Weishanite $(Au, Ag)_3Hg_2$

Crystal Data: Hexagonal. *Point Group:* $6/m\ 2/m\ 2/m$. Grains to 30 μm, in irregular aggregates from 0.05 to 0.4 mm.

Physical Properties: *Tenacity:* Ductile, malleable. Hardness = 2.4 VHN = 50.5
D(meas.) = n.d. D(calc.) = 18.17

Optical Properties: Opaque. *Color:* Pale yellow. *Luster:* Metallic. *Pleochroism:* Weak. *Anisotropism:* Weak.

R_1–R_2: (480) 63.75, (534) 76.30, (589) 81.03, (656) 68.6

Cell Data: *Space Group:* $[P6_3/mmc]$ (by analogy to Au_3Hg). $a = 2.9265$ $c = 4.8178$
Z = 2

X-ray Powder Pattern: Poshan district, China.
2.243 (100), 0.9396 (90), 1.3593 (80), 1.2509 (80), 0.9954 (70), 1.4609 (60), 1.2255 (60)

Chemistry:

	(1)
Au	56.91
Ag	3.17
Hg	39.92
Total	100.00

Poshan district, China; by electron microprobe, corresponding to $(Au_{2.89}Ag_{0.29})_{\Sigma=3.18}Hg_{1.99}$.

Occurrence: In the silicified zone of the silver-rich part of an Au-Ag deposit in biotite granulite.

Association: Gold, silver, acanthite, pyrite, galena, sphalerite, pyrrhotite, scheelite.

Distribution: From the Poshan mining district, Tongbai, Henan Province, China.

Name: Derivation not stated.

Type Material: National Geological Museum, Beijing, China.

References: (1) Li Yuheng, Ouyang Shan, and Tian Peixue (1984) Weishanite — a new gold-bearing mineral. Acta Mineral. Sinica, 4, 102–105 (in Chinese with English abs.). (2) (1988) Amer. Mineral., 73, 196 (abs. ref. 1).