
The Alteration Products of Potassium Depleted Oxybiotite

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Abstract: Artificial weathering of biotites, which contain various levels of structural ferric iron, by NaCl and NaBPh₄ solutions produces minerals and structures similar to those described for naturally weathered biotites. Oxidation of structural iron leads to K removal from alternate layers and development of hydrobiotite. The growth of order with increasing ferric iron content has been assessed by comparison with theoretical calculations for random and most ordered interstratified structures. There is evidence for the existence of two layer types in biotite prior to oxidation. The depression in rates of K release due to oxidation has been confirmed.

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