



Surface Measurement Systems
World Leader in Sorption Science

Sorption Characterization Services

Surface Measurement Systems provides contract services to help you understand and optimize material behavior under complex conditions. With over 30 years of experience, we offer flexible support, from rapid analyses to full collaborative projects, delivering reliable data and insights.

Your Partner in Materials Research



Expanded Research Capabilities

Enhance your research potential by partnering with SMS, gaining access to world-class sorption instrumentation and expert support.



World Leaders in Sorption Science

Collaborate with globally recognized experts in sorption-based materials characterization, backed by decades of innovation and technical leadership.



Advanced Experimental Methods

Utilize advanced sorption analyzers to execute tailored experiments under complex, real-world conditions.



Regulatory Support

Support for method development, validation, and industry compliance. *ISO-accredited, GLP-compliant*

Our Techniques

Dynamic Vapor Sorption (DVS)

Measure how materials interact with moisture and solvents to predict stability, optimize formulations, and improve real-world performance.

Inverse Gas Chromatography (IGC)

Analyze surface energy and chemical properties to optimize powder flow, adhesion, and material compatibility.

Breakthrough Analysis (BTA)

Assess gas separation performance under real conditions to optimize adsorption capacity and selectivity.

Membrane Permeation Analysis (MPA)

Quantify how gases and vapors pass through membranes to understand permeability and optimize filtration and barrier performance.

Our Services

1

Experimental Analysis Services

Fast, targeted analyses delivering clear, actionable insights, from sorption behavior to surface energy heterogeneity, without long-term commitment.

2

Bespoke Research Services

Custom research programs designed around your specific goals, combining tailored analyses, flexible timelines, and expert support to deliver clear, meaningful scientific results.

3

Standards & Validation Services

Expert support for method validation, standardization, and regulatory compliance, ensuring your processes are reliable, repeatable, and ready for real-world application.

Individual Packages

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| Dynamic Vapor Sorption Report | DVS | Hansen Solubility Parameter | iGC |
| Surface Area Analysis | DVS | Custom Surface Energy Analysis | iGC |
| Water Sorption Analysis | DVS | Standard Surface Energy Analysis | iGC |
| Organic Sorption Analysis | DVS | BET Specific Surface Area | iGC |
| Miscellaneous Isotherm Analysis | DVS | Surface Energy Heterogeneity | iGC |
| CO ₂ Sorption - Inorganic Porous Solids | DVS | Film Cell Permeability | iGC |
| Water/Organic Vapor/CO ₂ Sorption - Inorganic Porous Solids | DVS | Infinite Dilution Surface Energy | iGC |
| Vacuum Isotherm Analysis | DVS | Custom Water/Oxygen Permeability | MPA |
| Vapor Pressure Analysis | DVS | Standard Water/Oxygen Permeability | MPA |
| Permeability Analysis | DVS | Diffusion & Breakthrough Analysis | BTA |
| Diffusion Analysis | DVS | Standard Breakthrough Analysis | BTA |