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Erratum: The NBS tables of chemical thermodynamic properties. Selected values for inorganic and C_1 and C_2 organic substances in SI units [J. Phys. Chem. Ref. Data 11, Suppl. 2 (1982)] FREE

Donald D. Wagman; William H. Evans; Vivian B. Parker; Richard H. Schumm; Iva Halow; Sylvia M. Bailey; Kenneth L. Churney; Ralph L. Nuttall

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Erratum: The NBS tables of chemical thermodynamic properties

Selected values for inorganic and C_1 and C_2 organic substances in SI units

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National Bureau of Standards, Gaithersburg, MD 20899

The errata are given in three sections. These apply to: (1) the main tables of data in SI units, (2) Appendix 1 and 2, showing those changes that are also needed in the "NBS Technical Note 270 Series", and (3) changes related to ethylenediamine for both the NBS Tables and the NBS Technical Note 270.

Each change is identified by page and line number in the text or by page and the formula of the substance in the tables.

Formulas are written with the state or molality in solution in parentheses appended to them. The units are indicated in each case. The numerical values for the main tables in the "NBS Tables" are in SI units at the standard state pressure of 100 000 Pa (1 bar). The changes for the "NBS Technical Note 270 Series" are in calorie units and apply at 101 325 Pa (1 atm).

Errata in main tables of data

Page	Column/Line/Formula	Revision
2–10	col 1, l 2	replace integrand with $C_p°dT$
2–11	col 2, l 21	replace with "$\Delta_f H°(T_1) = -R(\partial \ln K/\partial(1/T))$"
2–21	col 1, l 5	change "$\Delta_f H°M^+$, g, 0 K)" to "$\Delta_f H°(M^+$, g, 0 K)"
2–21	col 1, l 15	change "J mol^{-1}" to "kJ mol^{-1}"
2–21	col 1 l 20	replace with "[$H°$(298.15 K) − $H°$(0 K)]"
2–23	col 2, l bot. −12	change " where δ is" to " where $\delta = \Sigma\nu_i$,"
		after "process" insert ", and ν_i is the (signed) stoichiometric coefficient of the ith gaseous substance in the process"
	col 2, l bot. −4	after "δ" insert "$= \Sigma\nu_i$"
2–27	col 1, 2d last line	delete term "$+ (1/T_1)\ln(T_2/T_1)$"
2–28	col 1, bot. −4	change "$\Delta_f G°$kJ mol^{-1}" to "$\Delta_f G°$/kJ mol^{-1}"
2–30	l bot. −2	after "mixed" add "solutions"
2-33	Table IV B, l 3 of heading	insert "one mole of" after "of" so that line reads "formation of one mole of the compound from the elements)"
2-35	Ref [17], l 1	delete "and"
2–52	I^-(g)	$\Delta_f H°_0 = -188.2$ kJ/mol
		$\Delta_f H° = -194.6$ kJ/mol
2–57	$S_2O_3^{2-}$(ao)	$\Delta_f H° = -652.3$ kJ/mol
	l bot. −4	change to "equivalent to SO_2(aq) + 3 H_2O(l)"
	l bot. −3	add chemical formula "$H_2SO_3(100H_2O)$"
2–59	$H_2SO_4 \cdot 2H_2O$(l)	$\Delta_f H° = -1427.100$ kJ/mol
2–64	NO_3^-(ao)	$\Delta_f H° = -207.36$ kJ/mol
		$\Delta_f G° = -111.25$ kJ/mol
2–73	PO_4^{3-}(ao)	$S° = -220.3$ J/(mol K)
	H_3PO_4(ai)	$S° = -220.3$ J/(mol K)
2–90	CH_3NO_2(600 H_2O)	change to CH_3ONO(600 H_2O:i1)
		add the comment "nitromethane"
2–93	CH_3CHO(g2)	$\Delta_f H°$(0 K) = −155.69 kJ/mol
		$\Delta_f G° = -132.86$ kJ/mol
		$H°$-$H°$(0 K) = 12.88 kJ/mol
		$S° = 263.8$ J/(mol K)
		$C_p° = 55.30$ J/(mol K)
	CH_3CHO(1000 H_2O) (l bot −6)	change to "CH_3CHO(1000 H_2O:i3) unhydrated acetaldehyde"
	CH_3CHO(1000 H_2O) (l bot −5)	change to "CH_3CHO(1000 H_2O:i2) hydrated acetaldehyde"

