



This document contains brochures of Wellington Reporters from the year **<u>2020</u>**. We have created a combined file that includes them all for the specified year:

- January 2020 Aqueous Film-Forming Foam PFAS
- January 2020 Native PFAS Solution/Mixtures
- January 2020 U.S. EPA 533 Solution/Mixtures
- November 2020 ISO 21675:2019 Solution/Mixtures
- November 2020 Native PFAS Certified Reference Standards

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PRODUCT UPDATES FROM WELLINGTON LABORATORIES

#### January 24, 2020

WELLINGTON

Reportei

# NEW PRODUCTS

#### Aqueous Film-Forming Foam PFAS

#### 5:3FTB & 5:1:2FTB

Interest in novel zwitterionic and cationic per- and polyfluoroalkyl substances (PFAS) being found at sites exposed to aqueous film-forming foams (AFFFs) continues to rise. As such, **Wellington** has expanded our PFAS product line to include two additional zwitterionic AFFF compounds (**5:3FTB** and **5:1:2FTB**). It has been reported in the scientific literature that environmental concentrations of fluorotelomer betaines (FTBs) do not decrease as quickly as fluorotelomer sulfonamide alkylbetaines (FTABs). This makes research associated with the mobility of these compounds as well as their environmental monitoring very important.

	Catalogue Number	Product (methanol)	Qty	Conc
NEW	5:3FTB	2-[(4,4,5,5,6,6,7,7,8,8,8-Undecafluorooctyl)dimethyl-	1.2 ml	50 µg/ml
		ammonio]acetate		
NEW	5:1:2FTB	2-[(3,4,4,5,5,6,6,7,7,8,8,8-Dodecafluorooctyl)dimethyl-	1.2 ml	50 µg/ml
		ammonio]acetate		
	N-AP-FHxSA	N-(3-dimethylaminopropan-1-yl)perfluoro-1-hexane-	1.2 ml	50 µg/ml
		sulfonamide		
	N-TAmP-FHxSA	N-[3-(perfluoro-1-hexanesulfonamido)propan-1-yl]-	1.2 ml	50 µg/ml
		N,N,N-trimethylammonium		
	N-CMAmP-6:2FOSA	N-(carboxymethyl)-N,N-dimethyl-N-[3-(1H,1H,2H,2H-	1.2 ml	50 µg/ml
		perfluoro-1-octanesulfonamido)propan-1-yl]ammonium		
		(6:2 FTAB)		





5:1:2FTB





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## **NEW PRODUCTS**

#### Native PFAS Solution/Mixtures

#### PFAC-MXF & PFAC-MXG

The removal of PFOS and PFOA from industrial processes has resulted in increased use of replacement per- and polyfluoroalkyl substances (PFAS) such as GenX (**HFPO-DA**), ADONA (**NaDONA**), and F-53B (**9CI-PF3ONS** and **11CI-PF3OUdS**). **Wellington** previously released individual certified reference standards for these compounds, but has now generated a solution/mixture that can be used to reduce the cost of in-house solution preparation as laboratory methods are modified to incorporate these new analytes in accordance with U.S. EPA Method 537 (revision 1).

Similarly, the finalization of U.S. EPA Method 533 has prompted many commercial laboratories to expand their PFAS analyte list to include the replacement PFAS listed above as well as three new perfluoroetherand perfluoropolyether-carboxylic acids (**PF4OPeA**, **PF5OHxA**, and **3,6-OPFHpA**) and a perfluoroethersulfonate (**PFEESA**). To accommodate laboratories doing drinking water analyses, **Wellington** has also added a new solution/mixture of native perfluoroethercarboxylic acids and a perfluoroethersulfonate (**PFAC-MXG**) to our PFAS product line. Although **Wellington** offers both native (**EPA-533PAR**) and mass-labelled (**EPA-533ES** & **EPA-533IS**) certified primary dilution standards for EPA Method 533, **PFAC-MXG** can be combined with **PFAC-MXF** and **PFAC-24PAR** to easily generate a quality control standard (QCS) for this method as well.

