

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As anhedral grains to 60 µm; in intimate intergrowths with chrisstanleyite to 500 µm. *Twinning:* Spindle-shaped deformation twins, common.

**Physical Properties:** *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* Uneven. Hardness = 5 VHN = 464-772, 612 average (25 g load). D(meas.) = n.d. D(calc.) = 7.96

**Optical Properties:** Opaque. *Color:* Creamy yellowish. *Streak:* Black. *Luster:* Metallic. *Optical Class:* Anisotropic. *Bireflectance:* Weak to moderate, brownish to bluish to greenish. *Pleochroism:* Slight, light buff to creamy buff.  
R<sub>1</sub>-R<sub>2</sub>: (470) 41.0-50.1 (27.0-31.9)<sub>oil</sub>, (546) 44.1-51.8 (29.2-33.8)<sub>oil</sub>, (589) 44.6-51.7 (29.4-33.7)<sub>oil</sub>, (650) 45.1-52.0 (30.2-34.1)<sub>oil</sub>

**Cell Data:** Space Group P2<sub>1</sub>/c. a = 5.672(5) b = 9.909(9) c = 6.264(6) β = 115.40(2)° Z = 2

**X-ray Powder Pattern:** Calculated pattern.  
2.676 (100), 2.630 (64), 1.920 (36), 2.508 (31), 2.269 (27), 1.950 (27), 1.866 (24)

Chemistry:	(1)	(2)
Cu	15.70	16.68
Ag	1.59	
Pd	42.04	41.88
Se	40.15	41.44
Total	99.48	100.00

(1) El Chire prospect, La Rioja Province, Argentina; average of 12 electron microprobe analyses; corresponds to Cu<sub>1.91</sub>Ag<sub>0.11</sub>Pd<sub>3.05</sub>Se<sub>3.93</sub>. (2) Cu<sub>2</sub>Pd<sub>3</sub>Se<sub>4</sub>.

**Polymorphism & Series:** Forms a limited solid-solution series with chrisstanleyite.

**Occurrence:** In a telethermal selenide vein deposit hosted by highly altered sedimentary rocks.

**Association:** Chrisstanleyite, clauthalite, naumannite, tiemannite, klockmannite, berzelianite, umangite, aguilarite, mercurian silver, native gold, calcite.

**Distribution:** From the El Chire prospect, 30 km northwest of the village of Vinchina, Los Llanteres mining district, La Rioja Province, Argentina.

**Name:** After the village of *Jagué*, the closest settlement to the El Chire mine.

**Type Material:** Department of Geography, Geology and Mineralogy, Division of Mineralogy and Material Sciences, University of Salzburg, Austria (14938 and 14939 a, b).

**References:** (1) Paar, W.H., D. Topa, E. Makovicky, R. J. Sureda, M. K. de Brodtkorb, E. H. Nickel, and H. Putz (2004) Jaguéite, Cu<sub>2</sub>Pd<sub>3</sub>Se<sub>4</sub>, A new mineral species from El Chire, La Rioja, Argentina. Can. Mineral., 42(6), 1745-1755. (2) Topa, D., E. Makovicky, and T. Balić-Žunić (2006) The crystal structures of jaguéite, Cu<sub>2</sub>Pd<sub>3</sub>Se<sub>4</sub>, and chrisstanleyite, Ag<sub>2</sub>Pd<sub>3</sub>Se<sub>4</sub>. Can. Mineral., 44, 497-505. (3) (2006) Amer. Mineral., 91(11), 1951 (abs. ref. 2).