Errata in main tables of data — Continued

Page	Column/Line/Formula	Revision
2–103	$(CH_3)_2NH$(ai) dimethylamine	change to "$(CH_3)_2NH$(ao)"
	$NH_2CH_2CH_2NH_2$(l3)	See separate list for changes in values for "en" and its derivatives.
	$NH_2CH_2CH_2NH_2$(200 H_2O) ethylenediamine	change to "$NH_2CH_2CH_2NH_2$(200 H_2O:i3)"
	$CNH(NH_2)(NHCN)$(250 H_2O) cyanoguanadine	change to "$CNH(NH_2)(NHCN)$(250 H_2O:i2)"
2–111	SiO_2(ai)	change formula to "SiO_2(ao)"
	$H_2(Si(OH)_6)$	change to read "equivalent to H_2SiO_3(ao) + $3H_2O$(l)"
	H_2SiF_6(ai)	$\Delta_f H°$ = −2389.1 kJ/mol $\Delta_f G°$ = −2199.4 kJ/mol $S°$ = 122.2 J/(mol K)
2–133	In^{+n}(g)	$\Delta_f H°$(0 K) $\Delta_f H°$(298.15 K) ..... kJ/mol .....
	In^+(g)	802.02 807.812
	In^{+2}(g)	2622.67 2634.66
	In^{+3}(g)	5327.4 5345.6
	In^{+4}(g)	10579. 10603.
2–146	CdSe(cr)	delete line (no data)
2–153	$HgBr_2{\cdot}C_2H_4(NH_2)_2$(cr)	change "glycinate" to "ethylenediamine"
2–162	$Ag(NO_2)_2^-$(ao)	$\Delta_f G°$ = 0.0
2–170	$HCoO_2^-$(ao)	$\Delta_f G°$ = −345.5 kJ/mol
2–187	$(Pt(NH_3)_2Cl(H_2O))^+$(ao2) trans	$\Delta_f G°$ = −311.1 kJ/mol
	$(Pt(CH_3NH_2)_2Cl)^+$(ao2) trans	$\Delta_f G°$ = 10.7 kJ/mol
	$(Pt(NH_3)Cl_2(H_2O))$(cis, ao)	$\Delta_f G°$ = −392.1 kJ/mol
2–230	$Gd(BrO_3)_3$(44.3 H_2O)	add "saturated"
2–234	Sm^{+2} and Sm^{+3}	Change state from "1o" to "ao"
2–242	$Ce_2(SO_4)_3$(cr)	After this line add
	$Ce_2(SO_4)_3$(1200 H_2O)	568.4248 g mol^{-1} $\Delta_f H°$ = −4079. kJ/mol
2–244	$La_2(SeO_3)_3$(cr)	Replace formula and values with
	$La_2(SeO_3)_3{\cdot}4H_2O$(cr)	730.7562 g mol^{-1} $\Delta_f H°$ = −4018.9 kJ/mol $\Delta_f G°$ = −3591.0 kJ/mol $S°$ = 661. J/(mol K)
2–246	U^{+3}(ao)	$\Delta_f G°$ = −476.2 kJ/mol $S°$ = −188 J/(mol K)
	U^{+4}(ao)	$\Delta_f G°$ = −531.8 kJ/mol
	UCl_4(ai)	$\Delta_f G°$ = −1056.8 kJ/mol
2–249	l 24	add formula "UN(cr)" to line below "$UN_{0.997}$ (cr)"
2–253	Th^{+n}(g)	$\Delta_f H°$(0 K) $\Delta_f H°$(298.15 K) ..... kJ/mol .....
	Th^+(g)	1185.2 1191.1
	Th^{+2}(g)	2298. 2310.
	Th^{+3}(g)	4224. 4242.
	Th^{+4}(g)	6998. 7022.
2–271	$Ca_3(PO_4)_2$(ai)	$S°$ = −599.9 J/(mol K)
2–272	$Ca_{10}(PO_4)_6(OH)_2$(ai) hydroxyapatite	$S°$ = −1874.3 J/(mol K) delete H-$H°$ value
2–311	Na_3PO_4(ai)	$S°$ = −43.3 J/(mol K)
2–339	K_3PO_4(ai)	$\Delta_f G°$ −1868.7 kJ/mol $S°$ = 87.2 J/(mol K)
2–342	$CH_3COOK(CH_3CO_2H$:u)	change to "$CH_3COOK(CH_3COOH$:900 H_2O)" $\Delta_f H°$ = −753.0 kJ/mol
2–349	$KMnO_4$(ai)	$\Delta_f H°$ = −793.8 kJ/mol $S°$ = 293.7 J/(mol K)
2–353	$KMgCl_3{\cdot}6H_2O$(cr)	Change "carnellite" to "carnallite"
	$K_2Mg(SO_4)_2{\cdot}6H_2O$(cr)	Add the name "picromerite"
	$K_2SO_4{\cdot}2MgSO_4$(cr)	Change "laugbenite" to "langbeinite"
	$KCl{\cdot}MgSO_4{\cdot}3H_2O$(cr)	Replace entry with:
	$KCl{\cdot}MgSO_4{\cdot}2.75H_2O$(cr)	$\Delta_f H°$ = −2569.0 kJ/mol
2–355	$Na_2SO_4{\cdot}3K_2SO_4$(cr)	Add the name "aphthitalite" after "glaserite,"

