

Pd <sub>5</sub> Sb <sub>2</sub>	<i>hP42</i>	(185) $P6_3cm - c^5b^2a^2$
---------------------------------	-------------	----------------------------

**Pd<sub>5</sub>Sb<sub>2</sub>** [1], stibiopalladinite; Ni<sub>5</sub>As<sub>2</sub> [1]

Structural features: Puckered close-packed Sb layers in hc stacking; Pd in distorted tetrahedral, square pyramidal and octahedral voids.

El Boragy M. et al. (1970) [1]

Pd<sub>5</sub>Sb<sub>2</sub>

$a = 0.7606$ ,  $c = 1.3863$  nm,  $c/a = 1.823$ ,  $V = 0.6946$  nm<sup>3</sup>,  $Z = 6$

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
Pd1	6 <i>c</i>	.. <i>m</i>	0.259	0	0.620		16-vertex Frank-Kasper Sb <sub>6</sub> Pd <sub>10</sub>
Pd2	6 <i>c</i>	.. <i>m</i>	0.306	0	0.415		anticuboctahedron Sb <sub>4</sub> Pd <sub>8</sub>
Sb3	6 <i>c</i>	.. <i>m</i>	0.339	0	0.217		pseudo Frank-Kasper Pd <sub>11</sub>
Pd4	6 <i>c</i>	.. <i>m</i>	0.370	0	0.023		tricapped pentagonal prism Sb <sub>4</sub> Pd <sub>9</sub>
Pd5	6 <i>c</i>	.. <i>m</i>	0.624	0	0.310		tricapped pentagonal prism Sb <sub>5</sub> Pd <sub>8</sub>
Pd6	4 <i>b</i>	3.. <i></i>	$\frac{1}{3}$	$\frac{2}{3}$	0.142		13-vertex polyhedron Sb <sub>4</sub> Pd <sub>9</sub>
Sb7	4 <i>b</i>	3.. <i></i>	$\frac{1}{3}$	$\frac{2}{3}$	0.447		bicapped square prism Pd <sub>10</sub>
Sb8	2 <i>a</i>	3.. <i>m</i>	0	0	0.000		bicapped square prism Pd <sub>10</sub>
Pd9	2 <i>a</i>	3.. <i>m</i>	0	0	0.284		pseudo Frank-Kasper Sb <sub>4</sub> Pd <sub>9</sub>

Transformation from published data: -*x*, -*y*, -*z*; origin shift 0 0 0.765

Experimental: single crystal, Weissenberg photographs, X-rays, R = 0.120

Remarks: Phase stable at T < 1033 K.

References: [1] El Boragy M., Bhan S., Schubert K. (1970), J. Less-Common Met. 22, 445-458.