

**DEGRADATION OF CONGO RED BY  
FENTON PROCESS**

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## **ABSTRACT**

### **DEGRADATION CONGO RED BY FENTON'S PROCESS**

Waste water is exhausted in large volume every year due to the processes of textile industrial such as dyeing and finishing processes. Nowadays, more than 50% of dyes used in textile industry are Azo-based dye. Inorganic salts improve the coloration of dye, which enhance the pollution load of waste water from textile industries. Degradation of the reactive textile dye Congo Red (CR) was studied using Fenton's Reagent of Advanced Oxidation Processes. The initial concentration of dye solution is  $10^{-4}$  M. The effects of irradiation time and the addition of different type of pH on degree of degradation efficiency were studied. The result indicated that photo-Fenton's process more effective in the degradation of Congo Red dye solution under sunlight. Degradation in presence of sunlight and without UV irradiation required of two condition which is in acidic and in alkaline. The percentage decolourization continuously decreased until 20 minutes. By increasing the pH condition of dye solution and presence of sunlight, the percentage decolourization more better than other condition. Determine the efficiency degradation was determine by using formula degradation.