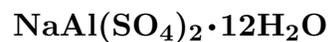


Sodium alum



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Crystal Data: Cubic. *Point Group:* $2/m\bar{3}$. As octahedral crystals, to 1 mm.

Physical Properties: *Fracture:* Conchoidal. Hardness = ~ 3 D(meas.) = 1.64 (synthetic). D(calc.) = 1.670 (synthetic). Soluble in H_2O .

Optical Properties: Transparent. *Color:* Colorless; colorless in transmitted light.

Luster: Vitreous.

Optical Class: Isotropic. $n = 1.4388$

Cell Data: *Space Group:* $Pa\bar{3}$. $a = 12.214(1)$ $Z = 4$

X-ray Powder Pattern: Synthetic.

4.314 (100), 2.962 (35), 3.526 (14), 7.05(7), 1.9077 (7), 3.263 (6), 2.493 (6)

Chemistry: (1) There are apparently no analyses of natural material.

Occurrence: A sublimate on burning coal heaps (Bátonyterenye, Hungary); a recent precipitate (Recsk mine, Hungary).

Association: Blödite, kröhnkite (Recsk mine, Hungary).

Distribution: Earlier reported localities require confirmation by modern methods. Recently identified in Hungary, from the Recsk copper mine, Mátra Mountains, and at Bátonyterenye.

Name: For its *sodium* content, and as a hydrated aluminum sulfate.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 474 [soda alum]. (2) Szakáll, S., Ed. (2002) Minerals of the Carpathians. Granit, Prague, 278. (3) Cromer, D.T., M.I. Kay, and A.C. Larson (1967) Refinement of the alum structures. II. X-ray and neutron diffraction of $\text{NaAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$, γ alum. *Acta Cryst.*, 22, 182–187. (4) (1978) NBS Mono. 25, 15.