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Adsorption of Reactive Yellow-14 dye from aqueous solution using Psophocarpus tetragonalobus: Characterization and Adsorption Studies

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Abstract : In the present work, Psophocarpus tetragonalobus Leaf Powder has been studied to evaluate its adsorption capacity onto Reactive Yellow-14 dye from aqueous solution. The influence of experimental parameters such as sorption dose, contact time and pH has been studied. The adsorption process represented with Freundlich, Langmuir and Temkin isotherms. The isothermal experimental data fitted with Langmuir and Temkin isotherms. The results indicated that the dye, Reactive yellow-14 strongly interacts with a Biomass based adsorbent; the Psophocarpus tetragonalobus leaf powder.

Keywords : Reactive Yellow-14 dye, Psophocarpus tetragonalobus leaf powder, adsorption, biomass, Isotherm.

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