

Apparatus for sorption measurements ASAP 2020 HD Micromeritics



Technical description:

Micromeritics' ASAP 2020 HD is an analyzer for measuring gas sorption and determination of BET surface area, size, volume, and pore distribution in powders and porous materials.

Apparatus characteristics:

apparatus compatible with N ₂ , Ar, He and CO ₂ gases
two independent degassing stations
one analytical station
determination of size, volume, and surface area (2 - 50 nm), micropores (0.35 - 2 nm)
working pressure range of the apparatus 1.3×10^{-9} to $1.0 P/P_0$
temperature range of sample degassing: 20-450 °C
analysis of powder and solid samples of dimensions not larger than 7 x 7 x 10mm

Trade name: Apparatus for sorption measurements ASAP 2020 HD
Micromeritics

More details: </equipment/aparat-do-pomiaru-powierzchni-cakowitej-i-objetosc/>

Access type: External

Type of accreditation / certificate: Not applicable

Contact person: Bajda Tomasz

Contact person url: <https://skos.agh.edu.pl/osoba/tomasz-bajda-5644.html>

Responsible body: Wydziałowe Laboratorium Badań Fazowych, Strukturalnych, Teksturalnych i Geochemicznych

Group / laboratory / team: The Faculty Laboratory for Phase, Structural, Textural and Geochemical Studies

Last update date: June 10, 2023, 11:02 p.m.

Year of commissioning: 2012

IDUB research areas:

(PRA 5) Materials, technologies, and processes inspired by nature: biotechnology, bioinspirations in engineering and materials science, biosensors, bioenergetics, biocatalysis, biocomputers, and biocomputation

(PRA 7) Design, production, and testing of modern materials and the technologies of the future based on a multidisciplinary approach combining materials engineering with chemistry, physics, mathematics, and medicine

Research capabilities:

gas sorption measurement for mineral, synthetic, industrial samples, etc.
BET and pore volume analysis of solid and powder samples

Measurement capabilities:

single and multi-point BET surface measurement
Langmuir surface and Temkin and Freundlich isotherm analysis
pore volume and pore surface area distributions in terms of meso- and macropores by the BJH method
distribution of micropores by D-A method and total volume of micropores by t-Plot method

Conditions for providing infrastructure:

- according to the regulations listed on the laboratory's website: <http://wydzlab.agh.edu.pl/wp-content/uploads/2020/11/Regulamin-WLBFSTiG.pdf>
- scientific and research cooperation with AGH units and other domestic and foreign scientific units
- cooperation within the projects of NCN, NCBiR, cooperation with industry and under contracts