Clinojimthompsonite $(Mg, Fe^{2+})_5Si_6O_{16}(OH)_2$

Crystal Data: Monoclinic. *Point Group:* $2/m$. As very thin lamellae.

Physical Properties: *Cleavage:* [{110} predicted from the structure.] Hardness = n.d. D(meas.) = n.d. D(calc.) = [3.01]

Optical Properties: Semitransparent. *Color:* Colorless to very light pinkish brown; in thin section, colorless.
Optical Class: [Biaxial.] *Orientation:* Extinction angle direction N $\wedge$ $c \simeq 10°$. α = n.d. β = n.d. γ = n.d. 2V(meas.) = n.d.

Cell Data: *Space Group:* $C2/c$. a = 9.874(4) b = 27.24(3) c = 5.316(3) β = 109.47(3)° Z = 4

X-ray Powder Pattern: Calculated.
8.809 (100), 13.6 (73), 3.083 (60), 2.639 (56), 2.506 (42), 4.704 (33), 4.036 (31)

Chemistry:

	(1)
SiO_2	58.55
Al_2O_3	0.37
FeO	12.13
MnO	0.73
MgO	24.93
CaO	0.50
Na_2O	0.10
H_2O	[2.93]
Total	[100.24]

(1) Chester, Vermont, USA; by electron microprobe, H_2O assuming (OH) sites filled by $(OH)^{1-}$.

Polymorphism & Series: Dimorphous with jimthompsonite.

Occurrence: In the black wallrock between chlorite and actinolite zones of a metamorphosed ultramafic body.

Association: Chesterite, clinojimthompsonite, anthophyllite, cummingtonite, talc.

Distribution: In the Carleton talc quarry, near Chester, Windsor Co., Vermont, USA.

Name: For its monoclinic crystallography and relation to *jimthompsonite*.

Type Material: Royal Ontario Museum, Toronto, Canada, M36083; Harvard University, Cambridge, Massachusetts; National Museum of Natural History, Washington, D.C., USA, 145689.

References: (1) Veblen, D.R. and C.W. Burnham (1978) New biopyriboles from Chester, Vermont: I. Descriptive mineralogy. Amer. Mineral., 63, 1000–1009. (2) Veblen, D.R. (1978) New biopyriboles from Chester, Vermont: II. The crystal chemistry of jimthompsonite, clinojimthompsonite, and chesterite, and the amphibole-mica reaction. Amer. Mineral., 63, 1053–1073.