

## SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 514 experiments for

(no ligands specified)

Metal : Tm+++

(no references specified)

(no experimental details specified)

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e- HL Electron (442)  
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	oth	none	25°C	0.0	U			1974JOb (988)	1	
									K(Tm+3e=Tm(s))=-117.7(-2.32V)	
									K(Tm+e=Tm(II))=-35(-2.1V)	

Method: literature evaluated data

Tm+++	oth	none	25°C	0.0	U			1969NBa (989)	2	
									K(Tm+e=Tm(II))=-40.6(-2.4V)	

Method: Estimated data

Tm+++	sp	oth/un	25°C	0.00	U			1964BDb (990)	3	
									K(Tm+e=Tm++) = -42, -2500 mV	

Tm+++	oth	none	25°C	0.0	U			1952LAb (991)	4	
									K(Tm+3e)=-115.5(-2280 mV)	

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AsO4--- H3L Arsenate CAS 7778-39-4 (1557)  
Arsenate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	sol	none	25°C	0.0	C			1992FIa (1163)	5	
									Kso(TmAsO4)=-23.08	

Equilibrium monitored by EDTA and iodine titrations.

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CO3-- H2L Carbonate CAS 465-79-6 (268)  
Carbonate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.70M	C			K1=5.96 2004LBb (3401)	6	
									K(Tm+HCO3=TmHCO3)=1.47	

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.68, B2=13.27,  
K(Tm+HCO3=TmHCO3)=2.52, K(Tm+HL=TmL+H)=-2.65, K(Tm+2HL=TmL2+2H)=-7.39

Tm+++	dis	NaClO4	25°C	0.70M	C	I		K1=5.95 B2=10.75 1998LBb (3402)	7	
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Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.

Values calculated for I=0.0 M, K1=7.93, B2=13.83.

Tm+++	sol none	25°C	0.0	C		1986FMa	(3403)	8
						Kso(Tm2(CO3)3)=-31.58		

Tm+++	sol none	25°C	0.0	C		1986HMa	(3404)	9
						Kso(Tm2(CO3)3)=-31.58		

Method: spectrophotometry.

Tm+++	dis oth/un	20°C	2.5M	C		1979DBb	(3405)	10
						B4=15.71		

Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;  
K1(Tm(edta))=19.24 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

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C6N6Fe--- H3L Ferricyanide (2491)  
Hexacyanoferrate (III); Fe(III)(CN)6---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	cal none	25°C	0.00	M	H		K1=3.67	1972SCd (3695)	11

DH(K1)=4.4 kJ mol<sup>-1</sup>, DS=84.9 J K<sup>-1</sup> mol<sup>-1</sup>

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Cl- HL Chloride CAS 7647-01-0 (50)  
Chloride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	cal non-aq	25°C	100%	C	HM		K1=2.6	2002KNc (5900)	12
							B(Tm(phen)Cl)=5.2		
							B(Tm(phen)Cl2)=6.9		
							B(Tm(phen)Cl3)=8.81		

Medium: DMF, 0.20 M Et4NClO4. DH(K1)=27 kJ mol<sup>-1</sup>, DH(Tm(phen)Cl)=4.0,  
DH(Tm(phen)Cl2)=28, DH(Tm(phen)Cl3)=6.

Tm+++	dis NaCl	25°C	1.0M	C			K1=-0.14	1997HTb (5901)	13

Method: by solvent extraction from 1.0 M NaCl into CHCl3, 0.1 M  
1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Tm+++	cal non-aq	25°C	100%	U	H		K1=2.57	B2=5.33	1991ITa (5902)	14
							K3=2.04			
							K4=1.55			

Medium: DMF, 0.2 M Et4NClO4. DH(K1)=27.4 kJ mol<sup>-1</sup>, DH(K2)=16.6, DH(K3)=21  
DH(K4)=20. DS(K1)=141, DS(K2)=109, DS(K3)=108 J K<sup>-1</sup> mol<sup>-1</sup>

Tm+++	sol NaClO4	25°C	?	U			K1=0.25	1982MAa (5903)	15
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Tm+++	cal non-aq	25°C	100%	U			K1=2.45	B2=4.82	1980VCa (5904)	16
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Medium: diemthylacetamide

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F- HL Fluoride CAS 7644-39-3 (201)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	ix	oth/un	25°C	0.02M	C	T H		K1=3.77 B2= 6.09	2004LMa	(7270) 17
Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=9.88. Data for 5 to 45 C. DH(K1)=10.6 kJ mol-1, DH(B2)=20.6.										
Tm+++	ISE	NaClO4	25°C	0.0	C	I		K1=4.29	2000LBa	(7271) 18
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4. At I=0.70 M, K1=3.361.										
Tm+++	ix	KNO3	25°C	0.02M	C			K1=3.75 B2= 6.35	1999SBc	(7272) 19
Medium: 0.025 M HNO3. Additional method: ICP-MS. Assumed K1(HF) = 3.03, derived from literature values.										
Tm+++	ISE	none	25°C	0.0	C	H		K1=3.25 B2=6.94 Kso=-16.1	1989MJa	(7273) 20
Also by conductivity and radiometry. DH(Kso)=14.7 kJ mol-1; DS=-294.										
Tm+++	ISE	R4N.X	25°C	0.50M	C			K1=3.25 B2=6.94	1989MJb	(7274) 21
Tm+++	cal	NaClO4	25°C	1.00M	C	H			1988GBa	(7275) 22
DH(K1)=10.8 kJ mol-1; DS(K1)= 104 J mol-1 K-1										
Tm+++	ISE	NaNO3	25°C	0.10M	U	H			1987SMd	(7276) 23
K(TmA+L)=2.09 DH=-0.5kJ mol-1, DS=38.2 J K-1 mol-1. H3A=HEDTA										
Tm+++	ISE	NaCl	25°C	1.00M	C			K1=3.155	1985BBb	(7277) 24
Tm+++	gl	KCl	25°C	1.00M	U	M			1981KTb	(7278) 25
K(TmEDTA+F)=1.65 K(Tm(EDTA)F+F)=0.60										
Tm+++	oth	NaClO4	25°C	0.10M	U			K1=3.58	1973MSg	(7279) 26
method:electromigration or transference number										
Tm+++	EMF	NaClO4	25°C	1.0M	U	H		K1=3.56	1967WCa	(7280) 27
By distribution: K1=3.57. By calorimetry: DH(K1)=36.2 kJ mol-1, DS=189.8 *****										
I03-		HL				Iodate		CAS 7782-68-5	(1257)	
Iodate;										

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 IO4- HL Periodate CAS 13444-71-8 (6063)  
 Periodate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sol	oth/un	25°C	dil	U			1974LOa (8616)	30
							Kso(Tm(H2IO6)(H2O)3)=-9.37		

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 Mo12042U----- H8L (2922)  
 Uranium-12-molybdate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	oth/un	20°C	0.10M	U			1989SBb (8783)	31
							B(TmHL)=8.26		
							B(Tm2L)=7.29		
							B(TmH2L)=10.55		

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 NO3- HL Nitrate CAS 7697-37-2 (288)  
 Nitrate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	cal	NaClO4	25°C	2.0M	C	IH	K1=-0.89	1998BMb (9968)	32
DH(K1)=7.1 kJ mol-1. From Pitzer extrapolation to I=0.0, K1=-0.11,									
DH(K1)=5.6 kJ mol-1									

Tm+++	dis	NaClO4	25°C	1.0M	U		K1=-0.25	1965CSb (9969)	33
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OH- HL Hydroxide (57)  
 Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.0	C	IH		2000KBa (12342)	34
							*K1=-7.39		
In 0.7 M NaClO4, *K1=-7.70. DH(*K1)=49 kJ mol-1.									

Tm+++	gl	NaCl	25°C	0.10M	U	I		1999FBa (12343)	35
							*B(1,3)=-20.86		
In 0.1 M Me4NCl, *B(1,3)=-21.97.									

Tm+++	dis	NaClO4	?	0.10M	U			1971GDb (12344)	36
							*K1=-4.4		

Medium: LiClO4

Tm+++	gl	NaClO4	25°C	0.30M	U			1966FKa (12345)	37
							*K1=-7.95		

Tm+++ gl oth/un 25°C var U 1944MKa (12346) 38  
 Kso(Tm(OH)3)=-23.5

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P04--- H3L Phosphate CAS 7664-38-2 (176)  
 Phosphate;

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Tm+++ sol none 25°C 0.0 M 1997LBd (13349) 39  
 Kso(TmP04)=-25.03

Calculated from data for 0.10 M HCl04 solution.

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 Tm+++ sol oth/un 25°C 0.0 C I 1993FKb (13350) 40  
 Kso(TmP04)=-26.68

In synthetic seawater, Ks(TmP04)=-24.08.

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 Tm+++ sol none 25°C 0.0 C 1991FBa (13351) 41  
 Kso(TmP04)=-26.05

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P3010----- H5L CAS 10380-08-2 (1001)  
 Tripolyphosphate; from (HO)2PO.0.PO(OH).0.PO(OH)2

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Tm+++ gl KNO3 25°C 0.10M U T H B2=9.7 1974KRa (13915) 42  
 K(Tm+2HL)=7.3

K(Tm+2HL)=7.5 and B2=9.8 (35 C), K(Tm+2HL)=7.1 and B2=9.4 (45 C)

DH(Tm+2HL)=-19 kJ mol<sup>-1</sup>; DH(B2)=-28

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Re04- HL Perrhenate (2581)  
 Rhenate(VII), Perrhenate;

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Tm+++ sp oth/un rt 1.00M U K1=-0.89 1970POa (14112) 43  
 Medium: HRe04

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SCN- HL Thiocyanate CAS 463-56-9 (106)  
 Thiocyanate;

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Tm+++ dis oth/un 25°C 1.0M C K1=0.42 1997HTb (15309) 44  
 Method: by solvent extraction from 1.0 M NaSCN into CHCl3, 0.1 M  
 1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

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 Tm+++ cal non-aq 25°C 100% U H K1=1.7 B2=3.0 1992TIa (15310) 45  
 K3 = 0.4

Medium: DMF, 0.2 M R4NX. DH(K1)=9 kJ mol<sup>-1</sup>, DH(B2)=6, DH(B3)=40

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Tm+++ dis oth/un 30°C 1.0M C T H K1=0.07 B2= 0.42 1980KMe (15311) 46  
 In 1.0 M NH4ClO4/NH4SCN. Extraction of 170Tm into hexane/ammonium dinonyl-  
 naphthalene sulfonate. Data for 15-45 C. DH(K1)=-1.5 kJ mol<sup>-1</sup>, DH(K2)=-4.9

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S04-- H2L Sulfate CAS 7664-93-9 (15)  
 Sulfate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	sol	oth/un	25°C	0.66M	C		K1=1.81	2004SBb (16610)	47
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Method: solubility of BaS04 in 0.117 m TmCl3 solution.  
 Calculated for I=0, K1=3.48.

Tm+++	cal	none	25°C	0.0	U	H		1974POa (16611)	48
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DH(K1)=20.0 kJ mol<sup>-1</sup>

Tm+++	cal	oth/un	25°C	0.0	U	H		1969FPa (16612)	49
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DH(K1)=13.2 kJ mol<sup>-1</sup>

Tm+++	cal	oth/un	25°C	0.0	U	H	K1=3.41 B2=5.21	1969IEa (16613)	50
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DH(K1)=15.1 kJ mol<sup>-1</sup>, DH(K2)=3.6; DS(K1)=115.8 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=44.7

Tm+++	ISE	NaClO4	25°C	2.0M	U	H	K1=1.15 B2=1.59	1967CCd (16614)	51
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By calorimetry: DH(K1)=17.6 kJ mol<sup>-1</sup>, DS=81.1 J K<sup>-1</sup> m<sup>-1</sup>; DH(K2)=4.2, DS=22.6

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CH03F3S HL CAS 1493-13-6 (6755)  
 Trifluoromethanesulfonic acid; CF3SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	sp	non-aq	25°C	100%	U			1993BCc (17470)	52
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K3=2.41

Medium: MeCN

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C2H02Cl3 HL Trichloroacetic CAS 76-03-9 (1205)  
 Trichloroethanoic acid; Cl3C.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	cal	NaClO4	25°C	2.00M	U		K1=0.23	1980ECa (18336)	53
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C2H202Cl2 HL CAS 79-43-6 (1282)  
 Dichloroethanoic acid; Cl2CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	cal	NaClO4	25°C	2.00M	U		K1=0.53	1980ECa (18402)	54
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C2H203 HL Glyoxylic acid CAS 298-12-4 (1142)  
 Glyoxylic acid; OHC.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	20°C	0.10M	U		K1=2.61 B2=4.61 K3=1.7	1964PSd (18432)	55
*****									
C2H2O4		H2L		Oxalic acid			CAS 144-62-7	(24)	
Ethanedioic acid; (COOH)2									
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	ix	R4N.X	25°C	0.05M	C		K1=5.97 B2=10.46 K(Tm+HL)=2.18	2001SBf (19112)	56
Medium: 0.05 M NH4NO3. At I=0, K1=6.89, B2=11.65.									
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Tm+++	gl	KCl	25°C	1.0M	U	M		1988Kta (19113)	57
K(Tm(edta)+L)=3.50									
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Tm+++	oth	oth/un	25°C	0.10M	U		K1=5.60 B2=9.52	1971STe (19114)	58
Method : electrical migration or transference number									
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Tm+++	ix	oth/un	18°C	0.10M	U		K1=3.40 B2=3.45 B3=1.0	1967ABa (19115)	59
*****									
C2H3O2Cl		HL		Chloroacetic			CAS 79-11-8	(34)	
Chloroethanoic acid; ClCH2.COOH									
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	cal	NaClO4	25°C	2.00M	U		K1=0.92	1980ECa (19388)	60
*****									
C2H4O2		HL		Acetic acid			CAS 64-19-7	(36)	
Ethanoic acid; CH3.COOH									
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	20°C	0.10M	U		K1=2.02 B2=3.61	1962KPa (20207)	61
*****									
C2H4O2S		H2L		Thioglycolic			CAS 68-11-1	(596)	
Mercaptoethanoic acid; HS.CH2.COOH									
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.20M	U		K1=5.71 B2=10.74	1998PJb (20377)	62
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Tm+++	gl	NaClO4	20°C	0.10M	U			1964PKa (20378)	63
K(Tm+HL)=1.98 K(TmHL+HL)1.11									
*****									
C2H4O3		HL		Glycolic acid			CAS 79-14-1	(33)	

2-Hydroxyethanoic acid; HO.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	32°C	0.10M	U			1980PPf (20640) 64		
								K(Tm+HL=TmL+H)=-0.38		
								*K(TmL)=-5.55		
								K(Tm+2HL=TmL2+2H)=-1.64		
								*K(TmL2)=-5.48		
Tm+++	gl	NaCl04	20°C	0.10M	U			K1=3.055 B2=5.33 1964PKb (20641) 65		
								B3=7.00		

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C2H5NO2 HL Glycine CAS 56-40-6 (85)  
2-Aminoethanoic acid; H2N.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (21737) 66		
								K(TmA+L)=4.39		
								K(TmA+HL)=3.01		
								K(TmA+H2L)=3.03		

Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.

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C2H6OS L DMSO CAS 67-68-5 (329)  
Dimethylsulfoxide; (CH3)2.SO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	sp	non-aq	25°C	100%	U			1992MBb (22128) 67		
								K8=0.7		
								K9=0.3		

Medium: MeCN. Method: FT-IR and Raman spectroscopy

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C2H6O2 L Ethyleneglycol CAS 107-21-1 (924)  
1,2-Dihydroxyethane (Ethane-1,2-diol); HO.CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaCl04	22°C	0.10M	U			1972MCd (22159) 68		
								K(TmH-1L+H)=6.80		

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C2H8N2 L Ethylenediamine CAS 107-15-7 (23)  
1,2-Diaminoethane; H2N.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	ISE	non-aq	25°C	100%	C	H		K1=2.86 B2=5.36 1992CBa (23242) 69		
								B3=7.04		



Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-21.6, DH(B2)=-40.7, DH(B3)=-84.0 kJ mol<sup>-1</sup>.

