
Ideal Behavior in Na⁺-Trace Metal Cation Exchange on Camp Berteau Montmorillonite

Garrison Sposito and Shas V. Mattigod

Department of Soil and Environmental Sciences University of California, Riverside, California 92521

Abstract: The conditions under which an exchanger phase will behave as an ideal mixture are established from thermodynamic principles. It is shown that, if a stoichiometric cation-exchange reaction is reversible, the exchanger phase will exhibit ideal behavior if the Vanselow selectivity coefficient is independent of the exchanger composition. This criterion is applied to some recently published data for Na⁺-trace metal cation exchange on Camp Berteau montmorillonite. An analysis of the data suggests that, so long as the exchange process is reversible, Na⁺-trace metal cation exchange produces an exchanger phase that behaves as an ideal mixture.

Key Words: Cation Exchange • Heterovalent Exchange • Montmorillonite • Trace Metals

Clays and Clay Minerals; April 1979 v. 27; no. 2; p. 125-128; DOI: [10.1346/CCMN.1979.0270208](https://doi.org/10.1346/CCMN.1979.0270208)

© 1979, The Clay Minerals Society

Clay Minerals Society (www.clays.org)
