

Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. As octahedra to 0.2 mm.

Physical Properties: *Cleavage:* None. *Tenacity:* n.d. *Fracture:* n.d. *Hardness* = n.d. VHN = n.d. *D(meas.)* = 2.43(1) *D(calc.)* = 2.423 Nonfluorescent.

Optical Properties: [Transparent to translucent.] *Color:* Colorless to white or very pale yellow. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Isotropic. $n = 1.68(1)$

Cell Data: *Space Group:* $F4/m\bar{3}2/m$. $a = 10.064(1)$ $Z = 4$

X-ray Powder Pattern: La Fossa crater, Vulcano Island, Aeolian Islands, Sicily, Italy. 5.811 (100), 5.032 (73), 2.516 (69), 3.035 (48), 1.779 (42), 2.250 (39), 1.937 (23)

Chemistry:	(1)	(2)
Cl	56.57	57.88
Sn	31.62	32.30
Br	1.53	
K	1.05	
NH ₄ ⁺	[9.23]	9.82
Total	100.00	100.00

(1) La Fossa crater, Vulcano Island, Aeolian Islands, Sicily, Italy; average electron microprobe analysis, NH₄⁺ by difference; corresponds to [(NH₄)_{1.90}K_{0.10}]_{Σ=2.00}Sn_{0.99}(Cl_{5.94}Br_{0.07})_{Σ=6.01}.

(2) (NH₄)₂SnCl₆.

Occurrence: A sublimate on cinder at a medium temperature intracrater fumarole (~250 °C).

Association: Alunite, anhydrite, bismuthinite, godovikovite, demicheleite-(Br).

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

Name: Honors Professor Ugo *Panichi* (1872-1966), a pioneer in the study of Vulcano minerals.

Type Material: Dipartimento di Chimica Strutturale e Stereochimica Inorganica, University of Milan, Italy (2008-01).

References: (1) Demartin, F., I. Campostrini, and C.M. Gramaccioli (2009) Panichiite, natural ammonium hexachlorostannate(IV), (NH₄)₂SnCl₆, from La Fossa crater, Vulcano, Aeolian Islands, Italy. *Can. Mineral.*, 47, 367-372.