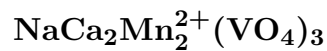


Palenzonaite



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Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. In dodecahedral crystals, to 6 mm, and as anhedral grains.

Physical Properties: *Fracture:* Subconchoidal. Hardness = 5–5.5 D(meas.) = 3.63(2)
D(calc.) = 3.78–3.79

Optical Properties: Transparent. *Color:* Wine-red; in thin section, wine-red.
Streak: Brownish red. *Luster:* Adamantine.
Optical Class: Isotropic. $n = 1.965(5)$

Cell Data: *Space Group:* $Ia\bar{3}d$. $a = 12.534(2)$ $Z = 8$

X-ray Powder Pattern: Molinello mine, Italy.
2.803 (100), 2.558 (60), 3.132 (55), 1.675 (40), 1.738 (20), 2.673 (19), 5.12 (11)

Chemistry:	(1)
	As ₂ O ₅ 5.14
	V ₂ O ₅ 39.34
	SiO ₂ 3.32
	MnO 25.19
	CaO 23.70
	Na ₂ O 3.40
	<hr/>
	Total 100.09

(1) Molinello mine, Italy; by electron microprobe, average of three analyses, total Mn as MnO; corresponds to $\text{Na}_{0.62}\text{Ca}_{2.37}\text{Mn}_{1.99}[(\text{V}_{0.81}\text{Si}_{0.10}\text{As}_{0.08})_{\Sigma=0.99}\text{O}_4]_3$.

Occurrence: A rare mineral in narrow veinlets cutting a manganese deposit hosted within radiolarian cherts (Molinello mine, Italy).

Association: Manganoan calcite, saneroite, ganophyllite, axinite (Molinello mine, Italy); medaite, saneroite, pyrobelonite, fianelite, parsettensite, rhodochrosite, kutnohorite, aegirine, quartz (Fianel mine, Switzerland).

Distribution: From the Molinello manganese mine, near Chiavari, Val Graveglia, Liguria, Italy. At the Fianel mine, Val Ferrera, Graubünden, Switzerland.

Name: In honor of Professor Andrea Palenzona, amateur mineralogist and discoverer of the mineral.

Type Material: University of Genoa, Genoa, Italy; Royal Ontario Museum, Toronto, Canada.

References: (1) Basso, R. (1987) The crystal structure of palenzonaite, a new vanadate garnet from Val Graveglia (Northern Apennines, Italy). *Neues Jahrb. Mineral., Monatsh.*, 136–144.

(2) (1988) *Amer. Mineral.*, 73, 930 (abs. ref. 1).