HTC-11

Hyphenated Techniques for Chromatography

HTSP

Hyphenated Techniques for Sample Preparation

One-day Short Course

Multidimensional techniques for applications in Industry

Course Teacher

Hernan J. Cortes

Bruges, Tuesday January 27th, 2010

Course summary

This course will provide an introduction to multidimensional chromatographic technologies and their applications to the solution of problems relevant to the chemical industry.

The basic principles and the nomenclature of multidimensional chromatography will be explained, and the advantages and disadvantages of the various methods will be critically discussed.

The role of each chromatographic technique (gas chromatography, GC; liquid chromatography, LC; supercritical-fluid chromatography, SFC; size-exclusion chromatography, SEC; liquid chromatography at the critical conditions, LCCC; ion chromatography, IC) will be covered with emphasis on strategies for selection of the appropriate tools depending on the application. The need for rapid separations and miniaturization will also be discussed.

Numerous applications will be presented to illustrate the general concepts and problem solving strategies.

Key topics

- Role of Analytical Sciences in the chemical industry
- General principles and advantages of multidimensional separations.
- Main separation techniques and their applications
- Rapid separations and miniaturization
- Applications of hyphenated and multidimensional separations.

Who should attend?

Chemists and analysts who experience a need for detailed characterization of complex samples and who wish to expand their knowledge of hyphenated and multidimensional separation technologies will benefit from this course. Practitioners in the chemical and pharmaceutical industries, life sciences, environmental monitoring, *etc.*, should consider attending this course.

About the instructor

Dr. Cortes has held a number of positions in various Analytical Sciences groups in the Dow Chemical Company, including polymer characterization, inorganic analysis, organic analysis, agricultural chemicals, and pharmaceuticals. Dr. Cortes' technology expertise is in Separation Science, with emphasis on the development of gas, liquid, supercritical and multidimensional chromatography methods. Throughout his career, he has utilized his expertise in various capacities, ranging from problem-solving in manufacturing to development of new technology to increase knowledge and create competitive advantages. He retired from Dow in 2009 after 30 years.

Hernan Cortes is the author of over 50 publications in peer-reviewed journals and 17 patents, and he is the editor of the first ever book on the subject of "Multidimensional Chromatography".

He holds a bachelors degree in Chemistry from Florida International University, Miami and a Ph.D. in Analytical Chemistry from the University of Stockholm, Sweden.

For more information see: www.ordibo.be/HTC