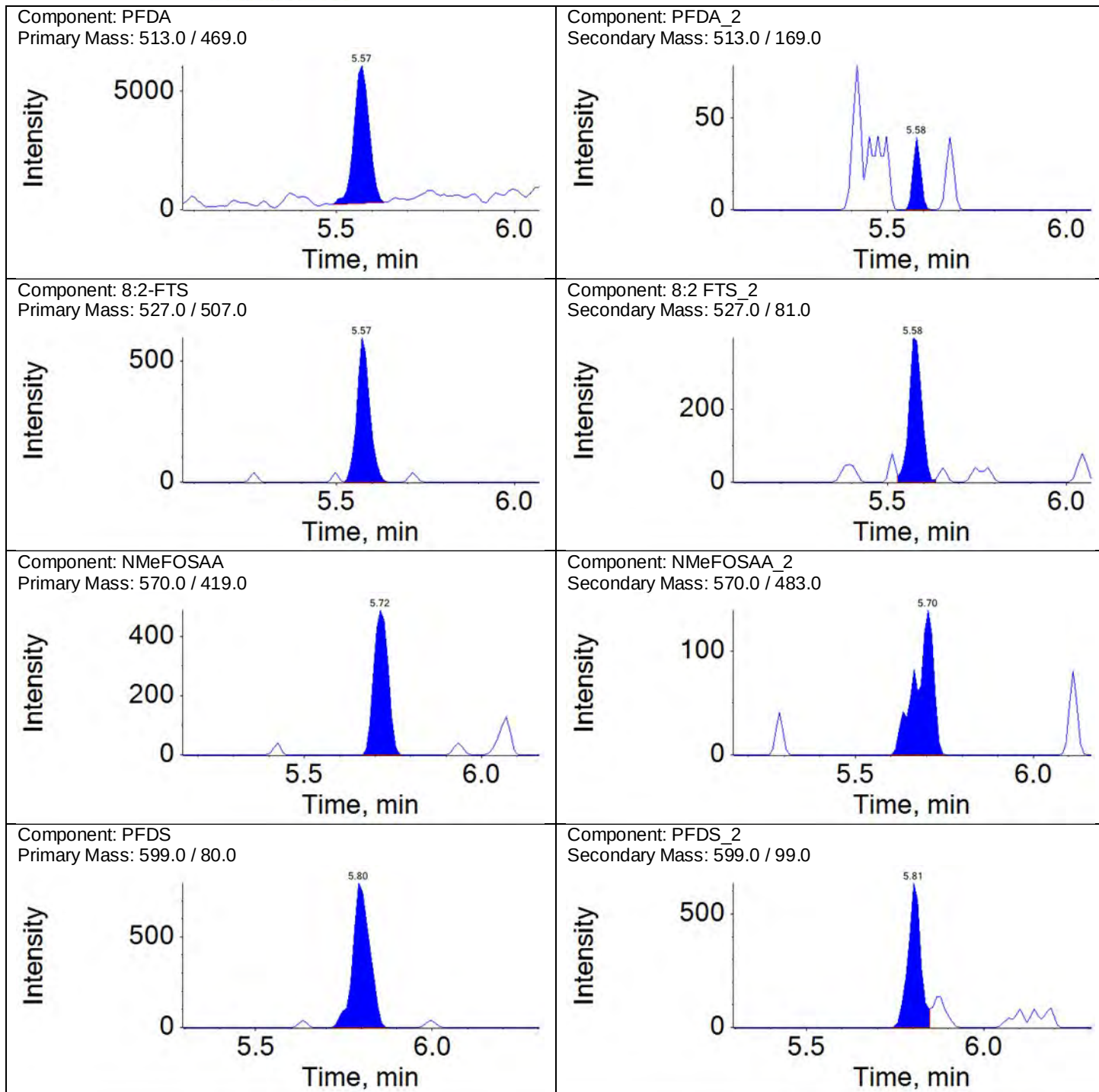
File Name: 18NOV12DCAL-41.wiff

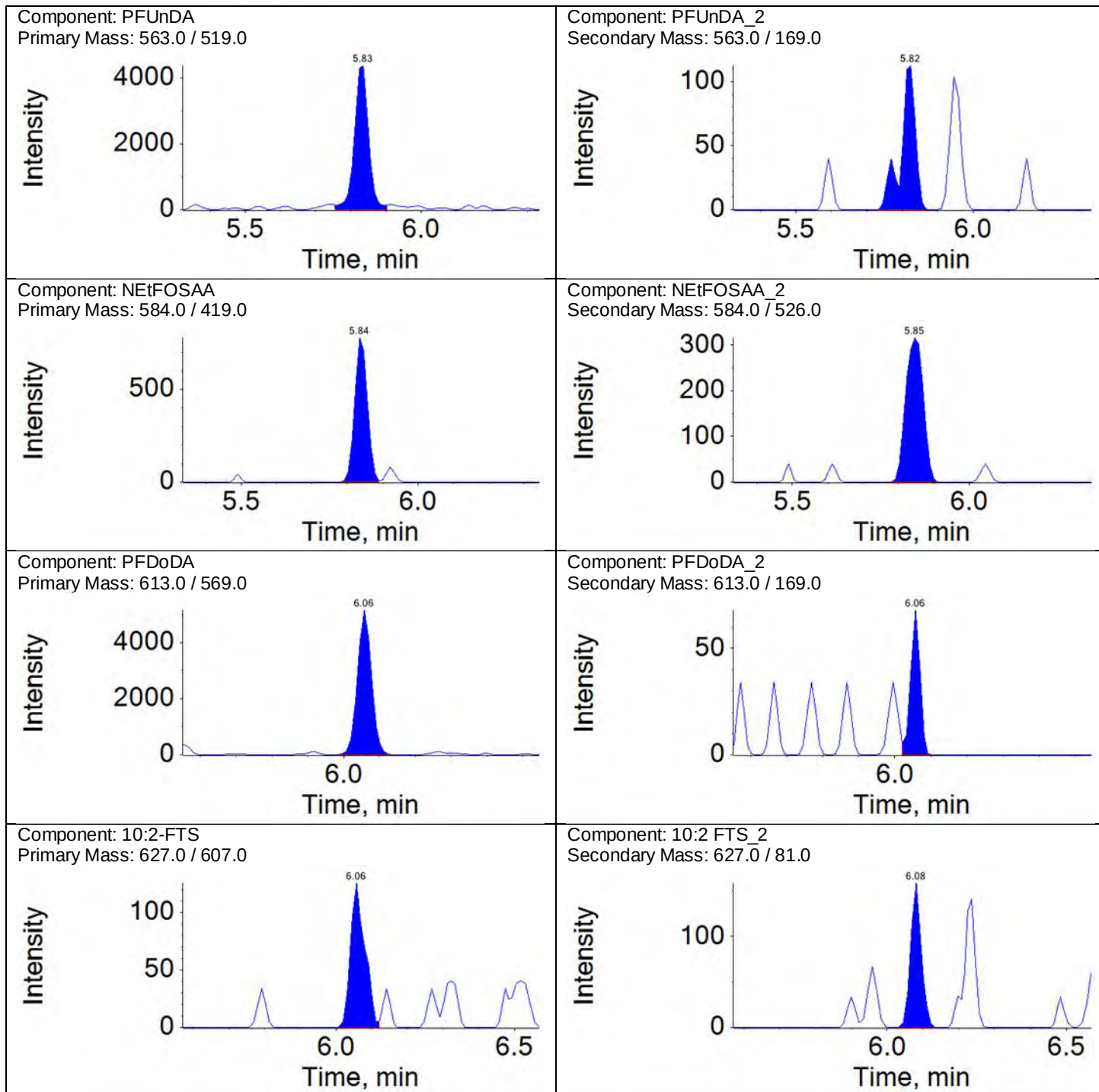
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	9248.27	A	0.3619	0.4009			
PFBS_2	3.81	1.00	3707.95	A	0.3619	0.4009	11	50	
4:2-FTS	4.13	1.00	1329.90	A	0.6730	1.1531			
4:2 FTS_2	4.14	1.00	1533.53	A	0.6730	1.1531		#NA!	
PFHxA	4.17	1.00	21601.58	A	0.0117	0.0185			
PFHxA_2	4.16	1.00	400.56	M	0.0117	0.0185	59	50	OOS
PFPeS	4.19	1.10	4484.75	A	0.5191	0.5939			
PFPeS_2	4.18	1.10	2663.62	A	0.5191	0.5939	14	50	
PFHpA	4.56	1.00	22043.51	A	0.0563	0.0598			
PFHpA_2	4.54	1.00	1317.81	A	0.0563	0.0598	6	50	
PFHxS	4.56	1.00	8143.51	M	0.3428	0.3665			
PFHxS_2	4.56	1.00	2984.60	M	0.3428	0.3665	7	50	
6:2-FTS	4.91	1.00	1176.17	M	0.6604	0.6555			
6:2 FTS_2	4.91	1.00	771.04	A	0.6604	0.6555		#NA!	
PFHpS	4.92	1.08	7117.47	A	0.4066	0.3729			
PFHpS_2	4.92	1.08	2653.97	A	0.4066	0.3729	-8	50	
PFOA	4.93	1.00	18045.03	A	0.0562	0.0847			
PFOA_2	4.92	1.00	1528.65	A	0.0562	0.0847	51	50	OOS
PFOS	5.25	1.00	6416.89	A	0.2968	0.3439			
PFOS_2	5.25	1.00	2206.80	A	0.2968	0.3439	16	50	
PFNA	5.27	1.00	18065.11	M	0.0229	0.0217			
PFNA_2	5.27	1.00	391.14	M	0.0229	0.0217	-5	50	
PFNS	5.54	1.06	3661.22	A	0.4828	0.5154			
PFNS_2	5.55	1.06	1886.87	A	0.4828	0.5154	7	50	
PFDA	5.57	1.00	17350.54	A	0.0081	0.0034			
PFDA_2	5.58	1.00	58.57	A	0.0081	0.0034	-58	50	OOS
8:2-FTS	5.57	1.00	1475.16	A	0.6814	0.6626			
8:2 FTS_2	5.58	1.00	977.44	M	0.6814	0.6626		#NA!	
NMeFOSAA	5.72	1.00	1372.38	A	0.2569	0.3580			
NMeFOSAA_2	5.70	1.00	491.32	A	0.2569	0.3580	39	50	
PFDS	5.80	1.10	2648.79	A	0.5144	0.5845			
PFDS_2	5.81	1.10	1548.24	M	0.5144	0.5845	14	50	
PFUnDA	5.83	1.00	12215.29	M	0.0058	0.0269			
PFUnDA_2	5.82	1.00	328.37	A	0.0058	0.0269	362	50	OOS
NEtFOSAA	5.84	1.00	1937.77	A	0.7253	0.5676			
NEtFOSAA_2	5.85	1.00	1099.93	A	0.7253	0.5676	-22	50	
PFDODA	6.06	1.00	14033.14	A	0.0157	0.0089			
PFDODA_2	6.06	1.00	124.75	M	0.0157	0.0089	-43	50	
10:2-FTS	6.06	1.09	352.60	M	0.6356	0.9381			
10:2 FTS_2	6.08	1.09	330.78	A	0.6356	0.9381		#NA!	
PFTTrDA	6.26	1.03	7825.51	M	0.0086	0.0105			
PFTTrDA_2	6.26	1.03	82.38	A	0.0086	0.0105	23	50	
PFTeDA	6.43	1.00	8938.53	A	0.0062	0.0089			
PFTeDA_2	6.43	1.00	79.25	A	0.0062	0.0089	42	50	
PFHxDA	6.74	1.05	3934.22	A	0.0683	0.0745			
PFHxDA_2	6.74	1.05	292.96	A	0.0683	0.0745	9	50	
PFODA	7.00	1.09	2726.36	A	0.0277	0.0224			
PFODA_2	6.99	1.09	61.09	A	0.0277	0.0224	-19	50	

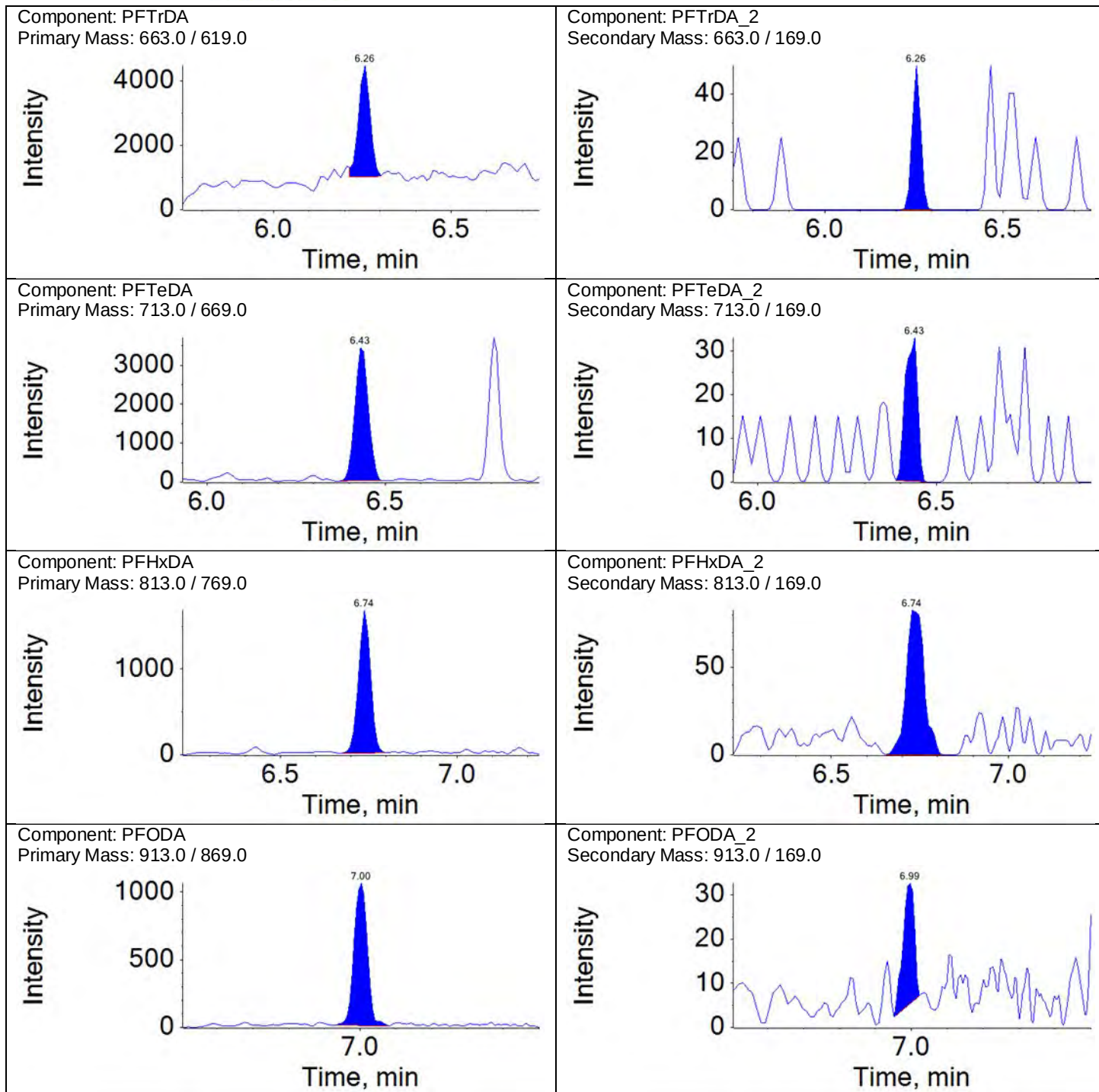












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	ICV		Data File:	18NOV12DCAL-50.wiff
Sample ID:	ICVMODX1833G		Acquis Date:	2018-11-12T16:18:11
Sample Type:	Quality Control		Instrument:	LM27631
Vial Position:	10		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	655209.3	659926.2	-1	50	
13C2-PFOA	5.0	452726.2	450219.7	1	50	
13C4-PFOS	4.8	253010.3	249205.8	2	50	
13C2-PFDA	5.0	277002.7	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	715834.4	13C3-PFBA	655209.3	1.093	5.000	4.898	98	70-130	
E13C5-PFPeA	699482.2	13C3-PFBA	655209.3	1.068	5.000	4.788	96	70-130	
E13C3-PFBS	394903.4	13C3-PFBA	655209.3	0.603	4.650	4.255	91	70-130	
E13C2-4:2-FTS	47297.3	13C2-PFOA	452726.2	0.104	4.670	4.653	100	70-130	
E13C5-PFHxA	613579.4	13C2-PFOA	452726.2	1.355	5.000	4.896	98	70-130	
E13C3-PFHxS	304897.8	13C2-PFOA	452726.2	0.673	4.730	4.621	98	70-130	
E13C4-PFHpA	485394.9	13C2-PFOA	452726.2	1.072	5.000	4.830	97	70-130	
E13C2-6:2-FTS	31532.8	13C2-PFOA	452726.2	0.070	4.750	4.660	98	70-130	
E13C8-PFOA	843573.3	13C2-PFOA	452726.2	1.863	5.000	5.134	103	70-130	
E13C8-PFOS	266211.4	13C4-PFOS	253010.3	1.052	4.780	4.662	98	70-130	
E13C9-PFNA	458821.5	13C4-PFOS	253010.3	1.813	5.000	5.056	101	70-130	
E13C6-PFDA	590290.3	13C2-PFDA	277002.7	2.131	5.000	4.973	99	70-130	
E13C2-8:2-FTS	22188.9	13C2-PFDA	277002.7	0.080	4.790	3.995	83	70-130	
E13C8-PFOSA	587080.1	13C2-PFDA	277002.7	2.119	5.000	4.699	94	70-130	
Ed3-NMeFOSAA	70133.2	13C2-PFDA	277002.7	0.253	5.000	4.570	91	70-130	
E13C7-PFUnDA	228363.9	13C2-PFDA	277002.7	0.824	5.000	4.786	96	70-130	
Ed5-NEtFOSAA	59551.3	13C2-PFDA	277002.7	0.215	5.000	4.548	91	70-130	
E13C2-PFDoDA	495858.1	13C2-PFDA	277002.7	1.790	5.000	4.648	93	70-130	
Ed7-NMePFOSAE	299185.4	13C2-PFDA	277002.7	1.080	5.000	4.674	93	70-130	
Ed3-NMePFOSA	75186.9	13C2-PFDA	277002.7	0.271	5.000	4.931	99	70-130	
Ed9-NEtPFOSAE	255149.8	13C2-PFDA	277002.7	0.921	5.000	4.791	96	70-130	
Ed5-NEtPFOSA	53596.2	13C2-PFDA	277002.7	0.193	5.000	4.539	91	70-130	
E13C2-PFTeDA	365300.2	13C2-PFDA	277002.7	1.319	5.000	4.630	93	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

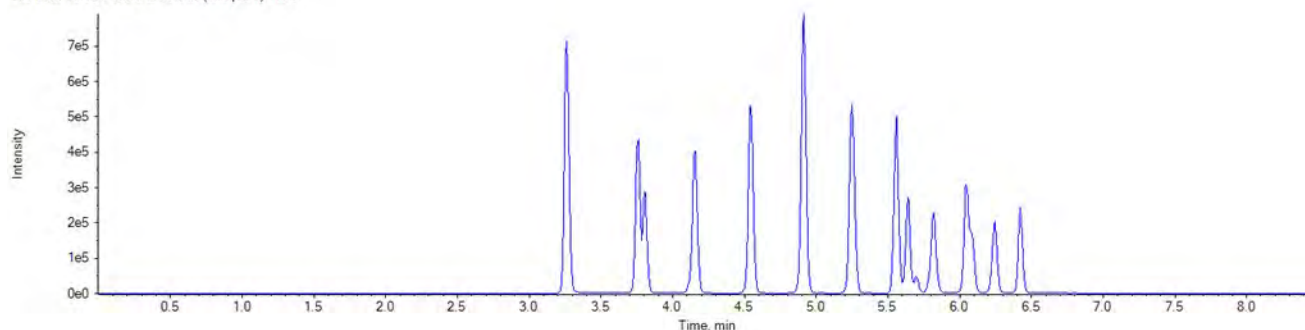
Sample Name: ICV Instrument Name: LM27631 File Name: 18NOV12DCAL-50.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	270820.6		A	13C4-PFBA	3.26	715834.4	0.378	2.096
PFPeA	3.76	1.000	265646.8		A	13C5-PFPeA	3.76	699482.2	0.380	2.198
PFBS	3.80	1.000	150059.6		A	13C3-PFBS	3.81	394903.4	0.380	1.808
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	47297.3	N/A	
PFHxA	4.15	1.000	328694.3		A	13C5-PFHxA	4.15	613579.4	0.536	2.237
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	394903.4	N/A	
PFHpA	4.54	1.000	316975.3		A	13C4-PFHpA	4.54	485394.9	0.653	2.165
PFHxS	4.55	1.000	115564.2		A	13C3-PFHxS	4.55	304897.8	0.379	1.838
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	31532.8	N/A	
PFHpS	4.91	1.080	118318.7		A	13C3-PFHxS	4.55	304897.8	0.388	2.043
PFOA	4.91	1.000	332094.4		A	13C8-PFOA	4.91	843573.3	0.394	2.103
PFOS	5.24	1.000	100952.5		M	13C8-PFOS	5.24	266211.4	0.379	1.658
PFNA	5.26	1.000	271240.4		A	13C9-PFNA	5.26	458821.5	0.591	2.132
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
PFDA	5.56	1.000	224279.8		A	13C6-PFDA	5.56	590290.3	0.380	2.014
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	587080.1	N/A	
NMeFOSAA	5.70	1.000	30591.9		A	d3-NMeFOSAA	5.70	70133.2	0.436	2.465
PFDS	5.79	1.110	52860.9		M	13C8-PFOS	5.24	266211.4	0.199	1.799
PFUnDA	5.82	1.000	183511.3		A	13C7-PFUnDA	5.82	228363.9	0.804	2.101
NEtFOSAA	5.83	1.000	26149.3		A	d5-NEtFOSAA	5.83	59551.3	0.439	2.302
PFDODA	6.05	1.000	185295.0		A	13C2-PFDODA	6.05	495858.1	0.374	1.903
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	299185.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	75186.9	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	255149.8	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	53596.2	N/A	
PFTTrDA	6.25	1.030	165153.1		A	13C2-PFDODA	6.05	495858.1	0.333	2.102
PFTeDA	6.42	1.000	135651.0		A	13C2-PFTeDA	6.42	365300.2	0.371	2.082
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	
PFOA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	

Total Ion Chromatogram

TIC from 18NOV12DCAL-50.wiff (sample 1) - ICV



APPROVED

By MCD at 6:34 pm, 11/12/18

BSI05 Page 1129 of 1595

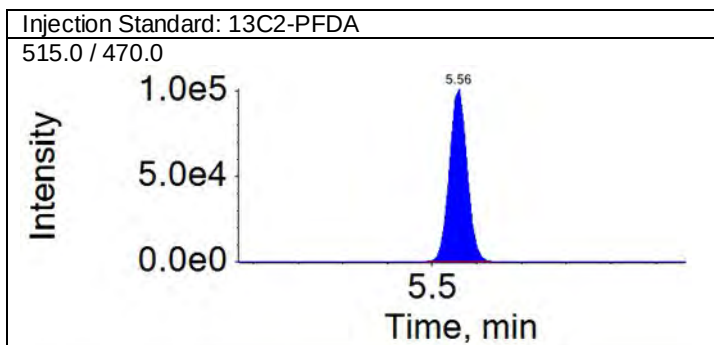
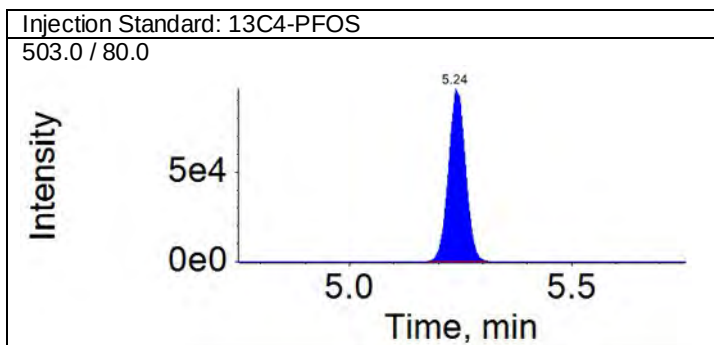
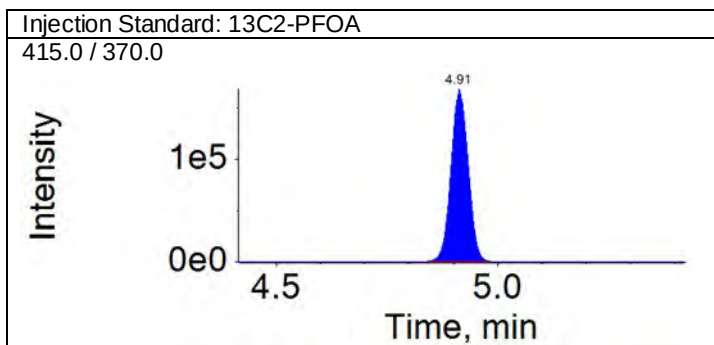
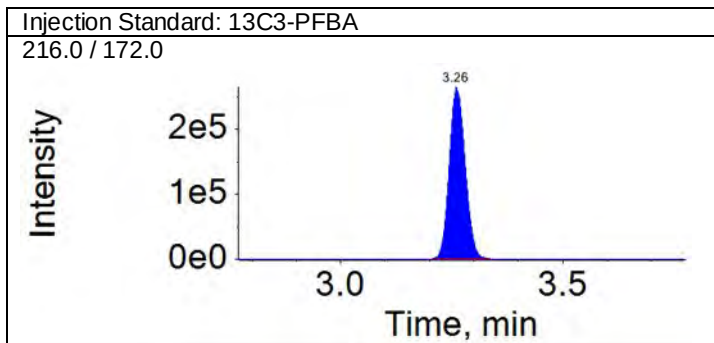
REVIEWED

By HMK at 10:53 am, 11/13/18

Page 2 of 17

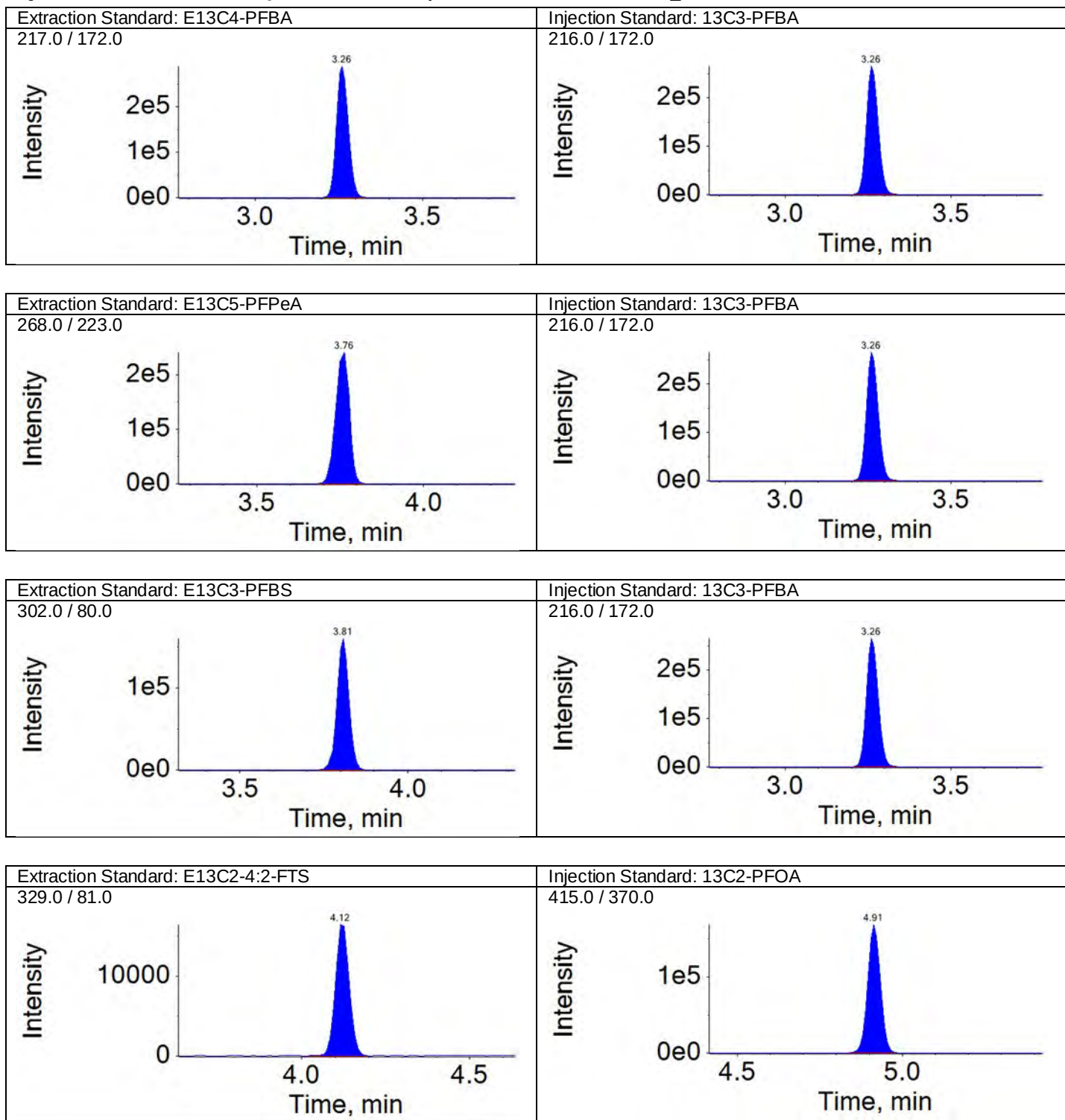
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



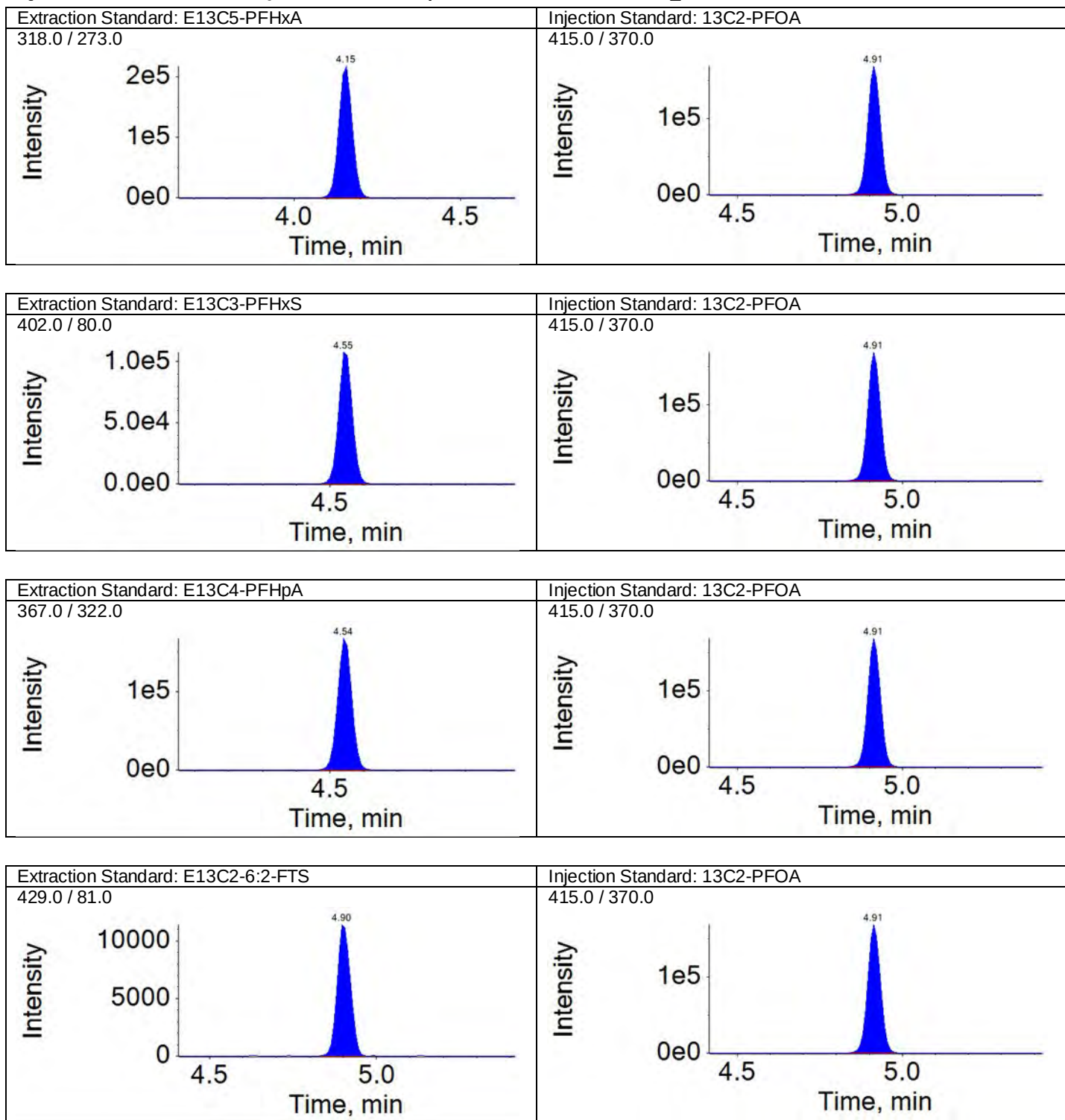
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



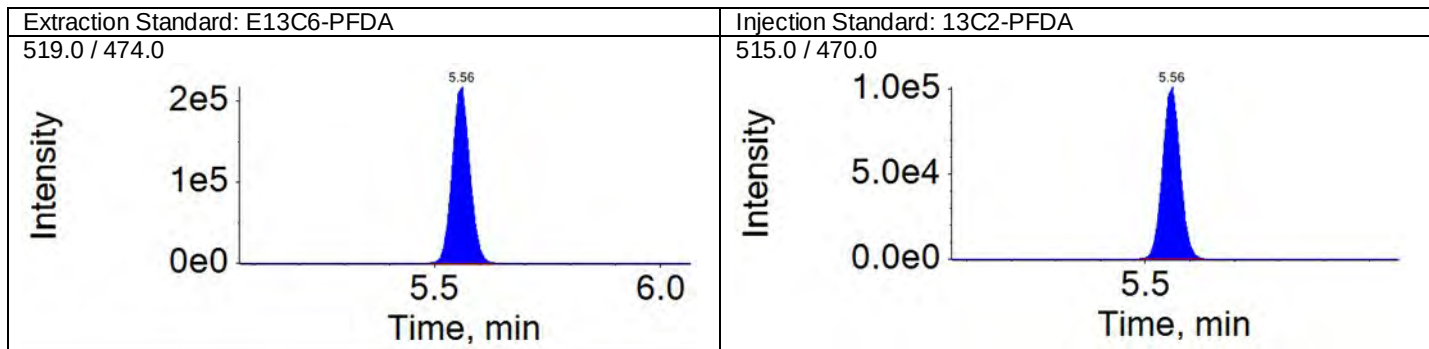
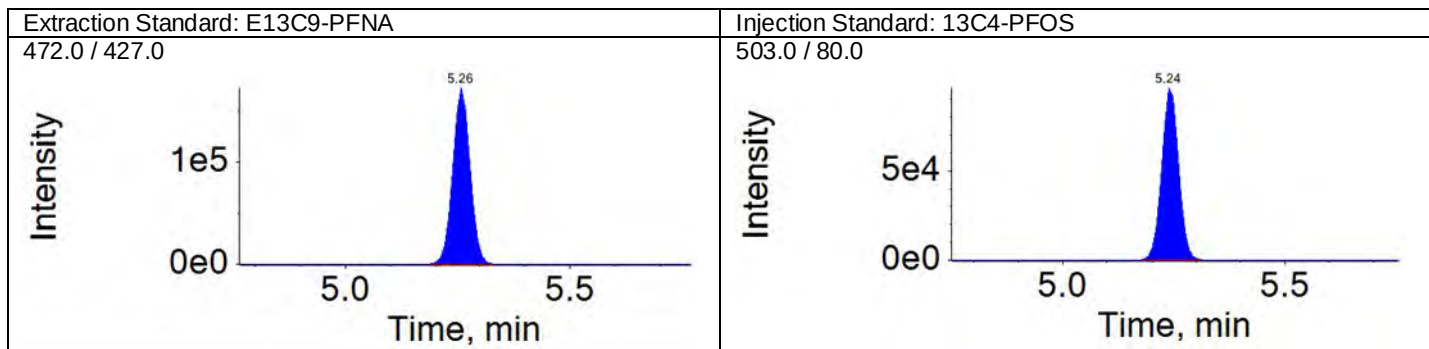
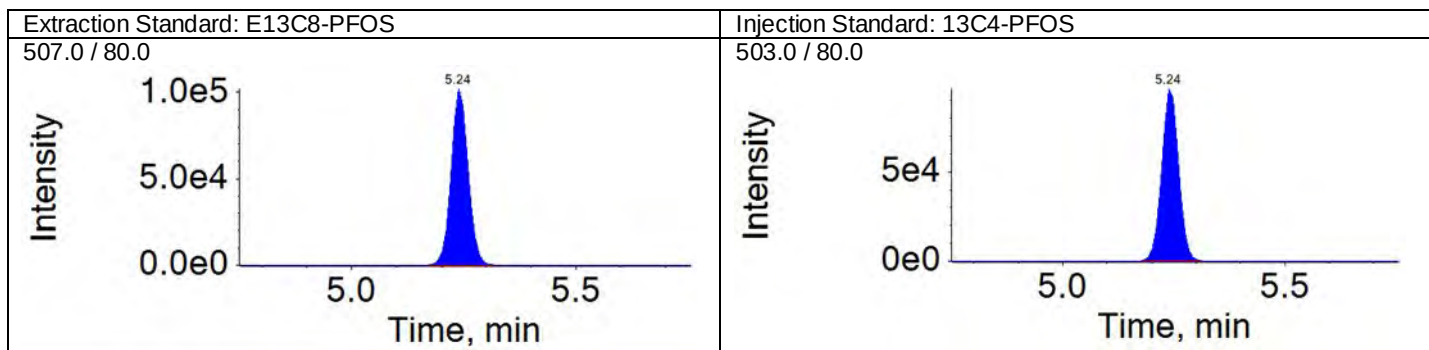
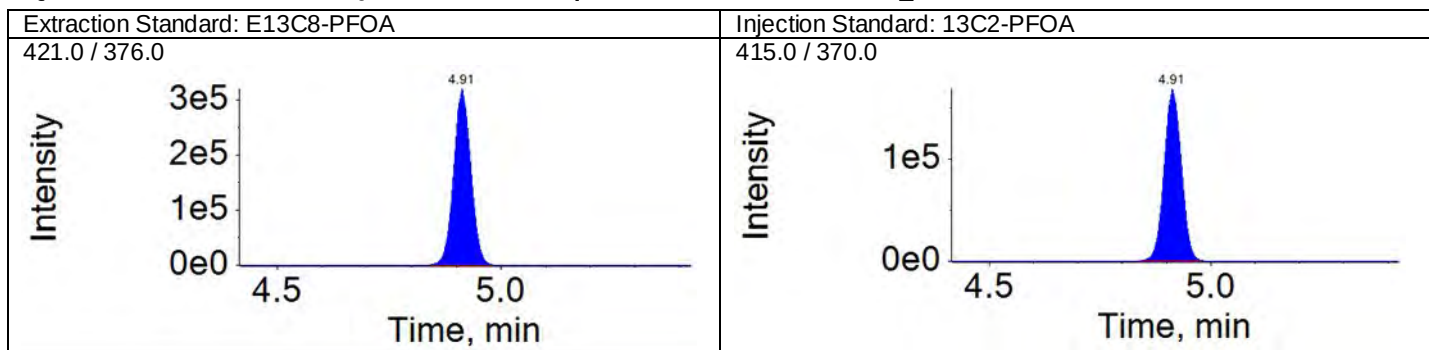
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



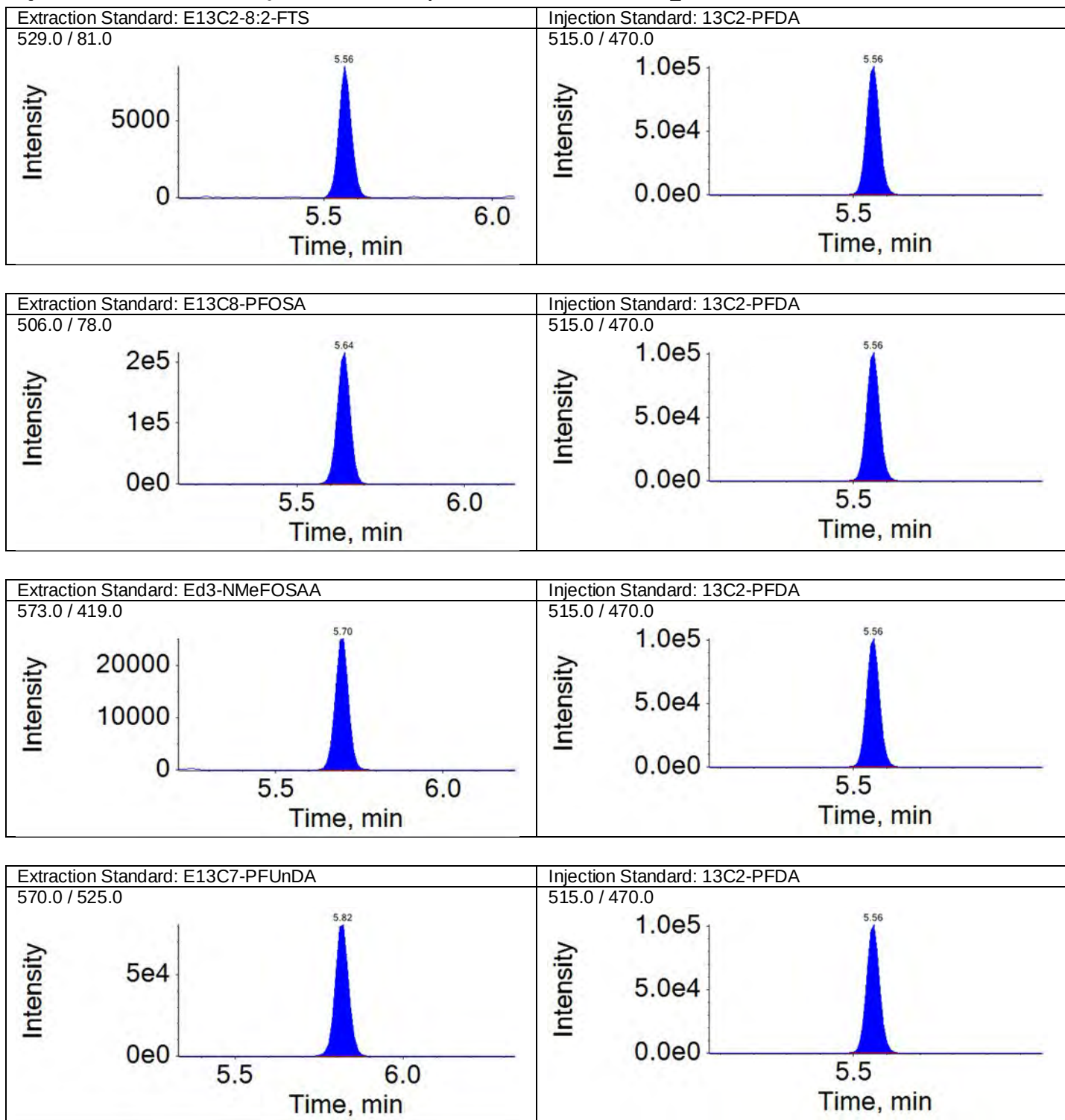
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



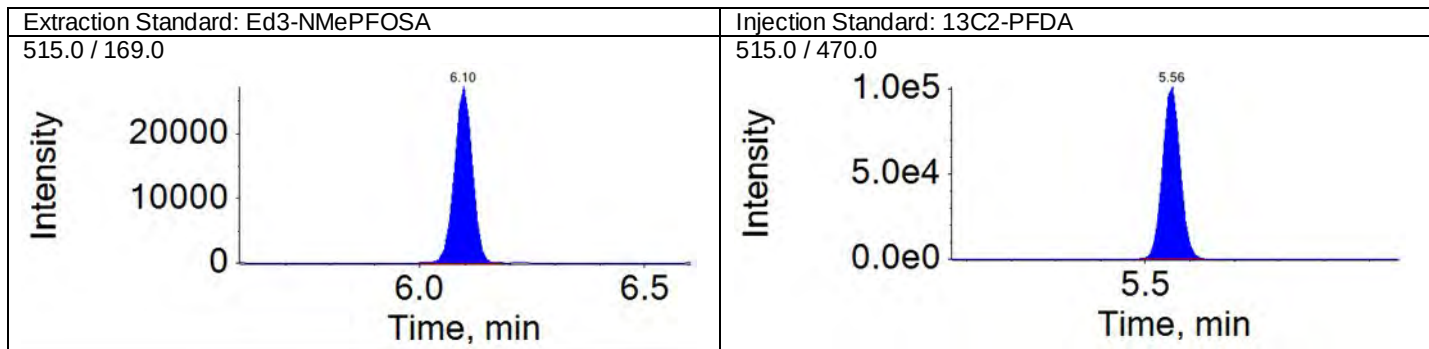
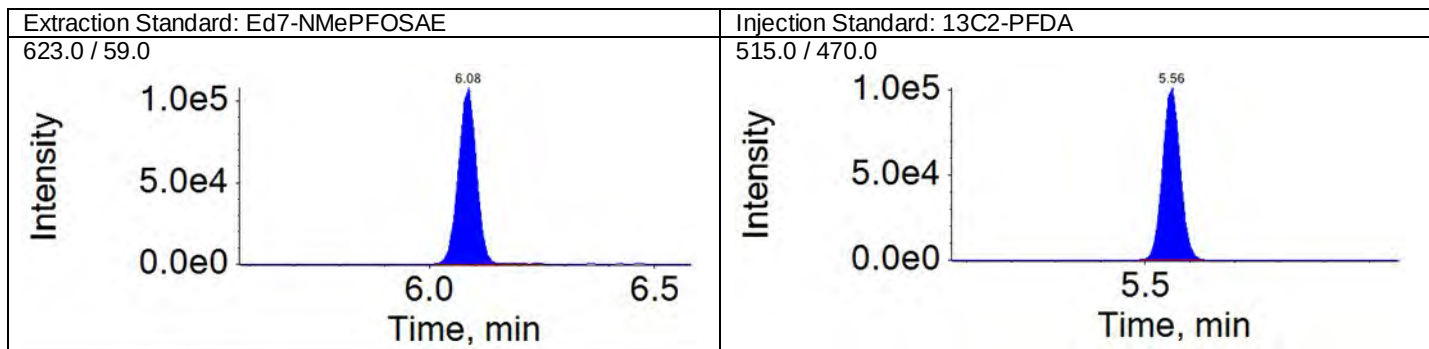
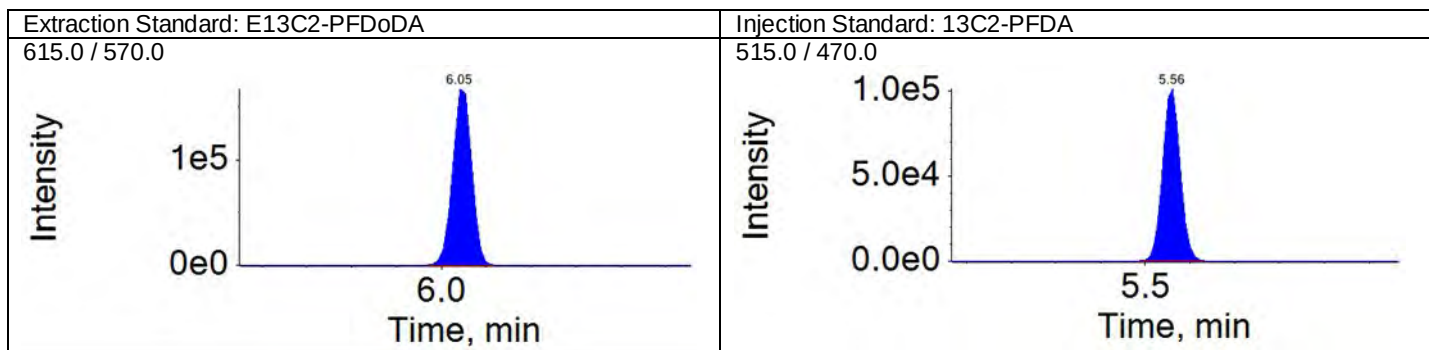
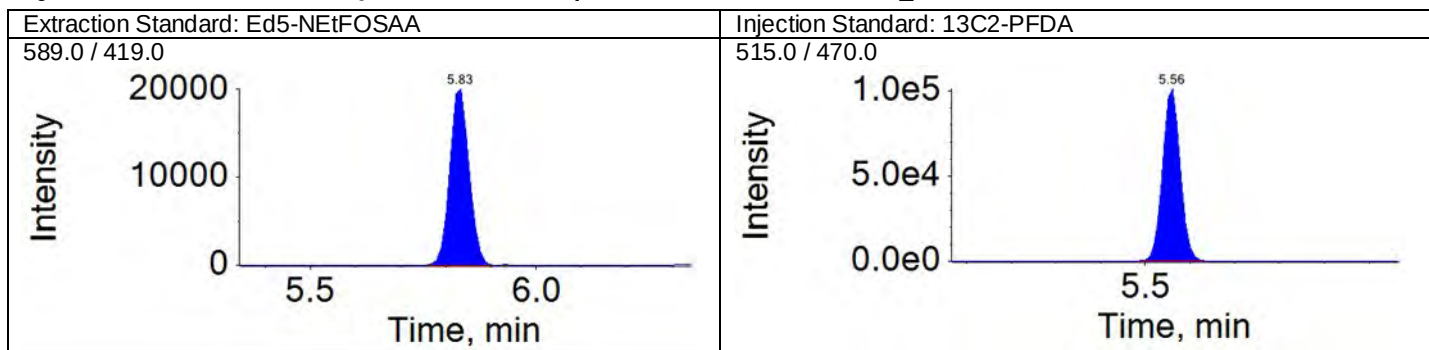
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



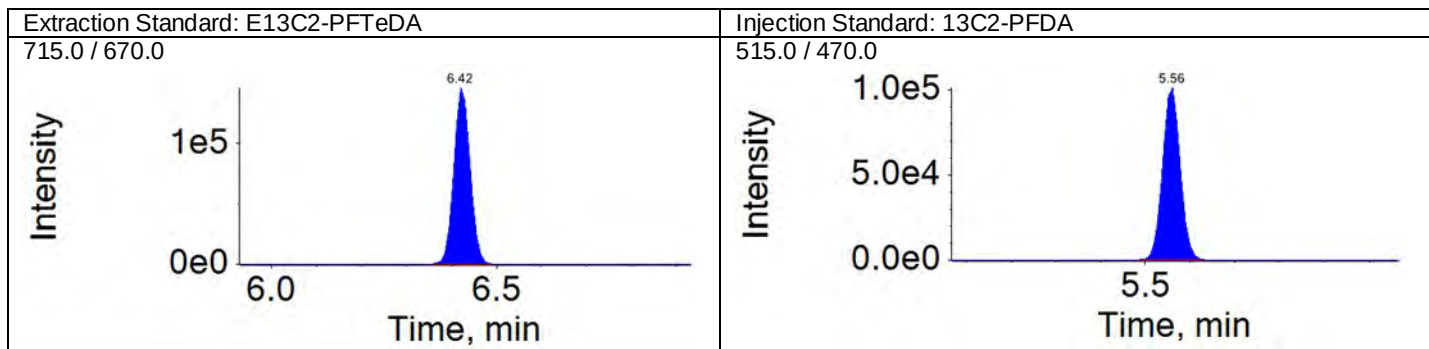
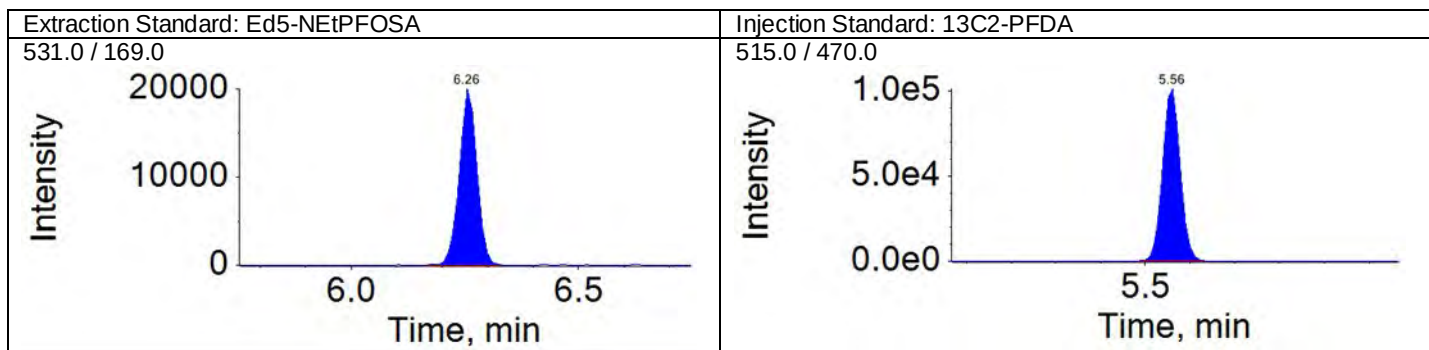
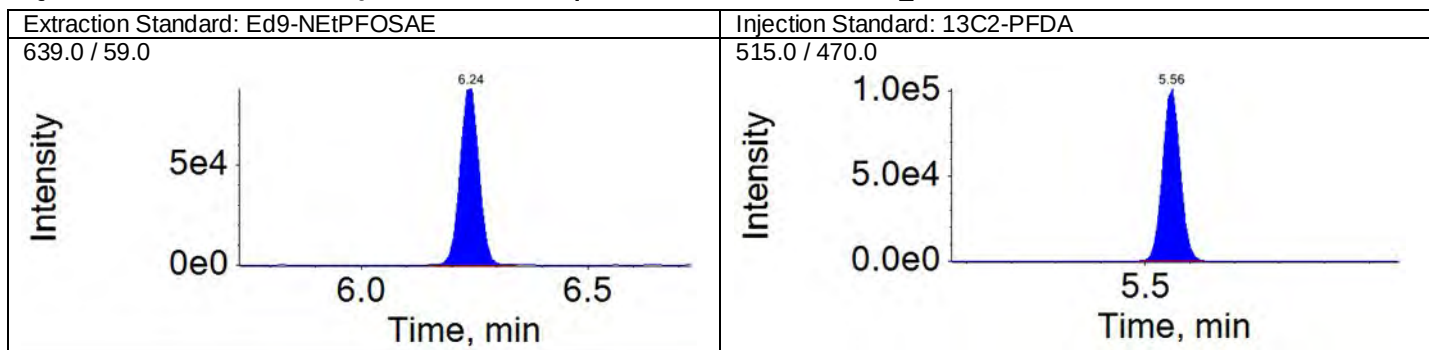
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



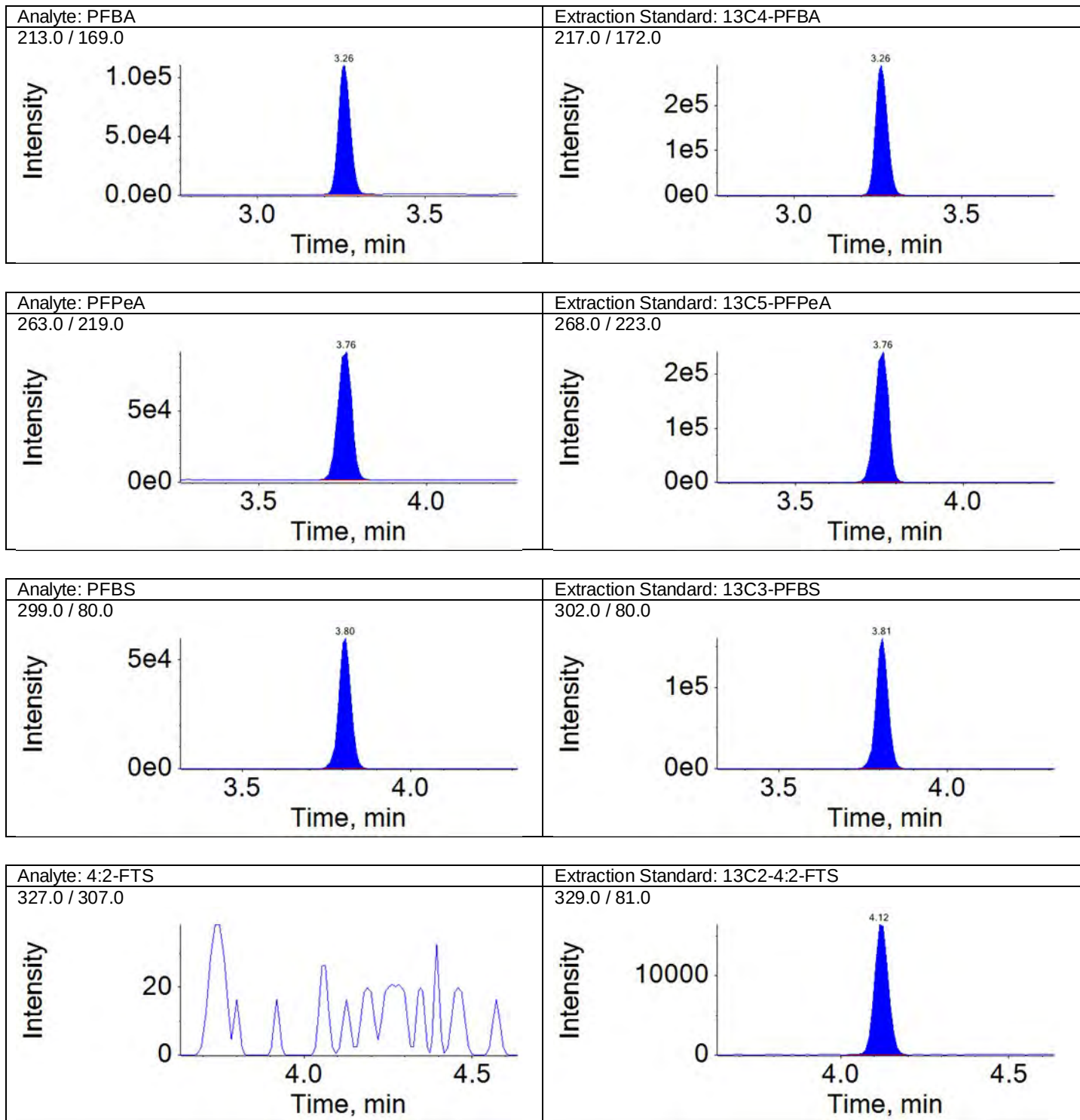
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



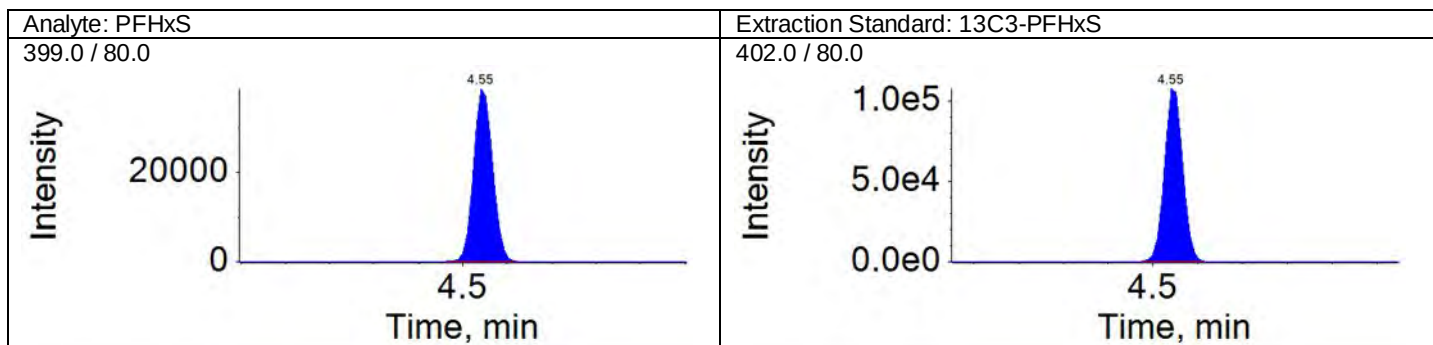
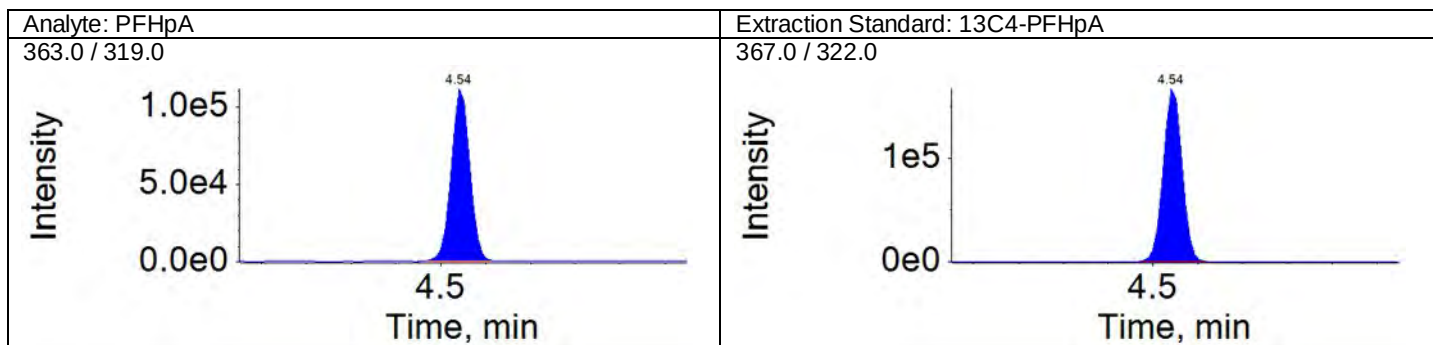
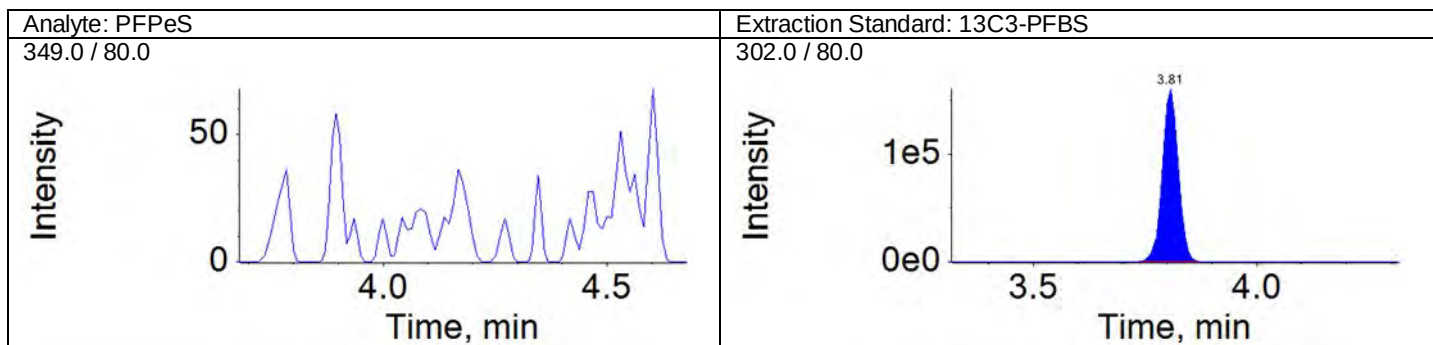
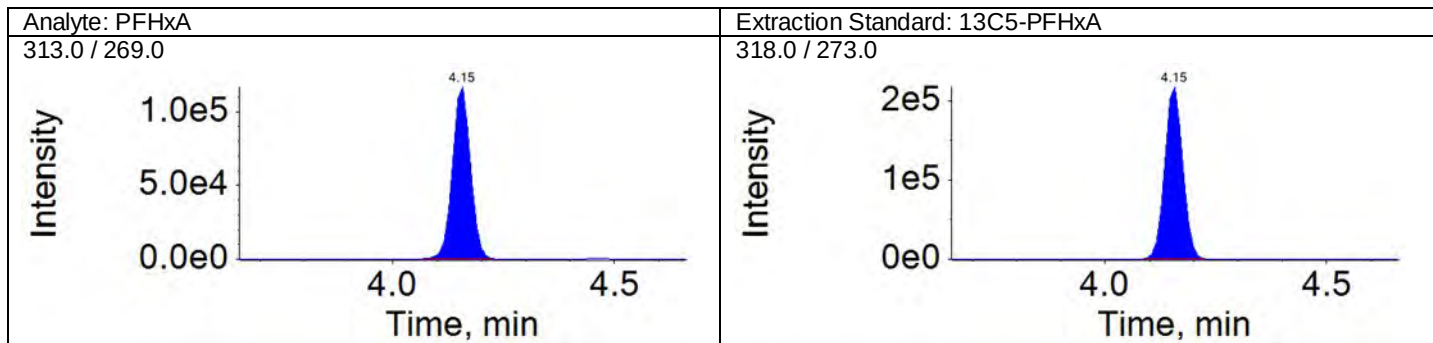
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



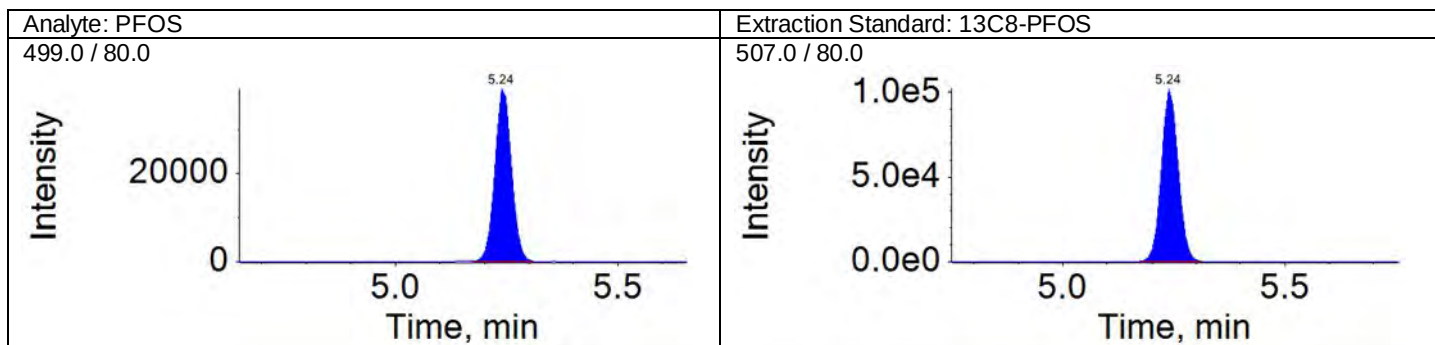
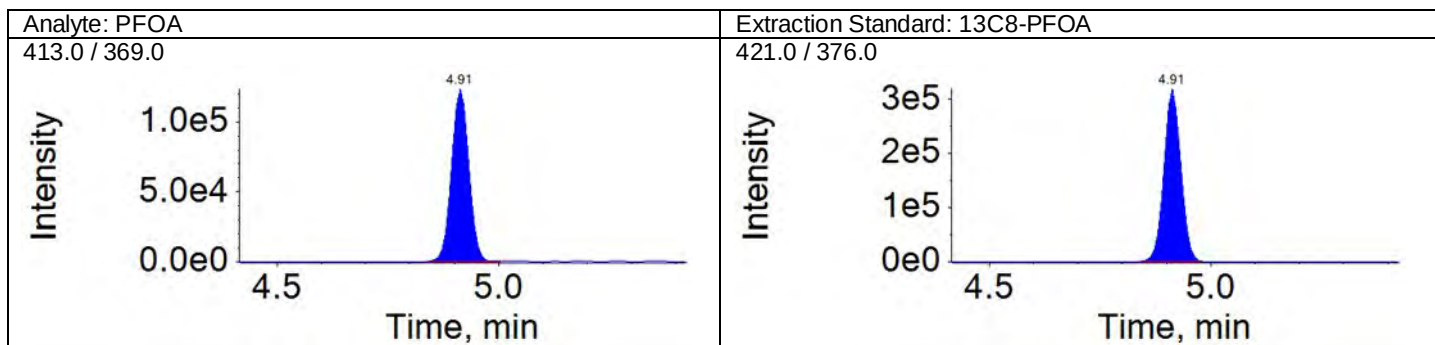
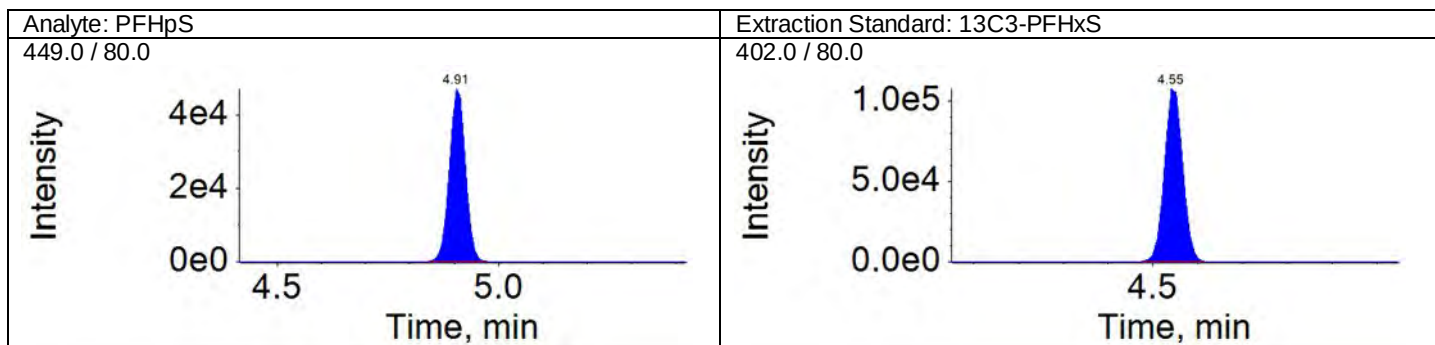
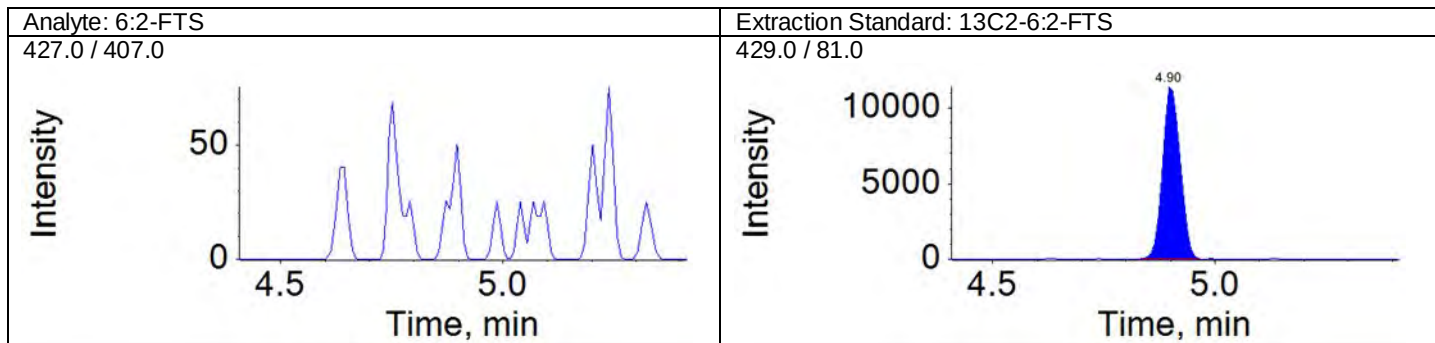
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



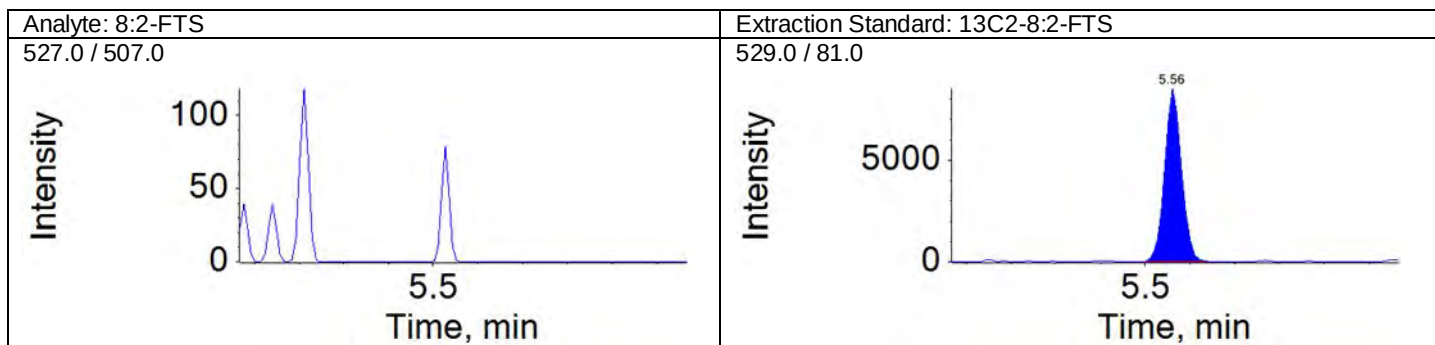
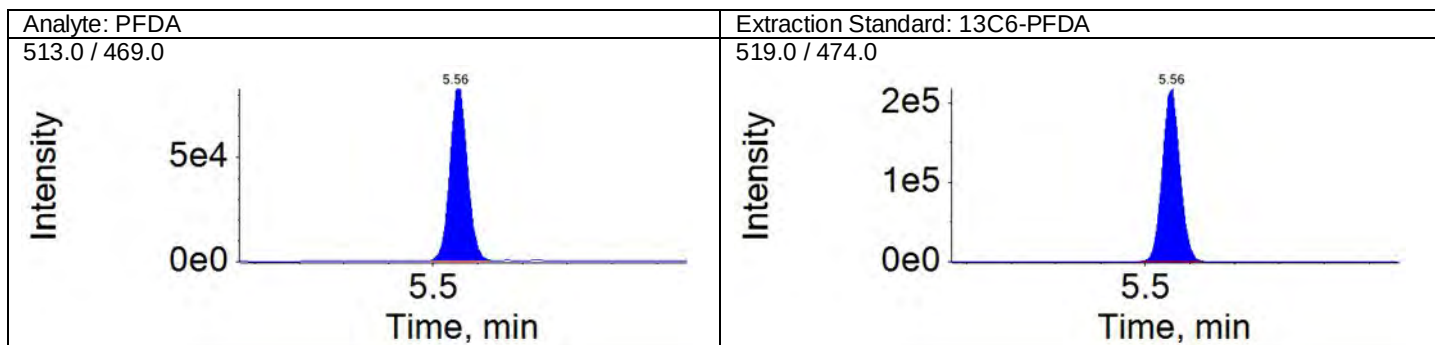
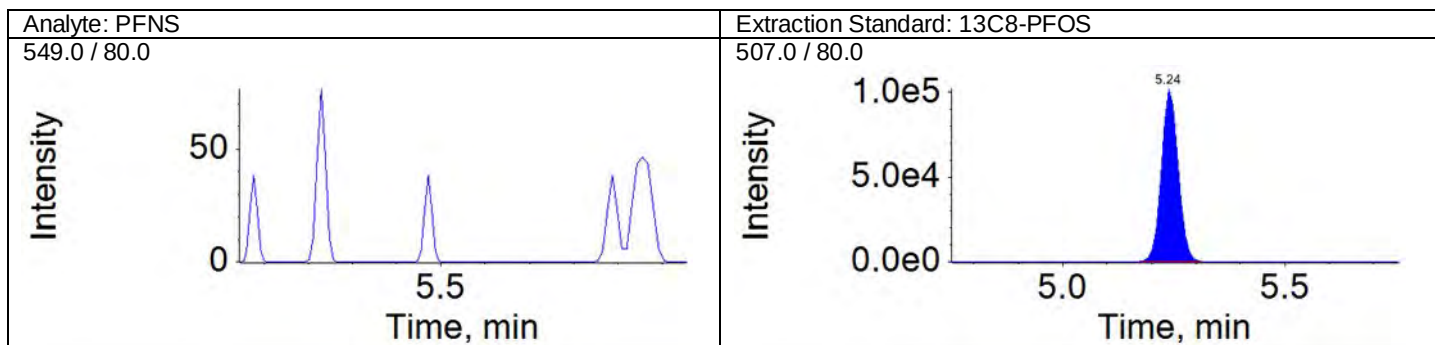
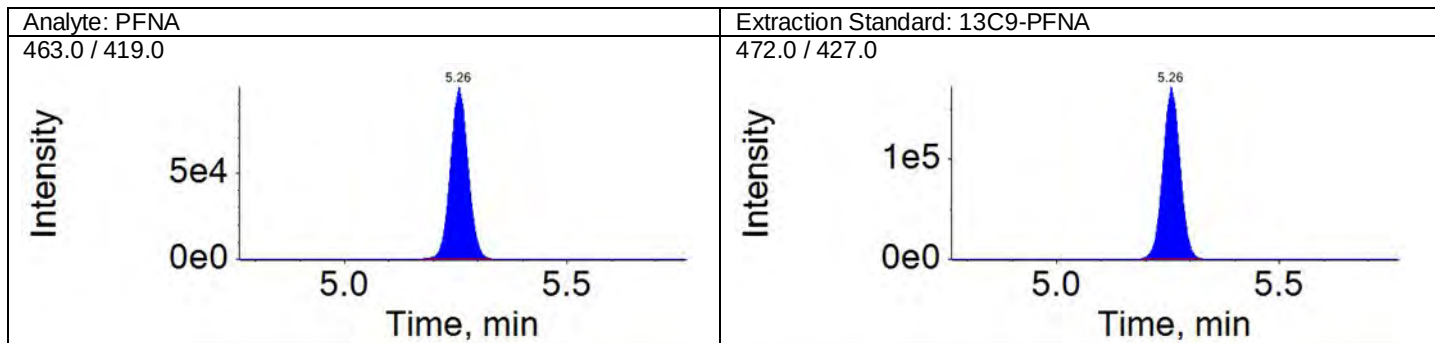
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



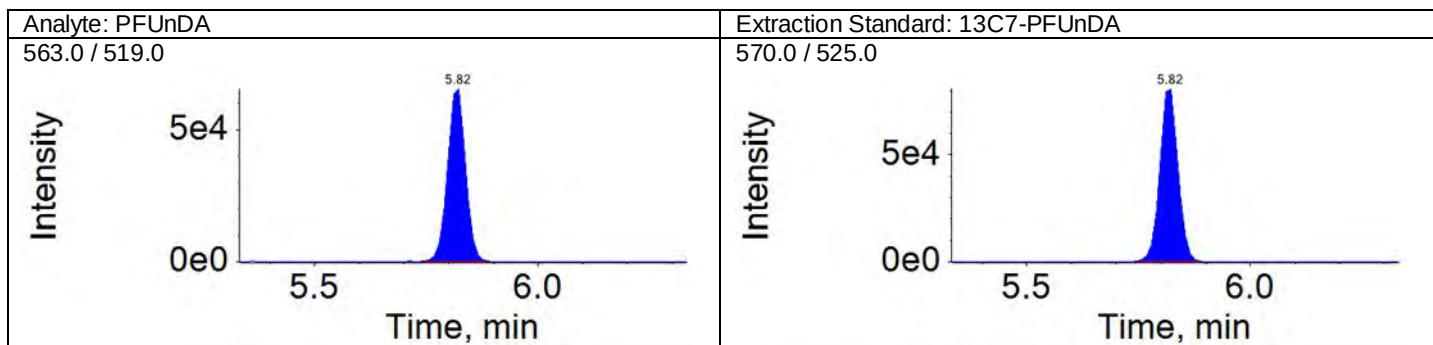
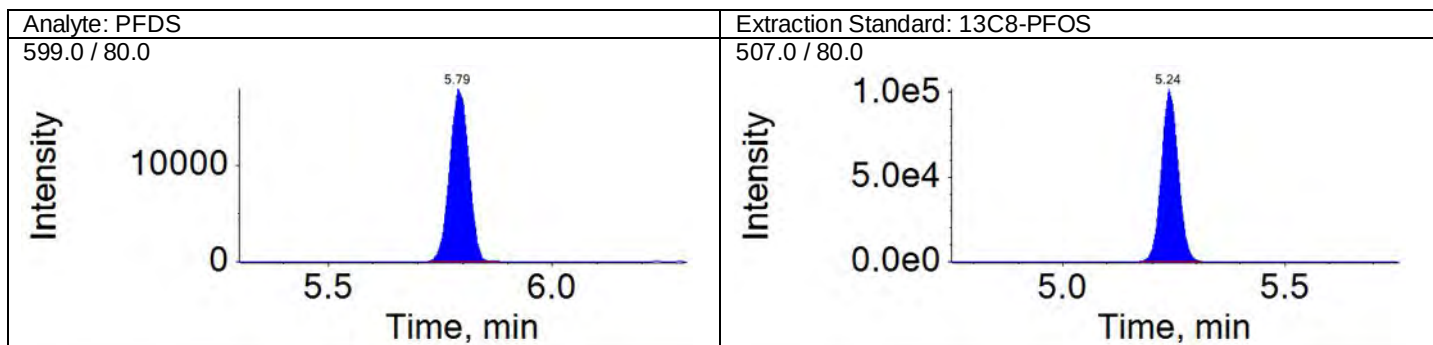
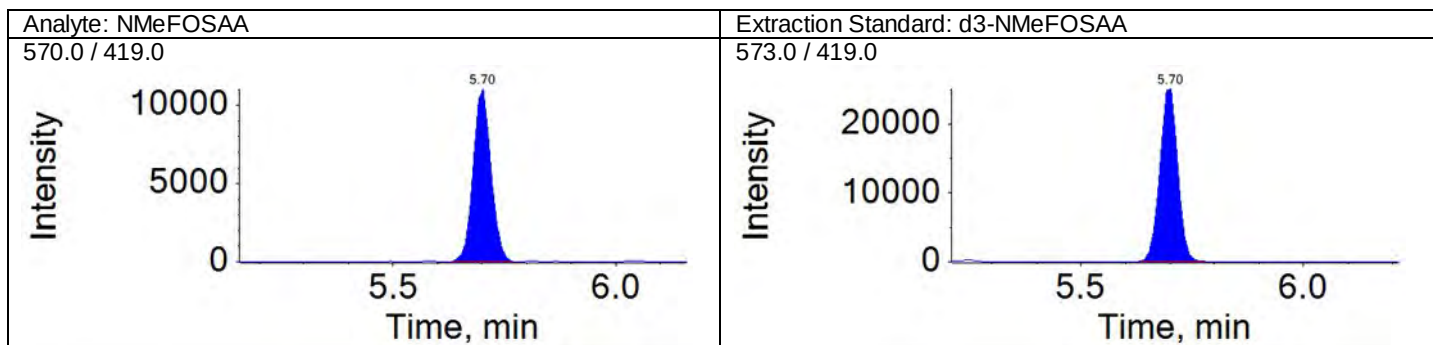
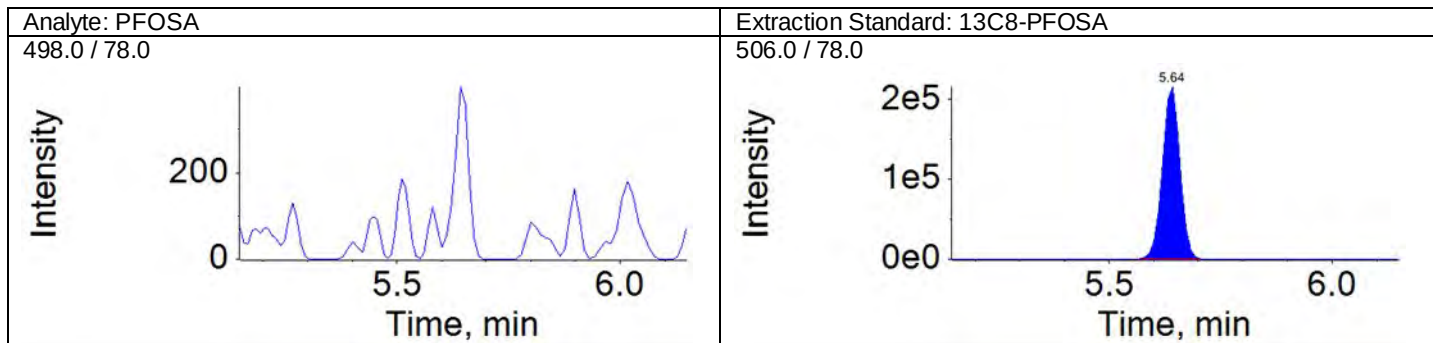
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



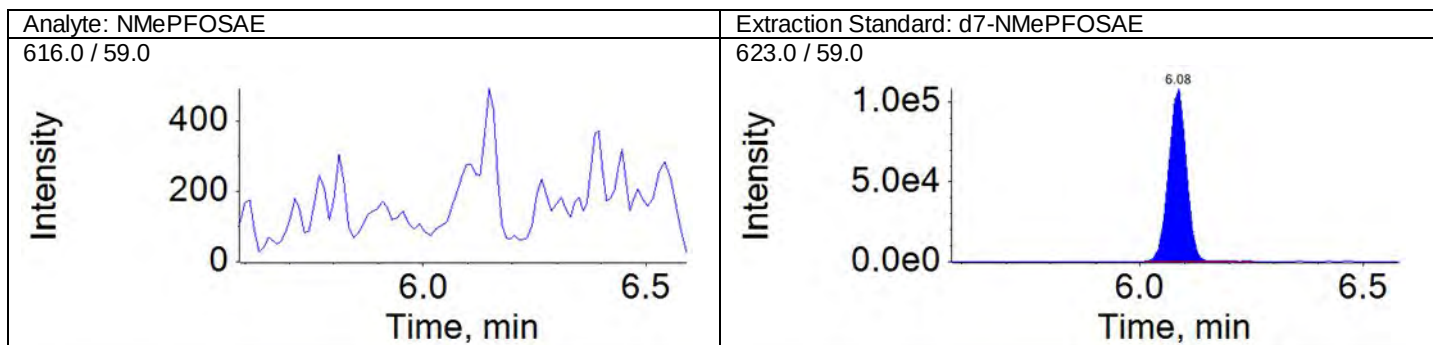
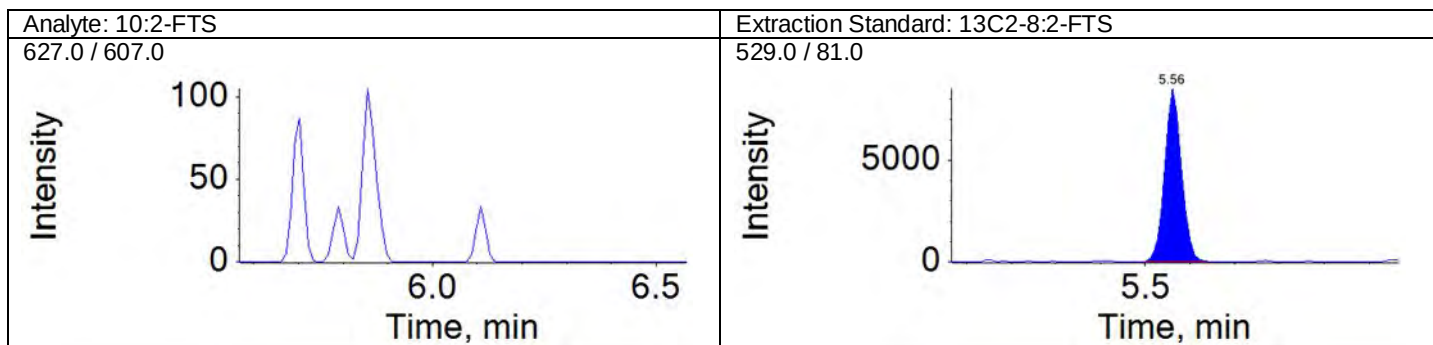
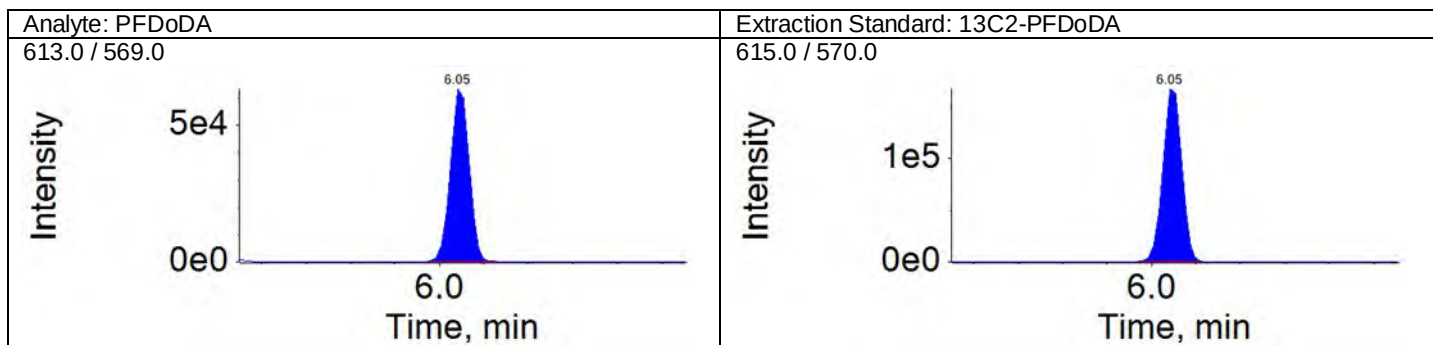
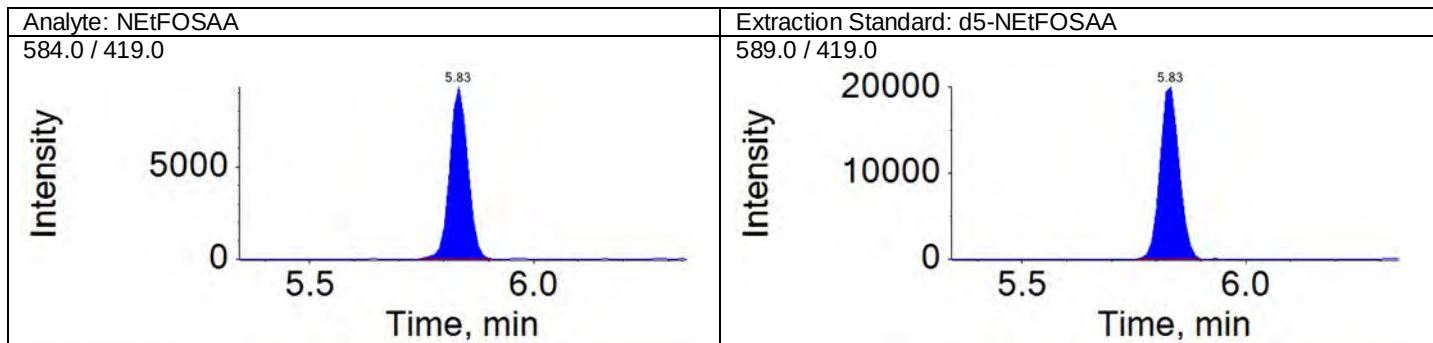
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



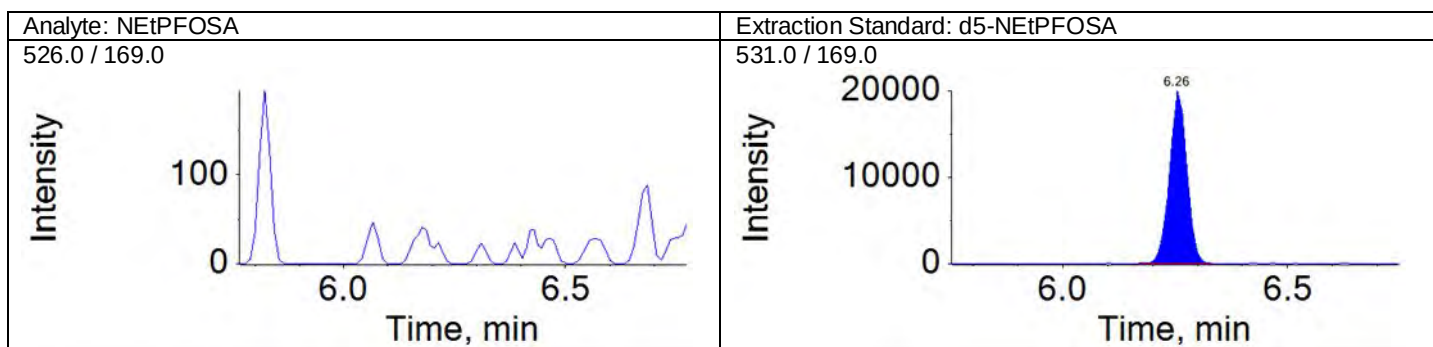
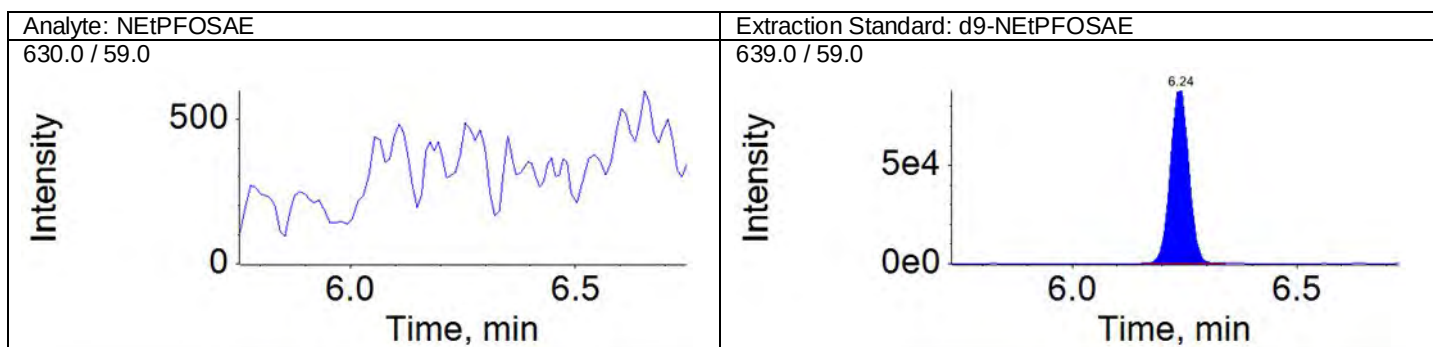
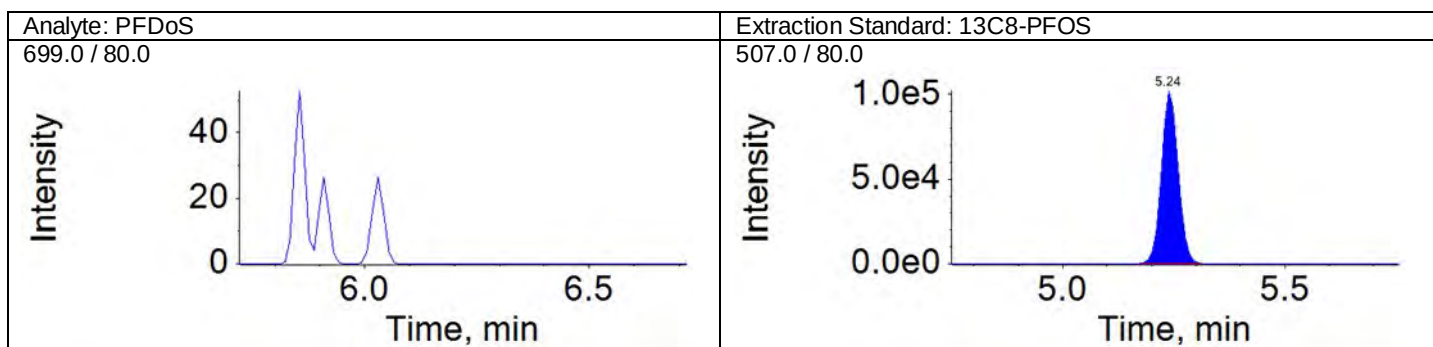
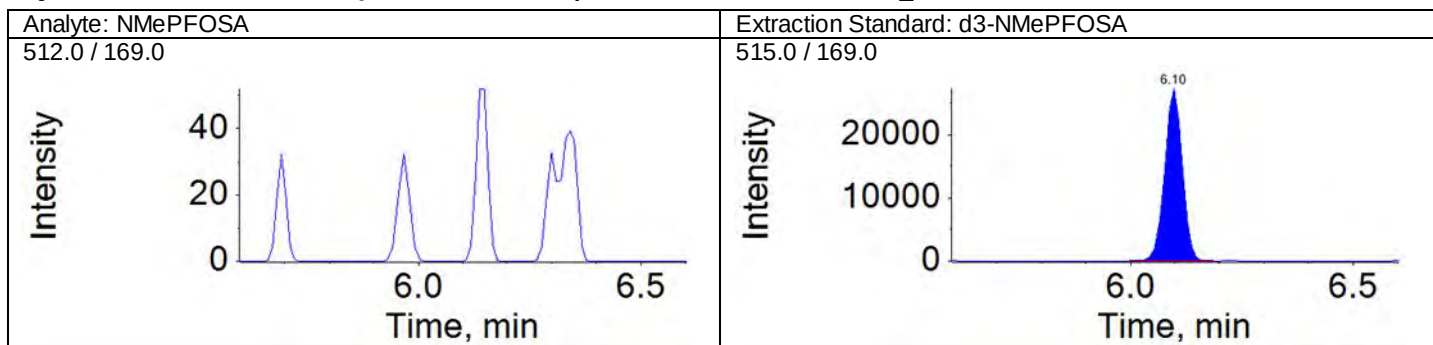
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



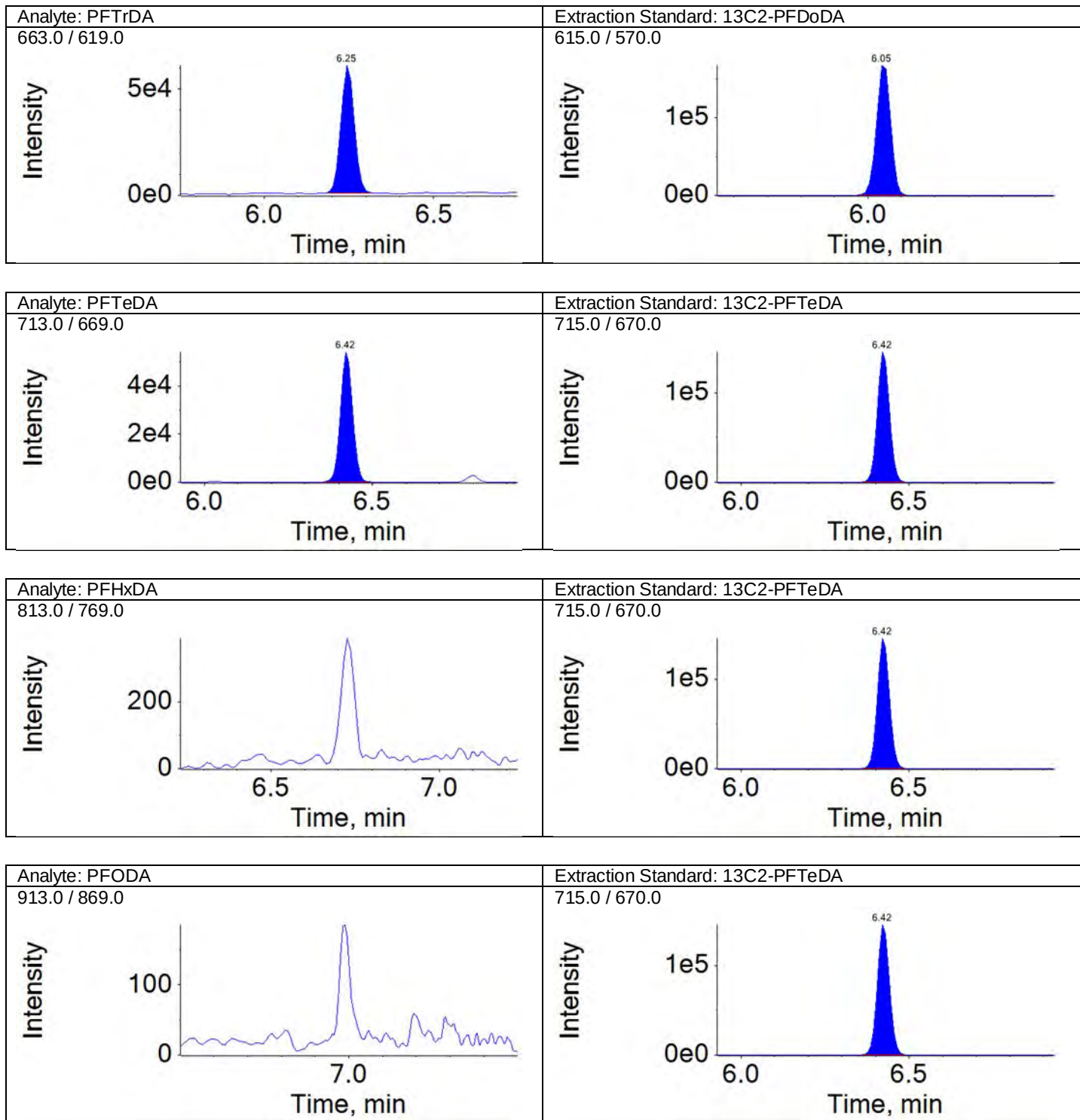
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

Component Name:

PFOS

RT (min.):

5.24

Peak Area:

101508.83

Mass Range:

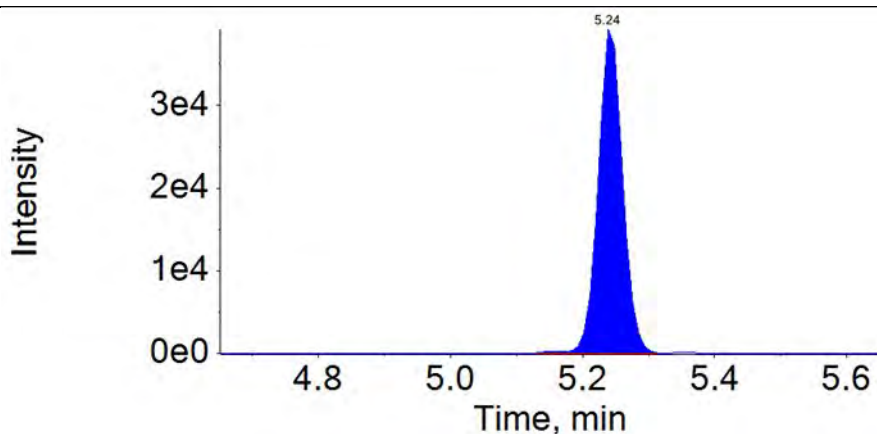
499.0 / 80.0

File Name:

18NOV12DCAL-50.wiff

Sample Name:

ICV



Integration Comment: incorrect integration

Component Name:

PFDS

RT (min.):

5.79

Peak Area:

52928.55

Mass Range:

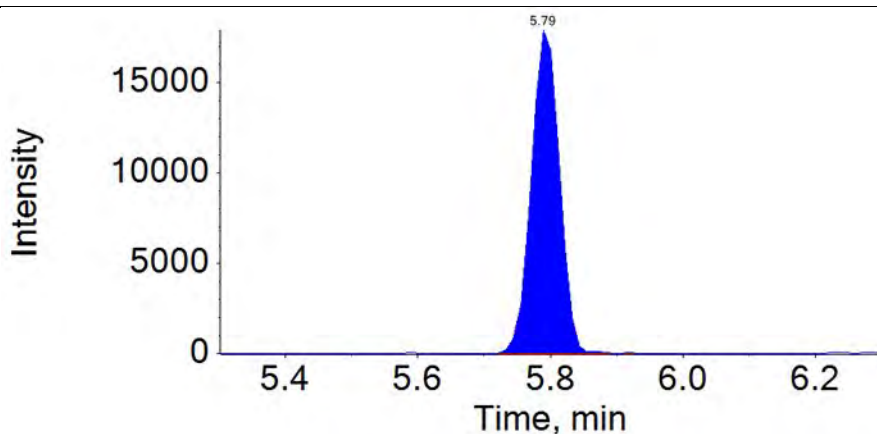
599.0 / 80.0

File Name:

18NOV12DCAL-50.wiff

Sample Name:

ICV



Integration Comment: incorrect integration

Component Name:

PFHxA_2

RT (min.):

4.15

Peak Area:

3909.75

Mass Range:

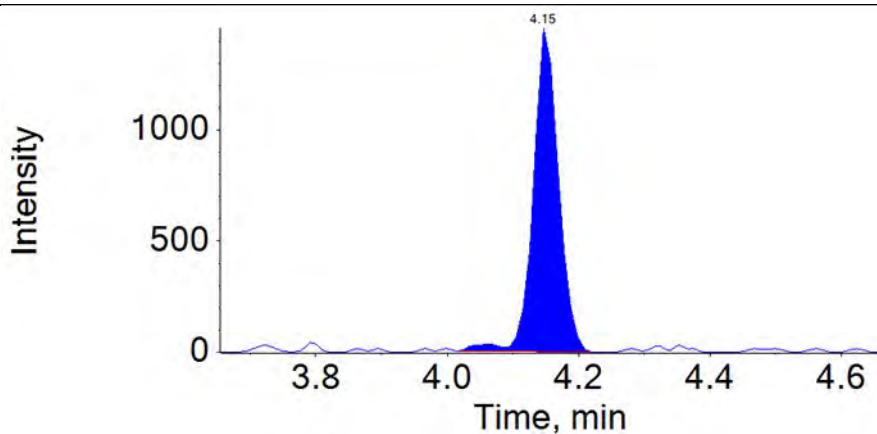
313.0 / 119.0

File Name:

18NOV12DCAL-50.wiff

Sample Name:

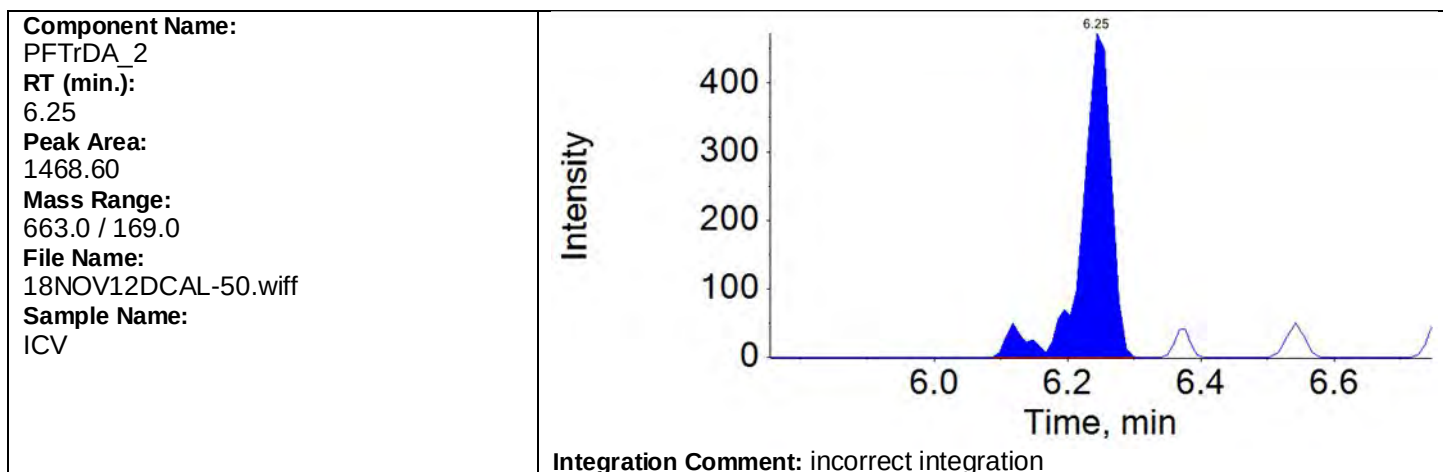
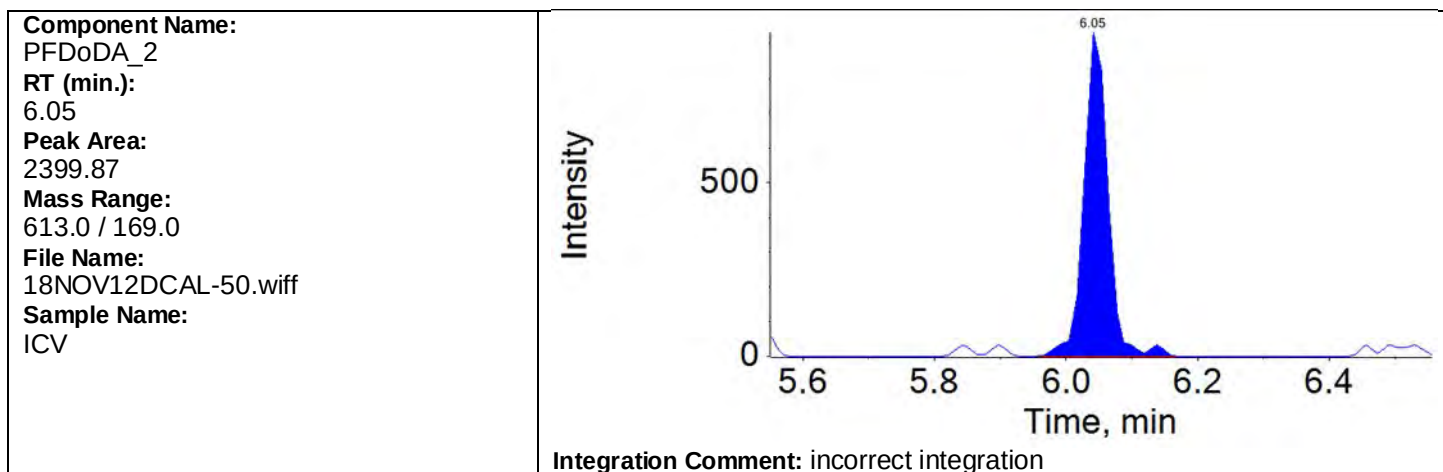
ICV



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:34 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

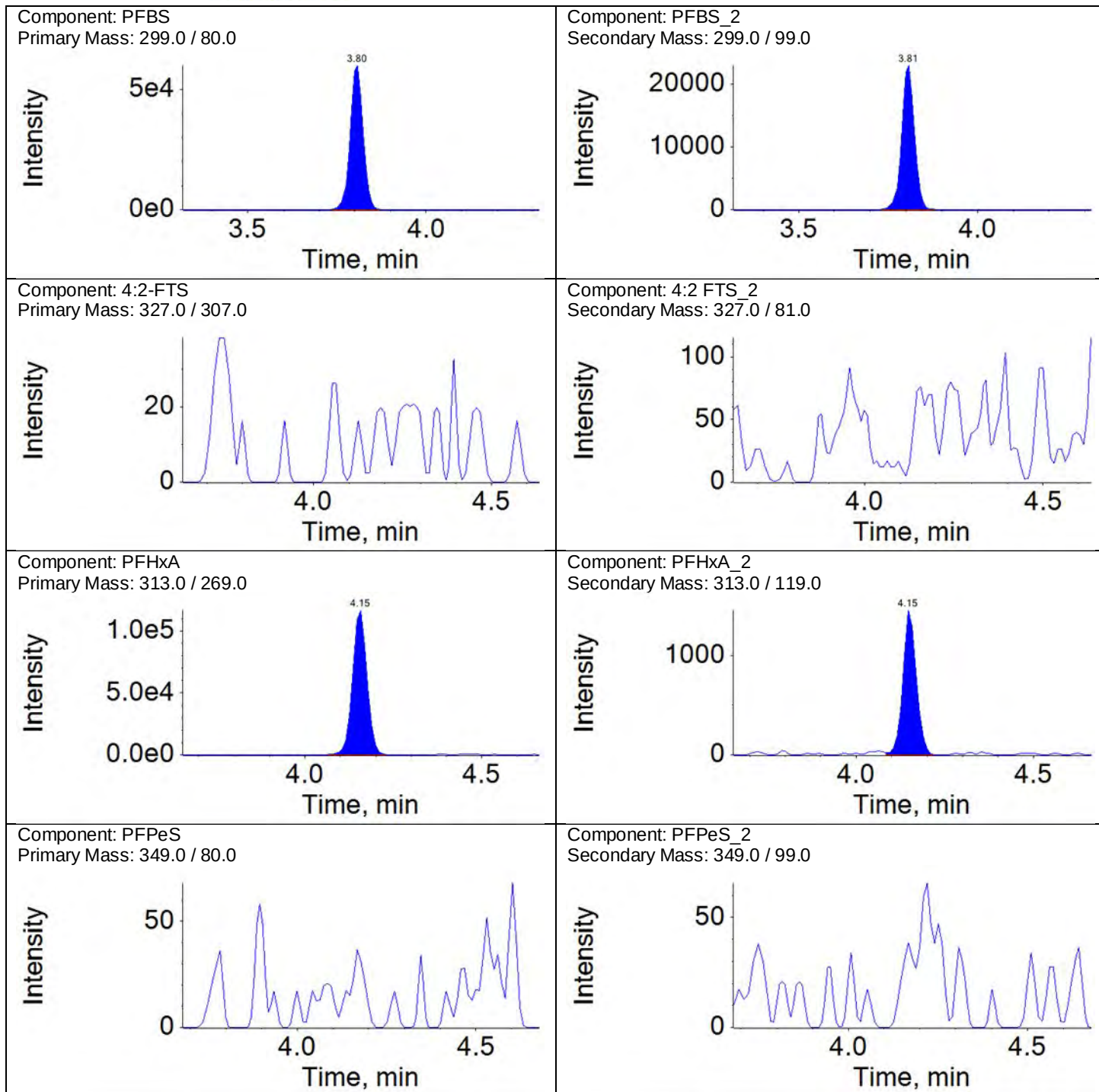
Ion Ratio Report

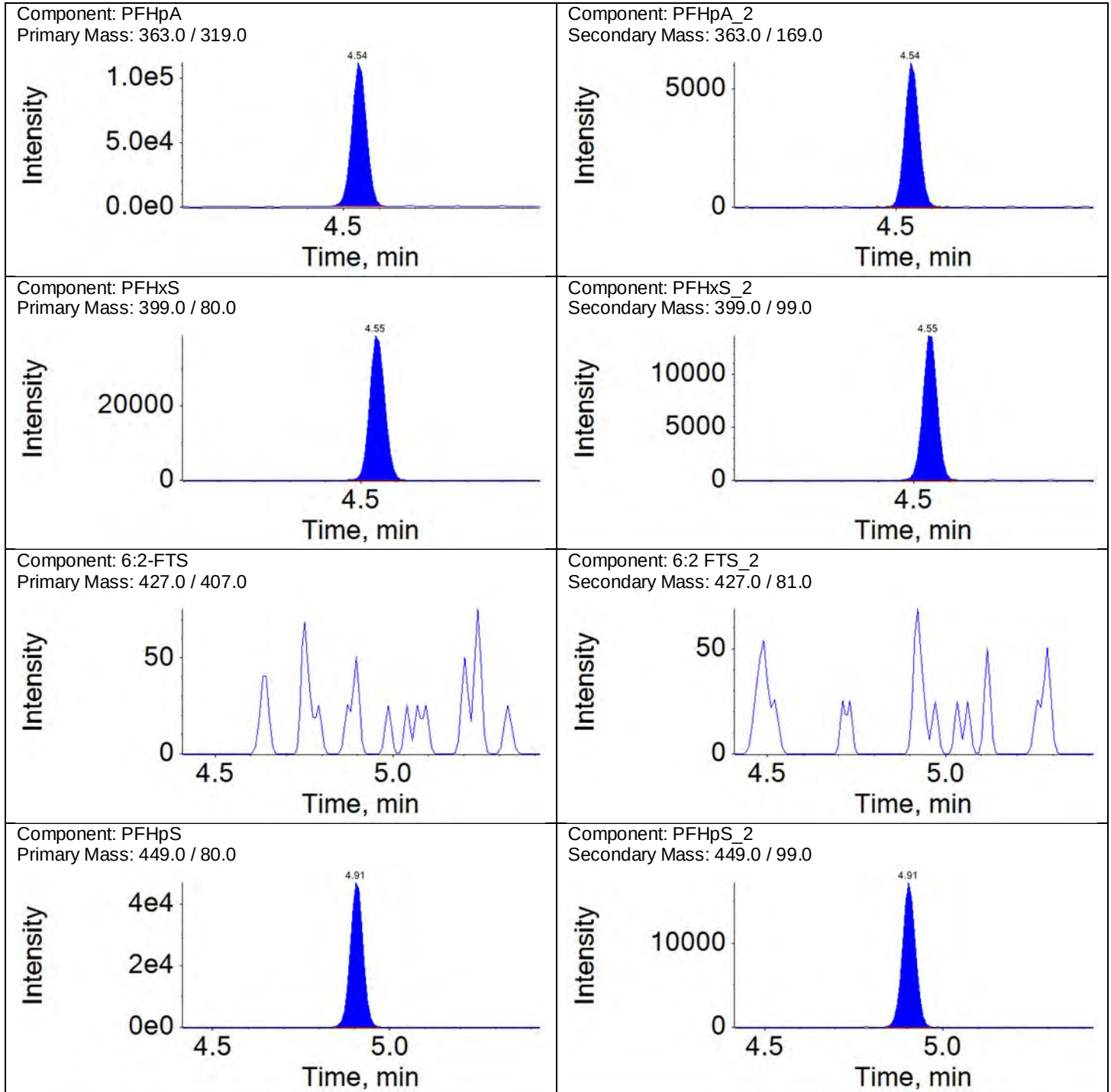
Sample Name: ICV

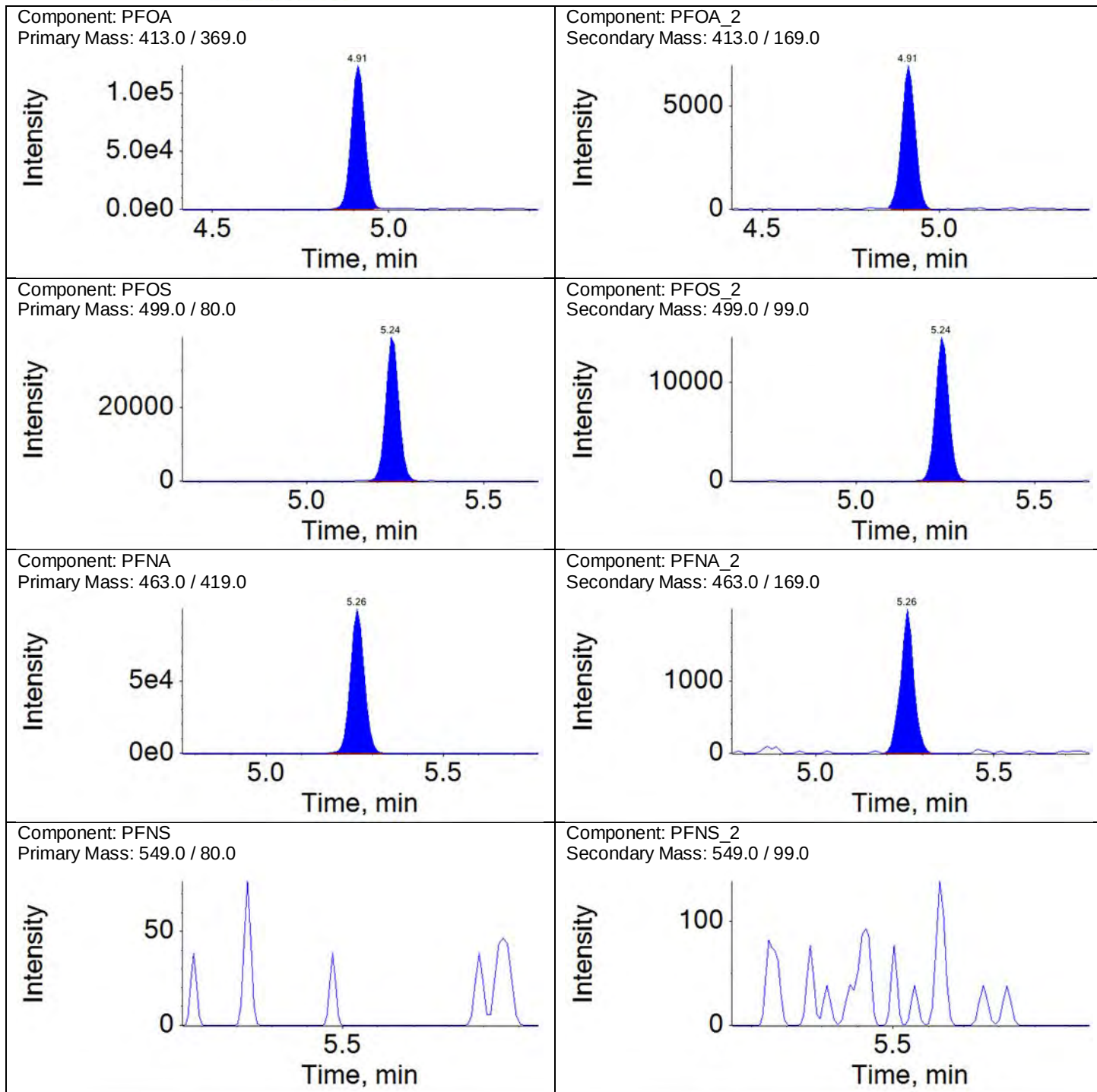
Instrument Name: LM27631

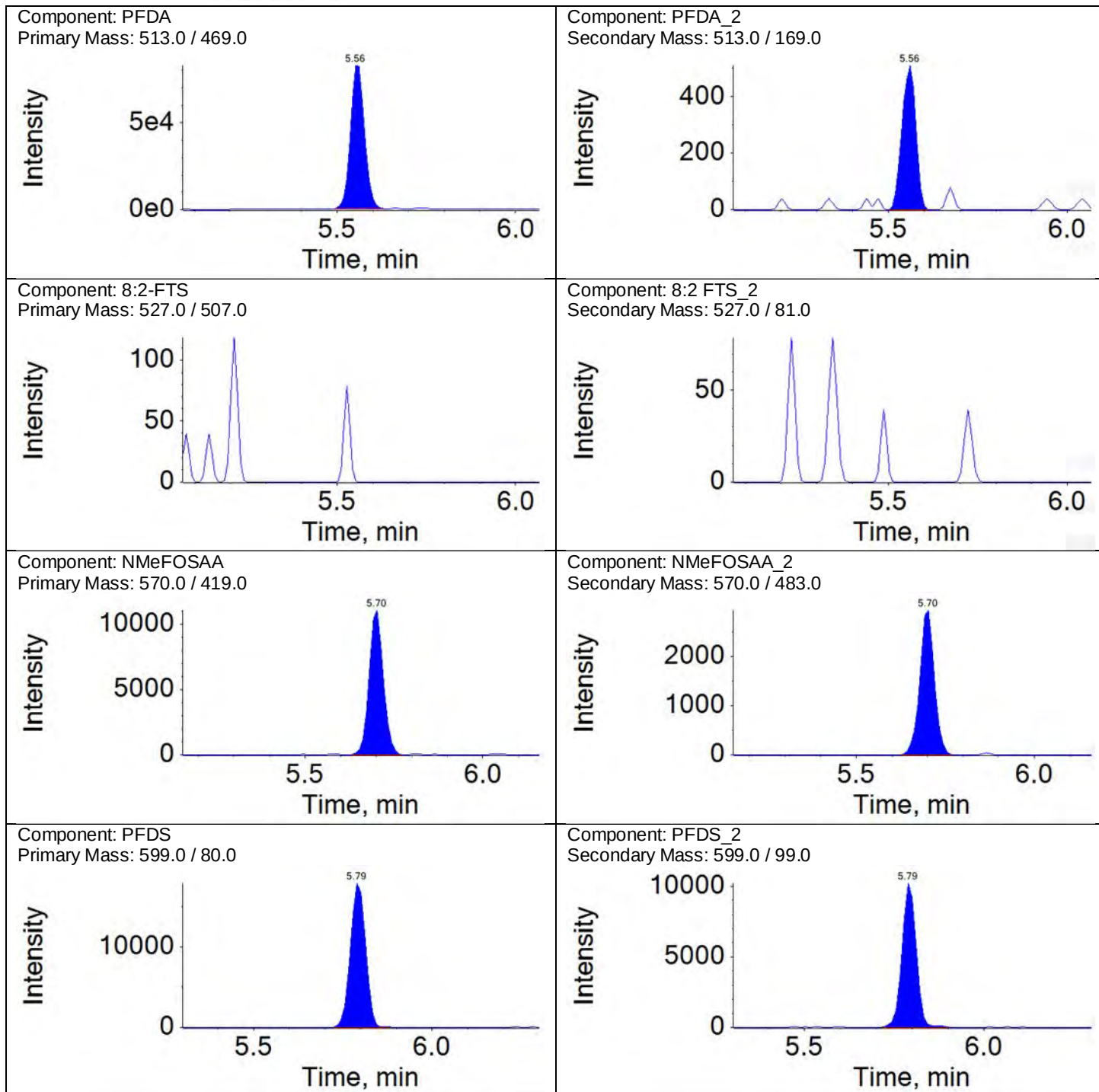
File Name: 18NOV12DCAL-50.wiff

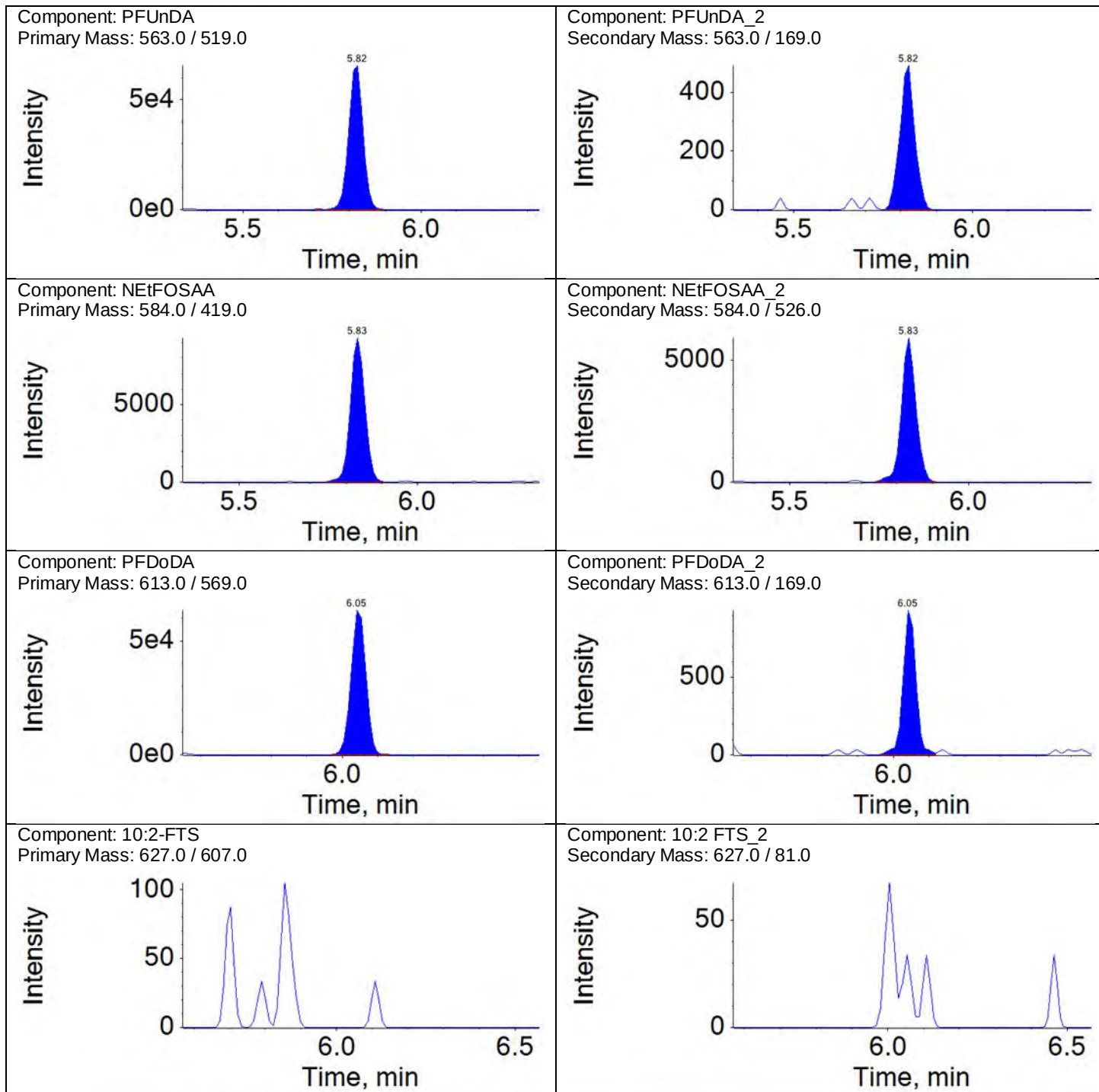
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	150059.59	A	0.3619	0.3773			
PFBS_2	3.81	1.00	56617.66	A	0.3619	0.3773	4	50	
4:2-FTS	N/A	N/A	N/A	A	0.6730	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	0.6730	N/A		#NA!	
PFHxA	4.15	1.00	328694.28	A	0.0117	0.0117			
PFHxA_2	4.15	1.00	3829.67	M	0.0117	0.0117	0	50	
PFPeS	N/A	N/A	N/A	A	0.5191	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5191	N/A		50	
PFHpA	4.54	1.00	316975.28	A	0.0563	0.0530			
PFHpA_2	4.54	1.00	16790.55	A	0.0563	0.0530	-6	50	
PFHxS	4.55	1.00	115564.23	A	0.3428	0.3340			
PFHxS_2	4.55	1.00	38596.78	A	0.3428	0.3340	-3	50	
6:2-FTS	N/A	N/A	N/A	A	0.6604	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	0.6604	N/A		#NA!	
PFHpS	4.91	1.08	118318.71	A	0.4066	0.3735			
PFHpS_2	4.91	1.08	44193.16	A	0.4066	0.3735	-8	50	
PFOA	4.91	1.00	332094.35	A	0.0562	0.0559			
PFOA_2	4.91	1.00	18574.54	A	0.0562	0.0559	0	50	
PFOS	5.24	1.00	100952.54	M	0.2968	0.3741			
PFOS_2	5.24	1.00	37762.78	A	0.2968	0.3741	26	50	
PFNA	5.26	1.00	271240.37	A	0.0229	0.0190			
PFNA_2	5.26	1.00	5150.39	A	0.0229	0.0190	-17	50	
PFNS	N/A	N/A	N/A	A	0.4828	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4828	N/A		50	
PFDA	5.56	1.00	224279.75	A	0.0081	0.0061			
PFDA_2	5.56	1.00	1372.75	A	0.0081	0.0061	-24	50	
8:2-FTS	N/A	N/A	N/A	A	0.6814	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	0.6814	N/A		#NA!	
NMeFOSAA	5.70	1.00	30591.86	A	0.2569	0.2719			
NMeFOSAA_2	5.70	1.00	8316.89	A	0.2569	0.2719	6	50	
PFDS	5.79	1.11	52860.94	M	0.5144	0.5291			
PFDS_2	5.79	1.11	27969.61	A	0.5144	0.5291	3	50	
PFUnDA	5.82	1.00	183511.26	A	0.0058	0.0078			
PFUnDA_2	5.82	1.00	1432.36	A	0.0058	0.0078	34	50	
NEtFOSAA	5.83	1.00	26149.34	A	0.7253	0.6365			
NEtFOSAA_2	5.83	1.00	16644.93	A	0.7253	0.6365	-12	50	
PFDODA	6.05	1.00	185295.04	A	0.0157	0.0127			
PFDODA_2	6.05	1.00	2348.96	M	0.0157	0.0127	-19	50	
10:2-FTS	N/A	N/A	N/A	A	0.6356	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	0.6356	N/A		#NA!	
PFTTrDA	6.25	1.03	165153.11	A	0.0086	0.0082			
PFTTrDA_2	6.25	1.03	1356.95	M	0.0086	0.0082	-4	50	
PFTeDA	6.42	1.00	135650.98	A	0.0062	0.0054			
PFTeDA_2	6.42	1.00	727.00	A	0.0062	0.0054	-14	50	
PFHxDA	N/A	N/A	N/A	A	0.0683	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0683	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0277	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0277	N/A		50	

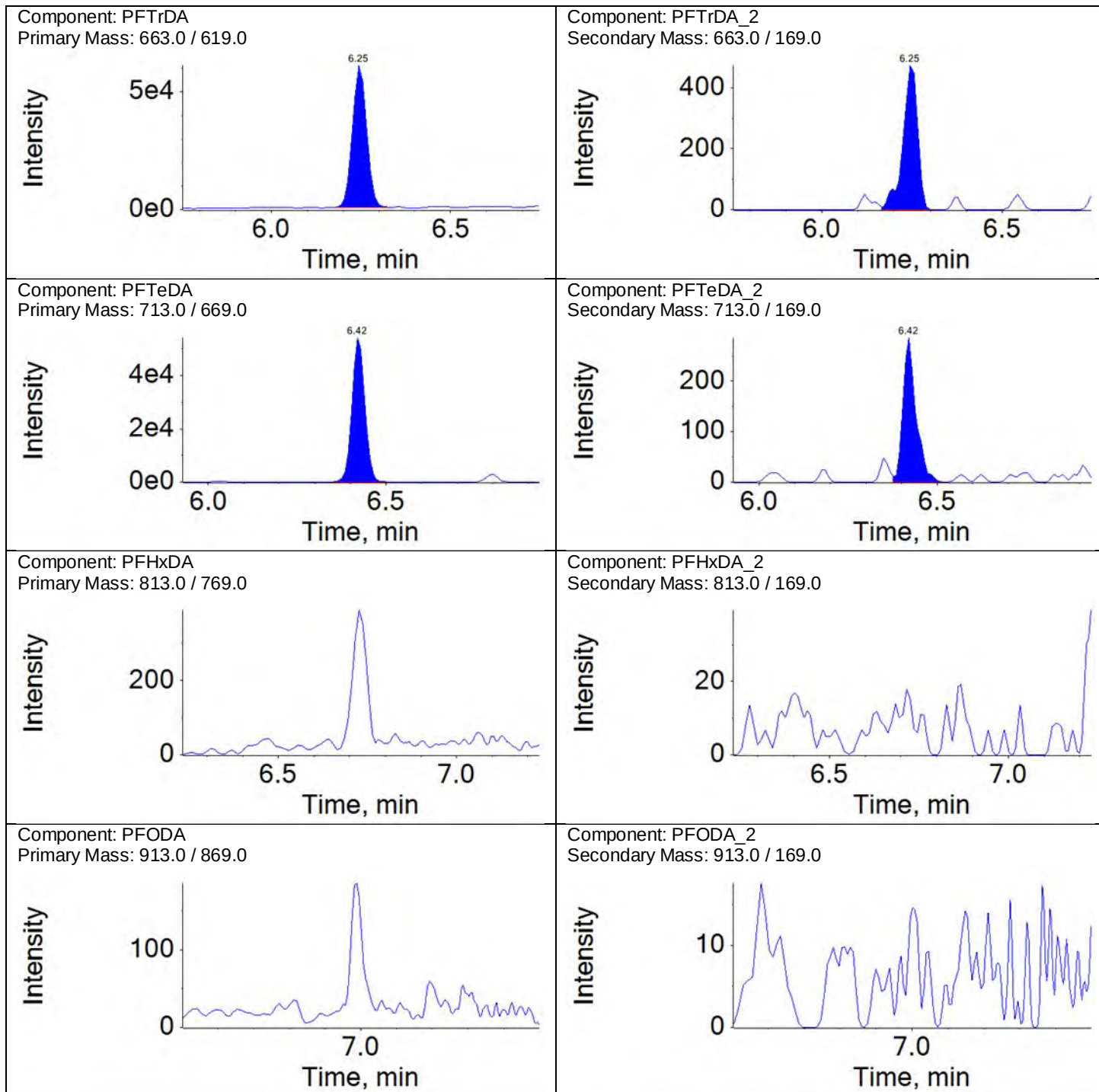












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	L+B CAL3		Data File:	18NOV12DCAL-51.wiff
Sample ID:	LBMODX1833D		Acquis Date:	2018-11-12T16:27:15
Sample Type:	Unknown		Instrument:	LM27631
Vial Position:	11		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	682528.6	659926.2	3	50	
13C2-PFOA	5.0	446810.2	450219.7	-1	50	
13C4-PFOS	4.8	256014.8	249205.8	3	50	
13C2-PFDA	5.0	295115.2	278743.9	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735331.8	13C3-PFBA	682528.6	1.077	5.000	4.830	97	70-130	
E13C5-PFPeA	714738.5	13C3-PFBA	682528.6	1.047	5.000	4.697	94	70-130	
E13C3-PFBS	418749.4	13C3-PFBA	682528.6	0.614	4.650	4.331	93	70-130	
E13C2-4:2-FTS	45470.2	13C2-PFOA	446810.2	0.102	4.670	4.532	97	70-130	
E13C5-PFHxA	624943.7	13C2-PFOA	446810.2	1.399	5.000	5.052	101	70-130	
E13C3-PFHxS	318599.1	13C2-PFOA	446810.2	0.713	4.730	4.893	103	70-130	
E13C4-PFHpA	492218.6	13C2-PFOA	446810.2	1.102	5.000	4.963	99	70-130	
E13C2-6:2-FTS	35757.3	13C2-PFOA	446810.2	0.080	4.750	5.354	113	70-130	
E13C8-PFOA	860795.2	13C2-PFOA	446810.2	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	257626.7	13C4-PFOS	256014.8	1.006	4.780	4.459	93	70-130	
E13C9-PFNA	443649.2	13C4-PFOS	256014.8	1.733	5.000	4.832	97	70-130	
E13C6-PFDA	588492.8	13C2-PFDA	295115.2	1.994	5.000	4.653	93	70-130	
E13C2-8:2-FTS	26035.6	13C2-PFDA	295115.2	0.088	4.790	4.400	92	70-130	
E13C8-PFOSA	615348.9	13C2-PFDA	295115.2	2.085	5.000	4.623	92	70-130	
Ed3-NMeFOSAA	69196.9	13C2-PFDA	295115.2	0.234	5.000	4.232	85	70-130	
E13C7-PFUnDA	249433.8	13C2-PFDA	295115.2	0.845	5.000	4.907	98	70-130	
Ed5-NEtFOSAA	70399.3	13C2-PFDA	295115.2	0.239	5.000	5.047	101	70-130	
E13C2-PFDoDA	502206.8	13C2-PFDA	295115.2	1.702	5.000	4.418	88	70-130	
Ed7-NMePFOSAE	314874.3	13C2-PFDA	295115.2	1.067	5.000	4.617	92	70-130	
Ed3-NMePFOSA	80287.6	13C2-PFDA	295115.2	0.272	5.000	4.943	99	70-130	
Ed9-NEtPFOSAE	265747.6	13C2-PFDA	295115.2	0.900	5.000	4.683	94	70-130	
Ed5-NEtPFOSA	56128.1	13C2-PFDA	295115.2	0.190	5.000	4.462	89	70-130	
E13C2-PFTeDA	379002.1	13C2-PFDA	295115.2	1.284	5.000	4.509	90	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

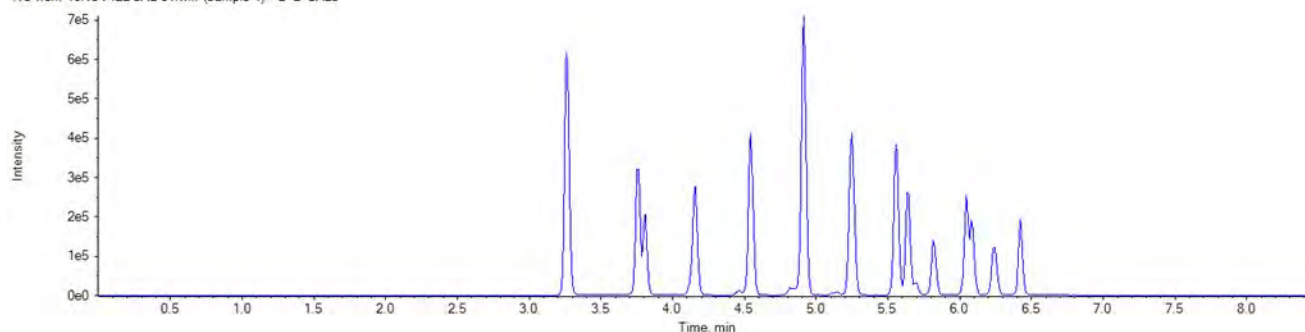
Sample Name: L+B CAL3 Instrument Name: LM27631 File Name: 18NOV12DCAL-51.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	735331.8	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	714738.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	45470.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	624943.7	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	492218.6	N/A	
PFHxS	4.55	1.000	122359.8		M	13C3-PFHxS	4.55	318599.1	0.384	1.862
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	35757.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	318599.1	N/A	
PFOA	4.91	1.000	312625.4		M	13C8-PFOA	4.91	860795.2	0.363	1.940
PFOS	5.24	1.000	105809.8		M	13C8-PFOS	5.24	257626.7	0.411	1.796
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	443649.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	588492.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	615348.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	69196.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PfUnDA	N/A	N/A	N/A		A	13C7-PfUnDA	5.82	249433.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	70399.3	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	502206.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	314874.3	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	80287.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	265747.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	56128.1	N/A	
PFTDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	502206.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFOA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	

Total Ion Chromatogram

TIC from 18NOV12DCAL-51.wiff (sample 1) - L+B CAL3



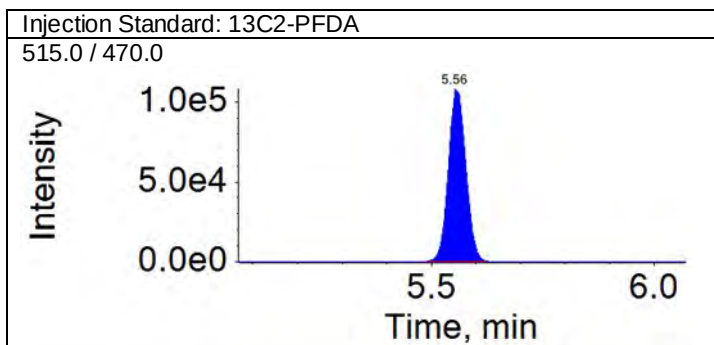
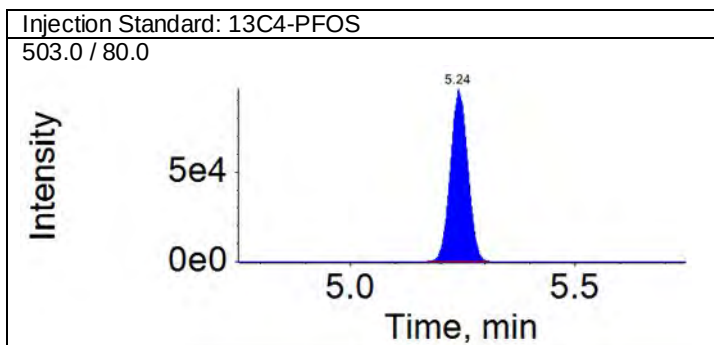
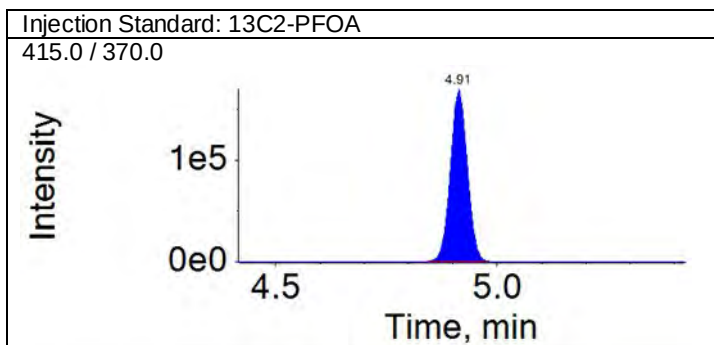
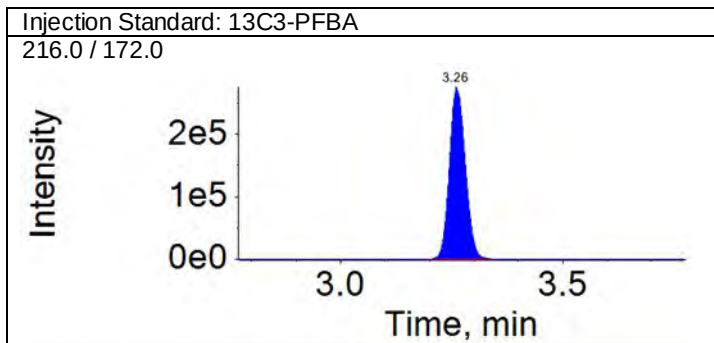
APPROVED
By MCD at 6:34 pm, 11/12/18

BSI05 Page 1156 of 1595

REVIEWED
By HMK at 10:53 am, 11/13/18

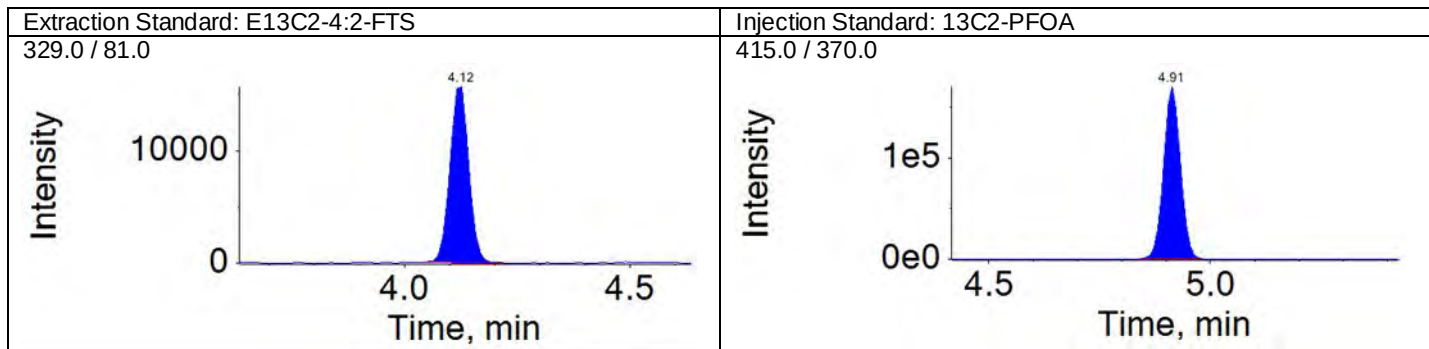
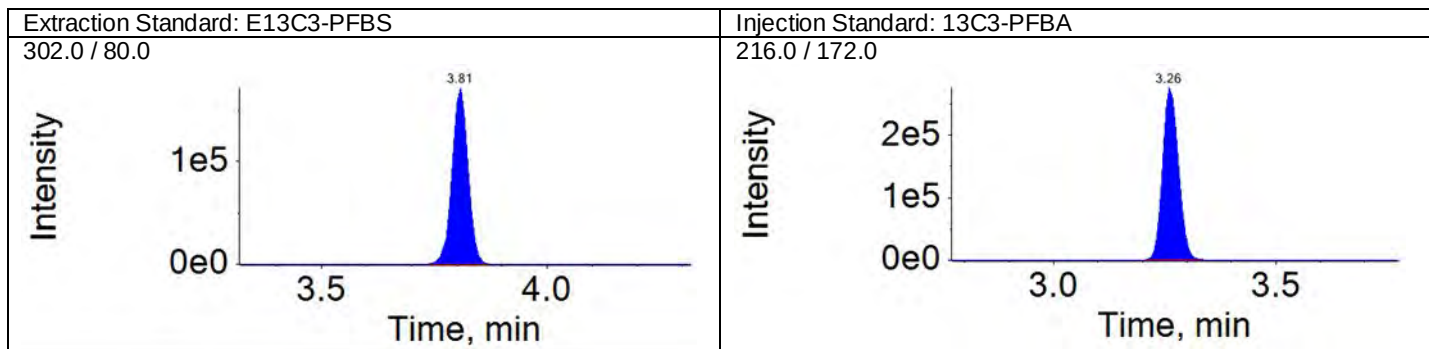
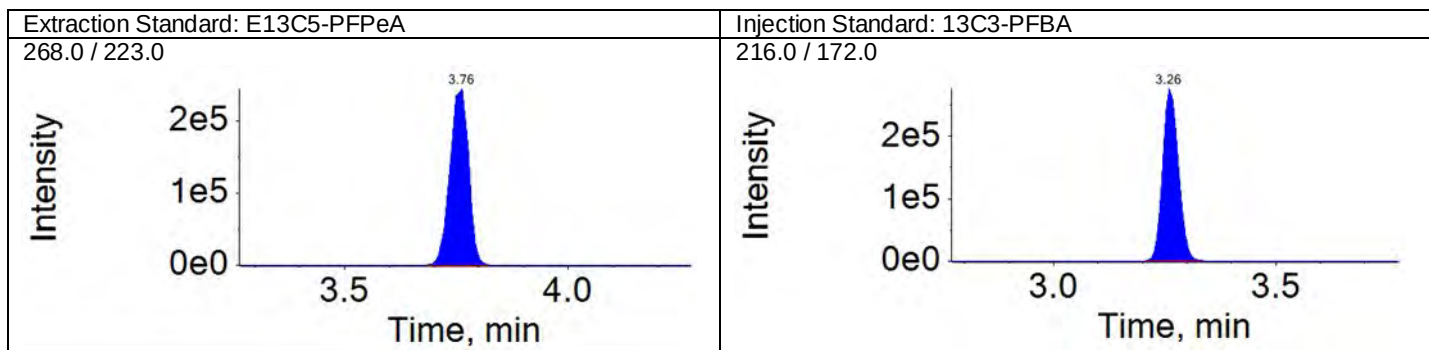
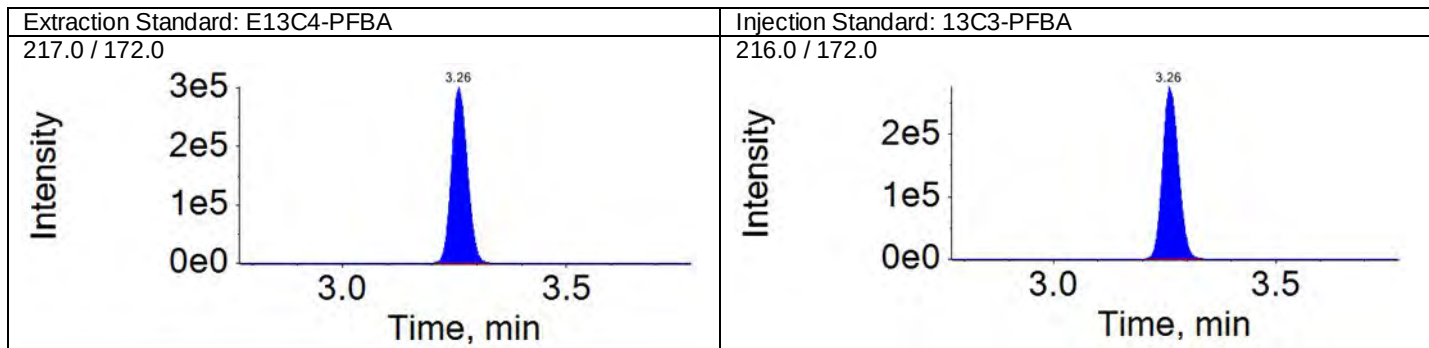
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



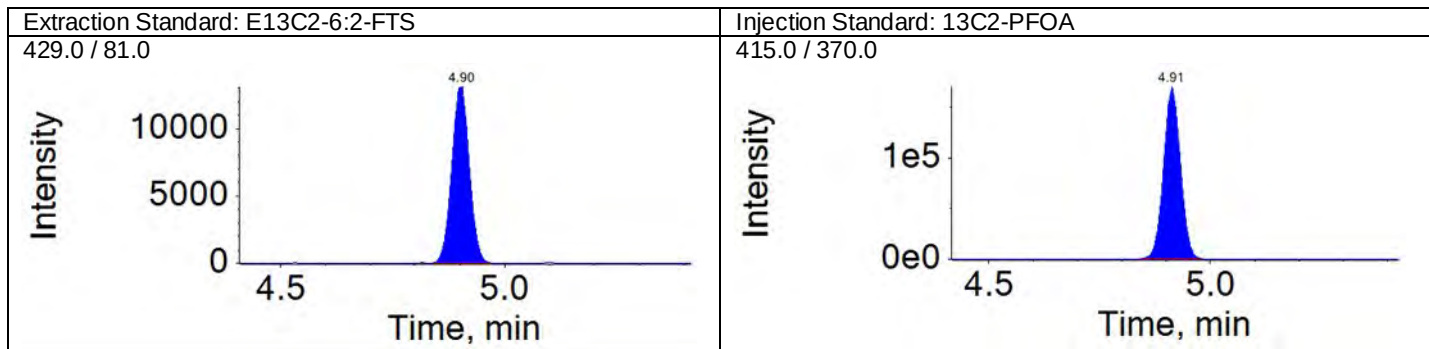
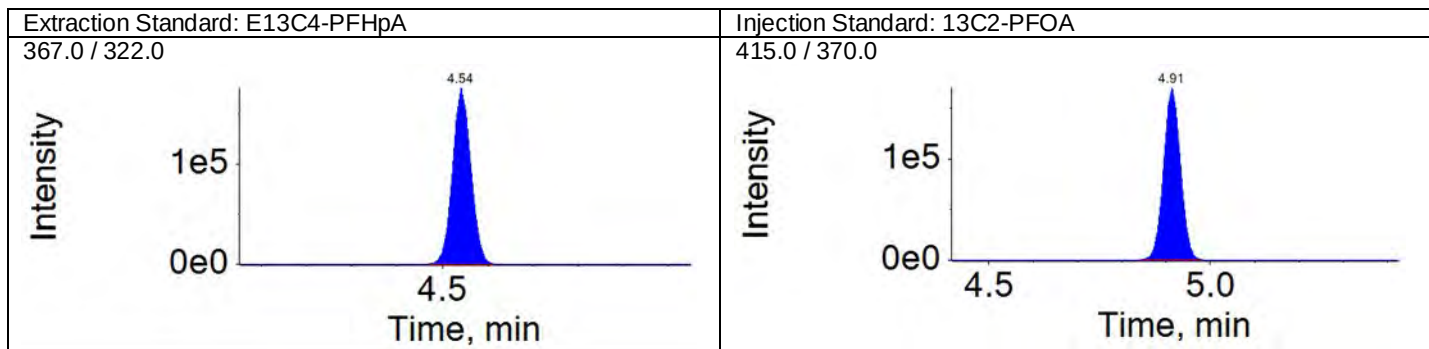
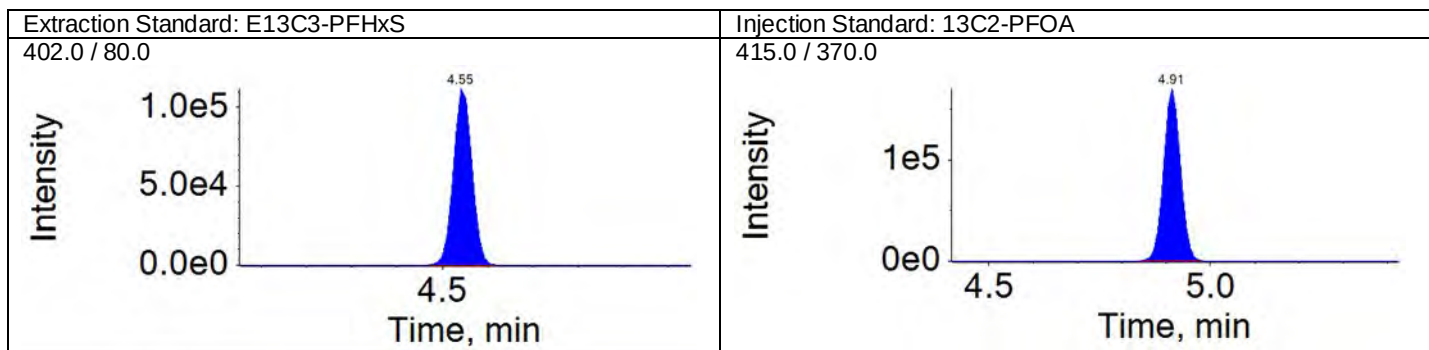
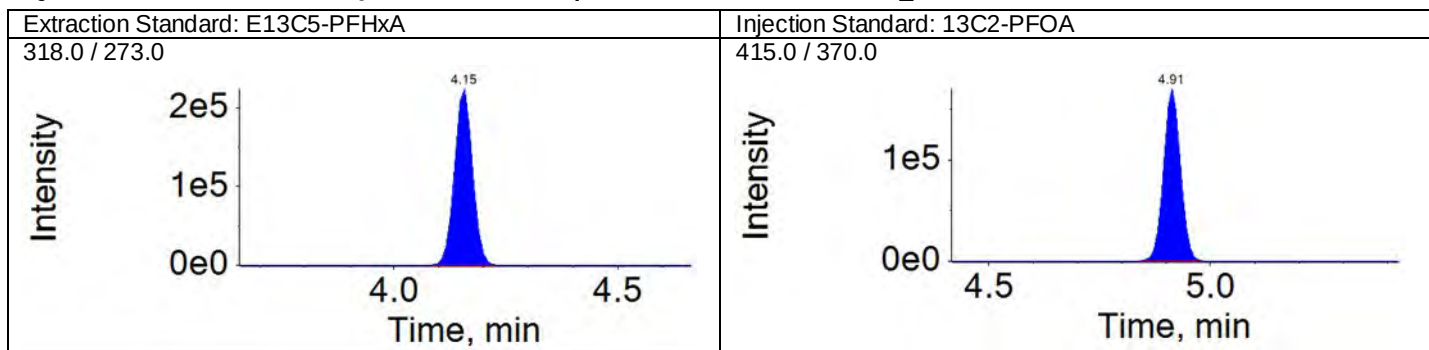
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



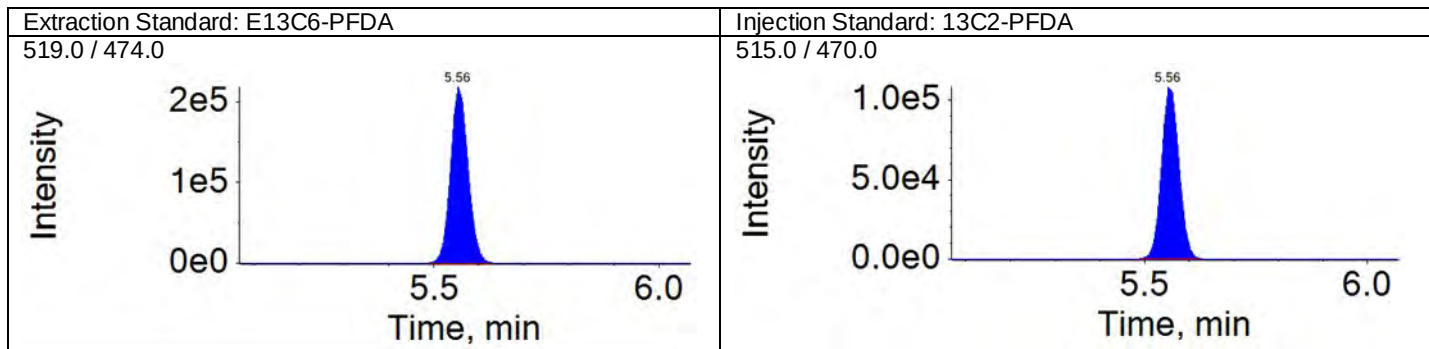
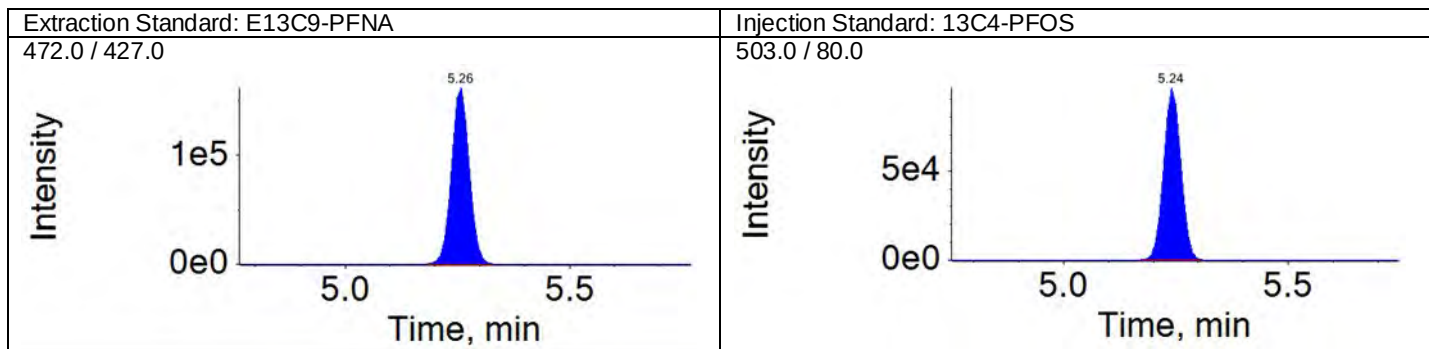
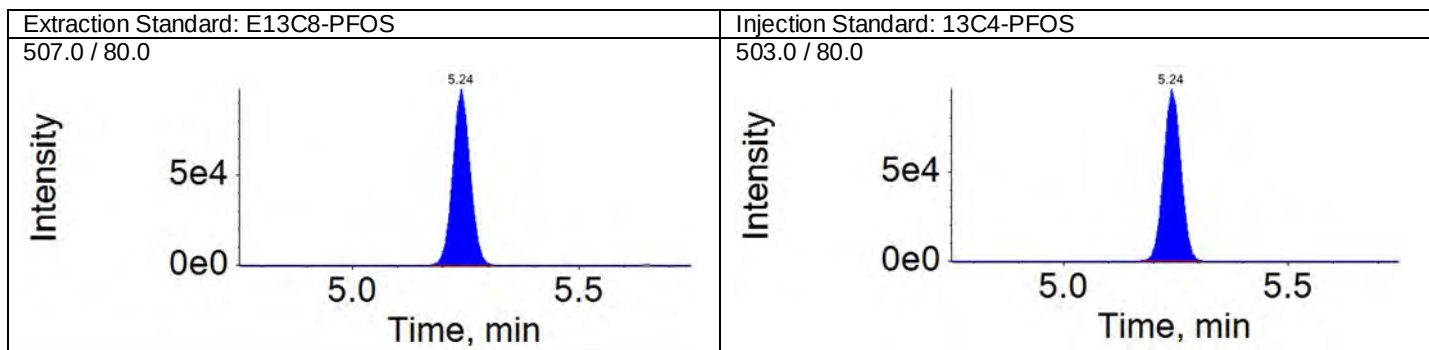
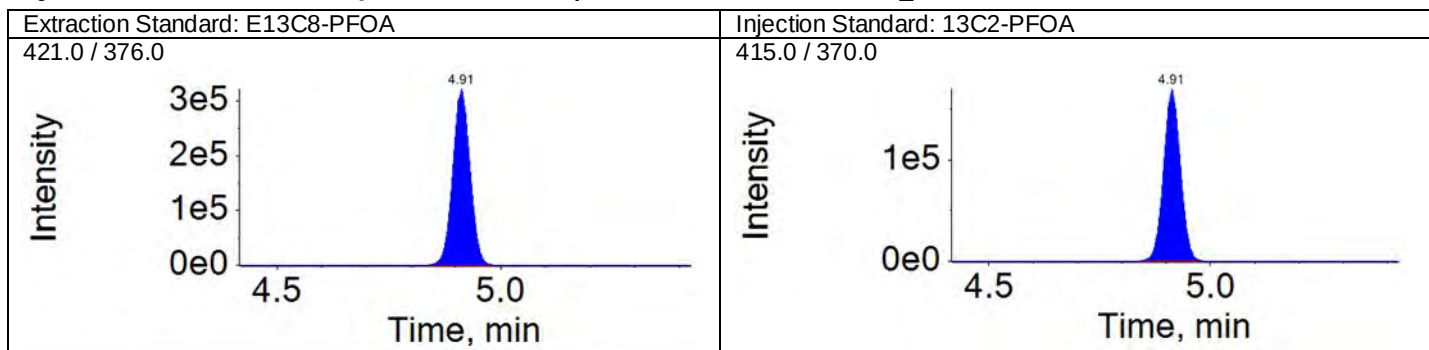
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



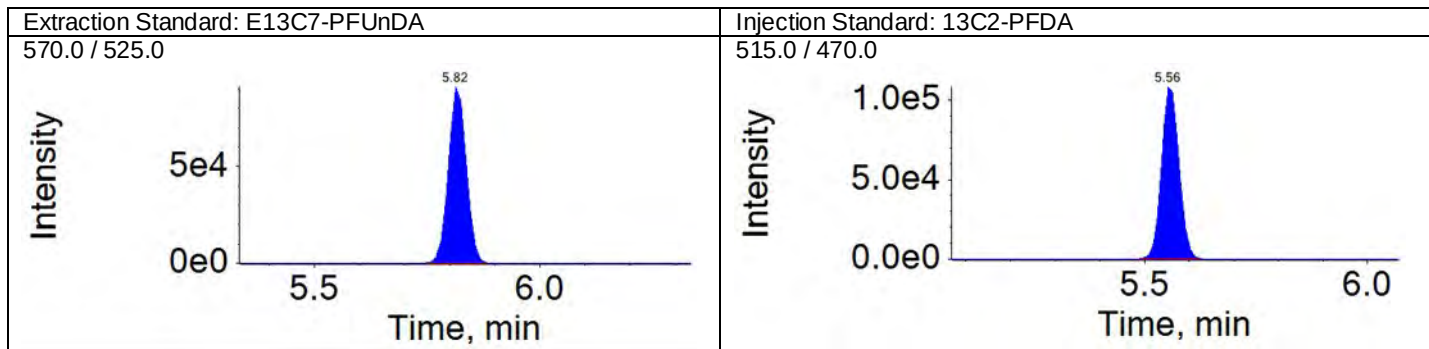
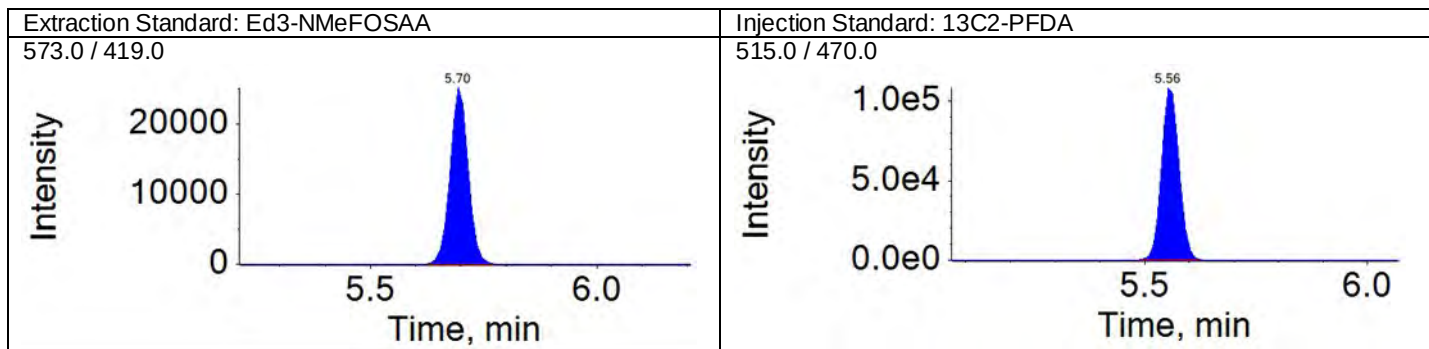
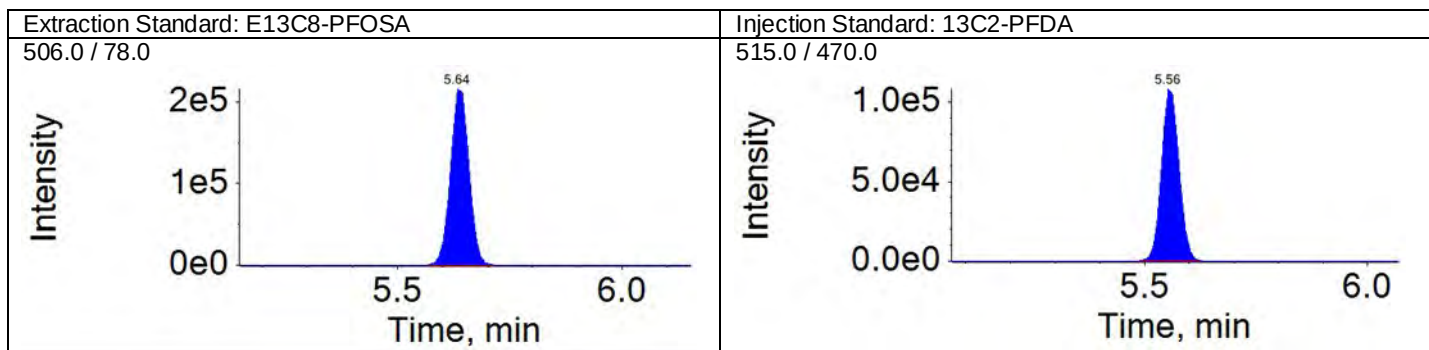
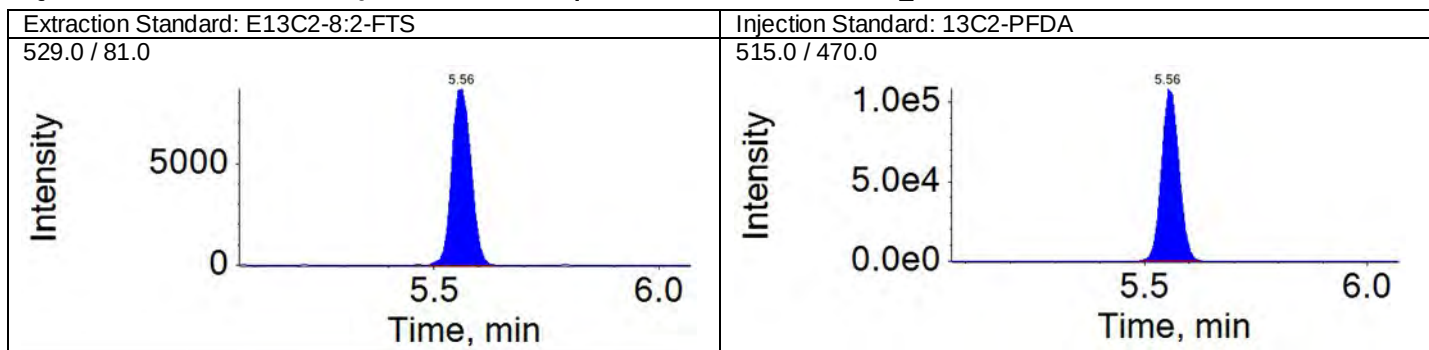
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



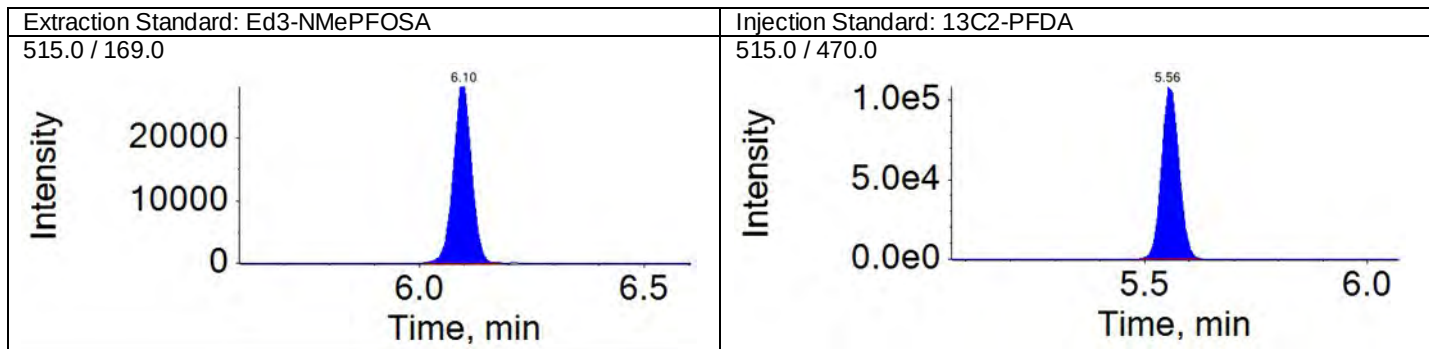
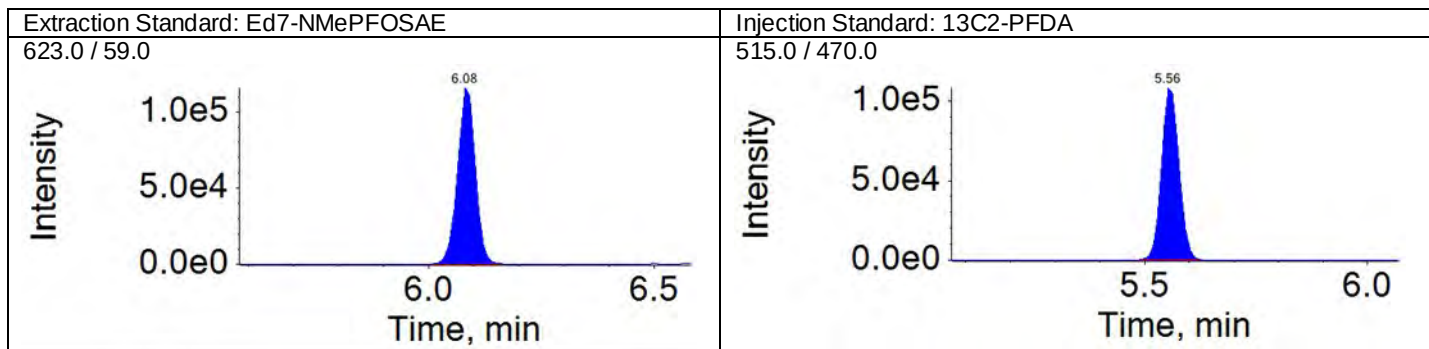
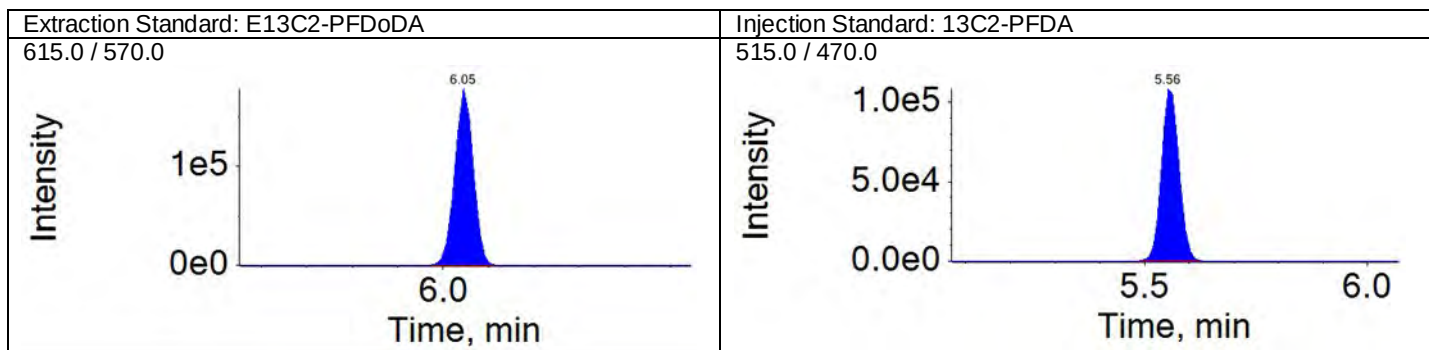
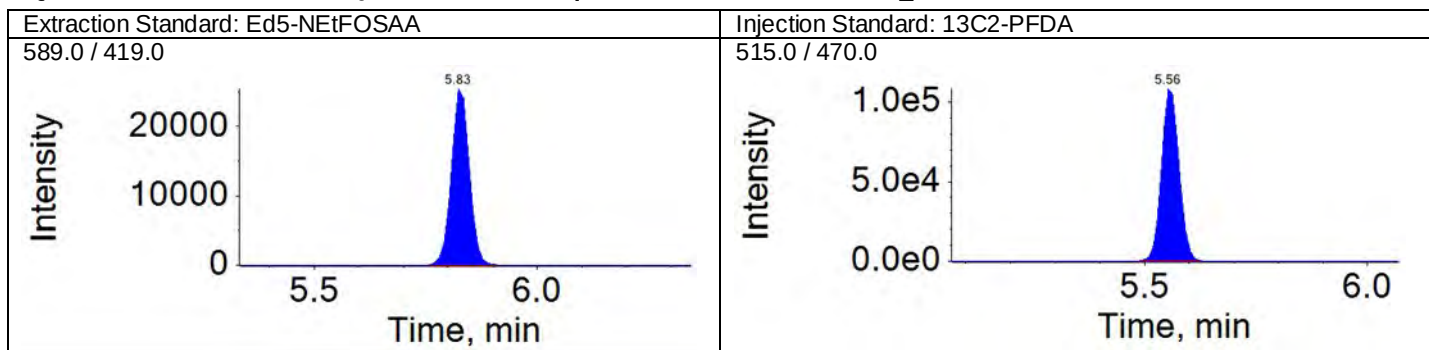
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



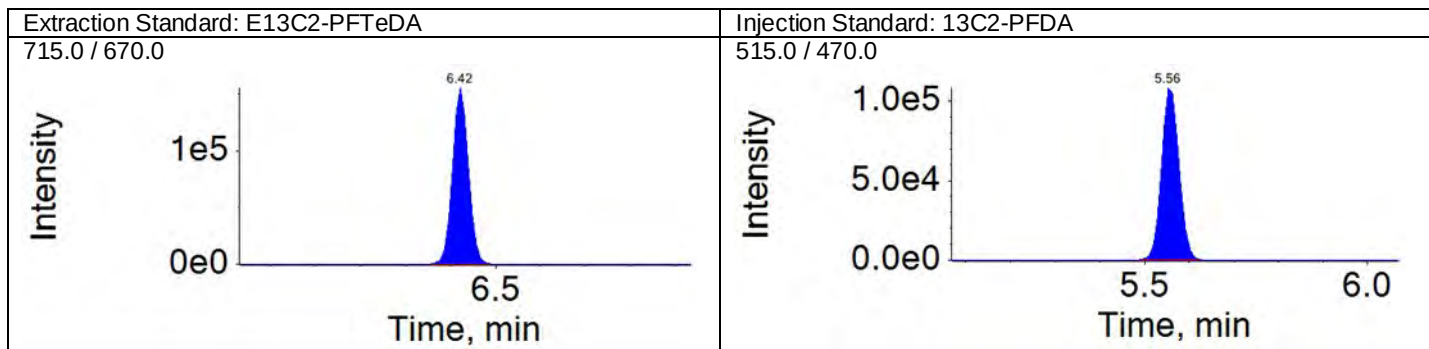
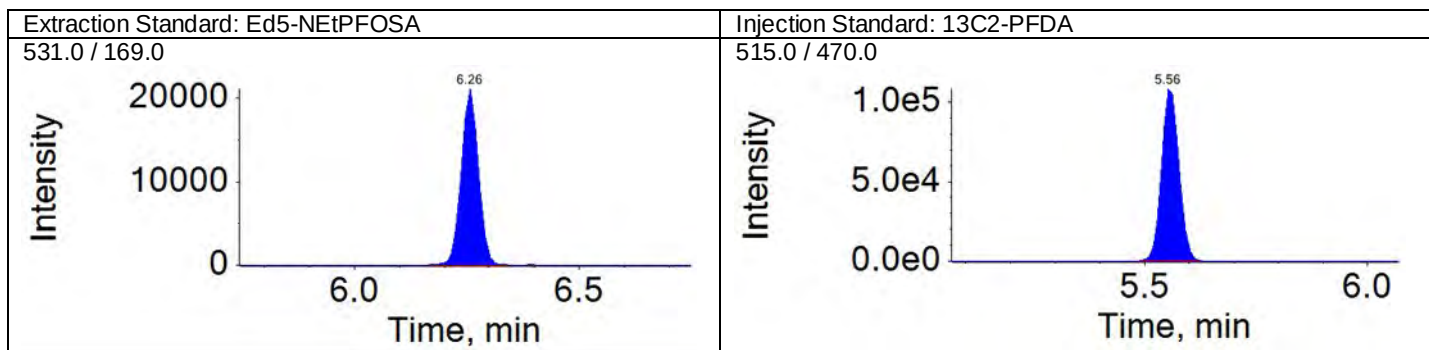
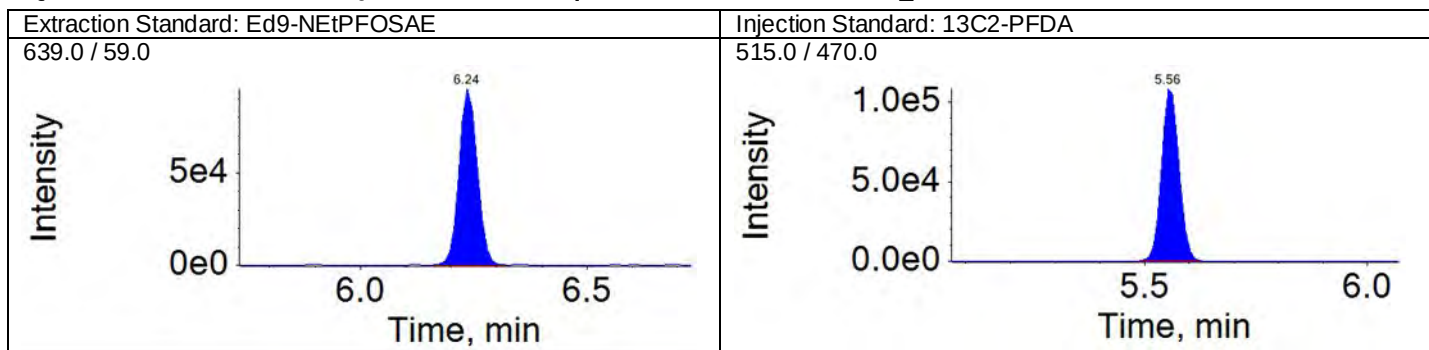
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



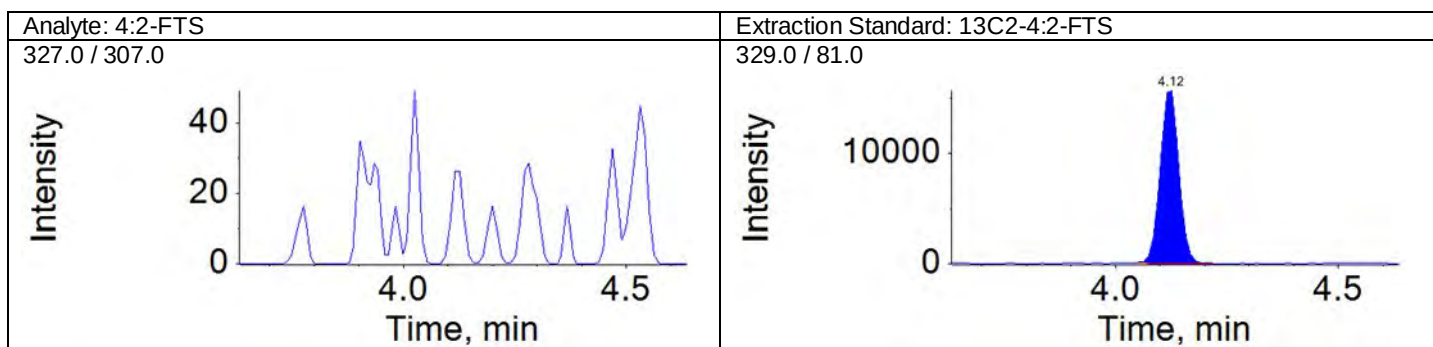
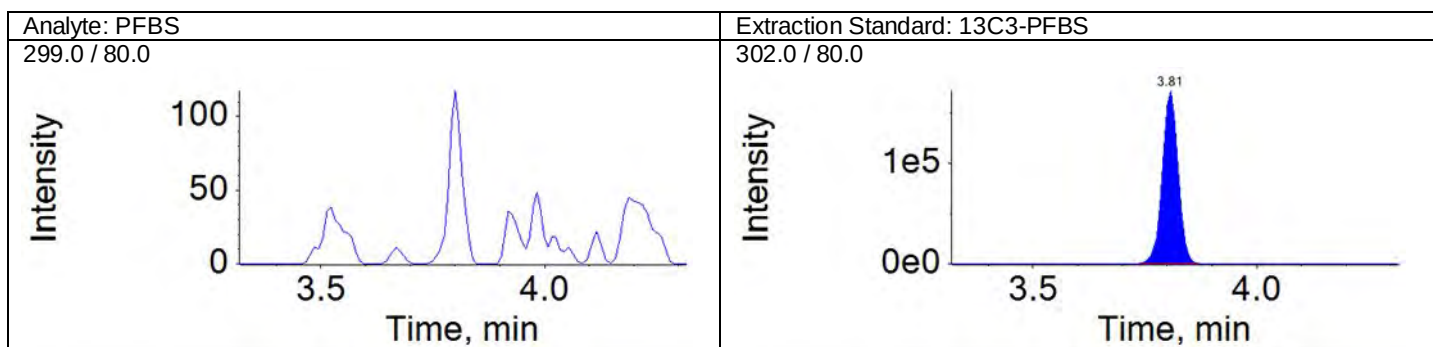
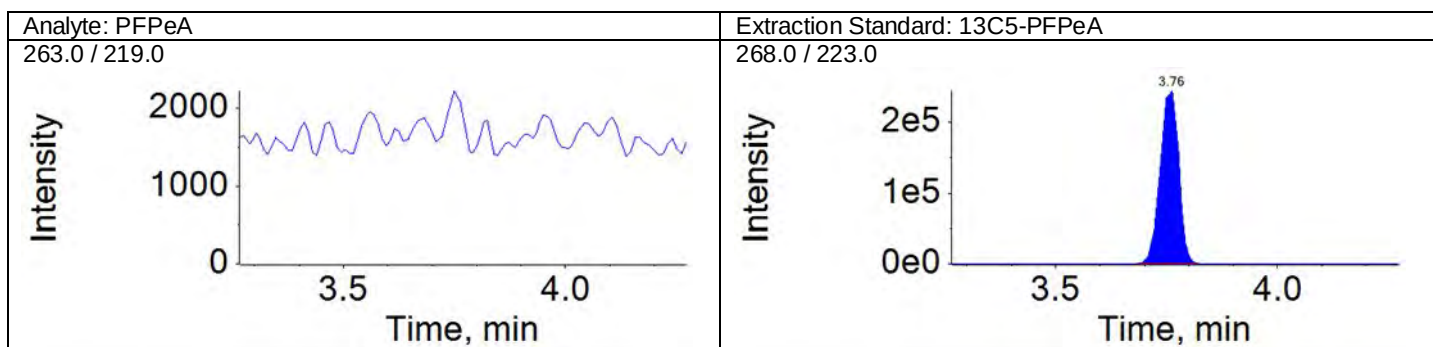
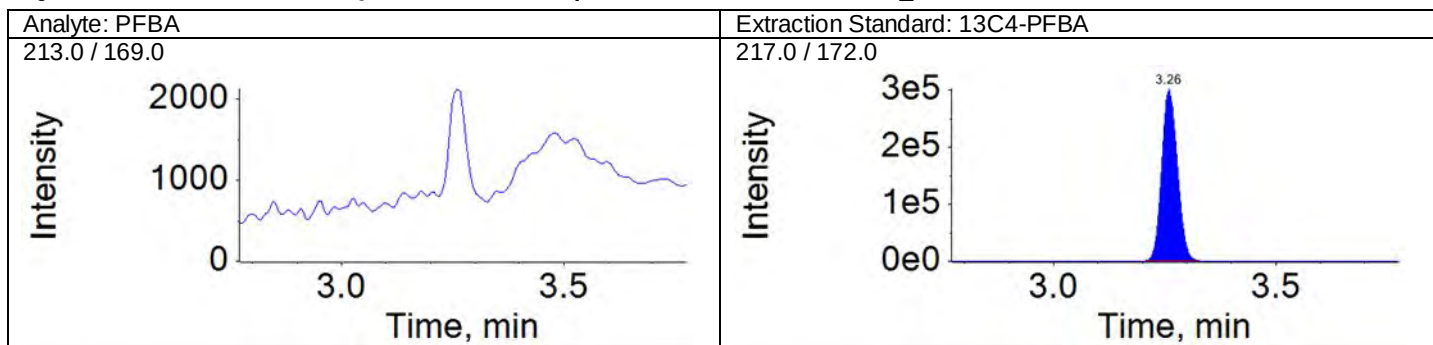
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



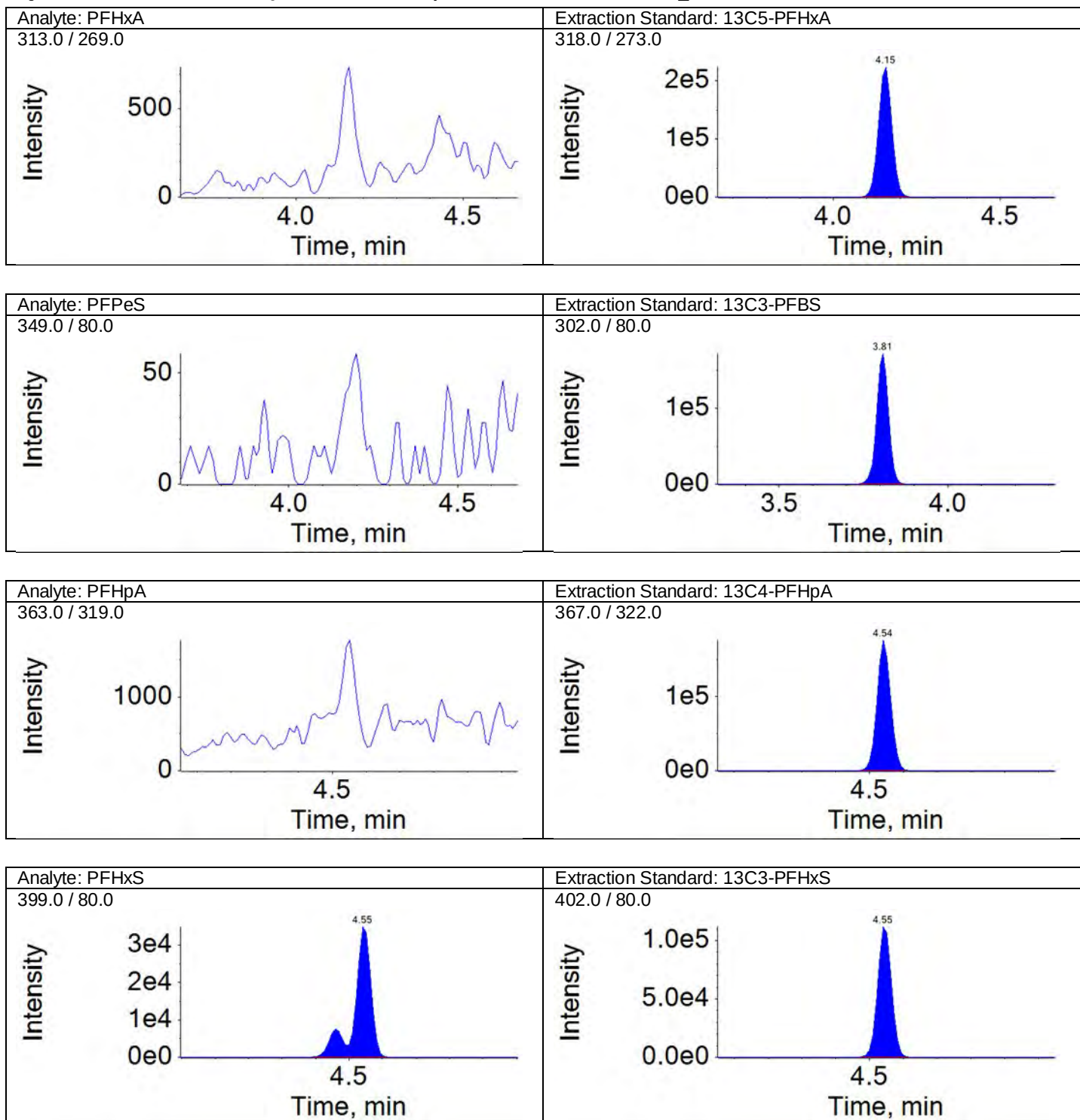
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



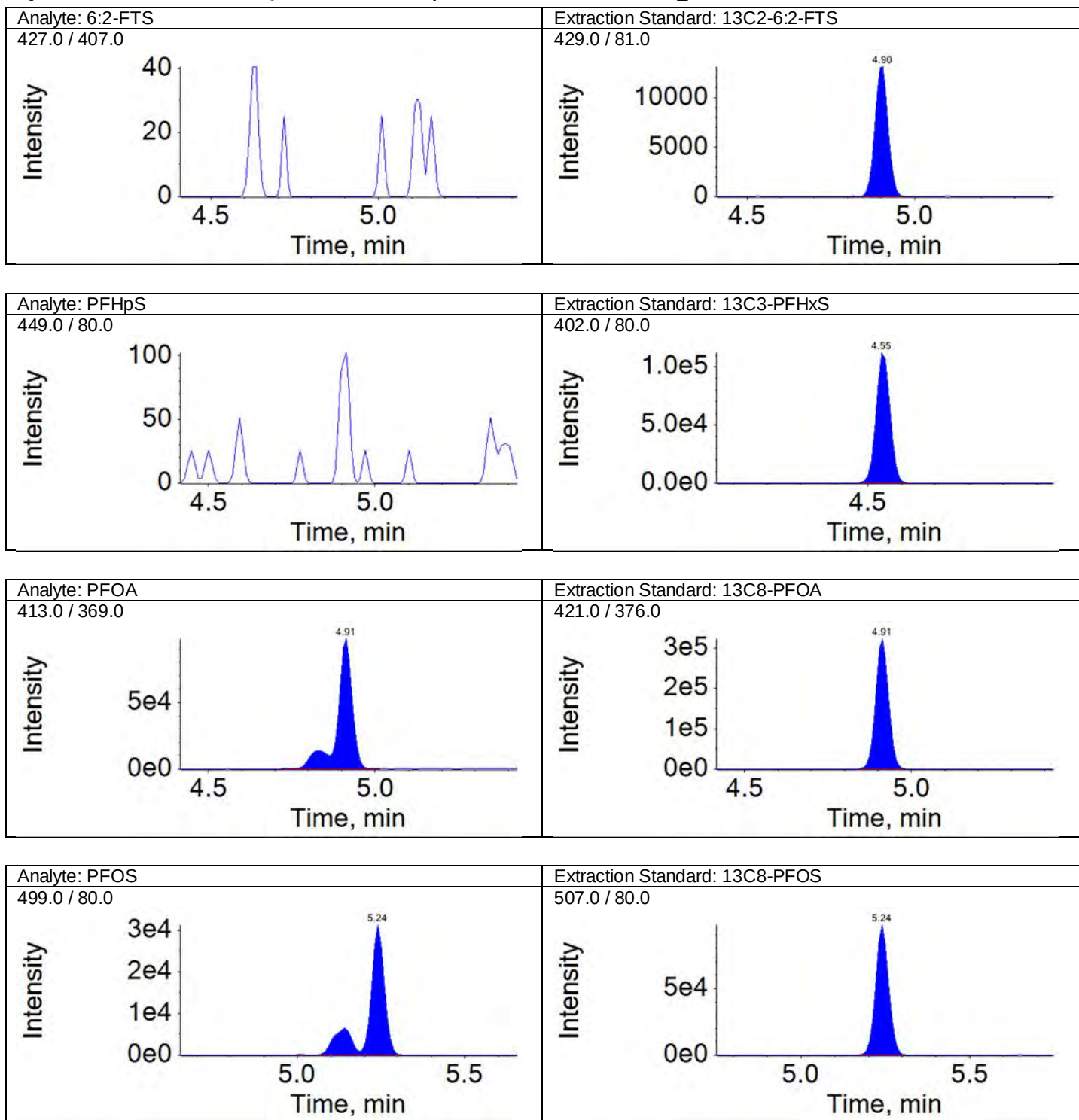
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



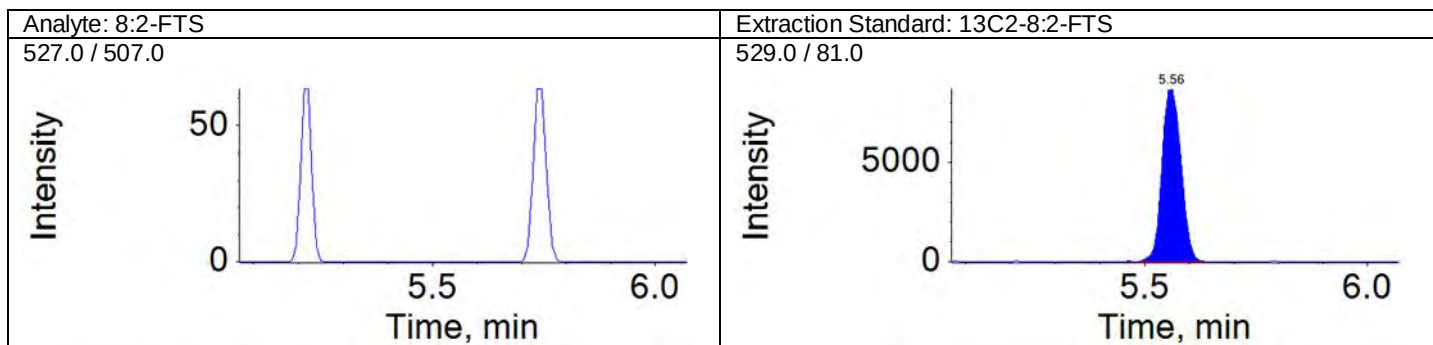
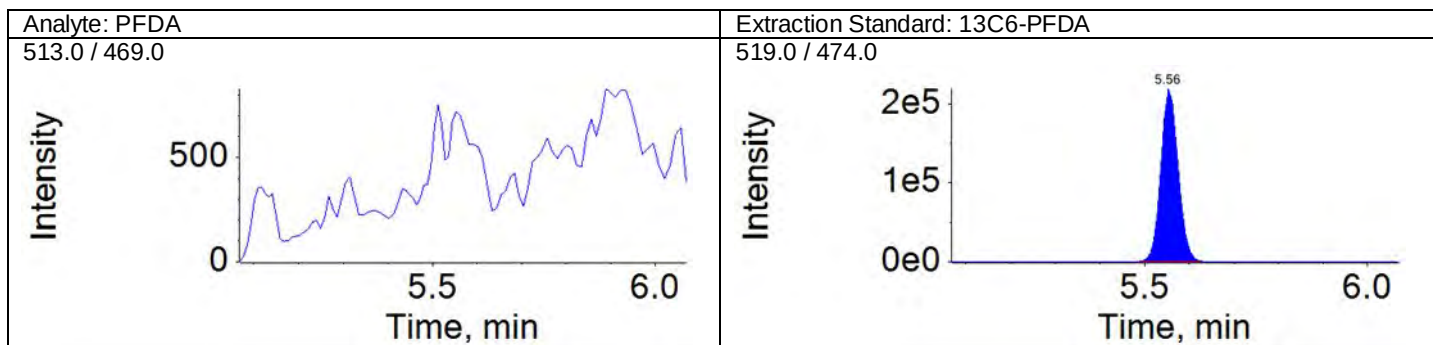
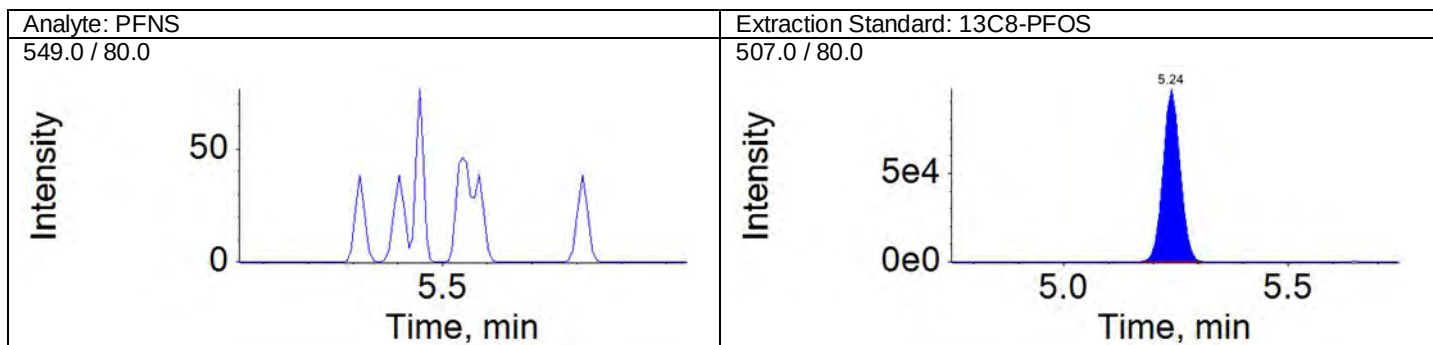
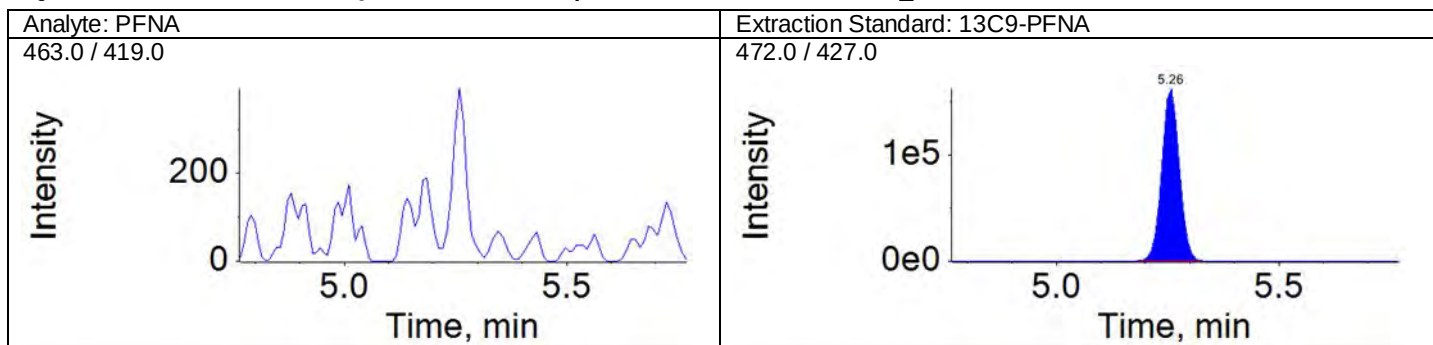
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



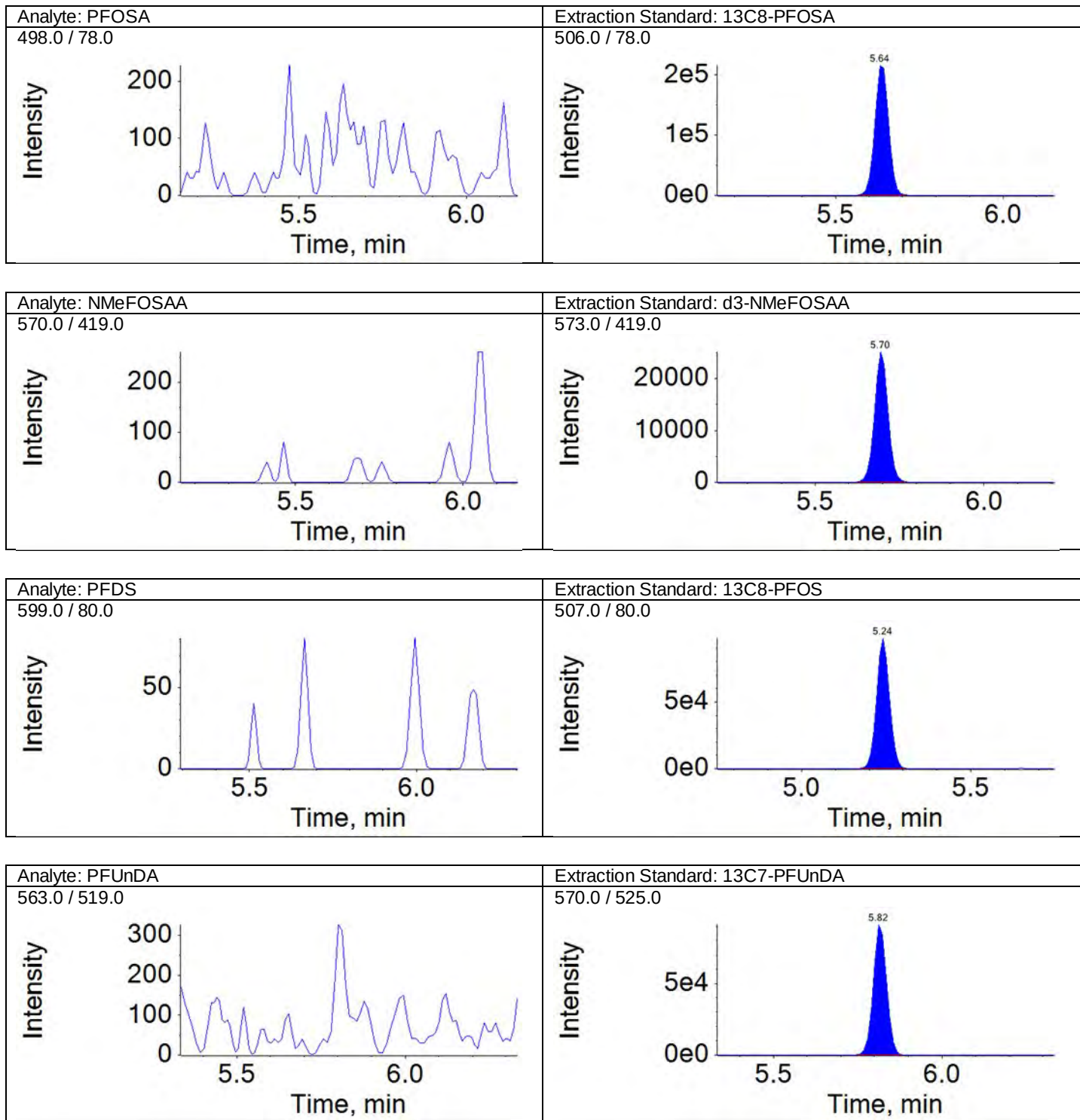
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



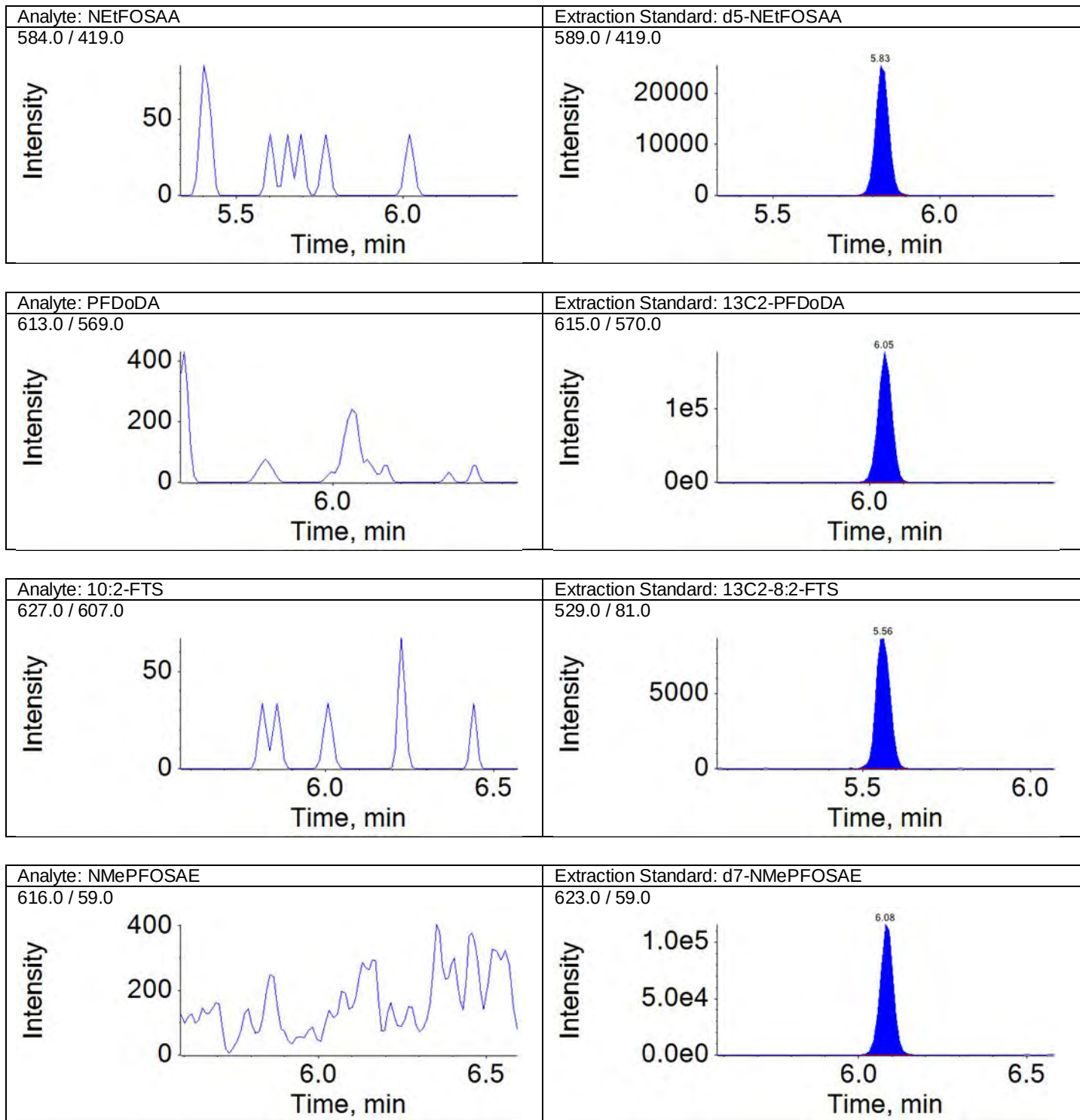
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



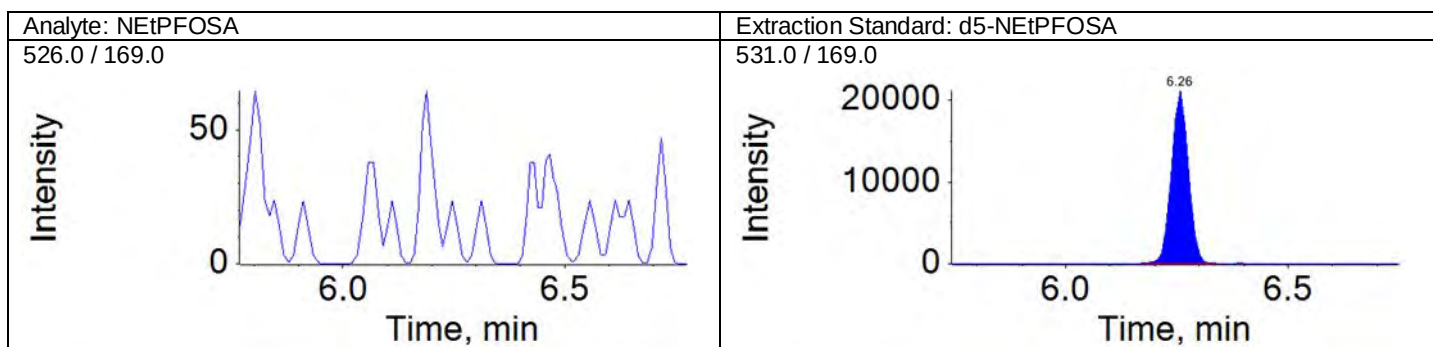
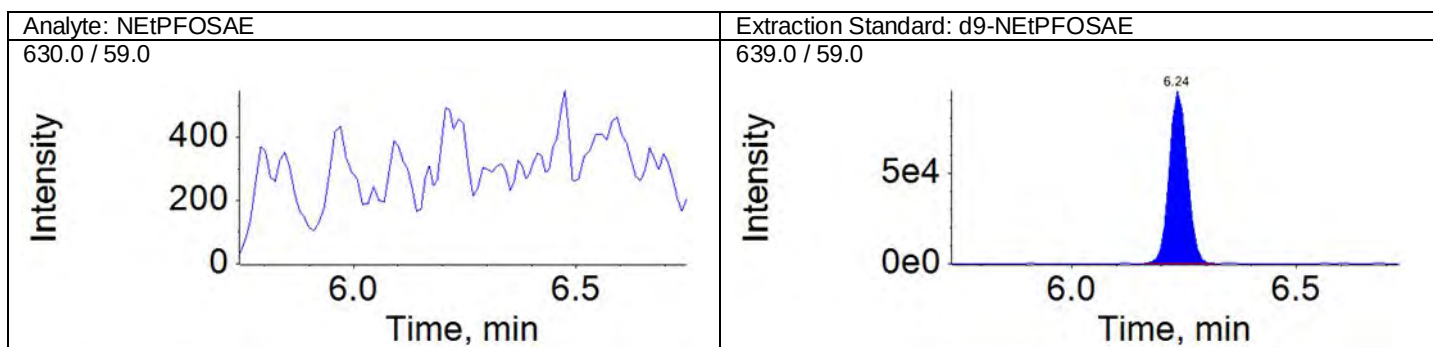
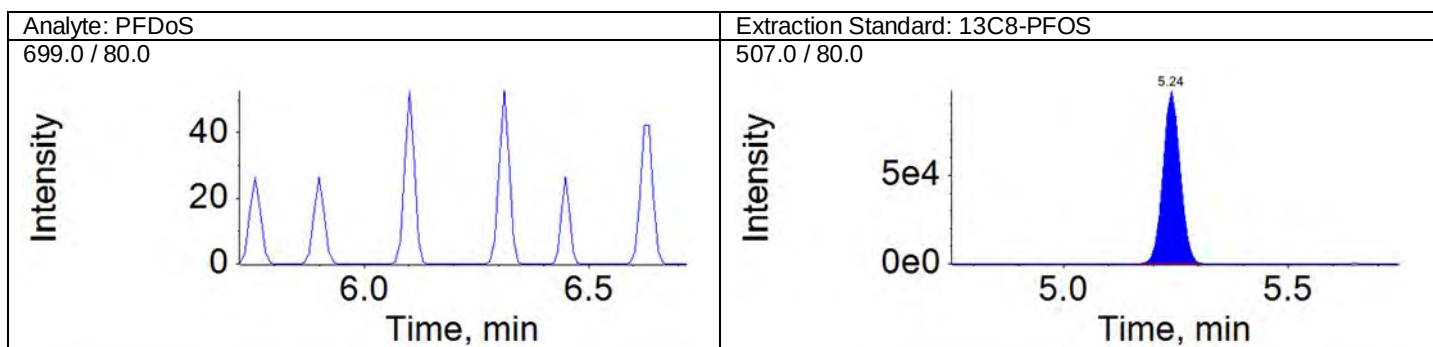
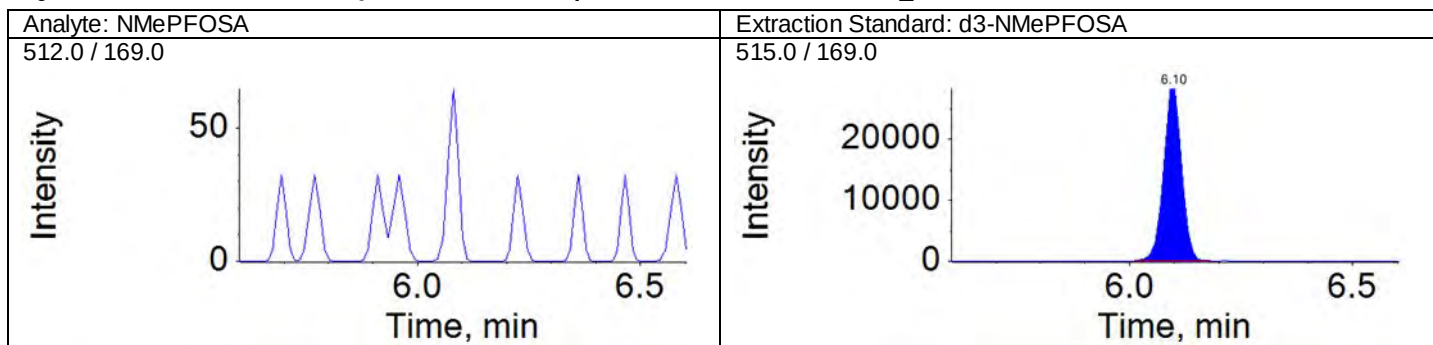
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



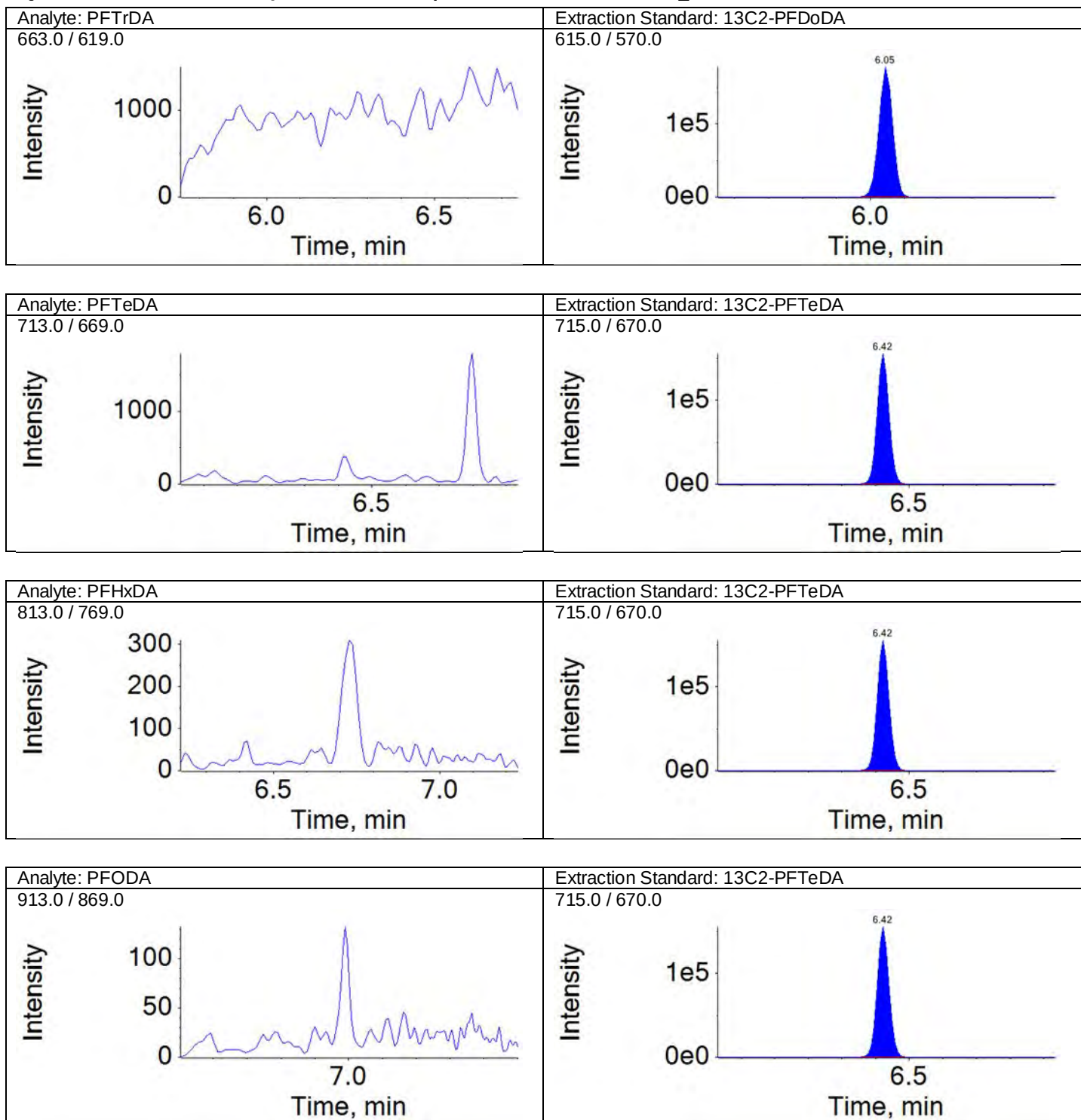
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



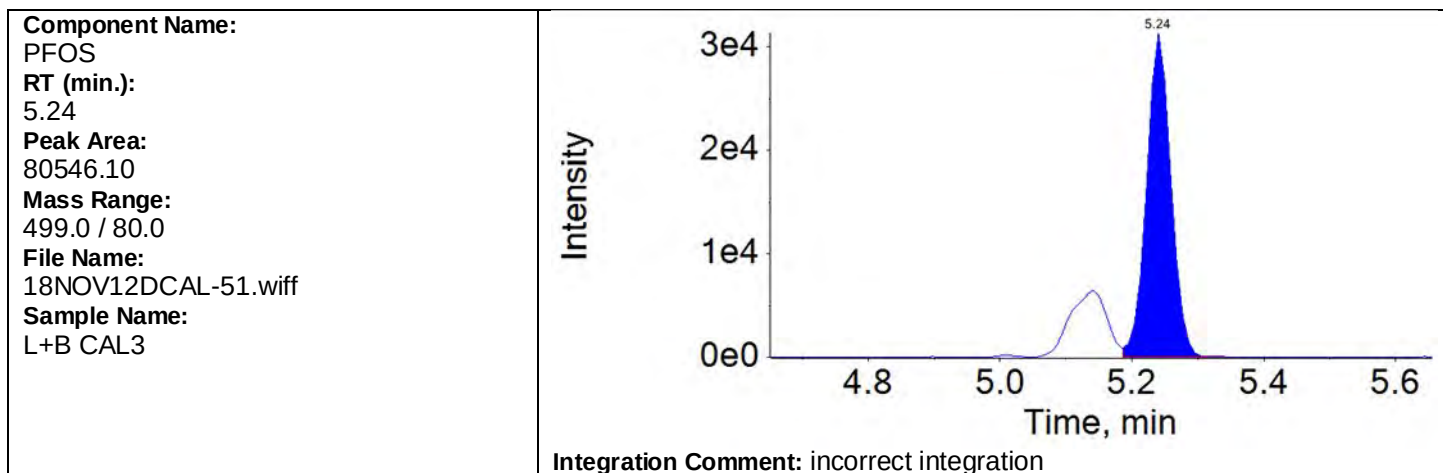
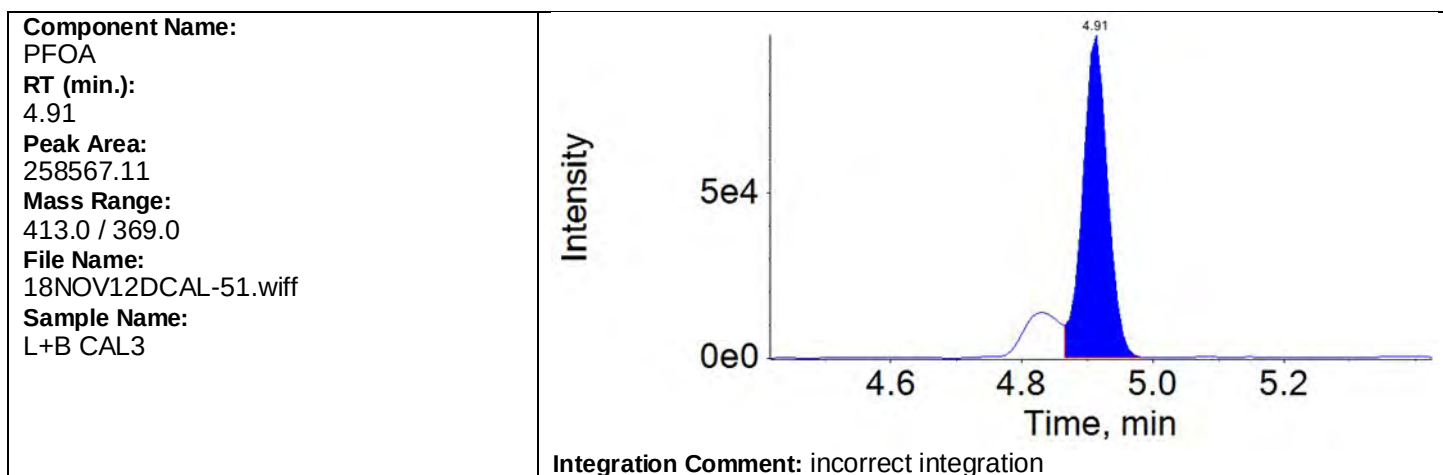
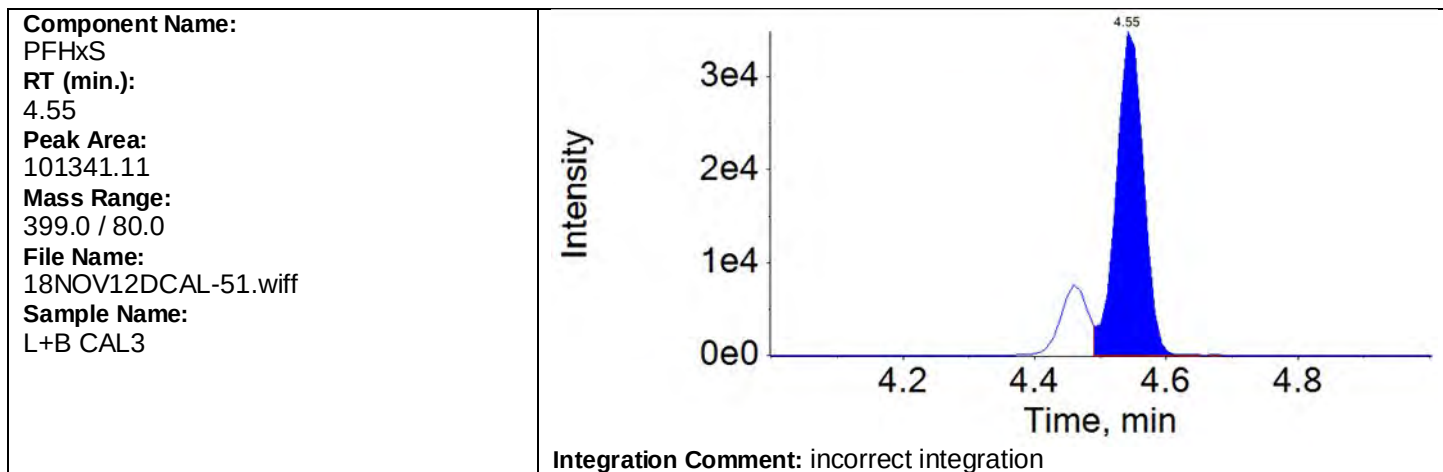
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

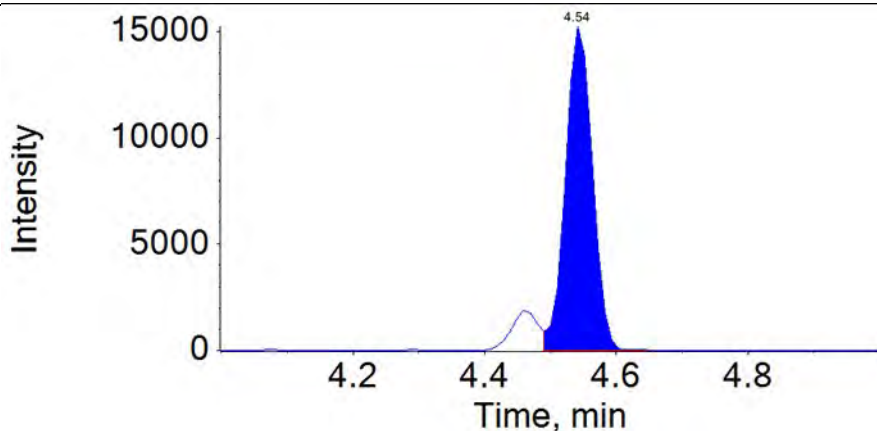
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

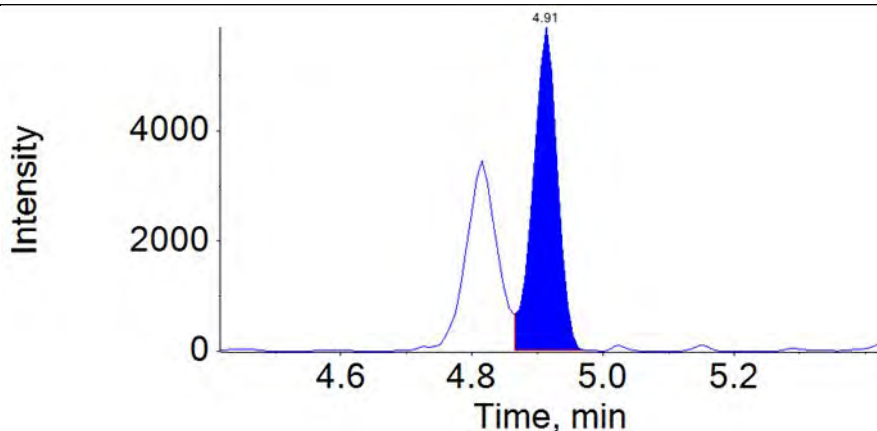
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
43554.75
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



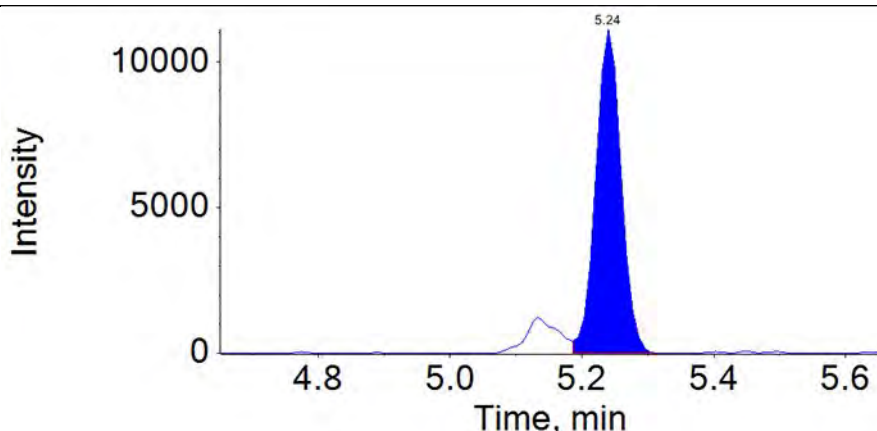
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
15059.21
Mass Range:
413.0 / 169.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
29829.42
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:34 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

