

Crystal Data: Tetragonal. *Point Group:* $4/m\ 2/m\ 2/m$. As small grains or nuggets, up to 1 cm, exhibiting octahedral points and having indistinct, slightly divergent columnar or fibrous structure.

Physical Properties: *Tenacity:* Brittle. Hardness = 3.5 VHN = 126–137 (100 g load) on granula material. $D(\text{meas.}) = 14.88$ $D(\text{calc.}) = 15.09$

Optical Properties: Opaque. *Color:* Silver-white; in polished section, cream to creamish white. *Streak:* Silver-white. *Luster:* Metallic, bright. *Anisotropism:* Noted on inclusions in the fine-granular, apparently isotropic principal component; brown with an orange tinge.

R_1 – R_2 : (400) 41.6–41.6, (420) 42.5–43.5, (440) 43.8–45.2, (460) 45.7–47.0, (480) 47.8–48.8, (500) 49.4–50.4, (520) 50.9–52.0, (540) 52.2–53.2, (560) 53.4–54.4, (580) 54.4–55.4, (600) 55.4–56.4, (620) 56.3–57.3, (640) 57.2–58.4, (660) 58.2–59.5, (680) 59.2–60.7, (700) 60.2–62.1

Cell Data: *Space Group:* $P4/mmm$. $a = 3.026$ $c = 3.702$ $Z = 1$

X-ray Powder Pattern: Potaro River area, Guyana.

2.33 (100), 1.269 (70), 0.849 (50), 0.818 (50), 1.395 (40), 0.957 (20), 0.924 (20)

Chemistry:

	(1)	(2)	(3)
Pd	34.5	33.2	34.66
Hg	64.3	67.0	65.34
Cu	0.5	0.1	
Total	99.3	100.3	100.00

(1) Potaro River area, Guyana; by electron microprobe. (2) Do.; by electron microprobe

(2) PdHg.

Occurrence: In chromitite and dunite ultramafics; in placers for gold and diamonds.

Association: Platinum, palladium, gold, Pd–Hg compounds; pentlandite, chalcopyrite, pyrrhotite, millerite.

Distribution: In Guyana, in placers in the Kangaruma district, Potaro River area, and at Amu Creek, Essequibo River. From Morro de Pilar, and in placers in the Bom Sucesso Stream, northwest of Serro, Minas Gerais, Brazil. From Fox Gulch, Goodnews Bay, Alaska, and in the Boss mine, Goodsprings district, Clark Co., Nevada, USA. In the Starchrome chromitite, Thetford Mines ophiolite, Quebec, Canada. From the Kytlym and Uktus complexes, Ural Mountains, Russia. At the Herbeira ultramafic massif, Cabo Ortegal, [notinColombiaG]??, Spain. From the Brancaga massif, northern Portugal. On the Island of Zabargad (Zabirget or St. Johns), in the Red Sea, Egypt. At the Copper Hills prospect, East Pilbara region, and in the Munni Munni layered intrusive, West Pilbara region, Western Australia. From the Inazumi-yama ultramafic complex, Honshu, Japan. A few additional occurrences have been noted.

Name: For the locality on the Potaro River, Guyana.

Type Material: The Natural History Museum, London, England, 1924,192, E238; National Museum of Natural History, Washington, D.C., USA, 95350.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 105. (2) Terada, K. and F.W. Cagle, Jr. (1960) The crystal structure of potarite (PdHg) with some comments on allopalladium. *Amer. Mineral.*, 45, 1093–1097. (3) Cabri, L.J., Ed. (1981) Platinum group elements: mineralogy, geology, recovery. *Can. Inst. Min. & Met.*, 131, 156. (4) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 449.

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