

DETERMINATION OF COLOUR REMOVAL IN SYNTHETIC  
DYE WASTE CONTAINING MEGAPERSE YELLOW YNA  
USING INORGANIC COAGULANTS

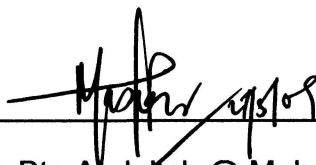
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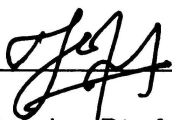


This Final Year Project Report entitled “**Determination of Colour Removal in Synthetic Dye Waste Containing Megaperse Yellow YNA Using Inorganic Coagulants**” was submitted by Wilsra Sugara, in partial fulfillment of the requirements for the degree of Bachelor science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, and was approved by



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## ABSTRACT

In this study, chemical coagulation process was chosen as a mean of removing colour from synthetic dye waste of Megaperse Yellow YNA. Coagulants used were  $\text{MgCl}_2$  and  $\text{FeCl}_3$  and combination of both in which the effectiveness was studied in three parameters: pH, coagulant dosage and contact time. Dye waste treatment with  $\text{MgCl}_2$  alone yielded unsatisfactory results with the maximum colour removal of only 39.94%. When treated with  $\text{FeCl}_3$  under the most optimum conditions, a high efficiency of colour reduction of 90.24% was obtained. In the combination of both coagulants, a slightly increased percentage was achieved (91.20%) at optimum conditions of pH 8, 8 g/L of 1:1 ratio (w/w) and 180 minutes time settling.