

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3}2/m$ . Granular, dropletlike and in spherical aggregates, to 13 mm.

**Physical Properties:** *Cleavage:* Perfect, on {0001}. *Tenacity:* Flexible, but not elastic. Hardness = 1.5–2 VHN = 62 (5 g load). D(meas.) = 8.1(1) D(calc.) = 8.07

**Optical Properties:** Opaque. *Color:* Steel-gray; in reflected light, bright white. *Streak:* Black. *Luster:* Metallic.

*Optical Class:* Uniaxial. *Anisotropism:* Distinct, in yellowish gray tints. *Birefractance:* Weak. R<sub>1</sub>–R<sub>2</sub>: (400) 46.3–50.1, (420) 47.5–50.2, (440) 48.9–50.5, (460) 48.1–52.2, (480) 48.2–52.0, (500) 47.7–52.4, (520) 47.7–52.2, (540) 48.1–52.4, (560) 48.7–52.6, (580) 48.6–52.1, (600) 49.0–51.6, (620) 49.3–51.0, (640) 49.2–51.1, (660) 49.2–50.8, (680) 48.7–51.1, (700) 48.5–51.2

**Cell Data:** *Space Group:*  $P\bar{3}m1$ .  $a = 4.249(2)$   $c = 62.82(5)$   $Z = 3$

**X-ray Powder Pattern:** Tyrnyauz deposit, Russia.

3.09 (100), 4.50 (46), 2.255 (38), 2.126 (25), 3.58 (22), 3.30 (20), 3.53 (15)

**Chemistry:**

	(1)	(2)
Pb	2.15	
Te	14.33	15.90
Se	0.00	
Sb	0.12	
Bi	76.40	78.11
S	6.64	5.99
Total	99.64	100.00

(1) Tyrnyauz deposit, Russia; by electron microprobe, average of 20 analyses; corresponds to (Bi<sub>5.78</sub>Pb<sub>0.16</sub>Sb<sub>0.02</sub>)<sub>Σ=5.96</sub>Te<sub>1.77</sub>S<sub>3.27</sub>. (2) Bi<sub>6</sub>Te<sub>2</sub>S<sub>3</sub>.

**Occurrence:** In altered magnetite–andradite skarn.

**Association:** Gold, bismuthinite, ingodite, joséite, andradite, calcite, chlorite, stilpnomelane.

**Distribution:** From the Tyrnyauz W–Mo deposit, left bank of the Baksan River Valley, northern Caucasus Mountains, Russia [TL].

**Name:** For the Baksan River Valley, in which the mineral occurs.

**Type Material:** Mining Institute, St. Petersburg, 2082/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, p1112/1.

**References:** (1) Pekov, I.V., E.N. Zav'yalov, S.V. Fedyushchenko, D.K. Shcherbachev, Y.S. Borodayev, and G.D. Dorokhova (1996) Baksanite, Bi<sub>6</sub>(Te<sub>2</sub>S<sub>3</sub>), a new mineral from Tyrny'auz (northern Caucasus). *Doklady Acad. Nauk SSSR*, 347, 787–791 (in Russian). (2) (1997) *Amer. Mineral.*, 82, 1038 (abs. ref. 1).