



CRITERION SCIENTIFIC LLC

"The Best Possible Materials & Product Testing Solution at Affordable Cost"



**We are global experts in
materials testing, analysis and consultancy**

Materials Characterization & Product Testing Services





CRITERION SCIENTIFIC LLC
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Who we are:

Criterion Scientific is an independent alliance of laboratories, technical consultants and research organizations.

Criterion Scientific applies a synergistic approach in solving your materials related problem. Our approach involves the integration of world class teams of scientists and engineers from all around the world as facilitated through the Criterion Scientific Lab Alliance.

The above synergistic approach not only results in the “Best Possible Solution” but, perhaps more importantly, in the “Best Possible Solution at an Affordable Cost” as we leverage and integrate the most appropriate facilities/labs from around the world.

We are committed to providing state of the art materials & product testing and consultancy services, including chemical analysis, physical testing, failure analysis, expert witness consulting and product testing, all at an affordable cost and uniquely tailored to your needs

Email Us or Call Us

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Services By Type

- Mechanical / Physical Testing
- Chemical Analysis
- Microscopic Analysis
- Thermal Analysis
- Metallurgical Analysis
- Failure Analysis
- Environmental Testing Services
- Corrosion Analysis and Testing
- Microbiological Testing and Analysis
- Product Analysis Services
- Formulation and Deformulation Services
- Contamination Testing
- Extractable/Leachable Analysis
- Stability Services
- ADME / DMPK Studies
- Toxicology Testing
- Pharmacology
- Pharmacopoeial Testing
- Bioassays and Bioanalytics
- Raw Material & Excipient Analysis
- Method Development & FDA Validation
- Regulatory & Compliance Laboratory Testing

- Quality Control Testing & Analysis
- Biomedical Testing Services
- Biological Testing Services
- Drug Testing and Analysis
- Consulting and Expert Witness Services
- Custom Analytical Testing Services
- Analytical Testing Services on Rush Basis

Services By Industry

- Plastics, Polymers & Composites
- Pharmaceutical and Healthcare
- Biomedical and Biological Industries
- Medical Device Industries
- Chemical Industries
- Environmental Engineering
- Aerospace and Defense
- Semiconductor and Electronics
- Textile, Apparels and Footwear
- Manufacturing Industries
- Energy and Petrochemicals
- Minerals, Metals and Alloys
- Consumer Products & Retail
- Construction & Building Products

Services By Method

Mechanical / Physical Testing

- Tensile and Compression Testing
- Hardness Testing
- Izod & Charpy Impact Testing
- Pull Out Force Testing
- Bend and Rebend Testing
- Cantilever Testing
- Flexural Testing
- Peel Testing
- Friction Testing
- Coating Analysis
- Dimensional Analysis
- Density and Specific Gravity
- Weld Testing and Evaluations
- Creep and Fatigue Testing
- Endurance Testing
- Viscosity Testing
 - Brookfields Viscosity
 - Mooney Viscosity
 - Inherent Viscosity
 - Intrinsic Viscosity
- Abrasion Testing
 - DIN Abrasion Tester
 - Taber Abrasion Tester
- Rheometry
- Rubber Processability Analyzer (RPA-2000)
- De-mattia Flexing Machine
- Ross Flexing Machine
- Air/Gas Permeability Testing
- Custom Tailored Testing Services

Chemical Analysis

- Chemical Analysis – Spectroscopy
 - X-ray Photoelectron Spectroscopy (XPS/ESCA)
 - SEM Energy Dispersive X ray Spectroscopy (SEM-EDXS)
 - Fourier Transform Infrared Spectroscopy (FT-IR)
 - Inductively Coupled Plasma Spectroscopy (ICP-OES/MS)
 - Secondary Ion Mass Spectrometry (SIMS)
 - NMR Spectroscopy Analysis
 - Auger Electron Spectroscopy (AES)
- Chemical Analysis – Chromatography
 - Gas Chromatography / Mass Spectrometry (GC-MS)
 - Liquid Chromatography / Mass Spectrometry (LC-MS)
 - Dynamic Headspace Concentration GC-MS
 - High Pressure Liquid Chromatography (HPLC)
 - Gel Permeation Chromatography (GPC or SEC)
 - Molecular Characterization
 - Ion Chromatography
 - Pyrolysis GC-MS
- Chemical Analysis – Others
 - Karl Fischer Volumetric Titration
 - Soxhlet Extraction and Analysis
 - pH Measurements
 - Carbon-Sulfur Determination
 - Wet Chemical Analysis

Microscopy

- Scanning Electron Microscopy (SEM-EDXS)
- Transmission Electron Microscopy (TEM)
- Scanning Probe Microscopy (SPM)
- Atomic Force Microscopy (AFM)
- Infrared Microscopy
- Optical Microscopy
- Micro-Photography

Thermal Analysis

- Differential Scanning Calorimetry (DSC)
- Dynamic Mechanical Thermal Analysis (DMTA)
- Flash & Fire Point Testing
- Melt Flow Rate Analysis (MFI)
- Thermogravimetric Analysis (TGA)
- Thermomechanical Analysis (TMA)
- Thermal Photography

Metallurgical Analysis

- Microstructure Evaluation
- Grain Size Determination (ASTM E-112)
- Phase Transformation and Percentage
- Structure Identification
- Grain Boundary Precipitation
- Carburization & Decarburization
- Heat Treatment Evaluations
- Case Depth Measurements
- Inclusion Rating (ASTM E-45)
- Intergranular Oxidation / Intergranular Corrosion (ASTM A-262)
- Plating Thickness Measurement
- Near Surface Conditions
- Carbide Precipitation & Distribution
- Sensitization Studies
- Alloy Depletion Studies

