Crystal Data: Isometric. *Point Group*: 4/*m* $\bar{3}$ 2/*m*. As a drusy coating comprised of cubes {100} and octahedra {111}, and their combination, to 0.2 mm.

Physical Properties: *Cleavage*: None. *Fracture*: Subconchoidal. *Tenacity*: Malleable. *Hardness* = 3-4 D(meas.) = n.d. D(calc.) = 7.212 Soluble in dilute HCl.

Optical Properties: Translucent. *Color*: Gray-brown, yellow-brown in transmitted light, grayish white in reflected light with distinct white internal reflections. *Streak*: Off-white to cream. *Luster*: Resinous to greasy.
Optical Class: Isotropic. *n*(calc.) = 2.264
$R_{air/oil}$ = (470) 16/4.4, (546) 15.2/4.0, (589) 15.0/4.0, (650) 14.7/3.8

Cell Data: *Space Group*: *Pm*3*m*. (By analogy to synthetic material). *a* = 3.8756(3) Z = 1

X-ray Powder Pattern: La Fossa Crater, Vulcano, Aeolian archipelago, Sicily, Italy.
2.745 (100), 3.887 (80), 1.583 (70), 2.237 (55), 1.937 (50), 1.733 (45), 1.370 (25)

Chemistry:

	(1)	(2)
Tl	81.74	85.22
Cl	10.79	14.75
Br	5.99	.
Total	98.52	100.00

(1) La Fossa Crater, Vulcano, Italy; average of 14 electron microprobe analyses; corresponds to $Tl_{1.027}(Cl_{0.781}Br_{0.192})_{\Sigma=0.973}$. (2) TlCl.

Occurrence: By sublimation from fumarolic gas.

Association: Cannizzarite, galenobismutite, pyrite.

Distribution: From the La Fossa Crater, Vulcano, Aeolian archipelago, Sicily, Italy.

Name: For the locality that produced the first specimens – *La Fossa* Crater, Italy.

Type Material: The research collection of T.M. Seward at the Institut für Mineralogie und Petrographie, Eidgenössische Technische Hochschule, Zürich, Switzerland, and in the Systematic Reference Series, National Mineral Collection of Canada, Geological Survey of Canada, Ottawa, (#68098), and the Natural History Museum, London, England (BM2004,55).

References: (1) Roberts, A.C., K.E. Venance, T.M. Seward, J.D. Grice, and W.H. Paar (2006) Lafossaite, a new mineral from the La Fossa Crater, Vulcano, Italy. Mineral. Rec., 37, 165-168. (2) (2006) Amer. Mineral., 91, 1455 (abs. ref. 1).