

**Crystal Data:** Monoclinic. *Point Group:* 2. As acicular crystals to 4 mm; in fibrous aggregates.

**Physical Properties:** *Cleavage:* None. *Fracture:* None observed. *Tenacity:* Brittle.  
Hardness = n.d. D(meas.) = n.d. D(calc.) = 7.375

**Optical Properties:** Transparent. *Color:* Colorless to white. *Streak:* White.  
*Luster:* Subadamantine.  
*Optical Class:* n.d.  $n(\text{calc.}) = 2.040$

**Cell Data:** *Space Group:* P2.  $a = 11.2486(11)$   $b = 5.6568(6)$   $c = 11.9139(10)$   $\beta = 99.177(7)^\circ$   
 $Z = 1$

**X-ray Powder Pattern:** Fumarole FF, La Fossa crater, Vulcano, Aeolian Islands, Italy.  
3.220 (100), 3.100 (95), 2.830 (30), 2.931 (25), 2.502 (25), 2.035 (20), 1.875 (20)

<b>Chemistry:</b>	(1)	(2)
SO <sub>3</sub>	11.06	11.93
Bi <sub>2</sub> O <sub>3</sub>	78.57	88.07
PbO	0.91	.
Total	90.54	100.00

- (1) Fumarole FF, La Fossa crater, Vulcano, Aeolian Islands, Italy; average of 9 electron microprobe analyses, supplemented by Raman spectroscopy; corresponding to  $(\text{Bi}_{12.40}\text{Pb}_{0.15})_{\Sigma=12.55}\text{S}_{5.08}\text{O}_{34}$ .  
(2)  $\text{Bi}_{12.67}\text{O}_{14}(\text{SO}_4)_5$ .

**Occurrence:** A sublimate on volcanic rock from the walls of a high-temperature fumarole.

**Association:** Anglesite, baličžuničite, lillianite, galenobismutite, bismoclite, Cd-rich sphalerite, Cd-rich wurtzite, pyrite, pyrrhotite.

**Distribution:** From Fumarole FF, La Fossa crater, Vulcano, Aeolian Islands, Italy.

**Name:** Honors François Le Guern (1942-2011), better known as “Fanfan,” a volcanologist and expert on volcanic gases and sublimates.

**Type Material:** C.L. Garavelli Museum, Earth Science Department, University of Bari, Bari, Italy (18/nm-V28).

**References:** (1) Garavelli, A., D. Pinto, D. Mitolo and L. Bindi (2014) Leguernite,  $\text{Bi}_{12.67}\text{O}_{14}(\text{SO}_4)_5$ , a new Bi oxysulfate from the fumarole deposit of La Fossa crater, Vulcano, Aeolian Islands, Italy. *Mineral. Mag.*, 78(7), 1629-1645. (2) (2016) *Amer. Mineral.*, 101, 2126-2127 (abs. ref. 1).