

Langisite

(Co,Ni)As

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Crystal Data: Hexagonal. *Point Group:* $6/m\ 2/m\ 2/m$. As irregular grains and lamellae in safflorite.

Physical Properties: Hardness = n.d. VHN = 780–857 (50 g load). D(meas.) = n.d. D(calc.) = 8.174

Optical Properties: Opaque. *Color:* In reflected light, pinkish buff. *Luster:* Metallic. *Pleochroism:* Weak. *Anisotropism:* Moderate, in bluish gray and light brown. *Birefractance:* Weak. R₁–R₂: n.d.

Cell Data: *Space Group:* $P6_3/mmc$. $a = 3.538$ $c = 5.127$ $Z = 2$

X-ray Powder Pattern: Langis mine, Canada. 2.631 (10), 1.966 (9), 1.770 (8), 1.493 (4), 1.470 (3), 1.315 (3), 1.141 (3)

Chemistry:	(1)
	Co 35.5
	Ni 7.0
	As 56.0
	Total 98.5

(1) Langis mine, Canada; by electron microprobe, corresponding to $(\text{Co}_{0.84}\text{Ni}_{0.16})_{\Sigma=1.00}\text{As}_{1.04}$.

Mineral Group: Nickeline group.

Occurrence: In pockets of ore minerals, mineralized fault gouge, and breccia cemented with calcite and quartz.

Association: Cobalt pentlandite, siegenite, parkerite, bravoite, safflorite, maucherite, pyrite, marcasite.

Distribution: From the Langis mine, Casey Township, Cobalt-Gowganda area, Ontario, Canada [TL].

Name: For the Langis mine in Canada, where it was discovered.

Type Material: Canadian Geological Survey, Ottawa, 12140; Royal Ontario Museum, Toronto, Canada.

References: (1) Petruk, W., D.C. Harris, and J.M. Stewart (1969) Langisite, a new mineral, and the rare minerals cobalt pentlandite, siegenite, parkerite and bravoite from the Langis mine, Cobalt–Gowganda area, Ontario. *Can. Mineral.*, 9, 597–616. (2) (1972) *Amer. Mineral.*, 57, 1910–1911 (abs. ref. 1).