$Mn_{6.87}[V_2O_7]_{0.2}[VO_4]_{3.6}[OH]_3$	*hP*62	(186) $P6_3mc$ – $d^2c^5b^3a$

$Mn_{6.87}(VO_4)_{3.6}(V_2O_7)_{0.2}(OH)_3$ [1]
Structural features: Columns of edge- and face-linked $Mn(O_4[OH]_2)$ octahedra are interconnected via common vertices, V_2O_7 units (two vertex-linked tetrahedra) and VO_4 tetrahedra (partial disorder) to form a 3D-framework; additional Mn in channels parallel to [001] (MnO_3 trigonal units).

Zhang F. et al. (1999) [1]
$H_3Mn_{6.87}O_{18.80}V_4$
a = 1.32293, c = 0.52547 nm, c/a = 0.397, V = 0.7964 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Mn1	12*d*	1	0.07902	0.42632	0.0137		octahedron $O_4(OH)_2$
O2	12*d*	1	0.3397	0.0726	0.1596		single atom V
O3	6*c*	.*m*.	0.0801	0.9199	0.4417		non-colinear VMn
V4	6*c*	.*m*.	0.15073	0.84927	0.4888		tetrahedron O_4
O5	6*c*	.*m*.	0.1877	0.8123	0.2083		coplanar triangle VMn_2
(OH)6	6*c*	.*m*.	0.4738	0.5262	0.3009		non-coplanar square Mn_4
O7	6*c*	.*m*.	0.5998	0.4002	0.3721		non-colinear V_2
V8	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.036	0.199	trigonal bipyramid VO_4
O9	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.375	0.801	colinear V_2
V10	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.7484	0.801	trigonal bipyramid VO_4
Mn11	2*a*	3*m*.	0	0	0.0	0.868	non-coplanar triangle O_3

Transformation from published data: -*x*,-*y*,-*z*
Experimental: powder, diffractometer, X-rays, R_p = 0.085

Remarks: General formula $Mn^{2+}_6Mn^{3+}_{1-2z/3}(OH)_3(VO_4)_3[(VO_4)_{1-2z}(V_2O_7)_z]$. 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] Zhang F., Zavalij P.Y., Whittingham M.S. (1999), J. Mater. Chem. 9, 3137-3140.