

PFAS analysis for up-to-date compliance

Marchwood Scientific Services has been analysing persistent organic pollutants (POPs), often referred to as “forever chemicals,” since 1998. Almost three decades of accumulated knowledge and expertise positions Marchwood as a unique provider to lead the way in POPs and PFAS analysis.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a broad class of synthetic, fluorinated organic compounds characterised by multiple carbon-fluorine (C-F) bonds.

Their extremely persistent and ubiquitous nature means they fall within the definition of “forever chemicals” and POPs classification.

Why test for PFAS: legislative and environmental considerations

On **3rd February 2026**, the UK Government released its first ever **national PFAS plan** – a major milestone in chemical regulation and environmental protection. The plan establishes a coordinated, science-led framework to address PFAS contamination across water, soil, ecosystems, industry, and waste systems.

It also represents a significant policy shift: for the first time, the UK has committed to an expanded national monitoring programme, strengthened regulatory controls, updated permitting rules, and long-term assessment of PFAS in the environment.

How Marchwood can help

Marchwood is fully equipped to support this national direction. The laboratory has validated methods for PFAS analysis across a wide range of liquid and solid matrices. Using state of the art LC/MS QQQ technology, Marchwood achieves low detection limits, making the platform the gold standard for PFAS quantification. This instrumentation enables highly selective detection of target analytes, even within complex environmental matrices, while delivering reliable, reproducible, and defensible quantitative data.

Standard 52 substance Target List

Marchwood currently offer a standard PFAS target list of **52 substances** which include all PFAS substances commonly regulated within drinking water, groundwater, surface water, soils, waste, food/feed and fire-fighting foams.

TOP Assay

PFAS exist in thousands of forms, not only as the well-known compounds (PFOS, PFOA etc) but also as precursor compounds. Marchwood also offers the **TOP Assay** (Total Oxidisable Precursors) which can be used to identify the potential presence of PFAS that may not be included in the standard 52 substance target list.

To conduct the TOP Assay, the sample is split. One part is analysed using the standard method, while the other is subjected to an alkaline aqueous persulfate oxidation step to convert PFAS and PFAS precursors, followed by a second analysis. The evaluation of pre- and post-TOP assay data offers a clearer view of PFAS present in specific samples.

Sample Requirements

Analysis Type	Minimum Quantity of Sample	Sample Container
PFAS in soils/Ash/Food & Feed	50g	PTFE free and PFAS HDPE free plastics e.g. polypropylene containers. Avoid use of foil.
PFAS in waters/AFFF	100ml	PTFE free and PFAS HDPE free plastics e.g. polypropylene containers.

PFAS by LCMSQ/QQ

Routine limits of detection are 0.001ug/l in waters and 1ug/kg in soils. Lower LODs can be achieved if required. For instance, PFOA and PFOS in water samples can be reported with an LOD of 0.00065 ug/L but this will not be accredited. If this LOD is required, please specify on the chain of custody.

PFAS Target Compound	CAS	Limit of Detection – low level water	Accreditation	Limit of Detection – solid	Accreditation
Perfluorobutanoic acid (PFBA)	375-22-4	0.005 ug/L	U	1 ug/kg	N
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.001 ug/L	U	1 ug/kg	N
Perfluorohexanoic acid (PFHxA)	307-24-4	0.001 ug/L	U	1 ug/kg	N
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001 ug/L	U	1 ug/kg	N
Perfluorooctanoic acid (PFOA)	335-67-1	0.001 ug/L	U N	1 ug/kg	N
perfluorononanoic acid (PFNA)	375-95-1	0.001 ug/L	U	1 ug/kg	N
Perfluorodecanoic acid (PFDA)	335-76-2	0.001 ug/L	U	1 ug/kg	N
Perfluoroundecanoic acid (PFUdA, PFUnA)	2058-94-8	0.001 ug/L	U	1 ug/kg	N
Perfluorododecanoic acid (PFDoA)	307-55-1	0.001 ug/L	U	1 ug/kg	N
Perfluorotridecanoic acid (PFTTrDA, PFTriA)	72629-94-8	0.001 ug/L	U	1 ug/kg	N
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.001 ug/L	U	1 ug/kg	N
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.001 ug/L	U	1 ug/kg	N
Perfluorooctadecanoic acid (PFODA)	16517-11-6	0.001 ug/L	N	1 ug/kg	N
Perfluorobutane sulfonate (PFBS)	375-73-5	0.001 ug/L	U	1 ug/kg	N
Perfluoropentane sulfonate (PFPeS)	2706-91-4	0.001 ug/L	U	1 ug/kg	N
Perfluorohexane sulfonate (PFHxS)	355-46-4	0.001 ug/L	U	1 ug/kg	N
Perfluoroheptane sulfonate (PFHpS)	375-92-8	0.001 ug/L	U	1 ug/kg	N

