

## Specification Sheet

# LCMS-2020

Liquid Chromatograph Mass Spectrometer



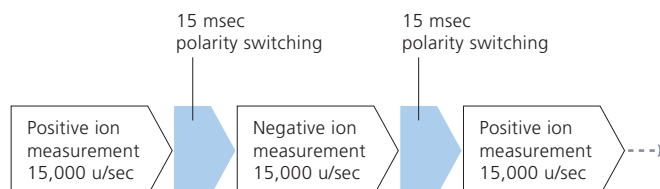
### UFsensitivity

Ultra-fast analysis with excellent sensitivity

Newly developed ion optical system and new Qarray provide excellent sensitivity, repeatability and linearity.

### UFswitching and UFscanning

UFswitching and UFscanning functions make ultra-fast MS measurement possible.



## Performance

Mass Range:	<i>m/z</i> 10 to 2000
Resolution:	R=2M
Max. Scan Speed:	15,000 u/sec
Polarity Switching Time:	15 msec
Max. Temperature of Desolvation Line:	300°C
Max. Temperature of Block Heater:	500°C (ESI, DUIS) / 300°C (APCI)
Interface:	ESI, APCI (Option), DUIS (Option)
Applicable Flow Rate:	0.001–2 mL/min (ESI) 0.05–2 mL/min (APCI) 0.05–1 mL/min (DUIS)

### Sensitivity:

Interface \ Polarity	Positive	Negative
ESI	S/N > 3500 RMS (S/N > 1400 peak-to-zero)	S/N > 150 RMS (S/N > 60 peak-to-zero)
	10 pg reserpine	20 pg <i>p</i> -nitrophenol
APCI	S/N > 1000 RMS (S/N > 400 peak-to-zero)	S/N > 250 RMS (S/N > 100 peak-to-zero)
	10 pg reserpine	20 pg <i>p</i> -nitrophenol
DUIS	S/N > 1500 RMS (S/N > 600 peak-to-zero)	S/N > 50 RMS (S/N > 20 peak-to-zero)
	10 pg papaverine	20 pg <i>p</i> -nitrophenol
	S/N > 500 RMS (S/N > 200 peak-to-zero)	
	10 ng acetophenone	

\*Sensitivities are measured using flow injection analysis.

## Software

[LabSolutions LCMS Ver.6]

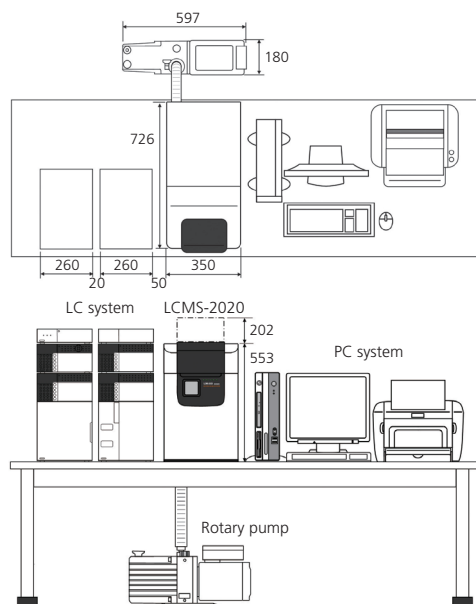
Operating System: Compatible with Windows 7 Professional / Window 10 Pro

Instrument Control: Integrated control of the UHPLC Nexera™, HPLC (Shimadzu Prominence Series and LC-2010/2030/2040), LCMS-2020 MS unit, and interface

Multi-Sequence Mode Function: Simultaneous data collection with a maximum 64 methods, such as scan, SIM, profile, positive ion, negative ion, CID switching

Autotuning: Sensitivity and resolution optimized for both positive-ion and negative-ion modes

## Installation Example



Temperature: 18°C to 28°C  
Humidity: 40% to 70% (no condensation)

Size: 350 mm (W) × 726 mm (D) × 553 mm (H)

Weight: 77.5 kg (MS unit)

Power supply: MS unit: 200/230 V AC, 10 A (50/60 Hz), single-phase  
PC unit: 100/120/220 V AC (50/60 Hz)  
LC unit: 100/120/220 V AC  
(current capacity varies with system configuration)

Gas: Nitrogen gas,  
consumption rate max. 21.5 L/minute

Size and weight of PC / Printer vary according to models.  
Appearance and Specifications are subject to change without notation of modification.

The above are not standard installation specification. All LCMS-2020 instruments will be installed and tested in accordance with standard performance tests as detailed in the Shimadzu document ZEAH-0440, Shimadzu High-Performance Liquid Chromatograph Mass Spectrometer LCMS-2020 Installation Standard.



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