

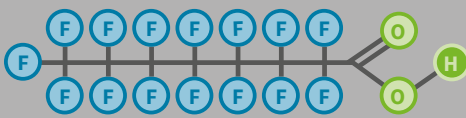


Expand your organization's testing capabilities

Essential information for detecting and quantifying novel PFAS and GenX by mass spectrometry

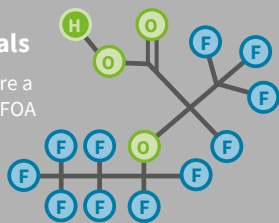
There are more than 4,000 different chemicals in the perfluoroalkyl and polyfluoroalkyl substances (PFAS) family. This group of substances includes the well-known compounds perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), as well as the next-generation compound called GenX. GenX, also known as hexafluoropropylene oxide dimer acid fluoride (HFPO-DA), has a chemical structure similar to PFOA.

PFOA & PFOS
U.S. manufacturers voluntarily phased out PFOA and PFOS, two specific PFAS chemicals.



Source: U.S.EPA

GenX chemicals
GenX chemicals are a replacement for PFOA



Little information is available about the toxicity of this latest generation of PFAS, and identifying and quantifying thousands of compounds presents a challenge to environmental testing laboratories. The diverse nature of PFAS compounds makes analytical testing very complex—from sample collection and preparation to the processing of accurate and high-quality data.



Here are the 3 keys to your PFAS testing success

Deploying the right analytical method



Different labs provide different options for measuring PFAS in drinking water. One commonly referenced method is the Environmental Protection Agency (EPA) method 537.1. It outlines the sample, reporting guidelines, and quality control of various PFAS in drinking water.

Obtaining the right instrument for your business



When your lab is faced with lots of samples and impending deadlines, you can't afford an unreliable instrument system. You need an instrument that delivers:

- **Higher throughput and less downtime**

Your lab needs an instrument that can screen for more compounds in each analysis, without compromising data quality.

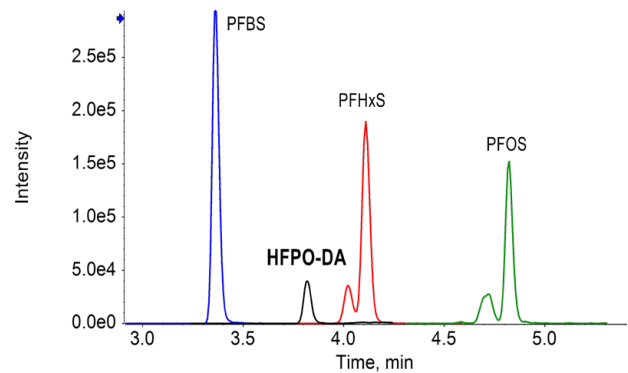
- **Enhanced sensitivity in negative ion mode**

SCIEX instruments exhibit excellent negative ion mode performance that provides the sensitivity to detect and quantify low concentration analytes in challenging matrices.

- **Improved accuracy**

SCIEX instruments have the dynamic range to see both high and low-level concentrations of common PFAS compounds, and the ability to confirm them by screening against our evolving MS/MS library of known PFAS or GenX compounds.

Whether your organization needs to identify new PFAS compounds or routinely quantify them, the **SCIEX Triple Quad™ 4500 LC-MS/MS System** is designed to provide the maximum productivity and robustness to provide high-quality data around the clock.



Chromatography of HFPO-DA in a mixture of PFAS.

Partnering with worldwide experts in mass spectrometry



You need to adapt quickly to the changing regulatory landscape when identifying these various compounds. In most cases, that's easier said than done.

At SCIEX we understand that having the right partner is critical to reacting quickly to changes. You can be confident that you have industry experts behind you, with a broad portfolio of environmental testing solutions. These solutions were developed based on feedback from users like you, to overcome your lab's testing challenges while sticking to your budget.



