



# HTC-11

## Hyphenated Techniques for Chromatography

# HTSP

## Hyphenated Techniques for Sample Preparation

One-day Short Course

## Liquid Chromatography Mass Spectrometry

Course Teachers

**Bart Devreese (Ghent University, Belgium)**

**Chris de Koster (University of Amsterdam, NL)**

**Bruges, Tuesday January 27<sup>th</sup>, 2010**

### Course summary

This course will provide practical knowledge on the hyphenation of liquid chromatography with mass spectrometry and tandem mass spectrometry. The main focus will be on the basic principles of LC-MS/MS techniques and strategies for qualitative and quantitative analysis of complex mixtures of molecules.

Questions that will be addressed include

- 🧩 What is the added value of hyphenating LC with MS/MS for complex mixture analysis?
- 🧩 What is the best way to perform LC-MS/MS

### Key topics

- 🧩 General principles of ionization techniques, such as electrospray ionization.
- 🧩 Principles of mass analysis and commonly used mass analyzers such as quadrupole, triple quadrupole, ion trap, time-of-flight, and hybrid instrumentation.
- 🧩 In and outs of quantitative analysis
- 🧩 Applications of LC-MS/MS with an emphasis on protein and proteomic analysis

### **Who should attend?**

Chemists and analysts who experience a need for LC-MS/MS analysis of complex samples in life science, pharmaceutical industry, biotechnology, industrial-product characterization, *etc.*, should consider attending this course. The course will be structured in such a way as to introduce newcomers and potential users to the principles and practices of LC-MS/MS.

### **About the instructors**

Chris G. de Koster is professor of mass spectrometry of biomacromolecules at the University of Amsterdam, The Netherlands. From 1995 up to 2001 he was senior expert mass spectrometry at DSM Research in Geleen, The Netherlands. He has been active in the field of mass spectrometry for almost thirty years and he has (co)-authored more than 100 scientific papers covering a broad range of topics, such as small molecules, glycolipids, proteins, synthetic polymers, biotechnology, development of LC-MS/MS methods and high-mass-resolving-power MS .

Bart Devreese is professor of Biochemistry and Analytical Biochemistry at the University of Ghent, Belgium. He has been active in the field of biological mass spectrometry since the early 1990's, particularly focusing on protein and proteomic analysis. He was amongst the first scientists to apply nano-liquid chromatography coupled to mass spectrometry for peptide analysis. He has published more than 100 peer-reviewed articles in this field.

**For more information see: [www.ordibo.be/HTC](http://www.ordibo.be/HTC)**