

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. Crystals exhibit rhombic cross-sections, typically as granular aggregates, to 5 mm. *Twinning:* Probable on {110}.

Physical Properties: *Cleavage:* Imperfect on {010}. *Fracture:* Conchoidal.
Tenacity: n.d. Hardness = 5.5-6 VHN = 306–349 (50 g load). D(meas.) = 2.86(1)
D(calc.) = 2.892

Optical Properties: Transparent. *Color:* Pink, yellow-pink; white in aggregates; colorless in thin section. *Streak:* White. *Luster:* Vitreous.
Optical Class: Biaxial. $\alpha = 1.621(2)$ $\beta = 1.626(3)$ $\gamma = 1.630(2)$ $2V_Z$ (meas.) = $-80(8)^\circ$
 $2V_Z$ (calc.) = -83° *Orientation:* $X = a$; $Y = b$; $Z = c$.

Cell Data: *Space Group:* Pbnm. $a = 5.0696(1)$ $b = 11.3955(1)$ $c = 23.5571(3)$ $Z = 4$

X-ray Powder Pattern: Northern Caucasus, Kabardino-Balkaria, Russia.
1.907 (100), 2.993 (80), 2.700 (80), 3.015 (70), 2.720 (70), 2.834 (60), 3.639 (50)

Chemistry:	(1)
SiO ₂	29.76
TiO ₂	0.49
Fe ₂ O ₃	0.02
CaO	65.67
F	1.64
H ₂ O	2.23
<u>-O=F</u>	<u>0.70</u>
Total	99.11

(1) Northern Caucasus, Kabardino-Balkaria, Russia; average of 68 electron microprobe analyses, corresponding to Ca₇(Si_{0.997}Ti_{0.003}O₄)₃(OH)_{1.48}F_{0.52}.

Occurrence: A product of sanidinite facies metamorphism of calcareous xenoliths in ignimbrite.

Association: Larnite, spurrite, rondorfite, reinhardbraunsite, wadalite, lakargiite, srebrodolskite.

Distribution: Upper Chegem volcanic structure, Northern Caucasus, Kabardino-Balkaria, Russia.

Name: For the Chegem River, in the headwater area of which the new mineral was discovered.

Type Material: A.E. Fersman Mineralogical Museum in Moscow, Russia (3731/1); Museum of Natural History, Bern, Switzerland (NMBE 39571).

References: (1) Galuskin, E.V., V.M. Gazeev, B. Lazic, T. Armbruster, I.O. Galuskina, A.E. Zadov, N.N. Persev, R. Wrzalik, P. Dzierzanowski, A.G. Gurbanov, and G. Bzowska (2009) Chegemite Ca₇(SiO₄)₃(OH)₂ - a new humite-group calcium mineral from the Northern Caucasus, Kabardino-Balkaria, Russia. *Eur. J. Mineral.*, 21, 1045–1059. (2) (2010) *Amer. Mineral.*, 95, 1122–1123 (abs. ref. 1).