

Leogangite**Cu₁₀(AsO₄)₄(SO₄)(OH)₆·8H₂O**

Crystal Data: Monoclinic. *Point Group:* 2/m. As aggregates of platelets, flattened on (100) and elongated on [010], to 0.1 mm.

Physical Properties: *Cleavage:* Perfect (100). *Fracture:* Partings parallel to (010) and (001). *Tenacity:* Brittle. Hardness = n.d. D(meas.) = n.d. D(calc.) = 3.55

Optical Properties: Transparent. *Color:* Green with a bluish tint. *Streak:* Light green. *Luster:* Vitreous.

Optical Class: Biaxial (-). $\alpha = 1.590(2)$ $\beta = 1.740(2)$ $\gamma = 1.744(2)$ $2V(\text{meas}) = 18(2)^\circ$
 $2V(\text{calc}) = 17.3^\circ$ *Dispersion:* Weak, $r > v$. *Pleochroism:* X = blue-green, Y = Z = pale green.
Orientation: X = a*; Y = b; Z = c.

Cell Data: *Space Group:* C2/c. $a = 21.770(7)$ $b = 12.327(4)$ $c = 10.720(3)$ $\beta = 92.85(1)^\circ$ Z = 4

X-ray Powder Pattern: Danielstollen mining area, near Leogang, Salzburg Province, Austria. 10.85 (100), 2.630 (60), 5.44 (50), 3.625 (50), 3.090 (40), 2.672 (40), 4.9 (30)

Chemistry:	(1)
CuO	51.1
As ₂ O ₅	29.7
SO ₃	5.1
SiO ₂	0.2
H ₂ O	13.9
Total	100.0

(1) Danielstollen mining area, near Leogang, Salzburg Province, Austria.; average of 5 electron microprobe analyses, H₂O by difference, corresponding to Cu_{9.94}(As_{0.99}Si_{0.01}O₄)_{Σ=4}(S_{0.99}O₄)(OH)₆·8.89H₂O.

Occurrence: A secondary mineral coating limonitic dolostone breccia and filling voids in the oxidized zone of a pyrite, galena, tennantite deposit.

Association: Olivenite, malachite, tyrolite, parnauite, strashimirite, euchroite, brochantite, langite, posnjakite, devilline.

Distribution: Found on one dump in both the Danielstollen and Inschlagalm mining areas, Schwarzleo Valley, about 10 km from Leogang, Salzburg Province, Austria.

Name: For the city (Leogang) in Austria near the first found specimens.

Type Material: Natural History Museum, Vienna, Austria; M8873.

References: (1) Lengauer, C.L., G. Giester, and E. Kirchner (2004) Leogangite, Cu₁₀(AsO₄)₄(SO₄)(OH)₆·8H₂O, a new mineral from the Leogang mining district, Salzburg province, Austria. *Mineral. Petrology*, 81, 187–201. (2) (2005) *Amer. Mineral.*, 90, 272 (abs. ref. 1).