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# I.R. Study of Alkyl-Ammonium Vermiculite Complexes

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**Abstract:** Two octyl-ammonium vermiculite complexes with different 001 periodicities have been studied by i.r. spectroscopy. In each case i.r. spectroscopy affords information on the orientation of the — NH<sub>3</sub><sup>+</sup> groups and the strength of the hydrogen bond between these groups and the silicate oxygen surfaces. Also a perturbation of the vibration of the OH groups of the silicate has been observed that seems to be related to the distance from the center of the layer at which the — NH<sub>3</sub><sup>+</sup> groups are situated.

The i.r. results are discussed in relation to the structural models deduced from X-ray analysis.

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