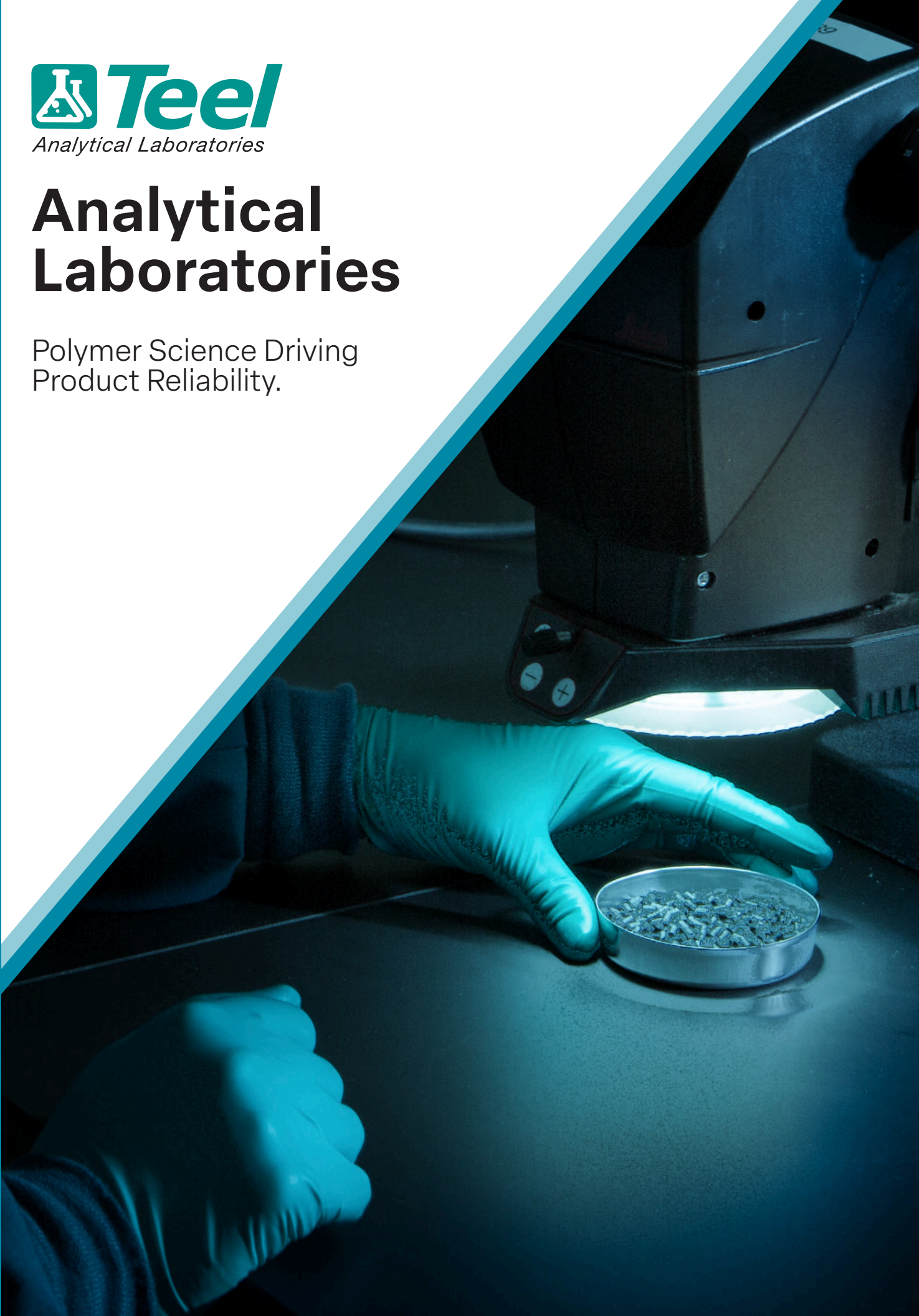




*Analytical Laboratories*

# Analytical Laboratories

Polymer Science Driving  
Product Reliability.





