

Available equipment	use/keywords	Staff CONTACT
<b>SAMPLE PREPARATION</b>		
Milli-Q Direct 8 Water purification system	Deionized water	Kim Ivey
Carver Laboratory Press Model B with 6" platens	sample press, composites, sample preparation	
Carver Laboratory Press Model C with 6" heated platens	sample press, composites, sample preparation	
<b>BALANCES</b>		
Sartorius Microbalance Model M2P	mass determination, sample preparation	Kim Ivey
Mettler Toledo ME30 Microbalance	mass determination, sample preparation	
Sartorius Semi-Micro Analytical 6place balance model LE 26D	mass determination, sample preparation	
<b>EXTRACTION</b>		
Dionex ASE 300 Accelerated Solvent Extractor	Extraction, fiber finish quantification, sample preparation	Kim Ivey
Dionex ASE 200 Accelerated Solvent Extractor	Extraction, fiber finish quantification, sample preparation	
<b>THERMAL ANALYSIS</b>		
TA Instruments Q400 TMA	Thermal mechanical anlysis	Kim Ivey
TA Instruments Q5000 TGA	Thermo-gravimetric analysis	
TA Instruments Q800 DMA	Dynamic Mechanical Analysis, Fiber/Film Tension Clamp, Dual/Single cantilever	
TA Instruments TGA 2950	Thermo-gravimetric analysis	
TA Instruments MDSC 2920	Thermal Analysis, Differential Scanning Calorimetry, modulated DSC	
TA Instruments Q1000 MDSC	Thermal Analysis, Differential Scanning Calorimetry	
Mettler Toledo DSC 823e	Thermal Analysis, Differential Scanning Calorimetry	
<b>UV/VIS SPECTROSCOPY</b>		
Shimadzu 3600 UV/Vis NIR	Ultraviolet, visible and near infrared spectroscopy	Kim Ivey
ISR-3100 UV/Vis NIR integrating sphere accessory for UV 3600	Ultraviolet, visible and near infrared spectroscopy	
<b>INFRARED SPECTROSCOPY</b>		
Thermo Nicolet Magna 550 FTIR	Fourier Transform Infrared Spectroscopy	Kim Ivey
Thermo-Spectra Tech Nic-Plan FTIR microscope	Fourier Transform Micro-Infrared Spectroscopy	
Thermo-SpectraTech Foundation Series Diamond ATR Accessory	Attenuated Total Reflection Infrared Spectroscopy	
Thermo 6700 FTIR Bench	Fourier Transform Infrared Spectroscopy	
Thermo CONTINUUM FTIR Microscope	Fourier Transform Micro-Infrared Spectroscopy	
Thermo- ORBIT ATR accessory with Diamond and Germanium plates	Attenuated Total Reflection Infrared Spectroscopy	
Pike Technologies VEEMAX II Grazing Angle Accessory for FTIR	Grazing Angle Infrared spectroscopy	
<b>SEPARATIONS/CHROMATOGRAPHY</b>		
Trace GC/MS (Thermo Finnigan)	Gas chromatography, mass spectroscopy	Kim Ivey
Waters GPC system with 1525 pump	Gel Permeation chromatography,polymer Molecular weight distribution	
Waters 2414 Refractive Index detector	Refractive Index, GPC detector	
Waters 2477 UV/Vis detector	UV/Vis detection for GPC	
Polymer Labs ELSD 2100 detector for GPC	Evaoporative light scattering	
<b>MICROSCOPY</b>		
Lawson-Hempill, Inc. DMT PPM-5R	dynamic modulus tester	
Instrument Color Systems multilight - LIGHTBOX	D65, A, CWF, UV lightbox	
Pantone Color Viewing Lightbox	D65, cool white, flourescent lightbox	
Meiji Techno RZ stereo microscope w/ ProgRes CapturePro software	image analysis, stereomicroscopy	
Jenoptik ProgRes SpeedXT core 5 CCD camera	CCD 5 megapixel high resolution camera	

