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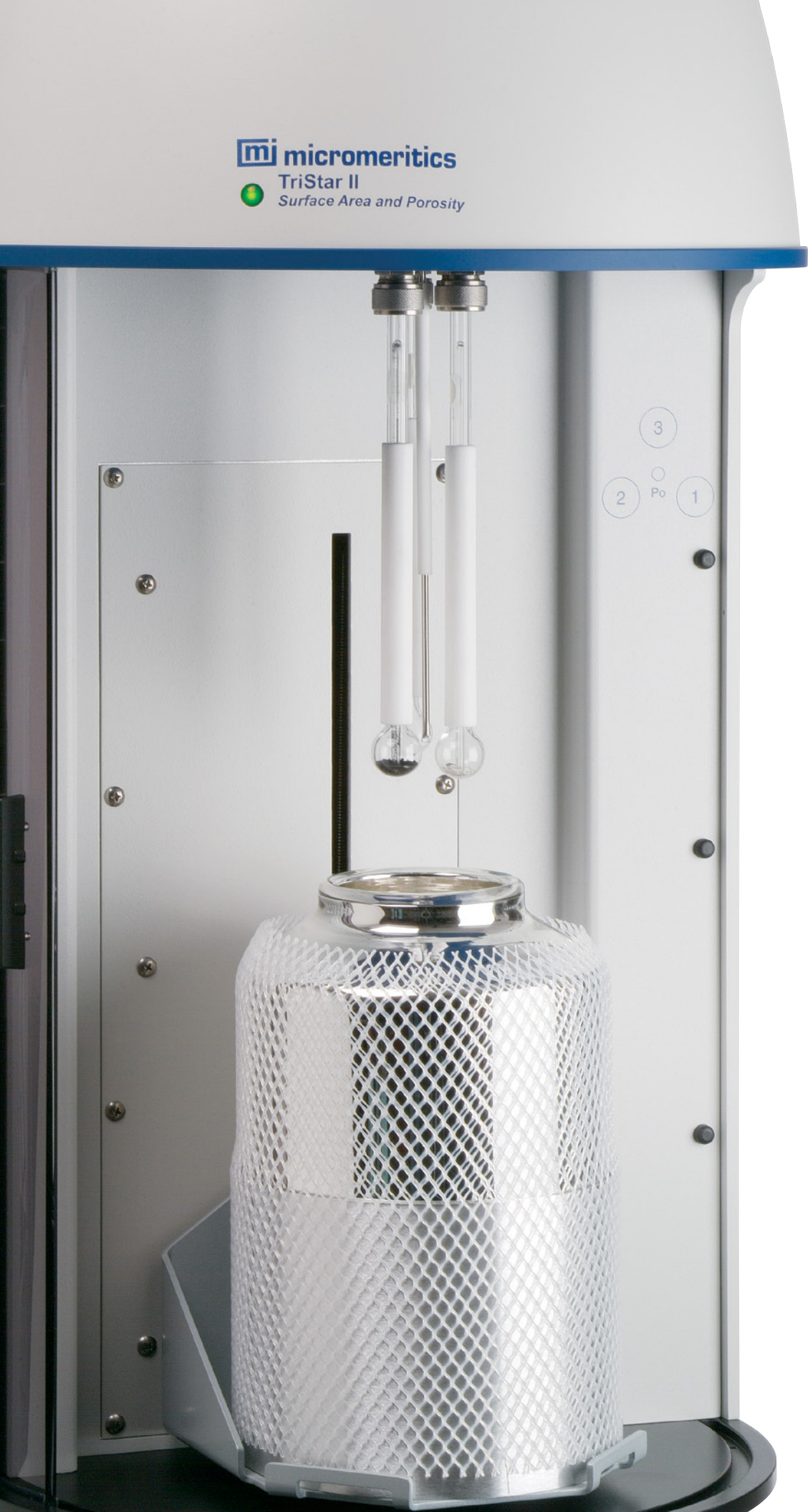
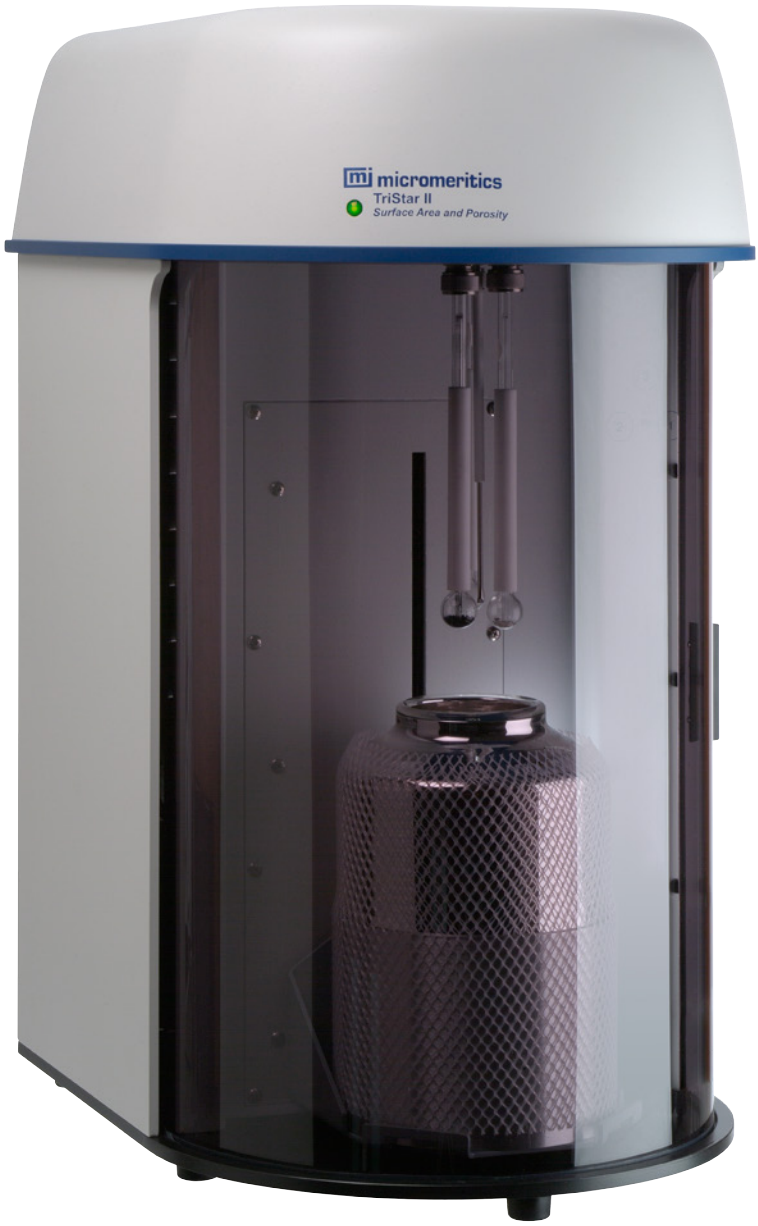


