HIGH RESOLUTION
TANDEM MASS SPECTROMETRY

WATERS GMBH, Q-TOF PREMIER

High resolution tandem mass spectrometry is used for identification and determination of compounds in wide range of molecular masses and polarity based on measurement of exact value of mass to charge ratio (m/z) of molecular ion of analyzed compound and study of its fragmentation (measurement of m/z value of characteristic fragments rising after dissociation of molecular ion in collision cell). The mass spectrometer is used as standalone or in a combination with ultra-performance liquid chromatography.

ACQUIRED INFORMATION

- Exact molecular mass of analyzed compound
- Exact mass of fragments rising after molecular ion dissociation
- Isotopic profile of analytes
- Retention characteristics in case of hyphenation of mass spectrometer with liquid chromatography
- Content of analytes in studied sample

SAMPLE TYPES

- Liquids and solutions of analytes
- Solid materials fixed on MALDI plate
- Clinical and environmental samples, plant extracts
- Direct analysis of human, animal and plant tissues
- Characterization of newly synthesized materials

MODES, CONDITIONS AND PRECISION

Used ion sources:

- Electrospray, atmospheric pressure chemical ionization
- Laser desorption ionization

Analyzer:

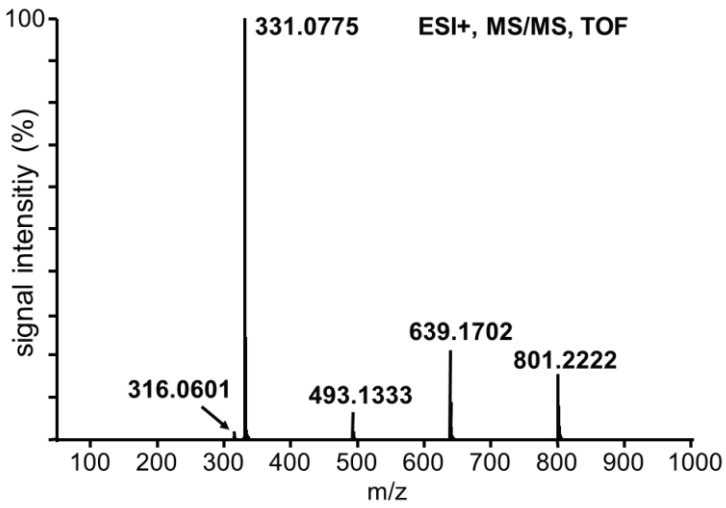
- Hybrid, quadrupole-time of flight type

Detector:

- Microchannel plate (MCP/TDC)

Resolution:

- Up to 17500 (FWHM, according to speficications for W-optics)



Fragmentation mass spectrum of selected analyte.

DETAILED INFORMATION ON REQUEST

REGIONAL CENTRE
OF ADVANCED TECHNOLOGIES
AND MATERIALS

WWW.RCPTM.COM RCPTM.SERVICES@UPOL.CZ

Palacký University
Olomouc