



**TEXTILE
TECHNOLOGY
CENTER**

at Gaston College

CATALOG OF SERVICES

**7220 Wilkinson Blvd.
Belmont, NC 28012
704.922.3737**

gaston.edu/textile-technology-center/

TEXTILE TECHNOLOGY CENTER

at Gaston College

Where do textile and fiber companies go when they need a centralized source of technical support for their business? For over 70 years that place has been the Textile Technology Center in Belmont, North Carolina.

Since its inception in 1943, the Center has played a significant role in serving the North Carolina textile industry. Today, the Center serves the nation and the world. Over time, the areas of need within the textile industry have changed and evolved and the Center has remained flexible and evolved along with those needs.

The Textile Center focuses on providing testing services, product prototyping and sample production in several areas.

With state of the art equipment and capable staff, the Textile Technology Center provides quick and cost effective solutions to fiber producers, textile and apparel manufacturers and retailers most specialized needs. How may we serve you?

Prices subject to change

Revised May 2020



TEXTILE TECHNOLOGY CENTER AT GASTON COLLEGE

7220 Wilkinson Blvd., Belmont, North Carolina

704.825.3737

TABLE OF CONTENTS

Textile Technology Center at Gaston College	1
Melt Extrusion Laboratory	3
Yarn Processing.....	5
Short Staple Processing	5
Lab Scale Processing.....	6
Fabric Formation	7
Dyeing Laboratory.....	8
Analytical Chemistry Laboratory	9
Microscopy Laboratory	12
Flammability Laboratory.....	16
Physical Testing Laboratory.....	17
Fiber Testing.....	17
Yarn Testing	18
Fabric Testing.....	20
Fabric & Yarn Analysis Laboratory.....	25
Customized Training - Textiles 101.....	27
Map	28

MELT EXTRUSION LABORATORY

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Where the creation of synthetic fibers begins. From polymer to chip to fiber. From fiber to yarn, then fabric, melt extrusion is the start of seeing your sample come to being. With small run capabilities, see if your formulation will translate well when implemented at your own mill or plant; minimizing your investment risk. Let the Textile Center's Melt Extrusion Laboratory be your lab for perfecting your project from its start!

Melt Spinner (Large Extruder): \$2500/day

Single line multi-filament melt extruder.

Melt Spinner (Small Extruder): \$2100/day

Staple Draw Line: \$1500/day

Processes filament fiber into cut staple with 2 draw lines, crimper, drying oven and cutter.

Fiber Drawing: \$90/process hour

Single thread line, four heated rolls

Fiber Cutting: \$90/process hour

Cuts drawn uncrimped fiber into staple, 1/2" to 7".

Chip Drying: Call for quote

Dessicate up to 180 pounds. Vacuum up to 250 pounds.

Reactor: \$1200/day

2 Liter Batch Autoclave includes cleanout/wash batch.

One Shot Extruder: \$375/hour

Includes clean up

Air Jet Texturing: \$90/hour

BCF Texturing: \$90/hour

False Twist Texturing: \$90/hour

\$90/labor hour *additional services*



YARN PROCESSING

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With as little as 100 grams of your fiber, the Textile Center's Yarn Processing Department can spin it into the yarn of your choice. Offering short and long staple options, the center supports both the synthetic and natural fiber industries.

Short Staple Processing (30 to 250 pounds)

please call for pricing

Hollingsworth Hopper Blend Line

Opens bales of fiber; weighs and blends to specific ratios. Used for natural and synthetic fibers.

Trutzschler LVSA Fine Opener

Opens fiber and stores it for fiber regulation and control.

Trutzschler FBK 760 Card

Cards short staple fibers. Operates using a single licker-in. Semi-worsted system, mid to long staple fibers.

Trutzschler DK 903 Card

Cards short staple fibers. Operates using triple licker-ins within rollertop card.

Reiter RSB 851 Draw Frame with Autoleveller

Used to draw sliver to improve evenness and achieve desired grain weight.

Saco-Lowell Rovamatic with Speed Controls

Processes sliver into roving for ring spinning.

CSM Ring Spinning Frame

Capable of producing a wide range of yarn counts.

Muratec MVS

Vortex Spinning Frame.

Schlafhorst SE-11 Autocoro

Open End spinning frame.

SSM Doubler

Plys together two to three packages.

Muratec Link Coner

Winds ring spun yarn that is packaged on bobbins onto larger packages.

Galan PR166/9 - Doubling and Ring Twisting Machine

Ring Twister offers flexibility for small to medium scale productions.

Agteks Directwist 2C10 - Multi-Function Twisting Machine

Symtech SSM Xeno YD with Digicone 2 Fastflex Technology

Winder for monofilament, textured filaments, technical yarns, assembly winding.

Xorella XO-Mini

Textile conditioning machine with treatment temperatures up to 140C.

