
Apparent and Partial Specific Sorption of Oxine by Montmorillonite and Silica Gel in Binary Mixtures

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Abstract: Oxine sorption by binary mixtures of montmorillonite and silica gel was studied at pH 5 as a function of oxine concentration and mixture composition. The investigation was made to resolve the problem of the determination of the oxine sorbed by each substance, inasmuch as the total amount sorbed by the mixture is the only value accessible experimentally. By the application of the thermodynamic method of partial quantities, the apparent and partial specific sorption by the clay and by the gel were calculated. These sorption values were found to increase with oxine concentration and to decrease as the proportion of the clay increased in the mixtures.

Key Words: Adsorption • Mixtures • Montmorillonite • Oxine • Silica gel • Specific sorption

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