

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. As roundish aggregates to 0.4 mm of fibrous, frequently radiating crystallites.

Physical Properties: *Tenacity:* n.d. *Fracture:* n.d. Hardness = ~ 3 D(calc.) = 4.53

Optical Properties: Opaque. *Color:* Black, gray in reflected light. *Streak:* Black.

Luster: Metallic to submetallic.

Optical Class: n.d. Strongly birefractant. *Pleochroism:* Distinct, pinkish to gray. Strongly anisotropic; orange-buff to deep red-brown to muddy green.

R₁-R₂: (470) 21.9-27.8, (546) 20.4-26.8, (589) 19.7-27.2, (650) 20.3-30.3

Cell Data: *Space Group:* $R\bar{3} m$. $a = 3.756(8)$ $c = 32.91(4)$ $Z = 2$ (by analogy with synthetic Cu₄SnS₆)

X-ray Powder Pattern: Chilena mine, Antofagasta Province, Chile.

3.022 (100), 1.877 (47), 1.667 (13), 1.592 (12), 1.999 (10), 3.664 (8), 3.265 (8)

| Chemistry: | (1) | (2) |
|------------|--------------|--------------|
| Cu | 42.46 | 44.96 |
| Sn | 20.99 | 20.99 |
| Fe | 0.01 | |
| In | 0.26 | |
| <u>S</u> | <u>34.42</u> | <u>34.04</u> |
| Total | 98.14 | 100.00 |

(1) Chilena mine, Antofagasta Province, Chile; average of 36 electron microprobe analyses; corresponding to Cu_{3.74}Sn_{0.99}In_{0.01}S₆. (2) Cu₄SnS₆.

Occurrence: In a high-sulfidation, epithermal vein deposit rich in gold, copper, and arsenic, with a strong influence of meteoric waters and hosted in volcanic rocks.

Association: Barite alunite, jarosite, olivenite, scorodite, chalcopyrite, Sb- and Se-rich bismuthinite, goldfieldite, enargite, covellite, tennantite.

Distribution: From the Chilena mine, Soledad property, El Guanaco gold deposit, Atacama desert, Antofagasta Province, Chile.

Name: Honors Gabriel Erazo Fernández (b. 1943) a mining engineer and mineralogist. He was professor of geology, crystallography, and metallurgy at Copiapo University, Chile, and was the first director of the Mineralogical Museum of Copiapo University from its opening in 1966 until 1991.

Type Material: Mineralogical Museum, University of Hamburg, Germany (MD 717).

References: (1) Schlüter, J., T. Malcherek, C. Stanley, M. Dini, and A. Molina Donoso (2017) Erazoite, a new copper tin sulfide from the El Guanaco gold deposit, Antofagasta Province, Chile. Neues Jahrb. Mineral., Abh, 194(1), 91-96. (2) (2017) Amer. Mineral., 102, 1566-1567 (abs. ref. 1).