BSD-660 A3TG Fully Automatic High-throughput
Advanced Specific Surface Area and Pore size Analyzer

BSD INSTRUMENT
FOCUS ON SORPTION

◆ Redefine 'Full Automation' : Support auto-switching degassing and testing;
◆ High Throughput: 3 in-situ analysis stations;
◆ Eliminate Helium Pollution: He gas measurement free space, then vacuum heating degassing, which eliminate pollution of He on micropore adsorption.



Main Function

◆ High-throughput and Fast Specific Surface Area Analysis;
◆ Pore Volume and Meso-, Micro-, Ultra Micro-pore Size Distribution Analysis;
◆ Regular gas, such as N_2, Kr, O_2, Ar, CO_2;
◆ other gas, such as Hydrocarbon C1-C4, CO, NH_3;

Technical Parameter

◆ Test Range: ≥0.01 m2/g (N_2) and 0.005 m^2/g (Kr), pore size distribution: 0.35 – 500 nm;
◆ High Accuracy: < 0.5% RSD of surface area, pore size, pore volume, adsorption capacity and quantitative error(BET value of standard Sample as reference);
◆ Pressure Transducer: Transducers are equipped for each analytic station, P0 station and calibrated volume respectively, 1000 Torr * 5,10 Torr* 3,0.1 Torr * 3, which work independently with precision at 0.15%;
◆ Vaccum System: Vacuum can reach 10^{-2} Pa with mechanical pump while can reach 10^{-8} Pa with molecular pump.
◆ Heater: temperature control range 25 – 500℃ ;
◆ Water bath: temperature control range -10 – 80℃ ;
◆ Dewar vessel capacity: 3L;
◆ Valve:Pneumatic valve with metal seal;
◆ Data report:Isotherm, BET, Langmuir, BJH,Dollimore-Heal (DH), DA, t-plot, MP, HK, SF, NLDFT, GCMC;
◆ Accessories: Liquid Nitrogen tank , Sample Cell, Glass rod, Glass funnel, Sample Cell Rack;

BSD-660MG A3TG Full Automation & High Throughput

Advanced Specific Surface Area and Pore size Analyzer

BSD INSTRUMENT
FOCUS ON SORPTION

Specification 660	
Analysis Range	1.0x 10^-8 to 1.0 P/P0
Measurement Range	≥0.01 m2/g (N2) and 0.005 m2/g (Kr)
Pore Size Range	0.35 – 500 nm
Sample Tube Volume	5 mL; Recommended Sample Mass: 100 mg
Gas Types	Regular gas, such as N2, Kr, O2, Ar, CO2; other gas, such as Hydrocarbon C1-C4, CO
Adsorption Method	Static volumetric method
Degassing System	Ambient to 450 °C, Vacuum level 10-2 Pa with mechanical pump, 10-8 Pa with molecular pump.
Pressure Transducers	1000 mmHg, 10 mmHg, 0.1 mmHg.
Reproducibility	< 0.5% RSD of surface area, pore size, pore volume
Analysis Time	Minimum 25 minutes
Sample Holders	Instrument-specific sample holders. Securely install 3 sample tubes simultaneously with a single bracket nut.
Gas Inlets	7 gas inlets for physisorption instrument
Degas station	Degas 3 in situ, 12 additional with BSD-VD12
A/D Data Acquisition	32 bit (effective 26)
Pressure Transducer	1000 Torr Transducer: Resolution ≤ 0.001 mmHg / Accuracy ≤±0.12%. 10 Torr Transducer: Resolution ≤ 0.00001 mmHg / Accuracy ≤±0.12%. 0.1 Torr Transducer: Resolution ≤ 0.0000001 mmHg / Accuracy ≤±0.15%
Cryogen Dewar	Volume ≥ 3 L; Holding Time: 90 h
Furnace	temperature control range 25 – 500°C
Software Capabilities	BET, Langmuir, BJH, DFT/NLDFT, t-plot, MP, HK, SF, Alpha-S, Dollimore-Heal methods.
PC Desktop/Laptop	Matched PC or Laptop

