

# LC-MS for Chromatographers (2 day)

## Who should take this course?

This course is for chromatographers who need to gain a thorough understanding of LC-MS. Practical applications to the analysis of drugs and metabolites in biological extracts are looked at. No previous experience of HPLC is necessary, although the course will be especially valuable to those with some chromatography experience.

## What does it cover?

This two-day course explains the principles of mass spectrometric detection, the design and operation of mass spectrometers, and the interfacing of the MS to the liquid chromatograph to obtain both qualitative and quantitative data:

- MS operation, including operation of the most popular LC-MS interfaces
- How a quadrupole mass filter works
- MS calibration and optimization
- Ion production, fragmentation and detection
- Operation in MS, MS-MS and MS-MS-MS modes
- Structure determination by product ion analysis
- Quantitative analysis
- Method development and validation
- Techniques to get the most from your LC-MS

## What will I get from this course?

You will learn how a mass spectrometer works, the advantages (and limitations) of adding mass spectrometric detection to your liquid chromatographic analyses, and how to use MS to approach separation and detection problems intractable by other methods. This course will give you a solid grounding on which to further build your LC-MS expertise.

## Course Outline

### Day 1

Overview of LC-MS  
Principles of Mass Analyzers  
Basics of Quadrupole Instrumentation  
The Molecular Ion  
Tuning and Calibration  
Qualitative Analysis

### Day 2

Developing the MS Method  
Quantitative Analysis  
Developing the LC Method  
Sample Preparation  
Validation

**Available as an in-house or off-site course. Contact us for details**

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