

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)

Chemistry:	(1)	(2)
SO ₃	11.06	11.93
Bi ₂ O ₃	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).