



Adsorption Studies on Chromium (VI) removal from Aqueous Solution using Activated Hibiscus sabdariffa Stem Nano Carbon

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Abstract: Batch adsorption experiments were carried to fix the adsorption dosage and also to find the optimum pH. A thermodynamic study was made on the adsorption of Cr (VI) ions in aqueous solution distinctly by the adsorbent such as activated Hibiscus sabdariffa Stem Nano Carbon. The adsorption of Chromium (VI) ions by activated Hibiscus sabdariffa Stem Nano Carbon increased when temperature was raised up to 60 °C. The thermodynamic study and kinetic models showed that the adsorption of Chromium (VI) ions follows pseudo second order kinetics and it was spontaneous and endothermic in nature.

Keywords: Chromium ions; Activated Hibiscus sabdariffa Stem Nano Carbon; adsorption models; equilibrium.

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