

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. As xenomorphic or poikilitic metacrysts to 50 μm , some with hexagonal outline.

Physical Properties: *Cleavage:* Imperfect on {001}; pronounced parting. *Tenacity:* Brittle. *Fracture:* n.d. Hardness = ~ 4.5 VHN = 353-473, 417 average (50 g load). D(calc.) = 3.39

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Uniaxial (-). $\omega = 1.640(3)$ $\epsilon = 1.636(2)$

Cell Data: *Space Group:* $R\bar{3} m$. $a = 7.1540(1)$ $c = 25.1242(5)$ $Z = 3$

X-ray Powder Pattern: Calculated pattern. 3.58 (100), 3.07 (91), 1.789 (73), 3.29 (60), 2.76 (47), 2.78 (36), 2.12 (25)

Chemistry:	(1)	(2)		(1)	(2)
SO ₃	20.77	19.49	CaO	44.04	44.09
P ₂ O ₅	0.09	2.70	K ₂ O	0.73	0.76
TiO ₂	n.d.	0.09	Na ₂ O	0.05	0.09
SiO ₂	15.87	14.35	F	0.23	0.28
Al ₂ O ₃	0.04	0.28	– O = F	0.10	0.12
BaO	16.49	17.20	Total	99.20	99.43
SrO	0.99	0.22			

(1) Shadil-Khokh volcano, Great Caucasus Mt. Range, South Ossetia, Georgia; average of 16 electron microprobe analyses supplemented by Raman spectroscopy; corresponds to (Ba_{0.82}K_{0.12}Sr_{0.07})(Ca_{5.99}Na_{0.01})[(Si_{1.01}Al_{<0.01})O₄]₂[(S_{0.99}P_{0.01})O₄]₂O_{0.87}F_{0.09}. (2) Jabel Harmun, Israel; average of 14 electron microprobe analyses supplemented by Raman spectroscopy; corresponds to (Ba_{0.85}K_{0.12}Sr_{0.02}) $\Sigma=0.99$ (Ca_{5.99}Na_{0.02}) $\Sigma=6.01$ [(Si_{0.91}Al_{0.02}P_{0.06}Ti_{<0.01}) $\Sigma=1.00$ O₄]₂[(S_{0.93}P_{0.07}) $\Sigma=1.00$ O₄]₂O_{0.84}F_{0.11}.

Polymorphism & Series: Continuous solid solution with the nabimusaite-dargaite series.

Occurrence: A high-temperature reaction product in carbonate-silicate xenoliths in rhyodacite (Georgia) or in pyrometamorphic rocks associated with volcanism or natural combustion (Israel).

Association: Larnite, fluorellestadite-fluorapatite, srebrodolskite-brownmillerite, minerals of the mayenite supergroup.

Distribution: From the Shadil-Khokh volcano, Great Caucasus Mt. Range, South Ossetia, Georgia and the Hatrurim Complex in Israel, at Nahal Darga and Jabel Harmun, Judean Mountains, Palestinian Autonomy and at Har Parsa, Negev Desert.

Name: Honors Viktor Magalimovich Gazeev (b. 1954), research staff of the Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry of the Russian Academy of Sciences, Moscow, and of the Vladikavkaz Scientific Centre of the Russian Academy of Sciences, Vladikavkaz, Republic of North Ossetia-Alania, Russia, for his discovery of unique xenoliths within the Upper Chegem Caldera that lead to the description of over 20 new mineral species.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (4713/1-4713/4) and Museum of Natural History, Bern, Switzerland (NMBE 43125).

References: (1) Galuskin, E.V., F. Gfeller, I.O. Galuskina, T. Armbruster, A. Krz̧ała, Y. Vapnik, J. Kusz, M. Dulski, M. Gardocki, A.G. Gurbanov, and P. Dzierzanowski (2017) New minerals with a modular structure derived from hatrurite from the pyrometamorphic rocks. Part III. Gazeevite, BaCa₆(SiO₄)₂(SO₄)₂O, from Israel and the Palestine Autonomy, South Levant, and from South Ossetia, Greater Caucasus. Mineral. Mag., 81(3), 499-513. (2) (2017) Amer. Mineral., 102, 2342 (abs. ref. 1).