Failure Analysis

- Fatigue Failure Analysis
- Corrosion Failure Analysis
- Embrittlement Testing
- Wear Failures Analysis

- Cracking (Stress Corrosion Cracking)
- Creep Failure Studies
- Environmental Degradation
- Overload Failures Analysis
- Improper Design / Fabrication
- Shearography
- Ageing Studies
- Dynamic Mechanical Analysis
- Tire Failure and Analysis
- Product Failure and analysis

Environmental Testing

- Accelerated Weathering Test
- ROHS Analysis (Cd, Hg, Pb, Cr VI, PBB and PBDE)
- Phthalate Testing
- Salt Spray Testing
- Dust Resistance Testing
- Vibration Testing
- Thermal Shock Testing
- Particle Analysis
- Product Testing
- Compliance Testing
- UV Testing
- Ozone Testing
- Cryogenic Testing
- Half Sine Shock Test
- Cold Test
- Dry Heat Test
- Humidity Testing
- Cyclic Humidity Testing
- Water Resistance Testing
- Resonance Point Search Test
- High & Low Temperature Testing
- Environmental Simulation Studies

Corrosion Analysis

- Electrochemical Corrosion Analysis
- Intergranular Corrosion
- Stress Corrosion Cracking
- Pitting Corrosion
- Salt Spray Testing
- Passivation
- Environmental Simulation
- Sea Water Corrosion

Product Analysis Services

- Competitor Product Analysis
- Raw Material Analysis and Selection
- Finished & Semi-Finished Product Analysis
- Product Design and Optimization
- Process Selection and Optimization
- Fatigue Testing and Analysis
- Environmental Simulation and Testing
- Product Failure Analysis
- Competitor Product Analysis
- Consumer Product Testing
- Product Endurance Testing
- Product Formulation & Deformulation
- Product Patent Infringement Analysis
- Product Performance Testing and Comparison
- Expert Witness Services and Litigation Support

Biological Analysis & Drug Testing

- Product Development
- Formulation and Deformulation Studies
- Method Development & Validation
- Product Characterization

- Stability Studies
- ADME / DMPK Studies
- Toxicology Testing
- Pharmacopoeial Testing
- Bioassays and Bioanalytics
- Raw Material & Excipient Analysis
- Pharmacology
- In vivo Analysis
- In vitro Analysis
- Drug Testing and Analysis
- Pharmaceutical Testing
- Contaminant Analysis
- Product Failure Analysis
- Performance Testing
- Litigation Support
- Quality Control
- Lipid Analysis
- Proteins Analysis
- Gel Analysis

Biomedical Testing Services

- Quality Control
- Function and Performance Testing
- Biocompatibility testing
- Implants Testing
- Biomaterials
- Disposables
- Tissue Engineering
- Mechanical Testing
- Failure Analysis
- Materials Characterization
- Contaminant Identification
- Customized Testing Services
- Extractables and Leachables
- Analysis of Coatings

Plastics, Polymers & Composites

- Comprehensive Testing and Analysis
- Additives Analysis
- Chemical Analysis and Materials Identification
- Complete Failure Analysis
- Mechanical Testing
- Contaminant Identification
- Deformulation and Reverse Engineering
- Thermal Analysis
- Coating and Paint Analysis
- Synthetic Fiber and Turf Testing
- Adhesives Analysis
- Competitor Product Analysis
- Patent and Litigation Support
- Polymer and Composites Research and Development

Microbiology / Antimicrobial Testing

- Antimicrobial Microbiology Testing
- Microbiology Testing for Food and Food Ingredients
- Dairy Industry Microbiology Testing Laboratory
- Microbiological Testing for Cosmetics and Personal Care
- Microbiological Testing for Pharmaceuticals
- Disinfectant Microbiology Testing
- Microbiology Testing for Polymers, Plastics, Rubbers and Composites
- Microbiological Testing for Carpets and Textile Materials
- Environmental Microbiology Testing
- Stability Testing
- Water Microbiology Testing
- Research Microbiology
- AOAC Testing Methods
- Time Kill Test
- Zone of Inhibition / Kirby-Bauer Test Services

- Minimum Inhibitory Concentration Test / MIC
- LAL Endotoxin Testing
- Microbial Identification Testing
- Microbiological Testing for Agriculture Products
- Microbial Claims Testing
- Microbiology Consulting and Testing Services

Deformulation Services at Criterion Scientific

- Polymer Deformulation
- Product Deformulation
- Pharmaceutical Deformulation
- Drug Deformulation Services
- Deformulation of Cosmetics
- Deformulation of Perfumes
- Detergent Deformulation
- Cleaning Solution Deformulation
- Deformulation of Lotions, Body wash, Shampoo and personal care
- Deformulation of Rubber, Plastics, Composites.
- Surfactant Mixture Deformulation
- Deformulation of Paints and Coatings
- Competitor Product Testing and Analysis
- Product Performance Testing
- Material Identification
- Extractable and Leachable Analysis
- Medical Devices Material Deformulation
- Active Ingredients Analysis

Consulting and Expert Witness Services

- Product Failure and Structural Failure
- Patent Infringement and Support
- Consultation on Consumer/Industrial Goods Performance Failure
- Litigation Case Assessment and Evaluation
- Materials/Product Testing and Analysis Proposal
- Actual Laboratory Product/Material Testing and Analysis

- Literature Review and Research
- Deposition and Trial Testimony
- Expert Witness Services
- Literature Review & Analysis

Services By Standards

- ASTM
- ISO
- FDA
- AASHTO
- MIL-STD
- SAE
- AISI
- AAMA
- RTCA/DO
- CISPR
- AREMA
- NYCTA
- DIN
- BIS
- AOAC
- IS
- JIS
- BS