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C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)  
2-Oxopropanoic acid; CH<sub>3</sub>.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	nmr	NaClO4	25°C	2.00M	U	H	K1=1.89	1980CCa (24075)	70
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DH=-4.64 kJ mol<sup>-1</sup>. Alternative method: Calorimetry.

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C3H4O4 H2L Malonic acid CAS 141-82-2 (79)  
Propanedioic acid; CH<sub>2</sub>(COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	NaClO4	25°C	0.10M	U		K1=4.91 B2=7.95	1972DCc (24572)	71
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Tm+++	gl	NaClO4	25°C	1.00M	U		K1=3.85 B2=6.42 B3=7.62 B(TmHL)=6.26 B(TmHL2)=9.98	1971DGa (24573)	72
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Tm+++	gl	KNO3	25°C	0.10M	U		K1=4.42 B2=7.01	1968PFa (24574)	73
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C3H4O6 H2L CAS 560-27-0 (4233)  
Dihydroxypropanedioic acid; HOOC.C(OH)<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	KCl	25°C	0.20M	U		K1=3.67	1973LPb (24634)	74
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C3H5NO2 HL (4234)  
Isonitrosoacetone; CH<sub>3</sub>.CO.CH:N.OH, anti-Pyruvic aldehyde oxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	diox/w	20°C	50%	U		K1=6.07	1971MAf (24651)	75
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Medium: 50% dioxan, 0.1 M NaClO4

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C3H6N2O2 L Methylglyoxime CAS 2140-03-6 (2981)  
Methylglyoxime; CH<sub>3</sub>.C(:N.OH).CH:N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	diox/w	20°C	50%	U		K1=7.27 B2=13.42	1971MAf (24813)	76
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Medium: 50% dioxan, 0.1 M NaClO4

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C3H6O2 HL Propionic acid CAS 79-09-4 (35)  
Propanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl04	25°C	2.0M	U		K1=1.61 B2=2.66	1965CGa (25062)	77
Tm+++	gl	NaCl04	20°C	0.10M	U		K1=1.91 B2=3.43	1964PKa (25063)	78
C3H6O2S H2L Thiolactic acid CAS 79-42-5 (366) 2-Mercaptopropionic acid; CH3.CH(SH).COOH									
Tm+++	gl	NaCl04	25°C	0.20M	U		K1=6.44 B2=12.38	1998PJb (25175)	79
Tm+++	gl	NaCl04	25°C	2.00M	U		K(Tm+HL)=1.48	1968Cma (25176)	80
C3H6O2S H2L CAS 107-96-0 (437) 3-Mercaptopropionic acid; HS.CH2.CH2.COOH									
Tm+++	gl	NaCl04	25°C	2.00M	U		K(Tm+HL)=1.40	1968Cma (25231)	81
C3H6O3 HL CAS 81598-26-7 (2521) 3-Hydroxypropionic acid; HO.CH2.CH2.COOH									
Tm+++	gl	NaCl04	25°C	2.00M	U		K1=1.45	1969JCc (25281)	82
C3H6O3 HL L-Lactic acid CAS 79-33-4 (82) L-2-Hydroxypropionic acid; CH3.CH(OH).COOH									
Tm+++	gl	KNO3	30°C	0.10M	U		K(Tm+HL=TmL+H)=0.44 *K(TmL)=-4.55 K(Tm+2HL=TmL2+2H)=-0.64 *K(TmL2)=-3.86	1983MPc (25556)	83
Tm+++	gl	NaCl04	25°C	0.20M	U		K1=2.92 B2=5.26 K3=1.34 K4=0.65	1964DVa (25557)	84
Tm+++	gl	NaCl04	20°C	0.10M	U		K1=3.190 B2=5.71 B3=7.43	1964PKb (25558)	85

C3H6O3                      HL      Methoxyacetic      CAS 625-45-6    (29)  
Methoxyethanoic acid; CH3.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	20°C	0.10M	U		K1=2.08    B2=3.23	1964PKa (25609)	86
*****									

C3H7NO2                      HL      Alanine                      CAS 56-41-7    (86)  
2-Aminopropanoic acid; H2N.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U		K1=4.7	1967EMb (26281)	87
*****									

C3H7NO2S                      H2L      Cysteine                      CAS 52-90-4    (96)  
2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	20°C	0.0	U	T H	K1=7.998    B2=15.90	1980SDc (26846)	88
Extrapolated from data for I=0.10-1.0 M. Data for 35 and 45 C. DH(K1)=-22.8 kJ mol-1, DS=75 J K-1 mol-1; DH(K2)=-34.4, DS(K2)=34.									
*****									

C3H8O2                      L      Propyleneglycol      CAS 57-55-6    (2025)  
Propan-1,2-diol; CH3.CH(OH).CH2(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	22°C	0.10M	U			1972Mcd (27687)	89
							K(TmH-1L+H)=6.85		
*****									

C3H8O3                      L      Glycerol                      CAS 56-81-5    (2707)  
Propane-1,2,3-triol; HO.CH2.CH(OH).CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	22°C	0.10M	U			1972Mcd (27755)	90
							K(TmH-1L+H)=6.75		

Tm+++	gl	NaCl	25°C	0.10M	U			1970PKe (27756)	91
							K(TmH-1L+H)=6.50		
*****									

C3H12N09P3                      H6L      NTPA                      CAS 6419-19-8    (2920)  
Nitrilotris(methylenephosphonic acid); N(CH2PO3H2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C			1991SKb (28593)	92
							K(TmL+H)=7.01		
							K(TmHL+H)=5.6		

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C4H2O4                      H2L      Squaric acid              CAS 2892-51-5    (439)  
3,4-Dihydroxy-3-cyclobutene-1,2-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	cal	NaCl04	25°C	0.10M	U	H	K1=2.78    B2=4.21	19760Ca (28668)	93
DH(K1)=9.8 kJ mol <sup>-1</sup> , DS=86 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=16.8, DS=137									

Tm+++	gl	NaCl04	25°C	0.10M	C	H	K1=2.779    B2= 4.22	19760Cb (28669)	94
By calorimetry: DH(K1)=9.75 kJ mol <sup>-1</sup> , DS(K1)=85.8 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=16.8, DS(B2)=137.									

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C4H4O4                      H2L      Maleic acid              CAS 110-16-7    (111)  
cis-Butenedioic acid; HOOC.CH:CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl04	25°C	0.10M	U		K1=3.62	1973CDc (29143)	95
Tm+++	gl	NaCl04	25°C	0.10M	U		K1=3.62    B2=5.64	1970RFa (29144)	96

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C4H4O4                      H2L      Fumaric acid              CAS 110-17-8    (289)  
trans-Butenedioic acid; HOOC.CH:CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl04	25°C	0.10M	C		K1=2.44 B(TmHL)=5.99 K(Tm+HL)=1.91	1986LCa (29223)	97

Tm+++	gl	NaCl04	25°C	0.10M	U		K1=2.81	1973CDc (29224)	98
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C4H5NO5                      H2L                                      (7375)  
Oxalohydroxamic acid; HOOC.CO.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.1M	M		K1=11.71    B2=22.62 K3=10.25	1989LWa (29317)	99

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C4H6O4                      H2L      Me-Malonic Acid      CAS 516-15-2    (816)  
Methylpropanedioic acid; HOOC.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	0.20M	U		K1=4.38    B2=7.05	1975PLa (30140)	100

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C4H6O4S                      H3L      Thiomalic acid      CAS 70-49-5    (109)  
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOC.CH(SH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.20M	U		K1=5.93 B2=11.58	1998PJb (30369)	101
*****									
C4H6O5		H2L		Malic acid			CAS 617-48-1 (393)		
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH									
Tm+++	gl	KNO3	30°C	0.10M	U	M		1984AIa (30742)	102
K(Tm(EDTA)+L)=1.982									
Tm+++	gl	KNO3	20°C	0.10M	U			1980SDa (30743)	103
B(TmHL)=7.80									
Tm+++	gl	KNO3	20°C	0.10M	U		K1=4.75 B2=7.95	1980Sdb (30744)	104
K(Tm+HL)=1.11									
Tm+++	gl	NaClO4	25°C	0.10M	U		K1=5.01 B2=8.50	1970RFa (30745)	105
*****									
C4H6O5		H2L		Diglycolic acid			CAS 110-99-6 (243)		
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH2.O.CH2.COOH									
Tm+++	gl	KCl	25°C	1.0M	U	M		1988KTa (30939)	106
K(Tm(edta)+L)=1.30									
Tm+++	cal	NaClO4	25°C	1.0M	C	H		1963GRd (30940)	107
DH(K1)=6.586 kJ mol <sup>-1</sup> , DS(K1)=128 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=4.874, DS(B2)=213; DH(B3)=-15.98, DS(B3)=200.									
Tm+++	EMF	NaClO4	20°C	1.00M	U		K1=5.49 B2=10.22	1963GTa (30941)	108
B3=13.29									
Method: quinhydrone electrode									
*****									
C4H6O6		H2L		L-Tartaric acid			CAS 87-69-4 (92)		
L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH									
Tm+++	ix	NaClO4	25°C	0.10M	U		B2=6.35	198000a (31378)	109
K(Tm+2HL)=4.10									
K(Tm+HL+L)=5.99									
Tm+++	sp	oth/un	25°C	0.0	U	T H	K1=5.31	1975YBa (31379)	110
DH(K1)=11.7 kJ mol <sup>-1</sup> , DS=142.2 J K <sup>-1</sup> mol <sup>-1</sup>									
Tm+++	gl	alc/w	25°C	40%	U	I	K1=5.09	1972SSj (31380)	111

Medium: 0-40% EtOH, 0.05 M. 40% EtOH, I=0: K1=6.51

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C4H7NO4 H2L Aspartic acid CAS 56-84-8 (21)

Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl04	30°C	0.10M	U		K1=5.87 B2=10.80	1984YLa (31956)	112

Tm+++	gl	KCl	25°C	0.10M	U		K1=6.10 B2=11.10	1968DRb (31957)	113
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C4H7NO4 H2L IDA CAS 142-73-4 (118)

Iminodiethanoic acid; HN(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	1.0M	U	M		1988KTa (32380)	114
							K(Tm(edta)+L)=3.03		

Tm+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (32381)	115
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K(TmA+L)=5.12

K(TmA+H2L)=0.98

K(TmA+H3L)=2.21

Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.

Tm+++	cal	KNO3	20°C	0.10M	U	HM		1971GKb (32382)	116
							K(TmA+L)=2.86		

DH(TmA+L)=-27.20 kJ mol<sup>-1</sup>, DS=-38.1 J K<sup>-1</sup> mol<sup>-1</sup>. DH(SmAL)=-35.02, DS=305.

H4A=EDTA

Tm+++	gl	KNO3	25°C	0.10M	U	M	K1=7.22 B2=12.90	1962THa (32383)	117
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Ternary complexes with N-(2-hydroxyethyl)diaminoethane-triethanoic acid

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C4H8N2O2 H2L Dimethylglyoxim CAS 95-45-4 (2032)

2,3-Butanedione dioxime, Dimethylglyoxime; CH3.(C:NOH).(C:NOH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	20°C	50%	U		K1=8.63 B2=16.20	1971MAf (32552)	118

Medium: 50% v/v dioxan, 0.1 M NaCl04

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C4H8N2O3 HL Asparagine CAS 70-47-3 (17)

2-Aminobutanedioic acid 4-amide; H2N.CH(CH2.CO.NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl04	30°C	0.10M	U		K1=4.22 B2=7.31	1984YLa (32735)	119

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C4H8N2O4 H2L HDA CAS 19247-05-3 (1025)

Hydrazine-N,N'-diethanoic acid; HOOC.CH2.NH.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KCl	60°C	0.10M	U			K1=6.41 B2=11.11 B3=10.95	1978NBa (33095)	120

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C4H8N2O4                      H2L                      CAS 39156-77-9 (3008)

Hydrazine-N,N-diethanoic acid; H2N.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	30°C	0.10M	U	M		K(Tm(EDTA)+L)=2.143	1984AIa (33116)	121

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C4H8O2                      HL                      Isobutyric acid                      CAS 79-31-2 (573)

2-Methylpropanoic acid; CH3.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	2.00M	U	H		K1=1.61    B2=2.67	1965CGa (33251)	122
By calorimetry: DH(K1)=22.6 kJ mol <sup>-1</sup> , DS=107 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=17.1, DS=78										

Tm+++	gl	NaClO4	25°C	0.50M	U			K1=1.69    B2=2.28	1964SPa (33252)	123
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C4H8O3                      HL                      CAS 594-61-6 (81)

2-Hydroxy-2-methylpropanoic acid; (CH3)2C(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.20M	U			K1=3.10    B2=5.79 K3=1.92 K4=1.62	1964DVa (33529)	124

Tm+++	gl	NaClO4	20°C	0.10M	U			K1=3.515    B2=6.22 B3=8.39	1964PKb (33530)	125
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Tm+++	gl	NaClO4	25°C	0.50M	U			K1=3.13    B2=5.62 B3=7.84	1964SPa (33531)	126
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C4H8O4                      HL                      CAS 21620-60-0 (2326)

2,3-Dihydroxy-2-methylpropanoic acid; HO.CH2.C(OH)(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C			K1=3.22    B2=5.78 K3=1.83	1975PFb (33687)	127

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C4H8O5                      HL                      CAS 56309-80-9 (2365)

2,3-Dihydroxy-2-hydroxymethylpropanoic acid; HO.CH2.C(CH2.OH)(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	EMF	KNO3	25°C	0.10M	U		K1=3.08 K3=2.04	1976PKb (33715)	128

Tm+++	gl	NaClO4	25°C	0.50M	U		K1=2.85 B3=6.51	1964SPa (33716)	129
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C4H11N L Butylamine CAS 109-73-9 (159)  
1-Aminobutane; CH3.CH2.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	cal	non-aq	25°C	100%	U	H	K1=4.38 B3=10.17 B4=11.67	1997CDa (34773)	130

Medium: MeCN. DH(K1)=-35.4 kJ mol<sup>-1</sup>, DS=35, DH(B2)=-70.4, DS=87;  
DH(B3)=-103, DS=151, DH(B4)=-135, DS=229

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C4H11O4P HL (4276)  
Diethylphosphoric acid; (C2H5O)2.PO.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	oth	oth/un	25°C		U		K1=2.18	1971MGB (35270)	131

Estimated

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C4H12N2O L CAS 2752-17-2 (312)  
Bis-(2-aminoethyl)ether; H2N.CH2.CH2.O.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	EMF	non-aq	25°C	100%	C	H	K1=2.68 B2= 4.64	2002CDb (35509)	132

Method: comp. reactn. using Ag electrode. Medium: DMSO, 0.10 M Et4NClO4.  
Calorimetry: DH(K1)=-12 kJ mol<sup>-1</sup>, DS=11 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-30, DS=-11.

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C4H13N3 L Dien CAS 111-40-0 (584)  
1,4,7-Triazaheptane, 2,2'-Iminobis(ethylamine), diethylenetriamine;  
NH2.(CH2)2.NH.(CH2)2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	EMF	NaClO4	25°C	100%	C	H	K1=6.57 B2=10.68	2000CDa (35819)	133

Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.  
By calorimetry: DH(K1)=-49.1, DH(B2)=-96.9 kJ mol<sup>-1</sup>.

