

Table C. Heat capacities  
 $C_p = a + bT + cT^{-2}$  (cal · deg<sup>-1</sup> · mole<sup>-1</sup>)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨Ag⟩	5.09	2.04	0.36		298–m.p.	124
{Ag}	7.30	—	—		m.p.–1600	124
⟨AgCl⟩	14.88	1.00	–2.70		298–m.p.	124
{AgCl}	16.0	—	—		m.p.–900	124
⟨AgBr⟩	7.93	15.40	—		298–m.p.	124
{AgBr}	14.9	—	—		m.p.–900	124
⟨AgI⟩ <sub>α</sub>	5.82	24.10	—		298–423	124
⟨AgI⟩ <sub>β</sub>	13.5	—	—		423–600	124
⟨Ag <sub>2</sub> O⟩	14.18	9.75	–1.0		298–500	138
⟨Ag <sub>2</sub> S⟩ <sub>α</sub>	10.13	26.40	—		298–452	124
⟨Ag <sub>2</sub> S⟩ <sub>β</sub>	21.64	—	—		452–850	124
⟨Ag <sub>2</sub> SO <sub>4</sub> ⟩	23.1	27.9	—		298–m.p.	124
⟨Ag <sub>2</sub> Se⟩ <sub>α</sub>	15.35	15.58	—		298–406	124
⟨Ag <sub>2</sub> Se⟩ <sub>β</sub>	20.4	—	—		406–500	124
⟨Ag <sub>3</sub> Sb⟩	19.53	16.0	—		298–700	124
⟨Ag <sub>2</sub> CO <sub>3</sub> ⟩	18.97	25.85	—		298–450	138
⟨Ag–Al⟩	additive		—		273–773	247
⟨Ag–Mg⟩	additive		—		298–773	247
⟨Ag–Au⟩	additive		—		298–m.p.	151
⟨Al⟩	4.94	2.96	—		298–m.p.	124
{Al}	7.00	—	—		m.p.–1273	124
(AlF)	8.9	—	–1.45		298–2000	77
⟨AlF <sub>3</sub> ⟩ <sub>α</sub>	17.27	10.96	–2.30		298–727	314
⟨AlF <sub>3</sub> ⟩ <sub>β</sub>	20.93	3.0	—		727–1400	314
(AlCl)	9.0	—	–0.68		298–2000	77
⟨AlCl <sub>3</sub> ⟩	13.25	28.00	—		273–m.p.	124
{AlCl <sub>3</sub> }	31.2	—	—		m.p.–500	124
(AlCl <sub>3</sub> )	19.8	—	–2.64		298–1800	77, 255
⟨AlBr <sub>3</sub> ⟩	18.74	18.66	—		298–m.p.	124
{AlBr <sub>3</sub> }	29.5	—	—		m.p.–500	124
⟨AlI <sub>3</sub> ⟩	16.88	22.66	—		298–m.p.	124
{AlI <sub>3</sub> }	29.0	—	—		m.p.–500	124
⟨Al <sub>2</sub> O <sub>3</sub> ⟩	25.48	4.25	–6.82		298–1800	124, 480, 129
⟨Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> ⟩	87.55	14.96	–26.68		298–1100	124
⟨AlN⟩	5.47	7.80	—		298–900	124
⟨Al <sub>4</sub> C <sub>3</sub> ⟩	24.08	31.6	—		298–600	124
⟨Al <sub>2</sub> SiO <sub>5</sub> ⟩	40.09	5.86	–10.13	sillimanite	298–1600	124
⟨Al <sub>2</sub> SiO <sub>5</sub> ⟩	46.24	—	–12.53	andalusite	298–1600	124
⟨Al <sub>2</sub> SiO <sub>5</sub> ⟩	45.32	2.34	–16.00	kyanite	298–1700	124
⟨Al <sub>2</sub> TiO <sub>5</sub> ⟩	43.63	5.30	–11.21		298–1800	280

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨As⟩	5.23	2.22	—		298–1100	124
{AsF <sub>3</sub> }	30.3	—	—		298–b.p.	125
{AsCl <sub>3</sub> }	31.9	—	—		298–371	124
⟨As <sub>2</sub> O <sub>3</sub> ⟩	8.37	48.6	—		273–548	124
⟨As <sub>2</sub> O <sub>5</sub> ⟩	27.85	—	—		298	124
⟨Au⟩	5.66	1.24	—		298–m.p.	124
{Au}	7.00	—	—		m.p.–1600	124
⟨AuSb <sub>2</sub> ⟩	17.12	4.64	—		298–628	124
⟨AuSn⟩	8.53	11.00	—		298–691	124
{AuSn}	14.5	—	—		m.p.–910	146
⟨AuZn⟩	11.51	3.56	—		298–m.p.	124
{AuZn}	13.6	—	—		m.p.–1200	124
⟨AuCd⟩	12.5	(25.0)	—		600–m.p.	146
{AuCd}	16.0	—	—		m.p.–1040	146
⟨B⟩	4.013	2.165	–1.79		298–1100	644
{B}	3.835	2.39	–1.50	amorph.	298–1240	644
(BF <sub>3</sub> )	12.44	6.70	–2.12		298–1000	124
(BCl <sub>3</sub> )	16.86	2.86	–2.44		298–1000	124
(BBr <sub>3</sub> )	17.83	2.04	–1.95		298–1000	124
⟨B <sub>2</sub> O <sub>3</sub> ⟩	13.63	17.45	–3.36		298–m.p.	128
{B <sub>2</sub> O <sub>3</sub> }	30.50	—	—		m.p.–1800	124
⟨BN⟩	8.10	3.52	–5.51	cubic	298–1200	572
⟨B <sub>4</sub> C⟩	22.99	5.40	–10.72		298–1373	124
⟨H <sub>3</sub> BO <sub>3</sub> ⟩	19.44	—	—		298	106
⟨Ba⟩ <sub>β</sub>	–1.36	19.2	—		673–m.p.	148
{Ba}	11.5	—	—		m.p.–1125	148
⟨BaCl <sub>2</sub> ⟩ <sub>α</sub>	22.63	—	—		892–1198	531
⟨BaCl <sub>2</sub> ⟩ <sub>β</sub>	26.61	—	—		1198–m.p.	531
{BaCl <sub>2</sub> }	24.96	—	—		m.p.–1339	531
⟨BaBr <sub>2</sub> ⟩	15.96	6.22	—		487–1126	531
{BaBr <sub>2</sub> }	31.00	—	—		1126–1237	531
⟨BaO⟩	12.74	1.04	–1.984		298–1270	154
⟨BaSO <sub>4</sub> ⟩	33.80	—	–8.43		298–1300	124
⟨BaCO <sub>3</sub> ⟩ <sub>α</sub>	20.77	11.70	–2.86		298–1040	154
⟨BaCO <sub>3</sub> ⟩ <sub>β</sub>	37.0	—	—		1079–1241	154
⟨BaCO <sub>3</sub> ⟩ <sub>γ</sub>	39.0	—	—		1241–	154
⟨BaTiO <sub>3</sub> ⟩	29.03	2.04	–4.58		298–1800	43
⟨Ba <sub>2</sub> TiO <sub>4</sub> ⟩	43.00	1.60	–6.96		298–1800	43

