



## BILLING RATES - FY 08/09

**DEPARTMENT NAME :**  
**School of Materials Science & Engineering**

**VICE-PRESIDENT AREA :**  
**Academic Affairs**

DESCRIPTION OF COMMODITY OR SERVICE :	UNIT OF BILLING	FY 08/09 RATE	CUSTOMERS BEING SERVED
<b>TEXTILES, FIBERS, POLYMER SCIENCE</b>			
<b><u>Analytical Testing Laboratory</u></b>			
Sample Preparation	per hour	\$72.00	Greater Textile & Fiber Industries
Extractions (Soxhlet)	per sample	\$72.00	(Same Customers for all Testing Listed Below)
Extractions (Supercritical) - Instrument	per instr. hour	\$72.00	
Extractions (Supercritical) - Preparation	per sample	\$18.00	"
Extractions (ASE) - Organic Solvent	per sample	\$48.00	"
Extractions (ASE) - Aqueous	per sample	\$72.00	"
Data Analysis	per hour	\$125.50	"
FTIR - Instrument (Avg 20 Min/Sample)	per instr. hour	\$113.00	"
FTIR Microscopy - Instrument (Avg 20 Min/Sample)	per instr. hour	\$149.00	"
GC/MS - Instrument (Avg 40 Min/Sample)	per instr. hour	\$125.50	"
Chromatography GC, SFC, HPLC - Instrument (Excludes Method Development)	per instr. hour	\$72.00	"
NMR - Operator	per hour	\$125.50	"
NMR - Instrument	per instr. hour	\$18.00	"
Thermal Analysis TGA - Instrument (Avg 60 Min/Sample)	per instr. hour	\$89.00	"
Thermal Analysis DSC - Instrument (Avg 30 Min/Sample)	per instr. hour	\$89.00	"
Thermal Analysis MDSC - Instrument (Avg 60 Min/Sample)	per instr. hour	\$89.00	"
Thermal Analysis DMTA - Instrument (Avg 60 Min/Sample)	per instr. hour	\$113.00	"
Formaldehyde/Benze Trials	daily	\$2,780.00	"

## BILLING RATES - FY 08/09

**DEPARTMENT NAME :**  
**School of Materials Science & Engineering**

**VICE-PRESIDENT AREA :**  
**Academic Affairs**

DESCRIPTION OF COMMODITY OR SERVICE :	UNIT OF BILLING	FY 08/09 RATE	CUSTOMERS BEING SERVED
<b><u>Physical Testing Laboratory</u></b>			
Bursting (Mullen) - ASTM D-3786	per sample	\$46.60	"
Bursting (Ball) - ASTM D-3787	per sample	\$46.60	"
Air Permeability (FX 3300) - D-0737	per sample	\$26.50	"
Abrasion - Stohl (Flex) D-3885	per sample	\$40.00	"
Abrasion - Stohl (Diaphragm) D-3886	per sample	\$40.00	"
Abrasion - Yarn - CTT	per sample	\$55.00	"
Yarn Twist (ILS) D-1423	per sample	\$35.50	"
Tear Test (D-1424) Elmendorf	per sample	\$35.50	"
Uster (Yarn Evenness) D-1425	per sample	\$46.60	"
Skein Break D-1578	per sample	\$40.00	"
Tensile (Grab) Warp & Filling - D-5034	per sample	\$46.60	"
Tensile (Modified Grab) Warp & Filling - D-5034	per sample	\$46.60	"
Single End Yarn Break - Statimat 11 - D-2256	per sample	\$46.60	"
Single End Yarn Break - Instron D-2256	per sample	\$46.60	"
Tear Test (Tounge) D-2261	per sample	\$46.60	"
Tear Test (Trapezoid) D-5587	per sample	\$46.60	"
Pilling (Rotary Tumble) - 3 Repeats D-3512	per sample	\$40.00	"
Weight - D-3776	per sample	\$26.50	"
Single Fiber Break D-3822	per sample	\$66.50	"
AOS (EOS) Geotextile	per sample	\$66.50	"
Yarn Appearance (EIB) D2255	per sample	\$26.50	"
Fabric Width D-3774	per sample	\$26.50	"
Tensile 1" Strip (Instron or Scott) D-5035	per sample	\$46.60	"
Fabric (Construction Ends/in., Picks/in., etc., D-3775	per sample	\$46.60	"
Abrasion - Taber (Cost Plus Wheels)	per sample	\$100.00	"
Abrasion (Wyzenbeek) D-4157	per sample	\$66.50	"
Moisture Regain/Content D-2495	per sample	\$46.60	"
Resistance to Slippage of Yarns in Woven Fabric - D434	per sample	\$66.50	"
Yarn Shrinkage (Boiling Water) D-2259	per sample	\$66.50	"
Yarn Inspection (Pulled from fabric)	per sample	\$13.80	"
Color Fastness (Crocking) AATCC 8:	per sample	\$26.50	"
Colorfastness to Light (Carbon-Arc Lamp) 16 AATCC Sec. 1 D	per sample	\$51.50	"
PH % - 81	per sample	\$26.50	"
Dimensional Change (Shrinkage) 3 Repeats/Sample - 135 AATCC	per sample	\$133.50	"
Fabric Durable Press Rating 3 Repeats - 124 AATCC	per sample	\$133.50	"

