

Chemistry FoPT Subcommittee Meeting Summary

May 5, 2023

1. Roll call, approval of minutes and overview:

Chair, Amy DeMarco, called the Chemistry FoPT meeting to order at 1pm Eastern on May 5, 2023. There were eleven (11) members present (X):

Stephen Arpie	X	Svetlana Izosimova	X
Kathryn Chang - Absent		Susan Jackson	X
Audrey Cornell	X	Carl Kircher	X
Tom Dziedzic	X	Patrick Selig - Absent	
Rachel Ellis	X	Amy DeMarco	X
Chuck Faulk	X	Aaron Bindel	X
Stacey Fry - Absent			
Craig Huff	X	Ilona Taunton – Program Administrator	X

Matt Graves joined as a guest.

There was one addition to the agenda – EPA verses LAMS Nomenclature.

A motion was made by Craig to approve the April 6, 2023 minutes as written. The motion was seconded by Susan and unanimously approved.

2. PFAS Limits

Data Submission

Craig tried to update his data but ran into issues. He is trying to get credentials from William (TNI IT). Ilona will reach out to William to alert him that Craig is trying to get help with the upload.

EPA verses LAMS Nomenclature

Current Analyte Name	Chemical Abstract Service Registry Number (CASRN)
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	113507-82-7
hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6
nonafluoro-3,6-dioxahptanoic acid (NFDHA)	151772-58-6

Current Analyte Name	Chemical Abstract Service Registry Number (CASRN)
perfluorooctanesulfonic acid (PFOS)	1763-23-1
Perfluoroundecanoic acid (PFUnA)	2058-94-8
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9
perfluoropentanoic acid (PFPeA)	2706-90-3
perfluoropentanesulfonic acid (PFPeS)	2706-91-4
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	27619-97-2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6
perfluorohexanoic acid (PFHxA)	307-24-4
perfluorododecanoic acid (PFDoA)	307-55-1
perfluorooctanoic acid (PFOA)	335-67-1
perfluorodecanoic acid (PFDA)	335-76-2
perfluorohexanesulfonic acid (PFHxS)	355-46-4
perfluorobutanoic acid (PFBA)	375-22-4
perfluorobutanesulfonic acid (PFBS)	375-73-5
perfluoroheptanoic acid (PFHpA)	375-85-9
perfluoroheptanesulfonic acid (PFHpS)	375-92-8
perfluorononanoic acid (PFNA)	375-95-1
perfluorotetradecanoic acid (PFTA)	376-06-7
perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	39108-34-4
perfluorotridecanoic acid (PFTrDA)	72629-94-8
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	757124-72-4
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9
perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5
4,8-dioxa-3H-perfluorononanoic acid (ADONA)2	919005-14-4

Shared by Carl:

Proposed Analyte Name (4-14-23)	Chemical Abstract Service Registry Number (CASRN)
perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA, <u>also includes Perfluoro(2-ethoxyethane) Sulfonate</u>)	113507-82-7 (113507-87-2 for Na salt)
hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6 (62037-80-3 for Na salt)
nonafluoro-3,6-dioxaheptanoic acid (NFDHA, <u>also includes Nonfluoro-3,6-dioxaheptanoate</u>)	151772-58-6
perfluorooctanesulfonic acid (PFOS, <u>also includes Perfluoro-octane Sulfonate</u>)	1763-23-1 (4021-47-0 for Na salt)
Perfluoroundecanoic acid (PFUnA, <u>also includes Perfluoroundecanoate</u>)	2058-94-8

