

Crystal Data: Monoclinic. *Point Group:* $2/m$. Crystals are platy to long prismatic, showing {010}, {130}, {001}, {041}, $\{\bar{1}01\}$, $\{\bar{1}21\}$, $\{\bar{1}51\}$, to 2 mm, in aggregates.

Twinning: Polysynthetic on {010} and contact twins on {100}.

Physical Properties: *Cleavage:* Perfect on $\{\bar{1}01\}$. *Fracture:* Uneven to conchoidal. *Tenacity:* Extremely brittle. Hardness = 2–2.5 VHN = 38–51 (10 g load). D(meas.) = n.d. D(calc.) = 5.24

Optical Properties: Opaque; translucent in thin fragments. *Color:* Black; in transmitted light, dark red with red internal reflections; pale gray in reflected light. *Streak:* Dark red. *Luster:* Metallic to submetallic. *Anisotropism:* Distinct.

R_1 – R_2 : (470) 29.7–35.4, (543) 28.8–33.1, (587) 26.7–30.3, (657) 26.6–29.9

Cell Data: *Space Group:* $P2_1/n$. $a = 8.0958(5)$ $b = 23.917(2)$ $c = 5.8876(5)$
 $\beta = 108.063(8)^\circ$ $Z = 4$

X-ray Powder Pattern: Binntal, Switzerland.

2.823 (100), 3.587 (86), 2.778 (84), 3.998 (74), 2.670 (58), 3.816 (54), 5.346 (32)

Chemistry:	(1)	(2)	(3)
Pb	21.44	24.45	23.67
Tl	23.92	23.94	23.34
As	19.16	21.69	17.11
Sb	12.53	7.68	13.91
S	22.42	22.29	21.97
Total	99.47	[100.05]	100.00

(1) Binntal, Switzerland; by electron microprobe, average of 15 analyses; corresponds to $\text{Pb}_{0.89}\text{Tl}_{1.01}\text{As}_{2.20}\text{Sb}_{0.89}\text{S}_{6.02}$. (2) Do.; by electron microprobe, average of 24 analyses, original total given as 100.1%; corresponds to $\text{Pb}_{1.01}\text{Tl}_{1.00}\text{As}_{2.48}\text{Sb}_{0.54}\text{S}_{5.96}$. (3) $\text{PbTlAs}_2\text{SbS}_6$.

Occurrence: Very rare in a hydrothermal deposit in dolostone.

Association: Realgar, orpiment, hutchinsonite, hatchite, wallisite, edenharterite, bernardite, sicherite.

Distribution: From the Lengenbach quarry, Binntal, Valais, Switzerland [TL].

Name: In honor of Franz Jentsch (1868–1908), an early prolific collector of Lengenbach minerals.

Type Material: Natural History Museum; Mineralogical Institute, University of Basel, Basel, Switzerland.

References: (1) Graeser, S. and A. Edenharter (1997) Jentschite ($\text{TlPbAs}_2\text{SbS}_6$) – a new sulphosalt mineral from Lengenbach, Binntal (Switzerland). *Mineral. Mag.*, 61, 131–137. (2) (1997) *Amer. Mineral.*, 82, 1261 (abs. ref. 1). (3) Berlepsch, P. (1996) Crystal structure and crystal chemistry of the homeotypes edenharterite ($\text{TlPbAs}_3\text{S}_6$) and jentschite ($\text{TlPbAs}_2\text{SbS}_6$) from Lengenbach, Binntal (Switzerland). *Schweiz. Mineral. Petrogr. Mitt.*, 76, 147–157.