



Throughout its 40 year history, the Analytical Services Group of Specialty Minerals Inc (SMI) has provided analytical and investigative services to SMI, Minteq and the Pyrogenics Research, Sales, Marketing, and Quality Assurance departments. These same services are now commercially available. The Group will function as both a service organization and a research facility engaged in developing new and improved analytical methods.

The Analytical Services Group is accredited by the American Association for Laboratory Accreditation (A2LA) to comply with ISO/IEC 17025-2005. The services are problem solving as well as solely analytical. We strongly recommend that the analysis objective, problem to be solved, or question to be answered be discussed and reviewed with SMI prior to sample submission. This discussion will guide the selection of appropriate methods, sampling techniques and control samples. Contact us at 610-250-3380 for a quotation.

Material Characterization

- Defects
- Contaminants
- Deposits
- Mineral Identification
- Thermal Properties

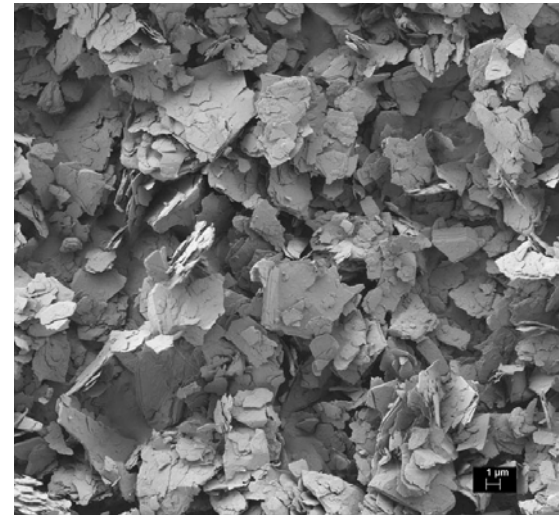
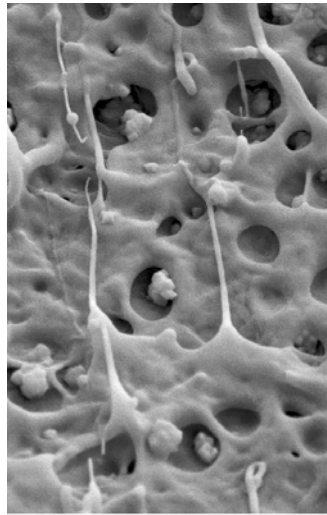
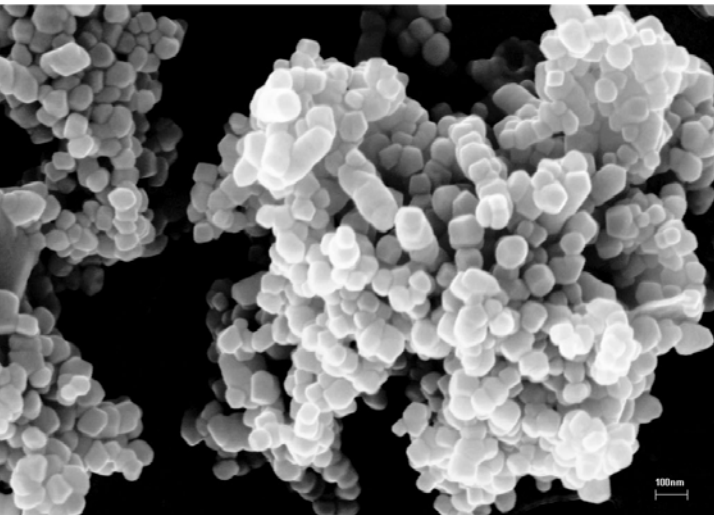
Chemical Analysis

- Bulk Elemental Analysis
 - Minerals
 - Paper
 - Process water
- Organic Identification
- Low Temperature Carbon

Microscopy

- Particle Size and Shape
- Surface Porosity
- Elemental Mapping

- Coating Layer Thickness and Identification
- Coating Pore Size Distribution



2009 Estimated Price List

**Analysis is customized per client's request.
Please request a quotation.**

| | |
|--|------------------|
| Light Microscopy | \$200 per hour |
| Transmitted and reflected with Bright Field, Darkfield, Differential Interference Contrast, Phase Contrast, Fluorescence, Imaging and Polarized Light Illumination | |
| SEM | \$200 per hour |
| Scanning Electron Microscopy | |
| FESEM | \$250 per hour |
| Field Emission Scanning Electron Microscopy | |
| XEDS | \$200 per hour |
| Xray Energy Dispersive Spectroscopy | |
| EBSD | \$200 per hour |
| Electron Back Scatter Diffraction | |
| Quantitive Image Analysis | \$200 per hour |
| Computerized image analysis system used for size analysis, coating coverage, And more | |
| XRD | |
| Qualitative phase identification as major, minor or trace | per quote |
| Semi-quantitative estimates as a range of the percent present | per quote |
| Surface XRD | |
| Surface layer phase identification using Parallel Beam Optics | \$400 per sample |
| Thermal XRD | |
| Mineral phase characterization vs. temperature to 1550°C | per quote |
| Thermal Characterization | |
| TGA-DTA - Scouting Runs to 1685°C | \$400 per sample |
| TGA-DTA - Quantitive testing to evaluate temperature of chemical and physical changes, monitor mass losses & assist phase identification | \$400 per sample |
| TGA-DSC - Enthalpy to 1500°C | \$400 per sample |

| | |
|---|-------------------|
| Elemental Analysis by XRF | |
| Steelmaking slag | \$200 per sample |
| Limestone | \$200 per sample |
| Other minerals | \$450 per sample |
| Trace Elemental Analysis ICP-MS | \$100 per element |
| Elements determined by client. | |
| Anion Analysis | |
| F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄ , CO ₃ , HCO ₃ | \$250 per sample |
| | \$125 per sample |
| FTIR | \$200 per sample |
| Characterization by FTIR | |
| Solvent Extractive | \$150 per sample |
| Determine weight extracted with specified solvent | |
| Loss On Ignition (LOI) | \$100 per sample |
| Determine weight loss of volatile compounds, performed at specified time and temperature | |
| pH | \$50 per sample |
| Cold or Hot Extraction | |
| Ash Content | \$100 per sample |
| Determine weight of residue at specified time and temperature | |
| Additional Charges | per quote |
| Sample Preparation, polish | |
| Custom Reporting | per quote |
| Rush Analyses (call for availability) | |
| 3-5 Day turnaround | 100% Premium |
| 24-48 hour Turnaround | 200% Premium |
| Multiple Sample Discounts | |
| 6-10 | 5% Discount |
| 11-20 | 10% Discount |
| 21-40 | 15% Discount |

Analysis is customized per client's request and sample type. Please request a quotation.



Specialty
MINERALS

ANALYTICAL SERVICES

640 North 13th Street
Easton, PA 18042
610.250.3380