

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . Euhedral acicular crystals in radiating aggregates, to 1 mm; as very fine granular aggregates.

**Physical Properties:** Hardness = 3.3 VHN = 120 D(meas.) = 5.969 D(calc.) = 5.88–5.928

**Optical Properties:** Opaque. *Color:* Black, white in reflected light. *Streak:* Black. *Luster:* Metallic.

*Optical Class:* Biaxial. *Pleochroism:* Distinct; white to very pale gray. *Anisotropism:* Distinct. *Birefractance:* Distinct.

R<sub>1</sub>–R<sub>2</sub>: (400) —, (420) 43.8–44.7, (440) 42.4–43.2, (460) 40.8–42.9, (480) 40.1–42.1, (500) 40.5–42.6, (520) 42.2–44.6, (540) 39.3–42.1, (560) 39.0–41.7, (580) 39.1–42.0, (600) 38.3–41.8, (620) 39.6–42.4, (640) 39.7–42.8, (660) 42.7–45.2, (680) 45.5–47.6, (700) 47.6–50.0

**Cell Data:** *Space Group:* *Pbnm*.  $a = 11.588$ – $11.593$   $b = 11.744$ – $11.747$   $c = 3.3984$ – $3.955$   
Z = 4

**X-ray Powder Pattern:** Near Kaiyang, China.

2.870 (100), 3.70 (70), 2.625 (60), 3.17 (50), 1.746 (35), 3.25 (30), 1.930 (30)

Chemistry:	(1)	(2)	(3)
Hg	2.35		
Fe	0.03		
Cu	0.61		
Se	48.91	50.35	
As	0.19	0.03	
Sb	47.32	49.25	50.69
S	0.13	0.26	49.31
Total	99.54	99.89	100.00

(1) Near Kaiyang, China; by electron microprobe, average of 14 analyses; corresponds to  $(\text{Sb}_{1.87}\text{Hg}_{0.06}\text{Cu}_{0.05}\text{As}_{0.01})_{\Sigma=1.99}(\text{Se}_{2.99}\text{S}_{0.02})_{\Sigma=3.01}$ . (2) Bentou deposit, China; by electron microprobe, corresponding to  $\text{Sb}_{1.88}(\text{Se}_{2.96}\text{S}_{0.04})_{\Sigma=3.00}$ . (3) Sb<sub>2</sub>Se<sub>3</sub>.

**Occurrence:** In uraniferous calcite veins in a hydrothermal U–Hg–Mo polymetallic deposit (near Kaiyan, China).

**Association:** Pyrite, sphalerite, galena, ferroselite, clausthalite, uraninite, cinnabar, hematite, calcite (near Kaiyan, China); gold, clausthalite, selenian famatinitite, selenian gersdorffite, trüstedtite, selenian stibnite, quartz, barite (Qiongmo deposit, China).

**Distribution:** In China, from near Kaiyang, Guizhou Province [TL]; in the Bentou uranium deposit, not otherwise located in Hunan Province; and from the Qiongmo gold deposit, western Qinling Mountains, Shaanxi Province.

**Name:** For ANTIMONY and SELENIUM in the composition.

**Type Material:** Chinese Museum of Geology, Guizhou(?), China.

**References:** (1) Chen Luming, Zhang Qifa, Li Deren, and Wang Guanxin (1993) Antimonselite – a new mineral. *Acta Mineral. Sinica*, 13(1), 7–11 (in Chinese with English abs.). (2) (1994) *Amer. Mineral.*, 79, 387 (abs. ref. 1). (3) Min Maoshong, Li Deren, Shi Nicheng, Liu Quanlin, and Cao Yawen (1995) Some new data on antimonselite. *Acta Mineral. Sinica*, 15(3), 303–304 (in Chinese with English abs.). (4) Min Maozhong, Zhai Jianping, Wang Xiangyun, Shen Baopei, Wen Guangdong, and Fan Tao (1998) Refinement of the crystal structure for a new mineral – antimonselite. *Chinese Science Bulletin*, 43(5), 413–416 (in English).

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