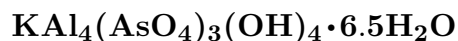


Alumopharmacosiderite



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Crystal Data: Cubic. *Point Group:* $\bar{4}3m$. As fine-grained polycrystalline aggregates.

Physical Properties: Hardness = n.d. $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = 2.676$

Optical Properties: Semitransparent. *Color:* White.

Optical Class: Isotropic. $n = 1.565(2)$

Cell Data: *Space Group:* $P\bar{4}3m$. $a = 7.745(1)$ $Z = [1]$

X-ray Powder Pattern: Guanaco, Chile.

7.77 (100), 2.739 (60), 4.48 (50), 3.16 (50), 3.87 (40), 2.335 (40), 2.452 (30)

Chemistry:

	(1)	(2)
As ₂ O ₅	44.3	46.03
Al ₂ O ₃	24.0	27.23
Fe ₂ O ₃	3.9	
CuO	trace	
K ₂ O	7.5	6.29
H ₂ O	20.3	20.45
Total	100.0	100.00

(1) Guanaco, Chile; by electron microprobe, average of four analyses, total Fe as Fe₂O₃, H₂O determined separately; after normalization to 79.7%, corresponds to $\text{K}_{1.24}(\text{Al}_{3.69}\text{Fe}_{0.38}^{3+})_{\Sigma=4.07}(\text{AsO}_4)_3(\text{OH})_4 \cdot 6.5\text{H}_2\text{O}$. (2) $\text{KAl}_4(\text{AsO}_4)_3(\text{OH})_4 \cdot 6.5\text{H}_2\text{O}$.

Occurrence: With other oxidized arsenates on a museum specimen.

Association: Ceruleite, olivenite, schlossmacherite, mansfieldite, quartz.

Distribution: From the [Emma Luisa gold mine,] Guanaco district, about 100 km east-northeast of Taltal, Antofagasta, Chile.

Name: As the ALUMinum analog of *pharmacosiderite*.

Type Material: National Museum of Natural History, Washington, D.C., USA, 149527.

References: (1) Schmetzer, K., W. Horn, and H. Bank (1981) Alumopharmakosiderit, $\text{KAl}_4[(\text{OH})_4](\text{AsO}_4)_3 \cdot 6, 5\text{H}_2\text{O}$, ein neues Mineral. Neues Jahrb. Mineral., Monatsh., 97–102 (in German with English abs.). (2) (1981) Amer. Mineral., 66, 1099 (abs. ref. 1).