Proposed Analyte Name (4-14-23)	Chemical Abstract Service Registry Number (CASRN)
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA, <u>also includes N-Methyl Perfluoro-octane Sulfonamidoacetate</u>)	2355-31-9
perfluoropentanoic acid (PFPeA, <u>also includes Perfluoropentanoate</u>)	2706-90-3 (2706-89-0 for Na salt)
perfluoropentanesulfonic acid (PFPeS, <u>also includes Perfluoropentane Sulfonate</u>)	2706-91-4 (175905-36-9 for Na salt)
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	27619-97-2 (27619-94-9 for Na salt)
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA, <u>also includes N-Ethyl Perfluoro-octane Sulfonamidoacetate</u>)	2991-50-6 (3871-50-9 for Na salt)
perfluorohexanoic acid (PFHxA, <u>also includes Perfluorohexanoate</u>)	307-24-4 (2923-26-4 for Na salt)
perfluorododecanoic acid (PFDoA, <u>also includes Perfluorododecanoate</u>)	307-55-1 (60872-01-7 for Na salt)
perfluorooctanoic acid (PFOA, <u>also includes Perfluoro-octanoate</u>)	335-67-1 (335-95-5 for Na salt)
perfluorodecanoic acid (PFDA, <u>also includes Perfluorodecanoate</u>)	335-76-2 (3830-45-3 for Na salt)
perfluorohexanesulfonic acid (PFHxS, <u>also includes Perfluorohexane Sulfonate</u>)	355-46-4 (82382-12-5 for Na salt)
perfluorobutanoic acid (PFBA, <u>also includes Perfluorobutanoate</u>)	375-22-4 (2218-54-4 for Na salt)
perfluorobutanesulfonic acid (PFBS, <u>also includes Perfluorobutane Sulfonate</u>)	375-73-5 (60453-92-1 for Na salt)
perfluoroheptanoic acid (PFHpA, <u>also includes Perfluoroheptanoate</u>)	375-85-9 (20109-59-5 for Na salt)
perfluoroheptanesulfonic acid (PFHpS, <u>also includes Perfluoroheptane Sulfonate</u>)	375-92-8 (21934-50-9 for Na salt)
perfluorononanoic acid (PFNA, <u>also includes Perfluorononanoate</u>)	375-95-1 (4149-60-4 for NH4 salt)
perfluorotetradecanoic acid (PFTeA, <u>also includes Perfluorotetradecanoate</u>)	376-06-7
perfluoro-3-methoxypropanoic acid (PFMPA, <u>also includes Perfluoro-3-methoxypropanoate</u>)	377-73-1
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	39108-34-4 (27619-96-1 for Na salt)
perfluorotridecanoic acid (PFTrDA, <u>also includes Perfluorotridecanoate</u>)	72629-94-8
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-CIPF3ONS, <u>also includes 9-Chlorohexadecafluoro-3-oxanonane 1-Sulfonate</u>)	756426-58-1
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	757124-72-4 (27619-93-8 for Na salt)
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11-CIPF3OUdS, <u>also includes 11-Chloroeicosafuoro-3-oxaundecane 1-Sulfonate</u>)	763051-92-9
perfluoro-4-methoxybutanoic acid (PFMBA, <u>also includes Perfluoro-4-methoxybutanoate</u>)	863090-89-5
4,8-dioxa-3H-perfluorononanoic acid (ADONA, <u>also includes 4,8-Dioxa-3H-perfluorononanoate</u>)	919005-14-4 (958445-44-8 for Na salt)

From Carl (4/14/23):

Chemically, at drinking water pH (hopefully 6-7), none of the PFAS target analytes will be prominent in the acid form. They will all be de-protonated into the conjugate base form. Thus, I have added the parenthetical information in Column A to denote that the FoPT analyte should include or account for the conjugate base or salt form of the PFAS. In Column B I have added the CAS Number that would account for the salt form of the PFAS, in which the anion is the deprotonated acid. I chose Sodium as the counter-cation since I expect that to be the major positively charged dissolved species present in drinking water. I am sorry that there are a few analytes that I could not find a CAS Number for the deprotonated sodium-salt form.

To my best knowledge, none of the approved test methods make any distinction between whether the acid form or the conjugate base form is the species that is detected for test results. I believe that the test methods quantitate the total acid+base PFAS concentrations in drinking water.

Thus, I strongly recommend that the PFAS FoPTs that we recommend for the TNI PT Program include the names and CAS Numbers that I have tabulated in the attached Excel file first tab. If you have any questions, please feel free to call or write me.

The tables above were reviewed and discussed.

A motion was made by Craig to use the current table and it was seconded by Aaron.
Vote: For – 10. Against – 1 Abstain – 1 (Svetlana noted that acids are widely accepted. Should check with secondary states.) The motion was approved.

3. New Business

None.

4. Action Items

4/6/23:

- Ilona will request current PT Provider contacts from Paul Junio. - Done
- Susan will send a request to PT Providers for data. - Done
- Compare all the names in the methods to prepare for a Nomenclature discussion. - Done

5/5/23:

- Ensure Craig gets assistance with upload of data.

5. Next Meeting

The next meeting will be a teleconference on June 1, 2023 at 1pm Eastern.

The meeting was adjourned at 1:40 pm Eastern.