## BILLING RATES - FY 08/09

**DEPARTMENT NAME :**  
**School of Materials Science & Engineering**

**VICE-PRESIDENT AREA :**  
**Academic Affairs**

DESCRIPTION OF COMMODITY OR SERVICE :	UNIT OF BILLING	FY 08/09 RATE	CUSTOMERS BEING SERVED
Hydrostatic Head (FX 3000) - 127 AATCC	per sample	\$40.00	"
Soil Release (Oily Stain Method) - 130 AATCC	per sample	\$80.00	"
Colorfastness to laundering (Home& Comm: Acclrtd) - AATCC 61 - 3A Test	per sample	\$334.00	"
Water Repellency - Spray Test - 22 AATCC	per sample	\$33.40	"
Water Repellency - IPA/Water AATCC - 42	per sample	\$40.00	"
Thickness (Shirley) FTM 5030	per sample	\$26.50	"
Flammability (45 degree Angle) FTM 5908 ASTM- D-1230	per sample	\$40.00	"
Verticle Flammability ASTM D-6413	per sample	\$40.00	"
Latex Trials	per day	\$835.00	"
Colorfastness (Washing)	per sample	\$67.00	"
Barre' (Redye)	per sample	\$166.50	"
Barre' (Yarn Pull & Weigh)	per sample	\$100.00	"
Scour Greige Goods & Dye	per sample	\$200.00	"
Barre' (Yarn Pull & ReKnit)	per sample	\$100.00	"
Yarn Denier/Count by Weight	per sample	\$20.15	"
Fiber Denier (Microscopic Measurement)	per sample	\$40.00	"
Uster AFIS (Neps, Length & Diameter & Trash)	per sample	\$40.00	"
MacBeth Color Eye - Spectrophotometer	per sample	\$80.00	"
HVI (Per Sample) ASTM D-4605	per sample	\$2.30	"
Liquid Wicking - INDA 10-70-3	per sample	\$26.50	"
Photomicrograph - Polaroid	per picture	\$16.15	"
Photomicrograph - 35 MM	per picture	\$22.80	"
Fabric Streak Analyzer (Replicas)	per sample	\$21.20	"
Image Analysis	per hour	\$83.80	"
Fabric Contamination Determination (Chem, Micro,Photo, etc.)	per sample	\$67.00	"
Desize Yarn	per hour	\$67.00	"
Yarn Tension	per sample	\$80.00	"
Fusion of Fibers	per sample	\$40.00	"
Crimp Per Inch (Fiber)	per sample	\$26.50	"
Cross-Sections (Fibers - Microtome Method)	per sample	\$46.60	"
% Take-Up (Ground & Pile)	per sample	\$33.40	"
Yarn Contraction (Per Directions)	per sample	\$33.40	"
Fiber Staple Length	per sample	\$26.50	"
Yarn Filament Count	per sample	\$33.40	"
Thickness - SAE J-1355	per sample	\$26.50	"
Non-Wovens Laboratory Usage (Rando) (Fiberglas Only)	daily	\$1,113.00	"
Sewability of Woven Cloth; Seam efficiency Method FTM 5110	per sample	\$55.50	"
Loop Strength ASTM D2256-5 (YARN)	per sample	\$46.60	"

## BILLING RATES - FY 08/09

**DEPARTMENT NAME :**  
**School of Materials Science & Engineering**

**VICE-PRESIDENT AREA :**  
**Academic Affairs**

DESCRIPTION OF COMMODITY OR SERVICE :	UNIT OF BILLING	FY 08/09 RATE	CUSTOMERS BEING SERVED
General Laboratory Usage	daily	\$556.50	"
Non-Wovens Laboratory Usage (Rando Machine)(except fiberglas)	daily	\$947.00	"
Hills Extruder (Room 236 Serrine) with technical assistance (single extruder includes winding & drawing) (1/2 Day Min.)	daily	\$1,670.00	"
James Extruder (Room 305 Rhodes) double extruder without winding and without drawing (1/2 Day Min.)	daily	\$1,113.00	"

### CERAMICS & MATERIALS ENGINEERING

#### External Rates

X-ray Diffraction(room temperature)	per sample	\$111.25	Industrial companies
X-ray Diffraction(elevated Temperature)	per hour	\$55.50	"
Total Particle Size Analysis PSD(Horiba)	per sample per sample	\$166.50 \$166.50	Industrial companies "
Thermogravimetric Analysis	per sample	\$166.50	Industrial companies
Differential Thermal Analysis	per sample	\$166.50	"
Dilatometry(air)	per sample	\$111.25	"
Dilatometry(controlled atmosphere)	per sample	\$222.50	"

#### Internal Rates

X-ray Diffraction(room temperature)	per sample	\$27.80	Faculty and CU research staff
X-ray Diffraction(elevated Temperature)	per hour	\$11.00	"
Total Particle Size Analysis PSD(Horiba)	per sample per sample	\$55.50 \$55.50	" " "
Thermogravimetric Analysis	per sample	\$55.50	"
Differential Thermal Analysis	per sample	\$55.50	"
Dilatometry(air)	per sample	\$55.50	"
Dilatometry(controlled atmosphere)	per sample	\$84.00	"

#### AMRL Rates

Optical Fiber Draws	Per day	\$2,121.00	"
Optical Characterization	per sample	\$159.00	"
New View (White Light interferometer)	per hour	\$51.50	"
Microthermal analysis	per hour	\$154.50	"

### ALL CHARGES EXCLUSIVE OF SUPPLIES