TriStar II Surface Area and Porosity Analyzer



Analytical Versatility. High Throughput. Small Footprint.

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.

High Sample Throughput and Analytical Versatility

The TriStar II is a fully automated, three-station, surface area and porosity analyzer that delivers high-quality data at an affordable price. The TriStar II also features a Krypton Option, allowing measurements in a very low surface area range.

A Small Footprint Packed with Features

- Three analysis ports can operate simultaneously and independently of one another. Three BET surface area measurements can be performed in less than 20 minutes.
- The TriStar II accommodates the use of nitrogen, argon, carbon dioxide, and other non-corrosive gases such as butane, methane, or other light hydrocarbons. A Krypton Option can extend surface area measurements to as low as 0.001 m^2/g.
- A dedicated P_o port is standard, allowing the measurement of saturation pressure on a continuous basis. Saturation pressure can be entered manually, measured continuously, or collected over the sample.
- Incremental or fixed dosing routines prevent overshooting pressure points while minimizing analysis time.
- Free space can be measured, calculated, or manually entered providing maximum flexibility in accommodating special sample types and emphasizing speed when needed. Helium is not required.
- The TriStar II can collect up to 1000 data points. Fine details of the isotherm can be observed and recorded providing high resolution and revealing pore structure details.
- Optional sample preparation devices are available combining flowing gas and/or vacuum with heat to remove atmospheric contaminants, such as water vapor and adsorbed gas, from the surface and pores of the sample.