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨Be⟩	4.54	2.05	-0.80	$+10.625 \times 10^7 T^{-3}$	298-m.p.	366, 538
[Be]	6.08	0.515	—		1560-2200	538
⟨BeO⟩	11.108	1.425	-8.407		273-1200	337
⟨Be <sub>3</sub> N <sub>2</sub> ⟩	7.32	30.8	—		298-800	124
⟨Be <sub>2</sub> C⟩	7.6	10.6	—	corrected for BeO, Be <sub>3</sub> N <sub>2</sub>	298-	175
⟨Bi⟩	4.49	5.40	—	graphite diamond	298-m.p.	124
[Bi]	4.78	1.47	5.05		m.p.-820	99
⟨Bi <sub>2</sub> O <sub>3</sub> ⟩	24.74	8.00	—		298-800	124
⟨Bi <sub>2</sub> S <sub>3</sub> ⟩	28.9	6.10	—		298-m.p.	122
⟨Bi <sub>2</sub> Te <sub>3</sub> ⟩	36.0	13.05	-3.12		373-m.p.	443
[Br <sub>2</sub> ]	17.1	—	—		273-b.p.	120
(Br <sub>2</sub> )	9.04	—	-0.37		298-1600	124
⟨C⟩	4.10	1.02	-2.10	graphite diamond	298-2300	124
⟨C⟩	2.18	3.16	-1.48		298-1200	124
(CH <sub>4</sub> )	5.65	11.44	-0.46		298-1500	124
[CCl <sub>4</sub> ]	32.0	—	—		298-b.p.	120
(CCl <sub>4</sub> )	23.34	2.30	-3.60		298-1000	124
⟨CBr <sub>4</sub> ⟩ <sub>α</sub>	31.7	—	—		295-320	387
⟨CBr <sub>4</sub> ⟩ <sub>β</sub>	33.0	—	—		320-m.p.	387
[CBr <sub>4</sub> ]	36.7	—	—		m.p.-450	124
(CBr <sub>4</sub> )	25.03	0.60	-3.03		298-1000	124
(CO)	6.79	0.98	-0.11		298-2500	124
(CO <sub>2</sub> )	10.55	2.16	-2.04		298-2500	124
(COS)	11.33	2.18	-1.83		298-1800	124
[CS <sub>2</sub> ]	18.4	—	—		298-b.p.	124
(CS <sub>2</sub> )	12.45	1.60	-1.80		298-1800	124
⟨Ca⟩ <sub>α</sub>	5.31	3.33	—		273-713	148
⟨Ca⟩ <sub>β</sub>	1.50	7.74	2.5		713-m.p.	148
[Ca]	7.4	—	—		m.p.-1220	148
⟨CaF <sub>2</sub> ⟩ <sub>α</sub>	14.30	7.28	0.47		124	124
⟨CaF <sub>2</sub> ⟩ <sub>β</sub>	25.81	2.50	—		1424-m.p.	124
[CaF <sub>2</sub> ]	23.90	—	—		m.p.-1800	124
⟨CaCl <sub>2</sub> ⟩	17.18	3.04	-0.60		600-m.p.	124
⟨CaCl <sub>2</sub> ⟩	24.70	—	—		m.p.-1700	124
⟨CaBr <sub>2</sub> ⟩	13.96	7.86	—		434-m.p.	531
[CaBr <sub>2</sub> ]	27.38	—	—		m.p.-1123	531
⟨CaO⟩	11.86	1.08	-1.66		298-1177	154

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨Ca(OH) <sub>2</sub> ⟩	14.18	32.02	-2.17	calcite diopside wollastonite	360-670	138
⟨CaS⟩	10.20	3.80	—		273-1000	124
⟨CaSO <sub>4</sub> ⟩	16.78	23.60	—		298-1400	124
⟨Ca <sub>3</sub> N <sub>2</sub> ⟩	20.44	22.00	—		298-800	124
⟨Ca <sub>2</sub> P <sub>2</sub> O <sub>7</sub> ⟩ <sub>α</sub>	54.9	12.9	-12.73		298-1413	55
⟨Ca <sub>2</sub> P <sub>2</sub> O <sub>7</sub> ⟩ <sub>β</sub>	76.11	—	—		1413-1626	55
[Ca <sub>2</sub> P <sub>2</sub> O <sub>7</sub> ]	96.85	—	—		1626-1700	55
⟨CaC <sub>2</sub> ⟩ <sub>α</sub>	16.40	2.84	-2.07		298-720	124
⟨CaC <sub>2</sub> ⟩ <sub>β</sub>	15.40	2.00	—		720-1275	124
⟨CaCO <sub>3</sub> ⟩ <sub>α,β</sub>	24.98	5.24	-6.20		298-1200	124
⟨CaO·MgO·2SiO <sub>2</sub> ⟩	52.87	7.84	-15.74		298-1600	124
⟨CaSiO <sub>3</sub> ⟩	26.64	3.60	-6.52		298-1450	124
β⟨Ca <sub>2</sub> SiO <sub>4</sub> ⟩	36.25	8.83	-7.24		298-1200 (243)	124
⟨CaTiSiO <sub>5</sub> ⟩	42.39	5.54	-9.63		298-1670	305
[CaTiSiO <sub>5</sub> ]	66.8	—	—		1670-1811	305
⟨CaTiO <sub>3</sub> ⟩ <sub>α</sub>	30.47	1.36	-6.69		298-1530	124
⟨CaTiO <sub>3</sub> ⟩ <sub>β</sub>	32.03	—	—		1530-1800	124
⟨CaO·2B <sub>2</sub> O <sub>3</sub> ⟩	51.34	19.16	-17.16		298-m.p.	124
[CaO·2B <sub>2</sub> O <sub>3</sub> ]	106.30	—	—		m.p.-1800	124
⟨CaO·B <sub>2</sub> O <sub>3</sub> ⟩	31.02	9.76	-8.07		298-m.p.	124
[CaO·B <sub>2</sub> O <sub>3</sub> ]	61.70	—	—		m.p.-1700	124
⟨2CaO·B <sub>2</sub> O <sub>3</sub> ⟩ <sub>α</sub>	43.75	11.50	-10.69		298-804	124
⟨2CaO·B <sub>2</sub> O <sub>3</sub> ⟩ <sub>β</sub>	52.29	2.40	—		804-m.p.	124
[2CaO·B <sub>2</sub> O <sub>3</sub> ]	68.20	—	—		m.p.-1900	124
⟨3CaO·B <sub>2</sub> O <sub>3</sub> ⟩	56.44	10.42	-13.02		298-m.p.	124
[3CaO·B <sub>2</sub> O <sub>3</sub> ]	94.00	—	—		m.p.-1900	124
⟨Ca <sub>3</sub> Al <sub>2</sub> O <sub>6</sub> ⟩	62.28	4.58	-12.01		298-1800	279
⟨CaAl <sub>2</sub> O <sub>4</sub> ⟩	36.0	5.96	-7.96		298-1800	279
⟨CaAl <sub>4</sub> O <sub>7</sub> ⟩	66.09	5.48	-17.8		298-1800	279
⟨CaFe <sub>2</sub> O <sub>4</sub> ⟩	39.42	4.76	-3.66		298-1510	348
[CaFe <sub>2</sub> O <sub>4</sub> ]	54.90	—	—		1510-1800	348
⟨Ca <sub>2</sub> Fe <sub>2</sub> O <sub>5</sub> ⟩	59.42	—	-11.68		298-1750	348
[Ca <sub>2</sub> Fe <sub>2</sub> O <sub>5</sub> ]	74.20	—	—		1750-1850	348
⟨Cd⟩	5.31	2.94	—		298-m.p.	124
[Cd]	7.10	—	—		m.p.-1100	124
⟨CdCl <sub>2</sub> ⟩	16.0	7.7	—		298-m.p.	—
⟨CdO⟩	9.65	2.08	—		298-1200	124
⟨CdS⟩	12.9	0.9	—		298-1273	124
⟨CdSO <sub>4</sub> ⟩	18.48	18.5	—		298-m.p.	122
⟨Ce⟩ <sub>β</sub>	5.65	2.3	+1.2		298-1003	99
⟨Ce⟩ <sub>γ</sub>	9.05	—	—		1003-m.p.	99

