

Na ₃ Y[Si ₂ O ₇]	<i>hP80</i>	(176) <i>P6₃/m – i⁵hf²dba</i>
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Na₃YSi₂O₇ [1]

Structural features: Units of two vertex-linked SiO₄ tetrahedra, YO₆ octahedra and YO₆ trigonal prisms share vertices to form a 3D-framework. Variant of Na₃LuSi₂O₇ with splitting of one Na site.

Merinov B.V. et al. (1981) [1]

Na₃O₇Si₂Y

a = 0.9422, *c* = 1.379 nm, *c/a* = 1.464, *V* = 1.0602 nm³, *Z* = 6

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
Si1	12 <i>i</i>	1	0.0194	0.3471	0.1412		tetrahedron O ₄
O2	12 <i>i</i>	1	0.1708	0.4402	0.0665		single atom Si
O3	12 <i>i</i>	1	0.1981	0.0478	0.1388		single atom Si
Na4	12 <i>i</i>	1	0.3301	0.3143	0.0875		tetrahedron O ₄
O5	12 <i>i</i>	1	0.515	0.123	0.1209		single atom Si
O6	6 <i>h</i>	<i>m</i> ..	0.097	0.417	¹ / ₄		non-colinear Si ₂
Na7	4 <i>f</i>	3..	¹ / ₃	² / ₃	0.229	0.5	
Y8	4 <i>f</i>	3..	¹ / ₃	² / ₃	0.5189		octahedron O ₆
Na9	2 <i>d</i>	-6..	² / ₃	¹ / ₃	¹ / ₄		trigonal prism O ₆
Na10	2 <i>b</i>	-3..	0	0	0		octahedron O ₆
Y11	2 <i>a</i>	-6..	0	0	¹ / ₄		trigonal prism O ₆

Transformation from published data: origin shift 0 0 ¹/₂

Experimental: single crystal, diffractometer, X-rays, R = 0.080

Remarks: Short interatomic distances for partly occupied site(s).

References: [1] Merinov B.V., Maximov B.A., Belov N.V. (1981), Dokl. Akad. Nauk SSSR 260, 1128-1130.