

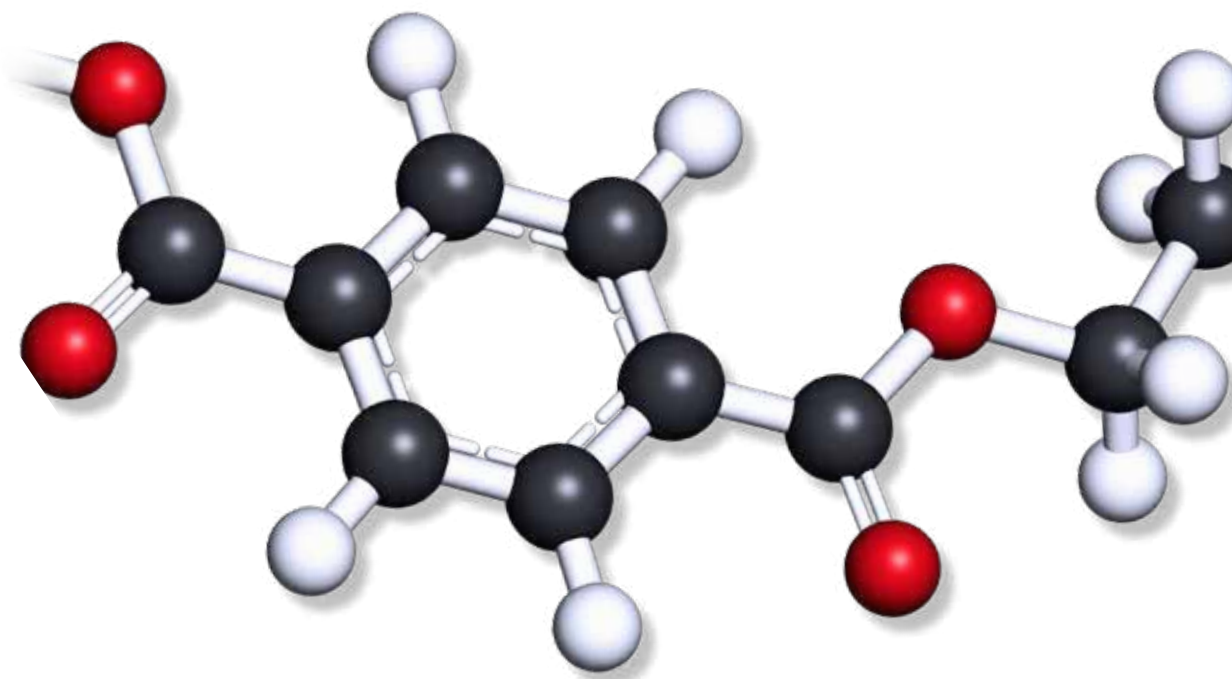
Leveraging material sciences to gain a competitive edge

EAG Laboratories offers expertise in polymer chemistry, with analytical services from basic characterization of materials to investigations involving complex problems. Our laboratories are equipped with state-of-the-art instrumentation:

- Spectroscopy: FTIR, NMR, Raman
- Chromatography: GC, LC, GPC, IC
- Mass Spectrometry: LC/MS, GC/MS, Pyrolysis GC/MS
- Thermal: DSC, TGA, TMA, DMA, Rheology
- Elemental: ICP, GDMS, SIMS, XRF, EDS
- Microscopy: SEM, TEM, FIB, AFM, OP
- Surface: XPS/ESCA, TOF-SIMS, Auger

Examples of EAG's solutions include:

- Identified source of pigment leaching from packaging into food product
- Determined the cause of clouding with a food packaging film
- Failure analysis of breaking light fixtures to determine root cause
- Performed polymer analysis to investigate biodegradation of an implanted device
- Analyzed polymeric materials to evaluate products for resin composition



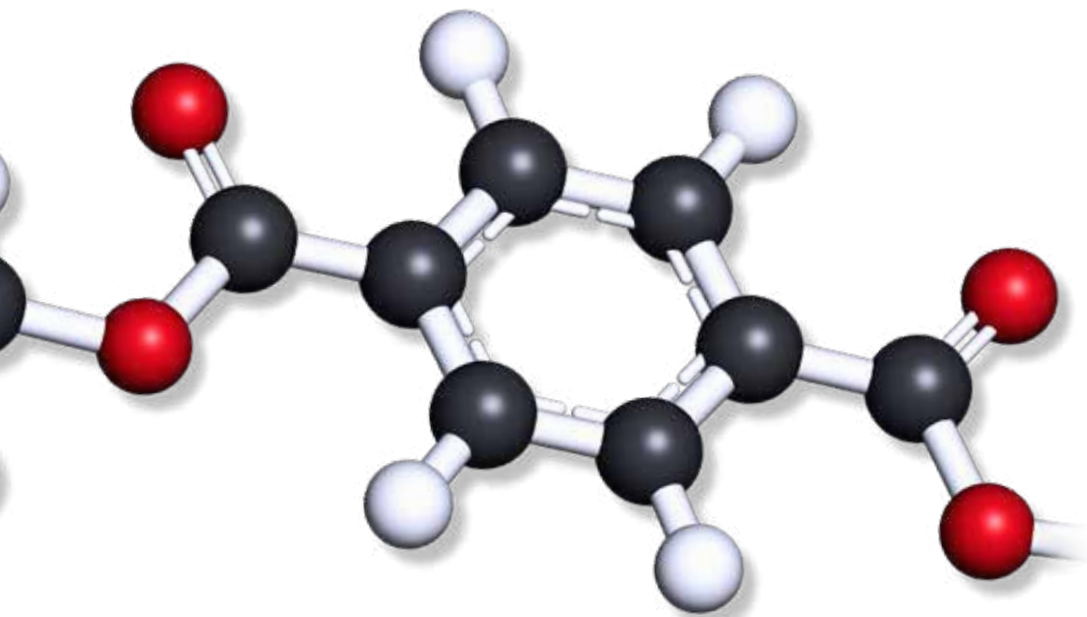
Customized chemical analysis

We have performed a variety of investigative projects for the aerospace, automotive, construction materials, electronics, consumer goods and packaging industries.

- Deformulation
- Contaminant Identification
- Failure Analysis
- Materials Identification
- Litigation Support

Case Study: Polyester fiberglass failure

A client came to EAG Laboratories when their unsaturated polyester-fiberglass composite experienced wrinkling and progressively large blisters after only a short period of service. Our expert scientists performed comparative analyses on a control and failed sample with solvent extraction, FT-IR, GC/MS, NMR and TGA methods. We found that the failure was due to the incomplete curing of the unsaturated polyester resin and an improper ratio of resin to fiberglass.



Extend Your R&D Resources

EAG Laboratories also offers rapid and cost-effective analytical services when scientists and engineers need direct access to our experts and specific instrumentation, including:

- Materials Characterization
- Polymer Testing
- Surface Analysis
- Microscopy
- Physical Testing

Case Study: Evaluating impurities in ceramic matrix composites (CMCs)

A leading composite manufacturer asked EAG to help control the purity of their “aerospace grade” CMC materials. Challenged by the material’s extreme chemical inertness toward common digestion media, they needed analytical support to confirm their product’s trace elemental concentration specifications. EAG applied a solid sampling trace elemental analysis using Fast-flow Glow Discharge Mass Spectrometry (FF-GDMS), helping the client to verify product specification before shipping bulk consignment materials for aircraft components production.