Tm+++	ISE	non-aq	25°C	100%	C	H	K1=3.97 B2=7.25	1993CCb (35820)	134
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Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-34.8 kJ mol<sup>-1</sup>, DS=-41; DH(B2)=-79.5, DS=128.



C5H2O5	H2L	Croconic acid	CAS 488-86-8	(1643)
4,5-Dihydroxycyclopent-4-ene-1,2,3-trione;				

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Method: extraction of  $^{170}\text{Tm}$  from 1.0 M  $\text{NaClO}_4$  into benzene/HL.

Tm+++	gl	NaClO4	20°C	0.10M	U	M			1973TZa (38107)	141
K(Tm(EDTA)+L)=3.66										
Tm+++	gl	NaClO4	25°C	2.0M	U		K1=6.03	B2=10.75	1964YCa (38108)	142
Tm+++	gl	oth/un	30°C	0.10M	U		K1=6.09	B2=10.85	1960GFa (38109)	143
K3=3.48										
*****										
C5H8O4		H2L					CAS	601-75-2	(479)	
Ethylpropanedioic acid; H00C.CH(C2H5).COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	0.20M	U		K1=4.51		1989ZPa (38252)	144
In 70.4% v/v EtOH/H2O: K1 = 6.43										
*****										
C5H8O4		H2L					CAS	498-21-5	(2234)	
Methylsuccinic acid; H00C.CH2.CH(CH3).COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M	U		K1=3.08	B2=5.14	1970RFa (38270)	145
*****										
C5H9NO2		HL					CAS	147-85-3	(44)	
Pyrrolidine-2-carboxylic acid; C4H8N.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M	U		B2=6.08		1981ZLa (38649)	146
*****										
C5H9NO3		HL					CAS	51-35-4	(416)	
4-Hydroxy-2-pyrrolidinecarboxylic acid; C4H7N(OH)(COOH)										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaCl	37°C	0.15M	U		K1=3.47		1997GMa (38756)	147
Tm+++	gl	NaClO4	25°C	0.10M	U		B2=5.55		1981ZLa (38757)	148
*****										
C5H9NO4		H2L					CAS	4408-64-4	(190)	
N-Methyliminodiethanoic acid; CH3.N(CH2.COOH)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	0.10M	U		K1=7.35	B2=13.44	1980MGc (39288)	149
B3=15.38										
B(Tm+20H+L)=18.67										
*****										
C5H10O3		HL					CAS	3739-30-8	(3612)	
2-Hydroxy-2-methylbutanoic acid, Methylethylglycolic acid; CH3.CH2.C(OH)(CH3)COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U		K1=3.37 K3=1.92	1969PCa (40265)	150
*****									
C5H10O4		HL					CAS 4767-03-7	(4297)	
2,2-Bis(hydroxymethyl)propanoic acid; CH3.C(CH2OH)2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M	U		K1=2.31 B2=3.93	1970RDa (40305)	151
*****									
C5H10O4		HL					CAS 19860-56-1	(2327)	
2,3-Dihydroxy-2-methylbutanoic acid; CH3.CH(OH).C(OH)(CH3).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C		K1=3.15 K3=1.73	1975PFb (40320)	152
*****									
C6H5NO2		HL					Picolinic acid CAS 98-98-6	(391)	
2-Pyridine-carboxylic acid; C5H4N.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.50M	U		K1=4.05 B3=10.58	1977GGb (42608)	153
*****									
Tm+++	gl	KNO3	25°C	0.10M	U		K1=4.33 K3=2.87 K4=2.04	1968PIa (42609)	154
*****									
Tm+++	gl	NaClO4	25°C	2.0M	U		K1=4.31 B2=7.48	1965YCa (42610)	155
*****									
Tm+++	gl	KNO3	25°C	0.10M	U		K1=4.36 B3=11.2	1964THb (42611)	156
*****									
C6H5NO3		HHL					CAS 824-40-8	(878)	
Pyridine-2-carboxylic acid N-oxide (Picolinic acid N-oxide); C5H4N(O)COO									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	2.0M	U		K1=3.16 B2=5.85	1965YCa (42841)	157
*****									
C6H5NO4		H2L					CAS 3163-07-3	(2711)	
2,4-Dihydroxy-1-nitrobenzene; O2N.C6H3(OH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Tm+++ sp KCl 25°C 0.10M M I K1=6.38 1989PEa (42961) 158  
\*\*\*\*\*

C6H5O4Br L CAS 40838-32-2 (1084)  
6-Bromo-5-hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp KCl 25°C 0.10M U K1=5.60 1987PLa (43117) 159  
\*\*\*\*\*

C6H5O4I L (1085)  
6-Iodo-5-hydroxy-2-hydroxymethyl-4H-pyran-4-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp KCl 25°C 0.10M U K1=5.68 1987PLa (43159) 160  
\*\*\*\*\*

C6H6O2 H2L Catechol CAS 120-80-9 (534)  
1,2-Dihydroxybenzene, pyrocatechol; HO.C6H4.OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 25°C 0.20M U K1=9.98 1998PJb (43853) 161  
-----

Tm+++ EMF NaCl 25°C 0.10M U K1=11.56 1969PKe (43854) 162  
\*\*\*\*\*

C6H6O3 H3L Pyrogallol CAS 87-66-1 (696)  
1,2,3-Trihydroxybenzene; C6H3(OH)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 25°C 0.20M U K1=11.08 1998PJb (43989) 163  
\*\*\*\*\*

C6H6O4 HL Kojic acid CAS 501-30-4 (1800)  
5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp KCl 25°C 0.10M C I K1=6.322 1987PEa (44246) 164  
In 0.087 M KCl, K1=6.349.

-----  
Tm+++ gl NaClO4 25°C 2.0M U K1=6.00 B2=11.55 1964YCa (44247) 165  
\*\*\*\*\*

C6H6O8S2 H4L Tiron CAS 149-45-1 (104)  
4,5-Dihydroxybenzene-1,3-disulfonic acid; (HO)2.C6H2(SO3H)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 25°C 0.50M C K1=12.96 B2=22.50 1976LAB (44503) 166  
B(TmHL2)=30.06  
-----

Tm+++ gl NaClO4 25°C 0.10M U K1=14.36 1970SSi (44504) 167  
K(Tm+HL)=5.67

\*\*\*\*\*

C6H7NO HL 2-Aminophenol CAS 95-55-6 (2868)  
2-Amino-1-hydroxybenzene; HO.C6H4.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl mixed 25°C 50% U I K1=4.48 B2=8.50 1969BCa (44939) 168  
Medium: 50% DMSO, 0.12 M NaClO4. In 0.12 M NaClO4, 50% dioxan: K1=5.65,  
K2=4.34. Medium: 0.12 NaClO4, 50% EtOH: K1=5.01, K2=4.20

\*\*\*\*\*

C6H8O4 H2L CAS 2583-25-7 (958)  
2-Allylpropanedioic acid; H00C.CH(CH2.CH:CH2).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KCl 25°C 0.20M U K1=4.03 1989ZPa (45476) 169  
In 70.4% v/v EtOH/H2O: K1 = 6.16

\*\*\*\*\*

C6H8O6 H2L Ascorbic acid CAS 50-81-7 (285)  
Ascorbic acid (Vitamin C);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 25°C 2.00M U IH K(Tm+HL)=1.41 1988HSa (45663) 170

DH=6.8 kJ mol<sup>-1</sup>, DS=49.9 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C6H8O7 H3L Citric acid CAS 77-92-9 (95)  
2-Hydroxypropane-1,2,3-tricarboxylic acid; H00CCH2.CH(OH)(COOH).CH2COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KNO3 25°C 1.0M M 1986SZb (46286) 171

K(Tm+H3L=TmHL+2H)=-2.46

K(Tm+H3L=TmL+3H)=-5.88

K(Tm+H3L=TmH-1L+4H)=-11.13

K(Tm+2H3L=TmH2L2+4H)=-6.35

K(Tm+2H3L=TmL2+6H)=-13.70, K(Tm+2H3L=TmH-2L2+8H)=-28.1,

K(Tm+2H3L=TmH-3L2+9H)=-27.5, K(Tm+2H3L=TmH-4L2+10H)=-35.4.

-----  
Tm+++ gl KNO3 25°C 0.10M U M 1975TDa (46287) 172

B(Tm(IDA)L)=10.2

-----  
Tm+++ dis NaClO4 25°C 0.15M U 1973HHc (46288) 173

K(Tm+HL+L)=11.43

-----  
Tm+++ gl alc/w 25°C 25% U I K1=8.84 1972BKd (46289) 174

Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4). 0%, K1=8.00; 50%, K1=9.99

-----  
Tm+++ ix NaCl 25°C 0.10M U K1=7.51 B2=12.74 197200a (46290) 175  
K(Tm+HL)=5.60  
K(Tm+2HL)=9.01  
-----

Tm+++ dis oth/un ? ? U 1972PGd (46291) 176  
K(Tm+HL+L)=10.18  
-----

Tm+++ oth oth/un 25°C 0.10M U K1=8.06 B2=11.36 1971STe (46292) 177  
K(TmL+HL)=2.60

Constants obtained by survey of literature data

\*\*\*\*\*

C6H9NO6 H3L NTA CAS 139-13-9 (191)  
Nitrilotriethanoic acid; N(CH<sub>2</sub>.COOH)<sub>3</sub>

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ ISE NaCl04 25°C 0.10M C I K1=11.98 1997LBb (47063) 178  
Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.  
At I=0.0 M, K1=13.83.  
-----

Tm+++ ISE KNO3 25°C 0.10M C K1=12.20 1980NSf (47064) 179  
Competitive method using Cd ion-selective electrode.  
-----

Tm+++ gl KNO3 20°C 1.0M C K2=8.47 1978GHb (47065) 180  
-----

Tm+++ gl NaCl04 25°C 0.50M U K1=11.95 1977GGb (47066) 181  
-----

Tm+++ EMF KCl 25°C 1.0M U M 1977GMa (47067) 182  
K(TmA+L)=5.73  
K(TmA+H2L)=1.80  
K(TmA+H3L)=2.25  
K(TmA+H4L)=3.37

Method: Pt/H<sub>2</sub> electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.  
-----

Tm+++ cal KNO3 20°C 0.10M U HM 1971GKb (47068) 183  
K(TmA+L)=3.13  
H4A=EDTA. DH(TmA+L)=-28.24 kJ mol<sup>-1</sup>, DS=-36.4 J K<sup>-1</sup> mol<sup>-1</sup>.  
DH(TmLA)=-36.1 kJ mol<sup>-1</sup>, DS=307 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Tm+++ gl oth/un 20°C 0.20M U 1970VMa (47069) 184  
B(TmL(OH))=6.62  
-----

Tm+++ gl KNO3 25°C 0.10M U T H T K1=12.22 B2=21.45 1962MFb (47070) 185  
15 C: K1=12.21, K2=9.32; 20 C: 12.20, 9.25; 30 C: 12.28, 9.22; 35 C: 12.27, 9.17; 40 C: 12.30, 9.16. DH(K1)=8.0 kJ mol<sup>-1</sup>, DS=261; DH(K2)=-9.9, DS=144  
-----

Tm+++ vlt KNO3 20°C 0.10M U 1957N0a (47071) 186  
B(Tm2L3)=38.28

\*\*\*\*\*

C6H10O3 HL CAS 16841-19-3 (3649)  
1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M	U		K1=3.110 B2=5.72 K3=1.99 K4=1.30	1966PRb (47998)	187

\*\*\*\*\*

C6H10O6 H2L CAS 23243-68-7 (242)  
1,2-Bis(carboxymethoxy)ethane; HOOC.CH2.O.CH2.CH2.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	oth	NaClO4	25°C	0.10M	U		K1=4.69	1984AFa (48357)	188
Laser excitation spectroscopy, competition method.									
Tm+++	gl	NaClO4	25°C	1.00M	C	H	K1=4.64 B2=8.23 B3=8.46 B(TmHL2)=9.51	1974GGa (48358)	189

\*\*\*\*\*

C6H11NO5 H2L HIMDA CAS 93-62-9 (192)  
N-(2-Hydroxyethyl)iminodiethanoic acid; HO.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	1.00M	U		K1=8.52 B2=16.23 K(YbL2(OH)+H)=9.12	1974CMd (48801)	190
Tm+++	oth	NaNO3	20°C	0.10M	U	M	K1=9.1 B2=16.90	1966JMc (48802)	191
Method: paper electrophoresis. Ternary complexes with HEDTA									
Tm+++	gl	KCl	25°C	0.10M	U		K1=9.03 B2=16.34	1965DTa (48803)	192
Tm+++	ISE	KNO3	25°C	0.10M	U		K1=9.35 B2=17.23	1963TLA (48804)	193

\*\*\*\*\*

C6H12N2O4 H2L EDDA CAS 5657-17-0 (119)  
1,2-Diaminoethane-N,N'-diethanoic acid; HOOC.CH2.NH.CH2.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	C		K1=8.75	1988CCb (49276)	194

\*\*\*\*\*

C6H12O2 HL CAS 142-62-1 (964)  
Hexanoic acid; CH3.(CH2)4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl	20°C	0.10M	U		K1=2.37	1986GKb (49429)	195

\*\*\*\*\*

C6H12O4 HL CAS 1112-33-0 (1246)  
2,3-Dihydroxy-2,3-dimethylbutanoic acid; (CH3)2.C(OH).C(OH)(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U		K1=3.44 B2=5.75 K3=1.81	1979PPa (49501)	196

\*\*\*\*\*

C6H13NO2 HL Norleucine CAS 616-06-8 (602)  
2-Aminohexanoic acid (2-Aminocaproic acid) CH3.(CH2)3.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KCl	20°C	0.20M	U		K1=4.18 B2=8.88	1990PLa (50196)	197

\*\*\*\*\*

C6H13NO4 HL Bicine CAS 150-25-4 (2124)  
N,N-Bis(2-hydroxyethyl)glycine; (HO.CH2.CH2)2N.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	0.10M	U		K1=5.35 B2=9.90	1982RFa (50414)	198
Tm+++	gl	KCl	30°C	0.10M	U		K1=5.52 B2=9.65	1973MSe (50415)	199

\*\*\*\*\*

C6H13N3O3 HL Citrulline (579)  
2-Amino-5-ureidovaleric acid; H2N.CO.NH.CH2.CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl	37°C	0.15M	U	M	K1=3.16 B(TmHL)=11.10 B(TmH2AL)=24.47	1997GMa (50589)	200

Ligand is DL-citrulline. HA is L-hydroxyproline.

\*\*\*\*\*

C6H18N4 L Tren CAS 4097-89-6 (817)  
2,2',2''-Triaminotriethylamine; (H2N.CH2.CH2)3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	ISE	non-aq	25°C	100%	C	H	K1=5.84 B2=7.27	1993CCb (52211)	201

Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-54.8 kJ mol<sup>-1</sup>, DS=-72; DH(B2)=-82.0, DS=-136.

\*\*\*\*\*

C6H20N2O12P4 H8L EDTPA CAS 1429-50-1 (434)  
Ethane-1,2-bis(iminobis(methylenephosphonic acid)); ((H2O3PCH2)2NCH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C			1991SKb (52367)	202



Tm+++	gl	KCl	25°C 0.10M U	K1=21.41	1967KDa (52368) 203
				K(Tm+HL)=16.17	
				K(Tm+H2L)=12.88	
				K(Tm+H3L)=10.28	
				K(Tm+H4L)=8.04	

\*\*\*\*\*  
C7H4N2O7                      H2L                      CAS 609-99-4    (400)  
3,5-Dinitrosalicylic acid; (O2N)2.C6H2(OH).COOH

Tm+++ g1 oth/un 24°C 0.20M U K1=5.61 1972PSd (52503) 204  
Medium: LiCl

\*\*\*\*\*  
C7H5N04                    H2L      Dipicolinic aci   CAS 449-83-2   (418)  
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

Tm+++ cal NaCl04 25°C 0.50M C H 1963GRd (52814) 205  
DH(K1)=-7.67 kJ mol<sup>-1</sup>, DS(K1)=143 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-22.89,  
DS(B2)=239; DH(B3)=-53.85, DS(B3)=239.

