

**Pitiglianoite** **$\text{K}_2\text{Na}_6\text{Si}_6\text{Al}_6\text{O}_{24}(\text{SO}_4) \cdot 2\text{H}_2\text{O}$** 

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**Crystal Data:** Hexagonal. *Point Group:* 6. Hexagonal prisms, consisting of  $\{10\bar{1}0\}$  and  $\{0001\}$ , elongated along  $[0001]$ , to 4 mm.

**Physical Properties:** *Fracture:* Subconchoidal. *Tenacity:* Brittle. *Hardness* =  $\sim 5$   
D(meas.) = 2.37(4) D(calc.) = 2.394

**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous.  
*Optical Class:* Uniaxial (-).  $\omega = 1.508(1)$   $\epsilon = 1.506(1)$

**Cell Data:** *Space Group:*  $P6_3$ .  $a = 22.121(3)$   $c = 5.221(1)$   $Z = 3$

**X-ray Powder Pattern:** Pitigliano, Italy.

4.77 (vs), 3.27 (vs), 6.39 (s), 3.69 (m), 2.769 (m), 2.650 (m), 5.54 (w)

**Chemistry:**

	(1)
$\text{SiO}_2$	34.99
$\text{Al}_2\text{O}_3$	29.05
CaO	0.07
$\text{Na}_2\text{O}$	17.10
$\text{K}_2\text{O}$	9.41
Cl	0.01
$\text{H}_2\text{O}$	[3.46]
$\text{SO}_3$	7.58
Total	[101.67]

(1) Pitigliano, Italy; by electron microprobe, average of seven analyses,  $\text{H}_2\text{O}$  calculated from theoretical composition; corresponding to  $\text{K}_{2.08}\text{Na}_{5.75}\text{Ca}_{0.01}\text{Si}_{6.07}\text{Al}_{5.93}\text{O}_{24}(\text{S}_{0.99}\text{O}_4) \cdot 2.00\text{H}_2\text{O}$ .

**Mineral Group:** Cancrinite group.

**Occurrence:** In metasomatized blocks of volcanic ejecta.

**Association:** Apatite, diopside, grossular.

**Distribution:** From Case Collina, Pitigliano, near Grosseto, Tuscany, Italy.

**Name:** For the locality at Pitigliano, Italy.

**Type Material:** University of Pisa, Pisa, Italy.

**References:** (1) Merlino, S., M. Mellini, E. Bonaccorsi, M. Pasero, L. Leoni, and P. Orlandi (1991) Pitiglianoite, a new feldspathoid from southern Tuscany, Italy: chemical composition and crystal structure. *Amer. Mineral.*, 76, 2003–2008.