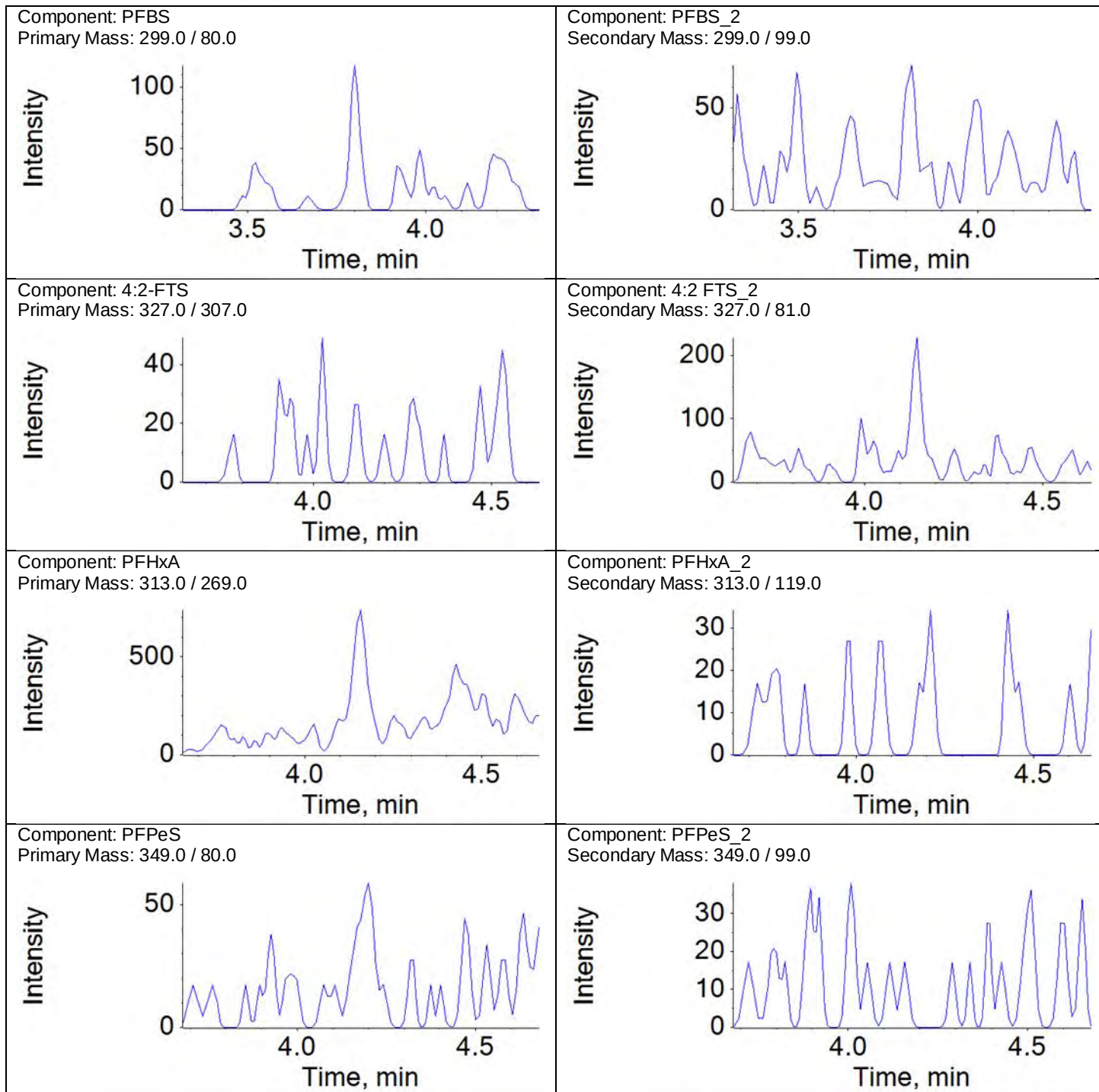
Ion Ratio Report

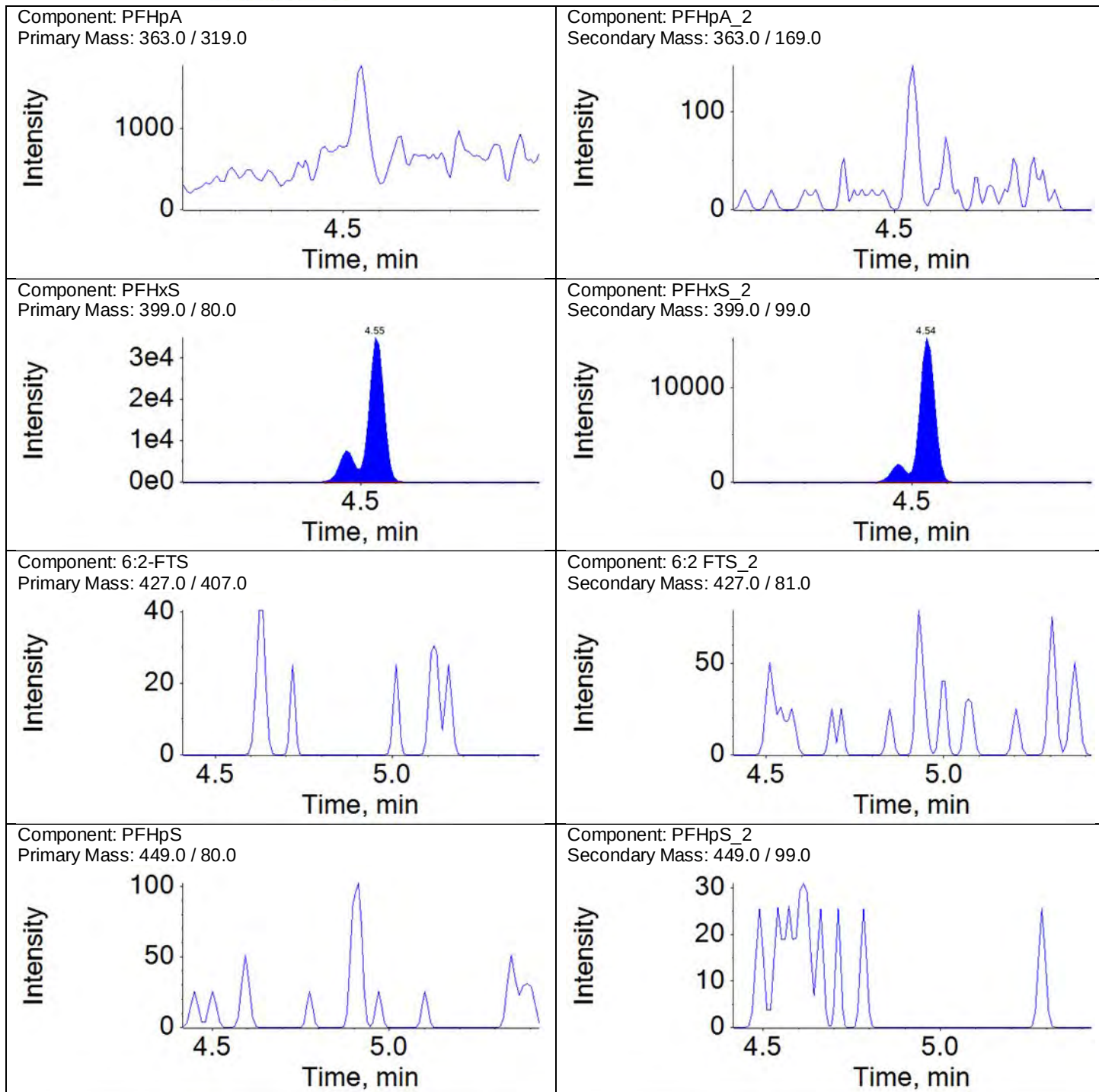
Sample Name: L+B CAL3

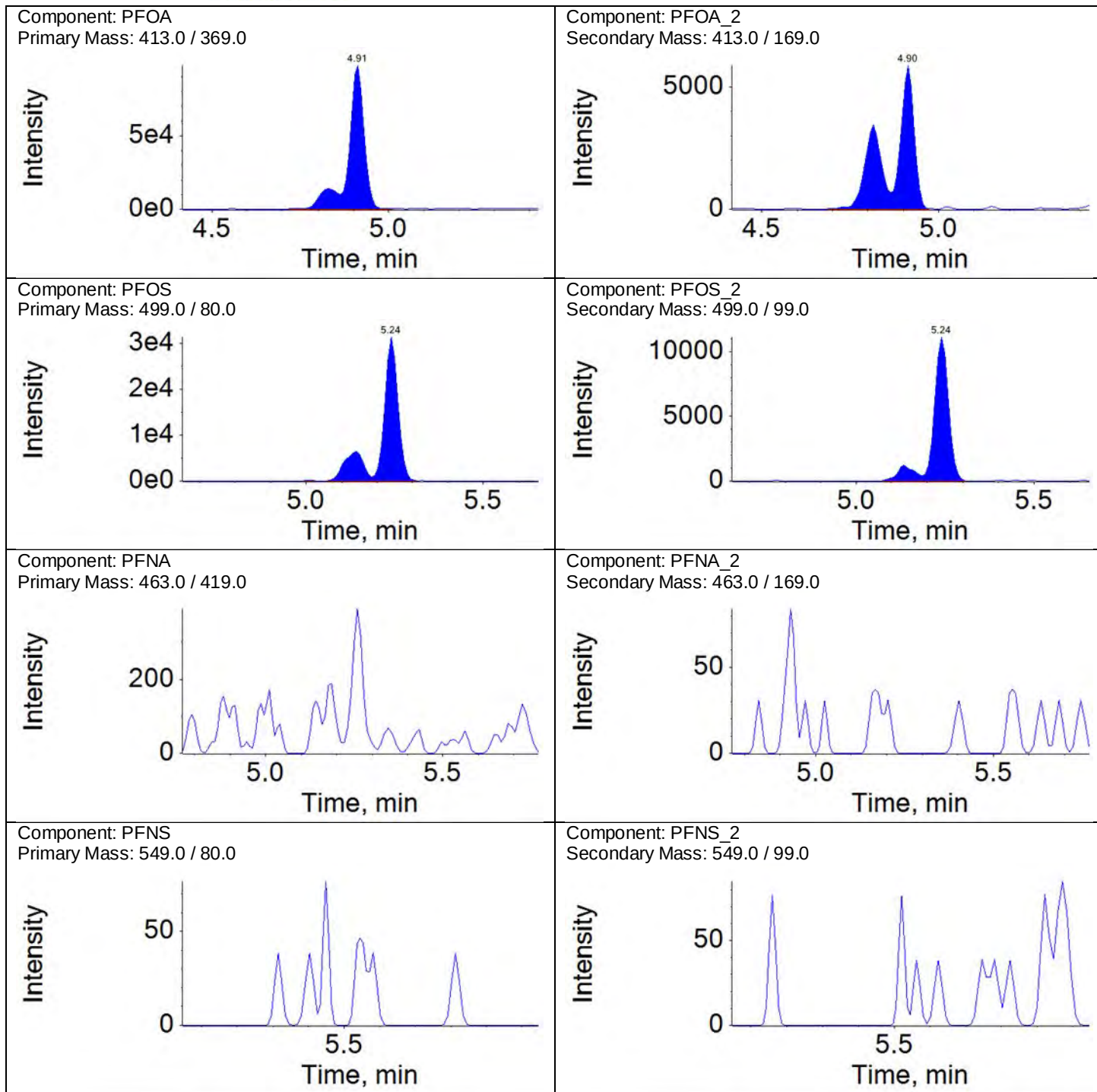
Instrument Name: LM27631

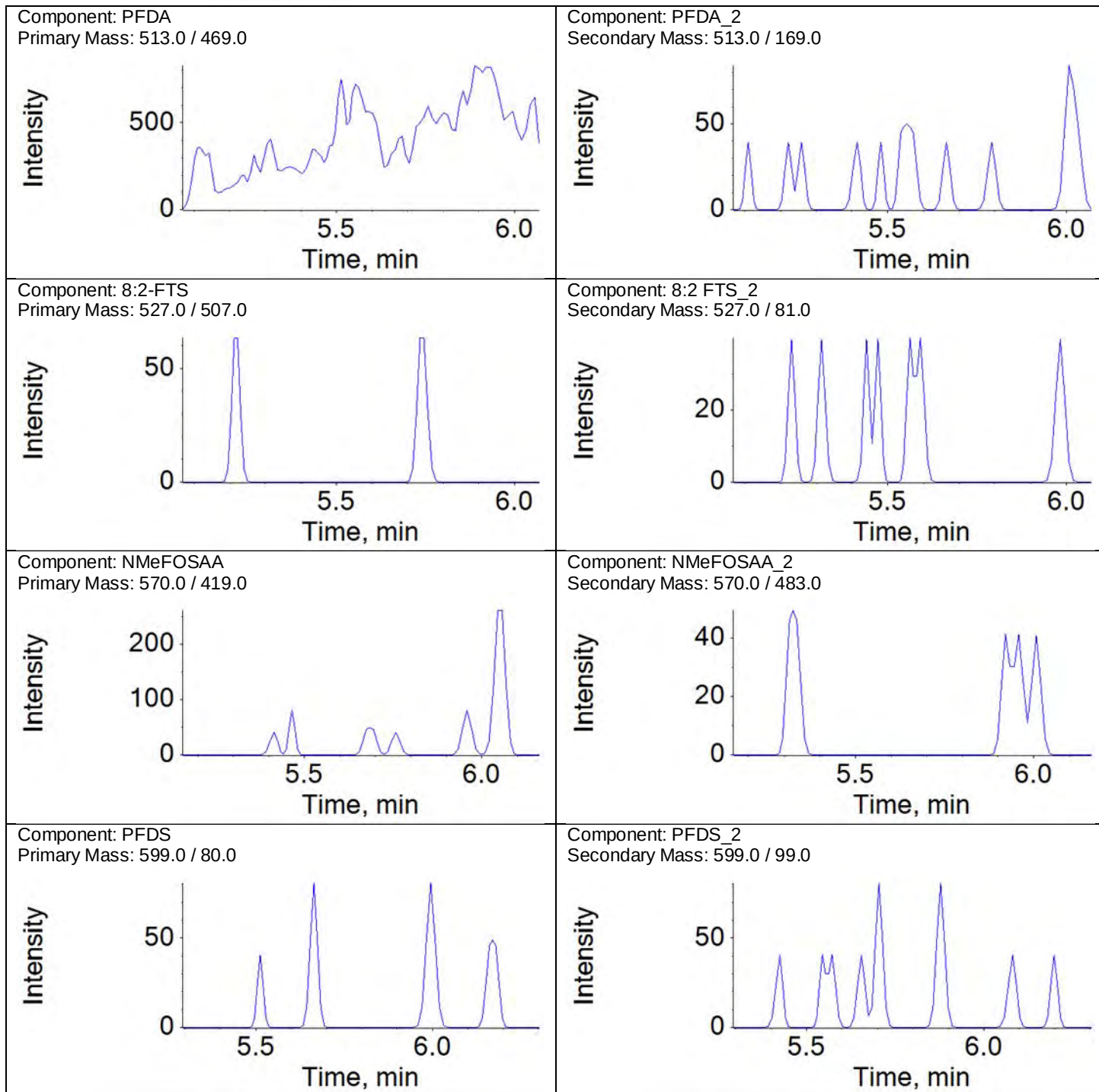
File Name: 18NOV12DCAL-51.wiff

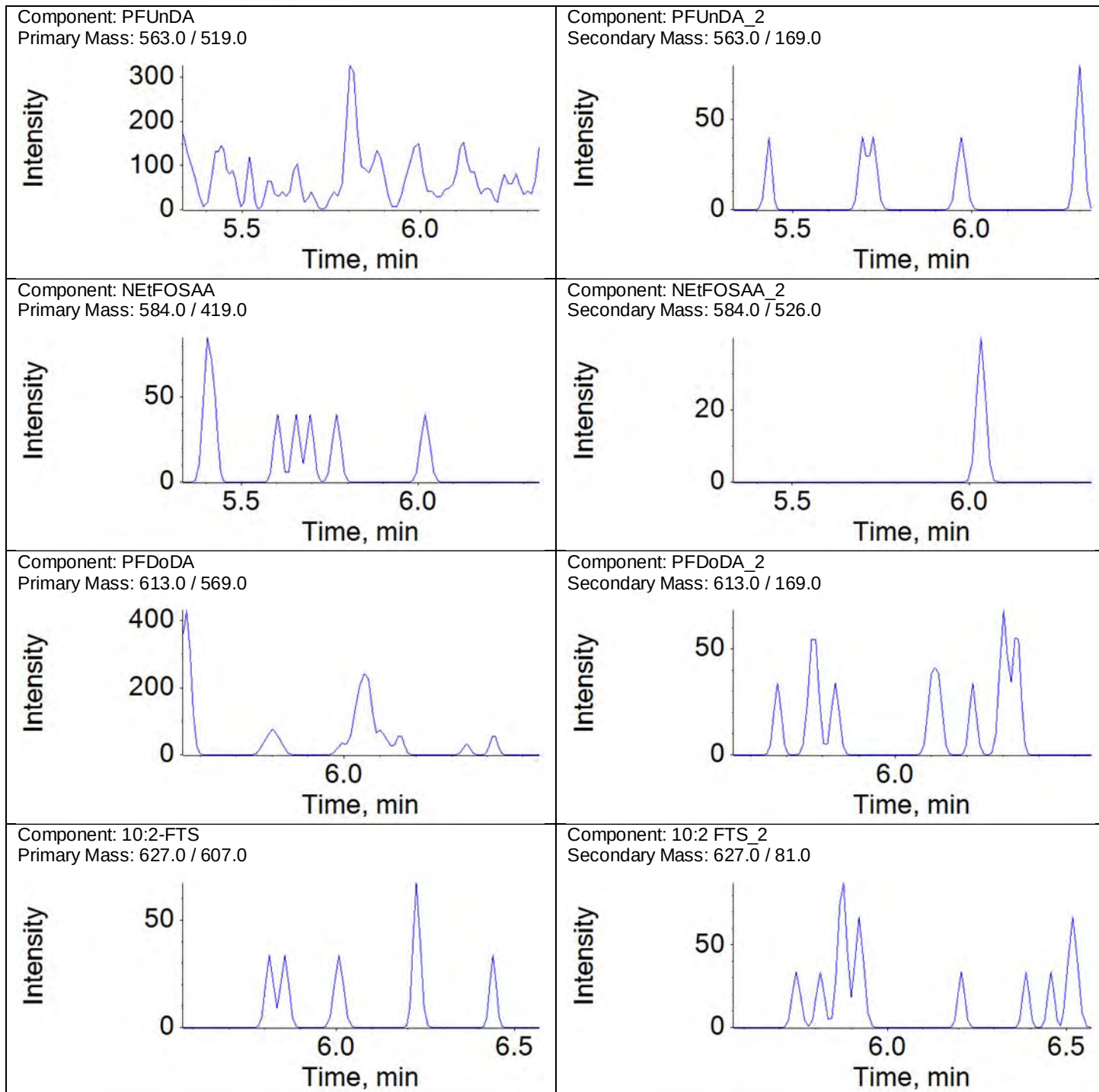
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	0.3619	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3619	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	0.6730	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	0.6730	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	0.0117	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0117	N/A		50	
PFPeS	N/A	N/A	N/A	A	0.5191	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5191	N/A		50	
PFHpA	N/A	N/A	N/A	A	0.0563	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0563	N/A		50	
PFHxS	4.55	1.00	122359.84	M	0.3428	0.3979			
PFHxS_2	4.54	1.00	48686.07	M	0.3428	0.3979	16	50	
6:2-FTS	N/A	N/A	N/A	A	0.6604	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	0.6604	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	0.4066	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.4066	N/A		50	
PFOA	4.91	1.00	312625.40	M	0.0562	0.0855			
PFOA_2	4.90	1.00	26736.79	M	0.0562	0.0855	52	50	OOS
PFOS	5.24	1.00	105809.81	M	0.2968	0.3212			
PFOS_2	5.24	1.00	33989.74	M	0.2968	0.3212	8	50	
PFNA	N/A	N/A	N/A	A	0.0229	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0229	N/A		50	
PFNS	N/A	N/A	N/A	A	0.4828	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4828	N/A		50	
PFDA	N/A	N/A	N/A	A	0.0081	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0081	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	0.6814	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	0.6814	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	0.2569	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2569	N/A		50	
PFDS	N/A	N/A	N/A	A	0.5144	N/A			
PFDS_2	N/A	N/A	N/A	A	0.5144	N/A		50	
PFUnDA	N/A	N/A	N/A	A	0.0058	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0058	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	0.7253	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.7253	N/A		50	
PFDODA	N/A	N/A	N/A	A	0.0157	N/A			
PFDODA_2	N/A	N/A	N/A	A	0.0157	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	0.6356	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	0.6356	N/A		#NA!	
PFTTrDA	N/A	N/A	N/A	A	0.0086	N/A			
PFTTrDA_2	N/A	N/A	N/A	A	0.0086	N/A		50	
PFTeDA	N/A	N/A	N/A	A	0.0062	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0062	N/A		50	
PFHxDA	N/A	N/A	N/A	A	0.0683	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0683	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0277	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0277	N/A		50	

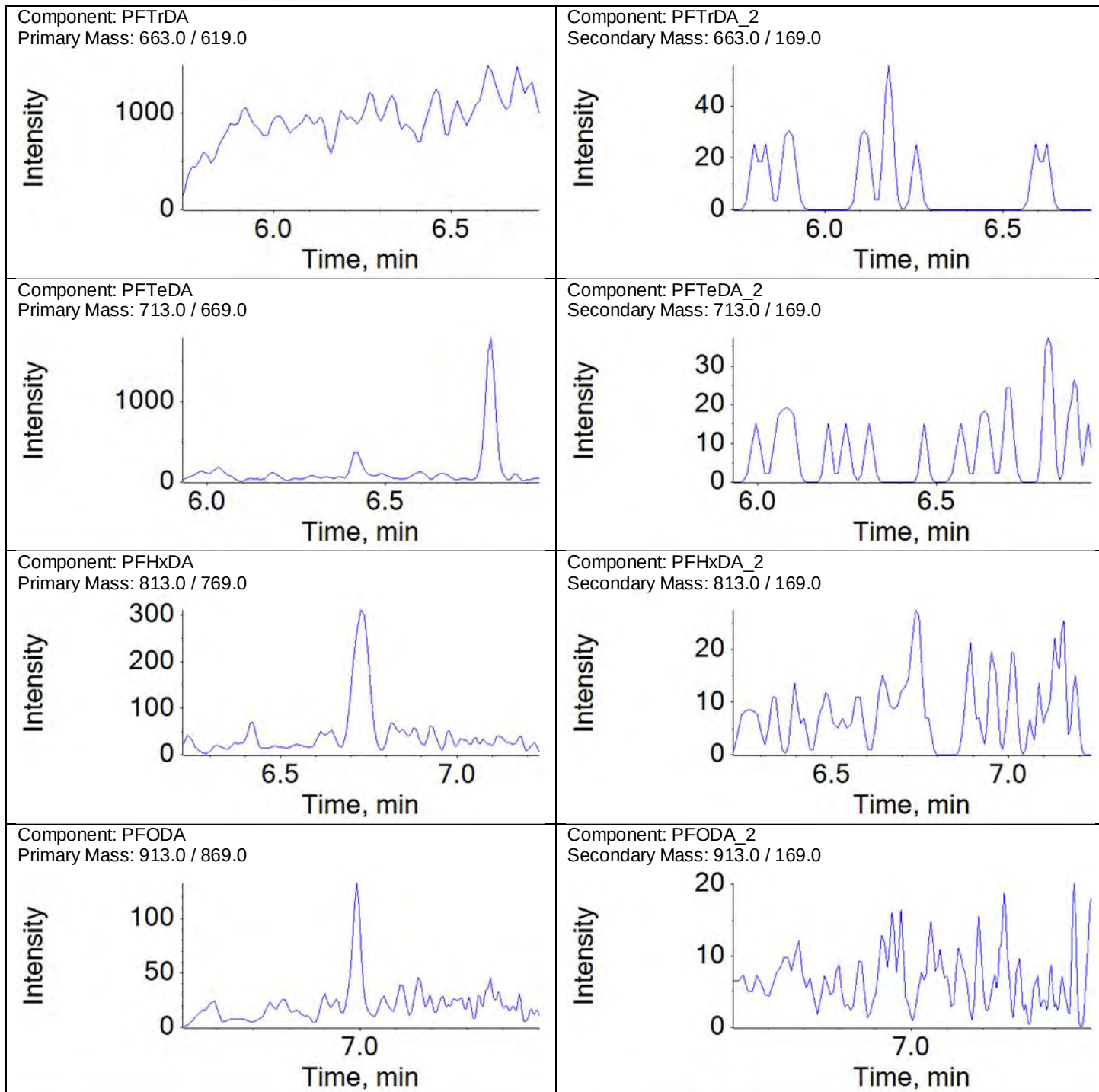










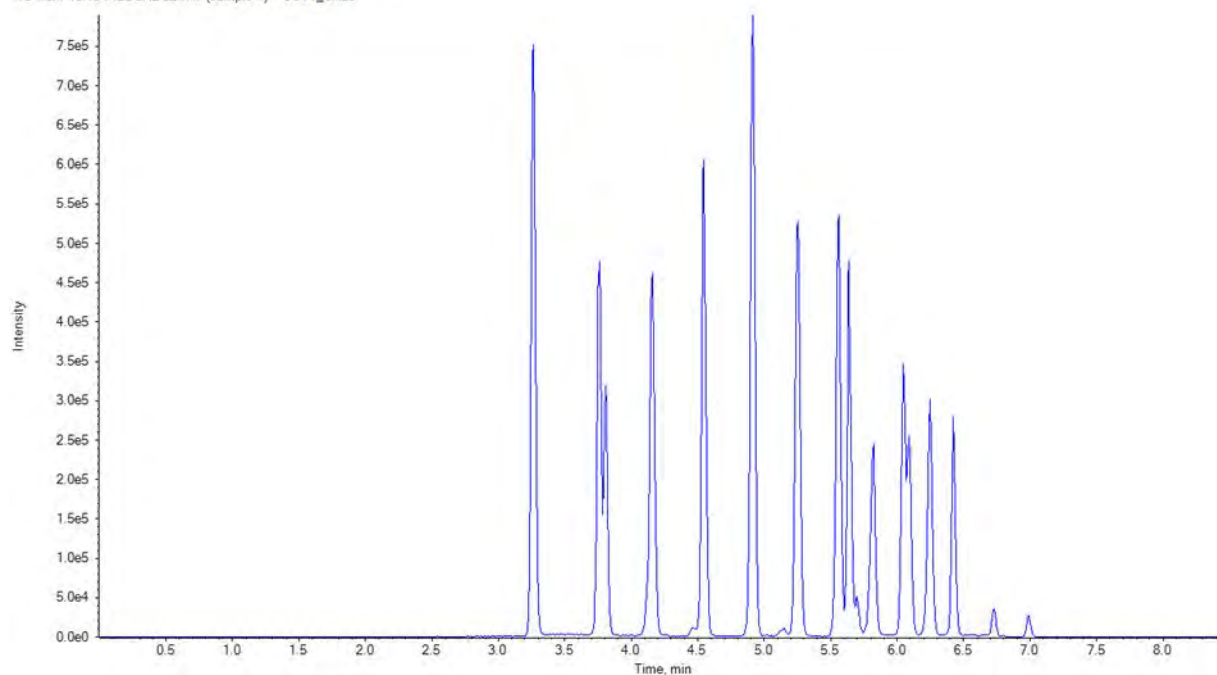


Continuing Calibration Verification

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1 CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17

TIC from 18NOV12DCAL-52.wiff (sample 1) - CCV1_CAL3



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

APPROVED

By MCD at 6:34 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

Continuing Calibration Verification

ICAL Name: 18NOV12DCAL Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	303662.2	10	13C4-PFBA	735275.5	5.0	0.413	3.26	1.000	2.000	2.288	14	30	
PFPeA	301109.0	11	13C5-PFPeA	741612.6	5.0	0.406	3.76	1.000	2.000	2.350	18	30	
PFBS	166889.6	10	13C3-PFBS	428368.4	4.7	0.390	3.81	1.000	1.770	1.853	5	30	
4:2-FTS	33008.9	12	13C2-4:2-FTS	45542.8	4.7	0.725	4.12	1.000	1.870	1.968	5	30	
PFHxA	362326.0	12	13C5-PFHxA	638944.4	5.0	0.567	4.16	1.000	2.000	2.368	18	30	
PFPeS	87834.9	11	13C3-PFBS	428368.4	4.7	0.205	4.18	1.100	1.880	1.991	6	30	
PFHpA	361271.6	11	13C4-PFHpA	513535.0	5.0	0.703	4.54	1.000	2.000	2.332	17	30	
PFHxS	128396.1	18	13C3-PFHxS	315408.2	4.7	0.407	4.55	1.000	1.820	1.974	8	30	
6:2-FTS	30500.7	11	13C2-6:2-FTS	31026.1	4.8	0.983	4.90	1.000	1.900	2.379	25	30	
PFHpS	122801.7	11	13C3-PFHxS	315408.2	4.7	0.389	4.91	1.080	1.900	2.050	8	30	
PFOA	370358.7	11	13C8-PFOA	845332.9	5.0	0.438	4.91	1.000	2.000	2.340	17	30	
PFOS	122332.0	21	13C8-PFOS	260810.5	4.8	0.469	5.24	1.000	1.850	2.051	11	30	
PFNA	292557.2	11	13C9-PFNA	468762.7	5.0	0.624	5.26	1.000	2.000	2.250	13	30	
PFNS	76021.2	11	13C8-PFOS	260810.5	4.8	0.291	5.54	1.060	1.920	2.039	6	30	
PFDA	253956.7	11	13C6-PFDA	610394.1	5.0	0.416	5.56	1.000	2.000	2.206	10	30	
8:2-FTS	22335.5	11	13C2-8:2-FTS	28002.9	4.8	0.798	5.56	1.000	1.920	1.860	-3	30	
PFOSA	236734.8	12	13C8-PFOSA	697263.3	5.0	0.340	5.64	1.000	2.000	1.658	-17	30	
NMeFOSAA	28733.4	18	d3-NMeFOSAA	73784.5	5.0	0.389	5.70	1.000	2.000	2.201	10	30	
PFDS	62507.8	11	13C8-PFOS	260810.5	4.8	0.240	5.79	1.110	1.930	2.172	13	30	
PFUnDA	199322.4	12	13C7-PFUnDA	244775.8	5.0	0.814	5.82	1.000	2.000	2.129	6	30	
NEtFOSAA	24531.9	20	d5-NEtFOSAA	70158.9	5.0	0.350	5.83	1.000	2.000	1.833	-8	30	
PFDODA	228792.9	12	13C2-PFDODA	497113.0	5.0	0.460	6.05	1.000	2.000	2.344	17	30	
10:2-FTS	14411.1	11	13C2-8:2-FTS	28002.9	4.8	0.515	6.06	1.090	1.930	1.714	-11	30	
NMePFOSAE	172466.5	11	d7-NMePFOSAE	300873.2	5.0	0.573	6.09	1.000	2.000	2.386	19	30	
NMePFOSA	31464.1	12	d3-NMePFOSA	75068.4	5.0	0.419	6.10	1.000	2.000	2.068	3	30	
PFDOS	33762.2	11	13C8-PFOS	260810.5	4.8	0.129	6.22	1.190	1.940	2.267	17	30	
NEtPFOSAE	180928.5	11	d9-NEtPFOSAE	250299.2	5.0	0.723	6.25	1.000	2.000	2.319	16	30	
NEtPFOSA	26529.3	11	d5-NEtPFOSA	59631.6	5.0	0.445	6.26	1.000	2.000	2.043	2	30	
PFTTrDA	185154.6	11	13C2-PFDODA	497113.0	5.0	0.372	6.25	1.030	2.000	2.351	18	30	
PFTeDA	159904.6	10	13C2-PFTeDA	379642.6	5.0	0.421	6.42	1.000	2.000	2.361	18	30	
PFHxDA	68393.8	11	13C2-PFTeDA	379642.6	5.0	0.180	6.73	1.050	2.000	2.146	7	30	
PFOA	58092.4	10	13C2-PFTeDA	379642.6	5.0	0.153	6.99	1.090	2.000	2.131	7	30	

Continuing Calibration Verification

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED

By MCD at 6:34 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3		Data File:	18NOV12DCAL-52.wiff
Sample ID:	CALBRN31833B		Acquis Date:	2018-11-12T16:36:17
Sample Type:	Quality Control		Instrument:	LM27631
Vial Position:	5		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV12DCAL
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735275.5	13C3-PFBA	664284.7	1.107	5.000	4.962	99	70-130	
E13C5-PFPeA	741612.6	13C3-PFBA	664284.7	1.116	5.000	5.007	100	70-130	
E13C3-PFBS	428368.4	13C3-PFBA	664284.7	0.645	4.650	4.552	98	70-130	
E13C2-4:2-FTS	45542.8	13C2-PFOA	438739.4	0.104	4.670	4.623	99	70-130	
E13C5-PFHxA	638944.4	13C2-PFOA	438739.4	1.456	5.000	5.261	105	70-130	
E13C3-PFHxS	315408.2	13C2-PFOA	438739.4	0.719	4.730	4.933	104	70-130	
E13C4-PFHpA	513535.0	13C2-PFOA	438739.4	1.170	5.000	5.273	105	70-130	
E13C2-6:2-FTS	31026.1	13C2-PFOA	438739.4	0.071	4.750	4.731	100	70-130	
E13C8-PFOA	845332.9	13C2-PFOA	438739.4	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	260810.5	13C4-PFOS	248122.9	1.051	4.780	4.657	97	70-130	
E13C9-PFNA	468762.7	13C4-PFOS	248122.9	1.889	5.000	5.267	105	70-130	
E13C6-PFDA	610394.1	13C2-PFDA	280671.6	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	28002.9	13C2-PFDA	280671.6	0.100	4.790	4.976	104	70-130	
E13C8-PFOSA	697263.3	13C2-PFDA	280671.6	2.484	5.000	5.508	110	70-130	
Ed3-NMeFOSAA	73784.5	13C2-PFDA	280671.6	0.263	5.000	4.745	95	70-130	
E13C7-PFUnDA	244775.8	13C2-PFDA	280671.6	0.872	5.000	5.063	101	70-130	
Ed5-NEtFOSAA	70158.9	13C2-PFDA	280671.6	0.250	5.000	5.288	106	70-130	
E13C2-PFDODA	497113.0	13C2-PFDA	280671.6	1.771	5.000	4.599	92	70-130	
Ed7-NMePFOSAE	300873.2	13C2-PFDA	280671.6	1.072	5.000	4.639	93	70-130	
Ed3-NMePFOSA	75068.4	13C2-PFDA	280671.6	0.267	5.000	4.859	97	70-130	
Ed9-NEtPFOSAE	250299.2	13C2-PFDA	280671.6	0.892	5.000	4.638	93	70-130	
Ed5-NEtPFOSA	59631.6	13C2-PFDA	280671.6	0.212	5.000	4.984	100	70-130	
E13C2-PFTeDA	379642.6	13C2-PFDA	280671.6	1.353	5.000	4.749	95	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3

Instrument Name: LM27631

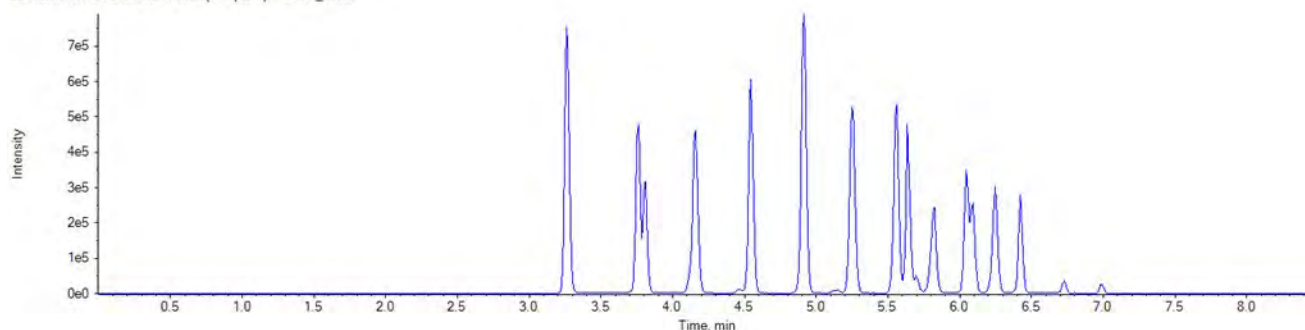
File Name: 18NOV12DCAL-52.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	303662.2		A	13C4-PFBA	3.26	735275.5	0.413	2.288
PFPeA	3.76	1.000	301109.0		A	13C5-PFPeA	3.76	741612.6	0.406	2.350
PFBS	3.81	1.000	166889.6		A	13C3-PFBS	3.81	428368.4	0.390	1.853
4:2-FTS	4.12	1.000	33008.9		A	13C2-4:2-FTS	4.12	45542.8	0.725	1.968
PFHxA	4.16	1.000	362326.0		A	13C5-PFHxA	4.16	638944.4	0.567	2.368
PFPeS	4.18	1.100	87834.9		A	13C3-PFBS	3.81	428368.4	0.205	1.991
PFHpA	4.54	1.000	361271.6		A	13C4-PFHpA	4.54	513535.0	0.703	2.332
PFHxS	4.55	1.000	128396.1		M	13C3-PFHxS	4.55	315408.2	0.407	1.974
6:2-FTS	4.90	1.000	30500.7		A	13C2-6:2-FTS	4.90	31026.1	0.983	2.379
PFHpS	4.91	1.080	122801.7		A	13C3-PFHxS	4.55	315408.2	0.389	2.050
PFOA	4.91	1.000	370358.7		A	13C8-PFOA	4.91	845332.9	0.438	2.340
PFOS	5.24	1.000	122332.0		M	13C8-PFOS	5.24	260810.5	0.469	2.051
PFNA	5.26	1.000	292557.2		A	13C9-PFNA	5.26	468762.7	0.624	2.250
PFNS	5.54	1.060	76021.2		A	13C8-PFOS	5.24	260810.5	0.291	2.039
PFDA	5.56	1.000	253956.7		A	13C6-PFDA	5.56	610394.1	0.416	2.206
8:2-FTS	5.56	1.000	22335.5		A	13C2-8:2-FTS	5.56	28002.9	0.798	1.860
PFOSA	5.64	1.000	236734.8		A	13C8-PFOSA	5.64	697263.3	0.340	1.658
NMeFOSAA	5.70	1.000	28733.4		A	d3-NMeFOSAA	5.70	73784.5	0.389	2.201
PFDS	5.79	1.110	62507.8		A	13C8-PFOS	5.24	260810.5	0.240	2.172
PfUnDA	5.82	1.000	199322.4		A	13C7-PfUnDA	5.82	244775.8	0.814	2.129
NEtFOSAA	5.83	1.000	24531.9		A	d5-NEtFOSAA	5.83	70158.9	0.350	1.833
PFDODA	6.05	1.000	228792.9		A	13C2-PFDODA	6.05	497113.0	0.460	2.344
10:2-FTS	6.06	1.090	14411.1		A	13C2-8:2-FTS	5.56	28002.9	0.515	1.714
NMePFOSAE	6.09	1.000	172466.5		A	d7-NMePFOSAE	6.09	300873.2	0.573	2.386
NMePFOSA	6.10	1.000	31464.1		A	d3-NMePFOSA	6.10	75068.4	0.419	2.068
PFDoS	6.22	1.190	33762.2		A	13C8-PFOS	5.24	260810.5	0.129	2.267
NEtPFOSAE	6.25	1.000	180928.5		A	d9-NEtPFOSAE	6.24	250299.2	0.723	2.319
NEtPFOSA	6.26	1.000	26529.3		A	d5-NEtPFOSA	6.26	59631.6	0.445	2.043
PFTDA	6.25	1.030	185154.6		A	13C2-PFDODA	6.05	497113.0	0.372	2.351
PFTeDA	6.42	1.000	159904.6		A	13C2-PFTeDA	6.42	379642.6	0.421	2.361
PFHxDA	6.73	1.050	68393.8		A	13C2-PFTeDA	6.42	379642.6	0.180	2.146
PFODA	6.99	1.090	58092.4		A	13C2-PFTeDA	6.42	379642.6	0.153	2.131

Total Ion Chromatogram

TIC from 18NOV12DCAL-52.wiff (sample 1) - CCV1_CAL3



APPROVED

By MCD at 6:34 pm, 11/12/18

BSI05 Page 1186 of 1595

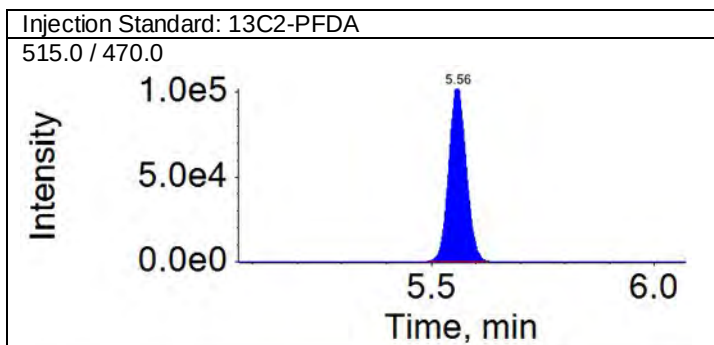
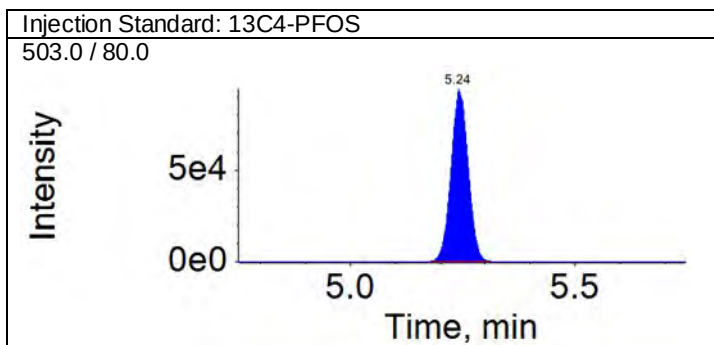
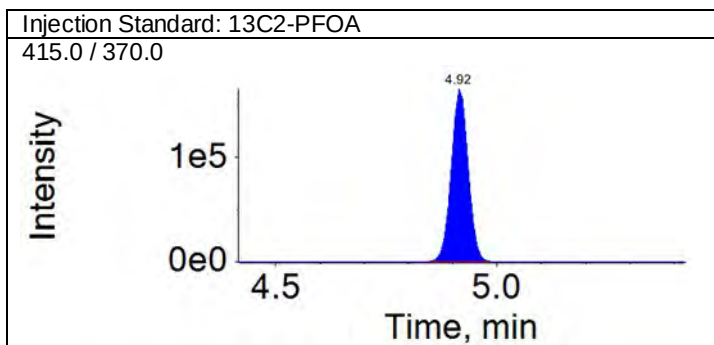
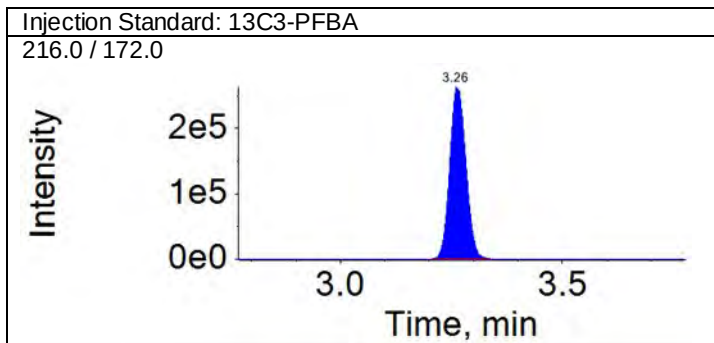
REVIEWED

By HMK at 10:53 am, 11/13/18

Page 2 of 17

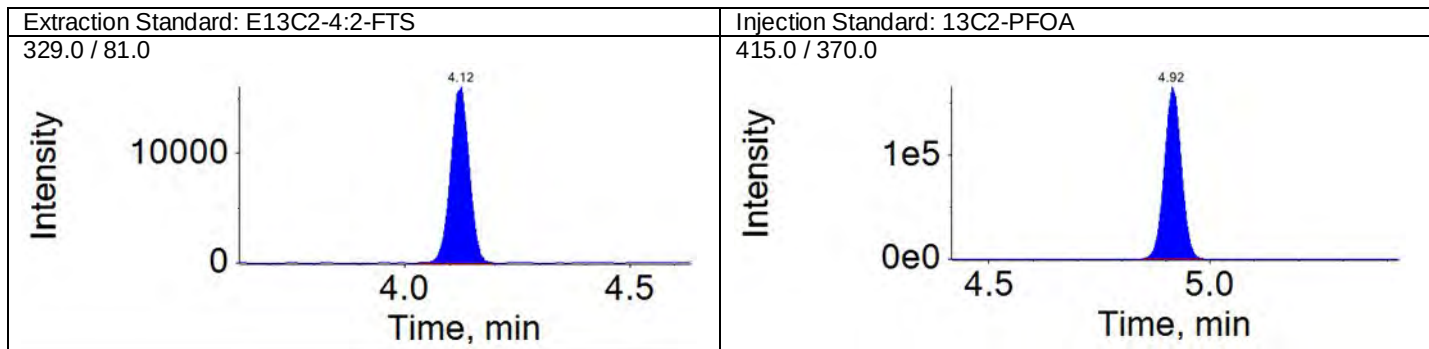
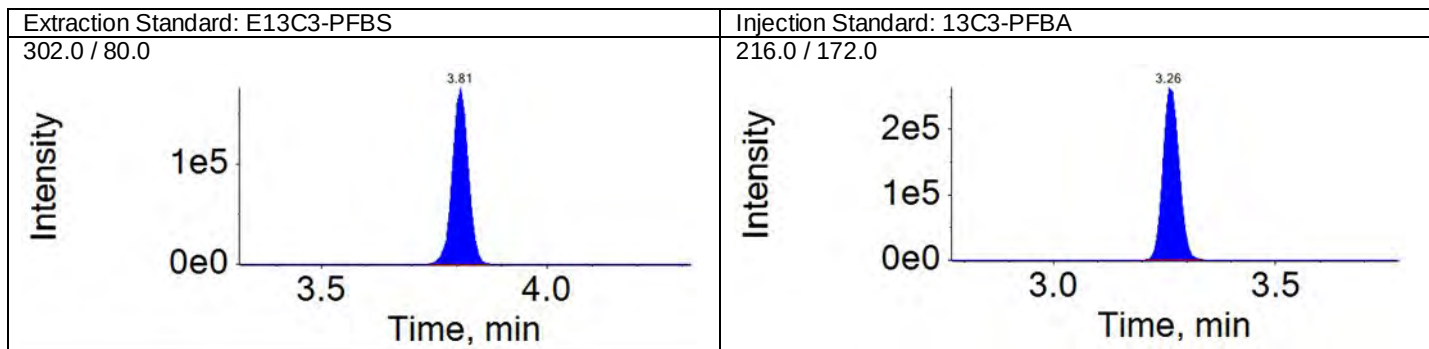
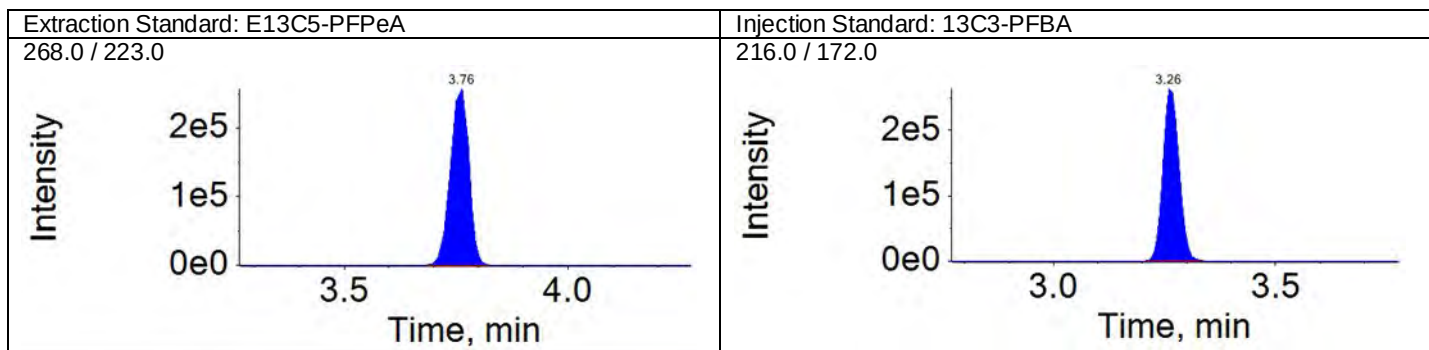
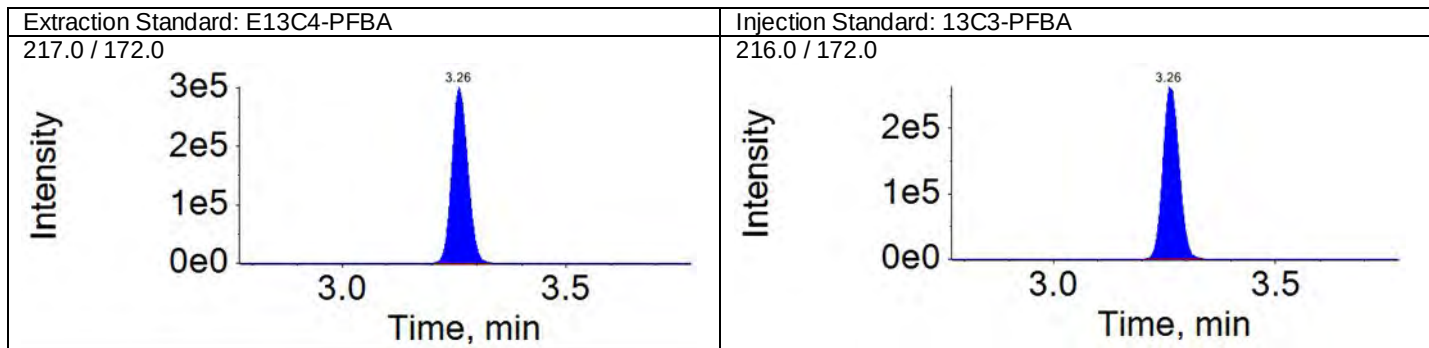
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



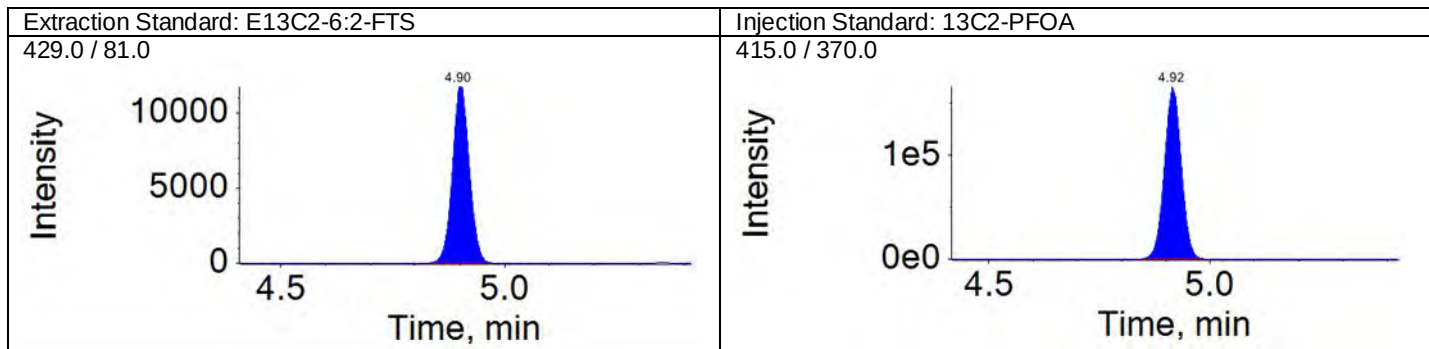
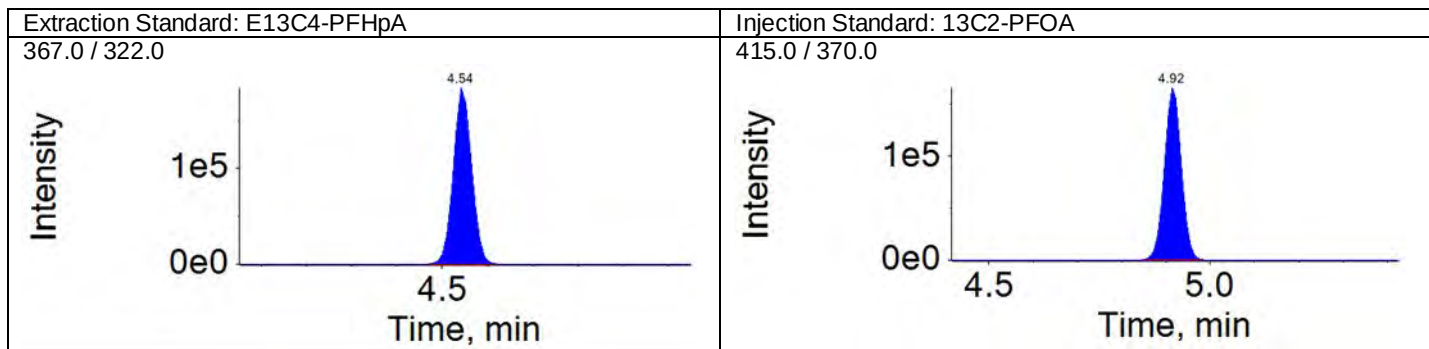
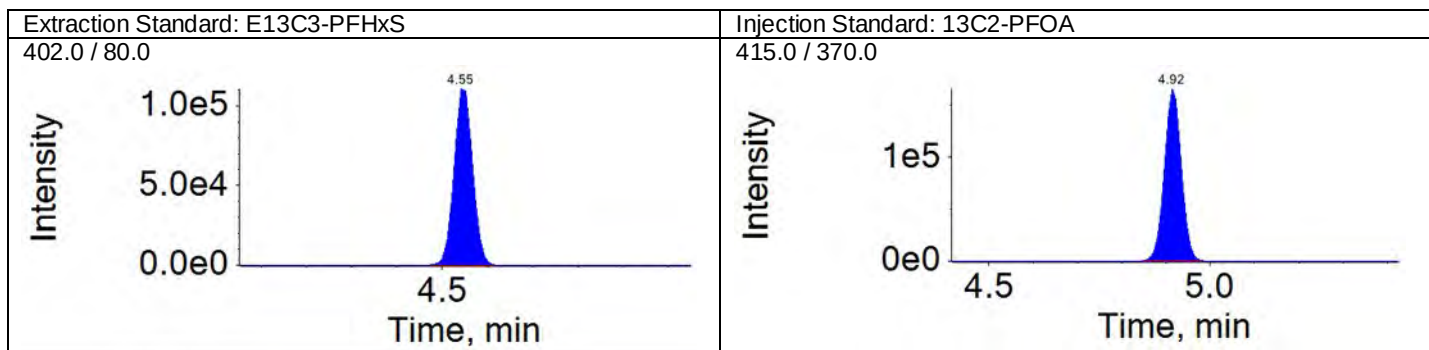
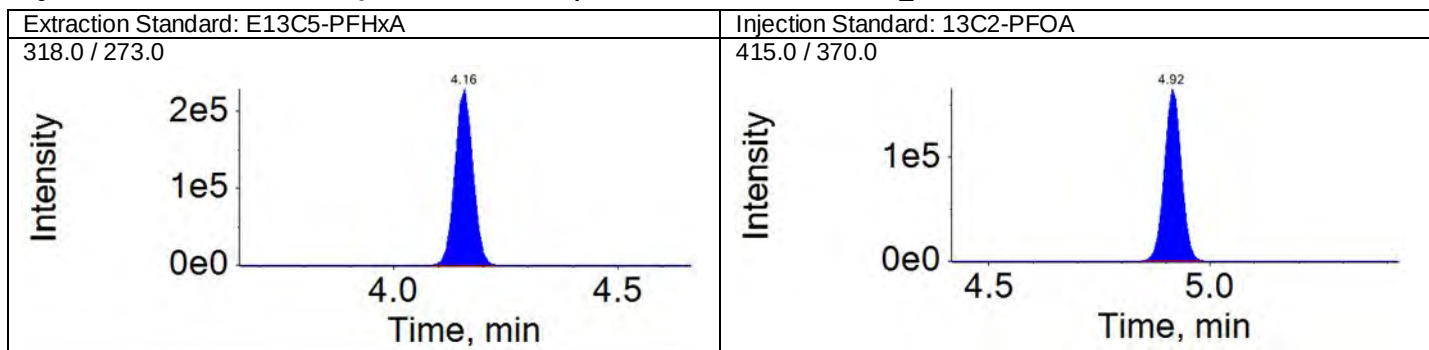
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



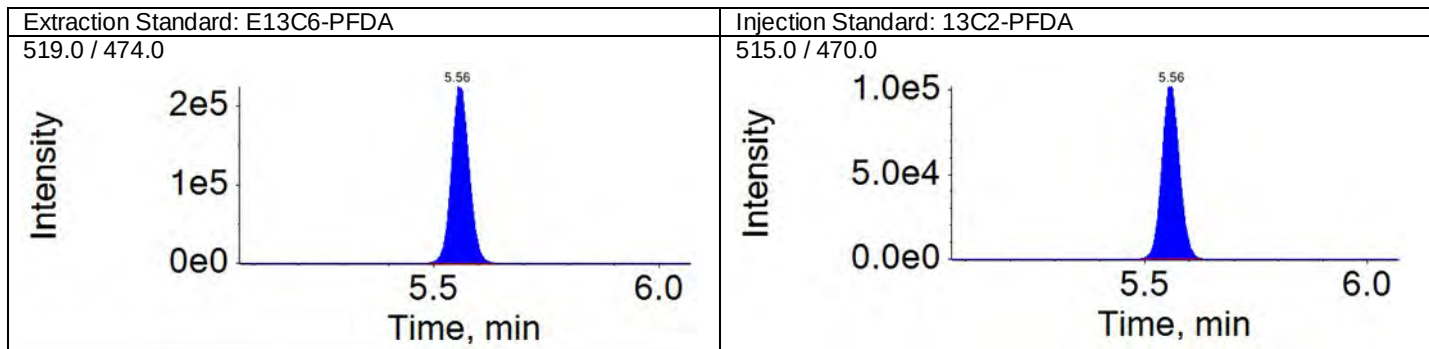
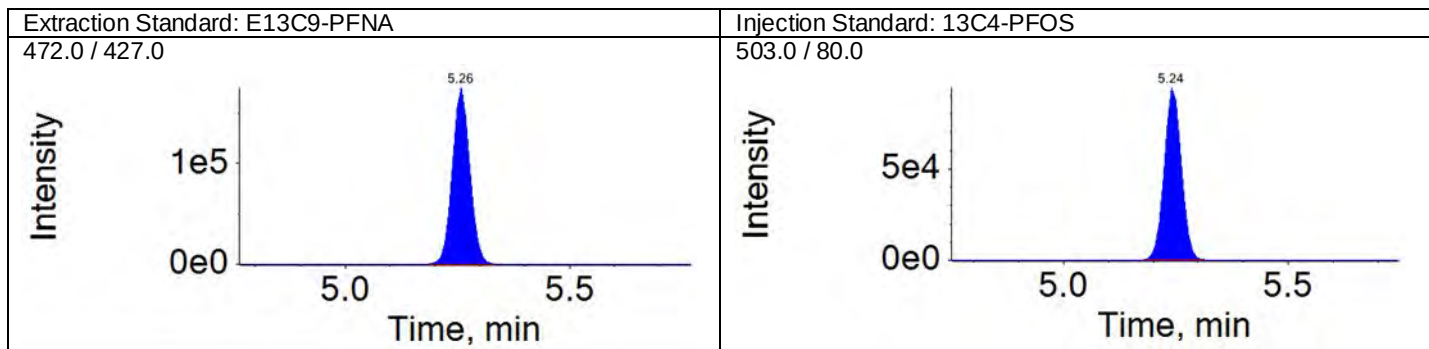
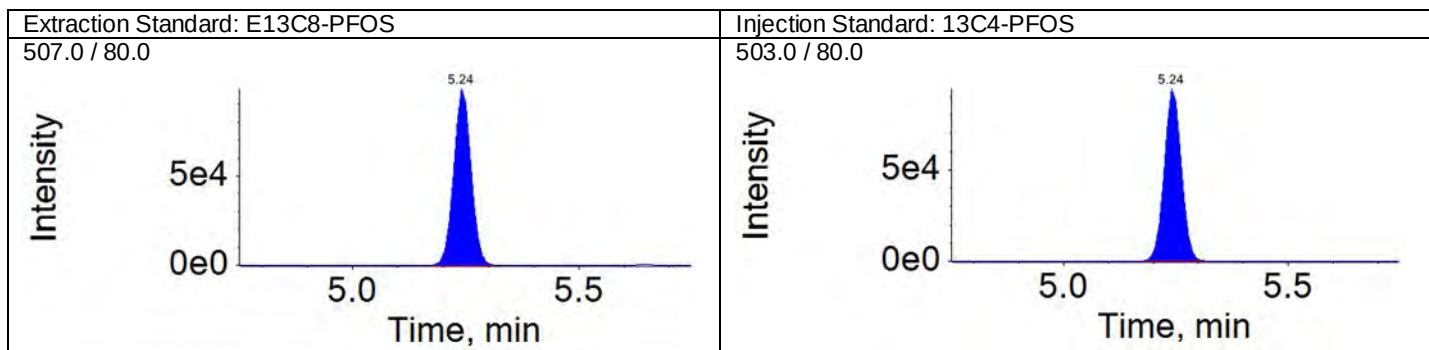
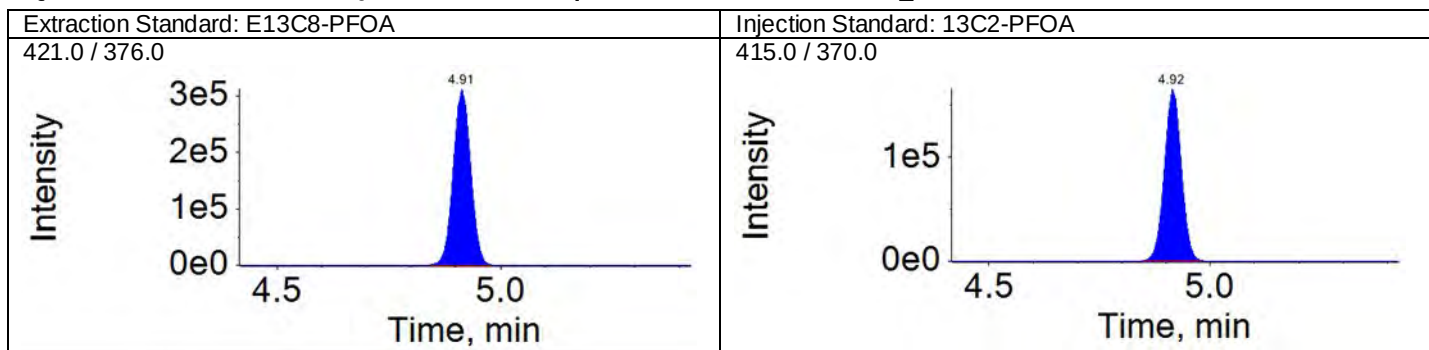
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



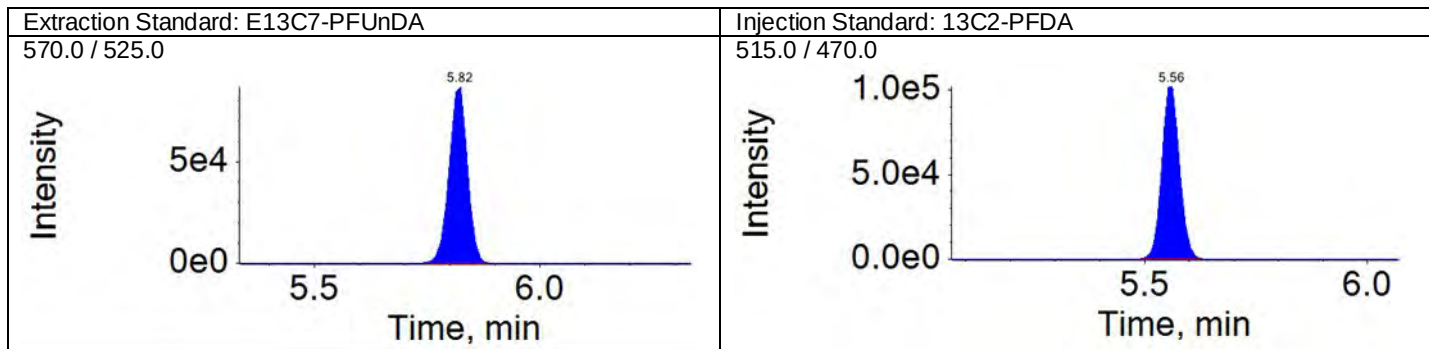
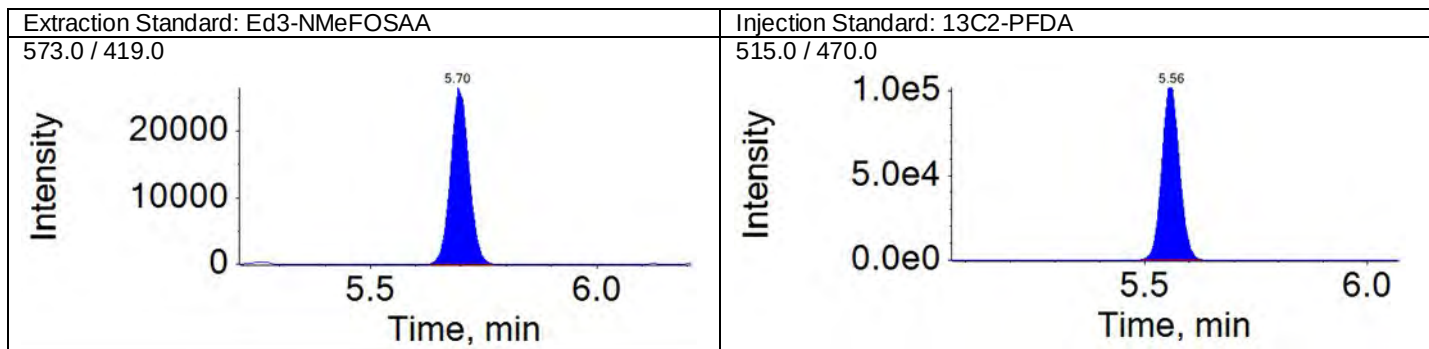
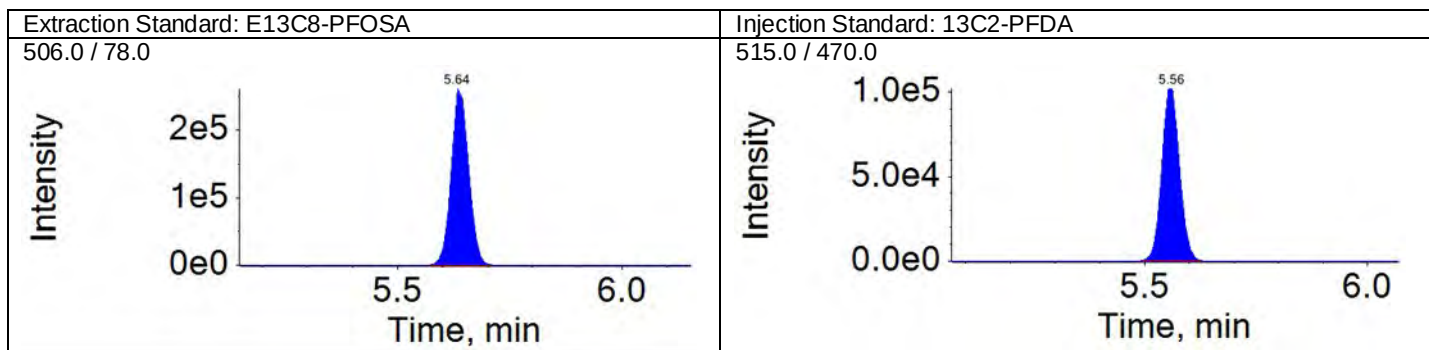
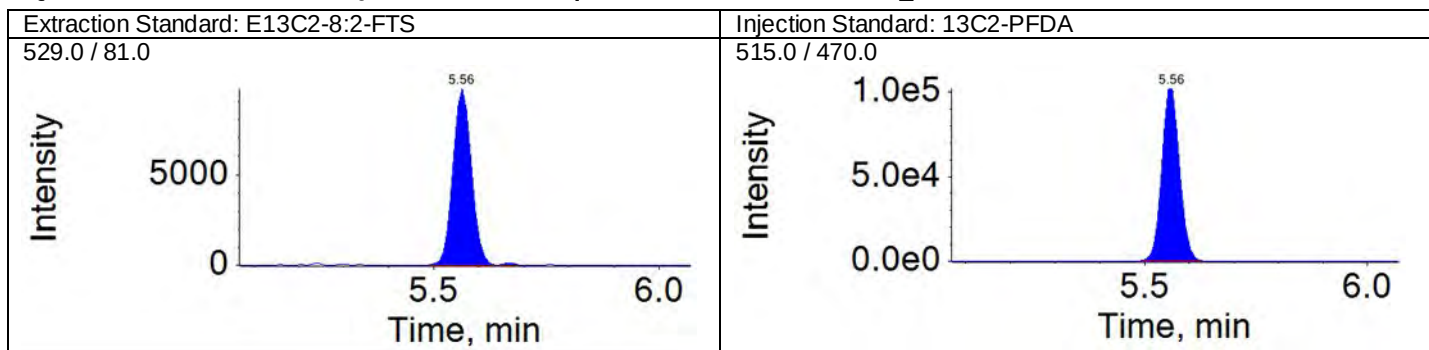
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



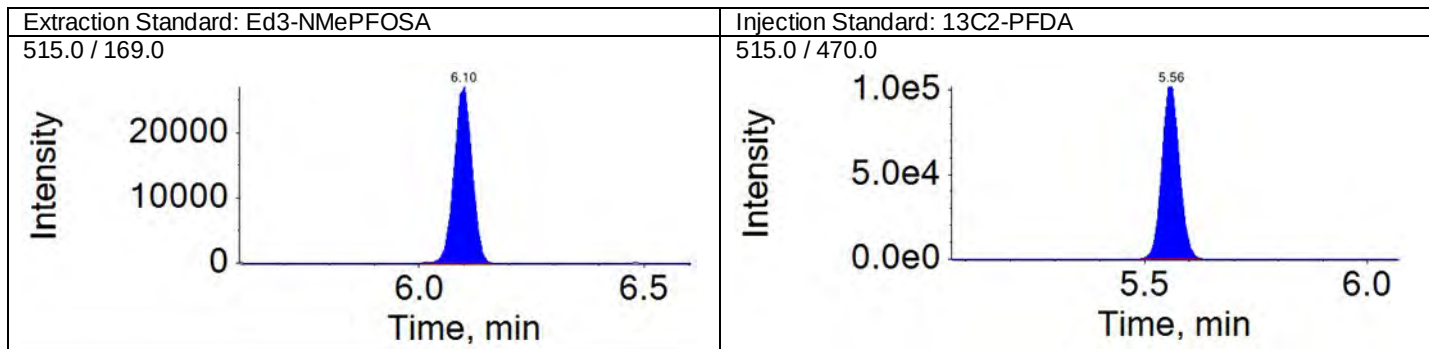
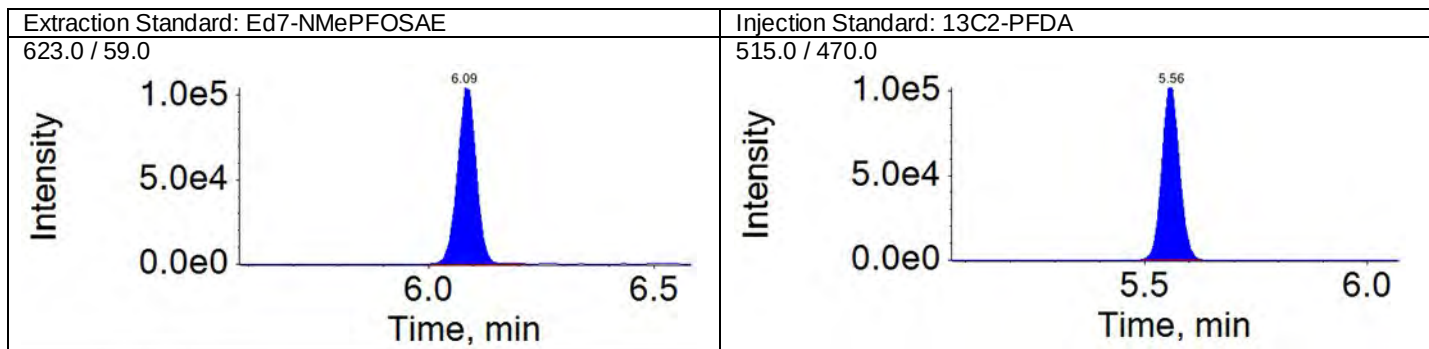
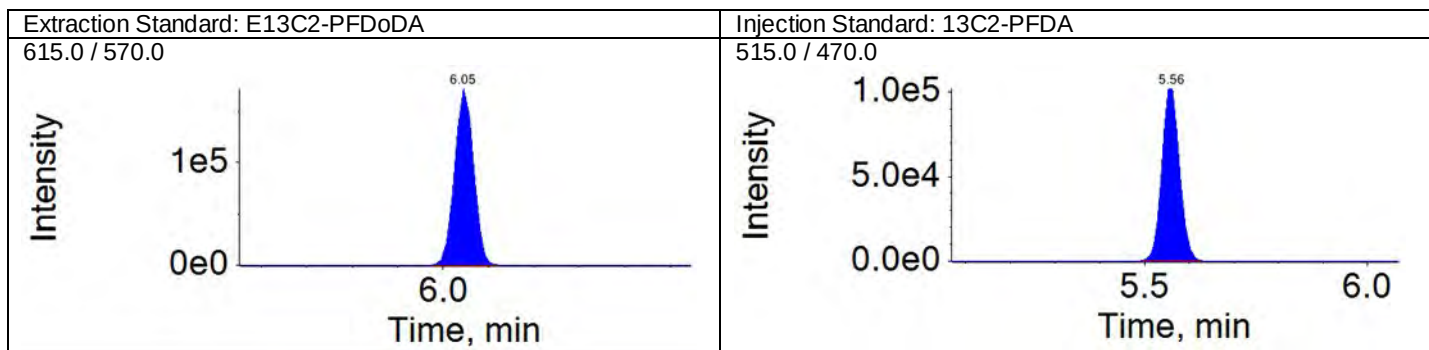
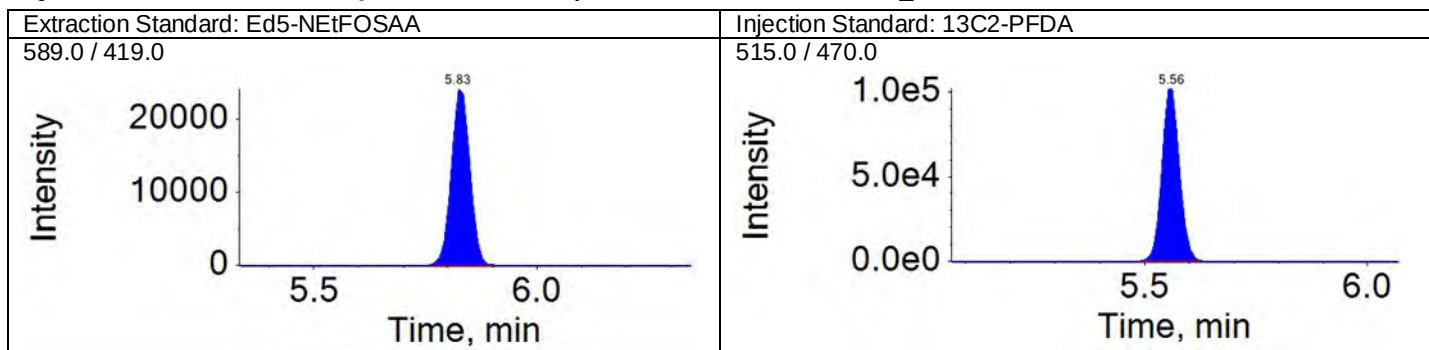
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



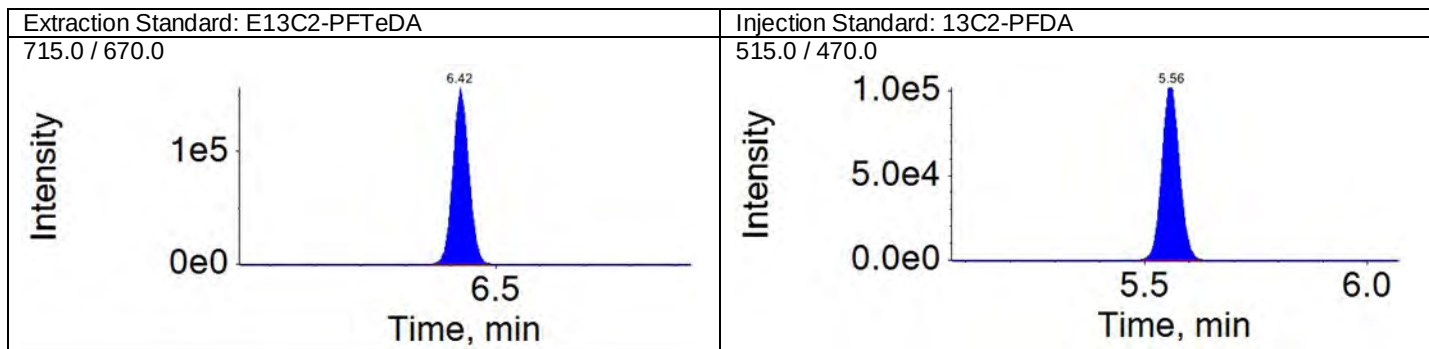
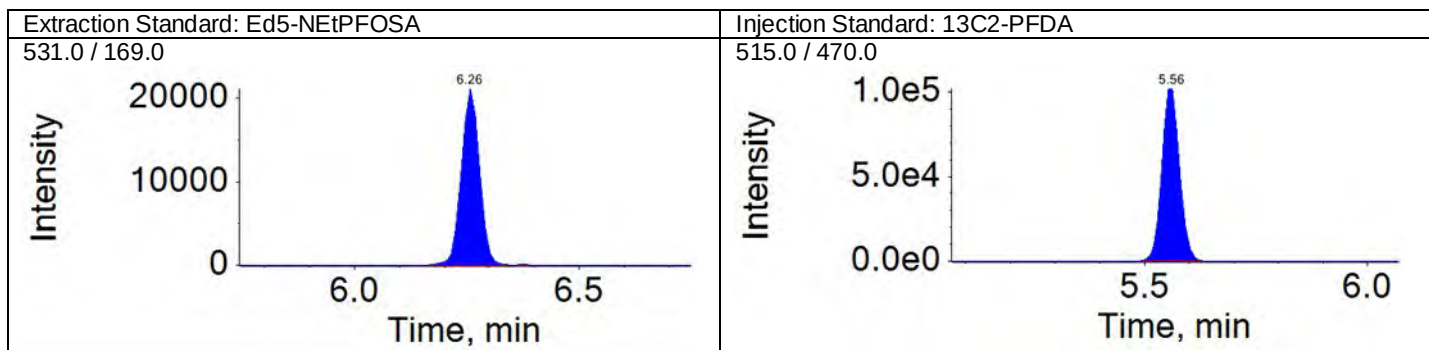
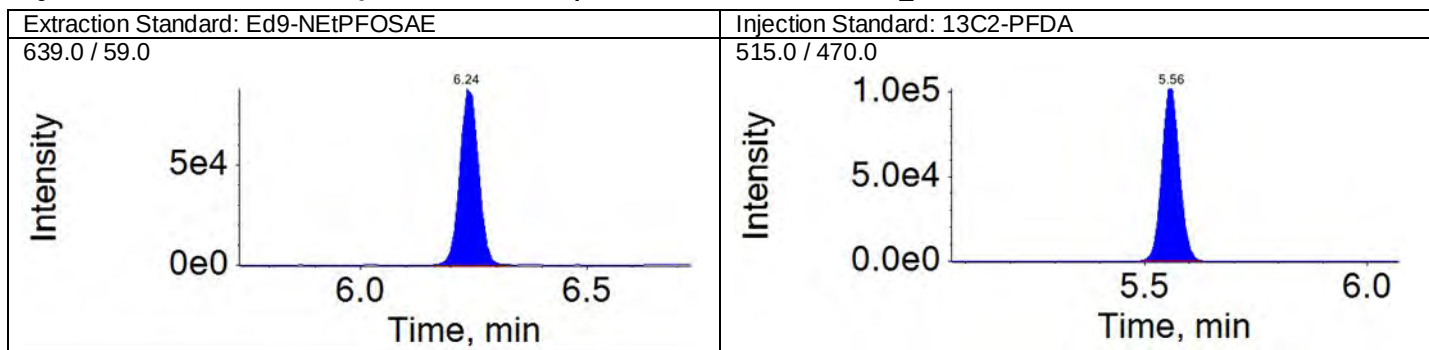
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



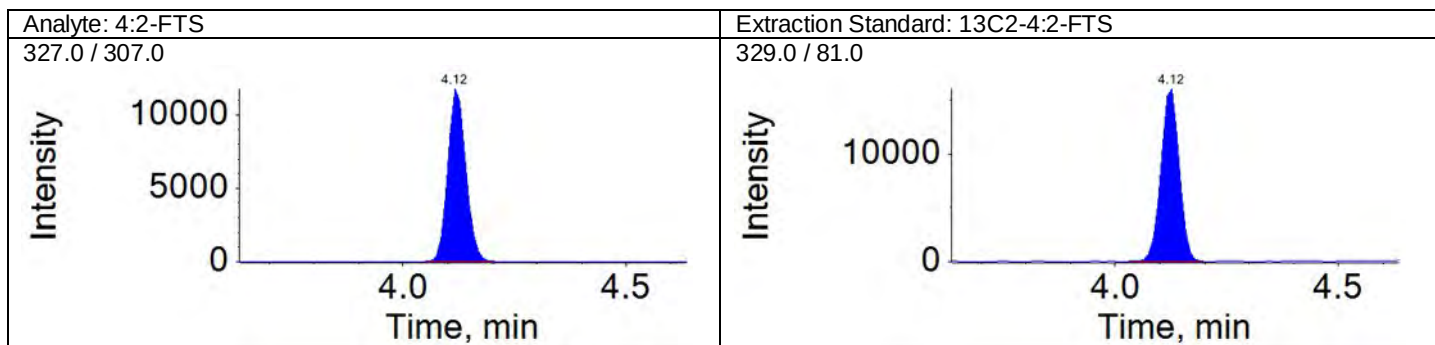
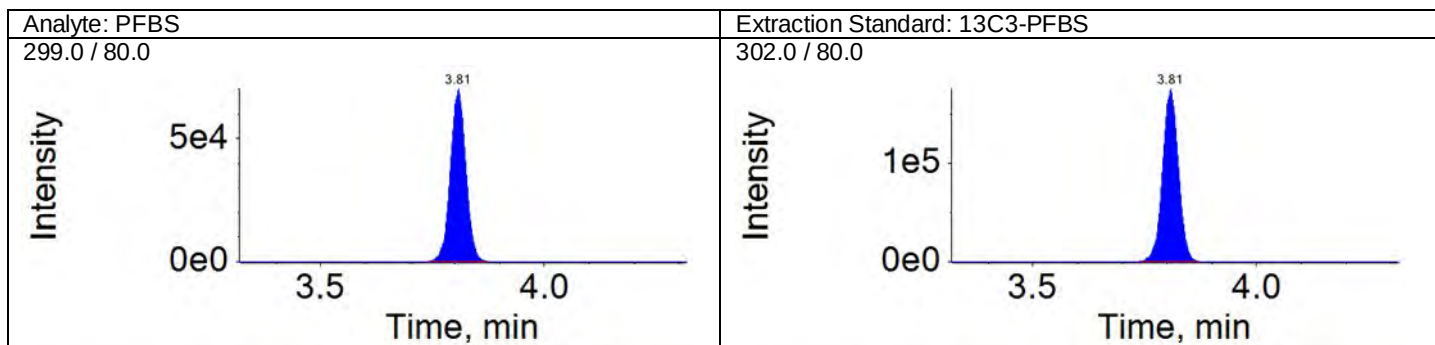
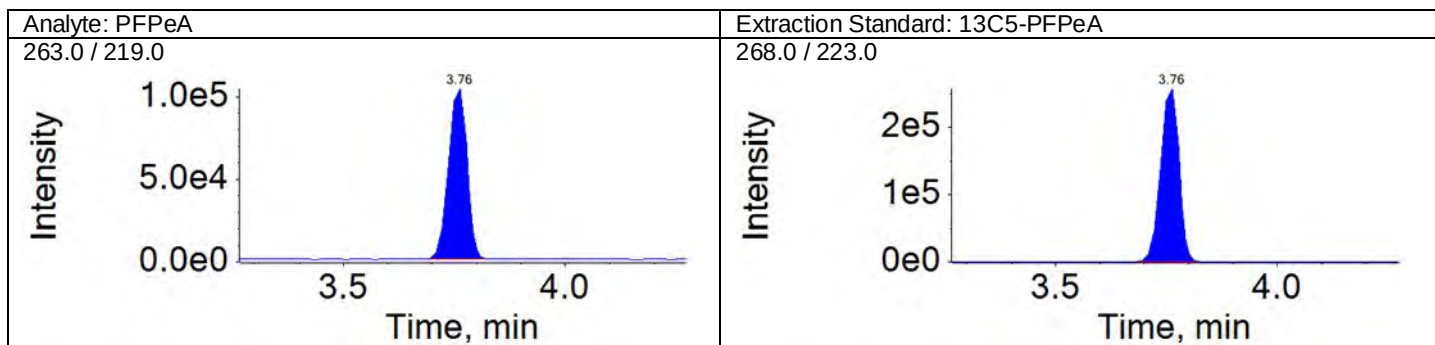
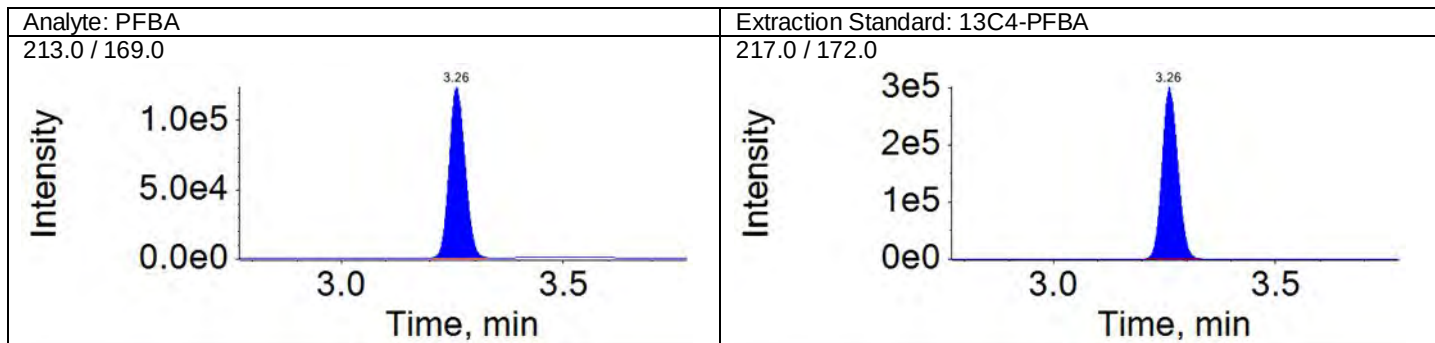
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



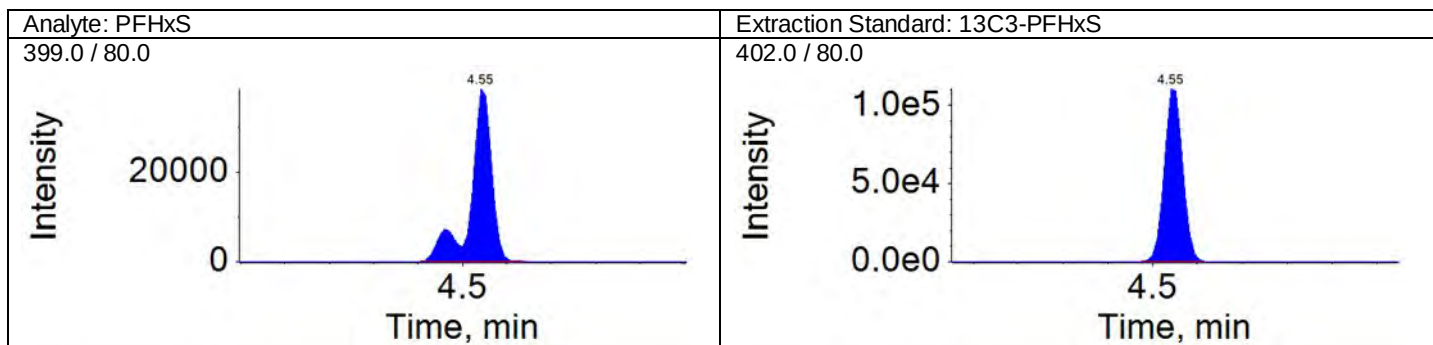
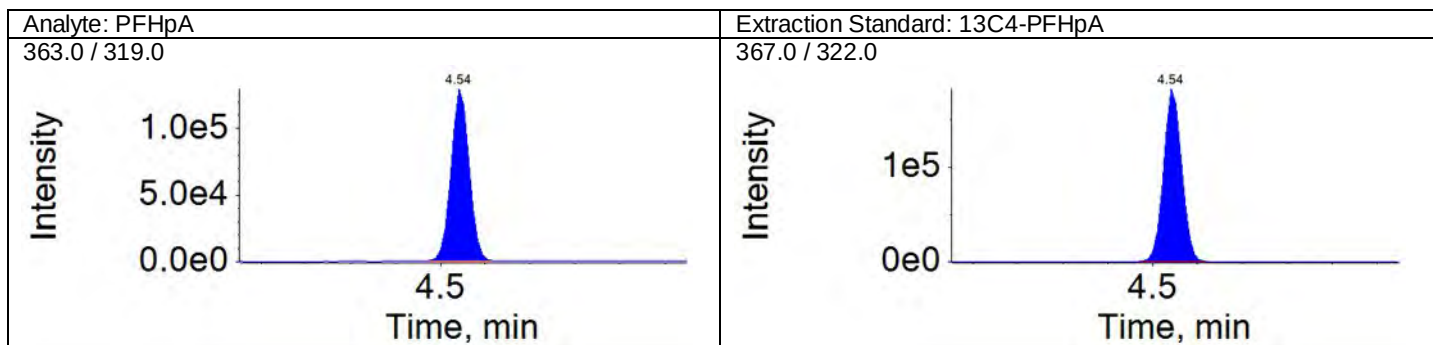
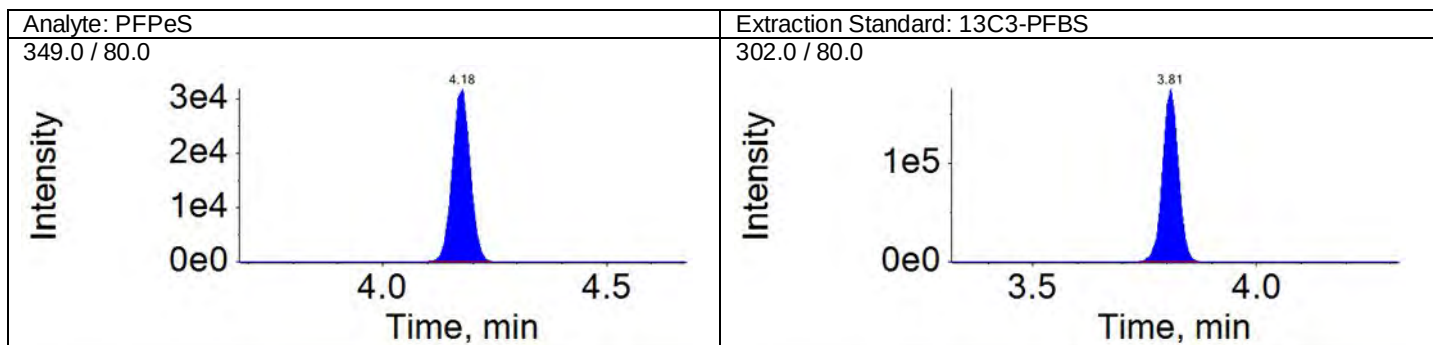
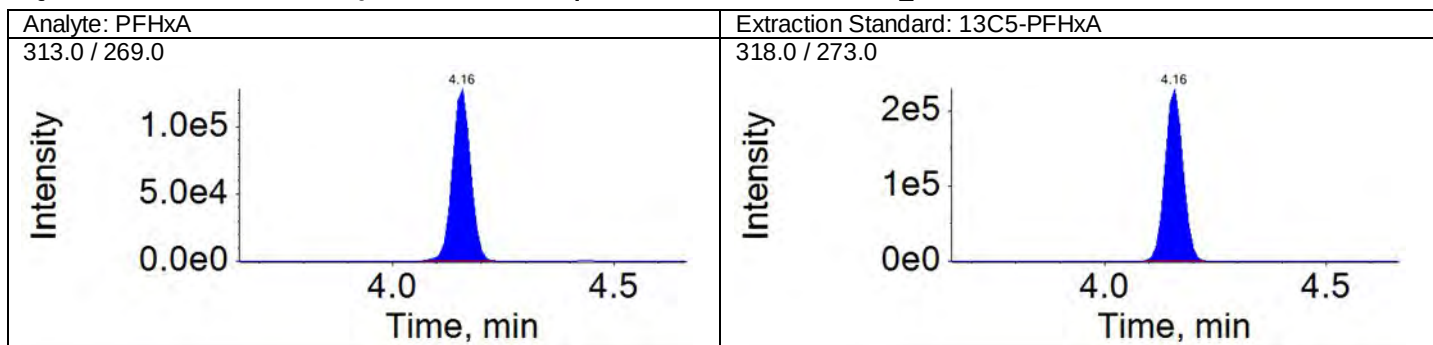
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



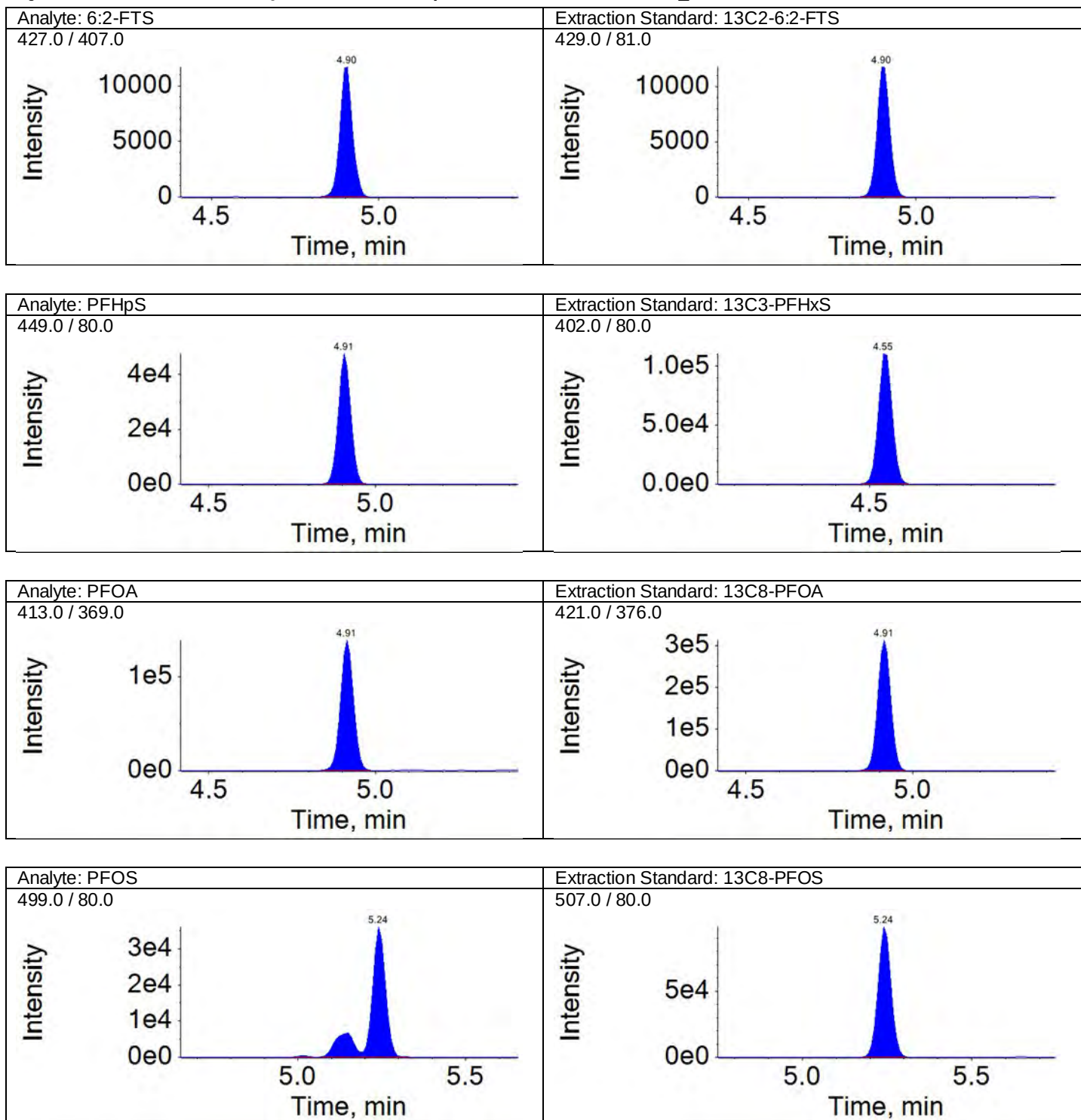
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



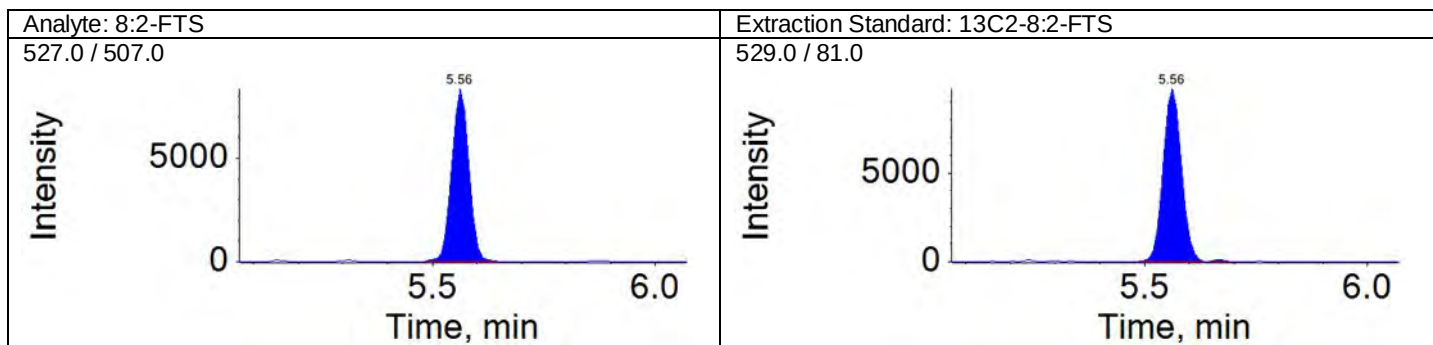
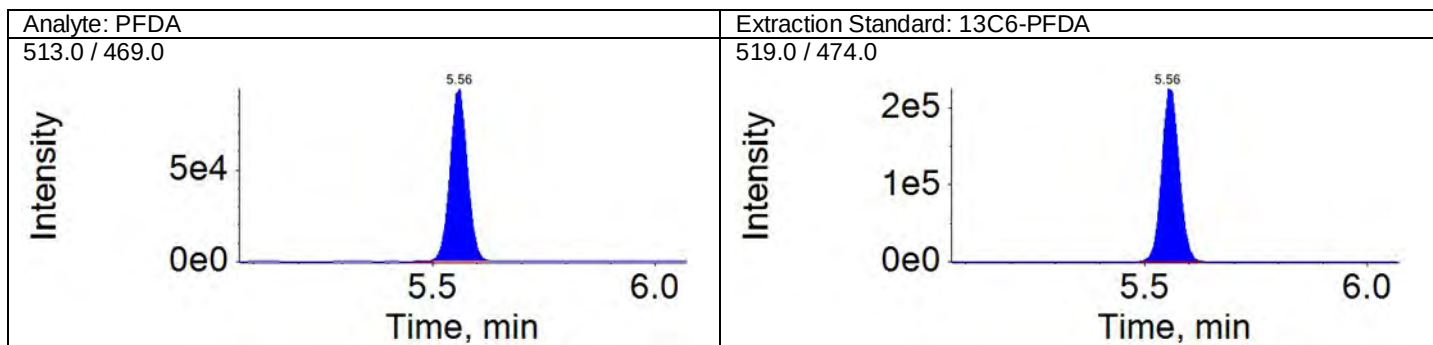
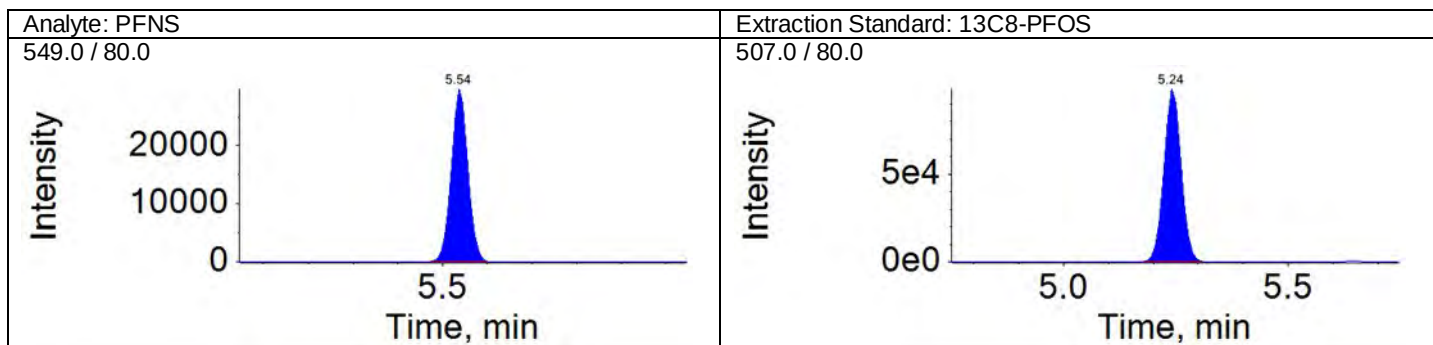
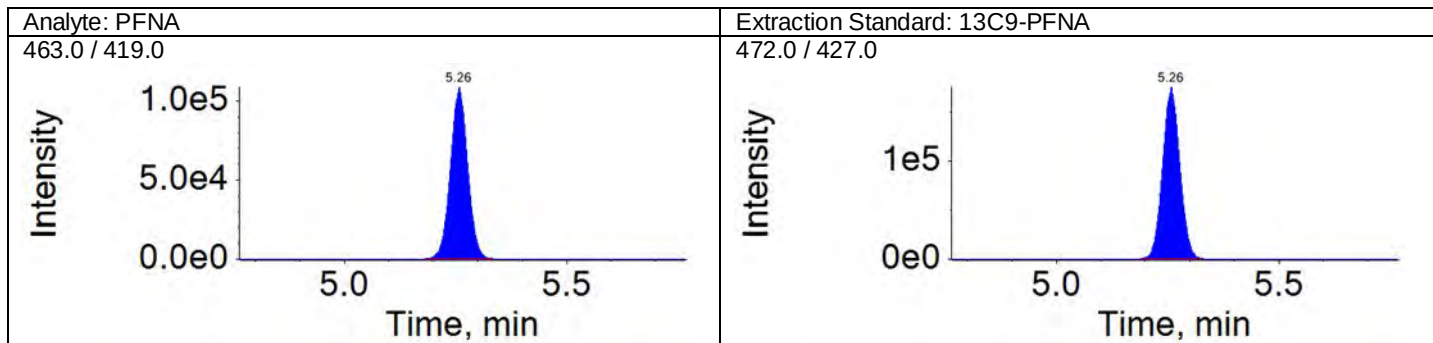
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



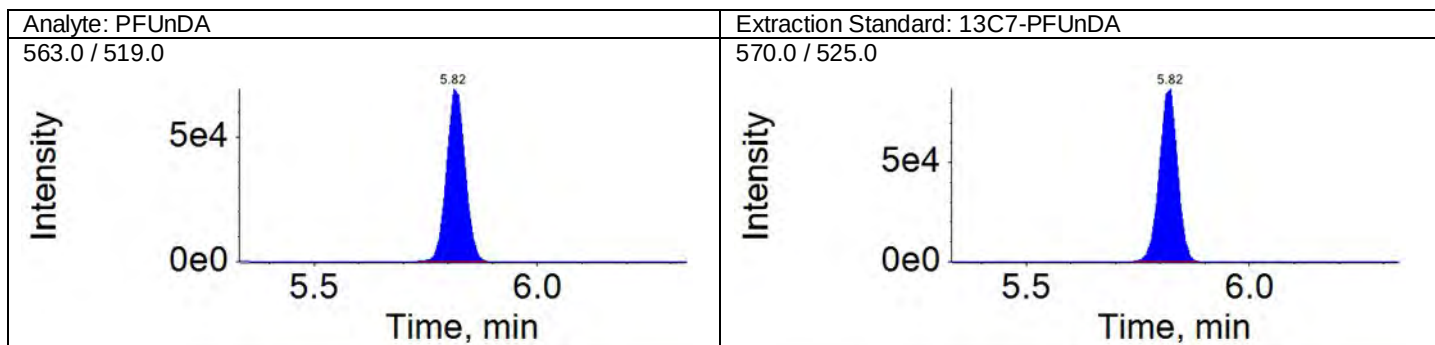
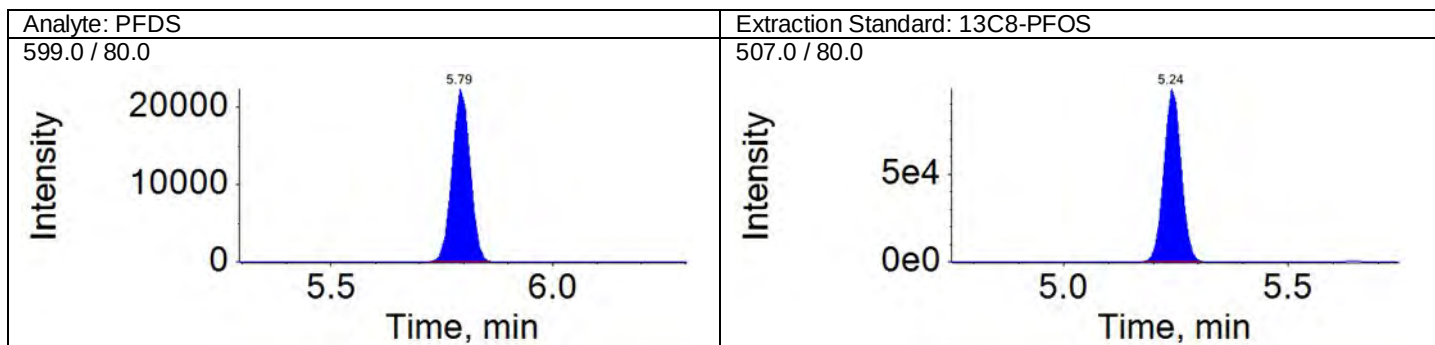
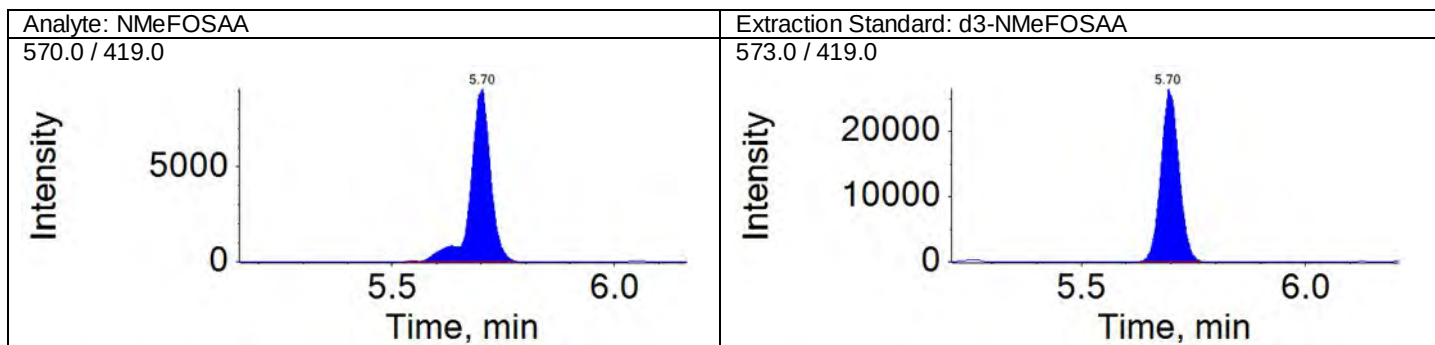
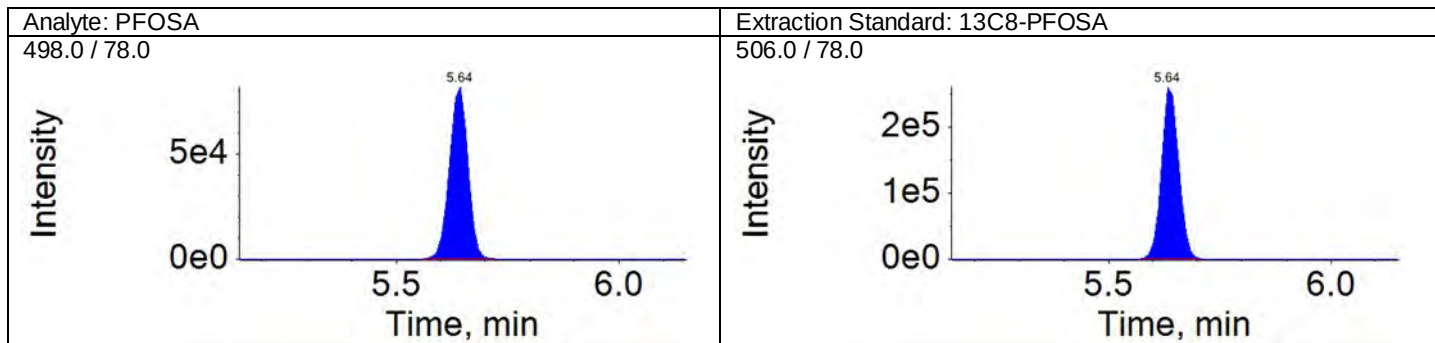
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



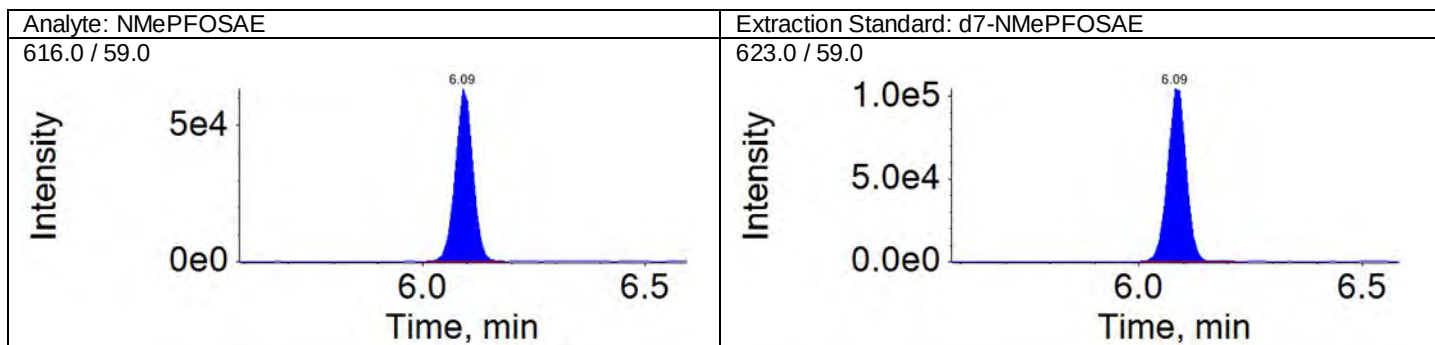
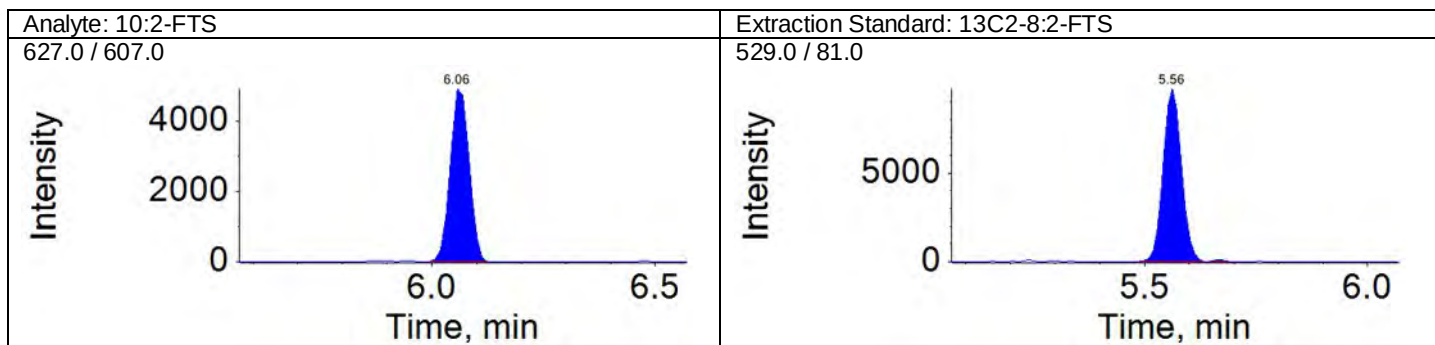
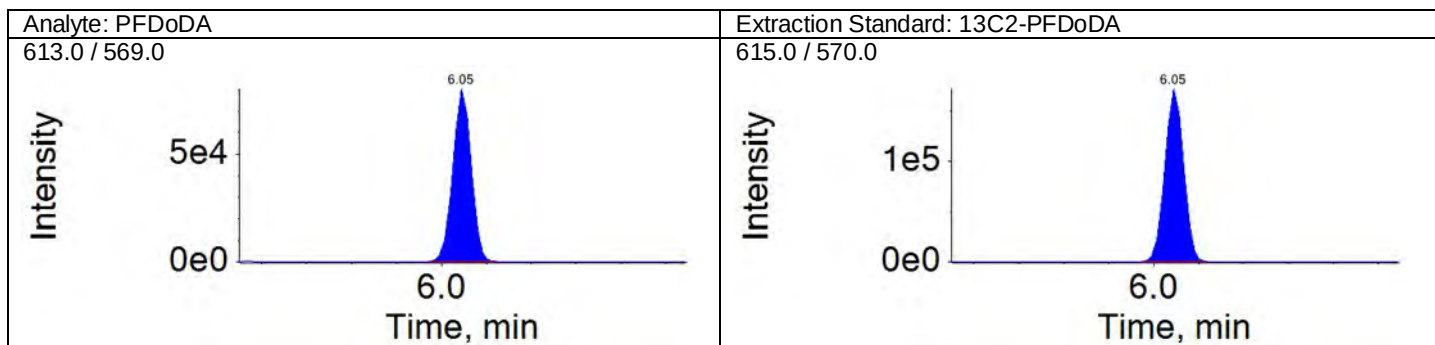
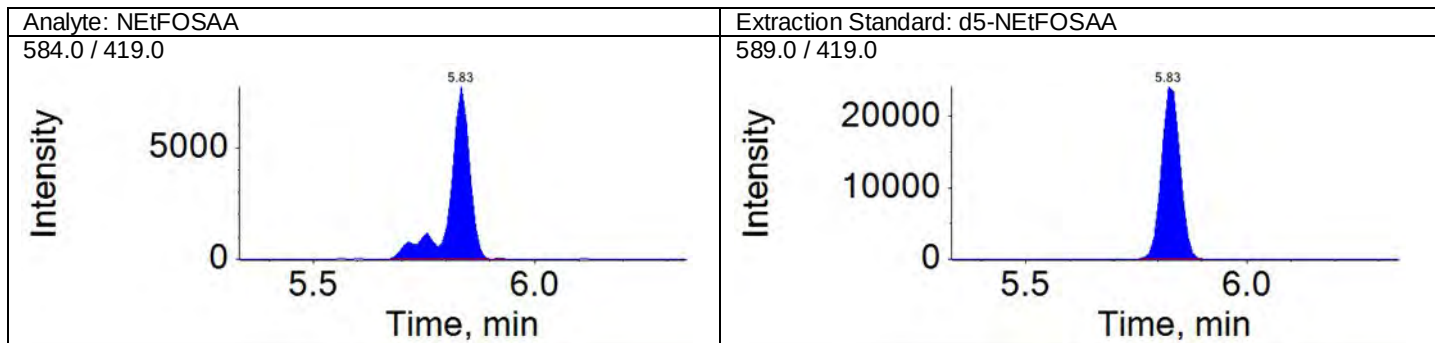
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



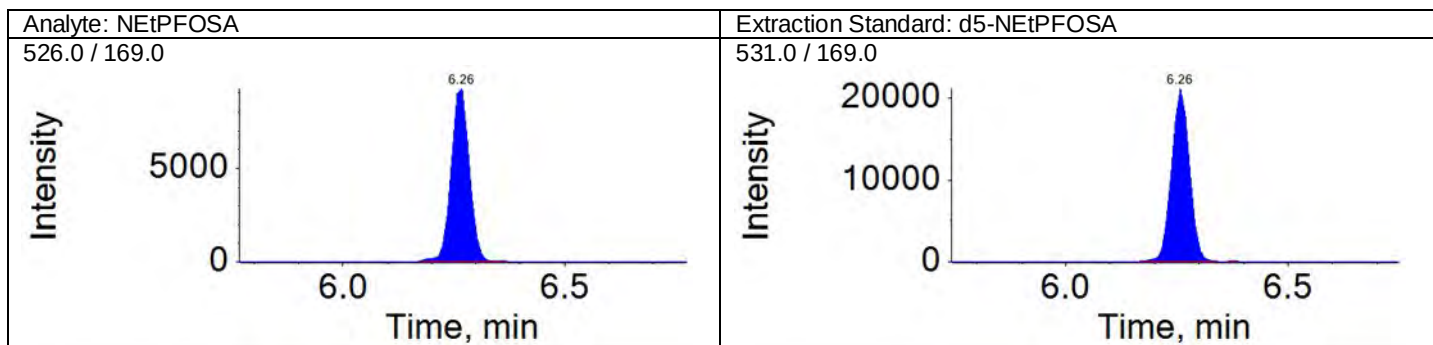
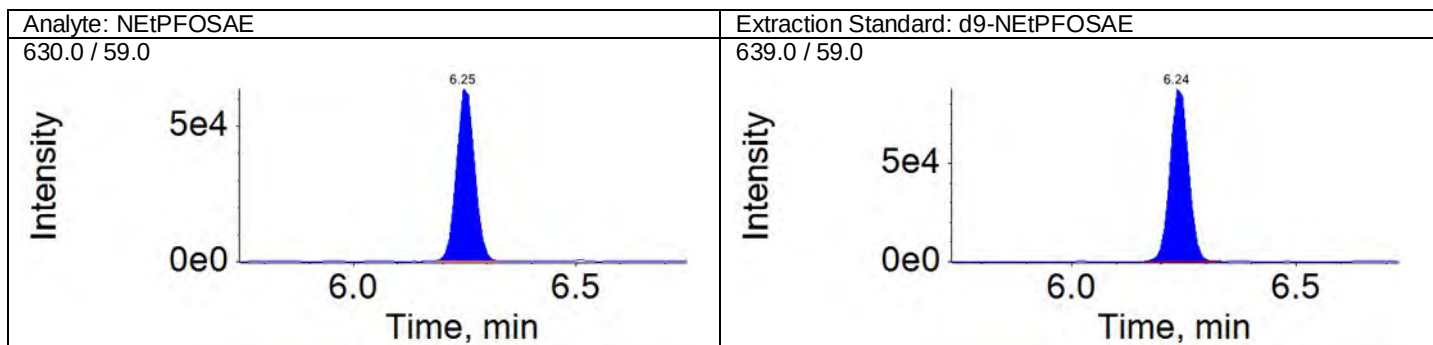
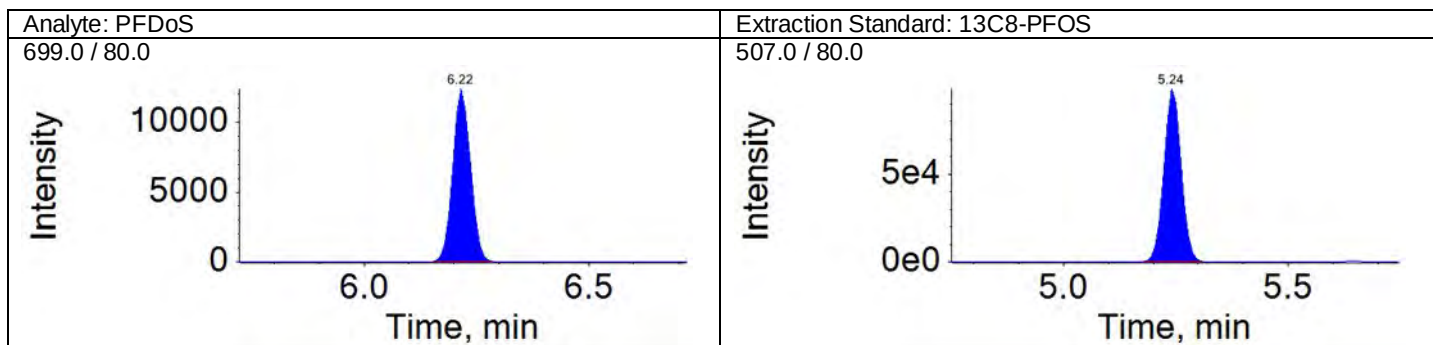
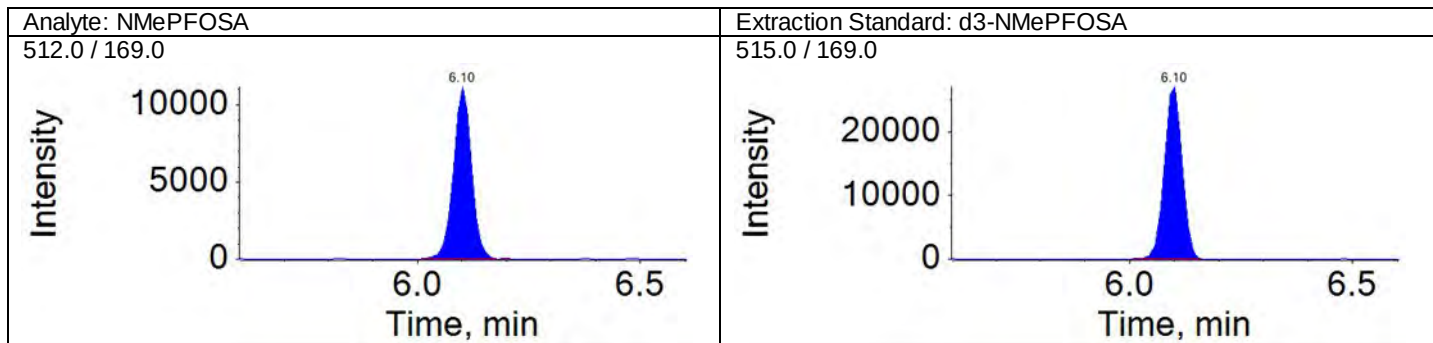
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



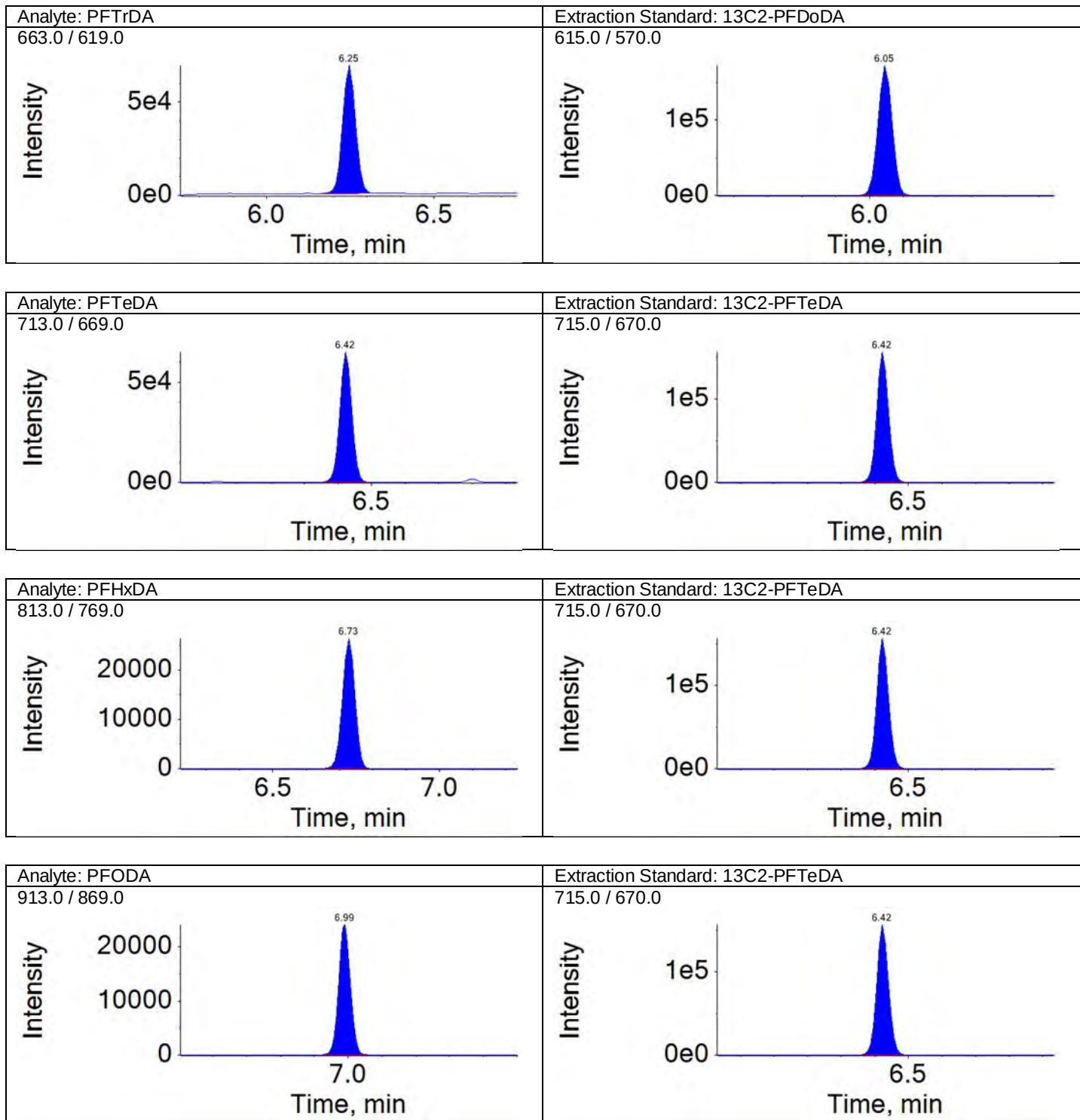
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



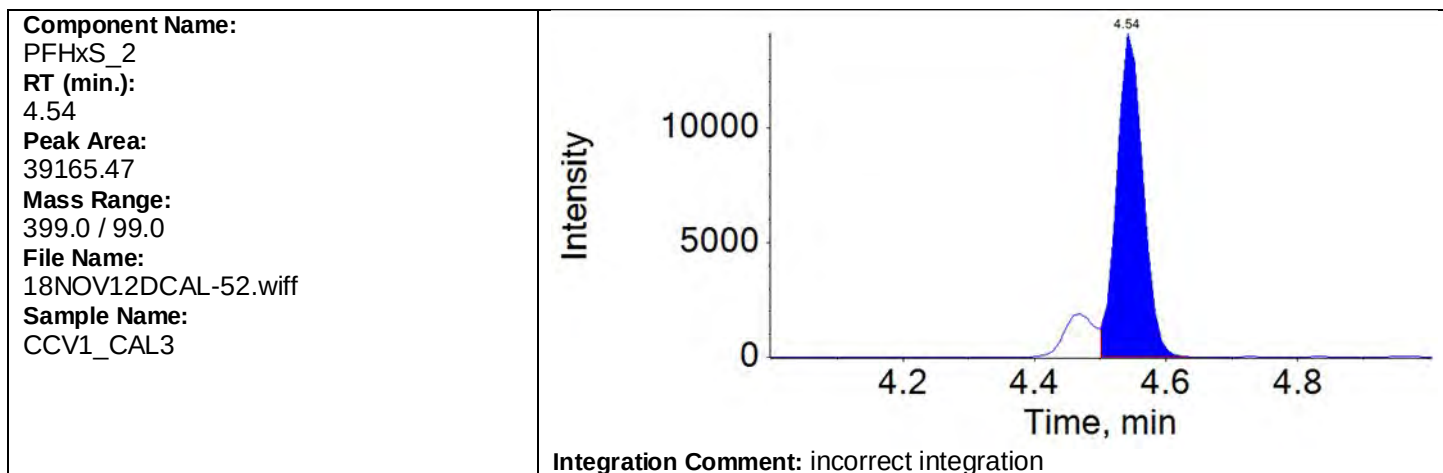
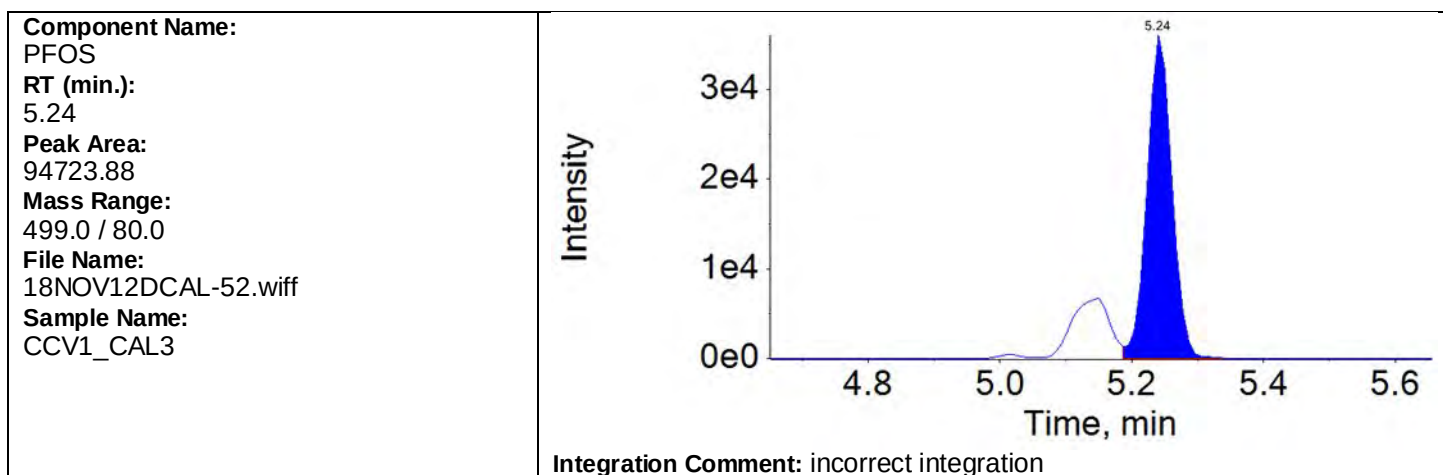
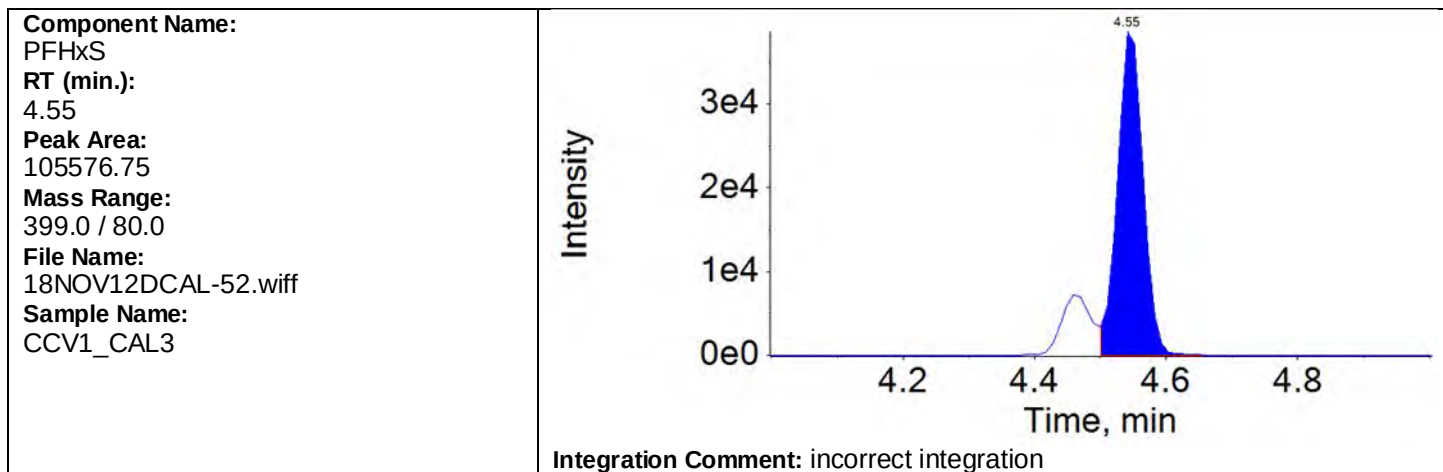
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

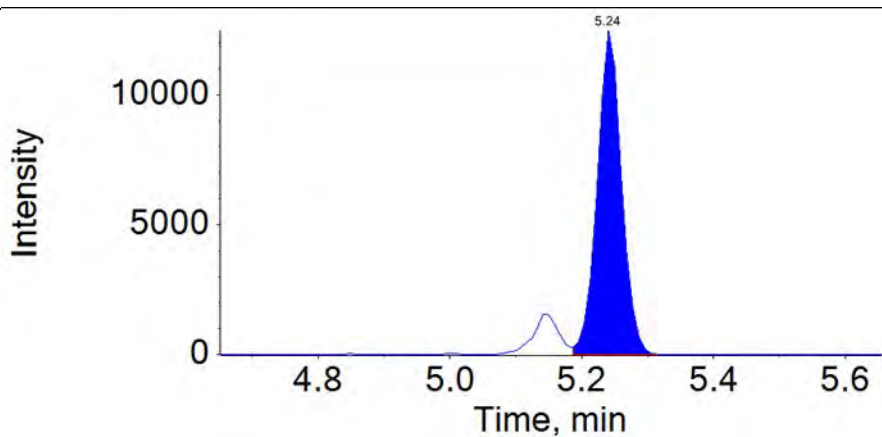
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

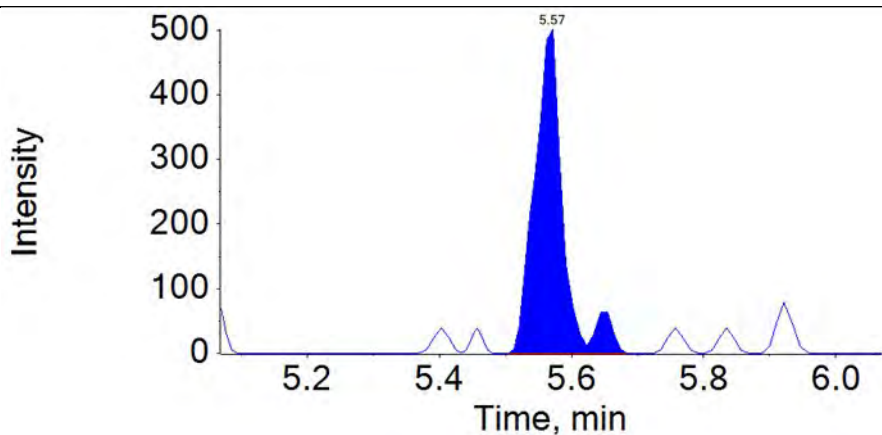
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
32024.51
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



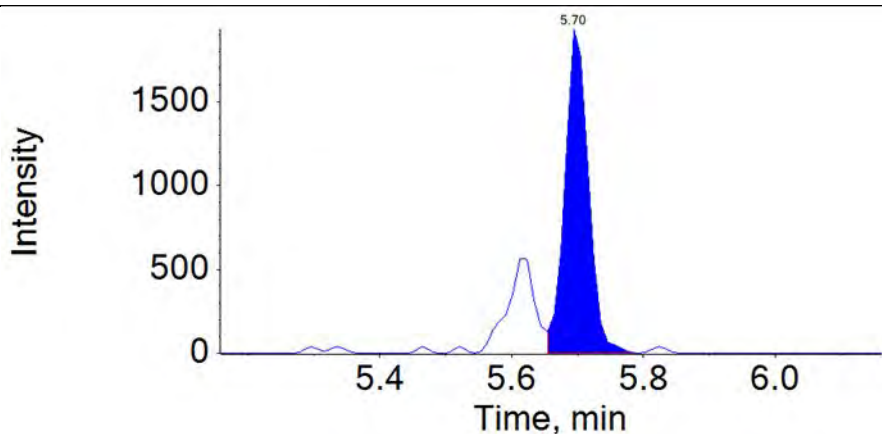
Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.57
Peak Area:
1525.22
Mass Range:
513.0 / 169.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
4786.64
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3

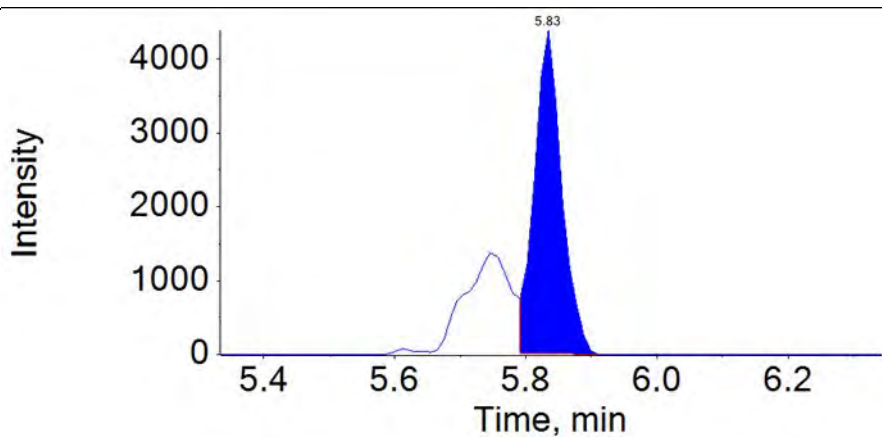


Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

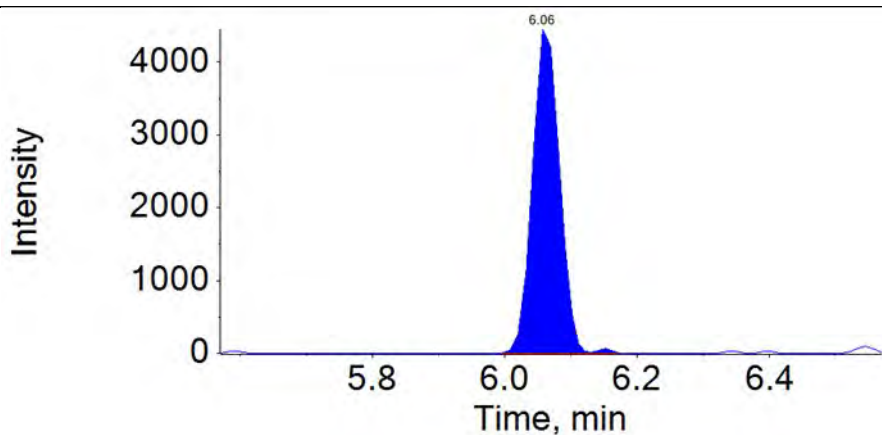
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
12735.31
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



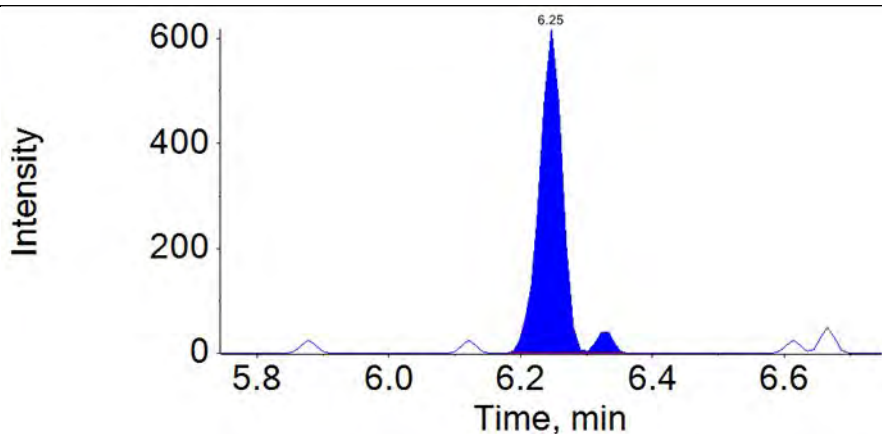
Integration Comment: incorrect integration

Component Name:
10:2 FTS_2
RT (min.):
6.06
Peak Area:
12750.49
Mass Range:
627.0 / 81.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFTTrDA_2
RT (min.):
6.25
Peak Area:
1561.97
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

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

APPROVED

By MCD at 6:34 pm, 11/12/18

REVIEWED

By HMK at 10:53 am, 11/13/18

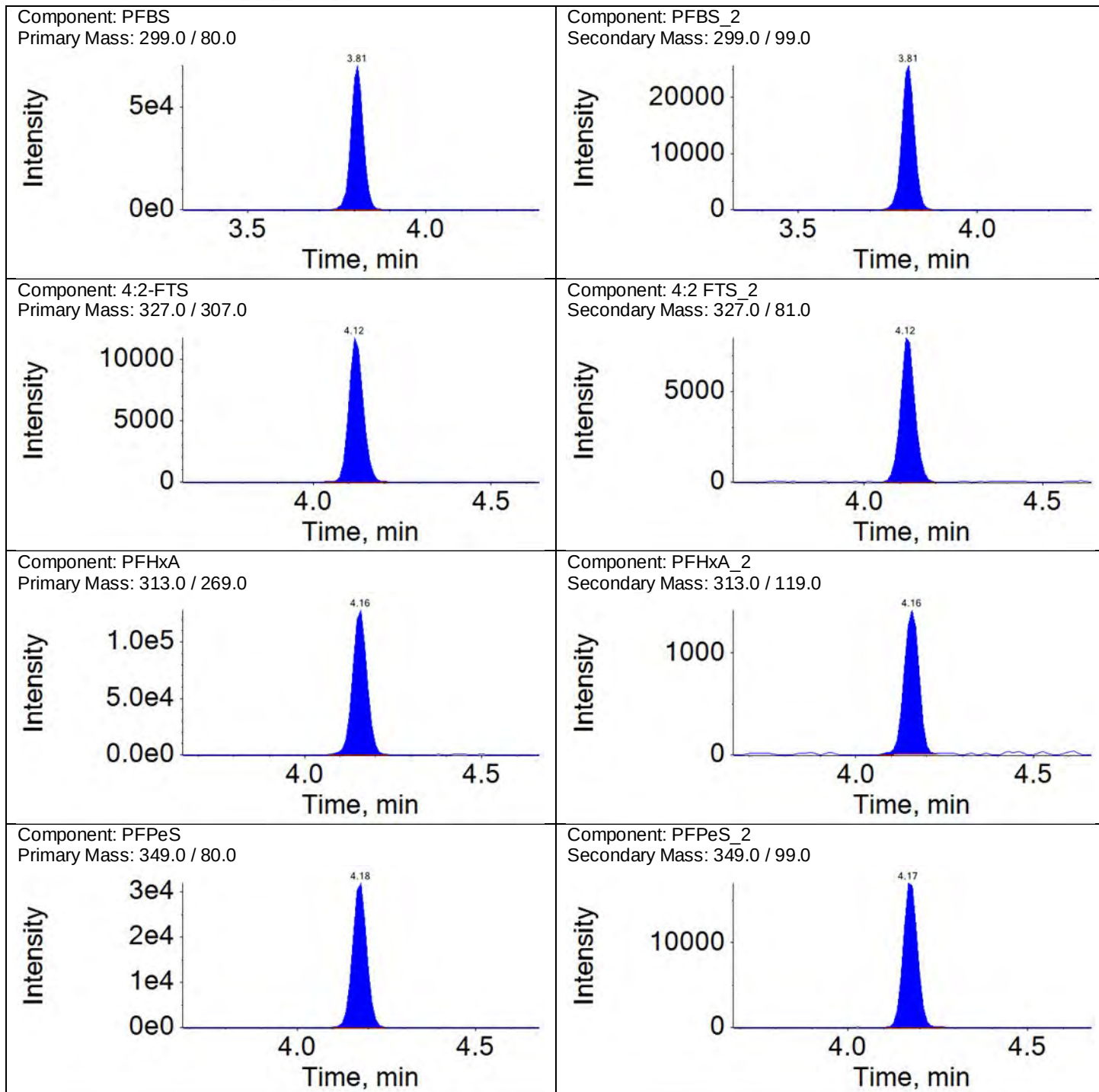
Ion Ratio Report

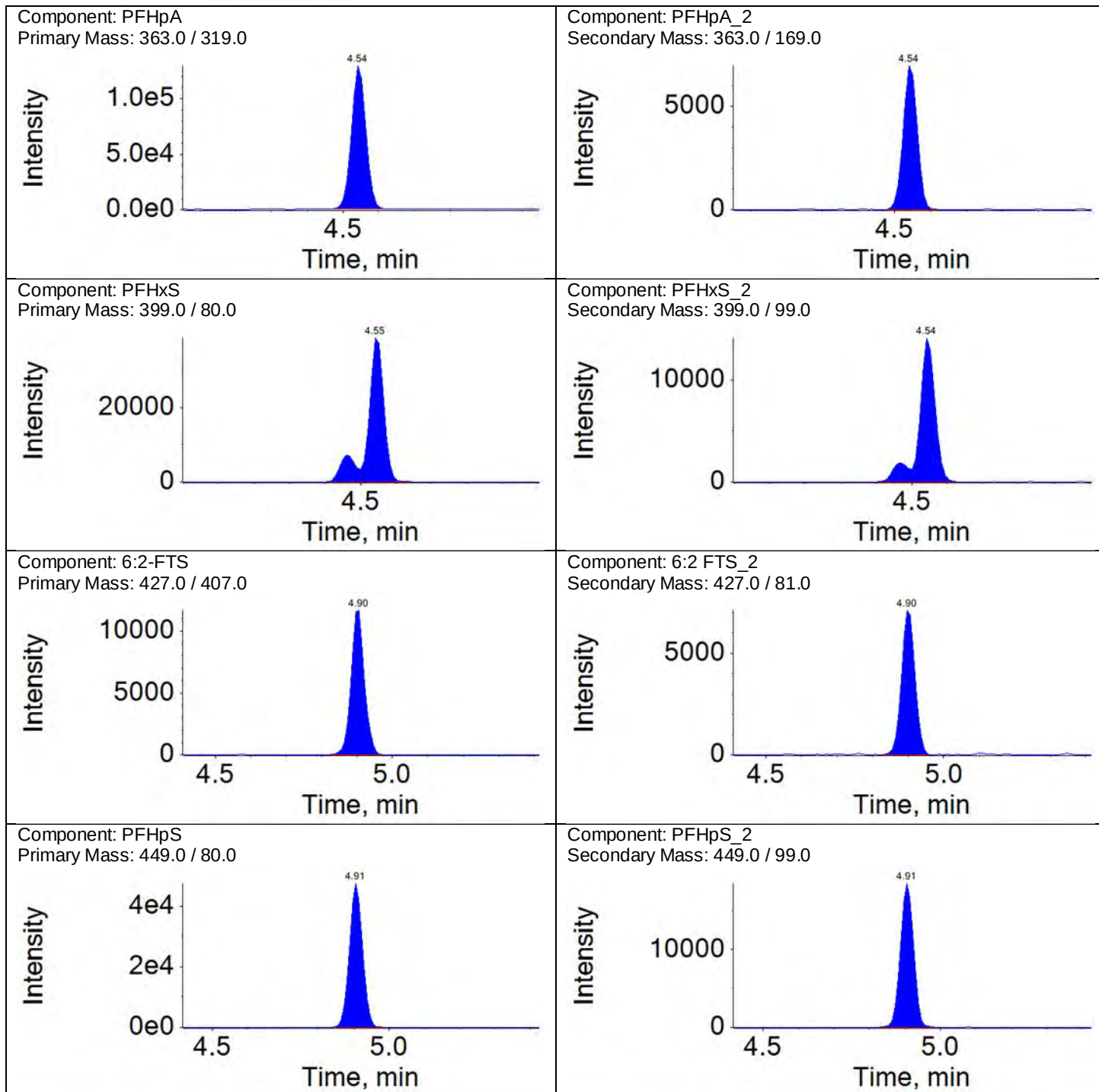
Sample Name: CCV1_CAL3

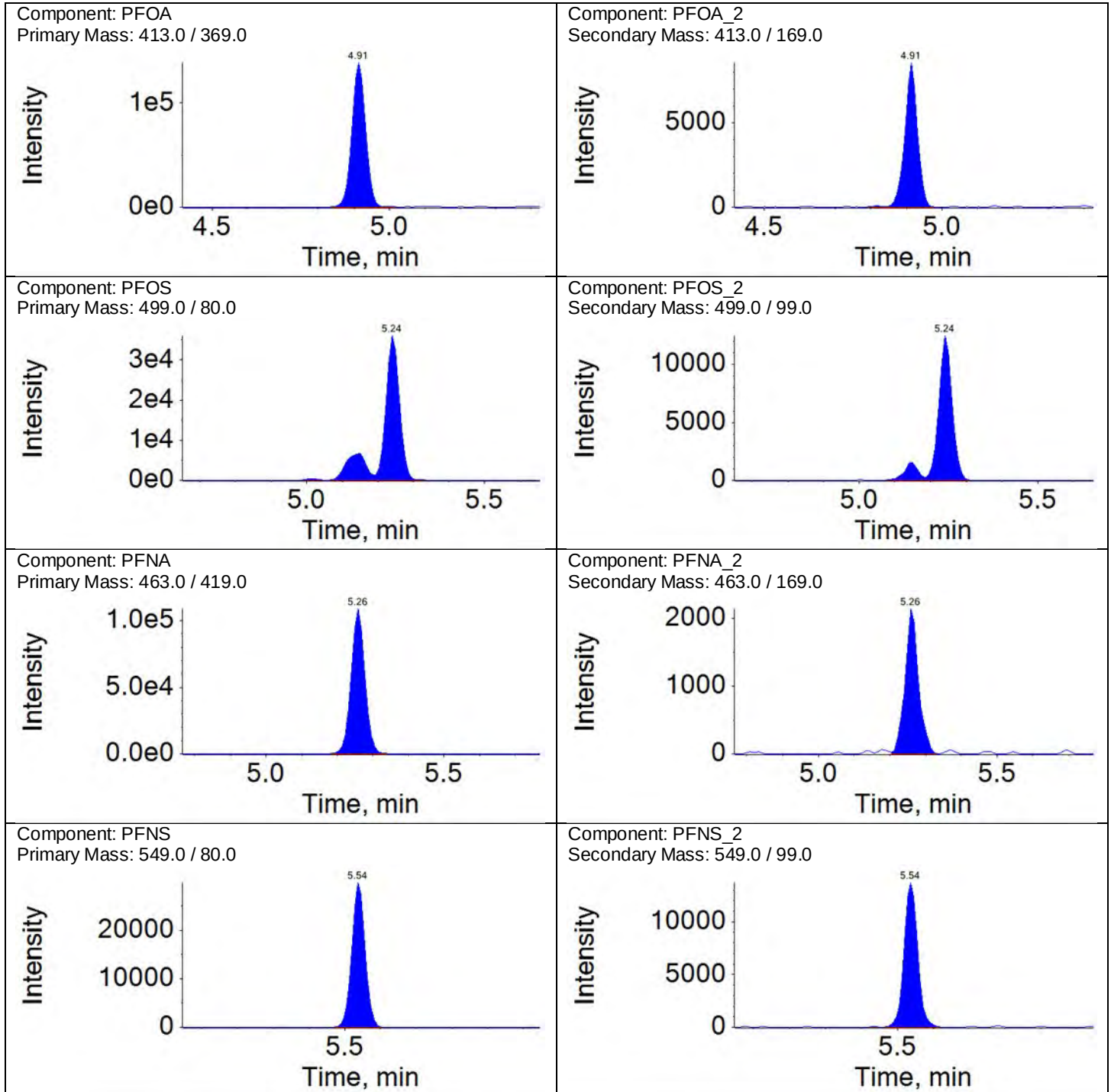
Instrument Name: LM27631

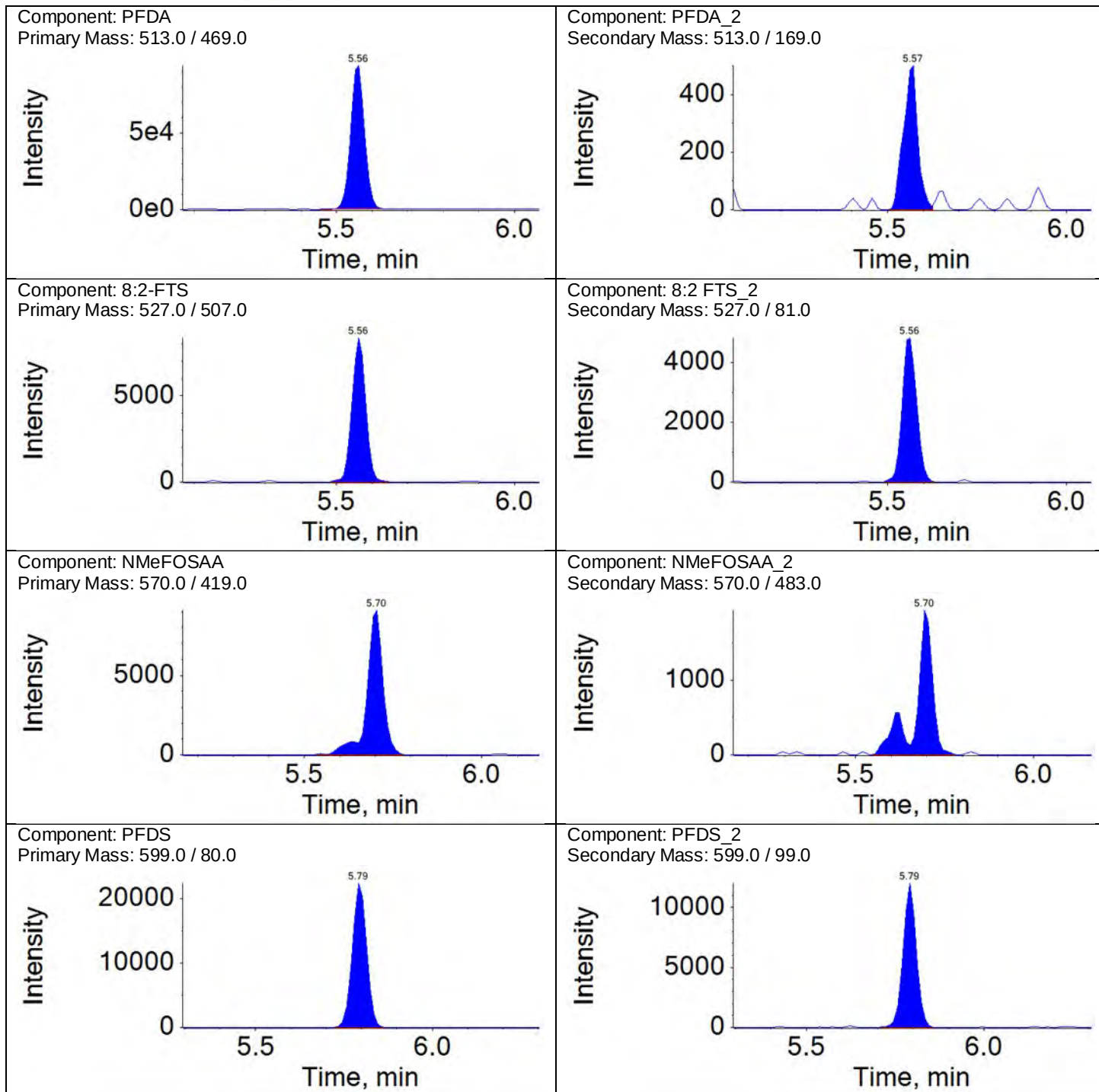
File Name: 18NOV12DCAL-52.wiff

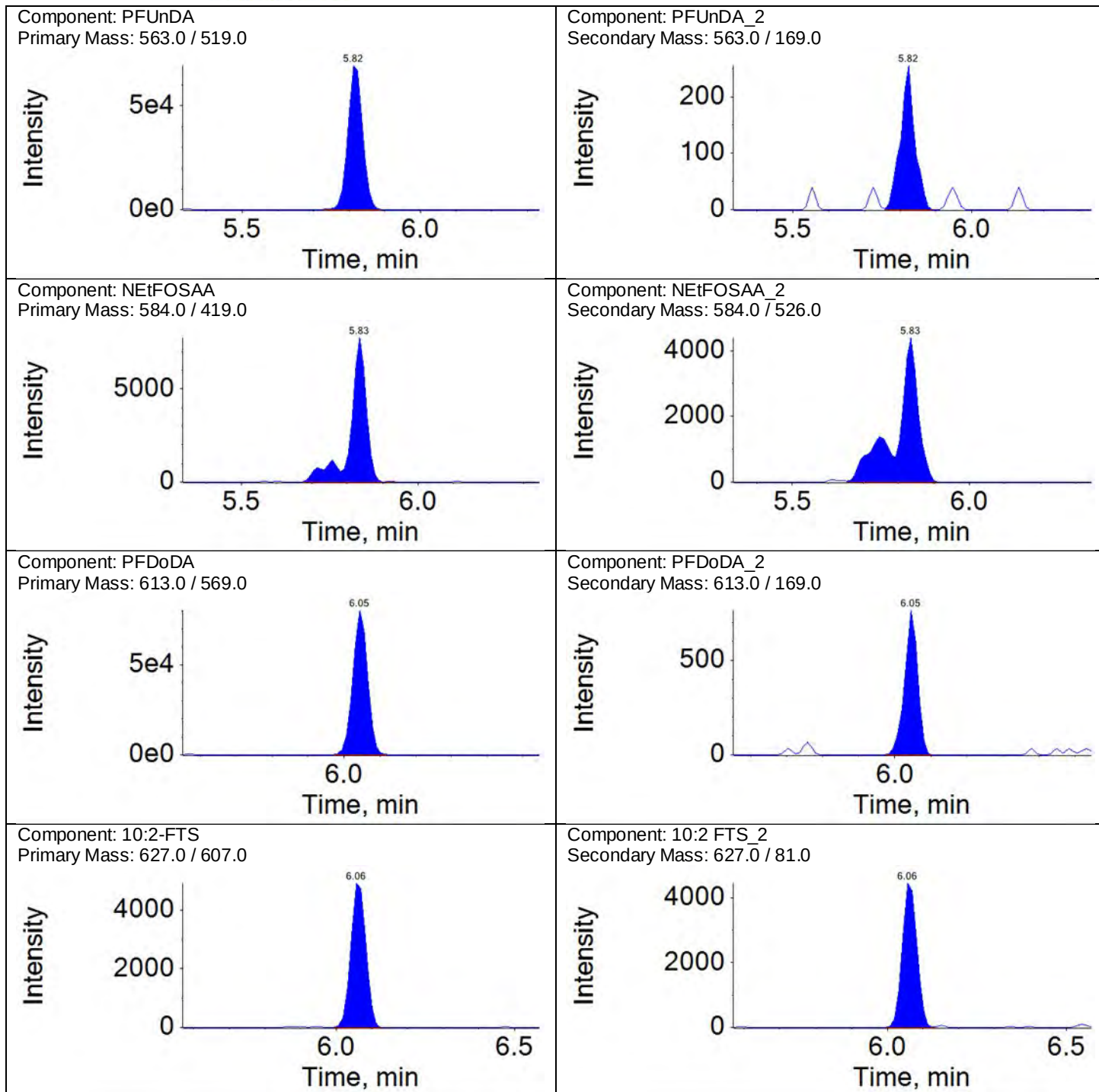
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	166889.60	A	0.3619	0.3759			
PFBS_2	3.81	1.00	62739.70	A	0.3619	0.3759	4	50	
4:2-FTS	4.12	1.00	33008.94	A	0.6730	0.6769			
4:2 FTS_2	4.12	1.00	22342.63	A	0.6730	0.6769		#NA!	
PFHxA	4.16	1.00	362325.97	A	0.0117	0.0114			
PFHxA_2	4.16	1.00	4119.87	A	0.0117	0.0114	-2	50	
PFPeS	4.18	1.10	87834.91	A	0.5191	0.5380			
PFPeS_2	4.17	1.10	47259.43	A	0.5191	0.5380	4	50	
PFHpA	4.54	1.00	361271.55	A	0.0563	0.0528			
PFHpA_2	4.54	1.00	19075.67	A	0.0563	0.0528	-6	50	
PFHxS	4.55	1.00	128396.13	M	0.3428	0.3526			
PFHxS_2	4.54	1.00	45266.10	M	0.3428	0.3526	3	50	
6:2-FTS	4.90	1.00	30500.72	A	0.6604	0.6139			
6:2 FTS_2	4.90	1.00	18723.69	A	0.6604	0.6139		#NA!	
PFHpS	4.91	1.08	122801.74	A	0.4066	0.3898			
PFHpS_2	4.91	1.08	47867.04	A	0.4066	0.3898	-4	50	
PFOA	4.91	1.00	370358.65	A	0.0562	0.0572			
PFOA_2	4.91	1.00	21182.05	A	0.0562	0.0572	2	50	
PFOS	5.24	1.00	122332.00	M	0.2968	0.2965			
PFOS_2	5.24	1.00	36275.78	M	0.2968	0.2965	0	50	
PFNA	5.26	1.00	292557.20	A	0.0229	0.0191			
PFNA_2	5.26	1.00	5601.50	A	0.0229	0.0191	-16	50	
PFNS	5.54	1.06	76021.24	A	0.4828	0.4752			
PFNS_2	5.54	1.06	36125.34	A	0.4828	0.4752	-2	50	
PFDA	5.56	1.00	253956.70	A	0.0081	0.0055			
PFDA_2	5.57	1.00	1404.60	M	0.0081	0.0055	-32	50	
8:2-FTS	5.56	1.00	22335.45	A	0.6814	0.6085			
8:2 FTS_2	5.56	1.00	13590.39	A	0.6814	0.6085		#NA!	
NMeFOSAA	5.70	1.00	28733.42	A	0.2569	0.2248			
NMeFOSAA_2	5.70	1.00	6459.32	M	0.2569	0.2248	-12	50	
PFDS	5.79	1.11	62507.84	A	0.5144	0.4958			
PFDS_2	5.79	1.10	30989.83	A	0.5144	0.4958	-4	50	
PFUnDA	5.82	1.00	199322.38	A	0.0058	0.0036			
PFUnDA_2	5.82	1.00	716.12	A	0.0058	0.0036	-38	50	
NEtFOSAA	5.83	1.00	24531.93	A	0.7253	0.7928			
NEtFOSAA_2	5.83	1.00	19448.32	M	0.7253	0.7928	9	50	
PFDODA	6.05	1.00	228792.93	A	0.0157	0.0084			
PFDODA_2	6.05	1.00	1930.67	A	0.0157	0.0084	-46	50	
10:2-FTS	6.06	1.09	14411.12	A	0.6356	0.8781			
10:2 FTS_2	6.06	1.09	12654.02	M	0.6356	0.8781		#NA!	
PFTTrDA	6.25	1.03	185154.57	A	0.0086	0.0080			
PFTTrDA_2	6.25	1.03	1486.41	M	0.0086	0.0080	-6	50	
PFTeDA	6.42	1.00	159904.63	A	0.0062	0.0061			
PFTeDA_2	6.42	1.00	982.46	A	0.0062	0.0061	-2	50	
PFHxDA	6.73	1.05	68393.80	A	0.0683	0.0584			
PFHxDA_2	6.73	1.05	3992.51	A	0.0683	0.0584	-14	50	
PFODA	6.99	1.09	58092.41	A	0.0277	0.0262			
PFODA_2	6.99	1.09	1524.27	A	0.0277	0.0262	-5	50	

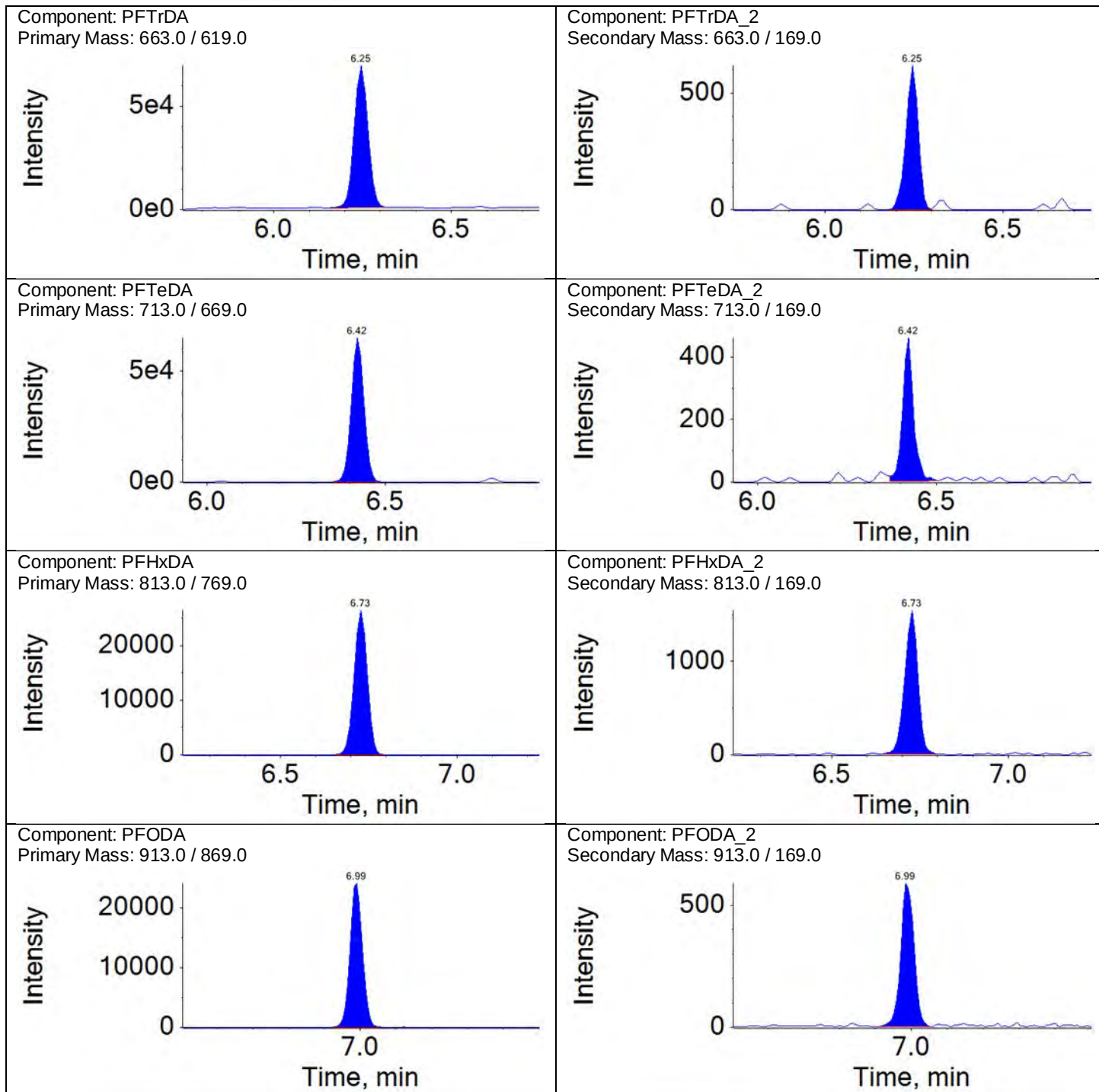








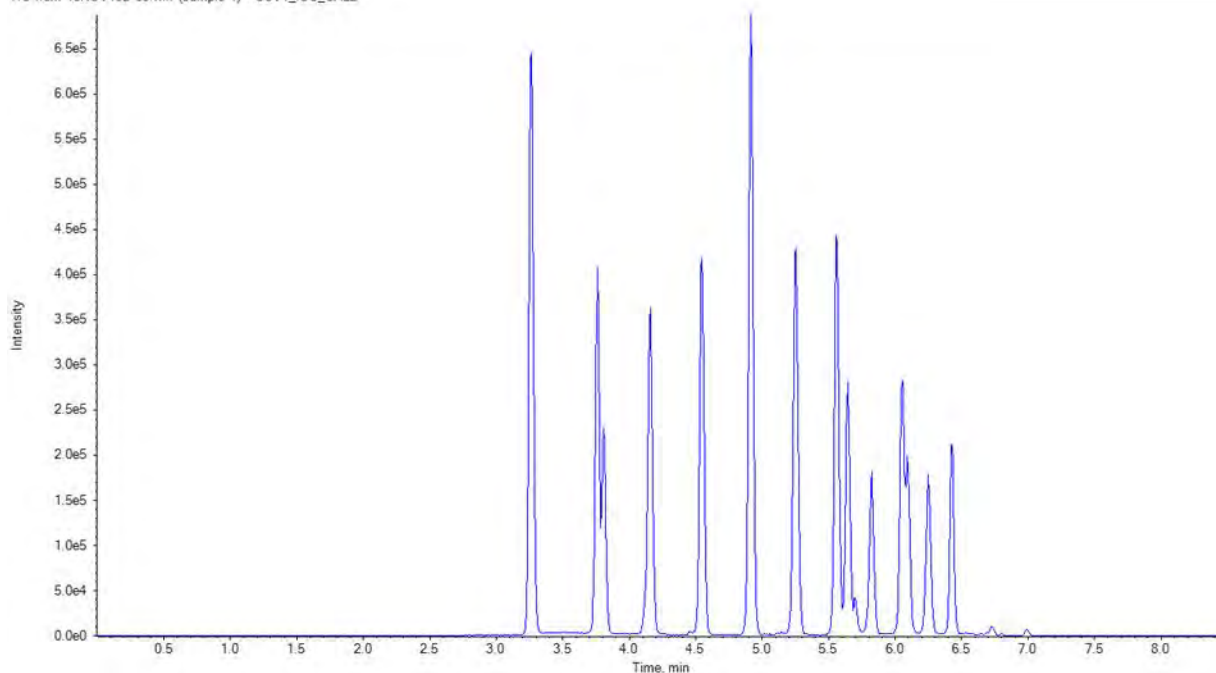




Instrument Sensitivity Check/
Continuing Calibration VerificationICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV13D-05.wiff	2018-11-13T09:44:02

TIC from 18NOV13D-05.wiff (sample 1) - CCV1_ISC_CAL2



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	661126.9	659926.2	0	50	
13C2-PFOA	5.0	466902.6	450219.7	4	50	
13C4-PFOS	4.8	247446.9	249205.8	-1	50	
13C2-PFDA	5.0	295381.6	278743.9	6	50	

APPROVED

By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

Instrument Sensitivity Check/ Continuing Calibration Verification

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV13D-05.wiff	2018-11-13T09:44:02

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	80023.3	10	13C4-PFBA	766812.0	5.0	0.104	3.26	1.000	0.600	0.578	-4	30	
PFPeA	76472.6	11	13C5-PFPeA	751025.9	5.0	0.102	3.76	1.000	0.600	0.589	-2	30	
PFBS	41984.3	11	13C3-PFBS	427122.1	4.7	0.098	3.81	1.000	0.531	0.468	-12	30	
4:2-FTS	9629.9	12	13C2-4:2-FTS	54897.9	4.7	0.175	4.12	1.000	0.560	0.476	-15	30	
PFHxA	96444.0	12	13C5-PFHxA	705940.0	5.0	0.137	4.16	1.000	0.600	0.570	-5	30	
PFPeS	22297.9	11	13C3-PFBS	427122.1	4.7	0.052	4.18	1.100	0.563	0.507	-10	30	
PFHpA	93659.5	12	13C4-PFHpA	545224.8	5.0	0.172	4.55	1.000	0.600	0.569	-5	30	
PFHxS	34111.0	18	13C3-PFHxS	315188.2	4.7	0.108	4.55	1.000	0.547	0.525	-4	30	
6:2-FTS	9221.0	11	13C2-6:2-FTS	36348.0	4.8	0.254	4.90	1.000	0.569	0.614	8	30	
PFHpS	30798.1	11	13C3-PFHxS	315188.2	4.7	0.098	4.91	1.080	0.571	0.514	-10	30	
PFOA	100905.0	11	13C8-PFOA	916289.6	5.0	0.110	4.92	1.000	0.600	0.588	-2	30	
PFOS	34555.4	22	13C8-PFOS	283234.2	4.8	0.122	5.24	1.000	0.555	0.534	-4	30	
PFNA	70400.6	11	13C9-PFNA	459889.6	5.0	0.153	5.26	1.000	0.600	0.552	-8	30	
PFNS	17583.2	10	13C8-PFOS	283234.2	4.8	0.062	5.54	1.060	0.576	0.434	-25	30	
PFDA	68441.3	11	13C6-PFDA	633571.3	5.0	0.108	5.56	1.000	0.600	0.573	-5	30	
8:2-FTS	5551.6	11	13C2-8:2-FTS	28239.6	4.8	0.197	5.56	1.000	0.575	0.458	-20	30	
PFOSA	70097.0	12	13C8-PFOSA	581964.0	5.0	0.120	5.64	1.000	0.600	0.588	-2	30	
NMeFOSAA	7238.6	17	d3-NMeFOSAA	75677.4	5.0	0.096	5.71	1.000	0.600	0.541	-10	30	
PFDS	14746.9	12	13C8-PFOS	283234.2	4.8	0.052	5.80	1.110	0.578	0.472	-18	30	
PFUnDA	55065.8	12	13C7-PFUnDA	262614.2	5.0	0.210	5.82	1.000	0.600	0.548	-9	30	
NEtFOSAA	8391.3	19	d5-NEtFOSAA	67382.4	5.0	0.125	5.84	1.000	0.600	0.653	9	30	
PFDODA	63306.6	12	13C2-PFDODA	563416.3	5.0	0.112	6.05	1.000	0.600	0.572	-5	30	
10:2-FTS	4315.1	11	13C2-8:2-FTS	28239.6	4.8	0.153	6.07	1.090	0.578	0.509	-12	30	
NMePFOSAE	46107.4	12	d7-NMePFOSAE	315627.9	5.0	0.146	6.10	1.000	0.600	0.608	1	30	
NMePFOSA	7580.7	13	d3-NMePFOSA	81274.6	5.0	0.093	6.11	1.000	0.600	0.460	-23	30	
PFDoS	7907.3	11	13C8-PFOS	283234.2	4.8	0.028	6.22	1.190	0.581	0.489	-16	30	
NEtPFOSAE	46594.2	12	d9-NEtPFOSAE	264447.2	5.0	0.176	6.26	1.000	0.600	0.565	-6	30	
NEtPFOSA	7426.1	11	d5-NEtPFOSA	57059.6	5.0	0.130	6.27	1.000	0.600	0.598	0	30	
PFTTrDA	52911.8	12	13C2-PFDODA	563416.3	5.0	0.094	6.25	1.030	0.600	0.593	-1	30	
PFTeDA	38686.6	11	13C2-PFTeDA	412151.2	5.0	0.094	6.43	1.000	0.600	0.526	-12	30	
PFHxDA	18605.8	11	13C2-PFTeDA	412151.2	5.0	0.045	6.73	1.050	0.600	0.538	-10	30	
PFOA	15935.1	10	13C2-PFTeDA	412151.2	5.0	0.039	6.99	1.090	0.600	0.538	-10	30	

**Instrument Sensitivity Check/
Continuing Calibration Verification**

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1 ISC CAL2	Data File:	18NOV13D-05.wiff
Sample ID:	CALBRN21833C	Acquis Date:	2018-11-13T09:44:02
Sample Type:	Quality Control	Instrument:	LM27631
Vial Position:	4	Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00	Result Table:	18NOV13DCCV1-4
QMethod File:	18AUG20QM	ICAL Name:	18NOV12DCAL
Batch Number:	N/A	Operator:	JPT12262
Sample Wt.:	1.00000	Dilution Factor:	1.00
Sample Vol.:	1.000	Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	661126.9	659926.2	0	50	
13C2-PFOA	5.0	466902.6	450219.7	4	50	
13C4-PFOS	4.8	247446.9	249205.8	-1	50	
13C2-PFDA	5.0	295381.6	278743.9	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	766812.0	13C3-PFBA	661126.9	1.160	5.000	5.200	104	70-130	
E13C5-PFPeA	751025.9	13C3-PFBA	661126.9	1.136	5.000	5.095	102	70-130	
E13C3-PFBS	427122.1	13C3-PFBA	661126.9	0.646	4.650	4.561	98	70-130	
E13C2-4:2-FTS	54897.9	13C2-PFOA	466902.6	0.118	4.670	5.237	112	70-130	
E13C5-PFHxA	705940.0	13C2-PFOA	466902.6	1.512	5.000	5.462	109	70-130	
E13C3-PFHxS	315188.2	13C2-PFOA	466902.6	0.675	4.730	4.632	98	70-130	
E13C4-PFHpA	545224.8	13C2-PFOA	466902.6	1.168	5.000	5.261	105	70-130	
E13C2-6:2-FTS	36348.0	13C2-PFOA	466902.6	0.078	4.750	5.209	110	70-130	
E13C8-PFOA	916289.6	13C2-PFOA	466902.6	1.962	5.000	5.407	108	70-130	
E13C8-PFOS	283234.2	13C4-PFOS	247446.9	1.145	4.780	5.072	106	70-130	
E13C9-PFNA	459889.6	13C4-PFOS	247446.9	1.859	5.000	5.182	104	70-130	
E13C6-PFDA	633571.3	13C2-PFDA	295381.6	2.145	5.000	5.005	100	70-130	
E13C2-8:2-FTS	28239.6	13C2-PFDA	295381.6	0.096	4.790	4.768	100	70-130	
E13C8-PFOSA	581964.0	13C2-PFDA	295381.6	1.970	5.000	4.368	87	70-130	
Ed3-NMeFOSAA	75677.4	13C2-PFDA	295381.6	0.256	5.000	4.625	92	70-130	
E13C7-PFUnDA	262614.2	13C2-PFDA	295381.6	0.889	5.000	5.162	103	70-130	
Ed5-NEtFOSAA	67382.4	13C2-PFDA	295381.6	0.228	5.000	4.826	97	70-130	
E13C2-PFDODA	563416.3	13C2-PFDA	295381.6	1.907	5.000	4.952	99	70-130	
Ed7-NMePFOSAE	315627.9	13C2-PFDA	295381.6	1.069	5.000	4.624	92	70-130	
Ed3-NMePFOSA	81274.6	13C2-PFDA	295381.6	0.275	5.000	4.999	100	70-130	
Ed9-NEtPFOSAE	264447.2	13C2-PFDA	295381.6	0.895	5.000	4.656	93	70-130	
Ed5-NEtPFOSA	57059.6	13C2-PFDA	295381.6	0.193	5.000	4.531	91	70-130	
E13C2-PFTeDA	412151.2	13C2-PFDA	295381.6	1.395	5.000	4.899	98	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2

Instrument Name: LM27631

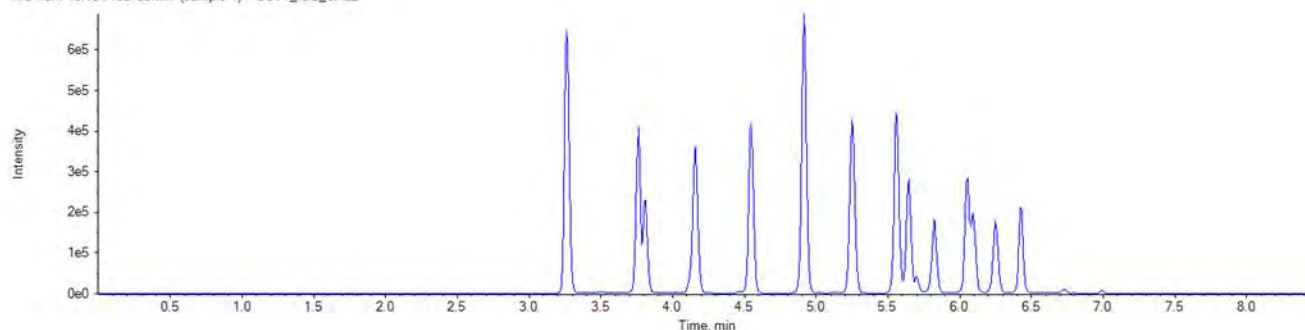
File Name: 18NOV13D-05.wiff

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	80023.3		A	13C4-PFBA	3.26	766812.0	0.104	0.578
PFPeA	3.76	1.000	76472.6		A	13C5-PFPeA	3.76	751025.9	0.102	0.589
PFBS	3.81	1.000	41984.3		A	13C3-PFBS	3.81	427122.1	0.098	0.468
4:2-FTS	4.12	1.000	9629.9		M	13C2-4:2-FTS	4.12	54897.9	0.175	0.476
PFHxA	4.16	1.000	96444.0		A	13C5-PFHxA	4.16	705940.0	0.137	0.570
PFPeS	4.18	1.100	22297.9		A	13C3-PFBS	3.81	427122.1	0.052	0.507
PFHpA	4.55	1.000	93659.5		A	13C4-PFHpA	4.55	545224.8	0.172	0.569
PFHxS	4.55	1.000	34111.0		M	13C3-PFHxS	4.55	315188.2	0.108	0.525
6:2-FTS	4.90	1.000	9221.0		M	13C2-6:2-FTS	4.90	36348.0	0.254	0.614
PFHpS	4.91	1.080	30798.1		A	13C3-PFHxS	4.55	315188.2	0.098	0.514
PFOA	4.92	1.000	100905.0		A	13C8-PFOA	4.91	916289.6	0.110	0.588
PFOS	5.24	1.000	34555.4		M	13C8-PFOS	5.24	283234.2	0.122	0.534
PFNA	5.26	1.000	70400.6		A	13C9-PFNA	5.26	459889.6	0.153	0.552
PFNS	5.54	1.060	17583.2		A	13C8-PFOS	5.24	283234.2	0.062	0.434
PFDA	5.56	1.000	68441.3		A	13C6-PFDA	5.56	633571.3	0.108	0.573
8:2-FTS	5.56	1.000	5551.6		A	13C2-8:2-FTS	5.56	28239.6	0.197	0.458
PFOSA	5.64	1.000	70097.0		A	13C8-PFOSA	5.64	581964.0	0.120	0.588
NMeFOSAA	5.71	1.000	7238.6		A	d3-NMeFOSAA	5.70	75677.4	0.096	0.541
PFDS	5.80	1.110	14746.9		A	13C8-PFOS	5.24	283234.2	0.052	0.472
PfUnDA	5.82	1.000	55065.8		A	13C7-PfUnDA	5.82	262614.2	0.210	0.548
NEtFOSAA	5.84	1.000	8391.3		M	d5-NEtFOSAA	5.83	67382.4	0.125	0.653
PFDODA	6.05	1.000	63306.6		A	13C2-PFDODA	6.05	563416.3	0.112	0.572
10:2-FTS	6.07	1.090	4315.1		A	13C2-8:2-FTS	5.56	28239.6	0.153	0.509
NMePFOSAE	6.10	1.000	46107.4		A	d7-NMePFOSAE	6.09	315627.9	0.146	0.608
NMePFOSA	6.11	1.000	7580.7		A	d3-NMePFOSA	6.10	81274.6	0.093	0.460
PFDoS	6.22	1.190	7907.3		A	13C8-PFOS	5.24	283234.2	0.028	0.489
NEtPFOSAE	6.26	1.000	46594.2		A	d9-NEtPFOSAE	6.25	264447.2	0.176	0.565
NEtPFOSA	6.27	1.000	7426.1		A	d5-NEtPFOSA	6.26	57059.6	0.130	0.598
PFTDA	6.25	1.030	52911.8		M	13C2-PFDODA	6.05	563416.3	0.094	0.593
PFTeDA	6.43	1.000	38686.6		A	13C2-PFTeDA	6.43	412151.2	0.094	0.526
PFHxDA	6.73	1.050	18605.8		A	13C2-PFTeDA	6.43	412151.2	0.045	0.538
PFODA	6.99	1.090	15935.1		A	13C2-PFTeDA	6.43	412151.2	0.039	0.538

Total Ion Chromatogram

TIC from 18NOV13D-05.wiff (sample 1) - CCV1_ISC_CAL2



APPROVED

By JPT at 4:33 pm, 11/13/18

BSI05 Page 1217 of 1595

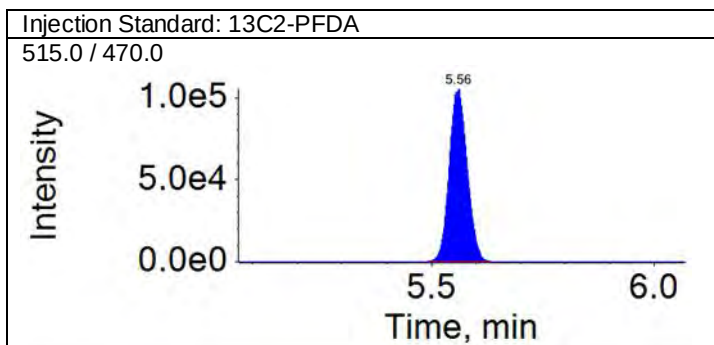
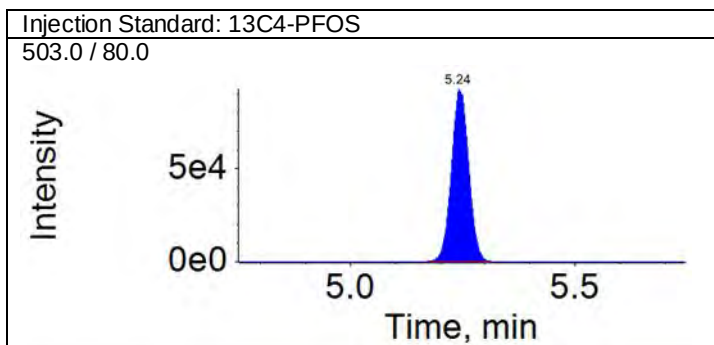
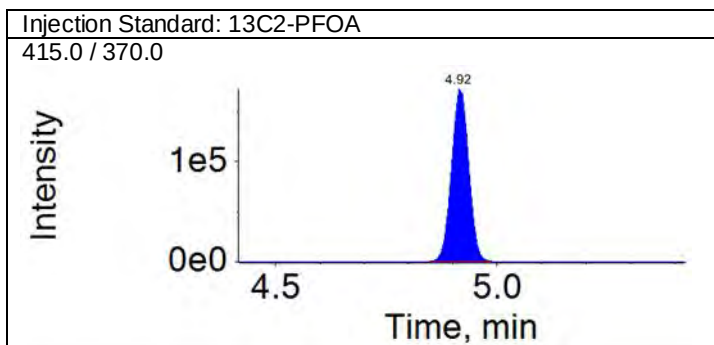
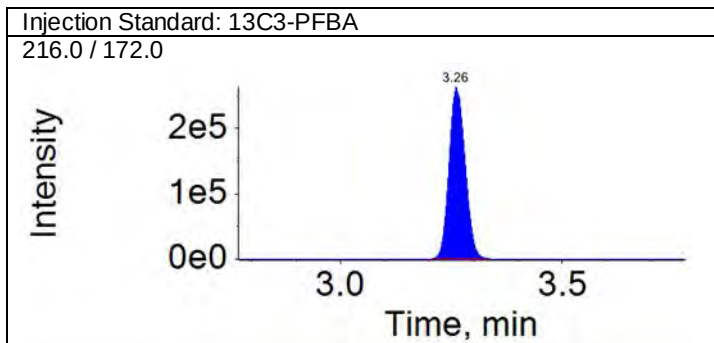
REVIEWED

By HMK at 1:48 pm, 11/14/18

Page 2 of 17

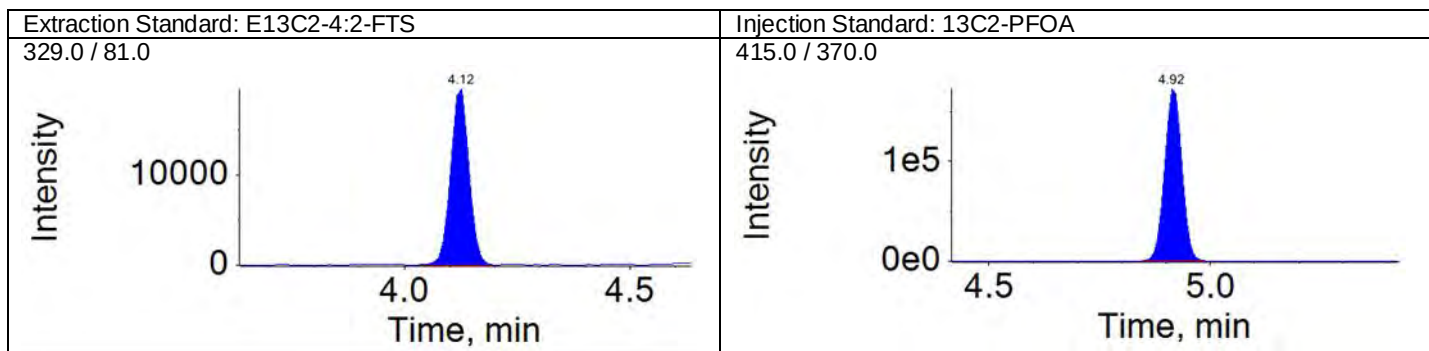
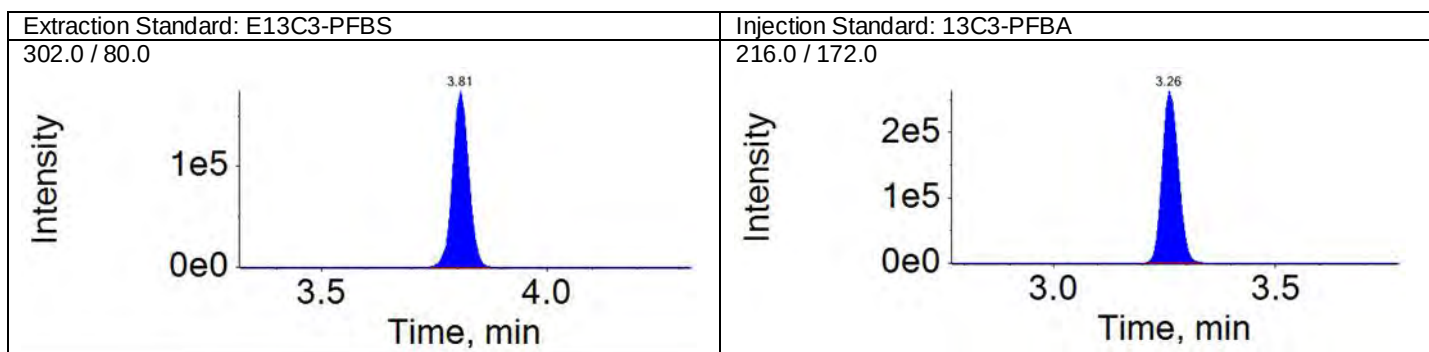
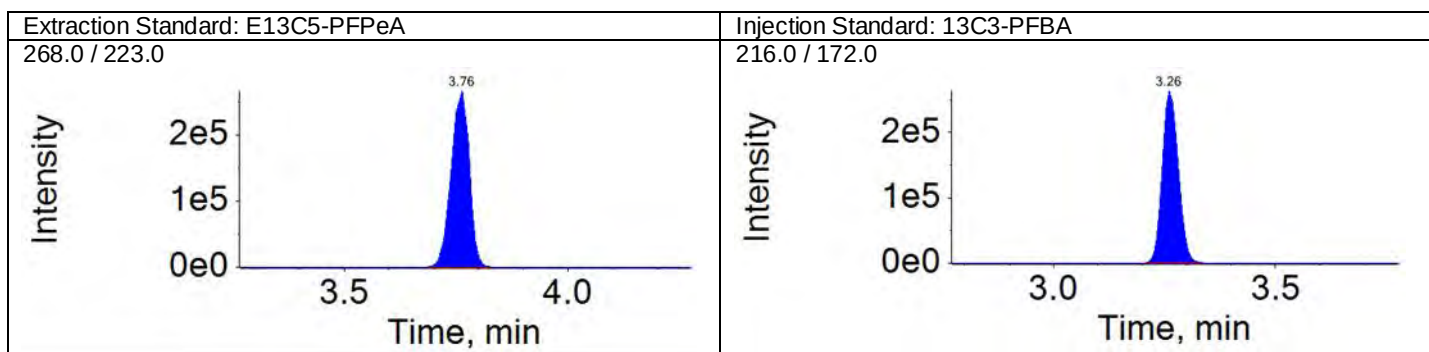
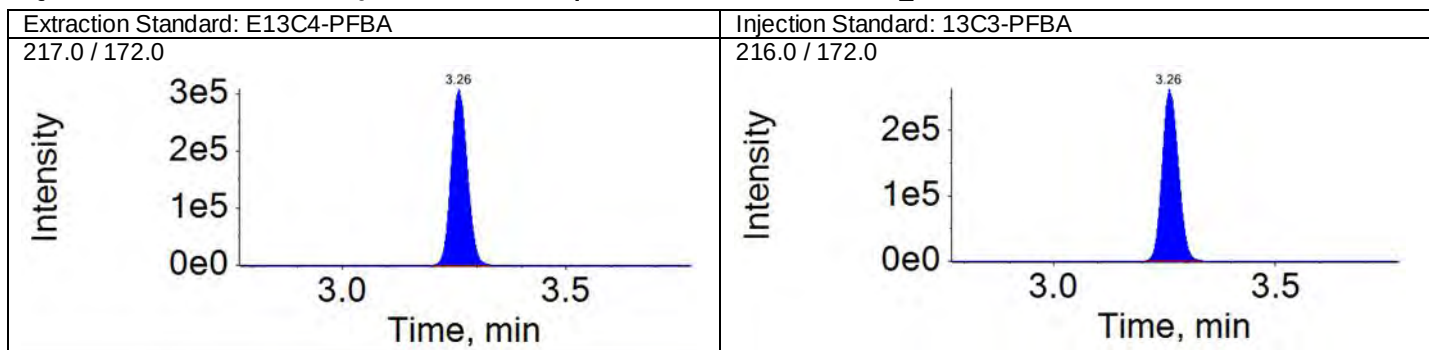
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



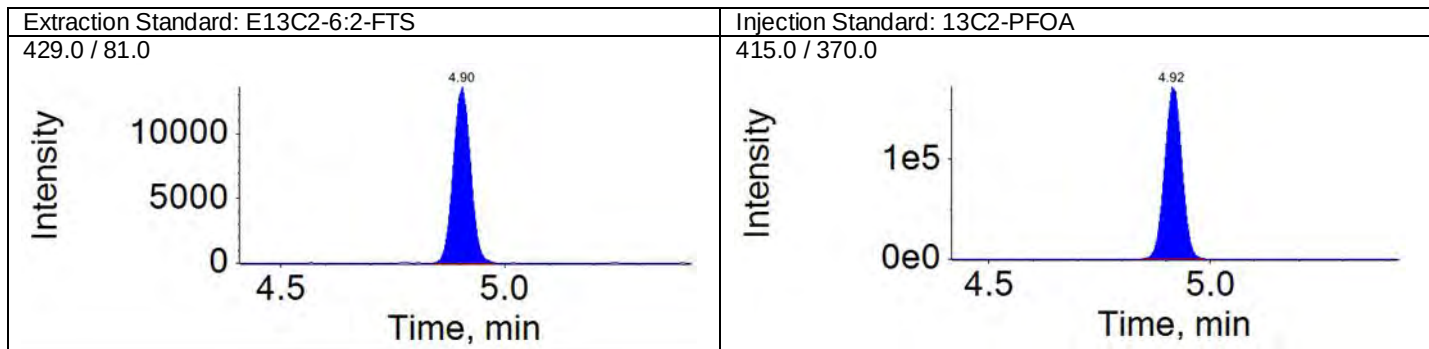
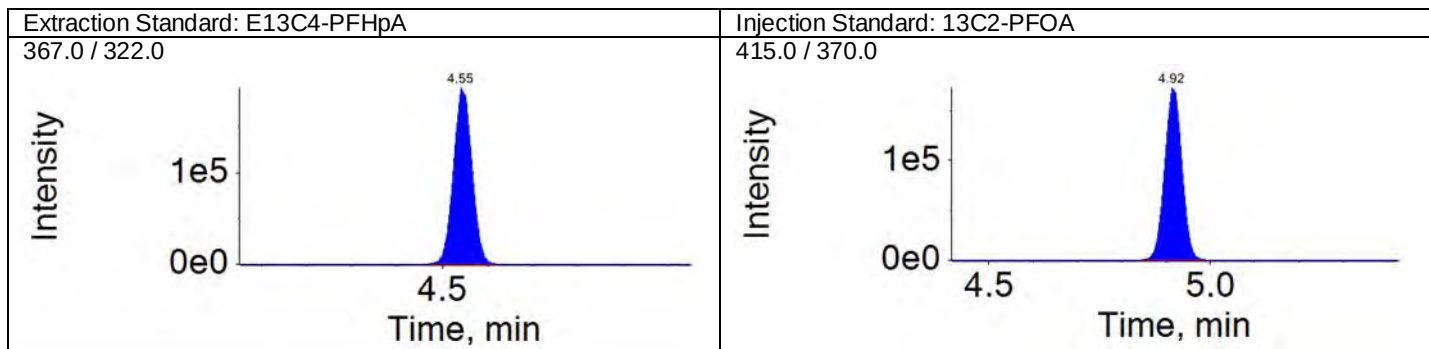
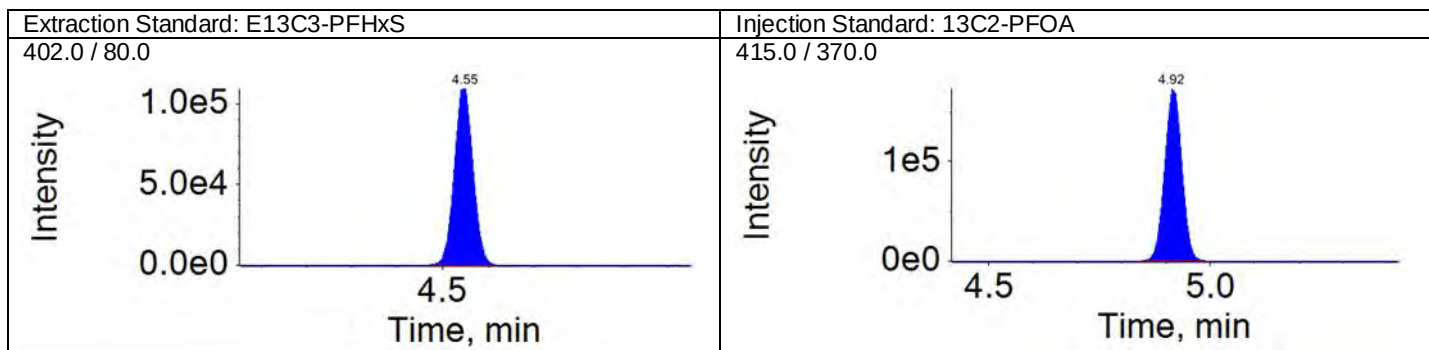
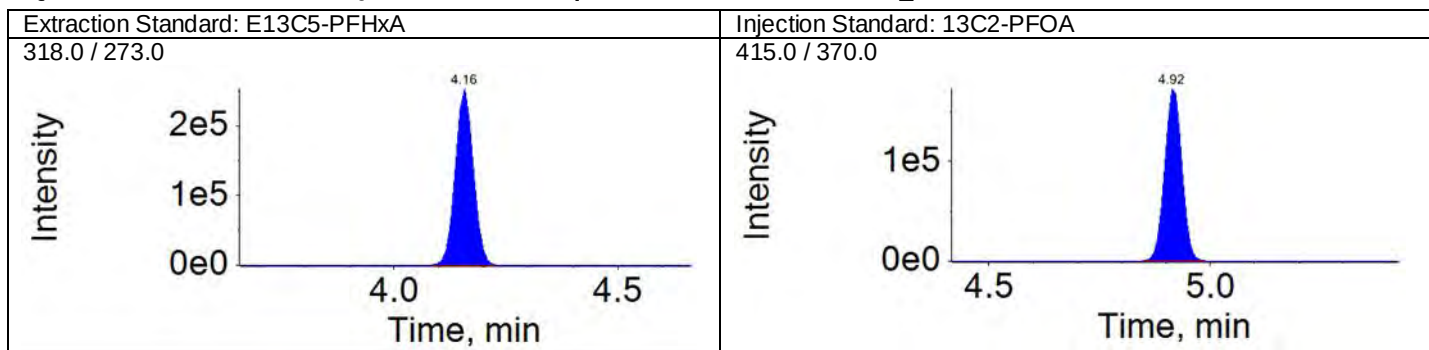
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

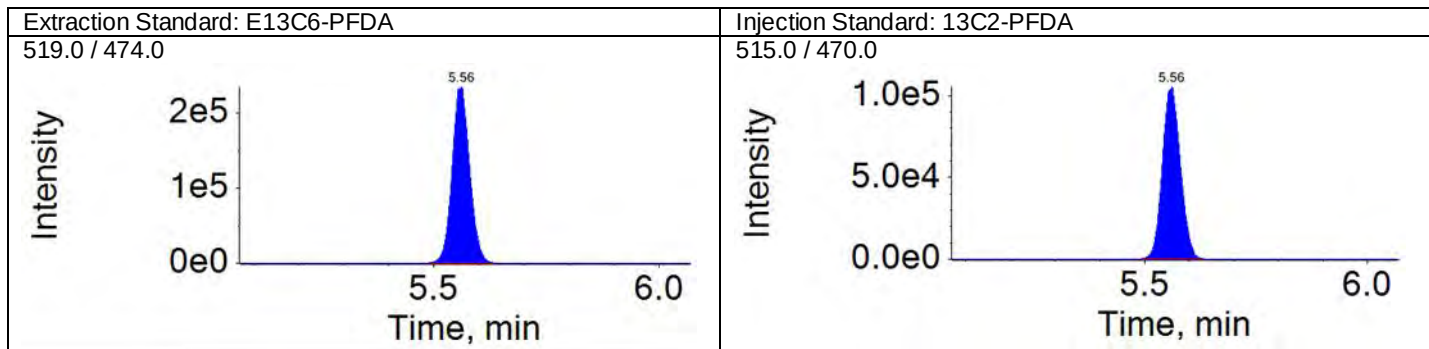
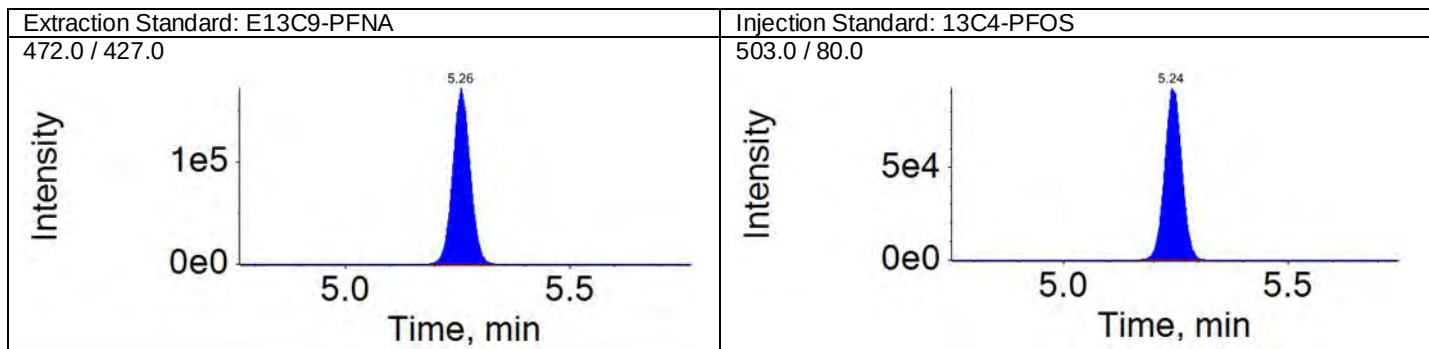
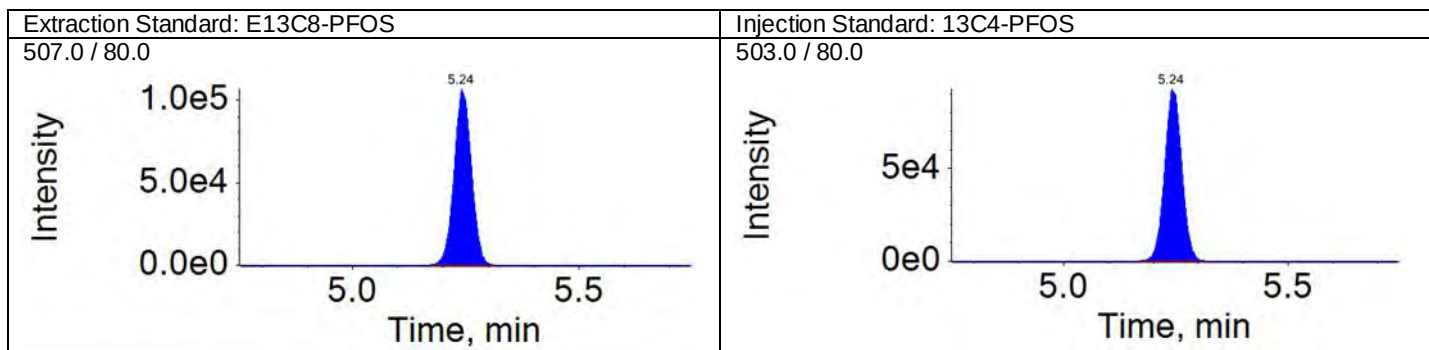
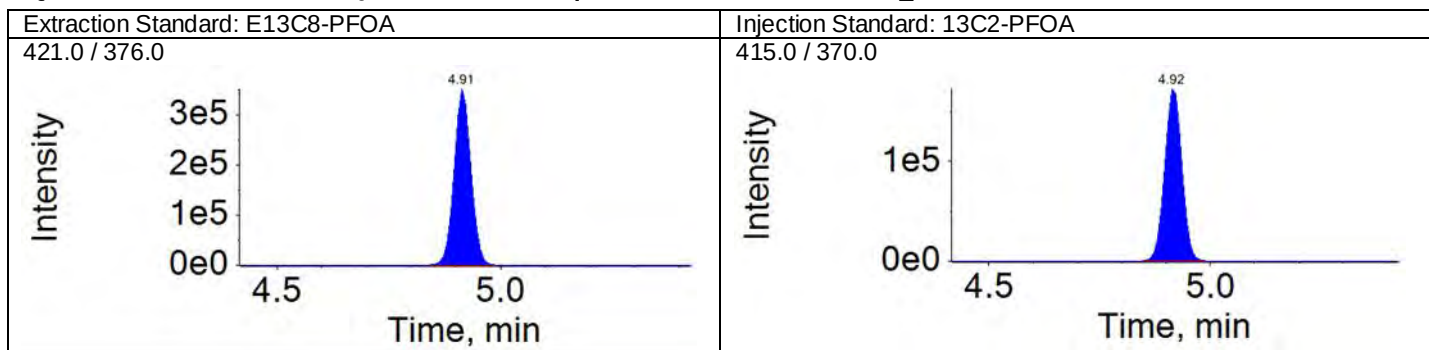
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

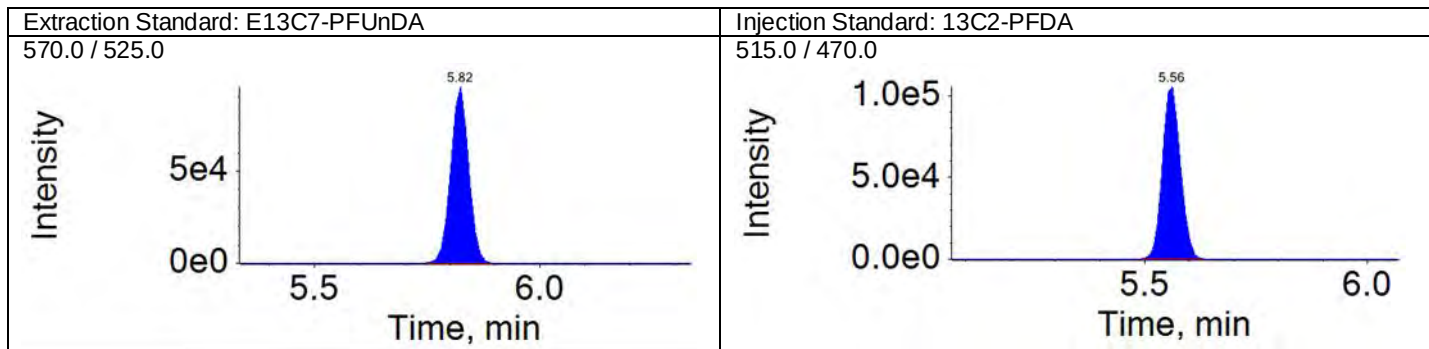
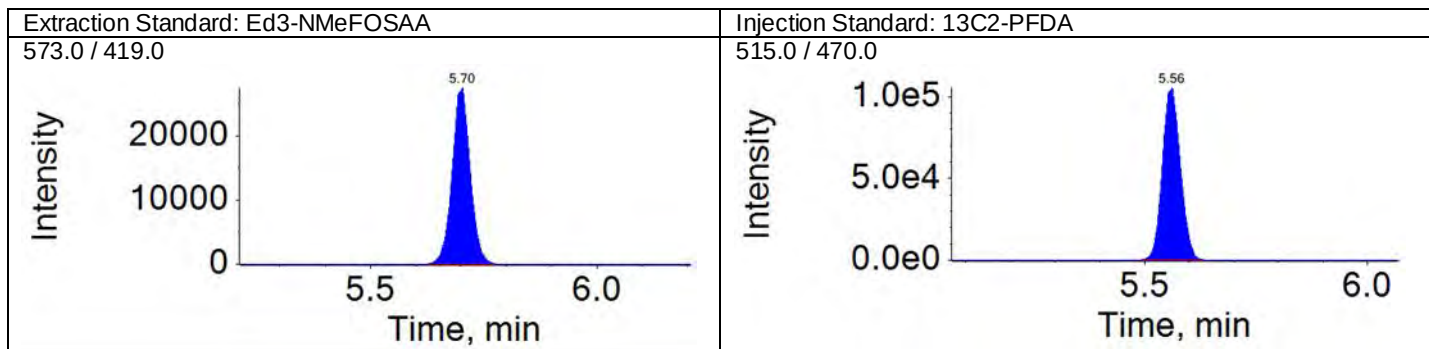
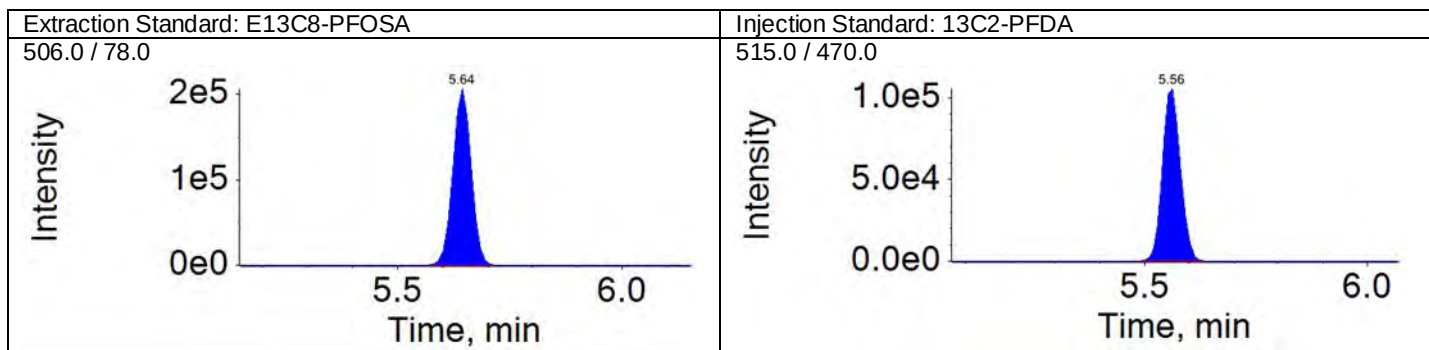
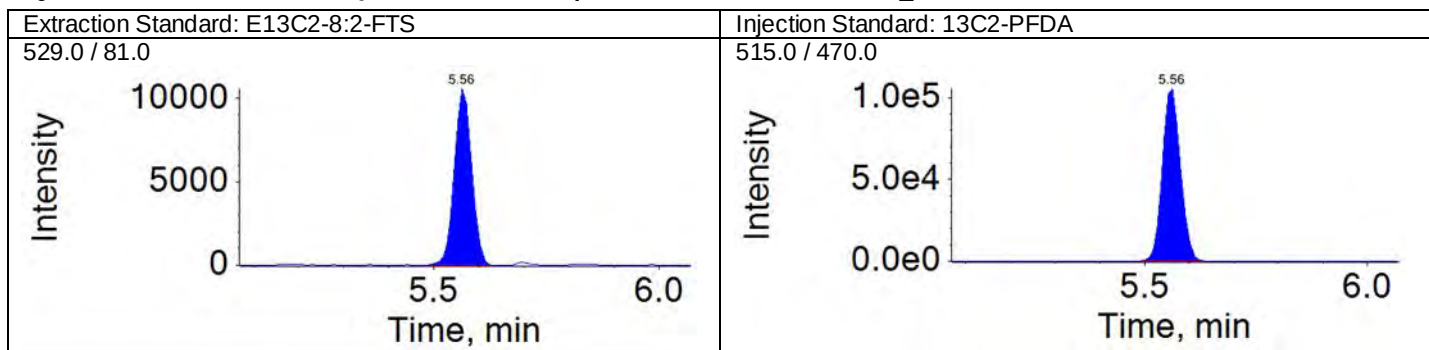
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



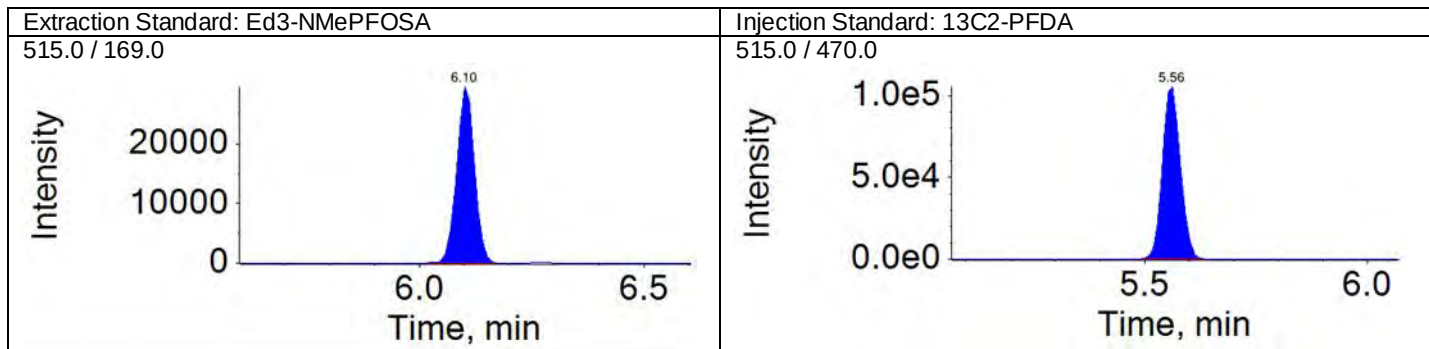
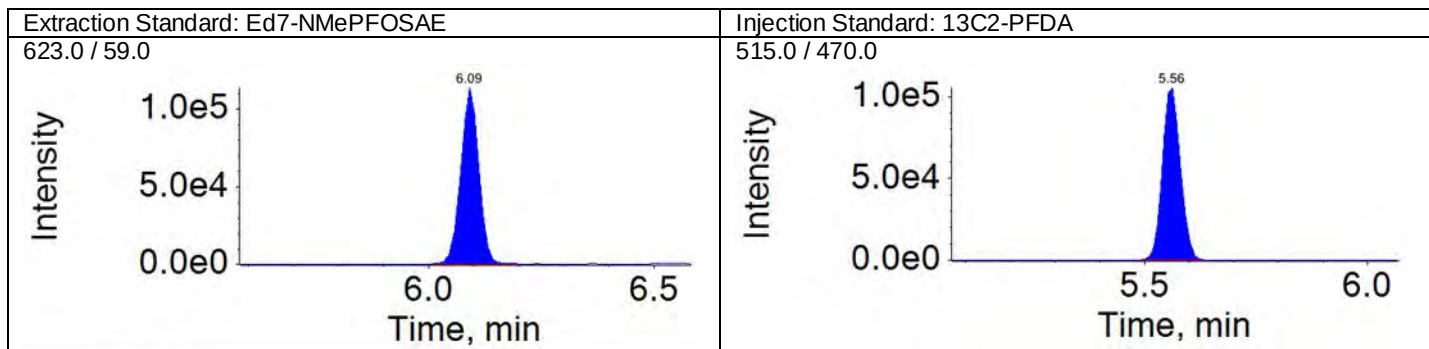
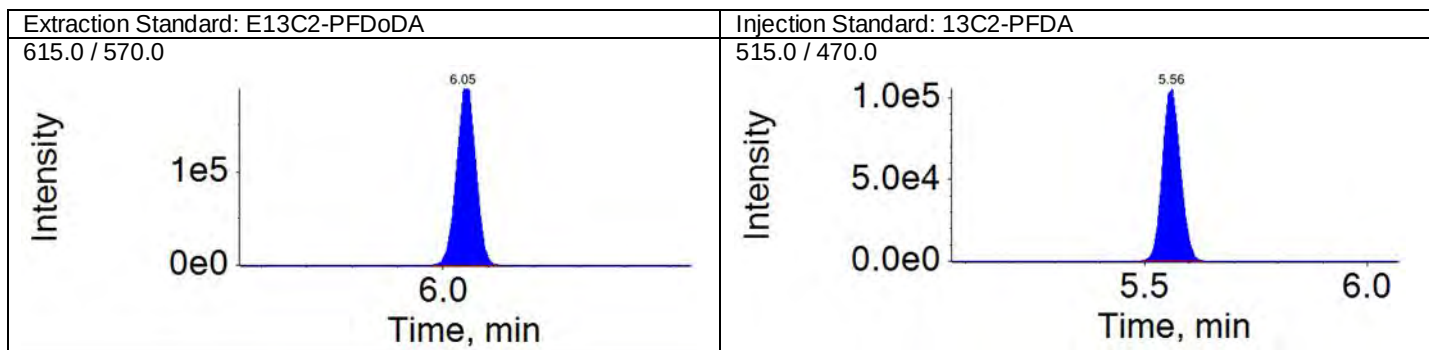
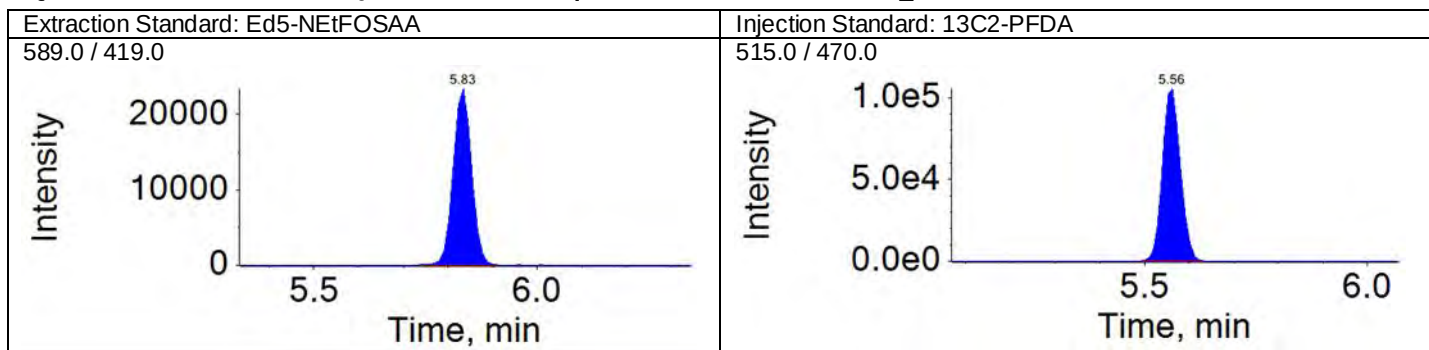
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

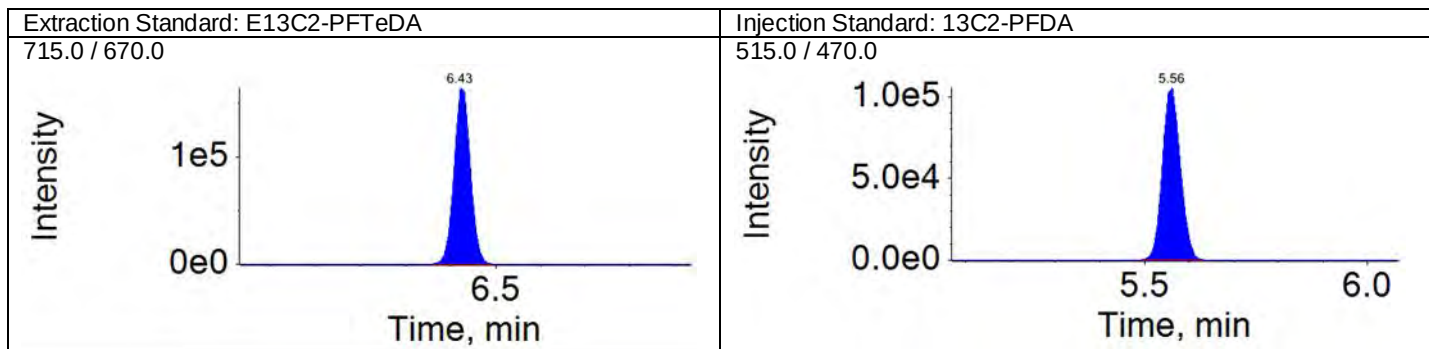
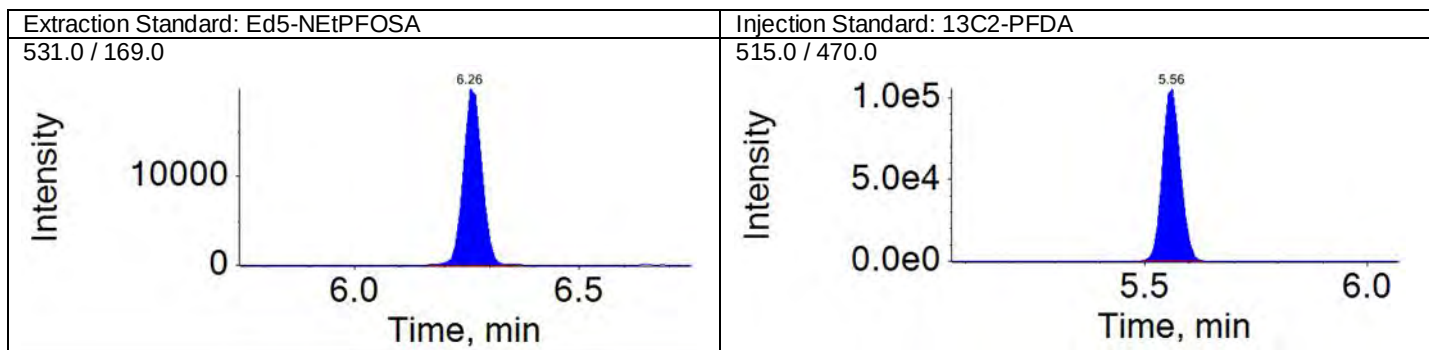
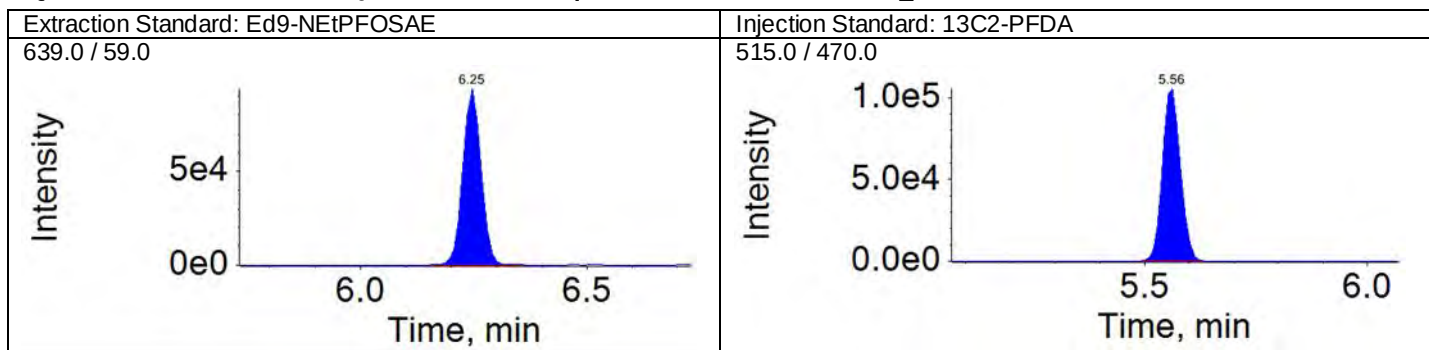
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

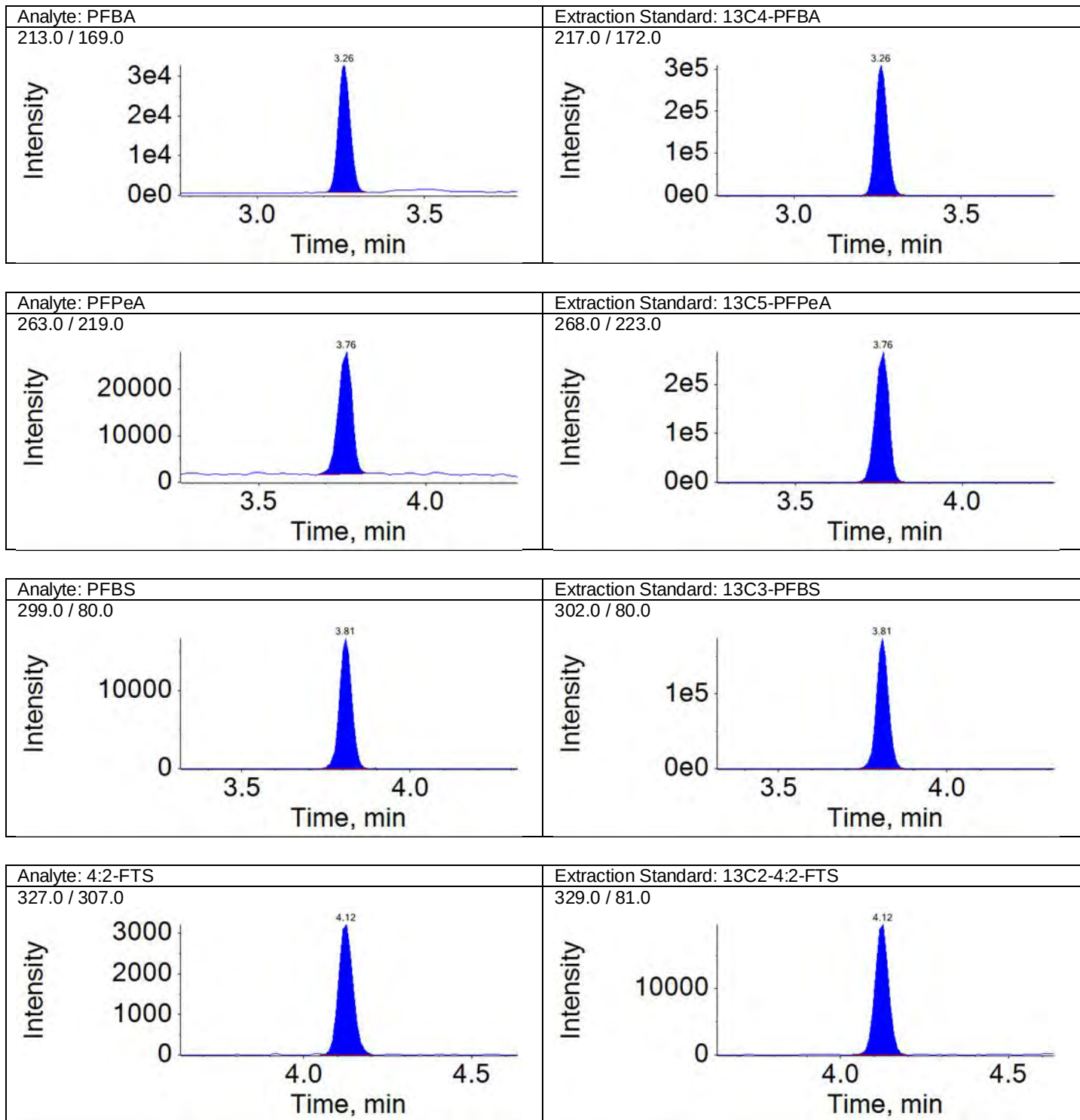
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

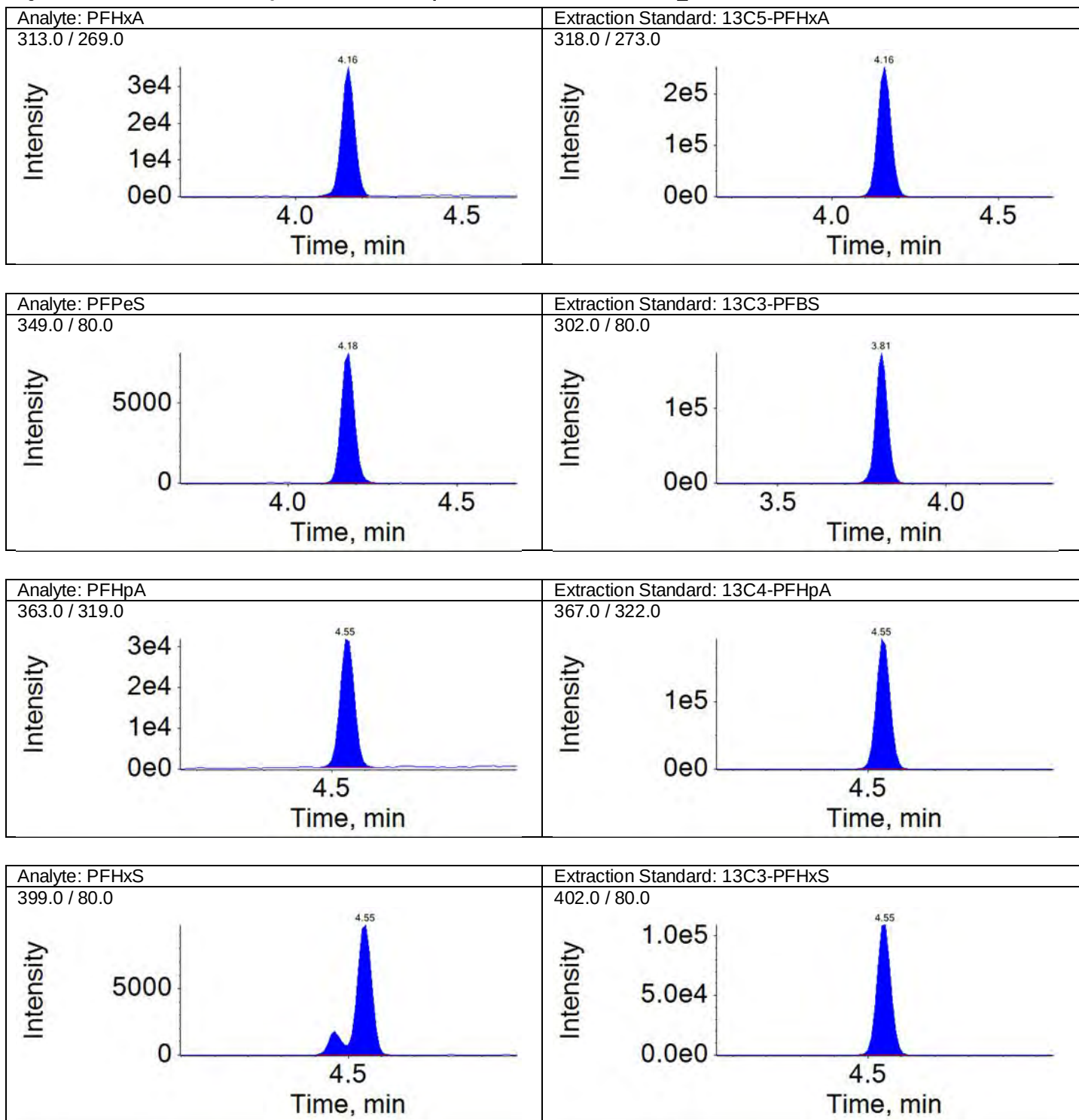
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

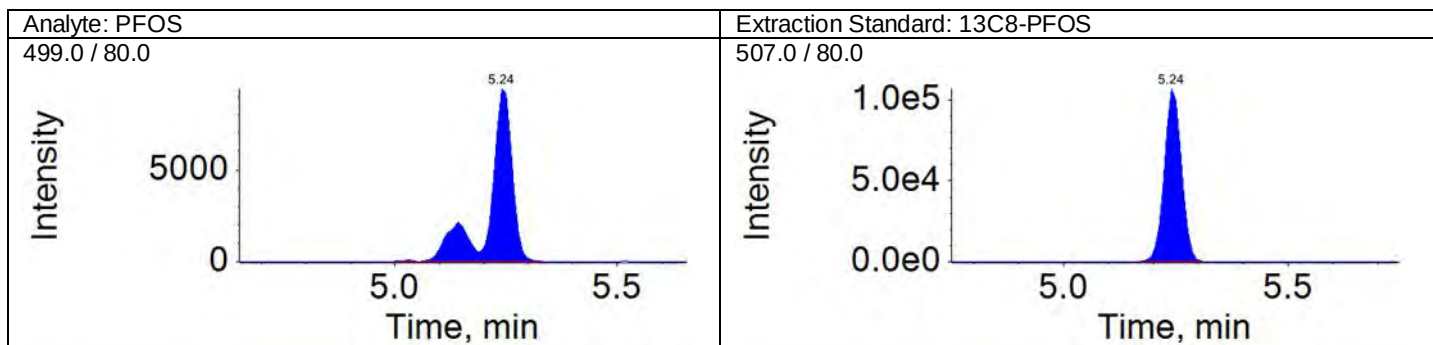
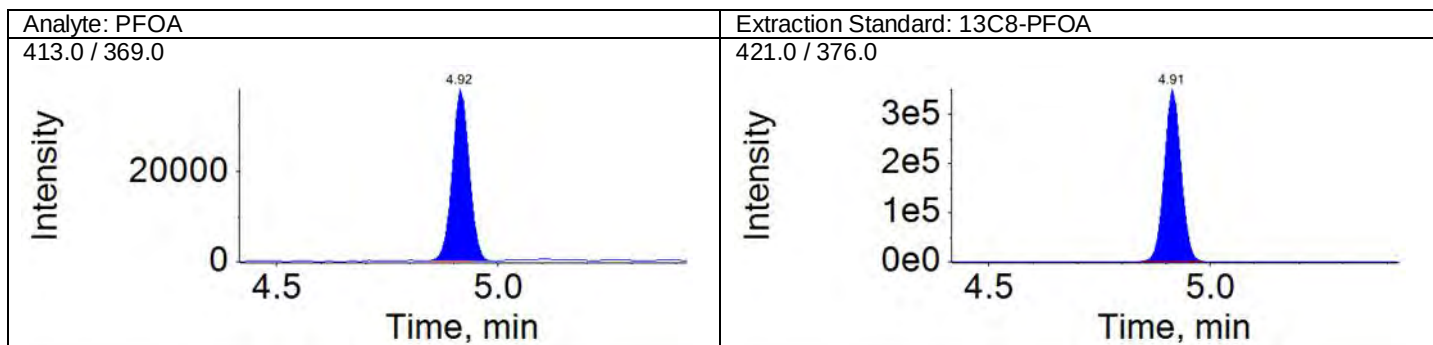
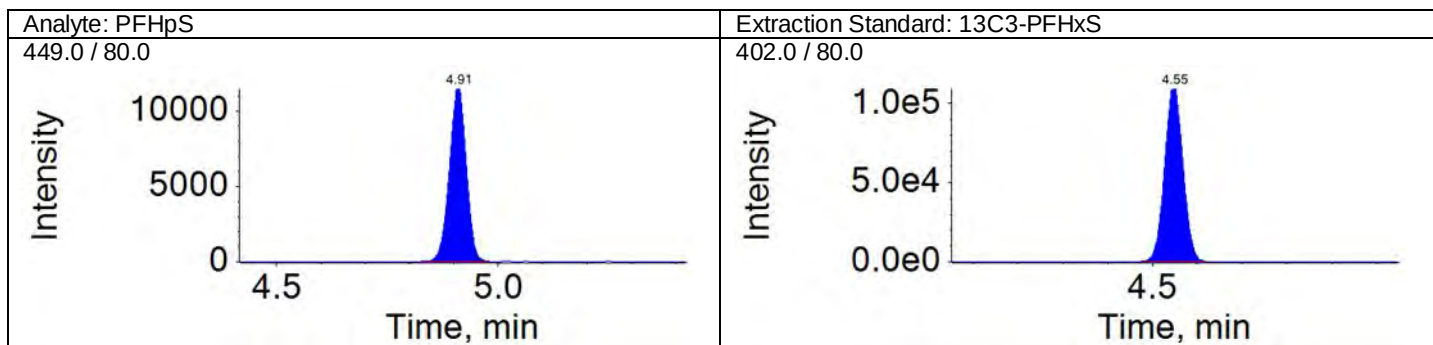
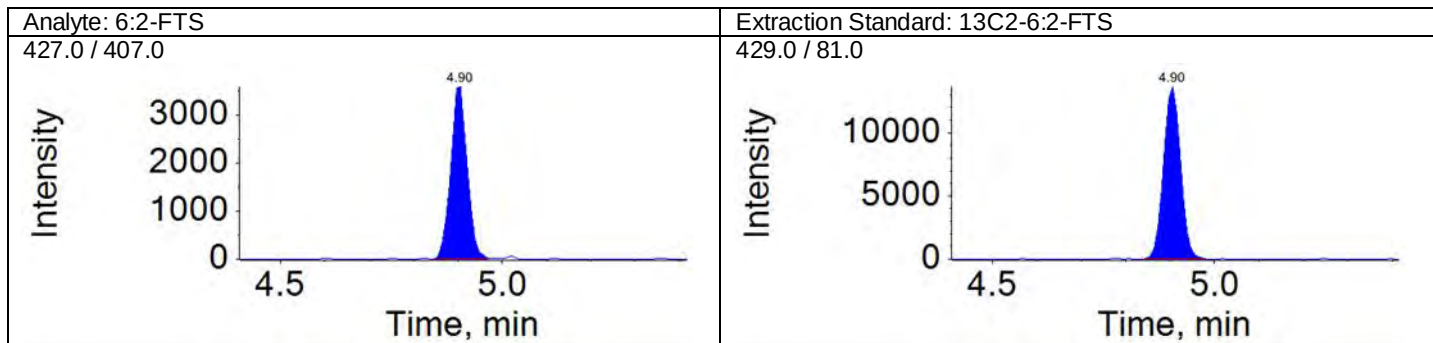
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