Errata in main tables of data — Continued

Page	Column/Line/Formula	Revision
2–358	(bot. −15)	after Rb_2S_5 insert the line:
	$RbS_2O_8^-$(ao)	$\Delta_fH^\circ = -1590.4$ kJ/mol
		$\Delta_fG^\circ = -1405.5$ kJ/mol
		$S^\circ = 406.3$ J/mol.K
2–359	Rb_2SeO_3(cr)	$\Delta_fH^\circ = -972.78$ kJ/mol
	$RbNO_2$(cr)	$\Delta_fH^\circ = -367.4$ kJ/mol
		$S^\circ = 172.$ J/(mol K)
	$RbNO_3(130H_2O)$	$\Delta_fH^\circ = -459.99$ kJ/mol
	$RbNO_3(135H_2O)$	$\Delta_fH^\circ = -459.95$ kJ/mol
2–360	$RbNO_3(3200H_2O)$	$\Delta_fH^\circ = -458.433$ kJ/mol
2–366	$RbNO_2 \cdot 2Ba(NO_2)_2$(cr)	$\Delta_fH^\circ = -1903.$ kJ/mol
	Rb_3PO_4(ai)	$S^\circ = 144.2$ J/(mol K)
	$RbKCl_2$(g)	$\Delta_fH^\circ = -610.$ kJ/mol
2–372	Cs_3PO_4(ai)	$S^\circ = 178.9$ J/(mol K)

Errata in Appendix 1[a]

