

FIBER IDENTIFICATION BY BURNING

All fabric sold for the RETAIL market in the US must carry a fiber content tag. However, we often purchase fabric or garments that are vintage, are no longer housed on original rolls, or from a jobber that purchased the fabric on wholesale put-ups.

With the advanced chemical make up of many textiles today, exact fiber ID must use a microscope. Those working in the textile industry and museums do perform such tests. Costume designers, however, rarely need an exact laboratory break down of fiber content. In general, we want to understand the fiber content so we can modify the garment by dying or painting.

We often do not have to exactly identify the chemical make up of fibers. NOTE: finishing chemicals may change burn results.

	CELLULOSE FIBERS	PROTEIN FIBERS	MANUF FIBERS	
	Cotton Flax/ Linen Ramie Lyocell/ Tencel (eco friendly) Viscose Rayon Bamboo PLA/Ingeo (corn)	Silk Wool Specialty wools Animal hair	Acetate** Acrylic	Nylon Polyester
			**final test for Acetate is to melt it with Acetone	
Approach Flame	Rapid ignite, does not fuse or melt when held next to flame	May curl slightly No melt	Fuses or melts in front of flame	Fuses or shrinks from flame
In Flame	Fast burn, yellow flame	Burns slowly	Fast burning, with melting –May drip	Slow burn, melting may drip
Removed from Flame	Continues to burn Afterglow red/yellow	Slow burn Sometimes self extinguishing	Continues to burn & melt- may drip	Often self extinguishing, may burn slowly
Ash Appearance	Soft, feathery grey ash Ash brushes away completely	Stiff, crisp black ash that can be crushed between fingers	Brittle black, hard bead Can be cracked off	Hard shiny bead that cannot be crushed Nylon= grey bead Poly- black bead
Odor	Burning paper or leaves	Burning hair or feathers	Acrid, Vinegar smell	

Burn chart & instructions on Ditzyprints.com

FIBER BURN CHART

