



Workshop on determining the geographical origin of food - **TRACE** elements and isotopic patterns in food verification

The globalisation of food markets and the relative ease with which food commodities are transported through and between countries and continents, means that consumers are increasingly concerned about the origin of the foods they eat. A growing body of research articles have been published in the last five years detailing the use of natural abundance isotope variation and elemental concentrations as geographic ‘tracers’ to determine the provenance of food. These investigations exploit the systematic global variations of stable hydrogen, carbon, nitrogen, oxygen and sulphur isotope ratios in combination with elemental concentrations, including heavy isotope variations (e.g. strontium-87) and other biogeochemical indicators. This workshop presents developments from the EU FP6 **TRACE project** in the application of multi-isotopic and multi-element methods in the emerging field of “Food Forensics”.

DRAFT Workshop Agenda

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| 08:30 – 09:00 | Registration |
| 09:00 – 09:15 | Welcome message (RAFA HOST - tbc) |
| 09:15 – 09:30 | Introduction from Chairman - Paul Brereton (TRACE Coordinator) |
| 09:30 – 10:00 | “The need for geographical origin verification – Regulations, Certifications and fraud cases”
Dr Nigel Harrison - Food Standards Agency (United Kingdom) |
| 10:00 – 10:30 | “An Introduction to Stable isotopes, their systematic behaviour and how they can be interpreted to determine the geographical origin of food”
Dr Nikolai Pedentchouk – School of Environmental Sciences, University of East Anglia (United Kingdom) |
| 10:30 – 11:00 | Coffee break |
| 11:00 – 11:30 | “Implications of animal metabolism on the interpretation of stable isotope signatures for origin determination”
Dr Frank Monahan – University College Dublin (Ireland) |
| 11:30 – 12:00 | “The practical and instrumental side of measuring stable isotopes in food”
Dr Andreas Rossmann – Isolab GmbH (Germany) |

- 12:00 – 12:30** **“Combining strontium and light stable elements (C, N, O, S) isotopic signatures for the authentication of provenance of European cereal samples”**
Dr Daniel Goitom Asfaha – Institute of Reference Materials and Methods, Geel (Belgium)
- 12:30 – 13:30** **Lunch**
- 13:30 – 14:00** **“Isotopic and elemental data for tracing the origin of European olive oils”**
Dr Federica Camin – E. Mach-Istituto Agrario di San Michele all'Adige (Italy)
- 14:00 – 14:30** **“Using stable Isotopes to determine the geographical origin of European beef”**
Mr Micha Horacek – Austrian Research Centre, Seibersdorf (Austria)
- 14:30 – 15:00** **“Multi-element (H, C, N, S) stable isotope ratio characteristics of honey from different European regions”**
Dr Antje Schellenberg - Bavarian Health and Food Safety Authority (Germany)
- 15:00 – 15:30** **“Determination of corn-fed status of chicken meat using the $^{13}\text{C}/^{12}\text{C}$ isotope ratio”**
Ms Katharina Heinrich – Food and Environment Research Agency (United Kingdom)
- 15:30 – 16:00** **Coffee break**
- 16:00 – 16:30** **“About MoniQA (Monitoring and Quality Assurance in the Food Supply Chain)”**
Dr Martin Rose – Food and Environment Research Agency (United Kingdom)
- 16:30 – 17:00** **“TRACE – Where to know?”**
Summation and Discussion (Andreas Rossmann and Paul Brereton)
- 17:00** **Close of the workshop**