

Particle Size and Particle Shape

Laser Light Scattering - Mie and Fraunhofer Theories

520 - 00 Aqueous-based dispersion.....	\$250
520 - 01 non-aqueous - based dispersion.....	\$250
520 - 50 Dry dispersion Malvern Mastersizer.....	\$250
520 - 51 Liquid Dispersion Malvern Mastersizer.....	\$250

Electrical Sensing Zone - “Coulter principle”

538 - 00 Aqueous and non-aqueous based dispersion.....	\$300
538 - 02 Particle Size Distribution plus particle concentration analysis.....	\$325

Particle Shape Analysis

005 - 80 Particle shape using Wet dispersion and Dynamic Image Analysis.....	\$275
005 - 81 Particle shape using an Automated Microscopy technique.....	\$750

Nano Particle Size

005 - 70 Average particle size calculated from BET surface area.....	\$250
005 - 71 Dynamic Light Scattering / Photon correlation spectroscopy.....	\$250

Sieve Analysis

010 - 16 Dry or West sieving available / Ro-Tap apparatus.....	\$175
010 - 71 Alpine Airjet Sieves.....	\$175
010 - 72 Sonic sifter for small volumes.....	\$175

Other Particle Size Techniques

005 - 73 Particulate count and concentration using the Light Obscuration technique (USP method <788> and USP <789>).....	\$300
005 - 74 HEL Sub-sieve auto-sizer ISO - 10070 Air permeability Diameter.....	\$250

Zeta Potential

120 - 00 Zeta potential.....	\$300
120 - 01 ISO-electric point determination and pH titration.....	\$650

Microscopy

010 - 50 Particle size using automated SEM techniques.....	\$575 + up
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B.E.T. or Langmuir Surface Area

005 - 01 Multipoint surface area using Nitrogen gas <USP 846>.....	\$200
005 - 02 Multipoint surface area using Krypton gas.....	\$225

Pore Volume Distribution Pore Size Distribution

Pore Size by Gas Adsorption

Pore size samples may include the following reports as appropriate: BET or Langmuir surface area, BJH mesopore analysis, DFT pore size calculations, single-point total pore volume, and t-Plot micropore volume.

005 - 50 40-point Nitrogen adsorption isotherm (20 Å to 3000 Å).....	\$350
005 - 05 Surface area and 40-point Nitrogen desorption isotherm (20 Å to 3000 Å).....	\$375
005 - 08 40-point Nitrogen adsorption and 40-point desorption isotherm (20 Å to 3000 Å).....	\$540

Micropore Pore Size Distribution

Reports may include H-K, Dubinin, and/or DFT methods for micropore analysis.

201 - 03 High-resolution micropore analysis plus mesopore isotherm (4 Å to 3000 Å).....	\$900
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Pore Size by Mercury Intrusion

Report will include calculations of bulk density, skeletal density, porosity, average pore diameters, median pore diameters, and total intrusion volume. Additional summary reports such as tortuosity, fractal dimension, permeability, and compressibility are available upon request for an additional fee.

942 - 03 Mercury intrusion analysis (pore size range 360 to 0.003 μm).....	\$325
942 - 04 Mercury intrusion and extrusion analysis (pore size range 360 to 0.003 μm).....	\$375
942 - 10 High-resolution macropore analysis (pore size range 900 to 4 μm).....	\$300
942 - 11 High-resolution macropore plus a complete intrusion and extrusion analysis.....	\$475

Density

133 - 00 Skeletal density (Helium or Nitrogen pycnometry) <USP 699>.....	\$100
942 - 07 Mercury bulk density.....	\$135
136 - 00 Envelope density of solid, non-powder samples using the GeoPyc® 1360.....	\$135
136 - 01 T.A.P.™ (Transverse Axial Pressure) density using the GeoPyc® 1360.....	\$200
136 - 02 Specific pore volume and percent porosity calculations (Includes true density analysis and envelope density analysis).....	\$225
010 - 70 Bulk and Tap Density USP method <616> / (Carr index).....	\$150

