

Mallestigit**Pb₃Sb(SO₄)(AsO₄)(OH)₆·3H₂O**

Crystal Data: Hexagonal. *Point Group:* 6. Crystals prismatic, elongated along [001], showing {100} and {101}, to 2 mm; also as radial aggregates to 3 mm.

Physical Properties: *Cleavage:* None observed. *Fracture:* Splintery. *Tenacity:* Brittle. VHN = 176 (10 g load). Hardness = 4 D(meas.) = n.d. D(calc.) = 4.91

Optical Properties: Transparent to translucent. *Color:* Colorless. *Streak:* White. *Luster:* Adamantine. *Optical Class:* Uniaxial (+). $\omega = 1.760(4)$ $\varepsilon = 1.801(4)$

Cell Data: *Space Group:* P6₃. $a = 8.938$ $c = 11.098$ $Z = 2$

X-ray Powder Pattern: Mallestiger Mattagskogel, Austria. 3.655 (100), 3.48 (80), 2.675 (62), 6.35 (44), 2.235 (35), 3.175 (31), 7.74 (25)

Chemistry:	(1)
SO ₃	8.64
Sb ₂ O ₅	14.68
As ₂ O ₅	9.71
PbO	65.67
H ₂ O _(calc)	[10.38]
Total	109.08

(1) Mallestiger Mattagskogel, Corinthia, Austria; average of 14 electron microprobe analyses, H₂O calculated, corresponding to Pb_{3.06}Sb_{0.95}[(SO₄)_{1.12}(AsO₄)_{0.88}]_{Σ=2.0}(OH)_{5.99}·3.01H₂O.

Mineral Group: The Sb analog of fleischerite.

Occurrence: A rare secondary mineral in the oxidized zone of a hydrothermal polymetallic base-metal deposit containing galena and tetrahedrite (Austria); in weathered metallic slag (Hartz Mountains, Germany).

Association: Anglesite, brochantite, langite, linarite, and schultenite.

Distribution: From the dumps of an ancient Cu-Pb-Zn mine near Mallestiger Mattagskogel, Corinthia, Austria; in slag, Hartz Mountains, Germany.

Name: For the town near the dumps from where the mineral was first noted.

Type Material: Not mentioned.

References: (1) Sima, I. (1998) Mallestigit, Pb₃Sb(SO₄)(AsO₄)(OH)₆·3H₂O, a new mineral from a dump of a former Cu-Pb-Zn mine northwest of the Mallestiger Mattagskogel in Westkarawanken, Corinthia, Austria. *Mitteil. Österr. Mineral. Ges.*, 143, 225–227 (in German). (2) (2004) *Amer. Mineral.*, 89, 1830 (abs. ref. 1). (3) (2003) *Can. Mineral.*, 41, 1314 (abs. ref. 1).