spacings has little meaning (12). Therefore, in their second step expansion the protein cations might be in preferred orientations depending on their quantity, charge density, polarity, polarizability, compressibility, and other properties (6) without any interstratification at any level of adsorption of protein. This is supported by the fact that Armstrong and Chesters (ref. 2, Table 2, Fig. 4) measured d(ool) spacings at many randomly selected adsorption levels of lysozyme but could not observe any interstratification. Moreover, in swollen systems, Ensminger and Giese-king (4) observed large d(ool) spacings with gelatin also. There acetic acid might have aceted as a swelling agent. McLaren et al. (11) reported that maximum adsorption for gelatin is about 1.8 g protein/g of clay. What was the d(ool) spacings?

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Literature Cited


COMMENTS AND LETTERS TO THE EDITOR

Calculated vs. Measured In Situ Hydraulic Conductivities

Recently, Matzdorf et al. (1975) compared in situ hydraulic conductivities, \( K(\Theta) \), for a silt loam soil at several depths. They concluded that “further research is needed to evaluate theoretical conductivities and their use in predicting actual field conductivities.” Their Fig. 3 presents theoretical conductivities utilizing water retention characteristics of undisturbed cores. The Green and Corey (1971) relation of \( K(\Theta) \) was employed with the modification that a scaling factor is taken from the midpoint of the measured water content range. Unfortunately, there are two major difficulties in application of this method:

1) **Matching of Data.** The matching of \( K(\Theta) \) at the midpoint of the \( \Theta \) range for each depth, particularly when the \( \Theta \) range is small, may cause the matching to appear fortuitous if the data are not fitted well to a theoretical model. Moreover, in swollen systems, Ensminger and Giese-king (4) observed large d(ool) spacings with gelatin also. There acetic acid might have aceted as a swelling agent. McLaren et al. (11) reported that maximum adsorption for gelatin is about 1.8 g protein/g of clay. What was the d(ool) spacings?

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