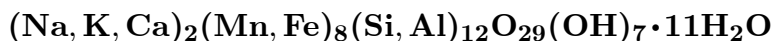


**Eggletonite**

©2001 Mineral Data Publishing, version 1.2

**Crystal Data:** Monoclinic. *Point Group:*  $2/m$  or  $m$ . Crystals display a pseudo-hexagonal cross section, elongated along [100], with {011} and {001} common. As clusters of divergent sprays of radiating acicular prisms, to 2 cm. *Twining:* On {001}.

**Physical Properties:** *Cleavage:* Perfect on {001}. *Tenacity:* Very brittle. *Hardness* = 3–4  
D(meas.) = 2.76 D(calc.) = 2.76

**Optical Properties:** Semitransparent. *Color:* Dark to golden brown, red-brown.  
*Streak:* Light brown. *Luster:* Vitreous.

*Optical Class:* Biaxial (-). *Pleochroism:* Very weak;  $X$  = pale brown to colorless;  $Y$  =  $Z$  = pale yellow-brown. *Orientation:*  $Z = b$ ;  $X \simeq c'$ ;  $Y \simeq a$ . *Dispersion:*  $r < v$ , weak.  
*Absorption:*  $Z \simeq Y > X$ .  $\alpha = 1.566(2)$   $\beta = 1.606(2)$   $\gamma = 1.606(2)$   $2V(\text{meas.}) = 9(3)^\circ$

**Cell Data:** *Space Group:*  $I2/a$  or  $Ia$ .  $a = 5.554$   $b = 13.72$   $c = 25.00$   $\beta = 93.95^\circ$   
 $Z = 2$

**X-ray Powder Pattern:** Big Rock quarry, Arkansas, USA.  
12.4 (100), 3.13 (30), 2.691 (25), 2.600 (20), 2.462 (20), 3.45 (15), 2.854 (15)

<b>Chemistry:</b>	(1)
	SiO <sub>2</sub> 41.5
	Al <sub>2</sub> O <sub>3</sub> 7.6
	FeO 3.0
	MnO 31.4
	ZnO 0.2
	MgO 0.4
	CaO 1.5
	Na <sub>2</sub> O 1.7
	K <sub>2</sub> O 1.3
	H <sub>2</sub> O [11.4]
	<hr/> Total [100.0]

(1) Big Rock quarry, Arkansas, USA; by electron microprobe, H<sub>2</sub>O by difference; corresponds to  $(\text{Na}_{0.82}\text{K}_{0.40}\text{Ca}_{0.39})_{\Sigma=1.61}(\text{Mn}_{6.61}\text{Fe}_{0.61}\text{Al}_{0.56}\text{Mg}_{0.16}\text{Zn}_{0.08})_{\Sigma=8.02}(\text{Si}_{10.33}\text{Al}_{1.67})_{\Sigma=12.00}[\text{O}_{28.92}(\text{OH})_{3.08}]_{\Sigma=32.00}(\text{OH})_{4.00} \cdot 10.66\text{H}_2\text{O}$ .

**Occurrence:** In miarolitic pockets in nepheline syenite pegmatite.

**Association:** Albite, natrolite, apophyllite pyrophanite, kupletskite.

**Distribution:** In the Big Rock quarry, Granite Mountain, near Little Rock, Pulaski Co., Arkansas, USA.

**Name:** To honor Dr. Richard A. Eggleton, Australian National University, Canberra, Australia.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 137143.

**References:** (1) Peacor, D.R., P.J. Dunn, and W.B. Simmons (1984) Eggletonite, the Na analogue of ganophyllite. *Mineral. Mag.*, 48, 93–96. (2) (1985) *Amer. Mineral.*, 70, 436 (abs. ref. 1).