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IGA ECOsorp DYNAMIC GAS & VAPOR SORPTION ANALYZER

A dedicated gravimetric analyzer for carbon capture applications

The IGA ECOsorp is a new benchtop sorption analyzer for carbon capture studies. Combining high resolution gravimetric water sorption with CO₂ gas sorption under dynamic flow conditions, the IGA ECOsorp offers an affordable and practical solution for assessment of candidate carbon capture sorbent performance across a wide range of relevant conditions.

Carbon dioxide and water concentrations are individually controlled, with CO₂ partial pressures from 100 ppm upwards and independent humidity regulation allowing accurate assessment of material performance under Direct Air Capture (DAC) conditions. Measurements are fully programmable and can be made at temperatures from 5 to 85 °C, with an integral heater allowing in situ degassing and regeneration at temperatures up to 350 °C.

BENEFITS OF IGA ECOsorp

- ▶ Water and carbon dioxide co-adsorption under carbon capture conditions
- ▶ Highly flexible partial pressure control from 100 ppm CO₂ to 100%
- ▶ Unparalleled flow regulation accuracy via barometric compensation technology



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APPLICATIONS

- ▶ CO₂ isotherm measurements under dry and controlled humidity conditions
- ▶ DVS H₂O sorption isotherm and kinetic studies
- ▶ Response tests under controlled DAC and PCC conditions
- ▶ Cycling stability testing
- ▶ Thermodynamic assessment (enthalpy of sorption)



KEY FEATURES

- ▶ Combines DVS water sorption with high resolution gas sorption
- ▶ Widest controllable CO₂ partial pressure range of any dynamic sorption analyzer
- ▶ Unique barometric compensation technology for accurate CO₂ flow regulation
- ▶ Advanced thermostat design for long term stability
- ▶ Complete automation for high resolution isothermal and long term cycling studies
- ▶ Fully programmable for advanced method development
- ▶ In-situ degassing and activation to 350 °C

For more information please contact our Sales and Application team via info@hidenisochema.com

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