

TOP ASSAY APPROACH

SAFE SUSTAINABLE SOLUTIONS



TOTAL OXIDIZABLE PRECURSOR ASSAY: HIDDEN PFAS IN FOOD CONTACT MATERIALS

Total Fluorine (TF) and **Total Organic Fluorine (TOF)** are increasingly used as **first-level screening tools** in the context of the **EU Packaging and Packaging Waste Regulation (PPWR)**, but **they are not designed to identify or quantify individual PFAS**. For this reason, they rarely answer the most important question companies face: **is the material truly compliant and defensible if asked which PFAS are actually present?**

The Limits of Total Fluorine Screening

PPWR regulates PFAS with a **global limit** (50 mg/kg) and **substance-specific thresholds** (25 µg/kg single, 250 µg/kg total), but:

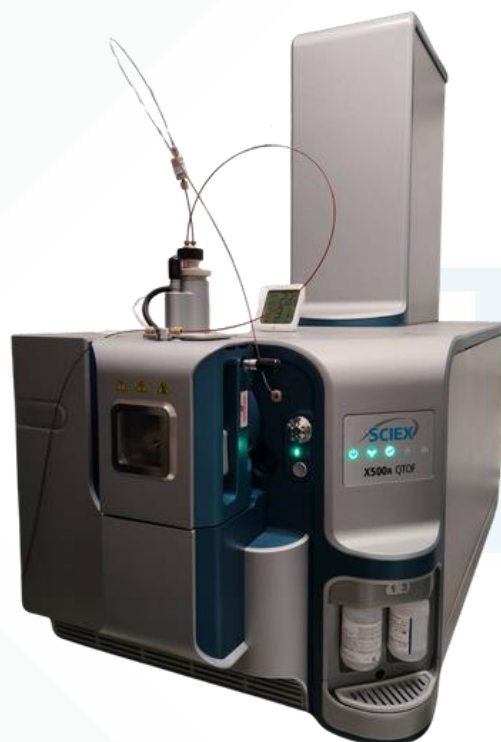
- Some **short-chain or telomeric PFAS** can exceed the limits without significantly affecting total fluorine
- A material can have **low total fluorine** while still containing PFAS above the thresholds
- Total fluorine is useful for **screening and prioritization**, but does **not identify which PFAS are present**

Why Screening Alone can be Risky

Total fluorine measurements do not indicate which PFAS are present or their concentrations. Since some PFAS contribute little to the total fluorine content, a material may pass TF or TOF screening while still containing individual substances above the specific thresholds as shown by [some market studies](#).

Independent testing confirms that materials with low total fluorine can still contain **individual PFAS above 25 µg/kg**. This reflects PFAS chemistry: **short-chain or telomeric compounds** have only a limited impact on total fluorine values.

When PFAS are later identified by customers, NGOs, or independent testing programs, **the lack of substance-specific data can become a technical, commercial, or reputational challenge.**



WHY TARGETED PFAS ANALYSIS MAKES THE DIFFERENCE



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Chromatographic PFAS analysis provides direct **identification and quantification of individual substances**. This approach allows manufacturers, converters and brand owners to:

- demonstrate compliance with substance-specific thresholds;
- support technical documentation and due diligence;
- respond confidently to customer or authority requests.

Our Analytical Strategy

Food Contact Center provides an **integrated PFAS assessment strategy designed to move beyond simple Total Organic Fluorine screening**. Our approach focuses on **Chromatographic-specific analysis**, supported by complementary techniques when needed. Our capabilities include:

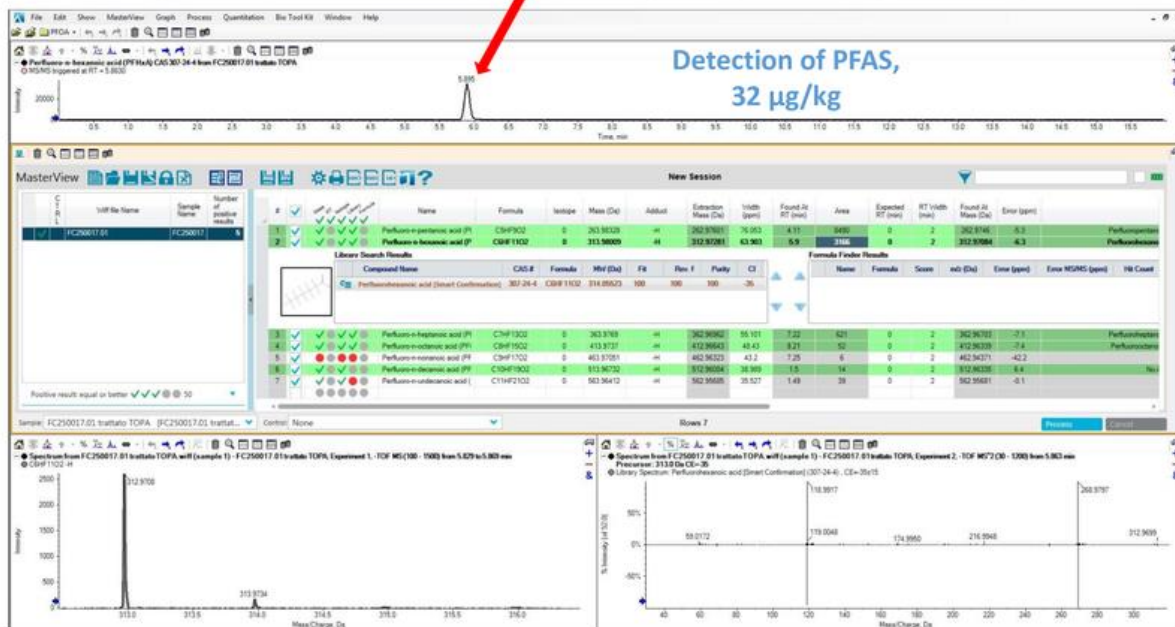
- Accredited LC-HRMS methods for the quantification of PFAS
- GC-based techniques for additional compound classes
- TOP Assay to evaluate potential PFAS precursors where relevant
- TF and TOF measurements as supporting information within a broader analytical strategy

Screening parameters may help orient the investigation, but they cannot replace substance-specific data.

Unlike non-specific screening parameters, Chromatographic methods generate substance-level evidence that is transparent, robust and defensible.

DESCRIZIONE Description	RISULTATO Res.	INC. Unc.	U.M.	LOQ	LIM	METODO Method
Determinazione del contenuto di Fluoro totale / Determination of Total content Fluorine	11		mg/kg	5		EN 17813:2023 - EN 14582:2016 - ASTM D7359-23 (*)
Determinazione del contenuto di Fluoro organico totale (TOF) / Determination of Total organic content Fluoride (TOF)	8,3		mg/kg	5		EN 17813:2023 - EN 14582:2016 - ASTM D7359-23 (*)

Total Fluorine
< 50 mg/kg



WHY CHOOSE US?

- Clear identification and quantification of individual PFAS
- Results directly comparable with PPWR thresholds
- Technically sound interpretation for compliance and due diligence
- Decision-ready reports for regulatory, commercial and risk-management purposes

Laboratory Management

FOOD CONTACT CENTER

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