

Crystal Data: Monoclinic. *Point Group:* 2/m. Irregular or short prismatic grains, to 100 μm , form random aggregates, to 1 cm, finely intergrown with other Pb-Sb sulfosalts.

Physical Properties: *Cleavage:* Good parallel [001]. *Fracture:* Sub-parallel perpendicular to [001]. *Tenacity:* Brittle. *Hardness* = 3 VHN = 213-238 (25 g load). $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = 7.14$

Optical Properties: Opaque. *Color:* Gray, white in reflected light. *Streak:* n.d. *Luster:* Metallic. *Bireflectance:* Distinct. *Pleochroism:* Weak, white with a yellowish green tint to white with a faint bluish tint. *Anisotropism:* Moderate to strong both in air and in oil, blue-gray to brown-gray. *Optical Class:* n.d.

R_1 - R_2 : (470) 43.6-37.7, (546) 43.0-36.7, (589) 41.3-35.4, (650) 39.2-34.0

Cell Data: *Space Group:* C2/m. $a = 48.19(5)$ $b = 4.110(4)$ $c = 34.24(3)$ $\beta = 106.059(15)^\circ$
 $Z = 4$

X-ray Powder Pattern: Calculated pattern.

3.433 (100), 4.012 (39), 3.966 (39), 3.387 (31), 3.269 (29), 3.376 (27), 2.996 (26)

Chemistry:	(1)	(2)
Pb	50.72	50.82
Sb	29.28	29.66
S	19.50	19.46
Bi	0.10	
Ag	0.07	
Cl	0.04	
O		0.06
Total	99.76	100.00

(1) Dúbrava deposit, The Low Tatra Mountains (Nízke Tatry), Slovakia; average of 18 electron microprobe analyses; corresponding to $\text{Pb}_{14.51}\text{Ag}_{0.04}(\text{Sb}_{14.26}\text{Bi}_{0.03})_{\Sigma=14.29}(\text{S}_{36.06}\text{Se}_{0.04}\text{Cl}_{0.07})_{\Sigma=36.16}$.

(2) $\text{Pb}_{14.55}\text{Sb}_{14.45}\text{S}_{36}\text{O}_{0.23}$.

Occurrence: In hydrothermal vein and stockwork antimony deposits cutting granites, mica schists or silicified mylonitized granitoids. It formed during the third (quartz-ankerite-sphalerite) of 5 stages of hydrothermal mineralization with a moderately high oxygen activity, replacing earlier sulfosalts.

Association: Boulangerite, robinsonite, dadsonite, scainiite.

Distribution: From the Dúbrava (the type deposit), Malé Železné, and Klačianka antimony deposits on the northern slopes of The Low Tatra Mountains (Nízke Tatry), Slovakia.

Name: Honors Professor Martin Chovan (b. 1946), Department of Mineralogy and Petrology, Comenius University, Bratislava, Slovakia, for his extensive studies of antimony mineralization in the Western Carpathian region.

Type Material: Department of Materials Engineering and Physics, University of Salzburg, Austria (#14995); in the mineralogical collections, Department of Mineralogy and Petrology, National Museum, Prague, Czech Republic (PIP 13/2009); and at the Department of Mineralogy and Petrology, Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia (#7282).

References: (1) Topa, D., J. Sejkora, E. Makovicky, J. Pršek, D. Ozdín, H. Putz, H. Dittrich, and S. Karup-Møller (2012) Chovanite, $\text{Pb}_{15-2x}\text{Sb}_{14+2x}\text{S}_{36}\text{O}_x$ ($x \sim 0.2$), a new sulphosalt species from the Low Tatra Mountains, Western Carpathians, Slovakia. *Eur. J. Mineral.*, 24(4), 727-740. (2) (2015) *Amer. Mineral.*, 100, 1320-1321 (abs. ref. 1).