\*\*\*\*\*  
C7H5NO4                      HL                      CAS 121-92-6    (490)  
3-Nitrobenzoic acid; O2N.C6H4.COOH

Tm+++ g1 NaClO4 25°C 0.10M C H K1=1.60 1986CLc (52874) 207  
DH=9.3 kJ mol<sup>-1</sup>, DS=62 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
C7H5O2F                      HL                      CAS 445-29-4    (5711)  
3-Fluorobenzoic acid; F.C6H4.COOH

Tm+++ g1 NaClO4 25°C 0.10M C H K1=1.73 1986CLc (53243) 208  
DH=9.0 kJ mol<sup>-1</sup>, DS=63 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
C7H5O2F                      HL                      CAS 456-22-4    (5710)  
4-Fluorobenzoic acid; F.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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-----  
Tm+++ gl NaClO4 25°C 0.10M C H K1=1.85 1986CLc (53263) 209  
DH(K1)=11.0 kJ mol<sup>-1</sup>, DS=72 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C7H5O6BrS H2L (1626)  
3-Bromo-5-sulfosalicylic acid; Br.C6H2(OH)(COOH).SO3H

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 25°C 0.10M C T 1993ALa (53377) 210  
B(1,1,1)=12.34  
B(1,0,1)=7.69  
B(1,0,2)=13.24  
B(1,-2,1)=-7.15

B(p,q,r); pTm+qH+rL=(Tm)pHqLr

\*\*\*\*\*

C7H6O2 HL Tropolone CAS 533-75-5 (3129)  
2-Hydroxycyclohepta-2,4,6-trien-1-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KNO3 25°C 0.10M U K1=7.60 B2=13.99 1969CMB (53697) 211  
K3=5.40  
K4=3.80

\*\*\*\*\*

C7H6O2 HL Benzoic Acid CAS 65-85-0 (462)  
Benzenecarboxylic acid; C6H5.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ cal NaClO4 25°C 0.10M U H K1=1.94 B2=3.63 1982CBc (53859) 212  
DH1= 9.9 kJ mol<sup>-1</sup>, DS1= 70 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C7H6O3 H2L Salicylic acid CAS 69-72-7 (14)  
2-Hydroxybenzoic acid, Salicylic acid; HO.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 25°C 0.1M C H 1996HYa (54317) 213  
By calorimetry: DH(K1)=3.34 kJ mol<sup>-1</sup>, DH(B2)=6.97 J K<sup>-1</sup> mol<sup>-1</sup>

Tm+++ gl NaClO4 25°C 0.10M C T 1989HMa (54318) 214  
K(Tm+HL)=1.75  
K(TmHL+HL)=1.92

\*\*\*\*\*

C7H6O3 H2L CAS 99-06-9 (1370)  
3-Hydroxybenzoic acid; HO.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaCl04 25°C 0.10M C 1988LLa (54391) 215  
K(Tm+HL)=1.93

\*\*\*\*\*

C7H6O3 H2L CAS 99-96-7 (1371)

4-Hydroxybenzoic acid; HO.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaCl04 25°C 0.10M C 1988LLa (54435) 216

K(Tm+HL)=2.08

\*\*\*\*\*

C7H6O4 H3L Protocatechuic CAS 99-50-3 (875)

3,4-Dihydroxybenzoic acid; C6H3(OH)2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaCl04 25°C 0.20M U K1=10.58 1998PJb (54705) 217

\*\*\*\*\*

C7H6O6S H3L CAS 5965-83-3 (399)

5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; H03S.C6H3(OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaCl04 20°C 1.0M U K1=7.28 B2=13.15 1972CBb (55060) 218

Tm+++ sp NaCl04 20°C 0.10M U K1=8.34 B2=14.95 1968KTb (55061) 219

K(Tm+HL)=2.27

\*\*\*\*\*

C7H6O9S2 H3L CAS 56507-30-3 (2659)

3,5-Disulfosalicylic acid; (H03S)2.C6H2(OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaCl04 25°C 0.50M C T K1=8.85 B2=14.70 1976LAc (55103) 220

\*\*\*\*\*

C7H7NO2 HL Anthranilic CAS 118-92-3 (1589)

2-Aminobenzoic acid, Anthranilic acid; H2N.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaCl04 25°C 0.10M C K1=2.22 B2=4.39 1989HMa (55267) 221

\*\*\*\*\*

C7H7NO2 HL CAS 150-13-0 (1376)

4-Aminobenzoic acid; H2N.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KCl 25°C 0.20M U K1=2.14 1977EBa (55395) 222

\*\*\*\*\*

C7H7NO3 H2L CAS 89-73-6 (204)

2-Hydroxybenzohydroxamic acid (salicylhydroxamic acid); HO.C6H4.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.1M	M			K1=12.00 B2=23.05 K3=10.32	1989LWa (55612)	223

\*\*\*\*\*

C7H7NO6S H3L CAS 6201-86-1 (7899)  
3-Amino-5-sulfosalicylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	0.20M	M T H			K1=8.85 K(Tm+OH+L)=16.06	1991BPb (55696)	224

DH(K1)=-115 kJ mol<sup>-1</sup>, DS(K1)=-216 J K<sup>-1</sup> mol<sup>-1</sup>. DH(Tm(OH)L)=-171,  
DS(Tm(OH)L)=-265. Also data for 35, 45 and 55 C.

\*\*\*\*\*

C7H8O2 H2L Methylcatechol CAS 452-86-8 (525)  
1,2-Dihydroxy-4-methylbenzene; CH3.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	mixed	25°C	50%	U I			K1=4.74 B2=9.29	1969BCb (56080)	225

Medium: 50% DMSO, 0.12 M NaClO4. In 50% dioxan, 0.12 M NaClO4: K1=5.80,  
K2=4.81; 50% EtOH, 0.12 M NaClO4: K1=5.36, K2=4.50

\*\*\*\*\*

C7H8O4 HL Methyl kojic CAS 1506-07-8 (2686)  
3-Hydroxy-6-(hydroxymethyl)-2-methyl-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	sp	KCl	25°C	0.10M	M I			K1=6.70	1986PLb (56135)	226

\*\*\*\*\*

C7H8O5 HL CAS 2029-29-4 (2687)  
3-Hydroxy-2,6-bis(hydroxymethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	sp	KCl	25°C	0.10M	M I			K1=6.39	1986PLb (56154)	227

\*\*\*\*\*

C7H10O4 H2L CAS 5802-62-3 (71)  
Cyclopentane-1,1-dicarboxylic acid; C5H8.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U			K1=4.25 B2=6.82	1971PJb (56737)	228

\*\*\*\*\*

C7H11NO4 H2L CAS 499-82-1 (3163)  
Piperidine-2,6-dicarboxylic acid; C5H9N(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U		K1=6.53 B2=12.30	1963THb (56814)	229
*****									
C7H11NO6		H3L					(2926)		
2-Aminobutanoic-N-propane-1,3-dioic acid; <chem>HOOC.CH(C2H5)NH.CH(COOH)2</chem>									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.1M	U		K1=9.16	1982KKc (56853)	230
*****									
C7H11NO6		H3L		MNTA			(1026)		
Nitrilo(2-propanoic)-diethanoic acid; <chem>HOOC.CH(CH3).N(CH2.COOH)2</chem>									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	0.10M	U		K1=13.01 B2=22.70	1974RMg (56920)	231
*****									
C7H12O4		H2L					CAS 510-20-3 (482)		
Diethylpropanedioic acid (Diethylmalonic acid); <chem>HOOC.C(C2H5)2.COOH</chem>									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U		K1=4.70 B2=7.31	1968PFa (57373)	232
*****									
C7H13NO6		H2L					CAS 32013-58-4 (6079)		
N-(2,3-Dihydroxypropyl)iminodiethanoic acid; <chem>HO.CH2.CH(OH).CH2.N(CH2.COOH)2</chem>									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	0.10M	U		K1=8.95 B2=16.77	1980RPa (57621)	233
*****									
C7H14O3		HL					CAS 65311-45-1 (6266)		
3-Hydroxy-3,4-dimethyl-pentanoic acid; <chem>CH3.CH2.C(OH)(CH3).CH(CH3).COOH</chem>									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M	C		K1=2.99 B2=4.88	1976SPa (57881)	234
*****									
C7H15NO4		HL					CAS 41244-51-3 (4459)		
N,N-Bis(2'-hydroxyethyl)alanine; <chem>(HO.CH2.CH2)2.N.CH(CH3)COOH</chem>									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	0.10M	U		K1=5.07 B2=9.58	1982RFa (57944)	235
*****									
C8H5N5O6		H3L		Murexide			(453)		
Purpuric acid (Murexide is ammonium salt);									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

-----  
Tm+++ sp KNO3 12°C 0.10M U 1965GEa (58542) 236  
K(Tm+H2L)=3.36

\*\*\*\*\*

C8H5O2F3S HL TTA CAS 326-91-0 (165)  
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ cal non-aq 25°C 100% C H 2004MIa (58689) 237  
Method: calorimetric titration. Medium: chloroform. DH(TmL3+A)=6.7 kJ  
mol-1, DS=77 J K-1 mol-1; DH(TmL3+2A)=-5.0, DS=77. HA is benzoic acid.

-----  
Tm+++ gl alc/w 22°C 80% U K1=6.35 B2=12.23 1995MTa (58690) 238  
K3=4.93

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

\*\*\*\*\*

C8H6O4 H2L Phthalic acid CAS 88-99-3 (113)  
Benzene-1,2-dicarboxylic acid; C6H4(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 30°C 0.10M U K1=4.45 B2=7.80 1966KPb (59020) 239  
\*\*\*\*\*

C8H6O4 H2L Isophthalic aci CAS 212-91-5 (1619)  
Benzene-1,3-dicarboxylic acid; C6H4(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ cal NaClO4 25°C 0.10M U H K1=2.57 1982CBc (59062) 240  
DH= 17.15 kJ mol-1, DS= 107 J K-1 mol-1

\*\*\*\*\*

C8H7NO2 HL CAS 532-54-7 (4363)  
Isonitrosoacetophenone, Phenylglyoxal 2-oxime;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl diox/w 20°C 50% U K1=6.49 B2=12.10 1971MAf (59109) 241  
Medium: 50% v/v dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H7NO3 HL (7376)  
benzoylhydroxamic acid; C6H5COCONHOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KNO3 25°C 0.1M M K1=10.87 B2=20.99 1989LWa (59130) 242  
K3=9.19

\*\*\*\*\*

C8H8N2O2 HL Phenylglyoxime (3222)  
Phenylglyoxime; C6H5.C(:N.OH).CH:N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	20°C	50%	U		K1=7.55 B2=14.07	1971MAf (59344)	243
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C8H8O2		HL		Phenylacetic			CAS 103-82-2	(1361)	
Phenylethanoic acid; C6H5.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.1M C	H		K1=1.73	1996HYa (59566)	244
By calorimetry: DH(K1)=16.73 kJ mol-1									
Tm+++	gl	NaClO4	25°C	0.10M C	H		K1=1.73	1990HYa (59567)	245
By calorimetry: DH(K1)=16.7 J K-1 mol-1									
*****									
C8H8O3		HL		o-Anisic acid			CAS 579-75-9	(2337)	
2-Methoxybenzoic acid; CH3O.C6H4.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M M	H		K1=1.83	1988CLb (59755)	246
DH=10.7 kJ mol-1, DS=71 J K-1 mol-1									
Tm+++	gl	alc/w	25°C	42%	U		K1=2.5	1983PMa (59756)	247
*****									
C8H8O3		HL		Mandelic Acid			CAS 611-72-3	(80)	
2-Phenyl-2-hydroxyethanoic acid; C6H5.CH(OH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M C			K1=3.20 B2=5.56	1989HMa (59881)	248
Tm+++	gl	NaClO4	25°C	2.0M U		T	K1=2.71	1972DCb (59882)	249
*****									
C8H8O3		HL		m-Anisic acid			CAS 586-38-9	(2804)	
3-Methoxybenzoic acid; CH3O.C6H4.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M M	H		K1=2.05	1988CLb (59921)	250
DH=11.9 kJ mol-1, DS=79 J K-1 mol-1									
*****									
C8H8O3		HL		p-Anisic acid			CAS 100-09-4	(1373)	
4-Methoxybenzoic acid; CH3O.C6H4.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M M	H		K1=2.02	1988CLb (59965)	251

DH=14.5 kJ mol<sup>-1</sup>, DS=87 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C8H8O4 HL CAS 520-45-6 (4478)

3-Acetyl-2-hydroxy-6-methylpyran-4-one, Dehydroethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl diox/w 35°C 50% U K1=5.02 B2=8.89 1971MAa (60099) 252  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O9 H4L (6951)

Tetrahydrofuran-2,3,4,5-tetracarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ cal NaClO4 25°C 0.10M C H 2000MNa (60137) 253  
DH(Tm+HL)=7.76 kJ mol<sup>-1</sup>, DS=185 J K<sup>-1</sup> mol<sup>-1</sup>. DH(Tm+H2L)=5.42, DS=137.

-----  
Tm+++ gl NaClO4 25°C 0.10M C K1=10.37 B2=14.93 1995JNa (60138) 254  
B(TmH2L)=17.38  
B(TmHL)=14.78  
B(TmH-1L)=2.62  
B(TmH-2L)=-7.12

B(TmH2L2)=24.91, B(TmHL2)=20.00

\*\*\*\*\*

C8H9NO4 H2L (4520)

Dehydroethanoic acid oxime;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl diox/w 35°C 50% U 1971MAa (60505) 255  
K(Tm+HL)=4.92  
K(Tm+2HL)=8.52

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H10O4 L CAS 34241-51-5 (5701)

3-Acetyl-6-methylhydropyrane-2,4-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl alc/w 22°C 20% U K1=4.77 B2=8.51 1988ZTa (60856) 256  
K3=3.37

\*\*\*\*\*

C8H10O5 H2L CAS 145-73-7 (138)

7-Oxa-bicyclo[2.2.1]-heptan-2,3-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl KCl 30°C 0.10M C K1=5.71 B2=9.99 1996SZa (60877) 257  
For the -5-en-2-exo isomer, K1=6.07, B2=10.83.



C8H11NO8	H4L	CAS 7408-20-0 (2608)
Amino-di(butanedioic acid);HN(CH(COOH)CH2.COOH)2		

\*\*\*\*\*

C8H12N2O8	H4L	CAS 35039-85-1 (4537)
1,2-Diaminoethane-N,N'-dimalonic acid; (HOOC)2.CH.NH.CH2.CH2.NH.CH(COOH)2		

\*\*\*\*\*

C8H12O4	H2L	CAS 1076-97-9	(2224)
Cyclohexane-1,4-dicarboxylic acid; C6H10.(COOH)2			

\*\*\*\*\*

C8H13N06                      H3L                      (3835)  
2-Amino-2-carboxypropane-N,N-diethanoic acid;  $\text{HOOCC}(\text{CH}_3)_2\text{N}(\text{CH}_2\text{COOH})_2$

C8H13NO6                      H3I                      (5681)

2-Aminobutanoic-N,N-diethanoic acid;  $\text{CH}_3\text{CH}_2\text{CH}(\text{COOH})\text{N}(\text{CH}_2\text{COOH})_2$

62H1004D III CAS 107-66-1 (2120)

Con1904P HL CAS 107-00-4 (Z150)  
Dibutylphosphoric acid; (C4H9O)2P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Tm+++	dis	oth/un	26°C	0.10M	C	I				1992SNc (63194)	264
K(Tm+5HL(org))=TmL3(HL)2(org)+3H)=19.1. Method: extraction of 170Tm from HNO3 solution into CFC-112. For extraction into benzene, K=6.2.											

