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Specification Sheet

Fully Automated Sample Preparation Module for LC-MS

CLAM™-2040

Specifications

Instrument	Volume in preparation vial	350 µL maximum
	Throughput	Up to 23 samples per hour * Under specific conditions.
	Preparation functions	Sample dispensing, reagent dispensing, shaking, suction filtration, and heating. * Up to 20 steps can be set in a protocol.
	Sample handling	Multiple sample preparations overlap.
	Onboard preparation vial capacity	Up to 60 filter vials and 60 collection vials
	Onboard sample capacity	Up to 60 samples
	Onboard reagent capacity	Up to 20 bottles
	Cooling temperature	• From 4 °C to 15 °C (in case room temp. is from 18 °C to 23 °C) • From 4 °C to (room temp. − 8) °C (in case room temp. is from 23 °C to 28 °C)
Preparation functions	Sample dispensing	Volume ranges from 10 to 100 µL in 0.5 µL increments. Liquid detection and shock detection.
	Reagent dispensing	Volume ranges from 10 to 300 µL in 0.5 µL increments. Liquid detection and shock detection.
	Shaking	Motorised cup with eccentric rotation. Rotation speed: from 1,000 to 2,600 rpm
	Heating	From 35 °C to 60 °C, Accuracy ±5 °C
Dimensions		Sample preparation module: 670 mm (W) × 700 mm (D) × 1,190 mm (H) Table for LC (accessory): 810 mm (W) × 655 mm (D) × 670 mm (H)
Weight		Sample preparation module: 170 kg. Table for LC (accessory): 60 kg.
Power		241-18700-40: 230 V AC, 50/60 Hz, 700 VA 241-18700-43: 220 V AC, 50/60 Hz, 700 VA 241-18700-42: 120 V AC, 50/60 Hz, 700 VA 241-18700-58: 230 V AC, 50/60 Hz, 700 VA
Working environment		Temperature: 18 °C to 28 °C, Humidity: 40 to 70 % RH
Compatibility (Instruments)		LCMS-8040/8045/8050/8060/8060NX/9030 * SIL-40C XR/X3 must be included in the HPLC configuration.
Optional parts		• Touch panel monitor and monitor arm. • Handheld barcode reader.

Software

Compatibility (Software)	LabSolutions™ LCMS
Functions	Control of the sample preparation module.
	Indirect control of the LCMS by linking to LabSolutions.
	Setting of the parameters for each sample preparation step. * Up to 20 steps per protocol. Up to 60 protocols.
	Various management • Calibration curve (display of accuracy) • Quality control (QC) • Maintenance history • Reagent (remaining amount, expiration date) • Operating log • Other
	Display of mass chromatograms and manual processing.
	Display and output of analysis results (concentration values).
	Option to submit priority analysis request for urgent samples.
	Filtration vials can be loaded during analysis.
	Sample dilution function (1:2, 1:5, 1:10).
	Dilution of the pretreated sample by the autosampler (after filtration) and storage of the treated solution in a 96-well plate.
	Qualitative analysis function * Toxicological Database for LC/MS/MS or Rapid Screening System for Toxicological Substances Ver. 3 software is required separately.
	Analysis request input assistance by handheld barcode reader (optional).
	Automatic reading of sample ID.
	Connectivity with Laboratory Information System (LIS) (HL7 standard) * Development is required separately on the LIS side based on the CLAM-2040 communication specifications.
	Reading analysis requests from text files and outputting concentration values to a specified folder

Preparation vial

Vial material	Polypropylene (PP)
Filter material	PTFE with 0.45 µm mesh
Reusability	None (disposable)
Sterilization	None

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