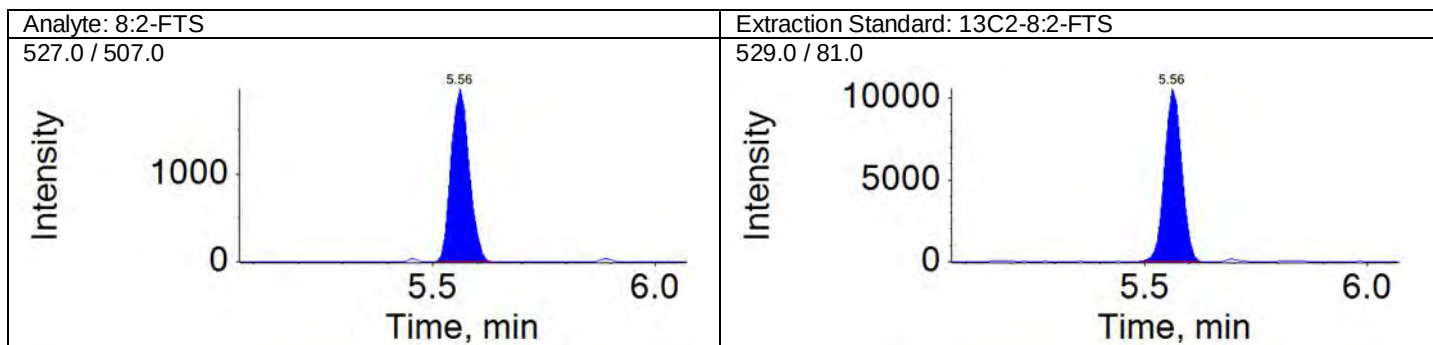
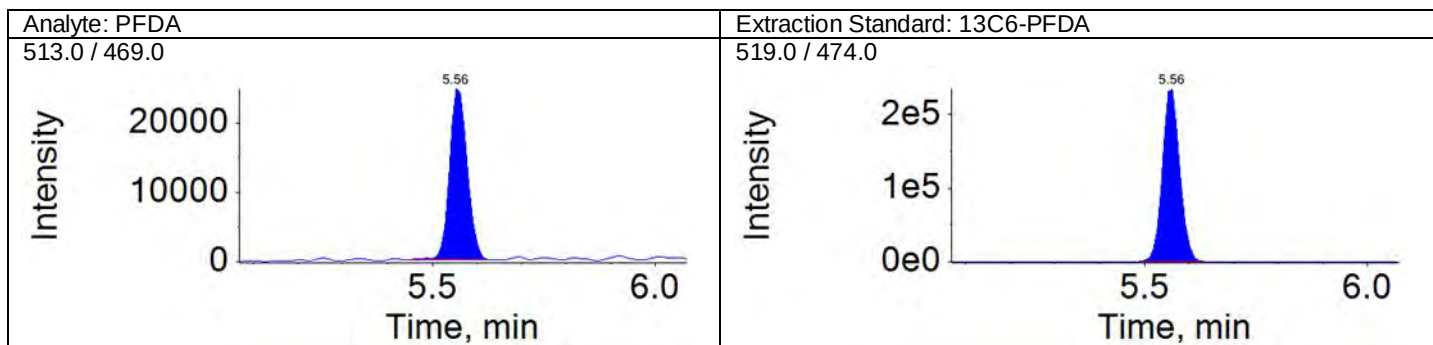
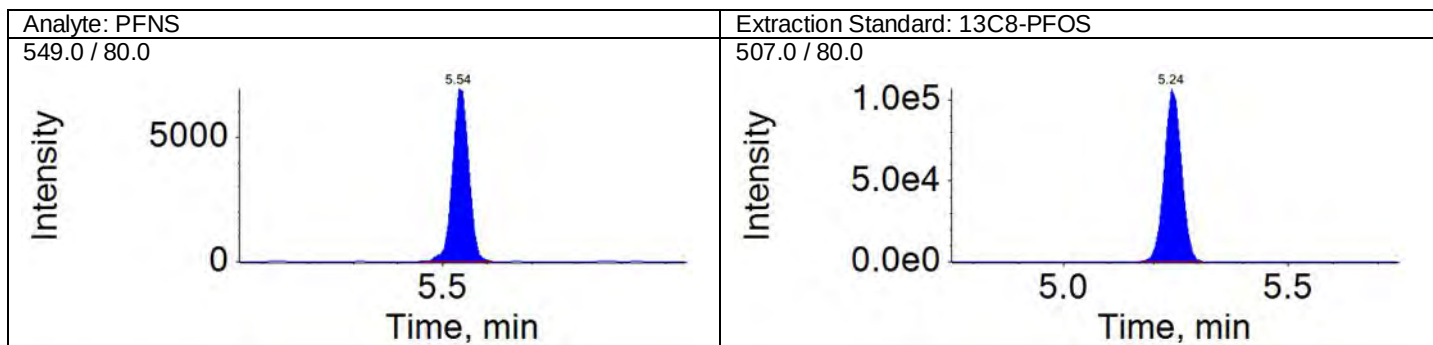
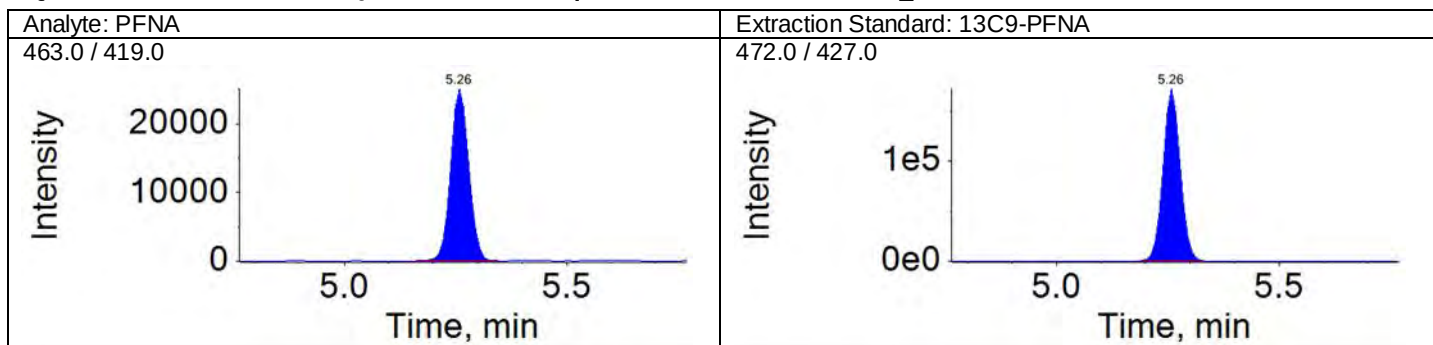
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



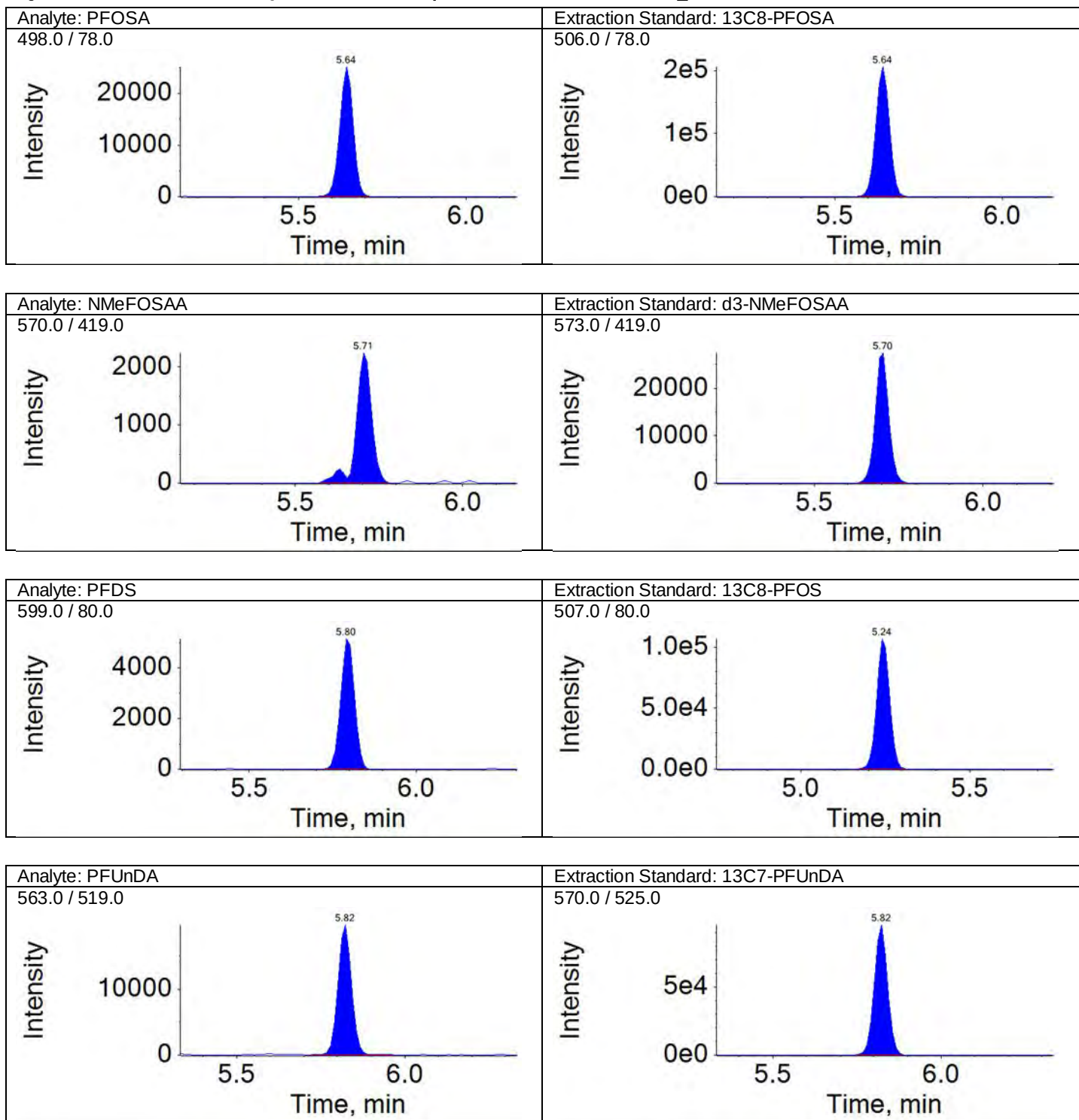
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

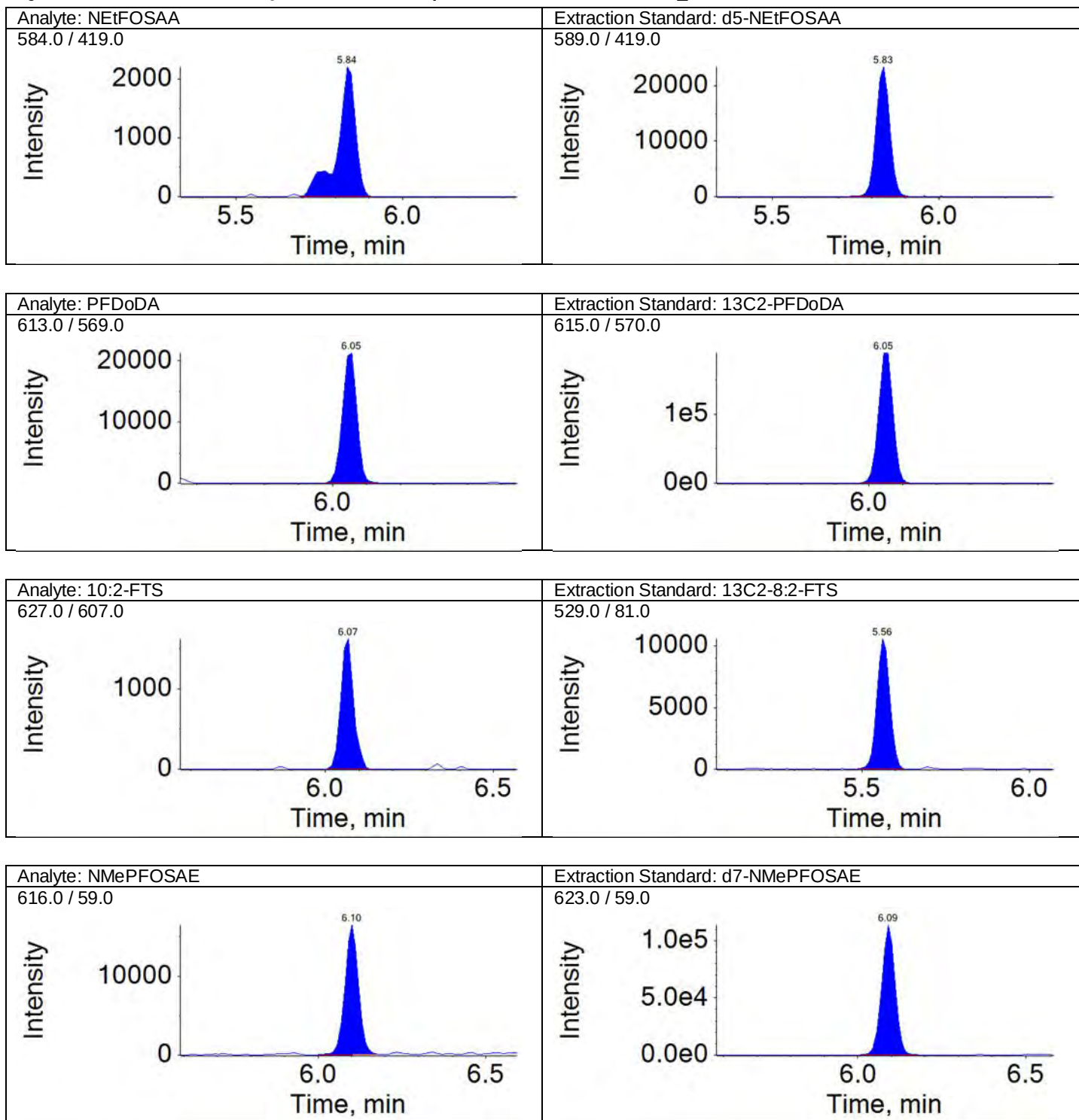
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

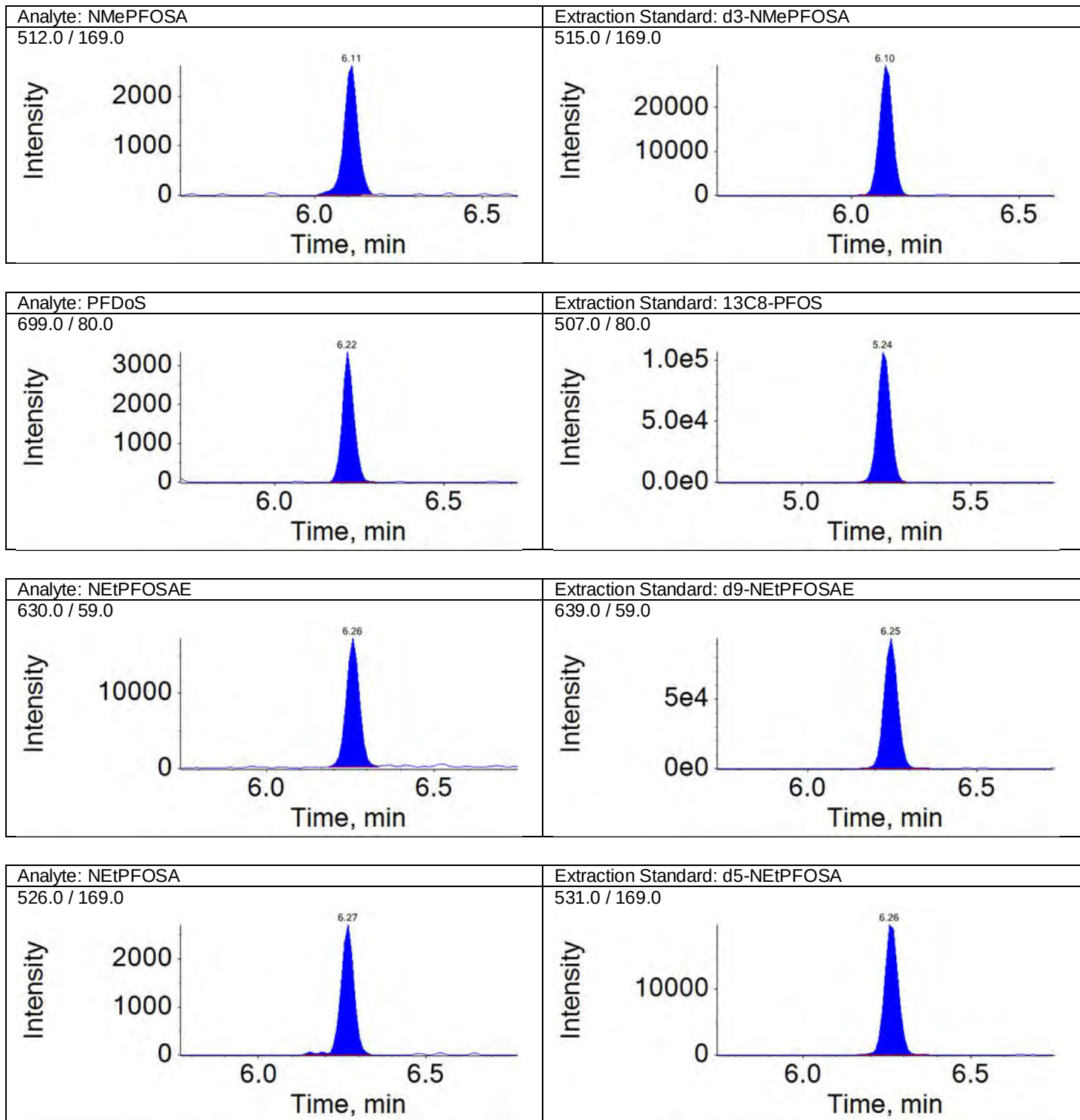
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



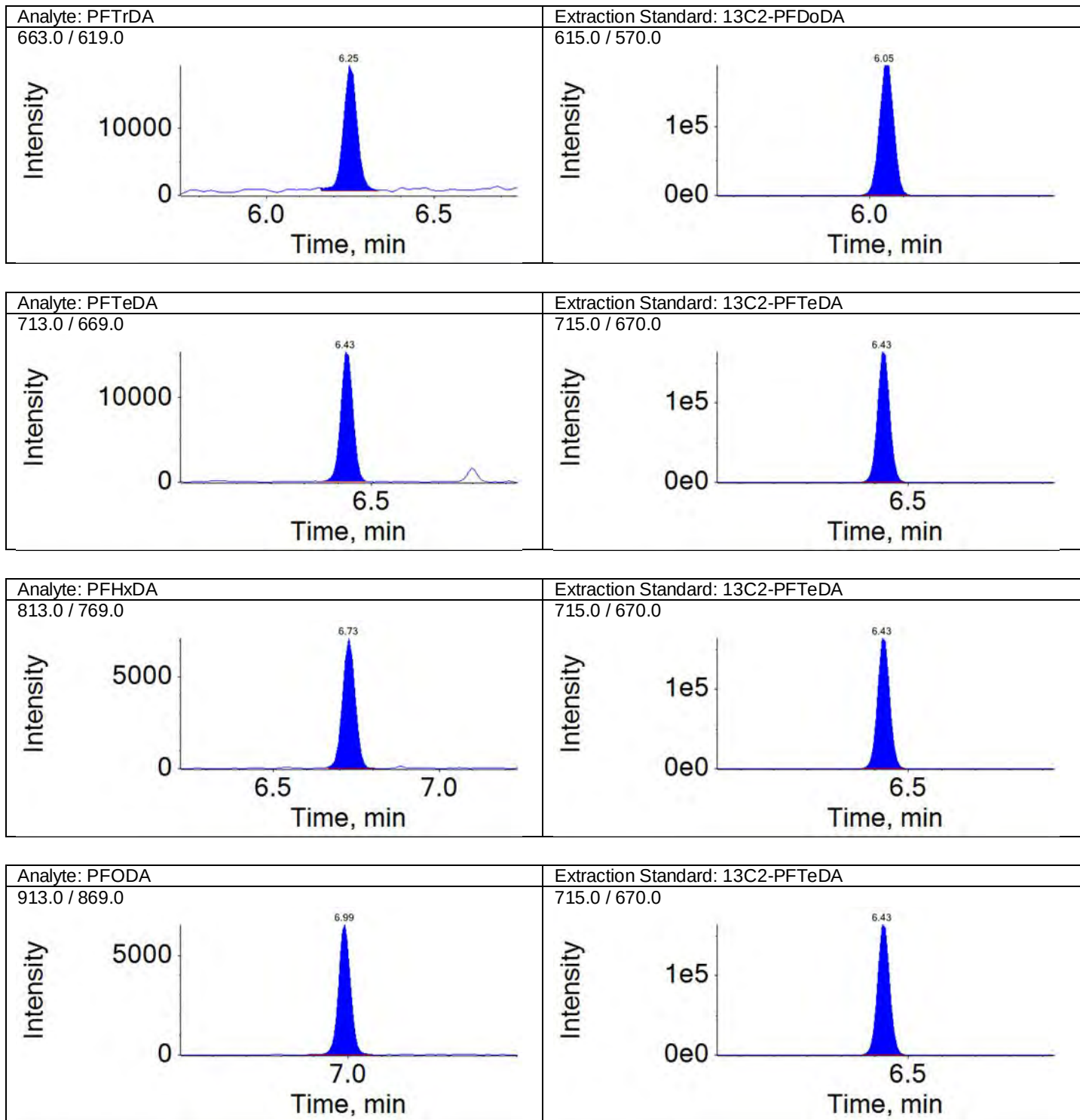
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

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

Component Name:

4:2-FTS

RT (min.):

4.12

Peak Area:

9681.3

Mass Range:

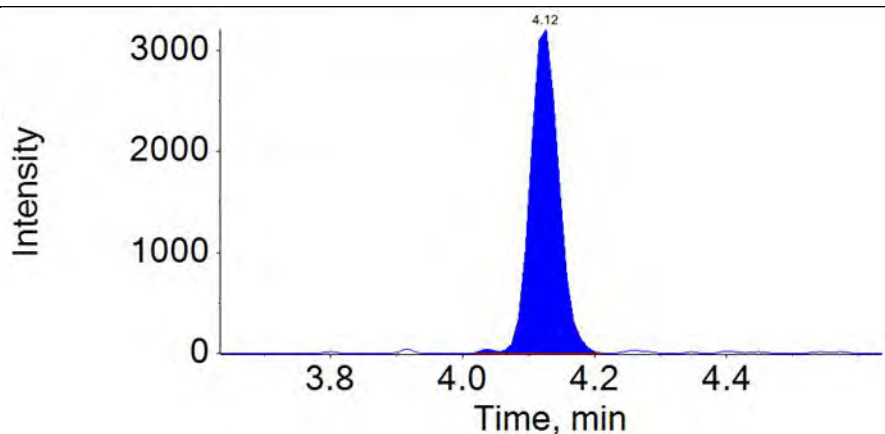
327.0 / 307.0

File Name:

18NOV13D-05.wiff

Sample Name:

CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:

PFHxS

RT (min.):

4.55

Peak Area:

29488.0

Mass Range:

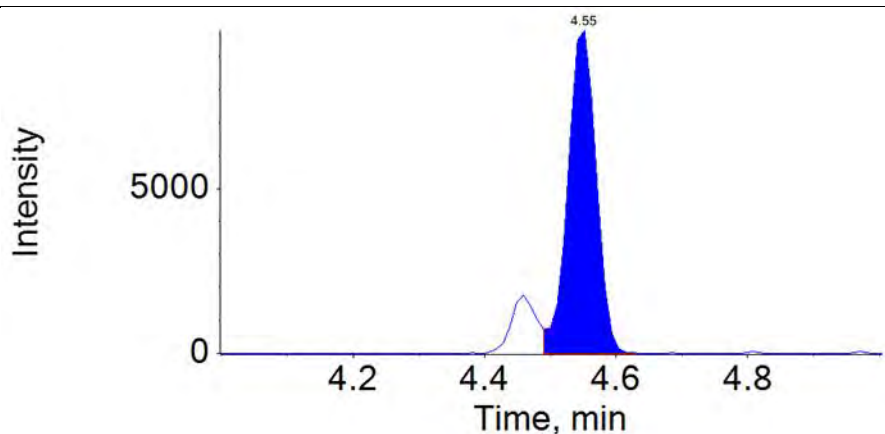
399.0 / 80.0

File Name:

18NOV13D-05.wiff

Sample Name:

CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:

6:2-FTS

RT (min.):

4.90

Peak Area:

9370.4

Mass Range:

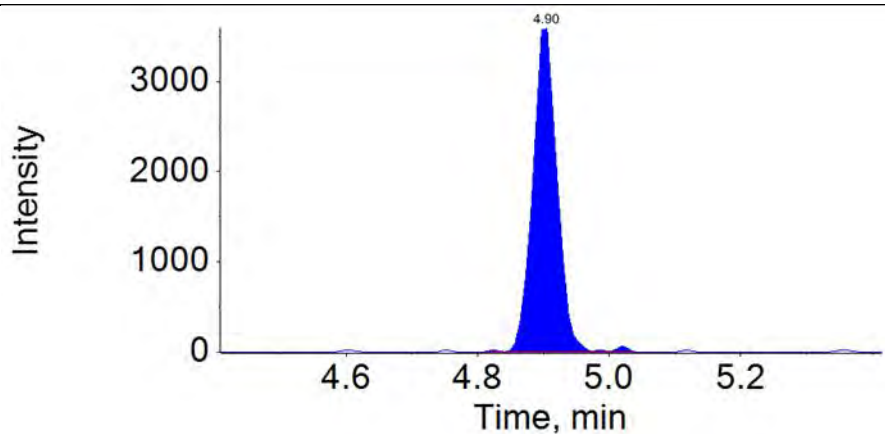
427.0 / 407.0

File Name:

18NOV13D-05.wiff

Sample Name:

CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED

By JPT at 4:33 pm, 11/13/18

BSI05 Page 1233 of 1595

REVIEWED

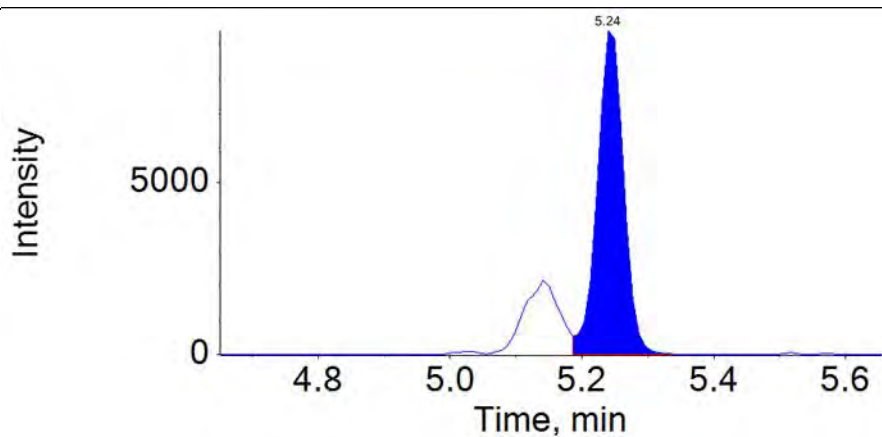
By HMK at 1:48 pm, 11/14/18

Page 1 of 4

Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

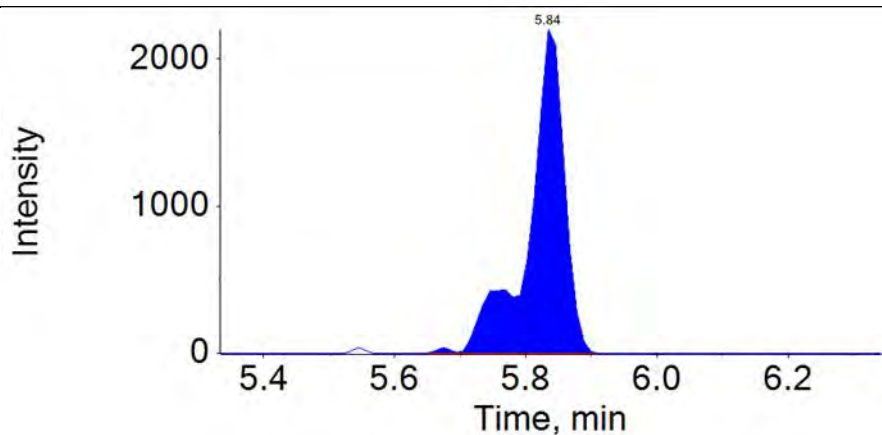
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
26298.4
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



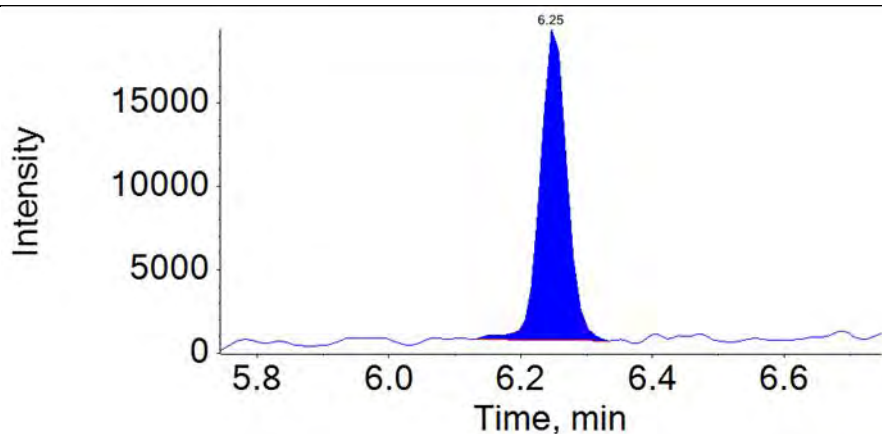
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
8449.1
Mass Range:
584.0 / 419.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

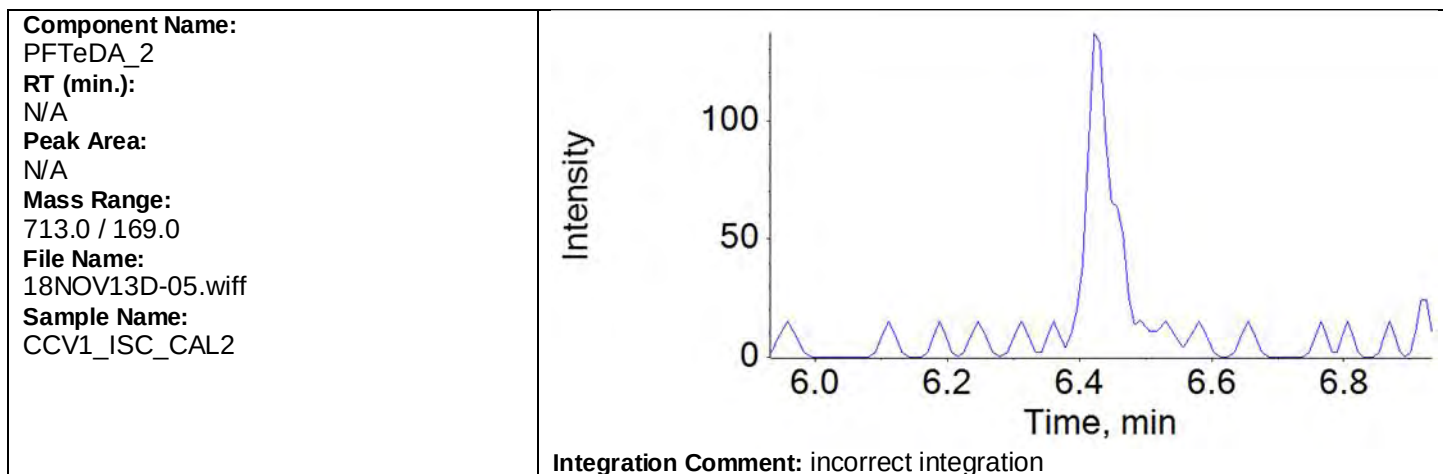
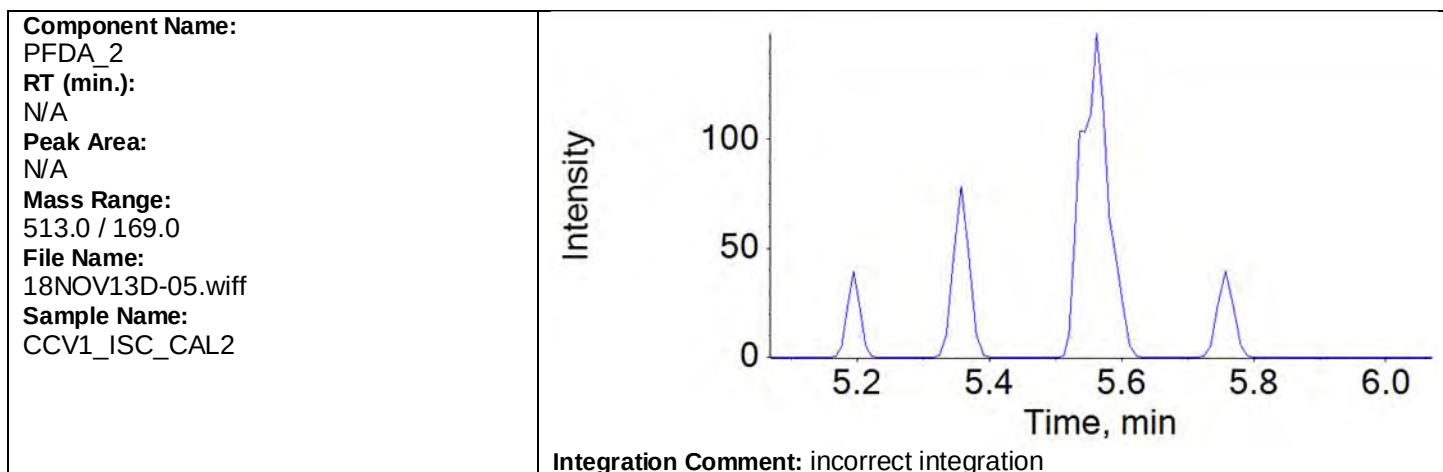
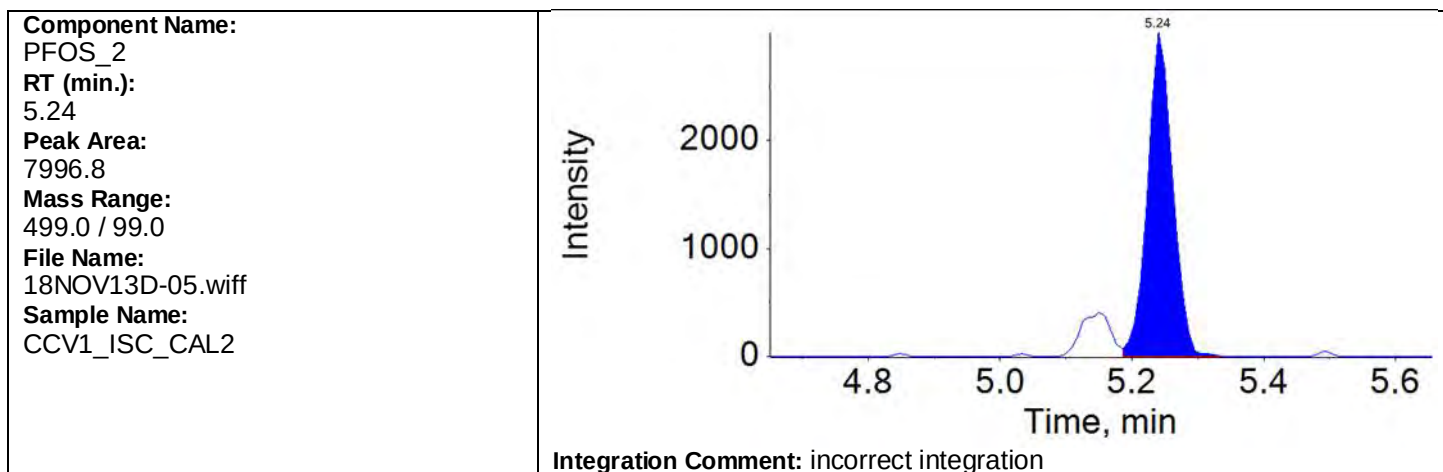
Component Name:
PFTrDA
RT (min.):
6.25
Peak Area:
52734.4
Mass Range:
663.0 / 619.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

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



Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

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

APPROVED
By JPT at 4:33 pm, 11/13/18

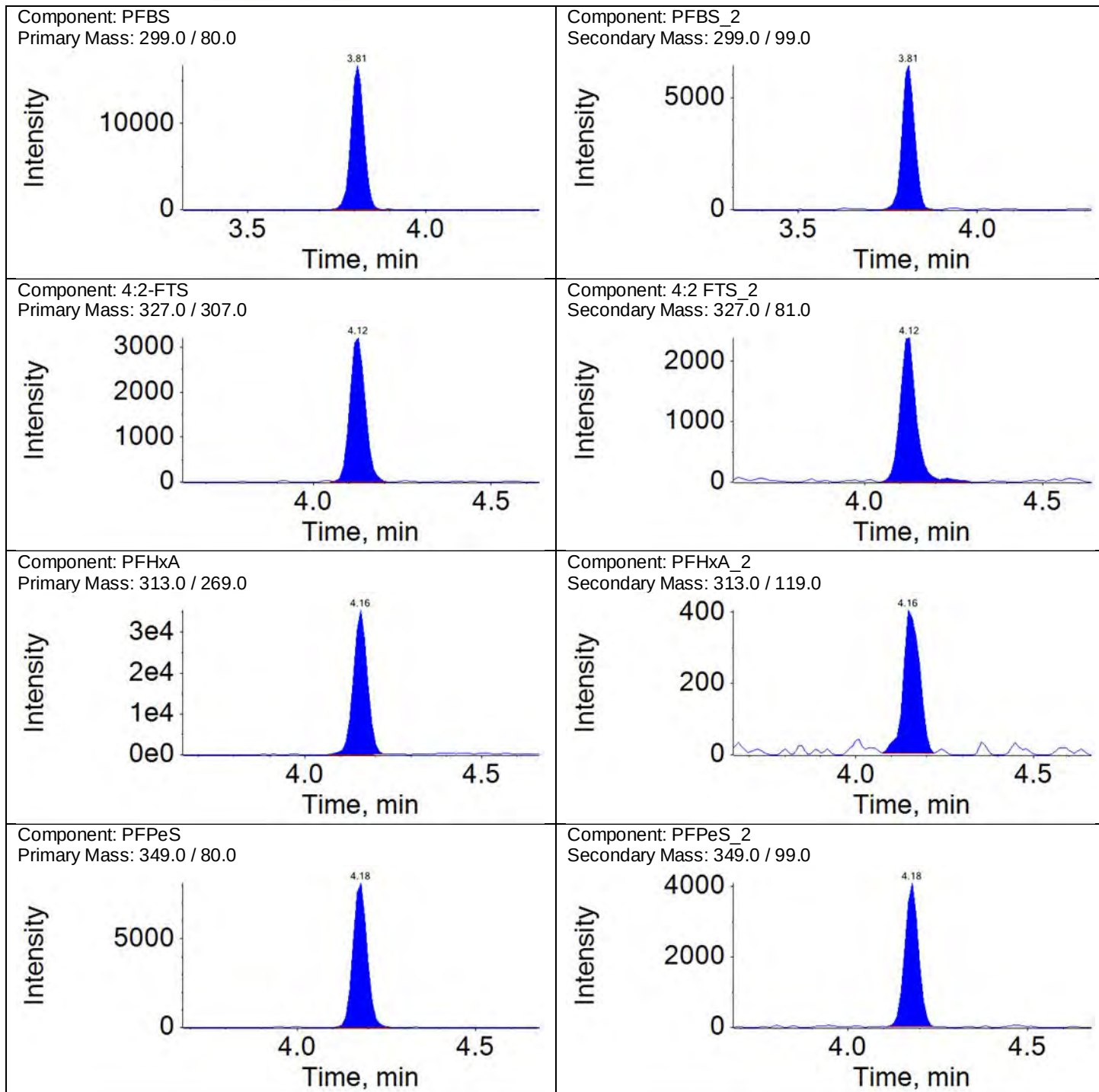
REVIEWED
By HMK at 1:48 pm, 11/14/18

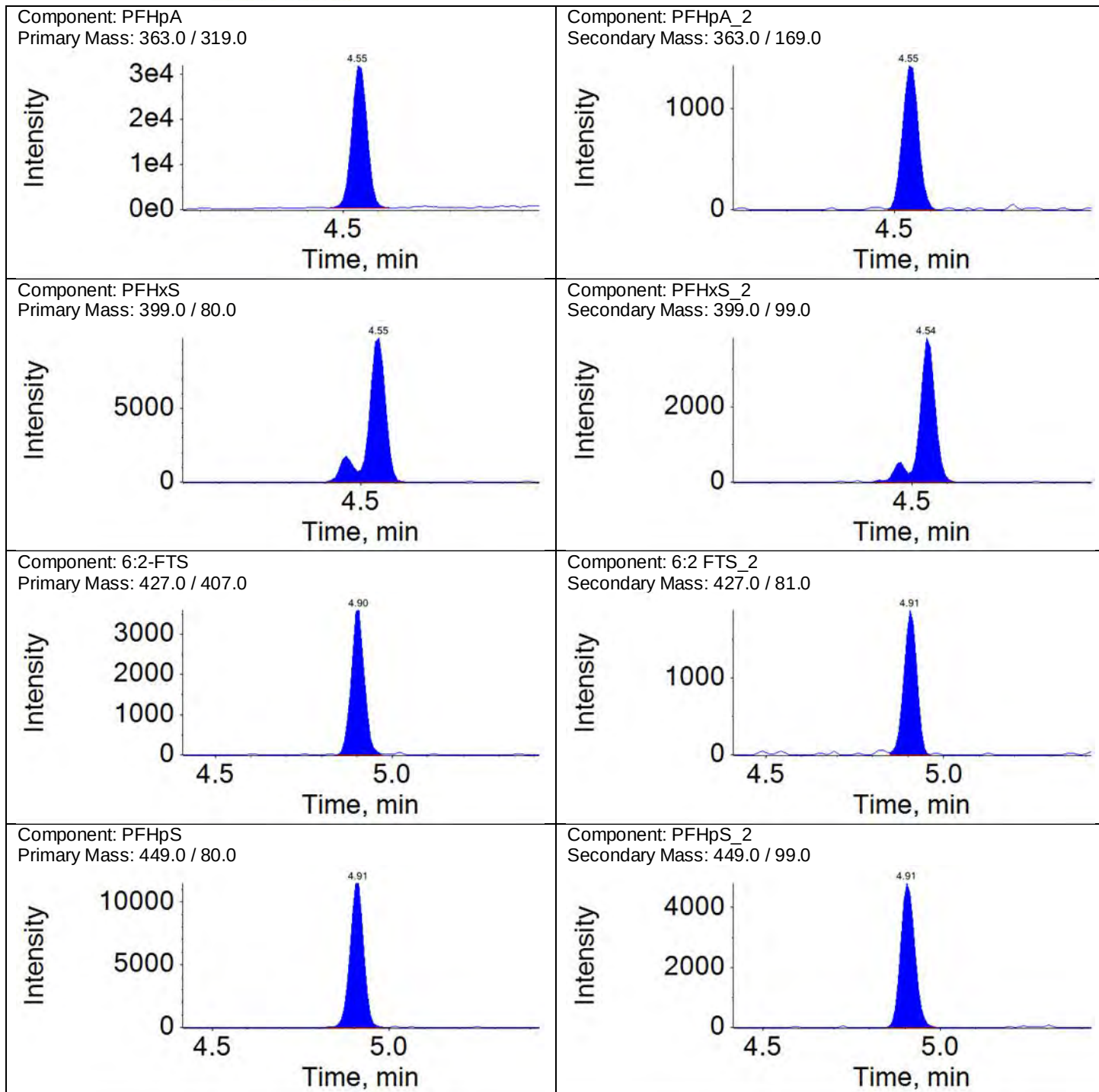
Ion Ratio Report

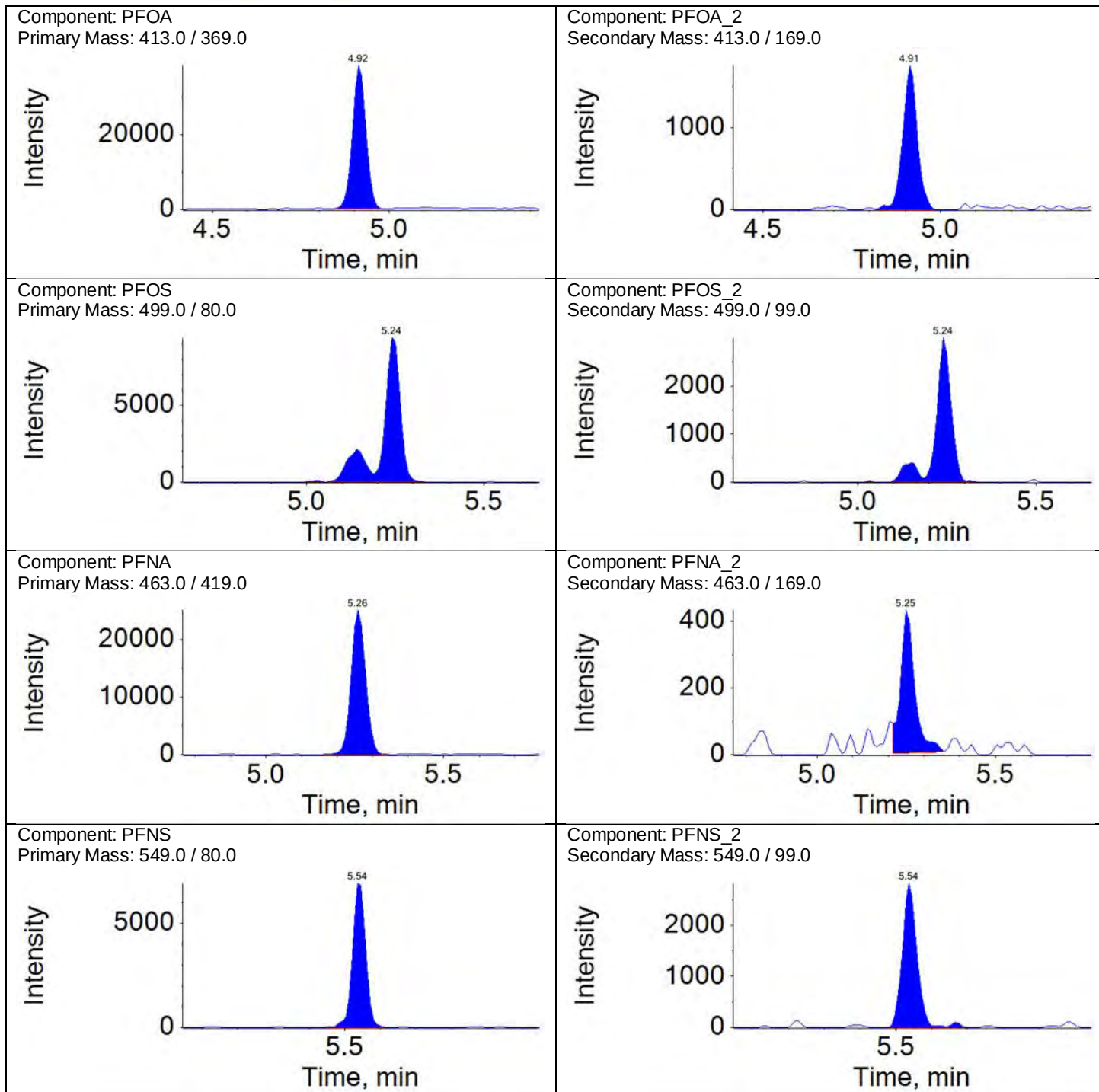
Sample Name: CCV1_ISC_CAL2 Instrument Name: LM27631

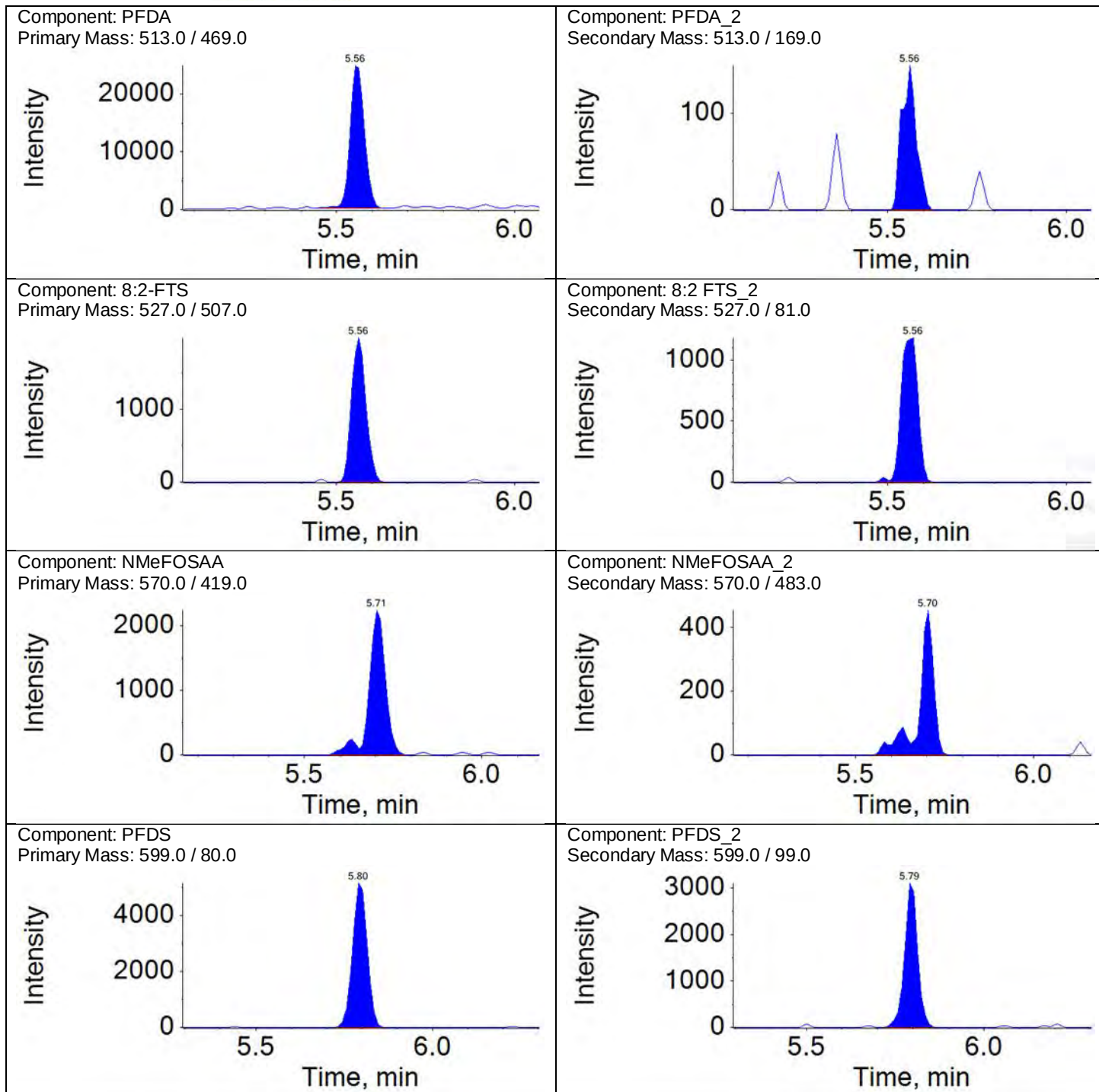
File Name: 18NOV13D-05.wiff

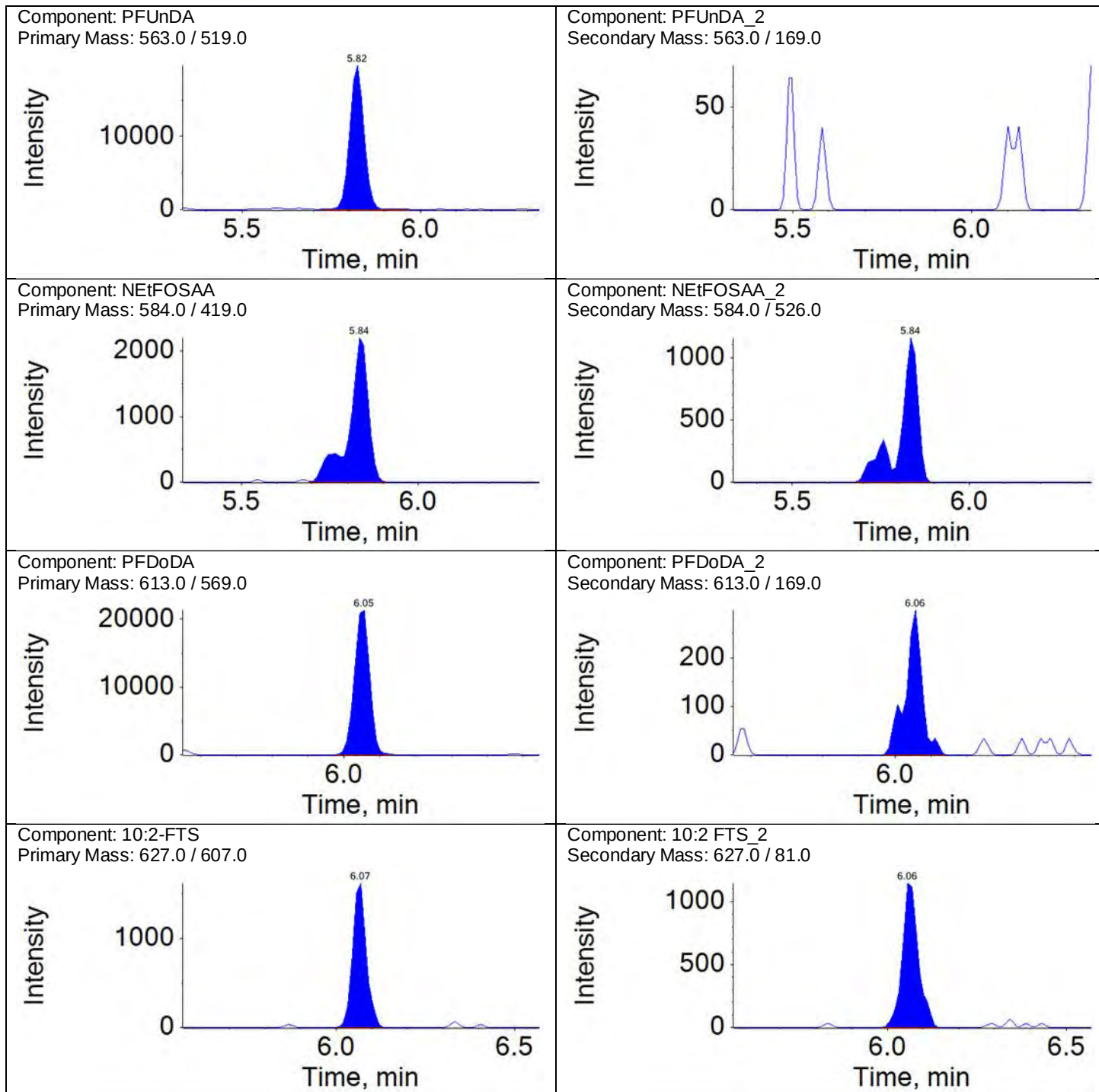
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	41984.3	A	N/A	1.0000			
PFBS_2	3.81	1.00	15769.1	A	N/A	0.3756	3	50	
4:2-FTS	4.12	1.00	9629.9	M	N/A	1.0000			
4:2 FTS_2	4.12	1.00	7594.0	A	N/A	0.7886		#NA!	
PFHxA	4.16	1.00	96444.0	A	N/A	1.0000			
PFHxA_2	4.16	1.00	1277.6	A	N/A	0.0132	13	50	
PFPeS	4.18	1.10	22297.9	A	N/A	1.0000			
PFPeS_2	4.18	1.10	10707.8	A	N/A	0.4802	-8	50	
PFHpA	4.55	1.00	93659.5	A	N/A	1.0000			
PFHpA_2	4.55	1.00	4377.9	A	N/A	0.0467	-17	50	
PFHxS	4.55	1.00	34111.0	M	N/A	1.0000			
PFHxS_2	4.54	1.00	11982.0	A	N/A	0.3513	16	50	
6:2-FTS	4.90	1.00	9221.0	M	N/A	1.0000			
6:2 FTS_2	4.91	1.00	4725.6	A	N/A	0.5125		#NA!	
PFHpS	4.91	1.08	30798.1	A	N/A	1.0000			
PFHpS_2	4.91	1.08	13327.9	A	N/A	0.4328	6	50	
PFOA	4.92	1.00	100905.0	A	N/A	1.0000			
PFOA_2	4.91	1.00	5004.1	A	N/A	0.0496	-13	50	
PFOS	5.24	1.00	34555.4	M	N/A	1.0000			
PFOS_2	5.24	1.00	9315.9	M	N/A	0.2696	4	50	
PFNA	5.26	1.00	70400.6	A	N/A	1.0000			
PFNA_2	5.25	1.00	1189.7	A	N/A	0.0169	-26	50	
PFNS	5.54	1.06	17583.2	A	N/A	1.0000			
PFNS_2	5.54	1.06	8054.2	A	N/A	0.4581	-4	50	
PFDA	5.56	1.00	68441.3	A	N/A	1.0000			
PFDA_2	5.56	1.00	425.8	M	N/A	0.0062	-22	50	
8:2-FTS	5.56	1.00	5551.6	A	N/A	1.0000			
8:2 FTS_2	5.56	1.00	3895.7	A	N/A	0.7017		#NA!	
NMeFOSAA	5.71	1.00	7238.6	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	1290.9	A	N/A	0.1783	-16	50	
PFDS	5.80	1.11	14746.9	A	N/A	1.0000			
PFDS_2	5.79	1.11	7890.7	A	N/A	0.5351	5	50	
PFUnDA	5.82	1.00	55065.8	A	N/A	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	5.84	1.00	8391.3	M	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	4219.2	A	N/A	0.5028	-13	50	
PFDODA	6.05	1.00	63306.6	A	N/A	1.0000			
PFDODA_2	6.06	1.00	973.7	A	N/A	0.0154	-6	50	
10:2-FTS	6.07	1.09	4315.1	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	3603.0	A	N/A	0.8350		#NA!	
PFTTrDA	6.25	1.03	52911.8	M	N/A	1.0000			
PFTTrDA_2	6.25	1.03	567.3	A	N/A	0.0107	16	50	
PFTeDA	6.43	1.00	38686.6	A	N/A	1.0000			
PFTeDA_2	6.43	1.00	380.7	M	N/A	0.0098	54	50	OOS
PFHxDA	6.73	1.05	18605.8	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1083.6	A	N/A	0.0582	-14	50	
PFODA	6.99	1.09	15935.1	A	N/A	1.0000			
PFODA_2	6.99	1.09	437.9	A	N/A	0.0275	2	50	

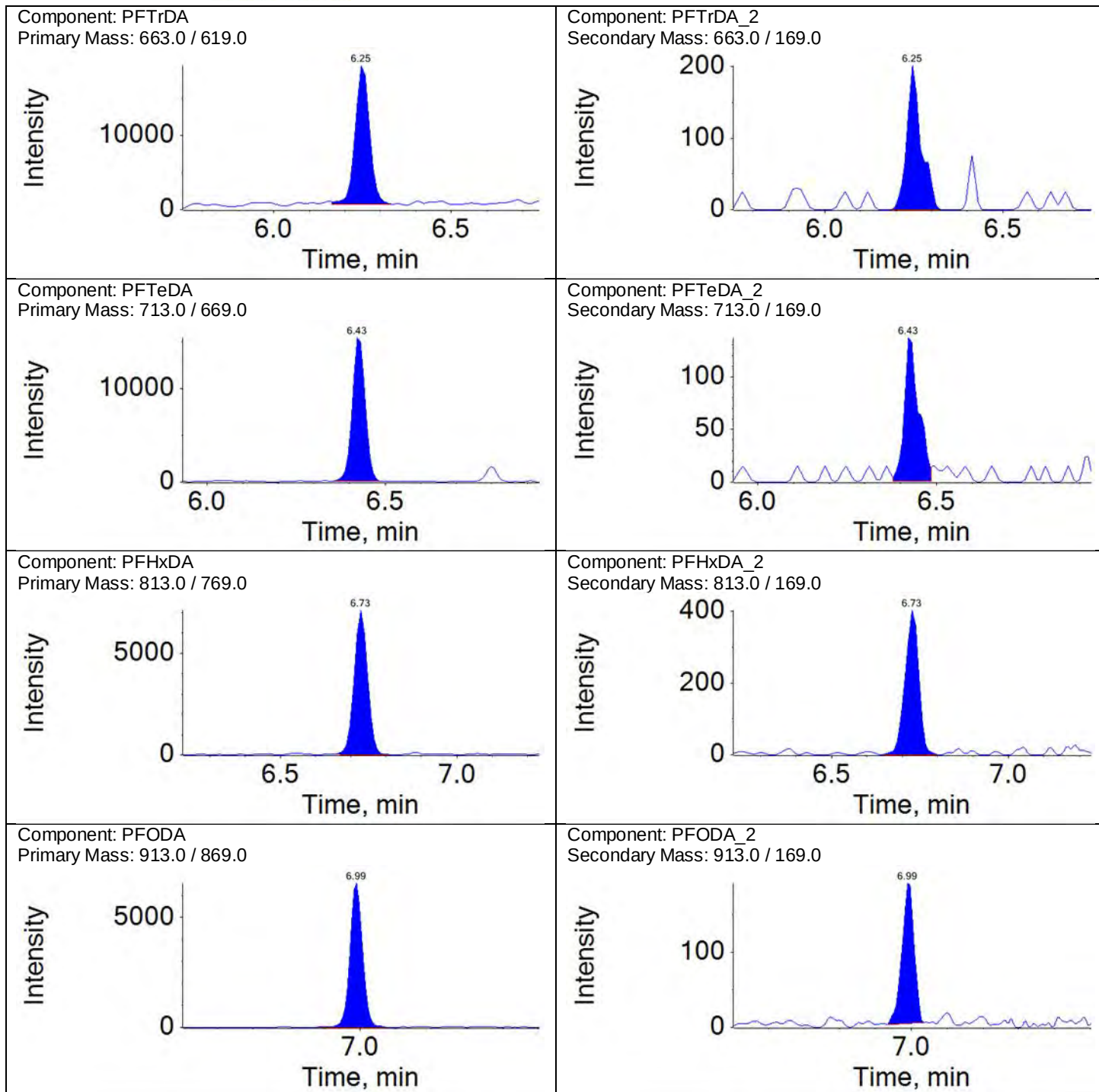












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	INBLK	Data File:	18NOV13D-06.wiff
Sample ID:	methanol + labels	Acquis Date:	2018-11-13T09:53:05
Sample Type:	Unknown	Instrument:	LM27631
Vial Position:	1	Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00	Result Table:	18NOV13DCCV1-4
QMethod File:	18AUG20QM	ICAL Name:	18NOV12DCAL
Batch Number:	N/A	Operator:	JPT12262
Sample Wt.:	1.00000	Dilution Factor:	1.00
Sample Vol.:	1.000	Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-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	712182.6	661126.9	8	50	
13C2-PFOA	5.0	517114.2	466902.6	11	50	
13C4-PFOS	4.8	271947.8	247446.9	10	50	
13C2-PFDA	5.0	309024.7	295381.6	5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	788556.3	13C3-PFBA	712182.6	1.107	5.000	4.964	99	70-130	
E13C5-PFPeA	789796.7	13C3-PFBA	712182.6	1.109	5.000	4.974	99	70-130	
E13C3-PFBS	465118.9	13C3-PFBA	712182.6	0.653	4.650	4.610	99	70-130	
E13C2-4:2-FTS	56775.7	13C2-PFOA	517114.2	0.110	4.670	4.890	105	70-130	
E13C5-PFHxA	691160.9	13C2-PFOA	517114.2	1.337	5.000	4.828	97	70-130	
E13C3-PFHxS	343877.9	13C2-PFOA	517114.2	0.665	4.730	4.563	96	70-130	
E13C4-PFHpA	573094.5	13C2-PFOA	517114.2	1.108	5.000	4.993	100	70-130	
E13C2-6:2-FTS	40405.9	13C2-PFOA	517114.2	0.078	4.750	5.228	110	70-130	
E13C8-PFOA	989330.5	13C2-PFOA	517114.2	1.913	5.000	5.271	105	70-130	
E13C8-PFOS	288721.3	13C4-PFOS	271947.8	1.062	4.780	4.704	98	70-130	
E13C9-PFNA	496672.5	13C4-PFOS	271947.8	1.826	5.000	5.092	102	70-130	
E13C6-PFDA	675627.9	13C2-PFDA	309024.7	2.186	5.000	5.102	102	70-130	
E13C2-8:2-FTS	30302.5	13C2-PFDA	309024.7	0.098	4.790	4.890	102	70-130	
E13C8-PFOSA	662561.8	13C2-PFDA	309024.7	2.144	5.000	4.753	95	70-130	
Ed3-NMeFOSAA	77164.8	13C2-PFDA	309024.7	0.250	5.000	4.507	90	70-130	
E13C7-PFUnDA	282164.2	13C2-PFDA	309024.7	0.913	5.000	5.301	106	70-130	
Ed5-NEtFOSAA	63151.8	13C2-PFDA	309024.7	0.204	5.000	4.323	86	70-130	
E13C2-PFDoDA	647992.1	13C2-PFDA	309024.7	2.097	5.000	5.444	109	70-130	
Ed7-NMePFOSAE	342687.6	13C2-PFDA	309024.7	1.109	5.000	4.799	96	70-130	
Ed3-NMePFOSA	79550.6	13C2-PFDA	309024.7	0.257	5.000	4.677	94	70-130	
Ed9-NEtPFOSAE	282226.0	13C2-PFDA	309024.7	0.913	5.000	4.750	95	70-130	
Ed5-NEtPFOSA	62508.0	13C2-PFDA	309024.7	0.202	5.000	4.745	95	70-130	
E13C2-PFTeDA	434458.5	13C2-PFDA	309024.7	1.406	5.000	4.936	99	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

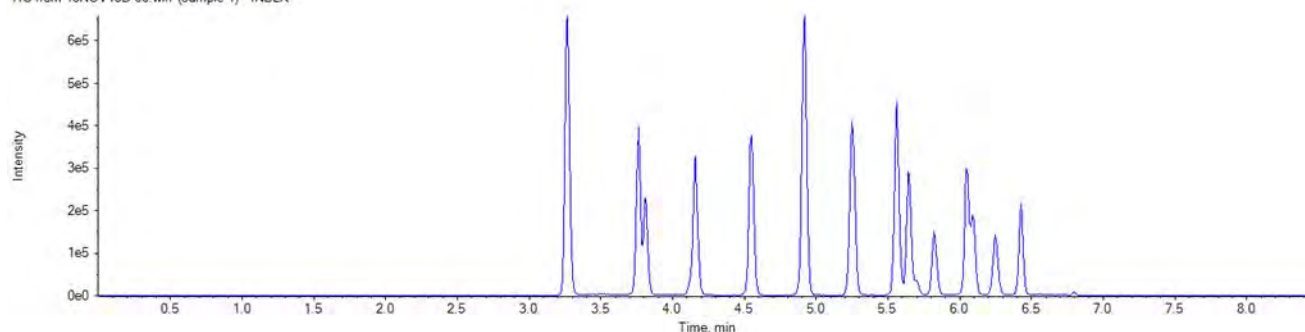
Sample Name: INBLK Instrument Name: LM27631 File Name: 18NOV13D-06.wiff

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	788556.3	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	789796.7	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	465118.9	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	56775.7	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	691160.9	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	465118.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	573094.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	343877.9	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	40405.9	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	343877.9	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	989330.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	496672.5	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	675627.9	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30302.5	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	662561.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	77164.8	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
PfUnDA	N/A	N/A	N/A		A	13C7-PfUnDA	5.82	282164.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	63151.8	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	647992.1	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30302.5	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	342687.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	79550.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	282226.0	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	62508.0	N/A	
PFTDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	647992.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	434458.5	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	434458.5	N/A	
PFOA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	434458.5	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-06.wiff (sample 1) - INBLK



APPROVED

By JPT at 4:33 pm, 11/13/18

BSI05 Page 1245 of 1595

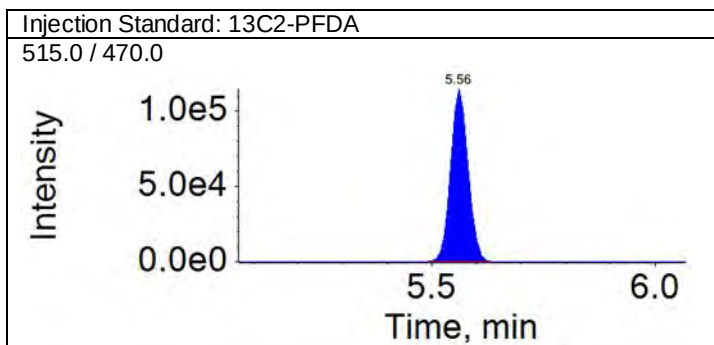
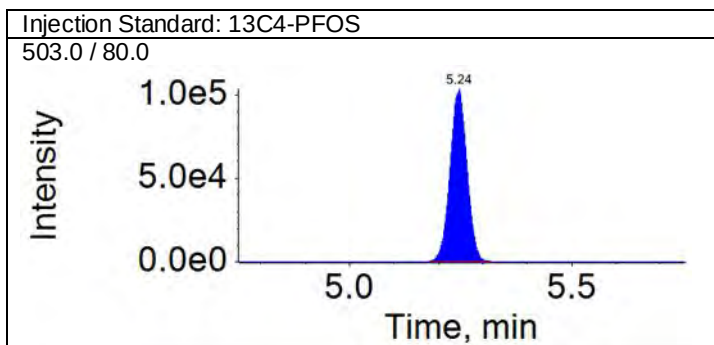
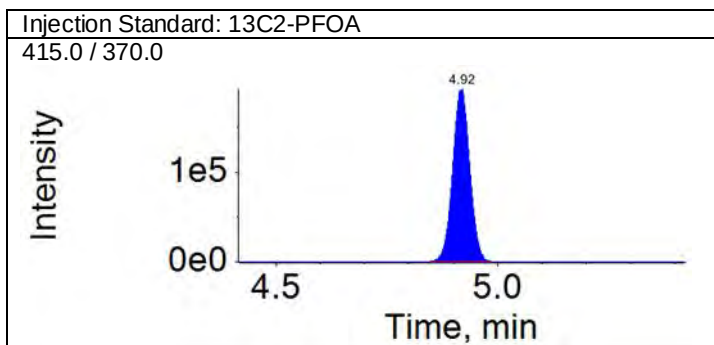
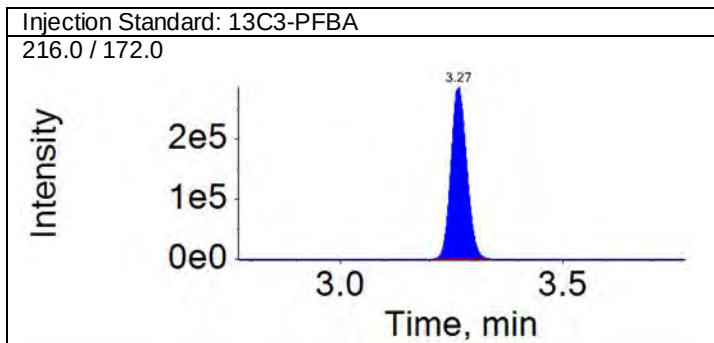
REVIEWED

By umar at 5:40 pm, 11/13/18

Page 2 of 17

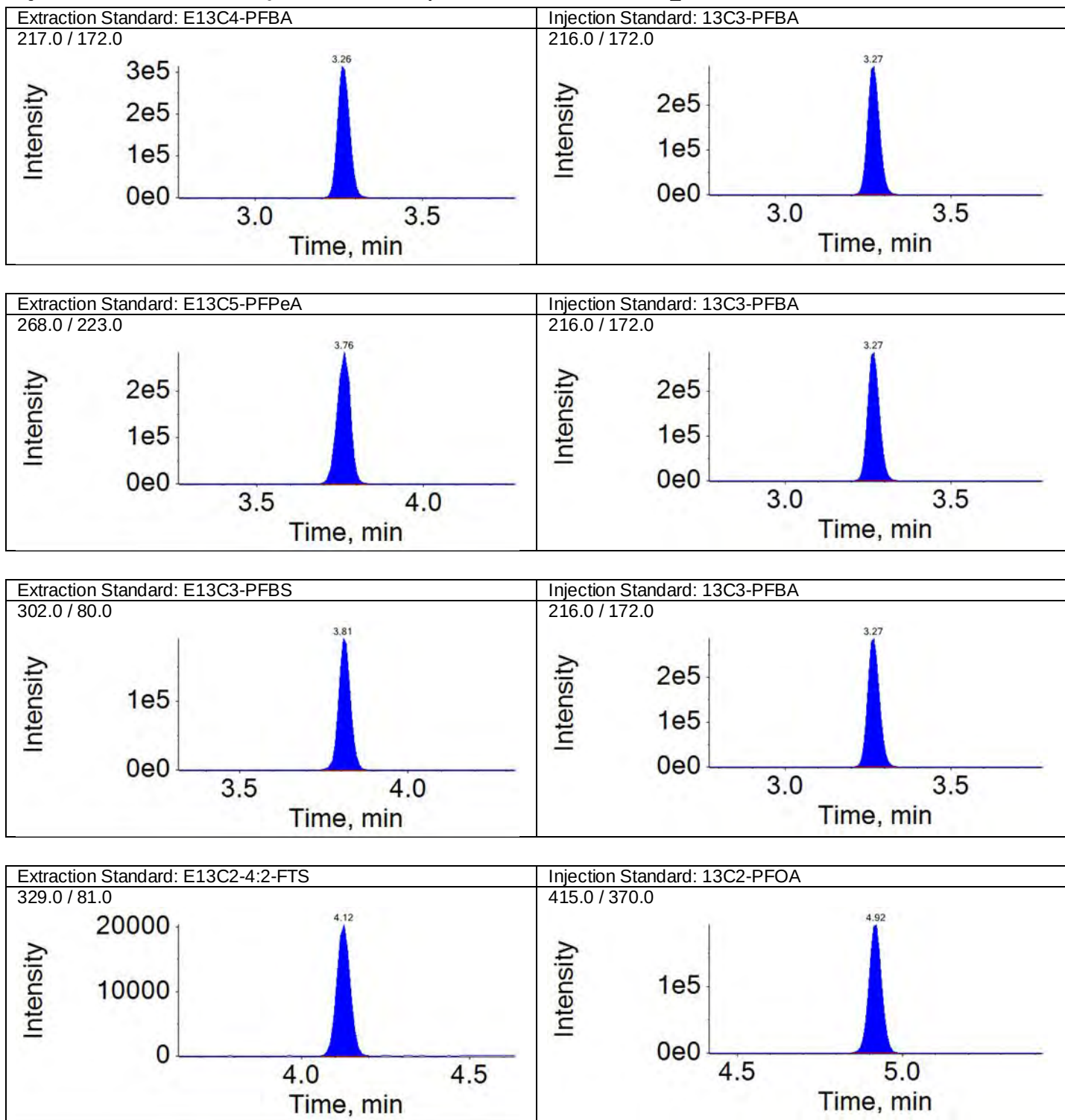
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



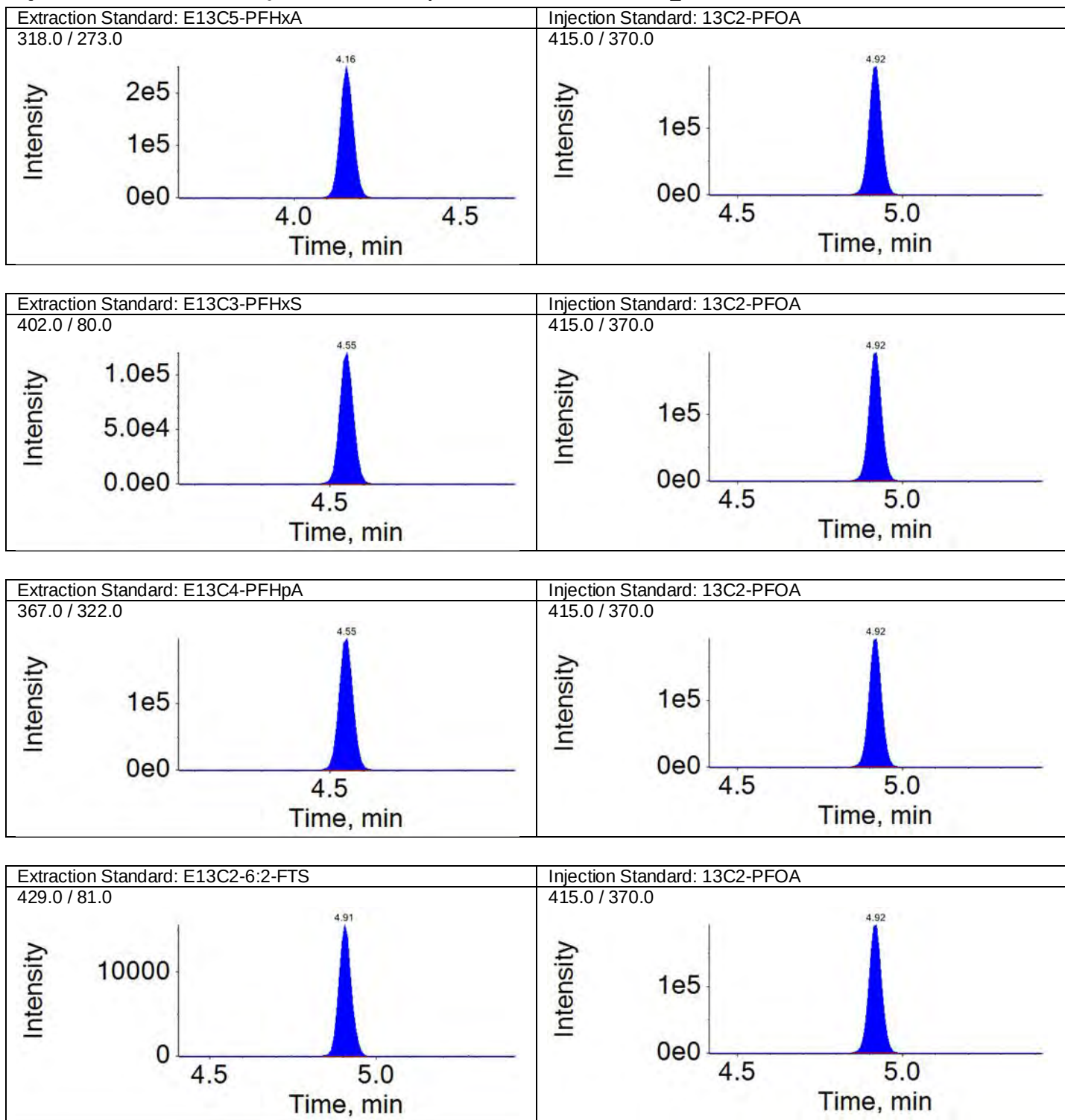
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

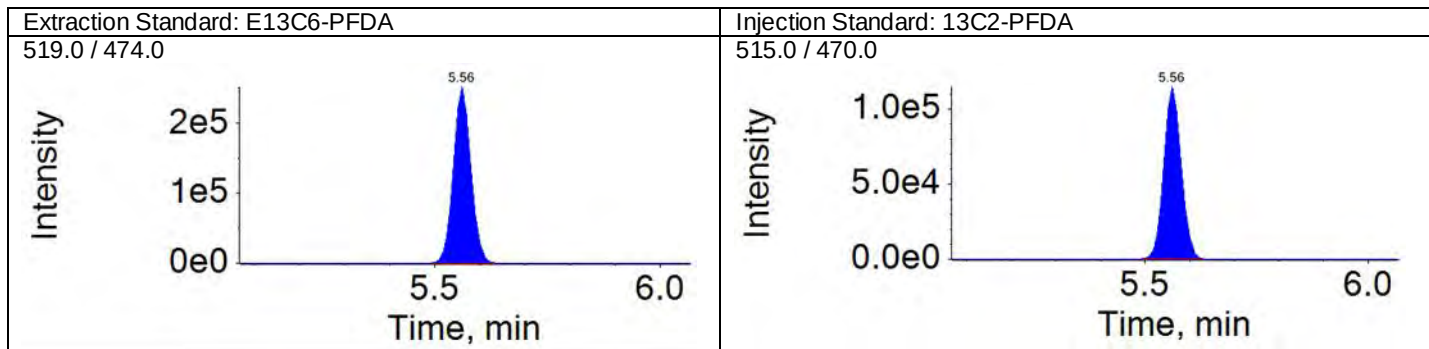
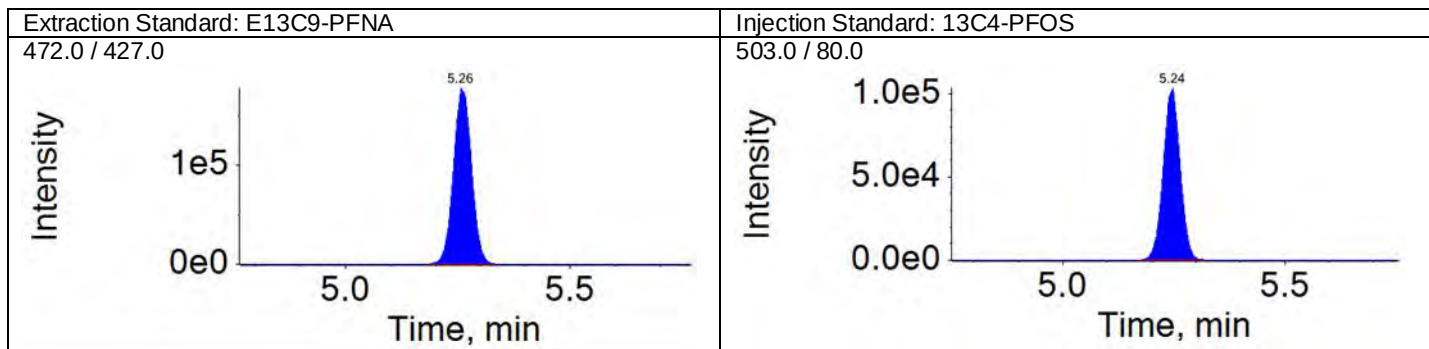
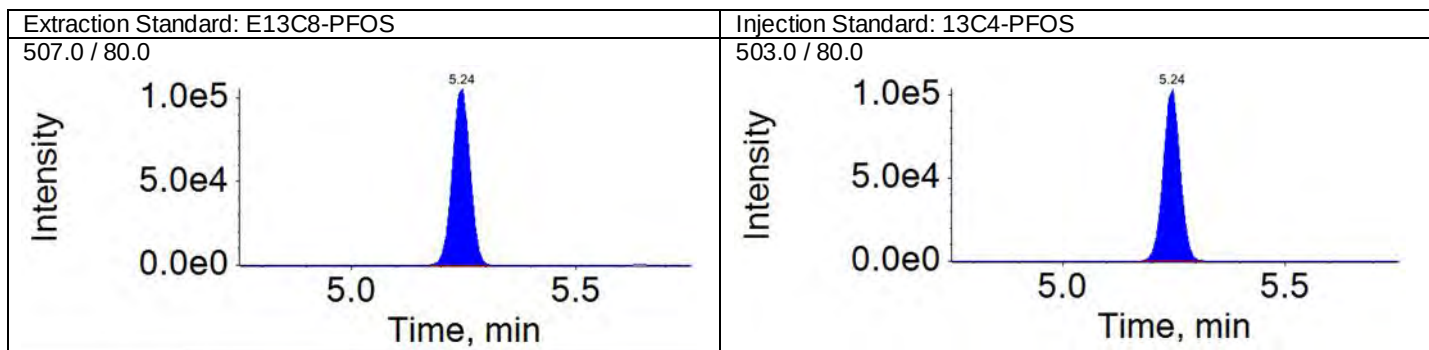
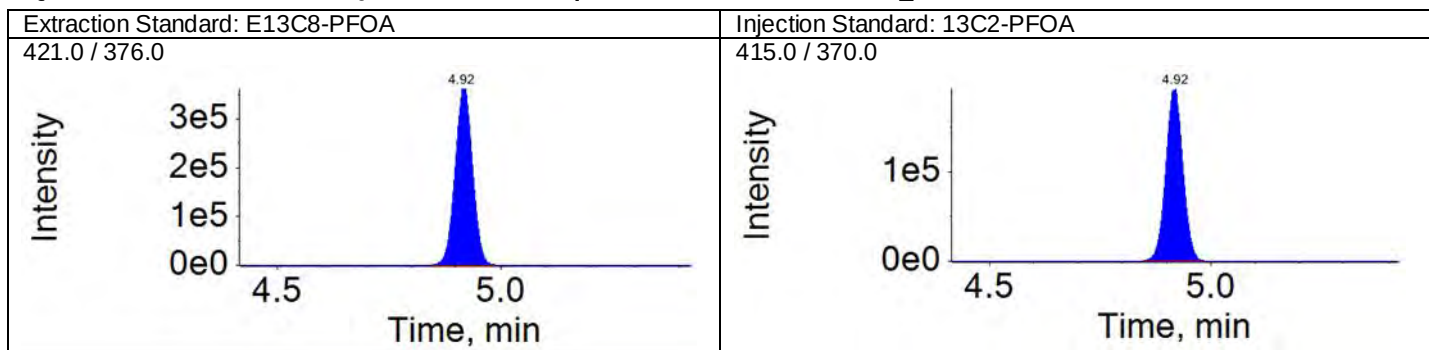
By JPT at 4:33 pm, 11/13/18

REVIEWED

By umar at 5:40 pm, 11/13/18

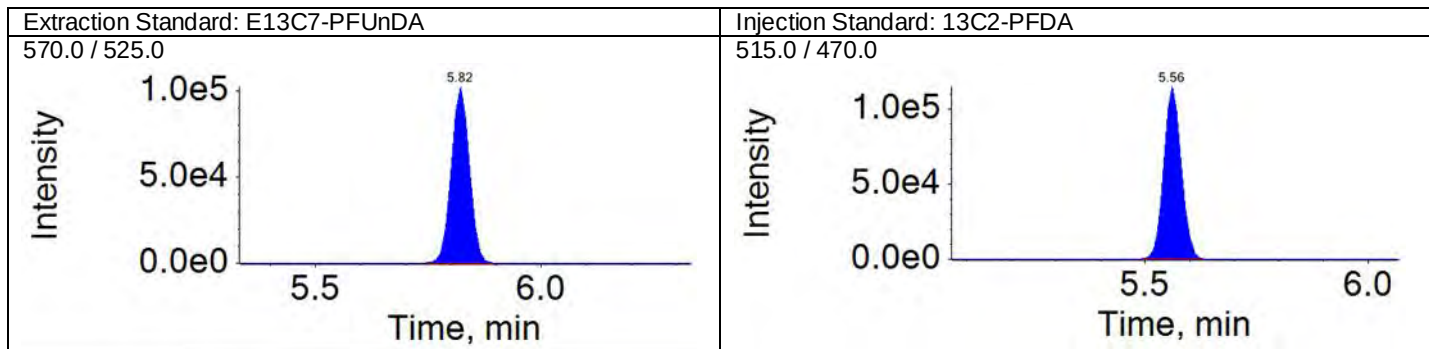
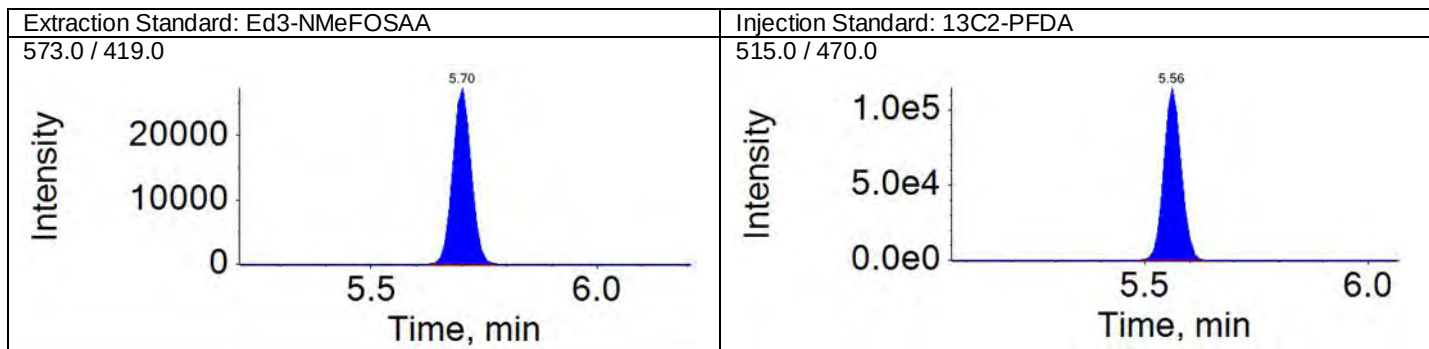
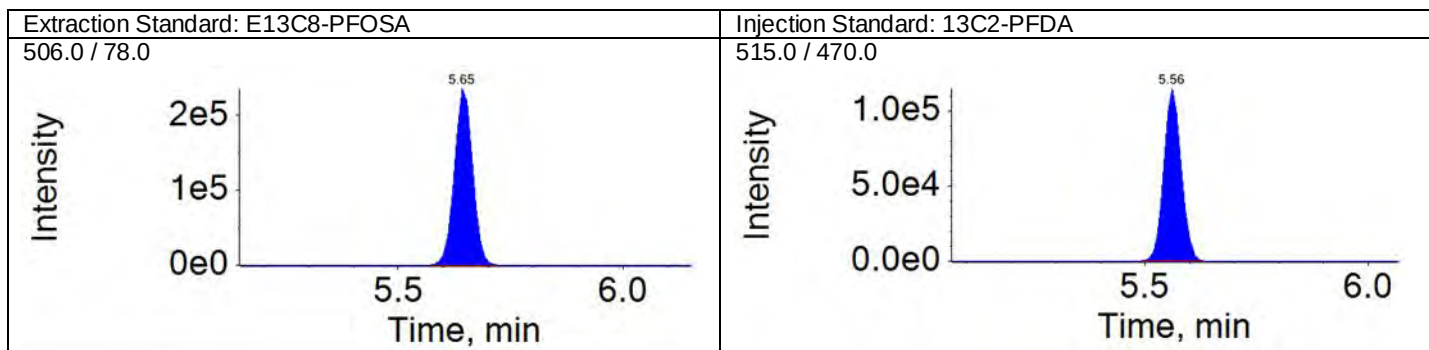
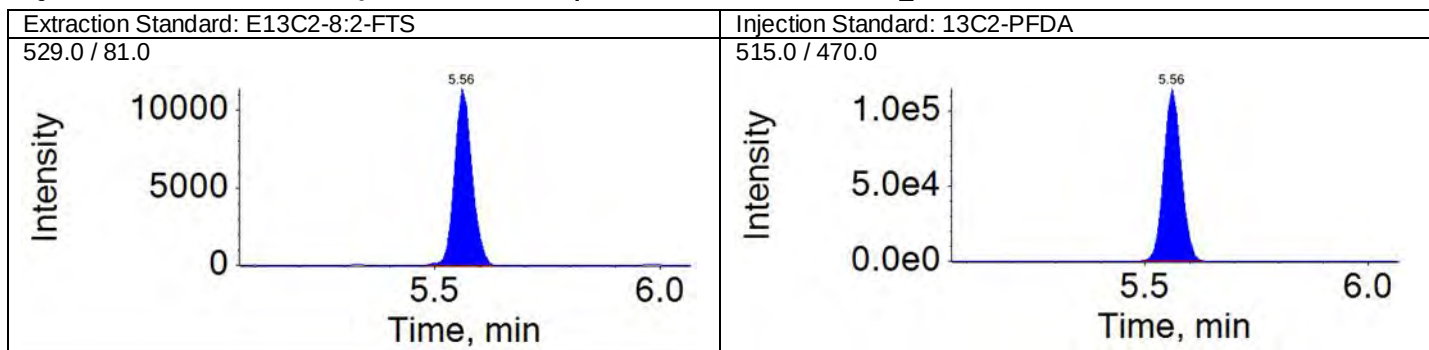
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



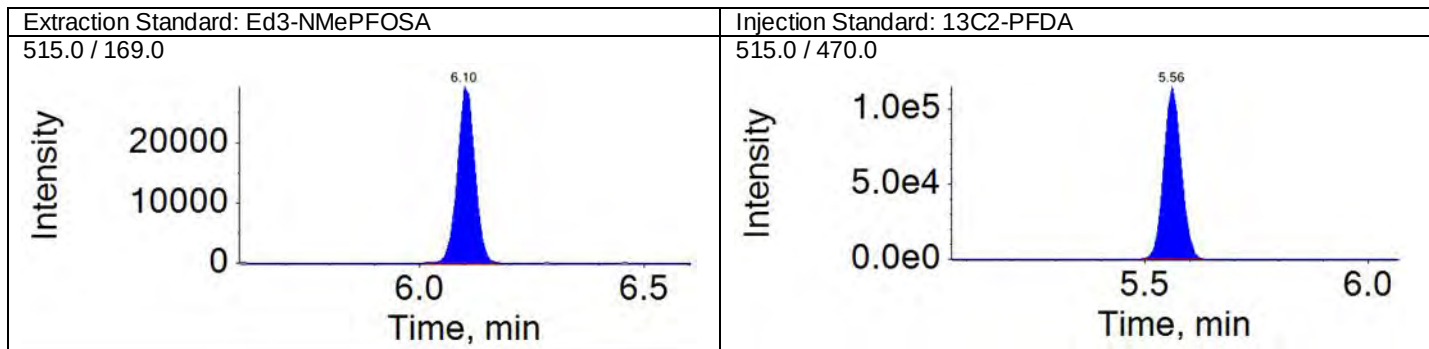
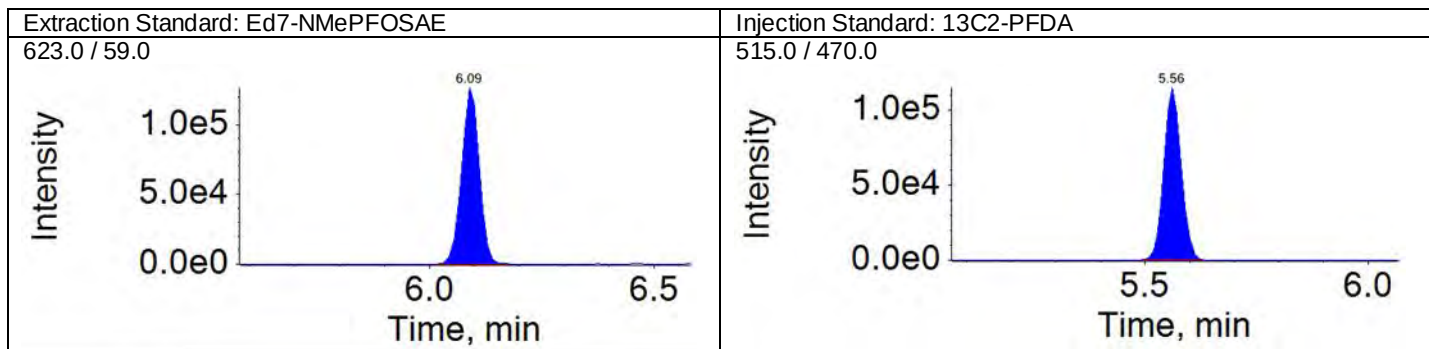
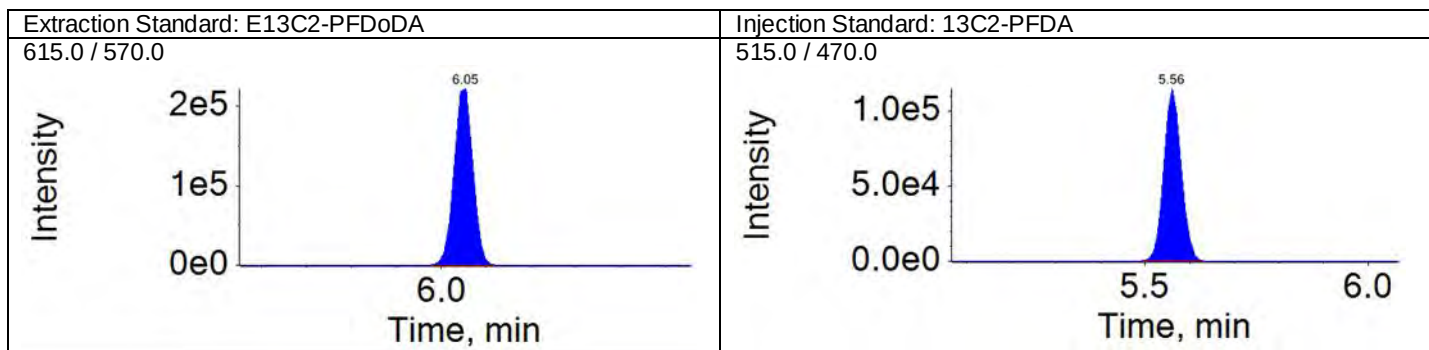
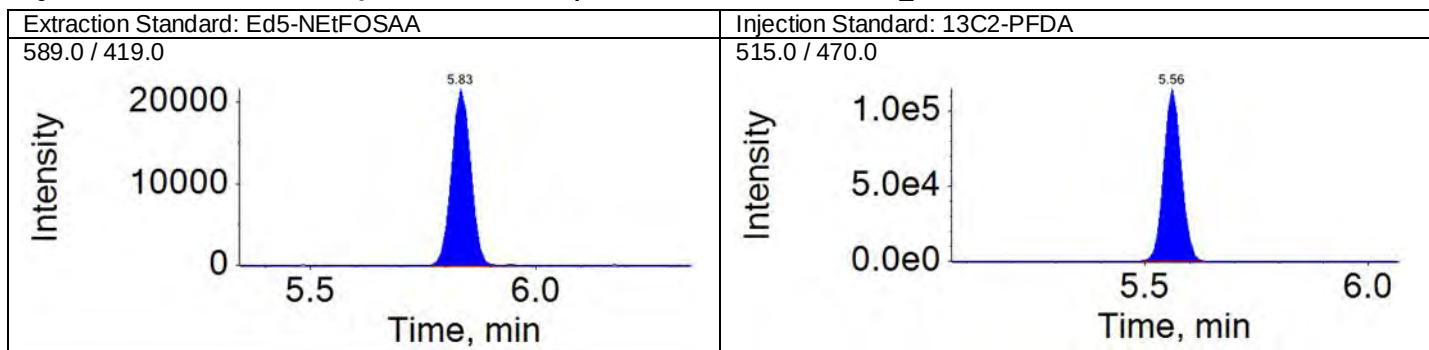
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

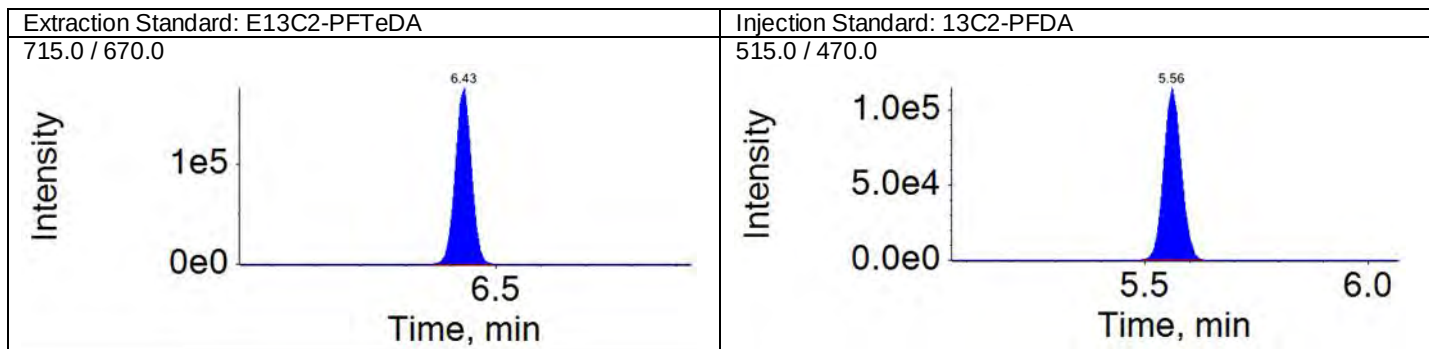
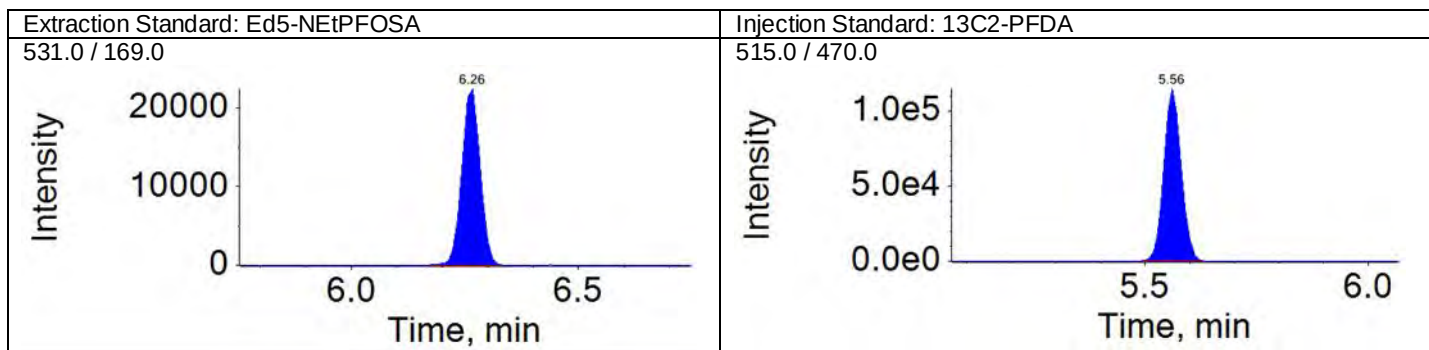
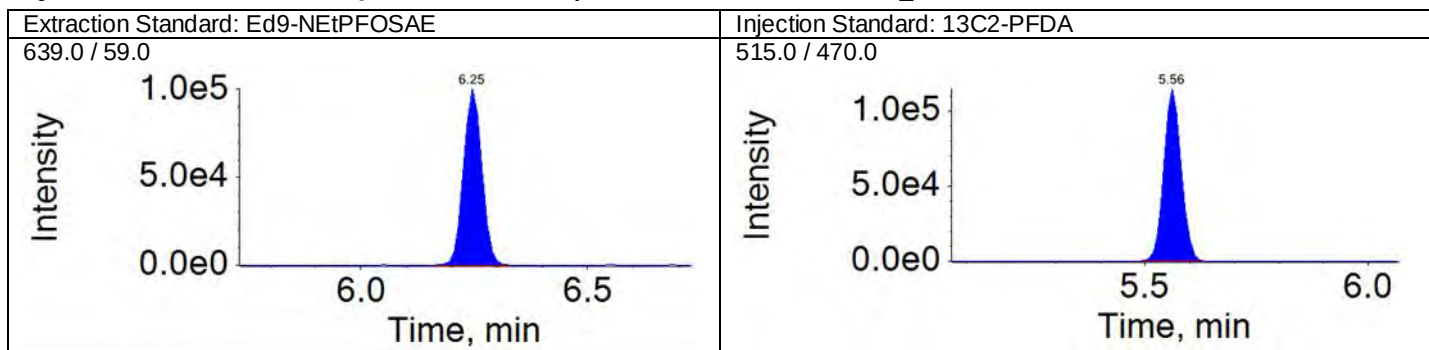
By JPT at 4:33 pm, 11/13/18

REVIEWED

By umar at 5:40 pm, 11/13/18

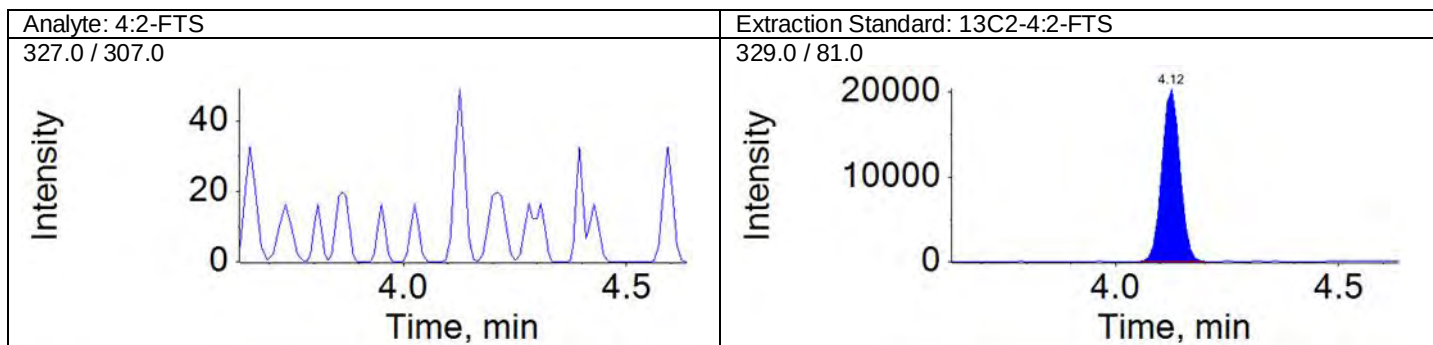
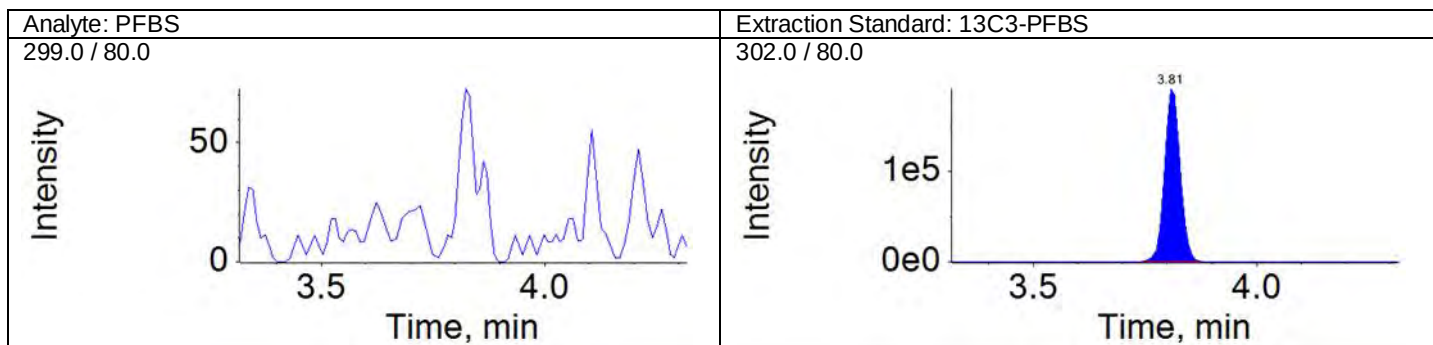
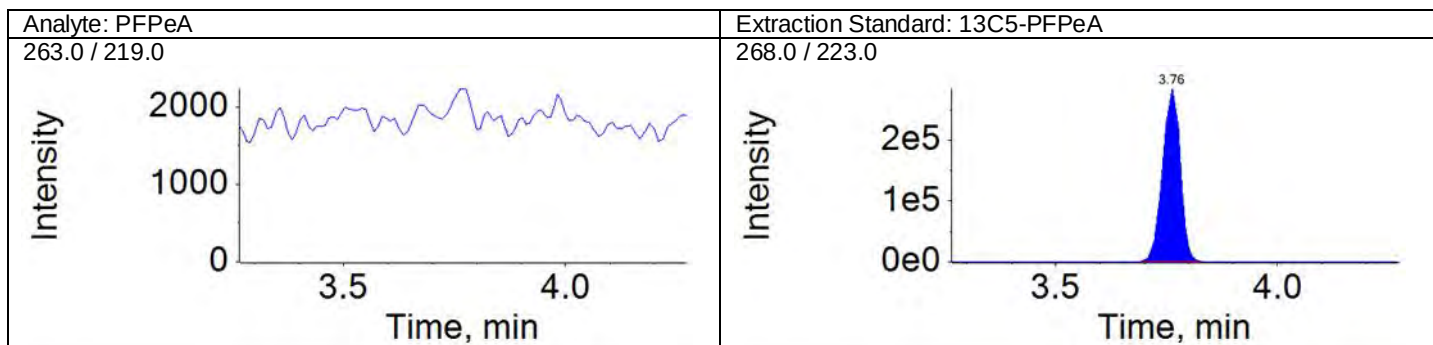
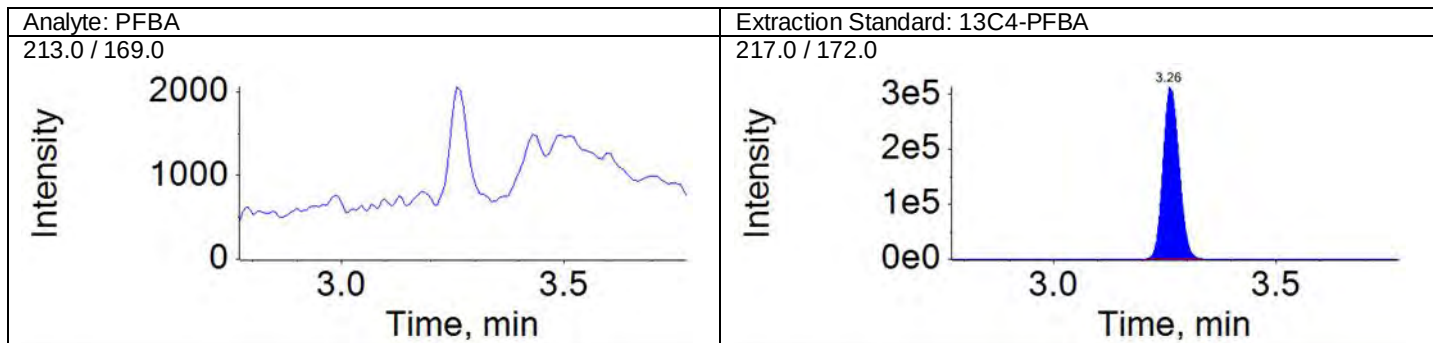
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



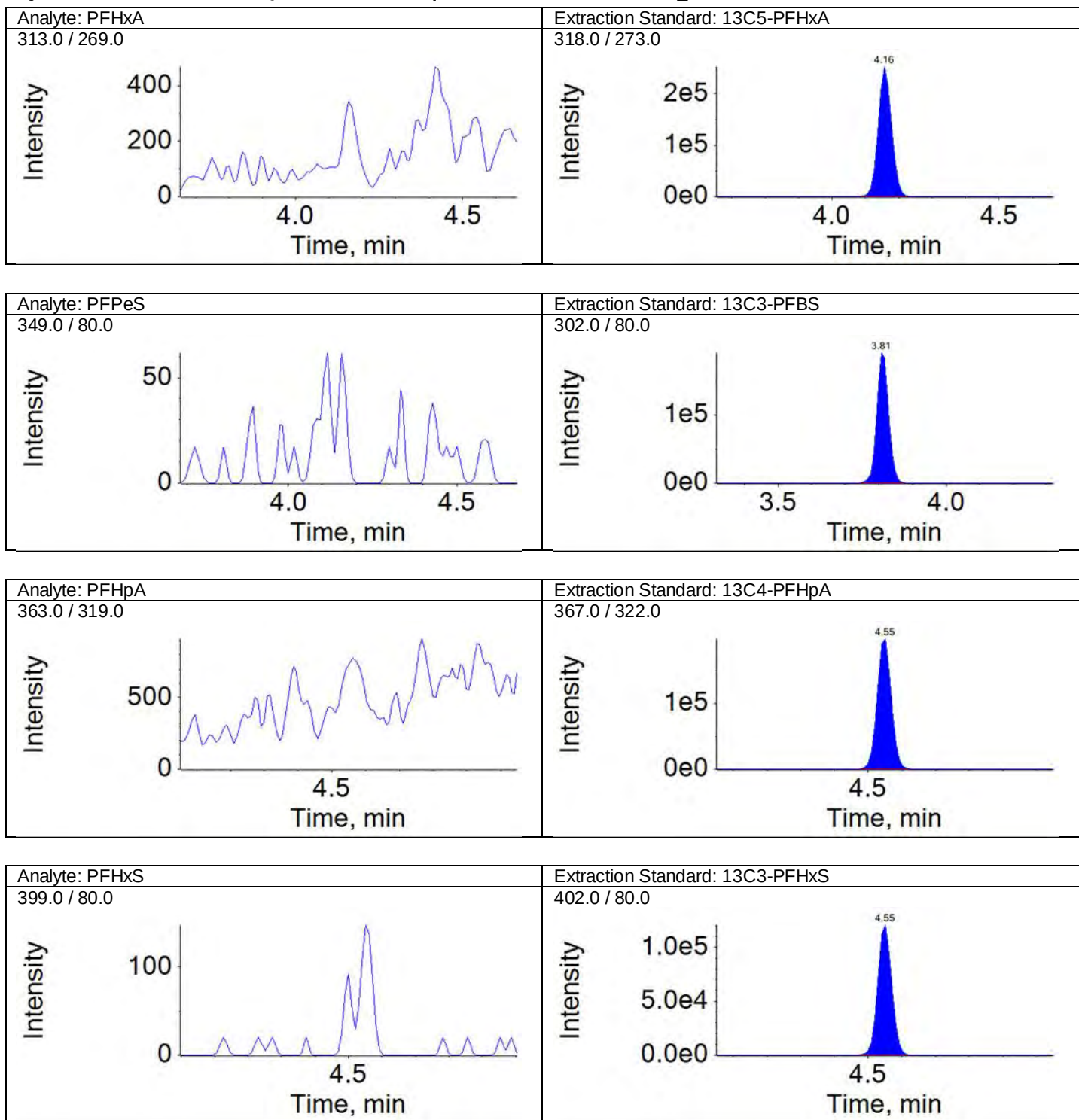
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



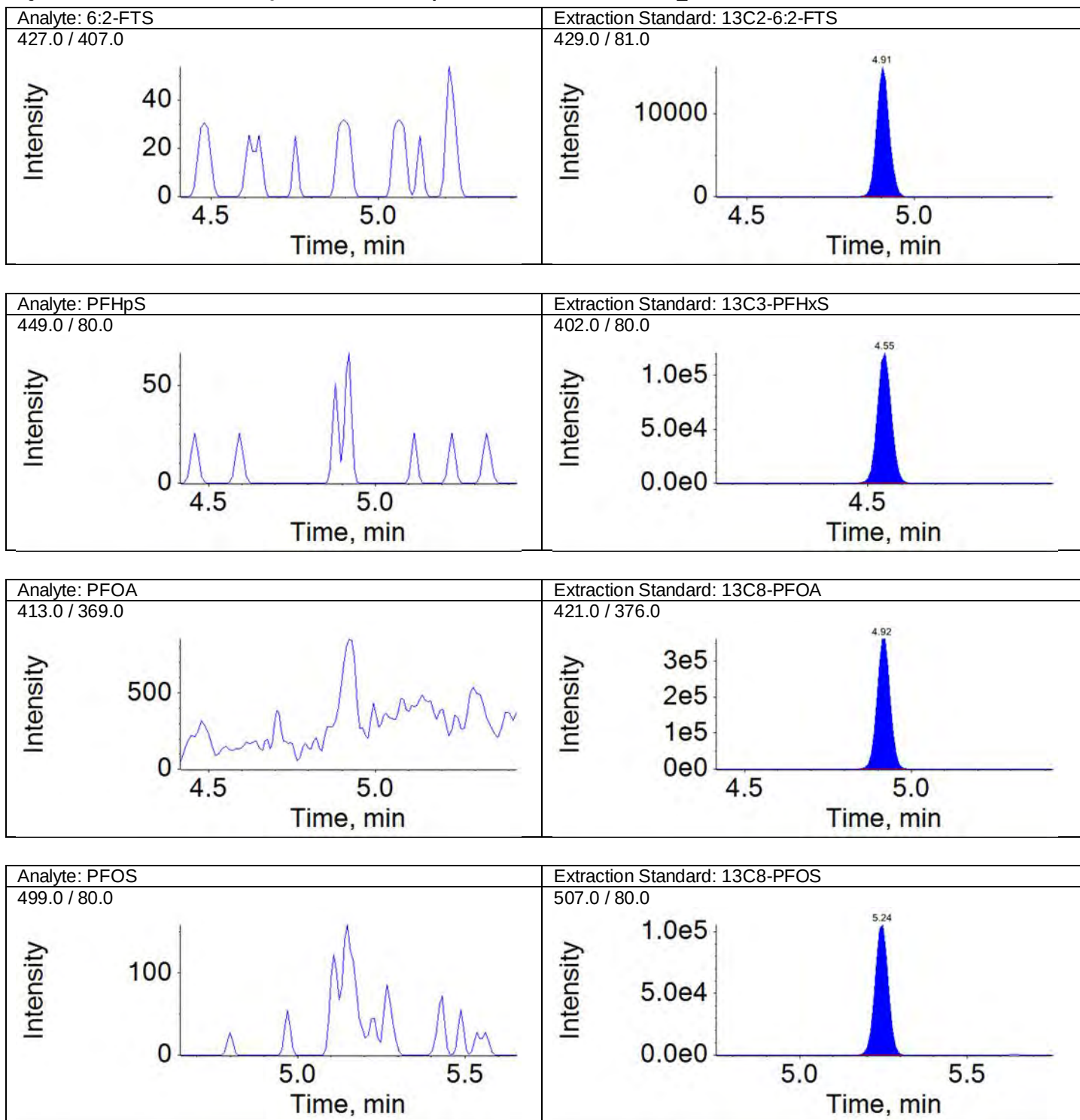
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



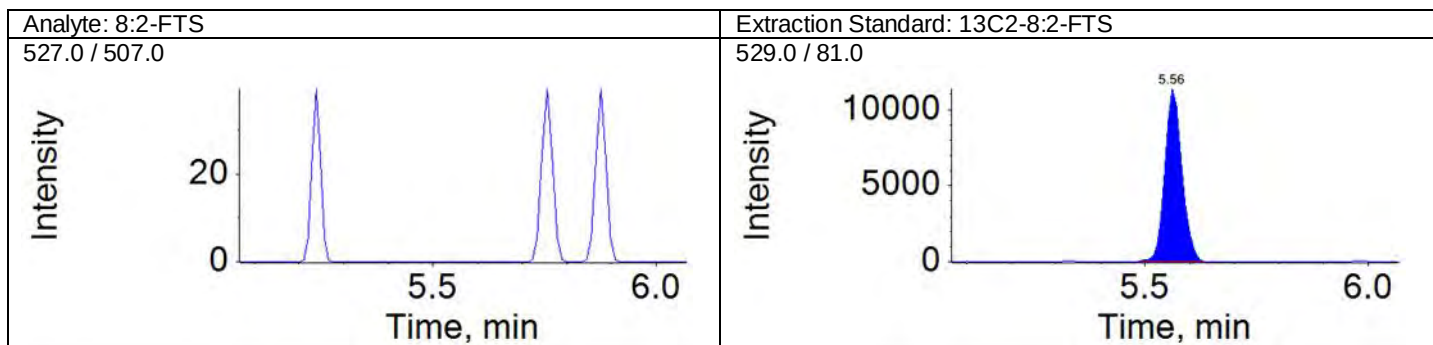
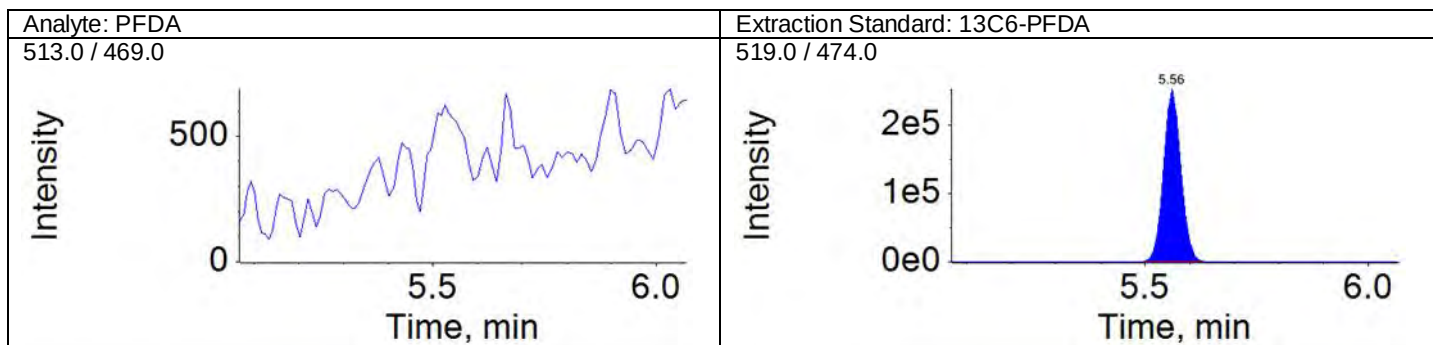
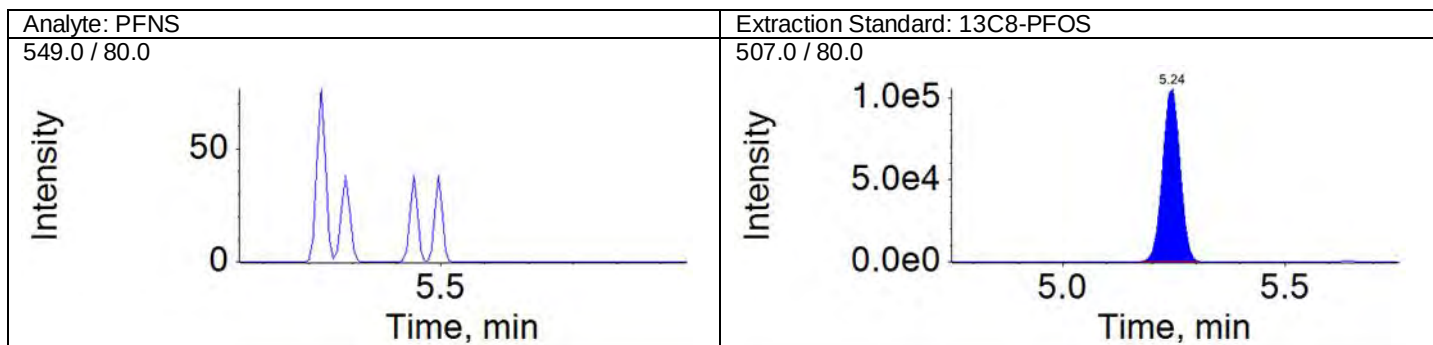
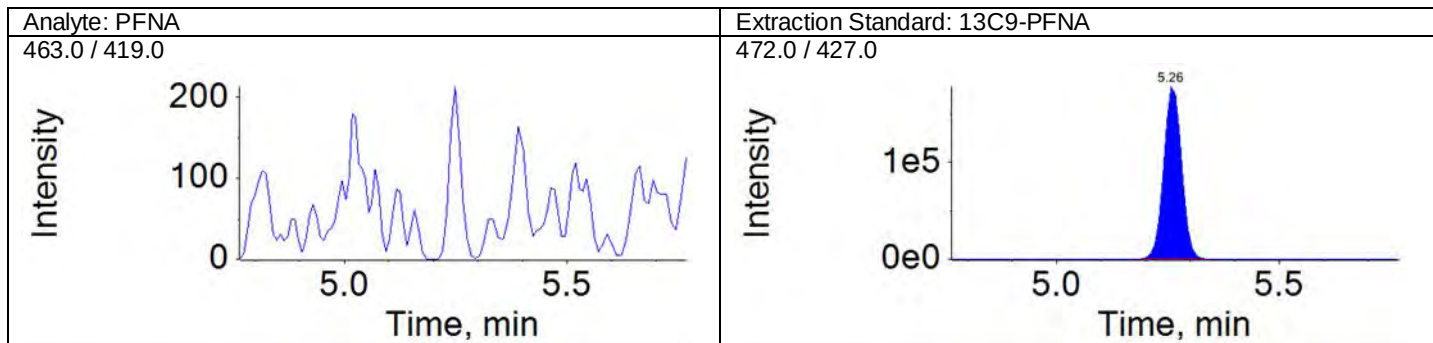
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



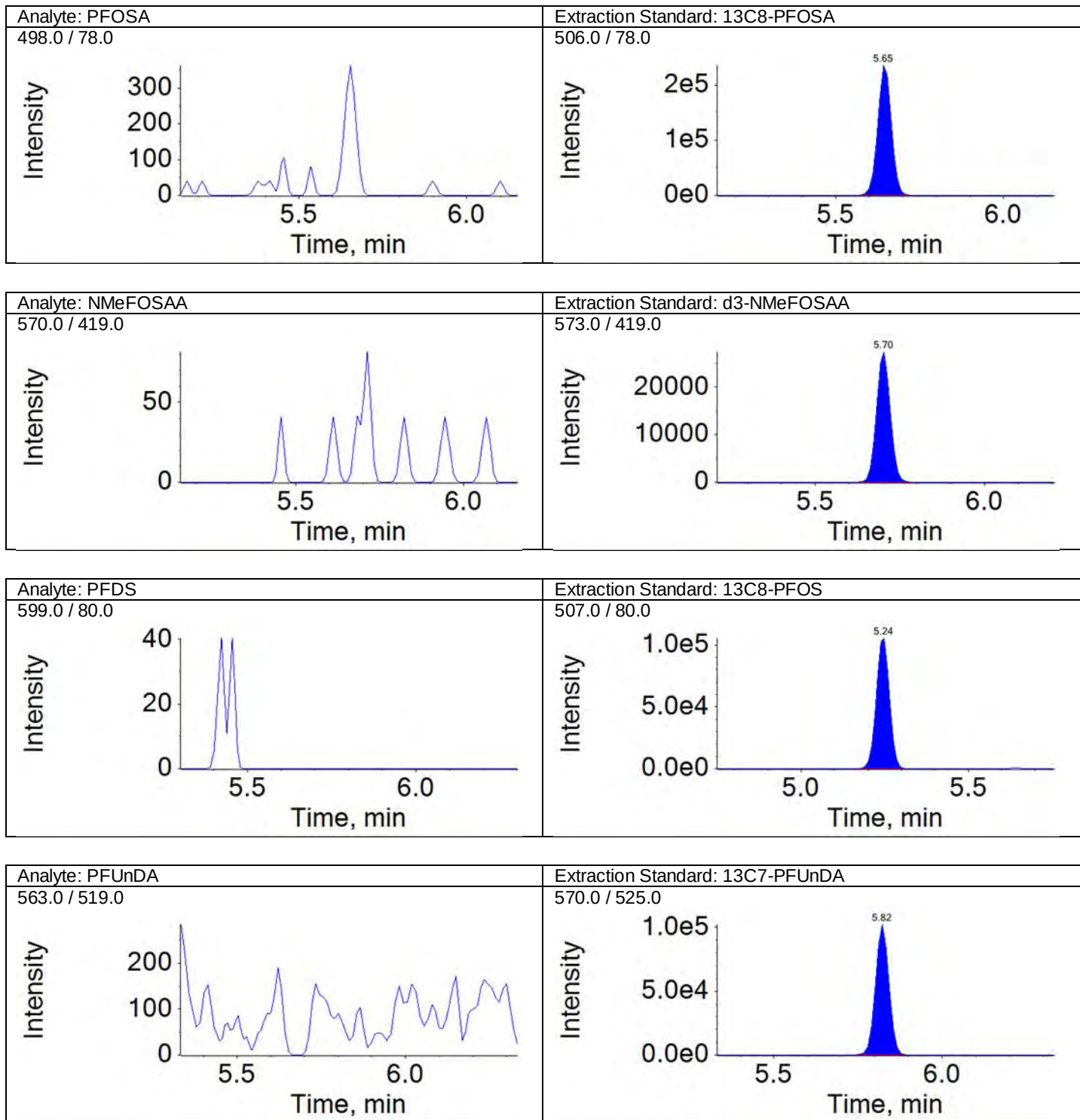
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



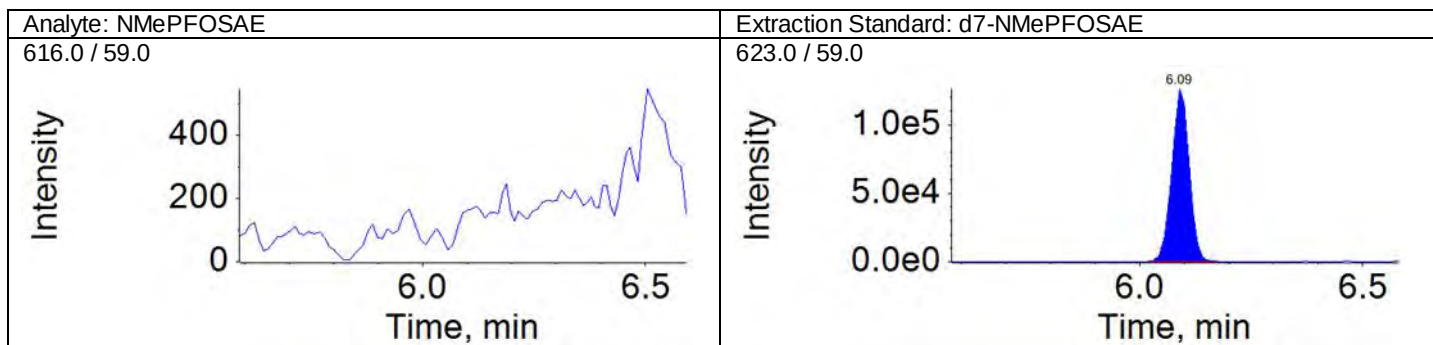
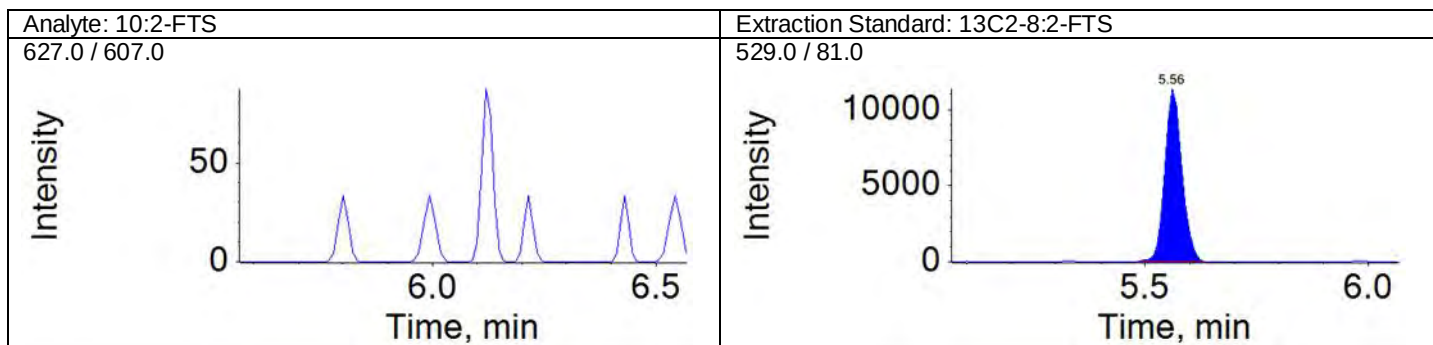
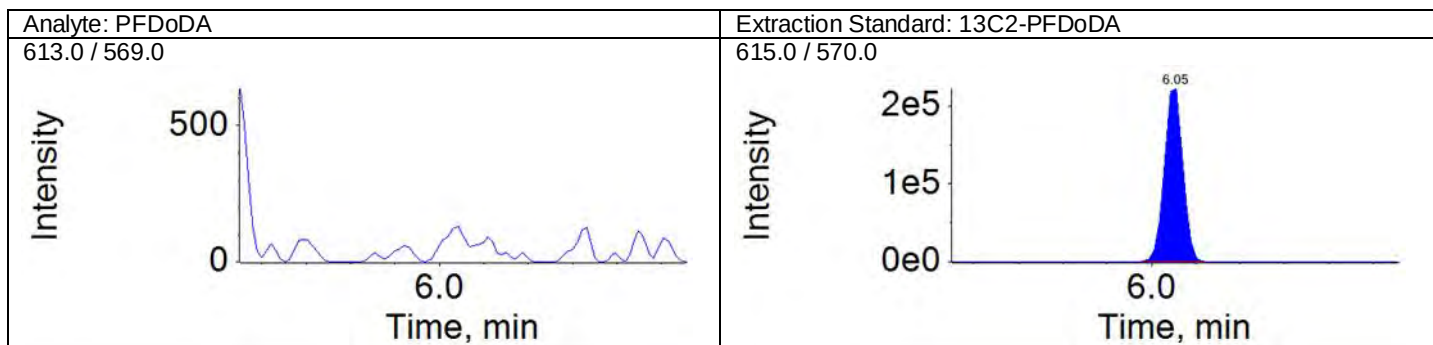
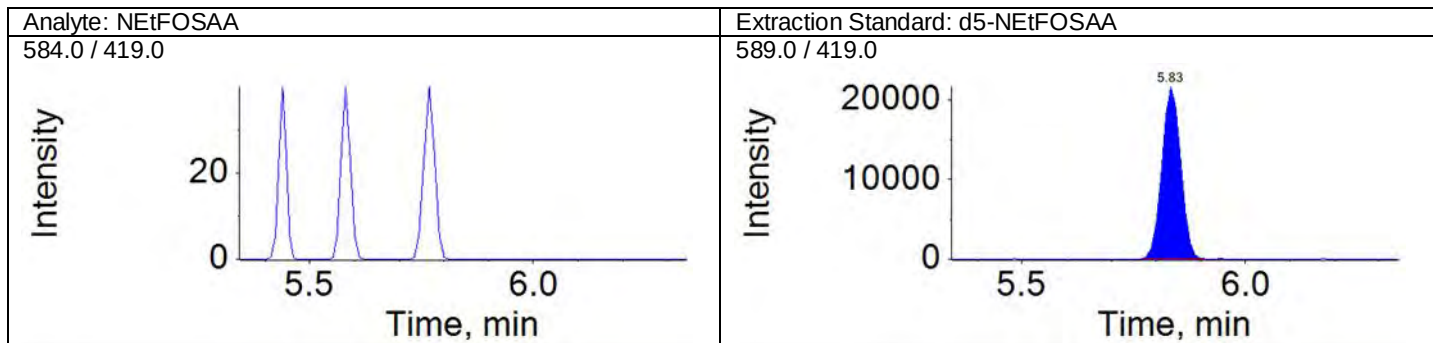
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



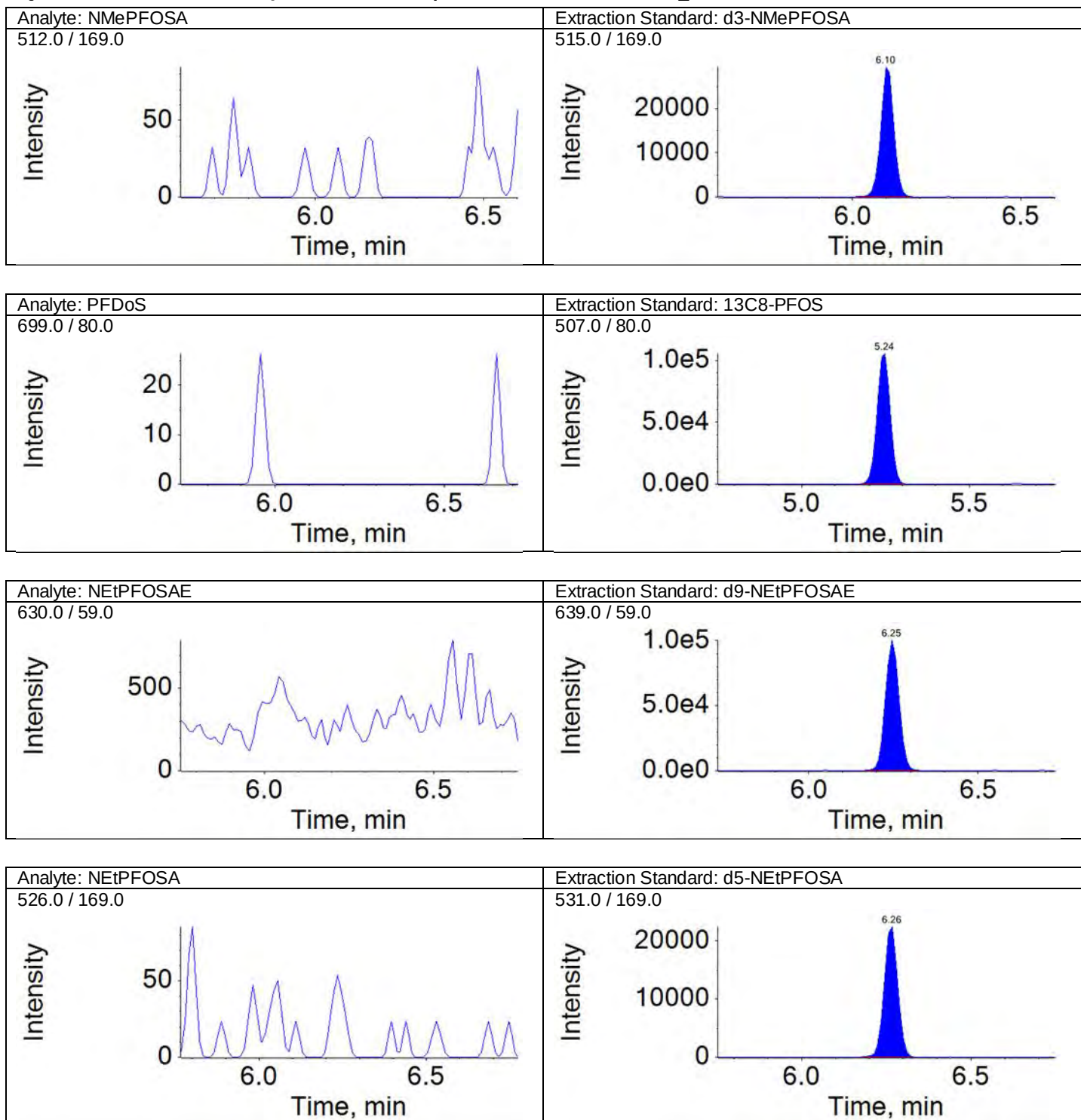
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



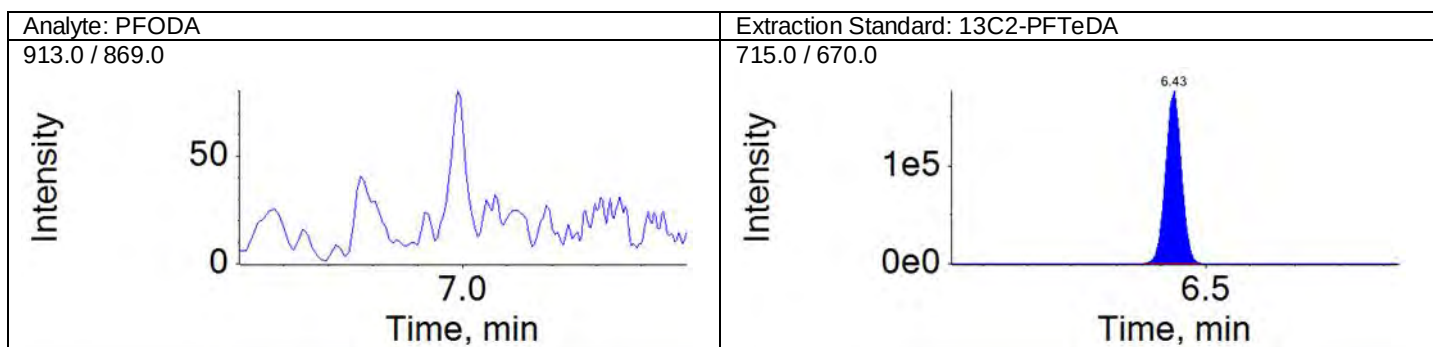
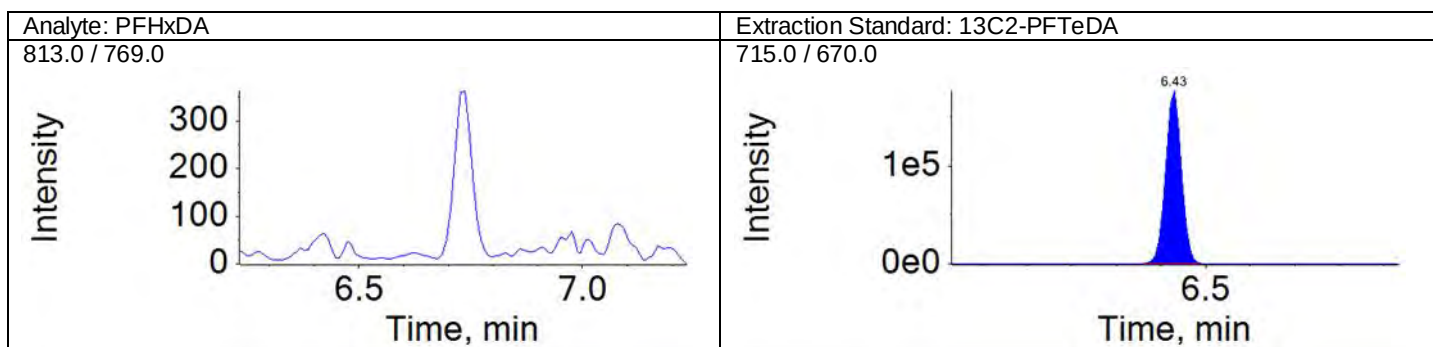
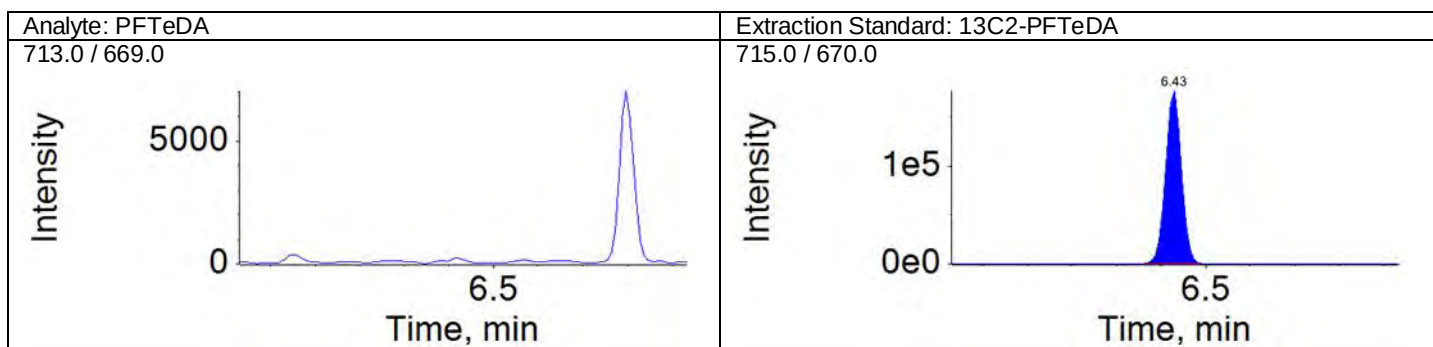
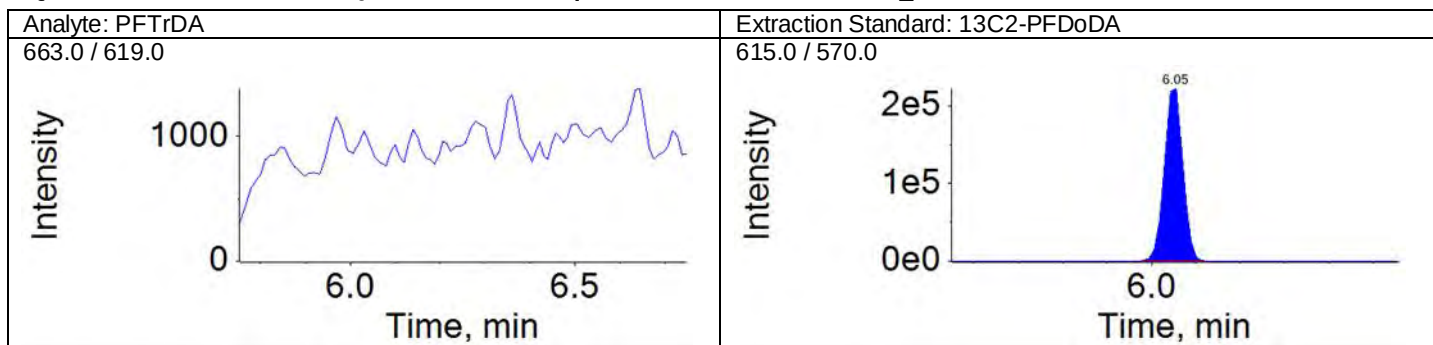
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



Ion Ratio Report

Sample Name: INBLK

Instrument Name: LM27631

File Name: 18NOV13D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDODA	N/A	N/A	N/A	A	N/A	N/A			
PFDODA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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

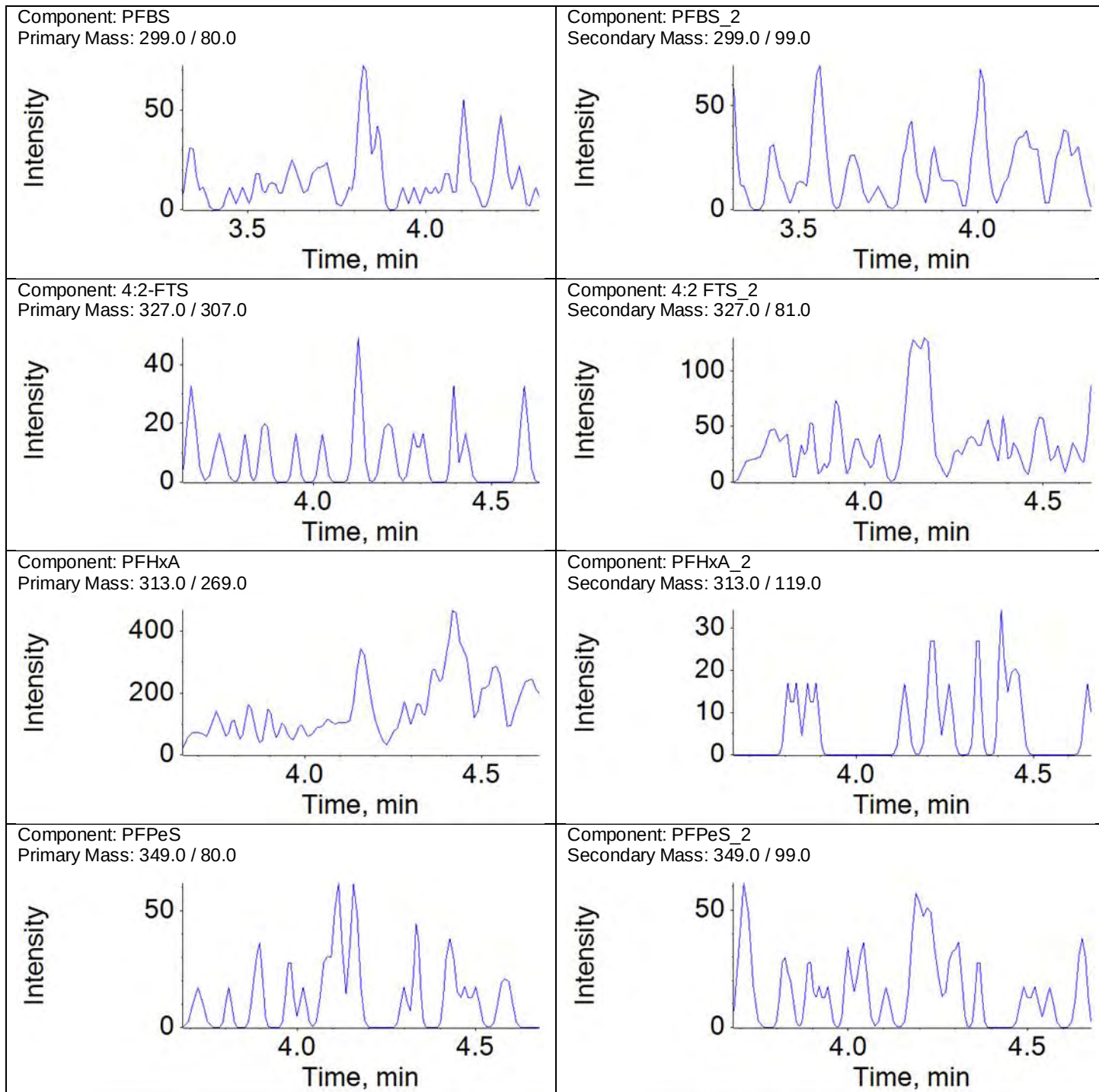
By JPT at 4:33 pm, 11/13/18

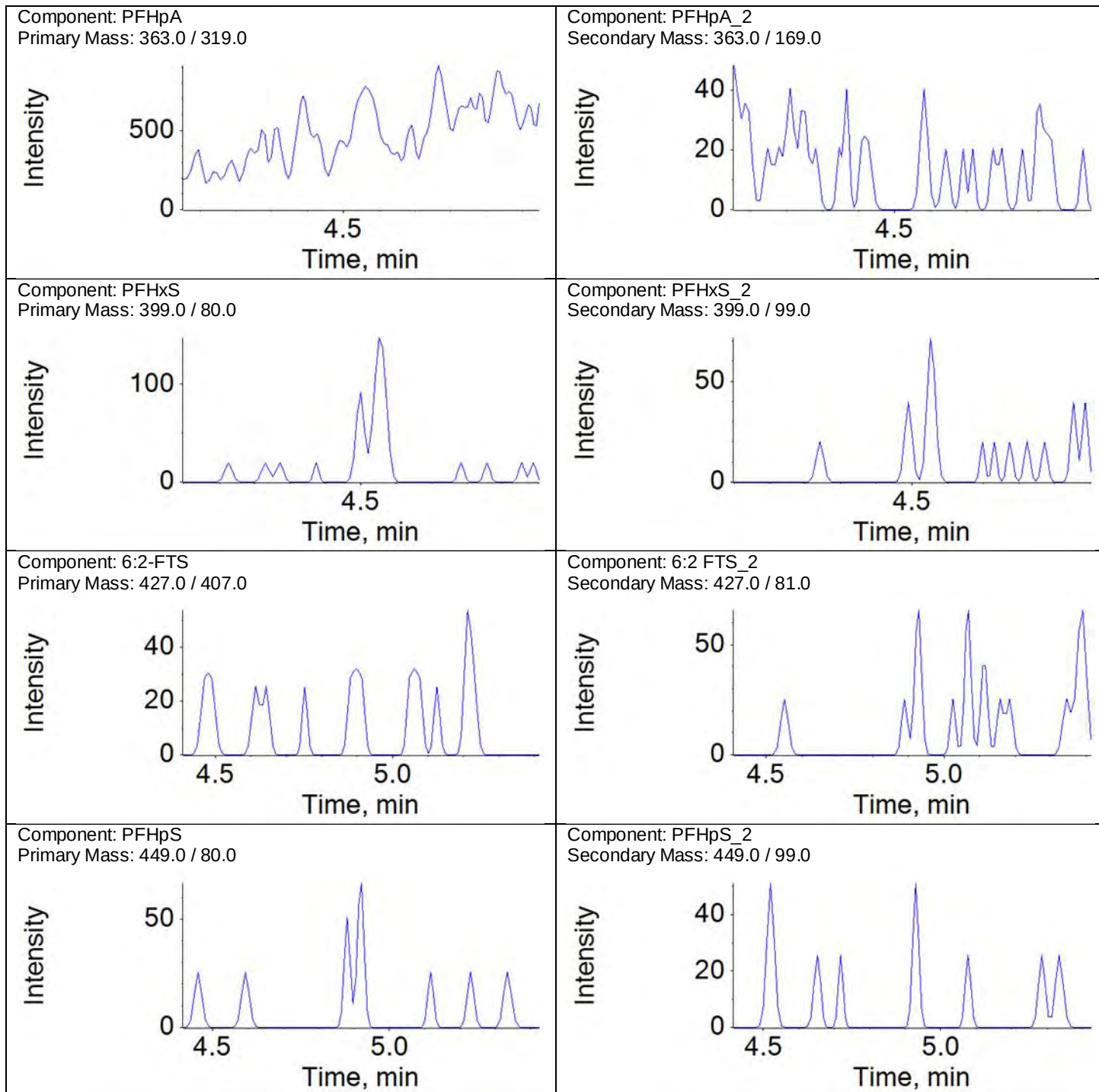
BSI05 Page 1261 of 1595

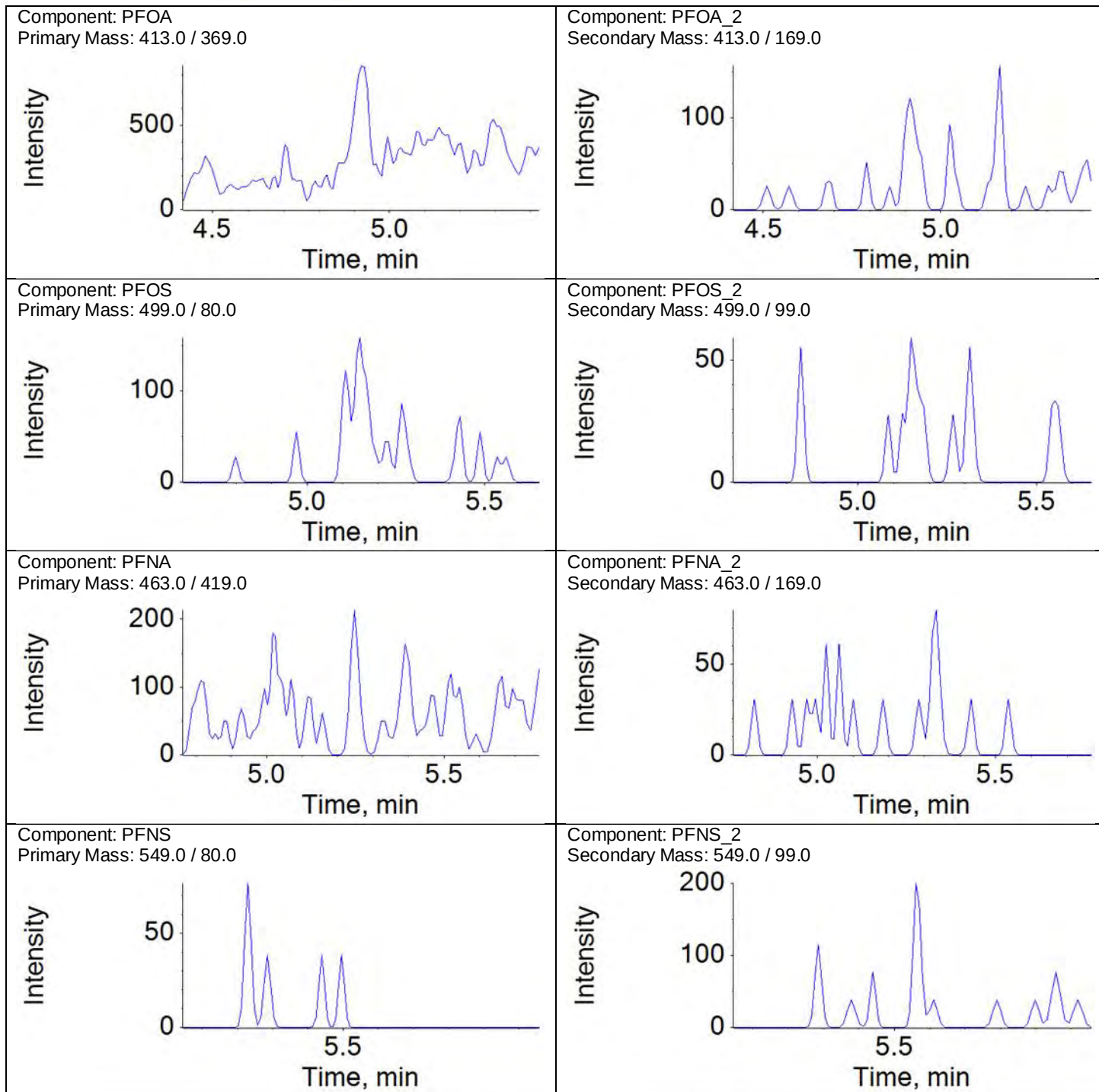
REVIEWED

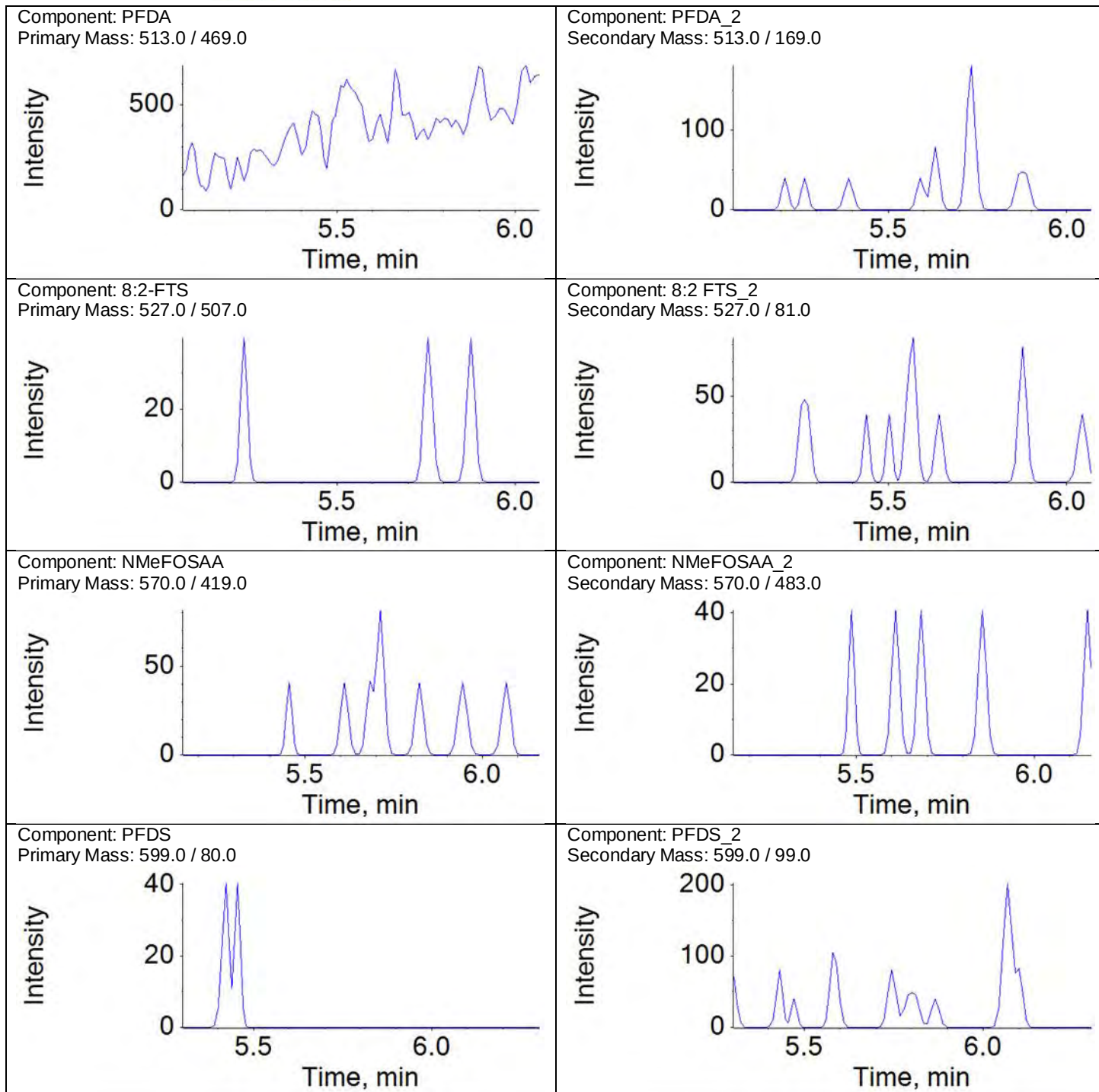
By umar at 5:40 pm, 11/13/18

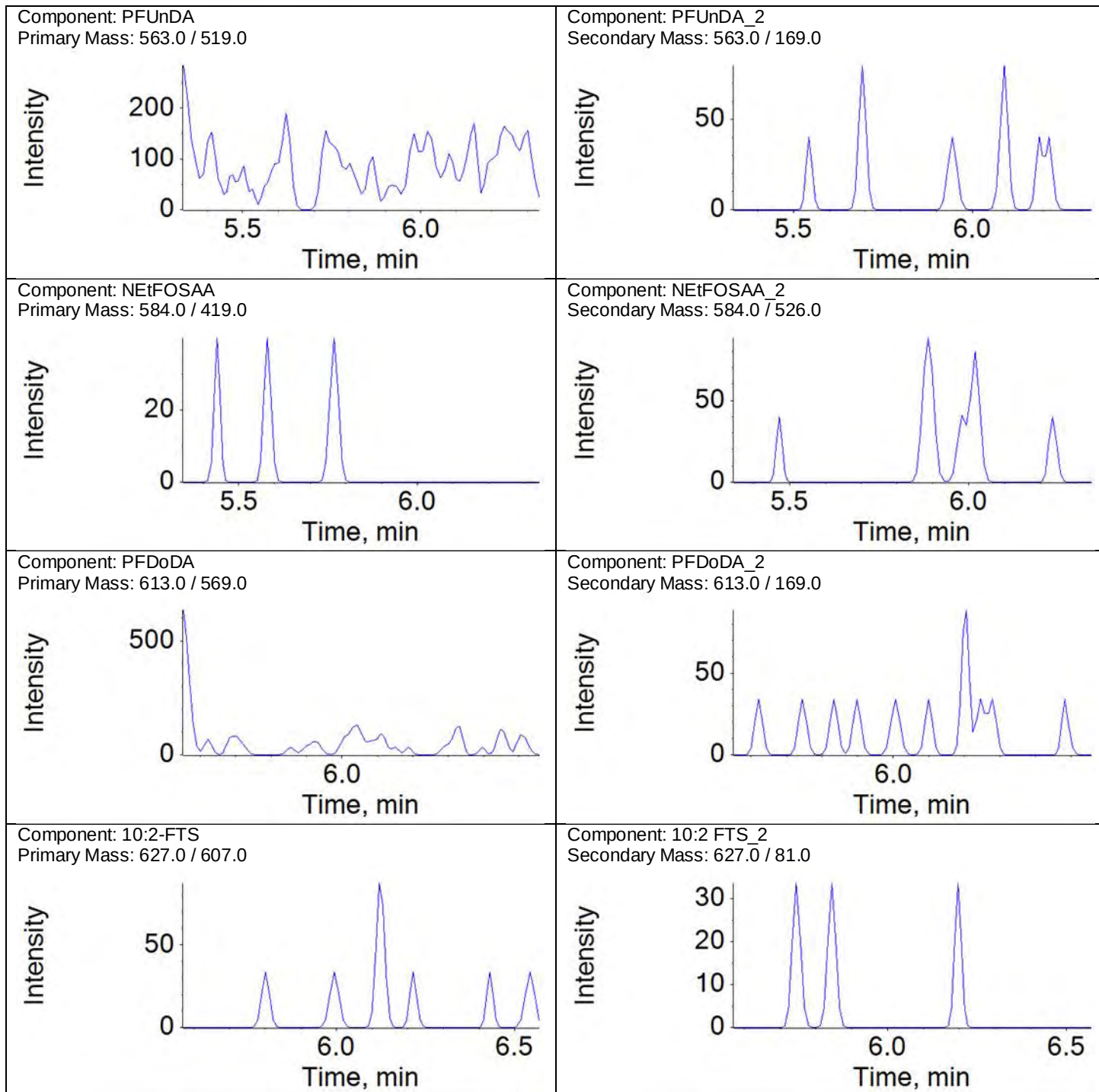
Page 1 of 7

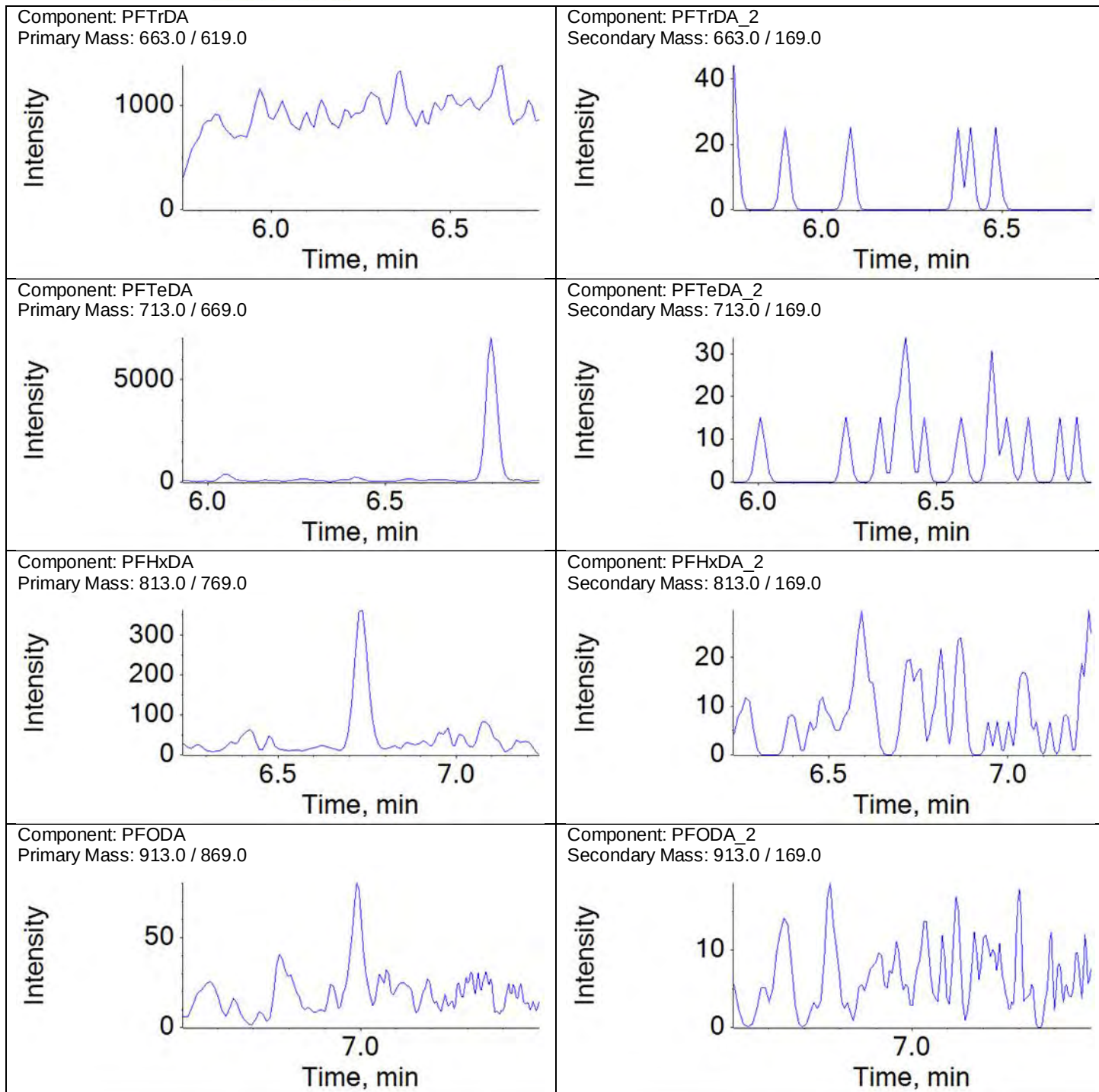










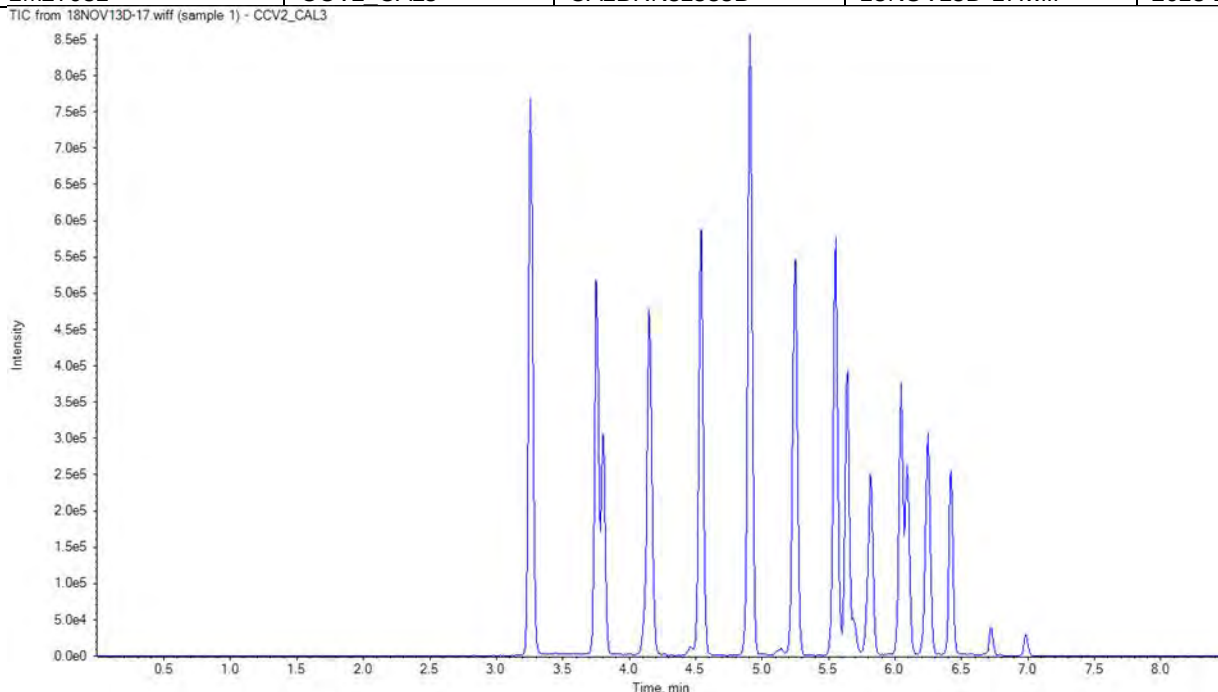


Continuing Calibration Verification

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV13D-17.wiff	2018-11-13T11:32:20



Injection Standard Area Reference File: 18NOV13D-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	672844.4	661126.9	2	50	
13C2-PFOA	5.0	448761.8	466902.6	-4	50	
13C4-PFOS	4.8	234558.2	247446.9	-5	50	
13C2-PFDA	5.0	289762.3	295381.6	-2	50	

APPROVED

By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

Continuing Calibration Verification

ICAL Name: 18NOV12DCAL Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV13D-17.wiff	2018-11-13T11:32:20

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	314464.6	10	13C4-PFBA	749784.8	5.0	0.419	3.26	1.000	2.000	2.323	16	30	
PFPeA	304023.7	11	13C5-PFPeA	758020.0	5.0	0.401	3.76	1.000	2.000	2.322	16	30	
PFBS	169051.3	11	13C3-PFBS	426304.5	4.7	0.397	3.80	1.000	1.770	1.886	7	30	
4:2-FTS	37343.0	11	13C2-4:2-FTS	50117.7	4.7	0.745	4.12	1.000	1.870	2.023	8	30	
PFHxA	371133.5	11	13C5-PFHxA	657311.6	5.0	0.565	4.15	1.000	2.000	2.358	18	30	
PFPeS	87968.9	11	13C3-PFPeS	426304.5	4.7	0.206	4.17	1.100	1.880	2.003	7	30	
PFHpA	368990.8	12	13C4-PFHpA	511795.2	5.0	0.721	4.54	1.000	2.000	2.390	19	30	
PFHxS	130814.3	19	13C3-PFHxS	308262.2	4.7	0.424	4.54	1.000	1.820	2.058	13	30	
6:2-FTS	32918.1	11	13C2-6:2-FTS	36338.6	4.8	0.906	4.90	1.000	1.900	2.192	15	30	
PFHpS	124422.5	11	13C3-PFHxS	308262.2	4.7	0.404	4.90	1.080	1.900	2.125	12	30	
PFOA	375544.6	11	13C8-PFOA	911217.6	5.0	0.412	4.91	1.000	2.000	2.201	10	30	
PFOS	120378.0	21	13C8-PFOS	265969.1	4.8	0.453	5.24	1.000	1.850	1.979	7	30	
PFNA	312367.0	11	13C9-PFNA	476405.5	5.0	0.656	5.25	1.000	2.000	2.364	18	30	
PFNS	75927.4	11	13C8-PFOS	265969.1	4.8	0.285	5.53	1.060	1.920	1.997	4	30	
PFDA	263206.6	11	13C6-PFDA	611299.8	5.0	0.431	5.55	1.000	2.000	2.283	14	30	
8:2-FTS	25032.7	12	13C2-8:2-FTS	27336.1	4.8	0.916	5.56	1.000	1.920	2.135	11	30	
PFOSA	274183.6	11	13C8-PFOSA	616561.5	5.0	0.445	5.64	1.000	2.000	2.172	9	30	
NMeFOSAA	28843.9	18	d3-NMeFOSAA	74275.0	5.0	0.388	5.70	1.000	2.000	2.195	10	30	
PFDS	63089.4	11	13C8-PFOS	265969.1	4.8	0.237	5.79	1.110	1.930	2.149	11	30	
PFUnDA	212311.7	11	13C7-PFUnDA	249982.5	5.0	0.849	5.82	1.000	2.000	2.220	11	30	
NEtFOSAA	25720.9	22	d5-NEtFOSAA	70717.5	5.0	0.364	5.83	1.000	2.000	1.907	-5	30	
PFDODA	230876.4	11	13C2-PFDODA	539182.2	5.0	0.428	6.04	1.000	2.000	2.180	9	30	
10:2-FTS	16368.9	12	13C2-8:2-FTS	27336.1	4.8	0.599	6.06	1.090	1.930	1.995	3	30	
NMePFOSAE	174209.3	12	d7-NMePFOSAE	319964.4	5.0	0.544	6.10	1.000	2.000	2.266	13	30	
NMePFOSA	32251.4	11	d3-NMePFOSA	74556.9	5.0	0.433	6.10	1.000	2.000	2.134	7	30	
PFDOS	32585.3	11	13C8-PFOS	265969.1	4.8	0.123	6.21	1.190	1.940	2.146	11	30	
NEtPFOSAE	183379.2	11	d9-NEtPFOSAE	268790.6	5.0	0.682	6.25	1.000	2.000	2.189	9	30	
NEtPFOSA	26562.7	11	d5-NEtPFOSA	59682.5	5.0	0.445	6.27	1.000	2.000	2.044	2	30	
PFTTrDA	200059.8	11	13C2-PFDODA	539182.2	5.0	0.371	6.24	1.030	2.000	2.342	17	30	
PFTeDA	155992.4	10	13C2-PFTeDA	390383.5	5.0	0.400	6.42	1.000	2.000	2.240	12	30	
PFHxDA	74153.5	11	13C2-PFTeDA	390383.5	5.0	0.190	6.72	1.050	2.000	2.263	13	30	
PFOA	62550.8	10	13C2-PFTeDA	390383.5	5.0	0.160	6.98	1.090	2.000	2.232	12	30	

Continuing Calibration Verification

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV2_CAL3		Data File:	18NOV13D-17.wiff
Sample ID:	CALBRN31833B		Acquis Date:	2018-11-13T11:32:20
Sample Type:	Quality Control		Instrument:	LM27631
Vial Position:	5		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18NOV13DCCV1-4
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	N/A		Operator:	JPT12262
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-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	672844.4	661126.9	2	50	
13C2-PFOA	5.0	448761.8	466902.6	-4	50	
13C4-PFOS	4.8	234558.2	247446.9	-5	50	
13C2-PFDA	5.0	289762.3	295381.6	-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	749784.8	13C3-PFBA	672844.4	1.114	5.000	4.996	100	70-130	
E13C5-PFPeA	758020.0	13C3-PFBA	672844.4	1.127	5.000	5.053	101	70-130	
E13C3-PFBS	426304.5	13C3-PFBA	672844.4	0.634	4.650	4.473	96	70-130	
E13C2-4:2-FTS	50117.7	13C2-PFOA	448761.8	0.112	4.670	4.974	107	70-130	
E13C5-PFHxA	657311.6	13C2-PFOA	448761.8	1.465	5.000	5.291	106	70-130	
E13C3-PFHxS	308262.2	13C2-PFOA	448761.8	0.687	4.730	4.714	100	70-130	
E13C4-PFHpA	511795.2	13C2-PFOA	448761.8	1.140	5.000	5.138	103	70-130	
E13C2-6:2-FTS	36338.6	13C2-PFOA	448761.8	0.081	4.750	5.418	114	70-130	
E13C8-PFOA	911217.6	13C2-PFOA	448761.8	2.031	5.000	5.594	112	70-130	
E13C8-PFOS	265969.1	13C4-PFOS	234558.2	1.134	4.780	5.024	105	70-130	
E13C9-PFNA	476405.5	13C4-PFOS	234558.2	2.031	5.000	5.663	113	70-130	
E13C6-PFDA	611299.8	13C2-PFDA	289762.3	2.110	5.000	4.923	98	70-130	
E13C2-8:2-FTS	27336.1	13C2-PFDA	289762.3	0.094	4.790	4.705	98	70-130	
E13C8-PFOSA	616561.5	13C2-PFDA	289762.3	2.128	5.000	4.717	94	70-130	
Ed3-NMeFOSAA	74275.0	13C2-PFDA	289762.3	0.256	5.000	4.627	93	70-130	
E13C7-PFUnDA	249982.5	13C2-PFDA	289762.3	0.863	5.000	5.009	100	70-130	
Ed5-NEtFOSAA	70717.5	13C2-PFDA	289762.3	0.244	5.000	5.163	103	70-130	
E13C2-PFDODA	539182.2	13C2-PFDA	289762.3	1.861	5.000	4.831	97	70-130	
Ed7-NMePFOSAE	319964.4	13C2-PFDA	289762.3	1.104	5.000	4.779	96	70-130	
Ed3-NMePFOSA	74556.9	13C2-PFDA	289762.3	0.257	5.000	4.675	93	70-130	
Ed9-NEtPFOSAE	268790.6	13C2-PFDA	289762.3	0.928	5.000	4.825	96	70-130	
Ed5-NEtPFOSA	59682.5	13C2-PFDA	289762.3	0.206	5.000	4.832	97	70-130	
E13C2-PFTeDA	390383.5	13C2-PFDA	289762.3	1.347	5.000	4.730	95	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV2_CAL3

Instrument Name: LM27631

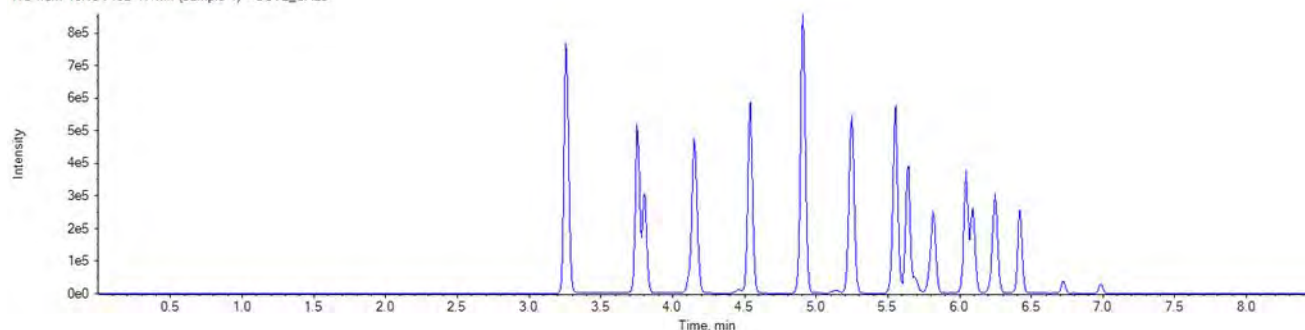
File Name: 18NOV13D-17.wiff

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	3.26	1.000	314464.6		A	13C4-PFBA	3.26	749784.8	0.419	2.323
PFPeA	3.76	1.000	304023.7		A	13C5-PFPeA	3.76	758020.0	0.401	2.322
PFBS	3.80	1.000	169051.3		A	13C3-PFBS	3.80	426304.5	0.397	1.886
4:2-FTS	4.12	1.000	37343.0		A	13C2-4:2-FTS	4.12	50117.7	0.745	2.023
PFHxA	4.15	1.000	371133.5		A	13C5-PFHxA	4.15	657311.6	0.565	2.358
PFPeS	4.17	1.100	87968.9		A	13C3-PFBS	3.80	426304.5	0.206	2.003
PFHpA	4.54	1.000	368990.8		A	13C4-PFHpA	4.54	511795.2	0.721	2.390
PFHxS	4.54	1.000	130814.3		M	13C3-PFHxS	4.54	308262.2	0.424	2.058
6:2-FTS	4.90	1.000	32918.1		A	13C2-6:2-FTS	4.90	36338.6	0.906	2.192
PFHpS	4.90	1.080	124422.5		A	13C3-PFHxS	4.54	308262.2	0.404	2.125
PFOA	4.91	1.000	375544.6		A	13C8-PFOA	4.91	911217.6	0.412	2.201
PFOS	5.24	1.000	120378.0		M	13C8-PFOS	5.24	265969.1	0.453	1.979
PFNA	5.25	1.000	312367.0		A	13C9-PFNA	5.25	476405.5	0.656	2.364
PFNS	5.53	1.060	75927.4		A	13C8-PFOS	5.24	265969.1	0.285	1.997
PFDA	5.55	1.000	263206.6		A	13C6-PFDA	5.55	611299.8	0.431	2.283
8:2-FTS	5.56	1.000	25032.7		A	13C2-8:2-FTS	5.56	27336.1	0.916	2.135
PFOSA	5.64	1.000	274183.6		A	13C8-PFOSA	5.64	616561.5	0.445	2.172
NMeFOSAA	5.70	1.000	28843.9		M	d3-NMeFOSAA	5.69	74275.0	0.388	2.195
PFDS	5.79	1.110	63089.4		A	13C8-PFOS	5.24	265969.1	0.237	2.149
PFUnDA	5.82	1.000	212311.7		A	13C7-PFUnDA	5.82	249982.5	0.849	2.220
NEtFOSAA	5.83	1.000	25720.9		M	d5-NEtFOSAA	5.83	70717.5	0.364	1.907
PFDODA	6.04	1.000	230876.4		A	13C2-PFDODA	6.04	539182.2	0.428	2.180
10:2-FTS	6.06	1.090	16368.9		A	13C2-8:2-FTS	5.56	27336.1	0.599	1.995
NMePFOSAE	6.10	1.000	174209.3		A	d7-NMePFOSAE	6.09	319964.4	0.544	2.266
NMePFOSA	6.10	1.000	32251.4		A	d3-NMePFOSA	6.10	74556.9	0.433	2.134
PFDoS	6.21	1.190	32585.3		A	13C8-PFOS	5.24	265969.1	0.123	2.146
NEtPFOSAE	6.25	1.000	183379.2		A	d9-NEtPFOSAE	6.24	268790.6	0.682	2.189
NEtPFOSA	6.27	1.000	26562.7		M	d5-NEtPFOSA	6.26	59682.5	0.445	2.044
PFTDA	6.24	1.030	200059.8		A	13C2-PFDODA	6.04	539182.2	0.371	2.342
PFTeDA	6.42	1.000	155992.4		A	13C2-PFTeDA	6.42	390383.5	0.400	2.240
PFHxDA	6.72	1.050	74153.5		A	13C2-PFTeDA	6.42	390383.5	0.190	2.263
PFODA	6.98	1.090	62550.8		A	13C2-PFTeDA	6.42	390383.5	0.160	2.232

Total Ion Chromatogram

TIC from 18NOV13D-17 wiff (sample 1) - CCV2_CAL3



APPROVED

By JPT at 4:33 pm, 11/13/18

BSI05 Page 1272 of 1595

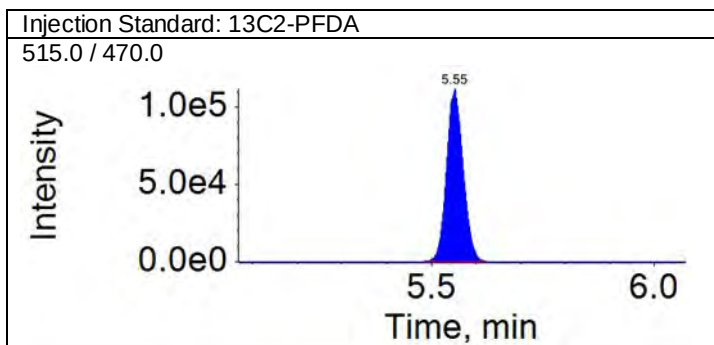
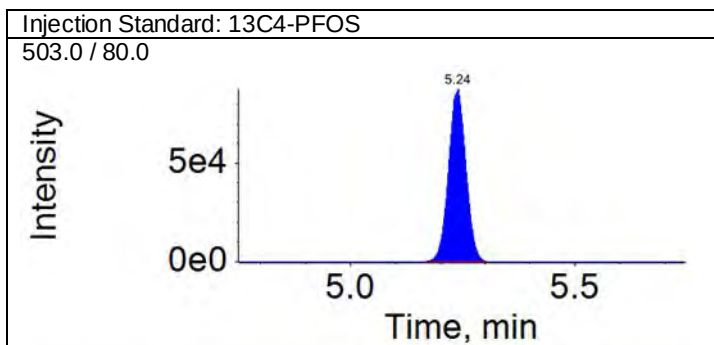
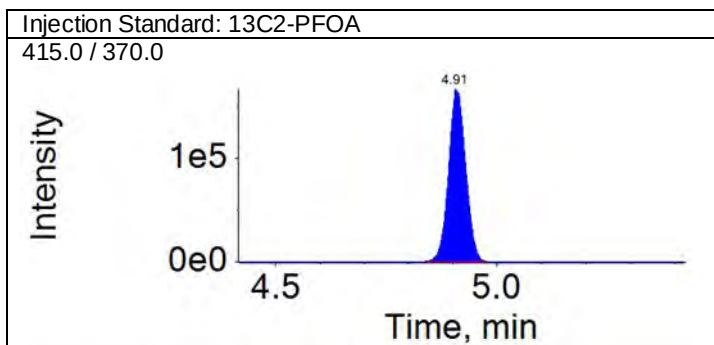
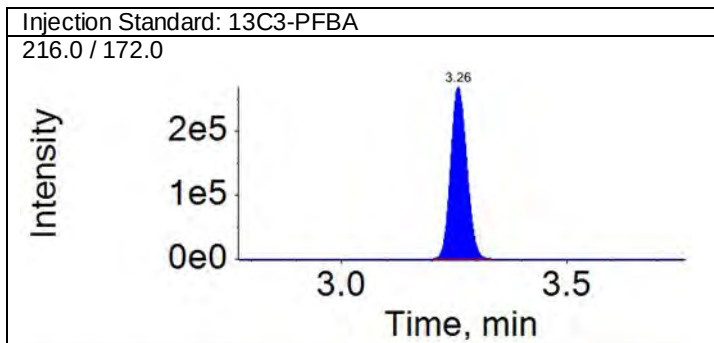
REVIEWED

By HMK at 1:48 pm, 11/14/18

Page 2 of 17

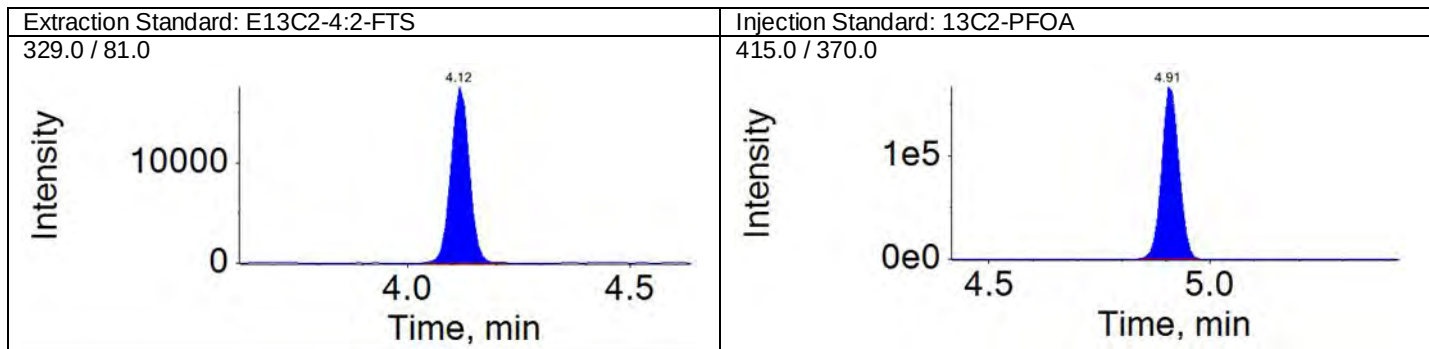
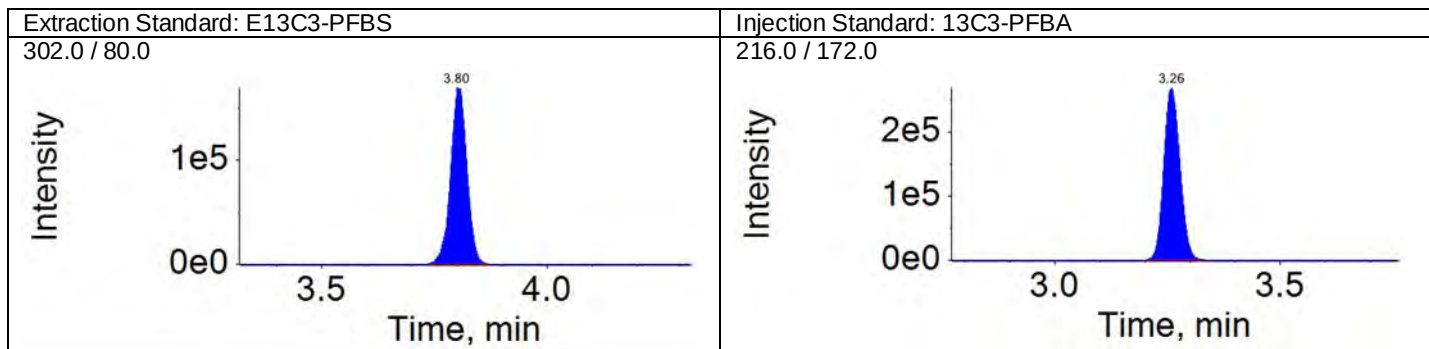
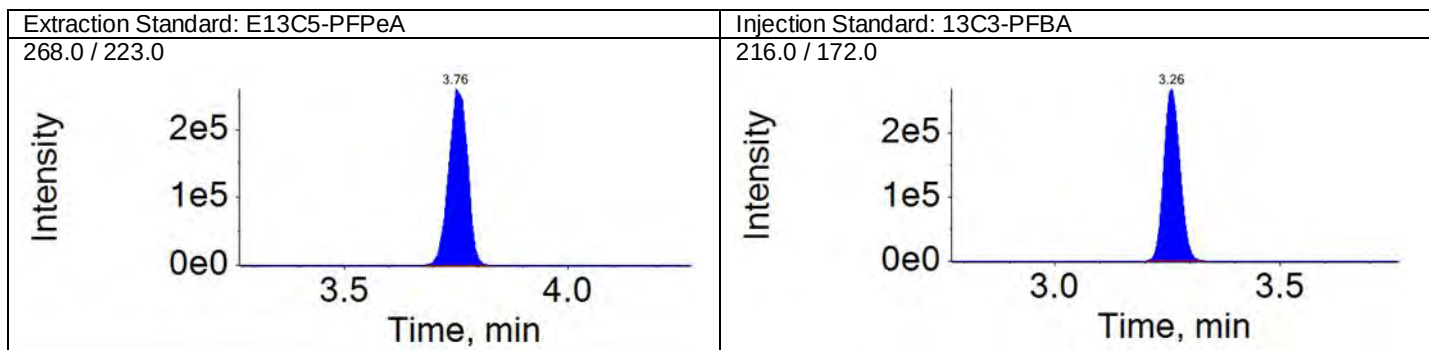
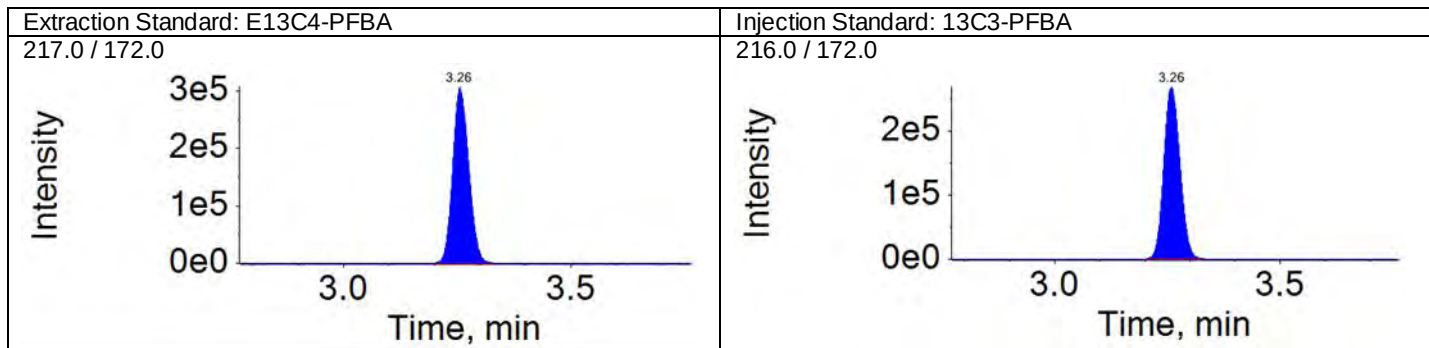
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



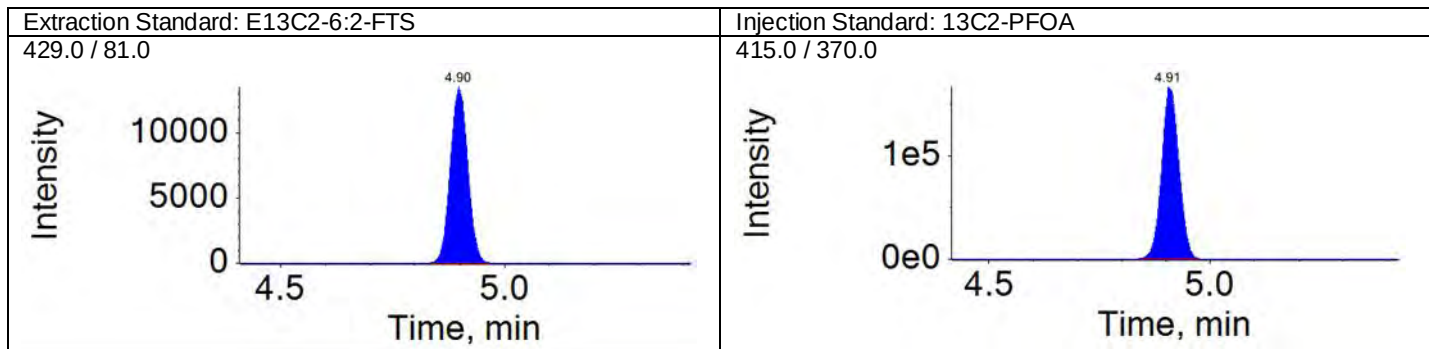
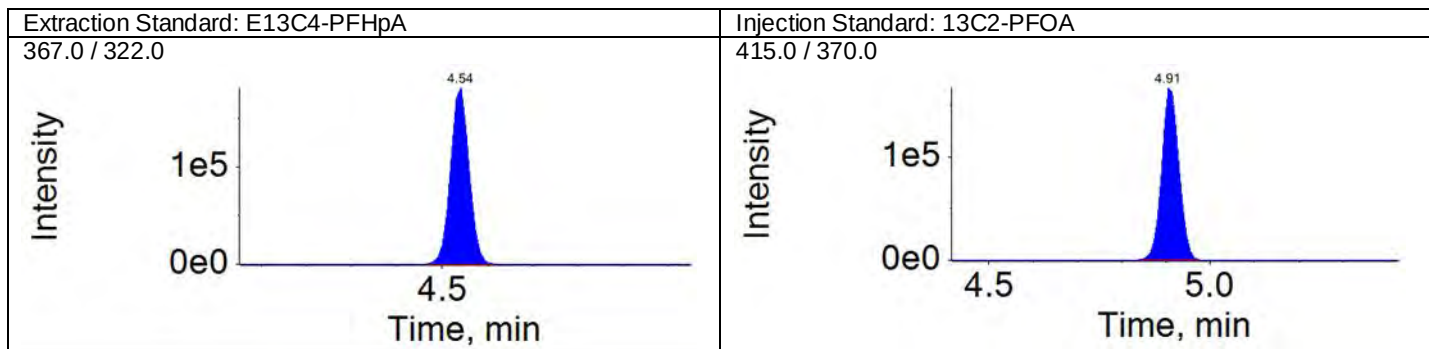
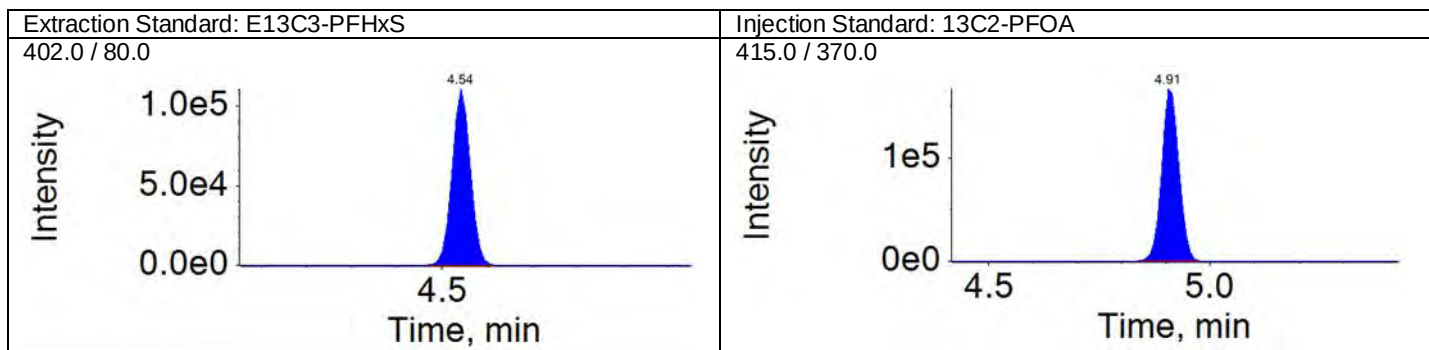
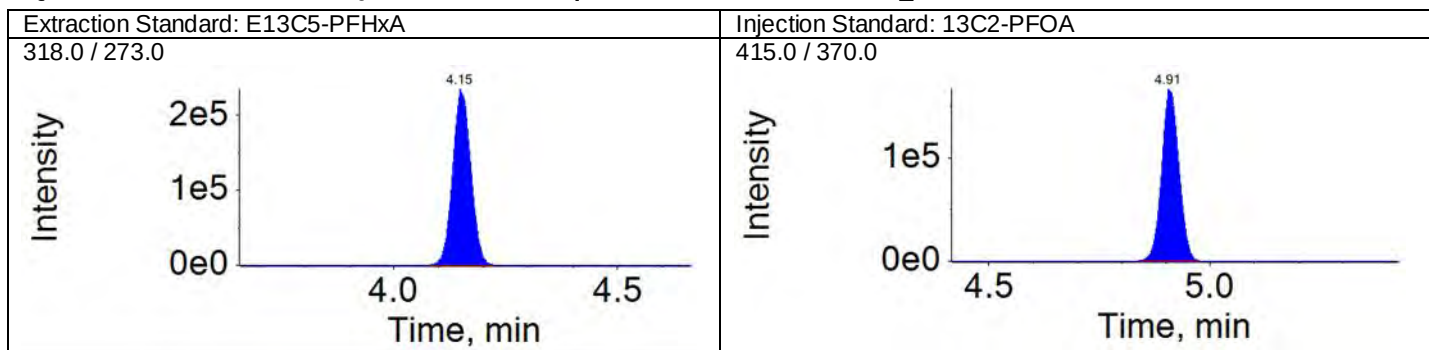
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



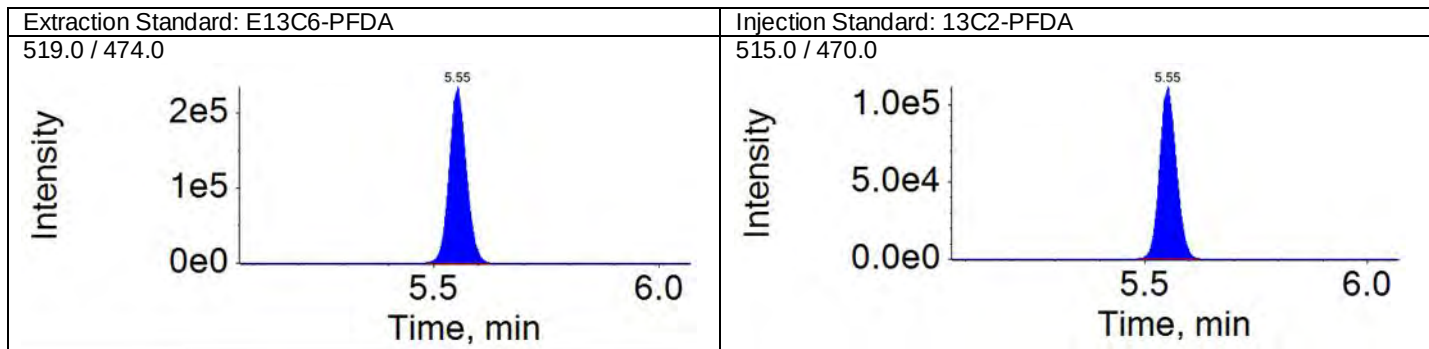
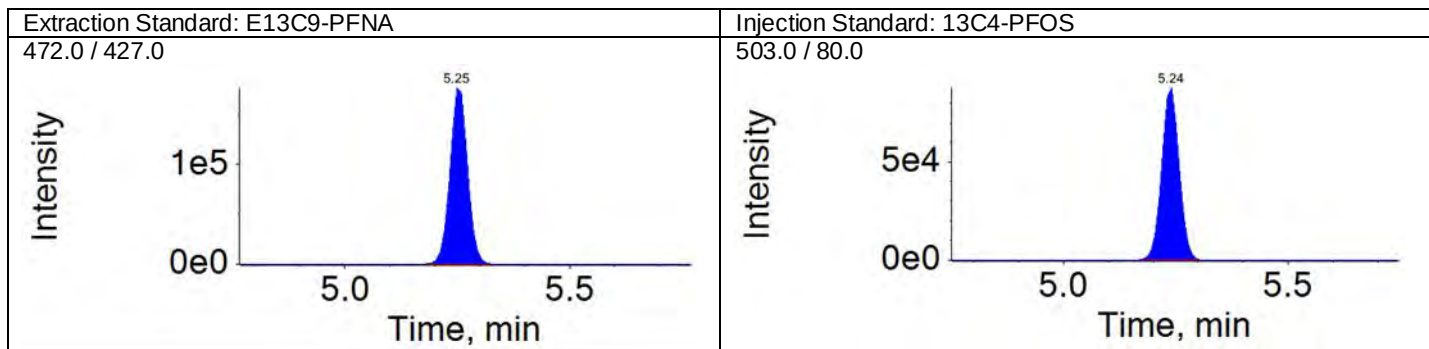
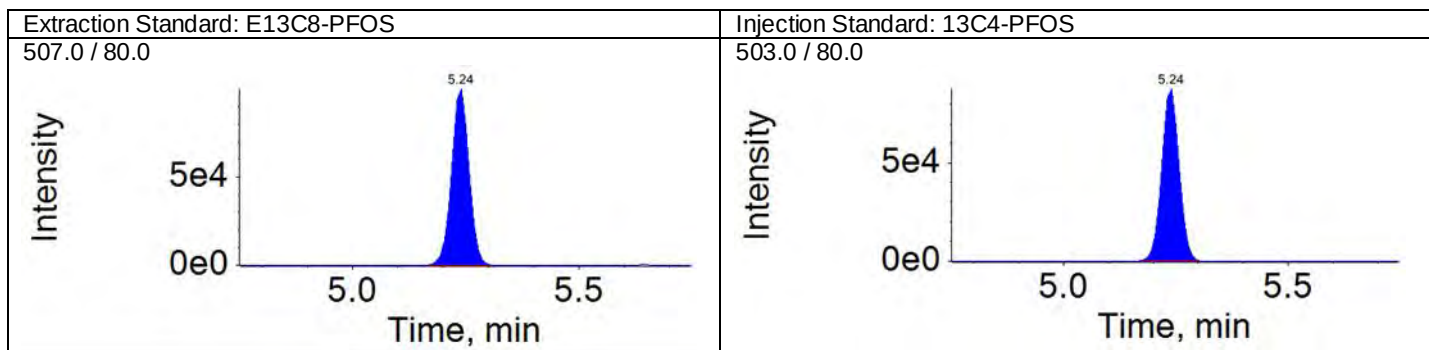
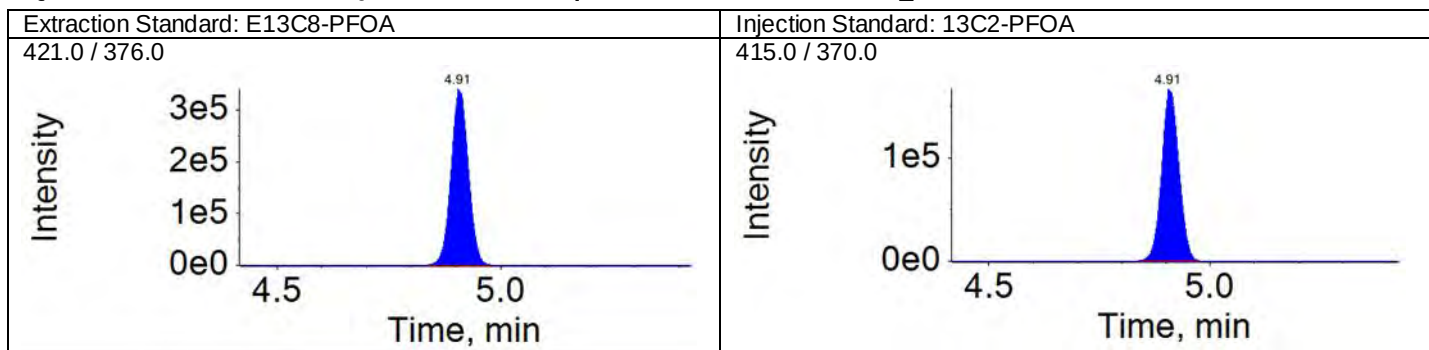
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



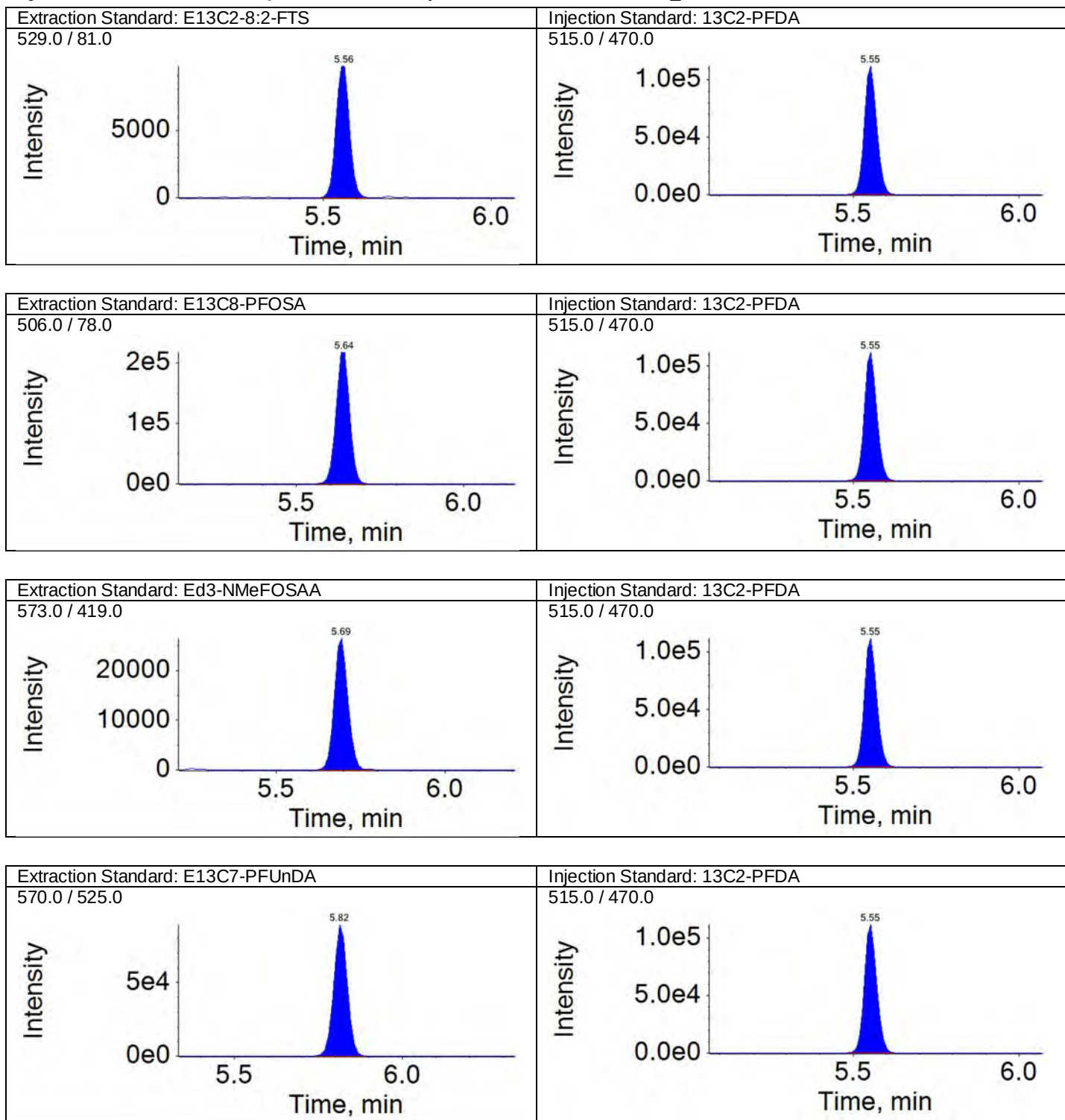
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

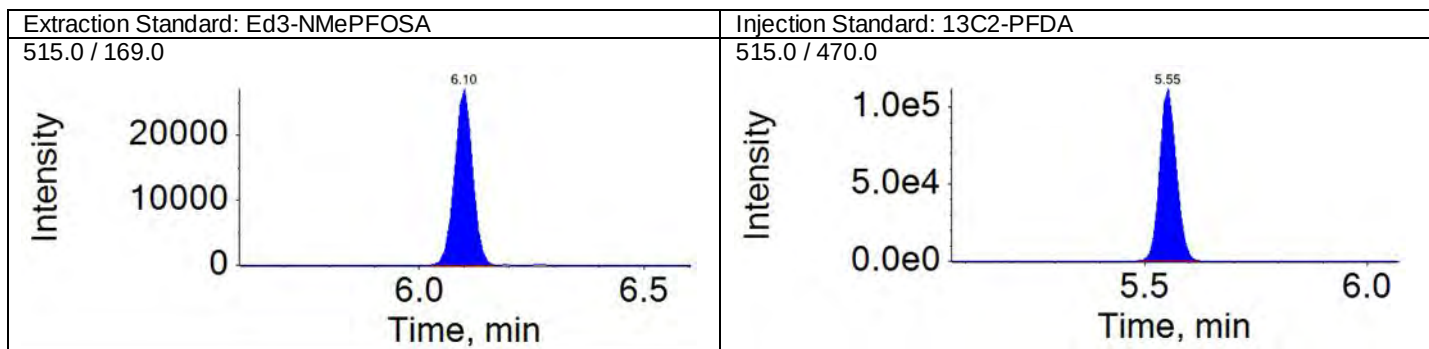
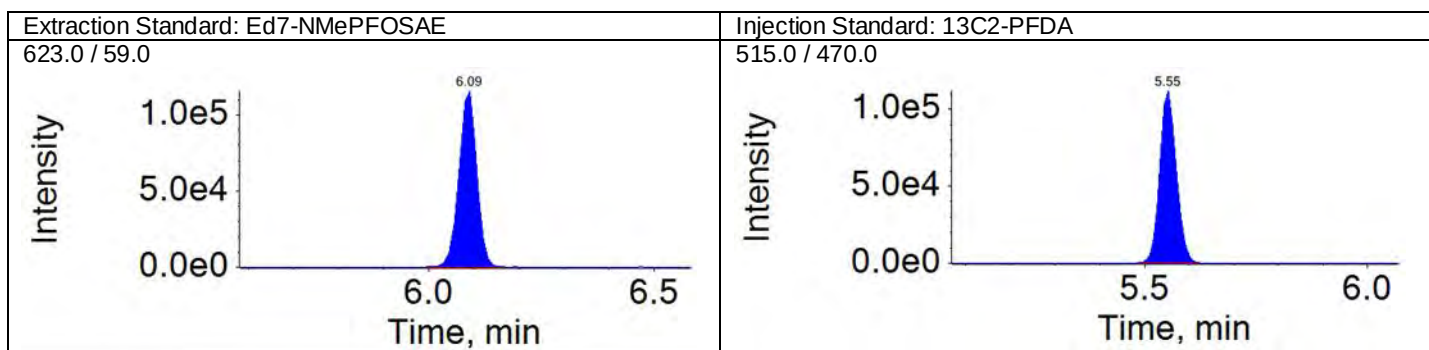
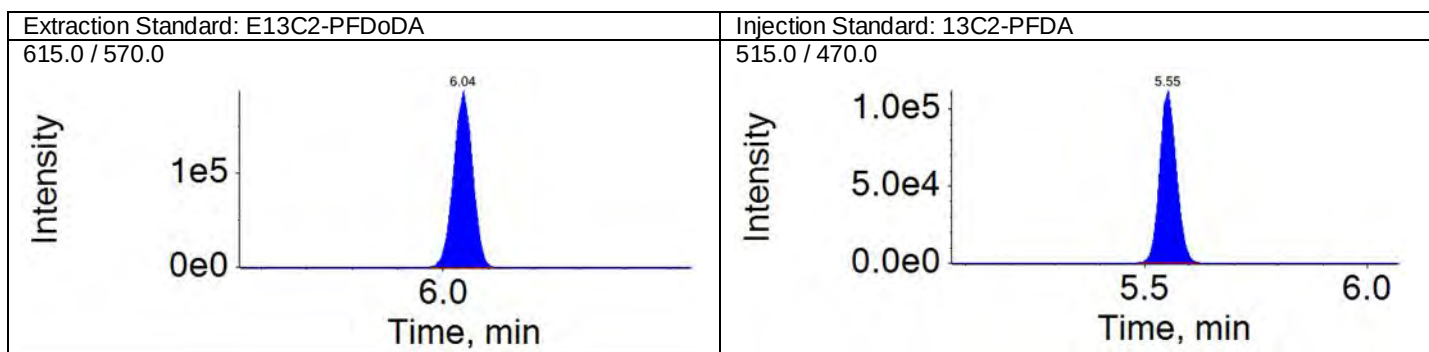
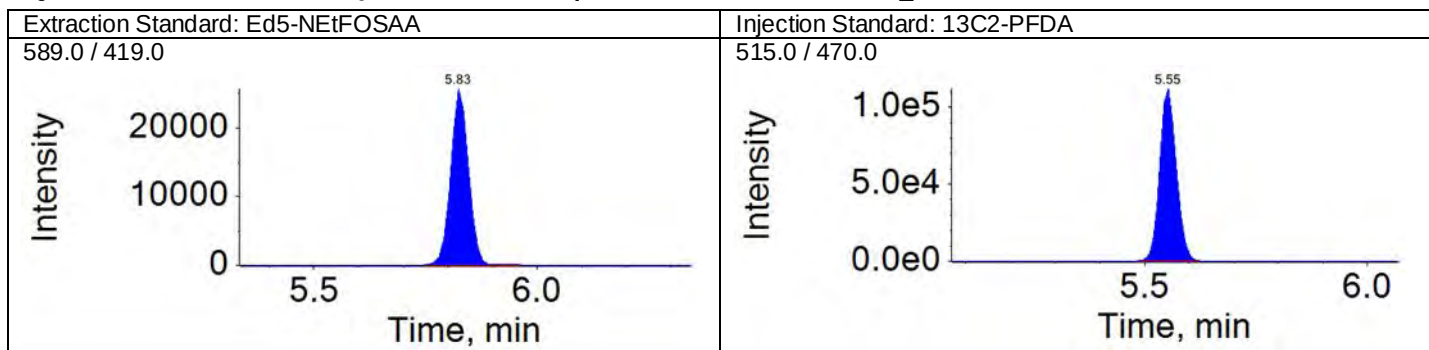
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

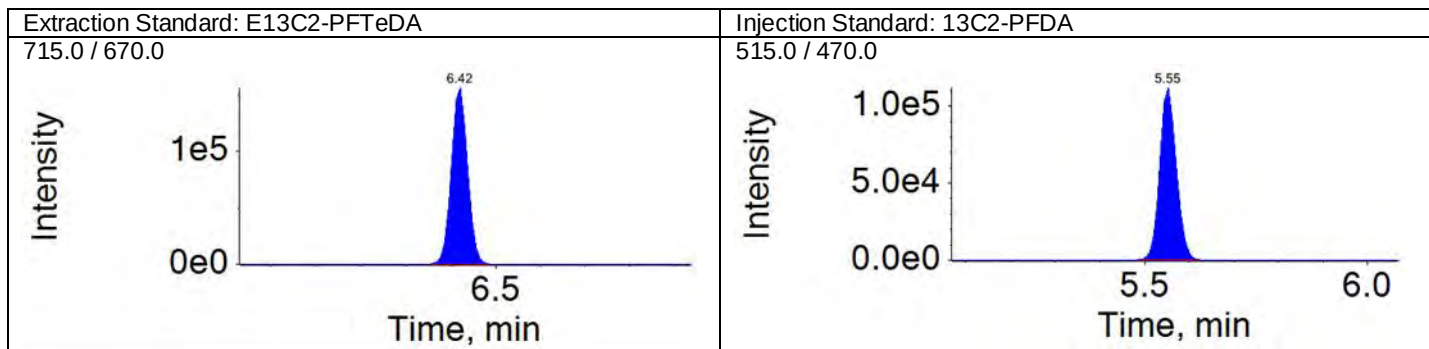
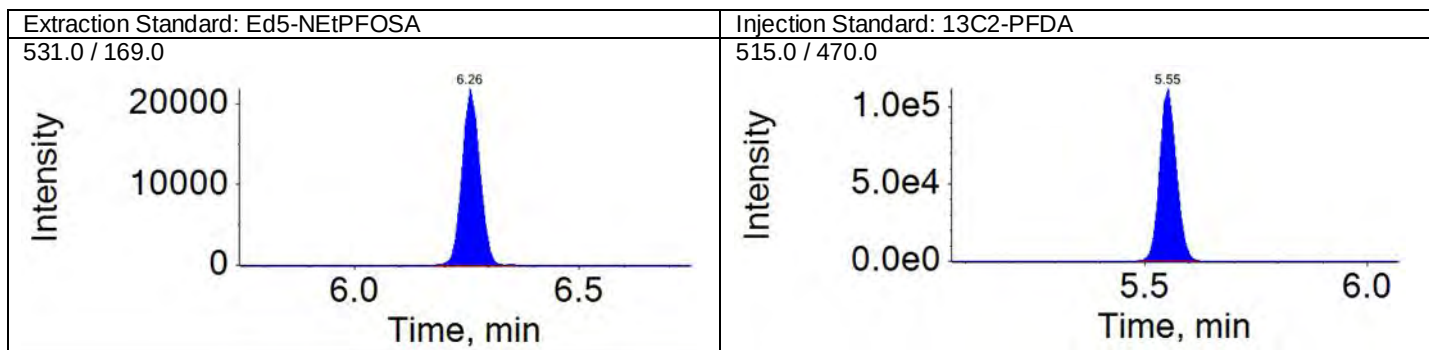
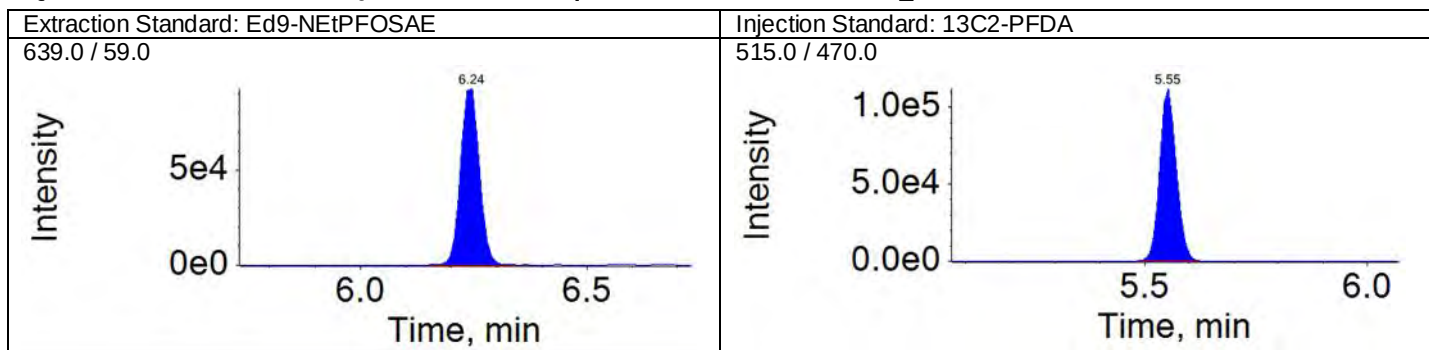
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



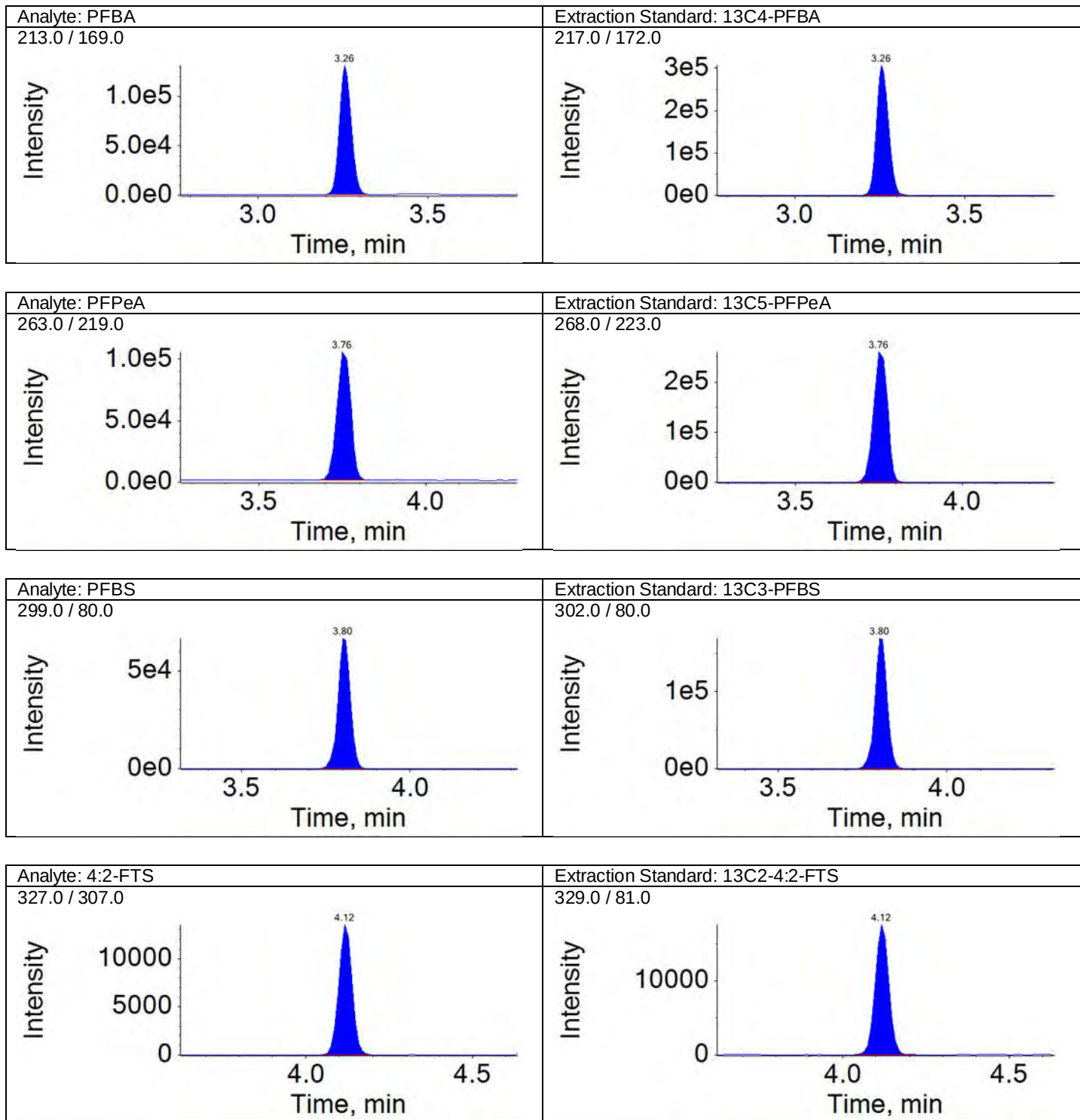
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



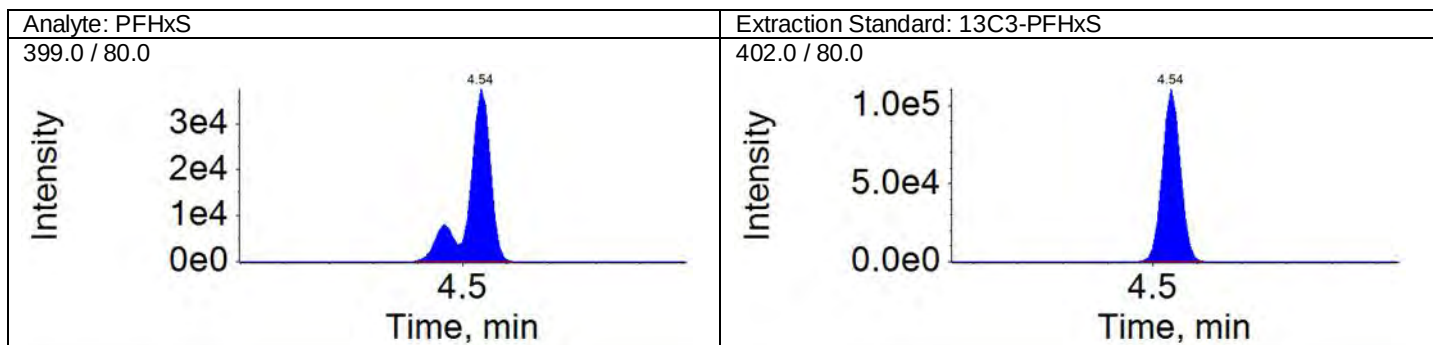
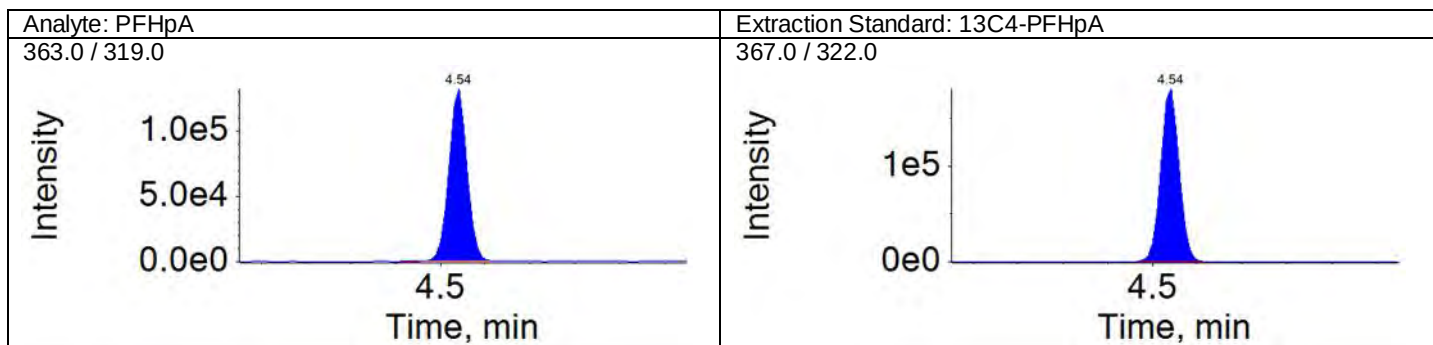
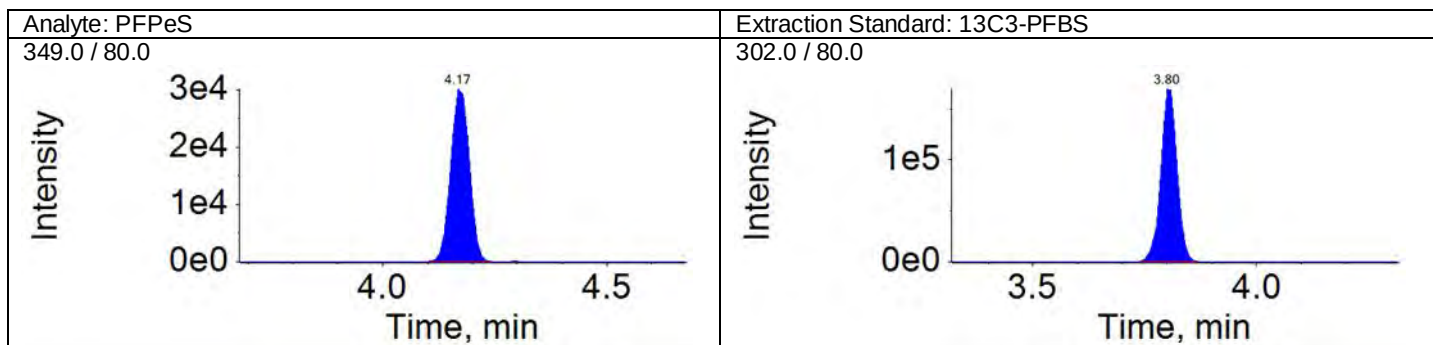
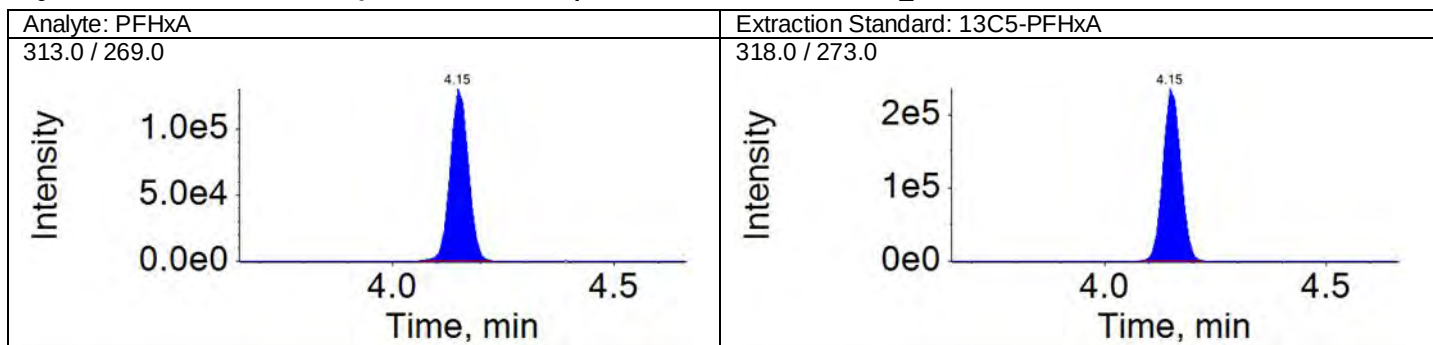
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



