

Liquid triple  
quadrupole mass  
spectrometer

LCMS-8060

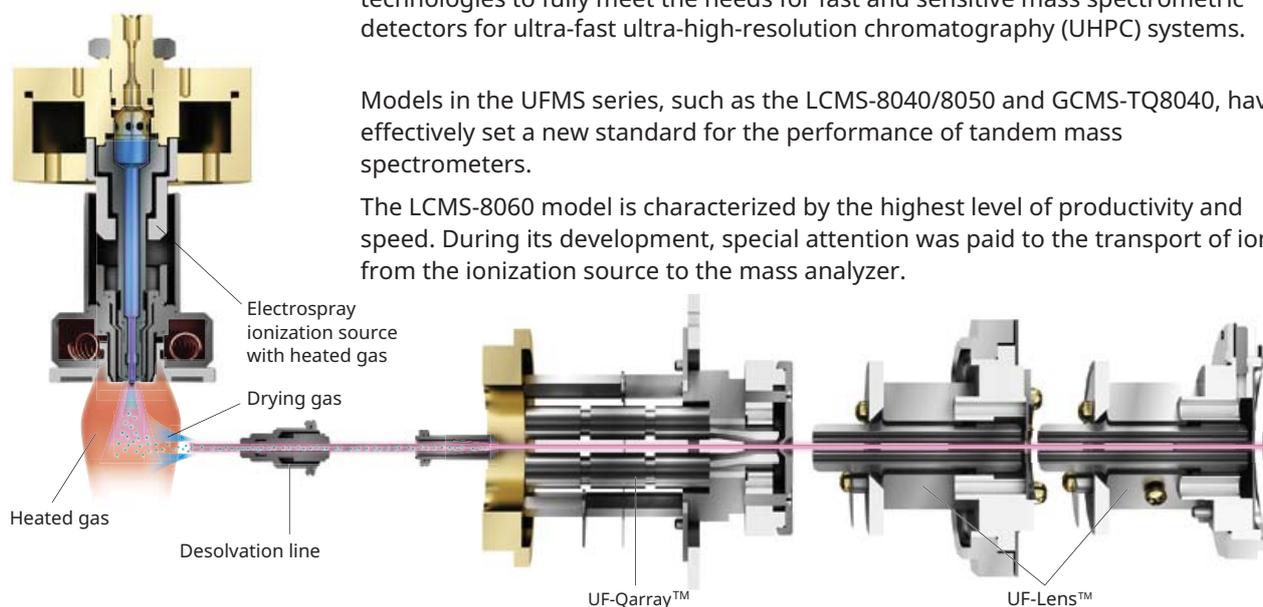


## Liquid Tandem Mass Spectrometer LCMS-8060

SHIMADZU Corporation is the first to implement high-speed mass spectrometry technologies to fully meet the needs for fast and sensitive mass spectrometric detectors for ultra-fast ultra-high-resolution chromatography (UHPC) systems.

Models in the UFMS series, such as the LCMS-8040/8050 and GCMS-TQ8040, have effectively set a new standard for the performance of tandem mass spectrometers.

The LCMS-8060 model is characterized by the highest level of productivity and speed. During its development, special attention was paid to the transport of ions from the ionization source to the mass analyzer.



The innovative UF-Qarray ion optics system focuses the ion beam and, in combination with a heated gas ionization source and an advanced vacuum system, provides a significant increase in the intensity of target ion signals. At the same time, the noise intensity does not increase and remains at the level characteristic of previous models of mass spectrometers.

Thus, the signal/noise ratio reaches impressive values, which makes the LCMS-8060 model currently the most sensitive tandem liquid mass spectrometer on the market: **the signal-to-noise ratio when administering 1 pg of reserpine is more than 750,000:1**

All SHIMADZU tandem mass spectrometer models feature the ability to operate in the combined measurement mode Synchronized Survey Scanning™, which is a combination of MRM and scanning modes, significantly expanding the analytical capabilities of the devices.

To intensify the work of analytical laboratories, SHIMADZU equips its tandem mass spectrometer models with ready-made analytical method packages (Method Packages) for use in various fields of science, industry and technology - pharmaceuticals, toxicology and forensic medicine, physiology and biochemistry, environmental protection, food industry, etc.

The packages include preset operating modes of mass spectrometers, conditions for determining target components, calibration data, and libraries of mass spectra.

## Technical specifications

Range of detectable masses:	2-2000 m/z
Permission :	R < 0.7 amu FWHM
Mass stability:	0.05 amu/12 h
Ionization methods:	Electrospray (ESI, Heated-ESI) (standard) Atmospheric Pressure Chemical Ionization (APCI) (optional) Dual Universal Ionization System (DUIS) (optional)
Max. scanning speed:	30'000 a.m.u./s
Switching time	5 ms
ionization polarity:	
Analysis modes:	Q3 scan (max . 1000 events); Q3 SIM (max . 1000 events x 32 channels); Q1 scan (max . 1000 events); Q1 SIM (max . 1000 events x 32 channels); MRM (max 1000 events x 32 channels); Product ion scan; Precursor ion scan; Neutral loss scan
Mode parameters	Maximum speed: 555 MRM/s
MRM transition registration:	Minimum measurement time (dwell time): 0.8 ms Minimum time between measurements (pause time): 1 ms
Sensitivity:	Positive ionization, 1 pg reserpine, MRM S/N > 750'000:1 (RMS) Negative ionization, 1 pg chloramphenicol, MRM S/N > 750'000:1 (RMS)
Maximum speed	2 ml/min (ESI and APCI)
mobile phase feed:	1 ml/min (DUIS)
Mass analyzer:	Molybdenum hyperbolic mass filters with prefilter
Collision cell:	Third Generation UFsweeper® Ultrafast Collision Dissociation Cell
Detector:	Ultrafast secondary electron multiplier with conversion dynode
Vacuum system:	Differential vacuum system with a capacity of (40 + 260 + 210) l/s
Dimensions:	1180 x 540 x 610 mm
Weight:	140 kg
Power supply:	Single-phase network 230 V AC (50/60 Hz), 15 A
Software :	LabSolutions LCMS



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