Lab Scale Processing (100 grams)

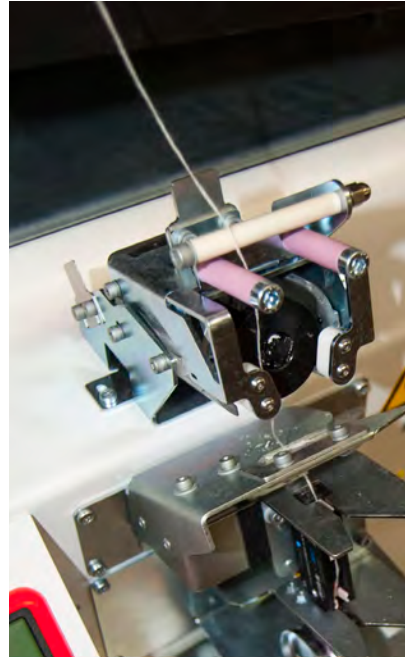
please call for pricing

Uster MDTA Rotoring

Produces sliver that can be used to create an Open End or Ring Spun yarn.

Pinter 24- Position Ring Spinning Frame: Call for quote

Capable of spinning long staple and fine counts



FABRIC FORMATION

Lee Allison • 704.825.6262 • allison.jeffrey@gaston.edu
Kelly Brown • 704.825.6290 • brown.kelly@gaston.edu

Starting with a CCI Sample Weaving System, The Fabric Formation Department is capable of sizing, warping and weaving fabric from a single package. The ability to warp using up to six different packages, using any fiber type! Fabric Formation also offers knitting services, from small tubular knit samples to larger jersey knits requiring as few as 24 packages.

Pricing based on sley (warp ends)

CCI Sample Weaving System: Call for Quote (min. 2 yds.)

This is a set of three separate machines that are capable of sizing, warping and weaving fabric from a single package. The machine is able to warp using up to six different packages. Any fiber type will work on this machine. Weaves any 18 body harness dobby design.



CCI Sample Weaving System: Call for Quote (up to 20 yds.)

Sulzer Rapier Weaving System: Call for Quote

Forty yard broadcloth sample in any dobby weave.

Circular Knitting Projects: Call for Quote

DYEING LABORATORY

Jerome Harris • 704.825.6268 or 704.825.6285 • harris.jerome@gaston.edu

From diagnostic dyeing and colorfastness evaluation to shade matching, the Dye Laboratory's capabilities can be performed on fiber, yarn and fabric samples.

**Colorfastness to Laundering, Home and Commercial:
Accelerated (AATCC 61): \$65/hour**

Launderometer / Ahiba Nuance

Colorfastness to Water (AATCC 107): \$65/hour

Merge Checks: \$65/hour

Competitive and Comparative.

Dye Puffs/Fabric: \$65/hour

Dye Re-level: \$65/hour

Pre-Treatment and After-Treatment: \$24/hour

Pressure Level: \$65/hour

Washing Accelerated: \$65/hour

Strip/Re-dye: \$132/hour

Scour: \$65/hour

V-Value for Polyester: \$65/hour

Gaston County Futura Jet: \$150/hour

Gaston County Package Machine: \$60/hour

(2 pound max.)

Scour: \$60/hour

Gaston County Mini-Lab Jet:

\$90/hour

(36" x 7 yards max.)

Ahiba Skein Dyer: \$65/hour

Single Dip Padder: \$120/hour

Single Dip Padder Usage:

**\$100/hour (minimum of
1 hour)**



ANALYTICAL CHEMISTRY LABORATORY

Rick Stahl • 704.825.6265 • ttcanalyticallab@ymail.com
Denisha Guy • 704.825.6263 • ttcanalyticallab@ymail.com

Using techniques that involve separation, identification and quantification, the Analytical Laboratory determines the identity and quantity of chemical components within a sample.

ICP: \$180 (Minimum sample size 5 grams)

Standard Element List-Standard Preparation (Acid Digestion or Ash) Elements available include (any and all can be reported at the specified rate):

Silver, Aluminum, Arsenic, Beryllium, Bismuth, Calcium, Cadmium, Cobalt, Chromium, Copper, Iron, Potassium, Lithium, Magnesium, Manganese, Molybdenum, Sodium, Nickel, Phosphorous, Lead, Antimony, Selenium, Strontium, Thallium, Titanium, Vanadium and Zinc.

GC: \$180 (Minimum sample size 5 grams)

Standard PET preparation and analysis only (Any other GC analysis must be quoted individually and test methods provided where applicable.)

GC/MS: Call for Quote

As required

DSC: \$120

Standard melt point and transitions.

DSC- Multiple Cycle: \$150

Multiple cycle heat and cool based on specific instructions included in the initial request.

DSC- Heat History: \$150

Heat history analysis of yarn, fiber and fabric in triplicate.

UVVis: Call for quote

Quoted per request dependent on requirements.

Ash Content: \$95

Per request duplicate analysis.

Moisture: \$100

Standard evaporative analysis of polymer moisture (n=1).

Loss on Drying: \$80

Standard evaporative analysis of polymer moisture (n=2).

