Gas Sorption Analyzer

3FLEX 3500 from Micromeritics Instrument Corporation, USA is recognized as one of the most advanced instrument in the field for material surface characterization. It is a fully automated 3-port (with 2-Micropore ports and 1-Mesopore port) gas adsorption analyzer for providing high resolution adsorption, desorption, isotherms to advance and validate fundamental understanding into development of methodologies and process improvements.

Contact Us

Dr, A. Samanta
Department of Chemical Engineering
Phone: 326 2235087
Email: asamanta@iitdhanbad.ac.in
Web:
https://www.iitism.ac.in/index.php/Research_consultancy/central_research_facility

Major Features:

- Minimum Measurable Surface Area Range: 0.01 m^2/g
- Pore Diameter Range: 3.5 - 5000 Å
- Micropore Volume: Detectable within 0.0001 cc/g
- Analysis Range: 1.3×10^{-9} to 1.0 P/P_0
- Ultimate Vacuum: 3.75×10^{-10} mm Hg
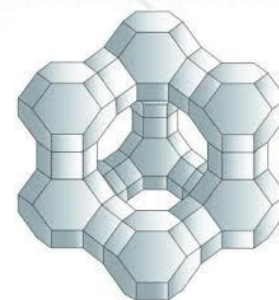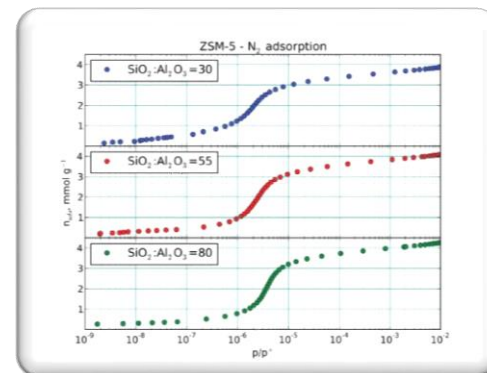
CENTRAL RESEARCH FACILITY IIT(ISM) DHANBAD
Jharkhand 826004

CENTRAL RESEARCH FACILITY IIT(ISM) DHANBAD

Gas Sorption Analyzer

BJH Desorption dV/dlog(w) Pore Volume
Alumina
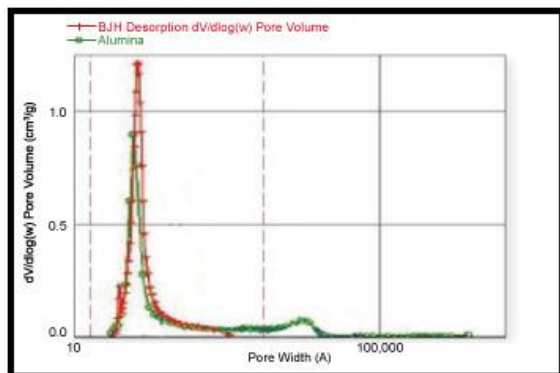
Bench top Instrument is capable of carrying out following analyses:

- Single-point BET surface area
- Multi-point BET surface area
- Adsorption isotherm
- Desorption isotherms
- Langmuir surface area
- BJH mesopore volume
- BJH mesopore area
- Total pore volume
- DeBoer t-plot & others

- MP method
- Micropore volume
- Micropore area
- Micropore size distribution
- Heat of adsorption

One instrument with three configurable analysis ports for high throughput mesopore and micropore analyses

Vapor Isotherms

The 3Flex includes an extensive library of fluid properties of fixed gases and commonly used vapors. Isotherm data are easily collected using hydrocarbons as the adsorptive.

Data Reduction and Software Control

User-selectable data ranges through the graphic interface allow direct modeling for BET, BJH, t-Plot, Langmuir, DFT interpretation.
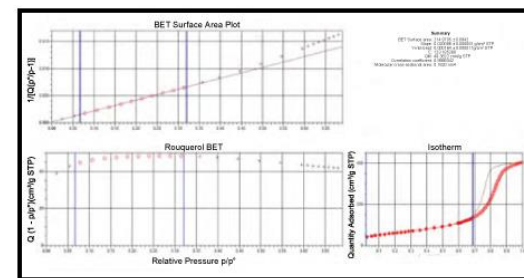
MicroActive interactive features reduce the often-difficult trial-and-error procedure for fitting the BET surface area plot by providing direct feedback to the user