



TEXAS TECH UNIVERSITY

Fiber & Biopolymer Research Institute™

Standardized Tests and Fees

Effective September 2009 – August 2010

Mailing Address:

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INFORMATION CONTAINED:

Charges for fiber, yarn and fabric tests conducted at the Fiber & Biopolymer Research Institute (FBRI).

Estimates of charges for testing and evaluation not shown may be obtained by contacting the FBRI.

PROCEDURAL REQUIREMENTS:

We do not accept items shipped “collect.”

For return shipments, specify shipping preference and account number to bill for cost. Otherwise return shipment is sent collect.

If a purchase order (PO) is required, submit with documents authorizing tests.

Payment may be made by credit card. (MasterCard, Visa, American Express and Discover accepted.)

Unless an exemption has been approved, international orders require prepayment.

All sample residues and excess raw materials become the property of the FBRI unless a specific request is made for return.

To ensure faster fiber preparation and testing, please follow these guidelines:

Sample Preparation: Do not use staples or plastic sacks. If sacks need to be closed, use rubber bands.

Sample Identification: Limit identification codes to ten digits and use numerals only (no letters, symbols, dots or dashes).

DATA DELIVERY CHARGES:

| | |
|---|---------------|
| Fax copies of test data (per page) | \$1.00 |
| Email copies of test data | Free |

FIBER, YARN AND FABRIC TESTING

Contact: Kathy Martin, 806-742-5333, extension 242

kathy.martin@ttu.edu

Unlisted Tests or Services Quoted upon Request

| | <u>Price</u> |
|---|--------------|
| <u>HIGH VOLUME INSTRUMENT (HVI) TESTING</u> | |
| HVI testing using Uster Technologies 1000 systems, providing the average of micronaire, length, uniformity, strength, elongation, color and trash. 100g of lint required. | |
| Routine test, per sample Replications include 2 for color, 1 for micronaire, 2 for length and 2 for strength. | \$2.40 |
| Breeders' test, per sample Replications include 4 for color, 4 for micronaire, 10 for length and 10 for strength. | \$6.75 |
| <u>AFIS (ADVANCED FIBER INFORMATION SYSTEM) TESTING</u> | |
| Provides length, maturity ratio, fineness, neps, and trash. | |
| 3 replications of 3,000 fibers (<i>20 grams of lint required</i>) | \$15.00 |
| 5 replications of 3,000 fibers (<i>30 grams of lint required</i>) | \$20.00 |
| <u>FOREIGN MATTER CONTENT OF COTTON – ASTM D 2812</u> | |
| Provides non-lint content based on MTM separation of lint and foreign matter. | |
| Per sample of ginned lint, 3 replications (<i>100 grams of lint required</i>) | \$20.00 |
| Wastes | \$30.00 |
| <u>ROVING AND YARN TESTING</u> | |
| • <u>CV% and Imperfections (Uster 3 Evenness Tester)</u> | |
| Per Sample (<i>5,000 yards required</i>) | \$27.00 |
| • <u>Single-Strand Yarn Strength (Uster Tensorapid Tester) – ASTM D 2256-a</u> Provides tenacity, tenacity CV% and elongation. | |
| 100 breaks (<i>5,000 yards required</i>) | \$27.00 |
| 200 breaks (<i>8,000 yards required</i>) | \$32.00 |

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| | <u>Price</u> |
|---|--------------|
| • <u>Yarn Strength by Skein Method – ASTM D 1578</u> Provides break factor and yarn number on ten 120-yard skeins. | |
| Per 10 skeins (<i>5,000 yards required</i>) | \$30.00 |
| • <u>Yarn Number</u> Based on average of 10 skeins. | |
| Per sample (<i>5,000 yards required</i>) | \$8.00 |

FABRIC TESTING

NOTE: Extraordinary preparation time is charged at a rate of \$42.00/hour.

| | |
|--|------------|
| • <u>Abrasion (Martindale) – ASTM D 4966</u> | |
| Per sample (<i>1 yard of fabric required</i>) | \$42.00/hr |
| • <u>Colorfastness (Atlas, accelerated) – AATCC 61</u> | |
| Per sample | \$30.00 |
| • <u>Durable Press Rating – AATCC 124</u> | |
| Per sample (<i>1 yard of fabric required</i>) | \$38.00 |