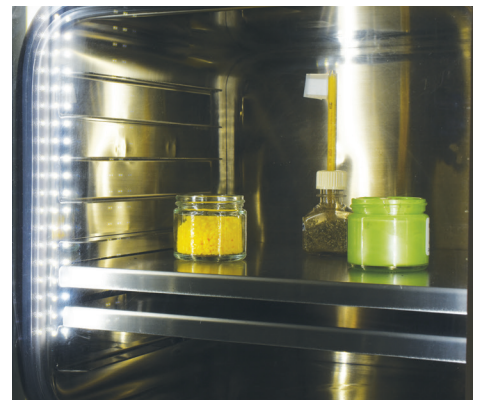
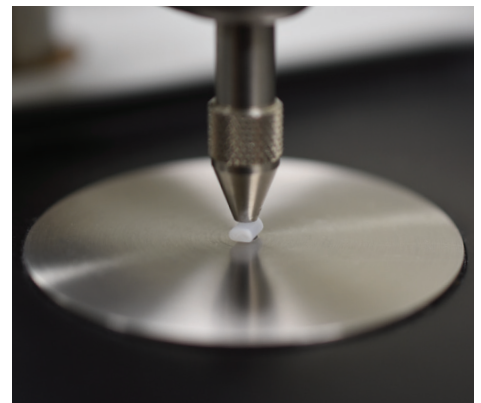
## Dedicated to Quality Laboratory Testing

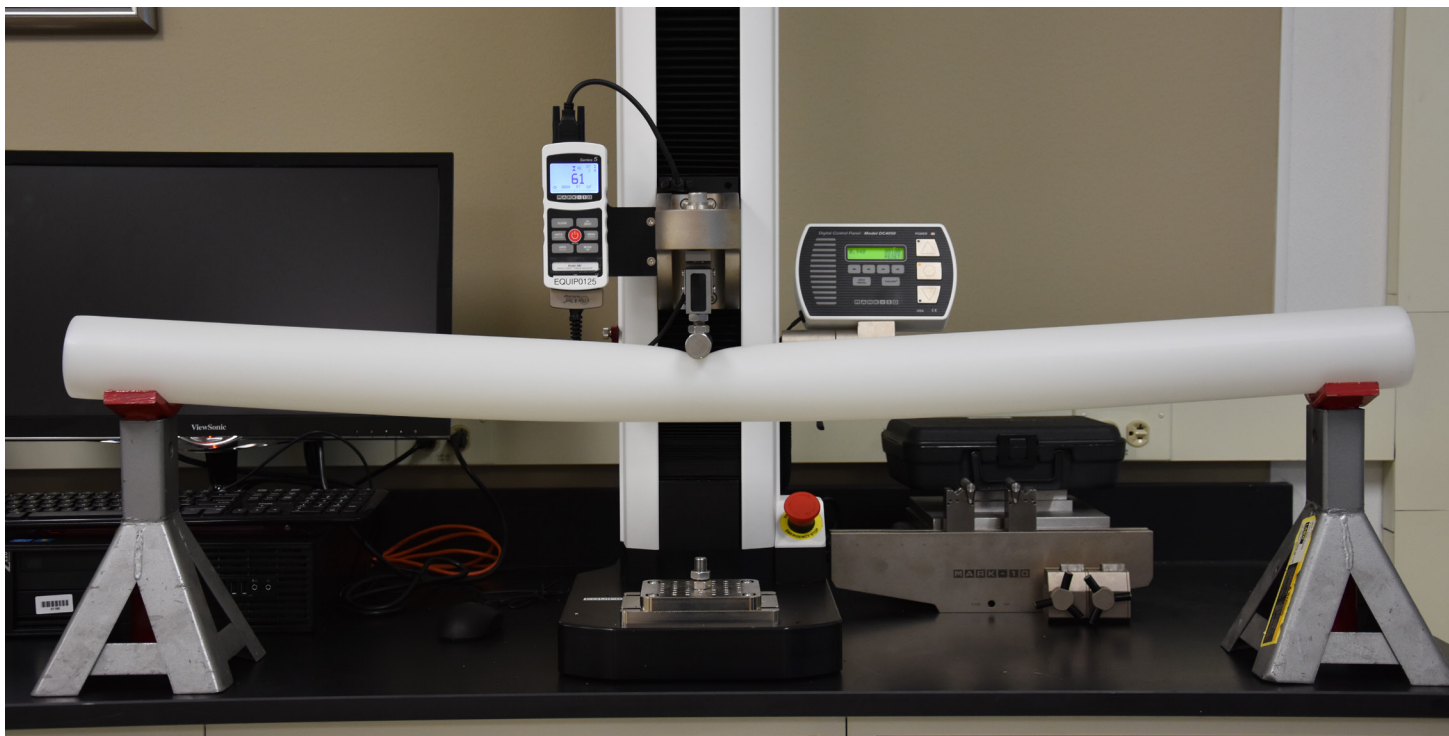
Teel Analytical Laboratories was founded in 2010 to support complex quality requirements and specialized new product development. We specialize in polymer analysis and custom method development.