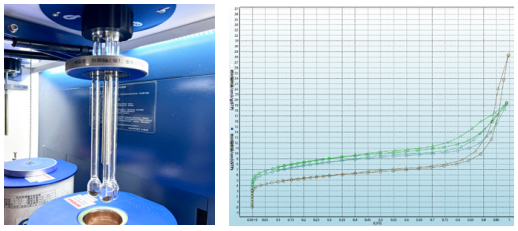
BSD-660 A3TG Fully Automatic High-throughput
Advanced Specific Surface Area and Pore size Analyzer

BSD INSTRUMENT
FOCUS ON SORPTION

Technical Advantages

◆ **High-throughput**

Support simultaneous testing of 3 samples,all 3 stations are tested in the same dewar or water bath;



Analyze 3 samples simultaneously

◆ **Fully Automatic Analysis**(Patent)

Auto-switch between furnace and Dewar cup firstly developed in worldwide;

◆ **Eliminate Pollution of Helium**

Before test Helium test free space, then vacuum heating degassing; First solve He pollution on micro-pore adsorption analysis;

◆ **In Situ Vacuum Degassing with Molecular Pump**

◆ **Programme Control Pressure and Temperature to Prevent Sample (Fine Powder Materials) from Elutriation**(Patent)

This procedure consists in varying the heating rate in relationship to the gas pressure evolved from a porous material during the degassing under vacuum conditions.

◆ **Thermostatic Gas Pipeline System**

Internal gas pipeline system keep thermostatic at 40℃ ;accuracy better than 0.1℃ ;

◆ **Seal-at-once Sample Tube Technology**(Patent)

Seal 3 tubes -at-once in one analytic station, no need to seal respectively;

◆ **Multiple Inlets for Adsorbate Gas**

5 Gas Inlet ports, optional with 8 independent gas inlet ports; It can support the adsorption of CO_2, O_2, Kr, Ar, CO, NH_3, H_2, CH_4, C_4H_{10} and other and non-corrosive gas;

◆ **Upward moving door**

User friendly design and save the space in lab;

◆ **Electric Turbine Liquid Nitrogen Pump** (Patent)

Move freely and safely add liquid nitrogen;

◆ **Telecommunication with Balance**

Connected to the scale, the audio voice announce the weighing and automatically record;

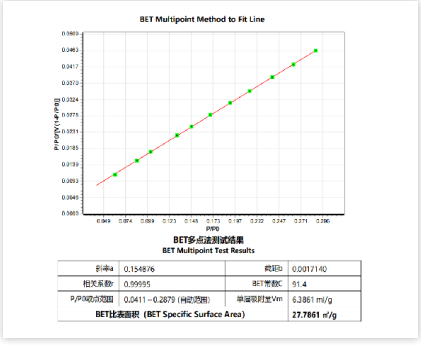
◆ **High Utilization of Time**

Auto-run based on program setting,utilization improved;

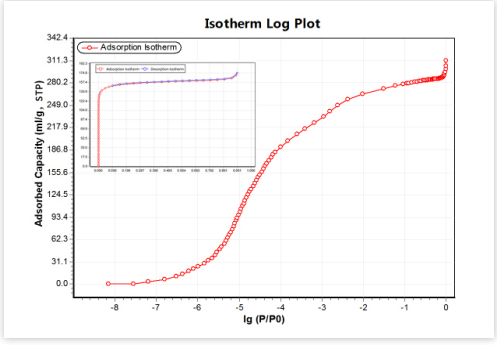
◆ **High Stability**

Intelligent software, safe and durable hardware.

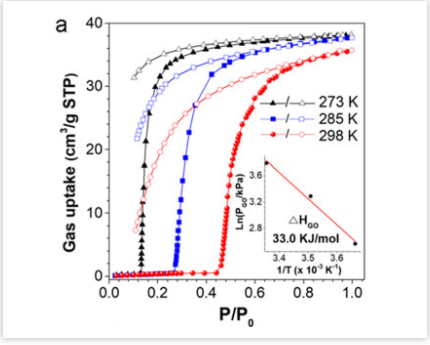
Test Reports



Test Report (BET Multi-point Method)



Isotherm（P/P0<E-9)



Gas Adsorption Isotherm Graph

WhatsAPP: +8613810681423
Web: www.bsdsorption.com
E-mail: service@beishide.com

Sample Test Support
Attn: Miss Yang
Mobile: +8613810512843