Rhodplumsite Pb₂Rh₃S₂

Crystal Data: Hexagonal. Point Group: 3 2/m. As grains, to 40 µm, in a platinum nugget.


R₁ – R₂: (400) — , (420) — , (440) 38.6–44.5, (460) 39.2–45.2, (480) 39.5–46.3, (500) 39.5–47.1, (520) 39.2–48.2, (540) 38.6–49.4, (560) 37.8–50.6, (580) 36.8–51.7, (600) 36.2–52.7, (620) 35.9–53.4, (640) 36.2–54.6, (660) 36.8–55.7, (680) 37.7–56.6, (700) 38.5–57.3

Cell Data: Space Group: R₃m. a = 5.73(1) c = 14.00(1) Z = 3

X-ray Powder Pattern: Ural Mountains, Russia.
2.86 (10), 2.33 (6), 2.01 (6), 4.02 (3), 2.44 (3), 1.807 (3), 4.64 (2)

Chemistry:

<table>
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</table>

Total 100.31 100.00

(1) Ural Mountains, Russia; by electron microprobe; corresponds to Pb₁,₉₅(Rh₃,₀₆Ir₀,₀₁Pt₀,₀₁)Σ=3,₉₇S₁,₉₇⁻ (2) Pb₂Rh₃S₂.

Occurrence: In a platinum nugget in a placer probably derived from the nearby Omutinskii gabbro-pyroxenite-dunite massif.

Association: Platinum, tulameenite, iridium–osmium, laurite, chromite.

Distribution: From the Omutinskaya platinum-bearing placer, Omutnaya River, 20 km south of Polevskoi, Sysert’ district, Ural Mountains, Russia [TL].

Name: For rhodium and lead, plumbum, in the composition.

Type Material: Institute of Geology of Ore Deposits, Petrology, Mineralogy, and Geochemistry, Moscow, Russia.