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“INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES”

Potential of Waste from Steam Treatment in Eucalyptus Wood as Natural Dye for Dyeing Cotton

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Abstract

Natural dyes are gaining importance due to minor damage to health and the environment. It has been proposed to assess the potential for treating residue produced eucalyptus wood steam coloring natural tissues. We analyzed the chemical and physical characteristics of the residue. We dyed cotton fabrics by using the process of exhaustion with residue concentration at 50% relative to the fiber mass without addition of metal salts. Also we evaluate the addition of metal salts, iron sulfate and potassium aluminum sulfate (alum), called mordant in the dyeing bath to increase the color range in dyed fabrics and their effects on resistance to fading of fabrics. Then we evaluated the Color fastness to washing of dyed fabrics by the ABNT. Fabrics were dyed footnote 5 of color transfer. This showed that the dyed fabric does not transfer color to the white fabrics of any type of fiber which showed that the dyeing with the residue of eucalyptus has characteristics acceptable to the textile industry. Alteration of color after wash was large; therefore, this dye can be a sustainable alternative for products which require neutral or acidic wash. Future studies should include assessments of color fastness to light.

Keywords: *eucalyptus, textile, waste, dyestuff*

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