

Table III-5. The 50% condensation temperature ($T_{C,50}$; K) of the elements at two different total pressure, and their major condensed forms and host phase.

Z	$T_{C,50}$ 10 ⁻⁴ atm.	$T_{C,50}$ 10 ⁻⁶ atm.	Condensed form (host phase)	Z	$T_{C,50}$ 10 ⁻⁴ atm.	$T_{C,50}$ 10 ⁻⁶ atm.	Condensed form (host phase)
Re-75	1818	1666	Re (Ia)	Ni-28	1354	1201	Ni (Ib)
Os-76	1812	1663	Os (Ia)	Mg-12 ^b	1340	1203	Mg ₂ SiO ₄
W-74	1794	1625	W (Ia)	Eu-63	1338	1232	Eu ₂ O ₃ (II)
Zr-40	1717	1594	ZrO ₂	Fe-26	1337	1185	Fe (Ib)
Hf-72	1690	1577	HfO ₂	Pd-46	1321	1165	Pd (Ib)
Sc-21	1652	1524	Sc ₂ O ₃	Si-14 ^b	1311	1193	Mg ₂ SiO ₄ ; CaMgSi ₂ O ₆
Al-13 ^b	1650	1531	Al ₂ O ₃	Cr-24	1301	1154	Cr (Ib)
Y-39	1622	1499	Y ₂ O ₃	Au-79 ^a	1225	1074	Au (Ib)
Ir-77	1603	1465	Ir (Ia)	Li-3 ^a	1225	1091	Li ₂ SiO ₃ (Mg ₂ SiO ₄)
Ti-22	1598	1463	CaTiO ₃	Sr-38	1217	1116	SrO (II)
Lu-71	1598	1463	Lu ₂ O ₃ (II)	Mn-25 ^a	1190	1078	Mn ₂ SiO ₄ (Mg ₂ SiO ₄)
Er-68	1598	1463	Er ₂ O ₃ (II)	Ba-56	1163	1052	BaO (II)
Th-90	1598	1463	ThO ₂ (II)	P-15	1151	1070	Fe ₃ P
Ho-67	1598	1463	Ho ₂ O ₃ (II)	As-33 ^a	1135	1000	As (Ib)
Tb-65	1598	1463	Tb ₂ O ₃ (II)	Cu-29 ^a	1037	910	Cu (Ib)
Tm-69	1598	1463	Tm ₂ O ₃ (II)	K-19 ^b	1000	890	feldspar
Dy-66	1598	1463	Dy ₂ O ₃ (II)	Rb-37 ^b	~1000	~890	feldspar
Gd-64	1597	1462	Gd ₂ O ₃ (II)	Na-11 ^b	970	861	feldspar
Mo-42	1595	1456	Mo (Ia)	Ag-47 ^a	952	843	Ag (Ib)
U-92	1580	1437	UO ₂ (II)	Ga-31 ^a	918	738	Ga (Ib)
Pu-94	1578	1445	PuO ₂ ; Pu ₂ O ₃ (II)	Sb-51 ^a	912	767	Sb (Ib)
Ru-44	1565	1432	Ru (Ia)	Cl-17	863	775	Na ₄ Al ₃ Si ₃ O ₁₂ Cl
Nd-60	1563	1430	Nd ₂ O ₃ (II)	Ge-32 ^a	825	702	Ge (Ib)
Sm-62	1560	1433	Sm ₂ O ₃ (II)	F-9	736	721	Ca ₅ (PO ₄) ₃ F
Pr-59	1557	1420	Pr ₂ O ₃ (II)	Sn-50 ^a	720	625	Sn (Ib)
La-57	1544	1410	La ₂ O ₃ (II)	Se-34 ^a	684	684	FeSe (III)
Ta-73	1543	1418	Ta ₂ O ₅ (II)	Te-52 ^a	680	600	Te (III)
Ca-20 ^b	1518	1382	Ca ₂ Al ₂ Si ₂ O ₈	Zn-30 ^a	660	605	ZnS (III)
Nb-41	1517	1362	NbO; NbO ₂ (II)	S-16 ^a	648	648	FeS (III)
Yb-70	1493	1392	Yb ₂ O ₃ (II)	Pb-82 ^b	521	472	Pb (IV)
V-23	1455	1308	VO; V ₂ O ₃ (II)	Bi-83 ^b	472	432	Bi (IV)
Ce-58	1440	1286	Ce ₂ O ₃ (II)	In-49 ^b	470	437	InS (IV)
Pt-78	1411	1275	Pt (Ia)	Tl-81 ^b	448	409	Tl (IV)
Rh-45	1392	1250	Rh (Ia)	Cd-48 ^b	429	392	CdS (IV)
Co-27	1356	1202	Co (Ib)	Br-35	~350	~350	Ca ₅ (PO ₄) ₃ Br

Host phases Ia and Ib: noble and iron metal group alloy with $T_{C,50}$ respectively greater and less than those of Fe-Co-Ni. II: solid solution with perovskite (CaTiO₃). III: solid solution with troilite (FeS). IV: in part solid solution with metal alloy and troilite and in part pure phase as indicated. a: data from Wai and Wasson (1977, 1979), Wai et al. (1978). b: data from Larimer (1973) and Grossman and Larimer (1974); others from Fegley and Lewis (1980), Fegley and Palme (1985), and Kornacki and Fegley (1986).