

Crystal Data: Monoclinic. *Point Group:* 2/m. As prismatic to thick tabular crystals to 0.1 mm.

Physical Properties: *Cleavage:* Imperfect, one direction. *Fracture:* Uneven. *Tenacity:* Brittle to weakly plastic. Hardness = ~ 3 D(meas.) = 2.91(1) D(calc.) = 2.945

Optical Properties: Transparent to translucent. *Color:* White, colorless in transmitted light.

Streak: White. *Luster:* Vitreous.

Optical Class: Biaxial (+). $\alpha = 1.488(2)$ $\beta = 1.491(2)$ $\gamma = 1.496(2)$ $2V(\text{meas.}) = 75(5)^\circ$
 $2V(\text{calc.}) = 76^\circ$

Cell Data: *Space Group:* C2/c. $a = 6.662(2)$ $b = 8.584(3)$ $c = 7.035(2)$ $\beta = 114.06(3)^\circ$ $Z = 4$

X-ray Powder Pattern: Arsenatnaya fumarole, Tolbachik volcano, Kamchatka, Russia.

3.041 (100), 3.233 (82), 3.210 (55), 2.589 (53), 4.766 (38), 2.571 (38), 3.567 (33)

Chemistry:	(1)	(2)
Na ₂ O	18.68	19.19
K ₂ O	0.14	
MgO	24.77	24.82
ZnO	0.28	
PbO	0.10	
SO ₃	48.44	49.32
F	11.82	11.70
Cl	0.12	
-O = (F + Cl) ₂	5.00	4.93
Total	99.35	100.00

(1) Arsenatnaya fumarole, Tolbachik volcano, Kamchatka, Russia; average of 4 electron microprobe analyses supplemented by IR spectroscopy; corresponding to Na_{0.99}K_{0.01}Mg_{1.01}Zn_{0.01}S_{0.99}O_{3.97}F_{1.02}Cl_{0.01}. (2) NaMg(SO₄)F.

Mineral Group: Durangite (tilasite) group.

Occurrence: Encrusting basaltic scoria around an active fumarole, probably by reaction of volcanic gas with minerals in the scoria.

Association: Langbeinite, hematite, anglesite, euchlorine.

Distribution: From the Arsenatnaya fumarole, Second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka, Russia.

Name: Honors Russian mineralogist Oleg V. Kononov (born 1932), Moscow State University, Russia.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (94147).

References: (1) Pekov, I.V., M.G. Krzhizhanovskaya, V.O. Yapaskurt, D.I. Belakovskiy, N.V. Chukanov, I.S. Lykova, and E.G. Sidorov (2015) Kononovite, NaMg(SO₄)F, a new mineral from the Arsenatnaya fumarole, Tolbachik volcano, Kamchatka, Russia. *Eur. J. Mineral.*, 27, 575-580. (2) (2016) *Amer. Mineral.*, 101, 1715 (abs. ref. 1).