Tm+++ kin oth/un 25°C ? U K1=3.29 1971MGb (63195) 265  
 \*\*\*\*\*

C9H5NOI2 HL CAS 83-73-8 (3280)  
 5,7-Di-iodo-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	35°C	75%	U		K1=7.60 B2=13.70 K3=5.20	1971MAb (63572)	266

Medium: 75% v/v dioxan, 0.1 M NaClO4  
 \*\*\*\*\*

C9H5NO4 HL CAS 22308-86-7 (4607)  
 3-Nitroso-4-hydroxycoumarin (oximidobenzotetronic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	diox/w	20°C	50%	U		K1=2.88 B2=4.84	1977MBb (63615)	267

C9H6NO4BrS H2L CAS 3062-37-1 (3889)  
 7-Bromo-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M	U		K1=5.82 B2=10.55 K3=3.9	1973MAa (63705)	268

\*\*\*\*\*  
 C9H6NO4IS H2L Ferron CAS 547-91-1 (275)  
 7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	oth/un	20°C	0.10M	U		K1=6.50	1977SKd (63832)	269

C9H6O6 H3L Hemimellitic ac CAS 569-51-7 (1621)  
 1,2,3-Benzenetricarboxylic acid; C6H3.(COOH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	25°C	0.10M	U	H	K1=4.81 K(Tm+HL)=2.88	1994CRa (63978)	270

DH(K1)=20.2 kJ mol<sup>-1</sup>; DS=160 J K<sup>-1</sup> mol<sup>-1</sup>  
 \*\*\*\*\*

C9H7NO HL Oxine CAS 148-24-3 (504)  
 8-Hydroxyquinoline (8-quinolinol);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sol	none	RT	0.0	U			1981FCa (64363)	271

