

$\text{Zn}_7[\text{VO}_4]_3[\text{SO}_4][\text{OH}]_3$	$hP60$	$(186) P6_3mc - d^2c^5b^2a$
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$\text{Zn}_7(\text{VO}_4)_3(\text{SO}_4)(\text{OH})_3$ [1]

Structural features: Columns of edge- and face-linked $\text{Zn}(\text{O}_4[\text{OH}]_2)$ octahedra are interconnected via common vertices, VO_4 and SO_4 tetrahedra to form a 3D-framework; additional Zn in channels parallel to $[001]$ (infinite columns of face-linked ZnO_6 octahedra). Ordering variant of $\text{Ni}_{6.58}\text{H}_{1.84}(\text{AsO}_4)_4(\text{OH})_3$.

Kato K. et al. (1998) [1]

$\text{H}_3\text{O}_{19}\text{SV}_3\text{Zn}_7$

$a = 1.2813$, $c = 0.51425$ nm, $c/a = 0.401$, $V = 0.7311$ nm³, $Z = 2$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
O1	$12d$	1	0.0676	0.346	0.4748		non-coplanar triangle VZn_2
Zn2	$12d$	1	0.42659	0.08017	0.3217		octahedron O_6
O3	$6c$	$.m.$	0.0757	0.9243	0.2507		coplanar triangle VZn_2
V4	$6c$	$.m.$	0.15129	0.84871	0.296		tetrahedron O_4
O5	$6c$	$.m.$	0.191	0.809	0.0067		non-coplanar triangle VZn_2
O6	$6c$	$.m.$	0.472	0.528	0.1067		non-colinear Zn_2
O7	$6c$	$.m.$	0.6033	0.3967	0.1797		single atom S
O8	$2b$	$3m.$	$\frac{1}{3}$	$\frac{2}{3}$	0.2977		single atom S
S9	$2b$	$3m.$	$\frac{1}{3}$	$\frac{2}{3}$	0.5738		tetrahedron O_4
Zn10	$2a$	$3m.$	0	0	0.0		octahedron O_6
H11	$6c$	$.m.$	0.433	0.567	0.1657		

Transformation from published data: $-x, -y, -z$; origin shift 0 0 0.1783

Experimental: single crystal, diffractometer, X-rays, $R = 0.041$, $T = 293$ K

Remarks: Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments.

References: [1] Kato K., Kanke Y., Oka Y., Yao T. (1998), Z. Kristallogr., New Cryst. Struct. 213, 26.