PRELIMINARY PRODUCT INFORMATION

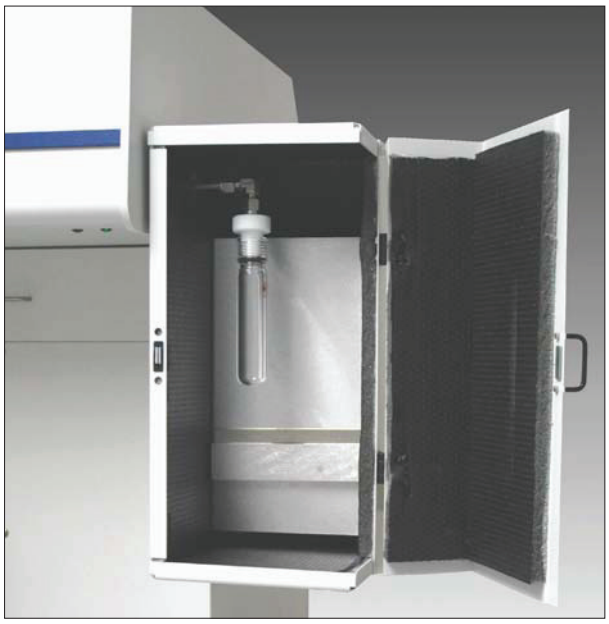
ASAP™ 2020 Vapor Option

Accelerated Surface Area and Porosimetry Analyzer Option

The ASAP 2020 Vapor Option provides an ideal solution for detailed characterization of materials using aggressive probes including, olefins, aromatics, and other volatile organic compounds (VOCs).

Compatible with a wide range of vapors:

- *Benzene*
- *Toluene*
- *Xylene*
- *Ethers*
- *Aldehydes*
- *Alcohols*



Temperature-Regulated Vapor Source

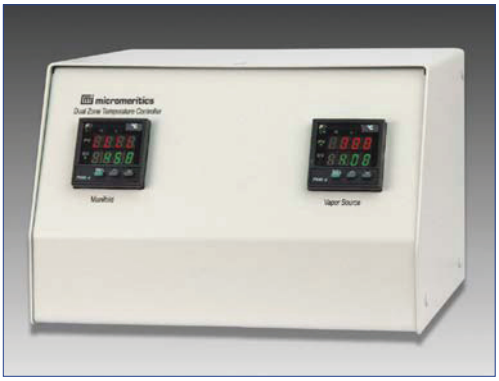
This accessory is easily retrofitted onto installed instruments or can be preinstalled on new instruments. The accessory includes a vapor source with perfluoroelastomer seals (Kalrez® or Chemraz®) and a dual-zone temperature controller for the ASAP 2020 analysis manifold. The ASAP 2020 vapor option may also be ordered with enhanced corrosion-resistant wetted materials.* This vapor option enables the ASAP 2020 to characterize large samples such as tablets, pellets, granulated food, powders, and desiccant packs. In addition to vapor sorption analysis, the ASAP 2020 retains all the functionality for determining surface area and porosity. This versatility provides researchers and formulators the capability to characterize the surface area and porosity of materials both before and after exposure to vapors, a powerful method for understanding the nature of materials. Adding the vapor option to the ASAP 2020 allows vapor isotherms to be collected from subambient to 40 °C (a temperature-controlled bath is recommended to maintain a stable sample temperature).

The ASAP 2020 may also be used to determine:

- BET surface area
- External surface area and micropore volume by the t-plot method
- Pore volume and pore area distributions by the BJH and DH methods
- Total pore volume
- Surface energy

With the addition of the micropore option, the ASAP 2020 may also be used with nitrogen, argon, or carbon dioxide for micropore characterization using:

- Pore size and volume distributions for various geometries via Horvath-Kawazoe (slit), Saito-Foley (cylindrical), and Cheng-Yang (spherical)
- NLDFT (non-local Density Functional Theory)



Dual-Zone Temperature Controller

* All applications requiring enhanced corrosion resistance are reviewed by the Micromeritics Engineering Services group to ensure the correct materials are selected and provide the widest range of application. This feature is not recommended as a field retrofit.

micromeritics®
The Science and Technology of Small Particles™

www.micromeritics.com

Micromeritics Instrument Corporation
4356 Communications Drive, Norcross, GA 30093, USA
US Sales: 770.662.3633, International Sales: 770.662.3660
Customer Orders: 770.662.3636, FAX: 770.662.3696

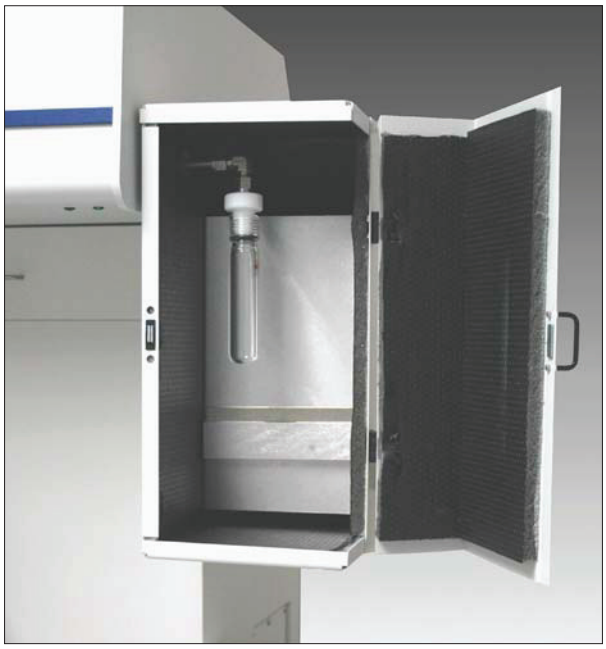
PRELIMINARY PRODUCT INFORMATION

ASAP™ 2020 Water Vapor Option

Accelerated Surface Area and Porosimetry Analyzer Option

The ASAP 2020 Water Vapor Option is an ideal tool for performing a detailed characterization of pharmaceuticals, food, cosmetics, and many other materials that sorb moisture. The moisture adsorption isotherm may be used to understand the water activity of a material which may influence:

- *Chemical stability*
- *Microbial activity*
- *Flow properties*
- *Compaction*
- *Hardness*
- *Dissolution rates*



Temperature-Regulated Water Source

This accessory includes a temperature-controlled analysis manifold and water reservoir. Unlike traditional gravimetric moisture analysis, the ASAP 2020 water vapor analysis allows the user to characterize large samples such as tablets, pellets, granulated food, powders, and desiccant packs. In addition to moisture sorption analysis, the ASAP 2020 water vapor unit retains all the functionality for determining surface area and porosity. This versatility provides researchers and formulators the capability to characterize the surface area and porosity of materials both before and after exposure to moisture, a powerful method for understanding the nature of materials. This ASAP 2020 Water Vapor Option allows moisture isotherms to be collected from subambient to 40 °C (a temperature-controlled bath is recommended to maintain a stable sample temperature).

The ASAP 2020 may also be used to determine:

- BET surface area
- External surface area by the t-plot method
- Pore volume and pore area distributions by the BJH and DH methods
- Total pore volume
- Surface energy

With the addition of the micropore option, the ASAP 2020 may also be used with nitrogen, argon, or carbon dioxide for micropore characterization using:

- Pore size and volume distributions for various geometries via Horvath-Kawazoe (slit), Saito-Foley (cylindrical), and Cheng-Yang (spherical)
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