

Barrotite**Cu₉Al(HSiO₄)₂[(SO₄)(HAsO₄)_{0.5}](OH)₁₂·8H₂O**

Crystal Data: Hexagonal. *Point Group:* 3. As hexagonal plates tabular on {001} to 0.5 mm or in radiating aggregates to 2 mm.

Physical Properties: *Cleavage:* Perfect mica-like on {001}. *Tenacity:* Flexible.
Fracture: Irregular. Hardness = 2 D(meas.) = 2.90(2) D(calc.) = 2.977 Nonfluorescent.

Optical Properties: Transparent to translucent. *Color:* Intense blue. *Streak:* Pale blue.
Luster: Vitreous to subadamantine.
Optical Class: Uniaxial (-). $\omega = 1.652(2)$ $\varepsilon = 1.576(2)$ *Pleochroism:* O = blue, E = light blue.

Cell Data: *Space Group:* P3₁ or P3₂. $a = 10.650(2)$ $c = 21.954(7)$ $Z = 3$

X-Ray Diffraction Pattern: Roua, Alpes-Maritimes, France.
7.34 (100), 3.670 (90), 2.645 (90), 1.537 (50), 2.587 (30), 2.396 (25), 1.331(20)

Chemistry:	(1)	(2)
CuO	54.63	56.07
Al ₂ O ₃	4.18	3.99
SiO ₂	9.06	9.41
SO ₃	6.48	6.27
As ₂ O ₅	4.14	4.50
H ₂ O	[21.51]	19.76
Total	100.00	100.00

(1) Roua, Alpes-Maritimes, France; average electron microprobe analysis supplemented by IR and Raman spectroscopy, H₂O by difference; corresponds to Cu_{8.85}Al_{1.06}(HSiO₄)₂[(S_{1.04}O₄)(HAS_{0.93}O₄)_{0.5}](OH)₁₂·8H_{2.07}O. (2) Cu₉Al(HSiO₄)₂[(SO₄)(HAsO₄)_{0.5}](OH)₁₂·8H₂O.

Occurrence: Secondary in sandstone.

Association: Chalcophyllite, malachite, cuprite, chrysocolla, algodonite.

Distribution: From the copper mines of Roua, Alpes-Maritimes, France.

Name: For the *Barrot Dôme*, where the mines of Roua are located.

Type Material: Aydin Adnan Menderes University, Memnune İnci Meslek Yüksek Okulu, Karacasu-Aydin, Turkey (KMY-26) and the Laboratory of Crystallography, University of Geneva, Geneva, Switzerland (CR-011).

References: (1) Sarp, H., R. Černý, D.Y. Pushcharovsky, P. Schouwink, J. Teyssier, P.A. Williams, H. Babalik, and G. Mari (2014) La barrotite, Cu₉Al(HSiO₄)₂[(SO₄)(HAsO₄)_{0.5}](OH)₁₂·8H₂O, un nouveau minéral de la mine de Roua (Alpes-Maritimes, France). *Riviera Scientifique*, 98, 3-22.