% Finish (Extractables): \$150 (minimum sample size 20 grams)

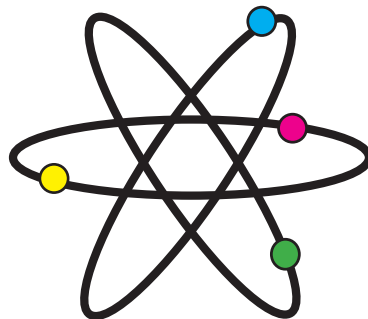
Polar and non-polar extraction using methanol/hexanes.

% Finish (Extractables): \$160 (minimum sample size 20 grams)

Finish analysis with hexanes and methanol data separated by solvent.

**Special Finish Analysis: Call for quote
(minimum sample size 20 grams)**

Finish extraction with non-standard solvents/
techniques quoted individually.



Complete Finish Analysis: \$360 (minimum sample size 20 grams)

Finish extraction and analysis of residue by FTIR. Additional charge if EDX and/or GCMS required.

Blend Analysis: \$115 (minimum sample size 10 grams)

Per polymer - i.e., remove cotton = 1 sample, remove PET = 1 sample

Dissolve Out: Call for quote

Per polymer.

FTIR: \$100 (minimum sample size 5 grams)

Normal Prep: Special handling will be quoted.

pH Determination: \$80 (minimum sample size 5 grams)

This test determines the pH of wet processed textiles.

Relative Dye: \$150 (minimum sample size 5 grams)

Standard PET method w/HFIP.

Surface Oligomers: \$150 (minimum sample size 5 grams)

Standard Method - UVVis.

Total Oligomers: \$150 (minimum sample size 5 grams)

Standard Method - UVVis.

Consultation: \$130 per hour

Analytical Priority Assignment

Standard Service: Completion within 15 working business days

Express Service: Completion within 5 working business days 50% surcharge

Priority Service: Completion within 1-2 working business days 100% surcharge

MICROSCOPY LABORATORY

Leslie Berryhill • 704.825.6293 • ttcmicro@yahoo.com
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Jim Taft • 704.825.6298 • ttcmicro@yahoo.com

The microscopy lab has a very talented staff that is trained to get the most out of the equipment which includes stereo, compound, scanning electron microscopes and more. These tools are often used for imaging, identification, reverse engineering and problem solving.

Bicomponent/Hollow Fiber dpf: \$180/sample

Similar to determining fiber dpf, uses the weight percent of each component.

Chemical Extraction: \$40/solvent/sample

Water, alcohol, hexanes, acetone and xylene for contamination investigation.

Chemical Extraction (HFIP gel analysis): \$80/sample/solvent

Chemical extraction typically involving 0.05 milliliters or less of solvent.

Cotton Maturity Detection: \$90/sample

Contamination Identification: Starting at \$330 +/-sample

The lab is skilled at contamination identification by combining sample manipulation, polarized light, microscope infrared, hot stage, and energy dispersive x-ray analysis techniques to identify contaminants.

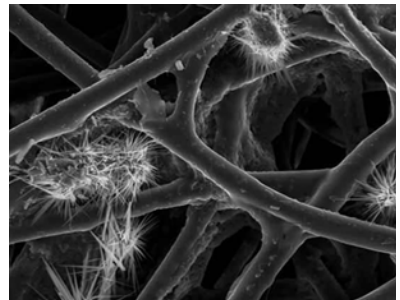
Crimp per inch by image analysis (n=30): \$150/sample or \$240/sample - Spiral or high twist fibers

Cross-section: \$90/sample or \$100/spandex (hand cut procedure) or \$130/comparing normal to defect yarns.

Digital image of fiber, yarn or multilayer film cross-section.

Data Compilation: \$80/hour

The compilation of data for all imaging and problem solving projects



Density Column: \$60/sample

Fiber or yarn – n=3 / Chip – n=10 /
Bottle Flake – n=1

EDX: \$90/sample

Identification of elements (carbon and heavier) lowest level of detection
2000ppm.

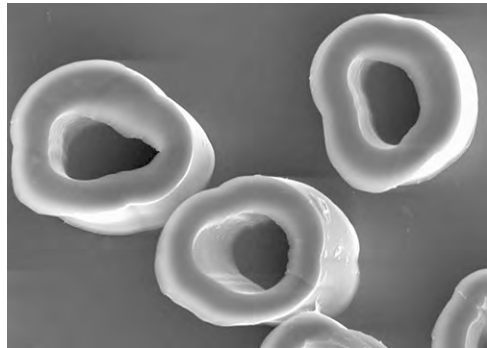
EDX Mapping: \$190/ sample

Epoxy Cross-section: \$180/sample

This technique is used to cross-section
high strength yarns such as
Paraaramid.

Failure Analysis: Starting at \$330+/sample

Root cause failure analysis (i.e., Did the
sample fail from stress overload,
brittle fracture, environmental stress
cracking, chemical attack, etc.) This does
not include the cost of contaminant identification.



Fiber Birefringence: \$240/sample

Fiber dpf: \$140/sample or

Bicomponent/Hollow: \$180/sample

Calculate fiber dpf by using image
analysis to measure the fiber
cross-sectional area.

Fiber Identification: \$190/sample

Unknown fibers are identified by using a combination of microscopy infrared
and cross section analysis. Additional testing may be required such as hot
stage and EDX at an additional cost.

