

November 3, 2021 (10:00-10:45, CET)



VENDOR WEBINAR:

Toxicity and Authenticity Testing of Foods with Trace Elemental and Stable Isotope Analysis

Using triple quadrupole ICP-MS to improve the speed, sensitivity, and accuracy of the analysis of toxic and nutritional elements in baby foods

Dr. Sukanya Sengupta, Application Specialist, Thermo Fisher Scientific

Food and food supplements supply the human body not only with energy, but also essential macro- and micronutrients for a long and healthy life. While several elements are essential nutritional building blocks, exposure to heavy metals, like arsenic, mercury, and lead, potentially present in food as contaminants may lead to serious negative effects on health. An especially vulnerable group susceptible to different illnesses and potential lifelong neurological damage through exposure to toxic heavy metals are infants and young children. In this presentation we are going to present a simple and fast analytical method based on the combination of triple quadrupole ICP-MS with oxygen as the only collision / reaction cell gas used for highly accurate and sensitive analysis of both nutritional and toxic elements in different types of baby foods.

Addressing authenticity of fish oils by online coupling of GC-IRMS with an organic mass spectrometer

Dr. David Psomiadis, Chief Business Officer, Imprint Analytics GmbH

Dr. Mario Tuthorn, Senior Product Marketing Specialist, Thermo Fisher Scientific

As fish oils become a popular and precious source of omega-3 fatty acids, the risk of mislabeling and adulteration has risen significantly. The fatty acid profiles of different fish oils do not often allow the discrimination between different sources and geographical origins. In this study, the compound specific multi-isotope analysis of fatty acids allowed the discrimination of fish oils from different provenance, following risk-based comparisons from market experience. In the light of emerging cases of food fraud, we present how GC-MS-IRMS advanced technology can tackle these problems for addressing authenticity of fish oils.