

$\text{Cu}_{10}\text{Sn}_3$	<i>hP26</i>	(176) $P6_3/m - \text{ihfdb}$
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$\text{Cu}_{10}\text{Sn}_3$ [1]

Structural features: Triangle-mesh Sn layers in h stacking; Cu in octahedral (in part displaced toward a face), tetrahedral and trigonal voids.

Lenz J., Schubert K. (1971) [1]

$\text{Cu}_{10}\text{Sn}_3$

$a = 0.733$, $c = 0.787$ nm, $c/a = 1.074$, $V = 0.3662$ nm³, $Z = 2$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Cu1	12i	1	0.365	0.031	0.08		icosahedron Cu_8Sn_4
Sn2	6h	$m..$	0.305	0.318	$\frac{1}{4}$		13-vertex polyhedron Cu_{13}
Cu3	4f	3..	$\frac{1}{3}$	$\frac{2}{3}$	0.093		pentacapped trigonal prism Cu_8Sn_3
Cu4	2d	-6..	$\frac{2}{3}$	$\frac{1}{3}$	$\frac{1}{4}$		pentacapped trigonal prism Cu_8Sn_3
Cu5	2b	-3..	0	0	0		cuboctahedron Cu_6Sn_6

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

Experimental: single crystal, Weissenberg photographs, X-rays, $R = 0.190$

Remarks: Metastable phase.

References: [1] Lenz J., Schubert K. (1971), Monatsh. Chem. 102, 1689-1698.