



SYNTHESIS AND PROPERTIES OF SOME NEW DISAZO DISPERSE DYES DERIVED FROM 3-CHLORO-4-FLUOROANILINE AND 2-CHLOROANILINE ON POLYETHYLENE TEREPHTHALATE FABRIC

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ABSTRACT

The synthesis and evaluation of the properties of some new brown and orange-brown disazo disperse dyes derived from 3-chloro-4-fluoroaniline and 2-chloroaniline are reported. They were synthesized via diazotization of 3-chloro-4-fluoroaniline followed by coupling reaction with 2-chloroaniline to give an intermediate. This dye was further diazotized and coupled with a variety of coupling components to afford the disazo disperse dyes. The spectral properties (^1H NMR, ^{13}C NMR, IR and UV-visible spectra) of obtained dyes are reported. The basic fastness (light fastness, heat treatment fastness and wash fastness) of the dyes on polyester fibre were also discussed in terms of their chemical structures. Because of the very good light fastness and heat fastness properties exhibited by the disazo disperse dyes on polyester fabric, the best of these dyes can be of commercial importance in the textile industry and other applications.

Keywords: 3-Chloro-4-fluoroaniline, disazo dyes; characterization, fastness, polyester fibre

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