

Specification Sheet

Liquid Chromatograph Mass Spectrometer

LCMS-8045RX



Ultrafast Track to Your Success

- **Reliable**

Designed specifically for routine analysis that requires high reliability

- **Resilient**

Trusted performance even with the changing scientific and business needs of laboratories

- **Responsible**

Our drive is to reduce the impact on the environment by designing instruments that work with lower energy and help reduce operating costs

Instrument

Model	LCMS-8045RX
Mass range	<i>m/z</i> 2 to 2,000
Sensitivity	ESI positive: 1 pg reserpine (FIA), S/N > 550,000 :1 (RMS) 10 fg reserpine (on-column), IDL* ≤ 2.0 fg ESI negative: 1 pg chloramphenicol (FIA), S/N > 550,000 :1 (RMS) 10 fg chloramphenicol (on-column), IDL* ≤ 2.0 fg
Resolution	R < 0.7 u FWHM and adjustable to 0.5 u
Mass stability	0.05 u / 24 hr
Mass accuracy	0.1 u
Cross-talk	< 0.0005 %
Minimum pause time	1 msec
Minimum dwell time	0.8 msec
Scan speed	Max 30,000 u/sec (in all modes of scanning) (30,000 u/sec scan rate at 10 data point per u)
Polarity switching time	5 msec (including stabilization time)
Interface	ESI (Standard), Micro-ESI (Optional), APCI (Optional), DUIS™ (Optional), PESI (Optional)
Applicable LC flow rate	ESI 1 μL/min to 2 mL/min
MRM transition speed	Max 555 channels/sec
ESI desolvation temperature	More than 650 °C
APCI desolvation temperature	More than 500 °C

Analysis mode	Q1 Scan/SIM Q3 Scan/SIM MRM Precursor ion scan Product ion scan Neutral loss scan Synchronized Survey Scan™
---------------	---

Mass Analyzers and Detector

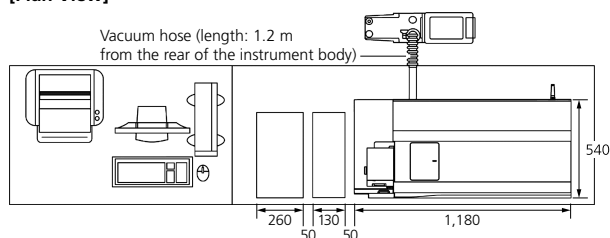
Mass analyzers	Q1 & Q3 are molybdenum hyperbolic mass filters with pre-rods; Q1 includes post-rods
Collision cell	Tapered multipole type ultra-high-speed collision cell (UFSweeper™ II collision cell)
Detector	Secondary electron multiplier with off-axis conversion dynode
Ion optics	Q-array focus optics operating in Field-Flow mode, multipole transfer optics
Digital detection system	Operates in pulse counting mode for fastest operation
Detection mode	Ultra-fast positive/negative ion switching
Dynamic range	7 orders
Vacuum system	Rotary pump (Optional): 1 unit Vacuum pumping speed: 28 m ³ /hr Triple-inlet turbo molecular pump: 1 unit 40 L/sec, 260 L/sec, 210 L/sec

Software

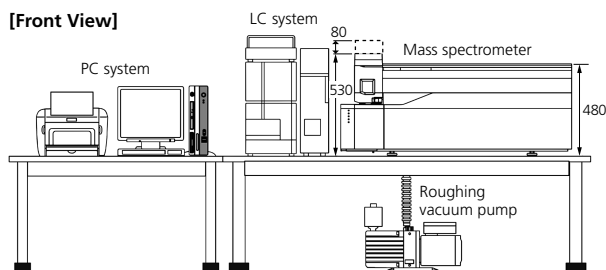
Workstation	LabSolutions™ LCMS
Multisample Quantitation Assistance	LabSolutions Insight™
Instrument control	Nexera™ and Prominence™ series
MS acquisition mode	Scan (Max. 1,000 events), SIM (Max. 1,000 events × 32 channels)
MS/MS acquisition mode	MRM (Max. 4,000 events) 1 to 1,000 events × 32 channels, 1,001 to 2,000 events × 16 channels, 2,001 to 4,000 events × 8 channels Product ion scan Precursor ion scan Neutral loss scan Synchronized Survey Scan
Auto-tuning	Possible to optimize sensitivity, resolution, and mass calibration in both positive and negative ionization mode

Installation Example

[Plan View]



[Front View]



Units: mm

Installation Conditions

Temperature	18 to 28 °C
Humidity	20 to 70 % (Non-condensing)
Size	1,180 mm (W) × 540 mm (D) × 610 mm (H)
Weight	140 kg
Power supply	MS unit: Single-phase AC 230 V, 15 A (50/60 Hz) Power consumption 640–960 W (Typical conditions), 1600 W (maximum) include rotary pump
Gas requirements	Nitrogen gas: Maximum 24.4 L/min, Purity greater than 97 % Argon: Purity greater than 99.99% as CID gas Dry air: Maximum 20 L/min, oil/water-free Total nitrogen plus air: 24.4 L/min maximum

* Instrument Detection Limit (IDL) has been statistically calculated from 10 replicate injections.

The above are not standard installation specification. All LCMS-8045RX instruments will be installed and tested in accordance with standard performance tests as detailed in the Shimadzu document ZEAH-6075, Shimadzu High-Performance Liquid Chromatograph Mass Spectrometer LCMS-8045RX Installation Standard.

DUIS, Synchronized Survey Scan, UFsweeper, LabSolutions, LabSolutions Insight, Nexera and Prominence are trademarks of Shimadzu Corporation or its affiliated companies in Japan and/or other countries.



Shimadzu Corporation

www.shimadzu.com/an/

For Research Use Only. Not for use in diagnostic procedures.

This publication may contain references to products that are not available in your country. Please contact us to check the availability of these products in your country.

Company names, products/service names and logos used in this publication are trademarks and trade names of Shimadzu Corporation, its subsidiaries or its affiliates, whether or not they are used with trademark symbol "TM" or "®".

Third-party trademarks and trade names may be used in this publication to refer to either the entities or their products/services, whether or not they are used with trademark symbol "TM" or "®".

Shimadzu disclaims any proprietary interest in trademarks and trade names other than its own.

Shimadzu does not assume any responsibility or liability for any damage, whether direct or indirect, relating to the use of this publication.