Fiber Shrinkage by Hot Stage: \$200/sample

Fiber shrinkage determined by Mettler Hot stage and Image Analysis.

Fiber ID Stain: \$50/sample

Gross determination of fiber types in an unknown sample.

Filament Count by Image Analysis: \$90/sample (Additional \$80 per hour for 100+ filament yarns if necessary)

Yarn cross-section via thin sectioning device.

Freeze Fracture: \$80/sample

Prepares foamed samples for SEM imaging.

Hot Stage Analysis: \$100/sample

The lab has a Mettler hot stage. The hot stage can be thought of as Differential Scanning Calorimetry with images instead of a thermal analysis plot.

Mod Ratio & DPF: \$180/sample

Similar to determining fiber dpf with the addition of mod ratio also being calculated.

Microscopic Infrared Analysis: \$100/sample

The lab has an IlluminatIR II for doing microscope ATR or ARO analysis.

Nonwoven Blend: \$430 / sample for 2 component (\$150 each additional component)

The lab is skilled at reverse engineering nonwoven fabrics. The lab can identify each fiber type and the type of binder. The analysis and quantification of a binder can be determined at an additional cost.

Optical Imaging: \$90/hour

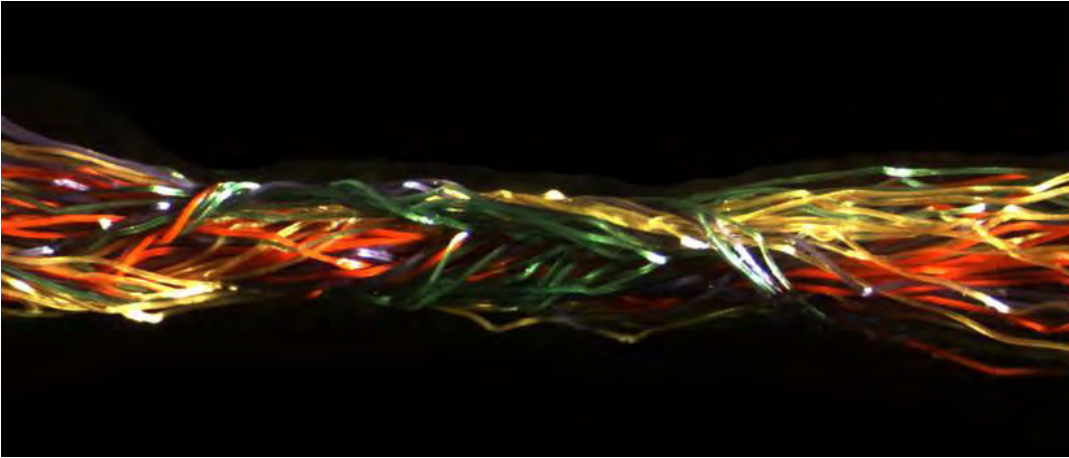
Optical microscopy includes stereo zoom compound microscopy.

Pyrolysis: \$80/sample

Sample prep for elastomeric materials.

Sample Examination Fee: \$80/sample

Sample investigation- minimum fee for all samples submitted for problem solving.



Scanning Electron Microscopy: \$190/hour

The Amray 1820 is a conventional high vacuum SEM. This unit has EDXRA energy dispersive x-ray analysis capabilities.

Sample Prep and Manipulation: \$80/sample

This fee is for non-routine sample prep such as unraveling a warp knit or manipulating 5 micron particles.

Yarn Blend Analysis (2 fiber types): \$350/sample or \$450/comparing normal v defect

Microscopy techniques are used to determine blend analysis when analytical techniques (i.e., dissolve out) cannot be used. Examples of when analytical techniques cannot be used are a heather blend of black and white polyester or a blend of cotton and rayon. Each **additional** fiber type adds \$150 to the cost.

Microscopy Priority Assignment

Standard Service: Completion within 15 working business days

Express Service: Completion within 10 working business days 50% surcharge

Priority Service: Completion within 5 working business days 100% surcharge

FLAMMABILITY LABORATORY

Jim Taft • 704.825.6298 • ttcmicro@yahoo.com

Flammability Vertical Burn: \$80/sample

(ASTM D6413) Standard Test Method Flame Resistance of Textiles. The purpose of this test is to determine whether a fabric will continue to burn after the source of ignition is removed.

