$Na_{1.3}Nd_{0.9}Al_{23}O_{36.5}$	*hP*71	(187) *P*-6*m*2 – $n^6k^3j^2i^3h^3g^4$

$Na_{1.3}Nd_{0.9}Al_{23}O_{36.5}$ [1]
Structural features: Spinel-type slabs (four close-packed O layers in c stacking, Al in octahedral and tetrahedral voids) alternate with NaO layers (split O site, Na near BR positions) and so-called R slabs containing units of two face-linked AlO_6 octahedra, AlO_4 tetrahedra (statistical occupation of two face-sharing tetrahedra) and Nd atoms (split site), along [001]. Magnetoplumbite- and β alumina-type slabs.

Kahn A., Thery J. (1986) [1]
$Al_{23}Na_{1.32}Nd_{0.90}O_{36.20}$
$a = 0.557$, $c = 2.2257$ nm, $c/a = 3.996$, $V = 0.5980$ nm^3, $Z = 1$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	6*n*	.*m*.	0.1557	0.8443	0.1936		tetrahedron Al_4
Al2	6*n*	.*m*.	0.1686	0.8314	0.353		octahedron O_6
O3	6*n*	.*m*.	0.4986	0.5014	0.3947		non-coplanar triangle Al_3
O4	6*n*	.*m*.	0.505	0.495	0.0971		non-coplanar triangle Al_3
Al5	6*n*	.*m*.	0.8315	0.1685	0.139		octahedron O_6
O6	6*n*	.*m*.	0.8436	0.1564	0.2957		tetrahedron Al_4
Na7	3*k*	*mm*2	0.0506	0.9494	$^1/_2$	0.18	
Na8	3*k*	*mm*2	0.1931	0.8069	$^1/_2$	0.26	
O9	3*k*	*mm*2	0.712	0.288	$^1/_2$	0.4	
O10	3*j*	*mm*2	0.1803	0.8197	0		
Nd11	3*j*	*mm*2	0.6803	0.3197	0	0.3	
O12	2*i*	3*m*.	$^2/_3$	$^1/_3$	0.1907		tetrahedron Al_4
Al13	2*i*	3*m*.	$^2/_3$	$^1/_3$	0.2716		tetrahedron O_4
Al14	2*i*	3*m*.	$^2/_3$	$^1/_3$	0.4245		
Al15	2*h*	3*m*.	$^1/_3$	$^2/_3$	0.0595		octahedron O_6
Al16	2*h*	3*m*.	$^1/_3$	$^2/_3$	0.2203		tetrahedron O_4
O17	2*h*	3*m*.	$^1/_3$	$^2/_3$	0.2999		tetrahedron Al_4
Al18	2*g*	3*m*.	0	0	0.0086	0.5	
O19	2*g*	3*m*.	0	0	0.0986		tetrahedron Al_4
Al20	2*g*	3*m*.	0	0	0.2467		octahedron O_6
O21	2*g*	3*m*.	0	0	0.3896		non-coplanar triangle Al_3

Transformation from published data: -*x*,-*y*,-*z*; origin shift 0 0 $^1/_2$
Experimental: single crystal, diffractometer, X-rays, R = 0.049, T = 297 K

Remarks: Short interatomic distances for partly occupied site(s). Space group (194) $P6_3/mmc$ was tested and rejected.

References: [1] Kahn A., Thery J. (1986), J. Solid State Chem. 64, 102-107.