

Week 6 Lab

**Manufactured
Synthetic fibers**

Microscope Observation

Burn Test

#	Name	Fiber	Physical Description Under Microscope differences, similarities, unique characteristics	Ease of Ignition	Color of smoke	Odor/ smell	Color of Ash	Texture of Ash	End Use
9	Lining Fabric	Polyester	Fine filaments, smooth, slightly crimped	Ignited quickly, sputters	Minimal smoke, gray	Chemical	Black	Hard, plastic-y bead	Lining for a variety of clothing: - hats - bags - jackets
86	Tricot	Nylon	Fine, loose, stringy, translucent	Difficult to ignite	White	Plastic	Black/Gre y	Crumbly	Sportswear, swimwear, lingerie
119	Sunbrella Outdoor Fabric	Acrylic	Very dense, resembles wire	Fast and sputtery	White	Plastic- but mixed with natural campfire	Black	Crumbly	Outdoor furniture, cushions, upholstery, boat covers
105	Malimo	Modacrylic	Thick, densely wound, some crimp, smooth	Hard to ignite, doesn't stay lit	Black and white	Plastic	Black	Brittle, crispy	Apparel and industrial textiles
96	Tyvek	Olefin	Tight and stringy, kinda like spider webs	Curled and melts away	White	Plastic	Black	Sticky, hardens into bead	Housewrap for construction, PPE, various industrial and design applications
77	Knit Terrycloth	Cotton Polyester Blend	Hairy, grass-like, bendy/curly	Ignited pretty fast/steadily	White when extinguished	Firework	Black	Crisp/dry	Towels, bathrobes, other garments and home textiles

59	Brocade	Metallic/Poly ester/Nylon blend	Fine filament fibers, with thicker fibers, hard to tell the difference between luster	Sputtery, curls away	Grey	Plastic	Black	Solid bead	Formalwear, upholstery, draperies, home decor, cultural and ceremonial garments
87	Compression Tricot	Nylon/Spandex	Smooth, slick fibers, super tightly and densely knit	Burns slowly	White	Plastic	Black	Very sticky, then forms bead	High and low intensity athletic activities
44	Warp Sateen	Cotton/Spandex blend	Crimpy, textured	Big flame, quickly burns	Grey	Paper, firework	Grey	Papery/dusty	Everyday apparel, bedding, home decor