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
[Ce]	9.35	—	—		m.p.-1373	99
<CeO <sub>2</sub> >	15.0	2.5	—		298-2500	—
(Cl <sub>2</sub> )	8.82	0.06	-0.68		298-3000	124
<Co> <sub>α</sub>	5.11	3.42	-0.21		440-650	9, 124
<Co> <sub>β</sub>	3.30	5.86	—		718-1400	124
<Co> <sub>γ</sub>	9.60	—	—		1400-m.p.	124
[Co]	9.65	—	—		m.p.-1900	258
<CoCl <sub>2</sub> >	14.41	14.60	—		298-1000	124
<CoO>	11.54	2.04	+0.4		298-1800	544
<Co <sub>3</sub> O <sub>4</sub> >	30.84	17.08	-5.72		298-1000	544
<CoS>	10.6	2.51	—		273-1373	124, 122
<Co <sub>2</sub> Sn>	additive				273-400	241
<CoO·Fe <sub>2</sub> O <sub>3</sub> >	31.5	33.8	—		400-770	17
β(CoO·Fe <sub>2</sub> O <sub>3</sub> )	49.0	—	—		793-880	17
<Cr>	5.84	2.36	-0.88		298-m.p.	124, 9
[Cr]	9.40	—	—		m.p.-	124
<CrCl <sub>2</sub> >	15.23	5.30	—		298-m.p.	49
[CrCl <sub>2</sub> ]	24.0	—	—		m.p.-	49
<CrCl <sub>3</sub> >	19.44	7.03	—		298-s.p.	49
<Cr <sub>2</sub> O <sub>3</sub> >	28.53	2.20	-3.74		350-1800	124
<Cr <sub>2</sub> N>	15.24	6.8	—		273-800	204
<CrN>	9.84	3.9	—		273-800	204
<Cr <sub>3</sub> C <sub>2</sub> >	30.03	5.58	-7.40		298-1500	124
<Cr <sub>7</sub> C <sub>3</sub> >	56.96	14.54	-10.12		298-1700	124
<Cr <sub>4</sub> C>	29.35	7.40	-5.02		298-1700	124
<Cr(CO) <sub>6</sub> >	48.7	18.0	—		293-329	219
<CrB>	10.12	3.83	-2.40		298-1200	572
<CrB <sub>2</sub> >	9.63	10.7	—		298-1200	572
[Cs]	7.62	—	—		m.p.-330	360
<CsF>	11.3	2.71	—		298-m.p.	124
<CsCl> <sub>α</sub>	12.78	1.23	-0.46		293-743	540
<CsCl> <sub>β</sub>	0.805	17.64	-0.89		743-m.p.	540
[CsCl]	13.86	4.28	—		m.p.-1170	540
<CsI>	7.06	10.36	+1.93		298-m.p.	540
[CsI]	-4.29	20.5	—		m.p.-1170	540
<Cu>	5.41	1.50	—		298-m.p.	124
[Cu]	7.50	—	—		m.p.-1600	124
<CuCl>	5.87	19.20	—		298-m.p.	124

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
[CuCl]	15.80	—	—		m.p.-1200	124
<CuCl <sub>2</sub> >	15.42	12.00	—		298-m.p.	124
<CuBr>	13.1	—	—		300	93
<CuI>	12.1	2.86	—		298-m.p.	124
<CuI <sub>2</sub> >	20.1	—	—		298-m.p.	124
<Cu <sub>2</sub> O>	14.90	5.70	—		298-1200	124
<CuO>	9.27	4.80	—		298-1250	124
<Cu <sub>2</sub> S> <sub>α</sub>	19.50	—	—		298-376	124
<Cu <sub>2</sub> S> <sub>β</sub>	23.25	—	—		376-623	124
<Cu <sub>2</sub> S> <sub>γ</sub>	20.32	—	—		623-1400	124
<CuS>	10.6	2.64	—		273-1273	124
<CuSO <sub>4</sub> >	18.77	17.20	—		298-900	124
<Cu <sub>2</sub> Se> <sub>α</sub>	21.20	—	—		298-383	124
<Cu <sub>2</sub> Se> <sub>β</sub>	20.20	—	—		383-500	124
<Cu <sub>3</sub> N>	21.7	—	—		273-373	124
<Cu <sub>2</sub> Sb>	16.38	6.60	—		298-600	124
<Cu <sub>3</sub> Sb>	21.79	9.00	—		298-700	124
<Cu <sub>2</sub> Cd <sub>3</sub> >	18.84	30.40	—		298-m.p.	124
[Cu <sub>2</sub> Cd <sub>3</sub> ]	41.50	—	—		m.p.-1000	124
<Cu <sub>5</sub> Cd <sub>8</sub> >	58.78	54.40	—		298-m.p.	124
[Cu <sub>5</sub> Cd <sub>8</sub> ]	106.00	—	—		m.p.-1000	124
<Cu <sub>2</sub> Mg>	14.96	7.76	—		273-873	124
<Eu <sub>2</sub> O <sub>3</sub> > <sub>α</sub>	29.60	6.48	-2.08	monoclin.	298-895	587
<Eu <sub>2</sub> O <sub>3</sub> > <sub>β</sub>	31.06	4.16	—	monoclin.	895-1802	587
<Eu <sub>2</sub> O <sub>3</sub> >	31.90	4.38	-3.04	cubic	298-1350	587
(F <sub>2</sub> )	8.29	0.44	-0.80		298-2000	124
<Fe> <sub>α</sub>	4.18	5.92	—		273-1033	148
<Fe> <sub>β</sub>	9.0	—	—		1033-1181	148
<Fe> <sub>γ</sub>	1.84	4.66	—		1181-1674	148
<Fe> <sub>δ</sub>	10.5	—	—		1674-m.p.	148
[Fe]	10.0	—	—		m.p.-1873	124
<FeCl <sub>2</sub> >	18.94	2.08	-1.17		298-950	124
[FeCl <sub>2</sub> ]	24.40	—	—		950-1110	124
<FeCl <sub>3</sub> >	29.56	—	-6.11		298-m.p.	245
<Fe <sub>0.947</sub> O>	11.66	2.00	-0.67		298-m.p.	42
[Fe <sub>0.947</sub> O]	16.30	—	—		m.p.-1800	42
<FeO>	12.38	1.62	-0.38		298-1200	124
<Fe <sub>3</sub> O <sub>4</sub> > <sub>α</sub>	21.88	48.2	—		298-900	42
<Fe <sub>3</sub> O <sub>4</sub> > <sub>β</sub>	48.00	—	—		900-1800	42
<Fe <sub>2</sub> O <sub>3</sub> > <sub>α</sub>	23.49	18.6	-3.55		298-950	42

