

## ***Mechanical Testing***

Trace Laboratories assists materials, component and assembly manufacturers with a variety of mechanical tests for design improvements, quality assurance and product qualification. The tests typically conducted for our broad customer base includes: physical property testing, mechanical durability, electrical characterization of materials and environmental simulation. Trace Laboratories is versatile and prepared to assist you with meeting your specific requirements promptly and efficiently

## ***Mechanical Capabilities***

- Tensile Properties (Ambient, Hot, Cold)
- Flexural Properties (Ambient, Hot, Cold)
- Mechanical Cycling
  - Durability
  - Pressure Cycling
  - Flexural Durability
  - Abrasion
  - Cyclic Fatigue
  - Altitude Cycling
  - Life Testing
- Force, Torque, Strain Measurements
- Bond Strength
- Microsectioning
- Flammability
- And Much More



## ***Environmental Simulation Capabilities***

- High and Low Temperature
- Vibration
- Mechanical Shock
- Thermal Shock
- Thermal Cycling
- Humidity
- Salt Spray
- Water Spray
- Dust
- Multiple Environments
- Explosion
- Altitude
- Freeze/Thaw
- And Much More



## Services

- Acceleration
- Complete Tool Room
- Custom Test Tailoring
- Design Recommendations
- DSCC, DGSC, and DISC
- Explosion Proofing
- Failure Analysis
- Fixture Design for Automation
- Safety and Reliability Analysis
- Solder Joint Reliability



Testing is performed in strict accordance with the standards and customer-specific requests. The lab is also available on a per-day basis for preliminary testing and troubleshooting.

Trace is an A2LA Accredited Laboratory.

## Independent, Internationally Accredited Testing Services

- ✓ Chemical Testing
- ✓ Electrical Testing
- ✓ EMC (Electromagnetic Compatibility)
- ✓ Environmental Testing
- ✓ Failure Analysis/Contamination
- ✓ HALT (Highly Accelerated Life Test)
- ✓ Material Properties
- ✓ Mechanical Testing
- ✓ Printed Circuit Board Testing
- ✓ Reliability/Durability/Qualification
- ✓ Thermal Analysis
- ✓ UL Testing
- ✓ Vibration Testing
- ✓ Water Testing

For more information, or for a quote on specific test requirements, contact:

**Trace Laboratories - Central**  
1150 West Euclid Avenue  
Palatine, IL 60067  
Phone: 847-934-5300  
Fax: 847-934-4600

**Trace Laboratories - East**  
5 North Park Drive  
Hunt Valley, MD 21030  
Phone: 410-584-9099  
Fax: 410-584-9117

Email: [info@tracelabs.com](mailto:info@tracelabs.com)