Consistent, reliable quantification around the clock with the SCIEX Triple Quad™ 4500 LC-MS/MS System

The LC-MS/MS workhorse

SCIEX Triple Quad 4500 System

Consistent, reliable quantification around the clock

When your lab is faced with lots of samples and impending deadlines, you can't afford an unreliable mass spectrometry system that could put your labor and your reputation at risk. When faced with pressure, the SCIEX Triple Quad 4500 System is designed to conquer:

- Data quality that decreases during long runs
- Data processing that is time-consuming and becomes a bottleneck
- Difficulty in getting immediate answers to solve problems as they arise



AcQuRate™ Pulse Counting Detector

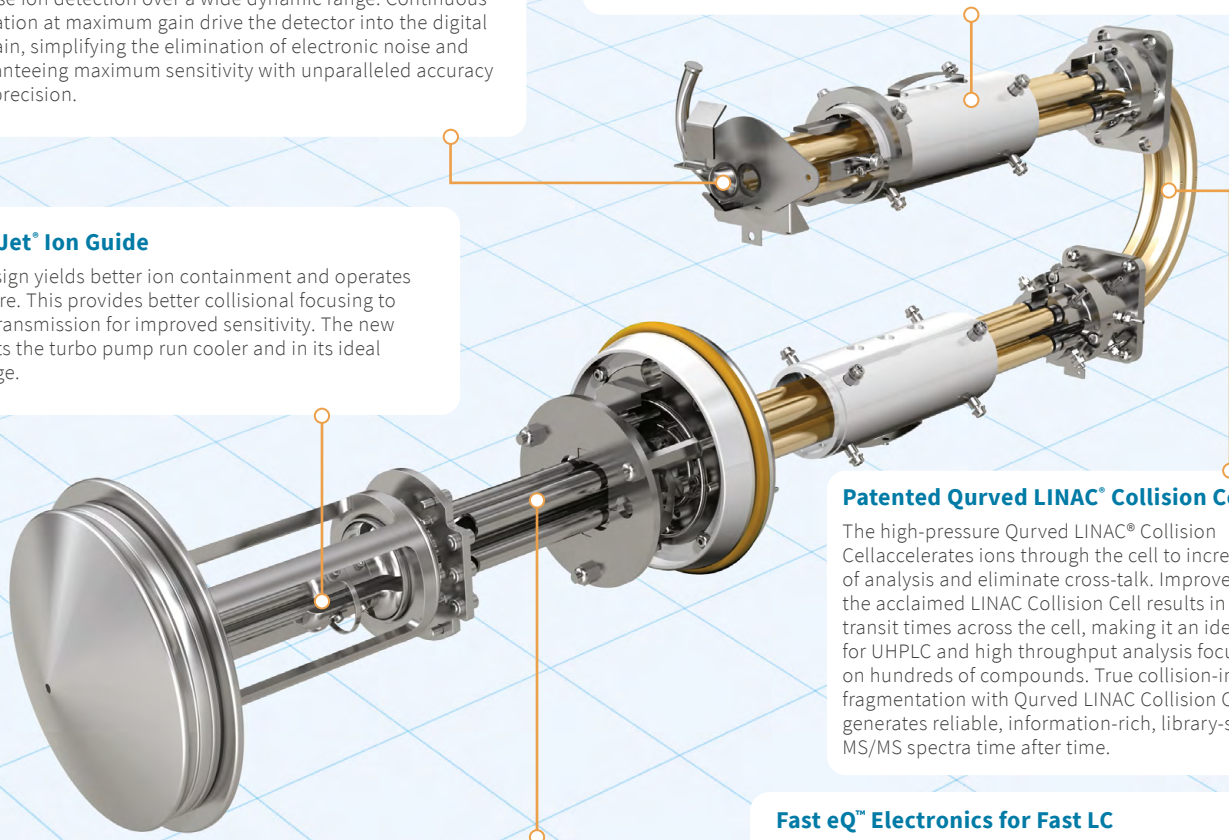
The AcQuRate Pulse Counting Detector combined with a pulse overlap correction algorithm, enable more accurate and precise ion detection over a wide dynamic range. Continuous operation at maximum gain drive the detector into the digital domain, simplifying the elimination of electronic noise and guaranteeing maximum sensitivity with unparalleled accuracy and precision.

Integrated QTRAP® technology

LINAC® technology in the Q3 linear ion trap greatly improves extraction efficiency to yield up to 100x gain in sensitivity under ion trap scan modes. Take full advantage of the 20,000 Da/s scan speeds with full scan linear ion trap sensitivity - 100x more sensitive than triple quad full scan experiments for greater confidence in qualitative workflow. Improved excitation efficiencies and reduced ion cooling and fragmentation times produce superior MS¹ qualitative results and provide unprecedented selectivity for the most challenging analytical assays.