Page	TN Page	Substance	Revision
2–382	3 83	PO_4^{3-}(ao)	$S^\circ = -52.7$ cal/(mol K)
	3 86	H_3PO_4(ai)	$S^\circ = -52.7$ cal/(mol K)
2–383	3 133	CH_3CHO(g2)	$\Delta_fH^\circ(0\text{ K}) = -37.21$ kcal/mol
			$\Delta_fG^\circ = -31.74$ kcal/mol
			$H^\circ\text{-}H^\circ(0\text{ K}) = 3.08$ kcal/mol
			$S^\circ = 63.0$ cal/(mol K)
			$C_p^\circ = 13.22$ cal/(mol K)
2–383	3 173	H_2SiF_6(ai)	$\Delta_fH^\circ = -571.0$ kcal/mol
			$\Delta_fG^\circ = -525.7$ kcal/mol
			$S^\circ = 29.2$ cal/(mol K)
2–384	3 216	$Al_6Si_2O_{13}$(cr)	$\Delta_fH^\circ = -1629.1$ kcal/mol
		mullite	delete entry for $\Delta_fH^\circ(0\text{ K})$
	4 34	$Ag(NO_2)_2^-$(ao)	$\Delta_fG^\circ = 0.0$ kcal/mol
	4 40	$HCoO_2^-$(ao)	$\Delta_fG^\circ = -82.6$ kcal/mol
	4 101	$(Pt(NH_3)_2Cl(H_2O))^+$(trans,ao2)	$\Delta_fG^\circ = -74.4$ kcal/mol
		$Pt(CH_3NH_2)_2Cl$(trans,ao2)	$\Delta_fG^\circ = 2.6$ kcal/mol
		$(Pt(NH_3)Cl_2(H_2O))$(cis,ao)	$\Delta_fG^\circ = -93.7$ kcal/mol
	6 43	$Ca_3(PO_4)_2$(ai)	$S^\circ = -143.4$ cal/(mol K)
	6 45	$Ca_{10}(PO_4)_6(OH)_2$(ai)	$S^\circ = -448.0$ cal/(mol K)
2–385	8 1	U^{+3}(ao)	$\Delta_fG^\circ = -113.8$ kcal/mol
			$S^\circ = -45.$ cal/(mol K)
		U^{+4}(ao)	$\Delta_fG^\circ = -127.1$ kcal/mol
		UCl_4(ai)	$\Delta_fG^\circ = -252.6$ kcal/mol
	8 36	Na_3PO_4(ai)	$S^\circ = -10.3$ cal/(mol K)
	8 65	K_3PO_4(ai)	$\Delta_fG^\circ = -446.6$ kcal/mol
			$S^\circ = 20.8$ cal/(mol K)
	8 68	$CH_3COOK(CH_3COOH{:}u)$	Change to "$CH_3COOK(CH_3COOH{:}900H_2O)$"
			$\Delta_fH^\circ = -180.0$ kcal/mol
	8 76	$KMnO_4$(ai)	$\Delta_fH^\circ = -189.7$ kcal/mol
			$S^\circ = 70.2$ cal/(mol K)
	8 81	$KCl{\cdot}MgSO_4{\cdot}3H_2O$(cr)	Replace entry with:
		$KCl{\cdot}MgSO_4{\cdot}2.75H_2O$(cr)	$\Delta_fH^\circ = -614.0$ kcal/mol
	8 86	Below Rb_2S_5 add	
		$RbS_2O_8^-$ (ao)	$\Delta_fH^\circ = -380.1$ kcal/mol
			$\Delta_fG^\circ = -335.9$ kcal/mol
			$S^\circ = 97.1$ cal/(mol K)
	8 87	Rb_2SeO_3(cr)	$\Delta_fH^\circ = -232.5$ kcal/mol
	8 88	$RbNO_2$(cr)	$\Delta_fH^\circ = -87.8$ kcal/mol
			$S^\circ = 41.$ cal/(mol K)
		$RbNO_3(130\ H_2O)$	$\Delta_fH^\circ = -109.94$ kcal/mol
		$RbNO_3(135\ H_2O)$	$\Delta_fH^\circ = -109.93$ kcal/mol
		$RbNO_3(3200\ H_2O)$	$\Delta_fH^\circ = -109.568$kcal/mol

Errata in Appendix 1[a] — Continued

Page	TN Page	Substance	Revision
	8 94	Rb_3PO_4(ai)	$S°$ = 34.5 cal/(mol K)
		$RbNO_2 \cdot 2Ba(NO_2)$(cr)	$\Delta_f H°$ = −455. kcal/mol
		$RbKCl_2$(g)	$\Delta_f H°$ = −146. kcal/mol
	8 101	Cs_3PO_4(ai)	$S°$ = 42.8 cal/(mol K)

[a]The values in kcal/mol and cal/(mol K) in these corrections to the appendices have been rounded, and will not reconvert exactly to the values in kJ/mol and J/(mol K).

