

Honzaite**(Ni,Co)₂(AsO₃OH)₂(H₂O)₅**

Crystal Data: Monoclinic. *Point Group:* 2/m. As irregular to hemispherical aggregates to 5 mm; as prismatic crystals to 30 μ m.

Physical Properties: *Cleavage:* Good on {010}. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = ~3 D(meas.) = n.d. D(calc.) = 2.993

Optical Properties: Transparent to translucent. *Color:* Pale pink, sometimes with purplish or violet tints. *Streak:* Pale pink. *Luster:* Vitreous. *Optical Class:* Biaxial (+). $\alpha = 1.601(2)$ $\beta = 1.608(2)$ $\gamma = 1.629(2)$ 2V(meas.) = 60(1) $^\circ$ 2V(calc.) = 60.6 $^\circ$ *Orientation:* $X = b$; if elongated on [100], $Z \wedge a \approx 20^\circ$.

Cell Data: Space Group: P2₁/n. $a = 4.6736(6)$ $b = 9.296(1)$ $c = 12.592(1)$ $\beta = 99.115(8)^\circ$ Z = 2

X-ray Powder Pattern: Jáchymov, Czech Republic.
7.431 (100), 6.215 (18), 3.717 (9), 3.254 (7), 3.078 (7), 2.568 (7), 3.005 (5)

Chemistry:	(1)	(2)
MgO	0.24	
CaO	0.10	
FeO	0.21	
NiO	16.51	30.66
CoO	12.71	
CuO	0.55	
ZnO	0.84	
P ₂ O ₅	0.26	
As ₂ O ₅	45.82	47.16
SO ₃	0.52	
H ₂ O	[22.15]	22.18
Total	99.91	100.00

(1) Jáchymov, Czech Republic; average of 23 electron microprobe analyses supplemented by IR and Raman spectroscopy, H₂O calculated from structure; corresponds to (Ni_{1.08}Co_{0.83}Zn_{0.05}Cu_{0.03}Mg_{0.03}Fe_{0.01}Ca_{0.01})_{Σ=2.04}(AsO₃OH)_{1.94}(SO₄)_{0.03}(PO₃OH)_{0.02}·5H₂O. (2) (Ni)₂(AsO₃OH)₂(H₂O)₅.

Occurrence: A secondary mineral formed by weathering of nickelskutterudite and tennantite, under strongly acidic conditions, in a Ag+As+Co+Ni+Bi and U vein-type hydrothermal mineral deposit.

Association: Arsenolite, zeunerite, Ni-rich burgessite.

Distribution: From Jáchymov, Czech Republic.

Name: Honors Czech mineralogist and collector of minerals from the Jáchymov ore district, Jan "Honza" Hloušek (1950-2014).

Type Material: Department of Mineralogy and Petrology, National Museum, Prague, Czech Republic (P1N 38.099).

References: (1) Sejkora, J., J. Plášil, and A.R. Kampf (2018) Honzaite, (Ni,Co)₂(AsO₃OH)₂(H₂O)₅, a new Ni-dominant analogue of burgessite, from Jáchymov, Czech Republic. Eur. J. Mineral., 30(5), 989-997. (2) (2019) Amer. Mineral., 104(9), 1362-1363 (abs. ref 1).