

## PFAS: persistent and ubiquitous pollutants

Per- and polyfluoroalkyl substances (PFAS) are synthetic chemical compounds known for their non-stick properties and resistance to high temperatures. These substances are found in water, air, soil, food, and even human blood.

### Why should we be concerned?

- **Bioaccumulation:** PFAS accumulate in the body over time.
- **Health risks:** PFAS are potential carcinogens, endocrine disruptors and can weaken the immune system.
- **Environmental impact:** industrial emissions and air pollution contribute to the persistent presence of PFAS in our environment.

### PFAS analyzed

There are thousands of PFAS, and the list of PFAS we analyze is constantly evolving. Please contact us to discuss your requirements. Our laboratories are key players in the development of cutting-edge LC-MS/MS analytical methods for measuring PFAS.

**TERA Environnement and ToxiLabo:**  
the choice of responsiveness and quality for your air analyses!



The expertise, scientific precision and analytical complementarity of **ISO 17025-accredited** laboratories.

### Contact our teams!

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# PFAS

## Assessing PFAS concentration

in workplace air

in outdoor and indoor ambient air

in atmospheric emission

in biological fluids

**ToxiLabo** **TERA**  
environnement

Specialists in air and biological fluid analysis  
for over 20 years





## Occupational exposure to PFAS

Helping you anticipate regulations and protecting exposed workers.

### Why is it important?

- Workplace air may contain PFAS in particulate or gaseous form, presenting a health risk.
- Certain industrial sectors are particularly exposed to PFAS.
- In Switzerland and Germany, limit values already exist:  
PFOA: 5 µg/m<sup>3</sup> (8h) / 40 µg/m<sup>3</sup> (15 min)  
PFOS: 10 µg/m<sup>3</sup> (8h) / 80 µg/m<sup>3</sup> (15 min).

### Methodology

- Sampling on a combined medium Filter + adsorbent tube.
- Analysis by liquid chromatography coupled with mass spectrometry (LC-MS/MS).
- Methods validated to NF X 43-215 standard.
- Ability to analyze over 25 PFAS belonging to different families (PFOA, PFOS, PFOSA, 6:2 FTS...).

### Goals

- Identify and quantify the presence of PFAS in workplace air.
- Provide data to industries and regulatory agencies to better understand occupational exposure.
- Improve the protection of workers potentially exposed to PFAS.

### Did you know?

#### Analysis of PFAS in blood

In addition to air analysis, Toxilabo can help you detect PFAS in blood.

**For more information, please contact our two biologists.**



## PFAS monitoring in outdoor and indoor ambient air

An emerging issue for environmental protection and public health. Anticipate, measure, act.

### Why is it important?

In 2025, there are no regulations governing the monitoring of PFAS in outdoor and indoor air, although studies have confirmed inhalation exposure at concentrations ranging from a few to several hundred pg/m<sup>3</sup> depending on the measurement site.

### Methodology

#### Outdoor air

- Long-term sampling of total atmospheric deposition using gauge.
- Faster sampling on 47 mm quartz filter/PUF/XAD-2 resin using high-flow sampler.
- Limits of quantification in the order of a few pg/m<sup>3</sup> per PFAS (lower than usual levels in ambient air).



First laboratory in France to be accredited COFRAC Essais\* for PFAS analysis on gauges and quartz filters in ambient air.

\* accreditation of our Crolles site 1-5598, scope available at [www.cofrac.fr](http://www.cofrac.fr)

### Goals

- Complete the assessment of overall exposure to PFAS by including indoor and outdoor air, which are often overlooked.
- Identify diffuse and secondary sources of air pollution to refine risk management strategies.
- Anticipate regulatory changes by documenting the presence and concentrations of PFAS in ambient air and indoor air.

#### Indoor air

In 2024, TERA Environnement launched funding for a doctoral thesis that aims to propose:

- A comprehensive and validated methodology for measuring and analyzing PFAS in indoor air,
- Solutions for reducing exposure to PFAS by combining the results obtained with measurements of material emissions.

### Did you know?

**Our laboratory can also offer analysis of volatile PFAS using gas chromatography (GC-MS) and ion chromatography (IC)**

Perfluorooctanoic acid  
PFOA resulting from reactions involving fluorotelomer alcohols (6:2 and 8:2 FTOH)  
Trifluoroacetic acid (TFA).



## PFAS monitoring in atmospheric emissions

Comply with regulations and secure your facilities

### Why is it important?

French interministerial PFAS plan – April 2024:

- Axis 2: Improve emissions monitoring
- Action 3.3: Mandate a campaign to measure PFAS at incinerator outlets

Decree of October 31, 2024, on the analysis of PFAS in atmospheric emissions from incineration plants.

### Methodology

- Samples taken by a COFRAC-accredited contractor using a combination of filters, resins, and bubbling system.
- Analyses performed by LC-MS/MS according to US EPA method OTM-45 or experimental standard XP X43-126.
- Determination of 49 PFAS substances:
  - 13 perfluorinated carboxylic acids (PFOA, etc.)
  - 8 perfluorinated sulfonic acids (PFOS, etc.)
  - 7 perfluorinated sulfonamides
  - 4 fluorotelomer sulfonates (6:2 FTS, etc.)
  - 17 other poly- or perfluorinated compounds.
- Limits of quantification below the requirements of standard XP X43-126.

### Goals

- Verify the presence or absence of PFAS pollution at the outlet of industrial facilities.
- Strengthen the monitoring of atmospheric emissions to anticipate regulatory changes.

### To go further

#### Anticipate PFAS-related issues in the pharmaceutical sector.

To date, there is no specific regulation prohibiting PFAS in medicines or pharmaceutical products. However, we are witnessing a growing momentum among industry players, who are voluntarily committing to monitoring these substances.

**Our laboratory supports this proactive approach by offering tailored analytical solutions.**