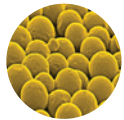


## PHARMACEUTICAL SERVICES

The McCrone Group offers you unlimited scope in the analysis of pharmaceutical materials, contaminants and packaging. Our team of scientists has unmatched experience in solving a wide variety of particle identification and materials problems. Our faculty of experts can teach you the techniques, and our knowledgeable 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 microscopy resource for the pharmaceutical industry.



ANALYSIS •  **McCRONE**<sup>™</sup>  
ASSOCIATES, INC.

The root cause of many contaminations and material failures often has a particulate basis. **McCrone Associates** is focused on solving particle identification and materials problems. Our staff scientists use state-of-the-art instruments and techniques to provide you with reliable, confidential analysis of your pharmaceutical products. All our services begin with an evaluation of your problem and samples, and continue with analysis and consulting. If needed, we also offer on-site investigation and coordination of additional services.

### Analytical Services:

- Contaminant Identification
- Materials Characterization
- Compositional Analysis
- Particle Counting
- Particle Size Distribution
- Product Comparisons
- New Product Development

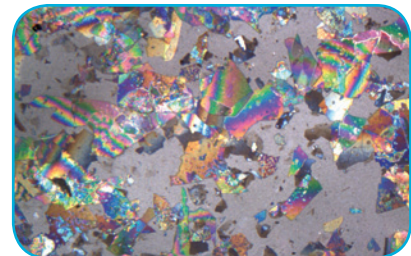
### Common Samples:

- Tablets
- Capsules
- Creams
- Injectables/Liquids
- Powders
- Packaging Materials
- Medical Devices

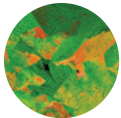
### On-site Services:

- Consultation
- Sample Collection
- Report Review
- Expert Testimony

McCrone Associates maintains professional and business relationships with a number of other laboratories where additional analysis beyond the capabilities of our laboratory can be obtained.



*Glass flakes from the interior wall of a delaminated pharmaceutical vial as seen using coaxial illumination.*



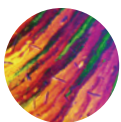
**Hooke College of Applied Sciences** offers a wide range of courses relating to the analysis of pharmaceutical products and packaging. Our courses explore a variety of techniques and instruments, taking a hands-on approach. They are taught by experts in the field and are IACET (International Association of Continuing Education and Training) approved.

**Our courses related to failure analysis include:**

- INS500: Modern Polarized Light Microscopy
- INS505: Freeze-Dry Microscopy
- INS510: Scanning Electron Microscopy
- INS520: Transmission Electron Microscopy
- INS525: Infrared Microscopy
- INS530: Raman Microspectroscopy
- MEI500: USP <788> Particulate Matter in Injections
- MEI610: Fiber Identification
- MEI630: Pharmaceutical Materials and Contaminants
- SMP500: Microscopic Particle Handling: Particle Isolation, Manipulation and Mounting
- SMP505: Sample Preparation: Pharmaceuticals and Medical Devices



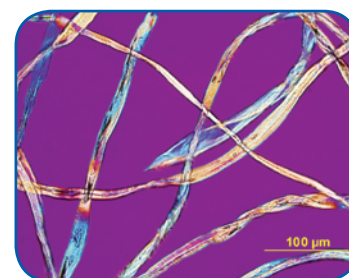
*Each Hooke College of Applied Sciences course is taught by recognized experts in their fields and in microscopy, with decades of real-world experience.*



**McCrone Microscopes & Accessories** offers you proven microscopy equipment and accessories for a variety of pharmaceutical 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 pharmaceutical analysis products include:**

- Olympus SZX Series Zoom Stereo Microscopes
- Olympus BX Series Polarized Light Microscopes
- Linkam Thermal Stages
- NeoScope Benchtop SEM
- Digital Cameras
- Slide Reference Sets
- Reference Books
- Lab Supplies
- Product Training and Support at Your Site



*Sample comparisons using McCrone Slide Reference Sets and/or the McCrone Atlas of Microscopic Particles are available at [www.mccrone.com](http://www.mccrone.com).*