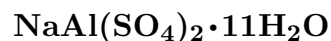


# Mendozite



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**Crystal Data:** Monoclinic. *Point Group:*  $2/m$ . As fibrous masses.

**Physical Properties:** Hardness =  $\sim 3$   $D(\text{meas.}) = 1.730$   $D(\text{calc.}) = 1.781$  Soluble in  $\text{H}_2\text{O}$ ; on exposure dehydrates to tamarugite.

**Optical Properties:** Transparent. *Color:* Colorless, white; colorless in transmitted light. *Optical Class:* Biaxial (-) (synthetic). *Orientation:*  $X = b$ ;  $Y \wedge c = 30^\circ$ . *Dispersion:* Distinct, crossed.  $\alpha = 1.449(1)$   $\beta = 1.461(3)$   $\gamma = 1.463(3)$   $2V(\text{meas.}) = 56(1)^\circ$

**Cell Data:** *Space Group:*  $C2/c$ .  $a = 21.75(3)$   $b = 9.11(1)$   $c = 8.30(1)$   $\beta = 92^\circ 28(5)'$   
 $Z = 4$

**X-ray Powder Pattern:** Synthetic.  
3.50 (100), 4.76 (85), 4.58 (65), 4.15 (50), 3.60 (35), 2.644 (35), 10.9 (30)

Chemistry:	(1)	(2)
$\text{SO}_3$	37.70	36.37
$\text{Al}_2\text{O}_3$	12.00	11.58
$\text{Na}_2\text{O}$	7.96	7.04
$\text{H}_2\text{O}$	41.96	45.01
Total	99.62	100.00

(1) "San Juan", Argentina. (2)  $\text{NaAl}(\text{SO}_4)_2 \cdot 11\text{H}_2\text{O}$ .

**Occurrence:** Rarely formed by oxidation of pyrite in reaction with clays; may occur in volcanic fumaroles.

**Association:** Tamarugite.

**Distribution:** In Argentina, from "San Juan, near Mendoza" [probably meaning Mendoza Province; the original occurrence appears lost.] At the Lanjarón mineral springs, Granada, Spain. On volcanoes on the Kamchatka Peninsula, Russia. In the USA, from Eureka, St. Louis Co., and Fulton, Calloway Co., Missouri. Other localities may afford this species, but modern confirmation is lacking.

**Name:** For its originally described occurrence in Mendoza Province, Argentina.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 469–471. (2) Fang, J.H. and P.D. Robinson (1972) Crystal structures and mineral chemistry of double-salt hydrates: II. The crystal structure of mendozite,  $\text{NaAl}(\text{SO}_4)_2 \cdot 11\text{H}_2\text{O}$ . *Amer. Mineral.*, 37, 1082–1088.