

Panunzite**(K, Na)AlSiO₄**

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Crystal Data: Hexagonal. *Point Group:* 6. As hexagonal prisms, up to 4 mm.**Physical Properties:** *Cleavage:* {10 $\bar{1}0$ } and {0001}, poor. *Hardness* = 5.5 *D*(meas.) = 2.59 *D*(calc.) = 2.62**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Uniaxial (-). $\omega = 1.540(1)$ $\epsilon = 1.535(1)$ **Cell Data:** *Space Group:* *P*6₃. *a* = 20.513(8) *c* = 8.553(3) *Z* = 32**X-ray Powder Pattern:** Monte Somma, Italy.

3.071 (100), 3.929 (70), 2.558 (40), 2.914 (30), 4.277 (25), 2.380 (20), 2.268 (20)

Chemistry:

	(1)	(2)
SiO ₂	39.60	37.99
Al ₂ O ₃	31.90	32.23
Fe ₂ O ₃	0.35	
FeO	0.15	
MgO	0.11	
CaO	0.43	
SrO	0.01	
BaO	0.12	
Na ₂ O	5.74	
K ₂ O	21.52	29.78
Rb ₂ O	0.07	
H ₂ O	0.12	
Total	100.12	100.00

(1) Monte Somma, Italy; alkalis determined by flame photometry. (2) KAlSiO₄.**Polymorphism & Series:** Polymorphous with kaliophilite, kalsilite, and trikalsilite.**Occurrence:** Within cavities of pyroxene-rich ejecta blocks that are part of a recent volcanoclastic deposit.**Association:** Nepheline, augite, biotite.**Distribution:** From Monte Somma and Vesuvius, Campania, Italy.**Name:** For Dr. Achille Panunzi, Professor of Chemistry, University of Naples, Naples, Italy, who discovered the ejecta blocks in which the mineral occurs.**Type Material:** University of Naples, Naples, Italy.**References:** (1) Franco, E. and M. de Gennaro (1988) Panunzite, a new mineral from Mt. Somma-Vesuvius, Italy. *Amer. Mineral.*, 73, 420–421. (2) Merlino, S., E. Franco, C.A. Mattia, M. Pasero, and M. de Gennaro (1985) The crystal structure of panunzite (natural tetrakalsilite). *Neues Jahrb. Mineral., Monatsh.*, 322–328.