

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. As irregular grains to several mm.

Physical Properties: *Cleavage:* None. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = 3-3.5 VHN = 200 (50 g load). D(meas.) = n.d. D(calc.) = 5.8

Optical Properties: Opaque. *Color:* Grayish black; grayish white in reflected light. *Streak:* Dark gray. *Luster:* Metallic. *Optical Class:* n.d. *Pleochroism:* Distinct, white to dark gray. *Anisotropism:* Distinct, gray tones. R₁-R₂: (470) 39.93-42.6 (24.1-39.9)_{oil}, (546) 38.6-41.7 (22.6-38.6)_{oil}, (589) 38.1-41.2 (22.1-38.1)_{oil}, (650) 37.3-40.6 (21.4-37.3)_{oil}

Cell Data: *Space Group:* Pnca. *a* = 13.199(2) *b* = 19.332(3) *c* = 8.249(1) *Z* = 1

X-ray Powder Pattern: Colorado vein, Animas mine, Chocaya Province, Bolivia. 3.34 (100), 2.881 (86), 3.37 (70), 2.982 (55), 3.66 (35), 2.062 (31), 2.733 (29)

Chemistry:	(1)	(2)
Cu	0.24	
Ag	14.50	14.58
Pb	11.16	11.20
Sb	28.72	27.98
Bi	24.56	25.43
<u>S</u>	<u>20.87</u>	<u>20.81</u>
Total	100.05	100.00

(1) Colorado vein, Animas mine, Chocaya Province, Bolivia; average of 4 electron microprobe analyses; corresponds to Cu_{0.24}Ag_{9.92}Pb_{4.00}Sb_{17.36}Bi_{8.64}S_{47.84}. (2) Ag₁₀Pb₄Sb₁₇Bi₉S₄₈.

Polymorphism & Series: Lillianite homologous series with N = 4.

Occurrence: In a hydrothermal Ag-Sn vein deposit in strongly-altered dacitic volcanic rocks.

Association: Aramayoite, stannite, miargyrite, pyrargyrite, tetrahedrite.

Distribution: From the Colorado vein, Animas mine, Chocaya Province, Department of Potosi, Bolivia.

Name: Honors Oscar Kempff Bacigalupo (b.1948), Bolivian mineralogist and economic geologist, who discovered several large mineral deposits in Bolivia (e.g., the deposit of Don Mario).

Type Material: Natural History Museum, Vienna, Austria (N 9593) and the Natural History Museum, London, England (BM 20, 3).

References: (1) Topa, D., W.H. Paar, E. Makovicky, C.J. Stanley, and A.C. Roberts (2016) Oscarkempffite, Ag₁₀Pb₄(Sb₁₇Bi₉)_{Σ26}S₄₈, a new Sb-Bi member of the lillianite homologous series. *Mineral. Mag.*, 80(5), 809-817. (2) (2017) *Amer. Mineral.*, 102, 697 (abs. ref. 1).