

$\text{Na}_2\text{Zn}_2[\text{TeO}_3]_3[\text{H}_2\text{O}]_3$	<i>hP70</i>	(176) $P6_3/m - i^4h^3f$
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**$\text{Na}_2\text{Zn}_2(\text{TeO}_3)_3 \cdot 3\text{H}_2\text{O}$**  [1], zemannite family

Structural features: Units of two face-linked  $\text{ZnO}_6$  octahedra share vertices with  $\text{TeO}_3$   $\psi$ -tetrahedra to form a 3D-framework; Na and  $\text{H}_2\text{O}$  in channels parallel to [001] (high degree of disorder).

Miletich R. (1995) [1]

$\text{H}_{5.94}\text{Na}_{1.98}\text{O}_{11.97}\text{Te}_3\text{Zn}_2$

$a = 0.9395$ ,  $c = 0.7733$  nm,  $c/a = 0.823$ ,  $V = 0.5911$  nm<sup>3</sup>,  $Z = 2$

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
Na1	12 <i>i</i>	1	0.081	0.249	0.035	0.33	
(OH <sub>2</sub> )2	12 <i>i</i>	1	0.117	0.188	0.045	0.13	
(OH <sub>2</sub> )3	12 <i>i</i>	1	0.186	0.097	0.182	0.17	single atom (OH <sub>2</sub> )
O4	12 <i>i</i>	1	0.4787	0.1414	0.071		non-colinear TeZn
(OH <sub>2</sub> )5	6 <i>h</i>	<i>m</i> ..	0.123	0.19	$\frac{1}{4}$	0.39	non-colinear (OH <sub>2</sub> ) <sub>2</sub>
O6	6 <i>h</i>	<i>m</i> ..	0.1607	0.4901	$\frac{1}{4}$		single atom Te
Te7	6 <i>h</i>	<i>m</i> ..	0.52981	0.04038	$\frac{1}{4}$		non-coplanar triangle O <sub>3</sub>
Zn8	4 <i>f</i>	3..	$\frac{1}{3}$	$\frac{2}{3}$	0.0621		octahedron O <sub>6</sub>

Experimental: single crystal, diffractometer, X-rays, R = 0.026

Remarks: Short interatomic distances for partly occupied site(s). Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments.

References: [1] Miletich R. (1995), Monatsh. Chem. 126, 417-430.