Per- & Polyfluoroalkyl Substances (PFASs)

Per- and polyfluoroalkyl substances (PFASs) belong to a continuously expanding family of over 4000 man-made chemical pollutants. In the late 1940s, 3M pioneered the discovery and manufacturing of PFASs through an electrochemical fluorination process that was used until 2001. This process generates a complex mixture of even- and odd- numbered carbon chain lengths. The amphiphilic ability of PFASs have led to the manufacturing of PFASs in oils and water-resistant industrial and consumer products such as firefighting foams, cleaners, cosmetics, paints, adhesives and insecticides. However, environmental chemists and biologists have uncovered that PFASs have harmful toxicolgical effects and pose a significant risk to the public. Perfluorooctanesulfonic acids (PFOSs), the key ingredient in fabric protectors and stain repellants, was the first perfluorinated compound to be added to the Stockholm Convention on Persistent Organic Pollutants in 2009. The high thermal and chemical stability of PFASs make them persistent in the environment and nearly non-biodegradable, necessitating chemical reference standards to test the validity and concentration of PFASs in drinking water, burn sites and teflon products.

Extension of Method 537 Standard

PFC-24 — **1 mL**

2 µg/mL each in MeOH:Water (80:20) — 24 comps.

Newly Available

- Perfluoro-n-butanioc acid
- Perfluoro-n-pentanoic acid
- Perfluoro-n-hexanoic acid
- Perfluoro-n-heptanoic acid
- Perfluoro-n-octanoic acid
- Perfluoro-n-nonanoic acid
- Perfluoro-n-decanoic acid
- Perfluoro-n-undecanoic acid
- Perfluoro-n-dodecanoic acid
- Perfluoro-n-tridecanoic acid
- Perfluoro-n-tetradecanoic acid
- N-Methylperfluorooctanesulfonamidoacetic acid
- N-Ethylperfluorooctanesulfonamidoacetic acid
- Potassium perfluoro-1-butanesulfonate
- Sodium perfluoro-1-pentanesulfonate
- Potassium perfluoro-1-hexanesulfonate
- Sodium perfluoro-1-heptanesulfonate
- Potassium perfluoro-1-octanesulfonate
- Sodium perfluoro-1-nonanesulfonate
- Sodium perfluoro-1-decanesulfonate
- Sodium 1H,1H,2H,2H-perfluoro-1-hexanesulfonate
- Sodium 1H,1H,2H,2H-perfluoro-1-octanesulfonate
- Sodium 1H,1H,2H,2H-perfluoro-1-decanesulfonate
- Perfluorooctane sulfonamide

Method 537 Native Compound Standard

M-537 — **1 mL**

50 µg/mL each in AcCN:Water (95:5) — 14 comps.

- Perfluoro-n-hexanoic acid
- Perfluoro-n-heptanoic acid
- Perfluoro-n-octanoic acid
- Perfluoro-n-nonanoic acid
- Perfluoro-n-decanoic acid
- Perfluoro-n-undecanoic acid
- Perfluoro-n-dodecanoic acid
- Perfluoro-n-tridecanoic acid
- Perfluoro-n-tetradecanoic acid
- N-Methylperfluorooctanesulfonamidoacetic acid
- N-Ethylperfluorooctanesulfonamidoacetic acid
- Perfluoro-n-butane sulfonic acid
- Perfluoro-n-hexane sulfonic acid
- Perfluoro-n-octane sulfonic acid

Technical Note

PFC salts are weight-compensated to fit the requirements of EPA Method 537.

AccuStandard offers the 14 component standard mixture associated with EPA method 537 (Determination of selected perfluorinated alkyl acids in drinking water analyzed by LC/MS/MS) and the extended 24 component mixture. Single neat and solution PFCs are also available.

Compound	CAS No.	Conc.	Matrix	Cat. No.	Unit
Perfluoro-n-octanoic acid	335-67-1		NEAT	PFOA-001N	100 mg
		100 µg/mL	MeOH	PFOA-001S	1 mL
Perfluoro-n-butanoic acid	375-22-4	100 µg/mL	MeOH	PFOA-002S	1 mL
Perfluoro-n-decanoic acid	335-76-2	100 µg/mL	MeOH	PFOA-003S	1 mL
Perfluoro-n-dodecanoic acid	307-55-1	100 µg/mL	MeOH	PFOA-004S	1 mL
Perfluoro-n-heptanoic acid	375-85-9	100 µg/mL	MeOH	PFOA-005S	1 mL
Perfluoro-n-hexanoic acid	307-24-4	100 µg/mL	MeOH	PFOA-006S	1 mL
Perfluoro-n-nonanoic acid	375-95-1	100 µg/mL	MeOH	PFOA-007S	1 mL
Perfluoro-n-pentanoic acid	2706-90-3	100 µg/mL	MeOH	PFOA-008S	1 mL
Perfluoro-n-undecanoic acid	2058-94-8	100 µg/mL	MeOH	PFOA-009S	1 mL
2H,2H,3H,3H-Perfluoroundecanoic acid	34598-33-9	100 µg/mL	MeOH	PFOA-010S	1 mL
Perfluoro-n-octane sulfonic acid	1763-23-1	100 µg/mL	MeOH	PFOS-001S	1 mL
Potassium perfluoro-1-octanesulfonate	2795-39-3		NEAT	PFOS-002N	100 mg
		100 µg/mL	MeOH	PFOS-002S	1 mL
N-ethyl perfluorooctanesulfonamidoacetic acid		100 µg/mL	MeOH	PFOS-003S	1 mL
N-methyl perfluorooctanesulfonamidoacetic acid		100 µg/mL	MeOH	PFOS-004S	1 mL
Potassium perfluoro-1-butanesulfonate	29420-49-3	50 µg/mL	MeOH	PFOS-005S	1 mL
Sodium perfluoro-1-pentanesulfonate		50 µg/mL	MeOH	PFOS-006S	1 mL
Potassium perfluoro-1-hexanesulfonate	3871-99-6	50 µg/mL	MeOH	PFOS-007S	1 mL
Sodium 1H,1H,2H,2H-perfluoro-1-hexanesulfonate		100 µg/mL	MeOH	PFOS-011S	1 mL
Sodium 1H,1H,2H,2H-perfluoro-1-octanesulfonate		100 µg/mL	MeOH	PFOS-012S	1 mL
Sodium 1H,1H,2H,2H-perfluoro1-decanesulfonate		100 µg/mL	MeOH	PFOS-013S	1 mL
Ammonium perfluoro(2-methyl-3-oxahexanoate) (GenX)	62037-80-3		NEAT	PFOS-019N-10MG	10 mg
		100 µg/mL	MeOH	PFOS-019S	1 mL
Scotchgard™ Pre-2002 Formulation (Tech mix)		100 µg/mL	MeOH	PFOS-SCG-001S	1 mL
Scotchgard™ Post-2002 Formulation (Tech mix)		100 µg/mL	MeOH	PFOS-SCG-002S	1 mL

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