Errata in Appendix 2[a]

Page	TN Page	Substance	Revision	
			$\Delta_f H°$(0 K)	$\Delta_f H°$(298.15 K)
			.....kcal/mol.....	
2–386	3 36	I^-(g)	−45.0	−46.6
2–387	3 223	In^+(g)	191.69	193.072
		In^{+2}(g)	626.83	629.70
		In^{+3}(g)	1273.3	1277.6
		In^{+4}(g)	2528.	2534.
2–389	8 8	Th^+(g)	283.3	284.7
		Th^{+2}(g)	549.	552.
		Th^{+3}(g)	1010.	1014.
		Th^{+4}(g)	1673.	1678.

[a]The values in kcal/mol and cal/(mol K) in these corrections to the appendices have been rounded, and will not reconvert exactly to the values in kJ/mol and J/(mol K).

Changes for Ethylenediamine and Some of Its Derivatives

The value for the enthalpy of formation of ethylenediamine has been changed. This has required the corresponding changes in many of the derivatives of ethylenediamine. These are all listed below. In the "NBS Tables" and the "NBS Technical Note 270 Series", the formula for ethylenediamine is given either as $NH_2CH_2CH_2NH_2$ or $C_2H_4(NH_2)_2$, while it is written as "en" below. In order to simplify finding the place where a change is needed, this list gives not only the page number and formula, for both the NBS Tables and NBS Tech. Note 270, but also the old and new values.

Changes for ethylenediamine and some of its derivatives

Page NBS Tables	Formula(state)	$\Delta_f H°$/kJ·mol^{-1} old	$\Delta_f H°$/kJ·mol^{-1} new	Page NBS TN 270	$\Delta_f H°$/kcal·mol^{-1} old	$\Delta_f H°$/kcal·mol^{-1} new
2–103	en(l3)	−24.35	−63.01	3 156	−5.82	−15.06
	ethylenediamine					
	en(200 H_2O)	−55.73	−94.39		−13.32	−22.56
	en·H_2O(l)	−321.7	−360.4		−76.9	−86.1
	ethylenediamine hydrate					
	$NH_2CH_2CH_2NH_3^+$(aq)	−105.9	−144.6		−25.3	−34.6
	ethyleneamineammonium ion					
	$NH_3CH_2CH_2NH_3^{+2}$(aq)	−150.6	−189.3		−36.0	−45.2
	ethylenediammonium ion					

