Environmental Toxicology Analysis Services

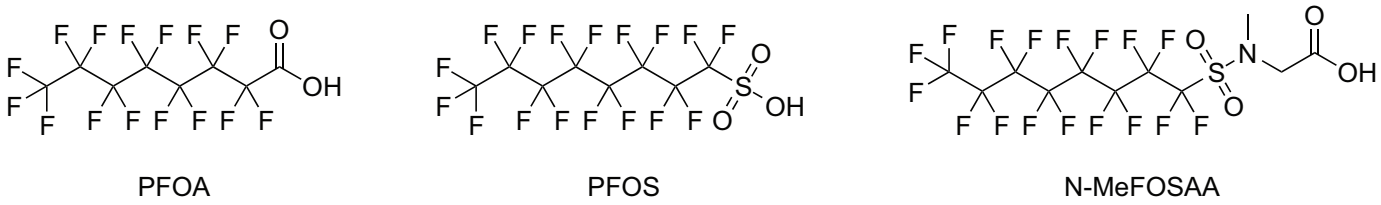
Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances (PFAS), also known as 'forever chemicals', are found in firefighting foams, nonstick cookware, cosmetics, and many other commercial products. These compounds include an acidic head group and alkyl chains where hydrogen atoms are replaced by fluorine. These substances do not get degraded or metabolized as non-fluorinated organic fatty acids do, and therefore, they are persistent pollutants that collect and concentrate in the environment and ultimately in biological organisms. While most cities and states require testing and regulation of PFAS in drinking water, there continues to be interest in measuring these forever chemicals in biological samples. Cayman offers an LC-MS-based service to quantify these molecules in biological matrices.

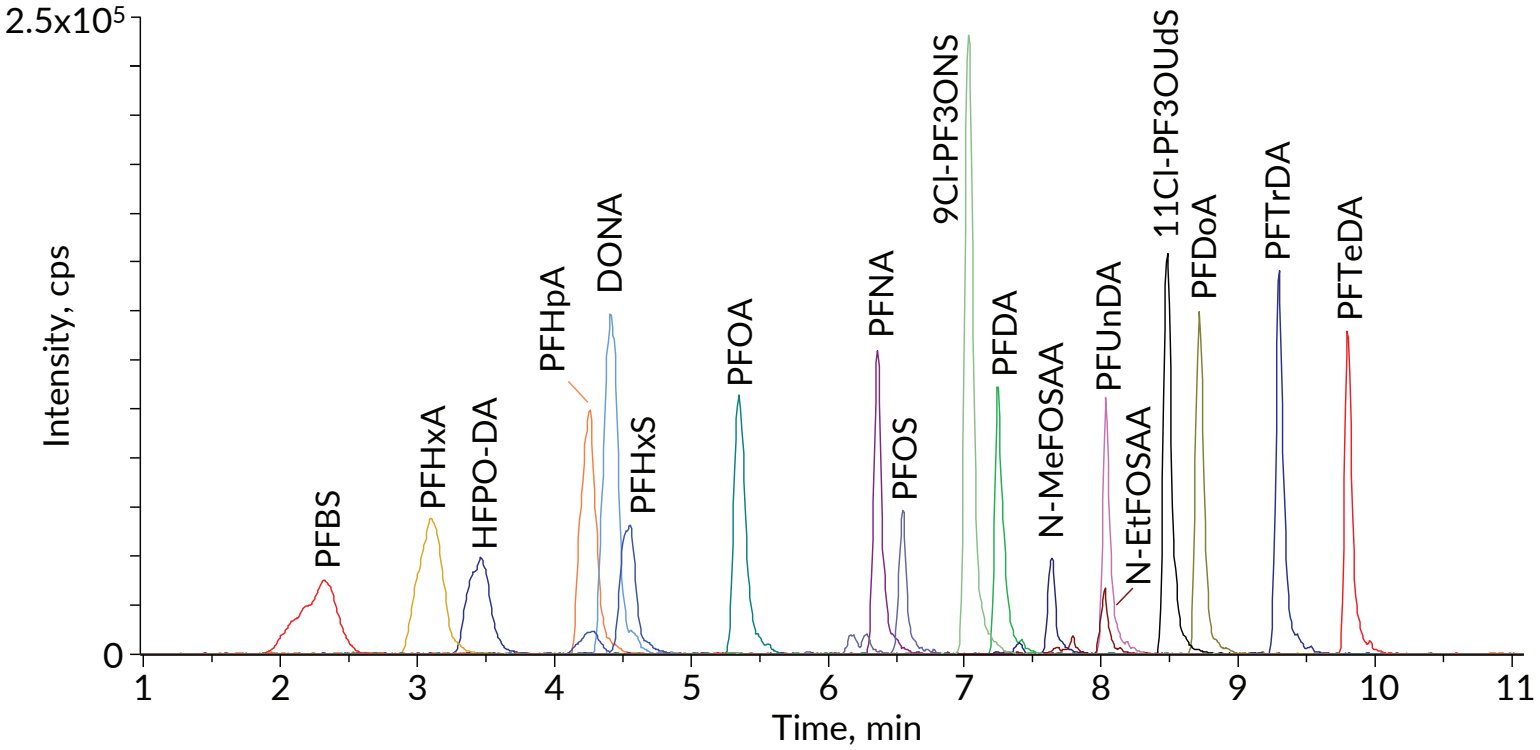
Analyte Coverage

We offer an analytical service to extract and analyze a panel of 18 different PFAS chemicals.

Analyte	Abbreviation
Perfluoro-1-butanesulfonic acid	PFBS
Perfluoro-n-hexanoic acid	PFHxA
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid	HFPO-DA
Perfluoro-n-heptanoic acid	PFHpA
Dodecafluoro-3h-4,8-dioxanonanoic acid	DONA
Perfluorohexanesulfonic acid	PFHxS
Perfluoro-n-octanoic acid	PFOA
Perfluoro-n-nonanoic acid	PFNA
Perfluorooctanesulfonic acid	PFOS
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS
Perfluoro-n-decanoic acid	PFDA
N-Methylperfluorooctanesulfonamidoacetic acid	N-MeFOSAA
N-Ethylperfluorooctanesulfonamidoacetic acid	N-EtFOSAA
Perfluoro-n-undecanoic acid	PFUnDA
11-Chloroperfluoro-3-oxaundecanesulfonic acid	11Cl-PF3OUdS
Perfluoro-n-dodecanoic acid	PFDoA
Perfluoro-n-tridecanoic acid	PFTrDA
Perfluoro-n-tetradecanoic acid	PFTeDA



PFOA PFOS N-MeFOSAA



LC-MS chromatogram traces of authentic standards of PFAS and related molecules.

Our Approach

We have optimized extraction and LC-MS methods for analysis of 18 different PFAS chemicals in the tissues of fish. The method can be adapted to include additional analytes or to study other types of biological or environmental samples.

Our Advantages

- Our scientists are expertly trained and have decades of collective experience in the analysis, synthesis, and evaluation of biological effects of potentially toxic chemicals.
- We use state-of-the-art instrumentation, reagents, and methods for all aspects of sample preparation, analyte extraction, LC-MS analysis, and data review to ensure consistent, high-quality data.
- The method is scalable, from pilot studies with a few samples to high-throughput studies with hundreds of samples.
- High-quality standards enable accurate calibration curve preparation and reliable quantitation.
- Collaborative, flexible approach. The method can be customized to include, remove, or substitute analytes, or to be used with other types of samples. Please inquire for specific details.

See How We Can Meet Your Specific Project Needs
Submit the Contact Us form at **www.caymanchem.com/analytical-chemistry**

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