

**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)

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

(1) Upper Chegem Caldera, Northern Caucasus, Russia; average of 9 electron microprobe analyses, absence of CO<sub>2</sub> confirmed by IR, H<sub>2</sub>O and OH<sup>-</sup> calculated from structural analysis; corresponding to (Ca<sub>4.02</sub>Na<sub>0.01</sub>)<sub>Σ=4.03</sub>[Si<sub>2.00</sub>O<sub>5.07</sub>(OH)<sub>1.93</sub>][(OH)<sub>3.16</sub>F<sub>0.84</sub>]<sub>Σ=4.00</sub>·5H<sub>2</sub>O.

**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, Ca<sub>4</sub>[Si<sub>2</sub>O<sub>5</sub>(OH)<sub>2</sub>](OH)<sub>4</sub>·5H<sub>2</sub>O, 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, Ca<sub>4</sub>[Si<sub>2</sub>O<sub>5</sub>(OH)<sub>2</sub>](OH)<sub>4</sub>·5H<sub>2</sub>O. *Zeitschrift für Kristallographie*, 228, 452-455. (3) (2013) *Amer. Mineral.*, 98, 811 (abs. refs. 1 & 2).