

In this work, an isothermal investigation of the adsorption of sulfadimethoxine from aqueous solution onto clay mineral (kaolinite) using batch equilibration method is reported. The equilibrium data were modelled using five linear forms of Langmuir equation, linear Freundlich and Temkin isotherm models and their corresponding non-linear equations. It is demonstrated that the linear Langmuir equations underestimated the maximum adsorption capacity of the sorbent. Linearization of adsorption isotherms is shown to induce errors that may lead to unreliable conclusions. The equilibrium data was best modeled by the non-linear Langmuir equation with a maximum adsorption capacity of 4.59 mg/g.

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