

Ch. 16 Notes: *Chemical Composition of Fibers*

→Fibers are _____: long _____ made of _____ molecules

Natural Fibers



1. W _____

- Polymer= _____ chains (forming the _____ keratin)
- Monomer= _____ (one of which is _____-- cysteine contains _____)

2. S _____

- Polymer= _____
- Monomer= _____ (but _____ of a variety than wool)



3. C _____

- Polymer= _____ (plant)
- Monomer= _____



4. L _____

- Polymer= cellulose (_____ plant)
 - _____ chains than cotton which makes it _____
- Monomer= _____

Man-made Fibers

1. Rayon

- _____ fiber, then chemically altered, _____ like _____

2. Acetate

- Made from a between _____ and _____

Synthetic Fibers

1. Polyamides—linked by _____ group

- Example: _____
- _____ and more chemically _____ than _____ fibers



2. Polyesters—lined by _____ group

- _____ linkage than polyamides
- Linkage can be linear (_____) or cross-linked (_____)



3. Spandex—structurally similar to _____

- Made of segments of _____ connected to long segments of polyesters
- Resulting spandex can stretch up to _____ and recover _____ strength