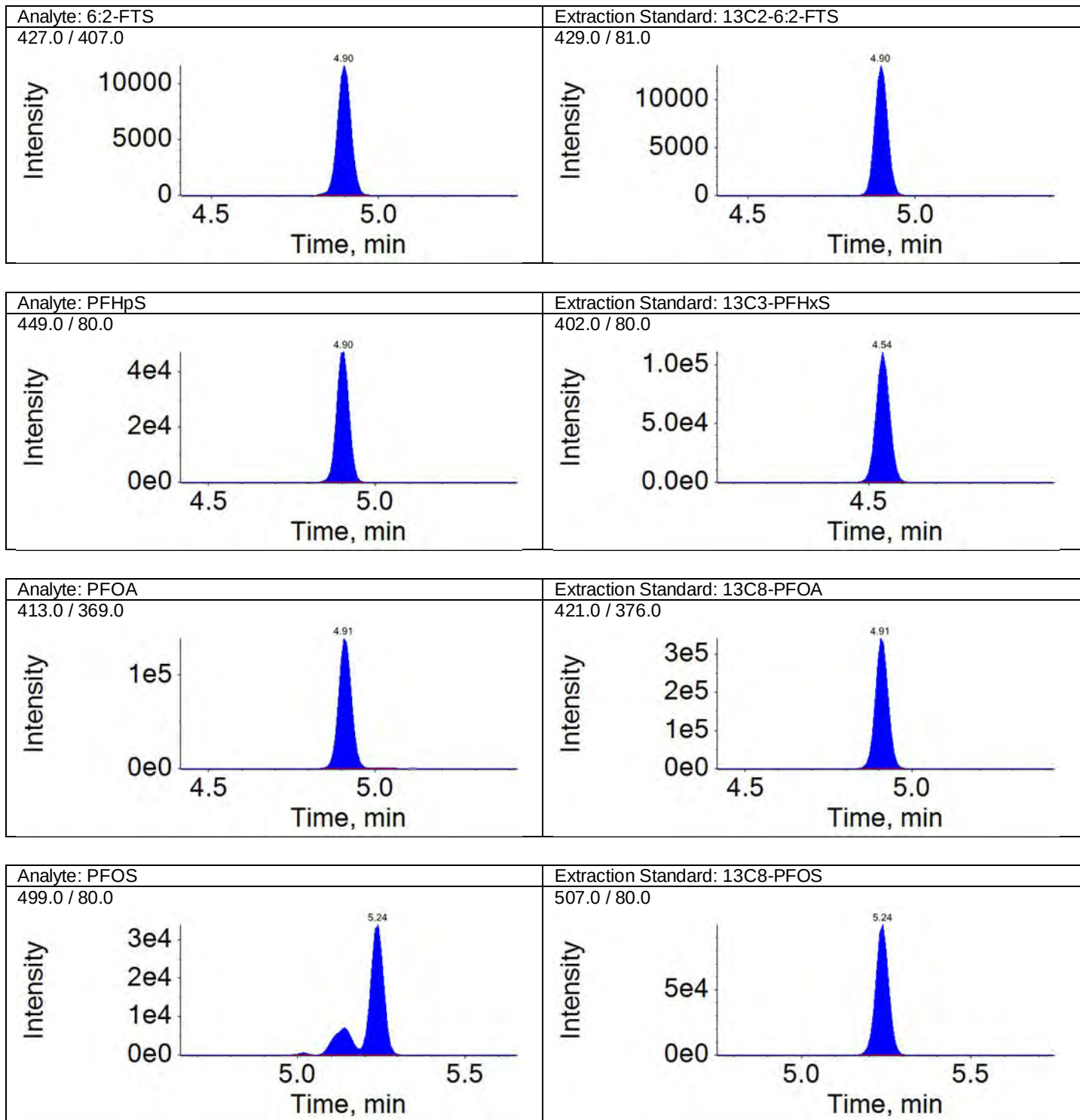
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



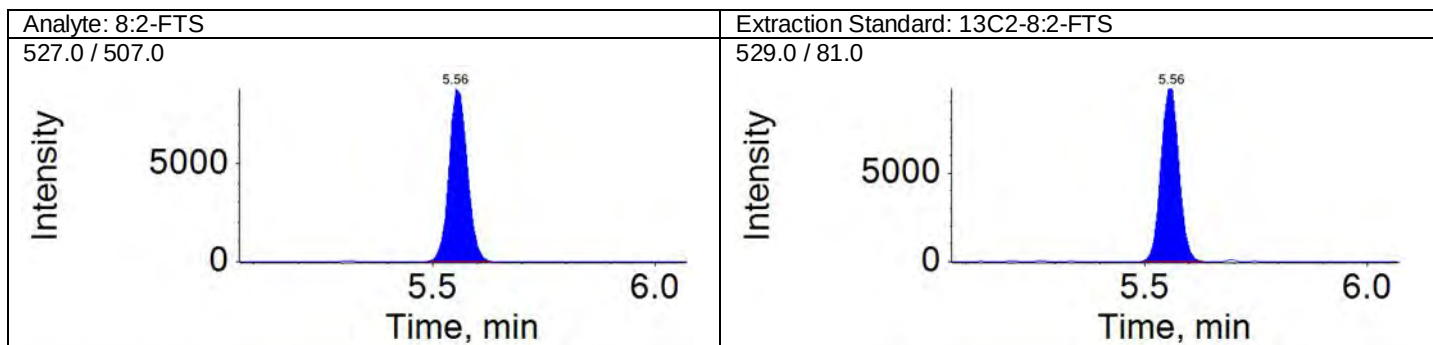
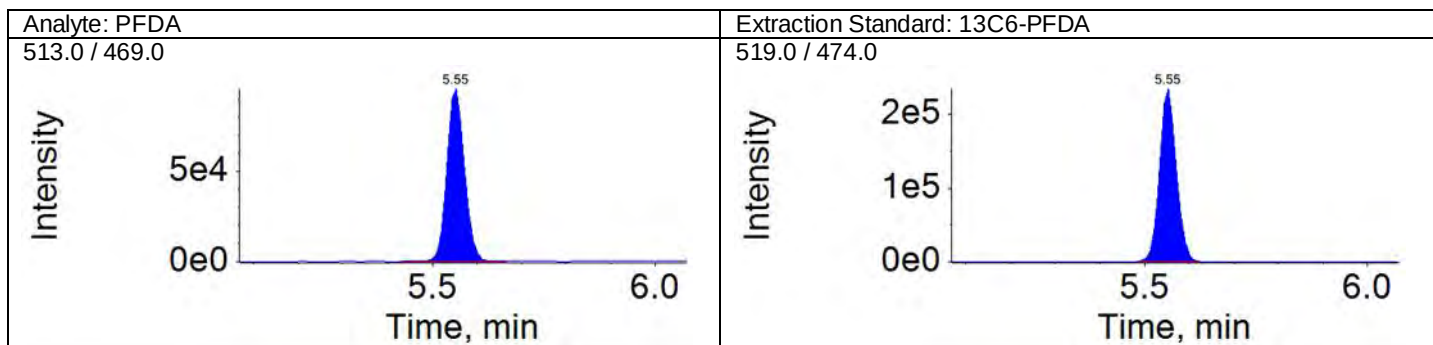
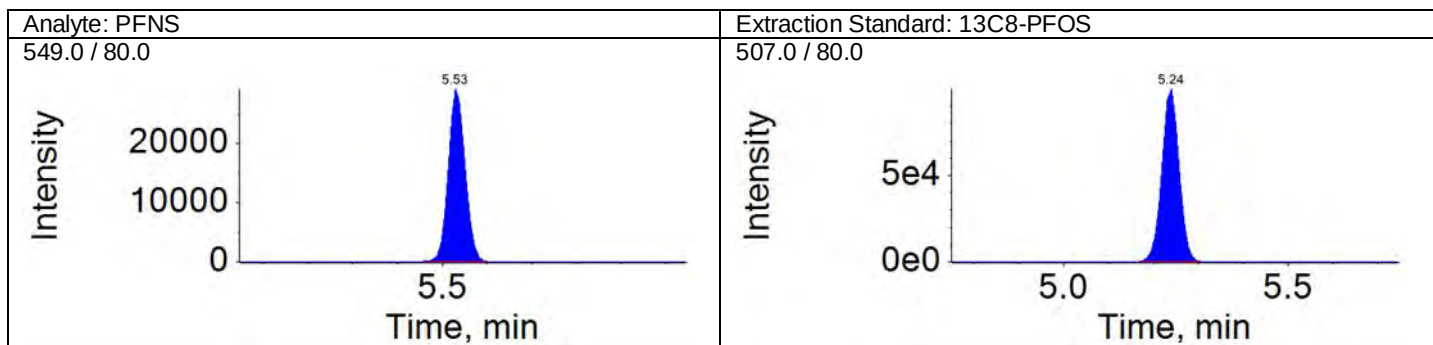
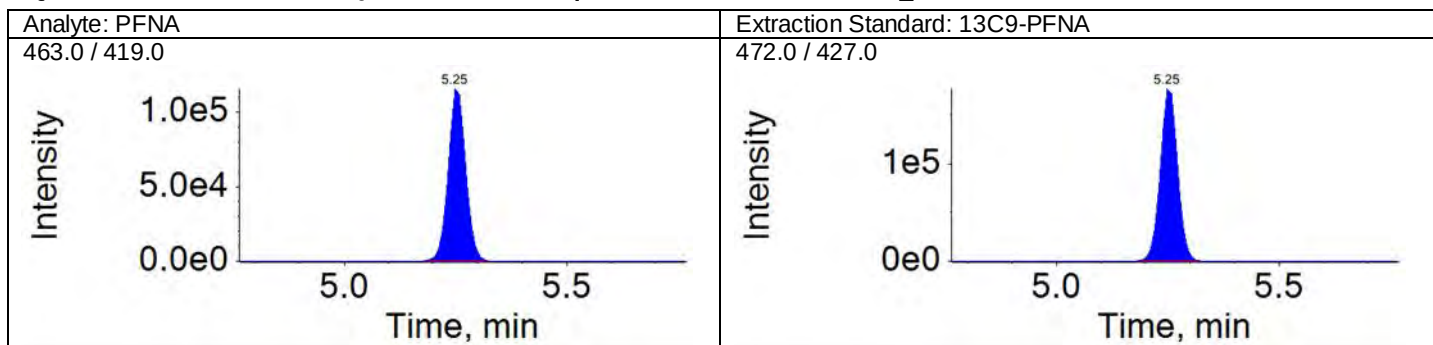
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



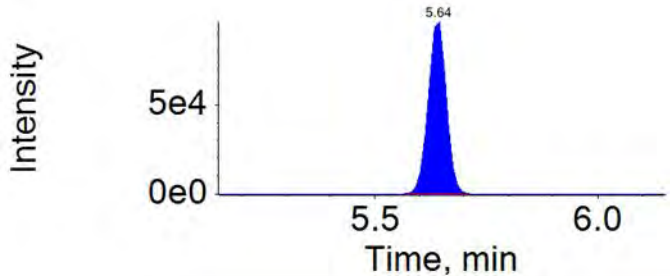
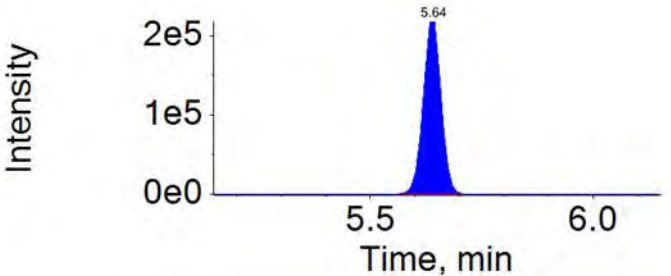
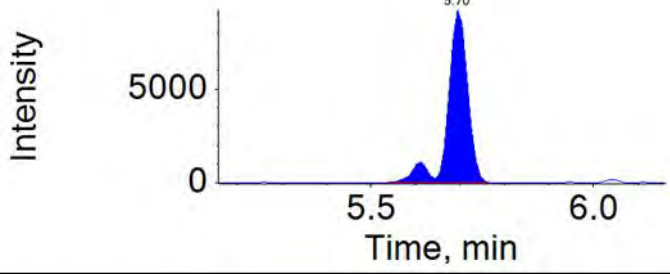
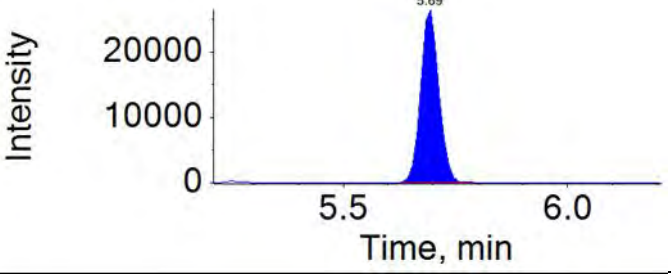
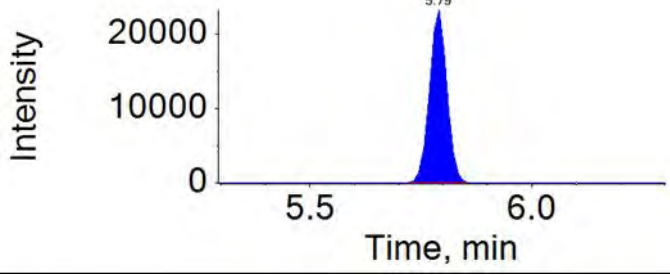
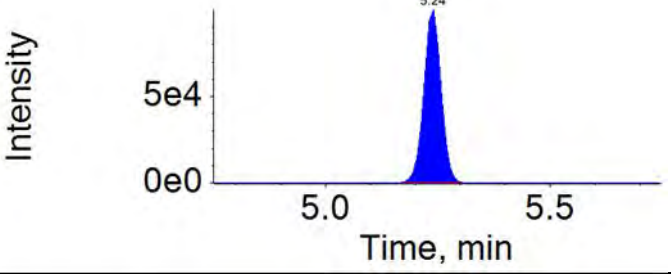
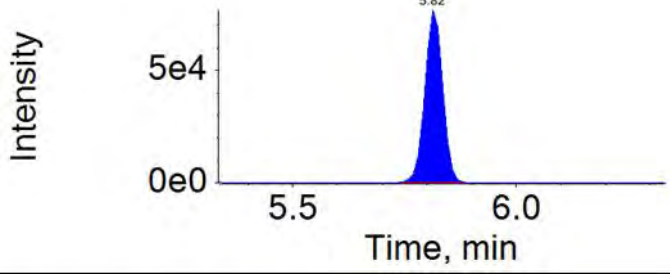
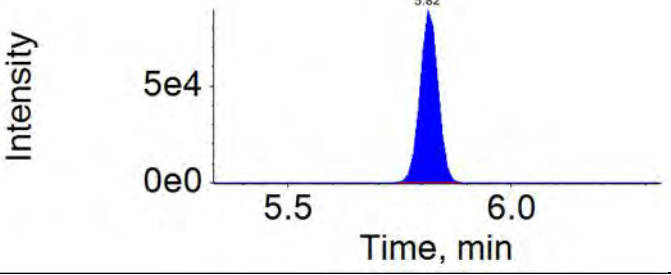
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



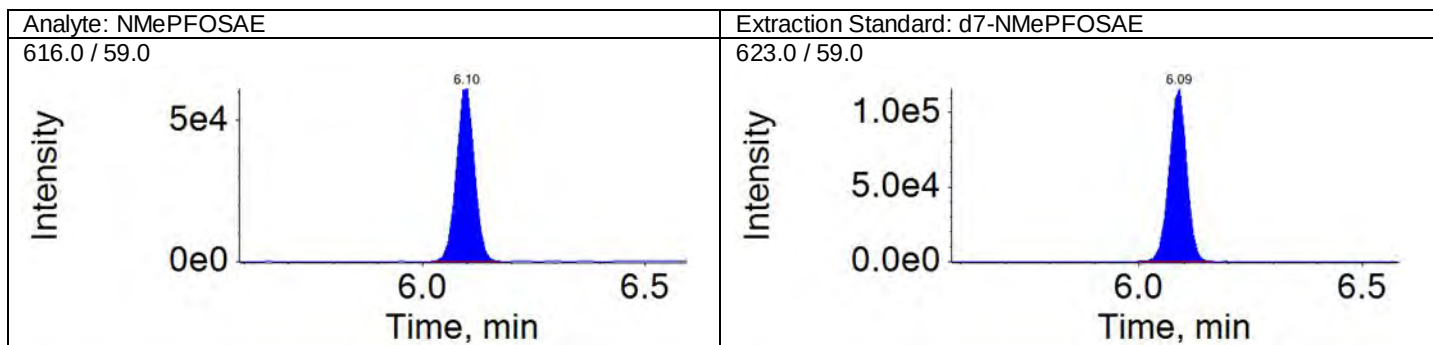
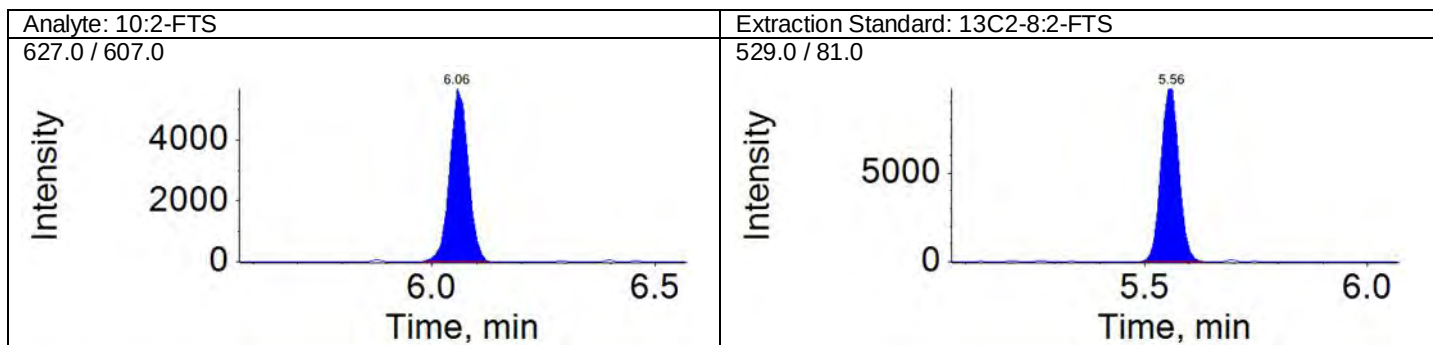
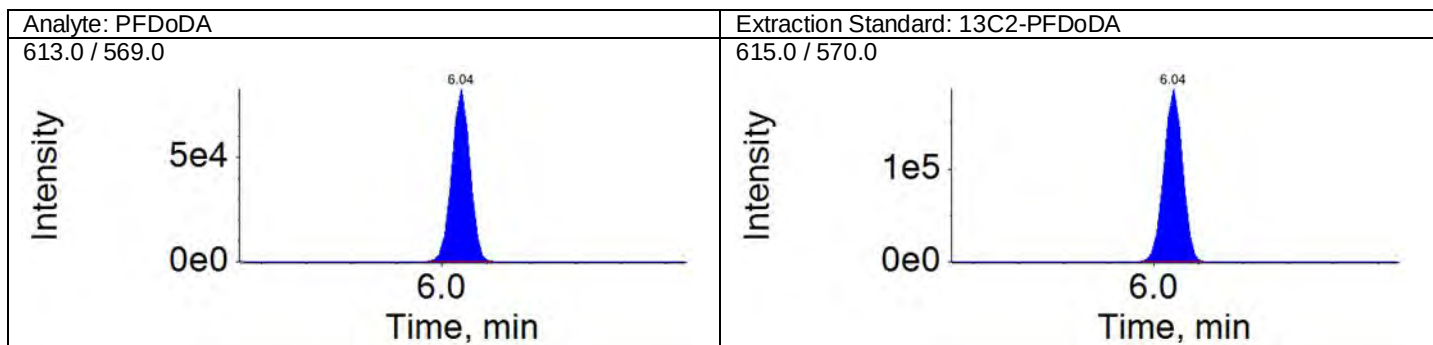
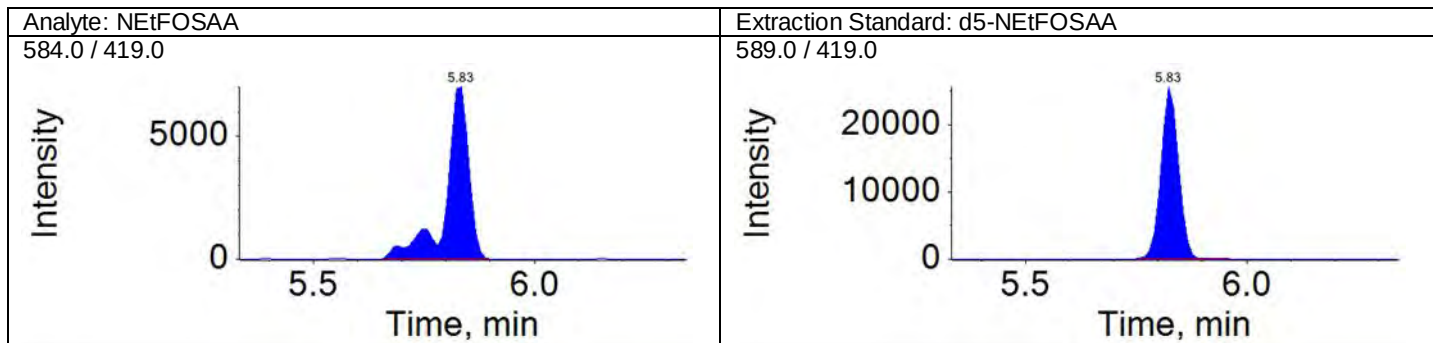
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte: PFOSA 498.0 / 78.0 	Extraction Standard: 13C8-PFOSA 506.0 / 78.0 
Analyte: NMeFOSAA 570.0 / 419.0 	Extraction Standard: d3-NMeFOSAA 573.0 / 419.0 
Analyte: PFDS 599.0 / 80.0 	Extraction Standard: 13C8-PFOS 507.0 / 80.0 
Analyte: PFUnDA 563.0 / 519.0 	Extraction Standard: 13C7-PFUnDA 570.0 / 525.0 

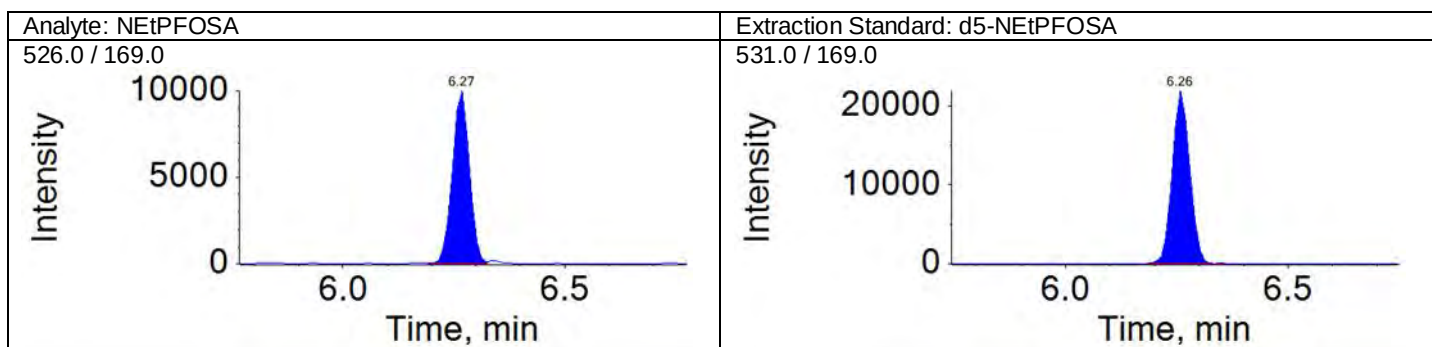
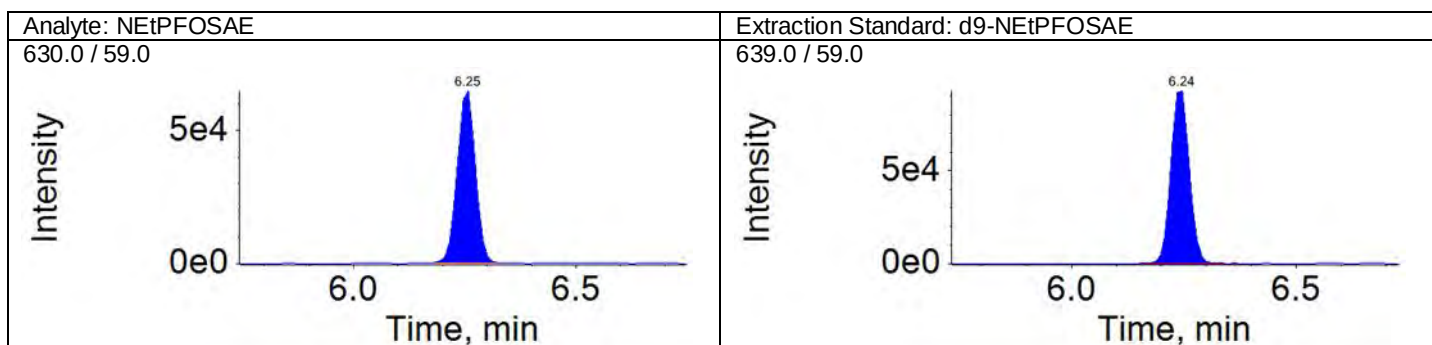
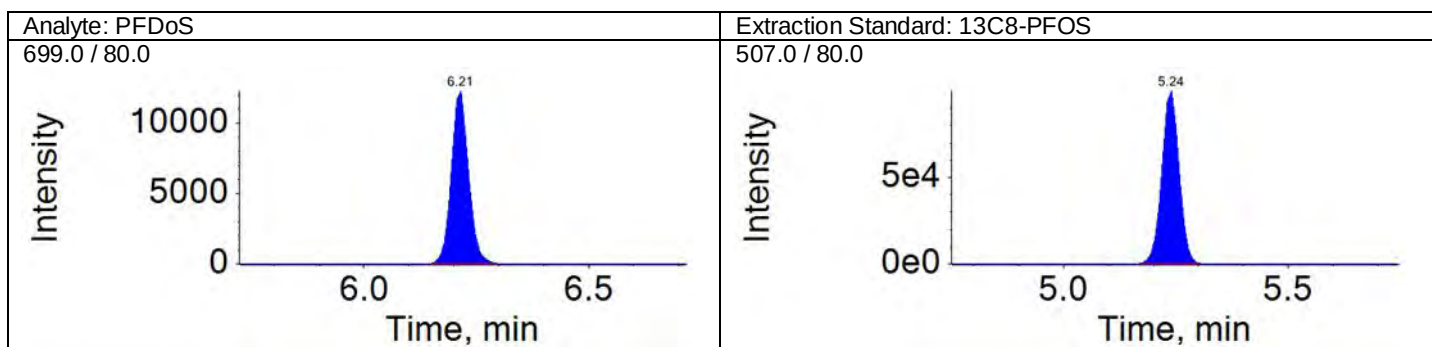
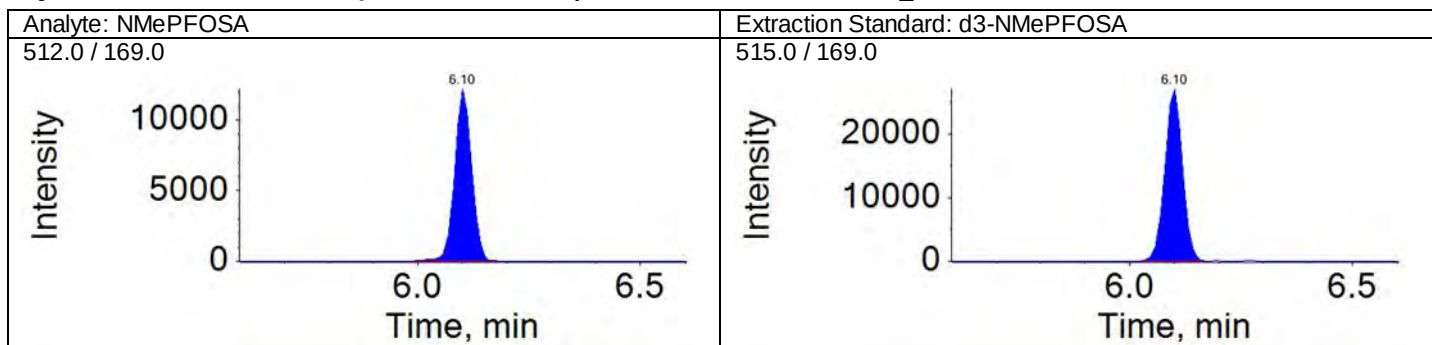
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



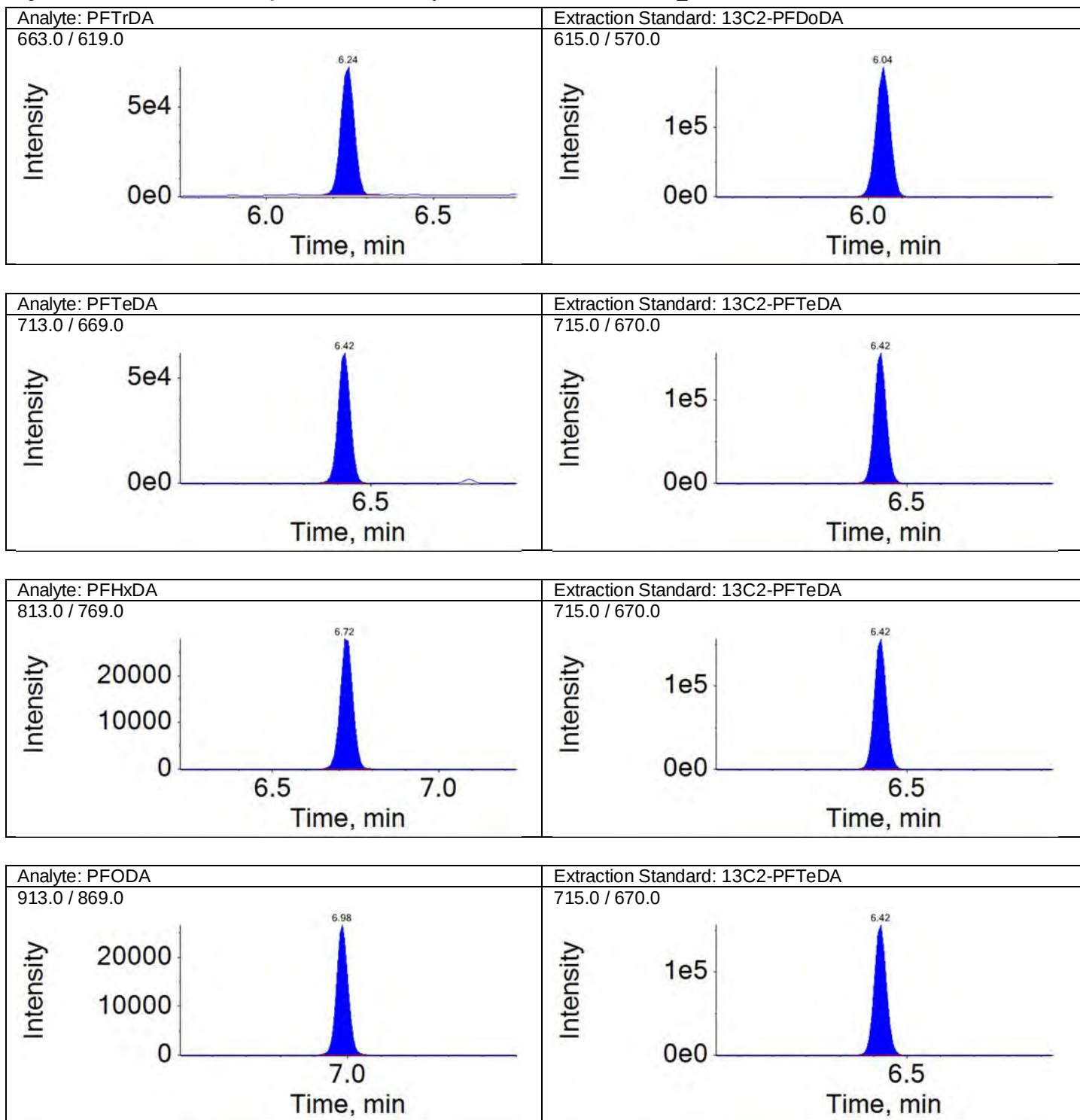
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

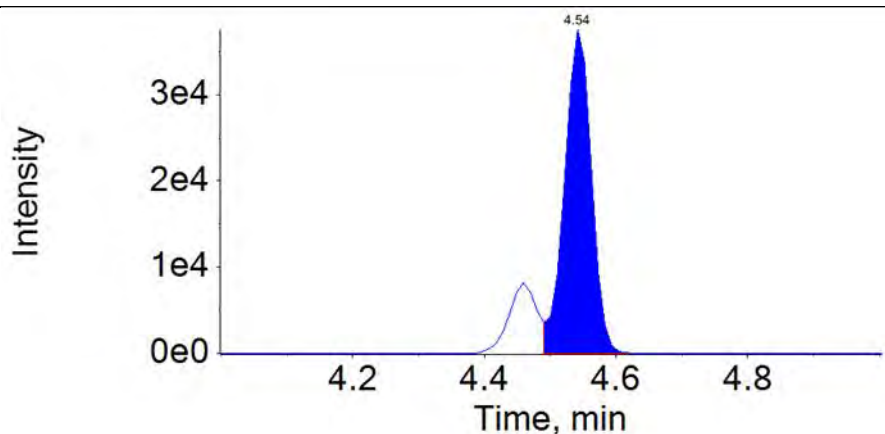
Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

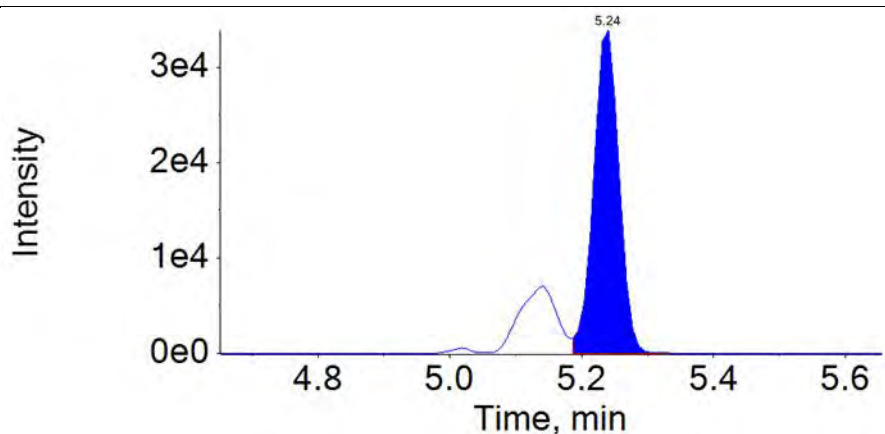
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
106966.7
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3



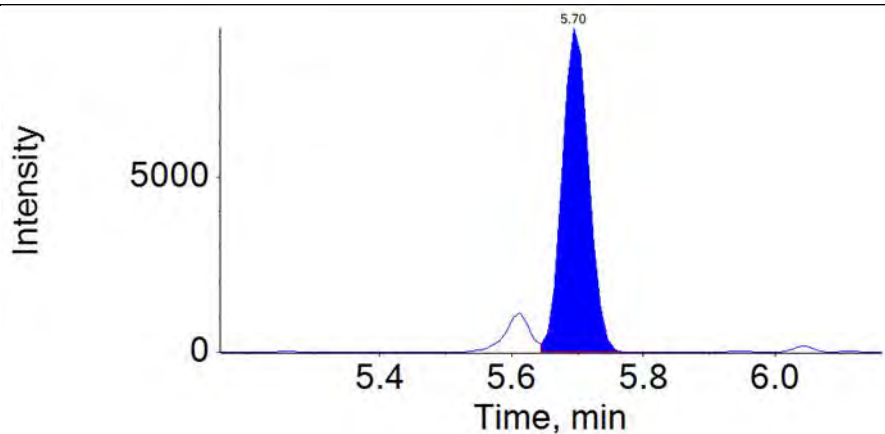
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
91264.4
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
25889.3
Mass Range:
570.0 / 419.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3

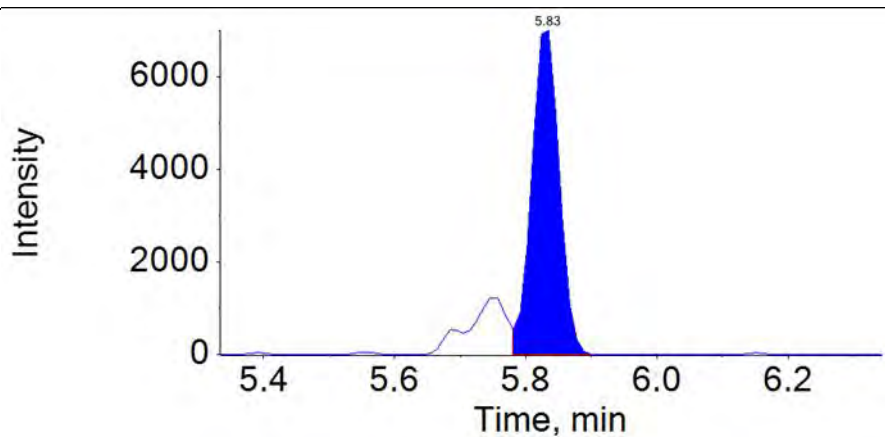


Integration Comment: incorrect integration

Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

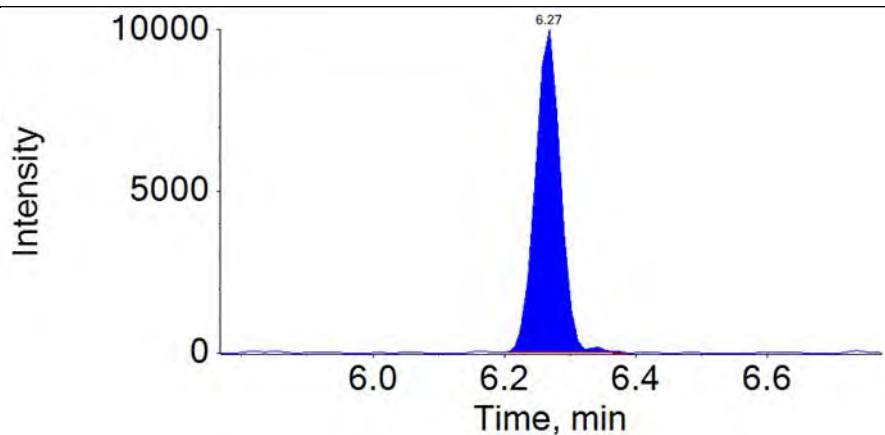
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
20682.5
Mass Range:
584.0 / 419.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3



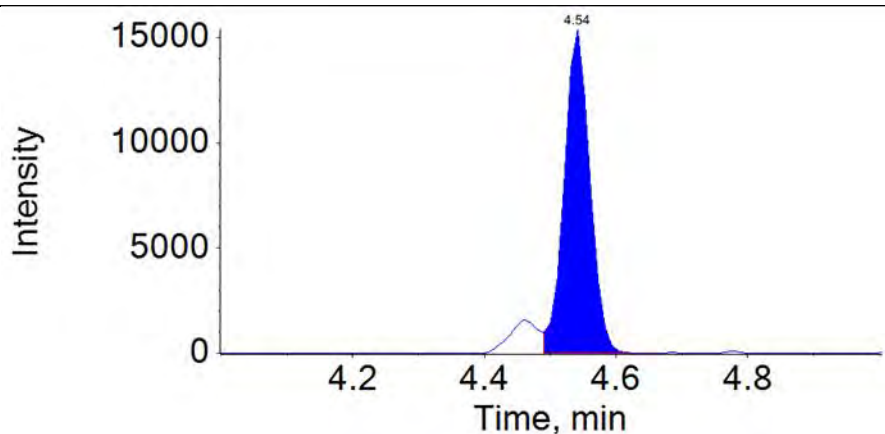
Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
26771.4
Mass Range:
526.0 / 169.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
41736.8
Mass Range:
399.0 / 99.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3

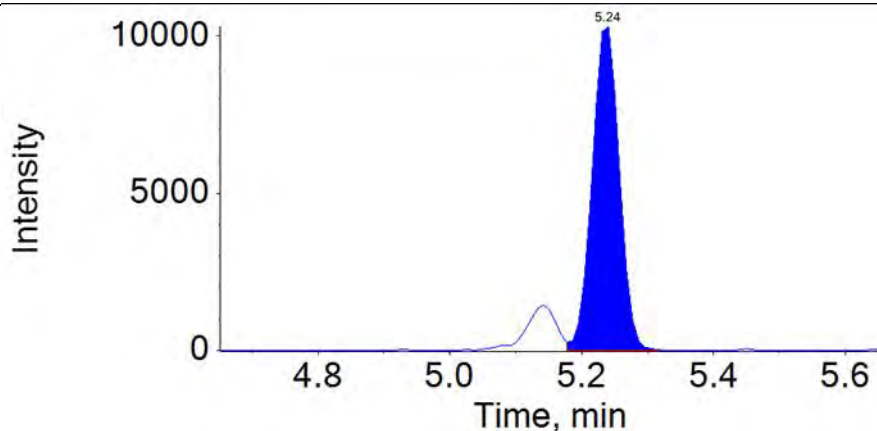


Integration Comment: incorrect integration

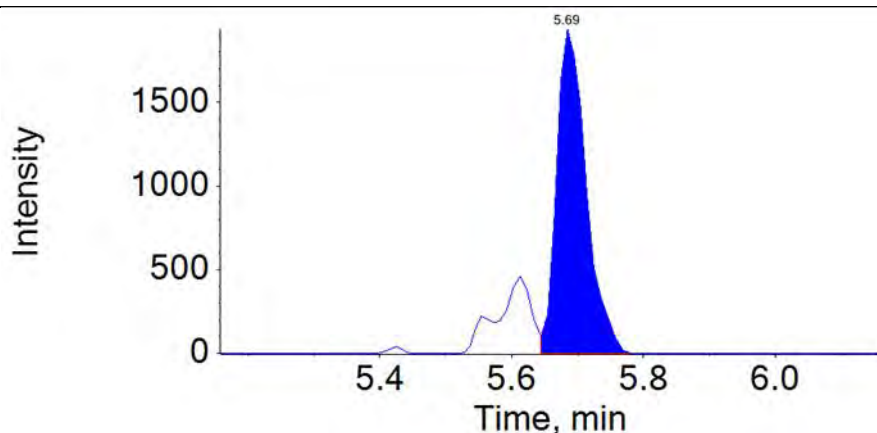
Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

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

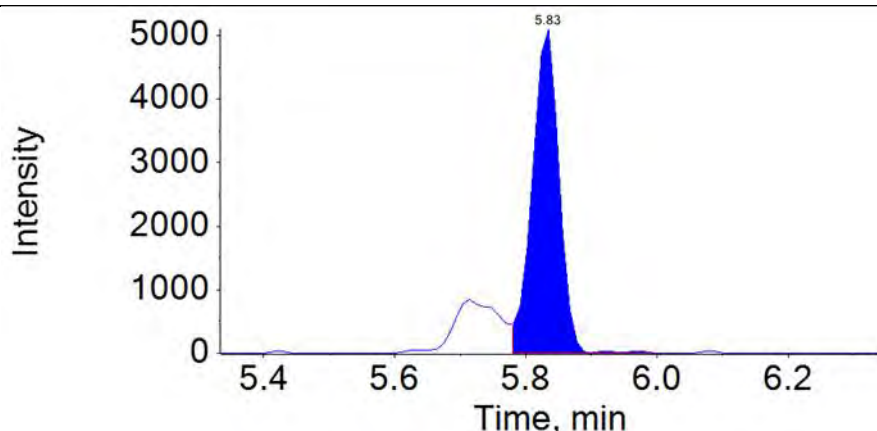
Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
29629.8
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3



Component Name:
NMeFOSAA_2
RT (min.):
5.69
Peak Area:
6049.1
Mass Range:
570.0 / 483.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3



Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
14527.0
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-17.wiff
Sample Name:
CCV2_CAL3



Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

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

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

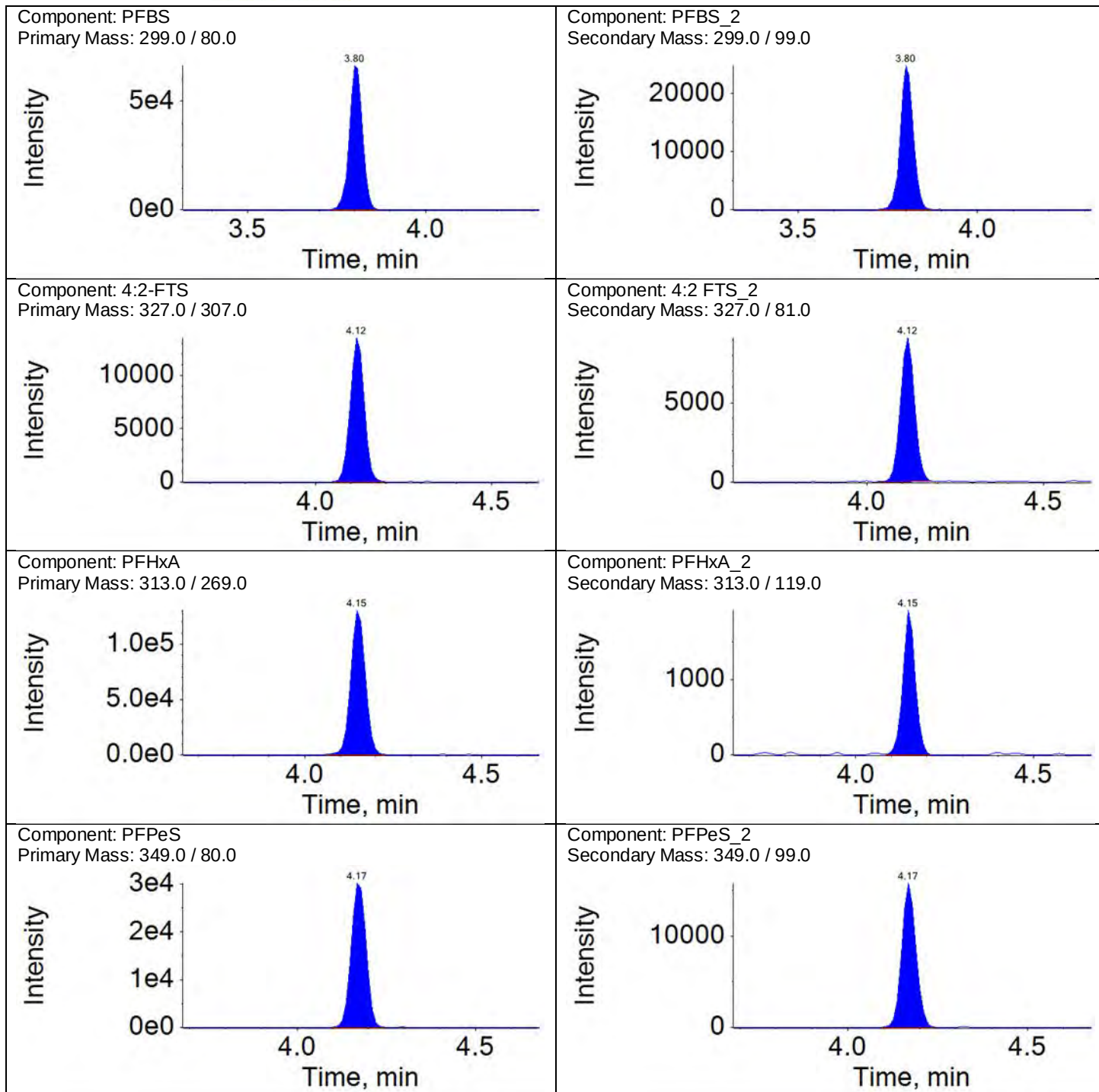
Ion Ratio Report

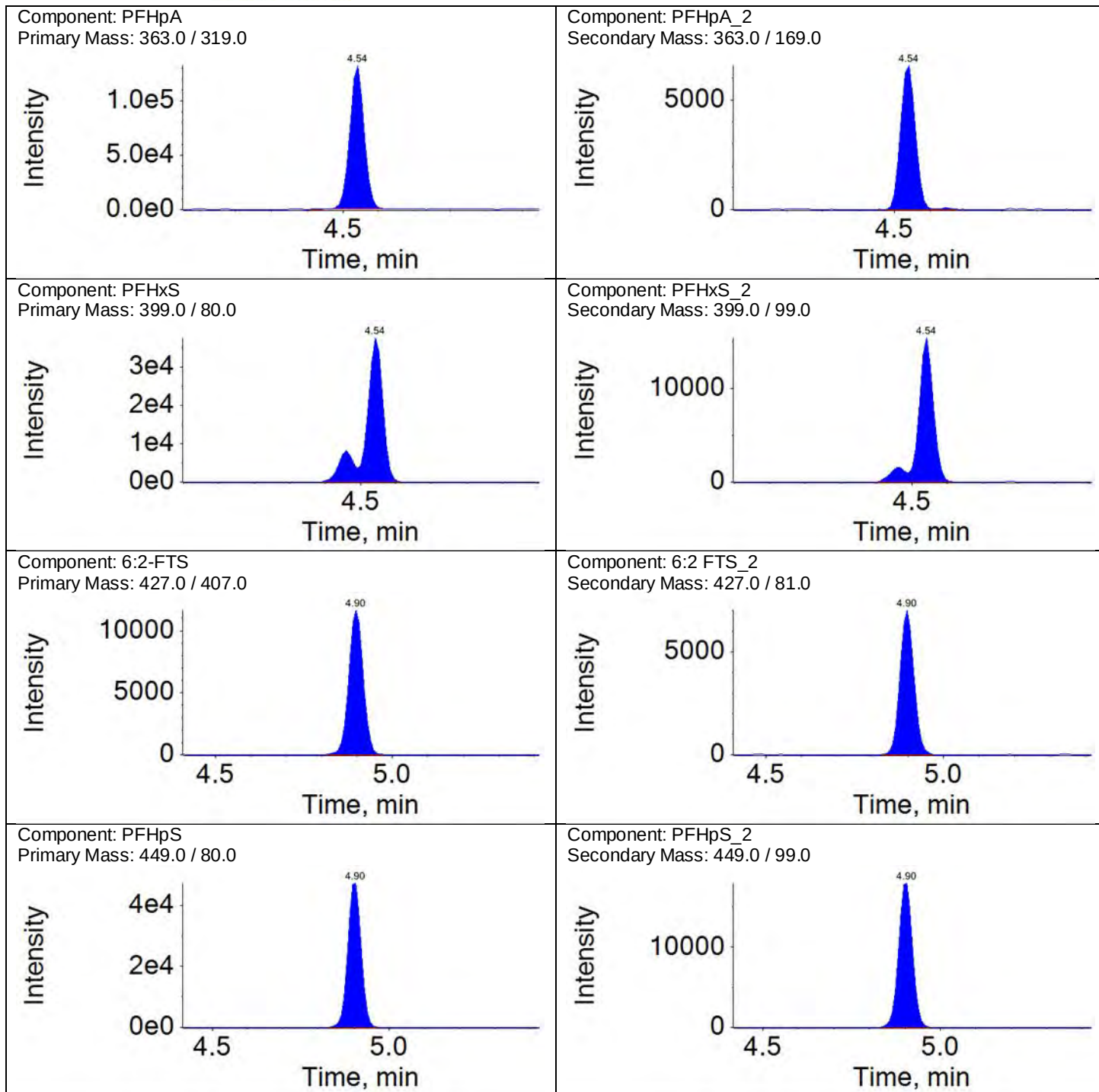
Sample Name: CCV2_CAL3

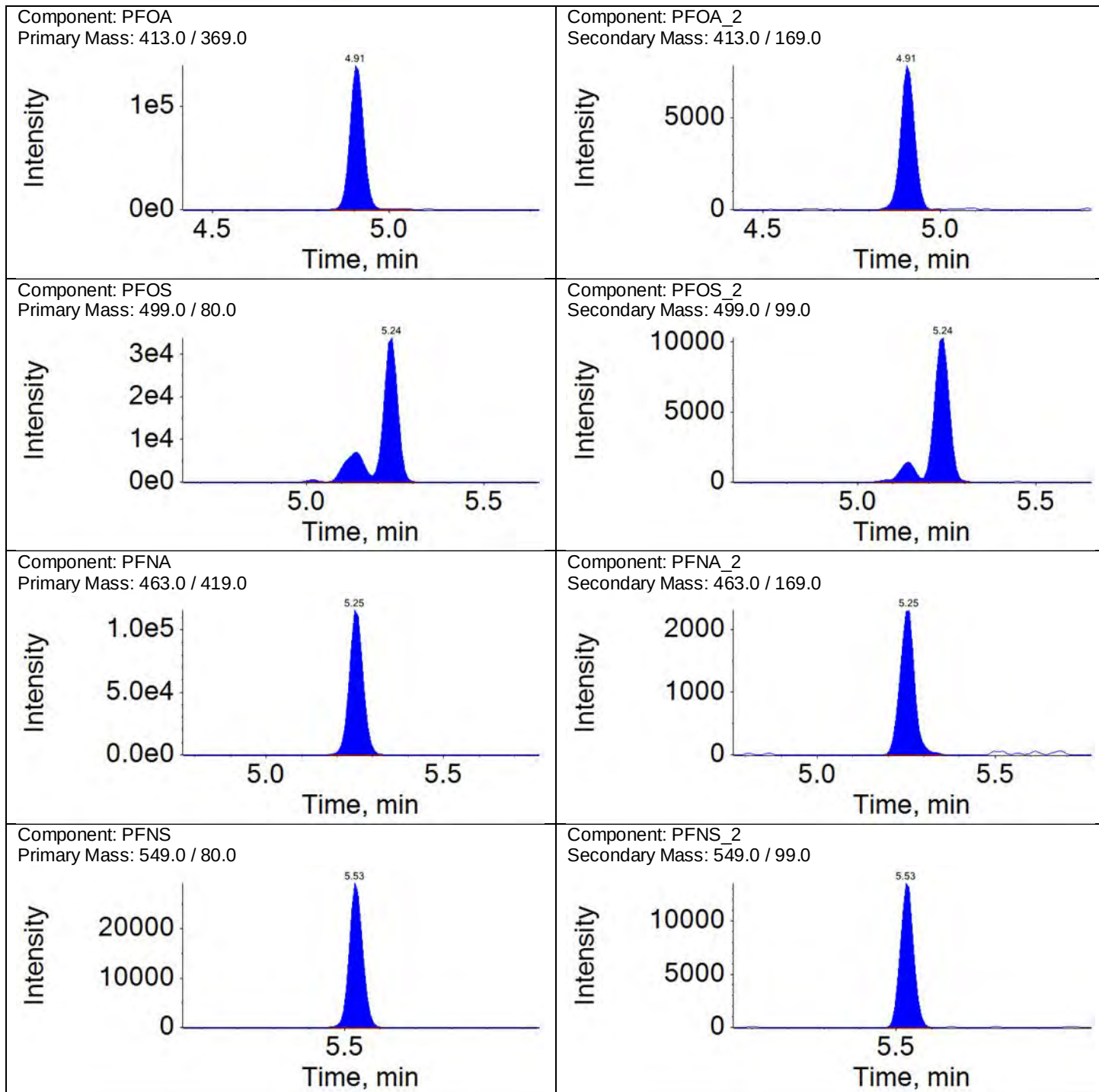
Instrument Name: LM27631

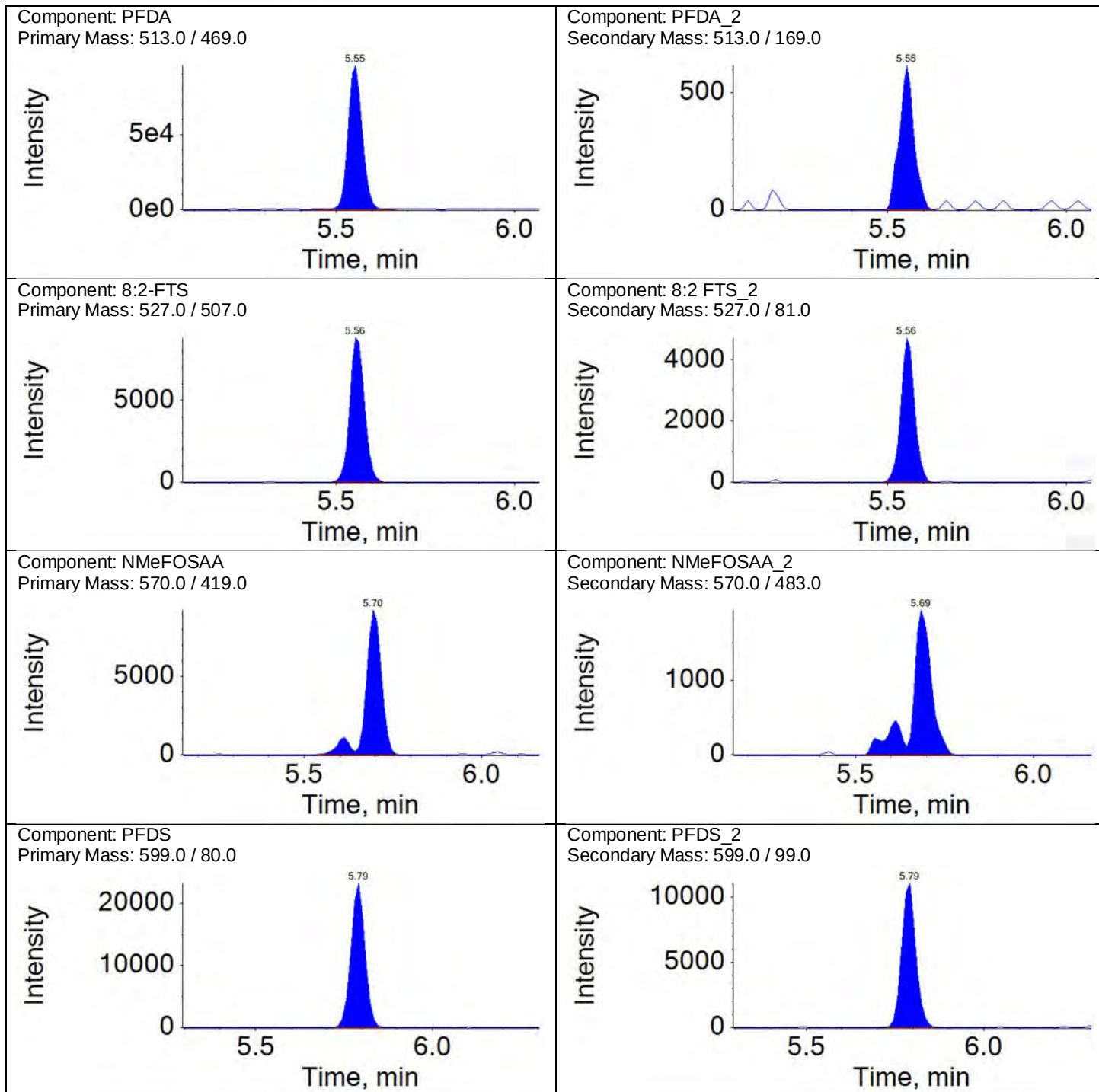
File Name: 18NOV13D-17.wiff

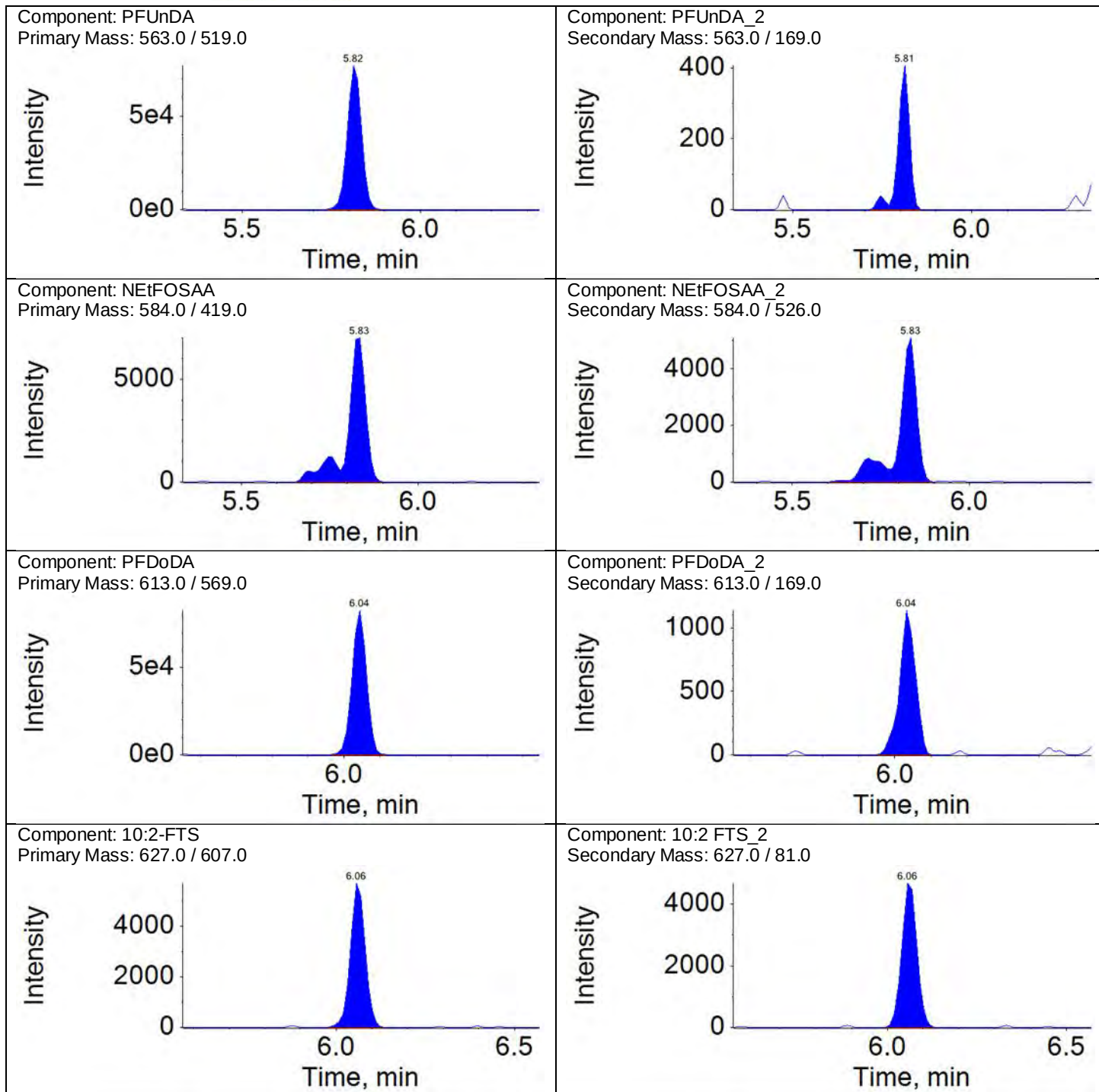
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	169051.3	A	N/A	1.0000			
PFBS_2	3.80	1.00	62580.9	A	N/A	0.3702	2	50	
4:2-FTS	4.12	1.00	37343.0	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	25291.3	A	N/A	0.6773		#NA!	
PFHxA	4.15	1.00	371133.5	A	N/A	1.0000			
PFHxA_2	4.15	1.00	4646.5	A	N/A	0.0125	6	50	
PFPeS	4.17	1.10	87968.9	A	N/A	1.0000			
PFPeS_2	4.17	1.10	43220.3	A	N/A	0.4913	-5	50	
PFHpA	4.54	1.00	368990.8	A	N/A	1.0000			
PFHpA_2	4.54	1.00	19022.4	A	N/A	0.0516	-8	50	
PFHxS	4.54	1.00	130814.3	M	N/A	1.0000			
PFHxS_2	4.54	1.00	46542.6	M	N/A	0.3558	17	50	
6:2-FTS	4.90	1.00	32918.1	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	19219.5	A	N/A	0.5839		#NA!	
PFHpS	4.90	1.08	124422.5	A	N/A	1.0000			
PFHpS_2	4.90	1.08	49059.6	A	N/A	0.3943	-3	50	
PFOA	4.91	1.00	375544.6	A	N/A	1.0000			
PFOA_2	4.91	1.00	21709.0	A	N/A	0.0578	2	50	
PFOS	5.24	1.00	120378.0	M	N/A	1.0000			
PFOS_2	5.24	1.00	34197.9	M	N/A	0.2841	10	50	
PFNA	5.25	1.00	312367.0	A	N/A	1.0000			
PFNA_2	5.25	1.00	6573.9	A	N/A	0.0210	-8	50	
PFNS	5.53	1.06	75927.4	A	N/A	1.0000			
PFNS_2	5.53	1.06	34857.7	A	N/A	0.4591	-4	50	
PFDA	5.55	1.00	263206.6	A	N/A	1.0000			
PFDA_2	5.55	1.00	1764.6	A	N/A	0.0067	-16	50	
8:2-FTS	5.56	1.00	25032.7	A	N/A	1.0000			
8:2 FTS_2	5.56	1.00	12496.0	A	N/A	0.4992		#NA!	
NMeFOSAA	5.70	1.00	28843.9	M	N/A	1.0000			
NMeFOSAA_2	5.69	1.00	7687.6	M	N/A	0.2665	25	50	
PFDS	5.79	1.11	63089.4	A	N/A	1.0000			
PFDS_2	5.79	1.11	30456.1	A	N/A	0.4827	-5	50	
PFUnDA	5.82	1.00	212311.7	A	N/A	1.0000			
PFUnDA_2	5.81	1.00	912.9	A	N/A	0.0043	3	50	
NEtFOSAA	5.83	1.00	25720.9	M	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	18533.4	M	N/A	0.7206	24	50	
PFDODA	6.04	1.00	230876.4	A	N/A	1.0000			
PFDODA_2	6.04	1.00	3504.0	A	N/A	0.0152	-7	50	
10:2-FTS	6.06	1.09	16368.9	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	13788.8	A	N/A	0.8424		#NA!	
PFTrDA	6.24	1.03	200059.8	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	1729.3	A	N/A	0.0086	-6	50	
PFTeDA	6.42	1.00	155992.4	A	N/A	1.0000			
PFTeDA_2	6.41	1.00	854.7	A	N/A	0.0055	-15	50	
PFHxDA	6.72	1.05	74153.5	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	4597.9	A	N/A	0.0620	-8	50	
PFODA	6.98	1.09	62550.8	A	N/A	1.0000			
PFODA_2	6.98	1.09	1638.5	A	N/A	0.0262	-3	50	

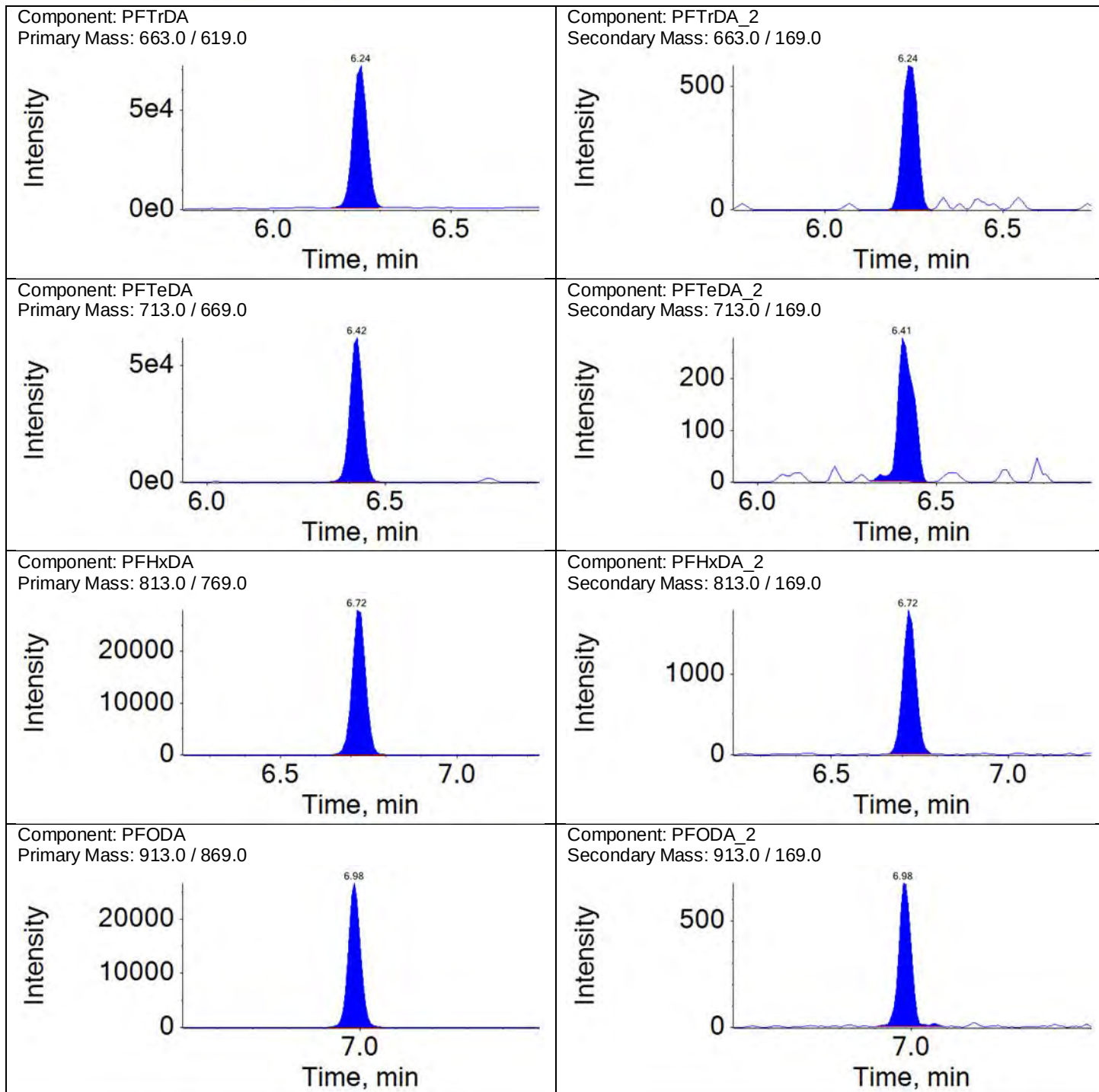










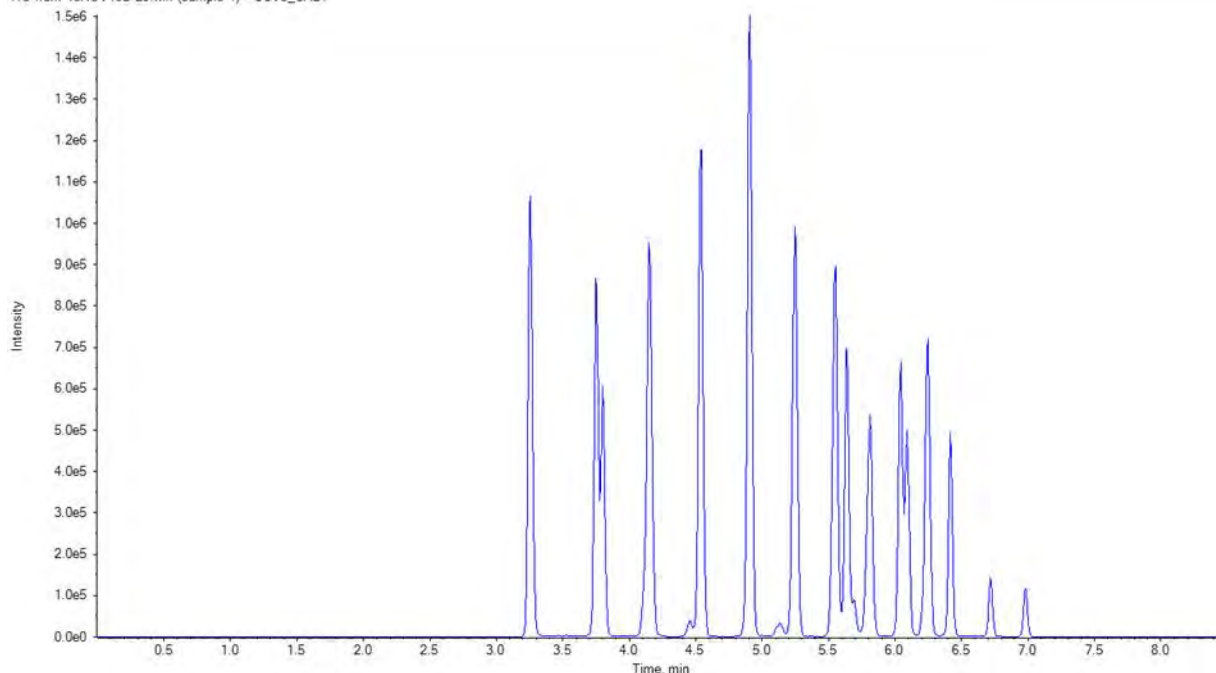


Continuing Calibration Verification

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3 CAL4	CALBRN41833B	18NOV13D-23.wiff	2018-11-13T12:26:35

TIC from 18NOV13D-23.wiff (sample 1) - CCV3_CAL4



Injection Standard Area Reference File: 18NOV13D-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	674532.6	661126.9	2	50	
13C2-PFOA	5.0	469240.0	466902.6	1	50	
13C4-PFOS	4.8	245294.7	247446.9	-1	50	
13C2-PFDA	5.0	299594.2	295381.6	1	50	

APPROVED

By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

Continuing Calibration Verification

ICAL Name: 18NOV12DCAL Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3_CAL4	CALBRN41833B	18NOV13D-23.wiff	2018-11-13T12:26:35

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	1076876.5	10	13C4-PFBA	726272.3	5.0	1.483	3.25	1.000	8.000	8.214	3	30	
PFPeA	1087870.4	11	13C5-PFPeA	745402.4	5.0	1.459	3.75	1.000	8.000	8.448	6	30	
PFBS	617597.3	11	13C3-PFBS	427494.9	4.7	1.445	3.80	1.000	7.080	6.872	-3	30	
4:2-FTS	141267.3	12	13C2-4:2-FTS	50472.7	4.7	2.799	4.12	1.000	7.470	7.599	2	30	
PFHxA	1280406.9	12	13C5-PFHxA	663434.2	5.0	1.930	4.15	1.000	8.000	8.058	1	30	
PFPeS	309863.8	11	13C3-PFBS	427494.9	4.7	0.725	4.17	1.100	7.500	7.037	-6	30	
PFHpA	1359613.4	11	13C4-PFHxA	519531.1	5.0	2.617	4.54	1.000	8.000	8.675	8	30	
PFHxS	458768.0	19	13C3-PFHxS	315686.3	4.7	1.453	4.54	1.000	7.300	7.046	-3	30	
6:2-FTS	108071.5	11	13C2-6:2-FTS	34757.5	4.8	3.109	4.90	1.000	7.580	7.524	-1	30	
PFHpS	446880.9	11	13C3-PFHxS	315686.3	4.7	1.416	4.90	1.080	7.610	7.452	-2	30	
PFOA	1362301.6	11	13C8-PFOA	887912.0	5.0	1.534	4.91	1.000	8.000	8.194	2	30	
PFOS	439272.9	22	13C8-PFOS	283430.9	4.8	1.550	5.24	1.000	7.400	6.778	-8	30	
PFNA	1141467.5	11	13C9-PFNA	446829.1	5.0	2.555	5.25	1.000	8.000	9.212	15	30	
PFNS	291902.2	11	13C8-PFOS	283430.9	4.8	1.030	5.53	1.060	7.680	7.205	-6	30	
PFDA	875408.9	11	13C6-PFDA	620184.2	5.0	1.412	5.55	1.000	8.000	7.483	-6	30	
8:2-FTS	86544.5	11	13C2-8:2-FTS	27394.6	4.8	3.159	5.55	1.000	7.660	7.366	-4	30	
PFOSA	962687.1	11	13C8-PFOSA	630662.9	5.0	1.526	5.64	1.000	8.000	7.456	-7	30	
NMeFOSAA	102800.4	19	d3-NMeFOSAA	68810.3	5.0	1.494	5.69	1.000	8.000	8.443	6	30	
PFDS	232494.5	11	13C8-PFOS	283430.9	4.8	0.820	5.79	1.110	7.700	7.433	-3	30	
PFUnDA	763658.8	12	13C7-PFUnDA	232744.0	5.0	3.281	5.81	1.000	8.000	8.578	7	30	
NEtFOSAA	94982.9	22	d5-NEtFOSAA	71296.2	5.0	1.332	5.83	1.000	8.000	6.984	-13	30	
PFDODA	846251.4	12	13C2-PFDODA	548137.6	5.0	1.544	6.04	1.000	8.000	7.862	-2	30	
10:2-FTS	60107.9	11	13C2-8:2-FTS	27394.6	4.8	2.194	6.06	1.090	7.710	7.308	-5	30	
NMePFOSAE	624149.1	11	d7-NMePFOSAE	325809.6	5.0	1.916	6.09	1.000	8.000	7.973	0	30	
NMePFOSA	118509.6	11	d3-NMePFOSA	75615.7	5.0	1.567	6.10	1.000	8.000	7.732	-3	30	
PFDOS	100927.8	11	13C8-PFOS	283430.9	4.8	0.356	6.21	1.190	7.740	6.237	-19	30	
NEtPFOSAE	656152.2	11	d9-NEtPFOSAE	266767.8	5.0	2.460	6.25	1.000	8.000	7.891	-1	30	
NEtPFOSA	96604.7	11	d5-NEtPFOSA	59516.7	5.0	1.623	6.26	1.000	8.000	7.454	-7	30	
PFTeDA	708052.2	11	13C2-PFDODA	548137.6	5.0	1.292	6.24	1.030	8.000	8.153	2	30	
PFTeDA	586334.7	10	13C2-PFTeDA	423201.7	5.0	1.385	6.42	1.000	8.000	7.766	-3	30	
PFHxDA	271760.5	11	13C2-PFTeDA	423201.7	5.0	0.642	6.72	1.050	8.000	7.651	-4	30	
PFOA	243657.7	10	13C2-PFTeDA	423201.7	5.0	0.576	6.98	1.090	8.000	8.019	0	30	

Continuing Calibration Verification

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV3 CAL4		Data File:		18NOV13D-23.wiff
Sample ID:	CALBRN41833B		Acquis Date:		2018-11-13T12:26:35
Sample Type:	Quality Control		Instrument:		LM27631
Vial Position:	6		Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:		18NOV13DCCV1-4
QMethod File:	18AUG20QM		ICAL Name:		18NOV12DCAL
Batch Number:	N/A		Operator:		JPT12262
Sample Wt.:	1.00000		Dilution Factor:		1.00
Sample Vol.:	1.000		Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-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	674532.6	661126.9	2	50	
13C2-PFOA	5.0	469240.0	466902.6	1	50	
13C4-PFOS	4.8	245294.7	247446.9	-1	50	
13C2-PFDA	5.0	299594.2	295381.6	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	726272.3	13C3-PFBA	674532.6	1.077	5.000	4.827	97	70-130	
E13C5-PFPeA	745402.4	13C3-PFBA	674532.6	1.105	5.000	4.956	99	70-130	
E13C3-PFBS	427494.9	13C3-PFBA	674532.6	0.634	4.650	4.474	96	70-130	
E13C2-4:2-FTS	50472.7	13C2-PFOA	469240.0	0.108	4.670	4.791	103	70-130	
E13C5-PFHxA	663434.2	13C2-PFOA	469240.0	1.414	5.000	5.107	102	70-130	
E13C3-PFHxS	315686.3	13C2-PFOA	469240.0	0.673	4.730	4.616	98	70-130	
E13C4-PFHpA	519531.1	13C2-PFOA	469240.0	1.107	5.000	4.988	100	70-130	
E13C2-6:2-FTS	34757.5	13C2-PFOA	469240.0	0.074	4.750	4.956	104	70-130	
E13C8-PFOA	887912.0	13C2-PFOA	469240.0	1.892	5.000	5.213	104	70-130	
E13C8-PFOS	283430.9	13C4-PFOS	245294.7	1.155	4.780	5.120	107	70-130	
E13C9-PFNA	446829.1	13C4-PFOS	245294.7	1.822	5.000	5.079	102	70-130	
E13C6-PFDA	620184.2	13C2-PFDA	299594.2	2.070	5.000	4.831	97	70-130	
E13C2-8:2-FTS	27394.6	13C2-PFDA	299594.2	0.091	4.790	4.560	95	70-130	
E13C8-PFOSA	630662.9	13C2-PFDA	299594.2	2.105	5.000	4.667	93	70-130	
Ed3-NMeFOSAA	68810.3	13C2-PFDA	299594.2	0.230	5.000	4.146	83	70-130	
E13C7-PFUnDA	232744.0	13C2-PFDA	299594.2	0.777	5.000	4.510	90	70-130	
Ed5-NEtFOSAA	71296.2	13C2-PFDA	299594.2	0.238	5.000	5.035	101	70-130	
E13C2-PFDODA	548137.6	13C2-PFDA	299594.2	1.830	5.000	4.750	95	70-130	
Ed7-NMePFOSAE	325809.6	13C2-PFDA	299594.2	1.088	5.000	4.706	94	70-130	
Ed3-NMePFOSA	75615.7	13C2-PFDA	299594.2	0.252	5.000	4.586	92	70-130	
Ed9-NEtPFOSAE	266767.8	13C2-PFDA	299594.2	0.890	5.000	4.631	93	70-130	
Ed5-NEtPFOSA	59516.7	13C2-PFDA	299594.2	0.199	5.000	4.660	93	70-130	
E13C2-PFTeDA	423201.7	13C2-PFDA	299594.2	1.413	5.000	4.959	99	70-130	

APPROVED

By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: CCV3_CAL4

Instrument Name: LM27631

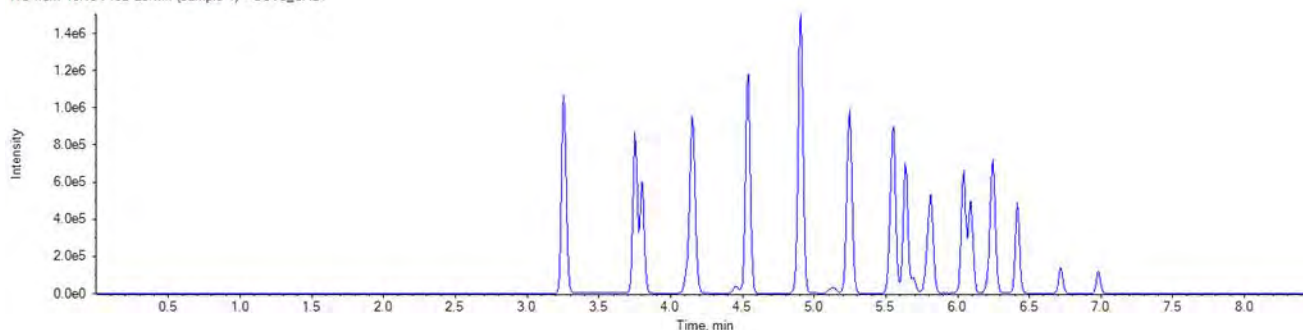
File Name: 18NOV13D-23.wiff

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	1076876.5		A	13C4-PFBA	3.25	726272.3	1.483	8.214
PFPeA	3.75	1.000	1087870.4		A	13C5-PFPeA	3.75	745402.4	1.459	8.448
PFBS	3.80	1.000	617597.3		A	13C3-PFBS	3.80	427494.9	1.445	6.872
4:2-FTS	4.12	1.000	141267.3		A	13C2-4:2-FTS	4.11	50472.7	2.799	7.599
PFHxA	4.15	1.000	1280406.9		A	13C5-PFHxA	4.15	663434.2	1.930	8.058
PFPeS	4.17	1.100	309863.8		A	13C3-PFBS	3.80	427494.9	0.725	7.037
PFHpA	4.54	1.000	1359613.4		A	13C4-PFHpA	4.54	519531.1	2.617	8.675
PFHxS	4.54	1.000	458768.0		M	13C3-PFHxS	4.54	315686.3	1.453	7.046
6:2-FTS	4.90	1.000	108071.5		A	13C2-6:2-FTS	4.90	34757.5	3.109	7.524
PFHpS	4.90	1.080	446880.9		A	13C3-PFHxS	4.54	315686.3	1.416	7.452
PFOA	4.91	1.000	1362301.6		A	13C8-PFOA	4.91	887912.0	1.534	8.194
PFOS	5.24	1.000	439272.9		M	13C8-PFOS	5.24	283430.9	1.550	6.778
PFNA	5.25	1.000	1141467.5		A	13C9-PFNA	5.25	446829.1	2.555	9.212
PFNS	5.53	1.060	291902.2		A	13C8-PFOS	5.24	283430.9	1.030	7.205
PFDA	5.55	1.000	875408.9		A	13C6-PFDA	5.55	620184.2	1.412	7.483
8:2-FTS	5.55	1.000	86544.5		A	13C2-8:2-FTS	5.56	27394.6	3.159	7.366
PFOSA	5.64	1.000	962687.1		A	13C8-PFOSA	5.64	630662.9	1.526	7.456
NMeFOSAA	5.69	1.000	102800.4		M	d3-NMeFOSAA	5.69	68810.3	1.494	8.443
PFDS	5.79	1.110	232494.5		A	13C8-PFOS	5.24	283430.9	0.820	7.433
PFUnDA	5.81	1.000	763658.8		A	13C7-PFUnDA	5.81	232744.0	3.281	8.578
NEtFOSAA	5.83	1.000	94982.9		A	d5-NEtFOSAA	5.82	71296.2	1.332	6.984
PFDODA	6.04	1.000	846251.4		A	13C2-PFDODA	6.04	548137.6	1.544	7.862
10:2-FTS	6.06	1.090	60107.9		A	13C2-8:2-FTS	5.56	27394.6	2.194	7.308
NMePFOSAE	6.09	1.000	624149.1		A	d7-NMePFOSAE	6.08	325809.6	1.916	7.973
NMePFOSA	6.10	1.000	118509.6		A	d3-NMePFOSA	6.10	75615.7	1.567	7.732
PFDOS	6.21	1.190	100927.8		A	13C8-PFOS	5.24	283430.9	0.356	6.237
NEtPFOSAE	6.25	1.000	656152.2		A	d9-NEtPFOSAE	6.24	266767.8	2.460	7.891
NEtPFOSA	6.26	1.000	96604.7		A	d5-NEtPFOSA	6.26	59516.7	1.623	7.454
PFTDA	6.24	1.030	708052.2		A	13C2-PFDODA	6.04	548137.6	1.292	8.153
PFTeDA	6.42	1.000	586334.7		A	13C2-PFTeDA	6.42	423201.7	1.385	7.766
PFHxDA	6.72	1.050	271760.5		A	13C2-PFTeDA	6.42	423201.7	0.642	7.651
PFODA	6.98	1.090	243657.7		A	13C2-PFTeDA	6.42	423201.7	0.576	8.019

Total Ion Chromatogram

TIC from 18NOV13D-23.wiff (sample 1) - CCV3_CAL4



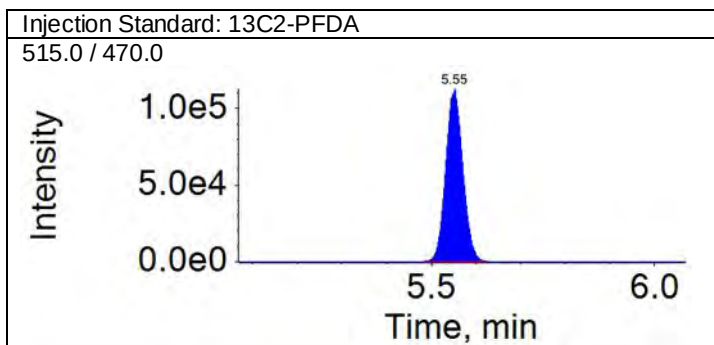
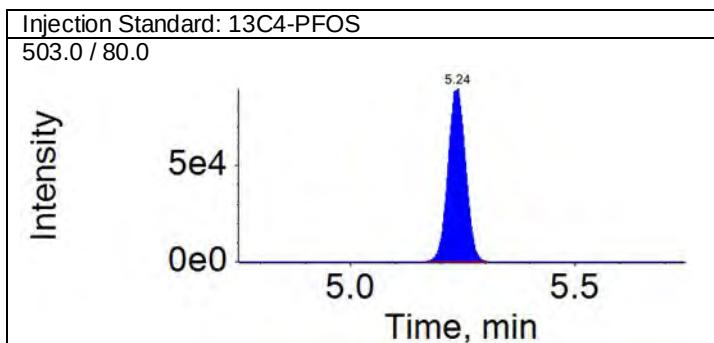
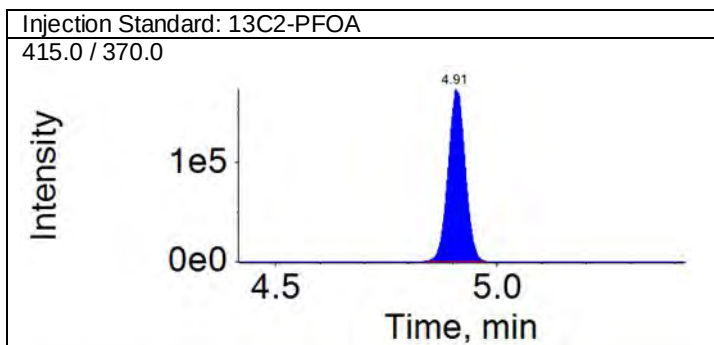
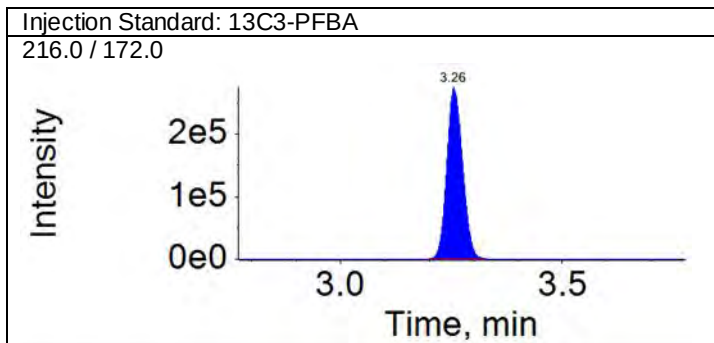
APPROVED
By JPT at 4:33 pm, 11/13/18

BSI05 Page 1303 of 1595

REVIEWED
By HMK at 1:48 pm, 11/14/18

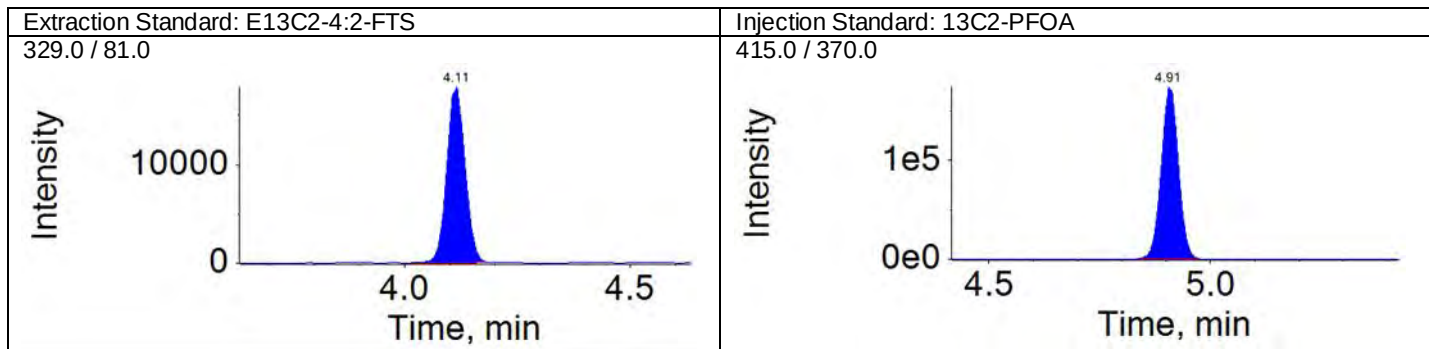
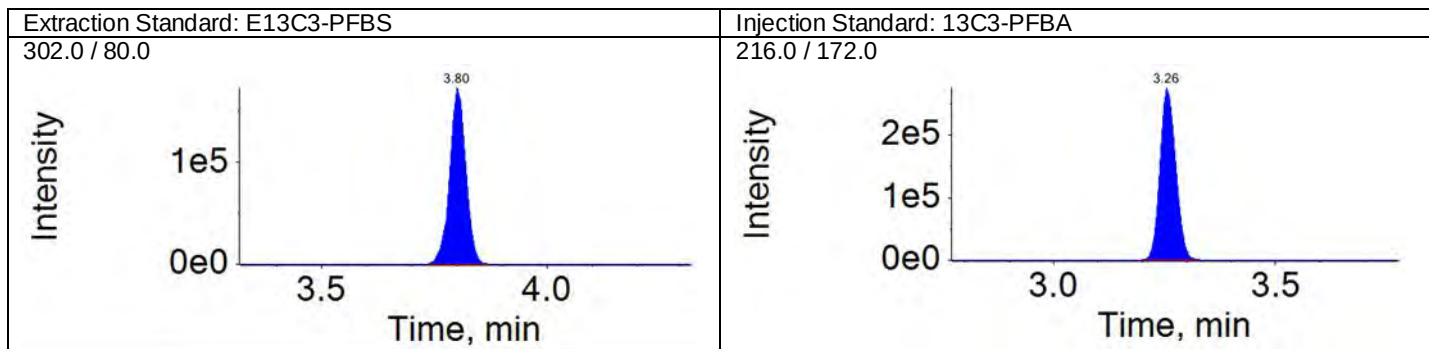
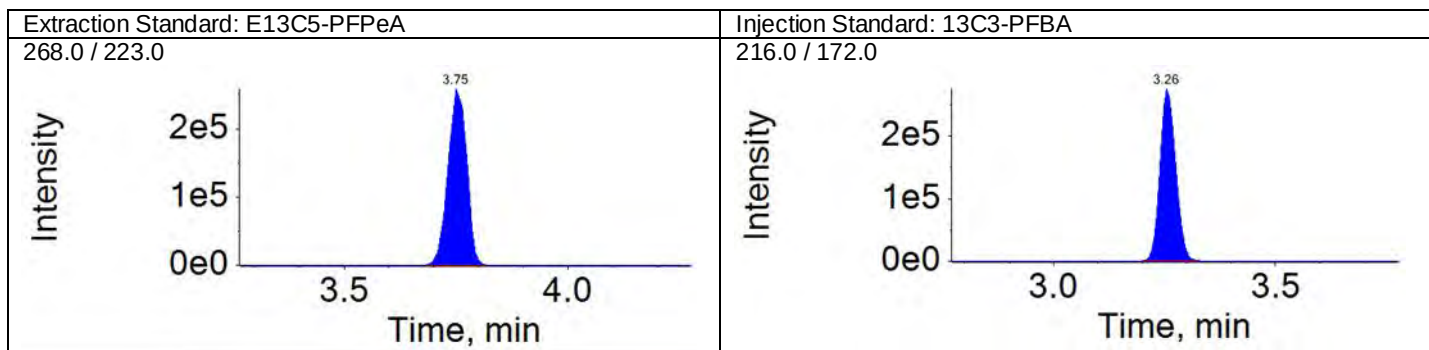
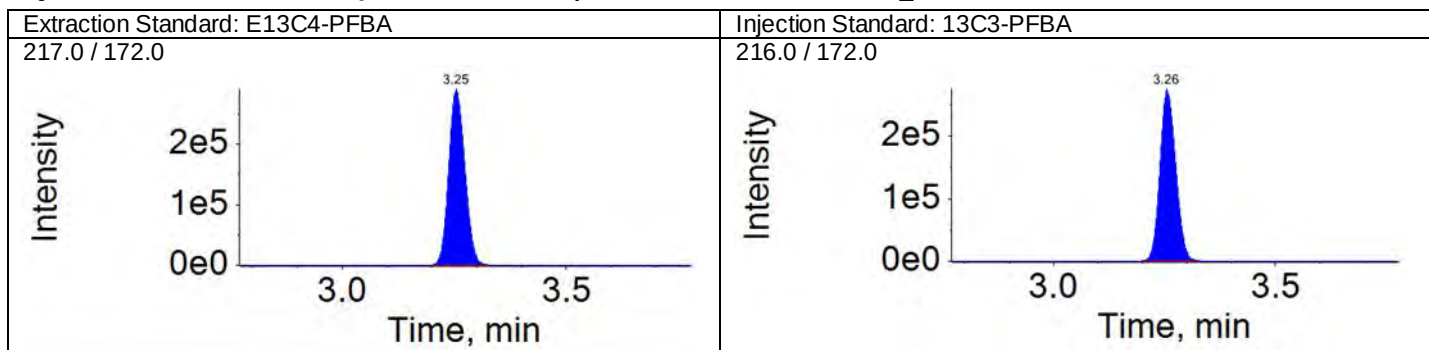
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



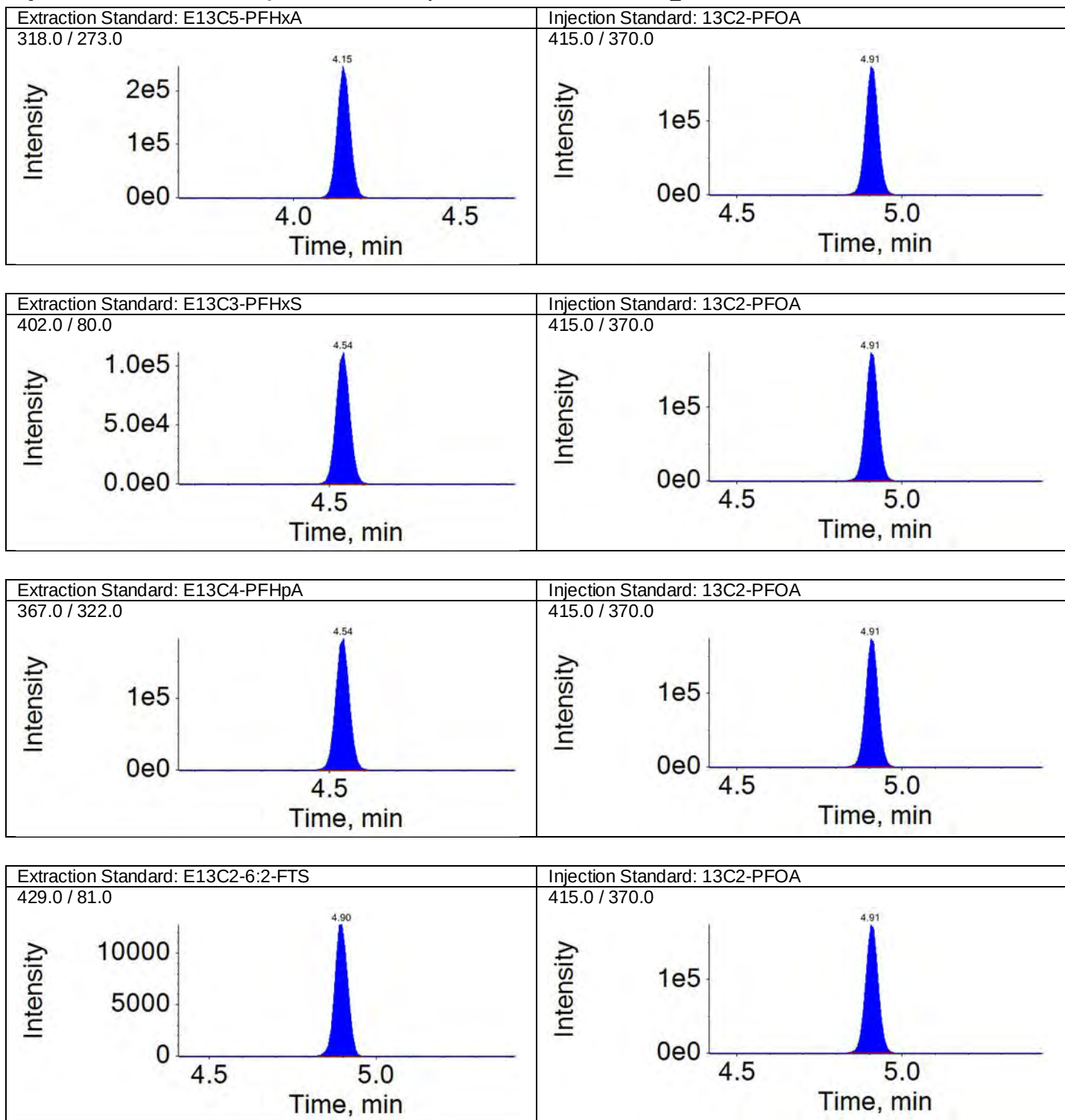
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

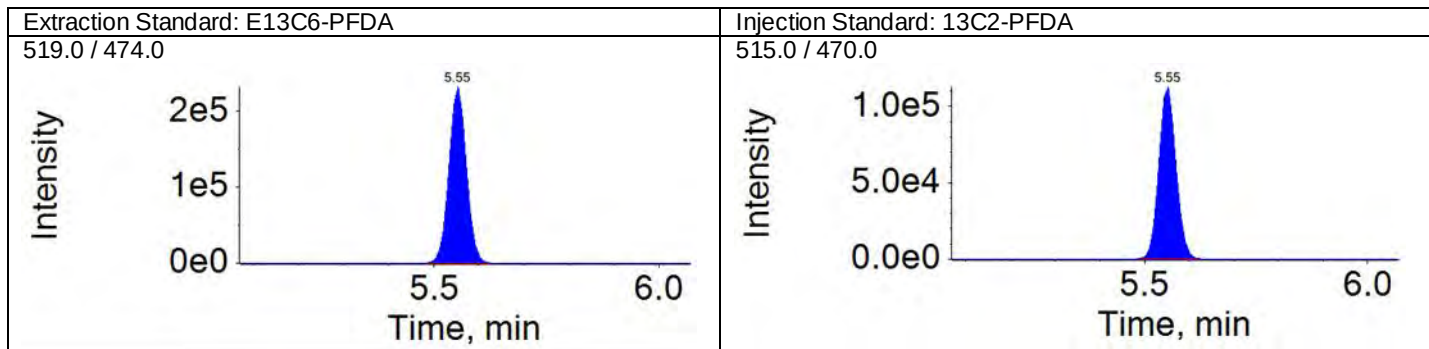
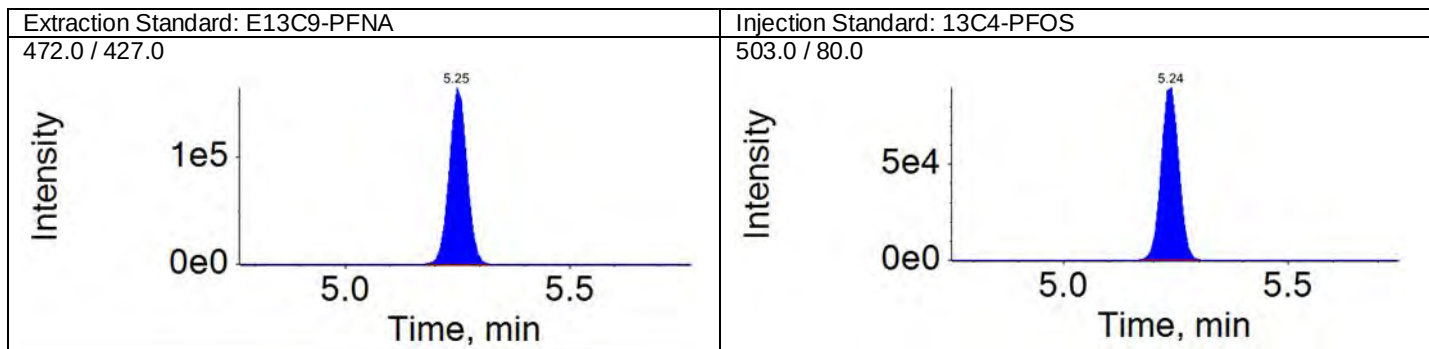
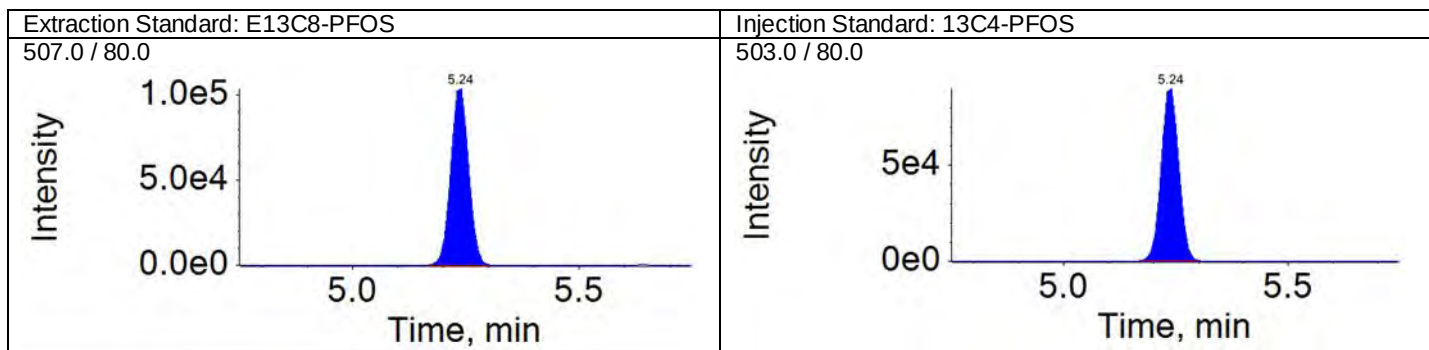
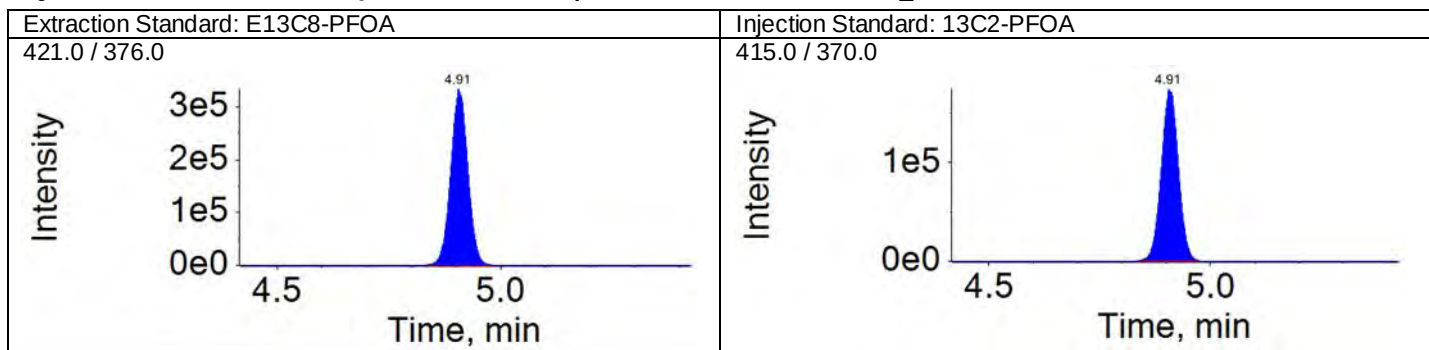
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

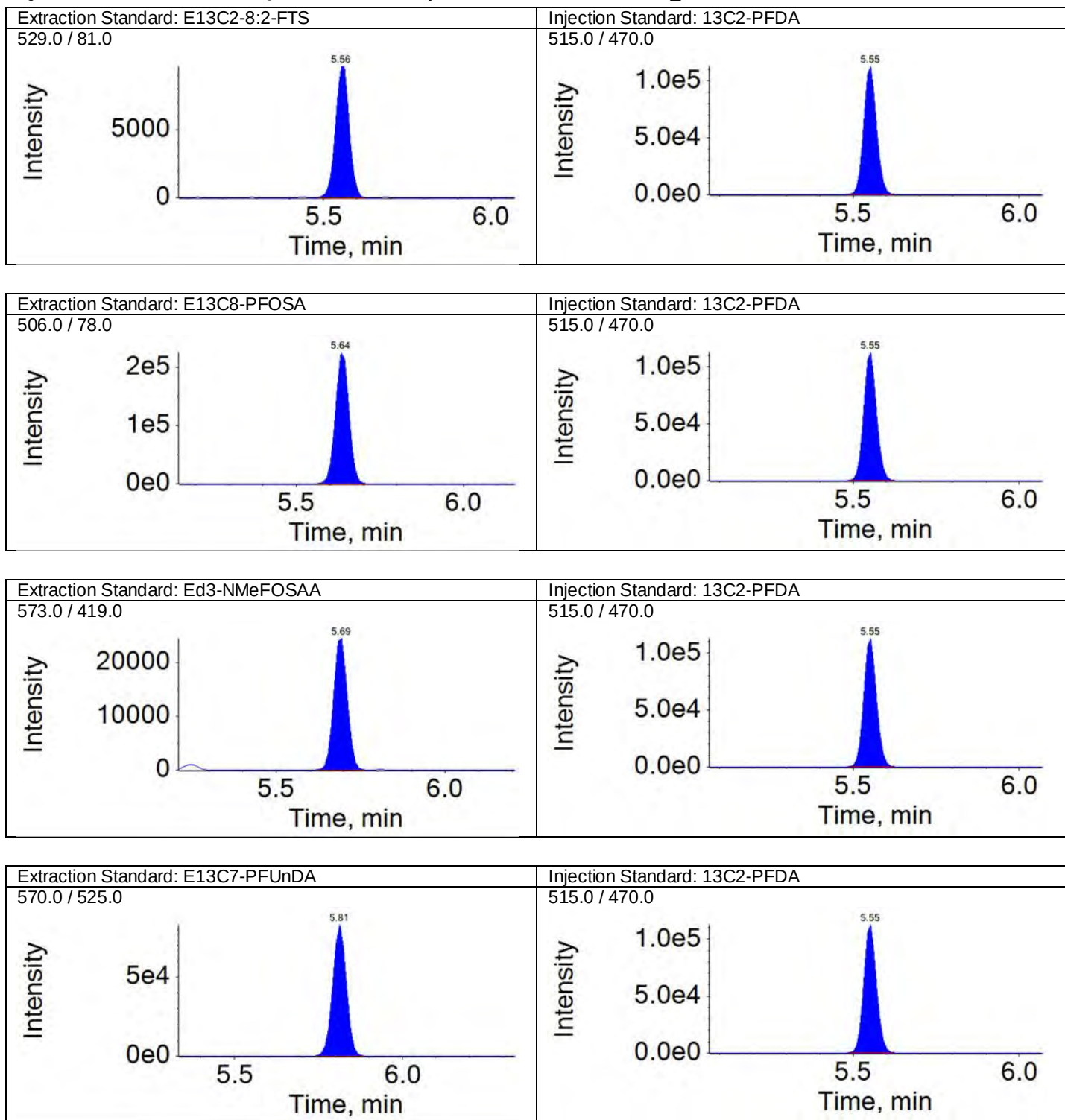
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

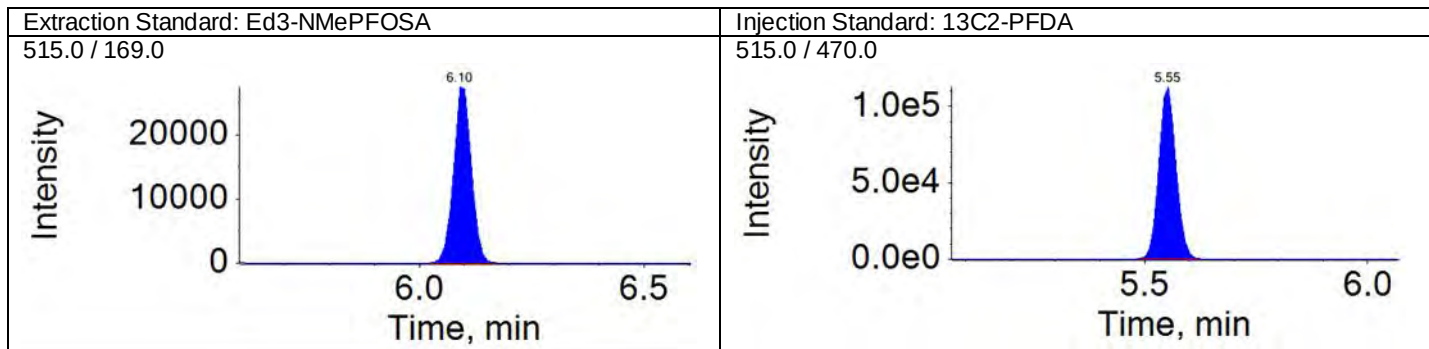
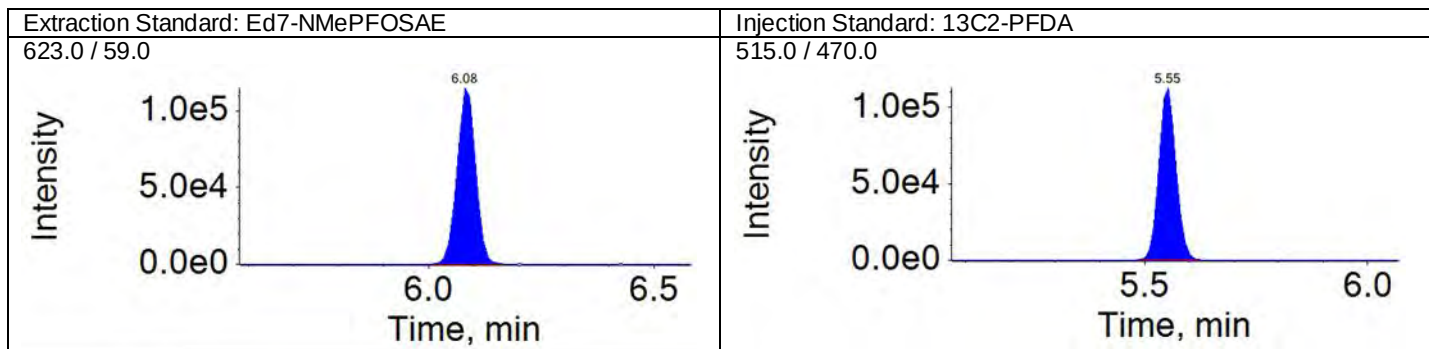
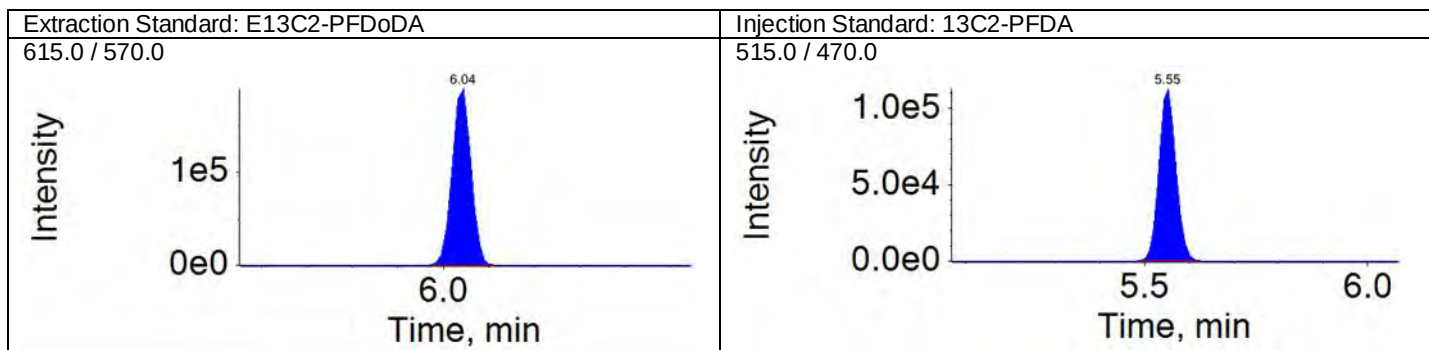
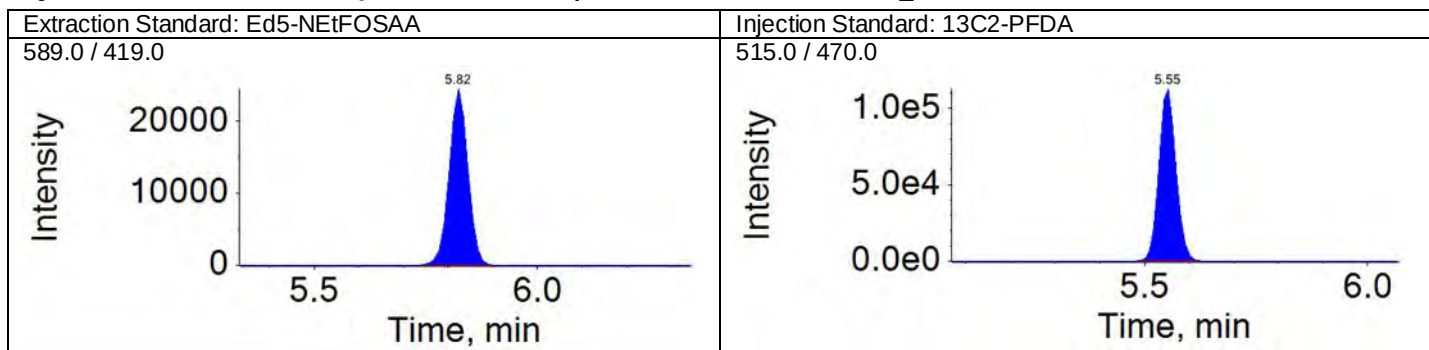
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

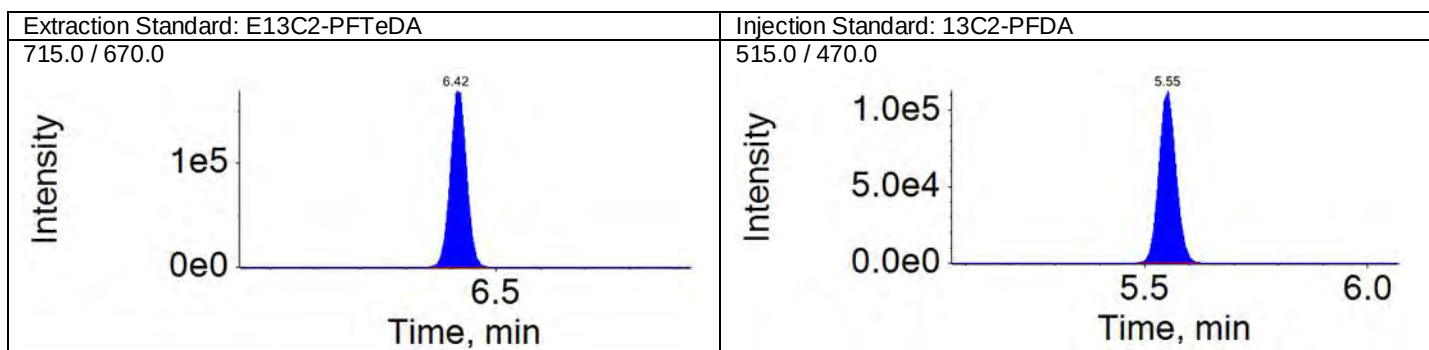
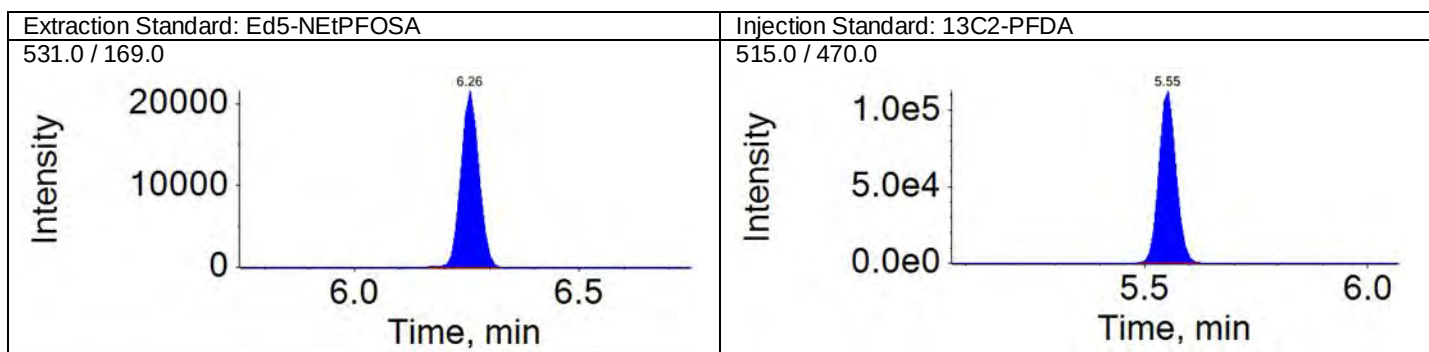
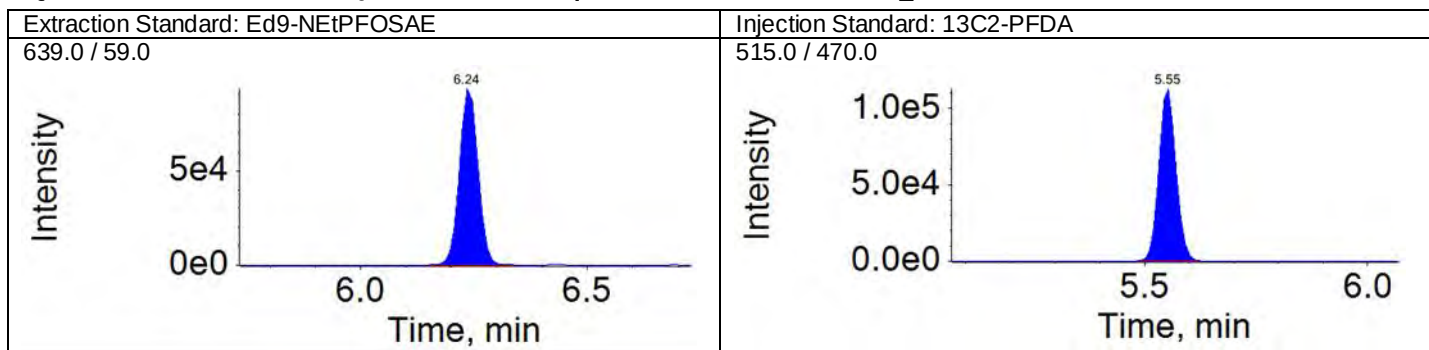
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

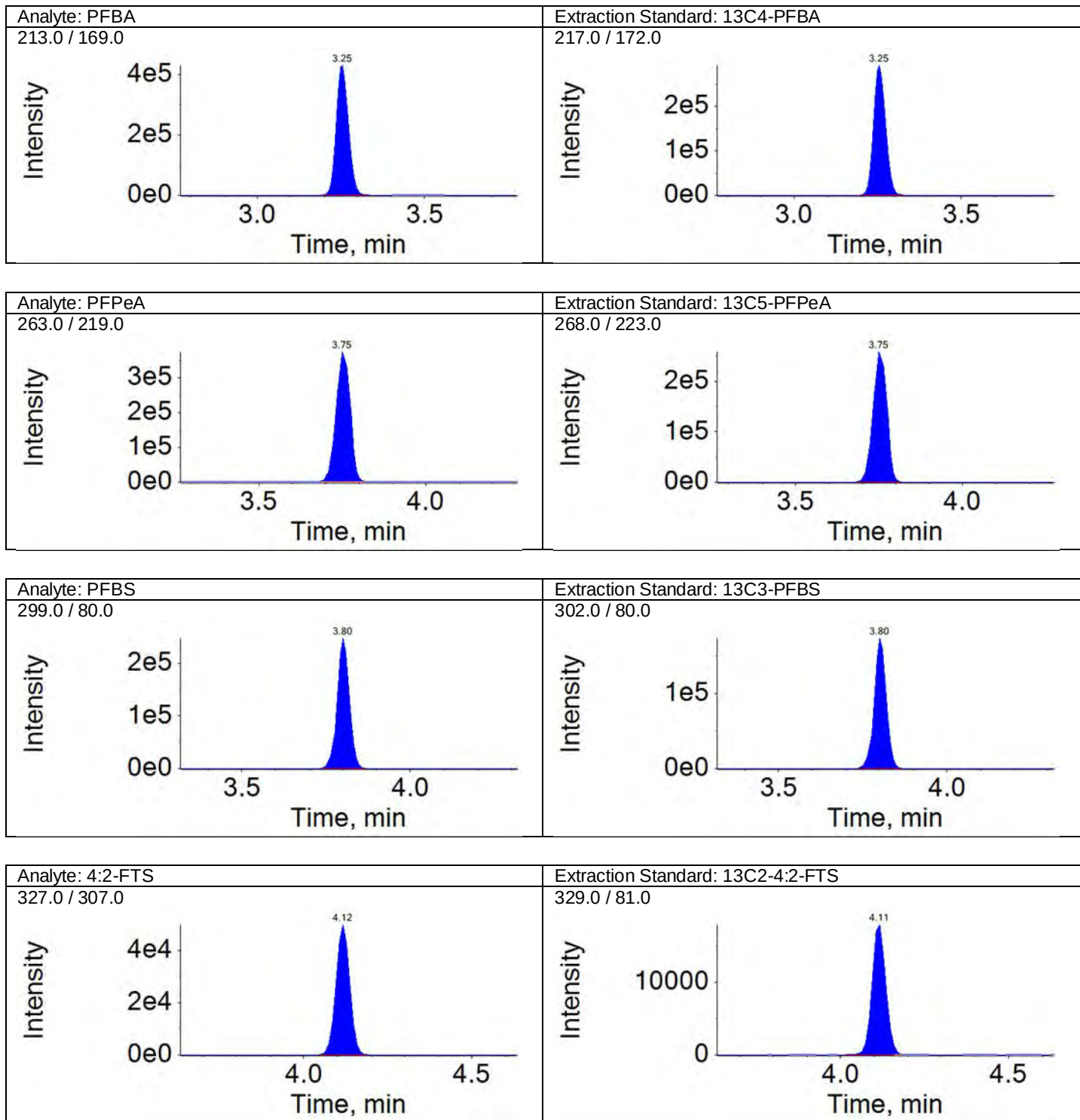
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



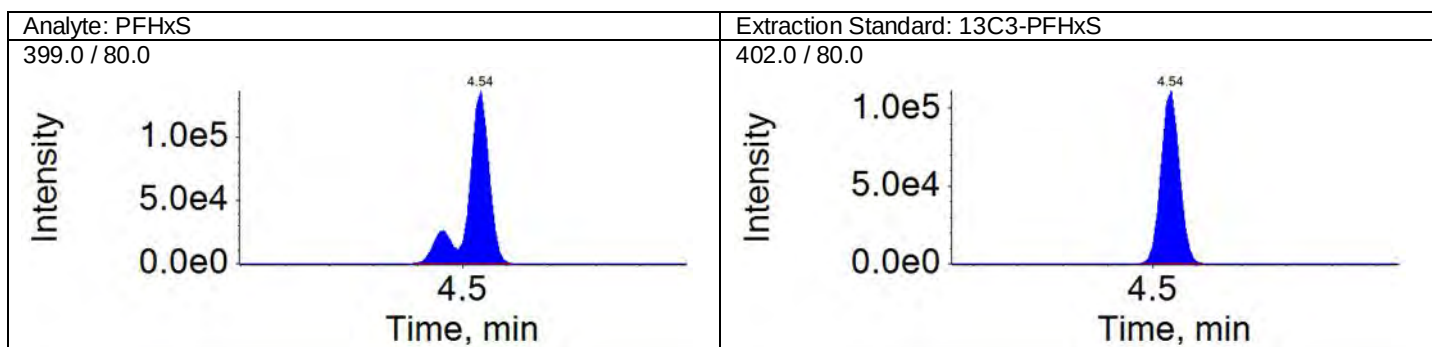
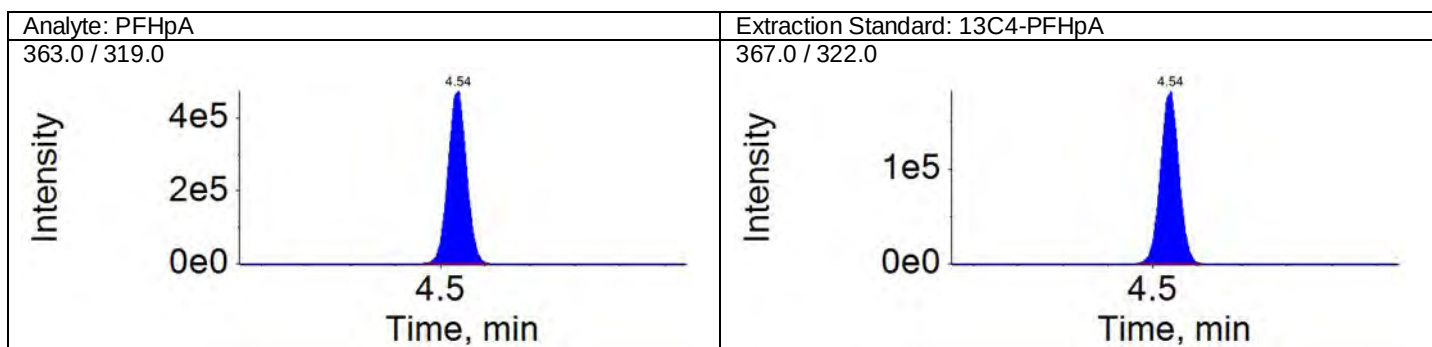
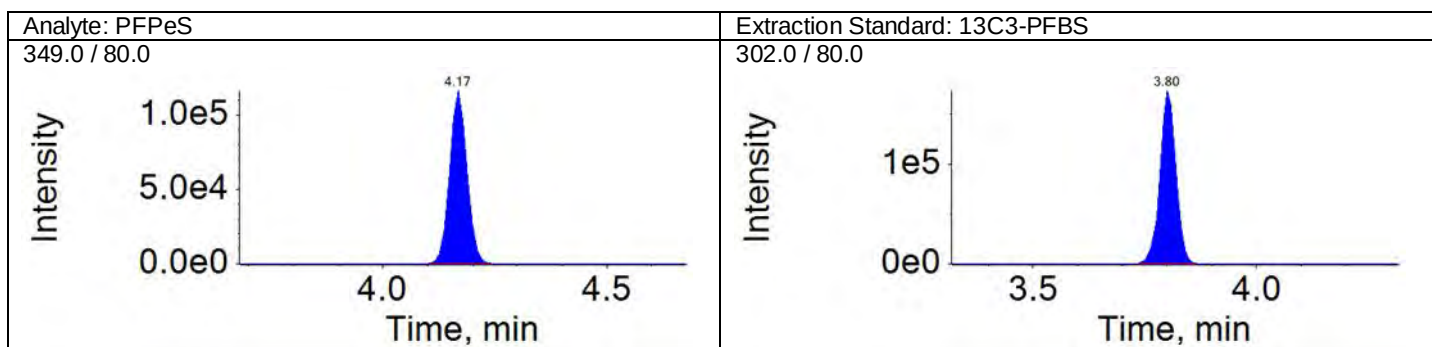
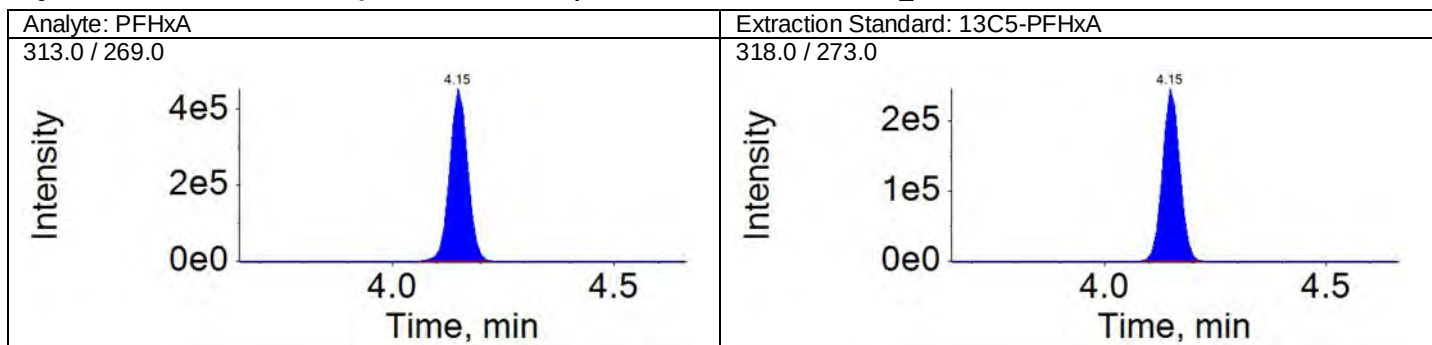
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



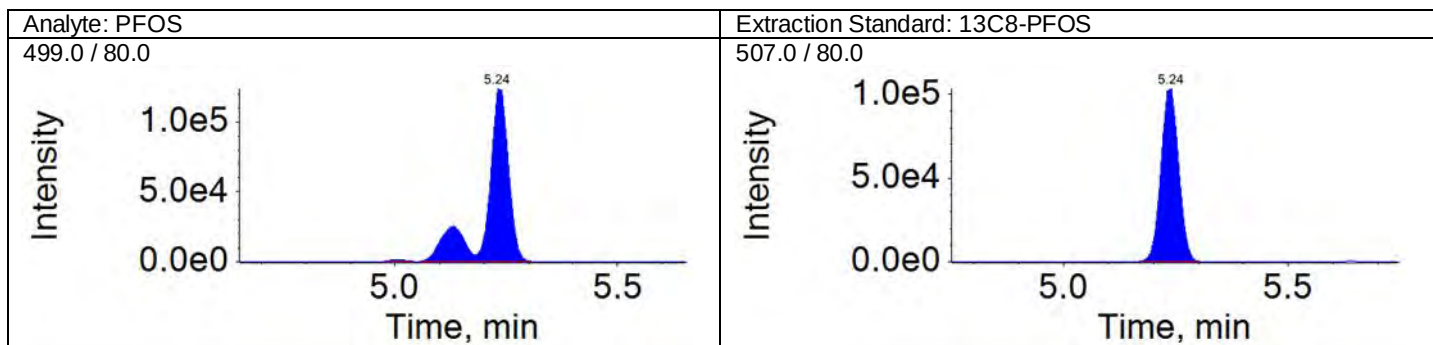
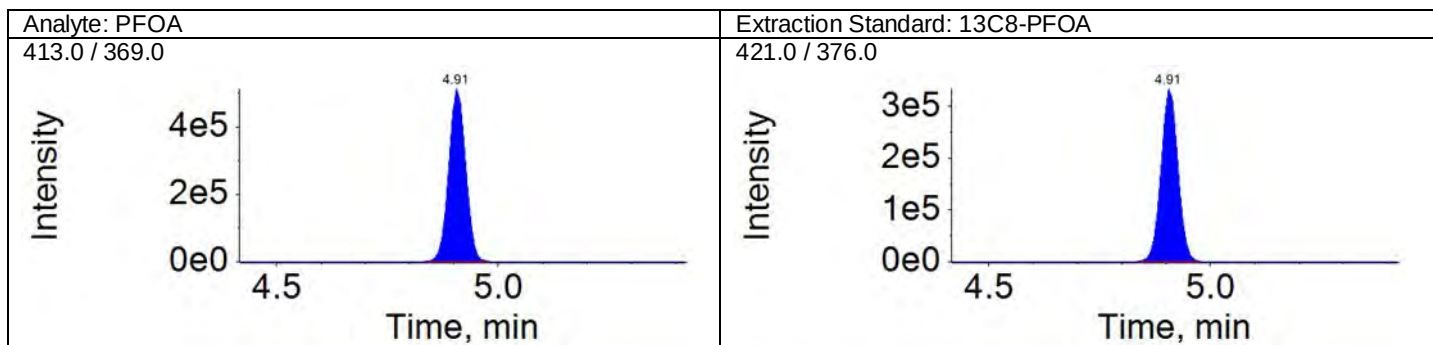
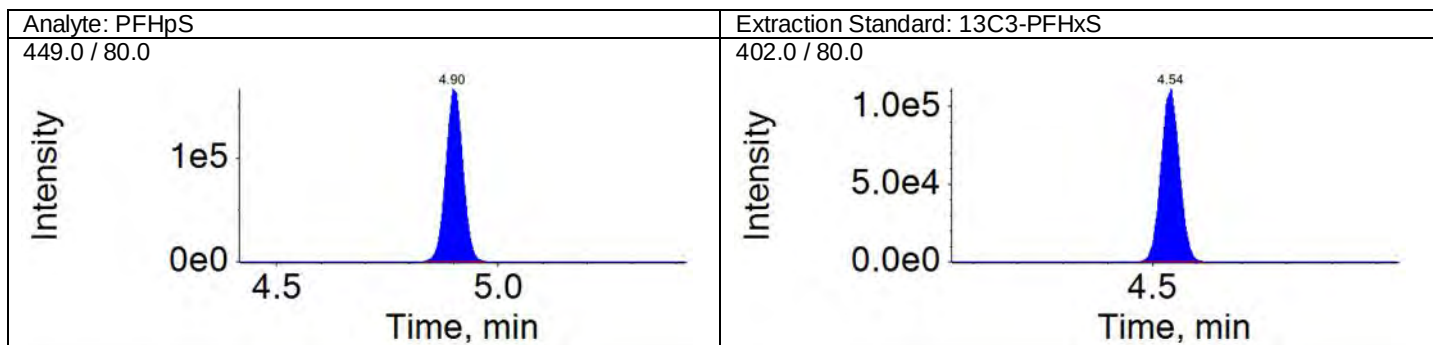
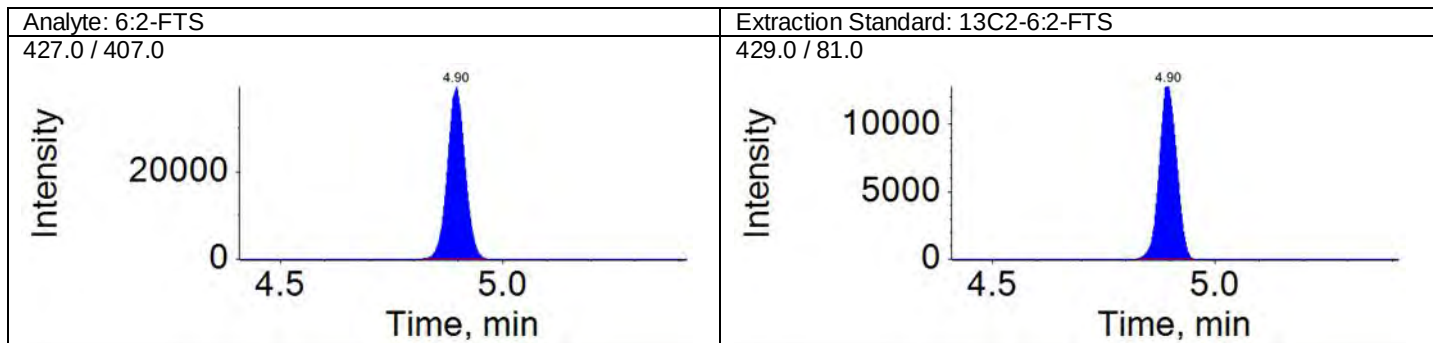
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



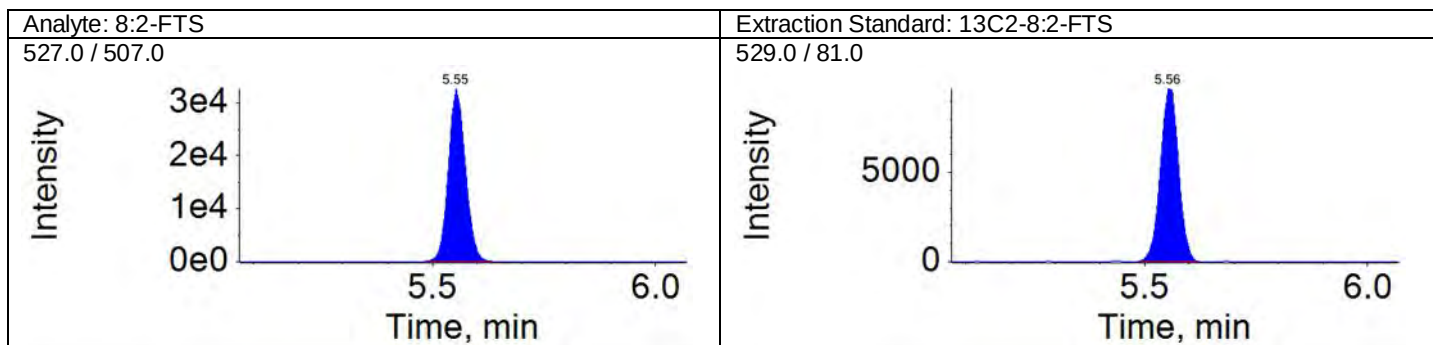
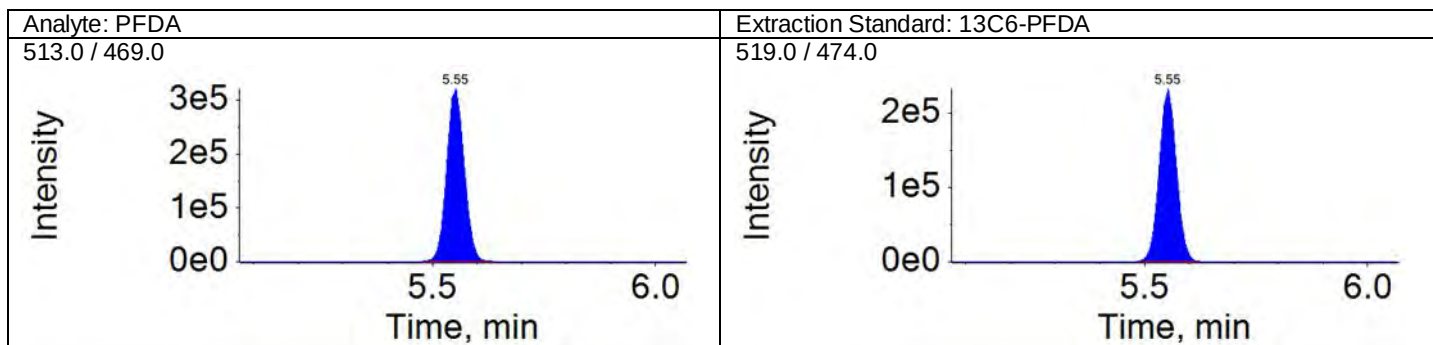
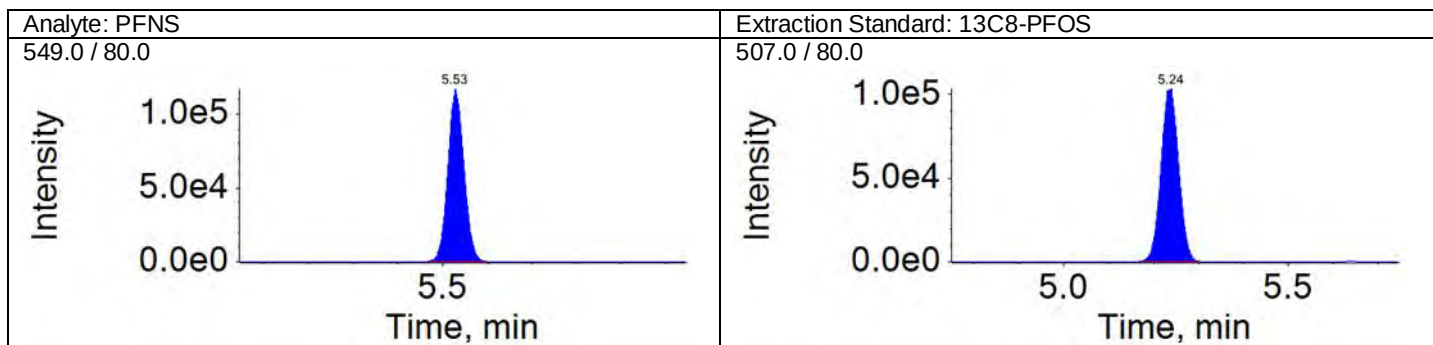
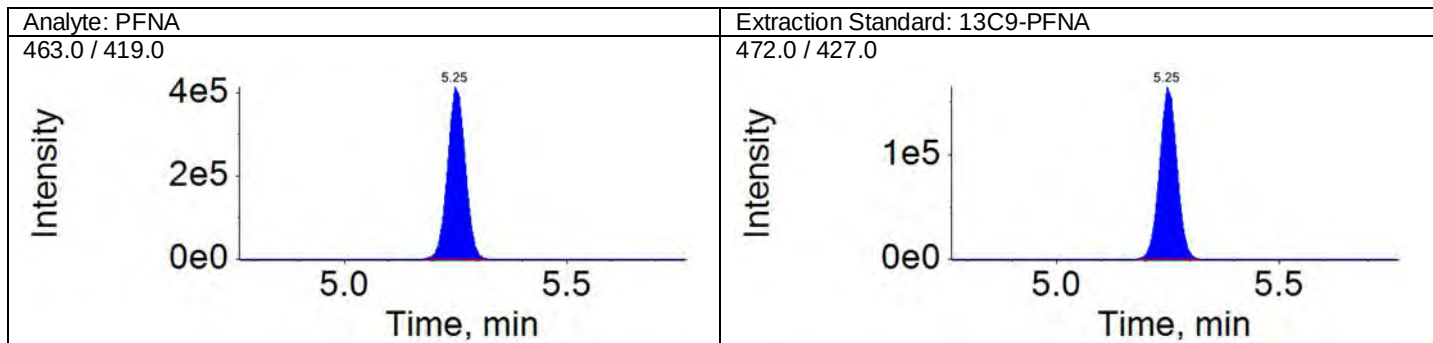
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



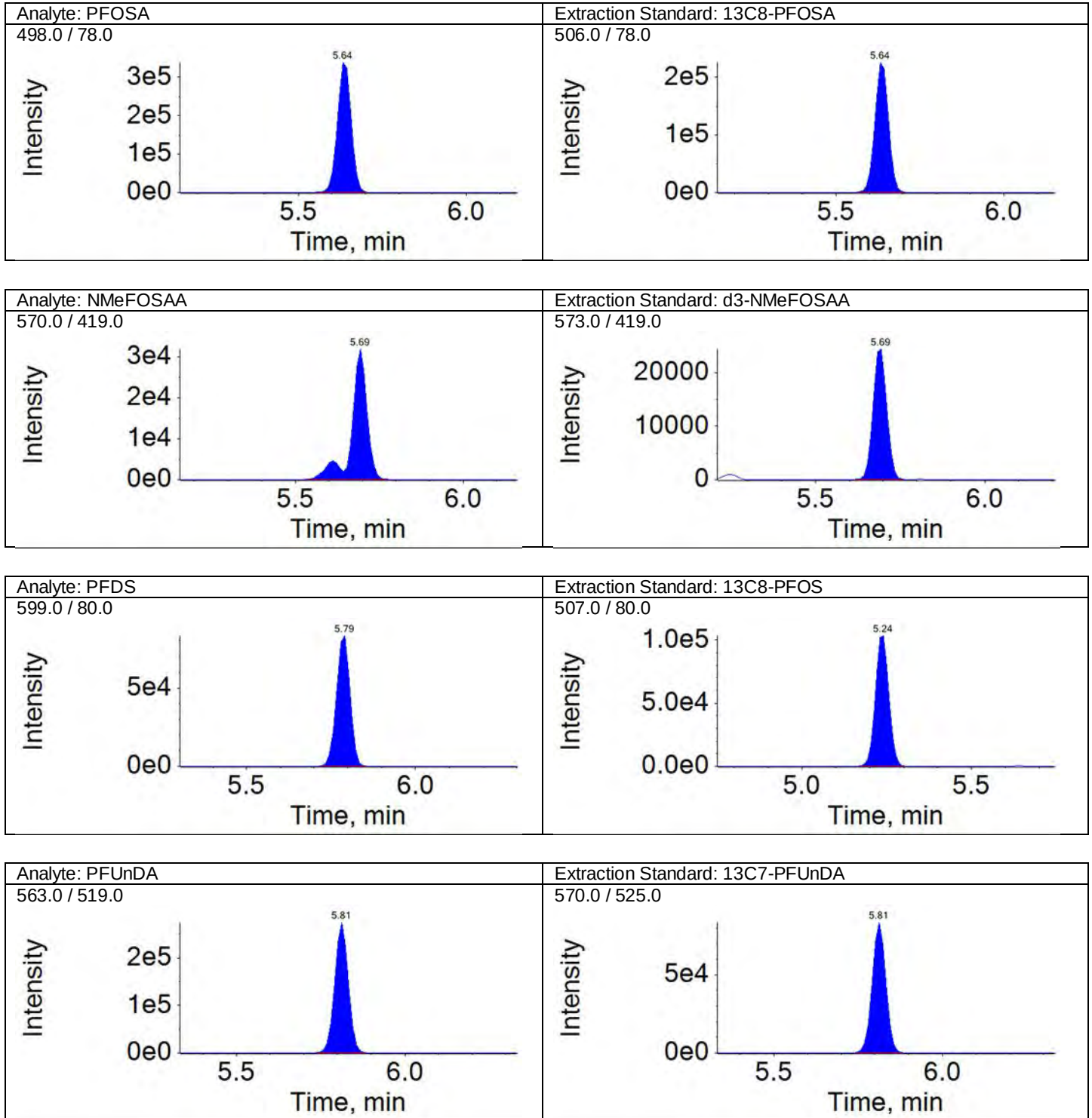
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

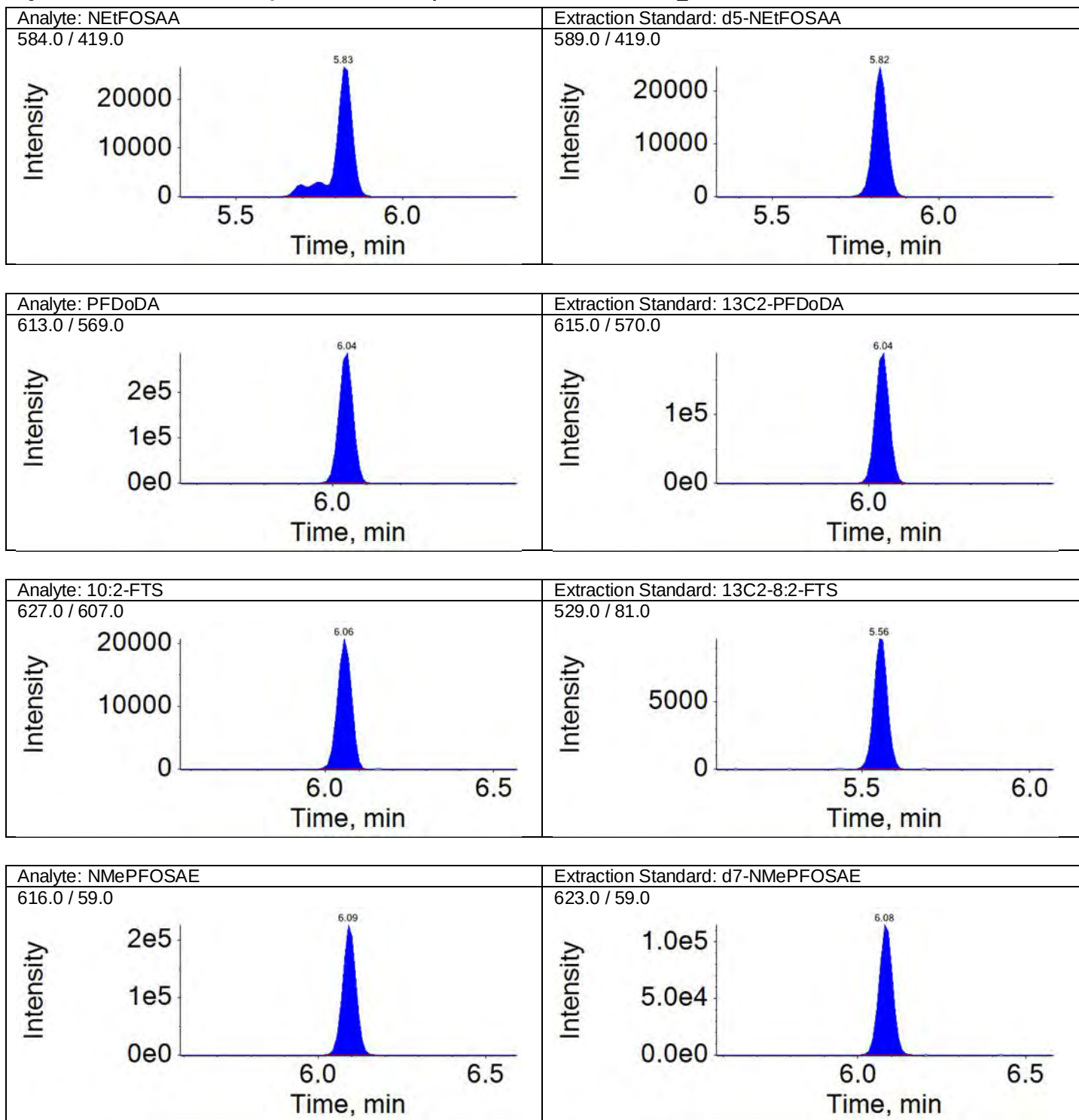
By JPT at 4:33 pm, 11/13/18

REVIEWED

By HMK at 1:48 pm, 11/14/18

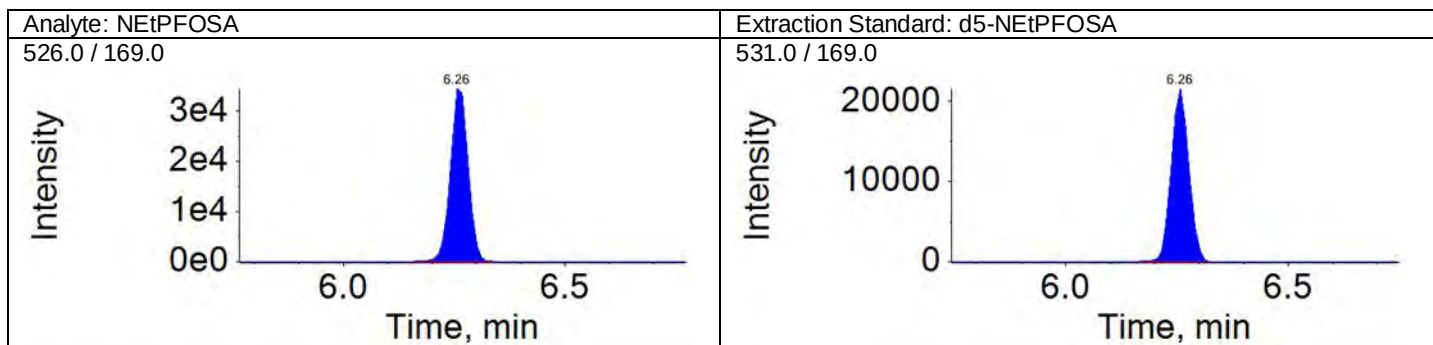
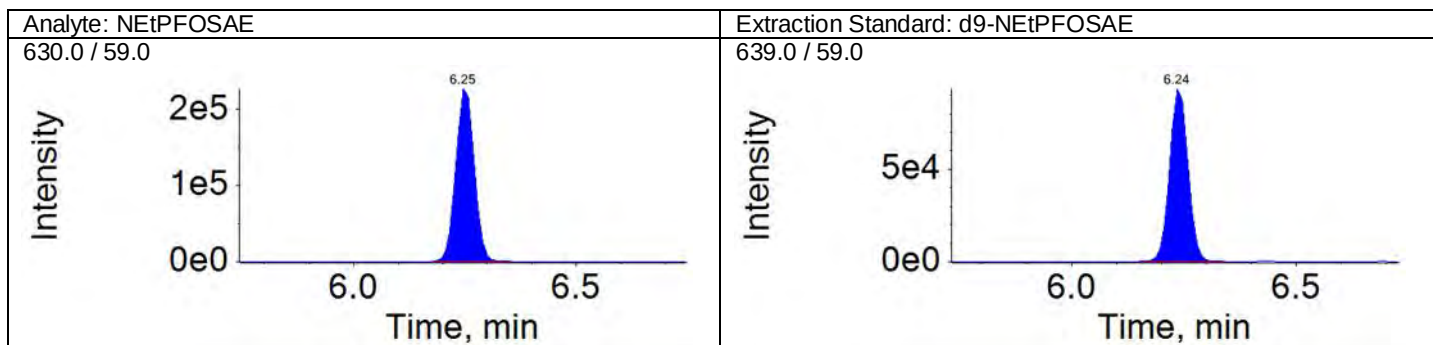
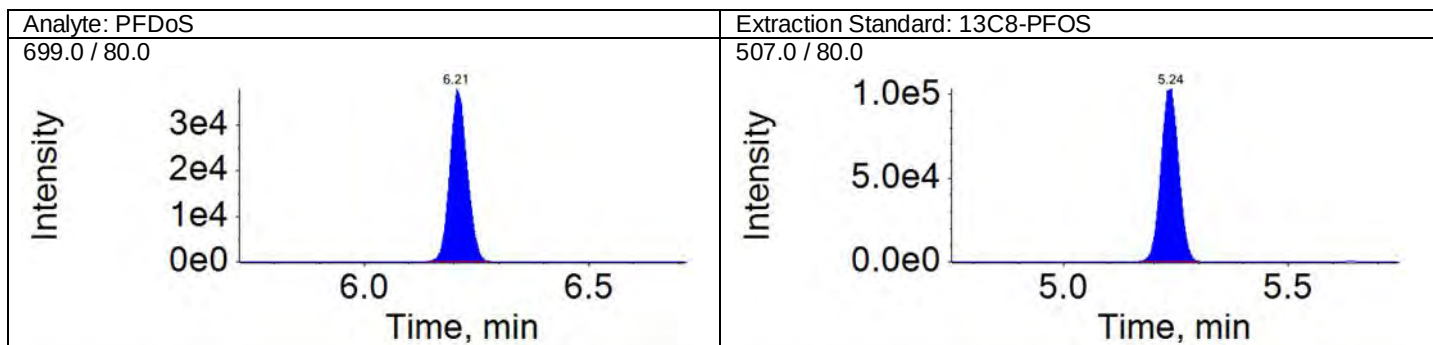
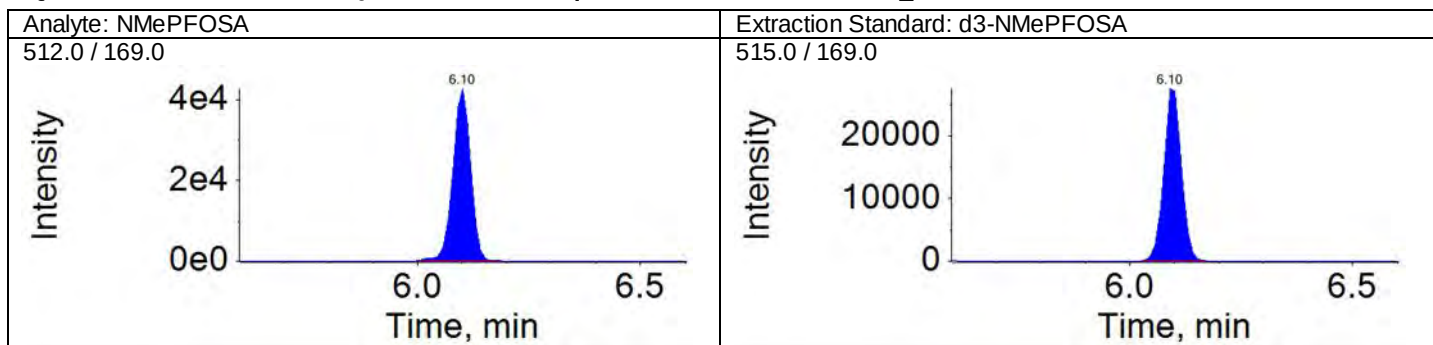
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



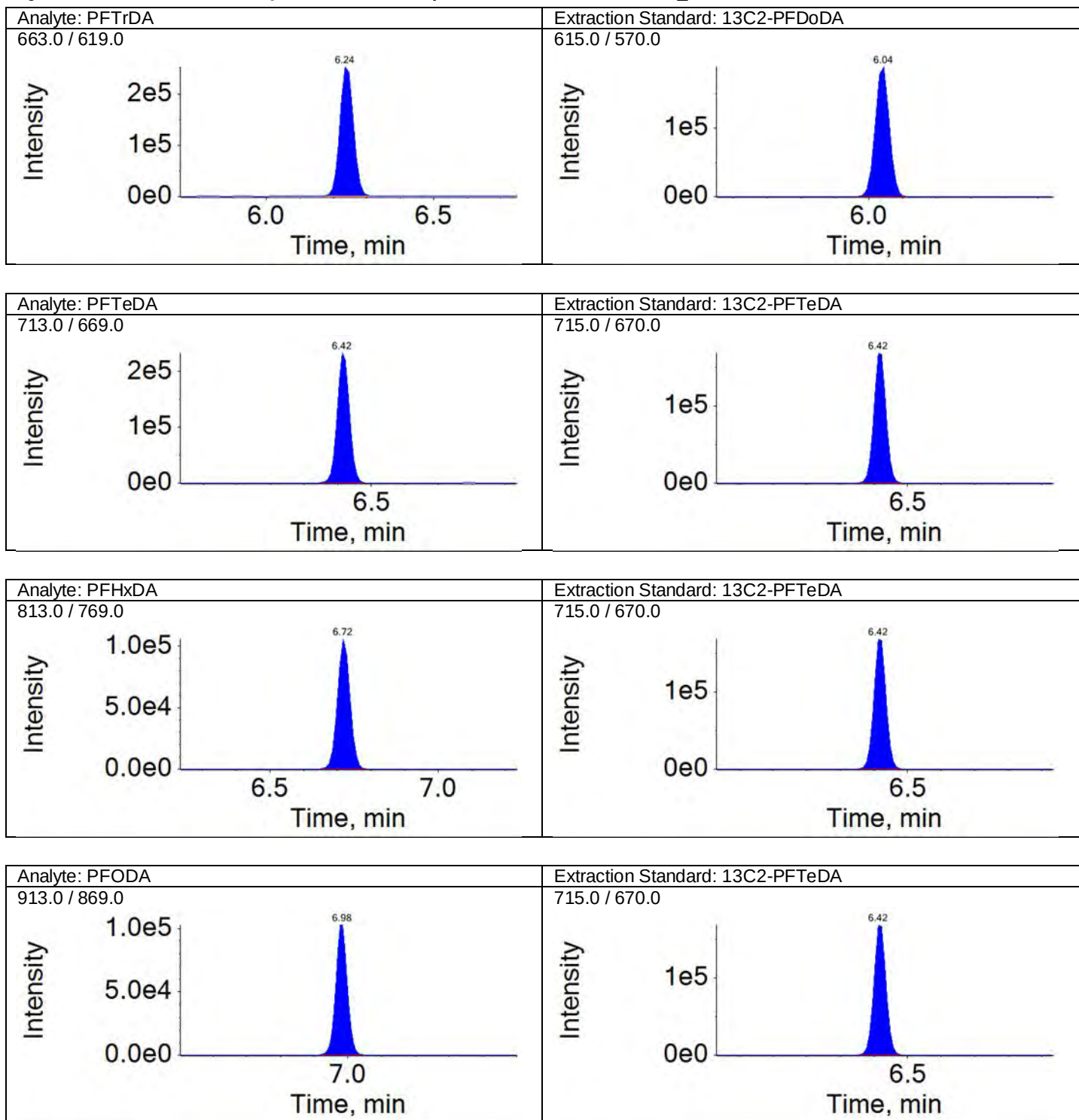
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

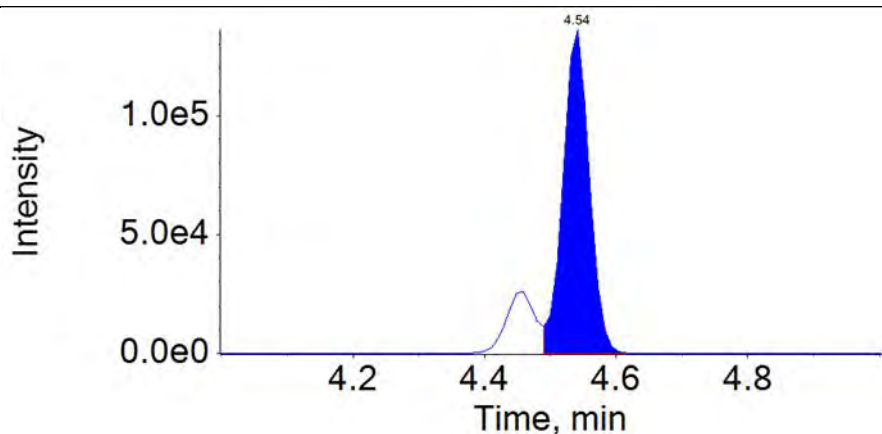
Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

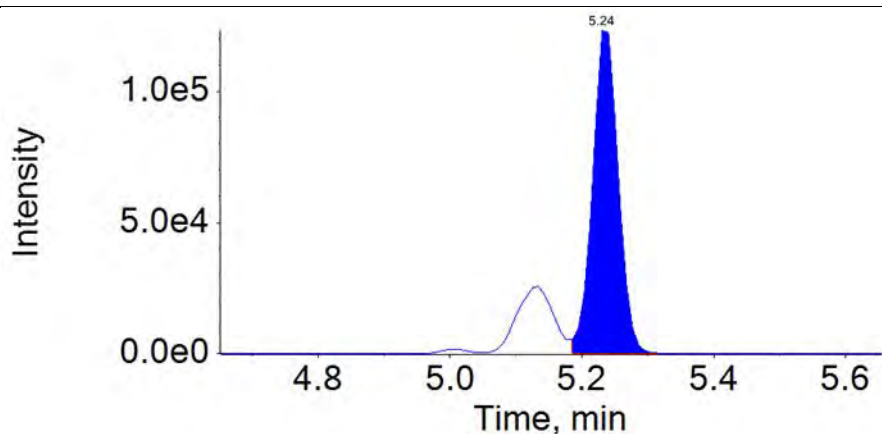
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
379499.6
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-23.wiff
Sample Name:
CCV3_CAL4



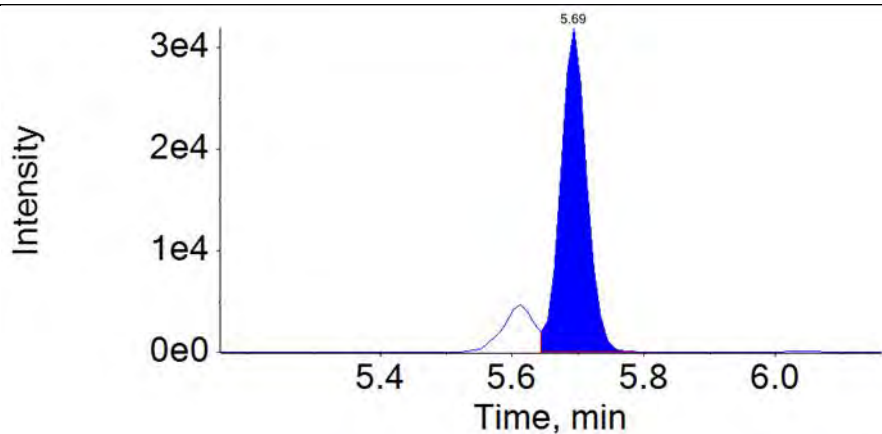
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
334920.9
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-23.wiff
Sample Name:
CCV3_CAL4



Integration Comment: incorrect integration

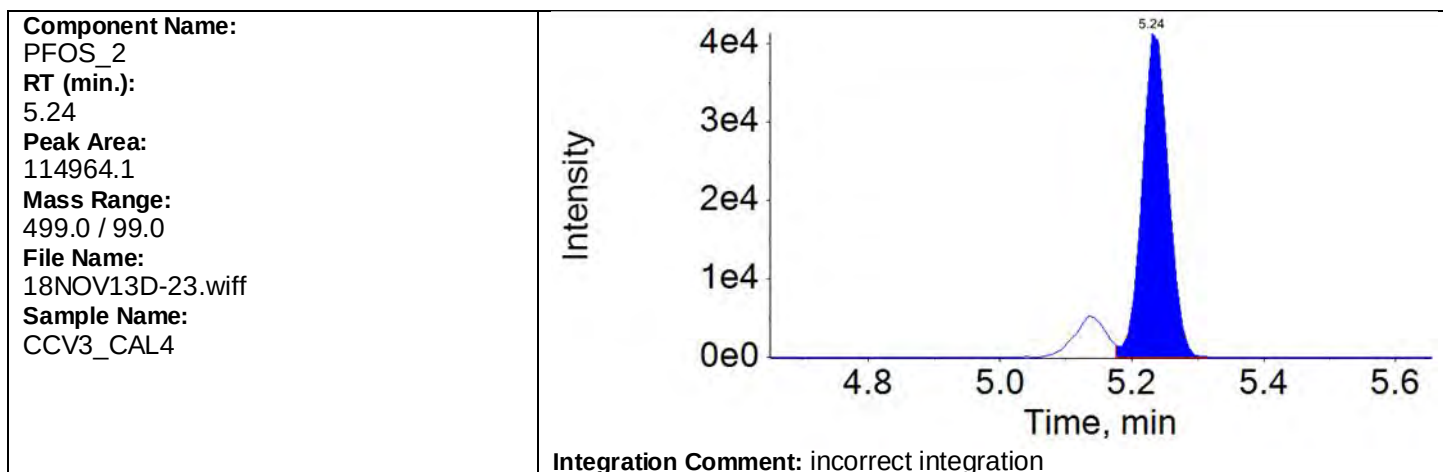
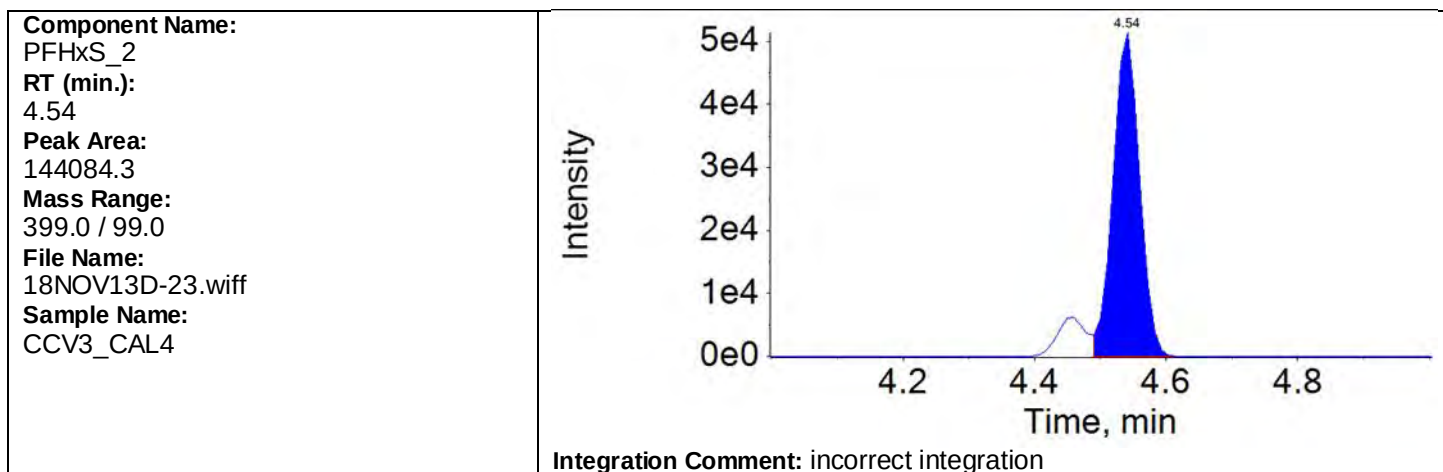
Component Name:
NMeFOSAA
RT (min.):
5.69
Peak Area:
87601.1
Mass Range:
570.0 / 419.0
File Name:
18NOV13D-23.wiff
Sample Name:
CCV3_CAL4



Integration Comment: incorrect integration

Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

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



Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

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

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

Ion Ratio Report

Sample Name: CCV3_CAL4

Instrument Name: LM27631

File Name: 18NOV13D-23.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	617597.3	A	N/A	1.0000			
PFBS_2	3.80	1.00	229777.3	A	N/A	0.3721	2	50	
4:2-FTS	4.12	1.00	141267.3	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	79686.5	A	N/A	0.5641		#NA!	
PFHxA	4.15	1.00	1280406.9	A	N/A	1.0000			
PFHxA_2	4.15	1.00	14066.0	A	N/A	0.0110	-7	50	
PFPeS	4.17	1.10	309863.8	A	N/A	1.0000			
PFPeS_2	4.17	1.10	162616.7	A	N/A	0.5248	1	50	
PFHpA	4.54	1.00	1359613.4	A	N/A	1.0000			
PFHpA_2	4.54	1.00	80199.9	A	N/A	0.0590	5	50	
PFHxS	4.54	1.00	458768.0	M	N/A	1.0000			
PFHxS_2	4.54	1.00	162757.7	M	N/A	0.3548	17	50	
6:2-FTS	4.90	1.00	108071.5	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	70004.2	A	N/A	0.6478		#NA!	
PFHpS	4.90	1.08	446880.9	A	N/A	1.0000			
PFHpS_2	4.90	1.08	176897.1	A	N/A	0.3958	-3	50	
PFOA	4.91	1.00	1362301.6	A	N/A	1.0000			
PFOA_2	4.91	1.00	76080.7	A	N/A	0.0558	-2	50	
PFOS	5.24	1.00	439272.9	M	N/A	1.0000			
PFOS_2	5.24	1.00	132645.4	M	N/A	0.3020	17	50	
PFNA	5.25	1.00	1141467.5	A	N/A	1.0000			
PFNA_2	5.25	1.00	23667.8	A	N/A	0.0207	-10	50	
PFNS	5.53	1.06	291902.2	A	N/A	1.0000			
PFNS_2	5.53	1.06	137864.3	A	N/A	0.4723	-1	50	
PFDA	5.55	1.00	875408.9	A	N/A	1.0000			
PFDA_2	5.55	1.00	6521.3	A	N/A	0.0074	-6	50	
8:2-FTS	5.55	1.00	86544.5	A	N/A	1.0000			
8:2 FTS_2	5.55	1.00	53086.1	A	N/A	0.6134		#NA!	
NMeFOSAA	5.69	1.00	102800.4	M	N/A	1.0000			
NMeFOSAA_2	5.69	1.00	32106.2	A	N/A	0.3123	47	50	
PFDS	5.79	1.11	232494.5	A	N/A	1.0000			
PFDS_2	5.79	1.11	110722.6	A	N/A	0.4762	-6	50	
PFUnDA	5.81	1.00	763658.8	A	N/A	1.0000			
PFUnDA_2	5.81	1.00	2419.0	A	N/A	0.0032	-24	50	
NEtFOSAA	5.83	1.00	94982.9	A	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	66066.5	A	N/A	0.6956	20	50	
PFDODA	6.04	1.00	846251.4	A	N/A	1.0000			
PFDODA_2	6.04	1.00	9239.4	A	N/A	0.0109	-33	50	
10:2-FTS	6.06	1.09	60107.9	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	43917.0	A	N/A	0.7306		#NA!	
PFTTrDA	6.24	1.03	708052.2	A	N/A	1.0000			
PFTTrDA_2	6.24	1.03	6363.9	A	N/A	0.0090	-3	50	
PFTeDA	6.42	1.00	586334.7	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	3765.2	A	N/A	0.0064	0	50	
PFHxDA	6.72	1.05	271760.5	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	17697.9	A	N/A	0.0651	-4	50	
PFODA	6.98	1.09	243657.7	A	N/A	1.0000			
PFODA_2	6.98	1.09	6199.0	A	N/A	0.0254	-6	50	

APPROVED

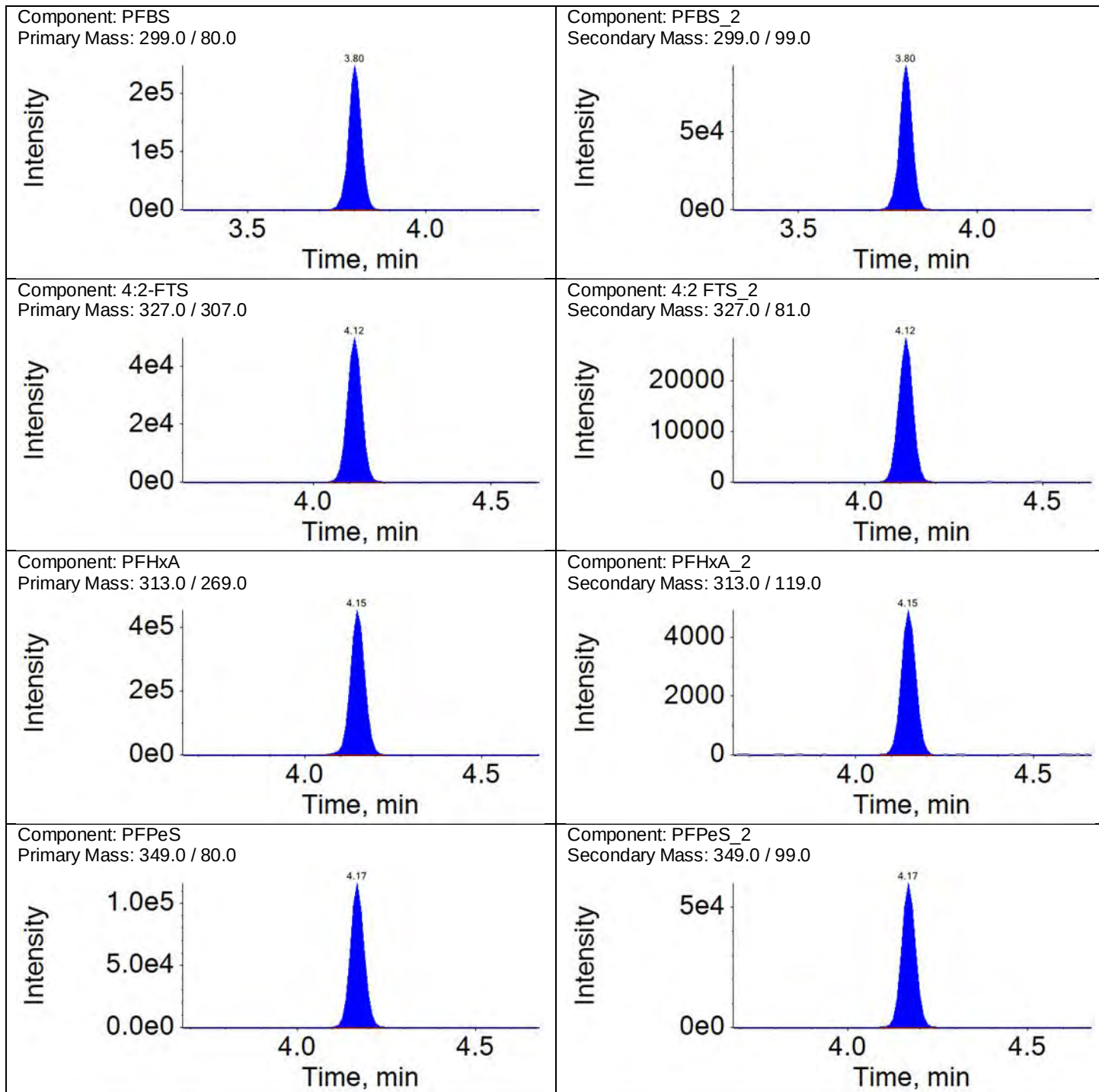
By JPT at 4:33 pm, 11/13/18

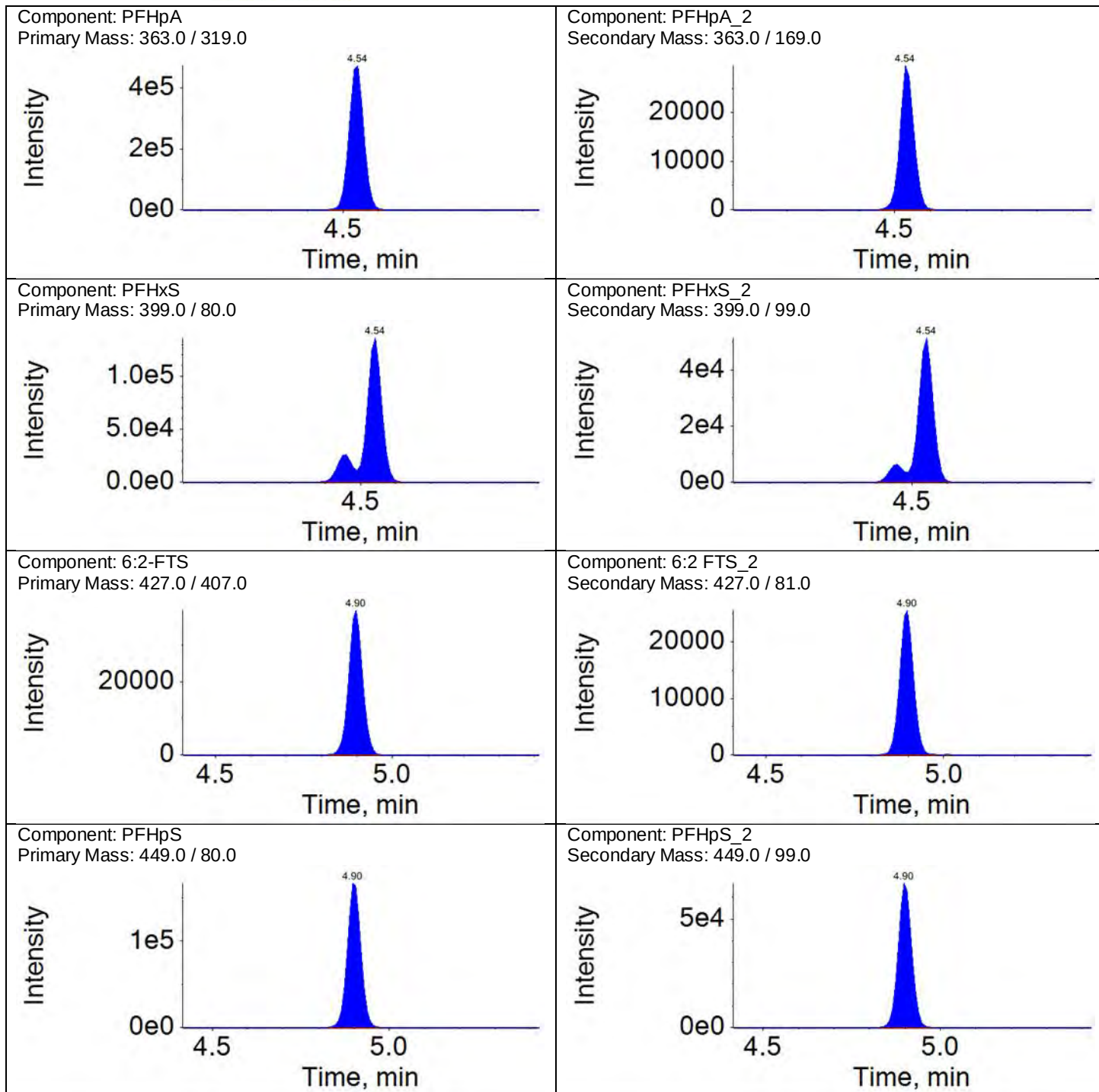
BSI05 Page 1322 of 1595

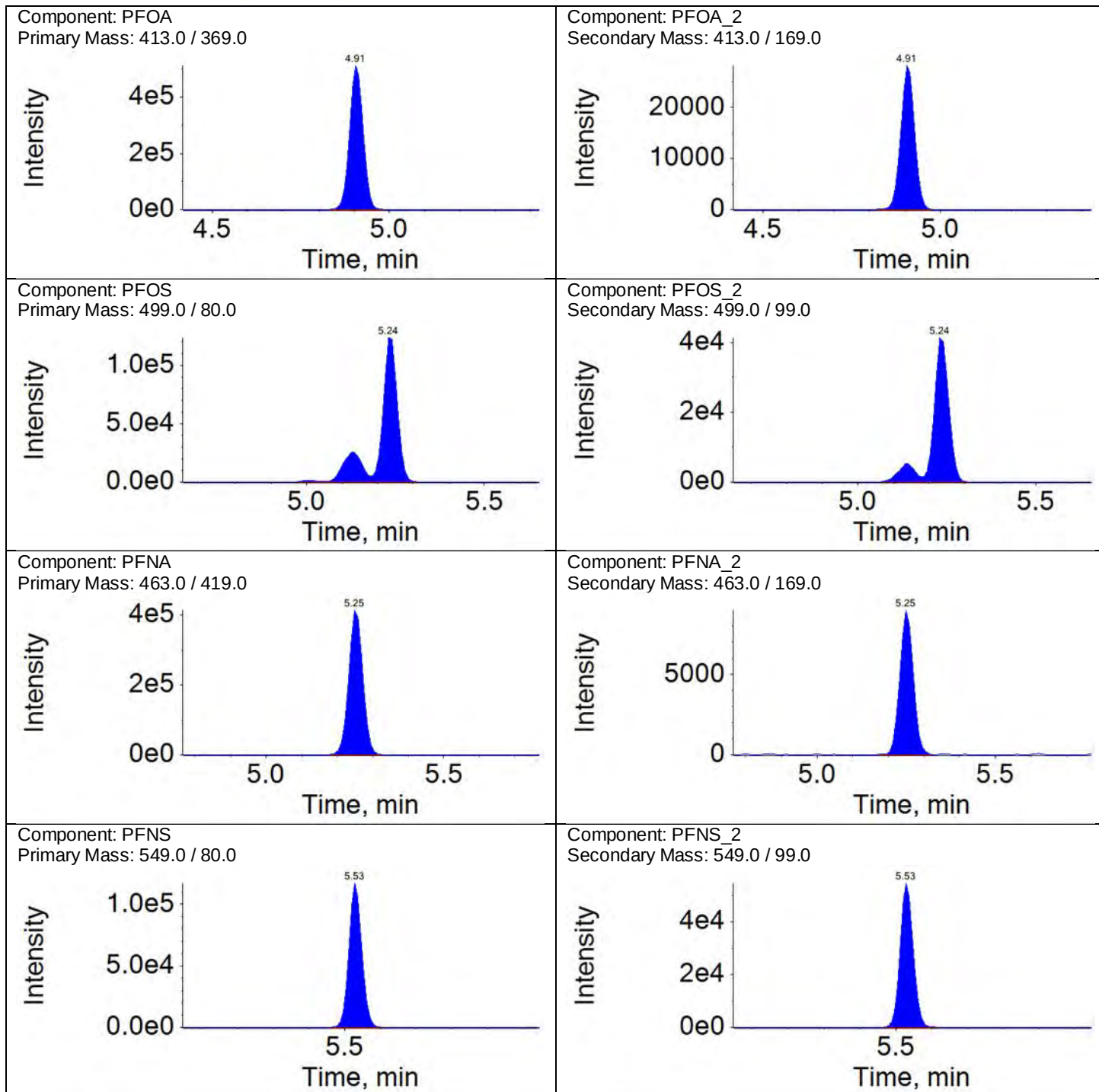
REVIEWED

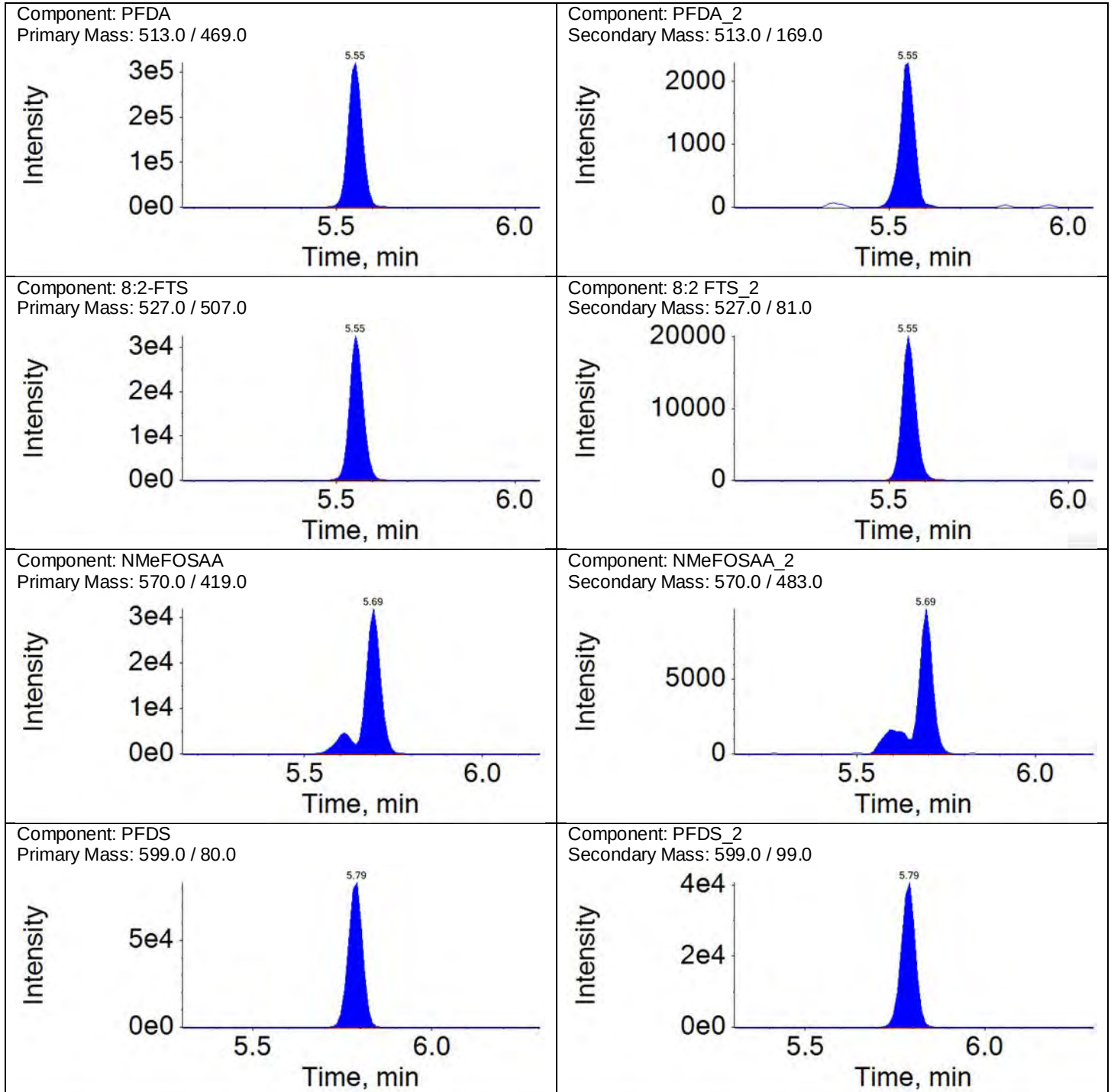
By HMK at 1:48 pm, 11/14/18

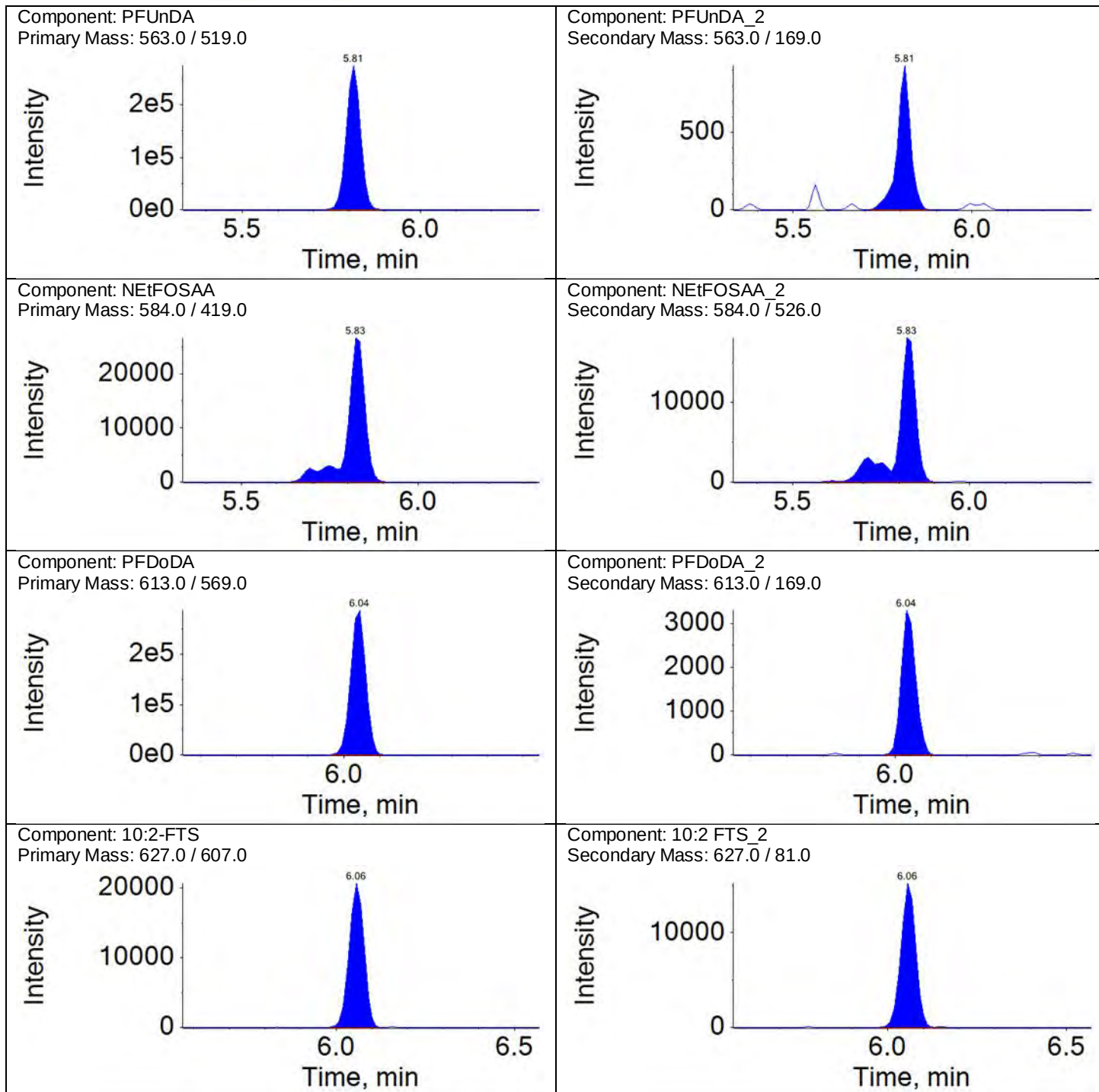
Page 1 of 7

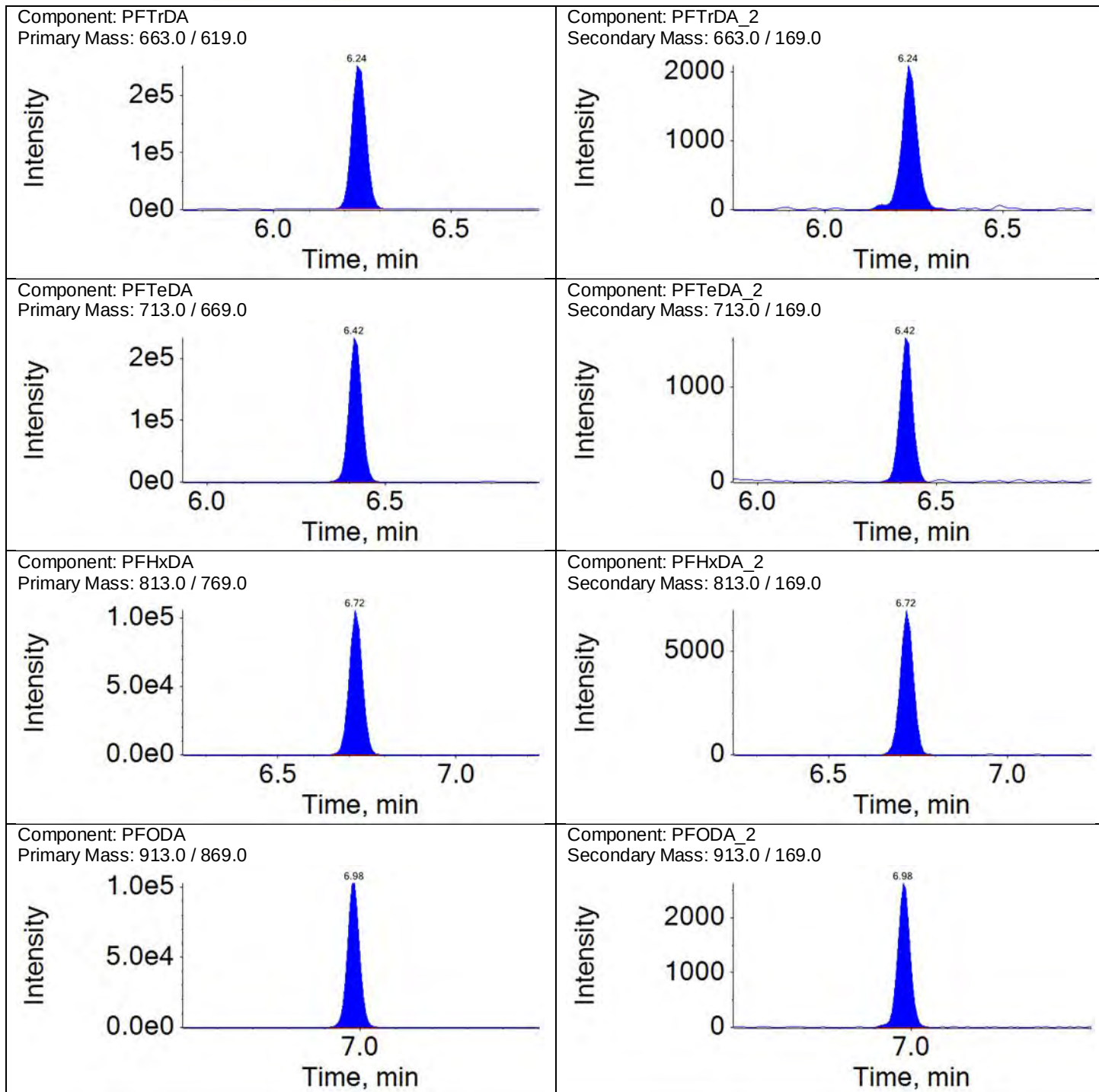










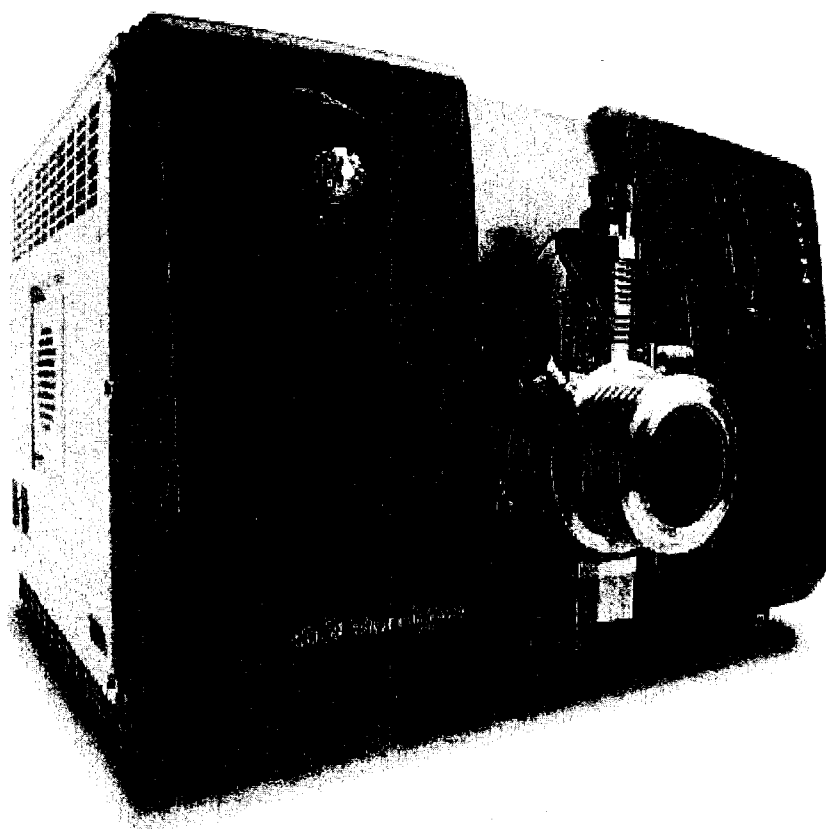


LM 27631



Triple Quad™ 4500 and Triple Quad™ 4500MD Systems

Installation Checklist and Data Log



This document is provided to customers who have purchased SCIEX equipment to use in the operation of such SCIEX equipment. This document is copyright protected and any reproduction of this document or any part of this document is strictly prohibited, except as SCIEX may authorize in writing.

Software that may be described in this document is furnished under a license agreement. It is against the law to copy, modify, or distribute the software on any medium, except as specifically allowed in the license agreement. Furthermore, the license agreement may prohibit the software from being disassembled, reverse engineered, or decompiled for any purpose. Warranties are as stated therein.

Portions of this document may make reference to other manufacturers and/or their products, which may contain parts whose names are registered as trademarks and/or function as trademarks of their respective owners. Any such use is intended only to designate those manufacturers' products as supplied by SCIEX for incorporation into its equipment and does not imply any right and/or license to use or permit others to use such manufacturers' and/or their product names as trademarks.

SCIEX warranties are limited to those express warranties provided at the time of sale or license of its products and are SCIEX's sole and exclusive representations, warranties, and obligations. SCIEX makes no other warranty of any kind whatsoever, expressed or implied, including without limitation, warranties of merchantability or fitness for a particular purpose, whether arising from a statute or otherwise in law or from a course of dealing or usage of trade, all of which are expressly disclaimed, and assumes no responsibility or contingent liability, including indirect or consequential damages, for any use by the purchaser or for any adverse circumstances arising therefrom.

Not all SCIEX instruments are approved IVDs. Consult your local sales representative or the SCIEX Web site for more information.

AB Sciex is doing business as SCIEX.

The trademarks mentioned herein are the property of AB Sciex Pte. Ltd. or their respective owners.

AB SCIEX™ is being used under license.

© 2016 AB Sciex



AB Sciex Pte. Ltd.
Blk 33, #04-06
Marsiling Ind Estate Road 3
Woodlands Central Indus. Estate.
SINGAPORE 739256

Contents

- Chapter 1 Installation Preparation.....4
 - Customer Information.....4
 - System Information.....4
- Chapter 2 Installation Checklist.....6
 - Unpacking and Inspection.....6
 - Hardware Installation.....7
 - Acquisition Computer Installation.....8
 - Initialization and Verification.....9
 - Wrap-up.....9
- Chapter 3 Data Log.....11
- Chapter 4 Signoff.....21
 - Comments and Exceptions.....21
- Revision History.....22

Installation Preparation

1

Note: For regulatory and safety information for the mass spectrometer, refer to the *System User Guide*.

Note: Before starting the installation, verify that the customer has completed the checklist in the *Site Planning Guide*.

Customer Information

Organization	Eurofins		
Address	2425 New Holland Pike Lancaster, PA 17601		
Telephone	717-556-7231	Fax	N/A
Contact name	Charles Neslund		
E-mail address	CharlesNeslund@eurofinsUS.com		

System Information

Table 1-1 Mass Spectrometer Information

Mass spectrometer location	A-223
Mass Spectrometer model name	4500QQQ
Mass spectrometer serial number	EB220251804
Firmware version	PL1801
Roughing pump serial number	31001702300

Table 1-2 Acquisition Computer Information

Model	XE2	Service tag	5L3QLN2
OS version	Win7 64bit	OS service pack	SP1
Analyst [®] or Analyst [®] MD software version	1.7.0	Analyst [®] or Analyst [®] MD software hotfix	HF2
Cliquid [®] MD software version (4500MD systems only)	N/A		
MultiQuant [™] or MultiQuant [™] MD software version	3.0.3		

Table 1-3 Ion Source Information

Component	Serial Number
Turbo V [™] ion source - TurboIonSpray[®] probe - APCI probe (if applicable)	2001171213
	20380180321
	20252180221
NanoSpray [®] ion source (if applicable, non-MD systems only)	N/A
DuoSpray [™] ion source (if applicable, non-MD systems only) - TurboIonSpray[®] probe - APCI probe (if applicable)	N/A
	N/A
	N/A
Other/Third-party ion source (if applicable, non-MD systems only)	N/A

Table 1-4 System Components and Peripherals

Component	Serial Number
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Installation Checklist and Data Log

Triple Quad[™] 4500 and Triple Quad[™]
4500MD Systems
5 of 22

GEN-IDV-06-1212-C | D5082309 C

Installation Checklist

2

The Field Service Employee (FSE) must complete this checklist to make sure that every step in the installation procedure is completed. The checklist also contains an installation acceptance form for the customer representative and the FSE to sign when the work is complete. Refer to Signoff on page 21.

Unpacking and Inspection

Task	Complete	N/A
Inspect the packaging: • Inspect all tip and shock indicators for signs of excessive shock or tilting. • Inspect the boxes for exterior damage.		
Unpack and inspect all of the components.		
(Optional) Unpack, inspect, and install the bench. 1. Inspect the packaging for exterior damage. 2. Unpack the bench and then inspect for damage. 3. Install the bench.		

Hardware Installation

Task	Complete	N/A
Install the mass spectrometer on the bench.		
Affix the name plate on the front cover of the mass spectrometer (only applies to mass spectrometer with the prefix 'CJ' in the serial number).		
Verify that the mains supply outlets for the roughing pump and the mass spectrometer deliver stable output voltages that meet the specified electrical requirements.		
(Optional) Install the SCIEX-supplied UPS.		
Install the roughing pump, connecting it to the mass spectrometer and the vent. Make sure that the roughing pump contains sufficient oil.		
(Optional) Install the SCIEX-supplied gas generator.		
Connect the gas lines.		
Install and connect the drain bottle.		
Install the Turbo V TM ion source. Refer to the <i>Turbo VTM Ion Source Operator Guide</i> . For 4500MD systems, refer to the <i>System User Guide</i> . For other systems, refer to the <i>Turbo VTM Ion Source Operator Guide</i> .		
Adjust the stopper on the integrated syringe pump.		
 WARNING! Electrical Shock Hazard. Make sure that the system can be disconnected from the mains supply outlet in an emergency. Do not block the mains supply outlet.		
Plug in and turn on the roughing pump, and then plug in and turn on the mass spectrometer.		

Installation Checklist

Acquisition Computer Installation

Task	Complete	N/A
Install the computer and monitor on the computer table.		
Connect the Ethernet cable from the computer to the mass spectrometer.		
Turn on the computer.		
Configure IP addresses for communication with the mass spectrometer.		
(Optional) Connect the computer to the customer network.		
Install the Analyst [®] or Analyst [®] MD software.		
Install any applicable Analyst [®] or Analyst [®] MD software hotfixes.		
(4500MD systems) Install the Cliqid [®] MD software.		
Install the MultiQuant [™] or MultiQuant [™] MD software.		
(If applicable, not for use with 4500MD systems) Install the StatusScope [®] agent on the acquisition computer, and then perform these tasks: • Discuss warranty coverage for the StatusScope[®] software. • If the customer wants the StatusScope[®] software installed, then complete the StatusScope[®] user access form. • If the customer does not want the StatusScope[®] software installed, then remove the StatusScope[®] software.		
(Optional) Install and license any add-on software purchased and shipped with the system. • (Non-MD systems) If applicable, Cliqid[®] software has been installed. • Other Analyst[®] or Analyst[®] MD compatible add-on software shipped with the system has been installed.		

Triple Quad[™] 4500 and Triple Quad[™] 4500MD
Systems
8 of 22

Installation Checklist and Data Log

GEN-IDV-06-1212-C | D5082309 C

Installation Checklist

Task	Complete	N/A
Verify and update the firmware and configuration files.		
Install the factory files.		

Initialization and Verification

Note: Perform these tasks after the mass spectrometer reaches operating vacuum.

Task	Complete	N/A
Perform the high pressure source and blocked exhaust flow tests.		
Measure and tune the Q1, Q3, and QJet® coil boxes.		
Perform all installation tests, print out the test results, and complete the Data Log.		

Wrap-up

Task	Complete	N/A
Delete unnecessary files from the computers.		
Back up the computer file systems, including the Analyst Data folder.		
Create a computer image using the image utility.		
Apply the biohazard labels included in the install kit. Apply one label to the ion source, and the other to the waste bottle. Find a vacant space that is clearly visible to affix the labels.		

Installation Checklist and Data Log

Triple Quad™ 4500 and Triple Quad™ 4500MD

Systems

GEN-IDV-06-1212-C | D5082309 C

9 of 22

Installation Checklist

Task	Complete	N/A
Complete all of the sections in the <i>Customer Familiarization Checklist</i> . Make a copy of the completed checklist and then give the original to the customer.	☒	
Inform the customer about the continuous improvement telephone surveys, and then advise the customer that a third party will call to obtain feedback.	☒	
Complete the <i>Installation Checklist and Data Log</i> : • Obtain customer acceptance. • Make a copy of the form and the test results. • Provide the customer with the originals. • (For MD systems only) E-mail this completed document and the test result files to servicedata@sciex.com.	☒	

Data Log

3

Use this log to record the test data obtained during performance of the system verification tests during installation.

Note: Perform all procedures with the Turbo V™ ion source, unless otherwise specified.

Pre-test Pressure Verification is Complete			
Perform this test with the Analyst® or Analyst® MD software.			
Test		Specification	Result
Vacuum chamber pressure with CAD gas off		$0.4 \times 10^{-5} \text{ torr} \leq P_{\text{CAD } 0} \leq 1.1 \times 10^{-5} \text{ torr}$	
Vacuum chamber pressure with CAD gas set to Full		$1.8 \times 10^{-5} \text{ torr} \leq (P_{\text{CAD } 12} - P_{\text{CAD } 0}) \leq 2.8 \times 10^{-5} \text{ torr}$	

Data Log

Q1 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10)			
- Test solution: POS PPG, 2e-6 M - Flow rate: 5 µL/min - MCA: On - Printouts required: Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.			
Mass (Da)	Intensity (cps)		Peak width (Da)
	Specification	Result	
175.133	$\geq 8.0 \times 10^6$	116298e7	0.7105
500.380	$\geq 8.0 \times 10^6$	274240e7	0.6995
906.673	$\geq 2.0 \times 10^7$	322349e7	0.7151
1952.427	$\geq 8.8 \times 10^5$	278122e6	0.7423

Q1 Positive PPGs Test is Complete: Peak Width for Identified Masses				
Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8	
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Data Log

Q3 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10)				
• Test solution: POS PPG, 2e-6 M • Flow rate: 5 µL/min • MCA: On • Printouts required: Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.				
Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
175.133	$\geq 8.0 \times 10^6$	19501e7	0.6 to 0.8	0.6916
500.380	$\geq 8.0 \times 10^6$	19268e7	0.6 to 0.8	0.7278
906.673	$\geq 2.0 \times 10^7$	31634e7	0.6 to 0.8	0.7403
1952.427	$\geq 8.8 \times 10^5$	24988e6	0.6 to 0.8	0.7828

Q3 Positive PPGs Test is Complete: Peak Width for Identified Masses					
Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)	
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8		
	200	50	0.6 to 0.8		
	1000	50	0.6 to 0.8		
	2000	100	0.6 to 0.8		

Q1 Negative PPGs Test is Complete	
• Test solution: NEG PPG, 3e-4 M • Flow rate: 10 μL/min • MCA: On • Printouts required: Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.	

Table 3-1 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q1 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	$\geq 1.8 \times 10^7$	2237857	0.6 to 0.8	0.6638
1863.306	$\geq 1.4 \times 10^6$	24104666	0.6 to 0.8	0.7369

Table 3-2 Verification: Peak Width for Identified Masses for the Q1 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
	10	10	0.6 to 0.8	
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q3 Negative PPGs Test is Complete	
• Test solution: NEG PPG, 3e-4 M • Flow rate: 10 µL/min • MCA: On • Printouts required: Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.	

Table 3-3 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q3 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	$\geq 1.8 \times 10^7$	21682187	0.6 to 0.8	0.17288
1863.306	$\geq 2.0 \times 10^6$	31573466	0.6 to 0.8	0.17038

Table 3-4 Verification: Peak Width for Identified Masses for the Q3 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
44.998, 411.259, 585.385, 933.636 1223.845, 1572.097, 1863.306 1979.389	10	10	0.6 to 0.8	
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Reserpine MS/MS Test is Complete	
• Test solution: Reserpine solution 0.167 pmol/µL • Flow rate: 5 µL/min • Scan rate: 10 Da/s (both MS and MS/MS) • Scan mode: Product Ion (MS2) • Product Of: 609.3 (or as calibrated) • Product Ion: 195.1 • Cycles: 10 • MCA: On • Printouts required: Spectra for masses 609.3 and 195.1, with peak intensities, peak width, and mass shift results, complete with method file information.	
Table 3-5 Verification for the Reserpine MS/MS Test	
Specification	Result
Transmission efficiency $\frac{\text{Intensity for ion at } m/z \text{ 195.1}}{\text{Intensity for ion at } m/z \text{ 609.2 (or as calibrated)}} \times 100 \geq 10\%$	10%

Turbo V™ Ion Source Acceptance Test is Complete				
Table 3-6 Verification for the Turbo V™ Ion Source Acceptance Test				
Probe	Test	Specification	Result (Passed)	
TurboIonSpray®	Set the temperature parameter to 500 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.		
APCI	Set the temperature parameter to 400 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.		

Data Log

Post-test Pressure Verification is Complete			
Perform this test with the Analyst® or Analyst® MD software.			
Test	Specification	Result	
Vacuum chamber pressure with CAD gas off	$0.4 \times 10^{-5} \text{ torr} \leq P_{\text{CAD } 0} \leq 1.1 \times 10^{-5} \text{ torr}$	0.74 x 10 ⁻⁵ OFF	
Vacuum chamber pressure with CAD gas set to Full	$1.8 \times 10^{-5} \text{ torr} \leq (P_{\text{CAD } 12} - P_{\text{CAD } 0}) \leq 2.8 \times 10^{-5} \text{ torr}$	2.41 x 10 ⁻⁵ OFF	

Signoff

4

Organization	Eurofins		
Customer contact name		Date (yyyy-mm-dd)	
Customer contact signature*			
FSE name	Michael F Pennell	Date (yyyy-mm-dd)	2018-05-29
FSE signature			

* Signature required on hard copy only.