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨Fe <sub>2</sub> O <sub>3</sub> ⟩ <sub>β</sub>	36.0	—	—		950–1050	42
⟨Fe <sub>2</sub> O <sub>3</sub> ⟩ <sub>γ</sub>	31.70	1.76	—		1050–1750	42
⟨FeS⟩ <sub>α</sub>	5.19	26.40	—		298–411	41
⟨FeS⟩ <sub>β</sub>	17.40	—	—		411–598	41
⟨FeS⟩ <sub>γ</sub>	12.20	2.38	—		598–m.p.	41
[FeS]	17.00	—	—		m.p.–1500	41
⟨FeS <sub>2</sub> ⟩	17.88	1.32	–3.05		298–1000	41
⟨Fe <sub>4</sub> N⟩	26.84	8.16	—		273–1000	124
⟨Fe <sub>2</sub> N⟩	14.91	6.09	—		273–1000	124
⟨Fe <sub>3</sub> C⟩ <sub>α</sub>	19.64	20.00	—		273–463	124
⟨Fe <sub>3</sub> C⟩ <sub>β</sub>	25.62	3.00	—		463–1500	124
⟨FeSi⟩	10.72	4.30	—		298–900	124
⟨Fe <sub>2</sub> SiO <sub>4</sub> ⟩	36.51	9.36	–6.70		298–1490	181
[Fe <sub>2</sub> SiO <sub>4</sub> ]	57.5	—	—		1490–1724	181
⟨FeTiO <sub>3</sub> ⟩	27.87	4.36	–4.79		298–1640	124
[FeTiO <sub>3</sub> ]	47.60	—	—		1640–1800	124
⟨Fe <sub>2</sub> TiO <sub>4</sub> ⟩	33.34	15.08	–3.40		298–1600	280
⟨Fe <sub>2</sub> TiO <sub>5</sub> ⟩	46.03	5.26	–7.41		298–1700	280
⟨FeCr <sub>2</sub> O <sub>4</sub> ⟩	38.96	5.34	–7.62		298–1800	124
⟨Ga⟩	6.236	—	—		300	1
[Ga]	6.645	—	—		300	1
⟨Gd <sub>2</sub> O <sub>3</sub> ⟩	27.28	3.54	–2.54	monoclin.	298–1802	587
⟨Gd <sub>2</sub> O <sub>3</sub> ⟩	28.72	2.84	–3.88	cubic	298–1550	587
⟨Ge⟩	5.98	0.82	–0.56		298–m.p.	614
[Ge]	6.8	—	—		m.p.–1573	614
(GeF <sub>4</sub> )	23.33	2.0	–3.91		298–1000	256
(H <sub>2</sub> )	6.52	0.78	0.12		298–3000	124
(HF)	6.43	0.82	0.26		298–2000	124
(HCl)	6.34	1.10	0.26		298–2000	124
(HBr)	6.25	1.40	0.26		298–1600	124
(HI)	6.29	1.42	0.22		298–2000	124
[H <sub>2</sub> O]	18.03	—	—		273–373	124
(H <sub>2</sub> O)	7.17	2.56	0.08		298–2500	124
(H <sub>2</sub> O <sub>2</sub> )	12.50	2.84	–2.84		298–1500	70
(H <sub>2</sub> S)	7.02	3.68	—		298–1800	124
[H <sub>2</sub> S <sub>2</sub> ]	22.0	—	—		273–b.p.	31
⟨Hf⟩	5.607	1.82	—		298–1346	515
⟨HfF <sub>4</sub> ⟩	31.9	74.8	+9.0		273–1100	540

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨HfO <sub>2</sub> ⟩	17.39	2.08	–3.48		298–1800	181
⟨HfCl <sub>4</sub> ⟩	31.47	—	–2.38		298–485	181
⟨HfB <sub>2</sub> ⟩	11.89	7.85	—		298–1200	572
[Hg]	6.61	—	—		298–b.p.	124
(Hg)	4.97	—	—		b.p.–3000	124
⟨HgCl⟩	11.05	3.70	—		273–m.p.	124
⟨HgCl <sub>2</sub> ⟩	15.28	10.4	—		273–553	124
⟨HgI⟩	11.4	4.61	—		273–563	124
⟨HgI <sub>2</sub> ⟩ <sub>α</sub>	18.50	—	—		298–403	124
⟨HgI <sub>2</sub> ⟩ <sub>β</sub>	20.20	—	—		403–m.p.	124
[HgI <sub>2</sub> ]	25.00	—	—		m.p.–600	124
⟨HgO⟩	9.00	6.0	—			117
⟨HgS⟩	10.0	3.65	—			124
⟨I <sub>2</sub> ⟩	9.59	11.90	—		298–m.p.	124
[I <sub>2</sub> ]	19.20	—	—		m.p.–456	124
(I <sub>2</sub> )	8.89	—	—		456–1500	124
⟨In⟩	5.81	2.50	—		298–m.p.	124
[In]	7.24	0.33	—		m.p.–800	99
⟨Ir⟩	5.56	1.42	—		298–1800	124
⟨IrO <sub>2</sub> ⟩	9.17	15.20	—		298–1300	124
⟨K⟩	6.04	3.12	—		298–m.p.	124
[K]	7.80	—	—		m.p.–600	124
⟨KF⟩	11.02	3.12	—		298–m.p.	124
⟨KCl⟩	9.89	5.20	0.77		298–m.p.	124
[KCl]	16.00	—	—		m.p.–1200	124
⟨KBr⟩	12.84	2.50	–2.84		600–1000	39
⟨KI⟩	21.10	–8.38	–10.38		600–1000	39
⟨K <sub>2</sub> SO <sub>4</sub> ⟩ <sub>α</sub>	28.77	23.80	–4.26		298–856	124
⟨K <sub>2</sub> SO <sub>4</sub> ⟩ <sub>β</sub>	33.60	13.40	—		856–m.p.	124
[K <sub>2</sub> SO <sub>4</sub> ]	47.80	—	—		m.p.–1700	124
⟨K <sub>2</sub> CO <sub>3</sub> ⟩	19.19	26.06	—		630–m.p.	533
[K <sub>2</sub> CO <sub>3</sub> ]	36.95	10.64	—		m.p.–1250	533
⟨La⟩	6.17	1.60	—		298–800	124
⟨La <sub>2</sub> O <sub>3</sub> ⟩	28.86	3.08	–3.28		298–1171	16
⟨Li⟩	3.05	8.60	—		273–m.p.	148
[Li]	7.0	—	—		500–1000	148

