

# RECENT KNOWLEDGE ABOUT DYEING TEXTILES WITH DYES OF NATURAL ORIGIN

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The textile industry is one of the largest consumers of water, which is especially present in dyehouses where synthetic chemicals and dyes are used. Natural dyes are generally environmentally friendly and have certain advantages over synthetic dyes in terms of production and application. In recent years, there has been interest in the application of these dyes due to their biodegradability and high compatibility with the environment. The paper discusses the review of the work of researchers in 2024. in the field of applying dyes from natural sources that can be used to dye textile material. From an ecological point of view, replacing chemical dyes with “natural products” for dyeing textiles can be convenient and can represent a strategy to reduce risks and pollutants. Also, it is an opportunity for new markets and new businesses that can be developed by including ecology in the market policy.

Although natural dyes cannot be an alternative to synthetic ones, today in recent scientific literature there are more and more works on their application, which is closely related to environmental problems. Accordingly, synthetic dyes with better dyeing properties, better substantivity, and dyeing procedures that require less energy and water consumption were also developed.

Today, there is a conflict between the interests of ecologists and manufacturers of synthetic dyes. The opinion of ecologists is to reject all “chemical” and “synthetic” products and replace them with “bio”, “eco” and “natural” products. On the other hand, producers of synthetic dyes say that natural dyes cannot be an alternative due to the lack of natural resources, the depletion of nature, the impossibility of dyeing synthetic fibers, ecologically questionable and demanding dyeing procedures, the impossibility of textile dyeing in industrial processes, weaker color fastness, higher dyeing costs and production etc.

Dyes that come from natural sources and can be used in textile dyeing will represent an important factor in the future, as a competitor to conventional dyeing procedures with synthetic dyes. The reasons are very significant, and they primarily concern ecology and health.

Namely, textiles, as an object with a greater or lesser degree of “closeness to the skin”, can be risky (allergies), while on the other hand, the classic dyeing of textiles with synthetic dyes is characterized by high environmental pollution and a high health risk for people who handle harmful substances.

In order to reduce the high pollution that characterizes modern textile dyeing processes, the partial replacement of synthetic dyes with natural dyes in textile production can represent a risk and pollutant reduction strategy.

**Keywords:** *natural dyes, textiles, dyeing, ecology.*