Comments and Exceptions

MQ will be installed on the processing PC.
--

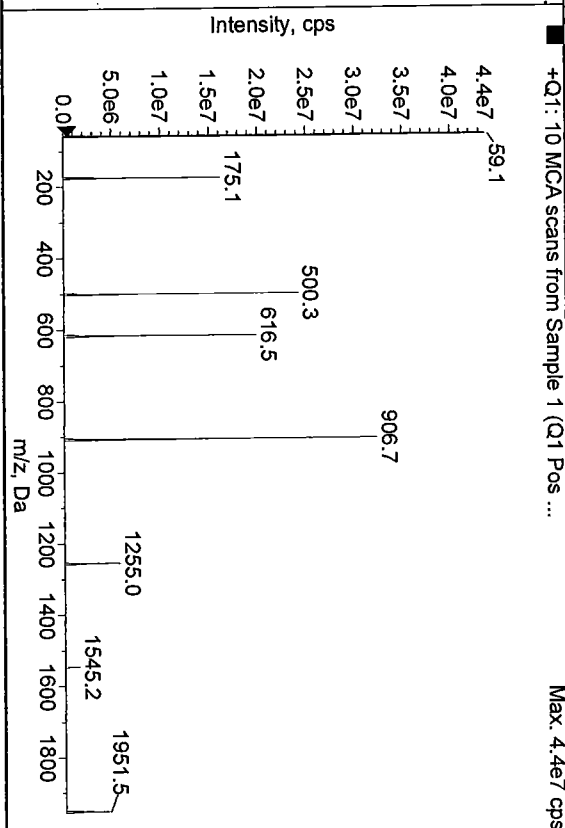
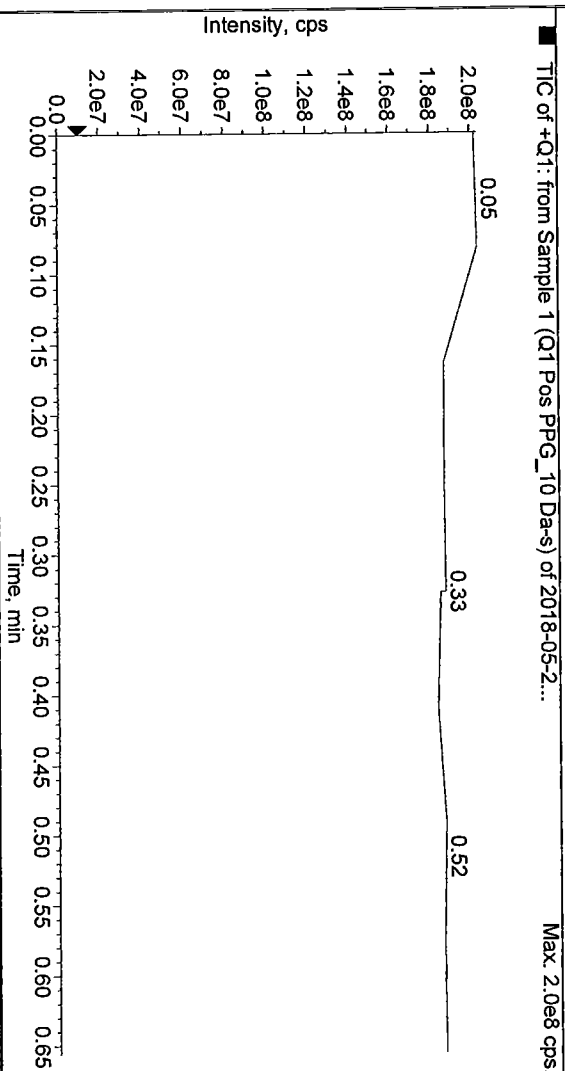
Revision History

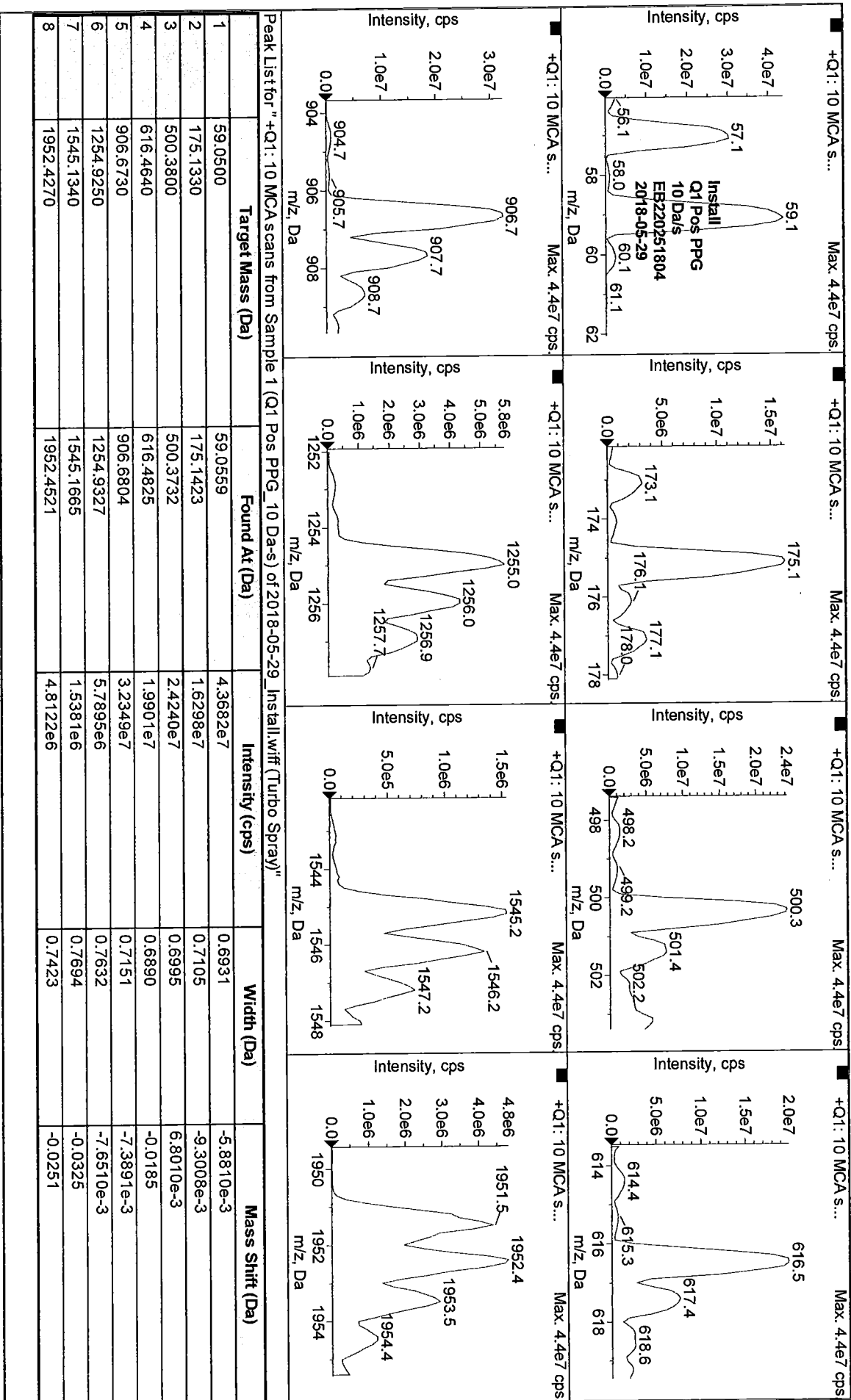
Revision	Reason for Change	Date
A	First release of the combined <i>SCIEX Triple Quad™ 4500 and 4500MD System Installation Checklist and Data Log</i> . Replaces D5028556 E.	May 2014
B	Updated the installation test data.	December 2014
C	- Applied new template. - Updated the System Information, Acquisition Computer Installation, and Data Log sections.	October 2016

State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray
Ion Source Temperature Reached:	5500.0
Curtain Gas (CUR):	10.0
Ion Spray Voltage (IS):	5500.0
Temperature (TIS):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Brinane Potential (EP):	10.0
Q1 Resolution:	Unit
Ion Energy 1 (IE1):	1.2
Q1 (CM):	1800.0
Period 1:	
Scans in Period:	10
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1
Period 1 Experiment 1:	
Scan Type:	Q1 MS (Q1)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q1:	Unit

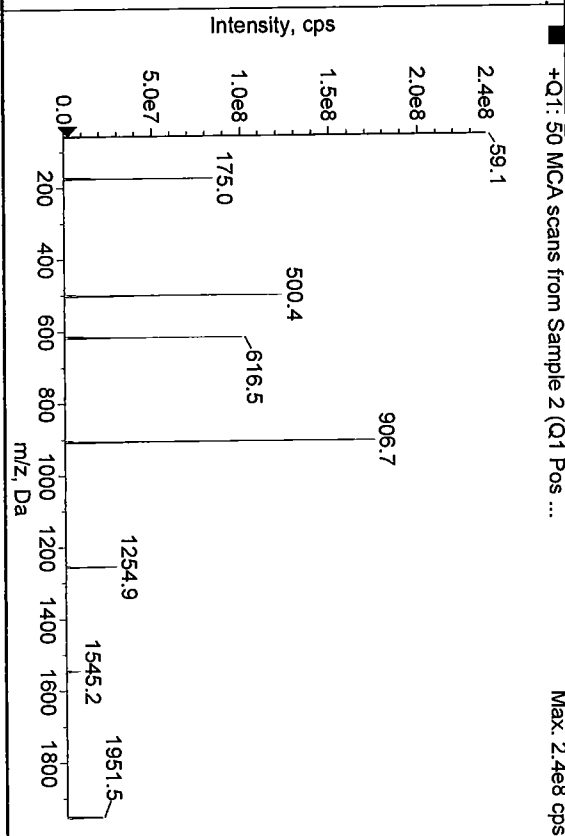
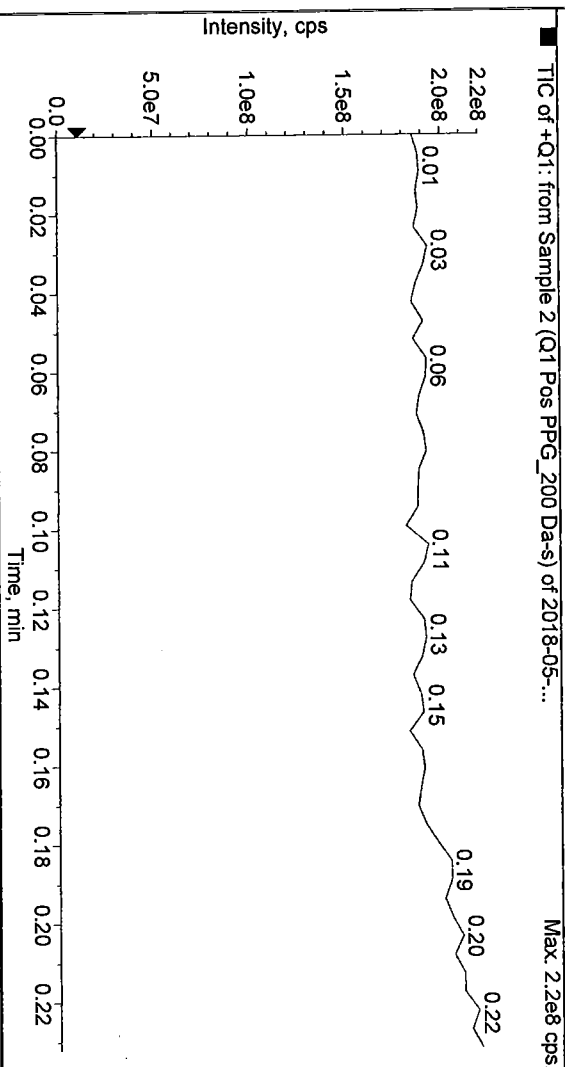


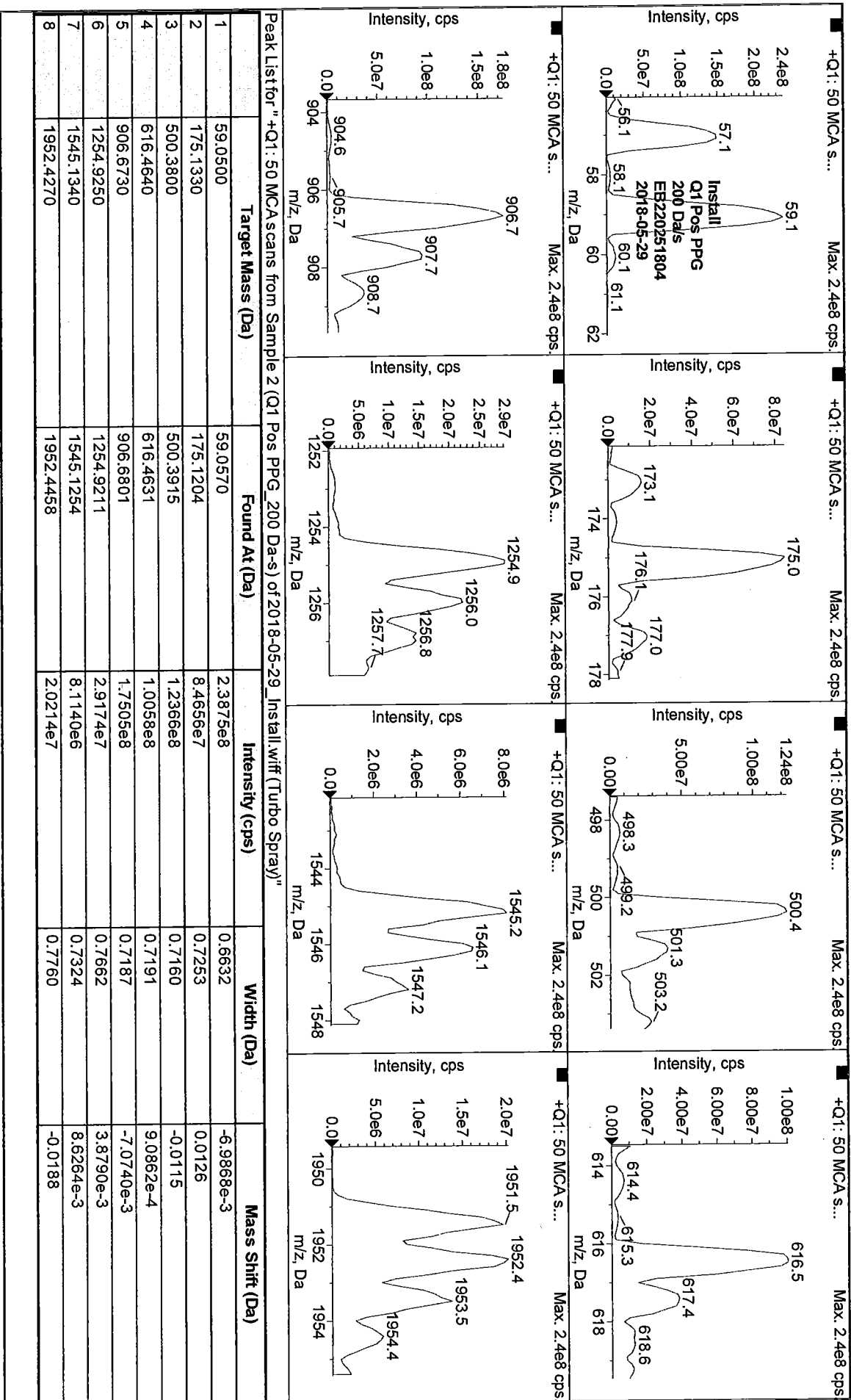


State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray	Period 1:	
Ion Source Temperature Reached:	10.0	Scans in Period:	50
Carrier Gas (CR):	5500.0	Relative Start Time:	0.00 msec
Ion Spray Voltage (IS):	0.0	Scheduled Ionization:	Off
Temperature (TM):	17.0	Experiments in Period:	1
Ion Source Gas 1 (GS1):	0.0		
Ion Source Gas 2 (GS2):	10.0		
Extraction Potential (EP):	1.2	Period 1 Experiment 1:	
Q1 Resolution:	1800.0	Scan Type:	Q1 MS (Q1)
Ion Energy 1 (IE1):		Polarity:	Positive
CM (CM):		Scan Mode:	Profile
		Ion Source:	Turbo Spray
		# Scans to Sum:	1
		Resolution Q1:	Unit





State Parameter Editor

Mass Spectrometer Method Properties

Ion Source: Turbo Spray
 Ion Source Temperature Reached: 10.0
 Curtain Gas (CUR): 5500.0
 Ion Spray Voltage (IS): 0.0
 Temperature (TM): 17.0
 Ion Source Gas 1 (GS1): 0.0
 Ion Source Gas 2 (GS2): 10.0

Period 1:
 Scans in Period: 50
 Relative Start Time: 0.00 msec
 Scheduled Ionization: OFF
 Experiments in Period: 1

Extraction Potential (EP): 10.0

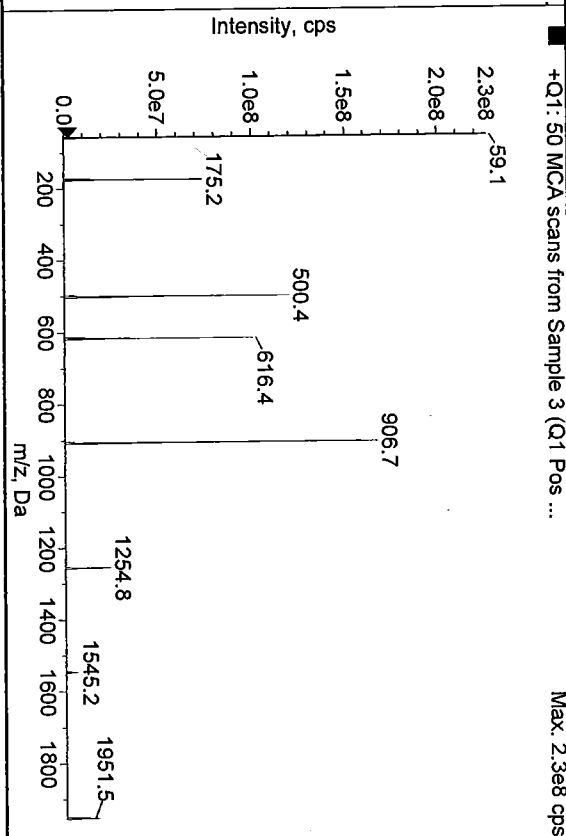
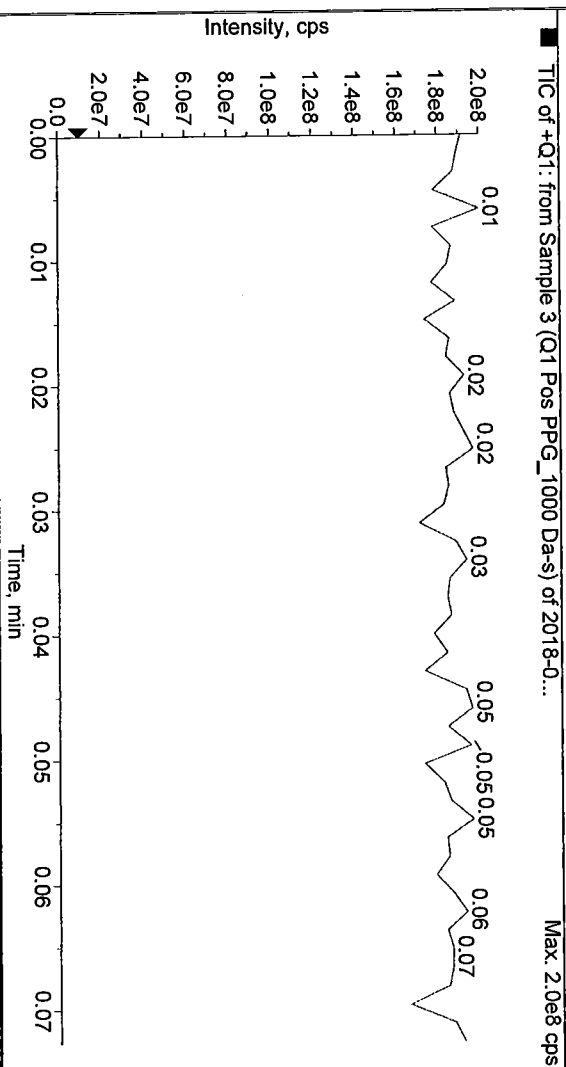
Period 1 Experiment 1:

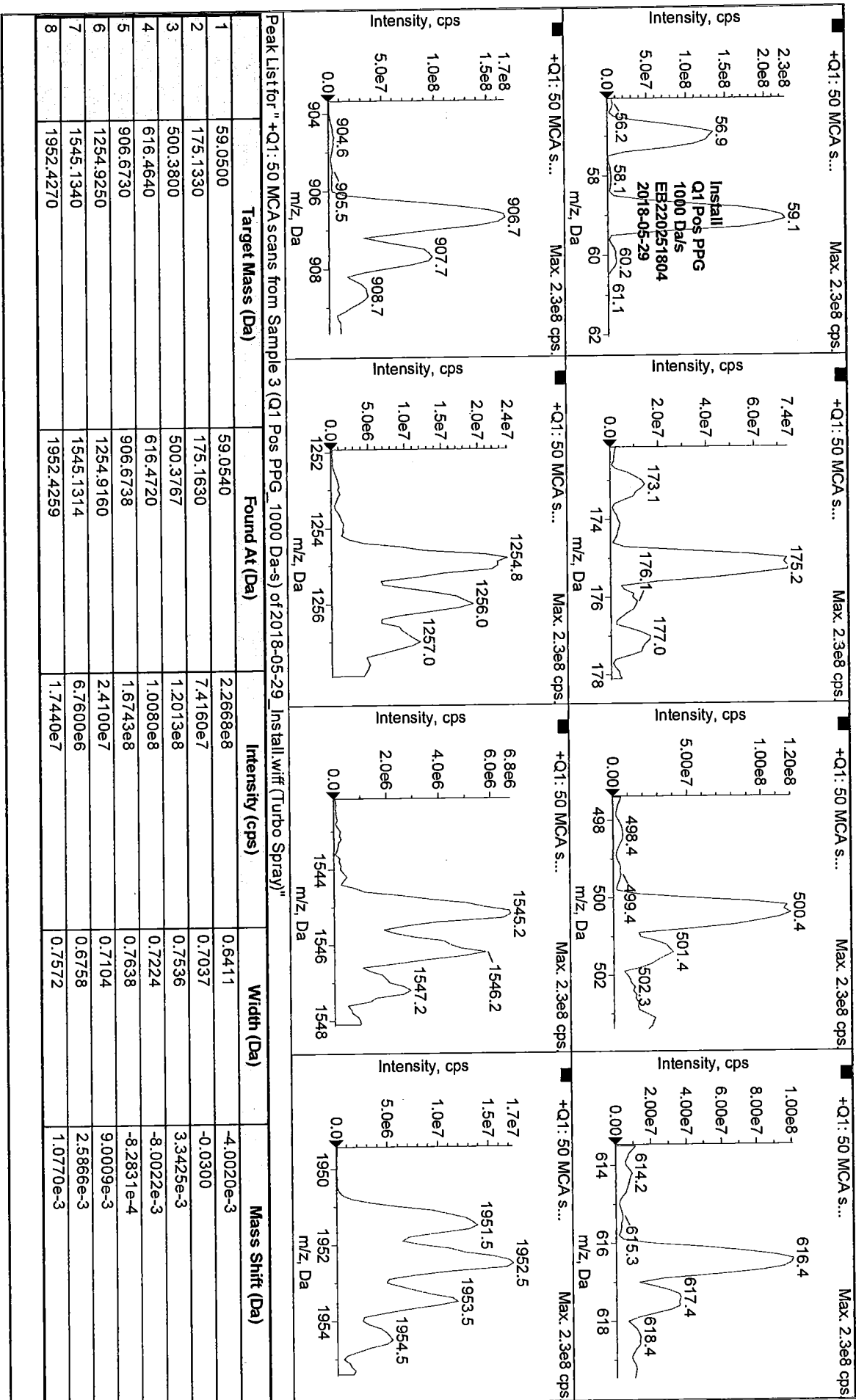
Q1 Resolution: Unit
 Ion Energy 1 (IE1): 1.2

Scan Type: Q1 MS (Q1)
 Polarity: Positive
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q1: Unit

CM (CD0): 1800.0

Unit





State Parameter Editor

Mass Spectrometer Method Properties

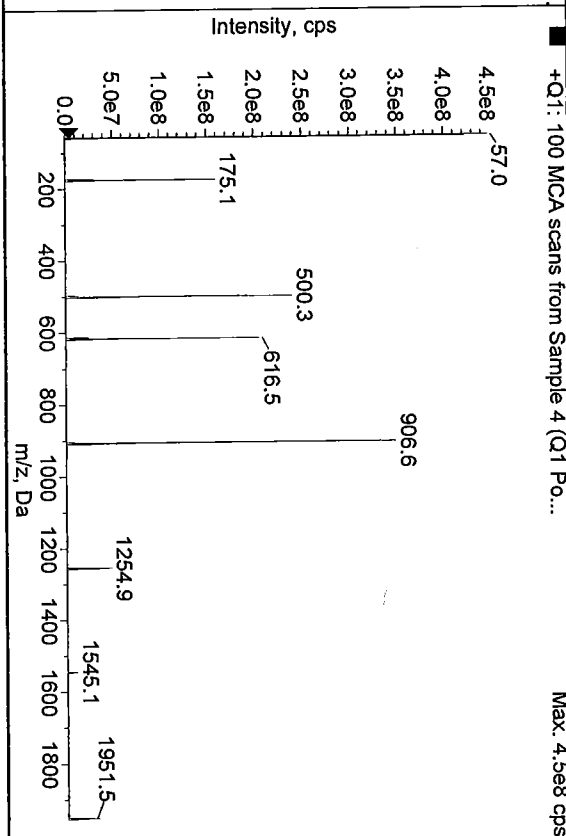
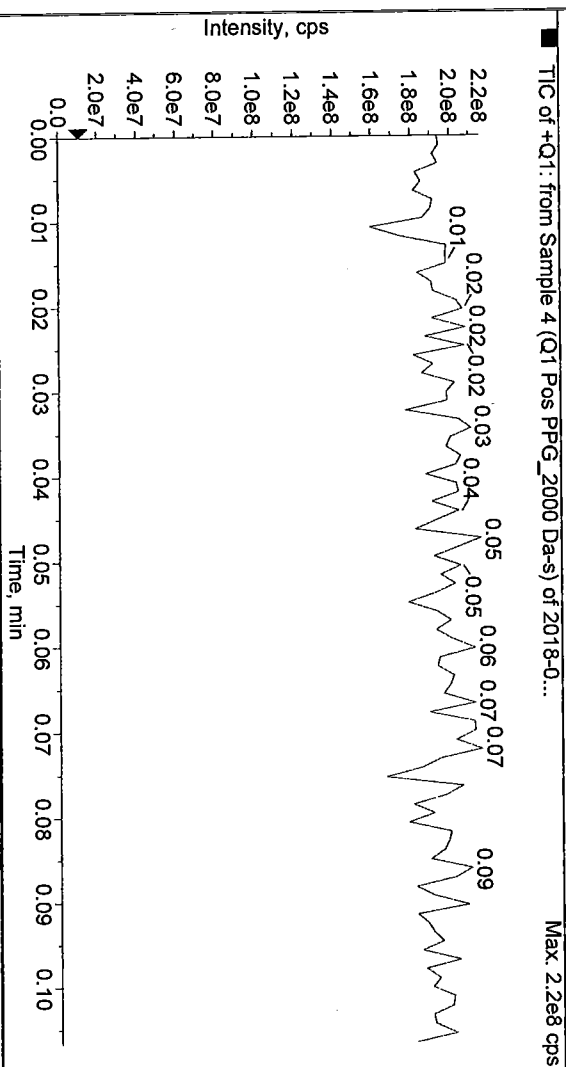
Ion Source: Turbo Spray
 Ion Source Temperature Reached: 5500.0
 Curtain Gas (CUR): 10.0
 Ion Spray Voltage (IS): 5500.0
 Temperature (TEM): 0.0
 Ion Source Gas 1 (GS1): 17.0
 Ion Source Gas 2 (GS2): 0.0

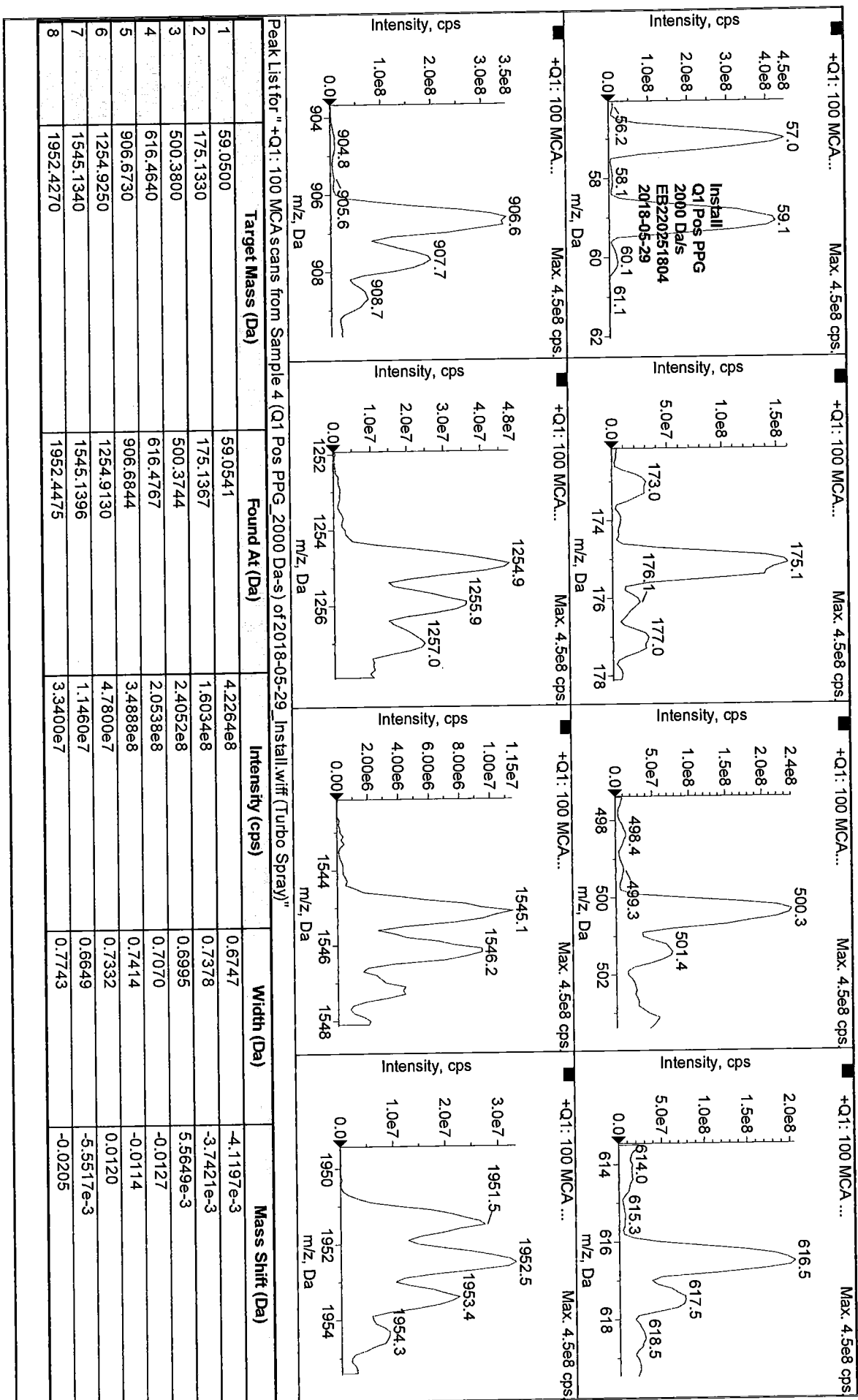
Period 1:
 Scans in Period: 100
 Relative Start Time: 0.00 msec
 Scheduled Ionization: Off
 Experiments in Period: 1

Distance Potential (EP): 10.0

Period 1 Experiment 1:

Q1 Resolution: Unit
 Ion Energy 1 (IE1): 1.2
 CM (CM): 1800.0
 Scan Type: Q1 MS (Q1)
 Polarity: Positive
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q1: Unit

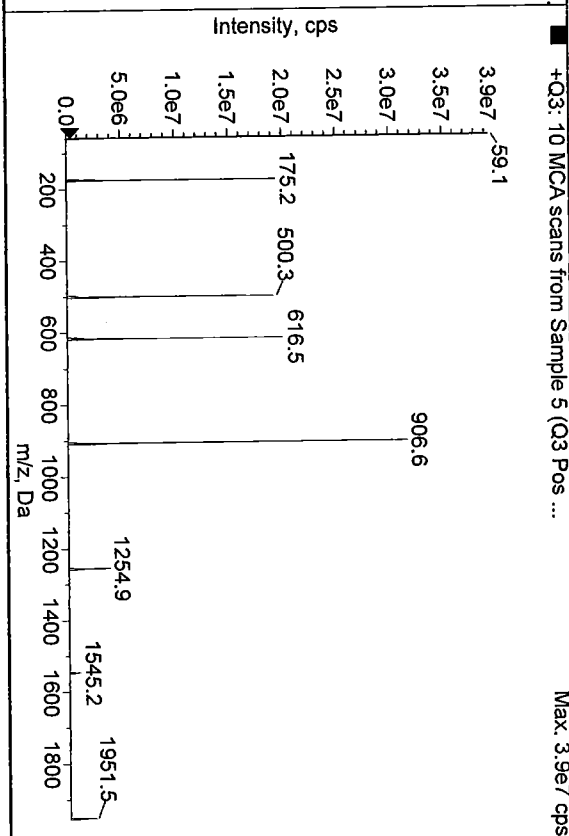
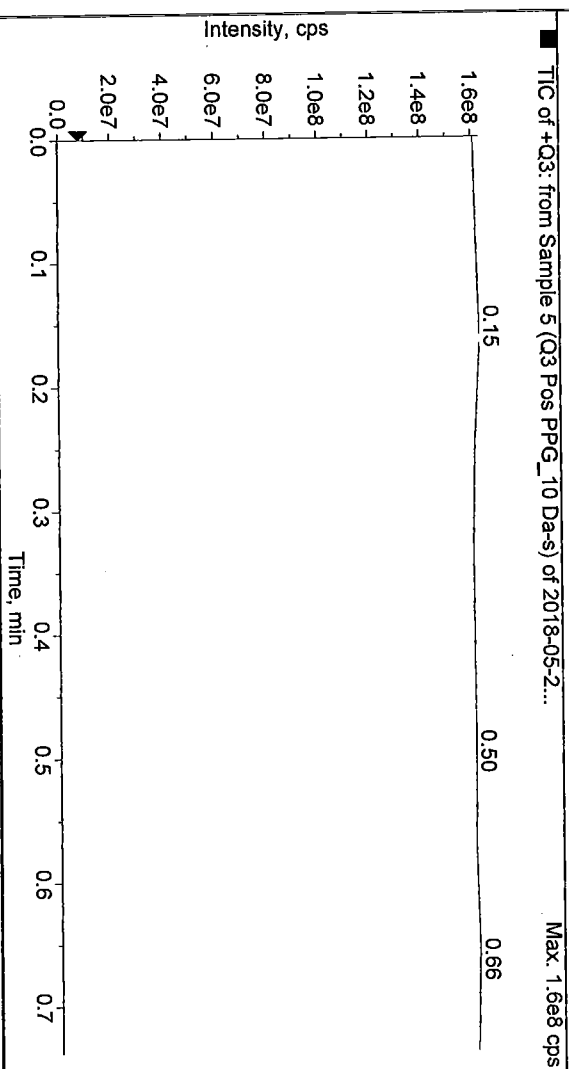


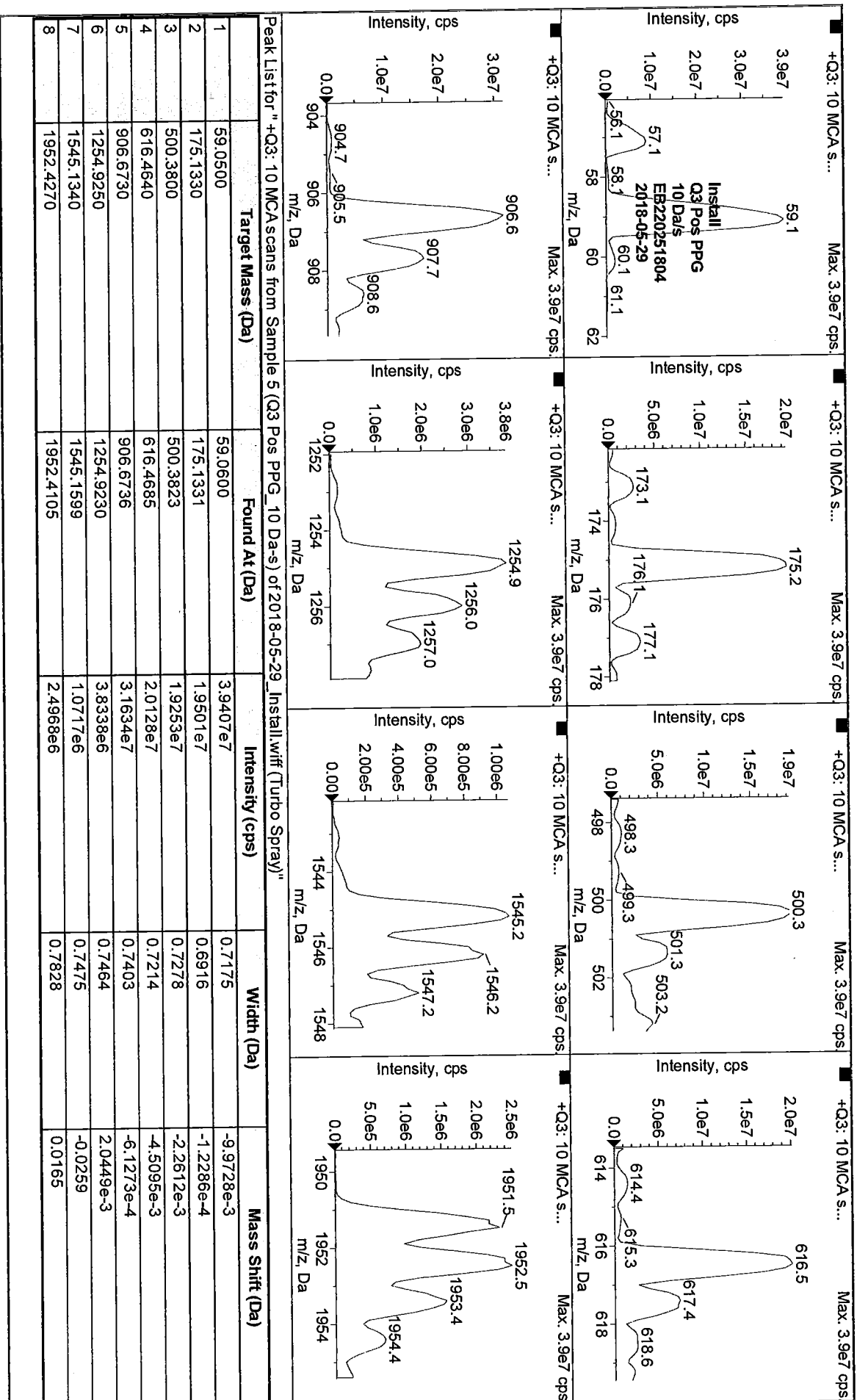


State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray
Ion Source Temperature Reached:	10.0
Carrier Gas (CIR):	5900.0
Ion Spray Voltage (IS):	0.0
Temperature (TRM):	17.0
Ion Source Gas 1 (GS1):	0.0
Ion Source Gas 2 (GS2):	10.0
Brinane Potential (BP):	10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	1.1
CM (CMI):	1800.0
Period 1:	
Scans in Period:	10
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1
Period 1 Experiment 1:	
Scan Type:	Q3 MS (Q3)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit

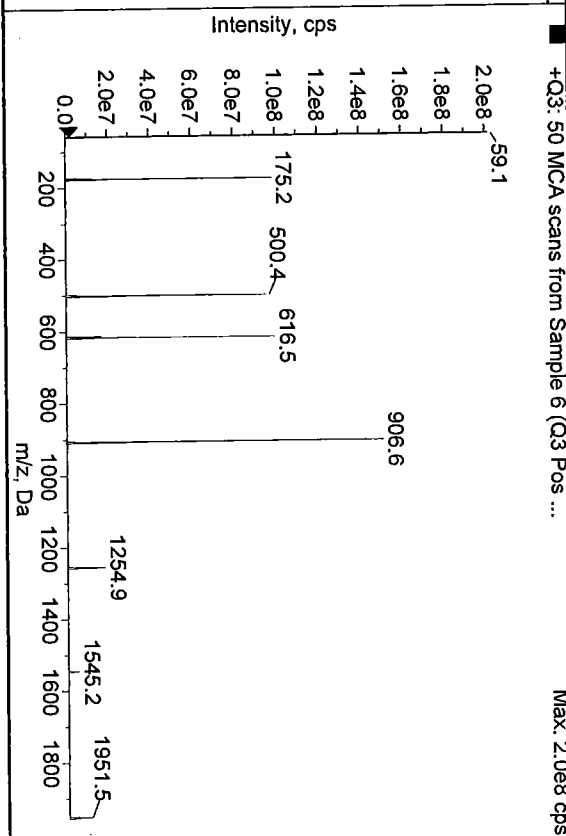
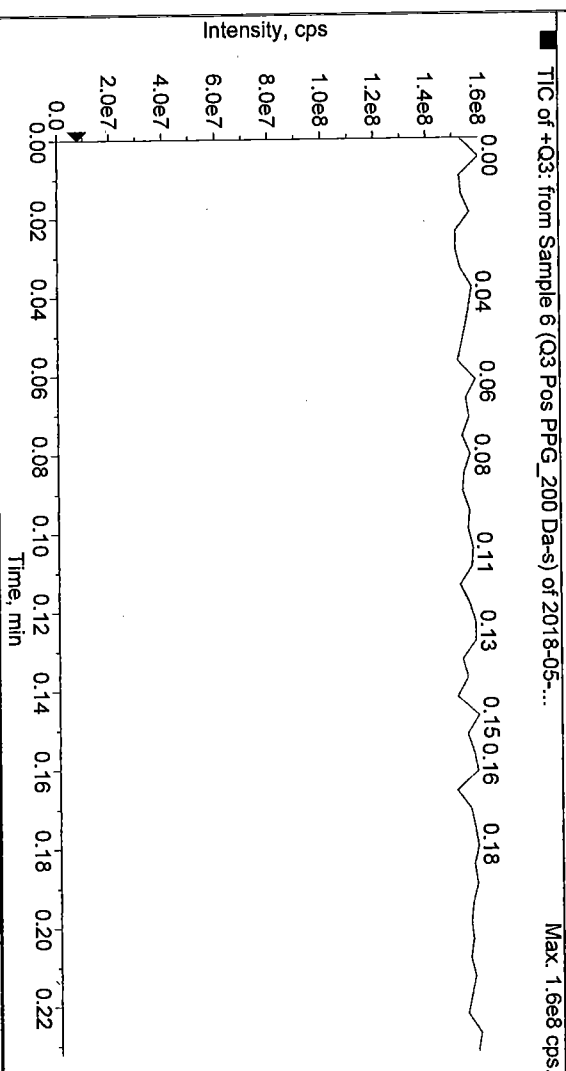


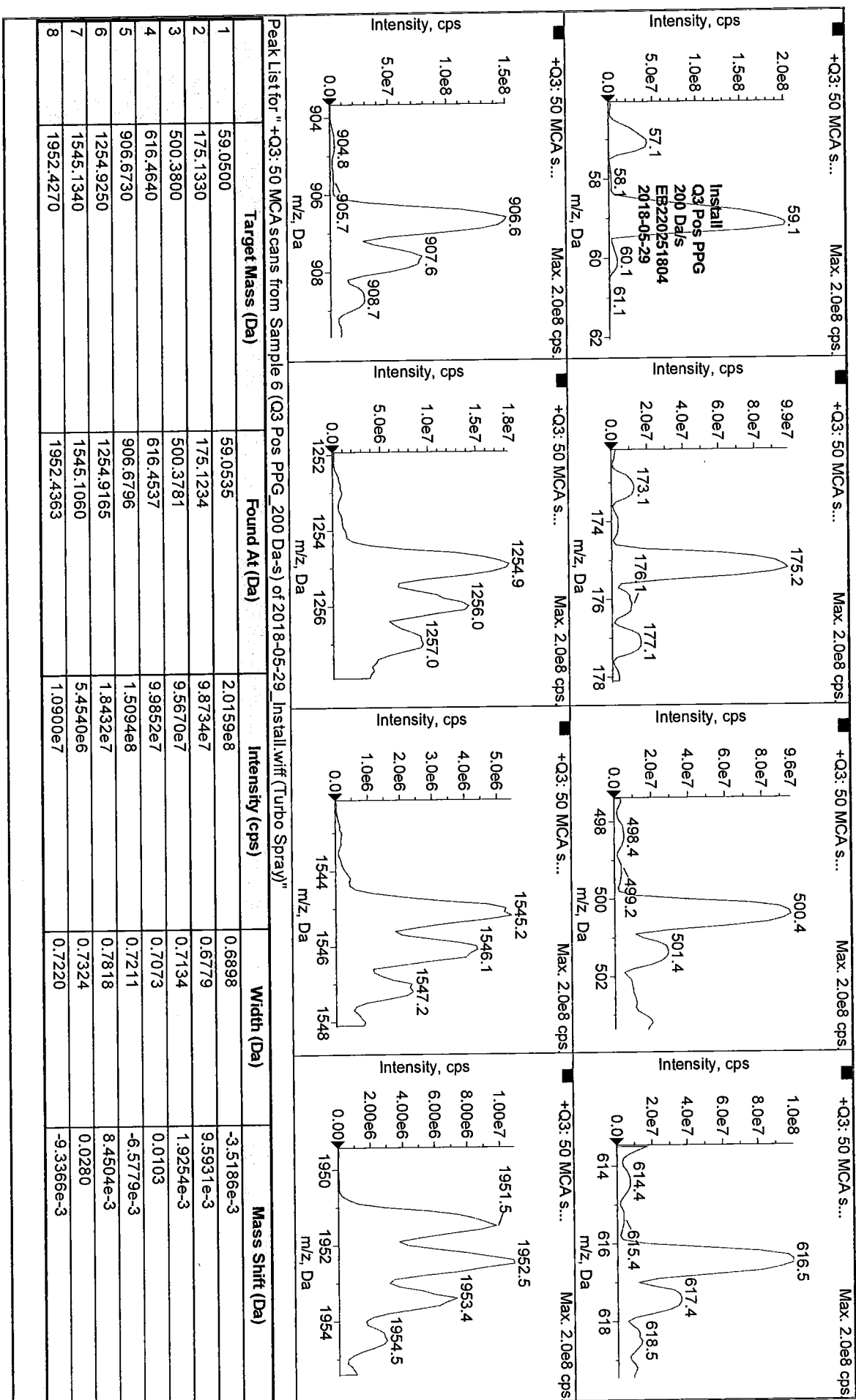


State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray	Period 1:	
Ion Source Temperature Reached:	5500.0	Scans in Period:	50
Carrier Gas (CR):	10.0	Relative Start Time:	0.00 msec
Ion Spray Voltage (IS):	5500.0	Scheduled Ionization:	Off
Temperature (TM):	0.0	Experiments in Period:	1
Ion Source Gas 1 (GS1):	17.0		
Ion Source Gas 2 (GS2):	0.0		
Brilliance Potential (BP):	10.0	Period 1 Experiment 1:	
Q3 Resolution:	Unit	Scan Type:	Q3 MS (Q3)
Ion Beam 3 (IE3):	1.0	Polarity:	Positive
CM (C30):	1800.0	Scan Mode:	Profile
		Ion Source:	Turbo Spray
		# Scans to Sum:	1
		Resolution Q3:	Unit

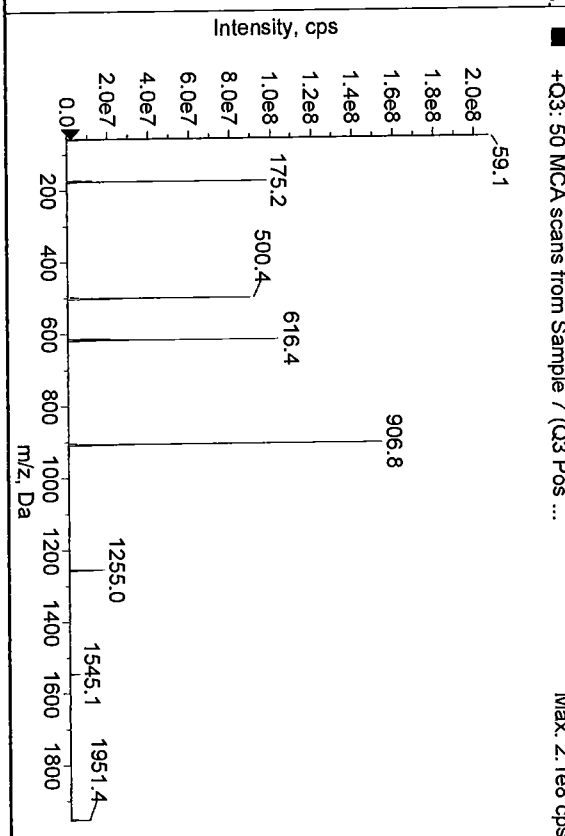
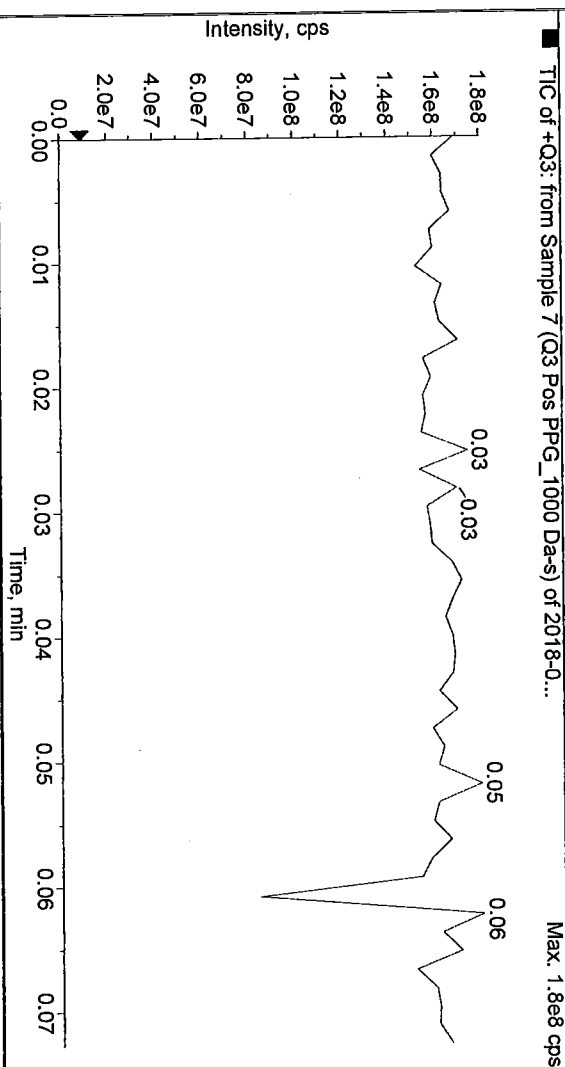


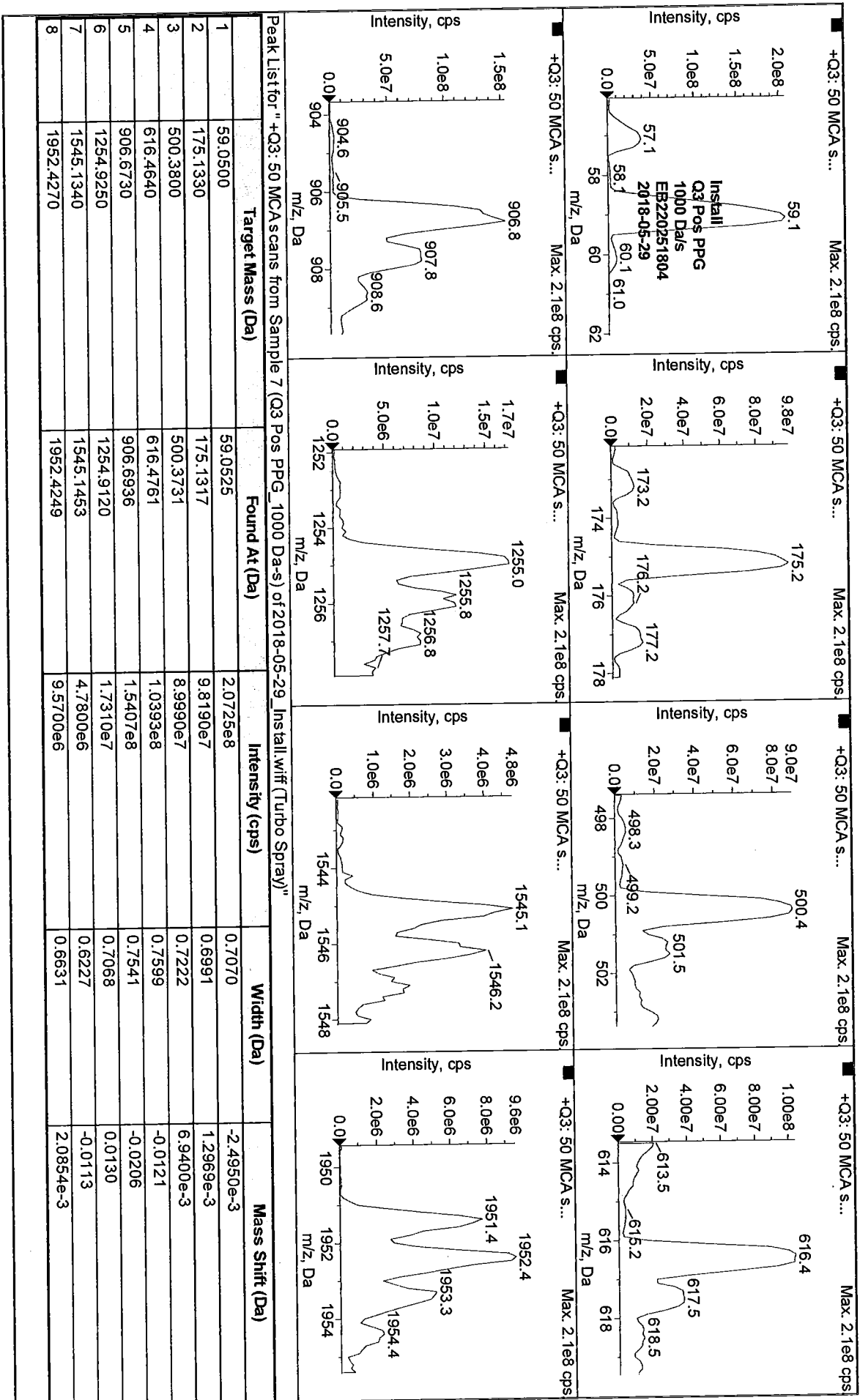


State Parameter Editor

Mass Spectrometer Method Properties

Ion Source: Turbo Spray
 Ion Source Temperature: Heated
 Curtain Gas (CUR): 10.0
 Ion Spray Voltage (IS): 5500.0
 Temperature (TEM): 0.0
 Ion Source Gas 1 (ESI): 17.0
 Ion Source Gas 2 (ESI): 0.0
 Distance Potential (EP): 10.0
 Period 1:
 Scans in Period: 50
 Relative Start Time: 0.00 msec
 Scheduled Ionization: Off
 Experiments in Period: 1
 Period 1 Experiment 1:
 Scan Type: Q3 MS (Q3)
 Polarity: Positive
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q3: Unit

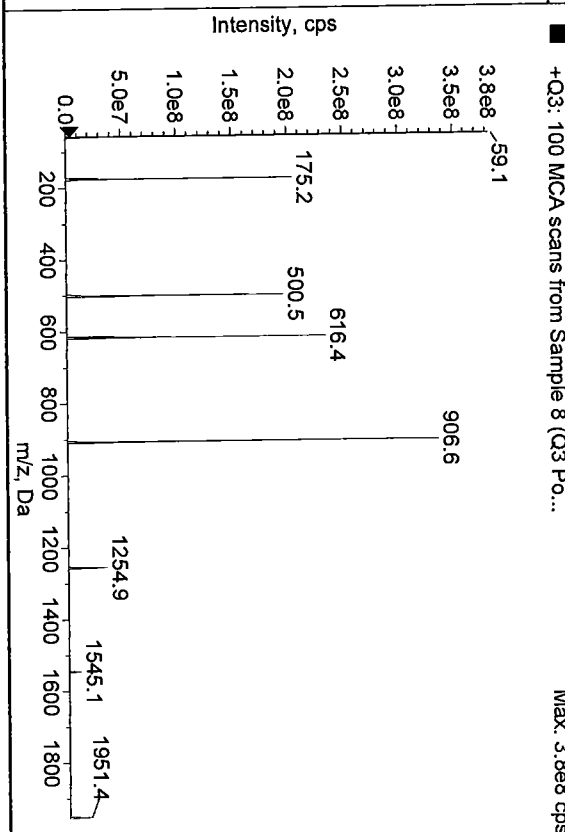
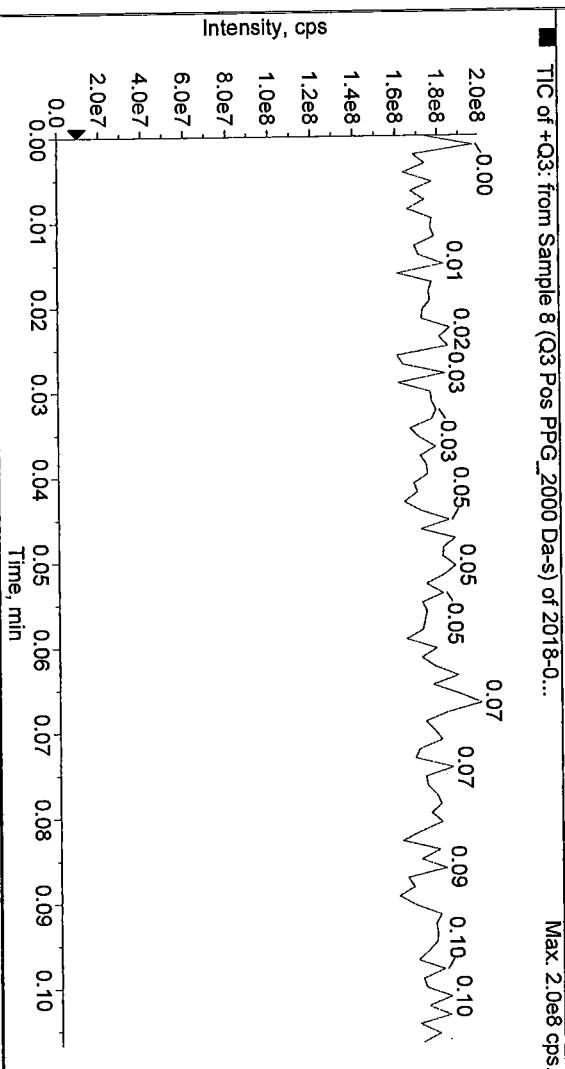


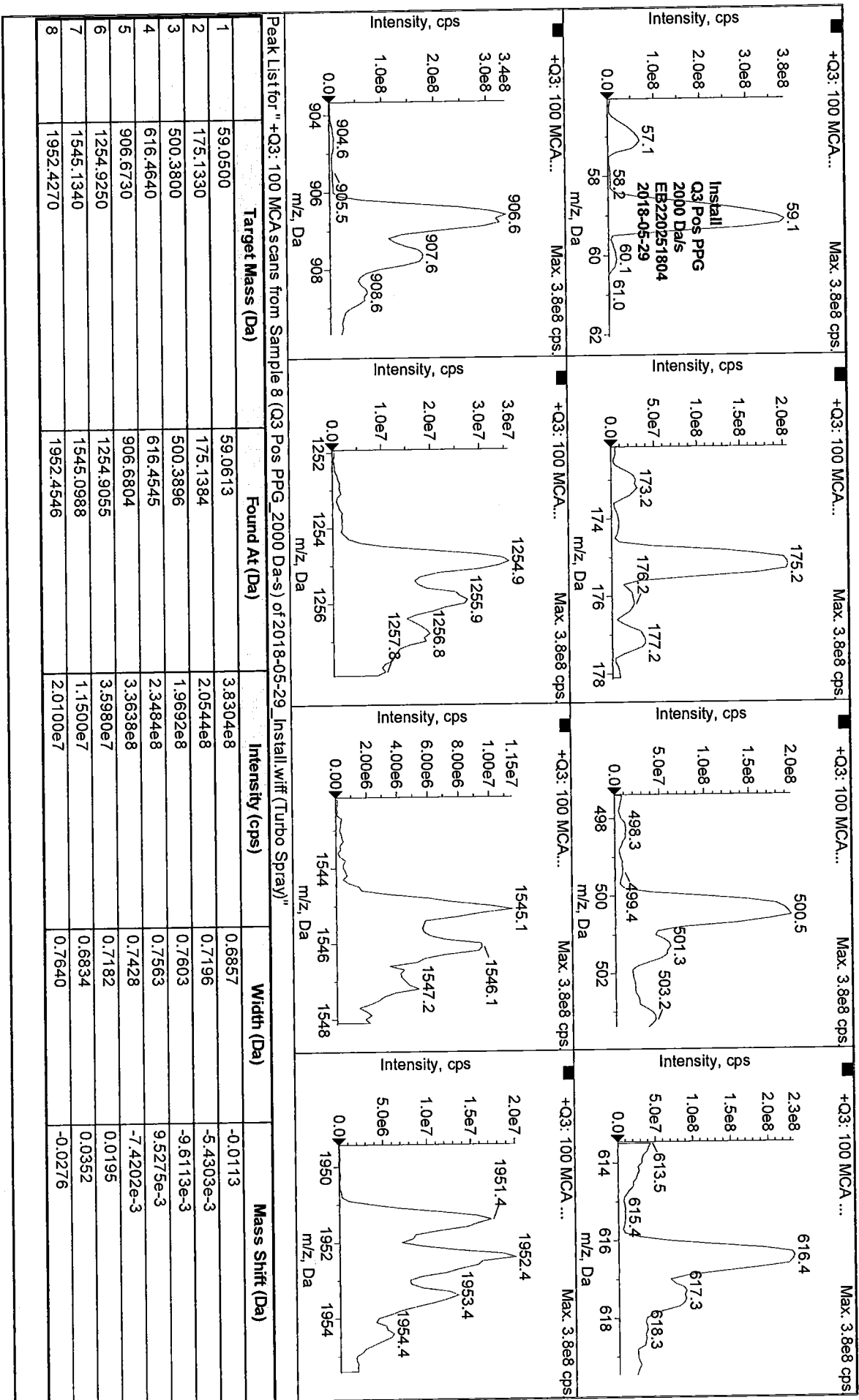


State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray
Ion Source Temperature Reached:	10.0
Carrier Gas (CUR):	5500.0
Ion Spray Voltage (IS):	0.0
Temperature (TBM):	17.0
Ion Source Gas 1 (GS1):	0.0
Ion Source Gas 2 (GS2):	10.0
Distance Potential (EP):	1.2
Q3 Resolution:	Unit
Ion Beam 3 (IE3):	1.2
CN (C/N):	1800.0
Period 1:	
Scans in Period:	100
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1
Period 1 Experiment 1:	
Scan Type:	Q3 MS (Q3)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit





State Parameter Editor

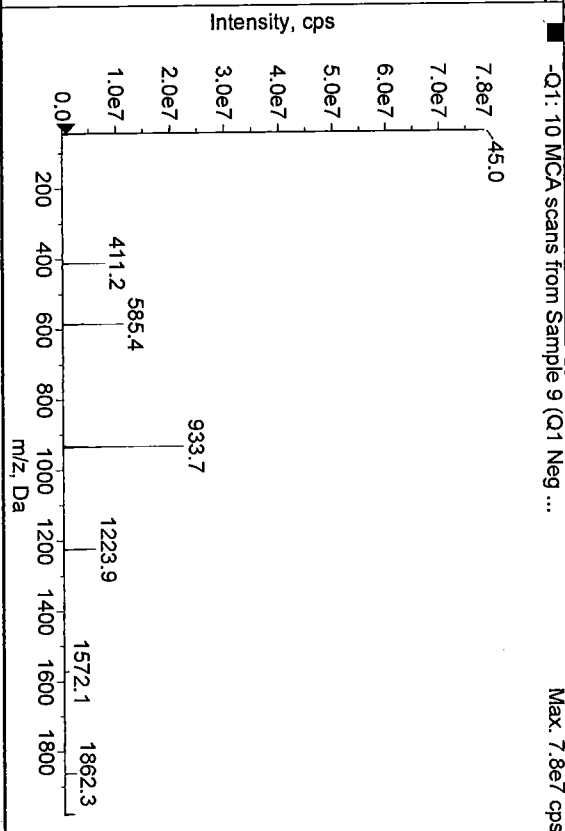
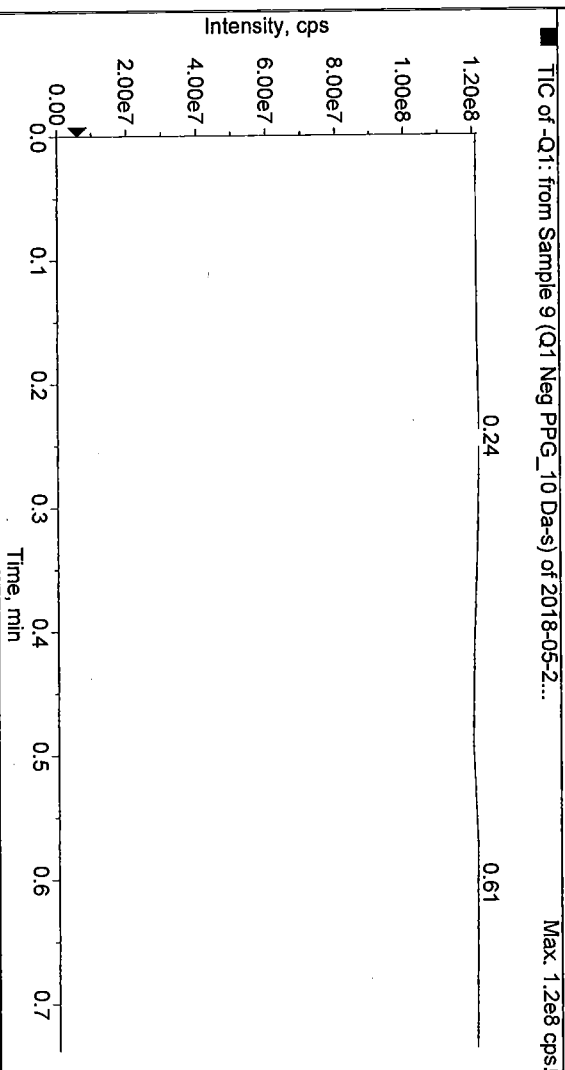
Mass Spectrometer Method Properties

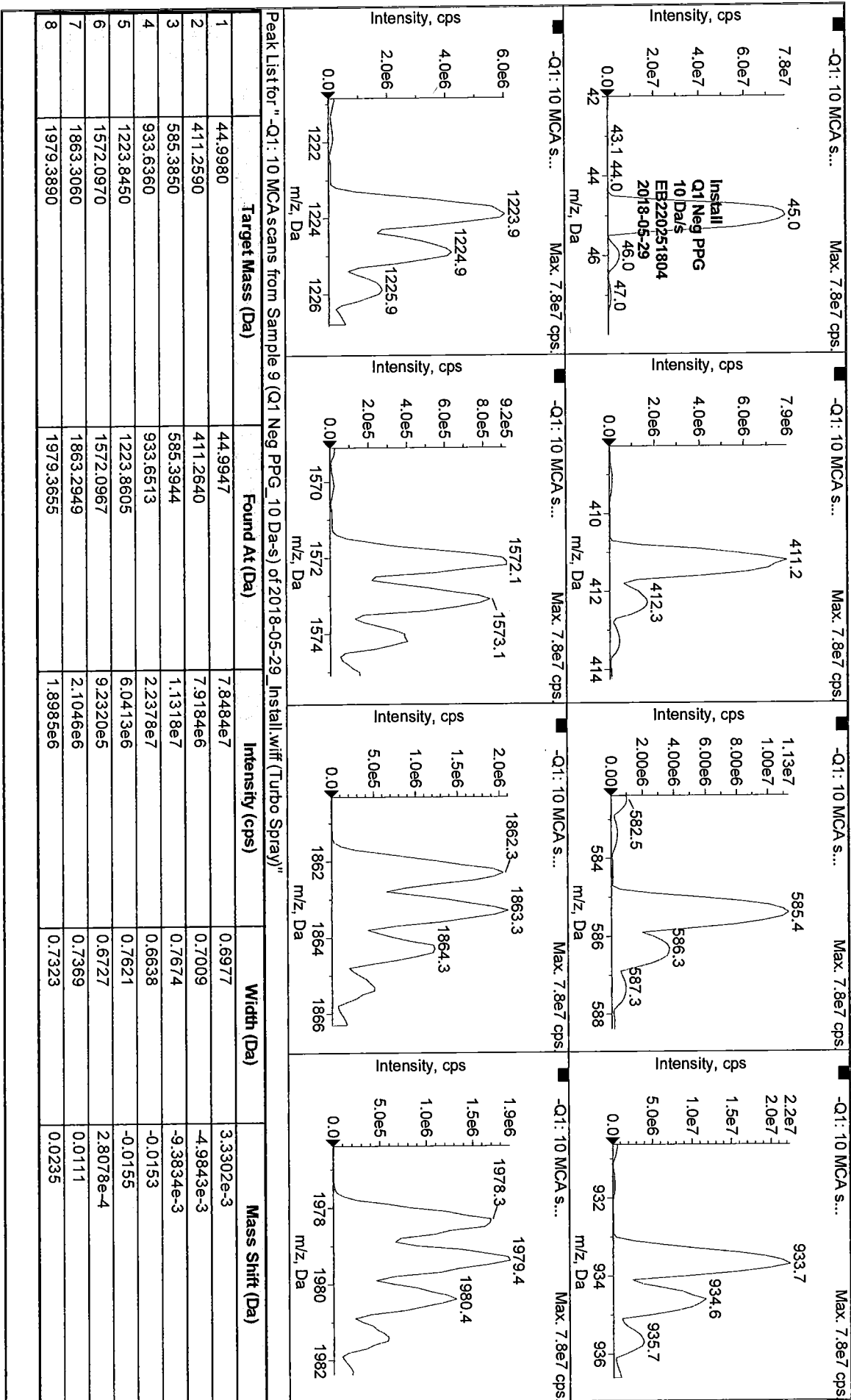
Ion Source: Turbo Spray
 Ion Source Temperature Reached: 10.0
 Curtain Gas (CUR): 10.0
 Ion Spray Voltage (IS): -4500.0
 Temperature (TM): 0.0
 Ion Source Gas 1 (GS1): 17.0
 Ion Source Gas 2 (GS2): 0.0
 Distance Potential (EP): -10.0

Period 1:
 Scans in Period: 10
 Relative Start Time: 0.00 msec
 Scheduled Ionization: Off
 Experiments in Period: 1

Period 1 Experiment 1:
 Scan Type: Q1 MS (Q1)
 Polarity: Negative
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q1: Unit

Q1 Resolution: Unit
 Ion Energy 1 (IE1): -1.0
 CM (CB): 1900.0





State Parameter Editor

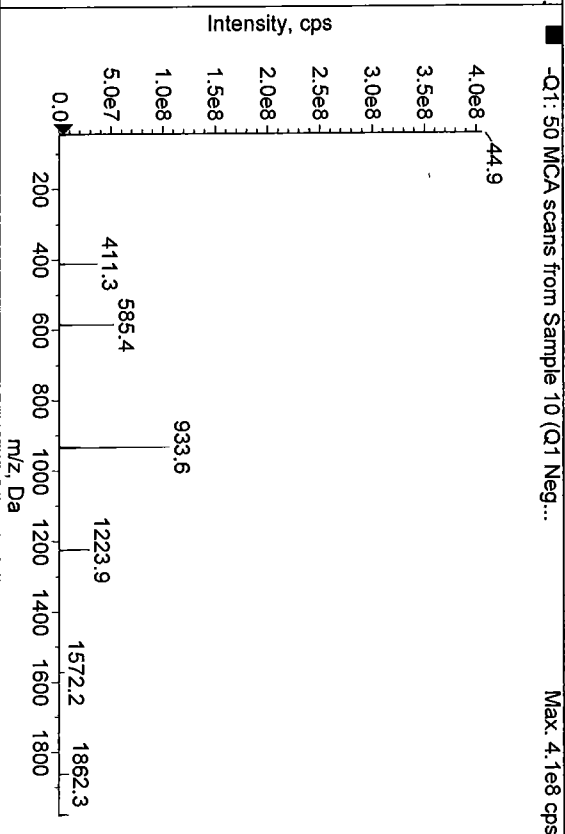
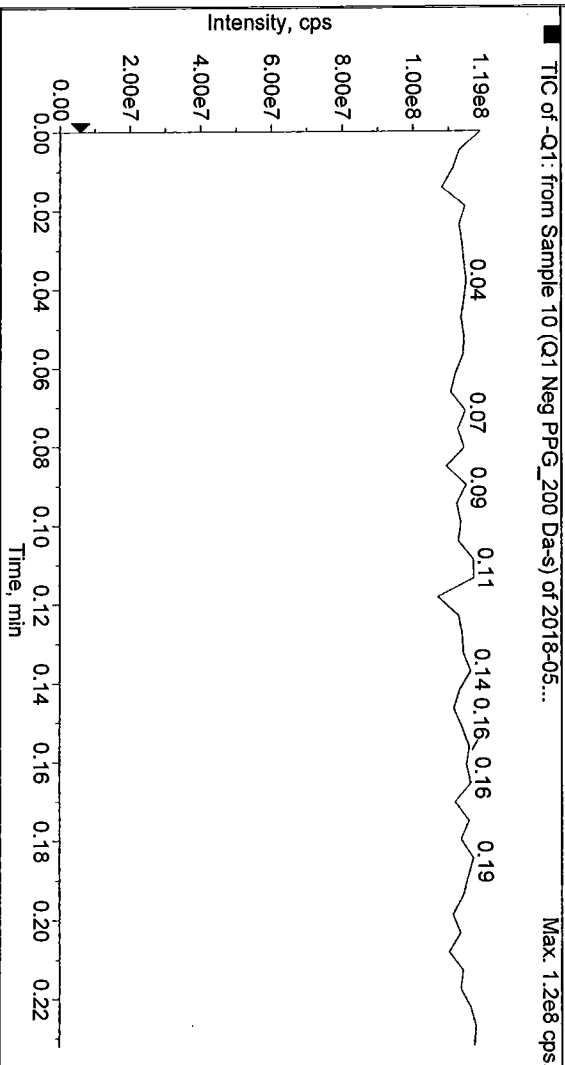
Mass Spectrometer Method Properties

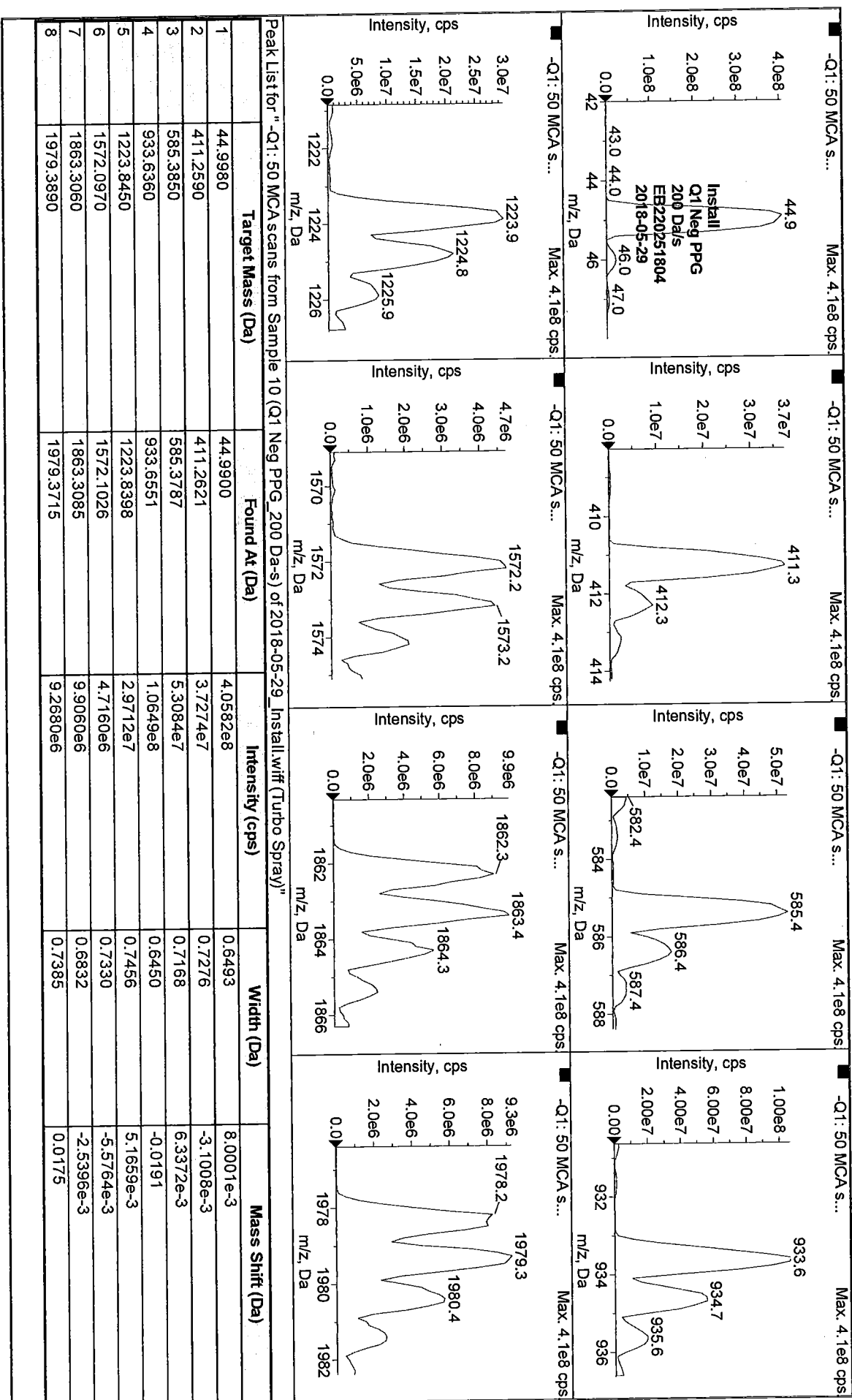
Ion Source: Turbo Spray
 Ion Source Temperature Reached: 10.0
 Curtain Gas (CUR): 10.0
 IonSpray Voltage (IS): -4500.0
 Temperature (TBP): 0.0
 Ion Source Gas 1 (GS1): 17.0
 Ion Source Gas 2 (GS2): 0.0
 Distance Potential (DP): -10.0

Period 1:
 Scans in Period: 50
 Relative Start Time: 0.00 msec
 Scheduled Ionization: Off
 Experiments in Period: 1

Period 1 Experiment 1:
 Scan Type: Q1 MS (Q1)
 Polarity: Negative
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q1: Unit

Q1 Resolution: Unit
 Ion Beam 1 (IB1): -1.0
 CM (CD1): 1900.0





State Parameter Editor

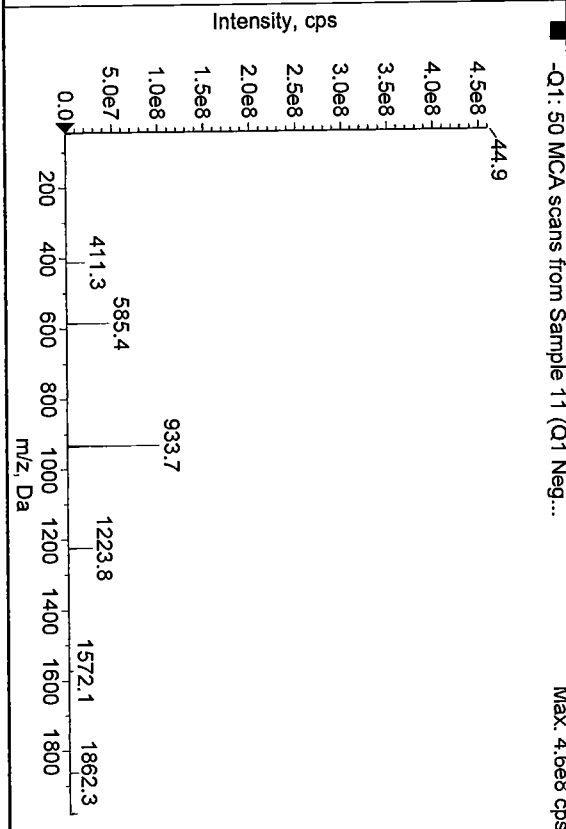
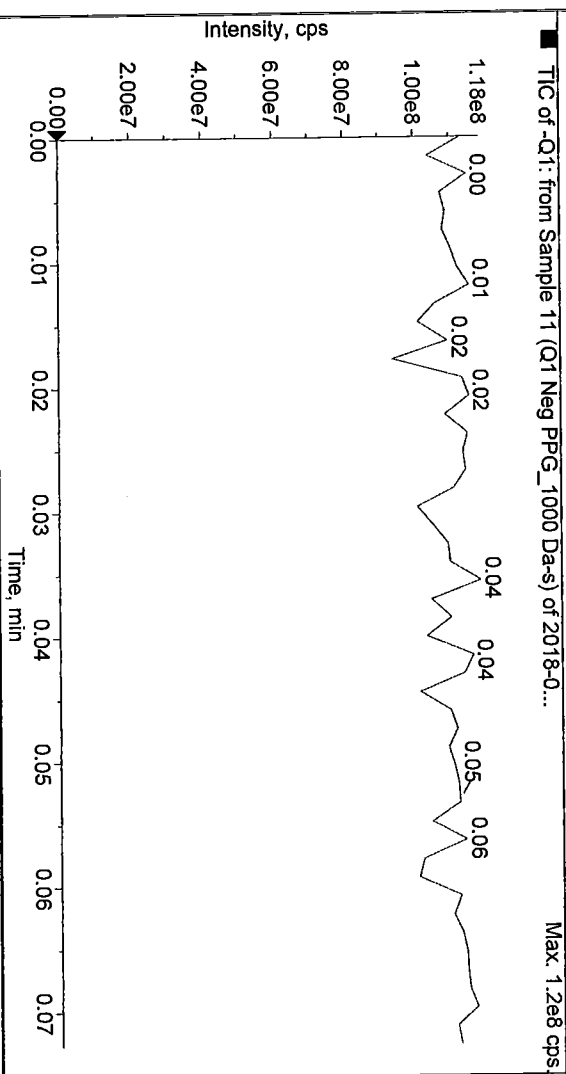
Mass Spectrometer Method Properties

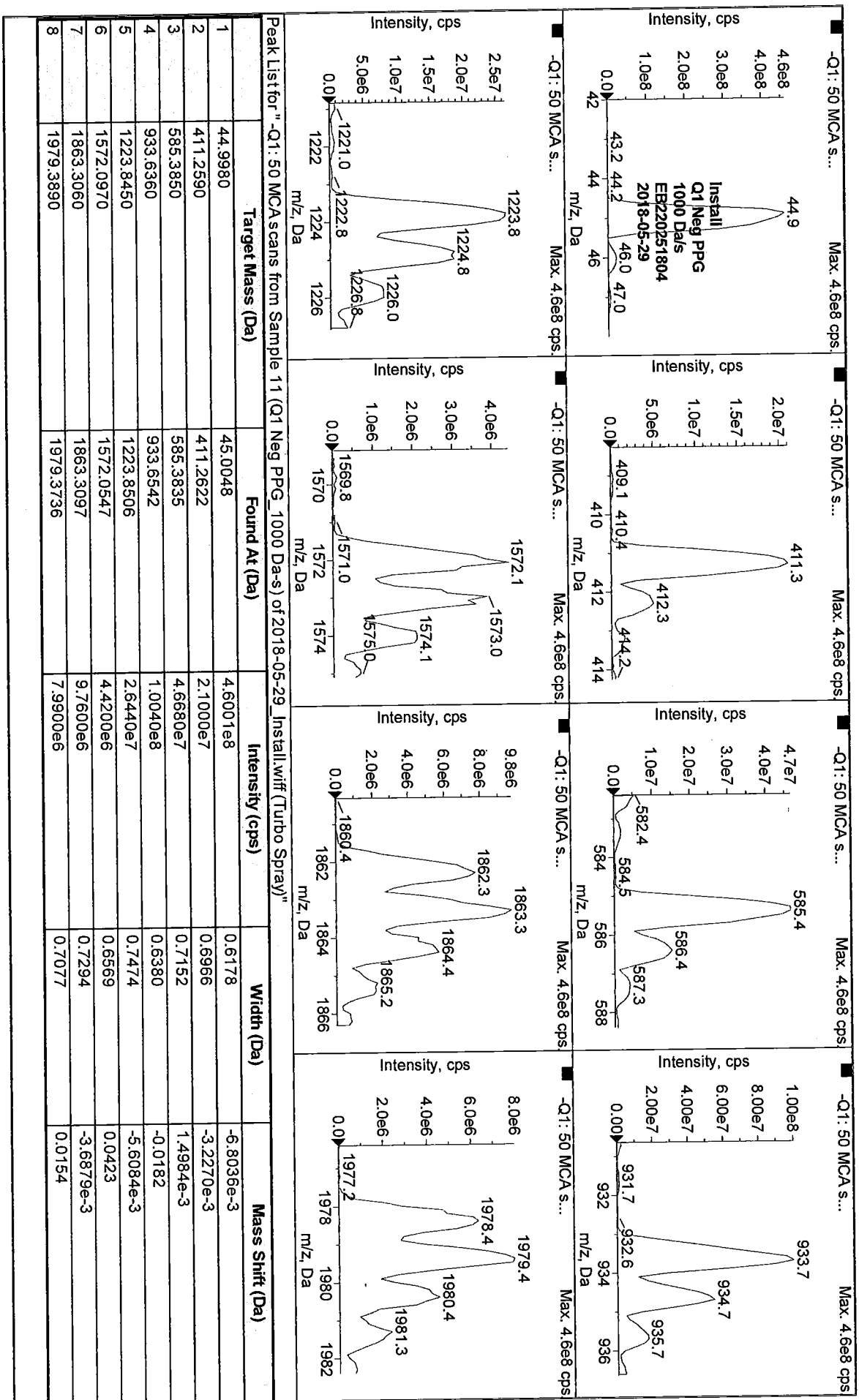
Ion Source: Turbo Spray
 Ion Source Temperature Reached: 10.0
 Curtain Gas (UIN): 10.0
 Ion Spray Voltage (IS): -4500.0
 Temperature (TBA): 0.0
 Ion Source Gas 1 (ESI): 17.0
 Ion Source Gas 2 (ESI): 0.0
 Distance Potential (EP): -10.0

Period 1:
 Scans in Period: 50
 Relative Start Time: 0.00 msec
 Scheduled Ionization: Off
 Experiments in Period: 1

Period 1 Experiment 1:
 Scan Type: Q1 MS (Q1)
 Polarity: Negative
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q1: Unit

Q1 Resolution: Unit
 Ion Beam 1 (IE): -1.0
 CM (CM): 1900.0

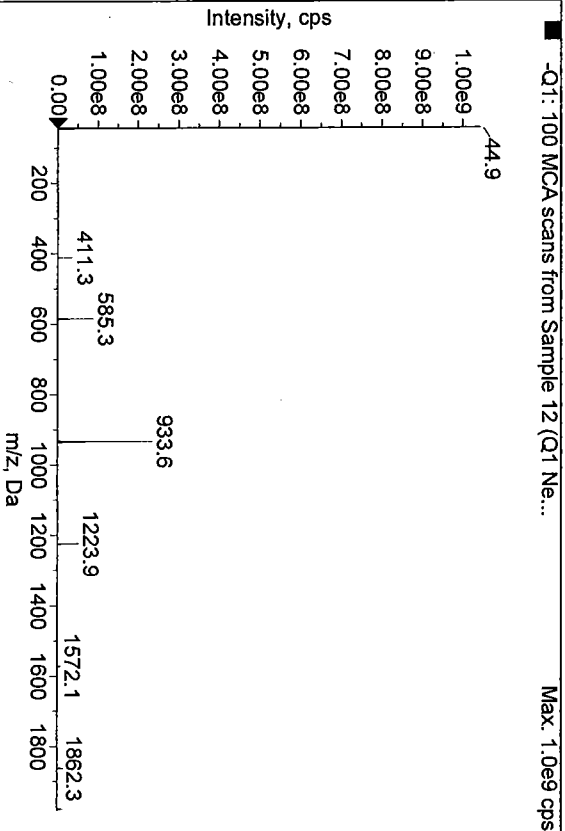
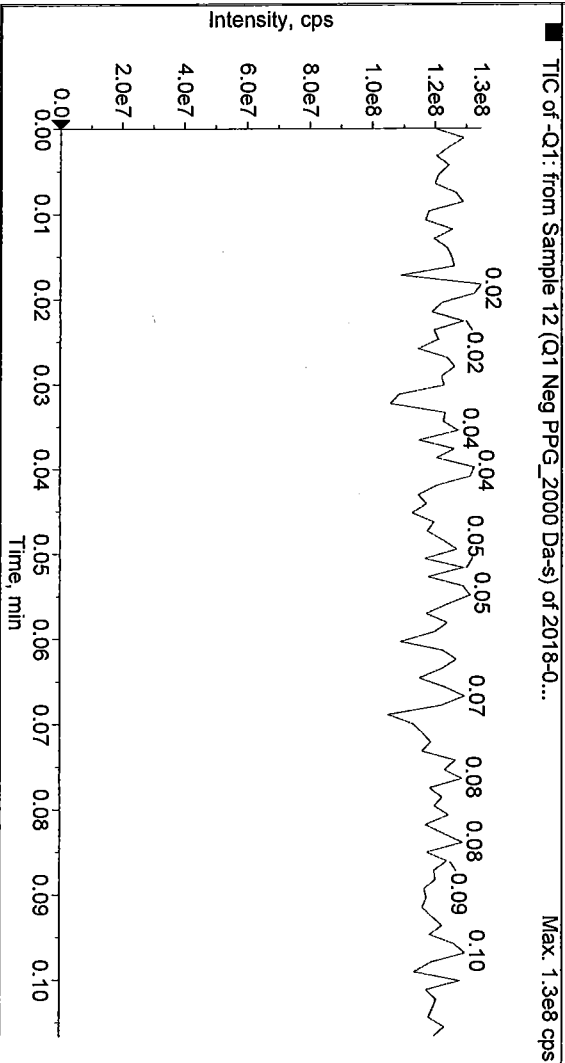


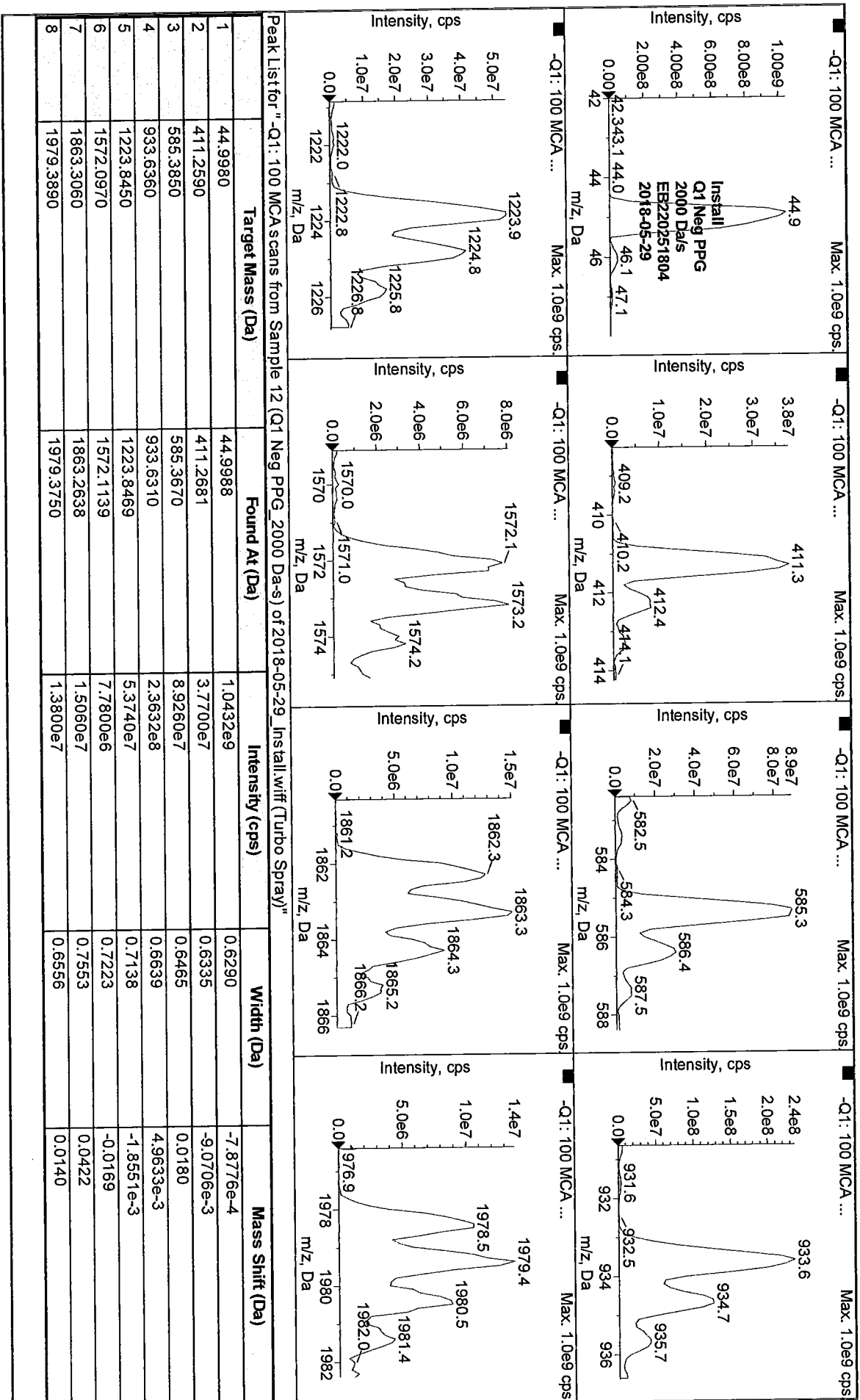


Site Parameter Editor

Mass Spectrometer Method Properties

Ion Source: Turbo Spray
 Ion Source Temperature Reached: 10.0
 Curtain Gas (Q0): -4500.0
 Ion Spray Voltage (IS): 0.0
 Temperature (TS): 17.0
 Ion Source Gas 1 (S1): 0.0
 Ion Source Gas 2 (S2): -10.0
 Distance Potential (P): -10.0
 Period 1:
 Scans in Period: 100
 Relative Start Time: 0.00 msec
 Scheduled Ionization: Off
 Experiments in Period: 1
 Period 1 Experiment 1:
 Scan Type: Q1 MS (Q1)
 Polarity: Negative
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q1: Unit

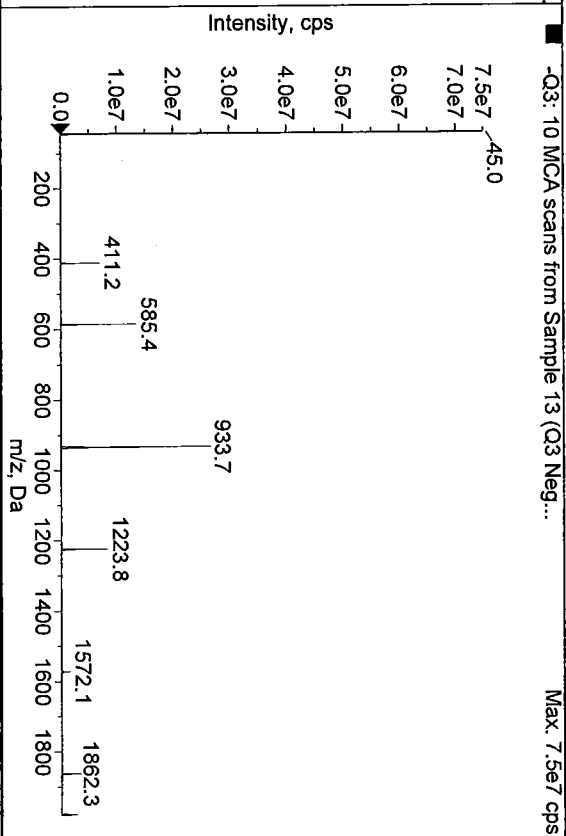
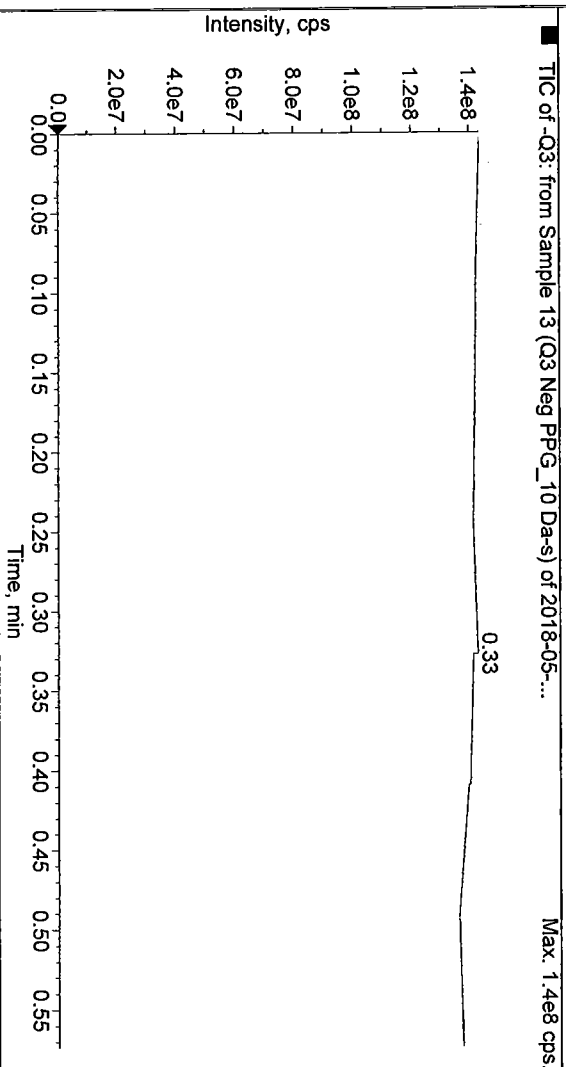


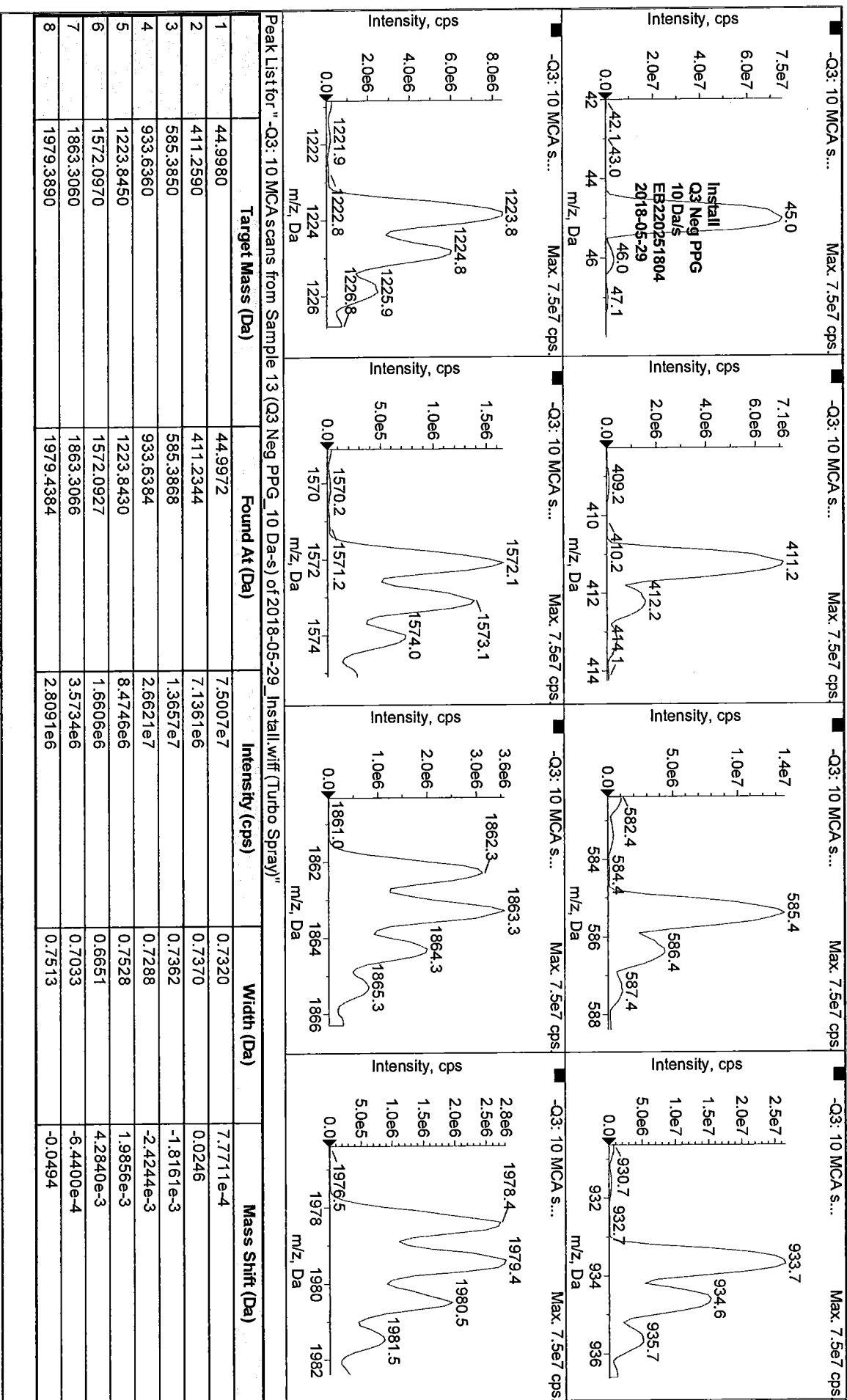


State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
Ion Spray Voltage (IS):	-4500.0
Temperature (TM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Distance Potential (EP):	-10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	-1.5
Q3 (Q3):	1900.0
Scan Type:	Q3 MS (Q3)
Polarity:	Negative
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit
Period 1:	
Scans in Period:	10
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1
Period 1 Experiment 1:	





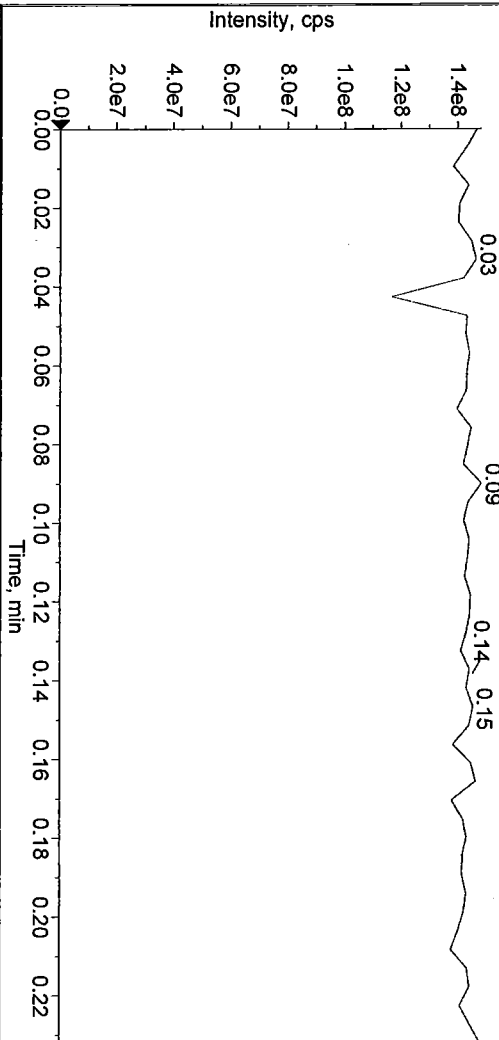
State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Carrier Gas (CUR):	10.0
Injector Volume (IS):	-4500.0
Temperature (TSM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Distance Potential (EP):	-10.0
Q3 Resolution:	Unit
Ion Beam 3 (IE3):	-1.5
Q3 (CE0):	1900.0
Period 1:	Experiment 1:
Scan Type:	Q3 MS (Q3)
Polarity:	Negative
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	OFF
Experiments in Period:	1

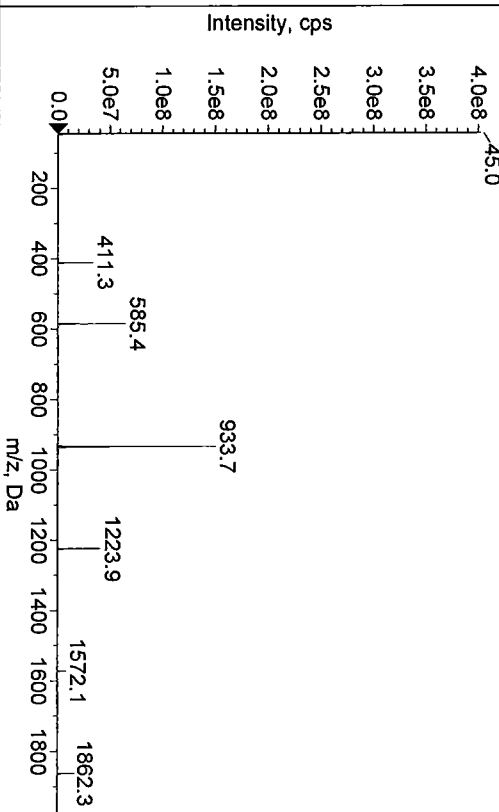
■ TIC of -Q3: from Sample 14 (Q3 Neg PPG_200 Da-s) of 2018-05...

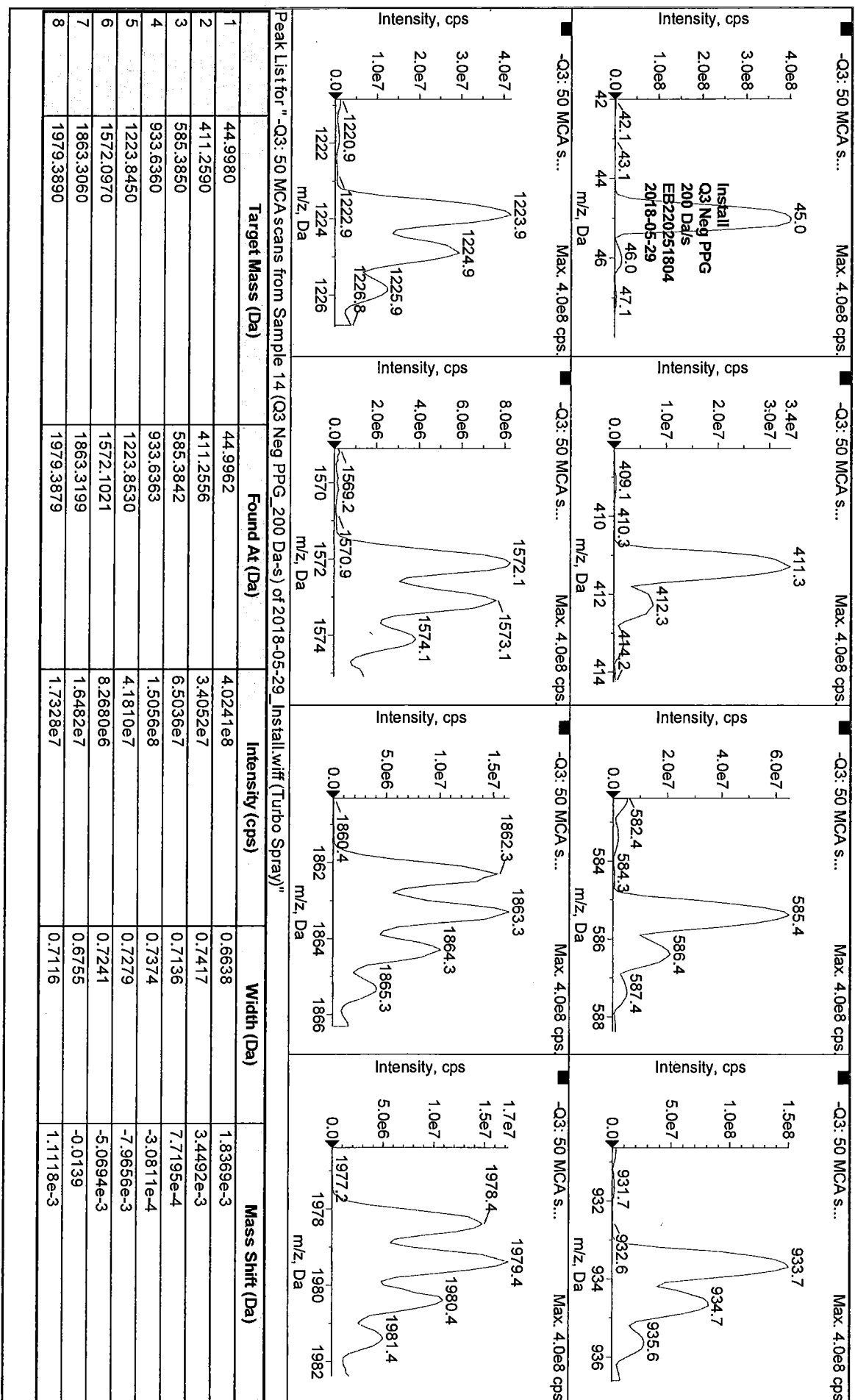
Max: 1.5e8 cps



■ -Q3: 50 MCA scans from Sample 14 (Q3 Neg...

Max: 4.0e8 cps

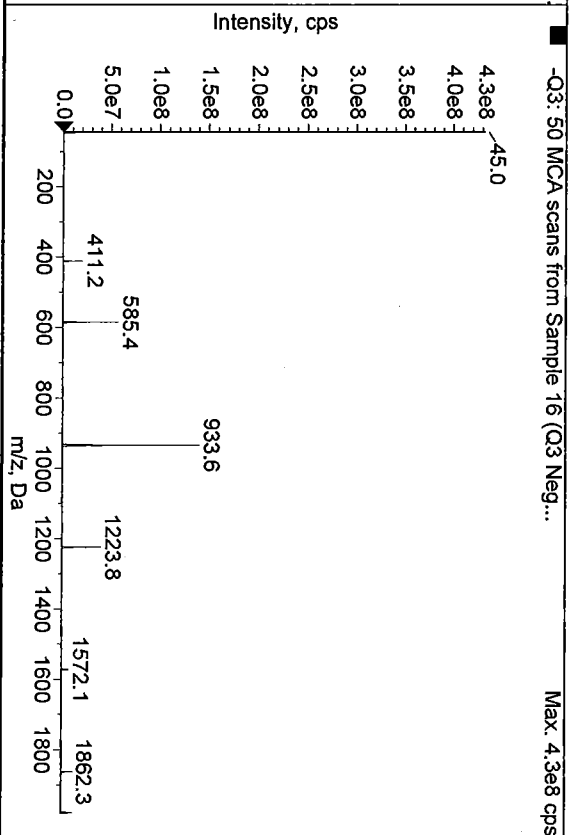
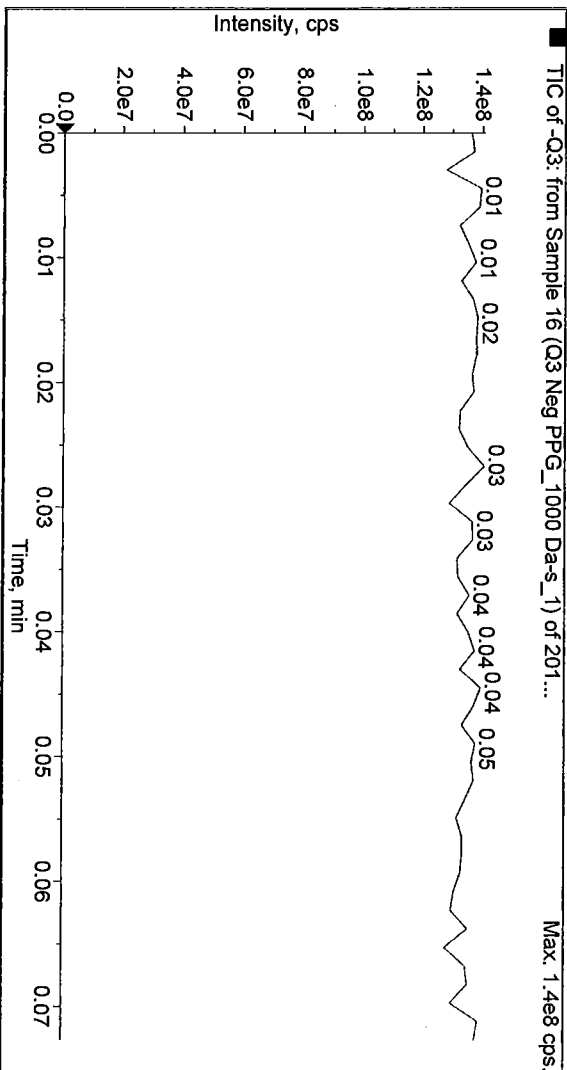


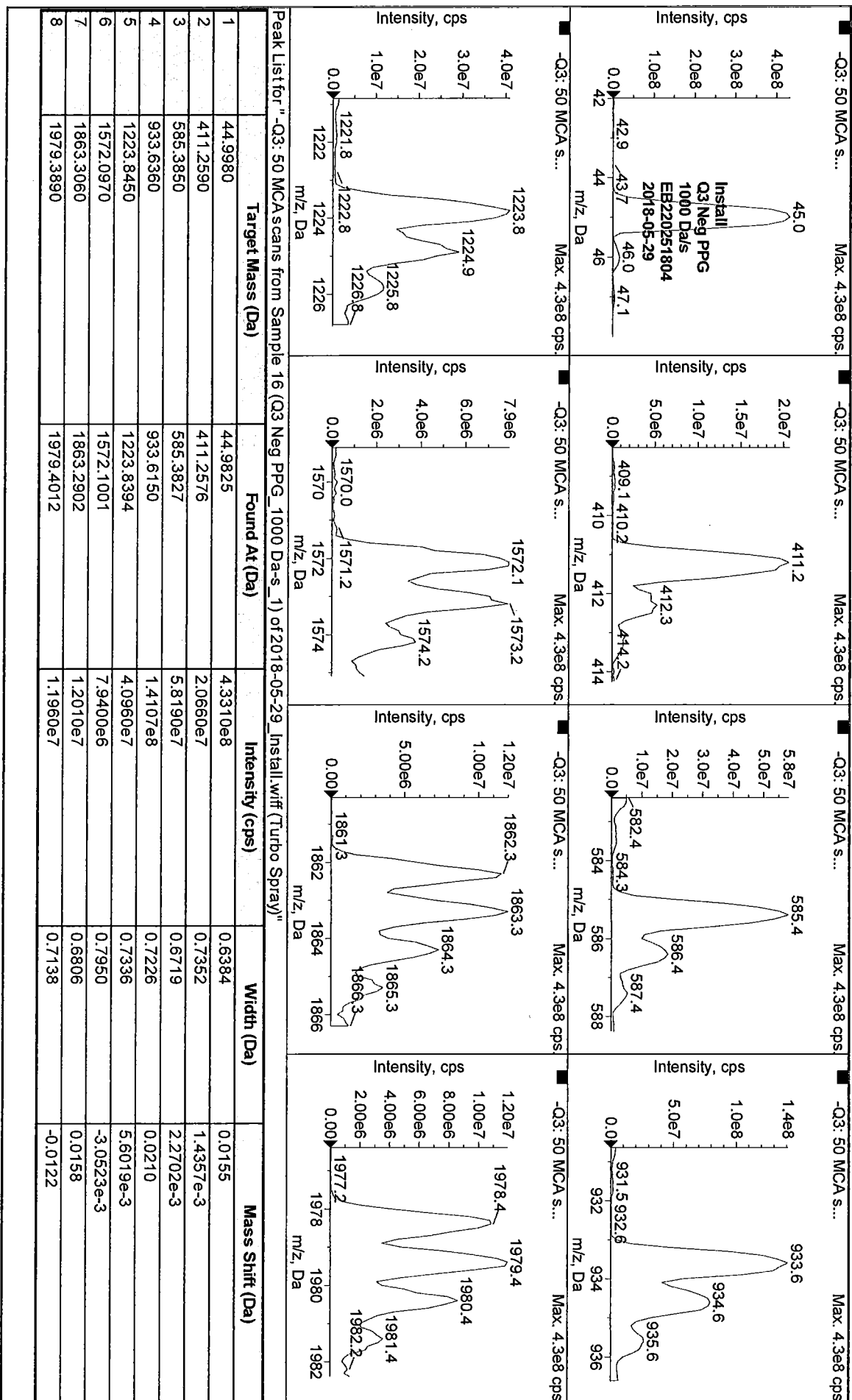


State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray
Ion Source Temperature Reached:	
Carrier Gas (CIR):	10.0
Ion Spray Voltage (IS):	-4500.0
Temperature (IP4):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Distance Potential (EP):	-10.0
Q3 Resolution:	Unit
Ion Beam 3 (IB3):	-1.5
CM (CM4):	1300.0
Period 1:	Experiment 1:
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1
Scan Type:	Q3 MS (Q3)
Polarity:	Negative
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit





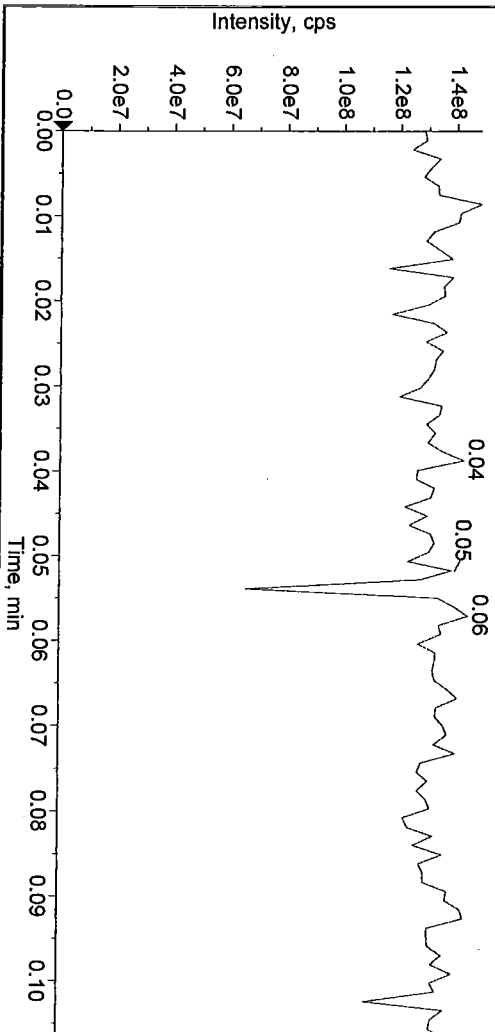
State Parameter Editor

Mass Spectrometer Method Properties

Ion Source:	Turbo Spray	Period 1:	
Ion Source Temperature Reached:	10.0	Scans in Period:	100
Carrier Gas (Q1):	-4500.0	Relative Start Time:	0.00 msec
Temperature (T3):	0.0	Scheduled Ionization:	Off
Ion Source Gas 1 (S1):	17.0	Experiments in Period:	1
Ion Source Gas 2 (S2):	0.0	Period 1 Experiment 1:	
Distance Potential (P):	-10.0	Scan Type:	Q3 MS (Q3)
Q3 Resolution:	Unit	Polarity:	Negative
Ion Beam 3 (I3):	-1.5	Scan Mode:	Profile
Q3M (Q3):	1000.0	Ion Source:	Turbo Spray
		# Scans to Sum:	1
		Resolution Q3:	Unit

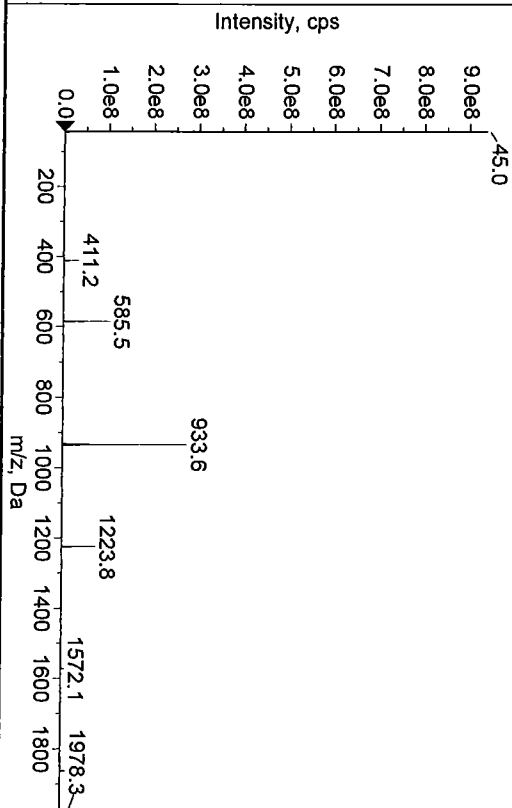
■ TIC of -Q3: from Sample 17 (Q3 Neg PPG_2000 Da-s) of 2018-0...

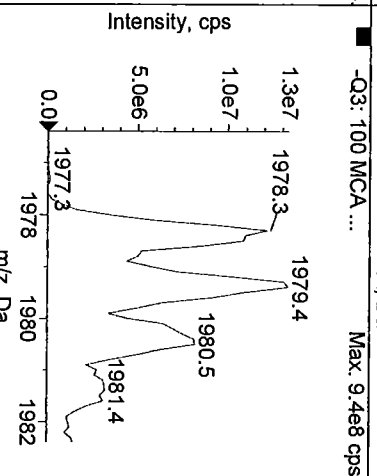
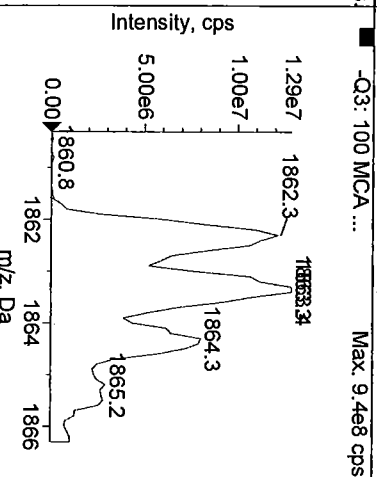
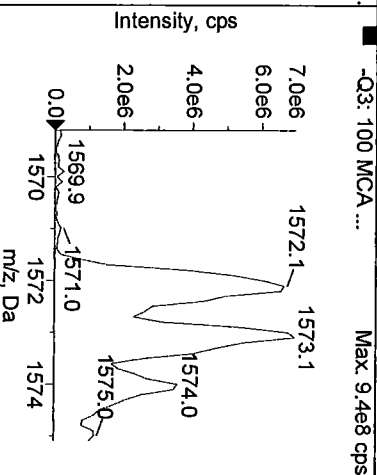
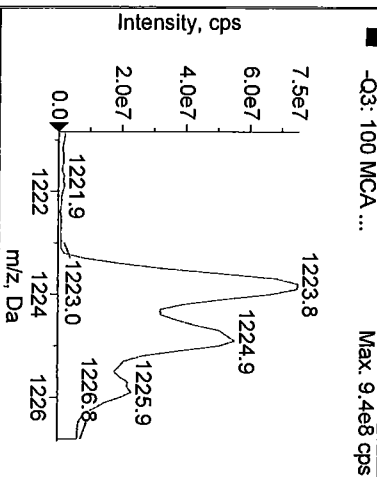
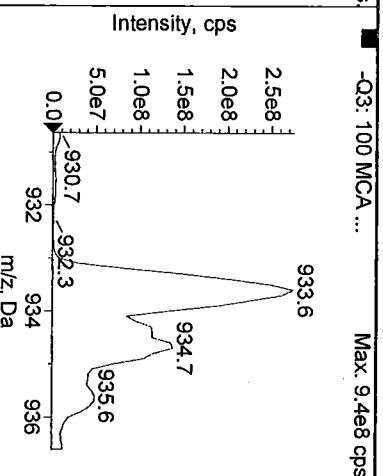
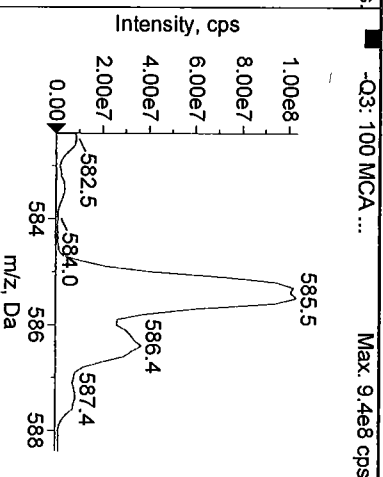
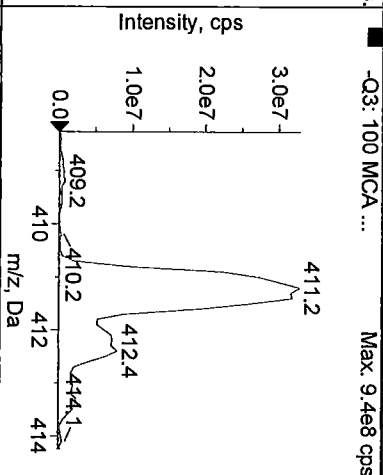
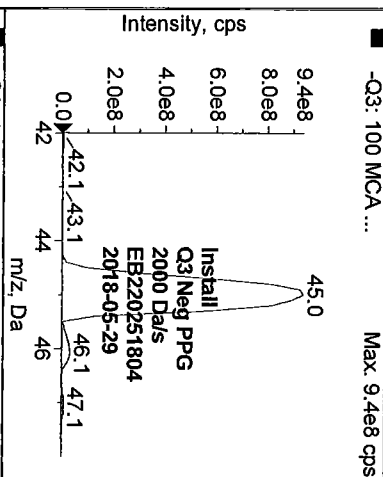
Max. 1.5e8 cps.



■ -Q3: 100 MCA scans from Sample 17 (Q3 Ne...

Max. 9.4e8 cps



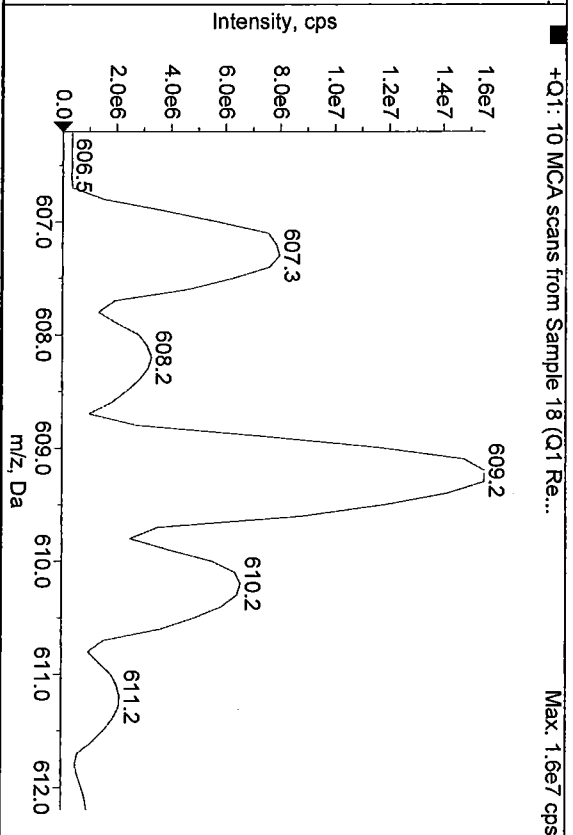
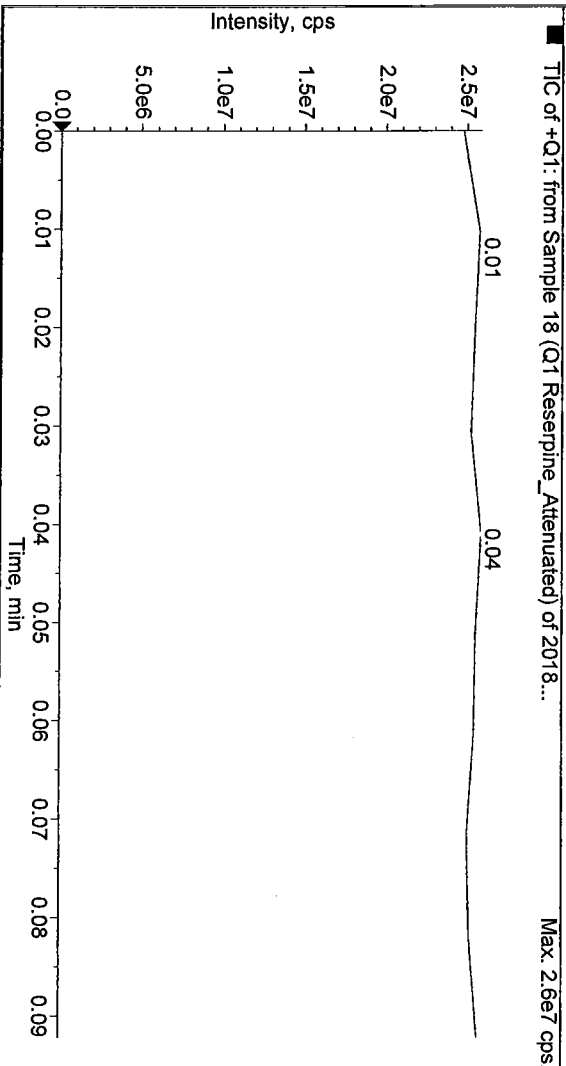


Peak List for "-Q3: 100 MCA scans from Sample 17 (Q3 Neg PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"					
	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9950	9.3786e8	0.6643	2.9882e-3
2	411.2590	411.2370	3.2920e7	0.7732	0.0220
3	585.3850	585.3850	1.0332e8	0.6994	-4.8105e-6
4	933.6360	933.6288	2.7486e8	0.7105	7.2155e-3
5	1223.8450	1223.8546	7.5140e7	0.6946	-9.5568e-3
6	1572.0970	1572.1115	6.6600e6	0.6890	-0.0145
7	1863.3060	1863.3250	1.2880e7	0.7704	-0.0190
8	1979.3890	1979.3741	1.3320e7	0.6259	0.0149

State Parameter Editor

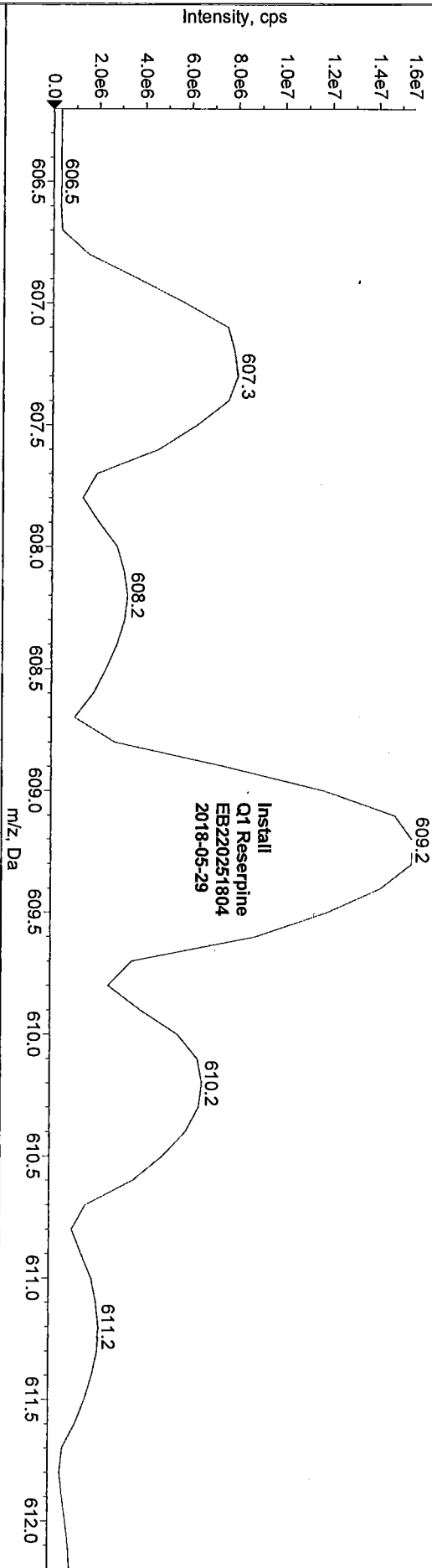
Mass Spectrometer Method Properties

Ion Source: Turbo Spray
 Ion Source Temperature Reached: 28.0
 Curtain Gas (Q1): 5500.0
 Ion Spray Voltage (IS): 0.0
 Temperature (TSP): 17.0
 Ion Source Gas 1 (GS1): 0.0
 Ion Source Gas 2 (GS2): 135.0
 Declustering Potential (DP): 10.0
 Entrance Potential (EP): 1.2
 Q1 Resolution: Unit
 Ion Energy 1 (IE1): 1800.0
 QM (QM): 1
 Period 1: 1
 Scans in Period: 10
 Relative Start Time: 0.00 msec
 Scheduled Ionization: Off
 Experiments in Period: 1
 Scan Type: Q1 MS (Q1)
 Polarity: Positive
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Resolution Q1: Unit



+Q1: 10 MCA scans from Sample 18 (Q1 Reserpine_Atenuated) of 2018-05-29_Install.wiff (Turbo Spray)

Max. 1.6e7 cps



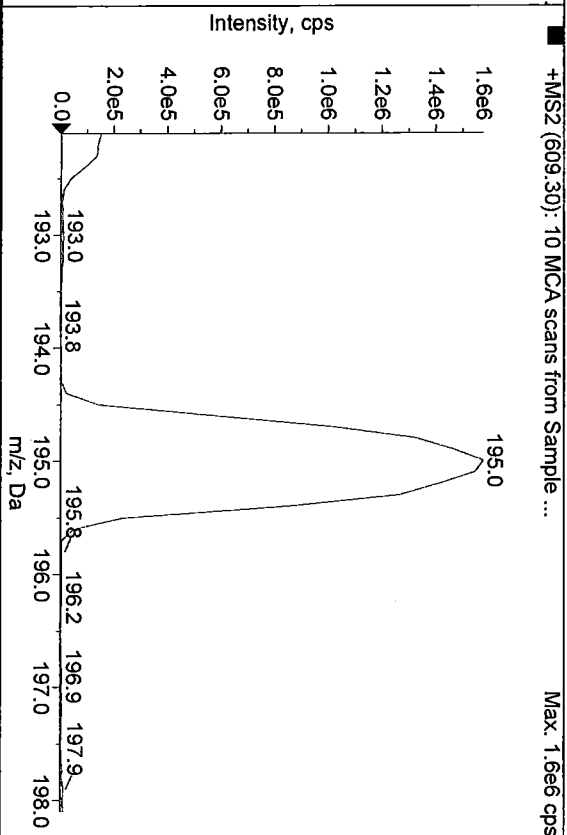
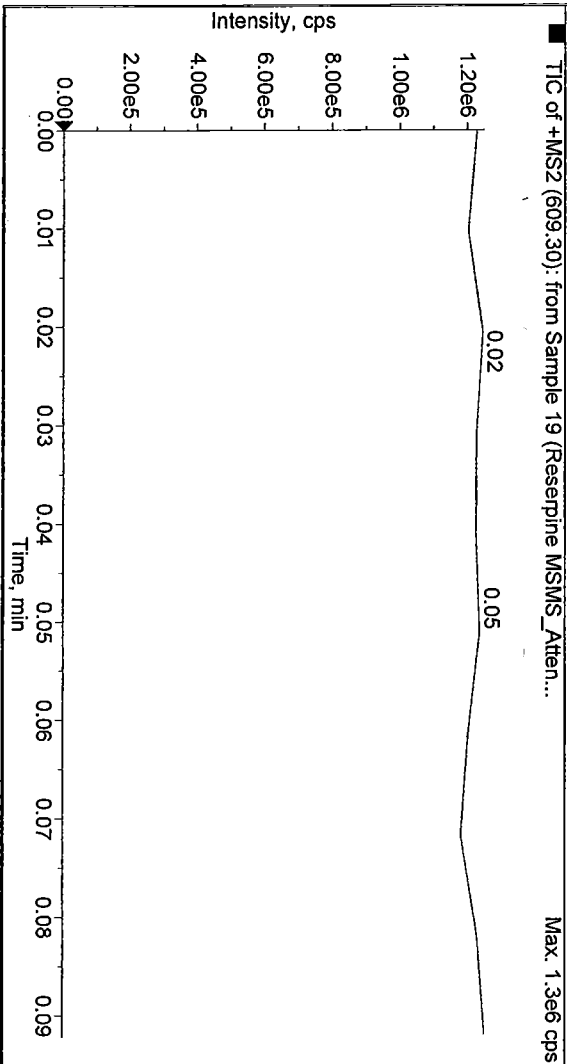
Peak List for "+Q1: 10 MCA scans from Sample 18 (Q1 Reserpine_Atenuated) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	n/a	n/a	n/a	
2	609.2810	609.2580	1.5520e7	0.7138	0.0230

State Parameter Editor

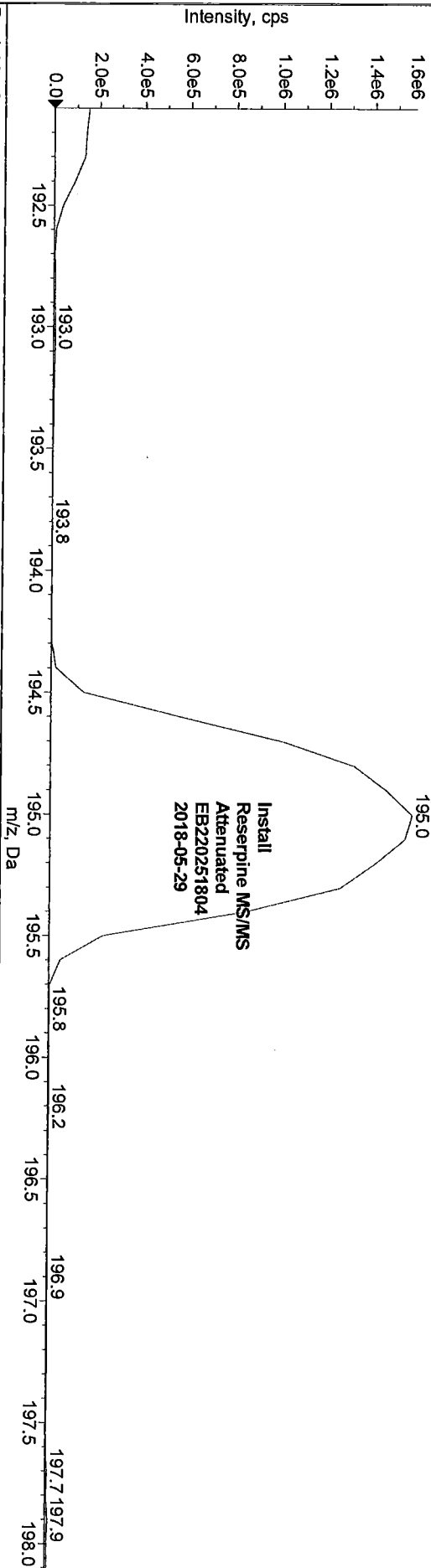
Mass Spectrometer Method Properties

Ion Source: Turbo Spray
 Ion Source Temperature Reached: 28.0
 Curtain Gas (CUR): 9
 Collision Gas (COL): 5500.0
 Ion Spray Voltage (IS): 0.0
 Temperature (TEMP): 17.0
 Ion Source Gas 1 (GS1): 0.0
 Ion Source Gas 2 (GS2): 135.0
 Declustering Potential (DP): 10.0
 Distance Potential (BP): 44.5
 Collision Energy (CE): 6.2
 Collision Cell Exit Potential (CXP):
 Q1 Resolution: Unit3 Resolution: Unit
 Ion Energy 1 (IE1): 1.2
 Period 1: Experiment 1:
 Scan Type: Product Ion (MS2)
 Polarity: Positive
 Scan Mode: Profile
 Ion Source: Turbo Spray
 # Scans to Sum: 1
 Product Of: 609.30 Da



+MS2 (609.30): 10 MCA scans from Sample 19 (Reserpine MSMS_Attenuated) of 2018-05-29_Install.wif (Turbo Spray)

Max: 1.6e6 cps



Peak List for "+MS2 (609.30): 10 MCA scans from Sample 19 (Reserpine MSMS_Attenuated) of 2018-05-29_Install.wif (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	195.0306	1.5772e6	0.7615	0.0694
2	609.2810	n/a	n/a	n/a	n/a

Raw QC Data

PFAS by LC/MS/MS

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

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	BLK310012		Data File:	18NOV08D-69.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18310012		Acquis Date:	2018-11-08T22:01:55
Sample Type:	Unknown		Instrument:	LM27631
Vial Position:	13		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18310012_Batch QC+9881916
QMethod File:	MQ4-18AUG13		ICAL Name:	18NOV07DCAL
Batch Number:	18310012		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 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	881209.7	728839.7	21	50	
13C2-PFOA	5.0	609933.4	491983.1	24	50	
13C4-PFOS	4.8	328452.7	255568.1	29	50	
13C2-PFDA	5.0	382290.8	315407.5	21	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	679689.9	13C3-PFBA	881209.7	0.771	10.000	7.139	71	50-150	
E13C5-PFPeA	698686.9	13C3-PFBA	881209.7	0.793	10.000	6.908	69	50-150	
E13C3-PFBS	367953.2	13C3-PFBA	881209.7	0.418	9.300	6.129	66	50-150	
E13C2-4:2-FTS	43839.8	13C2-PFOA	609933.4	0.072	9.340	6.486	69	50-150	
E13C5-PFHxA	594377.8	13C2-PFOA	609933.4	0.974	10.000	7.169	72	50-150	
E13C3-PFHxS	292170.4	13C2-PFOA	609933.4	0.479	9.460	6.878	73	50-150	
E13C4-PFHpA	552251.7	13C2-PFOA	609933.4	0.905	10.000	8.238	82	50-150	
E13C2-6:2-FTS	31258.6	13C2-PFOA	609933.4	0.051	9.500	6.835	72	50-150	
E13C8-PFOA	779724.4	13C2-PFOA	609933.4	1.278	10.000	7.130	71	50-150	
E13C8-PFOS	249547.9	13C4-PFOS	328452.7	0.760	9.560	6.719	70	50-150	
E13C9-PFNA	423076.5	13C4-PFOS	328452.7	1.288	10.000	7.037	70	50-150	
E13C6-PFDA	542304.7	13C2-PFDA	382290.8	1.419	10.000	7.135	71	50-150	
E13C2-8:2-FTS	20602.0	13C2-PFDA	382290.8	0.054	9.580	5.703	60	50-150	
E13C8-PFOSA	605077.6	13C2-PFDA	382290.8	1.583	10.000	6.908	69	50-150	
Ed3-NMeFOSAA	74970.9	13C2-PFDA	382290.8	0.196	10.000	7.294	73	50-150	
E13C7-PFUnDA	254557.3	13C2-PFDA	382290.8	0.666	10.000	7.683	77	50-150	
Ed5-NetFOSAA	52974.7	13C2-PFDA	382290.8	0.139	10.000	6.414	64	50-150	
E13C2-PFDoDA	496649.6	13C2-PFDA	382290.8	1.299	10.000	7.005	70	50-150	
Ed7-NMePFOSAE	294447.7	13C2-PFDA	382290.8	0.770	10.000	7.163	72	50-150	
Ed3-NMePFOSA	72820.5	13C2-PFDA	382290.8	0.190	10.000	6.975	70	50-150	
Ed9-NetPFOSAE	238430.8	13C2-PFDA	382290.8	0.624	10.000	7.124	71	50-150	
Ed5-NetPFOSA	61109.6	13C2-PFDA	382290.8	0.160	10.000	7.403	74	50-150	
E13C2-PFTeDA	332325.1	13C2-PFDA	382290.8	0.869	10.000	6.259	63	50-150	

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

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: BLK310012

Instrument Name: LM27631

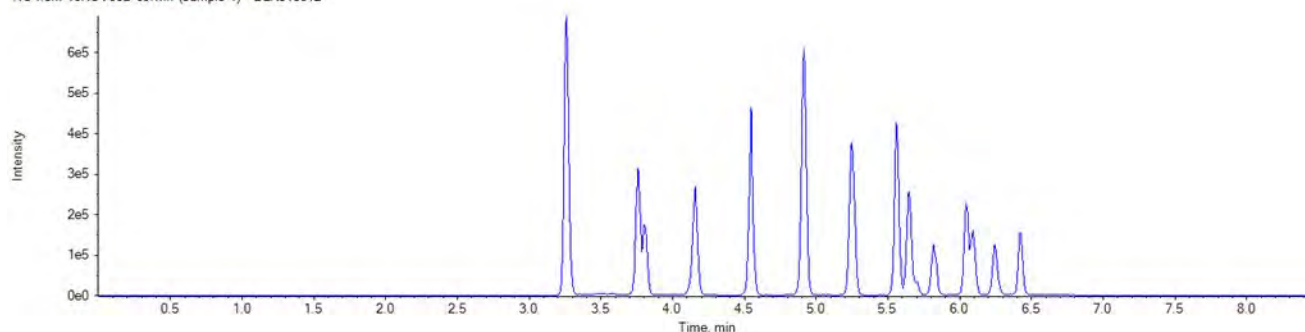
File Name: 18NOV08D-69.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	679689.9	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	698686.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	367953.2	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	43839.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	594377.8	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	367953.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	292170.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	552251.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	31258.6	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	292170.4	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	779724.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	249547.9	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	423076.6	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	249547.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	542304.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	20602.0	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	605077.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	74970.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	249547.9	N/A	
PfUnDA	N/A	N/A	N/A		A	13C7-PfUnDA	5.82	254557.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	52974.7	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	496649.6	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	20602.0	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	294447.7	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	72820.5	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	249547.9	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	238430.8	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	61109.6	N/A	
PFTDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	496649.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	332325.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	332325.1	N/A	
PFOA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	332325.1	N/A	

Total Ion Chromatogram

TIC from 18NOV08D-69.wiff (sample 1) - BLK310012



APPROVED
By MCD at 11:15 pm, 11/13/18

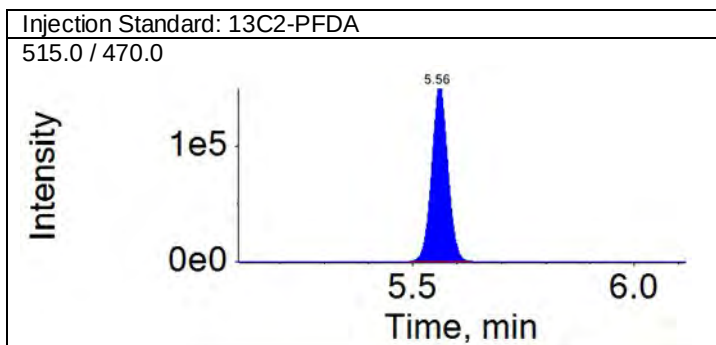
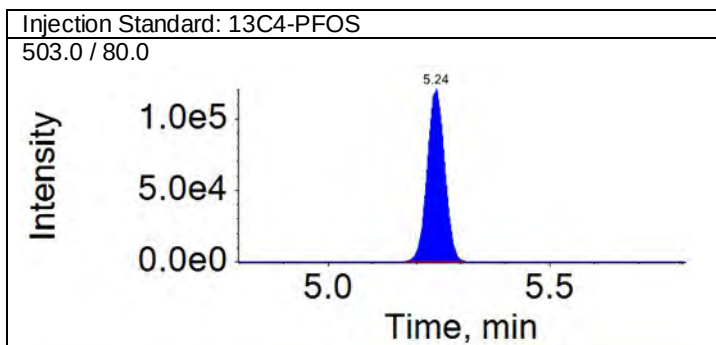
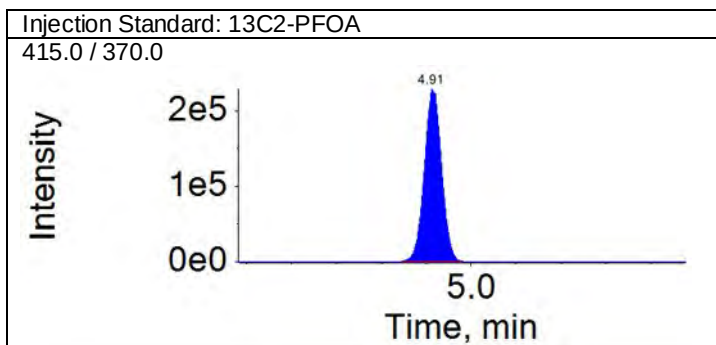
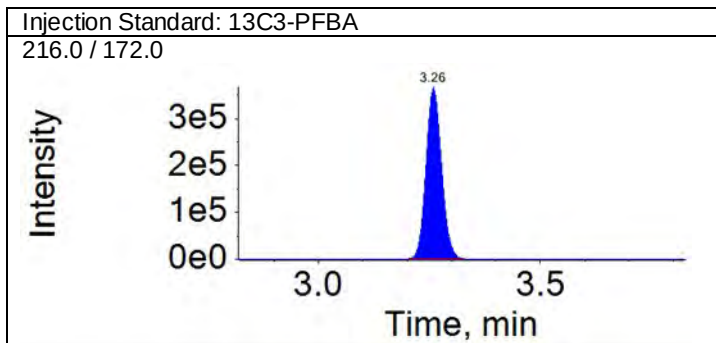
BSI05 Page 1389 of 1595

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

Page 2 of 17

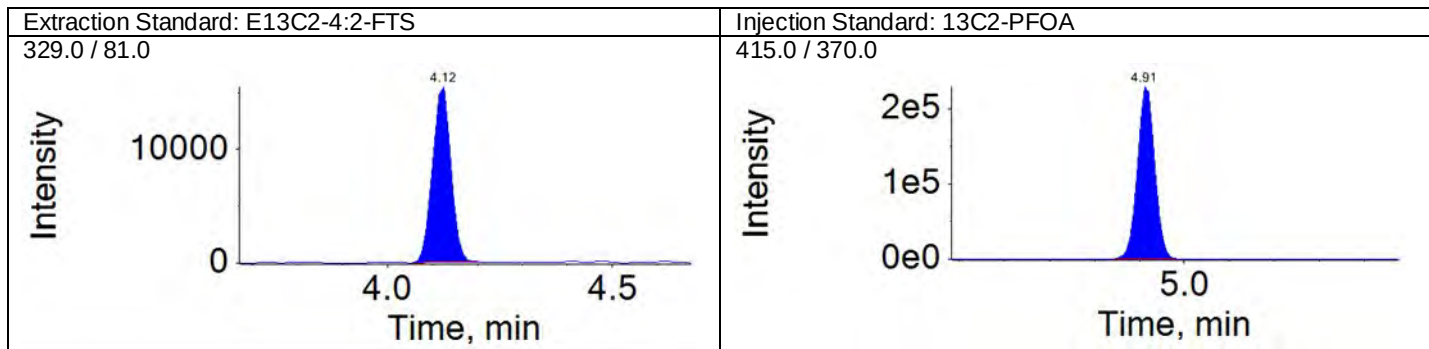
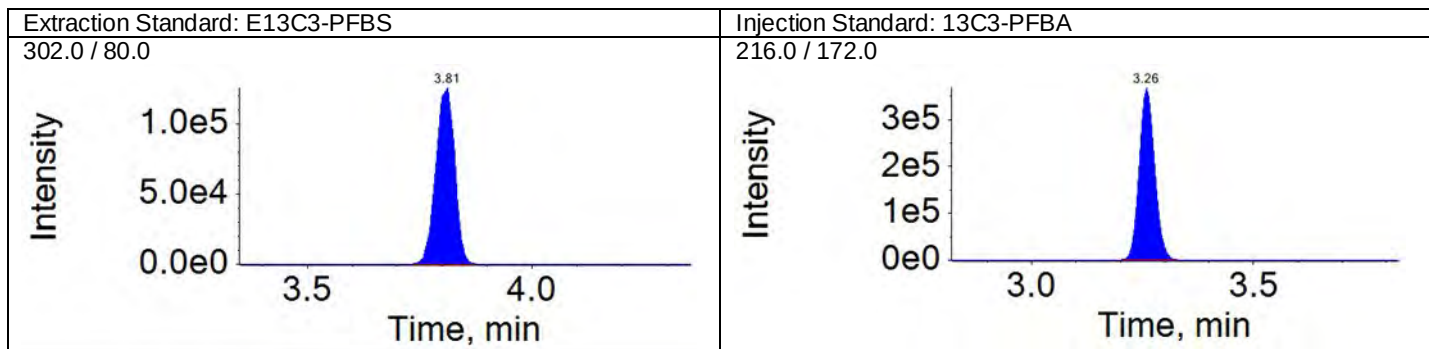
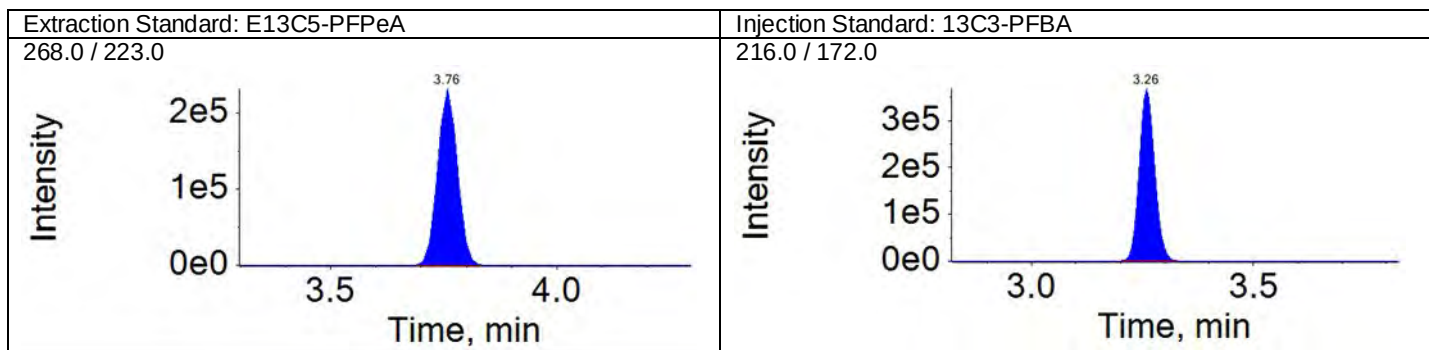
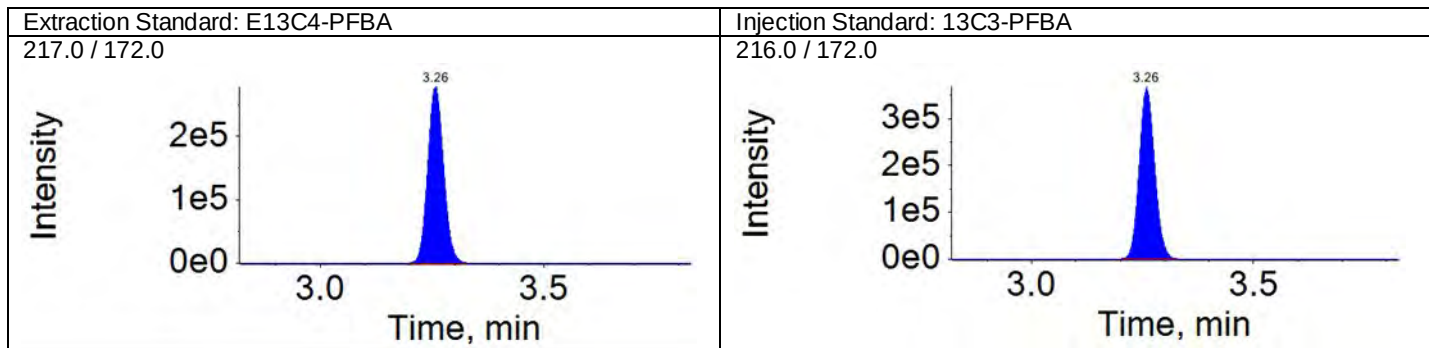
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



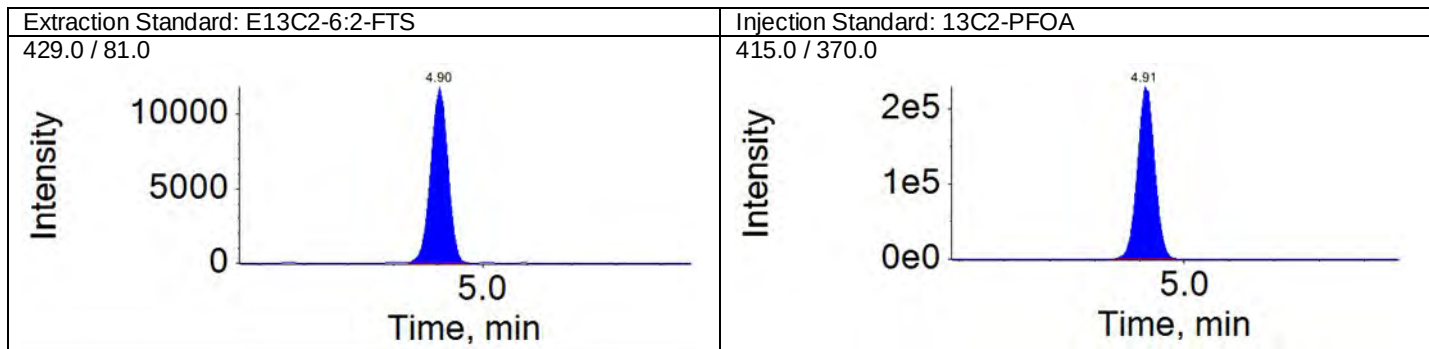
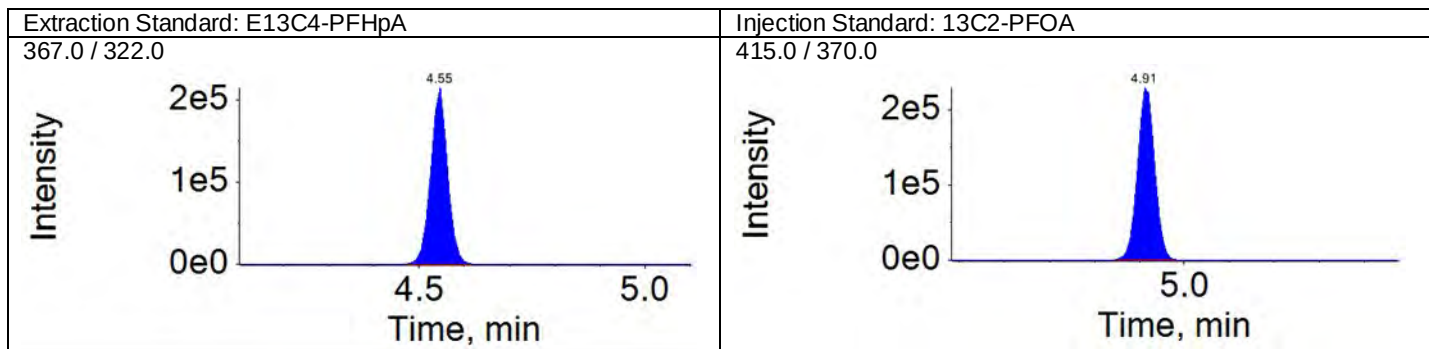
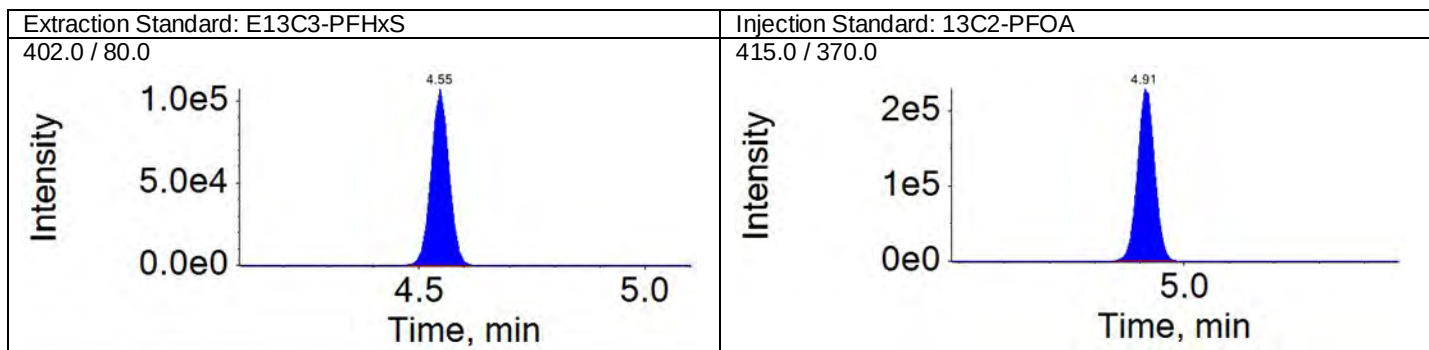
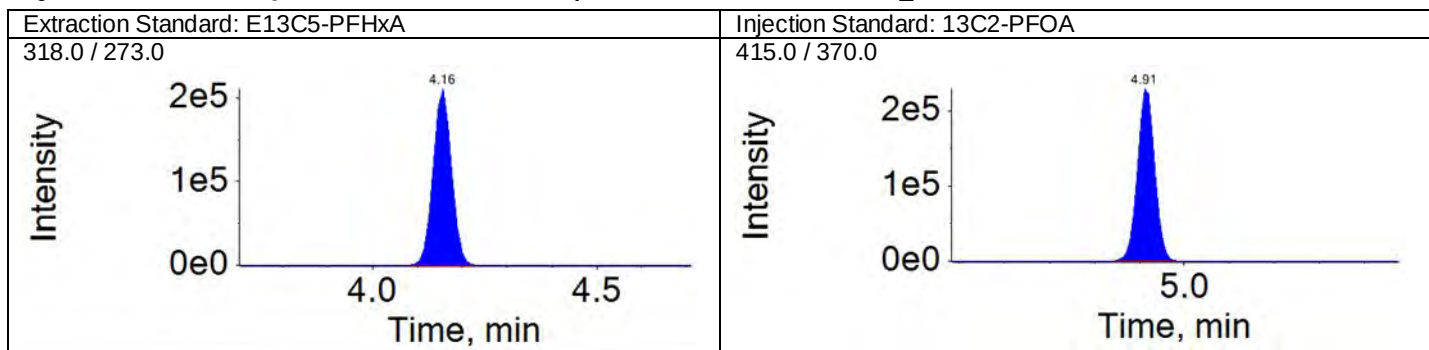
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



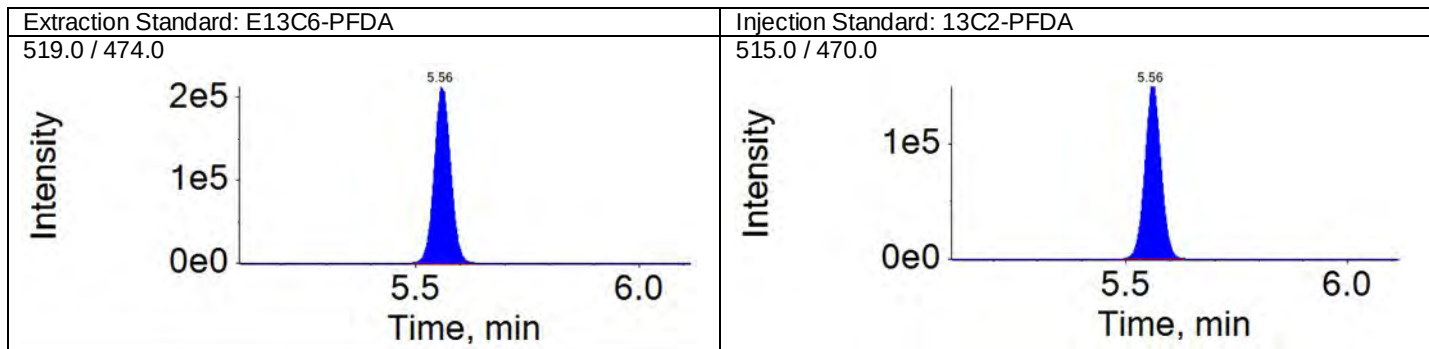
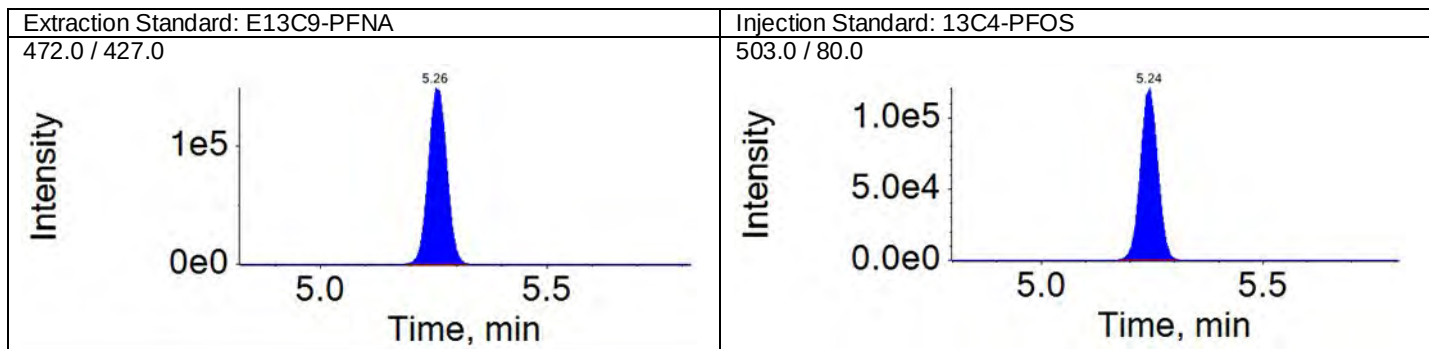
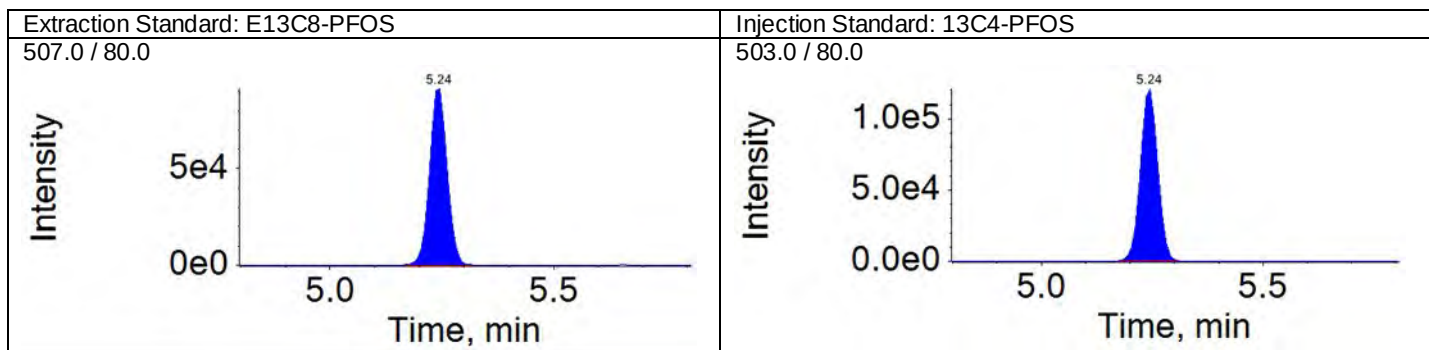
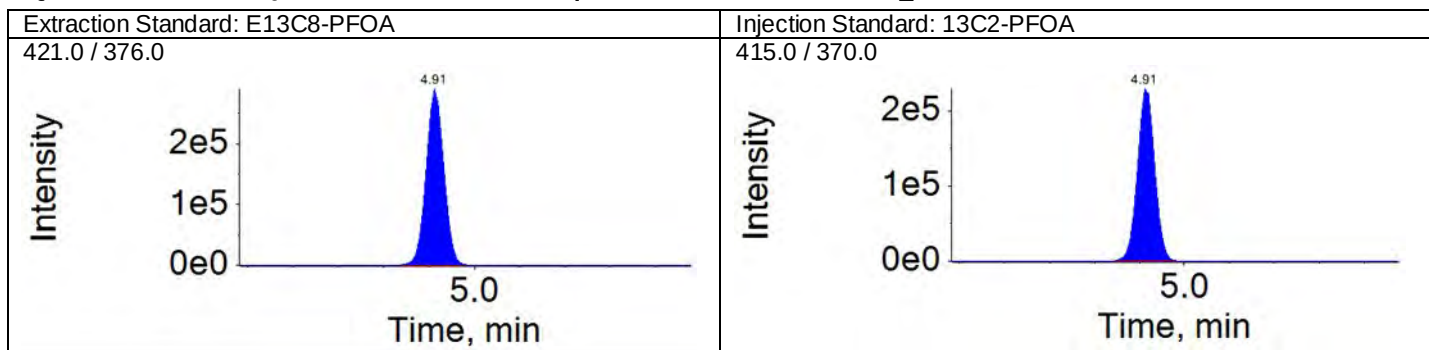
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



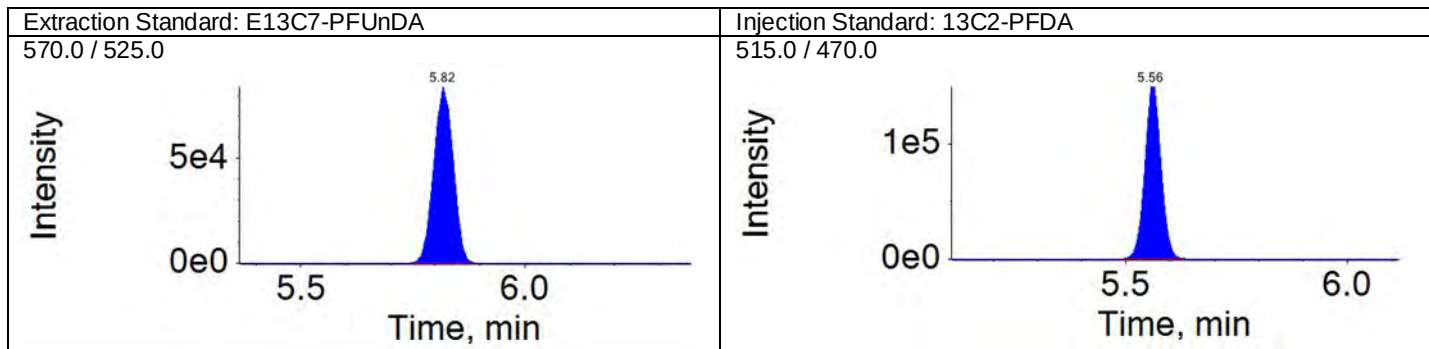
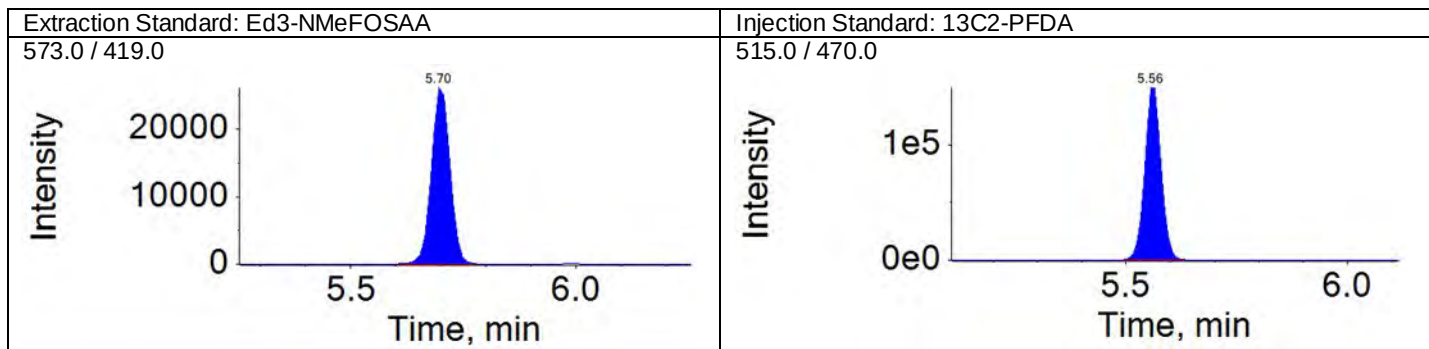
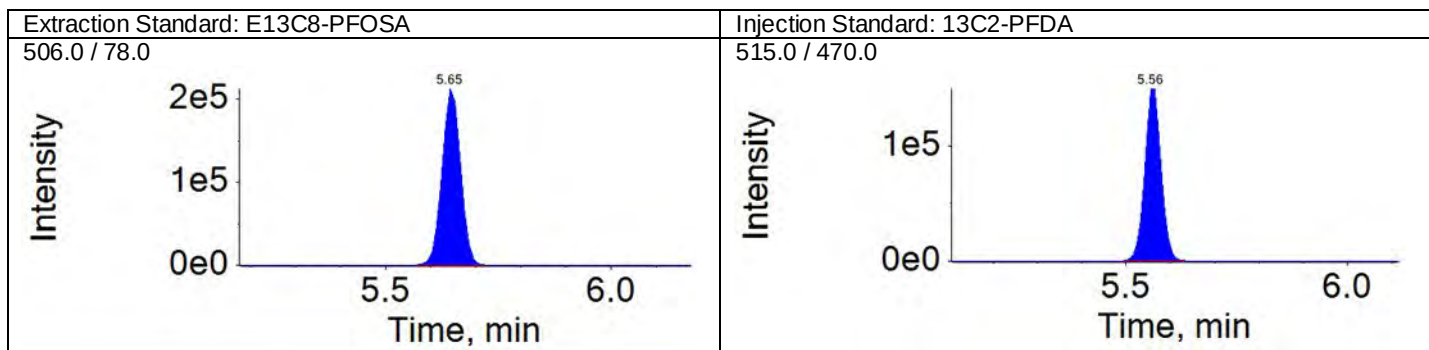
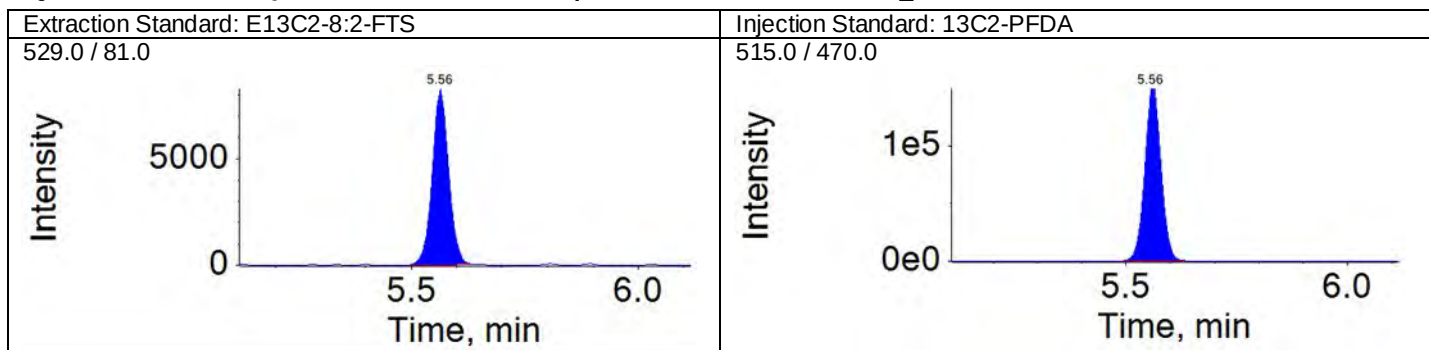
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



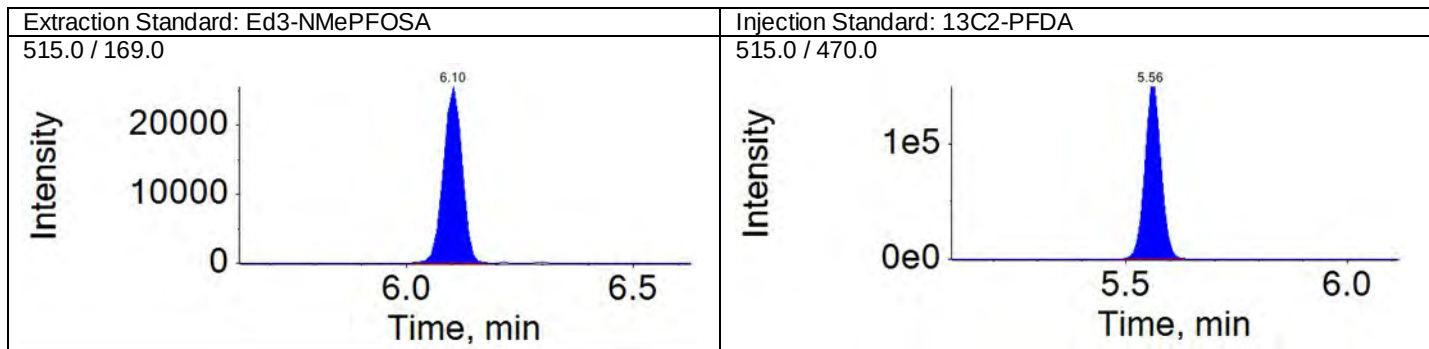
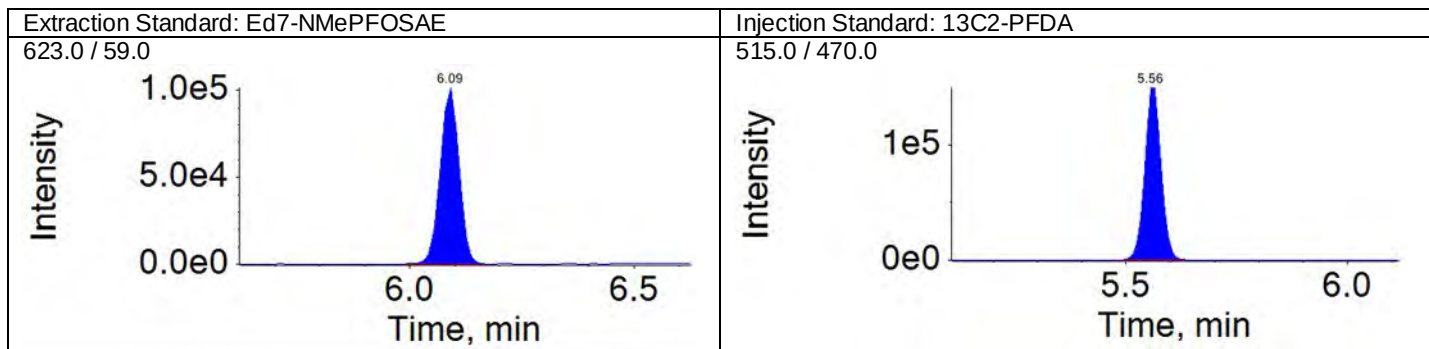
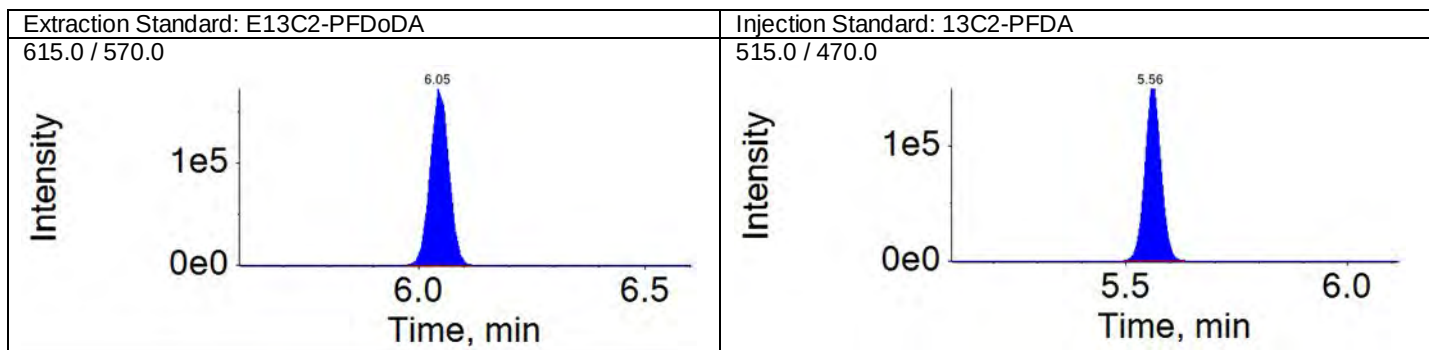
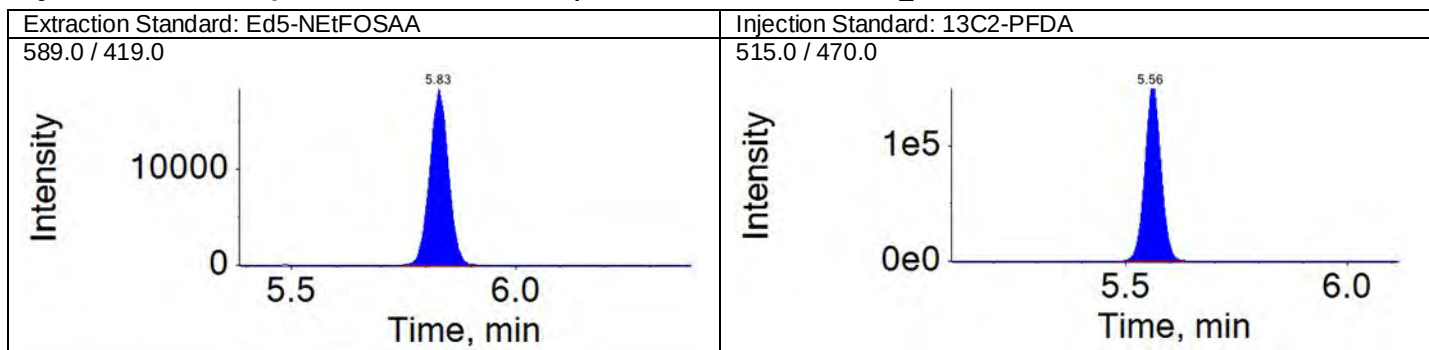
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



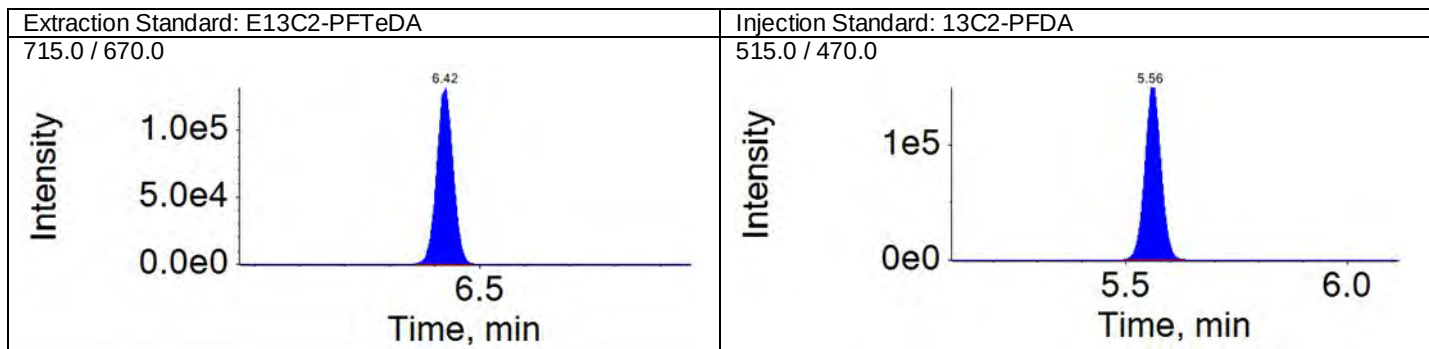
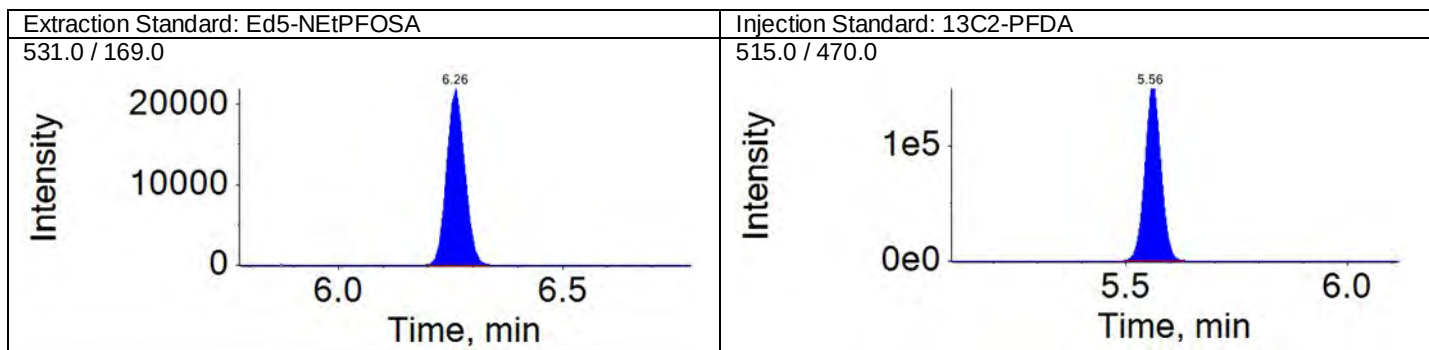
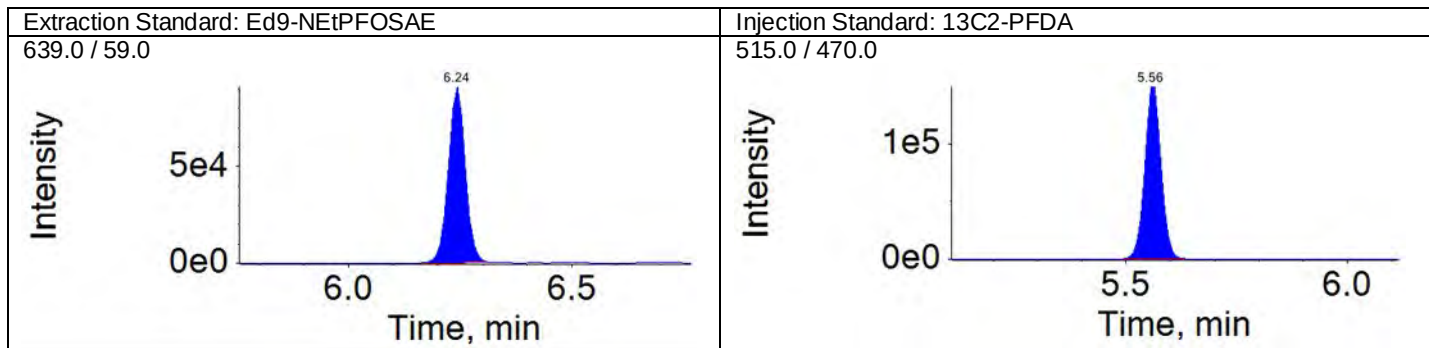
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



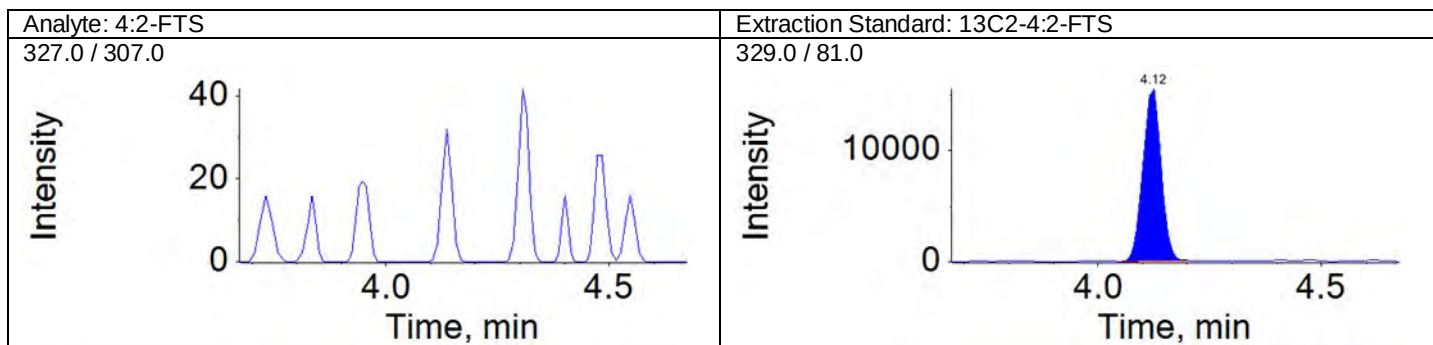
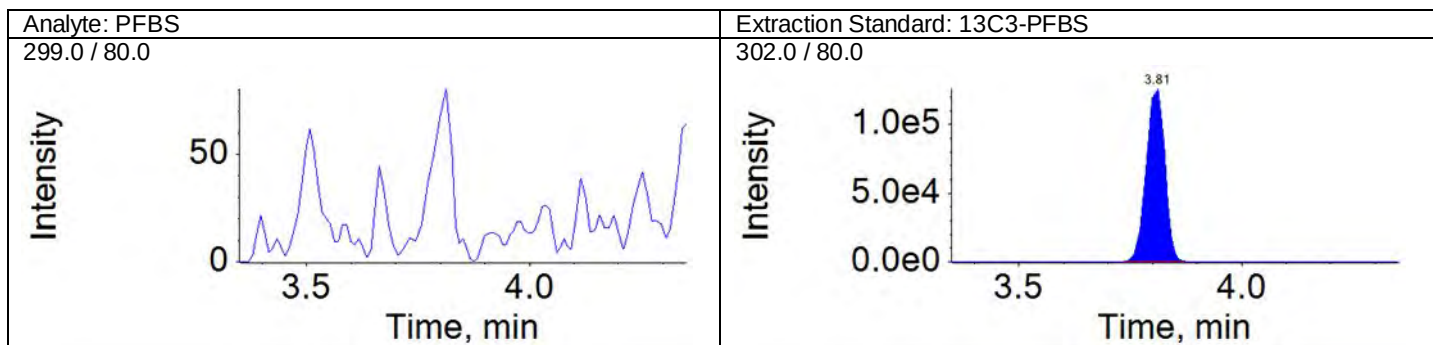
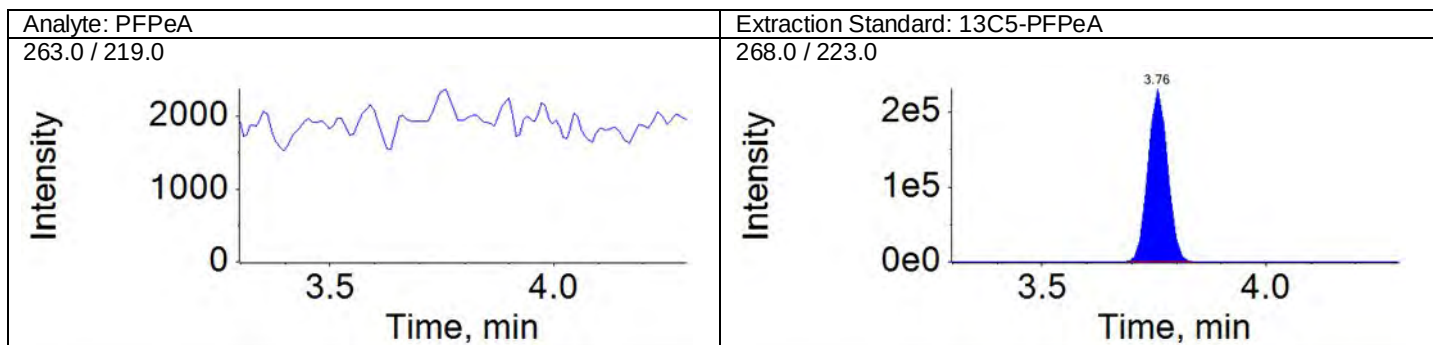
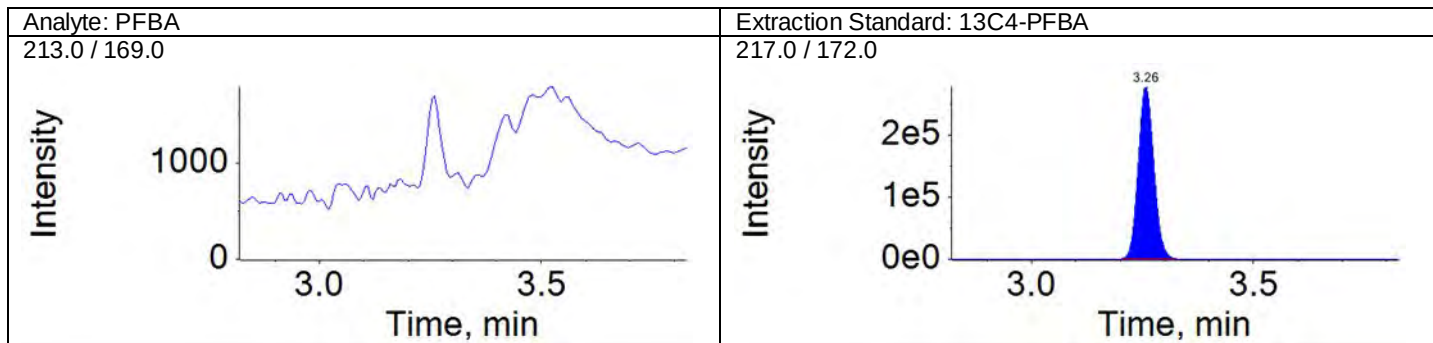
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



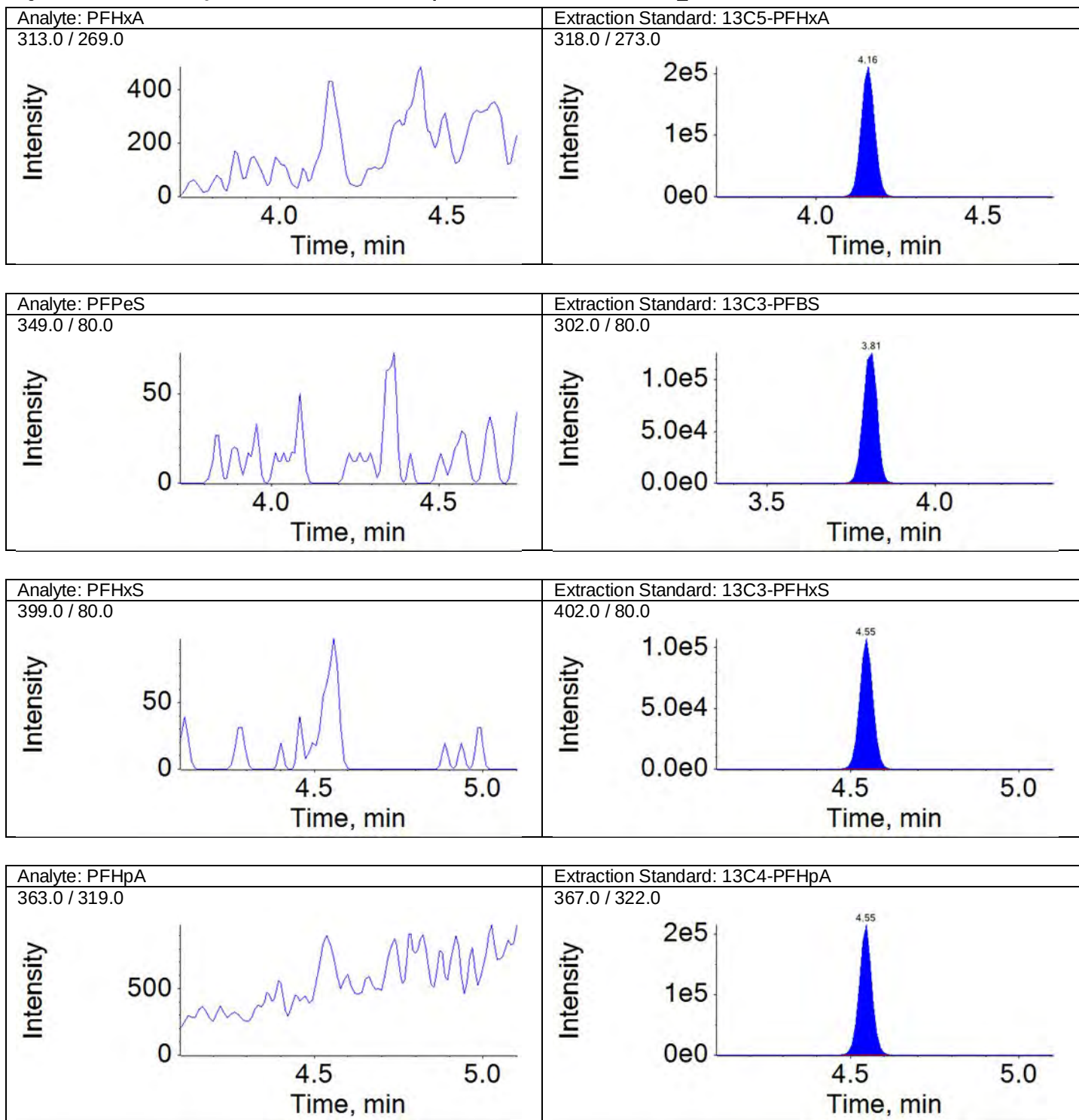
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



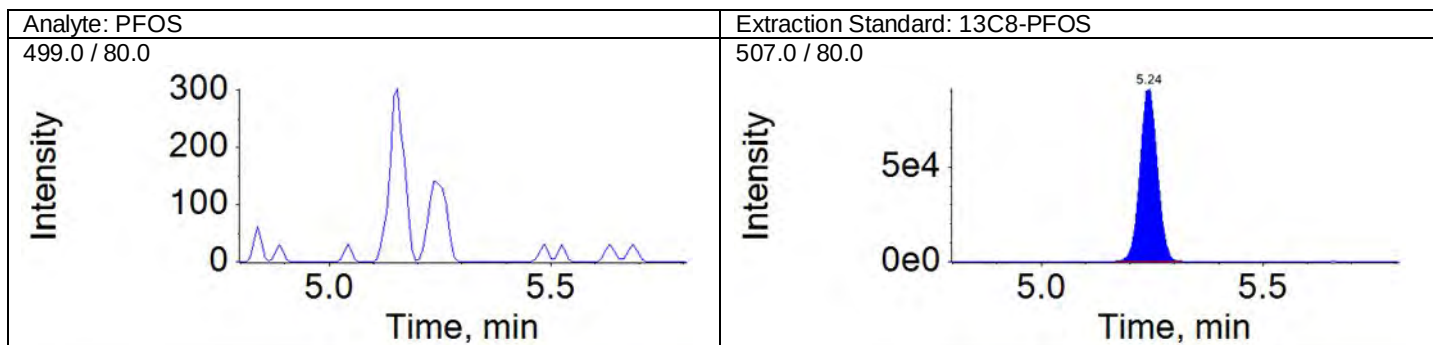
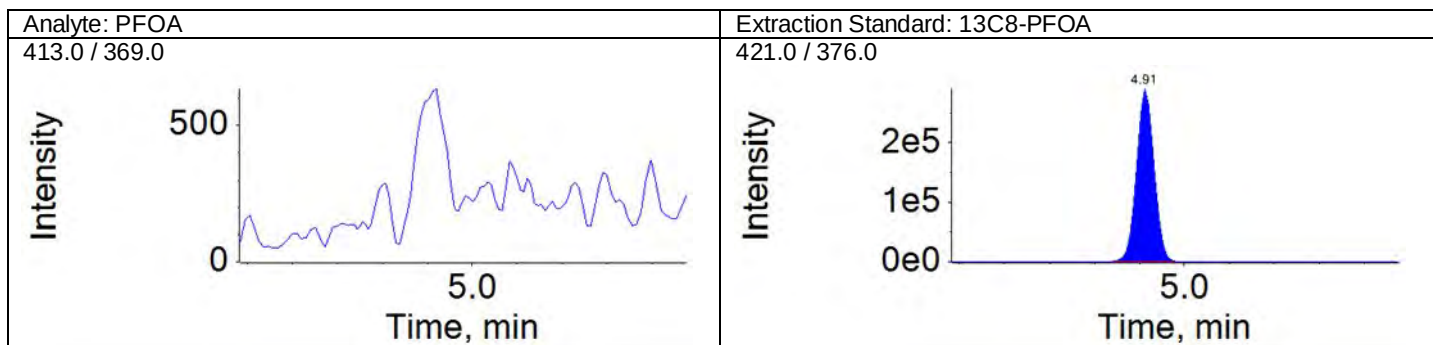
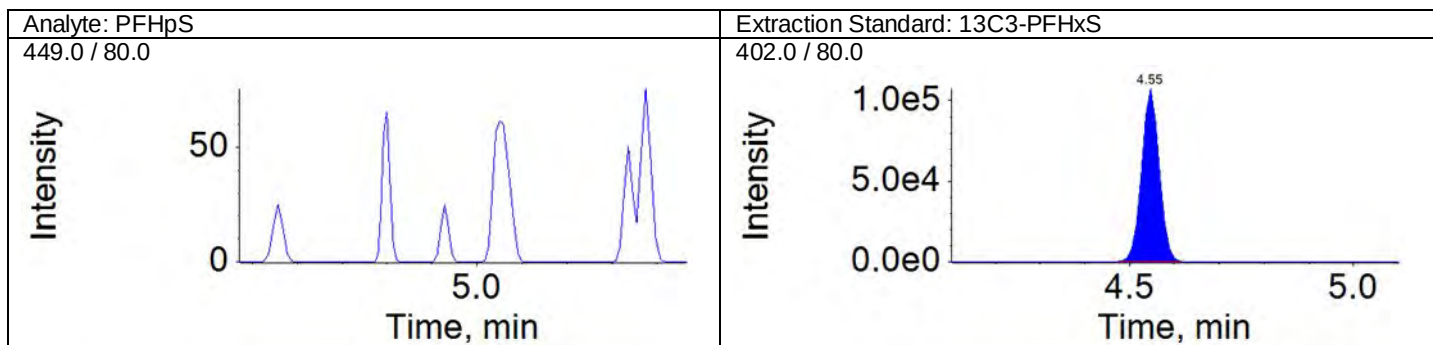
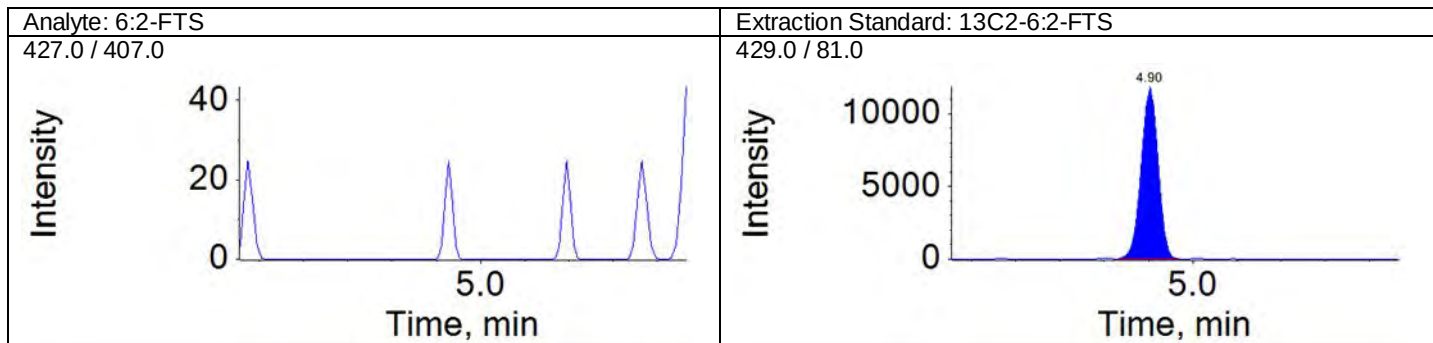
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



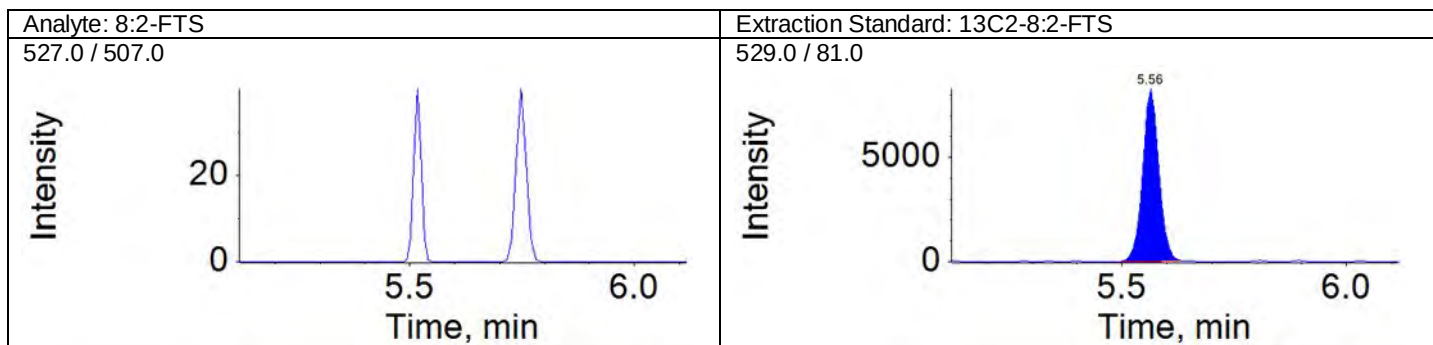
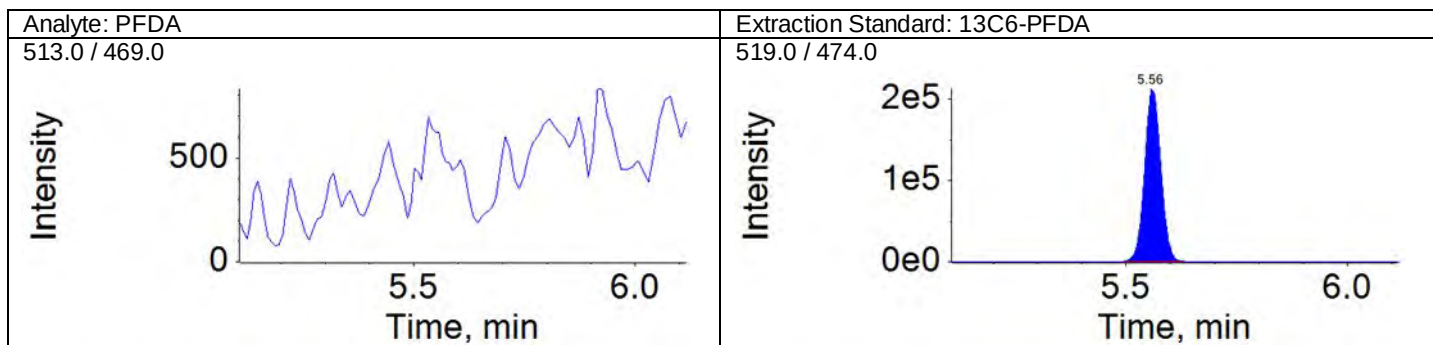
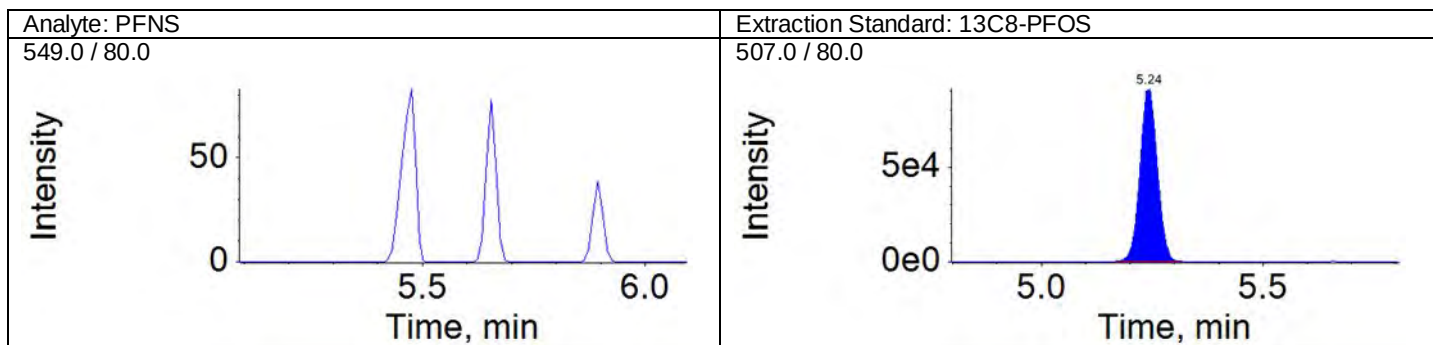
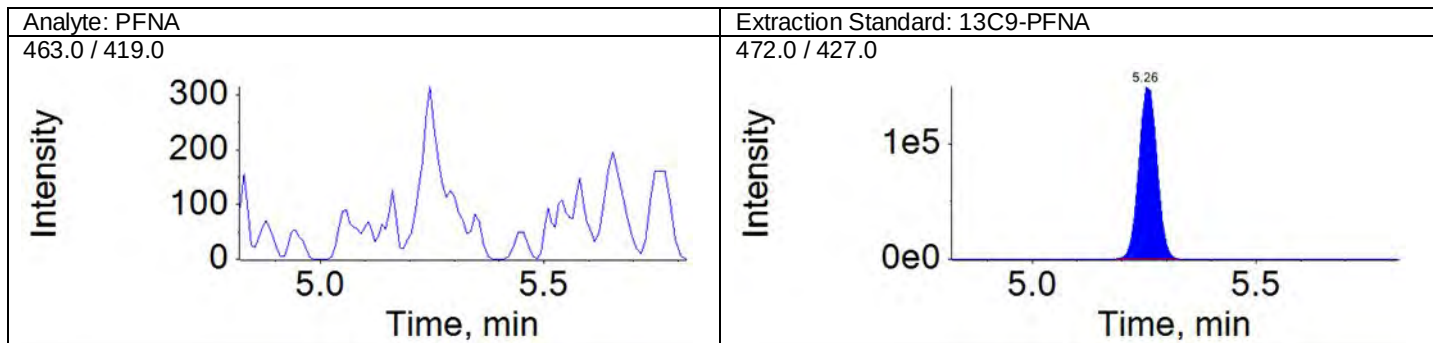
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



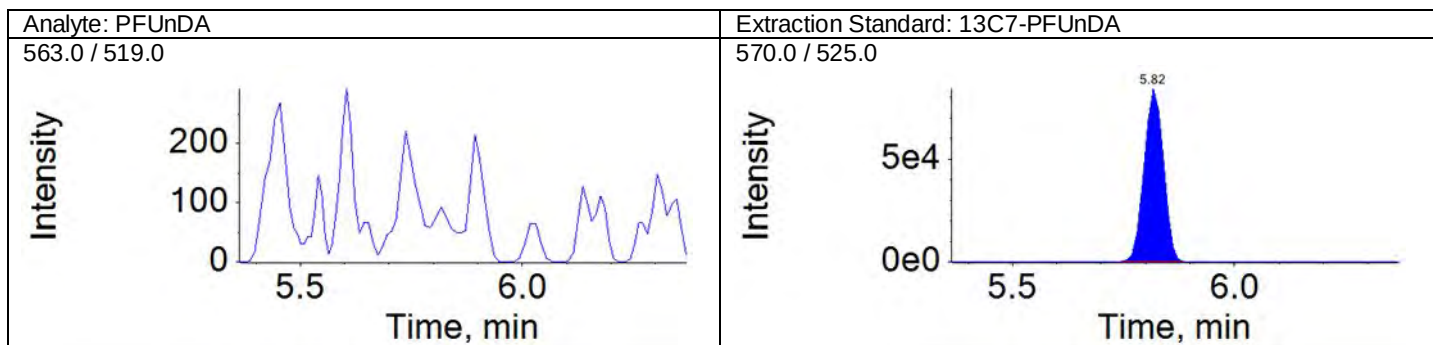
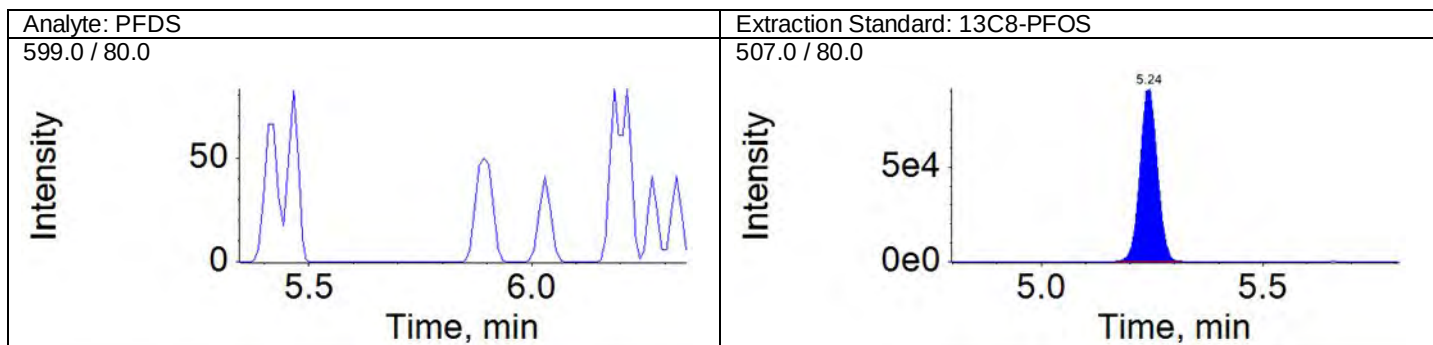
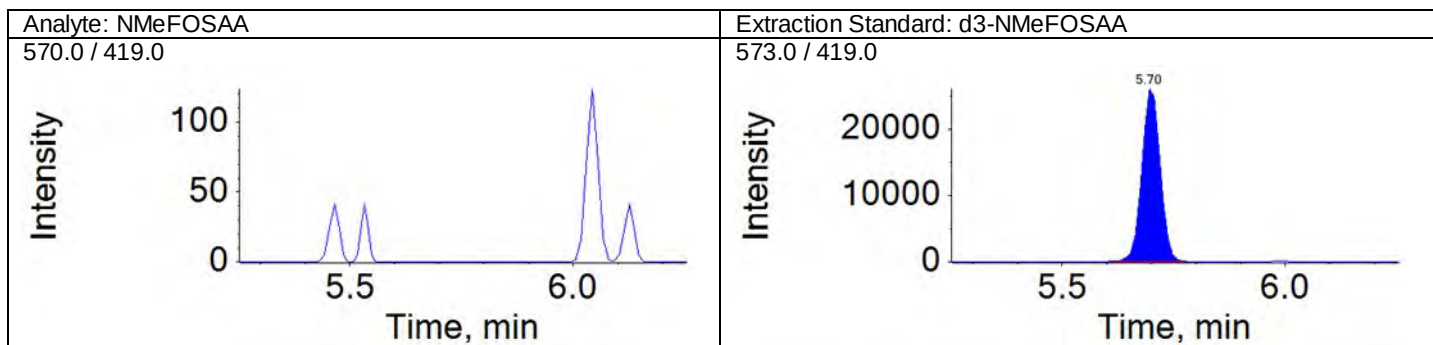
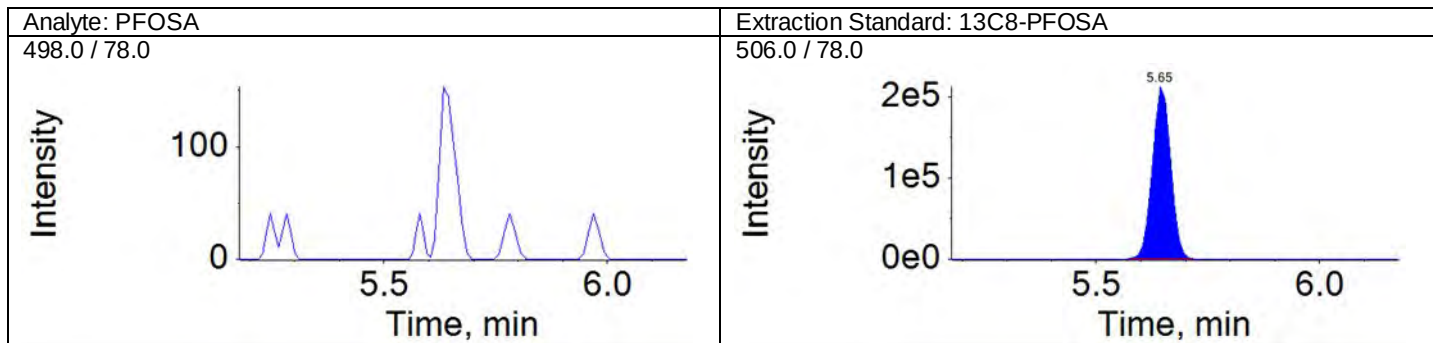
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



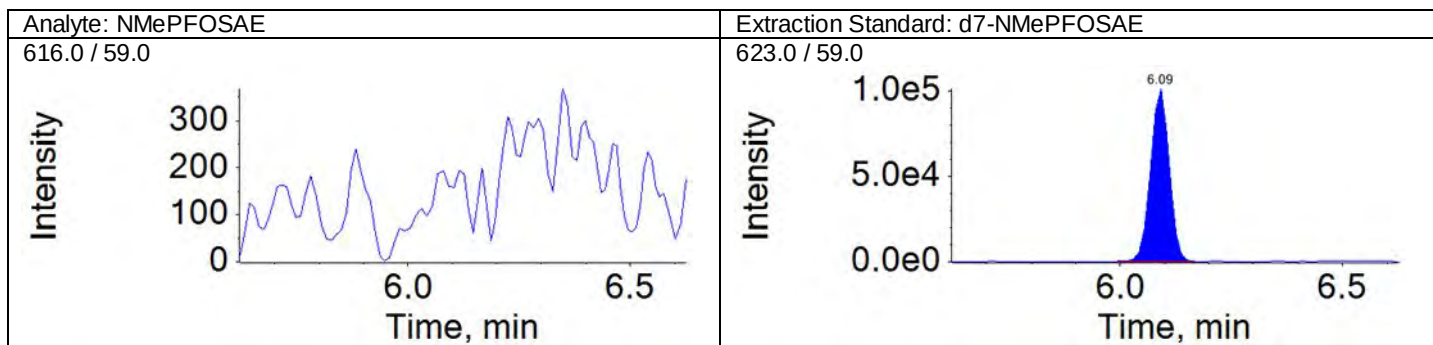
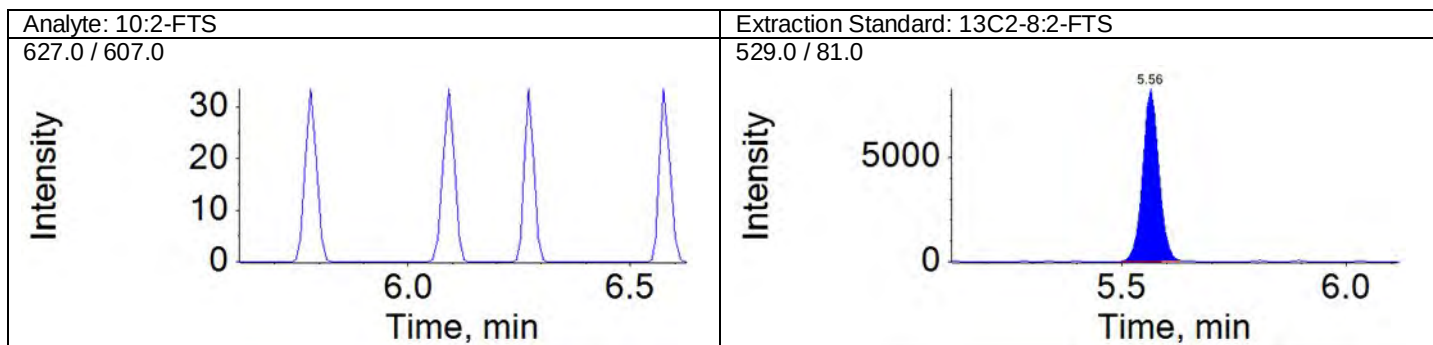
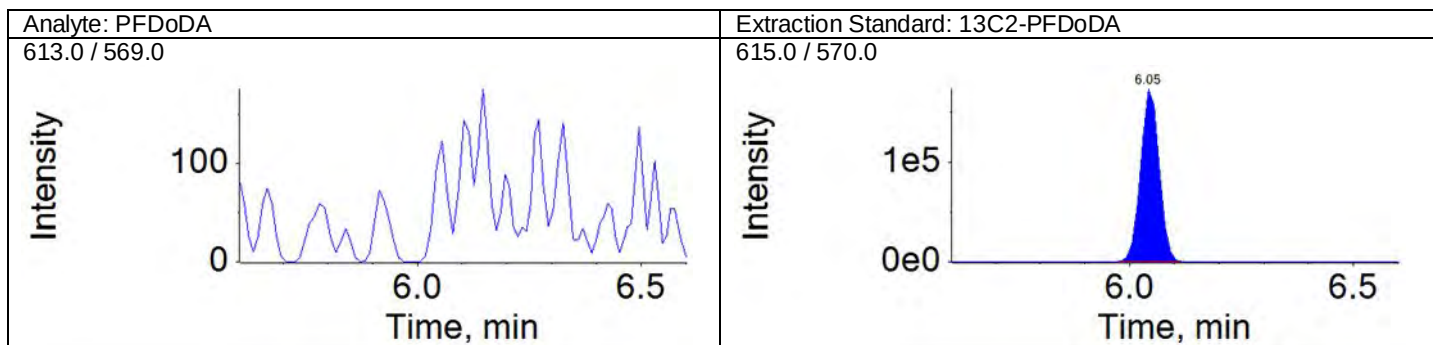
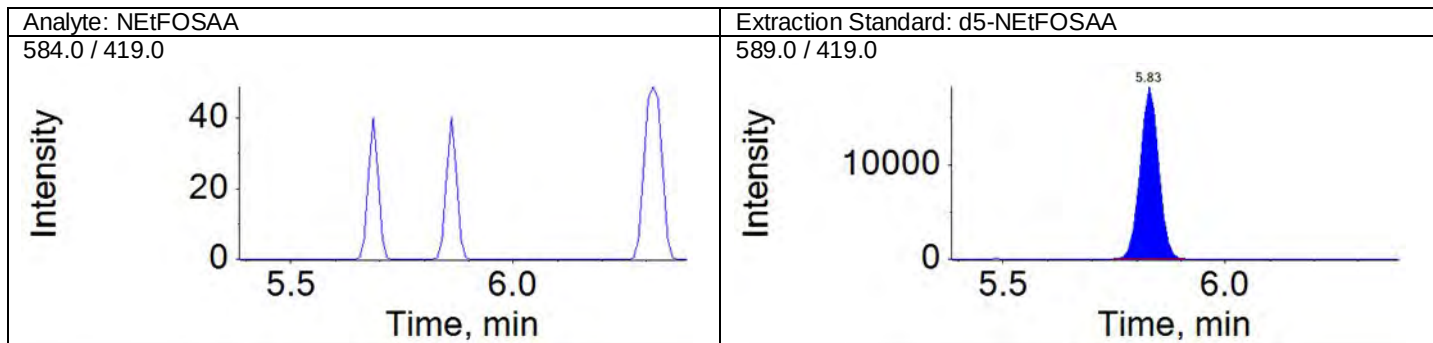
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



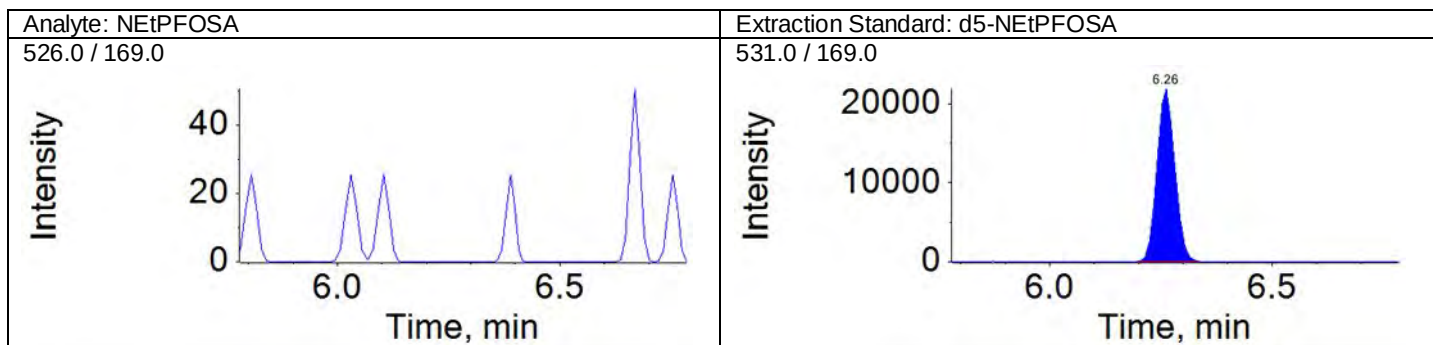
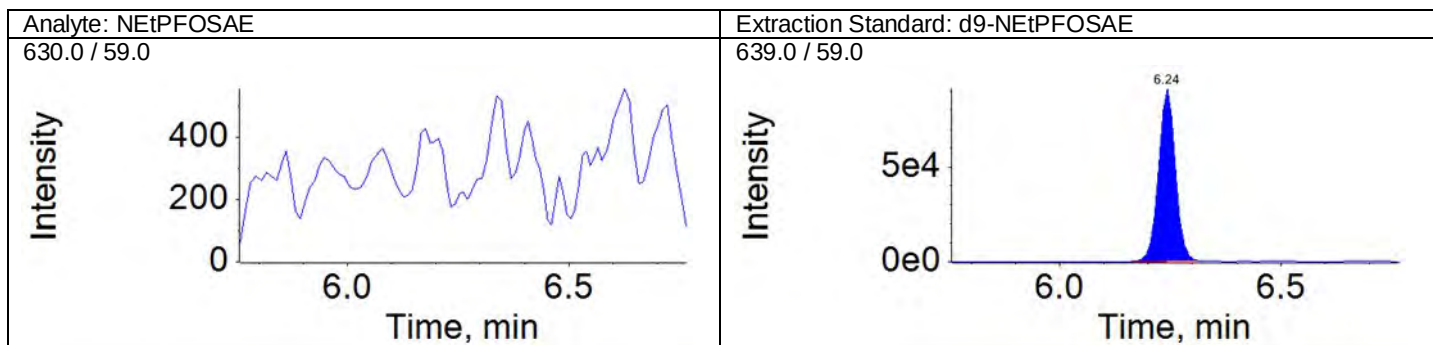
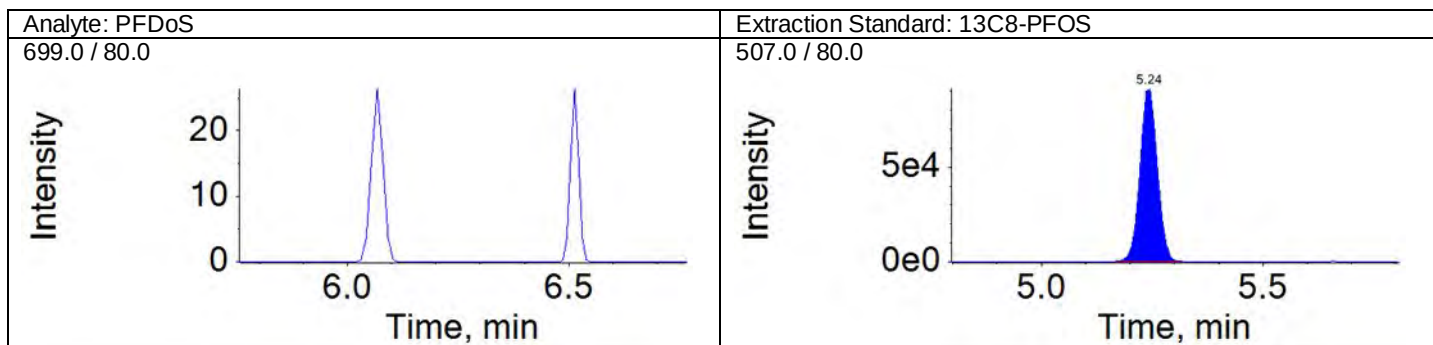
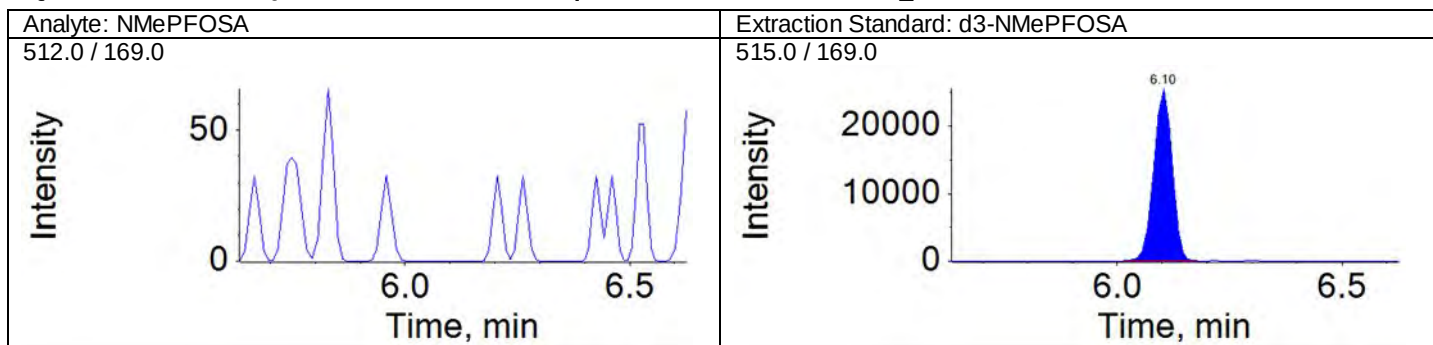
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



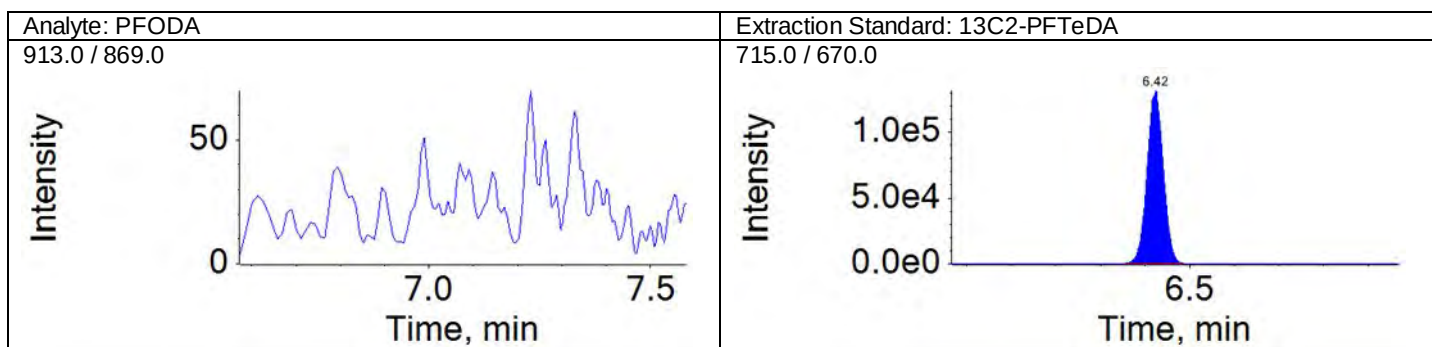
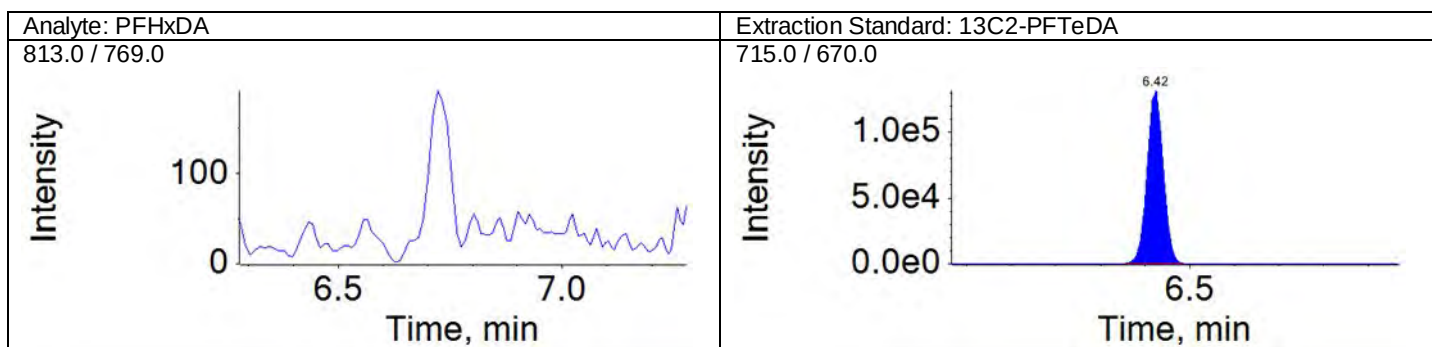
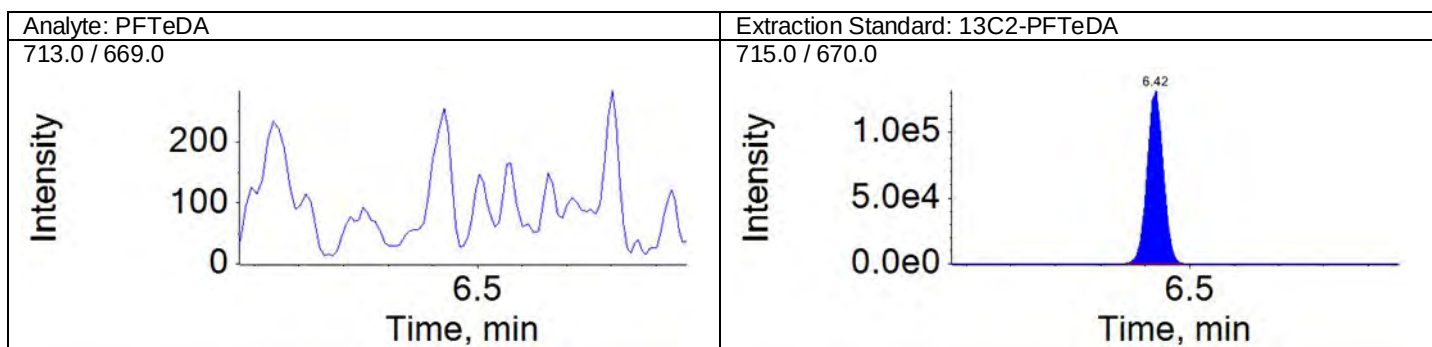
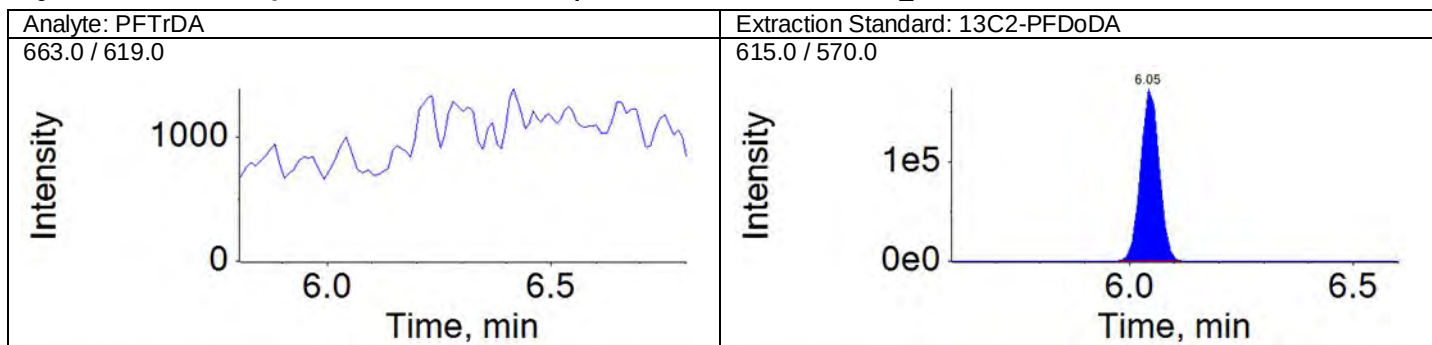
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



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

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



Ion Ratio Report

Sample Name: BLK310012

Instrument Name: LM27631

File Name: 18NOV08D-69.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	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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

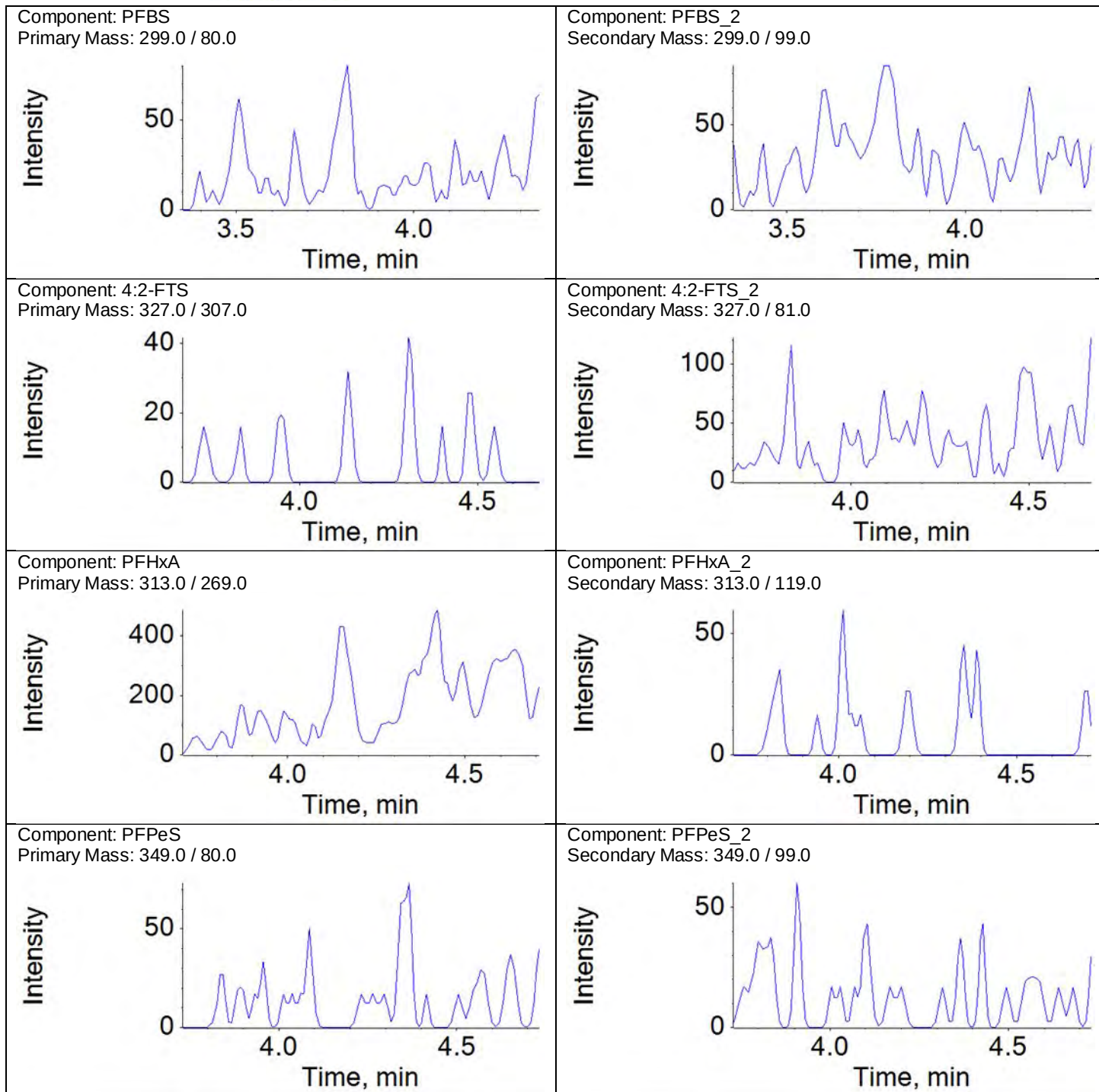
By MCD at 11:15 pm, 11/13/18

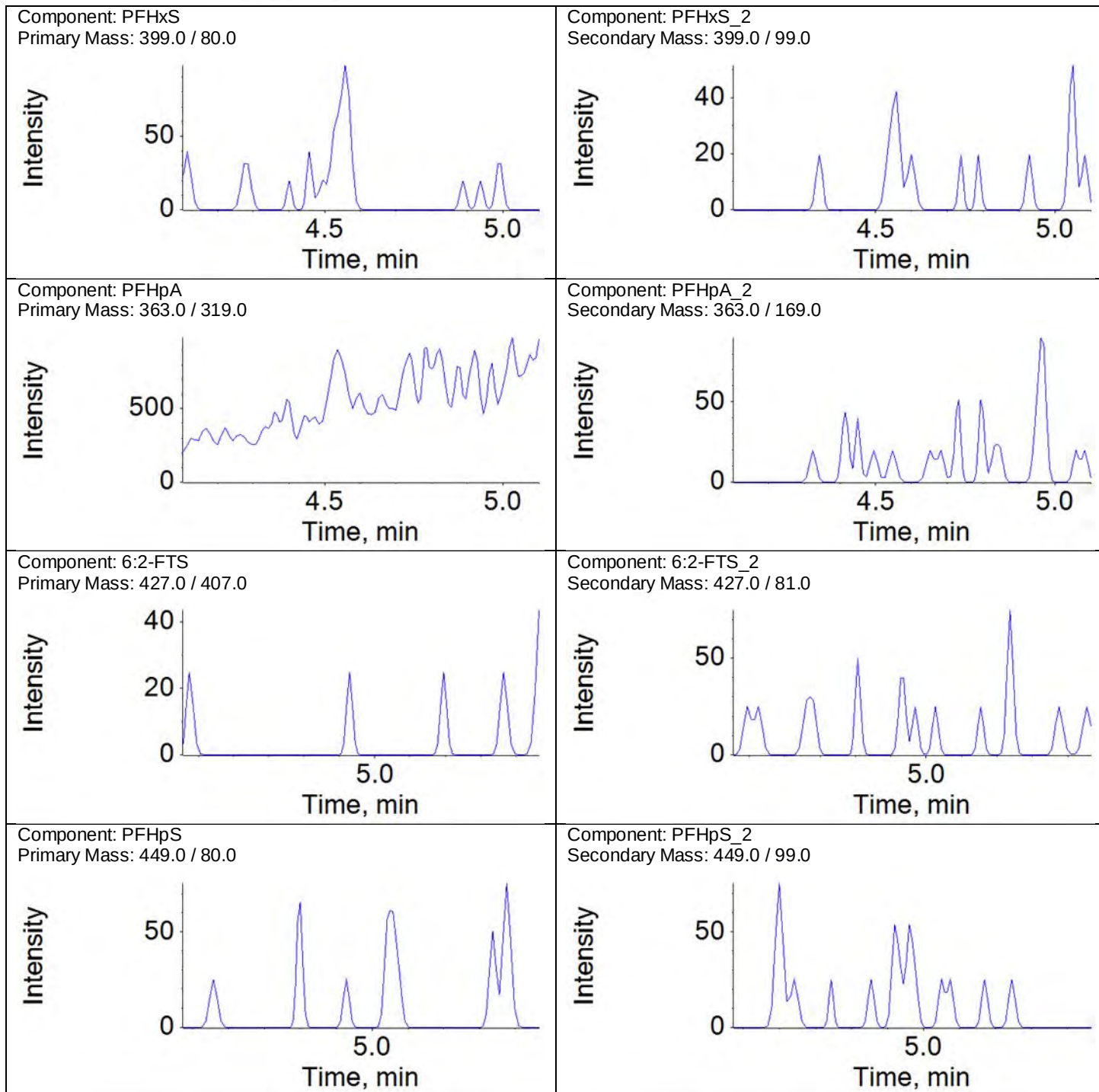
BSI05 Page 1405 of 1595

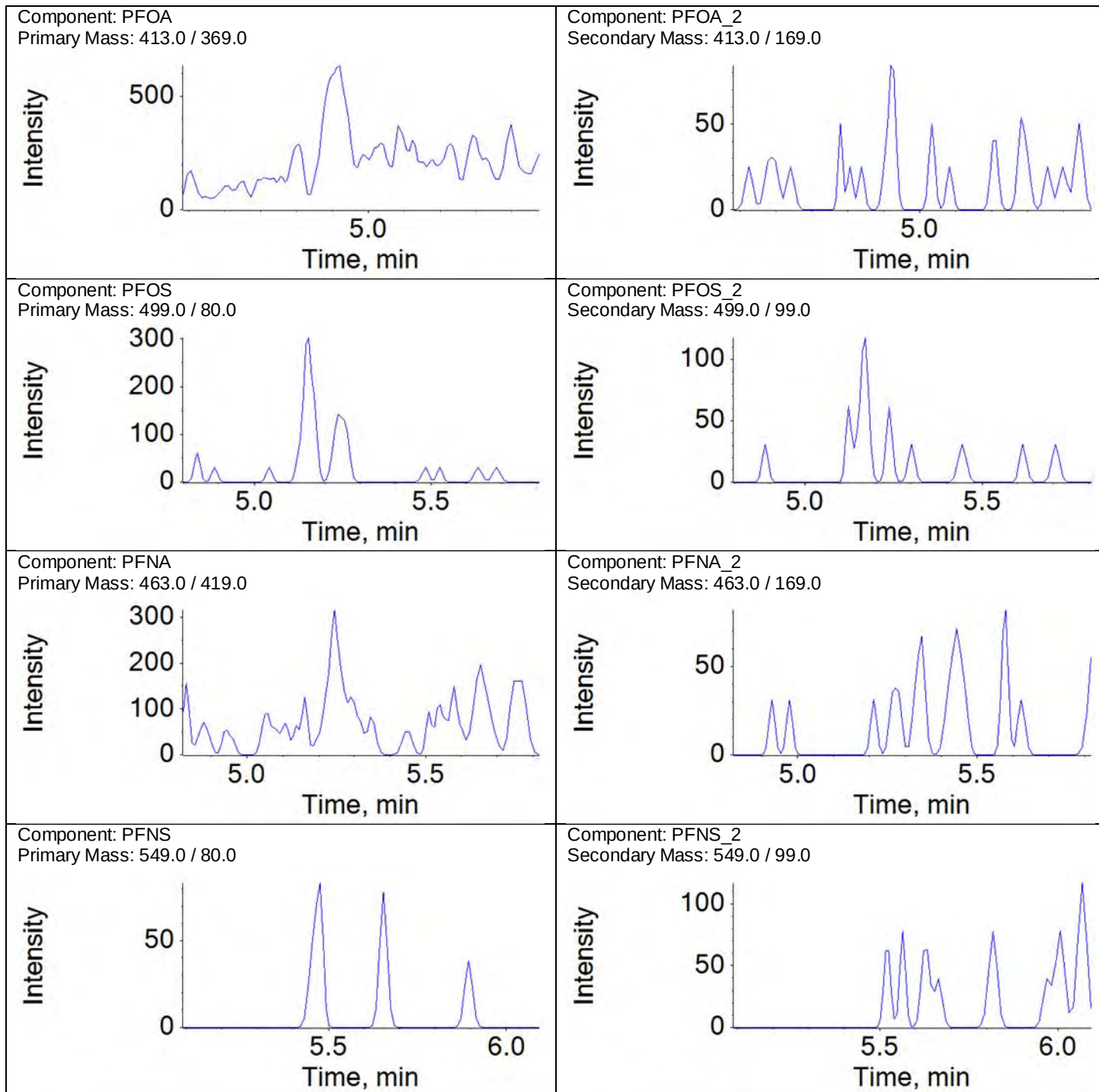
REVIEWED

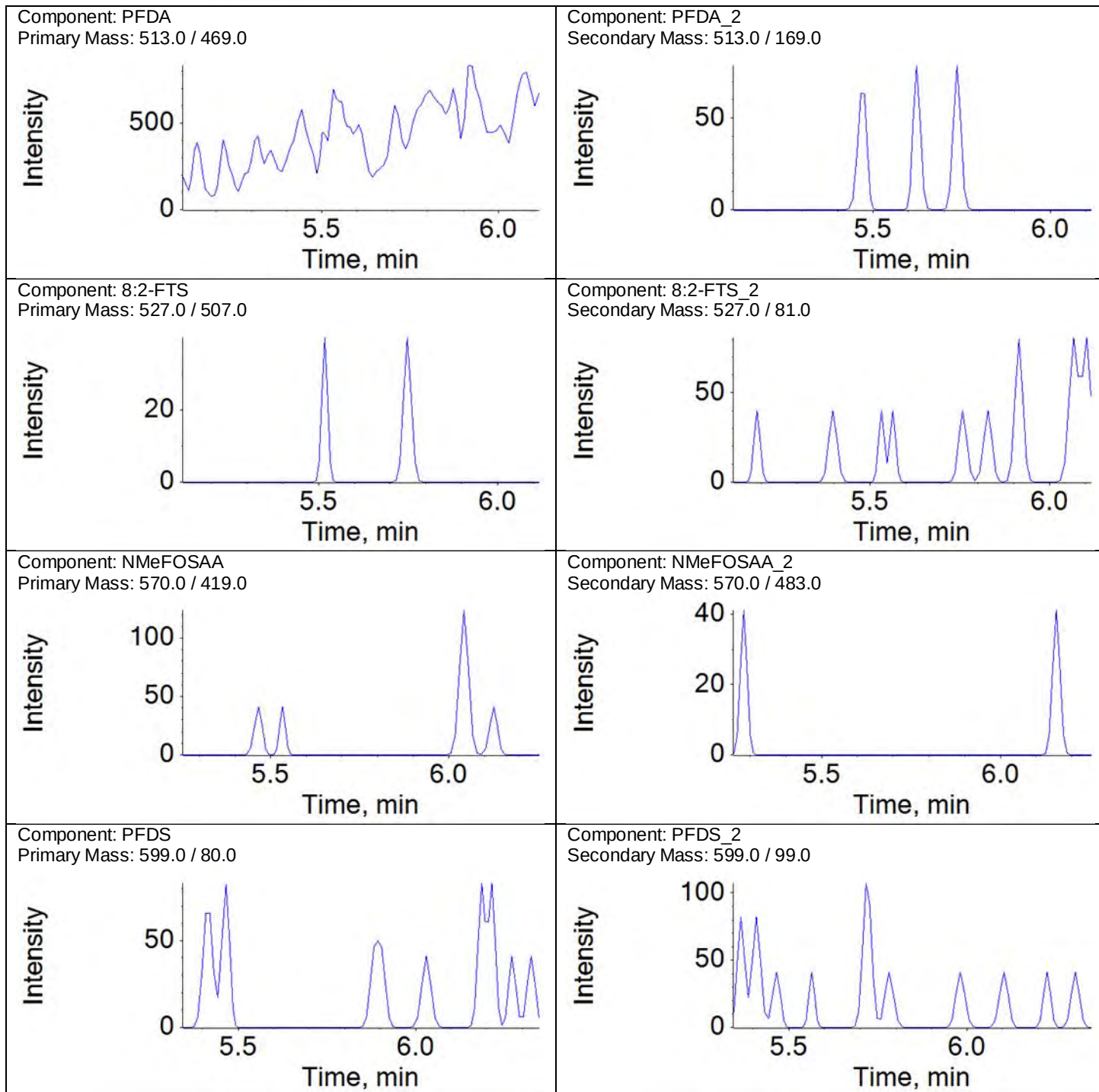
By HMK at 2:13 pm, 11/14/18

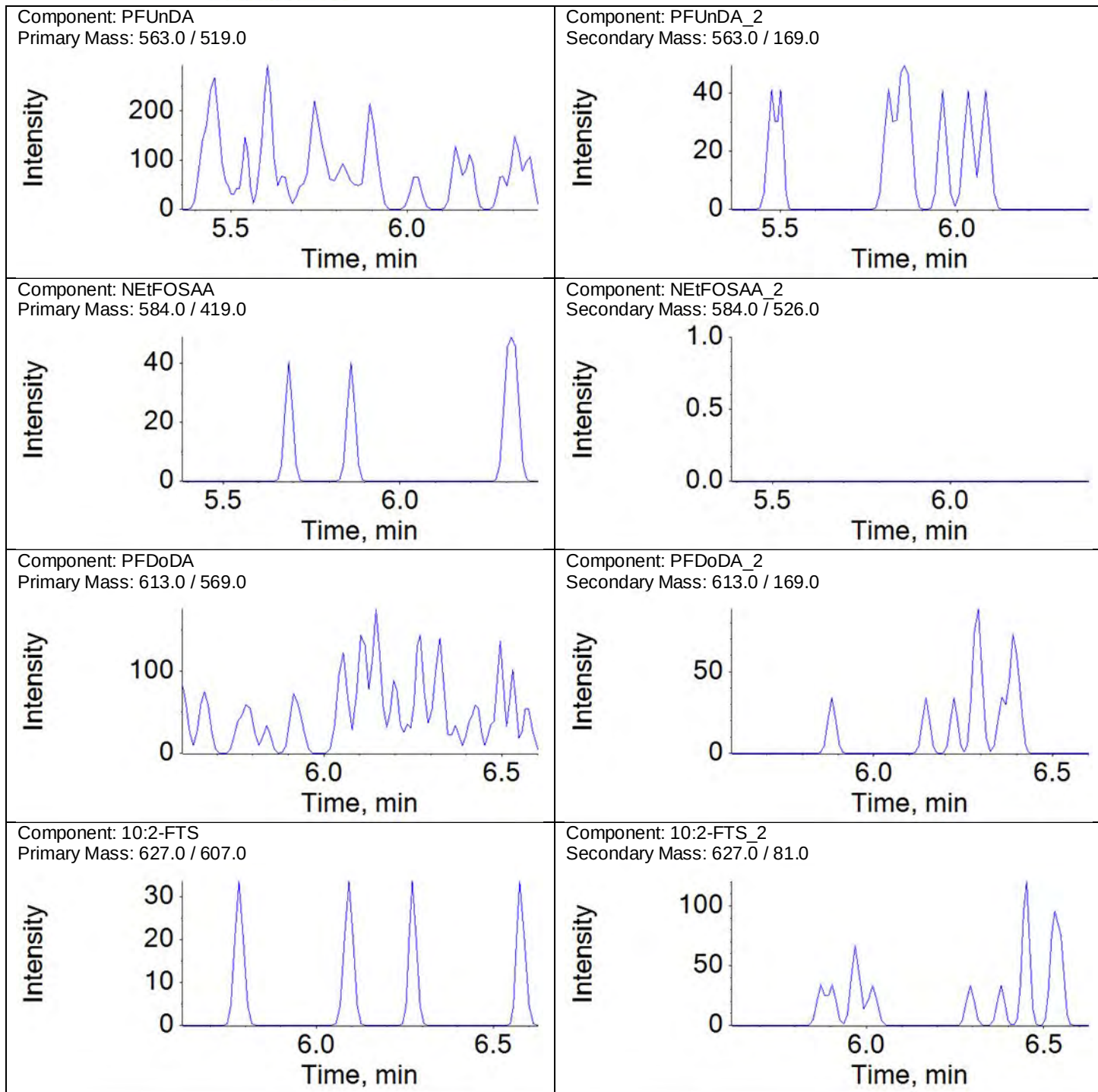
Page 1 of 7

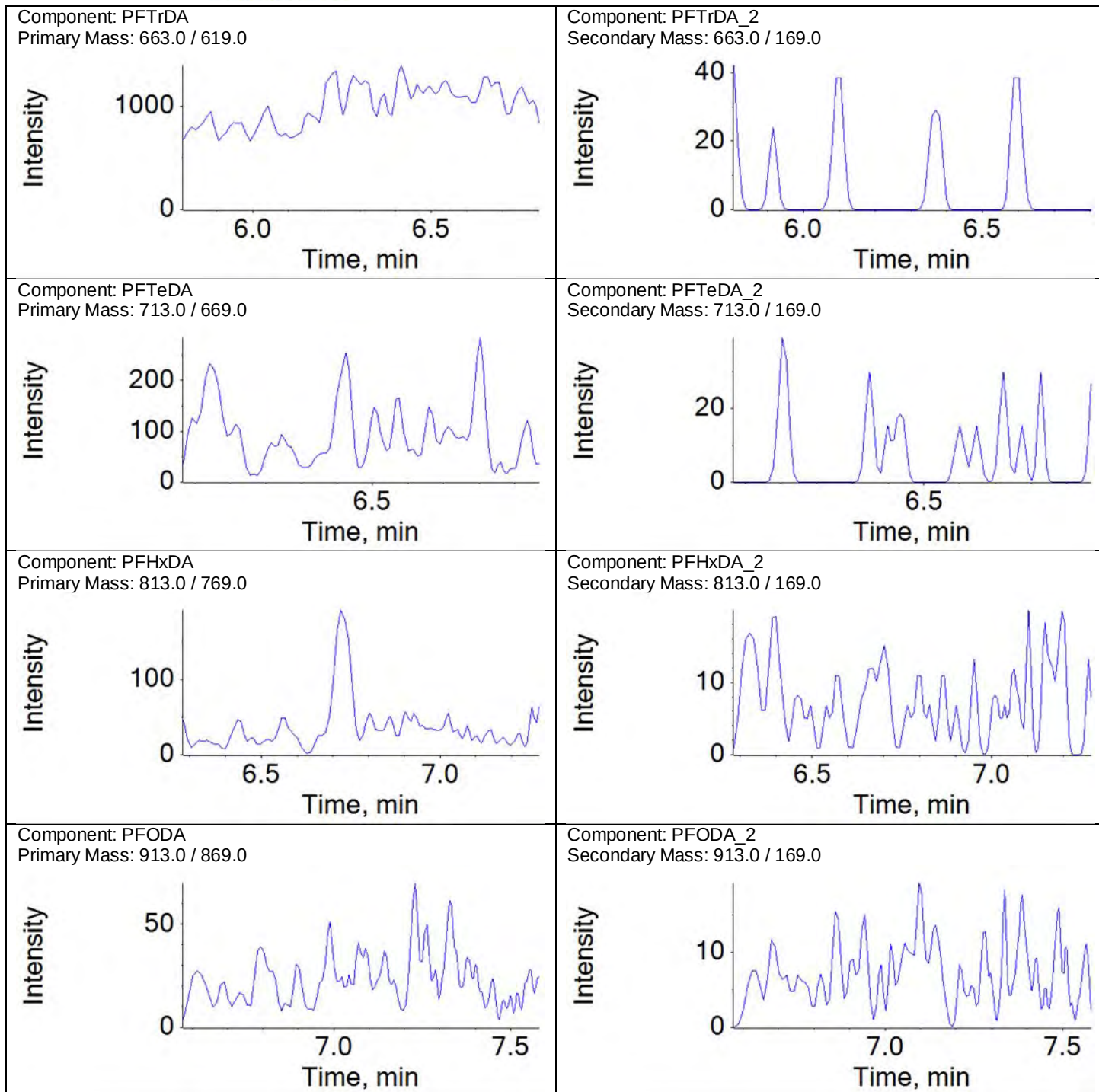












ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	BLK316012		Data File:	18NOV13D-07.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012		Acquis Date:	2018-11-13T10:02:05
Sample Type:	Unknown		Instrument:	LM27631
Vial Position:	13		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18316012
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	18316012		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-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	718239.3	661126.9	9	50	
13C2-PFOA	5.0	506555.6	466902.6	8	50	
13C4-PFOS	4.8	258928.7	247446.9	5	50	
13C2-PFDA	5.0	323043.7	295381.6	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	651475.2	13C3-PFBA	718239.3	0.907	10.000	8.133	81	50-150	
E13C5-PFPeA	657418.2	13C3-PFBA	718239.3	0.915	10.000	8.211	82	50-150	
E13C3-PFBS	368768.5	13C3-PFBA	718239.3	0.513	9.300	7.249	78	50-150	
E13C2-4:2-FTS	46873.0	13C2-PFOA	506555.6	0.093	9.340	8.242	88	50-150	
E13C5-PFHxA	592979.5	13C2-PFOA	506555.6	1.171	10.000	8.457	85	50-150	
E13C3-PFHxS	286687.2	13C2-PFOA	506555.6	0.566	9.460	7.767	82	50-150	
E13C4-PFHpA	459308.1	13C2-PFOA	506555.6	0.907	10.000	8.170	82	50-150	
E13C2-6:2-FTS	33444.7	13C2-PFOA	506555.6	0.066	9.500	8.835	93	50-150	
E13C8-PFOA	799277.8	13C2-PFOA	506555.6	1.578	10.000	8.694	87	50-150	
E13C8-PFOS	239089.2	13C4-PFOS	258928.7	0.923	9.560	8.183	86	50-150	
E13C9-PFNA	410191.5	13C4-PFOS	258928.7	1.584	10.000	8.834	88	50-150	
E13C6-PFDA	560090.7	13C2-PFDA	323043.7	1.734	10.000	8.092	81	50-150	
E13C2-8:2-FTS	25648.4	13C2-PFDA	323043.7	0.079	9.580	7.919	83	50-150	
E13C8-PFOSA	557297.8	13C2-PFDA	323043.7	1.725	10.000	7.649	76	50-150	
Ed3-NMeFOSAA	73494.2	13C2-PFDA	323043.7	0.228	10.000	8.213	82	50-150	
E13C7-PFUnDA	227959.9	13C2-PFDA	323043.7	0.706	10.000	8.194	82	50-150	
Ed5-NetFOSAA	55256.4	13C2-PFDA	323043.7	0.171	10.000	7.238	72	50-150	
E13C2-PFDoDA	482307.2	13C2-PFDA	323043.7	1.493	10.000	7.753	78	50-150	
Ed7-NMePFOSAE	286509.1	13C2-PFDA	323043.7	0.887	10.000	7.676	77	50-150	
Ed3-NMePFOSA	66547.7	13C2-PFDA	323043.7	0.206	10.000	7.486	75	50-150	
Ed9-NetPFOSAE	233638.1	13C2-PFDA	323043.7	0.723	10.000	7.523	75	50-150	
Ed5-NetPFOSA	52296.8	13C2-PFDA	323043.7	0.162	10.000	7.595	76	50-150	
E13C2-PFTeDA	341127.0	13C2-PFDA	323043.7	1.056	10.000	7.414	74	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: BLK316012