FIBER, YARN AND FABRIC TESTING

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| | <u>Price</u> |
|--|--------------|
| • <u>Fabric Strength Tests</u> (<i>1 yard of fabric required</i>) | |
| Grab Strength – ASTM D 5034 | \$31.50 |
| Strip Strength – ASTM D 5035 | \$31.50 |
| Ball Burst Strength – ASTM D 3787 | \$31.50 |
| Digital Elmendorf Tear Strength – ASTM D 1424 | \$31.50 |
| • <u>Fabric Count</u> (<i>1 yard of fabric required</i>) | |
| Ends & Picks or Courses & Wales – ASTM D 3775 | \$42.00/hr |
| • <u>Fiber Identification</u> (fiber, yarn, fabric) Includes microscopy and other confirming tests (solubility, density, melting point, refractive index) as needed. Contact Bobby Wyatt, 806-742-5333 ext.234, bobby.wyatt@ttu.edu | |
| 1 or 2 fibers – AATCC 20 | \$45.00 |
| Each additional fiber | \$22.50 |
| • <u>Fiber Content</u> (fiber, yarn, fabric) Chemical separation of fiber blends. Contact Bobby Wyatt, 806-742-5333 ext.234, bobby.wyatt@ttu.edu | |
| 2 fibers – AATCC 20A | \$90.00 |
| Each additional fiber | \$45.00 |
| • <u>Pilling</u> | |
| Tumble Method – ASTM D 3512 (<i>1/2 yard of fabric required</i>) | \$30.00 |
| Martindale – ASTM D 4970 (<i>1/2 yard of fabric required</i>) | \$30.00 |

FIBER, YARN AND FABRIC TESTING

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| | <u>Price</u> |
|---|---------------------|
| • <u>Shrinkage</u> | |
| Home Laundering – AATCC 135 (2 yards of fabric required.) | \$80.00 |
| Quickwash – AATCC 187 (1 yard of fabric required.) | \$35.00 |
| • <u>UV Transmission Testing – AATCC 183</u> | \$30.00 |
| • <u>UV Transmission Testing – ASTM D 6544</u> <i>(Sample Preparation prior to testing)</i> | |
| Laundering 40 Times (per load, not exceeding 4 lbs) | \$480.00 |
| Exposure to 100 AATCC Fading Units | \$50.00 |
| Exposure to Chlorinated Pool Water <i>(includes samples that are washable together, per load, not exceeding 4 lbs)</i> | \$60.00 |
| • <u>Weight per square yard – ASTM D 3776</u> (1 yard of fabric required) | \$12.00 |
| • <u>Yarn Number from Fabric – ASTM D 1059</u> (1 yard of fabric required) | \$42.00/hr |

MICROSCOPY

Contact: Bobby Wyatt, 806-742-5333, extension 234

bobby.wyatt@ttu.edu

Unlisted Tests or Services Quoted upon Request

| | <u>Price</u> |
|---|---------------------|
| <u>Fiber Diameter of synthetic fibers</u> (includes denier estimation) | |
| Per sample of 10 filaments | \$25.00 |
| <u>Fiber Identification</u> (fiber, yarn, fabric) Includes microscopy and other confirming tests (solubility, density, melting point, refractive index) as needed. | |
| 1 or 2 fibers – AATCC 20 | \$45.00 |
| Each additional fiber | \$22.50 |
| <u>Fiber Content</u> (fiber, yarn, fabric) Chemical separation of fiber blends. | |
| 2 fibers – AATCC 20A | \$90.00 |
| Each additional fiber | \$45.00 |
| <u>Photomicrographs</u> (fiber, yarn, fabric) | |
| Per picture | \$12.00 |
| <u>Spinning Process – Ring or Rotor Identification</u> | |
| Per sample | \$10.00 |
| <u>Scanning Electron Microscopy</u> | |
| Per sample | \$40.00 |

