
Reactions of Zinc with Acid and Base Saturated Dickites

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Abstract: The effect of pH, time and temperature on the interaction of zinc with acid and base saturated dickites has been investigated. Increase in pH resulted in an increase in adsorption of zinc in the higher concentration range. The adsorption increased rapidly and then slowly with increase in the time of interaction. The variation of rate constants and the half times of reaction suggested an exchange process controlled by film and possibly particle diffusion and thereafter fixation processes. The inferences found support from the nature of adsorption isotherms. Temperature affected adsorption with exothermic interactions. The activation energy of adsorption of zinc on Na-dickite was $14.0 \text{ kcal mole}^{-1}$.

Key Words: Adsorption • Dickite • Exchange • Sodium • Zinc

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