

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3} 2/m$ . As foliated aggregates, to 13 mm, and as smaller grains.

**Physical Properties:** *Cleavage:* Perfect on {0001}; “average” on rhombohedron. *Tenacity:* Flexible; brittle. *Hardness* = n.d. *VHN* = 51.6–62.9 (10 g load). *D*(meas.) = 7.739 *D*(calc.) = 8.06

**Optical Properties:** Opaque. *Color:* Silver-white; in polished section, white with very weak rose tint. *Streak:* Lead-gray. *Luster:* Metallic. *Pleochroism:* Very weak in air, noticeable in oil. *Anisotropism:* Distinct, reddish brown to bluish gray.  
*R*<sub>1</sub>–*R*<sub>2</sub>: (400) 62.9–62.1, (420) 62.9–62.0, (440) 63.0–61.8, (460) 63.2–61.8, (480) 63.7–61.8, (500) 64.4–61.9, (520) 65.0–62.0, (540) 65.3–62.1, (560) 65.5–62.2, (580) 65.8–62.2, (600) 66.1–62.3, (620) 66.4–62.4, (640) 66.5–62.6, (660) 66.6–62.8, (680) 66.7–63.0, (700) 66.6–63.2

**Cell Data:** *Space Group:*  $R\bar{3}m$ . *a* = 4.422 *c* = 41.49 *Z* = 3

**X-ray Powder Pattern:** Kochkar deposit, Russia.  
 3.22 (100), 2.34 (90), 1.473 (60), 1.976 (50), 2.21 (40), 1.822 (40), 1.607 (40)

Chemistry:	(1)		(2)	
Bi	37.4	38.1	Sb	1.0
Pb	15.4	13.6	Te	43.9
Ag	1.2	1.1	Total	98.9
				99.9

(1) Kochkar deposit, Russia; by electron microprobe, corresponding to (Bi<sub>2.08</sub>Pb<sub>0.88</sub>Ag<sub>0.13</sub>)<sub>Σ=3.09</sub>Te<sub>4.00</sub>. (2) Zod deposit, Armenia; by electron microprobe, corresponding to (Bi<sub>2.11</sub>Pb<sub>0.78</sub>Ag<sub>0.12</sub>Sb<sub>0.10</sub>)<sub>Σ=3.11</sub>Te<sub>4.00</sub>.

**Occurrence:** Of hydrothermal origin.

**Association:** Gold, arsenopyrite, boulangerite, dolomite (Kochkar deposit, Russia); tellurobismuthite, volynskite, calaverite, hessite (Ashley deposit, Canada); altaite, galena, volynskite, hessite, melonite, chalcopyrite, michenerite, hawleyite (Kambalda, Australia).

**Distribution:** In Russia, from the Kochkar gold deposit, Plast, Southern Ural Mountains [TL]; at the Alekseevskoye mine, Sutam district, Stanovoi Range, southeast Yakutia; in the Mount General'skaya massif, Kola Peninsula. From the Zod gold deposit, 14 km east of Vardenis, Armenia [TL]. In the Aidarly porphyry copper deposit, Kazakhstan. At Oldřichov, near Tachov, Czech Republic. From the Dragset deposit, south Trondelag, Norway. In the USA, at the Campbell mine, Bisbee, Cochise Co., Arizona; from the Hesperus mine, La Plata Co., Colorado; in the Olinghouse mine, Olinghouse district, Washoe Co., Nevada. In Canada, from the Ashley deposit, Bannockburn Township, Ontario; in the Robb-Montbray mine, Montbray Township, Quebec; at the ABO prospect, Harrison Hot Springs, British Columbia. From the Lunnon Shoot, Kambalda, 56 km south of Kalgoorlie, Western Australia, and at Crown Reef, Norseman, Western Australia. From the Yanahara mine, Okayama Prefecture, Japan. In the Bulawan Au–Ag–Te deposit, Negros Occidental, Phillipines.

**Name:** Honors Dr. John Christopher Rucklidge (1938–), Canadian mineralogist, University of Toronto, Toronto, Canada, who first noted a mineral of analogous composition in the Robb-Montbray deposit, Ontario, Canada.

**Type Material:** Vernadsky Geological Museum, Moscow, 50743; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 83005, 87446, vis 245, vis247.

**References:** (1) Zav'yalov, E.N. and V.D. Begizov (1977) Rucklidgeite, (Bi,Pb)<sub>3</sub>Te<sub>4</sub>, a new mineral from the Zod and Kochkar gold ore deposits. *Zap. Vses. Mineral. Obshch.*, 106, 62–68 (in Russian). (2) (1978) *Amer. Mineral.*, 63, 599 (abs. ref. 1). (3) Harris, D.C., W.D. Sinclair, and R.I. Thorpe (1983) Telluride minerals from the Ashley deposit, Bannockburn Township, Ontario. *Can. Mineral.*, 21, 137–143. (4) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 488.

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