

Crystal Data: Monoclinic. *Point Group:* $2/m$. As foliated masses of irregular undulating blades, flattened on {100} and striated parallel to [001].

Physical Properties: *Cleavage:* Perfect on {100}; good on {011}. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = ~ 4.5 D(meas.) = n.d. D(calc.) = 4.413-4.445 (analyses 1 & 2)

Optical Properties: Transparent. *Color:* Dark reddish brown. *Streak:* Brown. *Luster:* Vitreous. *Optical Class:* Biaxial (+). $\alpha = 1.827(3)$ $\beta = 1.845(3)$ $\gamma = 1.920(6)$ $2V(\text{meas.}) = 63(2)^\circ$ $2V(\text{calc.}) = 63.0^\circ$ *Orientation:* $X = b$, $Y \approx c$, $Z \approx a$. *Dispersion:* Parallel, $r < v$. *Pleochroism:* Brown. *Absorption:* $Z > X > Y$.

Cell Data: *Space Group:* $C2/m$. $a = 20.3459(10)$ $b = 7.0119(3)$ $c = 5.3879(4)$ $\beta = 94.874(7)^\circ$
Z = 4

X-ray Powder Pattern: Fresno County, California, USA.

3.708 (42), 3.506 (81), 2.880 (42), 2.788 (100), 2.663 (83), 3.506 (81), 2.126 (55)

Chemistry:	(1)	(2)	(3)
BaO	30.11	29.76	30.30
MgO	0.21	0.10	
MnO	1.19	0.79	
FeO	[26.01]	[26.24]	28.40
Fe ₂ O ₃	[15.30]	[15.35]	15.78
Al ₂ O ₃	0.02	0.04	
SiO ₂	22.89	23.34	23.75
F	0.09	0.05	
Cl	1.29	0.88	
H ₂ O	[1.33]	[1.42]	1.78
- O = F+Cl	0.33	0.22	
Total	98.11	97.75	100.00

(1) Esquire 7 claim, California, USA; average of 18 electron microprobe analyses, FeO, Fe₂O₃, and H₂O calculated from structure; corresponds to $\text{Ba}_{1.02}(\text{Fe}^{2+}_{1.89}\text{Mn}^{2+}_{0.09}\text{Mg}_{0.03})_{\Sigma=2.01}\text{Fe}^{3+}_{1.00}(\text{Si}_{1.99}\text{O}_7)\text{O}[(\text{OH})_{0.77}\text{O}_{0.02}\text{Cl}_{0.19}\text{F}_{0.02}]_{\Sigma=1}$. (2) Esquire 8 claim, California, USA; average of 11 electron microprobe analyses, FeO, Fe₂O₃, and H₂O calculated from structure; corresponds to $\text{Ba}_{1.01}(\text{Fe}^{2+}_{1.90}\text{Mn}^{2+}_{0.06}\text{Mg}_{0.01})_{\Sigma=1.97}\text{Fe}^{3+}_{1.00}(\text{Si}_{2.02}\text{O}_7)\text{O}[(\text{OH})_{0.82}\text{O}_{0.04}\text{Cl}_{0.13}\text{F}_{0.01}]_{\Sigma=1}$. (3) $\text{BaFe}^{2+}_2\text{Fe}^{3+}(\text{Si}_2\text{O}_7)\text{O}(\text{OH})$.

Mineral Group: Lamprophyllite group.

Occurrence: Along cleavage planes of altered gillespite in quartz-sanbornite veins.

Association: Anandite, bazirite, celsian, devitoite, quartz, titantaramellite.

Distribution: From the Esquire 7 and 8 claims, along Big Creek, eastern Fresno County, and at Trumbull Peak, Mariposa County, California, USA.

Name: As the Fe²⁺ analogue of *ericssonite*.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (63206 - Esquire 7 and 63207 - Esquire 8).

References: (1) Kampf, A.R., A.C. Roberts, K.E. Venance, G.E. Dunning, and R.E. Walstrom (2011) Ferroericssonite, the Fe²⁺ analogue of ericssonite, from eastern Fresno County, California, U.S.A. *Can. Mineral.*, 49, 587-594. (2) (2012) *Amer. Mineral.*, 97, 2066-2067 (abs. ref. 1).