

Crystal Data: Triclinic. *Point Group:* n.d. As imperfect acicular crystals, to 0.03 mm; in sheaflike sub-parallel aggregates.

Physical Properties: *Cleavage:* none discernable. *Fracture:* Uneven.
Tenacity: Brittle. Hardness = 3-3.5 VHN = 87 (25 g load). D(meas.) = n.d. D(calc.) = 4.82

Optical Properties: Opaque. *Color:* Dark gray. *Streak:* Brownish-red.
Luster: Submetallic. *Anisotropism:* Strong, bluish to green, red internal reflections.
Bireflectance: Strong. *Pleochroism:* Weak, white to slightly greenish gray.
Optical Class: n.d.
 R_1 - R_2 : (471.1) 45.6-46.1, (548.3) 46.1-46.6, (586.6) 46.1-46.6, (652) 46.4-47.1

Cell Data: *Space Group:* *P1* (probable). $a = 16.217(7)$ $b = 42.544(9)$ $c = 8.557(4)$
 $\alpha = 95.72(4)^\circ$ $\beta = 90.25(4)^\circ$ $\gamma = 96.78(4)^\circ$ $Z = 4$

X-ray Powder Pattern: Lengenbach quarry, Binntal, Switzerland.
3.927 (100), 2.850 (70), 2.929 (60), 2.097 (60), 3.620 (50), 3.124 (50), 3.775 (45)

Chemistry:	(1)
Pb	10.09
Sb	23.95
Tl	20.36
As	21.38
<u>S</u>	<u>26.16</u>
Total	101.94

(1) Lengenbach quarry, Binntal, Switzerland; average of 11 electron microprobe analyses, corresponding to $\text{Tl}_{4.15}\text{Pb}_{2.03}(\text{As}_{11.86}\text{Sb}_{8.20})\text{S}_{34}$.

Occurrence: Of hydrothermal origin in dolomitic marble.

Association: Realgar, pyrite, Sb-rich hutchinsonite, jordanite, Sb-rich seligmanite, sinnerite.

Distribution: Lengenbach quarry, Binntal, Switzerland.

Name: Honors Alberto Dal Negro (b. 1941), Professor in Mineralogy and Crystallography at the University of Padova, Italy, since 1976.

Type Material: Museum of Mineralogy, Department of Geosciences, University of Padova, Italy (catalog no. MMP M7620).

References: (1) Nestola, F., A. Guastoni, L. Bindi, and L. Secco (2009) Dalnegroite, $\text{Tl}_{5-x}\text{Pb}_{2x}(\text{As,Sb})_{21-x}\text{S}_{34}$, a new thallium sulfosalt from Lengenbach quarry, Binntal, Switzerland. *Mineral. Mag.*, 73, 1027–1032. (2) (2010) *Amer. Mineral.*, 95, 1359 (abs. ref. 1).