

Crystal Data: Monoclinic. *Point Group:* 2/m. Granular, porous to dense, to 1 mm.
Twinning: Frequently observed under the microscope.

Physical Properties: *Fracture:* Irregular to conchoidal. *Tenacity:* Very brittle. Hardness = 2-2.5
VHN = 173-201, 188 average (20 g load). D(meas.) = 9.56 D(calc.) = 9.643

Optical Properties: Translucent. *Color:* Deep raspberry-red to cherry-red, turns black on exposure; deep red or brownish red in transmitted light; white with a weak bluish gray tint in reflected light.
Streak: Red. *Luster:* Vitreous to adamantine.

Optical Class: Biaxial. $n = > 2.0$ 2V(meas.) = n.d. *Pleochroism:* Weak, sky-blue to brown-red or violet to gray. *Anisotropism:* Strong, azure to blue.

R₁-R₂: (440) 25.0-31.0, (460) 24.5-31.0, (480) 22.5-31.0, (500) 22.5-30.0, (520) 22.2-29.2, (540) 22.0-28.4, (560) 21.6-27.2, (580) 20.9-25.5, (600) 20.0-23.5, (620) 18.5-22.1, (640) 17.0-20.7

Cell Data: *Space Group:* C2/c. $a = 19.009(3)$ $b = 9.018(4)$ $c = 16.848(9)$ $\beta = 118.82(3)^\circ$ $Z = 24$

X-ray Powder Pattern: Khaydarkan, Kyrgyzstan.
2.83 (10), 2.74 (8), 1.799 (6.5), 2.60 (6), 3.09 (5), 2.96 (4), 1.883 (4)

| Chemistry: | (1) | (2) |
|------------|-------|--------|
| Hg | 91.30 | 92.12 |
| O | 2.36 | 2.45 |
| Cl | 5.30 | 5.43 |
| Total | 98.96 | 100.00 |

(1) Khaydarkan, Kyrgyzstan; by electron microprobe, average of ten analyses; corresponds to Hg_{3.03}O_{0.99}Cl_{1.00}. (2) Hg₃OCl.

Occurrence: A secondary mineral in the oxidized zone of mercury deposits.

Association: Eglestonite, calomel, terlinguaite, montroydite, kuznetsovite, shakhovite, chursinite, corderoite, mercury, cinnabar, livingstonite.

Distribution: In the Khaydarkan mercury deposit, Fergana Valley, Alai Range, south Kyrgyzstan. From the Arzak mercury deposit, ~12 km northeast of the Terlig-Khaya mercury mine, Pii-Khem district, Tuva Republic, Russia.

Name: Honors Vladimir Erastovich *Poyarkov* (1907-1975), Institute of Mineral Resources, Alma-Ata, Kyrgyzstan, investigator of mercury deposits, one of the discoverers of the Khaydarkan deposit.

Type Material: Central Siberian Geological Museum, Siberian Division, Academy of Sciences, Novosibirsk, Russia.

References: (1) Vasil'ev, V.I., Y.G. Lavrent'ev, and N.A. Pal'chik (1981) Poyarkovite - Hg₃OCl - a new natural mercury oxyhalide. Zap. Vses. Mineral. Obshch., 110, 501-506 (in Russian). (2) (1982) Amer. Mineral., 67, 860 (abs. ref. 1). (3) (1982) Mineral. Abs., 33, 170 (abs. ref. 1). (4) Vasil'ev, V.I., N.V. Pervukhina, G.V. Romanenko, S.A. Magarill, and S.V. Borisov (1999) New data on the mercury oxide-chloride mineral poyarkovite; the second find, and crystal-structure determination. Can. Mineral., 37, 119-126.