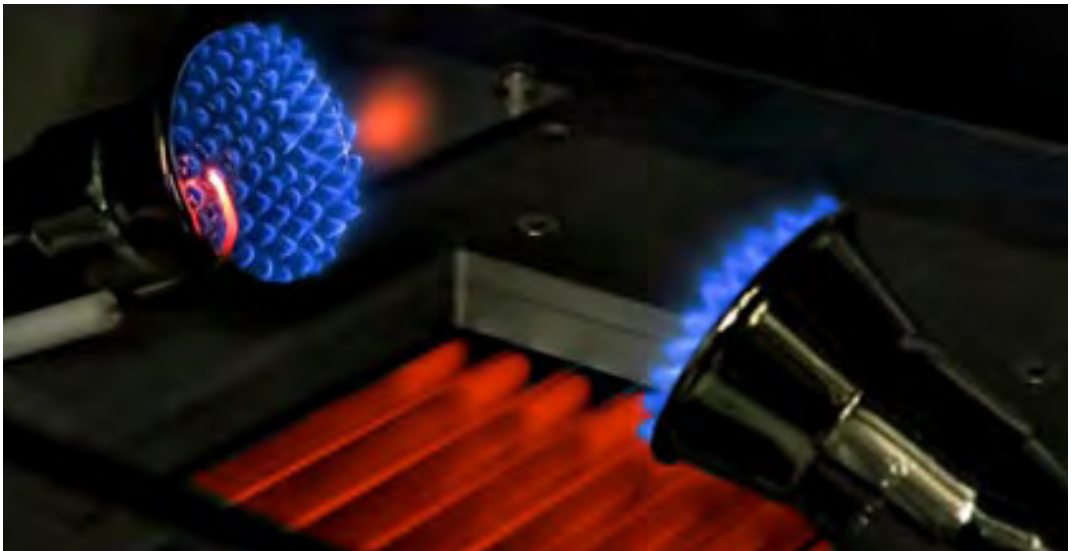
Flammability Vertical Burn (Draperies): \$100/sample

NFPA 701: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films. Drapery fabric is tested by burning a small sample and measuring the flame, char length and flaming residue.

TPP (Thermal Protective Performance) Flammability: \$100/sample

(ASTM F2700) Standard Test Method for Unsteady-State Heat Transfer Evaluation of Flame Resistant Materials for Clothing with Continuous Heating. This test method is intended for the determination of the heat transfer performance value of a material, a combination of materials, or a comparison of different materials used in flame resistant clothing for workers exposed to combined convective and radiant thermal hazards.

Flammability Sample Prep: \$80/hour



PHYSICAL TESTING LABORATORY

Teresa Morgan • 704.825,6288 • morgan.teresa@gaston.edu
Alicia Stevenson • 704.825,6284 • stevenson.alicia@gaston.edu

The Textile Center has two physical testing labs that house over \$1 million worth of equipment that make it possible to perform a wide variety of physical testing on fibers, yarns and fabrics.

Fibers can be singled out and analyzed for size, breaking strength, elongation, staple length and other attributes.

Fabrics can be analyzed for content and construction by breaking them down into yarn or fiber form and running tests or they can be tested in fabric form for ball burst, tear strength, pilling, shrinkage and more. In addition we can analyze the fabric and determine the weave or knit patterns used to produce the fabric.

FIBER TESTING

AFIS: \$60/sample

(ASTM D5866) Advanced Fiber Information System, provides an improved method of collecting fiber information on fiber quality. It measures “single” fibers and provides data and distributions of measured properties for length and neps.

Classifiber: \$45/sample

Classifiber is a fiber length distribution tester for short natural and synthetic fibers up to 80mm.

Crimp per inch: \$45/sample (n=15)

(ASTM D3937) This test for determination of crimp frequency of manufactured staple fibers may be used for the acceptance testing of commercial shipments.

Favimat Fiber Breaks: \$60/sample (Fiber from Yarn \$80/sample)

(ASTM D1577) Favimat is a semiautomatic controlled tensile tester which works according to the principle of constant rate of extension with integrated measuring head for fineness measurement.

Fiber Diameter Synthetic (DPF): \$40/sample

Denier per Filament or DPF is the method which covers the determination of denier to all types of yarn with less than 5% stretch.

Moisture Balance: \$60/sample

(ASTM D4120) This method is used to measure the amount of time it takes for water to dissipate from fabric.

Rotor Ring: \$50/sample

This Rotor Ring instrument measures fiber-to-fiber and fiber-to-metal opening energy to monitor changes in staple fiber cohesion.



Staple Length: \$30/sample

(ASTM D5103) This method covers the determination of average staple length and staple length distribution of both manufactured and natural fibers by manually measuring single fiber length.

YARN TESTING

Boiling Water Shrinkage: \$55/sample

(ASTM D2259) This test method covers the measurement of shrinkage of yarns that has been exposed to boiling water. Skeins are made from yarn and immersed into boiling water. Skeins are reconditioned and measured for shrinkage.

Hot Air Shrinkage: \$55/sample

(ASTM D2259) This test method covers the measurement of shrinkage of yarns that has been exposed to hot air. Skeins are made from yarn and exposed to dry heat. Skeins are reconditioned and measured for shrinkage.

Instron Yarn Breaks single end (n=10) – Cost: \$55

(ASTM D2256) This test conditions for determining the tensile properties of yarns using the single-strand method.

Node Count: \$50/sample

This method determines a node count in a filament yarn.

Short Length Denier (From Fabric): \$50/sample

(ASTM D1059) This test method covers the determination of the yarn number taken from any textile fabrics in which the yarns are intact and can be removed in measurable lengths. Because this method is based on short-length specimens, the results should only be considered as approximations of the yarn number.

