Manandonite $Li_2Al_4(Si_2AlB)O_{10}(OH)_8$

Crystal Data: Orthorhombic. *Point Group:* 222. As micaceous pseudohexagonal plates, fanlike lamellar aggregates, or as globules, to about 1 mm, forming crusts. *Twinning:* Commonly twinned around [001], producing six-fold sectors.

Physical Properties: *Cleavage:* Perfect on {001}. Hardness = 2.5 D(meas.) = 2.76–2.89 D(calc.) = 2.79

Optical Properties: Transparent to translucent. *Color:* White as crystals; dull yellow as globules. *Luster:* Pearly on cleavages.
Optical Class: Biaxial (+) to pseudouniaxial. *Orientation:* $Z \perp \{001\}$. $\alpha = 1.604(5)$ $\beta = 1.604(5)$ $\gamma =$ n.d. 2V(meas.) = 10°–15°

Cell Data: *Space Group:* $C222_1$. $a = 5.057(4)$ $b = 8.765(7)$ $c = 13.769(9)$ Z = 2

X-ray Powder Pattern: Antandrokomby, Madagascar.
6.92 (100), 3.447 (80), 2.376 (35), 4.362 (25), 2.489 (15), 1.863 (15), 4.158 (10)

Chemistry:

	(1)	(2)	(3)
SiO_2	25.20	23.12	23.48
B_2O_3	9.25	7.74	6.80
Al_2O_3	47.02	48.06	49.80
MnO		0.02	
MgO		0.03	
CaO		0.07	
Li_2O	3.97	5.40	5.84
Na_2O	0.48	0.13	
K_2O	0.20		
H_2O	14.10	15.43	14.08
Total	100.22	[100.00]	100.00

(1) Antandrokomby, Madagascar. (2) Do.; combined wet chemical analysis, plasma spectrometry, AA, and TGA, recalculated to 100.00% after deduction of FeO(OH) impurities. (3) $Li_2Al_4(Si_2AlB)O_{10}(OH)_8$.

Mineral Group: Kaolinite-serpentine group.

Occurrence: In miarolitic cavities developed in corroded differentiated quartz-microcline-tourmaline-bearing pegmatites.

Association: Elbaite, quartz, microcline, albite.

Distribution: At the Antandrokomby pegmatite, on the Manandona River, Sahatany Valley, Madagascar.

Name: For the Manandona River, nearby the type locality in Madagascar.

Type Material: n.d.

References: (1) Lacroix, M.A. (1912) Sur une nouvelle espèce minérale (manandonite) des pegmatites de Madagascar. Bull. Soc. fr. Minéral., 35, 223–226 (in French). (2) Ranorosoa, N., F. Fontan, and A.-M. Fransolet (1989) Rediscovery of manandonite in the Sahatany valley, Madagascar. Eur. J. Mineral., 1, 633–638.