Techni-Quip Corp T-Q/FOI-1 Lamp	sample illumination	Kate Stevens	
Schott KL 1600 LED lamp	sample illumination		
Stocker and Yale, Inc. Lite Mite 9 Series Circular Illuminator, UV	sample illumination		
Circular Illuminator, blacklight	sample illumination		
Leitz Laborlux S compound microscope	image analysis		
Jenoptik ProgRes C5 CCD camera	5 MP color CCD high resolution camera		
CoolLED pE-100 illuminant for Leitz microscope	sample illumination		
Huvitz HRM-300 microscope w/ Panasis digital imaging software	high magnification imaging, 3D imaging and measurements, metallurgical		
Lusis HC-20CU CCD camera	2 MP color CCD high resolution camera		
ausJena Jenapol Interphako interference microscope	refractive index measurement		
James Swift MP3502K microscope	image analysis		
Sony 3CCD camera	color video camera		
Mettler Toledo FP82HT Hotstage	visual examination of thermal transitions in sample, microscopy		
Mettler Toledo FP90 Central Processor	hot stage control		
<b>PHYSICAL TESTING &amp; CHARACTERIZATION</b>			
GretageMacbeth Color I 5 spectrophotometer	color measurement, L*a*b* values, whiteness index	Kate Stevens	
Buehler Ecomet 5 two speed grinder-polisher	sample grinding, polishing		
Buehler Automet 2 powerhead	ecomet 5 control		
Instron Model 1125 with hydraulic, yarn, and fiber grips	tensile strength testing, 10 N, 2000 g, 100 kg, and 1000 lb load cells		
Instron Model 5582	tensile and compressive strength testing, 10 kN, 100 kN, 10 N load cells		
Taber Abrader Model 503	abrasion testing, textiles		
Wyzenbeek Abrader	abrasion testing, textiles		
Textest FX 3000 Hydrostatic Head Tester	water resistance testing, hydrostatic head		
Textest FX 3700 Elmendorf Tester	tear strength testing		
Textest FX 3300 Air Permeability Tester	air permeability testing		
PMI CFP-1000-AEXS Capillary Flow Tester	pore size measurement		
Mullen Tester	burst strength measurment		
Uster Tester 4	slub yarn analysis, mass variation, diagram, textile,		
ILE DE-5 Digital Twist Counter	twist count of single or plied yarn, textile		
Sartorius MA50 Moisture Analyzer	moisture content determination		
Uster AFIS	raw material analysis, nep, length, diameter, trash measurements, cotton		
Lawson-Hemphill Constant Tension Transport	spun yarn testing		
Textechno Statimat M Automatic Tensile Tester	tensile strength testing		
Scott Tester Model J w/ Skein Tester	skein tensile strength testing		
Scott Tester Model J w/ ball burst tester	ball burst tensile testing		
USM Hytronic Cutting Machine Model B	sample cutting, die cutting		
Atlas Random Tumble Pilling Tester	sample pilling measurement, textile		
A.A.T.C.C. CM-5 Crockmeter	color transference, scuffing, abrasion, flexing, powdering, dry-cleaning, textile		
XRD Unit- Scintag Inc, Serial: 40074	x-ray, crystallography		
<b>MANUFACTURING</b>			
Ernst Benz Calendaring machine	nonwoven bonding, point and area bonding, hot oil		
Proctor and Schwartz Card	cleaning, blending, direct card feed, open and randomize		
Rando Feeder model 12 B	fiber feeder for Rando Webber		
Rando Webber model 12 C	fiber web formation, air laid system, isotropical layered, width of 12"		

