

## Comparative Study of Fenton and Activated Carbon Treatment for Dyeing Waste Water

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**Abstract :** In recent years 10000 dyes are approximately used by dying industry which makes dyeing wastewater more complex in nature. It is very difficult to treat dyeing wastewater by conventional methods. Here an attempt has been made to treat dyeing wastewater by the conventional and advanced method for removal of COD. Fenton process is the advanced method and activated carbon treatment is the conventional method. Experiments have been done on synthetic wastewater prepared from three different dyes; acidic, disperse and reactive. Experiments have also been conducted on real effluent obtained from industry. The optimum dose of catalyst and hydrogen peroxide in Fenton process and optimum activated carbon dose for each of these wastewaters were obtained. In Fenton treatment, COD removal was obtained up to 95% whereas 70% removal was obtained with activated carbon treatment.

**Keywords :** activated carbon, advanced oxidation process, dyeing waste water, fenton oxidation process

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