



Removal of Methylene Blue And Indigo Carmine From Aqueous Solutions Using Couroupita Guianensis Leaves As An Adsorbent

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ABSTRACT

Present study focuses on the use of leaves of Couroupita guianensis (kailashpati) in powder form as natural bio adsorbent for removal of methylene blue and indigo carmine dyes. The study revealed that the methylene blue dye (15 ppm) showed maximum removal at pH 9, contact time 45min, particle size 140 μ m and adsorbent dose 0.15 g. Its adsorption followed pseudo first order kinetics. Thermodynamic studies revealed that adsorption of mb is a spontaneous process. Indigo carmine dye (5 ppm) showed maximum removal at pH 2, contact time 90 min, particle size 140 μ m and adsorbent dosage 0.3 g. Its adsorption followed pseudo second order kinetics. Thermodynamic studies revealed that process of adsorption of ic is a non-spontaneous process.

Keywords: Bioadsorbent, Couroupita guianensis, methylene blue, indigo carmine, thermodynamics.
