

Extraction of Colorant and Dyeing of Gamma Irradiated Viscose Using Cordyline terminalis Leaves Extract

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Abstract : Natural dyes offer an alternative better application in textiles than synthetic ones. The present study will be aimed to employ natural dye extracted from Cordyline terminalis plant and its application into viscose under the influence of gamma radiations. The colorant extraction will be done by boiling dracaena leaves powder in aqueous, alkaline and ethyl acetate mediums. Both dye powder and fabric will be treated with different doses (5-20 kGy) of gamma radiations. The antioxidant, antimicrobial and hemolytic activities of the extracts will also be determined. Different tests of fabric characterization (before and after radiations treatment) will be employed. Dyeing variables just as time, temperature and M: L will be applied for optimization. Standard methods for ISO to evaluate color fastness to light, washing and rubbing will be employed for improvement of color strength 1.5-15.5% of Al, Fe, Cr, and Cu as mordants will be employed through pre, post and meta mordanting. Color depth % & L*, a*, b* and L*, C*, h values will be recorded using spectra flash SF650.

Keywords : natural dyes, gamma radiations, Cordyline terminalis, ecofriendly dyes

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