Microscopy

010 - 23 Optical Microscope Photos (price per photo).....	\$50
010 - 50 Microscopy Techniques courtesy of MVA Scientific Consultants.....	Call

Vapor Sorption

005 - 63 Water Vapor Isotherms - Dynamic Vapor Sorption (DVS).....	\$750
005 - 64 Vapor Isotherms using volumetric adsorption technique.....	\$750

Thermal Analysis

005 - 66 TGA - Thermal Gravimetric Analysis.....	\$350
005 - 67 DSC.....	\$375
005 - 68 mDCS - Modulated DCS Analysis.....	\$500
005 - 69 Combination TGA/DCS.....	\$650

Chemisorption / Pharma Catalyst / Reactive Materials

201 - 10 Volumetric Chemisorption analysis (specify analytical method).....	\$700
291 - 23 Dynamic or pulse Chemisorption analysis (specify analytical method).....	\$700
291 - 03 Pulse Chemisorption using liquid vapors (specify analytical method).....	\$800

Temperature-Programmed Studies

291 - 01 Temperature-Programmed Reduction (TPR).....	\$600
291 - 10 Temperature-Programmed Desorption (TPD).....	\$600
291 - 02 Temperature-Programmed Oxidation (TPO).....	\$600
291 - 06 Mass Spectrometry analysis of effluent gas from chemisorption experiment.....	\$200

Special Vapor Sorption Services/ Surface Energy

005 - 65 Inverse Gas Chromatography (IGC) Surface Energy Measurement.....	\$900
005 - 75 Surface energy heterogeneity (Requires BET 005-01).....	\$1200

Scientific Services

010 - 00 Non-Standard Laboratory Analysis.....	Call
010 - 10 Analytical Method Development or Method Validation service.....	Call
010 - 11 Method Validation Services.....	Call
010 - 06 Consulting services and detailed results interpretation.....	\$195/hr

Other Services

010 - 15 Viscosity of Newtonian liquids using cone/plate rheometer.....	\$75
010 - 18 pH.....	\$55
010 - 19 Percent moisture (weight loss upon drying).....	\$75
010 - 22 Specific gravity of slurry.....	\$75
010 - 24 Total dissolved solids.....	\$75
010 - 25 Total suspended solids.....	\$75
010 - 26 Specific gravity at user specified temperatures.....	\$125
005 - 86 Magnetic Content using BUCK analyzer.....	\$150
005 - 87 Expert Testimony.....	Call
010 - 50 Contamination or Particle Identification (outsourced).....	Call
010 - 80 Special Sample Preparation or storage.....	\$50

Additional Information

There is a **25% surcharge** for all **DEA-controlled substances and hazardous materials**.
There is a **10% surcharge** for all **GMP samples or projects**.

Volume Discount Schedule

(Volume discounts are based on the number of samples sent in for same test number, not just total number of samples)

1-5 samples.....	List Price
6-10 samples.....	5% discount
11-20 samples.....	10% discount
21-40 samples.....	15% discount
More than 40 samples.....	20% discount

Sample Turnaround times

(Turnaround times are typical for most samples. Some exclusions do apply.)

Normal.....	5-7 days.....	List Price
Priority.....	2-4 days.....	List Price + 50% surcharge
Rush.....	Next sample analyzed.....	List Price + 200% surcharge

All orders are subject to Micromeritics Analytical Services terms and conditions (see separate terms and conditions document at www.particletesting.com). Credit card orders are welcomed.

Unless otherwise requested, samples will be retained for 3 months. Samples can be returned at the customer's expense, provided correct shipping and payment information is received. Sample results will be maintained for 5 years.

All samples and related customer information is kept confidential.

Instrument Purchase Allowance: Half the cost of applicable analyses completed within 120 days of instrument purchase may be credited toward instrument purchase. The maximum credit allowed is 4% of the instrument purchase price. Customer must notify Micromeritics of credit due when instrument is ordered.

Return sample fee: There is a flat fee of \$50 per project for all sample returns, \$200 if samples are considered hazardous.

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Price effective October 1, 2013 and are subject to change without notice.

