Advanced Mass Spectrometry

Prof. Piero Pucci

Programma
Concetti di base: Profilo Isotopico; Risoluzione ed Accuratezza;
Sorgenti: Ionizzazione Elettronica (EI); Electrospray (ESI); MALDI.
Analizzatori di Massa: Quadrupolo; Time of Flight (TOF); Trappola Ionica; Trappola Ionica Lineare (LIT); Orbitrap; Ion Mobility Mass Spectrometry.
Sistemi Integrati: Analisi GC-MS ed LC-MS; Select Ion Monitoring (SIM).
Tandem Mass Spectrometry: Collision Induced Dissociation (CID); Tandem nello Spazio; Tandem nel Tempo;
Modalità Analisi MS/MS: Analisi GC-MS/MS ed LC-MS/MS; Product Ion Scan. Precursor Ion Scan (PIS); Neutral Loss Scan (NLS); Select Reaction Monitoring (SRM); Multiple Reaction Monitoring (MRM). Analisi quantitativa mediante Tandem Mass Spectrometry.
Applicazioni delle Analisi LC-MS/MS: Scienze Forensi; Diagnostica Beni Culturali; Analisi Ambientali; Diagnostica Neonatale; Dosaggio di Farmaci.

Program
Basics: Isotopic profile, Resolution and Mass Accuracy.
Ionization Methods: Electronic Ionization (EI); Electrospray; MALDI.
Mass Analysers: Quadrupole; Time of Flight (TOF); Ion Trap; Linear Ion Trap; Orbitrap.**Linked Systems**: GC-MS and LC-MS/MS analyses; Select Ion Monitoring (SIM); Ion Mobility Mass Spectrometry.
Tandem Mass Spectrometry: Collision Induced Dissociation (CID); Tandem in Space; Tandem in Time; Product Ion Scan.
Tandem MS Scan Mode: Precursor Ion Scan (PIS); Neutral Loss Scan (NLS); Select Reaction Monitoring (SRM); Multiple Reaction Monitoring (MRM). Quantitative Tandem Mass Spectrometry analyses.
Application of LC-MS/MS Analyses: Forensic Sciences; Diagnostic in Cultural Heritage; Environmental Analyses; Neonatal Diagnostic; Drugs determination

The course will take place in July, 1 – 5, 2019. If you are interested, please contact prof. Piero Pucci, (pucci@unina.it).