Skein Breaks (Instron): \$50/sample

(ASTM D1578) This test covers the determination of the breaking strength of yarn in skein form. The observed breaking strength is expressed in units of force and equations are provided to convert breaking strength to skein breaking tenacity and to skein break factor.

Spinning Process ID: \$25/sample

Determine how the yarn is spun. Ring, Open End or Air Jet. **For novelty yarns see Microscopy Laboratory.**

Staff Shedding Test: \$45/sample

Measures the lint generated by action of yarn against yarn.

Statimat: \$80/6 bobbins

(ASTM D2256) This test method covers the determination of tensile properties of monofilament, multifilament and spun yarns.

Twist per Inch-Plied: \$42/sample

(ASTM D1422) This test method covers the determination of the twist of the plied yarns and the twist of the single yarn before plying.

Twist per Inch-Singles: \$40/sample

(ASTM D1422) This test method covers the determination of the amount and direction of twist at the completion of any stage of twisting in single (spun or filament) yarns.

Uster Tensojet: \$80/sample

This test detects seldom-occurring yarn faults or isolated weak spots with multiple breaks. Also provides information on yarn strength, elongation and tenacity.

Uster UT-4 (Filament) and UT-3 (Roving/Silver/Staple): \$80

Determines the number of imperfections in a yarn. It provides statistical evaluations of polyester blended yarns for classification of evenness, thickness, thinness as well as neps.



Yarn Denier/Count: \$15/sample (90 Meter Skein)

(ASTM D1907) This test covers the determination of the yarn number of all types of cotton, woolen, worsted, and man-made fiber yarns taken from packages; or from any textile fabrics in which the yarns are intact and can be removed in measurable lengths.

FABRIC TESTING

Air Permeability: \$45/sample

(ASTM D737) This test method covers the measurement of the air permeability of textile fabrics. It applies to most fabrics including woven fabrics, nonwoven fabrics, air bag fabrics, blankets, napped fabrics, knitted fabrics, layered fabrics and pile fabrics. The fabrics may be untreated, heavily sized, coated, resin-treated or otherwise treated.

Absorbency: \$35/sample

(AATCC 79) This test method is designed to measure the water absorbency of textiles by measuring the time it takes a drop of water placed on the fabric surface to be completely absorbed into the fabric.

Ball Burst: \$55/sample

(ASTM D6797) This test method describes the measurement for bursting strength of woven and knitted textiles taken from rolls of fabric or fabric taken from garments.

Computer Color Measurement: \$35/sample

The Color Eye specializes in color management and color communication L,a,b technology. It offers digital solutions for color management, color matching, quality control and color communication from production to marketing.

Crocking: \$25/sample

This test method describes the transfer of color from one fabric onto another white test fabric. It is to test improper dyeing, poor penetration or poor fixation.

Cut TDM100: \$150/sample

(ASTM F2992-15) This test method covers the measurement of the cut resistance of a material when mounted on a mandrel and subjected to a cutting edge under a specific load.

Elmendorf Tear: \$50/sample

(ASTM D1424) A pendulum impact tester is used to measure the force required to propagate an existing slit a fixed stance to the edge of the test sample.

Fabric Appearance \$48/sample

(AATCC 124) This test method is designed to evaluate the smoothness appearance of flat fabric specimens after repeated home laundering.

Fabric Construction Analysis: \$80/sample

Visual determination of weave process, fabric weight, fabric thickness, thread count/courses and wales, and denier.

Fabric Weight: \$20/sample

(ASTM D3776) These test methods cover the measurement of fabric mass per unit area (weight) and is applicable to most fabrics.

**FAK Sampler Knitting Machine: \$80/hour (standard yarn)
\$90/hour (specialty yarn)
\$65/day (if knitting exceeds 8 hours)**

Knits sample sizes in tubular knit with one cone of yarn. The yarn can be of any type.

General Physical Testing Prep: \$50/sample

If additional preparation is necessary to complete primary testing.

Grab Strength: \$50/sample

(ASTM D5034) This test method covers the grab and modified grab test procedures for determining the breaking strength and elongation of most textile fabrics.

Home Laundering 5 wash: \$100/sample

Five Home Laundering washings in standard washing machine.

Plastic Replica: \$45/sample

Determine if defects in a fabric such as streaks and barre are caused by physical or dye defects.

Random Tumble Pilling: \$50/sample

(ASTM D3512) This test method covers the resistance to the formation of pills and other related surface changes on textile fabric.

Ring Pull: \$45/sample

Mechanical test that quantifies hand of a fabric.



Seam Slippage: \$50/sample

(ASTM D4034) Used to determine either the sewn seam strength of textiles or the efficiency of a seam assembly with any given fabric.

Shrinkage (Fabric): \$95/sample

(AATCC Test Method 135) This test method is intended for the determination of dimensional changes of fabrics when subjected to home laundering procedures used by consumers.

Static Dissipation: \$50/sample

(ATSM D4865) This is a measure of the amount of time it takes for static to dissipate from a fabric strip or staple fabric.