CHEMICAL TESTING

Contact: Bobby Wyatt, 806-742-5333, extension 234

bobby.wyatt@ttu.edu

Unlisted Tests or Services Quoted upon Request

| | <u>Price</u> |
|---|--------------|
| <u>Sample Preparation</u> | \$42.00/hr |
| <u>Cellulose Content (Anthrone Method)</u> | \$300.00 |
| <u>Dynamic Contact Angle Test – ASTM D 5725</u> | |
| Per sample | \$25.00 |
| <u>Extractables (fiber, yarn, fabric) – AATCC 97</u> (Average of three replications.) | |
| Organic solvent (per solvent) | \$100.00 |
| Water | \$75.00 |
| <u>Fiber Identification</u> (fiber, yarn, fabric) Includes microscopy and other confirming tests (solubility, density, melting point, refractive index) as needed. | |
| 1 or 2 fibers – AATCC 20 | \$45.00 |
| Each additional fiber | \$22.50 |
| <u>Fiber Content</u> (fiber, yarn, fabric) Chemical separation of fiber blends. | |
| 2 fibers – AATCC 20A | \$90.00 |
| Each additional fiber | \$45.00 |
| <u>Fourier Transform Infra-Red (FTIR)</u> | |
| Per sample | \$50.00 |
| <u>Intrinsic Viscosity & Molecular Weight Est. of Cellulose</u> | |
| Per sample (cupriethylene diamine) | \$250.00 |

CHEMICAL TESTING

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Unlisted Tests or Services Quoted upon Request

| | <u>Price</u> |
|--|---------------------|
| <u>Moisture Determination (oven dry) – ASTM D 2495</u> Reporting percent moisture or percent moisture regain. | |
| Per sample | \$42.00 |
| <u>Sugar Test (HPLC Method)</u> | |
| Set-up with standards | \$120.00 |
| Per sample | \$20.00 |
| <u>Thermogravimetric Analysis</u> | |
| Per sample | \$45.00 |

FLAMMABILITY TESTING

Contact: Bobby Wyatt, 806-742-5333, extension 234

bobby.wyatt@ttu.edu

Unlisted Tests or Services Quoted upon Request

| | <u>Price</u> |
|---|--------------|
| <u>Clothing Textiles</u> (<i>12" x 24" fabric required</i>) | |
| CPSC 16 / CFR 1610.4 | \$50.00 |
| Drycleaning & washing | \$100.00 |
| <u>Fabric</u> (<i>1/2 yard of full-width fabric required</i>) | |
| NFPA 701 (small scale) | \$75.00 |
| <u>California Fire Code – Title 19</u> (<i>Two 12" x 36" pieces of the fabric required</i>) | |
| Par. 1237.1 (small scale) | \$50.00 |

YARN FORMATION

Contact: Khawar Arain, 806-742-5333, extension 238

khawar.arain@ttu.edu

Unlisted Tests or Services Quoted upon Request

| | <u>Price</u> |
|---|---------------------|
| <u>SHORT STAPLE SYSTEMS</u> | |
| NOTE: Charges are for processing ONLY – testing costs not included. | |
| <u>Ring Spinning – Carded Yarn</u> (<i>minimum of 30 pounds of fiber</i>) | |
| One Yarn Number (1 TM) | \$300.00 |
| Two Yarn Numbers (1 TM) | \$450.00 |
| <u>Ring Spinning – Combed Yarn</u> (<i>minimum of 40 pounds of fiber</i>) | |
| One Yarn Number (1 TM) | \$400.00 |
| Two Yarn Numbers (1 TM) | \$550.00 |
| <u>Ring Spinning – Carded & Combed Yarn</u> (<i>minimum of 50 pounds of fiber</i>) | |
| One Yarn Number (1 TM) | \$600.00 |
| Two Yarn Numbers (1 TM) | \$900.00 |
| <u>Rotor Spinning</u> (<i>minimum of 30 pounds of fiber</i>) | |
| One Yarn Number (1 TM) | \$250.00 |
| Each additional TM or yarn number used | \$100.00 |

PERSONNEL CONTACT INFORMATION

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