

## Services for the Automotive Industry

For over 40 years EAG Laboratories has supported automotive customers working with raw materials, semiconductors, high-power devices and other components. We offer a comprehensive suite of testing techniques for characterization and testing of automotive products, including SiC & GaN devices.

### Purity Certification

Inspection of raw materials during key phases of manufacturing to identify impurities in materials and final products.

### Advanced Microscopy

Analysis of micro-structure, particle size, particle coatings and defects in thin/thick films or bulk materials.

### Failure Analysis

Investigations include IC deprocessing, thermal, physical, and chemical property characterization to help troubleshoot field failures.

### Contaminant Identification

Solving contamination issues originating from incoming raw materials, supply chain problems or manufacturing processes, such as oils and lubricants in plastics.

### Material Qualification

Testing materials from a new supplier to ensure they meet OEM requirements.

### Surface Analysis

Solving surface chemistry issues with adhesion, bonding, cleanliness, morphology and topography of a material.

### Electronic System Testing

Engineering expertise to design, develop, test, analyze, and debug using ATE, Burn-in, ESD & latch-up testing, system level testing, reliability, warpage analysis, and IC-level failure analysis.

### Metallurgical Analysis

Investigating fractures, fatigue, corrosion, contamination, wear, heat, stress related failures, and abrasion concerns.

### Polymer Characterization

Providing physical and chemical analyses for polymers and composites for automotive plastic related issues such as material incompatibilities.

### Quality Standards

EAG is accredited & certified for typical automotive testing standards.

Automotive Ecosystem	Material / Component	Application	Typical Services
<b>Raw material suppliers</b>	Plastic Parts Metal & Aluminum alloys Rubber Glass Paint	Vehicle Body Frame Tires Body Paint Glass Coatings	Materials Characterization Purity Services Reliability Testing Thermal & Physical Testing Chemical Characterization
<b>High-power device manufacturers that use SiC and GaN substrate</b>	Discrete Power Devices Sensors Lighting	eV & PHEV power Power Distribution Lidar High Intensity Headlights	Material Characterization Purity Services Vendor Qualification/Comparison
<b>Semiconductor component and device manufacturers</b>	Processor Analog IC Discrete Power Device Sensor Memory Device	Powertrain Safety Body Electronics Chassis Telematics and infotainment	Advanced Microscopy Wafer & Chip-Level FA ATE & Reliability Defect Localization Lifetime Testing Surface Analysis Material Characterization
<b>Automobile manufacturers</b>	Lithium Ion Batteries	eV and Hybrid Power	Electrolyte Chemical Analysis Advanced Microscopy Material Characterization Failure Analysis

## Litigation Support Services

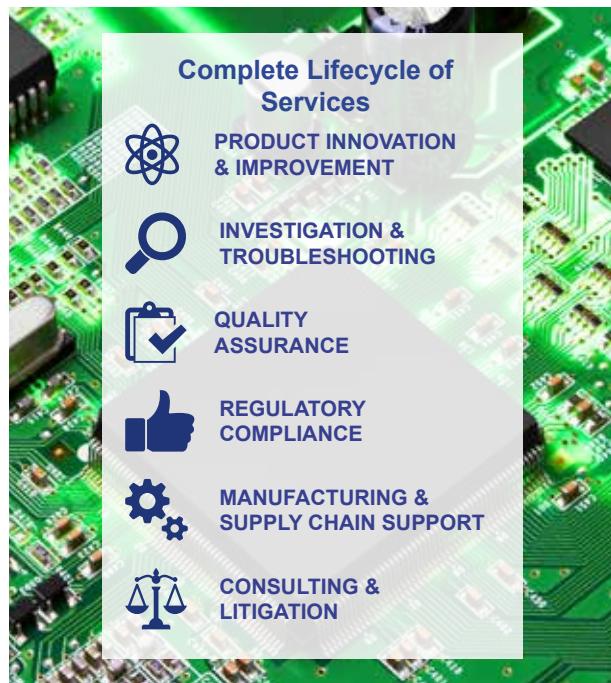
Providing scientific expertise, data interpretation, analytical litigation support, and expert witness testimony.

## Consultation and Project Management

We understand the need for first-to-market breakthrough technologies and can collaborate to provide results-driven solutions to the most complex of analytical investigations. Our experienced experts will work with your team to troubleshoot, and investigate the right material for your application, or optimize a manufacturing process.

## Global Support

We support over 4,000 clients in 20+ facilities located in the United States, Europe and Asia using more than 2,500 instruments worldwide.



## Typical Techniques for Automotive Testing

<a href="#">AFM</a>	<a href="#">GC-MS</a>	<a href="#">Pyro-GC-MS</a>
<a href="#">ATE Test</a>	<a href="#">GDMS</a>	<a href="#">PCB</a>
<a href="#">ATG (RBS)</a>	<a href="#">GPC</a>	<a href="#">Physical Testing</a>
<a href="#">Atom Probe</a>	<a href="#">HALT</a>	<a href="#">Profilometry</a>
<a href="#">Atomic Absorption</a>	<a href="#">HPLC</a>	<a href="#">Product Reliability</a>
<a href="#">Auger</a>	<a href="#">IC</a>	<a href="#">Raman</a>
<a href="#">Cathodoluminescence</a>	<a href="#">ICP-MS</a>	<a href="#">Reliability</a>
<a href="#">Circuit Edit</a>	<a href="#">ICP-OES</a>	<a href="#">RGA</a>
<a href="#">Corrosion Resistance</a>	<a href="#">IGA</a>	<a href="#">SEM</a>
<a href="#">DMA</a>	<a href="#">Ion Chromatography</a>	<a href="#">SIMS</a>
<a href="#">DPA</a>	<a href="#">LA-ICP-MS</a>	<a href="#">TEM</a>
<a href="#">DSC</a>	<a href="#">LC-MS</a>	<a href="#">Thermal Analysis</a>
<a href="#">Dual Beam</a>	<a href="#">LIBS</a>	<a href="#">TOF-SIMS</a>
<a href="#">EBSD</a>	<a href="#">Litigation Support</a>	<a href="#">TXRF</a>
<a href="#">EDS</a>	<a href="#">Metallurgy</a>	<a href="#">UV/VIS/NIR</a>
<a href="#">EMC</a>	<a href="#">Nanoindentation</a>	<a href="#">Warpage Analysis</a>
<a href="#">Electrochemistry</a>	<a href="#">NMR</a>	<a href="#">XPS/ESCA</a>
<a href="#">ESD</a>	<a href="#">Optical Microscopy</a>	<a href="#">XRD</a>
<a href="#">Failure Analysis</a>	<a href="#">Optical Profilometry</a>	<a href="#">XRF</a>
<a href="#">FTIR</a>	<a href="#">Organic FA</a>	<a href="#">XRR</a>

