



SPECIFICATION SHEET

ASAP 2425 AUTOMATED SURFACE AREA AND POROSIMETRY SYSTEM

Surface area and porosity are important physical properties that influence the quality and utility of many materials and products. Therefore it is critically important that these characteristics be accurately determined and controlled. Likewise, knowledge of surface area and especially porosity often are important properties in understanding the formation, structure, and potential application of many natural materials.

High Performance and High Sample Throughput

The automated Micromeritics® ASAP® 2425 surface area and porosimetry system is designed to help busy laboratories expand their workflow while providing highly accurate and precise surface area and porosimetry data. High performance, versatile analysis, and sample preparation systems are included in the same instrument.



Specifications
Electrical

Voltage	100/115/230 VAC ($\pm 10\%$)
Frequency	50 or 60 Hz
Power	800 VA, exclusive of vacuum pumps, which are powered separately

Environment

Temperature	10 to 30 °C operating, -10 to 55 °C storage or shipping
Humidity	Up to 90% (non-condensing) for instrument

Capacity

Analysis System	6 sample ports, each with a constantly monitored saturation pressure port
Degas System	12 degas ports, each with independently controlled heating mantle

Analysis System

Manifold Temperature Transducer	Type: Platinum resistance device (RTD) Accuracy: ± 0.10 °C by keyboard entry Stability: ± 0.10 °C per month
Manifold Pressure Transducer	Range: Vacuum to 950 mmHg operating: 1000 mmHg maximum 10 mmHg added for krypton option 1 mmHg for micropore option Resolution: 1000 mmHg Transducer: 0.01 mmHg 10 mmHg Transducer: 0.0001 mm 1 mmHg Transducer: 0.00001 mm Accuracy: 1000 mmHg Transducer: within 0.1% FS 10 mmHg Transducer ¹ : within 0.15% of reading 1 mmHg Transducer ² : within within 0.12% of reading
Sample Port Transducer and Po Port Transducers	Range: 0 to 950 mmHg Resolution: 0.01 mmHg Accuracy: $\pm 0.1\%$ Full Scale
Vacuum Gauge	Type: Thermocouple Range: 0.001 to 1 mmHg

Physical

Height	159 cm (62.5 in.)
Width	103 cm (40.5 in.)
Depth	51 cm (20.2 in.)
Weight	160 kg (350 lb)

Includes nonlinearity, hysteresis, and non-repeatability.

¹The 10 mmHg transducer is active only when performing krypton analyses.

²The 1 mmHg transducer is present only in the enhanced micropore option.

Vacuum System

Nitrogen System Pumps	2 oil-based pumps: 1 analysis, 1 degas 4 pumps (optional): 2 oil-free (1 analysis, 1 degas), 2 high vacuum (1 analysis, 1 degas)
Krypton & Micropore Pumps	4 pumps: 2 oil-free (1 analysis, 1 degas), 2 high-vacuum (1 analysis, 1 degas) Oil-based mechanical pump: 5 x 10 ⁻³ mmHg ultimate vacuum Oil-free and high vacuum pump: 3.8 x 10 ⁻⁹ mmHg ultimate vacuum ³

Degas System

Capacity	12 degas ports
Vacuum Control	Selectable target pressure controls switchover from restricted to unrestricted evacuation
Evacuation	Selectable evacuation rate from 1.0 to 50.0 mmHg/s
Manifold Pressure Transducer	Range: 0 to 950 mmHg Resolution: 0.01 mmHg Accuracy: $\pm 0.1\%$ Full Scale
Vacuum Transducer	Type: Thermocouple Range: 0.001 to 1 mmHg
Titled Backfill Gas	User-selectable at dedicated port, typically nitrogen or helium
Temperature Control	Temperature Range: Ambient to 450 °C (Programmable) Temperature Control: 1 ramp during evacuation phase, 5 additional selectable ramps during heating phase Selection: Digitally set, 1 °C increments from computer Accuracy: Deviation less than ± 10 °C of set point at the sensing thermocouple embedded in the heating mantle

Computer Requirements

Windows® 7 Professional or higher operating system recommended (64 bit) ⁴ USB port ⁵ Ethernet port (10 base T or 100 base T)
--

³Ultimate vacuum measured by pump manufacturer according to Pneuport Standard 5608
⁴Not to be installed on a network drive with shared access. Multiple users cannot operate the application at the same time.

⁵One additional USB port must be available for Instrument.

Due to continuous improvements, specifications are subject to change without notice.

Micromeritics Instrument Corp.
4356 Communications Drive
Norcross, GA 30093 • USA
Tel.: +1 770 662-3636

info@micromeritics.com
micromeritics.com

BELGIUM
micromeritics.benelux@micromeritics.com

CHINA
micromeritics.china@micromeritics.com

FRANCE
micromeritics.fr@micromeritics.com

GERMANY
micromeritics.de@micromeritics.com

THE NETHERLANDS
micromeritics.benelux@micromeritics.com

UK
micromeritics.uk@micromeritics.com