Kso(TmL3)=-33.03

Method: spectrophotometry.

```

-----
Tm+++      gl  oth/un 20°C 0.10M U      K1=7.55      1977SKd (64364) 272
-----
Tm+++      gl  diox/w 30°C 50% U      K1=9.55      B2=18.13      1970GMb (64365) 273
Medium: 50% dioxan, 0.3 M NaClO4
*****
C9H7NO2          HL          CAS 1127-45-3 (4614)
8-Hydroxyquinoline-N-oxide;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      gl  diox/w 30°C 50% U      K1=7.40      1970GMb (64412) 274
Medium: 50% dioxan, 0.3 M NaClO4
*****
C9H7NO4S          H2L      Sulfoxine      CAS 84-88-8 (448)
8-Hydroxyquinoline-5-sulfonic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      cal KNO3 20°C 0.10M U      HM          1971GKb (64583) 275
                        K(TmA+L)=4.76
DH(TmA+L)=-25.24 kJ mol-1, DS=4.59 J K-1 mol-1
DH(TmAL): DH=-33.06, DS=347.4. H4A=EDTA
*****
C9H7N3O2S          H2L      TAR          CAS 2246-46-0 (707)
4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      sp  NaNO3 25°C 0.10M C      K1=8.34      19850Hb (64733) 276
                        K(Tm+HL)=4.74
                        K(TmL+H)=5.84
*****
C9H8O4          H2L          CAS 15872-28-3 (8407)
Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxylic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      gl  KCl 30°C 0.10M U      K1=4.20      B2= 7.96      1996SZa (64983) 277
*****
C9H10O2          HL      Benzylacetic      CAS 501-52-0 (1362)
3-Phenylpropanoic acid; C6H5.CH2.CH2.COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      gl  NaClO4 25°C 0.1M C      H      K1=1.91      B2= 3.45      1996HYa (65375) 278
By calorimetry: DH(K1)=15.60 kJ mol-1, DH(B2)=14.24 J K-1 mol-1
-----
Tm+++      gl  NaClO4 25°C 0.10M C      H      K1=1.91      B2=3.45      1990HYa (65376) 279
By calorimetry: DH(K1)=15.6 J K-1 mol-1, DH(K2)=-1.4

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\*\*\*\*\*

C9H10O3 HL CAS 1878-49-5 (1600)  
2-Phenyl-2-methoxyethanoic acid; C6H5.CH(OCH3)COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl NaClO4 25°C 0.10M C K1=2.14 B2=3.86 1989HMa (65468) 280  
\*\*\*\*\*

C9H10O3 HL Tropic acid CAS 529-64-6 (1601)  
2-Phenyl-3-hydroxypropanoic acid; HO.CH2.CH(COOH)C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl NaClO4 25°C 0.10M C K1=2.02 B2=3.78 1989HMa (65482) 281  
\*\*\*\*\*

C9H10O4 H2L (7232)  
Bicyclo[2.2.1]hept-5-en-2-endo,3-cis-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl KCl 30°C 0.10M C K1=4.13 B2=6.68 1996SZa (65579) 282  
For the -2,5-dien-2-exo isomer, K1=4.20, B2=7.96.  
\*\*\*\*\*

C9H10O4 H2L CAS 3853-88-1 (5687)  
endo-cis-Bicyclo-[2,2,1]-5-hepten-2,3-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl NaClO4 24°C 0.10M U K1=4.40 1986ZBa (65594) 283  
K(Tm+HL)=1.50  
\*\*\*\*\*

C9H10O5 H2L CAS 54384-22-4 (8406)  
1-Methyl-(exo,exo)-7-oxabicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl KCl 30°C 0.10M U K1=5.15 B2= 8.14 1996SZa (65611) 284  
\*\*\*\*\*

C9H10O5 H2L (7233)  
1-Methyl-7-oxa-bicyclo[2.2.1]hept-5-en-2-exo,3-cis-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl KCl 30°C 0.10M C K1=5.15 B2=8.14 1996SZa (65626) 285  
\*\*\*\*\*

C9H11NO2 HL Phenylalanine CAS 63-91-2 (2)  
2-Amino-3-phenylpropanoic acid; H2N.CH(CH2.C6H5)COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaCl 25°C 0.15M U H K1=3.88 1992ZNa (65981) 286  
 By calorimetry: DH(K1)=3.41 kJ mol<sup>-1</sup>, DS(K1)=85.74 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*  
 C9H12N2O10 H5L CAS 80921-06-8 (2924)  
 2,3-Diaminopropanoic-N,N'-di-1,3-propanedioic acid;  
 (HOOC)2CH.NH.CH(COOH).CH2.NH.CH(COOH)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

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Tm+++ ISE KNO3 25°C 0.10M U K1=12.46 1983KBd (66748) 287  
 Hg-electrode.

\*\*\*\*\*  
 C9H13NO6 H3L (3881)  
 2,6-Dicarboxypiperidyl-N-ethanoic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++ gl KNO3 25°C 0.10M U K1=11.54 B2=20.17 1968TKe (66896) 288

\*\*\*\*\*  
 C9H15NO6 H3L (7177)  
 2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++ gl KNO3 20°C 0.10M U K1=11.93 B2=20.52 1974RMg (67416) 289

\*\*\*\*\*  
 C9H16N2O6 H3L MEDTA CAS 40423-02-7 (5717)  
 N-Methyldiaminoethane-N,N',N'-triethanoic acid; HOOC.CH2.N(CH3)CH2.CH2.N(CH2.COOH)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++ cal NaClO4 25°C 0.50M M IH K1=13.74 1986RCa (67646) 290  
 DH=-13.9 kJ mol<sup>-1</sup>, DS=216 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
 C9H16O4 H2L CAS 1636-27-7 (485)  
 Dipropylpropanedioic acid (Di-n-propylmalonic acid);

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++ gl KNO3 25°C 0.10M U K1=4.76 B2=7.39 1968PFa (67780) 291

\*\*\*\*\*  
 C10H5O2F7S L (6996)  
 1-(2-Thienyl)-3-heptafluoropropylpropane-1,3-dione; C3F7.C(=O)CH2C(=O)C4H3S

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++ gl alc/w 22°C 80% U K1=6.36 B2=11.88 1995MTa (68435) 292  
 K3=5.56

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

\*\*\*\*\*

C10H6O8                      H4L      Pyromellitic Ac    CAS 89-05-4    (519)  
Benzene-1,2,4,5-tetracarboxylic acid; C6H2.(COOH)4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tm+++      gl    NaCl04   25°C   0.10M U    H       K1=4.58                  1994CRa (68531) 293

$$K(T_m + HL) = 3.67$$

$\Delta H(K1)=25.4 \text{ kJ mol}^{-1}$ ,  $\Delta S=173 \text{ J K}^{-1} \text{ mol}^{-1}$ ;  $\Delta H(Tm+HL)=15.5$ ,  $\Delta S=122$

\*\*\*\*\*

C10H7NO2                      HL                      CAS 131-91-9    (2668)

1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tm+++ sp KCl 25°C 0.10M M I K1=4.38 1976PEa (68596) 294

\*\*\*\*\*

C10H7NO2                      HL                      CAS 132-53-6    (2524)

2-Nitroso-1-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tm+++ gl KNO3 25°C 0.10M U K1=6.00 B2=11.42 1982LPc (68664) 295

\*\*\*\*\*

C10H7N05S                      H2L                      CAS 14090-74-5    (2676)

1-Nitroso-2-hydroxynaphthalene-7-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Tm+++      g1    KCl      25°C 0.10M M      K1=4.26      1979LSb (68820) 296

\*\*\*\*\*

C10H7N05S                      H2L                      (4766)

1-Nitroso-2-hydroxynaphthalene-6-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tm+++ sp KCl 25°C 0.10M C K1=4.47 1973Pmb (68856) 297

\*\*\*\*\*

C10H7NO5S                      H2L                      CAS 31005-79-9    (1814)

2-Nitroso-1-hydroxynaphthalene-8-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tm+++ sp KCl 25°C 0.10M M K1=4.97 1978PPb (68953) 298

\*\*\*\*\*

C10H7N08S2      H3L      Nitroso-R acid      CAS 525-05-3      (1811)

1-Nitroso-2-hydroxynaphthalene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tm+++ gl oth/un 25°C 0.10M U K1=5.32 B2=9.82 1990ATa (69032) 299

\*\*\*\*\*

C10H7N5O5 HL CAS 102964-51-2 (6212)  
5-(2'-Nitrophenylazo)barbituric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl diox/w 25°C 75% U K1=5.82 B2=11.46 1986MIa (69103) 300  
\*\*\*\*\*

C10H7O2F3 HL CAS 326-06-7 (196)  
3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl alc/w 22°C 80% U K1=7.41 B2=13.37 1995MTa (69164) 301  
K3=6.02

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

\*\*\*\*\*

C10H8N4O3 HL CAS 43168-60-1 (6209)  
5-Phenylazobarbituric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl diox/w 25°C 75% U K1=6.08 B2=11.89 1986MIa (69737) 302  
\*\*\*\*\*

C10H8O2 H2L CAS 92-44-4 (1658)  
2,3-Dihydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl NaClO4 20°C 0.10M U M 1973PAC (69781) 303  
K(TmA+L)=7.95, H4A=EDTA

\*\*\*\*\*

C10H8O5S H3L DHNSA (877)  
2,3-Dihydroxynaphthalene-6-sulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl NaClO4 25°C 0.50M C K1=10.37 B2=18.92 1976LAd (69866) 304  
B3=23.3  
B(TmHL2)=25.73

\*\*\*\*\*

C10H10O6 H2L CAS 5411-14-3 (2394)  
1,2-Phenylenedioxodiethanoic acid; C6H4(O.CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Tm+++ gl NaClO4 25°C 0.10M M K1=3.94 1977HCb (70862) 305  
\*\*\*\*\*

C10H12N2O4 H2L CAS 16598-05-3 (967)  
2-Pyridylmethyliminodiethanoic acid; C5H4N.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U		K1=9.40 B2=17.01	1964THa (71278)	306
*****									
C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)									
Adenosine-5'-monophosphoric acid, 5-Adenylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	C	T	K1=4.59 K(Tm+HL)=2.70	1991SMa (72499)	307

IUPAC evaluation

\*\*\*\*\*

C10H16N2O8	H4L	EDDS	CAS 52759-67-8 (1100)
1,2-Diaminoethane-N,N'-di-1,4-butanedioic acid; (CH2.NH.CH(COOH)CH2.COOH)2			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	0.10M	U		K1=13.42 K(Tm+HL)=7.06	1980MMe (73191)	308
Tm+++	gl	KCl	25°C	0.10M	U		K2=4.00	1979MMe (73192)	309
Tm+++	gl	KNO3	20°C	0.10M	U		K1=14.00 B2=19.35	1975DPa (73193)	310
Tm+++	vlt	KNO3	25°C	0.10M	U		K1=14.0	1971BGb (73194)	311
*****									
C10H16N2O8 H4L EDTA CAS 60-00-4 (120)									
1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaClO4	20°C	0.02M	U	M	K(TmL+PO4)=3.12	1982MPd (74249)	312
Tm+++	vlt	KNO3	20°C	0.10M	U		K1=19.48	1978NLb (74250)	313
Tm+++	gl	NaClO4	25°C	0.50M	U		K1=17.80	1977GGb (74251)	314
Tm+++	gl	KCl	25°C	1.00M	U		K2=1.55 K(TmL+HL)=1.15 K(2TmL+L)=4.28	1976BKa (74252)	315
Tm+++	gl	KCl	25°C	1.0M	U		K(TmL+H)=1.19	1976GMb (74253)	316
Tm+++	sp	KCl	25°C	0.10M	U		K2=1.55 K(2TmL+L)=4.28 K(TmL+HL)=1.15	1975BKa (74254)	317



Tm+++	EMF	KCl	25°C	0.10M	U	T		1974BKb (74255)	318
							K(TmL+H)=0.8		
Tm+++	gl	KCl	25°C	1.0M	C		K2=1.55 K(TmL+HL)=1.15 K(2TmL+L=Tm2L3)=4.28	1974BKe (74256)	319
Tm+++	gl	KNO3	25°C	0.10M	U	T	M	1973TRb (74257)	320
							K(TmL+HA)=5.10 K(TmL+A)=7.64 K(TmL+HA)(2 C)=5.30, K(35 C)=5.19, K(45 C)=4.95, K(TmL+A)(2 C)=7.80, K(35 C)=7.71, K(45 C)=7.40, H5A=tripolyphosphoric acid		
Tm+++	gl	KNO3	25°C	0.10M	U	T	M	1973TRb (74258)	321
							K(TmL+A)=6.5 K(2 C)=6.6, K(35 C)=6.4, K(45 C)=6.2, H4A=adenosine triphosphate		
Tm+++	dis	oth/un	25°C	?	U		K1=18.04	1969PJa (74259)	322
Method: paper electrophoresis. Medium: pH=1.86									
Tm+++	ix	KCl	25°C	0.10M	U	H	K1=18.64	1959BDb (74260)	323
DH(K1)=6.6 kJ mol-1, DS=379 J K-1 mol-1									
Tm+++	gl	oth/un	20°C	0.01M	U		K1=19.49	1955WSa (74261)	324
Tm+++	vlt	KNO3	20°C	0.10M	U	T	K1=19.32	1954SGa (74262)	325
Tm+++	gl	KCl	20°C	0.10M	U	I	T K1=18.59	1953WSa (74263)	326
By polarography K1=18.62. In 0.1 M KNO3 K1=19.07									
*****									
C10H16N5O13P3		H4L		ATP		CAS 56-65-5 (403)			
Adenosine-5'-triphosphoric acid;									
*****									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	C	T	K1=6.80 K(Tm+HL)=3.67	1991SMa (74834)	327
IUPAC evaluation									
Tm+++	gl	KCl	25°C	0.10M	U		K1=6.50 B2=10.56 K(Tm+HL)=4.09	1988SSd (74835)	328
Tm+++	kin	oth/un	25°C	0.05M	C		K1=7.42	1983MCc (74836)	329
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).									
Tm+++	gl	KNO3	35°C	0.10M	U	M		1972TRc (74837)	330
							K(Tm(EDTA)+L)=6.8		
*****									
C10H18N2O7		H3L		HEDTA		CAS 150-39-0 (392)			

N-(Hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaCl04	25°C	0.50M	U			K1=15.04	1977GGb (75520)	331
Tm+++	EMF	KCl	25°C	1.0M	U			K2=3.77 K(TmL+HL)=2.11 K(TmL+H2L)=0.16 K(TmL+H4L)=1.71	1977GMa (75521)	332

Method: Pt/H2 electrode.

Tm+++	EMF	KCl	25°C	1.0M	U	M			1977GMa (75522)	333
								K(Tm(edta)+L)=2.50 K(Tm(edta)+HL)=1.95 K(Tm(edta)+H2L)=1.96 K(Tm(edta)+H3L)=1.74		

Method: Pt/H2 electrode.

Tm+++	gl	NaCl04	25°C	1.0M	U			K2=3.16 K(TmL+HL)=2.19 K(TmL+H2L)=1.09 K(TmL+H3L)=1.54	1973NMa (75523)	334
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Tm+++	ix	oth/un	?	?	U				1968MDa (75524)	335
								K(TmL+HL)=2.65 K(TmL2H+H)=6.15		

Tm+++	gl	KNO3	25°C	0.10M	U	M			1963TLb (75525)	336
								K(TmL+A)=4.95 K(TmL+B)=4.26		

Id=iminodiacetic acid

Tm+++	EMF	oth/un	20°C	0.10M	U			K1=16.00	1962PMa (75526)	337
Tm+++	gl	KNO3	15°C	0.10M	U	T H		K1=15.66 K1=15.64(20 C), 15.59(25 C), 15.62(30 C), 15.72(35 C), 15.69(40 C) DH(K1)=3.9 kJ mol <sup>-1</sup> (25 C), DS=312 J K <sup>-1</sup> mol <sup>-1</sup>	1961MFb (75527)	338

Tm+++	gl	KNO3	25°C	0.10M	U			K1=15.38	1956SPa (75528)	339
								By polarography K1=15.5		

\*\*\*\*\*

C10H20N2O4 H2L (4753)

N,N'-Diethylethylenedinitrilo-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U			K1=7.1	1973PSb (75786)	340
C10H22O5		L			Tetraglyme			CAS 143-24-8	(121)	

2,5,8,11,14-Pentaoxapentadecane; (CH<sub>3</sub>.O.CH<sub>2</sub>.CH<sub>2</sub>.O.CH<sub>2</sub>.CH<sub>2</sub>.)<sub>20</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	ISE	non-aq	25°C	100%	C			K1=3.63	1986BDa (76477)	341
Medium: propylene carbonate, 0.1 M Et <sub>4</sub> NClO <sub>4</sub>										
*****										
C11H8O3		L						CAS 1133-72-8	(2614)	
2-Aceto-1,3-indandione;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	mixed	22°C	60%	U			K1=3.87 B2=7.36 K3=3.11	1979JMa (77047)	342

Medium: 60% acetone/H<sub>2</sub>O

*****										
C11H8O4		HL						CAS 7555-37-5	(4812)	
3-Acetyl-4-hydroxycoumarin										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	diox/w	35°C	50%	U			K1=4.34 B2=7.42	1971MAa (77187)	343
Medium: 50% dioxan, 0.01 M NaClO <sub>4</sub>										
*****										

C11H8O6S		H3L						CAS 66695-90-7	(1996)	
1-Hydroxy-4-sulfo-2-naphthoic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaClO <sub>4</sub>	25°C	0.10M	C			K1=8.86 B2=15.52 K(Tm+HL)=1.88	1979LAb (77235)	344

*****										
C11H8O9S2		H4L						CAS 67097-84-1	(1995)	
1-Hydroxy-4,7-disulfo-2-naphthoic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	cal	NaClO <sub>4</sub>	25°C	0.10M	C	H		K1=9.01 B2=14.9 K(Tm+HL)=1.95	1986LLc (77288)	345

DH(Tm+HL)=8.1 kJ mol<sup>-1</sup>, DS=64 J K<sup>-1</sup> mol<sup>-1</sup>

*****										
C11H9NO4		H2L						CAS 4321-82-7	(4829)	
3-Acetyl-4-hydroxycoumarin oxime;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	diox/w	35°C	50%	U			K(Tm+HL)=4.01 K(Tm+2HL)=6.88	1971MAa (77430)	346

Medium: 50% dioxan, 0.01 M NaClO<sub>4</sub>

C11H9N3O2                      H2L                      PAR                      CAS 1141-59-9                      (636)  
4-(2'-Pyridylazo)-1,3-dihydroxybenzene; C5H4N.N:N.C6H3(OH)2

Tm+++      sp   NaNO3   25°C 0.10M C      K1=10.57      19840Ha (77593) 347  
K(Tm+HL)=4.34  
\*K(TmHL)=-6.07

Tm+++	sp	KCl	20°C 0.10M U	1971EKa (77594) 348
K(Tm+HL)=3.77				

C11H10N4O3                      HL                      CAS 92265-24-2 (6211)  
5-(2'-Methylphenylazo)barbituric acid;

Tm+++ gl diox/w 25°C 75% U K1=6.02 B2=11.45 1986MIa (77735) 349

C11H10N4O4                      HL                      CAS 92265-26-4    (6210)  
5-(2'-Methoxyphenylazo)barbituric acid;

Tm+++	gl	diox/w	25°C	75%	U	K1=6.23	B2=12.25	1986MIa (77750)	350
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C11H12N2O5S HL CAS 56475-09-3 (8410)  
3-(4'-Sulfofenylhydrazo)-pentane-2,4-dione;

Tm+++ gl oth/un 30°C 0.10M U B2=21.85 1985EEb (78329) 351  
Medium: not stated. For 3'-sulfo-phenylhydrazo-, B2=22.11; for 2'-sulfo-phenylhydrazo-, B2=25.13; for 4'-methyl-2'-sulfo-phenylhydrazo-, B2=23.75.

C11H13NO4 L CAS 15658-60-3 (4587)  
Diethyl 2,6-pyridinedicarboxylate; Dipicolinic acid diethyl ester;

Tm+++ sp non-aq 20°C 100% C K1=7.0 B2=13.70 1997RPa (78539) 352  
B3=17.6

C11H13NO5 H3L HBIDA CAS 7372-13-6 (1603)  
N-(2-Hydroxybenzyl)iminodiethanoic acid; HO.C6H4.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	U		K1=4.73 B2=7.34	1968PFa (79773)	363

\*\*\*\*\*

C12H7O2F7 L (6994)  
1-Heptafluoropropyl-3-phenylpropane-1,3-dione; C3F7.CO.CH2.CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	alc/w	22°C	80%	U		K1=6.28 B2=11.80 K3=5.36	1995MTa (80192)	364

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

\*\*\*\*\*

C12H8N2 L Phenanthroline CAS 66-71-7 (144)  
1,10-Phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	non-aq	25°C	100%	C	H	K1=2.06	2002KNc (80525)	365

Medium: N,N-dimethylformamide, 0.20 M Et4NClO4.

By calorimetry: DH(K1)=-9.9 kJ mol<sup>-1</sup>.

Tm+++	dis	non-aq	25°C	100%	C	HM		1998YHa (80526)	366
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K(TmA3+L)=7.98

Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is

1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(TmA3+L)=-11.9 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C12H12NO3Cl HL (1055)  
2-Chloro-4-dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H3Cl.CH:CH.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	NaClO4	25°C	0.50M	U		K1=2.128	1987MSa (80976)	367

\*\*\*\*\*

C12H12N2O3 HL Nalidixic acid CAS 389-08-2 (1401)  
1-Ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	alc/w	22°C	0.1M	U		K1=6.48 B2=12.15 K3=4.30	2000TBb (81083)	368

Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O

\*\*\*\*\*

C12H13NO3 HL (1054)  
