VENDOR SEMINAR:

# Implementing New GC-MS and LC-MS Technologies to Stay Ahead with Your Food Safety Analysis from Pesticides to PFAS and Microplastics

**Implementing new GC-MS and LC-MS technologies to stay ahead with your food safety analysis from pesticides to PFAS and microplastics**

*Dominic Roberts, Product Marketing Manager GC and GC-MS, Thermo Fisher Scientific*
*Frans Schoutsen, Sales Support Specialist LSMS, Thermo Fisher Scientific*

The first half of the presentation will focus on the capabilities of the new GC-MS/MS system from Thermo Scientific, which was launched in March 2022. The system design was based on direct customer feedback in order to overcome challenges faced by analytical testing laboratories. The system provides excellent sensitivity to meet the strictest regulatory limits and has modular GC design for increased flexibility in system configuration, while including unique maintenance options and compatibility with online automated clean-up to minimize instrument downtime and increase sample throughput. An overview of applications on the new GC-MS/MS with data examples will be presented, including the analysis of pesticides in baby food and the determination of ethylene oxide in food. We will also explore how pyrolysis -GC high resolution accurate mass MS can overcome challenges associated with the analysis of microplastics in food.

The second part of the lecture will focus on the development of a sensitive PFAS (Per- and Polyfluoroalkyl Substances) screening and quantitation method in pork muscle meat utilizing LC-Orbitrap and a novel cloud hosted application called myLibrary™ Enterprise, which allows users to easily extract spectra and create fit-for-purpose MS/MS spectral libraries. Curation is done directly in the application, and the final library can be exported for use directly in Thermo Scientific™ TraceFinder™ Software with mzVault. Details of the method will also be presented in terms of calibration, limits of quantitation, recovery, and identification according to SANTE guidance and MS/MS spectral matching.

At the conclusion of the presentation our application experts will answer any questions in a live Q and A.