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VENDOR WEBINAR:

Multiple Analytical Challenges for Food Safety Laboratories - Solved by One Solution

Multiple Analytical Challenges for Food Safety Laboratories - Solved by One Solution

Tomáš Kovalczuk¹, Nick Jones¹, Sebastiano Panto¹, Michal Stupák², Giorgia Purcaro³

¹ *LECO European Application and Technology Center Biotechpark, Berlin, Germany*

² *University of Chemistry and Technology, Prague, Faculty of Food and Biochemical Technology, Department of Food Analysis and Nutrition, Prague, Czech Republic*

³ *University of Liege, Gembloux Agro-Biotech, Belgium*

The trend of the last decade in analytical chemistry is clear - to analyze as many analytes as possible in a single run, utilizing a fast and simple sample preparation step. This demand using modern analytical instrumentation is desired to significantly boost both (i) sample throughput together with (ii) sensitivity - This has shaped the analytical strategies of the last decade.

The routine workflows of today in food safety labs provide a variety of challenges. Although, the analytical approaches are fully validated and greatly optimized, issues related to sample preparation, sample introduction and/or analyte determinations can often be observed, typically due to sample matrix complexity.

The Time-of-flight mass spectrometers (TOF MS) offering the advantages of (i) full mass spectral information collected at fast acquisition rates, across wide concentration ranges, (ii) non-skewed high-quality spectra for each individual analyte and (iii) high level of data robustness due to a unique "open-source design" enabling significantly reduced maintenance/instrument downtime needed for source cleaning.

The comprehensive two-dimensional gas chromatography (GC×GC) offers dramatic improvements over traditional GC, especially in the analysis of complex mixtures. This is due to significantly increased chromatographic resolution and improved analytes' detectability.

A hyphenation of TOF MS with GC×GC is an ideal solution for challenging applications in offering all the benefits of GC×GC and TOF MS techniques. All the benefits of both hyphenated techniques can be only fully utilized when an appropriate data processing software is employed.

All these advantages will be demonstrated in this webinar, summarizing the use of LECO's BT4D GC×GC-TOF MS system in challenging food applications, such as:

- MOSH/MOAH
- Pesticides is difficult matrices
- Ethylene oxide