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U020-P04

Room:Convention Hall

Time:May 24 10:30-13:00

## Formation condition of monohydrocalcite

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Monohydrocalcite ( $\text{CaCO}_3 \cdot \text{H}_2\text{O}$ : MHC) was found from sediment core at lake Hovsgol, Mongolia. It is estimated that MHC was formed during the cold periods. It may be possible to estimate water quality condition of lake Hovsgol during the cold periods by understanding the formation condition of MHC. Synthesis experiments of carbonate minerals from various concentration of Ca, Mg  $\text{CO}_3$  were conducted to find the formation condition of MHC. MHC was produced when the original solution condition was  $\text{Ca} < \text{CO}_3$  and Mg existed. Crystal morphology of MHC was observed by scanning electron microscope. The morphology of MHC was spherocrystal that aggregate acicular or long column crystal, and bow-tie-shaped crystal depending on Mg/Ca ratio in original solution. In present study, the equilibrium constant of MHC formation reaction was estimated from the reaction solutions.