perfluorooctane sulfonate (PFOS)	1763-23-1	0.001 ug/L (0.00065)	U N	1 ug/kg	N
Perfluorononane sulfonate (PFNS)	68259-12-1	0.001 ug/L	U	1 ug/kg	N
Perfluorodecane sulfonate (PFDS)	335-77-3	0.001 ug/L	U	1 ug/kg	N
Perfluoroundecane sulfonate (PFUDS, PFUnDS, PFUnS)	749786-16-1	0.001 ug/L	U	1 ug/kg	N
Perfluorododecane sulfonate (PFDoS)	79780-39-5	0.001 ug/L	U	1 ug/kg	N
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS, 4:2 FTSA)	757124-72-4	0.001 ug/L	U	1 ug/kg	N
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS, 6:2 FTSA)	27619-97-2	0.001 ug/L	U	1 ug/kg	N
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS, 8:2 FTSA)	39108-34-4	0.001 ug/L	U	1 ug/kg	N
1H,1H,2H,2H-perfluorododecane sulfonate (10:2 FTS, 10:2 FTSA)	108026-35-3	0.001 ug/L	N	1 ug/kg	-
Bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP)	678-41-4	0.001 ug/L	N	1 ug/kg	-
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA, MeFOSAA)	2355-31-9	0.001 ug/L	U	1 ug/kg	N
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA, EtFOSAA)	2991-50-6	0.001 ug/L	U	1 ug/kg	N
Perfluoro-1-butanefulfonamide (FBFA)	30334-69-1	0.001 ug/L	U	1 ug/kg	N
Perfluoro-1-hexanesulfonamide (FHxSA)	41997-13-1	0.001 ug/L	U	1 ug/kg	N
Perfluorooctane sulfonamide (FOSA, PFOSA)	754-91-6	0.001 ug/L	U	1 ug/kg	N
N-methyl perfluorooctane sulfonamide (N-MeFOSA, MeFOSA)	31506-32-8	0.001 ug/L	N	1 ug/kg	N
N-ethyl perfluorooctane sulfonamide (N-EtFOSA, EtFOSA)	4151-50-2	0.001 ug/L	N	1 ug/kg	N
2-(N-methyl perfluorooctane sulfonamido)-ethanol (N-MeFOSE, MeFOSE)	24448-09-7	0.001 ug/L	N	1 ug/kg	N
2-(N-ethyl perfluorooctane sulfonamido)-ethanol (N-EtFOSE, EtFOSE)	1691-99-2	0.001 ug/L	N	1 ug/kg	N
2,3,3,3-tetrafluoro-2-(1,2,2,3,3,3-heptafluoropropoxy)propanoic acid (HFPO-DA, Gen X)	13252-13-6 (62037-80-3)	0.001 ug/L	U	1 ug/kg	N
Perfluoro-2,5-dimethyl-3,6-dioxananoic acid (HFPO-TA)	13252-14-7	0.001 ug/L	U	1 ug/kg	N
Dodecafluoro-3H-4,8-dioxananoate (ADONA, DONA, NaDONA)	919005-14-4	0.001 ug/L	U	1 ug/kg	N

	(958445-44-8)				
Perfluoro-3-methoxypropanoic acid (PFMOPrA)	377-73-1	0.001 ug/L	U	1 ug/kg	N
Perfluoro-4-methoxybutanoic acid (PFMOBA)	863090-89-5	0.001 ug/L	U	1 ug/kg	N
Perfluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	0.001 ug/L	U	1 ug/kg	N
3-Perfluoropropyl propanoic acid (3:3 FTCA, FPrPA)	356-02-5	0.001 ug/L	U	1 ug/kg	N
3-Perfluoropentyl propanoic acid (5:3 FTCA, FPpPA)	914637-49-3	0.005 ug/L	U	1 ug/kg	N
3-Perfluoroheptyl propanoic acid (7:3 FTCA, FHpPA)	812-70-4	0.001 ug/L	U	1 ug/kg	N
Perfluoro(2-ethoxyethane) sulfonate (PFEESA)	113507-82-7	0.001 ug/L	U	1 ug/kg	N
9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (9Cl-PF3ONS, 6:2 Cl-PFESA)	756426-58-1	0.001 ug/L	U	1 ug/kg	N
11-chloroeicosafluoro-3-oxanundecane-1-sulfonate (11Cl-PF3OUdS, 8:2 Cl-PFES)	763051-92-9	0.001 ug/L	U	1 ug/kg	N
Perfluoro-4-ethylcyclohexane sulfonate (PFECHS)	133201-07-7	0.001 ug/L	U	1 ug/kg	N
Capstone B (CDPOS) - 1-Propanaminium, N-(carboxymethyl)-N,N-dimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulfonyl]amino]-,hydroxide (6:2 FTAB)	34455-29-3	0.001 ug/L	N	5 ug/kg	N
Capstone A - 1-Propanaminium, N,N-dimethyl-N-oxide-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulfonyl]amino]-,hydroxide	80475-32-7	0.001 ug/L	N	5 ug/kg	N
Perfluorotridecane sulfonic acid (PFTTrDS)	791563-89-8	0.001 ug/L	N	1 ug/kg	N

Note: our scope of accreditation for water samples includes surface water, groundwater and potable water.

For more information on Marchwood's services, or to request a quotation, please visit our website or contact us on the details provide below:



Customer Services

Tel: 02380 786979 | **E-mail:**

receptionmw@marchwood-scientific.co.uk

Jenny Wraith, Business Development Manager

Tel: 07957 422 879 | **E-mail:**

Jenny.Wraith@marchwood-scientific.co.uk

Website: www.cawood.co.uk/marchwood

Callback: www.cawood.co.uk/callback/