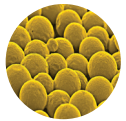


PLASTICS AND POLYMERS SERVICES

The McCrone Group offers expertise in the analysis of materials. Our team of scientists at McCrone Associates has unmatched experience in analysis of plastics and polymers. The diverse faculty of experts at Hooke College of Applied Sciences can teach you the techniques, and the knowledgeable McCrone Microscopes & Accessories sales team can help you configure the instruments to meet the analytical needs in your laboratory. From analysis to education to instruments, The McCrone Group is your premier resource for analysis of plastics and polymers.



ANALYSIS •  **McCRONE**[™]
 ASSOCIATES, INC.

McCrone Associates receives projects involving plastic or polymer problems on a daily basis. Some of the problems we have recently investigated include: polymer, filler and additive identification; thickness measurements of multi-layer films; identification of stains or discoloration; distribution of carbon black and other fillers; and analysis of adhesion failures.

Problems with plastic or polymer products often arise from a variety of manufacturing issues, such as inadequate mixing, improper additive packages, poor temperature control, contamination and by-product formation. Since the industrial production of polymers and plastics involves the mixing of organic monomers, antioxidants, and other additives, along with inorganic pigments, tracking down the source of a failure or contaminant is often a difficult analytical problem.

All our services begin with an evaluation of your problem and samples, and continue with analysis and consulting. Our scientists use state-of-the-art instruments and techniques to provide you with confidential, reliable results. If needed, we also offer on-site investigation and coordination of additional services.

McCrone Associates is ISO/IEC 17025:2017 A2LA accredited (certificate #3631.01), and registered with the FDA, GDUFA, and DEA.

Analytical Services:

- Materials Characterization
- Compositional Analysis
- Contaminant Identification
- Materials Compatibility
- Product Comparisons
- Failure Analysis
- Surface Analysis
- New Product Development
- Raw Material Testing

Common Samples:

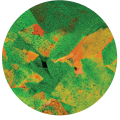
- Plastic Parts
- Raw Materials
- Paints, Pigments, and Coatings
- Packaging Materials

On-site Services:

- Consultation
- Sample Collection
- Report Review
- Expert Testimony



Debris inclusion embedded in a multi-layer film.



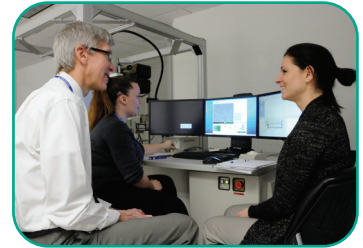
EDUCATION • **HOOKE COLLEGE™**
OF APPLIED SCIENCES

Hooke College of Applied Sciences provides accredited training and education to technicians and scientists from a wide range of industries. Our instructors deliver, via professionally-produced videos, high-quality microscopy and microanalysis online courses that provide the essential skills needed for problem solving back at your own laboratory. Learn new skills and techniques from the experts in microscopy.

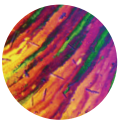
Let us collaborate with you to design a custom course. Depending on the level of customization required and the number of employees to be trained, custom training solutions can often be more cost effective than sending the same individuals to an open enrollment course. As an added bonus, learning activities built into the courses provide great team-building opportunities.

Our courses related to plastics and polymers include:

- Polarized Light Microscopy
- Scanning Electron Microscopy
- Infrared Microscopy



Each Hooke College of Applied Sciences course is taught by recognized experts in their fields and in microscopy, with decades of real-world experience.

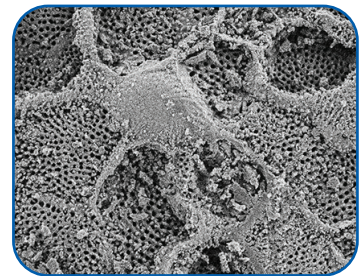


INSTRUMENTS • **McCRONE™**
MICROSCOPES & ACCESSORIES

McCrone Microscopes & Accessories offers you proven microscopy equipment and accessories for a variety of materials analysis applications. Our technical sales team has helped create custom instrument packages to fulfill the needs and specifications of laboratories around the country. We can help outfit your entire lab and provide ongoing product training and support.

Our analysis products include:

- Nikon Microscopes
- Nikon Measuring and X-Ray Systems
- JEOL NeoScope JCM-7000 Benchtop SEM with EDS
- Linkam Thermal Stages
- Timegate PicoRaman
- McCrone Micronizing Mills
- Retsch Mills
- Motic Microscopes
- Hirox Digital Microscopes
- Digital Imaging Systems
- Microscope Accessories/Tools
- Lab Supplies
- Cleaning, Calibration, Installation and Training
- References and Resources



Magnify images from 10X to 60,000X with the compact NeoScope II Benchtop SEM, with optional EDS for elemental identification.