We work with plastics processors daily and understands your needs and challenges. We can use test results to improve everything from materials selection to inventory management.

At Teel Analytical Laboratories, we follow a consultative approach to testing services and work with our customers to recommend only the testing needed. We want our testing to be immediately impactful and help drive decisions in your operation.

We are ISO 17025 accredited and use validated test methods to assure that the results you receive are accurate and reliable.





## Our Customer-Centric Approach

Teel Analytical Laboratories offers a full service approach to the testing we provide. We begin by discussing the issue you are seeing or the information you need. You get to talk directly to one of our chemists even during these initial phone calls.

Based on your situation, we recommend specific testing protocols that will provide the information you need. This may include a standard method based on an ASTM or a custom developed technique for your application. We want to make sure you get the value out of the testing and results we provide.

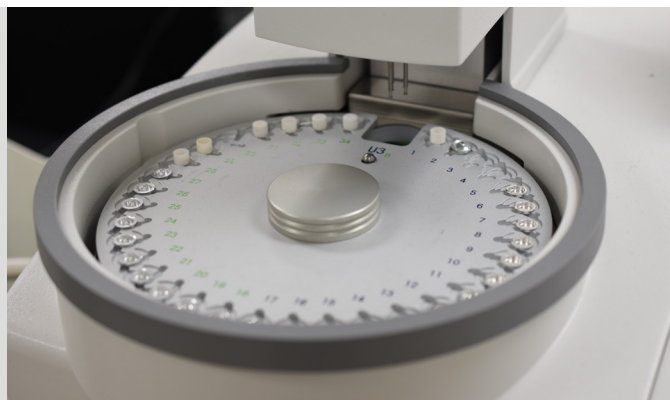
Test times will vary depending on the complexity and duration of the test required. We can provide updates and estimates as testing progresses.

