$K_{0.5}(Ca_{0.5}Nd_{0.5})[PO_4]$	*hP*21	(180) $P6_222$ – kdca

$KCaNd(PO_4)_2$ [1]
Structural features: Distorted $(Ca,Nd)O_8$ square antiprisms are interconnected via common edges and PO_4 tetrahedra to form a 3D-framework; K in channels parallel to [001]. Filled-up derivative of hexagonal $CePO_4$.

Vlasse M. et al. (1982) [1]
$Ca_{0.50}K_{0.50}Nd_{0.50}O_4P$
$a = 0.7033$, $c = 0.6397$ nm, $c/a = 0.910$, $V = 0.2740$ nm^3, $Z = 3$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	12*k*	1	0.3013	0.4397	0.18683		single atom P
M2	3*d*	222	$^1/_2$	0	$^1/_2$		8-vertex polyhedron O_8
P3	3*c*	222	$^1/_2$	0	0		tetrahedron O_4
K4	3*a*	222	0	0	0	0.5	colinear K_2

M2 = 0.5Ca + 0.5Nd
Transformation from published data: origin shift 0 0 $^1/_2$
Experimental: single crystal, diffractometer, X-rays, R = 0.042

Remarks: Short interatomic distances for partly occupied site(s).

References: [1] Vlasse M., Bochu P., Parent C., Chaminade J.P., Daoudi A., Le Flem G., Hagenmuller P. (1982), Acta Crystallogr. B 38, 2328-2331.