

Pokrovskite**Mg₂(CO₃)(OH)₂•0.5H₂O**

©2001-2005 Mineral Data Publishing, version 1

Crystal Data: Monoclinic. *Point Group:* 2/m (by analogy to malachite). Crystals are prismatic to acicular, to 7 mm, in sheaves; as spherulitic aggregates, may be cross-vein fibrous, asbestiform.

Physical Properties: Hardness = ~3 D(meas.) = 2.51–2.52 D(calc.) = 2.58

Optical Properties: Semitransparent, may be opaque due to inclusions. *Color:* White with a flesh tint. *Streak:* White. *Luster:* Dull.

Optical Class: Biaxial (-). *Orientation:* X ∧ c = 8°; elongation, negative. α = 1.537

β = 1.619 γ = 1.619 2V(meas.) = 18°

Cell Data: *Space Group:* P2₁/a (by analogy to malachite). a = 9.43(1) b = 12.27(1) c = 3.395(3) β = 96.60(9)° Z = 4

X-ray Powder Pattern: Zlatogorsk massif, Kazakhstan.

2.60 (10b), 2.17 (9), 6.10 (7), 4.70 (7), 3.73 (7), 1.661 (7b), 1.385 (5)

Chemistry:

	(1)	(2)
SiO ₂	< 0.10	
CO ₂	28.78	29.02
Al ₂ O ₃	< 0.05	
Fe ₂ O ₃	1.90	
MnO	1.02	
MgO	50.80	53.16
CaO	0.39	
BaO	0.10	
Na ₂ O	0.10	
K ₂ O	< 0.10	
H ₂ O ⁺	16.72	17.82
H ₂ O ⁻	0.44	
Total	100.50	100.00

(1) Zlatogorsk massif, Kazakhstan; (OH)¹⁻ and H₂O confirmed by IR, corresponds to (Mg_{1.93}Fe_{0.04}Mn_{0.02})_{Σ=1.99}(CO₃)(OH)₂•0.42H₂O. (2) Mg₂(CO₃)(OH)₂•0.5H₂O.

Occurrence: An uncommon species in ultramafic bodies of dunite or serpentinite.

Association: Dolomite, magnesite, sjögrenite (Zlatogorsk intrusion, Kazakhstan); coalingite, mcguinnessite (Cedar Hill quarry, Pennsylvania, USA).

Distribution: From a drillhole in the Zlatogorsk massif, 90 km west-southwest of Kokchetav, Kazakhstan. In the USA, at the Hunting Hill quarry, Montgomery Co., Maryland; in the Cedar Hill quarry, Lancaster Co., Pennsylvania; at the Addie quarry, Jackson Co., North Carolina; from the Gabbs mine, Gabbs district, Nye Co., Nevada; at Lytton, Sonoma Co., California.

Name: Honors Pavel Vladimirovich Pokrovskii (1912–1979), Russian mineralogist, Institute of Geology and Geochemistry, Sverdlovsk, Russia.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

References: (1) Ivanov, O.K., Y.A. Malinovskii, and Y.V. Mozherin (1984) Pokrovskite. Mg₂[(CO₃)(OH)₂]•0.5H₂O – a new mineral from the Zlatogorskaya layered intrusive (Kazakhstan). Zap. Vses. Mineral. Obshch., 113, 90–95. (2) (1985) Amer. Mineral., 70, 217 (abs. ref. 1).