Surface Area and Porosity (BET)

Band: **Micromeritics**

Model: **3Flex**

Custodian: **Ketwadee Wetsuwan**

Location: **R02 Room, SC1 Building, B Floor, Faculty of Science (Salaya Campus)**

Description and Specification:

The 3Flex is a high-performance adsorption analyzer for measuring surface area, pore size, and pore volume of powders and particulate materials. Standard methods or user protocols can be used to characterize adsorbents, catalysts, zeolites, MOFs, APIs, excipients, and a wide variety of porous and non-porous materials. The 3Flex is ideally suited for gas or vapor adsorption analysis of microporous (< 2nm) and mesoporous (2 to 50nm) materials and delivers superior accuracy, resolution and data reduction.

Specifications	Description
Cabinet Temperature	Upper cabinet is maintained at 45 °C providing a stable environment.
Cryogen Free Space Control	Isothermal Jacket (for use with physical adsorption tubes only)
Degas	3 in situ, 6 additional with SmartVac Prep
Cryogen Dewar	3.2 L, greater than 70 hrs virtually unlimited with refill during analysis.
Electrical	Voltage 230 VAC Frequency 5060 Hz Power 1350 VA
Furnace	Range: Ambient 5°C to 1100 °C Accuracy: ±1% Ramp Rate: 1 to 100 °C/min up to 800 °C 1 to 50 °C/min from 800 to 1000 °C 1 to 25 °C/min from 1000 to 1100 °C
Gas Flow Controller	200 sccm mass flow controller Accuracy: ±1%
Gas Inlets	- 6 for physical adsorption - 12 for chemical adsorption - 4 additional for dynamic analysis loop
Heating Mantle	Temperature to 450 °C
Loop	For use with level 2 analyzers only. Gas Inlet: 4 Volume: 0.5 cm^3 nominal Control: Automatic electric rotary valve
Manifold Outgas Rate	< 0.1 µm/min