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Investigation of Adsorption Isotherms of Myristic, Palmitic and Stearic Acids on Rice Hull Ash

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Abstract: The adsorption of myristic, palmitic and stearic acids on rice hull ash from isooctane as solvent was studied and conformed to a Langmuir isotherm.

Monolayer coverage was determined to be 40.08, 38.43 and 37.27 mg/g, respectively.

The free energy of adsorption, ΔG°_{ads} , for the adsorption was determined to be -6,25, -6.32 and -6.39 kcal mol⁻¹ for the adsorbates, respectively. The equilibrium parameter indicated that rice hull ash is a good adsorbent for myristic, palmitic and stearic acids examined.

Key Words: Adsorption, free energy of adsorption, Langmuir isotherm, myristic,