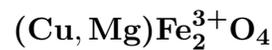


Cuprospinel



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Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. As irregular grains, to ~ 0.1 mm; these may form lamellar intergrowths with hematite.

Physical Properties: Hardness = n.d. VHN = 920–1081, 985 average (100 g load).
D(meas.) = n.d. D(calc.) = [5.25]

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

R: (470) 22.7, (546) 21.7, (589) 21.0, (650) 20.0

Cell Data: *Space Group:* $Fd\bar{3}m$. $a = 8.369$ $Z = 8$

X-ray Powder Pattern: Baie Verte, Canada.
2.517 (10), 1.479 (6), 2.96 (5), 1.613 (4), 4.79 (3), 2.100 (3), 1.087 (3)

Chemistry:	(1)
Al ₂ O ₃	2.6
Fe ₂ O ₃	65.7
FeO	1.7
MnO	0.2
CoO	0.6
CuO	27.8
ZnO	0.7
MgO	1.8
Total	101.1

(1) Baie Verte, Canada; by electron microprobe, Fe²⁺:Fe³⁺ calculated to satisfy the spinel structure; corresponding to $(\text{Cu}_{0.80}\text{Mg}_{0.10}\text{Fe}_{0.05}^{2+}\text{Co}_{0.02}\text{Zn}_{0.02}\text{Mn}_{0.01})_{\Sigma=1.00}(\text{Fe}_{1.89}^{3+}\text{Al}_{0.11})_{\Sigma=2.00}\text{O}_4$.

Mineral Group: Spinel group.

Occurrence: In highly oxidized material, once spontaneously ignited, in an ore dump.

Association: Pyrite, chalcopyrite, sphalerite, pyrrhotite, hematite.

Distribution: On the property of Consolidated Rambler Mines Limited, near Baie Verte, Newfoundland, Canada.

Name: For the mineral's copper, CUPRum, content and having the *spinel* structure.

Type Material: National Museum of Natural History, Washington, D.C., USA, 128673.

References: (1) Nickel, E.H. (1973) The new mineral cuprospinel (CuFe₂O₄) and other spinels from an oxidized ore dump at Baie Verte, Newfoundland. *Can. Mineral.*, 11, 1003–1007.
(2) (1974) *Amer. Mineral.*, 59, 381 (abs. ref. 1).