

Crystal Data: Monoclinic, pseudo-orthorhombic. *Point Group:* $2/m$. Crystals are typically bladed, tabular on {010}, to 2 mm, thin scaly, less commonly in needles, may be as crusts.

Physical Properties: *Cleavage:* On {001} and {h0l}, good. Hardness = 3.5
D(meas.) = 7.07 (synthetic). D(calc.) = 7.12

Optical Properties: Transparent to translucent. *Color:* Colorless to white, yellowish white.
Luster: Pearly, adamantine, to greasy.
Optical Class: Biaxial (-), may be (+). *Orientation:* Positive elongation, parallel extinction,
 $\alpha = 2.12$ $\beta = 2.14$ $\gamma = \text{n.d.}$ $2V(\text{meas.}) = \sim 80^\circ$

Cell Data: *Space Group:* $P2_1/m$. $a = 6.91$ $b = 5.48$ $c = 4.51$ $\beta = 112^\circ 50'$ $Z = 2$

X-ray Powder Pattern: Cerro de Cacheuta, Argentina.
2.756 (10), 3.32 (9), 3.43 (7), 3.17 (7), 4.15 (6), 2.090 (6b), 2.99 (5)

Chemistry: (1) No chemical analysis has been performed; identity depends on correspondence of X-ray patterns between natural and synthetic material.

Occurrence: A rare species in the oxidized zone of selenium-bearing hydrothermal base metal deposits.

Association: Chalcomenite (Cerro de Cacheuta, Argentina); clausthalite, uraninite, calcite (Ranwick mine, Canada); chalcomenite, cobaltomenite, schmiederite, krutaite (El Dragón mine, Bolivia).

Distribution: From Cerro de Cacheuta, Mendoza Province, Argentina. At the Pacajake mine, Hiaco, 24 km east-northeast of Colquechaca, and the El Dragón mine, 30 km southwest of Cerro Rico de Potosí, Potosí, Bolivia. In the Trogtal quarry, near Lautenthal, Harz Mountains, Germany. From the Tolbachik fissure volcano, Kamchatka Peninsula, Russia. At the Ranwick uranium mine, north of Sault Sainte Marie, Ontario, Canada. In the Bozo #1 mine, Skull Creek, Moffat Co., Colorado, USA.

Name: From the Greek for *lead* and *moon*, for its composition, selenium being named for the moon.

Type Material: Natural History Museum, Paris, France, 98293.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 640. (2) Mandarino, J. (1965) Molybdomenite from the Ranwick uranium mine, Montreal River area, Ontario. *Can. Mineral.*, 8, 149–158. (3) Fischer, R. (1972) Die Kristallstruktur von Molybdomenit, PbSeO₃. *Tschermaks Mineral. Petrog. Mitt.*, 17, 196–207 (in German with English abs.).