Perfojet jetlace hydroentanglement system	light-weight nonwoven production, hydroentanglement, 1000 psi	Kate Stevens
Ernst Benz TKF M500 oven, Aztec improved	nonwoven textile heat setting, through-air oven	
James Hunter Fiber Locker needling machine	needle punching, 12" wide	
James Hunter Pin-sonic Bonder	ultrasonic bonding, vibrates at 20 kHz, 9" wide	
Rando Prefeeder	opening, blending	
Rando Cleaner	fiber cleaning for nonwoven line, feeds fiber into chute	
Bematic Construzione Macchine Tessili	carding, 20" wide	
Impianti Automatex cross lapper conveyor	layering lightweight web, 24" wide	
Automatex Needle Loom	bonding, 27" wide	
Hills Inc Single Screw Extruder	fiber extrusion	
<b>DYEING &amp; FINISHING</b>		
Despatch model LTC 2-12 oven	textile drying, curing	Kate Stevens
Despatch model LTC 2-12 oven	textile drying, curing	
Speed Queen Drying Tumbler	tumble drying	
Erving Washer	wash-fastness testing	
Atlas Launder-ometer model LHD-HT	wash-fastness testing	
Atlas Launder-ometer model LHTP	wash-fastness testing	
Atlas Color Fade-ometer	light-fastness testing	
Ernst Benz Oven, Proctor and Schwartz Padder	latex application on nonwoven, max width 15"	
Milli-Pore Milli-Q Direct 8 water purification system	deionized water	
Roaches Colortec dyeing machine	small package, beam, and loose fiber dyeing	
Ahiba Texomat bench dye machine	small sample dyeing	
Werner Mathis AG DHE 39784 steamer oven	universal steamer type	
Sartorius CP16001 S Competence Analytical Balance	large surface balance	
4 ea Struers Labopol-5/Laboforce-3 polishing machine	grinding, lapping, polishing	
Struers Tegramin-20	polishing, specimen preparation, up to 4 specimens of 40 mm dia.	
Buehler VibroMet 2 vibratory polisher	polishing, 12" bowl size	
Olympus BX60 Metallurgical microscope	microscopy, imaging, image analysis, CCD 5 megapixel high resolution camera	
Jenoptick ProgRes SpeedXT core 5 CCD camera and I-solutions software	microscopy, imaging, image analysis, CCD 5 megapixel high resolution camera	
<b>FURNACES</b>		
Lindberg Heavy Duti - Type: 59744 Serial: 10853		
Lindberg Heavy Duti - Model: CC58125C Serial: UOSE-211167-UE		
Lindberg - Type: 54233 Serial: 721024		
Lindberg Heavy Duti - Type: 54253 Serial: 7831		
Lindberg - Type: 51442 Serial: 879102		
Thermodyne Over Series 9000 - Model: OV47335 Serial: 671990163682		
Thermodyne Over Series 9000 - Model: OV47335 Serial: 671930574328		
Lindberg - Type: 51333 Serial: 12878		
Lindberg - Model: STF54453C Serial: TIIIL-533879-TL		
Applied Test Systems, Inc - Serial: 9361A		
Lindberg - Type: 54032-A Serial: 114644		
Lindberg - Type: 54314 Serial: 909199		
Lindberg - Type: 51314 Serial: 848026		
KH Huppert Co - Serial: 101 Type: SP		

Thermcraft Inc - Model: FCR-10-0-10-1C-J53007/6A Serial: 005307/6A	
Thermcraft Inc - Model: FCR-10-0-10-1C-J53007/6B Serial: 005307/6B	
Thermcraft Inc - Model: FCR-10-0-10-1C-J53007/6C Serial: 005307/6C	
Lindberg Blue - Type: HTF55347C Serial: T12L-534116-TL	
Lindberg Blue - Type: STF-54453C Serial: T11L-533880-TL	
Tube Furnace	
Lindberg - Type: 51333 Serial: 899116	
Lindberg - Model: S51644 Serial:919162	
Deltech Inc	
Lindberg	
Grieve	
Lindberg Blue	
Pereco - Model: 2600-112	
Thermcraft Inc - Model: FBM-24-24-30-1F-J5307/1A Serial: 005307/1A	
Grieve - Model: AA-1250 Serial: 340093	

Kate Stevens