

Automatic specific surface area / pore size distribution measurement

Purpose:

To evaluate radionuclides sorption behavior on candidate materials for a disposal facility such as bentonite, cement hydrate and surrounding rocks, this equipment measures specific surface area / pore size distribution of the materials that are fundamental parameters of radionuclide sorption.

Main Specifications:

Adsorption isotherms of water and organic vapors as well as nitrogen can be measured automatically together with the values of specific surface area, pore size distribution and chemical adsorption and etc. In order to enhance the accuracy of vapor adsorption, the measuring system is kept inside the thermostat. Various techniques are applied such as the minimization and correction of vapor adsorption on the system walls. The measuring software includes AI functions and various analysis software for easy operation.

Measuring principle:	Volumetry
Adsorbates:	Water, organic vapors and nitrogen, H ₂ , CO, and etc.
Minimum surface area:	0.001 m ² /g
Pore size distribution:	Diameter 0.30200 nm
Minimum adsorbed amount:	1 μg

Location and Date of Installation

Komae Campus, March 2005

