



Delta Analytical Instruments, Inc.
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 North Huntingdon, PA 15642
 (724) 864-9850
 Fax (724) 864-9851
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SAMPLE SUBMISSION FORM

P.O.# or Credit Card # _____ Exp. Date _____ Date _____
 Name _____ Title _____
 Company _____ Dept. _____
 Address _____
 City _____ State _____ Zip Code _____
 Telephone _____ / _____ Ext. _____ Fax _____
 E-mail address _____ URL _____

Chemical identification of materials---include sample identification for each material and identify liquid phase, organic, etc.

Federal law requires labeling of hazardous substances. Note special sample handling requirements:

Specific analysis instructions---include preparation methods, gases, dispersion liquids, etc.

PARTICLE SIZE DISTRIBUTION

() **Particle Size Distribution by Laser Light Scattering**

Horiba LA920 0.02---2000um

Sample requirement: 10mg-5 grams or 10-100ml slurry and 1L/sample of dispersing liquid if other than water or IPA

Refractive Index: _____

Expected Size Median: _____ um

Expected Size Range: _____ um

Dispersion Fluid: _____

() **Particle Size Distribution by Dynamic Light Scattering**

Horiba LB550 0.003---6um

Refractive Index: _____

Expected Size Median: _____ um

Expected Size Range: _____ um

Dispersion Fluid: _____

Sample Viscosity: _____

() **Particle Size Distribution by Centrifugal Photosedimentation** by Shimadzu SA-CP3 **0.02---500um**

Sample requirement: 1-10 grams or 50ml (0.1wt%) slurry and 250ml/sample dispersing liquid if other than water or IPA

() **Particle Size Distribution by Computer Controlled Scanning Electron Microscopy (CCSEM) 0.2---70 um**

Sample requirement: 1 gram

SURFACE AREA

() **Single Point** () **BET Surface Area** () **Krypton**

Sample requirements for all types: 10 grams. Solid sample must fit 8mm diameter of sample tube.

Outgassing temperature _____ °C (110°C will be used unless otherwise specified)

Approximate surface area _____ m²/g

PORE VOLUME AND PORE SIZE DISTRIBUTION

(Nitrogen)

() **BET surface area, pore volume, and average pore diameter**

() **BET surface area, pore volume, and pore size distribution by physical adsorption**

() **BET surface area, pore volume, pore size distribution, and micropore volume analysis by physical adsorption**

Sample requirement for all: 10 grams. Solid sample must fit 8mm diameter of sample tube.

Outgassing temperature _____ °C (110°C will be used unless otherwise specified)

Approximate surface area _____ m²/g

All sample requirements are approximate and size dependant. Please call for more information.

PORE VOLUME AND PORE SIZE DISTRIBUTION

(Mercury)

Incremental Pressure Method

Intrusion Only

Intrusion data from 15 to 60,000 psia (0.003-360 um) unless otherwise specified

Intrusion and Extrusion

Intrusion data from 15 to 60,000 psia (0.003-360 um) unless otherwise specified and extrusion from maximum pressure to 15 psia

Contact angle of 130° unless otherwise specified

Estimated pore volume _____ cm³/g

Estimated density _____ g/cm³

Sample requirement: 10 grams. Solid sample must fit 0.5 inch diameter by 1 inch length.

Send 4 portions of each solid sample if possible.

DENSITY

Helium Pycnometer

Samples outgassed before analysis unless otherwise specified

Bulk Density by mercury displacement

Tap Density

MICROSCOPY

S.E.M.

Special instructions: _____

Sample requirement - 1 gram

THERMAL ANALYSIS

Thermal Expansion

DSC (Differential Scanning Calorimetry) Ambient to 600°C

TGA (Thermal Gravimetric Analysis) Ambient to 1000°C

Special instructions: _____

Sample requirement – 25 mg

X-RAY DIFFRACTION

XRD using PANalytical X-Pert Pro diffractometer

Special instructions: _____

Sample requirement – 25 mg

Additional comments: _____

Results faxed? (Charges apply)

Samples returned? (Charges apply)

E-mail results?

CHECK LIST

- Correct sample ID?
- Properly labeled hazardous material?
- Purchase order enclosed?
- M.S.D.S. enclosed?
- Sample info listed?
- Credit card: type, number, & expiration date

SHIP TO:

PARTICLE CHARACTERIZATION LAB

Delta Analytical Instruments, Inc.

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