Hollisterite $Al_3(Fe,Cu)$

Crystal Data: Monoclinic. *Point Group*: 2/*m*. As subhedral crystals to 7 μm.

Physical Properties: *Cleavage*: n.d. *Fracture*: n.d. *Tenacity*: n.d.
Hardness = n.d. D(meas.) = n.d. D(calc.) = 3.84

Optical Properties: Opaque. *Color*: n.d. *Streak*: n.d. *Luster*: n.d.
Optical Class: n.d.

Cell Data: *Space Group*: *C*2/*m*. a = 15.60 b = 7.94 c = 12.51 β = 108.1° Z = 24

X-ray Powder Pattern: Calculated pattern.
2.098 (100), 2.097 (85), 2.032 (84), 1.985 (83), 2.030 (82), 2.040 (79), 2.064 (44)

Chemistry:	(1)	(2)
Al	55.0	59.17
Fe	30.4	40.83
Cu	14.2	
Si	0.30	
Cr	0.16	
Total	100.1	100.00

(1) Khatyrka CV3 carbonaceous chondrite meteorite; average of 4 electron microprobe analyses; corresponds to $Al_{2.89}Fe_{0.77}Cu_{0.32}Si_{0.02}$. (2) Al_3Fe.

Occurrence: In metal assemblages in a carbonaceous chondrite meteorite.

Association: Stolperite, icosahedrite, khatyrkite, spinel, hercynite, forsterite, silicate glass.

Distribution: From the Khatyrka CV3 carbonaceous chondrite meteorite, Koryak Mountains, Far Eastern region, Russia.
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Name: Honors Lincoln S. Hollister, Emeritus Professor, Department of Geosciences, Princeton University, USA, for his extraordinary contributions to Earth science in general.

Type Material: National Museum of Natural History, Washington, D.C., USA (in section 126A of USNM 7908).

References: (1) Ma, C., C. Lin, L. Bindi, and P.J. Steinhardt (2017) Hollisterite (Al_3Fe), kryachkoite $(Al,Cu)_6(Fe,Cu)$, and stolperite (AlCu): Three new minerals from the Khatyrka CV3 carbonaceous chondrite. Amer. Mineral., 102, 690-693.