

Jankovičite

Tl₅Sb₉(As, Sb)₄S₂₂

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Crystal Data: Triclinic. *Point Group:* $\bar{1}$. Granular, may be tabular, to 1 mm.
Twinning: May exhibit polysynthetic lamellae.

Physical Properties: *Cleavage:* Perfect on {100}. *Fracture:* Sunconchoidal.
Tenacity: Brittle. Hardness = ~ 2 VHN = 98 (50 g load). D(meas.) = n.d. D(calc.) = 5.12

Optical Properties: Opaque. *Color:* Black, with abundant red internal reflections.
Streak: Brown-violet. *Luster:* Metallic.
Optical Class: Biaxial. *Anisotropism:* Distinct to strong; gray-blue to blue-green.
Birefractance: Low to medium; white to grayish-bluish white.

R₁–R₂: (400) 34.7–37.4, (420) 34.6–37.2, (440) 34.5–37.1, (460) 34.2–36.8, (480) 33.8–36.6, (500) 33.4–36.2, (520) 32.8–35.8, (540) 32.2–35.1, (560) 31.6–34.4, (580) 30.8–33.5, (600) 30.1–32.5, (620) 29.3–31.4, (640) 28.5–30.3, (660) 27.7–29.1, (680) 26.8–27.8, (700) 25.8–26.4

Cell Data: *Space Group:* $P\bar{1}$. $a = 7.393(4)$ $b = 8.711(5)$ $c = 17.58(1)$ $\alpha = 103.81(3)$
 $\beta = 91.81(3)$ $\gamma = 109.51(3)$ $Z = 1$

X-ray Powder Pattern: Alšar, Macedonia.
3.459 (100), 3.0755 (65), 3.884 (64), 2.2868 (57), 3.1774 (54), 2.8019 (44), 1.7364 (38)

Chemistry:	(1)
Tl	31.51
As	7.95
Sb	37.69
S	22.30
Total	99.45

(1) Alšar, Macedonia; by electron microprobe, average of five analyses; corresponds to Tl_{4.87}Sb_{9.79}As_{3.35}S_{21.99}.

Occurrence: In a hydrothermal Tl–Sb–As deposit, formed at low temperatures.

Association: Realgar, stibnite, pyrite.

Distribution: From the Crven Dol mine, Alšar (Allchar), near Rošden, Macedonia [TL].

Name: To honor Professor S. Janković (1925–), who has worked in the Allchar region.

Type Material: Natural History Museum, Belgrade, Serbia; Natural History Museum, Vienna, Austria.

References: (1) Cvetković, L., V.A. Boronikhin, M.K. Pavićević, D. Krajnović, I. Gržetić, E. Libowitzky, G. Giester, and E. Tillmanns (1995) Jankovičite, Tl₅Sb₉(As, Sb)₄S₂₂, a new Tl-sulfosalt from Allchar, Macedonia. *Mineral. Petrol.*, 53, 125–131. (2) (1996) *Amer. Mineral.*, 81, 250 (abs. ref. 1). (3) Lobowitzky, E., G. Giester, and E. Tillmanns (1995) The crystal structure of jankovičite, Tl₅Sb₉(As, Sb)₄S₂₂. (4) Makovicky, E. and T. Balić-Žunić (1998) Contributions to the crystal chemistry of thallium sulfosalts. IV. Modular description of Tl–As–Sb sulfosalts rebulite and jankovicitite [sic]. *Neues Jahrb. Mineral., Abh.*, 174, 181–210.