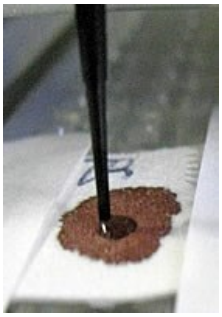
Orbitrap mass spectrometry

The Orbitrap Velos is a hybrid mass spectrometer which combines the high resolution orbitrap with a high sensitivity front-end dual-pressure linear ion trap. The instrument offers resolution of 100,000 at m/z 400, ppm mass accuracy and sub-femtomole sensitivity. The instrument is routinely used for proteomics experiments.

Picture: Thermo Fisher Velos Orbitrap ETD w/ Triversa Nanomate and nanoLC

The Orbitrap is equipped with a Triversa Nanomate (Advion) chip-based electrospray system and a 2-dimensional direct nano-flow LC system (Dionex). The Triversa Nanomate also offers liquid extraction surface analysis (LESA) capability, i.e., direct surface sampling. In addition, the Orbitrap can be coupled with differential ion mobility (or FAIMS) either for direct injection or on-line liquid chromatography.



Tandem mass spectrometry capabilities include collision induced dissociation (CID), electron transfer dissociation (ETD) and higher collisional energy dissociation (HCD).