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
<LiF>	9.14	5.19	—		298-m.p.	288
{LiF}	15.50	—	—		m.p.-1170	288
<LiCl>	11.0	3.40	—		298-m.p.	124
<Li <sub>2</sub> O>	14.94	6.08	-3.38		298-1045	326
<LiOH>	11.99	8.24	-2.27		298-m.p.	326
{LiOH}	20.74	—	—		m.p.-880	326
<Li <sub>3</sub> N>	11.73	23.00	—		298-800	124
<Li <sub>2</sub> CO <sub>3</sub> >	3.82	42.72	—		560-m.p.	533
{Li <sub>2</sub> CO <sub>3</sub> }	30.85	13.55	—		m.p.-1150	533
<Mg>	5.33	2.45	-0.103		293-m.p.	148
{Mg}	8.10	—	—		m.p.-1130	148
<MgF <sub>2</sub> >	16.93	2.52	-2.20		298-m.p.	124
{MgF <sub>2</sub> }	22.60	—	—		m.p.-1800	124
<MgCl <sub>2</sub> >	18.90	1.42	-2.06		298-m.p.	124
{MgCl <sub>2</sub> }	22.10	—	—		m.p.-1500	124
<MgO>	10.74	2.435	-2.262	-0.695 × 10 <sup>-6</sup> T <sup>2</sup>	273-1200	337
<Mg <sub>3</sub> N <sub>2</sub> > <sub>α</sub>	20.77	11.20	—		298-823	124
<Mg <sub>3</sub> N <sub>2</sub> > <sub>β</sub>	20.07	10.66	—		823-1061	124
<Mg <sub>3</sub> N <sub>2</sub> > <sub>γ</sub>	28.50	—	—		1061-1300	124
<MgCO <sub>3</sub> >	18.62	13.80	-4.16		298-750	124
<Mg <sub>2</sub> Si>	17.52	3.58	-2.11		298-873	241
<MgSiO <sub>3</sub> >	24.55	4.74	-6.28	Clinoenstone	298-1600	124
See Ref. 124 for pyroxene-type, amphibole-type and glass						
<Mg <sub>2</sub> SiO <sub>4</sub> >	35.81	6.54	-8.52		298-1808	181
<MgTiO <sub>3</sub> >	28.29	3.28	-6.53		298-1800	124
<Mg <sub>2</sub> TiO <sub>4</sub> >	35.96	8.54	-6.89		298-1800	316
<MgTi <sub>2</sub> O <sub>5</sub> >	40.68	9.20	-7.35		298-1800	316
<MgAl <sub>2</sub> O <sub>4</sub> >	36.80	6.40	-9.78		298-1800	279
<MgZn <sub>2</sub> >	15.55	7.20	—		298-800	124
<MgCu <sub>2</sub> >	additive				273-650	241
<MgAg>	additive				298-773	241
<MgCr <sub>2</sub> O <sub>4</sub> >	40.02	3.56	-9.58		298-1800	124
<MgNi <sub>2</sub> >	15.67	7.30	—		298-900	124
<Mn> <sub>α</sub>	5.16	3.81	—		298-1000	9, 124
<Mn> <sub>β</sub>	8.33	0.66	—		1000-1374	124
<Mn> <sub>γ</sub>	10.70	—	—		1374-1410	124
<Mn> <sub>δ</sub>	11.30	—	—		1410-m.p.	124
{Mn}	11.00	—	—		m.p.-b.p.	124
<MnCl <sub>2</sub> >	18.04	3.16	-1.37		298-m.p.	124
{MnCl <sub>2</sub> }	22.60	—	—		m.p.-1200	124

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
<MnO>	11.11	1.94	-0.88		298-1800	124
<Mn <sub>3</sub> O <sub>4</sub> > <sub>α</sub>	34.64	10.82	-2.20		298-1445	124
<Mn <sub>3</sub> O <sub>4</sub> > <sub>β</sub>	50.20	—	—		1445-1800	124
<Mn <sub>2</sub> O <sub>3</sub> >	24.73	8.38	-3.23		298-1350	315
<MnO <sub>2</sub> >	16.60	2.44	-3.88		298-780	124
<MnS>	11.40	1.80	—		298-1803	41
<MnSO <sub>4</sub> >	29.26	8.92	-7.04		298-1100	124
<Mn <sub>4</sub> N>	22.16	30.5	—		298-800	124
<Mn <sub>3</sub> N <sub>2</sub> >	30.55	38.40	—		298-800	124
<Mn <sub>3</sub> N <sub>2</sub> >	22.5	22.5	—		298-800	—
<Mn <sub>3</sub> C>	25.26	5.60	-4.07		298-1310	124
<MnCO <sub>3</sub> >	21.99	9.30	-4.69		298-700	124
<MnSiO <sub>3</sub> >	26.42	3.88	-6.16		298-1500	124
<Mo>	5.77	0.28	—	+0.54 × 10 <sup>-6</sup> T <sup>2</sup>	300-2500	628, 124
<MoO <sub>3</sub> >	20.07	5.90	-3.68		298-1808	181
<Mo <sub>2</sub> N>	11.19	13.80	—		298-800	124
<Mo <sub>3</sub> Si>	21.98	4.58	-1.0		298-1450	543
<MoSi <sub>2</sub> >	additive				298-1150	259
<Mo(CO) <sub>6</sub> >	49.05	37.0	—		293-351	219
<Mo <sub>2</sub> B>	18.42	1.3	—		298-800	572
<MoB>	9.77	3.07	-1.13		298-1200	572
<MoB <sub>2</sub> >	7.92	13	—		600-1200	572
(N <sub>2</sub> )	6.66	1.02	—		298-2500	124
(NH <sub>3</sub> )	7.11	6.00	-0.37		298-1800	124
(N <sub>2</sub> O)	10.92	2.06	-2.04		298-2000	124
(NO)	7.03	0.92	-0.14		298-2500	124
<Na>	5.00	5.36	—		298-m.p.	124
{Na}	7.50	—	—		m.p.-500	124
<NaF>	10.40	3.88	-0.33		298-m.p.	314
<NaCl>	10.98	3.90	—		298-m.p.	124
{NaCl}	16.0	—	—		m.p.-1300	124
<NaBr>	11.87	2.10	—		298-550	124
<Na <sub>2</sub> O>	15.70	5.40	—		298-1100	124
<NaOH>	17.15	-26.5	—	+56.35 × 10 <sup>-6</sup> T <sup>2</sup>	298-568	289
<NaOH> <sub>β</sub>	20.55	—	—		568-m.p.	289
{NaOH}	21.38	-1.40	—		m.p.-980	289
<Na <sub>2</sub> SO <sub>4</sub> > <sub>α</sub>	23.50	31.74	—		298-450	285
<Na <sub>2</sub> SO <sub>4</sub> > <sub>γ</sub>	29.06	19.34	—		514-1157	285
{Na <sub>2</sub> SO <sub>4</sub> }	47.18	—	—		1157-1850	285
<Na <sub>2</sub> CO <sub>3</sub> >	13.98	54.4	-3.125		298-500	138