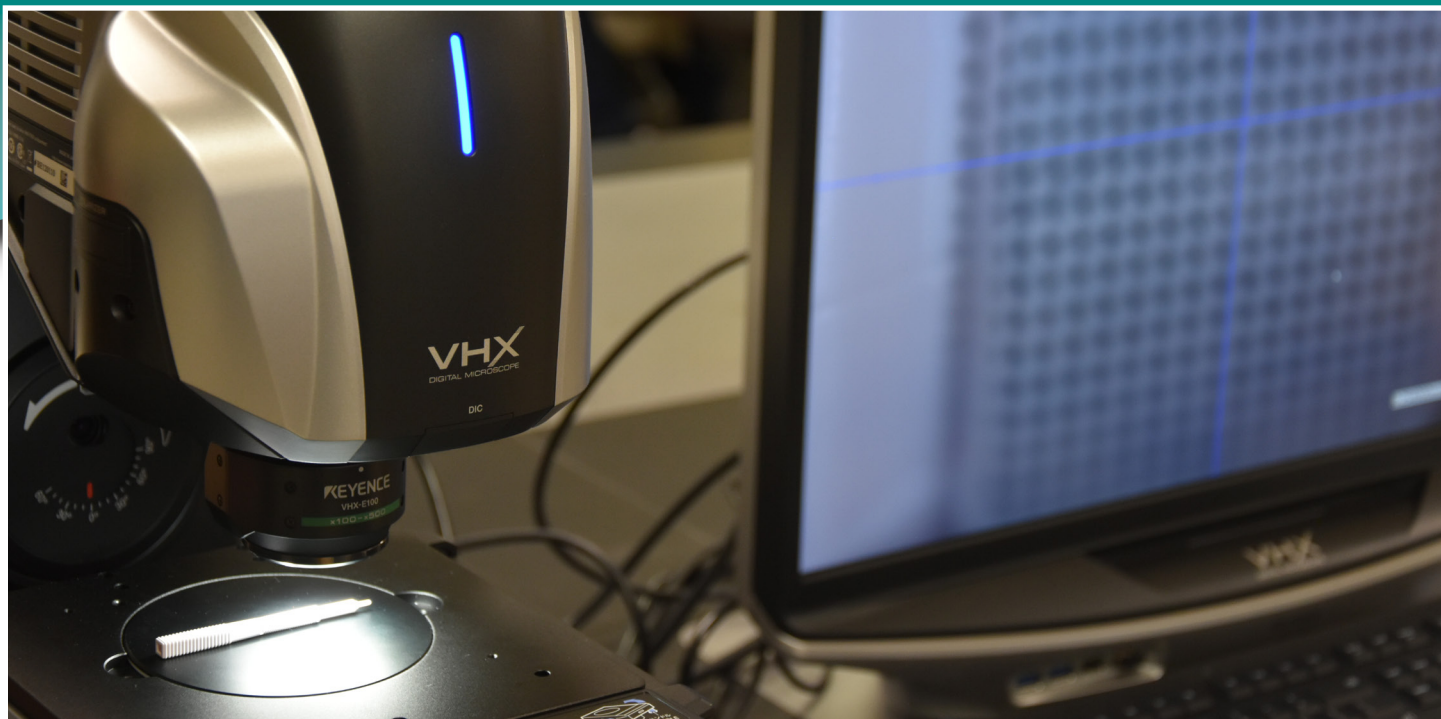
Once testing is completed, Teel Analytical Laboratories provides more than a graph and numbers. We provide a detailed, written report that gives interpretation of what we saw during testing.

Not sure you understand? We are available for follow-up consultations.

Looking for a supplier that can  
co-develop solutions and meet  
your challenges?

**Partner with Teel!**





## Testing Capabilities

- **Differential Scanning Calorimetry (DSC)**
  - Determines the thermal characteristics of your polymer such as the melting point and percent crystallinity
  - Oxidation resistance analysis
  - Kinetic modeling available
- **Thermogravimetric Analysis (TGA)**
  - Compositional analysis for volatiles, base polymer, carbon loading, inorganics
  - Simultaneous DSC analysis available
  - Kinetic modeling available
- **Fourier Transform Infrared Spectroscopy (FT-IR)**
  - Material identification
  - Software capabilities for multiple component matches
- **Melt Flow Rate (MFR)**
  - Determines the flow rate of a polymer under different temperatures and load
- **Durometer Hardness**
  - Determine the hardness of a material in Shore A and D scale
- **Particle Size**
  - Sieve testing with a 10 to 270 mesh range (2.00mm to 53µm)
- **Impact**
  - Dart or tup drop test
- **Tensile/Compression**
  - Tensile and compression testing available with up to 1500 lbs. of force
- **Pipe Burst**
  - Resistance to short-time hydraulic pressure (quick burst)
- **Microscopy**
  - Microscopic imaging available up to 200X
  - Measurements (X, Y and Z planes) down to 0.005 mm or 0.0002 inches
- **Moisture**
  - Determines the moisture in a material by relative humidity
- **Loss on Drying**
  - Determines the weight loss associated with volatiles and moisture by exposure to elevated temperatures
- **Viscosity**
  - Determines the viscosity of liquids by a rotational viscometer
- **Density**
  - Determines the density of solid material
- **Bulk Density**
  - Determines the volume of space occupied by a material
- **High-Performance Liquid Chromatography (HPLC)**
  - Technique to identify and quantify components within a mixture
- **Environmental Stress Crack Resistance (ESCR)**
  - Determines a product's ability to resist slow growth cracking and environmental stress
- **Custom Testing Protocols**
  - Combinations of test capabilities or other tests not listed can generate invaluable information
  - Examples of this include the identification of contaminants, the presence of DEHP in PVC, material degradation, percent VOCs, and many more