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Synthesis and Dyeing Performance of Bifunctional Reactive Dye of 5 (4 bromophenyl) 1, 3 thiazole 2-amine by using H acid and PCVs

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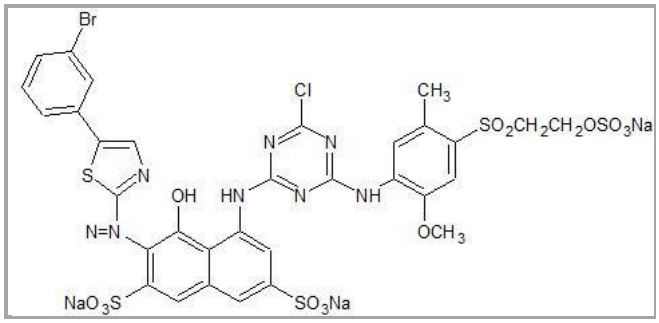
ABSTRACT

Bifunctional reactive dyes are colored compounds that possess more than one reactive moiety per molecule or groups, capable of forming covalent bonds between dye ions or molecules and the substrate. The bi functional reactive dye was synthesized with s-triazine and vinyl sulphone groups via 5(4 bromophenyl) 1,3 thiazole 2 - amine. This intermediate was diazotized coupled with H acid and other various coupling components to derive such bifunctional reactive dyes by using PCVs and λ_{max} of dyes were measured. % exhaustion, % fixation and % fixation efficiency of dyes was determined by Glauber salt using fixing agent at various temperature condition. Washing and light fastness were determined. The results were confirmed at λ_{max} 410 nm. The overall result concluded that bromo and methoxy group was introduced in para position of benzene ring induced hypsochromic shift.

Graphical Abstract



Structure of synthesized bifunctional reactive dye.

Keywords: Bifunctional, Co-valent bond, λ_{max}, Hypsochromic shift.