

**November 4, 2026 (13:30-14:15)**



**VENDOR SEMINAR:**

**Transforming innovation into operational excellence:  
Advancing technologies for routine success**

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Join our session, where we will serve up two wholesome presentations, complemented by engaging questions, answers and discussions with peers and experts.

**Under pressure: Cereulide and PFAS at ultra-trace levels in complex food matrices**

*Thomas Behnke and Jorg Konetzki, Mérieux NutriSciences Germany*

Food testing laboratories face growing demands for rapid turnaround times, high sample throughput and ultra-trace sensitivity in complex matrices. To meet the new strict EFSA risk assessment requirements for the heat-stable emetic toxin cereulide, Mérieux NutriSciences developed advanced LC-MS/MS workflows on the Waters Xevo™ TQ Absolute XR equipped with the UniSpray ionization source.

Moving beyond baseline standard procedures (DIN EN ISO 18465) with a LOQ of 0.1 µg/kg, which are applied for challenging matrices like specialty lipid powders and oils, an accelerated QuEChERS cleanup was established for matrices like powdered infant formulas and complex food matrices. This approach achieves ultra-low LOQs down to 0.02 µg/kg and significantly mitigates matrix suppression.

Demonstrating platform versatility across distinct chemical structures, this setup was equally applied to multi-analyte PFAS testing 34 targeted compounds down to 1 ng/kg, where reliability and contamination control are critical.

This presentation shares practical experiences, troubleshooting/ optimization strategies and valuable tips and tricks for successfully operating high-throughput methodologies under daily commercial laboratory pressure.

**Expanding selectivity with mixed-mode approaches: Liquid chromatography strategies for polar anionic analytes that challenge traditional C18 retention**

*Euan Ross, Waters Corporation*

Highly polar and ionic analytes, including anionic polar pesticides and ultra short chain PFAS, are often poorly retained by conventional C18 reversed phase chromatography.

These compounds present significant chromatographic challenges, particularly when robust separations are required in complex food matrices and across diverse food safety and regulatory monitoring workflows.

This presentation outlines recent work investigating mixed-mode liquid chromatography as a practical approach for overcoming the limitations of conventional reversed-phase separations. Emphasis is placed on mixed-mode stationary phases that combine reversed-phase and ion-exchange functionalities within a single column. Using application examples including anionic polar pesticides and ultra-short-chain PFAS, the presentation demonstrates how these complementary retention mechanisms can improve retention, selectivity, and robustness for highly polar and ionic analytes that are poorly retained under conventional RP conditions.