Changes for ethylenediamine and some of its derivatives — Continued

Page NBS Tables	Formula(state)	$\Delta_f H°$/kJ·mol^{-1} old	new	Page NBS TN 270	$\Delta_f H°$/kcal·mol^{-1} old	new
2–107	$NH_2CH_2CH_2NH_3Cl$(5000 H_2O) aminoethylammonium chloride	−273.2	−311.9	3 165	−65.3	−74.5
	$(CH_2NH_3Cl)_2$(cr) ethylenediammonium chloride	−513.4	−552.1		−122.7	−132.0
	$(CH_2NH_3Cl)_2$(5000 H_2O)	−485.01	−523.67		−115.92	−125.16
2–143	$Zn(en)^{+2}$(aq)	−237.7	−276.4	3 246	−56.8	−66.0
	$Zn(en)_2^{+2}$(aq)	−323.0	−400.3		−77 .2	−95.7
	$Zn(en)_3^{+2}$(aq)	−407.5	−523.5		−97.4	−125.1
	$ZnCl_2$·en(cr)	−569.0	−607.7	3 247	−136.0	−145.2
	$ZnCl_2$·3en(cr)	−727.2	−843.2		−173.8	−201.5
	$ZnBr_2$·en(cr)	−446.4	−485.1		−106.7	−115.9
	$ZnBr_2$·3en(cr)	−657.7	−773.7		−157.2	−184.9
	ZnI_2•en(cr)	−358.2	−396.9		−85.6	−94.8
	ZnI_2·3en(cr)	−541.0	−657.0		−129.3	−157.0
2–148	$Cd(en)^{+2}$(ao)	−161.1	−199.8	3 260	−38.5	−47.7
	$Cd(en)_2^{+2}$(ao)	−243.5	−320.8		−58.2	−76.7
	$Cd(en)_3^{+2}$(ao)	−325.5	−441.1		−77.8	−105.5
2–148	$Cd(en)_3Cl_2$(cr)	−702.16	−818.14	3 261	−167.82	−195.54
2–149	$Cd(en)_3Cl_2$(aq)	−653.79	−769.77		−156.26	−183.98
	$Cd(en)_3Cl_2$(aq)	−653.79	−769.77		−156.26	−183.98
	$Cd(en)_3Br_2$(cr)	−618.94	−734.92		−147.93	−175.65
	$Cd(en)_3Br_2$(aq)	−564.88	−680.86		−135.01	−162.73
2–153	$Hg(en)_2^{+2}$(ao)	−67.4	−144.7	4 10	−16.1	−34.6
	$HgCl(en)^{+}$(ao)	−141.0	−179.7	4 11	−33.7	−42.9
	$HgCl_2$·en(cr)	−361.9	−400.6		−86.5	−95.7
	$HgBr_2$·en(cr)	−287.9	−326.6		−68.8	−78.0
	glycinate change to "ethylenediamine"					
	HgI_2·en(cr)	−197.5	−236.2		−47.2	−56.4
2–158	$Cu(en)^{+2}$(ao)	−44.4	−83.1	4 25	−10.6	−19.8
	$Cu(en)_2^{+2}$(ao)	−151.9	−229.2		−36.3	−54.8
2–159	$CuCl_2$·en(cr)	−385.8	−424.5	4 27	−92.2	−101.4
	$CuCl_2$·2(en)(cr)	−489.5	−566.8		−117.0	−135.5
	$CuBr_2$·en(cr)	−301.2	−339.9		−72.0	−81.2
	$CuBr_2$·2(en)(cr)	−427.2	−504.5		−102.1	−120.6
2–169	$Ni(en)^{+2}$(aq)	−147.3	−186.0	4 51	−35.2	−44.4
	$Ni(en)_2^{+2}$(aq)	−240.2	−317.5		−57.4	−75.8
	$Ni(en)_3^{+2}$(aq)	−338.1	−454.1		−80.8	−108.5
	$Ni(en)_3Cl_2$(cr)	−661.1	−777.1	4 52	−158.0	−185.7
	$Ni(en)_3Cl_2$(aq)	−651.66	−767.64		−155.75	−183.47
	$Ni(en)_3Cl_2·2H_2O$(cr)	−1276.1	−1392.1		−305.0	−332.7
	$Ni(en)_3Br_2$(cr)	−597.9	−713.9		−142.9	−170.6
	$Ni(en)_3Br_2$(aq)	−560.45	−676.43		−133.95	−161.67
	$Ni(en)_3Br_2·2H_2O$(cr)	−1194.1	−1310.1		−285.4	−313.1
	$Ni(en)_3I_2$(cr)	−475.3	−591.3		−113.6	−141.3
	$Ni(en)_3I_2$(aq)	−427.73	−543.71		−102.23	−129.95
	$Ni(en)_3I_2·2H_2O$(cr)	−1061.9	−1177.9		−253.8	−281.5
2–175	$(Co(en))^{+2}$(aq)	−142.7	−181.4	4 69	−34.1	−43.4
	$(Co(en)_2)^{+2}$(aq)	−228.0	−305.3		−54.5	−73.0
	$(Co(en)_3)^{+2}$(aq)	−318.0	−434.0		−76.0	−103.7
	$(Co(en)_3)^{+3}$(aq)	−303.8	−419.8		−72.6	−100.3
	$(Co(en)(NH_3)(NO_2)_3)$(cr)	−584.1	−700.1	4 70	−139.6	−167.3
	$(Co(en)_2(NO_2)_2)^{+}$(aq)	−438.9	−477.6	4 71	−104.9	−114.1
	cis $(Co(en)_2(NO_2)_2)NO_3$(cr)	−689.5	−766.8		−164.8	−183.3
	cis $(Co(en)_2(NO_2)_2)NO_3$(13000 H_2O)	−646.4	−723.7		−154.5	−173.0
	cis $(Co(en)_3(NO_3)_3)$(cr)	−989.5	−1105.5		−236.5	−264.2
	$(Co(en)_3(NO_3)_3)$(16000 H_2O)	−925.9	−1041.9		−221.3	−249.0
	$(Co(en)Cl_2$ (cr)	−472.8	−511.5		−113.0	−122.2
	$CoCl_2$·1.5en(cr)	−445.6	−503.6		−106.5	−120.4
	$(Co(en)_2Cl_2)^{+}$(aq) cis	−492.0	−569.3		−117.6	−136.1

