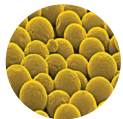


# PHARMACEUTICAL SERVICES

The McCrone Group offers you expertise 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™**  
 ASSOCIATES, INC.

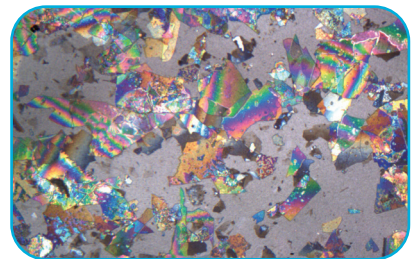
The root cause of many contamination and material defects can often be identified through isolation, characterization, and identification of particles. Our staff scientists use specialized techniques, over 60 years of experience and an unparalleled collection of microscopy, spectroscopy and micro-analytical instrumentation to provide you with accurate, confidential and defensible results. All of our services begin with a consultation to evaluate your problem and samples, then continue with analysis and reporting requests.

- |   |   |
|---|---|
| <p><b>Analytical Services:</b></p> <ul style="list-style-type: none"> <li>• Contaminant Identification</li> <li>• Materials Characterization</li> <li>• Compositional Analysis</li> <li>• Particle Counting</li> <li>• Particle Size Distribution</li> <li>• Particle Sizing (Light Obscuration)</li> <li>• Product Comparisons</li> <li>• New Product Development</li> </ul> | <p><b>Common Samples:</b></p> <ul style="list-style-type: none"> <li>• Tablets</li> <li>• Capsules</li> <li>• Syringes</li> <li>• Creams</li> <li>• Injectables/Liquids</li> <li>• Powders</li> <li>• Packaging Materials</li> <li>• Medical Devices</li> </ul> |
|---|---|

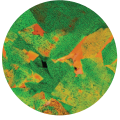
- On-site Services:**
- Consultation
  - Sample Collection
  - Report Review
  - Expert Testimony

Sample evaluation begins with isolation in our certified ISO Class 5 cleanrooms, particles are identified and peer-reviewed results are delivered in a confidential report.

McCrone Associates is ISO/IEC 17025:2017 A2LA accredited (certificate #3631.01), registered with the FDA (analytical laboratory), DEA (Schedules I, II, III, IV and V), and GDUFA, operating in compliance with applicable Good Manufacturing Practices as outlined in the Code of Federal Regulations.



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



EDUCATION ·



**HOOKE COLLEGE™**  
OF APPLIED SCIENCES

**Hooke College of Applied Sciences** offers on-demand, online courses that explore a variety of techniques and instruments. Your instructors, who each have more than 20 years of direct laboratory experience solving current industry challenges, deliver high-quality microscopy and microanalysis courses that provide the essential skills needed for problem solving back at your own laboratory. IACET certification ensures best practices in education are implemented.

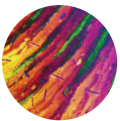
Let us collaborate with you to design a custom course. Depending on the level of customization required and the number of employees to be trained, custom training solutions can often be more cost effective than sending the same individuals to an open enrollment course. As an added bonus, learning activities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

**Our online courses include:**

- Polarized Light Microscopy
- Scanning Electron Microscopy
- Infrared Microscopy



*Professionally produced videos recorded in several perspectives help you understand the methods and lesson material.*



INSTRUMENTS ·



**McCRONE™**  
MICROSCOPES & ACCESSORIES

**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 forensic laboratories around the country. We can help outfit your entire lab and provide ongoing product training and support.

**Our forensics 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
- Hirox Digital Microscopes
- Motic Microscopes
- Digital Imaging Systems
- Microscope Accessories/Tools
- Lab Supplies
- Cleaning, Calibration, Installation and Training
- References and Resources



*Loading a sample in the JEOL JCM-7000.*



**THE McCRONE GROUP™**

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