

Crystal Data: Monoclinic. *Point Group:* 2/m. Crystals are long prismatic or thick lance-shaped, from 0.5–1 cm. *Twinning:* Lamellar twinning on (010).

Physical Properties: *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 2 VHN = 206 (20 g load). D(meas.) = 5.43 D(calc.) = [5.64]

Optical Properties: Opaque. *Color:* Gray-black; in polished section, white.

Streak: Gray-black. *Luster:* Metallic. *Pleochroism:* Very weak. *Anisotropism:* Moderate.

R₁–R₂: (400) 39.3–43.1, (420) 38.8–42.8, (440) 38.3–42.5, (460) 37.8–42.2, (480) 37.4–42.0, (500) 36.9–41.6, (520) 36.5–41.2, (540) 36.0–40.9, (560) 35.7–40.5, (580) 35.3–40.2, (600) 34.8–39.7, (620) 34.4–39.2, (640) 34.0–38.7, (660) 33.4–38.0, (680) 32.8–37.3, (700) 32.0–36.4

Cell Data: *Space Group:* P2₁/n. a = 19.24 b = 13.08 c = 8.73 β = 90.28° Z = [2]

X-ray Powder Pattern: Chocaya mine, Bolivia.

3.32 (100), 2.94 (60), 2.78 (50), 2.21 (50), 3.48 (30), 3.04 (30), 3.82 (20)

| Chemistry: | (1) | (2) | (3) | (4) |
|------------|-------|-------|-------|--------|
| Ag | 8.96 | 8.79 | 9.6 | 8.80 |
| Pb | 33.84 | 34.46 | 35.7 | 33.82 |
| Fe | | 0.21 | | |
| Cd | | 0.60 | | |
| In | | 0.20 | | |
| Sb | 34.91 | 34.40 | 36.1 | 36.44 |
| S | 21.14 | 20.41 | 19.6 | 20.94 |
| Total | 98.85 | 99.07 | 100.8 | 100.00 |

(1–2) Chocaya mine, Bolivia; by electron microprobe. (3) Do.; by electron microprobe, average of ten analyses. (4) Ag₃Pb₆Sb₁₁S₂₄.

Occurrence: Found in fine-grained quartz in a vein of hydrothermal origin (Chocaya mine, Bolivia).

Association: Pyrite, stannite, andorite, jamesonite, sphalerite, quartz (Chocaya mine, Bolivia); andorite (Bear Basin, Washington, USA).

Distribution: In Bolivia, from the Colorado Ag–Sn vein, Chocaya mine, Potosí, and from Tatasi. In the USA, at the Round Valley tungsten mine, Bishop Creek area, Inyo Co., California; and at Bear Basin, King Co., Washington.

Name: For Professor Paul Ramdohr (1890–1985), German mineralogist.

Type Material: National Museum of Natural History, Washington, D.C., USA, R6595.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 450–451. (2) Donnay, J.D.H. and G. Donnay (1954) Syntaxial intergrowths in the andorite series. *Amer. Mineral.*, 39, 161–171. (3) Ramdohr, P. (1969) The ore minerals and their intergrowths, (3rd edition), 731–733. (4) Borodaev, Y.S., O.L. Sveshnikova, and N.N. Mozgova (1971) The inhomogeneity of ramdohrite. *Doklady Acad. Nauk SSSR*, 199, 1138–1141 (in Russian). (5) (1972) *Amer. Mineral.*, 57, 1560 (abs. ref. 4). (6) Makovicky, E. and W.G. Mumme (1983) The crystal structure of ramdohrite, Pb₆Sb₁₁Ag₃S₂₄, and its implications for the andorite group and zinckenite. *Neues Jahrb. Mineral., Abh.*, 147, 58–79. (7) Moëlo, Y., E. Makovicky, and S. Karup-Møller (1984) New data on the minerals of the andorite series. *Neues Jahrb. Mineral., Monatsh.*, 175–182. (8) (1985) *Amer. Mineral.*, 70, 219–220 (abs. ref. 7).