

The Crystal Structure and Chemistry of Several Palygorskite Samples with Different Geneses

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Abstract—The structure, chemical composition, and properties of palygorskites from several deposits in the Russian Federation, Ukraine, Uzbekistan, and Slovakia have been investigated by transmission electron microscopy, microanalysis, X-ray diffraction, IR spectroscopy, and thermal analysis. It is shown that the palygorskites formed under different physico-chemical conditions may significantly differ in chemical composition, morphology, and defect structure. Depending on the formation conditions, palygorskites decompose differently upon heating.

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