

## Key Principles of LC-MS/MS in Relation to the Analysis of Chemical Residues and Contaminants in Food

### Course Description

This five-day course provides an insight into the general principles of LC-MS, with a particular emphasis on the different types of ionisation, mass analysers and modes of operation best suited to the analysis of chemical residues and contaminants in food. The course will cover fundamentals; provide practical technical advice and utilise relevant applications as case studies. The course will be delivered through a combination of seminars and practical work using state-of-the-art analytical equipment. The course covers:

- HPLC/UHPLC with emphasis on the considerations when used with MS
- Interfacing LC with MS using electrospray and atmospheric pressure chemical ionisation
- Identifying and dealing with matrix effects
- Capabilities and acquisition modes of different mass analysers
- Optimisation of LC conditions and MS parameters and setting up analyses
- Data processing, analytical quality control and interpretation
- Method development
- Troubleshooting and preventative maintenance

This is supplemented with presentations on:

- History of the development of LC-MS for the analysis of chemical residues and contaminants in food
- Overview of the use of HPLC/UHPLC when coupled to MS
- Introduction to modes of ionisation and mass analysis
- Targeted and untargeted approaches using LC-MS

### Course Lecturers

This course is taught by Fera's team of LC-MS specialists who offer key skills and wide ranging expertise across a broad spectrum of food testing requirements.

Fera's food analytical capability is underpinned by scientific expertise, detailed knowledge of current and emerging regulations, and internationally recognised quality standards. Fera is the UK National Reference Laboratory for many areas including Chemical Safety in Food, Chemical Contaminants in Animal Feed, Pesticide Residues and Veterinary Medicine Residues.

### Venue

The course is delivered using dedicated facilities at Fera's world-class laboratory complex located on the Sand Hutton National Agri-Food Innovation Campus near York, UK.

### How to register interest

Please e-mail your details, the name of the course you would like to attend and the number of people from your organisation who would like to attend the course to: [traininglabs@fera.co.uk](mailto:traininglabs@fera.co.uk)

You will also find useful information about the venue, details of how to find us, and advice on accommodation and visas on our web site.