

Reactive and Vat Dyestuff in the Dyeing of Cotton: A Review of Energy and Water Consumption, Ecological Analysis and Effluent Treatment

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Abstract

This study compared reactive dyestuffs and vat dyestuffs in the dyeing of cotton, evaluating the reuse of the effluent generated, the ecological costs, as well as comparative testing for color fastness to water and perspiration acid and alkaline. The experiments with vat dyestuffs showed slight advantage in ecological costs, generating less molecules of carbon dioxide than the experiments conducted with reactive dyestuffs, lower consumption of energy, greater possibility of reuse of treated effluent, which presented decolorization efficiency above 99% in all cases, in addition to higher values in the wet fastness properties

Keywords: reacitve dyestuff, vat dyestuff, dyeing of cotton, ecological costs.