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
{Na <sub>2</sub> CO <sub>3</sub> }	33.99	10.7	—		m.p.—1210	533
<Na <sub>2</sub> SiO <sub>3</sub> >	31.14	9.60	—6.47		298—m.p.	124
{Na <sub>2</sub> SiO <sub>3</sub> }	42.80	—	—		m.p.—1800	124
<Na <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> >	44.38	16.86	—10.67		298—m.p.	124
{Na <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> }	62.35	—	—		m.p.—1800	124
<Na <sub>3</sub> AlF <sub>6</sub> > <sub>α</sub>	45.95	29.46	—2.78		298—845	314
<Na <sub>3</sub> AlF <sub>6</sub> > <sub>β</sub>	52.15	15.86	—		845—1300	314
{Na <sub>3</sub> AlF <sub>6</sub> }	93.4	—	—		1300—1400	314
<Na <sub>2</sub> TiO <sub>3</sub> > <sub>α</sub>	25.18	20.72	—		298—560	124
<Na <sub>2</sub> TiO <sub>3</sub> > <sub>β</sub>	25.95	17.00	—		560—1303	124
{Na <sub>2</sub> TiO <sub>3</sub> }	46.90	—	—		1303—1600	124
<Na <sub>2</sub> Ti <sub>2</sub> O <sub>5</sub> >	49.32	7.06	—4.60		298—1258	124
{Na <sub>2</sub> Ti <sub>2</sub> O <sub>5</sub> }	68.50	—	—		1258—1600	124
<Na <sub>2</sub> Ti <sub>3</sub> O <sub>7</sub> >	63.46	10.64	—5.64		298—1401	124
{Na <sub>2</sub> Ti <sub>3</sub> O <sub>7</sub> }	94.15	—	—		1401—1700	124
<Nb>	5.885	0.81	—2.2		298—1415	516
<NbO>	10.04	2.35	—0.78		298—1700	488
<NbO <sub>2</sub> > <sub>α</sub>	11.70	9.56	—0.72		298—1090	545
<NbO <sub>2</sub> > <sub>β</sub>	22.20	—	—		1090—1200	545
<NbO <sub>2</sub> > <sub>γ</sub>	19.85	—	—		1200—1800	545
<Nb <sub>2</sub> O <sub>5</sub> >	38.76	3.54	—7.32		298—1780	488
<NbN>	8.69	5.40	—		298—600	124
<Nb <sub>2</sub> C>	15.88	3.0	—2.05		298—1703	488
<NbC <sub>0.75</sub> >	8.95	2.25	—1.25		298—1763	488
<NbC>	10.79	1.73	—2.15		298—1790	488
<NbB <sub>2</sub> >	11.01	9.38	—1.78		298—1200	572
<Nd>	5.61	5.34	—		298—900	124
<Nd <sub>2</sub> O <sub>3</sub> > <sub>α</sub>	27.67	7.12	—2.84		298—1395	587
<Nd <sub>2</sub> O <sub>3</sub> > <sub>β</sub>	37.20	—	—		1395—1795	587
<Ni> <sub>α</sub>	7.80	—0.47	—1.335		298—(630)	
<Ni> <sub>β</sub>	7.10	1.00	—2.23		630—m.p.	381,489,
						148
{Ni}	9.3	—	—		m.p.—2200	489
<NiCl <sub>2</sub> >	17.50	3.16	—1.19		298—m.p.	41
{NiCl <sub>2</sub> }	24.00	—	—		m.p.—1336	41
<NiO> <sub>α</sub>	—4.99	37.58	+3.89		298—525	544
<NiO> <sub>β</sub>	13.88	—	—		525—565	544
<NiO> <sub>γ</sub>	11.18	2.02	—		565—1800	544
<NiS>	9.25	12.80	—		298—600	124
<NiSO <sub>4</sub> >	30.1	9.92	—		298—1200	124

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
<NiTe>	11.57	3.30	—		298—700	124
<Ni <sub>2</sub> Si>	15.8	3.29	—		298—1582	124
<Ni <sub>3</sub> Sn>	20.78	10.20	—		298—900	124
α,β<NiO·Fe <sub>2</sub> O <sub>3</sub> >	40.5	—	—	transformation disregarded	500—1000	17
(O <sub>2</sub> )	7.16	1.00	—0.40		298—3000	124
<Os>	5.69	0.88	—		298—1900	124
<P <sub>4</sub> > white	22.50	—	—		298—m.p.	124
{P <sub>4</sub> }	23.50	—	—		m.p.—370	124
<P> red	4.74	3.90	—		298—800	124
(P)	4.97	—	—		298—1500	124
(P <sub>2</sub> )	8.31	0.46	—0.72		298—2000	124
(P <sub>4</sub> )	18.93	0.86	—2.81		298—1500	124
(PH <sub>3</sub> )	9.11	2.86	—1.71		298—2000	124
(PF <sub>3</sub> )	17.18	1.92	—3.88		298—2000	124
(PCl <sub>3</sub> )	19.15	0.74	—1.91		298—1000	124
(PCl <sub>5</sub> )	23.40	12.00	—		298—500	124
(POCl <sub>3</sub> )	22.12	3.60	—2.69		298—1000	124
(PBr <sub>3</sub> )	19.81	—	—1.43		298—1000	124
<P <sub>2</sub> O <sub>5</sub> >	8.37	54.0	—		298—631	124
<Pb>	5.63	2.33	—		298—m.p.	288
{Pb}	7.75	—0.74	—		m.p.—1200	288
<PbF <sub>2</sub> >	16.50	4.10	—		293—1097	124
<PbCl <sub>2</sub> >	15.96	8.00	—		298—m.p.	124
{PbCl <sub>2</sub> }	27.20	—	—		m.p.—900	124
<PbBr <sub>2</sub> >	18.59	2.20	—		298—m.p.	124
{PbBr <sub>2</sub> }	27.60	—	—		m.p.—900	124
<PbI <sub>2</sub> >	18.00	4.70	—		298—m.p.	124
{PbI <sub>2</sub> }	32.40	—	—		m.p.—800	124
<PbO> red	10.60	4.00	—		298—900	124
<PbO> yellow	9.05	6.40	—		298—1000	124
<PbO <sub>2</sub> >	12.7	7.80	—		298—1000	124
<PbS>	10.66	3.92	—		298—900	124
<PbSO <sub>4</sub> >	10.96	31.00	4.20		298—1100	124
<PbCO <sub>3</sub> >	12.39	28.6	—		298—800	124
<Pb <sub>0.37</sub> Tl <sub>0.63</sub> >	4.93	4.5	—		298—m.p.	148
<PbTiO <sub>3</sub> >	18.7	23.3	—		300—850	226
<Pd>	5.80	1.38	—		298—1828	124
<PdO>	3.30	14.2	—		293—823	274
<Pd-Sb>	approximately additive				298—900	124

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨Pr <sub>6</sub> O <sub>11</sub> ⟩	95.29	2.62	-9.31		298-1172	16
⟨Pt⟩	5.796	1.285	—		298-m.p.	99
⟨PtS⟩	11.14	2.86	—		298-1000	124
⟨PtS <sub>2</sub> ⟩	13.86	7.14	—		298-1000	124
⟨PtSb <sub>2</sub> ⟩	15.27	5.06	—		298-900	124
⟨Rb⟩	7.27	—	—		298-m.p.	124
⟨Rb⟩	7.80	—	—		m.p.-400	124
⟨RbF⟩	7.97	9.2	+1.21		298-m.p.	540
⟨RbF⟩	-11.30	0.833	+350.7		m.p.-1200	540
⟨RbCl⟩	11.5	2.49	—		283-990	124
⟨RbCl⟩	15.3	—	—		990-	—
⟨RbBr⟩	11.6	2.55	—		283-945	124
⟨RbI⟩	11.6	2.63	—		283-911	124
⟨Re⟩	5.80	0.95	—		298-2300	628
⟨Rh⟩	5.49	2.06	—		298-1900	124
⟨Rh <sub>2</sub> O⟩	15.59	6.47	—		292-973	274
⟨RhO⟩	9.84	5.33	—		293-1023	274
⟨Rh <sub>2</sub> O <sub>3</sub> ⟩	20.74	13.8	—		291-973	274
⟨Ru⟩ <sub>α</sub>	5.25	1.50	—		298-1308	124
⟨Ru⟩ <sub>β,γ</sub>	7.20	—	—		1308-1773	124
⟨Ru⟩ <sub>δ</sub>	7.50	—	—		1773-1900	124
⟨S⟩	3.58	6.24	—	rhombo- monoclinic	298-368.6	124
⟨S⟩	3.56	6.96	—		368.6-m.p.	124
⟨S⟩	5.40	5.50	—		m.p.-b.p.	124
⟨S <sub>2</sub> ⟩	8.54	0.28	-0.79		298-2000	124
⟨SO⟩	7.70	0.84	-0.65		298-2000	124
⟨SO <sub>2</sub> ⟩	10.38	2.54	-1.42		298-1800	124
⟨SO <sub>3</sub> ⟩	13.70	6.42	-3.12		298-1200	124
⟨Sb⟩	5.51	1.74	—		298-m.p.	124
⟨Sb⟩	7.50	—	—		m.p.-1300	124
⟨SbCl <sub>3</sub> ⟩	10.3	51.1	—		273-346	124
⟨SbBr <sub>3</sub> ⟩	17.2	29.3	—		273-370	124
⟨Sb <sub>2</sub> O <sub>3</sub> ⟩	19.10	17.1	—		273-930	124
⟨SbO <sub>2</sub> ⟩	11.3	16.2	—		298-1198	124
⟨Sb <sub>2</sub> O <sub>5</sub> ⟩	28.11	—	—		300	124
⟨Sb <sub>2</sub> S <sub>3</sub> ⟩	24.2	13.2	—		298-821	124

