Demicheleite-(Br) BiSBr

Crystal Data: Orthorhombic. *Point Group*: 2/*m* 2/*m* 2/*m*. Crystals, terminated prismatic, to 0.5 mm; with forms {110} and {210}.

Physical Properties: *Cleavage*: None observed. *Fracture*: n.d. *Tenacity*: Brittle. Hardness = n.d. D(meas.) = n.d. D(calc.) = 6.312 Non-fluorescent.

Optical Properties: Translucent. *Color*: Red to black. *Streak*: Red. *Luster*: Submetallic. *Optical Class*: n.d.

Cell Data: *Space Group*: *Pnam.* a = 8.04241(9) b = 9.8511(11) c = 4.0328(5) Z = 4

X-ray Powder Pattern: La Fossa crater, Vulcano Island, Sicily, Italy.
2.909 (100), 1.774 (88), 4.220 (68), 1.865 (63), 3.740 (62), 2.036 (47), 3.721 (44)

Chemistry:

	(1)	(2)
Bi	67.65	65.11
S	10.10	9.99
I	0.61	24.90
Br	17.35	
Cl	4.09	
Total	99.80	100.00

(1) La Fossa crater, Vulcano Island, Sicily, Italy; electron microprobe analysis, corresponding to $Bi_{0.99}S_{0.97}(Br_{0.67}Cl_{0.35}I_{0.02})_{\Sigma=1.04}$. (2) BiSBr.

Occurrence: A product of fumarolic alteration of pyroclastic breccia.

Association: Demicheleite-(I), pseudocotunnite, bismoclite, bismuthinite, cotunnite, challacolloite.

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 suffix for its chemical composition.

Type Material: Department of Structural Chemistry and Inorganic Stereochemistry, University of Milan, Italy (reference collection 2007-01).

References: (1) Demartin, F., C.M. Gramaccioli, I. Campostrini, and P. Orlandi (2008) Demicheleite, BiSBr, a new mineral from La Fossa Crater, Vulcano, Aeolian Islands, Italy. Amer. Mineral., 93, 1603-1607.