

**ELIMINATION OF GREEN METHYL DYE ONTO WATER USING UNTREATED SHRIMP CARAPACE AND PHOTODEGRADATION USING UV IRRADIATION IN SUSPENSIONS OF PURE ZnO**

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**Abstract**

Decolorization of the green methyl dye (cationic dye) in water was investigated in laboratory-Cryoproceeding and Engineering Reaction using untreated shrimp carapace and Photodegradation by UV irradiation in pure ZnO suspensions. Natural shrimp carapaces were dried, then ground. The powder which were immersed in green methyl dye and subjected to dark light and UV light source shows positive results for degradation of methyl green dye. Photodegradation experiments were carried out in a stirred batch photoreactor equipped with a low-pressure mercury lamp as UV source at 254 nm. The degradation of green methyl dye was followed by UV- vis spectroscopy. The effect of operating parameters such as pH, [ZnO], [dye] were also investigated. The results indicated that complete dye decolorization was obtained quickly under optimum conditions. Furthermore, results showed that dye degradation was dependent upon pH, [ZnO] and initial dye concentration. The experimental data and the predicted results are in good agreement.

**Keywords:** Dye, Photocatalytic degradation, Adsorption, Photolysis. UV, ZnO

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