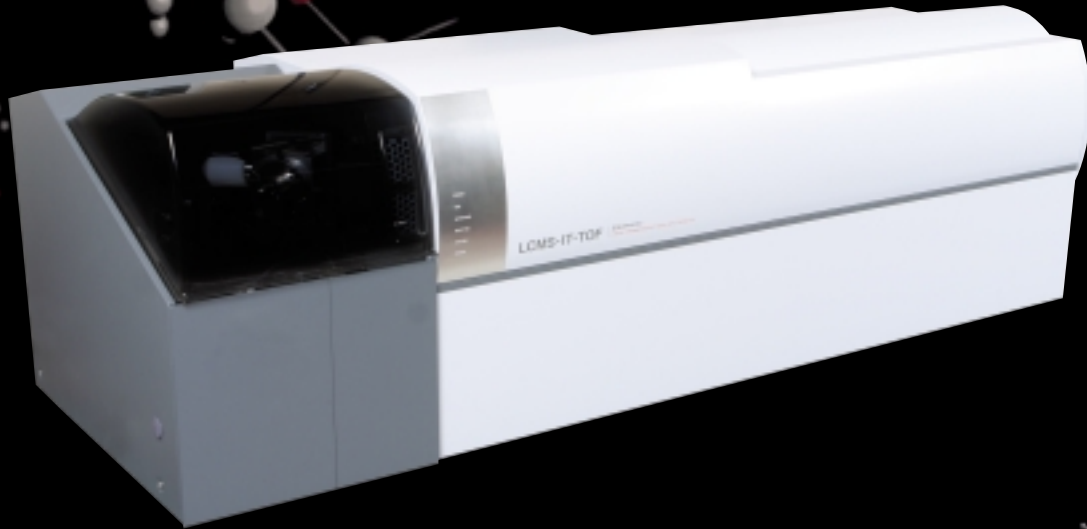


Shimadzu Liquid Chromatograph Mass Spectrometer

# LCMS-IT-TOF

High Resolution  
 High Accuracy  
 High Throughput  
 High Sensitivity



## ● High Resolution and High Accuracy

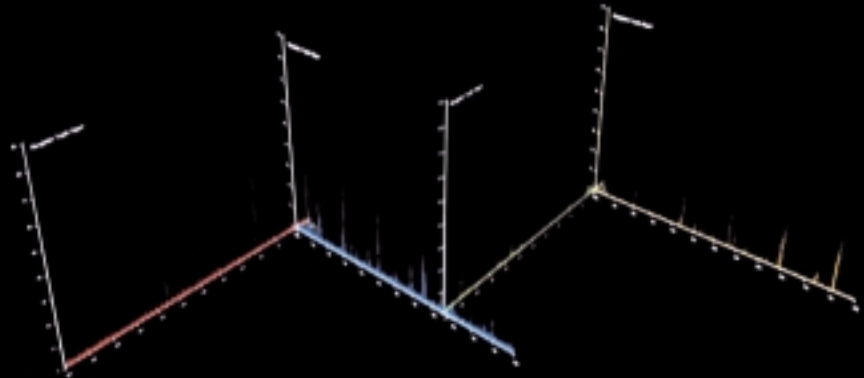
DSR (Dual-Stage Reflectron) (Patent Pending) and BIE (Ballistic Ion Extraction) (Patent Pending) achieve high resolution ( $R > 10,000$ ) and high accuracy (5 ppm) in all modes: MS, MS/MS, and MS/MS/MS.

## ● High Throughput

The highest-speed scanning performance of any hybrid MS for structural analysis: switching between the positive ion mode and negative ion mode in 0.1 sec. and 0.1 sec. spectrum measurement period.

## ● High Sensitivity

Compressed Ion Injection (CII) (Patented) in the ion optical system efficiently introduces ions into the ion trap and achieves high  $MS^n$  sensitivity.



### Octopole Lens

Compressed Ion Injection (CII) (Patented) in the ion optical system efficiently introduces the eluted component ions from the LC into the ion trap.

