

Lithium chloride Treatment for Identification of Randomly Interstratified Illite - Smectite

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Abstract: Identification of randomly interstratified illite – smectite, the most abundant of the mixed-layer clay minerals, is occasionally difficult. The so-called magnesium chloride and ethylene glycol treatment does not always reveal all the peaks necessary for identification of these clay minerals. Therefore a new modality, lithium chloride treatment, is suggested. With the application of this treatment, the characteristic peaks related to the mixed-layer as well as smectite will appear clearly. So, the illite proportion in the mixed-layer can be determined easily.

Keywords: *Clay minerals, Lithium chloride treatment, Randomly interstratified Illite-Smectite, XRD, Beidellite.*