

$\text{Rb}_3\text{Sb}_{7.11}\text{Se}_3\text{O}_9([\text{OH}]_{0.16}[\text{H}_2\text{O}]_{0.84})_{2.07}$	<i>hP</i> 54	(176) $P6_3/m - \text{ih}^6\text{fb}$
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$\text{Rb}_6[\text{Sb}_{12}\text{O}_{18}](\text{SbSe}_3)_2\text{Sb}_{0.22}(\text{OH})_{0.66}(\text{H}_2\text{O})_{3.48}$ [1]

Structural features: SbO_3 ψ -tetrahedra share vertices to form infinite tubes with Sb_6O_6 rings parallel to [001]; single SbSe_3 ψ -tetrahedra (orientational disorder up-down) between the tubes, Rb and (OH_2, OH) in the tubes.

Wang X. (1995) [1]

$\text{H}_{3.81}\text{O}_{11.07}\text{Rb}_3\text{Sb}_{7.11}\text{Se}_3$

$a = 1.4715$, $c = 0.5653$ nm, $c/a = 0.384$, $V = 1.0601$ nm³, $Z = 2$

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
O1	12 <i>i</i>	1	0.0598	0.3545	0.001		non-colinear Sb ₂
M2	6 <i>h</i>	<i>m</i> ..	0.142	0.052	$\frac{1}{4}$	0.69	non-colinear Sb ₂
Rb3	6 <i>h</i>	<i>m</i> ..	0.1696	0.2657	$\frac{1}{4}$		10-vertex polyhedron O ₆ (OH ₂) ₄
O4	6 <i>h</i>	<i>m</i> ..	0.35	0.1255	$\frac{1}{4}$		non-colinear Sb ₂
Se5	6 <i>h</i>	<i>m</i> ..	0.3675	0.5298	$\frac{1}{4}$		non-colinear Sb ₂
Sb6	6 <i>h</i>	<i>m</i> ..	0.40019	0.01982	$\frac{1}{4}$		non-coplanar triangle O ₃
Sb7	6 <i>h</i>	<i>m</i> ..	0.44132	0.28122	$\frac{1}{4}$		non-coplanar triangle O ₃
Sb8	4 <i>f</i>	3..	$\frac{1}{3}$	$\frac{2}{3}$	0.0966	0.5	single atom Sb
Sb9	2 <i>b</i>	-3..	0	0	0	0.11	octahedron (OH ₂) ₆

$\text{M2} = 0.84\text{OH}_2 + 0.16\text{OH}$

Transformation from published data: origin shift 0 0 $\frac{1}{2}$

Experimental: single crystal, diffractometer, X-rays, $R = 0.069$, $T = 293$ K

Remarks: We assigned an approximate value to the OH/OH₂ ratio of site M2 based on the nominal composition. Short interatomic distances for partly occupied site(s). Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments. Contrary to reports on similar compounds, no superstructure reflections were observed.

References: [1] Wang X. (1995), *Z. Kristallogr.* 210, 693-694.