Improving Dyeability of Cotton Fabric with Juglans regia L. Natural Dyestuff

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Abstract : Natural dyestuff, extracted from Juglans Regia L., a kind of walnut, was used to dye 100% cotton gabardine fabric. The main goal of this study was to enhance dyeing process of cotton fabric with Juglans Regia L. dyestuff in terms of color fastness values by designing and developing a mordant application process. Within the context of this study, different mordants such as tannic acid, gallic acid, ascorbic acid, potassium sodium tartrate tetrahydrate, calcium carbonate, iron (II) sulphate heptahydrate, aluminum potassium sulphate dodecahydrate and their combinations were applied in the mordanting processes. Spectrophotometric analysis, color fastness to washing and color fastness to light tests were carried out on the fabric samples. In this study, it was shown that by using the right combination of mordants with a proper application process, it is possible to improve color fastness values of cotton fabric samples dyed with natural dyestuff.

Keywords : extraction, Juglans Regia L., mordanting process, natural dyestuff

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