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# Transformation of Montmorillonite to Nickel-Chlorite

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**Abstract:** Nickel-chlorite has been obtained by the co-precipitation of nickelous hydrous oxide and montmorillonite at an OH/Ni ratio of 2.0. Chemical analysis shows that 16 me of Ni is fixed per gram of clay. System without any free nickelous hydrous oxide is quite stable up to an investigated period of 6 months, shows impedance to collapse on heating to 550° C, and no expansion of 001 spacing on glycerol treatment.

Different properties studied (X-ray diffraction analysis, thermal [D.T.A. and T.G.A.] data, i.r. absorption analysis, polarographic reduction behavior and cation exchange capacity measurements) confirm the complete transformation of montmorillonite to nickel-chlorite.

" Seeding" of the hydroxide out of the " fixed" interlayer positions takes place on ageing the sample with free nickelous hydrous oxide. No montmorillonite could be detected by X-ray diffraction analysis in spite of this backward reaction.

*Clays and Clay Minerals*; October 1969 v. 17; no. 4; p. 233-239; DOI: [10.1346/CCMN.1969.0170406](https://doi.org/10.1346/CCMN.1969.0170406)  
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