Catalogue Number	Product (methanol)	Qty	Conc
PFAC-MXF	Native Replacement PFAS Solution/Mixture	1.2 ml	2.0 µg/ml ea
	HFPO-DA (GenX)		
	NaDONA (ADONA)		
	9CI-PF3ONS (Major component of F-53B)		
	11Cl-PF3OUdS (Minor component of F-53B)		
PFAC-MXG	Native Perfluoroether-Carboxylic Acids and	1.2 ml	2.0 µg/ml ea
	-Sulfonate Solution/Mixture		
	PF4OPeA (Perfluoro-4-oxapentanoic acid or PFMPA)		
	PF5OHxA (Perfluoro-5-oxahexanoic acid or PFMBA)		
	3,6-OPFHpA (Perfluoro-3,6-dioxaheptanoic acid or NFDHA)		
	PFEESA (Potassium perfluoro(2-ethoxyethane)sulfonate)		





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# **NEW PRODUCTS**

### U.S. EPA 533 Solution/Mixtures

#### EPA-533PAR, EPA-533ES, & EPA-533IS

To support the newly drafted U.S. EPA Method for determination of per- and polyfluoroalkyl substances (PFAS) in drinking water (Method 533), **Wellington** has prepared native and mass-labelled solution/mixtures that will allow analytical laboratories to purchase certified primary dilution standards and avoid the hassle and cost associated with solution preparation and testing. As required by the method, the native analyte solution/mixture (**EPA-533PAR**) includes characterized mixtures of the linear and branched isomers of the C<sub>6</sub> and C<sub>8</sub> perfluoroalkanesulfonates (PFHxSK and PFOSK) to facilitate the quantification of both the branched and linear isomers of these analytes.

For total compliance with the method, **Wellington** also offers a certified reference standard of technical ammonium perfluorooctanoate (PFOA) for which the isomeric content has been characterized by <sup>19</sup>F NMR (**T-PFOA**). This standard can be used to identify the retention times of the branched and linear isomers of PFOA.

Cat. No.	Product (methanol)	Qty	Conc
EPA-533PAR	Native Analyte Primary Dilution Standard (PDS): 25 comp.	1.2 ml	0.5 µg/ml ea
	Perfluoroalkylcarboxylic acids (C4-C12)		
	Perfluoroalkanesulfonates (C4, C5, C7 linear, C6 & C8 linear and branched isomers)		
	4:2FTS, 6:2FTS, & 8:2FTS		
	HFPO-DA, NaDONA, 9CI-PF3ONS, & 11CI-PF3OUdS		
	PF4OPeA (PFMPA), PF5OHxA (PFMBA), 3,6-OPFHpA (NFDHA), & PFEE	SA	
EPA-533ES	Isotope Dilution Standard PDS: 16 comp.	1.2 ml	0.5/2.0 µg/ml
	M3PFBS, M3PFHxS, M8PFOS		
	MPFBA, M5PFPeA, M5PFHxA, M4PFHpA, M8PFOA, M9PFNA, M6PFDA, M7PFUdA, MPFDoA		
	M2-4:2FTS, M2-6:2FTS, M2-8:2FTS		
	M3HFPO-DA		
EPA-533IS	Isotope Performance Standard PDS: 3 comp.	1.2 ml	1.0/3.0 µg/ml
	M3PFBA, M2PFOA		
	MPFOS		



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Visit our website (www.well-labs.com) for a complete listing of our new products.



#### Chromatogram of EPA-533PAR (SRM Acquisition)

The EPA-533 solution/mixtures complement our existing line of mixed PFAS reference standards.

Cat. No.	Product (methanol)	Qty	Conc
PFC-MXA	Native PFCA Solution/Mixture (C <sub>4</sub> -C <sub>14</sub> )	1.2 ml	2.0 µg/ml ea
PFS-MXA	Native PFSA Solution/Mixture (C <sub>4</sub> ,C <sub>6</sub> -C <sub>8</sub> ,C <sub>10</sub> )	1.2 ml	2.0 µg/ml ea
PFAC-MXA	Native PFCA/PFSA Solution/Mixture (10)	1.2 ml	5.0 µg/ml ea
PFAC-MXB	Native PFCA/PFSA Solution/Mixture (17)	1.2 ml	2.0 µg/ml ea
PFAC-MXC	Native PFCA/PFSA Solution/Mixture (21)	1.2 ml	2.0 µg/ml ea
EPA-537PDS-R1	U.S. EPA Method 537 Native PDS (18)	1.2 ml	2.0 µg/ml ea
EPA-537PDSL-R1	U.S. EPA Method 537 Native Linear PDS (18)	1.2 ml	2.0 µg/ml ea
PFAC-24PAR	Native PFAS Solution/Mixture (24)	1.2 ml	2.0 µg/ml ea
PFAC30PAR	Native PFAS Solution/Mixture (30)	1.2 ml	1.0 µg/ml ea
MPFAC-MXA	Mass-Labelled PFCA/PFSA Solution/Mixture (9)	1.2 ml	2.0 µg/ml ea
MPFAC-C-ES	Mass-Labelled PFCA/PFSA Extraction Standard (13)	1.2 ml	2.0 µg/ml ea
MPFAC-C-IS	Mass-Labelled PFCA/PFSA Injection Standard (4)	1.2 ml	2.0 µg/ml ea
EPA-537IS	U.S. EPA Method 537 Internal Standard PDS (3)	1.2 ml	variable
EPA-537SS-R1	U.S. EPA Method 537 Surrogate PDS (4)	1.2 ml	variable
MPFAC-24ES	Mass-Labelled PFAS Extraction Standard (19)	1.2 ml	1.0 µg/ml ea

