

Panasqueiraite

CaMg(PO₄)(OH, F)

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Crystal Data: Monoclinic. *Point Group:* 2/m or m. Anhedronal, to about 1 mm; fine-grained massive, in aggregates.

Physical Properties: *Cleavage:* On {010}, poor. Hardness = 5 D(meas.) = 3.22 D(calc.) = 3.21 Blue cathodoluminescence under the electron beam.

Optical Properties: Semitransparent. *Color:* Pink. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Biaxial (+). *Orientation:* Z = b; X ∧ c = 22°. α = 1.590(2) β = 1.596(2) γ = 1.616(2) 2V(meas.) = 51(2)°

Cell Data: *Space Group:* C2/c or Cc. a = 6.535(3) b = 8.753(4) c = 6.919(4) β = 112.33(4)° Z = 4

X-ray Powder Pattern: Panasqueira, Portugal; nearly identical to isokite. 2.626 (100), 3.02 (86), 3.20 (67), 2.584 (45), 1.722 (33), 2.783 (31), 1.658 (30)

Chemistry:

	(1)
P ₂ O ₅	39.6
FeO	0.4
MnO	0.0
MgO	22.9
CaO	31.0
F	3.1
OH	[6.7]
-O = (F ₂ , OH)	4.4
Total	[99.3]

(1) Panasqueira, Portugal; by electron microprobe, (OH)¹⁻ calculated from stoichiometry; corresponds to Ca_{0.99}(Mg_{1.02}Fe_{0.01})_{Σ=1.03}(PO₄)_{1.00}[(OH)_{0.71}F_{0.29}]_{Σ=1.00}.

Occurrence: A rare mineral in vein selvages in a hydrothermal Sn–W deposit.

Association: Fluorapatite, wolfeite, topaz, muscovite, sphalerite, quartz, chalcopyrite, pyrrhotite, siderite, arsenopyrite, chlorite, vivianite, althausite, thadeuite.

Distribution: From the Panasqueira Sn–W deposit, Portugal.

Name: For Panasqueira, Portugal, the type locality.

Type Material: Department of Geological Sciences, University of Michigan, Ann Arbor, Michigan; National Museum of Natural History, Washington, D.C., USA, 144521.

References: (1) Isaacs, A.M. and D.R. Peacor (1981) Panasqueiraite, a new mineral: the OH-equivalent of isokite. *Can. Mineral.*, 19, 389–392. (2) (1982) *Amer. Mineral.*, 67, 859 (abs. ref. 1). (3) Isaacs, A.M. and D.R. Peacor (1985) Panasqueiraite, a new mineral: the OH-equivalent of isokite. Erratum. *Can. Mineral.*, 23, 131.