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨Sc <sub>2</sub> O <sub>3</sub> ⟩	23.17	5.64	—		298-2500	—
⟨Se⟩	4.53	5.50	—		273-m.p.	148
⟨Se⟩	7.0	—	—		m.p.-790	148
⟨Si⟩	5.72	0.59	-0.99		298-m.p.	124, 391, 482
⟨Si⟩	6.12	—	—		m.p.-1873	391
⟨SiF <sub>4</sub> ⟩	21.86	3.17	-4.70		298-1000	257
⟨SiCl <sub>4</sub> ⟩	33.5	—	—		298-b.p.	—
⟨SiCl <sub>4</sub> ⟩	24.25	1.64	-2.75		298-1000	124
⟨SiO <sub>2</sub> ⟩	11.22	8.20	-2.70	α-quartz	298-848	124
⟨SiO <sub>2</sub> ⟩	14.41	1.94	—	β-quartz	848-2000	124
⟨SiO <sub>2</sub> ⟩	4.28	21.06	—	α-cristobalite	298-523	124
⟨SiO <sub>2</sub> ⟩	14.40	2.04	—	β-cristobalite	523-2000	124
⟨SiO <sub>2</sub> ⟩	3.27	24.80	—	α-tridymite	298-390	124
⟨SiO <sub>2</sub> ⟩	13.64	2.64	—	β-tridymite	390-2000	124
⟨SiO <sub>2</sub> ⟩	13.38	3.68	-3.45	glass	298-2000	124
⟨Si <sub>3</sub> N <sub>4</sub> ⟩	16.83	23.6	—		298-900	124
⟨SiC⟩	8.93	3.00	-3.07		298-1700	124
⟨Sm⟩ <sub>α</sub>	6.00	5.84	-0.61		298-1190	624
⟨Sm⟩ <sub>β</sub>	11.22	—	—		1190-1345	624
⟨Sm⟩	12.57	—	—		m.p.-1398	624
⟨Sm <sub>2</sub> O <sub>3</sub> ⟩ <sub>α</sub>	30.75	4.64	-4.30	monoclin.	298-1195	587
⟨Sm <sub>2</sub> O <sub>3</sub> ⟩ <sub>β</sub>	36.90	—	—	monoclin.	1195-1798	587
⟨Sm <sub>2</sub> O <sub>3</sub> ⟩	30.64	5.08	-3.96	cubic	298-1150	587
⟨Sn⟩	4.42	6.30	—		298-m.p.	124
⟨Sn⟩	8.29	-2.2	—		510-810	99
⟨SnCl <sub>4</sub> ⟩	36.0	—	—		298-b.p.	—
⟨SnCl <sub>4</sub> ⟩	25.57	0.20	-1.87		298-1000	124
⟨SnCl <sub>2</sub> ⟩	16.2	9.26	—		298-520	124
⟨SnI <sub>4</sub> ⟩	19.4	36.0	—		298-m.p.	124
⟨SnI <sub>4</sub> ⟩	40.1	—	—		m.p.-450	124
⟨SnO⟩	9.55	3.50	—		298-1273	124
⟨SnO <sub>2</sub> ⟩	17.66	2.40	-5.16		298-1500	124
⟨SnS⟩ <sub>α</sub>	8.53	7.48	0.9		298-875	315
⟨SnS⟩ <sub>β</sub>	9.78	3.74	—		875-m.p.	315
⟨SnS <sub>2</sub> ⟩	15.51	4.20	—		298-1000	315
⟨SrCl <sub>2</sub> ⟩	18.2	2.44	—		298-m.p.	124
⟨SrBr <sub>2</sub> ⟩	18.1	3.15	—		298-m.p.	124
⟨SrI <sub>2</sub> ⟩	18.6	3.05	—		298-m.p.	124
⟨SrO⟩	12.34	1.12	-1.806		298-1270	154

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
<SrCO <sub>3</sub> > <sub>α</sub>	21.42	8.56	-3.39	+0.05 × 10 <sup>-6</sup> T <sup>2</sup>	298-1197	154
<SrCO <sub>3</sub> > <sub>β</sub>	34.0	—	—		1197-1325	154
<SrTiO <sub>3</sub> >	28.23	2.04	-4.58		298-1800	43
<Sr <sub>2</sub> TiO <sub>4</sub> >	38.45	3.84	-4.67		298-1800	43
<Ta>	5.80	0.71	—		298-2300	628, 124
<Ta <sub>2</sub> O <sub>5</sub> >	29.2	10.0	—		298-m.p.	—
<TaN>	7.73	7.80	—		298-800	124
<TaC>	11.46	1.33	—		1296-2843	560
<TaB>	7.82	5.8	—		500-1200	572
<TaB <sub>2</sub> >	11.39	8.75	—		298-1200	572
<Te>	4.58	5.25	—		273-m.p.	148
{Te}	9.0	—	—		m.p.-873	148
<TeCl <sub>4</sub> >	33.2	—	—		298-m.p.	124
{TeCl <sub>4</sub> }	53.2	—	—		m.p.-550	124
<TeO <sub>2</sub> >	15.58	3.48	-1.20		298-m.p.	571
{TeO <sub>2</sub> }	26.92	0.52	—		m.p.-1146	571
<Th>	5.63	3.04	—		298-1273	99
<ThO <sub>2</sub> >	16.65	2.13	-2.24		298-2500	124, 317, 522
<Th(SO <sub>4</sub> ) <sub>2</sub> >	25.0	55.2	—		623-897	569
<Th <sub>3</sub> N <sub>4</sub> >	27.78	31.8	—		298-800	124
<Ti> <sub>α</sub>	5.28	2.4	—		298-t.p.	—
<Ti> <sub>β</sub>	6.91	—	—		t.p.-1350	—
{TiCl <sub>4</sub> }	35.7	—	—		285-b.p.	—
(TiCl <sub>4</sub> )	25.45	0.24	-2.36		298-2000	124
<TiBr <sub>4</sub> >	28.0	—	—		298-m.p.	197
{TiBr <sub>4</sub> }	32.75	15.66	—		m.p.-423	197
(TiBr <sub>4</sub> )	25.77	—	-1.58		>298	197
<TiO> <sub>α</sub>	10.57	3.60	-1.86		298-1264	124
<TiO> <sub>β</sub>	11.85	3.00	—		1264-180	124
<Ti <sub>2</sub> O <sub>3</sub> > <sub>α</sub>	7.31	53.52	—		298-473	124
<Ti <sub>2</sub> O <sub>3</sub> > <sub>β</sub>	34.68	1.30	-10.20	rutile anatase	473-1800	124
<Ti <sub>3</sub> O <sub>5</sub> > <sub>α</sub>	35.47	29.5	—		298-450	124
<Ti <sub>3</sub> O <sub>5</sub> > <sub>β</sub>	41.60	8.0	—		450-1400	124
<TiO <sub>2</sub> >	17.97	0.28	-4.35		298-1800	124
<TiO <sub>2</sub> >	17.83	0.50	-4.23		298-1300	124
<TiS <sub>2</sub> > <sub>α</sub>	8.08	27.34	—		298-420	245
<TiS <sub>2</sub> > <sub>β</sub>	14.99	5.14	—		420-1010	245
<TiN>	11.91	0.94	-2.96		298-1800	124
<TiC>	11.83	0.80	-3.58		298-1800	124
<TiB <sub>2</sub> >	10.92	7.10	—		298-1200	572

Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
<Ti> <sub>α</sub>	5.26	3.46	—		298-505.5	124
<Ti> <sub>β</sub>	7.30	—	—		505.5-m.p.	124
{Ti}	7.50	—	—		m.p.-800	124
<TiF> <sub>α</sub>	12.31	2.62	—		298-355	463
<TiF> <sub>β</sub>	5.29	17.78	—		355-595	463
{TiF}	16.08	—	—		m.p.-850	463
<TiCl>	12.00	2.00	—		298-700	463
{TiCl}	14.2	—	—		700-850	463
<TiBr>	9.95	7.10	—		298-m.p.	463
{TiBr}	25.25	-9.04	—		m.p.-950	463
<TiI> <sub>α</sub>	11.56	3.32	—		298-451	463
<TiI> <sub>β</sub>	7.72	11.26	—		451-m.p.	463
{TiI}	17.2	—	—		m.p.-950	463
<U> <sub>α</sub>	2.61	8.95	+1.17		298-941	399
<U> <sub>β</sub>	10.0	—	—		941-1048	399
<U> <sub>γ</sub>	9.1	—	—		1048-1405	399
<UF <sub>4</sub> >	25.7	7.00	-0.06		298-1309	399
<UF <sub>6</sub> >	12.6	92.0	—		273-337	399
(UF <sub>6</sub> )	22.3	28.5	—		273-400	399
<UCl <sub>3</sub> >	20.8	7.75	1.05		298-900	399
<UCl <sub>4</sub> >	27.2	8.57	-0.79		298-800	399
{UCl <sub>4</sub> }	25.8	14.4	—		890-920	399
<UBr <sub>4</sub> >	31.4	4.92	-3.15		350-750	399
<UI <sub>4</sub> >	34.8	2.38	-4.72		380-720	399
{UI <sub>4</sub> }	39.6	—	—		820-870	399
<UO <sub>2</sub> >	19.20	1.62	-3.96		298-1500	124
<U <sub>3</sub> O <sub>8</sub> >	67.5	8.83	-11.94		298-900	399
<UO <sub>3</sub> >	22.09	2.54	-2.97		298-900	124, 244
<US <sub>2</sub> >	15.2	8.7	—		298-625	399
<UC>	13.40	1.02	-1.46		298-2073	—
<UC <sub>2</sub> >	29.90	3.06	-3.71		298-2073	—
<V>	5.40	2.00	—		298-1900	124
<VCl <sub>2</sub> >	17.25	2.72	-0.71		298-1300	124
<VCl <sub>3</sub> >	22.99	3.92	-1.68		298-900	124
<VO>	11.32	3.22	-1.26		298-1700	315
<VO <sub>2</sub> > <sub>α</sub>	14.96	—	—		293-345	124
<VO <sub>2</sub> > <sub>β</sub>	17.85	1.70	-3.95		345-m.p.	124
{VO <sub>2</sub> }	25.5	—	—		m.p.-1900	124
<V <sub>2</sub> O <sub>3</sub> >	29.35	4.76	-5.42		298-1800	124
<V <sub>2</sub> O <sub>5</sub> >	46.54	-3.90	-13.22		298-m.p.	124
{V <sub>2</sub> O <sub>5</sub> }	45.60	—	—		m.p.-1500	124



Table C. Heat capacities (contd.)

Substance	$C_p$ in cal · deg <sup>-1</sup> · mole <sup>-1</sup>			Remarks	Temp.-Range °K	Ref.
	a	b · 10 <sup>3</sup>	c · 10 <sup>-5</sup>			
⟨VN⟩	10.94	2.10	-2.21		298-1600	124
⟨VC⟩	9.18	3.30	-1.95		298-1600	124
⟨V <sub>3</sub> Si⟩	22.12	4.58	-1.23		298-1500	586
⟨W⟩	5.69	0.78	—		298-3000	522, 124
⟨WO <sub>3</sub> ⟩	17.48	6.79	—		298-1550	124
⟨WC⟩	7.98	2.17	—		298-3000	—
⟨W(CO) <sub>6</sub> ⟩	39.30	62.6	—		293-372	219
⟨W <sub>2</sub> B⟩	18.46	1.44	-3.14		298-1200	572
⟨WB⟩	13.89	-0.78	-5.02		298-1200	572
⟨W <sub>2</sub> B <sub>5</sub> ⟩	39.27	2.08	-16.72		298-1200	572
⟨Y⟩ <sub>α</sub>	5.59	1.9	+0.29		298-1758	437
⟨Y⟩ <sub>β</sub>	8.37	—	—		1758-m.p.	437
{Y}	10.3	—	—		m.p.-1950	437
⟨Y <sub>2</sub> O <sub>3</sub> ⟩ <sub>α</sub>	29.60	1.20	-4.78		298-1330	587
⟨Y <sub>2</sub> O <sub>3</sub> ⟩ <sub>β</sub>	31.50	—	—		1330-1800	587
⟨Zn⟩	5.35	2.40	—		298-m.p.	124
{Zn}	7.50	—	—		m.p.-1200	124
⟨ZnCl <sub>2</sub> ⟩	14.5	5.5	—		298-m.p.	463
{ZnCl <sub>2</sub> }	24.1	—	—		m.p.-1000	463
⟨ZnBr <sub>2</sub> ⟩	12.6	10.4	—		298-m.p.	463
{ZnBr <sub>2</sub> }	27.2	—	—		m.p.-1000	463
⟨ZnO⟩	11.71	1.22	-2.18		298-1600	124
⟨ZnS⟩	12.16	1.24	-1.36		298-1200	124
⟨ZnSO <sub>4</sub> ⟩	21.9	18.2	—		298-m.p.	122
⟨Zn <sub>3</sub> N <sub>2</sub> ⟩	19.00	22.5	—		273-700	204
⟨ZnCO <sub>3</sub> ⟩	9.3	33.0	—		298-	126
⟨Zn <sub>2</sub> SiO <sub>4</sub> ⟩	29.48	—	—		298	243
⟨Zn <sub>2</sub> TiO <sub>4</sub> ⟩	39.82	5.54	-7.69		298-1800	280
⟨ZnO·Fe <sub>2</sub> O <sub>3</sub> ⟩	34.3	13.3	—		400-1000	17
⟨Zr⟩ <sub>α</sub>	6.83	1.12	-0.91		298-1135	132
⟨Zr⟩ <sub>β</sub>	7.27	—	—		1135-1400	132
⟨ZrCl <sub>4</sub> ⟩	31.92	—	-2.91		298-s.p.	132
⟨ZrBr <sub>4</sub> ⟩	25.5	15.1	—		298-s.p.	120
⟨ZrO <sub>2</sub> ⟩ <sub>α</sub>	16.64	1.80	-3.36		298-1478	132
⟨ZrO <sub>2</sub> ⟩ <sub>β</sub>	17.80	—	—		1478-1850	132
⟨ZrN⟩	11.10	1.68	-1.72		298-1700	132
⟨ZrSiO <sub>4</sub> ⟩	31.48	3.92	-8.08		298-1800	132
⟨ZrB <sub>2</sub> ⟩	15.79	4.22	-3.51		298-1200	254