
Kaolinite/Montmorillonite Resembles Beidellite

J. Cuadros¹, A. Delgado¹, A. Cardenete², E. Reyes¹ and J. Linares¹

¹ U.E.I. Fisicoquímica y Geoquímica Mineral, Estación Experimental del Zoolidín (C.S.I.31C.) Profesor Albareda 1, 18008 Granada, Spain

² Departamento de Química Física, Facultad de Ciencias Universidad de Granada, Campus Universitario de Fuentenueva, 18001 Granada, Spain

Abstract: A number of smectitic samples from Almería (SE Spain) were studied by chemical analysis, DTA, TG, XRD (oriented aggregates with ethylene glycol treatment and Greene-Kelly test), FTIR and MAS NMR. Chemically they resembled a beidellite-montmorillonite series, displaying DTA/TG characteristics already quoted in the literature in beidellite descriptions. They did not swell after the Greene-Kelly test, as it has also been reported for some beidellites. Nevertheless XRD of the oriented, glycolated samples, FTIR, MAS NMR and revision of the chemical analysis demonstrated that they were mixed-layered kaolinite/montmorillonite. It is possible that some of the reported beidellites in the literature are kaolinite/montmorillonite. Beidellite characterization must be supported by several different techniques.

Key Words: Beidellite • Greene-Kelly test • Kaolinite/montmorillonite

Clays and Clay Minerals; October 1994 v. 42; no. 5; p. 643-651; DOI: [10.1346/CCMN.1994.0420517](https://doi.org/10.1346/CCMN.1994.0420517)

© 1994, The Clay Minerals Society

Clay Minerals Society (www.clays.org)
