$Yb_9In_{3.67}S_{18}$	*hP*62	(176) $P6_3/m - h^{10}c$

$Yb_{18}In_{7.33}S_{36}$ [1]
Structural features: Double infinite chains of edge-linked $(Yb,In)S_6$ octahedra (partial vacancies ignored) and single columns of base-linked YbS_6S monocapped trigonal prisms share atoms to form a 3D-framework; additional In in channels parallel to [001]. Ordering variant of $KTm_{11.67}S_{18}$, $In[Yb_3(Yb,In)_{8.67}]S_{18}$.

Lemoine P. et al. (1989) [1]
$In_{3.66}S_{18}Yb_9$
a = 2.0688, c = 0.3861 nm, c/a = 0.187, V = 1.4311 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Yb1	6*h*	*m*..	0.0165	0.3453	$^1/_4$		monocapped trigonal prism S_7
S2	6*h*	*m*..	0.0234	0.5812	$^1/_4$		square pyramid Yb_5
S3	6*h*	*m*..	0.0322	0.169	$^1/_4$		non-coplanar triangle Yb_3
S4	6*h*	*m*..	0.1514	0.5071	$^1/_4$		non-coplanar triangle Yb_3
M5	6*h*	*m*..	0.2259	0.4351	$^1/_4$		octahedron S_6
M6	6*h*	*m*..	0.2336	0.1078	$^1/_4$	0.889	octahedron S_6
S7	6*h*	*m*..	0.2361	0.3137	$^1/_4$		square pyramid Yb_5
S8	6*h*	*m*..	0.3546	0.2356	$^1/_4$		square pyramid Yb_5
S9	6*h*	*m*..	0.5169	0.2052	$^1/_4$		non-coplanar triangle Yb_3
M10	6*h*	*m*..	0.5485	0.099	$^1/_4$		octahedron S_6
In11	2*c*	-6..	$^1/_3$	$^2/_3$	$^1/_4$		tricapped trigonal prism S_9

M5 = 0.667Yb + 0.333In; M6 = 0.75Yb + 0.25In; M10 = 0.667Yb + 0.333In
Transformation from published data: *y*,*x*,-*z*; origin shift 0 0 $^1/_2$
Experimental: single crystal, diffractometer, X-rays, R = 0.053, T = 293 K

References: [1] Lemoine P., Tomas A., Carré D., Guittard M., Likforman A. (1989), Acta Crystallogr. C 45, 1858-1861.