

Konyaite

$\text{Na}_2\text{Mg}(\text{SO}_4)_2 \cdot 5\text{H}_2\text{O}$

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Crystal Data: Monoclinic. *Point Group:* $2/m$. As powdery aggregates of minute crystals.

Physical Properties: Hardness = 2.5 $D(\text{meas.}) = 2.088(6)$ $D(\text{calc.}) = 2.097$ Readily soluble in H_2O ; very unstable, commonly transforming to blödite in a matter of days.

Optical Properties: Transparent. *Color:* White, may be colorless.

Optical Class: Biaxial (+). *Orientation:* $X = b$; $Z \wedge c = 70(2)^\circ$. $\alpha = 1.464(1)$ $\beta = 1.468(1)$
 $\gamma = 1.474(1)$ $2V(\text{meas.}) = 74(2)^\circ$ $2V(\text{calc.}) = 79^\circ$

Cell Data: *Space Group:* $P2_1/c$. $a = 5.786(3)$ $b = 24.029(9)$ $c = 8.060(3)$ $\beta = 95.38^\circ$
 $Z = 4$

X-ray Powder Pattern: Synthetic.

4.541 (100), 4.017 (45), 3.960 (45), 2.597 (45), 12.01 (40), 4.202 (40), 2.659 (40)

Chemistry: (1) Identification depends on the identity of the X-ray pattern of the natural mineral with synthetic material, with the qualitative presence of Na, Mg, and SO_4 .

Occurrence: Widespread in salt efflorescences on saline soils, formed between 30°C and 50°C by evaporation of ground and surface waters.

Association: Gypsum, hexahydrite, blödite, halite, starkeyite, löweite, mirabalite, thénardite, epsomite, burkeite, tychite.

Distribution: In Turkey, from near Çakmak, between Ereğli and Niğde, Great Konya Basin, Konya Province. In the Tăuçoare Cave, Rodna Mountains, Romania. In the USA, found at many places in North Dakota. In Canada, noted across central and southern Alberta.

Name: For its occurrence in the Great Konya Basin, Turkey.

Type Material: National Museum of Geology and Mineralogy, Leiden, The Netherlands.

References: (1) van Doesburg, J.D.J., L. Vergouwen, and L. van der Plas (1982) Konyaite, $\text{Na}_2\text{Mg}(\text{SO}_4)_2 \cdot 5\text{H}_2\text{O}$, a new mineral from the Great Konya Basin, Turkey. *Amer. Mineral.*, 67, 1035–1038.