Changes for ethylenediamine and some of its derivatives — Continued

Page NBS Tables	Formula(state)	$\Delta_f H°$/kJ·mol^{-1} old	new	Page NBS TN 270	$\Delta_f H°$/kcal·mol^{-1} old	new
	$(Co(en)_2Cl_2)^+$(aq2)	−499.6	−576.9		−119.4	−137.9
	trans $(Co(en)_2Cl_2)Cl$(cr)	−681.2	−758.5		−162.8	−181.3
	cis $(Co(en)_2Cl_2)Cl$(aq)	−659.4	−736.7		−157.6	−176.1
	cis $(Co(en)_2Cl_2)Cl$(cr2)	−677.4	−754.7		−161.9	−180.4
	trans $(Co(en)_2Cl_2)Cl$(aq2)	−666.9	−744.2		−159.4	−177.9
	trans $(Co(en)_2Cl_2)Cl·HCl·6H_2O$(cr)	−2555.6	−2632.9		−610.8	−629.3
	trans $(Co(en)_2Cl_2)Cl·NH_3$(cr)	−795.	−872.		−190.	−208.
	cis $(Co(en)_2Cl_2)Cl·NH_3$(cr2)	−774.	−851.		−185.	−203.
2–176	trans $(Co(en)_2Cl_2)Cl·2NH_3$(cr)	−891.	−968.	4 72	−213.	−231.
	cis $(Co(en)_2Cl_2)Cl·2NH_3$(cr2)	−870.	−947.		−208.	−226.
2–176	trans $(Co(en)_2Cl_2)Cl·4NH_3$(cr)	−1071.	−1148.	4 72	−256.	−274.
	cis $(Co(en)_2Cl_2)Cl·4NH_3$(cr2)	−1033.	−1110.		−247.	−265.
	trans $(Co(en)_2Cl_2)Cl·6NH_3$(cr)	−1238.	−1315.		−296.	−314.
	cis $(Co(en)_3)Cl_2$ (cr)	−655.6	−771.6		−156.7	−184.4
	$(Co(en)_2Cl_2)NO_3$(cr)	−751.0	−828.3		−179.5	−198.0
	trans $(Co(en)_2Cl_2)NO_3$(15000 H_2O)	−707.1	−784.4		−169.0	−187.5
	trans $(Co(en)_3)(ClO_4)_3$(cr)	−762.7	−878.7		−182.3	−210.0
	$(Co(en)_3)Br_2$(cr)	−595.8	−711.8		−142.4	−170.1
	$(Co(en)_3)I_3$(cr)	−475.3	−591.3		−113.6	−141.3
	$(Co(en)_3)I_3$(cr)	−519.2	−635.2		−124.1	−151.8
	$(Co(en)_3)I_2$(25000 H_2O)	−469.4	−585.4		−112.2	−139.9
	$Fe(en)^{+2}$(KCl+55 H_2O)	−166.1	−204.8	4 86	−39.7	−48.9
	$Mn(en)^{+2}$(aq)	−288.3	−327.0	4 114	−68.9	−78.2
	$Mn(en)_2{}^{+2}$(aq)	−357.3	−434.6		−85.4	−103.9
	$Mn(en)_3{}^{+2}$(aq)	−434.3	−550.3		−103.8	−131.5