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# Hydroxy-Chromium Smectite

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**Abstract:** Hydroxy-chromium solutions were prepared from chromium nitrate solutions by adding NaOH with OH/Cr = 2.

The solutions were treated at 20° C and 60° C. The hydrolysis times were from 1 to 100 days. Polymeric species in hydrolyzed chromium solutions were followed by visible absorption spectra within the range 325– 800 nm and by pH measurement. OH-Cr-smectite with high d(001) spacing (2.07 nm) was obtained when hydroxy-chromium solution was prepared at 60° C and with 1-day hydrolysis. When this sample was heated up to 350° C the basal spacing collapsed at 1.8 nm.

The samples were characterized by X-ray diffraction and N<sub>2</sub> adsorption-desorption isotherms.

**Key Words:** Cross-linked smectites • Pillared smectites • Polymeric Cr species

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