Crystal Data: Monoclinic. *Point Group*: 2/m. As rod-like aggregates of pseudohexagonal platy crystals, to 100 μ m and 1-2 μ m thick.

Physical Properties: *Cleavage*: Good on $\{100\}$. *Tenacity*: n.d. *Fracture*: n.d. Hardness = n.d. D(meas.) = n.d. D(calc.) = 2.12

Optical Properties: Transparent. *Color*: Colorless; white in clusters. *Streak*: n.d. *Luster*: Vitreous. *Optical Class*: Biaxial (+). $\alpha = 1.502(2)$ $\beta = 1.503(2)$ $\gamma = n.d.$ 2V(meas.) = 10° to 20°

Optical Class: Biaxial (+). $\alpha = 1.502(2) \beta = 1.503(2) \gamma = n.d. 2V (meas.) = 10° to 2$ Orientation: X = b, $Y \approx c$, $Z \approx a^*$. No dispersion or pleochroism.

Cell Data: Space Group: $P2_1/c$. a = 13.478(3) b = 9.971(2) c = 6.999(1) $\beta = 97.20(3)^{\circ}$ Z = 2

X-Ray Diffraction Pattern: Penrice marble quarry, Barossa Valley, South Australia, Australia. 13.39 (100), 8.00 (30), 5.562 (26), 2.855 (16), 2.782 (15), 5.718 (12), 3.004 (5)

Chemistry:		(1)	(2)
	Na ₂ O	4.39	5.22
	K ₂ O	0.32	
	CaO	1.58	
	MgO	9.10	6.78
	Al_2O_3	22.7	25.7
	P_2O_5	24.0	23.9
	F	10.8	19.2
	-O = F	4.56	8.1
	H ₂ O	30.5	27.3
	Total	98.83	100.00

(1) Penrice marble quarry, Barossa Valley, South Australia, Australia; average electron microprobe analysis supplemented by IR spectroscopy; corresponds to $Na_{0.85}K_{0.05}Ca_{0.17}Mg_{1.35}Al_{2.68}P_{2.04}H_{20.38}$ (F_{3.42}O_{19.58}). (2) [Mg(H₂O)₆][Na(H₂O)₂Al₃(PO₄)₂F₆]·H₂O.

Mineral Group: The F-dominant analogue of aldermanite.

Occurrence: Crystallized from groundwaters at ambient temperatures and the phosphorus derived by leaching of weakly phosphatic limestones or low-grade primary phosphorites.

Association: Angastonite, minyulite, perhamite, crandallite, quartz, goethite.

Distribution: From the Penrice marble quarry, 2 km north of Angaston, Barossa Valley, South Australia, Australia.

Name: For the quarry from which the studied material was collected.

Type Material: Museum of South Australia, Adelaide, South Australia, Australia (G32227 holotype) and the Natural History Museum of Los Angeles County, Los Angeles, California, USA (76158 cotype).

References: (1) Elliott, P., I.E. Grey, C.M. MacRae, A.R. Kampf, and C. Davidson (2022) Penriceite, $[Mg(H_2O)_6][Na(H_2O)_2Al_3(PO_4)_2F_6]\cdot H_2O$, the F-analogue of aldermanite, from the Penrice marble quarry, South Australia. Australian J. Mineral., 23(1), 5-12.