EQUIPMENT CARD

PLAPIQUI



#5617

Gas Adsorption Analyzer (micropore size-chemisorption) (Quantachrome, AUTOSORB IQ)

DESCRIPTION

Volumetric gas adsorption analyzer with a high vacuum system and a chemisorption station. It determines surface area, pore volume and pore size distribution by physisorption, and characterizes the active sites of catalysts by chemisorption and temperature programmed analysis.

MAIN FEATURES

- Principle: physical and chemical adsorption by the manometric (volumetric) method
- Vacuum: high vacuum system with low pressure transducers (0.1 torr) for micropores
- Ports: up to 3 analysis stations and integrated degassing stations
- Adsorptives: N_2 (77 K), Ar (87 K), CO_2 (273 K), H_2, CO, NH_3
- Chemisorption: high temperature furnace with fan-assisted cooling
- Flow measurements: TCD detector and pulse titration loop (TPR, TPD, TPO)
- Calculation models: BET, Langmuir, t-plot, BJH, DR/DA and DFT/NLDFT

MAIN APPLICATIONS

- Textural characterization of catalysts, supports, zeolites and activated carbons
- Determination of exposed metal area, dispersion and crystallite size
- Measurement of surface acidity and basicity by NH_3 and CO_2 TPD
- Reducibility studies by H_2-TPR
- Evaluation of adsorbents and analysis of the micropore development of carbons

ASSOCIATED TECHNOLOGY AND SERVICES

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