

September 7, 2022 (13:30-14:15)



VENDOR SEMINAR:

Tips and Tricks to Quantify Emerging Toxins and Process Contaminants

Alternarias, Ergots and other major mycotoxins simultaneously in various food matrices - Furan and Alkyfurans, utilizing SPME Arrow increase sensitivity

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Food Safety Laboratories have to face a broad variety of different contaminants in different matrices, with Pesticides as a prominent and complex example.

Next to these, mycotoxins have seen some major changes in regulations within Europe. Ergot Alkaloids are regulated since this year, and Alternaria Toxins have gained some publicity due to contaminated Tomato Purees' with effect on upcoming regulations.

Several screening (or multi compound) methods for a large combination of mycotoxins are published, but most often using non-MS-detector friendly and column challenging conditions.

Jan Pschierer will present a screening method for a variety of regulated mycotoxins, including Alternaria Toxins and all 6 nowadays EU-regulated Ergot Alkaloids and their Epimers. He utilizes a Biphenyl phase chemistry and a generic easy to use sample preparation to reach and exceed regulatory LOQ's and LOD's.

Jana Hepner will focus on process contaminants, which are widely discussed in the Food Safety regulatory bodies at the moment. Next to Acrylamide, Furan and its methylated and ethylated derivatives are formed during heat driven processes like baking, grilling, toasting. Especially Baby Food and Infant formulas are of common interest as well as food consumed in large quantities, like coffee.

Methods reported for the analysis of these volatile organic compounds include static headspace (HS) and solid phase microextraction (SPME) in combination with GC-MS. The use of SPME for the analysis of these process contaminant has demonstrated improved method sensitivity and higher S/N for some of the alkyfurans.

However, the fragility of traditional SPME fibers can be a concern. In her presentation, Jana Hepner will report about a HS-SPME-GC-MS method for the analysis of furans and alkyfurans in baby formula and coffee using an SPME Arrow. The SPME Arrow geometry allows for a much better mechanical robustness of the extraction device and enhanced method sensitivity.

At the end of this vendor seminar, Restek will invite you for a traditional Prague Beer Tasting.

Keywords: Ergot Alkaloids, Alternaria Toxins, Alkyfurans, SPME Arrow