

**Crystal Data:** Orthorhombic. *Point Group:*  $mm2$  or  $2/m\ 2/m\ 2/m$ . As irregular grains, to 200  $\mu\text{m}$ , in sharp contact with altaite.

**Physical Properties:** *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* n.d. Hardness = 3-3.5 VHN = 101 (25 g load). *D(meas.)* = n.d. *D(calc.)* = 9.04

**Optical Properties:** Opaque. *Color:* Light gray in reflected light. *Pleochroism:* Weak, greenish gray to a slightly darker bluish gray. *Anisotropism:* Moderate. *Streak:* Black. *Luster:* Metallic. *Optical Class:* n.d.

$R_1$ - $R_2$ : (400) 45.1-45.4, (420) 45.2-45.7, (440) 45.4-45.9, (460) 45.6-46.1, (480) 45.9-46.3, (500) 45.9-46.4, (520) 46.0-46.4, (540) 46.0-46.5, (560) 46.2-46.6, (580) 46.3-47.0, (600) 46.4-47.0, (620) 46.4-47.1, (640) 46.5-47.2, (660) 46.3-47.0, (680) 46.2-46.9, (700) 46.0-46.8

**Cell Data:** Space Group:  $Pna2_1$  or  $Pnam$ .  $a = 16.495(6)$   $b = 14.762(7)$   $c = 4.506(2)$   $Z = 4$

**X-ray Powder Pattern:** Findley Gulch, Bonanza mining district, Saguache County, Colorado, USA. 3.01 (100), 3.65 (60), 3.17 (60), 2.754 (60), 1.806 (55), 3.26 (50), 2.137 (50), 2.316 (45)

Chemistry:	(1)	(2)
Pb	14.12	13.90
Ag	21.60	21.70
Hg	13.58	13.45
Sb	8.07	8.16
Te	42.68	42.79
Total	100.05	100.00

(1) Findley Gulch, Saguache County, Colorado, USA; average of 20 electron microprobe analyses, corresponds to  $\text{Ag}_{2.99}\text{Hg}_{1.01}\text{Pb}_{1.02}\text{Sb}_{0.99}\text{Te}_{4.99}$ . (2)  $\text{Ag}_3\text{HgPbSbTe}_5$ .

**Occurrence:** A rare mineral in a hydrothermal telluride deposit.

**Association:** Altaite, galena, quartz.

**Distribution:** From Findley Gulch, Bonanza mining district, Saguache County, Colorado, USA.

**Name:** Honors Giuseppe Mazzetti (1942-2003), curator in chief of the Mineralogy Section, Museum of Natural History, University of Florence, Italy.

**Type Material:** Natural History Museum, University of Florence, Italy (2951/I) and the Mineralogical Collection, Royal Institute of Natural Sciences, Brussels, Belgium (V/876).

**References:** (1) Luca, B. and C. Cipriani, (2004) Mazzettiite,  $\text{Ag}_3\text{HgPbSbTe}_5$ , a new mineral species from Findley Gulch, Saguache county, Colorado, USA. *Can. Mineral.*, 42(6), 1739-1743. (2) (2005) *Amer. Mineral.*, 90, 1229 (abs. ref. 1).