

MV-10 ASFE System

The Waters® MV-10 ASFE® System is a semi-automated, multi-vessel supercritical fluid extraction (SFE) system enabling faster, greener, and more selective analyte extractions, using supercritical CO₂, from a wide variety of sample matrices.

SYSTEM SPECIFICATIONS*

Operating pressure range	60 to 325 bar (870.2 to 4713.7 psi)
System dimensions (W x D x H)	137.2 x 64.8 x 58.8 cm (54.0 x 25.5 x 22.0 in.)
Voltage and frequency	110 or 220 V; 50 to 60 Hz
Process control	Automated operation via computer
Wetted materials	316 stainless steel, 17-4 stainless steel, Nitronic 60, Teflon (PTFE), sapphire, ruby, GFPM, UHMWPE (optional)
Software	ChromScope™ Software

* Individual component specifications may allow operation outside the total system defined parameters.

The system is designed and tested only for the ranges defined in System Specifications.

FLUID DELIVERY MODULE (FDM)

CO ₂ flow rate	0.5 to 15.0 mL/min
Co-Solvent flow rate	0.1 to 10.0 mL/min
Flow accuracy	±0.1 mL/min
Liquid CO ₂ supply pressure	~ 57 bar (827 psi)
Cooling	Circulating coolant
Pressure range	60 to 400 bar (870.2 to 5801.5 psi)
Pressure accuracy	±1% full scale pressure
Number of co-solvents	Six
Capacity	Up to 10 extraction vessels (5, 10, or 25 mL volume)

COLUMN OVEN

Temperature range	Ambient to 90 °C
Maximum heat rate	~6 °C/min
Temperature accuracy	±0.5 °C
Temperature stability	±0.1 °C
Temperature precision	±0.1 °C
Operation control	Touch panel interface or PC control
Programming	User customizable PID
Switching valves	Two, 10-port valves for extraction vessel selection

BACK PRESSURE REGULATOR (BPR)

Flow rate	1.0 to 20.0 mL/min
Maximum pressure	400 bar (5801.5 psi)

FRACTION COLLECTION MODULE

Capacity	Up to 12 collection bottles (100, 250, or 500 mL volume)
Makeup pump flow rate	0.1 to 5.0 mL/min
Fraction selection valve	12-port
Maximum pressure	5 bar (72.5 psi)

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