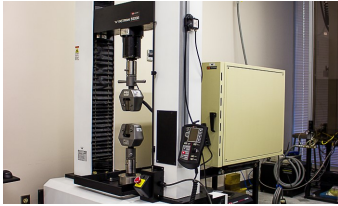


TEXTILE TESTING

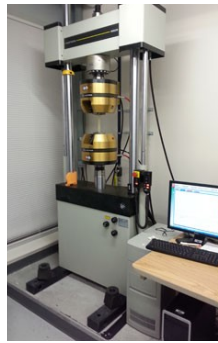


Gateway Materials Test Center (GMTC) is equipped with state of the art testing systems. Affiliation with the Joint School of Nanoscience and Nanoengineering enables GMTC to offer testing on an impressive suite of chemical and analytical instruments. Contact us today to discuss your testing needs.



MATERIALS TEST SYSTEMS

The Instron 3384 and 5900R are both equipped with temperature chambers to allow for testing at elevated and sub-ambient temperatures (-200F to 600F). The systems have load cells ranging from 2 lb to 30K lbs and a wide assortment of ASTM fixtures.



FATIGUE TEST SYSTEM

The Instron 9250G can operate at an energy level of up to 1000 ft-lb and at a speed of up to 5 mps. It is equipped with a pneumatic rebound brake. The output data acquired is Load vs. Time.



CHEMICAL & ANALYTICAL TESTING

GMTC has access to a state of the art suite of instruments including FTIR, HPLC, XRD, NMR, Mass Spectrometers, Spectrophotometers, ICP-OES, UV-Vis, and Fluorimeters. Check with us about any testing chemical or analytical testing that you require.



DYNAMIC MECHANICAL ANALYZER

The DMA 8000 is used to characterize the bulk properties of materials such as modulus, compliance and damping (tan delta).



SCANNING ELECTRON MICROSCOPY

The Zeiss Auriga and EVO along with the Hitachi S4800 combine to offer a wide range of imaging capabilities down to nanoscale. Evaluation of textiles at these magnifications can provide useful information on fiber identification and internal morphology. All three SEMs offer EDX capability and the Auriga is equipped with Focused Ion Beam (FIB).



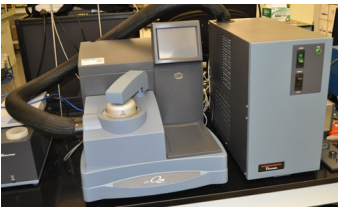
THERMOGRAVIMETRIC ANALYZER

The TA Instruments TGA Q500 measures changes in physical and chemical properties of materials as a function of increasing temperature (with constant heating rate) or time (with constant temperature).



ENVIRONMENTAL CHAMBER

The 10 cubic foot Tenney C-EVO can condition specimens from -73° to 200° C. Humidity can be controlled in the range of 10% to 95% RH over the temperature range of 20° to 85° C limited by a 3° dew point.



DIFFERENTIAL SCANNING CALORIMETER

The TA Instruments DSC Q200 and the Perkin Elmer DSC4000 are used to measure melting temperature, heat of fusion, glass transition temperature, and study oxidation and other chemical reactions.



Contact Us: Gateway Materials Test Center
2901 East Gate City Blvd
Greensboro, NC 27401
Evan Kimbro, PhD - Director
336-217-5185
evank@gatewaymaterialstestcenter.com



MOST REQUESTED TESTING CAPABILITIES

ASTM D276	Standard Test Method for Identification of Fibers in Textiles	
ASTM D629	Standard Test Method for Quantitative Analysis of Textiles	
ASTM D751	Standard Test Method for Coated Fabrics	
ASTM D1776	Standard Practice for Conditioning and Testing Textiles	
ASTM D1894	Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and sheeting	
ASTM D2097	Standard Test Method for Flex Testing of Finish on Upholstry Leather	
ASTM D2136	Standard Test Method for Coated Fabrics - Low-temperature Bend Test	
ASTM D2256	Standard Test Method for Tensile Properties of Yarns by the Single-Strand Method	
ASTM D2259	Standard Test Method for Shrinkage of Yarns	
ASTM D3107	Standard Test Method for Stretch Properties of Fabrics Woven from Stretch Yarns	
ASTM D3108	Standard Test Method for Coefficient of Friction, Yarn to Solid Material	
ASTM D3412	Standard Test Method for Coefficient of Friction, Yarn to Yarn	

ASTM D3776	Standard Test Method for Mass Per Unit Area (Weight) of Fabric	
ASTM D3787	Standard Test Method for Bursting Strength of Textiles - Constant Rate of Traverse (CRT) Ball Burst Test	
ASTM D4964	Standard Test method for Tension and Elongation of Elastic Fabrics (CRE)	
ASTM D5034	Standard Test Method for Breaking Strength and Elongation of Textile Fabrics	
ASTM D5035	Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Strip Method)	
ASTM D5278	Standard Test Method for Elongation of Narrow Elastic Fabrics (Static Load Testing)	
ASTM D6048	Standard Practice for Stress Relaxation Testing of Raw Rubber, Unvulcanized Rubber Compounds, and Thermoplastic Elastomers	
ASTM D6614	Standard Test Method for Stretch Properties of Textile Fabrics (CRE)	
ASTM D6775	Standard Test Method for Breaking Strength and Elongation of Textile Webbing, Tape and Braided Material	
ASTM D6797	Standard Test Method for bursting Strength of Fabrics constant Rate of Ex-	*

* ISO 17025 Certified