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# WELLINGTON PRODUCT UPDATES FROM WELLINGTON LABORATORIES REDORTER

November 12, 2020

# **NEW PRODUCTS**

# ISO 21675:2019 Solution/Mixtures

## ISO 21675-NSS & ISO 21675-LSS

To support a new international standard for water quality (ISO 21675:2019) which can be utilized to determine perfluoroalkyl and polyfluoroalkyl substances (PFAS) in various water samples using solid phase extraction and LC-MS/MS analysis, Wellington has prepared native and mass-labelled solution/mixtures (ISO 21675-NSS & ISO 21675-LSS respectively). These solutions will allow analytical laboratories to reduce the time and cost associated with solution preparation and testing by purchasing ready made certified standards. This flexible method allows for the analysis of a variety of waters including fresh water, sea water, and waste water containing less than 2 g/L solid particulate material for a selection of PFAS with varying functionality.

Cat. No.	Product (methanol)	Qty	Conc
ISO 21675-NSS	ISO 21675:2019 Native Stock Solution: 30 comp.	1.2 mL	100 ng/mL ea
	Perfluoroalkylcarboxylic acids (C4-C14, C16, & C18)		
	FOUEA, FOSA, N-MeFOSA, N-EtFOSA, N-MeFOSAA, N-EtFOSAA		
	Perfluoroalkanesulfonates (C4, C6, C7, C8, & C10), 6:2FTS, 8:2FTS		
	HFPO-DA, NaDONA, 9CI-PF3ONS, 8:2diPAP		
ISO 21675-LSS	ISO 21675:2019 Labelled Stock Solution: 24 comp.	1.2 mL	100 ng/mL ea
	MPFBA, M5PFPeA, M5PFHxA, M4PFHpA, M8PFOA, M9PFNA,		
	M6PFDA, M7PFUdA, MPFDoA, M2PFTeDA, M2PFHxDA		
	MFOUEA, M8FOSA, d-N-MeFOSA, d-N-EtFOSA, d3-N-MeFOSAA, d5-N	I-EtFOSAA	
	M3PFBS, M3PFHxS, M8PFOS, M2-6:2FTS, M2-8:2FTS		
	M3HFPO-DA, M4-8:2diPAP		





#### Chromatogram of ISO-21675-NSS (SIM Acquisition)





PRODUCT UPDATES FROM WELLINGTON LABORATORIES

November 12, 2020

WELLINGTON

Reporter

## **NEW PRODUCTS**

#### Native Certified Reference Standards for L-PFUdS & L-PFTrDS

Earlier this year, the European Parliament and the Council of the European Union released new requirements for the analysis of per- and polyfluoroalkyl substances (PFAS) in water intended for human consumption (5813/20). Unfortunately, this ammendment to Council Directive 98/83/EC included perfluoroalkanesulfonates that were not commercially available. In response to this, **Wellington** is pleased to announce that our chemists have synthesized, purified, characterized, and prepared accurate certified reference standards of the required substances: sodium perfluoro-1-undecanesulfonate (**L-PFUdS**) and sodium perfluoro-1-tridecanesulfonate (**L-PFTrDS**). We have also prepared a native solution/mixture (**EU-5813-NSS**) that contains all of the PFAS listed in the drinking water directive (5813/20) for your convenience. This solution/mixture can be used in conjunction with two of our existing mass-labelled PFAS mixtures to easily prepare a calibration set for quantitation:

Suggested extraction standard mixture: MPFAC-C-ES Suggested injection standard mixture: MPFAC-C-IS



L-PFUdS



L-PFTrDS

Catalogue Number	Product (methanol)	Qty	Conc
L-PFUdS	Sodium perfluoro-1-undecanesulfonate	1.2 mL	50.0 µg/mL
L-PFTrDS	Sodium perfluoro-1-tridecanesulfonate	1.2 mL	50.0 µg/mL
EU-5813-NSS	5813/20 PFAS Native Solution/Mixture	1.2 mL	2.00 µg/mL ea
	C4 - C13 perfluoroalkylcarboxylic acids		
	C4 - C13 perfluoroalkanesulfonates		





# Chromatogram of EU-5813-NSS (SIM Acquisition)

