

CON-THE-020

CONFIRMATORY METHODS
MS part II: Detection and acquisition

• **Context**

The analysis of residues and contaminants in food requires the use of specific and sensitive measurement methods. In this respect, mass spectrometry presents all the necessary qualities to ensure the detection, identification and quantification of organic molecules at trace level in complex biological matrices.

• **General objective(s)**

To give the trainees the keys to understanding the general principles of this spectrometric technique, with a particular emphasis on the various mass analysers and the signal acquisition methods which are best suited to the analysis of chemical residues and contaminants in food.

• **Pedagogical objectives**

- ✓ List five mass analysers among the best suited to R&C
- ✓ Compare and describe the intrinsic qualities of the various analysers in terms of spectrometric resolution, range and price
- ✓ Explain the compared operation principle of a quadrupole and ion trap.
- ✓ Explain the relative relevance of multidimensional mass spectrometry versus high resolution mass spectrometry
- ✓ Master the critical points of acquisition signals parameter setting on a mass analyser in SRM mode
- ✓ Master the critical points of acquisition signals parameter setting on a mass analyser in SIM mode

• **Main items**

- ✓ Mass analyser, acquisition techniques (SIM, SCAN, SRM...)

• **Pedagogical tools**

- ✓ Slide show
- ✓ Word file support

• **Duration**

- ✓ 2 hours

• **Pre-requisite**

- ✓ Chemistry
- ✓ Physics