4-Dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H4.CH:CH.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	NaClO4	25°C	0.50M	U		K1=2.276	1987MSa (81206)	369

\*\*\*\*\*

C12H18N2O5S                      H2L                      CAS 80459-15-0 (1595)  
2-Nitroso-5-(N-propyl-3-sulfopropylamino)phenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C			K1=6.03	1988YSa (81821)	370

\*\*\*\*\*

C12H18N2O8                      H2L                      CAS 93031-52-8 (5829)  
1,4-Dioxa-7,10-diazayclododecane-5,12-dione-7,10-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	C			K1=6.53	1988CCb (81845)	371

\*\*\*\*\*

C12H18N2O8                      H4L                      CAS 76079-31-7 (2587)  
trans-1,2-Diaminocyclohexane-N,N'-di(propanedioic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	EMF	KNO3	25°C	0.10M	U			K1=14.22	1985SGa (81881)	372
Tm+++	EMF	KNO3	25°C	0.10M	U			K1=15.63	1980SGb (81882)	373

\*\*\*\*\*

C12H20N2O8                      H4L                      CAS 1798-13-6 (4935)  
1,2-Diaminobutane-N,N,N',N'-tetraethanoic acid;  
(HOOC.CH2)2N.CH2.CH(C2H5).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	vlt	KNO3	20°C	0.10M	U			K1=20.52	1968NLa (82036)	374

\*\*\*\*\*

C12H20N2O8                      H4L                      CAS 40623-42-5 (1101)  
1,2-Diaminoethane-N,N'-di(2-pentane-1,5-dioic acid); (CH2NHCH(COOH)CH2CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	0.10M	U			K1=9.59    B2=15.54	1975DPa (82105)	375
Tm+++	gl	KNO3	25°C	0.10M	U			K1=9.26	1973GBd (82106)	376

\*\*\*\*\*

C12H20N2O8                      H4L                      CAS 61368-60-3 (3389)  
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	vlt	KNO3	20°C	0.10M	U			K1=18.91	1976NKa (82147)	377

\*\*\*\*\*

C12H20N2O8                      H4L                      CAS 40623-42-5 (3388)  
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dipropanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl04	25°C	0.10M	U	IH	K1=14.25 B(Tm+HL)=6.66	1988RNa (82181)	378
DH(K1)=3.74 kJ mol <sup>-1</sup> , DH(Tm+HL)=27.9, DS(K1)=285 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C12H20N2O8		H4L					CAS 2458-58-4	(922)	
1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl04	25°C	0.50M	M	H	K1=11.25 K(TmL+H)=6.05 K(TmHL+H)=4.85	1985CBa (82238)	379
DH(K1)=23.3 kJ mol <sup>-1</sup> , DS=293 J K <sup>-1</sup> mol <sup>-1</sup> (by calorimetry)									
*****									
C12H20N2O8		H4L		BDTA			CAS 868-43-9	(1742)	
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	NaCl04	20°C	0.10M	U		K1=20.44	1971ISa (82340)	380
Tm+++	vlt	oth/un	20°C	0.10M	U		K1=20.96	1966DMa (82341)	381
Tm+++	vlt	KNO3	20°C	0.10M	U		K1=20.96	1966NSb (82342)	382
*****									
C12H20N2O8		H4L					CAS 22968-57-6	(3992)	
meso-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	NaCl04	20°C	0.10M	U		K1=17.87	1971ISa (82424)	383
Tm+++	vlt	oth/un	20°C	0.10M	U		K1=17.87	1966DMa (82425)	384
*****									
C12H20N2O8S		H4L		TEDTA			CAS 923-74-0	(3394)	
2,2'-Thiobis(ethyliminodiethanoic acid); S(CH2.CH2.N(CH2.COOH)2)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C		K1=14.41	1985TPa (82479)	385
*****									
C12H20N2O9		H4L		EEDTA			CAS 923-73-9	(2112)	
Oxa-bis(ethyleneimino)diethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2O									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo



Tm+++ EMF KNO3 20°C 0.10M U K1=17.83 1962MMc (82572) 386  
 \*\*\*\*\*

C12H20O8N2 H4L (6908)  
 2-Methyl-1,2-diaminopropane-N,N,N'-tetraethanoic acid;  
 (HOOC.CH2)2N.CH2.C(CH3)2.N(CH2.COOH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Tm+++ vlt KNO3 20°C 0.10M C K1=17.79 1978NL a (82683) 387  
 \*\*\*\*\*

C12H21NO6 H3L (7209)  
 1-Carboxy-1-aminoheptane-N,N-diethanoic acid; HOOC.CH(C6H13)N(CH2.COOH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Tm+++ gl alc/w 20°C 40% U K1=11.80 1985LBc (82707) 388  
 Medium: 40% v/v MeOH/H2O, 0.1 M KNO3  
 \*\*\*\*\*

C12H24N4O4 H2L (7343)  
 1,4,7,10-Tetraazacyclododecane-1,7-bis(ethanoic acid);

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Tm+++ gl R4N.X 25°C 0.10M C K1=13.19 1998CCb (83094) 389  
 \*\*\*\*\*

C12H26N2O4 L Cryptand 2,2 CAS 23978-55-4 (925)  
 4,7,13,16-Tetraoxa-1,10-diazacyclooctadecane;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Tm+++ gl alc/w 25°C 100% C K1=9.46 1983ANb (83912) 390  
 The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4  
 \*\*\*\*\*

C12H26O6 L Pentaglyme CAS 1191-87-3 (2498)  
 2,5,8,11,14,17-Hexaoxaoctadecane; (CH3.O.CH2.CH2.O.CH2.CH2.O.CH2.)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Tm+++ gl non-aq 25°C 100% C K1=4.56 1989BPa (84026) 391  
 Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4  
 \*\*\*\*\*

C12H28N2O9P2 H4L (7242)  
 1,4,10-Trioxa-7,13-diazacyclopentadecane-7,13-diyl dimethylenediphosphonic acid;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Tm+++ gl R4N.X 25°C 0.10M U K1=13.80 1996BJa (84167) 392  
 K(Tm+HL)=10.22  
 K(Tm+H2L)=5.86

Medium: 0.1 M Me4NCl

\*\*\*\*\*  
 C12H30N6 L CAS 296-35-5 (143)  
 1,4,7,10,13,16-Hexaazacyclooctadecane; cyclo(-(NH.CH2.CH2)6-)  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	NaNO3	25°C	0.20M	C		K1=8.95	1991KKa (84359)	393
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Tm+++	gl	NaCl	20°C	0.10M	C		K1=10.4	1988SJb (84360)	394
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C13H502F13S L (6997)  
 1-(2-Thienyl)-3-tridecafluorohexylpropane-1,3-dione; C6F13.CO.CH2.CO.C4H3S  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	alc/w	22°C	80%	U		K1=5.72 B2=11.11 K3=4.32	1995MTa (84463)	395
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Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

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C13H11NO2 HL CAS 304-88-1 (181)  
 N-Phenylbenzohydroxamic acid; C6H5.CO.N(C6H5).OH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	dis	oth/un	23°C	0.01M	C			1997AAa (85182)	396
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Method: extraction of 170Tm from 0.01 M borate buffer into benzene-ligand solution. K(Tm+3HL(org)=TmL3(org)+3H)=-13.54.

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C13H12N2O3S HL (6203)  
 Salicylidenesulfanilamide, 4-(N-(2-Hydroxybenzylene))aminosulanilamide;  
 H2NSO2C6H4N:CHC6H4OH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	oth/un	25°C	0.10M	U		K1=12.763	1987KSc (85367)	397
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C13H12N4O L Diphenylcarbaz. CAS 538-62-5 (1195)  
 Diphenylcarbazone; C6H5.NH.NH.CO.N:N.C6H5  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	EMF	alc/w	20°C	50%	U		K1=3.75	1971MAc (85420)	398
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Medium: 50% EtOH, 0.1 M NaClO4

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C13H12N4S L Dithizone CAS 60-10-6 (1801)  
 Diphenylthiocarbazone; C6H5.NH.NH.CS.N:N.C6H5  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	EMF	alc/w	20°C	50%	U		K1=2.25	1971MAc (85476)	399
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Medium: 50% EtOH, 0.1 M NaClO4

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C13H20N2O8                      H4L                      CAS 123064-92-6 (7929)  
trans-1,3-Cyclopentanediaminotetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	1.0M	U		K1=14.43 K(TmHL+H)=3.06 K(TmL+H)=3.76	1989Cmb (86129)	400

\*\*\*\*\*

C13H22N2O8                      H4L                      CAS 1798-14-7 (921)  
(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOCH2)2N.CH2.CH2)2CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C		K1=11.19 K(Tm+HL)=7.24	1982PPd (86210)	401

\*\*\*\*\*

C13H22N2O8                      H4L                      CAS 1198-14-7 (5004)  
1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCH2)2NCH2CH(C3H7)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	vlt	KNO3	20°C	0.10M	U		K1=20.46	1974NLa (86238)	402

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C13H22N2O8                      H4L                      (7164)  
2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid;  
(HOOCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	vlt	KNO3	20°C	0.10M	U		K1=13.63	1981NSc (86266)	403

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C13H22N2O8                      H4L                      (5003)  
3-Methyl-1,2-diaminobutane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	vlt	KNO3	20°C	0.10M	U		K1=20.38	1968NLb (86293)	404

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C13H22N2O9                      H4L                      DETAP                      CAS 36829-96-6 (5602)  
Bis(2-aminoethyl)ether-N,N,N'-triethanoic acid-N'-(3-propanoic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C		K1=14.97 K(Tm+HL)=9.29	1985PLa (86312)	405

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C14H8O4                      H2L                      Alizarin                      CAS 72-48-0 (1058)

1,2-Dihydroxyanthraquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	oth/un	25°C	0.10M	U		K1=12.73	1981EIa (86652)	406
*****									
C14H9N5Cl2		L					CAS 7071-45-6	(8463)	
1,5-Bis(4-chlorophenyl)-3-cyanoformazan;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	25°C	70%	U		K1=6.39 B2=12.65	1996DAb (86854)	407
Medium: 70% dioxane/H2O, 0.10 M NaClO4.									
*****									
C14H11N5		L					CAS 7014-08-6	(8461)	
1,5-Diphenyl-3-cyanoformazan;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	25°C	70%	U		K1=7.33 B2=14.18	1996DAb (87003)	408
Medium: 70% dioxane/H2O, 0.10 M NaClO4.									
*****									
C14H12N2O3		H2L					CAS 4870-46-6	(3432)	
2-Hydroxy-5-methyl-2'-carboxy-azobenzene; HO.C6H3(CH3).N:N.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	25°C	50%	U I		K1=3.92 B2=7.78	1985ANa (87224)	409
*****									
C14H15N2O3Cl		H2L					(8285)		
5,5'-Dimethylcyclohexane-2-(2'-hydroxy-4'-chlorophenyl)hydrazono-1,3-dione;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	mixed	30°C	0.10M	U T H		K1=12.68 B2=23.12	1988TRb (87727)	410
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water									
*****									
C14H16N2O2S		HL					CAS 189231-67-2	(8475)	
2-Thiophenylhydrazodimedone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	25°C	75%	C T H		K1=13.71 B2=25.81	1997EIa (87876)	411
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-8.48 kJ mol <sup>-1</sup> , DS(K1)=-13.50 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-7.38, DS(K2)=-11.63.									
*****									
C14H16N2O3		H2L					(8284)		
5,5'-Dimethylcyclohexane-2-(2'-hydroxyphenyl)hydrazono-1,3-dione;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++ gl mixed 30°C 0.10M U T H K1=12.90 B2=23.65 1988TRb (87894) 412  
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water

\*\*\*\*\*

C14H16N2O8 H4L CAS 40774-59-2 (1901)  
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO4 25°C 1.00M C H K1=15.87 1992YNa (87971) 413  
By calorimetry: DH(K1)=6.7 kJ mol<sup>-1</sup>, DS=326 J K<sup>-1</sup> mol<sup>-1</sup>

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C14H22N2O8 H4L cis-1,2-CDTA CAS 92761-75-6 (2846)  
cis-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KCl 25°C 1.0M U K1=4.40 1987CMe (88436) 414  
K(TmHL+H)=5.13  
K(TmL+H)=6.93

\*\*\*\*\*

C14H22N2O8 H4L cis-1,3-CDTA CAS 92681-23-7 (2847)  
cis-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KCl 25°C 1.0M U K1=8.30 1987CMe (88450) 415  
K(TmHL+H)=4.98  
K(TmL+H)=7.12

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C14H22N2O8 H4L cis-1,4-CDTA CAS 92681-25-9 (2848)  
cis-1,4-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KCl 25°C 1.0M U K1=9.47 1987CMe (88464) 416  
K(TmHL+H)=5.42  
K(TmL+H)=5.75

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C14H22N2O8 H4L CDTA CAS 482-54-2 (200)  
trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KCl 25°C 1.0M U K1=20.98 1987CMe (88808) 417  
K(TmL+H)=1.22

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Tm+++ gl KCl 25°C 1.00M U K1=20.98 1984MFa (88809) 418  
-----

Tm+++ gl NaClO4 25°C 0.50M U K1=19.58 1977GGb (88810) 419

-----  
Tm+++ EMF KNO3 25°C 0.10M U T H K1=20.46 1962MHa (88811) 420  
DH(K1)=-6.7 kJ mol<sup>-1</sup>, DS=368 J K<sup>-1</sup> mol<sup>-1</sup>. At 20 C: K(TmL+H)=2.20  
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Tm+++ vlt KNO3 20°C 0.10M U K1=20.96 1954SGa (88812) 421  
\*\*\*\*\*  
C14H22N2O8 H4L trans-1,3-CDTA CAS 92681-24-8 (2849)  
trans-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	KCl	25°C	1.0M	U		K1=8.66 K(TmHL+H)=4.44 K(TmL+H)=7.12	1987CMe (88843)	422
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\*\*\*\*\*  
C14H22N2O8 H4L trans-1,4-CDTA CAS 92681-26-0 (2843)  
trans-1,4-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	KCl	25°C	1.0M	U		K1=9.69 K(TmHL+H)=5.56 K(TmL+H)=5.70	1987CMe (88871)	423
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Tm+++ gl KCl 25°C 1.00M U K1=9.69 1984MFb (88872) 424  
\*\*\*\*\*  
C14H22N2O9 H2L CAS 93031-53-9 (5830)  
1,4,7-Trioxa-10,13-diazacyclopentadecane-8,15-dione-10,13-diethanoic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	gl	R4N.X	25°C	0.10M	C		K1=7.98	1988CCb (88887)	425
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\*\*\*\*\*  
C14H23N3O10 H5L DTPA CAS 67-43-6 (238)  
Diethylenetriamine-pentaethanoic acid; HOOC.CH2.N(CH2.CH2.N(CH2.COOH)2)2  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++	cal	KNO3	25°C	0.10M	C T			1988MIa (89418)	426
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DH(K1)=-26.52 kJ mol<sup>-1</sup>, DS=346.0 J mol<sup>-1</sup> K<sup>-1</sup>. Also data for 283 and 313 K  
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Tm+++	cal	NaClO4	25°C	0.50M	U	H		1977CGc (89419)	427
-------	-----	--------	------	-------	---	---	--	-----------------	-----

DH(K1)=-36.6 kJ mol<sup>-1</sup>  
-----

Tm+++	gl	NaClO4	25°C	0.50M	U		K1=21.15	1977GGb (89420)	428
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Tm+++	cal	KNO3	27°C	0.10M	U	H		1968CLd (89421)	429
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DH(K1)=-27.6 kJ mol<sup>-1</sup>, DS=343 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Tm+++	EMF	KNO3	25°C	0.10M	U	H	K1=22.72	1962MTc (89422)	430
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DH(K1)=-23.0 kJ mol<sup>-1</sup>, DS=358 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Tm+++ gl oth/un 25°C 0.10M U K1=22.97 1959HCa (89423) 431  
\*\*\*\*\*

C14H24N2O8 H4L (5075)  
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-butyric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ vlt KNO3 20°C 0.10M U K1=18.45 1969NDc (89521) 432  
\*\*\*\*\*

C14H24N2O8 H4L (7165)  
1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; (H00CCH2)NCH2CH(C4H9)N(CH2COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ vlt KNO3 20°C 0.10M U K1=20.40 1974NLa (89540) 433  
\*\*\*\*\*

C14H24N2O8 H4L HMDTA CAS 1633-00-7 (920)  
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((H00C.CH2)2N.CH2.CH2.CH2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KCl 25°C 1.00M U M 1976BKa (89610) 434  
K(TmEDTA+L)=2.4  
K(TmEDTA+HL)=2.2

-----  
Tm+++ gl KCl 25°C 0.10M U 1974KPd (89611) 435  
K(Tm+HL)=7.18

\*\*\*\*\*  
C14H24N2O8 H4L CAS 1633-00-7 (5076)  
4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;  
(H00CCH2)2NCH2CH(N(CH2COOH)2CH2CH(CH3)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ vlt KNO3 20°C 0.10M U K1=20.40 1968NLb (89644) 436  
\*\*\*\*\*

C14H24N2O8 H2L CAS 17619-53-3 (5833)  
Diaminoethane-N,N'-Di(ethylaceto)-N,N'-diethanoic acid;  
(-CH2.N(CH2.CO0H)CH2.COOC2H5)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl R4N.X 25°C 0.10M C K1=10.44 1988CCb (89658) 437  
\*\*\*\*\*

C14H24N2O8 H4L EDTP (2936)  
Diaminoethane-N,N,N',N'-tetrapropanoic acid; (H00C.CH2CH2)2N.CH2CH2.N(CH2CH2.CO0H)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo





Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	non-aq	25°C	100%	C			K1=6.25	1989BP a (90543)	445
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4										
*****										
C14H3007		L						CAS 1072-40-8 (2499)		
2,5,8,11,14,17,20-Heptaoheneicosane; CH3.0.(CH2.CH2.0)6.CH3										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	non-aq	25°C	100%	C			K1=5.34	1989BP a (90714)	446
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4										
*****										
C14H32N2010P2		H4L						CAS 81963-60-2 (7240)		
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diyl dimethylenediphosphonic acid;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	U			K1=13.77 K(Tm+HL)=10.24 K(Tm+H2L)=6.11	1996BJ a (90775)	447
Medium: 0.1 M Me4NCl										
*****										
C15H18N203		HL						CAS 116822-13-0 (6743)		
