



# Joint European Stable Isotope User Meeting 2022

UNIVERSITY OF  
EASTERN FINLAND  
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—*Abstracts*—

**“The important thing is to never stop questioning” (Albert Einstein)**

Topic groups: 06. Food Authenticity, Nutrition, Forensic,

Presentation types: Oral presentation

Title: Stable isotope analysis for the authenticity and traceability of food products, supplements and drugs

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Keywords: Stable isotope ratio analyzes, SIRA

**Content:**

Stable isotope ratio analyzes (SIRA) are nowadays increasingly used for the traceability and authenticity not only of food products (e.g. milk, cheese or vegetable oils), but also of drugs (such as curcumin) and food supplements with pharmacological properties (such as monakolin K, produced by the fermentation red yeast rice). The numerous official methods are flanked by various scientific works demonstrating the power of this technique and its applicability in official and non-official controls. Thanks to the coupling of isotope ratio mass spectrometry (IRMS) with separative techniques, such as liquid chromatography and gas chromatography, it is now possible to identify frauds ranging from the replacement of natural molecules with their synthetic form, to the identification of added adulterants, even in low concentration