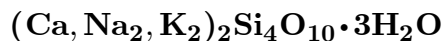


# Mountainite



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**Crystal Data:** Monoclinic. *Point Group:* n.d. As matted laths and fibers, elongated along [010], forming small rosettes, to 2 mm.

**Physical Properties:** *Cleavage:* {001} (?). *Hardness* = 3 *D*(meas.) = 2.36  
*D*(calc.) = 2.47

**Optical Properties:** Transparent to translucent. *Color:* White. *Luster:* Silky.  
*Optical Class:* Biaxial (+) (probable). *Orientation:*  $Y = b$ ;  $Z \wedge c = 18^\circ$ .  $\alpha = 1.500\text{--}1.504$   
 $\beta = 1.505\text{--}1.510$   $\gamma = 1.513\text{--}1.519$   $2V$ (meas.) = Moderate to large.  $2V$ (calc.) =  $76^\circ$

**Cell Data:** *Space Group:* n.d.  $a = 13.51$   $b = 6.55$   $c = 13.51$   $\beta = 104^\circ$   $Z = 8$

**X-ray Powder Pattern:** Kimberley, South Africa.  
2.94 (vvs), 6.6 (vs), 13.1 (s), 4.67 (s), 2.80 (ms), 1.967 (ms), 4.18 (m)

## Chemistry:

	(1)	(2)
SiO <sub>2</sub>	58.5	51.57
Al <sub>2</sub> O <sub>3</sub>	0.0	2.31
CaO	13.4	10.07
MgO	0.2	0.00
Na <sub>2</sub> O	7.9	10.15
K <sub>2</sub> O	6.0	4.43
H <sub>2</sub> O <sup>+</sup>		9.74
H <sub>2</sub> O <sup>-</sup>		8.02
H <sub>2</sub> O	13.4	
CO <sub>2</sub>		0.87
LOI		2.47
Total	99.4	99.63

(1) Kimberley, South Africa; corresponds to  $(\text{Na}_{1.04}\text{Ca}_{0.99}\text{K}_{0.54}\text{Mg}_{0.02})_{\Sigma=2.59}\text{Si}_{4.02}\text{O}_{9.99} \cdot 3.09\text{H}_2\text{O}$ . (2) Lovozero massif, Russia; corresponds to  $(\text{Na}_{1.28}\text{Ca}_{0.80}\text{K}_{0.42})_{\Sigma=2.50}(\text{Si}_{3.80}\text{Al}_{0.20})_{\Sigma=4.00}\text{O}_{9.99} \cdot 2.75\text{H}_2\text{O}$ .

**Occurrence:** In a kimberlite pipe (Kimberley, South Africa); in a differentiated alkalic massif (Lovozero massif, Russia).

**Association:** Rhodesite (Kimberley, South Africa); natrolite, steenstrupine, chkalovite, neptunite, sérandite, aegirine, leucosphenite, zorite, raite, polyolithionite, halite (Lovozero Massif, Russia).

**Distribution:** In the Bultfontein diamond mine, Kimberley, Cape Province, South Africa. On Mt. Karnasurt, Lovozero massif, Kola Peninsula, Russia. In the Höwenegg quarry, Hegau, Baden-Württemberg, Germany.

**Name:** For Edgar Donald Mountain, Professor of Geology, Rhodes University, Grahamstown, South Africa.

**Type Material:** The Natural History Museum, London, England, 1957,369; National Museum of Natural History, Washington, D.C., USA, 114792.

**References:** (1) Gard, J.A., H.F.W. Taylor, and R.A. Chalmers (1957) An investigation of two new minerals: rhodesite and mountainite. *Mineral. Mag.*, 31, 611–623. (2) (1958) *Amer. Mineral.*, 43, 624–625 (abs. ref. 1). (3) Bussen, I.V., L.G. Latysheva, Y.P. Men'shikov, A.N. Mer'kov, T.S. Romanova, and A.S. Sakharov (1973) First find of mountainite in the Soviet Union. *Doklady Acad. Nauk SSSR*, 210, 674–677 (in Russian).

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