

## Characterization of surface active site in schwertmannite and applicability of surface complexation modeling

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Discontinuous titration was performed under N<sub>2</sub> atmospheric condition in order to characterize the surface active site in schwertmannite. The consumption of hydroxyl ion by schwertmannite was estimated by the pH measurement after solid-liquid separation. The estimations showed that alkaline solution was buffered by the exchange process between structural sulfate of schwertmannite and hydroxyl ion in the solution. Moreover surface active site of schwertmannite was identified as structural sulfate site. Surface complexation modeling was applied to describe the result of titration experiments by using the surface complex formation constant and site density estimated by the experiments. The model is successful in describing the ligand exchange process in schwertmannite.