

REMOVAL OF COLOR FROM SYNTHETIC TEXTILE DYE STUFF BY ADSORPTION ONTO PREFORMED FLOCS

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ABSTRACT

This paper presents the results of colour removal from aqueous solutions of textile dye namely C.I. Acid blue 45 by adsorption onto preformed flocs of Alum, Ferric Chloride and Ferrous Sulphate. Agitated non-flow batch kinetic and isothermal equilibrium experiments were conducted and the experimental results revealed the potential of preformed flocs in the removal of colour of dye. Dye responded favourably and exhibited good to excellent colour removal at pH=4 with respect to dosage and at pH=10 with respect to contact time. Isothermal equilibrium adsorption data fitted well to Langmuir model representing formation of a unimolecular monolayer of dyes over a homogeneous surface of uniform energy.

KEYWORDS: Adsorption, Alum, Colour Removal, Ferric Chloride, Ferrous Sulphate, Preformed Flocs