

Crystal Data: Orthorhombic. *Point Group:* 222, *mm*2, or 2/*m* 2/*m* 2/*m*. As rodlike prismatic crystals, to 0.2 mm, elongated and striated || [001], and in grains, to 3 mm. *Twinning:* Lamellar in several directions, common.

Physical Properties: Hardness = ~3.5 VHN = 79.4–91.6 (100 g load). D(meas.) = 6.318 (synthetic). D(calc.) = 6.421

Optical Properties: Opaque. *Color:* Steel-gray; pale gray in polished section. *Luster:* Metallic. *Anisotropism:* Strong.

R₁–R₂: (400) —, (420) —, (440) 35.4–30.6, (460) 35.6–31.0, (480) 35.4–31.0, (500) 35.0–30.2, (520) 34.0–28.9, (540) 34.0–28.0, (560) 33.4–27.2, (580) 32.8–26.5, (600) 32.4–26.0, (620) 32.1–25.6, (640) 31.8–25.1, (660) 31.5–24.9, (680) —, (700) —

Cell Data: *Space Group:* P222, P*mm*2, or P*mmm*. *a* = 10.62(2) *b* = 9.42(2) *c* = 3.92(4) *Z* = 1

X-ray Powder Pattern: Sedmochislenitsi deposit, Bulgaria. 2.98 (10), 2.55 (10), 1.955 (9), 2.61 (8), 2.45 (8), 1.985 (8), 3.09 (7)

Chemistry:	(1)	(2)
Cu	37.4	37.1
Ag	33.1	33.3
Hg	14.0	13.8
S	17.2	16.9
Total	101.7	101.1

(1) Sedmochislenitsi deposit, Bulgaria; by electron microprobe, corresponding to Cu_{8.78}Ag_{4.58}Hg_{1.04}S_{8.00}. (2) Do.; corresponding to Cu_{8.76}Ag_{4.69}Hg_{1.04}S_{8.00}.

Occurrence: In high-grade copper ores in a stratiform Pb–Zn–Cu deposit (Sedmochislenitsi deposit, Bulgaria).

Association: Bornite, chalcocite, chalcopyrite, djurleite, digenite, tennantite, stromeyerite, mckinstryite, wittichenite, bismuth, rammelsbergite, mercurian silver, cinnabar, pyrite, calcite, barite, aragonite.

Distribution: In the Sedmochislenitsi mine, Vratsa district, western part of the Stara Planina (Balkan Mountains), Bulgaria [TL]. From Manhattan, Nye Co., Nevada, USA. From about 20 km southwest of Agua Prieta, Sonora, Mexico.

Name: For the medieval and popular name of the Stara Planina (Balkan Mountains), the main mountain range giving its name to the Balkan Peninsula.

Type Material: Mineralogical Museum of the Higher Institute of Mining and Geology, 619; Museum of the University of Sofia “Kliment Ohridsky”, Sofia, 1351; National Museum of Natural History, Sofia, Bulgaria, 2339.

References: (1) Atanassov, V.A. and G.N. Kirov (1973) Balkanite, Cu₉Ag₅HgS₈, a new mineral from the Sedmochislenitsi mine, Bulgaria. *Amer. Mineral.*, 58, 11–15.