Investigation of Nutgall and Some Natural Dyes with Mordants Cotton Dyeing and Fastness Level in the Context of the Ecological Textile Production

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ABSTRACT

Humans have been using plant-based dyestuff for centuries as the main provider of dyes for industrial products such as textiles, food, leather, etc. Specifically in Turkey, such plants have been used for the dyeing of the fibre and yarn of cotton, wool and silk used in handicraft products, such as carpets, rugs, fabrics, etc. With the discovery of synthetic dyestuffs in the mid-19th century, natural dyes, and thus, natural dyeing, gradually lost importance, although today, plant-based dyestuffs are again gaining popularity as a result of the rising popularity of the natural and the sustainable concept. The purpose of the present study is to investigate the dyeing effect of solutions obtained from gallnut dyestuffs and mordants from whey, yeast, lye and mushroom extract, with the intention being to identify light, crock and wash fastness levels and examine their usability in today's textile sector. Dyeing cotton fabric samples with gallnut dyestuffs and natural mordants has allowed some important conclusions to be drawn with respect to human and environmental health.

Keywords: Gallnut dyestuff, Light Fastness, Crock Fastness, Wash Fastness, Natural mordants