The Adsorption of N-Aliphatic Alcohols from Dilute Aqueous Solutions on RNH_3-Montmorillonites. Part I. Distribution at Infinite Dilution

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Abstract: The adsorption of butanol, hexanol, and octanol on alkylammonium clays of different chain length is studied. The adsorption at infinite dilution compares to the distribution of alcohol between alkane and water in bulk solution. The interlamellar phase of the montmorillonite acts as a solvent even more reactive than carbon tetrachloride. Hydrogen bonds probably occur between the OH group of the alcohol and the NH_3^+ group. The exchange of water by alcohol on the interlamellar alkylammonium ion is the major factor in the transfer process.

Key Words: Adsorption • Alkylammonium • Butanol • Hexanol • Interlayer • Octanol

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