$H_{1.84}Ni_{6.58}[AsO_4]_4[OH]_3$	*hP*60	(186) $P6_3mc$ – $d^2c^5b^2a$

$Ni_{6.58}H_{1.84}(AsO_4)_4(OH)_3$ [1]
Structural features: Columns of edge- and face-linked $Ni(O_4[OH]_2)$ octahedra are interconnected via common vertices and AsO_4 tetrahedra to form a 3D-framework; additional Ni in channels parallel to [001] (infinite columns of face-linked O_6 octahedra).

Marcos M.D. et al. (1995) [1]
$As_4H_3Ni_{6.58}O_{19}$
$a = 1.27018$, $c = 0.50322$ nm, $c/a = 0.396$, $V = 0.7031$ nm^3, $Z = 2$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	12*d*	1	0.0633	0.3395	0.493		non-coplanar triangle $AsNi_2$
Ni2	12*d*	1	0.4266	0.0752	0.33667		octahedron $O_4(OH)_2$
O3	6*c*	.*m*.	0.0766	0.9234	0.262		coplanar triangle $AsNi_2$
As4	6*c*	.*m*.	0.15113	0.84887	0.3078		tetrahedron O_4
O5	6*c*	.*m*.	0.197	0.803	0.022		non-coplanar triangle $AsNi_2$
(OH)6	6*c*	.*m*.	0.4749	0.5251	0.152		non-coplanar square Ni_4
O7	6*c*	.*m*.	0.5952	0.4048	0.195		non-coplanar triangle $AsNi_2$
O8	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.253		single atom As
As9	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.5959		tetrahedron O_4
Ni10	2*a*	3*m*.	0	0	0.0	0.58	octahedron O_6

Transformation from published data: origin shift 0 0 0.698
Experimental: powder, diffractometer, X-rays, $R_B = 0.046$

Remarks: H not belonging to OH was not located. Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments. A refinement on single-crystal X-ray diffraction data collected at 120 K is reported in [2].

References: [1] Marcos M.D., Amoros P., Beltran D., Beltran A., Attfield J.P. (1995), J. Mater. Chem. 5, 917-925. [2] Hughes R.W., Gerrard L.A., Price D.J., Weller M.T. (2003), Inorg. Chem. 42, 4160-4164.