

$\text{LaNi}_2(\text{Ni}_{0.93}\text{Sn}_{0.07})_3\text{H}_{6.1}$	$hP38$	(183) $P6mm - e^3d^2cb^2a$
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LaNi_{4.8}Sn_{0.2}H_{6.1} [1]

Structural features: Filled-up derivative of CaCu_5 (PrNi_2Al_3) with H in tetrahedral ($\text{La}_2(\text{Ni},\text{Sn})_2$, $\text{LaNi}_2(\text{Ni},\text{Sn})$, $\text{LaNi}(\text{Ni},\text{Sn})_2$ and $\text{Ni}(\text{Ni},\text{Sn})_3$) voids.

Joubert J.M. et al. (1999) [1]

$\text{D}_{6.17}\text{LaNi}_{4.80}\text{Sn}_{0.20}$

$a = 0.5399$, $c = 0.4307$ nm, $c/a = 0.798$, $V = 0.1087$ nm³, $Z = 1$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
D1	$6e$	$.m.$	0.14	0.86	0.5	0.323	tetrahedron D ₄
D2	$6e$	$.m.$	0.21	0.79	0.34	0.122	non-colinear D ₂
D3	$6e$	$.m.$	0.21	0.79	0.66	0.027	single atom D
D4	$6d$	$..m$	0.47	0	0.11	0.022	
D5	$6d$	$..m$	0.47	0	0.89	0.442	
M6	$3c$	$2mm$	$\frac{1}{2}$	0	0.5		
Ni7	$2b$	$3m.$	$\frac{1}{3}$	$\frac{2}{3}$	0.0		
D8	$2b$	$3m.$	$\frac{1}{3}$	$\frac{2}{3}$	0.38	0.275	non-coplanar triangle D ₃
La9	$1a$	$6mm$	0	0	0.0		36-vertex polyhedron D ₃₆

$\text{M6} = 0.933\text{Ni} + 0.067\text{Sn}$

Transformation from published data: $-x, -y, -z$

Experimental: powder, diffractometer, neutrons, $R_B = 0.044$

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

References: [1] Joubert J.M., Latroche M., Cerny R., Bowman R.C., Yvon K., Percheron Guégan A. (1999), J. Alloys Compd. 293/295, 124-129.