

**GOVERNMENT DEGREE COLLEGE PEDDAPALLI**

**DEPARTMENT OF BOTANY**

**STUDENT STUDY PROJECT ON**

**Natural Dyes for sustainable development**

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The world has a rich biodiversity and a wealth of useful germplasm resources, and there is no doubt that the plant and animal kingdoms are a treasure trove of diverse natural products.

Dye is one such natural product. Natural dyes are derived from natural sources such as Plants, insects, animals, and minerals are all examples of living things. This review is primarily concerned with natural dye yielding plants for textile products, and I have highlighted the plants that provide colors to natural dyes through technical means. Synthetic dyes cause a variety of pollution in the environment. Similarly, synthetic dyes or colorants have been banned because they cause allergic reactions or are carcinogenic. In recent years, environmental awareness about the health risks posed by synthetic dyes has regained prominence. Natural dyes are extremely important. Natural dyes are non-allergenic, non-toxic, and environmentally friendly.

Synthetic dyes do not only harm people – even more so, they destroy the environment (and thus also people all over again)! The biggest problem is that synthetic dyes need a lot of water to be produced and applied to the cloth. Often, areas – especially in China – near dye factories run out of water. At the same time, the chemical waste of those factories is often just dumped into the rivers.

Where large dye factories are, we see the effects most dramatically: the water in the rivers have the color of the dye the factories produce that day. The soil in which people grow their food becomes toxic, as they use the water for farming. The rivers are dead, as fish and plants can't survive the chemicals that the factories dump into the rivers.

You might ask yourself, why we don't just make laws that force those factories to produce the dyes in more environmentally friendly ways. The reason for this is that most of those factories are located in China or India – countries that have weak laws to protect nature. But

that is not entirely the fault of those countries: They need to make sure that their protections for workers and the environment are weak so they can attract the companies that produce the dyes (as laws that protect the environment and workers are expensive for the companies). And these companies are not Chinese and Indian companies! Companies from America and Europe build their factories in these countries to produce their goods as cheap as possible

In present scenario environmental consciousness of people about natural products, renewable nature of materials, less environmental damage and sustainability of the natural products has further revived the use of natural dyes

Synthetic dyes are very cheap and simple and produce numerous attractive colors and combinations, but their effects on the environment, plants, animals, and human health are very destructive.

Natural dyes are expensive and difficult to produce, but they are environmentally friendly and useful tools for sustainable development.