5,5-Dimethylcyclohexane-2-(2-hydroxy-4'-methylphenyl)-hydrazono-1,3-dione;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	alc/w	20°C	75%	U T H			K1=12.15 B2=21.48	1993RA a (92040)	448
Medium: 75% v/v MeOH/H2O; 0.10 M KNO3										
-----										
Tm+++	gl	mixed	30°C	0.10M	U T H			K1=13.16 B2=24.74	1988TR b (92041)	449
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water										
*****										
C15H20N206		H3L			BEDTA			CAS 65311-06-0 (2944)		
N-Benzyl diaminoethane-N,N',N'-triethanoic acid;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C			K1=13.65	1978MP b (92159)	450
*****										
C15H23N302		L						CAS 36763-33-4 (5176)		
N,N,N',N'-Tetraethyl-2,6-pyridinedicarboxamide;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	sp	non-aq	25°C	100%	M			K1=8.5 B2=16.00 B3=22.1	1997RP b (92291)	451
Medium: acetonitrile.										
*****										

C15H25N3O10 H5L (5127)  
Diethylenetriamine-N,N,N'',N''-tetraethanoic acid-N'-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	EMF	KCl	?	0.10M	U		K1=16.71	1966VL a (92385)	452

\*\*\*\*\*

C15H25N3O10 H5L (6100)  
Diethylenetriamine-N,N,N'',N''-tetraethanoic acid-N'-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	25°C	0.10M	C		K1=19.41 K(Tm+HL)=13.11	1989SP a (92401)	453

\*\*\*\*\*

C15H26N4O9 H4L (7685)  
Diethylenetriamine-N,N,N'',N''-pentaethanoic acid N'-methyleamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	0.10M	C		K1=20.4	2000SB b (92439)	454

\*\*\*\*\*

C15H26N4O9 H4L CAS 137076-43-8 (5085)  
Diethylenetriamine-N,N,N'',N''-pentaethanoic acid N-methyleamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KCl	25°C	0.10M	C		K1=19.1	2000SB b (92454)	455

\*\*\*\*\*

C16H9N2OBr3 HL CAS 84317-74-8 (5169)  
1-(2,4,6-Tribromophenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	kin	oth/un	25°C	0.02M	U		K1=5.45	1972GS e (92667)	456

\*\*\*\*\*

C16H11N3O10S2 H4L Chromotrope 2B CAS 548-80-1 (896)  
2-((4-Nitrophenyl)azo)chromotropic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	oth/un	25°C	?	U		K1eff=5.0	1967SA a (92870)	457

\*\*\*\*\*

C16H11N5O4 H2L (5153)  
1,5-Bis(2-carboxyphenyl)-3-cyanoformazan;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	25°C	70%	U	I	K1=11.06 B2=19.95	1996DA b (92901)	458

Medium: 70% dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>. In 50% EtOH/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>,  
K<sub>1</sub>=11.86, K<sub>2</sub>=9.69.

\*\*\*\*\*

C<sub>16</sub>H<sub>13</sub>N<sub>2</sub>O<sub>10</sub>AsS<sub>2</sub> H<sub>5</sub>L Thorin I CAS 3688-92-4 (2609)

1-((2-Arsonophenyl)azo)-2-hydroxy-3,6-naphthalylldisulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaClO<sub>4</sub> 30°C 0.10M U 1976NDa (93215) 459

K(Tm+H<sub>2</sub>L=TmH<sub>2</sub>L)=6.05

K(TmHL+H)=6.80

K(TmL+H)=8.80

K(TmL+OH)=3.10

\*\*\*\*\*

C<sub>16</sub>H<sub>13</sub>N<sub>2</sub>O<sub>11</sub>AsS<sub>2</sub> H<sub>6</sub>L Arsenazo I CAS 520-10-5 (277)

2-(2'-Arsonophenylazo)chromotropic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp oth/un 20°C 0.10M U 1971SSd (93271) 460

K(Tm+H<sub>2</sub>L)=8.33

\*\*\*\*\*

C<sub>16</sub>H<sub>15</sub>N<sub>5</sub> L CAS 7014-14-4 (8462)

1,5-Bis(4-methylphenyl)-3-cyanoformazan;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl diox/w 25°C 70% U K<sub>1</sub>=8.95 B<sub>2</sub>=16.80 1996DAb (93644) 461

Medium: 70% dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

\*\*\*\*\*

C<sub>16</sub>H<sub>20</sub>N<sub>2</sub>O<sub>8</sub> H<sub>4</sub>L CAS 6411-02-5 (1919)

1-Phenyl-ethylenediamine-N,N,N',N'-tetraethanoic acid (DL)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ vlt KNO<sub>3</sub> 20°C 0.10M U K<sub>1</sub>=19.34 1969NDb (94054) 462

\*\*\*\*\*

C<sub>16</sub>H<sub>26</sub>N<sub>2</sub>O<sub>10</sub> H<sub>2</sub>L CAS 93031-54-0 (5831)

1,4,7,10-Tetraoxa-13,16-diazacyclooctadecane-11,18-dione-13,16-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl R<sub>4</sub>N.X 25°C 0.10M C K<sub>1</sub>=8.56 1988CCb (94578) 463

\*\*\*\*\*

C<sub>16</sub>H<sub>27</sub>N<sub>5</sub>O<sub>8</sub> H<sub>3</sub>L (6621)

1,4,7-Tris(carboxymethyl)-1,4,7,10,13-pentaazacyclopentadecan-9,14-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp KCl 25°C 0.08M U K<sub>1</sub>=11.2 1994FCa (94678) 464

\*\*\*\*\*  
 C16H27N5O8 H3L (6915)  
 4,10,13-Tris(carboxymethyl)-1,4,7,10,13-pentaazacyclopentadeca-8,15-dione;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	KCl	25°C	0.08M	U		K1=14.7	1994FCa (94692)	465

\*\*\*\*\*

C16H28N2O8 H4L (5167)  
 1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-(3-methyl)butanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	0.10M	U		K1=15.20	1969NDc (94723)	466

By polarography: K1=15.31  
 \*\*\*\*\*

C16H28N2O8 H4L (5168)  
 1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-pentanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	vlt	KNO3	20°C	0.10M	U		K1=18.45	1969NDc (94749)	467

\*\*\*\*\*

C16H28N2O8 H4L (5138)  
 1,2-Diaminooctane-N,N,N',N'-tetraethanoic acid;  
 (HOOCCH2)2N.CH2.CH(C6H13)N(CH2COOH)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	vlt	KNO3	20°C	0.10M	U		K1=20.39	1979MBd (94775)	468

\*\*\*\*\*

C16H28N4O8 H4L DOTA CAS 60239-18-1 (1017)  
 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl	37°C	1.0M	C		K1=23.7	1994TBb (94935)	469

Method: Competitive reaction with Eu3+ ion.  
 \*\*\*\*\*

C16H30N2O8 H2L CAS 72912-01-7 (1568)  
 1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-N,N'-diethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	U		K1=11.10	1983CRb (95061)	470

\*\*\*\*\*

C16H32N2O5 L Cryptand 2,2,1 CAS 31364-42-8 (837)  
 1,10-Diaza-4,7,13,16,21-pentaoxabicyclo[8,8,5]tricosane (2,2,1);  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

-----  
Tm+++ gl R4N.X 25°C 0.25M C K1=6.88 1981BBe (95304) 471  
Medium: Me4NC1

\*\*\*\*\*  
C16H35O4P HL CAS 298-07-7 (1625)  
Di-(2-ethylhexyl)-phosphoric acid; (C2H5C6H12O)2P(O)OH  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tm+++ dis oth/un 20°C 0.10M C 1992SNb (95516) 472  
Extraction of 170Tm from 0.10 M LiNO3/HNO3 medium into 90% CFC-112/benzene  
K(Tm+4HL(org)=TmL3(HL)(org)+3H)=5.58  
\*\*\*\*\*

C17H14N2O2 L CAS 4551-69-3 (698)  
4-Benzoyl-3-methyl-1-phenyl-2-pyrazolin-5-one;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

-----

Tm+++ gl NaNO3 20°C 0.10M U M 1981GCa (95904) 473  
B(Tm+3L+2TBP)=24.35  
B(Tm+3L+TBPOxide)=23.6  
B(Tm+3L+4TBPOxide)=34.7  
\*\*\*\*\*

C17H20N3O3F HL (7845)  
1-Ethyl-6-fluoro-7-(4-methylpyperazine-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

-----

Tm+++ gl alc/w 22°C 0.1M U K1=5.60 B2=10.08 2000TBb (96292) 474  
Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O  
\*\*\*\*\*

C17H23N4O4BrS H2L (1594)  
2-(5-Bromo-2-pyridylazo)-5-(N-propyl-3-sulfopropylamino)phenol;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

-----

Tm+++ sp NaNO3 25°C 0.10M C K1=8.65 19880Ha (96427) 475  
K(Tm+HL)=2.76  
\*\*\*\*\*

C17H29N3O10 H4L CAS 89378-46-1 (5528)  
(Bis(3-(bis(carboxymethyl)amino)propyl)methylammonio)ethanoate;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

-----

Tm+++ gl KNO3 25°C 0.10M U K1=9.69 1984TPa (96579) 476  
K(Tm+HL)=6.34  
\*\*\*\*\*

C18H20N2O6 H4L EHPG CAS 10328-28-6 (429)  
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (HOOCC(C6H4OH)NHCH2.)2

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      EMF KNO3    25°C 0.10M C T H      K1=21.39          1985HWb (97442) 477
                                   K(TmL+H)=6.96
Method: Hg (and glass) electrode, using Hg(II) as competitive indicator
ion. Data for 10-35 C. DH(K1)=-83.4 kJ mol-1, DS(K1)=130 J K-1 mol-1.
*****
C18H25N3O8      H4L      BEATA      CAS 87732-99-8 (5600)
N,N-Bis(2-aminoethyl)aniline-N',N',N'',N''-tetraethanoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      gl  KNO3    25°C 0.10M C      K1=14.79          1985TPa (97661) 478
*****
C18H28O5      L      CAS 15196-73-3 (2359)
2,3-(4'-Dimethylethylbenzo)-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      gl  non-aq 25°C 100% U      K1=2.81          1982MDa (97816) 479
Medium: propylene carbonate
*****
C18H30N2O11    H2L      CAS 93049-99-1 (5832)
1,4,7,10,13-Pentaoxa-16,19-diazacycloeicosane-14,21-dione-16,19-diethanoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      gl  R4N.X  25°C 0.10M C      K1=8.94          1988CCb (97918) 480
*****
C18H30N4O12    H6L      TTHA      CAS 869-52-3 (694)
Triethylenetetraaminehexaethanoic acid;((HOOCH2)2N.CH2.CH2.N(CH2.COOH).CH2)2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      EMF KNO3    25°C 0.10M C T H      K1=23.48          1987HCa (98100) 481
                                   K(TmL+H)=5.04
                                   K(TmHL+H)=2.57
Method: Hg electrode; competitive reaction with Hg(II).
Data for 15-35 C. At 25 C, DH(K1)=104 kJ mol-1, DS(K1)=799 J K-1 mol-1.
*****
C18H32N4O8      H4L      TETA      CAS 60239-22-7 (1019)
1,4,8,11-Tetraazacyclotetradecane-1,4,8,11-tetraethanoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tm+++      gl  NaNO3   25°C 0.20M C      K1=15.15          1991KKa (98232) 482
*****
C18H34N2O8      H2L      CAS 68670-15-5 (5851)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-di-(3-propanoic acid);

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	C		K1=6.13	1988CCc (98347)	483
*****									
C18H34N4O9		H3L		D03A-B			(7301)		
10-[2,3-Dihydroxy-(1-hydroxymethyl)-propyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic ac.;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaCl	25°C	0.10M	C	I	K1=19.0	1996TKa (98385)	484
In 0.1 M Me4NCl K=21.1									
*****									
C18H36N2O6		L		Cryptand 2,2,2			CAS 23978-09-8	(514)	
1,10-Diaza-4,7,13,16,21,24-hexaoxabicyclo[8.8.8]hexacosane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	alc/w	25°C	100%	C		K1=11.61	1983ANb (98762)	485
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4									
*****									
C18H40N2O10P2		H2L					(7241)		
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylldimethylenediphosphonic acid bis(Et-ester);									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	R4N.X	25°C	0.10M	U		K1=6.47	1996BJa (98901)	486
Medium: 0.1 M Me4NCl									
*****									
C20H14N2O11S3		H5L		Chromotrope 8B			CAS 5850-64-6	(2674)	
3-(4'-Sulfonaphthylazo)chromotropic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	NaClO4	25°C	0.10M	C		K1=6.31	1979PLb (99718)	487
*****									
C20H18N4O2		HL					(5917)		
Pyruvic monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	diox/w	30°C	75%	U			1985RSb (99842)	488
							K(Tm+HL)=5.32		
							K(Tm+2HL)=10.84		
*****									
C20H24N2O6		H4L		HBED			CAS 3625-89-6	(2208)	
N,N'-Di-(2-hydroxybenzyl)-diaminoethane-N,N'-diethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	KNO3	20°C	0.10M	U		K1=20.31 K(TmL+H)=5.02 K(TmHL+H)=4.65	1985SNb (100017)	489

\*\*\*\*\*

C20H24O6 L DiBz-18-Crown-6 CAS 14187-32-7 (604)  
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	oth/un	25°C	0.0	U	H	K1=3.21	1991HJa (100255)	490

\*\*\*\*\*

C20H35N5O10 H5L (6545)  
1,4,7,10,13-Pentaazacyclopentadecane-N,N',N'',N''',N''''-pentaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	NaNO3	25°C	0.20M	C		K1=16.61	1991KKa (100548)	491

\*\*\*\*\*

C20H35N5O10 H3L (6623)  
1,4,7-Tris(carboxymethyl)-13,16-dioxo-1,4,7,10,19-pentaazacycloheptacosane-9,20-dione  
;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	KCl	25°C	0.08M	U		K1=17.1	1994FCa (100565)	492

\*\*\*\*\*

C21H17N5 L (7365)  
2,6-Bis(1-methylbenzimidazol-2-yl)pyridine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	gl	non-aq	25°C	100%	C		K3=3.9	1997PBa (101094)	493

Medium: CH3CN; 0.1 M Et4NClO4

\*\*\*\*\*

C22H14O9 H5L CAS 4431-00-9 (3513)  
Aurintricarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tm+++	sp	oth/un	25°C	?	U		K(Tm+HL)=5.1(?)	1967SAa (101511)	494

\*\*\*\*\*

C22H17AsN4O14S3 H6L Arsenazo M CAS 3563-69-7 (623)  
2-(2-Arsonophenylazo)-7-(3-sulfophenylazo)-1,8-dihydroxynaphthalene-3,6-disulfonic  
acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tm+++ sp oth/un ? ? U K1=16.14 1971SSi (101555) 495  
\*\*\*\*\*

C22H18N4O14As2S2 H8L Arsenazo III CAS 1668-00-4 (1148)  
2,7-Bis(2'-arsonophenylazo)chromotropic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp oth/un 20°C ? U 1972SSi (101653) 496  
K(Tm+H4L)=15.22

\*\*\*\*\*  
C22H24N2O10 H4L CAS 132796-79-3 (8113)  
1,2-Bis(2-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ EMF KNO3 25°C 0.10M C T H K1=11.60 1990HLA (101905) 497  
K(TmL+H)=3.45

Method: Competitive reaction with Hg++, using Hg indicator electrode.  
Data for 15-35 C. DH(K1)=-42.0 kJ mol<sup>-1</sup>, DS(K1)=81.3 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C22H26N4O10 H4L BAPTA (7230)  
1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;  
((HOOCH2)2NCH(OC6H4NH2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl R4N.X 25°C 0.10M C K1=10.51 1993YTa (101988) 498  
\*\*\*\*\*

C22H37N5O14 H7L CAS 3234-59-1 (2425)  
Tetraethylenepentamineheptaethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl KNO3 25°C 0.10M U K1=20.11 1968MIc (102346) 499  
K(Tm+HL)=13.98  
B(TmH-1L)=5.15

\*\*\*\*\*

C23H18O9S H4L Eriochrome cyan CAS 3564-18-9 (433)  
4'-Hydroxy-3,3'-dimethyl-2''-sulfofuchsone-5,5'-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp oth/un 25°C ? U B2=9.6 1968MDc (102638) 500  
\*\*\*\*\*

C23H24N4O2 L Trichachnine CAS 1251-85-0 (2606)  
4,4'-Diantipyrylmethane,  
4,4'-phenylmethylen-bis-(1,2-dihydro-1,5-dimethyl-2-phenylpyrazol-3-one

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Tm+++ sp diox/w 25°C 100% U K1=4.13 1995KMa (102680) 501  
\*\*\*\*\*

C24H42N6O12 H6L (6546)  
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N'',N''',N'''',N'''''-hexaethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl NaNO3 25°C 0.20M C K1=24.09 1991KKa (103389) 502  
K(Tm+H2L)=16.82  
\*\*\*\*\*

C26H23N5O2 HL (5918)  
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl diox/w 30°C 75% U K1=11.70 B2=22.28 1985RSb (103889) 503  
\*\*\*\*\*

C26H27N3O10 H4L (7231)  
2-((2-Amino-5-methylphenoxy)-methyl)-6-methoxy-8-aminoquinoline-N,N,N',N'-tetraetha  
noic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl R4N.X 25°C 0.10M C K1=14.35 1993YTa (103974) 504  
\*\*\*\*\*

C27H24N4O L BAHP (1023)  
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl diox/w 30°C 75% U K1=8.82 1983RSa (104392) 505  
\*\*\*\*\*

C27H29N011 L Adriamycin CAS 25316-40-9 (2407)  
Doxorubicin;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ sp oth/un 25°C 0.02M U T H K1=4.82 1985LSa (104464) 506  
Medium: 0.02M pH 7.6 buffer  
\*\*\*\*\*

C28H40O6 L CAS 29471-17-8 (1262)  
2,3:11,12-Bis(4'-tert-butylbenzo)-1,4,7,10,13,16-hexaoxacyclooctadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Tm+++ gl non-aq 25°C 100% U K1=2.94 1980MDb (104853) 507  
Medium: Propylene carbonate.

Medium: propylene carbonate  
\*\*\*\*\*

C31H24N4O HL CAS 88700-85-0 (1409)  
1,2-Diphenyl-1,2-ethanedione-3-(4-benzyl-6-phenyl)-pyridazinyl hydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	diox/w	30°C	75%	U	I		K1=10.04	1983RRa (105411)	508
In 75% MeOH: K1=7.79; 75% DMF: 6.63										

C32H34N4O2 L CAS 163892-66-8 (7329)  
1-Phenyl-1,1-di(2,3-dimethyl-1-phenyl-3-pyrazolyl-5-one)butane;C6H5C(C3H7)((C2N2(O)(CH3)2(C6H5))2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	sp	diox/w	25°C	100%	C				1997KMa (105637)	509
K(La(NO3)3+L)=4.07										

C33H45N7O3 L CAS 345349-93-1 (9178)  
Tris[6-((2-N,N-diethylcarbamoyl)pyridyl)methyl]amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	nmr	KCl	25°C	1.0M	C	H		K1=2.10	2004BRa (105976)	510
Method: 1H nmr measurements in D2O. DH(K1)=29 kJ mol-1										
DS(K1)=138 J mol-1K-1										

C36H60O3O L a-Cyclodextrin CAS 10016-20-3 (6946)  
alpha-Cyclodextrin, Cyclohexaamylose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaCl	25°C	0.10M	U	I		K1=2.65	1999FBa (106474)	511
In 0.1 M Me4NCl, K1=3.0.										

C37H44N2O13S H6L MeThymol Blue (428)  
3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tm+++	gl	NaCl	30°C	0.10M	U				1980NAb (106623)	512
K(Tm+H3L)=4.65										
K(Tm+H2L)=7.59										
K(TmH2L+H)=4.20										

Also data for TmHnL(OH) species

C47H46N6O4 L (7367)  
2,6-Bis(1-(3,5-dimethoxybenzyl)benzimidazol-2-yl)-4-(4-diethylamino)phenylpyridine ;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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#### EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES  
I Data with various BACKGROUNDS  
H Data for THERMOCHEMICAL quantities  
M Data for TERNARY Complexes

EVALUATION Flags are :-

T or IUP=T signifies EVALUATION RATING = Tentative by IUPAC

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