

# NATURAL FIBERS VS SYNTHETIC FIBERS

## NATURAL DYES

Natural dyes are derived from renewable sources, which can be harvested without hurting the environment. Natural dyes are safer than synthetic dyes because there are less chemicals. Using natural dyes helps to save water as well as pollutants because plants that grow abundantly can be used, which eliminates the process of production that would take place when making synthetic dyes. Because these dyes come from nature, they are biodegradable, which eliminates disposal problems.

Natural dyes are perceived as harmless & safe, but this isn't always the case. Some dyes are toxic, like logwood and bloodroot. These dyes can cause inflammation & irritation when absorbed by the skin or inhaled.

Natural Dyes can be toxic due to the mordant used for their application. Mordants are substances used to make the natural dye stick to fabrics such as aluminum, copper, iron & chrome. Natural dyes are expensive and in short supply because a large space of land is required when producing the dyes. Sustainability is also an issue when it comes to natural dyes because the pigment washes off over time.



## SYNTHETIC DYES

An advantage of using synthetic dyes is that textiles are more colorful as well as cheaper. Technology makes production easier & more colors are available in a large amount at a low cost.

Some of the chemicals found in synthetic dyes are mercury, lead, chromium, copper, sodium chloride, toluene, & benzene. Exposure to large doses of these substances can be toxic & can have severe effects in the human body. Some of these chemicals, such as benzene, have even been linked to cancer.

During the dyeing process, factories dump the used water into rivers because it is cheaper & easier than reusing the water in the factory.

Toxic chemicals from dyes create severe environmental havoc in the form of air, water & soil pollution. Large amounts of water are used to flush conventional synthetic dyes from garments & then this wastewater must be treated to remove the heavy metals & other toxic chemicals before it can be returned to water systems, sewers & rivers.