

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals, acicular to stout prismatic, to 0.25 mm; with forms {110} and {111} by analogy to demicheleite-(Br).

Physical Properties: *Cleavage:* None observed. *Fracture:* n.d. *Tenacity:* Brittle. Hardness = n.d. $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = 6.411$

Optical Properties: Translucent. *Color:* Dark red to black. *Streak:* Brown. *Luster:* Submetallic. *Optical Class:* n.d.

Cell Data: *Space Group:* $Pnam$. $a = 8.4501(7)$ $b = 10.1470(9)$ $c = 4.1389(4)$ $Z = 4$

X-ray Powder Pattern: La Fossa crater, Vulcano Island, Sicily, Italy. 6.490 (100), 4.346 (94), 3.896 (90), 2.709 (60), 2.161 (38), 3.243 (22), 2.999 (22)

Chemistry:	(1)	(2)
Bi	58.32	56.80
S	9.43	8.71
I	23.69	34.49
Br	5.66	
Cl	1.01	
Total	98.11	100.00

(1) La Fossa crater, Vulcano Island, Sicily, Italy; electron microprobe analysis, corresponding to $\text{Bi}_{0.97}\text{S}_{1.03}(\text{I}_{0.65}\text{Br}_{0.25}\text{Cl}_{0.10})_{\Sigma=1.00}$. (2) BiSI.

Occurrence: A product of fumarolic alteration of pyroclastic breccia.

Association: Demicheleite-(Br), bismoclite, bismuthinite, aiolosite, godovikovite, panichiite, brontesite, adranosite.

Distribution: La Fossa crater, Vulcano Island, Aeolian archipelago, Sicily, Italy.

Name: Honors Vincenzo de Michele (b. 1936), former curator of the Natural History Museum, Milan, Italy, and for its chemical composition.

Type Material: Department of Structural Chemistry and Inorganic Stereochemistry, University of Milan, Italy (reference collection 2009-02).

References: (1) Demartin, F., C.M. Gramaccioli, and I. Campostrini (2010) Demicheleite-(I), BiSI, a new mineral from La Fossa Crater, Vulcano, Aeolian Islands, Italy. *Mineral. Mag.*, 74, 141–145. (2) (2010) *Amer. Mineral.*, 95, 1596 (abs. ref. 1).