PFAS testing with Symbio Laboratories

Symbio LABORATORIES
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Advanced PFOS/PFOA analysis of Water, Soil & Food from Australia's largest independently and locally owned Laboratory service provider

What is PFAS?

Poly & Per-fluoroalkyl substances (PFAS) comprises a family of approximately 6000 fluorinated organic compounds with unique and complex properties. The two best known compounds, Perfluorooctane Sulfonate (PFOS) and Perfluorooctanic acid (PFOA), are the most regulated, and have been banned since the 1970's due to emerging health concerns in Australia and internationally.

What does it do?

PFAS are extremely complex, and are made up of unique properties such as:

- Dirt, grease and water resistant
- Low friction and surfactant properties
- Thermal stability, versatility, strength, resilience & durability
- Water soluble
- Bioaccumlative (Bioconcentration + Biomagnification) in food web

As such, PFAS has been widely used in a range of industrial and consumer products:

- Firefighting Aqueous film forming foams (AFFF)
- Oil & water resistant finishes on paper, textiles, carpeting & cookware ie non-stick pans
- Electroplating mist suppressants
- Semiconductor manufacture
- Aerospace and electronics applications
- Biosolids land application

Where is it found?

Major sites of contamination for PFAS include:

- Department of Defence sites
- Refineries
- Chemical facilities
- Large rail yards and commercial & private airports
- Fire stations and municipal fire training areas
- Landfills

Due to their complex properties and common locations of use, PFOS/PFOA leave persistent traces and are mobile in soil, leacing into groundwater.

Their water solubility and bioaccumulative nature allow uptake into plants and animals commonly used as food, and with long half lives pose a risk to humans and the environment.

Half Lives of PFOS/PFOA:

	Water	Humans
PFOS	41 years	~5 years
PFOA	92 years	~4 years

How can Symbio help?

Symbio Laboratories employs advanced analytical tools using LCMSMS (targeting 31 PFAS compounds) in matrices including:

Matrixes	Detection Limits
Water (Drinking, surface & groundwater)	Std 0.01 ppb, UT 0.0002 ppb
Soil & Sediment	0.5 ppb
Food	0.5 - 5 ppb

For more information contact our friendly customer service team on 1300 703 166 or admin@symbiolabs.com.au