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Electrochemical decolourizationprocess of synthetic toxic azo dyes with in situ electro –generated active chlorine

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Abstract: The removal of reactive dyes from effluents by electro coagulation has become an attractive method in recent years. This paper deals with the removal of the reactive textile dyes Samarone yellow, Fast sulphon black F, Acid Orange from an aqueous medium by the electro coagulation method using platinised titanium, mild steel, aluminium, copper and stainless steel electrodes. The effects of electrolyte concentration, initial pH, current density, electrode area, inter electrode distance, dye concentration, and treatment time on the decolourization efficiency have been investigated. The optical density of the dye solution was measured before and after electrolysis, and hence the decolourization efficiency (DE) was calculated. UV spectroscopy has been used to investigate the nature of dye before and after decolourization.
Key words: Electro coagulation, wastewater treatment, textile dyes, Samarone yellow, Fast sulphon black F, Acid Orange, decolourization efficiency.

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