

Effect of Anions on Copper-Sodium Exchange Selectivity on Montmorillonite. Z.Z. ZHANG*, D.L. SPARKS, and G.N. LAMBLE, Univ. of Delaware and Brookhaven National Laboratory.

Copper-sodium exchange experiments were conducted on Wyoming and Arizona montmorillonites in four anion backgrounds, namely, chloride, perchlorate, nitrate, and sulfate. The effect of anions on the exchange selectivity coefficients was studied. The copper exchange capacity (CuEC) was measured using the above four copper salts to further evaluate if CuCl^+ and CuNO_3^+ complexes were formed on the clay surfaces. In addition, extended x-ray absorption fine structure (EXAFS) spectroscopy experiments were conducted using synchrotron radiation to investigate the local coordination environment of copper ions on clay surfaces.

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