

**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*6<sub>3</sub>. *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 <sub>2</sub>	39.60	37.99
Al <sub>2</sub> O <sub>3</sub>	31.90	32.23
Fe <sub>2</sub> O <sub>3</sub>	0.35	
FeO	0.15	
MgO	0.11	
CaO	0.43	
SrO	0.01	
BaO	0.12	
Na <sub>2</sub> O	5.74	
K <sub>2</sub> O	21.52	29.78
Rb <sub>2</sub> O	0.07	
H <sub>2</sub> O	0.12	
Total	100.12	100.00

(1) Monte Somma, Italy; alkalis determined by flame photometry. (2) KAlSiO<sub>4</sub>.

**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-Vesuvio, 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.