Strip Strength: \$50/sample (1 inch Instron)

(ASTM D5035) This test method covers raveled strip and cut strip test procedures for determining the breaking force and elongation of most textile fabrics. Provision is made for wet testing.

Thickness: \$20/sample

(ASTM D1777) Covers the measurement on the thickness of most textile materials.

Thread Count: \$50/sample

(ASTM D3775) The measurement of warp end count and filling pick count and is applicable to all types of woven fabrics.

Tongue Tear: \$50/sample

(ASTM D2261) This test method covers the measurement of the tearing strength of textile fabrics by the tongue (single rip) procedure.

Trapezoid Tear: \$60/sample

(ASTM D4533) This test method is an index test used to measure the force required to continue or propagate a tear in woven or non-woven geotextiles by the trapezoid method.

Twist per Inch (Fabric): \$50/sample

(ASTM D1422) This test determines the amount and direction of twist at the completion of any stage of twisting in single (spun or filament) yarns taken from fabrics.

Vertical Wicking: \$50/sample

(AATCC Test Method 197) This test method is used to evaluate the ability of vertically aligned fabric specimens to transport liquid along and/or through them, and is applicable to woven, knitted or nonwoven fabrics.

Whiteness Measurement: \$35/sample

(AATCC Test Method 110) This test method provides procedures for measuring the whiteness and tint of textiles.

Martindale Abrasion: \$80/sample (1st 15,000 cycles*)

(ASTM D4966) This test method covers the determination of the abrasion resistance of textile fabrics abraded against crossbred, worsted wool fabric.

(*Each additional 5,000 rubs: \$15)

Tabor Abrasion: \$80/sample (1st 15,000 cycles*)

(ASTM D3884) This test method covers the determination of the abrasion resistance of organic coatings to abrasion produced by the Tabor Abraser on coatings applied to a plane, rigid surface, such as a metal panel.

(*Each additional 5,000 rubs: \$15)

Wyzenbeek: \$80/sample (1st 15,000 cycles*)

(ASTM D4157) This test method covers the determination of the abrasion resistance of woven textile fabrics using oscillatory cylinder tester. The specimen is abraded using cotton duck #10 and evaluated visually.

(*Each additional 5,000 rubs: \$15)

Physical Testing Priority Assignment

Standard Service: Completion within 15 working business days or more

Express Service: Completion within 5 working days 50% Surcharge

Priority Service: Completion within 1-2 working business days 100% Surcharge

FABRIC & YARN ANALYSIS LABORATORY

Leslie Berryhill • 704.825.6293 • ttcmicro@yahoo.com

The Fabric and Yarn Analysis Laboratory has a talented staff adept at analyzing fiber, yarn and fabric defects. They have numerous tools and resources at their disposal to aid in this very challenging type of analysis.

Cross Section: \$90/sample or \$130/normal vs defect yarn

Yarn and fiber identification and analysis per cross section.

Defect Analysis Sample Exam \$80/sample

Visual analysis and defect determination.

Fabric Construction \$50/sample (n=3)

Visual determination of weave process.

Filament Count: \$40/sample (n=3)

Determine filament count.

Hot Air Shrinkage: \$55/sample (n=10)

Percent yarn shrinkage.

Knit Extension: \$60/sample (n=10)

Measures the tightness and looseness of a yarn within a knitted fabric.

Plastic Replica: \$45/sample

Determines if defects in a fabric such as streaks and barre are caused by physical or dye defects.

Pressure Level: \$65/sample

Supplemental dye lab procedure for defect determination.

Sample Prep: \$80/hour

Separate normal and defect for woven and knit.

Scrim Analysis: Call for Quote. Price contingent upon polymer type.

Analysis comparison of one fiber component to the other in an intimate blend.

Short Length yarn denier from fabric: \$50/ sample (n=10)

This method covers the determination of the yarn taken from any textile fabrics in which the yarns are intact and can be removed in measurable lengths. Because this method is based in short length specimens, the results should only be considered as approximations of the yarn number.

Staple Length from fabric \$90/sample (n=25)

This method covers the determination of average staple length and staple length distribution of both manufactured and natural fibers by manually measuring single fiber length.

**Twist per inch (from fabric):
\$60/sample (n=10)**

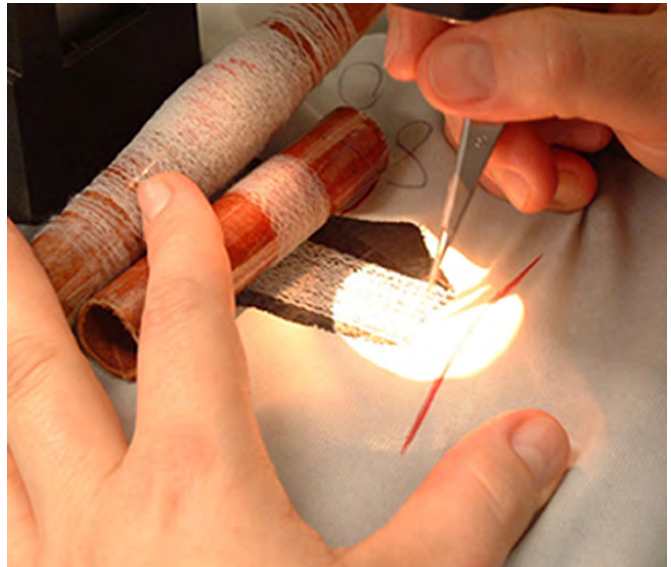
This test determines the amount and direction of twist at the completion of any stage of twisting in single (spun or filament) yarns taken from fabrics.

