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Adsorption Isotherms and Thermodynamics Study for Methyl Violet Dye Removal from Aqueous Solution using Water Hyacinth as an Adsorbent

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Abstract:The adsorption behaviour of Methyl Violet from aqueous solution onto a Water Hyacinth was examined as a function of parameters such as initial methyl violet concentration, contact time, particle size, pH and temperature. The Langmuir and Freundlich adsorption isotherms were applied to describe the equilibrium isotherms. The Langmuir monolayer adsorption capacity of Water Hyacinth was estimated at 6.67 mg/g. The values of the energy, enthalpy and entropy of activation were 3.197 kJ/mol, 5.269 kJ/mol and 4.078 kJ/mol, respectively, at pH 2.

Keywords :-Methyl Violet, pH, Temperature, Contact time.

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