

Crystal Data: Orthorhombic. *Point Group:* $mm2$. As well-formed prismatic crystals, to 0.1 mm, displaying {001}, {100}, {010}, {110}, {011}, {101}.

Physical Properties: *Cleavage:* None. *Fracture:* n.d. *Tenacity:* Brittle. Hardness = n.d. $D(\text{meas.}) = 2.75(1)$ $D(\text{calc.}) = 2.77$

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Nearly isotropic. $n = 1.32$

Cell Data: *Space Group:* $Imm2$. $a = 5.521(1)$ $b = 17.115(4)$ $c = 9.186(2)$ $Z = 2$

X-ray Powder Pattern: La Fossa crater, Vulcano, Aeolian Islands, Sicily, Italy. 4.044 (100), 8.558 (50), 2.280 (50), 3.175 (30), 8.107 (25), 4.726 (25), 4.134 (25)

Chemistry:	(1)	(2)
K	16.78	16.24
Si	11.36	11.67
F	57.83	57.87
Na	13.14	12.73
<u>B</u>	<u>1.50</u>	<u>1.50</u>
Total	100.61	100.00

(1) La Fossa crater, Vulcano, Sicily, Italy; average of 10 EDS analyses, B calculated from the structure, corresponding to $\text{K}_{3.09}\text{Na}_{4.11}\text{Si}_{2.91}\text{B}_{1.00}\text{F}_{21.89}$.

(2) $\text{K}_3\text{Na}_4[\text{SiF}_6]_3[\text{BF}_4]$.

Occurrence: On altered pyroclastic breccia in an active low-temperature volcanic fumarole.

Association: Hieratite, avogadrite, demartinite.

Distribution: La Fossa crater, Vulcano, Aeolian Islands, Sicily, Italy.

Name: An acronym based on the chemical symbols for its essential components.

Type Material: Dipartimento di Chimica Strutturale e Stereochimica Inorganica, Università degli Studi, Milan, Italy, 2006-03.

References: (1) Demartin, F., C.M. Gramaccioli, I. Campostrini, and P. Orlandi (2008) Knasibfite, $\text{K}_3\text{Na}_4[\text{SiF}_6]_3[\text{BF}_4]$, a new hexafluorosilicate–tetrafluoroborate from La Fossa crater, Vulcano, Aeolian Islands, Italy. *Can. Mineral.*, 46, 447–453. (2) (2008) *Amer. Mineral.*, 93, 1943 (abs. ref. 1).