MICROMERITICS ANALYTICAL SERVICES The Particle Testing Authority
One Micromeritics Dr, Norcross, GA 30093
www.particletesting.com (770) 662-3630

Sample Submission Requirements

The following information is to be used when submitting samples to Micromeritics Analytical Services. The quantities noted are for typical analysis and includes enough material to repeat an analysis if necessary. It is advantageous to include as much information as possible about a given sample, since it will help us in analyzing the sample and will translate into faster turnaround times for you.

General Requirements:

a) We assume that the sample supplied to us is representative of the entire batch of material. MAS personnel will sample from the container appropriately.
b) Analysis method development usually requires at least three times the recommended sample quantity.
c) Identify each sample and give the chemical name if available. MAS personnel need to know what materials they are analyzing for their own safety.
d) Customer should supply MAS with any known hazards precautions and should include an MSDS if available.
e) Customer should supply sample preparation and analysis procedures if known or if trying to duplicate a previous analysis.
f) Some tests are destructive, some are non-destructive, so if you need your sample for other tests please indicate that on the sample submission form.

Particle Size Analysis

Sedimentation - Please supply 10 grams or powder or 500ml of slurry material. Material density and liquid viscosity values are required for operation. Include identification of any surfactants present.
Laser Light Scattering - Please supply at least 2 grams of material. It is also important to note what analysis liquid is recommended to disperse your sample.
Electrozone Technique - Please Supply at least 2 grams of powder or 200 ml of low concentration slurry.
Sieve Analysis or Dynamic Image Analysis - Please supply at least 100 grams of dry granular material.

Density

Gas density - Requires at least 0.1 cc of true sample volume. The maximum size must fit inside a cylinder 46 mm wide and 61 mm tall. For liquids, the vapor pressure must be no higher than the vapor pressure of water. For foam density, supply enough material to cut two 1 inch cubes, and give the density of the solid unexpanded resin used to make the foam.
Envelope or T.A.P. density - Sample should be at least 3mm in diameter and no larger than 1.5 inches. Sample should also contain at least 0.5 cc of envelope volume for the best results. Supply absolute sample density if specific pore volume and percent porosity is desired. MAS can determine the absolute density if desired.
Hg Density - The sample must fit inside a cylinder 25mm wide and 25 mm deep.

Specific Surface Area, Porosimetry by Gas Adsorption

Please supply 5 grams of material. Depending on the technique requested, between 0.5 and 10 m^2 of total surface is needed. Lower surface area materials can be analyzed but may require Kr gas. Single point surface area is reported at 0.3 P/Po unless otherwise specified. Sample should fit inside a 9mm sample tube.

Mercury Porosimetry

Please supply 5 grams or 5 solid pieces of material. The largest solid sample should fit inside a 25mm x 25mm cylinder. Any information regarding approximate porosity or pore volume will be very helpful.

Chemisorption Studies

Typical analysis requires 3 grams of sample; other experiments require only 100 milligrams. Please identify the type of study desired (pulse/dynamic or volumetric), the chemisorptive gas (H2, CO, O2, N2O, NH3, etc), and the amount of metal present. Include any additional information about the support, analysis temperature, pretreatment temperatures and pretreatment reactions. For help in answering these questions contact our laboratory.