

Amblygonite, LiAlPO₄F

Amblygonite

Groat L A, Chakoumakos B C, Brouwer D H, Hoffman C M, Fyfe C A, Morell H, Schultz A J
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The amblygonite (LiAlPO₄F) - montebrasite (LiAlPO₄OH) solid solution:

A combined powder and single-crystal neutron diffraction and solid-state Li MAS, CP MAS,
 and REDOR NMR study

6.6815 7.7160 6.9565 90.777 117.617 91.275 C-1

atom	x	y	z	Wyckoff
P	0.98526	0.3406	0.26028	2i
Al1	0	0	0	1a
Al2	0	0	0.5	1b
O1	-0.31648	0.01684	-0.15047	2i
O2	0.29861	0.06004	0.58277	2i
O3	0.09968	-0.22222	-0.38606	2i
O4	0.02593	0.23308	0.09627	2i
F	0.0318	0.08571	-0.23449	2i
Li	0.0677	-0.3234	0.314	2i

$$(7 \times 2i) + (1 \times 1a) + (1 \times 1b)$$

Raman Active Modes

WP	A _g	A _u
2i	3	-
1b	-	-
1a	-	-

Total number of modes:

$$21A_g = 21$$