



# Chemical Analysis

## We Take A Closer Look

### Organic Chemistry Testing Services:

- Identification of contaminants in organic compounds
- Flame retardant analysis (tris compounds, PBDEs, PBBs, and others)
- Bisphenol-A (BPA) and Bisphenol-S (BPS) Analysis
- Phthalates
- Formaldehyde Testing
- Volatile Organic Compound (VOC) determination
- PFOS / PFOA
- Azo Dye analysis
- Polycyclic Aromatic Hydrocarbon (PAH) analysis

### Chemical Analysis Services

ATS provides a broad spectrum of chemical analysis with vast capabilities to identify elements/compounds at low levels.

- Trace Metals Analysis in Organic or Inorganic Matrices
- Commercial Grade Dedication for the Nuclear Industry
- On-Site Positive Material Identification (PMI)
- High Purity Metals Analysis
- Alloy Identification
- Wet Chemical and Elemental Analysis
- Comprehensive Polymer Testing
- Corrosion Product Identification
- Consumer Product and Toy Testing
- Toxic Substances Control Act (TSCA)
- Restriction of Hazardous Substances (RoHS)
- Toxics in Packaging (TPCH)
- California Proposition 65 Testing
- Lead Testing of Paint
- Contamination Analysis

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## Metal Analysis

Our chemistry department specializes in determining the elemental composition of ferrous and nonferrous alloys that are used in a variety of industries. Alternate techniques allow us to determine the composition of materials regardless of their size, shape, or base material.

We utilize proven classical wet chemical techniques when analysis of highest accuracy is needed. Our staff is well trained in the use of ASTM, EPA, NIOSH, and other classical analysis methods.

- Optical Emission Spectroscopy
- ICP Atomic Emission
- Atomic Absorption
- Carbon & Sulfur Combustion Analysis
- Hydrogen, Nitrogen & Oxygen (Carbofusion Analysis)
- Classical Wet Chemistry
- Scanning Electron Microscopy (SEM/EDS)
- Stainless Steel
- Low Alloy & Carbon Steel
- Aluminum Alloys
- Nickel Alloys
- Cobalt Alloys
- Cast Irons & Steels
- Tool Steels
- Copper Alloys



## Non-Destructive On-Site Chemical Analysis X-Ray Fluorescence

ATS offers a non-destructive analysis alternative for 21 common alloying elements found in iron, aluminum, nickel, cobalt and copper-based alloys. Because the instrumentation is portable, ATS can analyze your samples on-site, thus significantly reducing down time and eliminating the shipping costs associated with sending out samples. Our technicians can be at your site within 24 hours of when your request is made.

- Materials Sorting
- Positive Material Identification (PMI)
- Large Vessels/Boilers
- Fixed Structural or Process Components
- Welds
- Fasteners

## ATS Polymer Testing

Polymer Testing at ATS is a comprehensive service utilizing experienced and dedicated professionals using state-of-the-art equipment. Our capabilities include polymer characterization, molecular weight studies, and dilute solution viscosity as well as the determination of mechanical properties such as impact, tensile/ flexural strength, hardness, and flammability. Whether your polymer testing needs are process related or incoming material verification, ATS provides you with accurate and timely results.

- Failure Analysis of Plastics and Polymers
- Tensile or Flexural Strength of Films, Fibers, and Coatings
- Modulus by Dynamic Analysis (DMA, TMA)
- Heat Deflection Temperature Under a Load (DTUL)
- Coefficient of Thermal Expansion (CTE) by TMA
- Flammability, Heat Aging, and Thermal Stability
- Accelerated Weathering (UV Degradation)
- Tg, Melting Point, Crystallinity, and Heat Capacity (DSC)
- Filler Content and Decomposition Analysis (TGA)
- Polymer Identification (FT-IR)
- Analysis for Plasticizers, Inhibitors, and Additives
- Inherent/Intrinsic Viscosity
- Melt Flow Rate/Capillary Rheometry
- Durometer Hardness