Instrument Name: LM27631

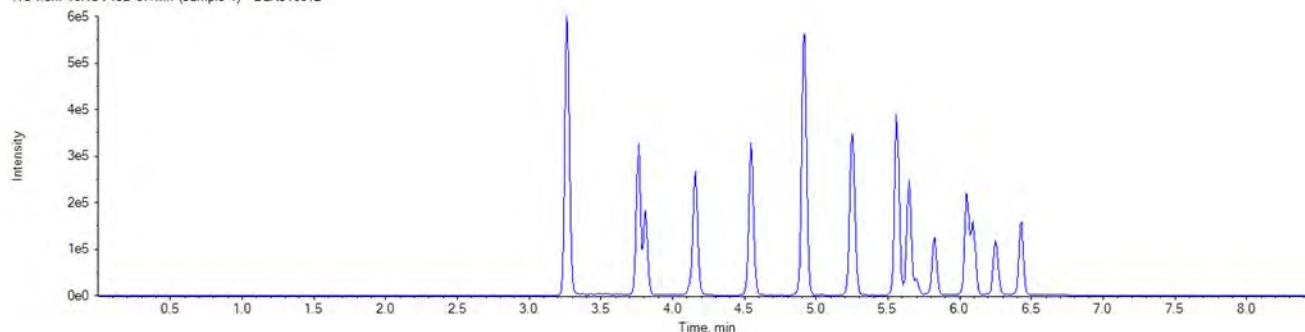
File Name: 18NOV13D-07.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	651475.2	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	657418.2	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	368768.5	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	46873.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	592979.5	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	368768.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	459308.1	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	286687.2	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	33444.7	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	286687.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	799277.8	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239089.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	410191.5	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239089.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	560090.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	25648.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	557297.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	73494.2	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239089.2	N/A	
PfUnDA	N/A	N/A	N/A		A	13C7-PfUnDA	5.82	227959.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	55256.4	N/A	
PFDODA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	482307.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	25648.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	286509.1	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	66547.7	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	239089.2	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	233638.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.27	52296.8	N/A	
PFTDA	N/A	N/A	N/A		A	13C2-PFDODA	6.05	482307.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	341127.0	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	341127.0	N/A	
PFOA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	341127.0	N/A	

Total Ion Chromatogram

TIC from 18NOV13D-07.wiff (sample 1) - BLK316012



APPROVED

By MCD at 10:39 pm, 11/13/18

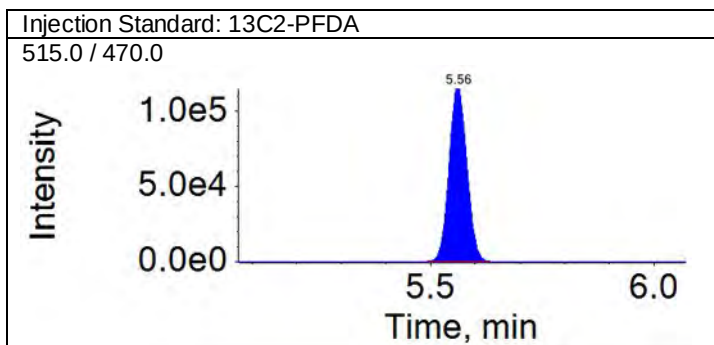
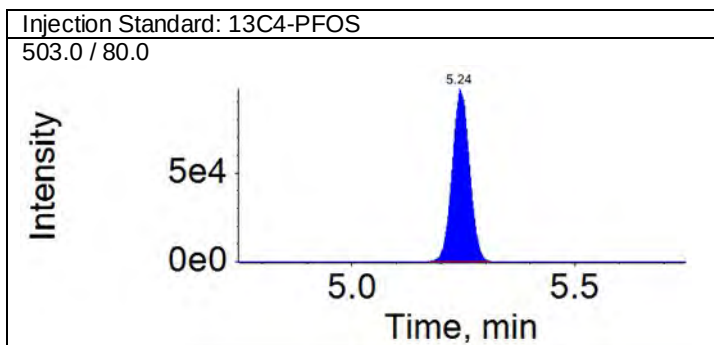
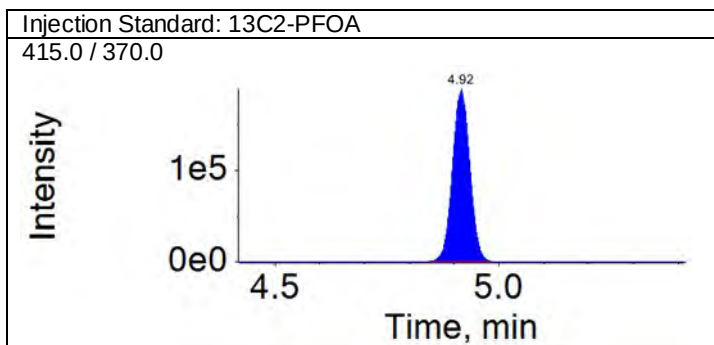
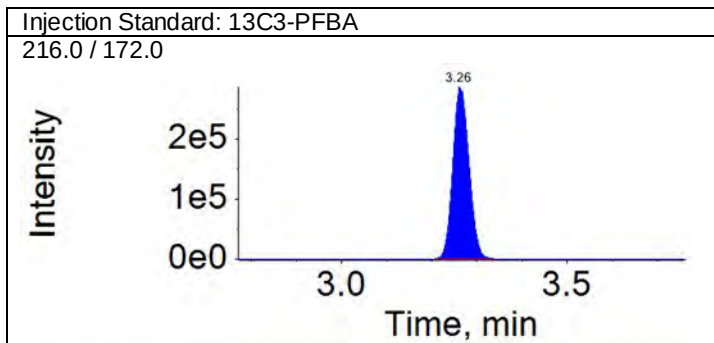
BSI05 Page 1413 of 1595

REVIEWED

By HMK at 2:12 pm, 11/14/18

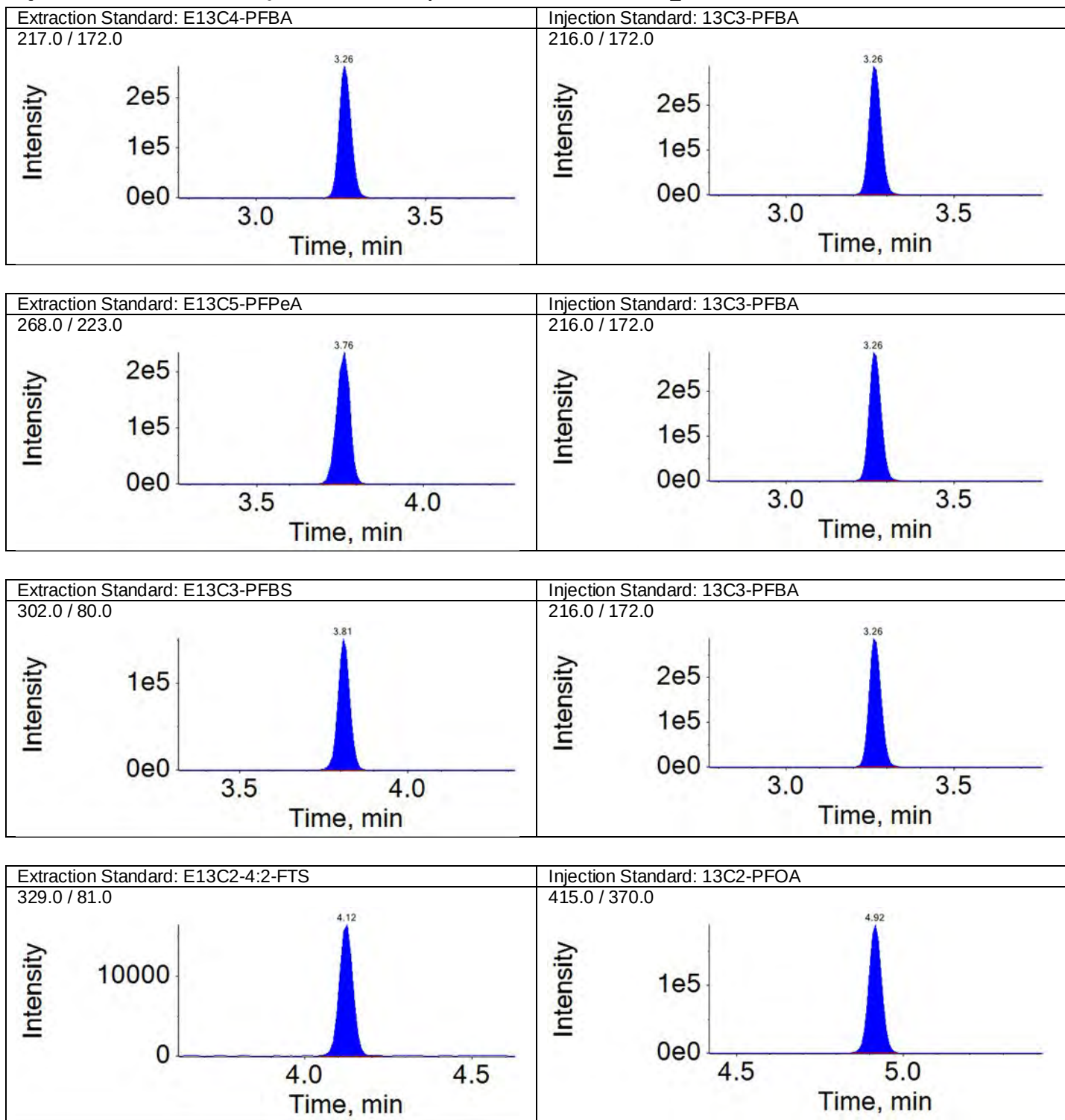
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



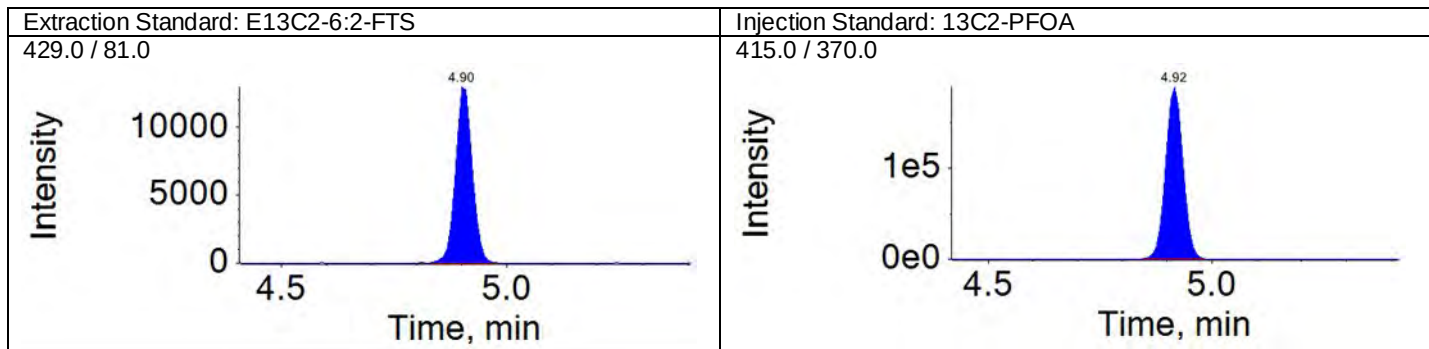
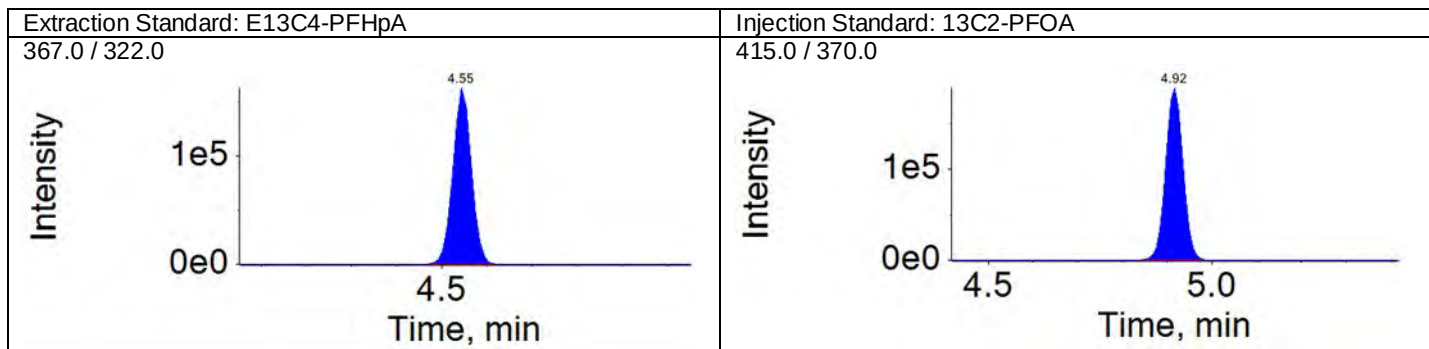
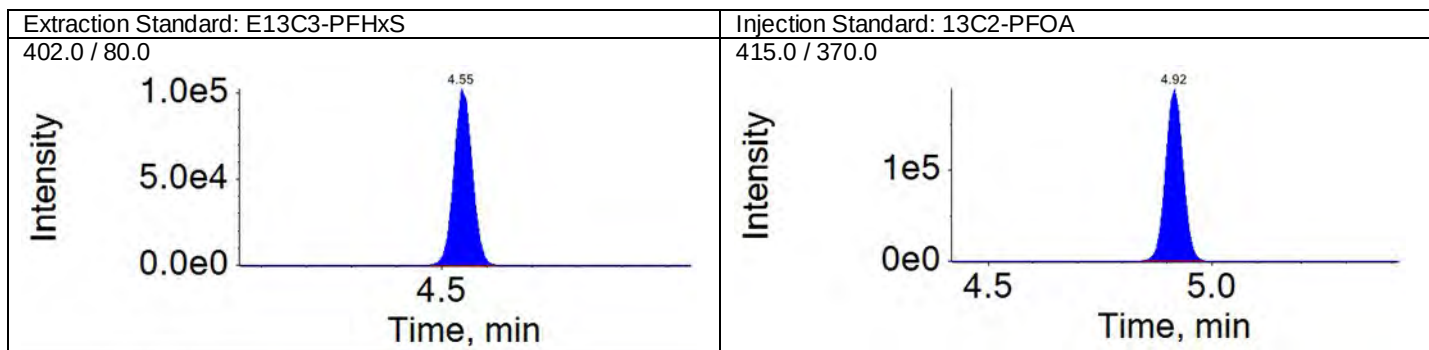
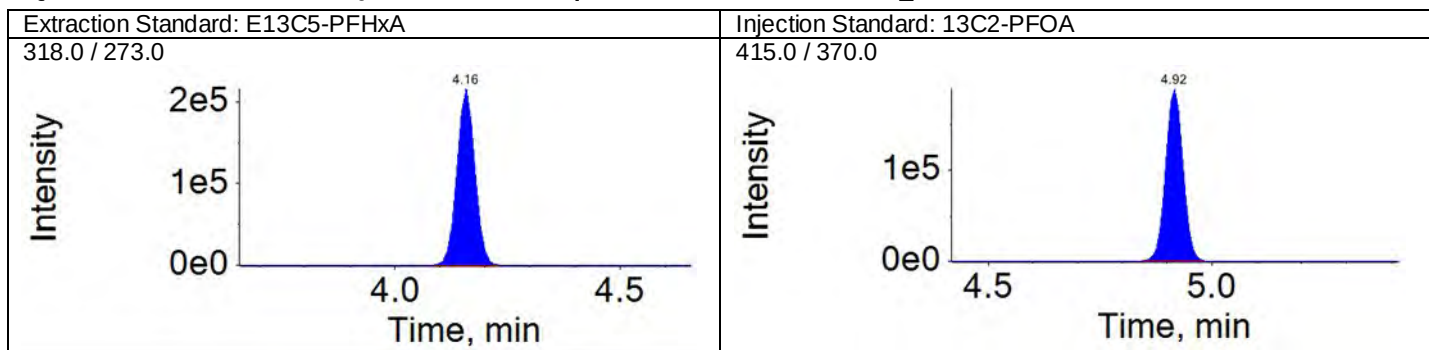
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



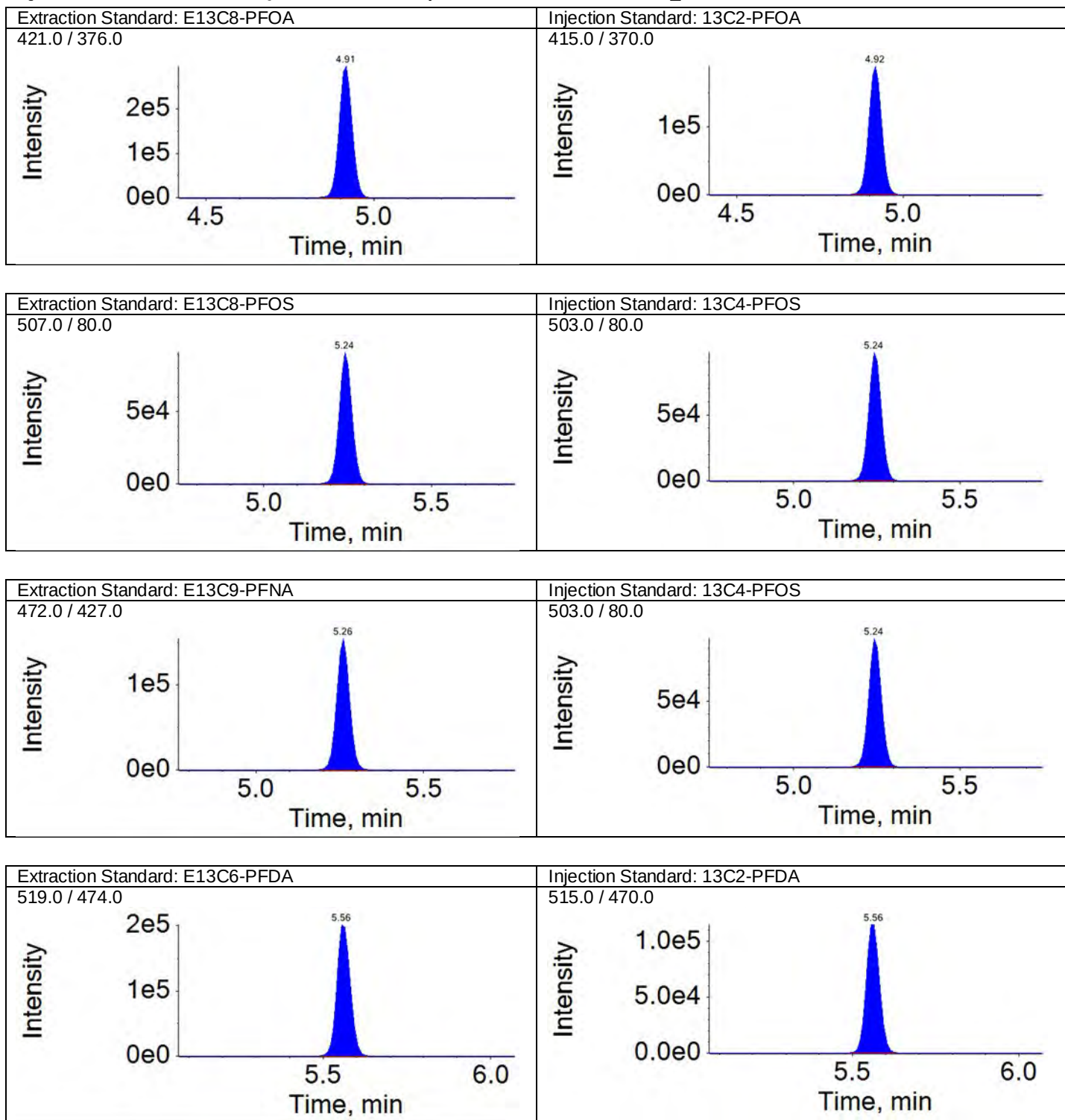
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



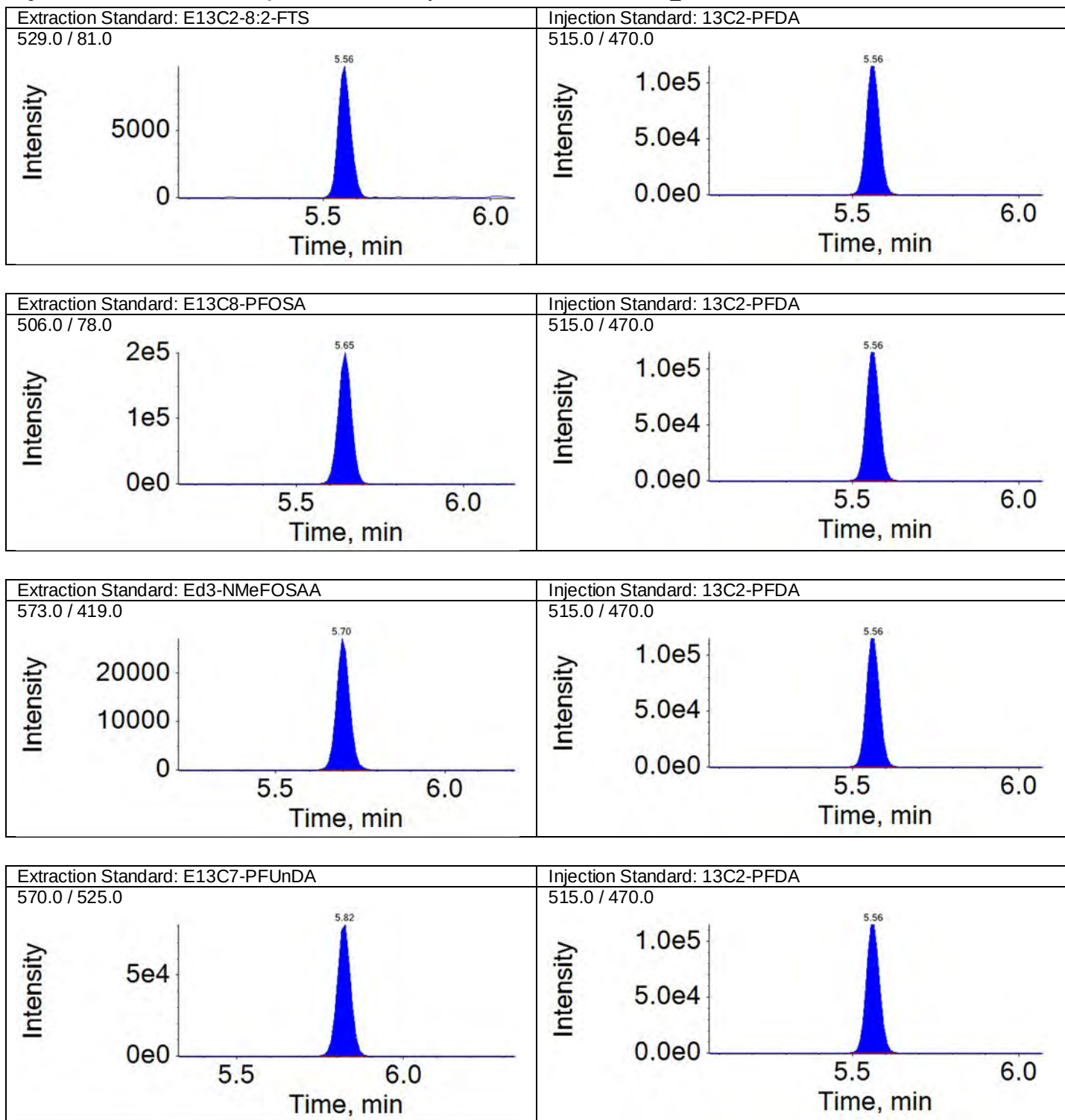
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



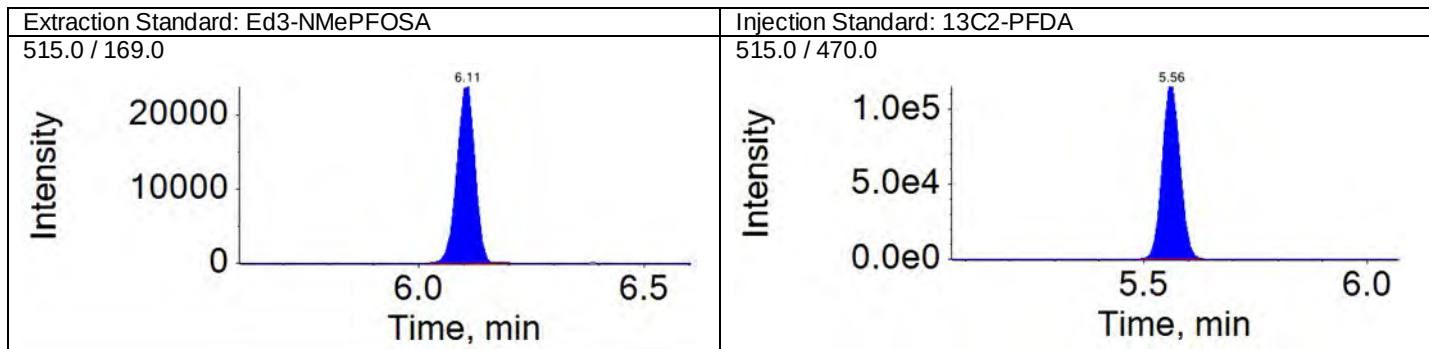
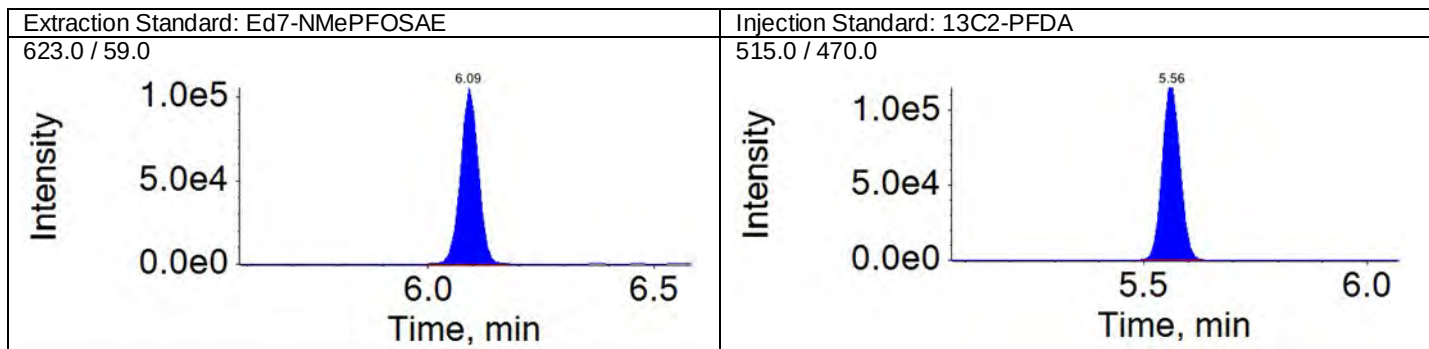
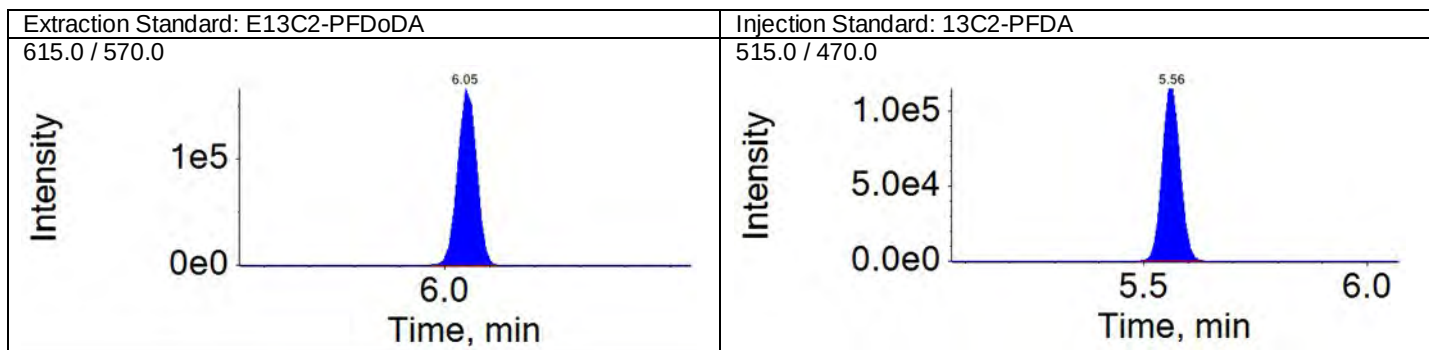
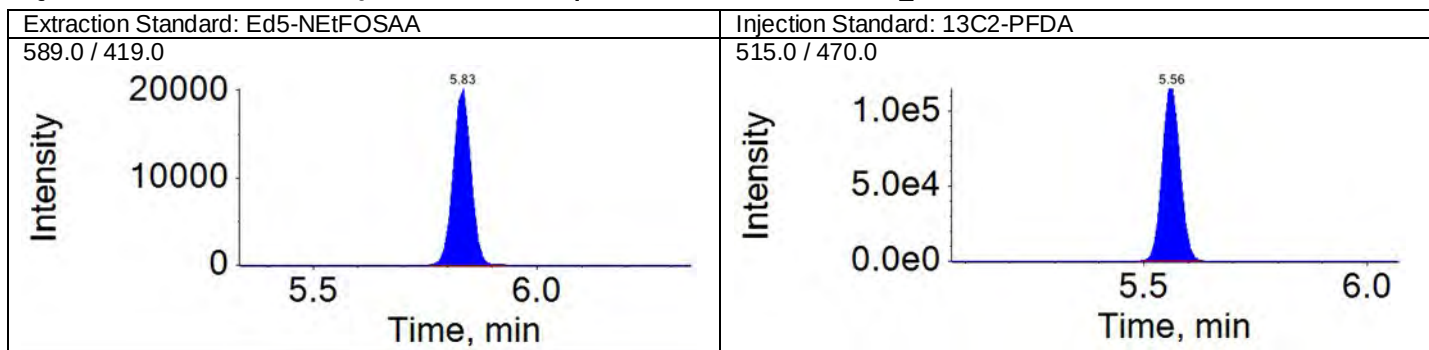
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



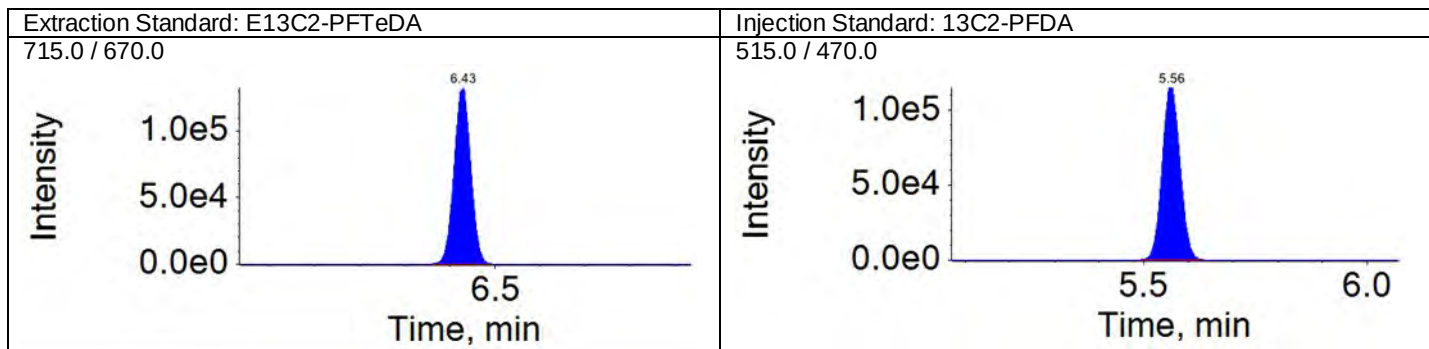
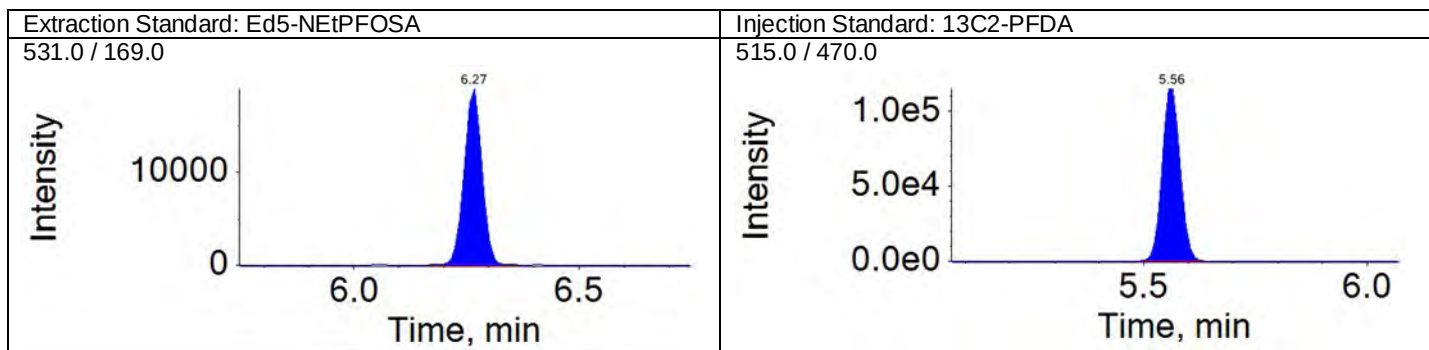
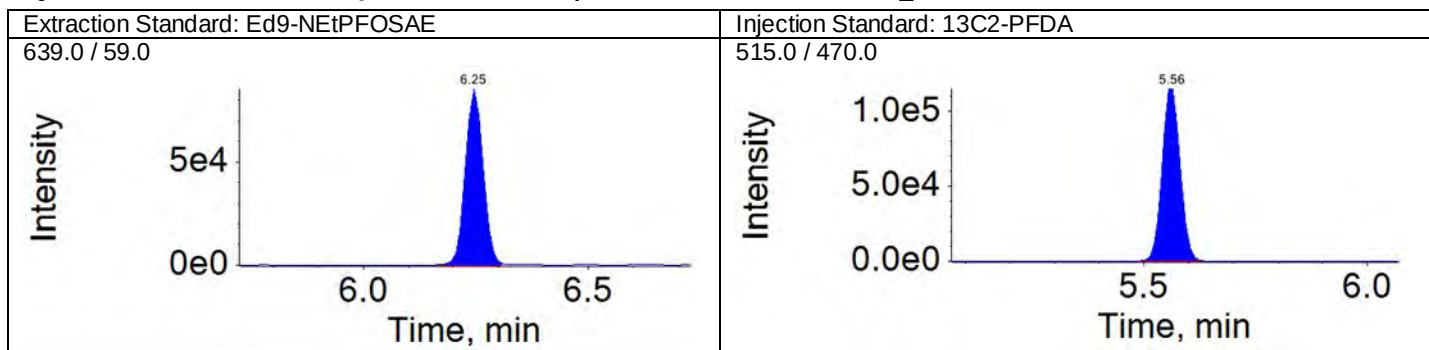
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



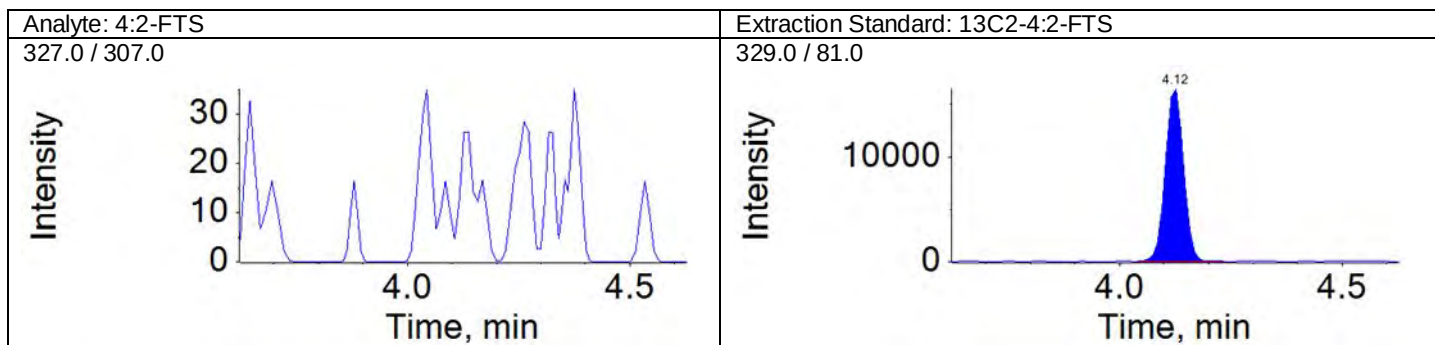
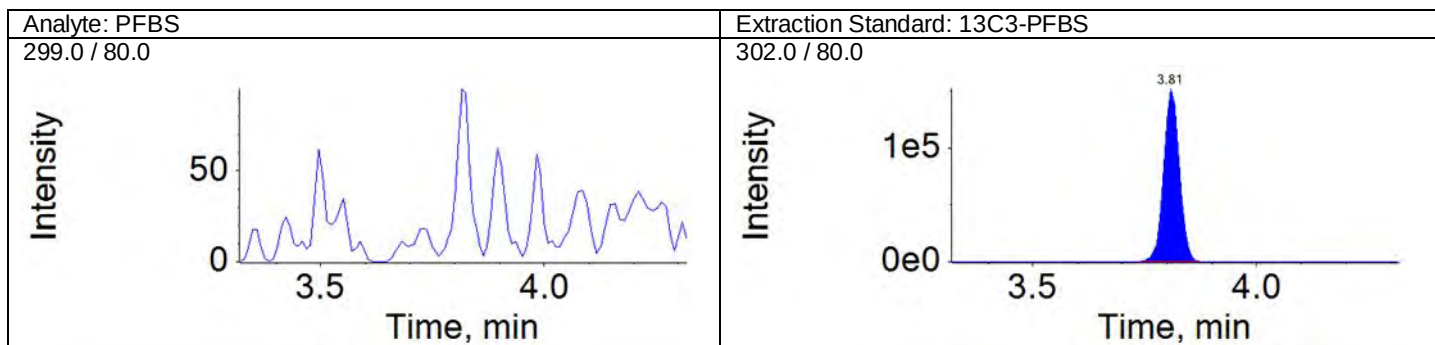
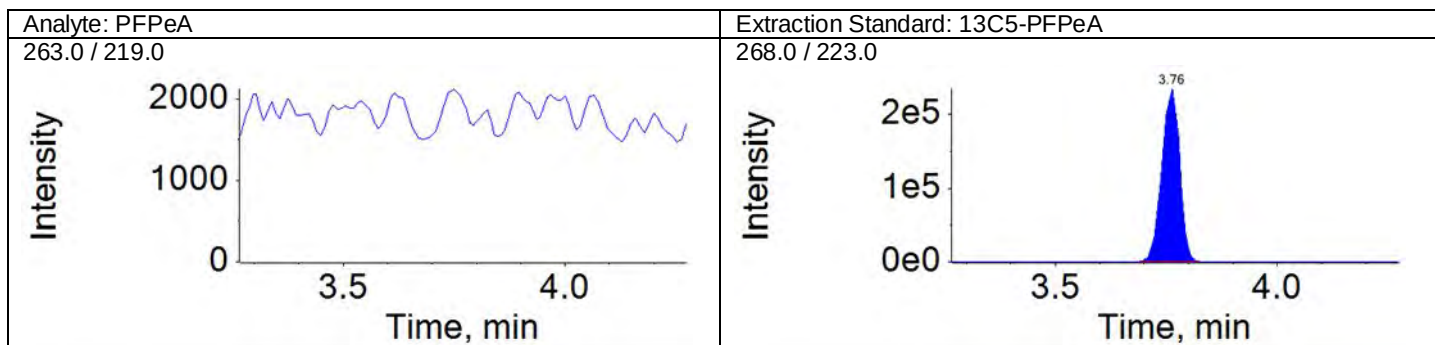
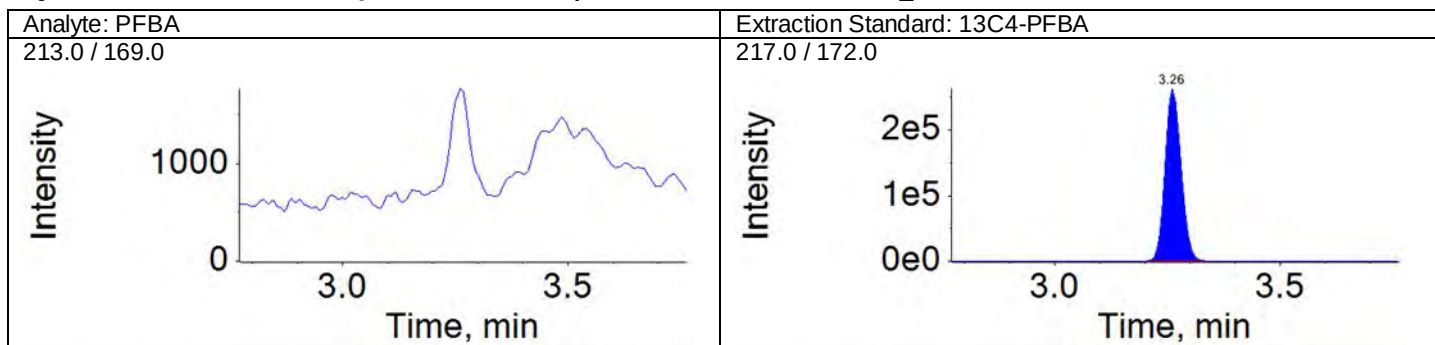
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



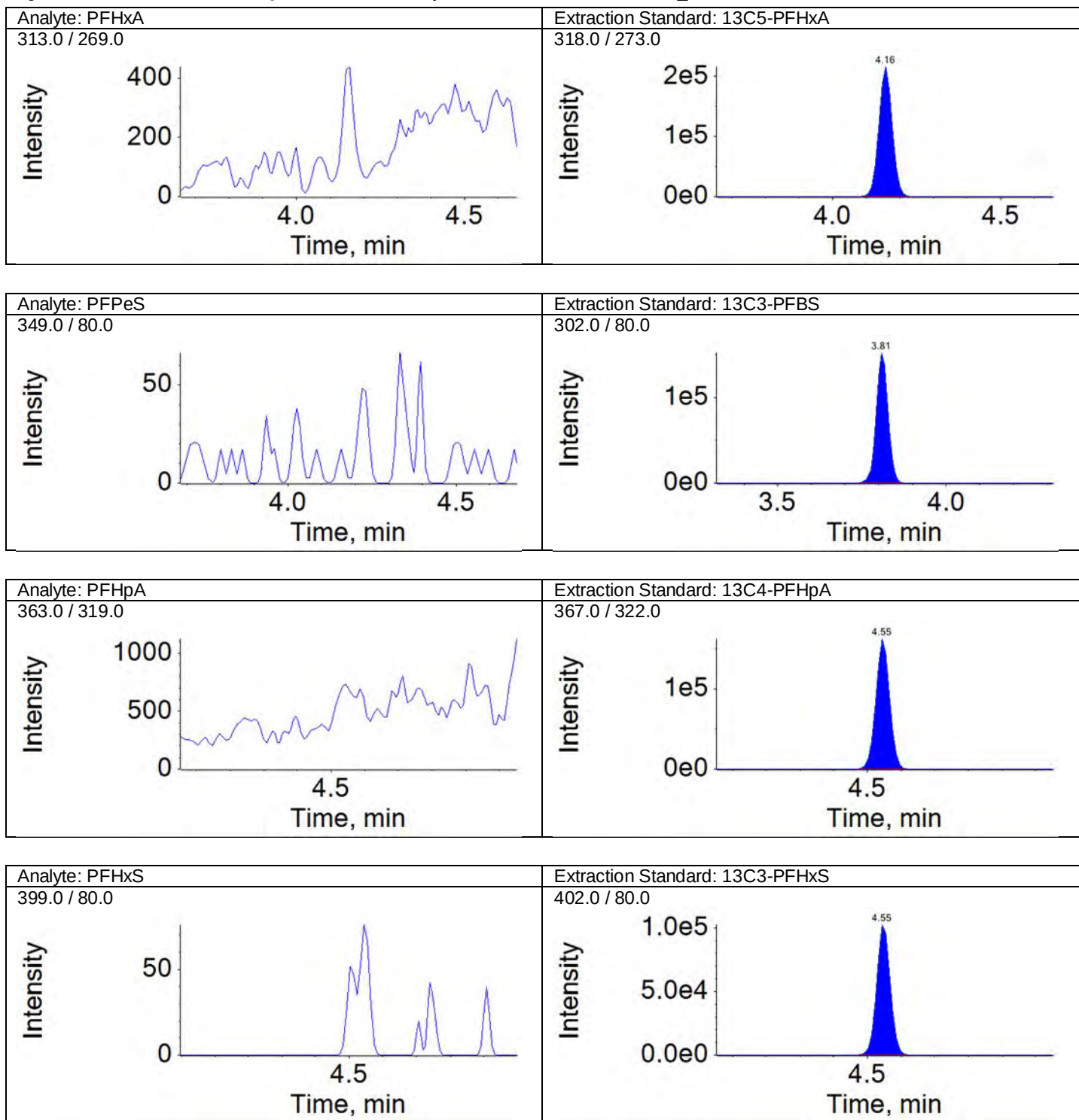
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



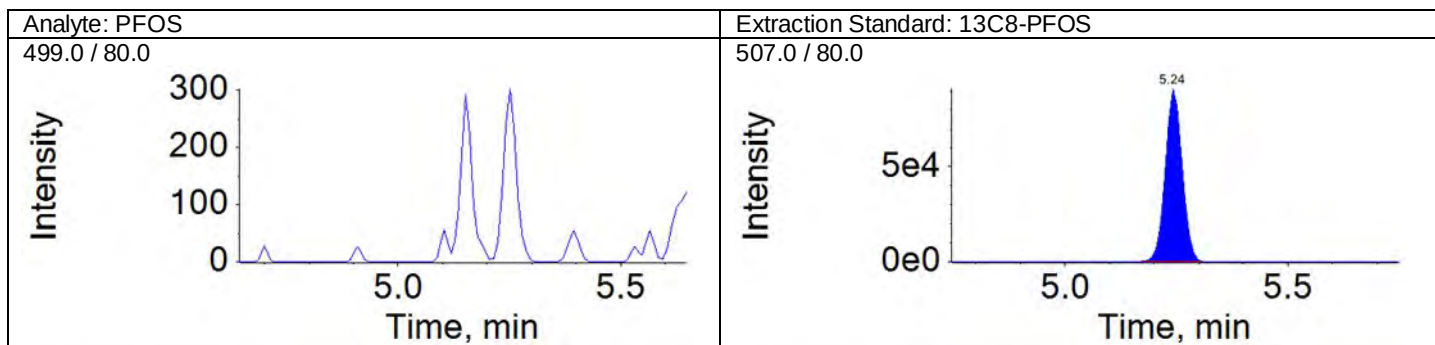
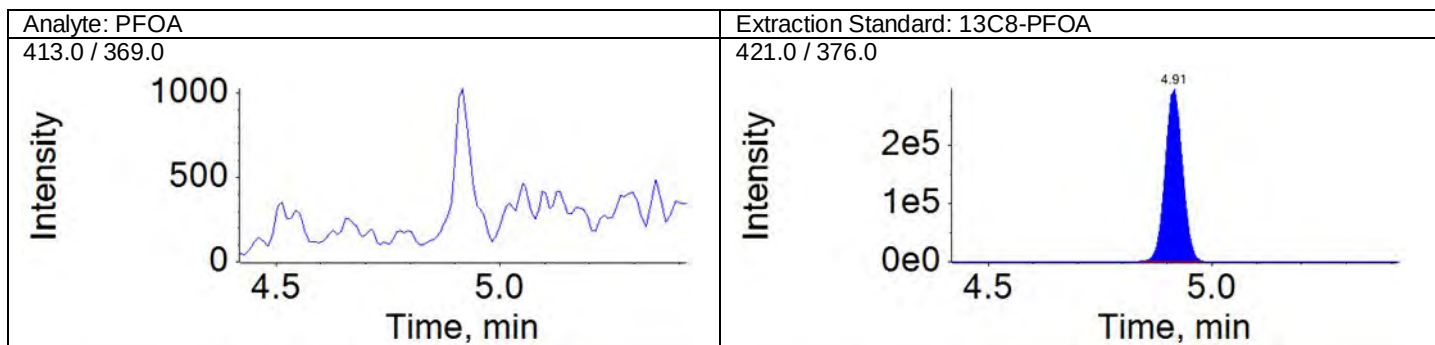
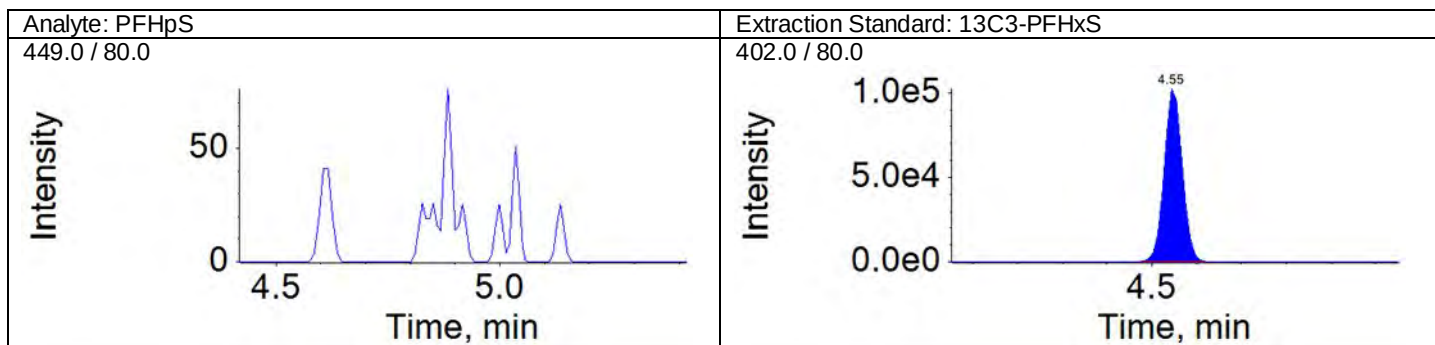
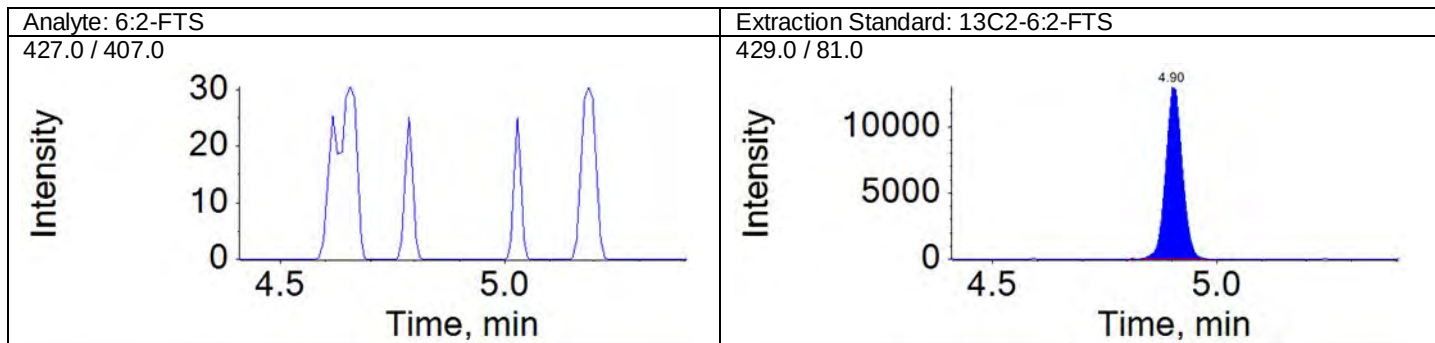
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



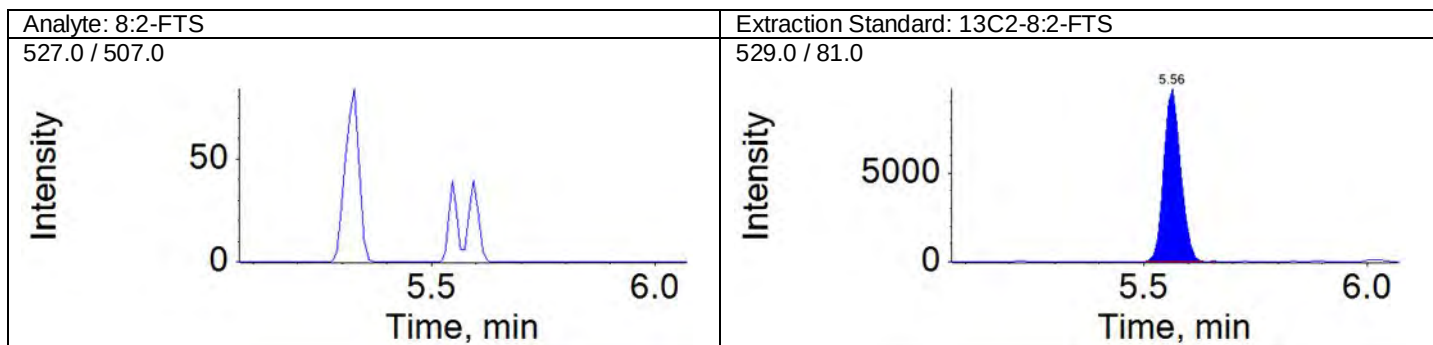
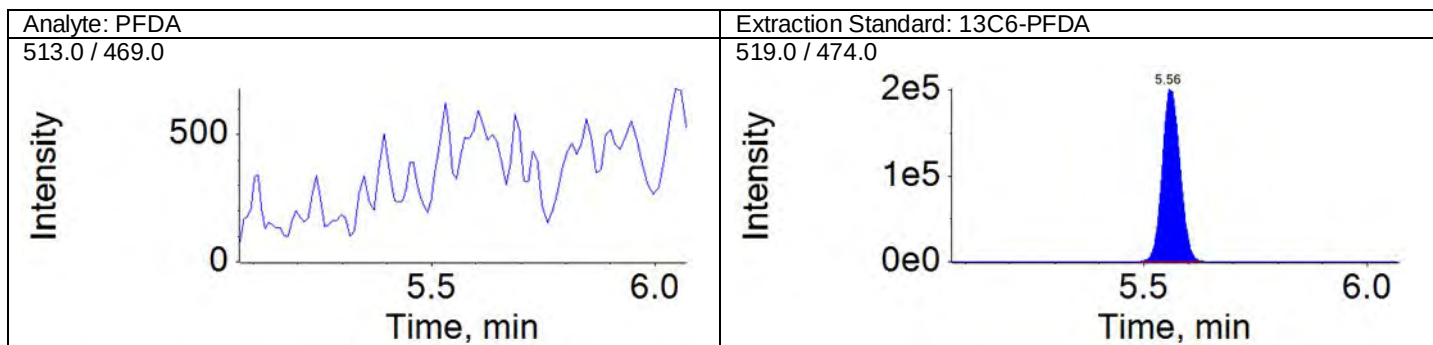
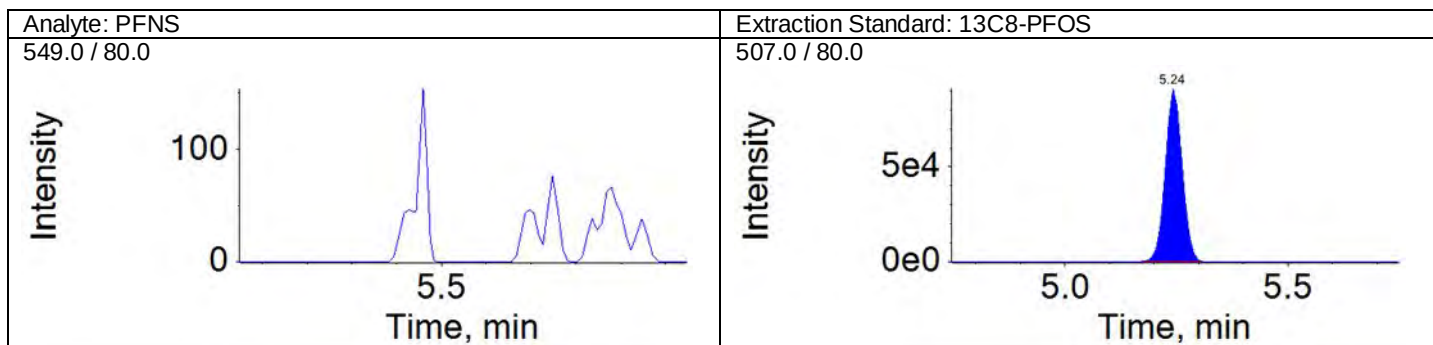
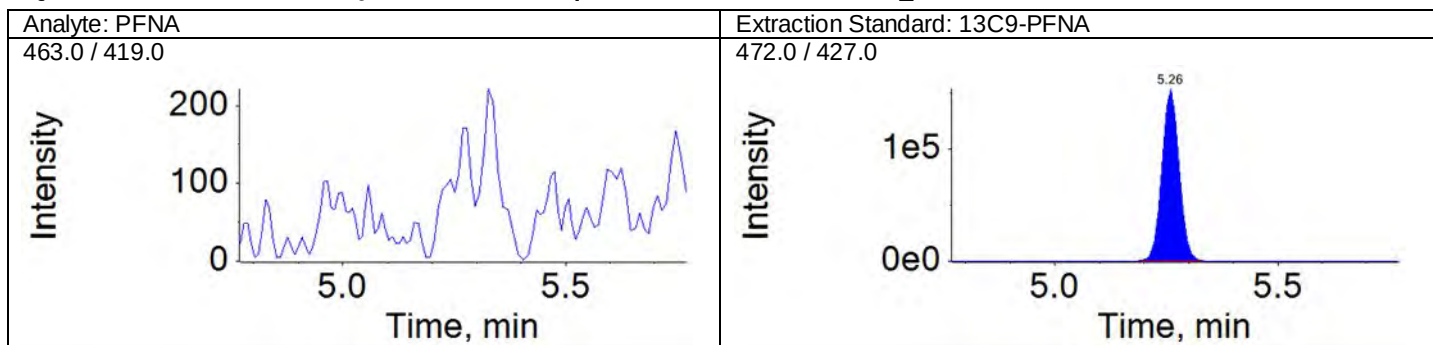
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



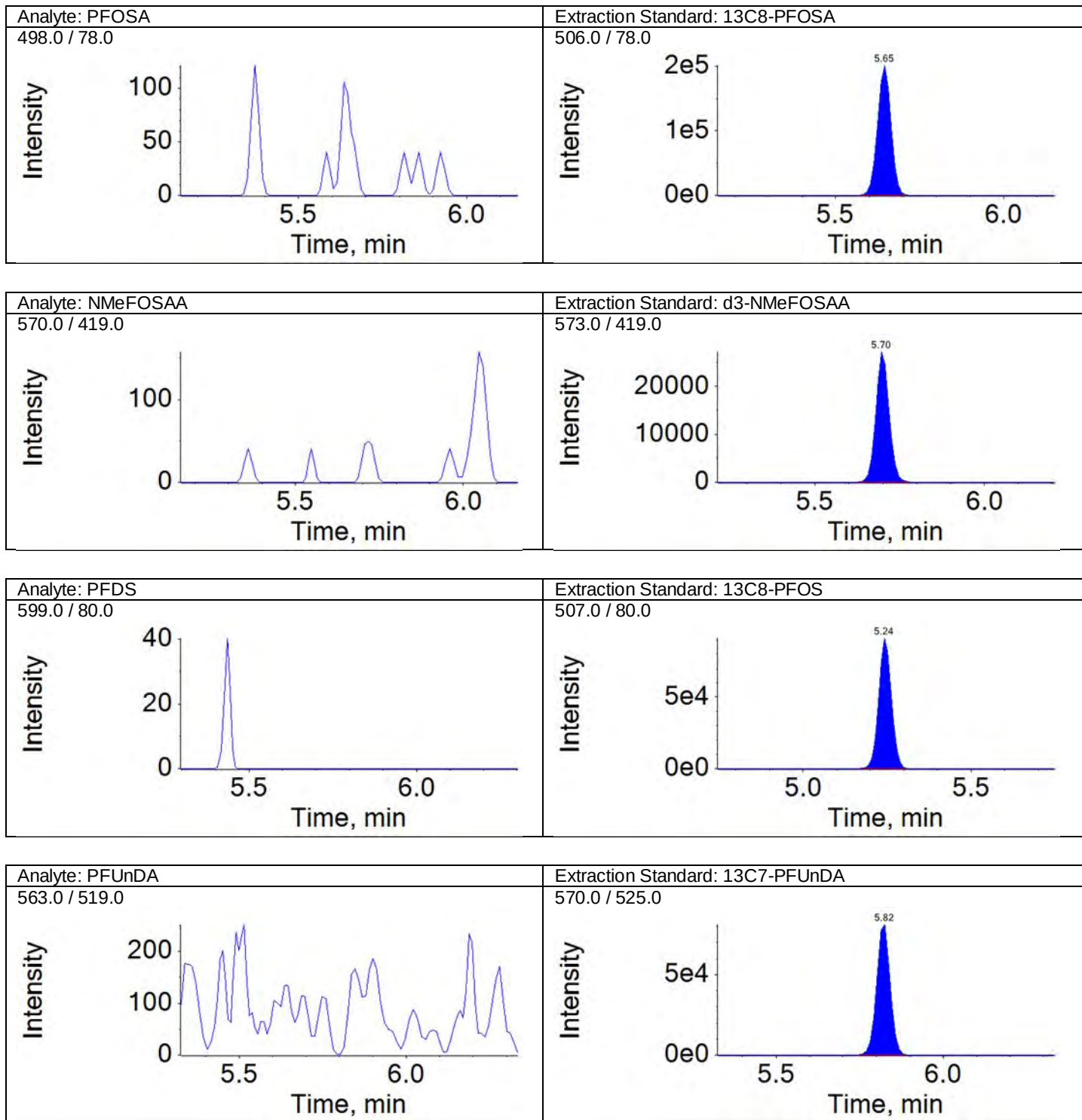
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



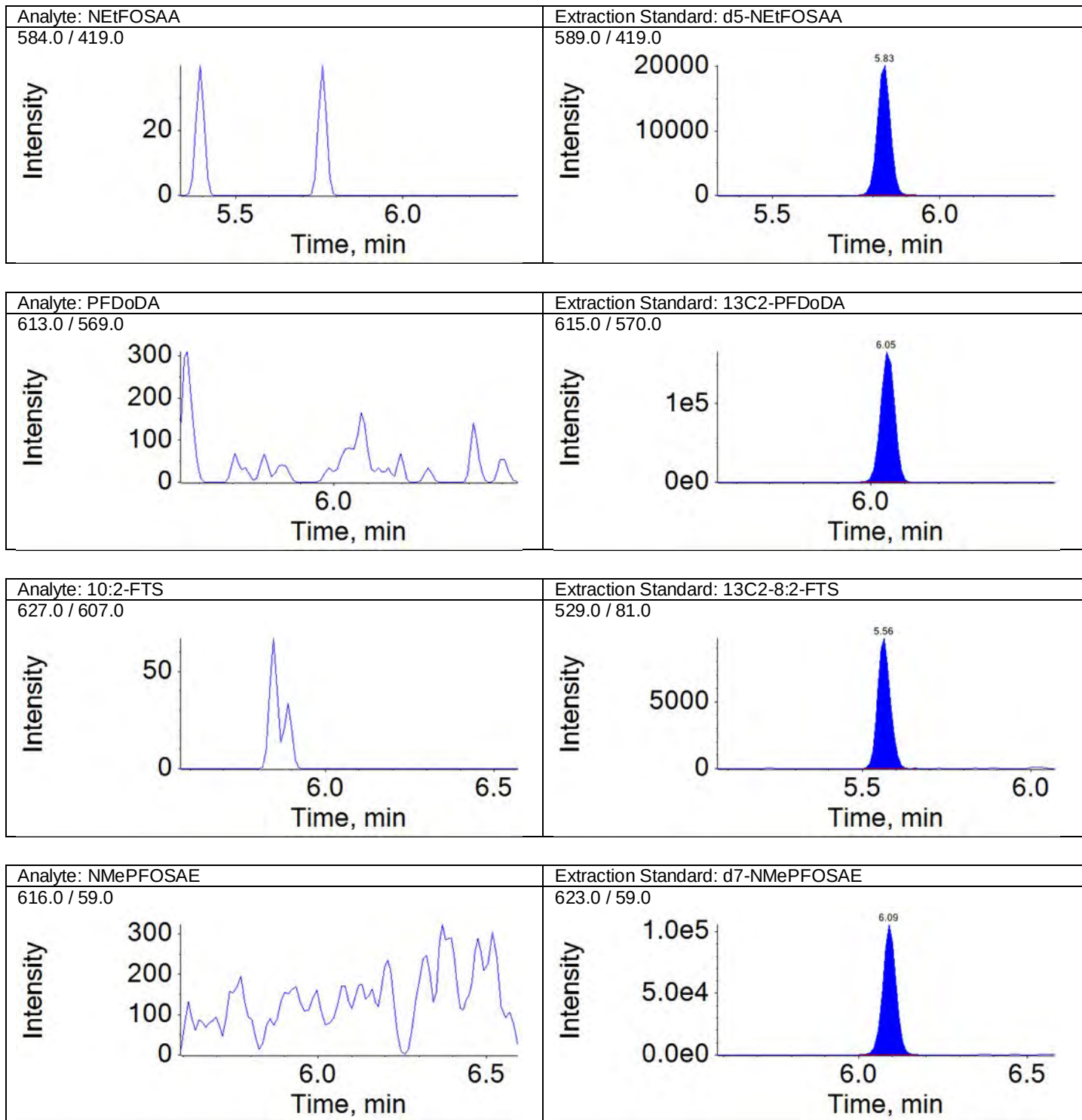
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



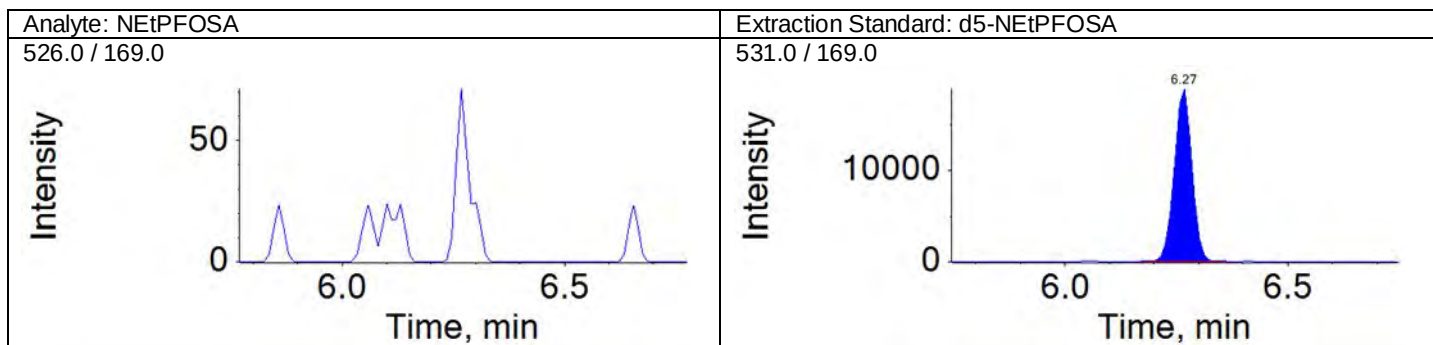
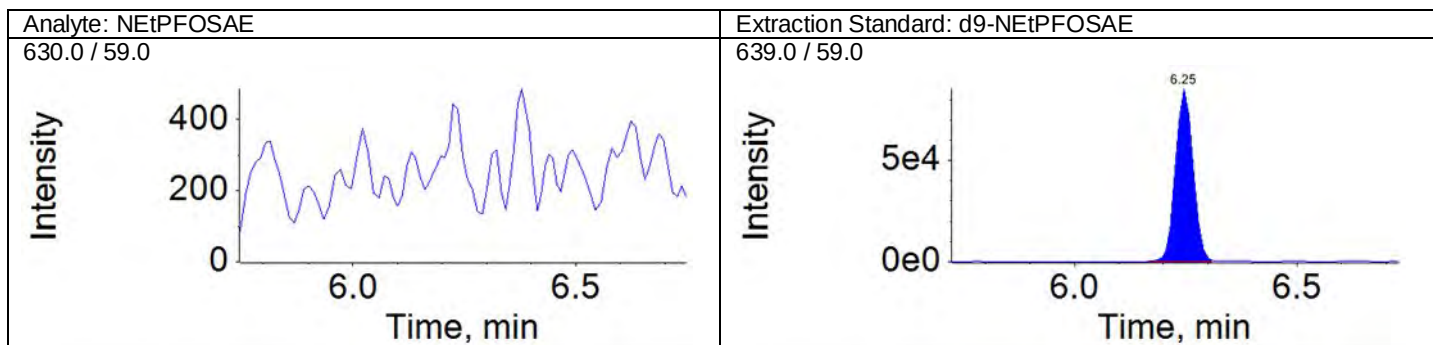
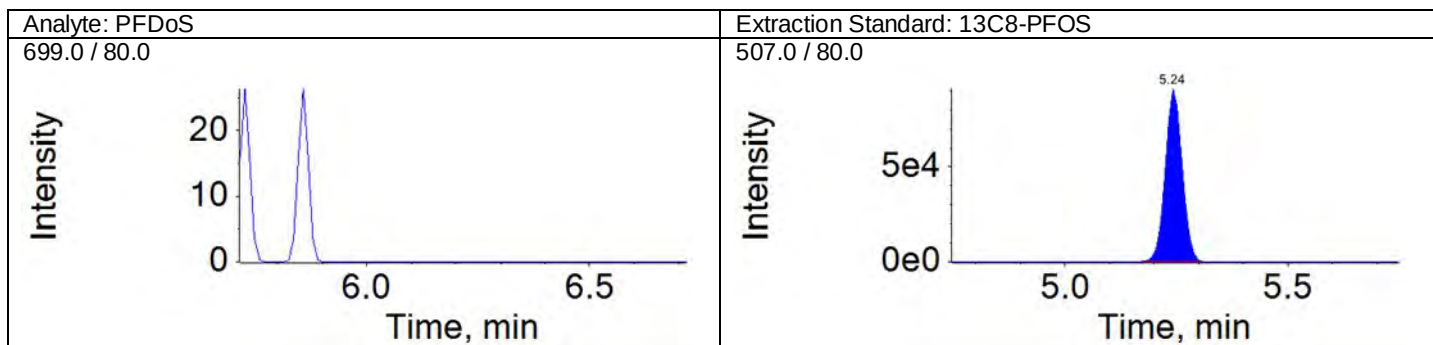
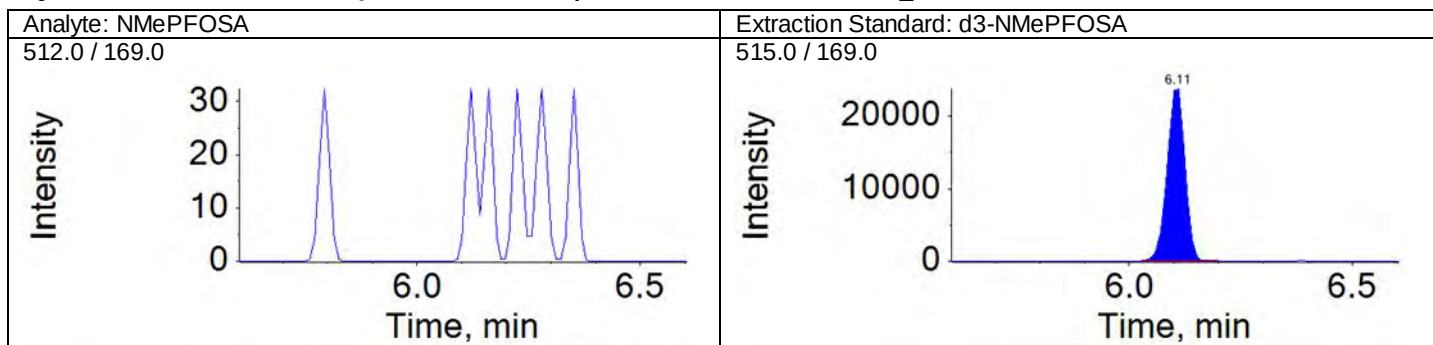
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



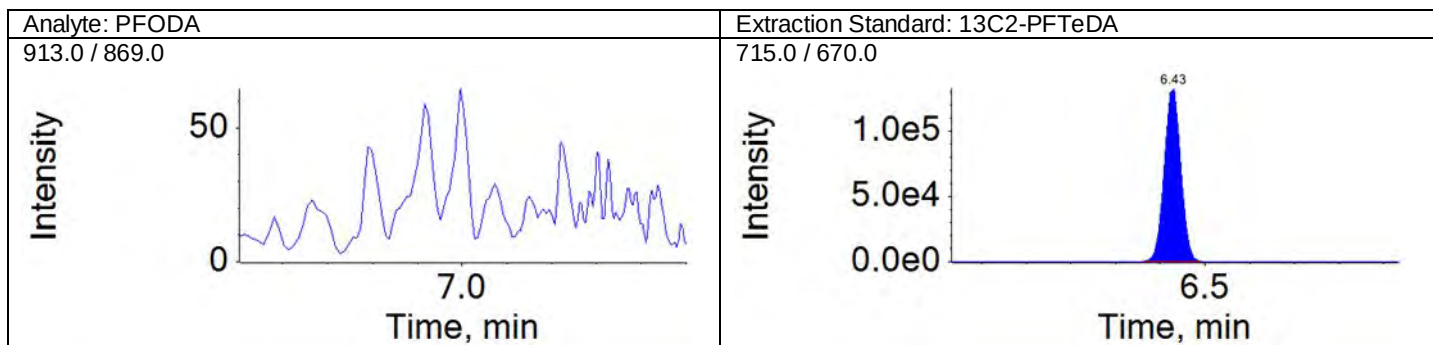
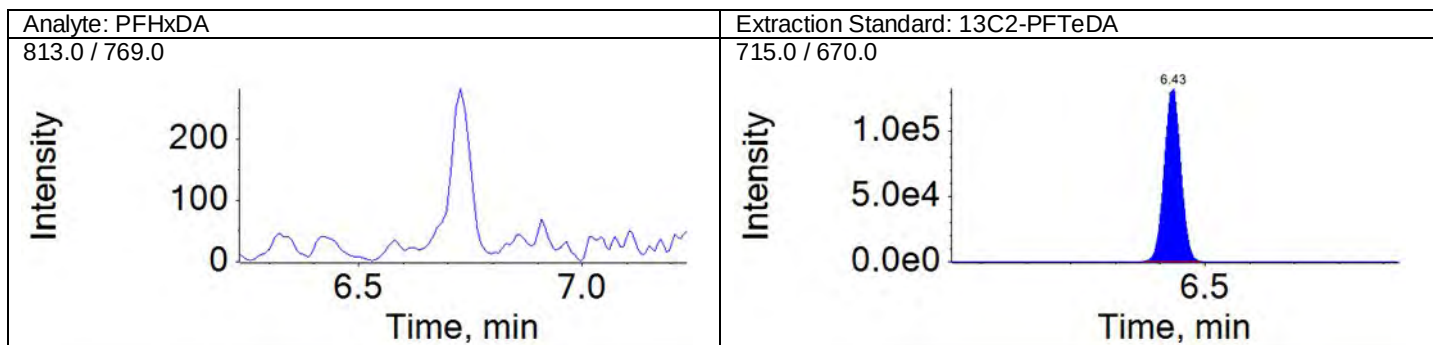
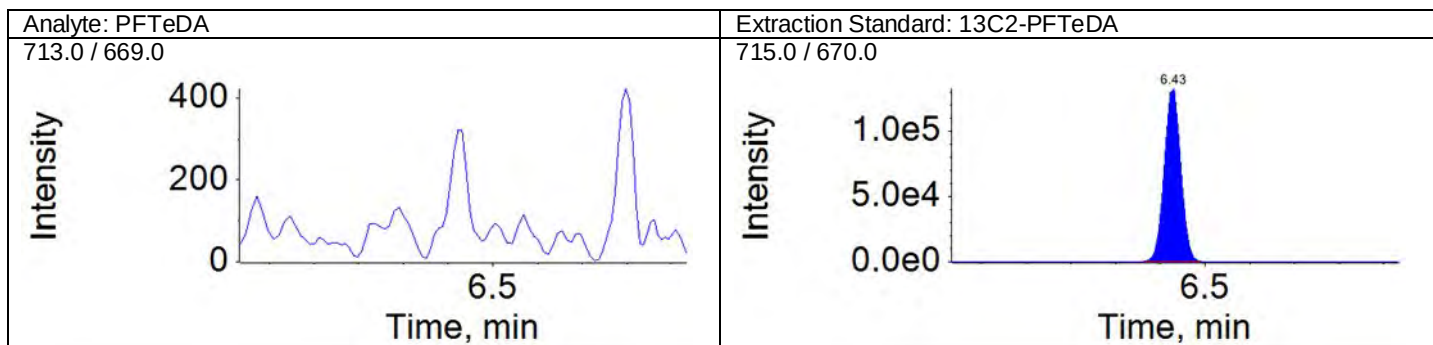
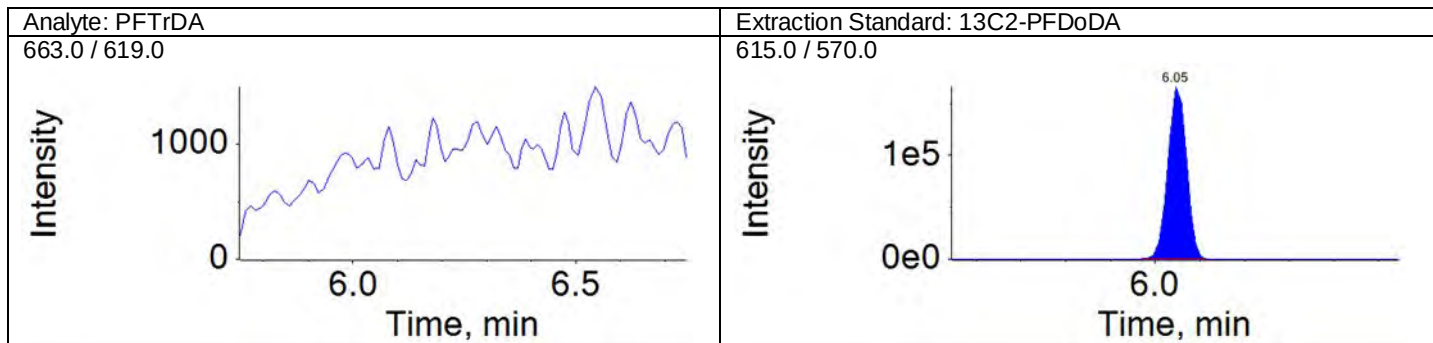
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



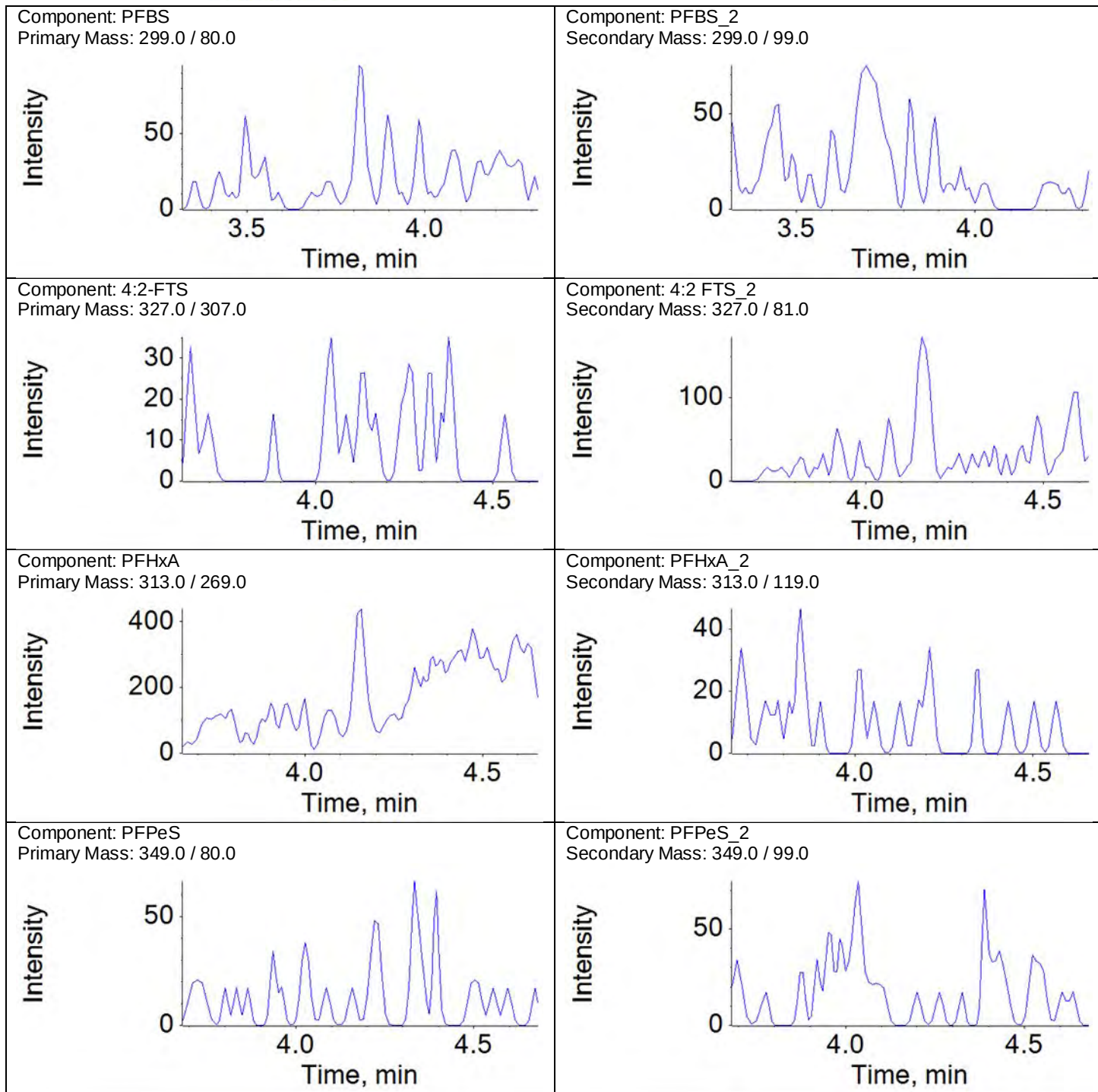
Ion Ratio Report

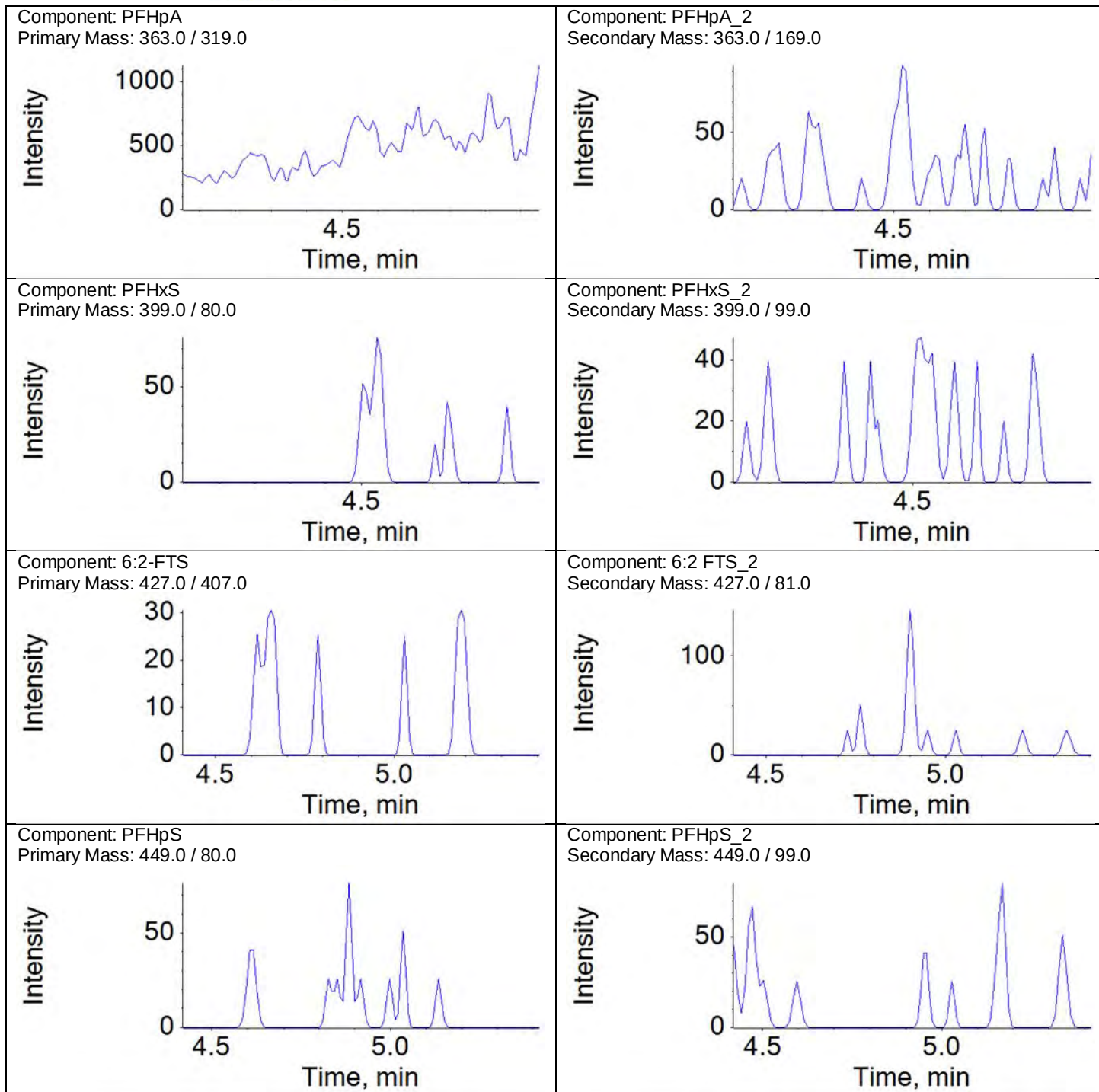
Sample Name: BLK316012

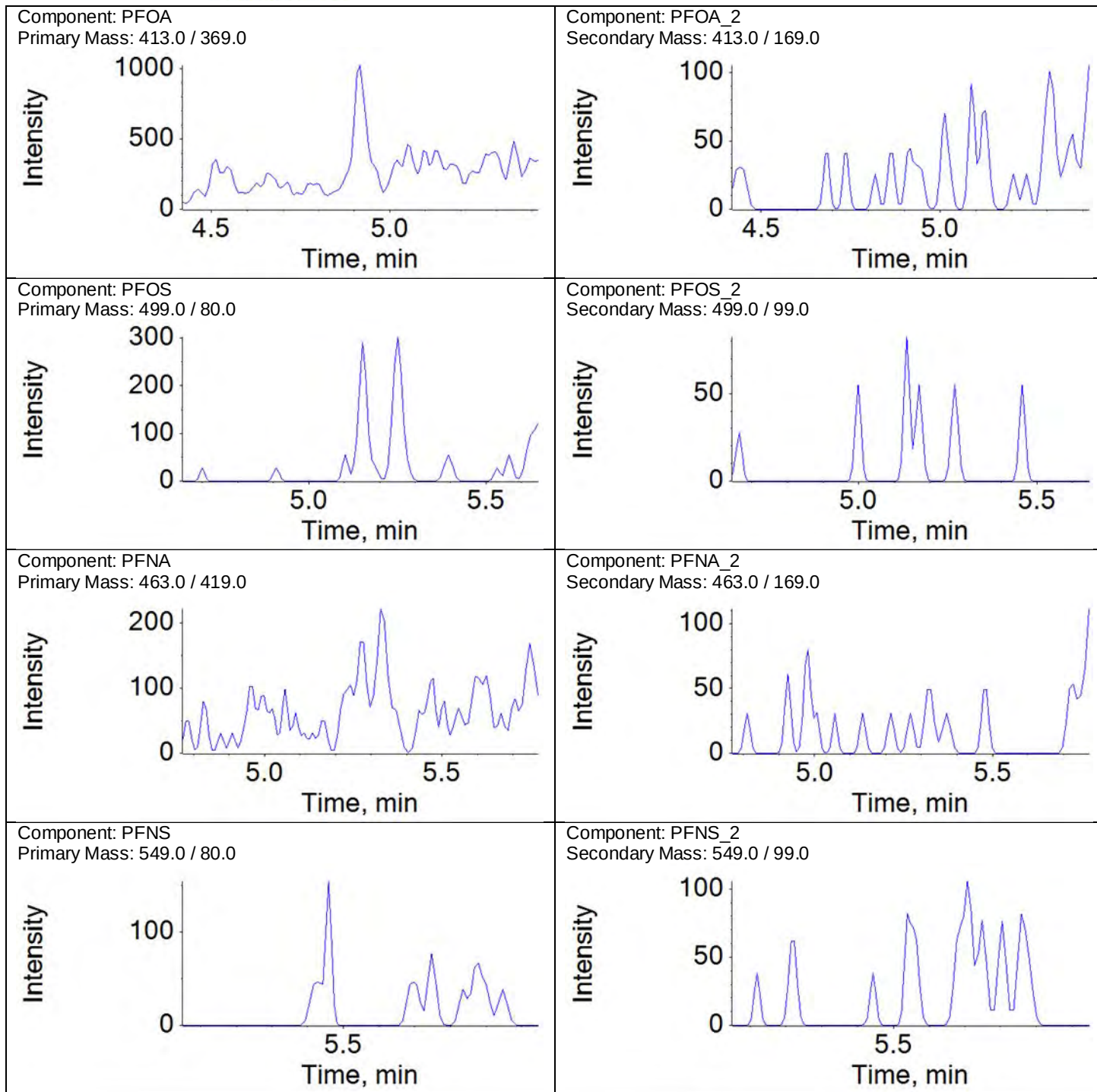
Instrument Name: LM27631

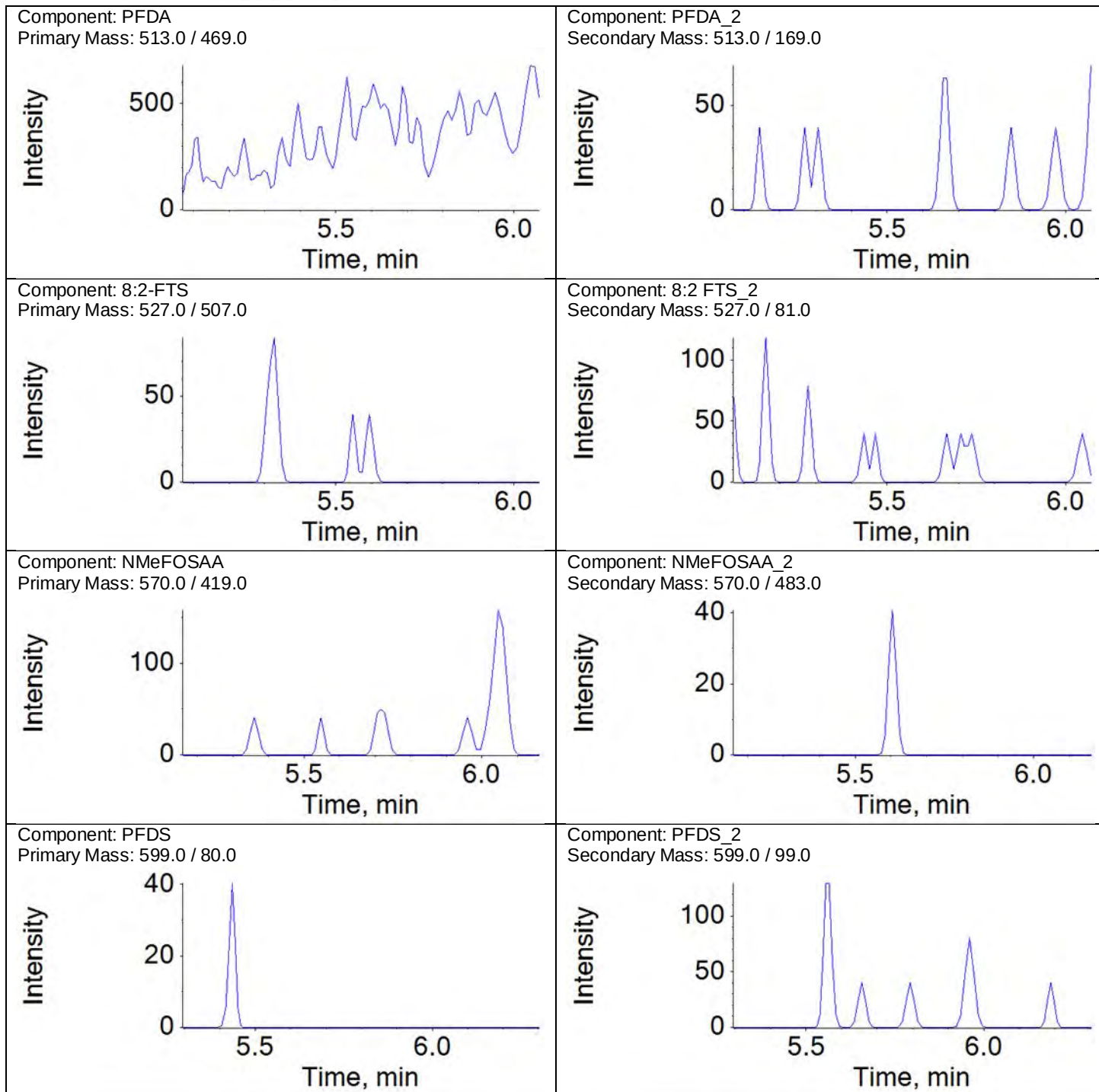
File Name: 18NOV13D-07.wiff

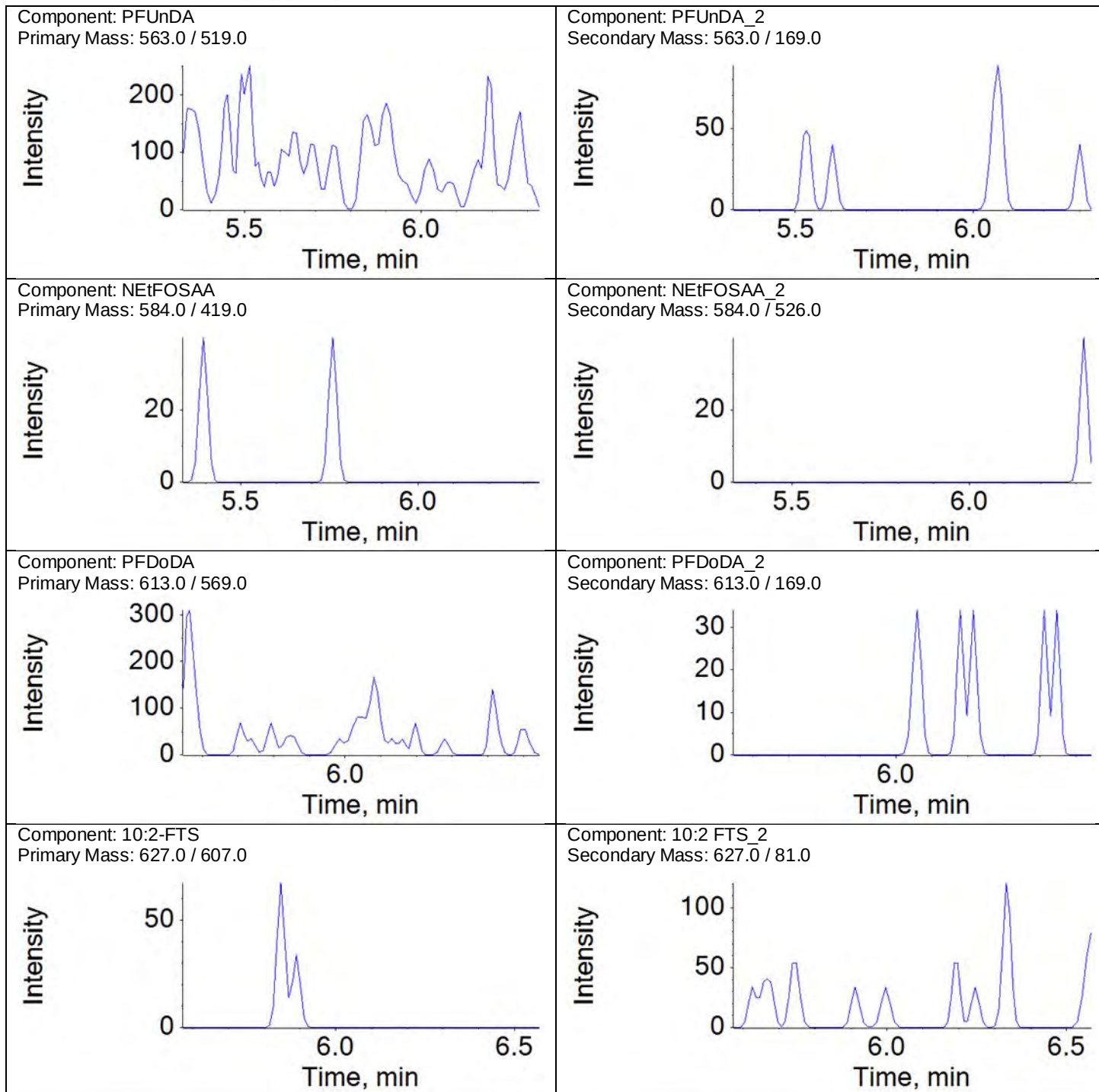
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDODA	N/A	N/A	N/A	A	N/A	N/A			
PFDODA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTTrDA_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	

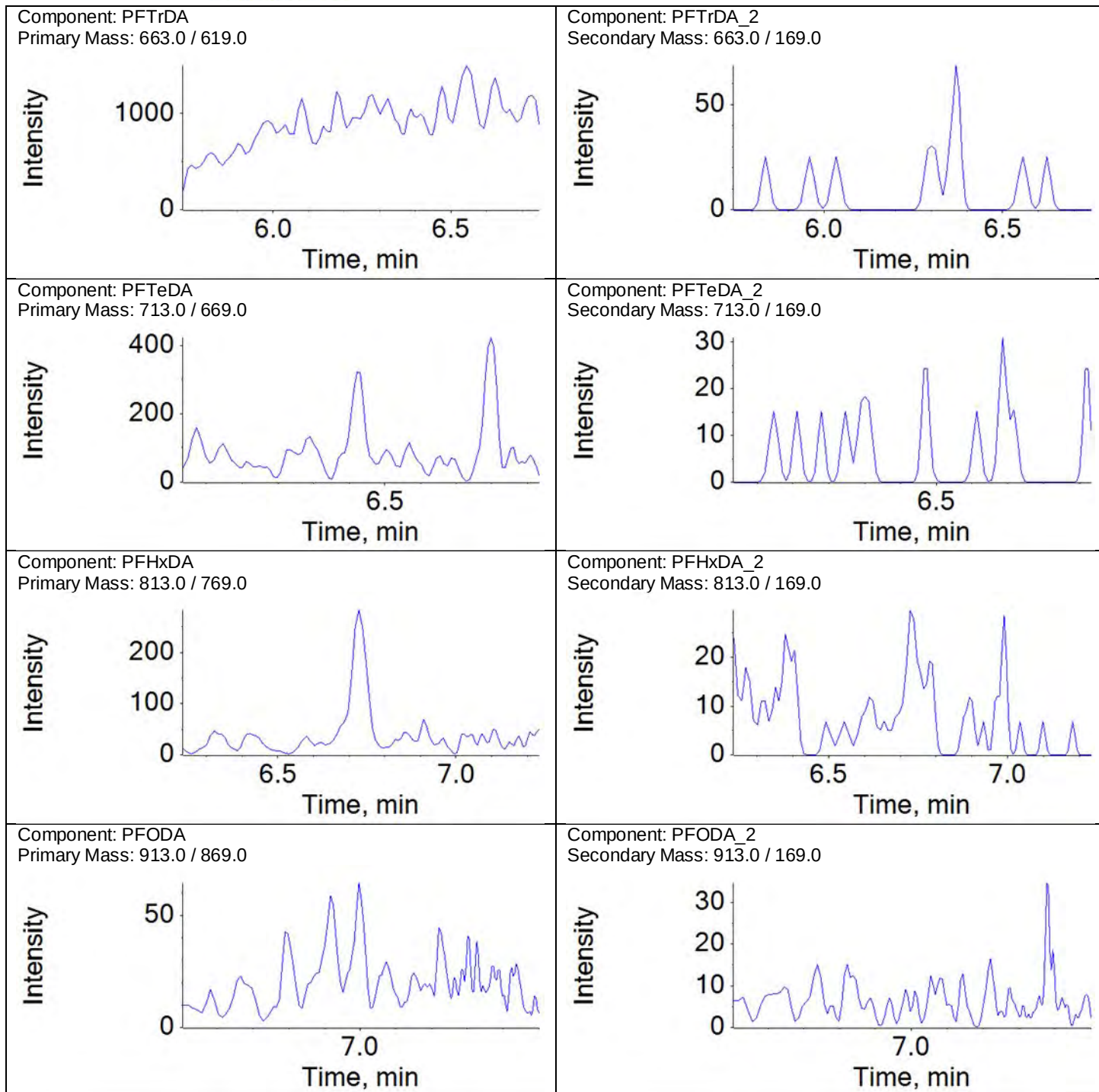










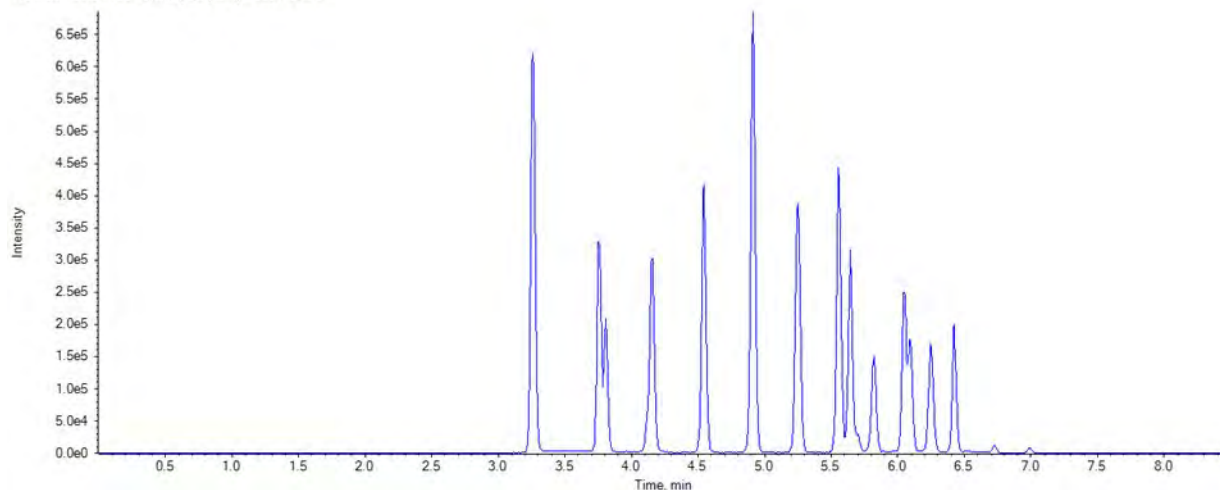


Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:21:17 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881908MS	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-01 MS Grab Soil	18NOV13D-13.wiff	2018-11-13T10:56:14

TIC from 18NOV13D-13.wiff (sample 1) - 9881908MS



Injection Standard Area Reference File: 18NOV13D-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	5.00	713941.7	661126.9	8	50	
13C2-PFOA	5.00	499981.0	466902.6	7	50	
13C4-PFOS	4.78	257425.4	247446.9	4	50	
13C2-PFDA	5.00	309843.6	295381.6	5	50	

APPROVED

By MCD at 10:39 pm, 11/13/18

BSI05 Page 1436 of 1595

REVIEWED

By HMK at 2:12 pm, 11/14/18

Page 1 of 3

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL Result Table: 18316012 11/13/2018 10:21:17 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881908MS	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-01 MS Grab Soil	18NOV13D-13.wiff	2018-11-13T10:56:14

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	48262.2	364786.9	0.132	1.192	1.246	105	70-130	
PFHxA	106049.0	568821.0	0.186	1.347	1.541	114	70-130	
PFHpA	117672.0	480694.0	0.245	1.347	1.607	119	70-130	
PFHxS	36792.6	273499.6	0.135	1.273	1.292	101	70-130	
PFOA	113176.5	820332.8	0.138	1.347	1.459	108	70-130	
PFOS	31999.2	232608.2	0.138	1.287	1.191	93	70-130	
PFNA	87125.9	416267.5	0.209	1.347	1.495	111	70-130	
PFDA	76236.6	559872.0	0.136	1.347	1.429	106	70-130	
NMeFOSAA	8797.4	59699.7	0.147	1.347	1.649	122	70-130	
PFUnDA	62160.8	230148.7	0.270	1.347	1.398	104	70-130	
NEtFOSAA	7506.5	46832.3	0.160	1.347	1.664	124	70-130	
PFDODA	66473.7	489148.0	0.136	1.347	1.370	102	70-130	
PFTTrDA	55615.8	489148.0	0.114	1.347	1.421	106	70-130	
PFTeDA	45744.8	351074.2	0.130	1.347	1.446	107	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Matrix Spike Recovery
Result Table: 18316012 11/13/2018 10:21:17 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 10:39 pm, 11/13/18

REVIEWED
By HMK at 2:12 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881908MS		Data File:	18NOV13D-13.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-01 MS Grab Soil		Acquis Date:	2018-11-13T10:56:14
Sample Type:	Quality Control		Instrument:	LM27631
Vial Position:	19		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18316012
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	18316012		Operator:	MCD7824
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: 18NOV13D-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	713941.7	661126.9	8	50	
13C2-PFOA	5.0	499981.0	466902.6	7	50	
13C4-PFOS	4.8	257425.4	247446.9	4	50	
13C2-PFDA	5.0	309843.6	295381.6	5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	364786.9	13C3-PFBA	713941.7	0.511	9.208	7.142	78	50-150	
E13C5-PFHxA	568821.0	13C2-PFOA	499981.0	1.138	9.901	8.138	82	50-150	
E13C3-PFHxS	273499.6	13C2-PFOA	499981.0	0.547	9.366	7.433	79	50-150	
E13C4-PFHpA	480694.0	13C2-PFOA	499981.0	0.961	9.901	8.577	87	50-150	
E13C8-PFOA	820332.8	13C2-PFOA	499981.0	1.641	9.901	8.951	90	50-150	
E13C8-PFOS	232608.2	13C4-PFOS	257425.4	0.904	9.465	7.928	84	50-150	
E13C9-PFNA	416267.5	13C4-PFOS	257425.4	1.617	9.901	8.928	90	50-150	
E13C6-PFDA	559872.0	13C2-PFDA	309843.6	1.807	9.901	8.350	84	50-150	
Ed3-NMeFOSAA	59699.7	13C2-PFDA	309843.6	0.193	9.901	6.887	70	50-150	
E13C7-PFUnDA	230148.7	13C2-PFDA	309843.6	0.743	9.901	8.540	86	50-150	
Ed5-NEtFOSAA	46832.3	13C2-PFDA	309843.6	0.151	9.901	6.332	64	50-150	
E13C2-PFDODA	489148.0	13C2-PFDA	309843.6	1.579	9.901	8.117	82	50-150	
E13C2-PFTeDA	351074.2	13C2-PFDA	309843.6	1.133	9.901	7.877	80	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

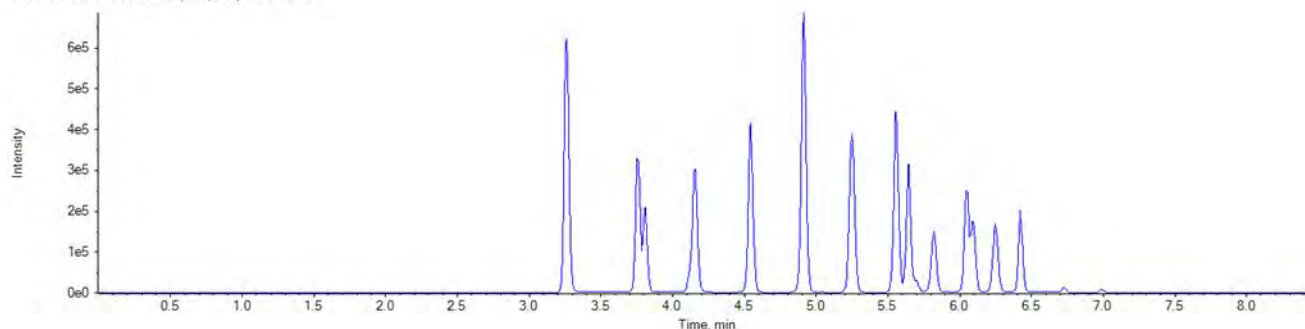
Sample Name: 9881908MS Instrument Name: LM27631 File Name: 18NOV13D-13.wiff

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	48262.2		A	13C3-PFBS	3.81	364786.9	0.132	1.246
PFHxA	4.15	1.000	106049.0		A	13C5-PFHxA	4.15	568821.0	0.186	1.541
PFHpA	4.54	1.000	117672.0		M	13C4-PFHpA	4.54	480694.0	0.245	1.607
PFHxS	4.55	1.000	36792.6		A	13C3-PFHxS	4.55	273499.6	0.135	1.292
PFOA	4.91	1.000	113176.5		A	13C8-PFOA	4.91	820332.8	0.138	1.459
PFOS	5.24	1.000	31999.2		M	13C8-PFOS	5.24	232608.2	0.138	1.191
PFNA	5.26	1.000	87125.9		A	13C9-PFNA	5.26	416267.5	0.209	1.495
PFDA	5.56	1.000	76236.6		A	13C6-PFDA	5.56	559872.0	0.136	1.429
NMeFOSAA	5.70	1.000	8797.4		A	d3-NMeFOSAA	5.70	59699.7	0.147	1.649
PFUnDA	5.82	1.000	62160.8		A	13C7-PFUnDA	5.82	230148.7	0.270	1.398
NEtFOSAA	5.83	1.000	7506.5		A	d5-NEtFOSAA	5.83	46832.3	0.160	1.664
PFDODA	6.05	1.000	66473.7		A	13C2-PFDODA	6.05	489148.0	0.136	1.370
PFTDA	6.25	1.030	55615.8		M	13C2-PFDODA	6.05	489148.0	0.114	1.421
PFTeDA	6.42	1.000	45744.8		A	13C2-PFTeDA	6.42	351074.2	0.130	1.446

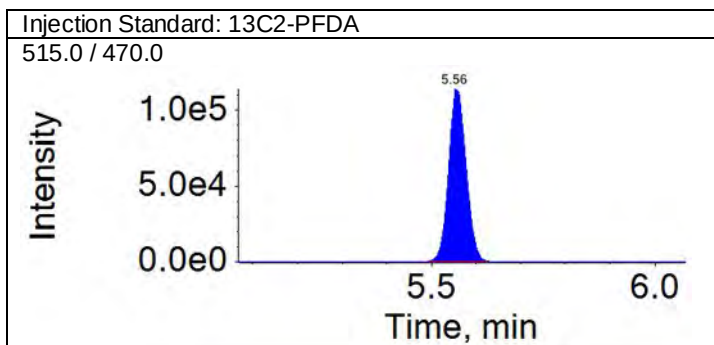
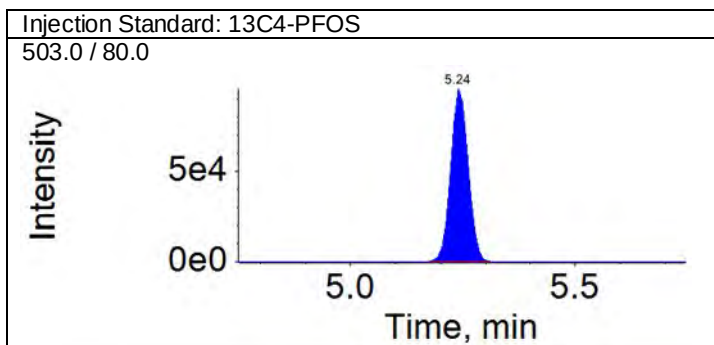
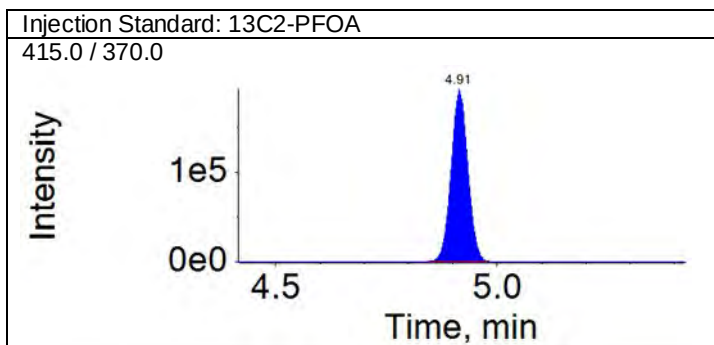
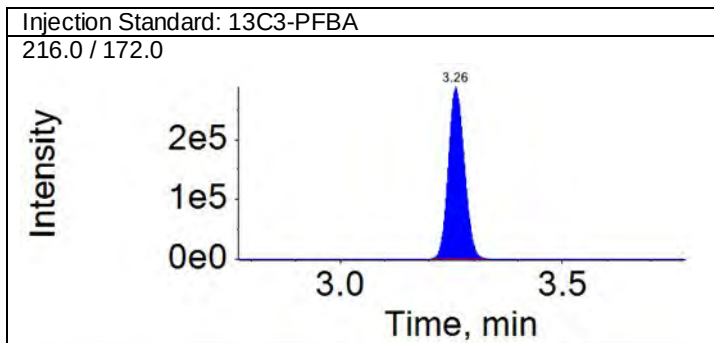
Total Ion Chromatogram

TIC from 18NOV13D-13.wiff (sample 1) - 9881908MS



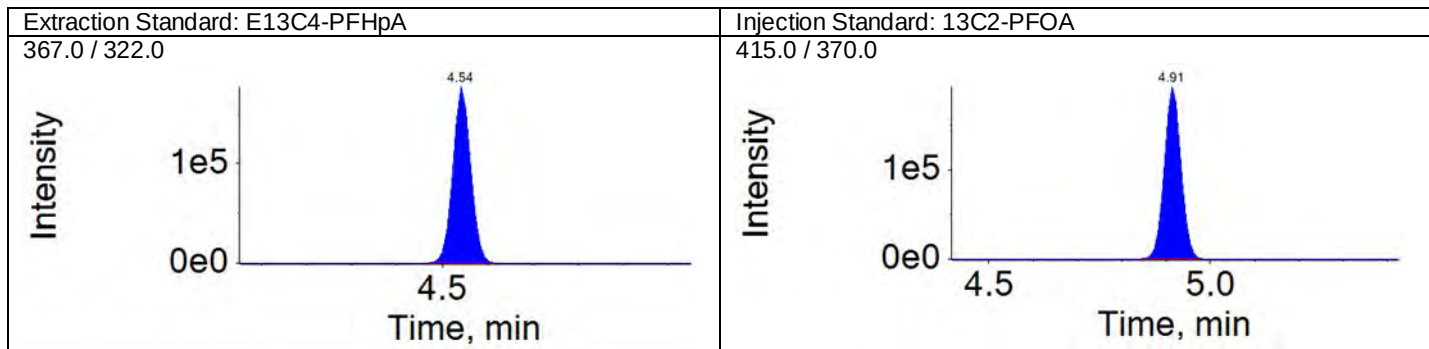
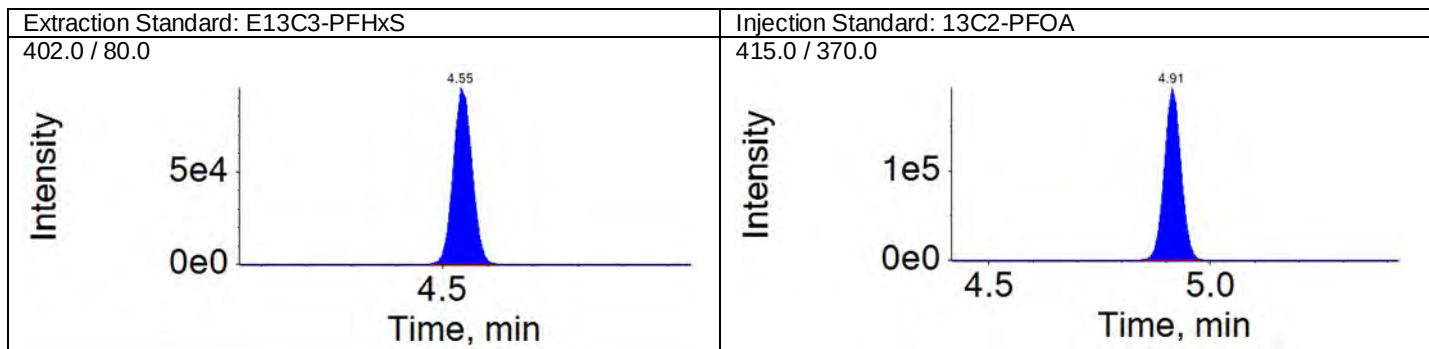
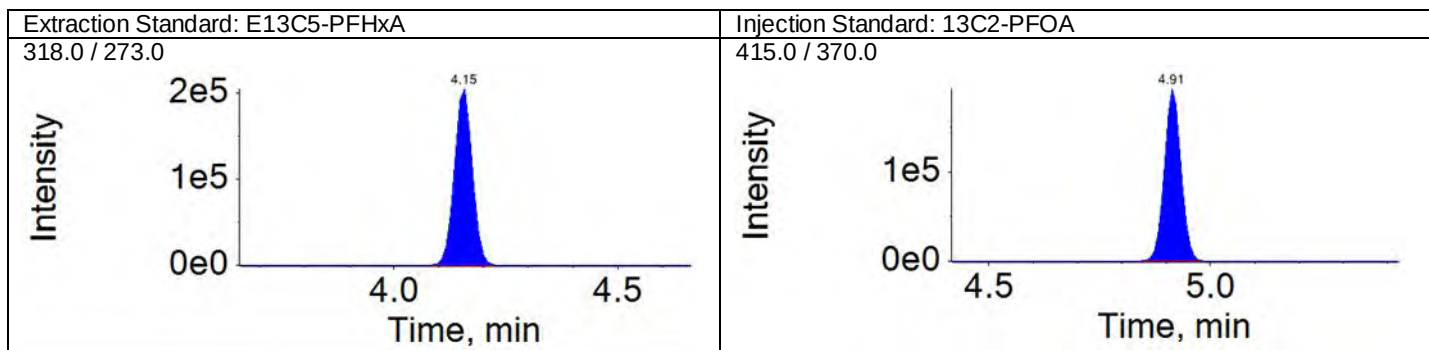
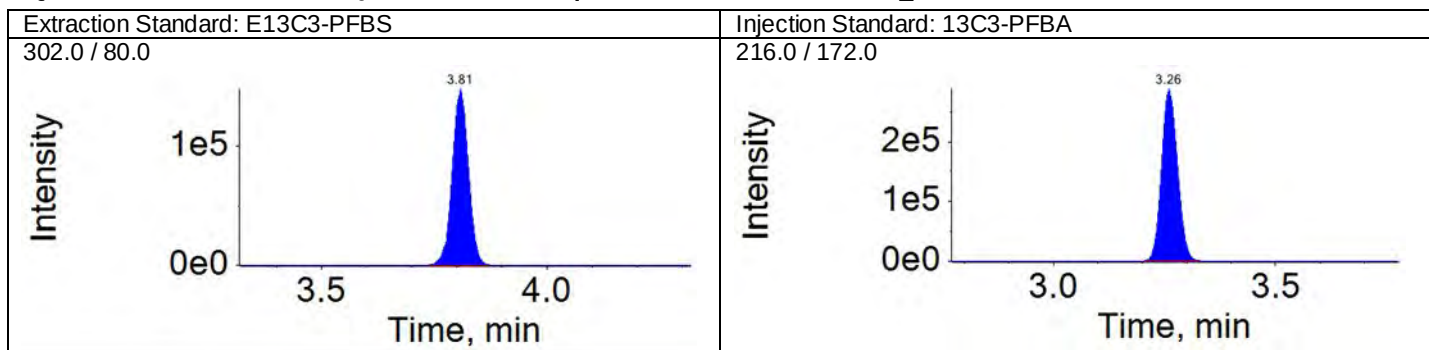
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

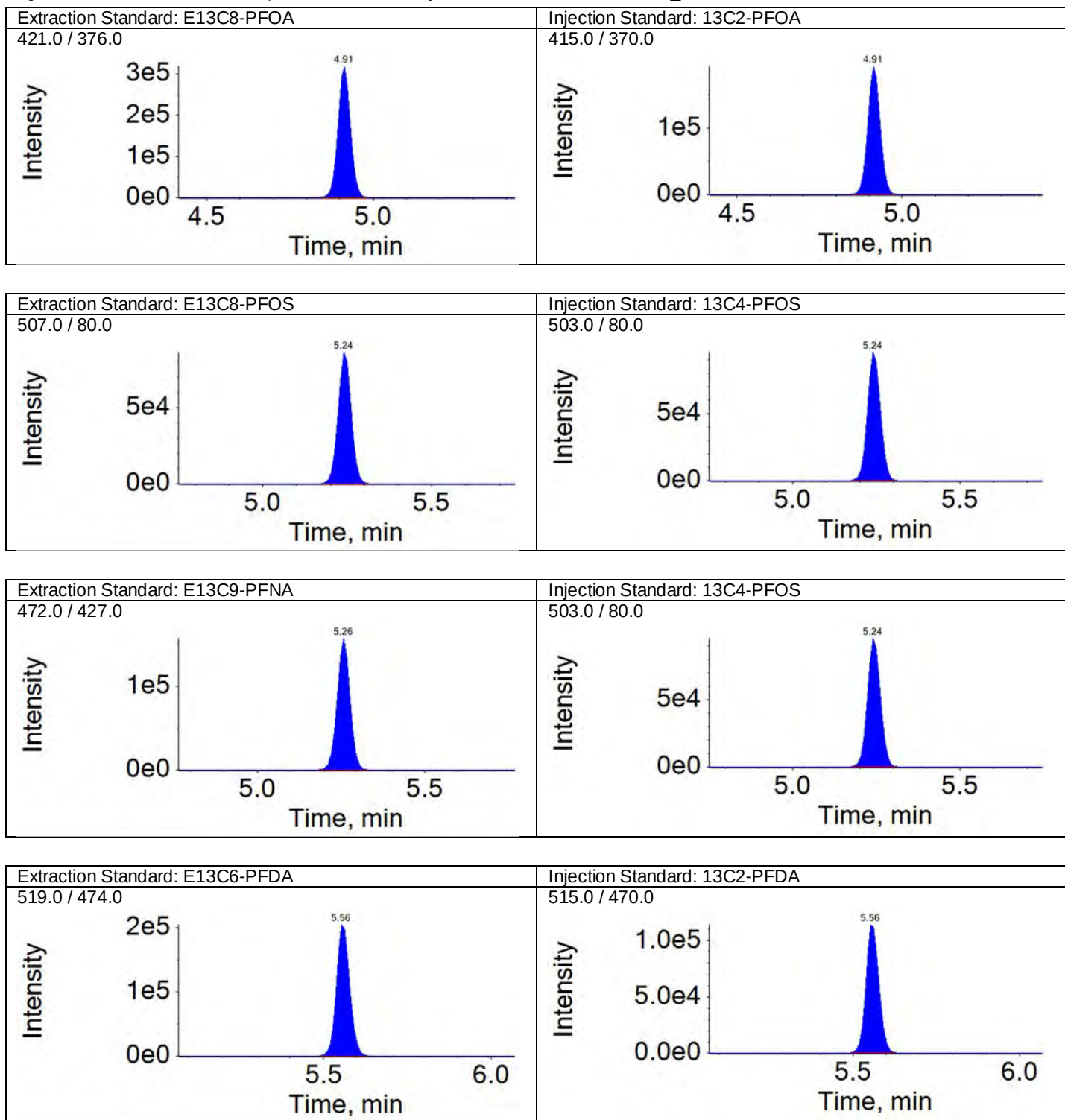
Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

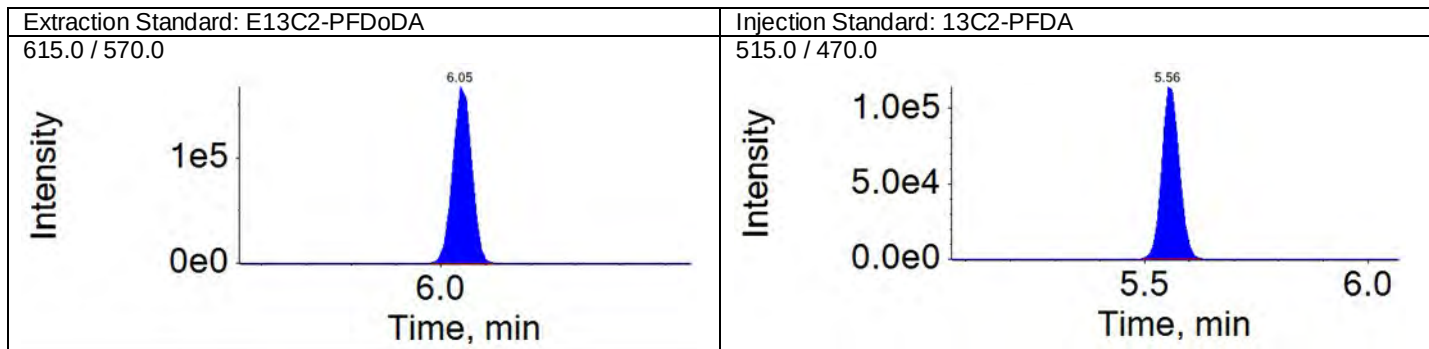
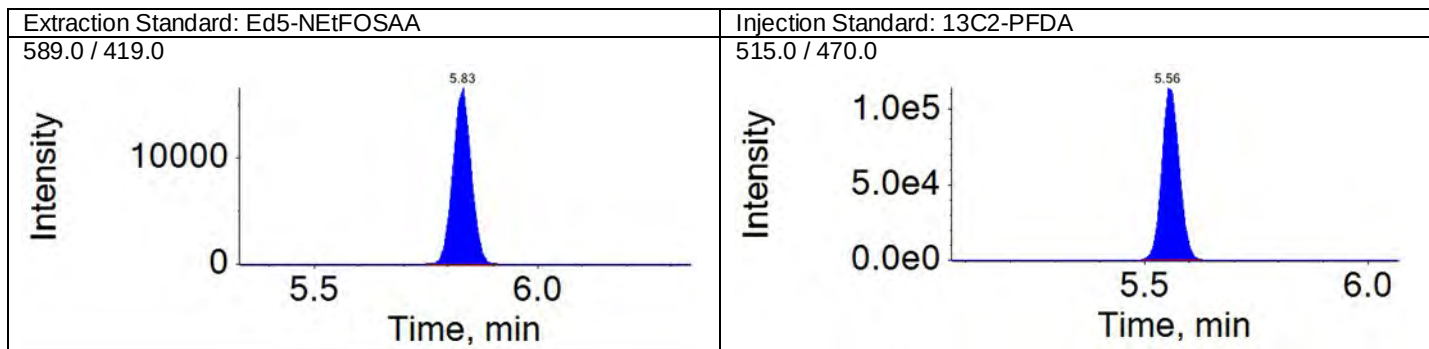
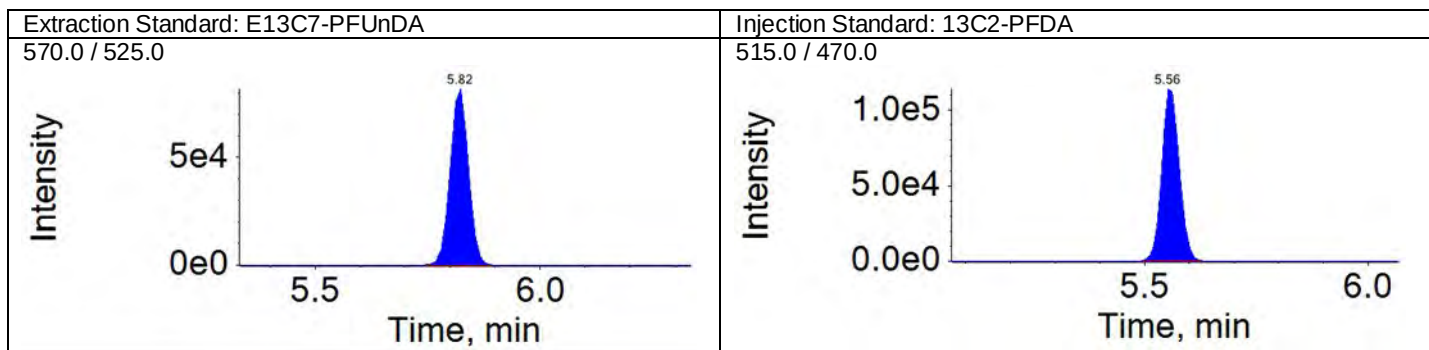
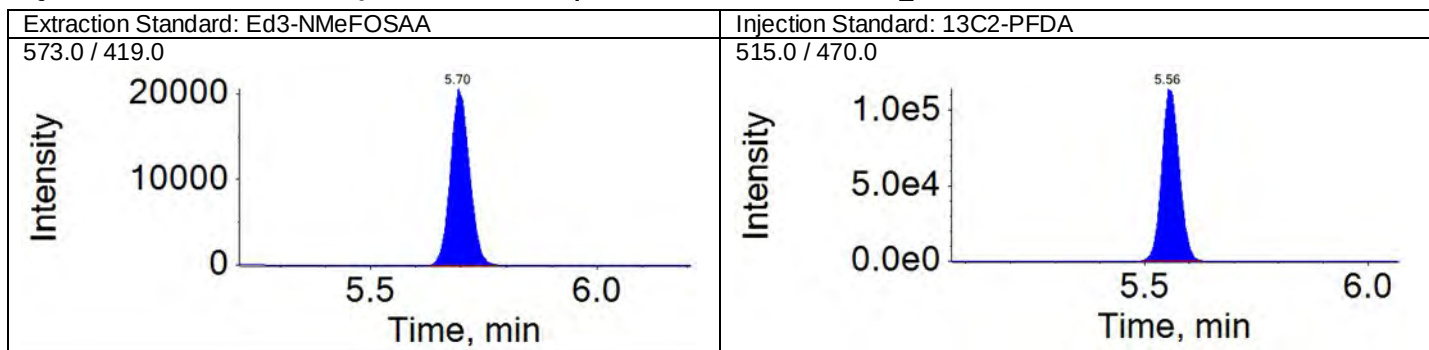
Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

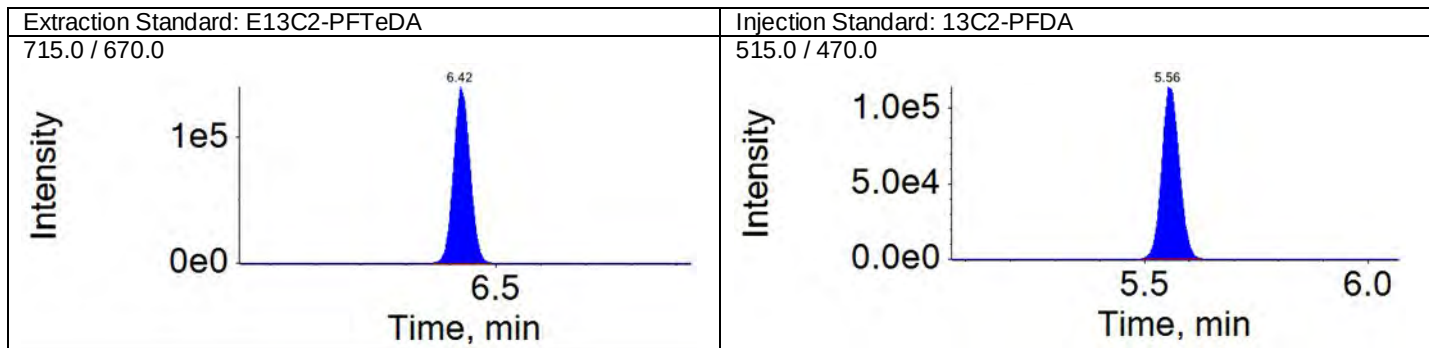
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

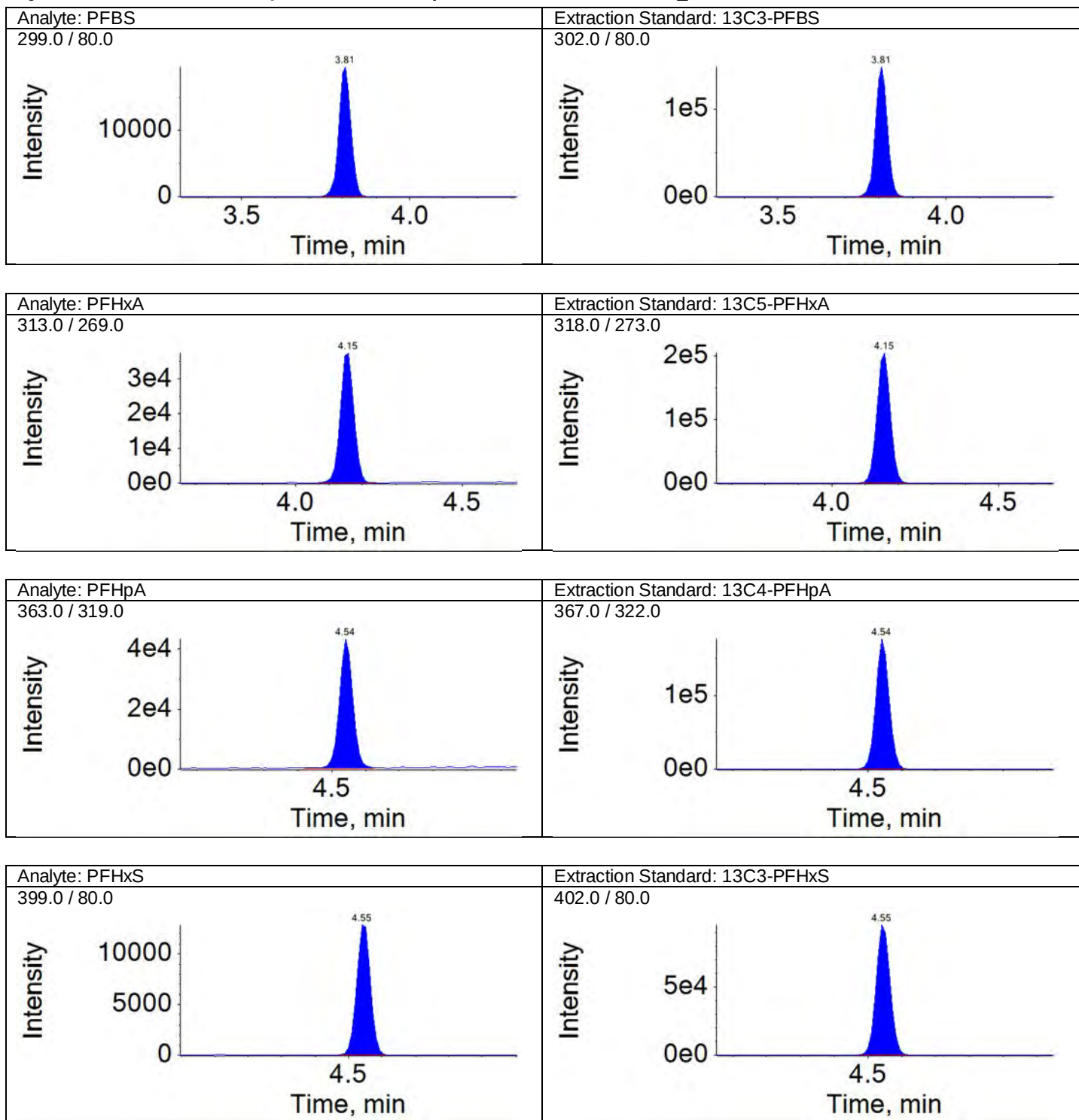
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

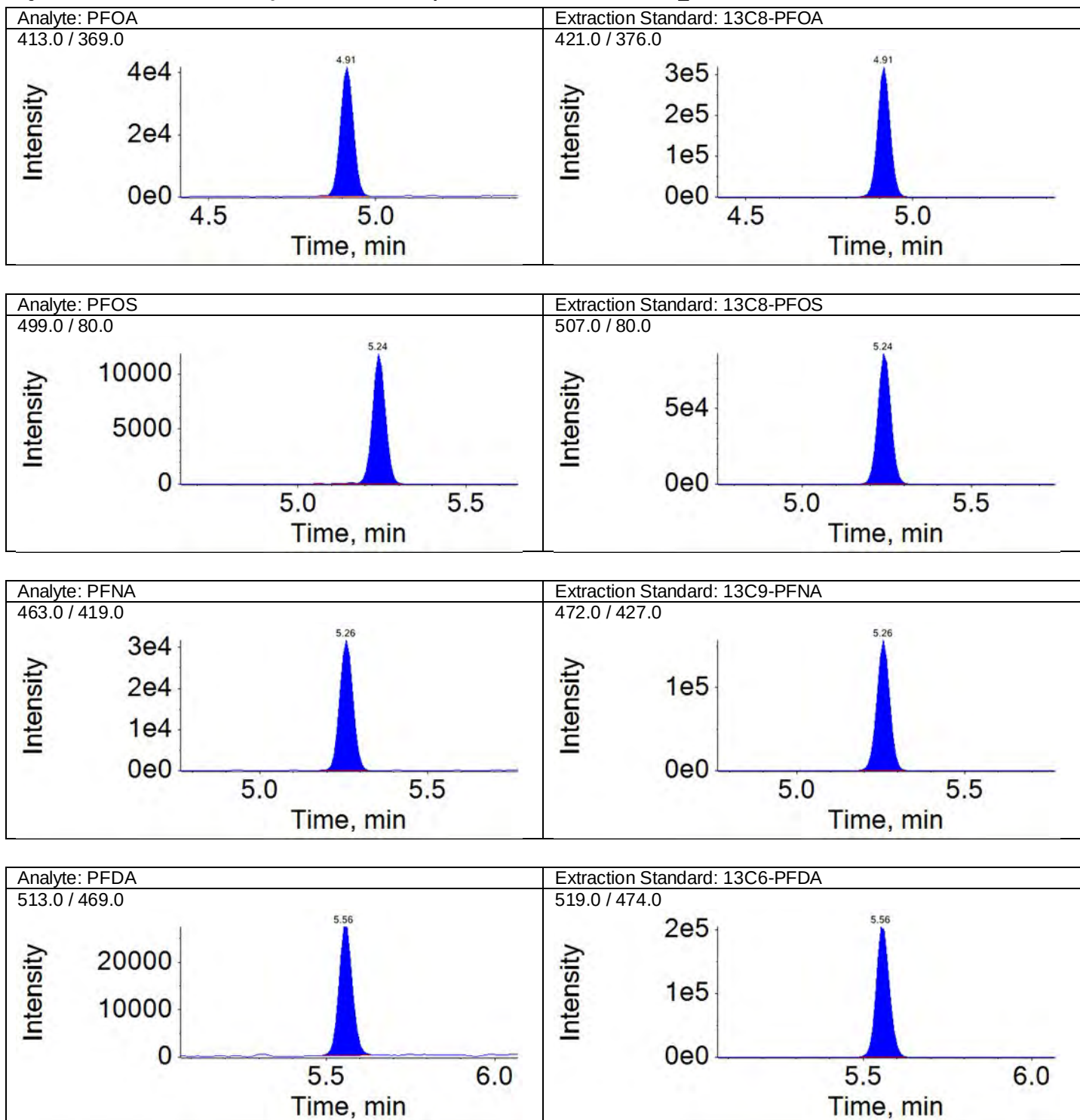
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



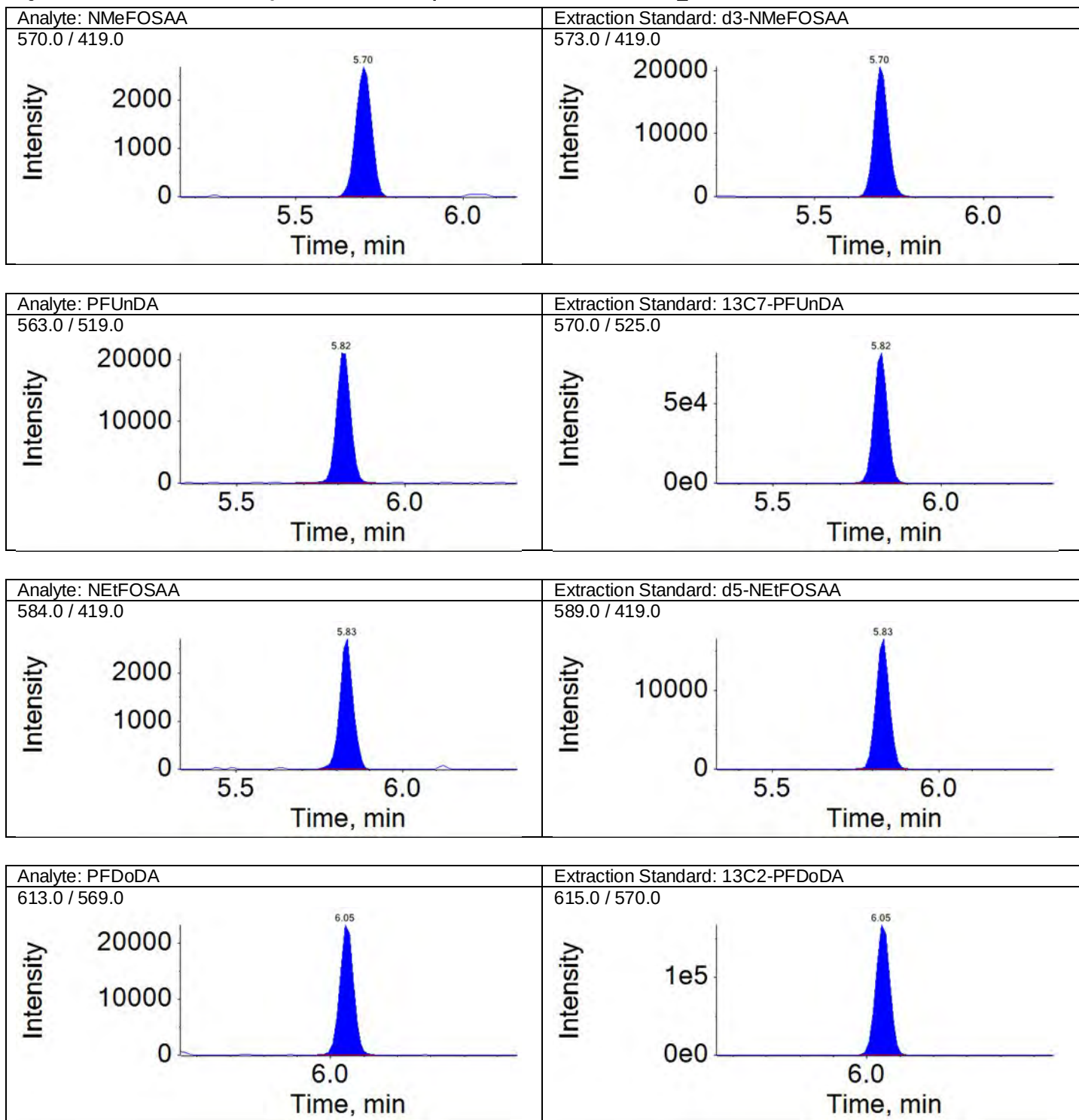
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



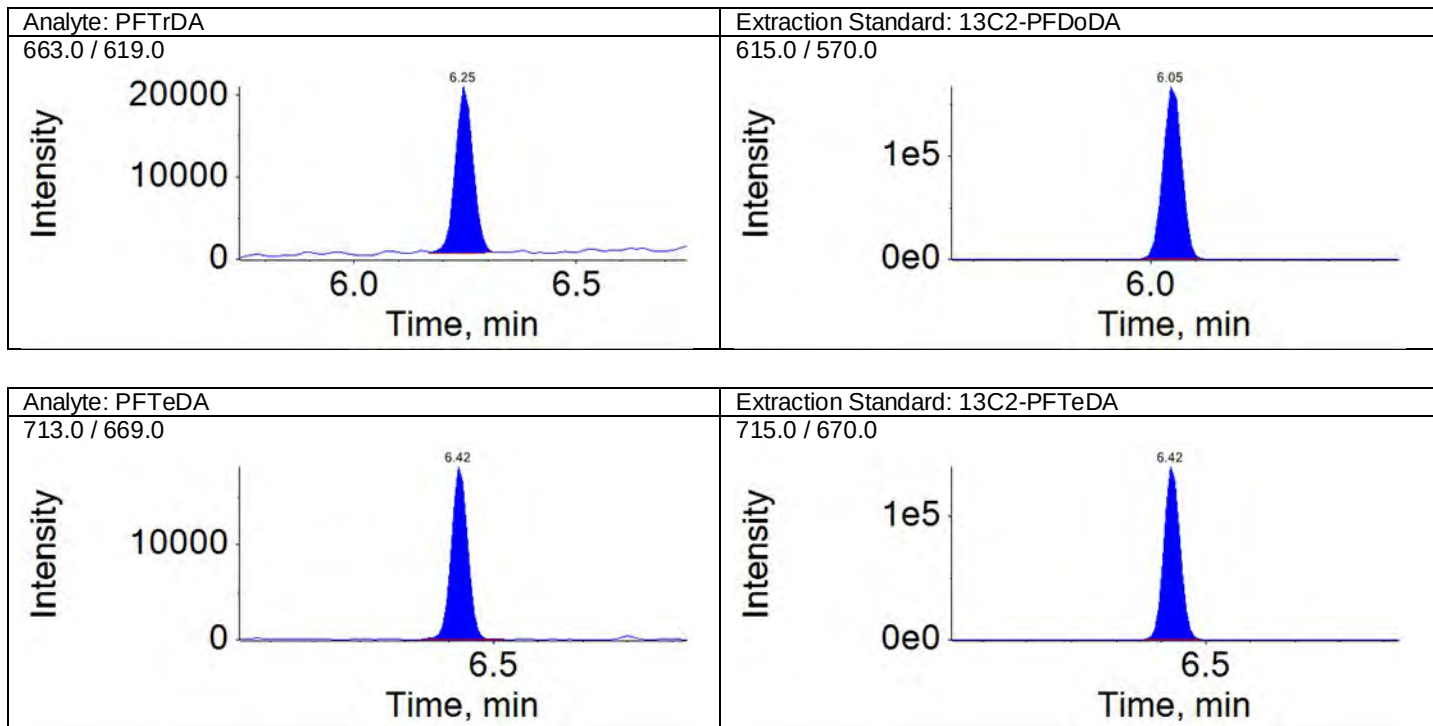
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



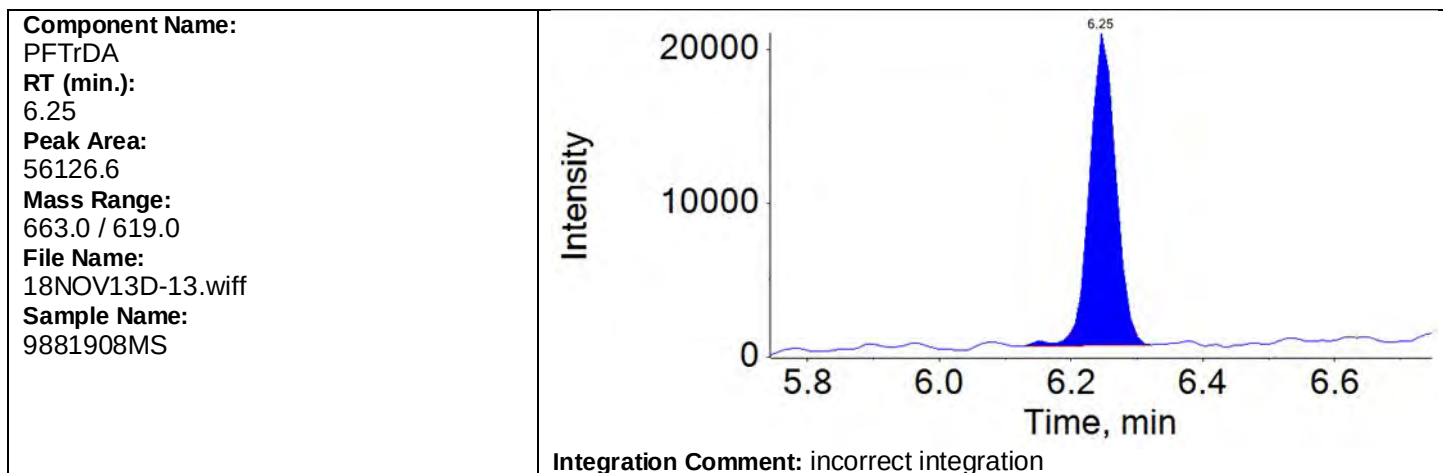
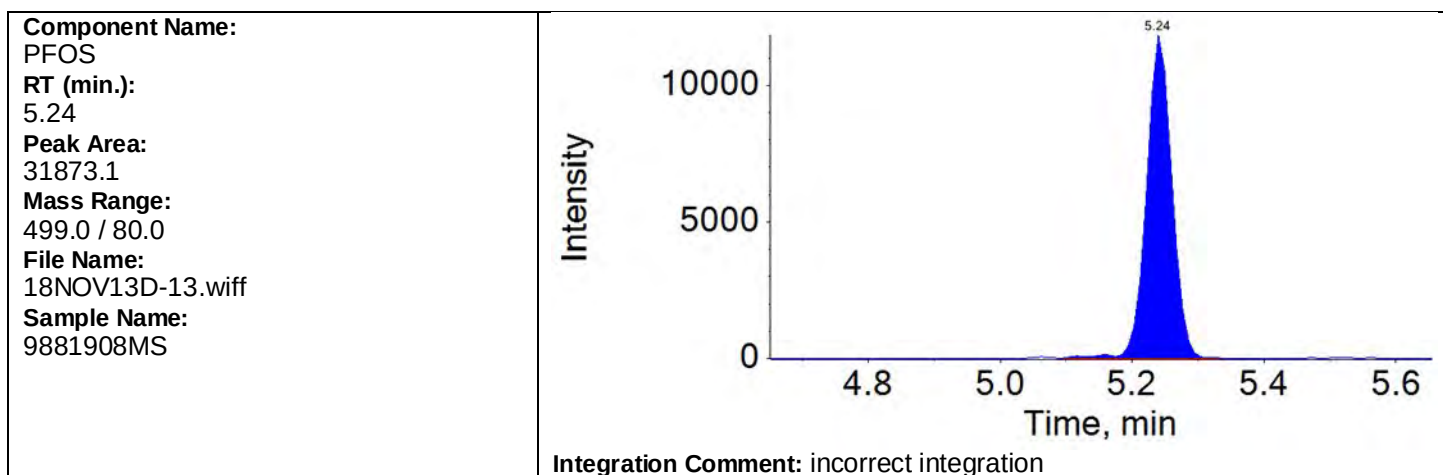
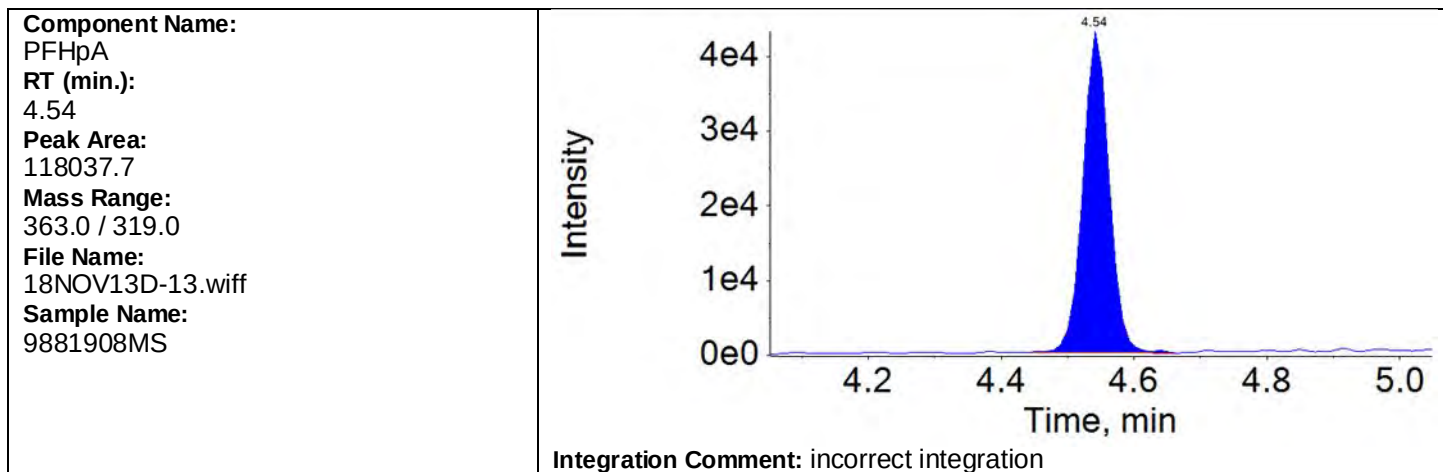
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

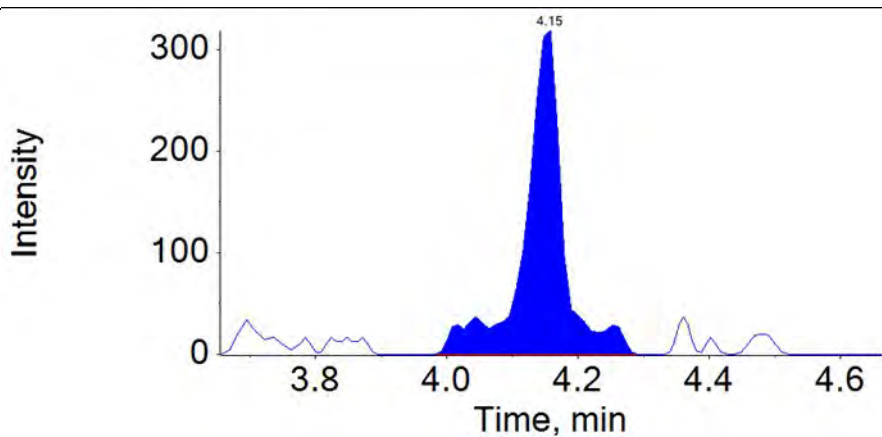
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

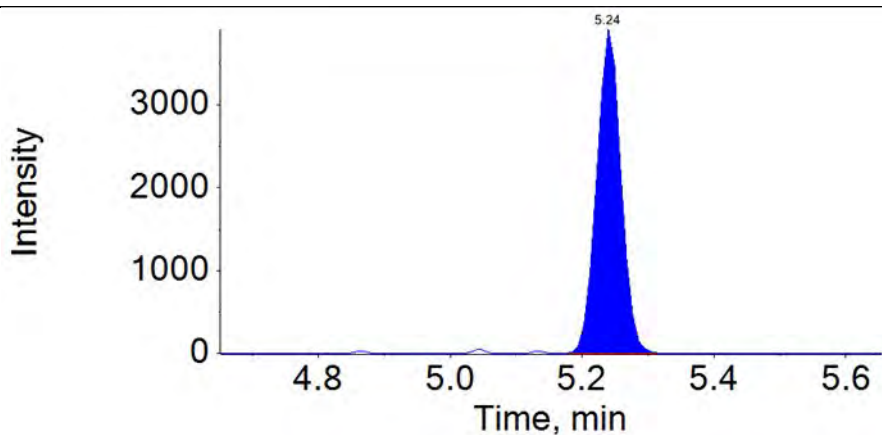
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA_2
RT (min.):
4.15
Peak Area:
1304.7
Mass Range:
313.0 / 119.0
File Name:
18NOV13D-13.wiff
Sample Name:
9881908MS



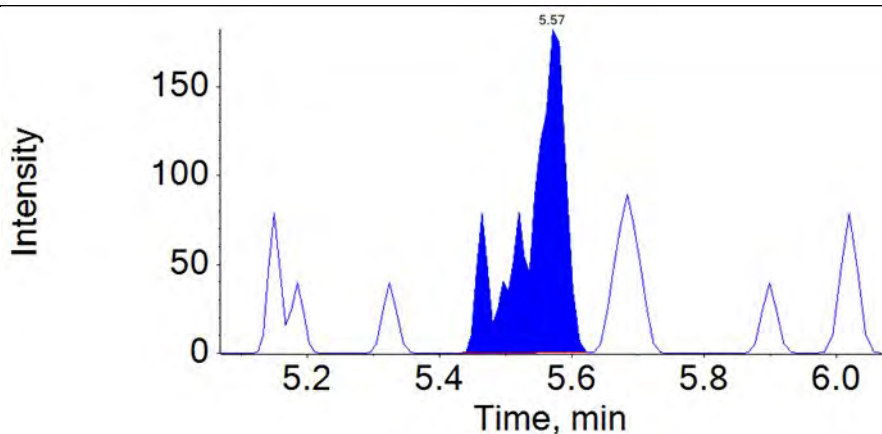
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
10009.1
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-13.wiff
Sample Name:
9881908MS



Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.57
Peak Area:
733.7
Mass Range:
513.0 / 169.0
File Name:
18NOV13D-13.wiff
Sample Name:
9881908MS

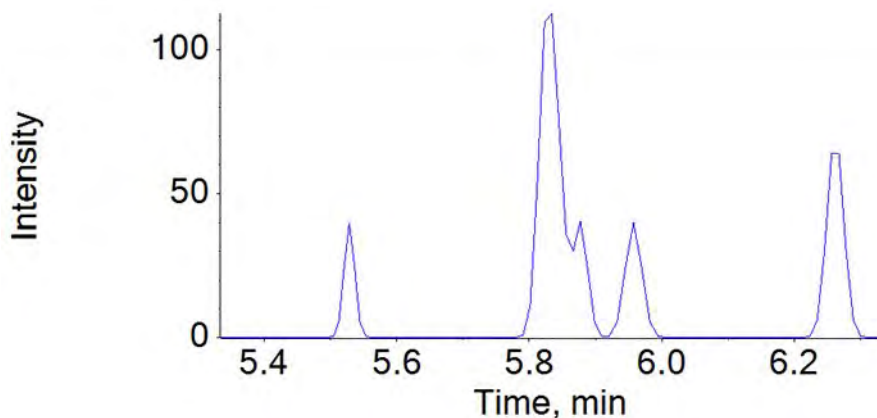


Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

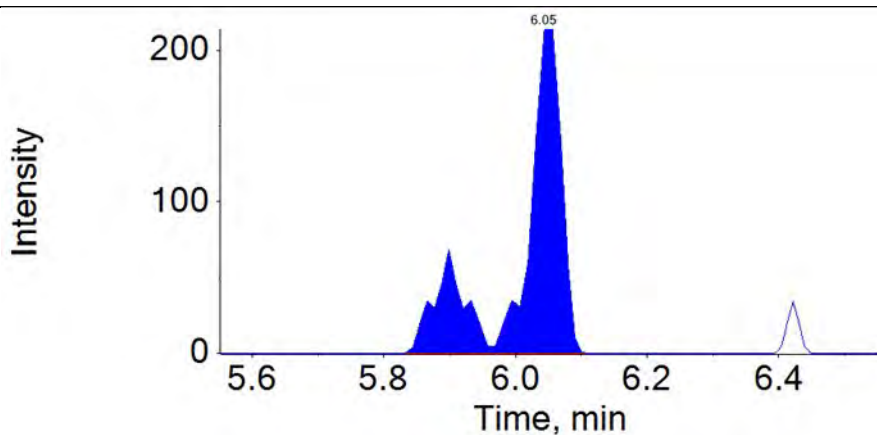
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
563.0 / 169.0
File Name:
18NOV13D-13.wiff
Sample Name:
9881908MS



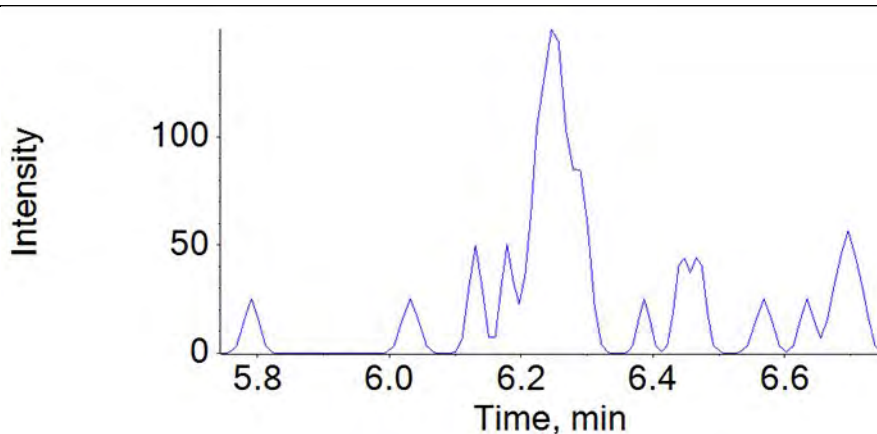
Integration Comment: incorrect integration

Component Name:
PFDODA_2
RT (min.):
6.05
Peak Area:
907.8
Mass Range:
613.0 / 169.0
File Name:
18NOV13D-13.wiff
Sample Name:
9881908MS



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
663.0 / 169.0
File Name:
18NOV13D-13.wiff
Sample Name:
9881908MS



Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

APPROVED
By MCD at 10:39 pm, 11/13/18

REVIEWED
By HMK at 2:12 pm, 11/14/18

Ion Ratio Report

Sample Name: 9881908MS

Instrument Name: LM27631

File Name: 18NOV13D-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	48262.2	A	N/A	0.3679			
PFBS_2	3.81	1.00	17755.9	A	N/A	0.3679	2	50	
PFHxA	4.15	1.00	106049.0	A	N/A	0.0107			
PFHxA_2	4.15	1.00	1138.9	M	N/A	0.0107	-8	50	
PFHpA	4.54	1.00	117672.0	M	N/A	0.0545			
PFHpA_2	4.54	1.00	6408.6	A	N/A	0.0545	-3	50	
PFHxS	4.55	1.00	36792.6	A	N/A	0.4072			
PFHxS_2	4.54	1.00	14983.1	A	N/A	0.4072	34	50	
PFOA	4.91	1.00	113176.5	A	N/A	0.0478			
PFOA_2	4.91	1.00	5408.2	A	N/A	0.0478	-15	50	
PFOS	5.24	1.00	31999.2	M	N/A	0.3138			
PFOS_2	5.24	1.00	10042.4	M	N/A	0.3138	21	50	
PFNA	5.26	1.00	87125.9	A	N/A	0.0166			
PFNA_2	5.25	1.00	1443.2	A	N/A	0.0166	-29	50	
PFDA	5.56	1.00	76236.6	A	N/A	0.0085			
PFDA_2	5.57	1.00	646.0	M	N/A	0.0085	5	50	
NMeFOSAA	5.70	1.00	8797.4	A	N/A	0.2093			
NMeFOSAA_2	5.70	1.00	1841.0	A	N/A	0.2093	-1	50	
PFUnDA	5.82	1.00	62160.8	A	N/A	0.0052			
PFUnDA_2	5.83	1.00	324.3	M	N/A	0.0052	23	50	
NEtFOSAA	5.83	1.00	7506.5	A	N/A	0.6465			
NEtFOSAA_2	5.84	1.00	4853.2	A	N/A	0.6465	9	50	
PFDoDA	6.05	1.00	66473.7	A	N/A	0.0102			
PFDoDA_2	6.05	1.00	678.8	M	N/A	0.0102	-39	50	
PFTTrDA	6.25	1.03	55615.8	M	N/A	0.0115			
PFTTrDA_2	6.25	1.03	640.5	M	N/A	0.0115	23	50	
PFTeDA	6.42	1.00	45744.8	A	N/A	0.0084			
PFTeDA_2	6.42	1.00	382.2	A	N/A	0.0084	28	50	

APPROVED

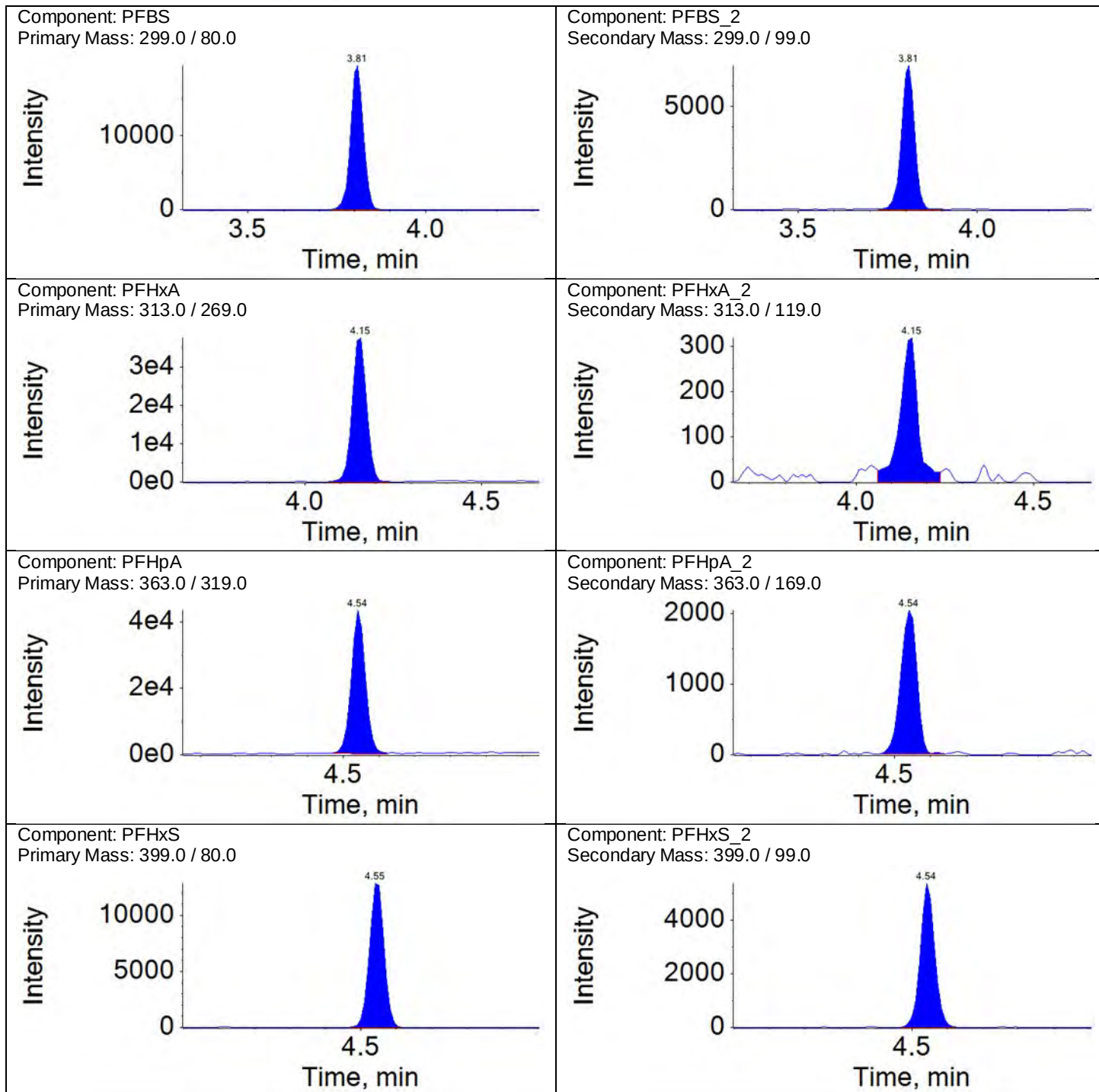
By MCD at 10:39 pm, 11/13/18

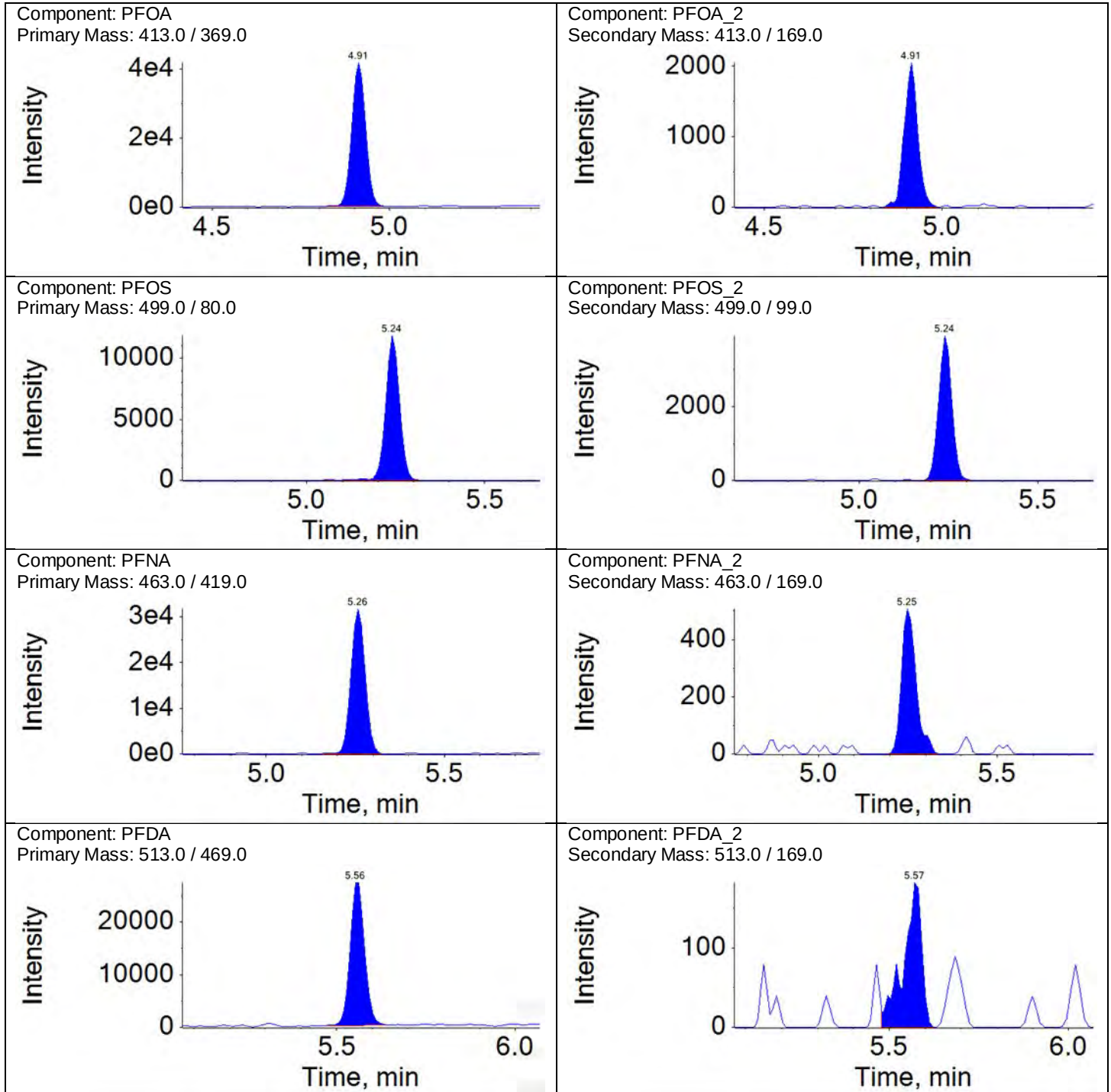
BSI05 Page 1454 of 1595

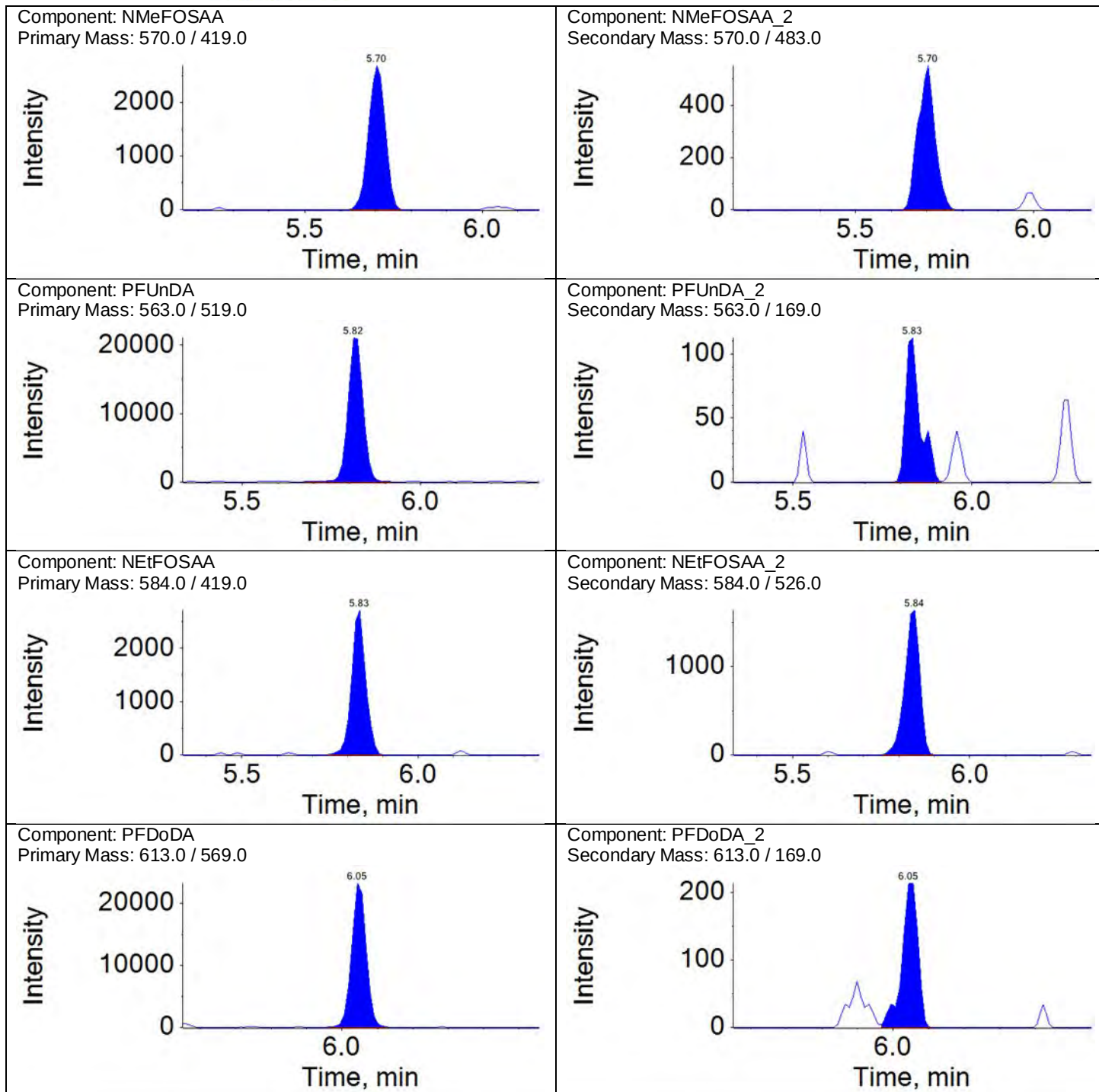
REVIEWED

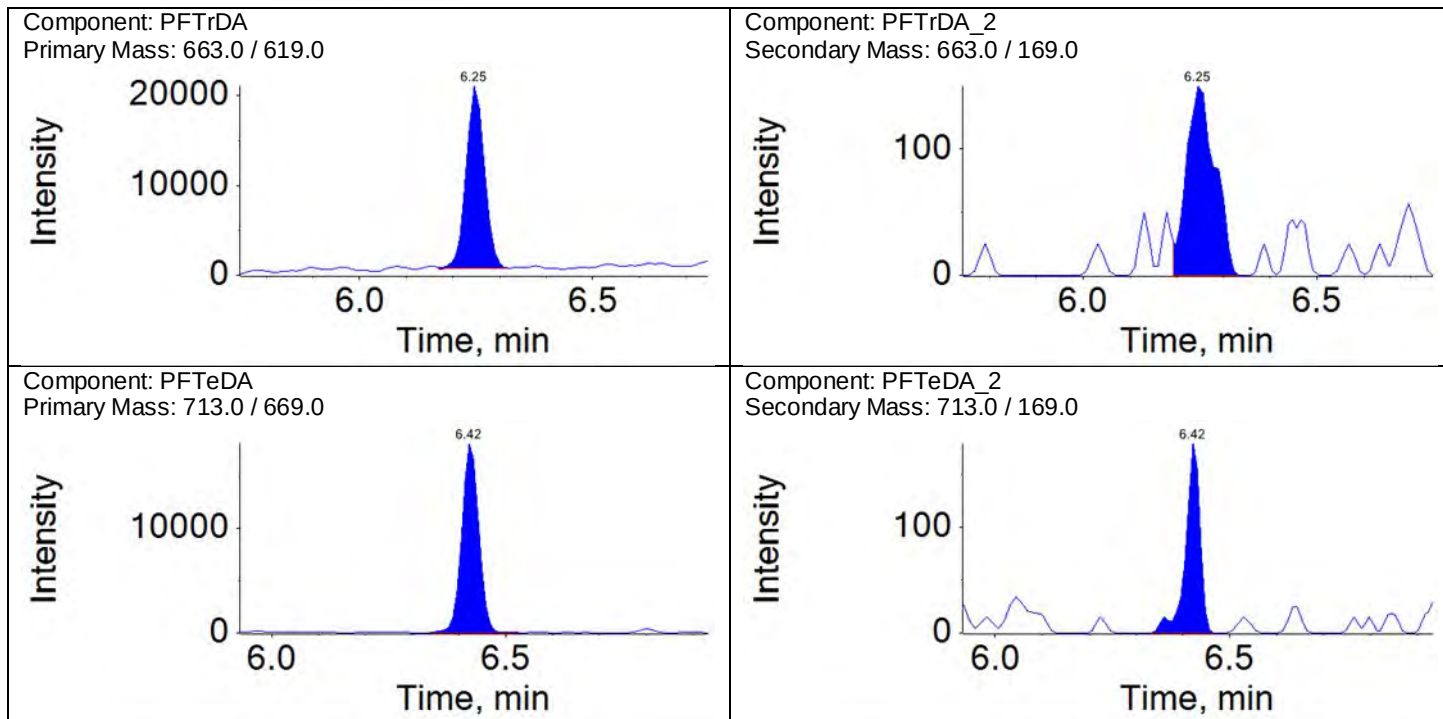
By HMK at 2:12 pm, 11/14/18

Page 1 of 5









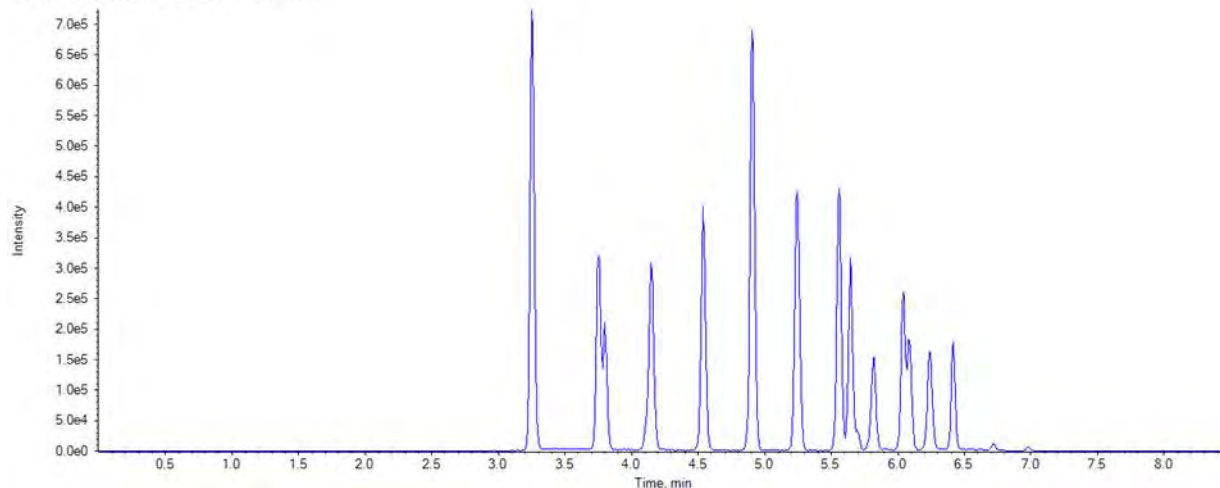
Matrix Spike Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881908MSRE	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-02-01 MS Grab Soil	18NOV08D-77.wiff	2018-11-08T23:14:11

TIC from 18NOV08D-77.wiff (sample 1) - 9881908MS



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	5.00	868822.5	728839.7	19	50	
13C2-PFOA	5.00	628847.9	491983.1	28	50	
13C4-PFOS	4.78	335546.7	255568.1	31	50	
13C2-PFDA	5.00	365120.1	315407.5	16	50	

APPROVED

By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

Matrix Spike Recovery

ICAL Name: 18NOV07DCAL Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881908MSRE	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-02-01 MS Grab Soil	18NOV08D-77.wiff	2018-11-08T23:14:11

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	50445.1	344656.1	0.146	1.123	1.379	123	70-130	
PFHxA	110972.6	578104.4	0.192	1.271	1.539	121	70-130	
PFHxS	42407.2	271901.9	0.156	1.202	1.478	123	70-130	
PFHpA	120674.9	457719.2	0.264	1.271	1.657	130	70-130	
PFOA	116612.5	766138.0	0.152	1.271	1.602	126	70-130	
PFOS	38390.1	251750.6	0.152	1.215	1.478	122	70-130	
PFNA	95123.5	396431.7	0.240	1.271	1.676	132	70-130	OOS
PFDA	75714.7	499823.8	0.151	1.271	1.558	123	70-130	
NMeFOSAA	6699.5	59884.9	0.112	1.271	1.076	85	70-130	
PFUnDA	63272.2	228680.6	0.277	1.271	1.483	117	70-130	
NEtFOSAA	7929.1	47740.5	0.166	1.271	1.334	105	70-130	
PFDoDA	70840.8	480791.3	0.147	1.271	1.493	117	70-130	
PFTTrDA	56511.4	480791.3	0.118	1.271	1.385	109	70-130	
PFTeDA	46041.5	325200.0	0.142	1.271	1.554	122	70-130	

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Matrix Spike Recovery
Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 2:33 pm, 11/14/18

REVIEWED
By HMK at 2:39 pm, 11/14/18

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881908MSRE			Data File:		18NOV08D-77.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-02-01 MS Grab Soil			Acquis Date:		2018-11-08T23:14:11
Sample Type:	Quality Control			Instrument:		LM27631
Vial Position:	19			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18310012_Batch QC+9881916
QMethod File:	18AUG20QM			ICAL Name:		18NOV07DCAL
Batch Number:	18310012			Operator:		MCD7824
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: 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	868822.5	728839.7	19	50	
13C2-PFOA	5.0	628847.9	491983.1	28	50	
13C4-PFOS	4.8	335546.7	255568.1	31	50	
13C2-PFDA	5.0	365120.1	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	344656.1	13C3-PFBA	868822.5	0.397	8.692	5.442	63	50-150	
E13C5-PFHxA	578104.4	13C2-PFOA	628847.9	0.919	9.346	6.321	68	50-150	
E13C3-PFHxS	271901.9	13C2-PFOA	628847.9	0.432	8.841	5.802	66	50-150	
E13C4-PFHpA	457719.2	13C2-PFOA	628847.9	0.728	9.346	6.189	66	50-150	
E13C8-PFOA	766137.9	13C2-PFOA	628847.9	1.218	9.346	6.350	68	50-150	
E13C8-PFOS	251750.6	13C4-PFOS	335546.7	0.750	8.935	6.201	69	50-150	
E13C9-PFNA	396431.7	13C4-PFOS	335546.7	1.181	9.346	6.032	65	50-150	
E13C6-PFDA	499823.8	13C2-PFDA	365120.1	1.369	9.346	6.435	69	50-150	
Ed3-NMeFOSAA	59884.9	13C2-PFDA	365120.1	0.164	9.346	5.701	61	50-150	
E13C7-PFUnDA	228680.6	13C2-PFDA	365120.1	0.626	9.346	6.753	72	50-150	
Ed5-NEtFOSAA	47740.5	13C2-PFDA	365120.1	0.131	9.346	5.656	61	50-150	
E13C2-PFDODA	480791.3	13C2-PFDA	365120.1	1.317	9.346	6.635	71	50-150	
E13C2-PFTeDA	325200.0	13C2-PFDA	365120.1	0.891	9.346	5.993	64	50-150	

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

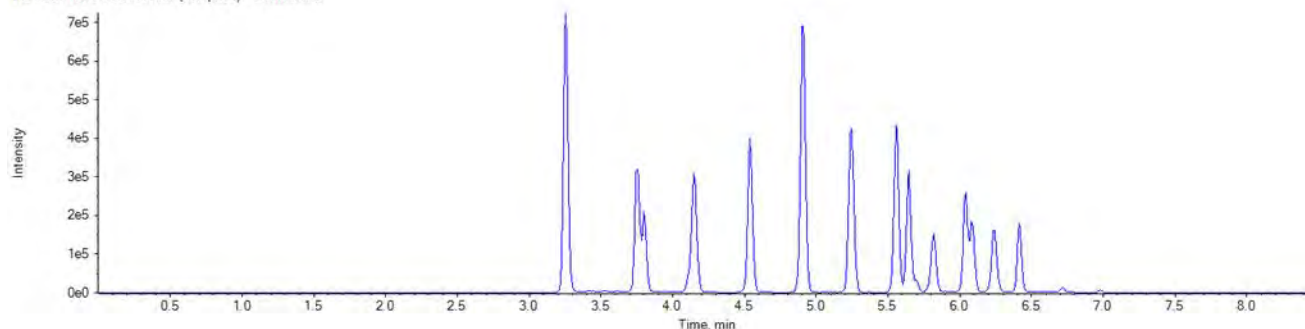
Sample Name: 9881908MSRE Instrument Name: LM27631 File Name: 18NOV08D-77.wiff

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	3.80	1.000	50445.1		A	13C3-PFBS	3.80	344656.1	0.146	1.379
PFHxA	4.15	1.000	110972.6		A	13C5-PFHxA	4.15	578104.4	0.192	1.539
PFHxS	4.54	1.000	42407.2		A	13C3-PFHxS	4.54	271901.9	0.156	1.478
PFHpA	4.54	1.000	120674.9		A	13C4-PFHpA	4.54	457719.2	0.264	1.657
PFOA	4.91	1.000	116612.5		A	13C8-PFOA	4.91	766138.0	0.152	1.602
PFOS	5.24	1.000	38390.1		M	13C8-PFOS	5.24	251750.6	0.152	1.478
PFNA	5.25	1.000	95123.5		A	13C9-PFNA	5.25	396431.7	0.240	1.676
PFDA	5.56	1.000	75714.7		A	13C6-PFDA	5.56	499823.8	0.151	1.558
NMeFOSAA	5.70	1.000	6699.5		A	d3-NMeFOSAA	5.70	59884.9	0.112	1.076
PFUnDA	5.82	1.000	63272.2		A	13C7-PFUnDA	5.82	228680.6	0.277	1.483
NEtFOSAA	5.83	1.000	7929.1		A	d5-NEtFOSAA	5.83	47740.5	0.166	1.334
PFDODA	6.04	1.000	70840.8		A	13C2-PFDODA	6.04	480791.3	0.147	1.493
PFTTrDA	6.24	1.030	56511.4		A	13C2-PFDODA	6.04	480791.3	0.118	1.385
PFTeDA	6.42	1.000	46041.5		A	13C2-PFTeDA	6.42	325200.0	0.142	1.554

Total Ion Chromatogram

TIC from 18NOV08D-77.wiff (sample 1) - 9881908MS



APPROVED

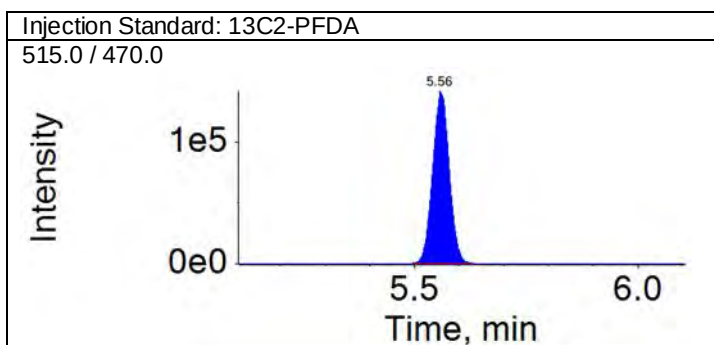
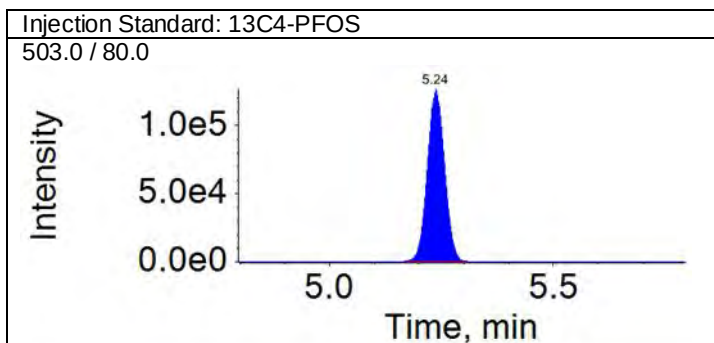
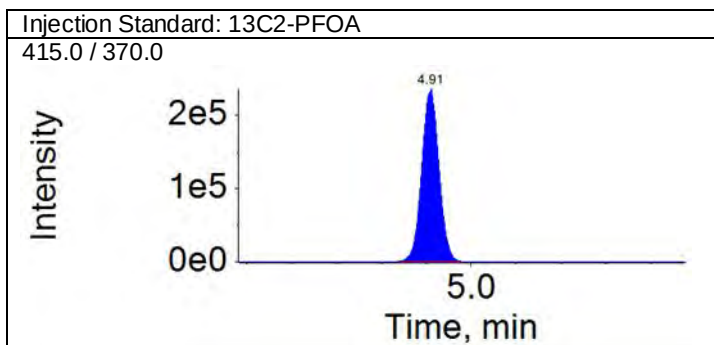
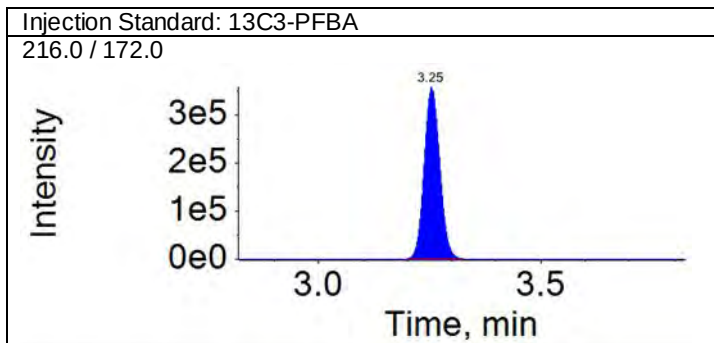
By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

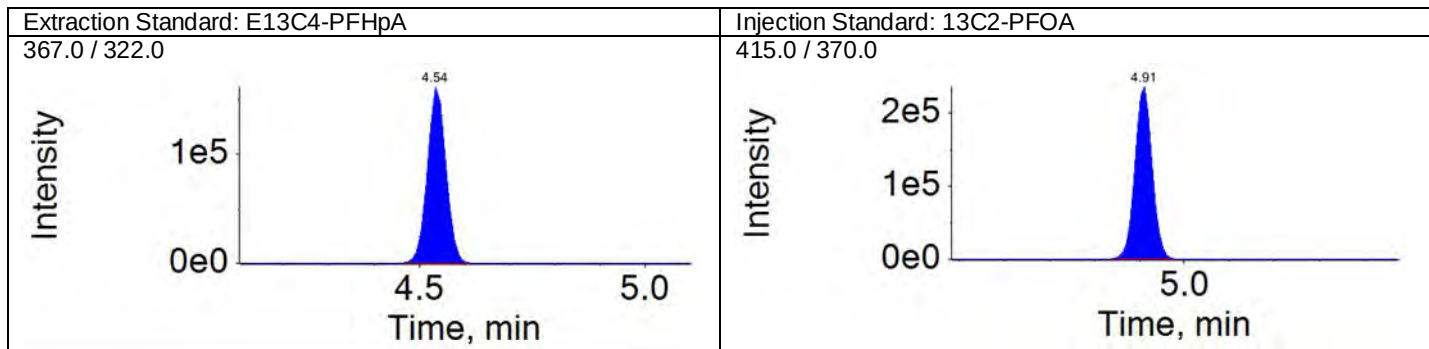
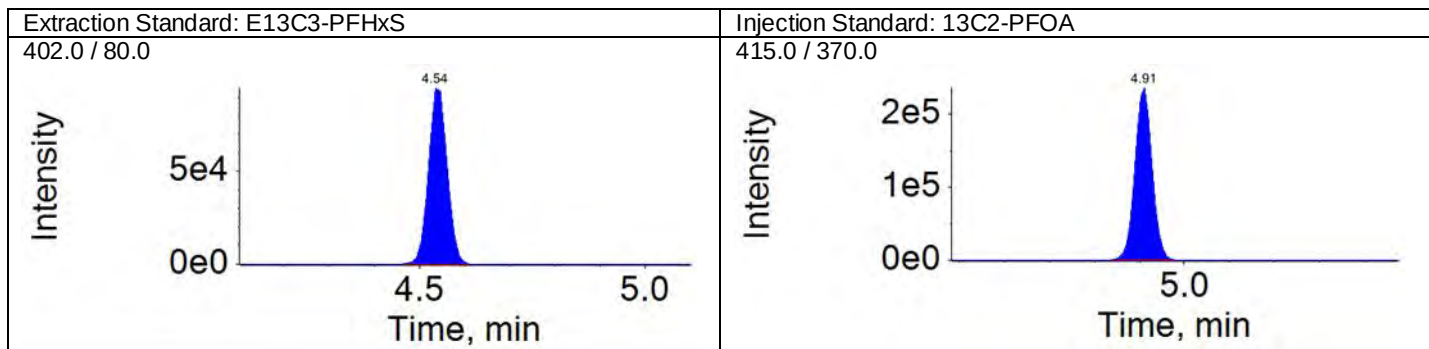
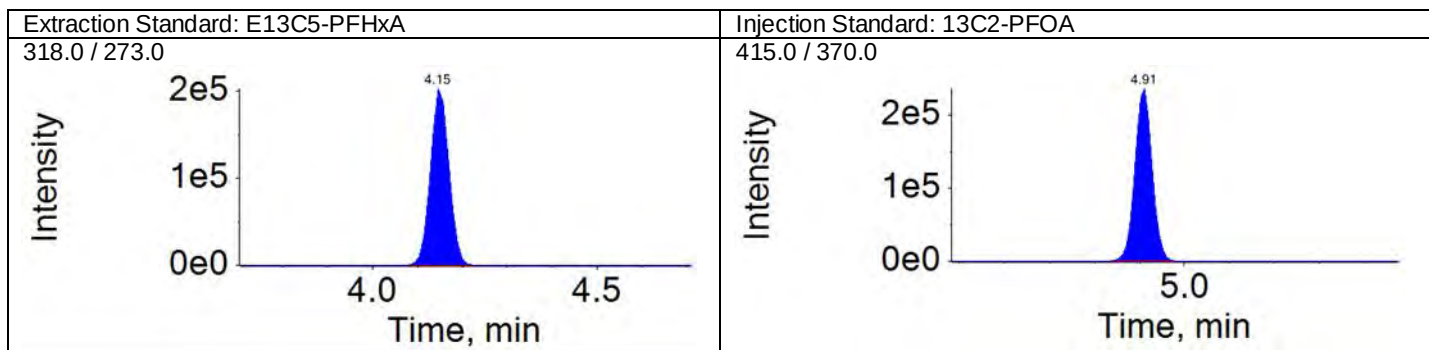
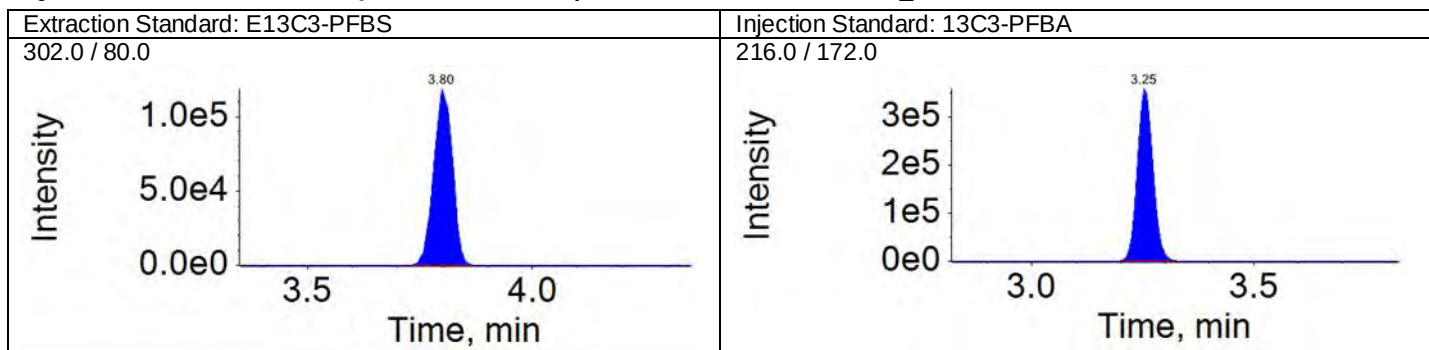
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



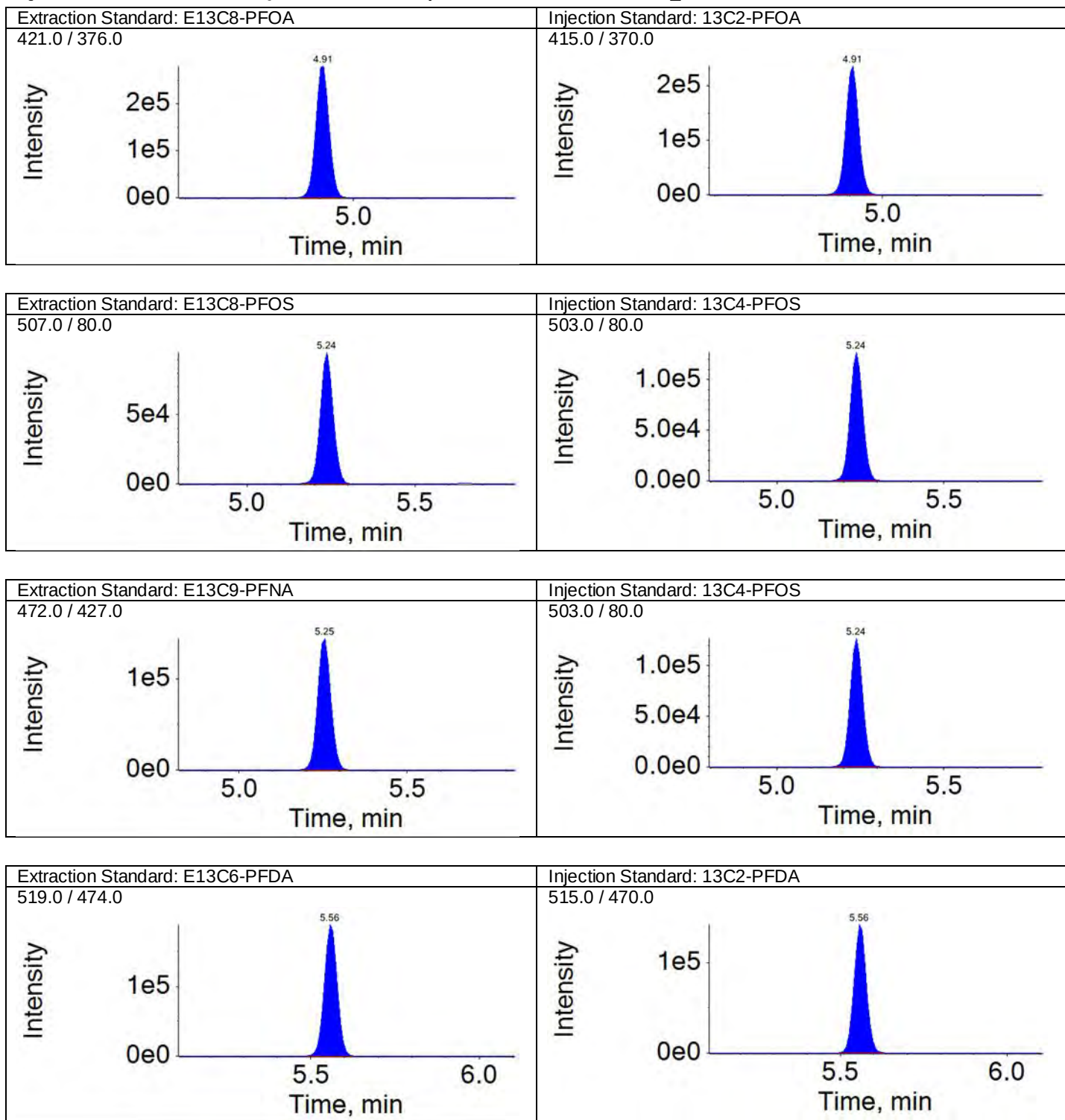
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

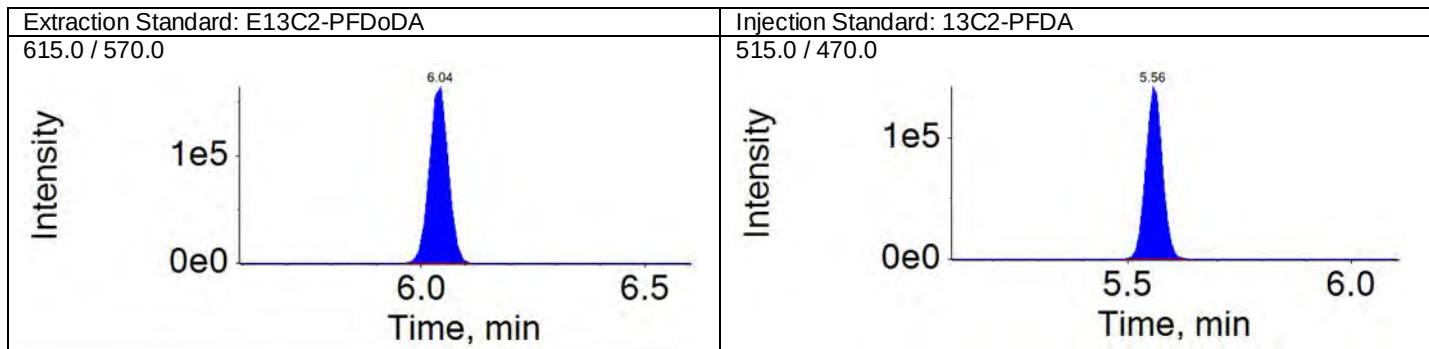
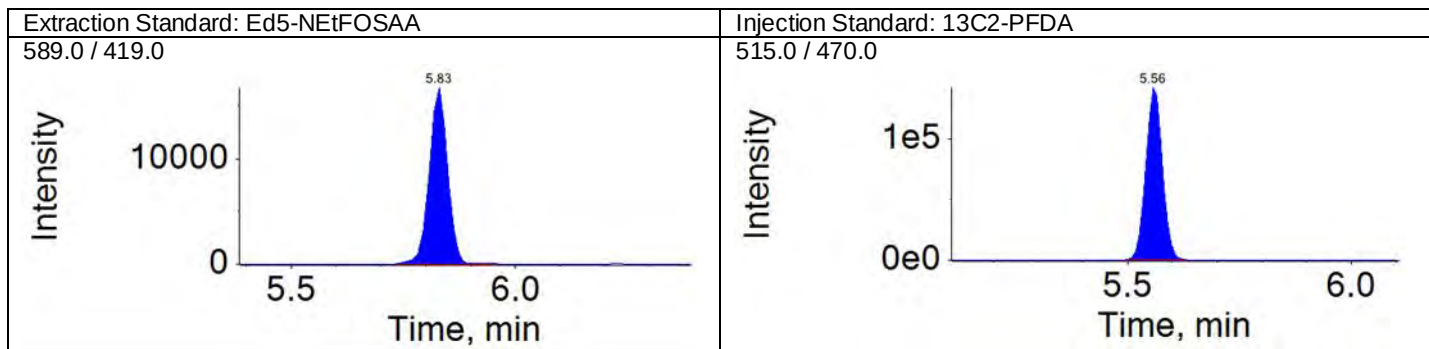
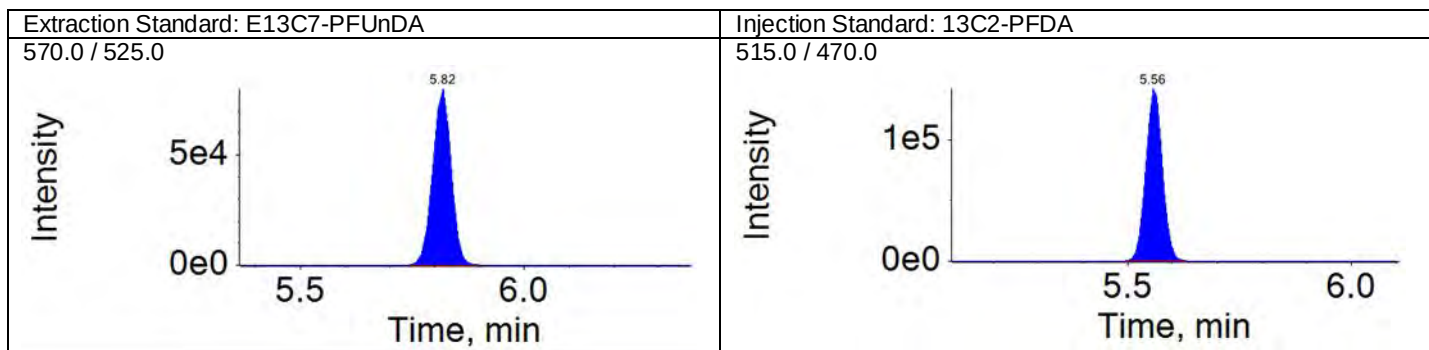
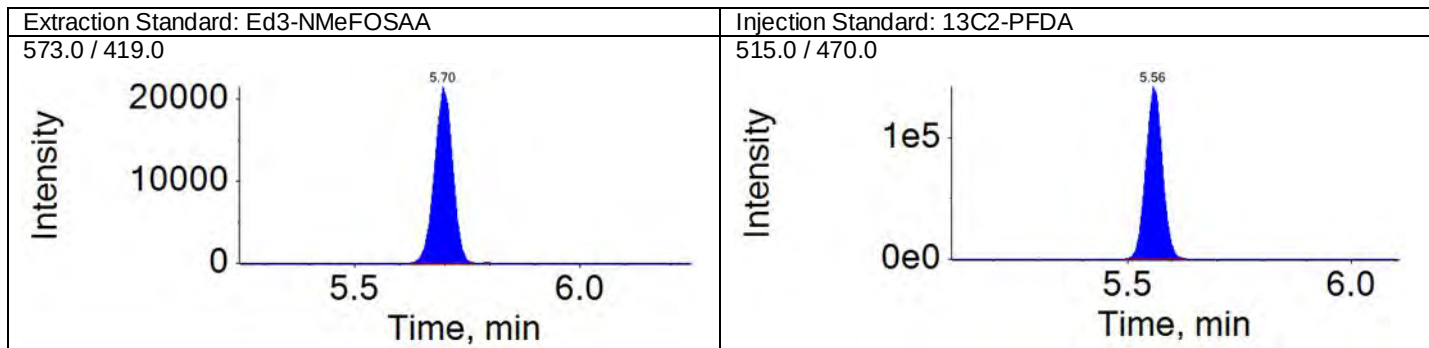
By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

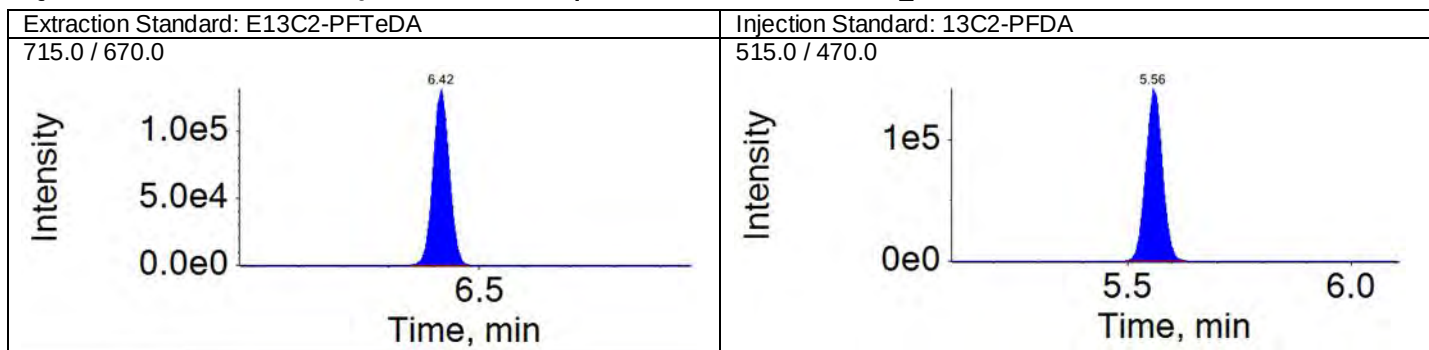
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



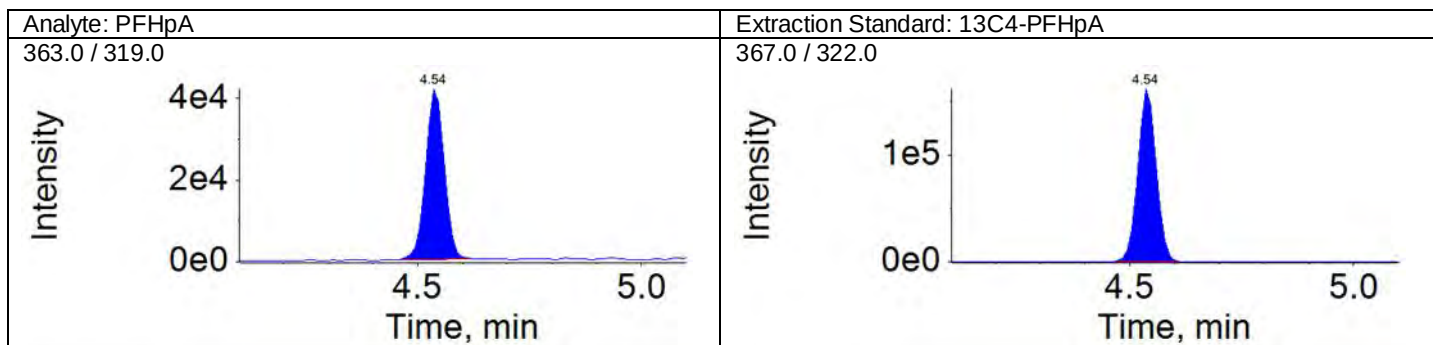
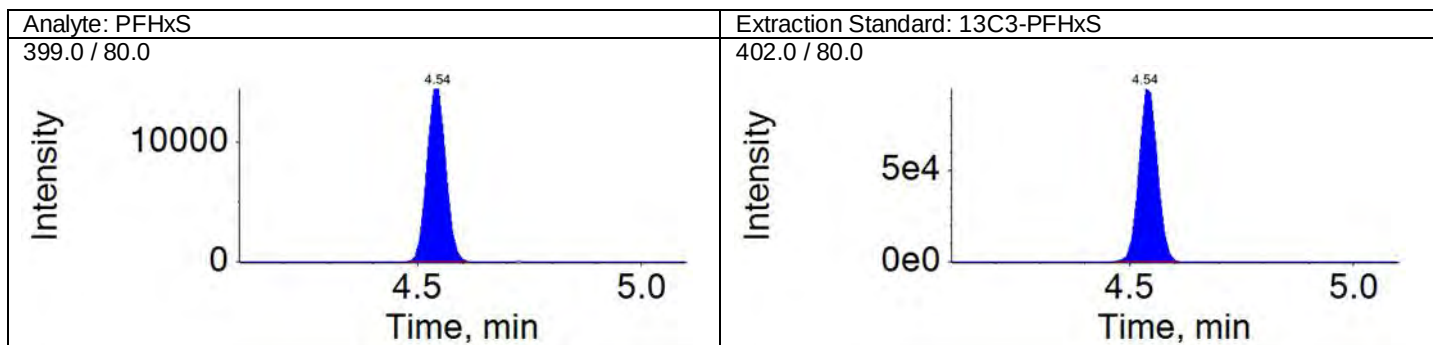
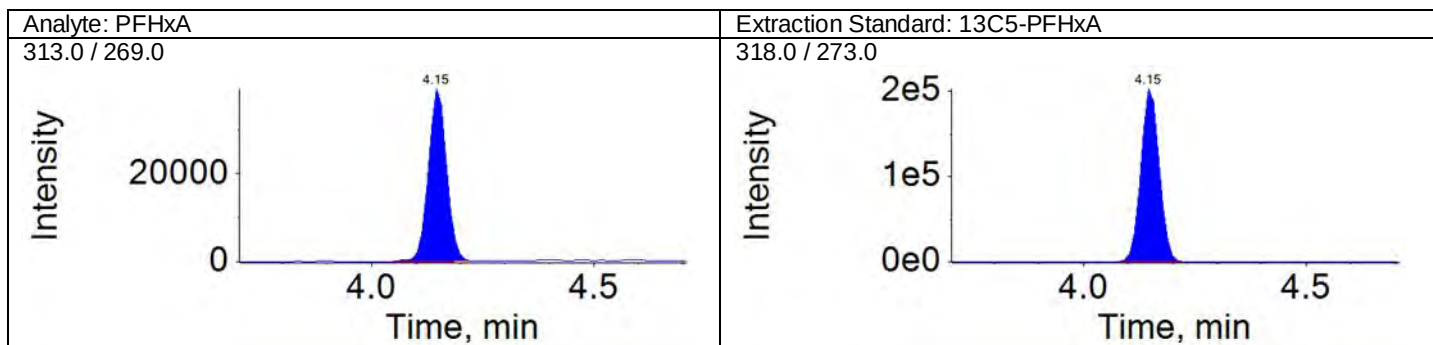
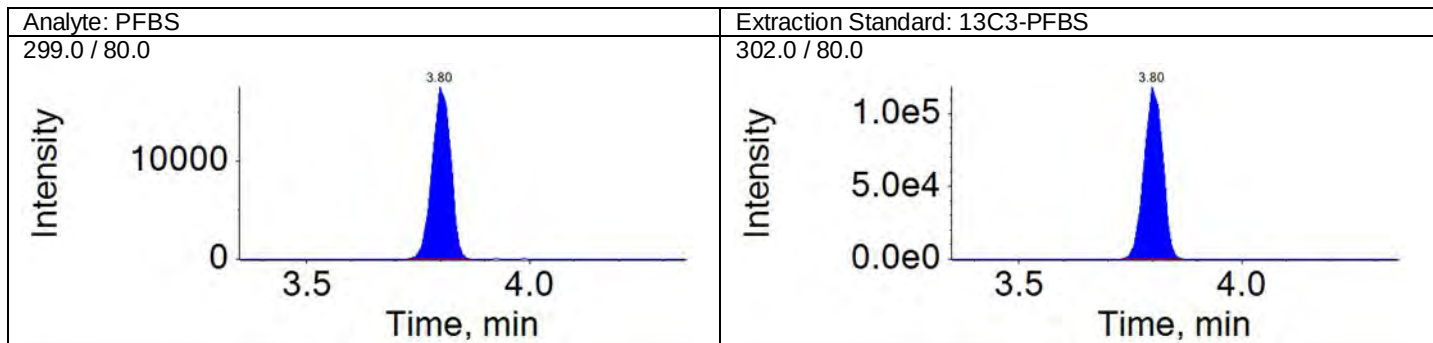
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



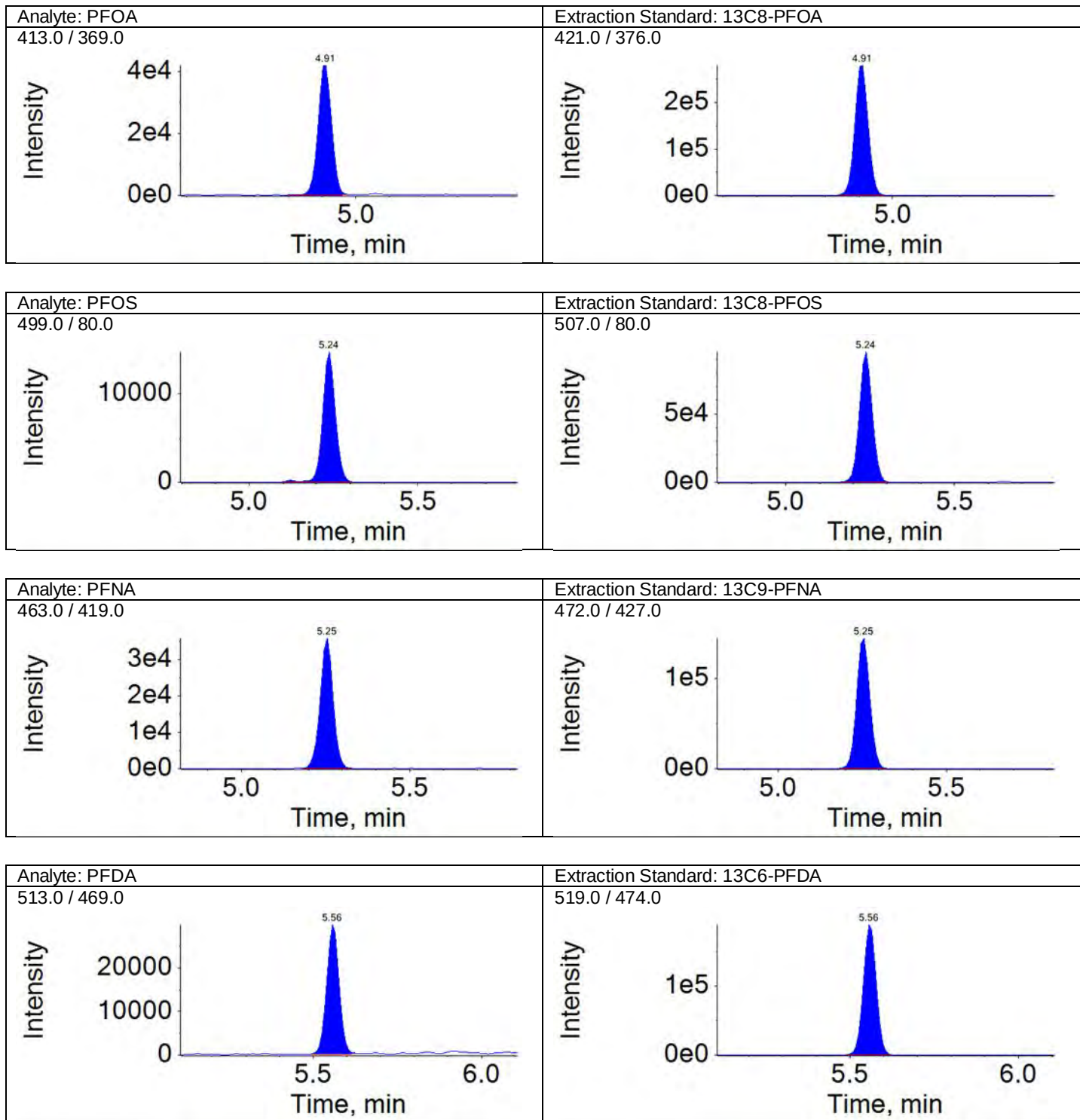
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



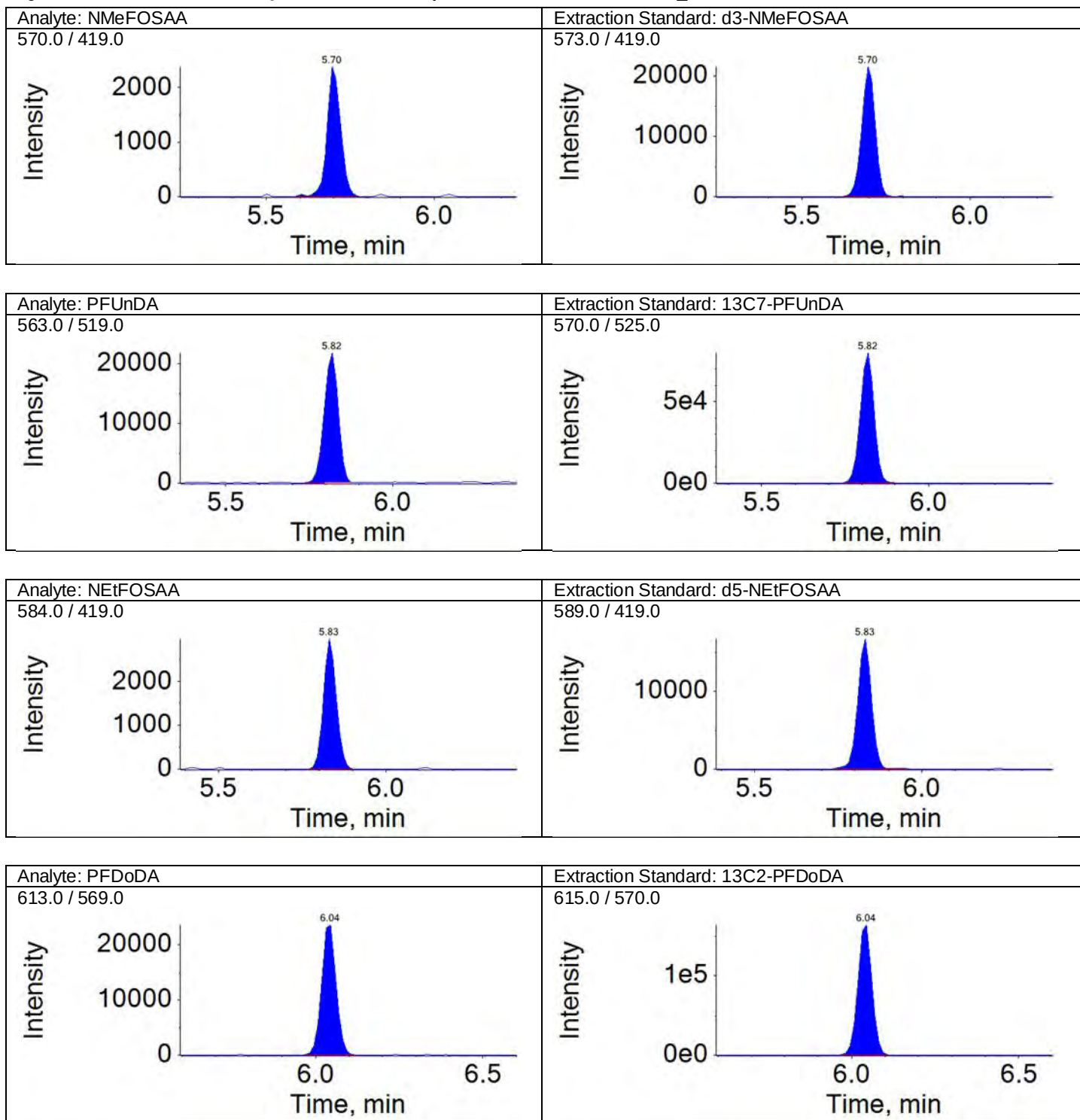
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



