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Rhodamine-B and Metanil Yellow Dyes Adsorption on Onion Sheath

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ABSTRACT

Organic dyes are very harmful and toxic in nature. They pollute the soil, water, plants and all living systems in the environment. In this study, how the onion is affected by Rhodamine-B and Metanil Yellow dyes has been verified by the adsorption of both dyes on onion sheath as an adsorbent. Varying the parameters such as contact time, concentration, adsorbent dosage, temperature and pH are optimized to attain equilibrium adsorption. Langmuir and Freundlich methods, pseudo second order kinetics are applied to find out the adsorption capacity and rate of adsorption respectively. The entropy, enthalpy and free energy of adsorption of both dyes have been evaluated by adsorption thermodynamics.

Keywords: Adsorption, Metanil Yellow, Rhodamine-B, Onion Sheath.
