

Instrument	Inlet	Ionization mode	Mass analyzer - detector	Mass accuracy (ppm)	Resolution	General mass range (Da)	Example applications
<b>MALDI-TOF/TOF-MS</b>	Matrix	MALDI	TOF and TOF/TOF	1 - 5	40,000	100-150,000	Identification of large (e.g. proteins) and small molecules (e.g. Identification of bacteria (BioTyper), oligosaccharides, peptides)
<b>Isotope-ratio mass spectrometer</b>	GC, Element Analyser	ESI	Curved magnetic field Fixed position	Measure ratio of 12C/13C and 14N/15N			Product authenticity and traceability Physiological research
<b>Q Exactive<sup>plus</sup> Orbitrap LC-MS/MS</b>	(UP)LC, Nano-LC	ESI/APCI	Orbitrap FTMS scan by scan pos-neg switching PDA, MS	< 2	280,000	100-1,200 up to 500-6,000	Profiling, quantitative analysis, MS/MS, pseudo-MS3
<b>UPLC-triple quad mass spectrometer</b>	UPLC (Acquity I class) nanoLC (optional)	ESI	Triple quadrupole ScanWave MS/MS		automatically adjusted (IntelliStart) to desired resolution	50 - 4,000	Analysis of traces in samples, such as peptides, hormones, Targeted analysis of protein/peptides and metabolites contaminants, toxins
<b>GCxGC-QTOF-MS</b>	GCxGC, thermo-desorbition inlet	EI/CI	Q-TOF	< 5	10,000	50 -1,700 (TOF) 50-1,050 (Quad)	A headspace trapping room is available for trapping volatiles for further analysis by the GCxGC-QTOF-MS
<b>UPLC-ESI-TWIM-MS (Synapt-G2Si)</b>	UPLC (bio-Acquity)	ESI	TOF MS/MS before and/or after ionmobility	< 1 (lockmass)	50,000	20 - 32,000	Identification of (isomeric) oligosaccharides from different origin (Plants, Algae) Characterization and quantification of peptides and chemical modifications of proteins
<b>Ambient Mass Spectrometry Imaging</b>	LAESI, DART, UPLC (nano-Acquity) TRIZAIC (Waters Ion Key)	ESI/DART LAESI	TOF MS/MS before and/or after ion mobility	< 1	40,000	20 - 40,000	Plant sciences: plant metabolomics  Food quality/safety: spatial distributions of food contaminants, residues and biotoxins  Microbiology: interaction studies of colonies  Animal sciences: imaging of lipids, sugars and proteins in tissue sections
<b>Preparative LC-MS</b>	HPLC	ESI	Single quad		0.1	150 - 2,000	mass directed purification of natural products extracts and new molecular entities