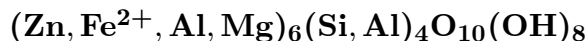


Baileychlore



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Crystal Data: Triclinic. *Point Group:* $\bar{1}$ or 1. As fine-grained transverse fibers of very small size.

Physical Properties: *Cleavage:* Perfect micaceous. Hardness = < 5 D(meas.) = 3.18(2)
D(calc.) = 3.195

Optical Properties: Transparent. *Color:* Green, zoned.
Optical Class: Biaxial. *Pleochroism:* Weak; green to yellow-green. $\alpha = 1.582$ $\beta = \text{n.d.}$
 $\gamma = 1.614$ $2V(\text{meas.}) = \text{n.d.}$

Cell Data: *Space Group:* $C\bar{1}$ or $C1$ (uncertainty due to random stacking of chlorite layers).
 $a = 5.346(3)$ $b = 9.257(4)$ $c = 14.40(7)$ $\beta = 97.12(5)^\circ$ $Z = [2]$

X-ray Powder Pattern: Red Dome deposit, Australia.
7.14 (100), 14.3 (90), 1.542 (60), 2.660 (50), 3.573 (40), 2.450 (35b), 4.600 (30)

Chemistry:	(1)
	SiO ₂ 32.0
	Al ₂ O ₃ 12.4
	FeO 12.9
	MnO 0.15
	ZnO 30.5
	MgO 4.6
	CaO 1.0
	H ₂ O n.d.

(1) Red Dome deposit, Australia; by electron microprobe; excluding CaO, corresponds to $(\text{Zn}_{2.50}\text{Fe}_{1.20}\text{Al}_{1.17}\text{Mg}_{0.76}\text{Mn}_{0.01})_{\Sigma=5.64}(\text{Si}_{3.55}\text{Al}_{0.45})_{\Sigma=4.00}\text{O}_{10}(\text{OH})_8$.

Mineral Group: Chlorite group.

Occurrence: As rims on colloform calcite veins, within a strongly oxidized collapse karst-breccia containing skarn clasts.

Association: Andesine, garnet, vesuvianite, zincian chamosite, goethite, hematite, chalcocite, copper, malachite, calcite.

Distribution: From the Red Dome deposit, 15 km west-northwest of Chillagoe, Queensland, Australia.

Name: For Professor Sturges W. Bailey (1919–1994), Department of Geology and Geophysics, University of Wisconsin, Madison, Wisconsin, USA.

Type Material: Geological Museum, University of Wisconsin, Madison, Wisconsin, 6000/1; National Museum of Natural History, Washington, D.C., USA, 164430; South Australian Museum, Adelaide, Australia, 13592.

References: (1) Rule, A.C. and F. Radke (1988) Baileychlore, the Zn end member of the trioctahedral chlorite series. *Amer. Mineral.*, 73, 135–139.