Patented QJet® Ion Guide

Optimized design yields better ion containment and operates at high pressure. This provides better collisional focusing to enhance ion transmission for improved sensitivity. The new design also lets the turbo pump run cooler and in its ideal operating range.



Patented Qurved LINAC® Collision Cell

The high-pressure Qurved LINAC® Collision Cell accelerates ions through the cell to increase speed of analysis and eliminate cross-talk. Improvement to the acclaimed LINAC Collision Cell results in shorter transit times across the cell, making it an ideal match for UHPLC and high throughput analysis focused on hundreds of compounds. True collision-induced fragmentation with Qurved LINAC Collision Cell generates reliable, information-rich, library-searchable MS/MS spectra time after time.

Proven Q0 High-Pressure Cell

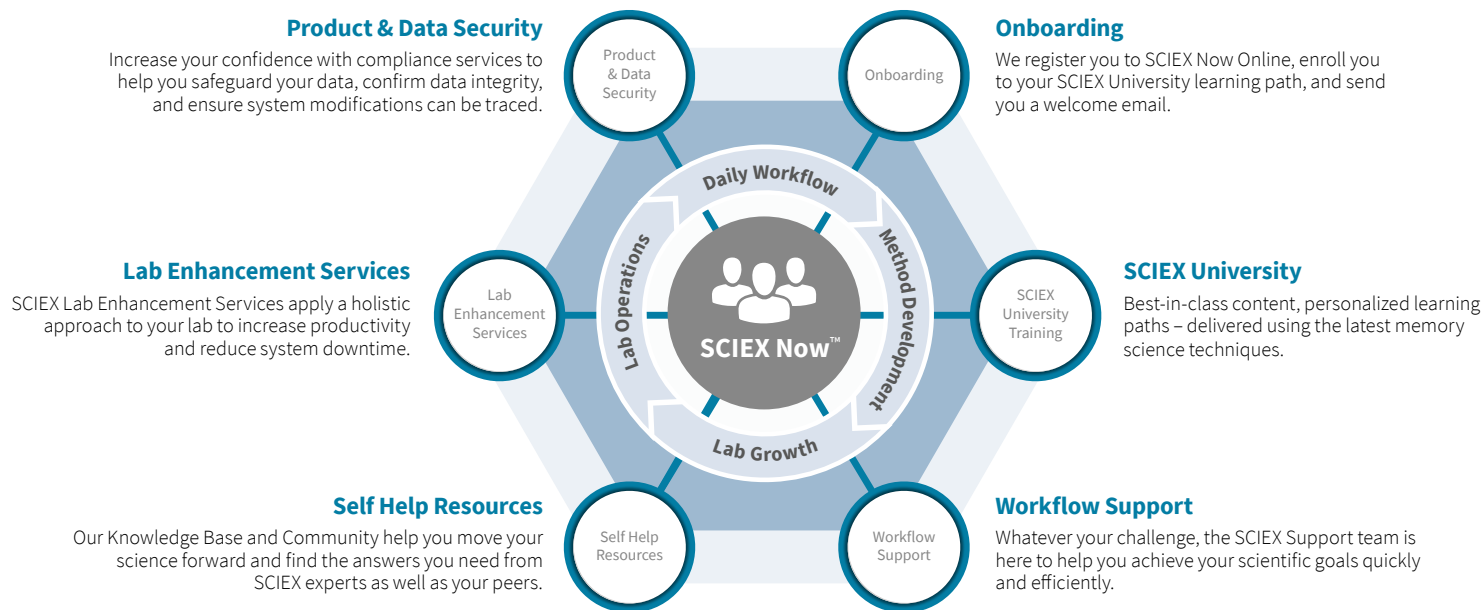
The high pressure collisional focusing technology maximizes transmission of ions for superior sensitivity. Ions can be accumulated in the Q0 region while the Linear Accelerator™ trap is performing MS/MS and MS¹ scans. This yields superior sensitivity in ion trap mode, which can be extremely important for fast UHPLC applications where time and duty cycle are condensed.

Fast eQ™ Electronics for Fast LC

Next-generation eQ™ Electronics enable polarity switching in 50 ms, shorter pause times, faster scan speeds, and faster duty cycles. Compounds with vastly different functional groups can be measured in a single pass. The electronics also provide improved ion containment for better sensitivity and superior detector performance. Ultra-fast and ultra-stable instrumentation means you get the most out of your standard or fast LC to save time and accelerate your research.

SCIEX Now™ Support Network

The destination for all your support needs



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