

Quadrupole Time-of-Flight Liquid Chromatograph Mass Spectrometer

LCMS-9030



Effortless Performance

The LCMS-9030 quadrupole time-of-flight (Q-TOF) mass spectrometer integrates the world's fastest and most sensitive quadrupole technology with TOF architecture. A product of Shimadzu's engineering DNA, speed and effortless performance enable the LCMS-9030 to address qualitative and quantitative challenges with genuine confidence and ease.



Watch the product video on our website.

Quadrupole Time-of-Flight
Liquid Chromatograph Mass Spectrometer

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Greater Accuracy

Better Sensitivity

Higher Resolution



Key Technologies of the LCMS-9030

The LCMS-9030 uses newly patented technologies to deliver both high resolution and accurate mass, attributes essential for confident formula assignment and unknown identification. High-efficiency ion guides, quadrupole, and collision cell enable high sensitivity for the detection of trace-level

compounds. Unique UFgrating and iRefTOF technologies ensure ultrafast acceleration of ions into the flight tube (UF-FlightTube) and ideal reflection of those ions back to the detector. The result is high-speed data acquisition compatible with the high-throughput laboratory.

►► High-Efficiency Quadrupole Technologies



► New TOF Technologies

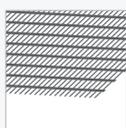
UFaccumulation™

Ion accumulation in the collision cell, synchronized perfectly with short cycles of data acquisition, maximizes sensitivity.

UFgrating™

Shimadzu's world-class manufacturing capability has enabled the ion acceleration electrode to be made with substantial mechanical strength. This grating is able to withstand the high voltages needed for ultrafast ion pulsing.

Traditional mesh electrodes for ion transmission lack mechanical strength, limiting acceleration voltage.

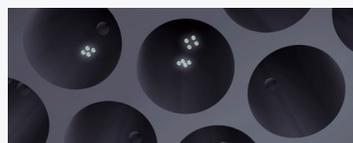


UFgrating has superior mechanical strength rather than conventional film like electrode. This unique grating structure makes it possible to apply a higher voltage.

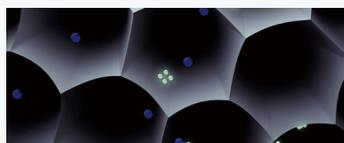
Funnel MCP

Lossless microchannel plate design maximizes sensitivity.

Conventional MCP



Funnel MCP



UF-FlightTube™

Mass accuracy needs mass stability. Shimadzu's temperature-controlled UF-FlightTube requires less frequent calibration, enabling you to run more samples.

iRefTOF™

A computationally ideal electrostatic field has become a reality. Meticulously manufactured plate electrodes are stacked to create a reflectron which turns ions with no compromise in resolution or sensitivity.



iRefTOF

A Slim, Floor-Standing Design

The simple and compact design conserves valuable laboratory space.



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Simple Design Ionization Units

In addition to the standard ESI ionization unit, optional APCI and Dual Ion Source (DUIS) probes are available for the LCMS-9030 to meet various analytical needs. Shimadzu's DUIS offers an efficient combination of ESI and APCI ionization capabilities.

ESI (standard)



APCI (optional)



DUIS™ (optional)

The dual ion source continuously performs both electrospray ionization (ESI) and atmospheric pressure chemical ionization (APCI).



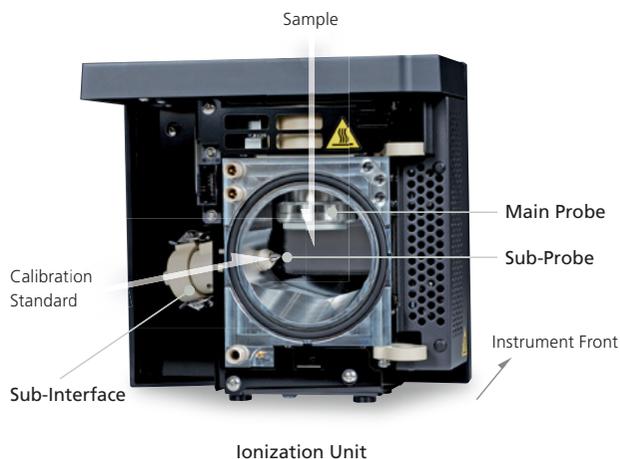
Time-Saving and Stress-Free

All ionization units are designed to be cable-free and tube-free. The probe can be detached simply by unlocking and lifting up on the unit. Switching between different ionization sources is easy, and takes just seconds.



Calibrant Delivery System (CDS)

By incorporating this CDS, calibration standards can now be introduced via a separate ionization probe that functions independently from the main probe. This optional sub-ionization unit is installed in the main probe housing and is available for all probe types (ESI/DUIS/APCI). By having two probes in one system, high-concentration calibration standards can be introduced only when needed without switching flow lines, and are kept in isolation from the sample stream, eliminating contamination.

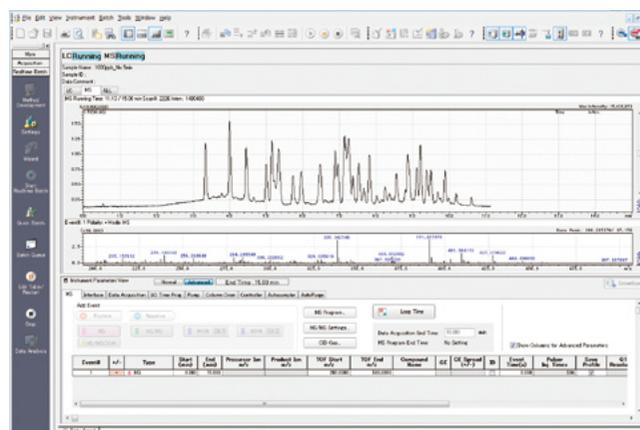


LabSolutions™ LCMS Software A Simple Analytical Platform

LabSolutions LCMS is your single point of control for UHPLC and mass spectrometry data acquisition and data analysis. Intuitive icons and a common user interface with Shimadzu's quantitative LCMS platform make accurate mass data analysis with the LCMS-9030 easy to perform. Qualitative and quantitative acquisition modes that fully utilize the capability

of the LCMS-9030 are MS, SIM, MS/MS, MRM, and MS/MS (DDA*). Three of these modes, MS/MS, MRM, and MS/MS (DDA), allow the user to fully customize settings such as quadrupole isolation resolution. Users will find easy yet flexible workflows with the LCMS-9030 Q-TOF.

* DDA: Data Dependent Acquisition



Together with the Power of Shimadzu LC

Shimadzu's renowned HPLC and UHPLC systems are the perfect chromatographic accompaniment to the LCMS-9030's high resolution and mass accuracy. LabSolutions software provides a unified point of control from which data quality is enhanced by the unmatched solvent delivery of Shimadzu's pumps and

the rapid cycle times of Shimadzu's sample injectors. In addition to reproducible high-throughput analysis, Shimadzu's UHPLC systems offer innovative method development tools (Method Scouting) and unique autosampler robotic functions to enhance your analysis and expand your capabilities.

Nexera™ X2



(Brochure: C196-E079)

i-Series Plus



(Brochure: C196-E091)

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