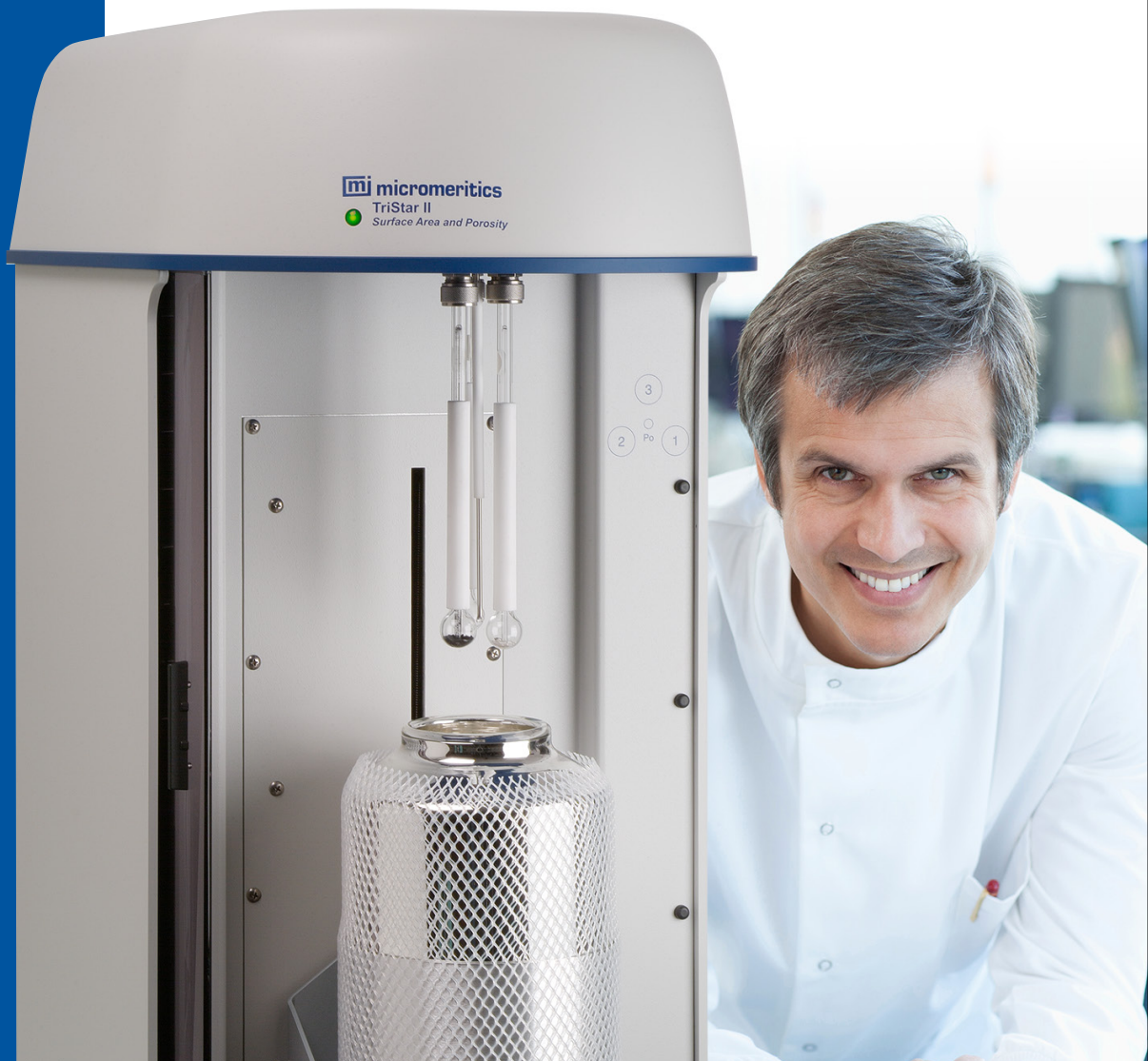
Tabular and Graphical Reports:

- Single and multipoint BET surface area
- Total pore volume
- Langmuir surface area and Isotherm reports
- t-Plot
  - Harkins and Jura Thickness Equation
  - Halsey Thickness Equation
  - Carbon STSA
  - Broekhoff-de Boer
  - Kruk-Jaroniec-Sayari
- BJH adsorption and desorption
  - Standard
  - Kruk-Jaroniec-Sayari correction
- Dollimore-Heal adsorption and desorption
- Mesopore
  - Volume and area distributions by pore size
- MP-Method
- HK
- Saito-Foley
- Chang-Yang
- DFT pore size
- DFT surface energy
- Summary Report
- SPC reports
- Validation reports

Operating Software

The TriStar II Windows interface provides a familiar environment for the user. It is easy to collect, organize, archive, reduce isotherm data, and store standardized sample information for later use. The reports may be generated to screen, paper, or spreadsheet file. Cut-and-paste graphics, scalable and editable graphs, and customized reports are easily generated.

In addition to controlling instrument operation, the Windows software also reduces the isotherm data collected during analysis. The reduced data can be reviewed or printed in a variety of easy-to-interpret tabular and graphical reports.



Specifications

Pressure Measurement

Absolute	Range: 0 to 950 mmHg • Resolution: Within 0.05 mmHg Accuracy: Within 0.1% of full scale • Linearity: < ± 0.1% of span
Relative	P/P_o range: 0 to 1.0 P/P_o • Resolution: < 10-4

Analysis

Specific Surface Area	From 0.01 m^2/g, nitrogen unit • From 0.001 m^2/g, krypton unit
Total Surface Area	From 0.1 m^2, nitrogen unit • From 0.01 m^2, krypton unit
Pore Volume	From 4 × 10-6 cm^3/g
Dewar Duration	Up to 40 hours

Adsorptive Gases

Nitrogen Unit	Nitrogen; argon, carbon dioxide, or other non-corrosive gases; butane, methane, or other light hydrocarbon vapors; Oxygen can also be used only with an appropriate vacuum pump.
Krypton Unit	Same as Nitrogen unit, plus the capability to perform krypton surface area analyses at lower pressures

Environment

Temperature	10 and 35 °C (50 to 95 °F), operating • 0 to 50 °C (0 to 122 °F), non-operating
Humidity	20 to 80% relative, non-condensing

Physical

Height	74 cm (29 in.)
Width	40 cm (16 in.)
Depth	51 cm (20 in.)
Weight	37 kg (82 lbs)

Electrical

Voltage	100/120, 220/240 VAC
Power	150 VA, maximum
Frequency	50 to 60 Hz

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

micromeritics®

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To request a quote or additional product information, visit
micromeritics.com

Contact your local Micromeritics sales representative
or our Customer Service Department at
770-662-3636

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