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Protoastrakhanite discredited

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During experimental investigations of the formation of astrakhanite in salt crusts and efflorescences on soils, Friedel (1976) described a new metastable salt with the ideal chemical formula $Na_2Mg(SO_4)_2 \cdot 5H_2O$. This salt was believed to be a potential mineral, and it was provisionally named protoastrakhanite.

Unaware of the description of protoastrakhanite, van Doesburg et al. (1982) described a new mineral that was found in salt efflorescences of the saline soils in the Great Konya Basin in Turkey. This new mineral was named after the type locality, konyaite.

Comparison of the information given in the two papers regarding chemical composition, synthesis, stability, optical and physical properties, and dehydration behavior leads to the conclusion that the two described phases are the same. The difference in their published X-ray diffraction patterns probably is due to instrumental factors and sample impurity: all weak lines of konyaite are missing in the X-ray pattern of protoastrakhanite, but their stronger lines agree completely.

A proposal to accept the name konyaite, and to discredit protoastrakhanite because this name was given to a synthesized crystalline phase, was approved by the Commission on New Minerals and Mineral Names, IMA.

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