

Brunauer-Emmett-Teller (BET)

Model	AUTOSORB-1
Description	<p>The AUTOSORB-1 operates by measuring the quantity of gas adsorbed onto or desorbed from a solid surface at some equilibrium vapor pressure by the static volumetric method. The data are obtained by admitting or removing a known quantity of adsorbate gas into or out of a sample cell containing the solid adsorbent maintained at a constant temperature below the critical temperature of the adsorbate. Consistent and reliable surface area and pore size results depend upon proper sample preparation procedures. In terms of Brunauer, Emmett and Teller (BET) analysis, the limitation in throughput is often sample preparation. The complete degassing of samples can often require several hours, while surface area measurements may require as little as 30 minutes. The instrument is equipped with two ports for sample outgassing and one port for sample measurement. Diameter of the sample cell: 6 mm, 9 mm, 12 mm. It enables accurate, precise and reliable characterization of powdered and porous materials: BET Surface Area Measurement (single point and/or multipoint), Langmuir Surface Area, Adsorption/Desorption Isotherms, Pore Volume and Pore Size Distribution, Chemisorption Studies.</p>
Features	<ul style="list-style-type: none">• Combines gas detection by high sensitivity, thermal conductivity detector (TCD) for TPR/TPD/TPO analysis and automatic physisorption and chemisorption by precise vacuum volumetric method for analysis of BET surface area, meso- and micropore size distribution, active surface area, degree of metal dispersion, heats of adsorption, etc.• Temperature programmed techniques (TPR/TPD/TPO) automatically performed via user programmable pretreatment and analysis procedures including multi-step temperature ramping up to 1,100 °C, automatic gas switching and automated data acquisition.• Provides for flow-based, pulse titration method for rapid determination of active surface area, degree of metal dispersion, etc.• Available vapor generator option with heated manifold for use with water and organic vapors.• Available, integrated mass spectrometer option for identification of desorbed gases.
Accessories	None
Consumables	<ul style="list-style-type: none">• Liquid Nitrogen• Helium gas• Nitrogen gas• Bulbs

Photo



Contact

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