Is PFAS getting away from you?

Per- and polyfluoroalkyl (PFAS) substances are a large, complex, and ever-expanding group of manufactured chemicals. The detection and quantification of these emerging contaminants of primary concern has never been more important. Determining the best analytical pathway for PFAS analysis can be challenging. Which method and workflow is optimal for your matrix and analysis goals? Is targeted analysis of known PFAS compounds needed or are you searching for unknowns that may be present in a variety of different matrices? Thermo Fisher Scientific provides options to help you meet all these challenges.

**WATER ANALYSIS**

- **Collect water sample in a polypropylene bottle**
- **PFAS**: Determine if specific PFAS compounds are present in the sample and at what levels (e.g., EPA Method 537.1).
- **Targeted analysis**: Determine if specific PFAS compounds are present in the sample and at what levels (e.g., EPA Method 537.1)
- **Solid phase extraction (SPE)**: Eliminates interference and concentrates the sample. Automation improves throughput, accuracy and precision, while reducing errors.
- **Determination of Adsorbable Organic Fluorine (AOF) by Combustion Ion Chromatography (CIC)**:
  - Eliminates complex sample preparation steps using automation
  - Indicates which samples should be screened by HRAM based on fluorine mass balance
- **High Resolution Accurate Mass Spectrometry (HRAM)**:
  - Screen all potential PFAS present without a target list
  - Data can be analyzed retrospectively
- **Analysis by LC-MS/MS**:
  - Based on target list of PFAS compounds
  - Triple quad MS focuses only on compounds of interest
- **Solid phase extraction (SPE)**: Sample preparation or direct injection (DI)
- **Direct injection (DI)**: No concentration step—more sensitive MS required

**SOIL ANALYSIS**

- **Collect soil sample in a polypropylene bottle**
- **PFAS**: Discover other PFAS compounds that may be present in a sample
- **Unknown screening**: Discover other PFAS compounds that may be present in a sample
- **Sample extraction with Accelerated Solvent Extraction followed by SPE clean-up**
- **Analysis by LC-MS/MS**:
  - Based on target list of PFAS compounds
  - Triple quad MS focuses only on compounds of interest
- **High Resolution Accurate Mass Spectrometry (HRAM)**:
  - Screen all potential PFAS present without a target list
  - Data can be analyzed retrospectively

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Find out more at thermofisher.com/pfas-testing