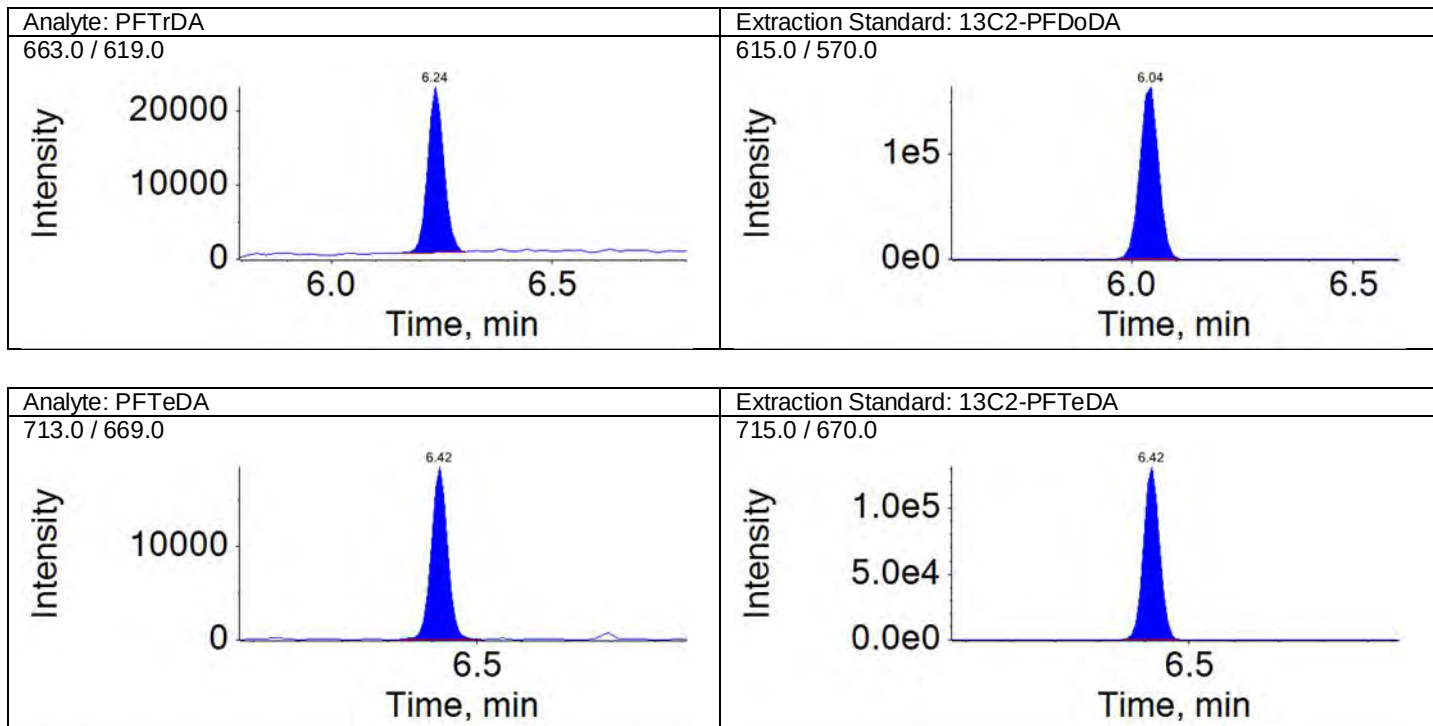
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18310012_Batch QC+9881916
Results Table Date: 11/14/2018 2:26:18 PM

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

Component Name:

PFOS

RT (min.):

5.24

Peak Area:

37923.7

Mass Range:

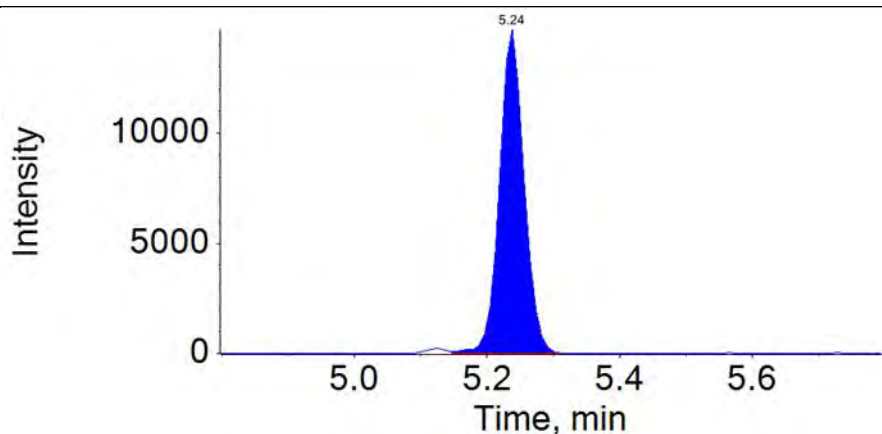
499.0 / 80.0

File Name:

18NOV08D-77.wiff

Sample Name:

9881908MSRE



Integration Comment: incorrect integration

Component Name:

PFHxS_2

RT (min.):

4.54

Peak Area:

14111.8

Mass Range:

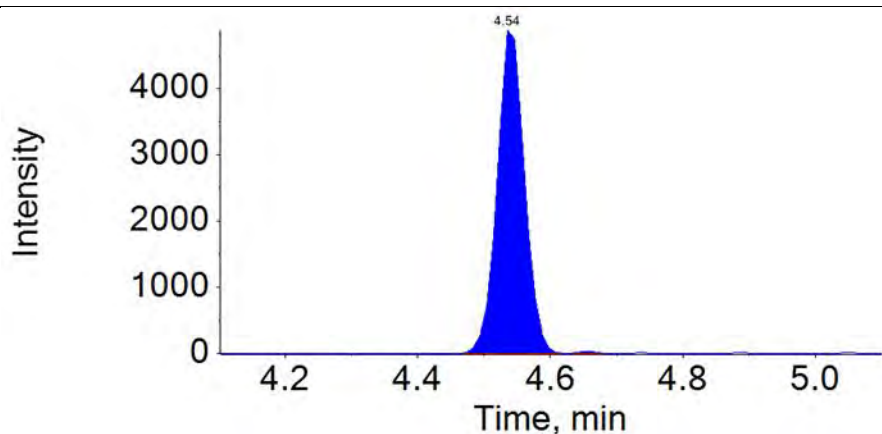
399.0 / 99.0

File Name:

18NOV08D-77.wiff

Sample Name:

9881908MSRE



Integration Comment: incorrect integration

Component Name:

NMeFOSAA_2

RT (min.):

5.70

Peak Area:

1934.3

Mass Range:

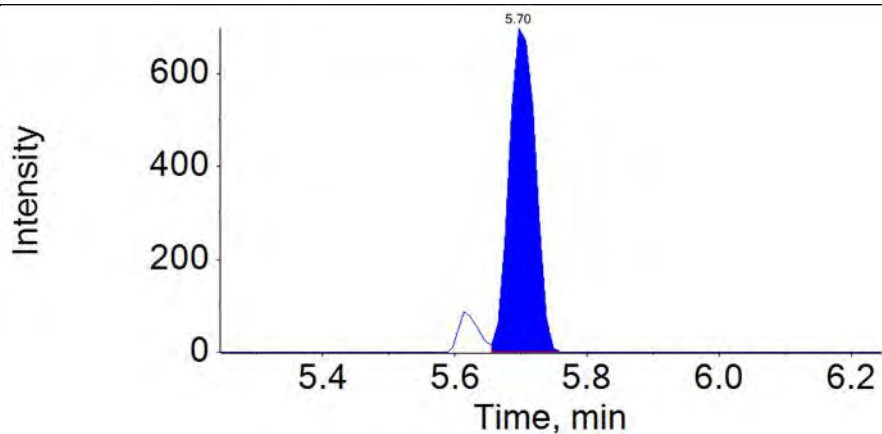
570.0 / 483.0

File Name:

18NOV08D-77.wiff

Sample Name:

9881908MSRE



Integration Comment: incorrect integration

Results Table Name: 18310012_Batch QC+9881916
Results Table Date: 11/14/2018 2:26:18 PM

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

APPROVED
By JPT at 2:33 pm, 11/14/18

REVIEWED
By HMK at 2:39 pm, 11/14/18

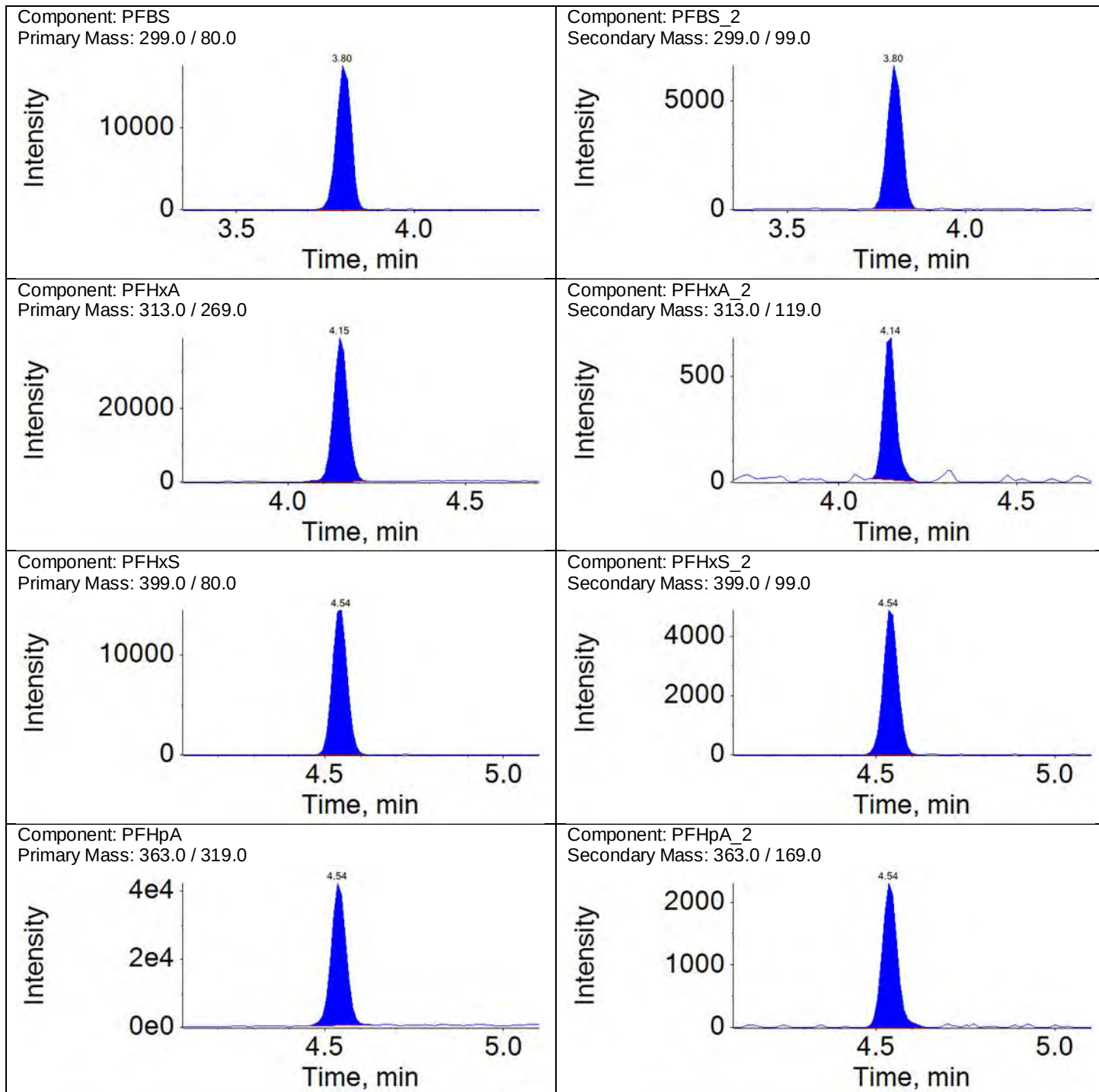
Ion Ratio Report

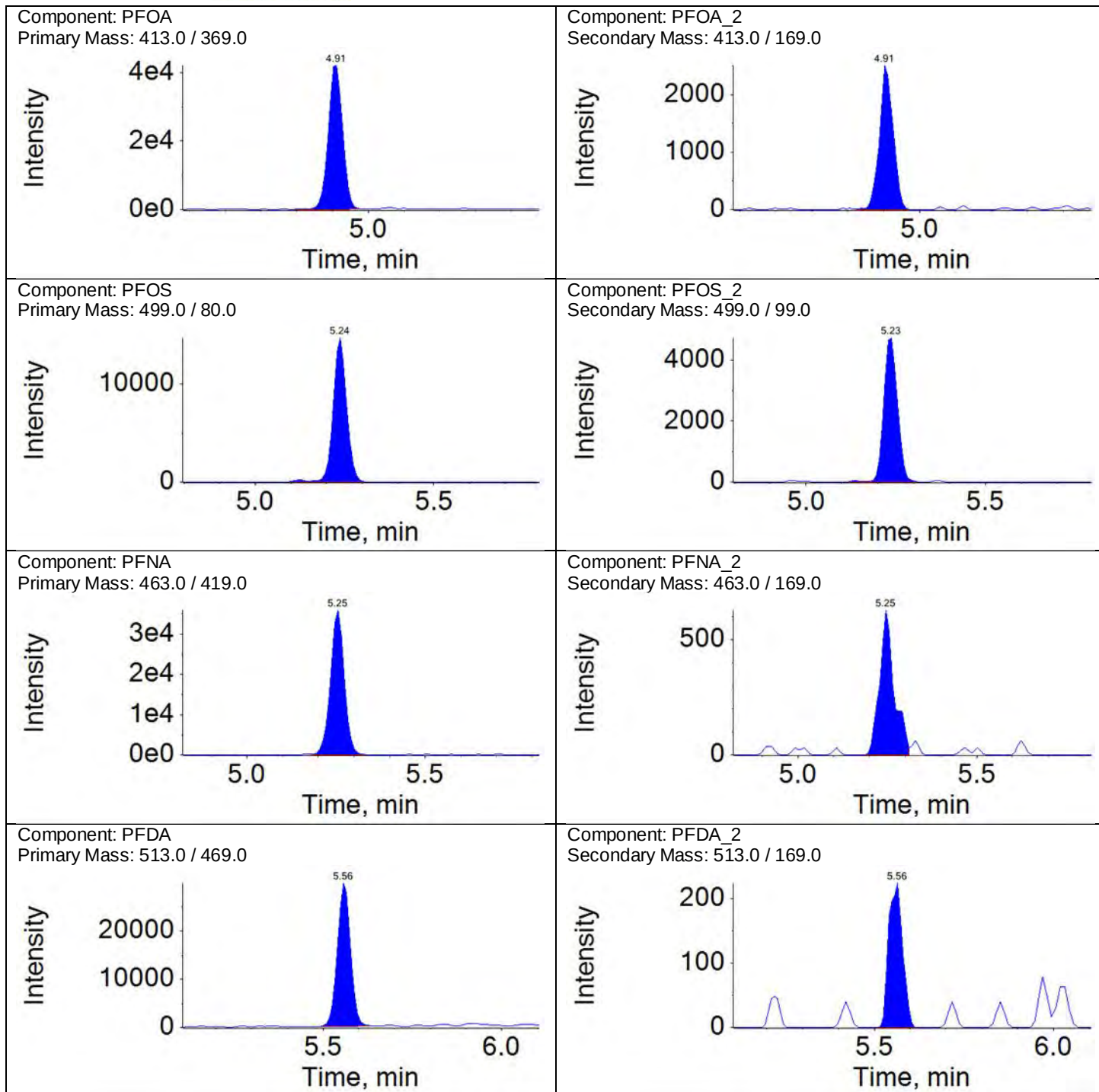
Sample Name: 9881908MSRE

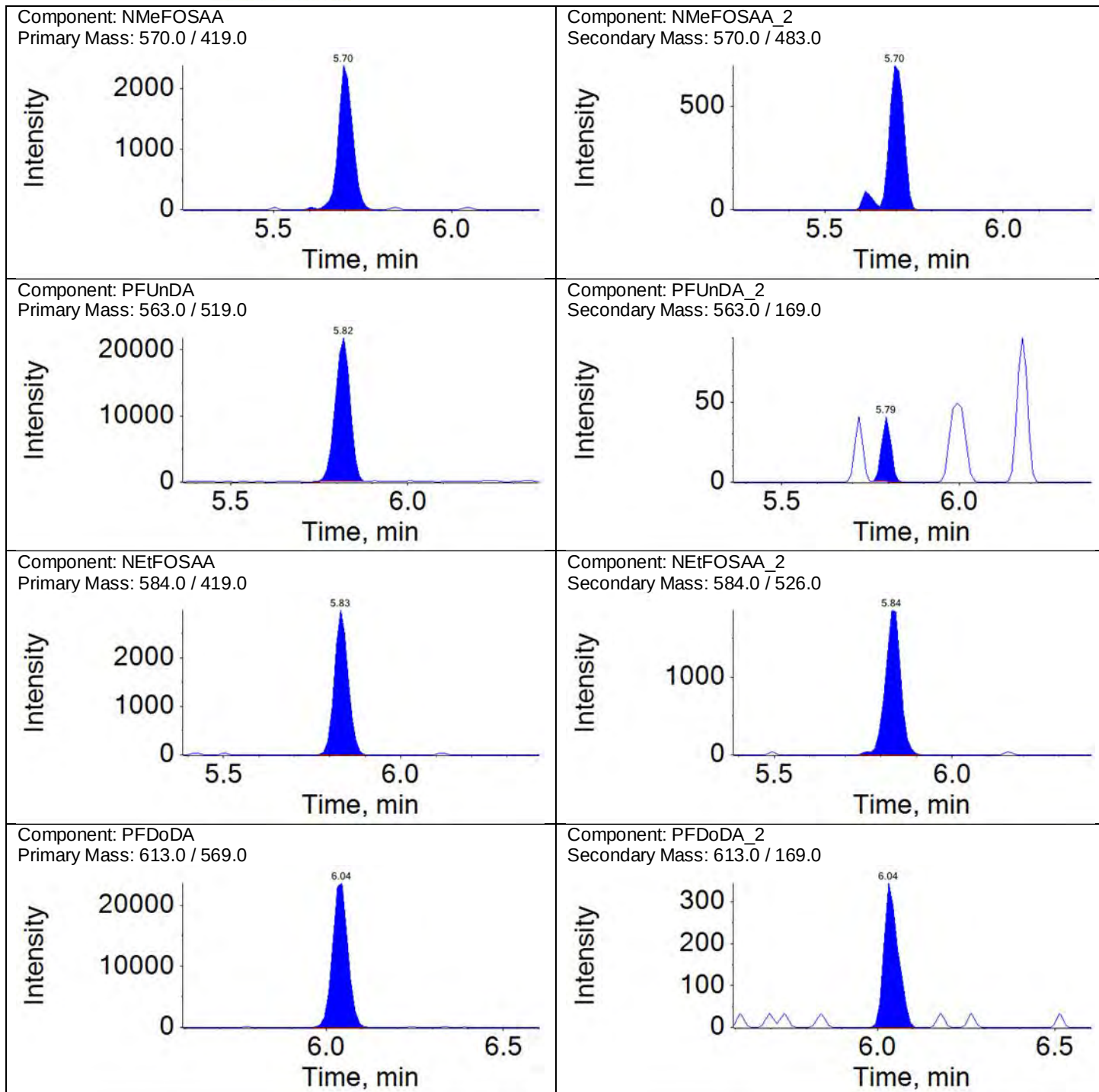
Instrument Name: LM27631

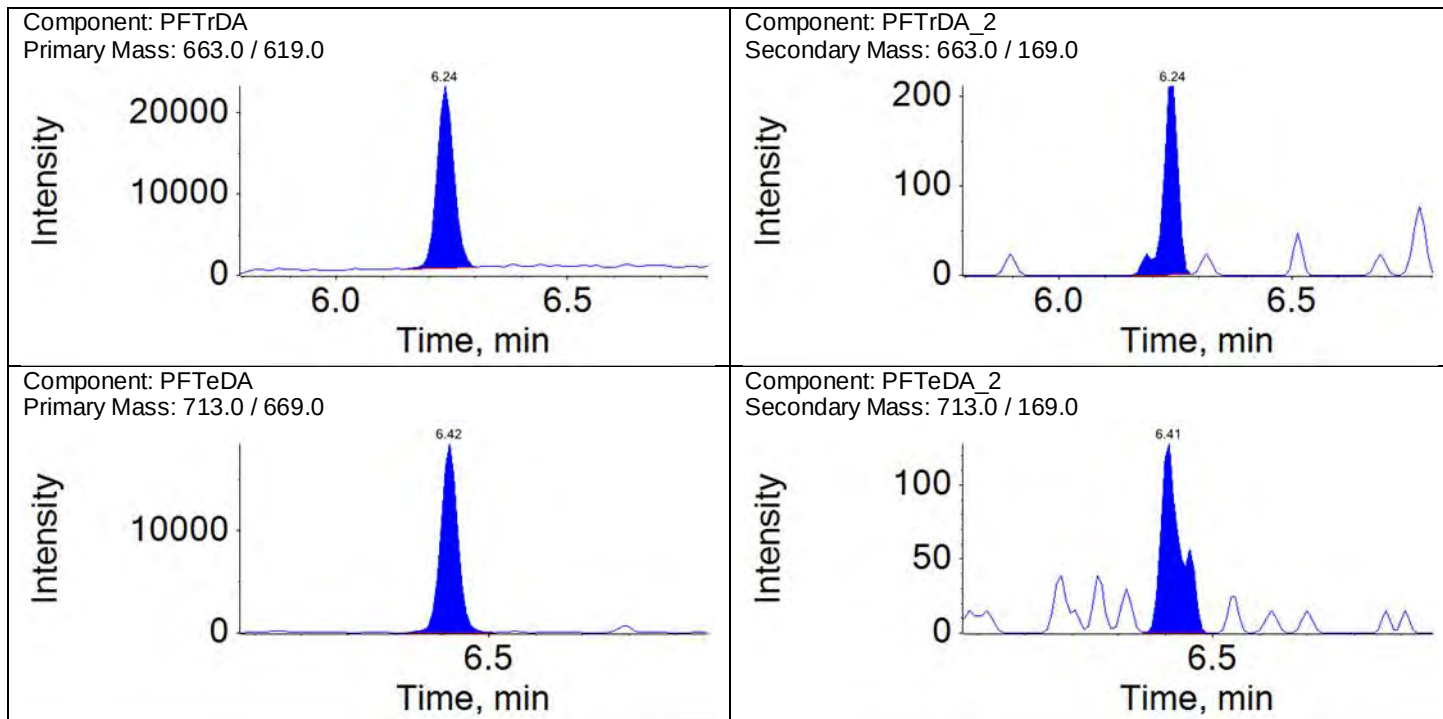
File Name: 18NOV08D-77.wiff

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	50445.1	A	N/A	1.0000			
PFBS_2	3.80	1.00	18788.5	A	N/A	0.3725	4	50	
PFHxA	4.15	1.00	110972.6	A	N/A	1.0000			
PFHxA_2	4.14	1.00	1675.6	A	N/A	0.0151	32	50	
PFHxS	4.54	1.00	42407.2	A	N/A	1.0000			
PFHxS_2	4.54	1.00	14052.2	M	N/A	0.3314	-7	50	
PFHpA	4.54	1.00	120674.9	A	N/A	1.0000			
PFHpA_2	4.54	1.00	6714.6	A	N/A	0.0556	-4	50	
PFOA	4.91	1.00	116612.5	A	N/A	1.0000			
PFOA_2	4.91	1.00	6582.3	A	N/A	0.0564	-11	50	
PFOS	5.24	1.00	38390.1	M	N/A	1.0000			
PFOS_2	5.23	1.00	12573.1	A	N/A	0.3275	-6	50	
PFNA	5.25	1.00	95123.5	A	N/A	1.0000			
PFNA_2	5.25	1.00	1774.2	A	N/A	0.0187	-10	50	
PFDA	5.56	1.00	75714.7	A	N/A	1.0000			
PFDA_2	5.56	1.00	606.8	A	N/A	0.0080	42	50	
NMeFOSAA	5.70	1.00	6699.5	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	2114.8	M	N/A	0.3157	43	50	
PFUnDA	5.82	1.00	63272.2	A	N/A	1.0000			
PFUnDA_2	5.79	1.00	73.5	A	N/A	0.0012	-63	50	OOS
NEtFOSAA	5.83	1.00	7929.1	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	5547.2	A	N/A	0.6996	15	50	
PFDoDA	6.04	1.00	70840.8	A	N/A	1.0000			
PFDoDA_2	6.04	1.00	942.8	A	N/A	0.0133	22	50	
PFTTrDA	6.24	1.03	56511.4	A	N/A	1.0000			
PFTTrDA_2	6.24	1.03	472.9	A	N/A	0.0084	-13	50	
PFTeDA	6.42	1.00	46041.5	A	N/A	1.0000			
PFTeDA_2	6.41	1.00	378.6	A	N/A	0.0082	48	50	







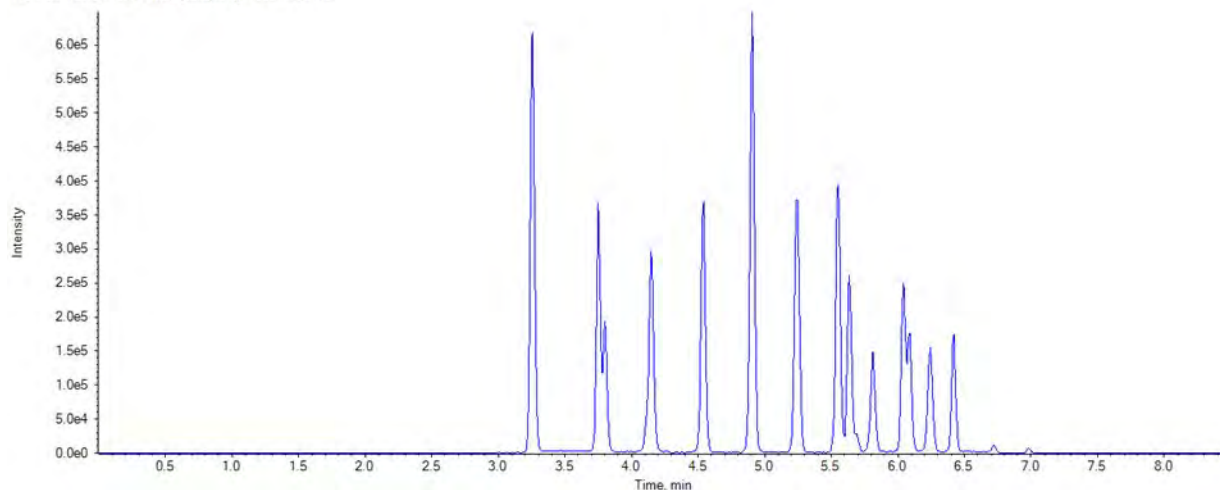


Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:21:17 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881909MSD	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-01 MSD Grab Soil	18NOV13D-14.wiff	2018-11-13T11:05:17

TIC from 18NOV13D-14.wiff (sample 1) - 9881909MSD



Injection Standard Area Reference File: 18NOV13D-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	5.00	703073.3	661126.9	6	50	
13C2-PFOA	5.00	492778.3	466902.6	6	50	
13C4-PFOS	4.78	249900.7	247446.9	1	50	
13C2-PFDA	5.00	305698.4	295381.6	3	50	

APPROVED

By MCD at 10:39 pm, 11/13/18

BSI05 Page 1480 of 1595

REVIEWED

By HMK at 2:12 pm, 11/14/18

Page 1 of 3

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL Result Table: 18316012 11/13/2018 10:21:17 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881909MSD	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-01 MSD Grab Soil	18NOV13D-14.wiff	2018-11-13T11:05:17

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	48223.5	350623.9	0.138	1.125	1.223	109	70-130	
PFHxA	103155.2	537851.4	0.192	1.271	1.497	118	70-130	
PFHpA	106403.8	437716.8	0.243	1.271	1.506	118	70-130	
PFHxS	34098.0	268809.5	0.127	1.202	1.150	96	70-130	
PFOA	105562.9	753298.3	0.140	1.271	1.399	110	70-130	
PFOS	33369.4	223348.8	0.149	1.215	1.221	101	70-130	
PFNA	83212.0	405263.8	0.205	1.271	1.384	109	70-130	
PFDA	73598.1	538808.5	0.137	1.271	1.354	106	70-130	
NMeFOSAA	7051.8	51219.6	0.138	1.271	1.454	114	70-130	
PFUnDA	63219.4	206857.1	0.306	1.271	1.493	117	70-130	
NEtFOSAA	6214.9	40064.8	0.155	1.271	1.520	120	70-130	
PFDODA	67852.3	471023.9	0.144	1.271	1.371	108	70-130	
PFTTrDA	53476.0	471023.9	0.114	1.271	1.339	105	70-130	
PFTeDA	43812.1	316276.4	0.139	1.271	1.451	114	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Matrix Spike Recovery
Result Table: 18316012 11/13/2018 10:21:17 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 10:39 pm, 11/13/18

REVIEWED
By HMK at 2:12 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881909MSD		Data File:	18NOV13D-14.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012 OU1-CAOC21-S-02-01 MSD Grab Soil		Acquis Date:	2018-11-13T11:05:17
Sample Type:	Quality Control		Instrument:	LM27631
Vial Position:	20		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18316012
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	18316012		Operator:	MCD7824
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: 18NOV13D-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	703073.3	661126.9	6	50	
13C2-PFOA	5.0	492778.3	466902.6	6	50	
13C4-PFOS	4.8	249900.7	247446.9	1	50	
13C2-PFDA	5.0	305698.4	295381.6	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
E13C3-PFBS	350623.9	13C3-PFBA	703073.3	0.499	8.692	6.580	76	50-150	
E13C5-PFHxA	537851.4	13C2-PFOA	492778.3	1.091	9.346	7.370	79	50-150	
E13C3-PFHxS	268809.5	13C2-PFOA	492778.3	0.545	8.841	6.997	79	50-150	
E13C4-PFHpA	437716.8	13C2-PFOA	492778.3	0.888	9.346	7.480	80	50-150	
E13C8-PFOA	753298.3	13C2-PFOA	492778.3	1.529	9.346	7.872	84	50-150	
E13C8-PFOS	223348.8	13C4-PFOS	249900.7	0.894	8.935	7.402	83	50-150	
E13C9-PFNA	405263.8	13C4-PFOS	249900.7	1.622	9.346	8.451	90	50-150	
E13C6-PFDA	538808.5	13C2-PFDA	305698.4	1.763	9.346	7.688	82	50-150	
Ed3-NMeFOSAA	51219.6	13C2-PFDA	305698.4	0.168	9.346	5.653	60	50-150	
E13C7-PFUnDA	206857.1	13C2-PFDA	305698.4	0.677	9.346	7.343	79	50-150	
Ed5-NEtFOSAA	40064.8	13C2-PFDA	305698.4	0.131	9.346	5.183	55	50-150	
E13C2-PFDODA	471023.9	13C2-PFDA	305698.4	1.541	9.346	7.478	80	50-150	
E13C2-PFTeDA	316276.4	13C2-PFDA	305698.4	1.035	9.346	6.789	73	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: 9881909MSD

Instrument Name: LM27631

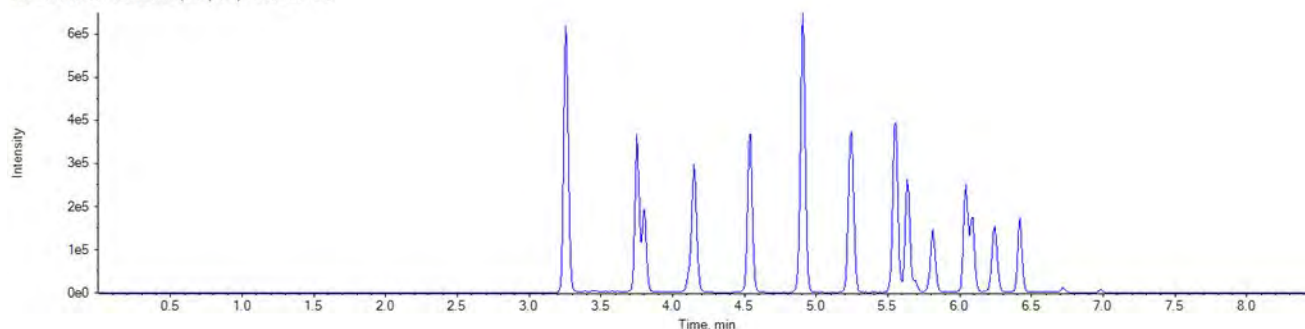
File Name: 18NOV13D-14.wiff

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	3.80	1.000	48223.5		A	13C3-PFBS	3.80	350623.9	0.138	1.223
PFHxA	4.15	1.000	103155.2		A	13C5-PFHxA	4.15	537851.4	0.192	1.497
PFHpA	4.54	1.000	106403.8		A	13C4-PFHpA	4.54	437716.8	0.243	1.506
PFHxS	4.54	1.000	34098.0		A	13C3-PFHxS	4.54	268809.5	0.127	1.150
PFOA	4.91	1.000	105562.9		A	13C8-PFOA	4.91	753298.3	0.140	1.399
PFOS	5.23	1.000	33369.4		A	13C8-PFOS	5.23	223348.8	0.149	1.221
PFNA	5.25	1.000	83212.0		A	13C9-PFNA	5.25	405263.8	0.205	1.384
PFDA	5.55	1.000	73598.1		A	13C6-PFDA	5.55	538808.5	0.137	1.354
NMeFOSAA	5.69	1.000	7051.8		A	d3-NMeFOSAA	5.69	51219.6	0.138	1.454
PFUnDA	5.81	1.000	63219.4		A	13C7-PFUnDA	5.81	206857.1	0.306	1.493
NEtFOSAA	5.83	1.000	6214.9		A	d5-NEtFOSAA	5.82	40064.8	0.155	1.520
PFDODA	6.04	1.000	67852.3		A	13C2-PFDODA	6.04	471023.9	0.144	1.371
PFTTrDA	6.24	1.030	53476.0		A	13C2-PFDODA	6.04	471023.9	0.114	1.339
PFTeDA	6.42	1.000	43812.1		A	13C2-PFTeDA	6.42	316276.4	0.139	1.451

Total Ion Chromatogram

TIC from 18NOV13D-14.wiff (sample 1) - 9881909MSD



APPROVED

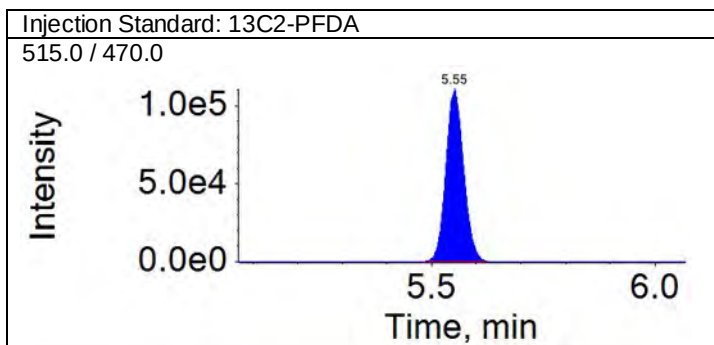
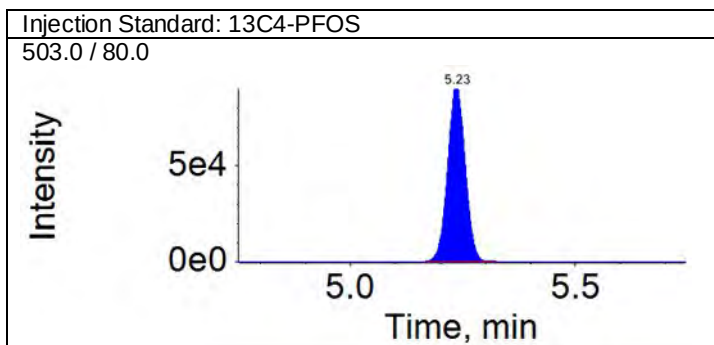
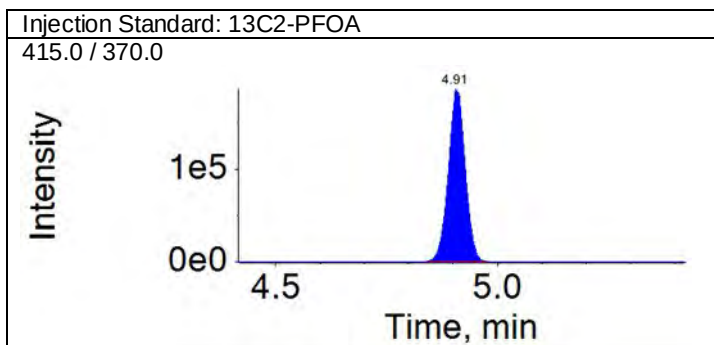
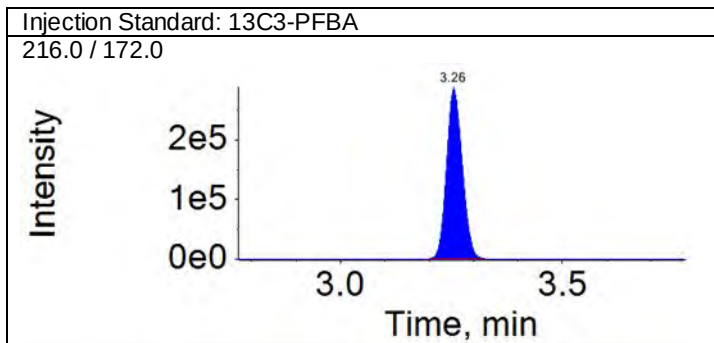
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

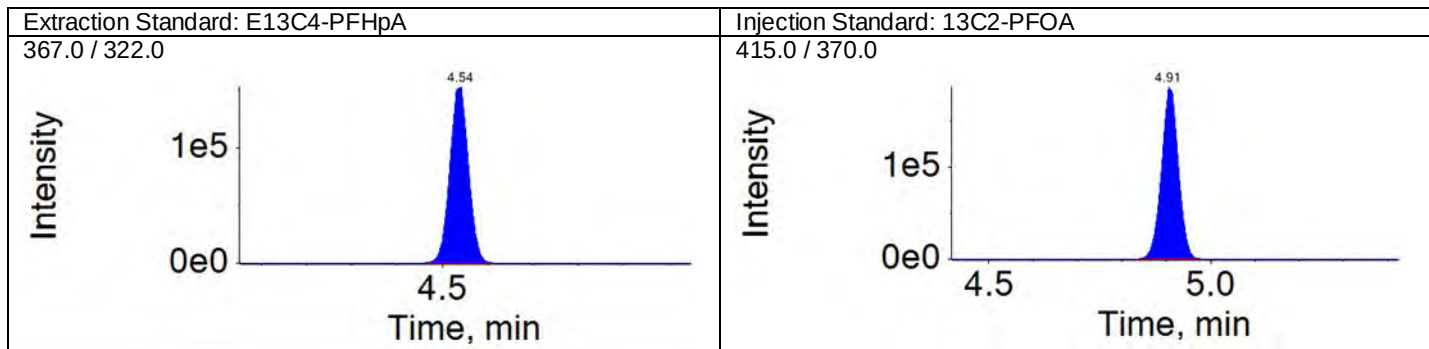
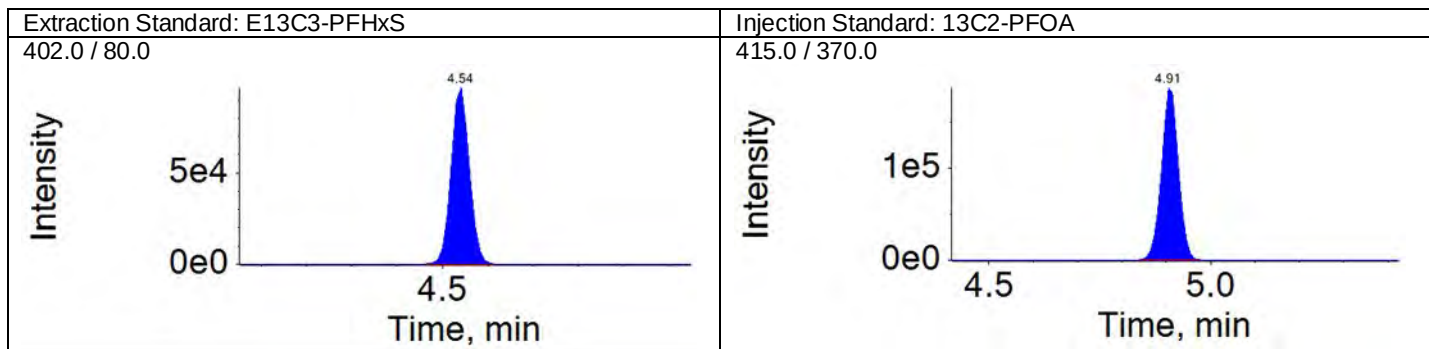
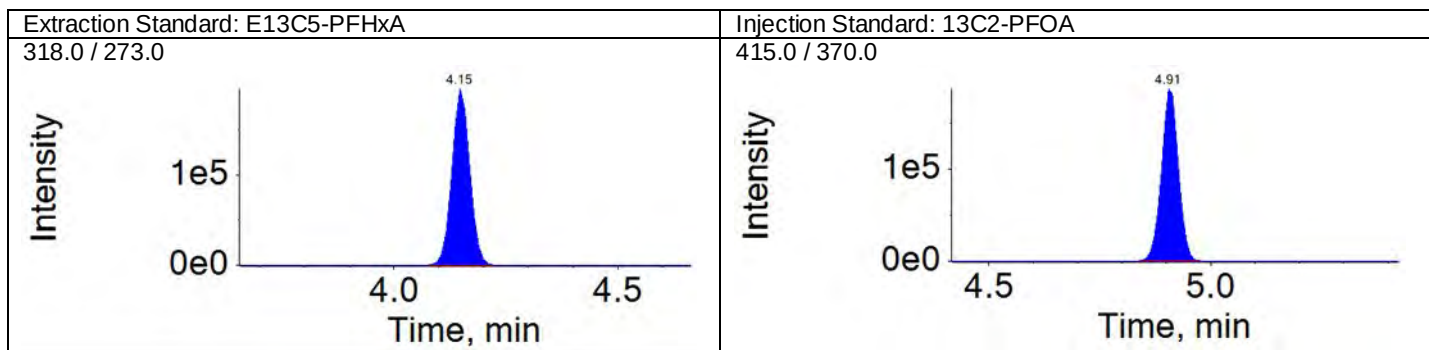
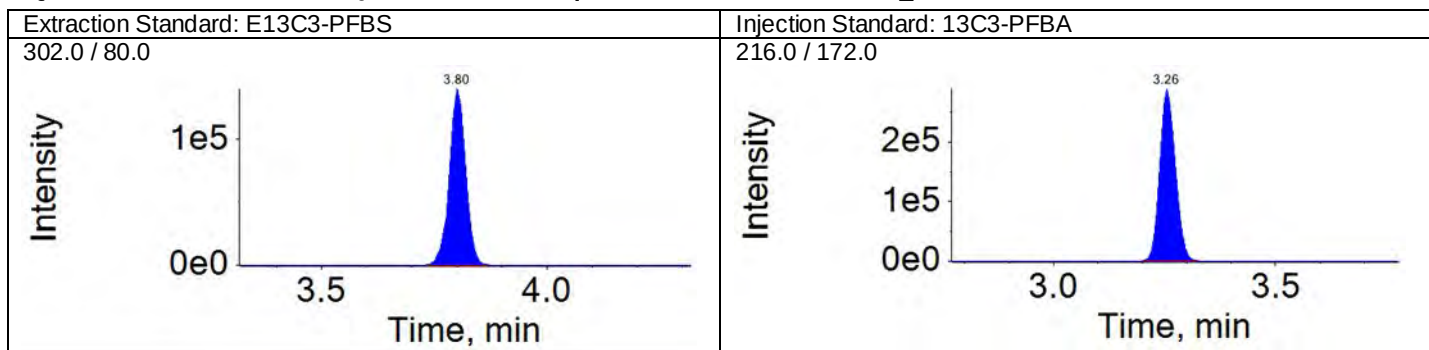
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



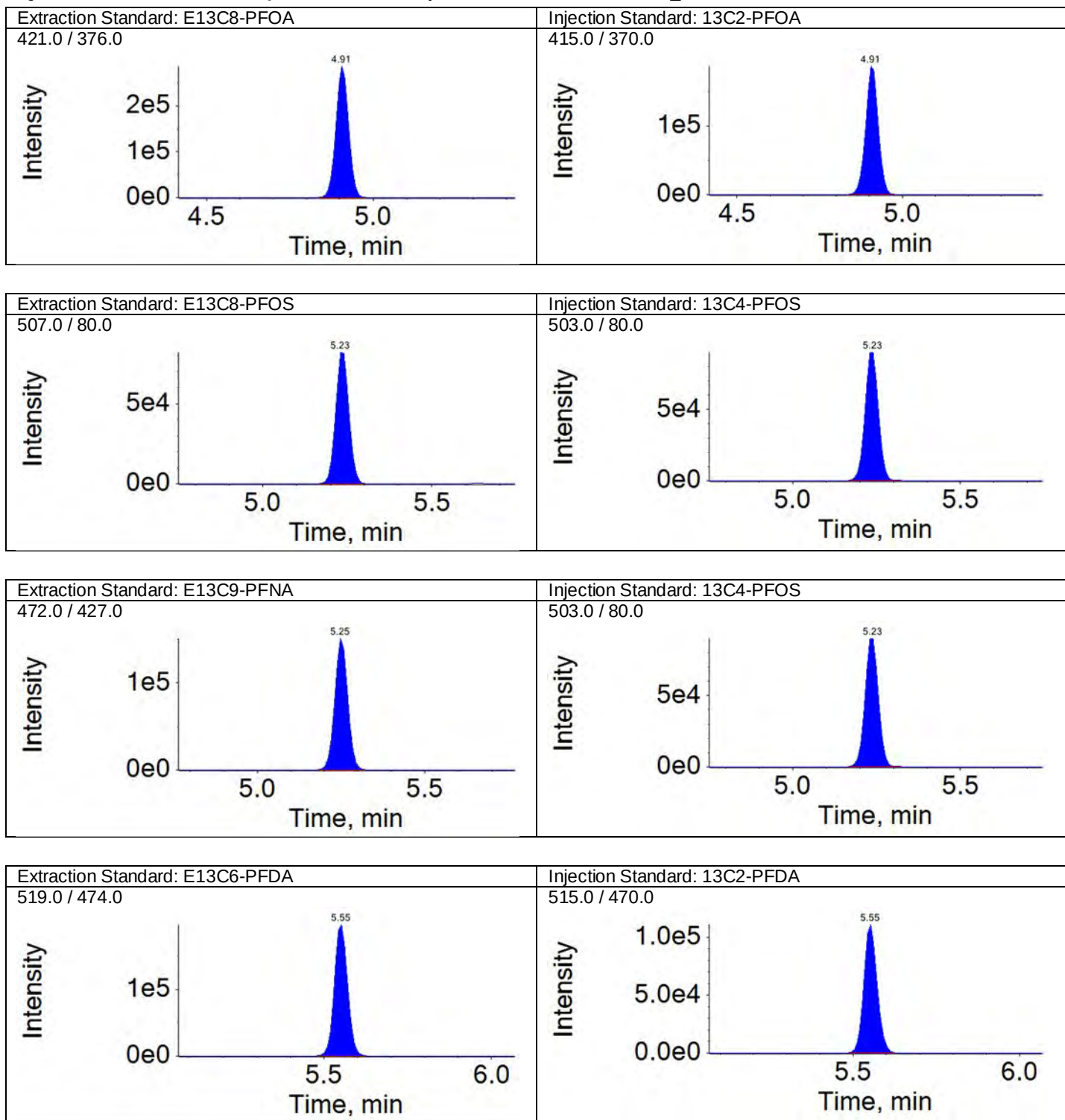
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



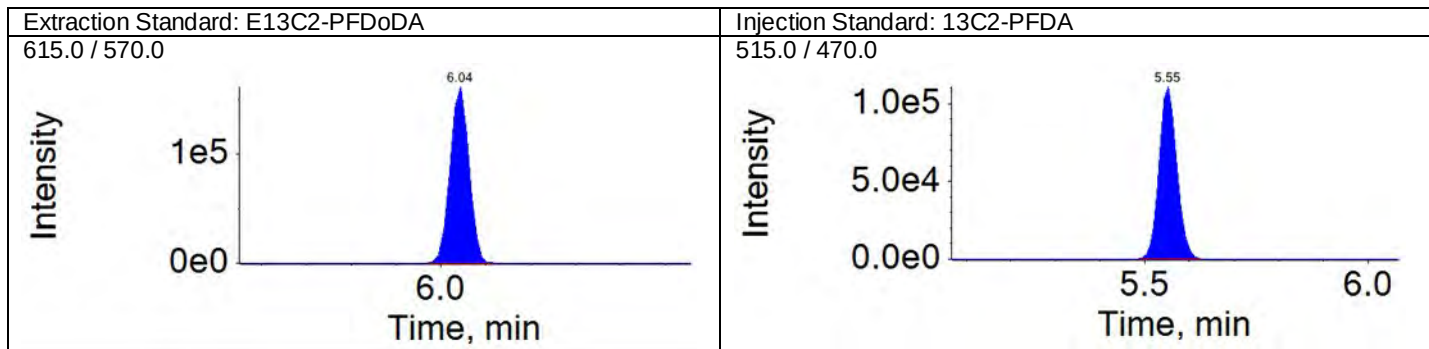
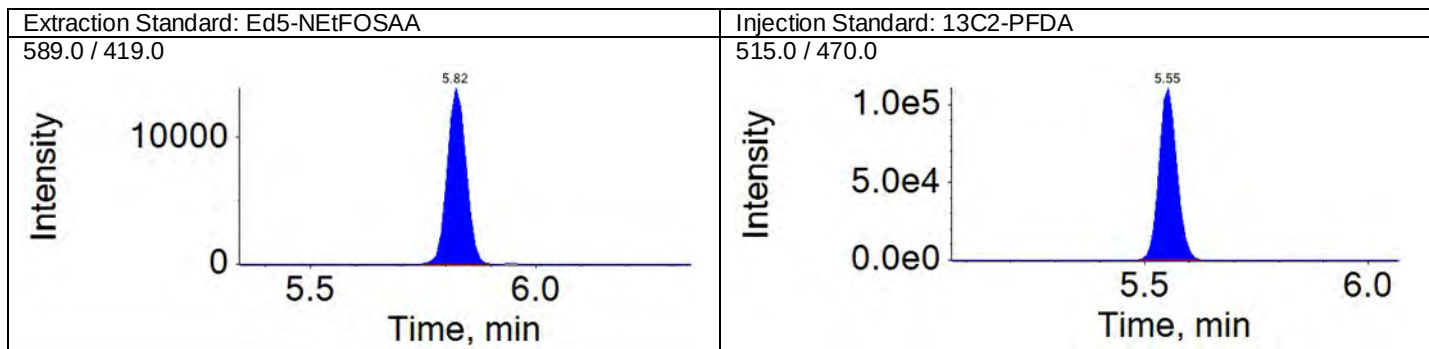
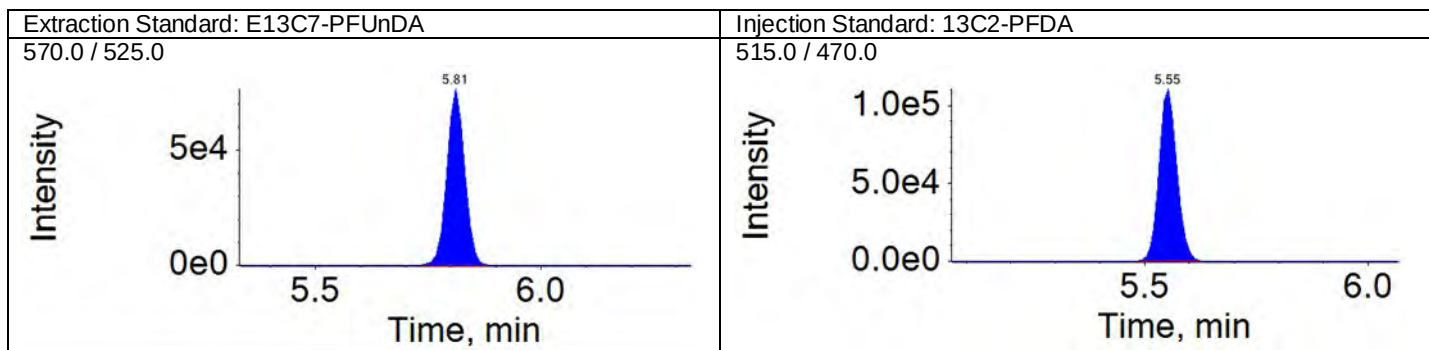
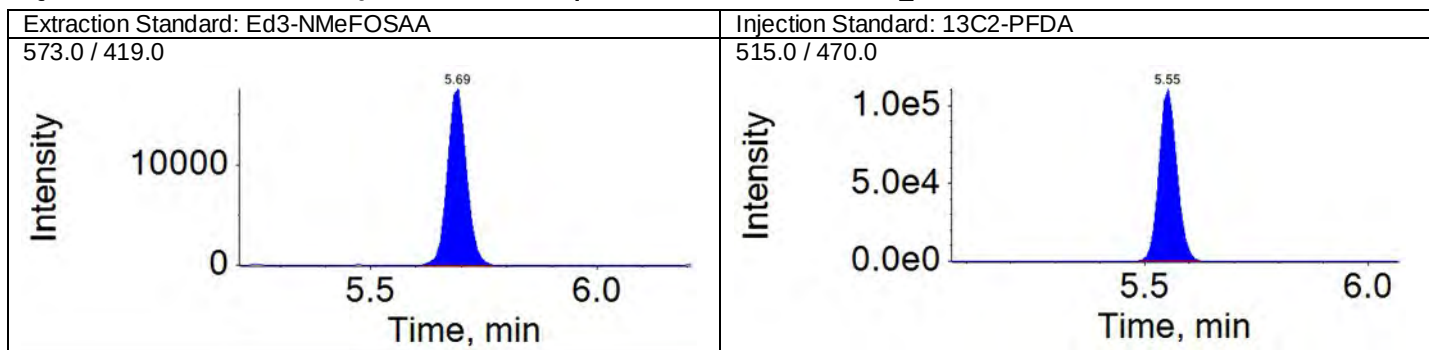
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



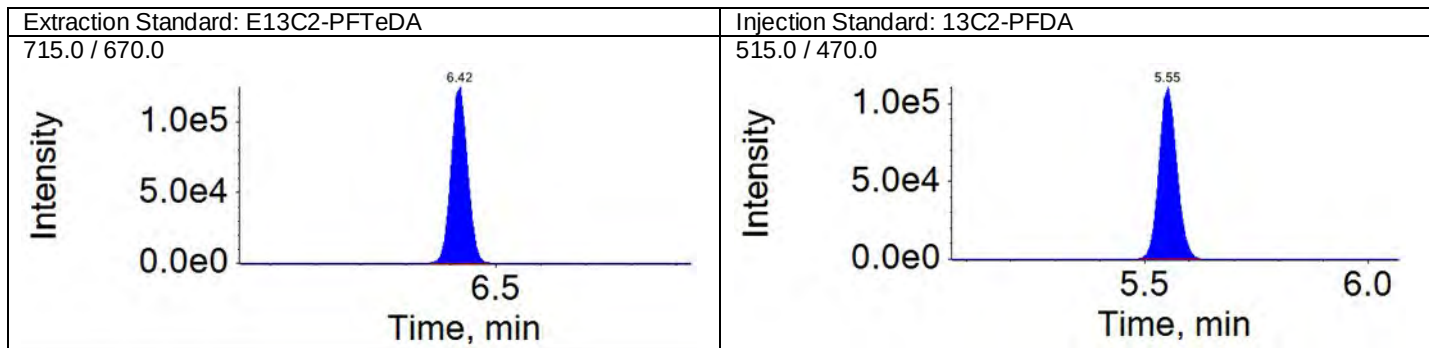
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

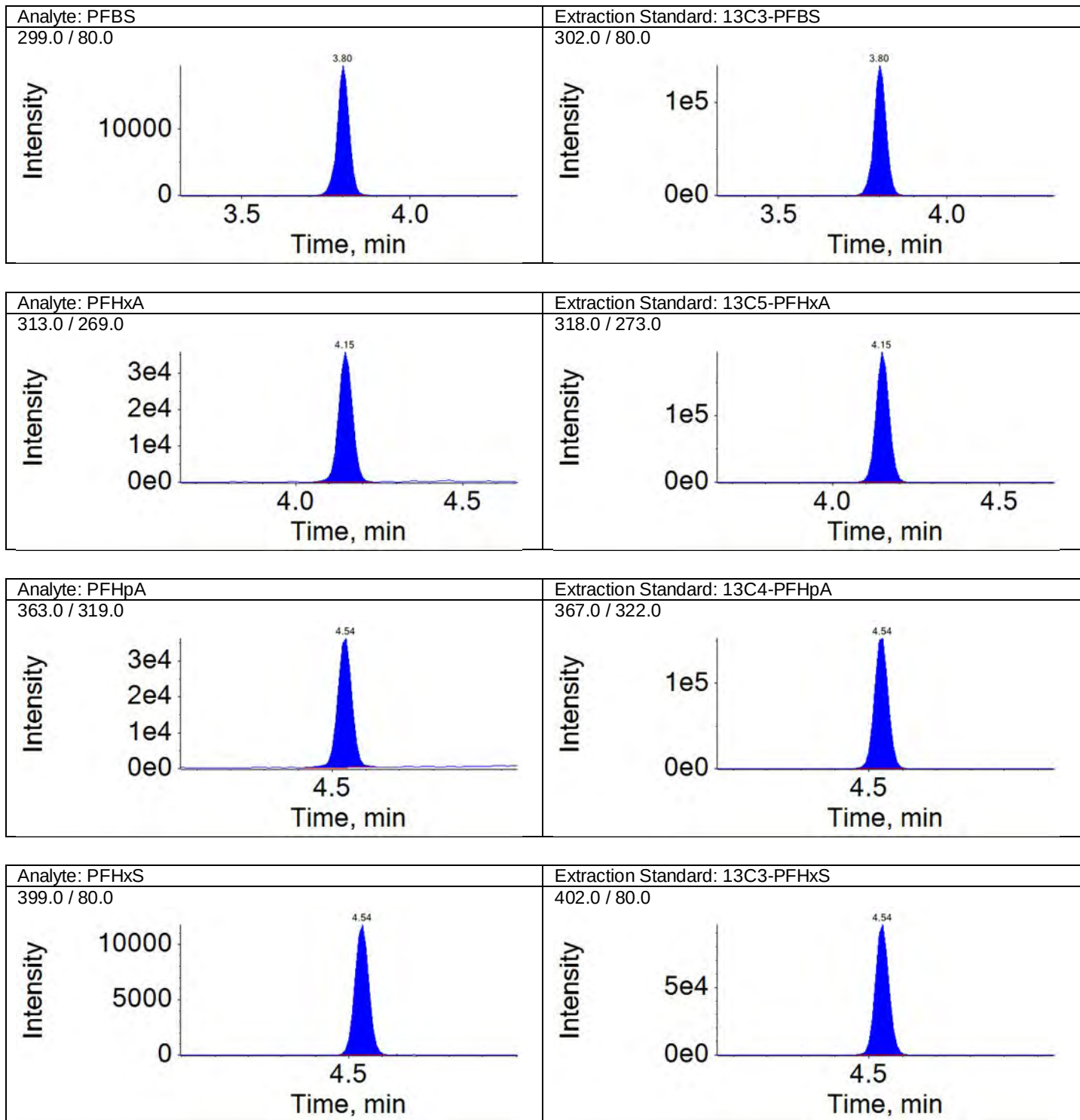
By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

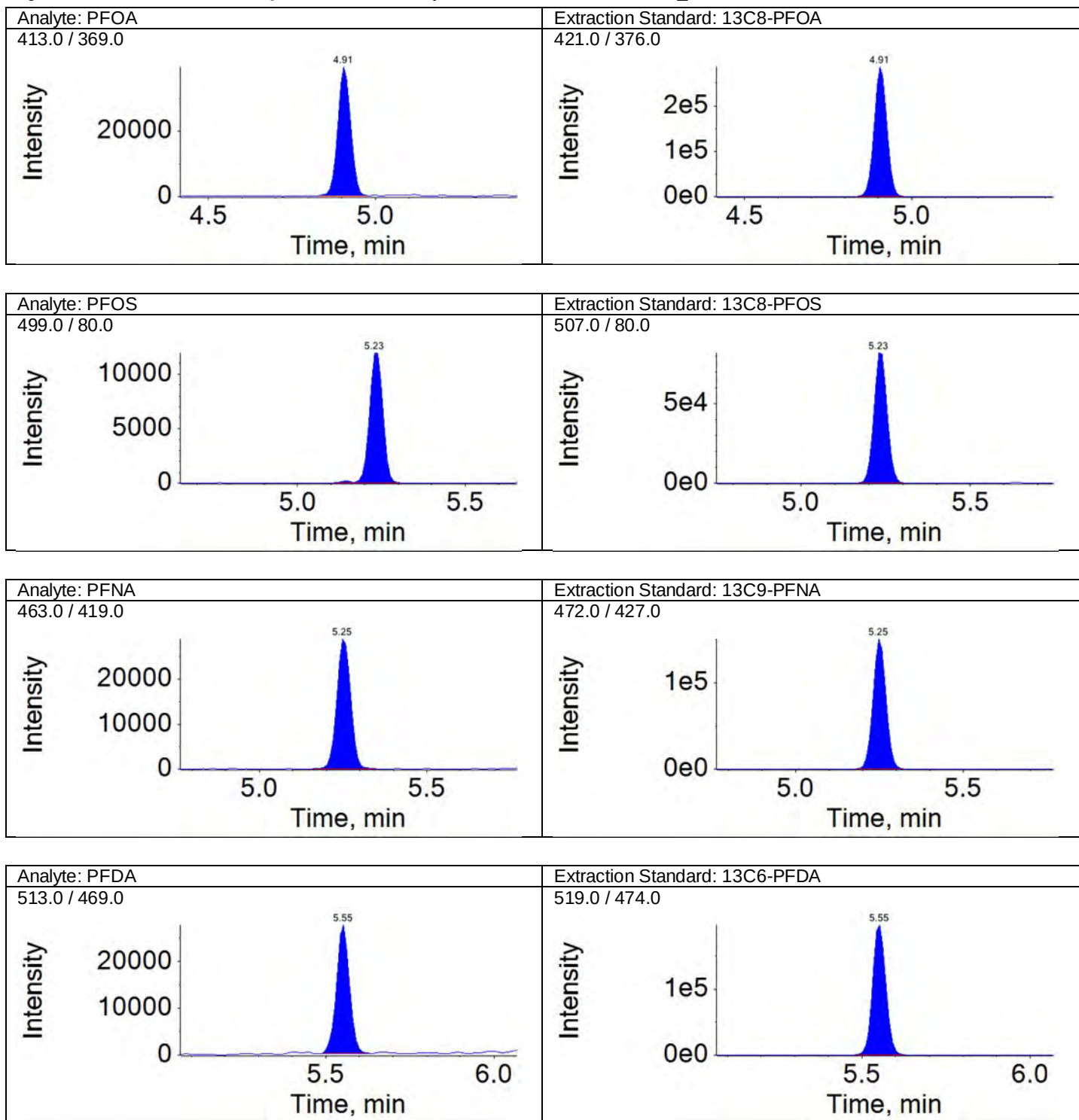
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



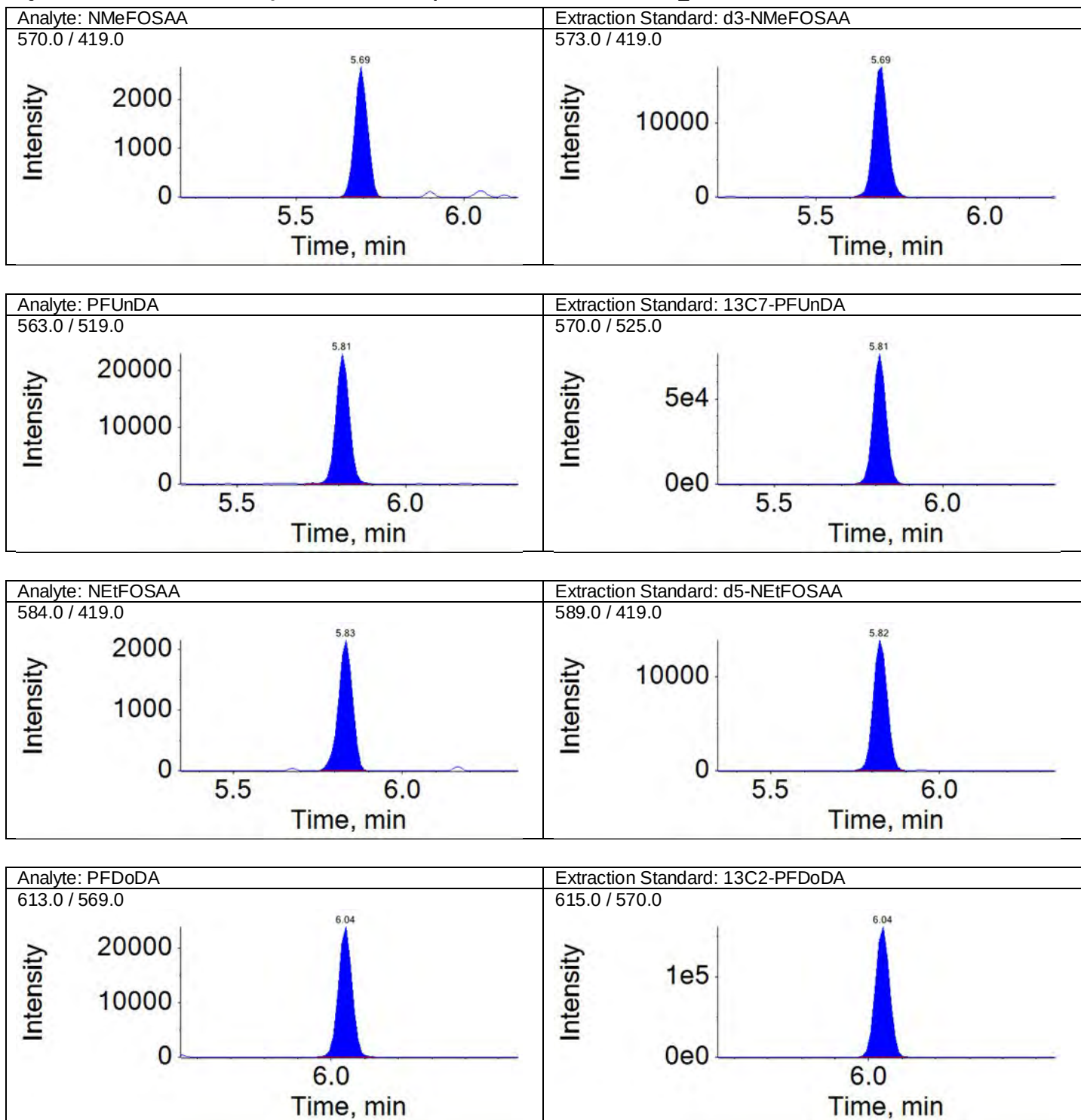
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



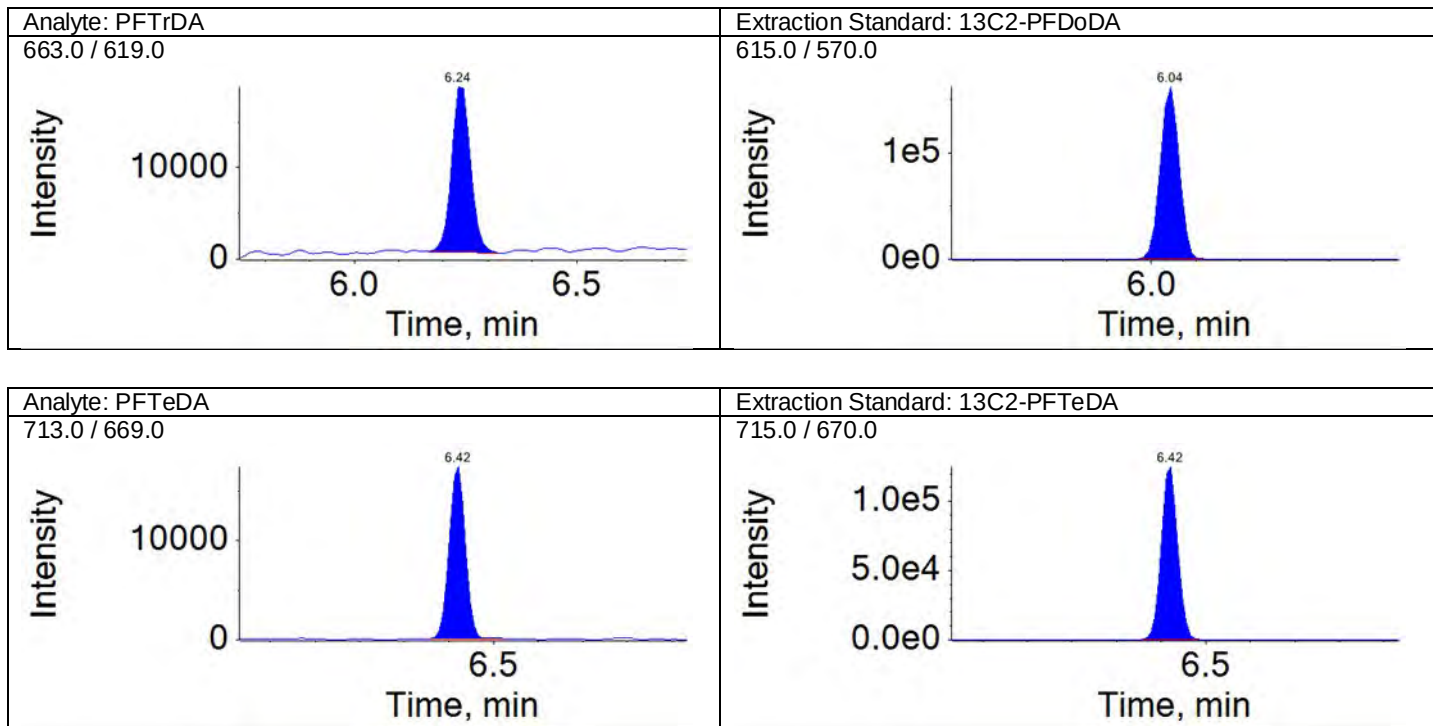
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

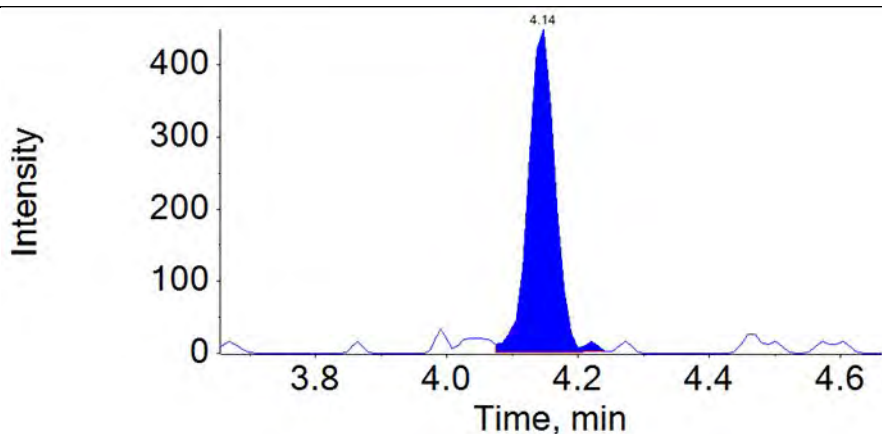
Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

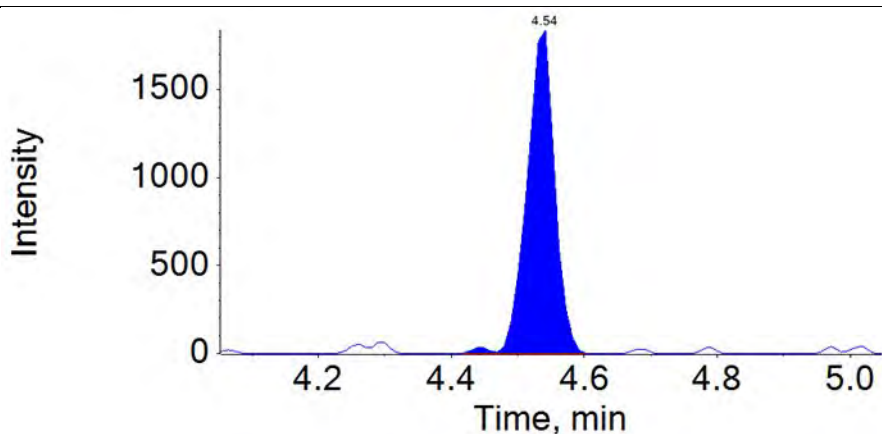
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxA_2
RT (min.):
4.14
Peak Area:
1279.5
Mass Range:
313.0 / 119.0
File Name:
18NOV13D-14.wiff
Sample Name:
9881909MSD



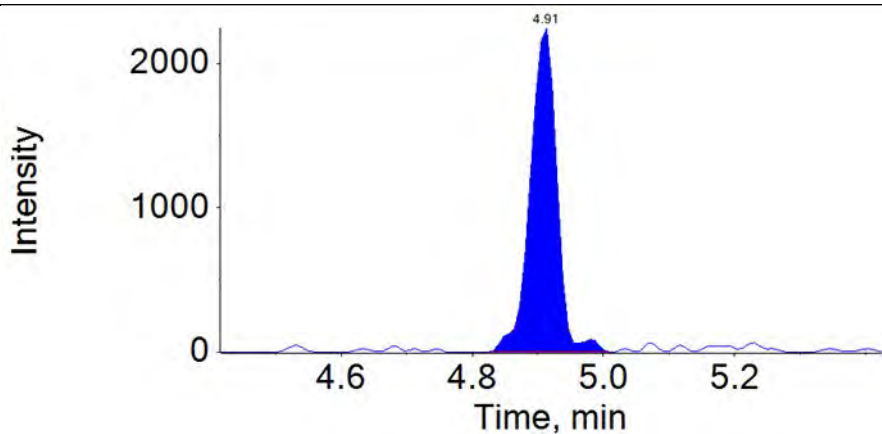
Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.54
Peak Area:
5369.7
Mass Range:
363.0 / 169.0
File Name:
18NOV13D-14.wiff
Sample Name:
9881909MSD



Integration Comment: incorrect integration

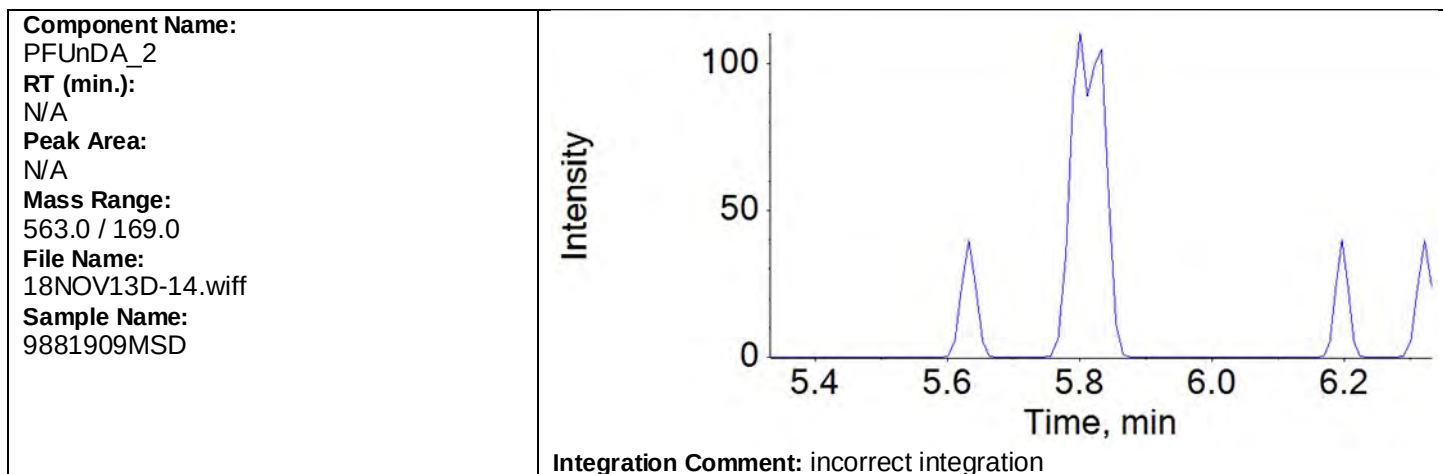
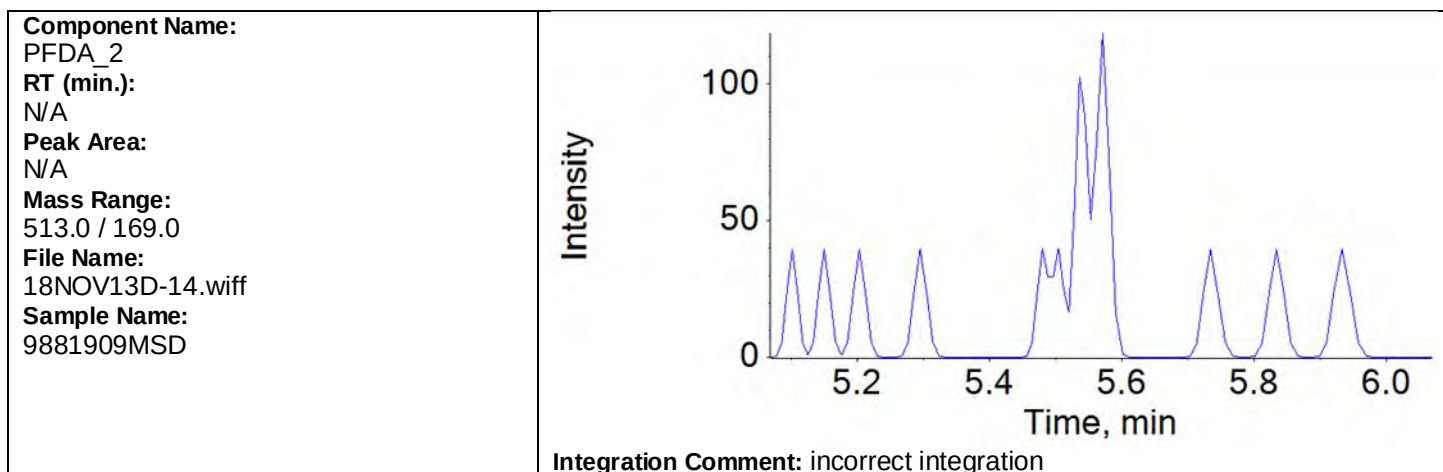
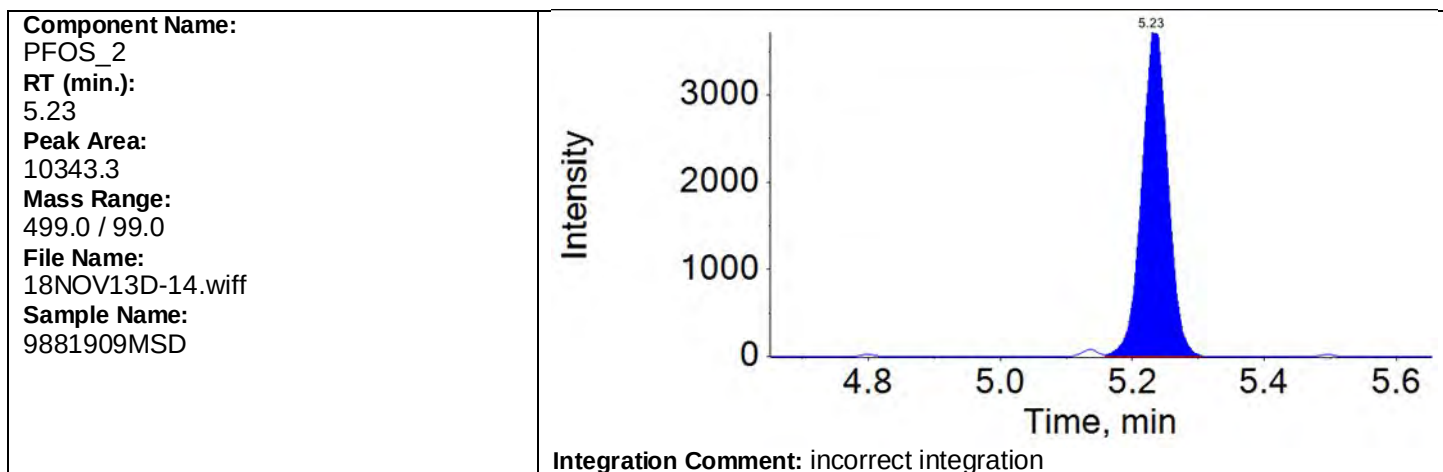
Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
6363.1
Mass Range:
413.0 / 169.0
File Name:
18NOV13D-14.wiff
Sample Name:
9881909MSD



Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

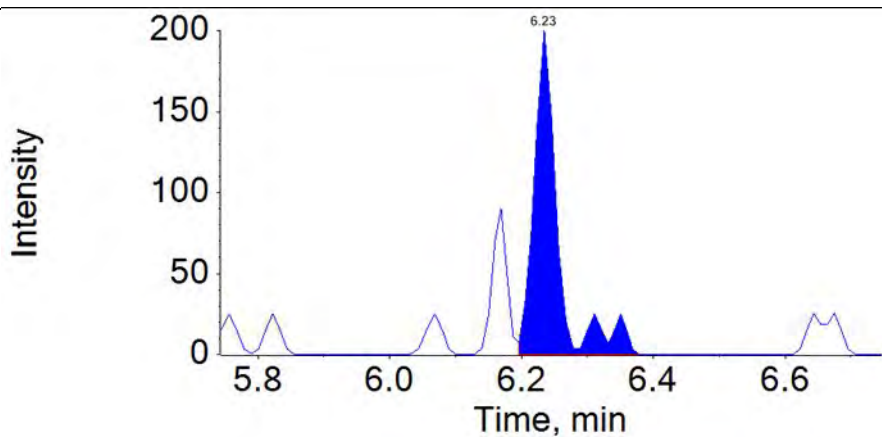
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

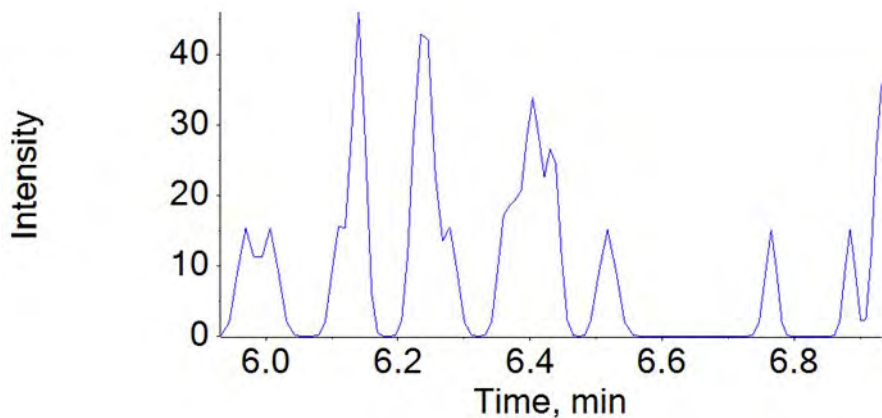
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTeDA_2
RT (min.):
6.23
Peak Area:
504.8
Mass Range:
663.0 / 169.0
File Name:
18NOV13D-14.wiff
Sample Name:
9881909MSD



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV13D-14.wiff
Sample Name:
9881909MSD



Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

APPROVED

By MCD at 10:39 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

Ion Ratio Report

Sample Name: 9881909MSD

Instrument Name: LM27631

File Name: 18NOV13D-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	3.80	1.00	48223.5	A	N/A	0.3531			
PFBS_2	3.80	1.00	17028.3	A	N/A	0.3531	-2	50	
PFHxA	4.15	1.00	103155.2	A	N/A	0.0122			
PFHxA_2	4.14	1.00	1258.8	M	N/A	0.0122	5	50	
PFHpA	4.54	1.00	106403.8	A	N/A	0.0499			
PFHpA_2	4.54	1.00	5306.3	M	N/A	0.0499	-11	50	
PFHxS	4.54	1.00	34098.0	A	N/A	0.3818			
PFHxS_2	4.54	1.00	13018.6	A	N/A	0.3818	26	50	
PFOA	4.91	1.00	105562.9	A	N/A	0.0589			
PFOA_2	4.91	1.00	6221.7	M	N/A	0.0589	5	50	
PFOS	5.23	1.00	33369.4	A	N/A	0.3140			
PFOS_2	5.23	1.00	10477.4	M	N/A	0.3140	21	50	
PFNA	5.25	1.00	83212.0	A	N/A	0.0183			
PFNA_2	5.25	1.00	1519.1	A	N/A	0.0183	-21	50	
PFDA	5.55	1.00	73598.1	A	N/A	0.0056			
PFDA_2	5.56	1.00	410.0	M	N/A	0.0056	-31	50	
NMeFOSAA	5.69	1.00	7051.8	A	N/A	0.2153			
NMeFOSAA_2	5.70	1.00	1518.4	A	N/A	0.2153	1	50	
PFUnDA	5.81	1.00	63219.4	A	N/A	0.0062			
PFUnDA_2	5.81	1.00	390.6	M	N/A	0.0062	46	50	
NEtFOSAA	5.83	1.00	6214.9	A	N/A	0.6246			
NEtFOSAA_2	5.83	1.00	3881.9	A	N/A	0.6246	5	50	
PFDoDA	6.04	1.00	67852.3	A	N/A	0.0092			
PFDoDA_2	6.03	1.00	627.0	A	N/A	0.0092	-45	50	
PFTTrDA	6.24	1.03	53476.0	A	N/A	0.0081			
PFTTrDA_2	6.23	1.03	431.6	M	N/A	0.0081	-14	50	
PFTeDA	6.42	1.00	43812.1	A	N/A	0.0032			
PFTeDA_2	6.41	1.00	140.3	M	N/A	0.0032	-51	50	OOS

APPROVED

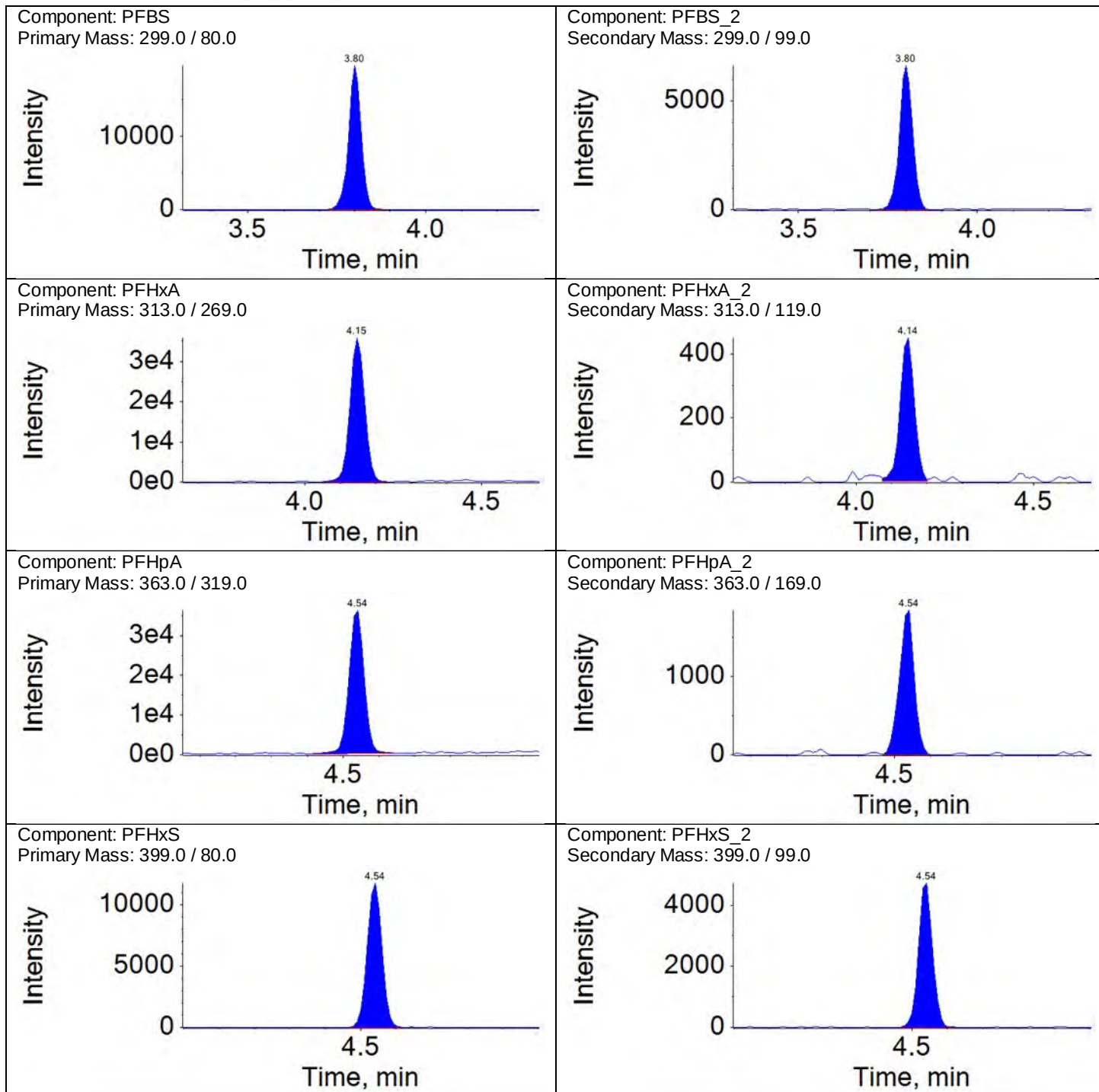
By MCD at 10:39 pm, 11/13/18

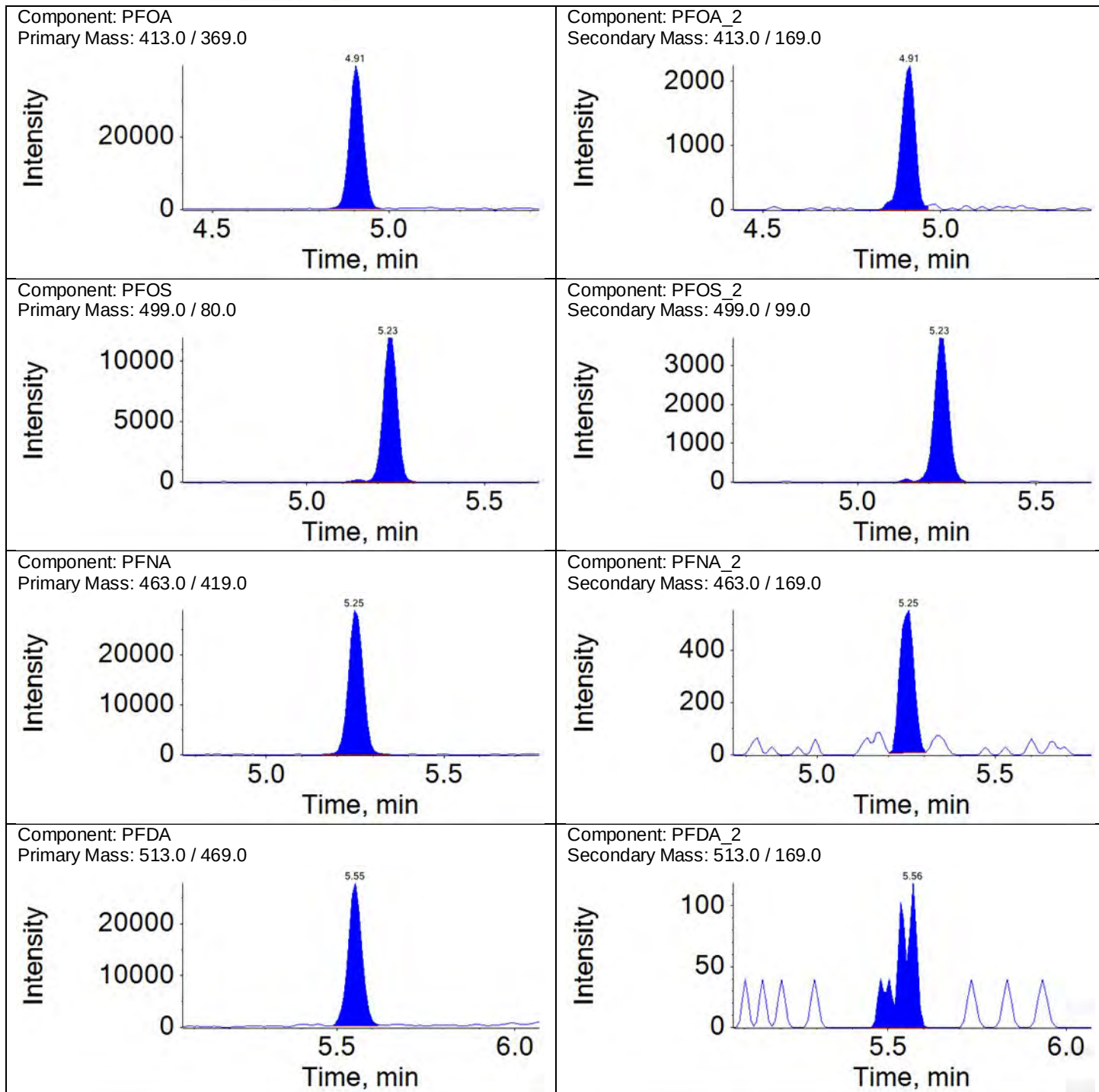
BSI05 Page 1498 of 1595

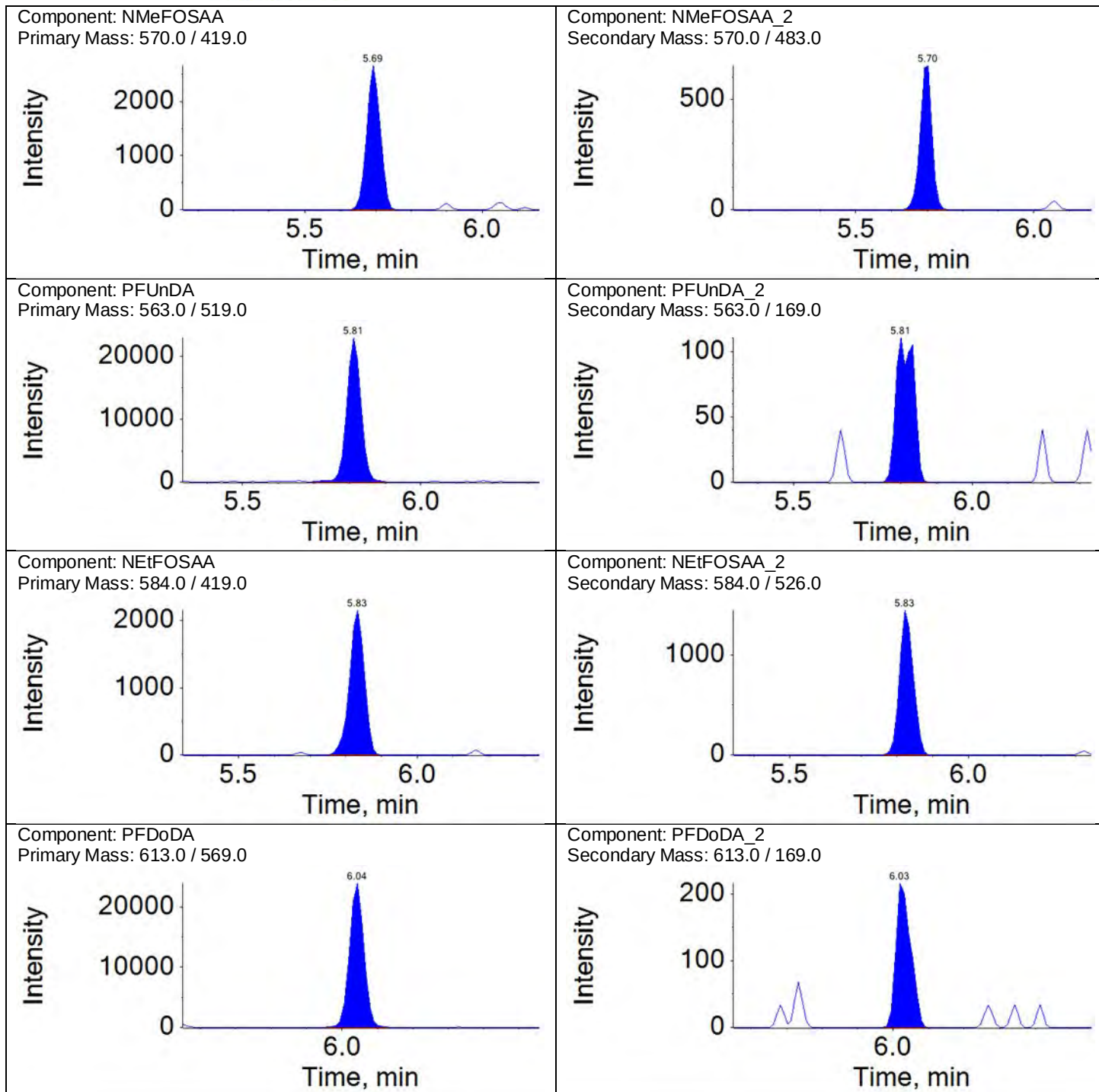
REVIEWED

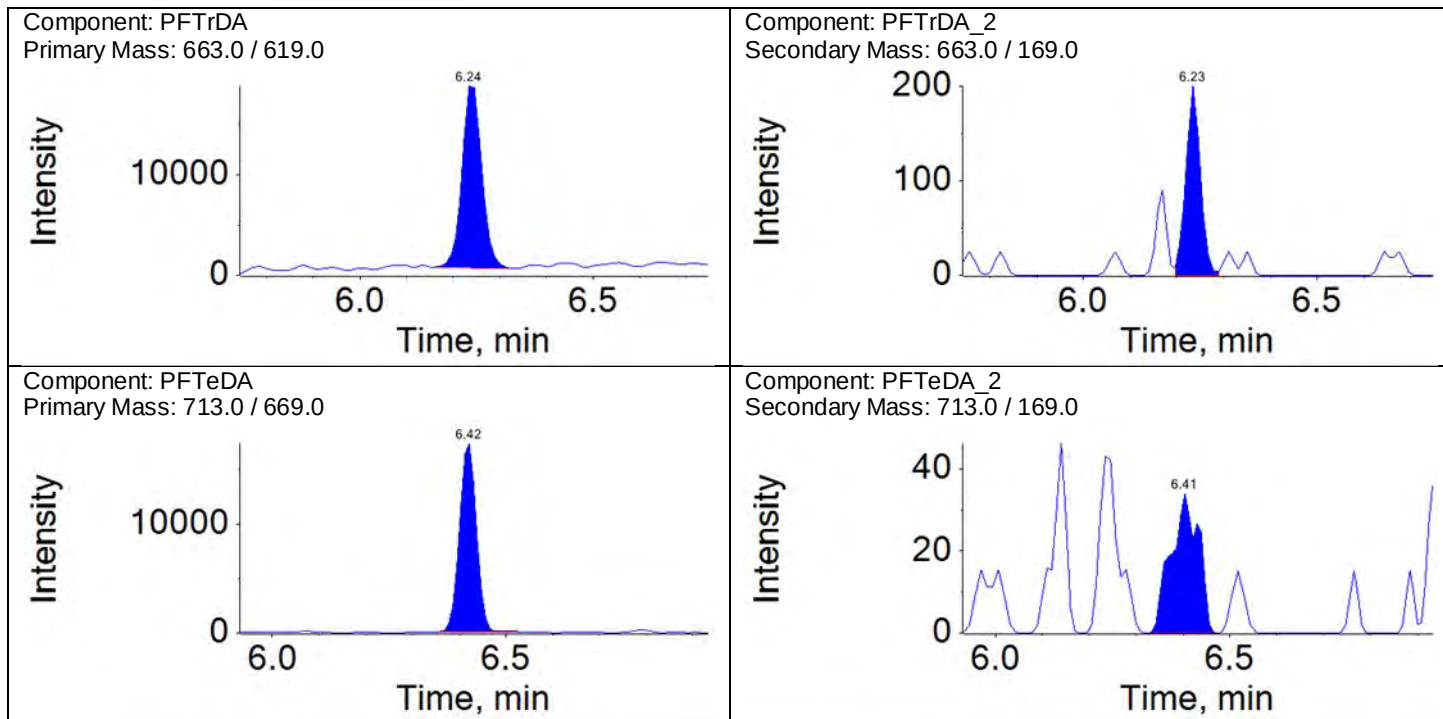
By HMK at 2:12 pm, 11/14/18

Page 1 of 5







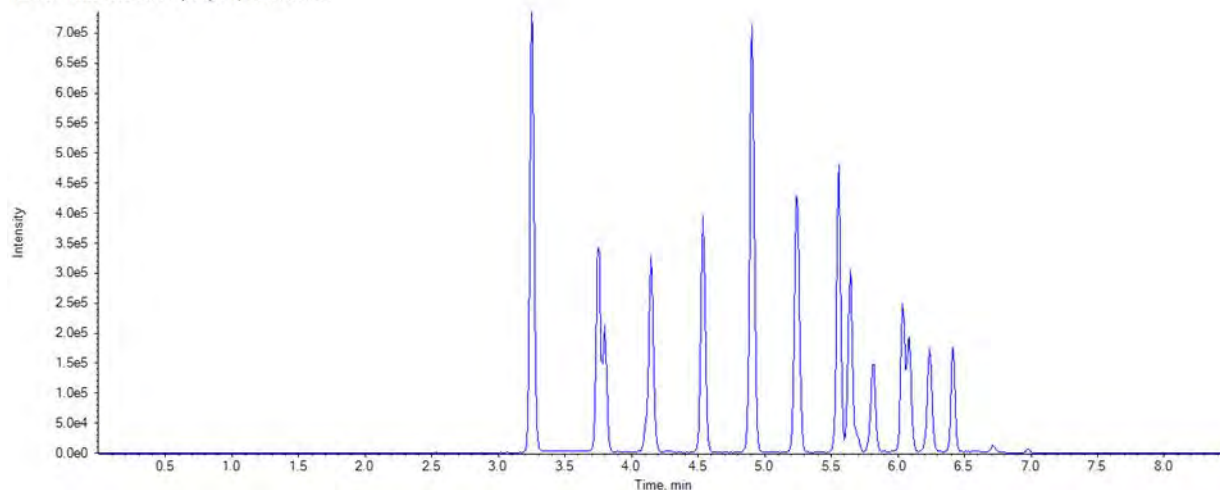


Matrix Spike Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QMResult Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881909MSDRE	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-02-01 MSD Grab Soil	18NOV08D-78.wiff	2018-11-08T23:23:13

TIC from 18NOV08D-78.wiff (sample 1) - 9881909MSD



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	5.00	864158.0	728839.7	19	50	
13C2-PFOA	5.00	603918.9	491983.1	23	50	
13C4-PFOS	4.78	323492.9	255568.1	27	50	
13C2-PFDA	5.00	371717.1	315407.5	18	50	

APPROVED

By JPT at 2:33 pm, 11/14/18

BSI05 Page 1503 of 1595

REVIEWED

By HMK at 2:39 pm, 11/14/18

Page 1 of 3

Matrix Spike Recovery

ICAL Name: 18NOV07DCAL Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9881909MSDRE	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-02-01 MSD Grab Soil	18NOV08D-78.wiff	2018-11-08T23:23:13

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	51329.8	352344.6	0.146	1.167	1.426	122	70-130	
PFHxA	117506.4	575178.1	0.204	1.320	1.701	129	70-130	
PFHxS	42561.1	282633.1	0.151	1.249	1.482	119	70-130	
PFHpA	122507.7	458483.1	0.267	1.320	1.745	132	70-130	OOS
PFOA	126340.7	805879.7	0.157	1.320	1.714	130	70-130	
PFOS	38843.4	247883.0	0.157	1.262	1.578	125	70-130	
PFNA	98728.4	422989.6	0.233	1.320	1.694	128	70-130	
PFDA	81690.4	519614.0	0.157	1.320	1.679	127	70-130	
NMeFOSAA	7806.9	59252.9	0.132	1.320	1.316	100	70-130	
PFUnDA	63491.9	228731.8	0.278	1.320	1.546	117	70-130	
NEtFOSAA	6638.3	47031.9	0.141	1.320	1.178	89	70-130	
PFDODA	72431.4	480150.3	0.151	1.320	1.587	120	70-130	
PFTTrDA	56059.9	480150.3	0.117	1.320	1.430	108	70-130	
PFTeDA	45990.9	333956.6	0.138	1.320	1.570	119	70-130	

APPROVED

By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Matrix Spike Recovery
Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 2:33 pm, 11/14/18

REVIEWED
By HMK at 2:39 pm, 11/14/18

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881909MSDRE			Data File:		18NOV08D-78.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18310012 OU1-CAOC21-S-02-01 MSD Grab Soil			Acquis Date:		2018-11-08T23:23:13
Sample Type:	Quality Control			Instrument:		LM27631
Vial Position:	20			Acquis Method:		18AUG13_3uL.dam
Injection Vol:	3.00			Result Table:		18310012_Batch QC+9881916
QMethod File:	18AUG20QM			ICAL Name:		18NOV07DCAL
Batch Number:	18310012			Operator:		MCD7824
Sample Wt.:	1.03000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 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	864158.0	728839.7	19	50	
13C2-PFOA	5.0	603918.9	491983.1	23	50	
13C4-PFOS	4.8	323492.9	255568.1	27	50	
13C2-PFDA	5.0	371717.1	315407.5	18	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	352344.6	13C3-PFBA	864158.0	0.408	9.029	5.810	64	50-150	
E13C5-PFHxA	575178.1	13C2-PFOA	603918.9	0.952	9.709	6.803	70	50-150	
E13C3-PFHxS	282633.1	13C2-PFOA	603918.9	0.468	9.184	6.524	71	50-150	
E13C4-PFHpA	458483.1	13C2-PFOA	603918.9	0.759	9.709	6.706	69	50-150	
E13C8-PFOA	805879.7	13C2-PFOA	603918.9	1.334	9.709	7.226	74	50-150	
E13C8-PFOS	247883.0	13C4-PFOS	323492.9	0.766	9.282	6.579	71	50-150	
E13C9-PFNA	422989.6	13C4-PFOS	323492.9	1.308	9.709	6.935	71	50-150	
E13C6-PFDA	519614.0	13C2-PFDA	371717.1	1.398	9.709	6.826	70	50-150	
Ed3-NMeFOSAA	59252.9	13C2-PFDA	371717.1	0.159	9.709	5.756	59	50-150	
E13C7-PFUnDA	228731.8	13C2-PFDA	371717.1	0.615	9.709	6.893	71	50-150	
Ed5-NEtFOSAA	47031.9	13C2-PFDA	371717.1	0.127	9.709	5.686	59	50-150	
E13C2-PFDODA	480150.3	13C2-PFDA	371717.1	1.292	9.709	6.762	70	50-150	
E13C2-PFTeDA	333956.6	13C2-PFDA	371717.1	0.898	9.709	6.280	65	50-150	

APPROVED

By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

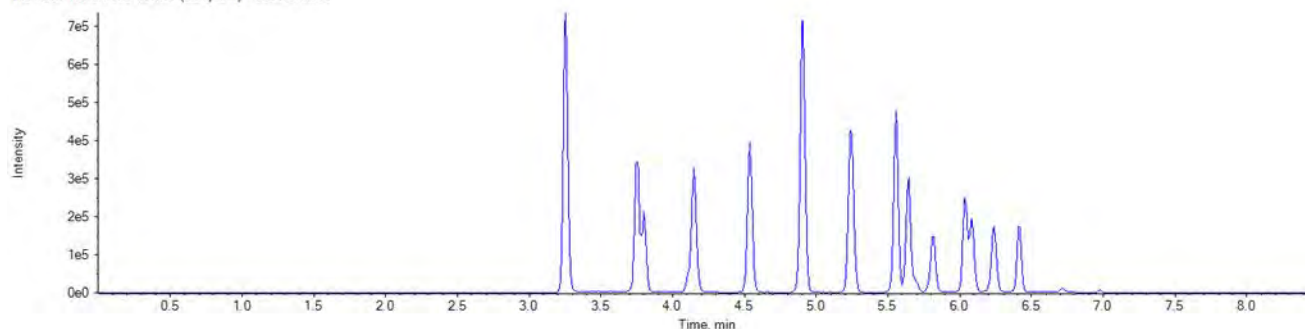
Sample Name: 9881909MSDRE Instrument Name: LM27631 File Name: 18NOV08D-78.wiff

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	3.80	1.000	51329.8		A	13C3-PFBS	3.80	352344.6	0.146	1.426
PFHxA	4.15	1.000	117506.4		A	13C5-PFHxA	4.15	575178.1	0.204	1.701
PFHxS	4.54	1.000	42561.1		A	13C3-PFHxS	4.54	282633.1	0.151	1.482
PFHpA	4.54	1.000	122507.7		A	13C4-PFHpA	4.54	458483.1	0.267	1.745
PFOA	4.90	1.000	126340.7		A	13C8-PFOA	4.91	805879.7	0.157	1.714
PFOS	5.23	1.000	38843.4		M	13C8-PFOS	5.23	247883.0	0.157	1.578
PFNA	5.25	1.000	98728.4		A	13C9-PFNA	5.25	422989.6	0.233	1.694
PFDA	5.55	1.000	81690.4		A	13C6-PFDA	5.56	519614.0	0.157	1.679
NMeFOSAA	5.70	1.000	7806.9		A	d3-NMeFOSAA	5.69	59252.9	0.132	1.316
PFUnDA	5.81	1.000	63491.9		A	13C7-PFUnDA	5.81	228731.8	0.278	1.546
NEtFOSAA	5.83	1.000	6638.3		A	d5-NEtFOSAA	5.82	47031.9	0.141	1.178
PFDODA	6.04	1.000	72431.4		A	13C2-PFDODA	6.04	480150.3	0.151	1.587
PFTTrDA	6.23	1.030	56059.9		A	13C2-PFDODA	6.04	480150.3	0.117	1.430
PFTeDA	6.41	1.000	45990.9		A	13C2-PFTeDA	6.41	333956.6	0.138	1.570

Total Ion Chromatogram

TIC from 18NOV08D-78.wiff (sample 1) - 9881909MSD



APPROVED

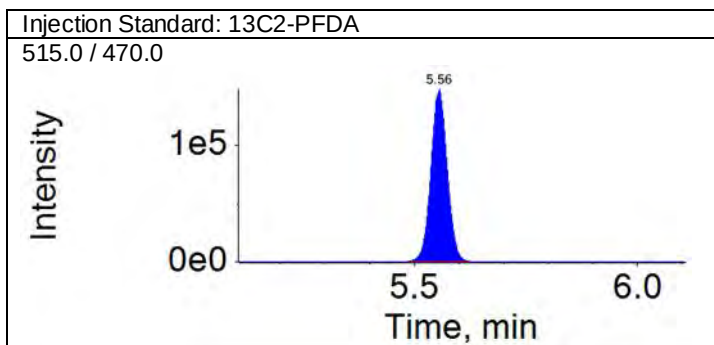
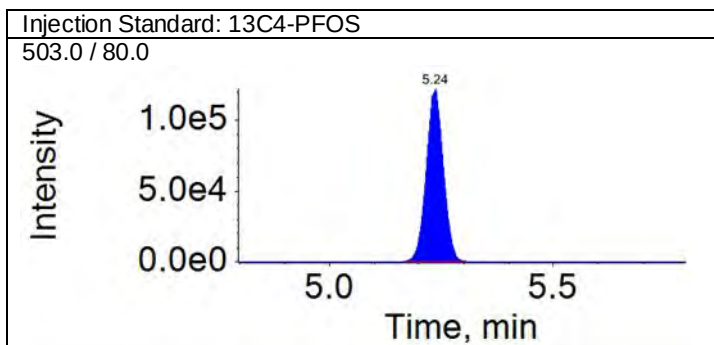
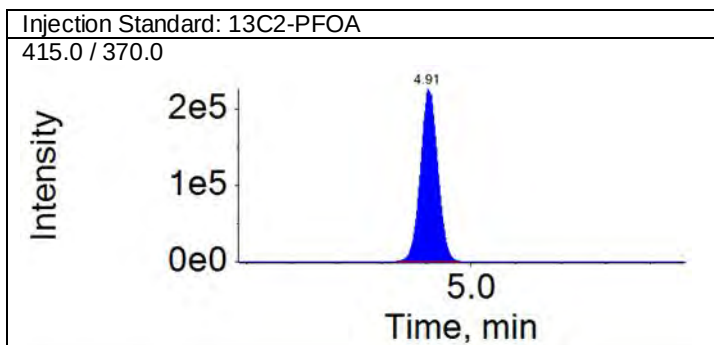
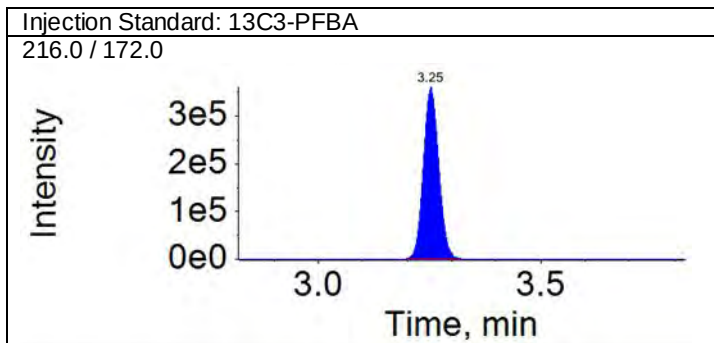
By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

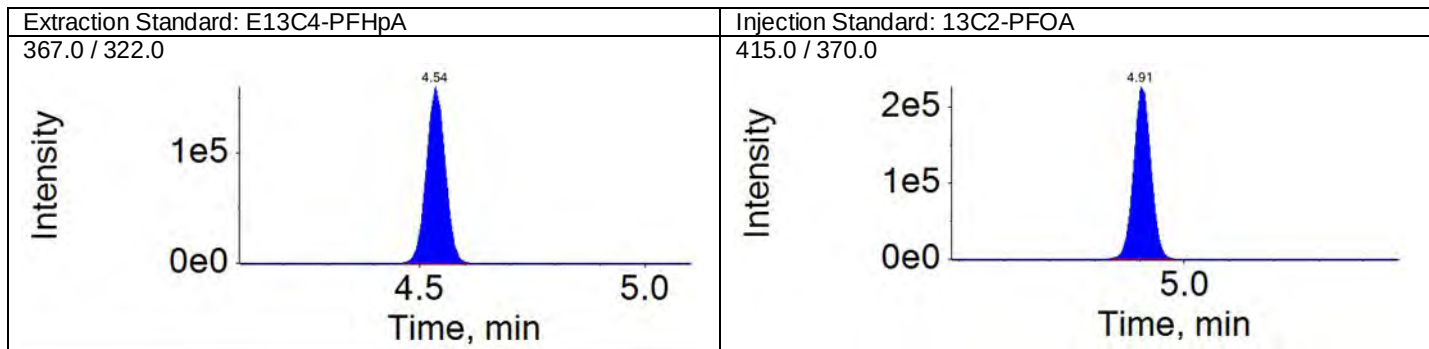
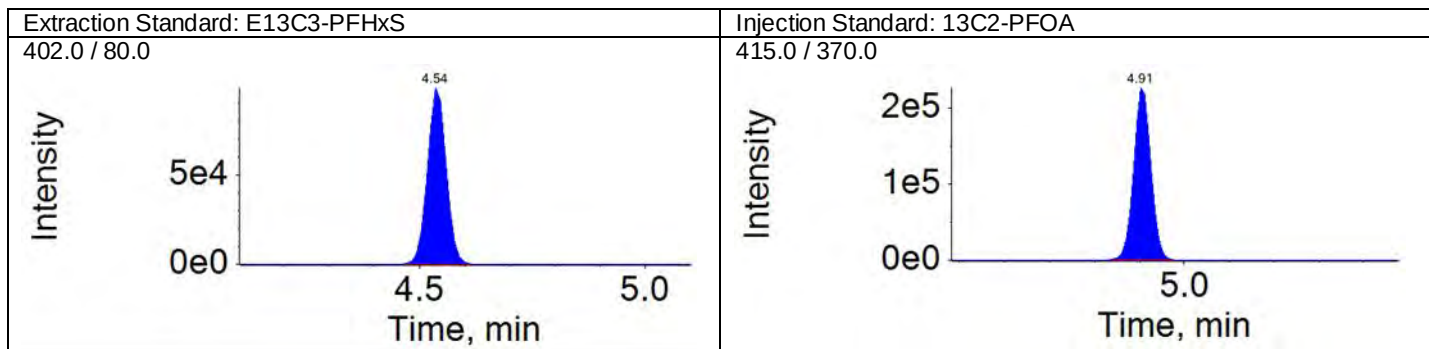
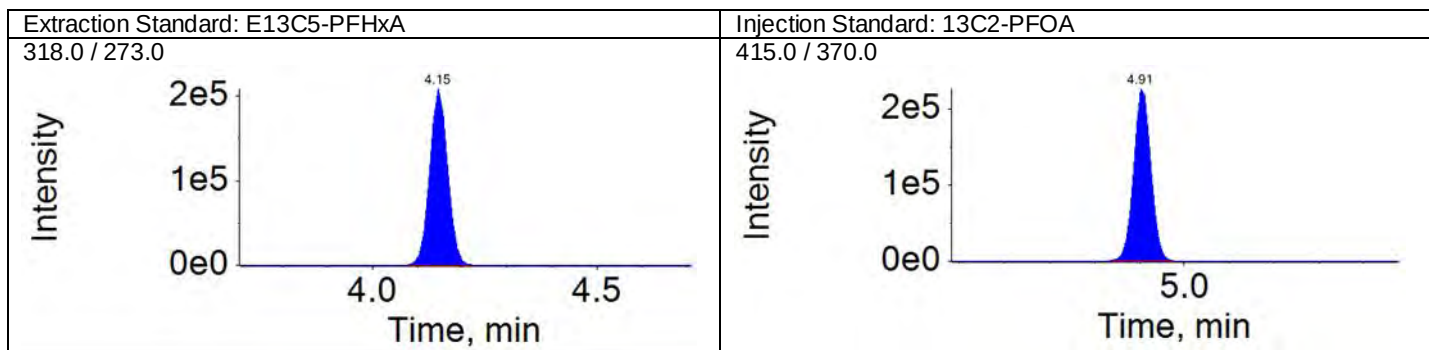
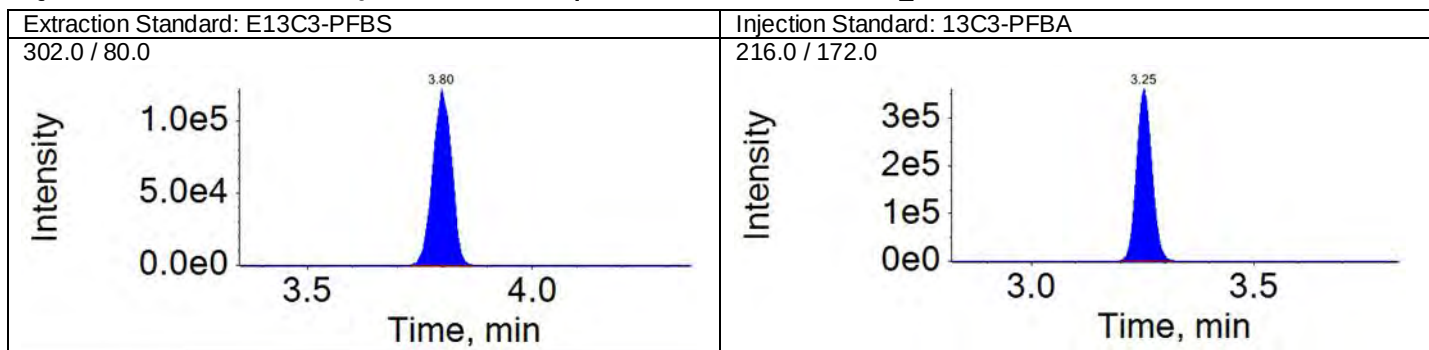
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



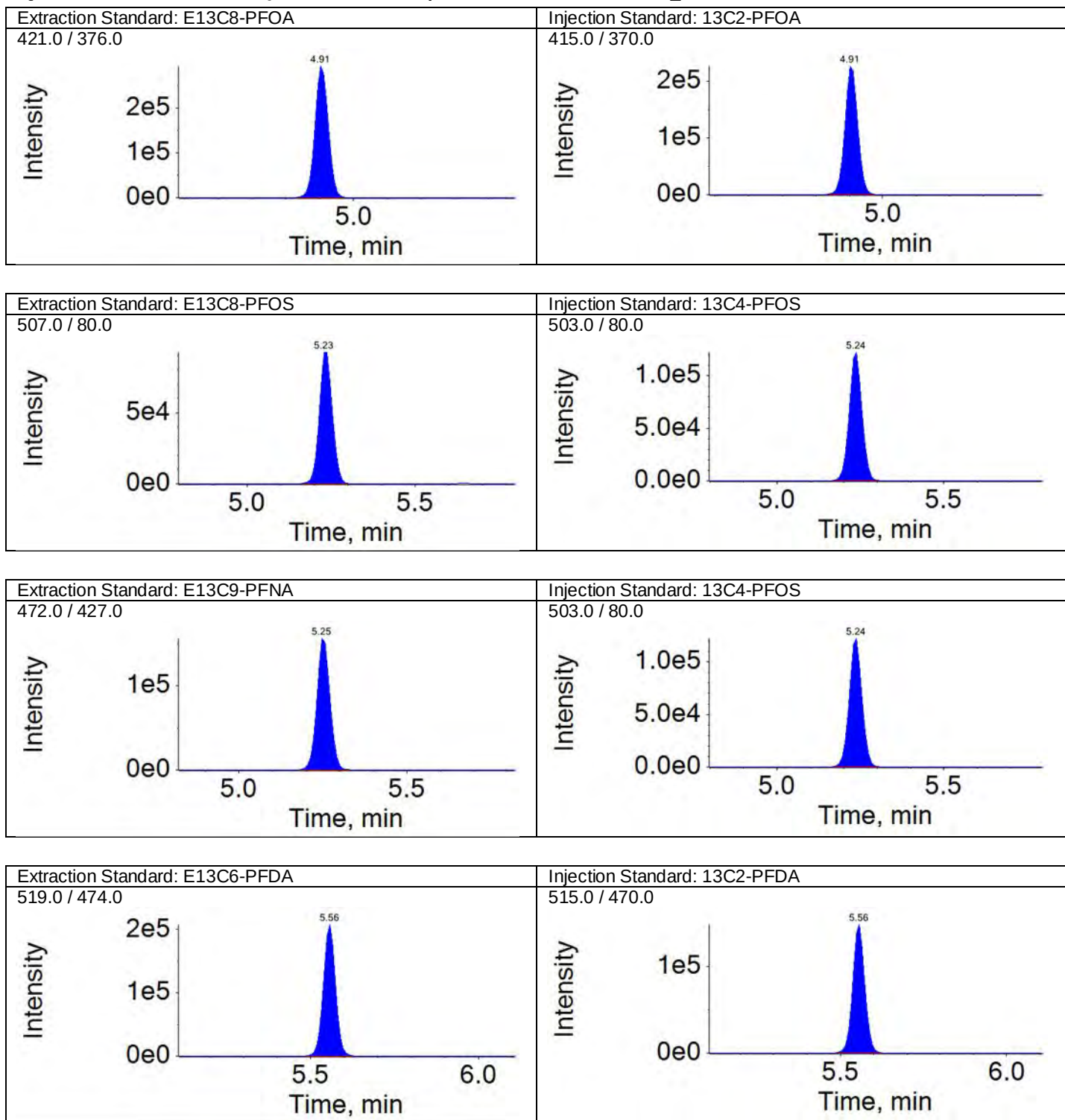
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



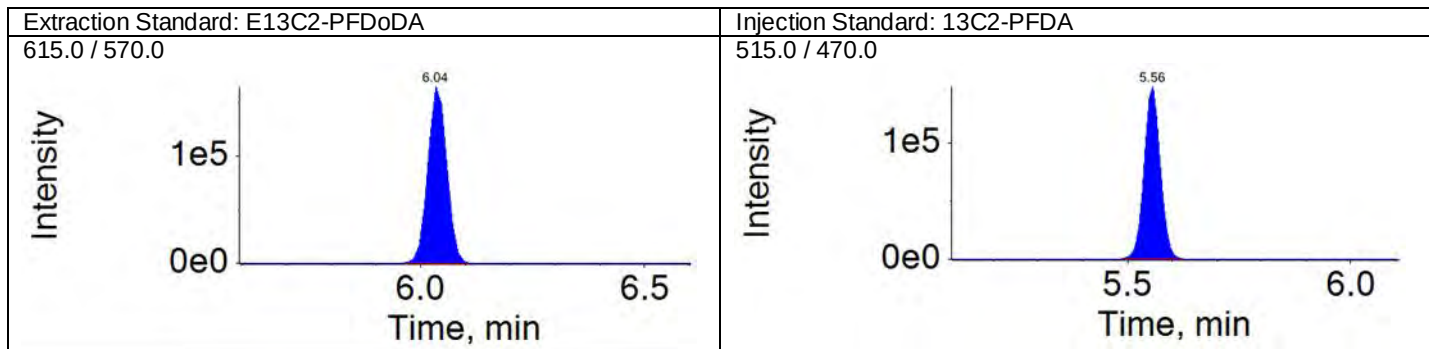
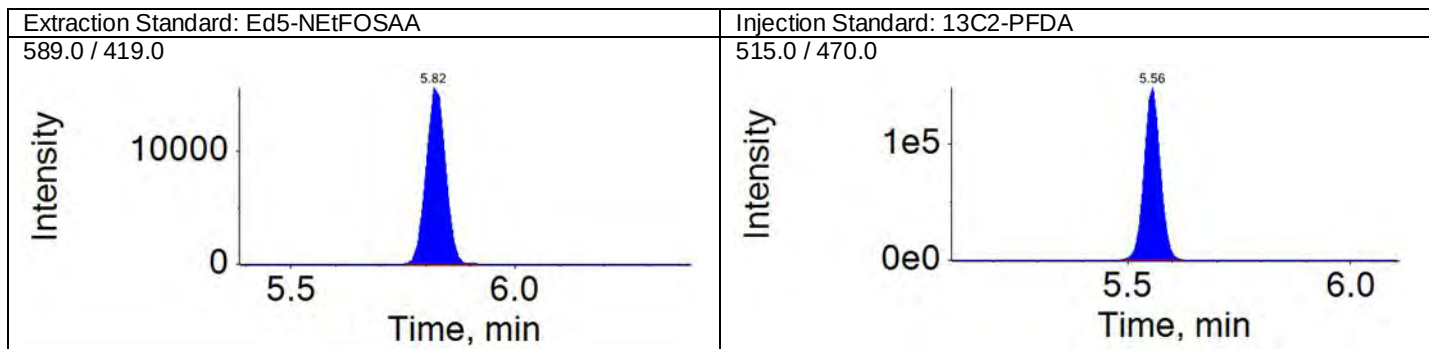
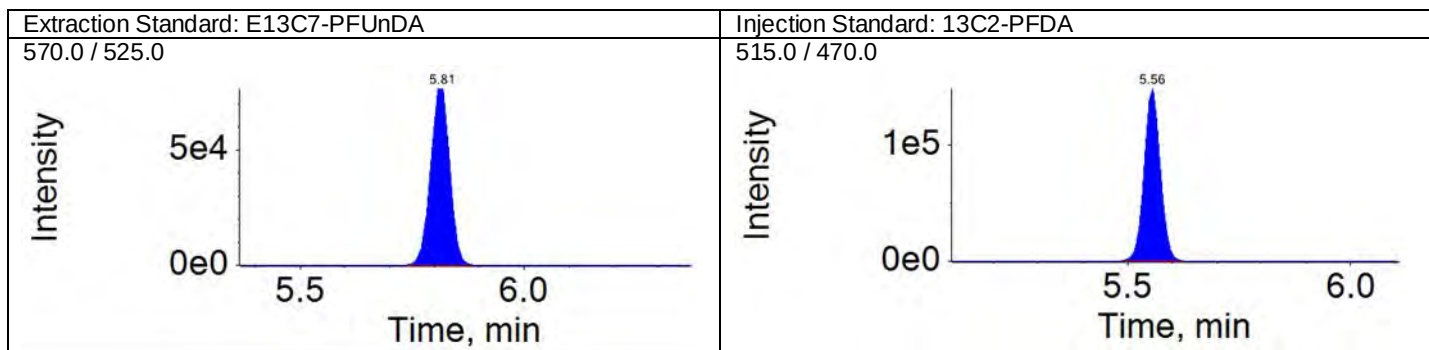
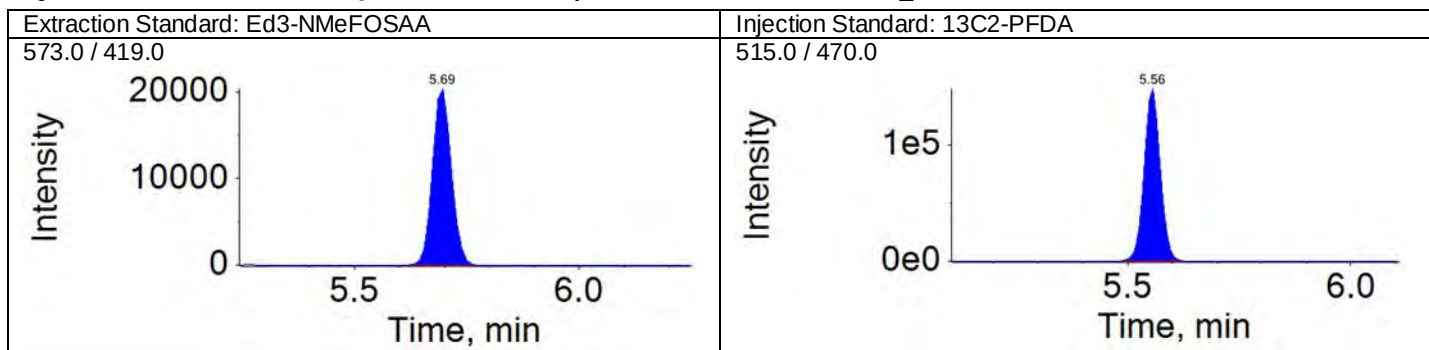
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

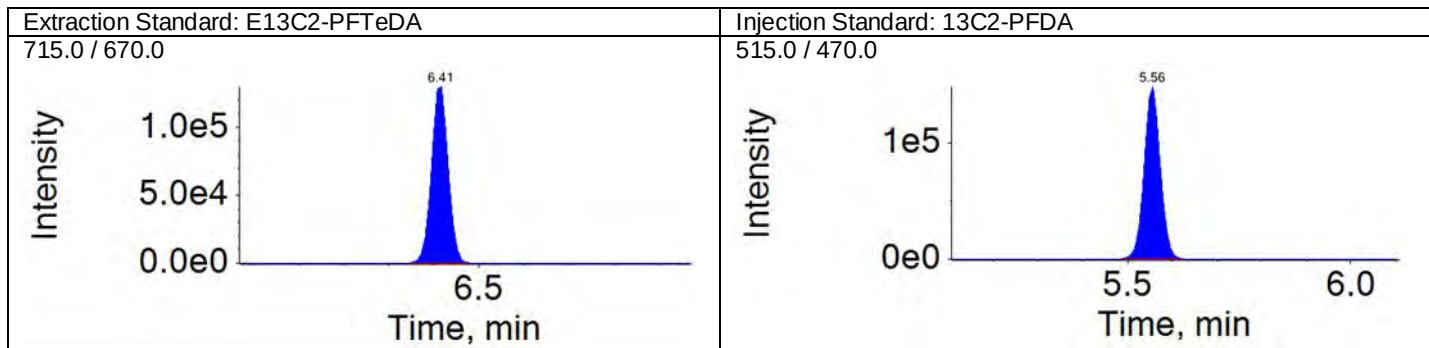
By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

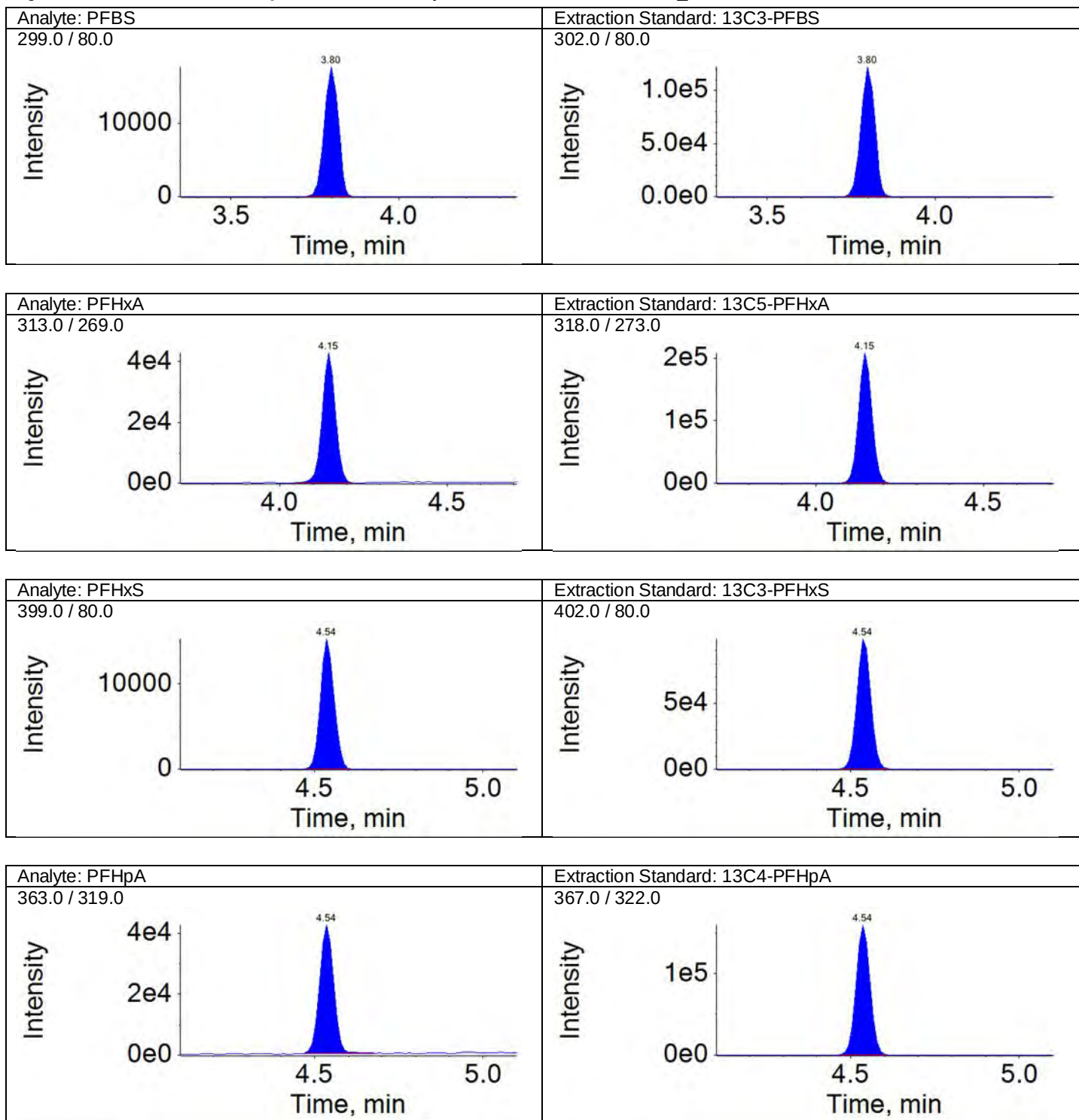
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



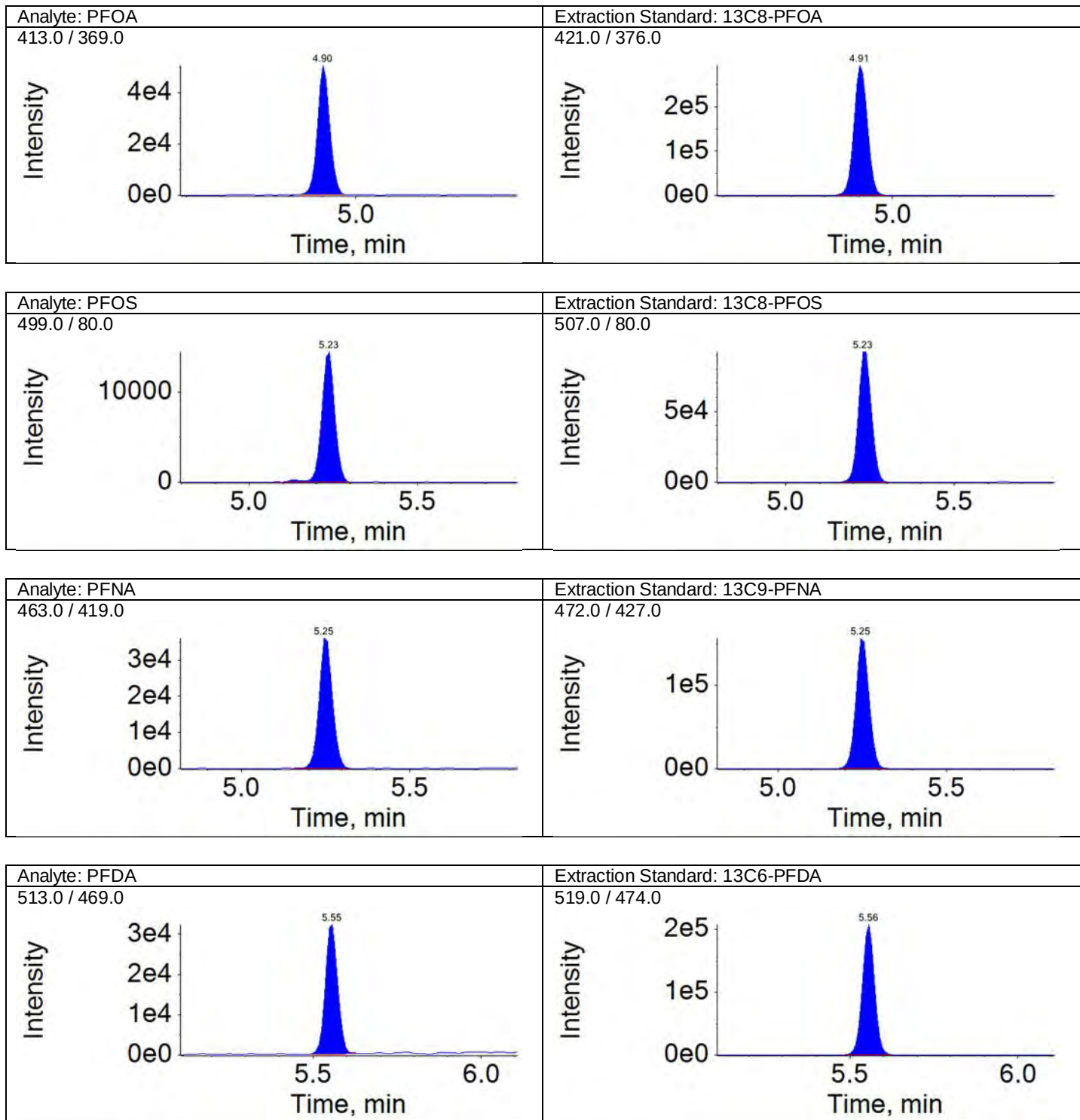
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

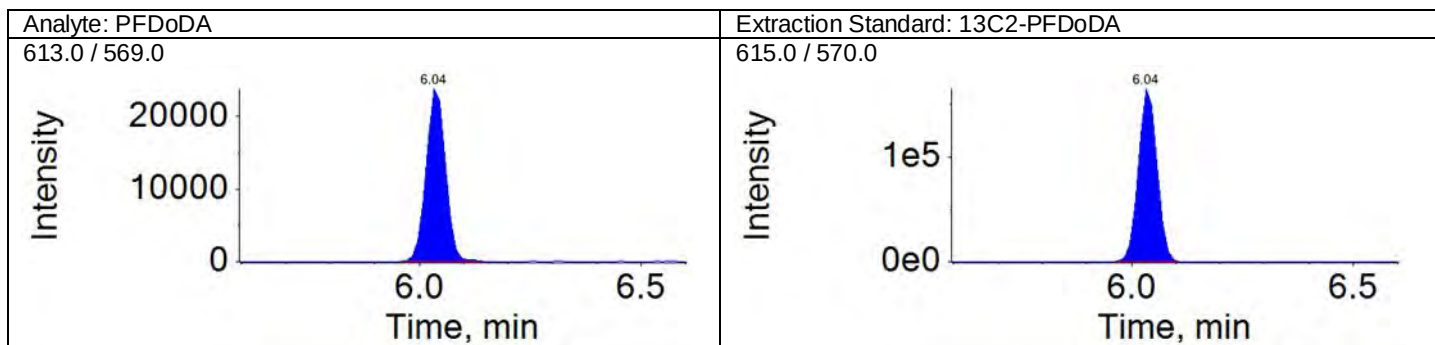
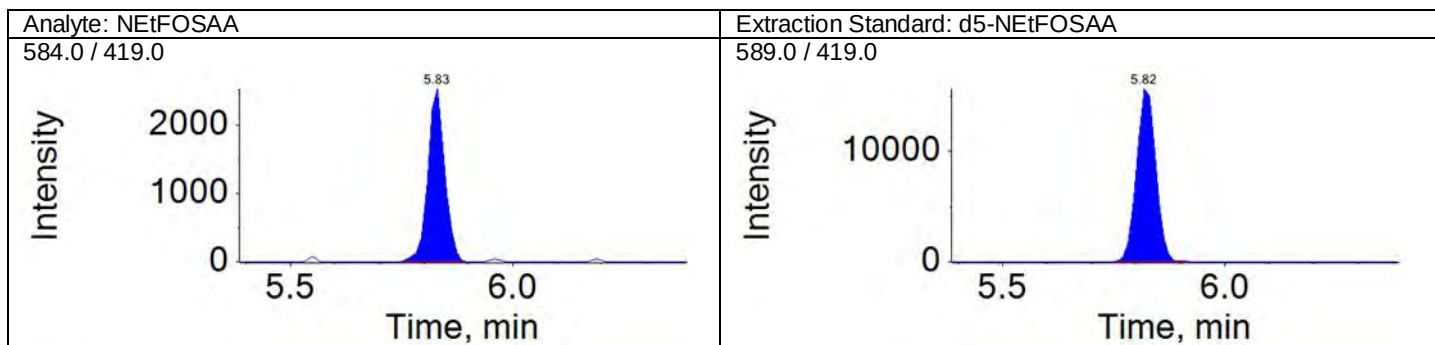
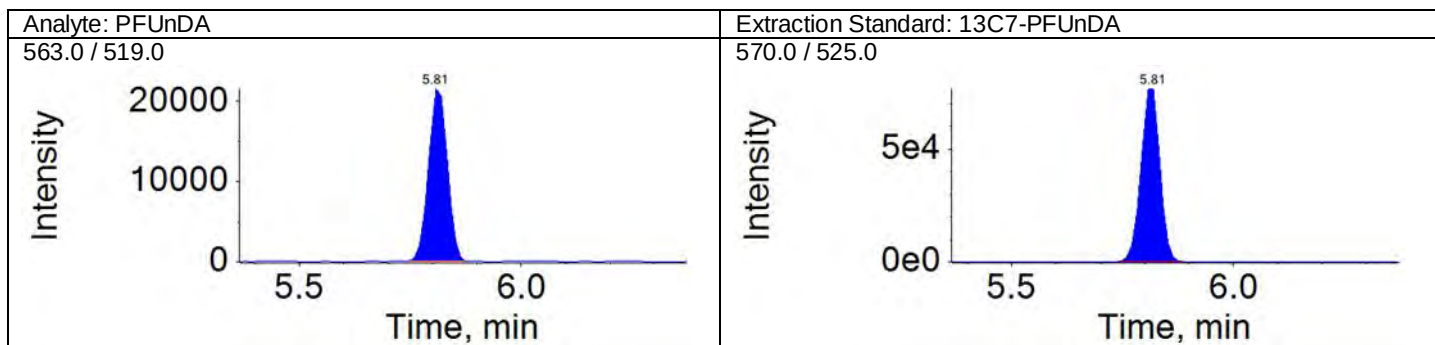
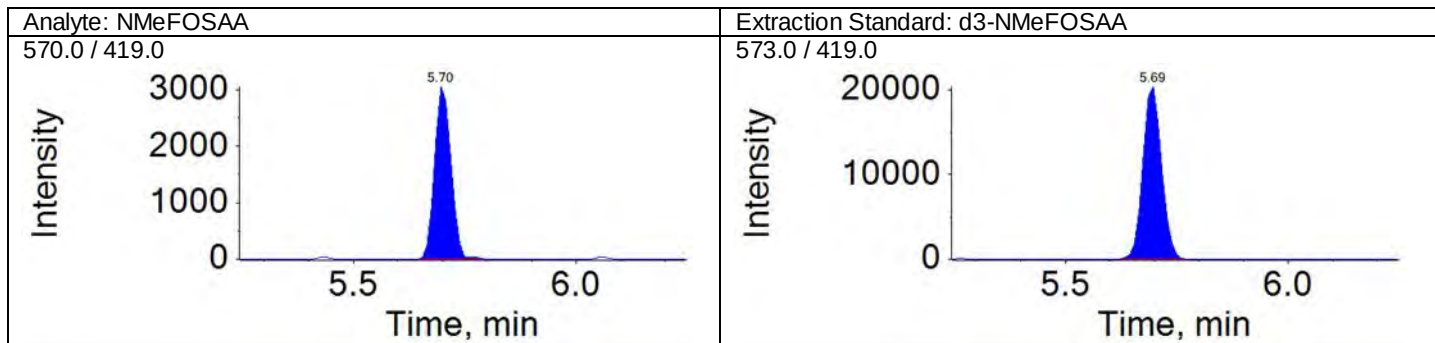
By JPT at 2:33 pm, 11/14/18

REVIEWED

By HMK at 2:39 pm, 11/14/18

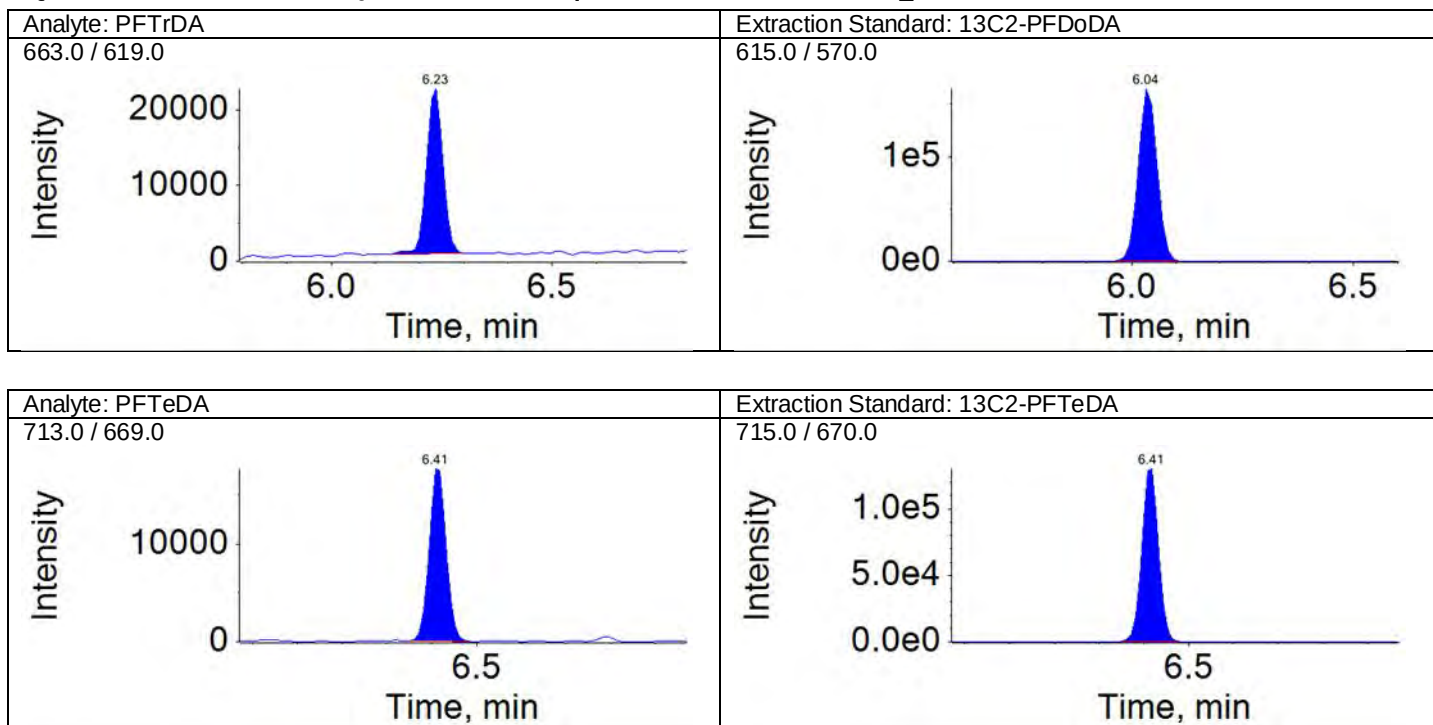
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



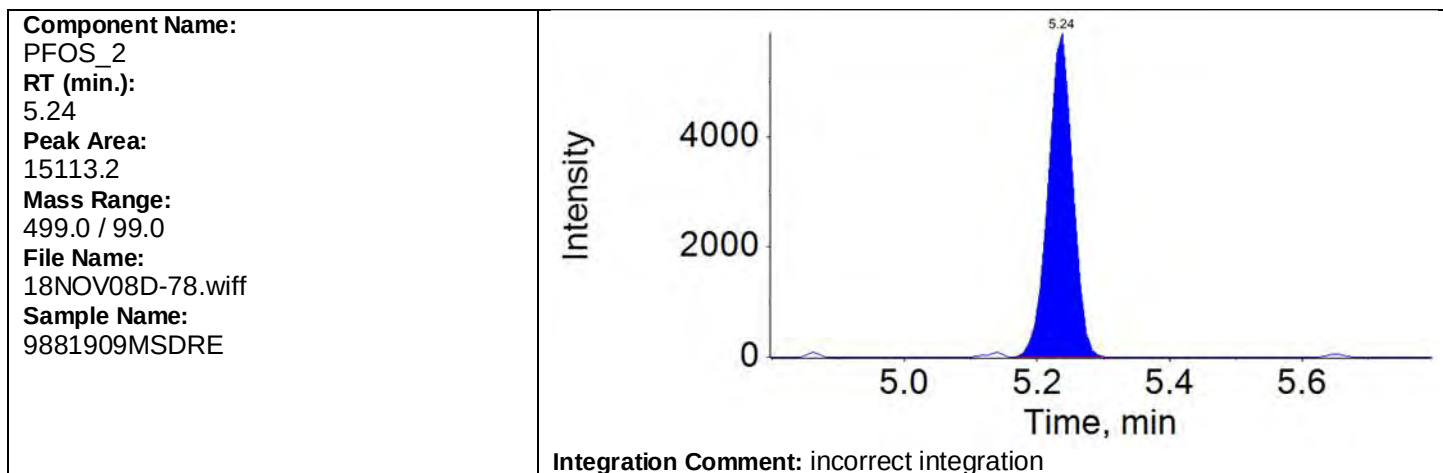
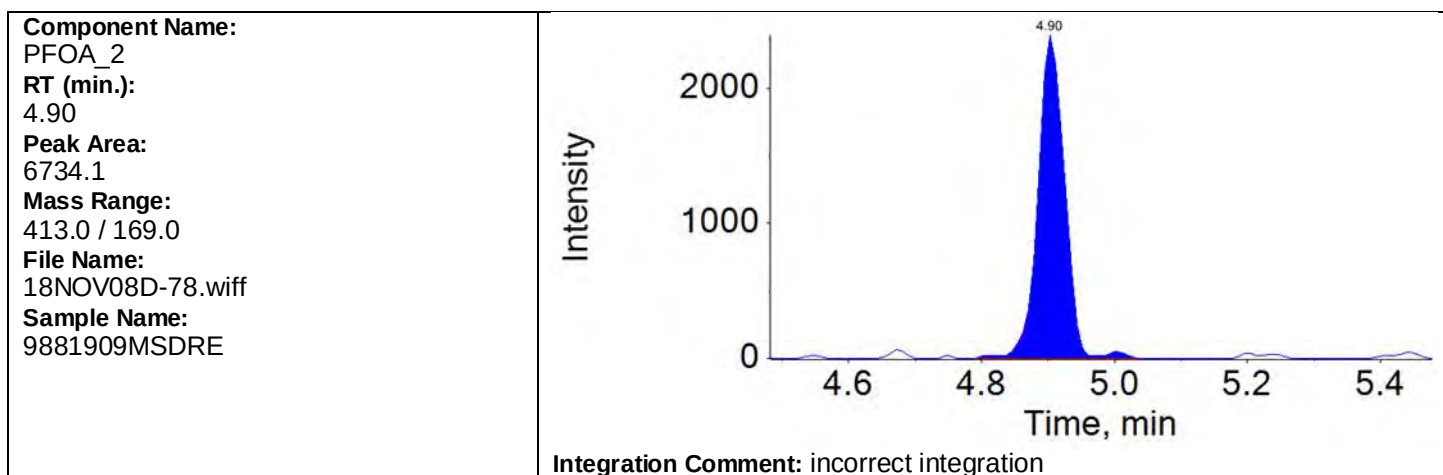
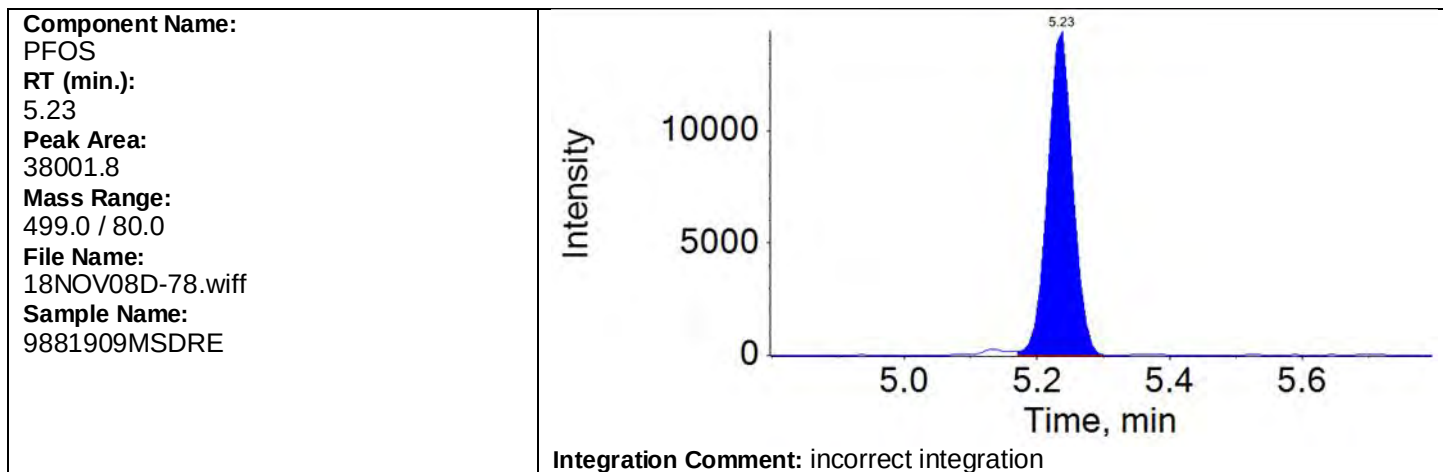
ICAL Name: 18NOV07DCAL
QMethod Name: 18AUG20QM

Result Table: 18310012_Batch QC+9881916 11/14/2018 2:26:18 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18310012_Batch QC+9881916
Results Table Date: 11/14/2018 2:26:18 PM

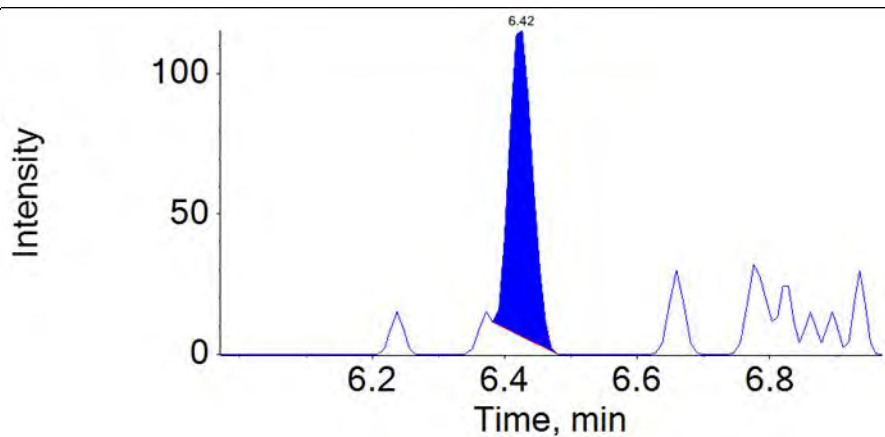
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18310012_Batch QC+9881916
Results Table Date: 11/14/2018 2:26:18 PM

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

Component Name:
PFTeDA_2
RT (min.):
6.42
Peak Area:
267.0
Mass Range:
713.0 / 169.0
File Name:
18NOV08D-78.wiff
Sample Name:
9881909MSDRE



Integration Comment: incorrect integration

Results Table Name: 18310012_Batch QC+9881916
Results Table Date: 11/14/2018 2:26:18 PM

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

APPROVED
By JPT at 2:33 pm, 11/14/18

REVIEWED
By HMK at 2:39 pm, 11/14/18

Ion Ratio Report

Sample Name: 9881909MSDRE

Instrument Name: LM27631

File Name: 18NOV08D-78.wiff

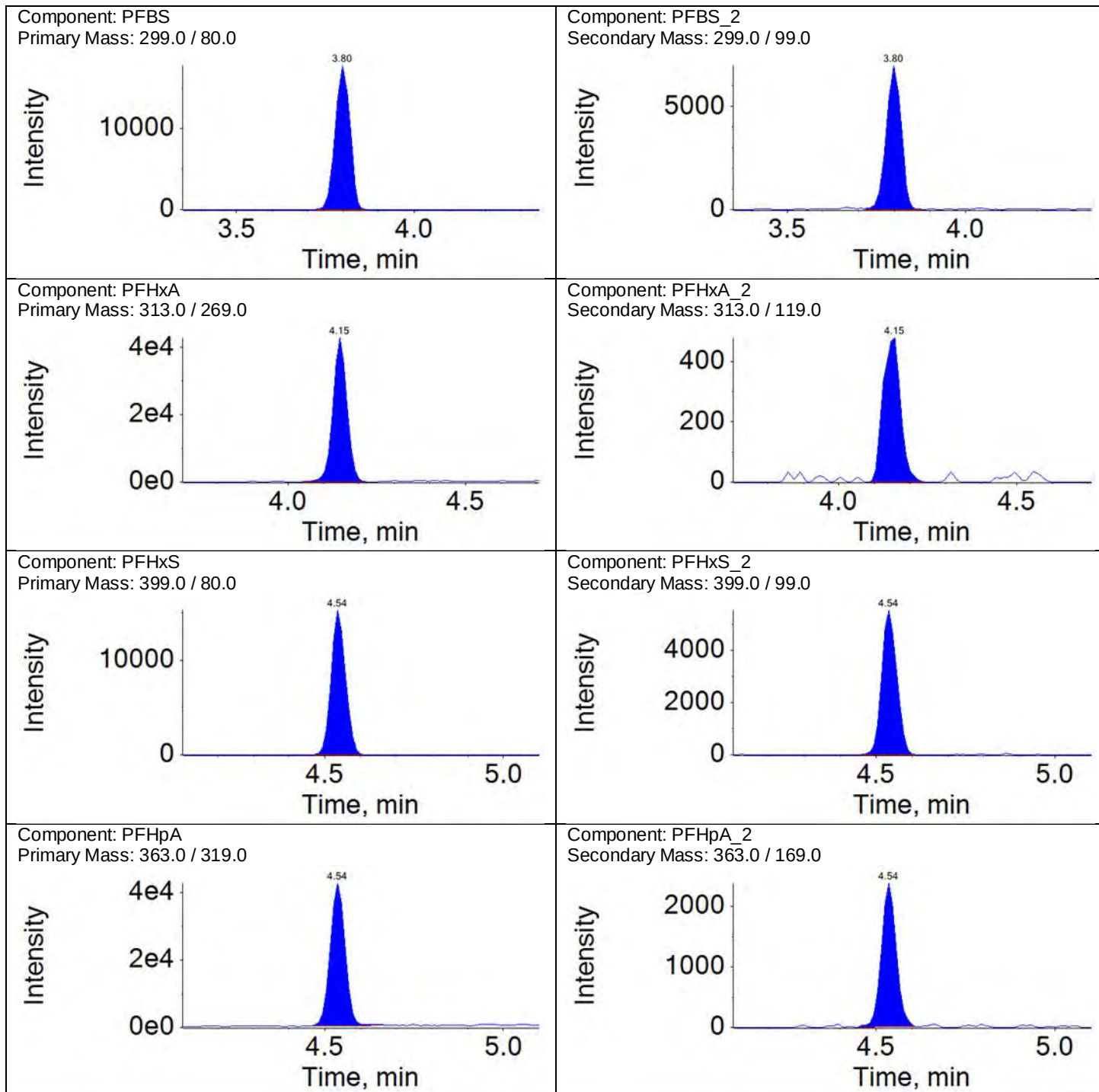
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	51329.8	A	N/A	1.0000			
PFBS_2	3.80	1.00	20379.6	A	N/A	0.3970	11	50	
PFHxA	4.15	1.00	117506.4	A	N/A	1.0000			
PFHxA_2	4.15	1.00	1658.9	A	N/A	0.0141	23	50	
PFHxS	4.54	1.00	42561.1	A	N/A	1.0000			
PFHxS_2	4.54	1.00	16252.7	A	N/A	0.3819	7	50	
PFHpA	4.54	1.00	122507.7	A	N/A	1.0000			
PFHpA_2	4.54	1.00	6842.5	A	N/A	0.0559	-3	50	
PFOA	4.90	1.00	126340.7	A	N/A	1.0000			
PFOA_2	4.90	1.00	6617.7	M	N/A	0.0524	-17	50	
PFOS	5.23	1.00	38843.4	M	N/A	1.0000			
PFOS_2	5.24	1.00	15258.4	M	N/A	0.3928	12	50	
PFNA	5.25	1.00	98728.4	A	N/A	1.0000			
PFNA_2	5.25	1.00	2253.7	A	N/A	0.0228	10	50	
PFDA	5.55	1.00	81690.4	A	N/A	1.0000			
PFDA_2	5.55	1.00	372.1	A	N/A	0.0046	-19	50	
NMeFOSAA	5.70	1.00	7806.9	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	1289.8	A	N/A	0.1652	-25	50	
PFUnDA	5.81	1.00	63491.9	A	N/A	1.0000			
PFUnDA_2	5.80	1.00	714.7	A	N/A	0.0113	257	50	OOS
NEtFOSAA	5.83	1.00	6638.3	A	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	5290.5	A	N/A	0.7970	31	50	
PFDoDA	6.04	1.00	72431.4	A	N/A	1.0000			
PFDoDA_2	6.03	1.00	918.7	A	N/A	0.0127	16	50	
PFTTrDA	6.23	1.03	56059.9	A	N/A	1.0000			
PFTTrDA_2	6.23	1.03	948.9	A	N/A	0.0169	76	50	OOS
PFTeDA	6.41	1.00	45990.9	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	303.2	M	N/A	0.0066	19	50	

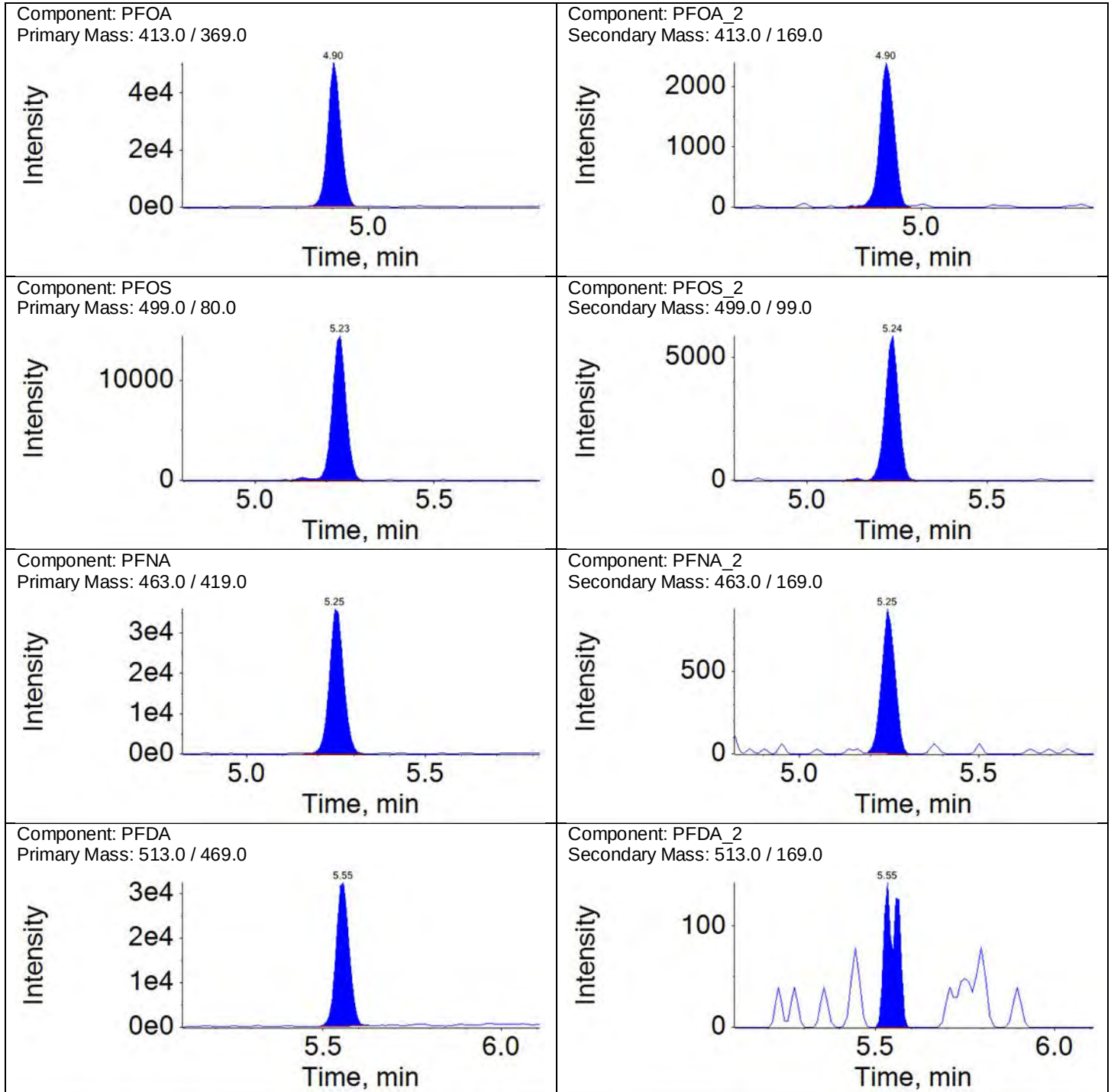
APPROVED

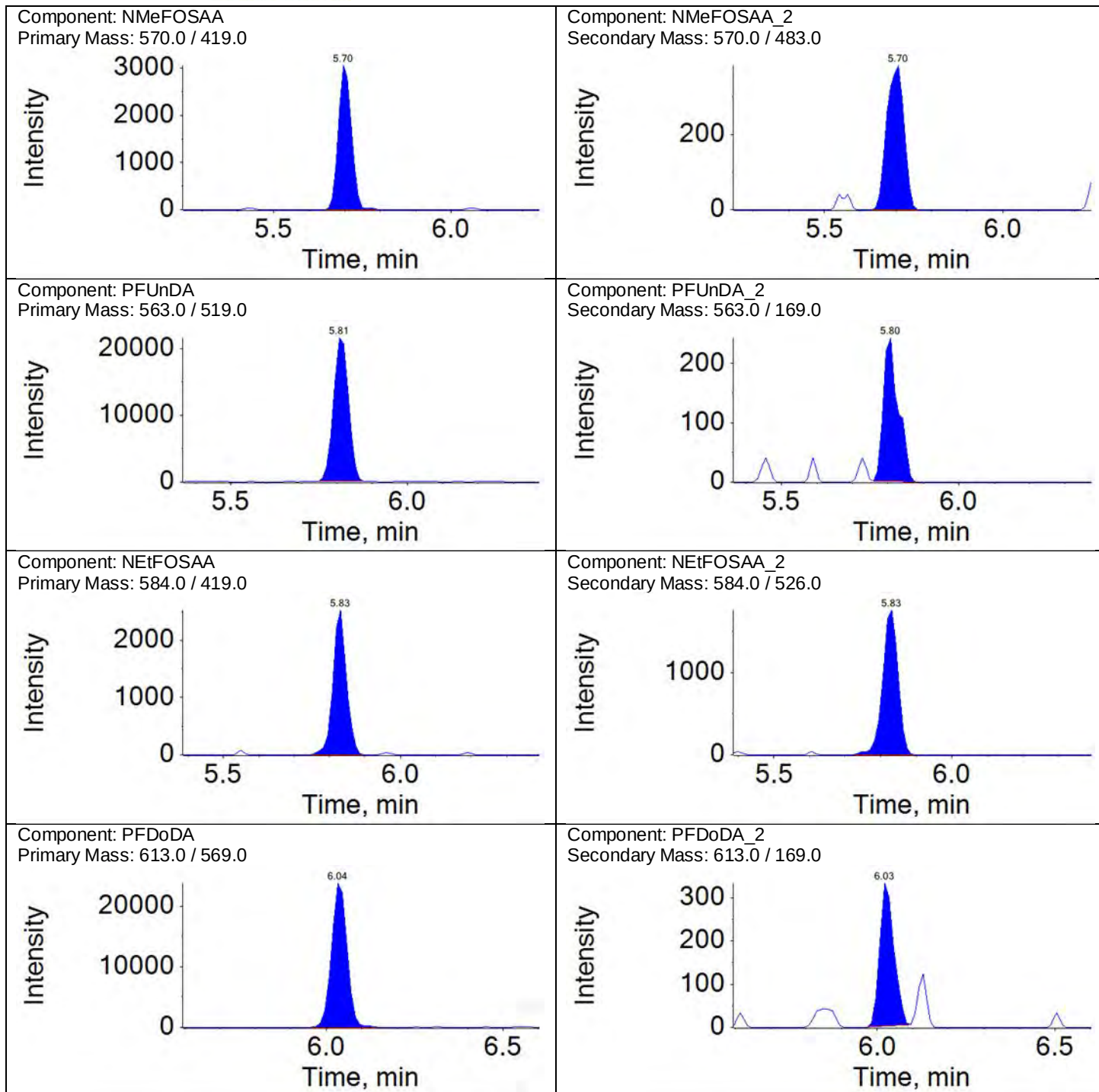
By JPT at 2:33 pm, 11/14/18

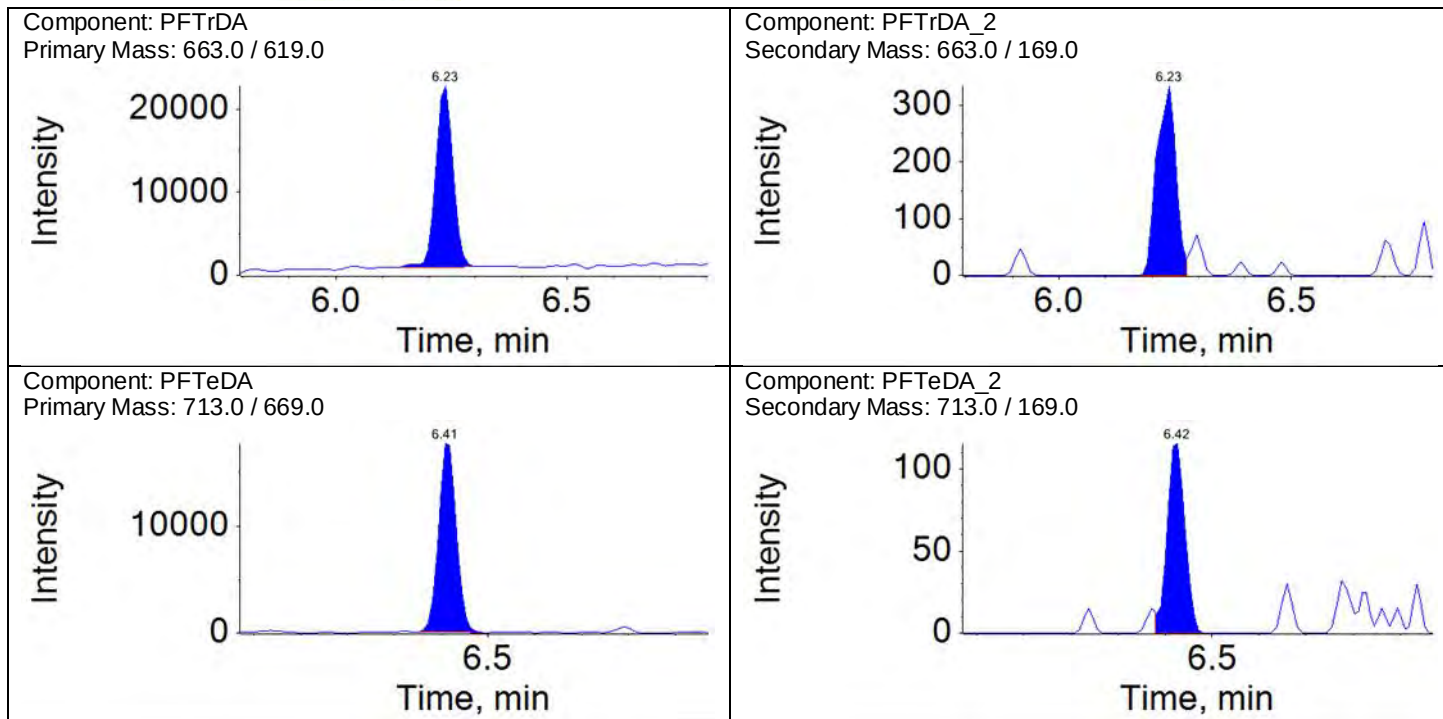
REVIEWED

By HMK at 2:39 pm, 11/14/18







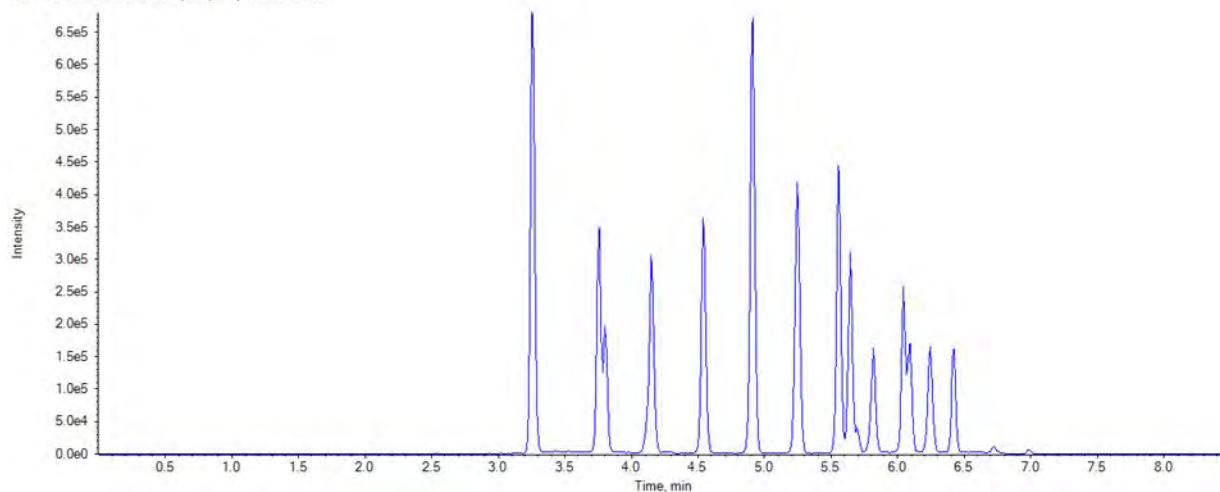


Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18310012_Batch QC+9881916 11/13/2018 11:03:29 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS310012	EPA 537 mod QSM 5.1 table B-15 18310012	18NOV08D-70.wiff	2018-11-08T22:10:58

TIC from 18NOV08D-70.wiff (sample 1) - LCS310012



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	5.00	856114.0	728839.7	17	50	
13C2-PFOA	5.00	593529.1	491983.1	21	50	
13C4-PFOS	4.78	314430.5	255568.1	23	50	
13C2-PFDA	5.00	373109.2	315407.5	18	50	

APPROVED

By MCD at 11:15 pm, 11/13/18

BSI05 Page 1525 of 1595

REVIEWED

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

Page 1 of 3

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL Result Table: 18310012_Batch QC+9881916 11/13/2018 11:03:29 PM
QMethod Name: MQ4-18AUG13 Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS310012	EPA 537 mod QSM 5.1 table B-15 18310012	18NOV08D-70.wiff	2018-11-08T22:10:58

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	88936.1	615561.1	0.144	1.360	1.691	124	70-130	
PFPeA	96539.7	667787.9	0.145	1.360	1.718	126	70-130	
PFBS	47045.7	330891.9	0.142	1.202	1.434	119	70-130	
4:2-FTS	32914.4	41728.0	0.789	3.736	4.241	114	70-130	
PFHxA	107307.8	535844.4	0.200	1.360	1.718	126	70-130	
PFPeS	22495.1	330891.9	0.068	1.276	1.341	105	70-130	
PFHxS	37262.4	268523.3	0.139	1.286	1.407	109	70-130	
PFHpA	116449.9	412323.5	0.282	1.360	1.900	140	70-130	OOS
6:2-FTS	27021.7	29465.8	0.917	3.792	4.575	121	70-130	
PFHpS	38091.4	268523.3	0.142	1.294	1.484	115	70-130	
PFOA	113603.0	741633.2	0.153	1.360	1.725	127	70-130	
PFOS	36432.2	219982.4	0.166	1.300	1.718	132	70-130	OOS
PFNA	96619.2	392755.9	0.246	1.360	1.839	135	70-130	OOS
PFNS	22160.9	219982.4	0.101	1.306	1.597	122	70-130	
PFDA	69858.3	465770.3	0.150	1.360	1.650	121	70-130	
8:2-FTS	19984.4	20381.5	0.981	3.832	4.420	115	70-130	
PFOSA	84721.3	577065.7	0.147	1.360	1.587	117	70-130	
NMeFOSAA	7800.1	69553.8	0.112	1.360	1.154	85	70-130	
PFDS	20350.5	219982.4	0.093	1.310	1.767	135	70-130	OOS
PFUnDA	64655.2	225334.4	0.287	1.360	1.646	121	70-130	
NEtFOSAA	9721.4	49139.5	0.198	1.360	1.700	125	70-130	
PFDaDA	68176.8	437682.2	0.156	1.360	1.688	124	70-130	
10:2-FTS	11496.5	20381.5	0.564	3.856	3.513	91	70-130	
NMePFOSAE	51161.5	264382.0	0.194	1.360	1.734	128	70-130	
NMePFOSA	7992.1	61731.8	0.129	1.360	1.449	107	70-130	
PFDaS	9886.6	219982.4	0.045	1.316	1.735	132	70-130	OOS
NEtPFOSAE	59727.2	223270.6	0.268	1.360	1.715	126	70-130	
NEtPFOSA	8201.1	53556.7	0.153	1.360	1.349	99	70-130	
PFTTrDA	55383.2	437682.2	0.127	1.360	1.596	117	70-130	
PFTeDA	45252.4	312097.5	0.145	1.360	1.703	125	70-130	
PFHxDA	19655.1	312097.5	0.063	1.360	1.564	115	70-130	
PFODA	13613.5	312097.5	0.044	1.360	1.250	92	70-130	

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

Lab Control Sample Recovery

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:03:29 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 11:15 pm, 11/13/18

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

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

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCS310012	Data File:	18NOV08D-70.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18310012	Acquis Date:	2018-11-08T22:10:58
Sample Type:	Quality Control	Instrument:	LM27631
Vial Position:	14	Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00	Result Table:	18310012_Batch QC+9881916
QMethod File:	MQ4-18AUG13	ICAL Name:	18NOV07DCAL
Batch Number:	18310012	Operator:	MCD7824
Sample Wt.:	1.00000	Dilution Factor:	1.00
Sample Vol.:	1.000	Prep Factor:	2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 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	856114.0	728839.7	17	50	
13C2-PFOA	5.0	593529.1	491983.1	21	50	
13C4-PFOS	4.8	314430.5	255568.1	23	50	
13C2-PFDA	5.0	373109.2	315407.5	18	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	615561.1	13C3-PFBA	856114.0	0.719	10.000	6.655	67	50-150	
E13C5-PFPeA	667787.9	13C3-PFBA	856114.0	0.780	10.000	6.796	68	50-150	
E13C3-PFBS	330891.9	13C3-PFBA	856114.0	0.387	9.300	5.673	61	50-150	
E13C2-4:2-FTS	41728.0	13C2-PFOA	593529.1	0.070	9.340	6.345	68	50-150	
E13C5-PFHxA	535844.4	13C2-PFOA	593529.1	0.903	10.000	6.642	66	50-150	
E13C3-PFHxS	268523.3	13C2-PFOA	593529.1	0.452	9.460	6.496	69	50-150	
E13C4-PFHpA	412323.5	13C2-PFOA	593529.1	0.695	10.000	6.321	63	50-150	
E13C2-6:2-FTS	29465.8	13C2-PFOA	593529.1	0.050	9.500	6.621	70	50-150	
E13C8-PFOA	741633.2	13C2-PFOA	593529.1	1.250	10.000	6.969	70	50-150	
E13C8-PFOS	219982.4	13C4-PFOS	314430.5	0.700	9.560	6.187	65	50-150	
E13C9-PFNA	392755.9	13C4-PFOS	314430.5	1.249	10.000	6.824	68	50-150	
E13C6-PFDA	465770.3	13C2-PFDA	373109.2	1.248	10.000	6.279	63	50-150	
E13C2-8:2-FTS	20381.5	13C2-PFDA	373109.2	0.055	9.580	5.781	60	50-150	
E13C8-PFOSA	577065.7	13C2-PFDA	373109.2	1.547	10.000	6.750	68	50-150	
Ed3-NMeFOSAA	69553.8	13C2-PFDA	373109.2	0.186	10.000	6.933	69	50-150	
E13C7-PFUnDA	225334.4	13C2-PFDA	373109.2	0.604	10.000	6.968	70	50-150	
Ed5-NetFOSAA	49139.5	13C2-PFDA	373109.2	0.132	10.000	6.096	61	50-150	
E13C2-PFDoDA	437682.2	13C2-PFDA	373109.2	1.173	10.000	6.325	63	50-150	
Ed7-NMePFOSAE	264382.0	13C2-PFDA	373109.2	0.709	10.000	6.590	66	50-150	
Ed3-NMePFOSA	61731.8	13C2-PFDA	373109.2	0.165	10.000	6.058	61	50-150	
Ed9-NetPFOSAE	223270.6	13C2-PFDA	373109.2	0.598	10.000	6.835	68	50-150	
Ed5-NetPFOSA	53556.7	13C2-PFDA	373109.2	0.144	10.000	6.647	66	50-150	
E13C2-PFTeDA	312097.5	13C2-PFDA	373109.2	0.836	10.000	6.023	60	50-150	

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: LCS310012

Instrument Name: LM27631

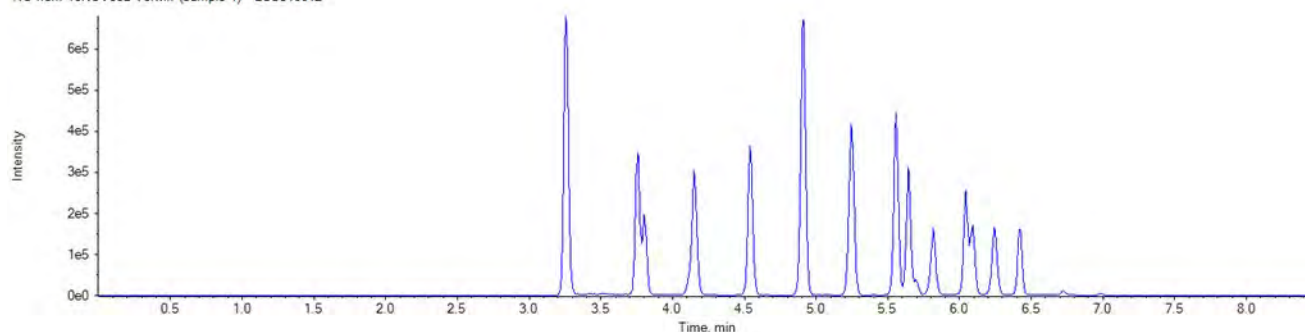
File Name: 18NOV08D-70.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	88936.1		A	13C4-PFBA	3.26	615561.1	0.144	1.691
PFPeA	3.76	1.000	96539.7		A	13C5-PFPeA	3.76	667787.9	0.145	1.718
PFBS	3.80	1.000	47045.7		A	13C3-PFBS	3.80	330891.9	0.142	1.434
4:2-FTS	4.12	1.000	32914.4		A	13C2-4:2-FTS	4.12	41728.0	0.789	4.241
PFHxA	4.15	1.000	107307.8		A	13C5-PFHxA	4.15	535844.4	0.200	1.718
PFPeS	4.17	1.100	22495.1		A	13C3-PFBS	3.80	330891.9	0.068	1.341
PFHxS	4.54	1.000	37262.4		A	13C3-PFHxS	4.54	268523.3	0.139	1.407
PFHpA	4.54	1.000	116449.9		A	13C4-PFHpA	4.54	412323.5	0.282	1.900
6:2-FTS	4.90	1.000	27021.7		A	13C2-6:2-FTS	4.90	29465.8	0.917	4.575
PFHpS	4.90	1.080	38091.4		A	13C3-PFHxS	4.54	268523.3	0.142	1.484
PFOA	4.91	1.000	113603.0		A	13C8-PFOA	4.91	741633.2	0.153	1.725
PFOS	5.24	1.000	36432.2		A	13C8-PFOS	5.24	219982.4	0.166	1.718
PFNA	5.26	1.000	96619.2		A	13C9-PFNA	5.26	392755.9	0.246	1.839
PFNS	5.54	1.060	22160.9		A	13C8-PFOS	5.24	219982.4	0.101	1.597
PFDA	5.56	1.000	69858.3		A	13C6-PFDA	5.56	465770.3	0.150	1.650
8:2-FTS	5.56	1.000	19984.4		A	13C2-8:2-FTS	5.56	20381.5	0.981	4.420
PFOSA	5.64	1.000	84721.3		A	13C8-PFOSA	5.64	577065.7	0.147	1.587
NMeFOSAA	5.70	1.000	7800.1		A	d3-NMeFOSAA	5.70	69553.8	0.112	1.154
PFDS	5.79	1.100	20350.5		A	13C8-PFOS	5.24	219982.4	0.093	1.767
PfUnDA	5.82	1.000	64655.2		A	13C7-PfUnDA	5.82	225334.4	0.287	1.646
NEtFOSAA	5.83	1.000	9721.4		A	d5-NEtFOSAA	5.83	49139.5	0.198	1.700
PFDODA	6.04	1.000	68176.8		A	13C2-PFDODA	6.04	437682.2	0.156	1.688
10:2-FTS	6.06	1.090	11496.5		A	13C2-8:2-FTS	5.56	20381.5	0.564	3.513
NMePFOSAE	6.10	1.000	51161.5		A	d7-NMePFOSAE	6.09	264382.0	0.194	1.734
NMePFOSA	6.10	1.000	7992.1		A	d3-NMePFOSA	6.10	61731.8	0.129	1.449
PFDoS	6.21	1.190	9886.6		A	13C8-PFOS	5.24	219982.4	0.045	1.735
NEtPFOSAE	6.25	1.000	59727.2		A	d9-NEtPFOSAE	6.24	223270.6	0.268	1.715
NEtPFOSA	6.26	1.000	8201.1		A	d5-NEtPFOSA	6.26	53556.7	0.153	1.349
PFTDA	6.24	1.030	55383.2		A	13C2-PFDODA	6.04	437682.2	0.127	1.596
PFTeDA	6.42	1.000	45252.4		A	13C2-PFTeDA	6.42	312097.5	0.145	1.703
PFHxDA	6.72	1.050	19655.1		A	13C2-PFTeDA	6.42	312097.5	0.063	1.564
PFODA	6.98	1.090	13613.5		A	13C2-PFTeDA	6.42	312097.5	0.044	1.250

Total Ion Chromatogram

TIC from 18NOV08D-70.wiff (sample 1) - LCS310012

APPROVED
By MCD at 11:15 pm, 11/13/18

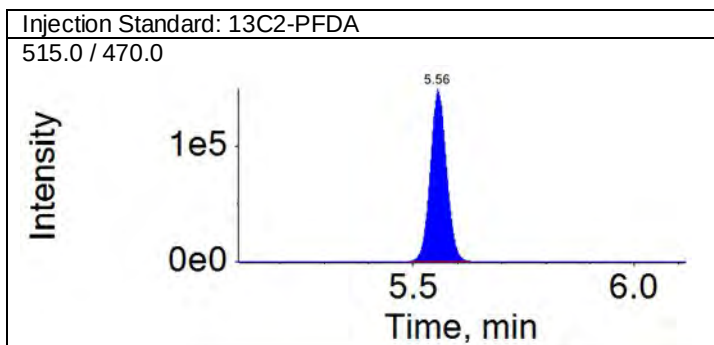
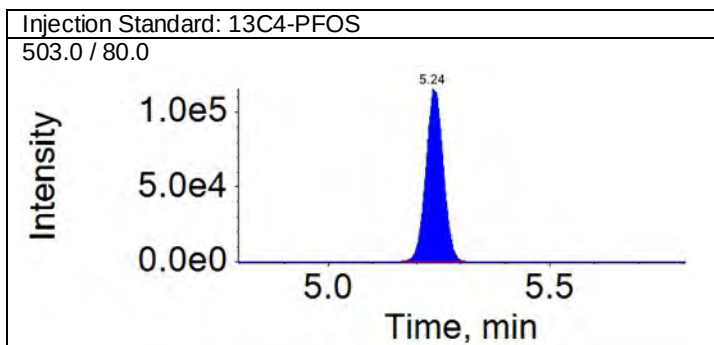
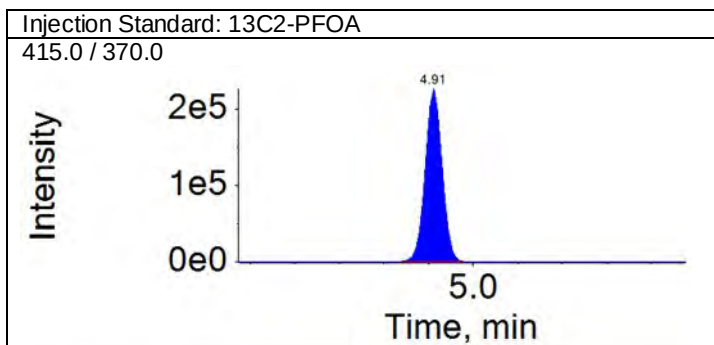
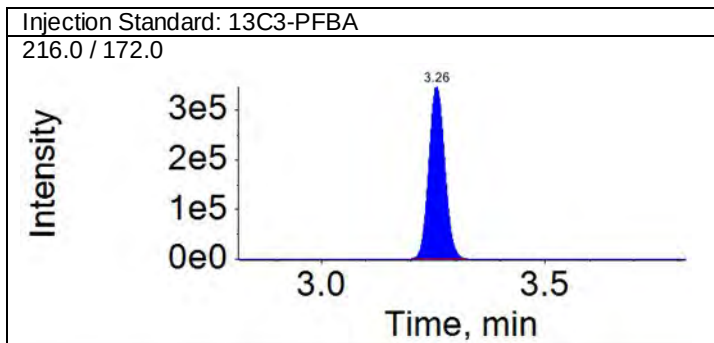
BSI05 Page 1529 of 1595

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

Page 2 of 17

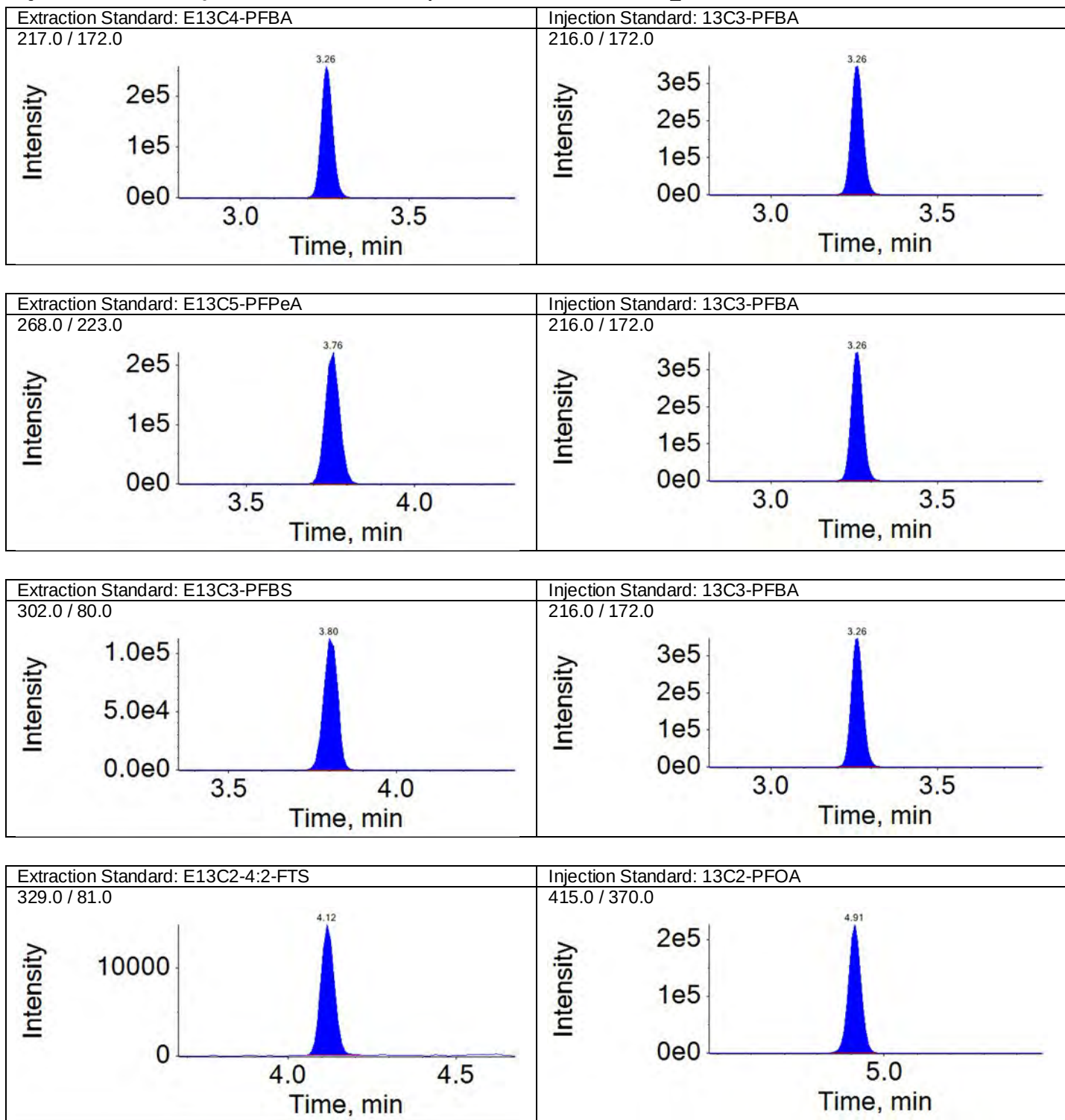
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



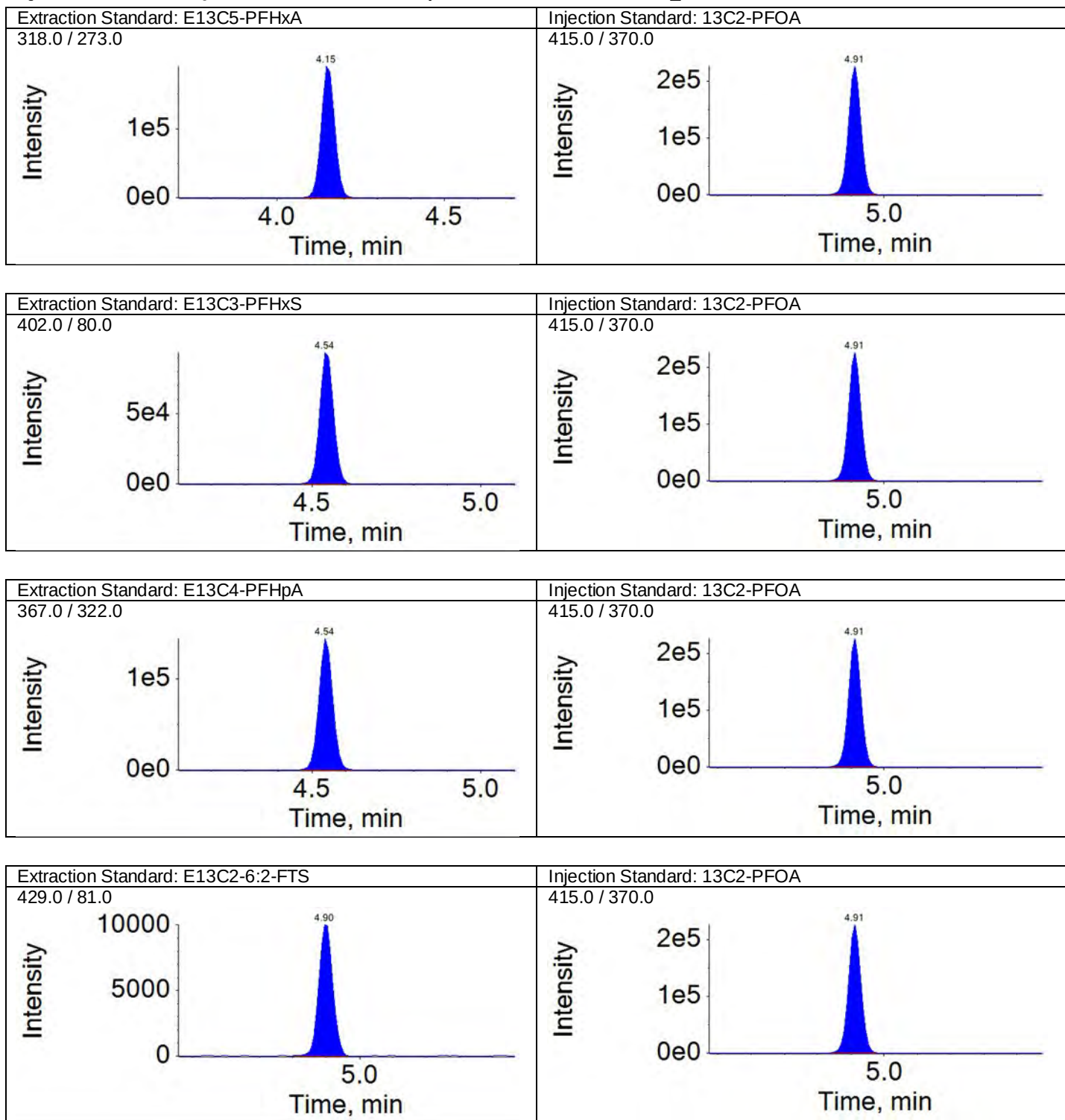
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



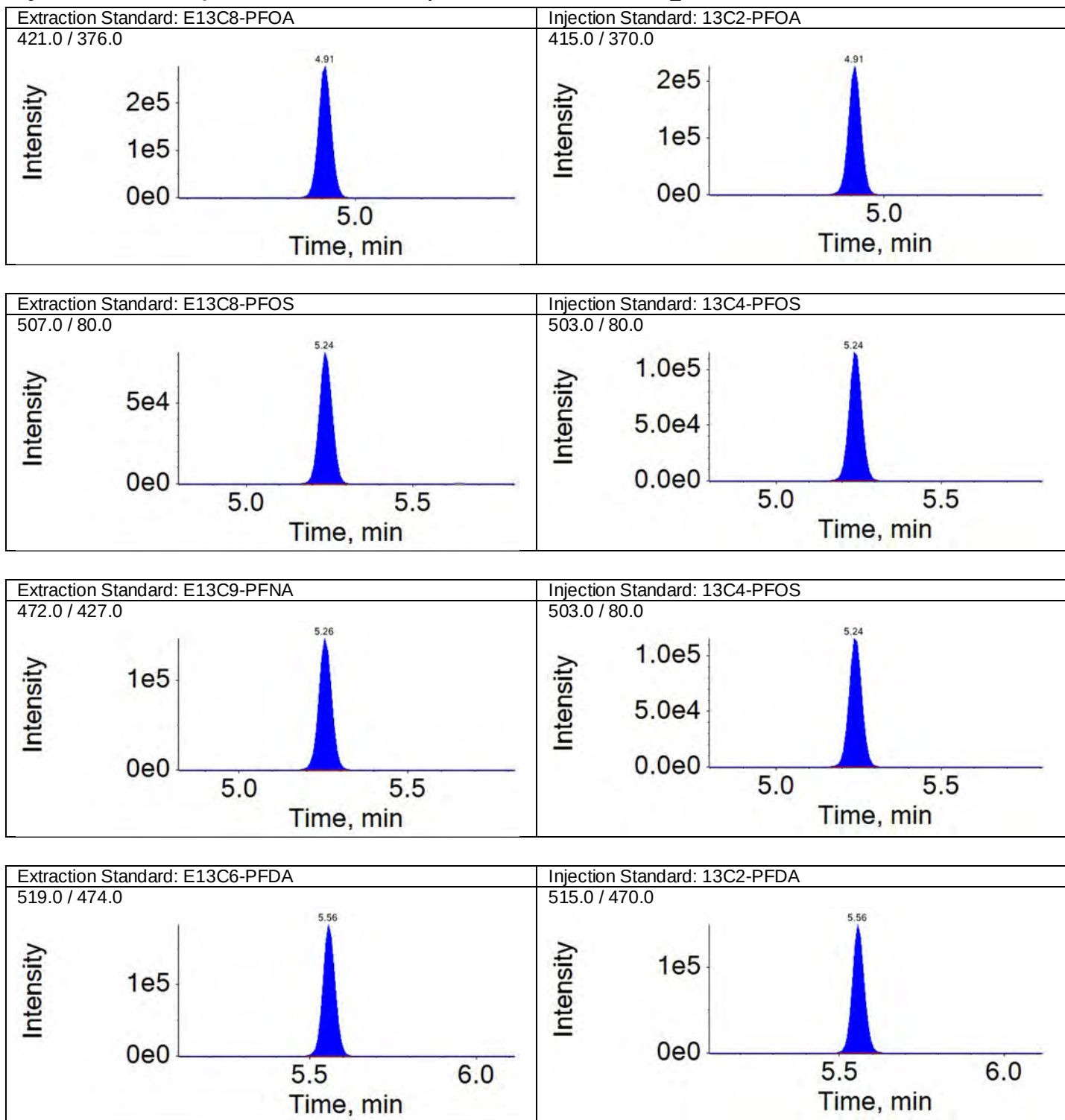
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



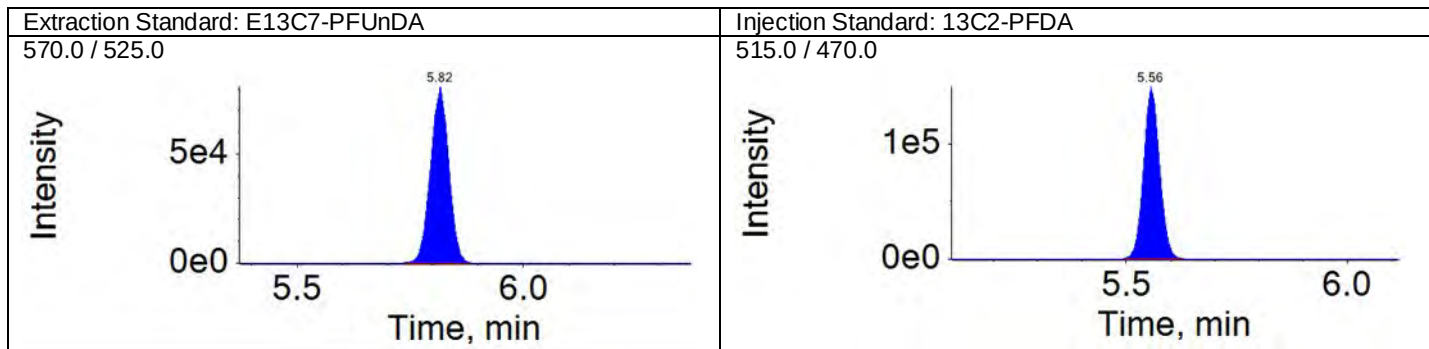
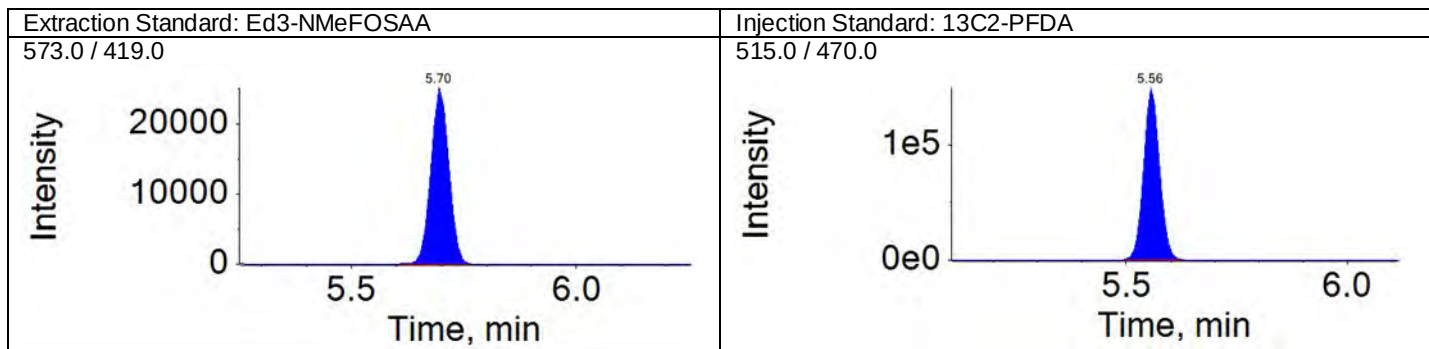
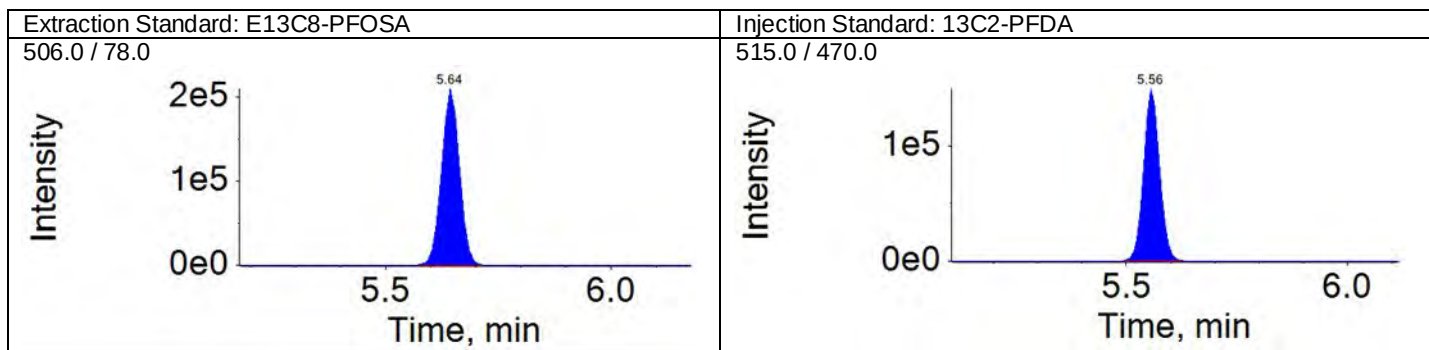
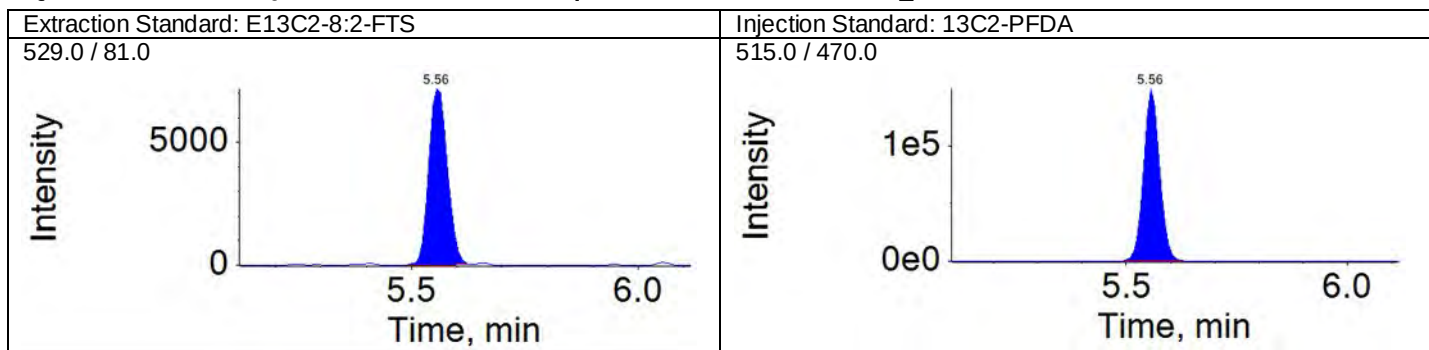
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



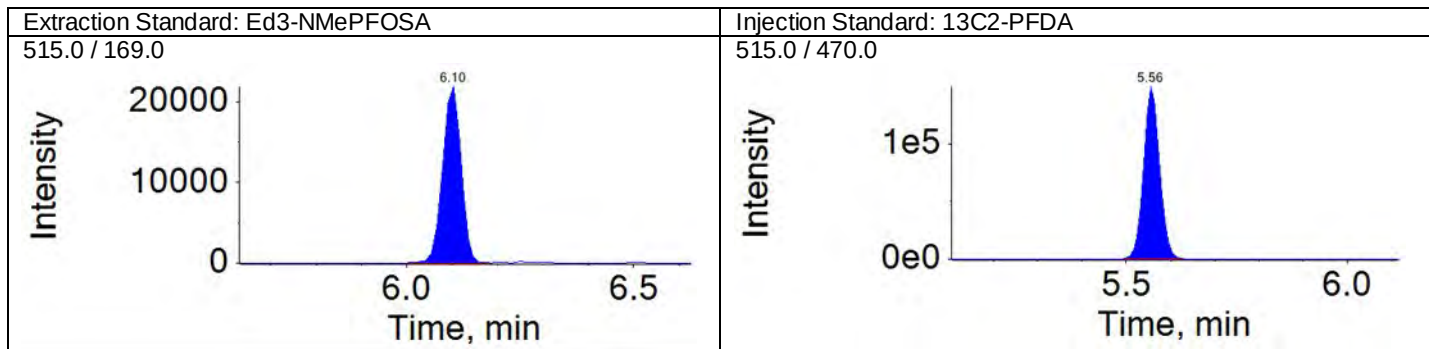
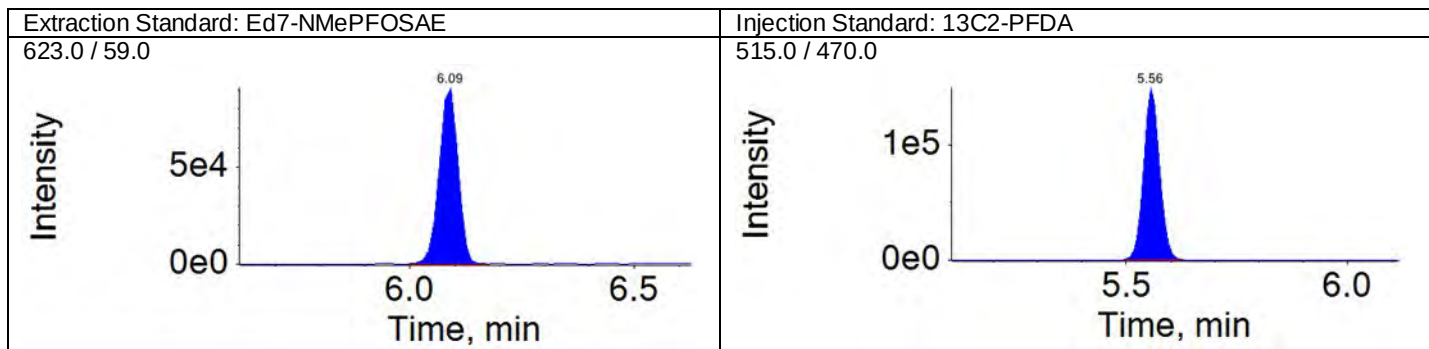
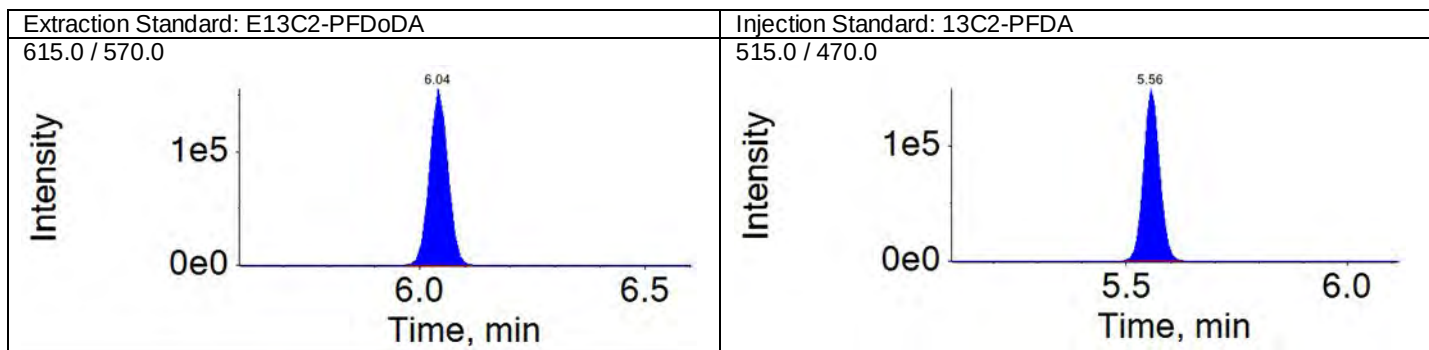
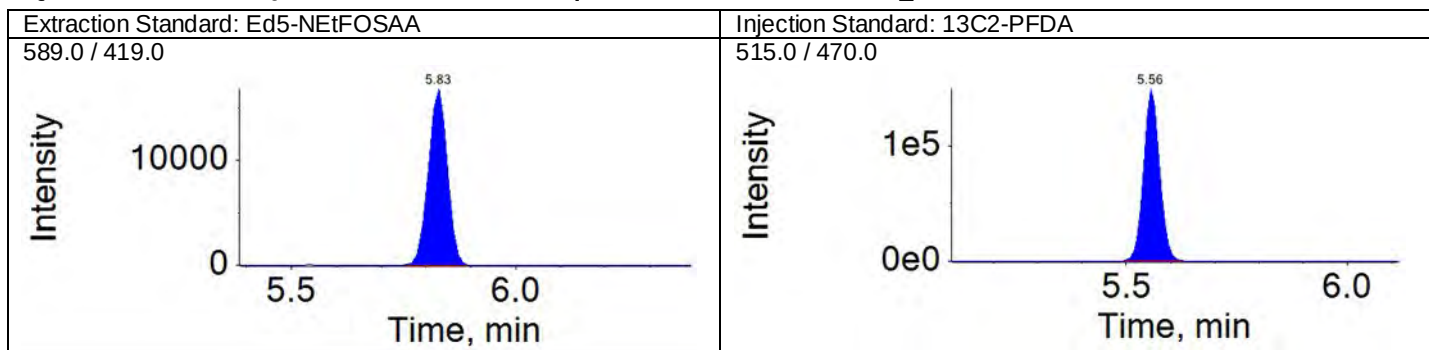
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



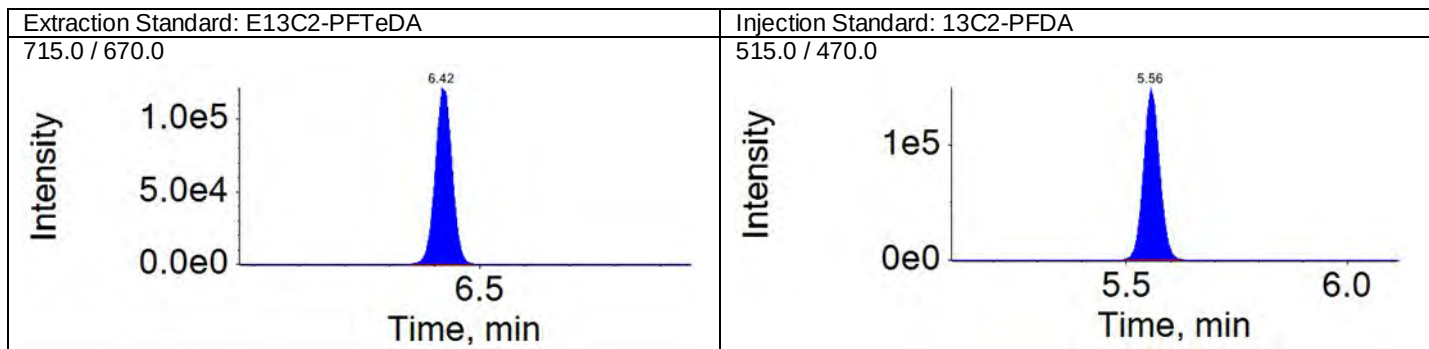
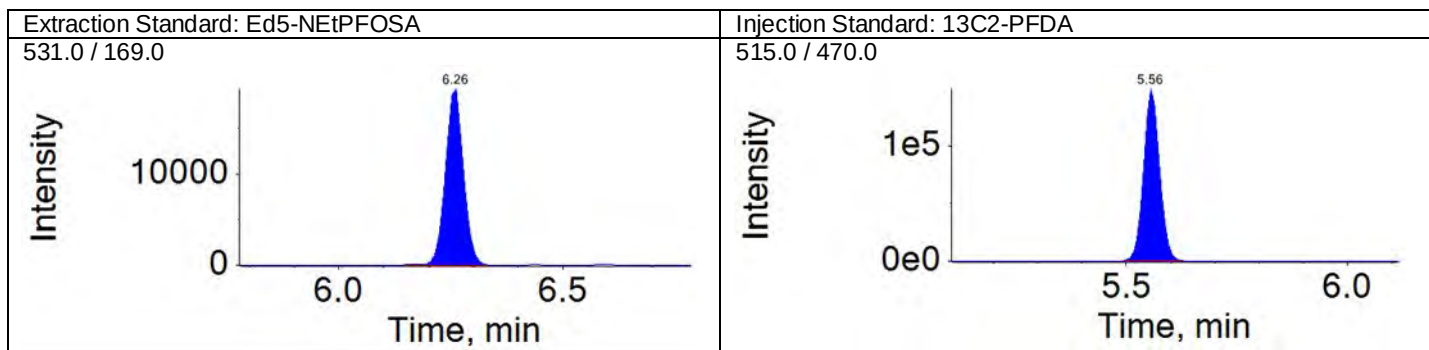
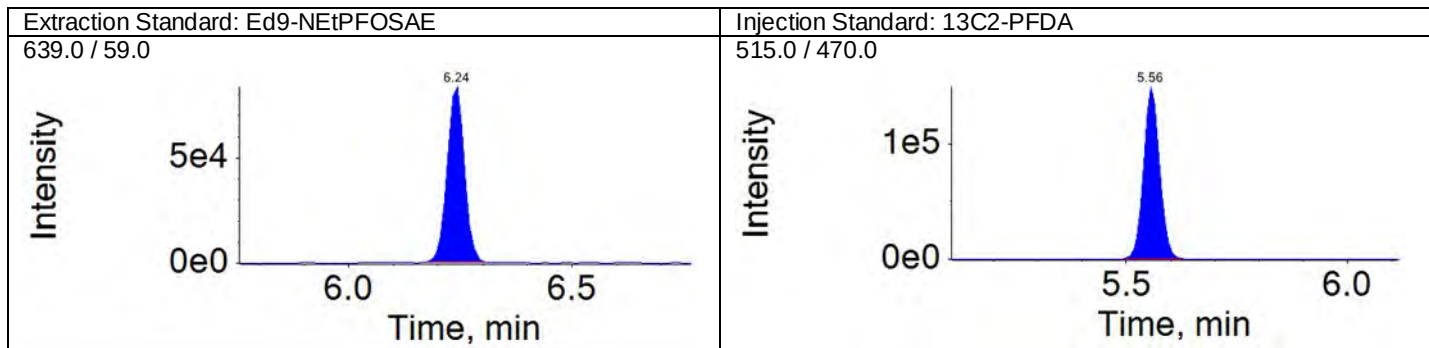
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



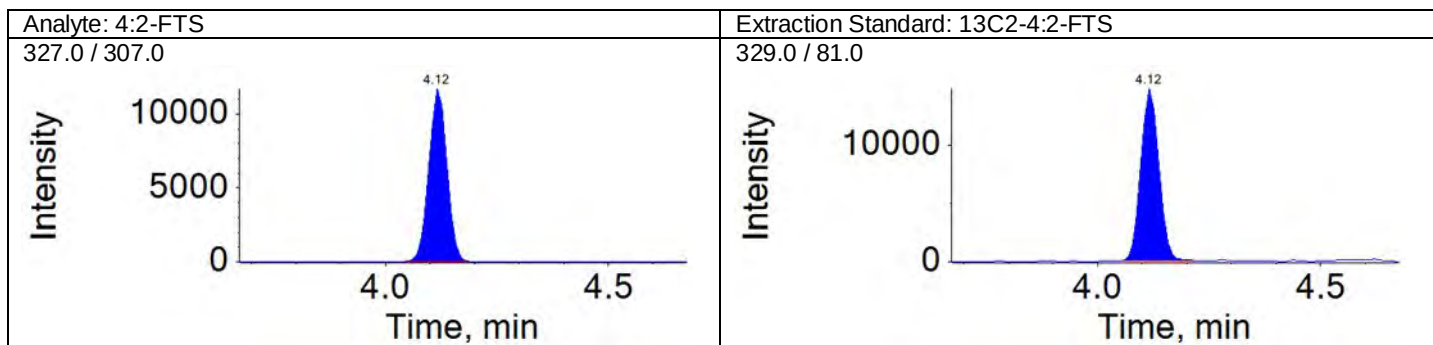
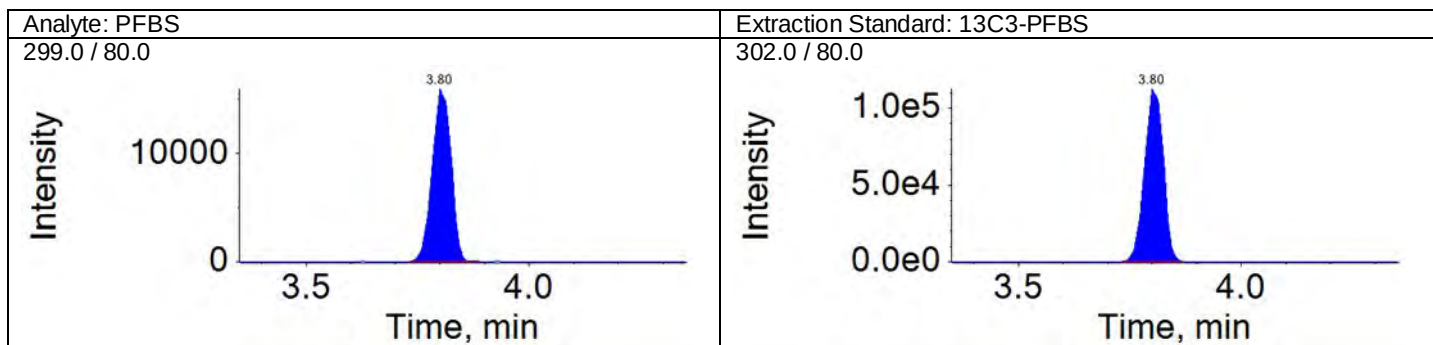
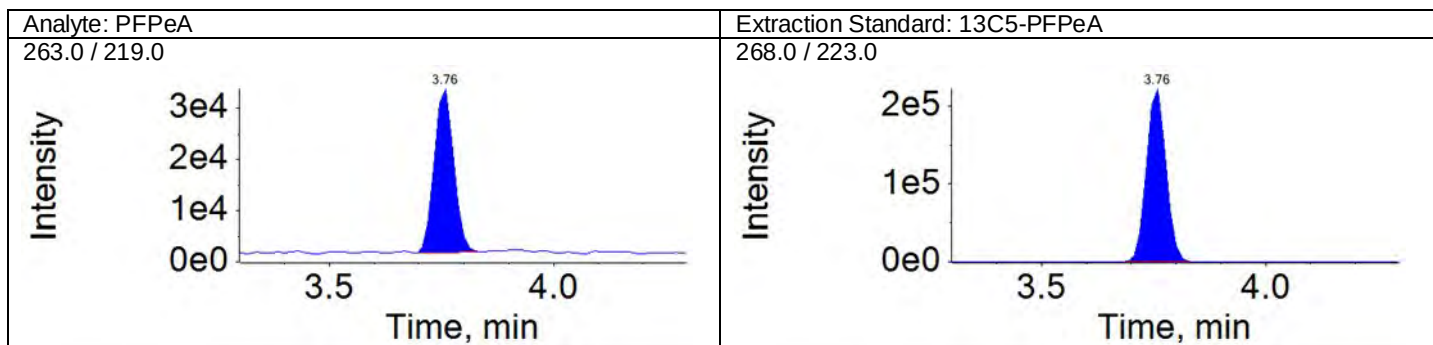
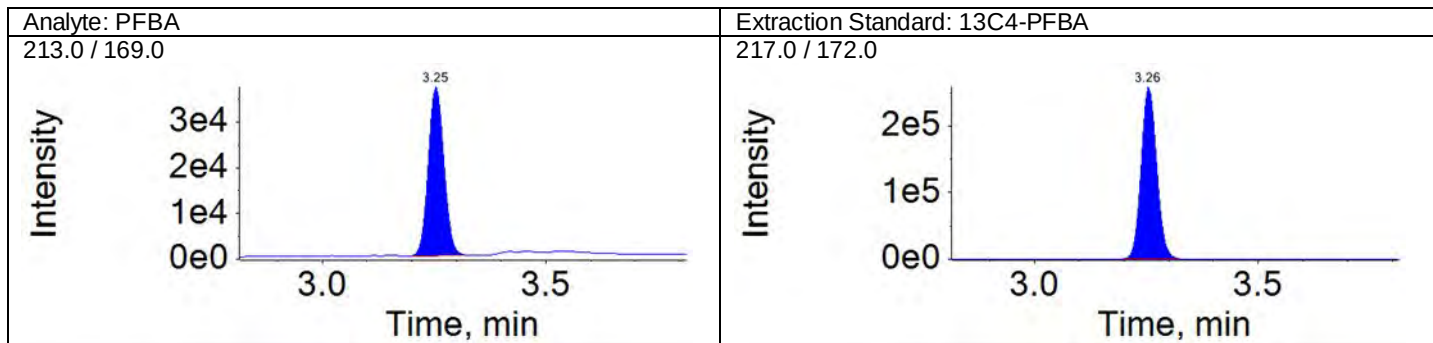
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



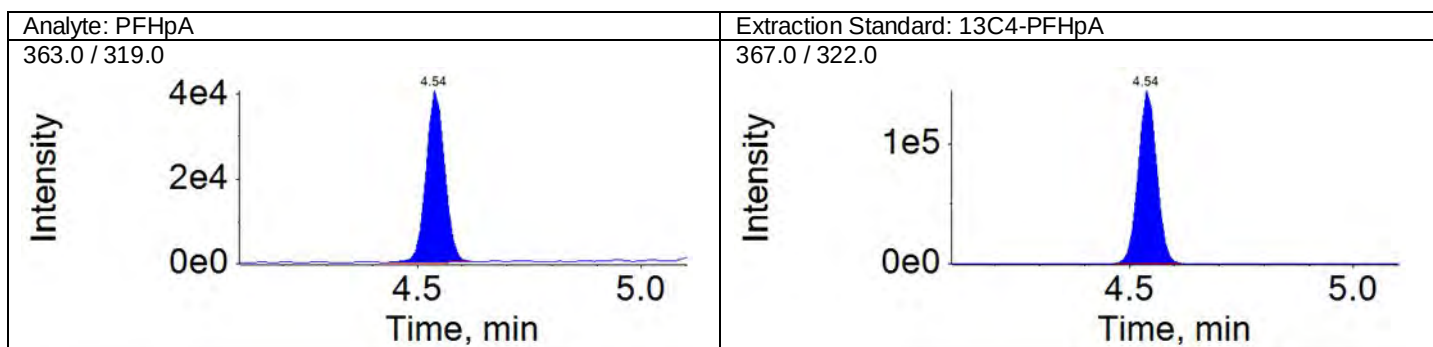
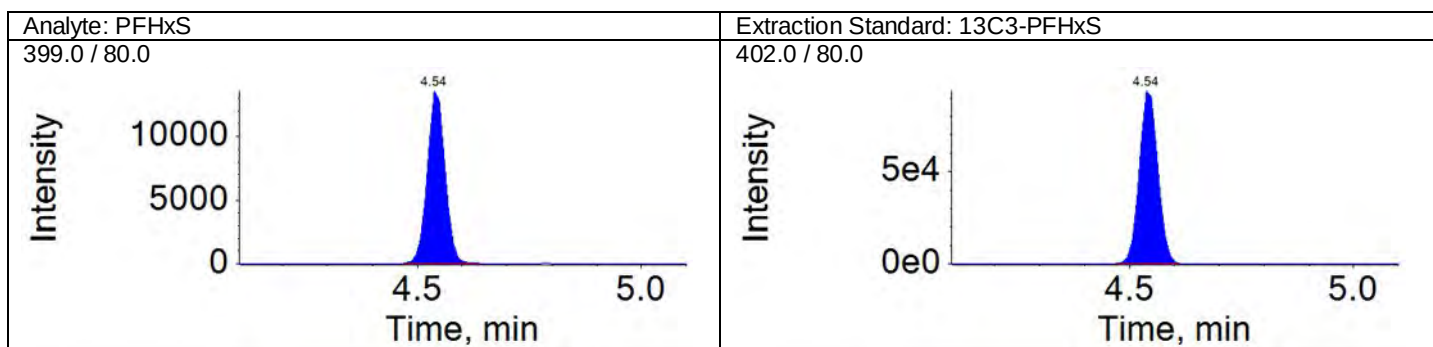
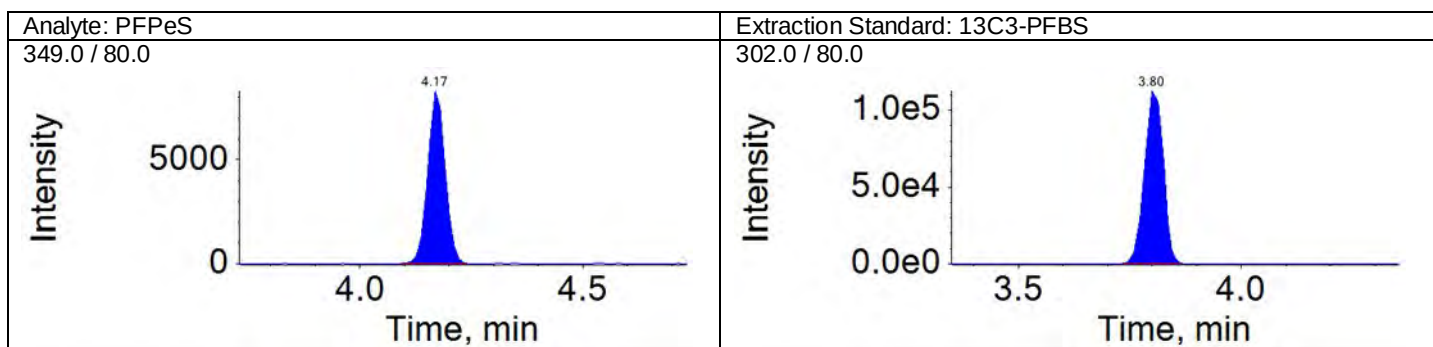
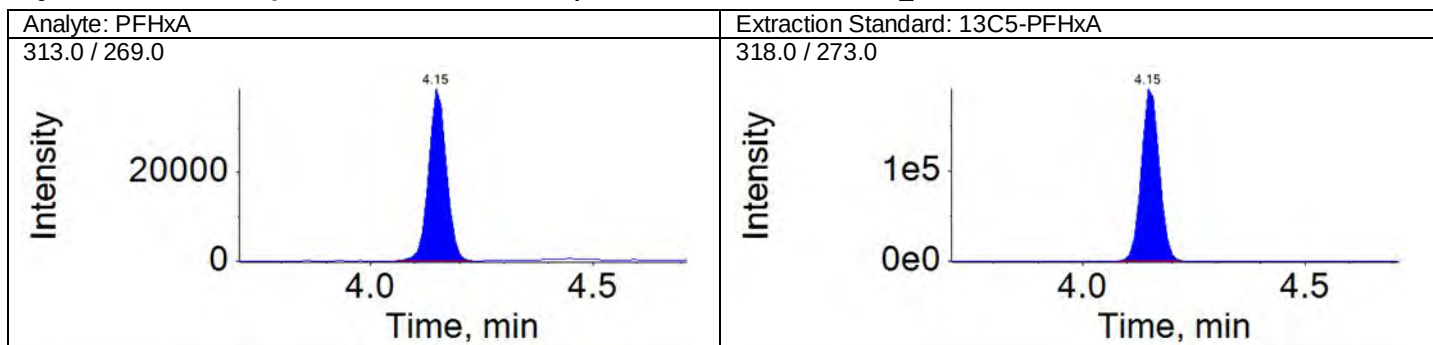
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



