

## Au – Hg (Gold – Mercury)

### Crystal structure

There have been found some intermediate phases, which are not included in the phase diagram. Possibly they are metastable. The structural details of them are given in Table 1.

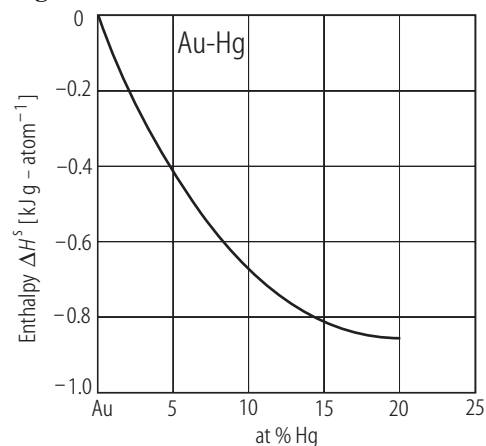
**Table 1. Au–Hg.** Structure and lattice constants of intermediate phases.

Phase	Structure	Prototype	Lattice parameters [nm]		Reference
			<i>a</i>	<i>c</i>	
AuHg <sub>4</sub>	hex	N <sub>6</sub> Nb <sub>5</sub>	0.736	0.9577	[67 Rol]
Au <sub>3</sub> Hg	hex		0.29180	0.48113	[67 Rol]
Au <sub>4</sub> Hg	cub		0.4120		[45 Owe]
Au <sub>6</sub> Hg <sub>5</sub>	hex		0.69937	1.01480	[70 Lin]
Au <sub>7</sub> Hg <sub>3</sub>	hex		0.29217	0.48150	[60 Mas]
Au <sub>17</sub> Hg <sub>3</sub>	cub		0.4112		[59 Ray]

### Thermodynamics

Rayson et al. [60 Ray], using the isopiestic method have determined the enthalpies of formation of solid alloys. The results obtained are given in Fig. 1.

**Figure**



**Fig. 1. Au–Hg.** Enthalpies of formation of solid alloys, relative to liquid Hg and solid Au [60 Ray].

### References

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