Eugenite $Ag_{11}Hg_2$

(c)2001-2005 Mineral Data Publishing, version 1

Crystal Data: Cubic. Point Group: $\overline{4}3m$. Granular, up to 4 mm.

Physical Properties: Hardness = n.d. VHN = 85–106, 92 average (15 g load). D(meas.) = 10.75(3) D(calc.) = 10.45

Optical Properties: Opaque. Color: [Black]; white with faint yellow tinge in reflected light.

Luster: Metallic.

Optical Class: Isotropic.

R: (546) 80.1, (589) 82.7, (656) 85.6

Cell Data: Space Group: $I4\overline{3}m$. a = 10.02(2) Z = 4

X-ray Powder Pattern: Lubin mine, Poland.

2.37 (10), 2.10 (8), 0.950 (8), 0.925 (8), 1.457 (7), 1.240 (7), 1.193 (6)

Chemistry:

	(1)	(2)
$_{\mathrm{Hg}}$	25.50	25.27
Ag	74.00	74.73
\mathbf{S}	0.15	
Total	99.70	100.00

(1) Lubin mine, Poland; by electron microprobe, corresponds to $Ag_{11.00}Hg_{2.10}$. (2) $Ag_{11}Hg_2$.

Occurrence: In low-grade copper sulfide ore in black shale and carbonate rocks (Lubin mine, Poland); in cuprite (Bisbee, Arizona, USA).

Association: Chalcocite, covellite, tennantite, hematite, calcite, ankerite, gypsum (Lubin mine, Poland).

Distribution: In Poland, from the Lubin [TL] and Sieroszowice copper mines, near Legnica, Zechstein copper district, Lower Silesia, Poland. In the USA, in the Southwest mine, Bisbee, Cochise Co., Arizona.

Name: To honor Professor Eugen Friedrich Stumpfl (1935–), Austrian mineralogist, Mining University, Leoben, Austria, for his studies of noble metal compounds.

Type Material: Institute of Geology and Mineral Deposit, Cracow, Poland.

References: (1) Kucha, H. (1986) Eugenite, $Ag_{11}Hg_2$ – a new mineral from Zechstein copper deposits in Poland. Mineral. Polonica, 17(2), 3–10. (2) Piestrzyński, A. and W. Tylka (1992) Silver amalgams from the Sieroszowice copper mine, Lubin-Sieroszowice district, SW Poland. Mineral. Polonica, 23(1), 17–24. (3) (1995) Amer. Mineral., 80, 845–846 (abs. refs. 1–2).