**Unravel Warp Knit or fabrics
with spandex: \$80/hour**

Fabric deconstruction, usually for further analysis.

**Weave Extension:
\$60/sample (n=10)**

Measures the tightness and looseness of a yarn within a woven fabric.



Fabric and Yarn Analysis Priority Assignment

Standard Service: Completion within 15 working business days

Priority Service: Completion within 5 working days: 100% Surcharge

Express Service: Completion within 10 working business days:
50% surcharge

CUSTOMIZED TRAINING

TEXTILES 101 OFFERED BY THE TEXTILE TECHNOLOGY CENTER

Developed for:

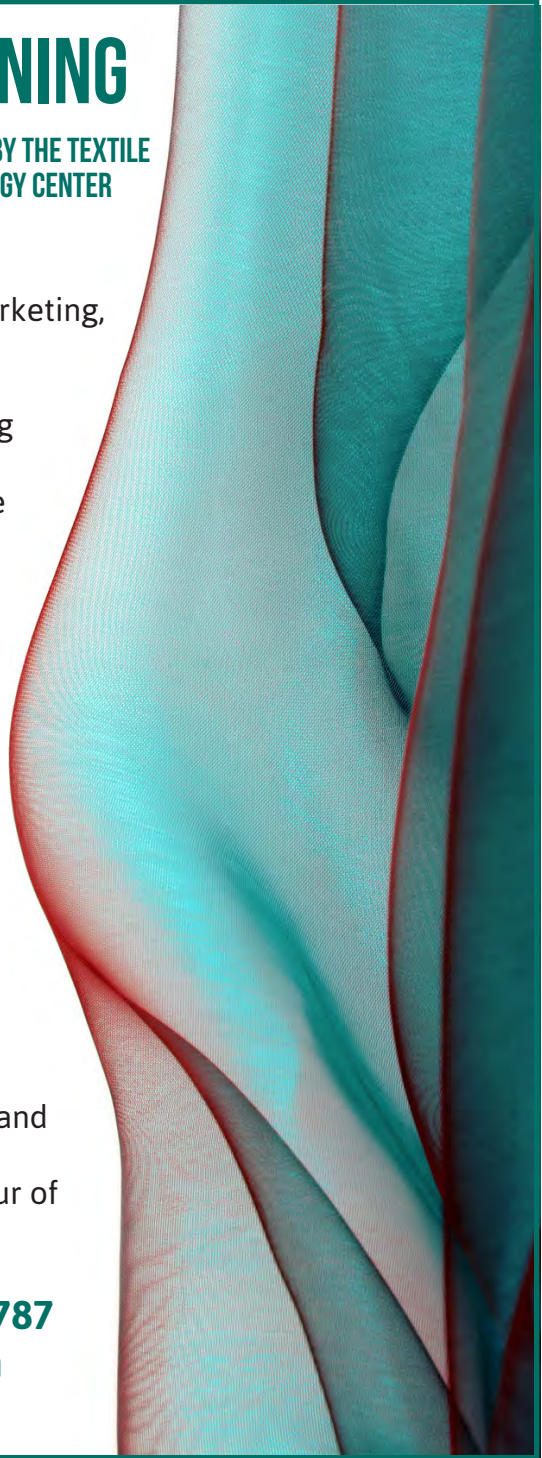
- Industry Professionals (Sales, Marketing, Purchasing, Manufacturing, IT)
- Architects & Interior Designers
- Apparel & Fashion Merchandising Personnel
- Educational Enrichment (College Students, Teachers & Staff Development)

Seminar Topics:

- Fiber Analysis (Natural vs. Synthetics)
- Yarn Spinning, Weaving, Knitting & Non-Woven Fundamentals
- Fabric Types & Constructors
- Dyeing, Finishing & Printing
- Fabric Testing, Analysis & QC
- US Textile Industry (Current)
- Textile Trends
- Product Development
- Ask about customized seminars and schedules

Includes hands-on exercises and tour of Textile Technology Center

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7220 WILKINSON BLVD., BELMONT, NC



Directions:

Coming from the North. Take exit #27 from I-85 South. Turn left at top of exit ramp onto Hwy. 273. Travel approximately 1/3 mile (3rd stop light) and turn left on Hwy. 74. Travel approximately 2/3 mile until you reach the GC Kimbrell Campus on your right.

Coming from the South. Take exit #27 from I-85 North. Turn right at top of exit ramp onto Hwy. 273. Turn left at the 2nd stoplight onto Hwy. 74 (Wilkinson Blvd.). Travel approximately 2/3 mile until you reach the Gaston College Kimbrell Campus on your right.



gaston.edu