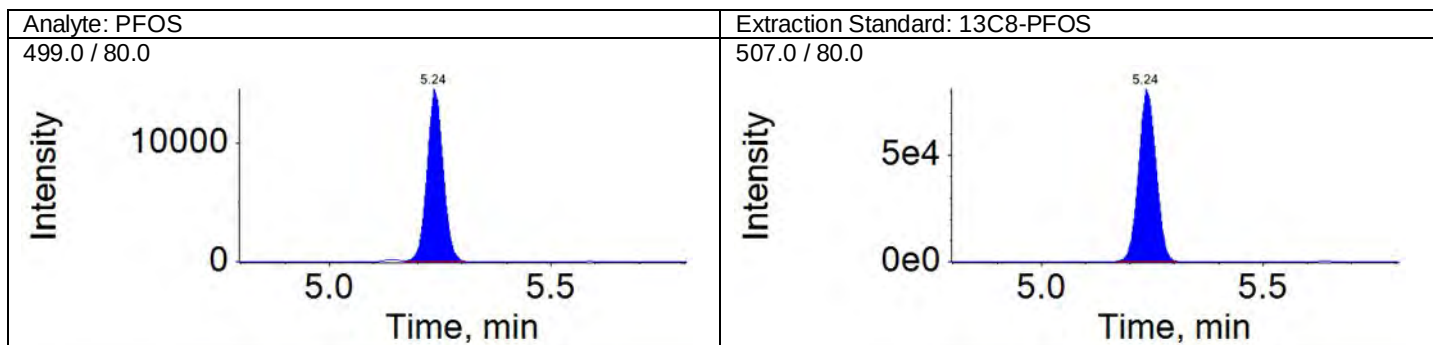
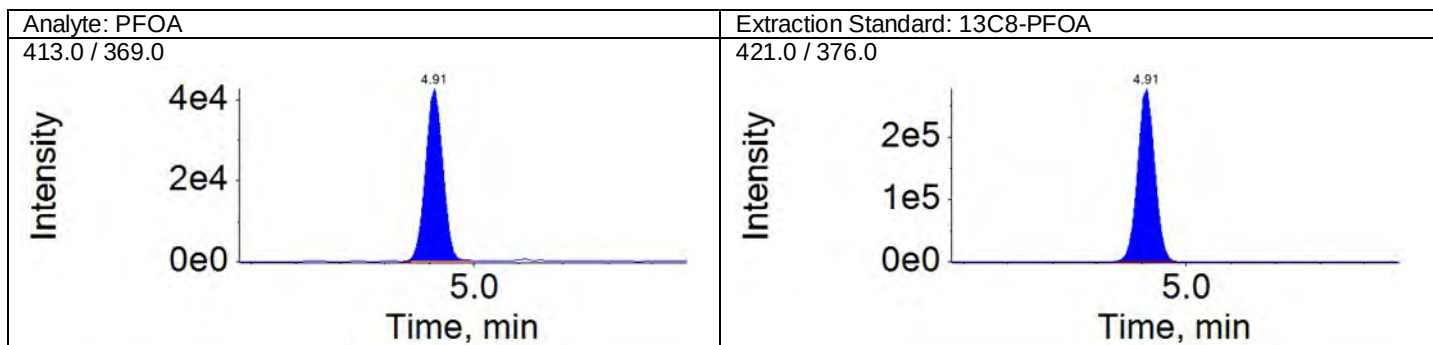
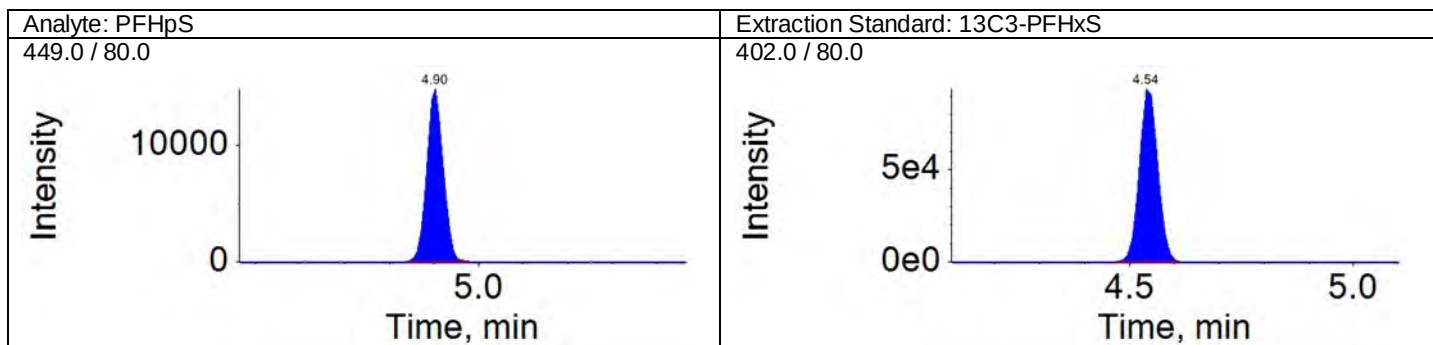
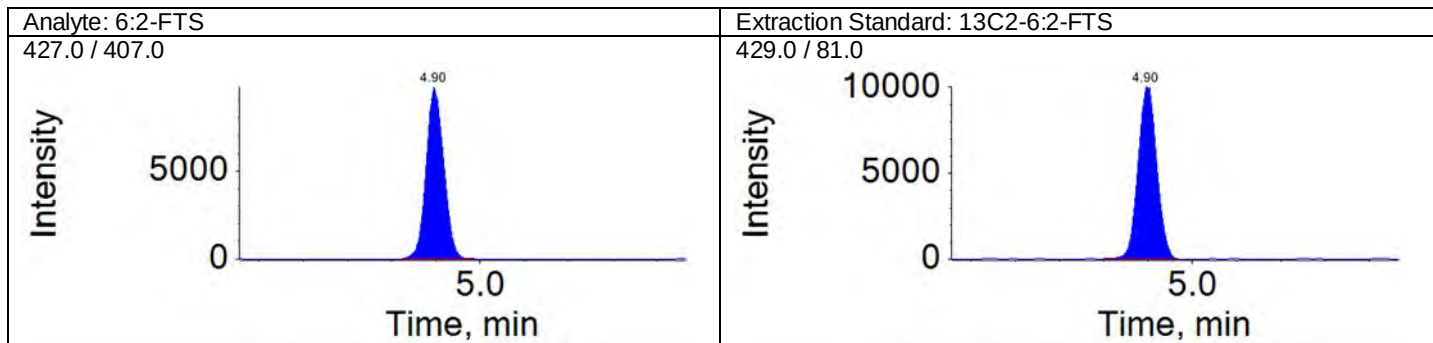
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



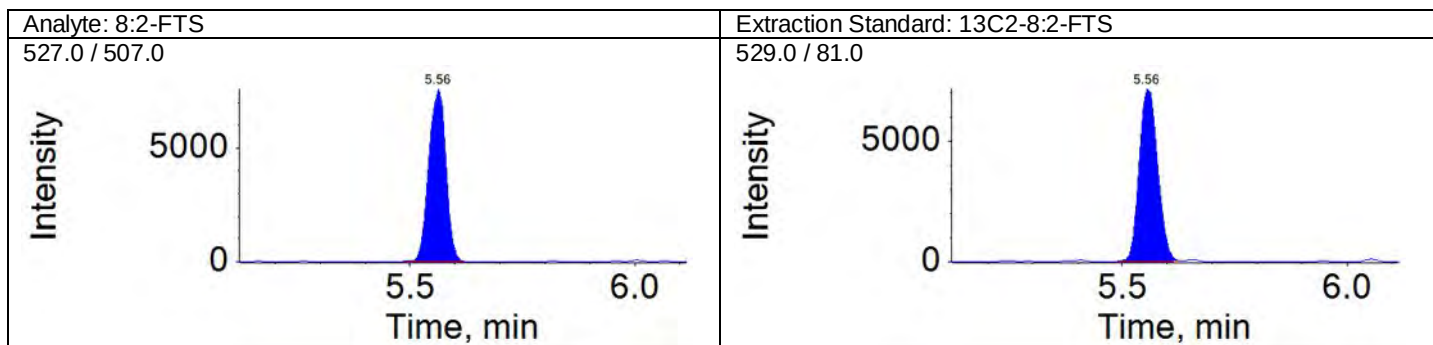
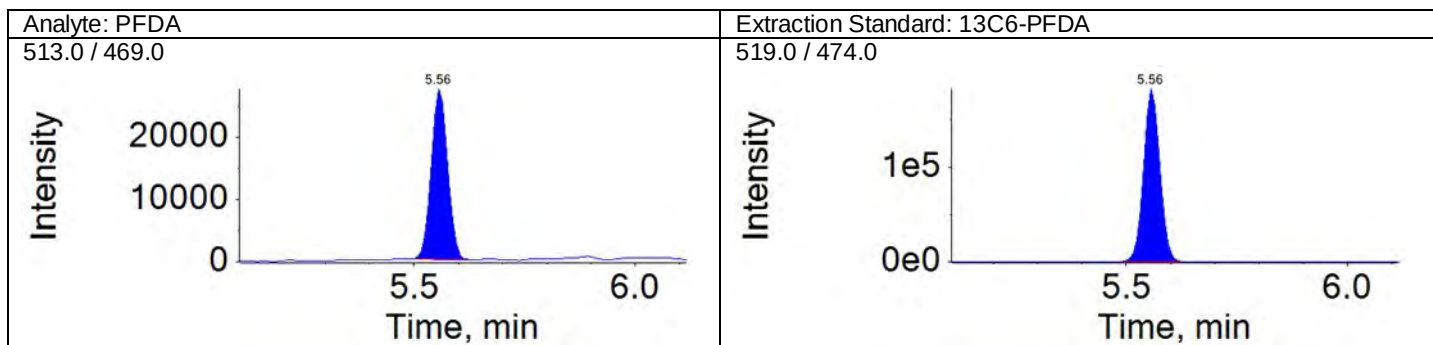
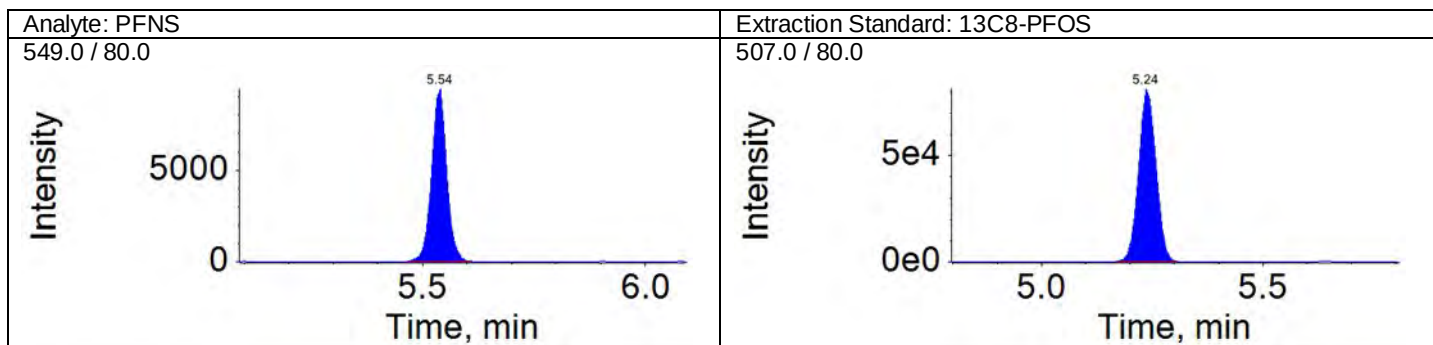
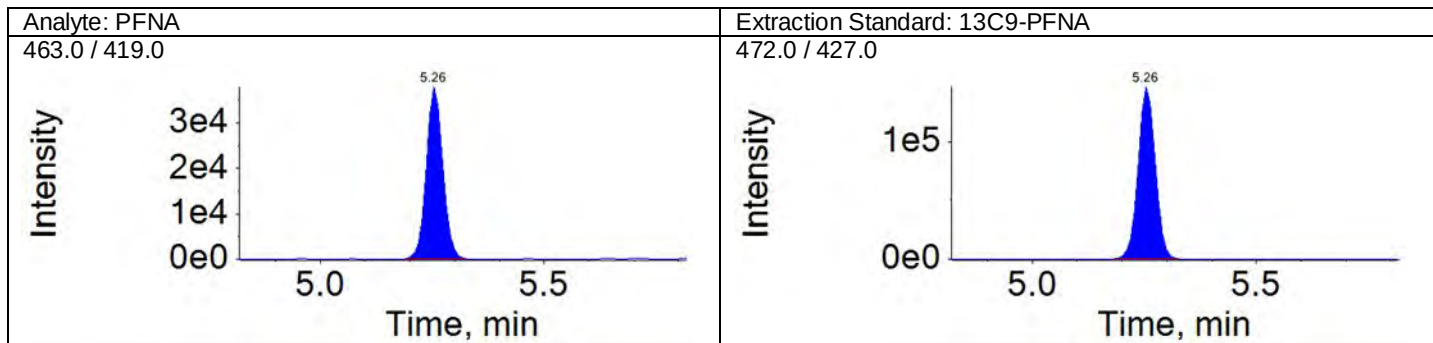
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



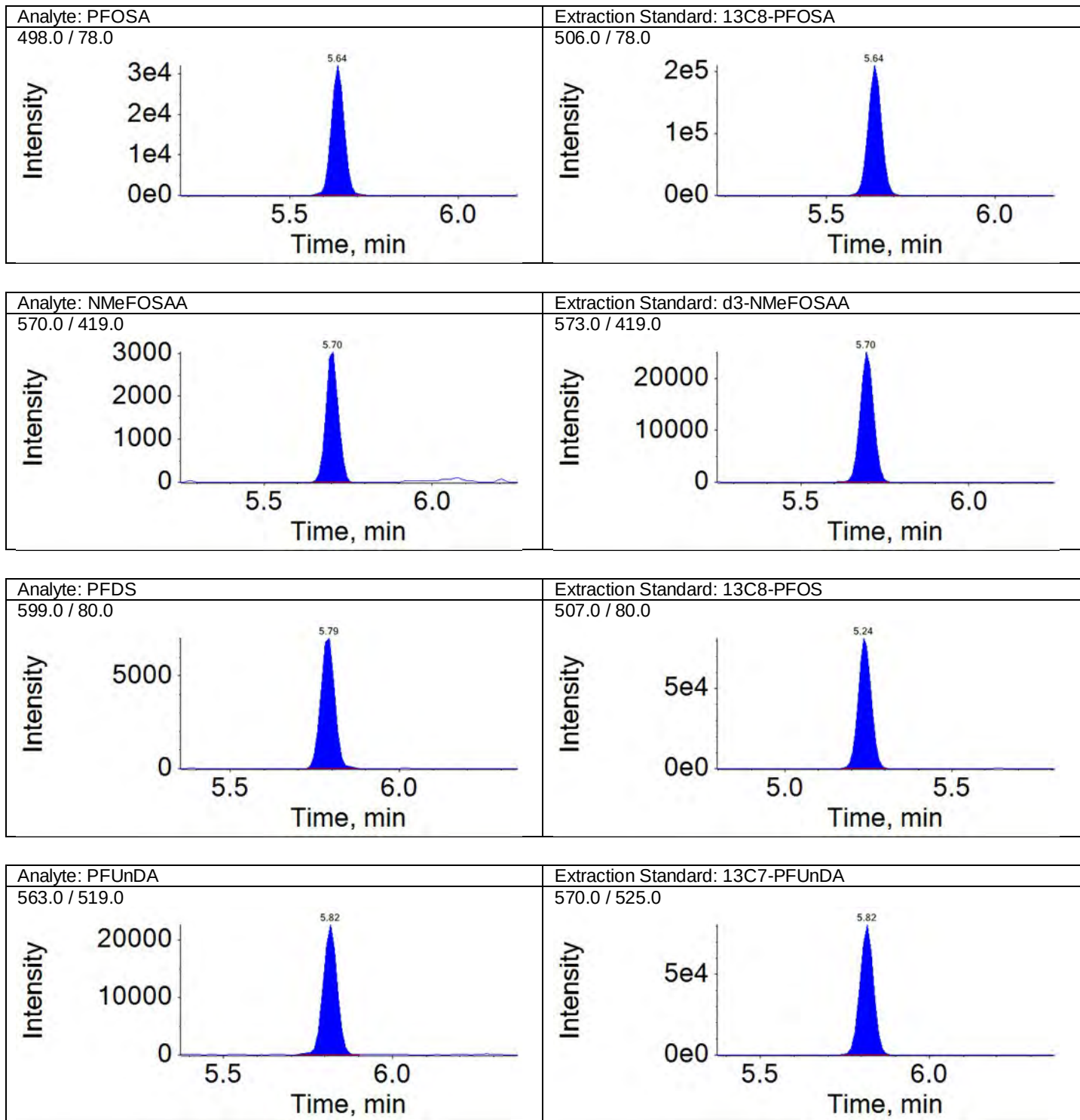
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



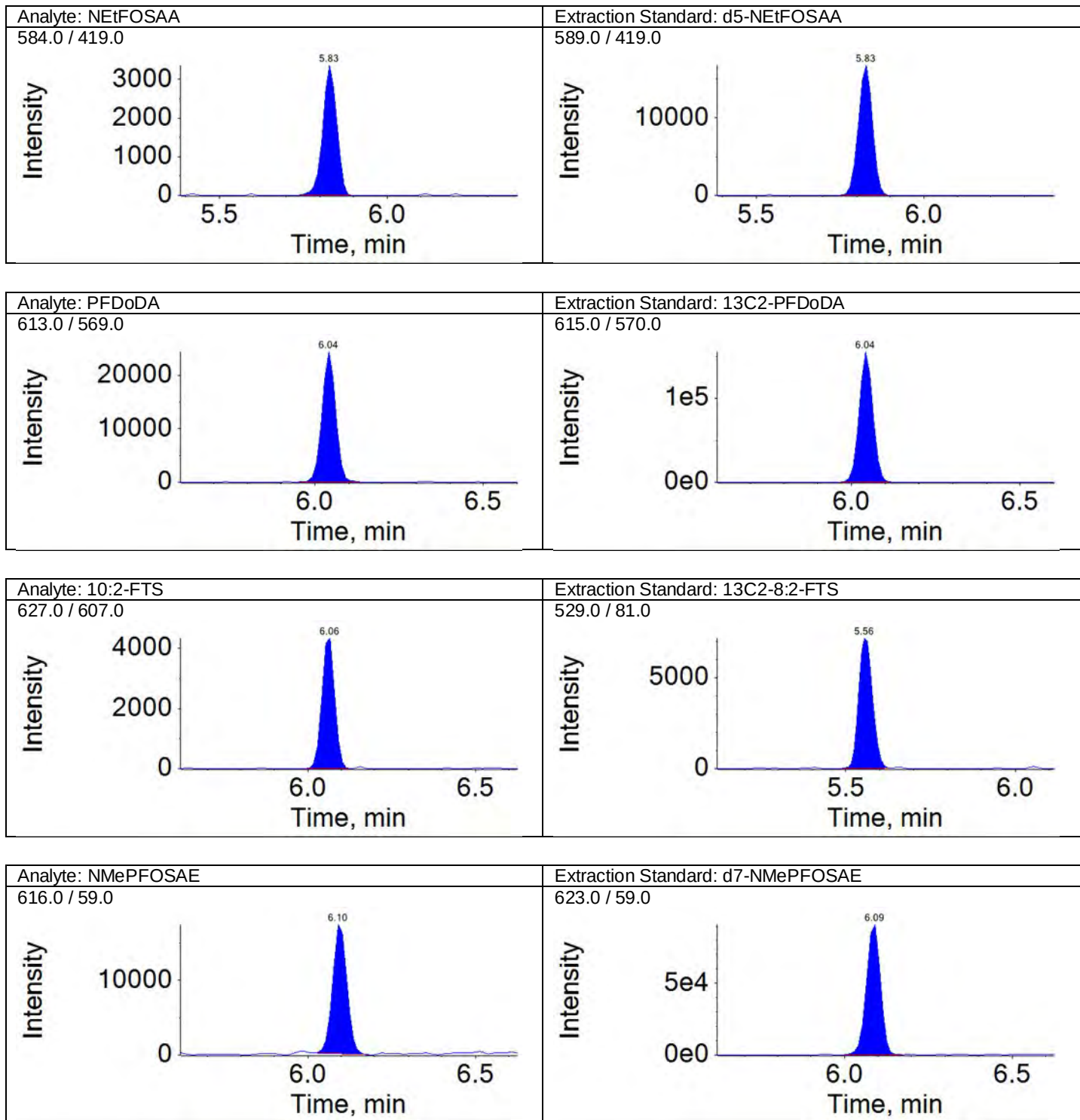
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



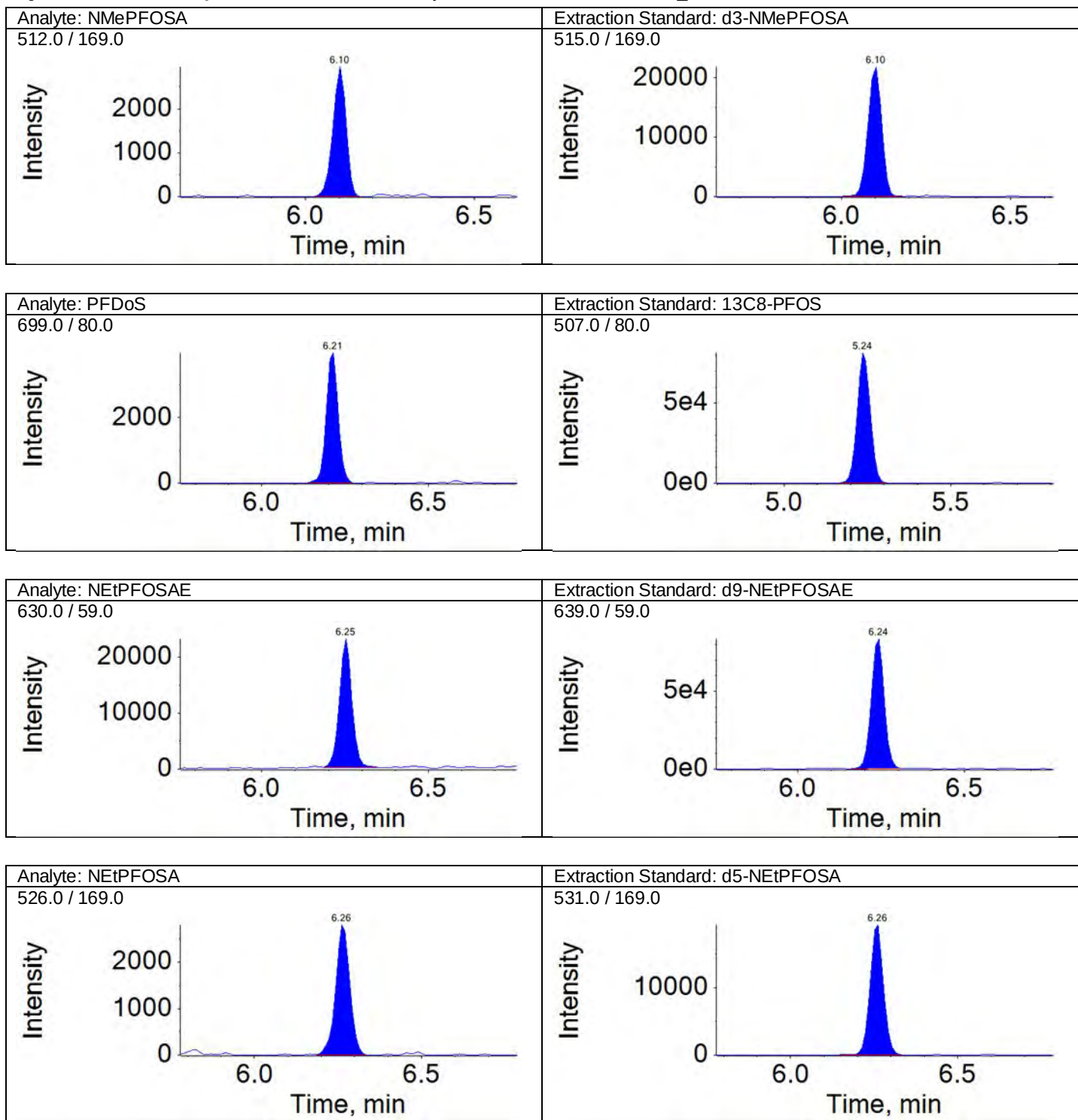
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



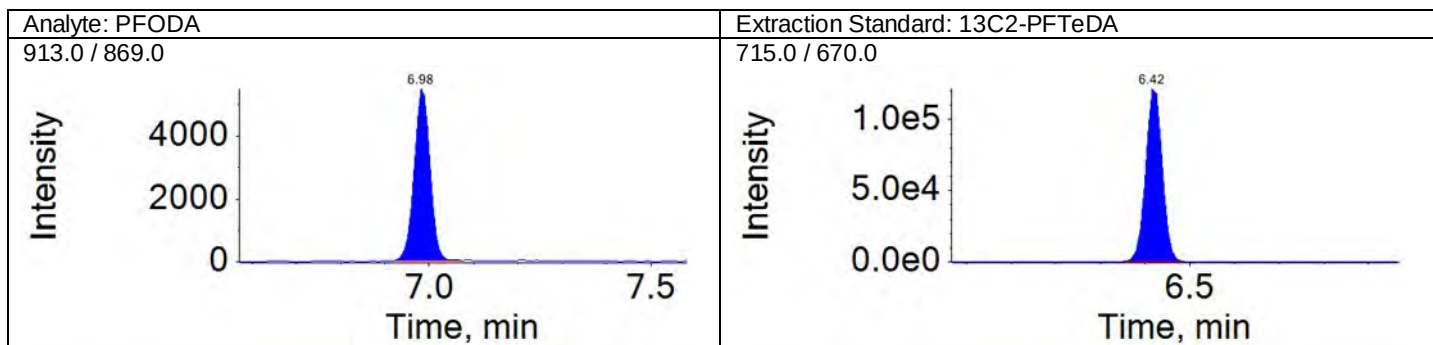
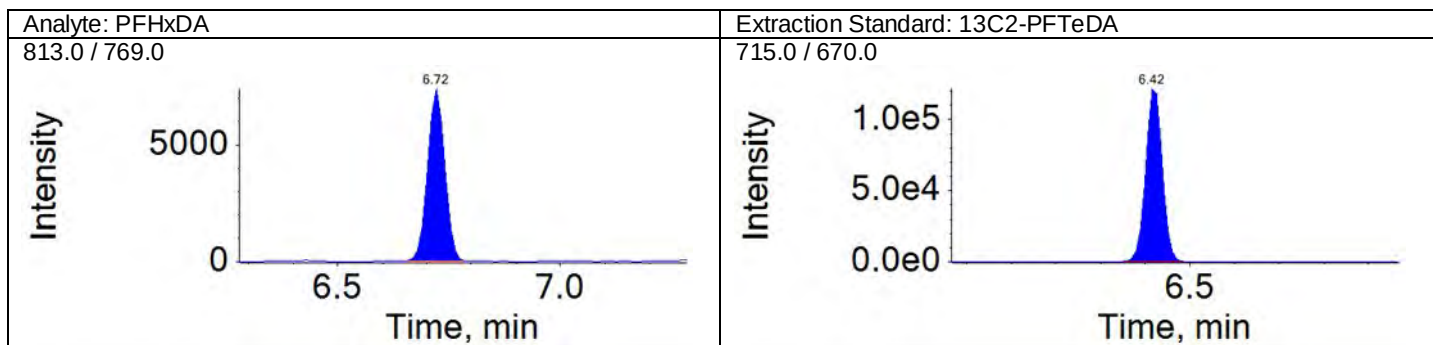
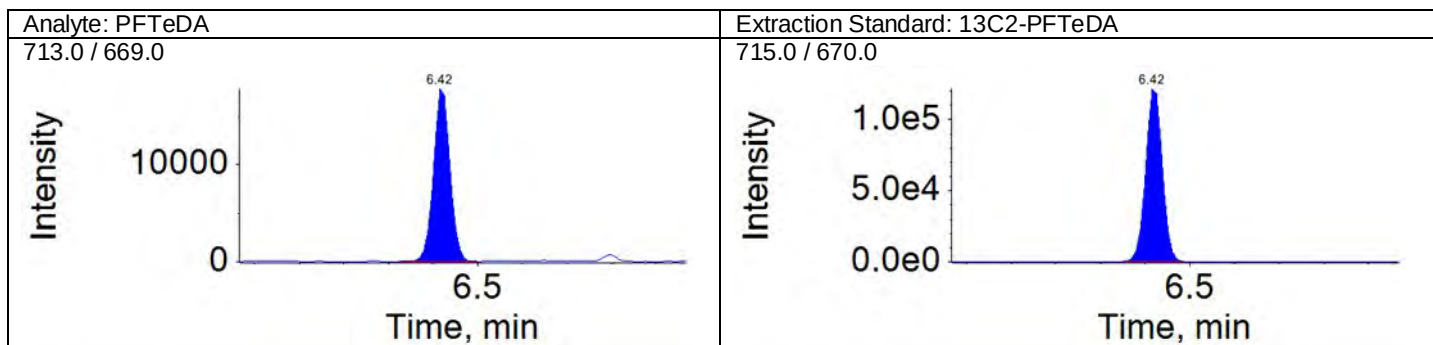
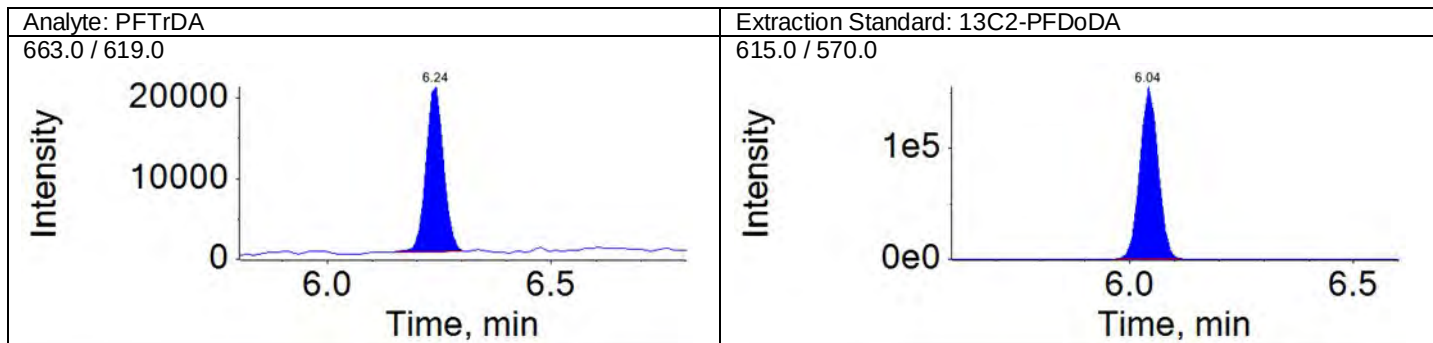
ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



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

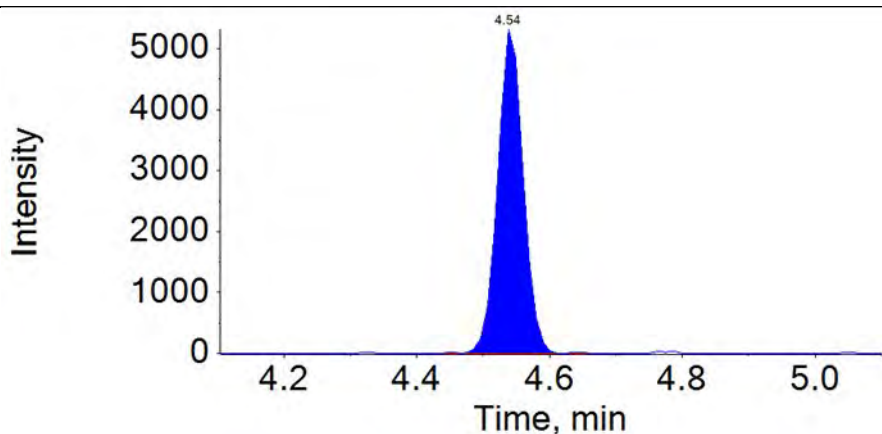
Result Table: 18310012_Batch QC+9881916 11/13/2018 11:08:58 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18310012_Batch QC+9881916
Results Table Date: 11/13/2018 11:08:58 PM

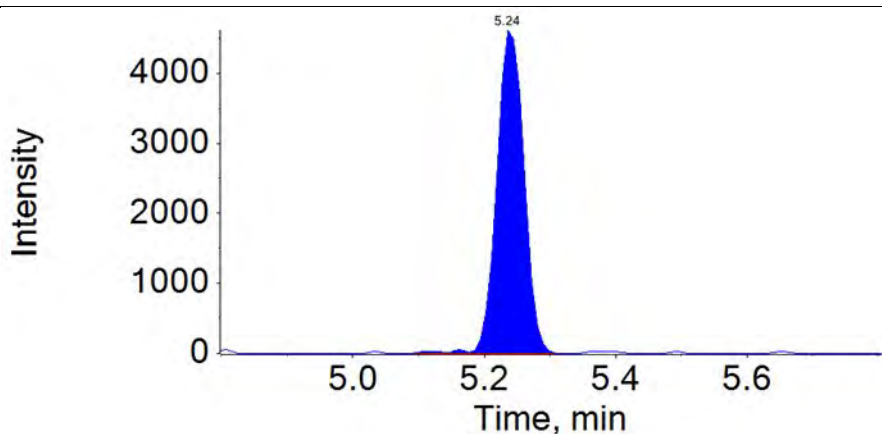
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
14292.2
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-70.wiff
Sample Name:
LCS310012



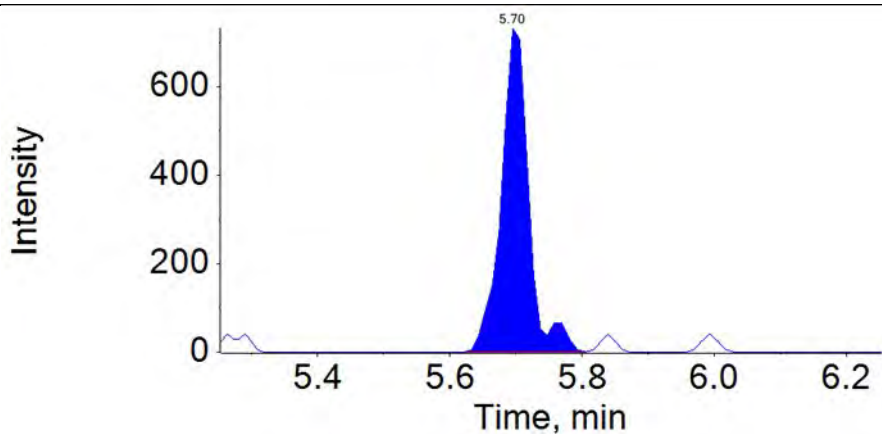
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
13371.5
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-70.wiff
Sample Name:
LCS310012



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
2136.0
Mass Range:
570.0 / 483.0
File Name:
18NOV08D-70.wiff
Sample Name:
LCS310012



Integration Comment: incorrect integration

Results Table Name: 18310012_Batch QC+9881916
Results Table Date: 11/13/2018 11:08:58 PM

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

APPROVED

By MCD at 11:15 pm, 11/13/18

REVIEWED

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

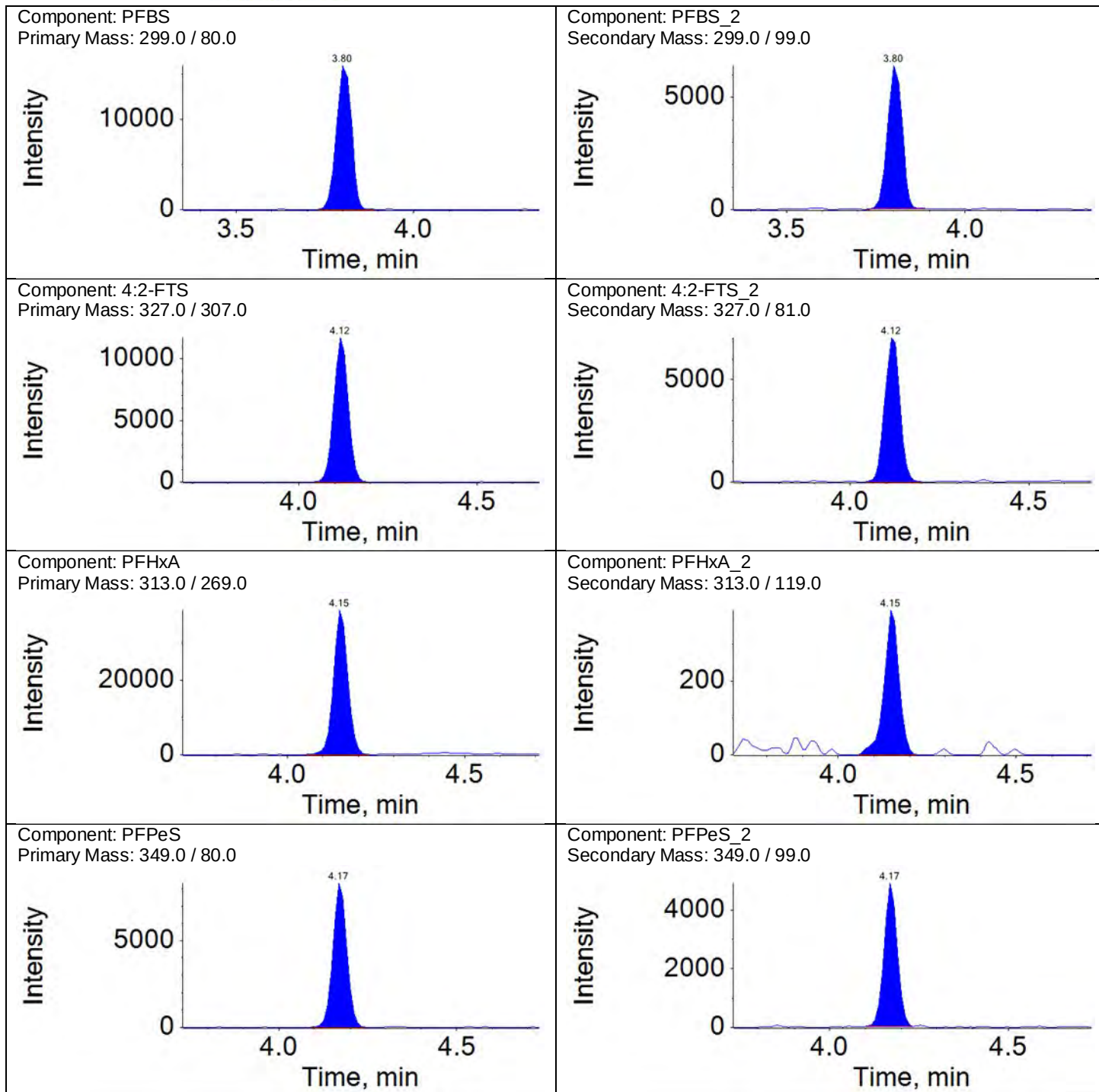
Ion Ratio Report

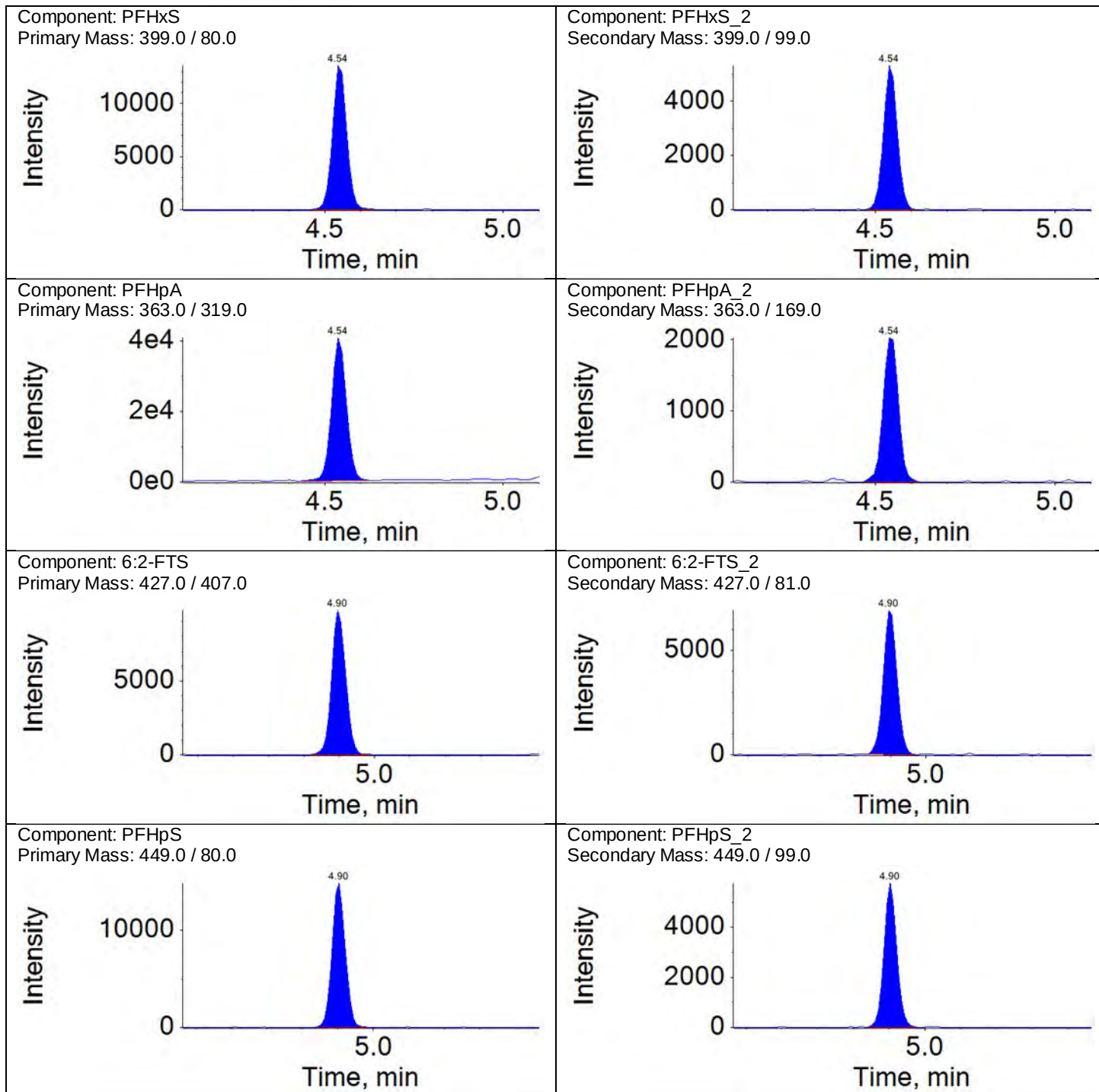
Sample Name: LCS310012

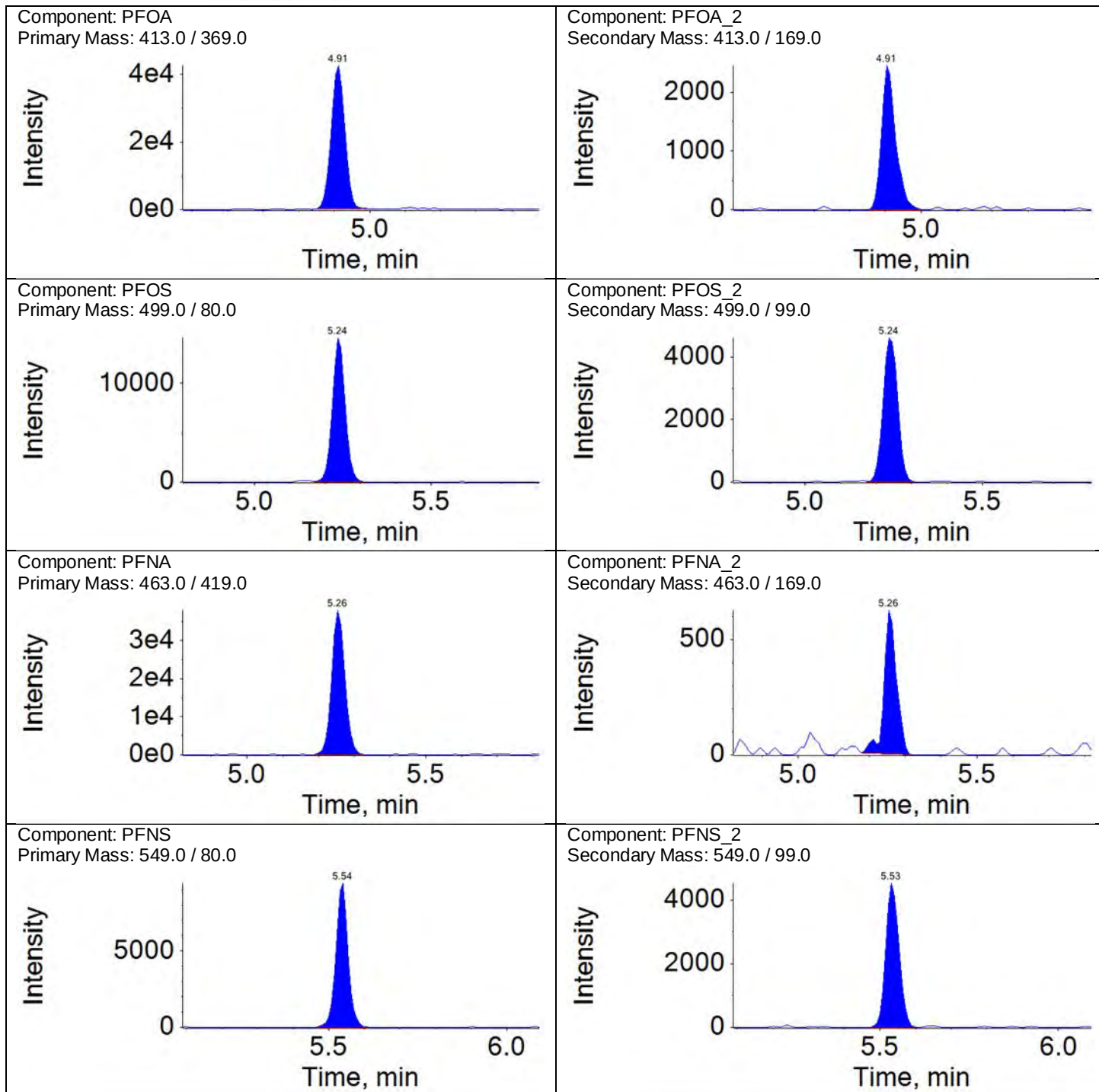
Instrument Name: LM27631

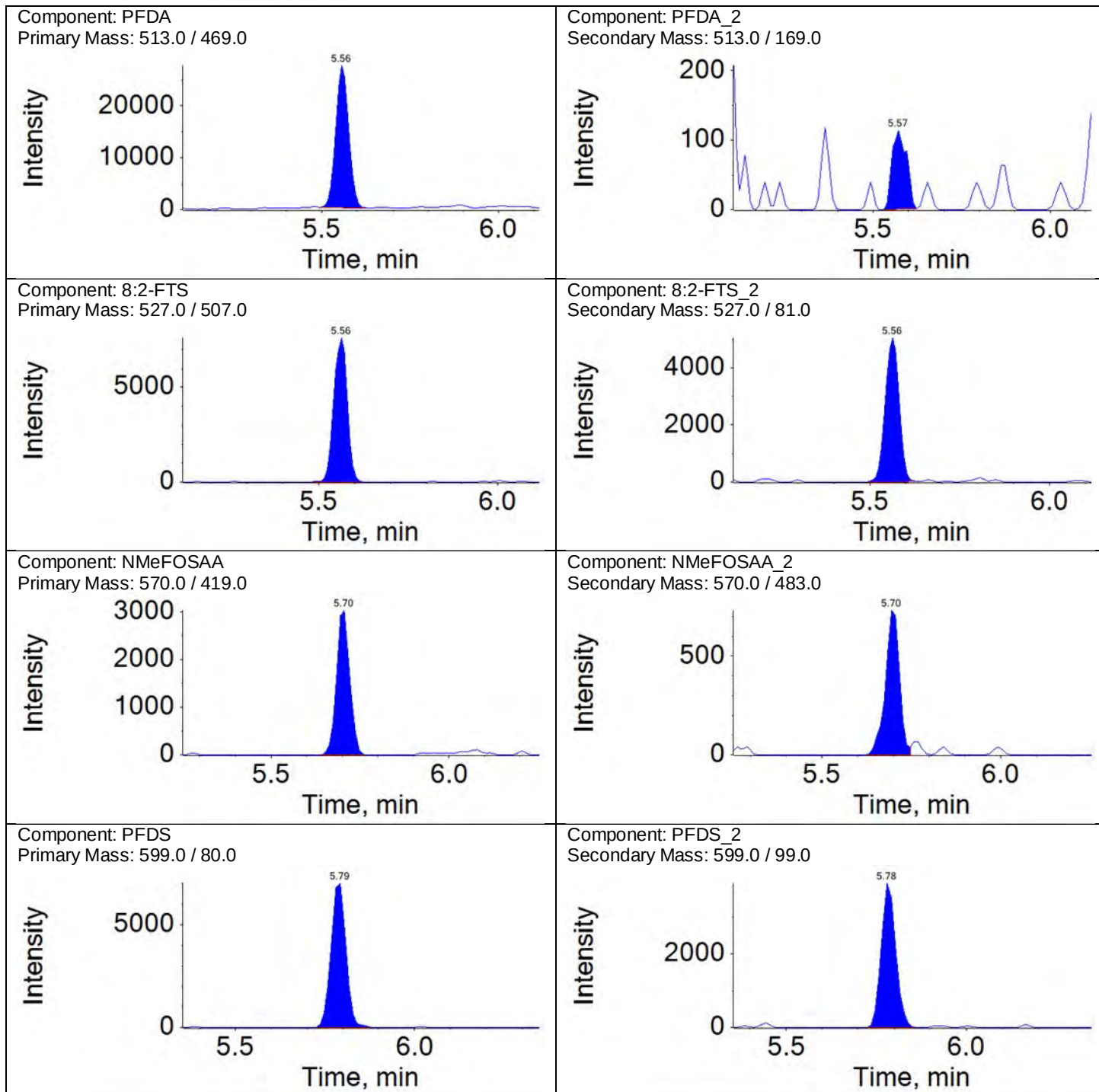
File Name: 18NOV08D-70.wiff

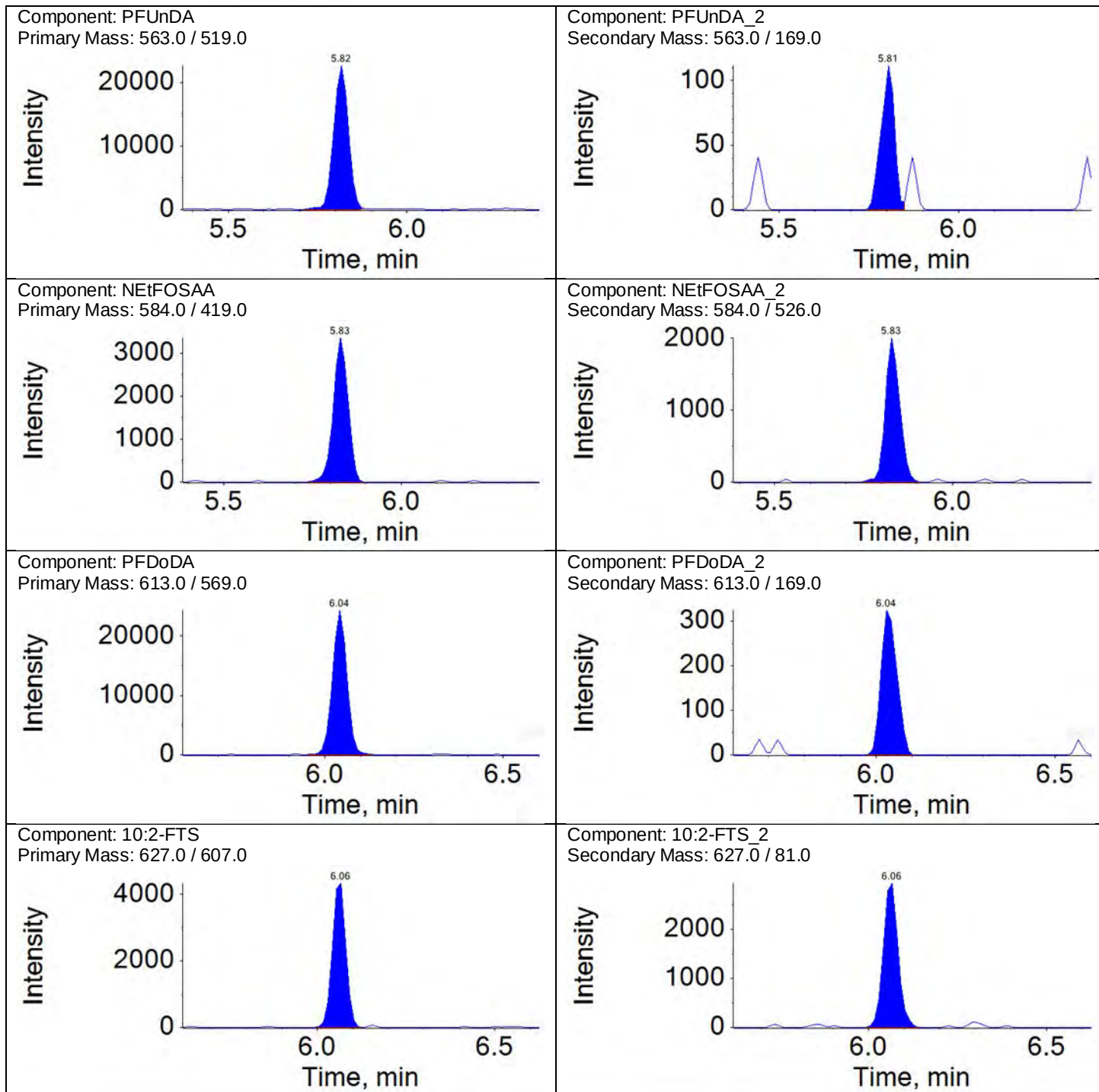
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	47045.7	A	N/A	0.3875			
PFBS_2	3.80	1.00	18231.3	A	N/A	0.3875	9	50	
4:2-FTS	4.12	1.00	32914.4	A	N/A	0.6325			
4:2-FTS_2	4.12	1.00	20819.5	A	N/A	0.6325	-1	50	
PFHxA	4.15	1.00	107307.8	A	N/A	0.0107			
PFHxA_2	4.15	1.00	1148.7	A	N/A	0.0107	-5	50	
PFPeS	4.17	1.10	22495.1	A	N/A	0.5539			
PFPeS_2	4.17	1.10	12460.9	A	N/A	0.5539	2	50	
PFHxS	4.54	1.00	37262.4	A	N/A	0.3822			
PFHxS_2	4.54	1.00	14241.0	M	N/A	0.3822	7	50	
PFHpA	4.54	1.00	116449.9	A	N/A	0.0520			
PFHpA_2	4.54	1.00	6059.6	A	N/A	0.0520	-10	50	
6:2-FTS	4.90	1.00	27021.7	A	N/A	0.6854			
6:2-FTS_2	4.90	1.00	18520.8	A	N/A	0.6854	0	50	
PFHpS	4.90	1.08	38091.4	A	N/A	0.3719			
PFHpS_2	4.90	1.08	14168.0	A	N/A	0.3719	-6	50	
PFOA	4.91	1.00	113603.0	A	N/A	0.0593			
PFOA_2	4.91	1.00	6737.9	A	N/A	0.0593	-7	50	
PFOS	5.24	1.00	36432.2	A	N/A	0.3632			
PFOS_2	5.24	1.00	13231.3	M	N/A	0.3632	3	50	
PFNA	5.26	1.00	96619.2	A	N/A	0.0157			
PFNA_2	5.26	1.00	1519.7	A	N/A	0.0157	-24	50	
PFNS	5.54	1.06	22160.9	A	N/A	0.5232			
PFNS_2	5.53	1.06	11594.8	A	N/A	0.5232	7	50	
PFDA	5.56	1.00	69858.3	A	N/A	0.0047			
PFDA_2	5.57	1.00	327.0	A	N/A	0.0047	-14	50	
8:2-FTS	5.56	1.00	19984.4	A	N/A	0.6781			
8:2-FTS_2	5.56	1.00	13551.3	A	N/A	0.6781	9	50	
NMeFOSAA	5.70	1.00	7800.1	A	N/A	0.2579			
NMeFOSAA_2	5.70	1.00	2011.6	M	N/A	0.2579	19	50	
PFDS	5.79	1.10	20350.5	A	N/A	0.5387			
PFDS_2	5.78	1.10	10962.2	A	N/A	0.5387	17	50	
PFUnDA	5.82	1.00	64655.2	A	N/A	0.0045			
PFUnDA_2	5.81	1.00	293.2	A	N/A	0.0045	49	50	
NEtFOSAA	5.83	1.00	9721.4	A	N/A	0.5770			
NEtFOSAA_2	5.83	1.00	5609.1	A	N/A	0.5770	-5	50	
PFDODA	6.04	1.00	68176.8	A	N/A	0.0148			
PFDODA_2	6.04	1.00	1006.6	A	N/A	0.0148	41	50	
10:2-FTS	6.06	1.09	11496.5	A	N/A	0.7421			
10:2-FTS_2	6.06	1.09	8531.6	A	N/A	0.7421	4	50	
PFTTrDA	6.24	1.03	55383.2	A	N/A	0.0080			
PFTTrDA_2	6.24	1.03	443.7	A	N/A	0.0080	-16	50	
PFTeDA	6.42	1.00	45252.4	A	N/A	0.0051			
PFTeDA_2	6.42	1.00	231.9	A	N/A	0.0051	-5	50	
PFHxDA	6.72	1.05	19655.1	A	N/A	0.0628			
PFHxDA_2	6.72	1.05	1233.5	A	N/A	0.0628	6	50	
PFODA	6.98	1.09	13613.5	A	N/A	0.0274			
PFODA_2	6.98	1.09	373.5	A	N/A	0.0274	7	50	

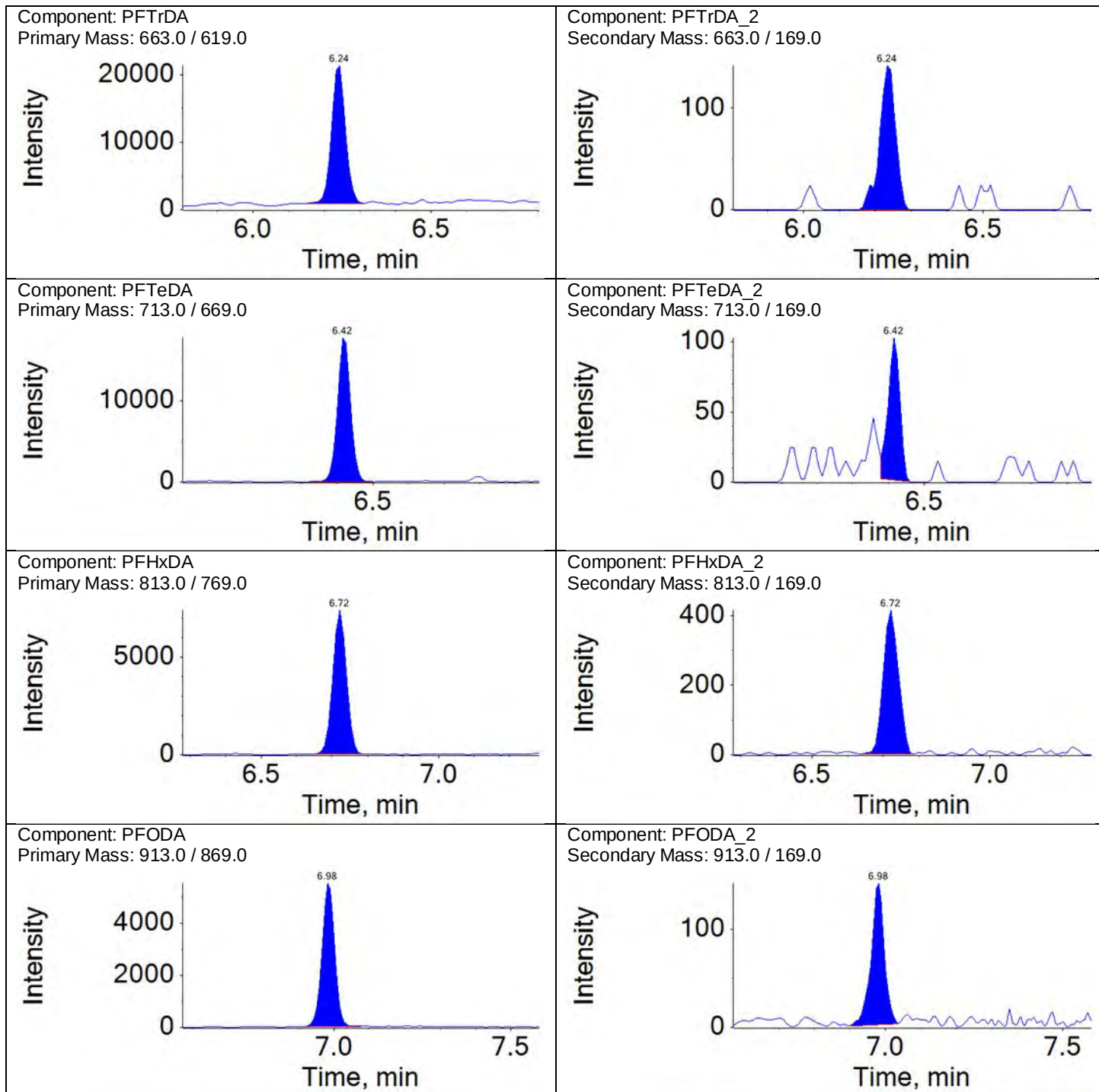










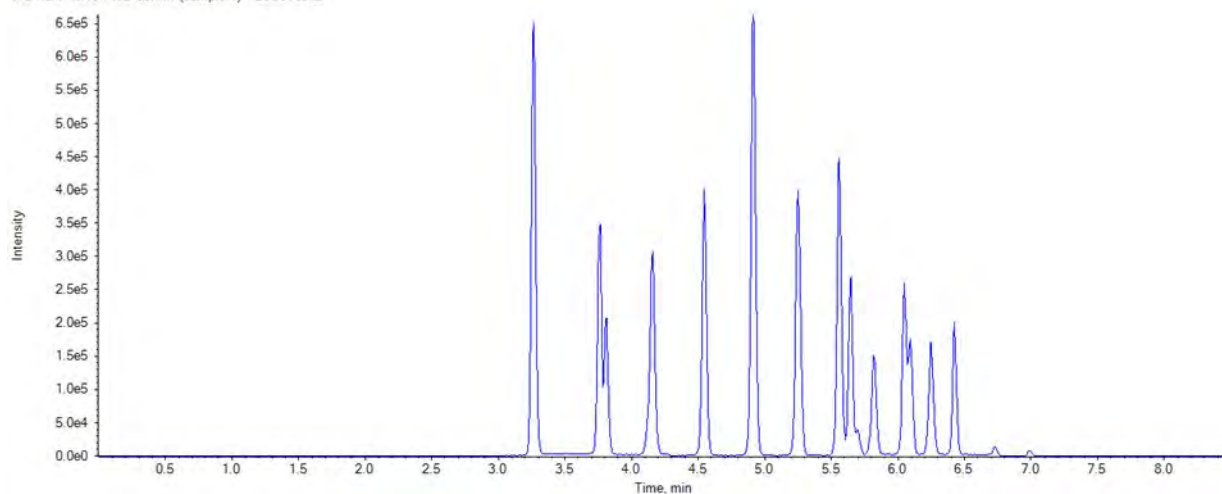


Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:21:17 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS316012	EPA 537 mod QSM 5.1 table B-15 18316012	18NOV13D-08.wiff	2018-11-13T10:11:09

TIC from 18NOV13D-08.wiff (sample 1) - LCS316012



Injection Standard Area Reference File: 18NOV13D-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	5.00	721263.5	661126.9	9	50	
13C2-PFOA	5.00	518882.9	466902.6	11	50	
13C4-PFOS	4.78	272242.3	247446.9	10	50	
13C2-PFDA	5.00	326722.9	295381.6	11	50	

APPROVED

By MCD at 10:39 pm, 11/13/18

BSI05 Page 1554 of 1595

REVIEWED

By HMK at 2:12 pm, 11/14/18

Page 1 of 3

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL Result Table: 18316012 11/13/2018 10:21:17 PM
QMethod Name: 18AUG20QM Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS316012	EPA 537 mod QSM 5.1 table B-15 18316012	18NOV13D-08.wiff	2018-11-13T10:11:09

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	88636.6	659007.0	0.135	1.360	1.490	110	70-130	
PFPeA	87984.6	653531.6	0.135	1.360	1.559	115	70-130	
PFBS	49793.5	362407.5	0.137	1.204	1.307	109	70-130	
4:2-FTS	30211.4	42587.6	0.709	3.736	3.852	103	70-130	
PFHxA	108611.8	578567.3	0.188	1.360	1.568	115	70-130	
PFPeS	26184.1	362407.5	0.072	1.276	1.403	110	70-130	
PFHpA	113389.5	451091.4	0.251	1.360	1.666	123	70-130	
PFHxS	37348.7	282185.3	0.132	1.286	1.284	100	70-130	
6:2-FTS	25298.8	32354.4	0.782	3.792	3.784	100	70-130	
PFHpS	36234.5	282185.3	0.128	1.294	1.352	104	70-130	
PFOA	115473.1	819927.8	0.141	1.360	1.504	111	70-130	
PFOS	31194.5	244127.3	0.128	1.300	1.118	86	70-130	
PFNA	85447.3	405498.5	0.211	1.360	1.520	112	70-130	
PFNS	23788.9	244127.3	0.097	1.306	1.364	104	70-130	
PFDA	69895.9	550807.9	0.127	1.360	1.345	99	70-130	
8:2-FTS	23267.1	23893.9	0.974	3.832	4.541	118	70-130	
PFOSA	71174.5	534887.5	0.133	1.360	1.300	96	70-130	
NMeFOSAA	7167.0	73591.2	0.097	1.360	1.101	81	70-130	
PFDS	18465.1	244127.3	0.076	1.310	1.371	105	70-130	
PFUnDA	61939.5	223968.4	0.277	1.360	1.446	106	70-130	
NEtFOSAA	7698.3	55390.5	0.139	1.360	1.457	107	70-130	
PFDoDA	62158.2	476043.0	0.131	1.360	1.330	98	70-130	
10:2-FTS	13929.3	23893.9	0.583	3.856	3.884	101	70-130	
NMePFOSAE	47501.8	279942.3	0.170	1.360	1.412	104	70-130	
NMePFOSA	9881.9	64495.5	0.153	1.360	1.512	111	70-130	
PFDoS	9642.8	244127.3	0.039	1.316	1.384	105	70-130	
NEtPFOSAE	51853.1	237144.8	0.219	1.360	1.403	103	70-130	
NEtPFOSA	7317.6	52390.4	0.140	1.360	1.283	94	70-130	
PFTTrDA	52579.3	476043.0	0.110	1.360	1.394	103	70-130	
PFTeDA	45291.6	354486.4	0.128	1.360	1.432	105	70-130	
PFHxDA	23236.0	354486.4	0.066	1.360	1.562	115	70-130	
PFODA	16946.9	354486.4	0.048	1.360	1.332	98	70-130	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Lab Control Sample Recovery

Result Table: 18316012 11/13/2018 10:21:17 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 10:39 pm, 11/13/18

REVIEWED
By HMK at 2:12 pm, 11/14/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCS316012		Data File:	18NOV13D-08.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316012		Acquis Date:	2018-11-13T10:11:09
Sample Type:	Quality Control		Instrument:	LM27631
Vial Position:	14		Acquis Method:	18AUG13_3uL.dam
Injection Vol:	3.00		Result Table:	18316012
QMethod File:	18AUG20QM		ICAL Name:	18NOV12DCAL
Batch Number:	18316012		Operator:	MCD7824
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-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	721263.5	661126.9	9	50	
13C2-PFOA	5.0	518882.9	466902.6	11	50	
13C4-PFOS	4.8	272242.3	247446.9	10	50	
13C2-PFDA	5.0	326722.9	295381.6	11	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	659007.0	13C3-PFBA	721263.5	0.914	10.000	8.193	82	50-150	
E13C5-PFPeA	653531.6	13C3-PFBA	721263.5	0.906	10.000	8.128	81	50-150	
E13C3-PFBS	362407.5	13C3-PFBA	721263.5	0.502	9.300	7.094	76	50-150	
E13C2-4:2-FTS	42587.6	13C2-PFOA	518882.9	0.082	9.340	7.311	78	50-150	
E13C5-PFHxA	578567.3	13C2-PFOA	518882.9	1.115	10.000	8.056	81	50-150	
E13C3-PFHxS	282185.3	13C2-PFOA	518882.9	0.544	9.460	7.463	79	50-150	
E13C4-PFHpA	451091.4	13C2-PFOA	518882.9	0.869	10.000	7.833	78	50-150	
E13C2-6:2-FTS	32354.4	13C2-PFOA	518882.9	0.062	9.500	8.344	88	50-150	
E13C8-PFOA	819927.8	13C2-PFOA	518882.9	1.580	10.000	8.707	87	50-150	
E13C8-PFOS	244127.3	13C4-PFOS	272242.3	0.897	9.560	7.947	83	50-150	
E13C9-PFNA	405498.5	13C4-PFOS	272242.3	1.489	10.000	8.306	83	50-150	
E13C6-PFDA	550807.9	13C2-PFDA	326722.9	1.686	10.000	7.868	79	50-150	
E13C2-8:2-FTS	23893.9	13C2-PFDA	326722.9	0.073	9.580	7.294	76	50-150	
E13C8-PFOSA	534887.5	13C2-PFDA	326722.9	1.637	10.000	7.259	73	50-150	
Ed3-NMeFOSAA	73591.2	13C2-PFDA	326722.9	0.225	10.000	8.131	81	50-150	
E13C7-PFUnDA	223968.4	13C2-PFDA	326722.9	0.685	10.000	7.960	80	50-150	
Ed5-NetFOSAA	55390.5	13C2-PFDA	326722.9	0.170	10.000	7.173	72	50-150	
E13C2-PFDoDA	476043.0	13C2-PFDA	326722.9	1.457	10.000	7.566	76	50-150	
Ed7-NMePFOSAE	279942.3	13C2-PFDA	326722.9	0.857	10.000	7.416	74	50-150	
Ed3-NMePFOSA	64495.5	13C2-PFDA	326722.9	0.197	10.000	7.173	72	50-150	
Ed9-NetPFOSAE	237144.8	13C2-PFDA	326722.9	0.726	10.000	7.550	76	50-150	
Ed5-NetPFOSA	52390.4	13C2-PFDA	326722.9	0.160	10.000	7.523	75	50-150	
E13C2-PFTeDA	354486.4	13C2-PFDA	326722.9	1.085	10.000	7.618	76	50-150	

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QMResult Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam

Analyte Quantitation Peak Table

Sample Name: LCS316012

Instrument Name: LM27631

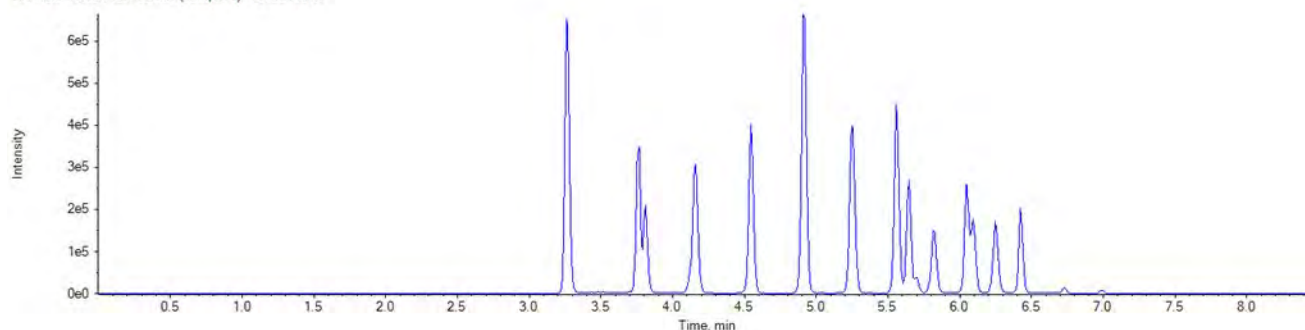
File Name: 18NOV13D-08.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	88636.6		A	13C4-PFBA	3.26	659007.0	0.135	1.490
PFPeA	3.76	1.000	87984.6		A	13C5-PFPeA	3.76	653531.6	0.135	1.559
PFBS	3.81	1.000	49793.5		A	13C3-PFBS	3.81	362407.5	0.137	1.307
4:2-FTS	4.12	1.000	30211.4		A	13C2-4:2-FTS	4.12	42587.6	0.709	3.852
PFHxA	4.16	1.000	108611.8		A	13C5-PFHxA	4.16	578567.3	0.188	1.568
PFPeS	4.18	1.100	26184.1		A	13C3-PFBS	3.81	362407.5	0.072	1.403
PFHpA	4.55	1.000	113389.5		M	13C4-PFHpA	4.55	451091.4	0.251	1.666
PFHxS	4.55	1.000	37348.7		A	13C3-PFHxS	4.55	282185.3	0.132	1.284
6:2-FTS	4.90	1.000	25298.8		A	13C2-6:2-FTS	4.90	32354.4	0.782	3.784
PFHpS	4.91	1.080	36234.5		A	13C3-PFHxS	4.55	282185.3	0.128	1.352
PFOA	4.92	1.000	115473.1		A	13C8-PFOA	4.91	819927.8	0.141	1.504
PFOS	5.25	1.000	31194.5		M	13C8-PFOS	5.24	244127.3	0.128	1.118
PFNA	5.26	1.000	85447.3		A	13C9-PFNA	5.26	405498.5	0.211	1.520
PFNS	5.54	1.060	23788.9		A	13C8-PFOS	5.24	244127.3	0.097	1.364
PFDA	5.56	1.000	69895.9		A	13C6-PFDA	5.56	550807.9	0.127	1.345
8:2-FTS	5.56	1.000	23267.1		A	13C2-8:2-FTS	5.56	23893.9	0.974	4.541
PFOSA	5.64	1.000	71174.5		A	13C8-PFOSA	5.64	534887.5	0.133	1.300
NMeFOSAA	5.70	1.000	7167.0		M	d3-NMeFOSAA	5.70	73591.2	0.097	1.101
PFDS	5.79	1.100	18465.1		M	13C8-PFOS	5.24	244127.3	0.076	1.371
PfUnDA	5.82	1.000	61939.5		M	13C7-PfUnDA	5.82	223968.4	0.277	1.446
NEtFOSAA	5.83	1.000	7698.3		A	d5-NEtFOSAA	5.83	55390.5	0.139	1.457
PFDODA	6.05	1.000	62158.2		A	13C2-PFDODA	6.05	476043.0	0.131	1.330
10:2-FTS	6.06	1.090	13929.3		A	13C2-8:2-FTS	5.56	23893.9	0.583	3.884
NMePFOSAE	6.10	1.000	47501.8		A	d7-NMePFOSAE	6.09	279942.3	0.170	1.412
NMePFOSA	6.11	1.000	9881.9		M	d3-NMePFOSA	6.10	64495.5	0.153	1.512
PFDoS	6.22	1.190	9642.8		A	13C8-PFOS	5.24	244127.3	0.039	1.384
NEtPFOSAE	6.26	1.000	51853.1		A	d9-NEtPFOSAE	6.25	237144.8	0.219	1.403
NEtPFOSA	6.27	1.000	7317.6		M	d5-NEtPFOSA	6.26	52390.4	0.140	1.283
PFTDA	6.25	1.030	52579.3		A	13C2-PFDODA	6.05	476043.0	0.110	1.394
PFTeDA	6.43	1.000	45291.6		A	13C2-PFTeDA	6.43	354486.4	0.128	1.432
PFHxDA	6.73	1.050	23236.0		A	13C2-PFTeDA	6.43	354486.4	0.066	1.562
PFODA	6.99	1.090	16946.9		A	13C2-PFTeDA	6.43	354486.4	0.048	1.332

Total Ion Chromatogram

TIC from 18NOV13D-08.wiff (sample 1) - LCS316012



APPROVED

By MCD at 10:39 pm, 11/13/18

BSI05 Page 1558 of 1595

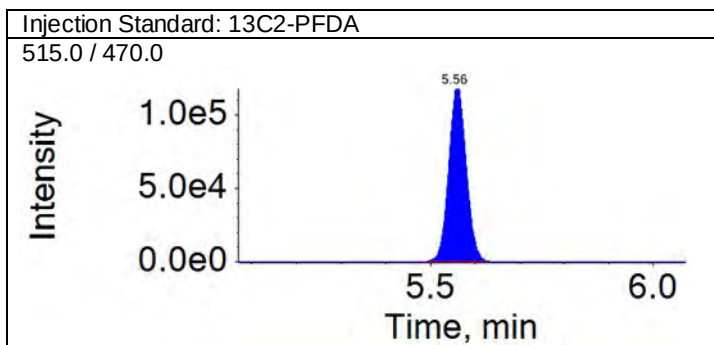
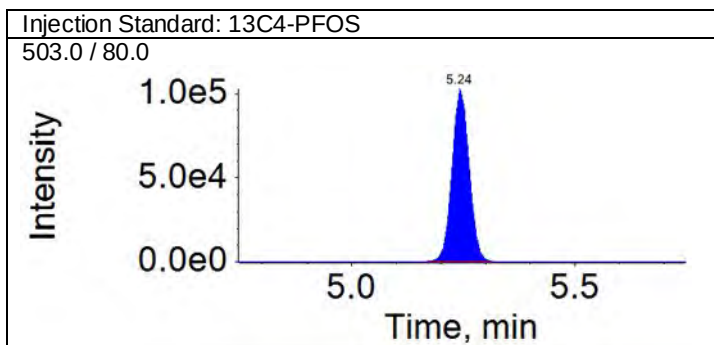
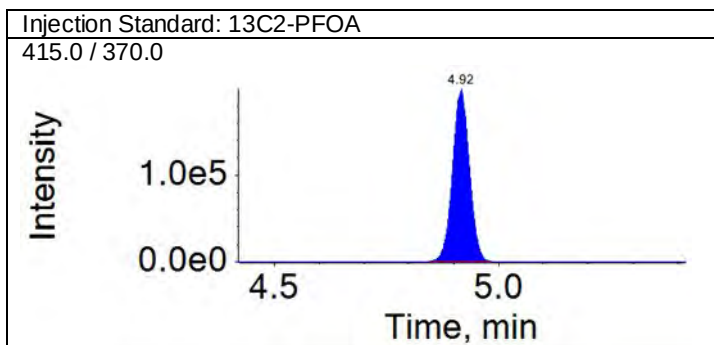
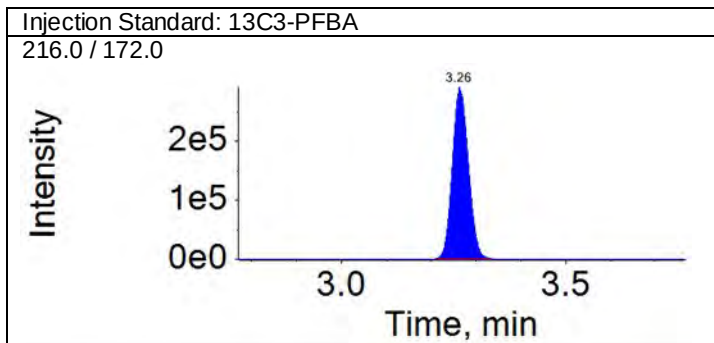
REVIEWED

By HMK at 2:12 pm, 11/14/18

Page 2 of 17

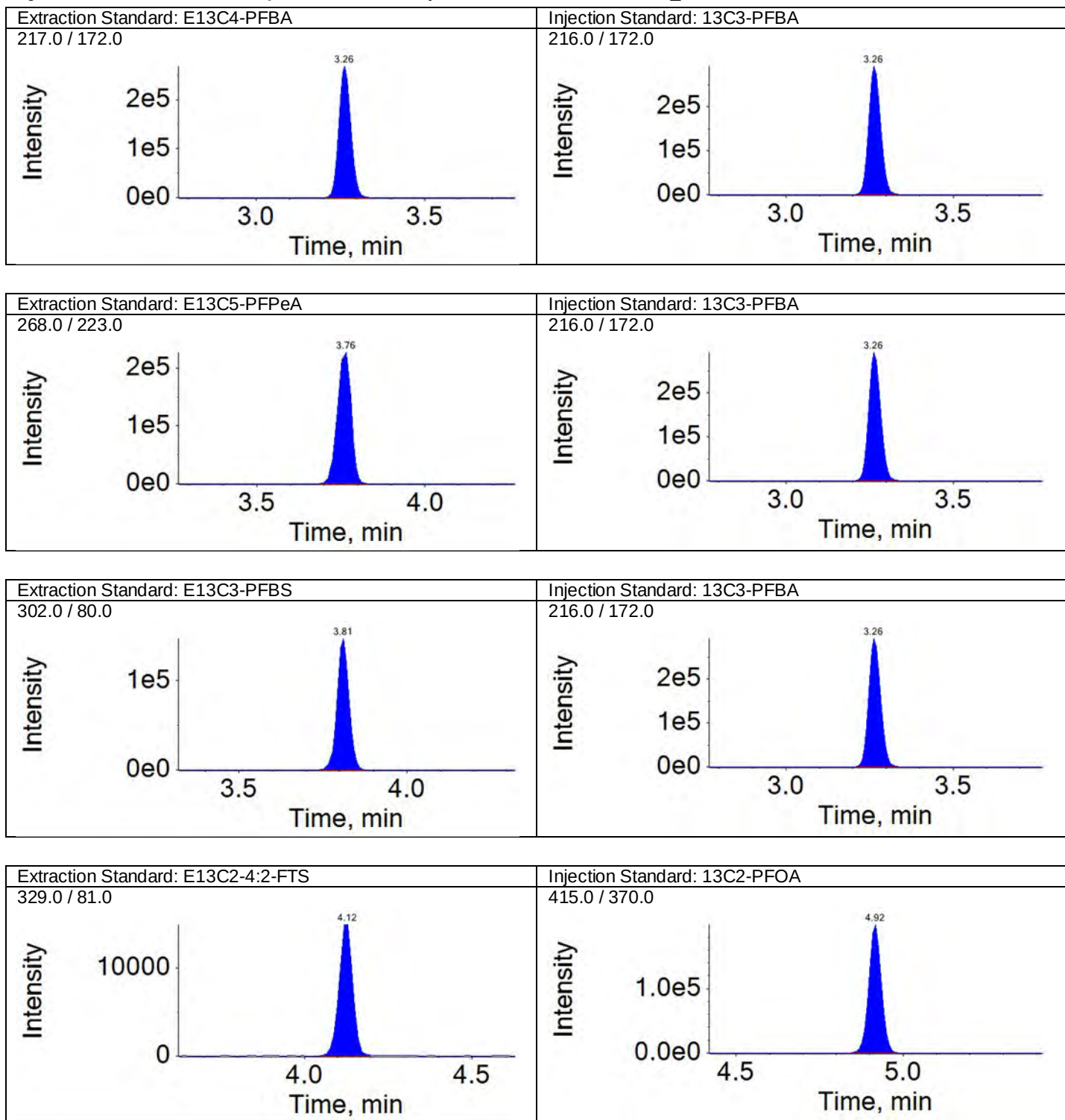
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



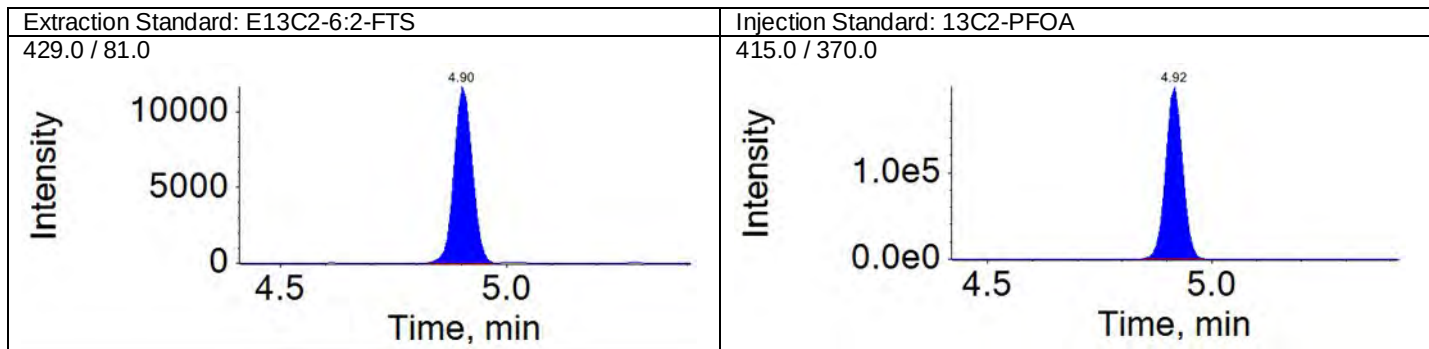
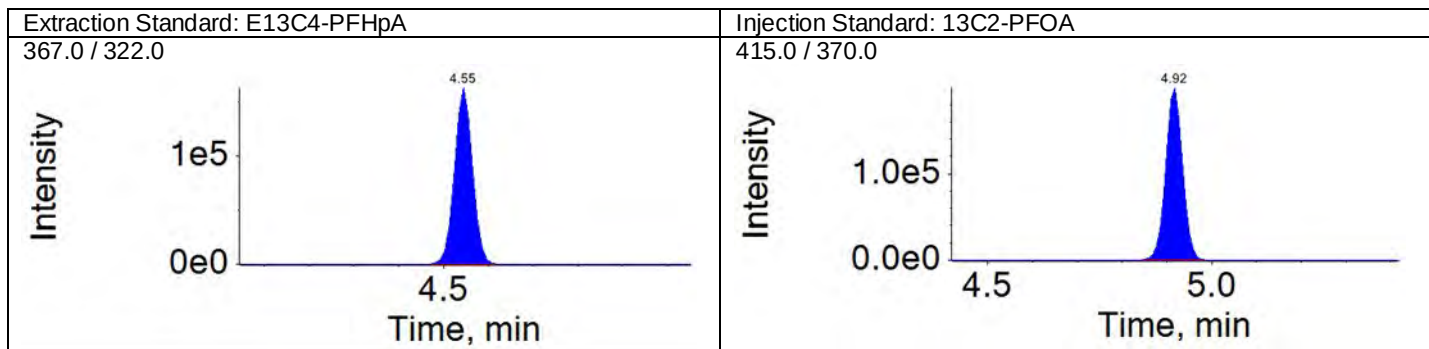
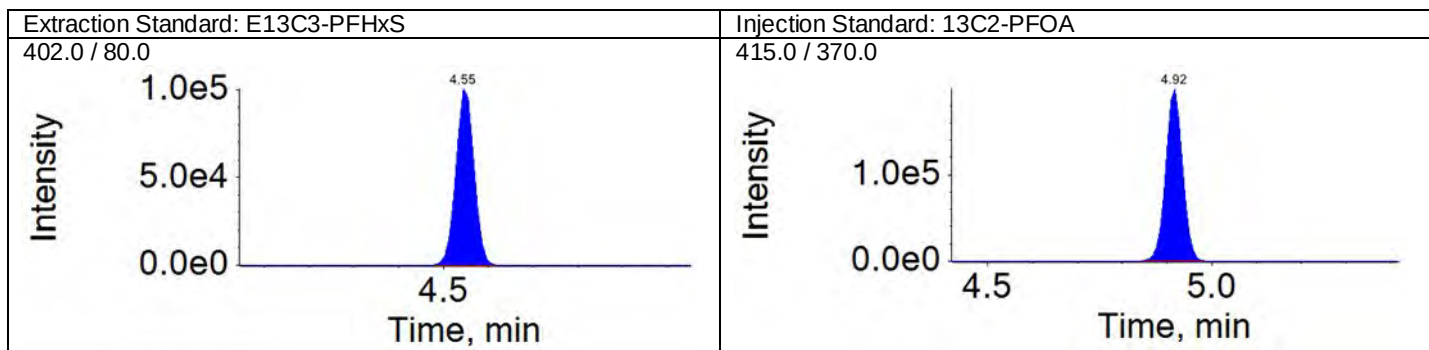
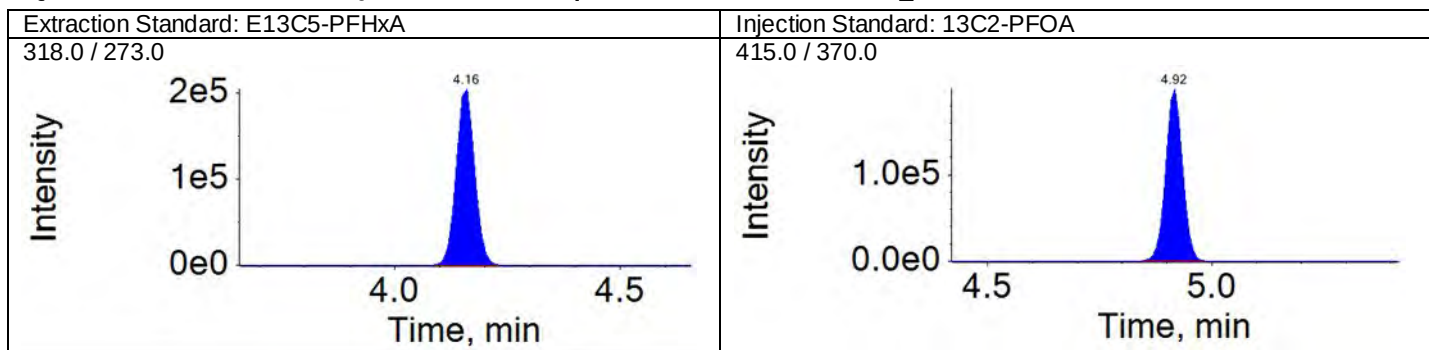
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



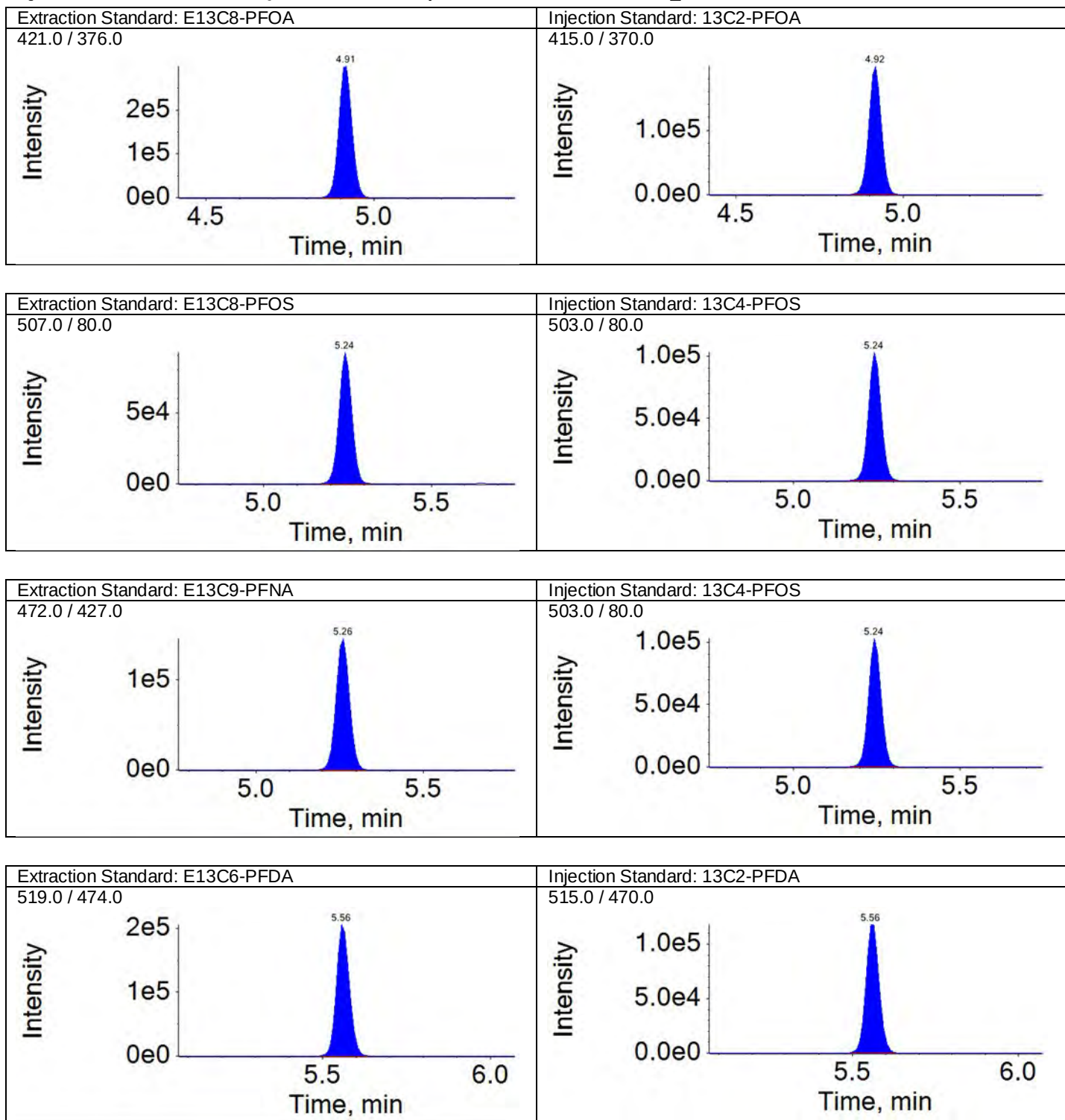
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



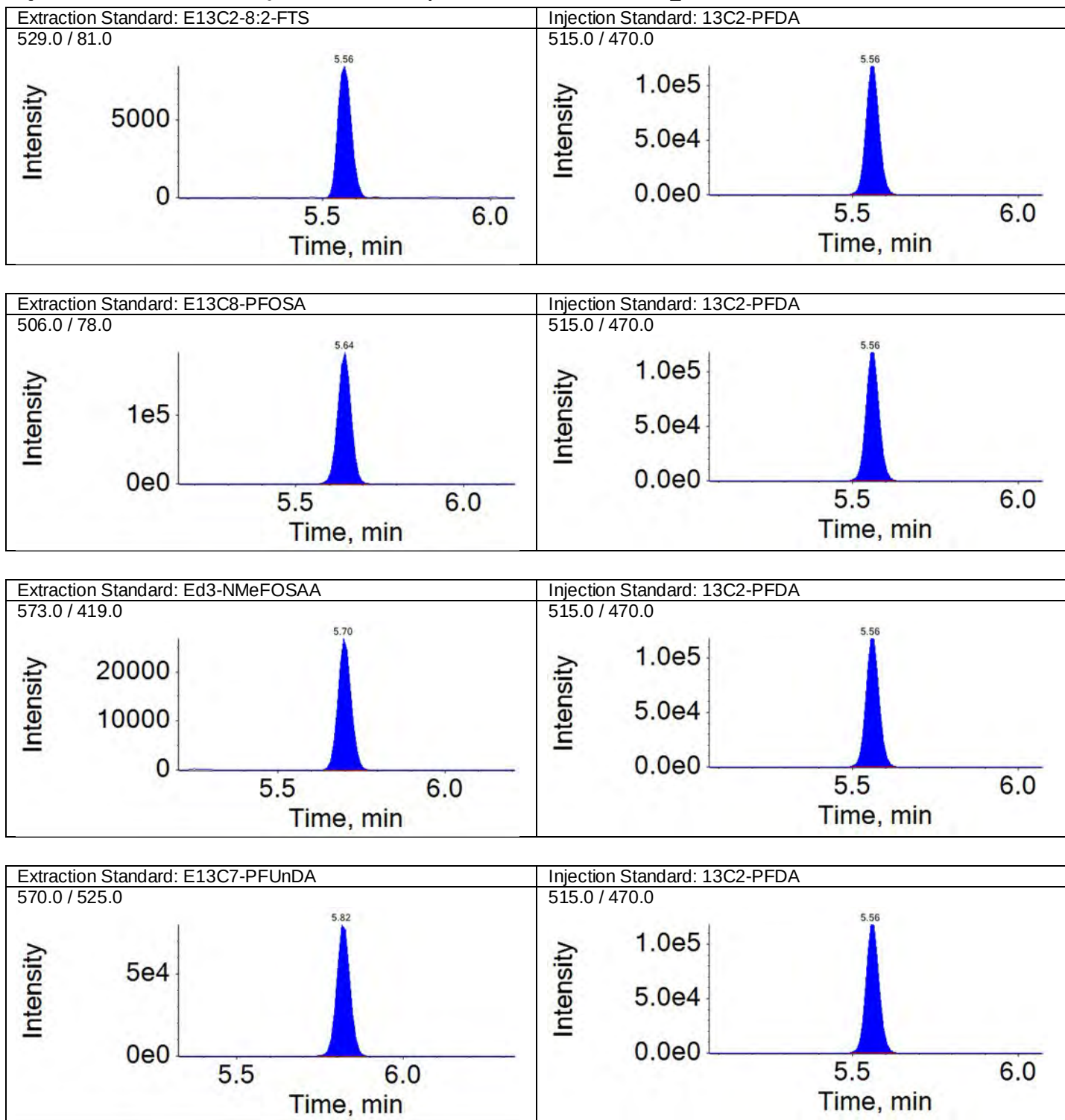
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



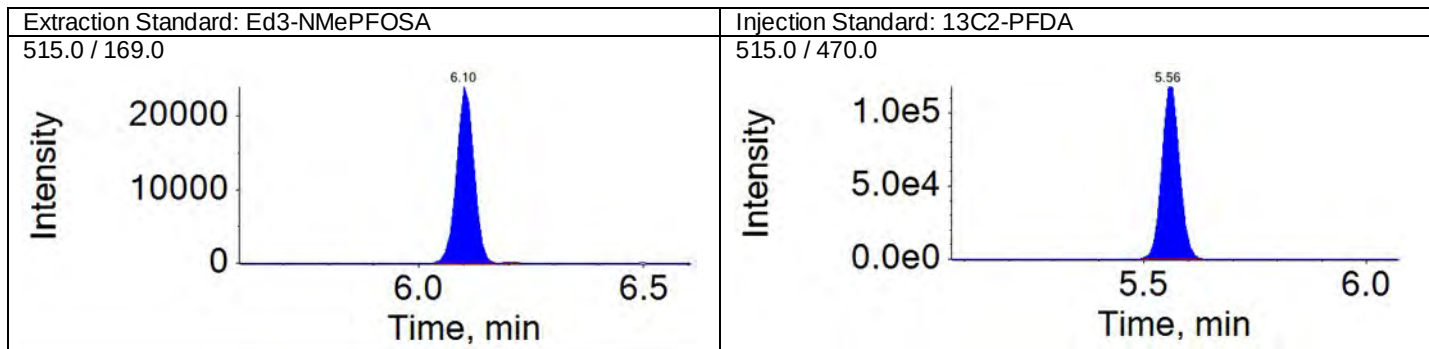
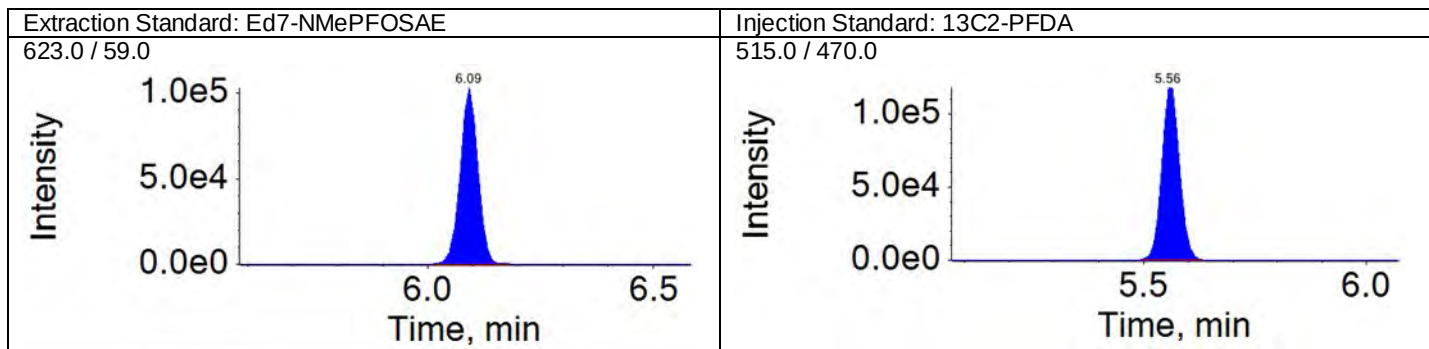
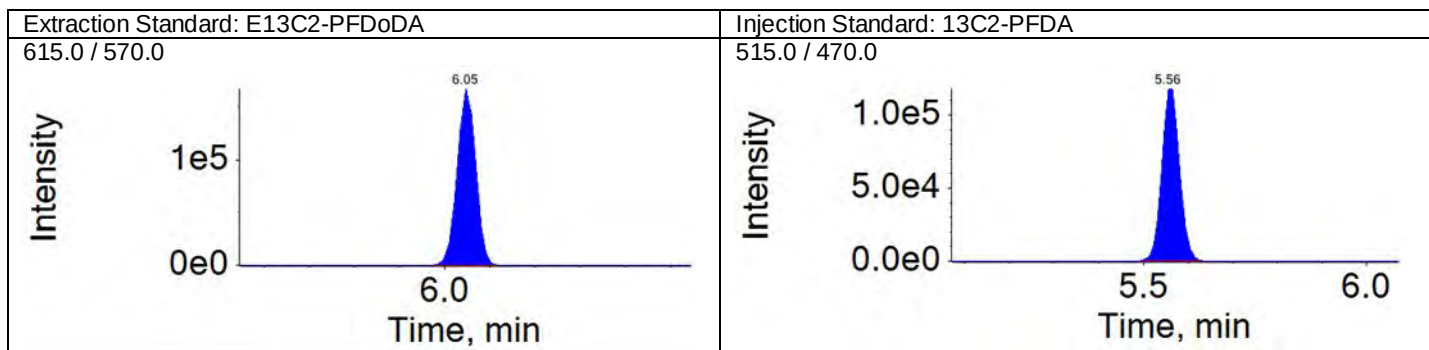
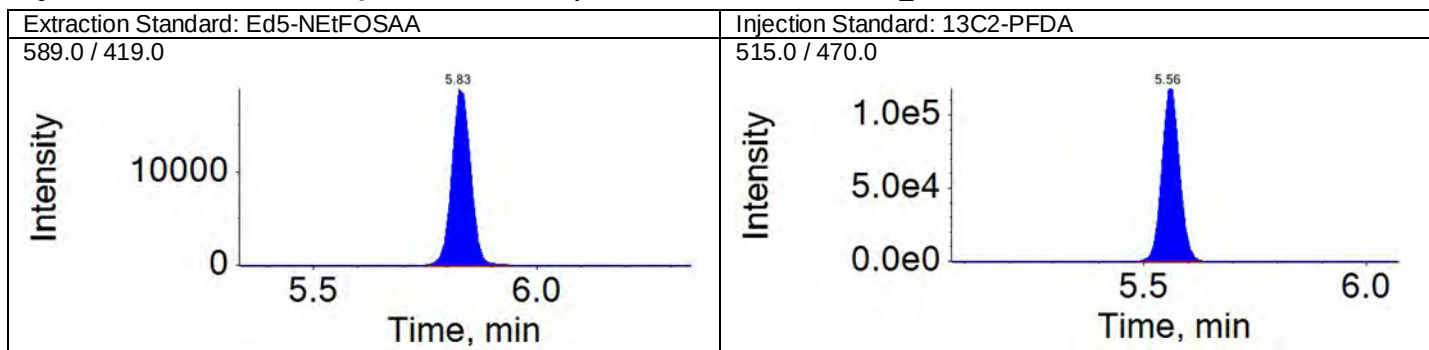
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

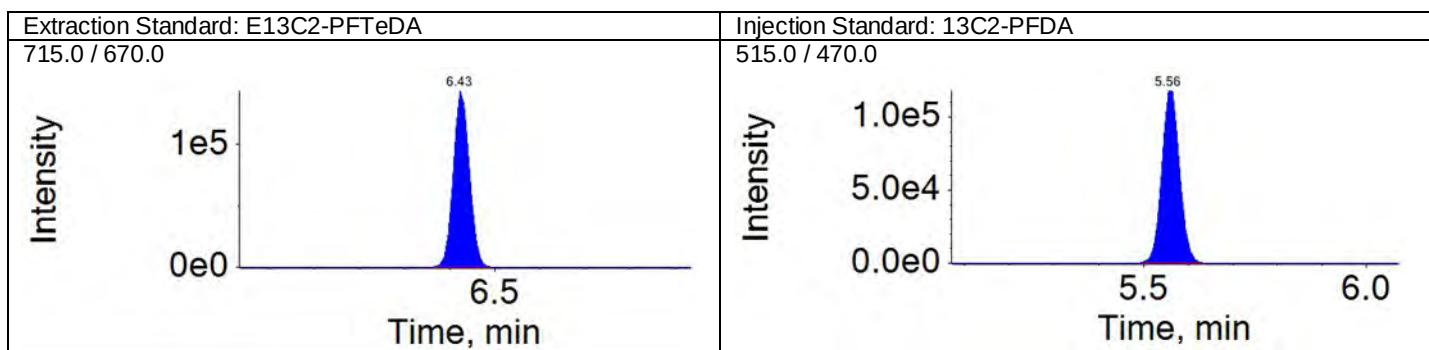
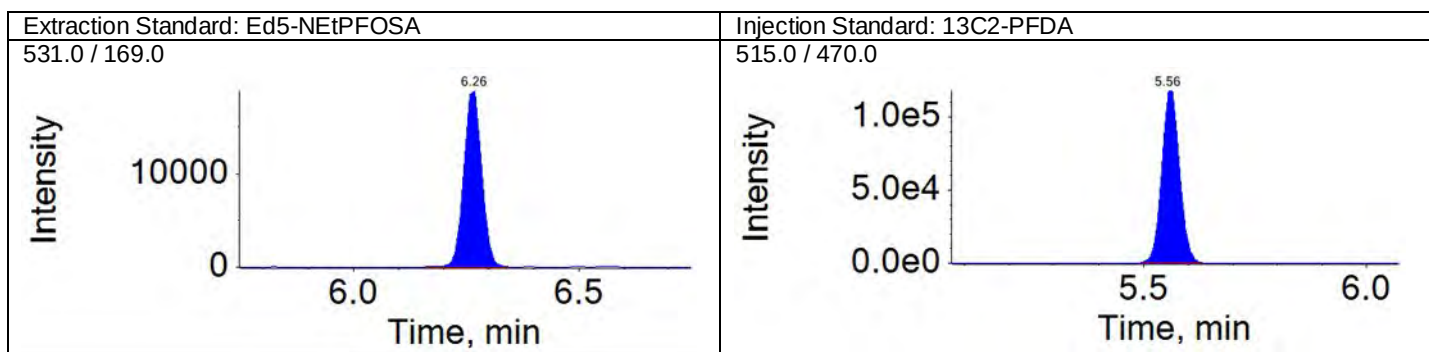
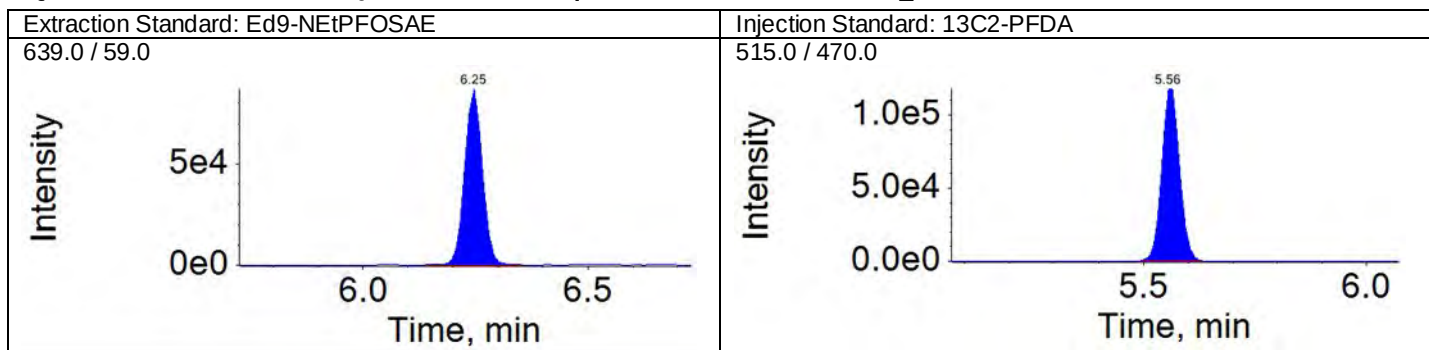
By MCD at 10:40 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

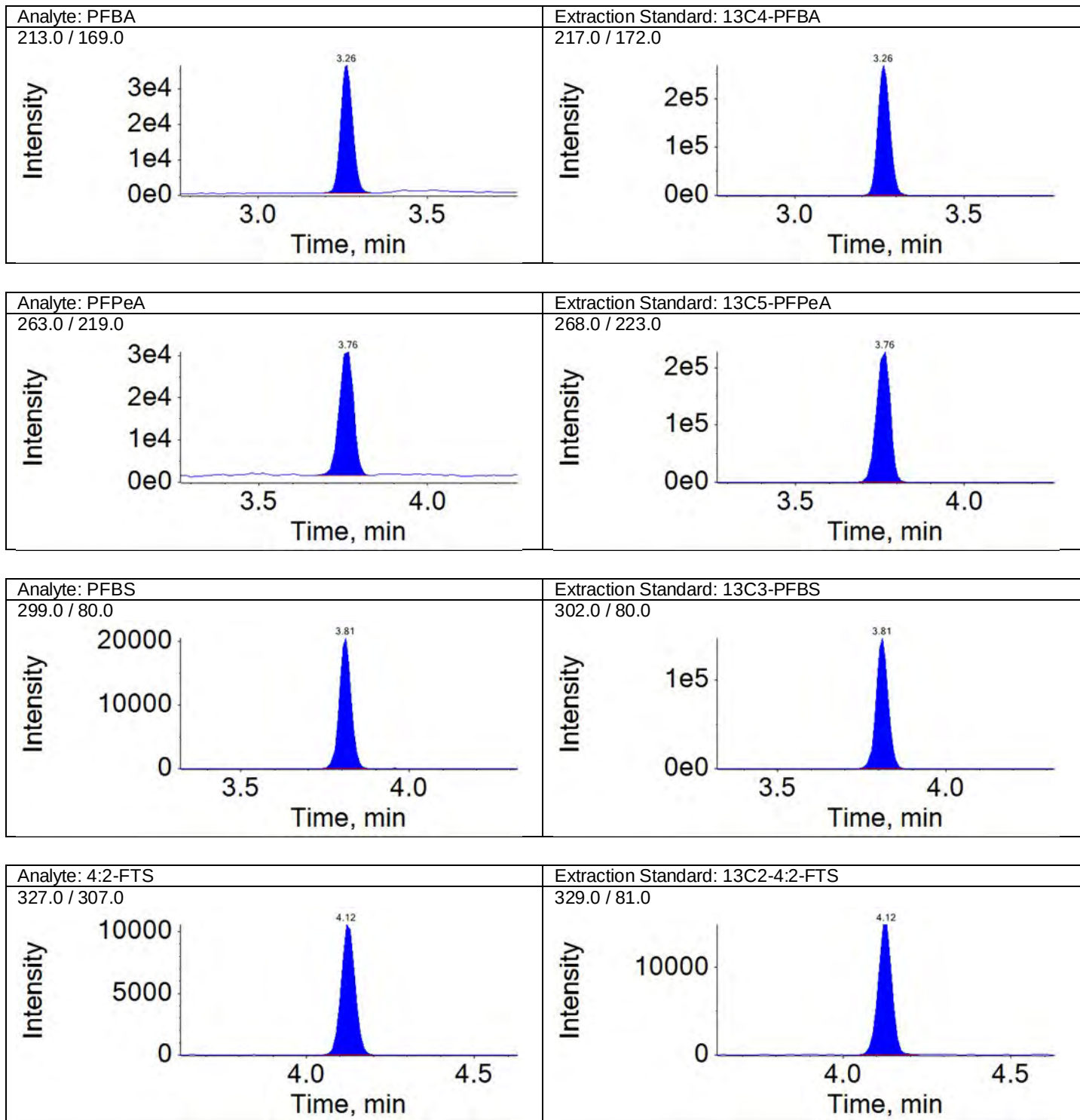
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



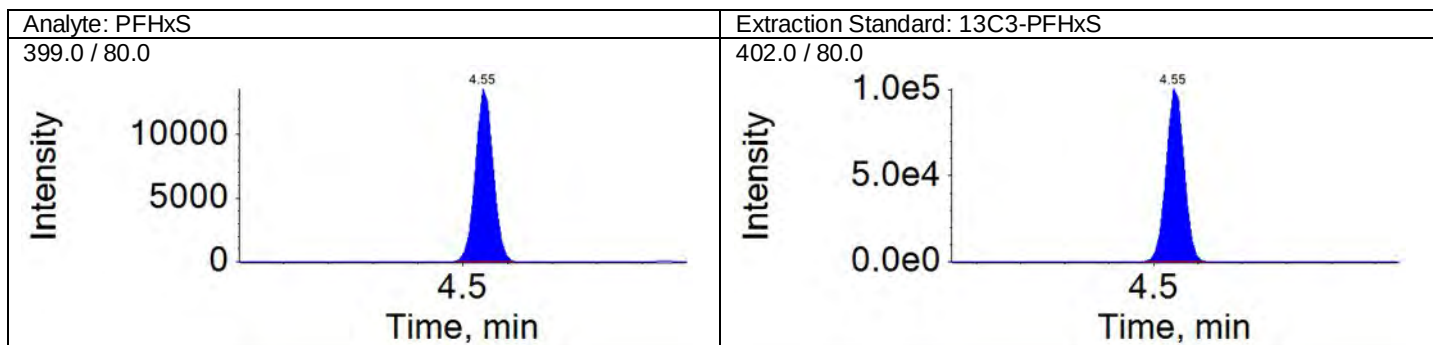
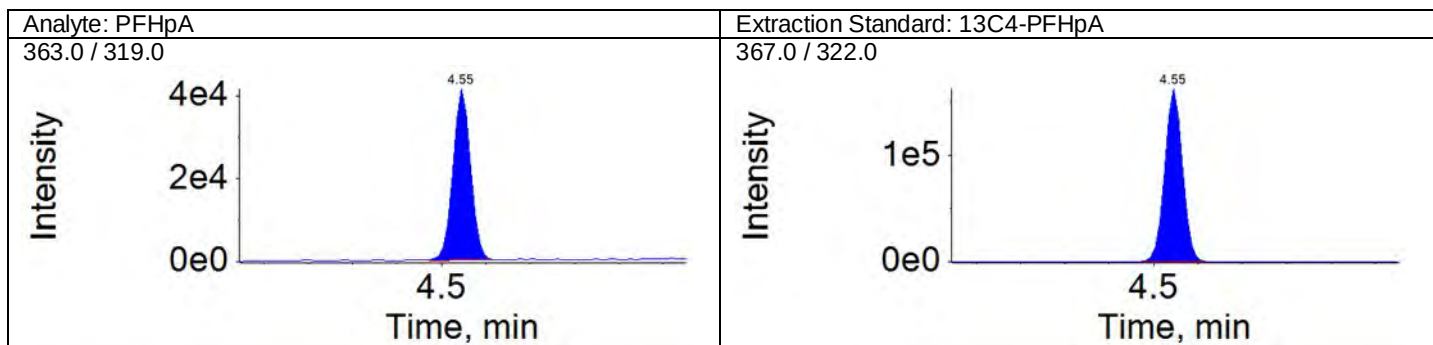
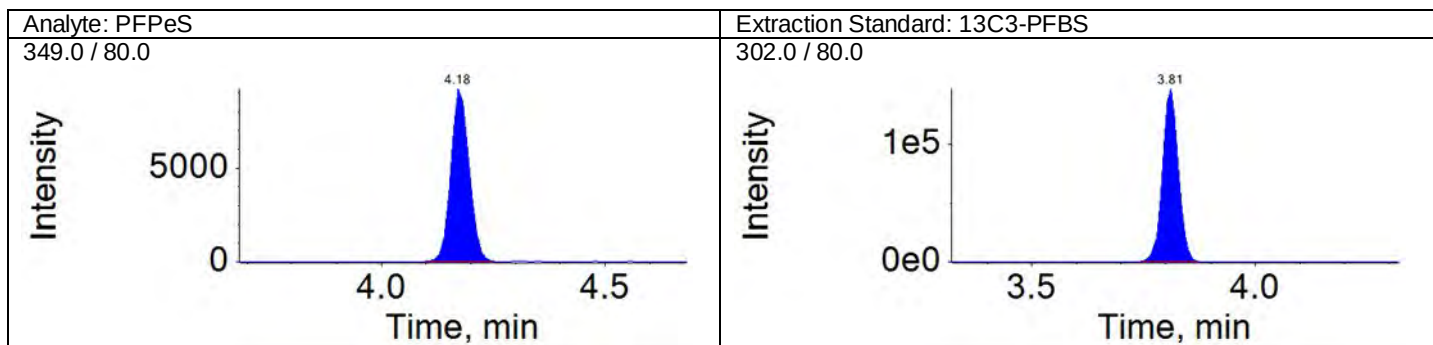
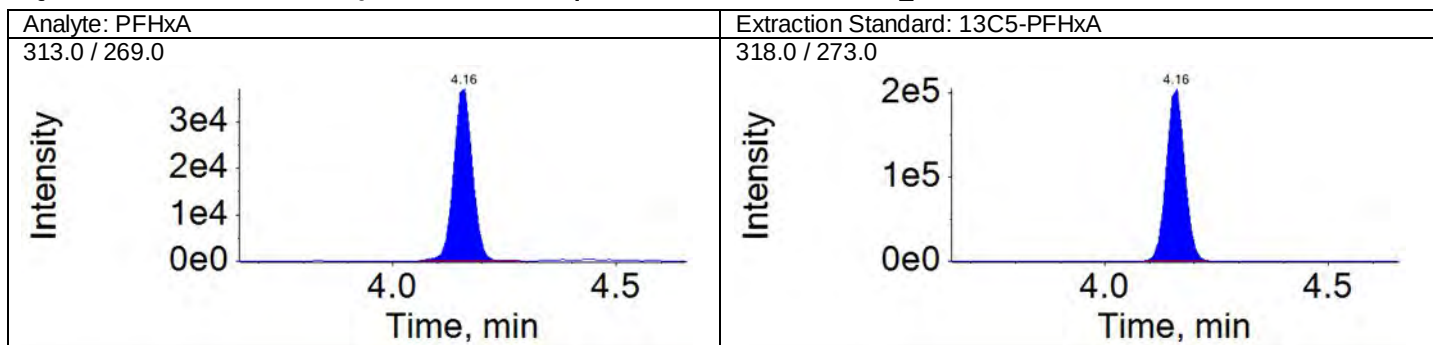
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



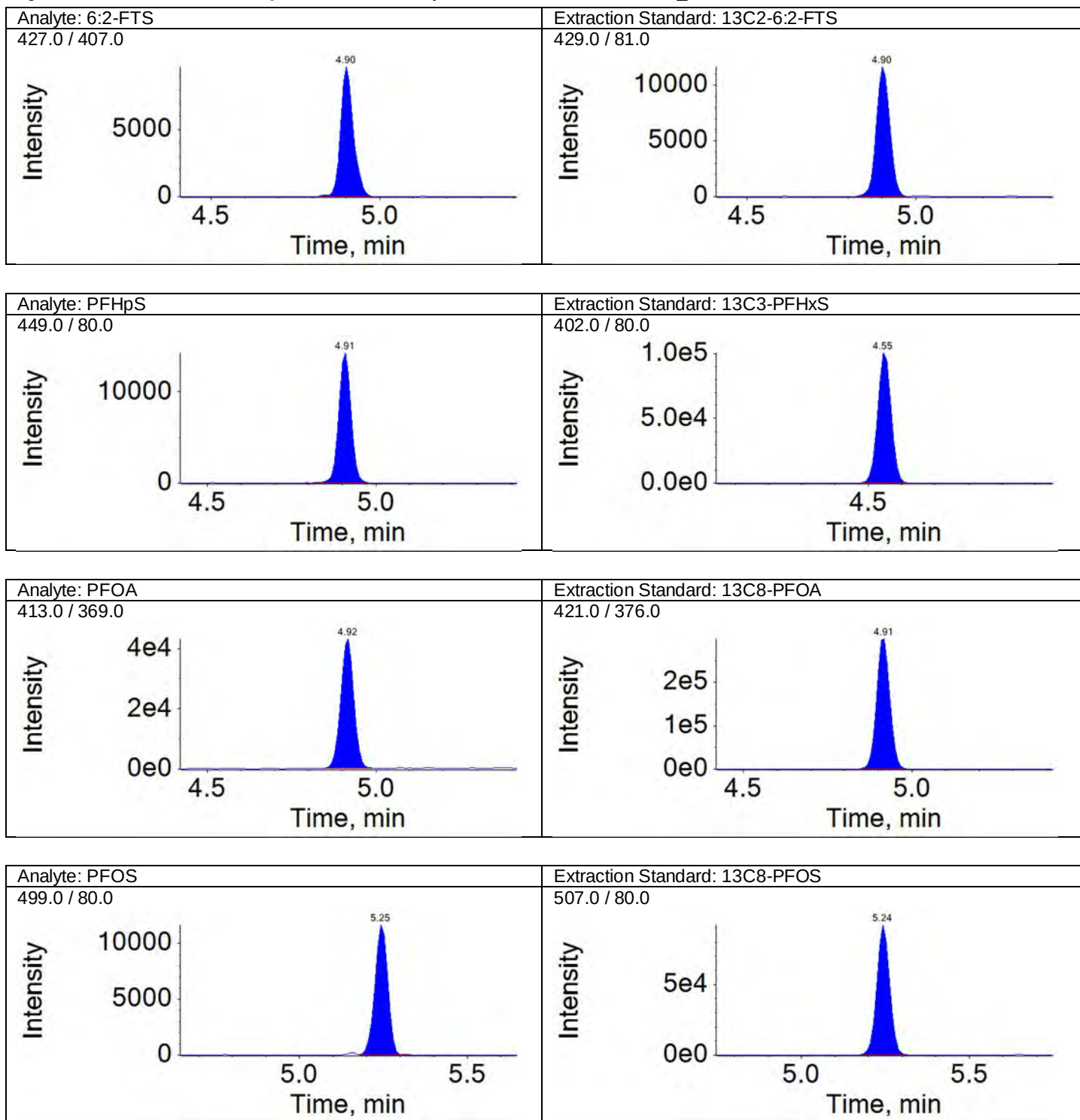
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



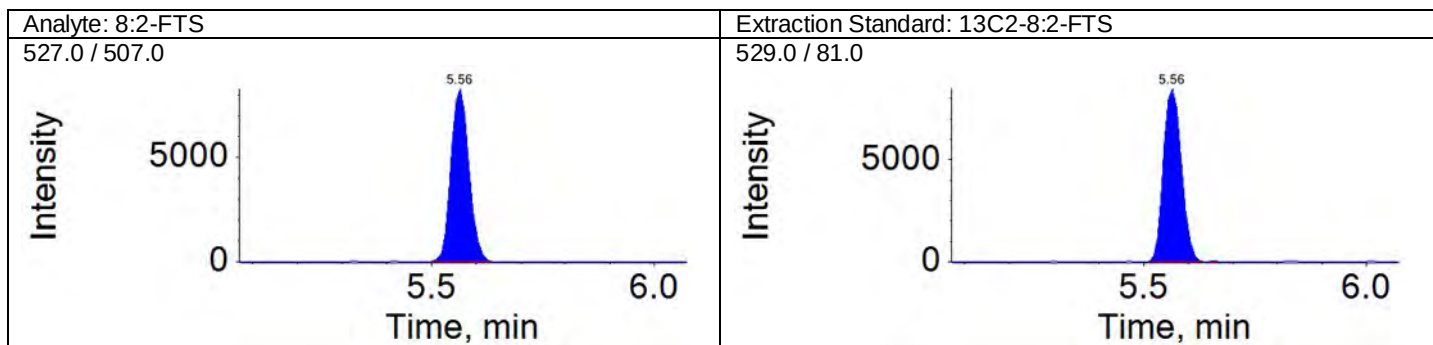
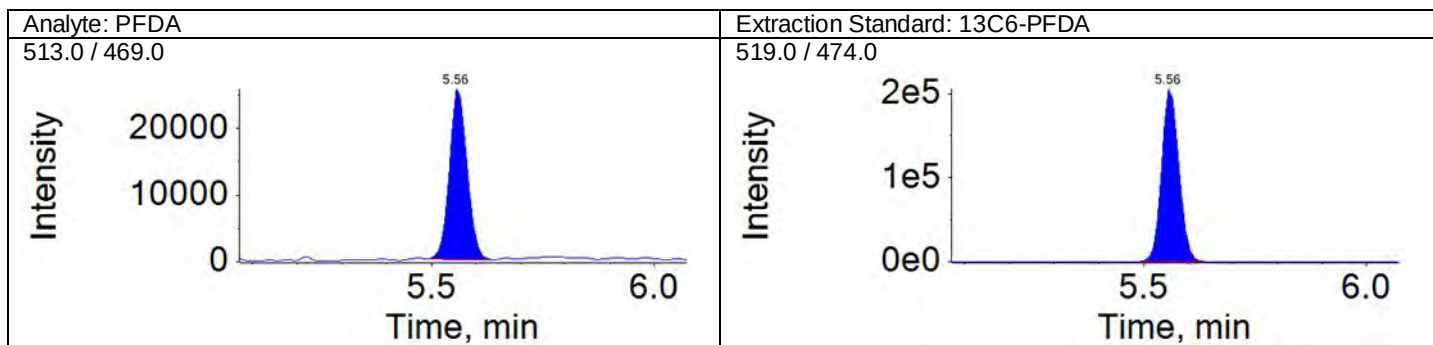
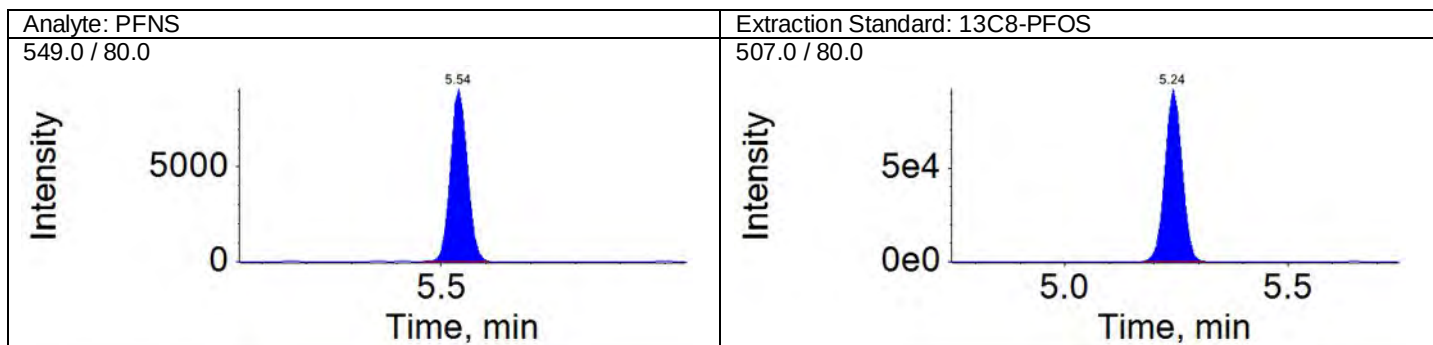
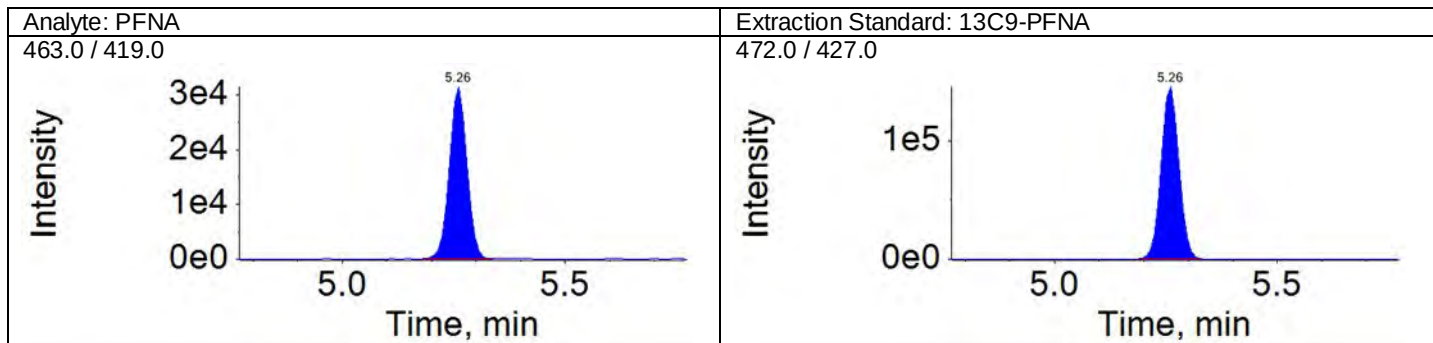
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



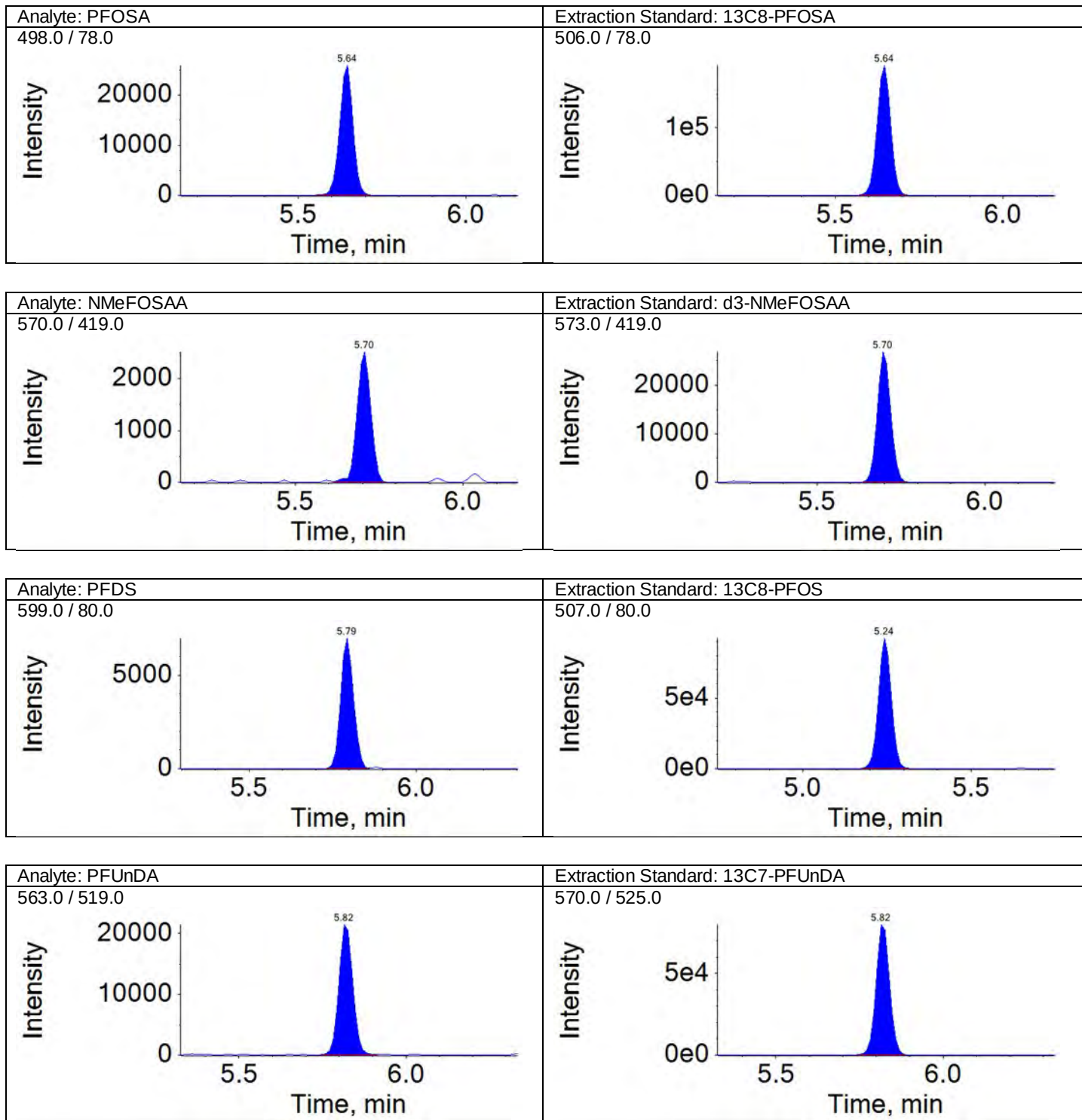
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



APPROVED

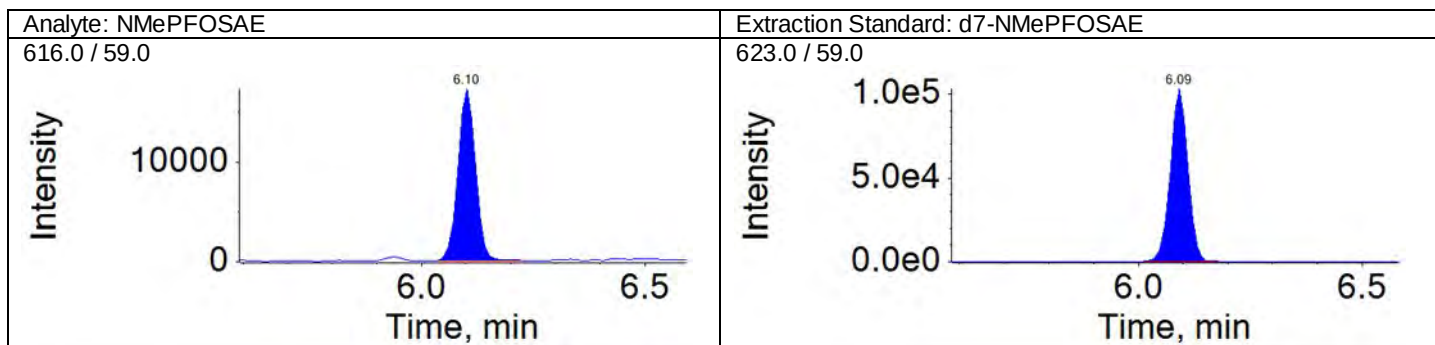
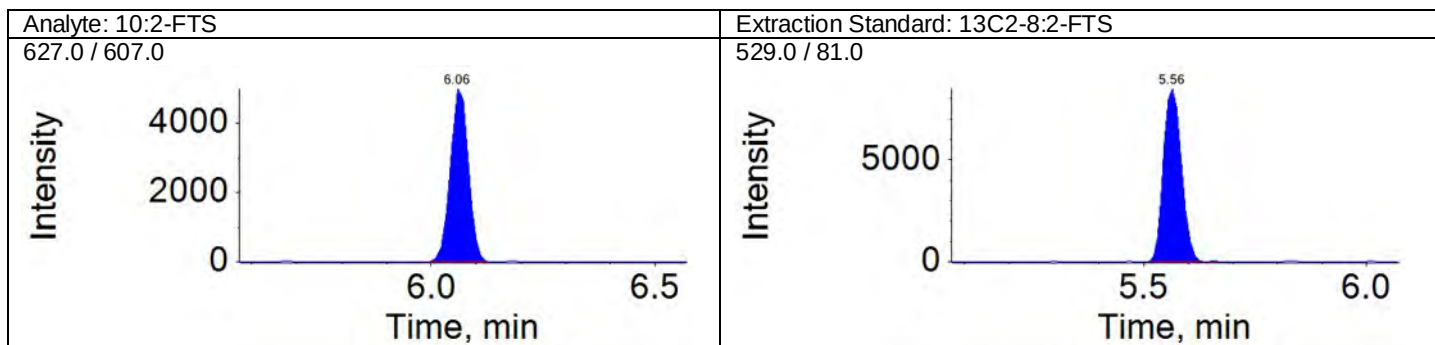
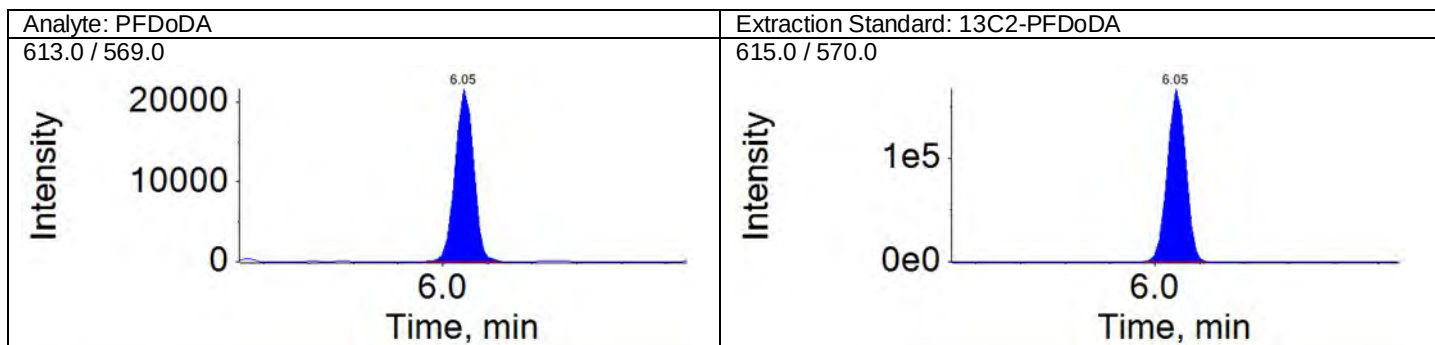
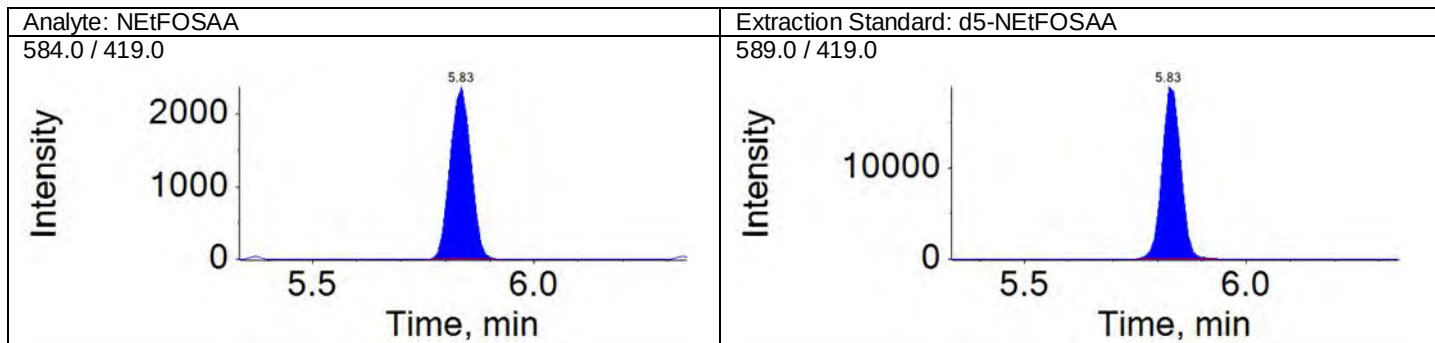
By MCD at 10:40 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

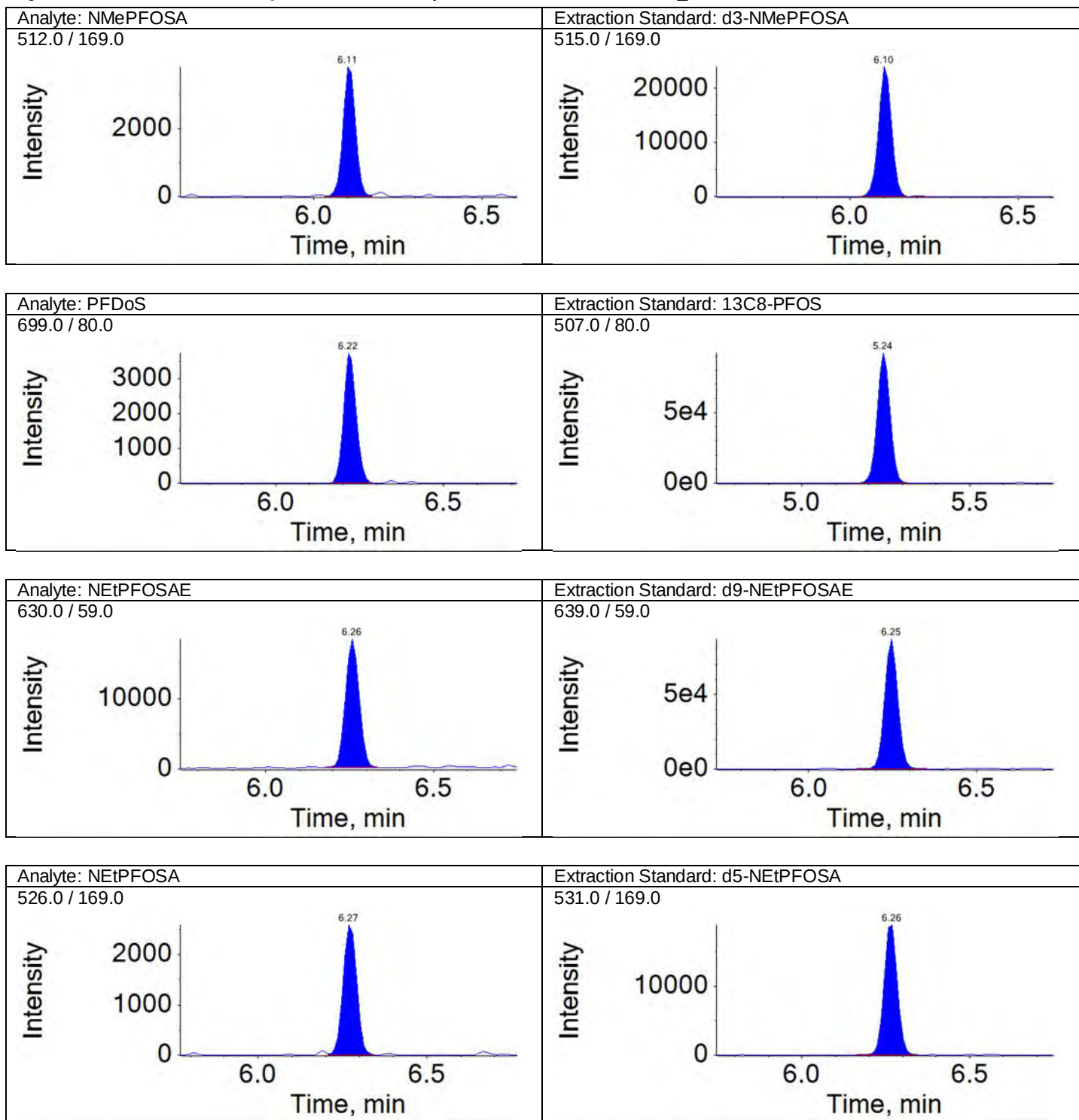
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



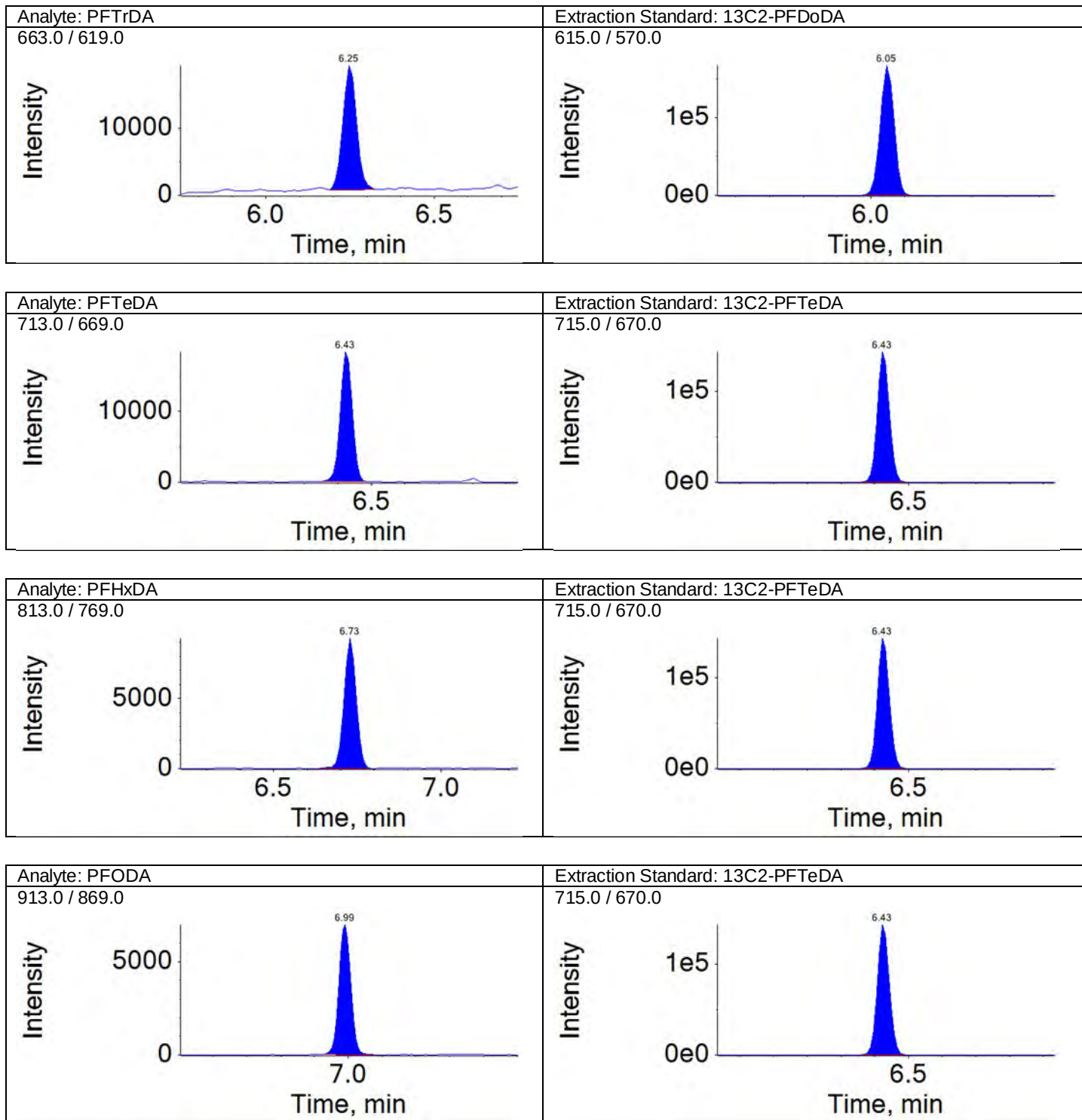
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



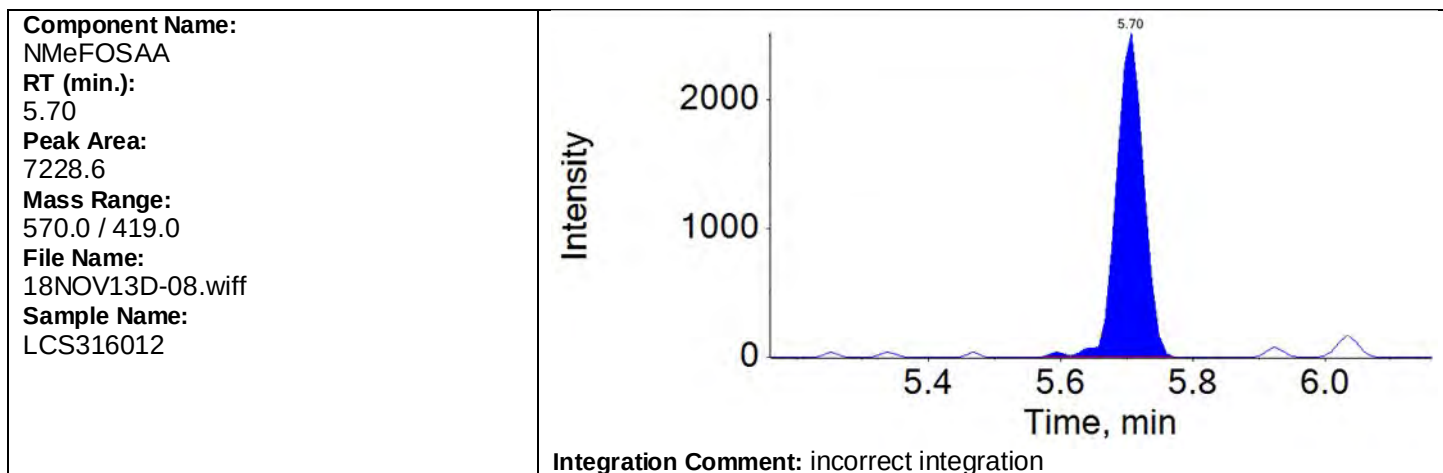
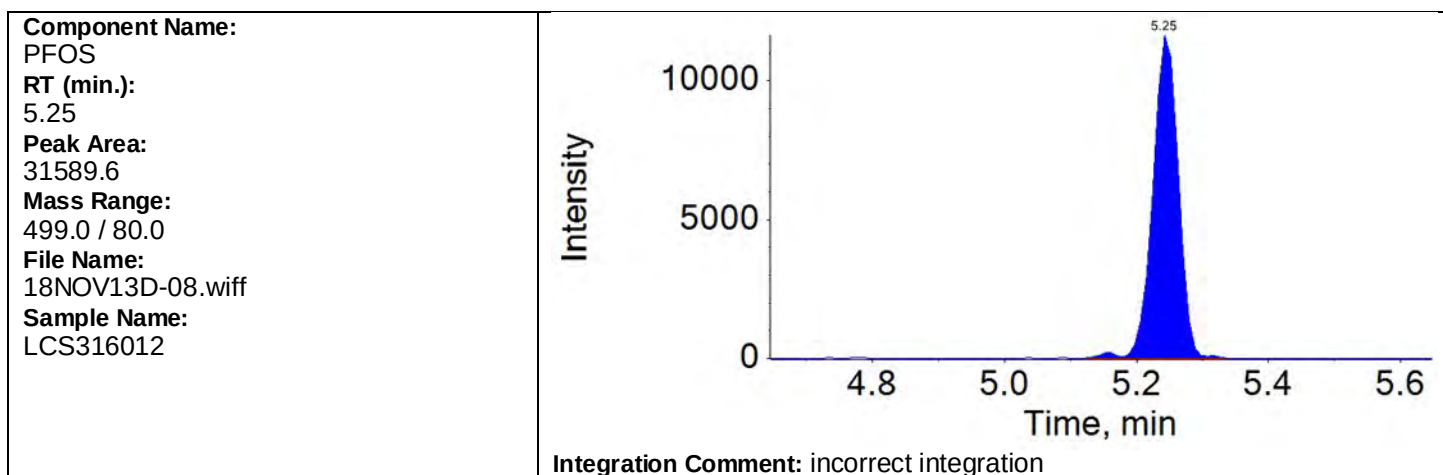
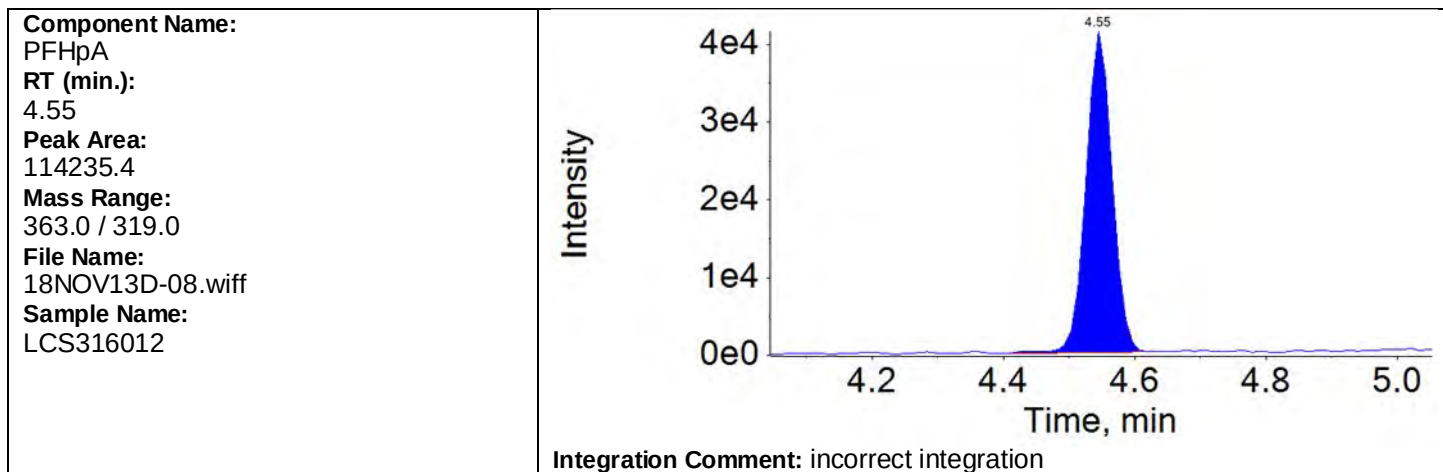
ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM

Result Table: 18316012 11/13/2018 10:22:37 PM
Acquisition Method: 18AUG13_3uL.dam



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

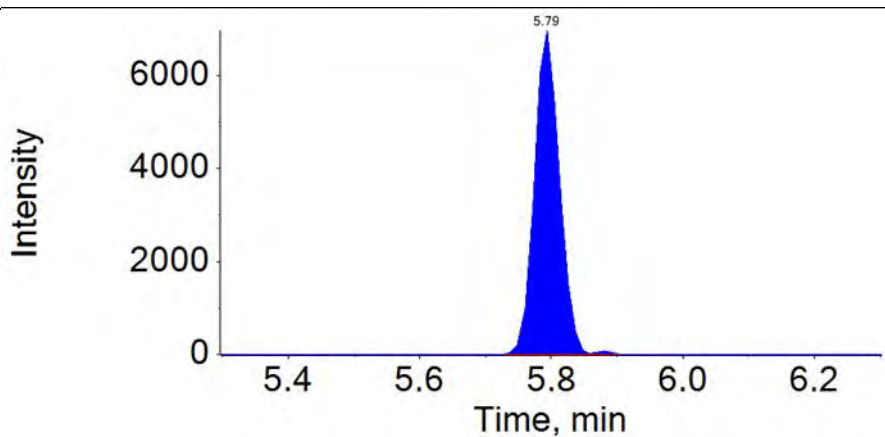
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

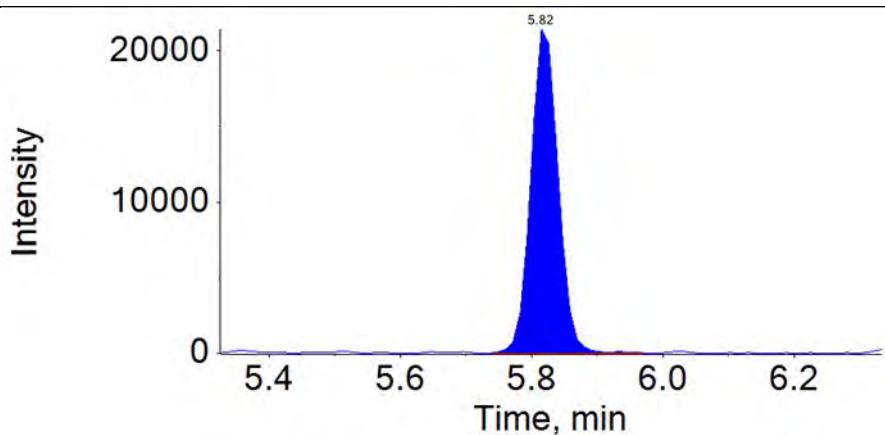
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDS
RT (min.):
5.79
Peak Area:
18594.0
Mass Range:
599.0 / 80.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



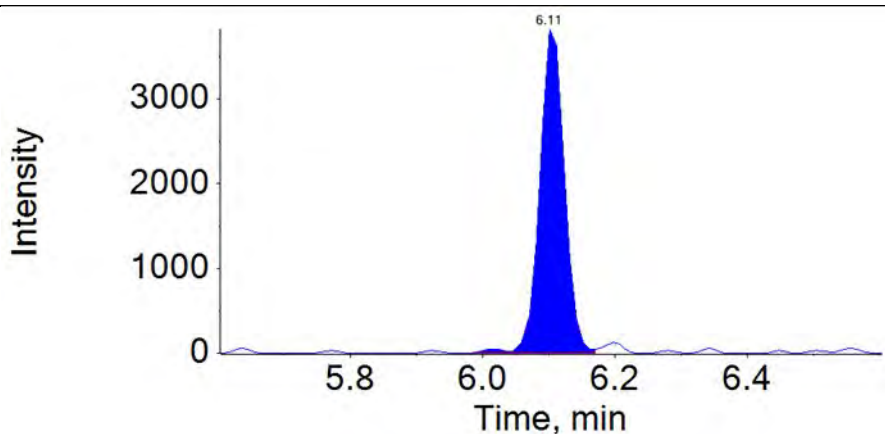
Integration Comment: incorrect integration

Component Name:
PUnDA
RT (min.):
5.82
Peak Area:
62192.5
Mass Range:
563.0 / 519.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.11
Peak Area:
9985.6
Mass Range:
512.0 / 169.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012

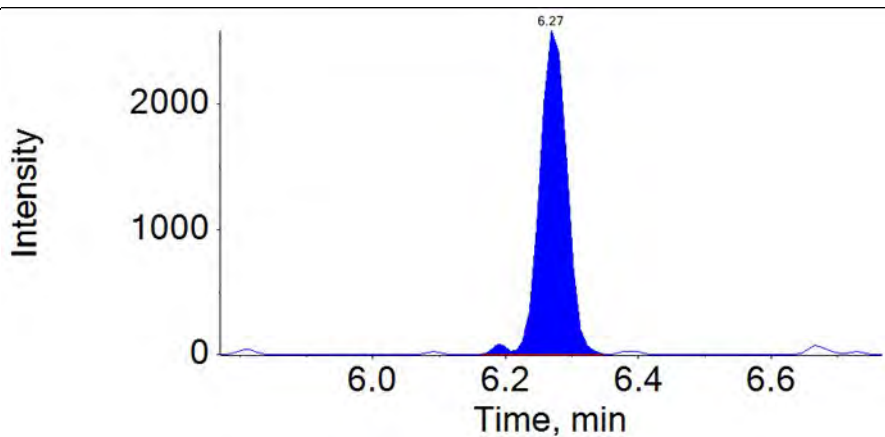


Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

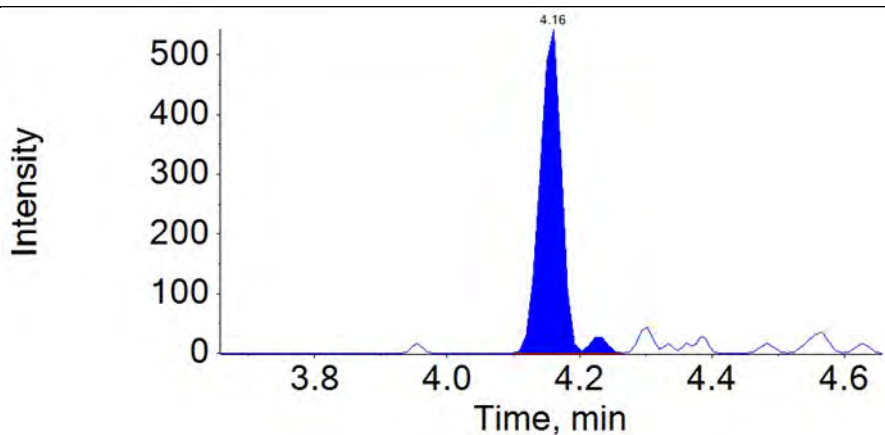
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NETPFOSA
RT (min.):
6.27
Peak Area:
7436.3
Mass Range:
526.0 / 169.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



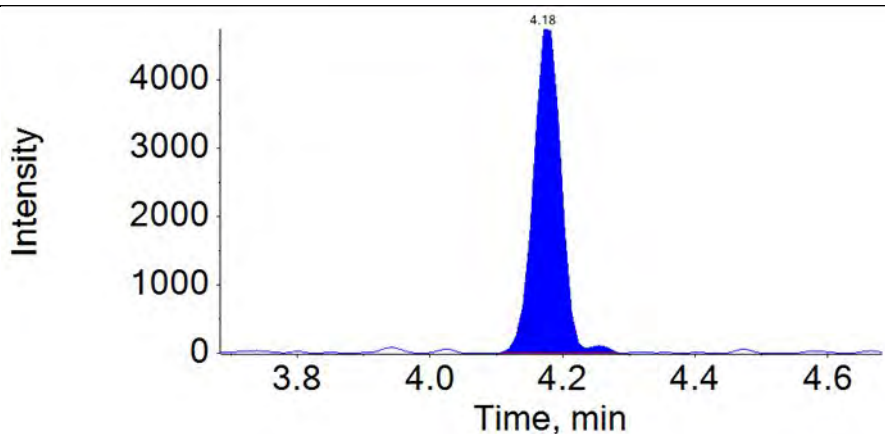
Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.16
Peak Area:
1265.8
Mass Range:
313.0 / 119.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



Integration Comment: incorrect integration

Component Name:
PFPeS_2
RT (min.):
4.18
Peak Area:
13822.6
Mass Range:
349.0 / 99.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012

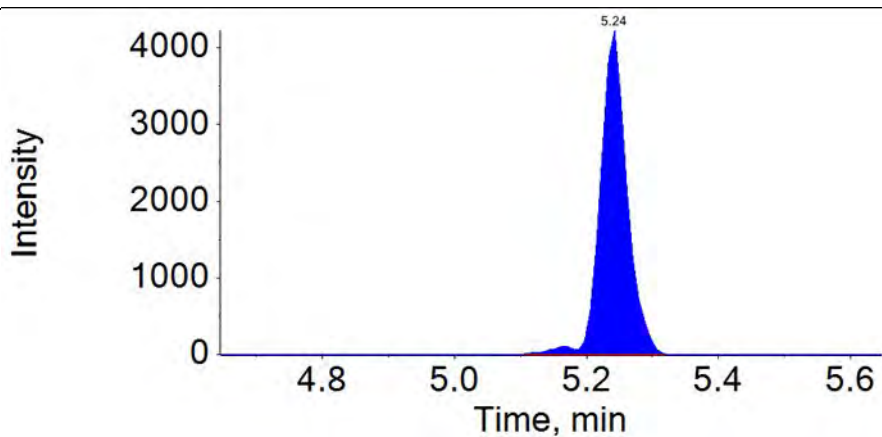


Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

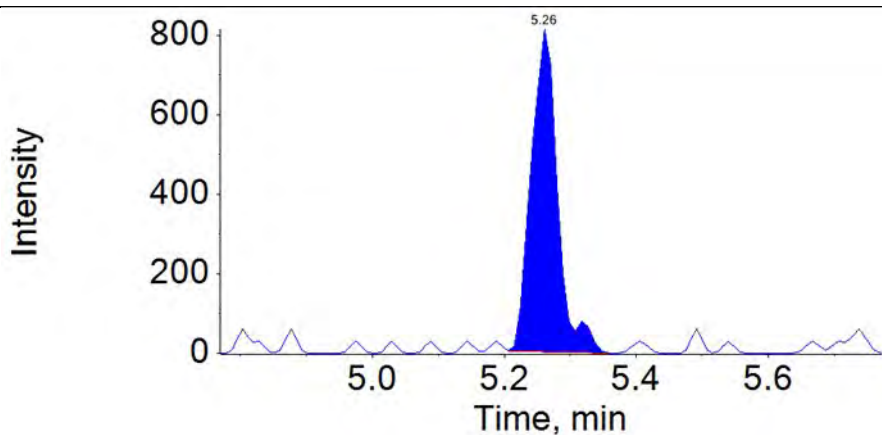
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
11926.2
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



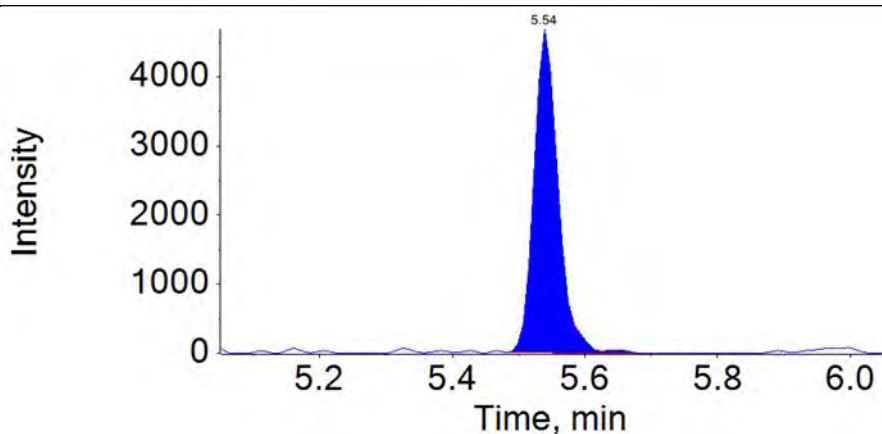
Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.26
Peak Area:
2269.8
Mass Range:
463.0 / 169.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



Integration Comment: incorrect integration

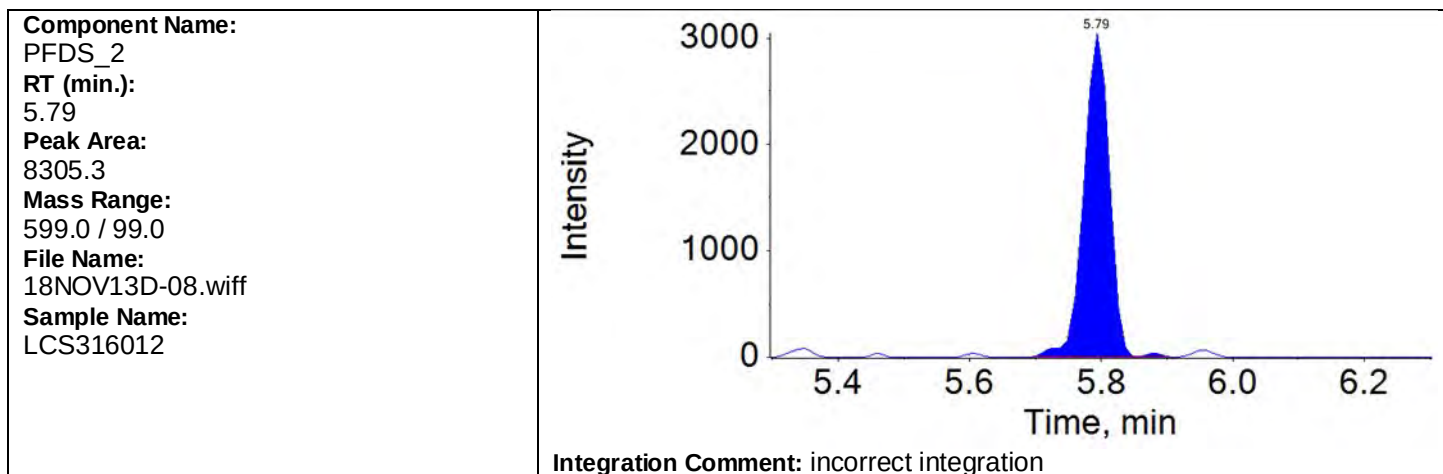
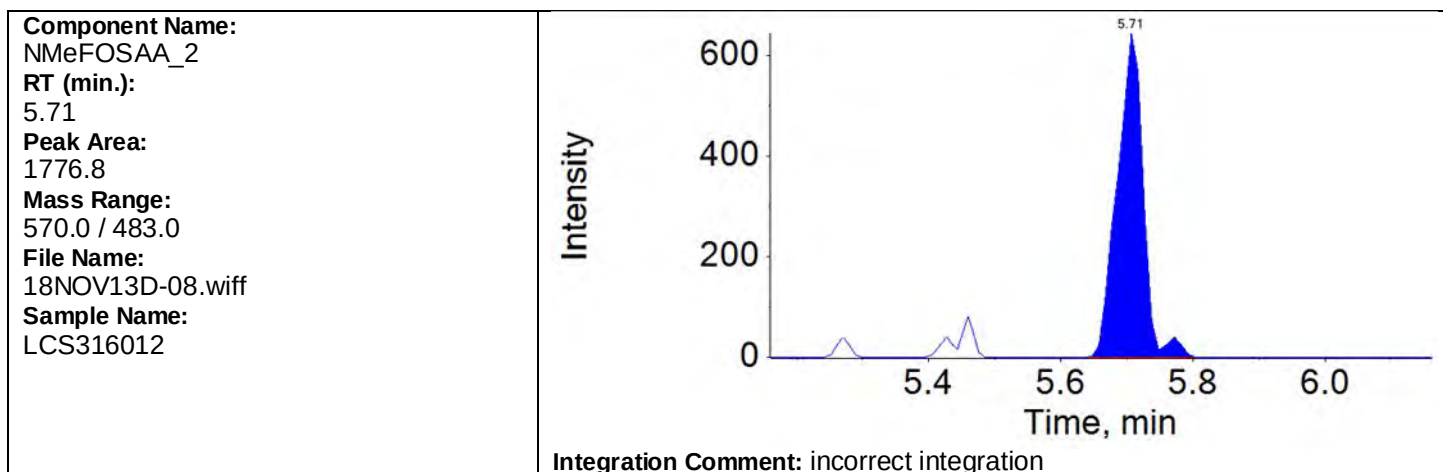
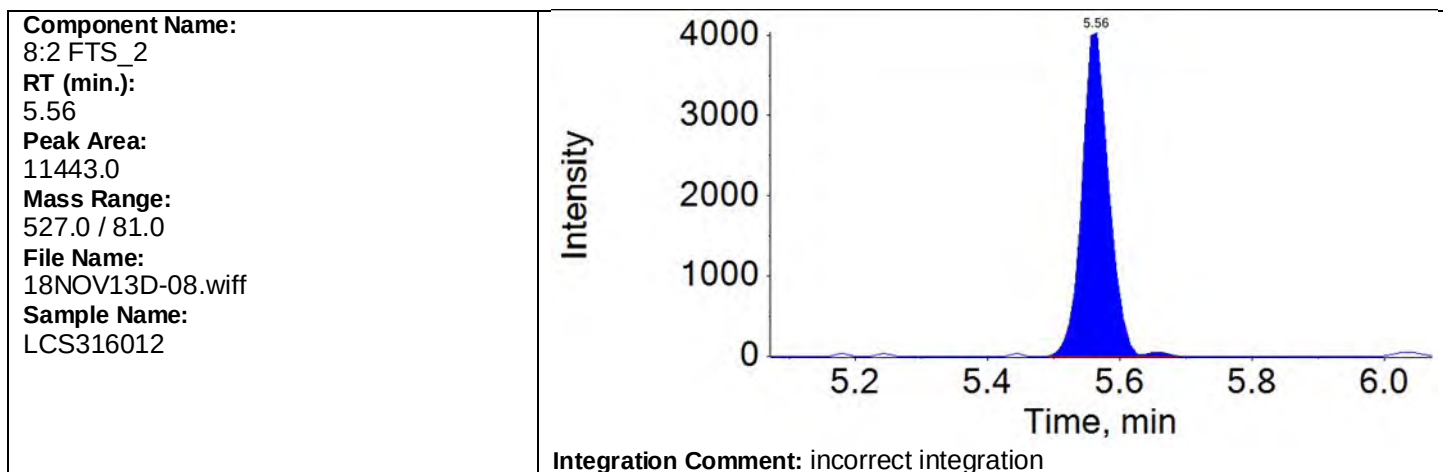
Component Name:
PFNS_2
RT (min.):
5.54
Peak Area:
11839.6
Mass Range:
549.0 / 99.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

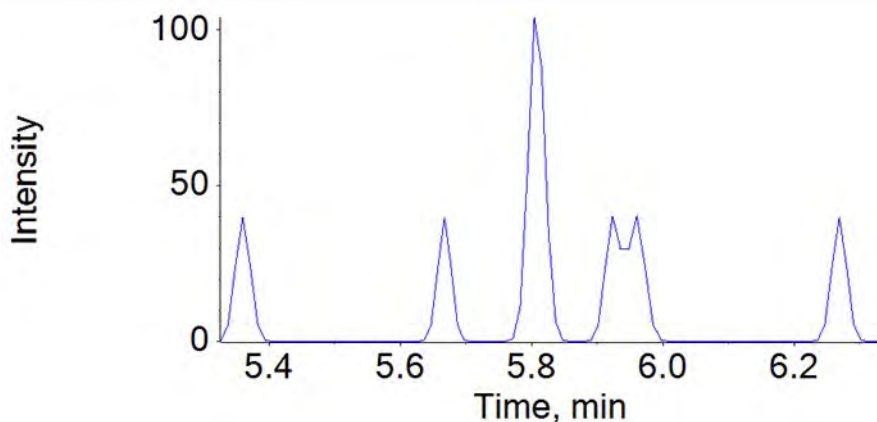
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM



Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

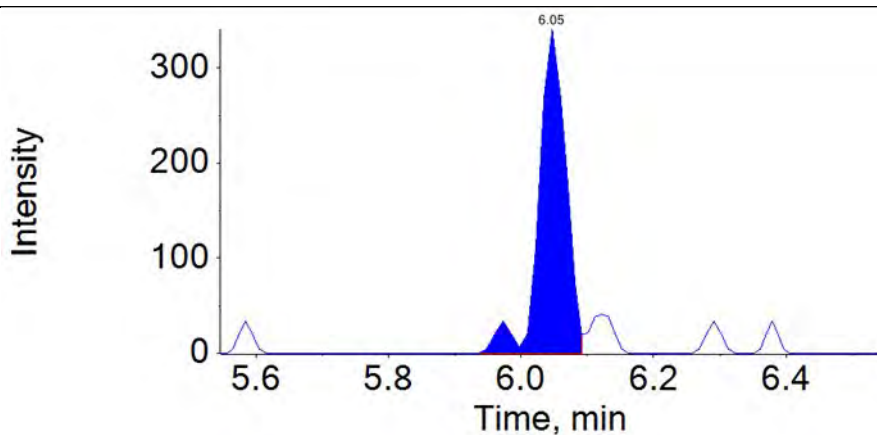
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
563.0 / 169.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



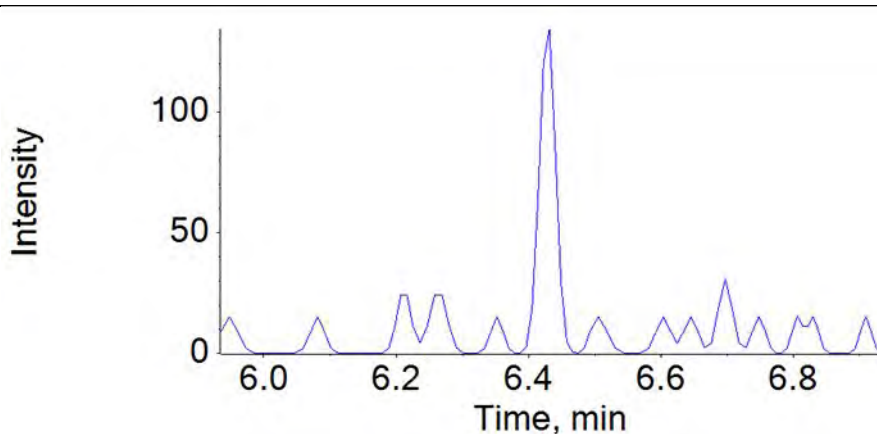
Integration Comment: incorrect integration

Component Name:
PFDODA_2
RT (min.):
6.05
Peak Area:
975.7
Mass Range:
613.0 / 169.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV13D-08.wiff
Sample Name:
LCS316012



Integration Comment: incorrect integration

Results Table Name: 18316012
Results Table Date: 11/13/2018 10:22:37 PM

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

APPROVED

By MCD at 10:40 pm, 11/13/18

REVIEWED

By HMK at 2:12 pm, 11/14/18

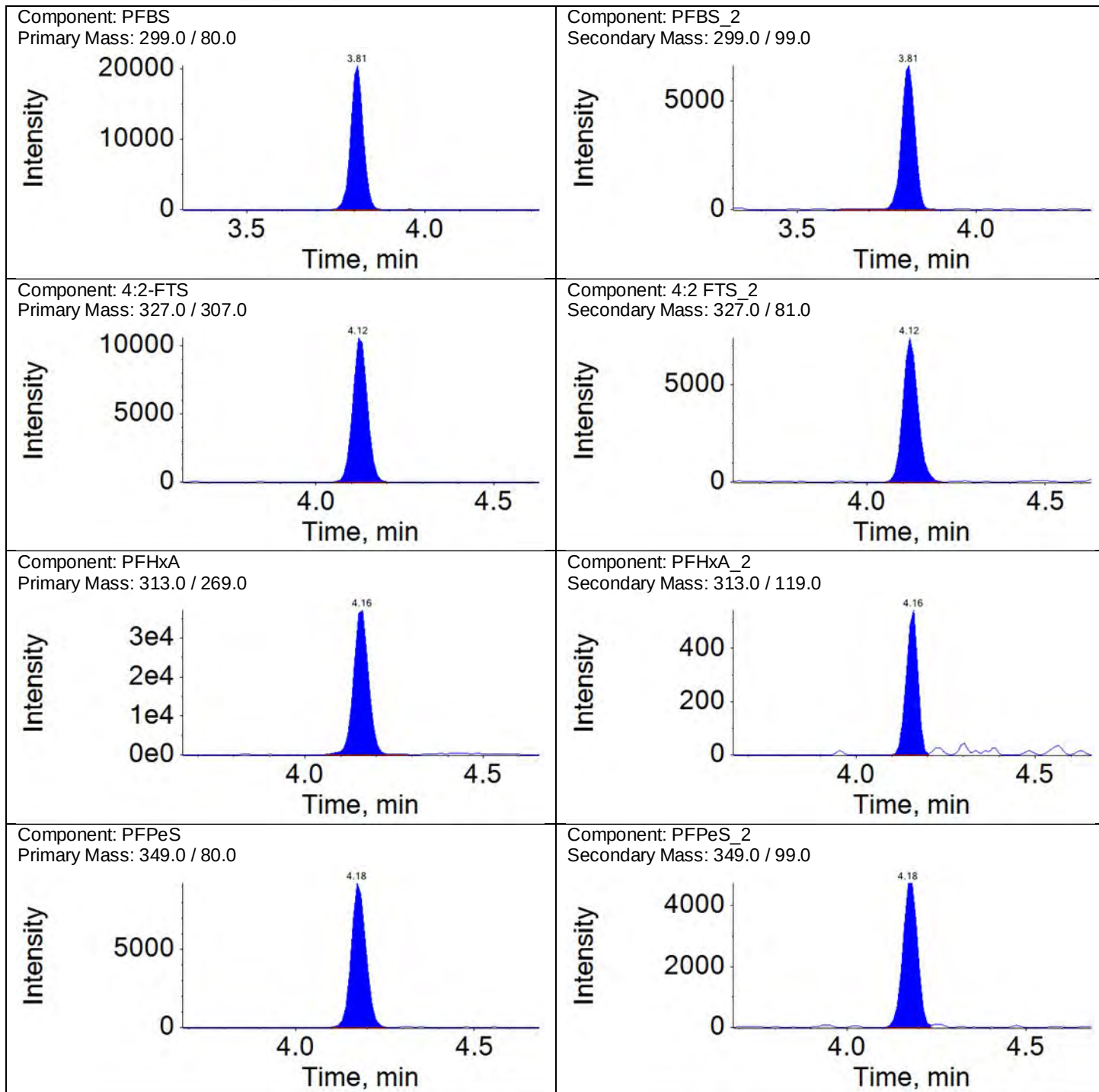
Ion Ratio Report

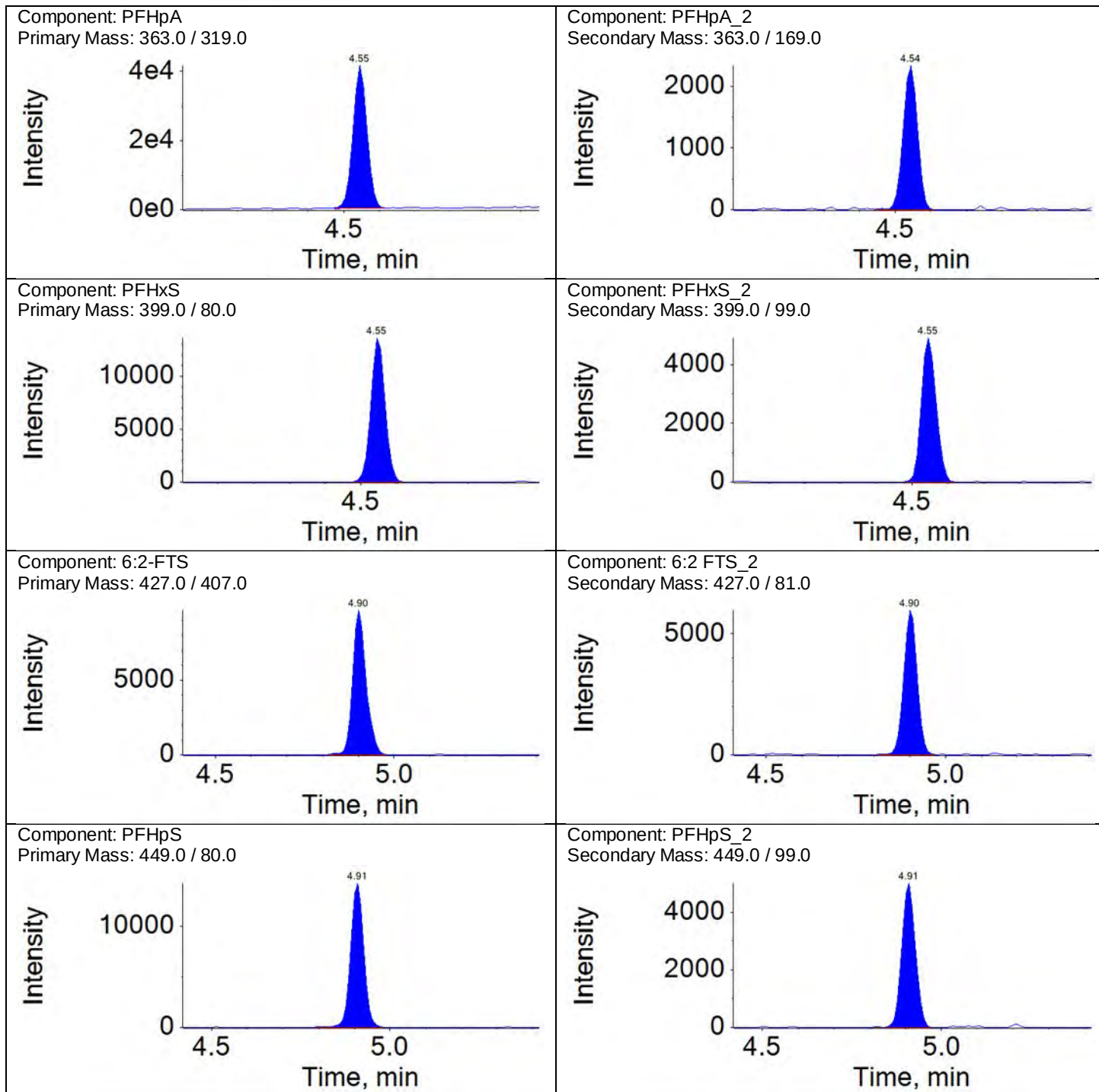
Sample Name: LCS316012

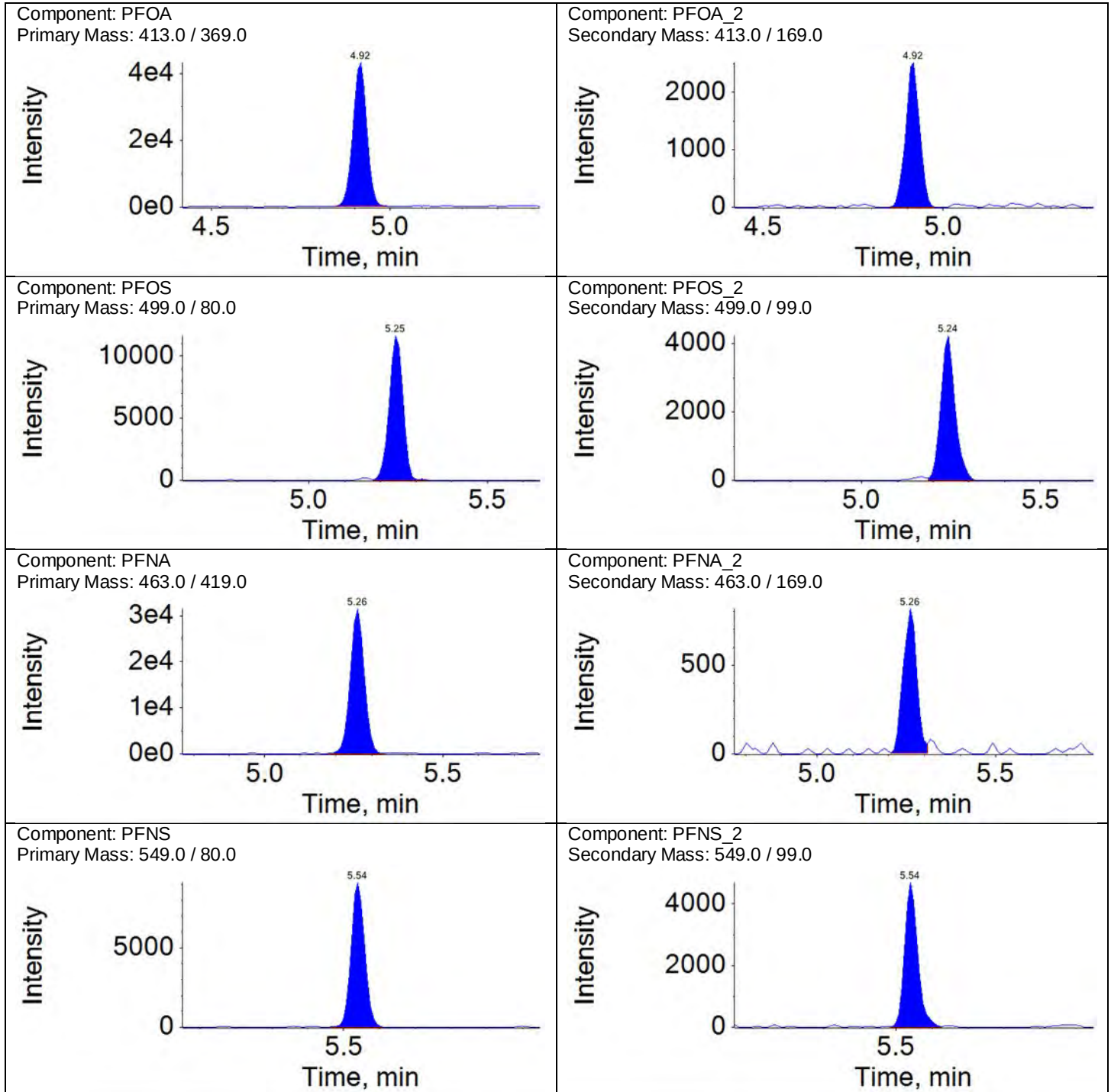
Instrument Name: LM27631

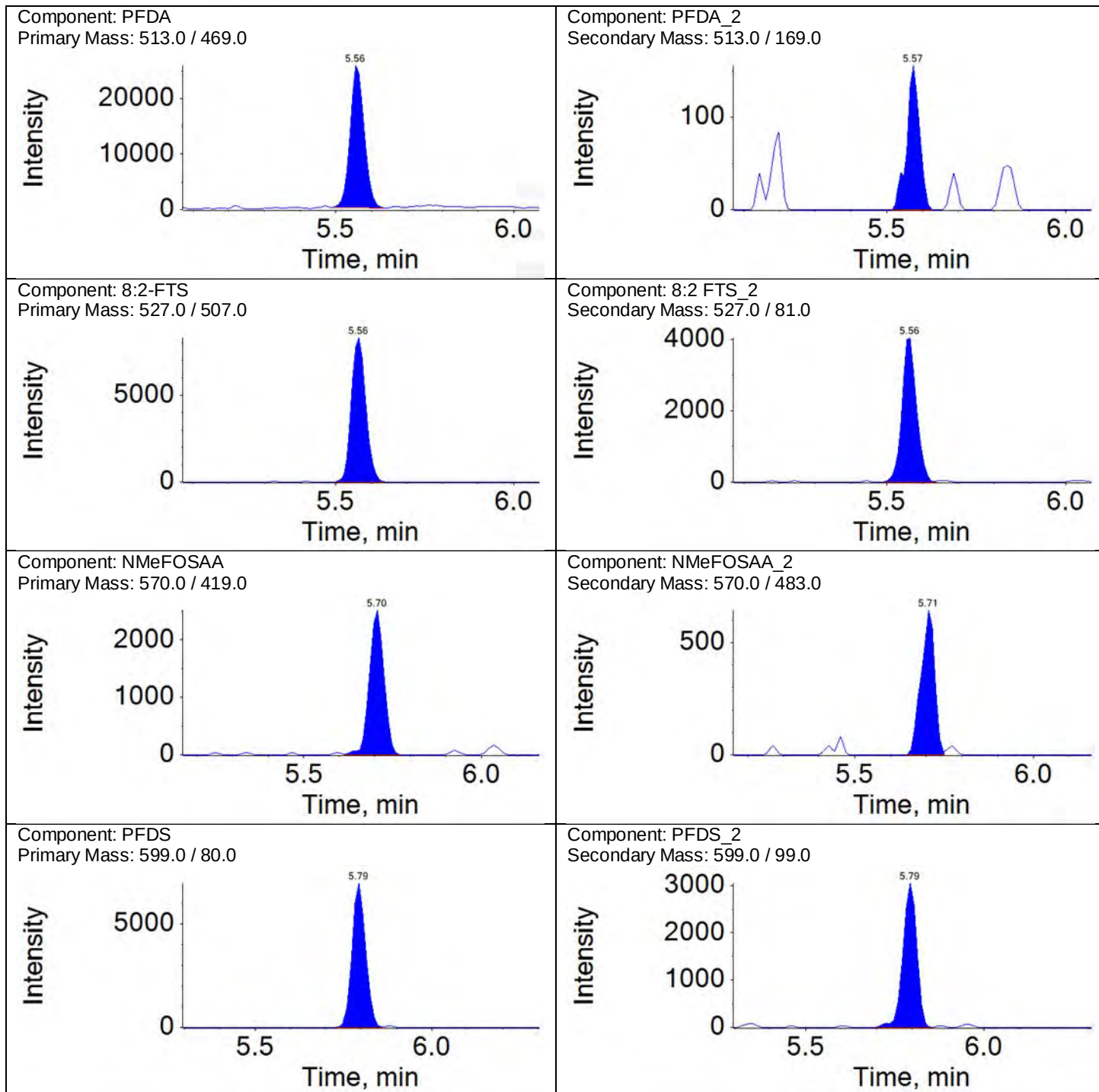
File Name: 18NOV13D-08.wiff

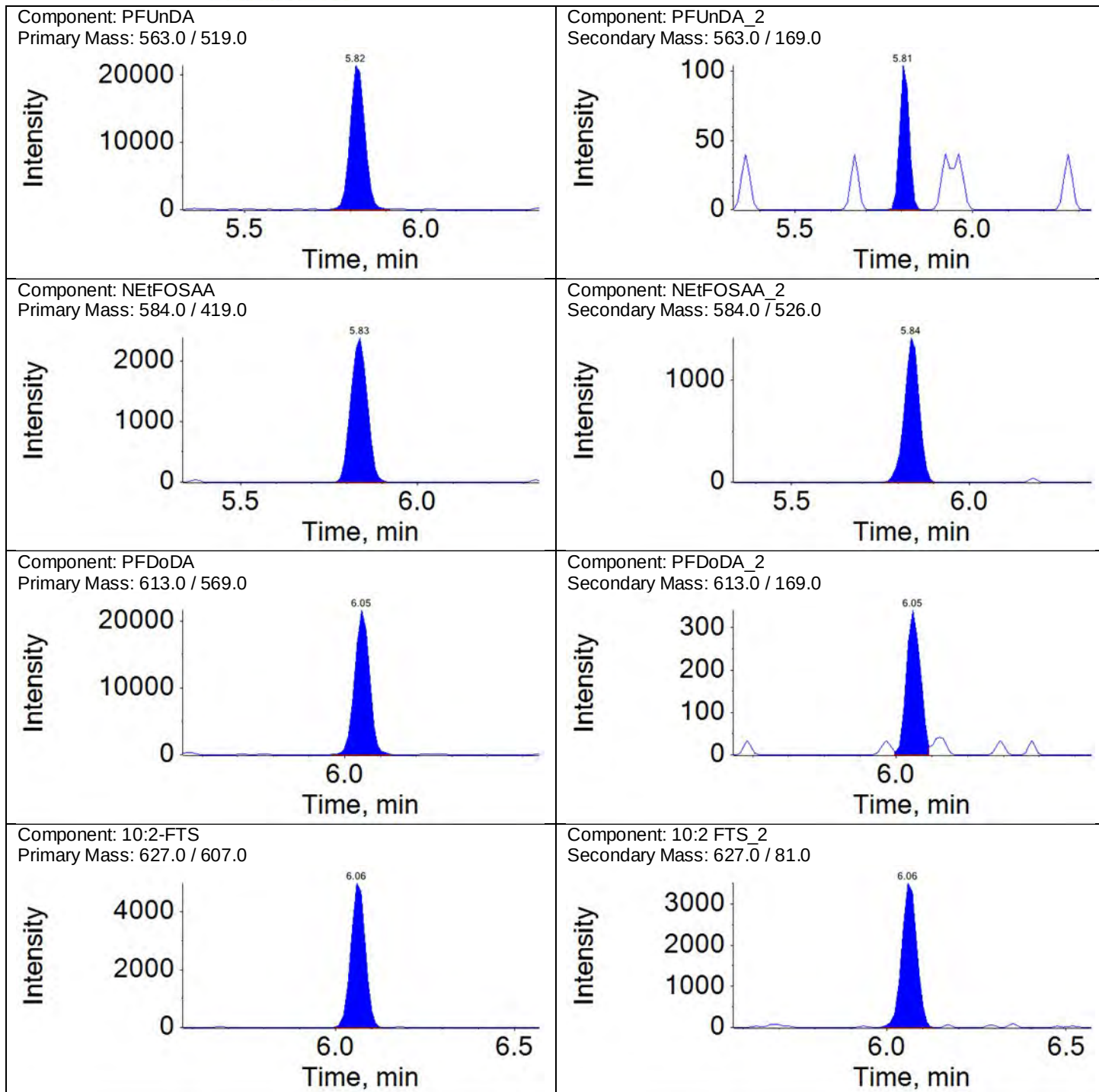
Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	49793.5	A	N/A	0.3493			
PFBS_2	3.81	1.00	17394.4	A	N/A	0.3493	-3	50	
4:2-FTS	4.12	1.00	30211.4	A	N/A	0.7088			
4:2 FTS_2	4.12	1.00	21414.2	A	N/A	0.7088		#NA!	
PFHxA	4.16	1.00	108611.8	A	N/A	0.0112			
PFHxA_2	4.16	1.00	1216.1	M	N/A	0.0112	-4	50	
PFPeS	4.18	1.10	26184.1	A	N/A	0.5199			
PFPeS_2	4.18	1.10	13613.5	M	N/A	0.5199	0	50	
PFHpA	4.55	1.00	113389.5	M	N/A	0.0576			
PFHpA_2	4.54	1.00	6530.2	A	N/A	0.0576	2	50	
PFHxS	4.55	1.00	37348.7	A	N/A	0.3748			
PFHxS_2	4.55	1.00	14000.0	A	N/A	0.3748	24	50	
6:2-FTS	4.90	1.00	25298.8	A	N/A	0.6118			
6:2 FTS_2	4.90	1.00	15477.8	A	N/A	0.6118		#NA!	
PFHpS	4.91	1.08	36234.5	A	N/A	0.3635			
PFHpS_2	4.91	1.08	13171.5	A	N/A	0.3635	-11	50	
PFOA	4.92	1.00	115473.1	A	N/A	0.0587			
PFOA_2	4.92	1.00	6773.6	A	N/A	0.0587	4	50	
PFOS	5.25	1.00	31194.5	M	N/A	0.3732			
PFOS_2	5.24	1.00	11642.4	M	N/A	0.3732	44	50	
PFNA	5.26	1.00	85447.3	A	N/A	0.0252			
PFNA_2	5.26	1.00	2150.7	M	N/A	0.0252	8	50	
PFNS	5.54	1.06	23788.9	A	N/A	0.4934			
PFNS_2	5.54	1.06	11738.3	M	N/A	0.4934	2	50	
PFDA	5.56	1.00	69895.9	A	N/A	0.0056			
PFDA_2	5.57	1.00	388.4	A	N/A	0.0056	-31	50	
8:2-FTS	5.56	1.00	23267.1	A	N/A	0.4871			
8:2 FTS_2	5.56	1.00	11332.7	M	N/A	0.4871		#NA!	
NMeFOSAA	5.70	1.00	7167.0	M	N/A	0.2383			
NMeFOSAA_2	5.71	1.00	1707.6	M	N/A	0.2383	12	50	
PFDS	5.79	1.10	18465.1	M	N/A	0.4467			
PFDS_2	5.79	1.10	8248.1	M	N/A	0.4467	-13	50	
PFUnDA	5.82	1.00	61939.5	M	N/A	0.0031			
PFUnDA_2	5.81	1.00	194.6	M	N/A	0.0031	-26	50	
NEtFOSAA	5.83	1.00	7698.3	A	N/A	0.5294			
NEtFOSAA_2	5.84	1.00	4075.6	A	N/A	0.5294	-11	50	
PFDODA	6.05	1.00	62158.2	A	N/A	0.0147			
PFDODA_2	6.05	1.00	914.5	M	N/A	0.0147	-12	50	
10:2-FTS	6.06	1.09	13929.3	A	N/A	0.7313			
10:2 FTS_2	6.06	1.09	10185.9	A	N/A	0.7313		#NA!	
PFTTrDA	6.25	1.03	52579.3	A	N/A	0.0136			
PFTTrDA_2	6.25	1.03	715.2	A	N/A	0.0136	45	50	
PFTeDA	6.43	1.00	45291.6	A	N/A	0.0053			
PFTeDA_2	6.43	1.00	241.1	M	N/A	0.0053	-18	50	
PFHxDA	6.73	1.05	23236.0	A	N/A	0.0522			
PFHxDA_2	6.73	1.05	1212.3	A	N/A	0.0522	-24	50	
PFODA	6.99	1.09	16946.9	A	N/A	0.0252			
PFODA_2	6.99	1.09	426.9	A	N/A	0.0252	-7	50	

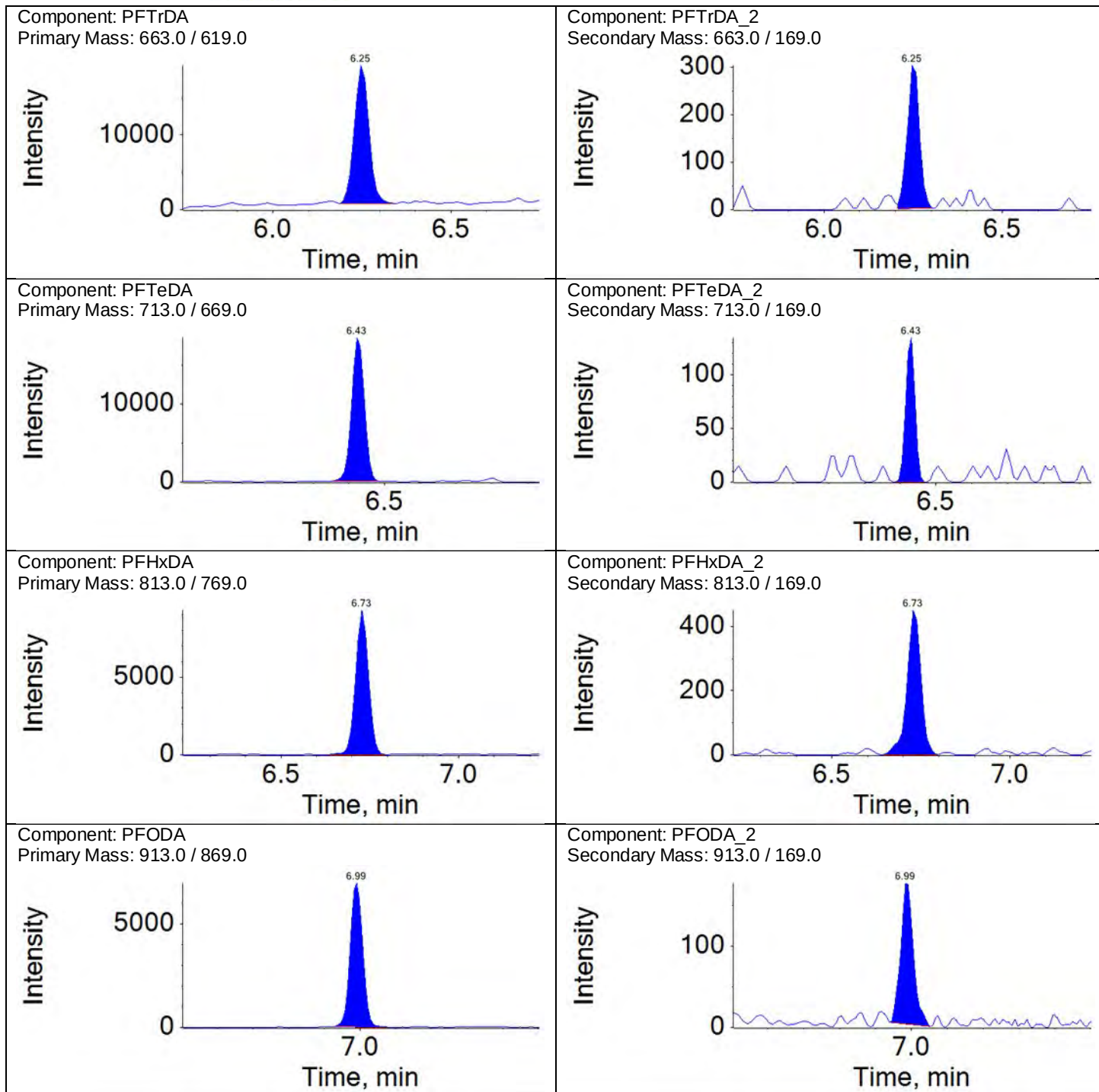












Preparation Logs

PFAS by LC/MS/MS

18310012

Tech 1: DDW25478

Tech 2: N/A

Start Date: 11/16/18

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD

Port #	QC	Sample Code	Amt ()	SS/IS Sol.	Amt (mL)	MS Sol.	IS Amt (uL)	BC	Comments
7	9881908MS	C2121	1.05	SSMODX1833BY	.05	SSMODX1833AP	1.00	20	14478
	9881909MSD	C2121	1.05	SSMODX1833BY	.05	SSMODX1833AP	1.00	1	14478
	BLANKA	BLK310012	1.00	SSMODX1833BY	.05		1.00	1	14478
	LCSA	LCS310012	1.05	SSMODX1833BY	.05	SSMODX1833AP	1.00	1	14478

Spike Solutions: Witness: ACP26543 Instrument: LM27631

MSMODX1833AP PFAS 537 Native Spike

Sequence: 18NOV07505-18NOV08D

SSMODX1833BY PFAS 537 Modified Extraction/Surrogate Spike

Port #	Sample #	Sample Code	Amt ()	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
1	9881902	57323	1.05	SSMODX1833BY	.05	1.00	20	170a		14478	11/13/2018	N
2	9881903	57325	1.03	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
3	9881904	57328	1.03	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
4	9881907	BKG C2121	1.05	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
5	9881910	C2123	1.05	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
6	9881911	C2126	1.05	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
7	9881912	C2128	1.05	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
8	9881915	C2161	1.05	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
9	9881916	C2163	1.04	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
10	9881917	C2165	1.05	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N
11	9881918	C2168	1.09	SSMODX1833BY	.05	1.00		170a		14478	11/13/2018	N

MCA MCO 7824 11/13/18



Organic Extraction Batchlog

18310012

Port#	Sample #	Sample Code	Amt ()	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
-------	----------	-------------	---------	------------	----------	---------	-------------	----	----------	----------	-----	-----

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	2047811051833A
Auto-pipette (dilutions)	
Auto-pipette (extract vial)	P1000 - 1
Envi-Carb	107563
Internal Standard	SS1830A37A
Methanol	DXG13-VS
Sand	MKBW7349V
Syringe (IS)	PFA5 11
Syringe (MS)	PFA5 10
Syringe (SS)	PFA5 13

Page 1

Balance #	06029704122
-----------	-------------

Sonic Bath ID

380013

N-evap

34C

SPE Manifold

N/A

18310012

D = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Page 2 of 2



N/A MCD-7824 11/13/18

18316012

Tech 1: PJR9213

Tech 2: —

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (447)	IS Amt (uL)	BC	Comments
7	9881908MS	C2121	1.01	SSMODX1833CA	.05	MSMODX1833AQ	.04	1.00	20	170A	
	9881909MSD	C2121	1.07	SSMODX1833CA	.05	MSMODX1833AQ	.04	1.00		170A	
	BLANKA	BLK316012	1.00	SSMODX1833CA	.05	—	—	1.00		Z	
	LCSA	LCS316012	1.00	SSMODX1833CA	.05	MSMODX1833AQ	.04	1.00		Z	

Spike Solutions: Witness: P-68 / 375 Instrument: Lm27631

MSMODX1833AQ PFAS 537 Native Spike

Sequence: 18 NOV 12 D00 / 18 NOV 13 D

SSMODX1833CA PFAS 537 Modified Extraction/Surrogate Spike

Port #	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (447)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
1	9881902 R	57323	1.02	SSMODX1833CA	.05	1.00	20	170a		14478	11/13/2018	N
2	9881903 R	57325	1.04	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
3	9881904 R	57328	1.04	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
4	9881907 R	BKG C2121	1.02	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
5	9881910 R	C2123	1.04	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
6	9881911 R	C2126	1.04	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
7	9881912 R	C2128	1.10	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
8	9881915 R	C2161	1.01	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
9	9881916 R	C2163	1.08	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
10	9881917 R	C2165	1.07	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N
11	9881918 R	C2168	1.08	SSMODX1833CA	.05	1.00		170a		14478	11/13/2018	N

MCD 7824 11/13/18



Organic Extraction Batchlog

18316012

Port#	Sample #	Sample Code	Amt ()	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
-------	----------	-------------	---------	------------	----------	---------	-------------	----	----------	----------	-----	-----

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	254781111833B
Auto-pipette (dilutions)	
Auto-pipette (extract vial)	P1000-1
Enviro-Carb	1075V3
Internal Standard	IS1831133A
Methanol	DV013-US
Sand	MR6W7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

Page 1

Balance #	B1029710472	Sonic Bath ID	3800B	N-evap	A	31C	SPE Manifold	18316012
-----------	-------------	---------------	-------	--------	---	-----	--------------	----------

D = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Page 2 of 2



MR MC038224 11/13/18

Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
9881902	57323
9881903	57325
9881904	57328
9881907	C2121BKG
9881908	C2121MS
9881909	C2121MSD
9881910	C2123
9881911	C2126
9881912	C2128
9881915	C2161
9881916	C2163
9881917	C2165
9881918	C2168

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18312820002B	Sample number(s): 9881902-9881904, 9881907-9881912, 9881915-9881918				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 18312820002B	Sample number(s): 9881902-9881904, 9881907-9881912, 9881915-9881918			
Moisture	N.D.	N.D.	0 (1)	5
Moisture	N.D.	N.D.	0 (1)	5
Moisture Duplicate	N.D.	N.D.	0 (1)	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

MOISTURE

Moisture Data Report

Batch #: 18312820002

<u>Sample ID</u>	<u>Batch ID</u>	<u>Analysis#</u>	<u>Sample</u>				<u>Analysis</u>		<u>Verified</u>	
			<u>Tare Wt</u>	<u>Wt</u>	<u>Dry Wt</u>	<u>%Moisture</u>	<u>Date (Emp#)</u>	<u>Date (Emp#)</u>		
9881902	B	00111	1.0894	5.2745	6.2342	2.46	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881903	B	00111	1.0687	5.3894	6.3426	2.14	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881904	B	00111	1.0763	5.4329	6.4114	1.80	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881907BKG	B	00111	1.0643	5.5455	6.5875	0.40	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881908MS	B	00118				0.40	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881909MSD	B	00118				0.40	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881909MSD	B	00121	1.0684	5.5894	6.6370	0.37	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881910	B	00111	1.0660	5.5536	6.5905	0.52	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881911	B	00111	1.0802	5.3126	6.3213	1.35	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881912	B	00111	1.0641	5.6949	6.6827	1.34	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881915	B	00111	1.0594	5.2318	6.1852	2.03	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881916	B	00111	1.0688	5.6358	6.6145	1.60	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881917	B	00111	1.1577	5.5536	6.6595	0.93	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
9881918	B	00111	1.1531	5.5131	6.6281	0.69	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		
LCS 89.5% Std.		00111	1.0837	5.0099	1.6157	89.38	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)		

file:///C:/Users/GW063173/Desktop/SW%20PFAS%20FOIA/MCLB%20BARSTOW/3 EDD%20SDG%20BSI05.txt[9/13/2019 2:40:38 PM]

0.20	0.20	0.68	0.80	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
0.68	0	NG_G	U	N	TRG				0.20
0.20	0.20	0.68	0.80	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
0.68	0	NG_G	U	N	TRG				0.20
0.20	0.20	0.68	0.80	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
0.68	0	NG_G	U	N	TRG				0.20
0.20	0.20	0.68	0.80	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
0.60	0	NG_G	U	N	TRG				0.20
0.20	0.20	0.60	0.80	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
0.64	0.64	NG_G	J	Y	TRG				0.20
0.20	0.20	0.64	0.80	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
0.65	0	NG_G	U	N	TRG				0.20
0.20	0.20	0.65	0.80	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
2.0	0	NG_G	U	N	TRG				0.50
0.50	0.50	2.0	3.0	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-03	537_MOD					
EUROFINS	BRADY GCE II	NONE	Dry	METHOD 000	S	UNK		20181112	
09:30:00	20181113	10:20:00	9881902	20190118	2005356	0.00	1	1	2.5
2.0	0	NG_G	U	N	TRG				0.50
0.50	0.50	2.0	3.0	BSI05	18316012	18316012	18316012	18316012	
Y									
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-05	Calculation					
EUROFINS	BRADY GCE II	NONE	Wet	NONE 000	S	UNK		20181108	
09:07:00	9881903	20190118	2005356	0.00	1	1	2.1	-86	2.1
TRG					0.50			0.50	0.50

file:///C:/Users/GW063173/Desktop/SW%20PFAS%20FOIA/MCLB%20BARSTOW/3 EDD%20SDG%20BSI05.txt[9/13/2019 2:40:38 PM]

Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:29:00 9881903 20190118 2005356 0.00 1 1 2.1 375-73-5
0.59 0 NG_G U N TRG 0.20
0.20 0.20 0.59 0.79 BSI05 18316012 18316012 18316012 18316012
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:29:00 9881903 20190118 2005356 0.00 1 1 2.1 355-46-4
0.68 0.68 NG_G J Y TRG 0.20
0.20 0.20 0.63 0.79 BSI05 18316012 18316012 18316012 18316012
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:29:00 9881903 20190118 2005356 0.00 1 1 2.1 1763-23-1
0.34 0.34 NG_G J Y TRG 0.20
0.20 0.20 0.64 0.79 BSI05 18316012 18316012 18316012 18316012
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:29:00 9881903 20190118 2005356 0.00 1 1 2.1 2991-50-6
2.0 0 NG_G U N TRG 0.49
0.49 0.49 2.0 2.9 BSI05 18316012 18316012 18316012 18316012
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:29:00 9881903 20190118 2005356 0.00 1 1 2.1 2355-31-9
2.0 0 NG_G U N TRG 0.49
0.49 0.49 2.0 2.9 BSI05 18316012 18316012 18316012 18316012
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
09:07:00 9881904 20190118 2005356 0.00 1 1 1.8 -86 1.8 1.8 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI05 18312820002B 18312820002B 18312820002B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:38:00 9881904 20190118 2005356 0.00 1 1 1.8 335-67-1
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.78 BSI05 18316012 18316012 18316012 18316012
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:38:00 9881904 20190118 2005356 0.00 1 1 1.8 375-95-1
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.78 BSI05 18316012 18316012 18316012 18316012
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:30:00 20181113 10:38:00 9881904 20190118 2005356 0.00 1 1 1.8 335-76-2
0.67 0 NG_G U N TRG 0.29
0.29 0.29 0.67 0.98 BSI05 18316012 18316012 18316012 18316012
Y

N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 2058-94-8
0.67	0	NG_G U	N TRG	0.20
0.20	0.20	0.67	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 307-55-1
0.67	0	NG_G U	N TRG	0.20
0.20	0.20	0.67	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 72629-94-8
0.67	0	NG_G U	N TRG	0.20
0.20	0.20	0.67	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 376-06-7
0.67	0	NG_G U	N TRG	0.20
0.20	0.20	0.67	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 307-24-4
0.67	0	NG_G U	N TRG	0.20
0.20	0.20	0.67	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 375-85-9
0.67	0	NG_G U	N TRG	0.20
0.20	0.20	0.67	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 375-73-5
0.59	0	NG_G U	N TRG	0.20
0.20	0.20	0.59	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 355-46-4
0.63	0	NG_G U	N TRG	0.20
0.20	0.20	0.63	0.78 BSI05	18316012 18316012 18316012 18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 1763-23-1
0.64	0	NG_G U	N TRG	0.20
0.20	0.20	0.64	0.78 BSI05	18316012 18316012 18316012 18316012
Y				

N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 2991-50-6
2.0 0	NG_G U	N	TRG	0.49
0.49	0.49 2.0 2.9	BSI05	18316012 18316012 18316012	18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-BLDG573-S-02-08	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:38:00	9881904 20190118	2005356 0.00 1 1 1.8 2355-31-9
2.0 0	NG_G U	N	TRG	0.49
0.49	0.49 2.0 2.9	BSI05	18316012 18316012 18316012	18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	Calculation
EUROFINS	BRADY GCE II NONE	Wet NONE 000	S UNK	20181108
09:07:00	9881907 20190118	2005356 0.00 1 1 0	-86 0.50 0.40	2127851411054 PCT
U	N	TRG	0.50	0.50
0.50 0.50 0.50	BSI05	18312820002B	18312820002B 18312820002B	Y
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:47:00	9881907 20190118	2005356 0.00 1 1 0 335-67-1
0.67 0	NG_G U	N	TRG	0.20
0.20	0.20 0.67 0.78	BSI05	18316012 18316012 18316012	18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:47:00	9881907 20190118	2005356 0.00 1 1 0 375-95-1
0.67 0	NG_G U	N	TRG	0.20
0.20	0.20 0.67 0.78	BSI05	18316012 18316012 18316012	18316012
Y				
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:47:00	9881907 20190118	2005356 0.00 1 1 0 335-76-2 0.67 0
NG_G U	N	TRG		0.29 0.29
0.29 0.67 0.98	BSI05	18316012	18316012 18316012 18316012	Y
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:47:00	9881907 20190118	2005356 0.00 1 1 0 2058-94-8 0.67 0
NG_G U	N	TRG		0.20 0.20
0.20 0.67 0.78	BSI05	18316012	18316012 18316012 18316012	Y
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:47:00	9881907 20190118	2005356 0.00 1 1 0 307-55-1 0.67 0
NG_G U	N	TRG		0.20 0.20
0.20 0.67 0.78	BSI05	18316012	18316012 18316012 18316012	Y
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:47:00	9881907 20190118	2005356 0.00 1 1 0 72629-94-8 0.67 0
NG_G U	N	TRG		0.20 0.20
0.20 0.67 0.78	BSI05	18316012	18316012 18316012 18316012	Y
N62473-14-D-1405	N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD
EUROFINS	BRADY GCE II NONE	Dry METHOD 000	S UNK	20181112
09:30:00	20181113	10:47:00	9881907 20190118	2005356 0.00 1 1 0 376-06-7 0.67 0
NG_G U	N	TRG		0.20 0.20
0.20 0.67 0.78	BSI05	18316012	18316012 18316012 18316012	Y

N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 10:47:00 9881907	20190118 2005356 0.00 1 1 0		307-24-4 0.67 0	
NG_G U N TRG			0.20	0.20
0.20 0.67 0.78 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 10:47:00 9881907	20190118 2005356 0.00 1 1 0		375-85-9 0.67 0	
NG_G U N TRG			0.20	0.20
0.20 0.67 0.78 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 10:47:00 9881907	20190118 2005356 0.00 1 1 0		375-73-5 0.59 0	
NG_G U N TRG			0.20	0.20
0.20 0.59 0.78 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 10:47:00 9881907	20190118 2005356 0.00 1 1 0		355-46-4 0.63 0	
NG_G U N TRG			0.20	0.20
0.20 0.63 0.78 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 10:47:00 9881907	20190118 2005356 0.00 1 1 0		1763-23-1 0.64 0	
NG_G U N TRG			0.20	0.20
0.20 0.64 0.78 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 10:47:00 9881907	20190118 2005356 0.00 1 1 0		2991-50-6 2.0 0	
NG_G U N TRG			0.49	0.49
0.49 2.0 2.9 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 10:47:00 9881907	20190118 2005356 0.00 1 1 0		2355-31-9 2.0 0	
NG_G U N TRG			0.49	0.49
0.49 2.0 2.9 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-03	Calculation	
EUROFINS BRADY GCE II NONE	Wet NONE 000 S	UNK	20181108	
09:07:00 9881910 20190118 2005356	0.00 1 1 0.52	-86 0.52 0.52 PCT	Y	TRG
0.50 0.50 0.50 BSI05	18312820002B	18312820002B		
18312820002B	Y			
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-03	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:14:00 9881910	20190118 2005356 0.00 1 1 0.52		335-67-1 0.66 0	
NG_G U N TRG			0.19	0.19
0.19 0.66 0.77 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-03	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:14:00 9881910	20190118 2005356 0.00 1 1 0.52		375-95-1 0.66 0	
NG_G U N TRG			0.19	0.19
0.19 0.66 0.77 BSI05	18316012	18316012	18316012	Y
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-02-03	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:14:00 9881910	20190118 2005356 0.00 1 1 0.52		335-76-2 0.66 0	
NG_G U N TRG			0.29	0.29

file:///C:/Users/GW063173/Desktop/SW%20PFAS%20FOIA/MCLB%20BARSTOW/3_EDD%20SDG%20BSI05.txt[9/13/2019 2:40:38 PM]

NG_G	U	N	TRG							0.48		0.48
0.48	1.9	2.9	BSI05	18316012	18316012	18316012	18316012		Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	Calculation							
EUROFINS	BRADY GCE II	NONE	Wet NONE	000 S	UNK				20181108			
09:07:00	9881911	20190118	2005356	0.00	1	1	1.3	-86	1.3	1.3	PCT	Y
0.50		0.50		0.50	0.50	BSI05		18312820002B				TRG
18312820002B			Y									
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		335-67-1	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		375-95-1	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		375-95-1	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		375-95-1	0.65
0												
NG_G	U	N	TRG							0.29		0.29
0.29	0.65	0.96	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		2058-94-8	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		307-55-1	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		72629-94-8	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		376-06-7	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		307-24-4	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3		375-85-9	0.65
0												
NG_G	U	N	TRG							0.19		0.19
0.19	0.65	0.76	BSI05	18316012	18316012	18316012			Y			
N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY GCE II	NONE	Dry METHOD	000 S	UNK				20181112			

09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3	375-73-5	0.57	0	
NG_G	U	N	TRG							0.19		0.19	
0.19	0.57	0.76	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3	355-46-4	0.61	0	
NG_G	U	N	TRG							0.19		0.19	
0.19	0.61	0.76	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3	1763-23-1	0.62	0	
NG_G	U	N	TRG							0.19		0.19	
0.19	0.62	0.76	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3	2991-50-6	1.9	0	
NG_G	U	N	TRG							0.48		0.48	
0.48	1.9	2.9	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-06	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:23:00	9881911	20190118	2005356	0.00	1	1	1.3	2355-31-9	1.9	0	
NG_G	U	N	TRG							0.48		0.48	
0.48	1.9	2.9	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	Calculation							
EUROFINS	BRADY	GCE II	NONE	Wet NONE	000 S	UNK				20181108			
09:07:00	9881912	20190118	2005356	0.00	1	1	1.3	-86	1.3	1.3	PCT	Y	TRG
0.50		0.50		0.50	0.50	0.50	BSI05	18312820002B		18312820002B			
18312820002B			Y										
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	335-67-1	0.63	0	
NG_G	U	N	TRG							0.18		0.18	
0.18	0.63	0.74	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	375-95-1	0.63	0	
NG_G	U	N	TRG							0.18		0.18	
0.18	0.63	0.74	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	335-76-2	0.63	0	
NG_G	U	N	TRG							0.28		0.28	
0.28	0.63	0.92	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	2058-94-8	0.63	0	
NG_G	U	N	TRG							0.18		0.18	
0.18	0.63	0.74	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD							
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112			
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	307-55-1	0.63	0	
NG_G	U	N	TRG							0.18		0.18	
0.18	0.63	0.74	BSI05	18316012	18316012	18316012				Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD							

EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	72629-94-8	0.63 0
NG_G	U	N	TRG						0.18		0.18
0.18	0.63	0.74	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	376-06-7	0.63 0
NG_G	U	N	TRG						0.18		0.18
0.18	0.63	0.74	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	307-24-4	0.63 0
NG_G	U	N	TRG						0.18		0.18
0.18	0.63	0.74	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	375-85-9	0.63 0
NG_G	U	N	TRG						0.18		0.18
0.18	0.63	0.74	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	375-73-5	0.55 0
NG_G	U	N	TRG						0.18		0.18
0.18	0.55	0.74	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	355-46-4	0.59 0
NG_G	U	N	TRG						0.18		0.18
0.18	0.59	0.74	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	1763-23-1	0.60 0
NG_G	U	N	TRG						0.18		0.18
0.18	0.60	0.74	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	2991-50-6	1.8 0
NG_G	U	N	TRG						0.46		0.46
0.46	1.8	2.8	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-02-08	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:41:00	9881912	20190118	2005356	0.00	1	1	1.3	2355-31-9	1.8 0
NG_G	U	N	TRG						0.46		0.46
0.46	1.8	2.8	BSI05	18316012	18316012	18316012	18316012	Y			
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-01	Calculation					
EUROFINS	BRADY	GCE II	NONE	Wet	NONE	000	S	UNK	20181108		
09:07:00	9881915	20190118	2005356	0.00	1	1	2	-86	2.0	2.0	PCT
0.50		0.50		0.50	0.50	BSI05		18312820002B		18312820002B	
18312820002B			Y								
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD					
EUROFINS	BRADY	GCE II	NONE	Dry	METHOD	000	S	UNK	20181112		
09:30:00	20181113	11:50:00	9881915	20190118	2005356	0.00	1	1	2	335-67-1	0.69 0
NG_G	U	N	TRG						0.20		0.20
0.20	0.69	0.81	BSI05	18316012	18316012	18316012	18316012	Y			

N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		375-95-1 0.69 0	
NG_G U N TRG			0.20	0.20
0.20 0.69 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		335-76-2 0.69 0	
NG_G U N TRG			0.30	0.30
0.30 0.69 1.0 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		2058-94-8 0.69 0	
NG_G U N TRG			0.20	0.20
0.20 0.69 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		307-55-1 0.69 0	
NG_G U N TRG			0.20	0.20
0.20 0.69 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		72629-94-8 0.69 0	
NG_G U N TRG			0.20	0.20
0.20 0.69 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		376-06-7 0.69 0	
NG_G U N TRG			0.20	0.20
0.20 0.69 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		307-24-4 0.69 0	
NG_G U N TRG			0.20	0.20
0.20 0.69 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		375-85-9 0.69 0	
NG_G U N TRG			0.20	0.20
0.20 0.69 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		375-73-5 0.61 0	
NG_G U N TRG			0.20	0.20
0.20 0.61 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		355-46-4 0.65 0	
NG_G U N TRG			0.20	0.20
0.20 0.65 0.81 BSI05 18316012	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-01	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 11:50:00 9881915	20190118 2005356 0.00 1 1 2		1763-23-1 0.66 0	
NG_G U N TRG			0.20	0.20

file:///C:/Users/GW063173/Desktop/SW%20PFAS%20FOIA/MCLB%20BARSTOW/3_EDD%20SDG%20BSI05.txt[9/13/2019 2:40:38 PM]

NG_G	U		N	TRG						0.19								0.19
0.19	0.64	0.75	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-03	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	11:59:00	9881916	20190118	2005356	0.00 1 1 1.6	375-85-9	0.64 0										
NG_G	U		N	TRG						0.19								0.19
0.19	0.64	0.75	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-03	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	11:59:00	9881916	20190118	2005356	0.00 1 1 1.6	375-73-5	0.56 0										
NG_G	U		N	TRG						0.19								0.19
0.19	0.56	0.75	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-03	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	11:59:00	9881916	20190118	2005356	0.00 1 1 1.6	355-46-4	0.60 0										
NG_G	U		N	TRG						0.19								0.19
0.19	0.60	0.75	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-03	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	11:59:00	9881916	20190118	2005356	0.00 1 1 1.6	1763-23-1	0.61 0										
NG_G	U		N	TRG						0.19								0.19
0.19	0.61	0.75	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-03	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	11:59:00	9881916	20190118	2005356	0.00 1 1 1.6	2991-50-6	1.9 0										
NG_G	U		N	TRG						0.47								0.47
0.47	1.9	2.8	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-03	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	11:59:00	9881916	20190118	2005356	0.00 1 1 1.6	2355-31-9	1.9 0										
NG_G	U		N	TRG						0.47								0.47
0.47	1.9	2.8	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-05	Calculation											
EUROFINS	BRADY	GCE II	NONE	Wet NONE	000 S	UNK	20181108											
09:07:00	9881917	20190118	2005356	0.00 1 1 0.93	-86 0.93 0.93 PCT		Y	TRG										
0.50		0.50	0.50	0.50 0.50 BSI05		18312820002B	18312820002B											
18312820002B				Y														
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00 1 1 0.93	335-67-1	0.64 0										
NG_G	U		N	TRG						0.19								0.19
0.19	0.64	0.75	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00 1 1 0.93	375-95-1	0.64 0										
NG_G	U		N	TRG						0.19								0.19
0.19	0.64	0.75	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00 1 1 0.93	335-76-2	0.64 0										
NG_G	U		N	TRG						0.28								0.28
0.28	0.64	0.94	BSI05		18316012	18316012	18316012	18316012			Y							
N62473-14-D-1405	N6247317F4100				BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD											
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK	20181112											

09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	2058-94-8	0.64	0
NG_G	U	N	TRG						0.19			0.19
0.19	0.64	0.75	BSI05	18316012	18316012	18316012	18316012			Y		
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	307-55-1	0.64	0
NG_G	U	N	TRG						0.19			0.19
0.19	0.64	0.75	BSI05	18316012	18316012	18316012	18316012			Y		
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	72629-94-8	0.64	0
NG_G	U	N	TRG						0.19			0.19
0.19	0.64	0.75	BSI05	18316012	18316012	18316012	18316012			Y		
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	376-06-7	0.64	0
NG_G	U	N	TRG						0.19			0.19
0.19	0.64	0.75	BSI05	18316012	18316012	18316012	18316012			Y		
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	307-24-4	0.64	0
NG_G	U	N	TRG						0.19			0.19
0.19	0.64	0.75	BSI05	18316012	18316012	18316012	18316012			Y		
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	375-85-9	0.64	0
NG_G	U	N	TRG						0.19			0.19
0.19	0.64	0.75	BSI05	18316012	18316012	18316012	18316012			Y		
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	375-73-5	0.57	0
NG_G	U	N	TRG						0.19			0.19
0.19	0.57	0.75	BSI05	18316012	18316012	18316012	18316012			Y		
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	355-46-4	0.60	0
NG_G	U	N	TRG						0.19			
0.19		0.19	0.60	0.75	BSI05	18316012	18316012	18316012	18316012			
Y												
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	1763-23-1		
0.61	0	NG_G	U	N	TRG					0.19		
0.19		0.19	0.61	0.75	BSI05	18316012	18316012	18316012	18316012			
Y												
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	2991-50-6		
1.9	0	NG_G	U	N	TRG					0.47		
0.47		0.47	1.9	2.8	BSI05	18316012	18316012	18316012	18316012			
Y												
N62473-14-D-1405	N6247317F4100			BARSTOW_MCLB	OU1-CAOC21-S-06-05	537_MOD						
EUROFINS	BRADY	GCE II	NONE	Dry METHOD	000 S	UNK				20181112		
09:30:00	20181113	12:08:00	9881917	20190118	2005356	0.00	1	1	0.93	2355-31-9		

file:///C:/Users/GW063173/Desktop/SW%20PFAS%20FOIA/MCLB%20BARSTOW/3 EDD%20SDG%20BSI05.txt[9/13/2019 2:40:38 PM]

N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-08	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 12:17:00 9881918	20190118 2005356 0.00 1 1 0.69	375-73-5 0.56 0		
NG_G U N TRG		0.19		0.19
0.19 0.56 0.75 BSI05	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-08	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 12:17:00 9881918	20190118 2005356 0.00 1 1 0.69	355-46-4 0.60 0		
NG_G U N TRG		0.19		0.19
0.19 0.60 0.75 BSI05	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-08	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 12:17:00 9881918	20190118 2005356 0.00 1 1 0.69	1763-23-1 0.61 0		
NG_G U N TRG		0.19		0.19
0.19 0.61 0.75 BSI05	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-08	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 12:17:00 9881918	20190118 2005356 0.00 1 1 0.69	2991-50-6 1.9 0		
NG_G U N TRG		0.47		0.47
0.47 1.9 2.8 BSI05	18316012 18316012 18316012		Y	
N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	OU1-CAOC21-S-06-08	537_MOD	
EUROFINS BRADY GCE II NONE	Dry METHOD 000 S	UNK	20181112	
09:30:00 20181113 12:17:00 9881918	20190118 2005356 0.00 1 1 0.69	2355-31-9 1.9 0		
NG_G U N TRG		0.47		0.47
0.47 1.9 2.8 BSI05	18316012 18316012 18316012		Y	
SAMPLE_NAME CONTRACT_ID DO_CTO_NUMBER PHASE INSTALLATION_ID SITE_NAME LOCATION_NAME SPECIMEN_NAME BIOLOGICAL_CLASS SEX AGE_CLASS EXCAVATION_NAME PARENT_SAMPLE_NAME SAMPLE_MATRIX SAMPLE_TYPE SAMPLING_EQUIPMENT PROJECT_PHASE COMPOSITE WATER_COLUMN COLLECT_DATE COLLECT_TIME DATUM_ELEV ELEV_UNITS DATUM_MLLW DATUM_DESC START_DEPTH END_DEPTH DEPTH_UNITS REMOVED REMOVED_DATE AMBIENT_BLANK EQUIPMENT_BLANK SOURCE_BLANK TRIP_BLANK SAMPLE_NARRATIVE				
OU1-BLDG573-S-02-03	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	
BLDG573-S-02	SO N	N	20181030	12:03:00
03 FT				
OU1-BLDG573-S-02-05	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	
BLDG573-S-02	SO N	N	20181030	12:07:00
05 FT				
OU1-BLDG573-S-02-08	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	
BLDG573-S-02	SO N	N	20181030	12:15:00
08 FT				
OU1-CAOC21-S-02-01	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	CAOC21-S-02
SO N	N	20181030	13:10:00	01 FT
OU1-CAOC21-S-02-01 MS	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	CAOC21-S-02
S-02	OU1-CAOC21-S-02-01 SO MS	N	20181030	13:10:00
01 FT				
OU1-CAOC21-S-02-01 MSD	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	
CAOC21-S-02	OU1-CAOC21-S-02-01 SO SD	N	20181030	
13:10:00	01 FT			
OU1-CAOC21-S-02-03	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	CAOC21-S-02
SO N	N	20181030	13:20:00	03 FT
OU1-CAOC21-S-02-06	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	CAOC21-S-02
SO N	N	20181030	13:28:00	06 FT
OU1-CAOC21-S-02-08	N62473-14-D-1405N6247317F4100	BARSTOW_MCLB	00000	CAOC21-S-02

SO N	N	20181030	13:33:00	08	FT		
OU1-CAOC21-S-06-01	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000	CAOC21-S-06	
SO N	N	20181030	14:10:00	01	FT		
OU1-CAOC21-S-06-03	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000	CAOC21-S-06	
SO N	N	20181030	14:18:00	03	FT		
OU1-CAOC21-S-06-05	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000	CAOC21-S-06	
SO N	N	20181030	14:35:00	05	FT		
OU1-CAOC21-S-06-08	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000	CAOC21-S-06	
SO N	N	20181030	14:38:00	08	FT		
LCS18312820002B	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000		
SO BS	N						
DUP18312820002B	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000		
SO LR	N	20181030	13:10:00				
BLK18316012	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000		
SO LB	N						
LCS18316012	N62473-14-D-1405	N6247317F4100		BARSTOW_MCLB	00000		
SO BS	N						