

Crystal Data: Monoclinic. *Point Group:* 2/m. As spherules of columnar or lath-shaped crystals to 5 mm; crystals flattened on (001) and elongated along [010].

Physical Properties: *Cleavage:* On {001}, perfect. *Fracture:* n.d. *Tenacity:* Brittle. Hardness = 3-4 D(meas.) = 2.20(1) D(calc.) = 2.274

Optical Properties: Transparent. *Color:* Colorless or light-pinkish. *Streak:* n.d. *Luster:* Vitreous.

Optical Class: Biaxial (-). $\alpha = 1.548(2)$ $\beta = 1.551(3)$ $\gamma = 1.553(2)$
2V(obs) > 70° 2V(calc) = 78° *Orientation:* Z = b.

Cell Data: *Space Group:* C2/m. $a = 16.907(5)$ $b = 3.6528(8)$ $c = 13.068(4)$ $\beta = 117.25(4)^\circ$
Z = 2

X-ray Powder Pattern: Upper Chegem Caldera, Northern Caucasus, Russia.
11.64 (100), 2.948 (32), 3.073 (20), 2.320 (12), 2.901 (11), 8.30 (10), 2.576 (10)

Chemistry:	(1)
Na ₂ O	0.06
K ₂ O	0.02
CaO	45.39
MnO	0.01
FeO	0.02
SiO ₂	24.23
SO ₃	0.04
F	3.22
H ₂ O	27.40
-O = F ₂	1.36
Total	99.03

(1) Upper Chegem Caldera, Northern Caucasus, Russia; average of 9 electron microprobe analyses, absence of CO₂ confirmed by IR, H₂O and OH⁻ calculated from structural analysis; corresponding to (Ca_{4.02}Na_{0.01}) $\Sigma=4.03$ [Si_{2.00}O_{5.07}(OH)_{1.93}][(OH)_{3.16}F_{0.84}] $\Sigma=4.00$ ·5H₂O.

Occurrence: In a metasomatically altered limestone xenolith in ignimbrite.

Association: Larnite, members of the calcium humite-group, hydrogarnets, bultfonteinite, afwillite, ettringite.

Distribution: Upper Chegem (Verkhnechegemskaya) Caldera, near Mount Lakargi, Kabardino-Balkaria, Northern Caucasus, Russia.

Name: Derived from a Turkish women's name, *Aklima*, which means *bright by the mind*, in allusion to the mineral's light color and to the challenge of studying complex crystal structures with imperfect material. The name also honors the Turkish population in the Lakargi region.

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

References: (1) Zadov, A.E., I.V. Pekov, N.V. Zubkova, V.M. Gazeev, N.V. Chukanov, V.O. Yapaskurt, P.M. Kartashov, E.V. Galuskin, I.O. Galuskina, N.N. Pertzev, A.G. Gurbanov, and D.Yu. Pushcharovsky (2012) Aklimaite, Ca₄[Si₂O₅(OH)₂](OH)₄·5H₂O, a new natural hydrosilicate from Lakargi area (the North Caucasus, Russia). *Zap. Ross. Mineral. Obshch.*, 141(2), 21-31 (in Russian, English abstract). (2) Zubkova, N.V., I.V. Pekov, D.Yu. Pushcharovsky, A.E. Zadov, and N.V. Chukanov (2012) The crystal structure of aklimaite, Ca₄[Si₂O₅(OH)₂](OH)₄·5H₂O. *Zeitschrift für Kristallographie*, 228, 452-455. (3) (2013) *Amer. Mineral.*, 98, 811 (abs. refs. 1 & 2).