

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS in the Environment

Per- and polyfluoroalkyl substances (PFAS) have many industrial and commercial applications due to their ability to repel oil and water, reduce friction, and their resistance to high temperatures. Non-stick coatings, textile applications and firefighting foams represent some of the most common uses of PFAS. Because of their widespread use since the manufacturing of these chemicals began in the 1940s, PFAS can be detected in human and mammalian serum all over the world.

Manufacturing and use of PFAS has resulted in their presence in the environment. The health effects of Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) have been widely studied and are associated with several adverse health effects. They are very persistent in the environment and are bioaccumulative.

PFAS can be released into the environment from sources such as the use for firefighting foams at airports, military sites, and major industrial facilities, such as refineries. These all have important firefighting training activities and, in some cases, application during fire events. After usage PFAS can migrate to soil, groundwater, surface water, drinking water, and eventually landfill leachate and wastewater.

Key Industries Supported by PFAS Analysis:

- Firefighters & First Responders
- Government Agencies
- Airports
- Energy, Oil, & Gas
- Wastewater Infrastructure
- Manufacturers

Why AGAT Stands Out in PFAS Testing



Leading Turnaround Times



Team of Technical Experts



Critical Lab Capacity



Coast to Coast Coverage

Analytical Method

In light of ongoing regulatory evaluations in various countries, AGAT has opted to align with established guidelines, particularly those published by the US Environmental Protection Agency, which encompasses several robust methods for PFAS analysis. This approach ensures that our PFAS testing protocols remain in harmony with widely recognized standards, promoting consistency and reliability in our analytical services. AGAT Laboratories offers PFAS analysis complying with the most current versions of EPA 533, EPA 537.1 for drinking water, and EPA 1633 for other matrices, covering all compounds in those methods.

Accreditation

AGAT Laboratories is accredited or licensed by various regulatory bodies, including SCC, CALA, A2LA, ANAB, Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs, and the Arizona Department of Health Services (ADHS), as per the individual locations' scopes of accreditation for analysis of PFAS in water, soil, serum, and tissue samples. AGAT maintains ongoing plans to expand our scope of analysis to better serve our international clientele and stay aligned with evolving PFAS regulatory requirements and method improvements.

Field Sampling

Given the ubiquitous nature of PFAS, the material and procedure normally used for environmental sampling may cause cross-contamination when collecting samples. It is important to plan ahead for sample collection activities to ensure the potential for cross contamination is minimized.

Sampling Supplies

- Request all containers and equipment rinse water from the laboratory.
- PFAS free water is available through AGAT.
- It is recommended to request a field blank, a trip blank, an equipment blank, and enough containers for duplicate samples for your field program.
- High-density polyethylene (HDPE) sampling bottles and jars with Teflon-free lids must be used.
- Do not use chemical ice packs.

Sampling Considerations

- Avoid clothing that has been treated with water-resistant, waterproof, or stain-repellent chemicals (e.g., Gore-Tex, Tyvek) when collecting samples, as this may contain PFAS. Instead, choose waterproof clothing made from untreated materials such as polyurethane, polyvinyl chloride (PVC), rubber, or neoprene.
- Clothing with natural fibers is preferred.
- Clothing should be well laundered, not new, and free of laundry soaps and fabric softeners. Water rinse is recommended before dryer.
- Polypropylene (PP), silicone, stainless steel, nylon, acetate, Polypropylene (PP), silicone, stainless steel, and acetate materials or equipment parts can be used during sampling.
- Samples should not be in contact with glass or low-density polyethylene (LDPE).
- Waterproof notebooks and pads are not recommended as waterproofing can introduce PFAS. Use pens that are known to be free of PFAS (Sharpies are not recommended).
- Powderless nitrile gloves should be worn at all stages of sampling and changed frequently, including but not limited to decontamination, manipulation, sampling, blank sampling, etc.
- Avoid any cosmetics, moisturizers, fragrances, and creams. Sunscreens and insect repellent must be applied outside of the sampling area when necessary, preferably at least half an hour before sampling. Hands must be washed well after application of sunscreens and insect repellents.
- Avoid packaged food in sampling area.

Please note that this document is not an exhaustive list of all sampling guidelines but highlights key areas of consideration. PFAS are a rapidly evolving concern and recommendations are subject to change based on local and federal guidelines.

For more information or confirmation of current requirements, please contact your designated AGAT Client Services Representative or info@agatlabs.com.