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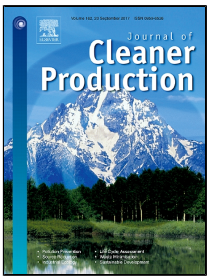

Color and Chemical Constitution of Natural Dye Henna (Lawsonia Inermis L) and its Application in the Coloration of Textiles

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Color and Chemical Constitution of Natural Dye Henna (Lawsonia Inermis L) and its Application in the Coloration of Textiles

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Abstract

The natural dye henna usually being recognized as lawsone is a red-orange pigment that has long been used for the coloration of skin and hair as well as textile materials. This natural colorant garners the attention of researchers throughout the globe for the coloration of textile materials due to the fact that its color can easily be harmonized with nature besides its slight chemical reactivity without posing any environmental problems. So, a large number of studies were carried out on both extraction and application of henna dye in textile fibers along with the standardization and simplification of dyeing techniques. This review article is mainly focused on the contemporary research works on henna dye highlighting the general characteristics alongside its chemical composition and chromatic properties. A greater emphasis is also placed on the dyeing chemistry of the natural dye henna as well as its applications in the dyeing of cellulosic, protein and synthetic textile fibers including the effects of different mordants and mordanting methods on the dye uptake. Moreover, the scope of improvement in terms of dyeability and overall colorfastness properties through chemical modification of textile fibers has also been mentioned.

Keywords: Natural dye; Henna leaves; Lawsone; Cellulosic fiber; Protein fiber