

Olenite,  $\text{Na}_{0.5}\text{Al}_9(\text{BO}_3)_3\text{Si}_6\text{O}_{18}(\text{O},\text{OH})_4$

Olenite

Hughes J M, Ertl A, Dyar M D, Grew E S, Wieden-beck M, Brandstatter F  
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Structural and chemical response to varying B content in zoned Fe-bearing olenite  
 from Koralpe, Austria

15.7713 15.7713 7.0760 90 90 120 R3m

atom	x	y	z	Wyckoff
Na	0	0	0.25	3a
AlY	0.12143	0.06071	-0.32815	9b
AlZ	0.29674	0.26042	-0.35941	18c
SiT	0.19136	0.18949	0.03338	18c
B	0.10914	0.21828	0.48456	9b
O1	0	0	-0.1938	3a
O2	0.06000	0.12000	0.5217	9b
O3	0.26057	0.13029	-0.4602	9b
O4	0.09384	0.18767	0.1077	9b
O5	0.18598	0.09299	0.1287	9b
O6	0.19389	0.18359	-0.1930	18c
O7	0.28653	0.28595	0.1089	18c
O8	0.20938	0.27000	0.4696	18c
H3	0.256	0.128	0.411	9b

$$(5 \times 18c) + (7 \times 9b) + (2 \times 3a)$$

**Raman Active  
 Modes**

WP	A <sub>1</sub>	A <sub>2</sub>	E
18c	3	·	6
9b	2	·	3
3a	1	·	1

Total number of modes:

$$31A_1 + 53E = 84$$