

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. As equidimensional and rarer bladelike grains isolated in altaite, and as irregular rims a few μm thick on pyrrhotite and chalcopyrite in contact with altaite. *Twinning:* In polished section twinning commonly observed perpendicular to elongation axis of the laths.

Physical Properties: Hardness = n.d. VHN = 383, 404 (25 g load). D(meas.) = n.d. D(calc.) = 8.00

Optical Properties: Opaque. *Color:* In polished section, violet. *Pleochroism:* Weak, colors from pink to cream. *Anisotropism:* Weak, pinkish violet to grayish violet.

R₁–R₂: (400) 50.2–62.2, (420) 51.0–60.3, (440) 51.8–58.4, (460) 51.0–56.6, (480) 49.9–55.6, (500) 48.7–54.7, (520) 48.2–54.2, (540) 47.9–53.9, (560) 47.8–53.9, (580) 47.7–54.0, (600) 47.8–54.3, (620) 48.0–54.7, (640) 48.3–55.2, (660) 48.6–55.6, (680) 48.9–56.3, (700) 49.1–56.9

Cell Data: *Space Group:* $Pn\bar{m}$ (synthetic). $a = 5.3294(6)$ $b = 6.3223(8)$ $c = 3.9080(6)$
Z = 2

X-ray Powder Pattern: Mattagami Lake mine, Canada.
2.805 (10), 2.703 (8), 2.066 (6), 1.843 (4), 3.31 (3), 1.583 (3), 1.514 (2)

Chemistry:	(1)	(2)
Co	10.3	18.76
Fe	6.7	
Te	82.4	81.24
Total	99.4	100.00

(1) Mattagami Lake mine, Canada; by electron microprobe, average of analyses of three grain sizes, corresponding to $(\text{Co}_{0.54}\text{Fe}_{0.37})_{\Sigma=0.91}\text{Te}_{2.00}$. (2) CoTe₂.

Polymorphism & Series: Forms a series with frobergite.

Mineral Group: Marcasite group.

Occurrence: In a small telluride zone in a massive zinc-rich stratiform deposit in Archaen volcanics (Mattagami Lake mine, Canada).

Association: Frobergite, altaite, pyrrhotite, chalcopyrite, magnetite, talc, chlorite (Mattagami Lake mine, Canada).

Distribution: From the Mattagami Lake mine, near Matagami, Quebec, Canada [TL]. At the Zhena-Tyube deposit, Kazakhstan. From Fe–Co–Au–U deposits in the the Kuusamo schist belt, northeastern Finland.

Name: For its occurrence at Mattagami Lake, Canada.

Type Material: Canadian Geological Survey, Ottawa; Royal Ontario Museum, Toronto, Canada, M31956.

References: FeTe₂, and CoTe₂. *Acta Chem. Scand.*, 24, 1925 – –1940.