

# PFAS analysis

Per- and poly-fluoroalkyl substances (PFAS) such as perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) are man-made fluorosurfactants which have been used in the manufacture of firefighting foams and other products used in Australia and around the world.

Due to their unique lipid and water repellent characteristics, PFAS have widespread applications, especially providing resistance to water and oil encroachment into a wide range of products such as clothes, carpet and paint. They were also used to manufacture aqueous film forming foam (AFFF), key ingredients in firefighting foams.

However, PFAS are extremely persistent in the environment and pose potentially adverse effects for the environment and human health due to their toxicity and bio-accumulating properties. In 2009, the Stockholm Convention added PFOS to the list of Persistent Organic Pollutants (POPs).

In response to this emerging contaminant issue and our interest in protecting public health and safety, ChemCentre has developed capabilities to analyse for PFAS in water, soil samples, and other matrices to meet Department of Water and Environmental Regulation (DWER) requirements. Our scope includes the ability to quantitate linear and branched isomers of some PFAS.

Since PFAS is an evolving issue in terms of the regulatory frameworks, on a state and national level, ChemCentre will progressively revise the scope of analytes and limits of detection to meet the demands from regulators and clients.

## DWER's Minimum Recommended Analytical PFAS Suite\*

Abbreviation	Compound name	Abbreviation	Compound name
PFOS	Perfluorooctane sulfonate	PFBS	Perfluorobutane sulfonate
PFOA	Perfluorooctanoic acid	PFBA	Perfluorobutanoic acid
6:2 FtS	6:2 Fluorotelomer sulfonate	PFHxA	Perfluorohexanoic acid
8:2 FtS	8:2 Fluorotelomer sulfonate	PFHxS	Perfluorohexane sulfonate
PFHpA	Perfluoroheptanoic acid	PFPeA	Perfluoropentanoic acid

\* *Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)*, (DER, January 2017)

## Testing for PFAS at ChemCentre

At ChemCentre, we strive to deliver the highest quality service by continuously improving our analytical capabilities to provide more accurate and defensible results. ChemCentre is NATA accredited for analysing PFAS and utilises LC-MS/MS technology to detect PFAS accurately at very low levels, exceeding regulatory requirements. With multiple LC-MS/MS instruments at our facility, we are well equipped to respond to your needs in a timely manner.

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## Analytical Suite

PFAS Suite	CAS Nos	Water (Standard Level)	Water (Low Level)	Water (Super Trace)	Soil
ChemCentre Method Code		ORG095W	ORG095WL	ORG095WXL	ORG095S
Units		µg/L	µg/L	µg/L	mg/kg
Perfluorooctanoic acid (PFOA)	335-67-1	0.05	0.002	0.0003	0.0002
Perfluorooctane sulfonate (PFOS)	1763-23-1	0.05	0.002	0.0003	0.0002
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.05	0.002	0.0005	0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.05	0.002	0.0005	0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.05	0.002	0.0005	0.0002
Perfluorobutane sulfonate (PFBS)	375-73-5	0.05	0.002	0.0005	0.0002
Perfluorohexane sulfonate (PFHxS)	355-46-4	0.05	0.002	0.0005	0.0002
1H,1H,2H,2H-perfluorohexane sulfonate (6:2 FTS)	27619-97-2	0.05	0.005	0.001	0.0005
1H,1H,2H,2H-perfluorohexane sulfonate (8:2 FTS)	39108-34-4	0.05	0.005	0.001	0.0005
Perfluorobutanoic Acid (PFBA)	375-22-4	0.1	0.01	0.002	0.001

## Sampling Requirements

Test	Matrix	Container requirements	Number	Preservation	Maximum holding time
PFAS	Water	60mL HDPE plastic bottle	2	Chilled	14 days
PFAS	Soil	200mL HDPE plastic jar	1	Chilled	14 days

## Why Choose ChemCentre?

**Reliability** — 120 years of service to the government, industries and community.

**Credibility** — Provider of choice for government at state, federal and international levels.

**Expertise** — Fully trained and qualified staff with almost 20% of our tertiary qualified staff holding dedicated PhDs.

**Defensibility** — Expert interpretation, legally defensible results and externally audited quality systems.

**World-class facilities** — \$40 million laboratories and equipment in a purpose-built, strategically located facility.

## How can we help?

Our expert advice sets us apart from others. To find out more on PFAS testing please contact Ibrahim Jambol at ChemCentre on (08) 9422 9919, or via [enquiries@chemcentre.wa.gov.au](mailto:enquiries@chemcentre.wa.gov.au)

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