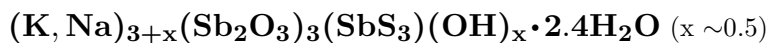


Cetineite

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Crystal Data: Hexagonal. *Point Group:* 6. As tufts of acicular crystals elongated || [0001], to 0.5 mm in length.**Physical Properties:** *Cleavage:* On {10 $\bar{1}$ 0}. *Tenacity:* Somewhat sectile. *Hardness* = n.d. VHN = 127–156 (20 g load). D(meas.) = n.d. D(calc.) = 4.21**Optical Properties:** Transparent to translucent. *Color:* Red-orange. *Streak:* Orange. *Luster:* Resinous.*Optical Class:* Uniaxial (+). *Pleochroism:* Weak, from orange to slightly orange-brown. $n = > 1.74$ 2V(meas.) = n.d.R₁–R₂: n.d.**Cell Data:** *Space Group:* P6₃. $a = 14.2513(3)$ $c = 5.5900(1)$ $Z = 2$ **X-ray Powder Pattern:** Cetine mine, Italy.

2.916 (100), 12.41 (80), 3.000 (74), 2.690 (61), 4.11 (55), 4.67 (54), 3.581 (44)

Chemistry:

	(1)
SiO ₂	0.67
Sb ₂ O ₃	81.06
K ₂ O	6.66
Na ₂ O	3.87
S	7.15
H ₂ O	[4.16]
–O = S	3.57
Total	[100.00]

(1) Cetine mine, Italy; by electron microprobe, average of two analyses, H₂O by difference; after deduction of SiO₂ corresponds to (K_{1.78}Na_{1.57})_{Σ=3.35}(Sb₂O₃)_{3.03}(SbS₃)_{0.94}(OH)_{0.53}•2.4H₂O.**Occurrence:** From an antimony deposit in highly silicified evaporites, on ore which has been roasted, then long weathered.**Association:** Mopungite, sénarmonite.**Distribution:** From the Cetine mine, 20 km southwest of Siena, Tuscany, Italy.**Name:** For the Cetine mine, Italy.**Type Material:** University of Florence, Florence, Italy, 644/RI; National Museum of Natural History, Washington, D.C., USA, 164388.**References:** (1) Sabelli, C. and G. Vezzalini (1987) Cetineite, a new antimony oxide-sulfide mineral from Cetine mine, Tuscany, Italy. *Neues Jahrb. Mineral., Monatsh.*, 419–425. (2) (1989) *Amer. Mineral.*, 74, 1399–1400 (abs. ref. 1). (3) Sabelli, C., I. Nakai, and S. Katsura (1988) Crystal structures of cetineite and its synthetic Na analogue Na_{3.6}(Sb₂O₃)₃(SbS₃)(OH)_{0.6}•2.4H₂O. *Amer. Mineral.*, 73, 398–404.