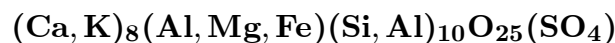


Latiumite



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Crystal Data: Monoclinic. *Point Group:* 2. Elongated tabular crystals, to 5 mm; also massive. *Twinning:* On {100} common, simple or multiple.

Physical Properties: *Cleavage:* {100}, perfect. Hardness = 5.5–6 D(meas.) = 2.93 D(calc.) = 2.92

Optical Properties: Transparent to translucent. *Color:* White, may be zoned or mottled. *Luster:* Vitreous.

Optical Class: Biaxial (+) or (–). *Orientation:* $Z = b$; $X \wedge c = 16^\circ\text{--}28^\circ$. *Dispersion:* $r > v$, marked. $\alpha = 1.600\text{--}1.603$ $\beta = 1.606\text{--}1.609$ $\gamma = 1.614\text{--}1.615$ $2V(\text{meas.}) = 83^\circ\text{--}90^\circ$

Cell Data: *Space Group:* $P2_1$. $a = 12.06(1)$ $b = 5.08(2)$ $c = 10.81(1)$ $\beta = 106.0^\circ$ $Z = 2$

X-ray Powder Pattern: Albano, Italy.

2.86 (s1), 3.06 (s2), 2.96 (s3), 2.54 (s), 4.6 (m), 4.5 (m), 3.83 (m)

Chemistry:

	(1)		(1)
SiO ₂	28.33	K ₂ O	7.20
Al ₂ O ₃	24.67	Cl	0.14
Fe ₂ O ₃	0.50	H ₂ O ⁺	0.27
FeO	0.55	H ₂ O [–]	0.00
MnO	0.02	CO ₂	1.60
MgO	0.76	SO ₃	5.42
CaO	29.41	–O = Cl ₂	0.03
Na ₂ O	1.11	Total	99.95

(1) Albano, Italy; combination of two partial analyses, corresponding to $(\text{Ca}_{5.91}\text{K}_{1.73}\text{Na}_{0.40})_{\Sigma=8.04}(\text{Al}_{0.76}\text{Mg}_{0.21}\text{Fe}_{0.09}^{2+}\text{Fe}_{0.07}^{3+})_{\Sigma=1.03}(\text{Si}_{5.31}\text{Al}_{4.69})_{\Sigma=10.00}\text{O}_{25}[(\text{SO}_4)_{0.76}(\text{CO}_3)_{0.40}\text{Cl}_{0.02}]_{\Sigma=1.18}$.

Occurrence: In blocks of metamorphosed limestone ejected by volcanism.

Association: Hedenbergite, grossular-andradite, melilite, leucite, haüyne, kaliophilite.

Distribution: From Albano, in the Alban Hills, Lazio, and from Pitigliano, near Grosseto, Tuscany, Italy.

Name: For the Latin name of the district of origin, Latium, Italy.

Type Material: Cambridge University, Cambridge, England, 45482, 29799.

References: (1) Tilley, C.E. and N.F.M. Henry (1953) Latiumite (sulphatic potassium-calcium-aluminum silicate), a new mineral from Albano, Latium, Italy. *Mineral. Mag.*, 30, 39–45. (2) (1954) *Amer. Mineral.*, 39, 402–403 (abs. ref. 1). (3) Cannillo, E., A. Dal Negro, and G. Rossi (1973) The crystal structure of latiumite, a new type of sheet silicate. *Amer. Mineral.*, 58, 466–470.