### QIT

MS<sup>n</sup> uses new cooling technology in QIT (Quadrupole Ion Trap) to achieve high efficiency. BIE (Ballistic Ion Extraction) (Patent Pending) achieves high resolution and sensitivity in all MS and MS<sup>n</sup> modes.

### Dual Stage Reflectron

DSR (Dual-Stage Reflectron) (Patent Pending) achieves high resolution by optimizing energy focusing and time focusing.

### ESI Ion Source

Ionization and ion transfer technologies developed for general-purpose LCMS have been further enhanced

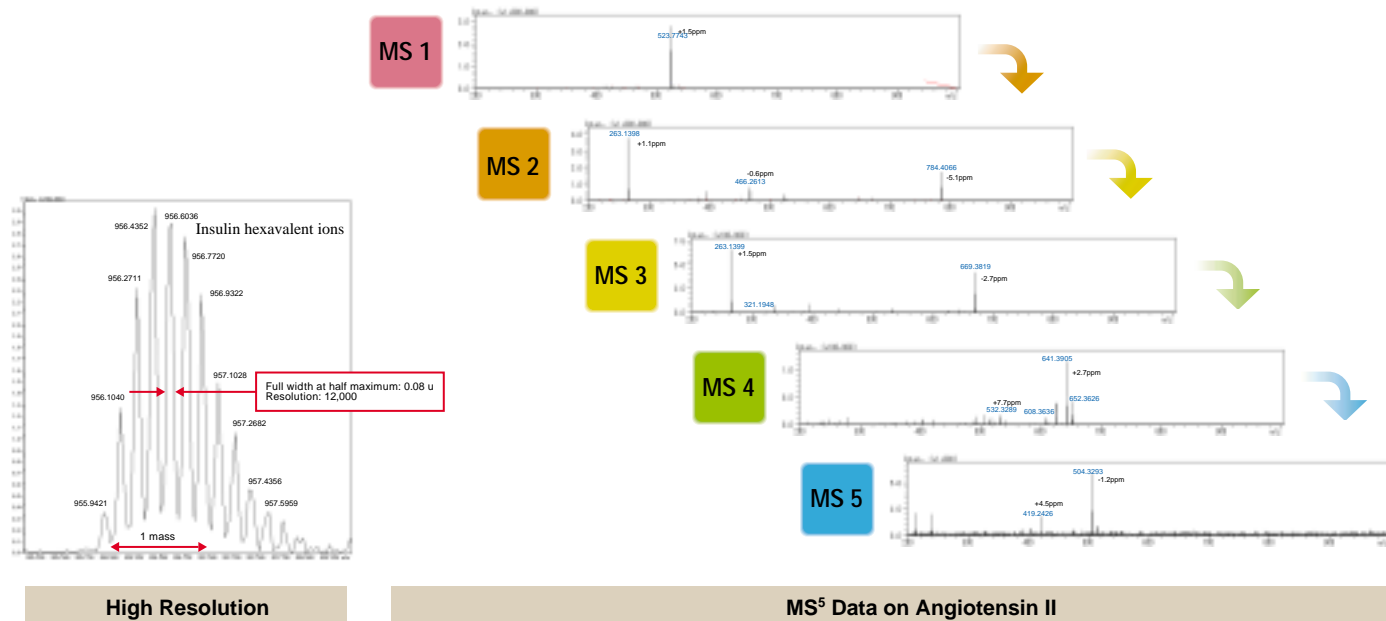
### 3-Stage Differential Pump

Permits high-sensitivity measurements by maintaining the optimum operating pressure to each mass spectrometer stage.

### Time Of Flight

The internal temperature-control mechanism ensures excellent mass stability by stabilizing the ion flight distance and ion acceleration voltage, which directly affect the mass stability.

**MS<sup>n</sup>** Support for MS<sup>10</sup>; Compressed Ion Injection (Patented) efficiently introduces ions into the ion trap and enhances sensitivity.



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