Kalinite $KAl(SO_4)_2 \cdot 11-12H_2O(?)$

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Crystal Data: Monoclinic. *Point Group:* $2/m$. Typically fibrous, in crusts or massive.

Physical Properties: Hardness = 2–2.5 D(meas.) = 1.75 D(calc.) = 2.00 Soluble in H_2O.

Optical Properties: Transparent to translucent. *Color:* White to pale blue.
Luster: Vitreous.
Optical Class: Biaxial (–). *Orientation:* $Z = b$; $Y \wedge c = 13°$. *Dispersion:* Weak. $\alpha = 1.430$ $\beta = 1.452$ $\gamma = 1.458$ 2V(meas.) = 52(1)°

Cell Data: *Space Group:* $C2/c$. $a = 19.92(16)$ $b = 9.27(3)$ $c = 8.304(13)$ $\beta = 98.79(19)°$ Z = 4

X-ray Powder Pattern: Alma mine, California, USA. (ICDD 41-1362).
4.80 (100), 4.31 (86), 3.494 (79), 4.12 (71), 4.94 (64), 4.60 (50), 2.679 (29)

Chemistry: (1) No modern analyses appear extant.

Occurrence: A rare secondary mineral observed in the oxidized zone of mineral deposits, as efflorescences on alum slates, in caves, and as a volcanic sublimate.

Association: Jarosite, pisanite (Quetena, Chile).

Distribution: All localities require modern characterization as many older samples have been found to be cubic potassium alum. From Mount Wingen, New South Wales, Australia. At Quetena, west of Calama, Antofagasta, Chile. In the USA, from Turkey Creek, Jefferson Co., Colorado; at the Alum mine, Silver Peak district, Esmeralda Co., Nevada; in the Alma pyrite mine, Alameda Co., California. Found on volcanoes in the Lipari Islands and Sicily, Italy, and on the Kamchatka Peninsula, Russia.

Name: For its potassium, *kalium*, content. Here applied to a partially characterized fibrous birefringent mineral, distinct from cubic potassium alum.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 471. (2) Dana, E.S. (1892) Dana's system of mineralogy, (6th edition), 951.

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